ARMY TM 9-2320-365-20-5 AIR FORCE T.O. 36A12-1B-1095-2-5

TECHNICAL MANUAL MAINTENANCE INSTRUCTIONS UNIT MAINTENANCE M1078 SERIES, 2 1/2-TON, 4 X 4, LIGHT MEDIUM TACTICAL VEHICLES (LMTV) VOLUME NO. 5 OF 5

MODEL	NSN	EIC	HOW TO USE THIS MANUAL PAGE iii
TRK, CAR., LMTV, M1078			
W/WN	2320-01-360-1898	BHH	
W/O WN	2320-01-354-3385	BHD	SPECIAL PURPOSE KITS MAINTENANCE
TRK, VAN, LMTV, M1079			PAGE 20-1
W/WN	2320-01-360-1891	BHG	
W/O WN	2320-01-354-3384	BHE	
TRK, CHAS, LMTV, M1080	2320-01-353-9098	BHC	ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL
TRK, CAR., LMTV, AIR DROP, M108	1		MAINTENANCE
W/WN	2320-01-360-1899	BHJ	PAGE 21-1
W/O WN	2320-01-355-3064	BHF	

ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE PAGE 22-1

AIR SYSTEM MAINTENANCE PAGE 23-1

GAGES (NON-ELECTRICAL) MAINTENANCE PAGE 24-1

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND THE AIR FORCE

WARNING SUMMARY

WARNING

EXHAUST GASES CAN KILL

- 1. **DO NOT** operate your vehicle engine in an enclosed area.
- 2. **DO NOT** idle vehicle engine with cab windows closed.
- 3. **DO NOT** drive vehicle with inspection plates or covers removed.
- 4. **BE ALERT** at all times for exhaust odors.
- 5. **BE ALERT** for exhaust poisoning symptoms, they are:

Headache

Dizziness

Sleepiness

Loss of Muscular Control

6. **IF YOU SEE** another person with exhaust poisoning symptoms:

Remove person from area.

Expose to open air.

Keep person warm.

Do not permit person to move.

Administer cardiopulmonary resuscitation, if necessary.*

* For cardiopulmonary resuscitation, refer to FM 21-11.

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Batteries can explode from a spark. Battery acid is harmful to skin and eyes. Always wear eye protection and rubber gloves when working with batteries.

WARNING

Battery acid (electrolyte) is extremely harmful. Always wear safety goggles and rubber gloves, and do not smoke when performing maintenance on batteries. Injury will result if acid contacts skin or eyes. Wear rubber apron to prevent clothing being damaged.

WARNING SUMMARY (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 degrees F (38 degrees C) and for Type II is 130 degrees F (50 degrees C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

After Nuclear, Biological, or Chemical (NBC) exposure of vehicle, all air filters shall be handled with extreme caution. Unprotected personnel may experience serious injury or death if residual toxic agents or radioactive material are present. If vehicle is exposed to chemical or biological agents, servicing personnel shall wear protective mask, hood, protective overgarments, and chemical protective gloves and boots in accordance with FM-3-4. All contaminated air filters shall be placed in double-lined plastic bags and moved swiftly to a segregation area away from the worksite. The same procedure applies for radioactive dust contamination. The Company NBC team should measure radiation prior to filter removal to determine extent of safety procedures required per the NBC Annex to the unit Standard Operating Procedures (SOP). The segregation area in which the contaminated air filters are temporarily stored shall be marked with appropriate NBC placards. Final disposal of contaminated air filters shall be in accordance with local SOP. Decontamination operation shall be in accordance with FM-3-5 and local SOP. Failure to comply may result in serious injury or death to personnel.

WARNING

Diesel fuel is flammable. Do not fill fuel tank with engine running, while smoking, or when near an open flame. Never overfill the tank or spill fuel. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

WARNING

Use care when removing/installing springs. Springs are under tension and can act as projectiles when being removed. Failure to comply can cause injury to personnel.

WARNING

Retaining rings are under tension and can act as projectiles when released causing severe eye injury. Use care when removing retaining rings. Failure to comply may result in injury to personnel.

WARNING

Ensure exhaust system is cool before performing maintenance. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.



Do not operate LMTV vehicle with muffler removed. Toxic exhaust fumes may enter cab, resulting in serious injury or death to personnel.

WARNING

Do not work on fuel system when engine is hot; fuel can be ignited by a hot engine.

WARNING SUMMARY (CONT)

WARNING

Post signs that read "NO SMOKING WITHIN 50 FEET" when working with open fuel, fuel lines or fuel tanks. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Exhaust pipe, transmission oil lines, and transmission scavenge pump hose may be hot to the touch. Extreme care should be taken when checking exhaust pipe, transmission oil lines, and transmission scavenge pump hose for leaks. Failure to comply may result in injury to personnel.

WARNING

Compressed air used for cleaning purposes will not exceed 30 psi (207 Kpa). Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc). Failure to comply may result in injury to personnel.

WARNING

Wheel drum weighs approximately 90 lb (41 Kg). Use the aid of an assistant to help remove wheel drum. Failure to comply may result in injury to personnel.

WARNING

Wheel drum weighs approximately 90 lb (41 kg). Use the aid of an assistant to help install wheel drum. Failure to comply may result in injury to personnel.

WARNING

Brake shoes may be covered with dust. Breathing this dust may be harmful to your health. Do not used compressed air to clean brake shoes. Wear a filter mask approved for use against brake dust. Failure to comply may result in injury to personnel.

WARNING

Cage spring brake before air chamber is removed or severe injury to personnel will occur.

WARNING

Ensure air chamber is caged prior to installation. Failure to comply may result in injury to personnel.

WARNING

Ensure that tire is totally deflated before removing self-locking nuts. Failure to comply may result in serious injury or death to personnel.

WARNING

Spring brakes must be caged before attempting replacement of a rear axle wheel stud. Failure to comply may result in severe injury to personnel.

WARNING

Wear protective goggles to protect against possible injury from release of high pressure air. Failure to comply may result in injury to personnel.

WARNING

Prolonged contact with lubricating oil (MIL-L-2104) may cause a skin rash. Skin and clothing that come in contact with lubricating oil should be thoroughly washed immediately. Saturated clothing should be removed immediately. Areas in which lubricating oil is used should be well ventilated to keep fumes to a minimum. Failure to comply may result in injury to personnel.

WARNING

Hydraulic fluid (MIL-H-5606) is TOXIC. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes. Skin and clothing that come in contact with hydraulic oil should be washed immediately. Saturated clothing should be removed immediately. Failure to comply may result in injury to personnel.

WARNING

Wire rope can become frayed or contain broken wires. Wear heavy leather-palmed gloves when handling wire rope. Frayed or broken wires can injure hands. Failure to comply may result in injury to personnel.

WARNING

Never let moving wire rope slide through hands, even when wearing gloves. A broken wire could cut through gloves and cut hands.

WARNING SUMMARY (CONT)

WARNING

Wear appropriate eye protection when removing rivets. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when drilling holes. Failure to comply may result in injury to personnel.

WARNING

Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

WARNING

Use extreme caution when working around moving cable. Failure to do so may result in serious injury to personnel.

WARNING

Caution must be exercised while cab is raised. Ensure that locking mechanism is functioning properly before proceeding. Failure to comply may result in death or serious injury to personnel and damage to equipment.

WARNING

Coolant may be very hot and under pressure from engine operation. Ensure engine is cool before performing maintenance. Failure to comply may result in injury to personnel.

WARNING

Do not remove oil filter while engine is hot. Failure to comply may result in injury to personnel.

WARNING

Sling spreader weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Remove all loose equipment from van body. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Van body weighs approximately 3,360 lbs (1525 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel.

WARNING

Guide ropes must be attached at opposite corners of van body to aid in controlling van body during removal. Failure to comply may result in serious injury or death to personnel.

WARNING

Center of gravity will change depending on equipment installed in van body. Attach and adjust lifting device so that van body lifts level. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

Pod frame weighs approximately 80 lbs (36 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.



Do not install pod frame on van body for 72 hours after installing blind rivet nuts and spacers. Failure to comply may result in injury to personnel and/or damage to equipment.



Goggles and gloves must be worn when working with glass. Failure to comply may result in injury to personnel.

WARNING SUMMARY (CONT)

WARNING

RH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

LH door assembly weighs approximately 85 lbs (39 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Wear appropriate eye protection when handling fluorescent lamps. Failure to comply may result in injury to personnel.

WARNING

Heavy objects/loads, such as tool boxes and heavy parts, must always be carried on the floor with the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

Heavy cabinets must always be mounted as low as possible with the weight distributed as equally as possible between left and right sides of M1079 van. Remember to consider the weight of the items that will be stored in the cabinets. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

Always keep in mind, when placing items inside the M1079 van, that heavier items must always be positioned as low as possible and the weight distributed as equally as possible between left and right sides of M1079 van. Failure to comply decreases the stability of the M1079 van and will increase the likelihood of a rollover.

WARNING

Extreme care must be taken when lowering gravel deflector. Coolant hoses could be pulled loose. Failure to comply could result in serious eye injury.

WARNING

- Do not open coolant fill cap if temperature reads above 110°F (43°C). Steam or hot coolant is under pressure. Failure to comply may result in injury to personnel.
- Pressure in reservoir tank must be released before removing cap. Failure to comply may result in injury to personnel.

WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to install 200 amp alternator. Failure to comply may result in injury to personnel.



Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.



Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use an assistant when removing LMHC boom assembly. Failure to comply may result in injury to personnel.

WARNING SUMMARY (CONT)

WARNING

Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

WARNING

Use care when removing/installing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

WARNING

Air conditioner weighs approximately 300 lbs (136 kg). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

WARNING

Ensure cargo bed is free of equipment and debris, and is not warped or damaged in any way. Failure to comply may result in serious injury or death to personnel or damage to equipment.

WARNING

S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

HEADQUARTERS DEPARTMENTS OF THE ARMY AND THE AIR FORCE Washington, D.C., 10 February 2006

TECHNICAL MANUAL MAINTENANCE INSTRUCTIONS UNIT MAINTENANCE M1078 SERIES, 2 1/2-TON, 4x4, LIGHT MEDIUM TACTICAL VEHICLE (LMTV)

VOLUME NO. 5 OF 5

TM 9-2320-365-20-5, 17 June 1998, is changed as follows:

- 1. Remove old pages and insert new pages as indicated below.
- 2. New or changed material is indicated by a vertical bar in the out margin of the page.
- 3. Added or revised illustrations are indicated by a vertical bar adjacent to the illustration.

Remove Pages

Insert Pages

None A and B B-1 thru B-19/(B-20 Blank Change 3 Transmittal/ Change 3 Authentication A and B B-1 thru B-20

Place this change sheet in the front of the publication for reference purposes.

CHANGE NO. 3 By Order of the Secretary of the Army:

PETER J. SCHOOMAKER General, United States Army Chief of Staff

Official:

Sandra R. Riley

SANDRA R. RILEY Administrative Assistant to the Secretary of the Army 0601912

By Order of the Secretary of the Air Force:

JOHN P. JUMPER General, United States Air Force Chief of Staff

Official:

GREGORY S. MARTIN General, United States Air Force Commander, Air Force Materiel Command

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 380934, requirements for Family of Medium Tactical Vehicles (FMTV) TM 9-2320-365-20-5.

HEADQUARTERS DEPARTMENTS OF THE ARMY AND THE AIR FORCE Washington, D.C., 20 August 2005

TECHNICAL MANUAL MAINTENANCE INSTRUCTIONS UNIT MAINTENANCE M1078 SERIES, 2 1/2-TON, 4x4, LIGHT MEDIUM TACTICAL VEHICLE (LMTV)

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Remove Pages	Insert Pages	Remove Pages	Insert Pages
e thru h	e thru h	H-15 thru H-21/	H-15 thru H-21/
none	A and B	(H-22 Blank)	(H-22 Blank)
none	Change 2 Authentication Sheet	K-1 thru K-4	K-1 thru K-4
20-1 and 20-2	20-1 and 20-2	INDEX-1 thru INDEX-6	INDEX-1 thru INDEX-6
20-185 thru 20-188	20-185 thru 20-188	FO-1 FP-3/(FP-4 Blank)	FO-1 FP-3/(FP-4 Blank)
none	20-188.1 and 20-188.2	FO-1 FP-61/(FP-62 Blank)	FO-1 FP-61/(FP-62 Blank)
20-189 thru 20-204	20-189 thru 20-204	Metric Conversion Chart	Metric Conversion Chart
none	20-204.1 and 20-204.2	/PIN	/PIN
20-205 thru 20-220	20-205 thru 20-220		
none	20-220.1 and 20-220.2		
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20-237 thru 20-250	20-237 thru 20-250		
20-255 and 20-256	20-255 and 20-256		
none	20-256.1 thru 20-256.8		
20-257 thru 20-260	20-257 thru 20-259/		
	(20-260 Blank)		
20-261 and 20-262	none		
20-263 and 20-264	20-263 and 20-264		
20-481 thru 20-486	20-481 thru 20-486		
none	20-486.1/(20-486.2 Blank)		
20-487 and 20-488	20-487 and 20-488		
none	20-489 thru 20-556		
21-7 and 21-8	21-7 and 21-8		
none	21-8.1 and 21-8.2		
21-9 and 21-10	21-9 and 21-10		
B-5 and B-6	B-5 and B-6		
B-17 thru B-19/	B-17 thru B-19/		
(B-20 Blank)	(B-20 Blank)		
C-1 thru C-4	C-1 thru C-4		
D-1 and D-2	D-1 and D-2		
D-5 and D-6	D-5 and D-6		
G-1 thru G-11/	G-1 thru G-11/		
(G-12 Blank)	(G-12 Blank)		
H-1 thru H-12	H-1 thru H-12		

Place this change sheet in the front of the publication for reference purposes.

CHANGE NO. 2

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER General, United States Army Chief of Staff

Official:

Sandra R. Riley

SANDRA R. RILEY Administrative Assistant to the Secretary of the Army 0501302

By Order of the Secretary of the Air Force:

JOHN P. JUMPER General, United States Air Force Chief of Staff

Official:

GREGORY S. MARTIN General, United States Air Force Commander, Air Force Materiel Command

Distribution:

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HEADQUARTERS DEPARTMENTS OF THE ARMY AND THE AIR FORCE

Washington, D.C., 1 July 2003

TECHNICAL MANUAL MAINTENANCE INSTRUCTIONS UNIT MAINTENANCE M1078 SERIES, 2 1/2-TON, 4x4, LIGHT MEDIUM TACTICAL VEHICLE (LMTV)

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Remove Pages	Insert Pages	Remove Pages	Insert Pages
i and j	i and j	none	E-21 and E-22
none	A and B	G-1 thru G-10	G-1 thru G-10
i thru iv	i thru iv	none	G-11/(G-12 Blank)
none	v/(vi Blank)	H-1 thru H-8	H-1 thru H-8
20-1 and 20-2	20-1 and 20-2	H-17 thru H-21/	H-17 thru H-21/
none	20-2.1/(20-2.2 Blank)	(H-22 Blank)	(H-22 Blank)
20-3 and 20-4	20-3/(20-4 Blank)	none	K-1 thru K-K-4
20-5 thru 20-184	none	INDEX-1 thru INDEX-6	INDEX-1 thru INDEX-6
20-281 and 20-282	20-281/(20-282 Blank)	INDEX-7/(INDEX-8 Blank)	none
20-283 thru 20-312	none	DA Form 2028-2 Sample	DA Form 2028 Sample
20-313 and 20-314	(20-313 Blank)/20-314	DA Form 2028-2	DA Form 2028
20-315 thru 20-318	20-315 thru 20-318	DA Form 2028-2	DA Form 2028
20-327 thru 20-334	20-327 thru 20-334	DA Form 2028-2	DA Form 2028
20-343 and 20-344	20-343 and 20-344	FO-1 FP-1/(FP-2 Blank)	FO-1 FP-1/(FP-2 Blank)
20-347 and 20-354	20-347 and 20-354	thru FP-19/(FP-20 Blank)	thru FP-19/(FP-20 Blank)
20-465 and 20-466	20-465 and 20-466	FO-1 FP-23/(FP-24 Blank)	FO-1 FP-23/(FP-24 Blank)
20-471 thru 20-476	20-471 thru 20-476	FO-1 FP-27/(FP-28 Blank)	FO-1 FP-27/(FP-28 Blank)
20-481 thru 20-488	20-481 thru 20-488	thru FP-61/(FP-62 Blank)	thru FP-61/(FP-62 Blank)
21-1 thru 21-12	21-1 thru 21-12	FO-1 FP-65/(FP-66 Blank)	FO-1 FP-65/(FP-66 Blank)
22-1 and 22-2	22-1 and 22-2	and FP-67/(FP-68 Blank)	and FP-67/(FP-68 Blank)
23-1 thru 23-4	23-1 thru 23-4	Metric Conversion Chart	Metric Conversion Chart
23-9 thru 23-20	23-9 thru 23-20	Cover	Cover
23-23 thru 23-28	23-23 thru 23-28		
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none	23-32.1 and 23-32.2		
23-33 and 23-34	23-33 and 23-34		
none	23-35 and 23-36		
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B-13 thru B-20	B-13 thru B-19/(B-20 Blank)		
C-3 and C-4	C-3 and C-4		
D-1 thru D-5/(D-6 Blank)	D-1 thru D-6		
E3 and E4	E3 and E4		

Place this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

JOHN M. KEANE General, United States Army Chief of Staff

Official: JOEL B. HUDSON

Administrative Assistant to the Secretary of the Army 0110106

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LIST OF EFFECTIVE PAGES

Insert latest changed pages. Destroy superseded pages.

NOTE: New or changed material is indicated by a vertical bar in the outer margin of the page.

Dates of issu	ue for original and o	changed pages are:
Original	0	17 June 1998
Change		1 July 2003
Change	2	20 August 2005
		10 February 2006

THE TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 648, CONSISTING OF THE FOLLOWING:

Page	*Change	Page	*Change	Page	*Change
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Blank		20-257 tillu 20-259		21-14 Dialik	-
a thru e		20-200 Blank		22-2 thru 22-5	
f	-	20-263		22-6 Blank	
q		20-264 thru 20-280		23-1	
h		20-281		23-2	
i		20-282 Blank		23-3 and 23-4	
i		20-283 thru 20-312 Delete		23-5 thru 23-8	
A and B		20-313 Blank		23-9 thru 23-11	
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v Added		20-315 thru 20-318		23-13	
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20-2		20-321		23-17 and 23-10	
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20-2.2 Blank Added		20-332		23-19	
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20-4 Blank		20-335 thru 20-343		23-21 and 23-22	
20-5 thru 20-184 Delete		20-344	-	23-23	-
20-185		20-345 thru 20-347		23-24 and 23-25	
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20-188.1 and 20-188.2	۷۲	20-340 and 20-349		23-27	
Added	2	20-352 thru 20-354		23-28	
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Added	2	20-472 thru 20-475		23-35 and 23-36 Added	
20-205 thru 20-220		20-481 thru 20-486		23-35 and 23-36 Added	
20-203 (ind 20-220) 20-220.1 and 20-220.2		20-486.1 Added		24-1	
Added		20-486.2 Blank Added		A-1	
20-221 thru 20-223		20-487 and 20-488		A-2 and A-3	
20-224 thru 20-236		20-489 thru 20-556 Added		A-2 and A-3	
20-224 tinu 20-250		20-489 thru 20-556 Added		B-1	-
20-251 thru 20-255		21-8		B-2	
20-251 1110 20-255		21-8.1 and 21-8.2 Added		B-3 thru B-20	
20-256.1 thru 20-256.8		21-9		С-1	
Added		21-9 21-10 and 21-11		C-2 thru C-4	
	Z	21-10 and 21-11		0-2 unu 0-4	∠
		21-12 dilu 21-13	0		

LIST OF EFFECTIVE PAGES (CONT)

Insert latest changed pages. Destroy superseded pages.

Page No.	*Change No.	Page No.	*Change No.	Page No.	*Change No.
	4		4		0
D-1 D-2		FO-1 FP-13 FO-1 FP-14 Blank		FO-1 FP-63 FO-1 FP-64 Blank	
D-2 D-3 thru D-5			-	FO-1 FP-64 Blank	-
D-3 thru D-5		FO-1 FP-15 FO-1 FP-16 Blank		FO-1 FP-66 Blank	
E-1 and E-2		FO-1 FP-16 Blank		FO-1 FP-66 Blank	
E-1 and E-2 E-3 and E-4		FO-1 FP-18 Blank		FO-1 FP-68 Blank	
E-5 thru E-20		FO-1 FP-10 Dialik		FO-1 FP-00 Dialik FO-2 FP-1	
E-21 and E-22 Added.		FO-1 FP-19		FO-2 FP-1 FO-2 FP-2 Blank	••••••
F-1 thru F-8		FO-1 FP-20 bialik	-	FO-2 FP-2 Dialik	
G-1		FO-1 FP-22 Blank	•	FO-2 FP-4 Blank	
G-2		FO-1 FP-22 Dialik		FO-2 FP-4 blank	
G-3 thru G-7		FO-1 FP-24 Blank		FO-2 FP-6 Blank	
G-8		FO-1 FP-24 Dialik		FO-2 FP-0 Dialik	
G-9 thru G-11		FO-1 FP-25	•	FO-2 FP-7 FO-2 FP-8 Blank	
G-12 Blank Added		FO-1 FP-20 Dialik	-		
		FO-1 FP-27 FO-1 FP-28 Blank		FO-3 FP-1	
H-1 thru H-6			-	FO-3 FP-2 Blank	
H-7	••••••	FO-1 FP-29		FO-3 FP-3	••••••
H-8 thru H-10		FO-1 FP-30 Blank		FO-3 FP-4 Blank	
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H-12		FO-1 FP-32 Blank		FO-3 FP-6 Blank	
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* Zero in this column indicates an original page.

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HOW TO USE THIS MANUAL

OVERVIEW

Table No.

This technical manual (TM) is provided to help you maintain the LMTV at the Unit Maintenance level. Because of its size, it is divided into five volumes. Volume 5 contains the following major sections in order of appearance:

- **WARNING SUMMARY.** Provides a summary of the most important warnings that apply throughout the manual.
- CHAPTER 20, SPECIAL PURPOSE KITS MAINTENANCE
- CHAPTER 21, ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL MAINTENANCE
- CHAPTER 22, ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE
- CHAPTER 23, AIR SYSTEM MAINTENANCE
- CHAPTER 24, GAGES (NON-ELECTRICAL) MAINTENANCE
- APPENDIX A, REFERENCES. Lists publications used with the LMTV.

OVERVIEW (CONT)

- APPENDIX B, MAINTENANCE ALLOCATION CHART. The maintenance allocation chart denotes the level of maintenance which performs specific maintenance tasks and the time required. It also lists tools and special tools required for each task.
- **APPENDIX C, TOOLS IDENTIFICATION LIST.** Lists equipment used in the performance of maintenance and references publications which contain information regarding the equipment.
- **APPENDIX D, EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST.** Lists expendable and durable items used in the performance of maintenance.
- APPENDIX E, ILLUSTRATED LIST OF MANUFACTURED ITEMS. Illustrates and describes items that must be fabricated from bulk materials for repair of the LMTV.
- APPENDIX F, TORQUE LIMITS. Lists the standard torque values for specific attaching hardware.
- APPENDIX G, MANDATORY REPLACEMENT PARTS.
- APPENDIX H, LUBRICATION ORDER.
- APPENDIX J, ADDITIONAL AUTHORIZATION LIST (AAL).
- APPENDIX K, TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART.
- **SUBJECT INDEX.** Lists important subjects contained in volume 5 in alphabetical order and gives the associated paragraph number.

FINDING INFORMATION

There are several ways to find the information you need in this manual. They are as follows:

- **FRONT COVER INDEX.** The front cover index contains a list of the most important topics contained in each volume. It features a black box at the right edge of the cover which corresponds with a black box on the page containing the topic. The topics listed on the front cover are highlighted in the table of contents with a box.
- TABLE OF CONTENTS. Lists chapters, sections, appendixes, and indexes with page numbers in order of appearance.
- **CHAPTER INDEXES.** List paragraphs contained in the individual chapters with paragraph and page numbers in order of appearance.
- SYMPTOM INDEX. Lists malfunctions contained in the troubleshooting table with page numbers in order of appearance.

TROUBLESHOOTING

Troubleshooting is contained in chapter 2. When a malfunction occurs, look at the symptom index for the vehicle troubleshooting table in chapter 2. Find the malfunction in the index. Turn to the page number listed for the malfunction in the troubleshooting table. Perform the steps required to correct the malfunction. If you can't find the malfunction, or the malfunction is not corrected, notify your supervisor.

- SCHEDULED MAINTENANCE. Your scheduled maintenance is located in Volume 1, table 2-1, PMCS. These checks and services are mandatory at the intervals listed. Always follow the WARNINGS and CAUTIONS.
- **UNSCHEDULED MAINTENANCE.** Unscheduled maintenance is located in chapters 3 through 24. The PMCS and troubleshooting tables often reference you to these procedures. When you perform maintenance, look over the entire procedure before starting. Make sure you have the necessary tools and materials at hand. Always follow the WARNINGS and CAUTIONS.

FOLLOW THESE GUIDELINES WHEN USING THIS MANUAL:

- Become familiar with the entire maintenance procedure before beginning a maintenance task.
- Read all WARNINGS and CAUTIONS before performing any procedures.

CHAPTER 20 SPECIAL PURPOSE KITS MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

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Section I. INTRODUCTION

20-1. INTRODUCTION

This chapter contains maintenance instructions for replacing, repairing, and installing special purpose kit components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

20-2. DELETED

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL.

This task covers:

- a. Installation
- b. Removal

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

c. Follow-On Maintenance

Materials/Parts

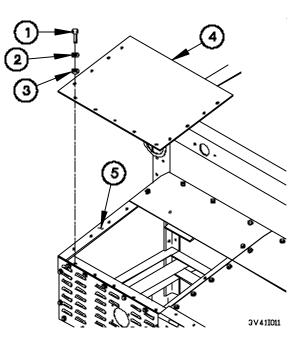
Lockwasher (44) (Item 82, Appendix G) Lockwasher (18) (Item 84, Appendix G) Lockwasher (12) (Item 76, Appendix G) Sealant, Pipe, Teflon (Item 58, Appendix D)

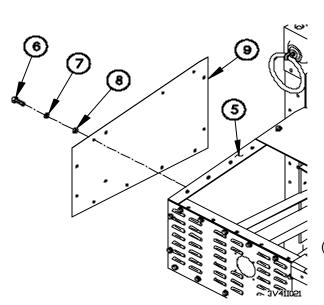
Personnel Required

(2)

a. Installation.

 Remove 13 screws (1), lockwashers (2), washers (3), and curbside top front panel (4) from pod frame (5). Discard lockwashers.

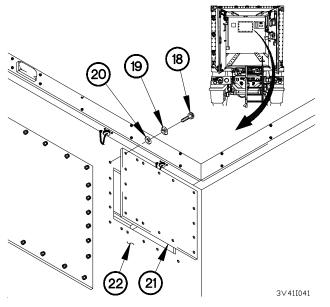




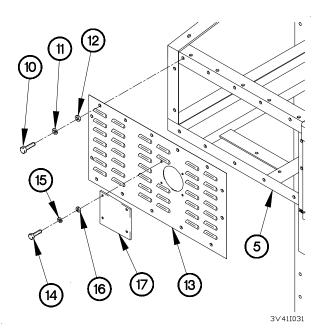
 Remove 13 screws (6), lockwashers (7), washers (8), and curbside panel (9) from pod frame (5). Discard lockwashers.

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

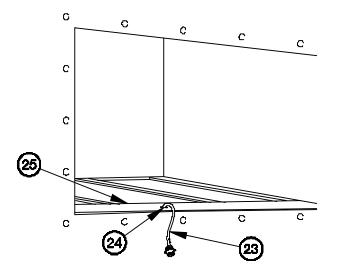
- (3) Remove 14 screws (10), lockwashers (11), washers (12), and curbside front panel (13) from pod frame (5). Discard lockwashers.
- (4) Remove four screws (14), lockwashers (15), washers (16), and cover plate (17) from curbside front panel (13). Discard lockwashers.
- (5) Retain cover plate (17) for future use.



(8) Route heater fuel pump cable (23) through hole(24) in pod panel (25).

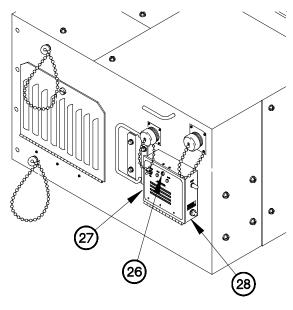


- (6) Remove 18 screws (18), lockwashers (19), washers (20), and cover (21) from inside front van body wall (22). Discard lockwashers.
- (7) Retain cover (21) for future use.

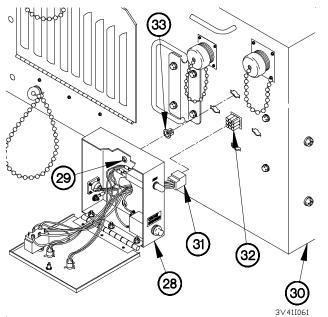


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- (9) Unlatch screw (26) on door (27).
- (10) Open door (27) on heater control unit (28).



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- (11) Unlatch two screws (29) on heater control unit (28).
- (12) Remove heater control unit (28) from heater (30).

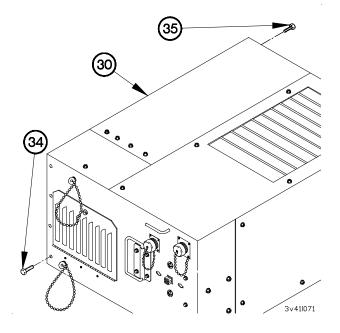
NOTE

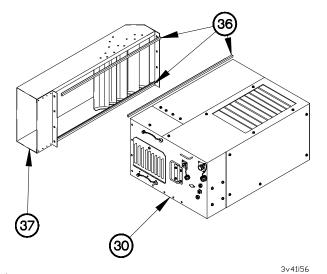
Tag connectors and connection points prior to disconnecting.

- (13) Disconnect connector P4 (31) from connector J4 (32).
- (14) Remove two twist locks (33) from heater (30).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (15) Remove eight screws (34) from heater (30).
- (16) Remove eight screws (35) from heater (30).
- (17) Retain screws (34 and 35) for future use.





(18) Apply silicone rubber sponge tape (36) to mating surfaces of heater duct (37) and heater (30).

WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in iniury to personnel.

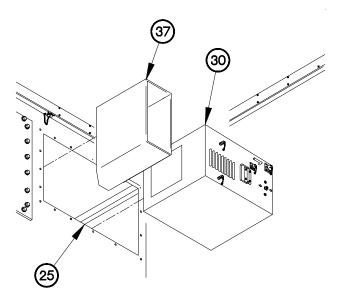
CAUTION

Use caution when installing heater. Heater fuel pump power cable installed. Failure to comply may cause damage to equipment.

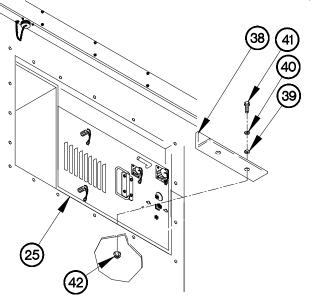
NOTE

Steps (19) through (24) require the aid of an assistant.

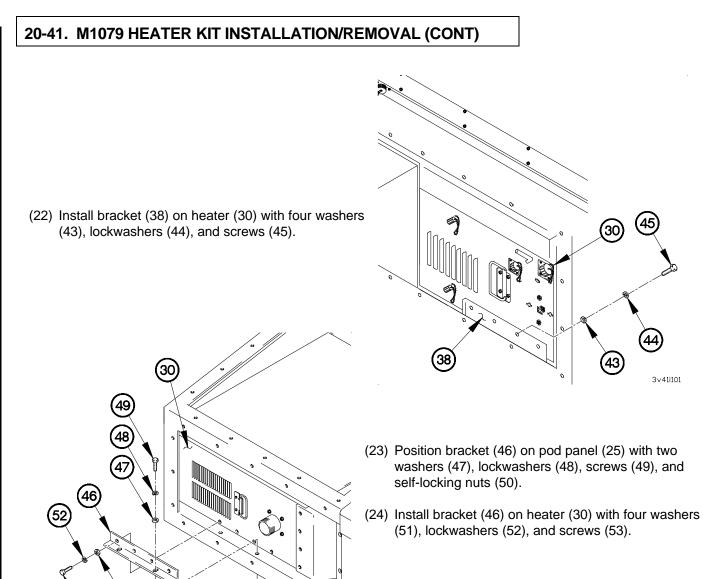
- (19) Position heater (30) on pod panel (25).
- (20) Position heater duct (37) on pod panel (25).

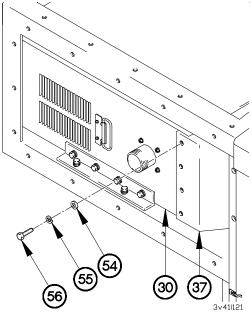


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(21) Position bracket (38) on pod panel (25) with two washers (39), lockwashers (40), screws (41), and self-locking nuts (42).





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(53)

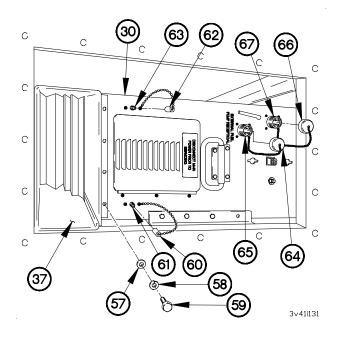
(25)

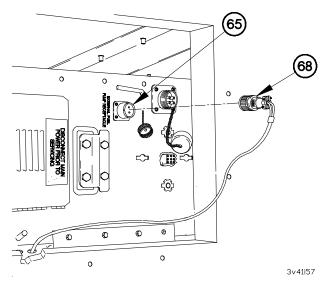
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(50)

(25) Install heater duct (37) on heater (30) with four washers (54), lockwasher (55), and screws (56).

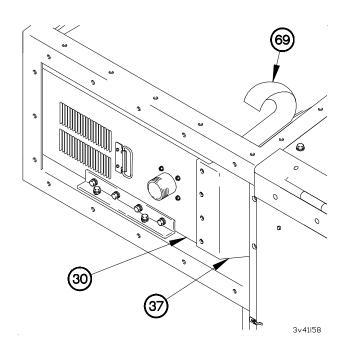
- (26) Install heater duct (37) on heater (30) with four washers (57), lockwashers (58), and screws (59).
- (27) Remove dust cap (60) from fuel overflow port (61).
- (28) Remove dust cap (62) from fuel inlet port (63).
- (29) Remove dust cap (64) from heater fuel pump power cable connector (65).
- (30) Remove dust cap (66) from heater power connector (67).





(32) Apply pressure sensitive tape (69) over seam between heater duct (37).

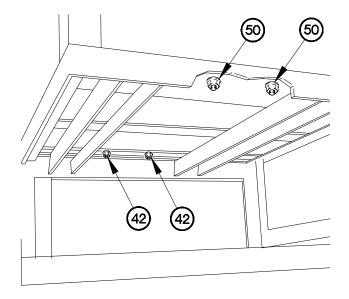
(31) Connect connector J314 (68) to heater fuel pump power cable connector (65).



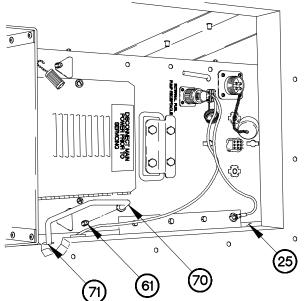
NOTE

Steps (33) and (34) require the aid of an assistant.

- (33) Tighten two self-locking nuts (42).
- (34) Tighten two self-locking nuts (50).



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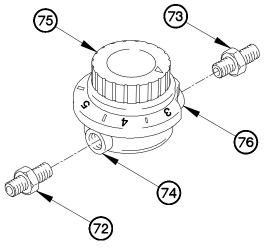
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- (35) Route fuel tube (70) through hole (71) in pod panel (25).
- (36) Install fuel tube (70) on fuel overflow port (58).

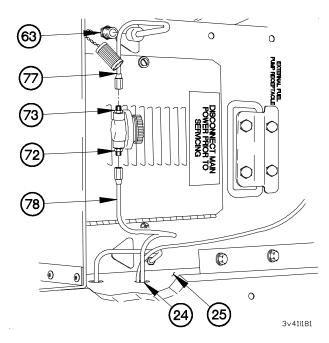
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (37) Apply sealing compound to threads of fittings (72 and 73).
- (38) Install fitting (72) in inlet port (74) of fuel regulator (75).
- (39) Install fitting (73) in outlet port (76) of fuel regulator (75).

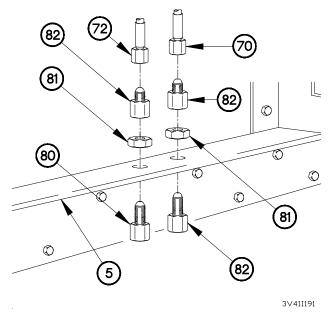


3∨41]171



- (40) Install fuel tube (77) on fuel inlet port (63).
- (41) Route fuel tube (78) through hole (24) in pod panel (25).
- (42) Install fuel tubes (77 and 78) on fittings (72 and 73).

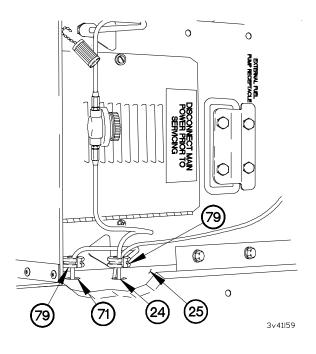
- (43) Cut grommets (79) prior to installation.
- (44) Install two grommets (79) in holes (24 and 71) on pod panel (25).



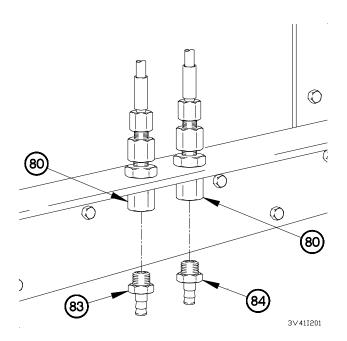


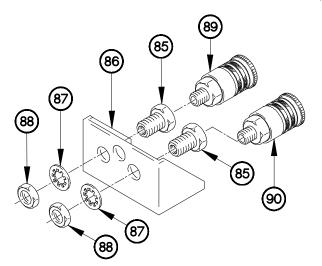
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (48) Apply sealing compound to threads of fittings (83 and 84).
- (49) Install fittings (83 and 84) on two fittings (80).

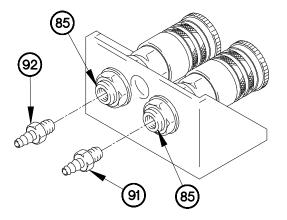


- (45) Install two fittings (80) on pod frame (5) with two nuts (81).
- (46) Install two adapters (82) on fittings (80).
- (47) Install fuel tubes (78 and 70) on two adapters (82).





3∨411211



(50) Install two bushings (85) on bracket (86) with two

(51) Install quick connect fittings (89 and 90) on two

lockwashers (87) and nuts (88).

bushings (85).

3V411221

WARNING

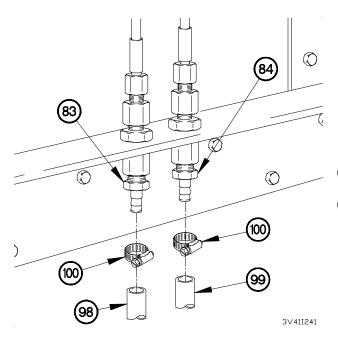
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (52) Apply sealing compound to threads of fittings (91 and 92).
- (53) Install fitting (91 and 92) in two bushings (85).

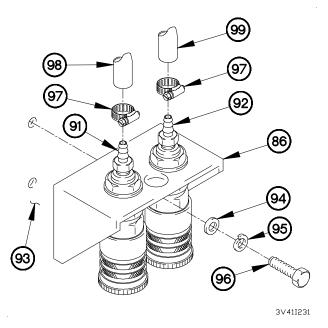
TM 9-2320-365-20-5

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

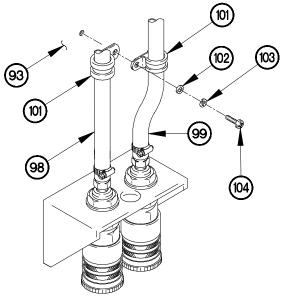
- (54) Install bracket (86) on outside front van body wall(93) with two washers (94), lockwashers (95), and screws (96).
- (55) Position two clamps (97) on hoses (98 and 99).
- (56) Install hoses (98 and 99) on fitting (91 and 92) with two clamps (97).



- (59) Position six clamps (101) on hoses (98 and 99).
- (60) Install six clamps (101) on outside front van body wall (93) with three washers (102), lockwashers (103), and screws (104).



- (57) Position two clamps (100) on hoses (98 and 99).
- (58) Install two hoses (98 and 99) on fittings (83 and 84) with two clamps (100).

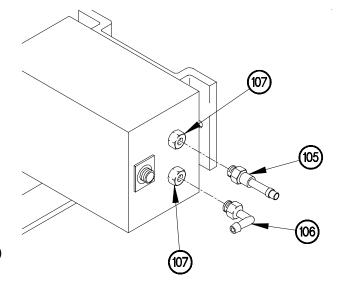


3V411251

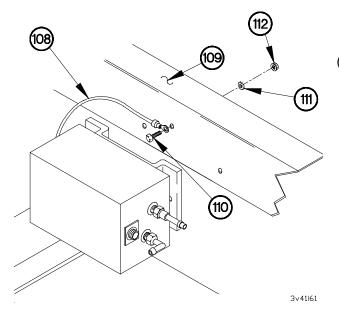
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To prevent injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (61) Apply sealing compound do threads of fitting (105) and 90 degree fitting (106).
- (62) Install fitting (105) and 90 degree fitting (106) in EMI shielded heater fuel pump couplings (107).

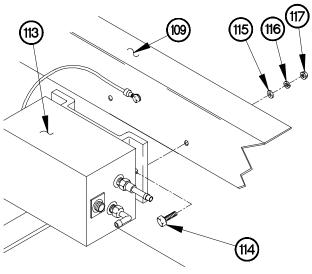


3v41i60



(64) Install EMI shielded fuel pump assembly (113) on sub frame (109) with two screws (114), washer (115), lockwasher (116), and nuts (117).

(63) Install EMI shielded fuel pump ground wire (108) to sub frame (109) with screw (110), washer (111), and locknut (112).



3v41i62

WARNING

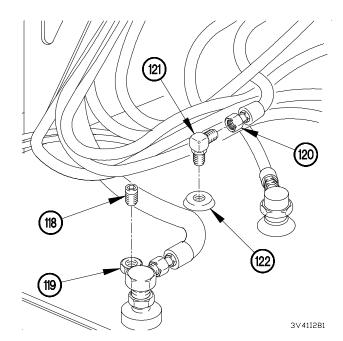
Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

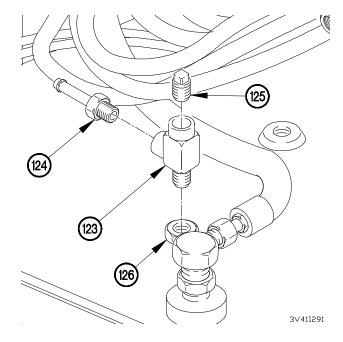
- (65) Remove plug (118) from auxiliary supply port (119).
- (66) Retain plug (118) for future use.

NOTE

Remove plastic cable ties as required.

- (67) Disconnect fuel hose (120) from 90-degree return fitting (121).
- (68) Remove 90-degree return fitting (121) from fuel tank (122).





WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To prevent injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

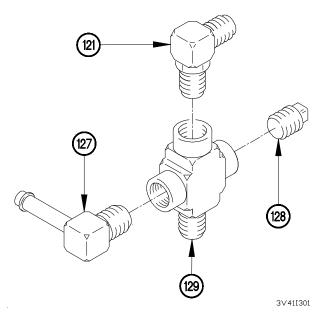
- (69) Apply sealing compound to threads of run tee fitting (123), fitting (124), and plug (125).
- (70) Install run tee fitting (123) in auxiliary supply port (126).
- (71) Install fitting (124) and plug (125) on run tee fitting

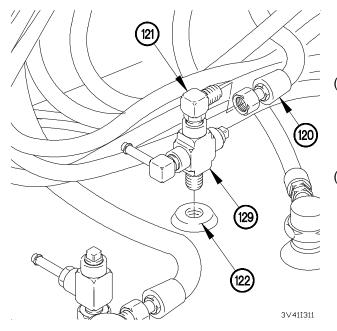
(123).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To prevent injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (72) Apply sealing compound to threads of 90-degree return fitting (127), 90-degree fitting (121), plug (128), and four-way fitting (129).
- (73) Install 90-degree return fitting (127), 90-degree fitting (121), and plug (128) on four-way fitting (129).





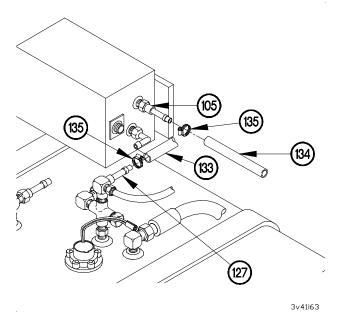
(74) Install four-way fitting (129) on fuel tank (122).

NOTE

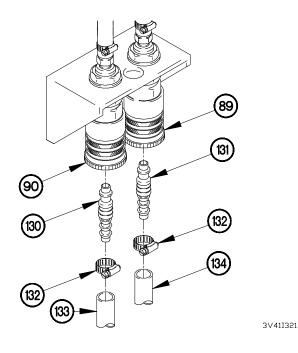
Install plastic cable ties as required.

(75) Connect fuel hose (120) to 90-degree return fitting (121).

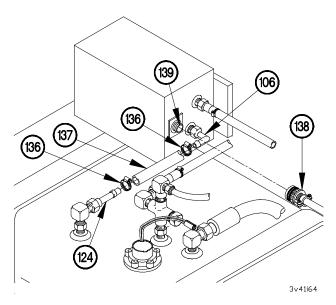
- (76) Connect fitting (130 and 131) to quick connect fittings (90 and 89).
- (77) Position two clamps (132) on hoses (133 and 134).
- (78) Install hoses (133 and 134) on fittings (130 and 131) with two clamps (132).

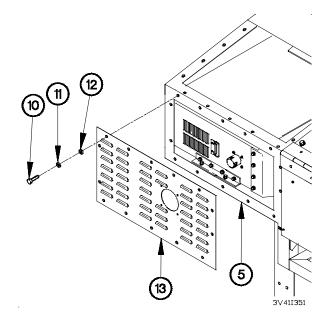


- (81) Position two clamps (136) on hose (137).
- (82) Install hose (137) on fittings (106 and 124) with two clamps (136).
- (83) Connect connector P310 (138) to heater fuel pump connector (139).



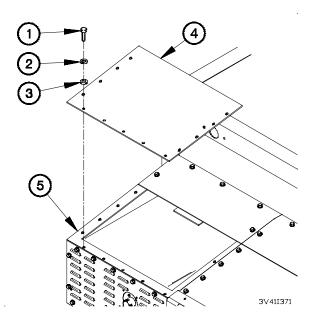
- (79) Position two clamps (135) on hoses (133 and 134).
- (80) Install hoses (133 and 134) on fittings (105 and 127) with two clamps (135).





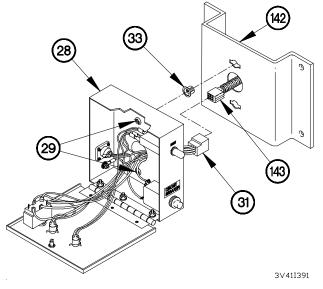
(84) Install curbside front panel (13) on pod frame (5) with 14 washers (12), lockwashers (11), and screws (10).

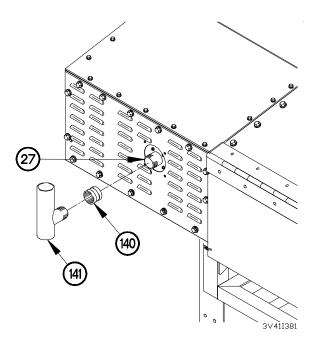
(85) Install curbside panel (9) on pod frame (5) with 13 washers (8), lockwashers (7), and screws (6).



(86) Install curbside top front panel (4) on pod frame (5) with 13 washers (3), lockwashers (2), and screws (1).

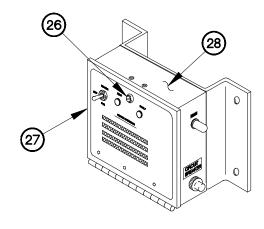
- (87) Install coupler (140) on heater (27).
- (88) Install exhaust pipe (141) on coupler (140).





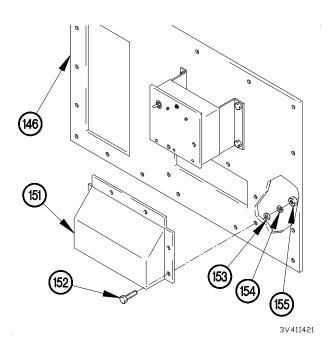
- (89) Install two twist locks (33) on bracket (142).
- (90) Position heater control unit (28) on bracket (142).
- (91) Latch two screws (29) on heater control unit (28).
- (92) Connect connector J4A (143) to connector P4 (31).

- (93) Close door (27) on heater control unit (28).
- (94) Latch screw (26) on door (27).



3∨41I401

- (95) Route heater control cable (144) through hole (145) in heater cover (146).
- (96) Install bracket (142) on heater cover (146) with four screws (147), washers (148), lockwashers (149), and nuts (150).

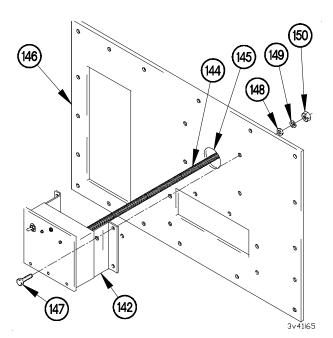


(98) Route heater power cable (156) through hole (145) in heater cover (146).

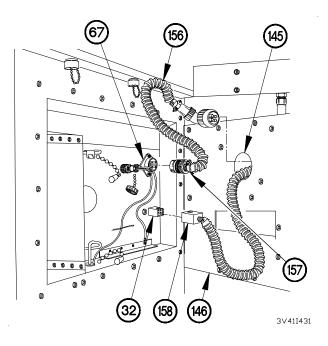
NOTE

Steps (99) and (100) require the aid of an assistant.

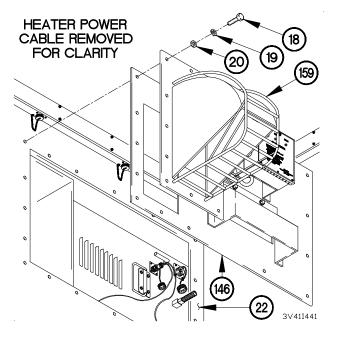
- (99) Connect connector J244A (157) to heater power connector (67).
- (100) Connect connector P4A (158) to connector J4 (32).



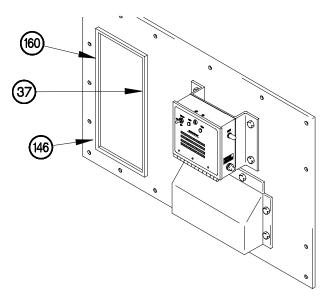
(97) Install hood (151) on heater cover (146) with six screws (152), washers (153), lockwashers (154), and nuts (155).



(101) Install heater cover (146) on inside front van body wall (22) with heater deflector (159), 18 washers (20), lockwashers (19), and screws (18).



- (102) Remove nine screws (18), lockwashers (19), washers (20), and heater deflector (159) from heater cover (146)

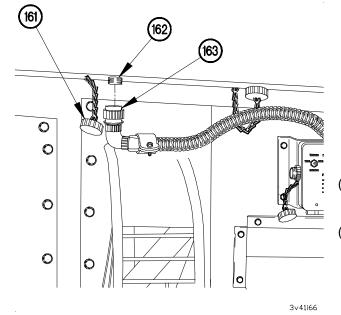


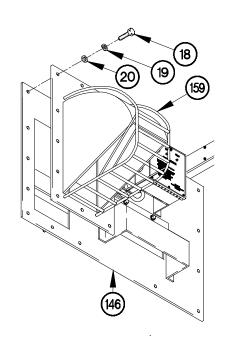
3v41i68

(103) Apply half the width of the silicone rubber sponge tape (160) to the inside edge of the heater duct (37) fold tape over to cover outside edge of heater cover (146).

3v41i67

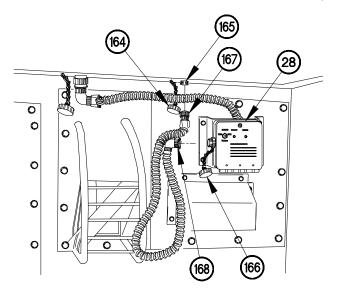
(104) Install heater deflector (159) with nine washers(20), lockwashers (19), and screws (18) on heater cover (146)





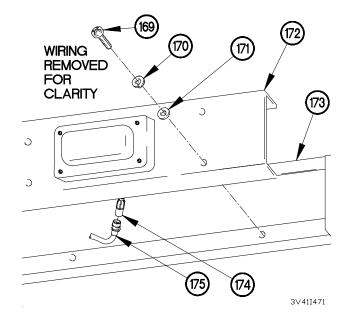
- 3v41i67
- (105) Remove dust cap (161) from heater connector (162).
- (106) Connect connector P244 (163) to heater connector (162).

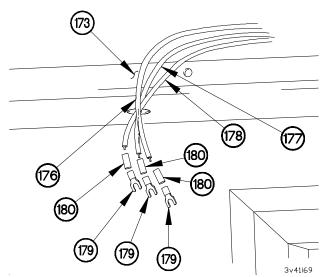
- (107) Remove dust cap (164) from thermostat connector (165).
- (108) Remove dust cap (166) from heater control unit (28).
- (109) Connect connector J245 (167) to thermostat connector (165).
- (110) Connect connector P245A (168) to heater control unit (28).



3∨41I461

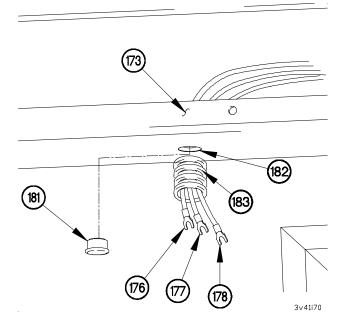
- (111) Remove 12 screws (169), lockwashers (170), washers (171), and cover (172) from raceway (173). Discard lockwashers.
- (112) Disconnect connector J165 (174) from connector P165 (175).

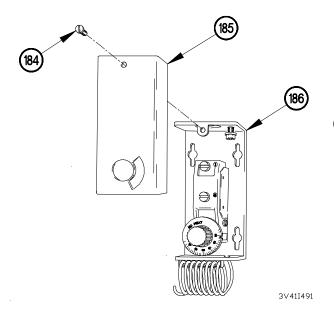




- (113) Remove wires 1499R (176), 3086C (177), and 401 (178) from raceway (173).
- (114) Strip insulation from wire 1499R (176), wire 3086C (177), and wire 401 (178) the depth of terminal well (178).
- (115) Slide insulator (180) over wires (176, 177, and 178).
- (116) Insert wire (176, 177, and 178) in terminal well (179).
- (117) Crimp terminal well (179) on wire (176, 177, and 178).
- (118) Slide insulator (180) over crimped terminal well (179).

- (119) Remove plug (181) from raceway (173).
- (120) Retain plug (181) for future use.
- (121) Route wire 1499R (176), wire 3086C (177), and wire 401 (178) through hole (182) in raceway (173).
- (122) Position convoluted tubing (183) over wires (176, 177, and 178).
- (123) Install convoluted tubing (183) in hole (182) in raceway (173).



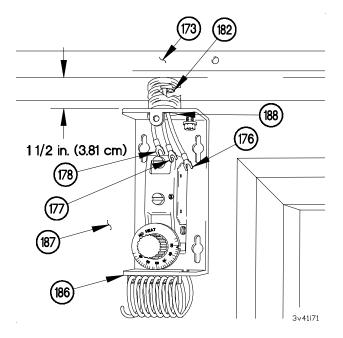


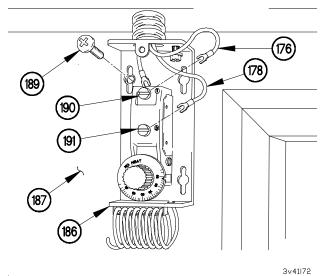
(119) Remove screw (184) and cover (185) from thermostat (186).

NOTE

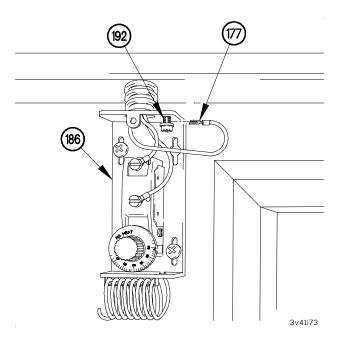
Steps (125) and (126) apply to initial installation.

- (125) Position thermostat (186) centered and 1 1/2 in.(3.81 cm) below hole (182) in raceway (173).
- (126) Match drill two holes in inside left van body wall (187).
- (127) Route wire 1499R (176), wire 3086C (177), and wire 401 (178) through hole (188) in thermostat (186).





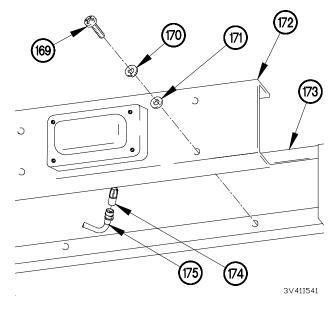
- (128) Install thermostat (186) on inside left van body wall (187) with two screws (189).
- (129) Loosen screws (190 and 191) on thermostat (186).
- (130) Position wire 1499R (176) and wire 401 (178) on thermostat (186).
- (131) Tighten screws (190 and 190) on thermostat (186).



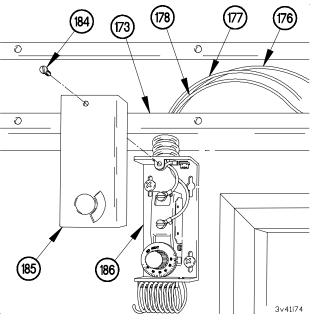
NOTE

Install plastic cable ties as required.

- (135) Pull slack from wire 1499R (176), wire 3086C (177) and wire 401 (178) into raceway (173) and secure in place.
- (136) Install cover (185) on thermostat (186) with screw (184).



- (132) Loosen screw (192) on thermostat (186).(133) Position wire 3086C (177) on thermostat (186).
- (134) Tighten screw (192) on thermostat (186).



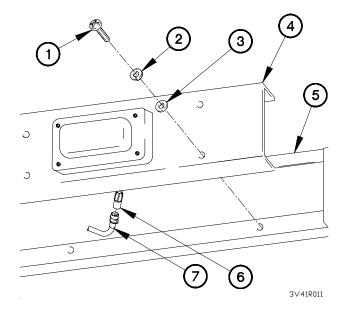
- (137) Connect connector J165 (174) to connector P165 (175).
- (138) Install cover (172) on raceway (173) with 12 washers (171), lockwashers (170), and screws (169).
- (139) Operate heater and check for proper operation (TM 9-2320-365-10).

b. Removal.

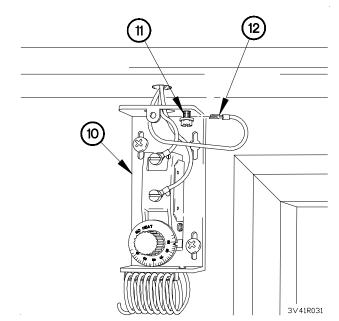
NOTE

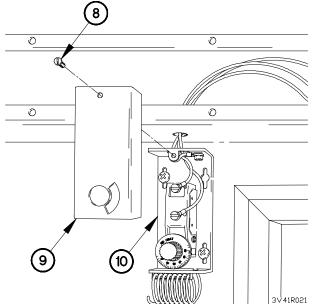
Store all removed parts in kit package.

- Remove 12 screws (1), lockwashers (2), washers (3), and cover (4) from raceway (5). Discard lockwashers.
- (2) Disconnect connector J165 (6) from connector P165 (7).



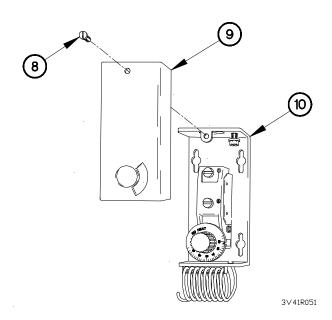
(3) Remove screw (8) and cover (9) from thermostat (10).

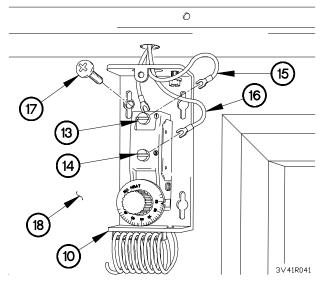




- (4) Loosen screw (11) on thermostat (10).
- (5) Remove wire 3086C (12) from thermostat (10).

- (6) Loosen screws (13 and 14) on thermostat (10).
- (7) Remove wire 1499R (15) and wire 401 (16) from thermostat (10).
- (8) Remove two screws (17) and thermostat (10) from inside left van body wall (18), and convoluted tubing (19).



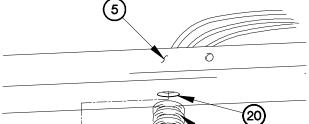


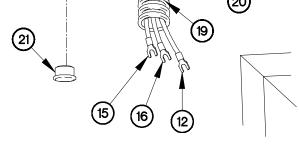
(9) Install cover (9) on thermostat (10) with screw (8).

NOTE

Remove plastic cable ties as required.

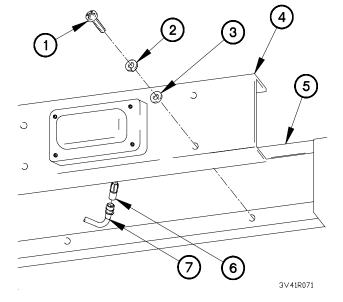
- (10) Pull wire 1499R (15), wire 3086C (12), and wire 401 (16) into raceway (5).
- (11) Remove convoluted tubing (19) from raceway hole (20).
- (12) Install plug (21) on raceway (5).



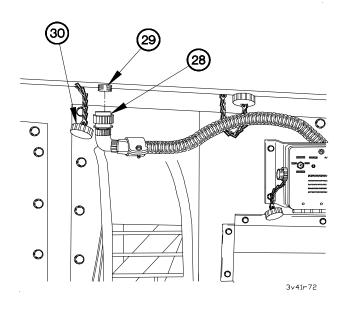


3v41r71

- (13) Connect connector J165 (6) to connector P165 (7).
- (14) Install cover (4) on raceway (5) with 12 washers (3), lockwashers (2), and screws (1).



- (15) Disconnect connector P245A (22) from heater control unit (23).
- (16) Disconnect connector J245 (24) from thermostat connector (25).
- (17) Install dust cap (26) on heater control unit (23).
- (18) Install dust cap (27) on thermostat connector (25).

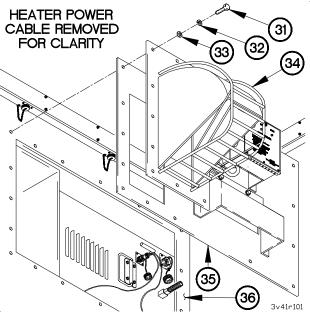


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3v41r081

- (19) Disconnect connect P244 (28) from heater connector (29).
- (20) Install dust cap (30) on heater connector (29).

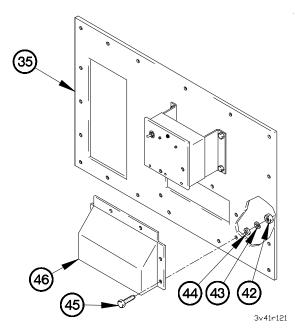
(21) Remove 18 screws (31), lockwashers (32), washers (33), heater deflector (34), and heater cover (35) from inside front van body wall (36). Discard lockwashers.

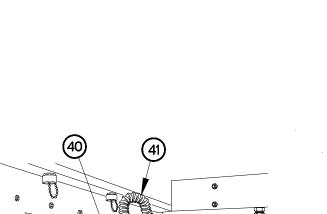


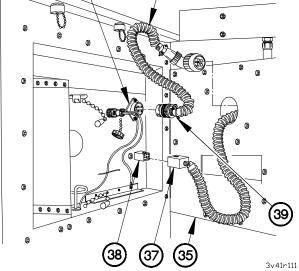
NOTE

Tag connectors and connection points prior to disconnecting.

- (22) Disconnect connect P4A (37) from connector J4 (38).
- (23) Disconnect connector J244A (39) from heater power cable connector (40).
- (24) Remove heater power cable (41) from heater cover (35).







(25) Remove six nuts (42), lockwashers (43), washers (44), screws (45), and hood (46) from heater cover (35).

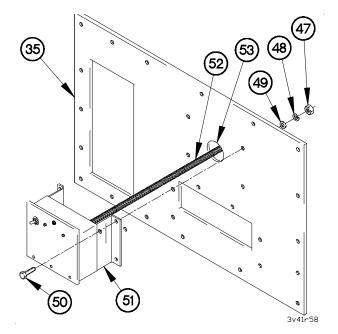
Change 2

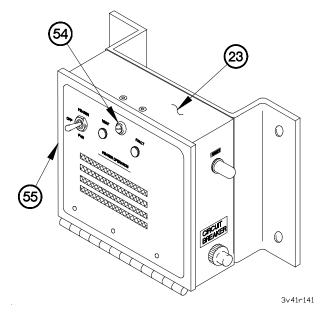
20-209

TM 9-2320-365-20-5

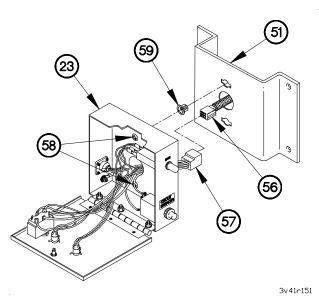
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

- (26) Remove four nuts (47), lockwashers (48), washers (49), screws (50), and bracket (51) from heater cover (35).
- (27) Route heater control cable (52) through hole (53) in heater cover (35).



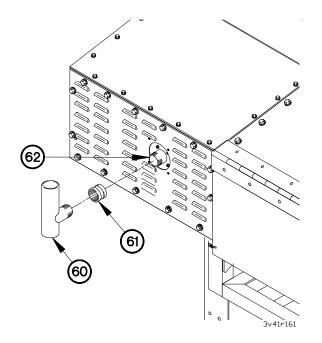


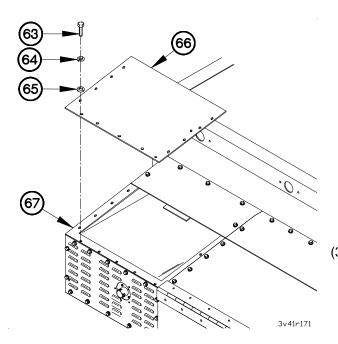
- (28) Unlatch screw (54) on door (55).
- (29) Open door (55) on heater control unit (23).



- (30) Disconnect connector J4A (56) from connector P4 (57).
- (31) Unlatch two screws (58) on heater control unit (23).
- (32) Remove heater control unit (23) from bracket (51).
- (33) Remove two twist locks (59) from bracket (51).

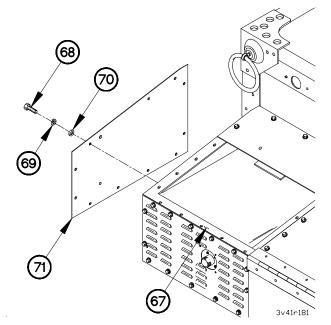
- (34) Remove exhaust pipe (60) from coupler (61).
- (35) Remove coupler (61) from heater (62).



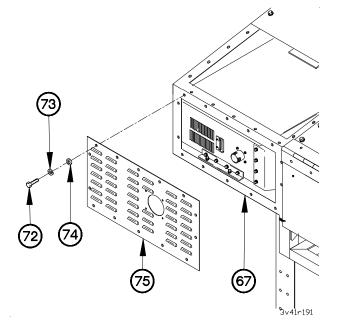


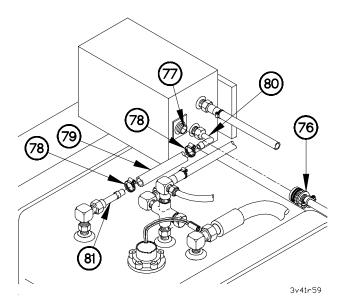
(36) Remove 13 screws (63), lockwashers (64), washers (65), and curbside top front panel (66) from pod frame (67). Discard lockwashers.

(37) Remove 13 screws (68), lockwashers (69), washers (70), and curbside panel (71) from pod frame (67). Discard lockwashers.



(38) Remove 14 screws (72), lockwashers (73), washers (74), and curbside front panel (75) from pod frame (67). Discard lockwashers.





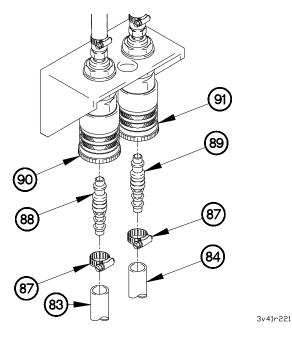
(39) Disconnect heater fuel pump connector (76) from connector P310 (77).

WARNING

Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

- (40) Loosen two clamps (78) on hose (79).
- (41) Remove hose (79) and two clamps (78) from fittings (80 and 81).

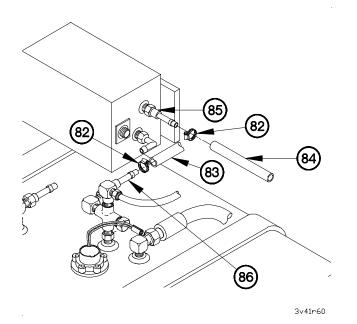
- (42) Loosen two clamps (82) on hoses (83 and 84).
- (43) Remove hoses (83 and 84) and two clamps (82) from fitting (85 and 86).



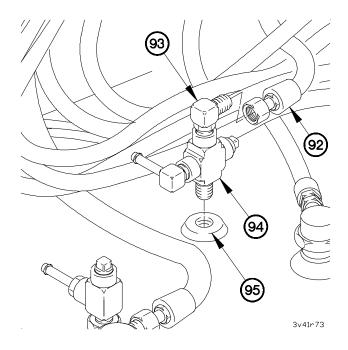
NOTE

Remove plastic cable ties as required.

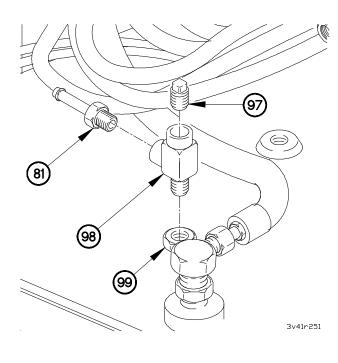
- (47) Disconnect fuel hose (92) from 90-degree return fitting (93).
- (48) Remove four-way fitting (94) from fuel tank (95).

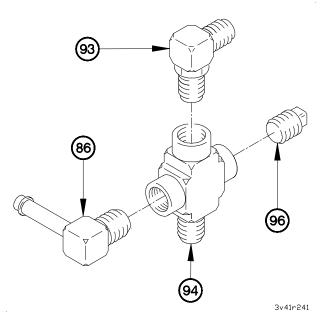


- (44) Loosen two clamps (87) on hoses (83 and 84).
- (45) Remove hoses (83 and 84) and two clamps (87) from fittings (88 and 89).
- (46) Disconnect fittings (88 and 89) from quick connect fittings (90 and 91).

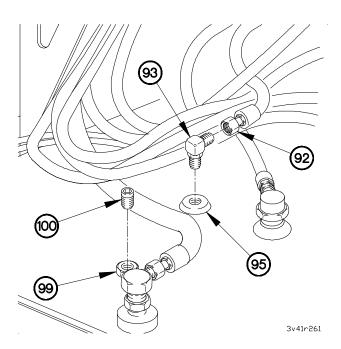


(49) Remove 90-degree return fitting (93), 90-degree fitting (86), and plug (96) from four-way fitting (94).





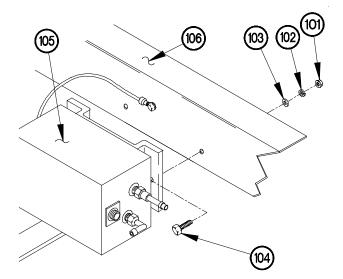
- (50) Remove fitting (81) and plug (97) from run tee fitting (98).
- (51) Remove run tee fitting (98) from auxiliary supply port (99).



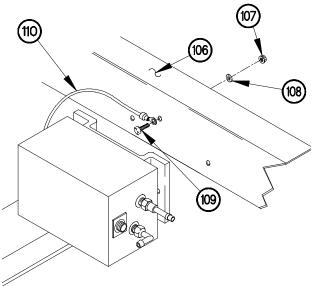


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (52) Apply sealing compound to threads of 90-degree return fitting (93) and plug (100).
- (53) Install 90-degree return fitting (93) on fuel tank (95).
- (54) Connect fuel hose (92) to 90-degree return fitting (93).
- (55) Install plug (100) in auxiliary supply port (99).



3v41r61



NOTE

Step (56) requires the aid of an assistant.

washers (103), screws (104), and EMI Shielded fuel pump assembly (105) from sub-frame (106).

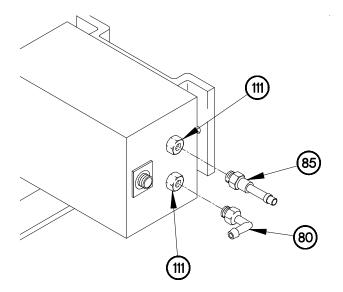
(56) Remove two nuts (101), lockwashers (102),

Discard lockwashers.

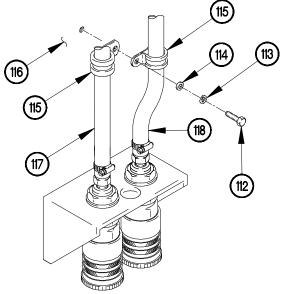
(57) Remove locknut (107), washer (108), screw (109), and EMI shielded fuel pump ground wire (110) from sub frame (106).

3v41r62

(58) Remove fittings (85) and 90-degree fitting (80) from EMI shielded fuel pump couplings (111).

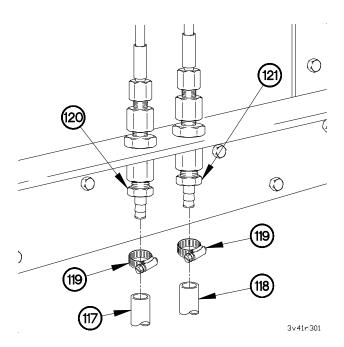


3v41r63

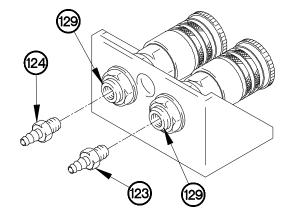


- (59) Remove three screws (112), lockwashers (113), washers (114), and six clamps (115) from outside front van body wall (116). Discard lockwashers.
- (60) Remove six clamps (115) from hoses (117 and 118).

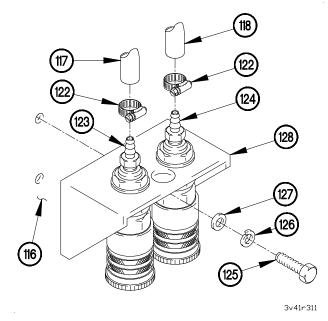
3v41r291



- (63) Loosen two clamps (122) on hoses (117 and 118).
- (64) Remove hoses (117 and 118) and clamps (122) from fittings (123 and 124).
- (65) Remove two screws (125), lockwashers (126), washers (127), and bracket (128) from outside front van body wall (116).



3v41r321



(66) Remove fittings (123 and 124) from two bushings

(129).

- (61) Loosen two clamps (119) on hoses (117 and 118).
- (62) Remove hoses (117 and 118) and clamps (119) from fittings (120 and 121).

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- (67) Remove quick connect fittings (130 and 131) from two bushings (129).
- (68) Remove two nuts (132), lockwashers (133), and bushings (129) from bracket (128). Discard lockwashers.

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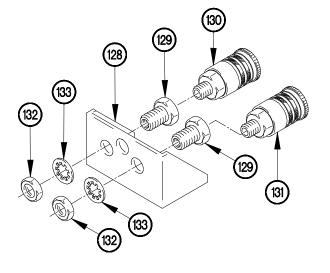
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3v41r341

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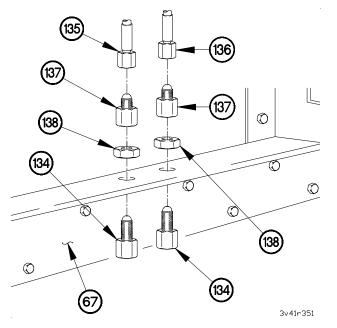
121



3v41r331

(69) Remove fitting (120 and 121) from two fittings (134).

- (70) Remove fuel tubes (135 and 136) from two
- (71) Remove two adapters (137) from fittings (134).
- (72) Remove two nuts (138) and fittings (134) from pod frame (67).



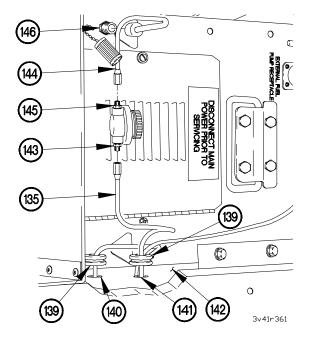
134

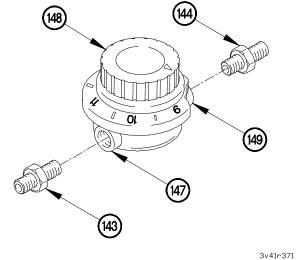
)

(120)

adapters (137).

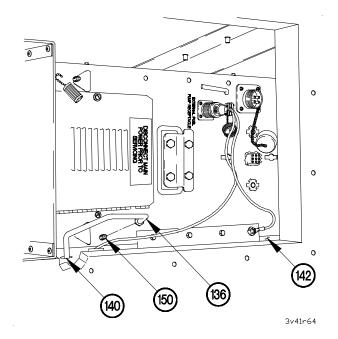
- (73) Remove two grommets (139) from holes (140 and 141) pod panel (142).
- (74) Remove fuel tube (135) from fitting (143).
- (75) Remove fuel tube (144) from fitting (145).
- (76) Remove fuel tube (135) from pod panel (142).
- (77) Remove fuel tube (144) from fuel inlet port (146).



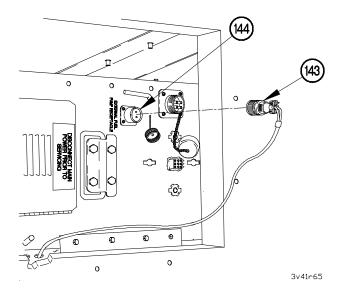


- (80) Remove fuel tube (136) from fuel overflow port (150).
- (81) Remove fuel tube (136) from hole (140) in pod panel (142).

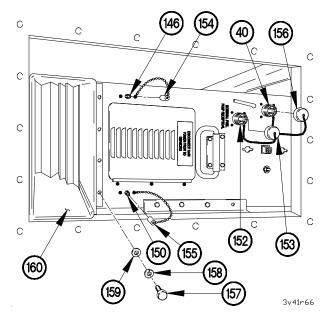
- (78) Remove fitting (143) from outlet port (147) of fuel regulator (148).
- (79) Remove fitting (144) from inlet port (149) of fuel regulator (148).



(82) Disconnect connector J314 (151) from heater fuel pump power cable connector (152).



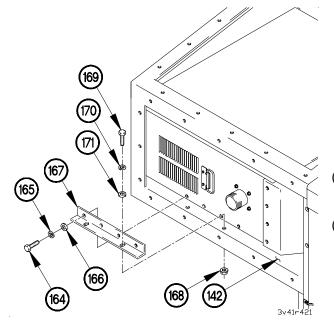
- (83) Install dust cap (153) on heater fuel pump power cable connector (152).
- (84) Install dust cap (154) on fuel inlet port (146).
- (85) Install dust cap (155) on fuel overflow port (150).
- (86) Install dust cap (156) on heater power cable connector (40).
- (87) Remove four screws (157), lockwashers (158), and washers (159) from heater duct (160). Discard lockwashers.



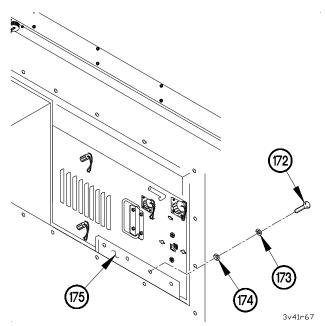
NOTE

Steps (88) through (94) require the aid of an assistant.

(88) Remove four screws (161), lockwashers (162), and washers (163) from heater duct (160). Discard lockwashers.



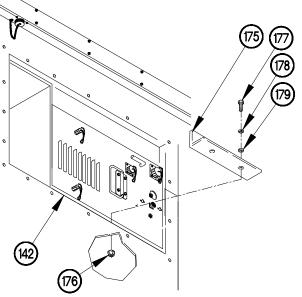
- (89) Remove four screws (164), lockwashers (165), and washers (166) from bracket (167).
- (90) Remove two self-locking nuts (168), screws (169), lockwashers (170), washers (171), and bracket (167) from pod panel (142).



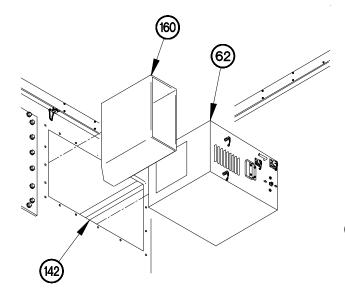
(91) Remove four screws (172), lockwashers (173), and washers (174) from bracket (175).

20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

 (92) Remove two self-locking nuts (176), screws (177), lockwashers (178), washers (179), and bracket (175) from pod panel (142).



3v41r68



- (95) Install two twist locks (59) on heater (62).
- (96) Position heater control unit (23) on heater (62).

3v41r69

- (97) Latch two screws (58) on heater control unit (23).
- (98) Connect connector P4 (57) to connector J4 (38).

(93) Remove heater duct (160) from pod panel (142).

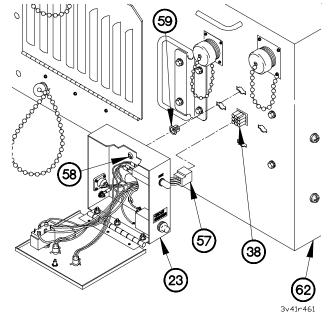


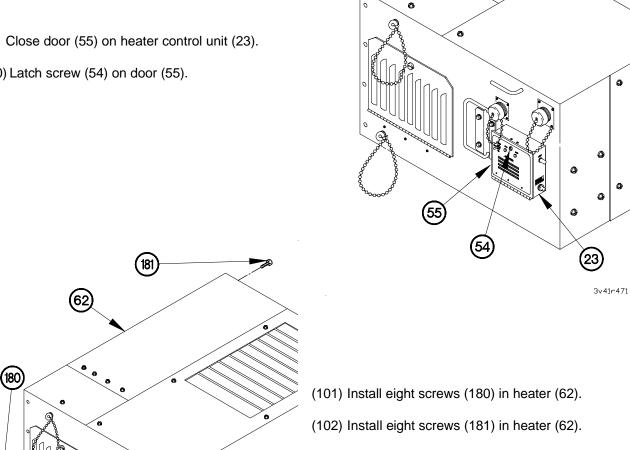
Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

CAUTION

Use caution when installing heater. Heater fuel pump power cable installed. Failure to comply may cause damage to equipment.

(94) Remove heater (62) from pod panel (142).





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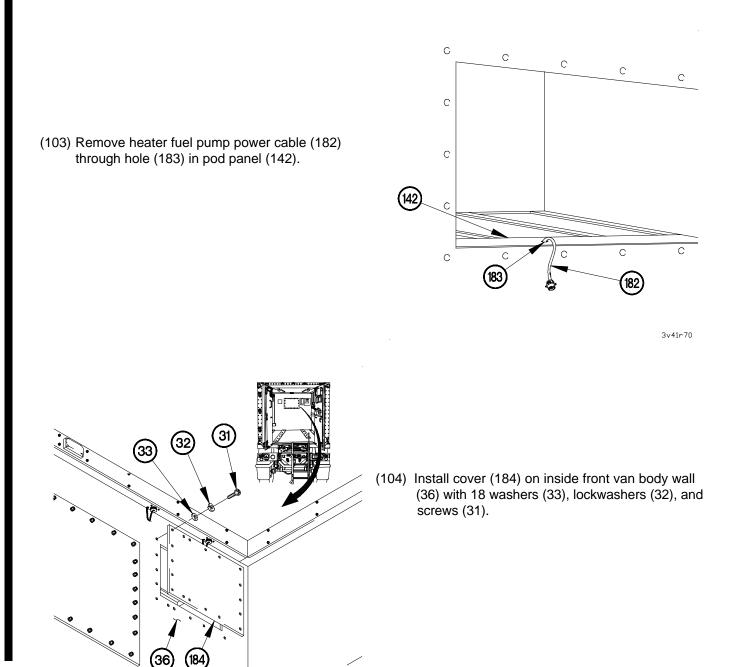
3v41r481

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(99) Close door (55) on heater control unit (23).

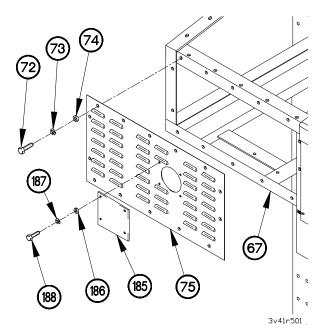
(100) Latch screw (54) on door (55).

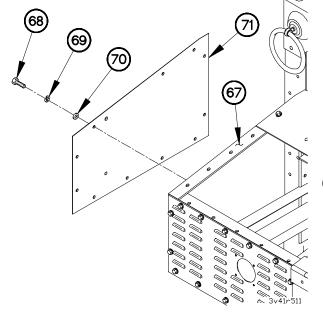
20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)



3v41r491

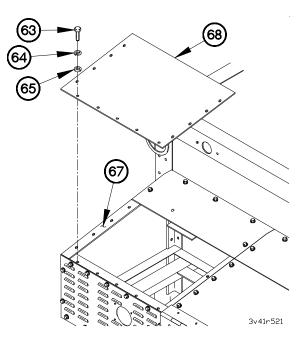
- (105) Install cover plate (185) on curbside front panel(75) with four washers (186), lockwasher (187), and screws (188).
- (106) Install curbside front panel (75) on pod frame (67) with 14 washers (74), lockwasher (73), and screws (72).





(108) Install curbside top front panel (68) on pod frame (67) with 13 washers (65), lockwashers (64), and screws (63).

(107) Install curbside panel (71) on pod frame (67) with 13 washers (70), lockwashers (69), and screws (68).



20-41. M1079 HEATER KIT INSTALLATION/REMOVAL (CONT)

c. Follow-on Maintenance.

- (1) Raise spare tire (TM 9-2320-365-10).
- (2) Lower cab (TM 9-2320-365-10).
- (3) Connect AC power (TM 9-2320-365-10).
- (4) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-42. M1079 HEATER POWER CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

NOTE

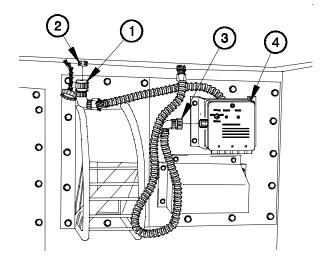
Tag connectors and connection points prior to removal.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).

c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Lockwasher (18) (Item 84, Appendix G)

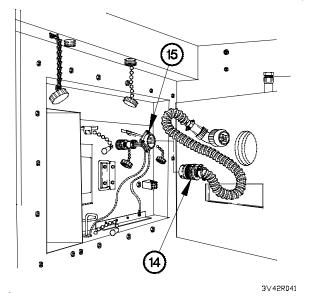


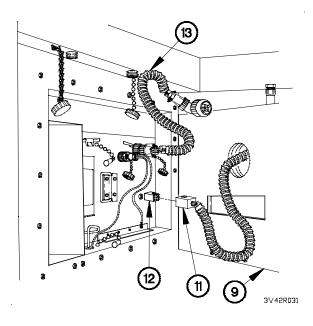
3V42R011

- (3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8), and heater cover (9) from van body wall (10). Discard lockwashers.

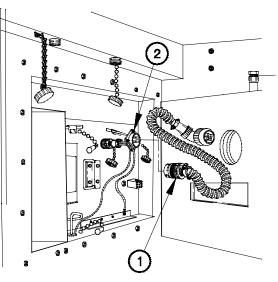
20-42. M1079 HEATER POWER CABLE REPLACEMENT (CONT)

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).





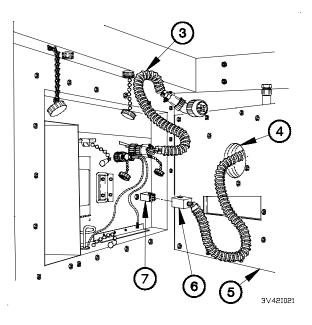
(6) Disconnect connector J244A (14) from heater power connector (15).



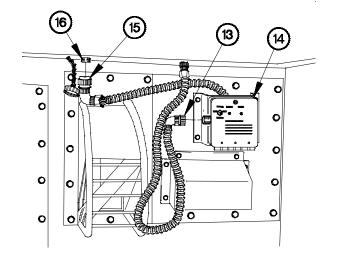
b. Installation.

 Connect connector J244A (1) to heater power connector (2).

3V42I011

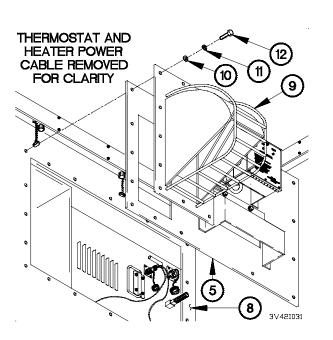


(4) Install heater cover (5) on van body wall (8) with heater deflector (9), 18 washers (10), lockwashers (11), and screws (12).



3V42I041

- (2) Route heater power cable (3) through hole (4) in heater cover (5).
- (3) Connect connector P4A (6) to connector J4 (7).



- (5) Connect connector P245A (13) to heater control unit (14).
- (6) Connect connector P244 (15) to heater connector (16).

20-42. M1079 HEATER POWER CABLE REPLACEMENT (CONT)

c. Follow-on Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-43. M1079 HEATER CONTROL CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

NOTE

Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).

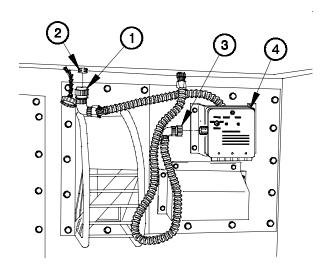
c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Lockwasher (18) (Item 92, Appendix G)

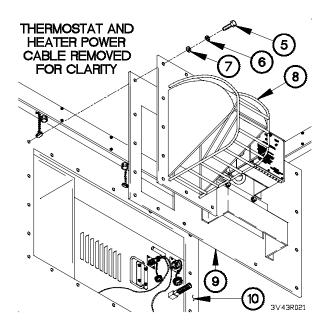
Personnel Required

(2)



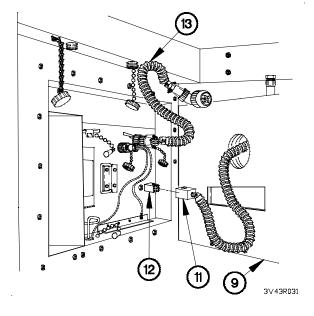
3V43R011

(3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8), and heater cover (9) from van body wall (10). Discard lockwashers.



20-43. M1079 HEATER CONTROL CABLE REPLACEMENT (CONT)

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).

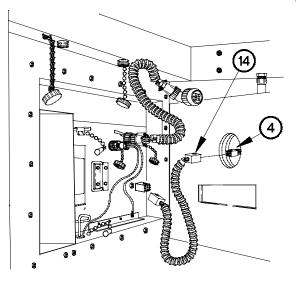


(6) Disconnect connector J4A (14) from connector P4 (4).

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3V43R041



(1) Connect connector J4A (1) to connector P4 (2).

3V43I011

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(2) Route heater power cable (3) through hole (4) in heater cover (5).

(12)

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[11]

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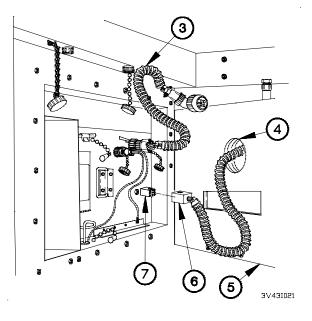
(3) Connect connector P4A (6) to connector J4 (7).

THERMOSTAT AND

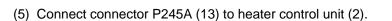
HEATER POWER

CABLE REMOVED

FOR CLARITY



(4) Install heater cover (5) on van body wall (8) with heater deflector (9), 18 washers (10), lockwasher (11), and screws (12).



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3V43I031

(6) Connect connector P244 (15) to heater connector (16).

16 15 [13] 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Ô 0 0 0

3V43I041

20-43. M1079 HEATER CONTROL CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH van doors (TM 9-2320-365-10).

End of Task.

20-44. M1079 HEATER THERMOSTAT REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

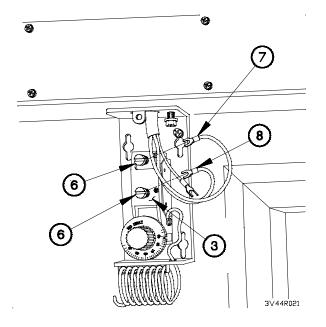
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

NOTE

Tag wires and connection points prior to removal.

- (1) Remove screw (1) and cover (2) from thermostat (3).
- (2) Loosen screw (4) on thermostat (3).
- (3) Remove wire 3086C (5) from thermostat (3).



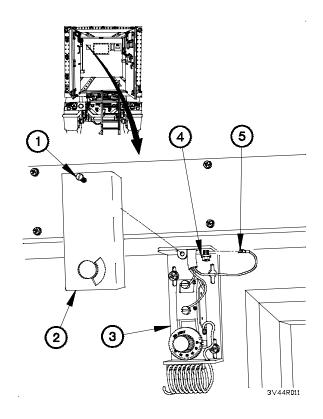
c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

References

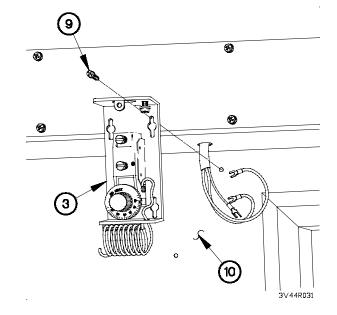
TM 5-4520-253-23P



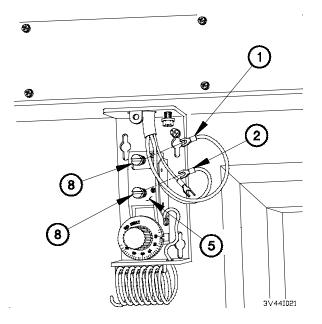
- (4) Loosen two screws (6) on thermostat (3).
- (5) Remove wire 1499R (7) and wire 401 (8) from thermostat (3).

20-44. M1079 HEATER THERMOSTAT REPLACEMENT (CONT)

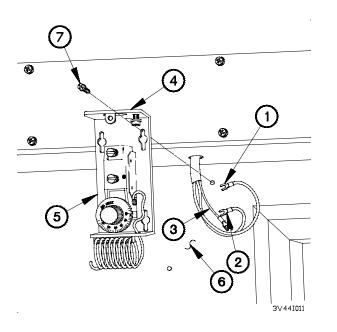
(6) Remove two screws (9) and thermostat (3) from van body wall (10).



- (1) Route wire 1499R (1), wire 401 (2), and wire 3086C (3) through hole (4) on thermostat (5).
- (2) Install thermostat (5) on van body wall (6) with two screws (7).



b. Installation.



- (3) Loosen two screws (8) on thermostat (5).
- (4) Position wire 401 (2) and wire 1499R (1) on thermostat (5).
- (4) Tighten two screws (8) on thermostat (5).

- (6) Loosen screw (9) on thermostat (5).
- (7) Position wire 3086C (3) on thermostat (5).
- (8) Tighten screw (9) on thermostat (5).
- (9) Install cover (10) on thermostat (5) with screw (11).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check thermostat for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-45. M1079 HEATER THERMOSTAT CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

NOTE

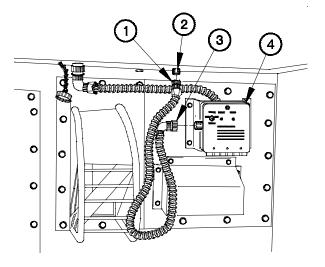
Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector J245 (1) from thermostat connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).

c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)



b. Installation

- (1) Connect connector P245A (3) to heater control unit (4).
- (2) Connect connector J245 (1) to thermostat connector (2).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check thermostat for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

3V45X011

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10). Spare tire lowered (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

NOTE

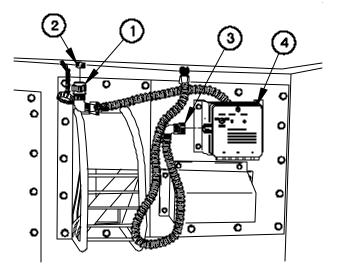
Tag connector and connection points prior to disconnecting.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).

c. Follow-On Maintenance

Materials/Parts

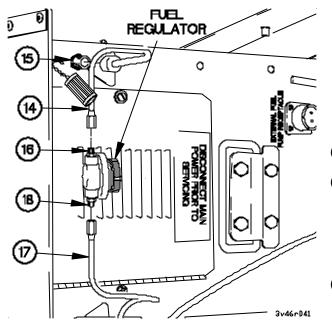
Sealant, Pipe, Teflon (Item 58, Appendix D) Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Lockwasher (18) (Item 84, Appendix G) Lockwasher (3) (Item 83, Appendix G) Ties, Cable, Plastic (Item 76, Appendix D)



3V46R011

- HERMOSTAT AND HEATER POWER CABLE REMOVED FOR CLARITY
- Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8), and heater cover (9) from van body wall (10). Discard lockwashers.

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).



WARNING

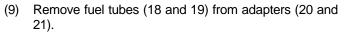
Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

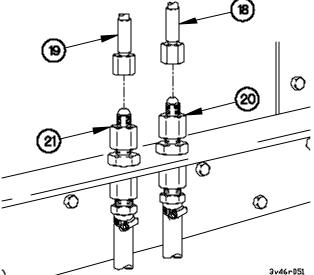
- (6) Remove fuel tube (14) from fuel inlet port (15).
- (7) Remove fuel tube (14) from fitting (16).

NOTE

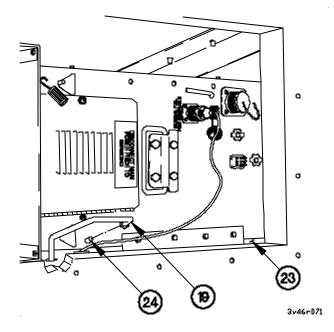
Note position of fuel regulator prior to removal.

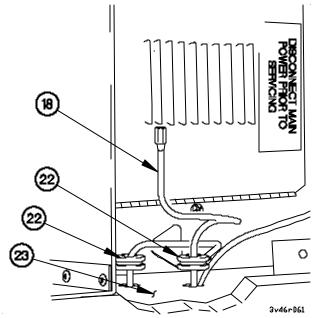
(8) Remove fuel tube (17) from fitting (18).





- (10) Remove two grommets (22) from pod panel (23).
- (11) Remove fuel tube (18) from pod panel (23).



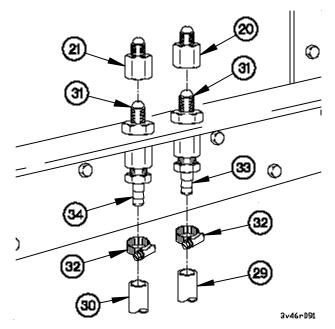


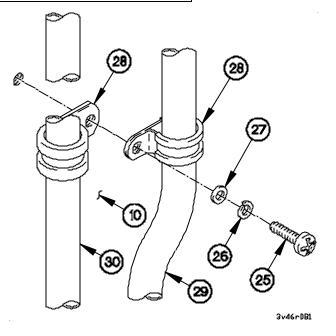
- (12) Remove fuel tube (19) from fuel overflow port (24).
- (13) Remove fuel tube (19) from pod panel (23).

NOTE

Remove plastic cable ties as required.

- (14) Remove three screws (25), lockwashers (26), washers (27), and six clamps (28) from van body wall (10). Discard lockwashers.
- (15) Remove six clamps (28) from hoses (29 and 30).



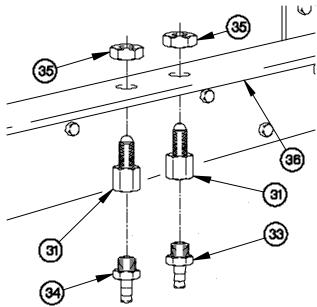


(16) Remove adapters (20 and 21) from two fittings (31).

NOTE

Tag hoses and connection point prior to disconnecting.

- (17) Loosen two clamps (32) on hoses (29 and 30).
- (18) Remove hoses (29 and 30) and two clamps (32) from fittings (33 and 34).



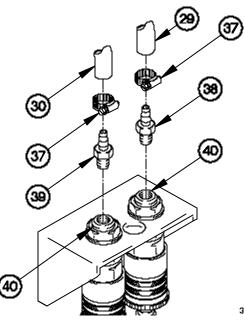
- (19) Remove fittings (33 and 34) from two fittings (31).
- (20) Remove two nuts (35) and fittings (31) from pod frame (36).

3v46r101

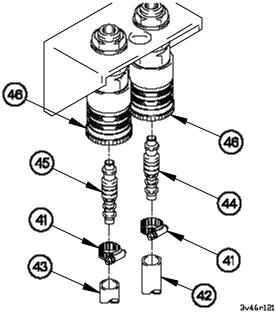
NOTE

Remove plastic cable ties as required.

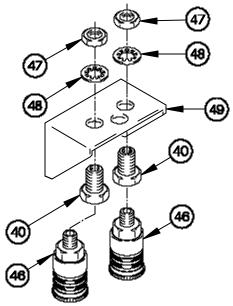
- (21) Loosen clamps (37) on hoses (29 and 30).
- (22) Remove hoses (29 and 30) and two clamps (37) from fittings (38 and 39).
- (23) Remove fittings (38 and 39) from two bushings (40).



3v46r111



- (24) Loosen two clamps (41) on hoses (42 and 43).
- (25) Remove hoses (42 and 43) and two clamps (41) from fittings (44 and 45).
- (26) Disconnect fitting (44 and 45) from two quick connect fittings (46).

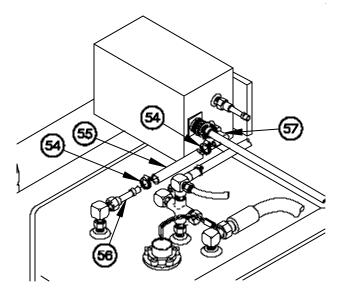


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nungs (+0).

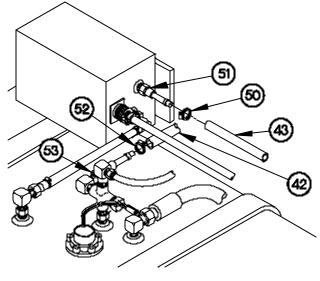
- (27) Remove two quick disconnect fittings (46) from bushings (40).
- (28) Remove two nuts (47), washers (48), and bushings(40) from bracket (49).

- (29) Loosen clamp (50) on hose (43).
- (30) Remove hose (43) and clamp (50) from fitting (51).
- (31) Loosen clamp (52) on hose (42).
- (32) Remove hose (42) and clamp (52) from 90-degree fitting (53).



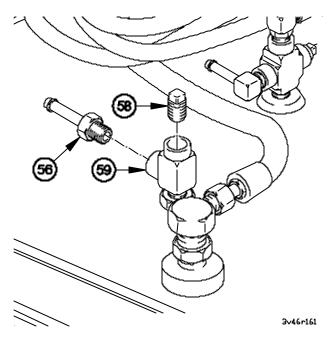


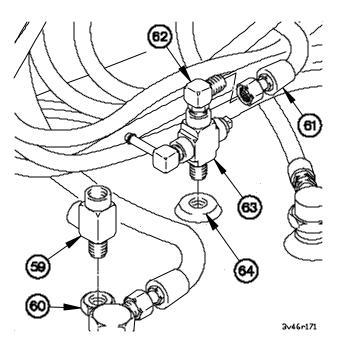
(35) Remove fitting (56) and plug (58) from run tee fitting (59).



3v46r141

- (33) Loosen two clamps (54) on hose (55).
- (34) Remove hose (55) and two clamps (54) from fittings (56 and 57).

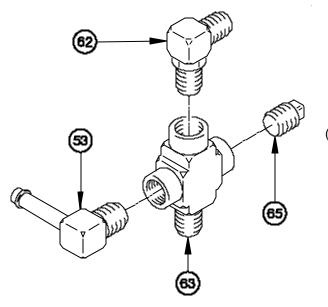




NOTE

Note position of fitting prior to removal.

- (36) Remove run tee fitting (59) from auxiliary supply port (60).
- (37) Disconnect fuel hose (61) from 90-degree fuel return fitting (62).
- (38) Remove four-way fitting (63) from fuel tank (64).



(39) Remove plug (65), 90-degree fitting (53), and 90degree fuel return fitting (62) from four way fitting (63).

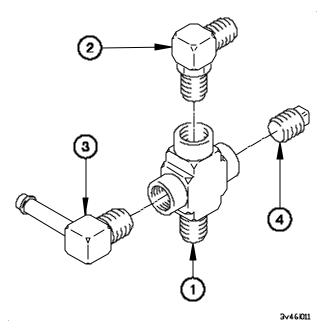
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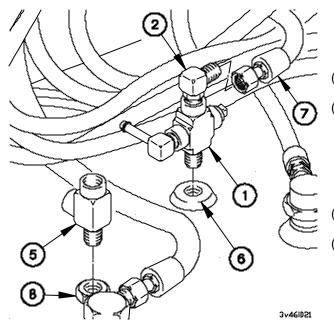
b. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- Apply sealing compound to four-way fitting (1), 90degree fuel return (2), 90-degree fitting (3), and plug (4).
- (2) Install 90-degree fuel return fitting (2), 90-degree fitting (3), and plug (4) on four-way fitting (1).





- (3) Apply sealing compound to run tee fitting (5).
- (4) Install four-way fitting (1) on fuel tank (6).

NOTE

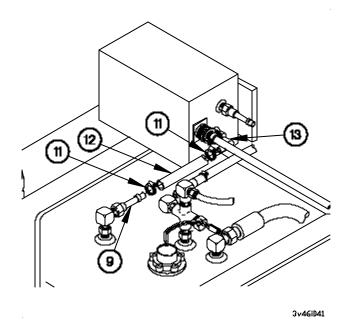
Install plastic cable ties as required.

- (5) Connect fuel hose (7) to 90-degree return fitting (2).
- (6) Install run tee fitting (5) in auxiliary supply port (8).

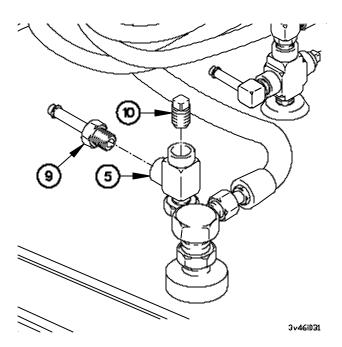
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in iniury to personnel.

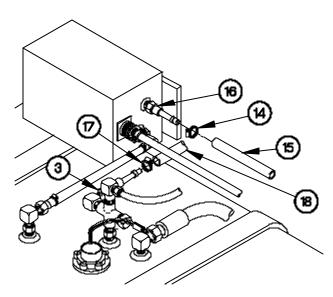
- (7) Apply sealing compound to threads of fitting (9) and plug (10).
- (8) Install fitting (9) and plug (10) on run tee fitting (5).



- (11) Position clamp (14) on hose (15).
- (12) Install hose (15) on fitting (16) with clamp (14).
- (13) Position clamp (17) on hose (18).
- (14) Install hose (18) on 90-degree fitting (3) with clamp (17).

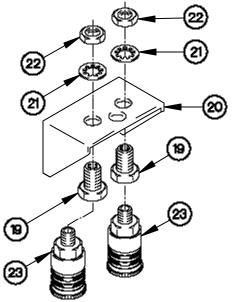


- (9) Position two clamps (11) on hose (12).
- (10) Install hose (12) on 90 degree fitting (13) and fitting (9) with two clamps (11).

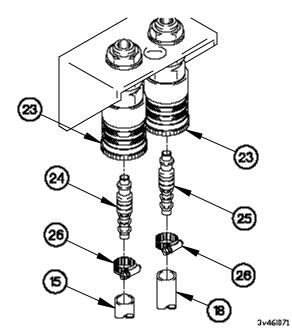


3v46iD51

- (15) Install two bushings (19) on bracket (20) with two washers (21) and nuts (22).
- (16) Install two quick disconnect fittings (23) on bushings (19).



3v46iD61

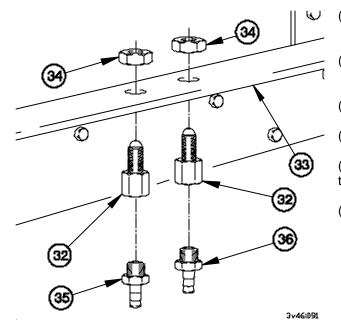


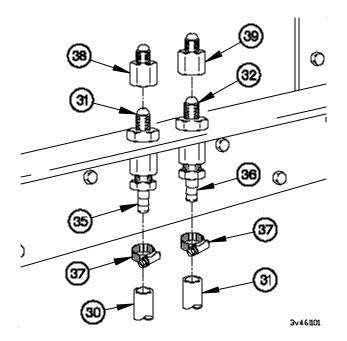
- (17) Connect fittings (24 and 25) to two quick connect fittings (23).
- (18) Position two clamps (26) on hoses (15 and 18).
- (19) Install hoses (15 and 18) on fittings (24 and 25) with two clamps (26).

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (20) Apply sealing compound to threads of fittings (27 and 28).
- (21) Install fittings (27 and 28) on two bushings (19).
- (22) Position two clamps (29) on hoses (30 and 31).
- (23) Install hoses (30 and 31) on fittings (27 and 28) with two clamps (29).





- (24) Install two fittings (32) on pod frame (33) with two nuts (34).
- (25) Apply sealing compounds to threads of fittings (35 and 36).
- (26) Install fittings (35 and 36) on two fittings (32).
- (27) Position two clamps (37) on hoses (30 and 31).

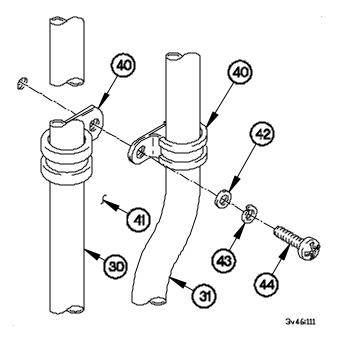
(28) Install hoses (30 and 31) on fittings (35 and 36) with two clamps (37).

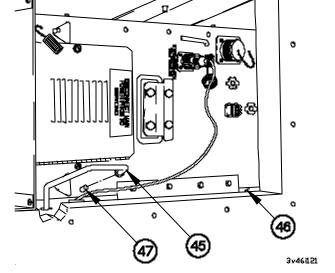
(29) Install adapters (38 and 39) on two fittings (32).

NOTE

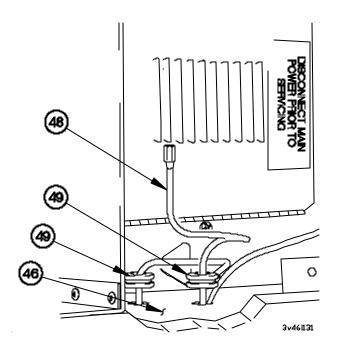
Install plastic cable ties as required.

- (30) Position six clamps (40) on hoses (30 and 31).
- (31) Install six clamps (40) on van body wall (41) with three washers (42), lockwashers (43), and screws (44).





- (32) Position fuel tube (45) on pod panel (46).
- (33) Install fuel tube (45) on fuel overflow port (47).



- (34) Position fuel tube (48) in hole on pod panel (46).
- (35) Install two grommets (49) in holes on pod panel (46).

(36) Install fuel tubes (45 and 48) on adapters (38 and 39).

FUEL

REGULATOR

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3v46i151

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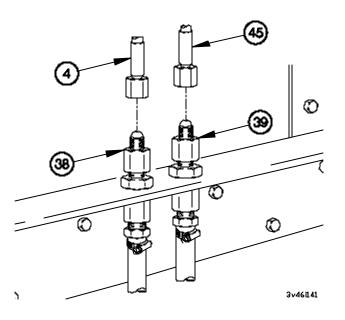
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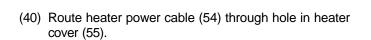
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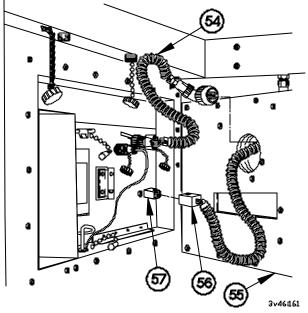
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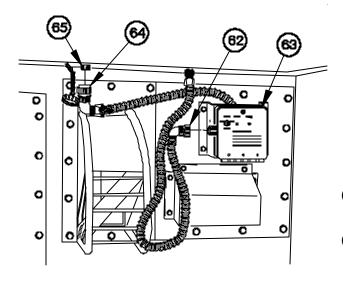
- (37) Install fuel tube (48) on fitting (50).
- (38) Install fuel tube (51) on fitting (52).
- (39) Install fuel tube (51) on fuel inlet port (53).

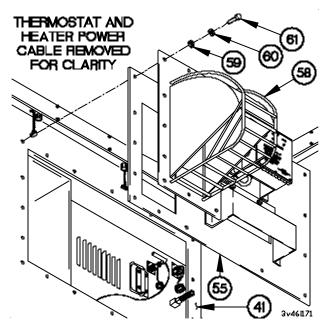


(41) Connect connector P4A (56) to connector J4 (57).



(42) Install heater cover (55) and heater deflector (58) on van body wall (41) with 18 washers (59), lockwashers (60), and screws (61).





- (43) Connect connector P245A (62) to heater control unit (63).
- (44) Connect connector P244 (64) to heater connector (65).

3v461B1

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).
- (4) Raise spare tire (TM 9-2320-365-10).

End of Task.

20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

THERMOSTAT AND HEATER POWER

NOTE

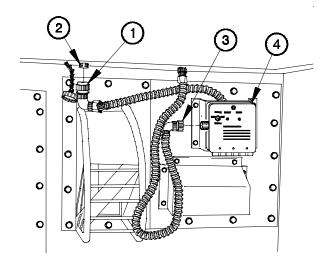
Tag connectors and connection points prior to disconnecting.

- (1) Disconnect connector P244 (1) from heater connector (2).
- (2) Disconnect connector P245A (3) from heater control unit (4).

c. Follow-On Maintenance

Materials/Parts

Sealant, Pipe, Teflon (Item 58, Appendix D) Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Lockwasher (18) (Item 84, Appendix G)

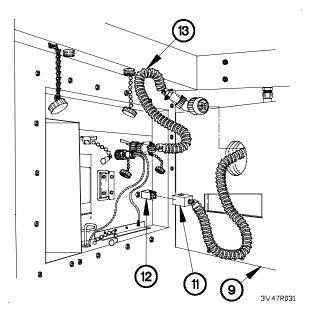


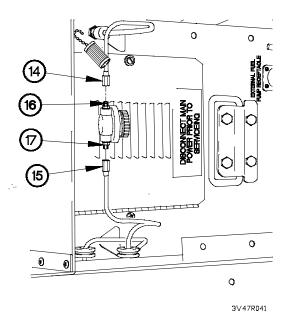
3V47R011

- (3) Remove 18 screws (5), lockwashers (6), washers (7), heater deflector (8) and heater cover (9) from van body wall (10). Discard lockwashers.

20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT (CONT)

- (4) Disconnect connector P4A (11) from connector J4 (12).
- (5) Remove heater power cable (13) from heater cover (9).



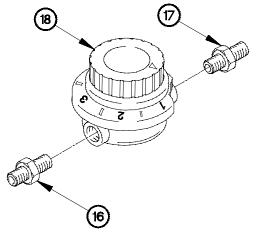




Diesel fuel is flammable. If fuel is spilled, clean it up immediately. Failure to comply may result in serious injury or death to personnel.

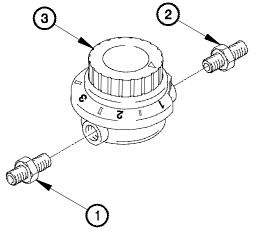
NOTE

- Tag tubes and connection points prior to disconnecting.
- Note position of fittings and fuel regulator prior to removal.
- (6) Disconnect fuel tubes (14 and 15) from fittings (16 and 17).



3V47R051

b. Installation.



(7) Remove fittings (16 and 17) from fuel regulator (18).

3V47I011

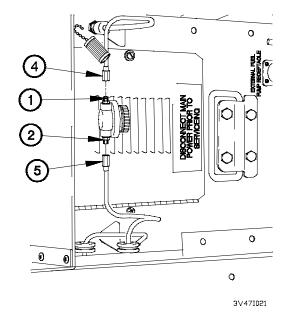
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

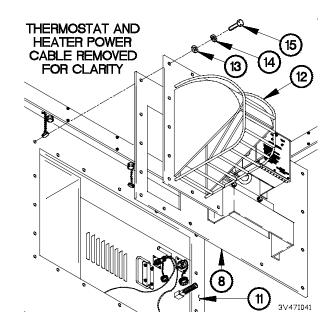
- (1) Apply sealing compound to threads of fittings (1 and 2).
- (2) Install fittings (1 and 2) on fuel regulator (3).

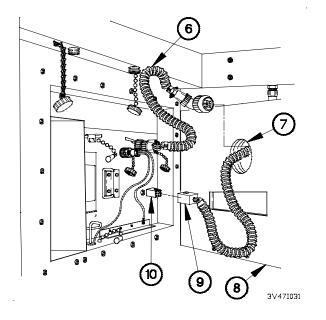
20-47. M1079 HEATER FUEL REGULATOR REPLACEMENT (CONT)

(3) Connect fuel tubes (4 and 5) to fittings (1 and 2).

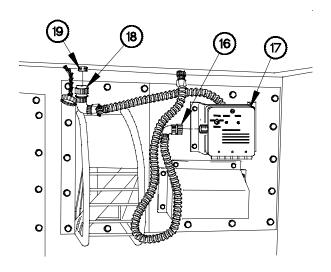


- (4) Route heater power cable (6) through hole (7) in heater cover (8).
- (5) Connect connector P4A (9) to connector J4 (10).





(6) Install heater cover (8) on van body wall (11) with heater deflector (12), washers (13), lockwashers (14), and screws (15).



- (7) Connect connector P245A (16) to heater control unit (17).
- (8) Connect connector P244 (18) to heater connector (19).

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

3V47I051

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT

This task covers:

- a. Removal
- b. Disassembly
- c. Cleaning/Inspection

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

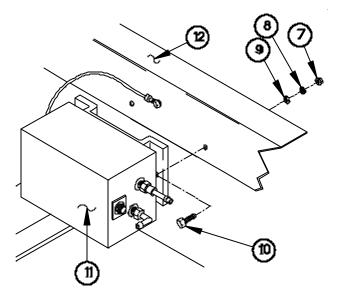
Sealant, Pipe, Teflon (Item 58, Appendix D) Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

a. Removal.

NOTE

Tag hoses and connection points prior to removal.

- (1) Loosen two clamps (1) on hoses (2).
- (2) Remove two hoses (2) and clamps (1) from fitting (3) and 90 degree fitting (4).
- (3) Disconnect connector P310 (5) from EMI shielded fuel pump connector (6).



3v48r021

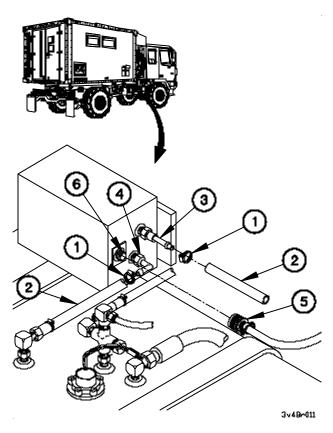
- d. Assembly
- e. Installation

Materials/Parts (Cont)

Lockwasher (2) (Item 83, Appendix G) Lockwasher (4) (Item 105, Appendix G) Lockwasher (2) (Item 106, Appendix G) Seal (Item 247.1, Appendix G) Seal (2) (Item 247.2, Appendix G) Seal (Item 247.3, Appendix G)

Personnel Required

(2)

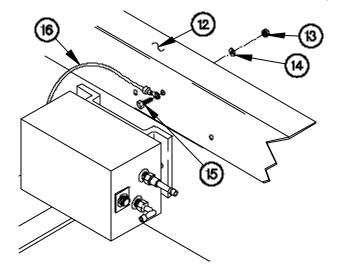


NOTE

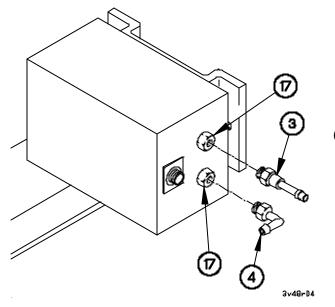
Steps (4) through (6) requires the aid of an assistant.

(4) Remove two nuts (7), lockwashers (8), washers (9), screws (10), and EMI shielded fuel pump assembly (11) from subframe (12). Discard lockwashers.

(5) Remove self-locking nut (13), washer (14), screw (15), and EMI shielded fuel pump ground wire (16) from sub-frame (12). Discard self-locking nut.



3v48rD31

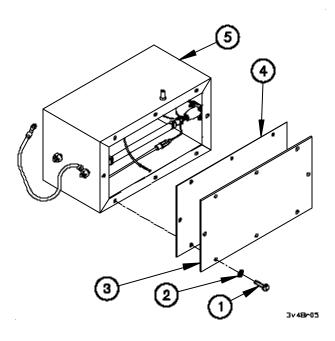


(6) Remove fitting (3) and 90-degree fitting (4) from two couplings (17).

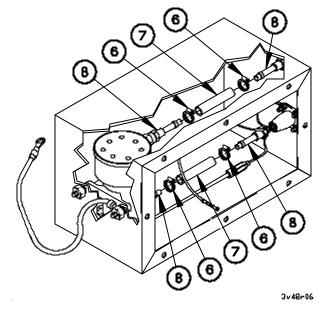
20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

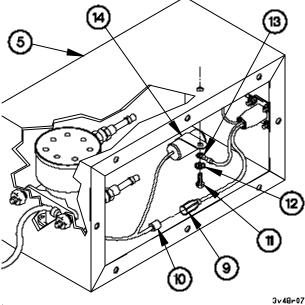
b. Disassembly.

(1) Remove eight screws (1), washers (2), seal (3), and cover (4) from fuel pump box (5). Discard seal.



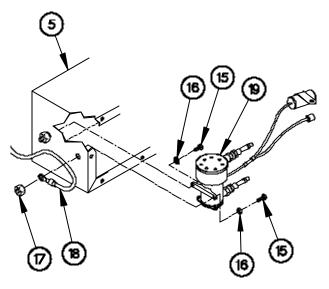
- Loosen four clamps (6) on two hoses (7). (2)
- (3) Remove two hoses (7) from four fittings (8).





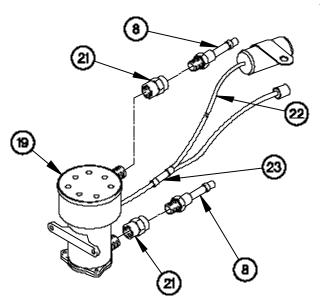
- Disconnect connector P46 (9) from fuel pump (4) connector (10).
- (5) Remove screw (11), washer (12), terminal lug TL526 (13), and capacitor (14) from pump box (5).

(6) Remove two screws (15), washers (16), nuts (17), ground wire (18), and fuel pump (19) from pump box (5).

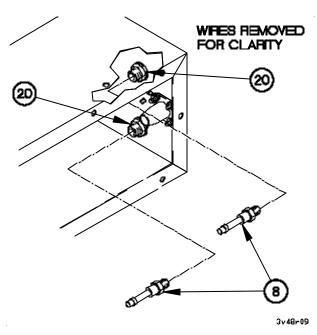


3v49rDB



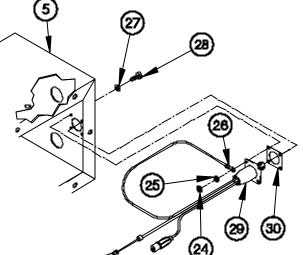


3v48r10

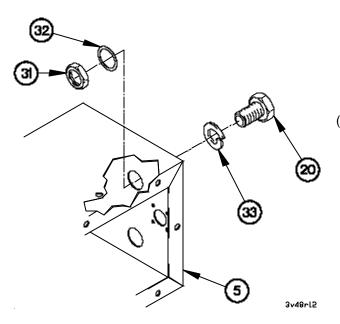


- (8) Remove two fittings (8) from couplers (21).
- (9) Remove two couplers (21) from heater fuel pump (19).
- (10) Cut condenser wire (22) leading to splice (23) on heater fuel pump (19).

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)



3v4Br-11



(11) Remove four nuts (24), lockwashers (25), terminal lug TL526 (26), four washers (27), screws (28), cable

Discard lockwashers and seal.

assembly (29), and seal (30) from pump box (5).

(12) Remove two nuts (31), seals (32), coupling (20), and lockwasher (33) from pump box (5). Discard seals and lockwasher.

c. Cleaning/Inspection.

WARNING

- Dry cleaning solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I dry cleaning solvent is 100 degree F (38 degree C) and for Type II is 130 degree F (50 degree C). Failure to comply may result in serious injury or death to personnel.'
- If personnel become dizzy while suing dry cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

NOTE

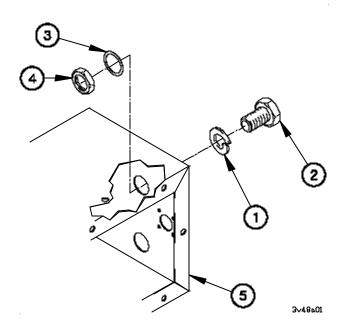
Clean all metal parts with dry cleaning solvent and dry using compressed air prior to inspection and assembly.

d. Assembly.

WARNING

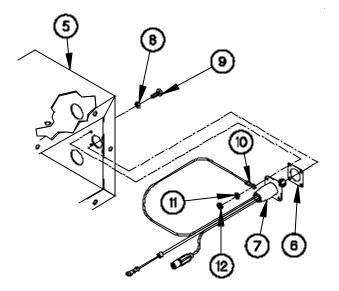
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesive, solvent, sealing or compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound around the edge of all exterior exposed surfaces.
- (2) Install two lockwashers (1), coupling (2), seals (3), and nuts (4) on pump box (5).

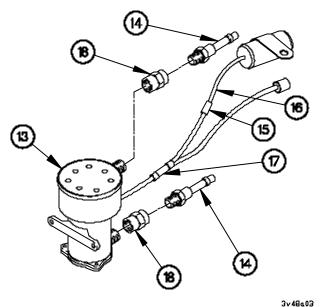


20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

Install seal (6), cable assembly (7), four washers (8), screws (9), terminal lug TL526 (10), lockwashers (11), and nuts (12) on pump box (5).



3v48aD2



WARNING

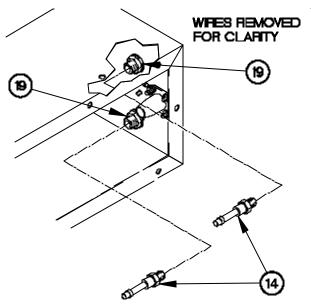
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. lf solvent, adhesive, sealing or compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (4) Apply sealing compound to threads of heater fuel pump (13) and two fittings (14).
- (5) Install conductor splice (15) on condenser wire (16) and fuel pump wire splice (17).
- (6) Install two couplers (18) on heater fuel pump (13).
- (7) Install two fittings (14) in couplers (18).

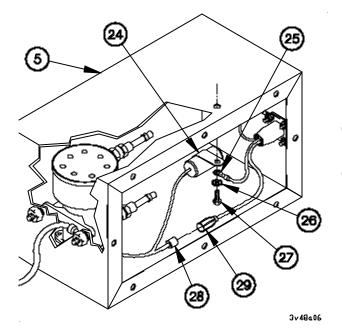
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. lf adhesive, solvent, sealing or compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (8) Apply sealing compound to threads of two fittings (14).
- (9) Install two fittings (14) in couplings (19).



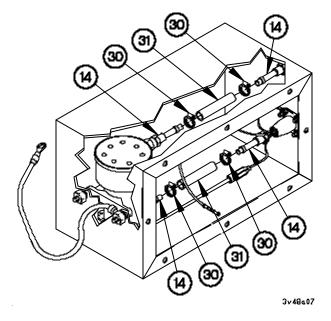
3v48a04



- (10) Install capacitor (24) on pump box (5) with terminal lug TL526 (25), washer (26), and screw (27).
- (11) Connect fuel pump connector (28) to connector P46 (29).

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

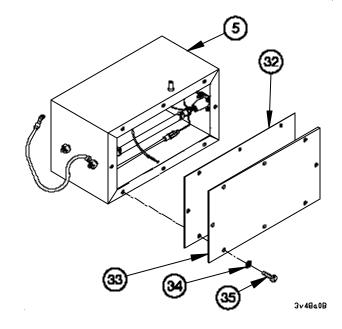
- (12) Position four clamps (30) on two hoses (31).
- (13) Install two hoses (31) on four fittings (14) with clamps (30).



WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (14) Apply sealing compound around outer mating area of pump box cover (33).
- (15) Install seal (32) and pump box cover (33) on pump box(5) with eight washers (34) and screws (35).

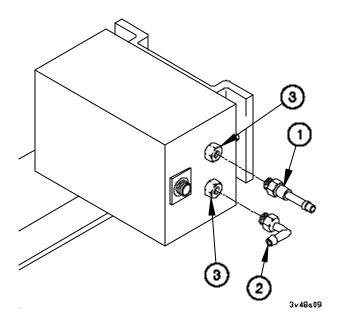


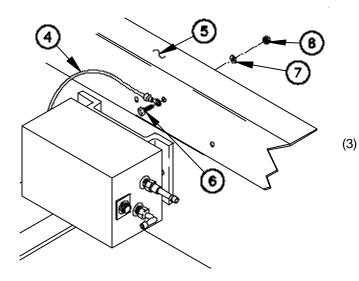
d. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to threads of fitting (1) and 90-degree (2).
- (2) Install fitting (1) and 90-degree fitting (2) in two couplings (3).





NOTE

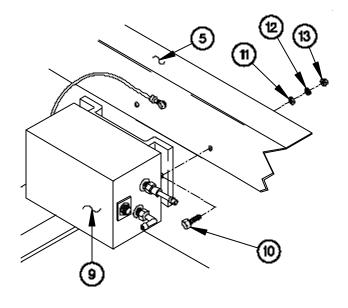
Step (3) requires the aid of an assistant.

Install EMI shielded fuel pump ground wire (4) on subframe (5) with screw (6), washer (7), and locknut (8).

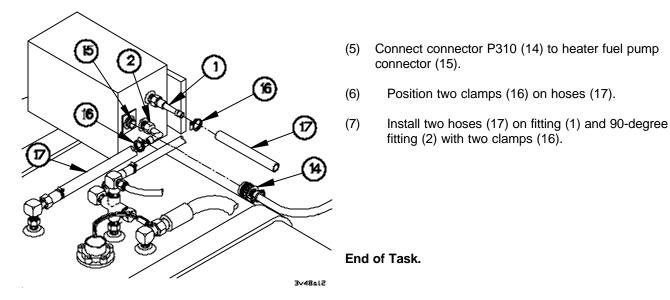
3~4810

20-48. M1079 HEATER EMI SHIELDED FUEL PUMP REPLACEMENT (CONT)

(4) Install EMI shielded fuel pump assembly (9) on subframe (5) with two screws (10), washers (11), lockwashers (12), and nuts (13).



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20-49. M1079 HEATER FUEL PUMP POWER CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10). Heater removed (para 20-51) c. Follow-On Maintenance

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

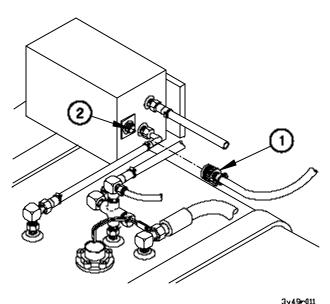
Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

a. Removal.

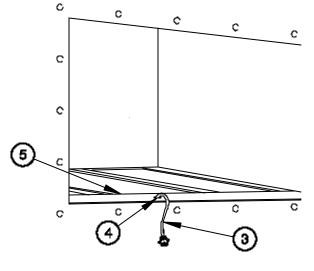
NOTE

Tag connectors and connection points prior to disconnecting.

(1) Disconnect connector P310 (1) from EMI shielded fuel pump connector (2).



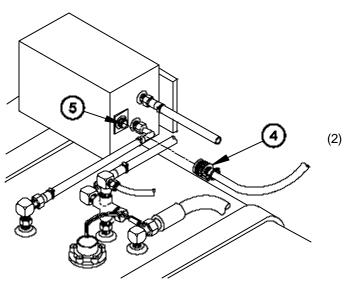
(2) Remove heater fuel pump power cable (3) through hole(4) in bottom pod panel (5).

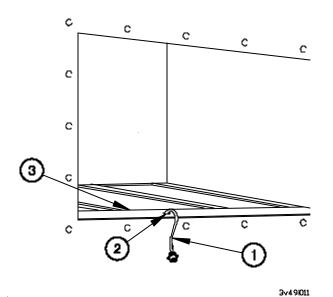


3v49rD21

b. Installation.

(1) Position heater fuel pump power cable (1) through hole (2) in bottom pod panel (3).





Connect connector P310 (4) to EMI shielded fuel pump connector (5).

3v49iD21

c. Follow-On Maintenance.

- (1) Connect AC power (TM 9-2320-365-10).
- (2) Check heater for proper operation (TM 9-2320-365-10).
- (3) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT

This task covers:

- a. Heater Deflector Removal
- b. Heater Deflector Installation
- c. Heater Duct Removal

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). LH and RH doors opened (115-degrees) (TM 9-2320-365-10). M1079 heater fuel pump power cable removed (for heater duct) (para 20-49).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

d. Heater Duct Installation

e. Follow-On Maintenance

Materials/Parts

Sealant, Pipe, Teflon (Item 58, Appendix D) Lockwasher (9) (for heater deflector) (Item 84, Appendix G) Lockwasher (40) (Item 82, Appendix G) Lockwasher (19) (Item 83, Appendix G) Nut, Self-Locking (4) (Item 126, Appendix G)

Personnel Required

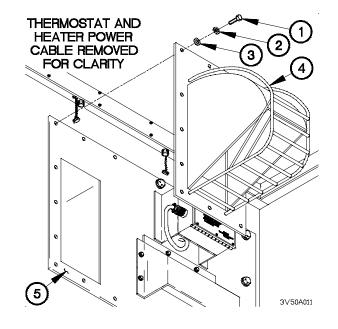
(2)

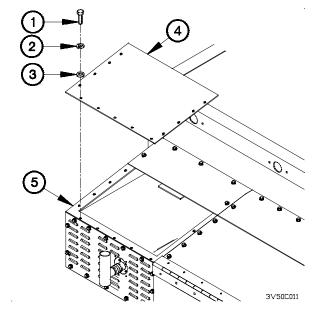
a. Heater Deflector Removal.

Remove nine screws (1), lockwashers (2), washers (3), and heater deflector (4) from heater cover (5). Discard lockwashers.

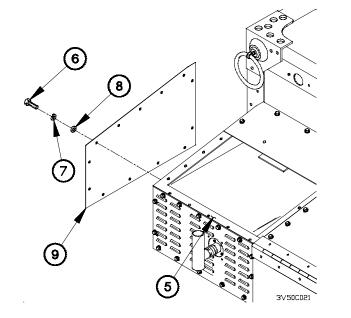
b. Heater Deflector Installation.

Install heater deflector (4) on heater cover (5) with nine washers (3), lockwashers (2), and screws(1).





(2) Remove 13 screws (6), lockwashers (7), washers (8), and curbside panel (9) from pod frame (5). Discard lockwashers.

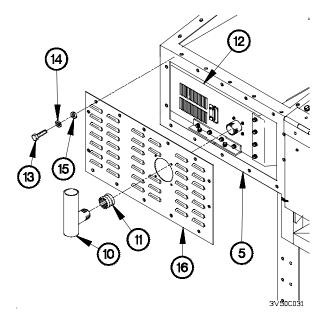


(1) Remove 13 screws (1), lockwashers (2), washers (3), and curbside top front panel (4) from pod frame (5).

c. Heater Duct Removal.

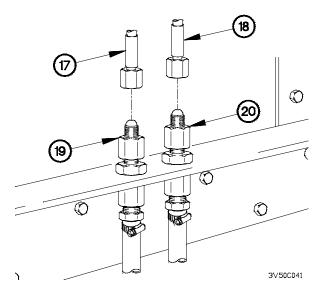
Discard lockwashers.

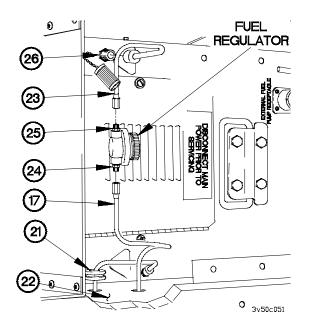
- (3) Remove exhaust pipe (10) from coupling (11).
- (4) Remove coupling (11) from heater (12).
- (5) Remove 14 screws (13), lockwashers (14), washers (15), and curbside front panel (16) from pod frame (5). Discard lockwashers.



20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

(6) Remove fuel tubes (17 and 18) from adapters (19 and 20).



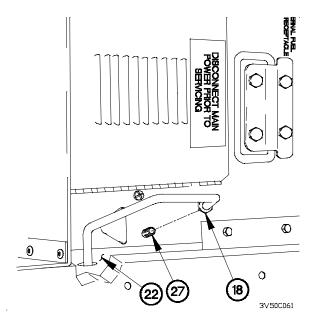


(7) Remove grommet (21) from pod panel (22).

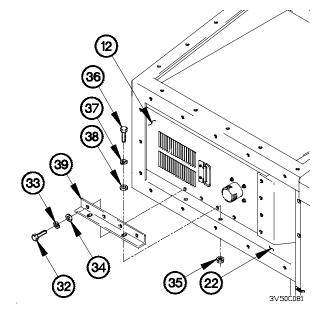
NOTE

Note position of fuel regulator prior to removal.

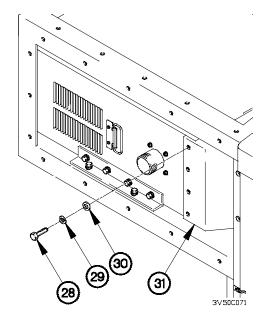
- (8) Remove fuel tubes (17 and 23) from fittings (24 and 25).
- (9) Remove fuel tube (23) from fuel inlet port (26).
- (10) Remove fuel tube (17) from pod panel (22).



(13) Remove four screws (28), lockwashers (29), and washers (30) from heater duct (31). Discard lockwashers.



- (11) Remove fuel tube (18) from overflow port (27).
- (12) Remove fuel tube (18) from pod panel (22).



NOTE

Steps (14) and (15) require the aid of an assistant.

- (14) Remove four screws (32), lockwashers (33), and washers (34) from heater (12). Discard lockwashers.
- (15) Remove two self-locking nuts (35), screws (36), lockwashers (37), washers (38), and bracket (39) from pod panel (22). Discard lockwashers and self-locking nuts.

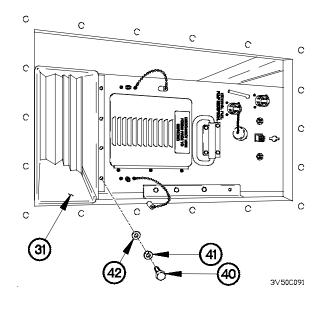
20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

43

3V50C101

(12)

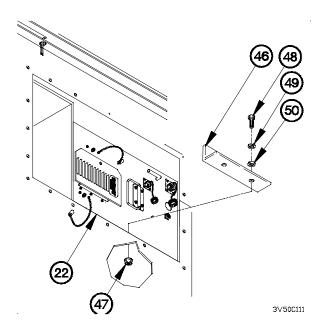
(16) Remove four screws (40), lockwashers (41), and washers (42) from heater duct (31). Discard lockwashers.



NOTE

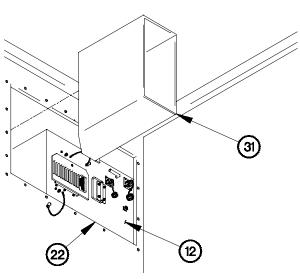
Steps (17) and (18) require the aid of an assistant.

(17) Remove three screws (43), lockwashers (44), washers (45), and bracket (46) from heater (12). Discard lockwashers.

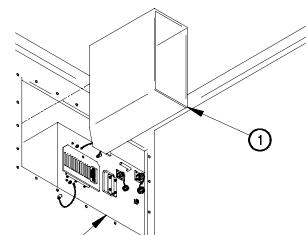


(18) Remove two self-locking nuts (47), screws (48), lockwashers (49), washers (50), and bracket (46) from pod panel (22). Discard lockwashers and self-locking nuts.

46



3V50C121



NOTE

Step (19) requires the aid of an assistant.

(19) Position heater (12) to access heater duct (31).

(20) Remove heater duct (31) from pod panel (22).

d. Heater Duct Installation.

2

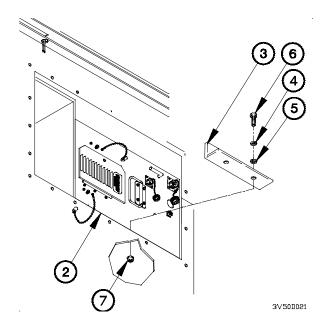
(1) Position heater duct (1) on pod panel (2).



3V50D011

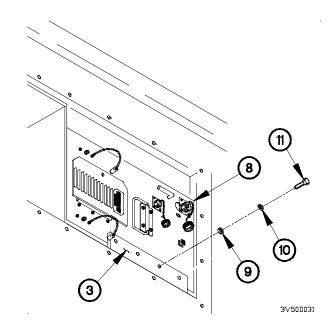
Steps (2) and (3) require the aid of an assistant.

(2) Position bracket (3) on pod panel (2) with two washers (4), lockwashers (5), screws (6), and self-locking nuts (7).

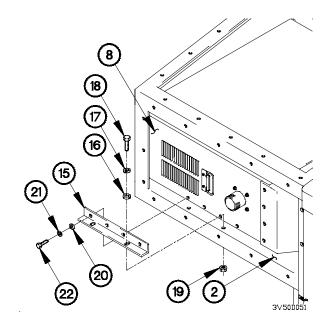


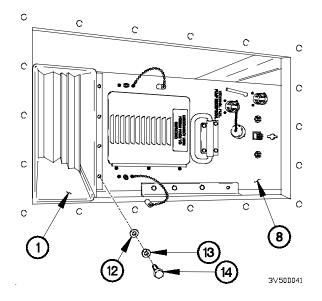
20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

(3) Install bracket (3) on heater (8) with three washers (9), lockwashers (10), and screws (11).



(4) Install heater duct (1) on heater (8) with four washers (12), lockwashers (13), and screws (14).

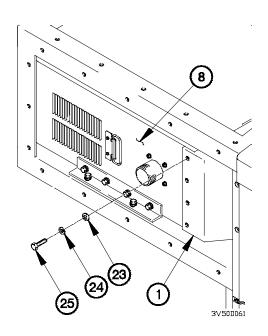




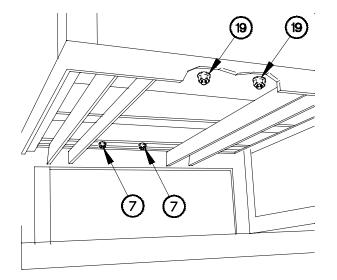
NOTE

Steps (5) and (6) require the aid of an assistant.

- (5) Position bracket (15) on pod panel (2) with two washers (16), lockwashers (17), screws (18), and self-locking nuts (19).
- (6) Install bracket (15) on heater (8) with four washers (20), lockwashers (21), and screws (22).

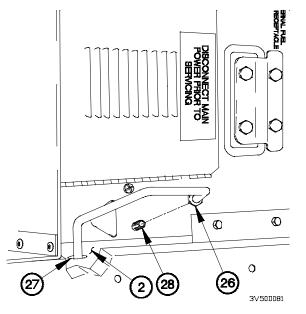


(7) Install heater duct (1) on heater (8) with four washers (23), lockwashers (24), and screws (25).



(8) Tighten two self-locking nuts (7 and 19).

- 3V50D071
- (9) Route fuel tube (26) through hole (27) in pod panel (2).
- (10) Install fuel tube (26) on fuel overflow port (28).



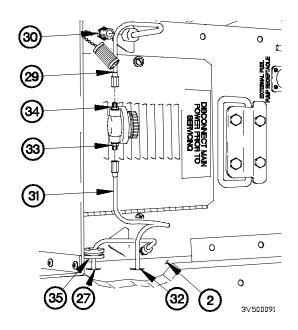
20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

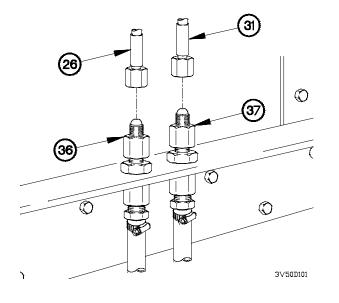
- (11) Install fuel tube (29) on fuel inlet port (30).
- (12) Route fuel tube (31) through hole (32) on pod panel(2).



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

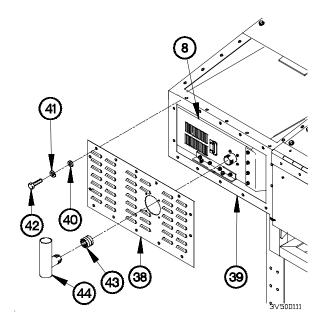
- (13) Apply sealing compound to threads of fittings (33 and 34).
- (14) Install fuel tubes (31 and 29) on fittings (33 and 34).
- (15) Install grommet (35) in hole (27) on pod panel (2).



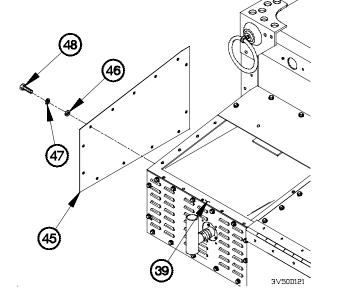


(16) Install fuel tubes (26 and 31) on adapters (36 and 37).

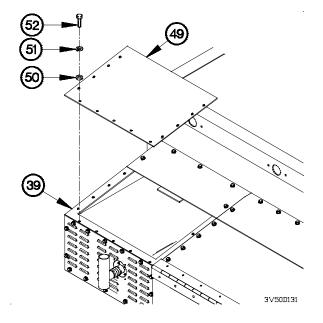
- (17) Install curbside front panel (38) on pod frame (39) with 14 washers (40), lockwashers (41), and screws (42).
- (18) Install coupling (43) on heater (8).
- (19) Install exhaust pipe (44) on coupling (43).



(20) Install curbside panel (45) on pod frame (39) with 13 washers (46), lockwashers (47), and screws (48).



(21) Install curbside top front panel (49) on pod frame (39) with 13 washers (50), lockwashers (51), and screws (52).



20-50. M1079 HEATER DEFLECTOR/DUCT REPLACEMENT (CONT)

e. Follow-On Maintenance.

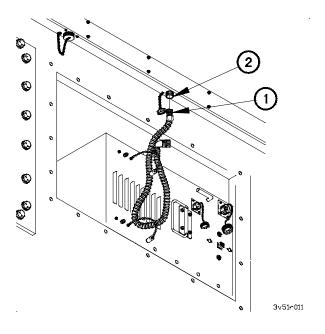
- (1) Lower cab (TM 9-2320-365-10).
- (2) Install M1079 heater fuel pump power cable (para 20-49).
- (3) Connect AC power (TM 9-2320-365-10).
- (4) Check heater for proper operation (TM 9-2320-365-10).
- (5) Close LH and RH doors (TM 9-2320-365-10).

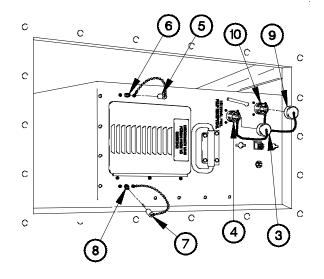
End of Task.

20-51. M1079 HEATER REPLACEMENT		
This task covers:		
a. Removal b. Installation	c. Follow-On Maintenance	
INITIAL SETUP		
Equipment Conditions		
M1079 heater duct removed (para 20-50).	Personnel Required (2)	
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)		

a. Removal.

(1) Disconnect connector J245 (1) from thermostat connector (2).





- (2) Install dust cap (3) on heater fuel pump power connector (4).
- (3) Install dust cap (5) on fuel inlet port (6).
- (4) Install dust cap (7) on fuel overflow port (8).
- (5) Install dust cap (9) on heater power connector (10).

20-51. M1079 HEATER REPLACEMENT (CONT)

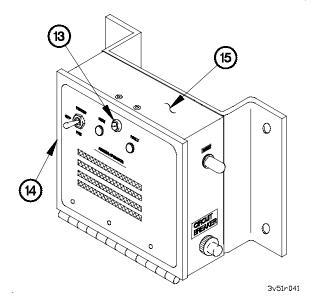
WARNING

Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

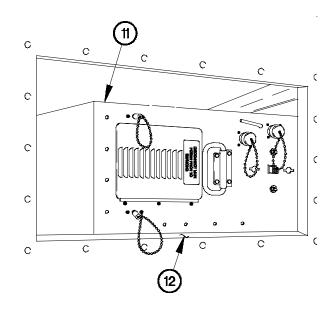
NOTE

Step (6) requires the aid of an assistant.

(6) Remove heater (11) from pod panel (12).

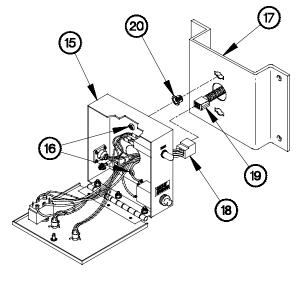


- (9) Unlatch two screws (16) on heater control unit (15).
- (10) Remove heater control unit (15) from bracket (17).
- (11) Disconnect connector P4 (18) from connector J4A (19).
- (12) Remove two twist locks (20) from bracket (17).

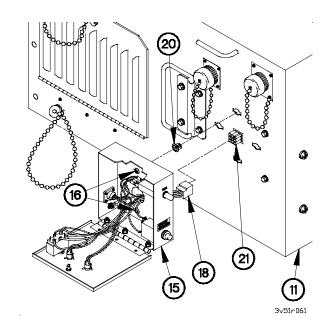


3v51r031

- (7) Unlatch screw (13) on door (14).
- (8) Open door (14) on heater control unit (15).

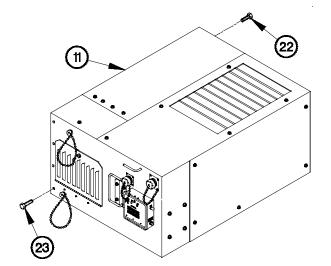


3v51r051

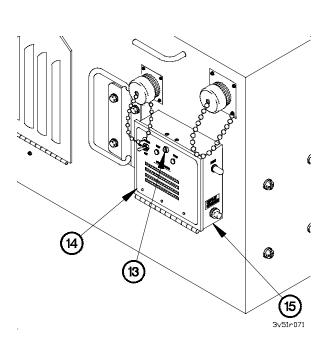


(17) Close door (14) on heater control unit (15).

(18) Latch screw (13) on door (14).



3v51r081



(13) Install two twist locks (20) on heater (11).

(14) Connect connector P4 (18) to connector J4 (21).

(15) Position heater control unit (15) on heater (11).

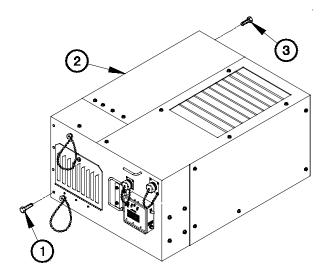
(16) Latch two screws (16) on heater control unit (15).

- (19) Install eight screws (22) in heater (11).
- (20) Install eight screws (23) in heater (11).

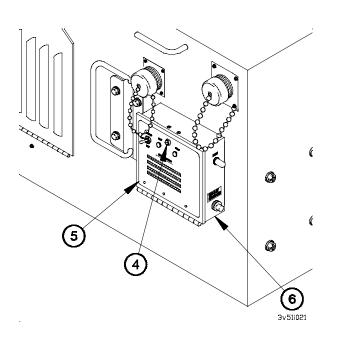
20-51. M1079 HEATER REPLACEMENT (CONT)

b. Installation.

- (1) Remove eight screws (1) from heater (2).
- (2) Remove eight screws (3) from heater (2).
- (3) Retain eight screws (1 and 3) for future use.

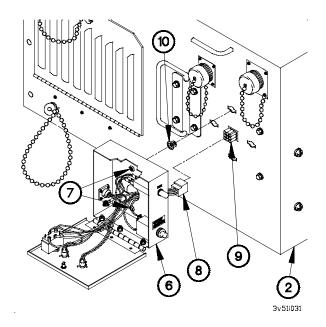


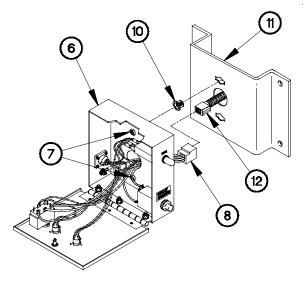
3v51i011



- (6) Unlatch two screws (7) on heater control unit (6).
- (7) Remove heater control unit (6) from heater (2).
- (8) Disconnect connector P4 (8) from connector J4 (9).
- (9) Remove two twist locks (10) from heater (2).

- (4) Unlatch screw (4) on door (5).
- (5) Open door (5) on heater control unit (6).

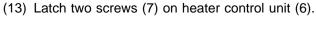




3v51i041



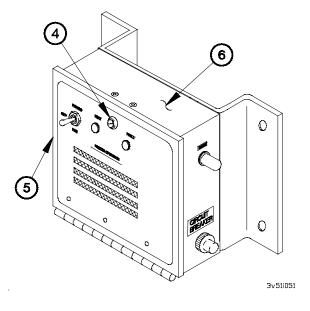
(15) Latch screw (4) on door (5).



(10) Install two twist locks (10) on bracket (11).

(11) Connect connector P4 (8) to connector J4A (12).

(12) Position heater control unit (6) on bracket (11).



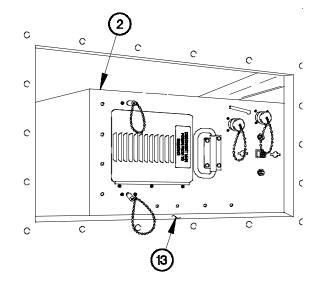


Heater weighs approximately 120 lbs (54 kgs). Use the aid of an assistant when lifting. Failure to comply may result in injury to personnel.

NOTE

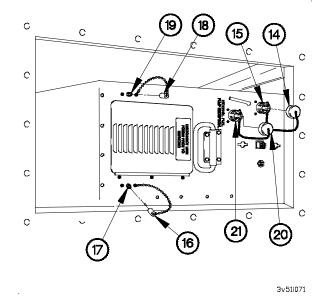
Step (16) requires the aid of an assistant.

(16) Install heater (2) on pod panel (13).



20-51. M1079 HEATER REPLACEMENT (CONT)

- (17) Remove dust cap (14) from heater power connector (15).
- (18) Remove dust cap (16) from fuel overflow port (17).
- (19) Remove dust cap (18) from fuel inlet port (19).
- (20) Remove dust cap (20) from heater fuel pump power connector (21).

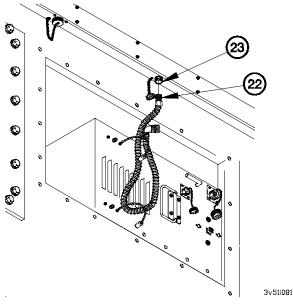


(21) Connect connector J245 (22) to thermostat connector (23).

c. Follow-On Maintenance.

Install M1079 heater duct (para 20-50).

End of Task.



20-52. DELETED

20-54. 200 AMP ALTERNATOR KIT INSTALLATION

This task covers:

a. Installation

INITIAL SETUP

Equipment Conditions

100 amp alternator removed (para 7-2).100 amp reverse polarity relay removed (para 7-27).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 35, Appendix C) Caps, Vise Jaw (Item 4, Appendix C) Vise, Machinist (Item 46, Appendix C)

a. Installation.

NOTE

Retain belt adjusting arm for future installation.

 Remove two screws (1), lockwashers (2), and belt adjusting arm (3) from alternator bracket (4). Discard lockwashers.

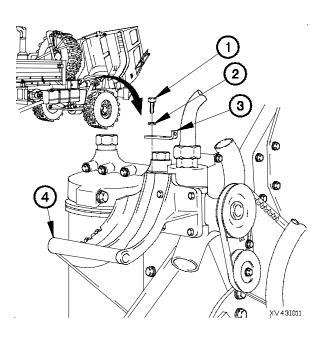
b. Follow-On Maintenance

Materials/Parts

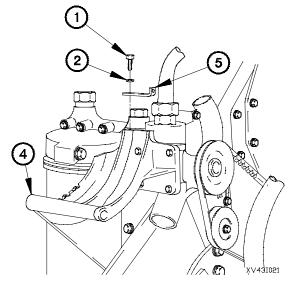
Ties, Cable, Plastic (Item 76, Appendix D) Nut, Self-Locking (3) (Item 149, Appendix G) Nut, Self-Locking (Item 137, Appendix G) Nut, Self-Locking (M1081 only) (2) (Item 140, Appendix G) Washer, Spring (M1081 only) (2) (Item 280, Appendix G) Lockwasher (2) (Item 92, Appendix G)

Personnel Required

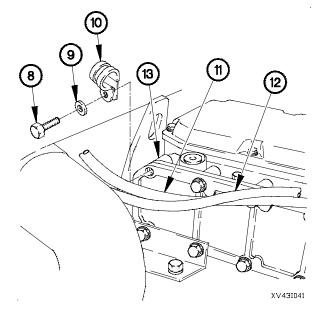
(2)



- (2) Position belt adjusting arm (5) on alternator bracket (4) with two lockwashers (2) and screws (1).
- (3) Tighten two screws (1) to 25-32 lb-ft (35-43 N·m).



(4) Remove terminal lug TL6 (6) from dust boot (7).

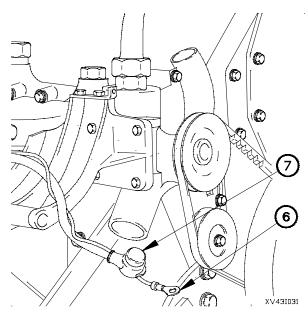


(7) Remove self-locking nut (14) and washer (15) from alternator (16).



Ensure pulley does not contact wires, terminal lugs, or terminal screws on front of alternator. Failure to comply may result in damage to equipment.

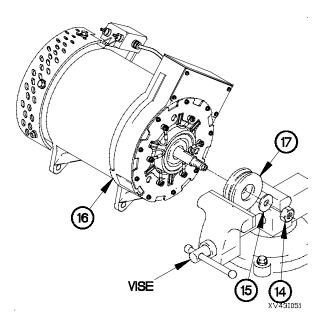
- (8) Position pulley (17) on alternator (16) with washer (15) and self-locking nut (14).
- (9) Position pulley (17) in vise.
- (10) Tighten self-locking nut (14) to 106-130 lb-ft (144-176 N⋅m).
- (11) Remove pulley (17) from vise.



NOTE

Retain 24vdc and 12vdc cable assemblies for future installation.

- (5) Remove three screws (8), washers (9), clamps (10), 24vdc cable (11), and 12vdc cable (12) from air inlet manifold (13).
- (6) Remove three clamps (10) from 24 vdc cable (11) and 12 vdc cable (12).



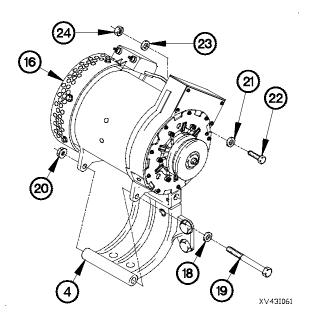
WARNING

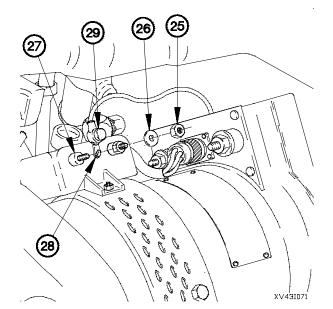
200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to install 200 amp alternator. Failure to comply may result in injury to personnel.

NOTE

Step (12) requires the aid of an assistant.

- (12) Position alternator (16) on alternator bracket (4) with washer (18), screw (19), and self-locking nut (20).
- (13) Position washer (21), screw (22), washer (23), and selflocking nut (24) on alternator (16).
- (14) Tighten self-locking nut (20) to 45-55 lb-ft (61-75 N·m).
- (14.1) Tighten self-locking nut (24) to 25-32 lb-ft (35-43 N·m).

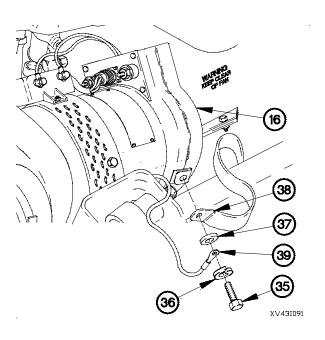




- (15) Remove self-locking nut (25) and washer (26) from voltage regulator terminal (27).
- (16) Position terminal lug TL110 (28) on voltage regulator terminal (27) with washer (26) and self-locking nut (25).
- (17) Tighten self-locking nut (25) to 24 lb-in. (3 N·m).
- (18) Position dust boot (29) on terminal lug TL110 (28).

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- (23) Remove screw (35), lockwasher (36), and washer (37) from alternator (16).
- (24) Position ground strap (38), washer (37), and terminal lug TL5 (39) on alternator (16) with lockwasher (36) and screw (35).
- (25) Tighten screw (35) to 60-84 lb-in. (7-9 N·m).

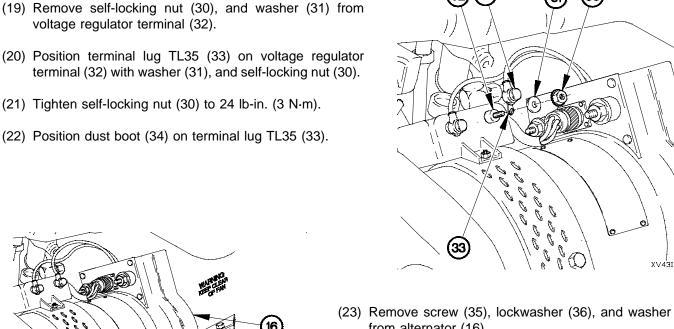
- (26) Position 12vdc cable (40) and 24vdc cable (41) in engine compartment with terminal lugs TL2 (42) and TL60 (43) located next to alternator (16).
- (27) Install dust boot (44) on 12vdc cable (40).
- (28) Install dust boot (45) on 24vdc cable (41).
- (29) Remove terminal lug TL6 (46) from wire (47). Discard terminal lug.
- (30) Position wire (47) in dust boot (45) with terminal lug TL2 (42).
- (31) Install terminal lug TL6 (48) on wire (47).

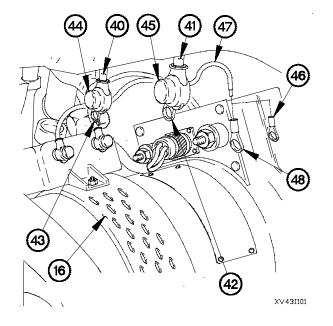


voltage regulator terminal (32).

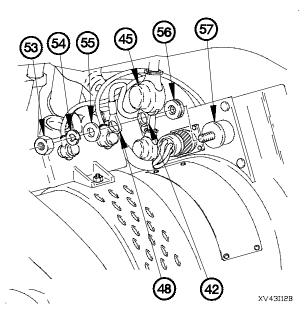
(21) Tighten self-locking nut (30) to 24 lb-in. (3 N·m).

(22) Position dust boot (34) on terminal lug TL35 (33).

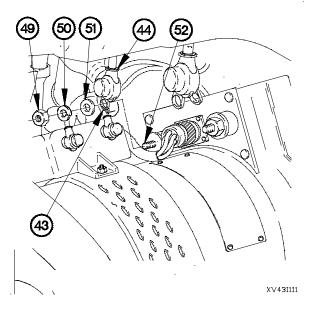




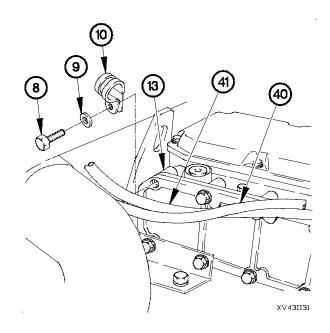
- (32) Remove nut (49), lockwasher (50), and washer (51) from alternator terminal (52).
- (33) Position terminal lug TL60 (43) on alternator terminal (52) with washer (51), lockwasher (50), and nut (49).
- (34) Tighten nut (49) to 156-180 lb-in. (17-21 N·m).
- (35) Position dust boot (44) on terminal lug TL60 (43).



- (40) Position three clamps (10) on 12vdc cable (40) and 24vdc cable (41).
- (41) Position three clamps (10) on air inlet manifold (13) three with washers (9) and screws (8).
- (42) Tighten three screws (8) to 22-27 lb-ft (31-37 N·m).



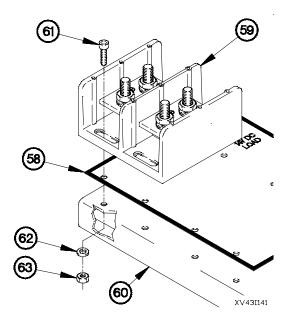
- (36) Remove nut (53), lockwasher (54), insulation washer (55), and fuse link (56) from alternator terminal (57).
- (37) Position fuse link (56), terminal lug TL2 (42) and TL6 (48), insulation washer (55), lockwasher (54), and nut (53) on alternator terminal (57).
- (38) Tighten nut (53) to 156-180 lb-in. (17-21 N·m).
- (39) Position dust boot (45) on terminal lugs TL2 (42) and TL6 (48).

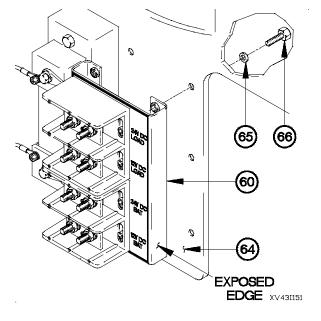


CAUTION

Position both terminal blocks loosely on mounting bracket and align correctly before tightening nuts. Failure to comply may result in damage to equipment.

- (43) Position identification plate (58) and two terminal blocks(59) on bracket (60) with eight screws (61), washers(62), and self-locking nuts (63).
- (44) Tighten eight self-locking nuts (63) to 48 lb-in. (5 N·m).

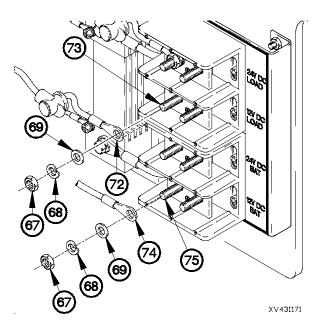




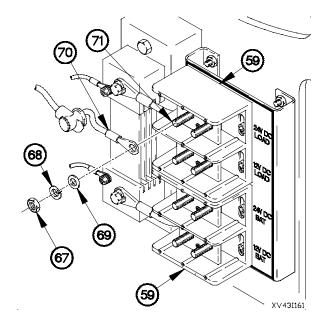
NOTE

- Terminal blocks are not centered on bracket.
 Position bracket on spare tire retainer with exposed edge of ident-ification plate toward cab.
- Step (45) requires the aid of an assistant.
- (45) Position bracket (60) on spare tire retainer (64) with four washers (65) and screws (66).
- (46) Tighten four screws (66) to 48 lb-in. (5 N·m).

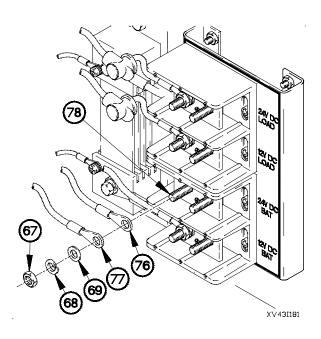
- (47) Remove eight nuts (67), lockwashers (68), and washers (69) from two terminal blocks (59).
- (48) Position terminal lug TL44 (70) on terminal block terminal (71) with washer (69), lockwasher (68), and nut (67).

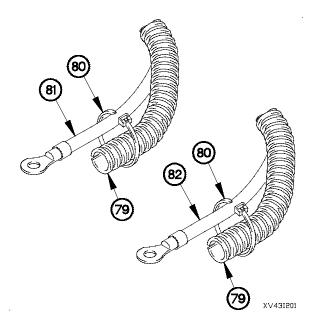


(51) Position terminal lugs TL36 (76) and TL37 (77) on terminal block terminal (78) with washer (69), lockwasher (68), and nut (67).



- (49) Position terminal lug TL80 (72) on terminal block terminal(73) with washer (69), lockwasher (68), and nut (67).
- (50) Position terminal lug TL47 (74) on terminal block terminal(75) with washer (69), lockwasher (68), and nut (67).





(52) Install 17.7 in. (45.0 cm) of convoluted tubing (79) on

(53) Install 19.6 in. (50.0 cm) of convoluted tubing (79) on

(54) Install three plastic cable ties (80) on convoluted tubing

12vdc cable (40).

24vdc cable (41).

(79).

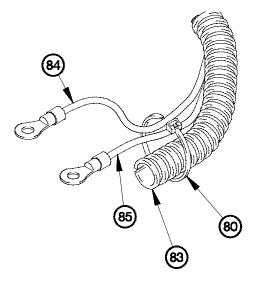
NOTE

24 vdc load cable terminates with terminal lugs TL167 and TL169. 24 vdc battery cable terminates with terminal lugs TL166 and TL168.

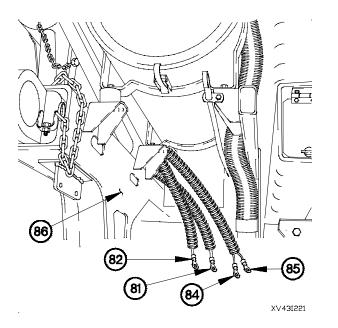
- (55) Install 21.6 in. (55.5 cm) of convoluted tubing (79) on 24vdc load cable (81).
- (56) Install 21.5 in. (55.0 cm) of convoluted tubing (79) on 24vdc battery cable (82).
- (57) Install plastic cable ties (80) on convoluted tubing (79).

NOTE

- 12 vdc load cable terminates with terminal lugs TL172 and TL174. 12 vdc battery cable terminates with terminal lugs TL171 and TL173.
- Position terminal lugs TL171 and TL172 at the same end.
- (58) Install 21.6 in. (55.0 cm) of convoluted tubing (83) on 12vdc load cable (84) and 12vdc battery cable (85).
- (59) Install plastic cable ties (80) on convoluted tubing (83).



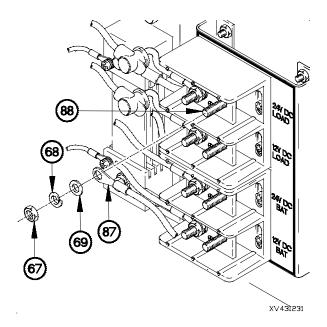
XV43I211



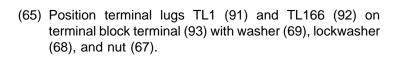
NOTE

Position 24vdc load cable, 24vdc battery cable, 12vdc load cable, and 12vdc battery cable with terminal lugs TL167, TL172, TL166, and TL171 at terminal block.

- (60) Position 24vdc load cable (81) on rear side of front lifting beam (86).
- (61) Position 24vdc battery cable (82) on rear side of front lifting beam (86).
- (62) Position 12vdc load cable (84) and 12vdc battery cable (85) on rear side of front lifting beam (86).



(64) Position terminal lug TL172 (89) on terminal block terminal (90) with washer (69), lockwasher (68), and nut (67).

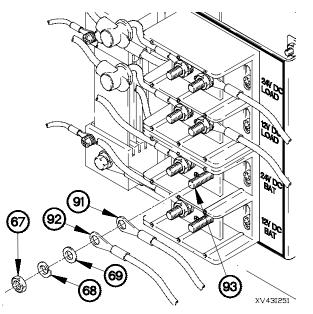


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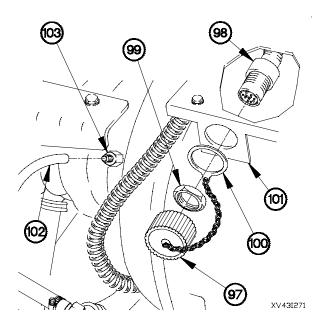
XV43I241

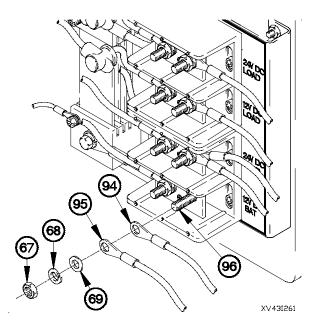
(63) Position terminal lug TL167 (87) on terminal block terminal (88) with washer (69), lockwasher (68), and nut

(67).

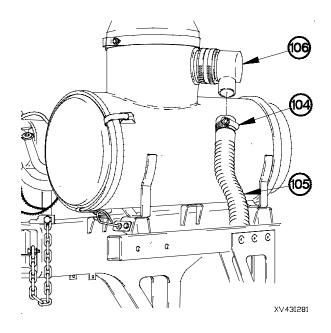


(66) Position terminal lugs TL61 (94) and TL171 (95) on terminal block terminal (96) with washer (69), lockwasher (68), and nut (67).





- (67) Remove dust cap (97) from connector J106 (98).
- (68) Remove nut (99), dust cap lanyard (100), and connector J106 (98) from chemical detection unit mounting bracket (101).
- (69) Disconnect air filter restriction gauge hose (102) from air flow sensor (103).

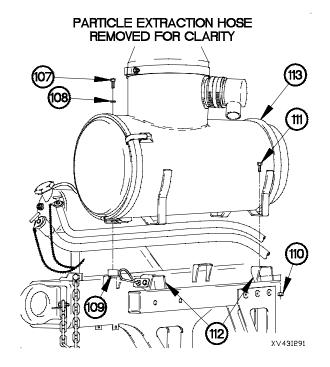


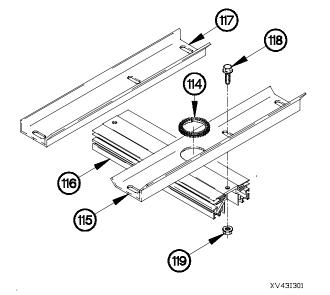
NOTE

Perform steps (70) through (104) on all models except M1081.

- (70) Loosen clamp (104) on particle extraction hose (105).
- (71) Remove particle extraction hose (105) from adapter (106).

- (72) Remove screw (107) and washer (108) from resilient mount (109).
- (73) Remove three self-locking nuts (110) and screws (111) from mounting brackets (112). Discard self-locking nuts.
- (74) Remove intake air cleaner housing (113) from mounting brackets (112) and resilient mount (109).





- (75) Cut grommet (114) to 8 1/4 in. (210 mm).
- (76) Install grommet (114) in bracket (115).

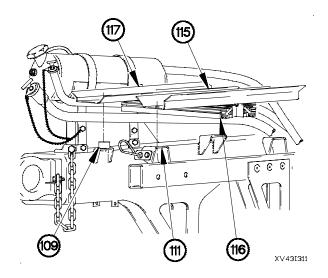
NOTE

Position reverse polarity relay 24V terminals toward front of vehicle.

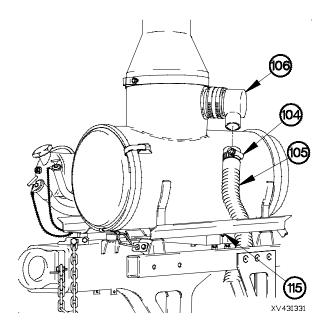
(77) Position reverse polarity relay (116) on brackets (115 and 117) with two screws (118) and self-locking nuts (119).

20-325

(78) Position reverse polarity relay (116) and brackets (115 and 117) on mounting brackets (112) and resilient mount (109) with bracket (115) toward rear of vehicle.

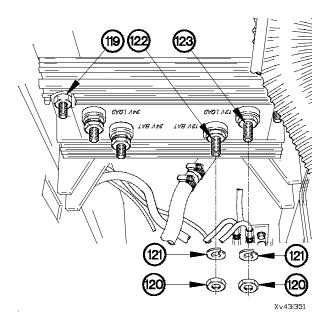


- (79) Position intake air cleaner housing (113) on brackets (115 and 117).
- (80) Position washer (108) and screw (107) in resilient mount (109).
- (81) Position three screws (111) and self-locking nuts (110) in mounting brackets (112).
- (82) Tighten screw (107) to 26-31 lb-ft (35-42 N·m).
- (83) Tighten three self-locking nuts (110) to 35-51 lb-ft (47-69 N·m).

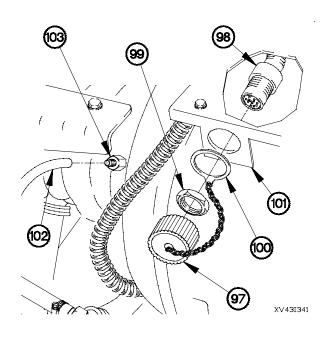


- (84) Position particle extraction hose (105) through bracket (115).
- (85) Install particle extraction hose (105) on adapter (106) with clamp (104).

- (86) Connect air filter restriction gauge hose (102) to air flow sensor (103).
- (87) Install connector J106 (98) and dust cap lanyard (100) on chemical detection unit mounting bracket (101) with nut (99).
- (88) Install dust cap (97) on connector J106 (98).



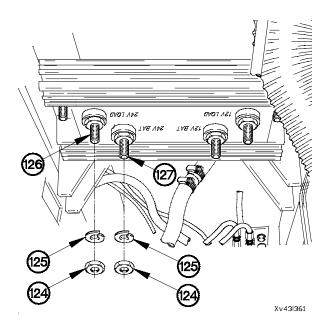
(91) Remove two nuts (124) and lockwashers (125) from reverse polarity relay 24V LOAD terminal (126) and 24V BAT terminal (127).



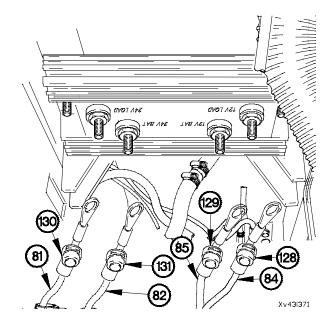
NOTE

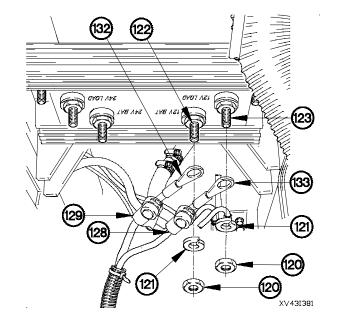
Step (89) requires the aid of an assistant.

- (89) Tighten two self-locking nuts (119) to 25-31 lb-ft (35-43 N⋅m).
- (90) Remove two nuts (120) and lockwashers (121) from reverse polarity relay 12V BAT terminal (122) and 12V LOAD terminal (123).



- (92) Install dust boot (128) on 12vdc load cable (84).
- (93) Install dust boot (129) on 12vdc battery cable (85).
- (94) Install dust boot (130) on 24vdc load cable (81).
- (95) Install dust boot (131) on 24vdc battery cable (82).



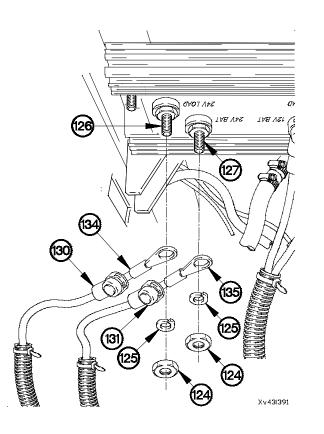


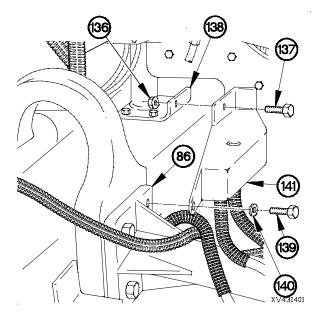
NOTE

Steps (96) through (101) require the aid of an assistant.

- (96) Position terminal lug TL173 (132) on reverse polarity relay 12V BAT terminal (122) with lockwasher (121) and nut (120).
- (97) Position terminal lug TL174 (133) on reverse polarity relay 12V LOAD terminal (123) with lockwasher (121) and nut (120).
- (98) Tighten two nuts (120) to 108-132 lb-in. (13-15 N·m).
- (99) Position dust boots (128 and 129) on terminal lugs TL173 (132) and TL174 (133).

- (100) Position terminal lug TL169 (134) on reverse polarity relay 24V LOAD terminal (126) with lockwasher (125) and nut (124).
- (101) Position terminal lug TL168 (135) on reverse polarity relay 24V BAT terminal (127) with lockwasher (125) and nut (124).
- (102) Tighten two nuts (124) to 27-33 lb-ft (37-47 N·m).
- (103) Install dust boots (130 and 131) on terminal lugs TL169 (134) and TL168 (135).



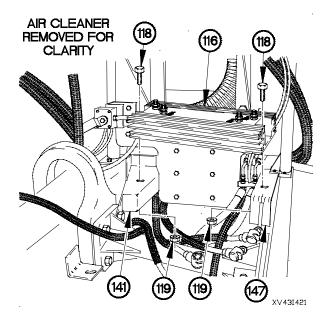


NOTE

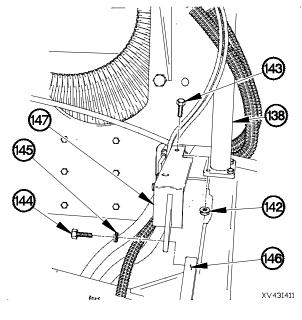
Perform steps (104) through (131) on M1081 only.

- (104) Remove self-locking nut (136) and screw (137) from spare tire retainer (138). Discard self-locking nut.
- (105) Remove screw (139) and spring washer (140) from front lifting beam (86). Discard spring washer.
- (106) Position bracket (141) on spare tire retainer (138) with screw (137) and self-locking nut (136).
- (107) Position bracket (141) on front lifting beam (86) with spring washer (140) and screw (139).
- (108) Tighten self-locking nut (136) to 43-51 lb-ft (58-69 N·m).
- (109) Tighten screw (139) to 43-51 lb-ft (58-69 N·m).

- (110) Remove self-locking nut (142) and screw (143) from spare tire retainer (138). Discard self-locking nut.
- (111) Remove screw (144) and spring washer (145) from rear support brace (146). Discard spring washer.
- (112) Position bracket (147) on spare tire retainer (138) with screw (143) and self-locking nut (142).
- (113) Position bracket (147) on rear support brace (146) with spring washer (145) and screw (144).
- (114) Tighten self-locking nut (142) to 43-51 lb-ft (58-69 N·m).
- (115) Tighten screw (144) to 43-51 lb-ft (58-69 N·m).



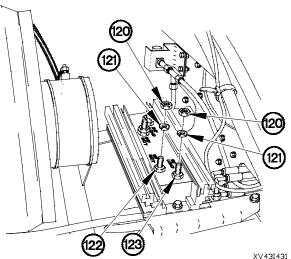
(118) Remove two nuts (120) and lockwashers (121) from reverse polarity relay 12V BAT terminal (122) and 12V LOAD terminal (123).

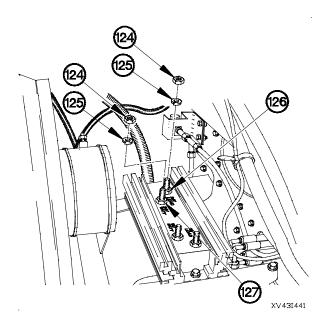


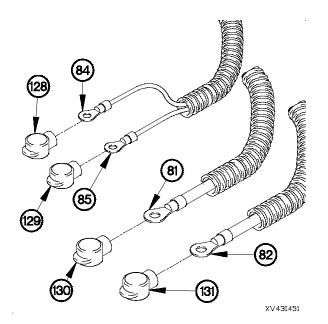
NOTE

Position reverse polarity relay 24V terminals toward front of vehicle.

- (116) Position reverse polarity relay (116) on brackets (141 and 147) with two screws (118) and self-locking nuts (119).
- (117) Tighten two self-locking nuts (119) to 25-31 lb-ft (35-43 $\,$ N·m).





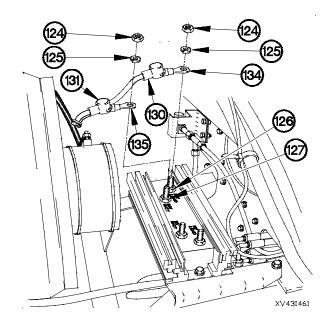


(119) Remove two nuts (124) and lockwashers (125) from reverse polarity relay 24V LOAD terminal (126) and 24V

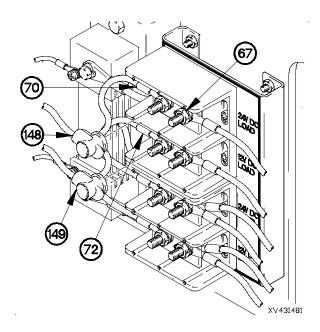
BAT terminal (127).

(120) Install dust boot (128) on 12vdc load cable (84).
(121) Install dust boot (129) on 12vdc battery cable (85).
(122) Install dust boot (130) on 24vdc load cable (81).
(123) Install dust boot (131) on 24vdc battery cable (82).

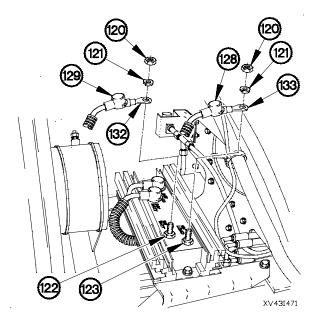
- (124) Position terminal lug TL169 (134) on reverse polarity relay 24V LOAD terminal (126) with lockwasher (125) and nut (124).
- (125) Position terminal lug TL168 (135) on reverse polarity relay 24V BAT terminal (127) with lockwasher (125) and nut (124).
- (126) Tighten two nuts (124) to 30 lb-ft (41 N·m).
- (127) Position dust boots (130 and 131) on terminal lugs TL169 (134) and TL168 (135).



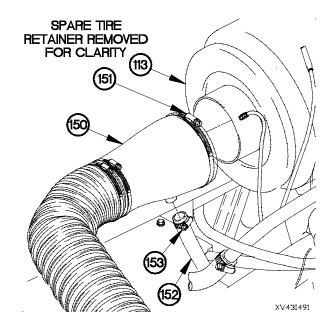
- (128) Position terminal lug TL173 (132) on reverse polarity relay 12V BAT terminal (122) with lockwasher (121) and nut (120).
- (129) Position terminal lug TL174 (133) on reverse polarity relay 12V LOAD terminal (123) with lockwasher (121) and nut (120).
- (130) Tighten two nuts (120) to 108-132 lb-in. (13-15 N·m).
 - (131) Position dust boots (128 and 129) on terminal lugs TL173 (132) and TL174 (133).



- (134) Position intake air cleaner boot (150) on intake air cleaner housing (113) with clamp (151).
- (135) Position air compressor intake hose (152) on intake air cleaner boot (150) with clamp (153).
- (136) Tighten clamps (151 and 153) to 36-48 lb-in. (4-5 N·m).



- (132) Tighten eight nuts (67) to 15-19 lb-ft (21-25 N·m).
- (133) Position dust boots (148 and 149) on terminal lugs TL44 (70) and TL80 (72).



b. Follow-On Maintenance.

- (1) Install alternator belts (para 7-3).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Connect batteries (para 7-48).
- (4) Start engine (TM 9-2320-365-10).
- (5) Check alternator operation (TM 9-2320-365-10).
- (6) Shut down engine (TM 9-2320-365-10).

End of Task.

This task covers:

a. Removal

INITIAL SETUP

Equipment Conditions

Batteries disconnected (para 7-48). Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Vise, Machinist (Item 46, Appendix C) Caps, Vise Jaw (Item 4, Appendix C)

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (2) (Item 66, Appendix G) Lockwasher (2) (Item 65, Appendix G) Nut, Self-Locking (2) (Item 139, Appendix G) Nut, Self-Locking (M1081) (2) (Item 140, Appendix G) b. Follow-On Maintenance

Materials/Parts

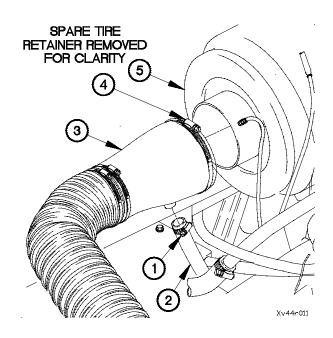
Washer, Spring (M1081) (2) (Item 280, Appendix G)
Nut, Self-Locking (all models except M1081) (3) (Item 140, Appendix G)
Lockwasher (8) (Item 92, Appendix G)
Nut, Self-Locking (8) (Item 146, Appendix G)
Lockwasher (2) (Item 101, Appendix G)
Terminal, Lug (Item 265, Appendix G)
Terminal, Lug (Item 264, Appendix G)
Lockwasher (Item 98, Appendix G)
Nut, Self-Locking (Item 130, Appendix G)
Nut, Self-Locking (Item 129, Appendix G)
Lockwasher (2) (Item 92, Appendix G)

Personnel Required

(2)

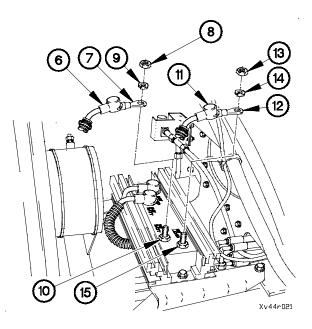


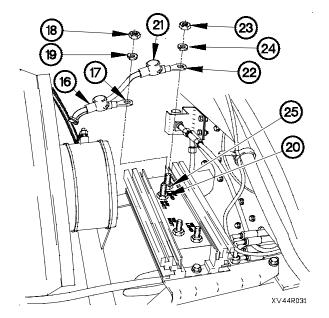
- (1) Loosen clamp (1) on air compressor intake hose (2).
- (2) Remove air compressor intake hose (2) from intake air cleaner boot (3).
- (3) Loosen clamp (4) on intake air cleaner boot (3).
- (4) Remove intake air cleaner boot (3) from intake air cleaner housing (5).



NOTE

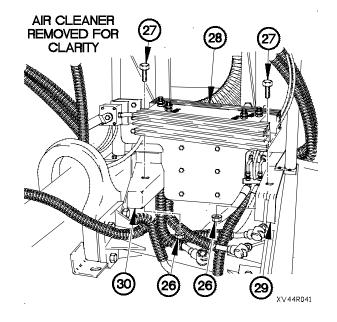
- Perform steps (5) through (27) on M1081.
- Remove plastic cable ties as required.
- (5) Lift dust boot (6) on terminal lug TL173 (7).
- (6) Remove nut (8), lockwasher (9), and terminal lug TL173
 (7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.
- (7) Lift dust boot (11) on terminal lug TL174 (12).
- (8) Remove nut (13), lockwasher (14), and terminal lug TL174 (12) from reverse polarity relay 12V LOAD terminal (15). Discard lockwasher.
- (9) Position lockwashers (9 and 14) and nuts (8 and 13) on reverse polarity relay 12V BAT terminal (10) and 12V LOAD terminal (15).

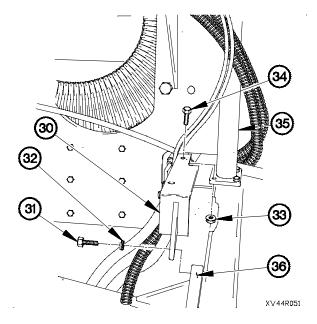




- (10) Lift dust boot (16) on terminal lug TL168 (17).
- (11) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.
- (12) Lift dust boot (21) on terminal lug TL169 (22).
- (13) Remove nut (23), lockwasher (24), and terminal lug TL169 (22) from reverse polarity relay 24V LOAD terminal (25). Discard lockwasher.
- (14) Position lockwashers (19 and 24) and nuts (18 and 23) on reverse polarity relay 24V BAT terminal (20) and 24V LOAD terminal (25).

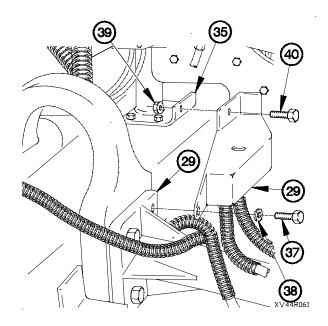
(15) Remove two self-locking nuts (26), screws (27), and reverse polarity relay (28) from brackets (29 and 30). Discard self-locking nuts.

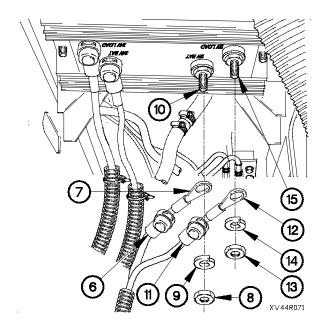




- (16) Remove screw (31) and lockwasher (32) from bracket (30). Discard lockwasher.
- (17) Remove self-locking nut (33), screw (34), and bracket(30) from spare tire retainer (35). Discard self-locking nut.
- (18) Position screw (34) and self-locking nut (33) in spare tire retainer (35).
- (19) Tighten self-locking nut (33) to 43-51 lb-ft (58-69 N·m).
- (20) Position lockwasher (32) and screw (31) in rear support brace (36).
- (21) Tighten screw (31) to 43-51 lb-ft (58-69 N·m).

- (22) Remove screw (37) and lockwasher (38) from bracket (29). Discard lockwasher.
- (23) Remove self-locking nut (39), screw (40), and bracket(29) from spare tire retainer (35). Discard self-locking nut.
- (24) Position screw (40) and self-locking nut (39) in spare tire retainer (35).
- (25) Tighten self-locking nut (39) to 43-51 lb-ft (58-69 N·m).
- (26) Position lockwasher (38) and screw (37) in front lifting beam (41).
- (27) Tighten screw (37) to 43-51 lb-ft (58-69 N·m).

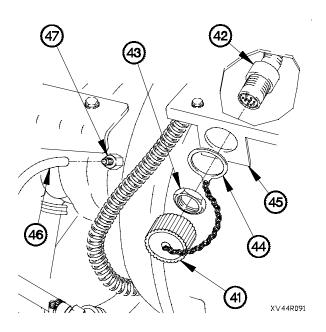




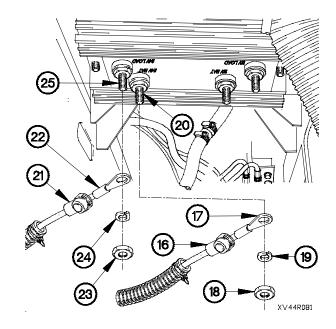
NOTE

- Perform steps (28) through (56) on all models except M1081.
- Remove plastic cable ties as required.
- (28) Lift dust boot (6) on terminal lug TL173 (7).
- (29) Remove nut (8), lockwasher (9), and terminal lug TL173(7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.
- (30) Lift dust boot (11) on terminal lug TL174 (12).
- (31) Remove nut (13), lockwasher (14), and terminal lug TL174 (12) from reverse polarity relay 12V LOAD terminal (15). Discard lockwasher.
- (32) Position lockwashers (9 and 14) and nuts (8 and 13) on reverse polarity relay 12V BAT terminal (10) and 12V LOAD terminal (15).

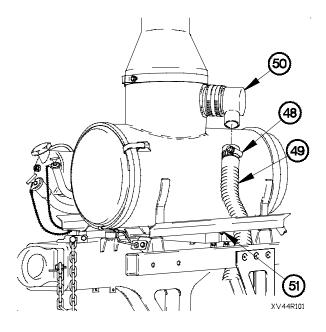
- (33) Lift dust boot (16) on terminal lug TL168 (17).
- (34) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.
- (35) Lift dust boot (21) on terminal lug TL169 (22).
- (36) Remove nut (23), lockwasher (24), and terminal lug TL169 (22) from reverse polarity relay 24V LOAD terminal (25). Discard lockwasher.
- (37) Position lockwashers (19 and 24) and nuts (18 and 23) on reverse polarity relay 24V BAT terminal (20) and 24V LOAD terminal (25).



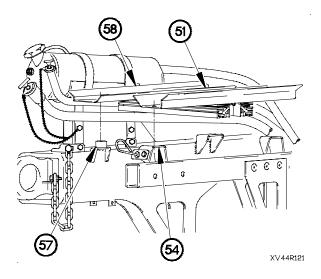
- (41) Loosen clamp (48) on particle extraction hose (49).
- (42) Disconnect particle extraction hose (49) from adapter (50).
- (43) Remove particle extraction hose (49) from bracket (51).

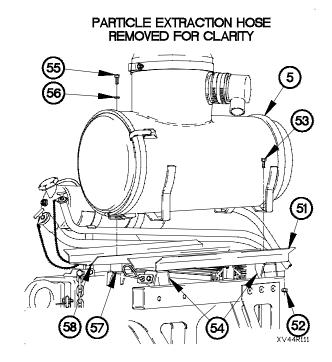


- (38) Remove dust cap (41) from connector J106 (42).
- (39) Remove nut (43), dust cap lanyard (44), and connector J106 (42) from chemical detection unit mounting bracket (45).
- (40) Disconnect air filter restriction gauge hose (46) from air flow sensor (47).

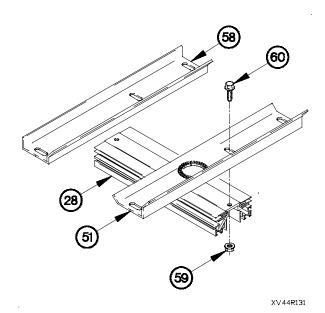


- (44) Remove three self-locking nuts (52) and screws (53) from mounting brackets (54). Discard self-locking nuts.
- (45) Remove screw (55) and washer (56) from resilient mount (57).
- (46) Remove intake air cleaner housing (5) from brackets (51 and 58).



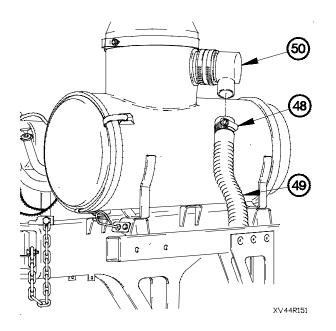


(47) Remove brackets (51 and 58) from three mounting brackets (54) and resilient mount (57).

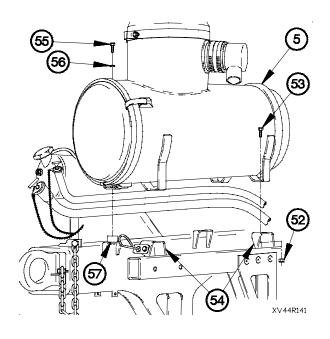


(48) Remove two self-locking nuts (59), screws (60), and reverse polarity relay (28) from brackets (51 and 58). Discard self-locking nuts.

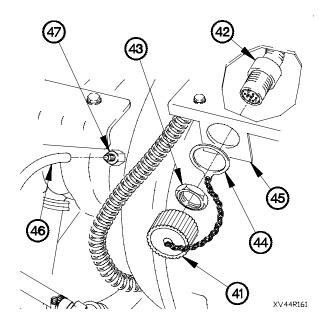
- (49) Position intake air cleaner housing (5) on three mounting brackets (54) with three screws (53) and self-locking nuts (52).
- (50) Position washer (56) and screw (55) in resilient mount (57).
- (51) Tighten screw (55) to 26-31 lb-ft (35-42 N·m).
- (52) Tighten three self-locking nuts (52) to 35-51 lb-ft (47-69 $\text{N}{\cdot}\text{m}).$

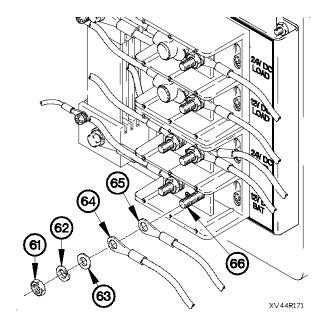


- (54) Connect air filter restriction gauge hose (46) to air flow sensor (47).
- (55) Install connector J106 (42) and dust cap lanyard (44) on chemical detection unit mounting bracket (45) with nut (43).
- (56) Install dust cap (41) on connector J106 (42).

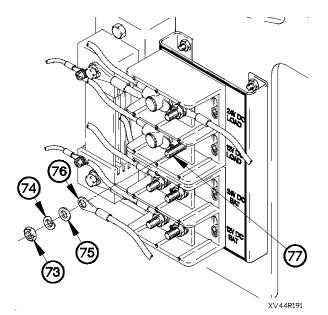


(53) Install particle extraction hose (49) on adapter (50) with clamp (48).





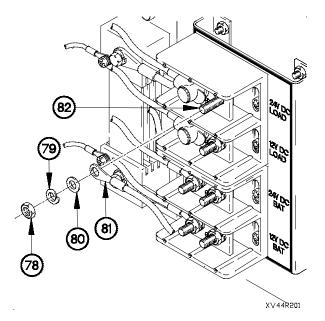
- (59) Remove nut (67), lockwasher (68), washer (69), and terminal lugs TL1 (70) and TL166 (71) from terminal block terminal (72). Discard lockwasher.
- (60) Position washer (69), lockwasher (68), and nut (67) on terminal block terminal (72).



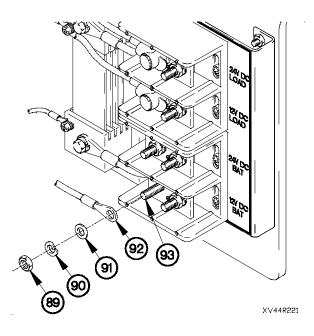
- (61) Remove nut (73), lockwasher (74), washer (75), and terminal lug TL172 (76) from terminal block terminal (77). Discard lockwasher.
- (62) Position washer (75), lockwasher (74), and nut (73) on terminal block terminal (77).

- (57) Remove nut (61), lockwasher (62), washer (63), and terminal lugs TL171 (64) and TL61 (65) from terminal block terminal (66). Discard lockwasher.
- (58) Position washer (63), lockwasher (62), and nut (61) on terminal block terminal (66).

- (63) Remove nut (78), lockwasher (79), washer (80), and terminal lug TL167 (81) from terminal block terminal (82). Discard lockwasher.
- (64) Position washer (80), lockwasher (79), and nut (78) on terminal block terminal (82).

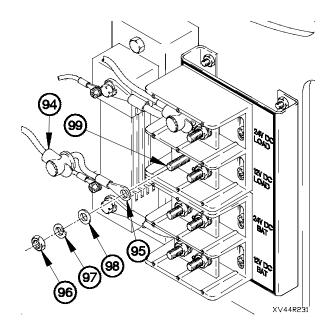


- (65) Remove nut (83), lockwasher (84), washer (85), and terminal lugs TL37 (86) and TL36 (87) from terminal block terminal (88). Discard lockwasher.
- (66) Position washer (85), lockwasher (84), and nut (83) on terminal block terminal (88).

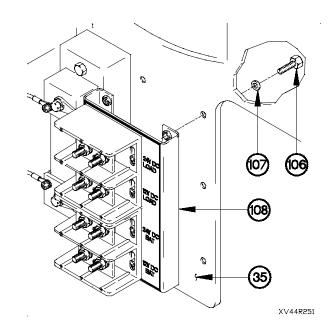


- (67) Remove nut (89), lockwasher (90), washer (91), and terminal lug TL47 (92) from terminal block terminal (93). Discard lockwasher.
- (68) Position washer (91), lockwasher (90), and nut (89) on terminal block terminal (93).

- (69) Lift dust boot (94) on terminal lug TL80 (95).
- (70) Remove nut (96), lockwasher (97), washer (98), and terminal lug TL80 (95) from terminal block terminal (99). Discard lockwasher.
- (71) Position washer (98), lockwasher (97), and nut (96) on terminal block terminal (99).

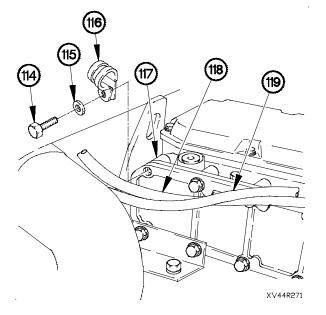


- (72) Lift dust boot (100) on terminal lug TL44 (101).
- (73) Remove nut (102), lockwasher (103), washer (104), and terminal lug TL44 (101) from terminal block terminal (105). Discard lockwasher.
- (74) Position washer (104), lockwasher (103), and nut (102) on terminal block terminal (105).

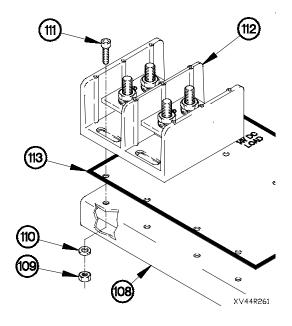


(75) Remove four screws (106), washers (107), and bracket (108) from spare tire retainer (35).

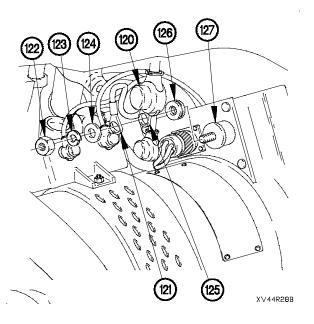
(76) Remove eight self-locking nuts (109), washers (110), screws (111), two terminal blocks (112) and identification plate (113) from bracket (108). Discard self-locking nuts.



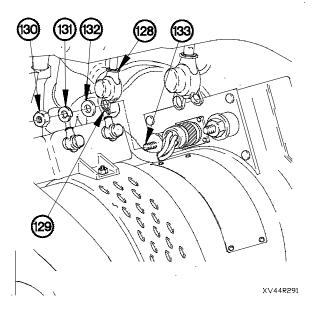
- (79) Lift dust boot (120) on terminal lug TL6 (121).
- (80) Remove nut (122), lockwasher (123), washer (124), and terminal lugs TL6 (121), TL2 (125) and fuse link (126) from alternator terminal (127). Discard lockwasher.
- (81) Position fuse link (126), washer (124), lockwasher (123), and nut (122) on alternator terminal (127).



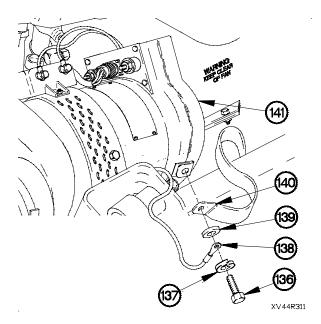
- (77) Remove three screws (114), washers (115), and clamps (116) from air inlet manifold (117).
- (78) Remove three clamps (116) from 12vdc cable (118) and 24vdc cable (119).

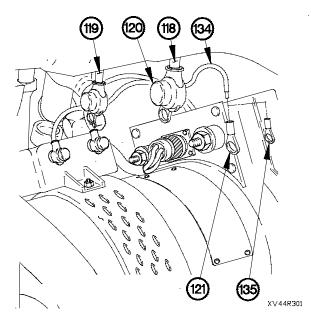


- (82) Lift dust boot (128) on terminal lug TL60 (129).
- (83) Remove nut (130), lockwasher (131), washer (132), and terminal lug TL60 (129) from alternator terminal (133). Discard lockwasher.
- (84) Position washer (132), lockwasher (131), and nut (130) on alternator terminal (133).



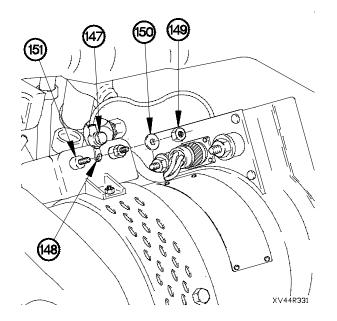
- (85) Remove terminal lug TL6 (121) from wire (134). Discard terminal lug.
- (86) Remove wire (134) from dust boot (120).
- (87) Install terminal lug TL6 (135) on wire (134).
- (88) Remove 12vdc cable (118) and 24vdc cable (119) from vehicle.





- (89) Remove screw (136), lockwasher (137), terminal lug TL5 (138), washer (139), and ground strap (140) from alternator (141). Discard lockwasher.
- (90) Position washer (139), lockwasher (137), and screw (136) in alternator (141).

- (91) Lift dust boot (142) on terminal lug TL35 (143).
- (92) Remove self-locking nut (144), washer (145), and terminal lug TL35 (143) from voltage regulator terminal (146). Discard self-locking nut.
- (93) Position washer (145) and self-locking nut (144) on voltage regulator terminal (146).



(97) Remove nut (152), washer (153), screw (154), and washer (155) from alternator (141).

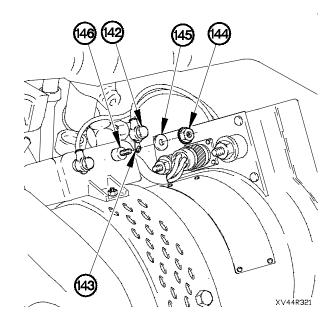
WARNING

200 amp alternator weighs approximately 70 lbs (32 kgs). The aid of an assistant is required to remove 200 amp alternator. Failure to comply may result in injury to personnel.

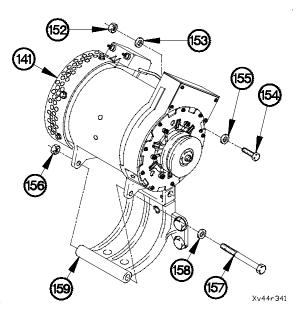
NOTE

Step (98) requires the aid of an assistant.

(98) Remove nut (156), screw (157), washer (158), and alternator (141) from alternator bracket (159).



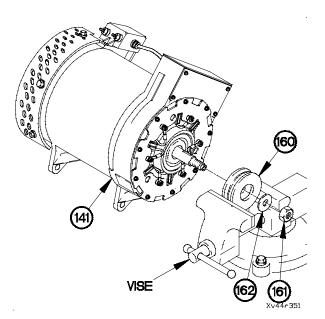
- (94) Lift dust boot (147) on terminal lug TL110 (148).
- (95) Remove self-locking nut (149), washer (150), and terminal lug TL110 (148) from voltage regulator terminal (151). Discard self-locking nut.
- (96) Position washer (150) and self-locking nut (149) on voltage regulator terminal (151).

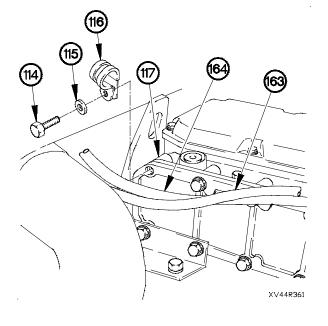


CAUTION

Alternator pulley must be positioned in a vise equipped with vise jaw caps when loosening self-locking nut. Failure to comply may result in damage to equipment.

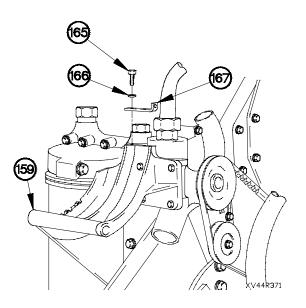
- (99) Position pulley (160) in vise.
- (100) Loosen self-locking nut (161).
- (101) Remove pulley (160) from vise.
- (102) Remove self-locking nut (161), washer (162), and pulley (160) from alternator (141). Discard self-locking nut.
- (103) Position washer (162) and self-locking nut (161) on alternator (141).

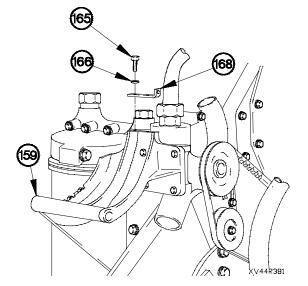




- (104) Position three clamps (116) on 12vdc cable (163) and 24vdc cable (164).
- (105) Position three clamps (116) on air inlet manifold (117) with three washers (115) and screws (114).
- (106) Tighten three screws (114) to 22-27 lb-ft (31-37 N·m).
- (107) Position 12vdc cable (163) and 24 vdc cable (164) on vehicle.

(108) Remove two screws (165),lockwashers (166), and belt adjusting arm (167) from alternator bracket (159). Discard lockwasher.





- (109) Position belt adjusting arm (168) on alternator bracket (159) with two lockwashers (166) and screws (165).
- (110) Tighten two screws (165) to 25-32 lb-ft (35-43 N·m).

b. Follow-On Maintenance.

- (1) Install 100 amp reverse polarity relay (para 7-27).
- (2) Install 100 amp alternator (para 7-2).
- (3) Raise spare tire (TM 9-2320-365-10).
- (4) Lower cab (TM 9-2320-365-10).
- (5) Connect batteries (para 7-48).
- (6) Start engine (TM 9-2320-365-10).
- (7) Check alternator operation (TM 9-2320-365-10).
- (8) Shut down engine (TM 9-2320-365-10).

End of Task.

20-56. 200 AMP ALTERNATOR REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

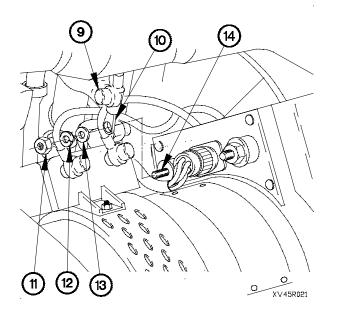
Batteries disconnected (para 7-48). Alternator belts removed (para 7-3).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Sling, Cargo (Item 31, Appendix C) Vise, Machinist (Item 46, Appendix C) Caps, Vise Jaw (Item 4, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

- (1) Lift dust boot (1) on terminal lug TL6 (2).
- (2) Remove nut (3), lockwasher (4), washer (5), terminal lugs TL6 (2) and TL2 (6), and fuse link (7) from alternator terminal (8).
- (3) Position fuse link (7), washer (5), lockwasher (4), and nut(3) on alternator terminal (8).

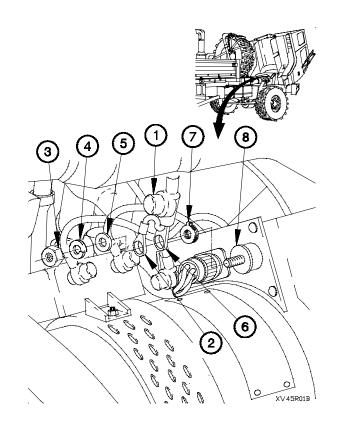


c. Follow-On Maintenance

Materials/Parts Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Nut, Self-Locking (Item 137, Appendix G)

Personnel Required

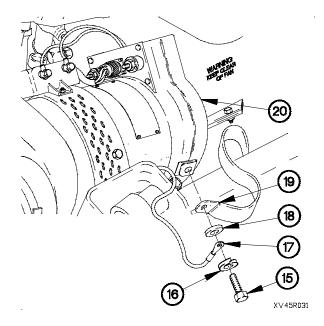
(2)

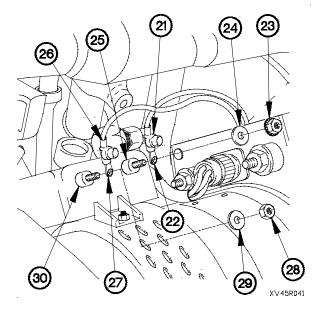


- (4) Lift dust boot (9) on terminal lug TL60 (10).
- (5) Remove nut (11), lockwasher (12), washer (13), and terminal lug TL60 (10) from alternator terminal (14).
- (6) Position washer (13), lockwasher (12) and nut (11) on alternator terminal (14).

20-56. 200 AMP ALTERNATOR REPLACEMENT (CONT)

- (7) Remove screw (15), lockwasher (16), terminal lug TL5 (17), washer (18), and ground strap (19) from alternator (20).
- (8) Position washer (18), lockwasher (16), and screw (15) on alternator (20).





- (9) Lift dust boot (21) on terminal lug TL35 (22).
- (10) Remove self-locking nut (23), washer (24), and terminal lug TL35 (22) from voltage regulator terminal (25).
- (11) Position washer (24) and self-locking nut (23) on voltage regulator terminal (25).
- (12) Lift dust boot (26) on terminal lug TL110 (27).
- (13) Remove self-locking nut (28), washer (29), and terminal lug TL110 (27) from voltage regulator terminal (30).
- (14) Position washer (29) and self-locking nut (28) on voltage regulator terminal (30).

- (15) Remove nut (31), washer (32), screw (33), and washer (34) from alternator (20).
- (16) Remove self-locking nut (35), screw (36), and washer(37) from alternator (20)

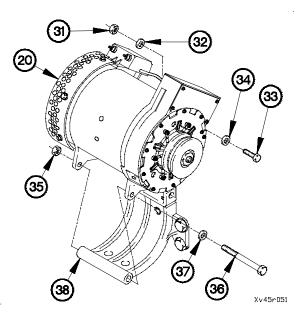


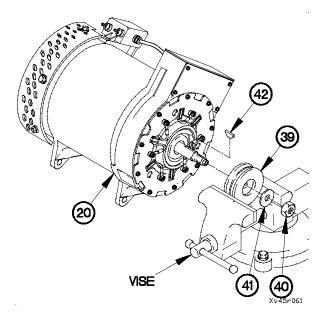
200 amp alternator weighs approximately 70 lbs (32 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

NOTE

Step (17) requires the aid of an assistant.

(17) Remove alternator (20) from alternator support bracket (38).





CAUTION

Alternator pulley must be positioned in a vise equipped with vise jaw caps when loosening self-locking nut. Failure to comply may result in damage to equipment.

- (18) Position pulley (39) in vise.
- (19) Loosen self-locking nut (40).
- (20) Remove pulley (39) from vise.
- (21) Remove self-locking nut (40), washer (41), pulley (39), and key (42) from alternator (20).
- (22) Position washer (41) and self-locking nut (40) on alternator (20).

20-56. 200 AMP ALTERNATOR REPLACEMENT (CONT)

b. Installation.

(1) Remove self-locking nut (1) and washer (2) from alternator (3).



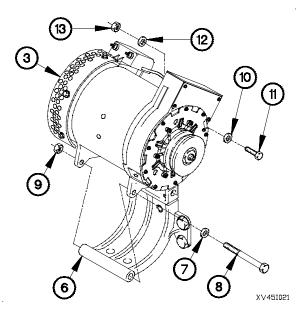
Ensure pulley does not contact wires, terminal lugs, or terminal screws on front of alternator. Failure to comply will result in damage to equipment.

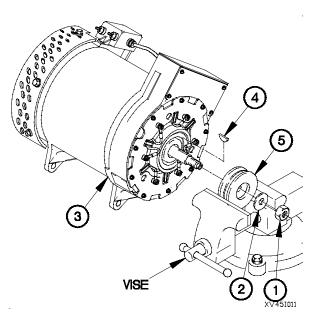
(2) Position key (4) and pulley (5) on alternator (3) with washer (2) and self-locking nut (1).



Alternator pulley must be positioned in a vise equipped with vise jaw caps when tightening self-locking nut. Failure to comply may result in damage to equipment.

- (3) Position pulley (5) in vise.
- (4) Tighten self-locking nut (1) to 106-130 lb-ft (144-176 N·m).
- (5) Remove pulley (5) from vise.







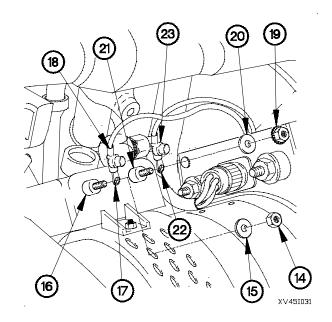
200 amp alternator weighs approximately 70 lbs (32 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

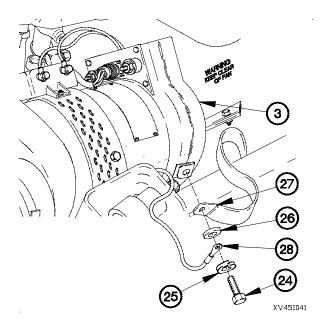
NOTE

Step (6) requires the aid of an assistant.

- (6) Position alternator (3) on alternator support bracket (6) with washer (7), screw (8), and self-locking nut (9).
- (7) Position washer (10), screw (11), washer (12), and nut (13) in alternator (3).
- (8) Tighten nut (13) to 25-32 lb-ft (35-43 N·m).
- (9) Tighten self-locking nut (9) to 45-55 lb-ft (61-75 N·m).

- (10) Remove self-locking nut (14) and washer (15) from voltage regulator terminal (16).
- (11) Position terminal lug TL110 (17) on voltage regulator terminal (16) with washer (15) and self-locking nut (14).
- (12) Tighten self-locking nut (14) to 24 lb-in. (3 N·m).
- (13) Position dust boot (18) on terminal lug TL110 (17).
- (14) Remove self-locking nut (19) and washer (20) from voltage regulator terminal (21).
- (15) Position terminal lug TL35 (22) on voltage regulator terminal (21) with washer (20) and self-locking nut (19).
- (16) Tighten self-locking nut (19) to 24 lb-in. (3 N·m).
- (17) Position dust boot (23) on terminal lug TL35 (22).

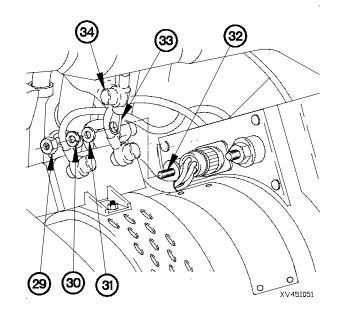


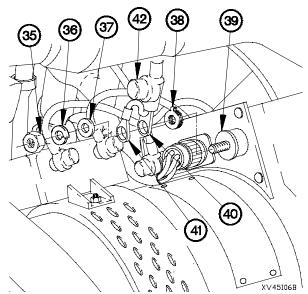


- (18) Remove screw (24), lockwasher (25), and washer (26) from alternator (3).
- (19) Position ground strap (27), washer (26), and terminal lug TL5 (28) on alternator (3) with washer (26), lockwasher (25), and screw (24).
- (20) Tighten screw (24) to 60-84 lb-in. (7-9 N·m).

20-56. 200 AMP ALTERNATOR REPLACEMENT (CONT)

- (21) Remove nut (29), lockwasher (30), and washer (31) from alternator terminal (32).
- (22) Position terminal lug TL60 (33) on alternator terminal (32) with washer (31), lockwasher (30), and nut (29).
- (23) Tighten nut (29) to 156-180 lb-in. (17-21 N·m).
- (24) Position dust boot (34) on terminal lug TL60 (33).





- (25) Remove nut (35), lockwasher (36), washer (37), and fuse link (38) from alternator terminal (39).
- (26) Position fuse link (38), terminal lugs TL2 (40) and TL6 (41) on alternator terminal (39) with washer (37), lockwasher (36), and nut (35).
- (27) Tighten nut (35) to 156-180 lb-in. (17-21 N·m).
- (28) Position dust boot (42) on terminal lug TL6 (41).

c. Follow-On Maintenance

- (1) Install alternator belts (para 7-3).
- (2) Connect batteries (para 7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check alternator operation (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

20-57. 200 AMP VOLTAGE REGULATOR REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 35, Appendix C) c. Follow-On Maintenance

Materials/Parts

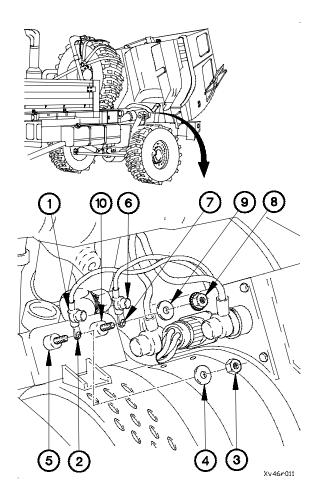
Lockwasher (2) (Item 100, Appendix G) Nut, Self-Locking (Item 130, Appendix G) Nut, Self-Locking (Item 131, Appendix G) Sealing Compound (Item 64, Appendix D)

a. Removal.

NOTE

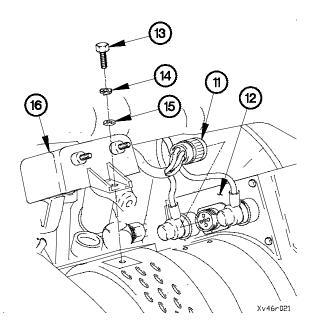
Tag terminal lugs and connection points prior to removal.

- (1) Lift dust boot (1) on terminal lug TL110 (2).
- (2) Remove self-locking nut (3), washer (4), and terminal lug TL110 (2) from voltage regulator terminal (5). Discard self-locking nut.
- (3) Lift dust boot (6) on terminal lug TL35 (7).
- (4) Remove self-locking nut (8), washer (9), and terminal lug TL35 (7) from voltage regulator terminal (10). Discard self-locking nut.

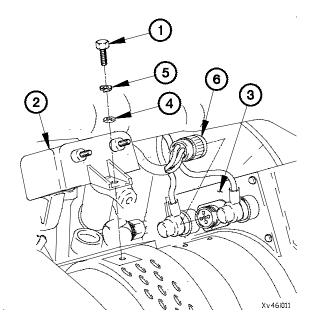


20-57. 200 AMP VOLTAGE REGULATOR REPLACEMENT (CONT)

- (5) Disconnect voltage regulator connector (11) from alternator (12).
- (6) Remove two screws (13), lockwashers (14), washers (15) and voltage regulator (16) from alternator (12). Discard lockwashers.



b. Installation

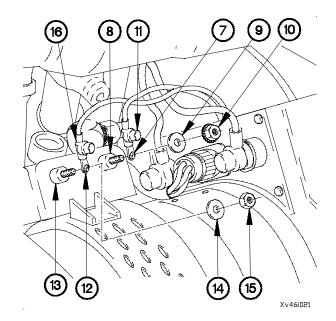


WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealing compound to threads of two screws (1).
- (2) Position voltage regulator (2) on alternator (3) with two washers (4), lockwashers (5), and screws (1).
- (3) Tighten two screws (1) to 75 lb-in. (8 N·m).
- (4) Connect voltage regulator connector (6) to alternator (3).

- (5) Position terminal lug TL35 (7) on voltage regulator terminal (8) with washer (9) and self-locking nut (10).
- (6) Tighten self-locking nut (10) to 25 lb-in. (3 N·m).
- (7) Position dust boot (11) on terminal lug TL35 (7).
- (8) Position terminal lug TL110 (12) on voltage regulator terminal (13) with washer (14) and self-locking nut (15).
- (9) Tighten self-locking nut (15) to 25 lb-in. (3 N·m).
- (10) Position dust boot (16) on terminal lug TL110 (12).



c. Follow-On Maintenance

- (1) Lower cab (TM 9-2320-365-10).
- (2) Connect batteries (para 7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT

This task covers:

- a. Removal (All Models Except M1081)
- b. Installation (All Models Except M1081)
- c. Removal (M1081)

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 35, Appendix C)

d. Installation (M1081)

e. Follow-On Maintenance

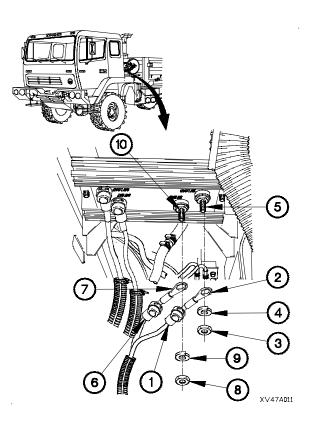
Material/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (2) (Item 65, Appendix G) Lockwasher (2) (Item 66, Appendix G) Nut, Self-Locking (2) (Item 135, Appendix G)

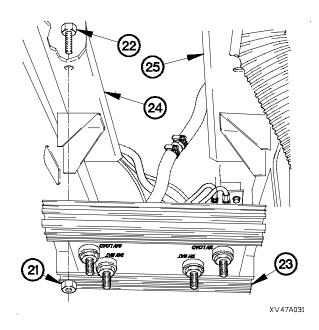
a. Removal (All Models Except M1081).

NOTE

- Tag cables and connection points prior to disconnecting.
- Remove plastic cable ties as required.
- (1) Lift dust boot (1) on terminal lug TL174 (2).
- (2) Remove nut (3), lockwasher (4), and terminal lug TL174
 (2) from reverse polarity relay 12V LOAD terminal (5). Discard lockwasher.
- (3) Lift dust boot (6) on terminal lug TL173 (7).
- (4) Remove nut (8), lockwasher (9), and terminal lug TL173(7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.

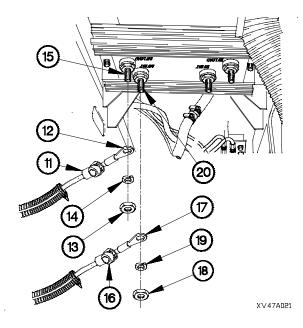


- (5) Lift dust boot (11) on terminal lug TL169 (12).
- (6) Remove nut (13), lockwasher (14), and terminal lug TL169 (12) from reverse polarity relay 24V LOAD terminal (15). Discard lockwasher.
- (7) Lift dust boot (16) on terminal lug TL168 (17).
- (8) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.



b. Installation (All Models Except M1081).

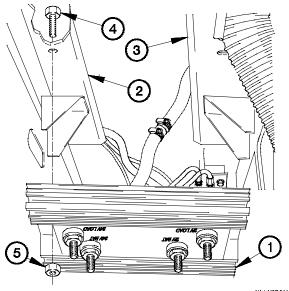
- (1) Position reverse polarity relay (1) on brackets (2 and 3) with two screws (4) and self-locking nuts (5).
- (2) Tighten two self-locking nuts (5) to 22-27 lb-ft (31-37 N·m).



NOTE

Note orientation of reverse polarity relay prior to removal.

(9) Remove two self-locking nuts (21), screws (22), and reverse polarity relay (23) from brackets (24 and 25). Discard self-locking nuts.



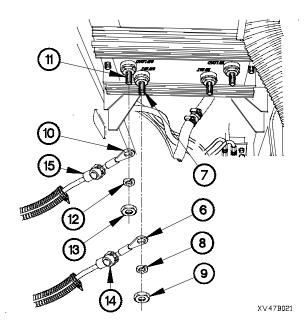
XV47B011

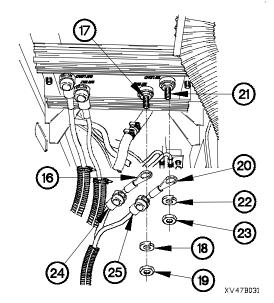
20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT (CONT)

NOTE

Install plastic cable ties as required.

- (3) Position terminal lug TL168 (6) on reverse polarity relay 24V BAT terminal (7) with lockwasher (8) and nut (9).
- (4) Position terminal lug TL169 (10) on reverse polarity relay 24V LOAD terminal (11) with lockwasher (12) and nut (13).
- (5) Tighten nuts (9 and 13) to 27-33 lb-ft (37-45 N·m).
- (6) Position dust boots (14 and 15) on terminal lugs TL168(6) and TL169 (10).

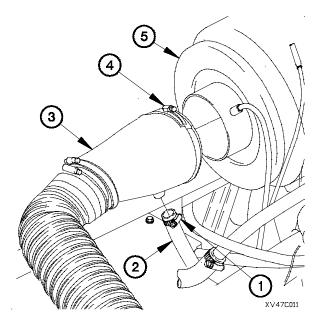


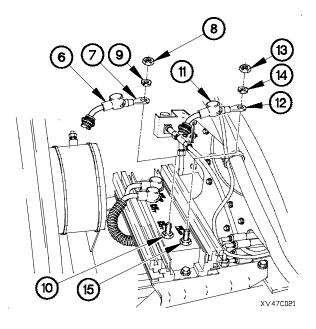


- (7) Position terminal lug TL173 (16) on reverse polarity relay 12V BAT terminal (17) with lockwasher (18) and nut (19).
- (8) Position terminal lug TL174 (20) on reverse polarity relay 12V LOAD terminal (21) with lockwasher (22) and nut (23).
- (9) Tighten nuts (19 and 23) to 108-132 lb-in. (12-15 N·m).
- (10) Position dust boots (24 and 25) on terminal lugs TL173 (16) and TL174 (20).

c. Removal (M1081).

- (1) Loosen clamp (1) on air compressor intake hose (2).
- (2) Remove air compressor intake hose (2) from intake air cleaner boot (3).
- (3) Loosen clamp (4) on intake air cleaner boot (3).
- (4) Remove intake air cleaner boot (4) from intake air cleaner housing (5).



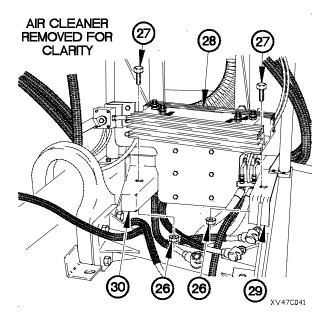


NOTE

- Tag cables and connection points prior to disconnecting.
- Remove plastic cable ties as required.
- (5) Lift dust boot (6) on terminal lug TL173 (7).
- (6) Remove nut (8), lockwasher (9), and terminal lug TL173(7) from reverse polarity relay 12V BAT terminal (10). Discard lockwasher.
- (7) Lift dust boot (11) on terminal lug TL174 (12).
- (8) Remove nut (13), lockwasher (14), and terminal lug TL174 (12) from reverse polarity relay 12V LOAD terminal (15). Discard lockwasher.

20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT (CONT)

- (9) Lift dust boot (16) on terminal lug TL168 (17).
- (10) Remove nut (18), lockwasher (19), and terminal lug TL168 (17) from reverse polarity relay 24V BAT terminal (20). Discard lockwasher.
- (11) Lift dust boot (21) on terminal lug TL169 (22).
- (12) Remove nut (23), lockwasher (24), and terminal lug TL169 (22) from reverse polarity relay 24V LOAD terminal (25). Discard lockwasher.

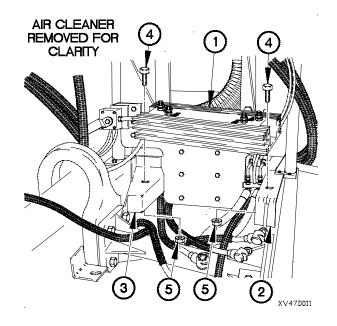


NOTE

18

Note orientation of reverse polarity relay prior to removal.

(13) Remove two self-locking nuts (26), screws (27), and reverse polarity relay (28) from brackets (29 and 30). Discard self-locking nuts.



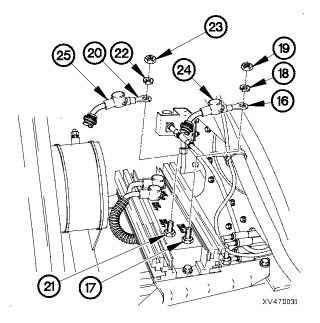
d. Installation (M1081).

- Position reverse polarity relay (1) on brackets (2 and 3) with two screws (4) and self-locking nuts (5).
- (2) Tighten two self-locking nuts (5) to 22-27 lb-ft (31-37 N⋅m).

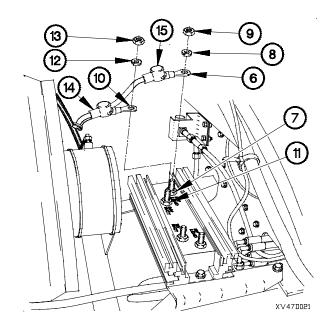
NOTE

Install plastic cable ties as required.

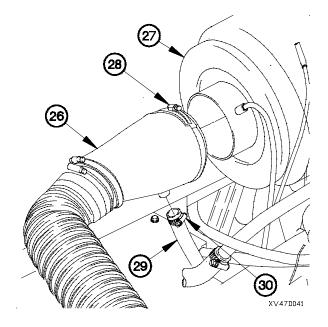
- (3) Position terminal lug TL169 (6) on reverse polarity relay 24V LOAD terminal (7) with lockwasher (8) and nut (9).
- (4) Position terminal lug TL168 (10) on reverse polarity relay 24V BAT terminal (11) with lockwasher (12) and nut (13).
- (5) Tighten nuts (9 and 13) to 27-33 lb-ft (37-45 N·m).
- (6) Position dust boots (14 and 15) on terminal lugs TL169 (6) and TL168 (10).



- (11) Position intake air cleaner boot (26) on intake air cleaner housing (27) with clamp (28).
- (12) Position air compressor intake hose (29) on intake air cleaner boot (26) with clamp (30).
- (13) Tighten clamps (28 and 30) to 36-48 lb-in. (4-5 N·m).



- (7) Position terminal lug TL174 (16) on reverse polarity relay 12V LOAD terminal (17) with lockwasher (18) and nut (19).
- (8) Position terminal lug TL173 (20) on reverse polarity relay 12V BAT terminal (21) with lockwasher (22) and nut (23).
- (9) Tighten nuts (19 and 23) to 108-132 lb-in. (12-15 N·m).
- (10) Position dust boots (24 and 25) on terminal lugs TL174 (16) and TL173 (20).



20-58. 200 AMP REVERSE POLARITY RELAY REPLACEMENT (CONT)

e. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

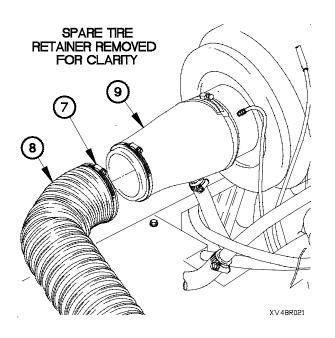
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

NOTE

Remove plastic cable ties as required.

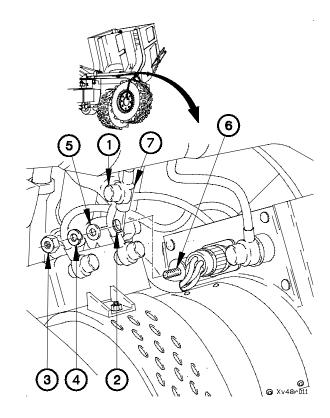
- (1) Lift dust boot (1) on terminal lug TL60 (2).
- (2) Remove nut (3), lockwasher (4), washer (5), and terminal lug TL60 (2) from alternator terminal (6). Discard lockwasher.
- (3) Remove dust boot (1) from terminal lug TL60 (2).



c. Follow-On Maintenance

Materials/Parts

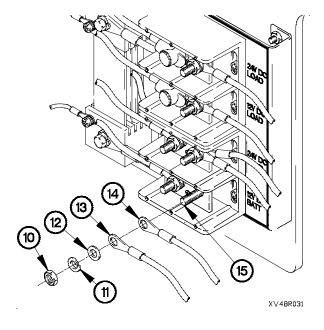
Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 96, Appendix G) Lockwasher (Item 89, Appendix G)



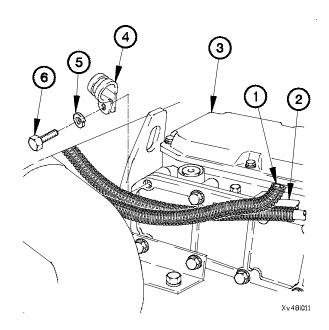
- (4) Loosen clamp (7) on turbocharger intake hose (8).
- (5) Remove turbocharger intake hose (8) from intake air cleaner boot (9).

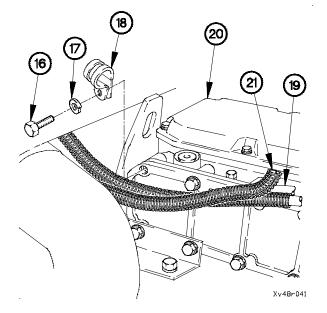
20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT (CONT)

(6) Remove nut (10), lockwasher (11), washer (12), and terminal lugs TL61 (13) and TL171 (14) from terminal block terminal (15). Discard lockwasher.



- (7) Remove three screws (16), washers (17), clamps (18), and 200 amp alternator to terminal block 12 vdc cable (19) from engine (20).
- (8) Remove convoluted tubing (21) from 200 amp alternator to terminal block 12 vdc cable (19).





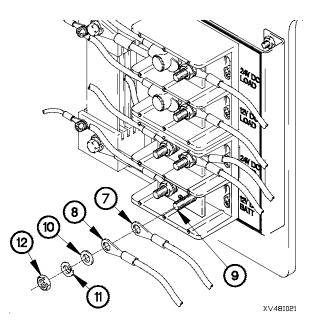
b. Installation.

NOTE

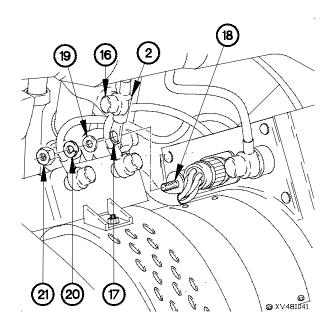
Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp alternator to terminal block 12 vdc cable (2).
- (2) Position 200 amp alternator to terminal block 12 vdc cable (2) on engine (3) with three clamps (4), washers (5), and screws (6).
- (3) Tighten three screws (6) to 22-27 lb-ft (31-37 N·m).

- (4) Position terminal lugs TL171 (7) and TL61 (8) on terminal block terminal (9) with washer (10), lockwasher (11), and nut (12).
- (5) Tighten nut (12) to 15-19 lb-ft (21-25 N·m).



- (6) Position turbocharger intake hose (13) on intake air cleaner boot (14) with clamp (15).
- (7) Tighten clamp (15) to 36-48 lb-in. (4-5 N·m).



- (8) Install dust boot (16) on terminal lug TL60 (17).
- (9) Position terminal lug TL60 (17) on alternator terminal (18) with washer (19), lockwasher (20), and nut (21).
- (10) Tighten nut (21) to 144-192 lb-in. (17-21 N·m).
- (11) Position dust boot (16) on terminal lug TL60 (17).

20-59. 200 AMP ALTERNATOR TO TERMINAL BLOCK 12 VDC CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Lower cab (TM 9-2320-365-10).
- (4) Start engine (TM 9-2320-365-10).
- (5) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (6) Shut down engine (TM 9-2320-365-10).

20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

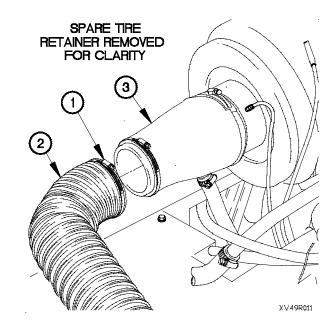
Tool Kit, Genl Mech (Item 44, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 65, Appendix G) Lockwasher (Item 89, Appendix G)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).

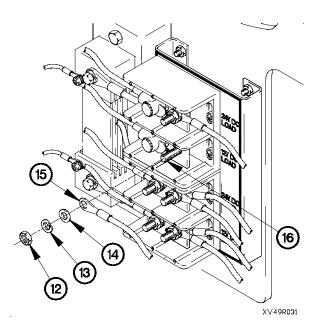


20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD CABLE REPLACEMENT (CONT)

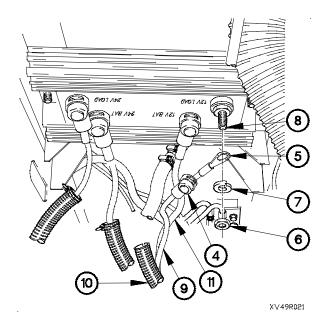
NOTE

Remove plastic cable ties as required.

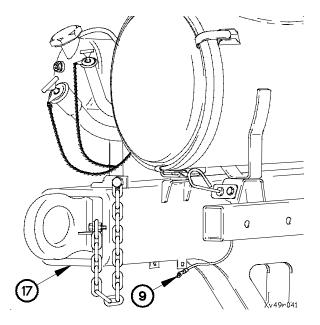
- (3) Lift dust boot (4) on terminal lug TL174 (5).
- (4) Remove nut (6), lockwasher (7), and terminal lug TL174(5) from reverse polarity relay (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 12 vdc load cable (9).
- (6) Remove convoluted tubing (10) from 200 amp terminal block to reverse polarity relay 12 vdc load cable (9) and 200 amp terminal block to reverse polarity relay 12 vdc battery cable (11).



(8) Remove 200 amp terminal block to reverse polarity relay 12 vdc load cable (9) from rear side of front lifting beam (17).

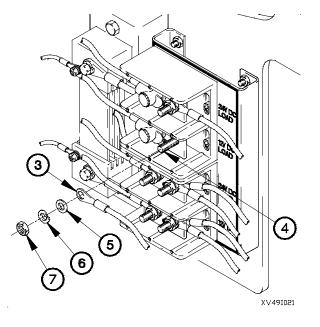


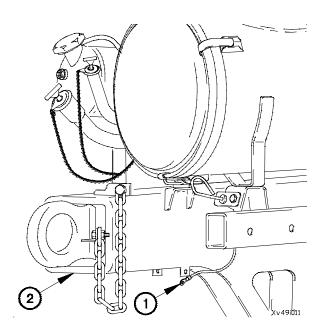
 (7) Remove nut (12), lockwasher (13), washer (14), and terminal lug TL172 (15) from terminal block terminal (16). Discard lockwasher.



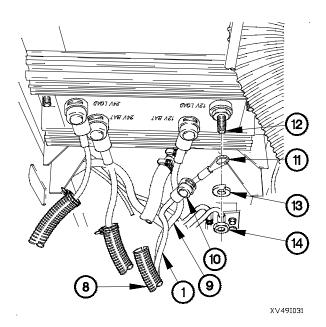
b. Installation.

 Position 200 amp terminal block to reverse polarity relay 12 vdc load cable (1) on rear side of front lifting beam (2).





- (2) Position terminal lug TL172 (3) on terminal block terminal(4) with washer (5), lockwasher (6), and nut (7).
- (3) Tighten nut (7) to 15-19 lb-ft (21-25 N·m).



NOTE

Install plastic cable ties as required.

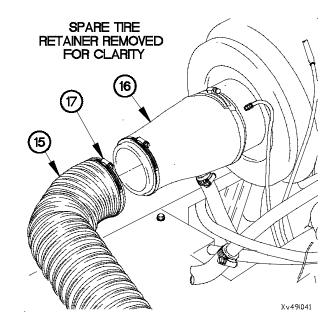
- (4) Install convoluted tubing (8) on 200 amp terminal block to reverse polarity relay 12 vdc load cable (1) and 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9).
- (5) Install dust boot (10) on 200 amp terminal block to reverse polarity relay 12 vdc load cable (1).
- (6) Position terminal lug TL174 (11) on reverse polarity relay (12) with lockwasher (13), and nut (14).
- (7) Tighten nut (14) to 108-132 lb-in. (12-15 N·m).
- (8) Position dust boot (10) on terminal lug TL174 (11).

20-60. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC LOAD CABLE REPLACEMENT (CONT)

- (9) Position turbocharger intake hose (15) on intake air cleaner boot (16) with clamp (17).
- (10) Tighten clamp (17) to 36-48 lb-in. (4-5 N·m).

c. Follow-On Maintenance

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Lower cab (TM 9-2320-365-10).
- (4) Start engine (TM 9-2320-365-10).
- (5) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (6) Shut down engine (TM 9-2320-365-10).



20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

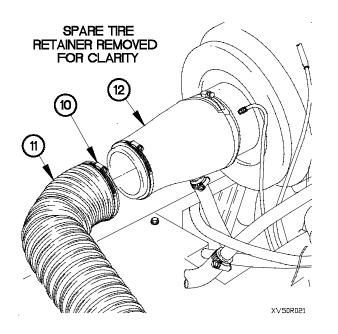
a. Removal.

(1) Lift dust boot (1) on terminal lug TL2 (2).

NOTE

Remove plastic cable ties as required.

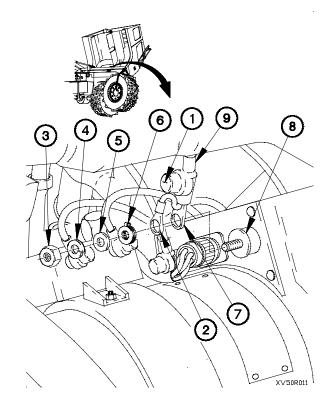
- (2) Remove nut (3), lockwasher (4), washer (5), fuse (6), and terminal lugs TL2 (2) and TL8 (7) from alternator terminal (8). Discard lockwasher.
- (3) Remove alternator to terminal block 24 vdc cable (9) from dust boot (1).



c. Follow-On Maintenance

Materials/Parts

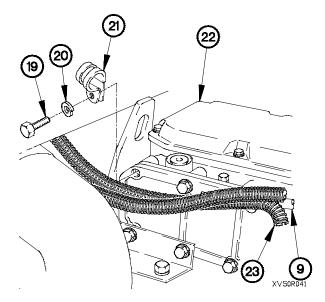
Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 96, Appendix G) Lockwasher (Item 89, Appendix G)



- (4) Loosen clamp (10) on turbocharger intake hose (11).
- (5) Remove turbocharger intake hose (11) from intake air cleaner boot (12).

20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT (CONT)

(6) Remove nut (13), lockwasher (14), washer (15), and terminal lugs TL1 (16) and TL166 (17) from terminal block terminal (18). Discard lockwasher.

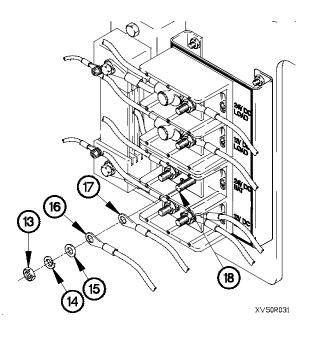


b. Installation.

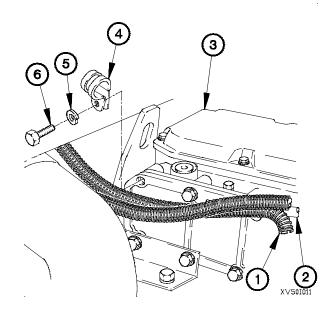
NOTE

Install plastic cable ties as required.

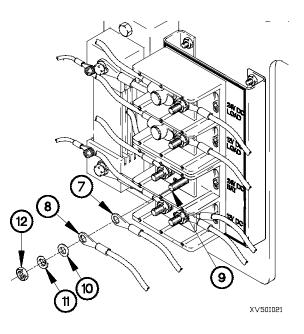
- (1) Install convoluted tubing (1) on 200 amp alternator to terminal block 24 vdc cable (2).
- (2) Position 200 amp alternator to terminal block 24 vdc cable (2) on engine (3) with three clamps (4), washers (5), and screws (6).
- (3) Tighten three screws (6) to 22-27 lb-ft (31-37 N·m).



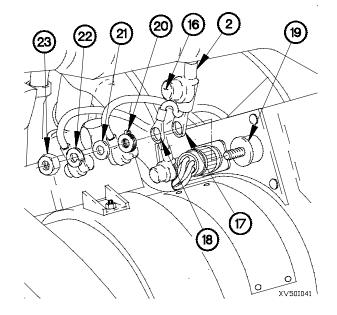
- (7) Remove three screws (19), washers (20), clamps (21), and 200 amp alternator to terminal block 24 vdc cable (9) from engine (22).
- (8) Remove convoluted tubing (23) from 200 amp alternator to terminal block 24 vdc cable (9).



- (4) Position terminal lugs TL166 (7) and TL1 (8) on terminal block terminal (9) with washer (10), lockwasher (11), and nut (12).
- (5) Tighten nut (12) to 15-19 lb-ft (21-25 N·m).



- (6) Position turbocharger intake hose (13) on intake air cleaner boot (14) with clamp (15).
- (7) Tighten clamp (15) to 36-48 lb-in. (4-5 N·m).



- (8) Install 200 amp alternator to terminal block 24 vdc cable(2) in dust boot (16).
- (9) Position terminal lugs TL8 (17) and TL2 (18) on alternator terminal (19) with fuse (20), washer (21), lockwasher (22), and nut (23).
- (10) Tighten nut (23) to 144-192 lb-in. (17-21 N·m).
- (11) Install dust boot (16) on terminal lug TL2 (18).

20-61. 200 AMP ALTERNATOR TO TERMINAL BLOCK 24 VDC CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

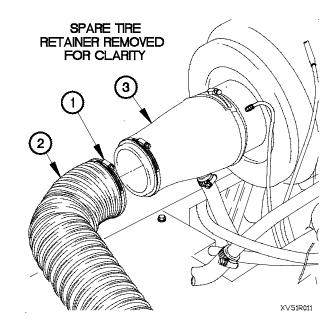
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C) c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 89, Appendix G) Lockwasher (Item 66, Appendix G)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).

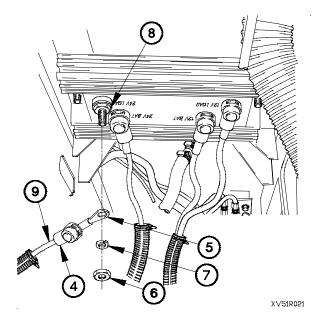


(3) Lift dust boot (4) on terminal lug TL168 (5).

NOTE

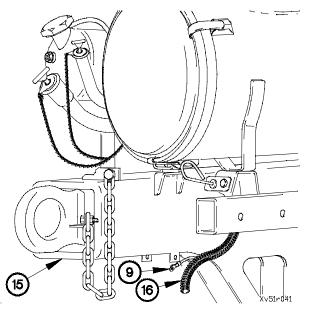
Remove plastic cable ties as required.

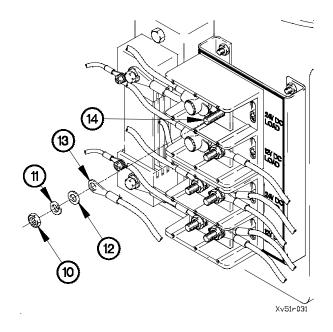
- (4) Remove nut (6), lockwasher (7), and terminal lug TL168(5) from reverse polarity relay 24 VDC LOAD terminal(8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 24 vdc load cable (9).



20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD CABLE REPLACEMENT (CONT)

 (6) Remove nut (10), lockwasher (11), washer (12), and terminal lug TL167 (13) from terminal block terminal (14). Discard lockwasher.





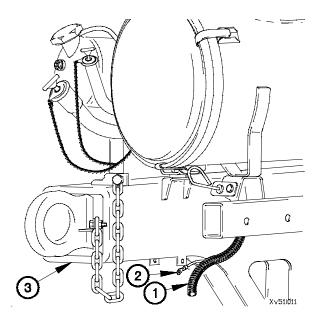
- (7) Remove 200 amp terminal block to reverse polarity relay 24 vdc load cable (9) from rear side of front lifting beam (15).
- (8) Remove convoluted tubing (16) from 200 amp terminal block to reverse polarity relay 24 vdc load cable (9).

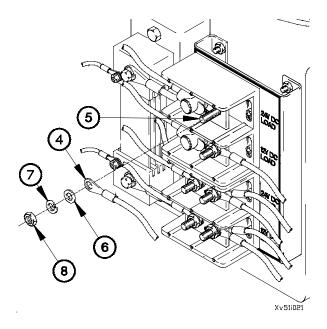
b. Installation.

NOTE

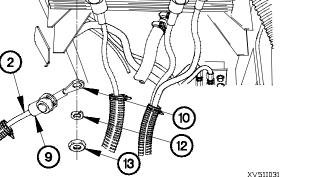
Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp terminal block to reverse polarity relay 24 vdc load cable (2).
- (2) Route 200 amp terminal block to reverse polarity relay 24 vdc load cable (2) on rear side of front lifting beam (3).





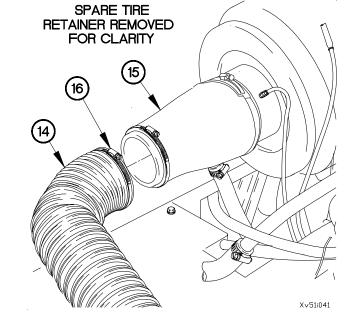
- (5) Install dust boot (9) on 200 amp terminal block to reverse polarity relay 24 vdc load cable (2).
- (6) Position terminal lug TL168 (10) on reverse polarity relay 24 VDC LOAD terminal (11) with lockwasher (12) and nut (13).
- (7) Tighten nut (13) to 27-33 lb-ft (37-45 N·m).
- (8) Position dust boot (9) on terminal lug TL168 (10).



(3) Position terminal lug TL167 (4) on terminal block terminal(5) with washer (6) lockwasher (7) and nut (8).

(4) Tighten nut (8) to 15-19 lb-ft (21-25 N·m).

11



- (9) Position turbocharger intake hose (14) on intake air cleaner boot (15) with clamp (16).
- (10) Tighten clamp (16) to 36-48 lb-in. (4-5 N·m).

20-62. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC LOAD CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

20-63. BATTERY TO 200 AMP TERMINAL BLOCK 12 VDC CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

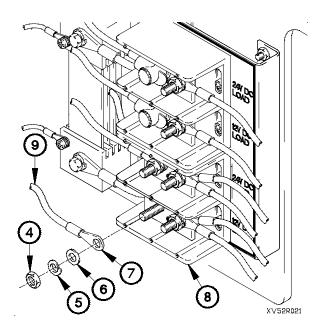
Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

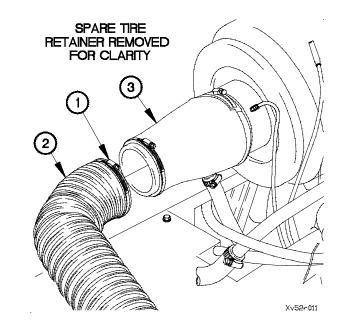
- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).



c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 89, Appendix G)



 (3) Remove nut (4), lockwasher (5), washer (6), and terminal lug TL47 (7) from terminal block (8). Discard lockwasher.

NOTE

- Note routing of battery to 200 amp terminal block 12 vdc cable prior to removal.
- Remove plastic cable ties as required.
- (4) Remove battery to 200 amp terminal block 12 vdc cable(9) from vehicle.

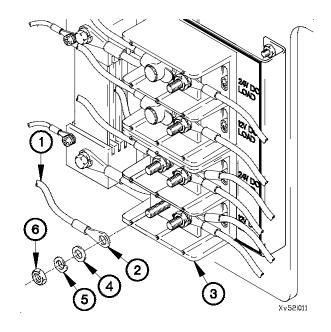
20-63. BATTERY TO 200 AMP TERMINAL BLOCK 12 VDC CABLE ASSEMBLY REPLACEMENT (CONT)

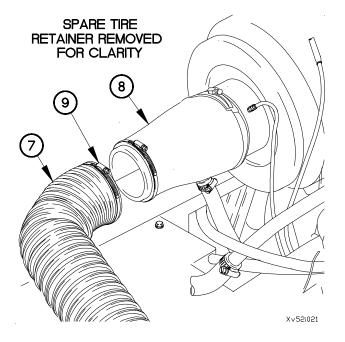
b. Installation.

NOTE

Install plastic cable ties as required.

- (1) Position battery to 200 amp terminal block 12 vdc cable(1) on vehicle.
- (2) Position terminal lug TL47 (2) on terminal block (3) with washer (4), lockwasher (5), and nut (6).
- (3) Tighten nut (6) to 15-19 lb-ft (21-25 N·m).





- (4) Position turbocharger intake hose (7) on intake air cleaner boot (8) with clamp (9).
- (5) Tighten clamp (9) to 36-48 lb-in. (4-5 N·m).

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

20-64. BATTERY TO 200 AMP TERMINAL BLOCK 24 VDC CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

c. Follow-On Maintenance

Materials/Parts

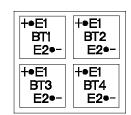
Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 89, Appendix G)

a. Removal.

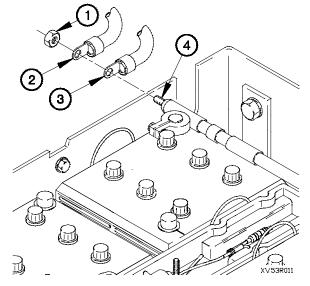
WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Batteries can explode from a spark. Battery acid is harmful to skin and eyes. Always wear eye protection when working with batteries. Failure to comply may result in injury to personnel.

(1) Remove nut (1) and terminal lugs TL10 (2) and TL39 (3) from battery cable BT1 E1 (4).

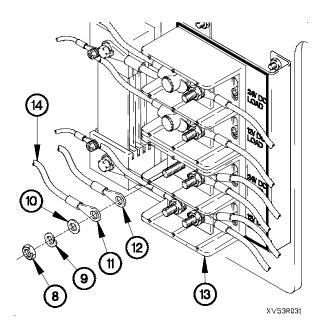


BATTERY INSTALLATION DIAGRAM



20-64. BATTERY TO 200 AMP TERMINAL BLOCK 24 VDC CABLE ASSEMBLY REPLACEMENT (CONT)

- (2) Loosen clamp (5) on turbocharger intake hose (6).
- (3) Remove turbocharger intake hose (6) from intake air cleaner boot (7).

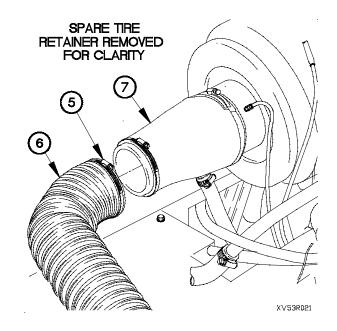


b. Installation.

NOTE

Install plastic cable ties as required.

- (1) Position battery to 200 amp terminal block 24 vdc cable assembly (1) on vehicle.
- (2) Position terminal lugs TL36 (2) and TL37 (3) on terminal block (4) with washer (5), lockwasher (6), and nut (7).
- (3) Tighten nut (7) to 15-19 lb-ft (21-25 N·m).

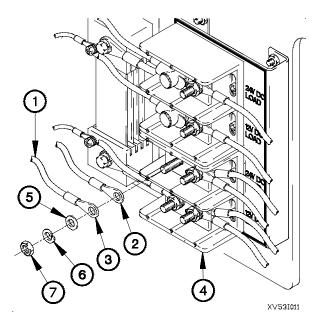


(4) Remove nut (8), lockwasher (9), washer (10), and two terminal lugs TL37 (11) and TL36 (12) from terminal block (13). Discard lockwasher.

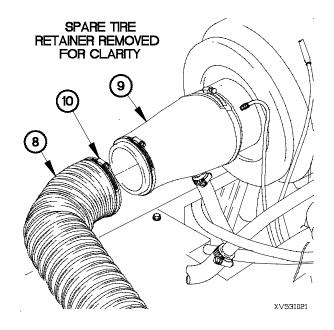
NOTE

Remove plastic cable ties as required.

(5) Remove battery to 200 amp terminal block 24 vdc cable (14) from vehicle.



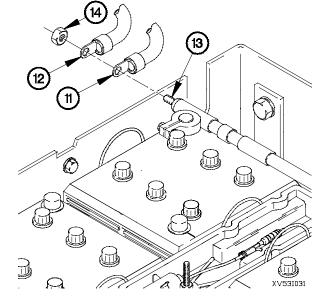
- (4) Position turbocharger intake hose (8) on intake air cleaner boot (9) with clamp (10).
- (5) Tighten clamp (10) to 36-48 lb-in. (4-5 N·m).



(6) Install terminal lugs TL39 (11) and TL10 (12) on battery cable BT1 E1 (13) with nut (14).

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for 24 vdc (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).



20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

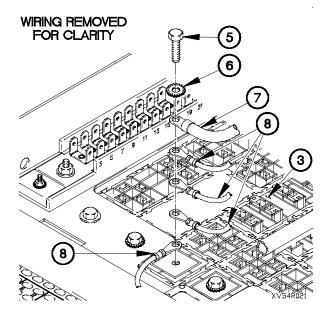
Batteries disconnected (para 7-48). PDP cover removed (para 16-2). Spare tire lowered (TM 9-2320-365-10). Lower radiator fan shroud removed (para 6-4).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

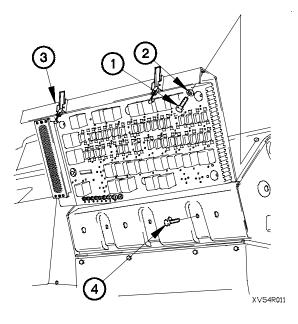
- (1) Remove three screws (1) and washers (2) from PDP (3).
- (2) Remove three screws (4) from PDP (3).
- (3) Lift PDP (3) outward to gain access.



c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Nut, Self-Locking (2) (Item 137, Appendix G) Lockwasher (Item 92, Appendix G) Lockwasher (Item 74, Appendix G)

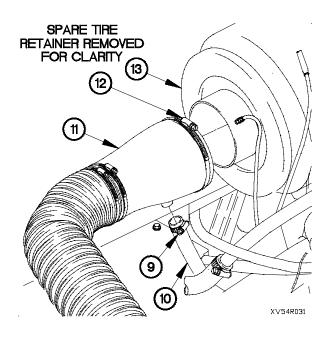


NOTE

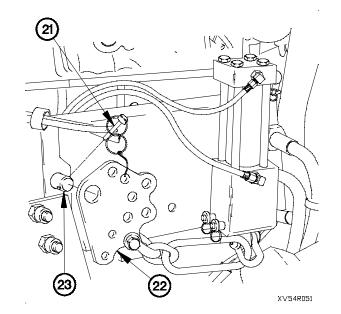
Remove plastic cable ties as required.

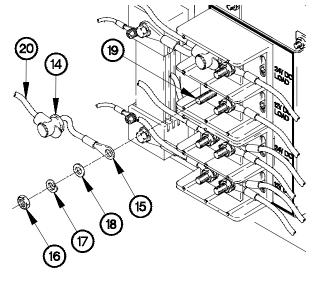
- (4) Remove screw (5), lockwasher (6), terminal lug TL41 (7), and four terminal lugs (8) from PDP (3). Discard lockwasher.
- (5) Position four terminal lugs (8) on PDP (3) with screw (5).

- (6) Loosen clamp (9) on air compressor intake hose (10).
- (7) Remove air compressor intake hose (10) from intake air cleaner boot (11).
- (8) Loosen clamp (12) on intake air cleaner boot (11).
- (9) Remove intake air cleaner boot (11) from intake air cleaner housing (13).



- (10) Lift dust boot (14) on terminal lug TL80 (15).
- (11) Remove nut (16), lockwasher (17), washer (18) and terminal lug TL80 (15) from terminal block terminal (19). Discard lockwasher.
- (12) Remove dust boot (14) from 200 amp terminal block to PDP 12 vdc cable (20).



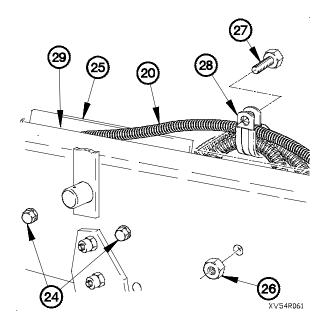


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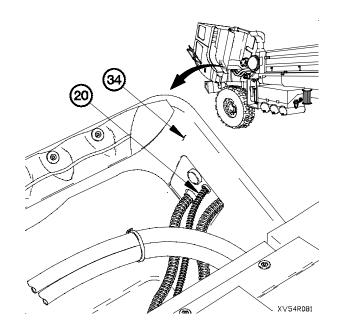
(13) Remove spring pin (21) and suspension compression plate (22) from suspension compression plate stud (23).

20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT (CONT)

- (14) Loosen two screws (24) in heat shield assembly (25).
- (15) Remove 200 amp terminal block to PDP 12 vdc cable(20) from heat shield assembly (25).
- (16) Remove self-locking nut (26), screw (27), clamp (28), and 200 amp terminal block to PDP 12 vdc cable (20) from frame rail (29). Discard self-locking nut.
- (17) Remove 200 amp terminal block to PDP 12 vdc cable(20) from clamp (28).



- (18) Remove self-locking nut (30) and screw (31) from clamps (32 and 33). Discard self-locking nut.
- (19) Remove 200 amp terminal block to PDP 12 vdc cable(20) from clamp (32).



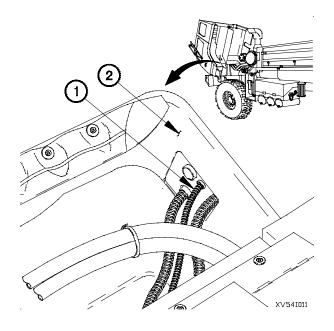
(20) Remove 200 amp terminal block to PDP 12 vdc cable(20) from cab (34).

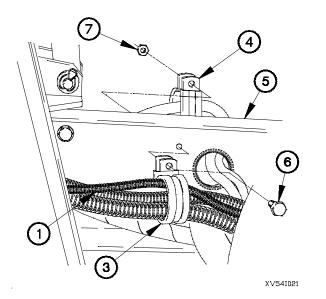
b. Installation.

NOTE

Install plastic cable ties as required.

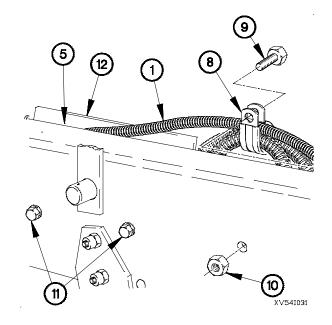
(1) Route 200 amp terminal block to PDP 12 vdc cable (1) through bottom of cab (2).





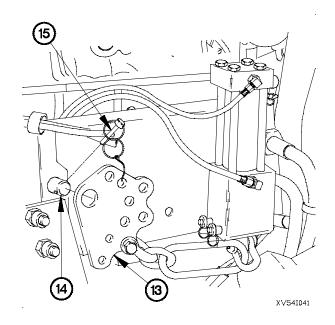
- (2) Position 200 amp terminal block to PDP 12 vdc cable (1) in clamp (3).
- (3) Install clamps (3 and 4) on frame rail (5) with screw (6) and self-locking nut (7).

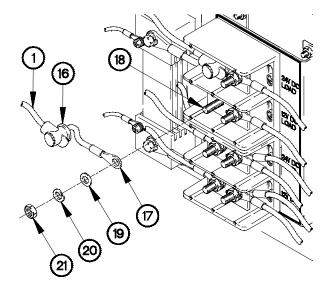
- (4) Position 200 amp terminal block to PDP 12 vdc cable (1) in clamp (8).
- (5) Position clamp (8) on frame rail (5) with screw (9), and self-locking nut (10).
- (6) Tighten self-locking nut (10) to 84-108 lb-in. (10-12 N·m).
- (7) Tighten two screws (11) in heat shield assembly (12).



20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT (CONT)

(8) Install suspension compression plate (13) on suspension compression plate stud (14) with spring pin (15).

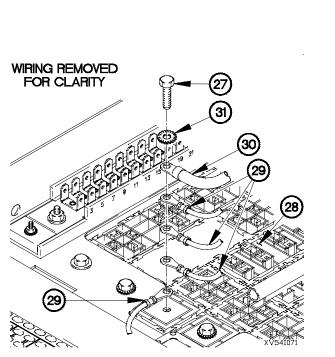




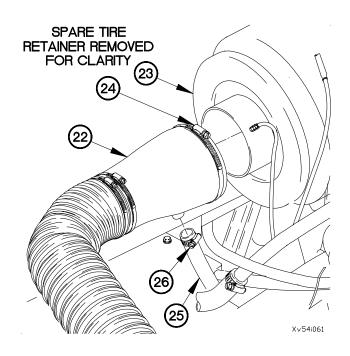
- (9) Install dust boot (16) on 200 amp terminal block to PDP 12 vdc cable (1).
- (10) Position terminal lug TL80 (17) on terminal block terminal(18) with washer (19), lockwasher (20), and nut (21).
- (11) Tighten nut (21) to 15-19 lb-ft (21-25 N·m).
- (12) Position dust boot (16) on terminal lug TL80 (17).

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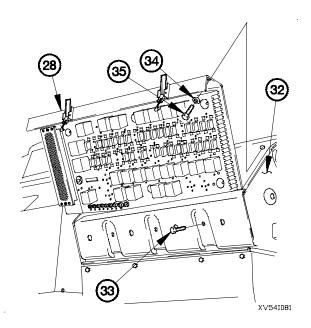
- (13) Position intake air cleaner boot (22) on intake air cleaner housing (23) with clamp (24).
- (14) Position air compressor intake hose (25) on intake air cleaner boot (22) with clamp (26).
- (15) Tighten clamps (24 and 26) to 36-48 lb-in. (4-5 N·m).
- (16) Lower cab (TM 9-2320-365-10).



- (20) Install PDP (28) on dashboard (32) with three screws (33).
- (21) Install three washers (34) and screws (35) in PDP (28).



- (17) Remove screw (27) from PDP (28).
- (18) Position four terminal lugs (29) and terminal lug TL41(30) on PDP (28) with lockwasher (31) and screw (27).
- (19) Tighten screw (27) to 35-45 lb-in. (4-5 N·m).



20-65. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 12 VDC CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Install PDP cover (para 16-2).
- (2) Install lower radiator fan shroud (para 6-4).
- (3) Connect batteries (para 7-48).
- (4) Raise spare tire (TM 9-2320-365-10).
- (5) Start engine (TM 9-2320-365-10).
- (6) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (7) Shut down engine (TM 9-2320-365-10).

End of Task.

20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC BATTERY CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

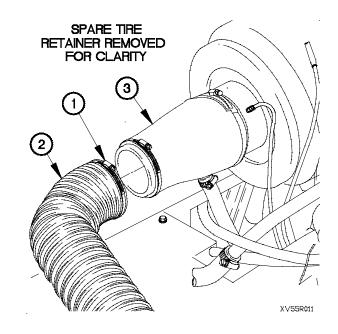
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C) c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 92, Appendix G) Lockwasher (Item 65, Appendix G)

a. Removal

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).



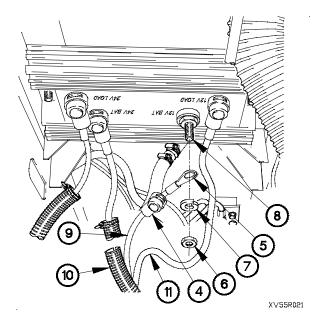
20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC BATTERY CABLE REPLACEMENT (CONT)

(3) Lift dust boot (4) on terminal lug TL173 (5).

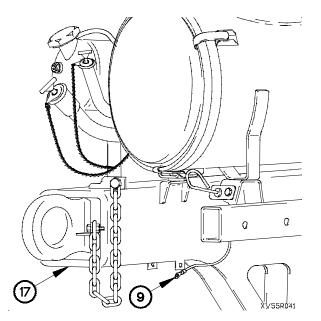
NOTE

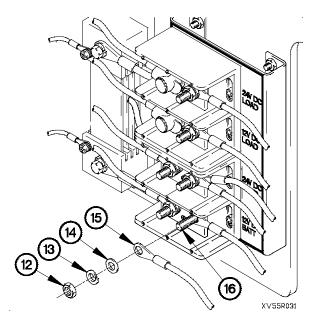
Remove plastic cable ties as required.

- (4) Remove nut (6), lockwasher (7), and terminal lug TL173(5) from reverse polarity relay 12 VDC BAT terminal (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9).
- (6) Remove convoluted tubing (10) from 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9) and 200 amp terminal block to reverse polarity relay 12 vdc load cable (11).



 (7) Remove nut (12), lockwasher (13), washer (14), and terminal lug TL171 (15) from terminal block terminal (16). Discard lockwasher.

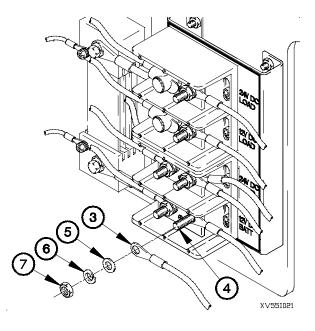


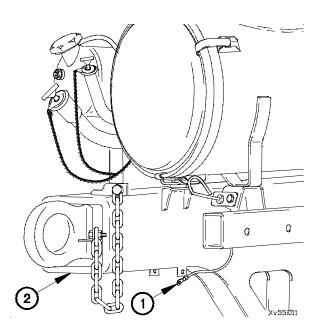


(8) Remove 200 amp terminal block to reverse polarity relay 12 vdc battery cable (9) from rear side of front lifting beam (17).

b. Installation.

(1) Route 200 amp terminal block to reverse polarity relay 12 vdc battery cable (1) to rear side of front lifting beam (2).



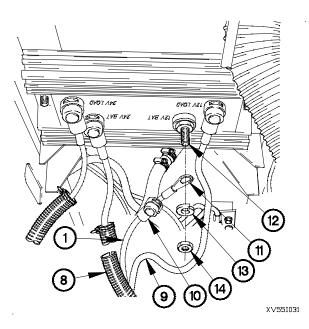


- (2) Position terminal lug TL171 (3) on terminal block terminal(4) with washer (5), lockwasher (6), and nut (7).
- (3) Tighten nut (7) to 15-19 lb-ft (21-25 N·m).



Install plastic cable ties as required.

- (4) Install convoluted tubing (8) on 200 amp terminal block to reverse polarity relay 12 vdc battery cable (1) and 200 amp terminal block to reverse polarity relay 12 vdc load cable (9).
- (5) Install dust boot (10) on 200 amp terminal block to reverse polarity relay 12 vdc battery cable (1).
- (6) Position terminal lug TL173 (11) on reverse polarity relay 12 VDC BAT terminal (12) with lockwasher (13), and nut (14).
- (7) Tighten nut (14) to 120 lb-in. (14 N·m).
- (8) Position dust boot (10) on terminal lug TL173 (11).



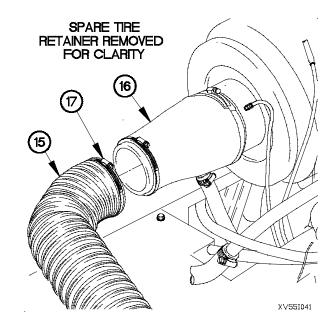
20-66. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 12 VDC BATTERY CABLE REPLACEMENT (CONT)

- (9) Position turbocharger intake hose (15) on intake air cleaner boot (16) with clamp (17).
- (10) Tighten clamp (17) to 36-48 lb-in. (4-5 N·m).

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.



20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

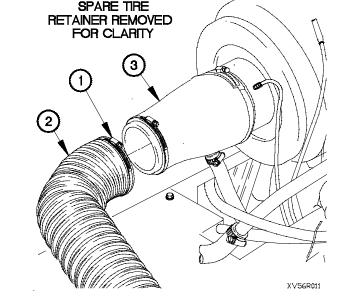
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C) c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (Item 92, Appendix G) Lockwasher (Item 66, Appendix G)

a. Removal.

- (1) Loosen clamp (1) on turbocharger intake hose (2).
- (2) Remove turbocharger intake hose (2) from intake air cleaner boot (3).

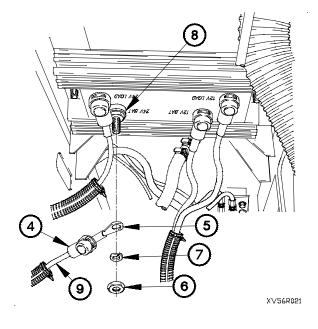


(3) Lift dust boot (4) on terminal lug TL169 (5).

NOTE

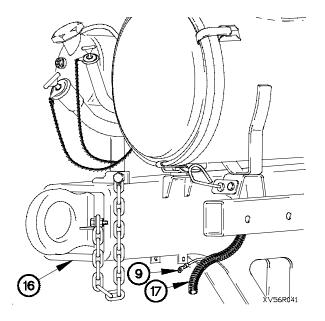
Remove plastic cable ties as required.

- (4) Remove nut (6), lockwasher (7), and terminal lug TL169(5) from reverse polarity relay 24 VDC BAT terminal (8). Discard lockwasher.
- (5) Remove dust boot (4) from 200 amp terminal block to reverse polarity relay 24 vdc battery cable (9).



20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY CABLE REPLACEMENT (CONT)

(6) Remove nut (10), lockwasher (11), washer (12), and terminal lugs TL1 (13) and TL166 (14) from terminal block terminal (15). Discard lockwasher.

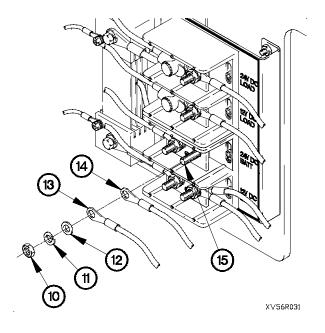


b. Installation.

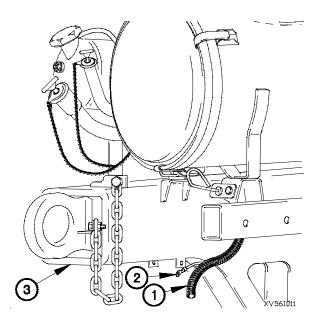
NOTE

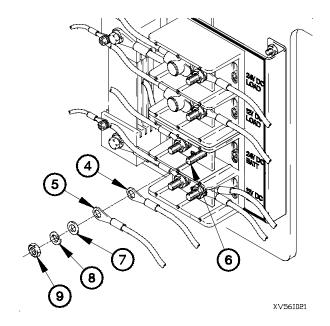
Install plastic cable ties as required.

- (1) Install convoluted tubing (1) on 200 amp terminal block to reverse polarity relay 24 vdc battery cable (2).
- (2) Position 200 amp terminal block to reverse polarity relay 24 vdc battery cable (2) on rear side of front lifting beam (3).

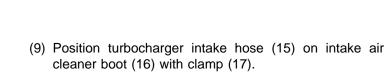


- (7) Remove 200 amp terminal block to reverse polarity relay 24 vdc battery cable (9) from rear side of front lifting beam (16).
- (8) Remove convoluted tubing (17) from 200 amp terminal block to reverse polarity relay 24 vdc battery cable (9).

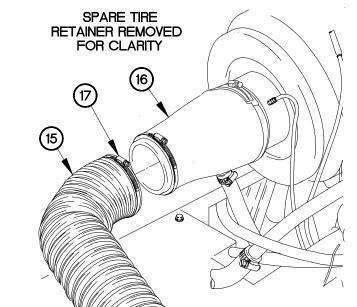




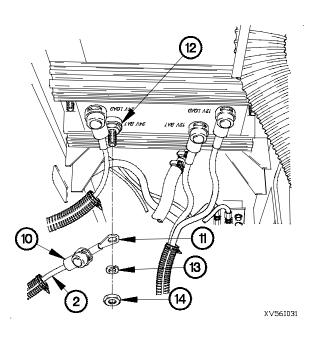
- (5) Install dust boot (10) on 200 amp terminal block to reverse polarity relay 24 vdc battery cable (2).
- (6) Position terminal lug TL169 (11) on reverse polarity relay 24 VDC BAT terminal (12) with lockwasher (13) and nut (14).
- (7) Tighten nut (14) to 30 lb-ft (41 N·m).
- (8) Position dust boot (10) on terminal lug TL169 (11).



(10) Tighten clamp (17) to 36-48 lb-in. (4-5 N·m).



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(3) Position terminal lugs TL166 (4) and TL1 (5) on terminal block terminal (6) with washer (7), lockwasher (8), and

(4) Tighten nut (9) to 15-19 lb-ft (21-25 N·m).

nut (9).

20-67. 200 AMP TERMINAL BLOCK TO REVERSE POLARITY RELAY 24 VDC BATTERY CABLE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Raise spare tire (TM 9-2320-365-10).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

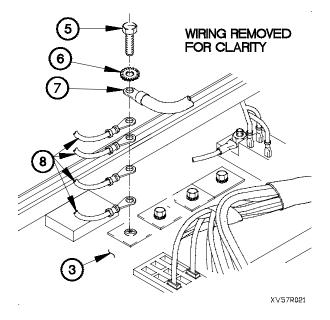
Batteries disconnected (para 7-48). PDP cover removed (para 16-2). Spare tire lowered (TM 9-2320-365-10). Bottom radiator fan shroud removed (para 6-4). Cab lowered (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

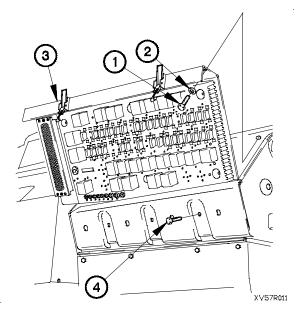
- (1) Remove three screws (1) and washers (2) from PDP (3).
- (2) Remove three screws (4) from PDP (3).
- (3) Lift PDP (3) outward to gain access.



c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Nut, Self-Locking (2) (Item 133, Appendix G) Lockwasher (Item 89, Appendix G) Lockwasher (Item 70, Appendix G)



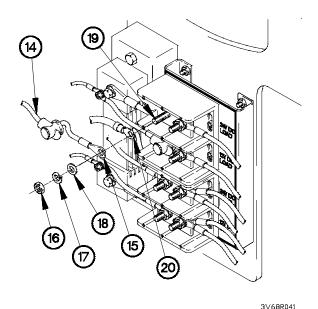
NOTE

Remove plastic cable ties as required.

- (4) Remove screw (5), lockwasher (6), terminal lug TL42 (7), and four terminal lugs (8) from PDP (3). Discard lockwasher.
- (5) Position four terminal lugs (8) on PDP (3) with screw (5).

20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT (CONT)

- (6) Loosen clamp (9) on air compressor intake hose (10).
- (7) Remove air compressor intake hose (10) from intake air cleaner boot (11).
- (8) Loosen clamp (12) on intake air cleaner boot (11).
- (9) Remove intake air cleaner boot (11) from intake air cleaner housing (13).

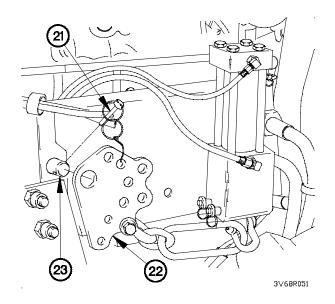


- (10) Lift dust boot (14) on terminal lug TL44 (15).
- (11) Remove nut (16), lockwasher (17), washer (18), and terminal lug TL44 (15) from terminal block terminal (19). Discard lockwasher.

NOTE

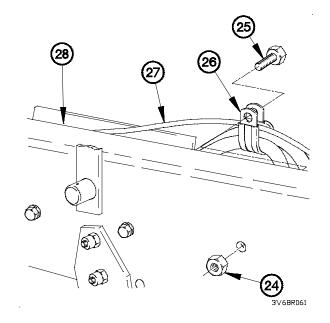
Perform step (12) on M1079.

(12) Remove terminal lug TL100 (20) from terminal block terminal (19).

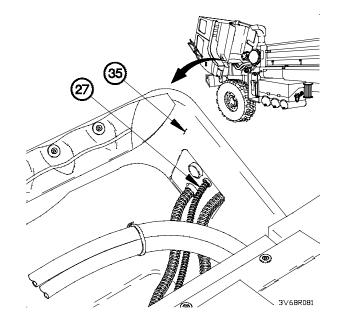


- (13) Raise cab (TM 9-2320-365-10).
- (14) Remove spring pin (21) and suspension compression plate (22) from suspension compression plate stud (23).

- (15) Remove self-locking nut (24), screw (25), clamp (26), and 200 amp terminal block to PDP 24 vdc cable (27) from frame rail (28).
- (16) Remove 200 amp terminal block to PDP 24 vdc cable(27) from clamp (26).



- (17) Remove self-locking nut (29), washer (30), screw (31), and washer (32) from clamps (33 and 34). Discard self-locking nut.
- (18) Remove 200 amp terminal block to PDP 24 vdc cable(27) from clamp (33).



(19) Remove 200 amp terminal block to PDP 24 vdc cable(27) from cab (35).

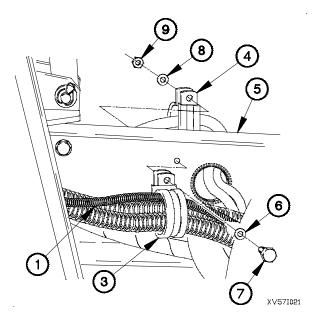
20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT (CONT)

b. Installation.

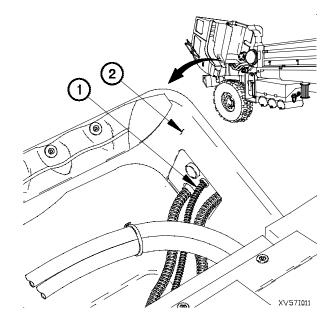
NOTE

Install plastic cable ties as required.

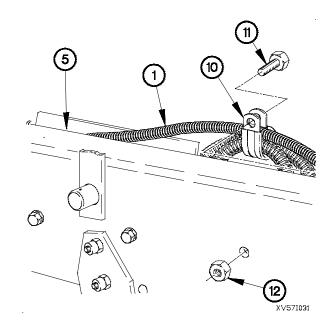
(1) Route 200 amp terminal block to PDP 24 vdc cable (1) through bottom of cab (2).



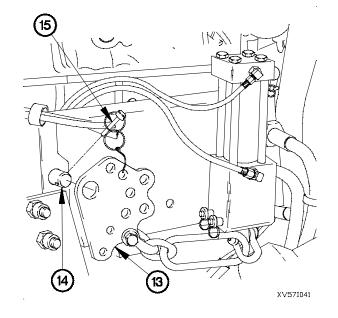
- (5) Position 200 amp terminal block to PDP 24 vdc cable (1) in clamp (10).
- (6) Position clamp (10) on frame rail (5) with screw (11) and self-locking nut (12).
- (7) Tighten self-locking nut (12) to 97-120 lb-in. (11-14 N·m).



- (2) Position 200 amp terminal block to PDP 24 vdc cable (1) in clamp (3).
- (3) Position clamps (3 and 4) on frame rail (5) with washer (6), screw (7), washer (8), and self-locking nut (9).
- (4) Tighten self-locking nut (9) to 97-120 lb-in. (11-14 N·m).



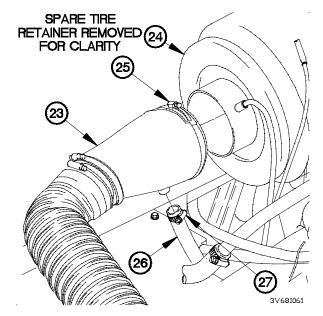
(8) Install suspension compression plate (13) on suspension compression plate stud (14) with spring pin (15).





Perform step (9) on M1089.

- (9) Position terminal lug TL100 (16) on terminal block terminal (17).
- (10) Position terminal lug TL44 (18) on terminal block terminal (17) with washer (19), lockwasher (20) and nut (21).
- (11) Tighten nut (21) to 15-19 lb-ft (21-25 N·m).
- (12) Position dust boot (22) on terminal lug TL44 (18).



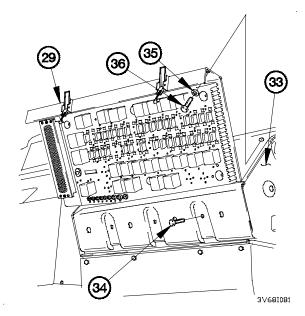
(13) Position intake air cleaner boot (23) on intake air cleaner housing (24) with clamp (25).

3V681051

- (14) Position air compressor intake hose (26) on intake air cleaner boot (23) with clamp (27).
- (15) Tighten clamps (25 and 27) to 36-48 lb-in. (4-5 N·m).
- (16) Lower cab (TM 9-2320-365-10).

20-68. 200 AMP TERMINAL BLOCK TO POWER DISTRIBUTION PANEL (PDP) 24 VDC CABLE REPLACEMENT (CONT)

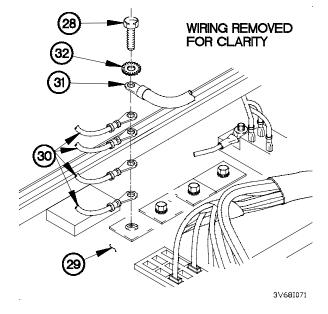
- (17) Remove screw (28) from PDP (29).
- (18) Position four terminal lugs (30) and terminal lug TL42(31) on PDP (29) with lockwasher (32) and screw (28).
- (19) Tighten screw (28) to 35-45 lb-in. (4-5 N·m).





- (1) Raise cab (TM 9-2320-365-10).
- (2) Install bottom radiator fan shroud (para 6-4).
- (3) Raise spare tire (TM 9-2320-365-10).
- (4) Install PDP cover (para 16-2).
- (5) Connect batteries (para 7-48).
- (6) Start engine (TM 9-2320-365-10).
- (7) Check VOLTS gage for charge indication (TM 9-2320-365-10).
- (8) Shut down engine (TM 9-2320-365-10).

End of Task.



- (20) Install PDP (29) on dashboard (33) with three screws (34).
- (21) Install three washers (35) and screws (36) in PDP (29).

05-10).

20-69. 200 AMP TERMINAL BLOCK REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Spare tire lowered (TM 9-2320-365-10). Batteries disconnected (para 7-48).

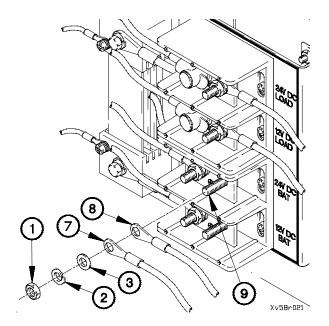
Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 34, Appendix C)

a. Removal.

NOTE

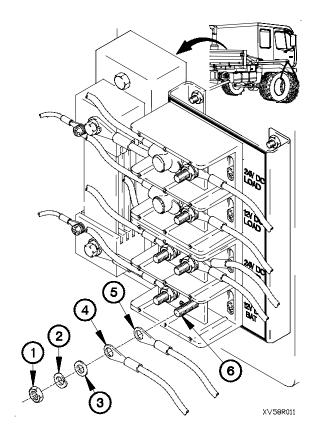
- Tag wires and connection points prior to disconnecting.
- Remove plastic cable ties as required.
- Remove nut (1), lockwasher (2), washer (3), and terminal lugs TL171 (4) and TL61 (5) from terminal block terminal (6). Discard lockwasher.



c. Follow-On Maintenance

Materials/Parts

Ties, Cable, Plastic (Item 76, Appendix D) Lockwasher (8) (Item 89, Appendix G) Nut, Self-Locking (8) (Item 143, Appendix G)

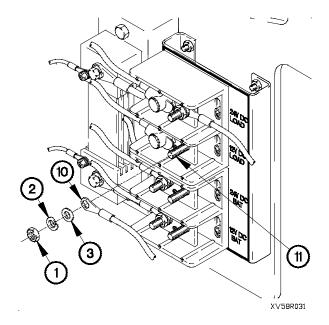


(2) Remove nut (1), lockwasher (2), washer (3), and terminal lugs TL166 (7) and TL1 (8) from terminal block terminal (9). Discard lockwasher.

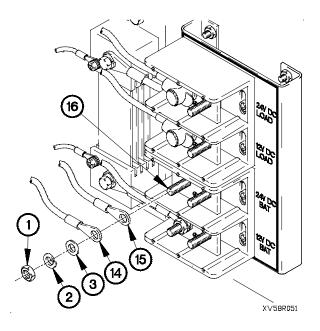
20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

- (3) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL172 (10) from terminal block terminal (11). Discard lockwasher.

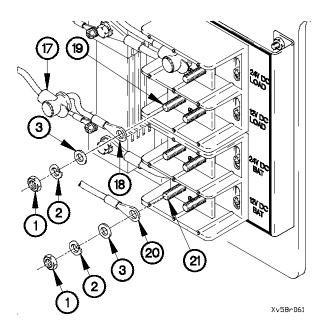
(5) Remove nut (1), lockwasher (2), washer (3), and terminal lugs TL37 (14) and TL36 (15) from terminal block terminal (16). Discard lockwasher.



(4) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL167 (12) from terminal block terminal (13). Discard lockwasher.



- (6) Lift dust boot (17) on terminal lug TL80 (18).
- (7) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL80 (18) from terminal block terminal (19). Discard lockwasher.
- (8) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL47 (20) from terminal block terminal (21). Discard lockwasher.

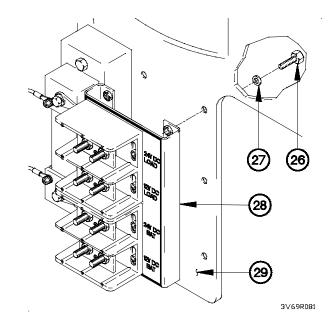


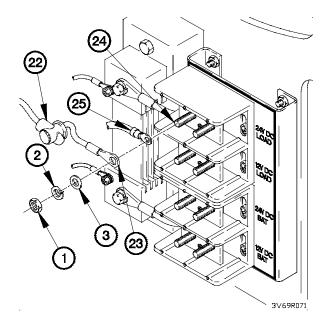
- (9) Lift dust boot (22) on terminal lug TL44 (23).
- (10) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL44 (23) from terminal block terminal (24). Discard lockwasher.

NOTE

Perform step (11) on M1079.

(11) Remove terminal lug TL100 (25) from terminal block terminal (24).

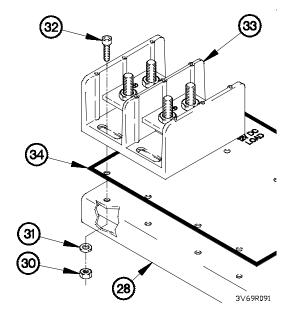




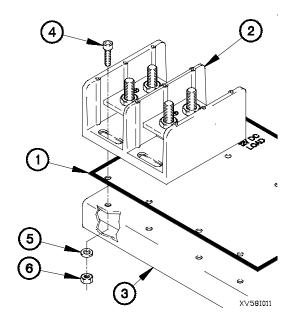
(12) Remove four screws (26), washers (27), and bracket (28) from spare tire retainer (29).

20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

(13) Remove eight self-locking nuts (30), washers (31), screws (32), two terminal blocks (33), and identification plate (34) from bracket (28). Discard self-locking nuts.



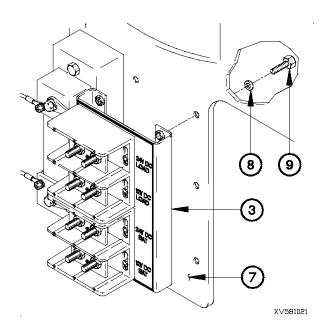
b. Installation.



CAUTION

Both terminal blocks must be positioned loosely to align correctly on mounting bracket before tightening hardware. Failure to comply may result in damage to equipment.

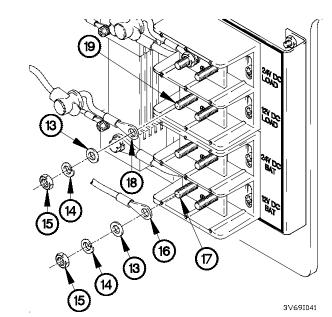
- Position identification plate (1) and two terminal blocks
 (2) on bracket (3) with eight screws (4), washers (5), and self-locking nuts (6).
- (2) Tighten eight self-locking nuts (6) to 48 lb-in. (5 N·m).



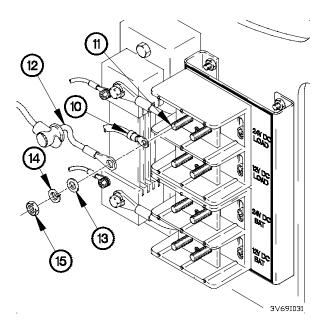
NOTE

Perform step (4) on M1079.

- (4) Position terminal lug TL100 (10) on terminal block terminal (11).
- (5) Position terminal lug TL44 (12) on terminal block terminal (11) with washer (13), lockwasher (14), and nut (15).



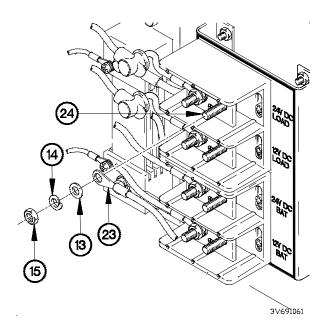
(3) Install bracket (3) on spare tire retainer (7) with four washers (8) and screws (9).



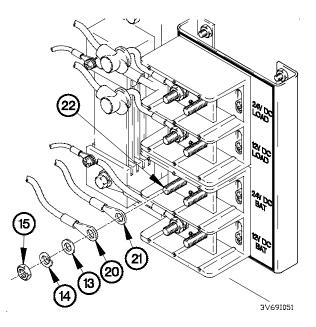
- (6) Position terminal lug TL47 (16) on terminal block terminal (17) with washer (13), lockwasher (14), and nut (15).
- (7) Position terminal lug TL80 (18) on terminal block terminal (19) with washer (13), lockwasher (14), and nut (15).

20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

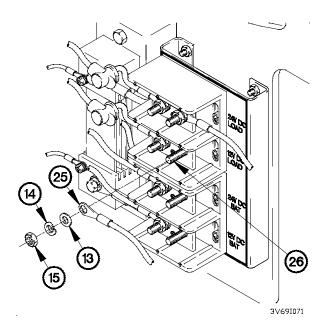
(8) Position terminal lugs TL37 (20) and TL36 (21) on terminal block terminal (22) with washer (13), lockwasher (14), and nut (15).

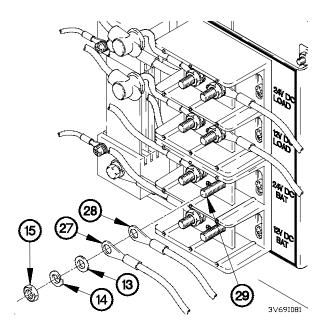


(10) Position terminal lug TL172 (25) on terminal block terminal (26) with washer (13), lockwasher (14), and nut (15).

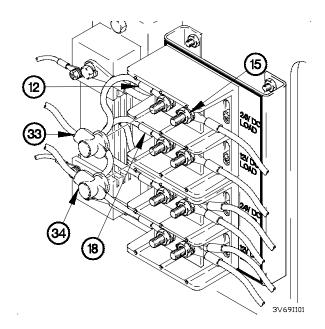


(9) Position terminal lug TL167 (23) on terminal block terminal (24) with washer (13), lockwasher (14), and nut (15).

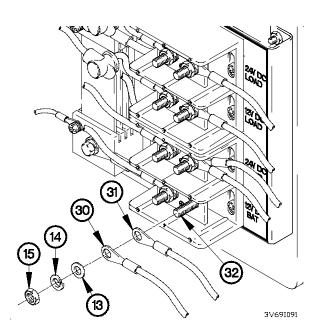




(12) Position terminal lugs TL171 (30) and TL61 (31) on terminal block terminal (32) with washer (13), lockwasher (14) and nut (15).



(11) Position terminal lugs TL166 (27) and TL1 (28) on terminal block terminal (29) with washer (13), lockwasher (14), and nut (15).



- (13) Tighten eight nuts (15) to 15-19 lb-ft (21-25 N·m).
- (14) Position dust boot (33) on terminal lug TL44 (12).
- (15) Position dust boot (34) on terminal lug TL80 (18).

20-69. 200 AMP TERMINAL BLOCK REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Raise spare tire (TM 9-2320-365-10).
- (2) Connect batteries (7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check alternator operation (TM 9-2320-365-10).
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY

b. Disassembly

Materials/Parts

(2)

Personnel Required

Lockwasher (2) (Item 104, Appendix G)

This task covers:

a. Assembly

INITIAL SETUP

Equipment Conditions Engine shut down (TM 9-2320-365-10).

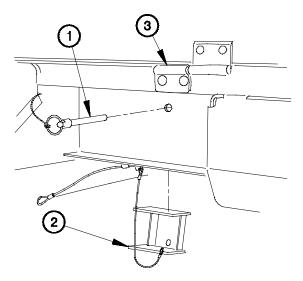
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Sling, Cargo (Item 31, Appendix C)

a. Assembly.

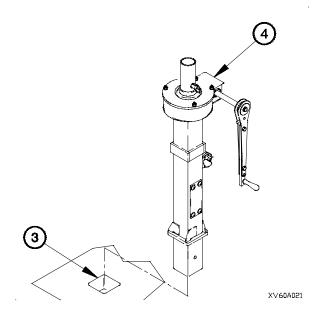
NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

(1) Remove quick release pin (1) and plug (2) from cargo bed pocket (3).



XV60A011





Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

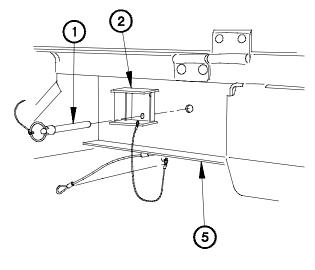
NOTE

- Step (2) requires the aid of an assistant.
- Position mast in cargo bed so handle does not extend over front or rear edge of cargo bed.

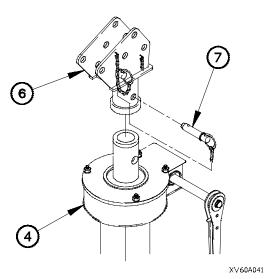
(2) Install mast (4) in cargo bed pocket (3).

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY (CONT)

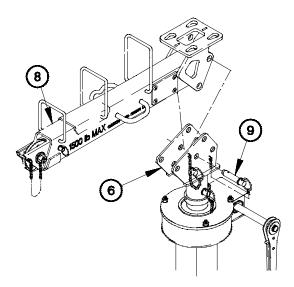
(3) Install plug (2) on cargo bed frame (5) with quick release pin (1).



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- (4) Position turret (6) on mast (4).
- (5) Install quick release pin (7) in turret (6).



XV60A051

WARNING

Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

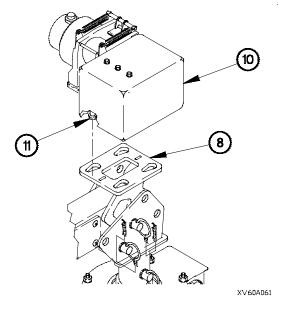
Step (6) requires the aid of an assistant.

- (6) Position boom (8) in turret (6).
- (7) Install two quick release pins (9) in turret (6).

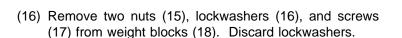


- (9) Slide winch (10) to front of boom (8).
- (10) Tighten four screws (11) on winch (10).

12



- (11) Connect power and remote control cables (TM 9-2320-365-10).
- (12) Extend winch cable (12) approximately 6 feet (1.8 m).
- (13) Remove quick release pin (13) from boom (8).
- (14) Position winch cable (12) on boom sheave (14).
- (15) Install quick release pin (13) in boom (8).

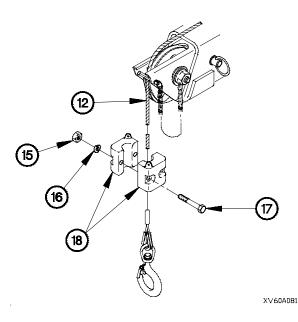


8

13

XV60A071

- (17) Install two weight blocks (18) on winch cable (12) with two screws (17), lockwashers (16), and nuts (15).
- (18) Position boom in stowed position (TM 9-2320-365-10).



20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY (CONT)

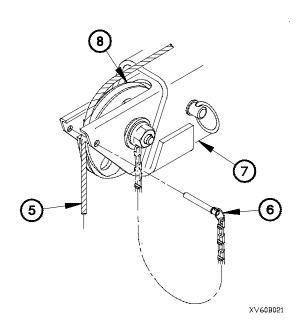
b. Disassembly.

- (1) Position boom in the 0-degree position (TM 9-2320-365-10).
- (2) Remove two nuts (1), screws (2), lockwashers (5), and weight blocks (3) from winch cable (4). Discard lockwashers.

NOTE

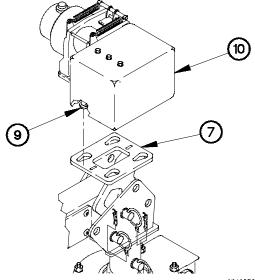
Perform step (3) for stowage of weight block.

(3) Install two screws (2) in weight blocks (3) with lockwashers (5) and nuts (1).



XV60B011

- (4) Remove quick release pin (6) from boom (7).
- (5) Remove winch cable (5) from boom sheave (8).
- (6) Install quick release pin (6) in boom (7).
- (7) Retract winch cable approximately 6 feet (1.8 m).
- (8) Disconnect remote control and power cables (TM 9-2320-365-10).



XV60B031

- (9) Loosen four screws (9) on winch (10).
- (10) Slide winch (10) to rear of boom (7).
- (11) Remove winch (10) from boom (7).

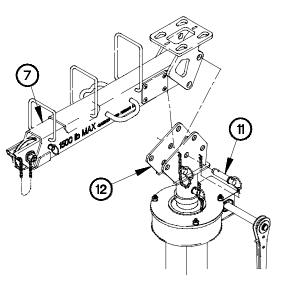
WARNING

Light Material Handling Crane (LMHC) boom weighs approximately 60 lbs (27 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

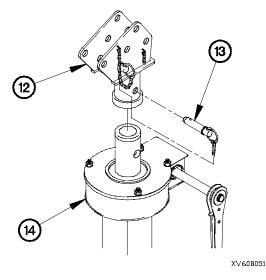
NOTE

Steps (12) and (13) require the aid of an assistant.

- (12) Remove two quick release pins (11) from turret (12).
- (13) Remove boom (7) from turret (12).



XV60B041

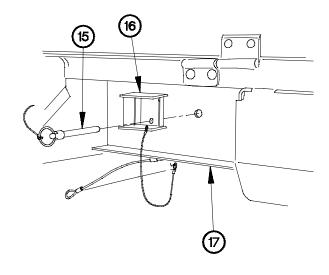


- (14) Remove quick release pin (13) from turret (12).
- (15) Remove turret (12) from mast (14).

NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

(16) Remove quick release pin (15) and plug (16) from cargo bed frame (17).



XV60B061

20-70. LIGHT MATERIAL HANDLING CRANE (LMHC) ASSEMBLY/DISASSEMBLY (CONT)

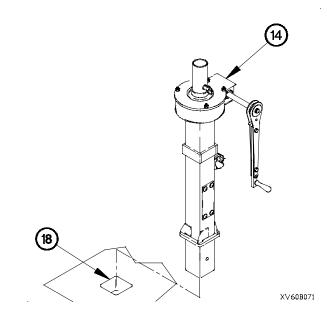
WARNING

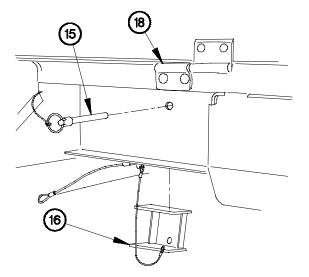
Light Material Handling Crane (LMHC) mast weighs approximately 110 lbs (50 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Step (17) requires the aid of an assistant.

(17) Remove mast (14) from cargo bed pocket (18).





(18) Install plug (16) in cargo bed pocket (18) with quick release pin (15).

End of Task.

XV60B081

20-71. LIGHT MATERIAL HANDLING CRANE (LMHC) REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). LMHC power cable removed (TM 9-2320-365-10). LMHC remote control cable removed (TM 9-2320-365-10). c. Follow-On Maintenance

Tools and Special Tools

Sling, Cargo (2) (Item 31, Appendix C)

Personnel Required

(2)

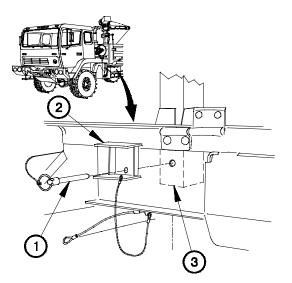
a. Removal.

CARGO

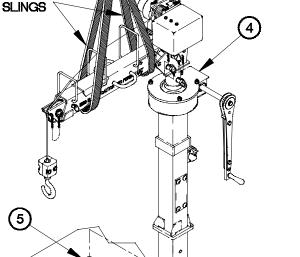
NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

(1) Remove quick release pin (1) and plug (2) from cargo bed frame (3).



XV61R011





Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

NOTE

Step (2) requires the aid of an assistant.

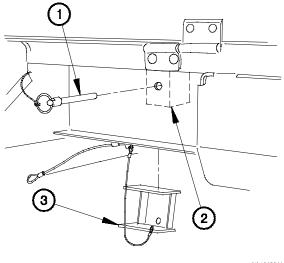
(2) Remove LMHC (4) from cargo bed pocket (5).

XV61R021

20-71. LIGHT MATERIAL HANDLING CRANE (LMHC) REPLACEMENT (CONT)

- (3) Install plug (2) in cargo bed pocket (5).
- (4) Install quick release pin (1) in cargo bed pocket (5).

b. Installation.



XV61I011

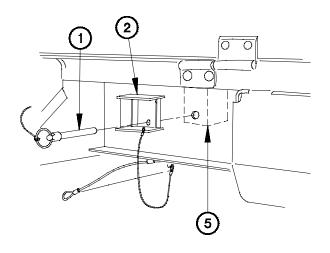


Light Material Handling Crane (LMHC) weighs approximately 250 lbs (114 kg). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

NOTE

Step (3) requires the aid of an assistant.

(3) Position LMHC (4) in cargo bed pocket (2).

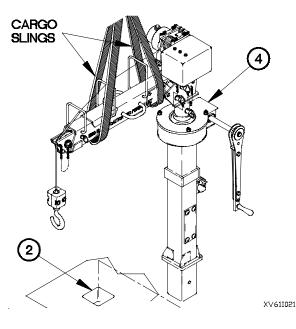


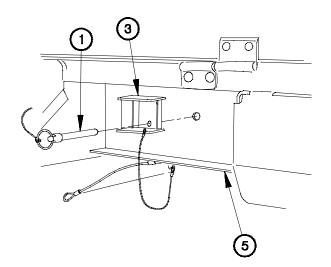
XV61R031

NOTE

LMHC may be installed in any of the four cargo bed pockets. Left front cargo bed pocket shown.

- (1) Remove quick release pin (1) from cargo bed pocket (2).
- (2) Remove plug (3) from cargo bed pocket (2).





(4) Install plug (3) on cargo bed frame (5) with quick release pin (1).

c. Follow-On Maintenance.

Operate LMHC and check for proper operation (TM 9-2320-365-10).

End of Task.

XV61I031

20-72. LIGHT MATERIAL HANDLING CRANE (LMHC) WEIGHT BLOCK AND WIRE ROPE REPLACEMENT/REPAIR

This task covers:

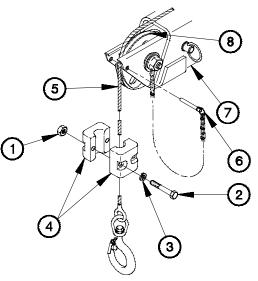
a. Removal b. Installation	c. Follow-On Maintenance
INITIAL SETUP	
Equipment Conditions	Tools and Special Tools
Engine shut down (TM 9-2320-365-10).	Tool Kit, Genl Mech (Item 44, Appendix C)
LMHC circuit breaker positioned to ON (TM 9-2320- 365-10).	Gloves, Welders (Item 14, Appendix C)
LMHC power cable installed (TM 9-2320-365-10).	Materials/Parts
LMHC remote control cable installed (TM 9-2320-365-10).	Lockwasher (2) (Item 104, Appendix G)
LMHC wire rope assembly fully extended (TM 9-	Personnel Required
2320-365-10).	(2)

a. Removal.

NOTE

Perform step (1) if replacing weight block.

- Remove two nuts (1), screws (2), lockwashers (3), and weight blocks (4) from wire rope (5). Discard lockwashers.
- (2) Remove quick release pin (6) from boom (7).
- (3) Remove wire rope (5) from sheave (8).



XV62R011

WARNING

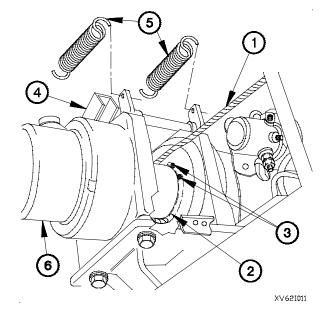
Use care when removing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

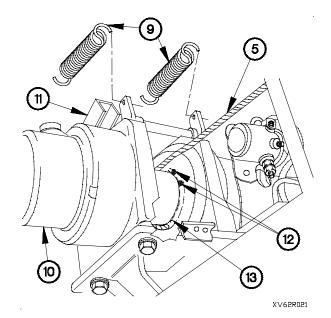
- (4) Remove two springs (9) from winch assembly (10).
- (5) Position tensioner (11) for access.
- (6) Loosen two set screws (12) on drum (13).

WARNING

- Wire rope can become frayed or contain broken wires. Wear heavy leather-palmed work gloves when handling wire rope. Failure to comply may result in injury to personnel.
- Never let moving wire rope slide through hands, even when wearing gloves. A broken wire could pierce through glove and cut hands. Failure to comply may result in injury to personnel.
- (7) Remove wire rope (5) from drum (13).

b. Installation.





- (1) Position wire rope (1) in drum (2).
- (2) Tighten two set screws (3) on drum (2).
- (3) Position tensioner (4) on drum (2).

WARNING

Use care when installing springs. Springs are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

(4) Install two springs (5) on winch assembly (6).

20-72. LIGHT MATERIAL HANDLING CRANE (LMHC) WEIGHT BLOCK AND WIRE ROPE REPLACEMENT/REPAIR.

NOTE

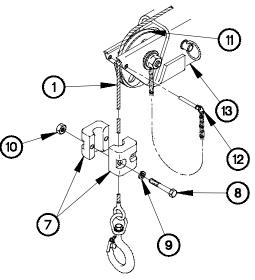
Perform step (5) if weight block was replaced.

- (5) Install two weight blocks (7) on wire rope (1) with two screws (8), lockwashers (9), and nuts (10).
- (6) Position wire rope (1) in sheave (11).
- (7) Install quick release pin (12) in boom (13).



- (1) Retract LMHC wire rope assembly (TM 9-2320-365-10).
- (2) Extend and retract LMHC wire rope assembly to check for proper function (TM 9-2320-365-10).
- (3) Remove LMHC remote control cable (TM 9-2320-365-10).
- (4) Remove LMHC power cable (TM 9-2320-365-10).
- (5) Notify DS maintenance to perform LMHC load test.

End of Task.



XV621021

20-73. LIGHT MATERIAL HANDLING CRANE (LMHC) WINCH REPLACEMENT/REPAIR This task covers: a. Removal e. Winch Assembly b. Base Plate Disassembly f. Base Plate Assembly c. Winch Disassembly a. Installation d. Cleaning/Inspection h. Follow-On Maintenance **INITIAL SETUP Equipment Conditions** Materials/Parts LMHC weight block and wire rope removed (para 20-Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) 72). Gasket (3) (Item 30, Appendix G) LMHC power cable removed (TM 9-2320-365-10). LMHC remote control cable removed (TM 9-2320-Grease, Molybdenum Disulfide (Item 25, Appendix 365-10). D) Rag, Wiping (Item 51, Appendix D) Solvent, Dry Cleaning (Item 71, Appendix D) **Tools and Special Tools** Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C) **Personnel Required** Gloves, Rubber (Item 13, Appendix C) (2)

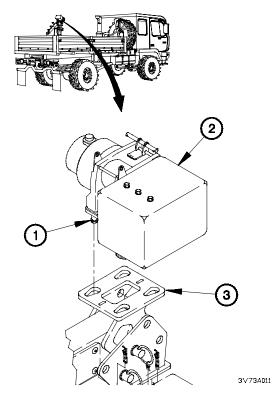
a. Removal.

(1) Loosen four screws (1) on winch (2).

NOTE

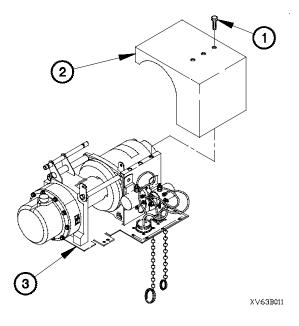
Step (2) and (3) require the aid of an assistant.

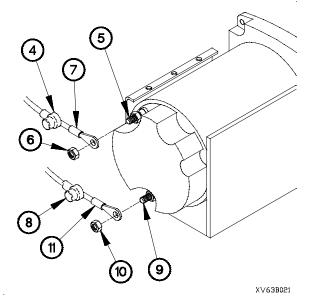
- (2) Slide winch (2) to rear of boom (3).
- (3) Remove winch (2) from boom (3).



b. Base Plate Disassembly.

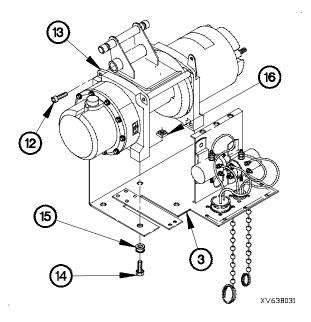
(1) Remove 18 screws (1) and cover (2) from base plate (3).



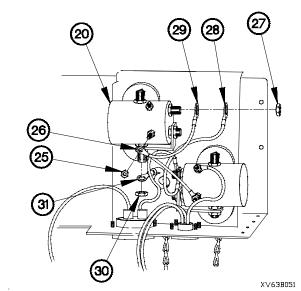


NOTE

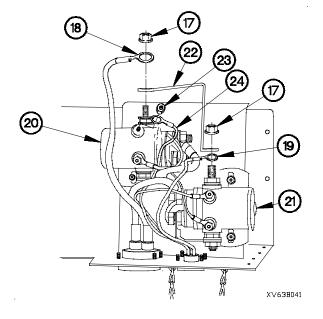
- Tag wires and connection points prior to disconnecting.
- Note position of wires prior to removal.
- (2) Remove rubber boot (4) from negative terminal (5).
- (3) Remove nut (6) and terminal lug (7) from negative terminal (5).
- (4) Remove rubber boot (8) from positive terminal (9).
- (5) Remove nut (10) and terminal lug (11) from positive terminal (9).



- (8) Remove two nuts (17) and terminal lugs (18 and 19) from solenoids (20 and 21).
- (9) Remove strap (22) from solenoids (20 and 21).
- (10) Remove nut (23) and terminal lug (24) from solenoid (20).

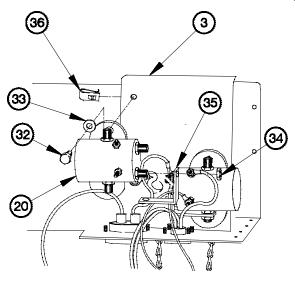


- (6) Remove two screws (12) from winch assembly (13).
- (7) Remove four screws (14), mounting feet (15), nuts (16), and winch assembly (13) from base plate (3).

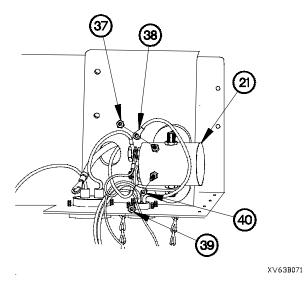


- (11) Remove nut (25) and terminal lug (26) from solenoid (20).
- (12) Remove nut (27) and two terminal lugs (28 and 29) from solenoid (20).
- (13) Remove nut (30) and terminal lug (31) from solenoid (20).

- (14) Remove two screws (32), washers (33), and solenoid (20) from base plate (3).
- (15) Remove nut (34) and strap (35) from solenoid (20).
- (16) Remove two clip nuts (36) from base plate (3).

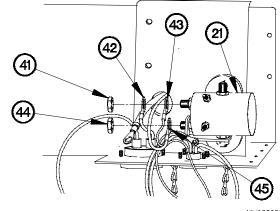


XV63B061

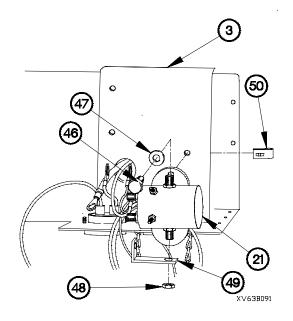


- (17) Remove nut (37) and terminal lug (38) from solenoid (21).
- (18) Remove nut (39) and terminal lug (40) from solenoid (21).

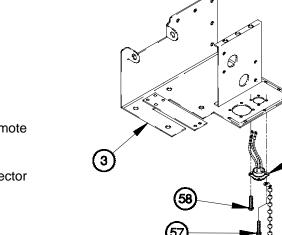
- (19) Remove nut (41) and two terminal lugs (42 and 43) from solenoid (21).
- (20) Remove nut (44) and terminal lug (45) from solenoid (21).



XV63B081



- (24) Remove dust caps (51 and 52) from power connector (53) and remote control connector (54).
- (25) Remove screw (55) and dust cap (51) from power connector (53).
- (26) Remove three screws (56) and power connector (53) from base plate (3).



52

X∨63B111

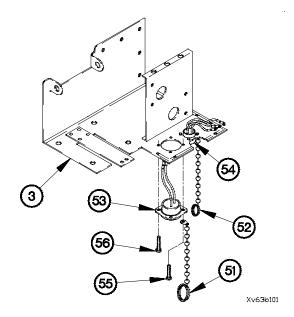
(54)

(22) Remove nut (48) and strap (49) from solenoid (21).

(21) Remove two screws (46), washers (47), and solenoid

(23) Remove two clip nuts (50) from base plate (3).

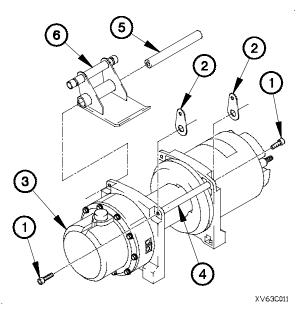
(21) from base plate (3).

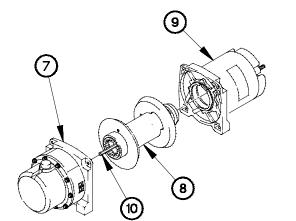


- (27) Remove screw (57) and dust cap (52) from remote control connector (54).
- (28) Remove three screws (58) and remote control connector (54) from base plate (3).

c. Winch Disassembly.

- (1) Remove two screws (1) and brackets (2) from winch assembly (3).
- (2) Remove tie rods (4 and 5) from winch assembly (3).
- (3) Remove tensioner (6) from tie rod (5).





(4) Remove housing assembly (7) from drum assembly (8).

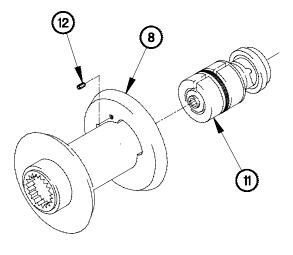
- (5) Remove drum assembly (8) from 24 vdc motor assembly (9).
- (6) Remove hex shaft (10) from drum assembly (8).

XV63C021

NOTE

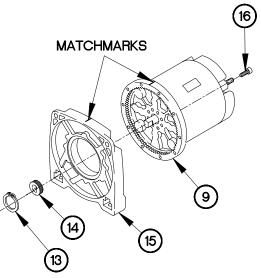
Note position of break in drum assembly prior to removal.

- (7) Remove brake (11) from drum assembly (8).
- (8) Remove two screws (12) from drum assembly (8).

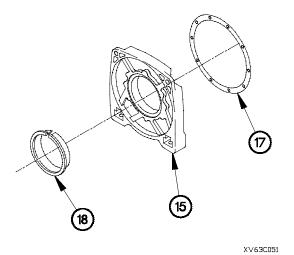


XV63C031

- (9) Remove circlip (13) and gear (14) from 24 vdc motor assembly (9).
- (10) Match mark drum support (15) and 24 vdc motor assembly (9).
- (11) Remove 10 screws (16) and drum support (15) from 24 vdc motor assembly (9).



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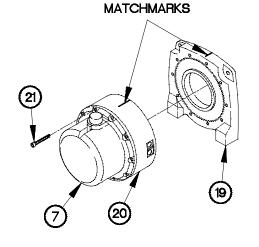
- (12) Remove gasket (17) from drum support (15). Discard gasket.
- (13) Remove sleeve bushing (18) from drum support (15).

- (14) Match mark drum support (19) spur gear (20) and
- (15) Remove 10 screws (21) and drum support (19) from spur gear (20).

housing assembly (7).

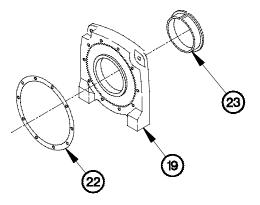


XV63C061



Discard

- (16) Remove gasket (22) from drum support (19). Discard gasket.
- (17) Remove sleeve bushing (23) from drum support (19).

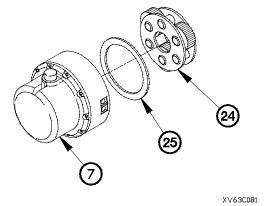


XV63C071



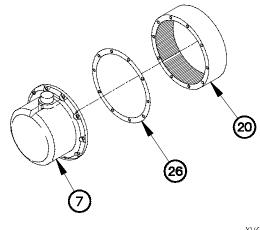
Note position of stage 3 carrier in housing assembly prior to removal.

- (18) Remove stage 3 carrier (24) from housing assembly (7).
- (19) Remove washer (25) from stage 3 carrier (24).



(20) Remove spur gear (20) from housing assembly (7).

(21) Remove gasket (26) from spur gear (20).



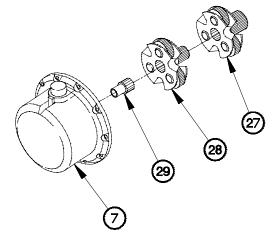
XV63C091

gasket.

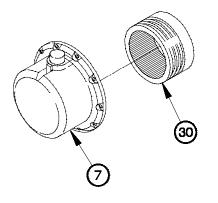
NOTE

Note position of stage 2 carrier, WI carrier, and spur gear in housing assembly prior to removal.

- (22) Remove stage 2 carrier (27) from housing assembly (7).
- (23) Remove WI carrier (28) from housing assembly (7).
- (24) Remove spur gear (29) from housing assembly (7).



XV63C101



NOTE

Note position of internal gear in housing assembly prior to removal.

(25) Remove internal gear (30) from housing assembly (7).

XV63C111

d. Cleaning/Inspection.

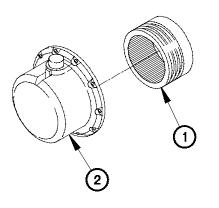
WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do not breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.
- (1) Clean all metal parts thoroughly with dry cleaning solvent.

NOTE

Replace any part that fails visual inspection.

- (2) Inspect all parts for visible cracks or damage.
- e. Winch Assembly.



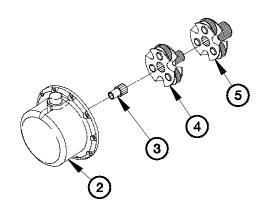
(1) Position internal gear (1) in housing assembly (2).

- (2) Apply grease to spur gear (3).
- (3) Install spur gear (3) in housing assembly (2).
- (4) Apply grease to WI carrier (4).

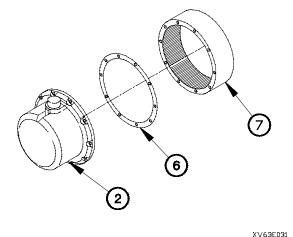
NOTE

Hex shaft may be used to align WI carrier with spur gear.

- (5) Install WI carrier (4) in housing assembly (2).
- (6) Apply grease to stage 2 carrier (5).
- (7) Install stage 2 carrier (5) in housing assembly (2).

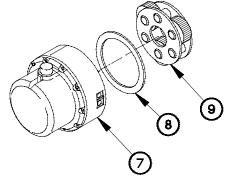


XV63E021

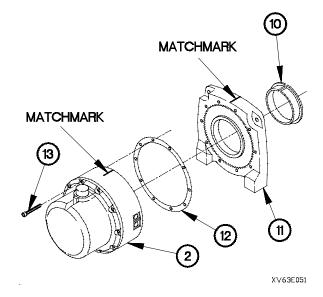


(8) Position gasket (6) and spur gear (7) on housing assembly (2).

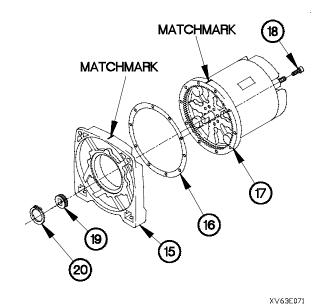
- (9) Apply grease to washer (8) and stage 3 carrier (9).
- (10) Position washer (8) and stage 3 carrier (9) in spur gear(7).



- (11) Install sleeve bushing (10) in drum support (11).
- (12) Install gasket (12) and drum support (11) on housing assembly (2) with matchmarks aligned.
- (13) Install 10 screws (13) in housing assembly (2).



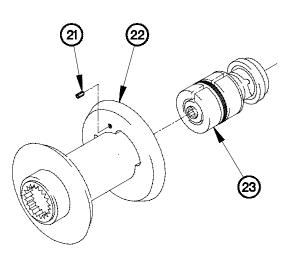
(14) Install sleeve bushing (14) in drum support (15).



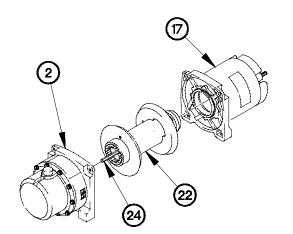
(15) Install gasket (16) and drum support (15) on 24 vdc motor assembly (17) with matchmarks aligned.

- (16) Install 10 screws (18) in 24 vdc motor assembly (17).
- (17) Apply grease to gear (19).
- (18) Install gear (19) on 24 vdc motor assembly (17) with circlip (20).

- (19) Position two screws (21) in drum assembly (22).
- (20) Apply grease to brake (23).
- (21) Install brake (23) in drum assembly (22).

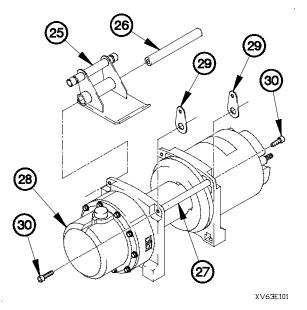


XV63E081



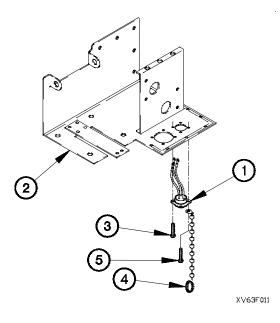
- (22) Apply grease to hex shaft (24).
- (23) Install hex shaft (24) in drum assembly (22).
- (24) Position drum assembly (22) on 24 vdc motor assembly (17).
- (25) Position housing assembly (2) on drum assembly (22).

- (26) Position tensioner (25) on tie rod (26).
- (27) Position tie rods (26 and 27) in winch assembly (28).
- (28) Install two brackets (29) on winch assembly (28) with two screws (30).

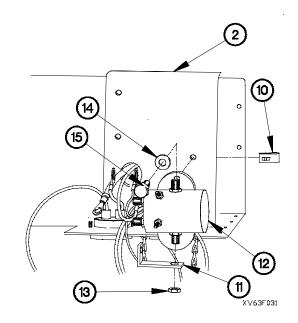


f. Base Plate Assembly.

- Install remote control connector (1) on base plate (2) with three screws (3).
- (2) Install dust cap (4) on remote control connector (1) with screw (5).



- (3) Install power connector (6) on base plate (2) with three screws (7).
- (4) Install dust cap (8) on power connector (6) with screw (9).
- (5) Install dust caps (4 and 8) on remote control connector (1) and remote control connector (6).

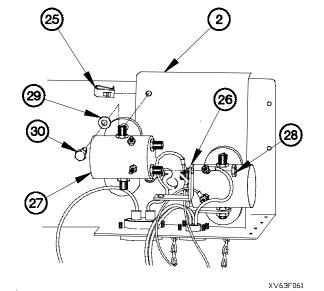


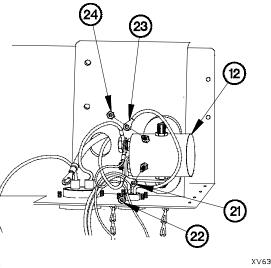
- (6) Install two clip nuts (10) on base plate (2).
- (7) Install strap (11) on solenoid (12) with nut (13).
- (8) Install solenoid (12) on base plate (2) with two washers (14) and screws (15).

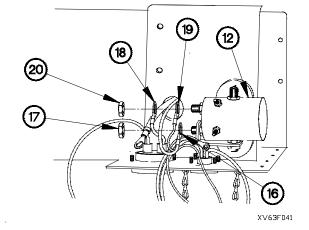
- (9) Install terminal lug (16) on solenoid (12) with nut (17).
- (10) Install terminal lugs (18 and 19) on solenoid (12) with nut (20).

- (11) Install terminal lug (21) on solenoid (12) with nut (22).
- (12) Install terminal lug (23) on solenoid (12) with nut (24).

- (13) Install two clip nuts (25) on base plate (2).
- (14) Install strap (26) on solenoid (27) with nut (28).
- (15) Install solenoid (27) on base plate (2) with two washers(29) and screws (30).





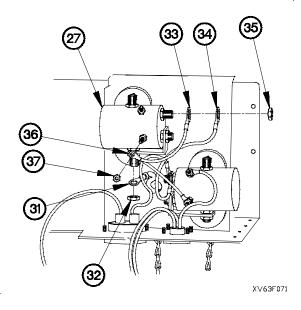


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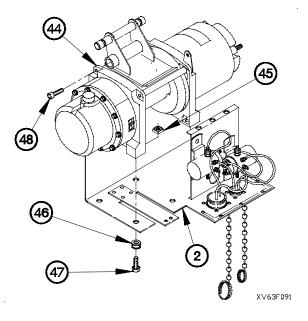
(42)

20-73. LIGHT MATERIAL HANDLING CRANE WINCH (LMHC) REPLACEMENT/REPAIR (CONT)

- (16) Install terminal lug (31) on solenoid (27) with nut (32).
- (17) Install terminal lugs (33 and 34) on solenoid (27) with nut (35).
- (18) Install terminal lug (36) on solenoid (27) with nut (37).



- 39 38 (43) (27 41 ର୍ଗ 8 0 [12] 令 (A)
- (19) Install terminal lug (38) on solenoid (27) with nut (39).
- (20) Install strap (40) on solenoids (12 and 27).
- (21) Install terminal lugs (41 and 42) on solenoids (12 and 27) with nuts (43).

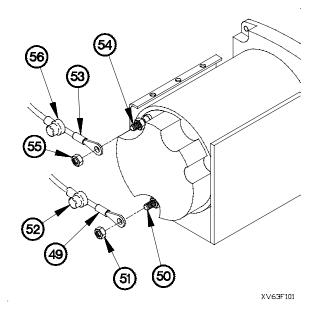


(22) Install winch assembly (44) on base plate (2) with four nuts (45), mounting feet (46), and screws (47).

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(23) Install two screws (48) in winch assembly (44).

- (24) Install terminal lug (49) on positive terminal (50) with nut (51).
- (25) Install rubber boot (52) on positive terminal (50).
- (26) Install terminal lug (53) on negative terminal (54) with nut (55).
- (27) Install rubber boot (56) on negative terminal (54).



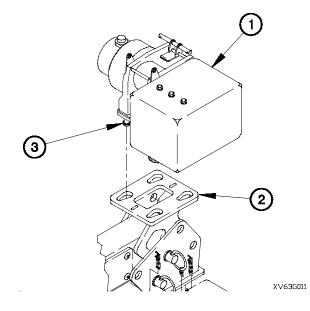
(28) Install cover (57) on base plate (2) with 18 screws (58).

g. Installation.

NOTE

Steps (1) and (2) require the aid of an assistant.

- (1) Position winch (1) on boom (2).
- (2) Slide winch (1) toward front of boom (2).
- (3) Tighten four screws (3).



h. Follow-On Maintenance.

- (1) Install LMHC remote control cable (TM 9-2320-365-10).
- (2) Install LMHC power cable (TM 9-2320-365-10).
- (3) Install LMHC weight block and wire rope (para 20-72).

End of Task.

20-74. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). LMHC winch removed (para 20-73).

Tools and Special Tools

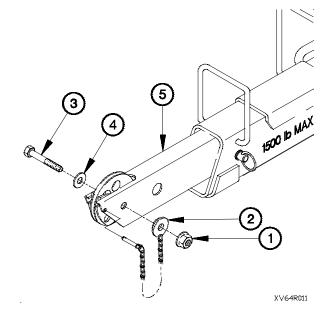
Tool Kit, Genl Mech (Item 44, Appendix C) Gloves, Welders (Item 14, Appendix C) c. Follow-On Maintenance

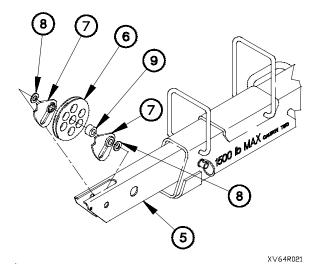
Materials/Parts

Nut, Self-Locking (Item 151, Appendix G) Bushing, Sleeve (Item 5, Appendix G)

a. Removal.

Remove self-locking nut (1), chain assembly (2), screw (3), and washer (4) from fly section (5). Discard self-locking nut.



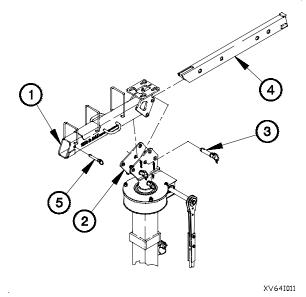


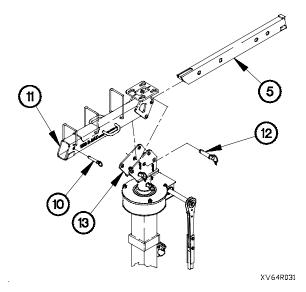
- (2) Remove sheave (6), two detent plates (7), and washers(8) from fly section (5).
- (3) Remove bushing (9) from sheave (6). Discard bushing.

20-74. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM REPLACEMENT (CONT)

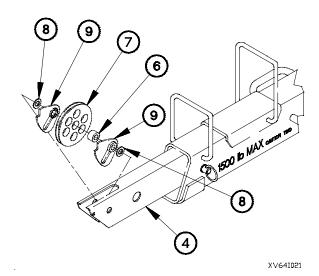
- (4) Remove quick release pin (10) from base weld (11) and fly section (5).
- (5) Remove fly section (5) from base weld (11).
- (6) Remove quick release pin (12) and base weld (11) from turret (13).

b. Installation.

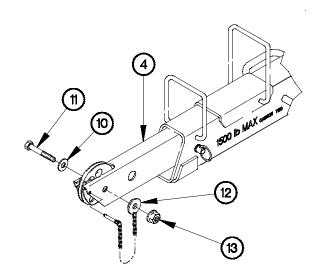




- (1) Install base weld (1) in turret (2) with quick release pin (3).
- (2) Position fly section (4) in base weld (1).
- (3) Install quick release pin (5) through base weld (1) and fly section (4).



- (4) Install bushing (6) in sheave (7).
- (5) Position two washers (8), detent plates (9), and sheave(7) in fly section (4).



(6) Install washer (10), screw (11), chain assembly (12), and self-locking nut (13) in fly section (4).

c. Follow-On Maintenance.

Install LMHC winch (para 20-73).

End of Task.

XV64I031

20-75. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM SHEAVE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

LMHC power cable removed (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Gloves, Welders (Item 14, Appendix C)

c. Follow-On Maintenance

Materials/Parts

Nut, Self-Locking (Item 151, Appendix G) Bushing, Sleeve (Item 5, Appendix G)

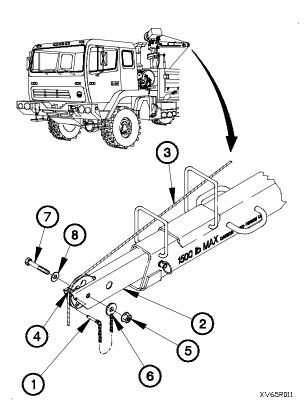
a. Removal.

(1) Remove quick release pin (1) from fly section (2).

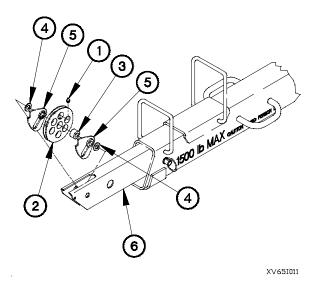


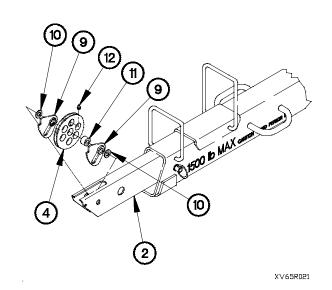
Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

- (2) Remove wire rope (3) from sheave (4).
- (3) Remove self-locking nut (5), chain assembly (6), screw (7), and washer (8) from fly section (2). Discard self-locking nut.



- (4) Remove sheave (4), two detent plates (9), and washers (10) from fly section (2).
- (5) Remove bushing (11) from sheave (4). Discard bushing.
- (6) Remove fitting (12) from sheave (4).
- b. Installation.





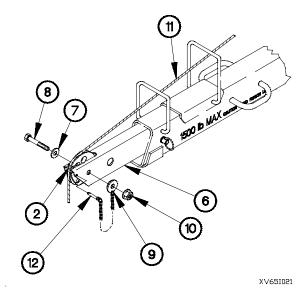
- (1) Install fitting (1) in sheave (2).
- (2) Install bushing (3) in sheave (2).
- (3) Position sheave (2), two washers (4), and detent plates(5) in fly section (6).

(4) Install washer (7), screw (8), chain assembly (9), and self-locking nut (10) in fly section (6).



Wear leather gloves at all times when handling winch cable. Do not allow cable to slide through hands even with gloves on. Broken wires may cause injury to personnel.

- (5) Install wire rope (11) in sheave (2).
- (6) Install quick release pin (12) in fly section (6).



20-75. LIGHT MATERIAL HANDLING CRANE (LMHC) BOOM SHEAVE REPLACEMENT (CONT)

c. Follow-On Maintenance.

- (1) Install LMHC power cable (TM 9-2320-365-10).
- (2) Extend and retract LMHC wire rope assembly to check for proper function (TM 9-2320-365-10).

End of Task.

20-76. LIGHT MATERIAL HANDLING CRANE (LMHC) TURRET REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Personnel Required (2)

c. Follow-On Maintenance

Engine shut down (TM 9-2320-365-10). LMHC power cable removed (TM 9-2320-365-10). LMHC remote control cable removed (TM 9-2320-365-10).

a. Removal.

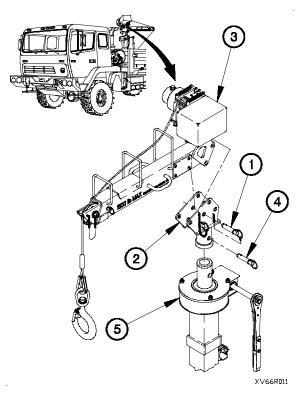
WARNING

Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use an assistant when removing boom assembly. Failure to comply may result in injury to personnel.

NOTE

Steps (1) and (2) require the aid of an assistant.

- (1) Remove quick release pin (1) from turret (2).
- (2) Remove boom assembly (3) from turret (2).
- (3) Remove quick release pin (4) from turret (2).
- (4) Remove turret (2) from mast (5).



20-76. LIGHT MATERIAL HANDLING CRANE (LMHC) TURRET REPLACEMENT (CONT)

b. Installation.

- (1) Position turret (1) on mast (2).
- (2) Install quick release pin (3) in turret (1).

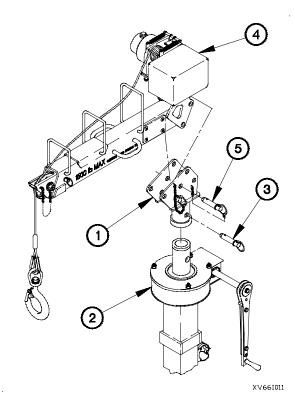
WARNING

Light Material Handling Crane (LMHC) boom assembly weighs approximately 150 lbs (68 kgs). Use the aid of an assistant when installing boom assembly. Failure to comply may result in injury to personnel.

NOTE

Steps (3) and (4) require the aid of an assistant.

- (3) Install boom assembly (4) on turret (1).
- (4) Install quick release pin (5) in boom assembly (4).



c. Follow-On Maintenance.

- (1) Install LMHC remote control unit cable (TM 9-2320-365-10).
- (2) Install LMHC power cable (TM 9-2320-365-10).
- (3) Operate LMHC and check for proper operation (TM 9-2320-365-10).

End of Task.

20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR

This task covers:

- a. Disassembly
- b. Assembly

INITIAL SETUP

Equipment Conditions

LMHC control box power cable removed (TM 9-2320-365-10). LMHC control box removed (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Tool Kit, Auto Fuel and Electrical Systems Repair (Item 43, Appendix C) c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Lockwasher (2) (Item 85, Appendix G) Lockwasher (2) (Item 96, Appendix G) Lockwasher (4) (Item 95, Appendix G) Gasket (Item 26, Appendix G) Terminal, Lug (2) (Item 267, Appendix G)

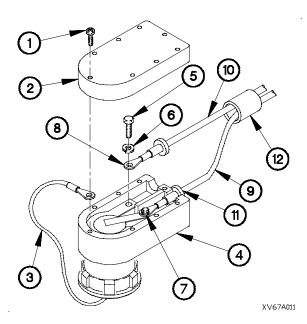
a. Disassembly.

(1) Remove eight screws (1), cover (2), and retainer (3) from NATO plug (4).

NOTE

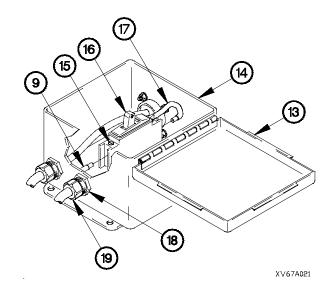
Tag wires and connection points prior to disconnecting.

- (2) Remove two screws (5), lockwashers (6), and terminal lugs (7 and 8) from NATO plug (4). Discard lockwashers.
- (3) Remove terminal lugs (7 and 8) from wires (9 and 10). Discard terminal lugs.
- (4) Remove two grommets (11) from wires (9 and 10).
- (5) Remove sleeve (12) from wires (9 and 10).

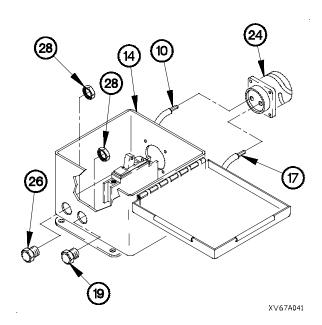


20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR (CONT)

- (6) Open cover (13) on control box (14).
- (7) Loosen two screws (15) on circuit breaker (16).
- (8) Disconnect wires (17 and 9) from circuit breaker (16).
- (9) Loosen nut (18) on box connector (19).
- (10) Remove wire (9) from control box (14).



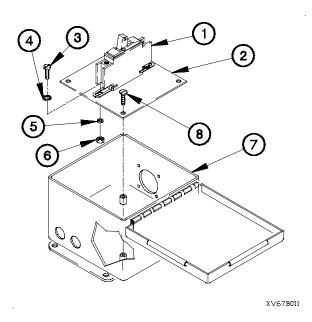
- (11) Remove four nuts (20), lockwashers (21), screws (22), and cap (23) from receptacle (24). Discard lockwashers.
 (12) Loosen nut (25) on box connector (26).
 - (13) Remove receptacle (24), wires (17 and 10), and gasket(27) from control box (14). Discard gasket.



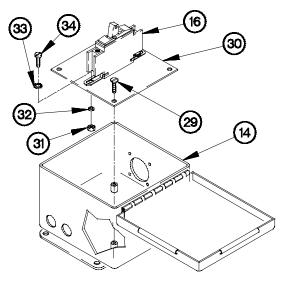
XV67A031

- (14) Remove wires (17 and 10) from receptacle (24).
- (15) Remove two nuts (28) and box connectors (19 and 26) from control box (14).

- (16) Remove four screws (29) and plate (30) from control box (14).
- (17) Remove two nuts (31), lockwashers (32), washers (33), screws (34), and circuit breaker (16) from plate (30). Discard lockwashers.
- b. Assembly.

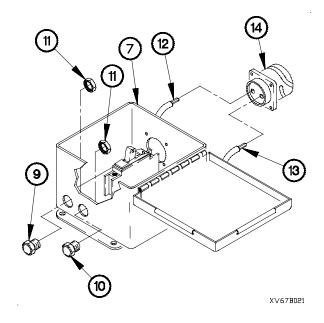


- (3) Install box connectors (9 and 10) in control box (7) with nuts (11).
- (4) Install wires (12 and 13) in receptacle (14).



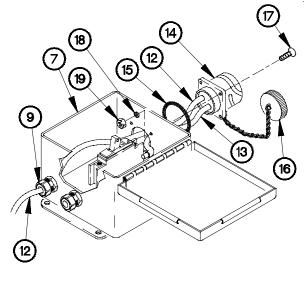
XV67A051

- Install circuit breaker (1) on plate (2) with two screws (3), washers (4), lockwashers (5), and nuts (6).
- (2) Install plate (2) in control box (7) with four screws (8).

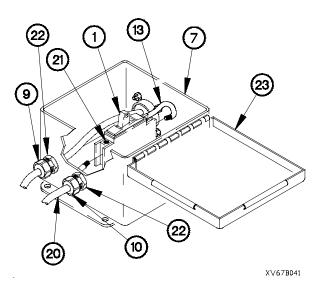


20-77. LIGHT MATERIAL HANDLING CRANE (LMHC) CONTROL BOX REPAIR (CONT)

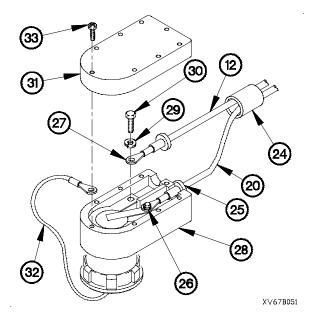
- (5) Install wires (12 and 13), gasket (15), and receptacle (14) in control box (7).
- (6) Position wire (12) through box connector (9).
- (7) Install cap (16), four screws (17), lockwashers (18), and nuts (19) in receptacle (14).



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- (8) Position wire (20) through box connector (10).
- (9) Install wires (13 and 20) in circuit breaker (1) with two screws (21).
- (10) Tighten two nuts (22) on box connectors (9 and 10).
- (11) Close cover (23) on control box (7).



- (12) Install sleeve (24) on wires (12 and 20).
- (13) Install two grommets (25) on wires (12 and 20).
- (14) Install terminal lugs (26 and 27) on wires (12 and 20).
- (15) Install wires (12 and 20) on NATO plug (28) with two lockwashers (29) and screws (30).
- (16) Install cover (31) and retainer (32) on NATO plug (28) with eight screws (33).

c. Follow-On Maintenance.

Operate LMHC and check for proper operation (TM 9-2320-365-10).

End of Task.

20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR

This task covers:

- a. Disassembly
- b. Cleaning

INITIAL SETUP

Equipment Condition

LMHC disassembled (para 20-70).

Tools and Special Tools

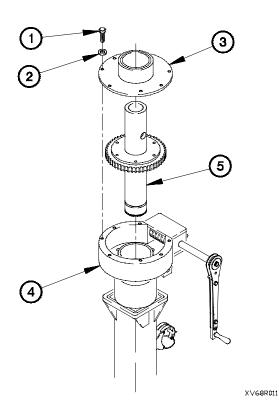
Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C) Gloves, Rubber (Item 13, Appendix C) c. Assemblyd. Follow-on Maintenance

Materials/Parts

Solvent, Dry Cleaning (Item 71, Appendix D) Rag, Wiping (Item 51, Appendix D) Lockwasher (3) (Item 90, Appendix G) Lockwasher (2) (Item 91, Appendix G)

a. Disassembly.

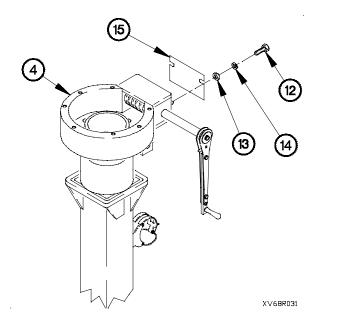
- (1) Remove seven screws (1) and washers (2) from top plate (3).
- (2) Remove top plate (3) from housing (4).
- (3) Remove rotator (5) from housing (4).

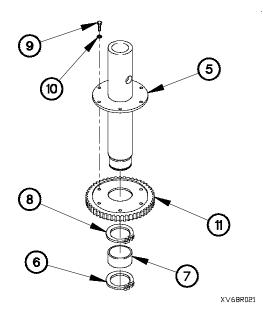


WARNING

Use care when removing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

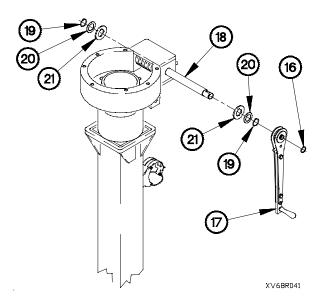
- (4) Remove retaining ring (6) from rotator (5).
- (5) Remove bearing (7) from rotator (5).
- (6) Remove retaining ring (8) from rotator (5).
- (7) Remove six screws (9), washers (10), and gear (11) from rotator (5).





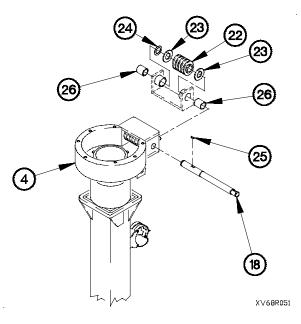
(8) Remove two screws (12), washers (13), lockwashers (14), and plate (15) from housing (4). Discard lockwashers.

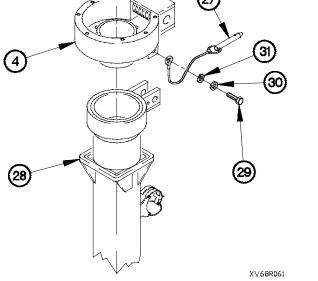
- (9) Remove retaining ring (16) and handle (17) from shaft (18).
- (10) Remove two retaining rings (19), washers (20), and washers (21) from shaft (18).



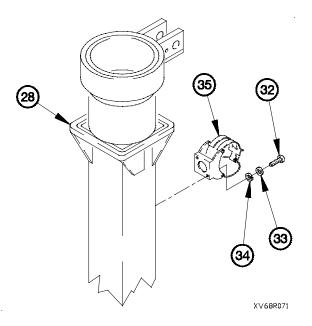
20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR (CONT)

- (11) Remove shaft (18), worm gear (22), two washers (23), and washer (24) from housing (4).
- (12) Remove woodruff key (25) from shaft (18).
- (13) Remove two bearings (26) from housing (4).





- (14) Remove quick release pin (27) from housing (4).
- (15) Remove housing (4) from mast (28).
- (16) Remove screw (29), washer (30), lockwasher (31), and quick release pin (27) from housing (4). Discard lockwasher.



(17) Remove two screws (32), washers (33), lockwashers (34), and clamp (35) from mast (28). Discard lockwashers.

b. Cleaning.

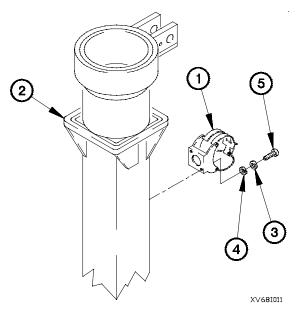
WARNING

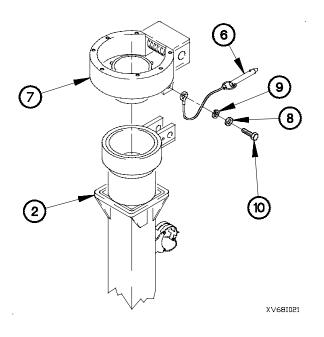
- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well ventilated area; avoid contact with skin, eyes, and clothes, and do breathe vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint or Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 130°F (50°C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

Clean all metal parts with dry cleaning solvent.

c. Assembly.

(1) Install clamp (1) on mast (2) with two lockwashers (3), washers (4), and screws (5).

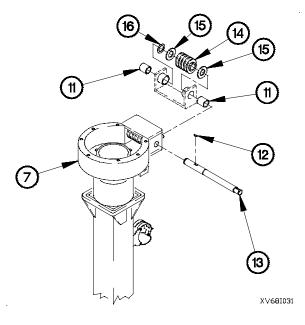


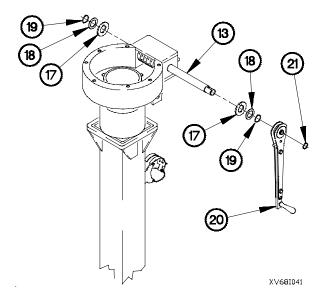


- (2) Install quick release pin (6) on housing (7) with lockwasher (8), washer (9), and screw (10).
- (3) Position housing (7) on mast (2).
- (4) Install quick release pin (6) in housing (7).

20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR (CONT)

- (5) Install two bearings (11) in housing (7).
- (6) Install woodruff key (12) on shaft (13).
- (7) Install worm gear (14), two washers (15), washer (16), and shaft (13) in housing (7).

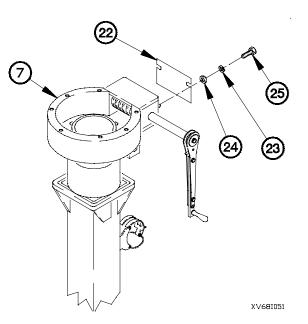




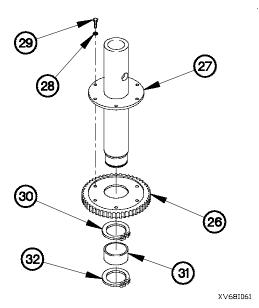
WARNING

Use care when installing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

- (8) Install two washers (17), washers (18), and retaining rings (19) on shaft (13).
- (9) Install handle (20) on shaft (13) with retaining ring (21).



(10) Install plate (22) on housing (7) with two lockwashers (23), washers (24), and screws (25).



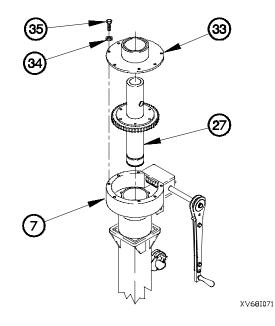
(11) Install gear (26) on rotator (27) with six washers (28) and screws (29).

WARNING

Use care when installing retaining rings. Retaining rings are under tension and can act as projectiles when released. Failure to comply may result in injury to personnel.

- (12) Install retaining ring (30) on rotator (27).
- (13) Install bearing (31) on rotator (27).
- (14) Install retaining ring (32) on rotator (27).

20-78. LIGHT MATERIAL HANDLING CRANE (LMHC) MAST AND SWING ASSEMBLY REPAIR (CONT)



(15) Install rotator (27) in housing (7).

(16) Install top plate (33) on housing (7) with seven washers(34) and screws (35).

d. Follow-On Maintenance.

Assemble LMHC (para 20-70).

End of Task.

20-79. TROOP TRANSPORT ALARM CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions Engine shut down (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10).

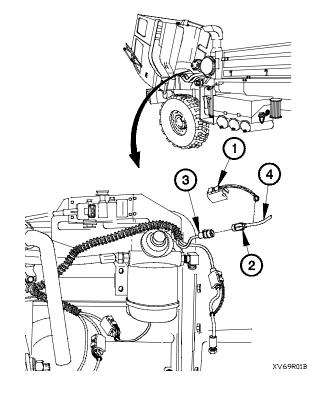
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

NOTE

Remove plastic cable ties as required.

- (1) Disconnect connector clamp (1) from connector J39 (2).
- (2) Disconnect connector J39 (2) from connector P39 (3).
- (3) Remove connector clamp (1) from troop transport alarm cable (4).



c. Follow-On Maintenance

Ties, Cable, Plastic (Item 76, Appendix D)

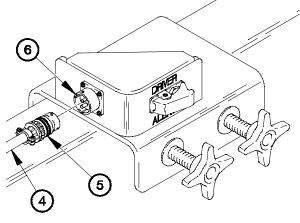
Materials/Parts

(4) Disconnect connector P921 (5) from connector J921 (6).

NOTE

Note routing of cable assembly prior to removal.

(5) Remove troop transport alarm cable (4) from vehicle.



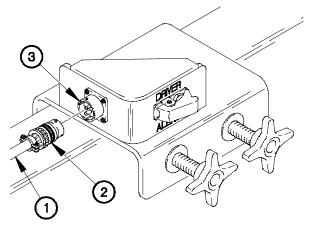
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20-79. TROOP TRANSPORT ALARM CABLE ASSEMBLY REPLACEMENT (CONT)

b. Installation.

- (1) Position troop transport alarm cable (1) on vehicle.
- (2) Connect connector P921 (2) to connector J921 (3).

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NOTE

Install plastic cable ties as required.

- (3) Install connector clamp (4) on troop transport alarm cable (1).
- (4) Connect connector J39 (5) to connector P39 (6).
- (5) Connect connector clamp (4) to connector J39 (5).



- (1) Lower cab (TM 9-2320-365-10).
- (2) Operate troop transport alarm and check for proper operation (TM 9-2320-365-10).

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End of Task.

20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions Engine shut down (TM 9-2320-365-10).

Tools and Special Tools

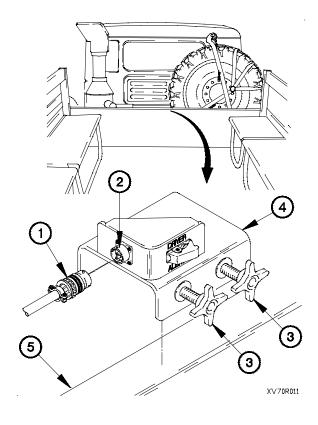
Tool Kit, Genl Mech (Item 44, Appendix C) Vise, Machinist (Item 46, Appendix C) c. Follow-On Maintenance

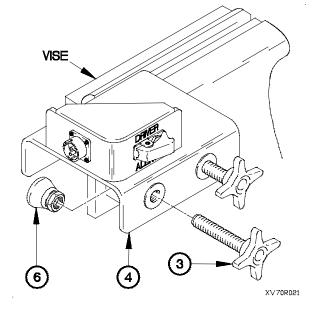
Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Adhesive (Item 8, Appendix D) Sealing Compound (Item 64, Appendix D) Nut, Self-Locking (4) (Item 120, Appendix G)

a. Removal.

- (1) Disconnect connector P921 (1) from connector J921 (2).
- (2) Loosen two knobs (3) on bracket (4).
- (3) Remove bracket (4) from cargo bed (5).





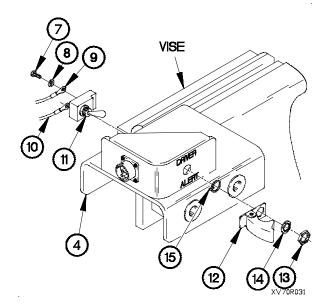
- (4) Position bracket (4) in vise.
- (5) Remove two mounts (6) from knobs (3).
- (6) Remove two knobs (3) from bracket (4).

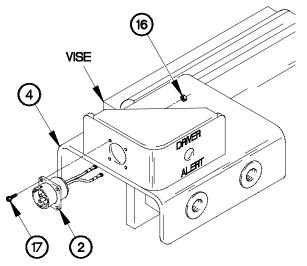
20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT (CONT)

NOTE

Tag wires and connection points prior to disconnecting.

- (7) Remove two screws (7), lockwashers (8), and terminal lugs TL164 (9) and TL165 (10) from switch (11).
- (8) Lift switch cover (12) on switch (11).
- (9) Remove nut (13), lockwasher (14), switch cover (12), locking ring (15), and switch (11) from bracket (4).





- (10) Remove four self-locking nuts (16), screws (17), and connector J921 (2) from bracket (4). Discard self-locking nuts.
- (11) Remove bracket (4) from vise.

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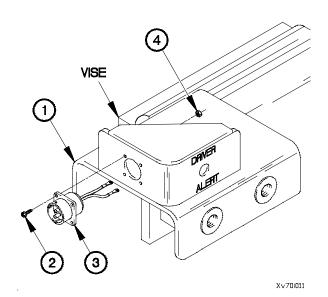
b. Installation.

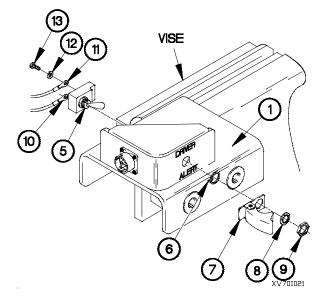
(1) Position bracket (1) in vise.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (2) Apply sealing compound to threads of four screws (2).
- (3) Install connector J921 (3) on bracket (1) with four screws(2) and self-locking nuts (4).





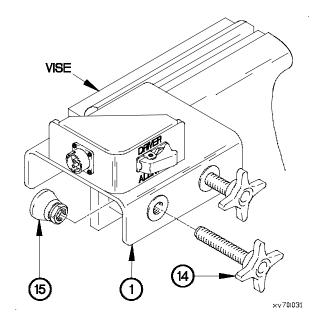
- (4) Install switch (5) on bracket (1) with locking ring (6), switch cover (7), lockwasher (8) and nut (9).
- (5) Close switch cover (7) on switch (5).
- (6) Install terminal lugs TL164 (10) and TL165 (11) on switch (5) with two lockwashers (12) and screws (13).
- (7) Apply adhesive to two screws (13), lockwashers (12), and terminal lugs TL164 (10) and TL165 (11).

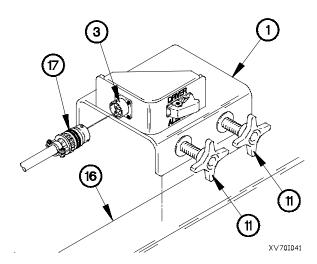
20-80. TROOP TRANSPORT ALARM SWITCH, CONNECTOR, AND BRACKET REPLACEMENT (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (8) Apply sealing compound to threads of two knobs (14).
- (9) Install two knobs (14) on bracket (1).
- (10) Install two mounts (15) on knobs (14).
- (11) Remove bracket (1) from vise.





- (12) Install bracket (1) on cargo bed (16) with two knobs (11).
- (13) Connect connector P921 (17) to connector J921 (3).

c. Follow-On Maintenance.

Operate troop transport alarm and check for proper operation (TM 9-2320-365-10).

End of Task.

20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL

This task covers:

- a. Installation
- b. Removal

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). Batteries disconnected (para 7-48). Cab raised (TM 9-2320-365-10). Spare tire lowered (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Sling, Endless (Item 32, Appendix C)

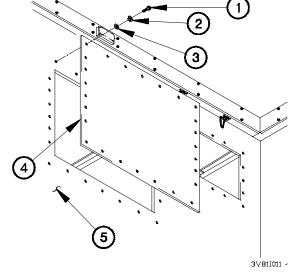
a. Installation.

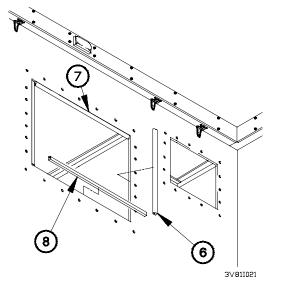
NOTE

Retain cover and hardware for future use.

(1) Remove 30 screws (1), lockwashers (2), washers (3), and cover (4) from van wall (5). Discard lockwashers.

- (2) Install seal (6) on left and right side of opening (7).
- (3) Install seal (8) on top and bottom of opening (7).





c. Follow-On Maintenance

Materials/Parts

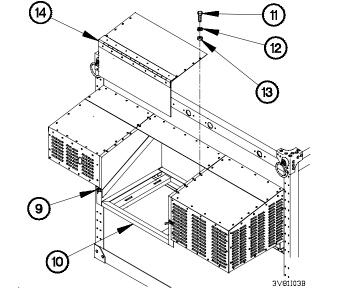
Lockwasher (30) (Item 84, Appendix G) Lockwasher (8) (Item 82, Appendix G) Seal, Nonmetallic (2) (Item 254, Appendix G)

Personnel Required

(4)

20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL (CONT)

- (4) Release two latches (9) on pod (10).
- (5) Remove eight screws (11), lockwashers (12), washers (13), and center top front cover (14) from pod (10). Discard lockwashers.





Air conditioner weighs approximately 300 lbs (136 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel.

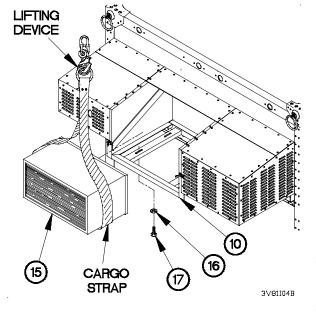


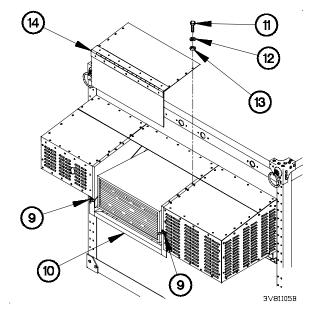
Use care when positioning air conditioner in van pod. Failure to comply may result in damage to air conditioner, pod panel, or seals.

NOTE

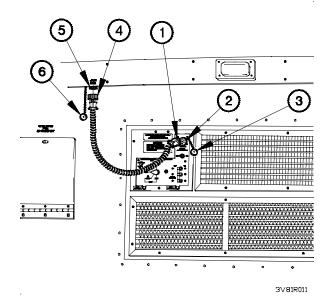
Step (6) requires the aid of three assistants.

- (6) Position air conditioner (15) in pod (10) with four washers (16) and screws (17).
- (7) Tighten four screws (17) to 27-29 lb-ft (N·m).

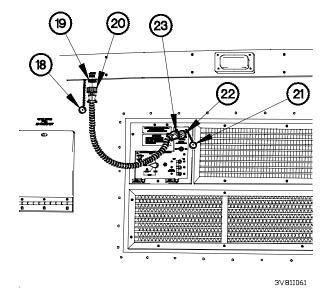




- (10) Remove dust cap (18) from connector J242 (19).
- (11) Connect connector P242 (20) to connector J242 (19).
- (12) Remove dust cap (21) from power input connector (22).
- (13) Connect connector J242A (23) to power input connector (22).



- (8) Install center top front cover (14) on pod (10) with eight washers (13), lockwashers (12), and screws (11).
- (9) Latch two latches (9) on pod (10).



b. Removal.

- (1) Disconnect connector J242A (1) from power input connector (2).
- (2) Install dust cap (3) on power input connector (2).

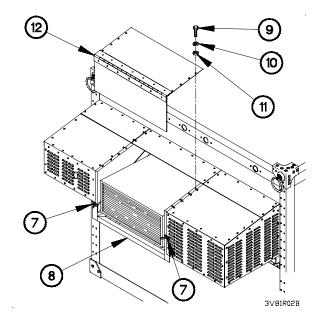
NOTE

Retain air conditioner power cable for future use.

- (3) Disconnect connector P242 (4) from connector J242 (5).
- (4) Install dust cap (6) on connector J242 (5).

20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL (CONT)

- (5) Release two latches (7) on pod (8).
- (6) Remove eight screws (9), lockwashers (10), washers (11), and center top front cover (12) from pod (8). Discard lockwashers.



(7) Remove four screws (13) and washers (14) from pod (8).

WARNING

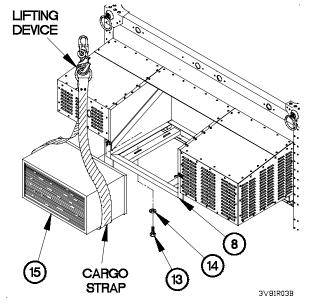
Air conditioner weighs approximately 300 lbs (136 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel.

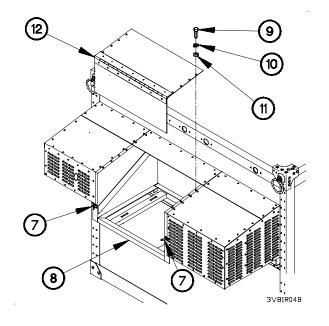


Use care when removing air conditioner from van pod. Failure to comply may result in damage to equipment.

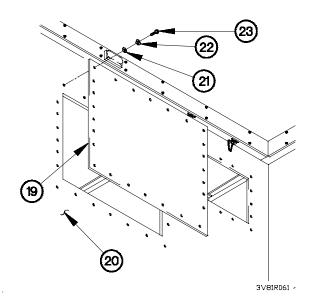
NOTE

- Step (8) requires the aid of three assistants.
- Retain air conditioner and hardware for future use.
- (8) Remove air conditioner (15) from pod (8).

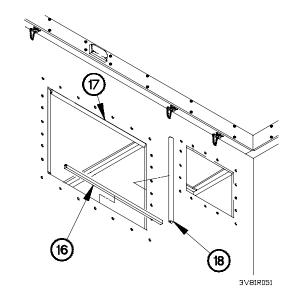




- (11) Remove seals (16) from top and bottom of opening (17). Discard seals.
- (12) Remove seals (18) from left and right side of opening (17). Discard seals.



- (9) Install center top front cover (12) on pod (8) with eight washers (11), lockwashers (10), and screws (9).
- (10) Latch two latches (7) on pod (8).



(13) Install cover (19) on van wall (20) with 30 washers (21), lockwashers (22), and screws (23).

20-81. M1079 AIR CONDITIONER KIT INSTALLATION/REMOVAL (CONT)

c. Follow-On Maintenance.

- (1) Raise spare tire (TM 9-2320-365-10).
- (2) Lower cab (TM 9-2320-365-10).
- (3) Connect batteries (para 7-48).
- (4) Connect AC power (TM 9-2320-365-10).
- (5) Operate air conditioner and check for proper operation (TM 9-2320-365-10).
- (6) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

20-82. M1079 A/C POWER CABLE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). AC power disconnected (TM 9-2320-365-10). LH and RH doors opened (115 degrees) (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Disconnect connector P242 (1) from connector J242 (2).
- (2) Disconnect connector J242A (3) from A/C power connector (4).

b. Installation

- (1) Connect connector J242A (3) to A/C power connector (4).
- (2) Connect connector P242 (1) to connector J242 (2).

c. Follow-On Maintenance.

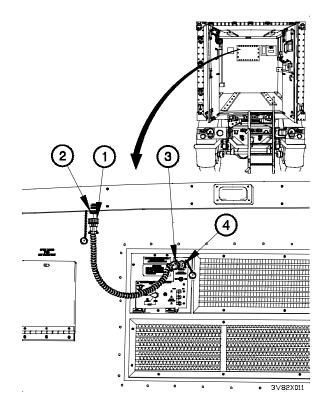
- (1) Connect AC power (TM 9-2320-365-10).
- (2) Close LH and RH doors (TM 9-2320-365-10).

End of Task.

c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)



20-83. AMBER WARNING LIGHT ASSEMBLY REPAIR

This task covers:

- a. Disassembly
- b. Assembly

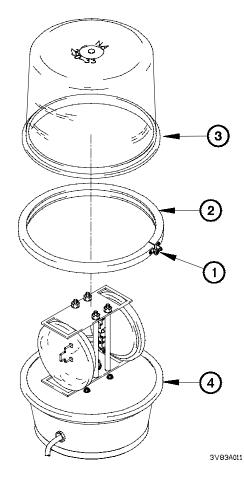
INITIAL SETUP

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

c. Follow-On Maintenance

Materials/Parts Lockwasher (4) (Item 68, Appendix G)



a. Disassembly.

- (1) Loosen screw (1) on clamp (2).
- (2) Remove lens (3) from lamp housing (4).
- (3) Remove clamp (2) from lamp housing (4).

NOTE

Perform step (4) on amber warning lights equipped with nuts containing a captive lockwasher.

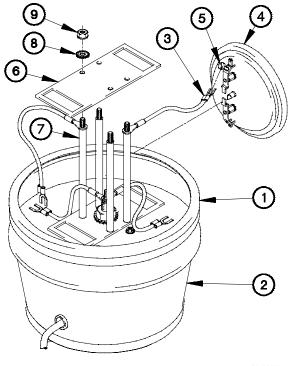
(4) Remove four self-locking nuts (5) and lamp mounting plate (6) from mounting studs (7). Discard self-locking nuts.

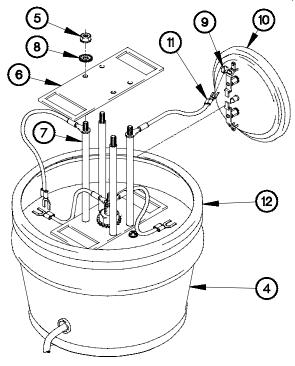
NOTE

Perform step (5) on amber warning lights equipped with nuts and lockwashers.

- (5) Remove four nuts (5), lockwashers (8), and lamp mounting plate (6) from mounting studs (7). Discard lockwashers.
- (6) Loosen four screws (9) on two lamps (10).
- (7) Remove four terminal lugs (11) from two lamps (10).
- (8) Remove seal (12) from lamp housing (4).

b. Assembly.





3V83A021

- (1) Install seal (1) on lamp housing (2).
- (2) Install four terminal lugs (3) on two lamps (4) with four screws (5).
- (3) Install lamp mounting plate (6) on four mounting studs(7) with lockwashers (8) and nuts (9).

3V83B011

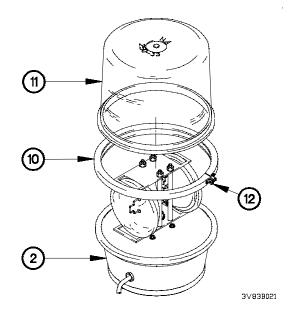
20-83. AMBER WARNING LIGHT ASSEMBLY REPAIR (CONT)

- (4) Position clamp (10) on lamp housing (2).
- (5) Install lens (11) on lamp housing (2).
- (6) Tighten screw (12) in clamp (10).

c. Follow-On Maintenance.

Operate amber warning light and check for proper operation (TM 9-2320-365-10).

End of Task.



20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT INSTALLATION/REMOVAL

This task covers:

- a. Installation
- b. Removal

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). Cargo bed side panels and stakes removed (TM 9-2320-365-10).

Tools and Special Tools

Drill Set, Twist (Item 8, Appendix C) Drill, Portable, Electric (Item 7, Appendix C) Tap, thread, cutting (Item 40.3, Appendix C) Tap and Die Set, (Item 40.2, Appendix C) c. Follow-On Maintenance

Tools and Special Tools (Cont)

Tool Kit, Genl Mech (Item 44, Appendix C) Sling, Cargo (2) (Item 31, Appendix C)

Materials/Parts

Lockwasher (8) (Item 66.2, Appendix G) Nut, Self-Locking (4) (Item 143, Appendix G)

Personnel Required

(2)

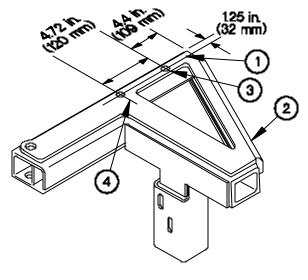
NOTE

This paragraph applies to shelter models A, B, or C with an overall height of 83 1/2 to 89 in. (214 to 226 cm). If shelter height is below 83 1/2 in. (214 cm), shorten cable for proper removal of slack in turnbuckle assembly.

a. Installation.

NOTE

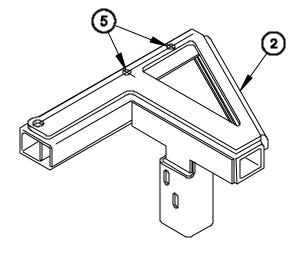
- Perform steps (1) through (6) on tiedowns not originally modified.
- All tiedowns are modified the same way. RH front tiedown shown.
- Measurements will be taken from upper LH corner on LH tiedown bracket.
- (1) Measure and mark a line (1) 1.25 in. (32 mm) down from upper RH corner of tiedown bracket (2).
- (2) Measure and mark a line (3) 4.4 in. (109 mm) from RH side of line (1).
- (3) Measure and mark a line (4) 4.72 in. (120 mm) from RH side of line (3).



3V84A011

20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT INSTALLATION/REMOVAL (CONT)

- (4) Drill two 27/64 in. holes (5) in tiedown bracket (2).
- (5) Tap two holes (5).
- (6) Perform steps (1) through (5) on remaining tiedowns.

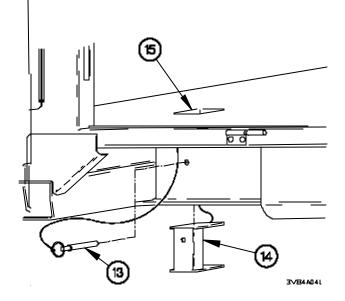


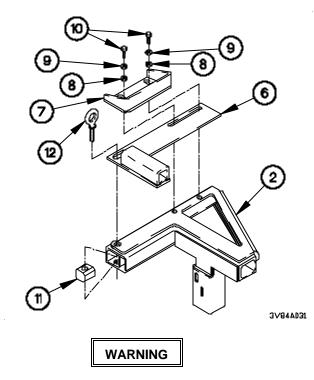
3V84AD21

NOTE

All tiedowns are assembled the same way. RH front tiedown bracket shown.

- (7) Position slider (6) and stop (7) on tiedown bracket(2) with two lockwashers (8), washers (9), and screws (10).
- (8) Install threaded block (11) in tiedown bracket (2) with eyebolt (12).
- (9) Perform steps (7) and (8) on remaining tiedown brackets.





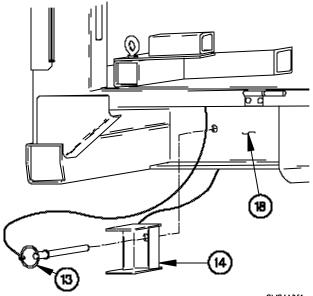
Ensure cargo bed is free of equipment and debris, and is not warped or damaged. Failure to comply may result in serious injury or death to personnel or damage to equipment.

- (10) Remove four quick release pins (13) and plugs (14) from crane pockets (15).
- (11) Lower ladder (TM 9-2320-365-10).

NOTE

Tiedowns are positioned with eyebolts toward four corners of cargo bed.

(12) Install two tiedowns (16 and 17) in four crane pockets (15).



3V84AD61

CAUTION

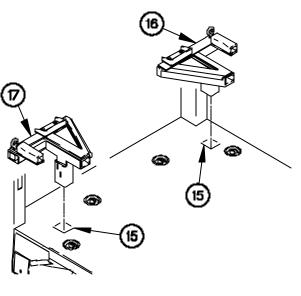
Ensure at least two whole threads are showing past nuts after installation. Failure to comply may result in damage to equipment.

NOTE

• Left and right clamps are installed the same way. Left clamp shown.

Perform steps (14) and (15) on M1078.

- (14) Install clamp (19) on frame rail (18) and subframe rail (20) with spacer (21), tie-rod (22), and two self-locking nuts (23).
- (15) Perform step (14) on right clamp.



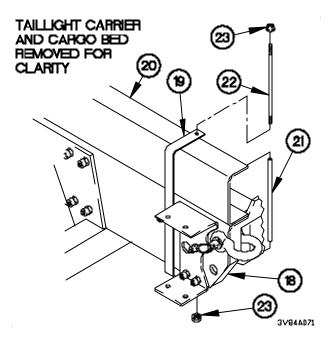
3∨84AD51

Ensure quick release pins are installed through both sides of crane pockets. Failure to comply may result in change to

equipment.

CAUTION

(13) Install four plugs (14) in cargo bed frame (18) with four quick release pins (13).



20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT INSTALLATION/REMOVAL (CONT)

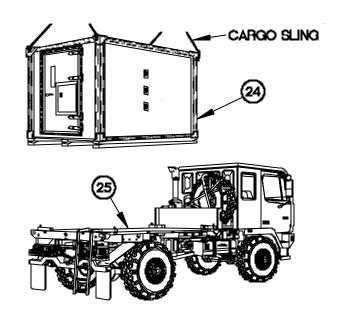
WARNING

S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

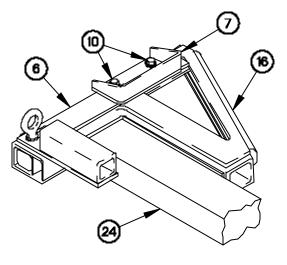
NOTE

Steps (16) through (19) require the aid of an assistant.

(16) Position S-280 shelter (24) on cargo bed (25).



3V84ADB1



NOTE

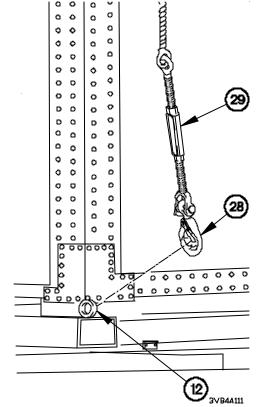
All tiedowns are adjusted the same way. RH front tiedown shown.

- (17) Adjust tiedown (16) until slider (6) and stop (7) are flush with side and end of S-280 shelter (24).
- (18) Tighten two screws (10)
- (19) Perform steps (17) and (18) on remaining tiedowns.

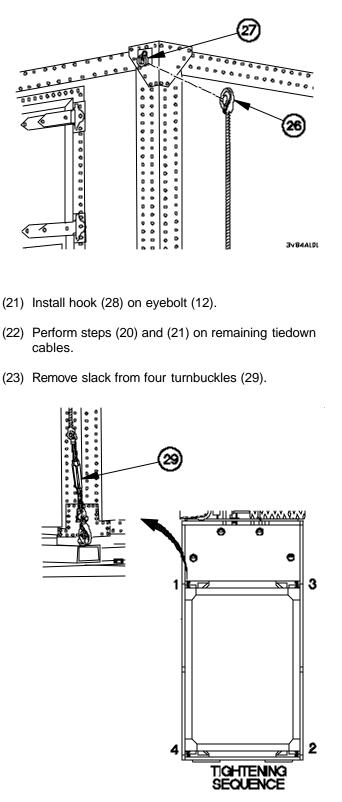
3∨B4A09I

NOTE

- Four tiedown cables are installed the same way. One tiedown cable shown.
- Large end of S-280 shelter tiedown ring points toward cargo bed.
- (20) Install hook (26) on upper S-280 shelter tiedown ring (27).



- (24) Tighten four turnbuckles (29) 1/2 turn in sequence shown.
- (25) Perform step (24) four more times.
- (26) Raise ladder (TM 9-2320-365-10).



3V84A121

20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT INSTALLATION/REMOVAL (CONT)

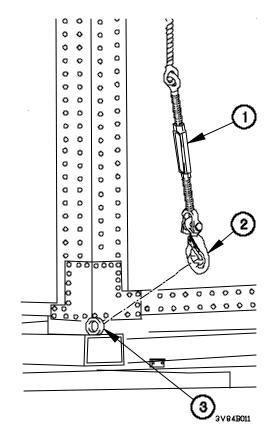
b. Removal.

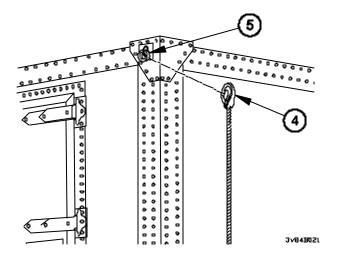
- (1) Lower ladder (TM 9-2320-365-10).
- (2) Loosen four turnbuckles (1).

NOTE

Four tiedown cables are removed the same way. One tiedown cable shown

(3) Remove hook (2) from eyebolt (3).



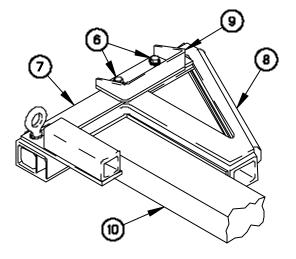


- (4) Remove hook (4) from upper S-280 shelter tiedown ring (5).
- (5) Perform steps (3) and (4) on remaining tiedown cables.

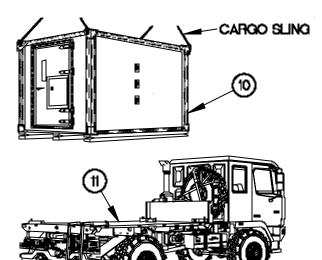
NOTE

All tiedowns are loosened the same way. RH front tiedown shown.

- (6) Loosen six screws (6).
- (7) Adjust tiedown (7) until slider (8) and stop (9) are removed from side and end of S-280 shelter (10).
- (8) Perform steps (6) and (7) on remaining tiedowns.



3∨B4B03l





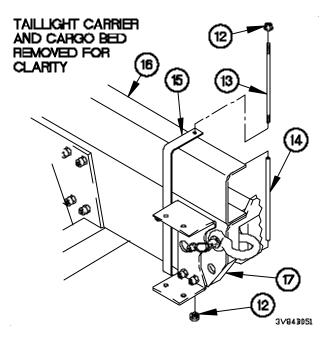
S-280 shelter weighs approximately 1500 lbs (680 kgs) empty. Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

Step (9) requires the aid of an assistant.

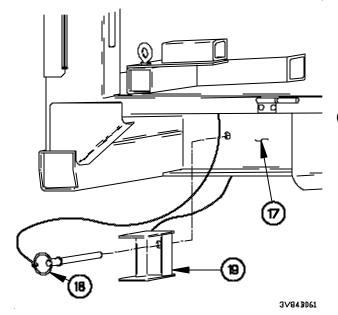
(9) Remove S-280 shelter (10) from cargo bed (11).

3V84BD41



NOTE

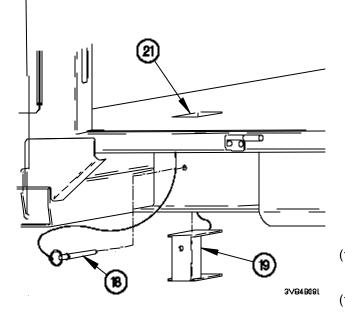
- Left and right clamps are removed the same way. Left clamp shown.
- Perform steps (10) and (11) on M1078.
- (10) Remove two self-locking nuts (12), tie-rod (13), spacer (14), and clamp (15) from subframe rail (16) and frame rail (17).
- (11) Perform step (10) on right clamp.



(12) Remove four quick release pins (18) and plugs (19) from cargo bed frame (17).

20-84. M1078/M1081 S-280 SHELTER MODELS A, B, OR C TIEDOWN KIT **INSTALLATION/REMOVAL (CONT)**

(13) Remove two tiedowns (7 and 20) from four crane pockets (21).



NOTE

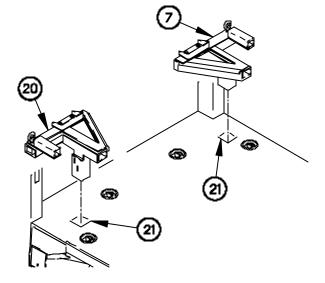
All tiedowns are disassembled the same way. RH front tiedown shown.

- (16) Remove eyebolt (3) and threaded block (22) from tiedowns.
- (17) Remove two screws (6), washers (24), lockwashers (25), stop (9), and slider (8) from tiedown bracket (23). Discard lockwshers.
- (18) Perform steps (16) and (17) on remaining tiedowns.

c. Follow-On Maintenance.

Install cargo bed side panels and stakes (TM 9-2320-365-10).

End of Task.

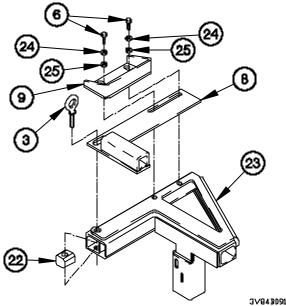


3∨84BD71

CAUTION

Ensure quick release pins are removed through both sides of crane pockets. Failure comply may result in change to to

- (14)Install four plugs (19) in crane pockets (21) with quick release pins (18).
- Raise ladder (Tm 9-2320-365-10). (15)



20-488 Change 2

20-85. DIGITIZATION KIT REMOVAL

This task covers:

- a. Removal
- b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10-1) Batteries discounted (Para 7-48) Kick panel removed (Para 16-3) Power distribution panel removed (Para 7-10 WTEC II, Para 7-11 WTEC III) RH seat removed (Para 16-14)

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C)

Materials/Parts

Lockwasher (2) (Item 103.1 Appendix G) Washer, Spring (6) (Item 283 Appendix G) Nut Self-Locking (6) (Item 132.1 Appendix G)

Personnel Required

(2)

NOTE

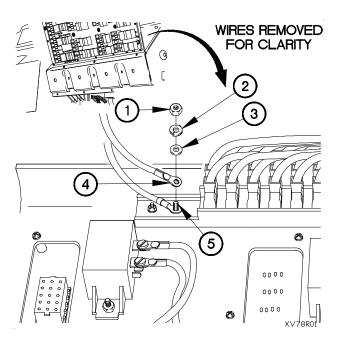
Retain digitization kit parts for future use.

a. Removal.

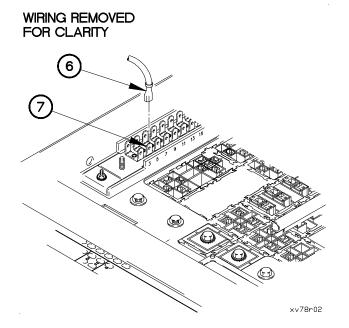
NOTE

Other terminal lugs are present at this location.

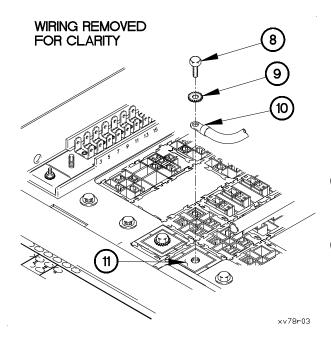
- (1) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL21 (4) from ground stud (5). Discard lockwasher.
- (2) Install washer (3) and lockwasher (2) on ground stud (5) with nut (1).



20-85. DIGITIZATION KIT REMOVAL (CONT)



(3) Disconnect terminal lug TL14 (6) from terminal block TB2 connector 5 (7).



NOTE

Other terminal lugs are present at this location.

- (4) Remove screw (8), lockwasher (9), and terminal lug TL20 (10) from 24 VDC connector X1 (11). Discard lockwasher.
- (5) Install lockwasher (9) on 24 VDC connector X1 (11) with screw (8).

(6) Remove two nuts (12), lockwashers (13), washers (14), cover (15), and two washers (14) from terminal block TB1 (16). Discard lockwasher.

NOTE

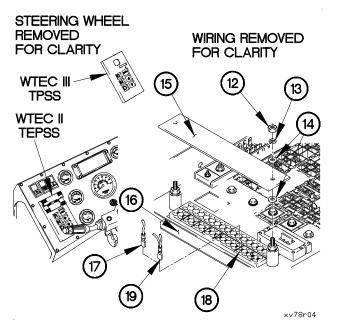
Perform step (7) on vehicles equipped with WTEC II transmission controllers.

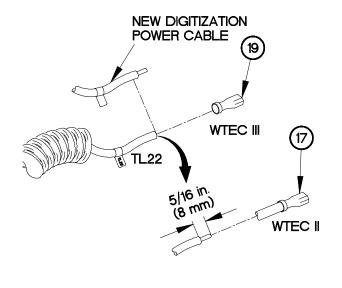
(7) Remove terminal lug TL22 (17) from terminal block TB1 connector 58 (18).

NOTE

Perform step (8) on vehicles equipped with WTEC III transmission controllers.

(8) Remove terminal lug TL22 (19) from terminal block TB1 connector 58 (18).





NOTE

Perform steps (9) through (11) on vehicle serial numbers 00001 through 11347 equipped with WTEC III controls.

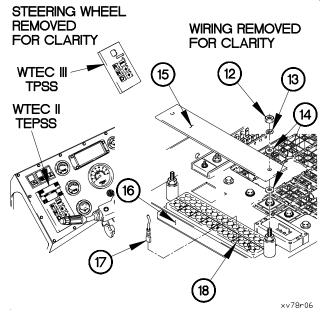
- (9) Remove terminal lug (19) from existing wire J117 and digitization power cable. Discard terminal lug.
- (10) Strip insulation 5/16 (8 mm) on existing wire J119.
- (11) Install terminal lug (17) on existing wire J119.

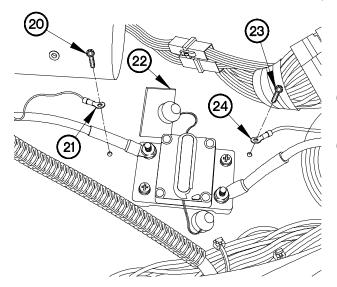
xv78r05

TM 9-2320-365-20-5

20-85. DIGITIZATION KIT REMOVAL (CONT)

- (12) Install terminal lug TL22 (17) on terminal block TB1 connector 58 (18).
- (13) Install two washers (14) and cover (15) on terminal block TB1 (16) with two washers (14), lockwashers (13), and nuts (12).

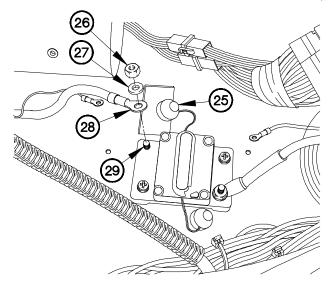




xv78r07

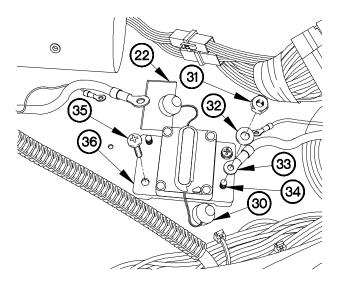
(16) Remove dust boot (25), nut (26), washer (27), and terminal lug TL23 (28) from stud (29).

- (14) Remove screw (20) and terminal lug TL25 (21) from dashboard (22).
- (15) Remove screw (23) and terminal lug TL19 (24) from dashboard (22).

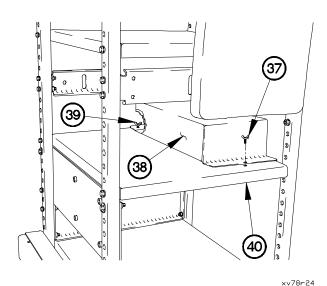


xv78r08

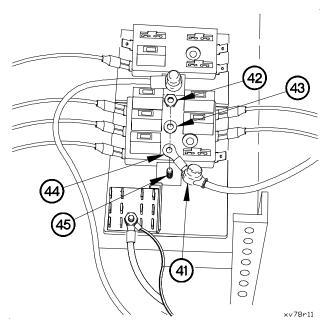
- (17) Remove dust boot (30), nut (31), washer (32), and terminal lug TL24 (33) from stud (34).
- (18) Remove two screws (35) and circuit breaker CB11(36) from dashboard (22).



xv78r09



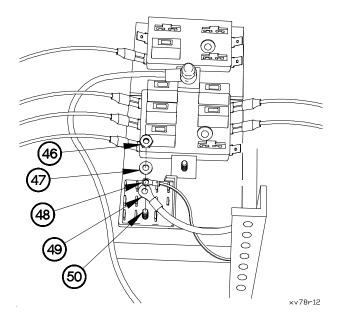
- (19) Remove wing screw (37) from electrical distribution block cover (38).
- (20) Loosen wing screw (39) on electrical distribution block cover (38).
- (21) Remove electrical distribution block cover (38) from power distribution shelf (40).
- (22) Position wing screw (37) in power distribution shelf(40).

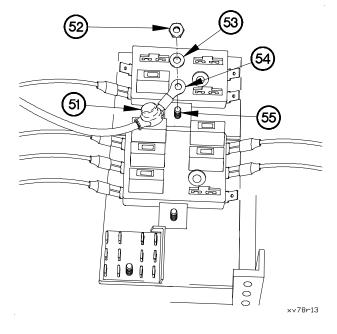


- (23) Remove dust boot (41), nut (42), washer (43), and terminal lug TL16 (44) from stud (45).
- (24) Position washer (43) on stud (45) with nut (42).

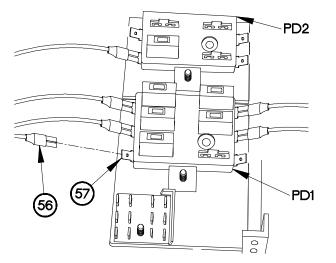
20-85. DIGITIZATION KIT REMOVAL (CONT)

- (25) Remove nut (46), washer (47), terminal lug TL17 (48), and terminal lug TL18 (49) from stud (50).
- (26) Position washer (47) on stud (50) with nut (46).





- (27) Remove dust boot (51), nut (52), washer (53), and terminal lug TL15 (54) from stud (55).
- (28) Position washer (53) on stud (55) with nut (52).



xv78r14

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINCGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

Table 1 – Terminal Lug Locations and Connectors

NOTE

- Terminal lugs are disconnected the same way. One terminal lug shown.
- Refer to **Table 1 Terminal Lug** Locations and Connectors for details.
- (29) Disconnect terminal lug TL1 (56) from distribution panel PD1 CB10 connector (57).
- (30) Perform step (29) on remaining terminal lugs.

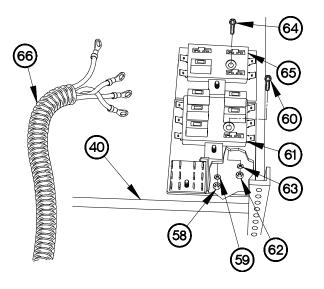
20-85. DIGITIZATION KIT REMOVAL (CONT)

- (31) Remove circuit breakers from distribution panels PD1 and PD2 (Para 20-87).
- (32) Remove four nuts (58), lockwashers (59), screws(60), and distribution panel PD1 (61) from power distribution shelf (40). Discard lockwashers.
- (33) Remove two nuts (62), lockwshers (63), screws (64), and distribution panel PD2 (65) from power distribution shelf (40). Discard lockwashers.

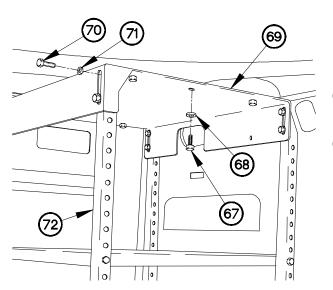
NOTE

Note routing of digitization power cable before removing from vehicle.

- (34) Remove digitization power cable (66) from vehicle.
- (35) Position four screws (60) in distribution panel PD1 (61).
- (36) Position two screws (64) in distribution panel PD2 (65) with nuts (62).



xv78r15



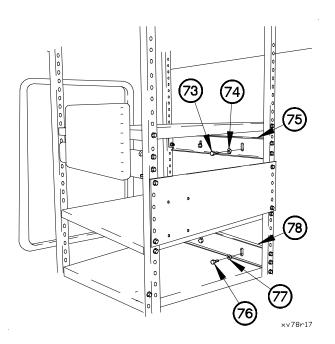
xv78r16

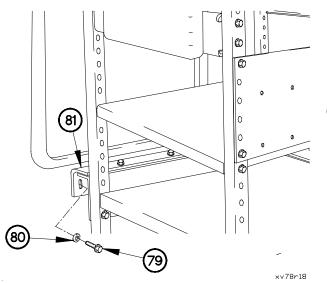
- (37) Remove six screws (67) and washers (68) from top support (69).
- (38) Remove eight screws (70), washers (71), and top support (69) from rack assembly (72).

CAUTION

Spacers may be used with vehicles equipped with rear panels. Use caution when removing screws so washers do not fall behind panel or disassembly may be required to recover washers.

- (39) Remove two screws (73) and washers (74) from rear upper support (75).
- (40) Remove two screws (76) and washers (77) from rear mid support (78).

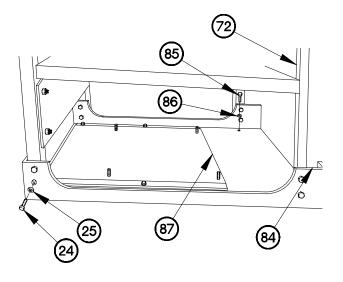




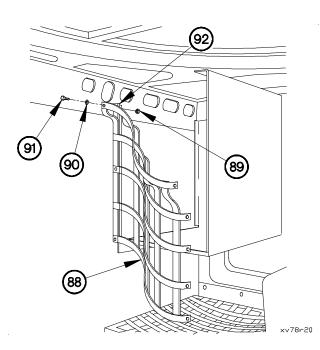
(41) Remove three screws (79) and washers (80) from side mid support (81).

20-85. DIGITIZATION KIT REMOVAL (CONT)

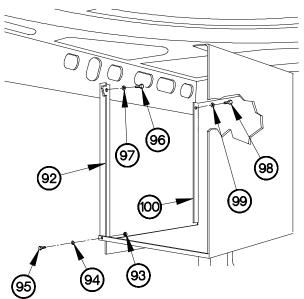
- (42) Remove eight screws (82) and washers (83) from bottom support (84).
- (43) Remove six screws (85), washers (86), and MTS mounting bracket (87) from bottom support (84).
- (44) Remove rack assembly (72) and bottom support(84) from cab.



xv78r19



- (45) Unsnap webbing (88).
- (46) Remove three nuts (89), webbing (88), washers (90), and screws (91) from angle (92).



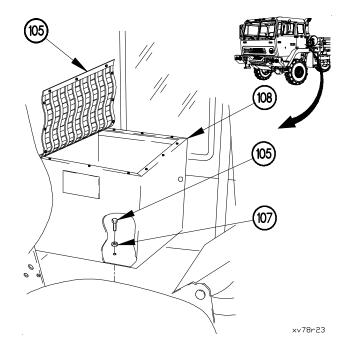
- (47) Remove nut (93), washer (94), and screw (95) from angle (92).
- (48) Remove screw (96), washer (97), and angle (92) from vehicle.
- (49) Remove two screws (98) and washers (99) from Co-Driver's Storage Box (100).

xv78r21

CAUTION

Spacers may be used with vehicles equipped with rear panels. Use caution when removing screws so washers do not fall behind panel or disassembly may be required to recover washers.

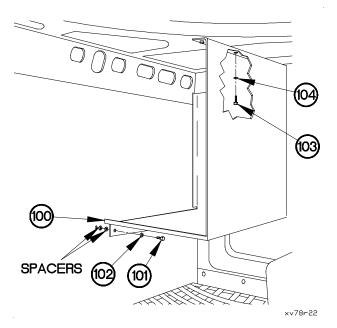
- (50) Remove three screws (101) and washers (102) from Co-Driver's Storage Box (100).
- (51) Remove three screws (103), washers (104), and Co-Driver's Storage Box (100) from vehicle.



b. Follow-on Maintenance

- (1) Install RH Seat (Para 16-14).
- (2) Install power distribution panel (Para 7-10 WTEC II, Para 7-11 WTEC III).
- (3) Install kick panel (Para 16-3).
- (4) Connect batteries (Para 7-48).
- (5) Install driver and co-driver storage boxes (Para 16-17).

End of Task



- (52) Unsnap webbing (105).
- (53) Remove six screws (106) and washers (107) from Driver's Storage Box (108).
- (54) Remove Driver's Storage Box (108) from cab.

20-86. DIGITIZATION KIT INSTALLATION

This task covers:

- a. Installation
- b. Follow-On Maintenance

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10) Batteries discounted (para 7-48) Power distribution panel removed (para 7-10 WTEC II, para 7-11 WTEC III) Kick panel removed (para 16-3) RH seat removed (para 16-14)

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque (0-200 Lb-in) (Item 58, Appendix C) Wrench Set, Socket (Item 49, Appendix C)

Materials/Parts

Plastic Cable Ties (Item 76, Appendix D) Sealant (Item 68.2 Appendix D)

Personnel Required

(2)

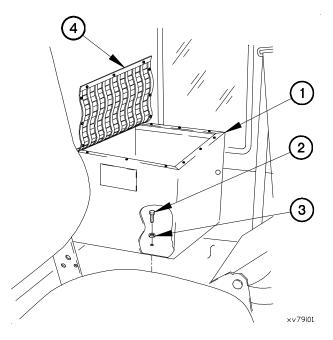
a. Installation.

(1) Position drivers storage box (1) in cab.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (2) Apply sealant to threads of six screws (2).
- (3) Position six washers (3) and screws (2) in drivers storage box (1).
- (4) Tighten six screws (2) to 70-85 lb-in. (8-10 N•m).
- (5) Snap webbing (4).



WARNING

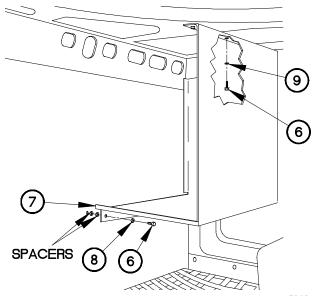
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(6) Apply sealant to threads of six screws (6).

CAUTION

Add spacers behind supports on vehicles equipped with rear panels. Failure to comply may result in damage to equipment.

- (7) Position co-drivers storage box (7) in cab with three washers (8) and screws (6).
- (8) Position three washers (9) and screws (6) in codrivers storage box (7).
- (9) Tighten six screws (6) to 70-85 lb-in. (8-10 N•m).

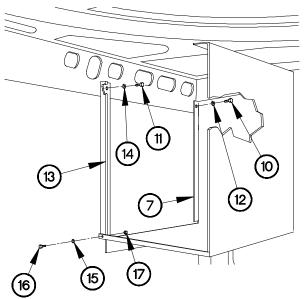


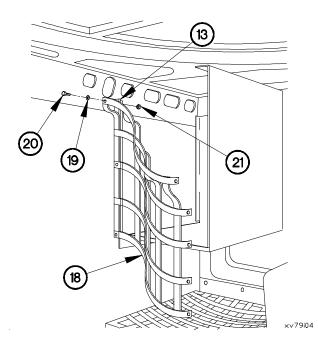
20-86. DIGITIZATION KIT INSTALLATION (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (10) Apply sealant to threads of screws (10 and 11).
- (11) Position washer (12) and screw (10) in co-drivers storage box (7).
- (12) Position angle (13) on cab with washer (14) and screw (11).
- (13) Position washer (15) and screw (16) in co-drivers storage box (7) with self-locking nut (17).
- (14) Tighten screws (10 and 11) to 70-85 lb-in. (8-10 N•m).
- (15) Tighten self-locking nut (17) to 100-120 lb-in. (12-13 N•m).





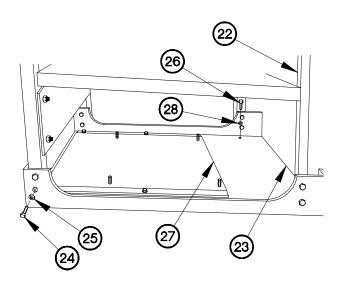
- (16) Position webbing (18) on angle (13) with three washers (19), screws (20), and self-locking nuts (21).
- (17) Tighten three self-locking nuts (21) to 110-120 lb-in (12-13 N•m).
- (18) Snap webbing (18).

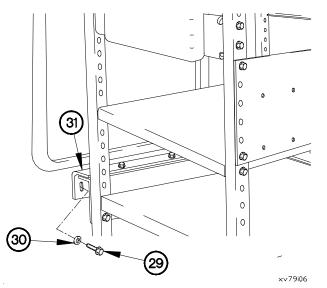
(19) Position rack assembly (22) and bottom support(23) in cab.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (20) Apply sealant to threads of eight screws (24).
- (21) Position eight washers (25) and screws (24) in bottom support (23).
- (22) Tighten eight screws (24) to 110-120 lb-in. (12-13 №m).
- (23) Apply sealant to threads of six screws (26).
- (24) Position MTS mounting bracket (27) on bottom support (23) with six washers (28) and screws (26).
- (25) Tighten six screws (26) to 70-85 lb-in (8-10 N•m).





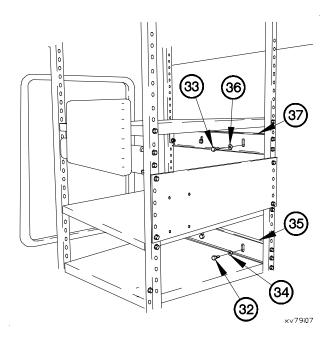
- (26) Apply sealant to threads of three screws (29).
- (27) Position three washers (30) and screws (29) in outer side support (31).

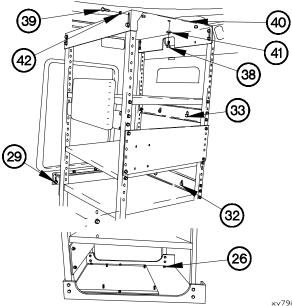
20-86 DIGITIZATION KIT INSTALLATION (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (28) Apply sealant to threads of two screws (32 and 33).
- (29) Position two washers (34) and screws (32) on lower rear support (35).
- (30) Position two washers (36) and screws (33) on upper rear support (37).



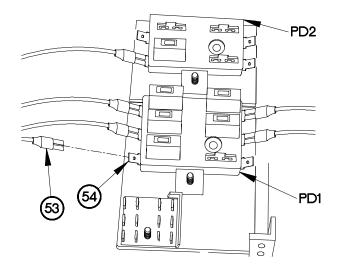


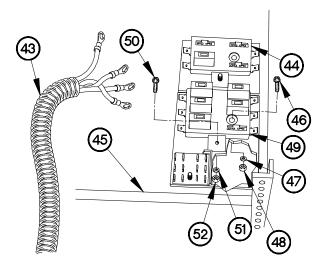
- (31) Apply sealant to threads of six screws (38) and eight screws (39).
- (32) Position top support (40) in cab with six washers (41) and screws (38).
- (33) Position eight washers (42) and screws (39) in top support (40).
- (34) Tighten eight screws (39) to 110-120 lb-in. (12-13 N•m).
- (35) Tighten six screws (26), three screws (29), two screws (32), two screws (33), and six screws (38) to 70-85 lb-in. (8-10 N•m).

NOTE

Install plastic cable ties as required.

- (36) Position digitization power cable (43) in vehicle.
- (37) Install distribution panel PD2 (44) on power distribution shelf (45) with two screws (46), lockwashers (47), and nuts (48).
- (38) Install distribution panel PD1 (49) on power distribution shelf (45) with four screws (50), lockwashers (51), and nuts (52).
- (39) Install circuit breakers in distribution panels PD2 and PD1 (para 20-87).





xv79i09

(40) Connect terminal lug TL1 (53) to distribution panel PD1 CB10 (54).

NOTE

- Terminal lugs are connected the same way. One terminal lug shown.
- Refer to Table 1 Terminal Lug Locations and Connectors for details.
- (41) Perform step (40) on remaining terminal lugs.

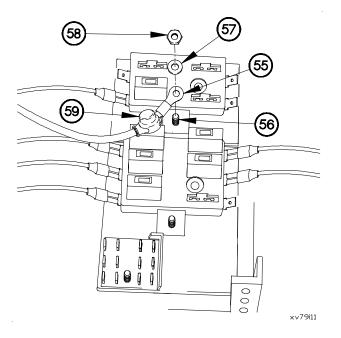
xv79i10

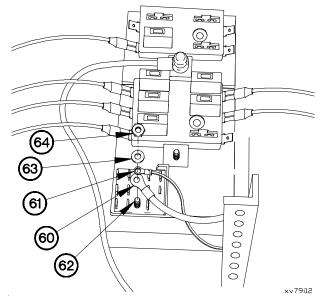
LOCATION **FUNCTION** PD CONNECTOR AMP CB1 MTS SENSE PD2 TL6 7.5A CB2 PD2 Spare Spare CB3 PD2 Spare Spare CB4 PD2 Spare Spare CB5 EPLRS PD1 TL8 10 A CB6 DVE PD1 TL3 7.5 A TL9 PLGR 7.5 A CB7 PD1 SINCGAR/FBC2 TL2 CB8 PD1 15 A PD1 CB9 Spare Spare PD1 TL1 **CB10** MTS PWR 20 A

Table 1 – Terminal Lug Locations and Connectors

20-86 DIGITIZATION KIT INSTALLATION (CONT)

- (42) Install terminal lug TL15 (55) on stud (56) with washer (57) and nut (58).
- (43) Install dust boot (59) on stud (56).



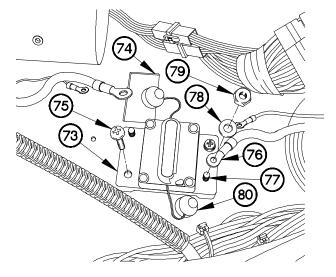


(44) Install terminal lug TL18 (60) and terminal lug TL17(61) on stud (62) with washer (63) and nut (64).

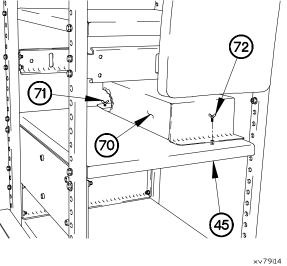
67

×v79i13

- - (47) Position electrical distribution block cover (70) on power distribution shelf (45).
 - (48) Tighten wing screw (71) on electrical distribution block cover (70).
 - (49) Install wing screw (72) in electrical distribution block cover (70).



×v79i15



(45) Install terminal lug TL16 (65) on stud (66) with

washer (67) and nut (68).

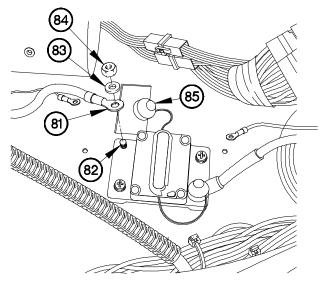
(46) Install dust boot (69) on stud (66).

- (50) Install circuit breaker CB11 (73) on dashboard (74) with two screws (75).
- (51) Install terminal lug TL24 (76) on stud (77) with washer (78) and nut (79).
- (52) Install dust boot (80) on stud (77).

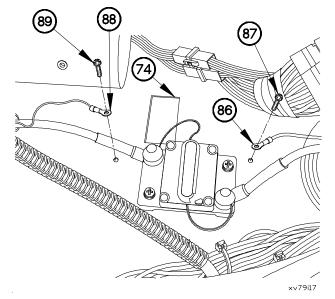
Change 2

20-86. DIGITIZATION KIT INSTALLATION (CONT)

- (53) Install terminal lug TL23 (81) on stud (82) with washer (83) and nut (84).
- (54) Install dust boot (85) on stud (82).



xv79i16



- (55) Install terminal lug TL25 (86) on dashboard (74) with screw (87).
- (56) Install terminal lug TL19 (88) on dashboard (74) with screw (89).

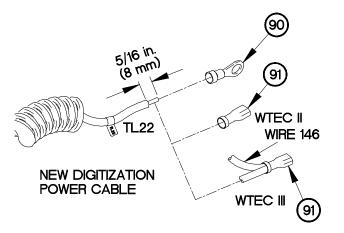
NOTE

- Perform steps (57) through (60) if a new digitization power cable is being installed.
- Perform steps (57) and (58) if replacing the digitization power cable on vehicle serial numbers 00001 through 11347 equipped with WTEC II controller.
- (57) Remove terminal lug TL22 ring terminal (90) from NEW digitization power cable and strip insulation 5/16 in (8 mm).
- (58) Install terminal lug TL22 spade terminal (91) on NEW digitization power cable.

NOTE

Perform steps (59) and (60) if replaicing the digitization power cable on vehicle serial numbers 00001 through 11347 equipped with WTEC III controller.

- (59) Remove terminal lug TL22, ring terminal (90) from NEW digitization power cable and strip insulation 5/16 in (8 mm).
- (60) Install terminal lug TL22, spade terminal (91) on NEW digitization power cable and wire 146.



xv79i18

20-86. DIGITIZATION KIT INSTALLATION (CONT)

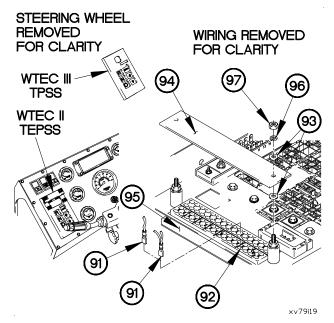
NOTE

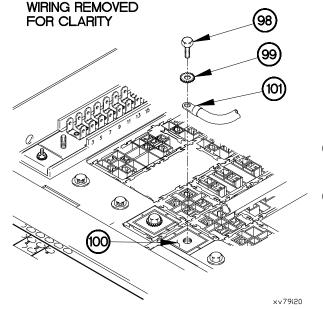
- Perform steps (61) through (68) on vehicle serial numbers 00001 through 11437.
- Peform step (61) on vehicles equipped with WTEC II transmission controllers.
- (61) Install terminal lug TL22 (91) on terminal block TB1 connector 58 (92).

NOTE

Perform step (62) on vehicles equipped with WTEC III transmission controllers.

- (62) Install terminal lug TL22 (91) on terminal block TB1 connector 58 (92).
- (63) Install two washers (93) and cover (94) on terminal block TB1 (95) with two washers (93), lockwashers (96), and nuts (97).

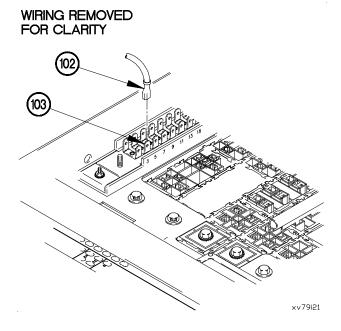




NOTE

Other terminal lugs are present at this location.

- (64) Remove screw (98) and lockwasher (99) from 24 VDC connector X1 (100).
- (65) Install terminal lug TL20 (101) on 24 VDC connector X1 (100) with lockwasher (99) and screw (98).



(66) Connect terminal lug TL14 (102) to terminal block

TB2 connector 43 (103).

NOTE

Other terminal lugs are present at this location.

- (67) Remove nut (104), lockwasher (105), and washer (106) from ground stud (107).
- (68) Install terminal lug TL21 (108) on ground stud (107) with washer (106), lockwasher (105), and nut (104).

b. Follow-on Maintenance

- (1) Install power distribution panel (para 7-11 WTEC II, Para 7-13 WTEC III).
- (2) Install kick panel (para 16-3).
- (3) Connect batteries (para 7-57).
- (4) Install RH seat (para 7-57)
- (5) Operate equipment, check for proper operation.

End of Task

20-87 DIGITIZATION KIT CIRCUIT BREAKER REPLACEMENT/INSTALLATION

This task covers:

- a. Removal
- b. installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10) Batteries discounted (para 7-48) c. Follow-On Maintenance

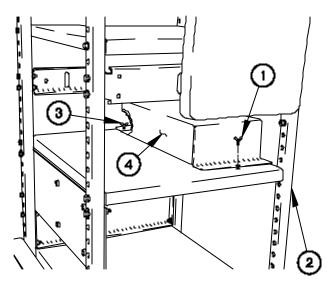
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

Personnel Required

(2)

a. Removal.

- (1) Removal wing screw (1) from power distribution shelf (2).
- (2) Loosen wing screw (3) on electrical distribution block cover (4).
- (3) Remove electrical distribution block cover (4) from power distribution shelf (2).



×v90A02

NOTE

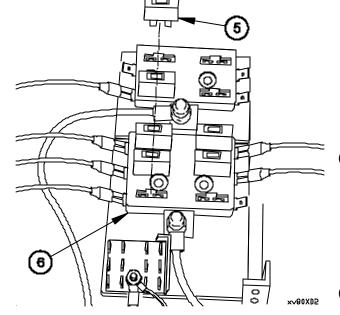
All circuit breakers in digitization power distribution panels PD1 and PD2 are replaced the same way. One circuit breaker shown.

(4) Locate circuit breaker to be replaced.

NOTE

Refer to Figure 3-1. Power Distribution Circuit Breaker Locations and Table 3-1 Power Distribution Circuit Breakers for details.

(5) Remove circuit breaker (5) from power distribution panel PD1 (6).



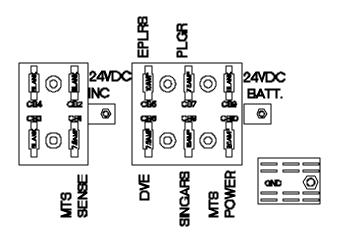


Figure 3-1. Power Distribution Circuit Breaker Locations

×v80A03

Table 3-1. Power Distribution Panel Circuit Breakers.

СВ	Amp	Function	Reset	P/N
CB1	7.5 AMP	MTS SENSE	Manual	223-7.5-400
CB2		Blank		
CB3		Blank		
CB4		Blank		
CB5	10 AMP	DPLARS	Manual	223-10-400
CB6	7.5 AMP	DVE	Manual	223-7.5-400
CB7	7.5 AMP	PLGR	Manual	223-7.5-400
CB8	15 AMP	SINCGARS/FBCB2	Manual	223-15-400
CB9		Blank		
CB10	20 AMP	MTS POWER	Manual	2223-20-400

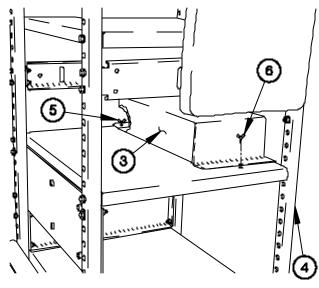
20-87. DIGITIZATION KIT CIRCUIT BREAKER REPLACEMENT/INSTALLATION (CONT)

b. Installation

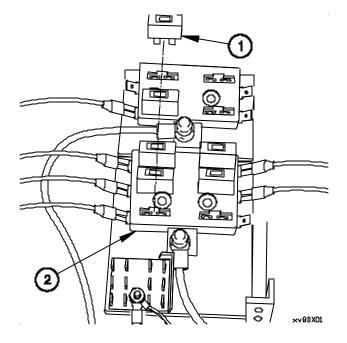
NOTE

Refer to Figure 3-1. Power distribution Circuit Breaker Locations and Table 3-1 Power Distribution Circuit Breakers for details.

(1) Install circuit breaker (1) on power distribution panel PD1 (2).







- (2) Position electrical distribution block cover (3) on power distribution shelf (4).
- (3) Tighten wing screw (5) on electrical distribution block cover (3).
- (4) Install wing screw (6) in power distribution shelf (4).

c. Follow-on Maintenance.

Connect batteries (para 7-48)

End of Task

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION

This task covers:

- a. Removal
- b. installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10-1) Batteries discounted (TM 9-2320-365-20-3) Kick panel removed (TM 9-2320-365-20-4) Power Distribution Panel removed for access (TM 9-2320-365-20-3)

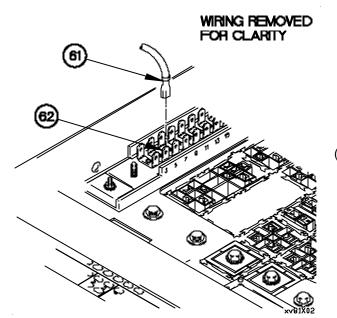
Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Tool Kit Electrical Contact Repair (Item 44.1 Appendix C)

a. Removal.

NOTE

- Perform steps (1) through (4) on vehicle serial numbers 00001 through 11437.
- Tag connectors and connection points prior to disconnecting.
- (1) Remove nut (1), lockwasher (2), washer (3), and terminal lug TL21 (4) from ground stud (5). Discard lockwasher.



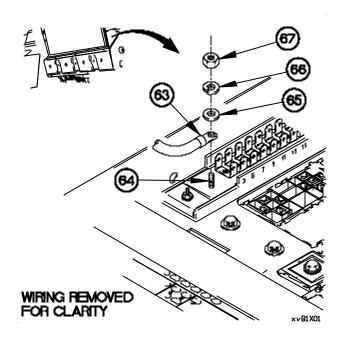
c. Follow-On Maintenance

Materials/Parts

Lockwasher (2) (Item 103.1Appendix G) Ties, Cable, Plastic (Item 76, Appendix D) Washer, Spring (6) (Item 283, Appendix G) Dispenser Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Terminal Lug (Item 269.01, Appendix G) Nut, Self-Locking (Item 132.1, Appendix G)

Personnel Required

(2)



(2) Disconnect terminal lug TL14 (6) from terminal block TB2 connector 5 (7).

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT) (59 WIRING REMOVED FOR CLARITY (3) Remove screw (8), lockwasher (9), and terminal lug TL20 (10) from 24 VDC connector X1 (11). Discard lockwasher. 58 ×vB1X03 Remove two nuts (12), lockwashers (13), washers (14), (4) WTEC III cover (15), and two washers (14) from terminal block TPSS TB1 (16). Discard lockwasher.

NOTE

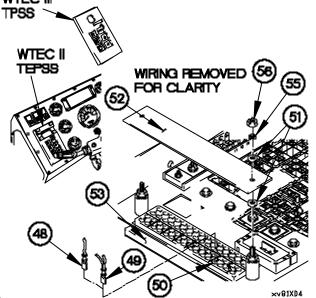
Perform step (5) on vehicles equipped with WTEC II transmission controllers.

(5) Remove terminal lug TL 22 (17) from terminal block TB1 connector 58 (18).

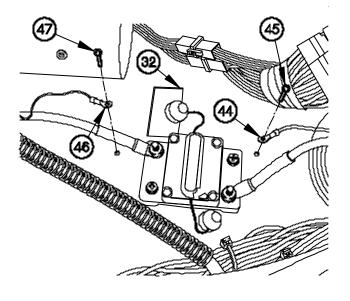
NOTE

Perform step (6) on vehicles equipped with WTEC III transmission controllers.

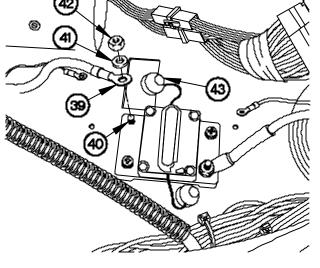
(6) Remove terminal lug TL22 (19) from terminal block TB1 connector 58 (18).



- (11) Remove screw (20) and terminal lug TL25 (21) from dashboard (22).
- (12) Remove screw (23) and terminal lug TL19 (24) from dashboard (22).



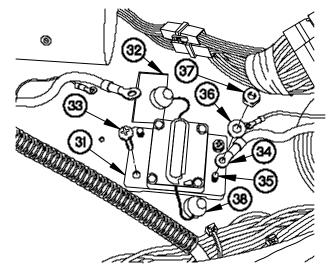
×v81X09



(13) Remove dust boot (25), nut (26), washer (27), and terminal lug TL23 (28) from stud (29).

XVBLXLD

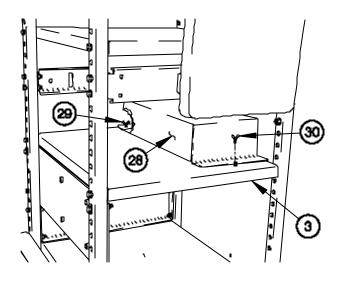
- (14) Remove dust boot (30), nut (31), washer (32), and terminal lug TL24 (33) from stud (34).
- (15) Remove two screws (35) and circuit breaker CB11 (36) from dashboard (22).



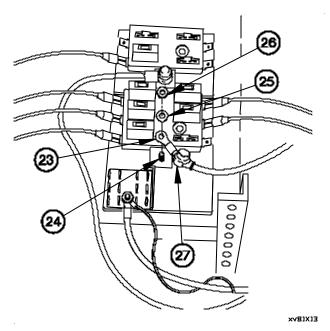
×v81×11

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (16) Remove wing screw (37) from electrical distribution block cover (38).
- (17) Loosen wing screw (39) on electrical distribution block cover (38).
- (18) Remove electrical distribution block cover (38) from power distribution shelf (40).

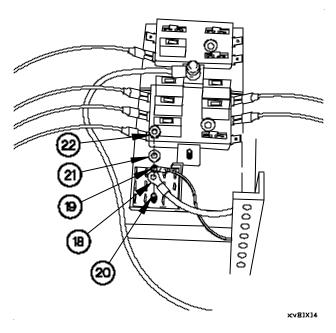


xv81X12

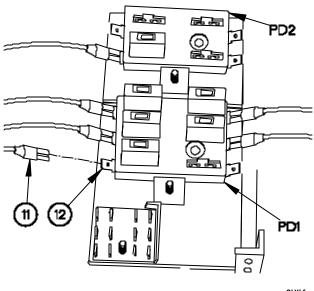


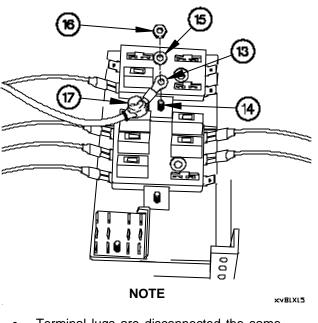
(20) Remove nut (46), washer (47), terminal lug TL17 (48), and terminal lug TL18 (49) from stud (50).

(19) Remove dust boot (41), nut (42), washer (43), and terminal lug TL16 (44) from stud (45).



(21) Remove dust boot (51), nut (52), washer (53), and terminal lug TL15 (54) from stud (55).





- Terminal lugs are disconnected the same way. One terminal lug shown.
- Refer to Table 1 Terminal Lug Locations and Connectors for details.
- (22) Disconnect terminal lug TL1 (56) from distribution panel PD1 CB10 connector (57).
- (23) Perform step 13 on remaining terminal lugs.

×v8LXL6

Table 1 – Terminal Lug Locations and Connectors

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINCGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

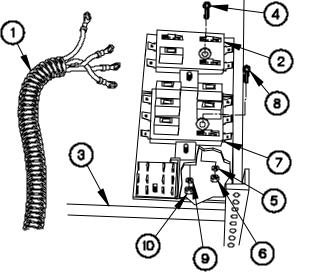
- (24) Remove circuit breakers from distribution panels PD1 and PD2 (WP 03).
- (25) Remove four nuts (58), lockwashers (59), screws
 (60), and distribution panel PD1 (61) from power distribution shelf (40). Discard lockwashers.
- (26) Remove two nuts (62), lockwashers (63), screws (64), and distribution panel PD2 (65) from power distribution shelf (40). Discard lockwashers.

NOTE

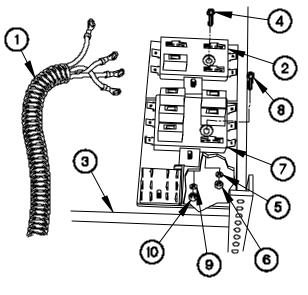
Note routing of digitization power cable prior to removal.

(27) Remove digitization power cable (66) from vehicle.

b. Installation





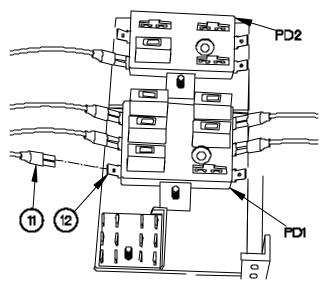


×v8LXL7

- (1) Position digitization power cable (66) in vehicle.
- (2) Install distribution panel PD2 (65) on power distribution shelf (40) with two screws (64), lockwashers (63), and nuts (62).
- (3) Install distribution panel PD1 (61) on power distribution shelf (40) with four screws (60), lockwashers (59), and nuts (58).
- (4) Install circuit breakers in distribution panels PD2 and PD1 (WP 03).

NOTE

- Terminal lugs are connected the same way. One terminal lug shown.
- Refer to Table 1 Terminal Lug Locations and Connectors for details.
- (5) Connect terminal lug TL1 (56) to distribution panel PD1 CB10 (57).
- (6) Perform step 5 on remaining terminal lugs.



×v81X16

LOCATION	FUNCTION	PD	CONNECTOR	AMP
CB1	MTS SENSE	PD2	TL6	7.5A
CB2	Spare	PD2		Spare
CB3	Spare	PD2		Spare
CB4	Spare	PD2		Spare
CB5	EPLRS	PD1	TL8	10 A
CB6	DVE	PD1	TL3	7.5 A
CB7	PLGR	PD1	TL9	7.5 A
CB8	SINCGAR/FBC2	PD1	TL2	15 A
CB9	Spare	PD1		Spare
CB10	MTS PWR	PD1	TL1	20 A

Table 1 – Terminal Lug Locations and Connectors

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (7) Install terminal lug TL15 (54) on stud (55) with washer (53) and nut (52).
- (8) Install dust boot (51) on stud (55).

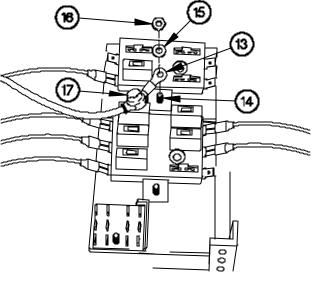
22

21

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18

(20)



xv8lXl5

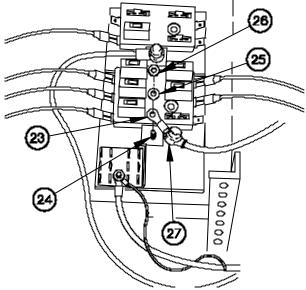
(9) Install terminal lug TL18 (49) and terminal lug TL17 (48) on stud (50) with washer (47) and nut (46).

(10) Install terminal lug TL16 (44) on stud (45) with washer(43) and nut (42).

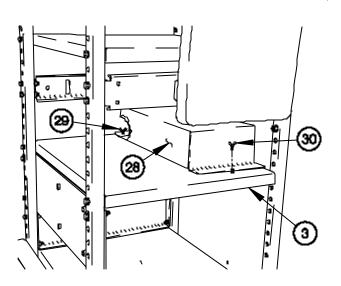
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xv81X14

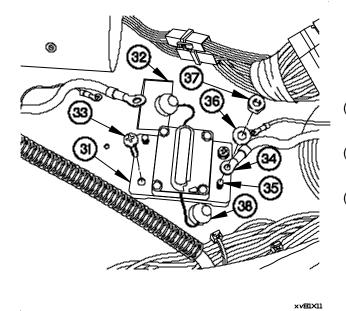
(11) Install Dust boot (41) on stud (45).



- (12) Position electrical distribution block cover (38) on power distribution shelf (40).
- (13) Tighten wing screw (39) on electrical distribution block cover (38).
- (14) Install wing screw (37) in electrical distribution block cover (38).



×v81X12

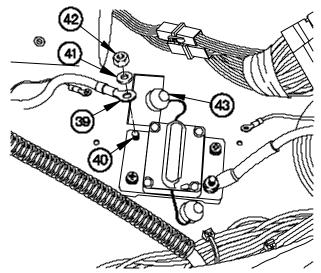


(18) Install terminal lug TL23 (28) on stud (29) with

washer (27) and nut (26).

(19) Install dust boot (25) on stud (29).

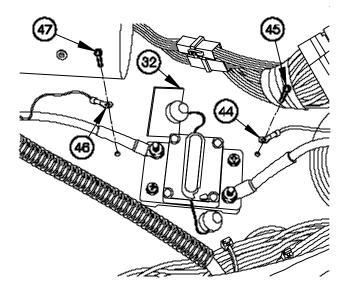
- (15) Install circuit breaker CB11 (36) on dashboard (22) with two screws (35).
- (16) Install terminal lug TL24 (33) on stud (34) with washer(32) and nut (31).
- (17) Install dust boot (30) on stud (34).



xv81X10

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

- (20) Install terminal lug TL25 (24) on dashboard (22) with screw (23).
- (21) Install terminal lug TL19 (21) on dashboard (22) with screw (20).



xv81X09

NOTE

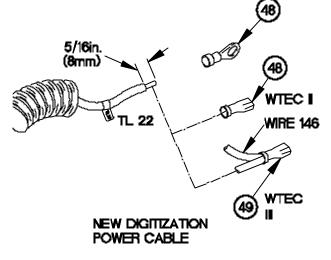
Perform steps (22) and (23) if replacing the digitization power cable on vehicle serial numbers 0001 through 11347 equipped with WTEC II controller.

- (22) Remove terminal lug TL22 ring terminal (17) from NEW digitization power cable and strip insulation 5/16 in (8 mm).
- (23) Install terminal lug TL22 spade terminal (17) on NEW digitization power cable.

NOTE

Perform steps (24) and (25) if replacing the digitization power cable on vehicle serial numbers 00001 through 11347 equipped with WTEC III controller.

- (24) Remove terminal lug TL22, ring terminal (19) from NEW digitization power cable and strip insulation 5/16 in (8 mm).
- (25) Install terminal lug TL22, spade terminal (19) on NEW digitization power cable and existing wire J117.



×v81X18

NOTE

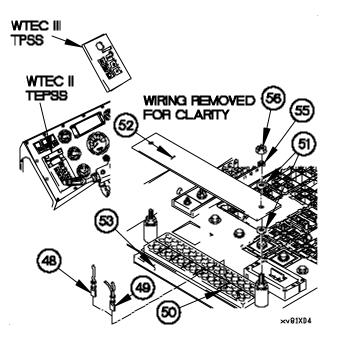
Perform step (26) on vehicles equipped with WTEC II transmission controllers.

(26) Install terminal lug TL22 (17) on terminal block TB1 connector 58 (18).

NOTE

Perform step (27) on vehicles equipped with WTEC III transmission controllers.

- (27) Install terminal lug TL22 (19) on terminal block TB1 connector 58 (18).
- (28) Install two washers (14) and cover (15) on terminal block TB1 (16) with two washers (14), lockwashers (13), and nuts (12).

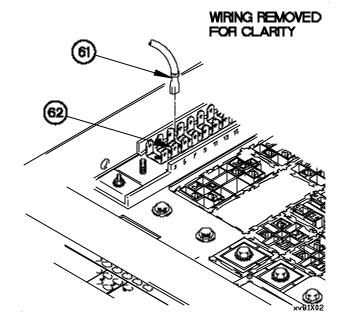




(29) Install terminal lug TL20 (10) on +24 VDC connector X1 (11) with lockwasher (9) and screw (8).

20-88. DIGITIZATION KIT POWER CABLE REMOVAL/INSTALLATION (CONT)

(30) Connect terminal lug TL14 (6) to terminal block TB2 connector 43 (7).



- (31) Install terminal lug TL21 (4) on ground stud (5) with washer (3), lockwasher (2), and nut (1).
- WIRING REMOVED FOR CLARITY

c. Follow-on Maintenance

- (1) Install power distribution panel (TM 9-2320-365-20-3).
- (2) Install kick panel (TM 9-2320-365-20-4).
- (3) Connect batteries (TM 9-2320-365-20-3).
- (4) Operate equipment, check for proper operation.

End of Task

20-526 Change 2

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly
- c. Assembly

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10) Batteries discounted (para 7-48) Equipment and mounting base(s) removed. Digitization power cable, removed (para 20-88) RH seat removed, (para 16-14)

- d. Installation
- e. Follow-On Maintenance

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque,0-150lb-in. (Item 58 Appendix C) Socket Wrench Set (Item 49, Appendix C)

Materials/Parts

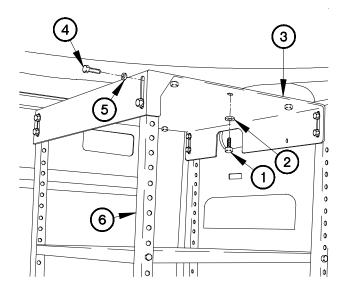
Ties, Cable, Plastic (Item 76, Appendix D) Sealant (Item 68.2, Appendix D)

Personnel Required

(2)

a. Removal.

- (1) Remove six screws (1) and washers (2) from top support (3).
- (2) Remove eight screws (4), washers (5), and top support (3) from rack assembly (6).



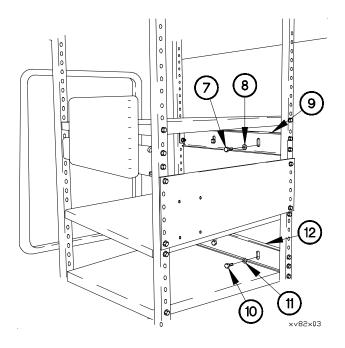
×v82A01

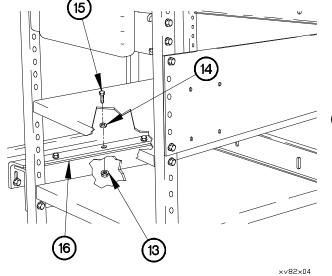
20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)



Spacers may be used with vehicles equipped with rear panels. Use caution when removing screws so that washers do not fall behind panel or disassembly may be required to recover washers.

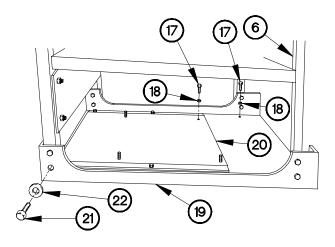
- (3) Remove two screws (7) and washers (8) from rear upper support (9).
- (4) Remove two screws (10) and washers (11) from rear mid support (12).





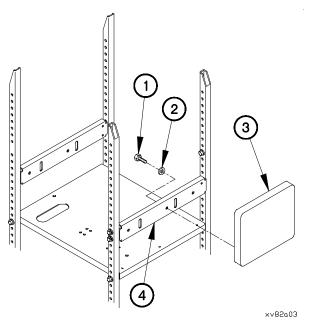
(5) Remove three self-locking nuts (13), washers (14), and screws (15) from outer side support (16).
 Discard self-locking nuts.

- (6) Remove two screws (17) and washers (18) from bottom support (19).
- (7) Remove four screws (17), washers (18), and MTS plate (20) from bottom support (19).
- (8) Remove eight screws (21) and washers (22) from bottom support (19).
- (9) Remove rack assembly (6) from bottom support (19).
- (10) Remove rack assembly (6) and bottom support (19) from cab.



×v82×05

b. Disassembly.



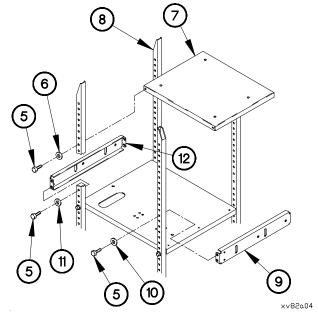
(1) Remove four screws (1), washers (2), and head pad (3) from head pad base (4).

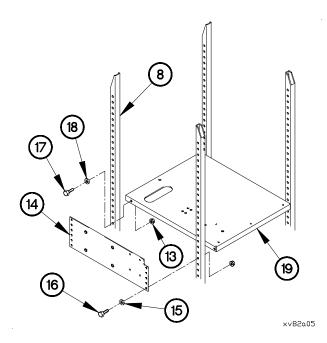
20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

NOTE

Note shelf and brace locations prior to removal.

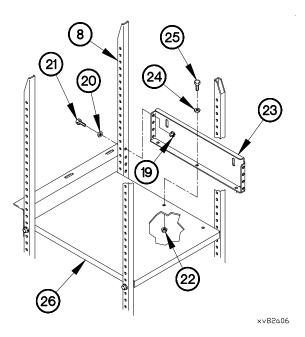
- (2) Remove four screws (5), washers (6), and SINGGAR shelf (7) from support legs (8).
- (3) Remove four screws (5), washers (10), and head pad brace (9) from four support legs (8).
- (4) Remove four screws (5), washers (11), and top rear wall brace (12) from support legs (8).

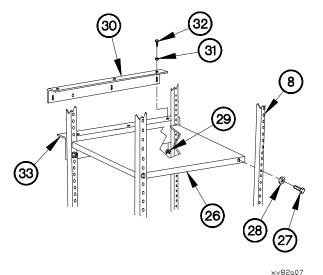




- (5) Remove four self-locking nuts (13), PLGR/M42 alarm plate (14), four washers (15), and screws (16) from support legs (8). Discard self-locking nuts.
- (6) Remove four screws (17), washers (18), and power distribution panel (19) from support legs (8).

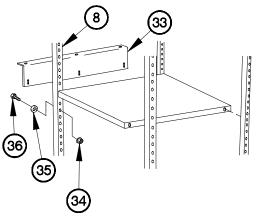
- (7) Remove four self-locking nuts (19), washers (20), and screws (21) from support legs (8). Discard selflocking nuts.
- (8) Remove three self-locking nuts (22), rear M10 support (23), three washers (24), and screws (25) from EPLRS shelf (26). Discard self-locking nuts.





- (9) Remove four screws (27), washers (25), and EPLRS shelf (26) from support legs (8).
- (10) Remove three self-locking nuts (29), outer side support (30), three washers (31), and screws (32) from inter side support (33). Discard self-locking nuts.

(11) Remove two self-locking nuts (34), inter side support (33), two washers (35), and screws (36) from support legs (8).

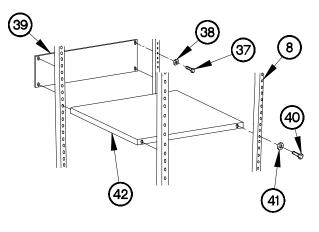


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20-531

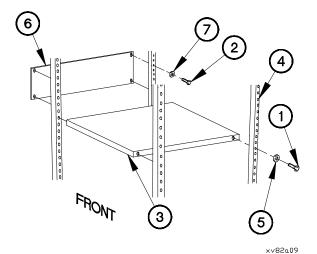
20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

- (12) Remove four screws (37), washers (35), and stiffening plate (39) from four support legs (8).
- (13) Remove four screws (40), washers (41), and support legs (8) from FBCB2 shelf (42).



×v82a08

c. Assembly.

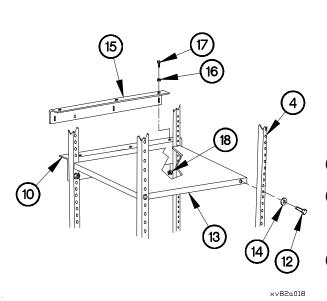


WARNING

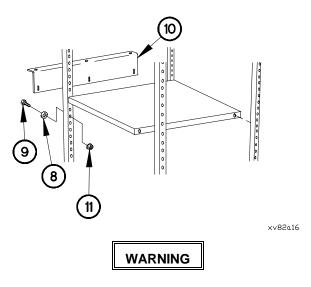
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound clothing, wash gets on skin or immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealant to threads of four screws (1 and 2).
- (2) Install FBCB2 (3) on four support legs (4) with washers (5) and screws (1).
- (3) Install stiffening plate (6) on support legs (4) with four washers (7) and screws (2).

- (4) Position two washers (8) and screws (9) in inter side support (10) with two self locking nuts (11).
- (5) Tighten two self-locking nuts (11) to 110-120 lb-in. (12-14 №m).

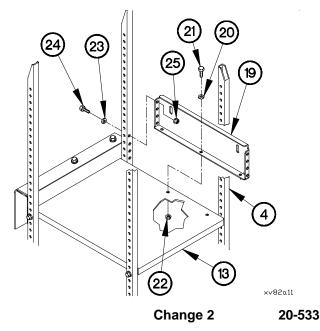


- (9) Position mid rear support (19) on EPLRS shelf (13) with three washers (20), screws (21), and self locking nuts (22).
- (10) Position four washers (23) and screws (24) in support legs (4) with self-locking nuts (25).
- (11) Tighten three self-locking nuts (22) and four self-locking nuts (25) to 110-120 lb-in. (12-13 N•m).



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (6) Apply sealant to threads of four screws (12).
- (7) Install EPLRS shelf (13) and inter side support (10) on support legs (4) with four washers (14) and screws (12).
- (8) Position outside support (15) on inter side support (10) with three washers (16), screws (17), and self-locking nuts (18).

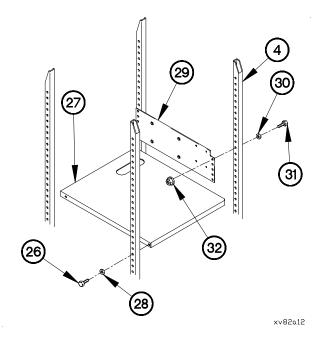


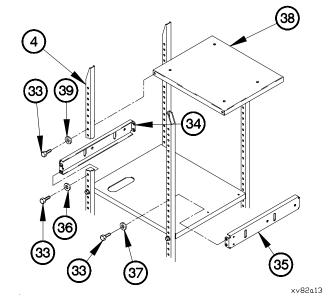
20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (12) Apply sealant to threads of four screws (26).
- (13) Install power distribution shelf (27) in support legs (4) with four washers (28) and screws (26).
- (14) Position PLGR/M42 alarm plate (29) on support legs(4) with four washers (30), screws (31), and self-locking nuts (32).
- (15) Tighten four self-locking nuts (32) to 110-120 lb-in.
 (12-13 N•m).
- (16) Apply sealant to threads of 12 screws (33).





- (17) Install top rear wall bracket (34) and front head pad bracket (35) on support legs (4) with four washers (36 and 37) and screws (33).
- (18) Install SINGGAR shelf (38) on support legs (4) with four washers (39) and screws (33).

35

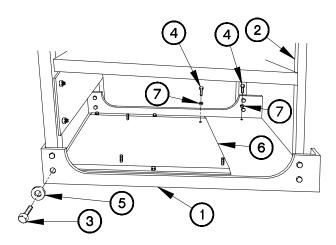
xv82a14

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (19) Apply sealant to threads of four screws (40).
- (20) Install head pad (41) on front head pad brace (35) with four washers (42) and screws (39).

d. Installation.



(1) Position bottom support (1) and rack assembly (2) in cab.

41

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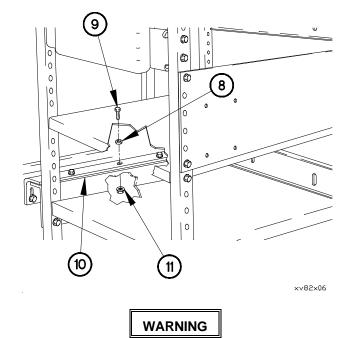
40

- (2) Apply sealant to threads of eight screws (3) and six screws (4).
- (3) Position rack assembly (2) on bottom support (1) with eight washers (5) and screws (3).
- (4) Tighten eight screws (3) to 110-120 lb-in. (12-14 N•m).
- (5) Position MTS plate (6) on bottom support (1) with four washers (7) and screws (4).
- (6) Position two washers (7) and screws (4) in bottom support (1).

×v82×08

20-89. DIGITIZATION KIT RADIO RACK ASSEMBLY REPLACEMENT/REPAIR (CONT)

(7) Position three washers (8) and screws (9) in outer side support (10) with three self-locking nuts (11).



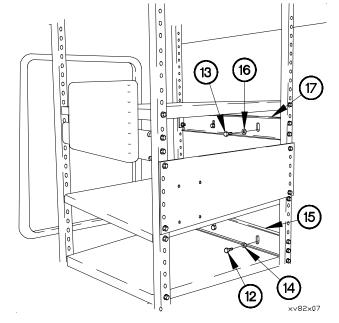
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

(8) Apply sealant to threads of two screws (12 and 13).

CAUTION

Add spacers behind support to vehicles equipped with rear panels. Failure to comply may result in damage to equipment.

- (9) Position two washers (14) and screws (12) in lower rear support (15).
- (10) Position two washers (16) and screws (13) in upper rear support (17).



WARNING

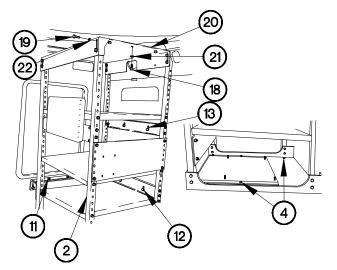
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (11) Apply sealant to threads of six screws (18) and eight screws (19).
- (12) Position top support (20) on rack assembly (2) with six washers (21) and screws (18).
- (13) Position eight washers (22) and screws (19) in top support (20).
- (14) Tighten two screws (12 and 13) to 70-85 lb-in. (8-10 N•m).
- (15) Tighten three self-locking nuts (11) to 110-120 lbin. (12-13 N•m).
- (16) Tighten six screws (18) to 70-85 lb-in. (8-10 N•m).
- (17) Tighten eight screws (19) to 110-120 lb-in. (12-13 N•m).

e. Follow-on Maintenance

- (1) Install RH seat (Para 16-15)
- (2) Install digitization power cable (Para 20-81)
- (3) Install mounting base(s) and equipment.
- (4) Connect batteries (Para 7-57)

End of Task



×v82a02

20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly
- c. Assembly

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10) Remove contents from AFT Storage Box

Tools and Special Tools

Drill, electric (Item 7, Appendix C) Drill set, twist (Item 8, Appendix C) Tool Kit, Blind Rivet (Item 43, Appendix C) Tool Kit, Genl Mech (Item 44, Appendix C) Wrench Set, Socket (Item 49, Appendix C) Wrench, Torque,0-200 lb-in. (Item 59 Appendix C)

- d. Installation
- e. Follow-On Maintenance

Materials/Parts

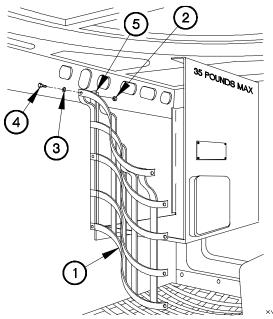
Nut, self-locking (13) (Item 146.1, Appendix G) Rivet (4) (Item 259, Appendix G) Washer, Spring (3) (Item 283, Appendix G) Sealant (Item 55.1, Appendix D)

Personnel Required

(2)

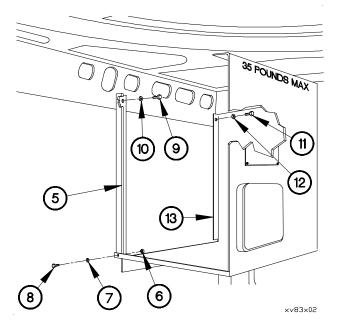
a. Removal.

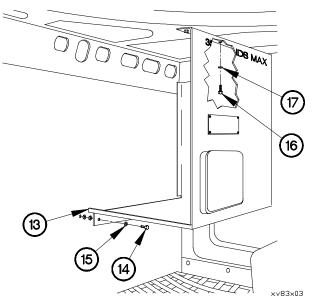
- (1) Unwrap webbing (1).
- (2) Remove three nuts (2), webbing (1), washers (3), and screws (4) from angle (5).



×v83×01

- (3) Remove nut (6), washer (7), and screw (8) from angle (5).
- (4) Remove screw (9), washer (10), and angle (5) from cab.
- (5) Remove two screws (11) and washers (12) from AFT Storage Box (13).



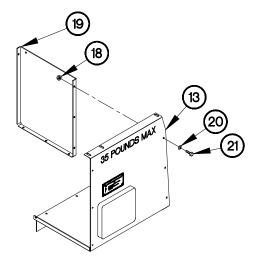


- (6) Remove three screws (14) and washers (15) from AFT Storage Box (13).
- (7) Remove three screws (16), washers (17), and AFT Storage Box (13) from cab.

20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR (CONT)

b. Disassembly.

 Remove six self-locking nuts (18), side panel (19), six washers (20), and screws (21) from AFT Storage Box (13). Discard self-locking nuts.



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×v83×04
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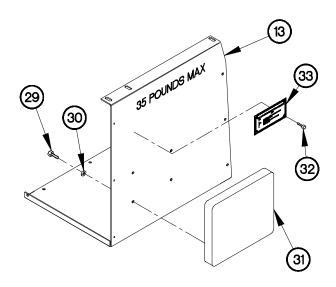
- Remove three self-locking nuts (22), bracket (23), three washers (24), and screws (25) from AFT Storage Box (13). Discard three self-locking nuts.
- (3) Remove three nuts (26), lockwashers (27), and snap screws (28) from AFT Storage Box (13).

 (4) Remove four screws (29), washers (30), and headrest (31) from AFT Storage Box (13).

WARNING

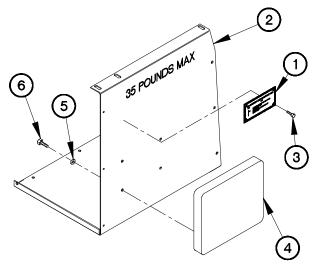
Wear appropriate eye protection when drilling out rivets. Failure to comply may result in injury to personnel.

(5) Remove four rivets (32) and data plate (33) from AFT Storage Box (13).



xv83x06

c. Assembly.



×v83×07

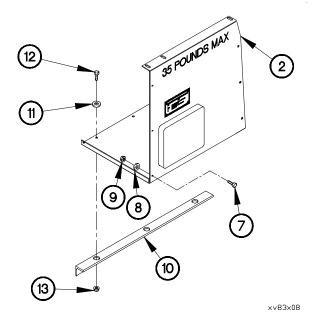
- (1) Install data plate (1) on AFT Storage Box (2) with four rivets (3).
- (2) Position headrest (4) on AFT Storage Box (2) with four washers (5) and screws (6).
- (3) Tighten four screws (6) to 70-85 lb-in. (8-10 N•m).

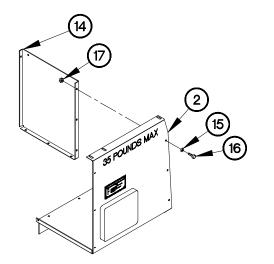
20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR (CONT)

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (4) Apply sealant to threads of three snap screws (7).
- (5) Install three snap screws (7) on AFT Storage Box(2) with three lockwashers (8) and nuts (9).
- (6) Position bracket (10) on AFT Storage Box (2) with three washers (11) screws (12) and self-locking nuts (13).
- (7) Tighten three self-locking nuts (13) to 95-110 lb-in. (11-12 N•m).





- (8) Position side panel (14) on AFT Storage Box (2) with six washers (15), screws (16), and self-locking nuts (17).
- (9) Tighten six self-locking nuts (17) to 95-110 lb-in. (11-12 N•m).

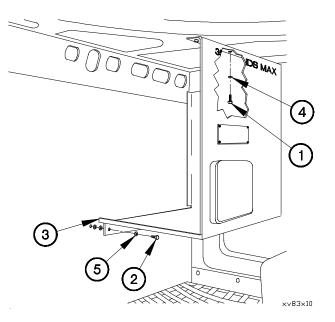
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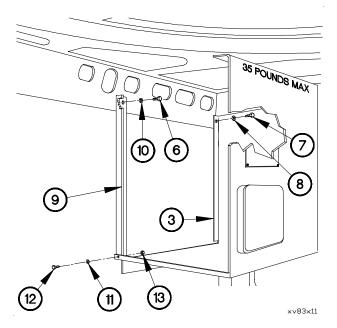
d. Installation.

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply sealant on threads of three screws (1 and 2).
- (2) Position AFT Storage Box (3) in cab with three washers (4) and screws (1).
- (3) Position three washers (5) and screws (2) in AFT Storage Box (3).
- (4) Tighten three screws (1 and 2) to 70-85 lb-in. (8-10 N•m).

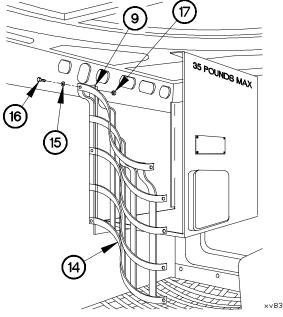




- (5) Apply sealant to threads of screws (6 and 7).
- (6) Position washer (8) and screw (7) in AFT Storage Box (3).
- (7) Position angle (9) on cab with washer (10) and screw (6).
- (8) Position angle (9) on AFT Storage Box (3) with washer (11), screw (12), and self-locking nut (13).
- (9) Tighten two screws (6 and 7) to 70-85 lb-in. (8-10 N•m).
- (10) Tighten self-locking nut (13) to 95-110 lb-in. (11-12 N•m).

20-90. DIGITIZATION KIT AFT STOWAGE BOX REPLACEMENT/REPAIR (CONT)

- (11) Position webbing (1) on angle (5) with three washers (3), screws (4), and self-locking nuts (2).
- (12) Tighten three self-locking nuts (2) to 95-110 lb-in. (11-12 N•m).
- (13) Snap webbing (1).



×v83×12

20-91. DIGITIZATION KIT DRIVER'S STORAGE BOX REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly
- c. Assembly

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10) Co-Driver's Storage Box, removed (TM 9-2320-365-20-5)

d. Installation

e. Follow-On Maintenance

Tools and Special Tools

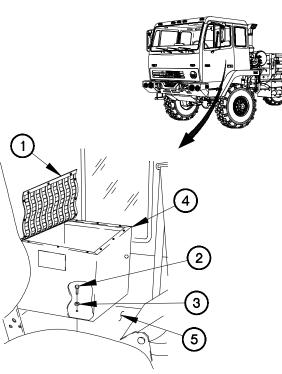
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-200 lb in (Item 58, Appendix-C) Wrench Set, Socket (Item 49, Appendix C)

Materials/Parts

Lockwasher (9) (Item 89, Appendix G)

a. Removal.

- (1) Unsnap webbing (1).
- (2) Remove six screws (2) and washers (3) from Driver's Storage Box (4).
- (3) Remove Driver's Storage Box (4) from cab floor (5).

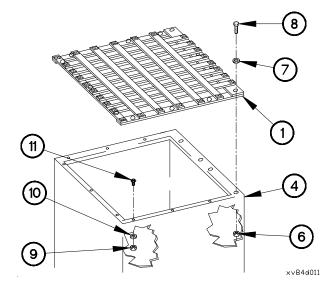


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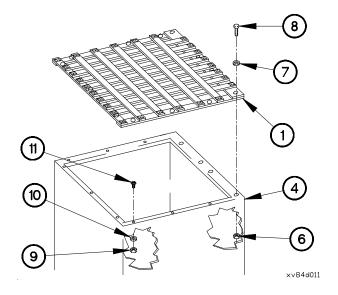
20-91. DIGITIZATION KIT DRIVER'S STORAGE BOX REPLACEMENT/REPAIR (CONT'D)

b. Disassembly.

- Remove four nuts (6), washers (7), screws (8), and webbing (1) from Driver's Storage Box (4).
- (2) Remove nine nuts (9), lockwashers (10), and snap screws (11) from Driver's Storage Box (4). Discard lockwashers.



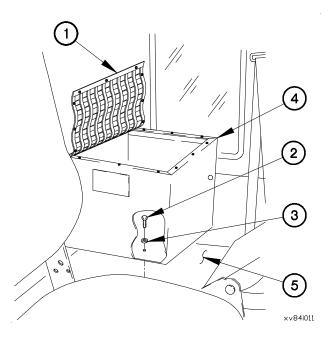
c. Assembly.



- (1) Install nine snap screws (11) on Driver's Storage Box(4) with nine lockwashers (10) and nuts (9).
- (2) Install webbing (1) on Driver's Storage Box (4) with four washers (7), screws (8), and nuts (6).

d. Installation.

- (1) Position Driver's Storage Box (4) in mounting location on cab floor (5).
- (2) Position six washers (3) and screws (2) in Driver's Storage Box (4).
- (3) Tighten six screws (2) to 70-85 lb-in. (8-10 N•m).
- (4) Snap webbing (1).



e. Follow-On Maintenance.

Install Co-Driver's Storage Box (TM 9-2320-365-20)

20-92. DIGITIZATION KIT CO-DRIVER'S SEAT REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly

c. Assembly

d. Installation

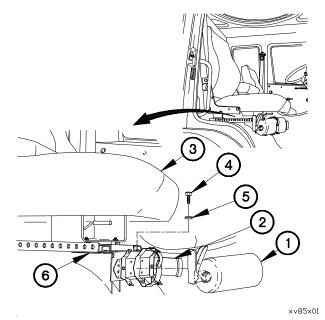
INITIAL SETUP

a. Removal.

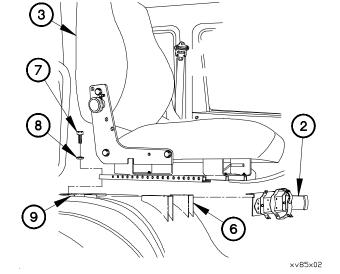
Equipment Conditions

Engine shut down (TM 9-2320-365-10-1)

Tools and Special Tools Tool Kit, Genl Mech (Item 46, Appendix C)

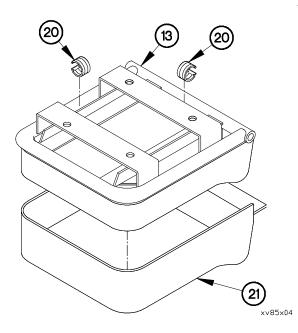


- Remove fire extinguisher (1) from bracket (2). (1)
- Slide seat (3) toward back of vehicle. (2)
- (3) Remove two screws (4) and washers (5) from front seat mount (6).
- Slide seat (3) toward front of vehicle. (4)
- (5) Remove two screws (7) and washers (8) from rear seat mount (9).
- (6) Remove seat (3) and bracket (2) from seat mounts (6 and 9).



b. Disassembly.

- (1) Remove four bolts (10) and washers (11) from two seat hinges (12).
- (2) Remove seat bottom (13) from two seat hinges (12).
- (3) Remove two bolts (14), washers (15), and two seat hinges (12) from seat back (16).
- (4) Remove two bolts (17), washers (18), and seat adjuster (19) from seat bottom (13).



Wear appropriate eye protection when removing spring rings. Spring rings are under tension and can act as projectiles when being removed. Failure to comply may result in injury to personnel.

- (5) Remove 10 hog rings (20) from seat bottom cover (21).
- (6) Remove seat bottom cover (21) from seat bottom (13).
- (7) Remove five hog rings (22) from seat back cover (23).
- (8) Remove seat back cover (23) from seat back (16).

20-92. DIGITIZATION KIT CO-DRIVER'S SEAT REPLACEMENT/REPAIR

c. Assembly.

NOTE

Plastic film is provided in replacement seat cover kit.

- (1) Position plastic film (24) over seat back (16).
- (2) Position seat back cover (23) over plastic film (24) and seat back (16).

WARNING

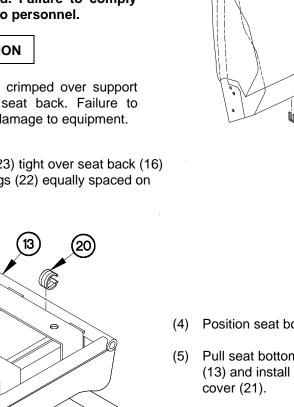
Wear appropriate eye protection when installing spring rings. Spring rings are under tension and can act as projectiles when being removed. Failure to comply may result in injury to personnel.

CAUTION

Ensure hog rings are crimped over support wires on bottom of seat back. Failure to comply may result in damage to equipment.

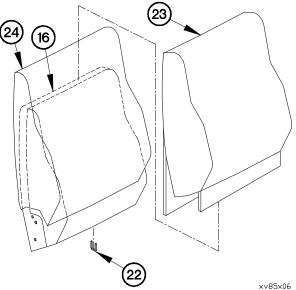
(3) Pull seat back cover (23) tight over seat back (16) and install five hog rings (22) equally spaced on seat back cover (23).

6



21

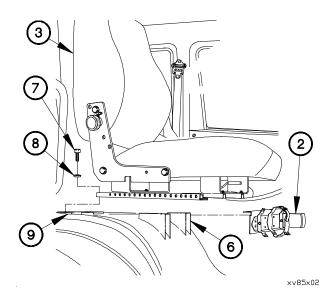
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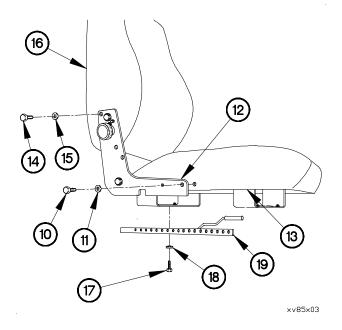


- (4) Position seat bottom cover (21) on seat bottom (13).
- (5) Pull seat bottom cover (21) tight over seat bottom (13) and install 10 hog rings (20) on seat bottom

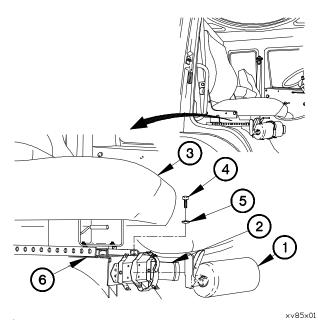
- (6) Install seat adjuster (19) on seat bottom (13) with two washers (18) and bolts (17).
- (7) Install two seat hinges (12) on seat back (16) with two washers (15) and bolts (14).
- (8) Install seat bottom (13) on two seat hinges (12) with four washers (11) and bolts (10).

d. Installation.





- (1) Position bracket (2) and seat (3) on seat mounts (6 and 9).
- (2) Slide seat (3) toward front of vehicle.
- (3) Install two washers (8) and screws (7) on rear seat mount (9).



- (4) Slide seat (3) toward rear of vehicle.
- (5) Install two washers (5) and screws (4) on front seat mount (6) and bracket (2).
- (6) Install fire extinguisher (1) on bracket (2).

20-93. RH CONVEX MIRROR INITIAL INSTALLATION

This task covers:

a. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10)

Tools and Special Tools

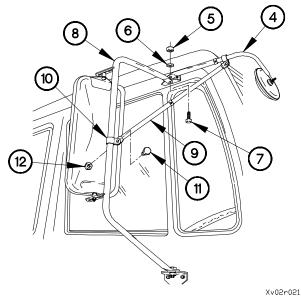
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C)

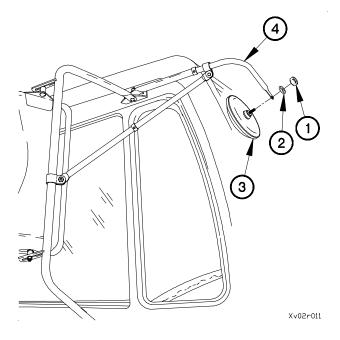
Personnel Required

(2)

a. Removal.

- (1) Remove nut (1) and washer (2) from Mirror (3).
- (2) Position mirror (3) on bracket arm (4) with washer (2) and nut (1).

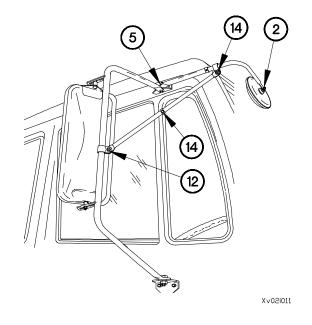




- (3) Remove nut (5), washer (6), and screw (7) from mirror arm (8).
- (4) Position bracket arm (9) on mirror arm (8) with clamp (10), screw (11) ,and nut (12).
- (5) Position bracket arm (4) on mirror arm (8) with screw (7), washer (6), and nut (5).

20-93. RH CONVEX MIRROR INITIAL INSTALLATION (CONT)

- (6) Tighten nut (5) to 156-204 lb-in. (17-23 N•m).
- (7) Tighten (2) to 36-60 lb-in. (4-6 N•m).
- (8) Tighten nut (12) to 84-108 lb-in. (9-12 N•m).
- (9) Tighten two set screws (14) to 36-60 lb-in. (4-6 N•m).



20-94. CONVEX MIRROR INITIAL INSTALLATION

This task covers:

a. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10)

Tools and Special Tools

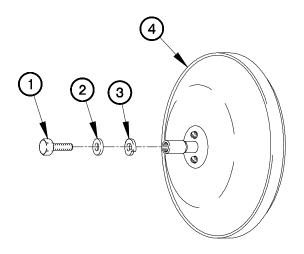
Tool Kit, Genl Mech (Item 46, Appendix C) Wrench, Torque 0-200 lb-in (Item 59, Appendix C) Lockwashers (3) (Item 105.3, Appendix G)

a. Installation.

NOTE

Perform step (1) on convex mirror mounted with bracket.

(1) Remove bolt (1), washer (2), and lockwasher (3) from convex mirror (4).

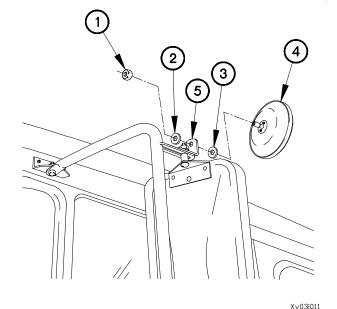


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NOTE

Perform step (2) on convex mirror mounted with clamp.

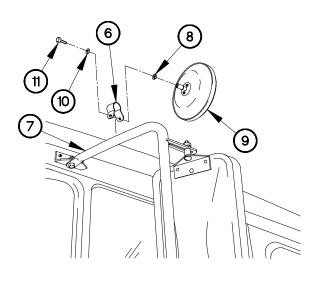
(2) Position convex mirror (4) on bracket (5) with lockwasher (3), washer (2), and bolt (1).



NOTE

Perform steps (3) and (4) on convex mirror with clamp.

- (3) Position clamp (6) on mirror arm (7).
- (4) Install washer (8) and convex mirror (9) on clamp(6) with lockwasher (10) and bolt (11).
- (5) Tighten bolts (1 and 11) to 56-68 lb-in. (6-7 N•m).



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20-95. RIM COVER INITIAL INSTALLATION

This task covers:

a. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10-1)

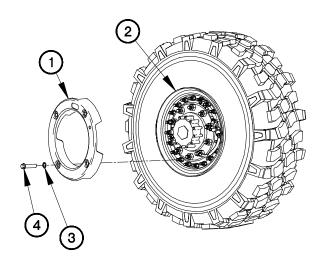
Tools and Special Tools Tool Kit, Genl Mech (Item 46, Appendix C) Wrench, Torque 1-175 lb-in (Item 58, Appendix C)

a. Installation.

NOTE

Slotted hole in rim cover is aligned with pressure valve extension.

- (1) Position rim cover (1) on wheel (2) with four washers (3) and bolts (4).
- (2) Tighten four bolts (1) to 71-95 lb-ft (96-128 N•m).



End of Task.

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CHAPTER 21 ARMAMENT/SIGHTING AND FIRE CONTROL MATERIEL MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

	n I. INTRODUCTION	
Section	II. MAINTENANCE PROCEDURES	21-2
21-2.	MACHINE GUN RING REPLACEMENT	21-2
21-3.	MACHINE GUN RING LOWER PLATFORM REPLACEMENT	21-5
21-4.	MACHINE GUN RING TOP PLATFORM REPLACEMENT	21-7
21-5.	MACHINE GUN RING CENTER SEAT REPLACEMENT	21-8
21-6.	MACHINE GUN RING ROOF SUPPORT REPLACEMENT	21-10
21-7.	SMALL ARMS MOUNT REPLACEMENT	21-12

Section I. INTRODUCTION

21-1. INTRODUCTION

This chapter contains maintenance instructions for replacing armament/sighting and fire control materiel components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

21-2. MACHINE GUN RING REPLACEMENT This task covers: b. Installation a. Removal **INITIAL SETUP Equipment Conditions Tools and Special Tools (Cont)** Engine shut down (TM 9-2320-365-10). Crowfoot Attachment, Socket Wrench (Item 10, Appendix B) **Tools and Special Tools** Tool Kit, Genl Mech (Item 44, Appendix C) **Personnel Required** Wrench, Torque, 0-175 lb-ft (Item 57, Appendix (2) C)

a. Removal.

- (1) Remove 12 screws (1) and washers (2) from machine gun ring (3).
- (2) Position three wooden blocks on cab roof (4).

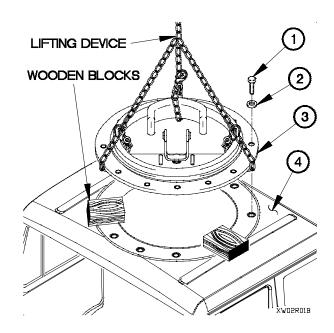
WARNING

Machine gun ring assembly weighs approximately 350 lbs (159 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

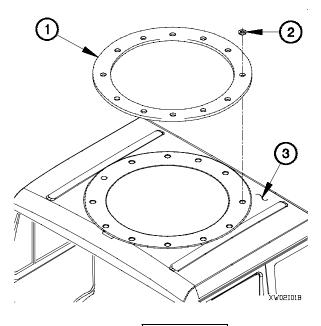
Steps (3) through (7) require the aid of an assistant.

- (3) Position machine gun ring (3) on three wooden blocks.
- (4) Re-position lifting device on machine gun ring (3).



- (5) Remove machine gun ring (3) from cab roof (4).
- (6) Remove three wooden blocks from cab roof (4).
- (7) Remove 12 washers (5) and ring spacer (6) from cab roof (4).

b. Installation.



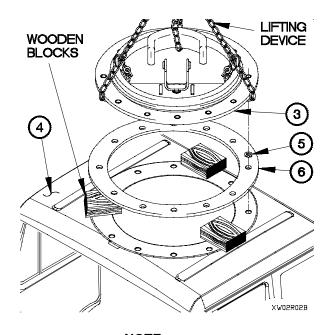


Machine gun ring assembly weighs approximately 350 lbs (159 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

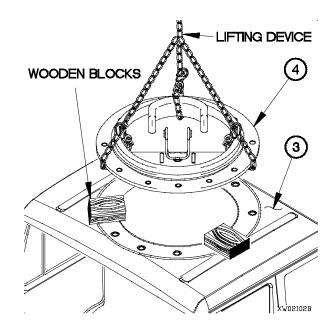
Steps (2) through (6) require the aid of an assistant.

- (2) Position three wooden blocks on cab roof (3).
- (3) Position machine gun ring (4) on cab roof on three wooden blocks.



NOTE

- Align ring spacer and washers with threaded holes in cab roof.
- Ring spacer should have 1/4 in. (0.635 cm) clearance from inner lip of cab rood to allow free rotation of machine gun ring.
- (1) Position ring spacer (1) and 12 washers (2) on cab roof (3).



21-2. MACHINE GUN RING REPLACEMENT (CONT)

- (4) Re-position lifting device on machine gun ring (4).
- (5) Remove three wooden blocks from cab roof (3).
- (6) Position machine gun ring (4) on cab roof (3).
- (7) Position 12 mounting washers (5) and screws (6) in machine gun ring (4).
- (8) Tighten mounting screws (6) to 49-61 lb-ft (66-82 N·m).

TIGHTENING LIFTING SEQUENCE DEVICE $\left(6 \right)$ 4 5 6 10 8 2 4 3 ø WOODEN BLOCKS Xw02i03b

21-3. MACHINE GUN RING LOWER PLATFORM REPLACEMENT

This task covers:

a. Removal

INITIAL SETUP

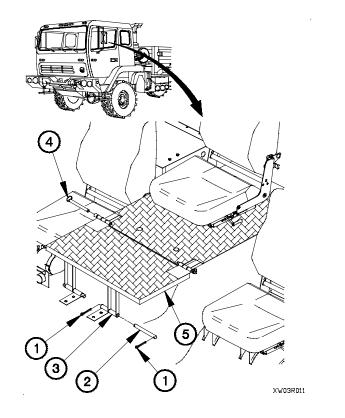
Equipment Conditions Engine shut down (TM 9-2320-365-10).

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) b. Installation

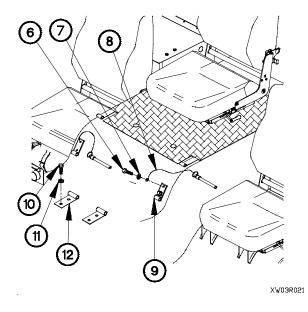
Materials/Parts Pin, Cotter (2) (Item 204, Appendix G)

a. Removal.

- (1) Remove four cotter pins (1) and straight pins (2) from two legs (3). Discard cotter pins.
- (2) Remove two quick-release pins (4) from lower platform (5).
- (3) Remove lower platform (5) from cab.



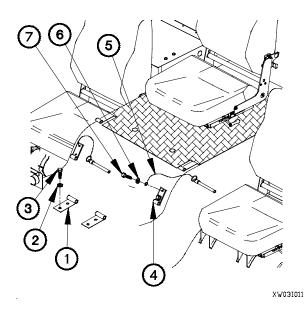
- (4) Remove four screws (6), washers (7), and two lanyards (8) from two brackets (9).
- (5) Remove two brackets (9) from cab floor.
- (6) Remove four screws (10), washers (11), and two brackets (12) from cab floor.



21-3. MACHINE GUN RING LOWER PLATFORM REPLACEMENT (CONT)

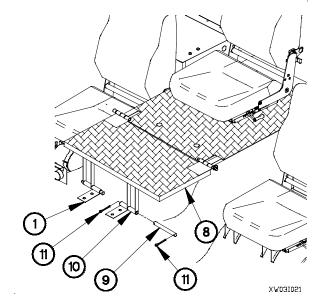
b. Installation.

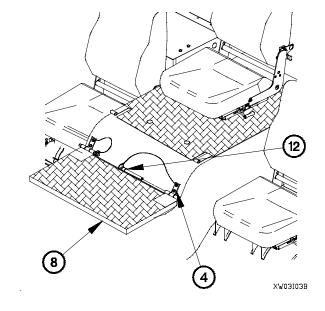
- (1) Install two brackets (1) with four washers (2) and screws (3).
- (2) Install two brackets (4) and lanyards (5) with four washers (6) and screws (7).





- (4) Install two straight pins (9) in legs (10).
- (5) Install four cotter pins (11) in two straight pins (9).





- (6) Place lower platform (8) in storage position.
- (7) Install two quick-release pins (12) in lower platform (8) and two brackets (4).

21-4. MACHINE GUN RING TOP PLATFORM REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Machine gun ring, center seat removed (para 21-5).

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

c. Follow-On Maintenance

a. Removal.

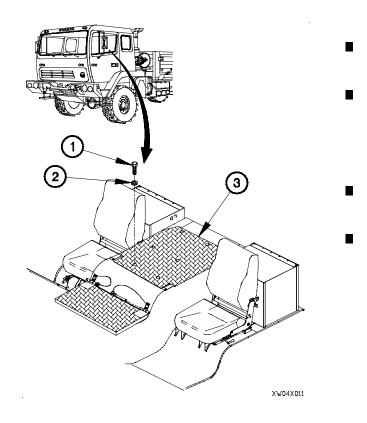
- (1) Remove two screws (1) and washers (2), from top platform (3).
- (2) Remove top platform (3) from vehicle.

b. Installation.

- (1) Position top platform (3) in vehicle with two washers (2) and screws (1).
- (2) Tighten two screws (1) to 71-89 lb-in. (8-10 N·m).

c. Follow-On Maintenance.

Install machine gun ring center seat (para 21-5).



21-5. MACHINE GUN RING CENTER SEAT REPLACEMENT

This task covers:

a. Removal

INITIAL SETUP

Equipment Conditions Engine shut down (TM 9-2320-365-10).

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) b. Installation

Materials/Parts Sealing Compound (Item 65, Appendix D) Spacer (4) (Item 259.1, Appendix G)

a. Removal.

(1) Fold back of center seat (1) down and slide fully forward.

NOTE

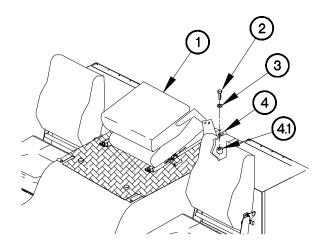
Perform step (2) on vehicles with cabs S/N 12075G or lower. Cab S/N located on B pillar.

(2) Remove two screws (2) and washers (3) from seat mount (4).

NOTE

Perform step (3) on vehicles with cab S/N 12076G or higher.

(3) Remove two screws (2), washers (3), and spacers (4.1) from seat mount (4). Discard spacers.



xw05r012

(4) Slide center seat (1) fully rearward.

NOTE

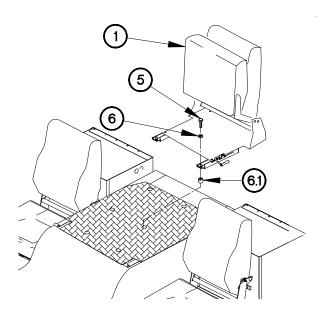
Perform step (5) on vehicles with cabs S/N 12075G or lower.

(5) Remove two screws (5), washers (6), and center seat (1) from vehicle.

NOTE

Perform step (6) on vehicles with cab S/N 12076G or higher.

(6) Remove two screws (5), washers (6), spacers (6.1), and center seat (1) from vehicle. Discard spacers.



XW05R02B

21-5. MACHINE GUN RING CENTER SEAT REPLACEMENT (CONT)

b. Installation.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

(1) Apply sealing compound to threads of two screws (1).

NOTE

- Perform step (2) on vehicles with cabs S/N 12075G or lower. Cab S/N located on B pillar.
- Install center seat in folded and raised position with seat rails in the forward position.
- (2) Position center seat (2) on platform (3).

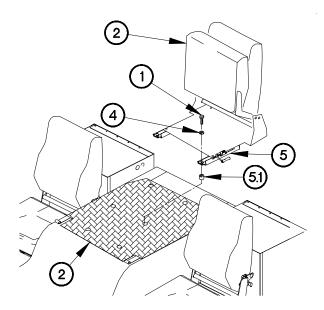
NOTE

- Flat sides of screw will be in line with seat tracks.
- Perform step (3) on vehicles with cabs S/N 12075G or lower.
- (3) Position two washers (4) and screws (1) in seat mount (5).

NOTE

Perform step (4) on vehicles with cabs S/N 12076G or higher.

- (4) Position two spacers (5.1), washers (4), and screws (1) in seat mounts (5).
- (5) Slide center seat (2) fully forward.
- (6) Fold center seat (2) down.



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b. Installation.

WARNING

Adhesive sealant MIL-S-46163 can damage your eyes. Wear safety goggles/glasses when using; avoid contact with eyes. If sealant contacts eyes, flush eyes with water and get immediate medical attention. Failure to comply may result in injury to personnel.

NOTE

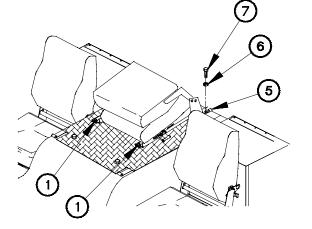
Install center seat in folded and raised position with seat rails in the forward position.

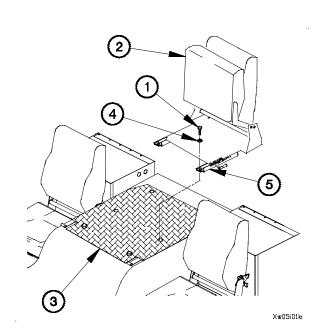
- (1) Apply sealing compound to threads of two screws (1).
- (2) Position center seat (2) on platform (3).

NOTE

Flat sides of screw will be in line with seat tracks.

- (3) Position two washers (4) and screws (1) in seat mount (5).
- (4) Slide center seat (2) fully forward.
- (5) Fold center seat (2) down.





(6) Position two washers (6) and screws (7) in seat mount (5).

NOTE

When tightening screws, flat sides of screws are to be in line with track sides.

(7) Tighten two screws (1 and 7) to 14-18 lb-ft (19-24 N·m).

End of Task.

Xw05i02b

21-6. MACHINE GUN RING ROOF SUPPORT REPLACEMENT

This task covers:

a. Removal

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

Tools and Special Tools

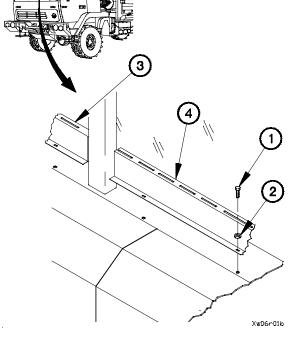
Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) b. Installation

Tools and Special Tools (Cont)

Wrench, Torque 0-200 lb-in. (Item 58, Appendix C)

a. Removal.

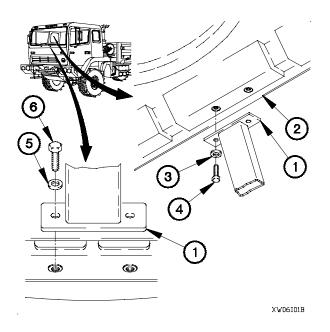
(1) Remove six screws (1), washers (2), LH defrost cover (3), and RH defrost cover (4) from vehicle.

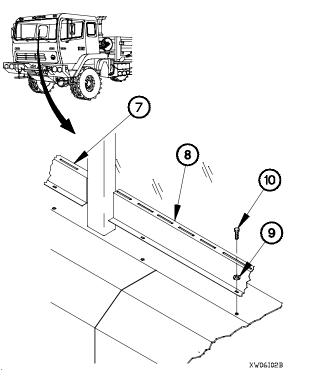


- Image: state stat
- (2) Remove two screws (5) and washers (6) from roof support (7).
- (3) Remove two screws (8) and washers (9) from roof support (7).
- (4) Remove roof support (7) from cab roof (10).

b. Installation.

- (1) Position roof support (1) on cab roof (2) with two washers (3) and screws (4).
- (2) Position two washers (5) and screws (6) in roof support (1).
- (3) Tighten two screws (4 and 6) to 21-27 lb-ft (29-37 N·m).





- (4) Position LH defrost cover (7) and RH defrost cover (8) in vehicle with six washers (9) and screws (10).
- (5) Tighten six screws (10) to 22-27 lb-in. (2-3 N·m).

21-7. SMALL ARMS MOUNT REPLACEMENT

This task covers:

a. Removal

b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10).

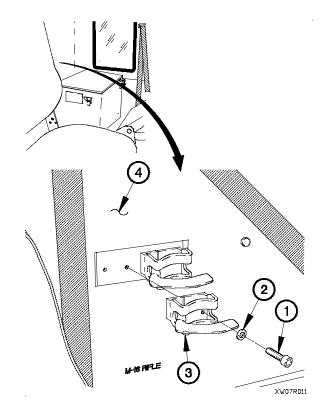
Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Socket Set, Socket Wrench (Item 35, Appendix C)

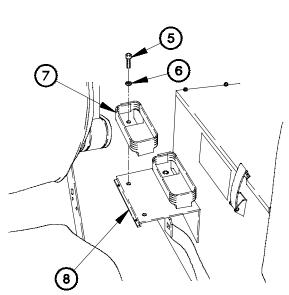
a. Removal.

NOTE

All three small arms mounts are removed the same way. Driver's side shown.

(1) Remove two screws (1), washers (2), and storage rack(3) from back wall of cab (4).





(2) Remove two screws (5), washers (6), and weapon support (7) from support (8).

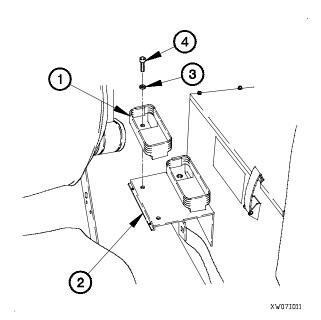
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b. Installation.

NOTE

All three small arms mounts are installed the same way. Driver's side shown.

- (1) Position weapon support (1) on support (2) with two washers (3) and screws (4).
- (2) Tighten two screws (4) to 36-44 lb-in. (4-5 N·m).



- (3) Position storage rack (5) on back wall of cab (6) with two washers (7) and screws (8).
- (4) Tighten two screws (8) to 36-44 lb-in. (4-5 N·m).

CHAPTER 22 ELECTRICAL ILLUMINATING EQUIPMENT MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	
Section II. MAINTENANCE PROCEDURES	

Section I. INTRODUCTION

22-1. INTRODUCTION

This chapter contains maintenance instructions for replacing electrical illuminating equipment authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

22-2. WARNING LIGHT CABLE ASSEMBLY REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

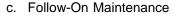
Batteries disconnected (para 7-48). Rear cab liner removed (para 16-13). Kick panel removed (para 16-3).

Tools and Special Tools

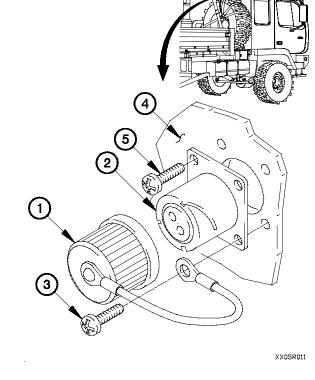
Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

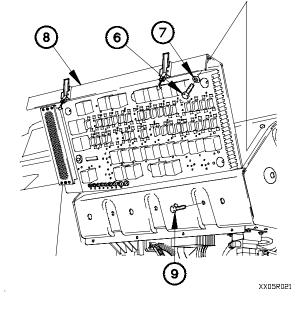
- (1) Remove dustcap (1) from connector J62 (2).
- (2) Remove screw (3) and dustcap (1) from cab (4).
- (3) Remove three screws (5) and connector J62 (2) from cab (4).

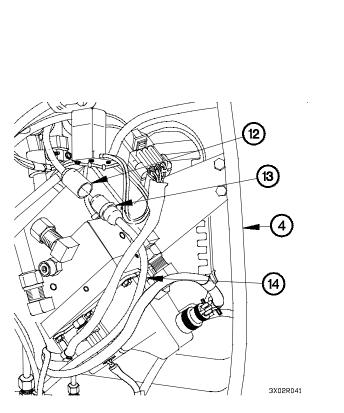


Material/Parts Ties, Cable, Plastic (Item 76, Appendix D)



- (4) Remove three screws (6) and washers (7) from PDP (8).
- (5) Remove three screws (9) from PDP (8).
- (6) Lift PDP (8) outward to gain access.





NOTE

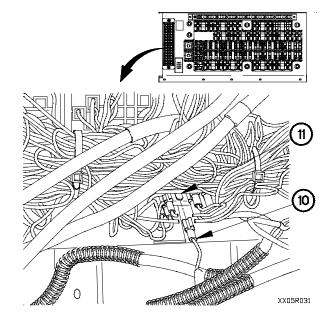
Remove plastic cable ties as required.

(7) Disconnect terminal lug TL14 (10) from terminal board

TB2 (11) position 12.

b. Installation.

- (1) Position warning light cable assembly (1) in cab (2).
- (2) Connect connector P65 (3) to connector J65 (4).

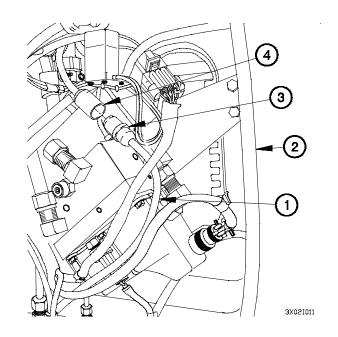


(8) Disconnect connector J65 (12) from connector P65 (13).

NOTE

Note routing of warning light cable assembly prior to removal.

(9) Remove warning light cable assembly (14) from cab (4).

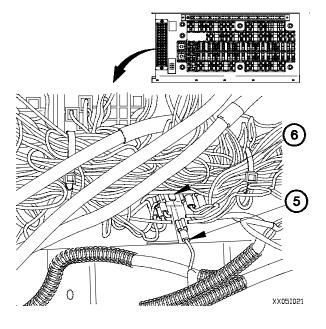


22-2. WARNING LIGHT CABLE ASSEMBLY REPLACEMENT (CONT)

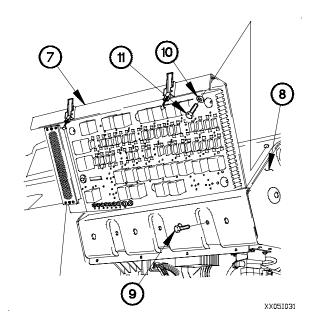
NOTE

Install plastic cable ties as required.

(3) Connect terminal lug TL14 (5) to terminal board TB2 (6) position 12.



- (4) Position PDP (7) on dashboard (8).
- (5) Install three screws (9) in PDP (7).
- (6) Install three washers (10) and screws (11) in PDP (7).



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- (7) Install connector J62 (12) in cab (2) with three screws (13).
- (8) Install dustcap (14) on cab (2) with screw (15).
- (9) Install dustcap (14) on connector J62 (12).

c. Follow-On Maintenance.

- (1) Install rear cab liner (para 16-13).
- (2) Install kick panel (para 16-3).
- (3) Connect batteries (para 7-48).
- (4) Operate warning lights and check for proper operation (TM 9-2320-365-10).

CHAPTER 23 AIR SYSTEM MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

	n I. INTRODUCTION	
Section	II. MAINTENANCE PROCEDURES	23-2
23-2.	PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT	23-2
23-3.	AIR TRANSPORTABILITY AIR HOSES REPLACEMENT	23-8
23-4.	INVERSION VALVE REPLACEMENT 2	3-11
23-5.	SHUTTLE VALVE REPLACEMENT	3-13
23-6.	AIR DRYER REPLACEMENT/REPAIR 2	3-15
23-7.	WET TANK REPLACEMENT	3-31
23-8.	PRESSURE SWITCH REPLACEMENT 2	3-35

Section I. INTRODUCTION

23-1. INTRODUCTION

This chapter contains maintenance instructions for replacing, repairing, and adjusting air system components authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT

This task covers:

a. Hose Locations

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). Air tanks drained (TM 9-2320-365-10).

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C)

a. Hose Locations.

b. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Cap and Plug Set (Item 15, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D)

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hose connections to prevent contamination. Failure to comply may result in damage to equipment.

NOTE

- This task shows locations of primary air supply and CTIS air hoses on the vehicle. It may not be necessary to remove all hoses at one time.
- Tag hoses and connection points prior to removal.
- Note location of plastic cable ties prior to removal.
- Remove plastic cable ties as required.
- Inspect air hoses and fittings for cracks, kinks, nicks, stripped threads, and cuts. Replace damaged parts.

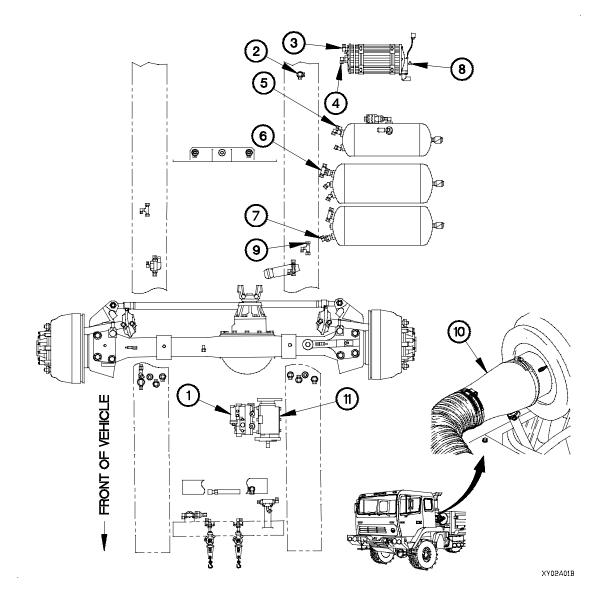
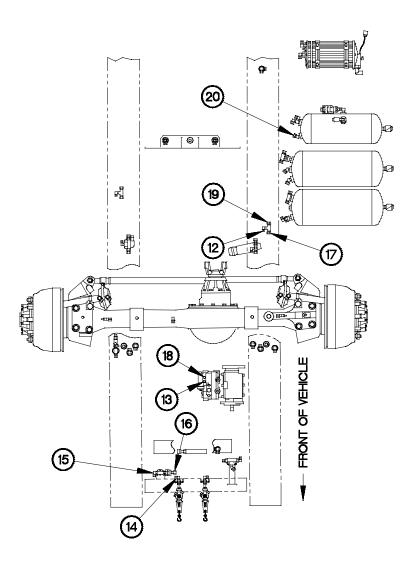


Figure 23-1. Primary Air Supply Hose Locations

Table 23-1.	Primary	Air Supply	Hose Locations
-------------	---------	------------	-----------------------

HOSE NAME	FROM	то	
Primary supply	Air compressor output fitting (1)	Bulkhead fitting (2)	
Primary supply tie	Bulkhead fitting (2)	Air dryer input fitting (3)	
Wet tank supply	Air dryer output fitting (4)	Wet tank supply fitting (5)	
Primary tank supply	Wet tank supply fitting (5)	Primary tank supply fitting (6)	
Secondary tank supply	Primary tank supply fitting (6) Secondary tank supply fitting (7)		
Air dryer pressure	Air dryer bottom fitting (8)	Hose fitting (9)	
Air compressor intake hose	Intake air cleaner (10)	Air compressor (11)	

23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT (CONT)



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Figure 23-1. Primary Air Supply Hose Locations (Cont)

HOSE NAME	FROM	то
Governor input #1	Hose fitting (12)	Governor input #1 fitting (13)
Emergency supply	Emergency supply fitting (14)	Hose fitting (15)
Emergency supply tie #1	Gladhand check valve fitting (16)	Hose fitting (17)
Governor input #2	Hose fitting (17)	Governor input #2 fitting (18)
Emergency supply tie #2	Hose fitting (19)	Wet tank fitting (20)

Table 23-1. Primary Air Supply Hose Locations (Cont)

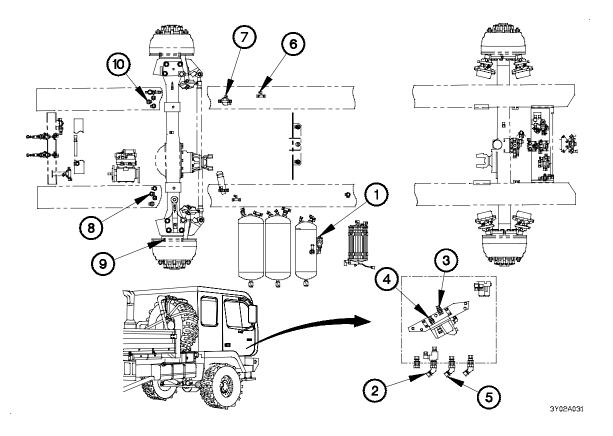


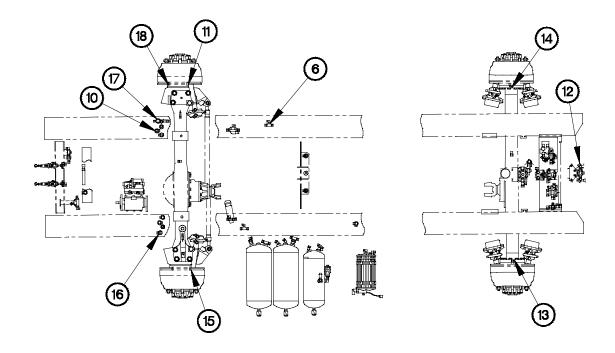
Figure 23-2. Central Tire Inflation System (CTIS) Air Hose Locations

Table 23-2. Central Tire Inflation System (CTIS) Air Hose Locations

HOSE NAME	FROM	то
Main air supply	Tank pressure valve fitting (1)	Cab bulkhead fitting (2)
CTIS manifold input	Cab bulkhead fitting (2)	CTIS manifold valve input fitting (3)
CTIS manifold output	CTIS manifold output fitting (4)	Cab bulkhead fitting (5)
CTIS air supply	Cab bulkhead fitting (5)	Two way splitter (6)
Supply tie	Two way splitter fitting (6)	Front quick release valve fitting (7)
Left front supply hose	Front quick release valve fitting (7)	Left front bulkhead fitting (8)
Left front drum supply	Left front bulkhead fitting (8)	Left front drum fitting (9)
Right front supply hose	Front quick release valve fitting (7)	Right front bulkhead fitting (10)

23-2. PRIMARY AND CENTRAL TIRE INFLATION SYSTEM (CTIS) AIR HOSES REPLACEMENT (CONT)

Figure 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)



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Table 23-2.	Central Tire	Inflation System	n (CTIS) A	Air Hose	Locations ((Cont)
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HOSE NAME	FROM	то
Right front drum supply	Right front bulkhead fitting (10)	Left front drum fitting (11)
Rear main supply	Two way splitter fitting (6)	Rear quick release valve (12)
Left rear drum supply	Rear quick release valve fitting (12)	Left rear drum fitting (13)
Right rear drum supply	Rear quick release valve fitting (12)	Right rear drum fitting (14)
Left front drum vent	Left front drum fitting (15)	Bulkhead fitting (16)
Vent tie	Bulkhead fitting (16)	Bulkhead fitting (17)
Right front drum vent	Bulkhead fitting (17)	Right front brake fitting (18)

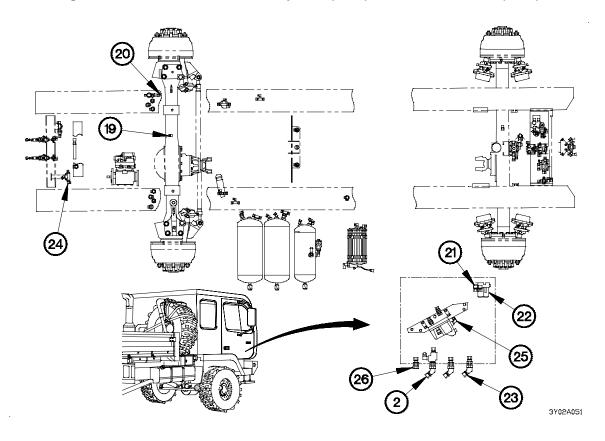


Figure 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)

Table 23-2. Central Tire Inflation System (CTIS) Air Hose Locations (Cont)

HOSE NAME	FROM	то
Axle vent	Axle vent fitting (19)	Vent fitting (20)
Fan supply	Bulkhead fitting (2)	Solenoid valve fitting (21)
Fan supply tie #1	Solenoid valve fitting (22)	Bulkhead fitting (23)
Fan supply tie #2	Bulkhead fitting (23)	Fan input fitting (24)
Manifold vent	Manifold fitting (25)	Bulkhead fitting (26)

b. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check around air hoses and fittings for air leaks.
- (3) Shut down engine (TM 9-2320-365-10).

23-3. AIR TRANSPORTABILITY AIR HOSES REPLACEMENT

This task covers:

a. Hose Locations

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). Air tanks drained (TM 9-2320-365-10).

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C)

a. Hose Locations.

b. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Cap and Plug Set (Item 15, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D)

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

CAUTION

Cap or plug hose connections to prevent contamination. Failure to comply may result in damage to equipment.

NOTE

- This task shows locations of air transportability air hoses on the vehicle. It may not be necessary to remove all hoses at one time.
- Tag hoses and connection points prior to removal.
- Note location of plastic cable ties prior to removal.
- Remove plastic cable ties as required.
- Inspect air hoses and fittings for cracks, kinks, nicks, stripped threads and cuts. Replace damaged parts.

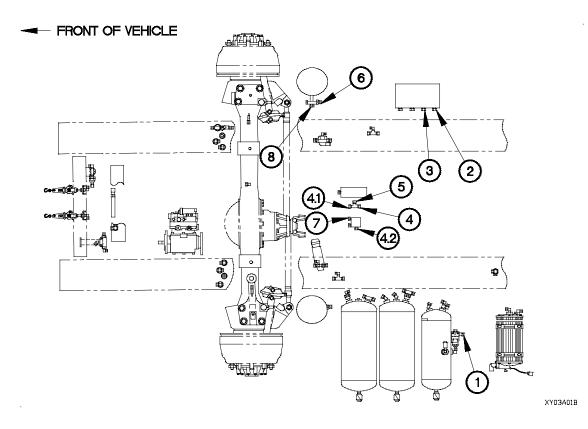


Figure 23-3. Air Transportability Air Hose Locations

HOSE NAME (NUMBER)	FROM	то
Wet tank supply (501)	Wet tank pressure valve fitting (1)	Manifold input (2)
Cab leveling valve tee supply (506)	Manifold output (3)	Cab leveling valve tee fitting (4)
Cab leveling valve supply (522)	Cab leveling valve tee fitting (4.1)	Cab leveling valve input fitting (4.2)
Check valve tie (503)	Cab leveling valve tee fitting (5)	Check valve output fitting (6)
Passenger cylinder (504)	Cab leveling valve fitting (7)	Passenger cylinder fitting (8)

Table 23-3.	Air Trans	portability A	Air Hose	Locations
	All Hulls	portubility r		Looutions

23-3. AIR TRANSPORTABILITY AIR HOSES REPLACEMENT (CONT)

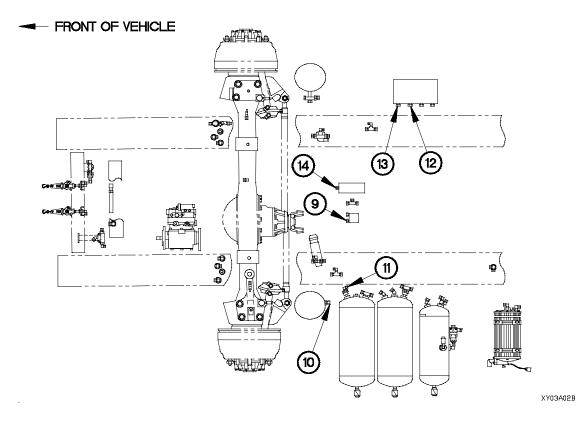


Figure 23-3. Air Transportability Air Hose Locations (Cont)

HOSE NAME (NUMBER)	FROM	то
Driver cylinder (505)	Cab leveling valve fitting (9)	Driver cylinder fitting (10)
Inversion valve supply (502)	Inversion valve fitting (11)	Manifold input (12)
Air/hydraulic supply (507)	Manifold output fitting (13)	Air/hyd power unit fitting (14)

Table 23-3. Air Transportability	Air Hose Locations (Cont)
----------------------------------	---------------------------

b. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check around air hoses and fittings for air leaks.
- (3) Shut down engine (TM 9-2320-365-10).

23-4. INVERSION VALVE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). Cab raised (TM 9-2320-365-10). Air tanks drained (TM 9-2320-365-10). c. Follow-On Maintenance

Tools and Special Tools

Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C)

Materials/Parts

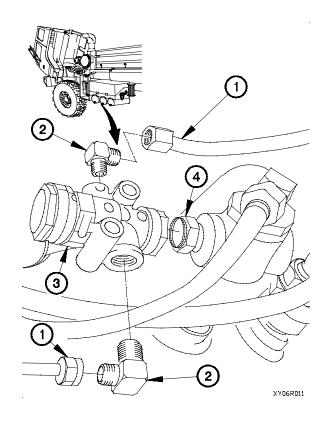
Antiseize Compound (Item 63, Appendix D)

a. Removal.



Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

- (1) Disconnect two air hoses (1) from 90-degree fittings (2).
- (2) Remove inversion valve (3) from fitting (4).
- (3) Remove two 90-degree fittings (2) from inversion valve (3).



23-4. INVERSION VALVE REPLACEMENT (CONT)

b. Installation.

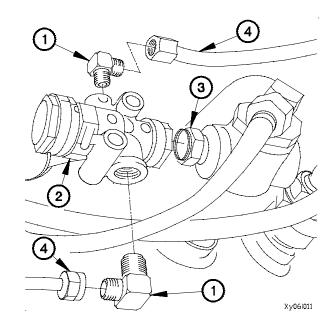


Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap or water. Failure to comply may result in injury to personnel.

- (1) Apply antiseize compound to threads of two 90-degree fittings (1).
- (2) Install two 90-degree fittings (1) on inversion valve (2).
- (3) Install inversion valve (2) on fitting (3).
- (4) Connect two air hoses (4) to 90-degree fittings (1).

c. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check for air leaks around inversion valve.
- (3) Shut down engine (TM 9-2320-365-10).



23-5. SHUTTLE VALVE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions Inversion valve removed (para 23-4).

Tools and Special Tools Goggles, Industrial (Item 15, Appendix C) Tool Kit, Genl Mech (Item 44, Appendix C)

WARNING

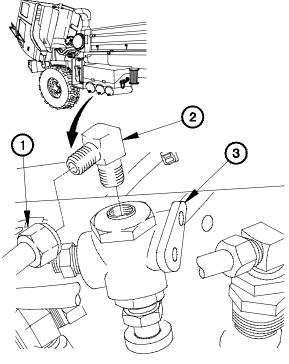
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

- (1) Disconnect air hose (1) from 90-degree fitting (2).
- (2) Remove 90-degree fitting (2) from shuttle valve (3).

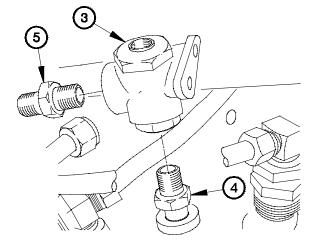


Materials/Parts Antiseize Compound (Item 63, Appendix D)



XY07R011

- (3) Remove shuttle valve (3) from adapter (4).
- (4) Remove adapter (5) from shuttle valve (3).



XY07R021

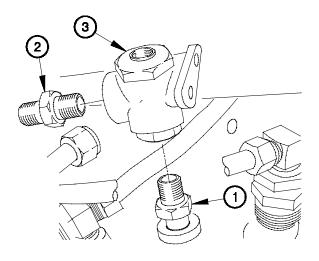
23-5. SHUTTLE VALVE REPLACEMENT (CONT)

b. Installation.

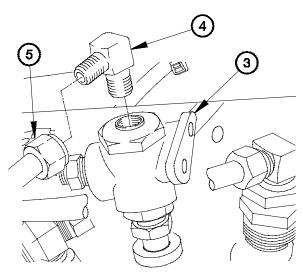
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply antiseize compound to threads of adapter (1) and adapter (2).
- (2) Install shuttle valve (3) on adapter (1).
- (3) Install adapter (2) in shuttle valve (3).



XY07I011



XY07I021

- (4) Apply antiseize compound to threads of 90-degree fitting (4).
- (5) Install 90-degree fitting (4) on shuttle valve (3).
- (6) Connect air hose (5) to 90-degree fitting (4).

c. Follow-On Maintenance.

- (1) Install inversion valve (para 23-4).
- (2) Start engine (TM 9-2320-365-10).
- (3) Check for air leaks around shuttle valve and inversion valve.
- (4) Shut down engine (TM 9-2320-365-10).

23-6. AIR DRYER REPLACEMENT/REPAIR

This task covers:

- a. Removal
- b. Disassembly
- c. Assembly

INITIAL SETUP

Equipment Conditions

Air tanks drained (TM 9-2320-365-10). Batteries disconnected (para 7-48).

Tools and Special Tools

Goggles, Industrial (Item 15, Appendix C) Tool Kit, Genl Mech (Item 44, Appendix C) Wrench, Torque, 0-175 lb-ft (Item 57, Appendix C) Wrench, Torque, 0-200 lb-in. (Item 58, Appendix C) Wrench Set, Socket (Item 48, Appendix C) Purge Valve Tool (Item E-22, Appendix E) Hammer, Hand (Item 18, Appendix C)

- d. Installation
- e. Follow-On Maintenance

Materials/Parts

Nut, Plain, Hex (Item 36, Appendix D) Ties, Cable, Plastic (Item 76, Appendix D) Parts Kit, Dehydrator (Item 196, Appendix G) Nut, Self-Locking (4) (Item 149, Appendix G) Boot Kit, Exhaust (Item 3, Appendix G) Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D)

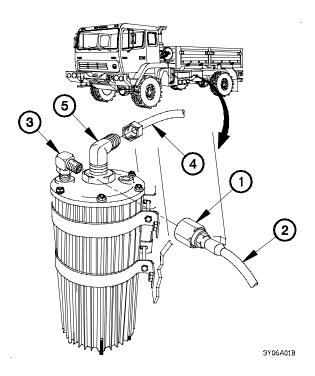
Personnel Required

(2)

a. Removal.

WARNING

- Air dryer may contain air pressure. Loosen input air hose connector slowly to vent off air pressure. Failure to comply may cause injury to personnel.
- Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.
- (1) Loosen input air hose nut (1).
- (2) Disconnect input air hose (2) from 90-degree fitting (3).
- (3) Disconnect outlet air hose (4) from 90-degree fitting (5).

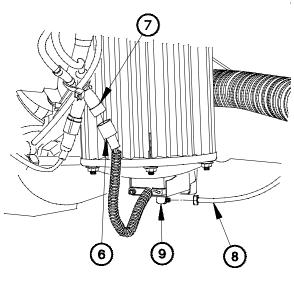


23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

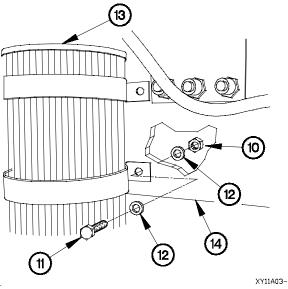
NOTE

Remove plastic cable ties as required.

- (4) Disconnect air dryer electrical connector (6) from connector P80 (7).
- (5) Disconnect air hose (8) from 90-degree fitting (9).

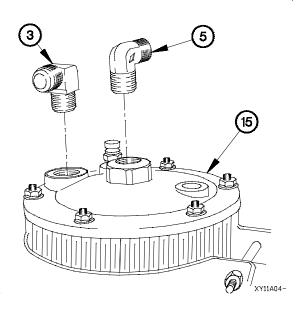


XY11A02-



NOTE

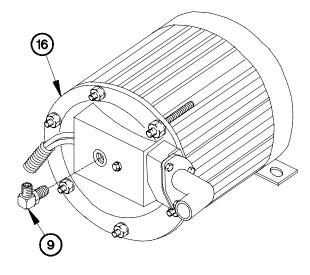
- Note the position of retaining bands on air dryer prior to removal.
- Step (6) requires the aid of an assistant.
- (6) Remove four self-locking nuts (10), screws (11), eight washers (12), and air dryer (13) from frame (14). Discard self-locking nuts.



NOTE

Tag fittings and connection points prior to removal.

(7) Remove 90-degree fittings (3 and 5) from top cover (15).

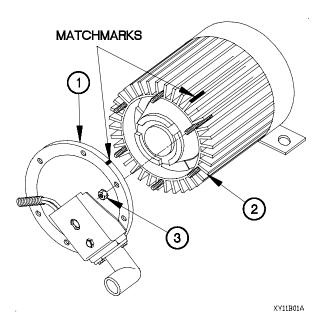


XY11A05-

- (1) Match mark lower cover (1) to air dryer housing (2).
- (2) Remove six flange nuts (3) from lower cover (1).
- (3) Remove lower cover (1) from air dryer housing (2).

(8) Remove 90-degree fitting (9) from lower cover (16).

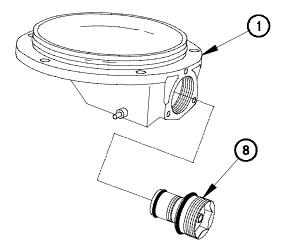
b. Disassembly.



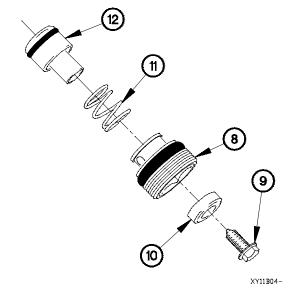
- (4) Remove preformed packing (4) from lower cover (1). Discard preformed packing.
- (5) Remove three screws (5), purge exhaust fitting (6), and exhaust boot (7) from lower cover (1). Discard exhaust boot.

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

- (6) Deleted.
- (7) Turn purge valve (8) to the left until removed from lower cover (1).
- (8) Deleted.

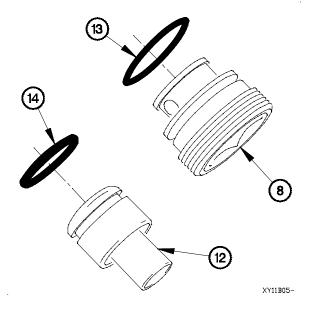


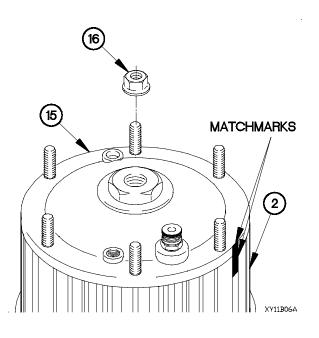
XY11B03B



(9) Remove screw (9), purge valve seat (10), spring (11), and purge piston (12) from purge valve (8). Discard purge valve seat.

- (10) Remove preformed packing (13) from purge valve (8). Discard preformed packing.
- (11) Remove preformed packing (14) from purge piston (12). Discard preformed packing.

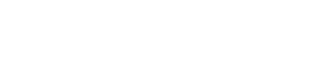




NOTE

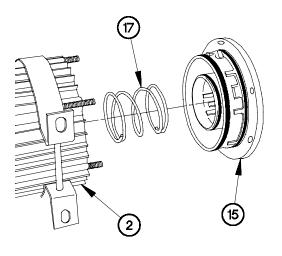
It may be necessary to tap on top cover to loosen.

(14) Remove top cover (15) and spring (17) from air dryer housing (2).



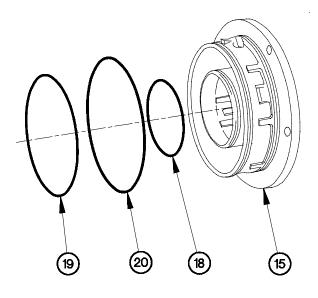
(12) Match mark top cover (15) to air dryer housing (2).

(13) Remove six flange nuts (16) from top cover (15).



XY11B07A

(15) Remove preformed packings (18, 19 and 20) from top cover (15). Discard preformed packings.



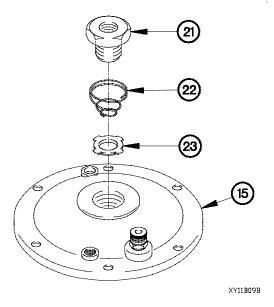
XY11B08A

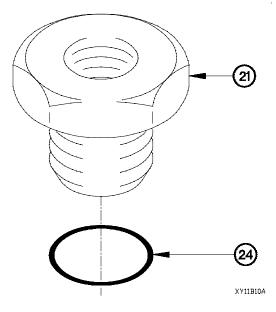
23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

NOTE

Note orientation of valve disc prior to removal.

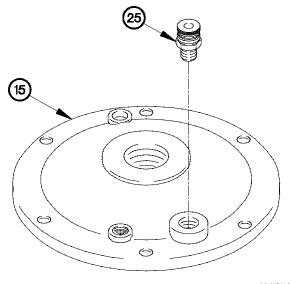
(16) Remove check valve end cap (21), spring (22), and valve disc (23) from top cover (15).





(18) Remove relief valve (25) from top cover (15).

(17) Remove preformed packing (24) from check valve end cap (21). Discard preformed packing.

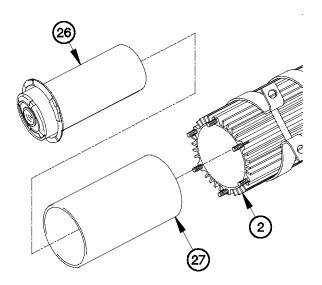


XY11B11A

NOTE

Desiccant canister and inner aluminum shell can be removed as one unit.

- (19) Remove desiccant canister (26) and inner aluminum shell (27) from air dryer housing (2).
- (20) Remove desiccant canister (26) from inner aluminum shell (27).

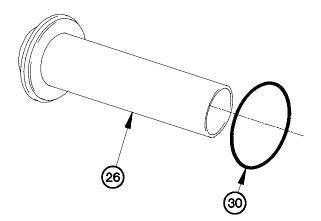


XY11B12A



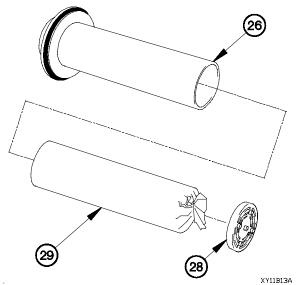
Desiccant follower will come out with desiccant. Retrieve for reuse.

(21) Remove desiccant follower (28) and desiccant cartridge(29) from desiccant canister (26). Discard desiccant cartridge.



(22) Remove preformed packing (30) from desiccant canister (26). Discard preformed packing.

XY11B14A



23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

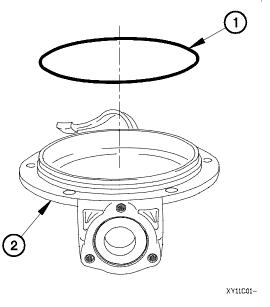
- (23) Remove screw (31) and filter retainer (32) from filter element (33).
- (24) Remove filter element (33) from desiccant canister (26). Discard filter element.

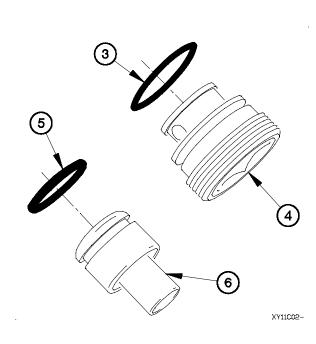
c. Assembly.

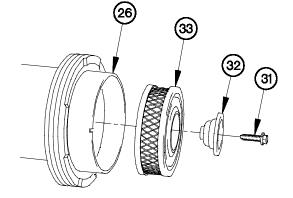
XY11B15A

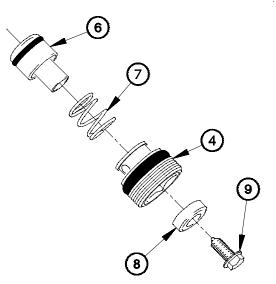
(1) Install preformed packing (1) on lower cover (2).

- (2) Install preformed packing (3) on purge valve (4).
- (3) Install preformed packing (5) on purge piston (6).

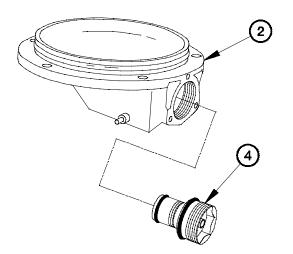








XY11C03-



(4) Position spring (7), purge piston (6), purge valve seat

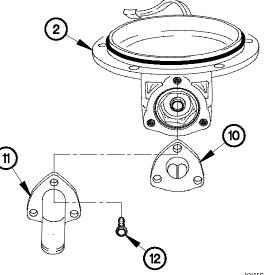
(8), and screw (9) on purge valve (4).

(5) Tighten screw (9) to 50-80 lb-in. (6-9 N·m).

- (6) Position purge valve (4) in lower cover (2).
- (7) Install nut in purge valve (4).
- (8) Tighten purge valve (4) to 35-50 lb-in. (4-6 N·m).
- (9) Remove nut from purge valve (4).

XY11C04B

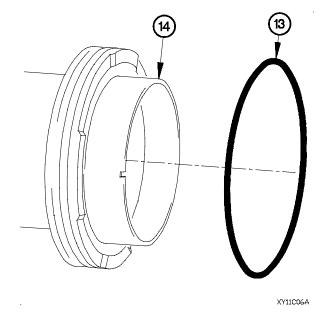
- (10) Position exhaust boot (10) and purge exhaust fitting (11) on lower cover (2) with three screws (12).
- (11) Tighten three screws (12) to 50-70 lb-in. (6-8 N·m).



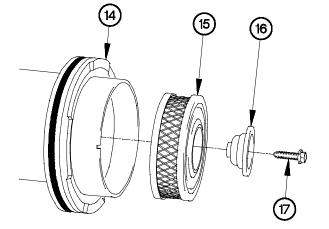
XY11C05-

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

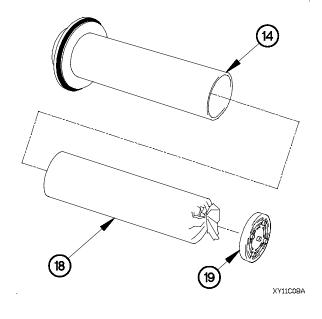
(12) Install preformed packing (13) on desiccant canister (14).



- (13) Position filter element (15) on desiccant canister (14).
 - (14) Position filter retainer (16) and screw (17) in desiccant canister (14).
 - (15) Tighten screw (17) to 60-90 lb-in. (7-10 N·m).



XY11C07A

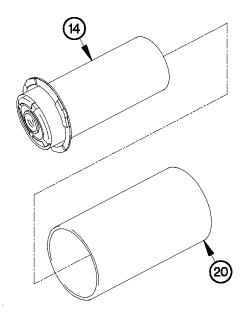


- (16) Slide desiccant cartridge (18) in desiccant canister (14).
- (17) Install desiccant follower (19) in desiccant canister (14).

CAUTION

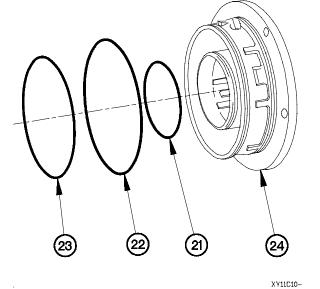
Use caution when installing desiccant canister in inner aluminum shell. Preformed packing can easily be damaged. Failure to comply may result in damage to equipment.

(18) Install desiccant canister (14) in inner aluminum shell (20).

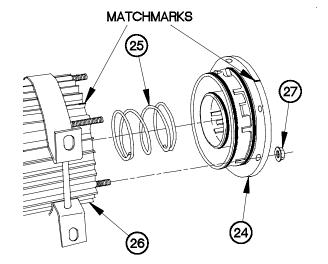


XY11C09A

(19) Install preformed packings (21, 22 and 23) on top cover (24).



- (20) Position spring (25) and top cover (24) on air dryer housing (26) with matchmarks aligned.
- (21) Position six flange nuts (27) on top cover (24).
- (22) Tighten six flange nuts (27) to 150-200 lb-in. (17-23 $\ensuremath{\text{N}$\cdot\text{m}$}\xspace$).

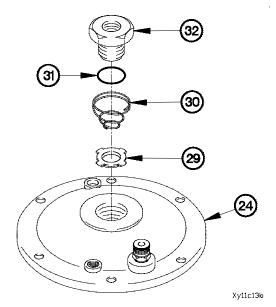


XYIICIIA

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

(23) Install relief valve (28) in top cover (24).

XY11C12A



NOTE

Install valve disc with rubber side down.

(24) Install valve disc (29) in top cover (24).

NOTE

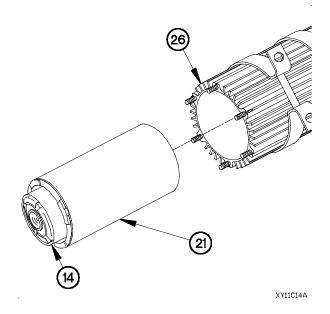
Install spring with small end toward valve disc.

(25) Install spring (30) in top cover (24).

(26) Install preformed packing (31) on check valve end cap (32).

(27) Position check valve end cap (32) on top cover (24).

(28) Tighten check valve end cap (32) to 35-50 lb-ft (47-68 N⋅m).



- (30) Position lower cover (2) on air dryer housing (26) with matchmarks aligned.
- (31) Position six flange nuts (33) on lower cover (2).
- (32) Tighten six flange nuts (33) to 150-200 lb-in. (17-23 $\text{N}{\cdot}\text{m}).$

XY11C15A

0

(26)

d. Installation.

(1) Install 90-degree fittings (1 and 2) in top cover (3).

100

(33)

(29) Install desiccant canister (14) and inner aluminum shell

(21) in air dryer housing (26).

MATCHMARKS

2

0

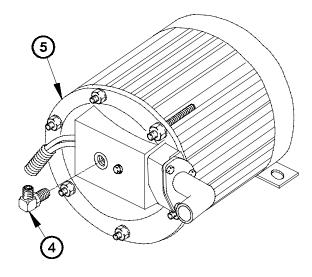
0

23-27

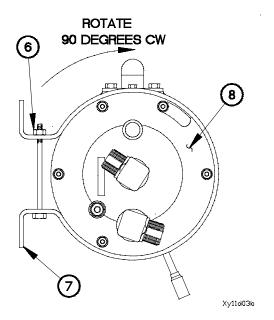
XY11D01-

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

(2) Install 90-degree fitting (4) in lower cover (5).



XY11D021





When installing a new air dryer, it is necessary to change the orientation of the retaining bands. Failure to comply may result in damage to equipment.

NOTE

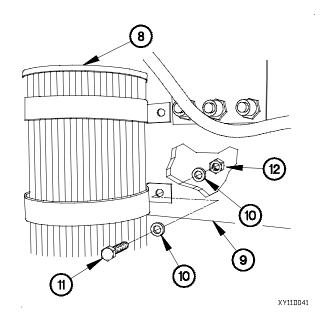
Perform steps (3) through (5) if installing a new air dryer.

(3) Loosen two nuts (6) on retaining bands (7).

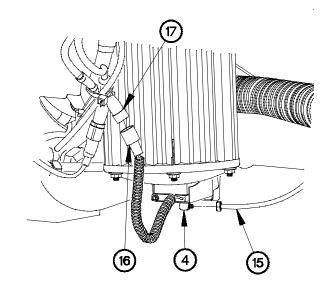
NOTE

Position retaining bands on air dryer as noted in removal.

- (4) Rotate two retaining bands (7) 90-degrees clockwise as viewed from top of air dryer (8).
- (5) Tighten two nuts (6) on retaining bands (7).



- (8) Connect output air hose (13) to 90-degree fitting (1).
- (9) Connect input air hose (14) to 90-degree fitting (2).



XY11D061

- (6) Position air dryer (8) on frame (9) with eight washers (10), four screws (11), and self-locking nuts (12).
- (7) Tighten four self-locking nuts (12) to 34-42 lb-ft (47-57 $\text{N}{\cdot}\text{m}).$

- Image: Contract of the second seco
- (10) Connect air hose (15) to 90-degree fitting (4).
- (11) Connect air dryer electrical connector (16) to connector P80 (17).

23-6. AIR DRYER REPLACEMENT/REPAIR (CONT)

e. Follow-On Maintenance.

- (1) Connect batteries (para 7-48).
- (2) Start engine (TM 9-2320-365-10) and allow air pressure to build up to normal pressure.
- (3) Check air dryer and air hoses for air leaks.
- (4) Shut down engine (TM 9-2320-365-10).

End of Task.

23-7. WET TANK REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Pressure protection valve removed (para 11-27).

Tools and Special Tools Goggles, Industrial (Item 15, Appendix C) Tool Kit, Genl Mech (Item 44, Appendix C)

WARNING

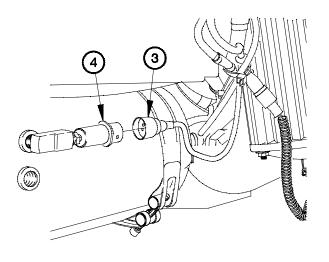
Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

NOTE

Tag hoses and connectors prior to removal.

(1) Disconnect three air hoses (1) from wet tank (2).



c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Antiseize Compound (Item 63, Appendix D) Nut, Self-Locking (2) (Item 122.1, Appendix G)

XY12R01B

(2) Disconnect connector P84 (3) from pressure switch (4).

XY12R02B

23-7. WET TANK REPLACEMENT (CONT)

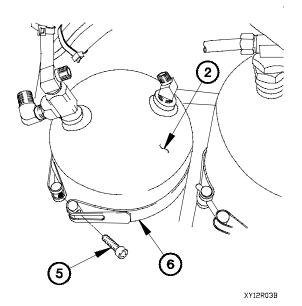
NOTE

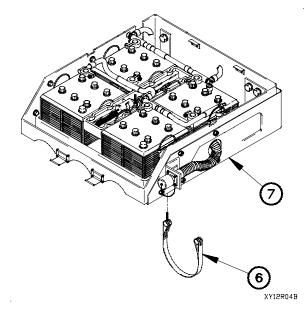
- Vehicles may be equipped with either corrosive enhanced clamps or noncorrosive enhanced clamps. Corrosive enhanced clamps have a self-locking nut and cork lining. When removing a noncorrosive enhanced clamp, replace it with a corrosive enhanced clamp.
- Perform steps (3) through (5) on vehicles not equipped with corrosive enhanced clamps.
- (3) Remove two screws (5) from clamps (6).

NOTE

Note the orientation of wet tank prior to removal.

(4) Remove wet tank (2) from two clamps (6).





(5) Remove two clamps (6) from battery box (7). Discard clamps.

NOTE

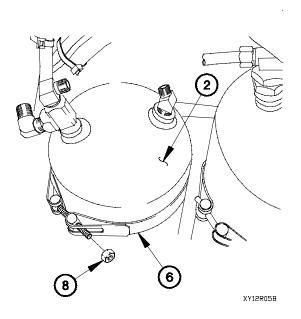
Perform steps (6) and (7) on vehicles equipped with corrosive enhanced clamps.

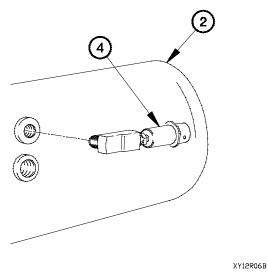
(6) Remove two self-locking nuts (8) from clamps (6). Discard self-locking nuts.

NOTE

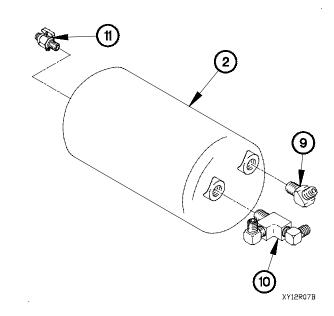
Note the orientation of wet tank prior to removal.

(7) Remove wet tank (2) from two clamps (6).





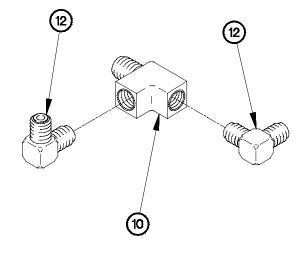
(8) Remove pressure switch (4) from wet tank (2).



- (9) Remove 45-degree fitting (9) from wet tank (2).
- (10) Remove street tee fitting (10) from wet tank (2).
- (11) Remove drain valve (11) from wet tank (2).

23-7. WET TANK REPLACEMENT (CONT)

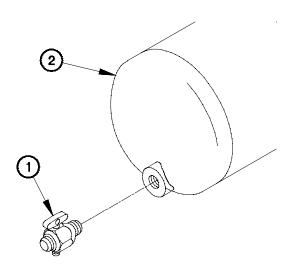
(12) Remove two 90-degree fittings (12) from street tee fitting



XY12R08B

b. Installation.

(10).



XY12I01-

WARNING

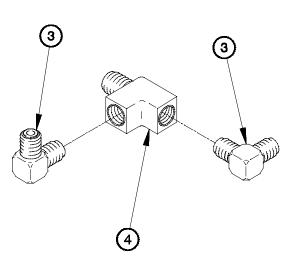
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply antiseize compound to threads of drain valve (1).
- (2) Install drain valve (1) in wet tank (2).

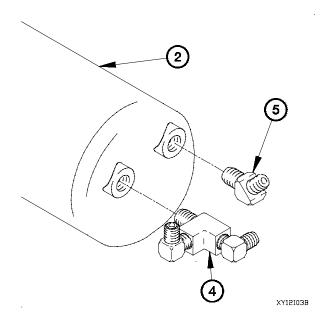
WARNING

Adhesives, solvents. and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

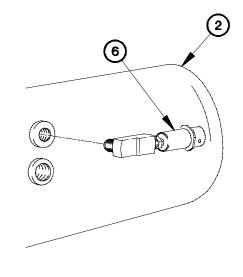
- (3) Apply antiseize compound to threads of two 90-degree fitting (3).
- (4) Install two 90-degree fittings (3) on street tee fitting (4).



XY12I02B



- (5) Apply antiseize compound to threads of street tee fitting (4).
- (6) Install street tee fitting (4) in wet tank (2).
- (7) Apply antiseize compound to threads of 45-degree fitting (5).
- (8) Install 45-degree fitting (5) in wet tank (2).



XY12I04B

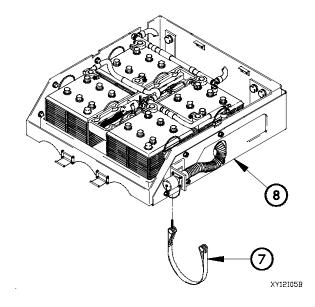
- (9) Apply antiseize compound to threads of pressure switch (6).
- (10) Install pressure switch (6) in wet tank (2).

23-7. WET TANK REPLACEMENT (CONT)

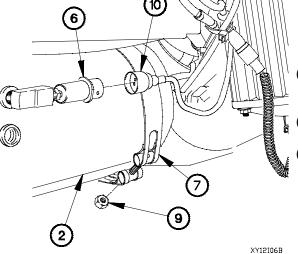
NOTE

Perform step (11) on vehicles not previously equipped with corrosive enhanced clamps.

(11) Position two clamps (7) on battery box (8).



- (12) Position wet tank (2) in two clamps (7) with self-locking nuts (9).
- (13) Tighten two self-locking nuts (9) to 4-5 lb-ft (5-7 N·m).
- (14) Connect connector P84 (10) to pressure switch (6).



(15) Connect three air hoses (11) to wet tank (2).

c. Follow-on Maintenance.

- (1) Install pressure protection valve (para 11-29).
- (2) Start engine (TM 9-2320-365-10).
- (3) Check air hoses and wet tank fittings for air leaks.
- (4) Shut down engine (TM 9-2320-365-10).

XY12I07B

End of Task.

23-8. PRESSURE SWITCH REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Engine shut down (TM 9-2320-365-10). Air tanks drained (TM 9-2320-365-10).

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C) Goggles, Industrial (Item 15, Appendix C)

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

a. Removal.

NOTE

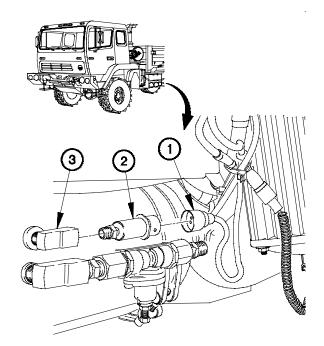
Tag connectors prior to removal.

- (1) Disconnect connector P84 (1) from pressure switch (2).
- (2) Remove pressure switch (2) from 90-degree fitting (3).

c. Follow-On Maintenance

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 21, Appendix D) Antiseize Compound (Item 14, Appendix D)



XY13R01B

23-8. PRESSURE SWITCH REPLACEMENT (CONT)

b. Installation

WARNING

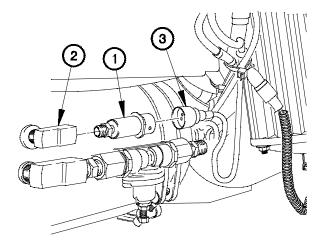
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

- (1) Apply antiseize compound to threads of pressure switch (1).
- (2) Install pressure switch (1) in 90-degree fitting (2).
- (3) Connect connector P84 (3) to pressure switch (1).

c. Follow-On Maintenance.

- (1) Start engine (TM 9-2320-365-10).
- (2) Check air pressure switch fitting for air leaks.
- (3) Shut down engine (TM 9-2320-365-10).

End of Task.



XY13I01B

CHAPTER 24 GAGES (NON-ELECTRICAL) MAINTENANCE

RESTRICTED MAINTENANCE NOTICE

Units not authorized SC 4910-95-CL-A72 (SHOP EQUIPMENT, COMMON NO. 2) in their T.O.E. may be unable to perform some of the maintenance tasks described in this chapter. If the required tools are not authorized, the equipment must be submitted to DS Maintenance for repair.

Section I. INTRODUCTION	
Section II. MAINTENANCE PROCEDURES	

Section I. INTRODUCTION

24-1. INTRODUCTION

This chapter contains maintenance instructions for replacing non-electrical gages authorized by the Maintenance Allocation Chart (MAC) at the Unit Maintenance level.

Section II. MAINTENANCE PROCEDURES

24-2. AIR FILTER RESTRICTION GAUGE REPLACEMENT

This task covers:

- a. Removal
- b. Installation

INITIAL SETUP

Equipment Conditions

Batteries disconnected (para 7-48). Instrument panel assembly removed for access (para 7-15).

c. Follow-On Maintenance

Tools and Special Tools Tool Kit, Genl Mech (Item 44, Appendix C)

a. Removal.

- (1) Disconnect vacuum hose (1) from AIR FILTER RESTRICTION GAUGE (2).
- Remove two screws (3) and AIR FILTER RESTRICTION GAUGE faceplate (4) from instrument panel assembly (5).
- (3) Remove AIR FILTER RESTRICTION GAUGE (2) from instrument panel assembly (5).

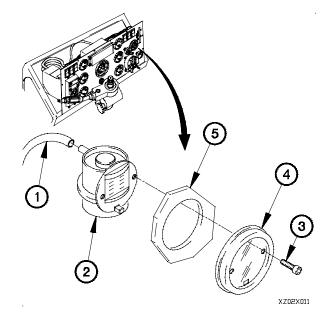
b. Installation.

- (1) Position AIR FILTER RESTRICTION GAUGE (2) in instrument panel assembly (5).
- (2) Install AIR FILTER RESTRICTION GAUGE faceplate (4) on instrument panel assembly (5) with two screws (3).
- (3) Connect vacuum hose (1) to AIR FILTER RESTRICTION GAUGE (2).

c. Follow-On Maintenance.

- (1) Install instrument panel assembly (para 7-15).
- (2) Connect batteries (para 7-48).
- (3) Start engine (TM 9-2320-365-10).
- (4) Check operation of AIR FILTER RESTRICTION GAUGE.
- (5) Shut down engine (TM 9-2320-365-10).

End of Task.



APPENDIX A REFERENCES

A-1. SCOPE

This appendix lists all forms, field manuals, technical manuals, and other publications referenced in this manual. Those publications that should be consulted for additional information about vehicle operations are also listed.

A-2. PUBLICATIONS INDEX

The following index should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

A-3. FORMS

The following forms pertain to this manual. See DA Pam 25-30 for index of blank forms. See DA Pam 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

Equipment Control Record D Equipment Inspection and Maintenance Worksheet D Maintenance Request Packaging Improvement Report	DA Form 2404 DA Form 2407
Processing and Deprocessing Record of Shipping, Storage, and Issue of Vehicles and	
Spare Engines	DD Form 1397
Product Quality Deficiency Report	SF 368
Recommended Changes to Publications and Blank Forms	DA Form 2028
Report of Item Discrepancy (ROID)	SF 364

A-4. OTHER PUBLICATIONS

The following publications contain information pertinent to the LMTV and associated equipment.

a. Safety.

First Aid	FM 4-25.11
Security of Tactical Wheeled Vehicles	TB 9-2300-422-20
Safety Inspection and Testing of Lifting Devices	TB 43-0142

A-4. OTHER PUBLICATIONS (CONT)

b. LMTV.

Direct Support and General Support Maintenance Manual for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV)
Hand Receipt Covering Contents of Components of End Item (COEI), Basic Issue
Items (BII), and Additional Authorization List (AAL), for M1078 Series, 2 1/2-Ton,
4x4, Light Medium Tactical Vehicles (LMTV)
Operator's Manual for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle
(LMTV) TM 9-2320-365-10
Unit, Direct Support, and General Support Repair Parts and Special Tools List for
M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle (LMTV) TM 9-2320-365-24P
Warranty Program for M1078 Series, 2 1/2-Ton, 4x4, Light Medium Tactical Vehicle
(LMTV)

c. General Vehicle Operation.

Army Motor Transport Units and Operations FM	55-30
Manual for the Wheeled Vehicle Driver FM 2	
Safety Prevention of Motor Vehicle Accidents AR 3 Vehicle Recovery Operations FM	

d. General Maintenance and Repair.

Army Oil Analysis Program TB 43-0211 Camouflage Pattern Painting FM 5-20 Charging System Troubleshooting DA Pam 750-33 Color, Marking, and Camouflage Painting of Military Vehicles TB 43-0209 Cooling Systems: Tactical Vehicles TM 750-254 Corrosion Prevention and Control Including Rustproofing Procedures for Tactical TM 750-254
Vehicles and Trailers
Description, Use, Bonding Techniques, and Properties of Adhesives
Equipment Improvement Report and Maintenance Digest: TACOM Equipment
Equipment Improvement Report and Maintenance Summary
Installation Instructions for Installation Kit, Electronic Equipment,
MK-2700/VRC (NSN 5895-01-421-0814) (EIC: N/A) to Permit Installation
of Radio Set AN/VRC-87/88/90 Series into M1078, M1080, M1081, M1083-
M1086, M1088-M1094 and M1096 Family of Medium Tactical Vehicles TB 11-5820-890-20-101
Installation Instructions for Installation Kit, Electronic Equipment,
MK-2715/VRC (NSN 5895-01-421-0812) (EIC: N/A) to Permit Installation
of Radio Set AN/VRC-89/91/92 Series into M1078, M1080, M1081, M1083-
M1086, M1088-M1094 and M1096 Family of Medium Tactical Vehicles
Metal Body Repair and Related Operations FM 43-2
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel
and Related Materials Including Chemicals TM 9-247
Operator's and Organizational Maintenance Manual for Radio Sets
Operator's and Organizational Maintenance Manual Including Repair Parts and
Special Tools List Simplified Test Equipment for Internal Combustion Engines
Reprogrammable (STE/ICE-R) (NSN 4910-01-222-6589)
Operator's Manual, Radio Set, AN/VRC-46

Operator's Manual, Radio Set, AN/VRC-90A
Operator's, Unit, Direct Support, and General Support Maintenance Manual
for Lead-Acid Storage Batteries TM 9-6140-200-14
Ordnance Tracked and Wheeled Vehicle Hull and Chassis Wiring, Repair of
Organizational Care, Maintenance, and Repair of Pneumatic Tires and Inner Tubes TM 9-2610-200-14
Painting Instructions for Field Use
Purging, Cleaning, and Coating Interior Ferrous and Terne Sheet Vehicle Fuel Tanks
Repair of Tents, Canvas, and Webbing FM 10-16
Rigging Techniques, Procedures, and Applications FM 5-125
Use and Care of Hand Tools and Measuring Tools TM 9-243
Use of Antifreeze Solutions and Cleaning Compounds in Engine Cooling Systems
Welding Theory and Application TM 9-237

e. Cold Weather Operation.

Basic Cold Weather Manual	FM 31-70
Northern Operations	FM 31-71
Operation and Maintenance of Ordnance Materiel in Cold Weather (0° to -65°F)	FM 9-207

f. Decontamination.

Decontamination Operations Facilities & Equipment TB	700-4
NBC Protection	M 3-4
NBC Decontamination F	M 3-5

g. Maintenance of Special Purpose Kits.

Operator and Organizational Maintenance Manual for Chemical Alarm	. TM 3-6665-225-12
Operator's and Unit Maintenance Manual Including Repair Parts and Special Tools	
List for Decontaminating Apparatus: M13	TM 3-4230-214-12&P
Operator's, Organizational, Direct Support, and General Support Maintenance Manual	
Including Repair Parts and Special Tools List for Various Machine Gun Mounts	. TM 9-1005-245-14
Operator's, Organizational, Direct Support, and General Support Maintenance	
Manual, Air Conditioner, Horizontal Compact, 18,000 BTU/HR, 208 Volt, 3 Phase,	
50/60 Hertz, Model F18H-3S	. TM 5-4120-384-14
Unit and Direct Support Maintenance, Repair Parts and Special Tools List for	
Heater, Space, Multifuel with Blower, 60,000 BTU/HR, 120V, Model UH-68G,	
NSN 4520-01-203-4410, and Model UH-68GI, NSN 4520-01-297-6803	TM 5-4520-253-23P

h. General.

Operator's Manual (M998 Series) TM 9-2320-280-10 Operator's Manual (M1008 Series) TM 9-2320-289-10 Operator's Manual (M35 Series) TM 9-2320-289-10 Operator's Manual (M35 Series) TM 9-2320-289-10 Operator's Manual (M35 Series) TM 9-2320-281-10 Operator's Manual (M939 Series) TM 9-2320-272-10 Principles of Automative Vehicles TM 9.8000
Principles of Automotive Vehicles TM 9-8000 Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use
(US Army Tank-automotive and Armaments Command) TM 750-244-6
Route Reconnaissance and Classification FM 5-36
Soldier's Manual MOS 88M Motor Transport Operator, Skill Levels 1/2

A-4. OTHER PUBLICATIONS (CONT)

i. Land, Sea, and Air Shipment.

Airdrop of Supplies and Equipment: Rigging 2 1/2-Ton Trucks
Containerization of Military Vehicles MTMCTEA Ref 95-55-23
Lifting and Tiedown of U.S. Military Helicopters
Marine Lifting and Lashing Handbook
Marine Terminal Lifting Guidance MTMCTEA Pam 56-1
Multiservice Helicopter External Air Transport: Basic Operations and Equipment
Multiservice Helicopter External Air Transport: Dual-Point Load Rigging Procedures
Multiservice Helicopter External Air Transport: Single-Point Load Rigging Procedures FM 55-450-4
Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military
Vehicles and Other Outsize/Overweight Equipment (in TOE Line Sequence)
Tiedown Handbook for Rail Movements
Tiedown Handbook for Truck Movements

APPENDIX B MAINTENANCE ALLOCATION CHART (MAC)

SECTION I

INTRODUCTION

B-1. The Army Maintenance System MAC.

a. This introduction (Section I) provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance System concept.

b.The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Unit/Field - includes two subcolumns, C (Operator/Crew) and O (Unit) maintenance.

Direct Support/Field - includes an F subcolumn.

General Support/Sustainment - includes an H subcolumn.

Depot/Sustainment - includes a D subcolumn.

c.Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d.Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance Functions. Maintenance functions are limited to and defined as follows:

a.**Inspect**. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g. by sight, sound, or feel).

b.**Test**. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c.**Service**. Operations required periodically to keep an item in proper operating condition; e.g. to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemicals fluids, or gases.

d.**Adjust**. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

e.Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. **Calibrate**. To determine and cause corrections to be made or to be adjusted on instruments or Test, Measurement, and Diagnostic Equipment (TMDE) used in precision measurement. Consists of comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

TM 9-2320-365-20-5

g.**Remove/Install**. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h.**Replace**. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace " is authorized by the MAC and assigned maintenance level is shown as the 3d position code of the SMR code.

i. **Repair**. The application of maintenance services¹ including fault location/troubleshooting², removal/installation, and disassembly/assembly³ procedures, and maintenance actions⁴ to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. **Overhaul**. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k.**Rebuild**. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

B-3. Explanation of Columns in the MAC, Section II.

a.**Column 1, Group Number.** Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

b.**Column 2, Component/Assembly.** Column 2 contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c.**Column 3, Maintenance Function.** Column 3 lists the functions to be performed on the items listed in Column 2. (For detailed explanation of these functions, see Paragraph B-2.)

d.**Column 4, Maintenance Level.** Column 4 specifies each level of maintenance authorized to perform each function listed in Column 3, by indicating work time required (expressed in man-hours in whole hours or decimals) in the appropriate subcolumn. This work-time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work-time figures are to be shown for each level. The work-time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions.

¹Services - Inspect, test, service, adjust, align calibrate, and/or replace.

²Fault location/troubleshooting - The process of investigating and detecting the cause of equipment malfunction; the act of isolating a fault within a system or Unit Under Test (UUT).

³Disassembly/assembly - The step-by-step breakdown (taking apart) of a spare/functional group coded item, to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

⁴Actions - Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

С	Operator or crew maintenance
	Direct Support/Field maintenance

e.**Column 5, Tools and Test Equipment Reference Code.** Column 5 specifies, by code, those common tools sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated functions. Codes are keyed to tools and test equipment in Section III.

f. **Column 6, Remarks.** When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks contained in Section IV.

B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III.

a.**Column 1, Reference Code.** The tool and test equipment reference code correlates with a code used in the MAC, Section II column 5.

b.Column 2, Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

c.Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National Stock Number of tool or test equipment.

e.Column 5, Tool Number. The manufacturer's part number, model number, or type number.

B-5. Explanation of Columns in Remarks, Section IV.

a.Column 1, Remarks Code. The code recorded in column 6, Section II.

b.Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

⁵This maintenance level is not included in Section II, Column (4) of the Maintenance Allocation Chart. Functions to this level of maintenance are identified by a work-time figure in the "H" column of Section II, Column (4), and an associated reference code is used in the Remarks column (6). This code is keyed to Section IV, Remarks, and the SRA complete repair application is explained there.

(1)	Section II. MAINTENA	NCE ALLOC (3)	AIIC	JN CI	HART FC (4)			/EHICLE (5)	(6)
	(2)	(3)		I	(4) Maintenanc	e Level		(3)	(0)
Group Number	Component/Assembly	Maintenance Function						Tools and Equipment Ref Code	Remarks Code
				FIEI	D	SUSTAIN	MENT		
			U	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
0100	ENGINE ASSEMBLY	Inspect		0.1				78	
		Test		1.5	0.3			78,79	
		Adjust			3.0			56,60,78,80	
		Service		0.8				57,59,78	
		Replace			7.0			16,56,59,61 ,78,79	
		Repair		0.4	1.6	3.3		16,31,32,44 ,56,59,60,6 1,78,79	
0101	CYLINDER HEAD ASSEMBLY	Inspect			0.1			78	
		Replace			2.0			44,56,59,60 ,78	
		Repair				2.5		56,59,60,61 ,62,78,81	
0102	CRANKSHAFT	Replace				16.0		56,57,60,71 ,78	
		Repair			3.8	16.0		16,31,32,56 ,59,60,61,7 8	
0103	FLEXPLATE, ENGINE	Replace			6.5			56,59,78	
		Repair			1.0			56,49,78	
0104	PISTON ASSEMBLY	Replace				9.0		56,57,59,60 ,62,78,79	
		Repair				0.6		78	
0105	CAMSHAFT ASSEMBLY	Replace				3.1		14,56,57,49 ,60,78	
		Repair				1.2		56,78	
0105	ROCKER ARM AND PUSH RODS	Replace			2.0			44,59,60,61 ,78	
		Repair			0.3			44,78	
0106	COOLER, ENGINE OIL	Replace			1.3			56,78	
		Repair			0.3			56,78	
0108	MANIFOLDS, INLET AND EXHAUST	Replace			1.5			56,60,61,78 ,79	
0301	INJECTOR ASSEMBLY, FUEL	Replace			2.1			44,57,78,80	
		Adjust			1.6			56,78,79,80	
0304	AIR INTAKE SYSTEM	Service		0.3					
		Repair		0.3				46,57	

(1)	(2)	(3)			(4) Maintenanc	e Level		(5)	(6)
				FIEI	D	SUSTAIN	IMENT	1	
Group Number	Component/Assembly	Maintenance Function	Ur	nit	Direct Support	General Support	Depot	Tools and Equipment Ref Code	Remarks Code
			С	0	F	Н	D		
0304	INTAKE AIR CLEANER	Service		0.2					
		Replace		0.8				6,46,57, 78	
		Repair		0.4				57,78	
0305	TURBOCHARGER	Replace			0.8			56,61,78,79	
0306	FUEL TANK	Inspect	0.1						
		Replace		1.5				57,59,78	
0308	GOVERNOR, ENGINE SPEED	Replace			1.0			57,60,76,78 ,79	
		Repair		0.5	0.7			57,78	
0309	FILTER, FUEL/WATER SEPARATOR	Inspect	0.2						
		Service	0.2	0.3				78	
		Replace		0.5				57,78	
0311	ETHER STARTING AID	Replace		0.6				57,59,78	
0312	ACCELERATOR/HAND THROTTLE	Replace		0.5				57,78	
		Adjust		0.2				57,78	
0401	EXHAUST MUFFLER/PIPES	Inspect	0.1	0.2					
		Replace		0.9				57,59,78	
0501	RADIATOR/CHARGE AIR COOLER	Inspect	0.1						
		Replace		2.5				2,27,53, 59,78	
		Service		1.5				59,79	
		Repair		0.6	2.0			2,27,53, 59,78	
0501	RADIATOR OVERFLOW TANK	Replace		0.5				46,57,78	
		Repair		0.3				78	
0502	SHROUD, FAN	Replace		1.0				57,59,78,86	
0503	HOSES, WATER	Replace		0.5				57,59,78,86	
0504	PUMP, WATER	Replace		0.8				15,57,59,78 ,86	
0505	CLUTCH, ENGINE FAN	Inspect		1.0				57	
		Replace		1.5				2,53,57, 78	
		Repair			1.2			56,59,60,61 ,78,79	

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(1)	(2)	(3)			(4) Maintenanc		• • • • • • •	(5)	(6)
Group Number	Component/Assembly	Maintenance Function			vannenane			Tools and Equipment Ref Code	Remarks Code
				FIEL	D	SUSTAIN	IMENT		
			Ur	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
0601	ALTERNATOR, 100 AMP	Inspect		0.2					
		Test		0.5	1.5			59,63,78	
		Replace		1.0				59,78	
		Repair		0.2	0.5			38,56,57,59 ,63,78,79	
0603	STARTING MOTOR, ENGINE	Inspect		0.1					
		Test		0.5	0.5			57,63	
		Replace		1.5				2,9,57, 59,78	
		Repair			2.1			52,56,59,60 ,76,78	
0606	SOLENOID, FUEL SHUTOFF	Replace			1.0			60,78,80	
0607	CABLE ASSEMBLY, DASHBOARD	Test		0.5				56	
		Replace		2.9				57,59,76, 78	
		Repair		1.0	0.6			56,57,61,78	
0607	DISPLAY, LIGHTED INDICATOR	Test		0.3					
		Replace		0.5				78,86	
		Repair		0.3				78	
0609	LIGHT ASSEMBLY, BACKUP	Inspect	0.1						
		Replace		0.8				57,78	
		Repair		0.3				78	
0609	LIGHT, BLACKOUT DRIVE	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	TAILLIGHT ASSEMBLY, COMPOSITE	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	LIGHT ASSEMBLY, FRONT TURN SIGNAL AND PARK	Inspect	0.1						
		Replace		0.8				57,59,78	
		Repair		0.5				78	
0609	HEADLIGHT	Inspect	0.1						
		Adjust		0.4				78	
		Replace		1.0				57,59,78	
0610	AUDIBLE ALARM	Inspect	0.1						
0611	HORN, CAB	Inspect	0.1						

(1)	(2)	(3)			(4)		(5)	(6)	
Group Number	Component/Assembly	Maintenance Function		ſ	Maintenanc	e Level		Tools and Equipment Ref Code	Remarks Code
				FIEL	D	SUSTAIN	IMENT		
			Ui	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
		Replace		0.4				57,78	
0612	BOX ASSEMBLY, BATTERY	Inspect	0.1						
		Test		0.5				57,78	
		Service		0.3				57	А
		Replace		1.0				57,59,78	
		Repair		0.2				63	
0613	CABLE ASSEMBLY, LH/RH CAB AND DOOR MARKER LIGHTS	Inspect	0.1						
		Replace		0.8				78	
		Repair		0.7				63	
0613	CABLE ASSEMBLY, LOWER, CAB MARKER LIGHTS, M1081	Inspect	0.1						
		Replace		0.6				78,86	
		Repair		0.5				63	
0613	CABLE ASSEMBLY, UPPER, CAB CLEARANCE AND MARKER LIGHTS, M1081	Inspect	0.1						
		Replace		0.8				78,86	
		Repair		0.5				63	
0613	CABLE ASSEMBLY, STE/ICE-R	Replace		1.0				78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, CAB CLEARANCE AND MARKER LIGHTS	Inspect	0.1						
		Replace		1.2				57,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, WARNING LIGHT	Replace		0.5				48,78,86	
		Repair		0.3	0.5			63	
0613	CABLE ASSEMBLY, WINDSHIELD WASHER PUMP/EMI	Replace		0.5				78	
		Repair		0.3				63	
0613	CABLE ASSEMBLY, ENGINE CONTROL	Inspect	0.1						
		Replace		2.3				57,78	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, FRONT INTERVEHICULAR, 12 VDC	Replace		0.8				59,78	
		Repair		0.2	1.3			63	

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(1)	(2)	(3)		I	(4) Maintenanc	e Level		(5)	(6)
Group Number	Component/Assembly	Maintenance Function					Tools and Equipment Ref Code	Remarks Code	
				FIEL	D	SUSTAINMENT			
			U	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
0613	CABLE ASSEMBLY, FRONT LIGHTS	Replace		2.0				57,59,78,86	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, REAR LIGHTS	Replace		2.8				57,59,78	
		Repair		0.5	0.5			63	
0613	CABLE ASSEMBLY, PTO	Replace		1.6				57,59,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, REAR INTERVEHICULAR, 24 VDC	Replace		0.6				59,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, START AND CHARGING	Replace		2.0				57,78	
		Repair		0.5	0.8			63	
0613	CABLE ASSEMBLY, WINCH CONTROL VALVE	Replace		1.8				57,59,78	
		Repair		0.5	0.8			63	
0705	WTEC II VEHICLE INTERFACE MODULE (VIM)	Replace		0.6				78	
		Repair		0.8				78	
0708	TORQUE CONVERTER	Adjust			0.9			18,59,60,78	
		Remove/ Install			0.8			56,59,60,61 ,78	
		Repair			1.3			30,56,59,60 ,62,78	
0710	TRANSMISSION	Inspect		0.4				78	
		Service		1.5				57,59,78	
		Replace			7.0			56,59,60,61 ,78,79,84	
		Repair		0.4	2.7	1.9		3,18,19, 24,25,27,41 ,56,57,59,6 0,61,78,79, 84	
0710	MODULE, FRONT SUPPORT	Remove/ Install				2.0		56,57,59,60 ,61,78	
		Repair				0.7		30,56,57,59 ,60,61,78	
0710	MODULE, PLANETARY GEAR (P1)	Remove/ Install				2.0		59,60,71,78	

(1)	(2)	(3)		I	(4) Maintenanc	e Level		(5)	(6)
Group Number	Component/Assembly	Maintenance Function					Tools and Equipment Ref Code	Remarks Code	
				FIEI	LD	SUSTAIN	IMENT		
			U	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
		Repair				1.5		59,60,71,78	
0710	MODULE, PLANETARY (P2)	Remove/ Install				2.0		3,56,59, 60,61,78	
		Repair				1.9		3,19,56, 59,60,61,71 ,78	
0710	PLANETARY CARRIER (P3)	Remove/ Install				2.0		3,56,60, 78	
		Repair				1.9		3,27,56, 60,78	
0710	MODULE, MAIN SHAFT	Remove/ Install				2.0		59,60,78	
		Repair				0.4		59,60,78	
0710	MODULE, CONVERTER HOUSING	Remove/ Install				4.3		3,56,57, 59,60,78	
		Repair				2.0		3,19,25, 56,57,59,60 ,78	
0713	CLUTCH ASSEMBLY, C3/C4/C5, TRANSMISSION	Remove/ Install				2.0		56,57,59,60 ,78	
		Repair				1.0		41,56,57,59 ,60,78	
0713	MODULE, ROTATING CLUTCH	Remove/ Install				2.0		3,56,59, 60,78	
		Repair				2.4		3,19,24, 56,59,60,78	
0714	VALVE ASSEMBLY, CONTROL MODULE	Remove/ Install			2.0			56,59,60,61 ,78,79	
		Repair		1.0	2.5			59,61,78,79	
0714	BODY ASSEMBLY, MAIN VALVE	Service		1.5				57,59,78	
		Remove/ Install			2.0			56,59,60,61 ,78,79	
		Repair		1.5	2.5			56,59,60,61 ,78,79	
0801	MODULE, TRANSFER CASE	Adjust				1.0			
		Remove/ Install				2.0		21,56,57,59 ,60,61,71,7 4,78,79	
		Repair				1.1		23,27,33,50 ,56,57,60,7 8	

(1)	(2)	(3)			(4) Maintenanc			(5)	(6)
Group Number	Component/Assembly	Maintenance Function					Tools and Equipment Ref Code	Remarks Code	
				FIEL	D	SUSTAIN	IMENT		
			Uı	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
0802	HOUSING ASSEMBLY, C6 AND C7 CLUTCH	Remove/ Install				2.0		56,59,60,61 ,78	
		Repair				0.8		19,23,26,27 ,28,29,56,5 9,60,61,62, 71,78	
0802	CONTROL VALVE ASSEMBLY	Remove/ Install				2.0		56,59,61,78 ,79	
		Repair				1.0		56,59,61,78 ,79	
0804	PUMP ASSEMBLY, OIL	Replace				1.0		79	
		Repair				0.8		79	
0900	PROPELLER SHAFT	Inspect		0.1					
		Service		0.5				59	
		Repair		0.6				57,59,78	
		Replace		0.5				57,59,78	
1000	AXLE ASSEMBLY, FRONT	Inspect	0.1	0.3	0.7			78	
		Adjust			1.0			57,79	
		Service		0.5				59,78	
		Replace			4.5			56,57,59,60 ,61,70,78	
		Repair		2.3	2.2	6.0		56,57,59,60 ,61,78	
1002	CARRIER ASSEMBLY, DIFFERENTIAL	Inspect		0.1	0.1	0.1		78,79	
		Service			0.3			78	
		Replace				4.6		21,56,57,59 ,60,78,79	
		Repair				2.7		56,57,59,60 ,78,79	
1004	STEERING KNUCKLE, AXLE	Inspect			0.2				
		Adjust			2.5			79	
		Service			0.3			79	
		Replace			5.1			56,57,59,60 ,71,78	
1100	AXLE ASSEMBLY, REAR	Inspect	0.1	0.4	0.7				
		Service		0.8				57,59,78	
		Replace			4.5			34,56,57,59 ,60,78,84	

(1)	(2)	(3)			(4) Maintenanc	e Level		(5)	(6)
Group Number	Component/Assembly	Maintenance Function						Tools and Equipment Ref Code	Remarks Code
				FIEL	D	SUSTAINMENT			
			Ur	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
		Repair			0.9	6.0		21,56,57,59 ,60,78,84,8 5	
1102	CARRIER ASSEMBLY, DIFFERENTIAL	Inspect		0.1	0.1	1.0		78,79	
		Service			0.3			78	
		Replace				4.6		21,56,57,59 ,60,78,79,8 5	
		Repair				2.7		21,37,56,57 ,59,60,71,7 3,78	
1202	BRAKE ASSEMBLY, FRONT AXLE	Inspect		0.1	1.0			59,78,79	
		Adjust		0.4				57,59,78	
		Repair		1.5	0.5			57,59,78,83	
1202	BRAKE ASSEMBLY, REAR AXLE	Inspect		0.1	1.0			59,78,79	
		Adjust		0.4				57,59,78	
		Repair		1.5	0.5			57,59,78,83	
1208	BRAKE AIR CHAMBER	Inspect		0.1					
4000		Replace		0.5				57,59,78	
1209	AIR COMPRESSOR	Adjust Replace		0.6	1.2			59,78 56,60,61,78	
		Toplace						,79	
1311	WHEEL ASSEMBLY, PNEUMATIC TIRE	Inspect	0.1					57	В
		Replace	1.0	1.2				57,59	
		Repair		2.0				57,59	
1313	TIRE, PNEUMATIC	Replace		2.0				57,59	
1401	STEERING SYSTEM	Inspect		0.2					
		Adjust		4.0	1.0			56,60,78	
		Repair		1.0	1.5			54,56,57,59 ,60,61,78,7 9	
1407	STEERING GEAR ASSEMBLY	Replace			4.0			56,60,78	
1410	PUMP, POWER STEERING	Replace			1.5			47,56,59,60 ,78	
1411	HOSES, POWER STEERING	Replace		0.3				57,59,78,88	
1413	HYDRAULIC RESERVOIR,	Service	0.1	0.5				78	

(1)	(2)	(3)			(4) Maintenanc			(5)	(6)
Group Number	Component/Assembly	Maintenance Function						Tools and Equipment Ref Code	Remarks Code
				FIEI	D	SUSTAIN	IMENT		
			Uı	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
	POWER STEERING								
		Replace		0.8				59,78,86	
1501	FRAME ASSEMBLY	Inspect	0.1	0.3					
		Repair		0.8	14.0			56,57,59,60 ,61,78,79	
1504	RETAINER, SPARE TIRE	Inspect	0.1	0.1					
		Replace		3.0				57,59,78	
		Repair		0.6				57,59,78	
1601	LEAF SPRING ASSEMBLIES	Inspect	0.1	0.2					
		Service		0.3				57	
		Replace			2.7			56,57,59,60 ,78,79	
1604	SHOCK ABSORBERS	Inspect	0.1	0.3					
		Replace		0.5				57,59,78	
1605	STABILIZER BAR, REAR	Inspect		0.2					
		Replace		2.0				57,59,68,78	
		Repair		1.5				57,78	
1801	CAB BODY, STANDARD	Inspect	0.1						
		Replace			60.0			56,57,60,61 ,78,79	
		Repair		0.6				57,59,78	
1801	CAB BODY, AIR DROP	Inspect	0.1						
		Replace			60.0			56,57,60,61 ,78,79	
		Repair		0.6				57,59,78	
1801	CAB DOORS, STANDARD	Inspect	0.1						
		Replace			1.0			55,59,78	
		Repair		2.7				49,57,78	
1801	CAB DOORS, AIR DROP	Inspect	0.1						
		Replace			1.0			55,59,78	
1		Repair		2.7				49,57,78	
1801	SUPPORT ASSEMBLY, CAB FRONT	Inspect	0.1						
		Repair		1.1				57,59,78	
		Replace			3.0			8,13,57, 59,60,78, 79	
1801	SUPPORT ASSEMBLY, CAB REAR	Inspect	0.1					19	

(1)	(2)	(3)			(4) Maintenanc			(5)	(6)
Group Number	Component/Assembly	Maintenance Function			Vantenane			Tools and Equipment Ref Code	Remarks Code
Tumber	Component/Coombly	i unotion		FIEI	D	SUSTAIN	MENT		oouo
			Ur	nit	Direct Support	General Support	Depot		
			С	0	F	н	D		
		Replace		1.0				57,59,78	
		Repair		0.8				57,78	
1802	WINDSHIELD	Replace			0.6			55,59,78	
1802	FENDER, VEHICULAR, FRONT	Inspect	0.1						
		Replace		2.0				57,59,78	
		Repair		0.5				57,78	
1803	ROOF, CAB, M1081	Replace		1.0				45,50,57,59 ,78	
1805	FLOOR COVERING, CAB	Replace		1.0				57,78	
1806	SEATS	Replace							
1808	TOOL BOX ASSEMBLY	Inspect	0.1						
		Replace		0.5				47,57,59,78	
		Repair		0.5				57,59,78	
1808	STOWAGE BOX, CAB	Replace		0.8				57,78	
		Repair		0.5				57,78	
1810	BODY, CARGO	Inspect	0.1						
		Replace			4.0			56,57,59,60 ,78	
		Repair		0.5				57,59,78	
1812	BODY ASSEMBLY, VAN	Inspect	0.1	0.1					
		Repair		0.5				20,35,36,42 ,43,47,57,5 9,64,72,76, 78	
		Replace		1.9				36,64,78	
1812	DOOR, ACCESS, LEFT	Inspect	0.1						
		Replace		2.3				78	
		Repair		0.1				57,59,78	
1812	DOOR, ACCESS, RIGHT	Inspect	0.1						
		Replace		1.4				78	
		Repair		0.4				57,59,78	
1812	WINDOW SASH ASSEMBLY	Inspect	0.1						
		Replace		0.2				78	
		Repair		0.4				57,59,78	
1812	BOX ASSEMBLY, RELAY	Inspect	0.1	0.1					
		Replace		0.6				78	
		Repair		0.1				78	
		Test	0.1	0.5				59,78	
1812	FAN ASSEMBLY	Inspect	0.1						

(1)	(2)	(3)			(4) Maintenanc			(5)	(6)
Group Number	Component/Assembly	Maintenance Function						Tools and Equipment Ref Code	Remarks Code
				FIEI	LD	SUSTAIN	IMENT		
			Ur	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
		Replace		1.8				20,76,78	
		Repair		0.5				78	
2001	WINCH, 11K SELF- RECOVERY (SRW)	Inspect	0.1	4.0					
		Service		0.2				59	
		Replace			1.0			59,60,78	
		Repair			0.9			59,60,78	
2004	POWER TAKEOFF ASSEMBLY (PTO)	Inspect	0.1						
		Replace			1.0			56,57,59,60 ,78	
		Repair			0.8			56,57,59,60 ,78	
2202	MOTOR, WIPER, WINDSHIELD	Test		0.5					
		Replace		1.0				78	
2207	HEATER ASSEMBLY, PERSONNEL	Replace		2.0				57,59,78	
		Repair	_	1.0				57,59,78	
2210	DECALS	Inspect Replace	0.1	1.0				78	
2401	POWER UNIT, AIR/HYDRAULIC	Inspect	0.1	1.0				10	
		Test		0.2					
		Service		1.0					
		Replace		3.0				57,59,78	
		Repair			2.0			57,59,60,69 ,78,79	
2402	MANIFOLD, HYDRAULIC	Inspect	0.1						
		Test		0.2					
		Replace		1.5				51,57,59,78	
		Repair		1.0				51,57,59,78	
2402	LATCH, HYDRAULIC, CAB	Inspect	0.1						
		Adjust		0.5				57,59,78	
		Replace		0.5				57,59,78	
2404	SUSPENSION CYLINDER	Inspect							
		Replace							
2406	FILTER, HYDRAULIC	Service		0.3				59,78	
		Replace		0.2				59,78	
2408	RESERVOIR, HYDRAULIC	Replace		1.0				57,59,78	

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Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1)	(2)	(3)		(4) Maintenance Level				(5)	(6)
Group Number Component/Assembly		Maintenance Function						Tools and Equipment Ref Code	Remarks Code
				FIEI	D	SUSTAIN	IMENT		
			Uı	nit	Direct Support	General Support	Depot		
			С	0	F	н	D		
		Repair		0.5				57,59,78	
3303	HEATER KIT, M1079	Inspect	0.1						
		Remove/ Install		2.5				78	
3307	ALTERNATOR KIT, 200 AMP	Inspect	0.1	0.2					
		Test		0.5				59	
		Remove/ Install		2.0				57,59,78	
		Replace		1.0				57,59,78	
		Repair			0.5			56,57,60,62 ,78	
3307	ALTERNATOR, 200 AMP	Inspect Test Replace Repair		0.2 0.5 1.0 0.2	1.5 0.5			59,63,78 57,59,78 56,57,60,61	
3307	CRANE (LMHC), MATERIAL HANDLING, LIGHT	Inspect	0.1	0.1				,63,78	
3307	WEIGHT BLOCK AND WIRE	Repair Replace Test Inspect	0.1	0.5 0.5 0.5				59,76,78	
	ROPE, LMHC			~ 1				50.70	
		Replace		0.1				59,78	
		Repair		0.5	0 F			59,78	
0007		Test	.		0.5				
3307	WINCH, LMHC	Inspect	0.1		o -			50.70	
		Replace			0.5			59,78	
		Repair		<u>م -</u>	1.0			59,78	
3307	MAST/SWING ASSEMBLY, LMHC	Test Inspect	0.1	0.5					
	-	Repair		1.0				59,78	
		Test		0.5					
3307	CONTROL BOX, LMHC	Inspect	0.1						
	, -	Replace		0.1					
		Repair		0.5				76,78	
		Test	0.1	0.5					
3307	TROOPSEAT KIT	Remove/ Install	1.0						

Section II. MAINTENANCE ALLOCATION CHART FOR THE LMTV VEHICLE (CONT)

(1)	(2)	(3)		(4) Maintenance Level				(5)	(6)
Group Number	Component/Assembly	Maintenance Function					Tools and Equipment Ref Code	Remarks Code	
				FIEL	D	SUSTAIN	IMENT		
			Ur	nit	Direct Support	General Support	Depot		
			С	0	F	Н	D		
		Inspect	0.1						
		Replace		1.0					
		Repair		0.5				78	
3307	COVER KIT, CARGO SOFT TOP	Remove/ Install	1.5						
		Inspect	0.1						
		Replace		2.0					
		Repair		0.5					
3307	AIR CONDITIONER KIT, M1079	Inspect	0.1						
		Remove/ Install		1.5				59,78	
3307	WARNING LIGHT ASSEMBLY, AMBER	Inspect	0.1						
		Repair		0.4				78	
		Test		0.2					
3401	MACHINE GUN RING KIT	Inspect	0.1						
		Remove/ Install			4.0			56,57,60,78 ,79,84	
		Repair		1.1				10,57,78	
3402	MOUNT, SMALL ARMS	Inspect	0.1						
		Replace		0.3				78	
3909	CABLE ASSEMBLY, WARNING LIGHT	Inspect	0.1						
		Replace		0.5				78	
4316	AIR HOSE, CTIS	Inspect	0.1						
		Replace		0.4				59,78	
4317	VALVE, INVERSION	Replace		0.5				59,78	
4321	AIR DRYER	Inspect	0.1	0.1					
		Replace		1.0				57,59,78	
		Repair		0.6				57,59,78	
4702	GAUGE, AIR FILTER RESTRICTION	Replace		0.5				78	

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES

Tool or Test				
Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	O,F	ADAPTER, RADIATOR	4910-01-170-4928	J29003-A
2	0	ADAPTER, SOCKET WRENCH	5120-00-240-8702	11655788-2
2.1	0	BASE, MAGNETIC		P5646
3	н	BUSHING DRIVER SET	5120-01-391-3541	J35922
4	0	CRIMPING TOOL, TERMINAL, HAND	5120-00-165-3912	M22520/1-01
5	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-078-3809	10935497
6	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-293-1010	5120-293-1282
7	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-00-181-6754	GGG-C-1507
8	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-074-7557	FCOM19
9	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-236-9996	FCOM15
10	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1091	FCO32
11	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1119	SCO34
12	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1122	SCO40
12.1	0	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-335-1126	SCO48
13	F	CROWFOOT ATTACHMENT, SOCKET WRENCH	5120-01-348-9473	AN8508-19A
13.1	0	DISPENSER, SEALANT	5120-00-061-1283	45RCT
13.2	F	DRILL SET, STOPCOLLAR	5133-01-383-7665	1955
14	н	DRIVER KIT, BEARING	4910-01-032-3128	8S0602
14.1	0	FRAME, HAND HACKSAW	5110-00-289-9657	163-20
15	0.5		0005 04 440 0007	CA 404
16 17	O,F	GAGE, BELT TENSION	6635-01-143-2237	GA-424
17	O,F	GAGE, PRESSURE, 0-150 psi	6685-00-474-5721 5220-01-388-1460	111T1D05A01
18	F,H			J-38548-1
19 20	Н	HANDLE, DRIVE	5120-00-377-2259	J8092
20	0	HEATER, GUN TYPE, ELECTRIC	4940-00-561-1002	500A
21	F,H	HOLDING BAR, PINION	5120-01-166-0573	J3453
21.1	0			P36491
22	0	INSERTER AND REMOVER, ELECTRICAL CONTACT	5120-00-915-4588	MS3447-16
23	н	INSERTER AND REMOVER, SPRING	5120-01-388-3660	J38573
24	Н	INSERTER AND REMOVER, SPRING	5120-01-388-4436	J35923
25	н	INSERTER, BEARING AND BUSHING	5120-01-388-7841	J-38565

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
26	Н	INSERTER, BEARING AND BUSHING	5120-01-389-0658	J35921-1
27	н	INSERTER, BEARING AND BUSHING	5120-01-390-1104	J 38569
28	н	INSERTER, BEARING AND BUSHING	5120-01-390-1105	J 38568-3
29	н	INSERTER, BEARING AND BUSHING	5120-01-391-5133	J 38579
30	F,H	INSERTER, BEARING AND BUSHING	5120-01-414-7398	J38566
31	F	INSERTER, SEAL	5120-01-362-2026	1U7430
32	F	INSERTER, SEAL	5120-01-362-2027	1U7598
33	F	INSTALLER, SEAL	N/A	J38574
33.1	F	JACK, DOLLY TYPE HYDRAULIC	4910-01-396-5044	TTJ3
34	F	JACK, LEVELING SUPPORT, VEHICLE	2590-00-231-7418	10876244
35.1	0	KEY, SOCKET HEAD SCREW	5120-01-355-1670	AWML2.5
35.2	F	LIFTING SADDLE ASSEMBLY		TTJ-ZIFA
36	0	LINK, CHAIN, END	4010-00-932-5013	NAS1049-16
36.1	F	NOSE ASSEMBLY		99-3307
36.2	0	PLIERS, HOG RING STAPLE	5120-01-413-8837	0012
37	н	PULLER KIT, UNIVERSAL	5180-00-089-3660	A57QB
38	F	PULLER KIT, UNIVERSAL	5180-01-124-1903	1P3075
39	0	REMOVER, ELECTRICAL CONTACT	5120-00-148-9844	MS3448-001B
40	F	RIVETER, BLIND, HAND	5120-01-289-4310	HP-2
40.1	F	RIVETER, BLIND, PNEUMATIC	5130-01-232-4042	245
41 42	H O	RIVETER, YOKE, HAND SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-415-3558 5120-00-180-0881	J-39354 5120-00-180-0881
43	О	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-053-4158	FAM5A
44	O,F,H	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-055-1308	ANSIB18.3.2M
45	0	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-079-8032	SAM8A
46	0	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-160-8862	S 6 HBS
47	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3462	SA10A
47.1	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3483	FA5LE
48	O,F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3497	TMP12A
49	0	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3519	F23D
50	0	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3526	FP24
51	0	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3527	FP32A
52	F,H	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3536	FTX40A
53	Ο	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-367-3574	GFA8A

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test				
Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
53.1	F	SCREWDRIVER ATTACHMENT, SOCKET WRENCH	5120-01-430-5715	SZ-21
54	0	SEPARATOR, BALL JOINT	5120-01-255-8238	2287
55	F	SETTING TOOL, WINDSHIELD	5120-01-316-4995	CRL216
56	O,F	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-348-7696	SC4910-95CLA02
57	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0650	SC4910-95CLA72
58	0	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0653	SC4910-95CLA73
59	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0654	SC4910-95CLA74
60	F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0705	SC4910-95CLA31
61	F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0706	SC4910-95CLA62
62	O,F,H	SHOP EQUIPMENT, AUTOMOTIVE VEHICLE	4910-00-754-0707	SC4910-95CLA63
63	O,F	SHOP EQUIPMENT, FUEL AND ELECTRICAL	4910-00-754-0714	SC4910-95CLA01
64	0	SLING, EYE	3940-01-334-0749	EE1-202
65	F	SLING, MULTIPLE LEG	3940-00-777-5744	A170
66	н	SOCKET SET, SOCKET WRENCH	5120-01-195-0640	208FA
67	F,H	SOCKET, SOCKET WRENCH	5120-01-068-5643	5555M
68	0	SOCKET, SOCKET WRENCH	5120-01-161-5907	GLDH382
69	F	SOCKET, SOCKET WRENCH	5120-01-335-0784	TW321
70	0	SOCKET, SOCKET WRENCH	5120-01-144-5324	ANS 1913A
71	F	SOLDERING AND BRAZING OUTFIT, RESISTANCE HEATING	3439-00-460-7198	SC4940-95-CLB20
72	0	SOLDERING IRON, ELECTRIC	3439-01-036-3308	3112-S3-40W
73	н	STAND, DIFFERENTIAL CARRIER REPAIR	4910-01-085-7729	J3409-D
74	н	STAND, MAINTENANCE, AUTOMOTIVE ENGINE	4910-00-808-3372	J29109
75	F	TOOL, DISTORTER	5120-01-119-1748	5P-7312
76	O,F	TOOL KIT, AUTO FUEL AND ELECTRICAL SYSTEM REPAIR	5180-00-754-0655	SC4910-95CLA50
77	F	TOOL KIT, BODY AND FENDER	5180-00-754-0643	SC5180-90-N34
78	O,F,H	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033	SC5180-90-CL-N26
79	F,H	TOOL KIT, GENERAL MECHANIC'S	5180-00-699-5273	SC5180-90-CL-N05
80	F	TOOL KIT, INTERNAL COMBUSTION ENGINE	5180-01-356-8155	1U6680
81	н	TOOL KIT, DIESEL INJECTOR	5180-01-466-3966	143-2099
82	F	TOOL OUTFIT, HYDRAULIC	4940-01-036-5784	SC4940-95-CL-B07

Section III. TOOLS AND TEST EQUIPMENT FOR LMTV VEHICLES (Cont)

Tool or Test Equipment REF Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
83	0	TOOL, SPRING REMOVAL	5120-01-360-1918	TV940010
84	F	WRENCH SET, CROWFOOT, RATCHETING	5120-00-293-0013	GGG-W-646
85	F	WRENCH SET, SOCKET	5120-00-148-3706	ANSI-B107.5
86	0	WRENCH, TORQUE, 0-75 LB-IN.	5120-01-112-9532	TQSC6A

Section IV. REMARKS FOR THE LMTV VEHICLE

Remarks Code Remarks	
A	Battery service will be in accordance with TM 9-6140-200-14.
В	Repair of tires will be in accordance with TM 9-2610-200-14.

APPENDIX C TOOLS IDENTIFICATION LIST

Section I. INTRODUCTION

C-1. INTRODUCTION

This appendix lists common tools, supplements, and special tools/fixtures that are suggested for maintenance tasks performed at the Unit Maintenance level.

C-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item, e.g., "Bar, Pry (Item 1, Appendix C)."

b. Column (2) - Item Name. This column contains the nomenclature for the item.

c. Column (3) - National Stock Number. This is the national stock number assigned to the item which you can use to requisition it.

d. Column (4) - Part Number. This provides the Government, manufacturer, or vendor part number for the item.

e. Column (5) - Reference. This column contains the shop catalog (SC), technical manual, or other publication which provides an illustration and description of the item, or lists whether the item is fabricated.

Section II. TOOLS IDENTIFICATION LIST						
(1) ITEM	(2)	(3) NATIONAL	(4)	(5)		
NUMBER	ITEM NAME	STOCK NUMBER	PART NUMBER	REFERENCE		
1	ADAPTER, SOCKET WRENCH	5120-00-227-8088	A-A-2172	SC 4910-95-CL-A74		
2	ADJUSTING TOOL, BRAKE SHOE	5120-00-154-3029	J34061	SC 4910-95-CL-A74		
3	APRON, RUBBER	8145-00-082-6108	MIL-A-41829	SC 4910-95-CL-A74		
4	CAPS, VISE JAW	5120-00-221-1506	GGG-C-137	SC 4910-95-CL-A74		
5	DISPENSING PUMP, HAND DRIVEN	4930-00-263-9886	43D15069	SC 4910-95-CL-A74		
6	DRILL SET, TWIST	5130-00-293-0983	58	SC 4910-95-CL-A74		
7	DRILL, PORTABLE, ELECTRIC	5130-00-293-1849	W-D-661	SC 4910-95-CL-A74		
8	DRILL, TWIST	5133-01-120-3519		SC 4910-95-CL-A74		

APPENDIX C Section II. TOOLS IDENTIFICATION LIST

Section II.	TOOLS IDENTIFICATION LIST	(CONT)
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(1)	(2)	(3)	(4)	(5)
ITEM NUMBER	ITEM NAME	NATIONAL STOCK NUMBER	PART NUMBER	REFERENCE
9	FISHING TOOL, PNEUMATIC TIRE VALVE	5120-00-516-4220	991	SC 4910-95-CL-A74
10	GAGE, DEPTH, MICROMETER	5210-00-619-4045	445BZ-6RL	CTA 50-909
11	GAGE, TIRE PRESSURE	4910-01-117-2994	955	SC 4910-95-CL-A72
12	GAGE, WHEEL ALIGNMENT	5210-01-223-3701	WA361	SC 4910-95-CL-A72
13	GLOVES, RUBBER	8415-00-641-4601	ZZ-G-381	SC 4910-95-CL-A74
14	GLOVES, WELDER'S	8415-00-268-7859	A-A-50022	SC 4910-95-CL-A72
15	GOGGLES, INDUSTRIAL	4240-00-052-3776	A-A-1110	SC 4910-95-CL-A74
16	GUN, LUBRICATING	4930-00-253-2478	1142	SC 4910-95-CL-A74
17	HAMMER, HAND	5120-00-224-4130	A-A-1292	SC 4910-95-CL-A74
18	HAMMER, HAND	5120-01-065-9037	57-533	SC 4910-95-CL-A72
19	HOSE ASSEMBLY, NONMETALLIC	4720-00-356-8557	ZZ-H-461	SC 4910-95-CL-A74
20	IRON, TIRE	5120-00-765-8536	T48A	SC 4910-95-CL-A74
21	JACK, HYDRAULIC, HAND	5120-00-224-7330	D120	SC 4910-95-CL-A74
22	MULTIMETER, DIGITAL	6625-01-139-2512	T00377	SC 4910-95-CL-A74
23	MULTIPLIER, TORQUE WRENCH	5120-00-574-9318	292	SC 4910-95-CL-A72
24	PAN, DRAIN	4910-00-387-9592	450	SC 4910-95-CL-A72
25	PAN, WASH	4940-00-617-9859	5582281	SC 4910-95-CL-A72
26	PRESSURE TESTER, RADIATOR	4910-01-170-4929	J24460-01	SC 4910-95-CL-A74
27	PULLER KIT, MECHANICAL	5120-00-313-9496	1178	SC 4910-95-CL-A74
28	PULLER, BATTERY TERMINAL	5120-00-944-4268	21	SC 4910-95-CL-A74
29	RESPIRATOR, AIR FILTER	4240-00-022-2524	GGG-M-125/6	SC 4910-95-CL-A72
30	SCALE, WEIGHING	6670-00-254-4634	AAA-5-133	SC 4910-95-CL-A72
31	SLING, CARGO	1670-00-823-5043	63J4261-13	CTA 50-970
32	SLING, ENDLESS	3940-00-675-5003	PD101-96	CTA 50-970
33	SOCKET SET, IMPACT	5120-01-117-0466	4151MMY	SC 4910-95-CL-A74
34	SOCKET SET, SOCKET WRENCH	5120-01-073-2821	217FMY	SC 4910-95-CL-A72

Section II. TOOLS IDENTIFICATION LIST (CONT)

(1) (2) (3) (4) (5)					
(1) ITEM		(3) NATIONAL			
NUMBER	ITEM NAME	STOCK NUMBER	PART NUMBER	REFERENCE	
35	SOCKET SET, SOCKET WRENCH	5120-01-117-3876	221FSMY	SC 4910-95-CL-A02	
36	SOCKET, SOCKET WRENCH	5120-00-181-6813	5530	SC 4910-95-CL-A74	
37	SOCKET, SOCKET WRENCH	5120-00-232-5681	1242	SC 4910-95-CL-A74	
38	SOCKET, SOCKET WRENCH	5120-01-112-0581	SIMM190	SC 4910-95-CL-A74	
39	STE/ICE-R	4910-01-222-6589	12259266	SC 4910-95-CL-A74	
40	TAPE, MEASURING	5210-00-081-4719	GA508A	CTA 50-970	
40.1	TEST KIT, RADIATOR	4910-00-728-8227		SC 4910-95-CL-A74	
40.2	TAP AND DIE SET	5136-01-119-0005	TDM99117	SC 4910-95-CL-A72	
40.3	TAP, THREAD, CUTTING	5136-00-729-5692	B94.9 ½13 UNCHSGH3	SC 4910-95-CL-A72	
41	TESTER, ANTIFREEZE AND BATTERY	6630-00-105-1418	10425	SC 4910-95-CL-A74	
42	TOOL KIT, AUTO FUEL	5780-00-754-0655		SC 5180-95-CL-A50	
43	TOOL KIT, BLIND RIVET	5180-01-201-4978	D-100-MIL-1	SC 4910-95-CL-A72	
44	TOOL KIT, GENERAL MECHANIC'S	5180-00-177-7033		SC 5180-90-N26	
44.1	TOOL KIT, ELECTRICAL CONTACT REPAIR	5780-00-876-9336	7550526	SC 4940-95-B09	
45	TRESTLE, MOTOR VEHICLE MAINTENANCE	4910-00-251-8013	306	SC 4910-95-CL-A72	
46	VISE, MACHINIST	5120-00-293-1439	504M2	SC 4910-95-CL-A74	
47	WRENCH SET, SOCKET	5120-00-081-2305	GGG-W-641	SC 4910-95-CL-A74	
48	WRENCH SET, SOCKET	5120-00-204-1999	GGG-W-641	SC 4910-95-CL-A74	
49	WRENCH SET, SOCKET	5120-00-322-6231	51200017510	SC 4910-95-CL-A74	
50	WRENCH, ADJUSTABLE	5120-00-264-3793	2117080	SC 4910-95-CL-A72	
51	WRENCH, ADJUSTABLE, AUTOMOTIVE	5120-00-449-8083	1B7536	SC 4910-95-CL-A74	
51.1	WRENCH, BOX AND OPEN END	5120-00-228-9518	1174	SC 4910-95-CL-A74	
52	WRENCH, BOX AND OPEN END	5120-00-277-8833	1244	SC 4910-95-CL-A74	
53	WRENCH, BOX AND OPEN END	5120-00-277-8834	GGG-W-636	SC 4910-95-CL-A74	
54	WRENCH, PIPE	5120-00-277-1461		SC 4910-95-CL-A74	

(1) ITEM	(2)	(3) NATIONAL	(4)	(5)			
NUMBER	ITEM NAME	STOCK NUMBER	PART NUMBER	REFERENCE			
55	WRENCH, PIPE	5120-00-277-1485		SC 4910-95-CL-A74			
56	WRENCH, STRAP, ADJUSTABLE	5120-00-020-2947	A91C	SC 4910-95-CL-A74			
57	WRENCH, TORQUE, 0-175 lb- ft	5120-00-640-6364	1753LDF	SC 4910-95-CL-A72			
58	WRENCH, TORQUE, 0-200 lb- in.	5120-00-853-4538	F2001	SC 4910-95-CL-A72			
58.1	WRENCH, TORQUE, 0-300 lb- in.	5120-00-776-1841	2163993	SC 4910-95-CL-A74			
59	WRENCH, TORQUE, 0-600 lb- ft	5120-00-221-7983	SW130-301	SC 4910-95-CL-A72			

Section II. TOOLS IDENTIFICATION LIST (CONT)

APPENDIX D EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists expendable and durable items that you will need to operate and maintain the LMTV vehicle. This listing is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (except medical, class V repair parts, and heraldic items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

D-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the item, e.g., "Oil, Lubricating (Item 25, Appendix D).

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the item.

c. Column (3) - National Stock Number. This is the national stock number assigned to the item which you can use to requisition it.

d. Column (4) - Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number. This provides the other information you need to identify the item.

e. Column (5) - Unit of Measure. This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

(1) Item	(2) (3) National Stock		(4)	(5)
Number	Level	Number	Description	U/M
1	0	4730-00-248-9340	Adapter, Pipe to Tube (81343) 4-4 010103B	ea
1.1	0	4730-01-453-9651	Adapter, Straight, Pipe to Boss (19207) 12421890-001	ea
1.2	0	4730-01-457-4025	Adapter, Straight, Pipe to Tube (96906) MS51503B4-4	ea
1.3	0	4730-00-760-3525	Adapter, Straight, Tube to Boss (81361) C116-3-71	ea
2	0	8040-00-273-8717	Adhesive (81348) MMM-A-121	pt
3	0	8040-00-152-0063	Adhesive (81348) MMM-A-1617 TY 3	bt
4	0	8040-01-250-3969	Adhesive (05972) 242	ea
5	Ο	8040-01-117-7872	Adhesive (04963) 08031	tu
6	Ο	8040-00-117-8510	Adhesive (71984) 3145 RTV Clear	tu
7	Ο	8040-00-776-9602	Adhesive (73168) 80055-31	kt
8	0	8040-00-118-2695	Adhesive (72799) RTV162	kt

(1) Item	(2)	(3) National Stock	(4)	(5)
Number	Level	Number	Description	U/M
9	0	8040-01-446-7842	Adhesive (01139) RTV123	са
10	0	8040-01-331-7473	Adhesive (81349) (MIL-A-46106 GP3TY1)	
11	0	8040-01-331-7470	Adhesive (81349) (MIL-A-46106 GP1TY1)	tu
11.1	0	8040-00-728-3088	Adhesive (78500) 1199-T-3842 6 oz	kt
12	С	6850-00-174-1806	Antifreeze, Arctic Type (81349) (MIL-A-11755) 55 gl drum	dr
13	С	6850-01-441-3218 6850-01-441-3221 6850-01-441-3257	Antifreeze, Multi-Engine Type (58536) (A-A-52624A) Type I (Green) – 1 gal Type I (Green) - 5 gal Type II (Purple) - 5 gal	dr gal co co
14	0	8030-00-597-5367	Antiseize Compound (81349) (MIL-A-907)	lb
14.1	0	5110-00-277-4588	Blade, Hand Hacksaw (54940) 31-51024	ea
14.2	0	5340-01-454-4336	Bracket, Angle (0FW39) 12421859-001	ea
15	0	5340-00-450-5718	Cap and Plug Set 10935405	ea
15.1	0	5340-01-423-0972	Clamp, Loop (18076) S630H-20	ea
16	0	6850-00-926-2275	Cleaning Compound, Windshield (81349) O-C-1901 16 oz bottle	
17	0	7920-00-044-9281	Cloth, Cleaning (81349) (MIL-C-85043)	
18	0	8030-00-062-6950 8030-01-149-1731 8030-00-837-6557 8030-00-903-0931	Corrosion Preventive Compound (81349) (MIL-C-16173) Grade 1 - 1 qt can Grade 2 - 1 qt can Grade 3 - 1 pt can Grade 4 - 1 pt can	
19	0	8030-00-033-4291	Corrosion Preventive Compound (MIL-C-82594) 8 oz can	bt
19.1	0	2540-01-460-8048	Cover, Seat, Vehicular (27797) WM1059	ea
19.2	0	2540-01-463-8394	Cover, Seat, Vehicular (0FW39) WM1058	ea
20	С	9150-00-664-0047	Damping Fluid (81348) VV-D-1078 1 lb can	
21	Ο	7520-01-209-1152	Dispenser, Pressure Sensitive Adhesive Tape (75037) STD-0-9	
21.1	0	4730-01-454-1233	Elbow, Pipe to Boss (19207) 12421891-001	ea
21.2	0	4730-00-863-9098	Elbow, Pipe to Tube (30780) 4VBTXB	ea
22	0	5330-01-325-6993	Gasket Forming Compound (05972) 515	ea
22.1	0		Gasket Maker, RTV Silicone (05972) 5699	ea

(1) (2) Item		(3) National Stock	(4) Description	
Number				
23	С	9150-01-197-7688 9150-01-197-7690 9150-01-197-7689 9150-01-197-7692	Grease, Automotive and Artillery (GAA) (81349) (MIL-G-10924) 2-1/4 oz tube 1.75 lb can 6.5 lb can 35 lb can	tu cn cn cn
24	Ο	9150-00-530-6814	Grease, Wire Rope-Exposed Gear (81349) (MIL-G-18458) 35 lb can	cn
25	Ο	9150-00-935-4018	Grease, Molybenum Disulfide (81349) (MIL-G-21164) 14 oz cartridge	ca
25.1	Ο	4720-00-988-3842	Hose Assembly, Nonmetallic (50599) R25679-1	ea
25.2	0	4720-01-384-0995	Hose Assembly, Nonmetallic (19207) 12421858-006	ea
25.3	0	4720-01-453-9530	Hose Assembly, Nonmetallic (0FW39) 12421857	ea
25.4	0	4720-01-469-9208	Hose Assembly, Nonmetallic (19207) 12418004-002	ea
26	С	9150-00-252-6383 9150-00-223-4134	Hydraulic Fluid A (MIL-H-5606) 1 qt can 1 gl can	
27	Ο	7510-00-145-0559	Ink, Marking Stencil (MIL-I-43553)	
28	Ο	7510-01-386-0787	Inking Pad, Rubber Stamp	ea
29	0	9150-01-360-1905	Insulating Compound, Electrical	tu
30	0	5970-00-838-5951	Insulation Sleeving, Electrical (06090) CRN3-16BLACK	ft
30.1	0	5970-01-378-3018	Insulation Sleeving, Electrical (06090) ATUM-1/4-0-4FT	lg
31	0	5970-01-422-3579	Insulation Sleeving, Electrical (06090) ATUM 1/2 4 ft length	lg
32	0	1650-00-166-4834	Lockwire (90166) 68A32	ea
33	0	9150-01-360-1905	Lubricant, Solid Film (MIL-L-46147) 16 oz can	
34	0	4730-00-019-0608	Nipple, Pipe	ea
35	0	4730-00-825-7304	Nipple, Tube MS51501B4	ea
36	0	5310-00-059-4265	Nut, Plain, Hex	ea

(1)	(2)		(3) National Stock	(4)	(5)
Item Number	Level	National Stock	Description	U/M	
36.1	С		Oil, Commercial Burner Fuel, Grade FO-1 (ASTM D396)		
36.2	С		Oil, Commercial Burner Fuel, Grade FO-2 (ASTM D396)		
37	С	9140-00-286-5282 9140-00-286-5283 9140-00-286-5284 9140-00-286-5285	Oil, Fuel Diesel, DF-A, Arctic (VV-F-800) (81348) 5 gl can Bulk 55 gl drum, 16 gauge 55 gl drum, 18 gauge	cn gl dr dr	
38	С	9140-00-286-5286 9140-00-286-5287 9140-00-286-5288 9140-00-286-5289	Oil, Fuel, Diesel, DF-1, Winter (VV-F-800) (81348) Bulk 5 gl can 55 gl drum, 16 gauge 55 gl drum, 18 gauge	gl cn dr dr	
39	С	9140-00-286-5294 9140-00-286-5295 9140-00-286-5296 9140-00-286-5297	Oil, Fuel, Diesel, DF-2, Regular (VV-F-800) (81348) Bulk Can 55 gl drum, 16 gauge 55 gl drum, 18 gauge	gl cn dr dr	
40	С	9150-00-402-2372 9150-00-491-7197	Oil, Lubricating, Arctic (MIL-L-46167) 5 gl can 55 gl drum	cn dr	
41	С	9150-00-035-5390 9150-00-035-5391	Oil, Lubricating, Gear, GO 75W (MIL-L-2105C) 1 qt can 5 gl can	cn cn	
42	С	9150-01-035-5392 9150-01-035-5393 9150-01-035-5394	Oil, Lubricating, Gear, 80W-90 (MIL-L-2105C) 1 qt can 5 gl can 55 gl drum, 16 gauge	qt cn dr	
43	С	9150-00-183-7807 9150-00-186-6668 9150-00-191-2772	Oil, Lubricating, OE/HDO 10 (MIL-L-2104) Bulk 5 gl can 55 gl drum	gl cn dr	
44	С	9150-00-189-6727	Oil, Lubricating, OE/HDO 10W (MIL-L-2104) 1 qt can	cn	
45	С	9150-01-152-4117 9150-01-152-4118 9150-01-152-4119	Oil, Lubricating, OE/HDO 15W-40 (MIL-L-2104) 1 qt can 5 gl can 55 gl drum	cn cn dr	

(1)	(2)	(3) National Stock	(4)	(5)
ltem Number	Level	National Stock	Description	U/M
46	С	9150-00-183-7808 9150-00-186-6681 9150-00-188-9858 9150-00-189-6729	Oil, Lubricating, OE/HDO 30 (SAE 30) (MIL-L-2104) Bulk 1 qt can 5 gl can 55 gl drum, 18 gauge	gl cn cn dr
47	С	9150-00-405-2987 9150-00-189-6730 9150-00-188-9862	Oil, Lubricating, OE/HDO 40 (MIL-L-2104) Bulk 1 qt can 5 gl can	gl cn cn
48	0	5350-00-067-7639	Paper, Abrasive (28124) 02347 pg contains 100 sheets	pg
49	Ο	8010-01-146-2650	Polyurethane Coating (MIL-C-46168)	kt
50	0	8030-00-181-8372	Primer, Sealing Compound (05972) 747-56	cn
51	С	7920-00-205-1711	Rag, Wiping A-A-531	be
52		DELETED		
53	0	4020-00-855-2767	Rope, Fibrous (MIL-R-17343) 75 ft	
54	0	7520-00-634-2442	Rubber Stamp Set, Fixed Type	ea
55	0	5330-01-337-1108	Rubber Strip (12624) V4062	ft
56	0	5330-01-181-6482	Rubber Strip (19207) 12328583-3	
56.1	0	5305-00-021-3740	Screw, Cap, Hex Hd (97942) 645A560H43	ea
56.2	0	5305-01-299-4602	Screw, Cap, Hex Hd (64678) 000933 006058	ea
56.3	0	5305-01-454-5938	Screw, Cap, Hex Hd (19207) 12419954-093	ea
57	0	5305-01-296-0019	Screw, Cap, Socket Head (06888) SHCM75275 50 ct box	bx
58	0	1015-01-255-4144	Sealant, Pipe, Teflon (19207) 12297953 50 ml tube	tu
59	0	8030-00-081-2327	Sealing Compound (05972) 079-21	bx
60	0	8030-00-111-2762	Sealing Compound (05972) 290-31	bt
61	0	8030-00-133-3164	Sealing Compound (05972) 571-31	bt
62	0	8030-00-148-9833	Sealing Compound (05972) 271-21	bx
63	0	8030-00-204-9149	Sealing Compound (05972) 592-41	tu
64	0	8030-00-656-1426	Sealing Compound (81349) (MIL-S-45180)	pt
65	0	8030-01-025-1692	Sealing Compound (05972) 242-41 (MIL-S-46163)	bt
66	0	8030-01-088-8140	Sealing Compound (52571) 9001512-0011	bt

(1)	(2)	(3)	(4)	(5)
ltem Number	Level	National Stock Number	Description	U/M
67	0	8030-00-753-5006 8030-00-753-4599 8030-00-723-2746 8030-00-685-0915	Sealing Compound (81349) (MIL-S-8802TY2CLB-2) 2 oz cartridge 6 oz can 12 oz can 24 oz can	ca kt kt kt
68	О	8030-01-155-3238	Sealing Compound (11083) 6V6640	ml
68.1	0	8030-01-371-8405	Sealing Compound (83574) PR-1422 B-1/2 6 oz	ca
68.2	0	8030-01-255-4144	Sealant (19207) 12297953	tb
68.3	0	8030-00-956-2397	Sealing Compound 104	tb
69	С	7930-00-634-3935	Soap, Laundry (81348) P-S-1792	lb
70	0	3439-00-006-7764	Solder, Tin Alloy (81348) SN63WRAP3	sl
71	С	6850-00-281-1985 6850-00-664-5685	Solvent, Dry Cleaning SD (P-D-680) 1 gl can 1 qt can	cn cn
71.1	0		Strap, Tiedown, Electrical Components (06383) PLP2S	ea
72	О		Tape, Adhesive (0SHR6) 70P00002	ea
72.1	0	9320-01-244-0046	Tape, Adhesive, Rubber (18876) MIS-41157-08 180 ft	ro
73	0	8030-00-889-3534	Tape, Antiseizing (81349) (MIL-T-27730)	
74	0	5640-00-103-2254	Tape, Duct (39428) 1791K70	ea
75	0	5970-00-644-3167	Tape, Insulation, Electrical (80063) TL83	ro
75.1	0	4730-00-138-8050	Tee, Pipe (81343) 8-8-8 140424C	ea
76	0	5975-01-379-4997	Ties, Cable, Plastic (06383) PLT 35-C-O	hd
	С		Turbine Fuel, Aviation, Kerosene Type (MIL-T-83133), Grade JP-8	
	С		Turbine Fuel, (MIL-F-16884), (NATO Code No. F75 or F-72)	
		9140-00-255-7764 9140-00-273-2378 9140-00-273-2377	5 gl can 55 gl drum 1 gl can	cn dr cn
	С	9130-00-273-2380	Turbine Fuel, (MIL-F-5624), Grade JP-4 (NATO Code No. F40) Drum, 16 gage	dr
	С	9130-01-305-5596 9130-01-250-6353	Turbine Fuel, (MIL-T-5624), Grade JP-5 (NATO Code No. F-44) Bulk Drum, 16 gage	gl dr
77	0	6145-01-148-2263	Wire, Electrical (80009) 175-0825-00 50 ft	ft

APPENDIX E ILLUSTRATED LIST OF MANUFACTURED ITEMS

Section I. INTRODUCTION

E-1. INTRODUCTION

This appendix includes complete instructions for manufacturing or fabricating authorized items locally. All bulk materials needed to manufacture an item are listed by part number or specification number. Figures are provided as needed. See standards and specifications DoD-Std-00100D(AR) and ANSI Y14.5M1982 for required details.

Section II. MANUFACTURED ITEMS INDEX

ITEM NAME/PART NUMBER	ITEM DESCRIPTION	PARA NO.
Brake Adjusting Tool Support		E-2
Brake Plunger Seal Driver		E-3
Cab Support Tool		E-4
Headlight Adjustment Screen		E-5
M1079 Blackout Shield Seals		E-6
M1079 Door Gaskets		E-7
M1079 Window Sash Glazing Seals		E-8
Relay Test Wire		E-9
Wheel Bearing Shim Tool Rest		E-10
12414690-001	Pneumatic Tube	E-11
12414690-002	Pneumatic Tube	E-11
12414690-004	Pneumatic Tube	E-11
12414690-005	Pneumatic Tube	E-11
12414690-010	Pneumatic Tube	E-11
12414690-101	Pneumatic Tube	E-11
12414690-102	Pneumatic Tube	E-11
12414690-103	Pneumatic Tube	E-11
12414690-104	Pneumatic Tube	E-11
12414690-105	Pneumatic Tube	E-11
12414690-106	Pneumatic Tube	E-11
12414690-107	Pneumatic Tube	E-11
12414690-108	Pneumatic Tube	E-11
12414690-109	Pneumatic Tube	E-11
12414690-112	Pneumatic Tube	E-11
12414690-113	Pneumatic Tube	E-11
12414690-115	Pneumatic Tube	E-11
12414690-117	Pneumatic Tube	E-11
12414690-118	Pneumatic Tube	E-11
12414690-119	Pneumatic Tube	E-11
12414690-120	Pneumatic Tube	E-11
12414690-121	Pneumatic Tube	E-11
12414690-122	Pneumatic Tube	E-11
12414690-123	Pneumatic Tube	E-11
12414690-124	Pneumatic Tube	E-11
12414690-125	Pneumatic Tube	E-11
12414690-126	Pneumatic Tube	E-11
12414690-127	Pneumatic Tube	E-11
12414690-201	Pneumatic Tube	E-11
12414690-202	Pneumatic Tube	E-11

Section II. MANUFACTURED ITEMS INDEX (CONT)

ITEM NAME/PART NUMBER ITEM DESCRIPTION PARA NO. 12414690-203 Pneumatic Tube E-11 12414690-205 Pneumatic Tube E-11 Pneumatic Tube 12414690-206 E-11 Pneumatic Tube E-11 12414690-207 12414690-208 Pneumatic Tube E-11 Pneumatic Tube 12414690-209 E-11 12414690-210 Pneumatic Tube E-11 Pneumatic Tube 12414690-211 E-11 Pneumatic Tube 12414690-212 E-11 12414690-213 Pneumatic Tube E-11 Pneumatic Tube E-11 12414690-214 12414690-215 Pneumatic Tube E-11 Pneumatic Tube 12414690-216 E-11 Pneumatic Tube 12414690-217 E-11 Pneumatic Tube E-11 12414690-218 12414690-219 Pneumatic Tube E-11 12414690-220 Pneumatic Tube E-11 Pneumatic Tube E-11 12414690-221 Pneumatic Tube 12414690-222 E-11 Pneumatic Tube E-11 12414690-223 12414690-224 Pneumatic Tube E-11 Pneumatic Tube 12414690-225 E-11 Pneumatic Tube E-11 12414690-226 12414690-227 Pneumatic Tube E-11 12414690-228 Pneumatic Tube E-11 Pneumatic Tube E-11 12414690-229 12414690-230 Pneumatic Tube E-11 Pneumatic Tube 12414690-231 E-11 12414690-301 Pneumatic Tube E-11 Pneumatic Tube 12414690-302 E-11 Pneumatic Tube E-11 12414690-303 12416381P1 Non-Metallic Electrical Cable Conduit E-12 12416381P10 Non-Metallic Electrical Cable Conduit E-12 12416381P11 Non-Metallic Electrical Cable Conduit E-12 Non-Metallic Electrical Cable Conduit E-12 12416381P12 Non-Metallic Electrical Cable Conduit 12416381P13 E-12 12416381P14 Non-Metallic Electrical Cable Conduit E-12 12416381P15 Non-Metallic Electrical Cable Conduit E-12 Non-Metallic Electrical Cable Conduit E-12 12416381P16 12416381P17 Non-Metallic Electrical Cable Conduit E-12 Non-Metallic Electrical Cable Conduit 12416381P2 E-12 E-12 12416381P20 Non-Metallic Electrical Cable Conduit 12416381P21 Non-Metallic Electrical Cable Conduit E-12 Non-Metallic Electrical Cable Conduit 12416381P22 E-12 Non-Metallic Electrical Cable Conduit E-12 12416381P23 Non-Metallic Electrical Cable Conduit 12416381P26 E-12 12416381P3 Non-Metallic Electrical Cable Conduit E-12 Non-Metallic Electrical Cable Conduit E-12 12416381P30 Non-Metallic Electrical Cable Conduit 12416381P32 E-12 Non-Metallic Electrical Cable Conduit E-12 12416381P34 12416381P35 Non-Metallic Electrical Cable Conduit E-12

ITEM NAME/PART NUMBER

12416381P36
12416381P37
12416381P38
12416381P4
12416381P5
12416381P6
12416381P7
12416381P8
12416381P9
12418037
12418460-001
12418460-002
12418763
12420196
12420197-001
12420197-002
12420197-003
12420197-004
12420197-005
12420197-006
12420198-001
12420198-002
12420308-457
12420308-760
12420489
3256-H-1048
3256-K-1051
Dimmer Switch Test Wire
Purge Valve Tool

PARA NO.

Non-Metallic Electrical Cable Conduit	E-12
Non-Metallic Electrical Cable Conduit	E-12
Steering Gear Return Hose	E-13
Transmission Oil Cooler Hose	E-13
Transmission Oil Cooler Hose	E-13
Lanyard Assembly	E-14
Lanyard Assembly	E-14
Non-Metallic Vent Air Hose	E-15
Personnel Heater Air Duct Hose	E-16
Personnel Heater Air Duct Hose	E-16
Block Seal	E-17
CTIS Seal Driver	E-18
Wheel Hub Grease Seal Driver	E-19
	E-20
	E-21

ITEM DESCRIPTION

Section III. MANUFACTURED ITEMS

E-2. BRAKE ADJUSTING TOOL SUPPORT

Make the brake adjusting tool support from 0.134 in. (3.4 mm) flat steel stock according to the following instructions. Refer to the parts list and **Figure E-1**. **Brake Adjusting Tool Support** for details.

ltem	Part Number	Material Description	Size	Qty
1	N/A	Steel, ASTM A569 Sheet, Hot Rolled	6.0 in. (152.4 mm) x 6.0 in. (152.4 mm) x 0.134 in. (3.4 cm)	2

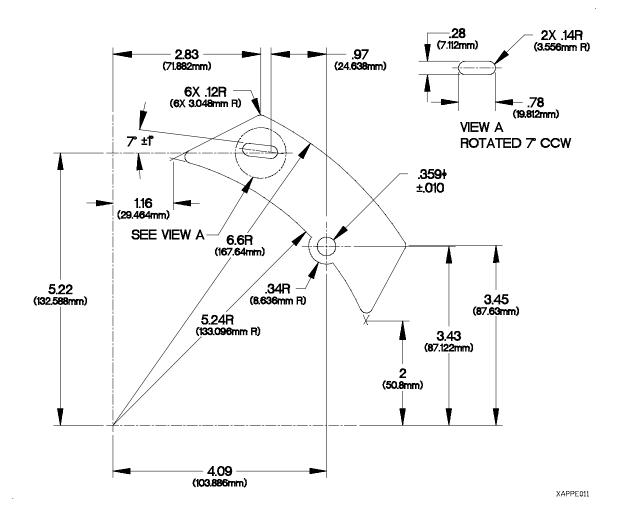


Figure E-1. Brake Adjusting Tool Support

- a. All dimensions are in inches (millimeters).
- b. Cut steel sheet as shown by dimensions on Figure E-1. Brake Adjusting Tool Support.
- c. De-burr and remove sharp edges.

E-3. BRAKE PLUNGER SEAL DRIVER

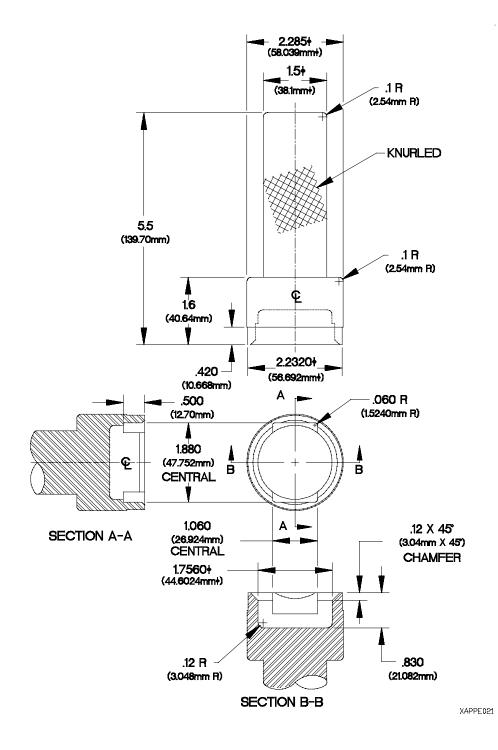


Figure E-2. Brake Plunger Seal Driver

- a. All dimensions are in inches (millimeters).
- b. Manufacture from round steel stock.
- c. De-burr and remove sharp edges.

E-4. CAB SUPPORT TOOL

Make the cab support tool from .38 inch (.96 cm) flat steel stock and angle iron stock according to the following instructions. Refer to the parts list and **Figure E-3. Cab Support Tool Strut and Cab Rest** for details.

Item	Part Number	Material Description	Size	Qty
1	N/A	Steel, Flat Bar	4.0 in. (10.2 cm) X 33.38 in. X (84.8 cm) X 0.38 in. (0.96 cm)	1
2	N/A	Steel, Flat Bar	4.0 in. (10.2 cm) X 12.0 in. (30.5 cm) X 0.38 in. (0.96 cm)	1
3	N/A	Angle Iron	2.0 in. (5.1 cm) X 2.0 in. (5.1 cm) X 3.5 in. (8.9 cm)	2
4	H.S.105VW-1	Insulgrip, CSA 105 C		

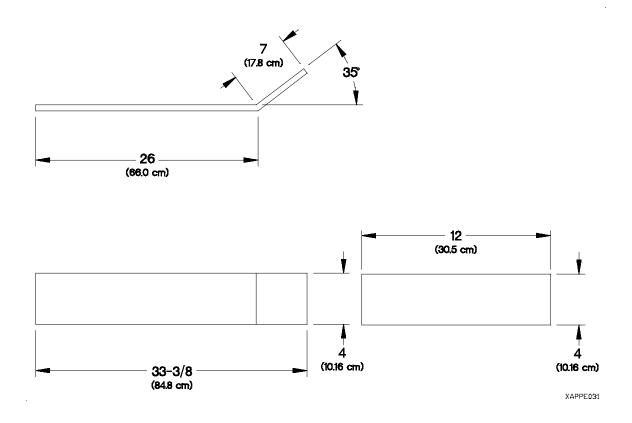


Figure E-3. Cab Support Tool Strut and Cab Rest

- a. All dimensions are in inches (centimeters).
- b. Cut cab support tool strut (1) from steel flat bar and bend to shape as shown in Figure E-3. Cab Support Tool Strut and Cab Rest.
- c. Cut cab support tool cab rest (2) from steel flat bar.
- d. De-burr and remove sharp edges.

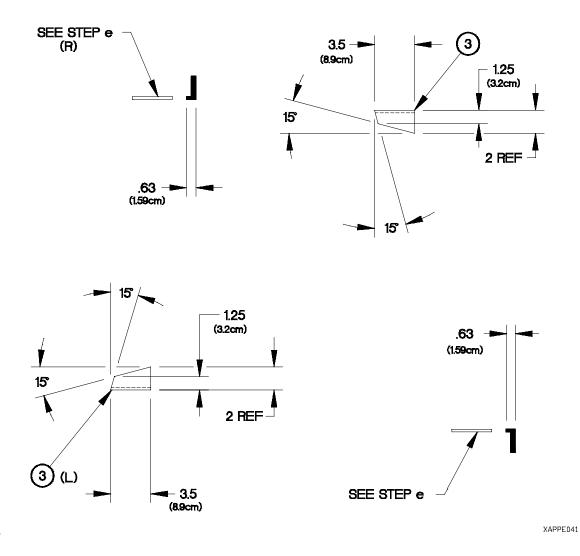
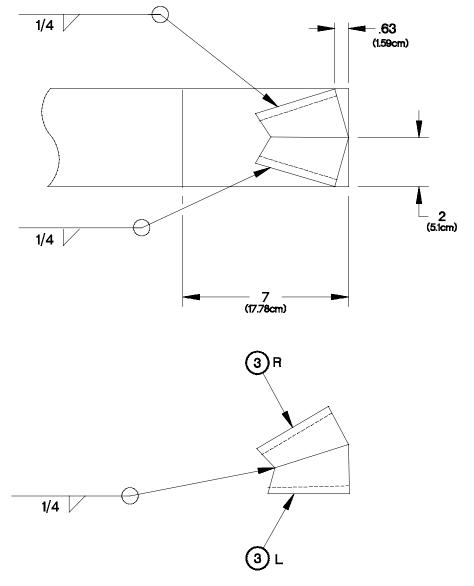


Figure E-4. Cab Support Tool Seat

- e. Remove flange side of cab support tool seats (3) as shown in Figure E-4. Cab Support Tool Seat.
- f. Cut cab support tool seats (3) L and (3) R according to dimensions and left\right orientation shown on **Figure E-4**. **Cab Support Tool Seat**.
- g. De-burr and remove sharp edges.

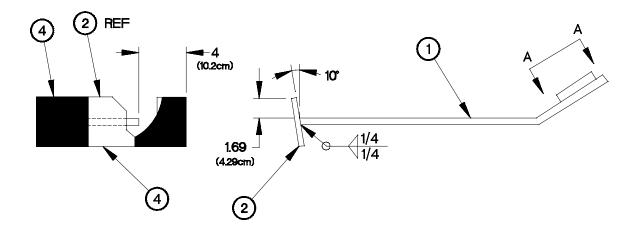
E-4. CAB SUPPORT TOOL (CONT)



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Figure E-5. Cab Support Tool Seat Layout

- h. Position and clamp cab support tool seats (3) L and (3) R together as shown by dimensions on Figure E-5. Cab Support Tool Seat Layout.
- i. Weld cab support tool seat (3) L to cab support tool seat (3) R as identified on assembly table and Figure E-5. Cab Support Tool Seat Layout.
- j. Position and clamp cab support tool seats (3) L and (3) R to cab support tool strut (1) as shown by dimensions on Figure E-5. Cab Support Tool Seat Layout.
- k. Weld items clamped in step (f) as shown in Figure E-5. Cab Support Tool Seat Layout.
- I. De-burr and remove sharp edges.



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Figure E-6. Cab Support Tool Assembly

- m. Position and clamp cab support tool strut (1) to cab support tool cab rest (2) as shown by dimensions on Figure E-6. Cab Support Tool Assembly, before insulgrip (4) is applied.
- n. Weld cab support tool strut (1) to cab support tool cab rest (2).
- o. Apply Insulgrip (4) to cab support tool cab rest (2) as described on material container.

E-5. HEADLIGHT ADJUSTMENT SCREEN

The headlight adjustment screen may be drawn on any vertical surface at least 50 in. (127 cm) high and 100 in. (254 cm) wide.

- a. Draw two vertical lines (1) 50 in. (127 cm) high and 90.6 in. (230 cm) apart (centered on headlight adjustment screen).
- b. Locate two points 40 in. (101.6 cm) from floor and 13 in. (33 cm) toward the center from each vertical line (1).
- c. Draw vertical line (2) about 3-5 in. (8-13 cm) centered on each of the two points.
- d. Draw horizontal line (3) about 3-5 in. (8-13 cm) centered on each of the two points.
- e. Measure out 4 in. (10 cm) along each vertical line (2) and horizontal line (3) from each of the two points to make 8 in. (20 cm) squares (4).

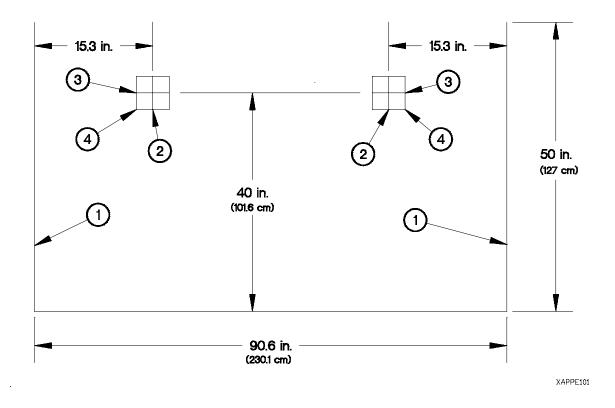


Figure E-7. Headlight Adjustment Screen

E-6. M1079 BLACKOUT SHIELD SEALS

Fabricate the M1079 blackout shield seals according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
Blackout Shield Header Seal	942P00001	0SHR6	28-3/4 in. (730 mm)
Blackout Shield Jamb Seal (van body serial numbers 001 through 190)	942P00001	0SHR6	63-3/8 in. (1610 mm)
Blackout Shield Jamb Seal (van body serial number 191 and higher)	942P00001	0SHR6	33 in. (838 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.

E-7. M1079 DOOR GASKETS

Fabricate the M1079 door gaskets according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
LH Door Gasket	12416417	19207	214 in. (5435 mm)
RH Door Gasket	12416417	19207	197 in. (5004 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.
- c. Glue ends of gasket to each other using adhesive MIL-A-46106 GP1TY1 (Item 11, Appendix D).

E-8. M1079 WINDOW SASH GLAZING SEALS

Fabricate the M1079 window sash glazing seals according to the following steps. Refer to the following parts list for materials.

Description	Material Part Number	CAGE Code	Cut Length
Window Sash Top/Bottom Seal	941P00001	0SHR6	26-13/16 in. (681 mm)
Window Sash Side Seal (van body serial numbers 001 through 190)	941P00001	0SHR6	28-1/2 in. (724 mm)
Window Sash Side Seal (van body serial number 191 and higher)	941P00001	0SHR6	12-11/16 in. (322 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut seal material to the specified length using a fine-toothed hacksaw or other suitable cutting tool.

NOTE

Cut miters so that short side of seal faces toward glass.

c. Cut 45-degree miters on ends of window sash seals.

E-9. RELAY TEST WIRE

Fabricate the relay test wire according to the following steps. Refer to the following parts list for materials.

Material Description	National Stock Number	Cut Length
Wire, Electrical (MIL-W-16878)	6145-00-330-3318	6 in. (152 mm)

- a. Dimensions are in inches (millimeters).
- b. Cut a length of wire six inches (152 mm) long.
- c. Remove approximately 3/4 in. (19 mm) of electrical insulation from each end of wire.

E-10. WHEEL BEARING SHIM TOOL REST

Fabricate the wheel bearing shim tool rest according to the following steps. Refer to the following parts list for materials.

Part Number	National Stock Number	Description
QQ-T-570	9510-00-866-1037	Bar, Metal

- a. Dimensions are in inches (millimeters).
- b. Cut metal bar to 9.0 inches (228.6 mm) long.
- c. De-burr and remove sharp edges from ends of metal bar.

E-11. PNEUMATIC TUBES FABRICATION

Cut pneumatic tubes from bulk tubing stock listed **Table E-1**. **Pneumatic Tube Lengths**. Use a fine-toothed hacksaw or suitable cutting device and cut tubing to required length.

- • - ·	Bulk Tubing	Cut Le	ength
Tube Part Number	Part Number	inches	cm
12414690-001	NT-100-4 (79470)	18.1	46.0
12414690-002	NT-100-4 (79470)	16.0	40.6
12414690-004	NT-100-4 (79470)	74.8	190.0
12414690-005	NT-100-4 (79470)	69.7	177.0
12414690-010	NT-100-4 (79470)	180.0	457.2
12414690-101	J844TYBSIZE 3/8 (81343)	18.0	45.7
12414690-102	J844TYBSIZE 3/8 (81343)	35.4	90.0
12414690-103	J844TYBSIZE 3/8 (81343)	20.9	53.0
12414690-104	J844TYBSIZE 3/8 (81343)	13.8	35.0
12414690-105	J844TYBSIZE 3/8 (81343)	11.8	30.0
12414690-106	J844TYBSIZE 3/8 (81343)	20.5	52.0
12414690-107	J844TYBSIZE 3/8 (81343)	39.0	99.0
12414690-108	J844TYBSIZE 3/8 (81343)	15.4	39.0
12414690-109	J844TYBSIZE 3/8 (81343)	23.0	58.4
12414690-112	J844TYBSIZE 3/8 (81343)	80.0	198.0
12414690-113	J844TYBSIZE 3/8 (81343)	11.4	29.0
12414690-115	J844TYBSIZE 3/8 (81343)	82.8	210.2
12414690-117	J844TYBSIZE 3/8 (81343)	156.5	397.5
12414690-118	J844TYBSIZE 3/8 (81343)	11.8	30.0
12414690-119	J844TYBSIZE 3/8 (81343)	269.5	684.5
12414690-120	J844TYBSIZE 3/8 (81343)	11.9	30.2
12414690-121	J844TYBSIZE 3/8 (81343)	43.0	109.2
12414690-122	J844TYBSIZE 3/8 (81343)	44.1	112.0
12414690-123	J844TYBSIZE 3/8 (81343)	259.4	659.0
12414690-124	J844TYBSIZE 3/8 (81343)	288.2	732.0
12414690-125	J844TYBSIZE 3/8 (81343)	10.8	27.3
12414690-126	J844TYBSIZE 3/8 (81343)	17.0	43.2
12414690-127	J844TYBSIZE 3/8 (81343)	17.0	43.2

Table E	E-1.	Pneumatic	Tube	Lengths
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E-11. PNEUMATIC TUBES FABRICATION (CONT)

	Bulk Tubing	Cut L	ength
Tube Part Number	Part Number	inches	cm
12414690-201	C608-100BLK (13174)	14.8	37.5
12414690-202	C608-100BLK (13174)	14.0	35.7
12414690-203	C608-100BLK (13174)	6.5	16.5
12414690-205	C608-100BLK (13174)	14.5	36.8
12414690-206	C608-100BLK (13174)	14.9	37.7
12414690-207	C608-100BLK (13174)	15.5	39.5
12414690-208	C608-100BLK (13174)	6.7	17.0
12414690-209	C608-100BLK (13174)	19.5	49.5
12414690-210	C608-100BLK (13174)	15.5	39.3
12414690-211	C608-100BLK (13174)	8.0	20.3
12414690-212	C608-100BLK (13174)	16.9	43.0
12414690-213	C608-100BLK (13174)	118.5	301.0
12414690-214	C608-100BLK (13174)	124.0	315.0
12414690-215	C608-100BLK (13174)	163.0	414.0
12414690-216	C608-100BLK (13174)	160.0	406.4
12414690-217	C608-100BLK (13174)	62.6	159.0
12414690-218	C608-100BLK (13174)	119.8	304.2
12414690-219	C608-100BLK (13174)	69.0	175.3
12414690-220	C608-100BLK (13174)	45.5	115.6
12414690-221	C608-100BLK (13174)	12.6	32.0
12414690-222	C608-100BLK (13174)	5.5	14.0
12414690-223	C608-100BLK (13174)	14.6	37.1
12414690-224	C608-100BLK (13174)	170.0	431.8
12414690-225	C608-100BLK (13174)	174.0	442.0
12414690-226	C608-100BLK (13174)	103.5	263.0
12414690-227	C608-100BLK (13174)	32.8	83.2
12414690-228	C608-100BLK (13174)	3.5	8.9
12414690-229	C608-100BLK (13174)	62.2	158.1
12414690-230	C608-100BLK (13174)	14.6	37.0
12414690-231	C608-100BLK (13174)	60.5	153.7
12414690-301	PFT-10B-BLK-100 (61424)	19.0	48.3
12414690-302	PFT-10B-BLK-100 (61424)	56.0	142.2
12414690-303	PFT-10B-BLK-100 (61424)	118.1	300.0

Table E-1. Pneumatic Tube Lengths (Cont)

E-12. NON-METALLIC ELECTRICAL CABLE CONDUIT FABRICATION

Make conduit to cover electrical cables described on 1241638 from bulk tube stock listed in **Table E-2. Non-Metallic Electrical Cable Conduit Lengths**. Use a fine-toothed hacksaw or suitable cutting device and cut hose/tube to required length.

		Cut L	ength
Tube Part Number	Bulk Tube Part Number	inch	cm
12416381P1	49008	8.9	22.6
12416381P10	49008	17.8	45.2
12416381P11	49008	29.9	75.9
12416381P12	49008	33.0	83.8
12416381P13	49008	13.9	35.3
12416381P14	49008	4.0	10.2
12416381P15	49008	17.4	44.2
12416381P16	49008	3.2	8.1
12416381P17	49008	4.5	11.4
12416381P2	49008	16.2	41.1
12416381P20	27413	32.8	83.3
12416381P21	27413	9.2	23.4
12416381P22	27413	8.0	20.3
12416381P23	27413	23.3	59.2
12416381P26	49008	2.5	6.4
12416381P3	27413	7.3	18.5
12416381P30	49007	17.0	43.2
12416381P32	49005	1.7	4.3
12416381P34	49005	20.7	52.6
12416381P35	49005	21.8	55.4
12416381P36	49005	5.5	14.0
12416381P37	49005	8.0	20.3
12416381P38	49008	3.7	9.4
12416381P4	49008	12.0	30.5
12416381P5	49008	26.0	66.0
12416381P6	49008	7.7	19.6
12416381P7	49008	26.7	67.8
12416381P8	49008	5.2	13.2
12416381P9	49008	16.8	42.7

Table E-2. Non-Metallic Electrical Cable Conduit Lengths

E-13. STEERING GEAR RETURN HOSE AND TRANSMISSION OIL COOLER HOSES FABRICATION

Cut the following hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

		Cut L	ength
Hose Part Number	Bulk Hose Part Number	inches	cm
12418037	A110 (30327)	75.5	191.7
12418460-001	MS521302B110360 (96906)	17.5	44.4
12418460-002	MS521301A206R (96906)	16.0	40.6

E-14. LANYARD ASSEMBLIES P/N 12418763 AND 12420196 FABRICATION

Make the following lanyard assemblies from bulk cable material, sleeves, and tab material and assemble according to **Figure E-8. Lanyard Assembly**. The following parts list identifies part numbers and lengths of cut pieces.

Item	Part Number	Material Description	Size	Qty
1	MIL-W-83420 Type 1, Comp B	1/16 in. stranded wire cable	4 in. (102 mm)	1
2	MS51844-22	Sleeve		2
3	N/A	Tab, Stainless Steel ASTM A617	.06 in. (16 cm) X .37 in. (9.5 mm) X 1.25 in. (32 mm)	1

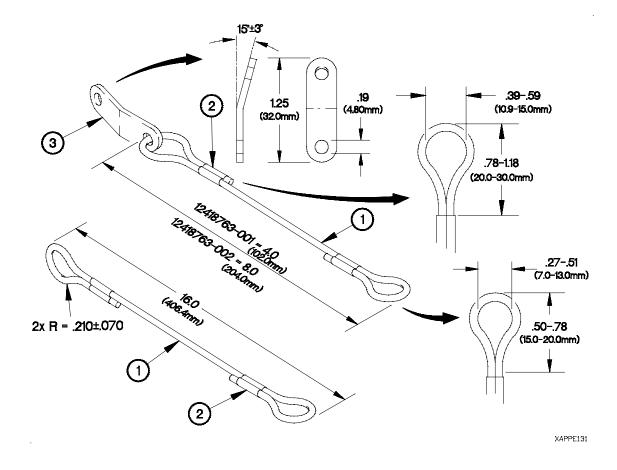


Figure E-8. Lanyard Assembly

- a. All dimensions are in inches (millimeters).
- b. Make from bulk cable and flat steel material as identified in parts list.
- c. Drill two 0.19 in. (4.8 mm) diameter holes through tab material as shown on Figure E-14. Lanyard Assembly.
- d. De-burr and remove sharp edges.
- e. Bend tab as shown on Figure E-14. Lanyard Assembly.
- f. Form loops on cable ends and insert sleeve material over cable on one end of cable and over cable and through sleeve at other end of cable as shown in Figure E-14. Lanyard Assembly.
- g. Crimp two sleeves over cable ends.

E-15. NON-METALLIC VENT AIR HOSES FABRICATION

Cut the following vent air hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

		Cut L	ength
Hose Part Number	Bulk Hose Part Number	inches	cm
12420197-001	483666 (02280)	180.0	457.2
12420197-002	483666 (02280)	120.0	304.8
12420197-003	483666 (02280)	96.0	243.8
12420197-004	483666 (02280)	36.0	91.4
12420197-005	483666 (02280)	156.0	396.2
12420197-006	483666 (02280)	72.0	182.9
12420198-001	881-16 (98441)	120.0	304.8
12420198-002	11657469	36.0	91.4

E-16. PERSONNEL HEATER AIR DUCT HOSE FABRICATION

Cut the following hoses from bulk hose using a fine-toothed hacksaw or suitable cutting device.

		Cut L	ength
Hose Part Number	Bulk Hose Part Number	inches	cm
12420308-457	8711054 (19207)	18.3	46.4
12420308-760	8711054 (19207)	30.4	77.2

E-17. BLOCK SEAL 12420489 FABRICATION

Make block seal from P/N (0VXY8) STN2.38X.5. Use a suitable cutting tool to cut seal to 0.52 inch (1.3 cm) long.

E-18. CTIS SEAL DRIVER 3256-H-1048

Used on Front and Rear Axle CTIS Seals.

NOTES ON USE OF DRIVER

- 1) SEAL END OF DRIVER TO BE CLEAN OF DEBRIS, DIRT, NICKS AND BURRS
- 2) DO NOT USE A METAL HAMMER ON DRIVER
- A RUBBER, PLASTIC, WOOD OR SOME OTHER DEAD BLOW TYPE MALLET IS TO BE USED
- 3) SLIGHTLY GREASE SEAL END OF DRIVER PRIOR TO INSTALLING SEAL

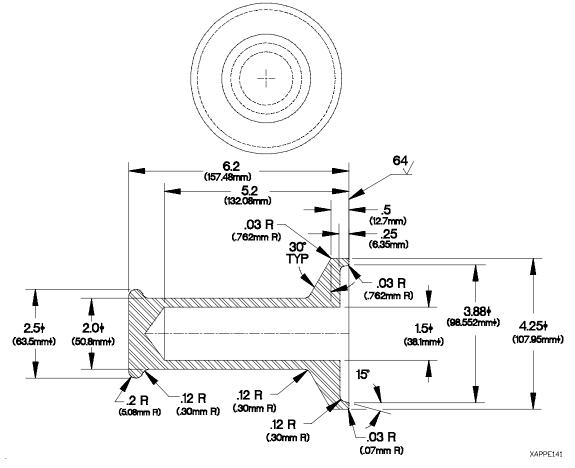


Figure E-9. CTIS Seal Driver

- a. All dimensions are in inches (millimeters).
- b. Manufacture from round steel stock.
- c. De-burr and remove sharp edges.

E-19. WHEEL HUB GREASE SEAL DRIVER 3256-K-1051

NOTES ON USE OF DRIVER

- 1) SEAL END OF DRIVER TO BE CLEAN OF DEBRIS, DIRT, NICKS AND BURRS
- 2) DO NOT USE A METAL HAMMER ON DRIVER A RUBBER, PLASTIC, WOOD OR SOME OTHER DEAD BLOW TYPE MALLET IS TO BE USED
- 3) SLIGHTLY GREASE SEAL END OF DRIVER PRIOR TO INSTALLING SEAL

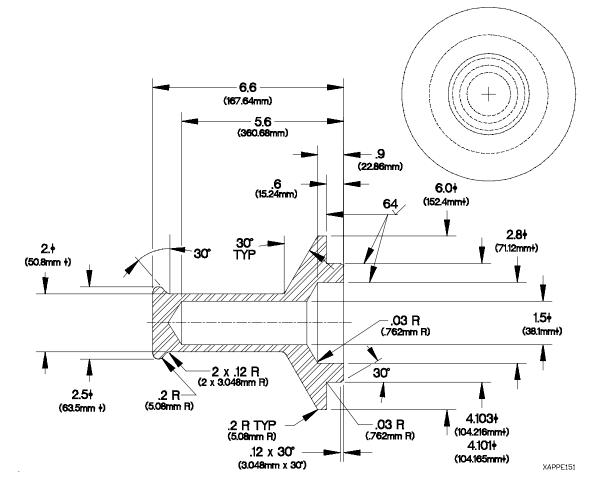


Figure E-10. Wheel Hub Grease Seal Driver

- a. All dimensions are in inches (millimeters).
- b. Manufacture from round steel stock.
- c. De-burr and remove sharp edges.

E-20. DIMMER SWITCH TEST WIRE

Fabricate the dimmer switch test wire according to the following steps. Refer to the following parts list for materials.

Material Description	National Stock Number	Quantity	Cut Length
Wire, Electrical (M168678/14BKE9)	6145-01-229-4134	1	12 in (305 mm)
Pin, Grooved, Headless (12258939-1)	5315-01-156-6314	1	
Contact, Electrical (12258939-2)	5999-01-150-8808	1	

a. Dimensions are in inches (millimeters).

b. Cut a length of electrical wire approximately 12 in. (305 mm) long.

c. Remove approximately 1/4 in. (6 mm) of insulation from each end of electrical wire.

d. Crimp headless grooved pin on one end of electrical wire.

e. Crimp electrical contact on opposite end of electrical wire.

E-21. PURGE VALVE TOOL

Fabricate Purge Valve Tool according to the following instructions. Refer to Figure E-11. Purge Valve Tool for details.

ltem	Part Number	Material Description	Size	Qty
1	N/A	Steel, ASTM A 108 or A576 Grade 1015-1025, BAR (Ref UNS G10150-G10250). Finish Black Oxide Coat, Class I, IAW MIL-C-13924.	14.0 in. (356 mm)	1

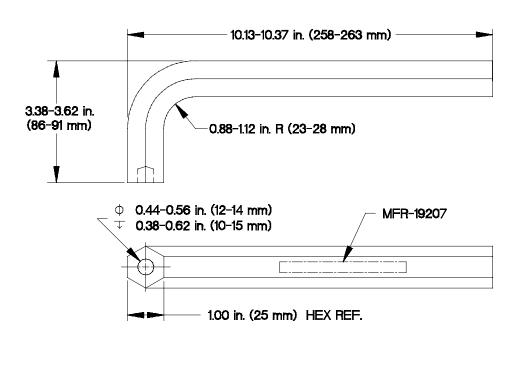


Figure E-11. Purge Valve Tool

Xappe17b

- a. All dimensions are in inches (cm).
- b. Cut steel bar (1) and bend to shape as shown in Figure E-11.
- c. Dimensional limits apply after coating.
- d. All edges shall be broken and free from burrs.
- e. Metal Stamp, electro etch, or engrave with the following marking IAW MIL-STD-130: 19207-12379968 MFR-19207.

F-1. GENERAL

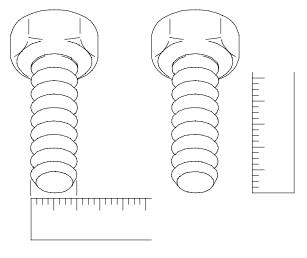
This appendix provides general torque limits for screws and nuts used on the vehicle. Special torque limits are shown in the maintenance procedures for applicable components. Use the general torque limit given in this appendix when specific torque limits are not given in the maintenance procedure. These general torque limits can not be applied to screws that retain rubber components. The rubber components will be damaged before the torque limit is reached. If a special torque limit is not given in the maintenance instructions for a fastener which retains a rubber component, tighten the screw or nut until it touches metal, then tighten one more turn. Whenever possible, the tightening force (torque) should be applied to the nut side of the fastener group.

F-2. TORQUE LIMITS

Refer to Table F-1. Torque Limits for SAE and ANSI Fasteners for torque limits on standard (SAE and ANSI) screws and free spinning nuts. Refer to Table F-2. Torque Limits for SAE and ANSI Prevailing Torque Nuts for torque limits on standard (SAE and ANSI) self-locking nuts. Refer to Table F-3. Torque Limits for Metric Screws and Free Spinning Nuts for torque limits on metric screws and free spinning nuts. Refer to Table F-4. Torque Limits for Metric Prevailing Torque Nuts for torque limits on metric self-locking nuts.

F-3. USE OF TORQUE TABLES

- (1) Measure the diameter of the screw to be installed.
- (2) Count the number of threads per inch.
- (3) Under the heading DIAMETER look down the column until the diameter of the screw is found. (There are usually two lines beginning with the same diameter.)
- (4) Under the heading THREADS PER INCH (SAE and ANSI) or THREAD PITCH (metric), find the number of threads per inch that matches the number counted in step (2).
- (5) To find the grade of the screw, match the markings on the head to the correct picture under CAPSCREW HEAD MARKINGS on the torque table.
- (6) Look down the column under the picture found in step (5) until the torque limit (lb-ft or N·m) for the diameter and threads per inch (or thread pitch, in the case of metric fasteners) of the screw are located.



XAPPF01A

Table F-1. Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts

				Material Gra	de Markings		
XAPPF02A NOTE Manufacturer's marks may vary. These are all SAE Grade 5.						APPF051 rade 8	
Diameter	Threads per inch			Tor	que		
inch		lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m
1/4	20	3-5	5-7	5-7	8-10	8-10	10-14
1/4	28	4-6	5-7	6-8	9-11	8-12	12-16
1/4	32	4-6	5-7	7-9	9-11	9-13	12-16
5/16	18	7-9	9-13	11-15	15-21	15-21	21-29
5/16	24	8-10	11-15	12-16	17-23	17-23	24-32
5/16	32	9-11	12-16	14-18	18-24	19-25	27-34
3/8	16	13-17	17-23	20-26	27-35	28-38	38-50
3/8	24	15-19	20-26	22-30	31-41	32-42	43-57
3/8	32	15-21	21-27	24-32	33-43	33-45	55-61
7/16	14	20-28	28-38	32-42	43-57	44-60	61-81
7/16	20	23-31	31-41	35-47	48-64	49-67	68-90
7/16	28	25-33	33-45	37-51	51-69	54-72	73-97
1/2	13	32-42	43-57	49-65	66-88	68-92	93-123
1/2	20	35-47	48-64	55-73	74-98	77-103	105-139
1/2	28	38-50	51-67	58-78	79-105	82-110	111-149
9/16	12	55-61	62-82	70-94	95-127	98-132	134-178
9/16	18	50-68	69-91	78-104	105-141	109-147	149-199
9/16	24	53-71	72-96	82-110	111-149	115-155	158-210
5/8	11	62-84	85-113	95-129	131-175	136-182	184-246
5/8	18	70-94	96-128	108-146	148-198	154-206	209-279
5/8	24	73-99	100-134	114-154	155-207	161-217	219-293

Table F-1. Dry Torque Limits for SAE and ANSI Screws and Free Spinning Nuts (Cont)

		Material Grade Markings					
Manufacture may vary. Th SAE Gr	ese are all		APPF03A	-	APPF04A		APPF 051
		SAE G	irade 2	SAE G	irade 5	SAE G	irade 8
Diameter	Threads per inch			Tor	que		
inch		lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m
11/16	24	99-133	135-181	153-207	209-279	217-291	296-394
3/4	10	110-148	150-200	171-229	232-310	240-324	328-438
3/4	16	123-165	168-224	190-256	259-345	269-361	366-488
3/4	20	127-171	174-232	197-265	268-358	278-374	379-505
13/16	20			252-340	345-459	357-481	487-649
7/8	9			275-369	374-498	387-521	528-704
7/8	14			303-407	413-551	427-575	583-777
7/8	20			319-429	435-579	450-606	614-818
15/16	20			395-531	538-718	558-750	760-1014
1	8			411-553	560-748	581-781	792-1056
1	12			450-606	614-818	636-856	867-1155
1	20			483-649	658-878	681-917	929-1239
1-1/16	18			576-776	782-1044	813-1095	1109-1479
1-1/8	7			507-683	693-923	824-1108	1123-1497
1-1/8	12			570-766	776-1034	923-1241	1258-1678
1-1/8	18			600-806	817-1089	971-1307	1324-1766
1-3/16	18			709-953	966-1288	1149-1545	1566-2088
1-1/4	7			716-964	976-1302	1161-1563	1584-2112
1-1/4	12			793-1067	1081-1441	1286-1730	1754-2338
1-1/4	18			831-1117	1132-1510	1346-1812	1835-2447
1-5/16	18			965-1299	1316-1754	1565-2105	2134-2846
1-3/8	6			939-1263	1281-1707	1523-2049	2076-2768

Table F-2. Dry Torque Limits for SAE and ANSI Prevailing Torque Nuts								
		Material Grade Markings						
		XAPPF061						
		SAE G	rade 5	SAE G	rade 8			
Hole Diameter	Threads per inch		Tor	que				
inch		lb-ft	N∙m	lb-ft	N∙m			
1/4	20	10-12	14-16	15-17	20-24			
1/4	28	12-14	16-18	14-18	21-25			
5/16	18	20-24	27-33	26-32	36-44			
5/16	24	22-26	30-36	29-35	40-48			
3/8	16	35-41	47-55	48-58	65-77			
3/8	24	38-46	53-63	53-63	72-86			
7/16	14	55-65	74-88	75-91	103-123			
7/16	20	60-70	81-97	80-98	110-132			
1/2	13	86-102	116-138	113-137	154-184			
1/2	20	92-110	125-149	127-153	177-207			
9/16	12	120-144	162-194	168-202	229-273			
9/16	18	135-161	183-219	179-217	244-294			
5/8	11	165-199	226-270	226-272	306-368			
5/8	18	181-219	246-296	244-296	331-401			
3/4	10	296-354	402-480	395-479	538-648			
3/4	16	310-376	422-508	424-516	576-698			
7/8	9	460-554	625-749	612-746	833-1009			
7/8	14	503-607	684-822	652-800	888-1082			
1	8	686-828	933-1121	941-1141	1280-1544			

		Material Grade Markings							
			APPF081	Metric G	APPF091	Metric G	APPF101 rade 10.9		KAPPF111 rade 12.9
Diameter	Thread					Torque		I	
mm	Pitch	lb-ft	N∙m	lb-ft	N∙m	Ib-ft	N⋅m	lb-ft	N∙m
6	1	3	4-5	5-7	7-9	7-9	10-13	8-11	11-15
8	1.25	7-9	9-11	13-17	17-23	17-23	23-31	21-27	27-37
8	1	7-9	9-13	14-18	18-24	19-25	25-33	21-29	29-39
10	1.5	13-17	17-23	25-33	33-45	34-46	46-62	40-54	54-72
10	1.25	14-18	18-24	26-34	35-47	36-48	49-65	42-56	57-77
10	0.75	15-19	21-27	29-39	39-53	40-54	54-72	47-63	63-85
12	1.75	22-30	30-40	43-57	58-78	60-80	81-107	69-93	94-126
12	1.5	23-31	32-42	46-60	61-81	63-83	85-113	73-97	99-131
12	1.25	24-32	33-45	47-63	65-85	65-87	88-118	76-102	104-138
12	1	26-34	34-46	49-65	67-89	68-90	93-123	80-106	108-144
14	2	36-48	48-74	69-91	93-125	95-127	129-173	112-148	151-201
14	1.5	39-51	52-70	75-99	99-135	103-137	140-186	120-160	163-217
15	1	51-69	69-93	100-132	135-179	137-183	187-249	160-214	218-290
16	2	55-73	75-99	107-143	145-193	148-198	201-267	173-231	235-313
16	1.5	59-79	80-106	114-152	155-207	158-210	214-286	184-246	250-334
18	1.5			166-222	225-301	230-306	311-415	268-358	364-486
20	2.5			209-279	283-377	289-385	392-522	338-450	458-610
20	1.5			232-308	315-419	321-427	435-579	375-499	508-678
20	1			244-324	330-440	337-449	457-609	394-524	534-712
22	2.5			285-379	387-515	394-524	534-712	461-613	624-832
22	1.5			313-417	424-566	432-576	586-782	664-884	900-1200
24	3			361-481	489-653	499-665	677-903	584-778	791-1055
24	2			394-524	534-712	545-725	738-984	725-965	982-1310
25	1.5			467-621	633-843	645-859	875-1167	754-1004	1023-1363

Table F-3. Dry Torque Limits for Metric Screws and Free Spinning Nuts

Table F-4. Dry Torque Limits for Metric Prevailing Torque Nuts

					Material	Grade Marki	ngs		
		Metric G	XAPPF121 XAPPF121 Metric Grade 4.8 Metric Grade 8.8 Metric Grade 10.9		·				
Diameter	Thread					Torque			
mm	Pitch	lb-ft	N∙m	lb-ft	N∙m	Ib-ft	N∙m	lb-ft	N∙m
6	1	5-6	7-8	7-9	10-12	10-12	14-17	11-14	15-19
8	1.25	12-14	16-18	18-22	24-30	24-30	32-40	27-33	36-46
8	1	12-14	16-20	19-23	25-31	25-31	34-42	28-36	38-48
10	1.5	21-25	28-34	33-41	44-56	44-56	60-76	50-64	68-86
10	1.25	21-25	29-35	34-42	46-58	46-58	63-79	53-67	71-91
10	0.75	23-27	31-37	37-47	49-63	50-64	68-86	57-73	77-99
12	1.75	33-41	46-56	55-69	74-94	75-95	102-128	85-109	115-147
12	1.5	35-43	47-57	56-72	77-97	78-98	106-134	89-113	120-152
12	1.25	36-44	48-60	58-74	79-101	81-103	109-139	91-117	125-159
12	1	37-45	50-62	61-77	82-104	84-106	114-144	95-121	129-165
14	2	53-65	72-88	87-109	117-149	118-150	160-204	134-172	182-232
14	1.5	57-69	76-94	92-116	125-159	126-160	171-217	143-183	194-248
16	2	79-97	107-131	130-166	177-225	178-228	243-309	204-262	277-355
16	1.5	82-102	112-138	138-176	187-239	189-241	256-328	215-277	292-376
18	1.5			197-253	267-343	271-347	367-471	309-399	420-542
20	2.5			248-318	337-431	342-438	464-594	391-503	530-682
20	1.5			271-349	369-473	374-480	507-651	428-552	580-750
20	1			283-365	384-494	390-502	529-681	447-577	606-784
22	2.5			335-429	455-583	460-592	624-802	526-680	714-922
22	1.5			363-467	492-634	499-643	676-872	730-950	990-1290
24	3			420-540	569-733	577-743	783-1009	662-856	897-1161
24	2			453-583	614-792	622-804	844-1090	803-1043	1088-1416

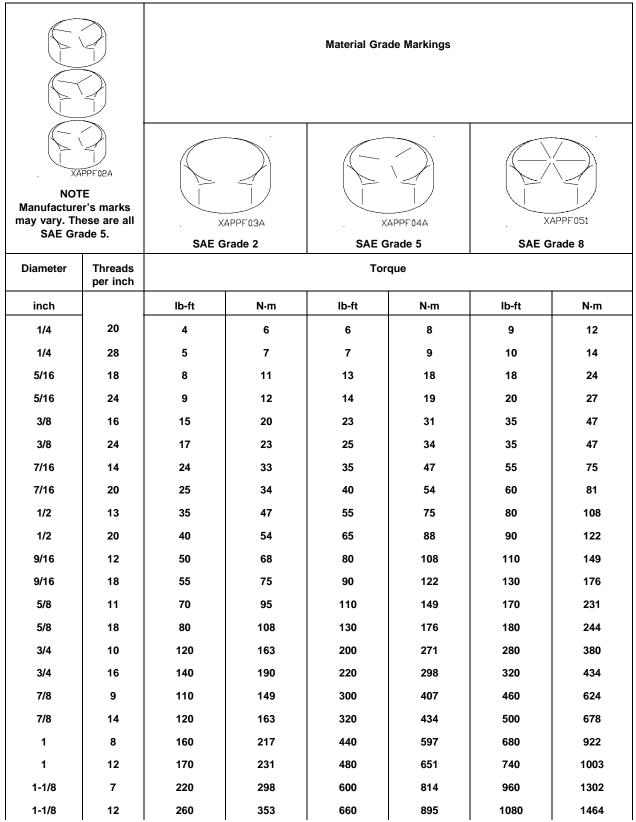


Table F-5. Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts

Table F-5. Wet Torque Limits for SAE and ANSI Screws and Free Spinning Nuts (Cont)

		Material Grade Markings					
XAPPF02A Manufacturer's marks may vary. These are all SAE Grade 5			APPF03A Grade 2	-	APPF04A Grade 5	SAEG	APPF051 rade 8
Diameter	Threads per inch			Tor	que		
inch		lb-ft	N∙m	lb-ft	N∙m	lb-ft	N∙m
1-1/4	7	320	434	840	1139	1360	1844
1-1/4	12	360	488	920	1248	1500	2034
1-3/8	6	420	570	1100	1492	1780	2414
1-3/8	12	460	624	1260	1709	2040	2766

APPENDIX G MANDATORY REPLACEMENT PARTS

Section I. INTRODUCTION

G-1. SCOPE

This appendix lists mandatory replacement parts you will need to maintain the LMTV vehicle.

G-2. EXPLANATION OF COLUMNS

a.Column (1) - Item Number.

This number is assigned to each entry in the listing and is referenced in the Initial Setup of the applicable task under Materials/Parts.

b.Column (2) - Nomenclature.

Name or identification of the part. The manufacturer's part number.

c.Column (3) - Part Number.

The National stock number of the part.

d.Column (4) - National Stock Number.

Section II. MANDATORY REPLACEMENT PARTS LIST

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
1	BLADE, WINDSHIELD WIPER	105.384	2540-01-364-1621
2	BOLT, MACHINE	12414307-065	5306-01-382-5054
3	BOOT KIT, EXHAUST	DQ6025	4730-01-417-3197
4	BUMPER, RUBBER	12419182	5340-01-410-8397
5	BUSHING, SLEEVE	7-199-002668	3120-01-367-6894
6	CHANNEL, RUBBER	ZZR765/2-001A7	9390-01-420-4560
7	CLAMP	12421183-005	4730-01-447-4312
8	CLAMP	12421183-006	4730-01-447-4313
9	DECAL	12340917	7690-01-256-4909
10	FASTENER TAPE	MIL-F-21840	8315-00-006-9855
11	FASTENER TAPE	50-534718-19	8315-00-935-6762
12	FILTER ASSEMBLY	75223-11	2940-01-417-9333
13	FILTER ELEMENT	1048011	2940-01-385-8931
14	FILTER ELEMENT, FLUID	R22146	2910-01-360-6366
14.1	FILTER ELEMENT, FLUID	ST117073098-000	2910-01-467-4594
15	FILTER ELEMENT, FLUID	29507750	2940-01-361-2406
16	FILTER ELEMENT, FLUID	599791	4460-01-284-2344

(1)	(2)	(3)	(4)
ITEM NO.	NOMENCLATURE	PART NUMBER	NATIONAL STOCK NUMBER
17	FILTER ELEMENT, FLUID	931558	2940-01-363-4377
18	FILTER ELEMENT, INTAKE AIR CLEANER	P52-7750	2940-01-361-2407
19	FILTER, AIR	12416539	
20	FILTER, AIR	12416563	4730-01-398-5654
21	FILTER, FUEL	7E9763	2940-01-363-3089
22	FILTER, OIL	1R0739	2940-00-029-0388
23	GASKET	F337576M6	
24	GASKET	M28840/24HA	5935-01-421-9754
25	GASKET	QS-1181	5330-01-058-3788
26	GASKET	10-36675-18	5330-00-298-0190
26.1	GASKET	11446	5330-00-247-4174
27	GASKET	119-2940	5330-01-424-7905
28	GASKET	12421469	5330-01-453-2980
29	GASKET	12422254	
30	GASKET	13848	5330-01-211-0717
31	GASKET	350700	5330-01-295-3053
32	GASKET	350903	5330-00-576-4626
33	GASKET	352200	5330-01-421-6105
34	GASKET	352302	5330-01-421-6107
35	GASKET	353400	5330-01-421-6102
36	GASKET	353806	5330-01-421-6103
37	GASKET	353810	5330-01-450-6666
38	GASKET	355148	5330-01-423-0596
39	GASKET	355175	5330-01-423-0623
40	GASKET	3K3257	5330-01-305-6550
40.1	GASKET	3N4087	5330-01-061-8003
41	GASKET	4P1624	5330-01-360-5934
42	GASKET	9Y8103	5330-01-360-5931
42.1	GASKET AND PREFORMED PACKING SET	9X8318	5330-01-360-9098
43	GASKET, FUEL FILTER	7C1159	5330-01-360-5941
44	NOT USED		

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
45	GASKET, THERMOSTAT	2W7212	5330-01-347-3206
46	GROMMET, NONMETALLIC	MS35489-6	5325-00-263-6632
47	GROMMET, NONMETALLIC	12417598	5325-01-375-1299
48	GROMMET, NONMETALLIC	12421402	5325-01-440-2178
49	GROMMET, NONMETALLIC	4082-37634-01	5325-01-194-3076
50	GROMMET, NONMETALLIC	50S12-1-1AA	5325-01-145-0105
51	GROMMET, NONMETALLIC	8741442	5325-00-088-6147
51.1	HEAD, FLUID FILTER	7632-002-144	2940-01-387-4397
52	INSULATOR, TANK	A1394J	5970-01-385-7317
53	INSULATOR, TANK	A1394K	5970-01-385-7262
54	KIT, FILTER	29503829	
55	KIT, FILTER	29526899	5330-01-453-0770
56	NOT USED		
57	LAMP, INCANDESCENT	CM7-7373	6240-00-270-6824
58	LAMP, INCANDESCENT	CM7376	6240-00-499-6278
59	LATCH, BAIL HEAD	68-20-101-10	2540-01-232-2470
60	LOCKNUT	0770-023-003	5310-01-423-3725
61	LOCKWASHER	ABCH207-LW-1/2	
62	LOCKWASHER	ABCH207-LW-3/8	
63	LOCKWASHER	B7949000161	
64	LOCKWASHER	D70336/1-20	5310-01-110-7933
65	LOCKWASHER	D70336/3-50	5310-01-439-2542
66	LOCKWASHER	D70336/3-52	5310-01-439-2543
66.1	LOCKWASHER	MS35333-78	5310-01-110-7953
66.2	LOCKWASHER	ERNA245	5310-00-584-5272
67	LOCKWASHER	MS35335-30	5310-00-209-0788
68	LOCKWASHER	MS35335-31	5310-00-596-7693
69	LOCKWASHER	MS35335-33	5310-00-209-0786
70	LOCKWASHER	MS35335-36	5310-00-550-3503
71	LOCKWASHER	MS35335-38	5310-00-616-6354
72	LOCKWASHER	MS35335-58	5310-00-209-1366
73	LOCKWASHER	MS35335-61	5310-00-527-3634
74	LOCKWASHER	MS35335-62	5310-00-184-9562

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)								
(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER					
75	LOCKWASHER	MS35337-25	5310-00-013-8502					
76	LOCKWASHER	MS35338-100	5310-00-261-8278					
77	LOCKWASHER	MS35338-102	5310-00-167-0671					
78	LOCKWASHER	MS35338-103	5310-00-184-8971					
79	LOCKWASHER	MS35338-135	5310-00-933-8118					
80	LOCKWASHER	MS35338-136	5310-00-929-6395					
81	LOCKWASHER	MS35338-137	5310-00-933-8119					
82	LOCKWASHER	MS35338-138	5310-00-933-8120					
83	LOCKWASHER	MS35338-139	5310-00-933-8121					
84	LOCKWASHER	MS35338-140	5310-00-974-6623					
85	LOCKWASHER	MS35338-141	5310-00-984-7042					
86	LOCKWASHER	MS35338-143	5310-00-933-8778					
87	LOCKWASHER	MS35338-158	5310-00-883-9417					
88	LOCKWASHER	MS35338-171	5310-01-130-9066					
89	LOCKWASHER	MS35338-42	5310-00-045-3299					
90	LOCKWASHER	MS35338-43	5310-00-045-3296					
91	LOCKWASHER	MS35338-45	5310-00-407-9566					
92	LOCKWASHER	MS35338-46	5310-01-334-4710					
93	LOCKWASHER	MS35338-51	5310-00-584-7888					
94	LOCKWASHER	MS35340-44	5310-00-682-5930					
95	LOCKWASHER	MS51414-1	5310-01-235-2057					
96	LOCKWASHER	MS51414-2	5310-01-310-1098					
97	LOCKWASHER	MS51848-50	5310-01-033-8615					
98	LOCKWASHER	N9015	5310-01-369-6073					
99	LOCKWASHER	N9018	5310-01-032-4827					
100	LOCKWASHER	N9459	5310-01-348-8393					
101	LOCKWASHER	N9461	5310-01-348-8392					
101.1	LOCKWASHER	XP1113	5310-01-460-5991					
101.2	LOCKWASHER	10241	5310-01-416-3010					
101.3	LOCKWASHER	10030						
102	LOCKWASHER	1229-S-513C	5310-01-062-3384					
102.1	LOCKWASHER	12414570-011	5310-01-374-3292					

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
102.2	LOCKWASHER	12414570-013	5310-01-374-4515
103	LOCKWASHER	12414570-015	5310-01-388-2043
103.1	LOCKWASHER	12414570-019	5310-01-470-2362
104	LOCKWASHER	12414570-021	5310-01-374-4516
105	LOCKWASHER	MS35338-40	5310-00-543-2410
106	LOCKWASHER	MS35338-47	5310-00-550-3741
107	NOT USED		
108	LOCKWASHER	1729B262	5310-00-964-7811
109	NOT USED		
110	NUT, BLIND RIVET	MS27130-S136	5310-01-409-4435
111	NUT, BLIND RIVET	MS27130-S148	5310-01-370-5548
112	NUT, BLIND RIVET	12421403-060	
113	NUT, BLIND RIVET	12421403-065	
114	NUT, BLIND RIVET	12421634-017	
115	NUT, BLIND RIVET	12442158-5	
115.1	NUT, PLAIN, ROUND	1727N40	5310-00-123-2572
116	NUT, SELF-LOCKING	DIN-934STM6	5310-01-342-2739
117	NUT, SELF-LOCKING	MS16228-10C	5310-00-245-8826
118	NUT, SELF-LOCKING	MS16228-5C	5310-00-584-7992
119	NUT, SELF-LOCKING	MS20500-524	5310-00-208-4023
120	NUT, SELF-LOCKING	MS21042-04	5310-00-811-6419
121	NUT, SELF-LOCKING	MS21042-5	5310-00-807-1469
122	NUT, SELF-LOCKING	MS21044C08	5310-00-982-6814
122.1	NUT, SELF-LOCKING	MS21045L5	5310-00-857-5559
123	NUT, SELF-LOCKING	MS21083N08	5310-00-941-6019
124	NUT, SELF-LOCKING	MS21083N6	5310-00-926-1852
125	NUT, SELF-LOCKING	MS51922-1	5310-00-088-1251
126	NUT, SELF-LOCKING	MS51922-2	5310-00-929-1807
127	NUT, SELF-LOCKING	MS51922-33	5310-00-225-6993
128	NUT, SELF-LOCKING	MS51922-5	5310-00-959-7600
129	NUT, SELF-LOCKING	N9406	5310-01-362-6171
130	NUT, SELF-LOCKING	N9410	5310-01-348-8398

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Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
130.1	NUT, SELF-LOCKING	N9453	5310-01-348-8314
131	NUT, SELF-LOCKING	N9467	5310-01-350-4257
131.1	NUT, SELF-LOCKING	N9556	5310-01-423-0880
132	NUT, SELF-LOCKING	12301125	5310-01-210-0199
132.1	NUT, SELF-LOCKING	12411174-008	
133	NUT, SELF-LOCKING	12412476-04	5310-01-466-0565
134	NUT, SELF-LOCKING	12414308-002	5310-01-381-2819
135	NUT, SELF-LOCKING	12414308-003	5310-01-377-1549
136	NUT, SELF-LOCKING	12414308-004	5310-01-369-5703
137	NUT, SELF-LOCKING	12414308-007	5310-01-046-0186
138	NUT, SELF-LOCKING	12414308-017	5310-01-381-9830
139	NUT, SELF-LOCKING	12414308-018	5310-01-369-3337
140	NUT, SELF-LOCKING	12414308-019	5310-01-369-9522
141	NUT, SELF-LOCKING	12414308-020	5310-01-381-9849
142	NUT, SELF-LOCKING	12414308-021	5310-01-369-3338
143	NUT, SELF-LOCKING	12414308-022	5310-01-417-1262
144	NUT, SELF-LOCKING	12414308-025	5310-01-367-6706
145	NUT, SELF-LOCKING	12414308-027	5310-01-369-3339
146	NUT, SELF-LOCKING	12414315-003	5310-01-374-1382
147	NUT, SELF-LOCKING	12414315-005	5310-01-372-3023
148	NUT, SELF-LOCKING	12414315-006	5310-01-369-3332
149	NUT, SELF-LOCKING	12414315-009	5310-01-365-7236
150	NUT, SELF-LOCKING	12414315-012	5310-01-369-3331
151	NUT, SELF-LOCKING	12414315-017	5310-01-368-8065
152	NUT, SELF-LOCKING	12414420-004	5310-01-370-0010
152.1	NUT, SELF-LOCKING	12417642-002	5310-01-374-3288
153	NUT, SELF-LOCKING	12419003	5310-01-376-0773
154	NUT, SELF-LOCKING	270W10000	
155	NUT, SELF-LOCKING	29514660	
156	NUT, SELF-LOCKING	7951286	5310-00-789-0398
157	PACKING, PREFORMED	A82777	5330-00-579-6495
158	PACKING, PREFORMED	F4001-16	5331-01-466-0354
158.1	PACKING, PREFORMED	J515-16-3	5331-01-465-3634

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(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
158.2	PACKING, PREFORMED	J515-4-1	5331-01-387-9490
159	PACKING, PREFORMED	J515-8-1	5330-00-292-8171
160	PACKING, PREFORMED	5999807	5331-01-456-9156
161	PACKING, PREFORMED	MS28775-011	5330-00-582-2133
162	PACKING, PREFORMED	MS28775-227	5330-00-576-9731
162.1	PACKING, PREFORMED	MS28775-910	5331-00-448-6753
163	PACKING, PREFORMED	MS28778-10	5330-00-285-9842
164	PACKING, PREFORMED	MS28778-12	5330-00-251-8839
165	PACKING, PREFORMED	MS28778-16	5330-00-816-3546
166	PACKING, PREFORMED	MS28778-4	5330-00-805-2966
166.1	PACKING, PREFORMED	MS28778-6	5331-00-804-5695
167	PACKING, PREFORMED	MS9955-113	5330-01-374-2325
168	PACKING, PREFORMED	M25988/1-246	5330-01-189-6351
168.1	PACKING, PREFORMED	M83461/1-442	5330-01-183-0987
169	PACKING, PREFORMED	OR42OA	5330-01-389-6028
170	PACKING, PREFORMED	11639519-1	5330-00-463-0200
170.1	PACKING, PREFORMED	12422548-004	5331-01-059-1141
171	PACKING, PREFORMED	1509	5330-00-172-1919
171.1	PACKING, PREFORMED	195045	5331-00-618-5361
171.2	PACKING, PREFORMED	19755	5331-01-415-9632
171.3	PACKING, PREFORMED	198336	5331-00-584-1840
172	PACKING, PREFORMED	2M4453	5330-00-074-3768
173	PACKING, PREFORMED	22617-16	5330-01-168-0885
174	PACKING, PREFORMED	23043446	5330-01-424-6629
174.1	PACKING, PREFORMED	250192	5331-01-417-5105
174.2	PACKING, PREFORMED	251216	5330-01-417-5107
175	PACKING, PREFORMED	29500969	5330-01-360-7852
176	PACKING, PREFORMED	29503383	5330-01-360-6017
177	PACKING, PREFORMED	3-906N522-90	5330-01-104-1093
178	PACKING, PREFORMED	3-908N522-90	5330-00-929-8171
179	PACKING, PREFORMED	3D2824	5330-00-944-8281
180	PACKING, PREFORMED	3J1907	5330-01-333-6444

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
181	PACKING, PREFORMED	3J7354	5330-00-954-8008
182	PACKING, PREFORMED	3K0360	5330-00-948-6482
183	PACKING, PREFORMED	4J5477	5330-00-855-8059
184	PACKING, PREFORMED	4L9564	5330-00-828-8639
184.1	PACKING, PREFORMED	420828	5340-01-417-3788
185	PACKING, PREFORMED	5-X-1155	5330-01-392-1637
186	PACKING, PREFORMED	5F7054	5330-00-339-6224
187	PACKING, PREFORMED	5P7813	5330-01-335-0042
188	PACKING, PREFORMED	6V8397	5330-00-579-6495
189	PACKING, PREFORMED	673268	
190	PACKING, PREFORMED	673269	5330-01-395-1252
191	PACKING, PREFORMED	7F8267	5330-01-291-7353
192	PACKING, PREFORMED	7320658	5330-00-297-7106
193	PACKING, PREFORMED	9604792-001	5330-01-429-3089
194	PAD, CUSHIONING	12416479-001	2590-01-397-7844
195	PAD, CUSHIONING	12416479-002	2590-01-412-2663
196	PARTS KIT, DEHYDRATOR	RN-60-A	4440-01-337-7324
197	PARTS KIT, SEAL REPLACEMENT	SK10-2	5330-01-350-4474
198	PARTS KIT, SEAL REPLACEMENT	SK10-3	5330-01-350-4472
199	PARTS KIT, SEAL REPLACEMENT	SK10-4	5330-01-343-2745
200	PIN, COTTER	K-2412-Z	5315-01-179-9882
201	PIN, COTTER	MS171659	5315-00-846-8337
202	PIN, COTTER	MS24665-151	5315-00-815-1405
203	PIN, COTTER	MS24665-298	5315-00-234-1861
204	PIN, COTTER	MS24665-385	5315-00-187-9382
205	PIN, COTTER	MS24665-423	5315-00-013-7228
206	PIN, COTTER	MS24665-457	5315-00-187-9393
207	PIN, COTTER	MS24665-459	5315-00-187-9394
208	PIN, COTTER	MS24665-69	5315-00-828-8190
208.1	PIN, COTTER	XB-781-1	5315-01-369-1346
209	NOT USED		

Section II. MANDATORY REPLACEMENT PARTS LIST (CONT)

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
210	PIN, SPRING	MS16562-142	5315-00-058-6115
211	PIN, SPRING	MS16552-146	5315-00-853-3814
212	PLASTIC STRIP	352700	5330-01-296-2109
213	RECEPTACLE	50R4-1-1AA	5325-01-049-2049
213.1	REPAIR KIT, GOVERNOR	RN32W	
213.2	RETAINER, PACKING	11863-012	5330-01-417-7795
213.3	RETAINER, PACKING	202624	5330-01-417-7794
214	RETAINER	A-1205-D-2344	5330-01-360-5253
215	RIVET, BLIND	AK42H	5320-00-874-4477
216	RIVET, BLIND	AK43H	5320-00-143-6149
217	RIVET, BLIND	MS20600AD5W12	5320-01-047-0467
217.1	RIVET, BLIND	MS20601B4W2	5320-00-616-5274
218	RIVET, BLIND	MS20604B3W2	5320-00-721-9075
219	RIVET, BLIND	M24243/1-A806	5320-00-850-3256
220	RIVET, BLIND	M24243/1-B302	5320-00-999-0397
221	RIVET, BLIND	M24243/1-D502	5320-00-850-3248
222	RIVET, BLIND	M24243/1-D608	5320-00-850-3246
223	RIVET, BLIND	M24243/1-F402	5320-00-129-9706
223.1	RIVET, BLIND	M24243/1-F608	5320-01-392-0699
223.2	RIVET, BLIND	M24243/1-F610	
224	RIVET, BLIND	M24243/6-A403H	5320-00-882-8388
225	RIVET, BLIND	M24243/6-A405H	5320-01-291-9121
226	RIVET, BLIND	M24243/6-A406H	5320-01-421-0484
227	RIVET, BLIND	M24243/6-A602H	5320-00-956-7362
228	RIVET, BLIND	M24243/6-A604H	5320-00-956-7355
229	RIVET, BLIND	M24243/6-A606H	5320-00-882-8385
230	RIVET, BLIND	M24243/6-A608H	5320-01-032-6534
231	RIVET, BLIND	M24243/7-A402H	5320-00-874-4477
232	RIVET, BLIND	M24243/7-A403H	5320-00-143-6149
233	RIVET, BLIND	M24243/7-A604H	5320-00-420-2165
234	RIVET, BLIND	M24243/7-A606H	5320-00-490-5523

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
235	RIVET, BLIND	SD64BSLF	5320-01-397-3347
236	RIVET, BLIND	206057	5320-01-411-0081
237	RIVET, COMPRESSION	12418469	5320-01-376-0699
237.1	SCREW, CAP	CSH5-24-39	5305-01-479-7857
238	SCREW, CAP	12414475-131	5303-01-363-0703
239	SCREW, CAP	6V-2315	5306-01-433-4753
240	SCREW, MACHINE	MS24693-144	
241	SCREW, MACHINE	MS51958-83	5305-00-071-2095
242	SCREW, SELF-LOCKING	MS16998-61L	5305-01-211-3097
243	SEAL	VC08G1R0B	5330-01-389-6109
244	SEAL	12421431	9320-01-398-6317
245	SEAL	125128-5	
246	SEAL	125128-6	
247	SEAL	355150	5330-01-423-0689
247.1	SEAL	12422401-001	5999-01-478-5940
247.2	SEAL	12422401-002	5999-01-478-5932
247.3	SEAL	12422401-003	5999-01-478-5937
248	SEAL ASSEMBLY, CTIS	A1205-Q-2435	5330-01-360-7753
249	SEAL ASSEMBLY, HUB	A1205-R-2254	5330-01-360-5252
250	SEAL, DOOR	12416467	5330-01-385-3769
251	SEAL RING, METAL	29505809	5330-01-360-5329
252	SEAL, NONMETALLIC	CC3550	5330-01-431-7575
253	SEAL, NONMETALLIC	12417725	5330-01-375-2908
254	SEAL, NONMETALLIC	2418974-1	5330-01-257-1709
255	SEAL, NONMETALLIC	673999	5310-01-454-5553
255.1	SEAL, PLAIN	N72143	5330-01-453-4462
255.2	SEAL, SHAFT	SERUR25-2	5330-01-135-3376
256	SEAL, URETHANE FOAM	12420420-001	5680-01-453-8912
257	SEAL, URETHANE FOAM	12420420-002	5680-01-453-8485
258	SEAL, URETHANE FOAM	12420420-003	5680-01-453-8486
259	SEAL, WEATHER	147P00039	
259.1	SPACER	12422545	5365-01-490-6790

(1) ITEM NO.	(2) NOMENCLATURE	(3) PART NUMBER	(4) NATIONAL STOCK NUMBER
260	SPACER, RING	4P2987	5365-01-433-8407
260.1	SPIDER, UNIVERSAL JOINT, VEHICULAR	R279X	
261	SPLICE, CONDUCTOR	12420927-001	5940-01-456-1319
262	SPLICE, CONDUCTOR	12420927-002	5940-01-421-6955
263	STRAIN RELIEF	10280870-3	5975-00-376-1585
263.1	STRIP, RUBBER	12412581	9320-01-399-4888
264	TERMINAL, LUG	MS20659-163	5940-00-113-3145
265	TERMINAL, LUG	MS20659-164	5940-00-113-3148
266	TERMINAL, LUG	MS25036-108	5940-00-143-4780
267	TERMINAL, LUG	MS25036-122	5940-00-113-8190
268	TERMINAL, LUG	12414275-001	
269	TERMINAL, LUG	12416409-006	
269.1	TERMINAL, LUG	12420344	5940-01-082-3321
270	WASHER, FLAT	MS27183-10	5310-00-809-4058
270.1	WASHER, FLAT	12414473-010	5310-01-374-6990
271	WASHER, FLAT	12417948-004	5365-01-436-8308
271.1	WASHER, FLAT	251391	5310-01-417-1041
272	WASHER, FLAT RUBBER	900.032	5330-01-378-7541
273	WASHER, NYLON	MS51859-16	5310-00-964-7811
274	WASHER, SPRING	D63474/1-30	5310-01-413-8475
275	WASHER, SPRING	WW579S18	
276	WASHER, SPRING	110 7289	5310-01-246-1387
277	WASHER, SPRING	12414559-021	5310-01-374-4517
278	WASHER, SPRING	12414560-017	5310-01-395-0820
279	WASHER, SPRING	12414560-018	5310-01-381-3281
280	WASHER, SPRING	12414560-019	5310-01-369-6074
281	WASHER, SPRING	12417503	5310-01-406-6326
282	WASHER, SPRING	12418220	5310-01-372-3495
283	WASHER, SPRING	12414560-009	5310-01-333-5517

APPENDIX H LUBRICATION ORDER AND SERVICES

SECTION I. INTRODUCTION

H-1. GENERAL

The information contained in this appendix provides the lubrication/services requirements for the LMTV vehicle.

a. Adherence. Intervals (on-condition or hardtime) and the related man-hour times are based on normal operation. The man-hour time specified is the time needed to do all the services prescribed for a particular interval. On-condition (OC) oil sample intervals will be applied unless changed by the Army Oil Analysis Program (AOAP) laboratory. Change the hardtime interval if the lubricants are contaminated or if operating the equipment under adverse operating conditions, including longer-than-usual operating hours. The calendar interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken. Hardtime intervals will be applied in the event AOAP laboratory support is not available. Hardtime intervals must be applied during the warranty period.

Intervals shown in this lubrication order and services are based on mileage/calendar, and in some cases mileage alone. An example of a mileage/calendar interval is: **Q**, which means every 3,000 miles (4,827 km) or quarterly (every three months). The lubrication is to be performed at whichever interval occurs first for the vehicle. An example of a mileage alone interval is: **6K**, which stands for every 6,000 miles (9,654 km). The lubrication/services is to be performed at the mileage indicated regardless of the calendar interval.

WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38 C) and for Type II is 138 F (50 C). Failure to comply may result in serious injury or death to personnel.
- •If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.
- **b.** Cleaning fittings before lubricating. Clean parts with dry cleaning solvent (SD P-D-680) (Item 71, Appendix D) or equivalent. Dry before lubricating. Dashed arrows indicate lubrication on both sides of the equipment.
- c. Lubricating after fording. If fording occurs, lubricate all fittings below fording depth and check submerged gearboxes for presence of water.
- **d.** Lubricating after high-pressure washing. After a thorough washing, lubricate all grease fittings and oil can points outside and underneath vehicle.
- e. Level of Maintenance. The lowest level of maintenance authorized to lubricate a point is Operator/Unit Maintenance (O). Operator/crew (C) may lubricate points authorized for Unit Maintenance (O) when authorized by Unit Maintenance (O).
- f. Localized views. A reference to the appropriate localized view is given after most lubrication entries. Localized views begin on page H-9.

H-1. GENERAL (CONT)

g. Interval Symbols. The lubrication/service interval symbols will be used as applicable:

Q-quarterly/3,000 mi (4,827 km) (whichever occurs first) S-semiannually/6,000 mi (9,654 km) (whichever occurs first) A-annually/12,000 mi (19,308 km) (whichever occurs first) B-biennially/24,000 mi (38,616 km) (whichever occurs first) 3K-every 3,000 mi (4,827 km) (no calendar interval) 6K-every 6,000 mi (9,654 km) (no calendar interval) 12K-every 12,000 mi (19,308 km) (no calendar interval) 24K-every 24,000 mi (38,616 km) (no calendar interval)

H-2. OIL FILTERS

Oil filters shall be serviced/changed as applicable, when:

- a. They are known to be contaminated, or clogged;
- b. Service is recommended by AOAP laboratory analysis; or
- c. At prescribed hardtime intervals while vehicle is under warranty, or if AOAP is not available/used as required.

H-3. AOAP SAMPLING INTERVAL

WARNING

- Engine oil is hot and under pressure. The oil sampling valve releases oil proportionally to the amount of pressure applied to valve. Activate oil sampling valve by pressing in slowly to prevent injury to personnel. Failure to comply may result in injury to personnel.
- Wear safety goggles when taking oil sample. Oil is under pressure and could cause injury to personnel. Failure to comply may result in injury to personnel.

Units participating in AOAP will sample engine oil every 3,000 miles (4,827 km) or 6 months, whichever occurs first and change engine oil as directed by AOAP. Units participating in AOAP will sample transmission oil every 6,000 miles (9,654 km) or 12 months, whichever occurs first and change transmission oil as directed by AOAP. Units participating in AOAP will sample hydraulic system oil initially after 6 weeks or 10 hours of operation, whichever occurs first and change samples should be taken every 12 months or 50 hours of operation, whichever occurs first and change hydraulic oil as directed by AOAP.

H-4. WARRANTY HARDTIME STATEMENT

"For equipment under manufacturer's warranty, hardtime oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (such as longer than usual operating hours, extended idling periods, extreme dust)."

SECTION II. LUBRICATION/SERVICE CHART

H-5. LUBRICATION/SERVICE KEY

LUBRICANTS				
Specification	Туре			
MIL-L-2104 (OE/HDO)	Lubricating Oil, Internal Combustion Engine, Combat/Tactical Service			
MIL-L-46167 (OEA)	Lubricating Oil, Internal Combustion Engine, Arctic			
MIL-L-2105 (GO)	Lubricating Oil, Gear, Multipurpose			
MIL-G-10924 (GAA)	Grease, Automotive and Artillery			
MIL-G-18458 (GW)	Grease, Wire-Rope and Exposed Gear			
MIL-H-5606 (OHA)	Hydraulic Fluid, Petroleum Base, Aircraft, Missile, and Ordnance			

DESCRIPTION	CAPACITY	E	EXPECTED TEMPERATURES	
		Above +40 F (Above +4 C)	₊₄₀ F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Engine crankcase	25 qt (24 L)	OE/HDO-15/40	OE/HDO-15/40	OEA
Transmission (total system)	43.3 qt (41 L)	OE/HDO-15/40	OE/HDO-10	OEA
Transmission (at oil change)	31.8 qt (30.0 L)	OE/HDO-15/40	OE/HDO-10	OEA
Transmission (after overhaul)	39.0 qt (37.0 L)	OE/HDO-15/40	OE/HDO-10	OEA
Steering system	5 qt (4.8 L)	OE/HDO-10	OE/HDO-10	OEA
Hydraulic reservoir	27 gal (102.2 L)	OE/HDO-10	OE/HDO-10	OEA
Front axle differential (maximum capacity)	9.5 qt (9.0 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
Rear axle differential (maximum capacity)	18.05 qt (17.1 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
Front axle planetary hubs	11-13 oz (0.33-0.38 L)	GO-80/90	GO-80/90	SAE 75W90 OR GO-75
11K Self-Recovery Winch (SRW)	As Required	GO-85/140	GO-80/90	GO-75
Propeller shaft universal and slip joints	As Required	GAA	GAA	GAA
Tie rod ends	As Required	GAA	GAA	GAA
Towing pintle assembly	As Required	GAA	GAA	GAA
Spring bolts and spring shackles	As Required	GAA	GAA	GAA
Front axle shaft U-joints and steering knuckles	As Required	GAA	GAA	GAA

H-5. LUBRICATION/SERVICE KEY (CONT)

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Front axle inner wheel bearing	As Required	GAA	GAA	GAA
Rear axle inner wheel bearing	As Required	GAA	GAA	GAA
Front lifting beam	As Required	GAA	GAA	GAA
11K Self-Recovery Winch (SRW) cable	As Required	GW	GW	GW
Air/hydraulic power unit	3 pt (1.4 L)	OHA	OHA	OHA
Backup hydraulic pump	19 oz (562 ml)	OHA	OHA	OHA

COOLANT			
Specification Type			
A-A-52624A	Antifreeze, Multi-Engine Type		
MIL-A-11755	Antifreeze, Arctic-Type		

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +40 F (Above +4 C)	+40 F to -15 F (+4 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
Cooling system (engine only)	14 qt (13 L)	A-A-52624A	A-A-52624A	N/A
Cooling system (total system)	43.8 qt (41.5 L)	A-A-52624A	A-A-52624A	N/A
Cooling system, Arctic (total system)	58.3 qt (55.2 L)	N/A	N/A	MIL-A-11755

CLEANING AGENT			
Specification	Туре		
P-D-680	Dry Cleaning Solvent, SD-II		
O-C-1901	Cleaning Compound, Windshield		

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES		
		Above +15 F (Above -9 C)	+15 F to -15 F (-9 C to -26 C)	-15 F to -50 F (-26 C to -46 C)
All metal parts as required	N/A	SD-II (all temperatures)		
Windshield washer reservoir	7.5 qt (7.1 L)	2/3 water to 1/3 O-C-1901	1/2 water to 1/2 O-C-1901	1/3 water to 2/3 O-C-1901

For arctic operation refer to FM 9-207.

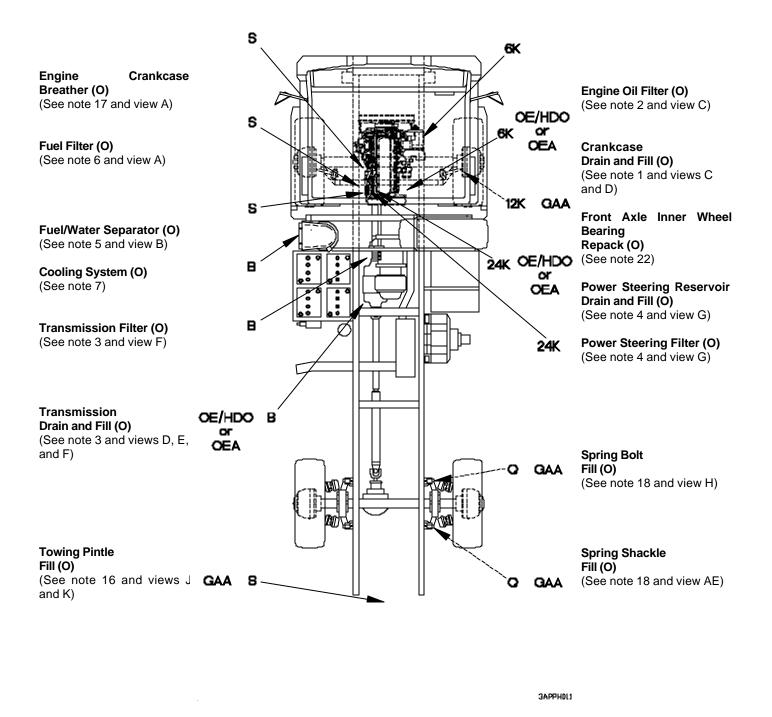
H-6. LUBRICATION/SERVICE INTERVALS

Intervals		Total Man-Hours	
Quarterly (Q)	Lubrication performed once every three months or 3,000 mi (4,827 km).*	2.0	
Semi-annually (S)	Lubrication performed once every six months or 6,000 mi (9,654 km).*	2.5	
Annually (A)	Lubrication performed once every year or every 12,000 mi (19,308 km).*	1.5	
Biennially (B)	Lubrication performed once every two years or every 24,000 mi (38,616 km).*	3.5	
3K	Lubrication performed once every 3,000 mi (4,827 km).**	1.0	
6K	Lubrication performed once every 6,000 mi (9,654 km).**	1.0	
12K	Lubrication performed once every 12,000 mi (19,308 km).**	4.0	
24K	Lubrication performed once every 24,000 mi (38,616 km).**	0.5	
* Whichever occurs first. ** No calendar interval.			

H-7. LOCATOR VIEWS

LUBRICANT INTERVAL

INTERVAL LUBRICANT



CHASSIS

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

LUBRICANT INTERVAL

INTERVAL LUBRICANT

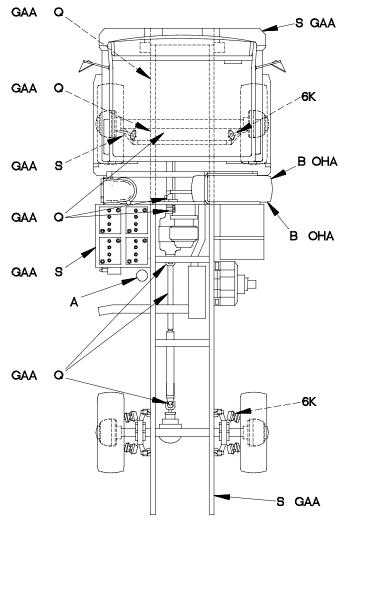
Fill (O) (See note 18 and view H) Spring Shackle Fill (O) (See note 18 and view I) Tie Rod Ends Fill (O) (See note 13 and view N) Universal and Slip Joints Fill (O) (See note 9 and view P)

Spring Bolt

Battery Posts (O) (See note 19 and view Q)

Air Dryer (O) (See note 25 and view AF)

Universal and Slip Joints Fill (O) (See note 9 and view P)



11K Self-Recovery Winch (SRW) Cable Front Roller Fairlead Fill (O) (See note 23 and views Z and AA)

Brake Wedge and Air Chamber (O) (See note 21 and view L)

Backup Hydraulic Pump Drain and Fill (O) (See note 10 and view R)

Air/Hydraulic Power Unit Drain and Fill (O) (See note 10 and view S)

Brake Wedge and Air Chamber (O) (See note 21 and view M)

11K Self-Recovery Winch (SRW) Cable Rear Roller Fairlead Fill (O) (See note 23 and views AB and AC)

3APPH021

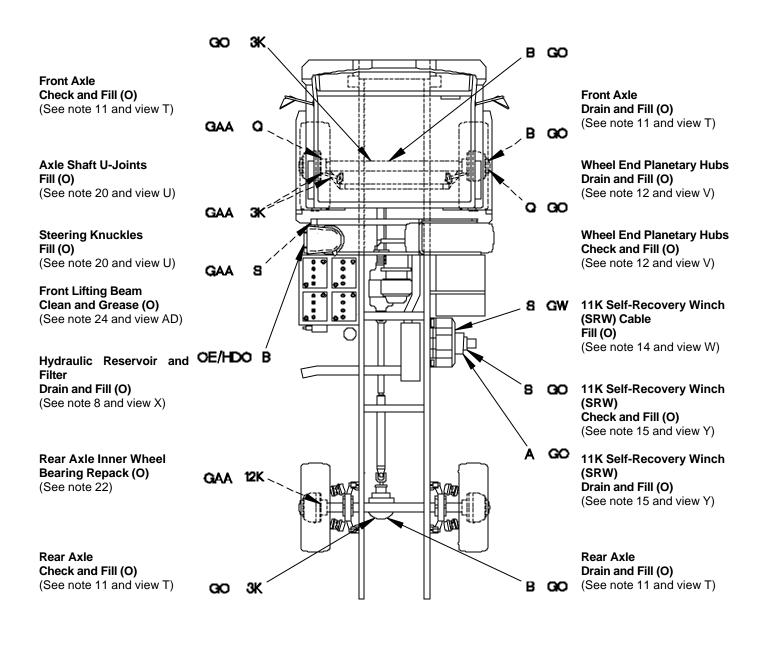
CHASSIS

NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

H-7. LOCATOR VIEWS (CONT)

LUBRICANT INTERVAL

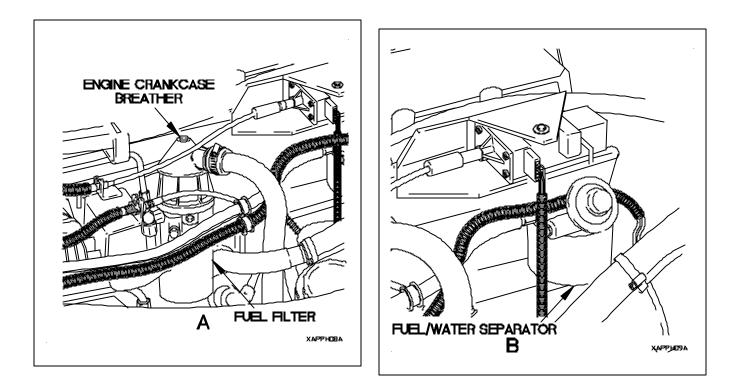
INTERVAL LUBRICANT

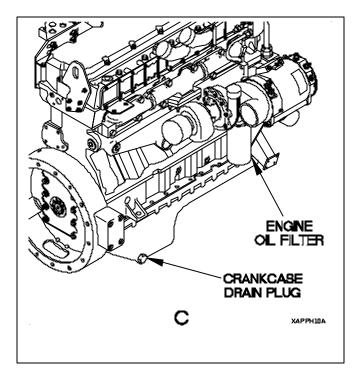


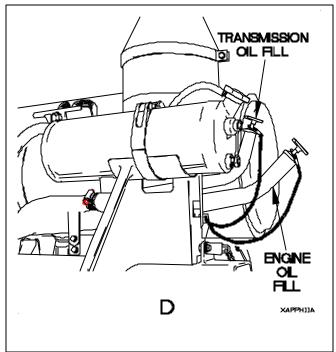
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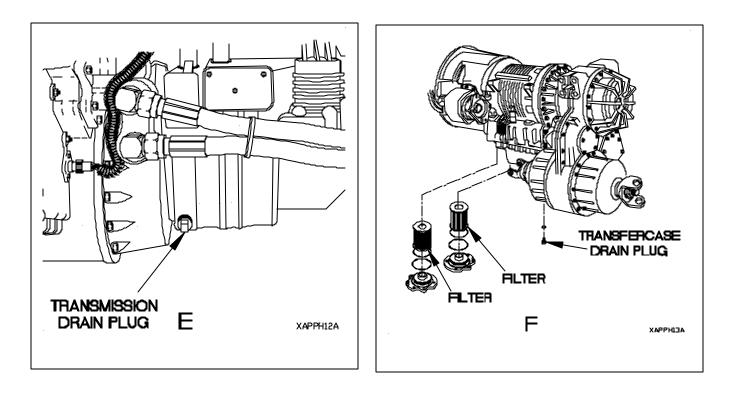
NOTE: Dashed arrows indicate lubrication on both sides of vehicle.

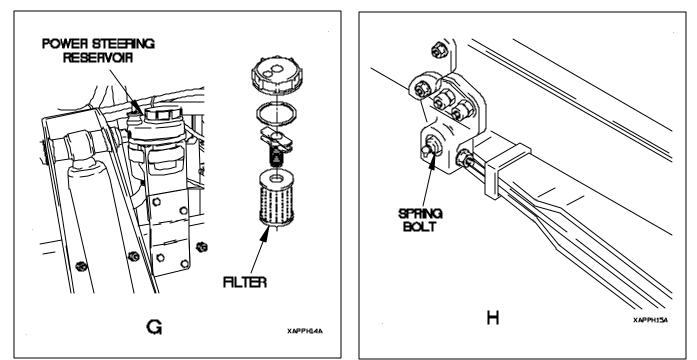


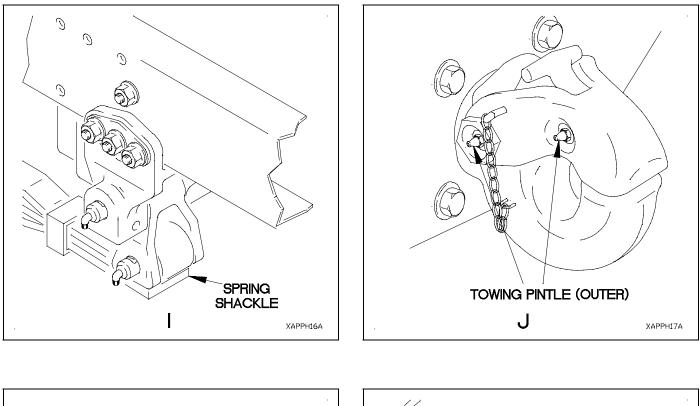


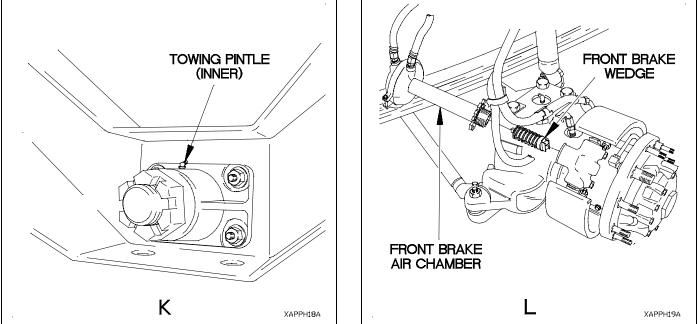


H-8. LOCAL VIEWS (CONT)

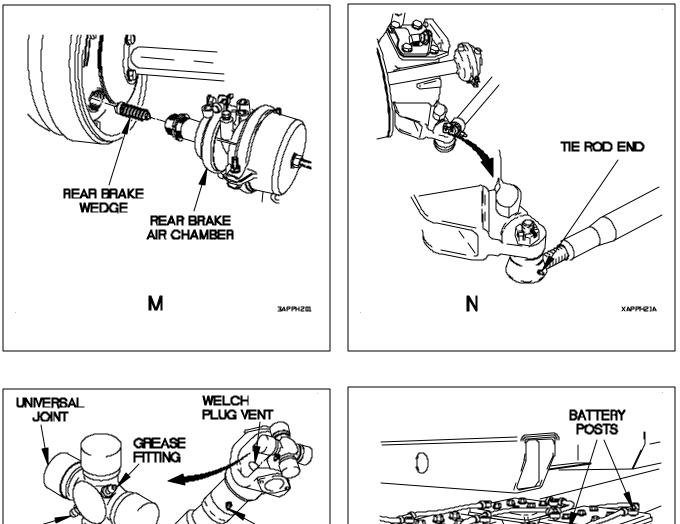


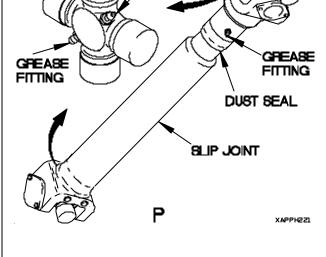


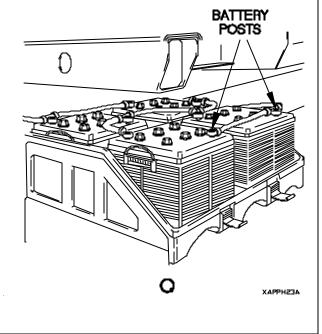


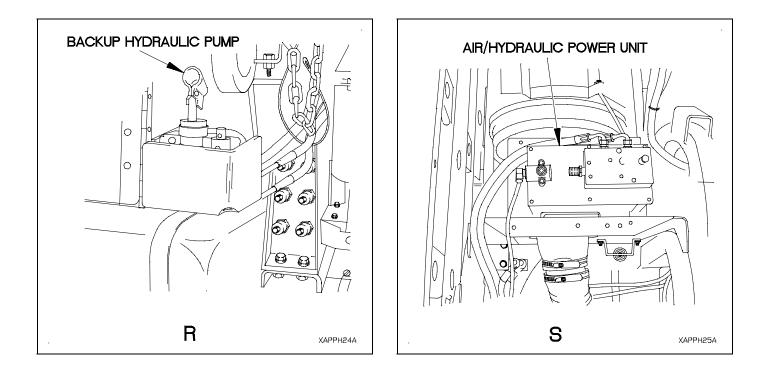


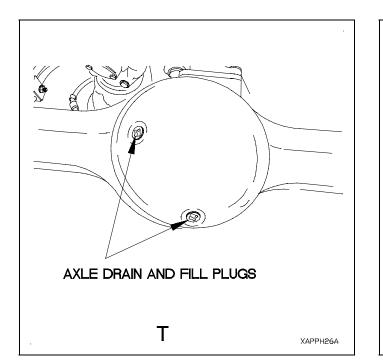
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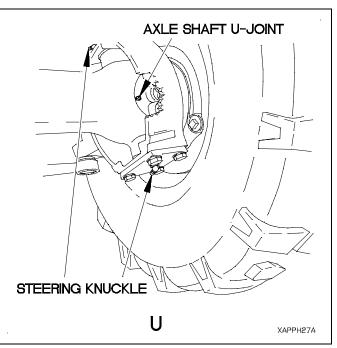




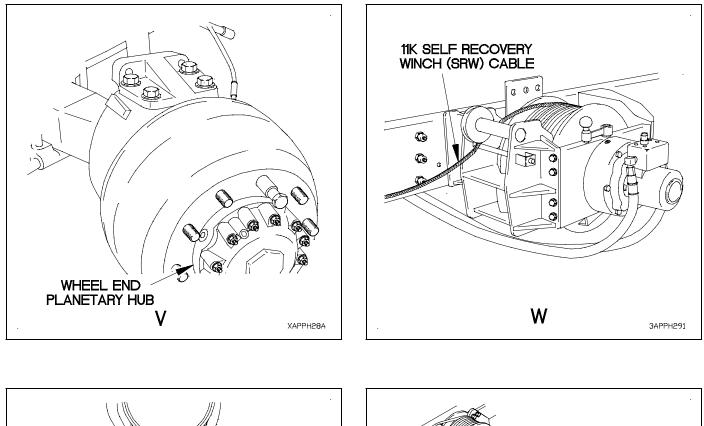


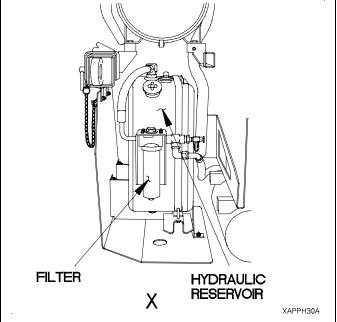


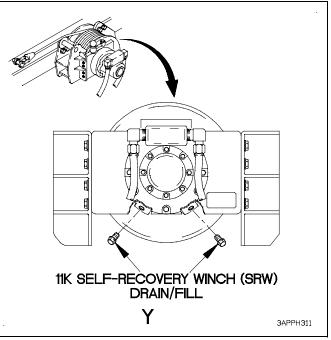


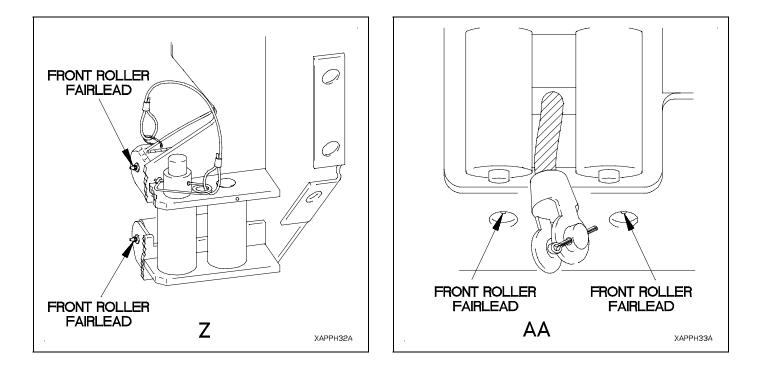


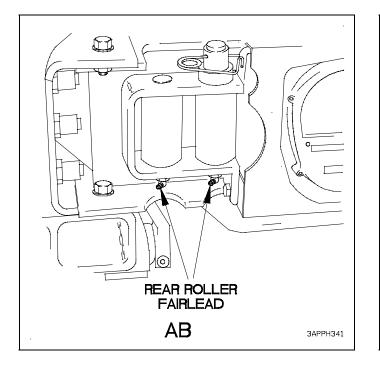
H-8. LUBRICATION LOCAL VIEWS (CONT)

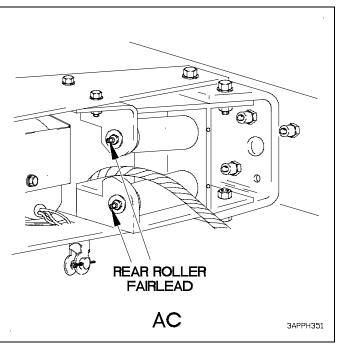




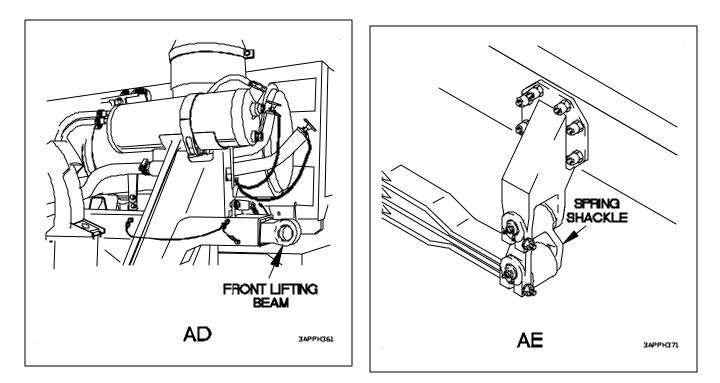


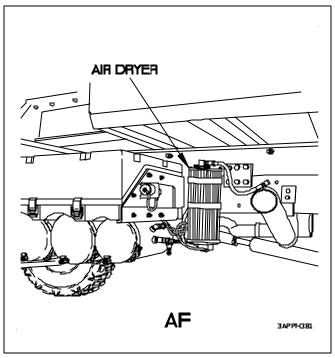






H-8. LOCAL VIEWS (CONT)





H-9. LUBRICATION/SERVICES NOTES

1. ENGINE CRANKCASE. Check engine oil level daily. Change engine oil at initial 5,000 miles (8,045 km). During the remainder of the 12,000 mile (19,308 km)/18 month warranty period, Units participating in AOAP will sample engine oil every 3,000 miles (4,827 km) or 6 months, whichever occurs first and change engine oil as directed by AOAP. Units not participating in AOAP, will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first. After expiration of engine warranty period, Units participating in AOAP will perform engine oil change as directed by AOAP. Units not participating in AOAP will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first, or every six months, whichever occurs first. Units not participating in AOAP will change engine oil every 6,000 miles (9,654 km) or every six months, whichever occurs first, or when operating in dusty areas or under severe operating conditions, change the oil every 3,000 miles (4,827 km) or every three months, whichever occurs first. Drain engine oil when engine is warm. Refill engine crankcase with OE/HDO specified for the ambient temperature. Engine oil is full when level is within crosshatch marks on the dipstick. Do not overfill.

2. ENGINE OIL FILTER. Filter is replaced each time the crankcase is drained. If water or metal particles are detected during oil filter replacement, notify Direct Support Maintenance personnel before refilling crankcase (para 3-4).

3. TRANSMISSION. Check transmission oil level daily. Change transmission oil at initial 5,000 miles (8,045 km). During the remainder of the 24 month/unlimited mileage warranty, Units participating in AOAP will sample transmission oil every 6,000 miles (9,654 km) or 12 months, whichever occurs first and change transmission oil as directed by AOAP. Units not participating in AOAP will perform transmission oil change every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Drain transmission oil when engine is warm. Refill with OE/HDO specified for ambient temperature. Add oil until the proper level is reached (TM 9-2320-365-10). Do not overfill. Replace oil filters each time transmission oil is changed (para 8-9).

4. POWER STEERING. Check power steering oil level weekly. Change the oil every 24,000 miles (38,616 km). Disconnect upper and lower hoses from steering gear and drain oil. Refill power steering pump reservoir with OE/HDO specified for the ambient temperature. Reservoir is full when oil is between the two marks on the dipstick. Do not overfill. Remove dipstick, wipe clean and install dipstick fully into reservoir. Remove dipstick and read oil level. Replace oil filter each time power steering oil is changed (para 13-8).

5. FUEL/WATER SEPARATOR. Replace filter element every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 4-13).

6. FUEL FILTER. The fuel particle filter is replaced when a new fuel/water separator filter element is installed. The normal replacement interval is every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 4-14).

7. ENGINE COOLANT. Check engine coolant level daily. Change the coolant and flush the cooling system every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Fill radiator overflow tank with an Ethylene Glycol/water mixture as specified in 0-A-548D. Service the cooling system before the specified interval if:

- Coolant is heavily contaminated.
- Engine overheats.
- Oil cooler has failed allowing oil and coolant to mix.

8. HYDRAULIC RESERVOIR and FILTER. Check oil level weekly and make sure oil level gage reads F (full). Units participating in AOAP will sample oil annually and change oil and filter as directed by AOAP. Units not participating in AOAP will change oil and filter every two years. Drain oil and refill hydraulic reservoir with OE/HDO specified for ambient operating temperature. Fill hydraulic reservoir until oil level gage reads F (full). Do not overfill. Replace oil filter each time oil is changed (para 9-12).

H-9. LUBRICATION/SERVICE NOTES (CONT)

9. DRIVE SHAFT UNIVERSAL and SLIP YOKE.

Lubricate drive shafts with GAA every 3,000 miles (4,827 km) or once every three months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first. Perform drive shaft hinging inspection every time drive shafts are serviced (para 9-3).

• UNIVERSAL JOINT:

A. Apply grease to both grease fittings until new grease purges from all four bearing caps.

B. If grease does not purge from all four bearing caps, perform the following steps:

- (1) Loosen two screws on bearing cap that does not purge, approximately 1/4 in.
- (2) Apply grease to grease fitting for bearing cap that does not purge until bearing cap purges.
- (3) Remove and discard the two screws loosened in step (1).
- (4) Position two replacement screws in bearing cap and tighten down evenly.
- (5) Tighten two screws to 26-35 lb-ft (35-47 N m).
- SLIP JOINT:

- A. Apply grease until grease appears at the vent in the welch plug.
- B. Place your finger over the welch plug vent and add grease until grease purges from the dust seal.
- C. If grease does not purge from the dust seal, inspect drive shaft slip yoke (para 9-2).

10. AIR/HYDRAULIC POWER UNIT and BACKUP HYDRAULIC PUMP. Change OHA oil every 24,000 miles (38,616 km) or once every two years, whichever occurs first. To service air/hydraulic power unit and backup hydraulic pump refer to vehicle para 19-7, Air Transportability Hydraulic System Service.

11. ALL AXLE DIFFERENTIALS. Check oil level in differentials every 3,000 miles (4,827 km). Check oil level with vehicle parked on level surface and axle differential at ambient temperature, allowing at least one hour to cool down after vehicle operation. If oil is checked when axle differential is hot, it is normal for oil to spill out of the port due to expansion from the heat. Oil level is considered full if it is within one inch of the bottom of the fill port. If oil spills from the fill port when the axle differential is cool, it is overfull. Allow oil to drain until no more drains out. If the oil level is more than one inch below the bottom of the fill port, refill axle differential with GO specified for the ambient temperature until level with bottom of fill port. Change the oil every 24,000 miles (38,616 km) or once every two years, whichever occurs first. Drain oil when hot after operation.

12. FRONT AXLE WHEEL END PLANETARY HUBS. There are two lube intervals for the front axle wheel end planetary hubs.

- a. Check and fill front axle wheel end planetary hubs every 3,000 miles (4,827 km) or once every three months, whichever occurs first, as follows:
 - (1) Position vehicle on a level surface. Allow 15 minutes for vehicle to cool before checking oil levels.
 - (2) Position fill port at 4 o'clock position. If oil flows from fill port when plug is loosened, let oil drain to correct level. If oil level is below fill port, fill hub with GO specified for the ambient temperature until oil is level with fill port.
- b. Drain and fill front axle wheel end planetary hubs every 24,000 miles (38,616 km) or once every two years, whichever occurs first, following the repacking of the inner wheel bearings or whenever wheel end assemblies are taken apart for other maintenance as follows:
 - (1) Position vehicle on a level surface.
 - (2) Position fill port at the 6 o'clock (down) position.
 - (3) Drain hub oil (allow a minimum of 15 minutes for oil to drain down from vent tubes).
 - (4) Refill hubs with 11-13 ounces of GO specified for the ambient temperature.

13. TIE ROD ENDS. Lubricate tie rod ends with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun, until new grease is seen purging from the boot area. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

14. 11K SELF-RECOVERY WINCH (SRW) CABLE:

CAUTION

Do not use dry cleaning solvent to clean 11K Self-Recovery Winch (SRW) cables. Use of dry cleaning solvent will remove lubricant from inner strands of 11K SRW cables. Failure to comply may result in damage to equipment.

a. After winch operation:

Refer to FM 5-125.

b. Care of wire rope:

Refer to FM 5-125.

c. Inspection of wire rope:

Refer to FM 5-125.

- d. Every six months:
 - (1) Unwind entire length of 11K SRW cable (TM 9-2320-365-10).
 - (2) Soak and clean 11K SRW cable with new OE/HDO 30.
 - (3) Wipe off excess OE/HDO 30.
 - (4) Coat 11K SRW cable with GW.
 - (5) Rewind 11K SRW cable (TM 9-2320-365-10).

15. 11K SRW. Check 11K SRW gear oil level every 6,000 miles (9,654 km) or once every six months, whichever occurs first. Refill 11K SRW with GO specified for ambient temperature. Change oil every 12,000 miles (19,308 km) or once every year, whichever occurs first. Use procedure (a) to check and fill oil level; use procedure (b) to change oil.

- a. Check and fill oil level as follows:
 - (1) Shift the freespool mechanism to the disengage position so the drum can be freely rotated.
 - (2) Rotate the drum to where either plug is near the top of the 11K SRW. Remove the plug.
 - (3) Rotate the drum 90 degrees in the direction that allows the other plug to be near the top of the 11K SRW. Remove the plug.

NOTE

Oil level is full if a small amount of oil runs out of lower plug.

- (4) Add oil until a small amount of oil runs out of lower plug hole.
- (5) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (6) Rotate drum until open hole is at top.
- (7) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (8) Tighten plugs to 13-15 lb-ft (18-20 N·m).

H-9. LUBRICATION/SERVICE NOTES (CONT)

- b. Change oil as follows:
 - (1) Shift the freespool mechanism to the disengage position so the drum can be freely rotated.
 - (2) Rotate the drum to where either plug is near the top of the 11K SRW. Remove the plug.
 - (3) Rotate the drum 90 degrees in the direction that allows the other plug to be near the top of the 11K SRW. Remove the plug.
 - (4) Position drain pan (Item 17, Appendix C) under 11K SRW.
 - (5) Rotate the drum until either hole is straight down to the bottom of the 11K SRW. Allow the oil to drain completely.
 - (6) Rotate the drum until either hole is at top.

NOTE

Oil level is full if a small amount of oil runs out of lower plug.

- (7) Add oil until a small amount of oil runs out of lower plug hole.
- (8) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (9) Rotate drum until open hole is at top.
- (10) Apply adhesive (Item 2, Appendix D) to plug and position plug in top hole.
- (11) Tighten plugs to 13-15 lb-ft (18-20 N•m).

16. TOWING PINTLE. Lubricate towing pintle with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun until new grease is seen purging.

WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.

17. ENGINE CRANKCASE BREATHER. Remove crankcase breather and clean with Dry Cleaning Solvent (SD P-D-680) (Item 71, Appendix D) or equivalent, and replace o-ring seal every 6,000 miles (9,654 km) or once every six months, whichever occurs first (para 3-5).

18. FRONT and REAR AXLE SPRING BOLT and SPRING SHACKLE. Lubricate front and rear axle spring bolts and spring shackles with GAA every 3,000 miles (4,827 km) or once every three months, whichever occurs first, using a low pressure lubrication gun until grease appears between pins and bushings at both ends of spring bolt and spring shackle. If pins do not accept grease, notify Direct Support to remove pins. Clean and inspect pins and bushings, replace if necessary. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

19. BATTERY POSTS. Service batteries in accordance with TM 9-6140-200-14, every 6,000 miles (9,654 km) or once every six months, whichever occurs first.

20. FRONT AXLE SHAFT UNIVERSAL JOINTS and STEERING KNUCKLES. Lubricate universal joints every 3,000 miles (4,827 km) or once every three months, whichever occurs first. Lubricate steering knuckles with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

21. BRAKE WEDGE and AIR CHAMBER: BRAKE SPIDER, SELF-ADJUSTER MECHANISM, AND WEDGE ASSEMBLY. Clean and lubricate (with GAA) areas of spider and hardware that contact the brake shoes. Disassemble, clean and lubricate the self-adjuster mechanism. Clean and lubricate the wedge head, rollers and ramps in the plungers. Clean and lubricate every 6,000 miles (9,654 km). If operating conditions are severe or abnormal, service at 3,000 miles (4,827 km) or once every three months, whichever occurs first, or when any of the following occur: Refer to para 11-4 and 11-5.

- Seals are replaced
- Plungers are removed
- Brakes are relined
- Grease becomes contaminated or hardened

22. FRONT and REAR AXLE INNER WHEEL BEARINGS. Repack inner wheel bearings with GAA every 12,000 miles (19,308 km), when semiannual PMCS inspection of service brakes reveals oil leak from inner hub, or whenever wheel end assemblies are taken apart for other maintenance (para 10-2).

23. 11K SRW CABLE ROLLER FAIRLEADS. Lubricate with GAA every 6,000 miles (9,654 km) or once every six months, whichever occurs first, using a low pressure lubrication gun. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

WARNING

- Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 F (38 C) and for Type II is 138 F (50 C). Failure to comply may result in serious injury or death to personnel.
- If personnel become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts skin or clothes, flush with cold water. If solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in injury to personnel.

24. FRONT LIFTING BEAM. Remove left and right lifting beams and clean with Dry Cleaning Solvent (SD P-D-680) (Item 71, Appendix D) or equivalent, every 6,000 miles (9,654 km) or once every six months, whichever occurs first. Apply a light coat of GAA to lifting beams. If operating conditions are severe or abnormal, service at 1,000 miles (1,609 km) or once every month, whichever occurs first.

25. AIR DRYER. Service air dryer (para 23-6) every 12,000 miles (19,308 km) or annually, whichever occurs first.

26. FRONT AND REAR LEAF SPRING. At initial 1000 miles (1609 km) of vehicle operation, tighten U-bolts to 390-510 lb-ft (529-692 N•m).

APPENDIX J ADDITIONAL AUTHORIZATION LIST (AAL)

Section I. INTRODUCTION

J-1. SCOPE

This appendix lists additional items you are authorized for the support of the LMTV.

J-2. GENERAL

This list identifies items that do not have to accompany the LMTV and that do not have to be turned in with it. These items are all authorized to you by Common Tables of Allowance (CTA), Modification Table of Organization and Equipment (MTOE), Tables of Distribution and Allowances (TDA), or Joint Table of Allowance (JTA).

J-3. EXPLANATION OF LISTING

National Stock Numbers, description, and quantities are provided to help you identify and request the additional items you require to support this equipment.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) National Stock Number	(2) Description (CAGE) Part Number	(3) U/M	(4) Qty Auth
6685-01-193-1733	10,000 PSI Transducer: (19207) 12258956	EA	1

APPENDIX K TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART

Section I. INTRODUCTION

K-1. INTRODUCTION

This appendix lists the various transmission controls and configuration modifications that may be required to permit the transmission to function correctly. This appendix will guide the mechanic through the hardware selection process by identifying compatibility issues between the transmission controls (WTEC II/WTEC III) and the numerous revisions of the Allison MD3070PT transmission (PRE-ID w/ 24-pin connector, PRE-ID w/ 31-pin connector, TID 1, TID 2, and TID 3). Refer to Figure 1. After replacing any component of the transmission controls or the transmission assembly, perform calibration procedures in TM 9-2320-365-20-3 paragraph 8-2 or 8-3.

K-2. EXPLANATION OF COLUMNS

- a. Column (1) Installed Controls or Controls Being Installed. This column lists all of the variables concerning which version of transmission controls are installed in the vehicle, or may need to be installed, to communicate correctly with the transmission.
- **b.** Column (2) Installed Transmission or Transmission Being Installed. This column lists all of the various revisions of the Allison MD3070PT transmissions that may be installed in the vehicle.
- c. Column (3) Required Modification. This column lists the various electrical interface (hardware) modifications that may be required to allow the transmission controls to communicate with the transmission.

K-3. HOW TO USE THIS CHART

- a. Determine which controls and transmission are installed in the vehicle.
- b. Determine which component requires replacement.
- c. Read across the row to column (3) to determine the required modification.

Section II.

TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART

(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC II (with 24-pin connector)	PRE-ID w/ 24-pin connector (transmission serial number prior to 6510032369)	No modification required.
WTEC II (with 24-pin connector)	PRE-ID w/ 31-pin connector (transmission serial number 6510032369 to 6510090785)	Install 31-pin connector.
WTEC II (with 24-pin connector)	TID 1 (transmission serial number 6510090786 to 6510142171)	Install 31-pin connector.
WTEC II (with 24-pin connector)	TID 2 (transmission serial number 6510142172 to 6510262116)	Install 31-pin connector and replace transmission internal wiring harness.

TRANSMISSION/TRANSMISSION CONTROLS ADAPTABILITY CHART (CONT)

(1) (2) (3)			
Installed Controls or Controls Being Installed	رے) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)	
WTEC II	TID 3	Install 31-pin connector, replace	
(with 24-pin connector)	(transmission serial number	transmission internal wiring harness,	
	6510262117 and subsequent)	and reprogram WTEC II TEPSS. ¹	
WTEC II	PRE-ID w/ 24-pin connector	Install adapter cable assembly.	
(with 31-pin connector)	(transmission serial number prior to	install adapter cable assembly.	
	6510032369)		
WTEC II	PRE-ID w/ 31-pin connector	No modification required.	
(with 31-pin connector)	(transmission serial number		
	6510032369 to 6510090785)		
WTEC II	TID 1	No modification required.	
(with 31-pin connector)	(transmission serial number 6510090786 to 6510142171)		
WTEC II	TID 2	Replace transmission internal wiring	
(with 31-pin connector)	(transmission serial number	harness.	
	6510142172 to 6510262116)		
WTEC II	TID 3	Replace transmission internal wiring	
(with 31-pin connector)	(transmission serial number	harness and reprogram WTEC II	
	6510262117 and subsequent)	TEPSS. ¹	
WTEC III	PRE-ID w/ 24-pin connector	Install adapter cable assembly and ID	
(with ECU manufactured prior to	(transmission serial number prior to	harness.	
October 1999) ²	6510032369)		
WTEC III	PRE-ID w/ 31-pin connector	Install ID harness.	
(with ECU manufactured prior to	(transmission serial number		
October 1999) ²	6510032369 to 6510090785)		
WTEC III	TID 1	No modification required.	
(with ECU manufactured prior to	(transmission serial number		
October 1999) ²	6510090786 to 6510142171)		
WTEC III	TID 2	No modification required.	
(with ECU manufactured prior to	(transmission serial number		
October 1999) ²	6510142172 to 6510262116)		
WTEC III	TID 3	Reprogram WTEC III ECU ¹ or install	
(with ECU manufactured prior to	(transmission serial number	new WTEC III ECU (P/N 12421787-	
October 1999) ²	6510262117 and subsequent)	002).	
WTEC III	PRE-ID w/ 24-pin connector	Install adapter cable assembly and ID	
(with ECU manufactured after	(transmission serial number prior to	harness.	
October 1999) ³	6510032369)		
WTEC III	PRE-ID w/ 31-pin connector	Install ID harness.	
(with ECU manufactured after	(transmission serial number		
October 1999) ³	6510032369 to 6510090785)		
WTEC III	TID 1	No modification required.	
(with ECU manufactured after	(transmission serial number		
October 1999) ³	6510090786 to 6510142171)		

¹ Reprogramming can only be accomplished by an authorized Allison Transmission distributor. You must provide the transmission serial number of the transmission being installed to ensure correct reprogramming. If at a later time, an earlier version transmission is installed in a WTEC II equipped vehicle, WTEC II TEPSS will require reprogramming again. ² Vehicle serial number 012477 and lower. Refer to Figure 1.

³ Vehicle serial number 012478 and higher. Refer to Figure 1.

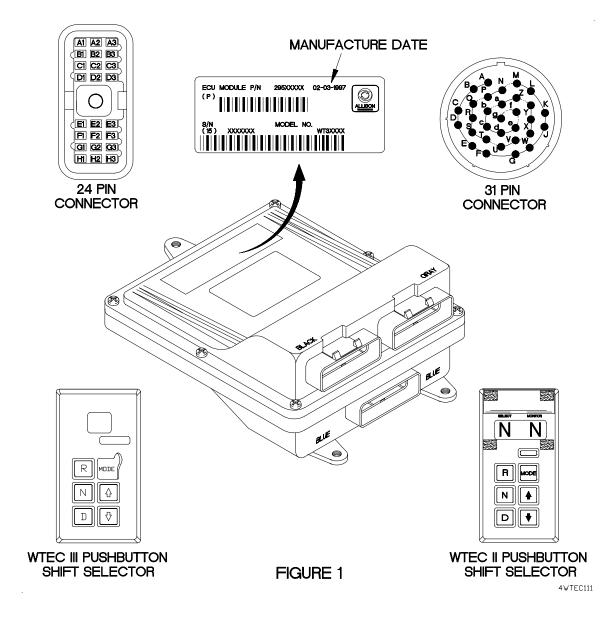
(1) Installed Controls or Controls Being Installed	(2) Installed Transmission or Transmission Being Installed	(3) Required Modification (Refer to Section III)
WTEC III (with ECU manufactured after October 1999) ³	TID 2 (transmission serial number 6510142172 to 6510262116)	No modification required.
WTEC III (with ECU manufactured after October 1999) ³	TID 3 (transmission serial number 6510262117 and subsequent)	No modification required.

Section III.

MODIFICATION PARTS IDENTIFICATION

Identification	Part Number/NSN	Description
31-pin connector	300130 5935-21-921-1813	Converts a transmission external wiring harness from a 24-pin ("D" type) connector to a 31-pin (round type) connector.
Transmission internal wiring harness	29529474 6150-01-481-8088	Converts a TID 2 transmission to a TID 1 configuration to allow WTEC II controls to communicate with the transmission.
Gasket	29503283 5330-01-360-9035	Required when replacing transmission internal wiring harness.
ID harness	200100 6150-21-921-1191	Allows WTEC III controls to communicate with a PRE-ID transmission.
Adapter cable assembly	29519210 6150-01-420-5987	Adapts a PRE-ID transmission with 24-pin ("D" type) connector to a transmission external wiring harness with a 31-pin (round) connector.





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GLOSSARY ABBREVIATIONS

A/C Air Conditioner
AC Alternating Current
ANSI American National Standards Institute
CCW Counterclockwise
CTIS Central Tire Inflation System
CW Clockwise
ECU Electronic Control Unit
EMI Electromagnetic Interference
LED Light Emitting Diode
LH Left Hand
LMHC Light Material Handling Crane
MAC Maintenance Allocation Chart
NATO North Atlantic Treaty Organization
NBC Nuclear, Biological, or Chemical
NO/NC Normally Open/Normally Closed
PDP Power Distribution Panel
PMCS Preventive Maintenance Checks and Services
PTO Power Takeoff
RH Right Hand
SAE Society of Automotive Engineers
SRW Self-Recovery Winch
STE/ICE-R Simplified Test Equipment/Internal Combustion Engine-Reprogrammable
TEPSS Transmission ECU Pushbutton Shift Selector
TM Technical Manual
TPS Throttle Position Sensor

TM 9-2320-365-20-5

TPSS Transmission Pushbutton Shift Selector
VAC Volts Alternating Current
VDC Volts Direct Current
VIM Vehicle Interface Module
WTEC II World Transmission Electronic Controls (version 2)
WTEC III World Transmission Electronic Controls (version 3)

By Order of the Secretary of the Army:

DENNIS J. REIMER General, United States Army Chief of Staff

Official: JOEL B. HUDSON

Administrative Assistant to the Secretary of the Army 04996

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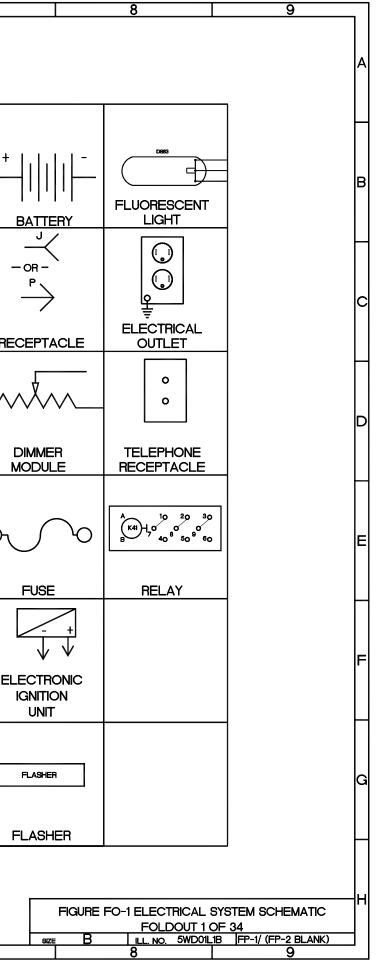
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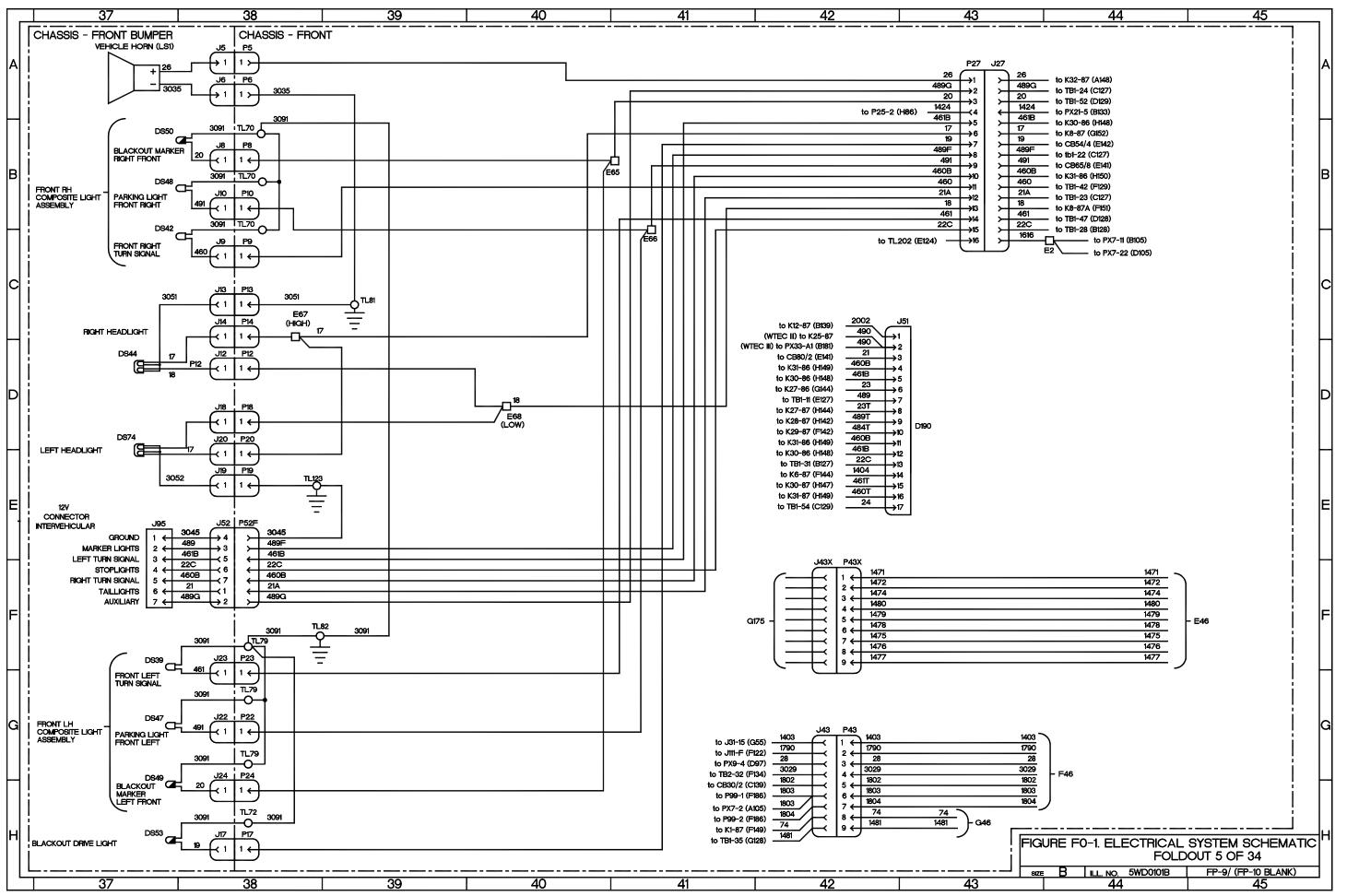


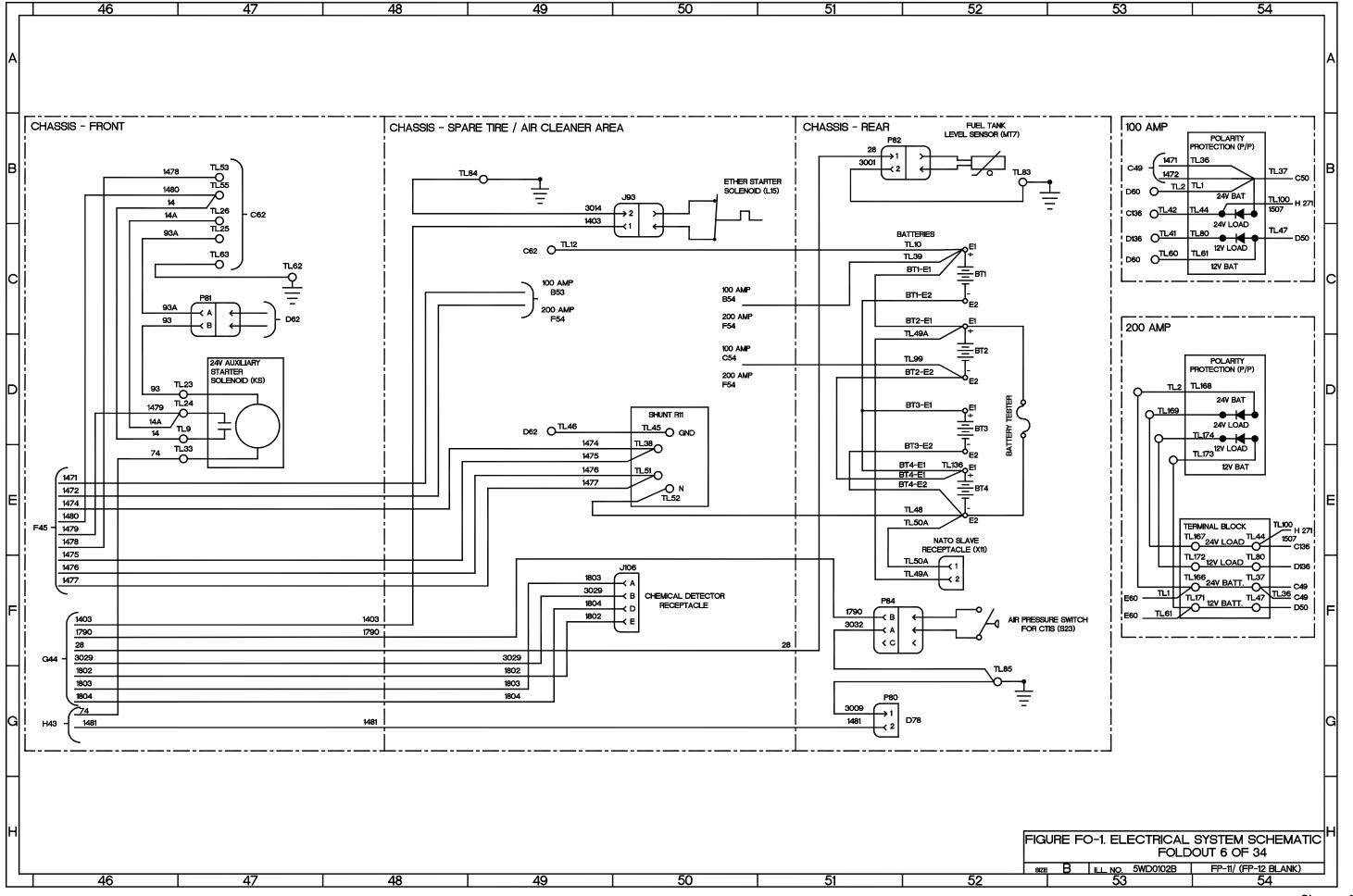
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	A13	A66 8	WTEC II TRANSMISSION CONNECTOR A	J154		VAN FRONT MARKER LIGHT	P53R	D196	3 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	P132	B85 10 CAB MARKER LIGHT FRONT LOWER RIGHT
A	A13	A70 8	WTEC II TRANSMISSION CONNECTOR B	J155		VAN CURBSIDE MARKER LIGHT	P54	D197	22 LEFT REAR MARKER	P150	B272 31 VAN FRONT MARKER LIGHT
	A13	A74 9	WTEC II TRANSMISSION CONNECTOR C	J156		VAN CURBSIDE MARKER LIGHT	P55		10 CAB MARKER LIGHT FRONT UPPER RIGHT	P151	B272 31 VAN FRONT MARKER LIGHT
	л		2 VAN 110 VAC POWER ENTRY	J157		VAN ROADSIDE MARKER LIGHT	P55		6 23 RH FRONT TOP CAB MARKER LIGHT	P152	B272 31 VAN FRONT MARKER LIGHT
	J2		1 EMI FILTER	J158		VAN ROADSIDE MARKER LIGHT	P56		22 MIDDLE REAR MARKER	P153	A272 31 VAN FRONT MARKER LIGHT
	<u>J2</u>	_	2 VAN 110 VAC POWER ENTRY	J159		VAN REAR CENTER MARKER LIGHT	P57		10 CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT	P154	
	<u>J3</u>	_	3 AIRDROP ONLY	J160		VAN REAR CENTER MARKER LIGHT	P57			P155	B287 32 VAN CURBSIDE MARKER LIGHT
	J5	_		J161		VAN REAR CENTER MARKER LIGHT	P58		22 RIGHT REAR MARKER	P156	B287 32 VAN CURBSIDE MARKER LIGHT
	J6	A38 5		J162	B273 31	VAN CURBSIDE BLACKOUT LIGHT	P59			P157	C287 32 VAN ROADSIDE MARKER LIGHT
	J/		1 WTEC II TRANSMISSION DIMMER MODULE	J163			P59			P158	C287 32 VAN ROADSIDE MARKER LIGHT
- IBI	38	B38 5		J164	H274 31	VAN ROADSIDE BLACKOUT LIGHT	P60			P159	D287 32 VAN REAR CENTER MARKER LIGHT
	J9	C38 5	FRONT RIGHT TURN SIGNAL	J165	H275 31		P60			P160	
	J10 J12	B38 5	PARKING LIGHT FRONT RIGHT RIGHT HEADLIGHT	J166 J167	C271 31	VAN FRONT EMERGENCY LIGHT VAN REAR EMERGENCY LIGHT	P61 P62		22 RH COMPOSITE LIGHT 22 RH COMPOSITE LIGHT	P161	D287 32 VAN REAR CENTER MARKER LIGHT B273 31 VAN CURBSIDE BLACKOUT LIGHT
	J13	C38 5	RIGHT HEADLIGHT	J173	G272 31	VAN HEAR EMERGENCI LIGHT	P63	_	22 RH COMPOSITE LIGHT	P163	B273 31 VAN CURBSIDE BLACKOUT LIGHT
	J14	C38 5	RIGHT HEADLIGHT	J209A	_	PTO EQUIPPED	P64	_	22 RH COMPOSITE LIGHT	P164	G274 31 VAN CONDICE EMENDIAL CONDICT LIGHT
н	.117	H38 5	BLACKOUT DRIVE LIGHT	J209A		PTO EQUIPPED	P65	E186		P165	G275 31 VAN ROADSIDE EMERGENCY LIGHT
	J18	D38 5		J210		CAB - DASH - CENTER - OPTIONS PANEL	P67	A74		P166	C272 32 VAN FRONT EMERGENCY LIGHT
	. 110	E38 5		J215		PTO EQUIPPED	F0/	- A/4		P167	D287 31 VAN REAR EMERGENCY LIGHT
	J19	_	0 CAB - DASH - LEFT - UNDERDASH	J230		VAN CURBSIDE 110 VAC OUTLET	P67	Bee	WIRING HARNESS TO TRANSMISSION CONNECTOR 8 TID1, TID2, AND TID3 TRANSMISSION EXTERNAL WIRING	P172	E264 30 DUMP BODY CONNECTOR
	J20	D38 5	LEFT HEADLIGHT	J230		VAN CURBSIDE 110 VAC CUTLET	· · ·	1009	HARNESS TO TRANSMISSION EXTERINAL WIFING	P173	G271 31 VAN 12/24 VDC POWER
	J20	G38 5	PARKING LIGHT FRONT LEFT	J231		VAN CURBSIDE 110 VAC OUTLET	P69	D59		P201	Get 7 Engine
	J23	F38 5	FRONT LEFT TURN SIGNAL	J233		VAN CONBALLE 110 VAC COTLET	P71	E66		P210	F222 25 CAB - DASH - CENTER - OPTIONS PANEL
	J23	H38 5	BLACKOUT MARKER LEFT FRONT	J233		VAN ROADSIDE 110 VAC OUTLET			CONNECTOR	P210	C227 26 PTO EQUIPPED
	J25	G85 10		J235		VAN ROADSIDE 110 VAC OUTLET	P71	E70		P215	E230 26 PTO EQUIPPED
	J27	_	CHASSIS - FRONT	J236	H275 31	VAN ROADSIDE 18 VAC OUTLET	<u> </u>	+	SENSOR CONNECTOR	P216	
	J31		ENGINE	J237	275 31	VAN CURBSIDE 24 VDC OUTLET	P71	E75		P217	
	J31X		0 CAB - DASH - LEFT - UNDERDASH	J242	D271 31	VAN A/C	· · · ·		SPEED SENSOR CONNECTOR	P217	B268 30 PTO EQUIPPED
	J39			J244	E271 31	VAN THERMOSTAT	P72	F66		P901	A209 24 CAB - DASH - CENTER - OPTIONS PANEL
	J43		CHASSIS - FRONT	J245	F271 31	VAN HEATER				P902	
	J43X		CHASSIS - FRONT	J912		CAB - DASH - CENTER - HEATER / CTIS ECU	P72	F70		P903	
М	J43X		0 CAB - DASH - LEFT - UNDERDASH	J912		CAB - DASH - CENTER - OPTIONS PANEL		-	SENSOR CONNECTOR	P903/	
	J50		CAB MARKER LIGHT FRONT UPPER LEFT	J913	B122 14	CAB - DASH - CENTER - HEATER / CTIS ECU	P72	E75		P904	
	J51		CHASSIS - FRONT	J921	G62 7	TROOP TRANSPORT ALARM				P904	
	J52	_	CHASSIS - FRONT BUMPER	P2	A185 21	EMI FILTER	P73	F66		P905	
н	J52		3 CHASSIS - FRONT	P3	D204 23	AIRDROP ONLY		-	SENSOR CONNECTOR	P905/	
	J53	_	3 AIRDROP ONLY	P5	A38 5	VEHICLE HORN	P73	F70		P906	
	J55	C85 10	CAB MARKER LIGHT FRONT UPPER RIGHT	P6	A38 5	VEHICLE HORN			SENSOR CONNECTOR	P906,	A B212 24 CAB - DASH - CENTER - OPTIONS PANEL
	J57	D85 10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT	P8	B38 5	BLACKOUT MARKER RIGHT FRONT	P73	F75	9 PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION THROTTLE	P908	A215 24 CAB - DASH - CENTER - OPTIONS PANEL
	J59	C85 10	CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT	P9	C38 5	FRONT RIGHT TURN SIGNAL			POSITION SENSOR CONNECTOR	P908/	A B215 24 CAB - DASH - CENTER - OPTIONS PANEL
E	J60	D85 10	CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE	P10	B38 5	PARKING LIGHT FRONT RIGHT	P74	B197	22 LH COMPOSITE LIGHT	P909	A220 25 CAB - DASH - CENTER - OPTIONS PANEL
	J62	E88 10	ROTARY WARNING LIGHT CONNECTOR	P12	D38 5	RIGHT HEADLIGHT	P76		22 LH COMPOSITE LIGHT	P909/	A B220 25 CAB - DASH - CENTER - OPTIONS PANEL
	J65	E186 2	1 ROTARY WARNING LIGHT CONNECTOR	P13	C38 5	RIGHT HEADLIGHT	P77	C197	22 LH COMPOSITE LIGHT	P910	C215 24 CAB - DASH - CENTER - OPTIONS PANEL
	J78	F185 2	1 CAB RADIO CONNECTOR	P14	C38 5	RIGHT HEADLIGHT	P78	B197	22 LH COMPOSITE LIGHT	P910A	D215 24 CAB - DASH - CENTER - OPTIONS PANEL
	J80	D78 9	AIR DRYER (EXCEPT DUMP)	P17	H38 5	BLACKOUT DRIVE LIGHT	P80	G51	6 CHASSIS - REAR	P911	C220 25 CAB - DASH - CENTER - OPTIONS PANEL
Н	J93	B50 6	CHASSIS - SPARE TIRE	P18	D38 5	LEFT HEADLIGHT	P81	C47	6 CHASSIS - FRONT	P911A	D220 25 CAB - DASH - CENTER - OPTIONS PANEL
	J95	E38 5	12V INTERVEHICULAR	P18	A177 20	CAB - DASH - LEFT - UNDERDASH	P81	D62	7 STARTER THERMO SWITCH	P912	B124 14 CAB - DASH - CENTER - HEATER / CTIS ECU
	J95	B206 2	3 ENGINE	P19	E38 5	LEFT HEADLIGHT	P82		6 FUEL TANK LEVEL SENSOR	P913	B122 14 CAB - DASH - CENTER - HEATER / CTIS ECU
	J99		1 CHEMICAL ALARM CONNECTOR	P20	D38 5	LEFT HEADLIGHT	P83	B172	20 CAB - DASH - LEFT - UNDERDASH	P913	F209 24 CAB - DASH - CENTER - OPTIONS PANEL
	J106	F50 6	CHEMICAL DETECTOR RECEPTACLE	P22	G38 5	PARKING LIGHT FRONT LEFT	P84	F51		P914	A214 24 CAB - DASH - CENTER - OPTIONS PANEL
	J108		5 CAB - DASH - CENTER - OPTIONS PANEL	P23	F38 5	FRONT LEFT TURN SIGNAL	P85		22 LH SIDE MARKER LIGHT	P914A	
	JIII		4 CTIS ELECTRONIC CONTROL UNIT	P24	H38 5	BLACKOUT MARKER LEFT FRONT	P86		22 LH REAR MARKER LIGHT	P921	G62 7 TROOP TRANSPORT ALARM
	J113		1 CTIS PRESSURE TRANSDUCER	P25	G85 10	WINDSHIELD WASHER ROTARY PUMP (B3)	P87		22 BACKUP LIGHT	PBSS	
	J114		1 CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P27	A43 5	CHASSIS - FRONT	P88			PX1	A92 11 ENGINE FAN OFF SWITCH
Ш	Jt14		4 WTEC III TRANSMISSION HARNESS (TID1)	P31	E56 7	ENGINE	P89	_	22 RH REAR MARKER LIGHT	PX10	D107 12 CAB - DASH - LEFT - INSTRUMENT PANEL
	J114		4 WTEC III TRANSMISSION HARNESS (TID2)	P31X	D56 7	ENGINE	P99	_	21 CHEMICAL ALARM CONNECTOR	PX11	G107 12 CAB - DASH - LEFT - INSTRUMENT PANEL
	J115		3 CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P32	F59 7		P10		5 PARKING LIGHT FRONT RIGHT	PX12	C112 13 ROTATING WARNING LIGHT SWITCH
	J116		3 CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P33	H59 7	FUEL/WATER SEPARATOR	P110		14 CTIS ELECTRONIC CONTROL UNIT	PX124	
	J117		3 CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P34	E59 7	OIL PRESSURE WARNING LIGHT SWITCH	P111	_	14 CTIS ELECTRONIC CONTROL UNIT	PX13	
G	J117		3 WTEC III DIAGNOSTIC CONNECTOR	P36	A57 7	WATER COOLER TEMPERATURE	P112		14 CAB - DASH - CENTER - HEATER / CTIS ECU	PX13A	
[⁻]	J118		3 CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P37	C57 7		P113			PX14	
	J119		O CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	P38	F61 7	ENGINE SPEED MAGNETIC PICKUP	P115			PX14/	
	J119		4 WTEC III CAB TRANSMISSION HARNESS (TIDI)	P39	G61 7		P116			PX15	
	J119		4 WTEC III CAB TRANSMISSION HARNESS (TID2)	P41	B57 7		P118		18 CAB - DASH - LEFT - WTEC II TRANSMISSION HARNESS	PX17	
Н	J129			P410			P116			PX174	
	J130			P42	F57 7	ETHER SENSOR SWITCH	P119		8 PRE-BLOCK SEVEN TRANSMISSION CONNECTOR	PX1A	B92 11 CAB - DASH - LEFT - INSTRUMENT PANEL
	J130			P43	G42 5	CHASSIS - FRONT	P119		8 TIDI, TID2, AND TID3 TRANSMISSION CONNECTOR	PX2	D92 11 LAMP TEST SWITCH
	J131			P43X	F42 5		P119		9 PRE-BLOCK SEVEN W/PIGTAIL TRANSMISSION CONNECTOR	PX20	
	J132	_		P50			P119			PX21	A134 15 WIPER DELAY MODULE
H	J150			P50			P125	_	10 WINDSHIELD WASHER ROTARY PUMP (B3)		
	J151			P51 P52F		CAB - DASH - RIGHT - POWER DISTRIBUTION PANEL	P129		10 CAB MARKER LIGHT FRONT LOWER LEFT		FIGURE FO-1 ELECTRICAL SYSTEM SCHEMATIC
	J152 J153		1 VAN FRONT MARKER LIGHT 1 VAN FRONT MARKER LIGHT	P52F P52R		CHASSIS - FRONT ALL MODELS EXCEPT WRECKER, TRACTOR, AND LONG WHEEL BASE	P130 P131		10 CAB MARKER LIGHT LEFT DOOR 10 CAB MARKER LIGHT RIGHT DOOR		FOLDOUT 2 OF 34
		1/1/1/3								s	ZE B ILL. NO. 5WD01L2B FP-3/ (FP-4 BLANK)
			10 11		12	13	14		15 16		17 18

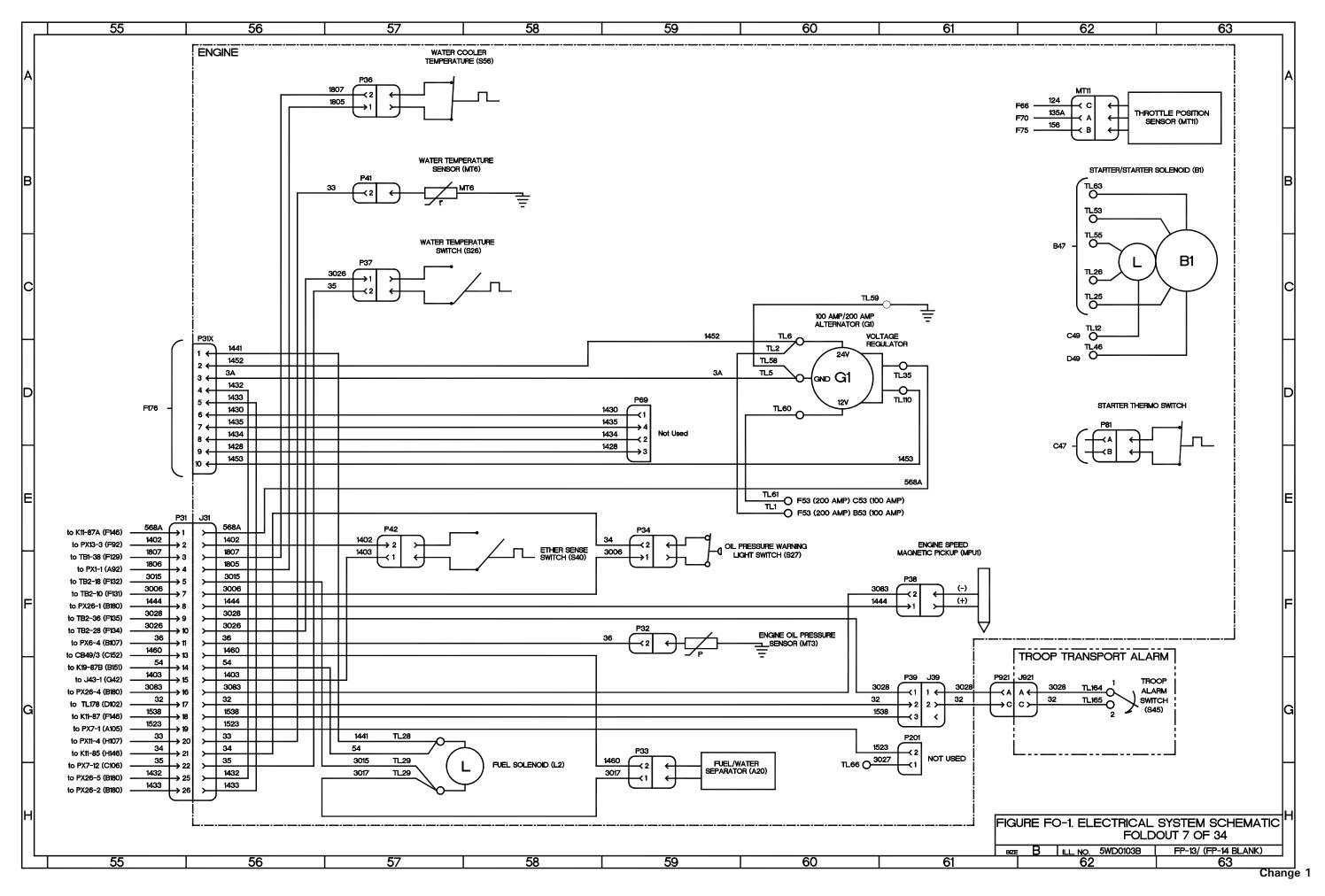
	1	9 20			21 22			23	<u>24</u>			25			26		27
0	ONNECTORS	(CONTINUED)		HTS (CON	TINUED)		UIT BREAK	ERS (CONTINUED)		ERMINAL L	LUG	as (continued)		TER	MINAL LUGS (CONTINUED)	
NUMBER	ZONE SH	DESCRIPTION			BH DESCRIPTION			DESCRIPTION				I DESCRIPTION			ZONE SH D		
PX22	A184 21	EMI FILTER	DS56	_	0 CAB MARKER LIGHT FRONT UPPER MIDDLE RIGHT	CB40		CTIS COOLER	ТLЗІ	F198	22	MIDDLE REAR MARKER		TL.99	D52 6 C		
PX24		INSTRUMENT PANEL LIGHTS DIMMER MODULE	DS56		23 RH FRONT TOP CAB CLEARANCE LIGHT			TRAILER REAR LIGHTS POWER			_	RIGHT REAR MARKER		TL100		OLARITY PR	
PX25		CAB DASH CENTER HEATER / CTIS ECU	D650		CAB MARKER LIGHT FRONT UPPER RIGHT	CB42		BLACKOUT MARKER LIGHTS POWER	TL32	E47	_	24V AUXILIARY STARTER SOLENC		TLHO	+ + +	LTERNATOR	
			DS57		23 RH FRONT TOP CAB MARKER LIGHT						<u> </u>						
PX26				_		CB43			TL35	D61	1	ALTERNATOR					
PX2A		CAB - DASH - LEFT - INSTRUMENT PANEL	DS58	_	CAB MARKER LIGHT FRONT UPPER LEFT	CB44		REAR COMPOSITE LIGHTS	TL36	B54	6	POLARITY PROTECTION		TL123			IONT (REF J19)
PX33	B182 21	CAB - DASH - RIGHT - UNDERDASH	DS58	F206	23 LH FRONT TOP CAB MARKER LIGHT	CB45	C139 16	FUEL PREHEAT	TL37	F54	6	POLARITY PROTECTION		TL126	E126 14 C	HASSIS GRO	NND
PX33	G292 33	WTEC III TRANSMISSION PUSHBUTTON SHIFT	DS59	B84 1	0 CAB MARKER LIGHT RIGHT DOOR	CB48	C140 16	ARCTIC CAB/ENGINE KILL	TL37	C54	6	POLARITY PROTECTION		TL130	F85 10 C	ab - Marke	RLIGHTS
		SELECTOR	DS60	F84 1	0 CAB MARKER LIGHT FRONT LOWER LEFT	CB49	C151 17	PTO POWER	1 п. 38	E50	6	SHUNT		TLIBI	A85 10 C	AB - MARKE	RLIGHTS
PX34	E188 21	FRONT AIR PRESSURE METER	DS61	A84 1	0 CAB MARKER LIGHT RIGHT DOOR	CB50	F256 29	MAIN POWER CIRCUIT BREAKER SWITCH	Т.39	C52	6	CHASSIS - REAR (REF E1)		TL133	F85 10 C		
PX4		FAN SOLENOID	DS62		0 CAB MARKER LIGHT LEFT DOOR	CB53		CAB - DASH - RIGHT - POWER DISTRIBUTION PNL		C53	-	POLARITY PROTECTION		TL134	B85 10 C		
				_		-					-						
PX5		REAR AIR PRESSURE METER	DS63		24 CAB - DASH - CENTER - OPTIONS PANEL	CB54		BLACKOUT HEADLIGHT	TL42	B54	-	POLARITY PROTECTION		TL150			NT AIR PRESSURE TRANSMI
PX6		CAB - DASH - LEFT - INSTRUMENT PANEL	DS64		24 CAB - DASH - CENTER - OPTIONS PANEL	CB61		CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TL44	B54	-	POLARITY PROTECTION		TL151			R AIR PRESSURE TRANSMIT
PX7	A104 12	CAB - DASH - LEFT - INSTRUMENT PANEL	DS65	A198	22 LH SIDE MARKER LIGHT	CB62	D153 17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	11_44	E54	6	POLARITY PROTECTION		TL152	C179 20 S	TOPLIGHT S	MITCH
PX8	G102 12	CAB - DASH - LEFT - INSTRUMENT PANEL	DS66	A198 :	22 LH REAR MARKER LIGHT	CB63	D151 17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TL45	D50	6	SHUNT		TL153	C179 20 S	TOPLIGHT S	WITCH
PX9	D97 11	FUEL LEVEL METER	DS67	H198 :	22 RH SIDE MARKER LIGHT	CB64	D151 17	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TL46	D49	6	SHUNT		TL154	D179 20 S	TOPLIGHT S	WITCH
			DS68	G198 (22 RH REAR MARKER LIGHT	CB65	D140 16	PARKING LIGHTS	1 т.46	D62	7	STARTER/STARTER SOLENOID		TL154	D179 20 S	TOPLIGHT S	WITCH
LIGI	нтз		DS69	_	22 LEFT REAR MARKER	CB66		BLACKOUT MARKER POWER		C54	_	POLARITY PROTECTION		TL155	D179 20 S		
	ZONE SH	DESCRIPTION	DS70	_		CB67	+	MARKER LIGHTS	11.48	E52	_	CHASSIS - REAR (REF E2)		TL156			
				_							-						IT AIR PRESSURE TRANSMIT
201		POWER LAMP	D871	_	22 RIGHT REAR MARKER	CB68		CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TL49A		-	CHASSIS - REAR (REF EI)		TL157			AIR PRESSURE TRANSMITT
052		POWER LAMP	DS72	_	22 REAR LH COMPOSITE LIGHT	CB70		IGNITION/MAIN LIGHT SWITCH	TL49A		_	NATO SLAVE RECEPTACLE		TL158			PUSHBUTTON
ଖ	D96 11	CAB - DASH - LEFT - INSTRUMENT PANEL	D873	F198	22 REAR RH COMPOSITE LIGHT	CB71	D149 17	HAZARD/FLASHER WORKLIGHTS	TL50	G121	14	CHASSIS GROUND		TL159	E136 16 S	TART INHIBIT	PUSHBUTTON
S2	G106 12	CAB - DASH - LEFT - INSTRUMENT PANEL	DS74	D37	5 LEFT HEADLIGHT	CB72	D139 16	CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TL50A	F52	6	NATO SLAVE RECEPTACLE		TL160	H102 12 A	UDIBLE ALA	RM
53		CAB - DASH - LEFT - INSTRUMENT PANEL	D875	_	31 VAN CURBSIDE BLACKOUT LIGHT	CB73	D150 17	BACK-UP LIGHT POWER	TL51	E50	6	SHUNT		TL161			
<u>64</u>		CAB - DASH - LEFT - INSTRUMENT PANEL	DS76	_	31 VAN ROADSIDE BLACKOUT LIGHT	CB74		CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	TL52	E50	_	SHUNT		TL162	Bt14 13 S		
		CAB - DASH - LEFT - INSTRUMENT FANEL		_	31 VAN CURBSIDE EMERGENCY LIGHT			BLACKOUT STOP RELAY POWER			_						
S5	_		DS78			CB76			TL53	B47	_	CHASSIS - FRONT		TL163		TARTER PUS	
S6		CAB - DASH - LEFT - INSTRUMENT PANEL	DS79	_					TL53	B62	_	STARTER/STARTER SOLENOID		TL164		NGINE (REF	
S7		CAB - DASH - LEFT - INSTRUMENT PANEL	DS80		32 VAN ROADSIDE FLUORESCENT LIGHT	CB78		HEADLIGHTS	TL55	B47	_	CHASSIS - FRONT		TL165	G62 7 E	NGINE (REF	J921)
S 8	C91 1	CAB - DASH - LEFT - INSTRUMENT PANEL	DS81	H286	32 VAN ROADSIDE FLUORESCENT LIGHT	CB79	C150 17	WTEC II VIM POWER/WTEC III REVERSE	TL55	C62	7	STARTER/STARTER SOLENOID		TL166	F54 6 T	ERMINAL BL	OCK
69	B101 12	DUMP BODY UP	D682	A286	32 VAN CURBSIDE FLUORESCENT LIGHT			WARNING RELAY	TL56	F136	16	X3 GROUND		TL167	E54 6 T	ERMINAL BL	OCK
S10		CAB - DASH - LEFT - INSTRUMENT PANEL	DS83	_	32 VAN CURBSIDE FLUORESCENT LIGHT	CB80	D142 16	TAILLIGHTS	TL57	_	_	CAB GROUND		TL169			DTECTION (P/P)
311		CAB - DASH - LEFT - INSTRUMENT PANEL	DS84		31 VAN FRONT MARKER LIGHT	┥└╧╝┉	121.12 10		TL58		_	ALTERNATOR		TL171		ERMINAL BL	
							-	2		_	_						
312			DS85	_			VINAL LUG		TL59		_	ALTERNATOR		TL172		ERMINAL BL	
313		CAB - DASH - LEFT - INSTRUMENT PANEL	DS86	_	31 VAN FRONT MARKER LIGHT			DESCRIPTION	TL60	_	_	POLARITY PROTECTION		TL173			DTECTION (P/P)
514	B101 12	LEFT TURN SIGNAL	DS87	A271	31 VAN FRONT MARKER LIGHT	TL1	B54 6	POLARITY PROTECTION	TL60	D60	7	ALTERNATOR		TL174	D54 6 P	OLARITY PR	DTECTION (P/P)
315	B101 12	RIGHT TURN SIGNAL	DS88	A271	31 VAN FRONT MARKER LIGHT	1 11	E60 7	ALTERNATOR	TL61	C54	6	POLARITY PROTECTION		TL190	D290 33 W	TEC III PRES	SURE SWITCH GROUND
516		HIGH BEAM	DS89	_	32 VAN CURBSIDE MARKER LIGHT			POLARITY PROTECTION	TL61	_	_	ALTERNATOR		TL201	E125 14 P		
317		HEATER CONTROL PANEL ILLUMINATION	DS90	_	32 VAN CURBSIDE MARKER LIGHT		D60 7	ALTERNATOR	TL62		_	CHASSIS - FRONT		TL202	E125 14 P		
				_													
S18		CAB - DASH - CENTER - OPTIONS PANEL	D691	_	32 VAN ROADSIDE MARKER LIGHT			POLARITY PROTECTION (P/P)	TL63	C47	_	CHASSIS - FRONT		TL320	E232 26 P		
IS19		RADIATOR FAN OFF	DS92	_	32 VAN ROADSIDE MARKER LIGHT	TL3		CAB MARKER LIGHT FRONT UPPER RIGHT	TL63	B62	-	STARTER/STARTER SOLENOID		TL320	C241 27 A	RCTIC KIT W	/PTO EQUIPPED
821	C101 12	EMERGENCY BRAKE	D893		32 VAN REAR CENTER MARKER LIGHT	<u>п.з</u>		RH FRONT TOP CAB MARKER LIGHT	ΤL66	H61	_	ENGINE (REF P201)					
S22	D101 12	PARKING BRAKE	DS94	E288	32 VAN REAR CENTER MARKER LIGHT] TL4	C85 10	CAB MARKER LIGHT FRONT UPPER	TL68	D224	1 25	CAB - DASH - CENTER - OPTION	IS PANEL	SWI	rches		
S23	C101 12	PTO ON	DS95	E288	32 VAN REAR CENTER MARKER LIGHT	11		MIDDLE RIGHT	TL69	E224	25	CAB - DASH - CENTER - OPTION	IS PANEL	NUMBER	ZONE SH C	ESCRIPTION	
524		OIL PRESSURE	DS96	B215	24 CAB - DASH - CENTER - OPTIONS PANEL	1 11.4	D206 23	RH FRONT TOP CAB CLEARANCE LIGHT	TL70	B38	5	FRONT RH COMPOSITE LIGHT		S 3	A177 20 C		
325		WATER TEMPERATURE	DS96	_	31 VAN FRONT EMERGENCY LIGHT		+	ALTERNATOR	11.71	_	_	CAB MARKER LIGHT RIGHT DOOP	₁	53	C177 20 C		
325		REAR BRAKE AIR	DS97		25 CAB - DASH - CENTER - OPTIONS PANEL					_	_	BLACKOUT DRIVE LIGHT	•	33 84	D114 13 M		
										_	_						
528		FRONT AIR BRAKE	DS97		32 VAN REAR EMERGENCY LIGHT		D85 10	CAB MARKER LIGHT FRONT UPPER	TL73	_	_	CAB - MARKER LIGHTS		S5/1	Btt1 13 K		
329		ENGINE OIL LEVEL	DS100		24 CAB - DASH - CENTER - OPTIONS PANEL			MIDDLE MIDDLE	TL74		_	CAB - MARKER LIGHTS		S5/11	A91 11 E	NGINE FAN	
330	F101 12	MASTER STOP	DS101		4 HEATER CONTROL PANEL ILLUMINATION	TL8	E206 23	MIDDLE FRONT TOP CLEARANCE LIGHT	TL74	E204	23	AIRDROP ONLY		S5/14	C213 24 W	INCH ON OF	F
31	D213 24	CAB - DASH - CENTER - OPTIONS PANEL	DS108	E91	I CAB - DASH - LEFT - INSTRUMENT PANEL	1 п.9	D47 6	24V AUXILIARY STARTER SOLENOID	TL75	F87	10	CAB - MARKER LIGHTS		S5/15	B212 24 W	INCH IN-OU	٢
32		CHEMICAL DETECT				TL10		CHASSIS - REAR (REF E1)	TL76		_	PTO EQUIPPED		S5/16	F91 11 E		
<u>34</u>		CTIS OVERSPEED		RCUIT BRE	AKERS	TL12		BATTERIES	TL79		_	FRONT LH COMPOSITE LIGHT		S5/2		AMP TEST S	
											_						
35				_	SH DESCRIPTION	TL12		STARTER/STARTER SOLENOID	TL80		-	POLARITY PROTECTION		S5/2			
36		REAR RH COMPOSITE LIGHT	CBI		32 VAN 110 VAC MAIN CIRCUIT BREAKER	TL14		ROTARY WARNING LIGHT CONNECTOR	TL80		_	200 AMP		S5/22			D WARNING SWITCH
37	B198 22	REAR LH COMPOSITE LIGHT	CB2	C284	32 VAN A/C	TL15	A198 22	LH SIDE MARKER LIGHT	TL81	C39	5	CHASSIS GROUND		85/25	A219 25 S	WINGFIRE P	JMP SWITCH
38	F198 22	REAR RH COMPOSITE LIGHT	CB3		32 VAN 110 VAC POWER OUT	TL16	A198 22	LH REAR MARKER LIGHT	TL82	F38	5	CHASSIS GROUND		S5/6	B210 24 P	TO ON/OFF	SWITCH
339		FRONT LEFT TURN SIGNAL	CB4	_	32 VAN NOT USED	TL17		BACKUP LIGHT	TL83		-	FUEL TANK LEVEL SENSOR		S5/8		-	VERRIDE SWITCH
341		TRANSMISSION OIL TEMPERATURE	CB4 CB5	_	32 VAN BLACKOUT OVERRIDE	TL18		LONG WHEEL BASE	TL84		_	CHASSIS - SPARE TIRE (REF J93)	,	S5/9	A214 24 F		
342		FRONT RIGHT TURN SIGNAL							TL85		_	CHASSIS - REAR	·	36	At14 13 S		
			CB6		32 VAN LIGHTS						_						
343		CAB - DASH - CENTER - OPTIONS PANEL	CB7		32 VAN 110 VAC OUTLETS	TL20		RH REAR MARKER LIGHT	TL86		-	CAB - MARKER LIGHTS		S7			PUSHBUTTON
44		RIGHT HEADLIGHT	CB8	_	32 VAN THERMOSTAT/FAN	TL21			TL86		_	AIRDROP ONLY		S10A	C179 20 S		
45		BACKUP LIGHT	CB9	<u>E284</u>	32 VAN 110 VAC OUTLETS	TL22	D85 10	CAB MARKER LIGHTS	TL87			CAB - MARKER LIGHTS		S10B	D179 20 S		
46	D210 24	CAB - DASH - CENTER - OPTIONS PANEL	CBIO		31 VAN BLACKOUT LIGHTS	TL22	E206 23	LH FRONT TOP CAB CLEARANCE LIGHT	TL92	F195	22	ALL MODELS EXCEPT WRECKER	, TRACTOR,	S11	A287 32 V	AN CURBSID	E WINDOW BLACKOUT SW
47	G37 5	PARKING LIGHT FRONT LEFT	CB1	_	31 VAN EMERGENCY/BLACKOUT LIGHTS	TL23	+	24V AUXILIARY STARTER SOLENOID	11		1	AND LONG WHEEL BASE		S12	A287 32 V	AN CURBSID	E WINDOW BLACKOUT SW
48		PARKING LIGHT FRONT RIGHT	CB20		16 CAB RADIO	TL24		24V AUXILIARY STARTER SOLENOID	TL93	C104	20	ALL MODELS EXCEPT WRECKER	TRACTOR	S13			E WINDOW BLACKOUT SW
				_					11		1~~	AND LONG WHEEL BASE	,	513 S14			
49		BLACKOUT MARKER LEFT FRONT	CB21		17 WTEC II VIM STE/ICE	TL25											E WINDOW BLACKOUT SW
350		BLACKOUT MARKER RIGHT FRONT	CB22		17 FAN/ETHER	TL25		STARTER/STARTER SOLENOID	TL94		_	WINDSHIELD WASHER ROTARY PU	JMP (B3)	S15			E WINDOW BLACKOUT SW
	C198 22	REAR LH COMPOSITE LIGHT	CB23	_	17 HEATER BLOWER	TL26	C47 6	CHASSIS - FRONT	TL96			VAN BODY GROUND		S17	G288 32 V	AN DOOR W	NDOW BLACKOUT SWITCH
	F198 22	REAR RH COMPOSITE LIGHT	CB30	C139	16 CHEMICAL ALARM	TL26	C62 7	STARTER/STARTER SOLENOID	TL97	B88	10	CHEMICAL ALARM CONNECTOR		1	@	3/N 191 AND	HIGHER)
351 352	1	BLACKOUT DRIVE LIGHT	CB35	D149	17 WTEC II VIM POWER	TL27		CAB MARKER LIGHT FRONT UPPER RIGHT	Т.98	B88	10	CHEMICAL ALARM CONNECTOR		-			
151 152			CB36	_				CAB MARKER LIGHTS FRONT UPPER RIGHT	1								
351 352 353	H37 5			I C147 I	17 I BOHN POWER												
151 152 153 154	H37 5 D84 10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT		_					-			[YSTEM SCHEM
51 52 53 54 54	H37 5 D84 10 F206 23	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT LH FRONT TOP CAB CLEARANCE LIGHT	CB37	C151	17 WINDSHIELD WIPER/WASHER	TL28	G57 7	FUEL SOLENOID					FIGURE I	FO-1.			
51 52 53 54 54 54 55	H37 5 D84 10 F206 23 D84 10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT LH FRONT TOP CAB CLEARANCE LIGHT CAB MARKER LIGHT FRONT UPPER MIDDLE MIDDLE	CB37 CB38	C151 D147	17 WINDSHIELD WIPER/WASHER 17 ROTATING BEACON	TL28 TL29	G57 7 H57 7	FUEL SOLENOID FUEL SOLENOID					FIGURE I	F0-1.			YSTEM SCHEM/ JT 3 OF 34
51 52 53 54 54	H37 5 D84 10 F206 23 D84 10	CAB MARKER LIGHT FRONT UPPER MIDDLE LEFT LH FRONT TOP CAB CLEARANCE LIGHT	CB37	C151 D147	17 WINDSHIELD WIPER/WASHER	TL28	G57 7 H57 7	FUEL SOLENOID								OLDO	YSTEM SCHEM/ JT 3 OF 34 FP-5/ (FP-6 BLANK

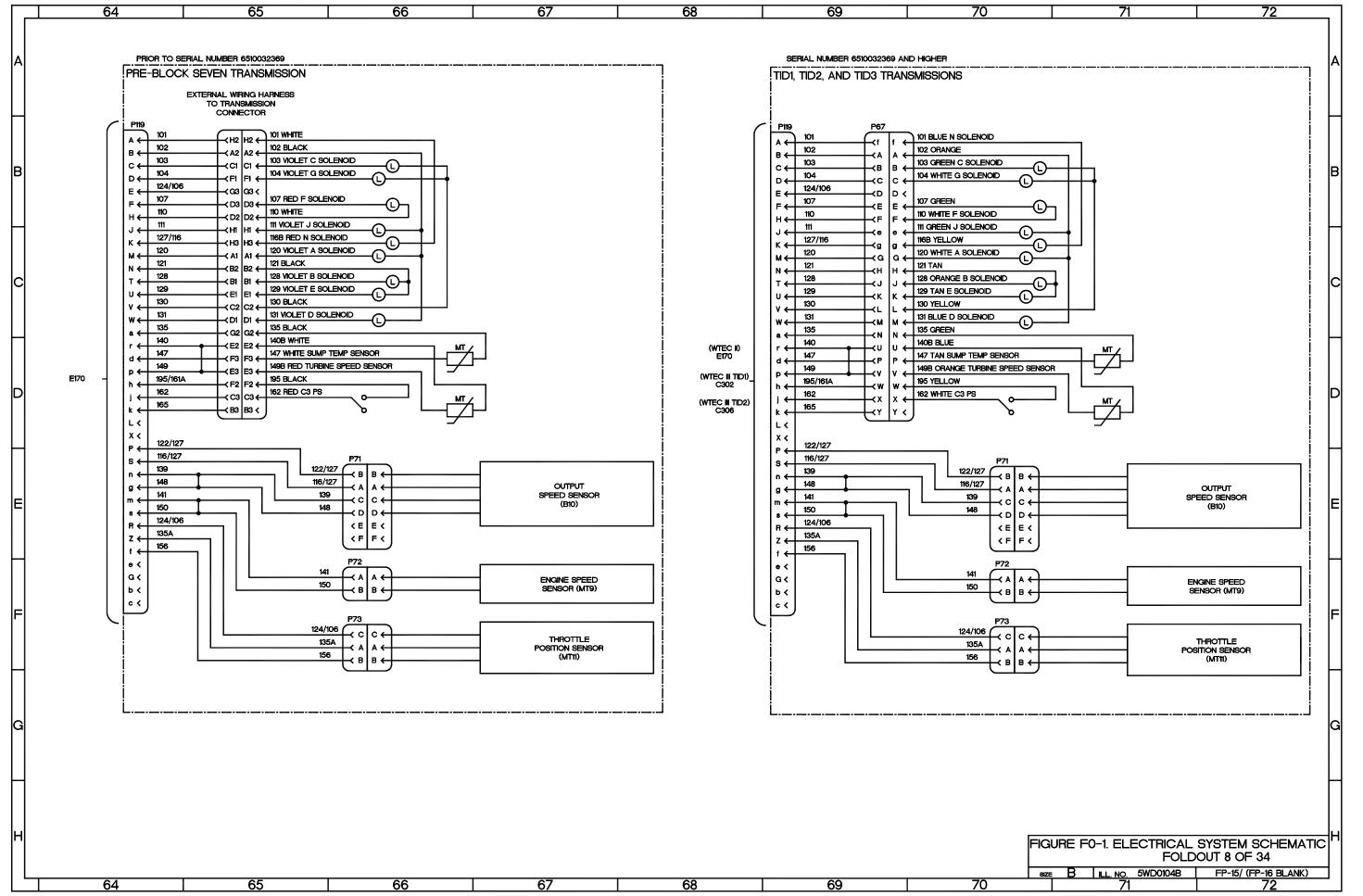
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	SWITCHES (CONTINUED)	SOLENOIDS	MISCELLANEOUS (CONTINUED)	MISCELLANEOU
	NUMBER ZONE SH DESCRIPTION	NUMBER ZONE SH DESCRIPTION	NUMBER ZONE SH DESCRIPTION	NUMBER ZONE SH DESCR
	S17 G288 32 VAN CURBSIDE WINDOW BLACKOUT SWITCH	KS D47 6 24V AUXILIARY STARTER SOLENOID	E15 E197 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	E77 9 LIGHT
۱ I	(S/N 001 THROUGH 190)	L1 E189 21 FAN SOLENOID	LONG WHEEL BASE	E77 9 LMHC
	S18 D269 30 PTO PRESSURE SWITCH	L2 H57 7 FUEL SOLENOID	E16 A197 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	E77 9 LMHC
	S20 E177 20 SWITCH/FRONT AIR PRESSURE TRANSMITTER	L3 D269 30 PTO SOLENOID	LONG WHEEL BASE	G78 9 LMHC
	S23 F52 6 AIR PRESSURE SWITCH FOR CTIS	L4 E233 26 WINCH IN SOLENOID	E17 G195 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	G302 34 WTEC
	S24 E125 14 PARKING BRAKE SWITCH	L5 D233 26 SOLENOID	LONG WHEEL BASE	B304 34 WTEC
1	S26 C57 7 WATER TEMPERATURE SENSOR	L15 B51 6 CHASSIS - SPARE TIRE	E18 G194 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	C304 34 WTEC
	S27 E59 7 OIL PRESSURE WARNING LIGHT SWITCH	E80 9 LMHC IN SOLENOID		E304 34 WTEC
	S29 G177 20 SWITCH/REAR AIR PRESSURE TRANSMITTER	F80 9 LMHC OUT SOLENOID	E19 F194 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	
				TRANSMISSION
	S31 A216 24 ARCTIC TROOP HEATER SWITCH			NUMBER ZONE SH DESCR
3	S32 F288 32 VAN LIGHTS ON/OFF SWITCH	HORNS AND ALARMS	E20 E194 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	A10 B183 21 WTEC
	S33 E277 31 VAN BLACKOUT SWITCH	NUMBER ZONE SH DESCRIPTION	LONG WHEEL BASE	
	S34 D278 31 VAN BLACKOUT SWITCH	LSI A37 5 VEHICLE HORN	E21 D195 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	
	S35 H273 31 VAN BLACKOUT OVERRIDE SWITCH	LS2 H101 12 AUDIBLE ALARM	LONG WHEEL BASE	A13 A72 8 WTEC
	S40 F58 7 ETHER SENSOR SWITCH		E22 B86 10 CAB - MARKER LIGHTS	A13 A76 9 WTEC
-	S45 E62 7 TROOP ALARM SWITCH	MOTORS	E23 D86 10 CAB - MARKER LIGHTS	B10 E67 8 PRE-E
	S45 G62 31 VAN FAN ON/OFF SWITCH	NUMBER ZONE SH DESCRIPTION	E23 D205 23 AIRDROP ONLY	SENSO
	S56 A57 7 WATER TEMPERATURE SWITCH	B2 A183 21 WINDSHIELD WIPER MOTOR	E24 C85 10 CAB - MARKER LIGHTS	B10 E72 8 TID1, T
1	857 G77 9 LMHC IN/OUT SWITCH	B4 C118 14 FAN MOTOR	E24 D205 23 AIRDROP ONLY	SENSO
1	less le lesses avress	F81 9 LMHC HOIST MOTOR	E25 F86 10 CAB - MARKER LIGHTS	B10 E76 9 PRE-E
	GAGES		E60 B41 31 24 VDC VAN POWER	SPEEL
1		BATTERIES	E65 B41 5 CHASSIS - FRONT	MT9 F67 8 PRE-E
1	NUMBER ZONE SH DESCRIPTION			SENS
1	M2 D106 12 VOLTMETER	NUMBER ZONE SH DESCRIPTION	E66 C41 5 CHASSIS - FRONT	
1	M3 B106 12 ENGINE OIL PRESSURE METER	BTI C52 6 BATTERY	E66 D300 34 WTEC III CAB TRANSMISSION HARNESS (TID1)	MT9 F72 8 TID1, T
1	M4 F96 11 FRONT AIR PRESSURE METER	BT2 D52 6 BATTERY	E66 D305 34 WTEC III CAB TRANSMISSION HARNESS (TID2)	SENS
1	M5 B96 11 REAR AIR PRESSURE METER	BT3 D52 6 BATTERY	E67 D38 5 CHASSIS - FRONT	MT9 F76 9 PRE-6
	M6 G107 12 WATER TEMPERATURE METER	BT4 E52 6 BATTERY	E68 D40 5 CHASSIS - FRONT	ENGIN
	M7 D96 11 FUEL LEVEL METER		E70 C229 26 PTO EQUIPPED	MT11 F67 8 PRE-E
	M8 G102 12 SPEEDOMETER	MISCELLANEOUS	E71 F173 20 CAB - DASH - LEFT - UNDERDASH	
	M9 A210 24 TACHOMETER	NUMBER ZONE SH DESCRIPTION	E88 B106 12 CAB - DASH - LEFT - INSTRUMENT PANEL	MT11 F72 8 TID1, T
				POSIT
1		10A C183 21 WTECH VEHICLE INTERFACE MODULE	E89 C106 12 CAB - DASH - LEFT - INSTRUMENT PANEL	
	RELAYS	10A E183 21 WTECH VEHICLE INTERFACE MODULE	E90 D300 34 WTEC III CAB TRANSMISSION HARNESS (TID1)	
	NUMBER ZONE SH DESCRIPTION	A2 F118 14 CTIS ELECTRONIC CONTROL UNIT	E90 D305 34 WTEC III CAB TRANSMISSION HARMESS (TID2)	THROT
	K1 F149 17 STARTER RELAY	A3 G114 13 INSTRUMENT PANEL LIGHTS DIMMER MODULE		REV C183 21 WTEC
	K2 B143 16 CONTROL PANEL RELAY	A5 A135 15 WIPER DELAY MODULE	E91 C305 34 WTEC III CAB TRANSMISSION HARNESS (TID2)	RW D183 21 WTEC
1	K6 F144 16 STOPLIGHT RELAY	A7 B179 20 FREQUENCY DMDER	E501 B275 31 VAN EMERGENCY/BLACKOUT LIGHT/24 VDC	S02 F183 21 WTEC
	K7 G153 17 HEADLIGHT RELAY	A18 A103 12 LIGHTED INDICATOR DISPLAY	OUTLET	503 F183 21 WTEC
1	K8 GI51 17 HEADLIGHT LO/HI-BEAM RELAY	A20 H59 7 FUEL/WATER SEPARATOR	E502 G274 31 VAN EMERGENCY/BLACKOUT LIGHT	SF01 D183 21 WTEC
1			E502 02/4 31 VAN EMERGENCI/BLACKCOT LIGHT	SF01 D183 21 WTEC
1	K9 A142 16 HAZARD FLASHER BLACKOUT OVERRIDE	BI C63 7 STARTER/STARTER SOLENOID		SF02 C183 21 WTEC
:	K10 F150 17 STOP HAZARD FLASHER RELAY	B3 G83 10 WINDSHIELD WASHER ROTARY PUMP	E504 B272 31 VAN MARKER LIGHT	
1	K11 F146 17 ALTERNATOR EXCITATION RELAY	BIO E67 8 WTEC II TRANSFER CASE (SERIAL # 29513233)	E505 B287 32 VAN REAR MARKER LIGHTS	SF02 D183 21 WTEC
1	K12 B139 16 WORKLIGHT RELAY	BIO E70 8 WTEC II TRANSFER CASE (SERIAL # 29513233)	E506 C287 32 VAN REAR MARKER LIGHTS	SF04 C183 21 WTEC
1	K13 B149 17 ROTATING BEACON BLACKOUT OVERRIDE RELAY	BIO E66 8 WTEC II TRANSMISSION (SERIAL # 29513233)	E514 C274 31 VAN EMERGENCY LIGHT	SF3 F183 21 WTEC
	K15 B140 16 AUXILIARY COOLER RELAY	BIO E71 8 WTEC II TRANSFER CASE (SERIAL # 29517497)	E516 H272 31 VAN 24 VDC	SF4 D183 21 WTEC
	K19 B150 17 START INHIBIT RELAY	BIO E70 8 WTEC II TRANSMISSION (SERIAL # 29517497)	F2 H271 31 VAN 24 VDC POWER	
	K20 H138 16 MARKER LIGHTS RELAY	BIO E76 9 WTEC TRANSFER CASE (SERIAL # 29513233)	FL E183 21 WTEC II VEHICLE INTERFACE MODULE	
1	K24 B151 17 CRANKING LOCKOUT RELAY	BIO E74 9 WTEC II TRANSMISSION (SERIAL # 295/3233)	FL1 G85 10 EMI FILTER	
1	K25 B292 33 WTEC III REVERSE WARNING RELAY	BJI A175 20 JUNCTION BOX		
1				
	K26 B290 33 WTEC III NEUTRAL START RELAY	BL1 F257 29 FURNACE CONTROL UNIT		
-1	K27 H143 16 BLACKOUT STOP RELAY	BL2 F256 29 FURNACE CONTROL UNIT		
1	K28 H142 16 TRAILER REAR LIGHTS RELAY	BL3 F256 29 FURNACE CONTROL UNIT	MPU1 F61 7 ENGINE SPEED MAGNETIC PICKUP	
1	K29 F142 16 BLACKOUT MARKER RELAY/WTEC III BLACKOUT	D1A C138 16 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	MT3 F60 7 ENGINE OIL PRESSURE SENSOR	
1	DRIVE RELAY	D1B C138 16 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	MT4 E177 20 SENSOR/FRONT AIR PRESSURE TRANSMITTER	
1	K30 H147 17 REAR LEFT COMPOSITE LAMP RELAY	D2A D138 16 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	MT5 G177 20 SENSOR/REAR AIR PRESSURE TRANSMITTER	
4	K31 H149 17 REAR RIGHT COMPOSITE LAMP RELAY	D2B D138 16 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	MT6 B57 7 WATER COOLER TEMPERATURE	
I	K32 B147 17 HORN RELAY	D3A B138 16 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	MT7 B52 6 FUEL TANK LEVEL SENSOR	
1	K35 E277 31 VAN 10 VAC OUTLETS		NS E183 21 WTEC II VEHICLE INTERFACE MODULE	
		D38 B138 16 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	P/P B54 6 POLARITY PROTECTION	
	K36 F277 31 VAN FLUORESCENT LIGHTS	E1 C52 6 BATTERY	· · · · · · · · · · · · · · · · · · ·	
I	K37 B294 33 WTEC III PTO ENABLE OUTPUT RELAY	E1 D52 6 BATTERY	P/P D54 6 POLARITY PROTECTION	
i i	K52 H139 16 CTIS OVERSPEED INDICATION RELAY	E1 D52 6 BATTERY	R11 D50 6 SHUNT	
	K53 H140 16 RADIO POWER RELAY	E1 E52 6 BATTERY	R1 D79 9 AIR DRYER	
		E2 C43 5 CHASSIS FRONT BUMPER (REF J27)	TB1 C128 15 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	
L	RESISTORS	E2 C52 6 BATTERY	TB2 F130 15 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	
I I	NUMBER ZONE SH DESCRIPTION	E2 D52 6 BATTERY	X1 C137 16 24 VDC	
4	R2 E172 20 CAB - DASH - LEFT - UNDERDASH		X11 F52 6 NATO SLAVE RECEPTACLE	
I I			X2 D137 16 24 VDC	
1	R4 D175 20 CAB - DASH - LEFT - UNDERDASH	E2 E52 6 BATTERY		
1	R5 C175 20 CAB - DASH - LEFT - UNDERDASH	E3 H148 17 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X3 F137 16 GROUND	
	R6 F172 20 CAB - DASH - LEFT - UNDERDASH	E4 HI50 17 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X5 D137 16 24 VDC	
		E5 B151 17 CAB - DASH - RIGHT - POWER DISTRIBUTION PNL	X7 D137 16 24 VDC	
		E14 E194 22 ALL MODELS EXCEPT WRECKER, TRACTOR, AND	PHONE 1 A285 32 VAN PHONE 1	
			PHONE 2 H287 32 VAN PHONE 2	
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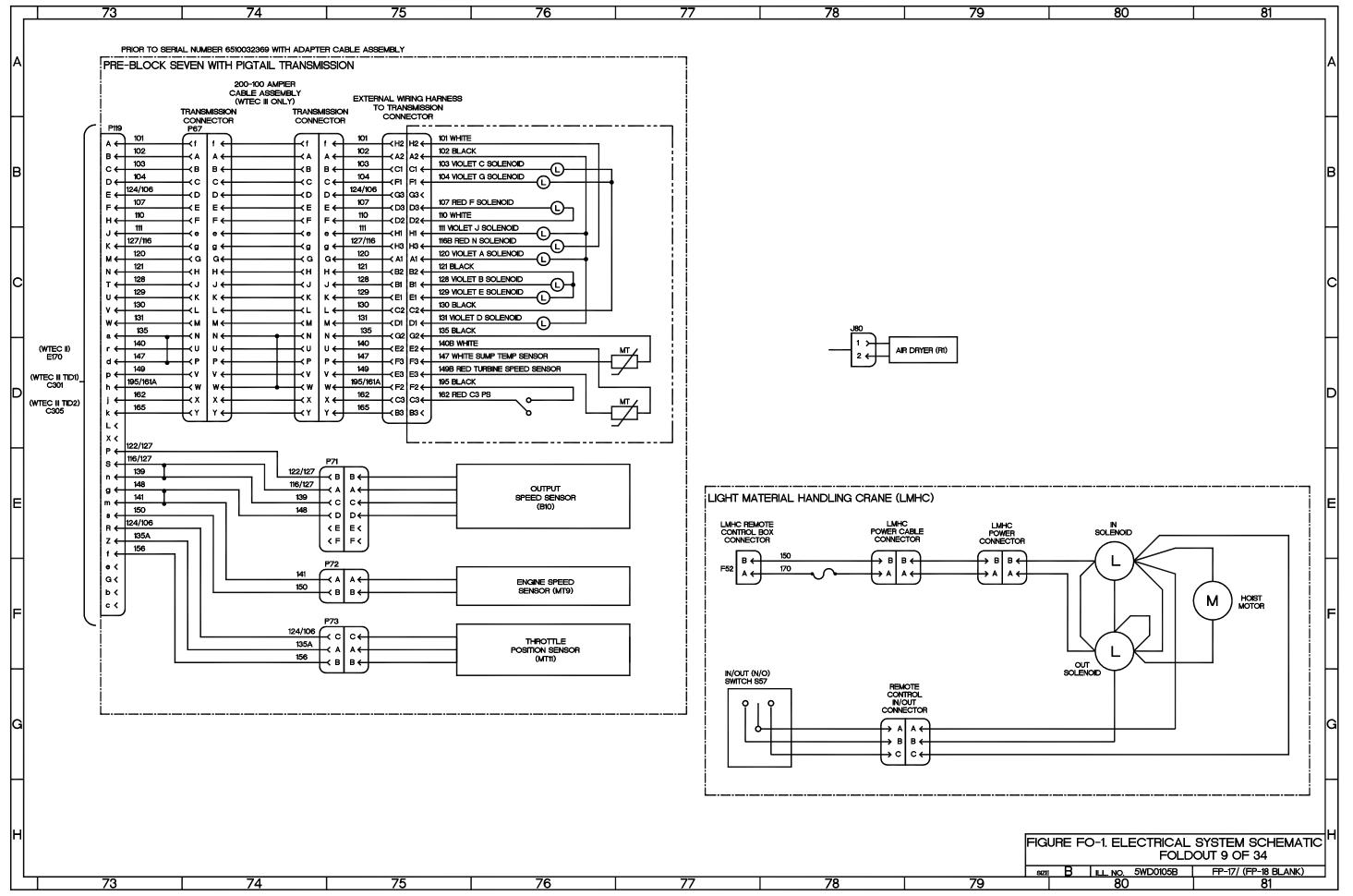
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NEOUS (CONTINUED)		
ESCRIPTION		
GHT MATERIAL HANDLING CRANE (LMHC)		A
		γ
WHC REMOTE CONTROL IN/OUT TEC III TRANSMISSION PRESSURE SWITCH		
TEC III OUTPUT SPEED SENSOR		
TEC III ENGINE SPEED SENSOR		٦
TEC III SUMP TEMP SENSOR		
ion		
		B
TEC II VEHICLE INTERFACE MODULE TEC II TRANSMISSION A13 (SERIAL \$ 29513233)		
TEC II TRANSMISSION AI3 (SERIAL # 295)2337		
TEC II TRANSMISSION A13 (SERIAL # 29513233)		
E-BLOCK SEVEN TRANSMISSION OUTPUT SPEED		
D1, TID2, AND TID3 TRANSMISSION OUTPUT SPEED		
ENSOR		
RE-BLOCK SEVEN W/PIGTAIL TRANSMISSION OUTPUT		
PEED SENSOR	1	C
RE-BLOCK SEVEN TRANSMISSION ENGINE SPEED		
D1, TID2, AND TID3 TRANSMISSION ENGINE SPEED		
ENSOR		
RE-BLOCK SEVEN W/PIGTAIL TRANSMISSION NGINE SPEED SENSOR		
RE-BLOCK SEVEN TRANSMISSION THROTTLE		
OSITION SENSOR		
D1, TID2, AND TID3 TRANSMISSION THROTTLE		
OSITION SENSOR		D
RE-BLOCK SEVEN W/PIGTAIL TRANSMISSION		_
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TEC II VEHICLE INTERFACE MODULE		
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FIGURE FO-1. ELECTRIC		H
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SIZE B ILL. NO. 5WD01L4E		
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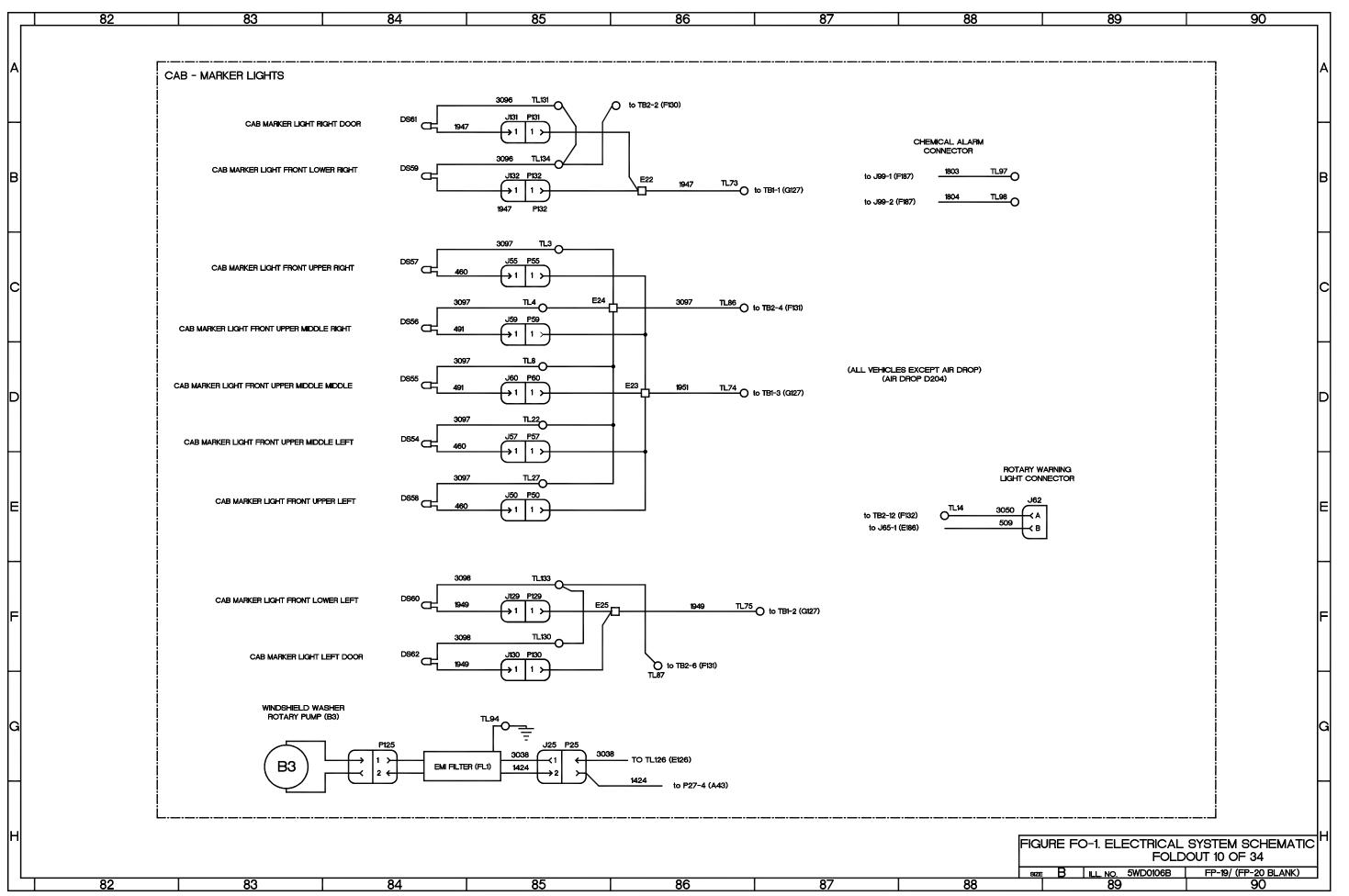


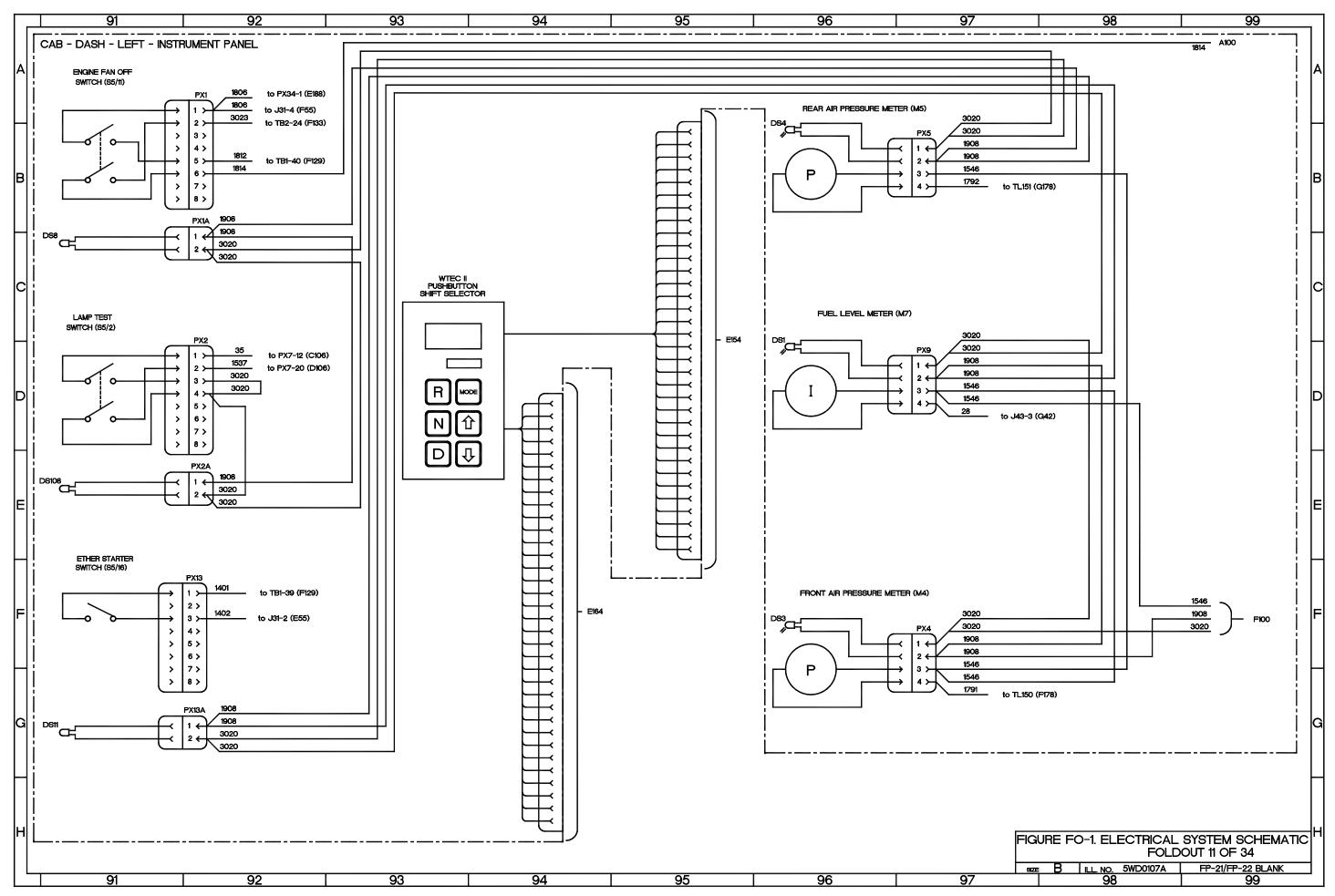


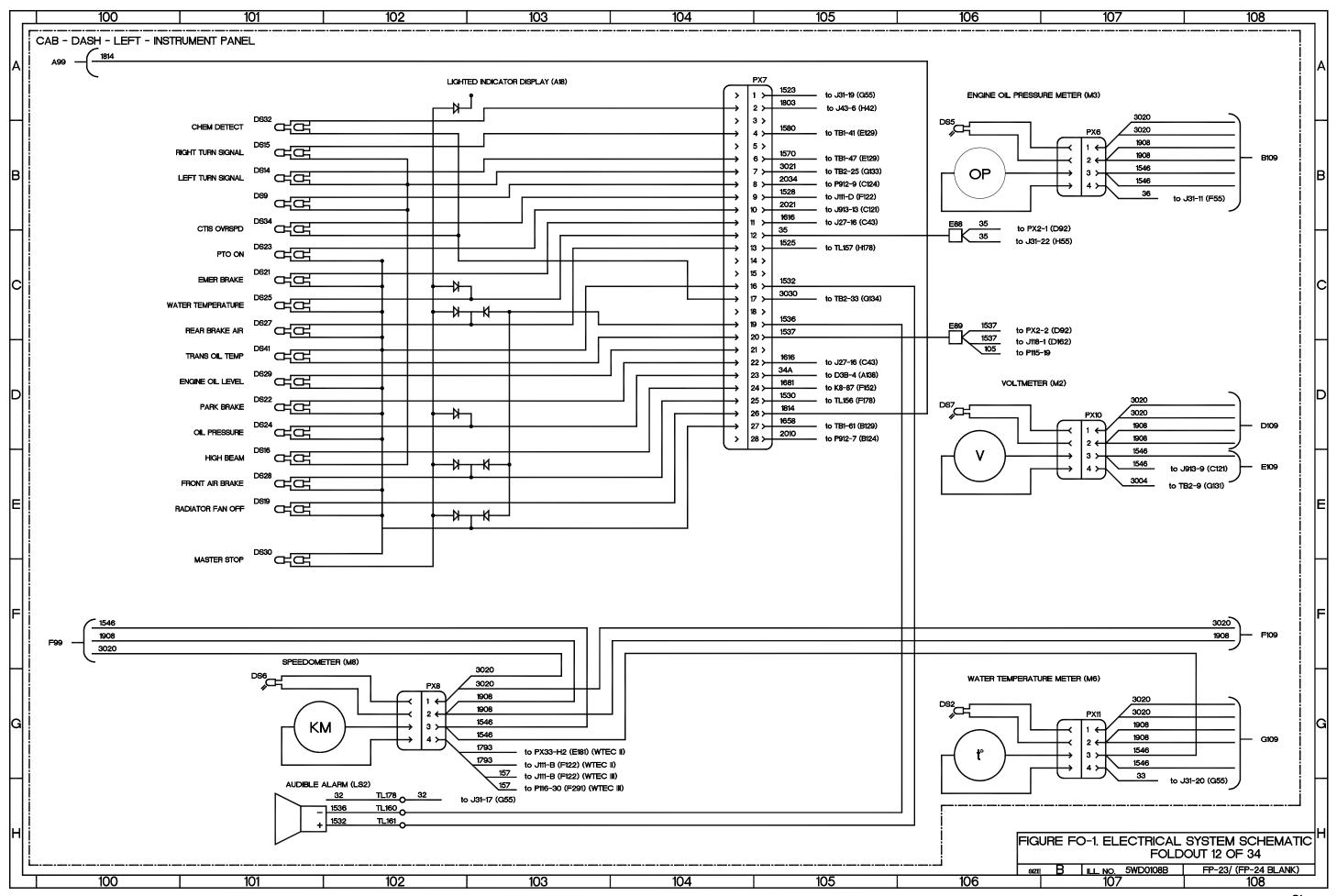


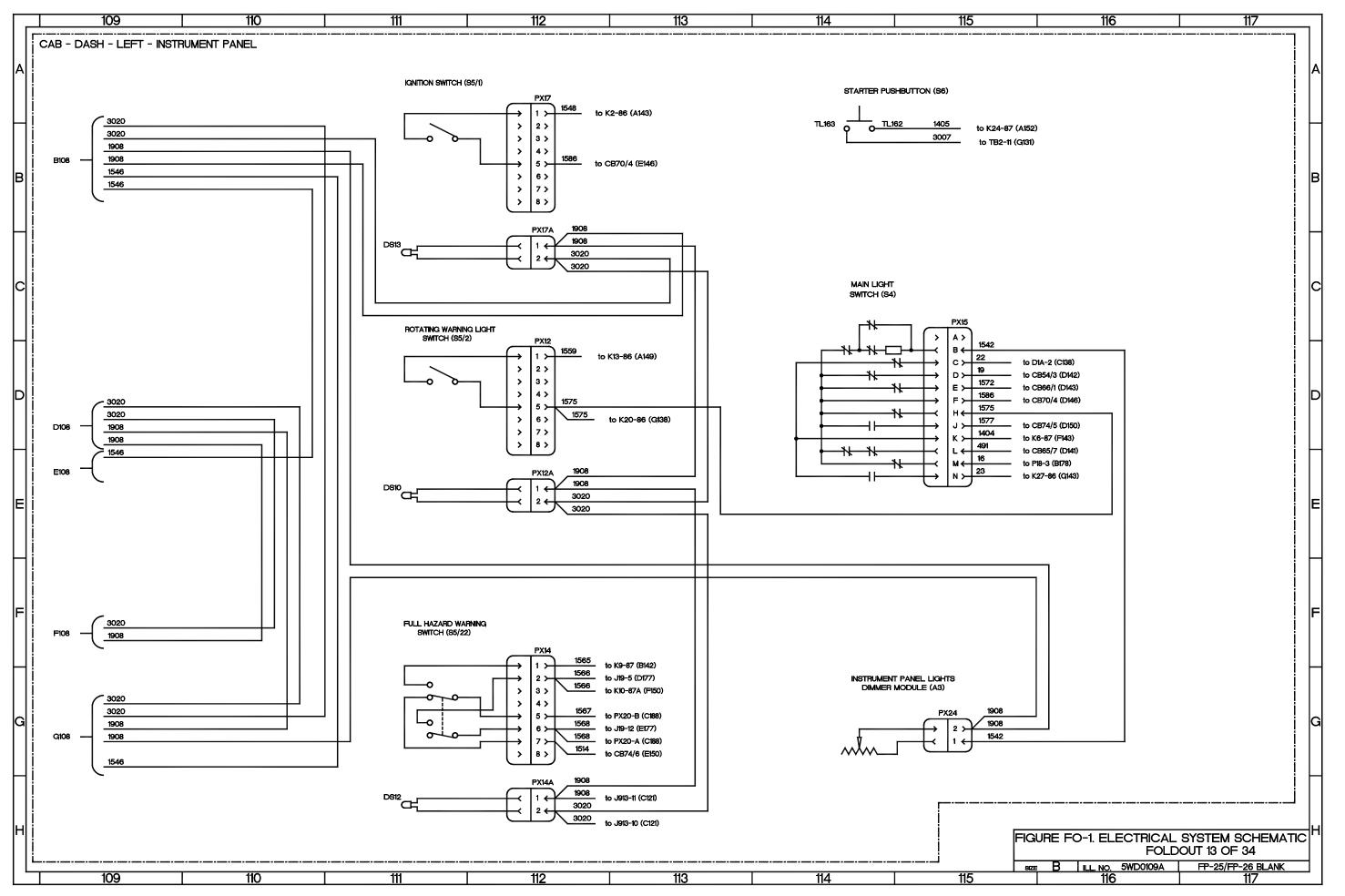


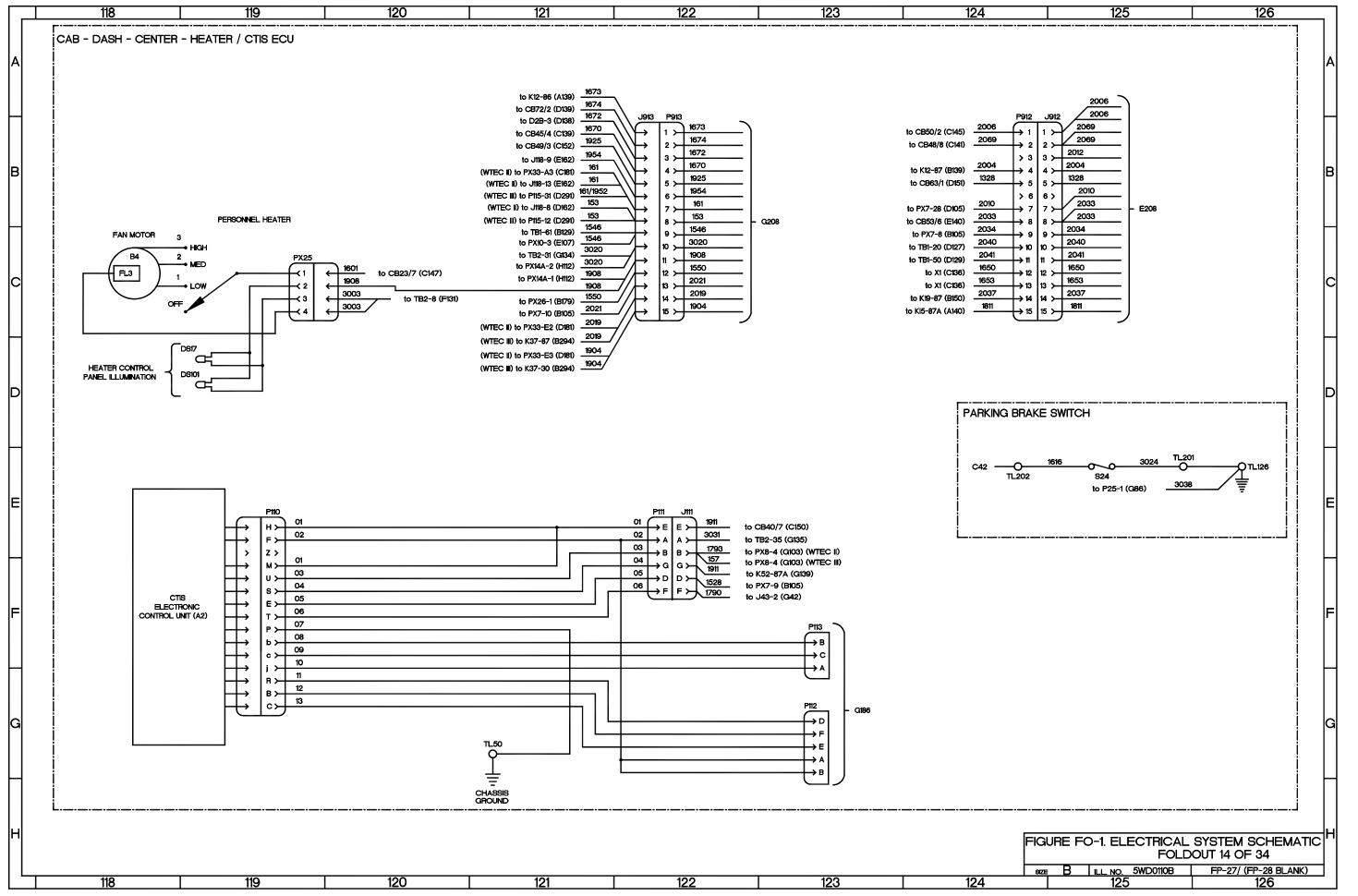


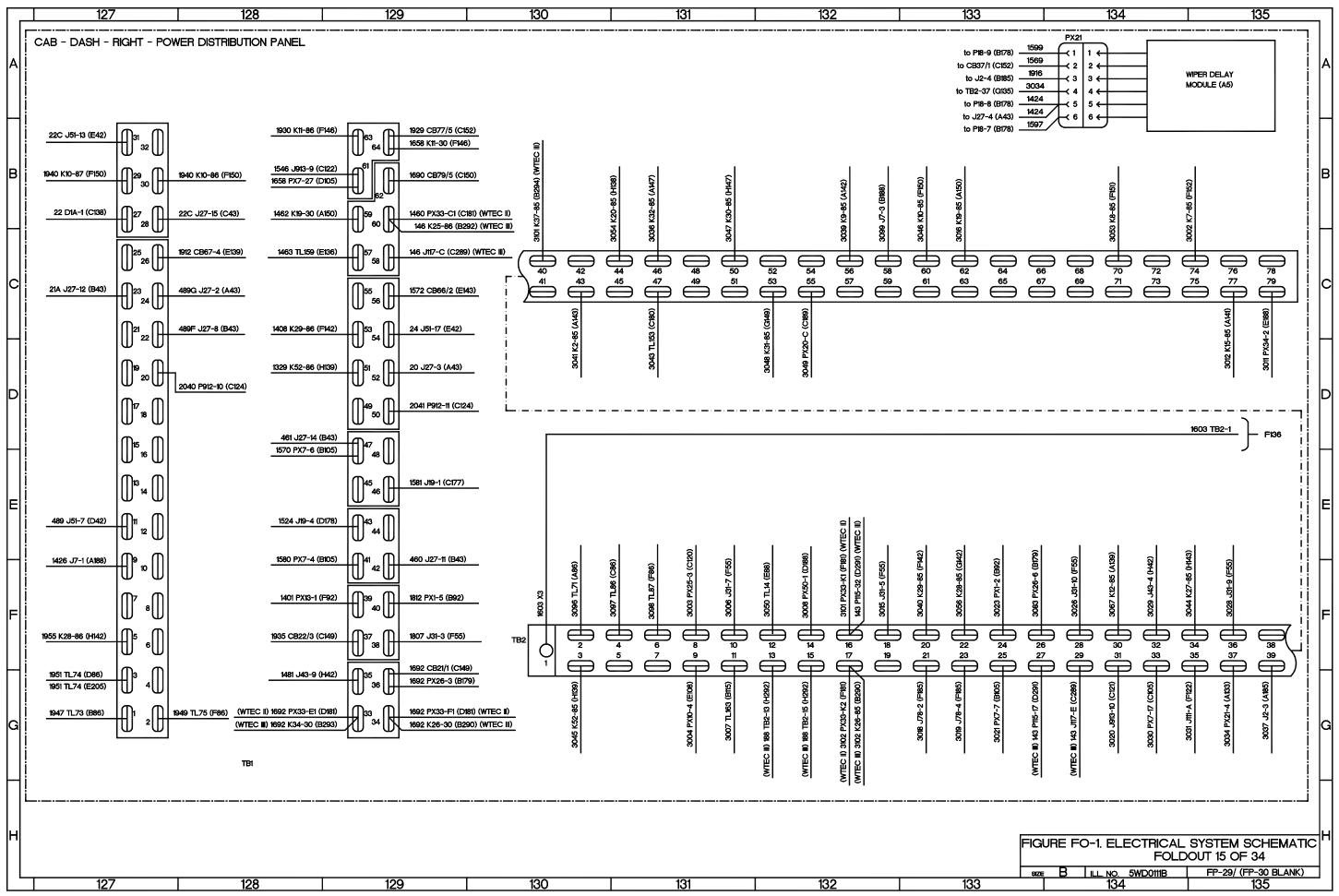


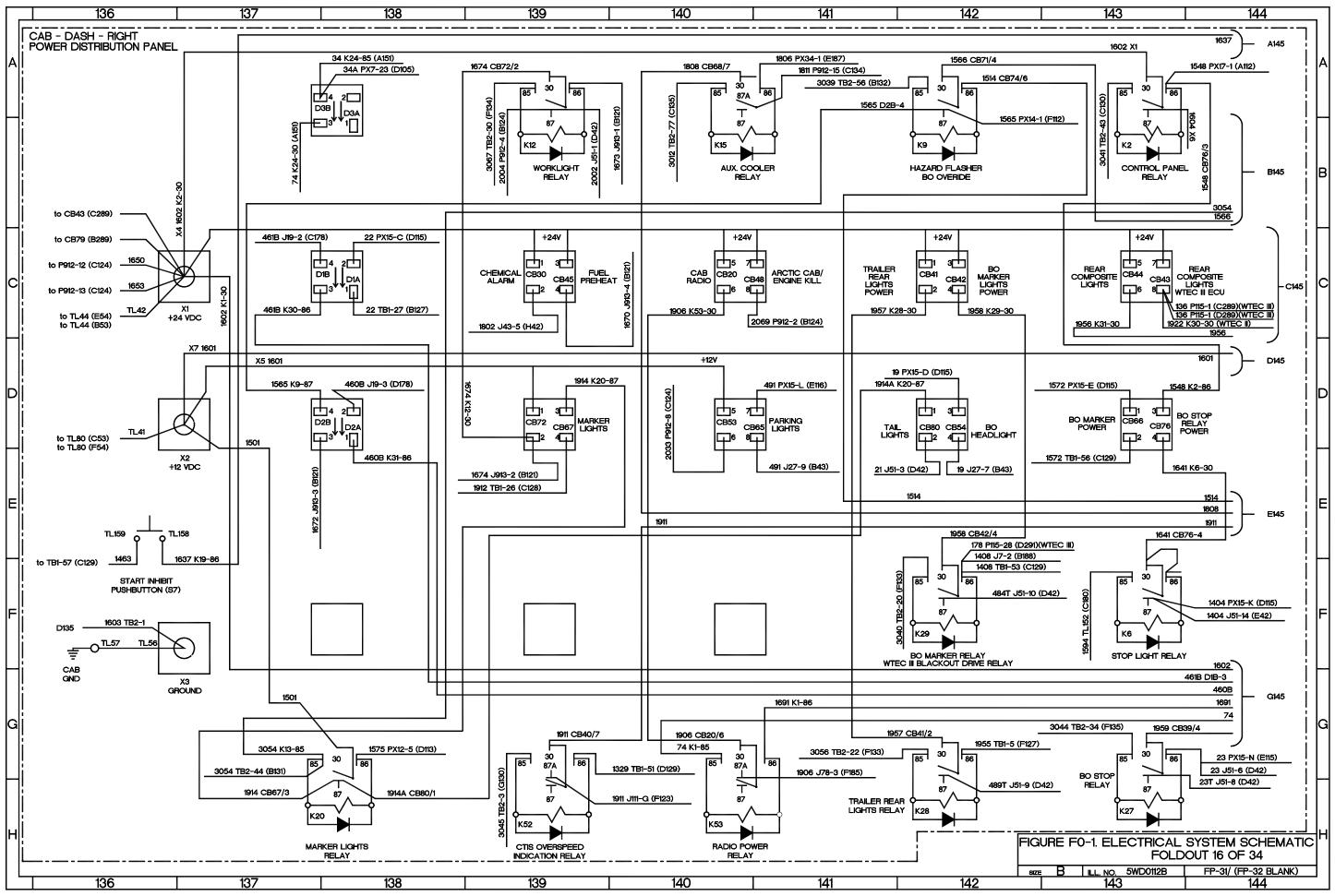


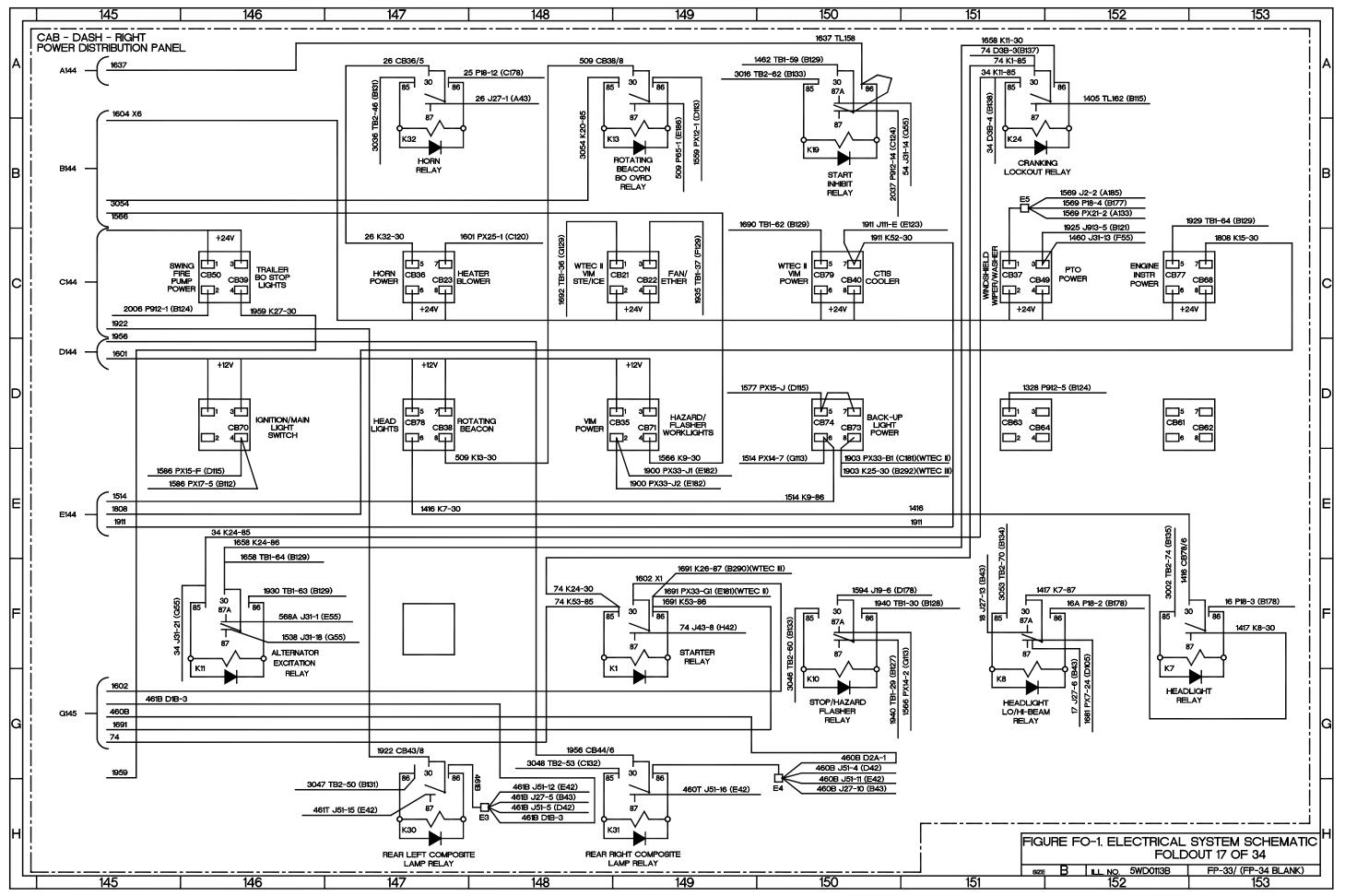


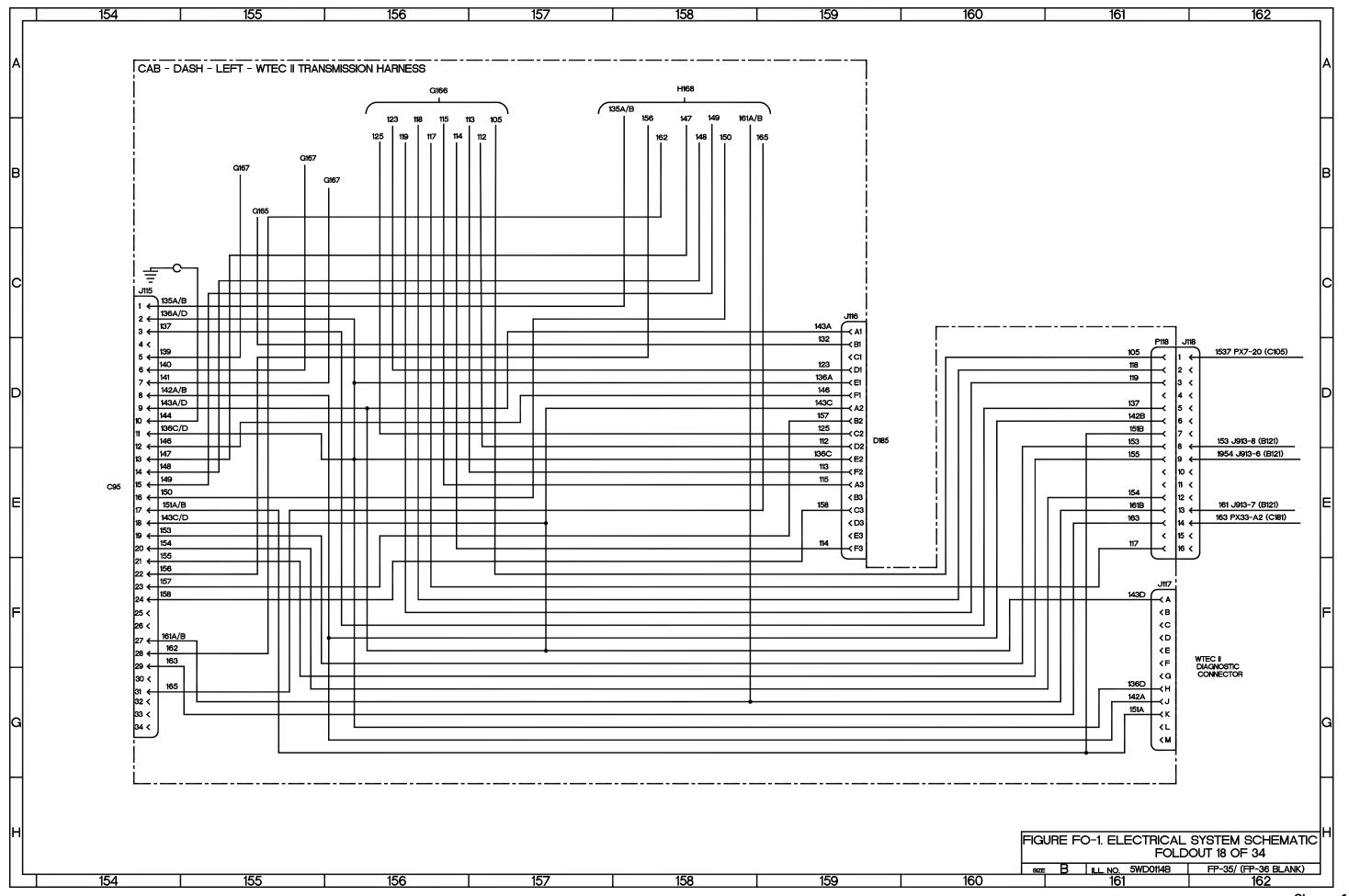


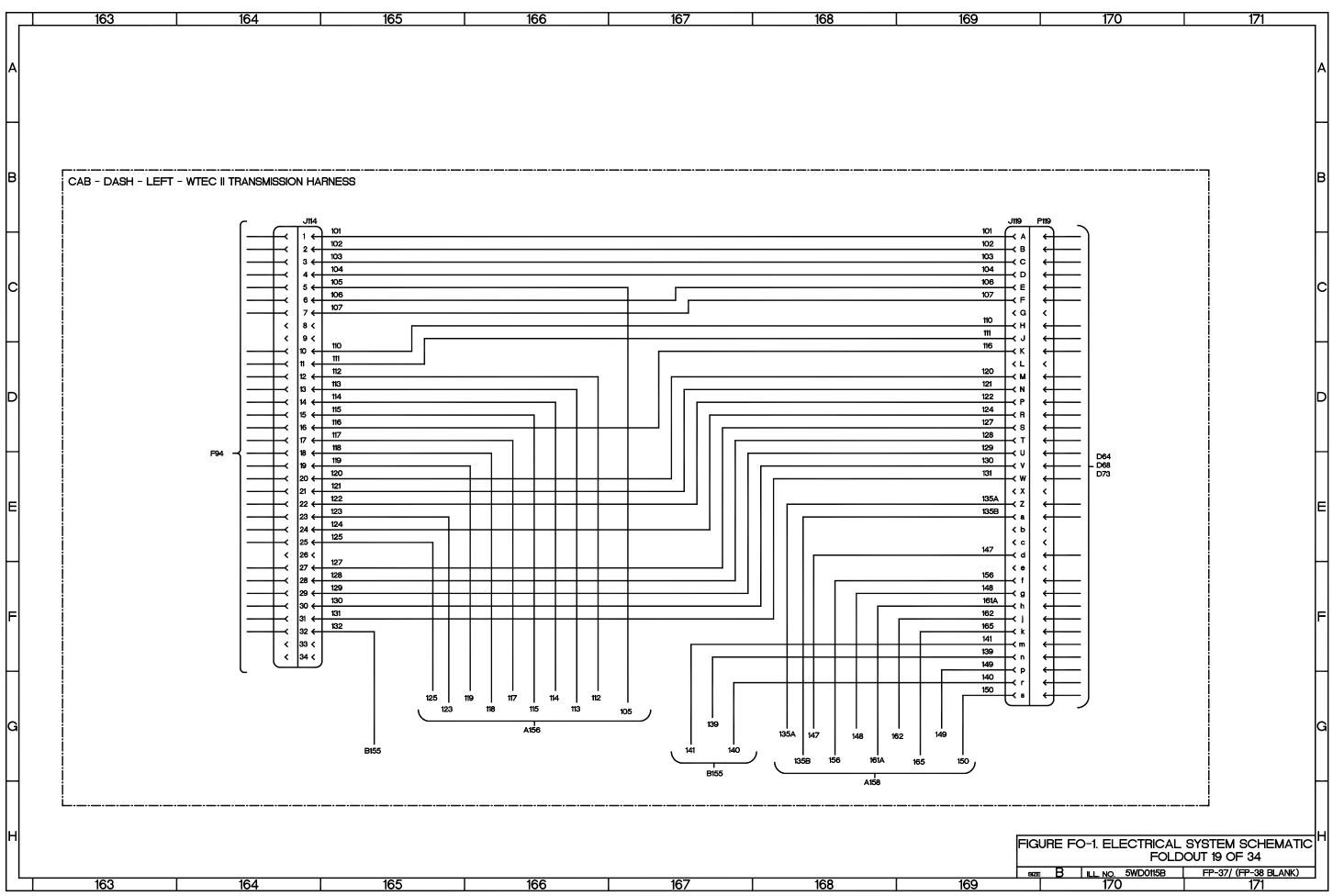


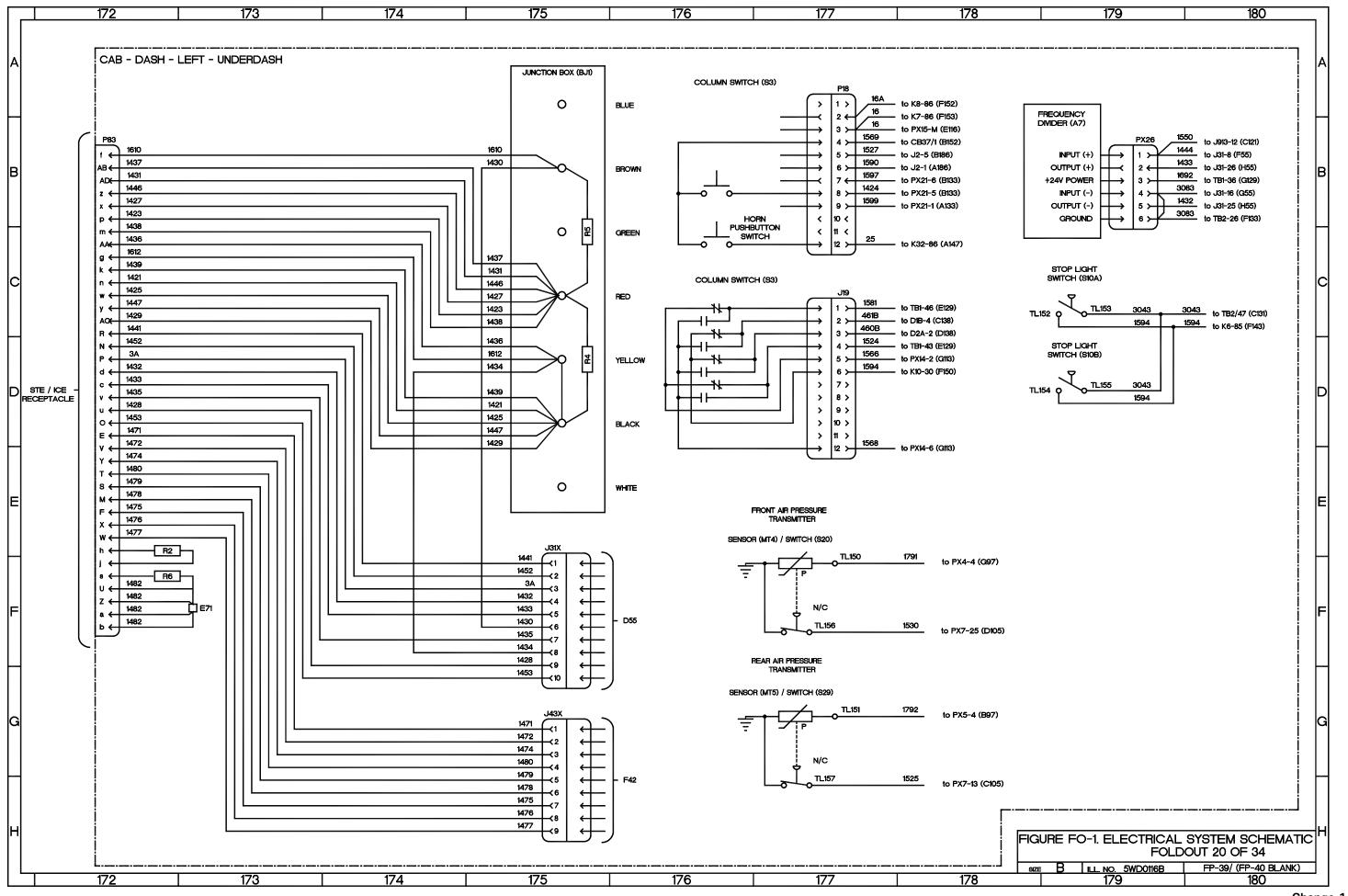


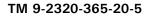


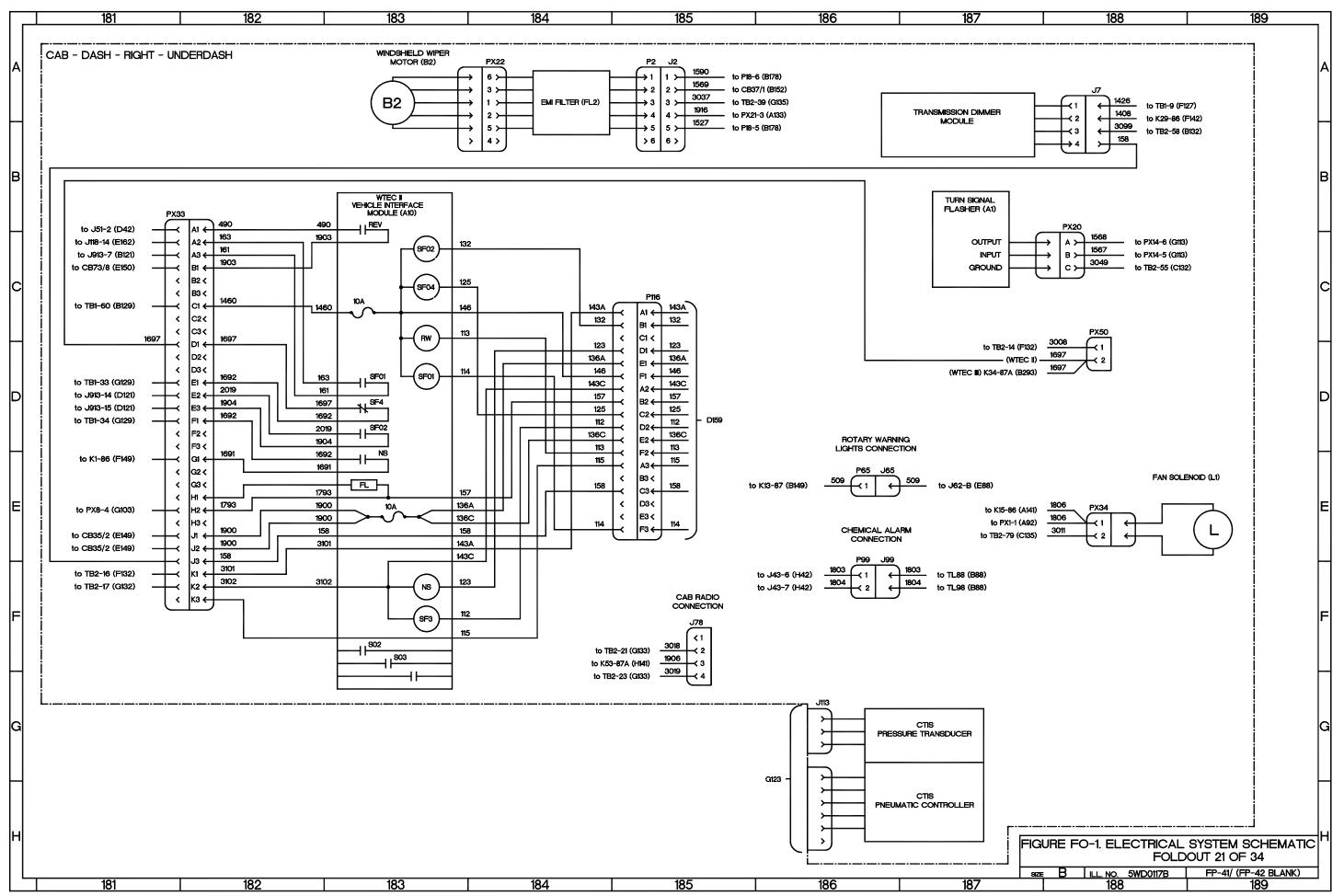


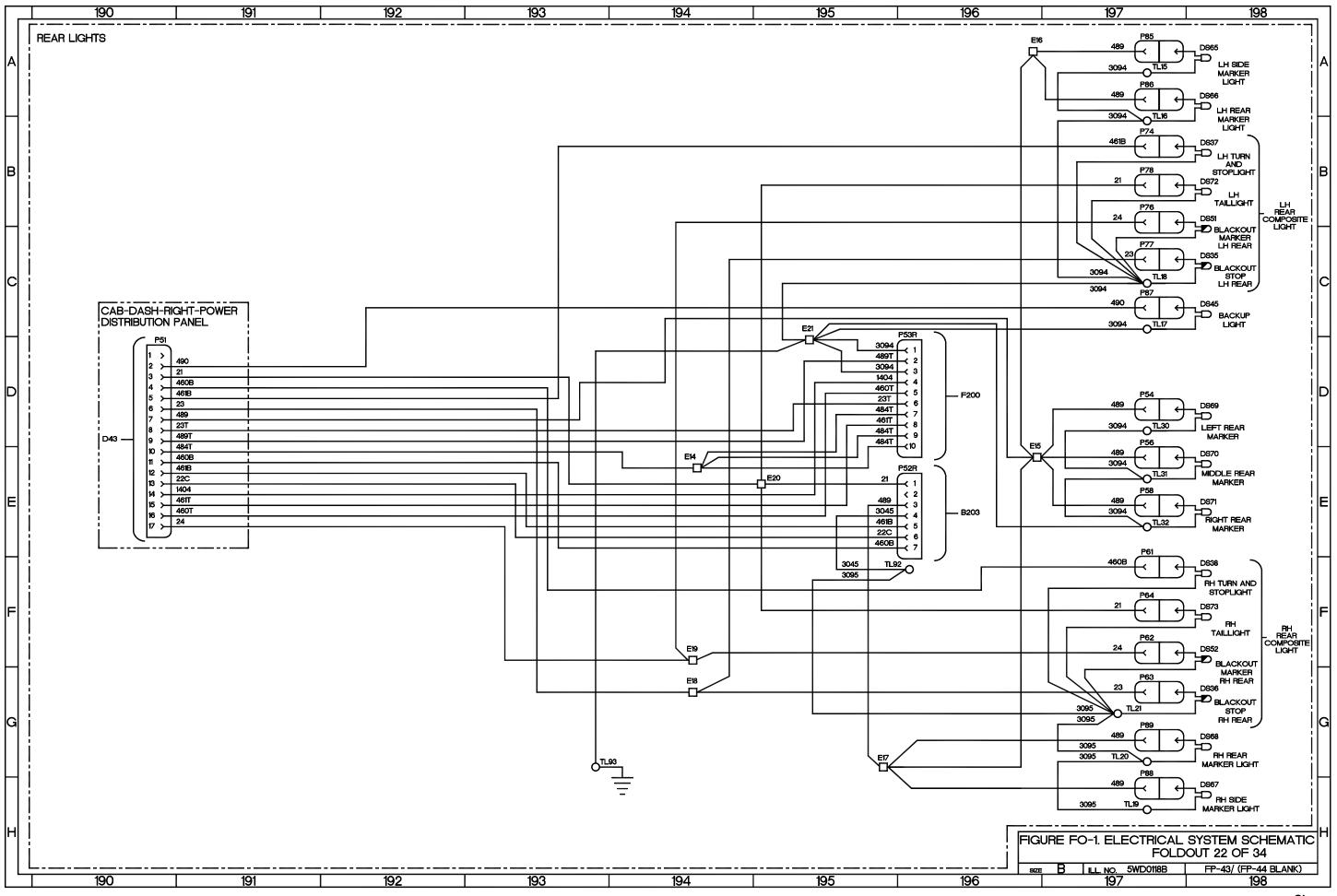




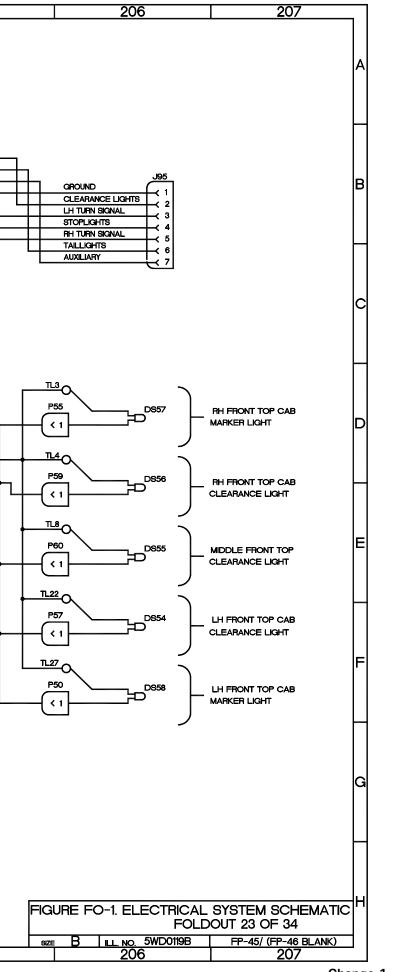


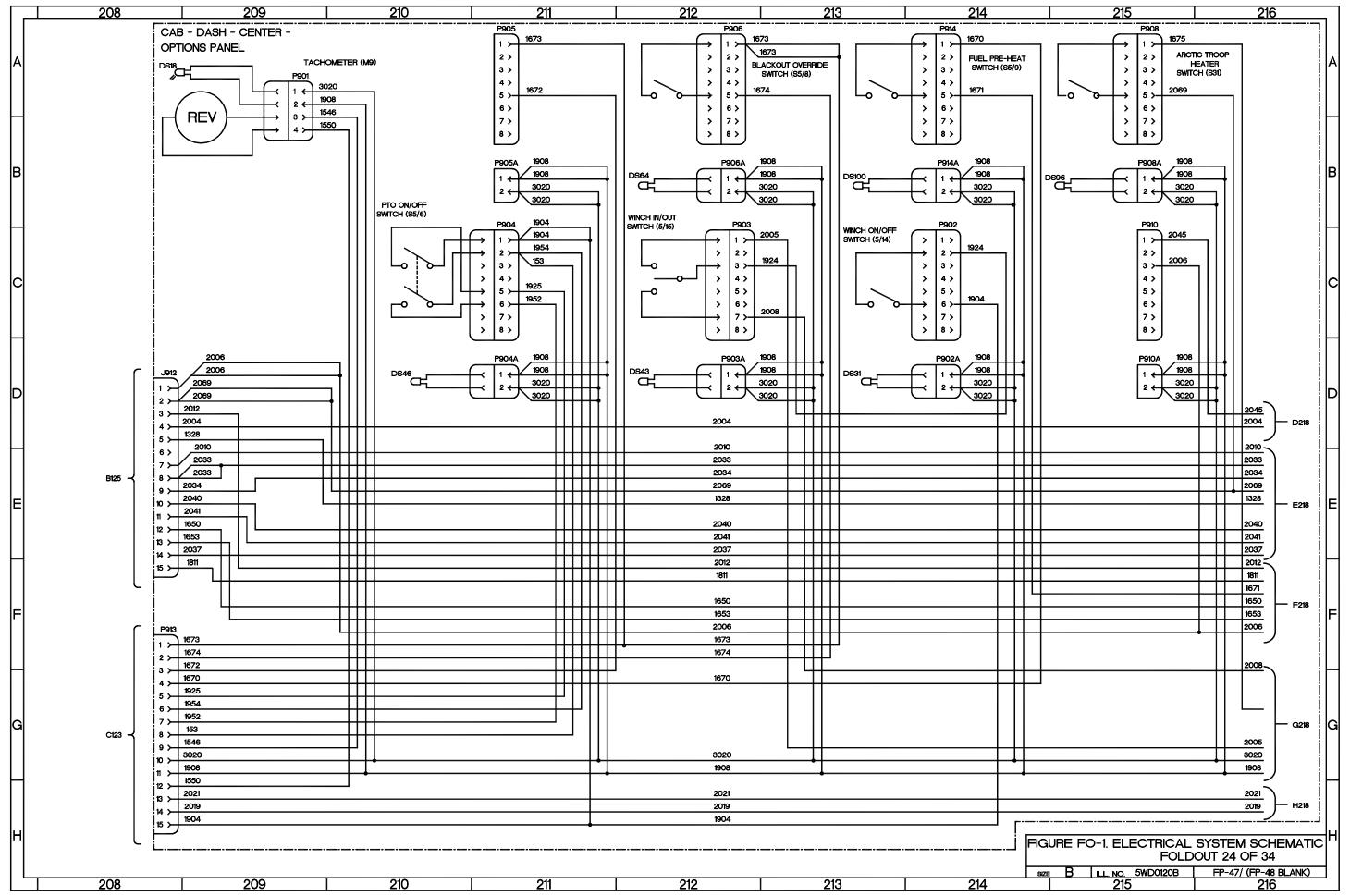


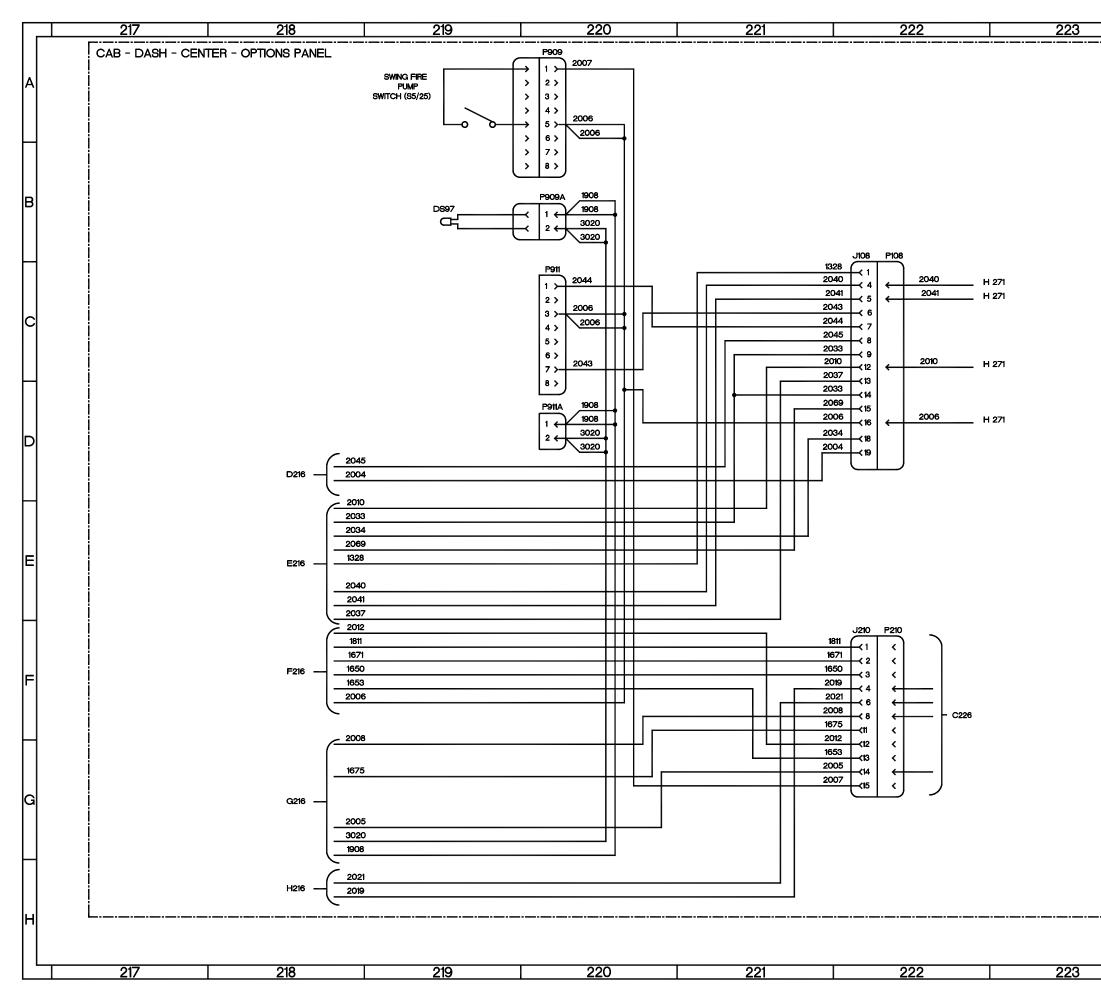




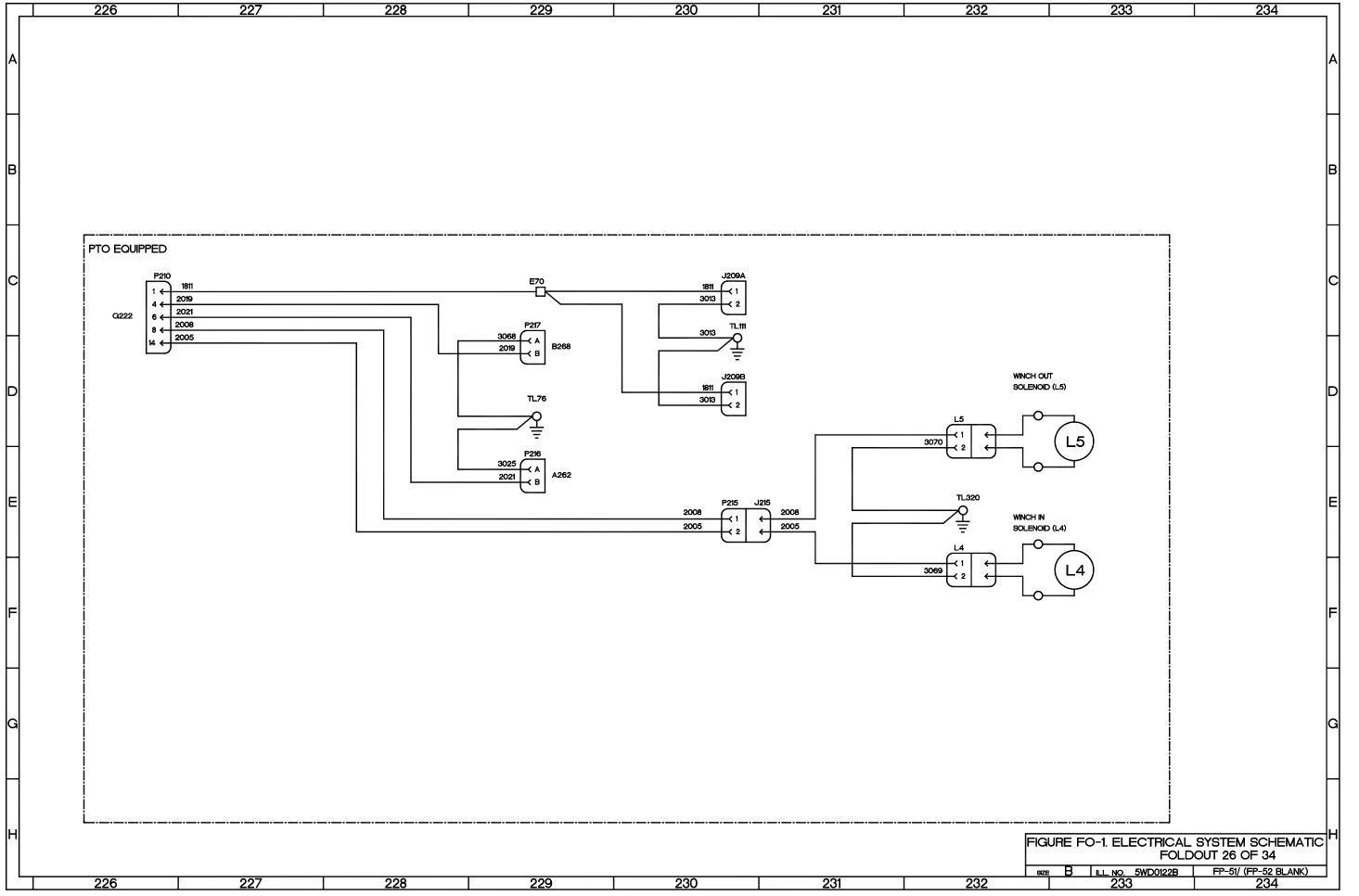
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	DI9	$\begin{array}{c} 4 \\ - \\ 6 \\ - \\ 6 \\ - \\ 6 \\ - \\ 6 \\ - \\ 23T \\ - \\ 23T \\ - \\ 484T \\ - \\ 7 \\ - \\ 484T \\ - \\ 9 \\ - \\ 484T \\ - \\ 9 \\ - \\ 484T \\ - \\ 9 \\ - \\ 484T \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ $		BLACKOUT STOP			
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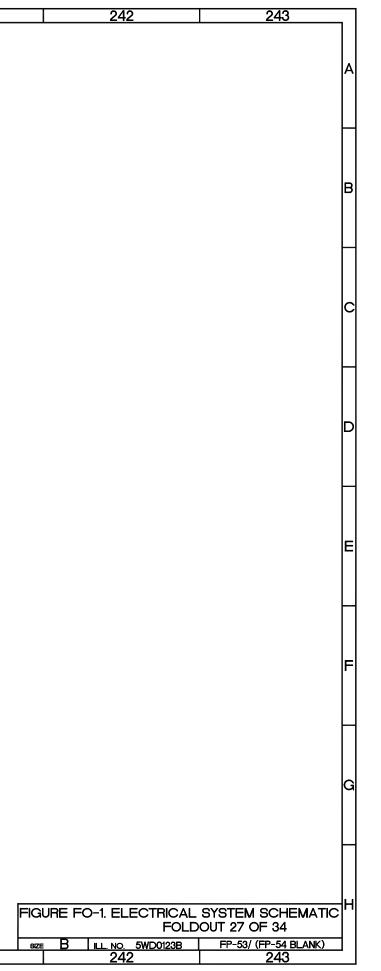




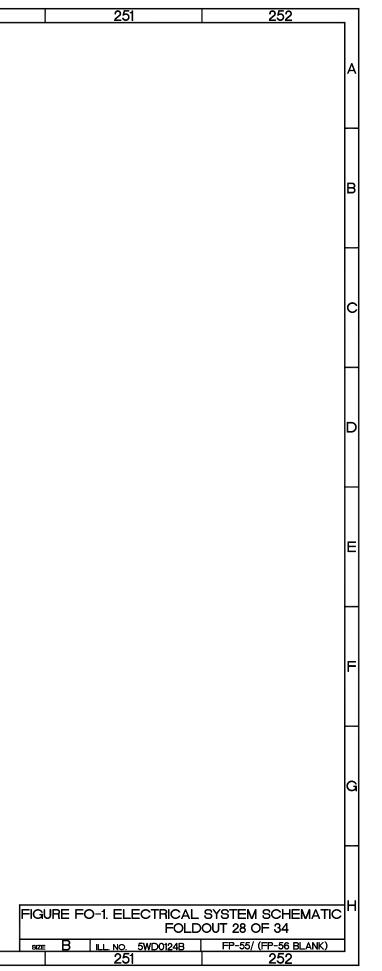
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]	FIGURE FO-1, ELECTRICAL SYSTEM SCHEMATIC FOLDOUT 25 OF 34 sze B ILL NO. 5WD0121B FP-49/ (FP-50 BLANK) 224 225	н



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н	235	236	237	238	239	240	241



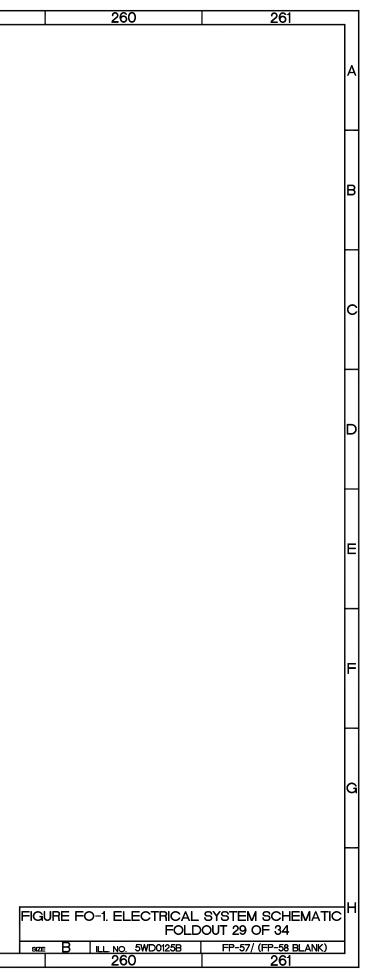
	244	245	246	247	248	249	250
A							
в							
C							
D							
					ETE	=D	
E							
H							
F							
G							
н							
	244	245	246	247	248	249	250



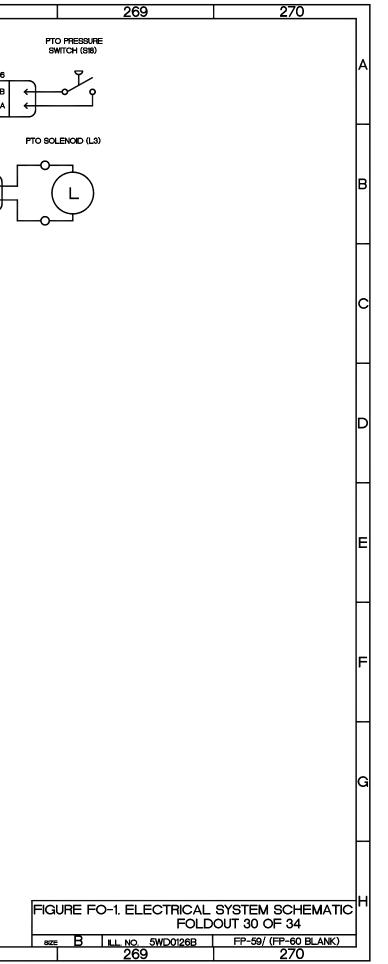
253	254	255	256	257	258	259

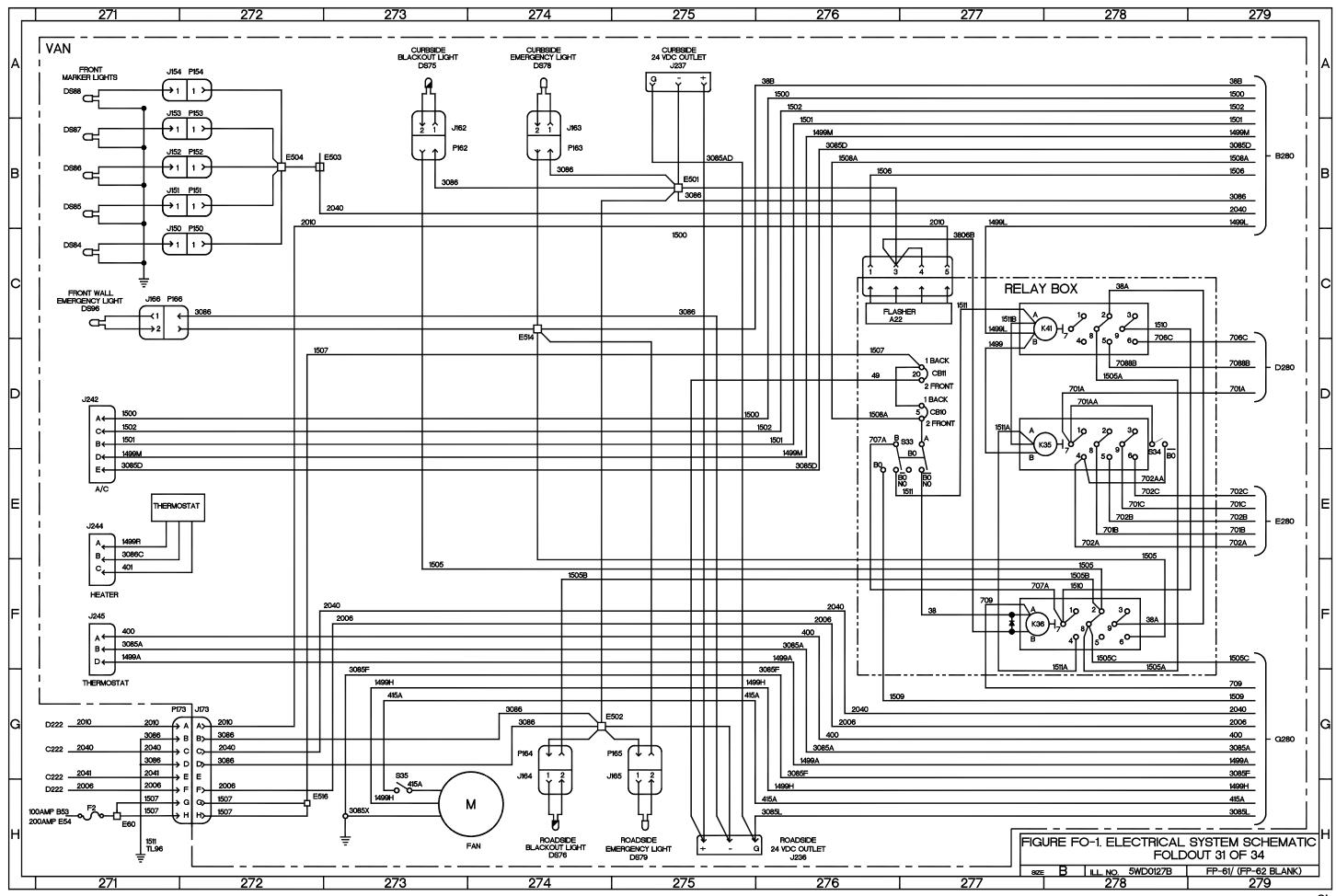
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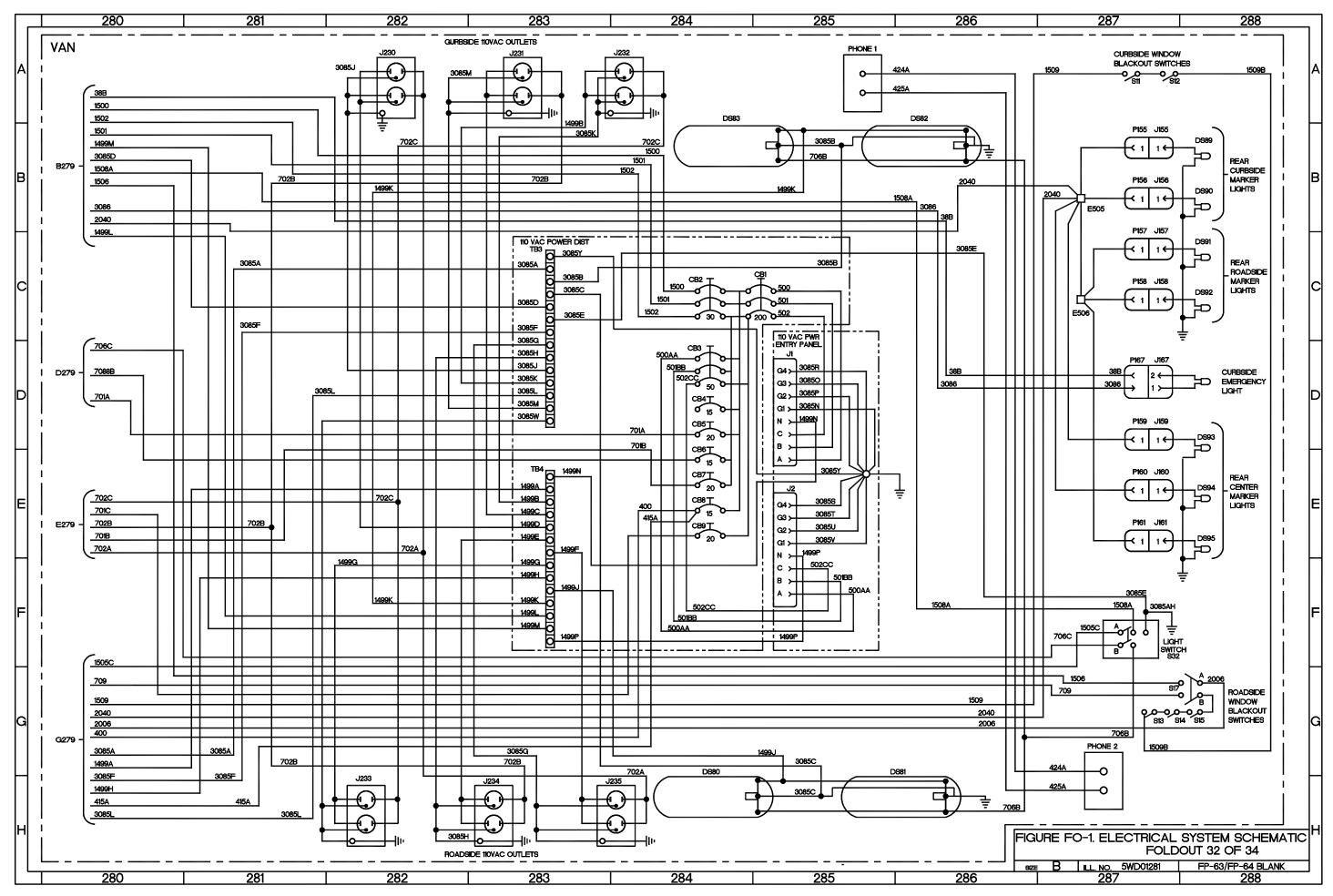
253	254	255	256	257	258	259

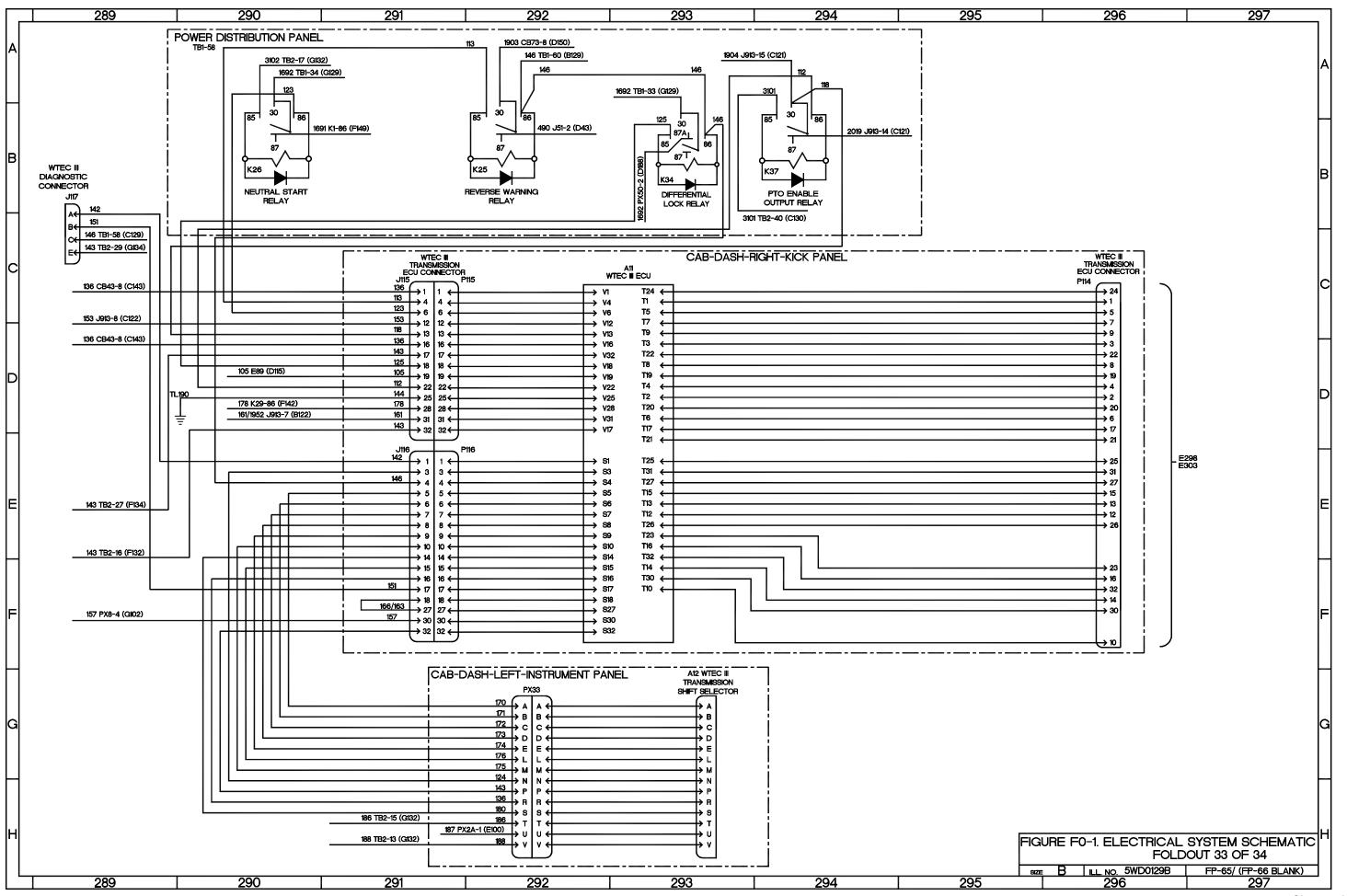


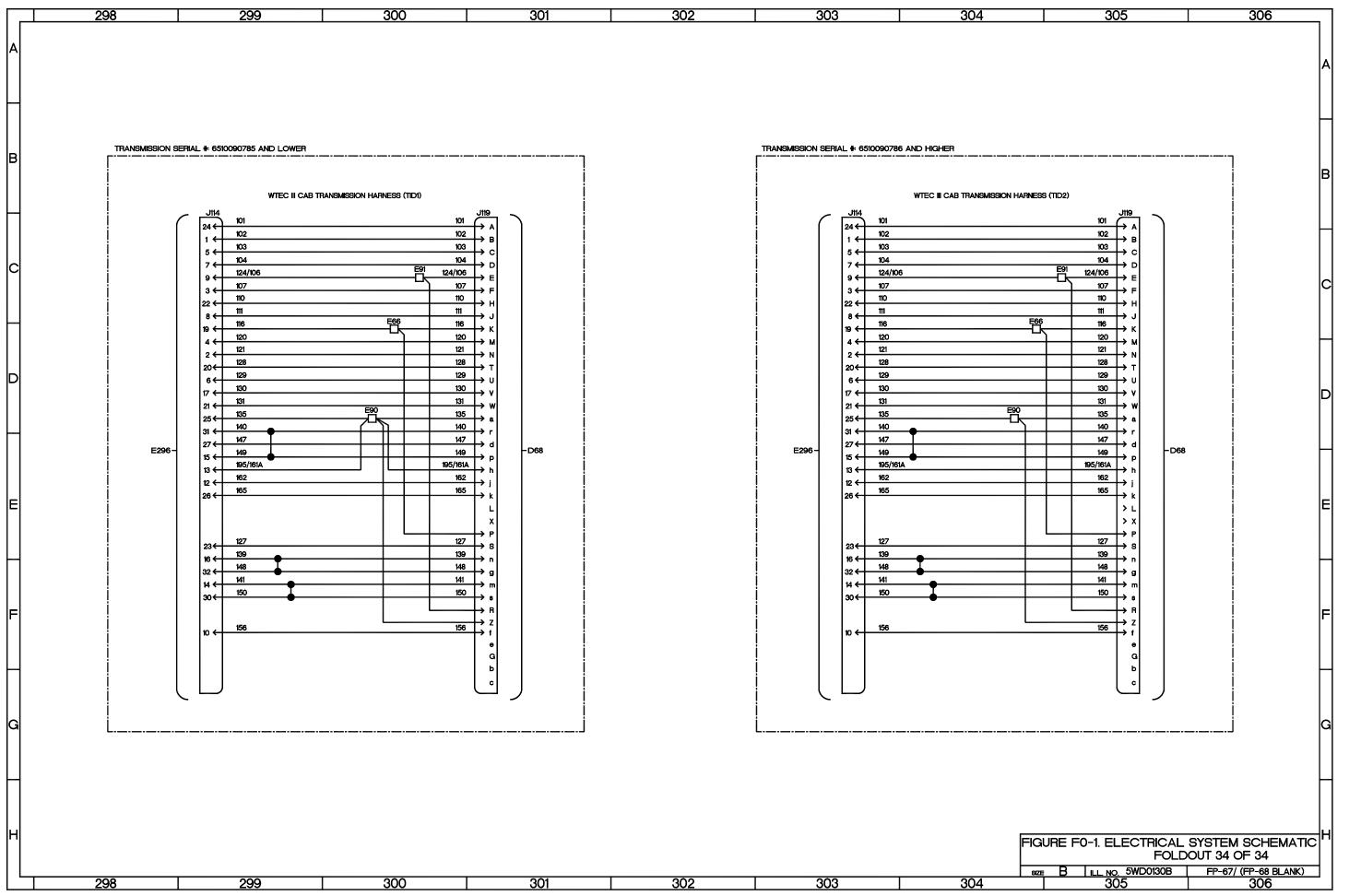
	$E229 \xrightarrow{2021} (A) \xrightarrow{P216} (A)$
	$E229 \xrightarrow{2021} (A)$ $E229 \xrightarrow{2019} (B) (A)$ $D229 \xrightarrow{3066} (B) (A)$
	$E229 \xrightarrow{2021} (A)$ $E229 \xrightarrow{2019} (B) (A)$ $E229 \xrightarrow{2019} (B) (A)$
	2019 P217 D229 3066 B C
B	D229 3068
D	
G	
\vdash	
H	
<u> </u>	268



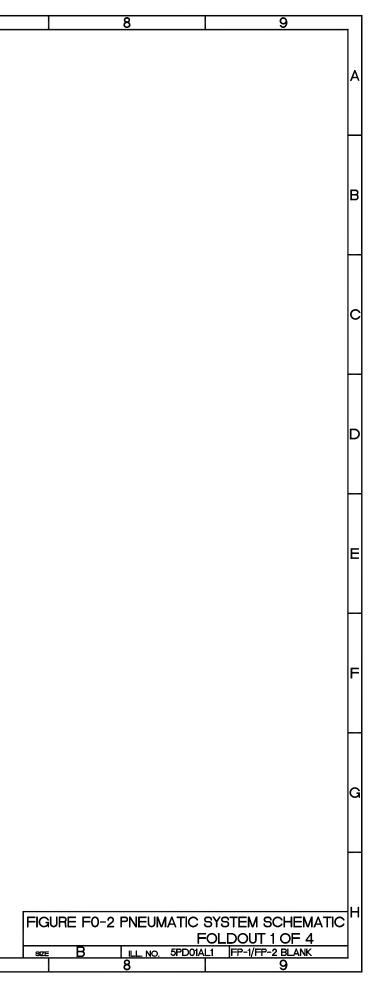








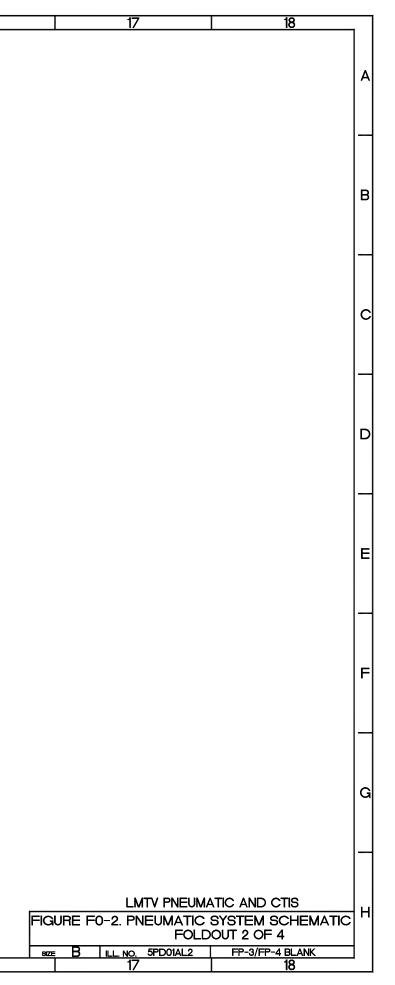
	1	2	3		4	5		6	7
A									
в									
Η			Ω						\bigcirc
						$ \langle \rangle$			\bigcirc
C		REAR AXLE BRAKE CHAMBER	FRONT AXLE BRAKE CHAMBER	COUPLER AIR BRAKE		AIR CLEANER INTAKE	AIR COMPRESSOR WITH GOVERNOR		DASH GAUGE
				\square					
			-\$v-				→¢-		0
D		MANUAL VALVE	ONE WAY CHECK VALVE	FAN CLUTCH	MODULATED CONTROL VALVE	OUICK RELEASE VAVLE	TWO WAY CHECK VALVE	TIRE	PRESSURE SWITCH
							╵╵┙┫╦┛╔┙		
									о <u></u> зторцант
E		RELIEF VALVE	FOOT CONTROL VALVE	VALVE (HAND OPERATED)	SUPPLY VALVE (HAND OPERATED)	VALVE (MECHANICALLY CONTROLLED)	RELAY VALVE	WITH TWO WAY CHECK VALVE	SWITCH
Н					DELIVERY	PARK/EMERGENCY			AIR BR AKE PRESSURE
						AIR HOSE	VALVE	VALVE	TRANSMITTER
F			╼ <u>╘╹╱</u> ╴╻╴╟╸ ╶╴╛┨			AUT			
Ц			AIR/HYDRAULIC INVERSION VALVE	DELIVERY AIR HOSE		BLEED VALVE			
		VALVE	VALVE	NO CONNECTION	VALVE	VALVE			
G									
Н									
	1	2	3		4	5		6	7

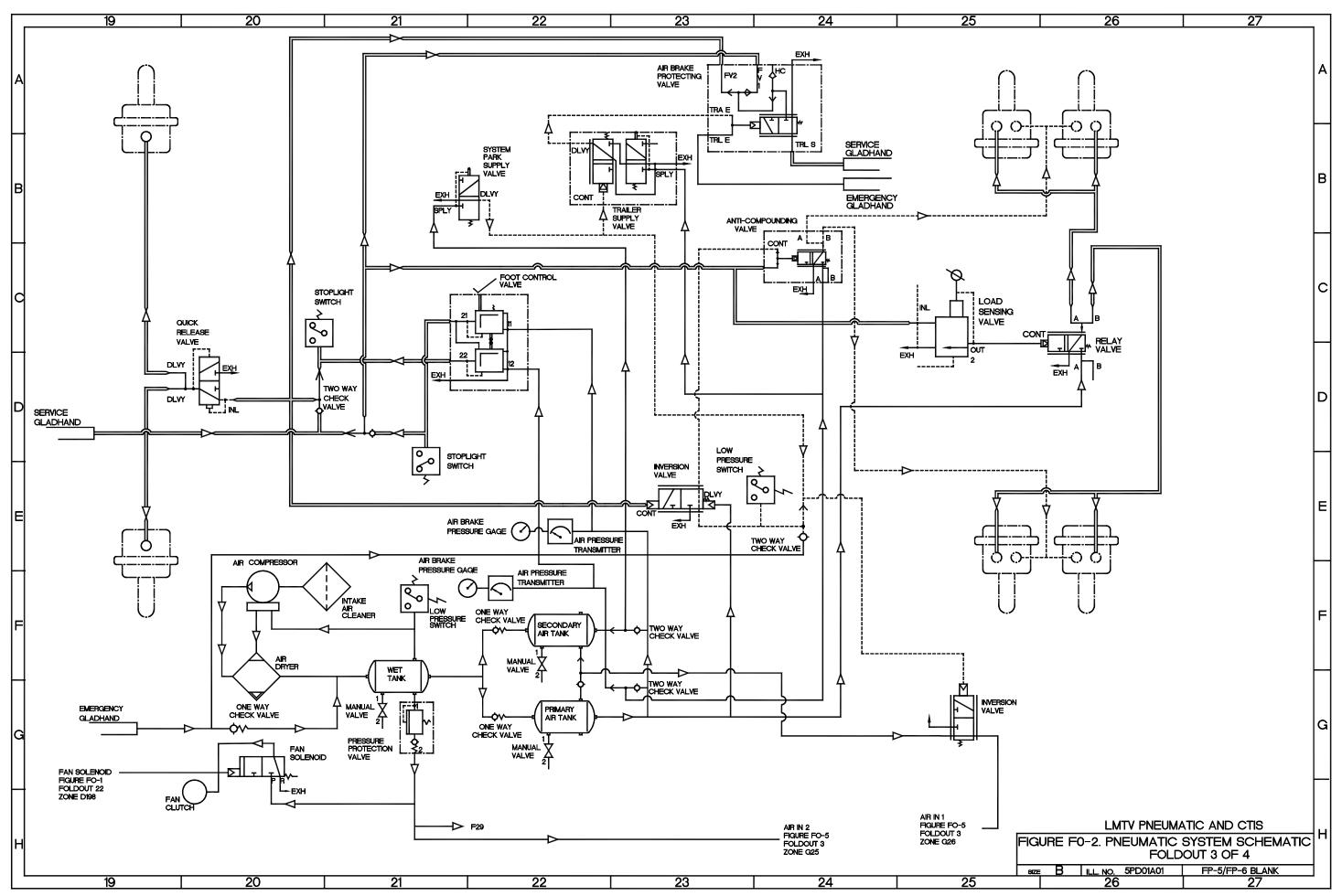


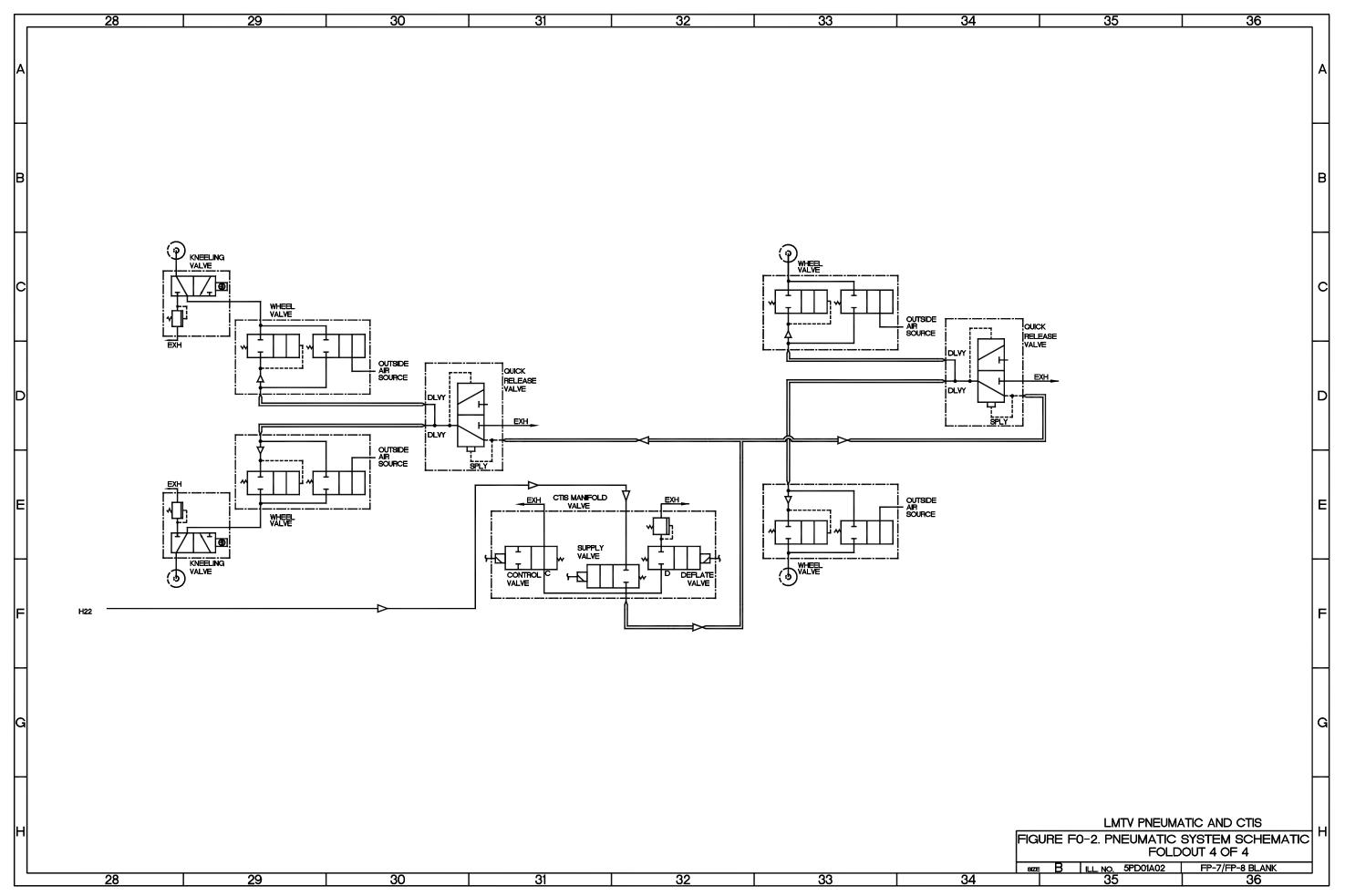
10	11	12	13	14	15	16

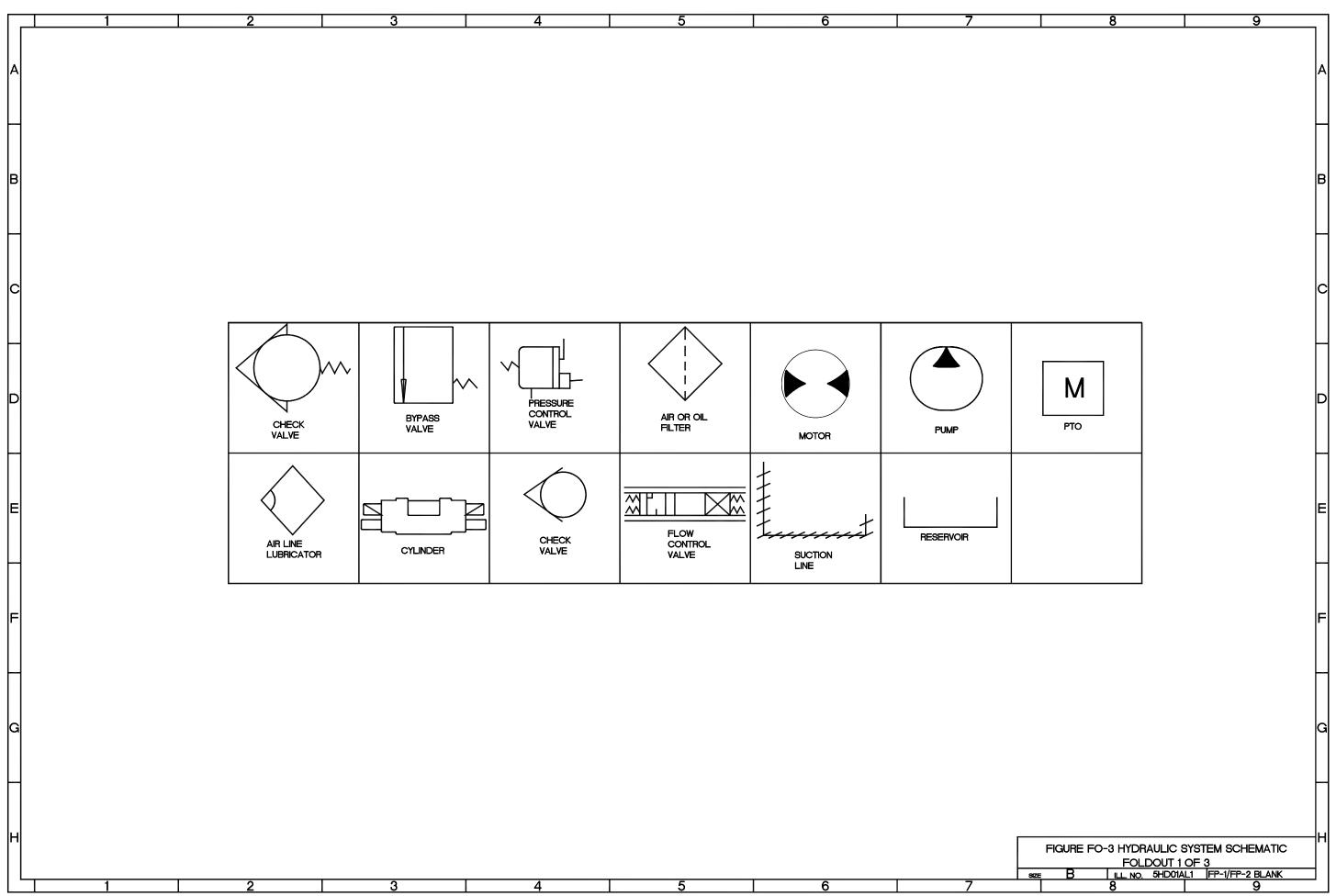
SH	ZONE	DESCRIPTION
3	E22	AIR BRAKE PRESSURE GAGE
3	F22	AIR BRAKE PRESSURE GAGE
3	A23	AIR BRAKE PROTECTING VALVE
3	F20	AIR COMPRESSOR
3	F20	AIR DRYER
3	E22	AIR PRESSURE TRANSMITTER
3	E22	AIR PRESSURE TRANSMITTER
3	C24	ANTI-COMPOUNDING VALVE
4	E31	CONTROL VALVE
4	E31	CTIS MANIFOLD VALVE
4	E32	DEFLATE VALVE
3	G19	EMERGENCY GLADHAND
3	B24	EMERGENCY GLADHAND
3	H20	FAN CLUTCH
3	G20	FAN SOLENOID
3	C22	FOOT CONTROL VALVE
3	F20	INTAKE AIR CLEANER
3	G25	INVERSION VALVE
3	E23	INVERSION VALVE
4	C28	KNEELING VALVE
4	E28	KNEELING VALVE
3	C25	LOAD SENSING VALVE
3	E23	LOW PRESSURE SWITCH
3	F21	LOW PRESSURE SWITCH
3	F22	MANUAL VALVE
3	Q22	MANUAL VALVE
3	G21	MANUAL VALVE
3	F22	ONE WAY CHECK VALVE
3	G22	ONE WAY CHECK VALVE
3	G20	ONE WAY CHECK VALVE
3	G21	PRESSURE PROTECTION VALVE
3	G22	PRIMARY AIR TANK
3	C20	QUICK RELEASE VALVE
4	C34	QUICK RELEASE VALVE
4	D30	QUICK RELEASE VALVE
3	D26	RELAY VALVE
3	F22	SECONDARY AIR TANK

SH	ZONE	DESCRIPTION
3	D19	SERVICE GLADHAND
3	B24	SERVICE GLADHAND
3	C20	STOPLIGHT SWITCH
3	E21	STOPLIGHT SWITCH
4	F32	SUPPLY VALVE
3	B21	SYSTEM PARK SUPPLY VALVE
3	B22	TRAILER SUPPLY VALVE
3	D21	TWO WAY CHECK VALVE
3	E24	TWO WAY CHECK VALVE
3	F23	TWO WAY CHECK VALVE
3	G23	TWO WAY CHECK VALVE
з	F21	WET TANK
4	C29	WHEEL VALVE
4	C33	WHEEL VALVE
4	E29	WHEEL VALVE
4	E33	WHEEL VALVE









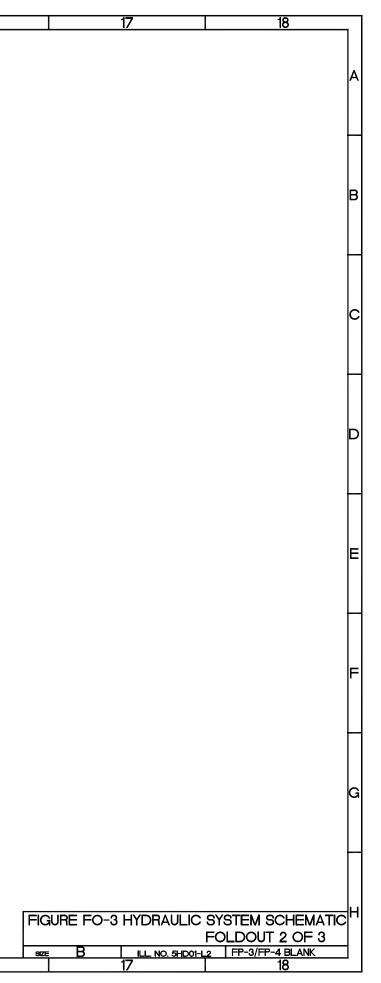
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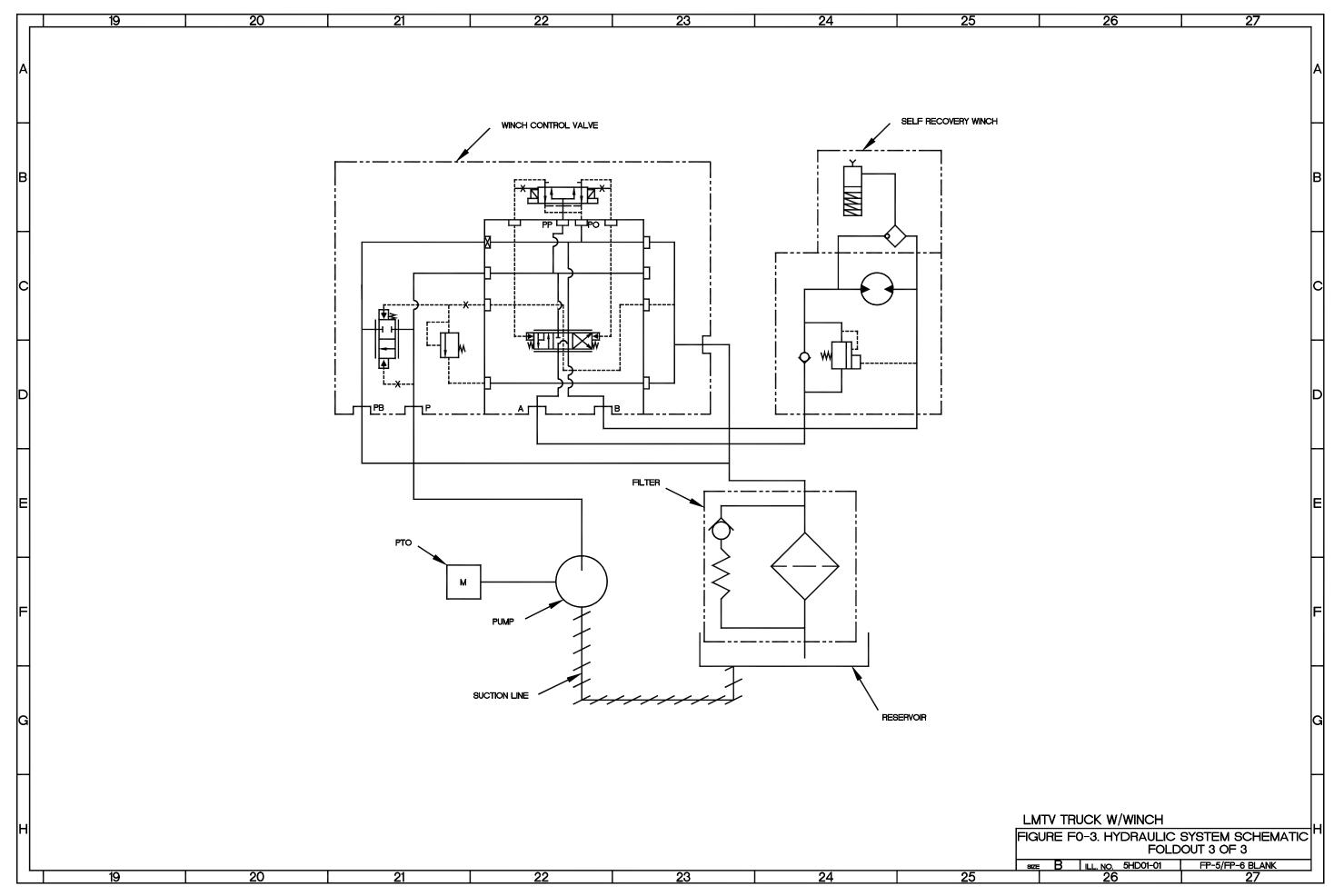
10	11	12	13	14	15	16

SHEET	ZONE	DESCRIPTION
3	B21	WINCH CONTROL VALVE
3	B24	SELF RECOVERY WINCH
3	F21	РТО
3	F22	PUMP
3	E23	FILTER
3	G23	RESERVOIR
3	G22	SUCTION LINE

10	11	12	13	14	15	16

TM 9-2320-365-20-5

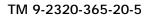


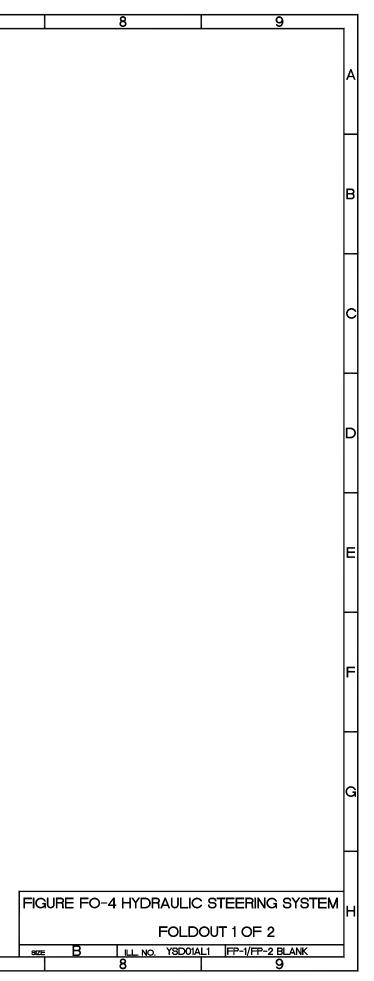


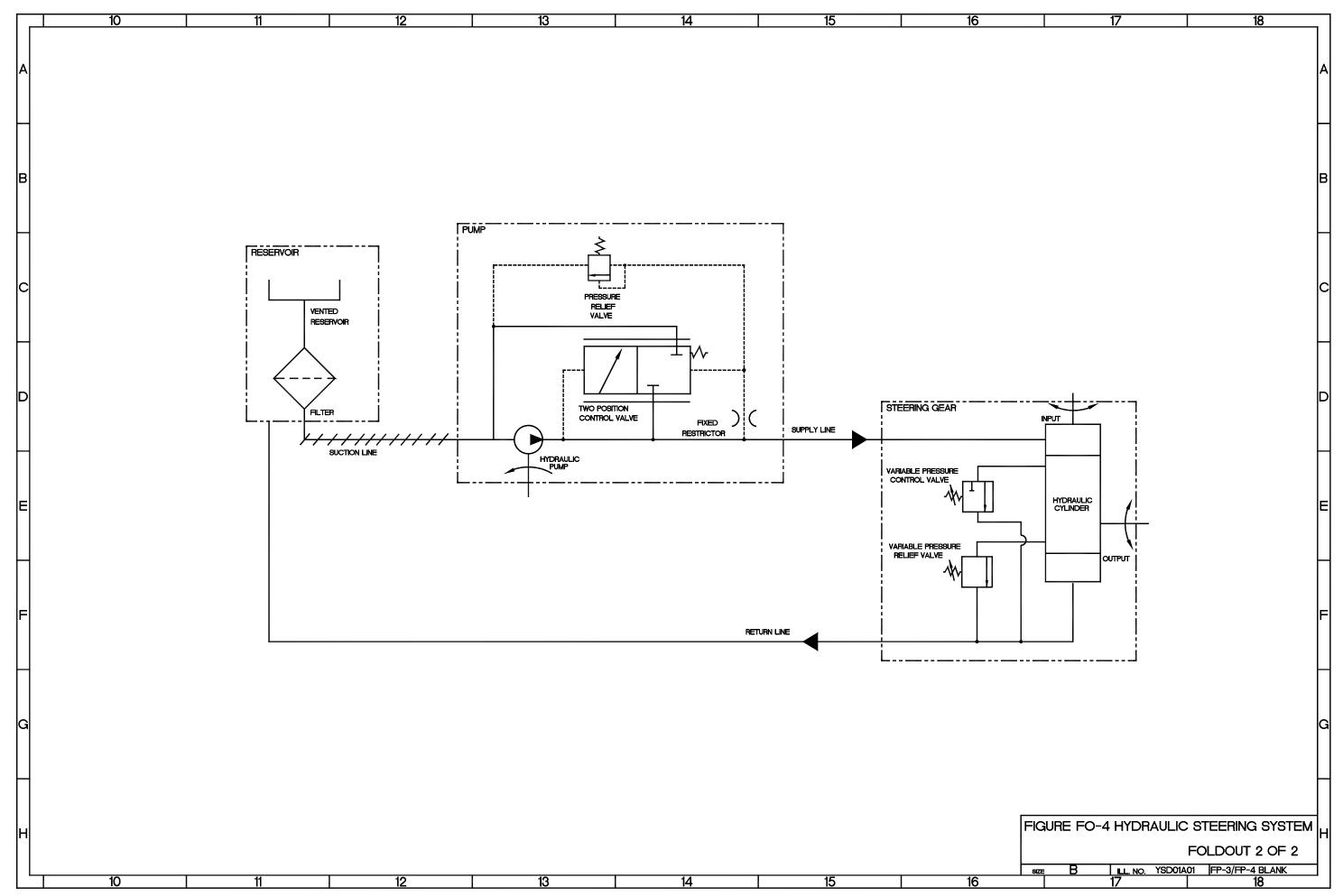
	ЪС						
VENTED RESERVOIR	FIXED RESTRICTOR	HYDRAULIC FLOW DIRECTION	TWO POSITION CONTROL VALVE	CONNECTION	NO CONNECTION	Fluid Line Working	FLUID PILOT LINE
	^₩	^ ₩		\Leftrightarrow			
PRESSURE RELIEF VALVE	VARIABLE PRESSURE RELIEF VALVE	VARIABLE PRESSURE CONTROL VALVE	HYDRAULIC CYLINDER	FILTER	I HYDRAULIC PUMP		

	-	
SH	ZONE	DESCRIPTION
2	Dtl	FILTER
2	D14	FIXED RESTRICTOR
2	E17	HYDRAULIC CYLINDER
2	E13	HYDRAULIC PUMP
2	C13	PRESSURE RELIEF VALVE
2	D13	TWO POSITION CONTROL VALVE
2	E16	VARIABLE PRESSURE CONTROL VALVE
2	E16	VARIABLE PRESSURE RELIEF VALVE
2	C11	VENTED RESERVOIR

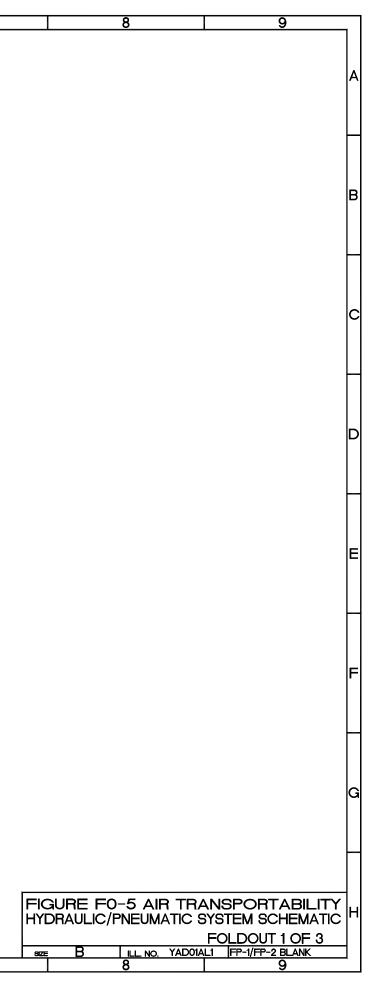
1	2	3	4	5	6	





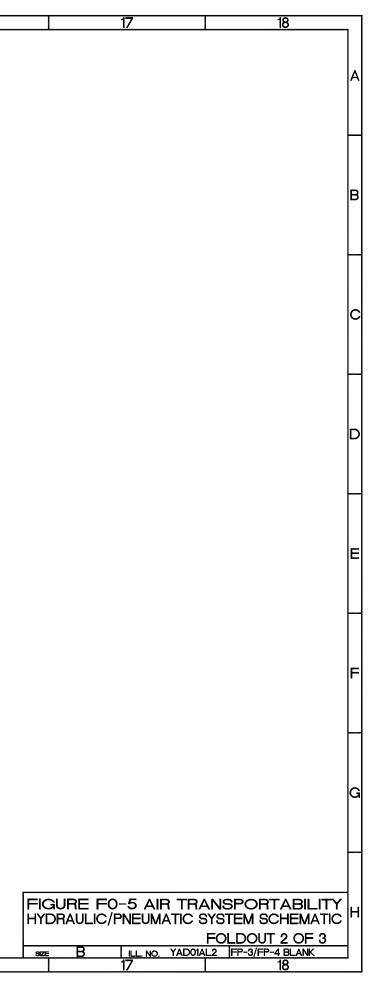


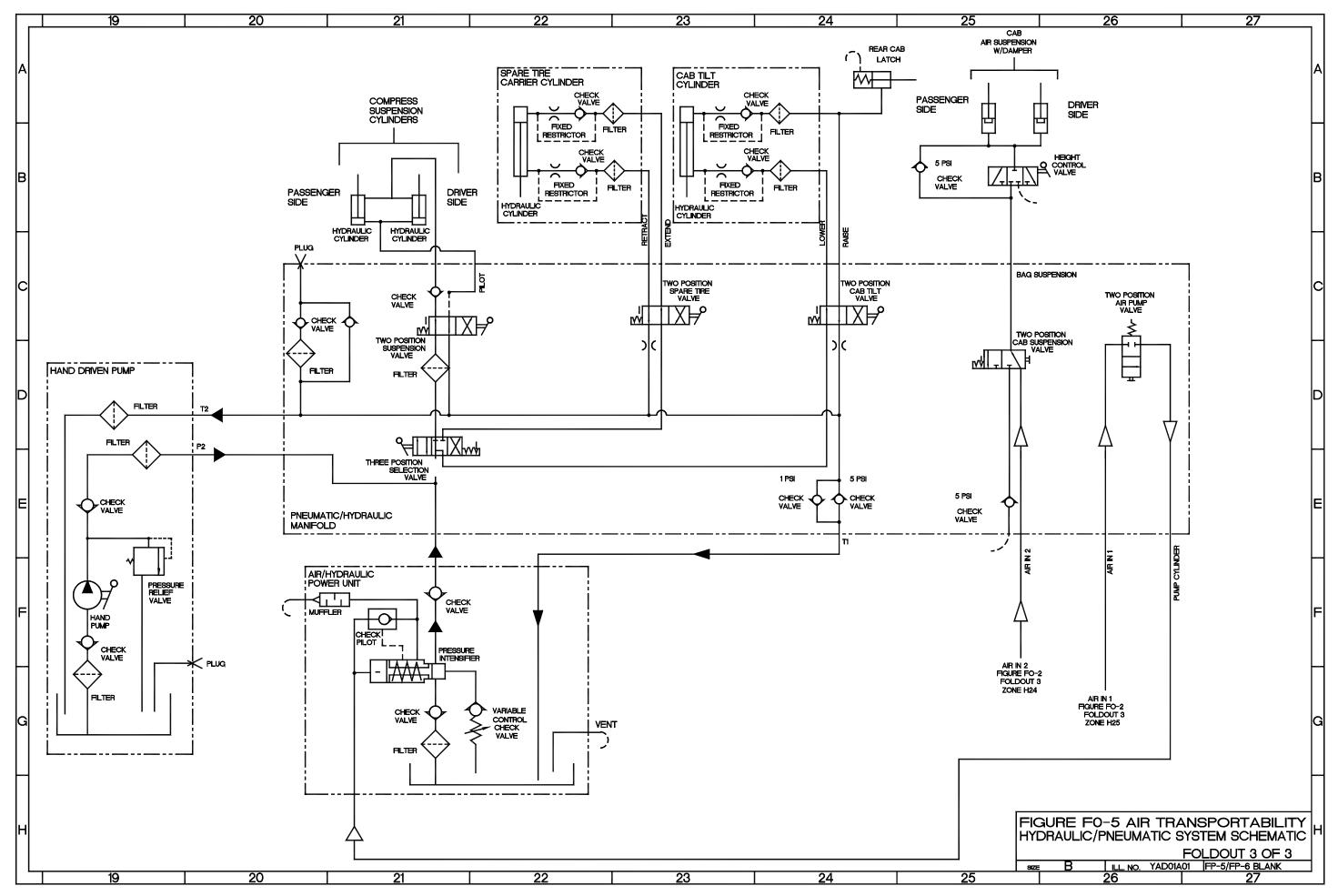
			\rightarrow				
VENTED RESERVOIR	ABOVE FLUID LEVEL RESERVOIR	HYDRAULIC FLOW DIRECTION	PNEUMATIC FLOW DIRECTION	CONNECTION	NO CONNECTION	FLUID LINE WORKING	FLUID PILOT LINE
) c	- \$	-\$4			\Leftrightarrow		
FIXED RESTRICTOR	CHECK VALVE	VARIABLE CONTROL CHECK VALVE	CHECK PILOT	RELIEF VALVE	FILTER	HAND PUMP	DETENT
┉╷╴╷╲╄					⋈ŢŢŢŢ₽	-[- [////]_]	
TWO POSITION CAB SUSPENSION VALVE	MUFFLER	HYDRAULIC CYLINDER	CAB AIR SUSPENSION W/DAMPER	REAR CAB LATCH	TWO POSITION AIR PUMP VALVE	PRESSURE INTENSIFIER	HEIGHT CONTRO VALVE
MIIIXF?	MIIIXF	MIIIXF	°€∏∏⊒Xw				
TWO POSITION CAB TILT VALVE	TWO POSITION SUSPENSION VALVE	TWO POSITION SPARE TIRE VALVE	THREE POSITION SELECTION VALVE				



	10	11	12	1	3	14	15	16
ΙГ					-			
						1		
				SH	ZONE	DESCRIPTION		
				3	A25	CAB AIR SUSPENSION W/DAMPER		
				3	F21			
				3	A22	CHECK VALVE		
				3	A23	CHECK VALVE		
				3	B22			
				3	B23	CHECK VALVE		
В				3	B25	CHECK VALVE		
				3	C20	CHECK VALVE		
				3	C21			
				3	E19	CHECK VALVE		
				3	E24	CHECK VALVE		
				3	E25	CHECK VALVE		
c				3	F19	CHECK VALVE		
				3	F21	CHECK VALVE		
				3	G21	CHECK VALVE		
Ц				3	A22	FILTER		
				3	B22	FILTER		
				3	A24	FILTER		
				3	B24	FILTER		
Ы				3	D19	FILTER		
				3	D20	FILTER		
				3	D21	FILTER		
\square				3	E19	FILTER		
				3	G19	FILTER		
				3	G21	FILTER		
E				3	A22	FIXED RESTRICTOR		
				3	B22	FIXED RESTRICTOR		
				3	A23	FIXED RESTRICTOR		
				3	B23	FIXED RESTRICTOR		
				3	F19	HAND PUMP		
				3	B25	HEIGHT CONTROL VALVE	\neg	
				3	B22	HYDRAULIC CYLINDER		
F				3	B23	HYDRAULIC CYLINDER		
				3	C21	HYDRAULIC CYLINDER		
				3	F20	MUFFLER		
H				3	F21	PRESSURE INTENSIFIER		
				3	F19	PRESSURE RELIEF VALVE		
				3	A24	REAR CAB LATCH		
G				3	E21	THREE POSITION SELECTION VALVE	—	
				3	D26	TWO POSITION AIR PUMP VALVE	—	
				3	D25	TWO POSITION CAB SUSPENSION VALVE	—	
Ц				3	C24	TWO POSITION CAB TILT VALVE	—	
				3	C23	TWO POSITION SPARE TIRE VALVE	—	
				3	D21	TWO POSITION SUSPENSION VALVE	—	
				3	G22	VARIABLE CONTROL CHECK VALVE	—	
H				3	G22	VENTED RESERVOIR		
				L ů]	
L	10	44	10	4,	0	1/ 1/		
L	10	11	12	1	3	14	15	16

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

- 1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
- 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
- 1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

- 1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
- 1 Kilogram = 1000 Grams = 2.2 Lb
- 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

- 1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
- 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches

- 1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
- 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

 $\label{eq:temperature} \frac{\text{TEMPERATURE}}{5/9~(^\circ\text{F} - 32) = \,^\circ\text{C}} \\ 212^\circ \mbox{ Fahrenheit is equivalent to } 100^\circ \mbox{ Celsius} \\ 90^\circ \mbox{ Fahrenheit is equivalent to } 32.2^\circ \mbox{ Celsius} \\ 32^\circ \mbox{ Fahrenheit is equivalent to } 0^\circ \mbox{ Celsius} \\ 9/5~\mbox{ C}^\circ + 32 = \mbox{ F}^\circ \\ \end{array}$

APPROXIMATE CONVERSION FACTORS

TO CHANGE	<u>TO</u> <u>MUL</u>	TIPLY BY	TO CHANGE	TO MUL	TIPLY BY
TO CHANGEInchesInchesFeetYardsMilesSquare InchesSquare FeetSquare YardsSquare MilesAcresCubic FeetCubic YardsFluid OuncesPintsQuartsGallonsOuncesPoundsPoundsFourds (force)Short TonsPound-Feet	Centimeters Millimeters	2.540 . 25.4 0.305 0.914 1.609 6.451 0.093 0.836 2.590 0.405 0.028 0.765 29.57 0.473 0.946 3.785 28.35 0.454 4.448 0.907	Centimeters Millimeters Meters Meters Square Meters Square Meters Square Meters Square Kilometers Square Kilometers Cubic Meters Cubic Meters Cubic Meters Liters Liters Liters Liters Liters Kilograms Newtons Metric Tons	InchesInchesFeetYardsSquare InchesSquare FeetSquare YardsSquare MilesAcresCubic FeetCubic YardsFluid OuncesPintsQuartsGallonsOuncesPoundsFounds (force)Short Tons	. 0.394 0.0394 . 3.280 . 1.094 . 0.621 . 0.155 10.764 . 1.196 . 0.386 . 2.471 35.315 . 1.308 . 0.034 . 2.113 . 1.057 . 0.264 . 0.035 . 2.205 0.2248 . 1.102
Pounds/Sq Inch Miles per Gallon Miles per Hour	Kilopascals	6.895 0.425	Kilopascals	Pounds per Sq Inch	. 0.145 . 2.354

