DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

AIR INDUCTION SYSTEM MAINTENANCE

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M48 & M60 SERIES VEHICLES

HEADQUARTERS, DEPARTMENT OF THE ARMY, WASHINGTON, D.C.

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AIR INDUCTION SYSTEM MAINTENANCE M48 AND M60 SERIES VEHICLES

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank-Automotive Command, Attn: AMSTA-MB, Warren, Michigan 48397-5000. A reply will be furnished to you.

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CHAPTER 1

INTRODUCTION

1-1. General

The material in these instructions will help you in what should be continuous effort to keep your vehicle running properly. Scheduled inspections and repairs can prevent deadlining your vehicle. Spend a few minutes to read and familiarize yourself with the contents of these instructions before performing the maintenance checks and procedures.

1-2. Scope

These instructions are to be used for the maintenance of the M48A5, M60A1, M60A1 RISE, M60A3, M728, M48A5 AVLB, M60A1 AVLB air induction system. These instructions are the result of:

- a. Technical manual evaluations
- b. Engineering problem analysis
- c. New design efforts due to field problem reports, tests, and recommendations
- d. PS Magazine articles and other publication sources reflecting user ideas and suggestions

Much of this information will be included in future changes and revisions to technical manuals. These instructions provide procedures that are to be performed at the operator and organizational, direct support and general support maintenance levels. Chapters 2 and 3 provide crew and Organizational Maintenance inspection and maintenance procedures for vehicles equipped with the conventional air induction system. Chapter 4 provides instructions to apply reliability improvements to vehicles equipped with the conventional air induction system. Chapters 5 and 6 provide crew and Organizational Maintenance inspection and maintenance procedures for vehicles equipped with the improved clean air induction system. Appendix B lists repair parts required to support vehicles equipped with either the conventional or improved air induction system.

NOTE

This technical bulletin must be used in conjunction with the applicable vehicle operator's manual (TM-10) and hull organizational maintenance manual (TM-20-1).

CHAPTER 2 CONVENTIONAL AIR INDUCTION SYSTEM CREW MAINTENANCE

2-1. General

This chapter contains inspection and maintenance instructions that the crew is authorized to perform to keep the air induction system operational. A large percentage of engines have to be replaced because dust, dirt, and foreign material is drawn into the engine due to a defective air induction system. The crew is responsible for the condition of the vehicle. Crew maintenance is limited to performance of the daily preventive maintenance, checks, and services (PMCS). Report all uncorrected defects to organizational maintenance. The crew may perform other maintenance procedures, but only under the direction of organizational maintenance.

2-2. Preventive Maintenance Checks and Services (PMCS)

The following PMCS table lists checks and services that are to be performed on a daily basis to find, correct, or report problems that are caused by normal wear and tear.

	1 tovolitive infantes offects and Del vices, Sub-Section 1 - Continued						
ITEM	BEFORE	DURING	AFTER	ITEM TO BE INSPECTED DAILY Procedure (required only if you operate)	EQUIPMENT IS NOT READY/AVAILABLE IF -		
				AIR CLEANER HOUSINGS AND DOORS RIGHT AND LEFT SIDE	s		
1.	•			Inspect housing (A) for cracks and dents.	ļ		
2.	•			Check Door (B), hinges (C), door locking bolts or fasteners (D) finissing parts.	or cracks, broken or		
3.	•			Check base plate (E) for cracks.			
4.	•			Check that inspection plugs (F) and drain plug (G) are not missing.			
				CLEANER DOOR ANY MISSING DR	ENTED HOUSING. OR MISSING AIR OR DOOR FASTENERS. AIN OR INSPECTION OR BENT DOOR		

Preventive Maintenance Checks and Services - Continued

ITEM	BEFORE	DURING	AFTER	ITEM TO BE INSPECTED Procedure	DAILY (required only if you operate)	EQUIPMENT IS NOT READY/AVAILABLE IF -
5.	•			AIR CLEANER BLOWER MOTORS Check that flow of air can be felt all four blower motor elbows (H).		ENGINE RUNNING)
				CAUTION If no airflow is	MOTO	RFLOW AT EITHER BLOWER R ELBOW ON SAME AIR VER HOUSING.
				present, shut off engine.	BLOWI	ER MOTOR ACCESS PLATE
6.	•			Check blower motor access plate (cracks, loose or missing locking bo		
				SIDE LOADING	TOF	LOADING
				H		(10 DOLTS
				(K)	16 LOCKING BOLTS)	(10 BOLTS AND LOCKWASHERS)

ITEM	BEFORE	DURING	AFTER	ITEM TO BE INSPECTED DAILY Procedure (required only if you ope	EQUIPMENT IS NOT READY/AVAILABLE IF -
				FILTER CLOG INDICATORS, RIGHT AND LEFT SIDE (If your tank is equipped with restriction indicators)	ES
7.	•			Check that restriction indicator (L), pipe plug (M) or restriction indicator guard (N) are not damaged or missing.	M P
8.	•			Check indicator reading.	
				Early model - filter clog indicator window (P) should not show red. If red, notify organizational maintenance.	
				Late model - A reading of 30 or more means that the filter element requires cleaning. Notify organi- zational maintenance. A reading of 25 indicates	BOTH FILTER CLOG INDICATOR AND PIPE PLUG ARE MISSING.
				that the elements should be cleaned before any extensive move.	EARLY MODEL - FILTER CLOG INDICATOR SHOWS RED.
					LATE MODEL - SHOWS 30 OR MORE.

Preventive Maintenance Checks and Services - Continued

ITEM	BEFORE	DURING	AFTER	ITEM TO BE INSPECTED Procedure (requi	DAILY red only if you operate)	EQUIPMENT IS NOT READY/AVAILABLE IF -
				AIR CLEANER ELBOWS, HOSES, AND (Accomplish with top grille doors open)	CLAMPS - RIGHT AND LEFT	T SIDES
				NOTE All AVLBs Bridge must be in a raised position to perform Steps 9, 10, and 11.	INTAKE HOSE	S OUTLET HOSE
9.	•			Check that air cleaner intake hoses (R) and outlet hoses (S) are not cracked, damaged, or missing.		
10.	•			Check that intake hose elbows (T) and outlet hose elbows (U) are not loose, damaged, or missing.		
11.	•			Check intake (V) and outlet (W) hose clamps (two on each hose) to ensure the are not loose, broken, or missing.	y (Y)	w u
					AGED OR MISSIN	LET HOSES ARE DAM- IG. ELBOWS ARE AGED. HOSE CLAMPS I, OR MISSING.

Preventive Maintenance Checks and Services - Continued

				a Services - Continued	
ITEM BEFORE	DURING	AFTER	ITEM TO BE INSPECTED DA Procedure (required only	ILY if you operate)	EQUIPMENT IS NOT READY/AVAILABLE IF -
12.			DURING PERIOD OF OPERATION, LOOK FO	OR THESE INDICATION	IS OF A DIRTY AIR
12.	•	'	Exhaust smoke is excessively black.		
13.	•		Filter clog indicator does not indicate or shows a red window (early model) or a high reading (late model). See filter clog indicators (paragraph 2-4) for detailed instructions.	EARLY MODEL - FI RED AFTER RESET. SHOWS 30 INCHES (
14.			Noticeable loss of engine power		
15.	•		Little or no airflow from the blower motor discharge elbows.	MOTOR ELBOW ON ER HOUSING.	

2-3. Air Cleaner Inspection.

- a. Examine the housing and the base plate for hairline cracks. If you find cracks in the housing, report to organizational maintenance immediately so the air cleaner assembly can be replaced. Do not operate the tank until it is repaired.
- b. With the engine running, check to see that air exhaust can be felt at all four blower motor elbows (fig. 2-1). Notify organizational maintenance immediately if two are not working on the same air cleaner. Do not operate your tank. If air exhaust can be felt at only one blower motor elbow on each air cleaner, you may continue to operate. Notify organizational maintenance at first opportunity because the blower motors may be inoperative and require replacement.

NOTE

Not all air cleaners have air cleaner filter clog indicators.

c. If your air cleaner has a filter clog indicator, take a reading as described in paragraph 2-4.

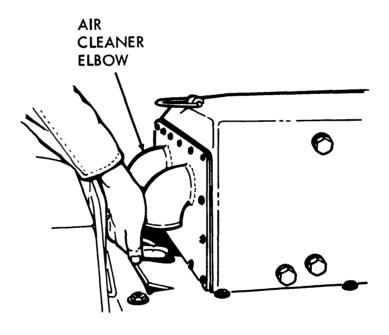


Figure 2-1. Blower motor check.

2-4. Air Cleaner Filter Clog Indicator

a. General.

The air cleaner filter clog indicator provides a visual means of determining when the air cleaner filter element must be serviced without actually opening the air cleaner box and inspecting the filter element. Two models of indicators are presently being used (fig. 2-2).

b. Checking. To determine if air filter element needs servicing.

Check indication on air restriction indicator.

Early Model - If red disk is visible, notify organizational maintenance.

Late Model-If reading is more than 25, notify organizational maintenance.

2-5. Engine Air Intake (Fig. 2-3).

a. General.

During normal and water fording operations, the engine air intakes (view A) must be positioned to draw air from the crew compartment. During extreme cold or an NBC attack alert, the engine air intakes must be reversed to draw air from the engine compartment (para b below)

b. Reversal Procedure.

- (1) Remove four screws and washers and cover (view A). A gasket is cemented to cover.
- (2) Remove six nuts and washers (view B).
- (3) Remove eight nuts and washers.
- (4) Remove intake from bulkhead.
- (5) If gaskets and/or intake are damaged, notify organizational maintenance.
- (6) Position intake on flange studs with screen toward engine compartment. (View C).
- (7) Install six nuts and washers on studs. (View C).
- (8) Install eight nuts and washers on studs. (View D).
- (9) Position cover on intake and install four screws and washers.

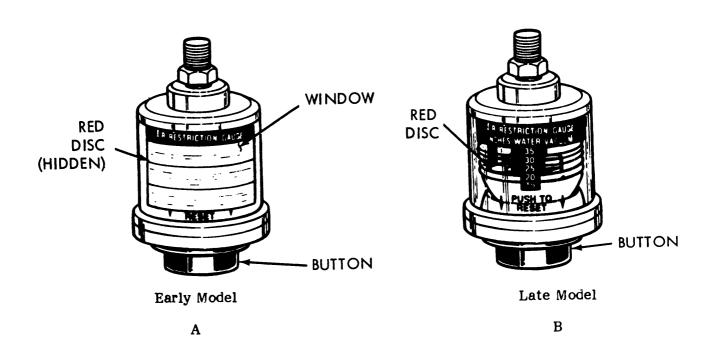


Figure 2-2. Air cleaner filter clog indicator.

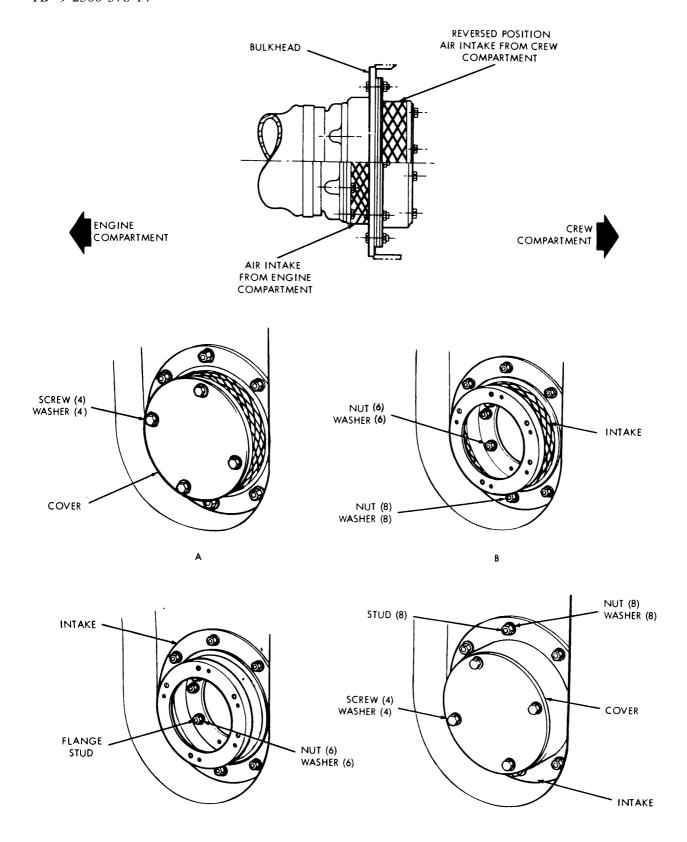


Figure 2-3. Engine air intake

CHAPTER 3 CONVENTIONAL AIR INDUCTION SYSTEM ORGANIZATIONAL MAINTENANCE

3-1. Preventive Maintenance Cheeks and Services (PMCS)

- a. General Preventive maintenance for the conventional air induction system is the systematic care, inspection, and service of equipment to maintain it in serviceable condition and detect faults and failure before extensive and time-consuming repairs or replacement are required. Not all possible repairs are described in these instructions. Those that are will be referenced in the PMCS. For items not referenced and are not self-explanatory, refer to the appropriate TM-20 technical manual.
- b. Procedures The PMCS table is set up to be performed by organizational personnel QUARTERLY and should be assisted by the crew. For vehicles equipped with top loading air cleaners; perform PMCS table 3-1, for vehicles equipped with side loading air cleaners, perform PMCS table 3-2.

Table 3-1. Top Loading Air Cleaner Organizational Preventive Maintenance Checks And Services

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES TOP LOADING AIR CLEANERS ONLY
		NOTE (1)
		If captive bolts are missing or defective, see paragraph 4-3.
1.	Air Cleaners (Left and Right Sides)	Check air cleaner doors (1) for damaged or missing bolts and washers (2) or captive bolts (3).
2.		If door (1) is equipped with captive bolts (3), check springs (4) and retainers (5) for damage or missing.
3.		Check door hinges (6) and housing ALUMINUM TOP-LOADING AIR CLEANER hinges (7) for damage cracks or missing.
4.		Ensure hinges (6) and (7) are held together with serviceable pin (8), washer (9), and cotter pin (10).
5.		Check that blower motor access plate (11), gasket (12), and mounting screws (13) and lockwashers (14) are not loose, damaged, or missing.
6.		Check that pipe plugs (15) (also known as inspection plugs) and drain plug (16) are not loose or missing.
		SERVICE NOTE
		Remove the two inspection plugs. Direct air into the top hole and blow dust out bottom hole. Reinstall plugs. ARMORED TOP-LOADING AIR CLEANER

Table 3-1. Top Loading Air Cleaner Organizational Preventive Maintenance Checks and Services-Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES TOP LOADING AIR CLEANERS ONLY
	Air Cleaners (Left and Right Sides)	NOTE If armored air cleaner base plate (17) is secured with original 3/8 inch screw (19) and washer (20), see paragraph 4-5.
9. Cont.		Ensure that base plate (17) for armored air cleaner is properly secured to fender support (18) with serew and washer (20) or with bolt (21), washers (22) (23), shims (24) (as required), and nut (25). 20 ORIGINAL 18 ORIGINAL

	Air Cleaners (Left and Right Sides)	WITH AIR CLEANER FILTER ACCESS DOOR OPEN
10.		Check access door seal (26) for permanent indentation, excessive hardness, cracks, damage, or missing.
11.		Check that cam arms (27) are not bent, cracked, or missing.
12.		Check sealing lip (28) on housing for any damage. NOTE 1. Air cleaner assembly must be replaced if cam arms are cracked or missing. 2. Air cleaner assembly must
13.		be replaced if sealing lip is damaged. Check three bolt holes (29) to ensure they have been drilled through and are free from dirt or obstruction. (See paragraph 4-2).

Table 3-1. Top Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES TOP LOADING AIR CLEA	
	Air Cleaners	REMOVE FILTER ELEMENT FROM FILTER COMP.	ARTMENT
	(Left and Right Sides)	NOTE If any defects are found that require replacement of the aluminum air cleaner housing, see paragraph 4-10.	32) H 12 1 12 9
14.		Check filter compartments (30) for internal cracks or damage.	(31)
15.		Check filter element sealing surface (31) for any damage which could prevent proper sealing of the filter element.	
16.		Check inside of air cleaner outlet elbow (32) for dust trails.	
		NOTE	
		Dust trails in the outlet elbow may be caused by damaged seal between air cleaner and outlet elbow, missing air restriction indicator (if equipped) or damaged air filter element.	30

Table 3-1. Top Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES TOP LOADING AIR CLEANERS ONLY
21.	Air Cleaners Elbows, Hoses, and Clamps (Left and	ACCOMPLISH WITH TOP GRILLE DOORS OPEN Remove air cleaner outlet hose (38), check for cracks, holes, or damage and dust trails.
	Right Sides)	Replace hose (38) if unserviceable. Install hose (38) if serviceable. NOTE
		Look for the source of dust trails. Dust can enter from a faulty element or failure of the parts in Steps 22 through 33 of this PMCS.
22.		Check that intake and outlet elbow mounting nuts (39) and gaskets (40) are not loose, or missing. If loose, see paragraph 4-7.
23.		Check that outlet hose preformed packing (41) is not loose, hardened, damaged, or missing.
24.		Check that fingers (42) and spring pins (43) are not loose, damaged, or missing.
25.		Check that hose clamps (44) are not loose, damaged, or missing.

Check elbow (45) for cracks or damage and dust trails. Ensure washers (46), nuts (47), and gasket (48) are not loose or missing.

Check both air cleaner inlet hoses (49) for cracks, tears, holes, or damage.

Check that hose clamps (50) are tight, not damaged, or missing.

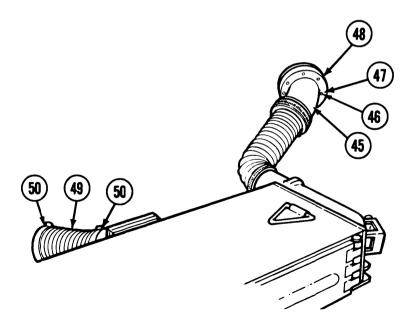


Table 3-1. Top Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES TOP LOADING AIR CLEANERS ONLY
29.	Air Cleaner Filter Clog Indicators (left and right sides) (If equipped)	Using fingers, check if filter clog indicator (51) is loose or missing. If loose, tighten finger tight. NOTE Filter clog indicator must be present. If indicator is not installed, plug (52) must be installed in place of indicator (51) until indicator (51) is available.
30.		Check indicator (51) for cracks. Check that pipe plug (52) is not missing. Check that clog indicator guard (53) is not missing or damaged.
31.		Check indicator reading in window (54). Late Model - A reading of 30 or more indicates filters require cleaning. A reading of 25 indicates that the elements should be cleaned before any extensive move.
		Make sure area around vehicle is clear of personnel and equipment before performing the following step.
		Early Model - Start engine, apply vehicle brakes, put transmission lever in high gear, accelerate to 1800/1900 rpm for no more than 30 seconds, and check filter clog indicator reading. If window (54) shows red, press reset button and repeat procedure above. If window shows red again, clean or replace filter element. If reset button won't depress, filter clog indicator (51) is defective and must be replaced (TM 20-1).

		ACCOMPLISH WITH ENGINE RUNNING
32.	Air Cleaner Blower Motor (Right and Left Sides)	Place hand under all four blower motor elbows (55) and feel for strong flow of air.
	Dert Sides/	CAUTION
	Ì	If no airflow is
		present, shut off engine and repair. (TM20)
22		56 58 TOP LOADING
33•		Check that blower motor access plate (56) is not cracking or missing. Check that mounting bolts and lockwashers (57) are not loose or missing.
		CAUTION
		Do not operate vehicle without access plate(s).
,		

Table 3-2. Side Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES SIDE LOADING AIR CLEANERS ONLY
	Air Cleaners (Left and Right Sides)	NOTE Repairs to the side loading air cleaner are limited to the latching device, servicing the filter element, and replacing the blower motor. For any other defect, refer to paragraph 4-10.
1.		Check air cleaner doors (1) for damage and for missing or damaged bolts with washers (2), hinge pins (3), latch (4), latch screws (5), and handle (6).
2.		Check door hinge (7) and housing hinge (8) for cracks or damage.
3.		Check that blower motor access plate (9), gasket (10), and mounting screws (11), and washers (12) are not loose, damaged, or missing. LATE MODEL 10 11 12

Table 3-2. Side Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES SIDE LOADING AIR CLEANERS ONLY
		WITH AIR CLEANER FILTER ACCESS DOOR OPEN
8.	Air Cleaner Access Door And Filter Compartment	Check access door seal (19) for permanent indentation, excessive hardness, cracks, damage, or missing.
9.		Check sealing lip (20) on housing for any damage. NOTE Housing must be replaced is sealing lip is damaged.
10.		Check filter latching rod and springs (21) for damage or missing. WITH FILTERS REMOVED FROM FILTER COMPARTMENT (See
11.		paragraph 2-3) Check filter compartments (22) for internal cracks or damage.
12.		Check sealing surface (23) for dents, cracks, damage, or missing seal.
13.		Check inside of air cleaner outlet elbow (24) for dust trails. NOTE Dust trails in the outlet elbow may be caused by damaged seal between air cleaner and outlet elbow or damaged air filter element.

14.	Air Cleaner Filters (Left and Right Side)	Check filter element seal (25) for permanent indentation, excessive hardness, cracks, damage, or missing.
15.		Check basket frame (26) and four seal retaining tabs (27) for damage or missing.
16.		Remove filter element (28) from basket (26). Remove twelve baffles (29) from filter element.
17.		Check filter element (28) for rips, holes, tears, or other damage. (2) RETAINING TABS (HIDDEN) (27) (25)
18.		Check each baffle (29) for cracks and broken corners.
19.		Replace any unserviceable parts of filter assembly. Clean and reassemble.
		23
		26

Table 3-2. Side Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES SIDE LOADING AIR CLEANERS ONLY
	Air Cleaner Elbows, Hoses and Clamps (Left and Right Sides)	NOTE The outlet hoses (30) currently found on the side-loading air cleaners may be found with either finger band or V-band clamps, so perform your PMCS accordingly. Included with either type of clamp will be the flat band clamp (36).
20.		Remove air cleaner outlet hose (30). Check for cracks, holes, tears or damage, and dust trails.
21.		Check that fingers (34) and spring pins (35) are not loose, damaged, or missing.
22.		Check that hose clamps (36) are not damaged or missing.
23.		Check elbow (37) for cracks or damage and dust trails. Ensure washers (38), nuts (39), and gasket (40) are not loose or missing.
24.		Check both air cleaner inlet hoses (41) for cracks, holes, tears, or damage.

25.	
26 . 27.	
41.	

Check that hose clamps (42) are not damaged or missing.

NOTE

Look for the source of dust trails. Dust can enter from a damaged filter element or failure of parts in Steps 20 through 27 of this PMCS.

Check that intake and outlet elbow mounting nuts (31) and gasket (32) are not loose or missing. (See paragraph 4-7).

Check that outlet hose preformed packing (33) are not loose, hardened, damaged, or missing.

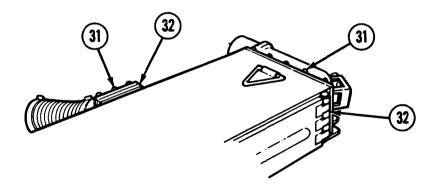


Table 3-2. Side Loading Air Cleaner Organizational Preventive Maintenance Checks and Services - Continued

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES SIDE LOADING AIR CLEANERS ONLY
		ACCOMPLISH WITH ENGINE RUNNING
29.	Air Cleaner Blower Motors (Right and Left Sides)	Place hand under all four blower motor elbows (43) and feel for strong flow of air.
		CAUTION If no airflow is present, shut off engine and repair (TM-20)
30.		Check blower motor access plate (44) for cracks, loose or missing locking bolts (45).
		CAUTION Do not operate vehicle without access plate(s). TA148803
		45 SIDE LOADING

3-2. Air Cleaner Filter Element Replacement

CAUTION

Never operate the engine without a filter element. If you do, dust and dirt will be drawn directly into the engine and cause severe damage.

a. Top Loading Air Filter Element (Fig. 3-1).

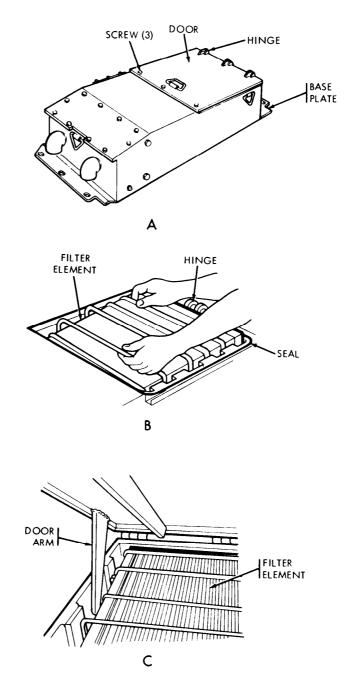


Figure 3-1. Top loading air cleaner filter element replacement.

(1) Removal

(a) Clean outside of housing. Wipe dust from air cleaner access door and hinges, bolt area, base plate, and fender (view A).

CAUTION

Do not walk on air cleaner access door when it is open. Do not open air cleaner door when any engine grille doors are open.

(b) Loosen three screws securing air cleaner door, and open door (view A).

CAUTION

Do not damage filter element seal when removing or installing element.

(c) Slide filter element away from door hinges and carefully lift it straight up to remove from box (view B).

CAUTION

Do not hit filter element against a solid object. This will cause damage to element. Do not start engine with filter element removed, or damage to engine will result.

- (d) Cover outlet elbow port and close air cleaner door.
- (2) Installation.
 - (a) Open air cleaner access door and remove cover from air outlet port. Wipe out filter compartment with clean damp cloth.

CAUTION

When installing filter element, make sure that the seal end of element is at the hinge end of air filter assembly before lowering into compartment. Ensure filter compartment is clean before installing element.

- (b) Carefully lower filter element to bottom of box and slide toward hinges as far as possible (view B).
- (c) Make sure that filter element is properly positioned so that door arms engage locking pins on sides of filter element (view C).

CAUTION

Before closing access door, ensure all dirt and debris is removed from hinge area.

(d) Close access door and secure with three screws.

Side Loading Air Filter Element (Fig. 3-2). BOLT (2) WASHER (2) SCREW WASHER SIDE LOADING SIDE LOADING LATE MODEL EARLY MODEL Α LOCKING L В SEAL C D

Figure 3-2. Side loading air cleaner filter element replacement.

E

(1) Removal

- (a) Remove screw and washer (on early model) or two bolts and washers (on late model) securing the access door (view A).
- (b) Open door to a full open position.
- (c) Rotate locking rod handle 1/4 turn upward to release filter assembly (view B).

CAUTION

Do not damage filter element seal when removing or installing element.

(d) Slide filter toward front of vehicle and away from air outlet elbow duct (view C). Ease filter out of compartment carefully, to avoid damaging seal or seal retaining tabs.

CAUTION

Do not hit filter element against a solid object. This will cause damage to element. Do not start engine with filter element removed, or damage to engine will result.

- (e) Cover outlet elbow port and close air clean access door.
- (2) Installation.
 - (a) Open air cleaner access door and remove cover from outlet port.
 - (b) Wipe out filter compartment using clean damp cloth.
 - (c) Position filter so that seal will be toward air outlet elbow duct (view D).
 - (d) Slide filter into housing as far as it will go, being careful not to damage either seal or filter retaining tabs (view D). Slide filter toward rear of vehicle so that filter seal makes direct contact with housing.
 - (e) Secure filter assembly in place by rotating locking rod handle 1/4 turn downward (view E).

CAUTION

Clear door area prior to closing door. Lubricate bolt threads lightly.

(f) Close door carefully and secure with handle latch and screw and washer (early model) or with two bolts and washers (late model) (view A). Do not omit any bolts or washers.

3-3. Air Cleaner Filter Element Service.

- a. Clean and inspect air cleaner (para. 2-3).
- b. Remove air filter element (para. 3-2a for top loading), para. 3-2b for side loading).
- c. Clean air filter element (para. 3-4b).

- d. Reach into elbow duct as far as you can and wipe dust into filter compartment. With a damp clean cloth, clean out filter compartment. Make sure dust or dirt did not go back toward air outlet elbow duct.
- e. Cover outlet port with cardboard and tape to prevent dirt from entering engine.
- f. Close access door if element will not be replaced immediately.

CAUTION

Inform crew that filter element has been removed and engine must not be started. Damage to engine could result if engine is started.

Install air filter element (para. 3-2a(2) for top loading) (para. 3-2b(2) for side loading).

3-4. Air Cleaner Filter Element Inspection and Cleaning.

NOTE

There are two approved methods for cleaning of the top loading air filter elements, using compressed air or washing.

CAUTION

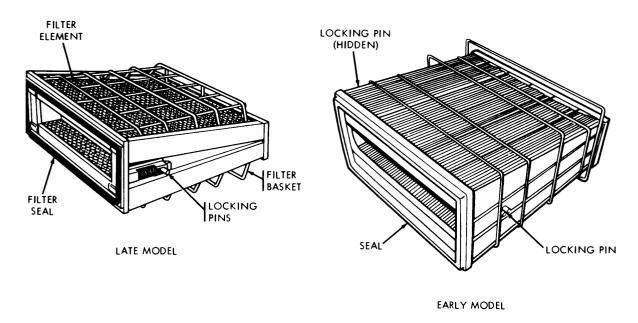
Do not bang or strike the element against the vehicle or any solid object. Striking the element will damage the element and the filter element must be replaced. DO NOT use a brush to clean the element. Brushes will tear holes in the filter and will allow dust and dirt to pass through and be drawn directly into the engine.

- a. Inspection.
 - (1) General.

Inspect the filter for any defect that will let the air flow draw foreign material, including pieces of a damaged filter element, into the elbow duct. The most common defects are:

- (a) Holes in the filter material.
- (b) Loose parts or deformation of the element.
- (c) Damaged seals and sealing surfaces.
- (d) Damaged tabs and parts that hold the element in the sealed position.

(2) Top Loading Filter Element (Fig. 3-3).



- (a) Check filter element seal for permanent indentation, excessive hardness, cracks, damage, or missing.
- (b) Check filter element frame and both locking pins and springs (if equipped) for damage or missing parts.
- (c) Place light inside of filter element and check for ruptured material. Inspect from outside.
- (d) If inspection reveals any defects, replace filter element.
- (e) If filter is contaminated with dust, clean with compressed air or by washing (paragraph 3-4b).
- (f) If filter is contaminated with carbon, or oil deposits, replace filter element.
- (g) If filter element in the right air cleaner is contaminated with fuel:
 - (1) Replace filter element.
 - (2) Check for proper installation of fuel tank vent valve (paragraph 3-5).

Figure 3-3. Top loading filter element inspection.

(3) Side Loading Filter Element (Fig. 3-4).

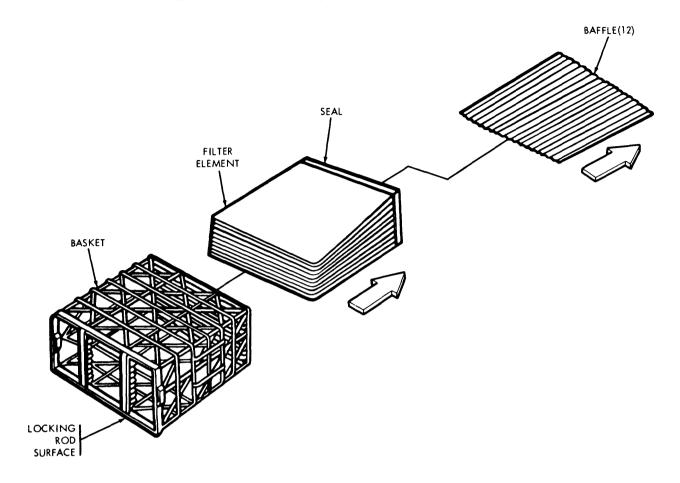


Figure 3-4. Side loading filter element inspection.

- (a) Check filter element seal for permanent indentation, excessive hardness, cracks, damage, or missing.
- (b) Disassemble filter element.

NOTE

It may be necessary to use pliers to remove top and bottom baffle. Be careful not to damage baffles.

- 1. Remove 12 baffles from inside of filter element.
- 2. Remove filter element from basket.
- (c) Inspect baffles for cracks, bends, or broken out sections.
- (d) Inspect filter element for holes or damaged seal.
- (e) Inspect basket and locking rod surface for breaks or dents.

(f) Replace any damaged or defective part.

CAUTION

Side loading element is to be cleaned with air only. Washing can damage the element.

- (g) If filter is contaminated with carbon, or oil deposit, replace element.
- (h) If filter element in right air cleaner is contaminated with fuel:
 - 1. Replace filter element.
 - 2. Check for proper installation of fuel tank vent valve (paragraph 3-5).
- b. Cleaning (Fig. 3-5).

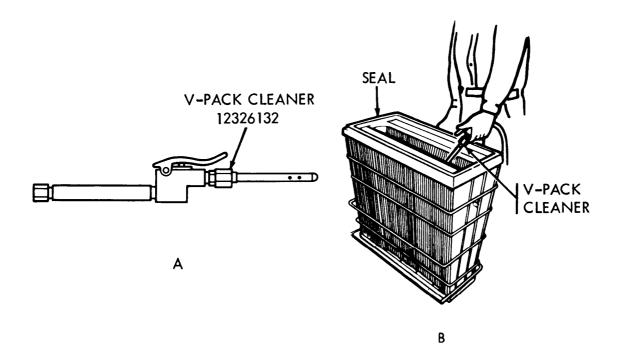


Figure 3-5. Air filter element compressed air cleaning.

(1) Compressed Air.

CAUTION

When shaking filter element; keep dust from inside pockets of element. Ensure that all creases and seams are free of dust, and never hit element against any surface.

(a) Grasp filter element at sealing end and shake vigorously to shake out excessive dust.

WARNING

Compressed air used for cleaning purposes must not exceed 90 psi. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).

- (b) Using V-pack cleaner (12326132) (view A), direct stream of compressed air against inside of filter element (view B).
- (c) Move air stream up and down inside length of pleats or pocket until no dust is visibly being blown out.
- (d) Inspect element before installing.
- (2) Washing

CAUTION

<u>DO NOT</u> wash side loading air cleaner filter. Damage to element will result.

CAUTION

Do not hit element against solid object. Do not steam clean. Do not use solvent. Damage to element will result.

- (a) Clean element using compressed air (para. 3-4b), before wetting filter element. Air must not exceed 90 psi.
- (b) Prepare solution of warm water (80°F to 110°F) and detergent (see below) in container large enough to hold filter element (see para. (3) below).

Detergent, Liquid - NSN 7930-00-929-1220-50 lb. drum Detergent, Liquid - NSN 7930-00-990-7391-25 lb. drum Detergent, Liquid - NSN 7930-00-985-6904-20 oz. box

- (c) Soak filter element in cleaning solution for 15 to 20 minutes, then gently shake it back and forth for 2 to 3 minutes to free dirt deposits.
- (d) Rinse filter element with cool water (35°F to 80°F) until all traces of dirt and detergent are removed.
- (e) If hose is used to rinse filter element, maximum line pressure of 40 psi should be used.
- (f) Make sure filter element is completely dry before using.
- (g) Air dry in a dust-free area at normal room temperature until filter element is competely dry. If circulating air is used, temperature must not exceed 160°F.
- (h) Permanently mark filter to indicate date it was washed. Four washings should be considered the approximate life of an element.
- (i) Inspect filter element before installing.
- (3) Washing Vat Fabrication.

NOTE

A suitable washing vat can be fabricated using the following suggested procedures:

- (a) Obtain a 55 gallon drum, approximately 23 inch diameter and 34 inch high.
- (b) Thoroughly clean out drum (steam clean).
- (c) Remove one end of drum (preferably the end with plugs in it). Minimum height of drum must be 23 inches.
- (d) Obtain a length of 5/8 or 3/4 inch water hose sufficient to cover cut edges of drum.
- (e) Split water hose lengthwise and position on cut edge of drum. This will prevent filter element damage from the cut edge.

3-5. Final Drive and Fuel Tank Vent Systems Inspection.

a. Fuel Tank Vent System (Fig. 3-6).

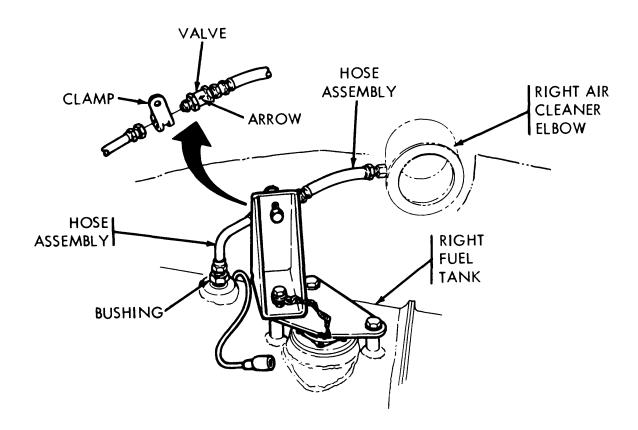


Figure 3-6. Fuel tank vent system inspection.

(1) Open top grille doors to expose top of fuel tanks and air cleaner outlet elbows. Move to right side of vehicle.

NOTE

Two types of air cleaner outlet elbows may be found on M48/M60 series. Early model has no hole to accept fuel tank vent lines and late model has a hole to accept a vent line fitting.

- (2) Inspect fuel tank for pressure of vent line from fuel tank to air cleaner.
- (3) If vehicle is equipped with fuel tank to air cleaner vent system, go to step 4. If not, go to step 8.
- (4) Make sure valve arrow points toward right fuel tank. If installed incorrectly, fuel will enter the air cleaner. Reverse valve installation, if required.
- (5) Check hose assemblies for line pliability, deterioration and general serviceability. If any hoses are defective, replace (TM-20).
- (6) Inspect all fittings and connectors for cracks or other damage. Replace as necessary (TM-20).
- (7) Check for loose, broken or cracked clamps, brackets or bushings. Replace as necessary (TM-20). Go to step 10.
- (8) Check outlet elbow for plug (late model vent hole). Install replacement plug if missing.
- (9) Tighten pipe plug securely.
- (10) Close right side grille doors (TM-10).
- b. Final Drive Vent System (Fig. 3-7).

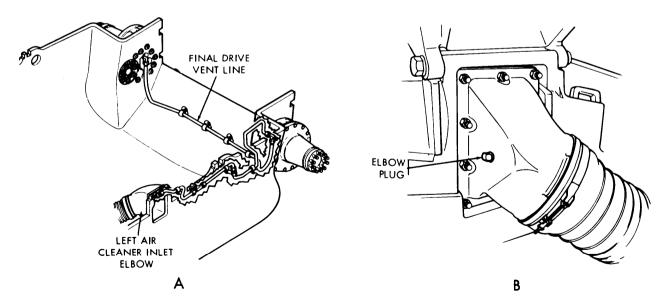


Figure 3-7. Final drive vent system inspection.

- (1) Move to left side of vehicle.
- (2) Inspect left air cleaner inlet elbow for presence of final drive vent line system (view A).
- (3) If vehicle is equipped with final drive vent system, go to step 4. If not equipped with final drive vent system, go to step 6.
- (4) Check all lines and fittings for cracks or other damage. Replace if necessary (TM-20).
- (5) Check fitting at inlet elbow for security. Go to step 7.
- (6) If vehicle is not equipped with final drive venting system, check elbow for plug (view B). Install replacement plug, if missing.
- (7) Close grille doors.

3-6. Air Cleaner Hoses Inspection and Replacement

- a. Inspection.
 - (1) Air Intake Hoses Inlet Screen to Air Cleaner) (Fig. 3-8).

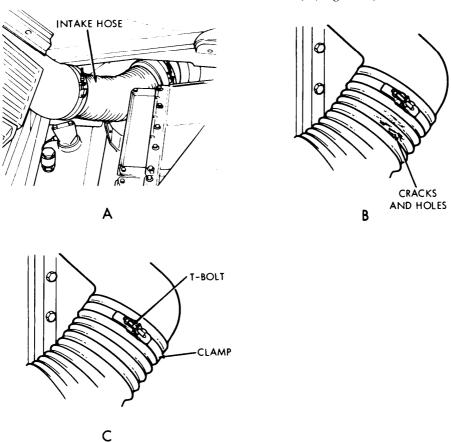


Figure 3-8. Air intake hoses inspection.

NOTE

Inspection of left and right intake hoses is the same.

- (a) Traverse turret so main gun points over left or right side of tank.
- (b) Open top grille doors.
- (c) Check intake hoses for misalinement (view A). A hose that appears too short may be misalined. Aline misalined hoses.
- (d) Check intake hoses for holes or cracks (view B). Replace defective hoses. Refer to para. 3-6b.
- (e) Check for loose hose clamps (view C). Make sure hose is properly seated and clamps are positioned correctly. Tighten loose clamps.
- (f) Check flat band clamp and screw threads on T-bolt (view C). If clamps or threads are damaged or missing, replace clamp.
- (2) Air Outlet Hoses (Air Cleaner to Turbosupercharger).

NOTE

If finger band clamps are installed, perform steps (a)1 thru (a)8. V-band clamps are installed, perform steps (b)1 thru (b)7. Inspection of left and right outlet hoses is the same.

(a) Finger Band Clamps (Fig. 3-9).

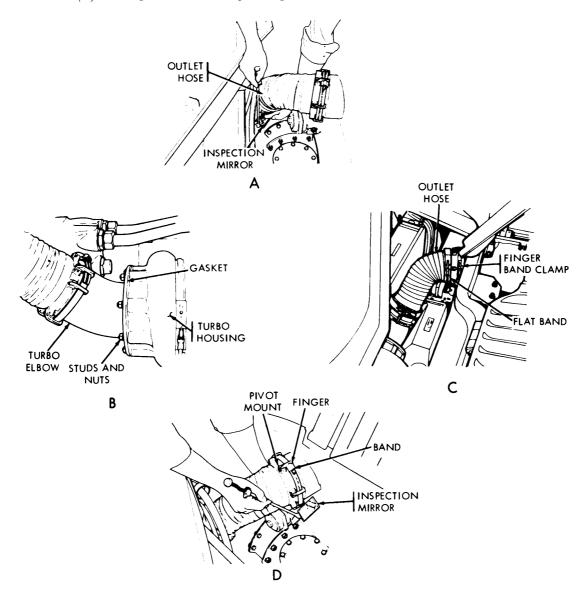


Figure 3-9. Air outlet hoses inspection (finger band clamp).

- 1. Open top deck grille doors (TM-10).
- 2. Inspect air cleaner outlet hose for damage (i.e., tears, punctures, sharp folds, hardness, or exposed support wire) (view A). An inspection mirror, McMaster Carr Co., model 1023T2 and flashlight are necessary, to view bottom of hose.
- 3. Feel hose with hands to detect any defects which may indicate damage or looseness. Replace defective hose. Refer to para. 3-6b.
- 4. Inspect outlet hose connection at engine turbo elbow (view B).

- 5. Check turbo elbow flange to ensure that all studs, and nuts are present, and tight (view B).
- 6. Check turbo elbow for gasket between turbo elbow, and turbo housing. Inspect gasket as much as possible looking for tears, folds, and missing pieces using an inspection mirror, and flashlight where necessary.
- 7. Inspect connection of outlet hose to outlet elbow (view C). Check that band clamp is installed. Inspect clamp for damage, or missing parts (i.e., bent, broken, or missing fingers, torn band, broken finger pivot mounts). Replace defective hose or clamp. Refer to para. 3-6b.
- 8. Verify that all fingers engage outlet elbow flange (view D). Use inspection mirror and flashlight to view bottom fingers. Grasp each finger individually, and attempt to move it side to side. Movement of any finger indicates a loose clamp. Tighten clamp if loose. Attempt to rotate flat band clamp, located on hose just behind finger band clamp. Any movement indicates a loose clamp. Tighten clamp if loose.

(b) V-Band Clamps (Fig. 3-10).

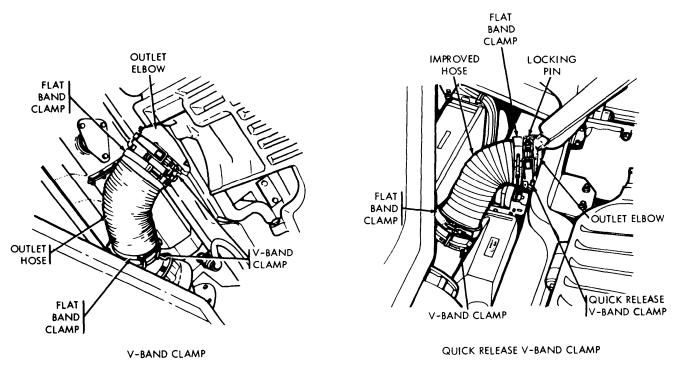


Figure 3-10. Air outlet hose inspection (V-band clamp).

NOTE

If V-band clamps, and V-band clamps with quick release handle are installed instead of the finger band clamps, perform steps 1 thru 7.

- 1. Inspect clamp for visual damage.
- 2. Make sure nut on adjustment screw is tight.
- 3. Check that quick release handle is down and secured with locking pin.
- 4. Grasp clamp and attempt to rotate it. Any movement indicates a loose clamp, tighten as necessary.
- 5. Grasp hose just behind hose flange, and attempt to move flange. Any movement indicates a loose clamp, tighten as necessary.
- 6. Check turbocharger inlet V-band clamp for split bands, bent or stripped T-bolts and damaged nuts. Replace defective clamp (NSN 5340-00-678-6178). Refer to para. 3-6b.
- 7. Check air cleaner outlet quick-release V-band clamp for split band, bent or stripped T-bolt, damaged nut or quick-release lever. Replace defective clamp (NSN 4730-01-132-9086). Refer to para. 3-6b.

b. Replacement

(1) Intake Hose (Flat Band Clamp) (Fig. 3-11)

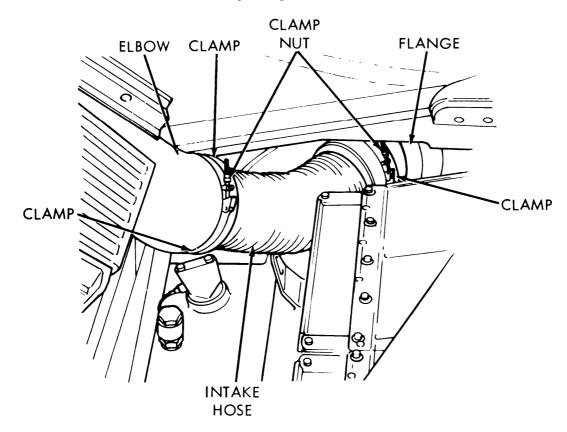


Figure 3-11. Air intake hose replacement.

- (a) Using 3/8 inch wrench, loosen clamp nut at each end of intake hose.
- (b) Slide clamp over intake hose.
- (c) Remove hose from elbow and flange (5).

- (d) Remove clamps from hose and throw hose away.
- (e) Obtain new hose NSN 2940-00-678-4700 (part no. 8762783).
- (f) Loosely install one clamp at each end of hose.
- (g) Install hose on elbow and flange.
- (h) Slide clamps over elbow and flange.
- (i) Using 3/8 inch wrench, tighten clamp nuts.
- (j) Close top grille doors (TM-10).
- (2) Outlet Hose (Finger Band Clamp) (Fig. 3-12).

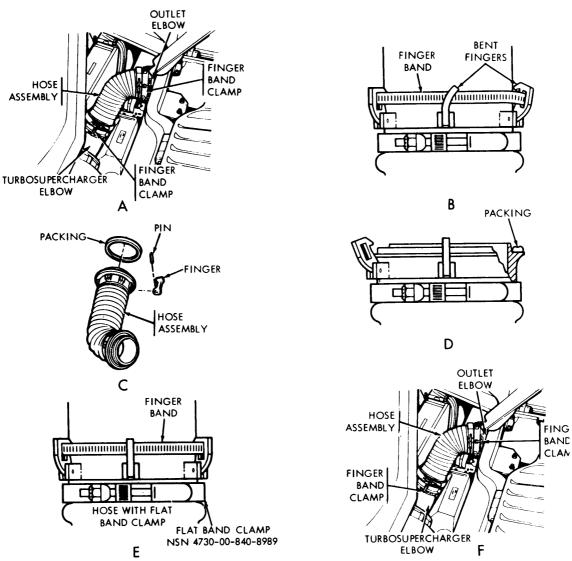


Figure 3-12. Air outlet hose replacement (finger band clamp).

- (a) Loosen two clamps (view A).
- (b) Remove hose assembly from air cleaner outlet elbow and turbosupercharger elbow.
- (c) Remove hose assembly.
- (d) Remove clamps from hose assembly.
- (e) Check hose assembly for damage or defective parts. If a hose or flange is unserviceable, replace hose assembly.
- (f) Make sure fingers are not bent (view B). If any are bent, replace as follows:
 - 1. Using a hammer and punch, drive out pin holding finger in place (view C).
 - 2. Position new finger NSN 2940-00-614-9007 part no. 1655238) on hose assembly.
 - 3. Using pliers, install new pin NSN 5315-00-058-9780 (part no. MS16562-235) securing finger to hose assembly.
 - 4. Using hammer, tap pin into place.
- (g) Check preformed packing (view D). If it is cracked, loose, or dried out, replace as follows:
 - Remove defective packing and clean away old adhesive.
 - 2. Apply adhesive MIL-SPEC-MMM-A-1617, Type II NSN 8040-00-152-0063 (2.5 oz. can) or NSN 8040-00-152-0067 (6 oz. can) in groove of hose assembly flange.
 - 3. Install new packing NSN 5330-00-729-5049 (part no. 10870861).
- (h) Check metal flange ends for bonding to hose. If bonding is loose, replace hose assembly.
- (i) Check finger band clamp for damage (view D). If damaged, replace clamp NSN 4730-00-908-6294 (part no. MS35842-16).
- (j) Check new flat band clamp, make sure it is properly installed. If it is not, loosen, apply a light coat of lubricant (silicone grease MIL-G-46886) to area of hose where clamp will be installed, install clamp and tighten securely.
- (k) Thread finger band clamp through slots in fingers (view E).
- (1) Position one end of hose assembly on air cleaner outlet elbow and other end on turbosupercharger elbow (view F).
- (m) Make sure fingers grip lips of elbows by feeling under hose.
- (n) Using screwdriver, tighten clamps securely.

- (o) Close top grille doors (TM-10).
- (3) Outlet Hose (V-Band Clamp) (Fig. 3-13).

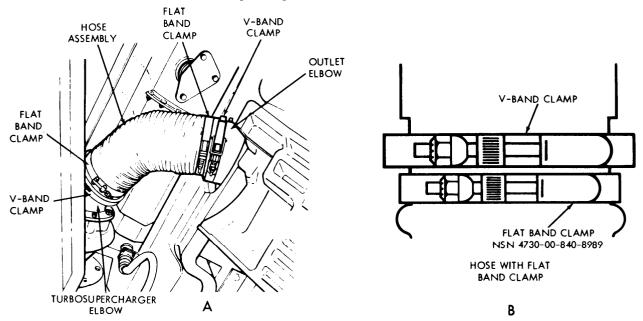


Figure 3-13. Air outlet hose replacement (V-band clamp).

- (a) Loosen hose clamps (view A).
- (b) Remove clamps from hose.
- (c) Remove hose from elbows.
- (d) Inspect hose packing. If it is cracked, loose or dry, replace as follows:
 - 1. Remove packing and clean away adhesive.
 - 2. Apply adhesive, MIL-SPEC MMM-A-1617, Type II NSN 8040-00-152-0063 (2.5 oz. can) or NSN 8040-00-152-0067 (6 oz. can) in groove of hose assembly flange.
 - 3 Install new packing NSN 5330-00-729-5049 (part no. 10870861).
- (e) Check metal flange ends for bonding to hose. If bonding is loose, replace hose assembly.
- (f) Check V-band clamps for split bands (view B) bent or stripped T-bolts, and damaged nuts. Replace defective clamp NSN 5340-00-678-6178 (part no. 8711310). Turbocharger end, NSN 4730-01-132-9086, PN 01-1000 outlet end.
- (g) Check flat band clamp for proper installation. If not installed properly, loosen and apply a light coat of lubricant (silicone grease MIL-G-46886) to the area of hose where clamp will be installed, install clamp and tighten securely.

- (h) Position hose between elbows, with curved end of hose toward outlet elbow. Adjust position for minimum strain on hose.
- (i) Position hose flange (curved end) against flange on outlet elbow.
- (j) Install and tighten clamp.
- (k) Position flange on other end of hose against turbosupercharger elbow.
- (1) Install and tighten clamp.
- (m) Close top grille doors (TM-10).
- (4) Outlet Hose (Quick-Release V-Band Clamp) (Fig. 3-14).

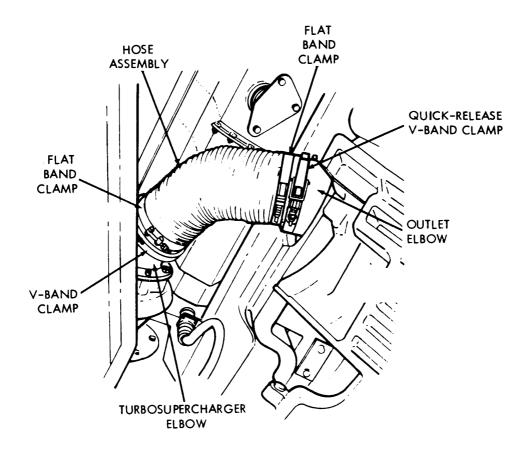


Figure 3-14. Air outlet hose replacement (quick release v-band clamp).

- (a) Using wrench, loosen clamp.
- (b) Pull pin and release clamp.

- (c) Disconnect hose assembly from outlet elbow of air cleaner and elbow of turbocharger.
- (d) Position one end of hose assembly onto outlet elbow and other end over turbosupercharger elbow.
- (e) Tighten T-bolt nut to eliminate all clearance between T-bolt and clamp. Tighten T-bolt one additional turn. This will apply approximately 8-12 lb-in torque.
- (f) Using wrench, tighten clamp.
- (g) Close quick release clamp and install pin.
- (h) Close top deck grille doors TM-10.

3-7. Army Oil Analysis Program

a. General.

- (1) The Army Oil Analysis Program is part of a DOD-wide effort to detect impending equipment component failures and lubricant condition through periodic analysis of oil samples.
- (2) Oil analysis helps determine the internal condition of engines, gearboxes, transmissions, and other oil-lubricated system sand components. Your tank is included in the program.
- (3) Just like a doctor checks your blood for diseases, your expert Army laboratory technicians analyze your oil sample to tell you what is going on inside your engine and the condition of your oil.

b. Purpose.

- (1) To detect potential component failure.
- (2) To reduce maintenance costs through preventive maintenance prior to major repair.
- (3) To develop a data bank relating to component wear or failure.

c. Procedures.

Refer to TB 43-0211.

NOTE

Be sure to identify each oil sample with the engine serial number and tank serial number.

CHAPTER 4 RELIABILITY IMPROVEMENTS

4-1. General.

Material in this chapter describes improvements to the air induction system. Much of this information has or will be issued as MWOs, or retrofit instructions. This information will be included in future changes or revisions to technical manuals. Table 4-1 lists the improvements, reference to procedures, and the lowest maintenance level authorized to perform them.

Table 4-1. Reliability Improvements

Reliability Improvements	Maintenance Level	Paragraph Reference
Rework of Top Loading Air Cleaner Access Door Bolt Holes	Org.	4-2
Top Loading Air Cleaner Captive Screw Replacement	Org.	4-3
Installation of Late Model Air Filter Clog Indicator	Org.	4-4
Armored Air Cleaner Mounting Bolt Replacement	Org.	4-5
Improved V-Band Hose Clamp and Torque Specifications	Org.	4-6
Improved Spring Loaded Air Filter	Org.	4-7
Ground Hop Kit	Org.	4-8
Retrofit of Aluminum Side or Top Loading to Armored Top Loading Air Cleaner	GS/DS	4-9
Rework of Grille Door Hinge	GS/DS	4-10
Housing Screw Hole Repair (Access Door Screw) Housing Vertical Guide Bar Rework	GS/DS	4-11

4-2. Top Loading Air Cleaner Access Door Bolt Holes Rework

a. General

The three (3) screw holes located on top of the top loading air cleaners (Fig. 4-1) which secure the access door are required to be drilled completely through. If they are not, dirt settles in the screw holes and the screws bottom out before tight, resulting in not obtaining a good seal between the access door and the air cleaner. Secondly, damage to both the screw and screw hole can occur.

b. Inspection.

Check access door bolts and bolt threads (Fig. 4-1). Ensure bolt threads and threads in holes are not stripped. If stripped, replace bolts and/or re-tap bolt holes. Clean bolt holes by removing all accumulated sand, dirt, or debris. Check all three threaded bolt holes to ensure the holes have not been drilled through. If the bolt holes have been drilled through, disregard this rework procedure. If they have not been drilled through, proceed with the rework procedure.

c. Rework Procedure.

- (1) Tools Required
 - (a) Electric Drill Motor (1/4 or 3/8 inch chuck)
 - (b) No. 12 High Speed Drill Bit
- (2) Fabricated Tools
 - (a) Fabricate drill guide (fig. 4-2)
 - (b) Fabricate drill stop (fig. 4-3)

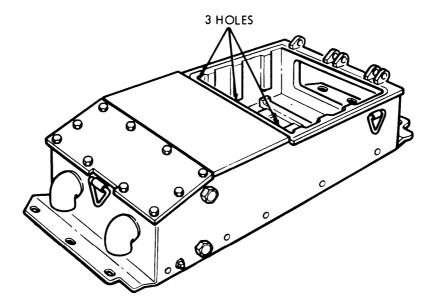


Figure 4-1. Air cleaner access door bolt holes.

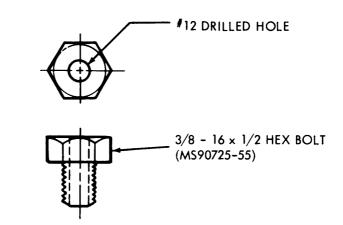


Figure 4-2. Drill guide fabrication

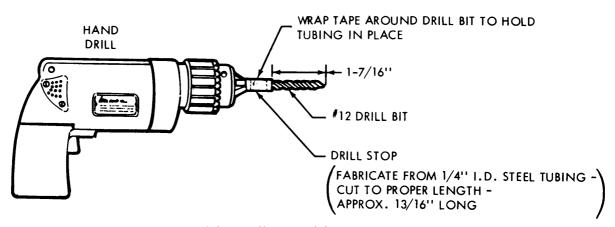


Figure 4-3. Drill stop fabrication.

(3) Procedure (Fig. 4-4).

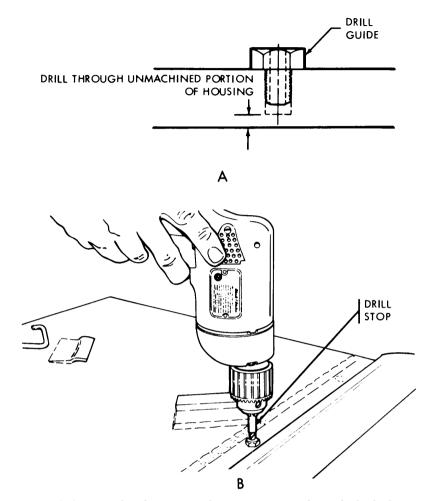


Figure 4-4. Top loading air cleaner access door bolt holes rework.

- (a) Remove air cleaner filter element (para. 3-2a).
- (b) Cover housing opening with tape and cardboard or a large cloth to prevent metal chips and dirt from entering the filter area.
- (c) Install fabricated drill guide in bolt hole (view A).
- (d) Place fabricated drill stop on a No. 12 drill bit to limit depth to 1-7/16 inch. Wrap tape around bit to hold stop in place (Fig. 4-3).

CAUTION

Do not drill hole through without drill stop installed or damage to air cleaner precleaned tubes will result.

(e) Using a hand drill with the No. 12 drill bit and stop, carefully drill through incompletely machined portion of hole (view B).

- (f) Drill remaining bolt holes using same procedure as described above.
- (g) Using compressed air, clean all metal chips from bolt holes.
- (h) Install air filter element (para. 3-2a).
- (i) Repeat procedure on opposite air cleaner.

4-3. Top Loading Air Cleaner Captive Screw Replacement

a. General.

Field reports indicate that some captive screws which are attached to armor top loading air cleaner access doors are being stripped, damaged and/or are missing. When this situation occurs, dirt/dust can enter directly into air cleaners which could result in damage to the engine.

NOTE

If bolt holes in housing are stripped, notify direct support for repair of holes. If holes are not stripped, proceed with replacement procedures.

b. Procedure.

- (1) Tools and Materials Required
 - (a) Hammer, hand: 1 lb. 5120-00-061-8543
 - (b) Punch, drive pin: 3/4 in. 5120-00-239-0038
 - (c) Wrench, combination box open end: 9/16 in. 5120-00-228-9507
 - (d) Tape, masking
 - (e) Cloth or cardboard (used to cover housing opening)
 - (f) Wood, 2 in. x 4 in. x 18 in. long
 - (g) Screws (per air cleaner) PN 12290914 (3 required)
 - (h) Punch, center 5120-00-293-3509

(2) Procedure (Fig. 4-5).

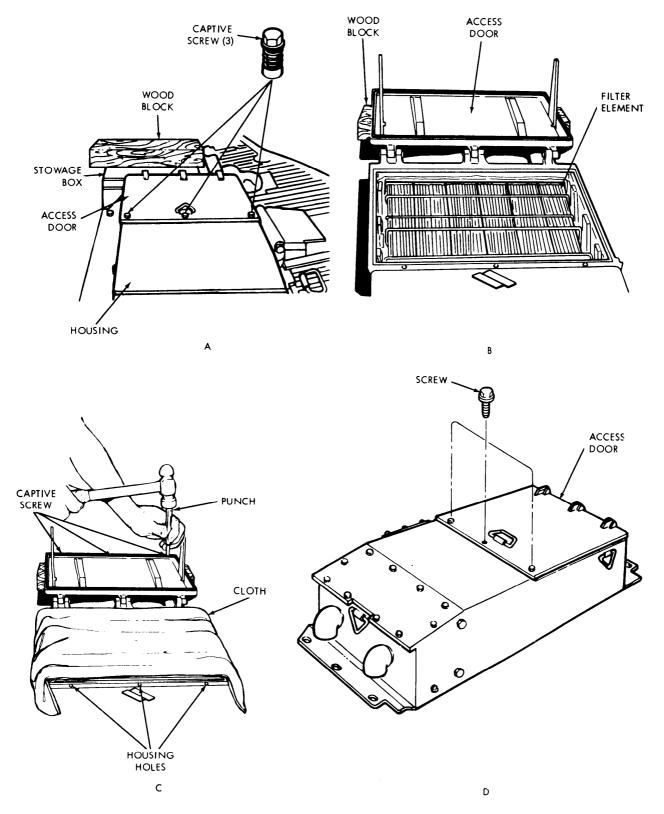


Figure 4-5. Top loading air cleaner captive screw replacement.

- (a) Using 9/16 wrench, loosen remaining captive screws securing access door to housing (view A).
- (b) Position a block (2 x 4 x 18) of wood across fender storage box so access door will rest on block of wood when door is opened.
- (c) Open access door allowing it to rest firmly against block of wood. Block must be positioned to inside of captive screw(s) (view B).
- (d) Remove filter element, cover, and store temporarily in a safe place.
- (e) Using tape and cardboard or a large cloth, cover housing opening (so dirt cannot fall into box). (Do not cover housing bolt holes.)
- (f) Using a hammer and punch drive pin, drive out damaged captive screw(s) (view C).
- (g) Remove tape, cardboard or cloth from housing opening. Using a damp clean rag, wipe inside of filter housing removing any dirt or metal chips.
- (h) Install filter element, make sure all seals and gaskets are in place. Carefully close access door (view B).

CAUTION

It may be necessary for mechanic to kneel on access door to start screws. Make sure screws are fully engaged before releasing weight from access door or hole threads will be stripped.

- (i) Install three new screws PN 12290914, NSN 5306-01-091-3384 in access door and finger tighten (view D). Using torque wrench, tighten three screws, starting with middle, to 40-48 lb-ft (54-65 N·M).
- (j) Repeat procedure for opposite air cleaner.

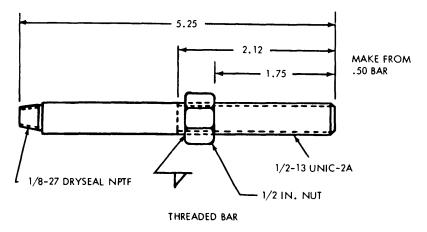
4-4. Air Cleaner Filter Clog Indicator Rework

a. General.

The following procedures to rework the air cleaner outlet elbow to accept the late model filter clog indicator.

- b. Rework Procedure.
 - (1) Tools and Equipment Required:
 - (a) Hacksaw
 - (b) Scribe
 - (c) 1/8 27 NPTF tap
 - (d) Electric drill with a 90° drive angle with a 3/8 inch chuck

- (e) Size "R" drill bit (0.339)
- (f) 1/8 inch drill bit
- (g) Hand driven metal stamping die set
- (h) 1. Number set NSN 5110-00-289-004
 - 2. Letter set NSN 5110-00-289-0008
- (h) Arc welding machine
- (i) Shield holding fixture (fabricated by Direct Support Maintenance) (fig. 4-6).



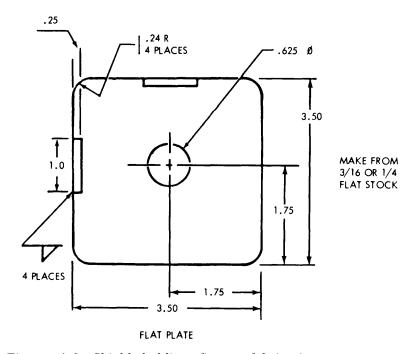


Figure 4-6. Shield holding fixture fabrication.

- (2) Supplies Required:
 - (a) Filter clog indicator (11669717)
 - (b) Clean rags
 - (c) Thread cutting oil
 - (d) Dry cleaning solvent
 - (e) Welding electrode MIL-E-13080
 - (f) Primer paint TT-P-1757
 - (g) Forest green enamel paint MIL-E-798
 - (h) Shield and plug assembly, (fabricated by Direct Support Maintenance) (figs. 4-7 and 4-8).

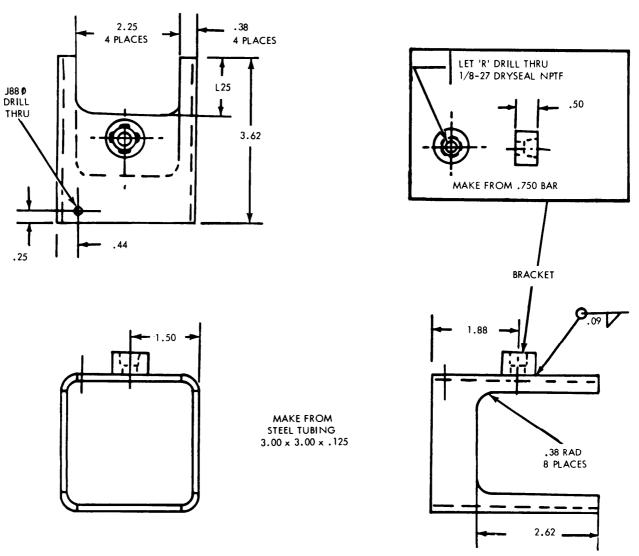


Figure 4-7. Filter clog indicator shield fabrication.

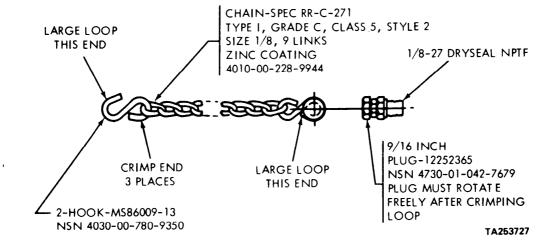


Figure 4-8. Chain and plug assembly fabrication.

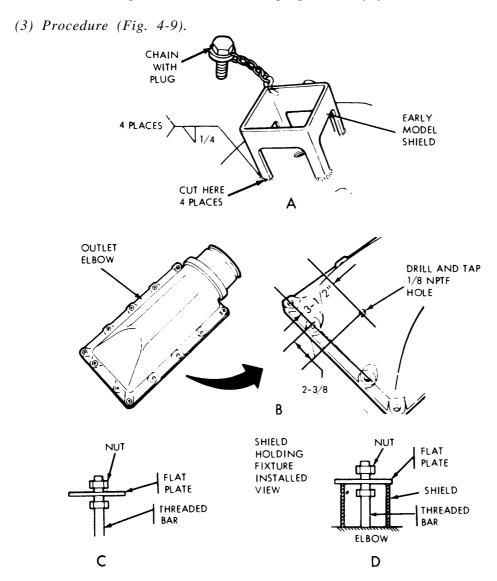


Figure 4-9. Air cleaner filter clog indicator rework (sheet 1 of 2).

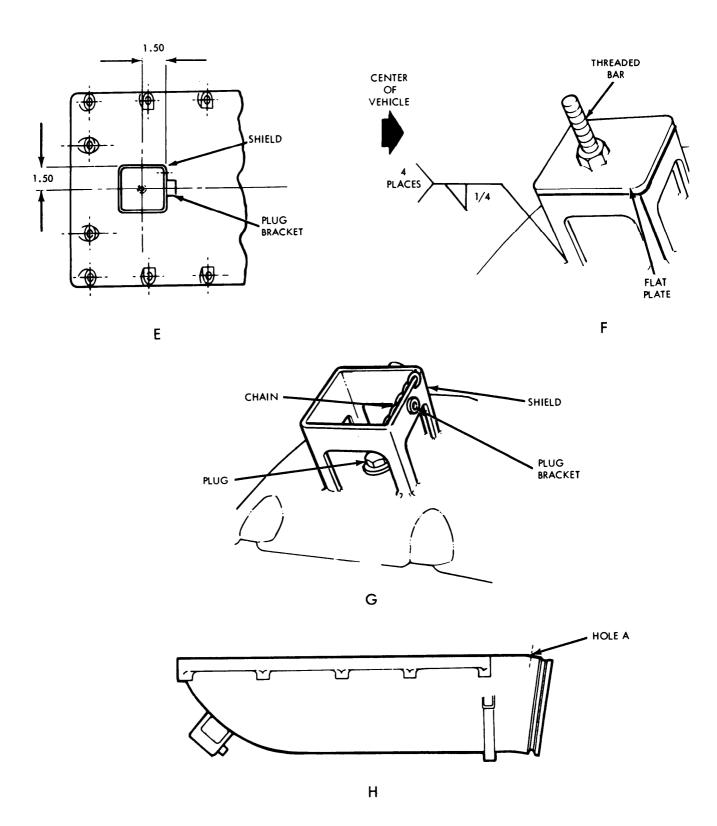


Figure 4-9. Air cleaner filter clog indicator rework (sheet 2 of 2).

- (a) Remove air cleaner filter element (para. 3-2).
- (b) Seal elbow outlet with clean rags and close access door.

NOTE

If vehicle is not equipped with a filter clog indicator and shield, go to step (g). If the vehicle is equipped with early model restriction indicator and shield, go to step (c).

- (c) Remove restriction indicator (TM-20).
- (d) Using a hacksaw, cut shield from elbow at four joining places (view A).
- (e) Remove chain with plug.

NOTE

Retain chain and plug for installation on late model shield.

- (f) Go to step (g).
- (g) Using a scribe and 6 inch steel rule, inscribe lines as shown (view B).
- (h) Using a center punch and ball peen hammer, punch center of two lines.

NOTE

Use cutting oil when drilling.

- (i) Using 1/8 inch drill bit, drill pilot hole.
- (j) Using "R" drill bit, drill through outlet elbow.

NOTE

Use cutting oil to reduce thread spalling and top breakage.

- (k) Using 1/8 27 NPTF tap, thread hole.
- (1) Using rags and dry cleaning solvent, clean oil from surface.
- (m) Go to step (n).
- (n) Assemble shield holding fixture (view C).
- (o) Position shield and holding fixture (view D) on elbow so that shield is centered over hole and bracket points toward the center of vehicle (view E).
- (p) Using a 1/2 inch box or open end wrench, tighten down nut on threaded bar so flat plate will hold shield in place (view F).
- (q) Using arc welding machine with welding electrode, weld shield in place in accordance with TM 9-237.
- (r) Remove shield holding fixture.
- (s) Install plug in elbow hole and crimp chain to hole in shield (view G).

- (t) Line out or X out elbow part number.
- (u) Using hand driven metal stamping die set and hammer:
 - 1. Apply part number 12304178-1 (LT) to elbows with hole A (view H).
 - 2. Elbows with hole A apply part number 12304178-2 (RT).
- (v) Using primer, paint all bare metal areas.
- (w) Using enamel, paint over primed areas.
- (x) Remove plug from tapped hole and install into plug bracket (View G).
- (y) Install filter clog indicator.

NOTE

If late model filter clog indicator is not available, install early model restriction indicator.

(z) Install filter element (para 3-2a).

4-5. Armored Air Cleaner Mounting Bolt Replacement

a. General.

Recent field reports indicate the 3/8 inch mounting bolts for the armored air cleaner are shearing off, causing unscheduled maintenance and vehicle deadlining. To correct this problem, a 5/8 inch mounting bolt is being released for installation in the field. This procedure is applicable to both the left and right armored air cleaners and provides instructions to the field to accomplish removal of the 3/8 inch mounting bolts and installation of 5/8 inch mounting bolts.

b. Replacement Procedures (Fig. 4-10).

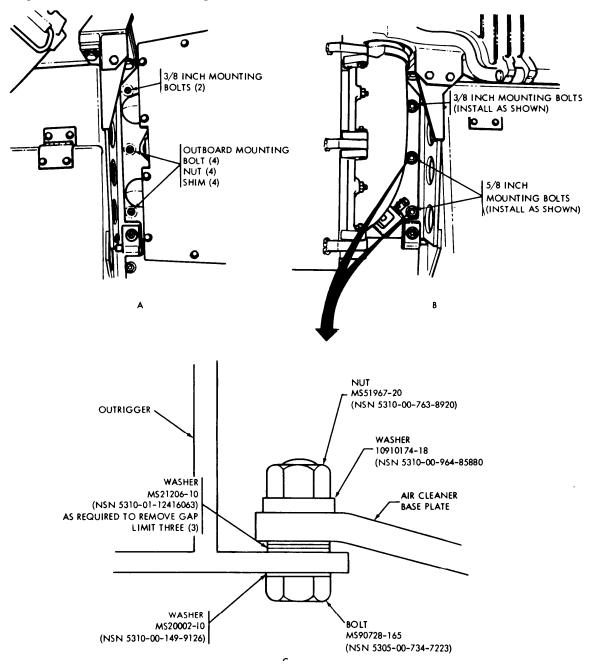


Figure 4-10. Armored air cleaner mounting bolt replacement.

(1) Tools Required.

(a) Drill Motor 1/2"	5130-00-889-9000
(b) Drill Bit 3/8"	5133-00-227-9666
(c) Drill Bit 5/8"	5133-00-228-1327

(2) Supplies Required.

(a)	Bolt	MS90728-165	5305-00-724-7223	8	required
(b)	Nut	MS51967-20	5310-00-763-8920	8	required
(c)	Washer	10910174-18	5310-00-964-8588	8	required
(d)	Washer	MS21206-10 or MS20002-10 (substitute)	5310-00-149-9126	32	required
(e)	Locking Compound Grade L, Type 1	MIL-S-46163	8030-00-148-9833		
(f)	Primer Grade F	MIL-S-46163	8030-00-900-2373		

(3) Procedure.

- (a) Disconnect battery ground cables (TM-20).
- (b) Remove and discard four outboard 3/8 inch armor air cleaner housing mounting bolts, nuts and shims (view A).
- (c) Loosen remaining two 3/8 inch armor air cleaner mounting bolts.
- (d) Loosen fender extension located outboard of air cleaner housing.
- (e) Make sure air cleaner four mounting holes are centered over four outrigger holes. Carefully shift air cleaner as required.
- (f) Tighten two 3/8 inch mounting bolts to secure air cleaner housing in place during drilling operation.
- (g) Drill out four outboard holes in the two outriggers using the following procedure:
 - 1. With a 1/2 inch drill motor and a 3/8 inch drill bit, drill out four outrigger threaded 3/8 inch holes.
 - 2. Using 3/8 inch hole as a pilot and a 5/8 inch drill bit, drill a 5/8 inch hole through outboard holes.
 - 3. Remove burrs as each hole is drilled.

- (h) After each hole is drilled, install bolt, washer and nut to insure air cleaner dues not shift during subsequent drilling operation (view B).
- (i) After drilling all four 5/8 inch holes, loosen all mounting bolts and check for gap between air cleaner base plate and outriggers. If a gap exists, use washers (maximum of three per bolt) to shim gap lighten 5/8 inch mounting.
- (j) Apply primer, NSN 8030-00-900-2373 and locking compound. NSN 8030-00-148-9833, to bolt threads and nuts.
- (k) Tighten 5/8 inch bolts to 85-95 1b-ft (115-129) and 3/8 inch bolts to 22-30 lb-ft (30-41 N·m).
- (1) Tighten fender extension mounting bolts.
- (m) Connect battery ground cables (TM-20).

4-6. V-Band Clamps (Fig. 4-11)

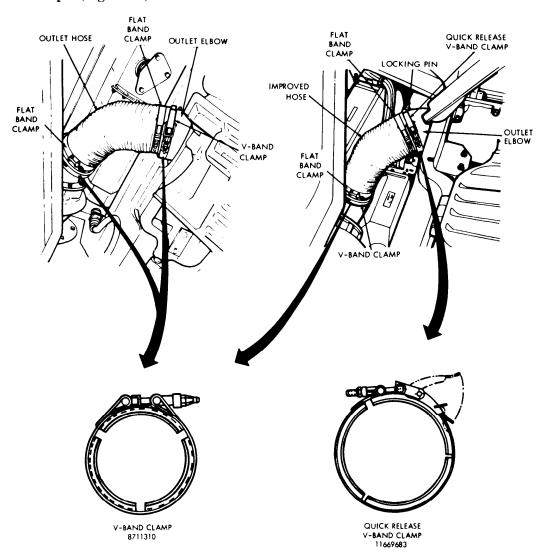


Figure 4-11. V-band clamps.

a. General.

Field reports indicate that finger band clamp tips and fingers have a tendency to bend. This creates a loose fitting between the elbow and hose and allows dirt and dust to enter the engine. Late model replacement clamps are available that have been proven to provide a better seal between the elbow and hose.

b. Description.

Two type of quick release clamps are being used.

- (1) V-band clamps can be used at either end of the outlet.
- (2) Quick-release V-band clamp can only be used with the improved hose at the air cleaner outlet elbow.

4-7. Inlet and Outlet Elbow Torquing Sequence (Fig. 4-12)

OUTLET ELBOW TIGHTENING SEQUENCE

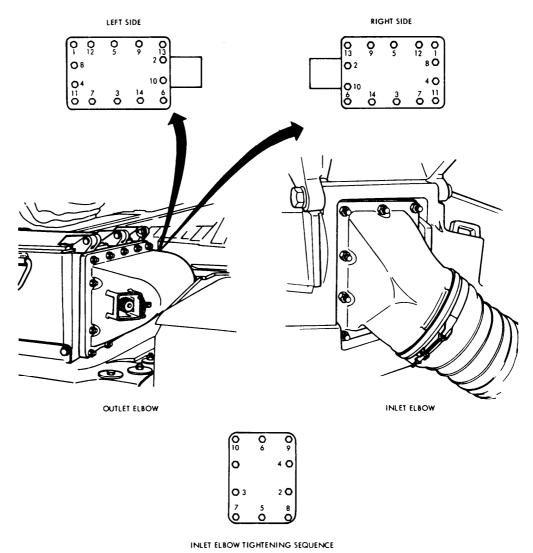


Figure 4-12. Inlet and outlet elbow torquing sequence.

a. General.

The nuts securing the inlet or outlet elbow of the air cleaner may loosen thus allowing dust to be drawn into the engine. Check that the securing nuts are properly tightened according to the following procedures.

b. Torquing Procedures.

- (1) Tools required.
 - (a) 9/16 inch socket, 1/2 inch drive
 - (b) 6 in. socket extension, 1/2 inch drive
 - (c) Torque wrench, 1/2 inch drive, 0-175 ft-lb
- (2) Whenever the air cleaner is serviced or replaced, check that the elbow securing nuts are properly tightened.

NOTE

On the M60 series tank, the nuts in positions and 2 of the outlet elbow cannot be tightened if the air cleaner is mounted on the tank. Be sure to tighten all nuts whenever the air cleaner is removed.

4-8. Spring Loaded Air Cleaner Filter Element (Fig. 4-13)

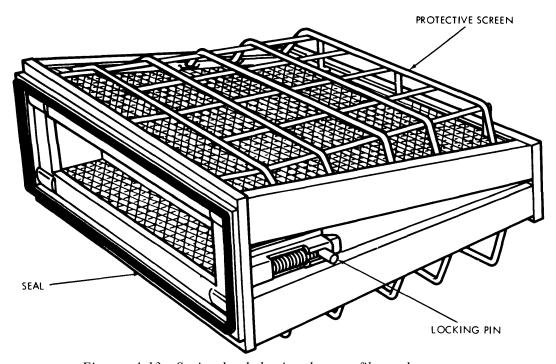


Figure 4-13. Spring-loaded air cleaner filter element.

An improved spring-loaded filter element is available that has increased dust capacity. This greater dust capacity provides greater mileage between cleanings. It also provides a more positive seal, through the use of spring loaded locking pins, that reduces the possibility of dust ingestion.

4-9. Powerpack Ground Hop Filter (Fig. 4-14).

a. General.

Ground hop filters must be installed during ground hop operations to prevent dust and dirt ingestion. Ground hop filters are available in the ground hop kit 12304135, NSN 2590-01-128-0097 (Table 4-2). If the kit is not available, the filter must be fabricated (para. C).

b. Powerpack Ground Hop Kit Components.

Table 4-2 lists the components of the powerpack ground hop kit.

Table 4-2. Powerpack Ground Hop Kit

Nomenclature	Part No.	NSN	Qty.
Cable Assembly, Generator	8366463	4910-00-092-9131	1
Cable Assembly, Access	10864166	2590-00-674-8736	1
Cable Assembly, Stanter	10864169	2590-00-674-8737	1
Cable Assembly, Ground	10864170	2590-00-674-8738	1
Tool, Brake, Applicator	10933755	5120-00-570-7486	2
Hose Assembly, Primer	11591102	5130-00-891-7865	1
Hose Assembly, Fuel	11591103	5130-00-891-7864	2
Cable Assembly, Alt	11674344	6150-00-628-1160	1
Hose Assembly, Air	12271067	4720-01-121-1542	2
Ground Hop Filter Assembly	12270979	2940-01-121-1221	2
Bag, Duff, TYPE	M11-B-829		2
Clamp Hose	1669683	4730-01-132-9086	2
Clamp Assembly	8711310	5340-00-678-6178	2

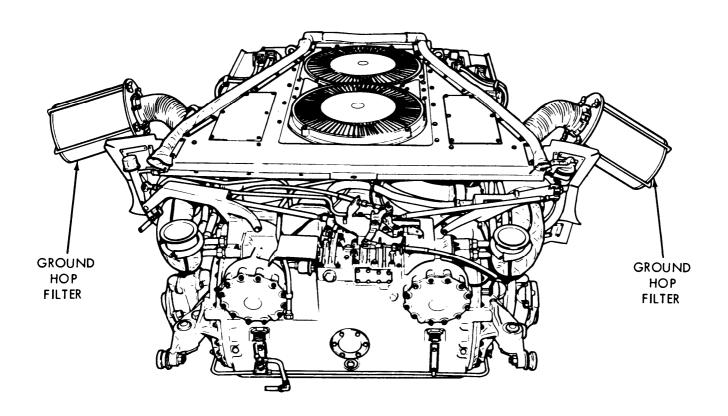


Figure 4-14. Ground hop filters.

c. Ground Hop Filter Fabrication (Fig. 4-15).

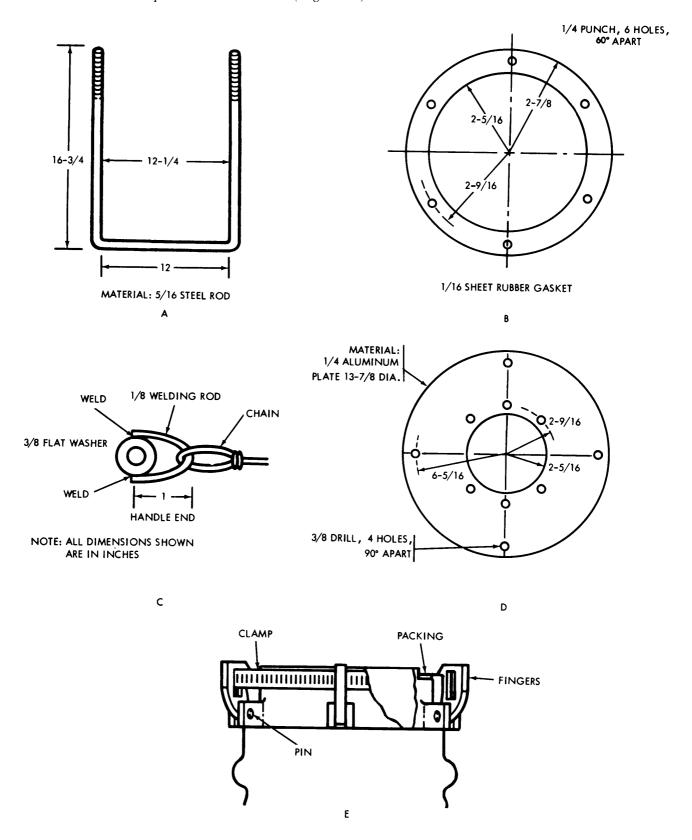


Figure 4-15. Ground hop filter fabrication (sheet 1 of 2).

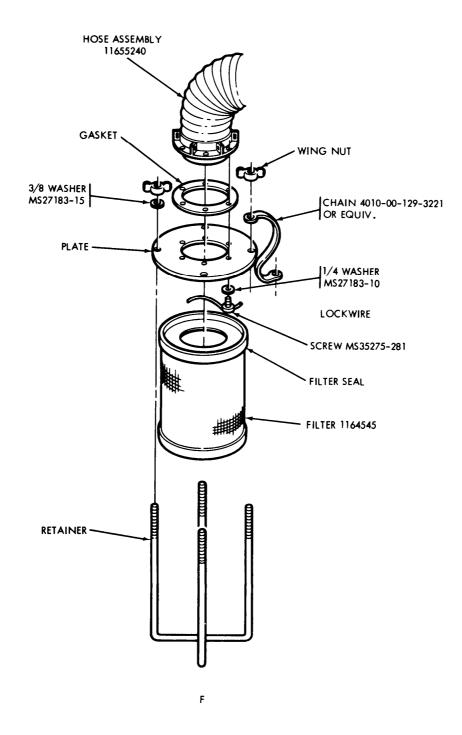


Figure 4-15. Ground hop filter fabrication (sheet 2 of 2).

(1) Parts Required. Table 4-3 lists the parts required to fabricate the ground hop filter.

Table 4-3. Ground Hop Filter Parts

Nomenclature	Part No.	NSN	Qty
Filter element	11604545	2940-00-134-4657	2
Hose assembly (on engine)	11655240	4720-00-614-8390	2
1/4" thick x 13-7/8" dia. aluminum plate			2
5/16" dia. x 45-1/2" long cold rolled steel rod			4
1/16" thick x 5-3/4" dia. rubber sheet			2
3/8" washer, plain	MS27183-15	5310-00-809-4061	12
Chain (11 inches)		4010-00-129-3881	2
1/4" 20 x 3/4 screws	MS35275-281	5305-00-939-9147	12
1/4" washer, plain	MS27183-10	5310-00-809-4058	12
5/16" 18 wing nut	MS35425-39	5310-00-080-8495	8
1/8" welding rod			As Req

- (2) Retainer (4 required). Fabricate as follows:
 - (a) Using steel rod, bend to dimensions (view A).
 - (b) Using 5/16-18 die, thread each rod end a minimum of 2 inches.
- (3) Gasket (2 required). Using 1/16 rubber sheet, fabricate gaskets as described in view B.
- (4) Handle (2 required). Using length of chain welding rod and washer, fabricate chain end as follows:
 - (a) Bend 1/8 inch welding rod to shap (view C).
 - (b) Weld rod to edge of washer on one side.
 - (c) Install chain.

- (d) Weld rod to edge of washer on other side.
- (e) Repeat steps (a) through (d) above for other end of chain.
- (5) Plate. Using aluminum plate, fabricate plate as follows:
 - (a) Cutout aluminum plate and lay out holes (view D).
 - (b) Cutout center hole.
 - (c) Position modified end of hose assembly in center of plate.
 - (d) Use a 13/64 inch drill to bore six holes through plate and positioned hose assembly.
 - (e) Remove hose assembly and tap the newly drilled holes in hose assembly using a 1/4-20 UNC tap.
 - (f) Enlarge six drilled holes in aluminum plate to 17/64 inch diameter.
 - (g) Drill four holes 3/8 inch diameter.
- (6) Hose Assembly Modification.

Modify hose assembly as follows:

NOTE

Remove parts from one end of hose assembly only.

- (a) Remove band clamp from end of hose assembly (view E).
- (b) Use punch to remove six (6) cold rolled pins.
- (c) Remove clamp fingers.
- (d) Remove preformed packing.
- (7) Assembly.

Assemble the ground hop filter as follows:

- (a) Attach modified hose assembly to plate using rubber gasket, six 1/4-20 screws and six flat washers.
- (b) Lockwire six screws.

WARNING

Screws must be lockwired to prevent loosening. Loose screws could fall out and be drawn into the turbocharger, causing damage to equipment and injury to personnel.

(c) Center seal end of filter against aluminum plate.

- (d) Insert one retainer into opposite holes in aluminum plate so that retainer will hold filter assembly in place against plate.
- (e) Install washer (MS27183-15) and wing nut on threaded ends of retainer. Place one end of chain handle assembly and wing nut on other threaded end of retainer.
- (f) Repeat steps (d) and (e) to install second retainer.
- (g) Tighten wing nuts evenly until filter seal is uniformly compressed along entire circumference.
- (8) Installation of Ground Hop Filter.

NOTE

Prior to removal of air cleaner-to-turbosupercharger hose assembly, mark it with chalk or grease pencil. This will index the hose for easy installation and ensure proper alinement.

- (a) Remove air cleaner-to-turbosupercharger hose assembly from engine.
- (b) Install filter on turbosupercharger elbow.

NOTE

Engine intake openings must be plugged or taped when filter units are not attached.

- (9) Maintenance of Ground Hop Filter.
 - (a) Inspect filter unit prior to use. Clean filter element as necessary. Never ground hop using a dirty filter.
 - (b) Keep modified hose assembly on ground hop air filter plugged when unit is not in use to prevent dirt from entering clean air inside of filter unit.
 - (c) Remove unit when ground hopping operations are discontinued to prevent filter from being exposed to elements.
- (10) Stowage. Upon completion of ground operations, perform the following:
 - (a) Clean ground hop filter:

WARNING

Compressed air used for cleaning purposes must not exceed 90 psi. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).

- 1. Direct compressed air (not to exceed 90psi) against inside of filter element.
- 2. Place each filter in duffel bag with flat end facing duffel bag bottom.
- 3. Place each air hose, with clamps into duffel bag on top filter. Close duffel bag using snap fastener.

4-10. Aluminum Side or Top Loading Air Cleaner Replacement

a. General.

When an aluminum air cleaner becomes unserviceable, it should be replaced with the armored air cleaner. Currently, the M60 series tanks may be furnished with one of the following listed air cleaners:

Aluminum Side Loading Air Cleaners (ALSLAC)

```
P/N 10863539- (Left) earlier model
P/N 10863540- (Right) earlier model
P/N 10940233-1, NSN 2940-00-067-7922- (Left)
P/N 10940233-2, NSN 2940-00-067-7926- (Right)
```

Aluminum Top Loading Air Cleaner (ALTLAC)

```
P/N 11655320-1, NSN 2940-00-621-1427- (Left)
P/N 11655320-2, NSN 2940-00-621-1428- (Right)
P/N 11675951-1, NSN 2940-00-455-2427- (Left)
P/N 11675951-2, NSN 2940-00-455-2511- (Right)
```

NOTE

Only DS/GS personnel are authorized to accomplish the air cleaner replacement.

b. Parts Required.

When the aluminum side or top loading air cleaners are being replaced with the armored top loading air cleaners, hardware kits 12290568 and 12290570 are required. The armored air cleaner assembly is not part of these kits and must be requisitioned separately. When replacing aluminum side loading air cleaners with armored top loading air cleaners, the existing fender extensions are not used and must be replaced with new fender extensions. These fender extensions are not part of the armored air cleaner kits and must be requisitioned separately. Fender extensions required are:

Left Fender Extension - NSN 2510-00-455-1351, P/N 11659711-1 Right Fender Extension - NSN 2510-00-455-1352, P/N 11659711-2

c. Tools Required.

3/8-16 UNC-2B Tap	5136-00-276-1032
Sander Disk	5130-00-857-8526
Torch Outfit	3433-00-357-8116
Welder, Arc	3431-00-903-5647
Drill 5/16	5133-00-227-9662

d. Procedures.

Replace aluminum air cleaner as follows:

(1) Remove aluminum air cleaner (TM20-1)

(2) Remove No. 3 and No. 4 outriggers as follows:

NOTE

Perform steps (a) thru (f) to both left and right sides of tank.

(a) Remove two bolts MS35673-838 or MS35764-838 or MS35763-31, bolt MS35763-32 and flat washer MS27183-17 securing outer support bracket 11655113-1 (Lt) or 8762504 (Lt) or 11655113-2 (Rt) or 8762503 (Rt) to outrigger number 3 (fig. 4-16, View A). Remove and retain outer support bracket.

NOTE

Some outer support brackets 8762504 (Lt) and 8762503 (Rt) removed from left and right outrigger number 3 may need to be reworked to fit the new outrigger supplied in kit. If the outer support brackets removed in step (a) above measured 5-1/2 inches high as shown in figure 4-17 and the distance between the centers of the two 3/8 inch tapped holes in 3 inches as shown in figure 4-17 then these outer support brackets must be reworked according to figure 4-18. The rework will require trimming 1 inch off the top of the bracket and drilling and tapping one new 3/8-16 UNC-2B hole as shown in figure 4-18.

- (b) Remove screw MS90725-112 and nut MS51922-33 securing outrigger number 3 to inner support bracket (fig. 4-16, view A).
- (c) Remove four screws MS90725-183 and lockwashers MS35338-51 securing outrigger number 3 to inner support bracket and remove and discard outrigger 11655110-1 (lt) or 8762417 (lt) or 11655110-2 (rt) (fg. 4-16, view A).
- (d) Remove two bolts MS35763-838 or MS35764-838 or MS35763-31, bolt MS35763-32 and flat washer MS27183-17 securing outer support bracket 8762503 (lt) or 8762504 (rt) to outrigger number 4. Remove and retain outer support bracket (fig. 4-16, view B).

NOTE

Do not rework outer support brackets removed from left and right outrigger number 4.

- (e) Remove two screws MS90725-112 and nuts MS51922-33, securing outrigger number 4 to inner support bracket (Fig. 4-16, View B).
- (f) Remove four screws MS90725-183 and lockwashers MS35338-51, securing outrigger number 4 to inner support bracket and remove and discard outrigger 8762387 (Lt) or 8762388 (Rt) (Fig. 4-16, View B).

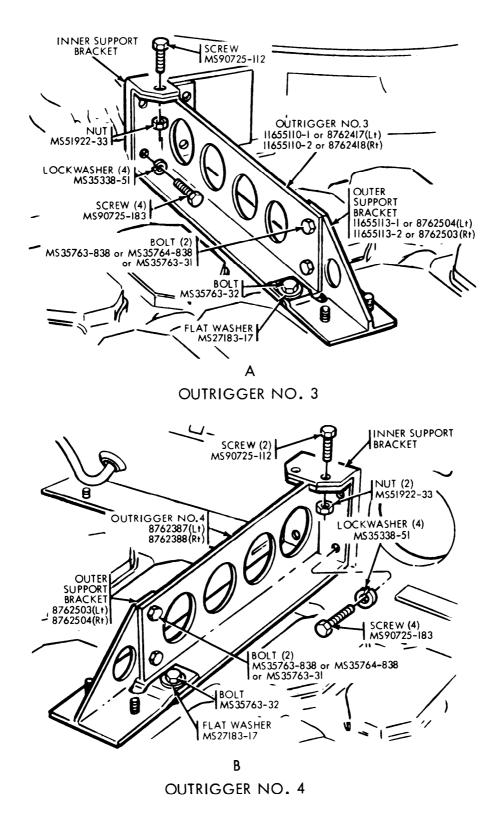
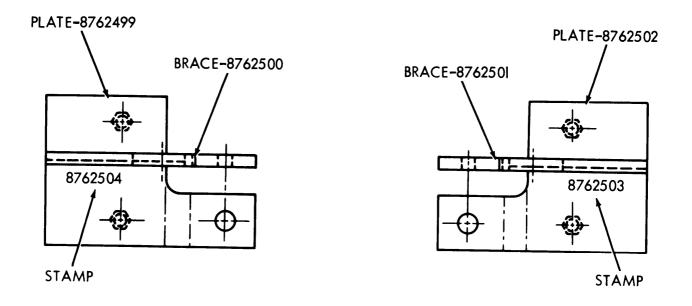


Figure 4-16. No. 3 and No. 4 outrigger removal.



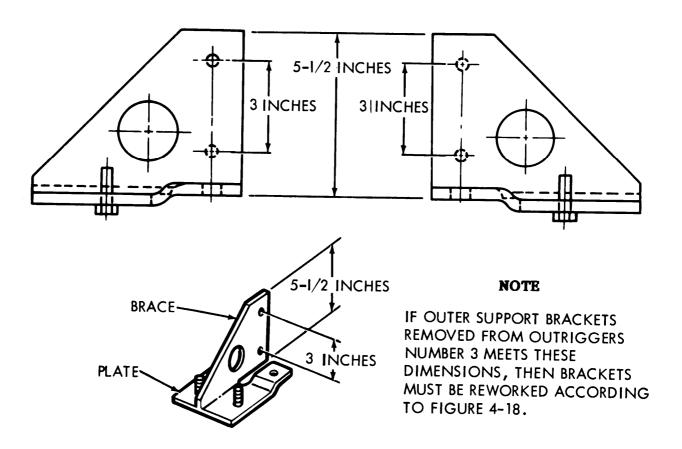
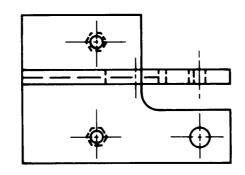


Figure 4-17. Outer support bracket measurements.



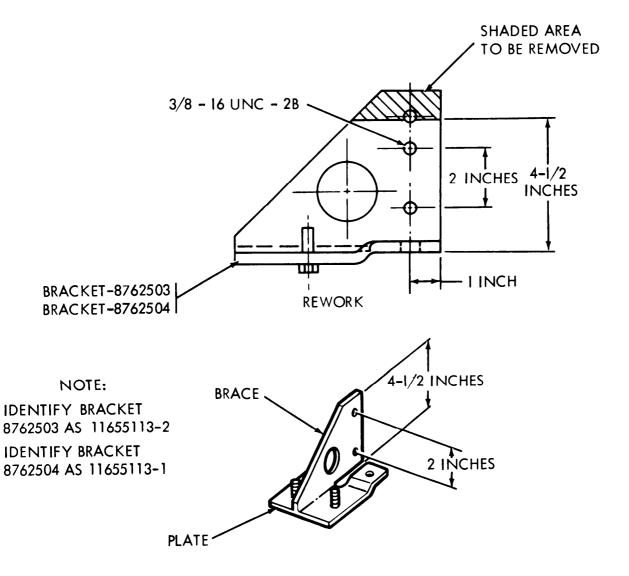


Figure 4-18. Support brackets rework.

(3) Install outrigger support plate as follows:

WARNING

Welding in the vicinity of fuel, oil and hydraulic fluid is dangerous. Place flameproof material between welding area and fuel tanks and surround components with wet rags or canvas to protect against weld spatter. Station a helper in the immediate area with an approved fire extinguisher before beginning welding operations. Failure to adequately protect against fire can cause injury, death or damage to equipment.

NOTE

- All welds must be performed to MIL-W-46086 (MR), Method 1. Use austentic electrodes only (308 MOT 16 stainless or equivalent). Refer also to TM 9-237 Welding Theory and Application.
- For left side of tank, proceed as follows:
- (a) Obtain reinforcement plate 12252268 from kit and weld plate to number 3 outrigger inner support bracket (on left side of tank) and hull as shown in Figure 4-19.
- (b) Clean, prime, and paint plate and weld area.

NOTE

For right side of tank, proceed as follows:

- (c) Using cutting torch, carefully cut the support 8762618 from the hull and grind surface smooth (Figure 4-20).
- (d) Obtain plate 12252276 from kit and trim or shim to obtain a good fit in position shown in figure 4-21. After good fit is obtained, tack weld plate in place. Weld plate flush to hull in areas shown in figure 4-21. Do not weld curved area of plate since of passageway must remain for fuel overflow drainage.
- (e) Clean, prime, and paint plate and weld area.

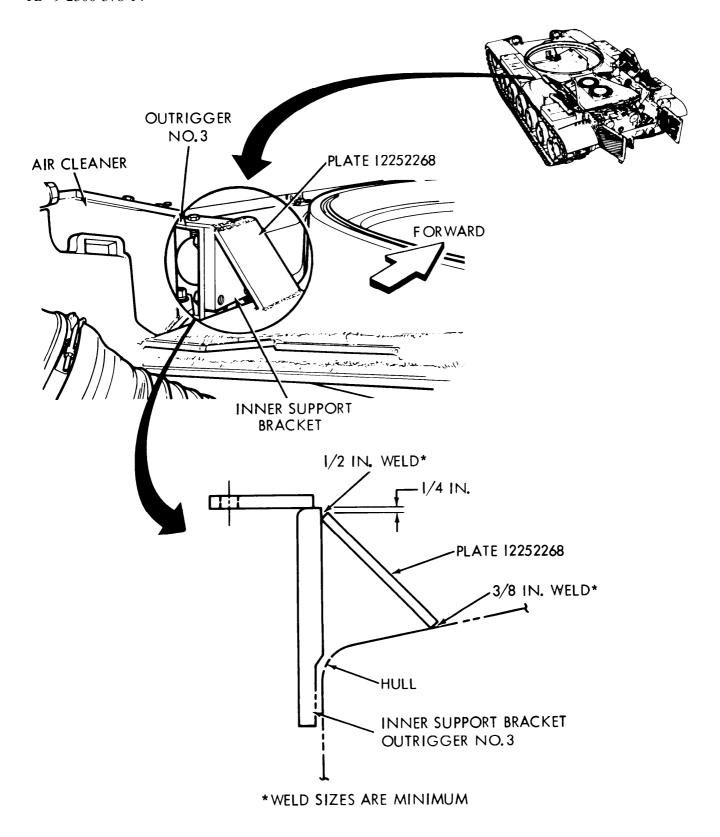


Figure 4-19. Left outrigger support plate installation.

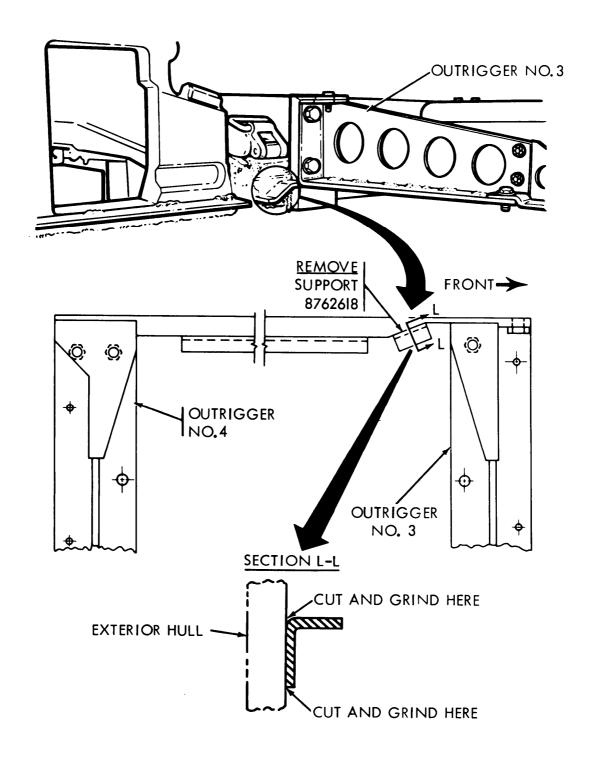


Figure 4-20. Right outrigger support removal.

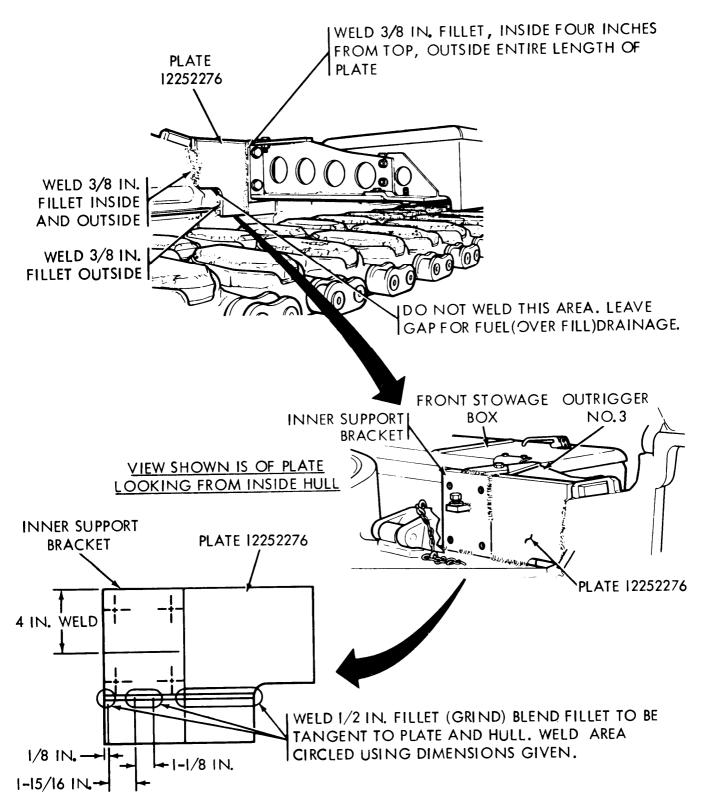
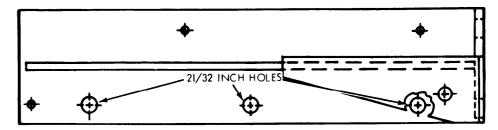


Figure 4-21. Right outrigger support installation.

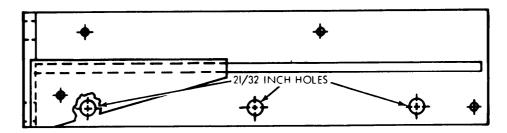
(4) Install Outriggers No. 3 and No. 4

NOTE

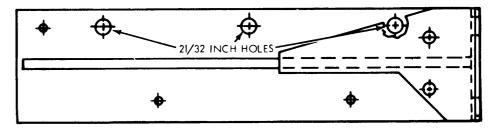
- Check all new outriggers from kit to ensure the holes for air cleaner mounting bolts are drilled to 21/32 inch (.656 inch) in places indicated for each outrigger as shown on figure 4-22. If the holes are to be 21/32 inch are 3/8 inch are 3/8 inch tapped holes, enlarge the three holes on each outrigger to 21/32 inch.
- Perform steps 1 through 5 to both left and right sides of vehicle.
- (a) Using four new screws MS90725-183 and new lockwashers MS35338-51, install new outrigger 12290526-1 (lt) or 12290526-2 (rt) to number 3 outrigger inner support bracket (fig. 4-23, view A). Torque four screws to 130 lb-ft (172 N⋅m) lubricated. Secure new outrigger to inner support bracket at top with new screw MS90725-112 and new nut MS51922-33.
- (b) Install outer support bracket 11655113-1 (lt) or 8762504 (lt) or 11655113-2 (lt) or 8762503 (rt) to number 3 outrigger using two new bolts MS35764-1289. Torque to 25 lb-ft (34 N·m) lubricated. Install new bolt MS35764-1291 and new flat washer MS27183-17 attaching outer support bracket to base of outrigger number 3. Torque bolt to 25 lb-ft (34 N·m) lubricated.
- (c) Using four new screws MS90725-183 and new lockwashers MS35338-51, install new outrigger 12290527-1 (lt) or 12290527-2 (rt) to number 4 outrigger inner support bracket (view B). Torque four screws to 130 lb-ft (172 N·m) lubricated. Secure new outrigger to inner support bracket at top with two new screws MS90725-112 and new nuts MS51922-33 (fig, view B).
- (d) Install outer support bracket 8762503 (lt) or 8762504 (rt) to number 4 outrigger using two new bolts MS35764-1289. Torque bolts to 25 lb-ft (34 N·m) lubricated.
- (e) Install new bolt MS35764-1291 and new flat washer MS27183-17 attaching outer support bracket to base of outrigger number 4. Torque bolt to 25 lb-ft (34 N⋅m) lubricated.



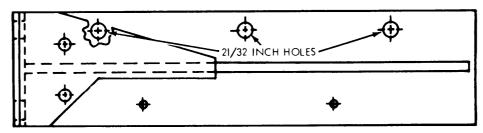
OUTRIGGER NO. 3 (12290526-1) LEFT SIDE



OUTRIGGER NO. 3 (12290526-2) RIGHT SIDE

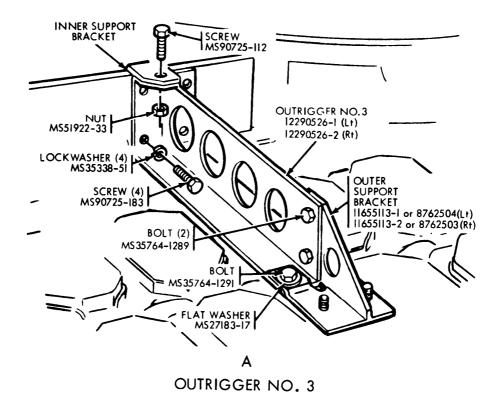


OUTRIGGER NO. 4 (12290527-1) LEFT SIDE



OUTRIGGER NO. 4 (12290527-2) RIGHT SIDE

Figure 4-22. Outriggers No. 3 and No. 4 21/32 in. hole location.



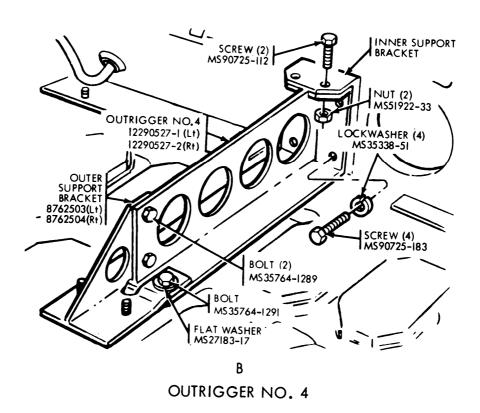


Figure 4-23. No. 3 and No. 4 outrigger installation.

(5) Install armored air cleaner as follows (fig. 4-24):

CAUTION

Armored air cleaner weighs approximately 600 pounds.

NOTES

- This procedure is to be used for installation of the armored top loading air cleaner when it is moved from a workbench or skid to its mounting position on tank.
- Perform steps a thru g to both left and right sides of tank.
- (a) Install new gasket 8762779 and outlet elbow 8762789 (lt) or (rt) or 8762789-1 (rt) on new armored air cleaner (view A). Secure with 14 new locknuts MS21044-N6 following proper tightening sequence (view B) (same for left and right sides). Torque locknuts to 20-25 lb ft (27-34 N·m).
- (b) Install new gasket 8762775 and inlet elbow 10863871 (lt) or 10863874 (rt) on new armored air cleaner (view A). Secure with ten nuts MS21044-N6. Tighten nuts evenly in a cross pattern (view C).
- (c) Attach lifting sling 11658914 to three lifting eyes of armored air cleaner assembly 12251922-1 (lt) or 12231922-2 (rt) (view D).
- (d) Lift and guide air cleaner to vehicle and carefully guide air intake and outlet elbows through hull openings, ensuring that blower motor electrical lead is properly inserted through opening.

NOTE

On some tanks it will be difficult to properly position air cleaner on outriggers due to an interference with hull inlet elbow opening. If this occurs, grind away excess metal around hull inlet elbow opening until proper alignment of air cleaner mounting holes and outrigger holes exists.

- (e) Check for gap between air cleaner base plate and the outriggers. If a gap exists between the armored air cleaner base plate and the outriggers, use up to 3 washers MS20002-10 per bolt as shims to eliminate gap (view E).
- (f) Secure air cleaner to outriggers with six new bolts MS90728-165, six new washers MS21206-10, six new washers 10910174-18, and six new nuts MS51967-20 (view E). Before installation, apply primer MIL-S-46163, Grade F, and sealing compound MIL-S-46163 Type 1, Grade L to bolt and nut threads. Use two to three drops of sealing compound per bolt. Torque air cleaner mounting bolts to 195 lb-ft (265 N⋅m).
- (g) Remove lifting sling 11658914 from armored air cleaner.

NOTE

Perform steps h through x to both left and right sides of tank

- (h) Place fender extension 11659711-1 (lt) or 11659711-2 (rt) in position (view F).
- (i) Secure fender to side of armored air cleaner using four new bolts MS35764-1289 and new flat washers MS27183-14. Before installation apply primer MIL-S-46163, Grade F, and sealing compound MIL-S-46163 Type I, Grade L to bolt threads. Use two to three drops of sealing compound per bolt. Torque the four bolts to 25 lb-ft (34 (N·m) lubricated.
- (j) Secure fender to outer support bracket on outrigger number 3 using new locknut MS51988-7 and new flat washer 11654843.
- (k) Secure fender to outer support bracket on outrigger number 4 and fender reinforcing angle using new locknut MS51988-7, new flat washer 11654843, new screw MS90725-62, new flat washer 11654843, new flat washer MS27183-14, new lockwasher MS35338-46, and new nut MS51967-8.
- (1) Remove tape from intake hose (view G). Connect hose to inlet elbow and secure with clamp MS21920-61R or 8711309 (view H).
- (m) Remove tape from outlet hose (view G). Connect hose to outlet elbow and secure with clamp MS35842-16 or 8711310 (view I). Ensure that clamps are tight.
- (n) Connect electrical connector to blower motor lead (view H).

NOTE

Vehicles being retrofitted with top loading armored air cleaners may or may not utilize positive venting systems from the air cleaner to the final drive (left side) or air cleaner to fuel tank (right side).

- (o) If vehicle has fuel tank to air cleaner vent hose and/or final drive to air cleaner vent line then connect fuel tank vent hose to right side air cleaner outlet elbow and check valve (view J). Connect final drive vent line to left side air cleaner inlet elbow (view K).
- (p) Position front stowage box between outriggers 2 and 3.

NOTE

If a gap exists between the stowage box base plates and the outriggers, use up to three plates 8705499, as shims, to eliminate gap.

- (q) Install three plates 8705499 and three locknuts MS51988-7 securing front stowage box to outrigger number 2 (view L).
- (r) Install four flat washers MS27183-17 and locknuts MS51988-7 securing front stowage box to tank.
- (s) Install three plates 8705499, two new bolts MS35764-1291 and new locknut MS51988-7 securing front stowage box to outrigger number 3 and outer support bracket. Torque the two bolts to 25 lb-ft (34 N·m) lubricated.
- (t) Position rear fender stowage box between outrigger numbers 4 and 5.
- (u) Install three plates 8705499, new locknut MS51988-7 and two new bolts MS35764-1291 securing rear stowage box to outrigger number 4 and outer support bracket (view M). Torque two bolts to 25 1b-ft (34 N·m) lubricated.
- (ν) Install three flat washers MS27183-17 and locknuts MS51988-7 securing rear stowage box to tank.
- (w) Install three flat washers MS27183-17 and locknuts MS51988-17 securing rear stowage box to outrigger number 5.
- (x) Install 6 screws MS90726-60, 12 flat washers MS27183-14, 6 lockwashers MS35338-46 and 6 nuts MS51967-8 securing rear stowage box to fender reinforcing angle.

Figure 4-24. Armored air cleaner installation (sheet 1 of 5).

OUTLET ELBOW TIGHTENING SEQUENCE

INLET ELBOW
TIGHTENING SEQUENCE

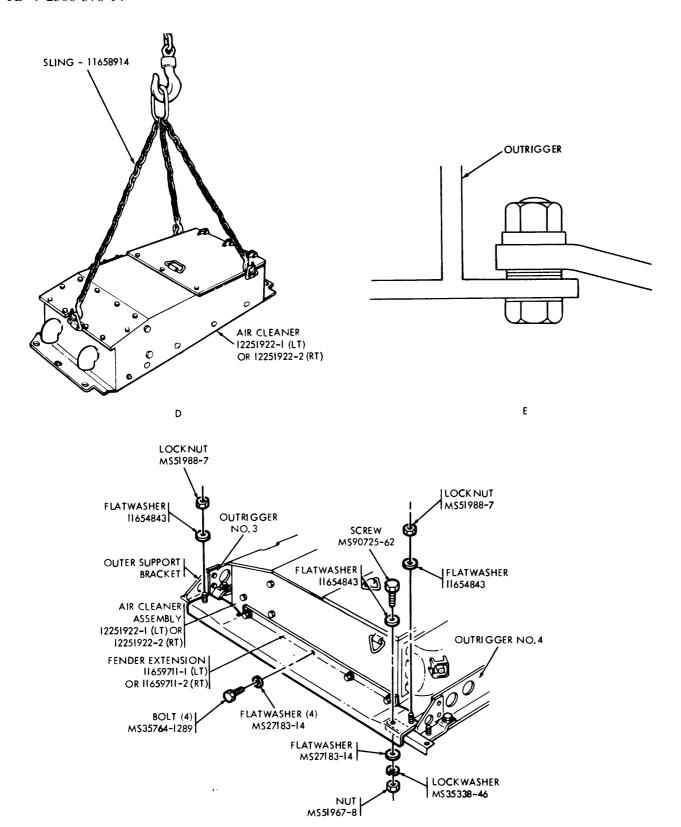


Figure 4-24. Armored air cleaner installation (sheet 2 of 5).

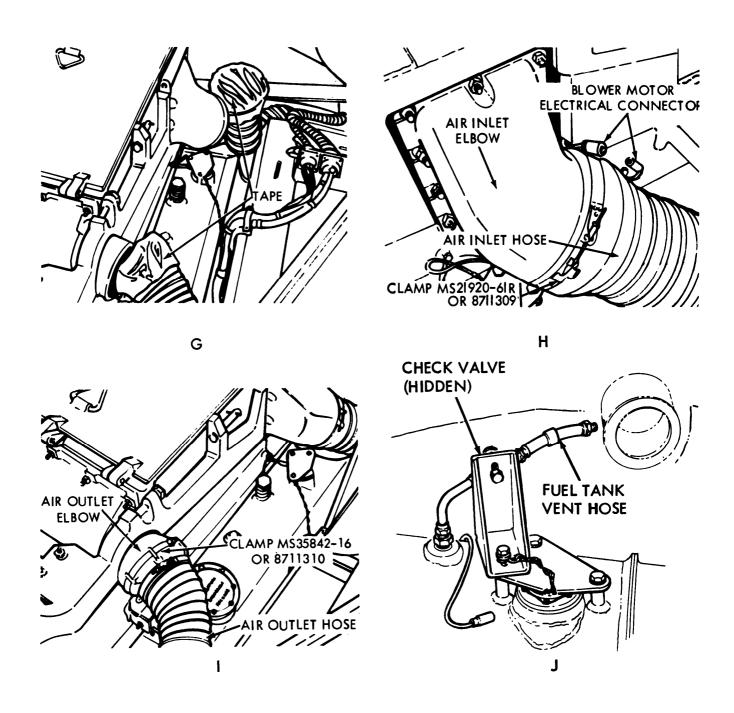


Figure 4-24. Armored air cleaner installation (Sheet 3 of 5).

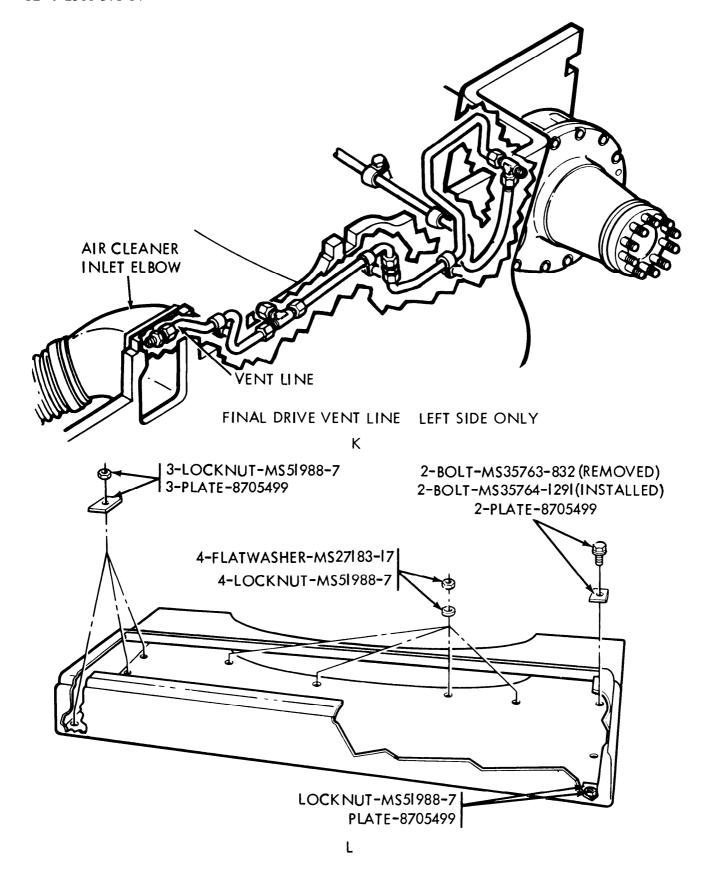


Figure 4-24. Armored air cleaner installation (sheet 4 of 5).

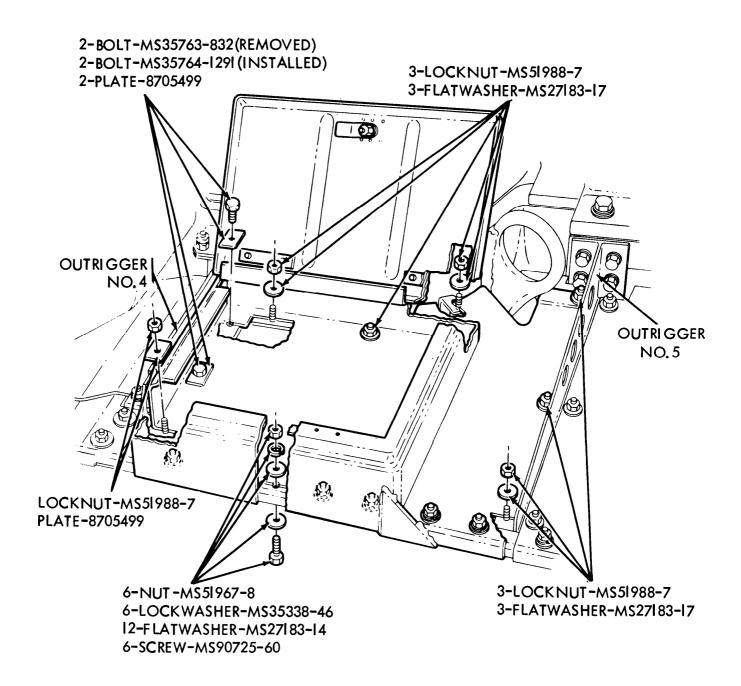


Figure 4-24. Armored air cleaner installation (sheet 5 of 5).

4-11. Top Deck Grille Door Rework.

a. General

Field reports indicate that air cleaner boxes are being damaged by top deck grille doors. This condition usually occurs following air cleaner replacement or after vehicle overhaul. These procedures provide inspection and rework instructions for the grille door hinges to prevent this damage to the air cleaner assembly. Corrective action to eliminate this interference condition is to be performed by DS level maintenance personnel.

b. Procedures (Fig. 4-25).

WARNING

Ensure all ammunition is removed from tank prior to performing modication. Failure to do so can cause death, injury or damage to equipment.

CAUTION

Ensure that prior to traversing turret, the top loading air cleaner doors and ammo rack handles are properly secured. Failure to do so can cause damage to doors or handles.

- (1) Disconnect three ground straps (TM-20).
- (2) Manually traverse turret, so main gun is positioned over right or left stowage box, to gain access to top deck grille doors.

WARNING

Welding in the vicinity of fuel oil and hydraulic fluid is dangerous. Place flameproof material between welding area and fluid carrying components. Cover adjacent components with wet rags or canvas to protect against weld spatter. Station a helper in the immediate area with an approved fire extinguisher before beginning welding operations. Failure to adequately protect against fire can cause injury, death, or damage to equipment. Extreme caution should be exercised to avoid burning air cleaner gasket.

CAUTION

During rework of grille doors, care must be taken to assure the grille door hinges do not strike the air cleaner as the doors are opened.

NOTE

Perform steps 3 through 7 to left and right side of vehicle.

CAUTION

Take special care to protect air induction system hoses and gaskets from weld spatter.

- (3) Cut apiece of cardboard at a 60° angle and use it to check angle between No. 2, 3, and 4 grille door and air cleaner box (view A). Grind or weld stop as shown to correct angle. Make area of contact as large as possible to prevent stop from deforming and changing angularity.
- (4) Check clearances between No. 4 grille door and air cleaner door hinges. Ensure that a clearance of at least 5/8-inch exists (view B). If specified clearance does not exist, grind area on grille door adjacent to air cleaner hinge to obtain specified dimensions.
- (5) Check No. 3 grille door for 1/8-inch clearance between grille door hinge and air cleaner housing (view C). If incorrect, remove door and adjust clearance by grinding door hinges. Install grille doors.
- (6) Check No. 2 grille door for 1/8-inch clearance between grille door hinge and air cleaner housing (view C). If incorrect, grind as required to obtain clearance.

NOTE

Grinding can be accomplished with grille door installed.

- (7) Clean, prime, and paint all bare metal areas.
- (8) Connect three battery ground cables.

CAUTION

Prior to starting engine, check the air cleaner hose clamps for proper installation and that the air cleaner door seal has not been burned during grille door hinge rework. Make sure that the air cleaner door bolts are properly secured. Inspect air inlet and outlet hoses for burns from weld spatter.

(9) Start engine, check air cleaner blower motor and restriction indicator operation (TM-10).

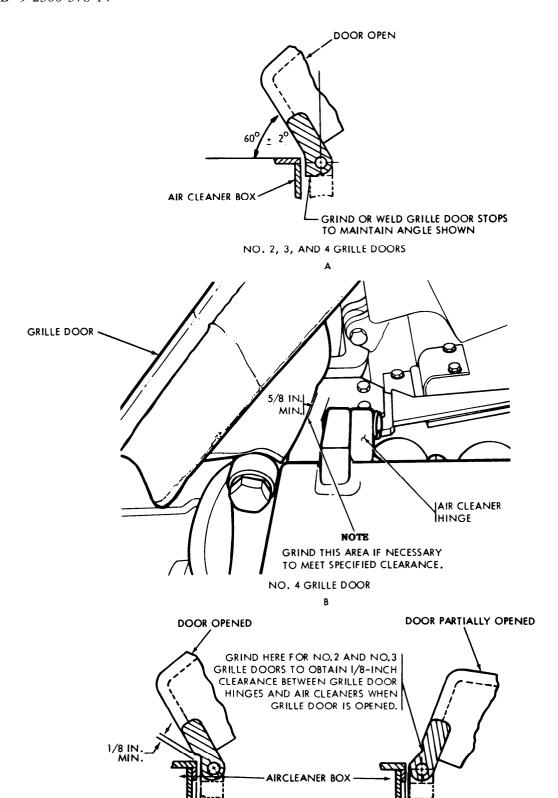


Figure 4-25. Top deck grille door rework.

NO. 2 AND NO. 3 GRILLE DOORS
C

1/8 IN. MIN.

-1/8 IN. MIN.

4-12. Air Cleaner Housing Screw Hole Repair

a. General

Damaged or stripped air cleaner housing screw holes must be repaired to insure proper sealing of the air cleaner door. If damaged or stripped holes occur, perform the following procedure.

b. Procedure

- (1) Tools and Equipment Required
 - (a) Drill motor
 - (b) Drill Bit, letter size "X" (0.397)
 - (c) Masking Tape
 - (d) Cardboard
 - (e) Air-vat Vacuum Tool NSN 7910-00-807-3704
 - (f) Rags
 - (g) Cutting Oil
 - (h) Dry Cleaning Solvent NSN 6850-00-281-1985
 - (i) Tool kit, Coil Thread Insert: 3/8-16 UNC NSN 5180-00-935-0734
 - (j) Tap and Reamer Wrench
 - (k) Approved Eye Protection
- (2) Repair. Perform the following to repair housing hole (fig. 4-26).
 - (a) Wrap masking tape around tap provided in insert kit so that 1-inch of tap is exposed below tape (view A).
 - (b) Fabricate drill stop (view B).
 - (c) Remove air cleaner filter element (TM-20).
 - (d) Tape cardboard over air outlet port to prevent dust or drilling chips from entering engine (view C).

WARNING

Use approved eye protection during drilling operations to prevent serious eye injury.

(e) Using drill motor, drill, and fabricated drill stop, drill through stripped screw hole.

CAUTION

Use cutting oil on tap to prevent thread spalling and to minimize tap breakage.

- (f) Using tap, tap wrench, and cutting oil, turn tap into drilled hole until tape contacts housing surface.
- (g) Using vacuum cleaner, rags, and cleaning solvent, remove chips and cutting oil from housing.

- (h) Install 9/16 inch long insert according to instructions in coil thread insert tool kit.
- (i) Inspect access door screws. Replace defective screws with new flanged screw (12290914) NSN: 5306-01-091-3384.
- (j) Remove cardboard and tape from air outlet port.
- (k) Inspect door seal. Replace if defective (TM-20).
- (1) Install air cleaner element (TM-20).

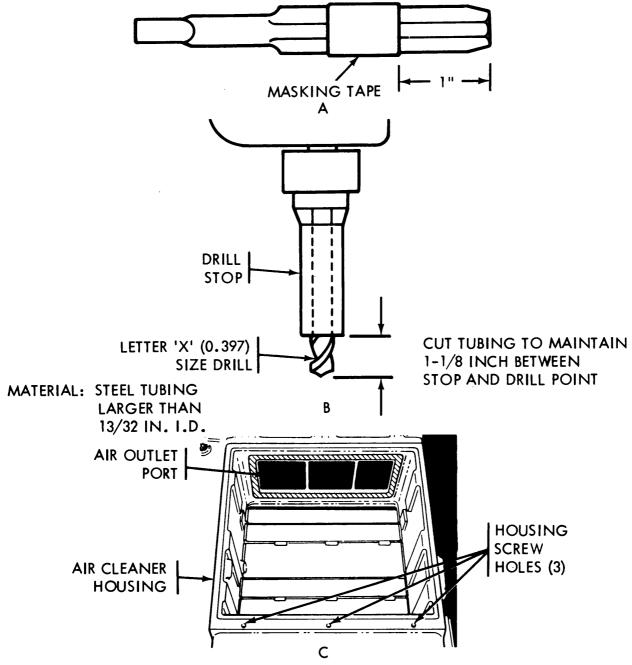


Figure 4-26. Air cleaner housing screw hole repair.

4-13. Air Cleaner Housing Vertical Guide Rework.

a. General.

Misalignment between the air cleaner housing vertical guide bar and filter element locating pin causes an improper filter seal. To correct this problem the following procedure must be performed.

b. Procedure.

- (1) Tools and Equipment Required:
 - (a) Primer NSN 8010-00-161-7425, Spec-TT-P636
 - (b) Paint NSN 8010-00-111-7937, MIL-E-52798
 - (c) Air-Vat Vacuum Tool NSN 7910-00-807-3704
 - (d) Hand Grinder NSN-5310-00-889-8979
 - (e) Grinding Wheel 2" x 1/2", 18500 RPM min for 3/8" arbor.
 - (f) Cut-off Wheel 2" x 1/8", 18500 RPM min for 3/8" arbor.
 - (g) Scribe
 - (h) Scale or Ruler
 - (i) Masking Tape
 - (j) Cardboard
 - (k) Rags
 - (l) Approved Eye Protection
- (2) Fabricate template (fig. 4-27).

NOTE

Template can be fabricated to simplify measurement and scribing of guide bar.

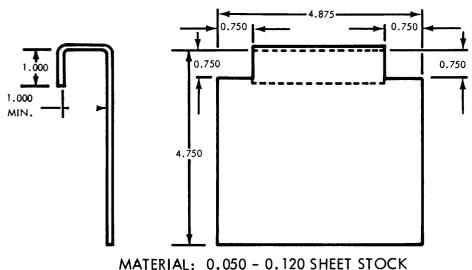
Rework procedure can be accomplished without template by measuring directly on guide bar.

(3) Remove air cleaner filter element (TM-20).

NOTE

If template was fabricated, go to step (4). If template was not fabricated, go to step (5).

(4) Position template on air cleaner housing and scribe left and right vertical guide bars as indicated (view A). Go to step (6).



TERIAL: 0.000 - 0.120 SHILL STOCK

Figure 4-27. Template fabrication

- (5) Using rule and scribe, scribe left and right vertical guide bars as indicated (view B).
- (6) Tape cardboard to air outlet port to prevent cutting and grinding debris from entering engine.

WARNING

Use approved eye protection during grinding operations to prevent serious eye injury.

- (7) Using hand grinder with cutting wheel, cut along scribed lines through vertical guide bar.
- (8) Cut through weld on backside of guide bar between cut-off line and lower end of bar.
- (9) Replace cut-off wheel with grinding wheel and remove remaining weld in cut-off area.
- (lo) Using rags and vacuum cleaner, remove cutting and grinding operation debris.
- (11) Prime and paint bare metal areas.
- (12) After paint has dried, wipe and vacuum inside of air cleaner housing to remove paint overspray residue.
- (13) Remove cardboard and tape from air outlet port.
- (14) Inspect door seal. Replace if defective (TM-20).
- (15) Install air cleaner filter element (TM-20).

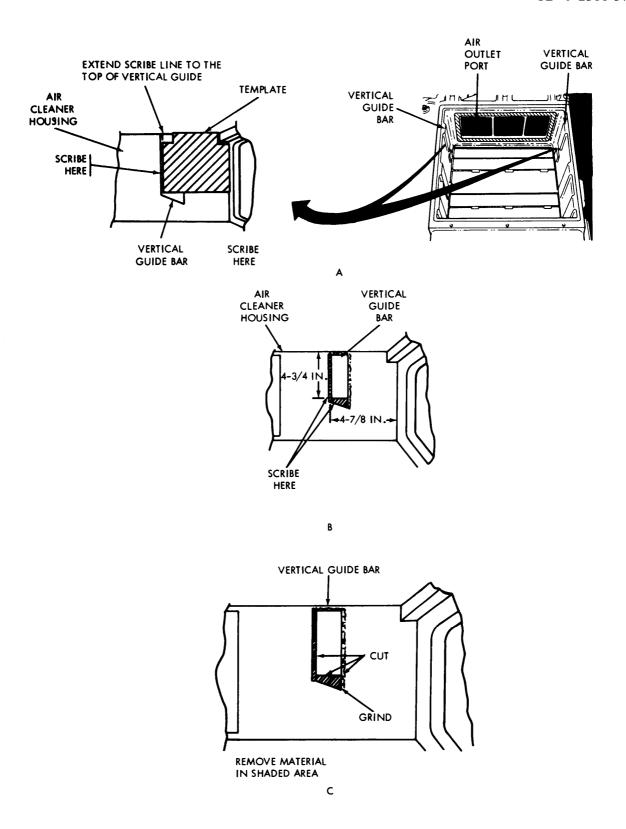


Figure 4-28. Air cleaner housing vertical guide bar network.

CHAPTER 5 IMPROVED CLEAN AIR INDUCTION SYSTEM CREW OPERATION/MAINTENANCE

5-1. General.

This chapter contains a description, and inspection and maintenance instructions that the crew is authorized to perform to keep the improved clean, air induction system operational. A large percentage of engines have to be replaced because dust, dirt, and foreign material is drawn into the engine due to a defective air induction system. The crew is responsible for the condition of the vehicle. Crew maintenance, for the improved air induction system, is limited to performance of the daily preventive maintenance, checks, and services PMCS. Report all uncorrected defects to organizational maintenance. The crew may perform other maintenance procedures, but only under the direction of organizational maintenance.

5-2. Improved Clean Air System.

- a. General. The improved clean air system operates essentially the same way as conventional system, but incorporates improved air induction components, a dust ejector system that takes the place of the air cleaner centrifugal fans, and a dust detector.
- b. Improved Air Induction Components. Improved air induction components include reduced restriction inlet and outlet elbows and hoses, improved clamps, improved gaskets and studs, spring loaded filter element, and late model filter clog indicator.
- c. Vehicle Exhaust Dust Ejector System (VEDES). The vehicle exhaust dust ejector system (VEDES) (fig. 5-1) replaces the air cleaner centrifugal fans. The air cleaner housing is modified to plug the fan exhaust elbows and to accommodate a tube manifold with its associated hoses, clamps, and mounting bracket installed in place of the fans. A system of dust scavenge tubes, check valves, and exhaust pipes with integral dust ejectors is mounted along each cylinder bank above and parallel to the engine and transmission oil coolers. VEDES scavenges dust from the precleaned section of the air cleaners through suction action of the exhaust ejectors.

Engine exhaust blowing by ejector nozzles at the exhaust outlet causes a pressure drop which creates the air flow for the scavenging action in the precleaners. Dust-laden scavenge air flows from the precleaned chamber through the ejector collector ring and mixes with the exhaust gasses at the nozzle outlet, after which the exhaust/dust mixture is ejected through the exhaust pipe.

d. Dust Detector. The dust detector system (fig. 5-2) uses engine air induction manifold pressure to circulate air through filter strips in the dust detectors mounted in the turbo supercharger compressor housing. When the filter strip(s) become clogged, the resultant change in pressure actuates a pressure switch which illuminates the power plant warning light and the dust detector warning light in the driver's compartment. A dust detector warning light ON indicates a restricted falter strip in either or both engine bank dust detectors.

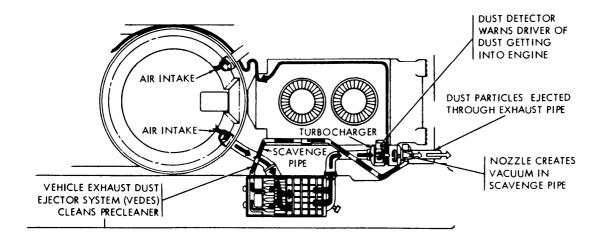


Figure 5-1. Vehicle exhaust dust ejector system (VEDES).

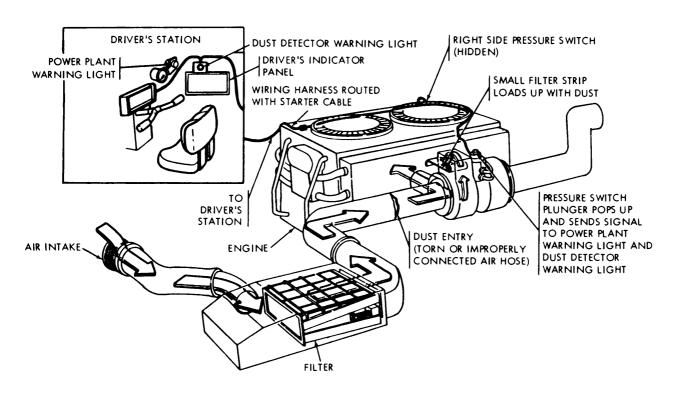


Figure 5-2. Dust detector system.

5-3. Air Cleaner Filter Clog Indicator.

a. General.

The air cleaner filter clog indicator provides a visual means of determining when the air cleaner filter element must be serviced without actually opening the air cleaner box and inspecting the filter element. Two models of indicators are presently being used (fig. 5-3).

b. Checking.

To determine if air filter element needs servicing. Check indication on air restriction indicator.

Early Model - If red disk is visible, notify organizational maintenance Late Model - If reading is more than 25, notify organizational maintenance

5-4. Engine Air Intake (fig. 5-4).

a. General.

During normal and water fording operations, the engine air intakes (view A) must be positioned to draw air from the crew compartment. During extreme cold or an NBC attack alert, the engine air intakes must be reversed to draw air from the engine compartment (para. 5-4b).

b. Reversal Procedure.

- (1) Remove four screws and washers and cover (view A). A gasket is cemented to cover.
- (2) Remove six nuts and washers (view B).
- (3) Remove eight nuts and washers.
- (4) Remove intake from bulkhead.
- (5) Install six nuts and washers on studs (view C).
- (6) Install eight nuts and washers on studs (view D).
- (7) Position cover on intake and install four screws and washers.
- (8) Install eight nuts and washers on studs. (View D).
- (9) Position cover on intake and install four screws and washers.

5-5. Preventive Maintenance Checks and Services (PMCS).

The following PMCS table lists checks and services that are to be performed on a daily basis to find, correct, or report problems that are caused by normal wear and tear.

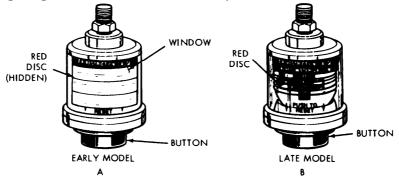


Figure 5-3. Air cleaner filter clog indicator.

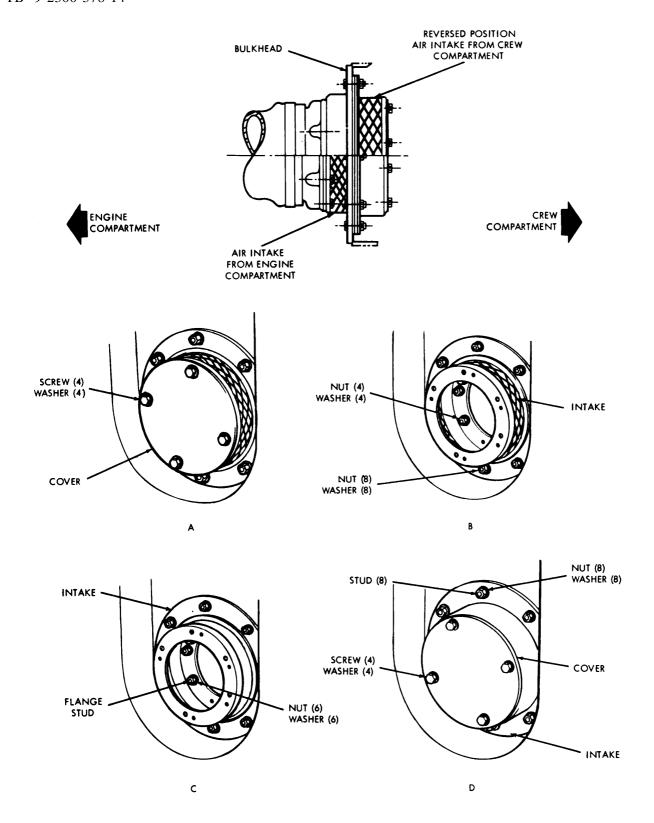


Figure 5-4. Engine air intake reversal.

Preventive Maintenance Checks and Services

ПЕМ	BEFORE	DNING	AFTER	ITEM TO BE INSPECTED DAILY Procedure (required only if you operate) EQUIPMENT IS NOT READY/AVAILABLE IF -
				AIR CLEANER HOUSINGS AND DOORS RIGHT AND LEFT SIDES
1.	•			Inspect housing (A) for cracks and dents.
2.	•			Check door (B), hinges (C), door locking bolts or fastener (D) for cracks, broken or missing parts.
3.	•			Check base plate (E) for cracks.
4.	•			Check access plate (F) for cracks, looseness or missing mounting bolts (G).
5.	•			Check that inspection plugs (H) and drain plug (J) are not missing.
				CRACKED OR DENTED HOUSING. ANY DAMAGED OR MISSING AIR CLEANER DOOR OR DOOR FASTENERS. ANY MISSING DRAIN OR INSPECTION PLUGS. BROKEN OR BENT DOOR HINGES. ACCESS PLATE MISSING.

5-6			AIR CLEANER ELBOWS, HOSES AND CLAMPS, RIGHT AND LEFT SIDES
	6.	•	Check that air cleaner intake hose (A) is not damaged or missing.
	7.	•	Check that air cleaner outlet hose (B) is not damaged or missing.
	8.	•	Check that intake hose elbow (C) and outlet hose elbow (D) is not loose or damaged.
	9.	•	Check that intake hose clamps (E) and outlet hose clamps (F) are not loose, broken or missing.
			INTAKE OR OUTLET HOSE DAMAGED OR MISSING. ELBOWS LOOSE OR DAMAGED HOSE CLAMPS LOOSE, BROKEN OR MISSING.

Preventive Maintenance Checks and Services

ITEM	BEFORE	DURING	AFTER	ITEM TO BE INSPECTED DAILY Procedure (required only if you ope	erate)	EQUIPMENT IS NOT READY/AVAILABLE IF -
10.	•			DUST DETECTOR PRESSURE SWITCH - RIGHT AND Inspect dust detector pressure switch (A) for security of mounting. Check that red plunger is not visible. If red plunger is visible, notify Organizational Maintenance.	C C	D B
11.	•			Check that wiring harness (B) is connected.		
12.	•			Check that hoses (C) are not damaged or missing.		D
13.	•			Check that fittings (D) are secure. FILTER CLOG INDICATORS (RIGHT AND LEFT SIDES)	SWITCH RED	PLUNGER IS VISIBLE
14.	•			Check that filter clog indicator (A), pipe plug (B) or clog indicator guard (C) are not damaged or missing.		
15.	•	•		Check indicator reading. Early model - filter clog indicator window	(D)	
						CLOG INDICATOR
				Late model - A reading of 30 or more means that the filter element requires	EARLY MODE INDICATOR S	L - FILTER CLOG

		POWER PLANT WARNING LIGHT (ENGINE RUNNING)
16.	•	Check power plant warning light (A), frequently to make sure it is not lit. If light (A) is lit, immediately check ENGINE OIL PRESSURE, ENGINE OIL TEMPERTURE, TRANSMISSION OIL PRESSURE and TRANSMISSION OIL TEMPERATURE gages on driver's indicator panel (B) and the DUST DETECTOR WARNING LIGHT (C).
		POWER PLANT WARNING LIGHT (ENGINE RUNNING)
17.	•	Check that DUST DETECTOR WARNING LIGHT (C) is out. Press lens cap in to check. If lamp does not light, replace lamp. If light is on, notify Organizational Maintenance. DURING PERIOD OF OPERATION, LOOK FOR THESE INDICATIONS OF A DIRTY AIR
		INDUCTION SYSTEM.
18.	•	Exhaust smoke is excessively black.
19.	•	Air restriction indicator shows a red window or a high reading or no reading at all. See restriction indicators (para. 5-3) for detailed instructions.
20.	•	Noticeable loss of engine power. EARLY MODEL - RESTRICTION INDICATOR INDICATES RED, LATE MODEL - SHOWS 30 INCHES OR MORE

CHAPTER 6

IMPROVED CLEAN AIR INDUCTION SYSTEM ORGANIZATIONAL MAINTENANCE

Section I. Description

6-1. General

This chapter provides Organizational Maintenance PMCS, troubleshooting and maintenance procedures required to support vehicles equipped with the improved clean air induction system.

6-2. Description

Refer to paragraph 5-2 for a description of the improved clean air induction system.

Section II. Preventive Maintenance checks and Services (PMCS)

6-3. General

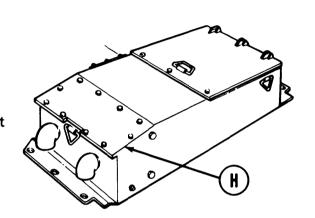
Preventive maintenance is the systematic care, inspection, and service of equipment to maintain a serviceable condition and detect faults and failures before extensive time consuming repairs are required.

6-4. Procedures

Table 6-1 provides additional PMCS requirements that must be performed to support vehicles equipped with the improved clean air induction system.

Table 6-1. Improved Clean Air Induction System - Organizational
Maintenance Quarterly Preventive Maintenance Checks and Services

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES
2	Air Cleaners (right and left sides)	Check air cleaner door (A) for loose, or missing screws (B) Make sure screw holes are free of dirt.
3		Check that clevis pins (C) and cotter pins (D) are not missing from door hinges (E).
4		Check that door hinges (E) are not cracked.
5		Check that access plate (F) mounting screws (G) are not loose or missing.



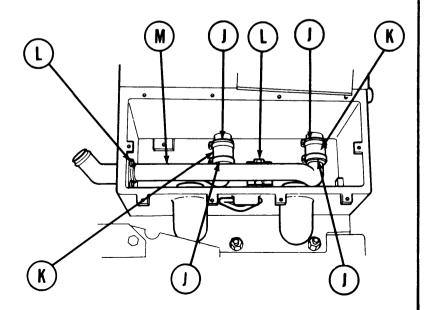


Table 6-1. Improved Clean Air Induction System - Organizational
Maintenance Quarterly Preventive Maintenance Checks and Services
(Continued)

10 sid	ir Cleaners ight and left des) continued)	Open air cleaner door (A). Check that door cam arms (N) are not bent or cracked. Check that air cleaner door seal (P) is not hardened, damaged or missing. Check that filter element (Q) is not damaged or missing.
13		Remove air cleaner outlet hose (para. 6-11a).

14	Air Cleaner Elbows, Hoses, and Clamps (left and right sides)	Check that outlet hose (A) is not cracked, torn, or leaking, and that clamps (B) are not loose or missing.
15		Check that V-band clamp (c) and quick release V-band clamp (D) are not loose or missing.
16		Check that preformed packings (E) are not hardened, cracked, or missing.
17		Check that turbocharger elbow (F), gasket (G), washers (H), and nuts (J) are not damaged or missing.
18		Check that outlet elbow (K), inlet elbow (L), gaskets (M), and mounting nuts (N) are not damaged or missing.
19		Check that inlet hose (P) is not torn or damaged, and that clamps (Q) are not damaged, loose, or missing. Install air clamps extlat have (nore fulls)
		Install air cleaner outlet hose (para. 6-11b).
		M

Table 6-1. Improved Clean Air Induction System - Organizational
Maintenance Quarterly Preventive Maintenance Checks and Services

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES
20	Air Cleaner Filter Clog Indicators (left and right sides)	Using fingers, check if filter clog indicator (A) is loose or missing. If loose tighten finger tight. NOTE Filter clog indicator must be present. If indicator is not installed, plug (B) must be installed in place of indicator (A) until indicator (A) is available.
21		Check indicator (A) for cracks. Check that pipe plug (B) is not missing. Check that clog indicator guard (C) is not missing or damaged.
22		Check indicator reading in window (D). Late Model - A reading of 30 or more means that the filters require cleaning. A reading of 25 indicates that the elements should be cleaned before any extensive move.
		WARNING
		Make sure area around vehicle is clear of personnel and equipment before performing the following step.
		Early Model - Start engine, apply vehicle brakes, put transmission lever in high gear, accelerate to 1800/1900 rpm for no more than 30 seconds, and check filter clog indicator reading. If window (D) shows red, press reset button (E) and repeat procedure above. If window shows red again, clean or replace filter element. If button (E) won't depress, filter clog indicator (A) is defective and must be replaced (para 6-14d).

	Dust Detector Filter Strip (right and	(D) (A)
‡ 	left sides)	NOTE
		Service dust detector filter
		strip quarterly, or after 750 miles operation, or whenever
		dust detector indicated
		ingestion of foreign matter.
23		Open top deck grille doors (TM-10).
24		Remove dust and dirt from filter strips
		cover (A) and compressor housing (B).
25		Loosen three captive screw (C) securing filter strip cover (A) to compressor housing (B). Remove cover (A).
		1
		Remove filter strip (D) with retainer (E) from filter strip cover (A) (para. 6-17a).
26		Clean cover (A) and mounting face of
20		compressor housing (B).
27		Inspect compressor housing chamber (F) for
2,		contamination.
28		Using pipe cleaner (item 7, appendix C), clean compressor
		housing chamber and orifice (F). Use small (not more than 0.030 inch dia.) wire to clean orifice (G). Blow out
		chamber (F) and orifice (G) by mouth using a short piece of
		tubing.
		(F) (- <u>• </u>

Table 6-1. Improved Clean Air Induction System - Organizational
Maintenance Quarterly Preventive Maintenance Checks and Services
(Continued)

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES
29	Dest Detector Filter Strip (right and left sides)	Blow out (by mouth) compressor housing hole (H)
30	(continued)	Inspect cover chamber (J) for contamination. Clean chamber (J) as required.
31		Using pipe cleaner (item 7, appendix C, clean drilled holes (K) and blow out (by mouth).

32	Dust Detector Filter Strip (right and left sides) (continued)	Replace three preformed packings (L) (B)
33	(continued)	Service dust detector filter strip (D). NOTE Make sure all orifices are clean. Cut off approximately two inches from end of filter strip (D). Pull filter strip (D) so that approximately 1/2 inch will extend past edge of cover (A) when filter strip is installed. Install filter strip (D) and retainer (E) in cover (A). Filter strip (D) must be approximately 1/2 inch past edge of cover (A).
		Install cover (A). Finger tighten three captive screws (C). Perform dust detector operational test (para. 6-17j).

Table 6-1. Improved Clean Air Induction System - Organizational
Maintenance Quarterly Preventive Maintenance Checks and Services
(Continued)

ITEM NO.	ITEM TO BE INSPECTED	PROCEDURES
34	Vehicle Exhaust Dust Ejector (VE DES)	Remove check valve (A) (para 6-16b). Inspect check valve (A) to make sure flapper is not sticking or broken. If sticking or broken, install new check valve (para. 6-16b). Install check valve (A) (para. 6-16b).

35	Vehicle Exhaust Dust Ejector System (VEDES) (continued)
36	
37	
38	
39	

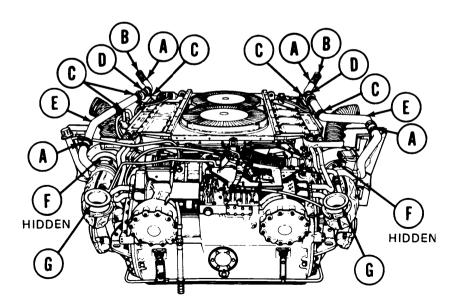
Check all hoses and hose clamps (A) for security. Intake hoses (B) may be loosely installed at this time. Check that hoses are not cracked, torn or otherwise damaged or detriorated.

Check all tube support clamps and brackets (C) for security. Check both check valves (D) for missing screws, loose clamps, or bad gaskets.

Check tube assemblies (E) for cracks, breaks, or corrosion.

Check turbo exhaust gaskets (F) for evidence of exhaust leakage.

Check both exhaust ejectors (G) for wear, cracks, breaks, or dust erosion.



Section III. Troubleshooting

6-5 General

Troubleshooting is a systematic solution of defective components by analysis of trouble symptoms. Table 6-2 lists additional symptoms which could occur in vehicles equipped with the improved clean air induction system.

6-6 Procedures

Table 6-3 provides step-by-step procedures that isolate the defective component in vehicles equipped with the improved clean air induction system.

Table 6-2. Improved Clean Air Induction System Malfunction Index

	MALFUNCTION	Page
1.	AIR CLEANER FILTER ELEMENTS REQUIRE CLEANING TOO OFTEN, ACCOMPANIED BY:	6-14
	A. EXCESSIVELY DIRTY ELEMENT	
	B. LOW POWER AND EXCESSIVE BLACK EXHAUST SMOKE	
2.	SOOT AN D/OR MOISTURE ON FILTER ELEMENT AND/OR DARK COLORED WATER OR MUD IN SCAVENGE TUBE OR CHECK VALVE.	6-14
3.	HIGH FILTER CLOG INDICATOR READING DURING HEAVY SNOW OPERATION ACCOMPANIED BY LOW POWER AND EXCESSIVE BLACK EXHAUST SMOKE.	6-14
4.	NO FILTER CLOG INDICATOR READING ACCOMPANIED BY LOW POWER AND EXCESSIVE BLACK EXHAUST SMOKE.	6-14
5.	ENGINE REVERSAL: VEHICLE HAS STALLED AND ROLLED BACKWARD DOWN AN INCLINE WITH TRANSMISSION IN A FORWARD GEAR	6-14
6.	POWERPLANT WARNING AND DUST DETECTOR WARNING LIGHTS ON, ONE (OR BOTH) DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, AND DUST DETECTOR FILTER STRIP INDICATES CONTAMINATION OF INTAKE AIR BY:	6-15
	A. DUST - (COLOR OF LOCAL SURROUNDINGS)	
	B. FUEL - (CLEAR TO TAN IN COLOR - OILY FEELING) C. SOOT, DRY - (GRAY TO BLACK IN COLOR, DUSTY, AND SMEARS) D. OIL, BLACK, AND WET E. WATER	
7.	POWERPLANT WARNING AND DUST DETECTOR WARNING LIGHTS ON, ONE (OR BOTH) DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, BUT DUST DETECTOR FILTER STRIP DOES NOT INDICATE CONTAMINATION OF INTAKE AIR.	6-16
8.	DUST DETECTOR WARNING LIGHT ON, POWER PLANT WARNING LIGHT OFF, DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED.	6-17
9.	POWERPLANT WARNING LIGHT ON, DUST DETECTOR WARNING LIGHT OFF, DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED.	6-17
10.	DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, BUT DUST DETECTOR WARNING LIGHT AND POWERPLANT WARNING LIGHT DO NOT COME ON.	6-17
11.	POWERPLANT WARNING LIGHT ON, DUST DETECTOR WARNING LIGHT ON, BUT DUST DETECTOR PRESSURE SWITCH(ES) NOT TRIPPED.	6-18
12.	POWERPLANT WARNING LIGHT NOT ON, DUST DETECTOR WARNING LIGHT NOT ON, DUST DETECTOR PRESSURE SWITCH(ES) NOT TRIPPED, DUST INGESTION IS APPARENT.	6-19

MALFUNCTION

TEST OR INSPECTION CORRECTIVE ACTION

VEHICLE EXHAUST DUST EJECTOR SYSTEM (VEDES)

- 1. AIR CLEANER FILTER ELEMENTS REQUIRE CLEANING TOO OFTEN, ACCOMPANIED BY:
 - A. EXCESSIVELY DIRTY ELEMENT
 - Step 1. Inspect exhaust protector cap for free action or damage. Repair or replace as necessary.
 - Step 2. Inspect precleaned and dust scavenge sections of air cleaner through inspection holes for plugging from dust, mud, or snow. Clean out as required.
 - Step 3. Inspect scavenge tubes and hoses for loose clamps, holes, or cracks.
 a. Tighten or replace clamps as required (para. 6-16a).
 - b. Replace tubes or hoses as required (para. 6-16a).
 - Step 4. Inspect check valve for free action. Replace as necessary (para. 6-16 b).
 - B. LOW POWER AND EXCESSIVE BLACK EXHAUST SMOKE
 - Step 1. Inspect air intake at turret bulkhead for clogging or restriction. Clean out as necessary.
 - Step 2. Inspect air cleaner intake hose for collapsed condition. Replace as necessary (para. 6-9).
 - Step 3. Inspect engine intake manifold for leaks. Notify direct support to repair or replace.
- 2. SOOT AND/OR MOISTURE ON FILTER ELEMENT AND/OR DARK COLORED WATER OR MUD IN SCAVENGE TUBE OR CHECK VALVE.
 - Step 1. Inspect exhaust protector cap for free action or damage. Repair or replace as necessary (TM 20-1).
 - Step 2. Inspect check valve for free action. Replace as necessary (para. 6-16b).
- 3. HIGH FILTER CLOG INDICATOR READING DURING HEAVY SNOW OPERATION ACCOMPANIED BY LOW POWER AND EXCESSIVE BLACK EXHAUST SMOKE

Inspect for heavy snow or ice accumulations in air cleaner filter compartment and precleaned dust scavenge sections.

- 4. NO FILTER CLOG INDICATOR READING ACCOMPANIED BY LOW POWER AND EXCESSIVE BLACK EXHAUST SMOKE.
 - Step 1. Inspect and clean filter.
 - Step 2. Start engine and look for reduction in exhaust smoke.
 - Step 3. If a reduction in exhaust smoke occurs replace filter clog indicator; if not notify direct support maintenance.
- 5. ENGINE REVERSAL: VEHICLE HAS STALLED AND ROLLED BACKWARD DOWN AN INCLINE WITH TRANSMISSION IN A FORWARD GEAR

Inspect insides of both air cleaner filter elements. Replace element if charring, soot, fuel, or burn holes are found inside, or if element seals show signs of excessive heat (para. 6-15).

MALFUNCTION

TEST OR INSPECTION CORRECTIVE ACTION

- 6. POWERPLANT WARNING AND DUST DEFLECTOR WARNING LIGHTS ON, ONE (OR BOTH) DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, AND DUST DETECTOR FILTER STRIP INDICATES CONTAMINATION OF INTAKE AIR BY:
 - A. DUST (Color of local surroundings)
 - Step 1. Inspect air cleaner outlet hose for holes or loose clamps
 - I. If clamps are loose, tighten them.
 - b. If hose is damaged, replace (para. 6-11), go to step 7.
 - If air cleaner outlet hose is OK, go to step 2.
 - Step 2. Inspect air cleaner door gasket for damage.
 - a. If door gasket is damaged, replace it (para. 6-14a), go to step 7.
 - b. If door gasket is OK, go to step 3.
 - Step 3. Inspect air cleaner filter element and seal for damage or leaks.
 - a. If filter is damaged or leaking, replace filter element (para. 6-15), go to step 7.
 - . If filter seal is OK, go to step 4.
 - Step 4. Inspect air cleaner outlet elbow for leaking gasket, cracks, or breaks.
 - a. If gasket leaks, replace (para. 6-14 b), go to step 7.
 - b. If elbow is damaged, replace (para. 6-14b), go to step 7.
 - c. If air cleaner outlet elbow is OK, go to step 5.
 - Step 5. Inspect turbo supercharger inlet elbow for leaking gasket, cracks, or breaks. If elbow is damaged, replace (para. 6-12), go to step 7.
 - Step 6. Inspect air cleaner filter clog indicator.
 - a. If filter clog indicator indicates a clogged air cleaner filter (a reading of 25 or more), clean or replace air cleaner filter element (para. 6-15).
 - b. If filter clog indicator does not indicate clogged filter, go to step 7. If filter clog indicator is damaged or missing, replace it (para. 6-14d), go to step 7.
 - Step 7. Change engine oil and filter, run engine 10 hours. Take engine oil sample and submit to AOAP laboratory per LO-12.
 - Step 8. Service dust detector filter strip (PMCS, item 23).
 - B. FUEL (Clear to tan in color Oil feeling)
 - Step 1. Inspect fuel/water separator bleed cap. If damaged, replace (TM 20-1). If OK, go to step 2.
 - Step 2. Inspect primary fuel filter bleed cap. If damaged, replace (TM 20-1). If OK, go to step 3.
 - Step 3. Inspect fuel tank condensate relief outlet plug assembly. If damaged, replace (TM 20-1). If OK, go to step 4.
 - Step 4. Inspect inside of both air cleaner filter elements. Replace element if evidence of fuel, soot, or charring is found inside element. Go to step 5.
 - Step 5. Service dust detector filter strip (see quarterly PMCS, item 23).
 - C. SOOT, DRY (Gray to black in color, dusty, and smears).
 - Step 1. Inspect inside and out of both air cleaner filter elements. Replace element if soot, charring, or fuel is found on element. Go step 2.
 - Step 2. Inspect for exhaust recirculation (TM 20-1).
 - Step 3. Service dust detector filter strip (see quarterly PMCS, item 23).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

- 6. POWERPLANT WARNING AND DUST DEFLECTOR WARNING LIGHTS ON, ONE (OR BOTH) DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, AND DUST DETECTOR FILTER STRIP INDICATES CONTAMINATION OF INTAKE AIR BY: Continued
 - D. OIL, BLACK, AND WET

Notify support maintenance personnel of defective turbosupercharger compressor shaft seal.

- E. WATER (Wet, not oil, possible mud color of local surroundings).
 - Step 1. Inspect air cleaner outlet hose for holes or loose clamps.
 - a. If clamps are loose, tighten them.
 - b. If hose is damaged, replace (para 6-11).
 - 2. If air cleaner outlet hose is OK, go to step 2.
 - Step 2. Inspect air cleaner outlet elbow for leaking gasket, cracks, or beaks.
 - a. If gasket leaks, replace it (para. 6-14b).
 - b. If elbow is damaged, replace (para 6-14 b).
 - Step 3. Service dust detector filter strip (see quarterly PMCS, item 23).
- 7. POWERPLANT WARNING AND DUST DETECTOR WARNING LIGHTS ON, ONE (OR BOTH) DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, BUT DUST DETECTOR FILTER STRIP DOES NOT INDICATE CONTAMINATION OF INTAKE AIR.
 - Step 1. Press plastic cap on dust detector pressure switch to reset switch.

WARNING

Make sure area around vehicle is clear of personnel and equipment before performing step 2.

Step 2. Start engine. Apply vehicle brakes. Put transmission lever in high gear and operate engine at 1800 to 1900 rpm for no more than 30 seconds. If switch trips and warning lights come on again, replace dust detector pressure switch (para 6-17b).

Table 6-3. Improved Clean Air Induction System Troubleshooting - Continued

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

- 8. DUST DETECTOR WARNING LIGHT ON, POWERPLANT WARNING LIGHT OFF, DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED (FIG 3-312.1).
 - Step 1. Set MASTER BATTERY switch to OFF.
 - Step 2. Disconnect connector P1 of harness 12325927 from dust detector warning light box.
 - Step 3. Set MASTER BATTERY switch to ON. Check for 24 vdc between pins-D (positive) and B (negative) of harness connector P1.
 - a. If 24 vdc exists, replace dust detector warning light box (para. 6-17g, M60A3; 6-17h, M728; 6-17i, M48A5AVLB, M60A1AVLB).
 - b. If 24 vdc does not exist, replace dust detector warning light wiring harness 12325927 (6-17f).
- 9. POWERPLANT WARNING LIGHT ON, DUST DETECTOR WARNING LIGHT OFF, DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED (FIG. 6-2).
 - Step 1. Set MASTER BATTERY switch to ON.
 - Step 2. Press DUST DETECTOR WARNING LIGHT lamp to test.
 - a. If light comes on, replace dust detector warning light box (para. 6-17g, M60A3; 6-17h, M728; 6-17i, M48A5AVLB, M60A1AVLB).
 - b. If lamp does not come on, go to step 3.
 - Step 3. Replace DUST DETECTOR WARNING lamp.
 - a. If lamp operates, discard defective bulb.
 - b. If lamp does not operate, go to step 4.
 - Step 4. Set MASTER BATTERY switch to OFF.
 - Step 5. Disconnect connector P1 of harness 12325927 from dust detector warning light box.
 - Step 6. Set MASTER BATTERY switch to ON. Check for 24 vdc between pins A and B of connector P1.
 - a. If 24 vdc exists, replace dust detector warning light box (para. 6-17g, M60A3; 6-17h, M728; 6-17i, M48A5AVLB, M60AlAVLB).
 - b. If 24 vdc does not exist, replace dust detector warning light wiring harness 12325927 (para 6-17f).
- 10. DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, BUT DUST DETECTOR WARNING LIGHT AND POWERPLANT WARNING LIGHT DO NOT COME ON (FIG. 6-2).
 - Step 1. Set MASTER BATTERY switch to OFF.
 - Step 2. Disconnect leads of engine wiring harness 12314608 (circuit 509B) from right and left dust detector pressure switches. Check continuity across terminals of each pressure switch connector.
 - a. If continuity across terminals does not exist, replace pressure switch (para. 6-17b).
 - b. If continuity across terminals does exist, check continuity from connector pin B to ground lead of harness 12314608.
 - c. If ground lead continuity does not exist, replace harness 12314608 (para. 6-17C)
 - d. If ground lead continuity exists, check continuity of engine wiring harness 12314608 (circuit 509B) from pin C of engine connector to pin A of pressure switch connector.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

- 10. DUST DETECTOR PRESSURE SWITCH(ES) TRIPPED, BUT DUST DETECTOR WARNING LIGHT AND POWERPLANT WARNING LIGHT DO NOT COME ON (FIG. 6-2) Continued
 - e. If continuity does not exist through engine wiring harness 12314608, replace harness (para. 6-17c).
 - f. If continuity exists through engine wiring harness 12314608, check continuity through engine-to-bulkhead lead 12325929 (circuit 509B) from engine connector socket C to bulkhead connector pin C.
 - g. If continuity does not exist, replace engine to bulkhead lead assembly 12325929 (circuit 509B (para. 6-17d).
 - h. If continuity exists through engine-to-bulkhead lead 12325929, disconnect hull intermediate lead assembly 12325928 (circuit 509B) from short lead of dust detector warning light harness at dust detector warning light box. Check continuity through lead 12325928 from pin C at bulkhead to short lead connector.
 - i. If continuity does not exist, replace hull intermediate lead 12325928 (circuit 509B (para. 6-17e).
 - j. If continuity exists through hull intermediate lead, go to step 3.
 - Step 3. Disconnect connector P1 of harness 12325927 from dust detector warning light box. Check continuity through circuit 509B of harness 12325927.
 - a. If continuity exists, replace dust detector warning light box (para. 6-17g, M60A3; 6-17h, M728; 6-17i, M48A5AVLB, M60A1AVLB).
 - b. If continuity does not exist replace dust detector warning light harness 12325927 (para 6-17f).
- 11. POWERPLANT WARNING LIGHT ON, DUST DETECTOR WARNING LIGHT ON, BUT DUST DETECTOR PRESSURE SWITCH(ES) NOT TRIPPED (FIG. 6-2).
 - Step 1. Set MASTER BATTERY switch to OFF.
 - Step 2. Disconnect leads of engine wiring harness 12314608 (circuit 509B) from right and left dust detector pressure switches. Check continuity across terminals of each pressure switch connector.
 - a. If continuity across terminals exists, replace pressure switch (para. 6-17b).
 - b. If continuity does not exist, go to step 3.
 - Step 3. Disconnect connector of engine wiring harness 12314608 (circuit 509B) at engine disconnect. Check harness 12314608 (circuit 509B) at engine disconnect by checking continuity to all other connector pins and to connector shells.
 - a. If continuity exists, replace engine wiring harness 12314608 (para. 6-17c).
 - b. If continuity does not exist, go to step 4.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

- 11. POWERPLANT WARNING LIGHT ON, DUST DETECTOR WARNING LIGHT ON, BUT DUST DETECTOR PRESSURE SWITCH(ES) NOT TRIPPED (FIG. 6-2) Continued.
 - Step 4. Disconnect connectors of engine to bulkhead lead assembly 12325929 at engine disconnect and at bulkhead disconnect. Check lead assembly circuit 509B by checking continuity to all other connector pins, connector sheels, and groun.

 a. If continuity exists, replace engine to bulkhead lead assembly 12325929 (para 6-17d).

If continuity does not exist, go to step 5.

- Step 5. Disconnect connectors of hull intermediate lead assembly 12325928 at bulkhead disconnect and at short lead (circuit 509B) from dust detector warning light box harness connector. Check for lead assembly 12325928 at bulkhead connector by checking continuity to all other connector pins, connector shells, and ground.
 - a. If continuity exists, replace hull intermediate lead assembly 12325928 (para. 6-17e).
 - . If continuity does not exist, go to step 6.
- Step 6. Disconnect connector P1 of dust detector warning light wiring harness from dust detector warning light box. Check for circuit between dust detector warning light box and harness assembly by checking for continuity between connector pins C and B and between connector pin C and connector shell.
 - a. If continuity exists, replace dust detector warning light harness (para. 6-17f).
 - b. If continuity does not exist, replace dust detector warning light box (para. 6-17g, M60A3; 6-17h, M728; 6017i, M48A5AVLB, M60A1AVLB).
- 12. POWERPLANT WARNING LIGHT NOT ON, DUST DETECTOR WARNING LIGHT NOT ON, DUST DETECTOR PRESSURE SWITCH(ES) NOT TRIPPED, DUST INGESTION IS APPARENT.
 - Step 1. Service dust detector filter strip (see quarterly PMCS, item 23).
 - Step 2. Check air pressure hoses for blockage and correct installation (para. 6-17 b).
 - Step 3. Perform dust detector operational test (para. 6-17j).
 - a. If dust detector is operational go to step 6.
 - . If dust detector is not operational, go to step 4.
 - Step 4. Replace dust detector pressure switch(es) (para. 6-17b).
 - Step 5. Perform dust detector operational test (para. 6-17h).
 - a. If dust detector is operational go to step 6.
 - b. If dust detector is not operational, notify support maintenance.
 - Step 6. Change engine oil and filter. Run engine 10 hours. Take engine oil sample and submit to AOAP laboratory per LO-12.

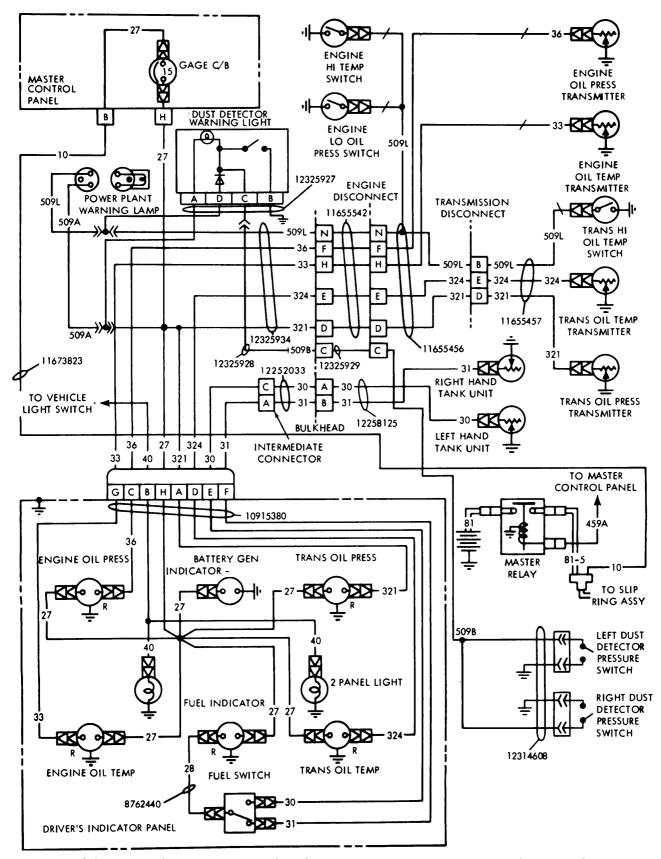


Figure 6-1. Powerplant warning and indicator transmitter circuits - schematic diagram.

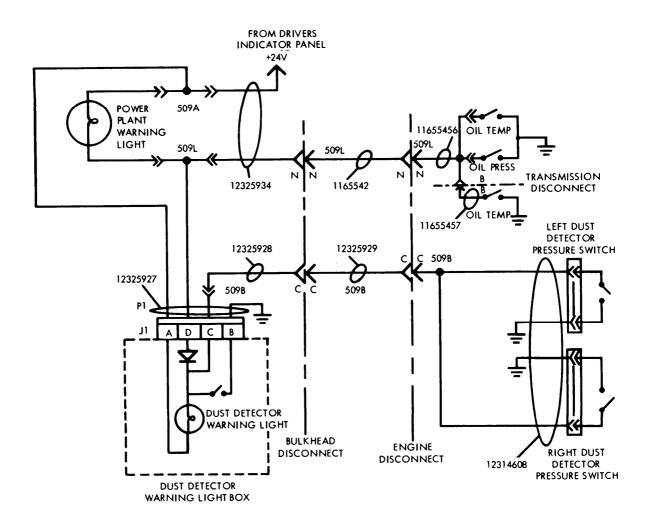


Figure 6-2. Dust detector schematic diagram.

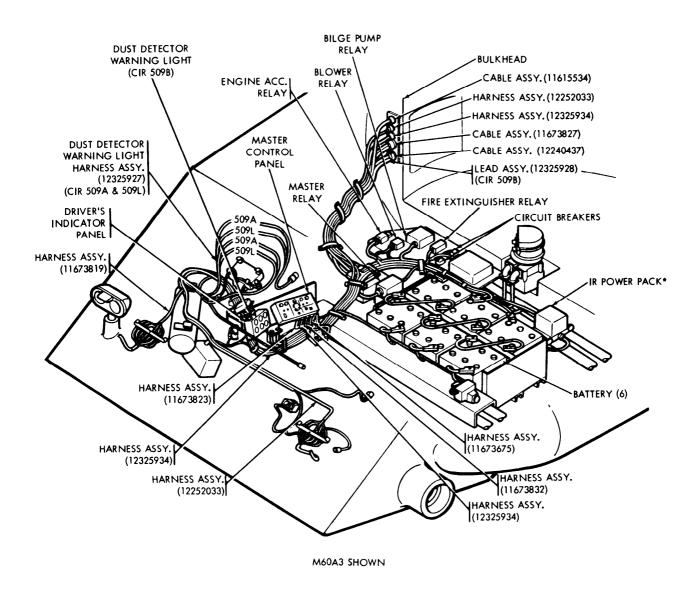


Figure 6-3. Crew compartment wiring harness and components - locational view (sheet 1 of 2).

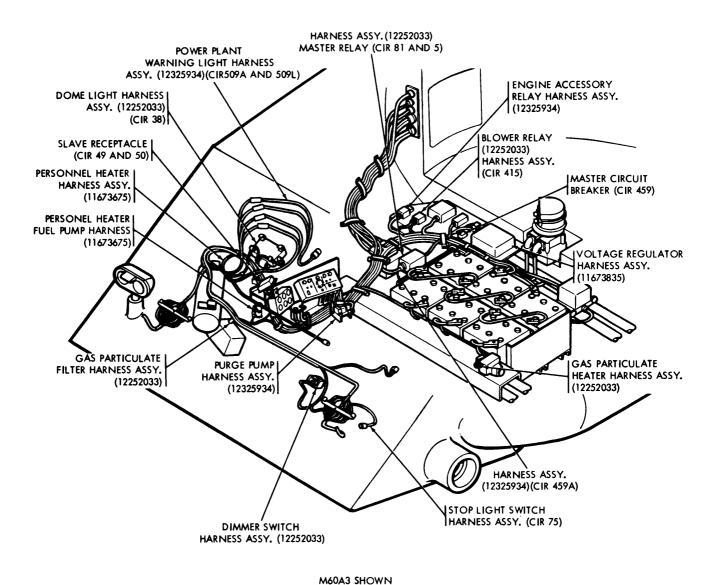


Figure 6-3. Crew compartment wiring harness and components - locational view (sheet 2 of 2).

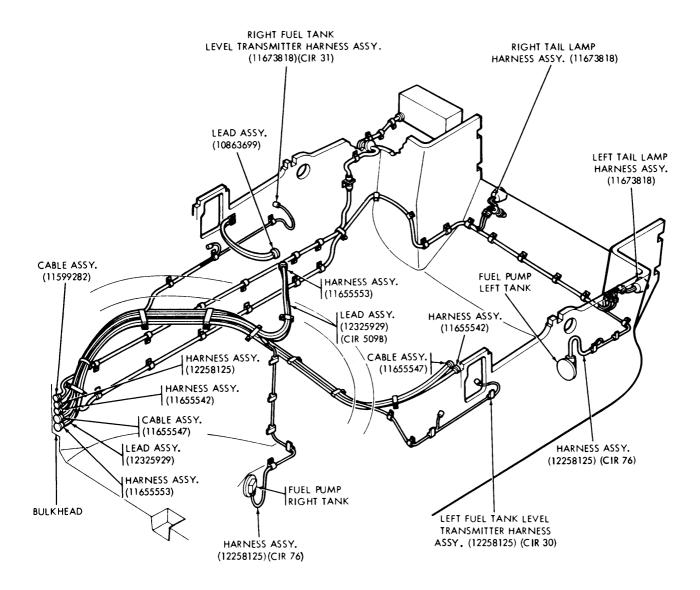


Figure 6-4. Engine compartment wiring harness - locational view.

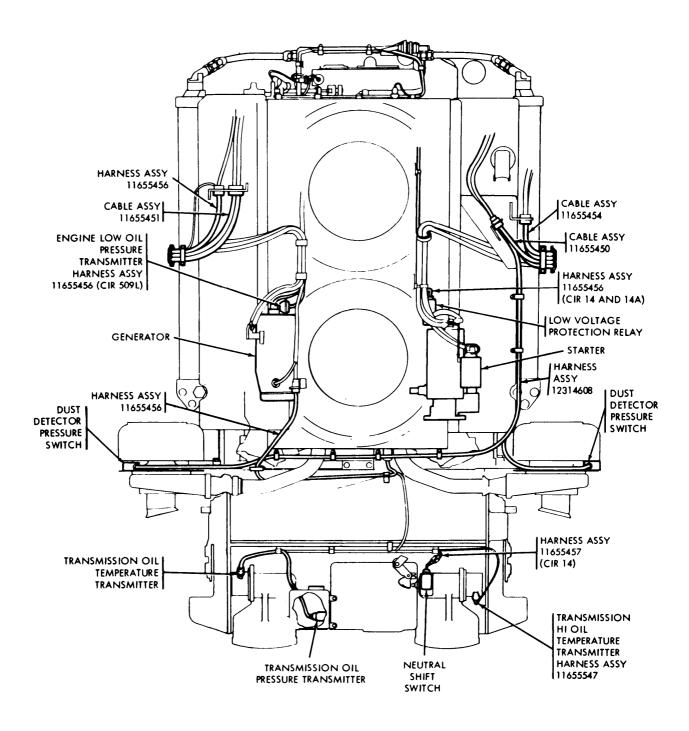


Figure 6-5. Powerplant top - locational view.

Section IV. Maintenance Procedures

6-7. General

This section provides additional maintenance procedures required to support vehicles equipped with the improved clean air induction systems. The procedures are to be used in conjunction with the vehicle organizational maintenance manuals (TM 20-1).

6-8. Powerplant Replacement

During powerplant replacement, the following steps must be performed in addition to the procedures described in the TM-20-1.

- a. Removal. After disconnecting the air cleaner outlet hose:
 - (1) Loosen two hose clamps (fig. 6-6) securing hose between air cleaner exhaust manifold tube and VEDES intake tube.
 - (2) Slide hose back off air cleaner exhaust manifold tube.
- b. Installation. After installing the air cleaner outlet hose and clamps:
 - (1) Install hose between air cleaner exhaust manifold tube and VEDES intake tube (fig. 6-6).
 - (2) Secure hose with two hose clamps.

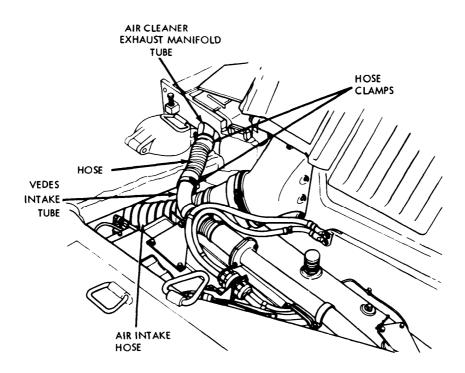


Figure 6-6. VEDES intake tube hose removal/installation (powerplant replacement).

6-9. Air Intake Hose Assembly Replacement (Fig. 6-7).

NOTE

Replacement of left and right air cleaner intake hoses is the same. Left side of vehicle shown.

a. Removal.

- (1) Open top deck grille doors.
- (2) Remove clamp securing air intake hose to air intake elbow (view A). Remove hose from elbow.
- (3) Inside crew compartment (view B), remove eight nuts and lockwashers securing air intake to bulkhead.
- (4) Pull air intake, with air intake hose attached, into crew compartment.
- (5) Loosen clamp securing hose to air intake flange. Remove hose from flange. Secure hose to flange with clamp.

NOTE

If clamp and/or clamp screw is damaged, replace entire clamp assembly. If hose is damaged, replace hose.

b. Installation.

- (1) Inside crew compartment, put small amount of silicone compound (item 5, appendix C) inside air intake hose opening (view B). Put air intake hose on air intake flange. Secure hose to flange with clamp.
- (2) Push hose through bulkhead opening and secure air intake to bulkhead with eight nuts and new lockwashers.
- (3) Put air intake hose on air intake hose elbow (view A). Secure hose to elbow with clamp.
- (4) Close top deck grille doors.

6-10. Air Intake Replacement (Fig. 6-7).

NOTE

Replacement of left and right air intakes is the same. Left side shown.

a. Removal.

- (1) Open top deck grille doors.
- (2) Remove clamp securing air intake hose to hose elbow (view A). Remove hose from elbow.
- (3) Inside crew compartment (view B), remove eight nuts and lockwashers securing air intake to bulkhead. Discard lockwashers.
- (4) Pull air intake, with air in-take hose attached, into crew compartment.
- (5) Loosen clamp securing hose to air intake flange. Remove hose from flange.
- (6) Remove gasket (view C) between air intake and bulkhead. Discard gasket. Clean off old adhesive and gasket material.

- (7) Remove four screws and lockwashers securing air intake cover to air intake. Remove cover and gasket. Discard gasket (view C). Clean off old adhesive and gasket material.
- (8) Remove six nuts and lock-washers (located inside air intake) securing gasket and air intake flange to air intake. Remove gasket and flange. Discard gasket and lockwashers (view C). Clean off old adhesive and gasket material.
- (9) Clean screen if required.

b. Installation.

- (1) Using adhesive (item 1, appendix C) cement new gasket on air intake flange (view C). Secure flange to air intake with six nuts and new lockwashers.
- (2) Using adhesive (item 1, appendix C) cement new gasket on air intake cover. Secure cover to intake with four screws and new lockwashers.
- (3) Using adhesive (item 1, appendix C) cement new gasket to bulkhead opening inside crew compartment.
- (4) Put small amount of silicone compound (item 5, appendix C) on inside of hose opening (view B). Put hose on air intake flange. Secure hose to flange with clamp.
- (5) Position air intake flange over bulkhead opening (view B). Secure intake to bulkhead with eight nuts and new lockwashers.
- (6) Put air intake hose on air intake hose elbow (view A). Secure hose to elbow with clamp.
- (7) Close top deck grille doors.

6-11. Air Cleaner Outlet Hose Assembly Replacement (Fig. 6-7).

NOTE

Replacement of left and right air cleaner outlet hose assemblies is the same. Left side shown.

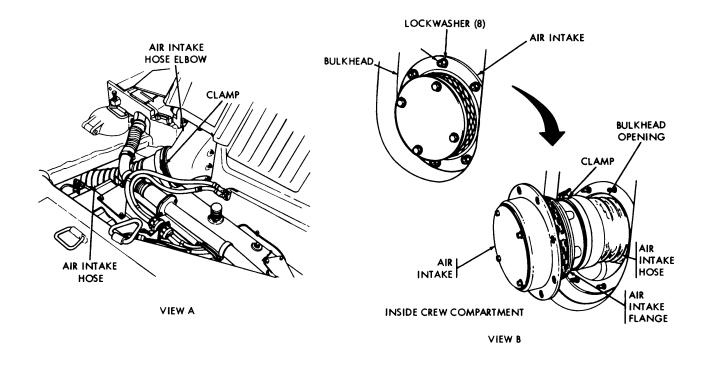
a. Removal.

(1) Open top deck door assemblies.

CAUTION

Do not open top deck doors when air cleaner door assembly is open. Damage to air cleaner door may result.

- (2) Pull pin and release quick release clamp. Remove clamp from hose (views D and E).
- (3) Remove screw clamp.
- (4) Remove hose.
- (5) Cover air cleaner outlet elbow and turbo-supercharger inlet elbow to prevent entrance of foreign matter.
- (6) Remove performed packings (view D). Get rid of packings. Clean old adhesive from packing groove on hose assembly.
- (7) Inspect hose assembly for damage or defective parts. Replace hose assembly if hose or flange is unserviceable.



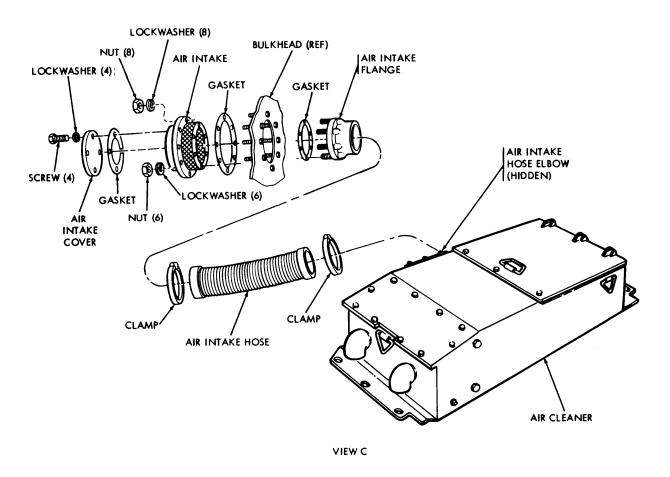


Figure 6-7. Air cleaner hoses, air intake gaskets and screens replacement (sheet 1 of 2).

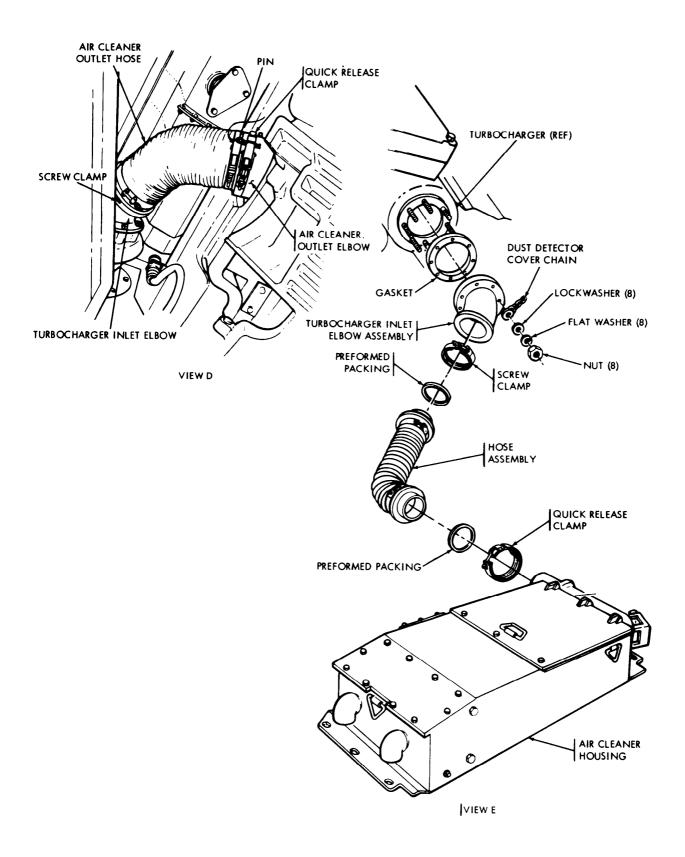


Figure 6-7. Air cleaner hoses, air intake gaskets and screens replacement (sheet 2 of 2).

- b. Installation.
 - (1) Remove covering from air cleaner outlet elbow and turbo-supercharger inlet elbow.
 - (2) Apply adhesive (item 4, appendix C) in grooves of hose flanges (view E) and install new preformed packings.
 - (3) Install hose assembly between air cleaner outlet elbow and turbocharger inlet elbow (view D).
 - (4) Align hose flange to turbo-supercharger elbow flange. position screw clamp on hose and hand tighten screw clamp nut.
 - (5) Position quick release clamp on hose. Loosen adjusting nut on "T" bolt of the quick release clamp.
 - (6) Align the hose flange and the air cleaner elbow. Engage "T" bolt with hasp and close clamp. Insert safety pin.
 - (7) Tighten adjusting nut to eliminate clearance between hasp and "T" bolt. Turn adjusting nut one additional turn. (8-12 lb. in.).
 - (8) Tighten screw clamp nut to 25-35 lb.-in. (3-4 N m).
 - (9) Close top deck door assemblies.

6-12. Turbocharger Inlet Elbow Assembly Replacement (Fig. 6-7).

NOTE

Replacement of left and right turbocharger inlet elbow assemblies is the same. Left side shown.

a. Removal.

CAUTION

Do not open top deck door assemblies if air cleaner is open. Damage to air cleaner door may result.

- (1) Open top deck door assemblies.
- (2) Remove intermediate scavenge tube (para. 6-16c).
- (3) Remove air cleaner outlet hose assembly (para. 6-11a).
- (4) Remove eight nuts, lockwashers, and flatwashers securing turbocharger inlet elbow assembly and dust detector cover chain to turbocharger (view E).
- (5) Remove elbow, gasket, and chain.
- (6) Discard gasket. Clean old gasket material off turbocharger.
- b. Installation.
 - (1) Position new gasket and elbow on study of turbocharger.
 - (2) Put dust detector cover chain in position on one stud.
 - (3) Secure elbow to turbocharger with eight flatwashers, lockwashers, and nuts.
 - (4) Install air cleaner outlet hose assembly (para. 6-11b).
 - (5) Install intermediate scavenge tube (para. 6-16c).
 - (6) Close top deck door assemblies.

6-13. Air Cleaner Replacement (Fig. 6-8)

NOTE

Removal of right and left air cleaners is the same except as noted. Right side shown.

a. Removal.

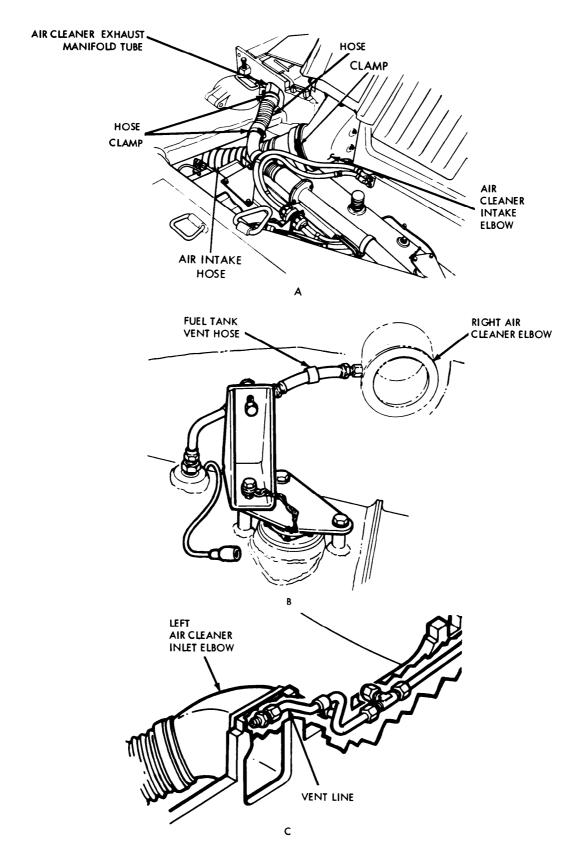


Figure 6-8. Air cleaner replacement (sheet 1 of 2).

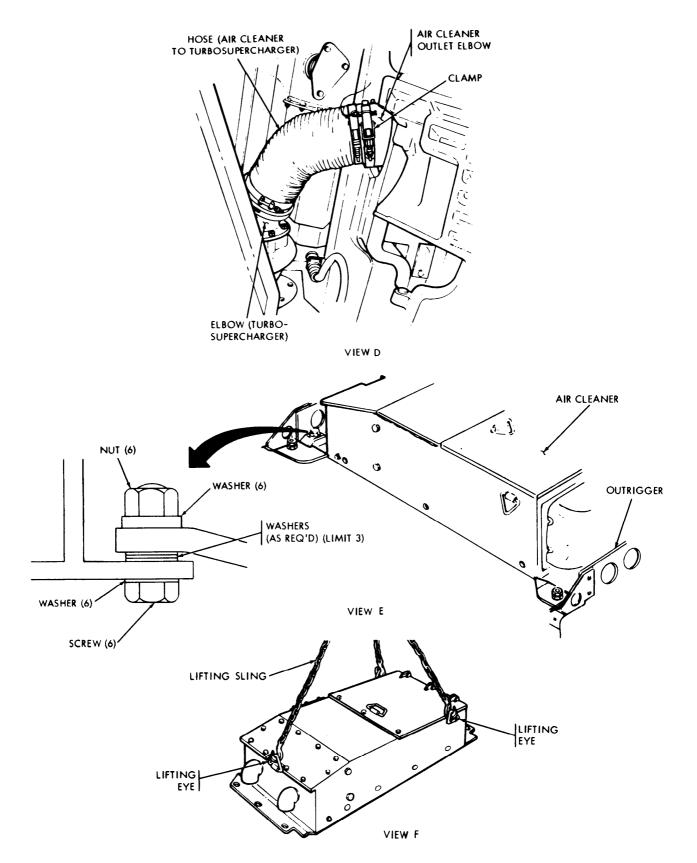


Figure 6-8. Air cleaner replacement (sheet 2 of 2).

CAUTION

Do not open top deck door assemblies if air cleaner is open. Damage to air cleaner door may result.

- (1) Open top deck door assemblies.
- (2) Loosen two hose clamps and slide hose back off air cleaner exhaust manifold tube (view A). Cover manifold and hose openings to prevent entry of foreign matter.
- (3) Loosen clamp at air cleaner and air intake hose, and remove hose from elbow (view A). Cover elbow and hose openings to prevent entry of foreign matter.

NOTE

Steps (4) and (5) apply to right air cleaner. Step (6) applies to left air cleaner.

- (4) Remove air cleaner manifold (para. 6-14e).
- (5) Disconnect fuel tank-to-air cleaner vent hose assembly from right side air cleaner (view B).
- (6) Disconnect final drive vent line from left air cleaner elbow (view C).

NOTE

Steps (7) through (12) apply to both sides.

- (7) Loosen clamp at air cleaner outlet elbow and remove hose from elbow (view D). Cover elbow and hose openings to prevent entry of foreign matter.
- (8) Remove air cleaner fender skirt (TM 20-1). Close top deck grille doors.
- (9) Attach lifting sling to three lifting eyes on the sides of the armor air cleaner (view F).
- (10) Remove six screws, 12 washers, and six nuts securing air cleaner housing to outriggers (view E).

NOTE

Up to three shim washers may be found between air cleaner housing and outrigger at each mounting screw.

- (11) Take strain on sling and guide air cleaner box away from vehicle until air cleaner air intake and outlet elbows are clear of hull openings (view F).
- (12) Lift air cleaner housing clear and away from vehicle. Disconnect sling.
- b. Installation.
 - (1) Attach lifting sling to the three lifting eyes on the sides of air cleaner (view F).
 - (2) Lift housing and position over edge of track with air cleaner housing centrifugal fan exhaust elbows toward front of vehicle and air intake elbow inboard.
 - (3) Move air cleaner housing into position, guiding air intake and outlet elbows through openings in hull.

NOTE

Before tightening nuts, if a gap exists between air cleaner housing and outrigger, use washers MS21200-10 (limit 3 at each mounting bolt) as shims. For air cleaner fit and to maintain clearance between VEDES manifold and hull deck.

(4) Install six screws, 12 washers, and six nuts to secure air cleaner housing to to outriggers. Prime threaded surfaces with primer (item 8, appendix C) and apply locking compound (item 3, appendix C). Install parts as indicated in view E. Install screws from bottom. Tighten nuts to 85-95 lb.-ft. (115-129 N m).

- (5) Disconnect sling.
 - (6) Install air cleaner fender skirt (TM 20-1).
- (7) Remove protective cover from air cleaner air inlet elbow and hose. Install hose on elbow and secure with clamp (view A).
- (8) Remove protective cover from air cleaner exhaust manifold tube and hose. Install hose on tube and secure with clamp (view A).

If hoses and/or clamp assemblies are damaged, have holes or tears, replace.

NOTE

Steps (i) and (j) apply to right air cleaner. Step (k) applies to left air cleaner.

- (9) Install air cleaner manifold (para. e below).
- (10) Connect fuel-tank-to-air cleaner vent hose assembly to right air cleaner only (view B). Connect final drive vent line to left air cleaner elbow (view C).

NOTE

Steps (11) and (12) apply to both sides

- (11) Remove protective covers from air cleaner air outlet elbow and hose. Install hose clamp over flange and tighten clamp (view D).
- (12) Close top deck door assemblies.

6-14. Air Cleaner Repair

- a. Door Assembly Gasket Replacement (Fig. 6-9).
 - (1) Completely remove old gasket and adhesive from gasket recess by scraping or other mechanical means.
 - (2) Apply adhesive (item 1, appendix C) to bottom of gasket recess in door.
 - (3) Install new gasket on door with flat side of rubber gasket toward adhesive.
 - (4) Close door assembly and secure with three screws.
- b. Air outlet elbow replacement (Fig. 6-9).
 - (1) Remove air cleaner (para. g(1) above).
 - (2) Remove 14 nuts securing air outlet elbow to air cleaner.
 - (5) Remove air outlet elbow and gasket. Discard gasket. Cover air cleaner opening.

NOTE

When outlet elbow is removed from air cleaner, cover the air cleaner opening to prevent entry of foreign material.

- (6) Remove protective cover from air cleaner opening.
- (7) Inspect and clean mating surfaces on air cleaner and outlet elbow.
- (8) Position new gasket and outlet elbow on air cleaner.

- (7) Install 14 nuts securing elbow to air cleaner. Tighten nuts to 35 lb. ft. (47 N.m) using sequence shown in figure 6-9. Repeat sequence tightening nuts to 50 lb. ft. (68 N.m).
- (8) Install air cleaner on vehicle (para. (g) (2) above.
- c. Air Intake Elbow Replacement (Fig. 6-9).
 - (1) Remove air cleaner (para. 6-13a above).
 - (2) Remove 10 self-locking nuts securing air intake hose elbow to air cleaner housing.
 - (3) Remove air intake hose elbow and gasket. Discard gasket.

If air intake elbow is to remain off the air cleaner for a period of time, cover the air cleaner opening to prevent entry of foreign material.

- (4) Remove protective cover from air cleaner air intake hose elbow opening if required.
- (5) Inspect and clean mating surfaces of air intake hose elbow and air cleaner.
- (6) Position new gasket and air intake hose elbow on air cleaner.
- (7) Install 10 self locking nuts securing air intake hose elbow to air cleaner in sequence shown on figure 6-9.
- (8) Install air cleaner on vehicle (para. (g) (2) above.
- d. Filter Clog Indicator Replacement (Fig. 6-10).
 - (1) Remove damaged or defective filter clog indicator along with adapter when engine is not operating. If a new filter clog indicator is not installed right away, install plug attached to chain securely into opening in outlet elbow.
 - (2) If plug has been installed into opening (1 above), remove it and install new adapter and filter clog indicator. Install plug in its original position on guard. Push reset button (early model).
- e. Air Cleaner Manifold Replacement (Fig. 6-11).

NOTE

Replacement of left or right manifold is the same. Left side shown.

(1) Removal.

CAUTION

Do not open top deck doors when air cleaner door assembly is open. Damage to air cleaner door may result.

- (a) Open top deck grille doors.
- (b) Loosen two clamps (view A). Remove hose from manifold tube.
- (c) Remove 10 screws and lockwashers securing cover to air cleaner (view A).
- (d) Remove cover and gasket. Discard gasket (view B).
- (e) Loosen four clamps (view C) securing two hoses to manifold and pre-cleaner chamber tubes.
- (f) Remove four screws and lockwashers securing manifold flange to air cleaner. Discard lockwashers.

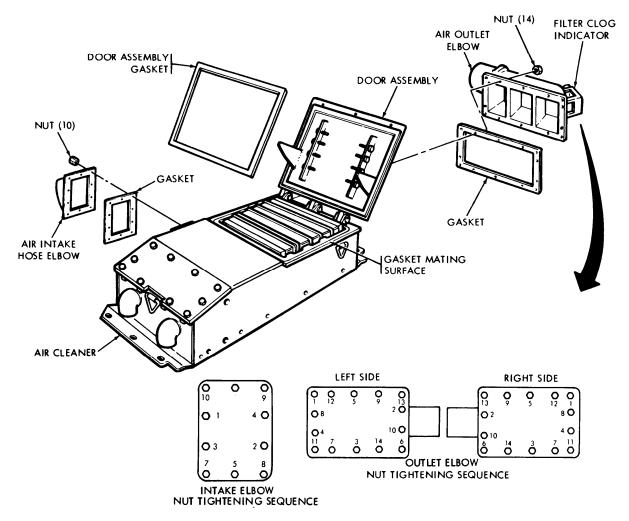


Figure 6-9. Air cleaner repair.

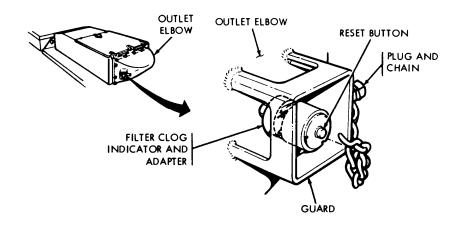


Figure 6-10. Filter clog indicator replacement.

- (g) Remove screw and lockwasher securing manifold secure bracket to air cleaner. Discard lockwasher.
- (h) Slide hose onto manifold until ends of hoses are even with edge of manifold Turn manifold until both inlet tubes are facing up. Remove manifold.

It may be necessary to cut manifold hoses to remove the manifold.

- (i) Remove gasket and tubes from manifold. Scrape off any remaining gasket material from manifold and air cleaner.
- (j) Remove screw and lockwasher securing manifold secure bracket to manifold and remove bracket.

(2) Installation.

- (a) Attach manifold secure bracket to manifold with screw and new lockwasher. Do not tighten.
- (b) Apply silicone compound (item 5, appendix C) inside three hoses (view A and c). Slide two hoses (view C) on manifold.
- (c) Put four clamps on two hoses. Leave clamps loose.
- (d) Put new gasket (view C) on manifold flange.
- (e) Put manifold in position in air cleaner. Slide two hoses on precleaned tubes.

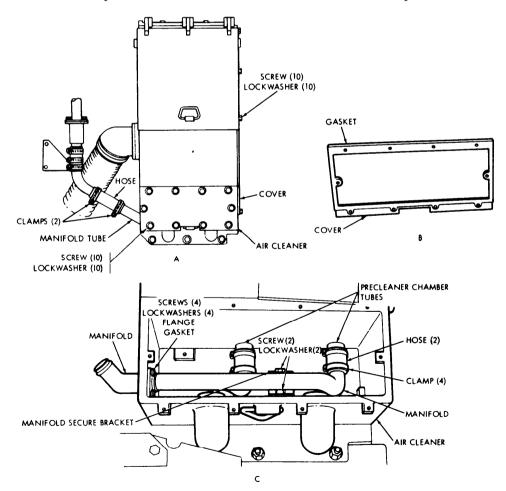


Figure 6-11. Vehicle exhaust dust ejector system (VEDES) air cleaner manifold replacement.

- (f) Coat threads of four screws (view C) with sealing compound (item 15, appendix A). Secure manifold to air cleaner with four coated screws, new lock washers, and new gasket.
- (g) Secure manifold secure bracket to air cleaner with screw and new lockwasher.
- (h) Tighten screw to secure manifold secure bracket to manifold secure bracket to manifold
- (i) Tighten four clamps to secure two hoses to precleaner tubes and manifold
- (i) Slide hose (view A) on manifold tube. Secure with two clamps.
- (k) Cement new gasket (view B) to housing with adhesive (item 1, appendix C).
- (1) Put cover (view A) in position on air cleaner. Secure with ten screws and new lockwashers.
- (m) Close top deck grille doors.

6-15. Air Cleaner Filter Elements.

a. General.

An air cleaner filter clog indicator has been added to each of the air cleaner outlet elbows to indicate when the filters require servicing (fig. 6-10). When the filters are clogged the window on the indicator shows red (early model) or indicates a reading of 25 or more (late model). Remove filters and clean per para. C. Reset indicator by pressing reset button. Refer to para. 6-14d for replacement of filter clog indicator.

NOTE

Care should be taken to keep indicator free from dirt, paint, and debris for easy detection of filter condition.

- b. Removal (Fig. 6-12).
 - (1) Kneel on air cleaner door assembly and remove three screws securing door assembly to air cleaner.

CAUTION

Do not stand on door assembly when it is open.

- (2) Open door until it rests on rear fender box.
- (3) Slide filter assembly toward front of vehicle and carefully lift filter assembly from air cleaner (view B). Care must be exercised to prevent dislodging dust from element (view B). When removing filter assembly, filter seal must be kept clear of door air sealing surface lip to avoid seal damage.
- (4) Cover engine air intake opening to deep out dust.
- (5) Wipe out the air filter compartment with a damp cloth.
- (6) Check door gasket and replace if necessary (para 6-14a).

CAUTION

When storing, handling, or transporting filter element, take care not to damage seal. Do not stand element on seal end.

- c. Inspection and Cleaning (Fig. 6-12, View C).
 - (1) Inspection. Inspect air filter as follows:
 - (a) Check filter element seal for permanent indentation, excessive harness, cracks, damage, or missing.
 - (b) Check filter element frame and both locking pins and springs (if equipped) for damage or missing parts.

- (c) Place light inside of filter element and check for ruptured material. Inspect from outside.
- (d) If inspection reveals any defects, replace filter element.
- (e) If filter is contaminated with dust, clean with compressed air or by washing (para. (2)(b) below).
- (f) If filter is contaminated with carbon, or oil deposits, replace filter element.
- (g) If filter element in the right air cleaner is contaminated with fuel:
 - 1. Replace filter element.
 - 2. Check for proper installation of fuel tank vent valve (para. 3-5).

(2) Cleaning

(a) Compressed air cleaning (Fig. 6-13).

CAUTION

When shaking filter element, keep dust from inside pockets of element. Ensure that all creases and seams are free of dust, and never hit element against any surface.

- 1. Grasp filter element at sealing end and shake vigorously to shake out excessive dust.
- 2. Compressed air used for cleaning purposes must not exceed 90 psi. Use only with effective chip guarding and personal protective equipment (goggles/shield, gloves, etc.).
- 3. Using V-pack cleaner (12326132) (view A), direct stream of compressed air against inside of filter element (view B).
- 4. Move air stream up and down inside length of pleats or pocket until no dust invisibly being blown out.
- 5. Inspect element before installing.

(b) Washing

CAUTION

Do not hit the element against a solid object. Damage may occur to the element.

- 1. Shake or blow off dust before wetting filter element.
- 2. Filter can be immersed in a solution-of warm water (80°F to 110°F) and detergent (item 6, appendix C).
- 3. Soak filter element in cleaning solution for 15 to 20 minutes, then gently agitate it back and forth for 2 to 3 minutes to free dust deposits.
- 4. If a hose is used to wash or rinse filter element, care must be taken not to rupture filter material with water jet. A maximum line pressure of 40 psi is recommended with cool water (35°F to 80°F). Rinse from inside to outside.
- 5. Rinse dust filter element until all traces of dust and detergent are removed. Thorough rinsing is very important to service life of dust filter element.
- 6. Thoroughly dry dust filter element before further use. If circulating air is used; temperature must not exceed 160°F. If circulating air is not used, air dry for approximately 6 hours at 70° to 90° ambient temperature.
- (3) Emergency cleaning. If necessary to clean filter element and neither compressor not washing facilities are available, filter can be partially cleaned by gently tapping it with the palm of hand. Care must be taken to avoid damage to filter element. Banging, hitting, or tapping my cause deformation and permanent damage to filter element.

- (4) Inspection. Inspect filter element carefully for damage after cleaning. Check for rupture in filter material or damage to seal. To detect filter material rupture, place a light inside filter element and inspect from outside. If ruptured, replace with new filter element.
- d. Installation (Fig. 6-12).

Care must be taken to avoid damaging or deforming wire filter element basket during handling.

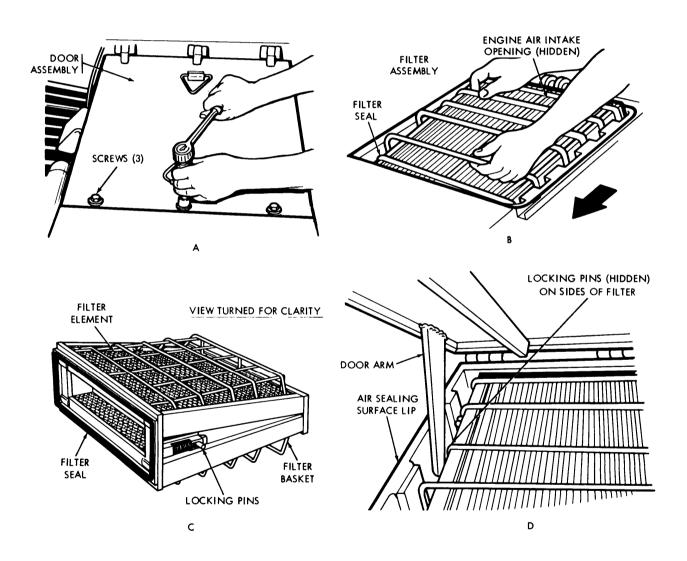


Figure 6-12. Air cleaner filter element replacement and inspection.

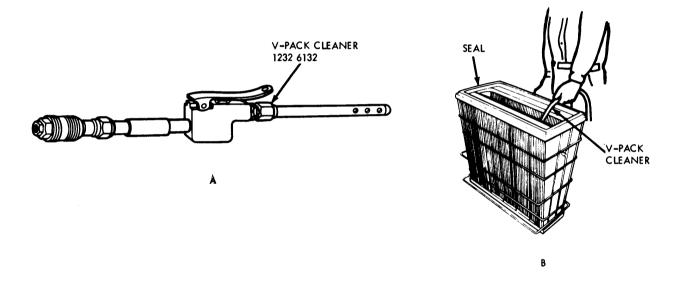


Figure 6-13. Air cleaner filter element compressed air cleaning.

After cleaning the filter element and before installing it, ensure that the inside of the filter element housing is absolutely clean using a damp cloth.

- (1) Remove cover over engine air intake opening.
- (2) Install filter assembly by lowering it to the bottom of air filter compartment and slide filter assembly rearward to seal surfaces. Keep seal clear of sealing surface lip to avoid damage.
- (3) Close door. The filter assembly must be properly positioned in the air cleaner housing so that the door arms (view D) engage the locing pins on the sides of the filter element frame (view C).

CAUTION

Mechanic must kneel on door to start screws, and all three screws must be tightened before force on door is released. Threads may be ripped from box if screws are not tightened all the way before force is released.

- (4) Secure with three screws (view A).
- 6-16. Vehicle Exhaust Dust Ejector System (VEDES).
 - a. VEDES Intake Tube and Hoses Replacement (Fig. 6-14).
 - (1) Removal

NOTE

Replacement of left or right VEDES intake tubes and hoses is the same. Left side shown.

CAUTION

Do not open top deck doors when air cleaner door assembly is open. Damage to air cleaner door may result.

- (a) Open top deck grille doors.
- (b) Remove tube clamp, screw, and locking nut securing VEDES intake tube to bracket. Discard nut.
- (c) Loosen four hose clamps securing VEDES intake tube and two hoses to manifold tube and check valve. Remove VEDES intake tube and hoses.
- (d) Take hoses and clamps off VEDES intake tube.
- (2) Installation.
 - (a) Apply silicone compound (item 5, appendix C) inside two hoses.
 - (b) Put tube clamp in position on VEDES intake tube.
 - (c) Put hoses on VEDES intake tube. Put four hose clamps loosely on hoses.
 - (d) Put VEDES intake tube in position with long hose toward air cleaner manifold tube, and short hose toward check valve.
 - (e) Tighten four hose clamps to secure VEDES intake tube and hose to check valve and air cleaner manifold tube.
 - (f) Secure VEDES intake tube to bracket with tube clamp, screw, and new locking nut.
 - (g) Close top deck grille doors.
- b. Check Valve Replacement (Fig. 6-15). NOTE

Replacement of left or right check valve is the same. Left side shown.

CAUTION

Do not open top deck doors when air cleaner door assembly is open. Damage to air cleaner door may result. Do not step on VEDES tubes. Damage to tubes may result.

- (1) Removal.
 - (a) Open top teck grille doors.
 - (b) Remove VEDES intake tube and hoses (a, above).
 - (c) Remove two screws and two lockwashers securing check valve and gasket to intermediate scavenge tube flange. Discard lockwashers.
 - (d) Remove check valve and gasket from intermediate scavenge tube flange. Discard gasket. Scrape any remaining gasket material off check valve and intermediate scavenge tube flange.
- (2) Installation.
 - (a) Put new gasket and check valve in position on intermediate scavenge tube flange. Secure with two screws and two new lockwashers.
 - (b) Install VEDES intake tube and hoses (a, above).
 - (c) Close top deck grille doors.
- c. Intermediate Scavenge Tube Replacement Left or Right Bank (Fig. 6-16).

NOTE

Replacement procedures are the same for both the left and the right bank intermediate scavenge tubes.

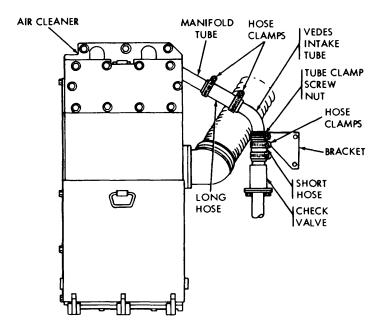


Figure 6-14. VEDES intake tube and hoses replacement.

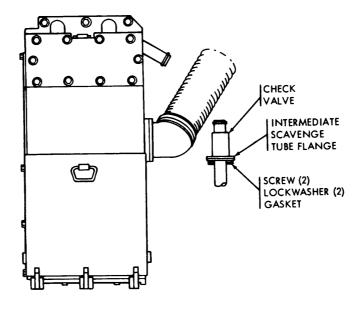


Figure 6-15. Check valve replacement.

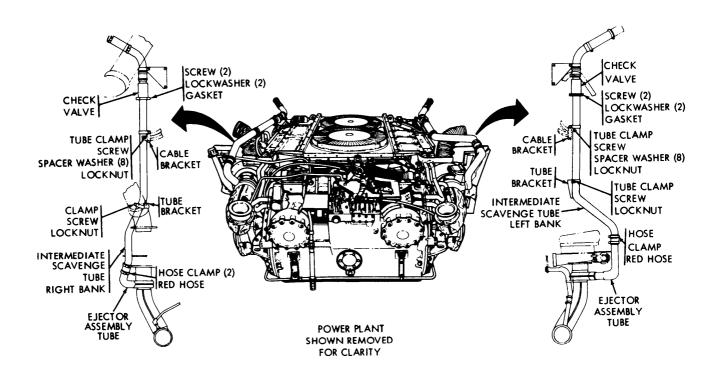


Figure 6-16. Intermediate scavenge tube replacement - left or right bank.

CAUTION

Do not open top deck doors when air cleaner door assembly is open. Damage to air cleaner door may result.

(1) Removal.

- (a) Open top deck grille doors.
- (b) Loosen two hose clamps on red hose securing intermediate scavenge tube to ejector assembly tube.
- (c) Remove tube clamp, screw, and locking nut securing intermediate scavenge tube to tube bracket. Discard nut.
- (d) Remove tube clamp, screw, eight spacer washers, and locking nut securing scavenge tube to cable bracket. Discard nut.
- (e) Remove two screws and washers, securing scavenge tube to check valve.
- (f) Use twisting motion and separate scavenge tube from check valve and from red hose.
- (g) Remove gasket from between scavenge tube flange and check valve. Discard gasket.
- (h) Scrape any remaining gasket material off mating faces of check valve and scavenge tube.
- (i) Inspect red hose for cracks, drying, or other signs of deterioration or damage. Replace if necessary.

(2) Installation.

- (a) Apply silicone compound (item 19, appendix C) inside red hose.
- (b) Put two hose clamps loosely over red hose.
- (c) Put intermediate scavenge tube in position. Join scavenge tube to ejector assembly tube using red hose.
- (d) Align flange and screw holes of scavenge tube with flange and screw holes of check valve.
- (e) Put new gasket between scavenge tube and check valve; secure with two screws and new lockwashers.
- (f) Tighten clamps on red hoes.
- (g) Secure scavenge tube to tube bracket using tube clamp, screw, and new locking nut.
- (h) Secure scavenge tube to cable bracket using tube clamp, screw, eight spacer washers and new locking nut.
- (i) Close top deck grille doors.
- d. Exhaust Ejector Assemblies Replacement (Fig. 6-17).
 - (1) Removal.
 - (a) Remove transmission shroud (TM 20-1).
 - (b) Remove top deck assembly (TM 20-1).
 - (c) Remove powerplant (TM 20-1).

NOTE

Step (d) applies to vehicle left side (engine right bank) ejector only (view A).

(d) Loosen nut and disconnect transmission breather tube from ejector assembly (view A).

Steps (e) through (f) apply to vehicle right side (engine left bank) ejector only (view B).

- (e) Remove clamp, screw, and nut securing engine breather adapter tube to ejector assembly bracket (view B).
- (f) Loosen four clamps and hoses securing ends of engine breather adapter tube to engine breather tube and ejector engine breather extension.
- (g) Remove engine breather adapter tube.

NOTE

Steps (h) through (l) apply to both right and left sides.

- (h) Loosen clamps and hose securing ejector assembly to intermediate scavenge tube (views A and B).
- (i) Remove six nuts securing ejector assembly and gasket to turbosupercharger (view A, B, and C). Remove ejector from turbosupercharger. Discard gasket.
- (j) Scrape any remaining gasket material from mating surfaces of turbosupercharger and ejector assembly.
- (k) Loosen clamp and remove clamp and packing from neck of ejector assembly (view C).
- (1) Remove screw, two flatwashers, lockwasher, and nut (11 places) securing two insulation halves to ejector assembly.
- (2) Installation.

NOTE

Steps (a) through (c) apply to both right and left sides.

- (a) Install insulation, if serviceable, on replacement ejector assembly (view C). Secure with screw, two washers, lockwasher, and nut at 11 locations. Use new insulation and hardware as necessary.
- (b) Put packing, if serviceable, on neck of ejector. Secure with clamp. Use new packing if necessary.
- (c) Put new gasket and ejector assembly in position on turbosupercharger studs. Secure ejector assembly to intermediate scavenge tube with hose and two clamps (views A and B). Use new hose and clamps as required. Secure ejector assembly to turbosupercharger with six new locknuts.

NOTE

Steps (d) and (e) apply to vehicle right side (engine left bank) ejector only (view B).

- (d) Secure engine breather adapter tube between engine breather tube and ejector engine breather extension (view B) with two hoses and four clamps. Use new hoses and clamps as required.
- (e) Secure engine breather adapter tube to ejector assembly bracket with clamp, screw, and nut (view B).

Step (f) applies to vehicle left side (engine right bank) ejector only (view A).

- (f) Connect transmission breather tube to ejector assembly (view A). Secure with nut.
- (g) Install powerplant (TM 20-1).
- (h) Install top deck assembly (TM 20-1).
- (i) Install transmission shroud (TM 20-1).

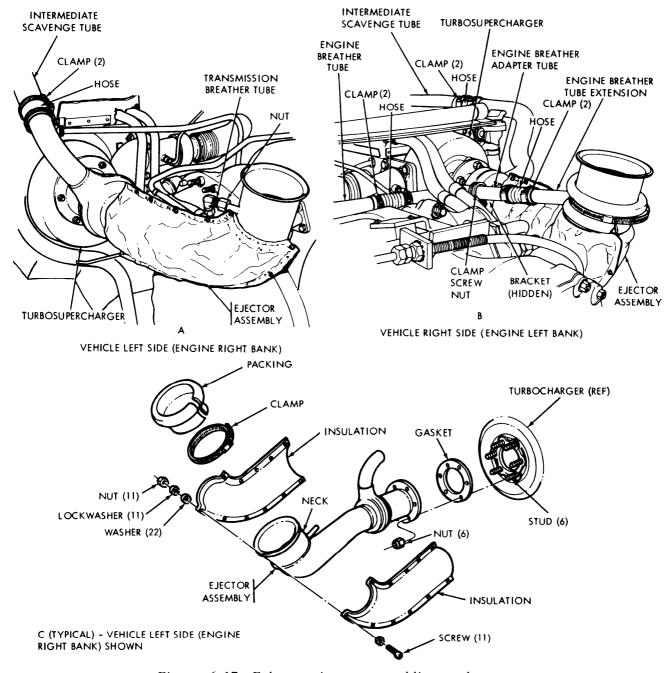


Figure 6-17. Exhaust ejector assemblies replacement.

6-17. Dust Detector

a. Filter Strip Cover Assembly Replacement (Fig. 6-18).

NOTE

Replacement procedures are the same for both the left and right cover assemblies.

WARNING

Engine components are hot after engine has been running. Take precaution to avoid burs.

(1) Removal.

- (a) Open top deck grille doors to expose turbosupercharger compressor housing (view A).
- (b) Clean dust and dirt from filter strip cover.
- (c) Remove hook and chain from filter strip cover.

CAUTION

Take care not to drop filter strip or retainer when servicing dust detector.

- (d) Remove three captive screws securing filter strip cover to turbosupercharger compressor housing. Remove cover.
- (e) Cover compressor housing mounting surface (view B) with clean rag to keep contaminants out of orifices while filter strip cover is off.

(2) Installation

- (a) Make sure compressor housing mounting surface (view B) and orifices are clean and dry. Apply three dabs of adhesive sealer (item 2, appendix C) equally spaced to each of the cover grooves. Wipe off excess adhesive sealer with clean cloth.
- (b) Install new preformed packings in new filter strip cover grooves (view C).
- (c) Put new filter strip in cover (view C).
- (d) Pull out filter strip so that it extends about 1/2 inch past edge of cover.
- (e) Put cover in position on compressor housing. Secure with three captive screws (view A).
- (f) Install hook and chain on cover.
- (g) Close top deck grille doors.

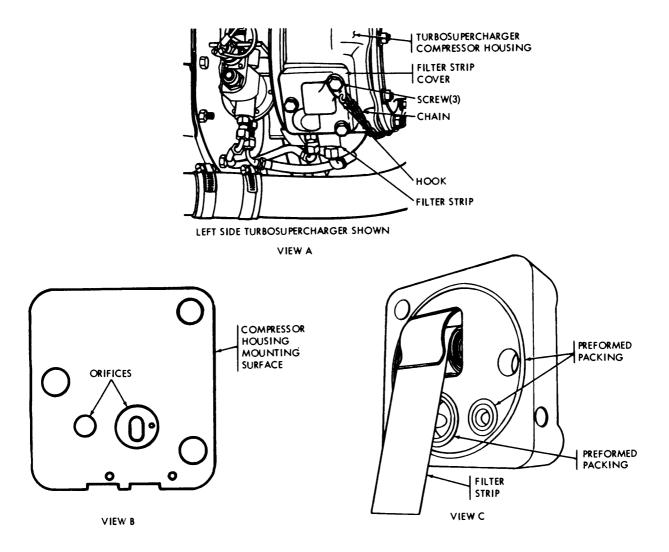


Figure 6-18. Dust detector filter strip cover assembly replacement.

b. Pressure Switch and Air Hoses Replacement (Fig. 6-19).

NOTE

Replacement procedures are the same for pressure switch and air hoses on left and right sides.

(1) Removal

- (a) Open top deck grille doors to expose turbosupercharger and pressure switch (view A).
- (b) Disconnect high and low air pressure hoses from pressure switch and from turbosupercharger compressor housing filter. Remove hoses.
- (c) Remove screw and lockwasher securing pressure switch mounting bracket to turbosupercharger mounting support. Remove pressure switch and mounting bracket.
- (d) Remove screw and lock-washer securing harness assembly ground lead to pressure switch mounting bracket.
- (e) Disconnect harness assembly connector from pressure switch (view B).
- (f) Remove adapters and packings from inlet and outlet (HIGH and LOW) ports of pressure switch. Discard packings.
- (g) Remove two remaining screws and lock washers securing pressure switch to mounting bracket. Separate pressure switch from mounting bracket.

(2) Installation

- (a) Put replacement pressure switch on mounting bracket and secure with two bottom screws and lock washers (Top screw and lock washer will be put in when ground lead is installed later).
- (b) Install adapters and new packings in inlet and outlet (HIGH and LOW) ports of replacement pressure switch.
- (c) Connect harness assembly connector to electrical connector on pressure switch.
- (d) Install harness assembly ground lead on pressure switch mounting bracket with screw and lockwasher.
- (e) Position assembled pressure switch and mounting bracket on turbosupercharger mounting support and secure with screw and lockwasher.

NOTE

Long air pressure hoses go on engine right bank pressure switch, short air pressure hoses go on engine left bank pressure switch.

- (f) Install air pressure hoses on adapters in pressure switch and turbosupercharger compressor filter housing.
- (g) Perform dust detector operational test (para. 6-17j).
- (h) Close top deck grille doors.
- c. Engine Wiring Harness Replacement (Fig. 6-20).
 - (1) Removal
 - (a) Disconnect three battery ground cable assemblies from battery terminals.
 - (b) Remove top deck transmission shroud and engine shroud (TM 20-1).
 - (c) Remove screw and lockwasher securing wiring harness ground lead to right and left bank pressure switch mounting brackets (view A). Disconnect ground lead.

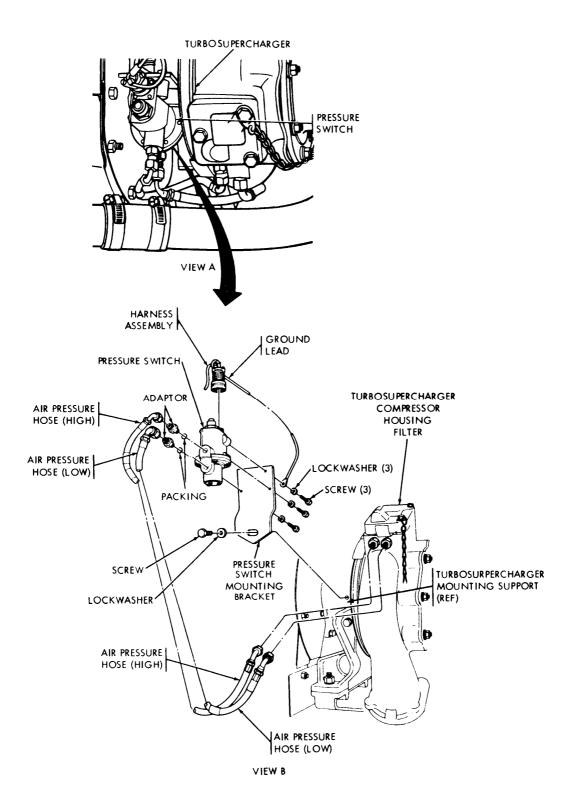


Figure 6-19. Pressure switch and hoses replacement.

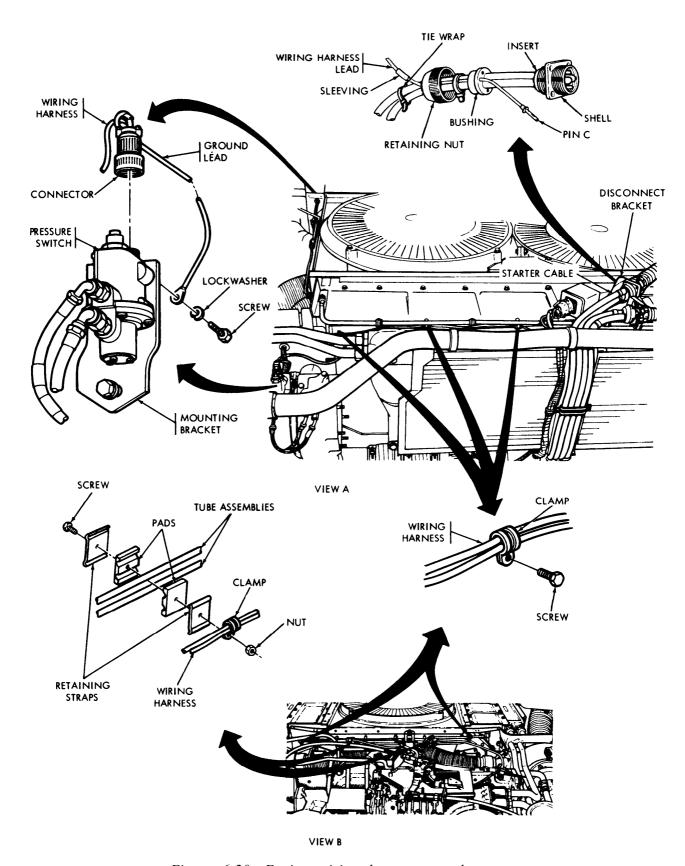


Figure 6-20. Engine wiring harnesses replacement.

- (d) Disconnect wiring harness connector from right and left bank pressure switches.
- (e) Remove screw and nut securing wiring harness and clamp to tube pad retaining straps at two locations at rear of engine (view B). Take clamps off wiring harness.
- (f) Remove screw and clamp securing wiring harness at two locations at rear of engine. (view A). Take clamps off wiring harness.
- (g) Disconnect starter cable at disconnect bracket (view A). Cut tie wraps.
- (h) Remove four screws and nuts securing starting cable connector to disconnect bracket. Remove connector from bracket (view A).
- (i) Unscrew retaining nut from shell. Slide retaining nut back along cable (view A).
- (j) Slide sleeving back along wiring harness lead (view A).
- $\binom{3}{k}$ Slide bushing back along cable (view A).
- (l) Remove pin from position "C" of insert (view A).
- (m) Pull lead from bushing and retaining nut (view A).
- (n) Remove wiring harness from engine.

(2) Installation

- (a) Lay wiring harness in position on engine between pressure switches and starter cable disconnect bracket (views A and B).
- (b) Connect wiring harness long lead connector to right bank pressure switch and wiring harness short lead connector to left bank pressure switch (view A).
- (c) Connect ground leads to right and left bank pressure switch mounting brackets (view A). Secure with screws and new lockwashers.
- (d) At two locations at rear or engine (view B), assembly pads and retraining straps around tube assemblies. Pull slack out of wiring harness and secure wiring harness to retaining straps with clamp, screw, and nut.
- (e) At two locations at rear of engine and at three locations along top left side of engine, route wiring harness along with smoke generator wiring harness and secure both harnesses with engine with clamp and screw (views A and B).
- (f) Temporarily place shell in position in bracket (view A).
- (g) Insert pin into position "C" of insert (view A).
- (h) Push insert into position in shell (view A).
- (i) Slide bushing against insert and slide sleeving against bushing (view A).
- (i) Install retaining nut onto shell and tighten (view A).
- (k) Place connector into disconnect bracket and secure with four screws and nuts (view A).
- (1) Connect starter cable at disconnect bracket (view A). Install tie wraps ar required.
- (m) Perform dust detector operational test (para. 6-17j).
- (n) Install engine shroud, transmission shroud, and top deck (TM 20-1).
- d. Engine to Bulkhead Lead Assembly Replacement (Fig. 6-21).
 - (1) Removal

CAUTION

Loosen retaining nut (view B) of starter feed harness connector before removing powerplant. Failure to do so may damage connector.

- (a) Disconnect three battery ground cable assemblies from battery terminals.
- (b) Remove powerplant (TM 20-1).
- (c) Remove right side bulkhead access cover (TM 20-1).

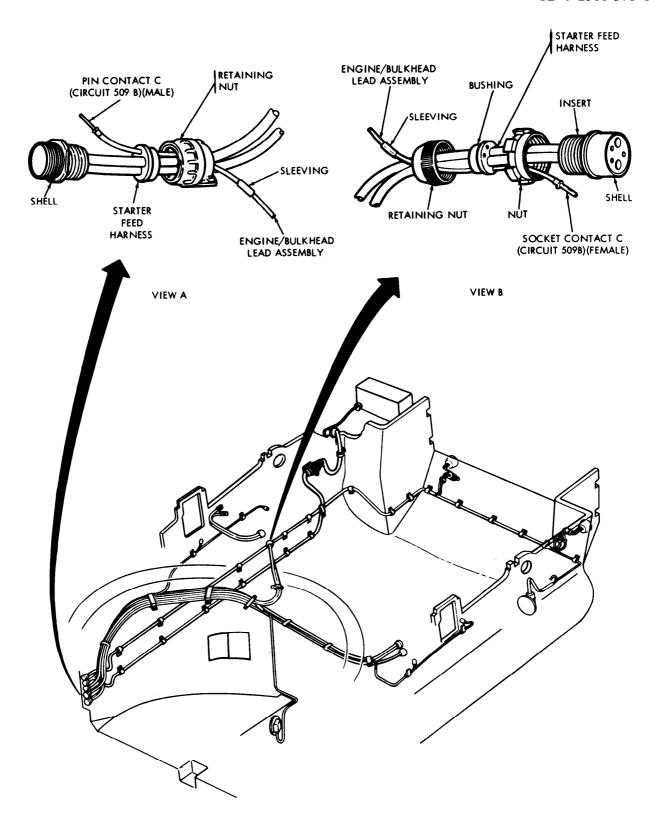


Figure 6-21. Engine to bulkhead lead assembly replacement.

- (d) Disassemble starter feed harness connector at bulkhead end of harness (view A).
- (e) Remove pin C (Circuit 509B) from position "C" of harness connector shell (view A).
- (f) Pull lead assembly out of retaining nut (view A).
- (g) Remove tie wraps securing lead assembly to starter feed harness.
- (h) Disassemble connector at engine end of starter feed harness (view B).
- (i) Remove socket contact C (circuit 509B) from harness connector shell (view B).
- (i) Pull lead assembly from bushing and retaining nut (view B).
- (k) Remove engine to bulkhead lead assembly from vehicle.
- (2) Installation.

CAUTION

Make sure lead is totally encased in feed harness protective wrap assembly.

- (a) Route engine to bulkhead lead assembly along starter feed harness with male pin contact of lead toward bulkhead end of harness and female socket contact of lead toward engine end of harness.
- (b) Pass female socket contact C (Circuit 509 B) of lead through retaining nut and bushing and install contact in position "C" of harness connector shell insert (view B).
- (c) Push bushing into position against insert, slide sleeving against bushing, and tighten retaining nut onto shell.
- (d) At bulkhead end, push male pin contact C (Circuit 509B) of lead through retaining nut and install contact in position "C" of harness connector shell (view A).
- (e) Slide sleeving against shell and tighten retaining nut onto shell.
- (f) Connect starter feed harness connector to bulkhead connector.
- (g) Secure engine to bulkhead lead assembly to starter feed harness with new tie wraps.
- (h) Install right side bulkhead access cover (TM 20-1).
- (i) Install powerplant (TM 20-1).
- e. Hull Intermediate Lead Assembly Replacement (Fig. 6-22).
 - (1) Removal.
 - (a) Disconnect three battery ground cable assemblies from battery terminals.
 - (b) Loosen retaining nut on starter cable at bulkhead connector (view A). Disconnect starter cable at bulkhead connector (view A). Disconnect starter cable at bulkhead connector (view A).
 - (c) Disassemble starter cable connector.
 - (d) Remove hull intermediate lead assembly socket contact 509B from position "C" of plug assembly.
 - (e) Pull lead assembly back through retaining nut.
 - (f) Cut tie wraps securing lead assembly to harness bundle and, working back toward driver's compartment (view B), pull lead assembly from beneath retaining straps.
 - (g) At gage indicator panel in driver's compartment, disconnect lead assembly connector 509B from short lead on dust detector warning light wiring harness.
 - (n) Remove hull intermediate lead assembly from vehicle.

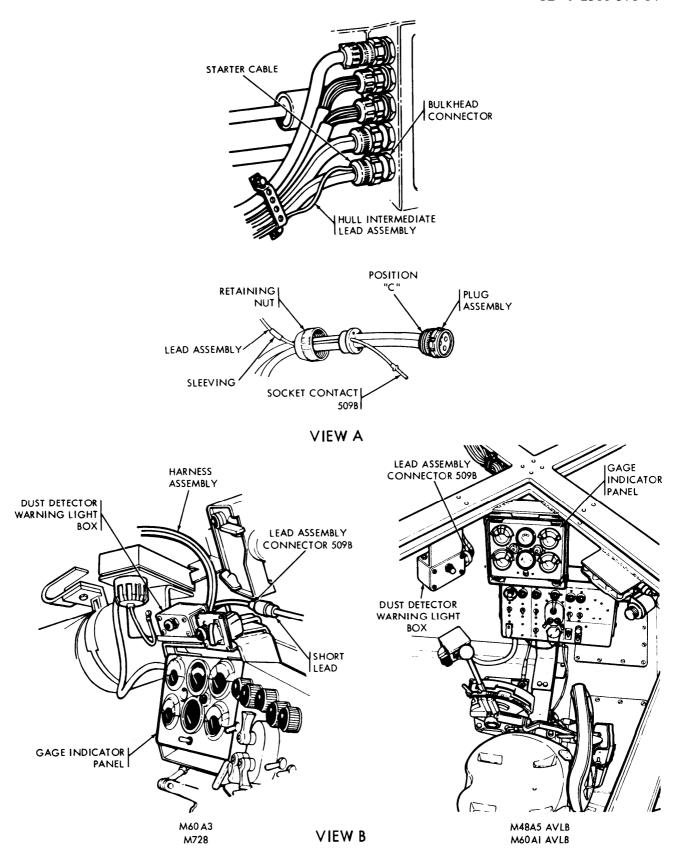


Figure 6-22. Hull intermediate lead assembly replacement.

(2) Installation

- (a) Connect connector 509B of replacement hull intermediate lead assembly to short lead of dust detector warning light harness assembly (view B).
- (b) Route socket contact end of replacement hull intermediate lead assembly beneath cable retaining straps from dust detector warning light box (view B) to starter cable bulkhead connector (view A).
- (c) At bulkhead connector (view A) push lead assembly socket contact 509B through retaining nut and install contact in position "C" of starter cable plug assembly (view A).
- (d) Assemble retaining nut to starter cable plug assembly and connect plug assembly to bulkhead connector.
- (e) Secure lead assembly to harness bundle with tie wrap as required.
- f. Dust Detector Warning Light Wiring Harness Assembly Replacement (Fig. 6-23).

(1) Removal

- (a) Disconnect three battery ground cable assemblies from battery terminals.
- (b) Disconnect four lead connectors connecting dust detector warning light wiring harness to front master harness assembly and powerplant warning light harness.
- (c) Remove screw and lockwasher securing dust detector warning light ground lead alongside of gage indicator panel.
- (d) Disconnect dust detector warning light wiring harness short lead 509B from hull intermediate lead assembly 509B.
- (e) Disconnect harness connector from dust detector warning light box.
- (f) Remove dust detector warning light wiring harness from vehicle.

(2) Installation

- (a) Connect harness connector to dust detector warning light box.
- (b) Connect dust detector warning light short lead 509B to hull intermediate lead assembly.
- (c) Secure dust detector warning light ground lead with screw and lockwasher alongside driver's gage indicator panel.
- (d) Connect dust detector warning light wiring harness lead connectors 509A and 509L to lead connectors 509A and 509L of powerplant warning light wiring harness and front master harness assembly.
- (e) Connect three ground cables to batteries.
- (f) Press test lamp on dust detector warning light box to insure circuit is functioning.
- o Dust Detector Warning Light Box Assembly Replacement (M60A3) (Fig. 6-24).

' (1) Removal

(a) Disconnect harness connector from dust detector warning light box (view A).

CAUTION

Support gage indicator panel mounting bracket when removing light box mounting screws. Gage indicator panel mounting bracket is secured using the same screws and may fall.

- (b) Remove four screws and lockwashers securing bracket, dust detector warning light box assembly, and spacer to switch bracket on gage indicator panel (view B).
- (c) Remove two screws, nuts, and lockwashers securing dust detector warning light box assembly to bracket. Separate box assembly and bracket.

(2) Installation

- (a) Put dust detector warning light box assembly in position on bracket and secure box assembly to bracket with two screws, lockwashers, and nuts. Make sure screws are installed from bottom (view B).
- (b) Put spacer in position on switch bracket on gage indicator panel.
- (c) Put dust detector warning light box assembly and bracket on top of spacer, secure bracket and spacer to switch bracket with four screws and lockwashers.

CAUTION

Do not overtighten harness connector (view A) damage to connector may result.

(d) Tighten harness connector on dust detector warning light box assembly (view A).

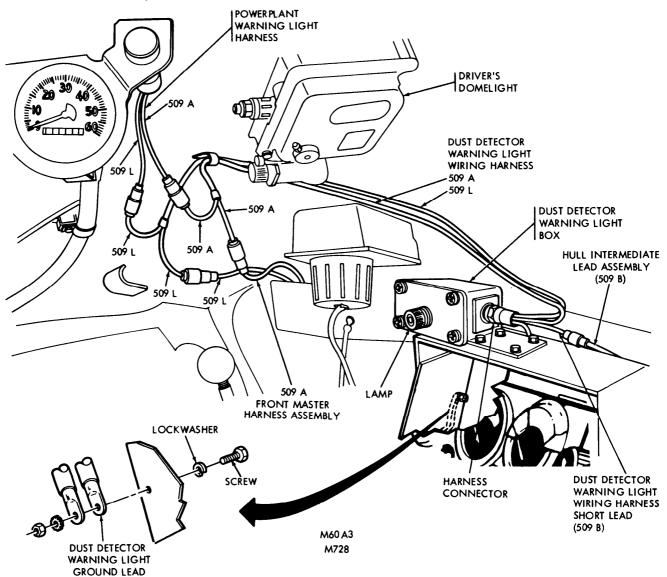


Figure 6-23. Dust detector warning light wiring harness assembly replacement (Sheet 1 of 2).

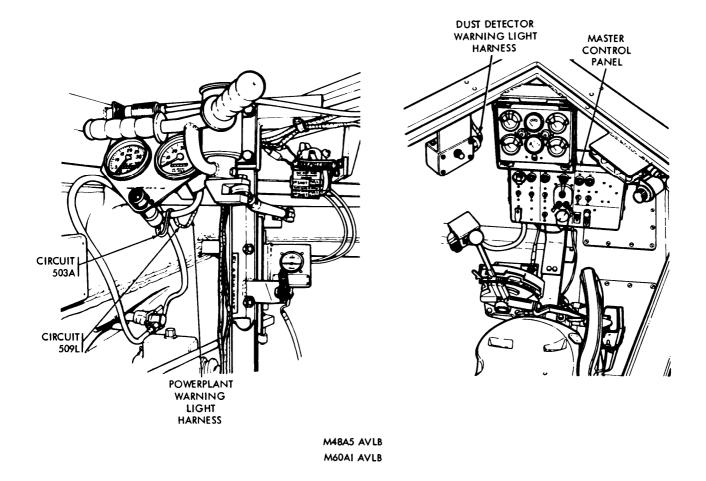
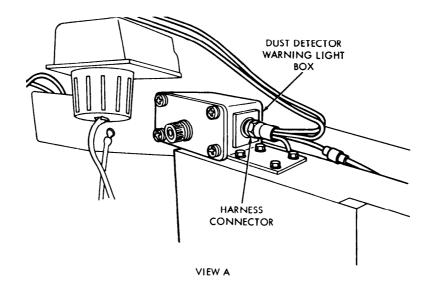


Figure 6-23. Dust detector warning light wiring harness assembly replacement (sheet 2 of 2).



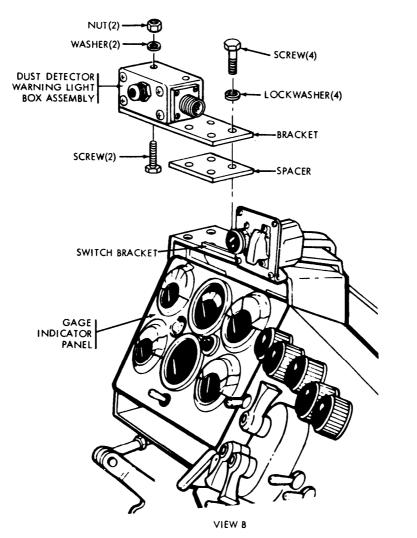


Figure 6-24. Dust detector warning light box assembly replacement (M60A3).

- h. Dust Detector Warning Light Box Assembly Replacement (M728) (Fig. 6-25).
 - (1) Removal.
 - (a) Disconnect harness connector from dust detector warning light box assembly.
 - (b) Remove two screws, nuts and lockwashers securing bracket and dust detector warning light box assembly to gage indicator panel support bracket.
 - (c) Separate dust detector warning light box assembly from bracket.

(2) Installation

- (a) Position bracket and dust detector warning light box assembly on gage indicator support bracket.
- (b) Secure dust detector warning light box assembly and bracket to gage indicator support bracket with two screws, lockwashers and nuts.

CAUTION

Do not overtighten harness connector. Damage to connector may result, if overtightened.

(c) Connect harness connector to dust detector warning light box assembly.

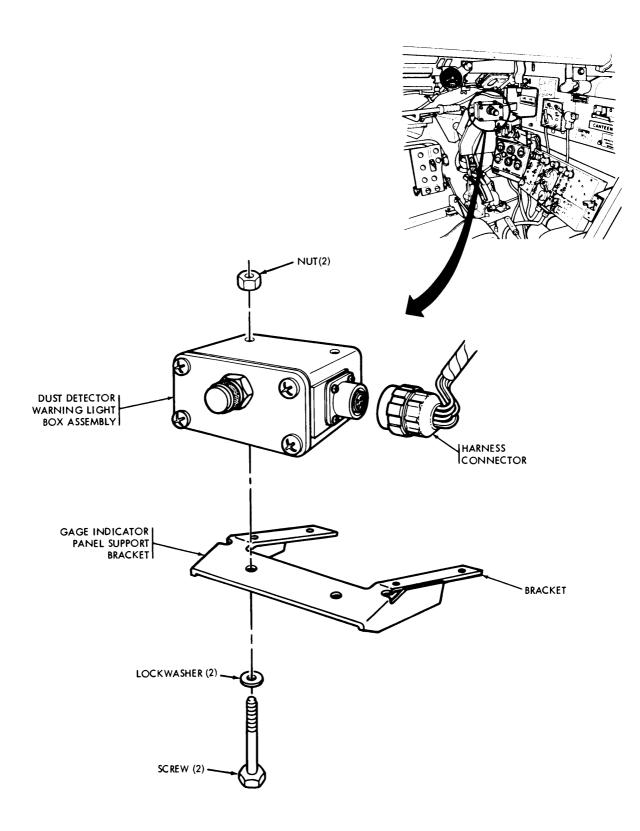


Figure 6-25. Dust detector warning light box assembly replacement (M728).

- i. Dust Detector Warning Light Box Assembly Replacement (M48A5 AVLB, M60A1 AVLB) (Fig. 6-26).
 - (1) Removal
 - (a) Disconnect harness connector from dust detector warning light box assembly.
 - (b) Remove two screws, nuts and lockwashers securing bracket and dust detector warning light box assembly to support bracket.
 - (c) Remove dust detector warning light box assembly from support bracket.

NOTE

If support bracket is to be replaced go to step (d).

- (d) Remove two screws and lockwashers securing support bracket to launcher basket.
- (e) Remove bracket.
- (2) Installation

NOTE

If support bracket was removed go to step (a), if not, go to step (b).

- (a) Position support bracket on launcher basket and secure using two screws and lockwashers.
- (b) Position bracket and dust detector warning light box assembly on support bracket and secure using two screws, lockwashers and nuts.

CAUTION

Do not overtighten harness connector. Damage to connector may result if overtightened.

(c) Connect harness connector to dust detector warning light box assembly.

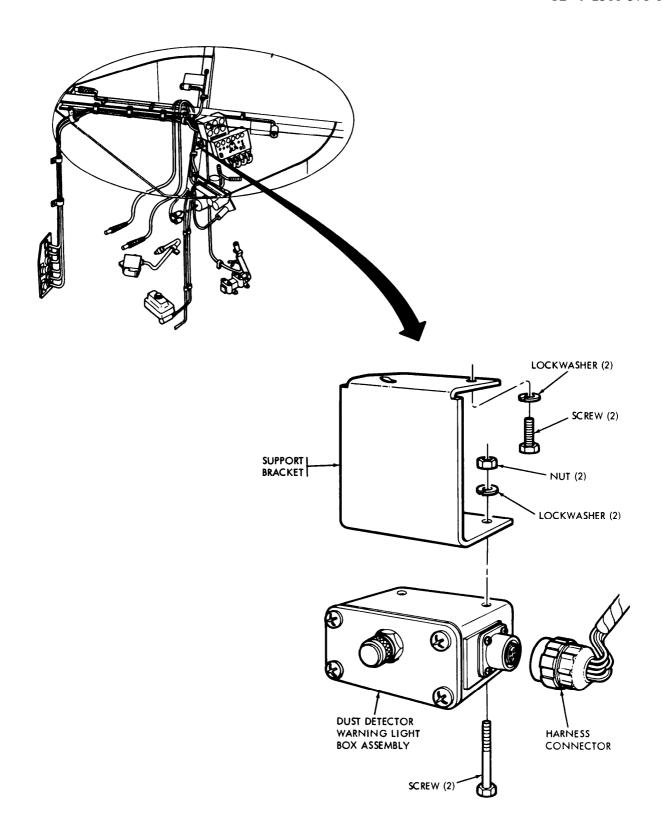


Figure 6-26. Dust detector warning light box assembly replacement (M48A5 AVLB, M60A1 AVLB).

j. Dust Detector Operational Test (Fig. 6-27).

NOTE

Operational test may be performed with powerplant out of vehicle if ground hop kit has starter cable modified to accommodate improved clean air system. If powerplant is out of vehicle, rig for powerplant test run with engine air cleaner (ground hop kit) (TM 20-1).

NOTE

Operational test is the same for both right and left sides.

- (1) Open top deck grille doors.
- (2) Remove dust and dirt from filter strip cover and compressor housing.
- (3) Loosen three captive screws securing filter strip cover to compressor housing, but do not remove cover.
- (4) Insert 1 inch wide strip of non-porous material (plastic, celluloid, etc.) over filter strip.
- (5) Tighten three captive screws.

WARNING

Make sure area around vehicle is clear of personnel and equipment before performing step (6).

- (6) Start engine. Apply vehicle brakes. Put transmission lever in high gear. Operate engine at 1800-1900 rpm for no more than 30 seconds. Observe powerplant and dust detector warning lamp.
 - (a) If powerplant and dust detector warning lamps light, system is operational; go to step (7).
 - (b) If powerplant and dust detector warning lamps do not light, check to see if dust detector switch tripped. A red plunger visible through plastic cover on switch indicates switch has tripped. If switch tripped, go to Troubleshooting Malfunction 10. If detector switch did not trip, repeat step 6 to verify. If switch still does not trip, replace dust detector switch (para. 6-17b).
- (7) Stop engine.
- (8) Loosen three captive screws securing filter strip cover to housing and remove non-porous material from filter strip and cover.
- (9) Tighten three captive screws.
- (10) Press plunger to reset pressure switch.
- (11) Close top deck grille doors.

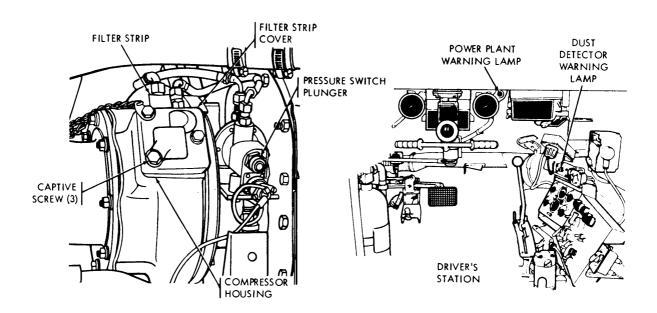


Figure 6-27. Dust detector operational test.

APPENDIX A REFERENCES

TECHNICAL BULLETIN

TB 43-0211

Army Oil Analysis Program (AOAP) Users Guide for Nonaeronautical Equipment.

TECHNICAL MANUALS

TM 5-5420-200-12

Operator and Organizational Maintenance Manual: Launcher, M48A2 Tank Chassis, Transporting for 63 Ft Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (Unit Rig and Equipment Model AVL 48A2) (NSN 5420-00-542-3052).

TM 5-5420-200-20P

Organizational Maintenance Repair Parts and Special Tools List: Launcher M48A2 Tank Chassis, Transporting for 63 Ft Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (Unit Rig and Equipment Model AVL 48A2) (NSN 5420-00-542-3052).

TM 5-5420-200-34

Direct Support and General Support Maintenance Manual: Launcher, M48A2 Tank Chassis, Transporting for 63 Ft Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (Unit Rig and Equipment Model AVL 48A2) (NSN 5420-00-542-3052).

TM 5-5420-200-34P

Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts): Launcher, M48A2 Tank Chassis, Transporting for 63 Ft Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (Unit Rig and Equipment Model AVL 48A2) (NSN 5420-00-542-3052).

TM 5-5420-202-10

Operator's Manual: Launcher, AVLB, M60A1 Tank Chassis, Transporting for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-00-889-2020).

TM 5-5420-202-20

Organizational Maintenance Manual: Launcher M60A1 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-00-889-2020).

TM 5-5420-202-20P

Organizational Maintenance Repair Parts and Special Tools List: Launcher, M60A1 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-00-889-2020).

TM 5-5420-202-34

Direct Support and General Support Maintenance Manual: Launcher, M60A1 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring, Type, Class 60 (NSN 5420-00-889-2020).

TM 5-5420-202-34P

Direct Support and General Support Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools): Launcher, M60A1 Tank Chassis Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-00-889-2020).

TM 5-5420-226-10

Operator's Manual for Launcher and 48A5 Tank Chassis, Transporting for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096).

TM 5-5420-226-20 Series

Organizational Maintenance for M48A5 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096).

TM 5-5420-226-34

Direct Support and General Support Maintenance M48A5 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096).

TM 5-5420-226-20-P

Organizational Maintenance Repair Parts and Special Tools List: M48A5 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096).

TM 5-5420-226-34P

Direct Support and General Support Repair Parts and Special Tools List: M48A5 Tank Chassis, Transporting: for Bridge, Armored Vehicle Launched, Scissoring Type, Class 60 (NSN 5420-01-076-6096).

TM 9-2300-378-20P/1

Organizational Maintenance Repair Parts and Special Tools List for Hull: Tank Combat: Full-Tracked, 152-MM Gun/Launcher, M60A2 (M60A1E2) W/E (NSN 2350-00-930-3590), 105-MM Gun, M60A1 W/E (NSN 2350-00-756-8497), M60 W/E (NSN 2350-00-678-5773); 90-MM Gun, M48A3 W/E (NSN 2350-00-895-9154) and Vehicle, Combat Engineer: Full Tracked, M728 W/E (NSN 2350-00-795-1797).

TM 9-2300-378-35/1

Direct Support and General Support Maintenance Manual for Tank, Combat: Full-Tracked, 152-MM Gun Launcher, M60A2 W/E (NSN 2350-00-930-3590) (Hull, Suspension and Final Drive Only) and Direct Support, General Support and Depot Maintenance Manual for 105-MM Gun, M60A1 W/E (NSN 2350-00-756-8497), 105-MM Gun, M60A1 W/E (NSN 2350-00-756-8497), 105-MM Gun, M60 W/E (NSN 2350-00-678-5773) and Vehicle, Combat Engineer: Full-Tracked, M728 W/E (NSN 2350-00-795-1797), Hull, Suspension, Final Drive, Slipring Assembly, Turret, and Miscellaneous Components.

TM 9-2300-378-35P/1-1

Direct Support, General Support and Depot Maintenance Repair Parts and Special Tools List for Hull; Tank, Combat: Full-Tracked, 152-MM Gun Launcher, M60A2 (M60A1E2) W/E (NSN 2350-00-930-3590); 105-MM Gun, M60A1 W/E (NSN 2350-00-795-1797) and 90-MM Gun, M48A3 W/E (NSN 2350-00-895-9154).

TM 9-2300-378-35P/1-2

Direct Support, General Support and Depot Maintenance Repair Parts and Special Tools List for Hull: Tank Combat: Full-Tracked, 152-MM Gun/Launcher, M60A2 (M60A1E2) W/E (NSN 2350-00-930-3590), 105-MM Gun, M60A1 W/E (2350-00-756-8497), M60 W/E (NSN 2350-00-1678-5773) and 90-MM Gun, M48A3 W/E (NSN 2350-00-895-9154) and Vehicle, Combat Engineer: Full-Tracked, M728 W/E (NSN 2350-00-795-1797).

TM 9-2350-215-10 Series

Operators Manual(s): Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (NSN 2350-00-756-8497) and M60A1/AOS (NSN 2350-01-058-9487).

TM 9-2350-215-20-1 Series

Organizational Maintenance Manual for Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (NSN 2350-00-756-8497) (Hull) and M60A1/AOS (NSN 2350-01-058-9487) (Hull).

TM 9-2350-215-34-1

Direct Support and General Support Maintenance Manual for Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (NSN 2350-00-756-8497) Hull and M60A1/AOS (NSN 2350-01-058-9487) Hull.

TM 9-2350-222-20-1 Series

Organizational Maintenance for Combat Engineer Vehicle, Full Tracked: M728, (NSN 2350-00-795-1797) (Hull).

TM 9-2350-222-20P-1

Organizational Maintenance Repair Parts and Special Tools List Combat Engineer Vehicle, Full Tracked: M728, (NSN 2350-00-795-1797) (Hull).

TM 9-2350-222-34-1

Direct Support and General Support Maintenance Manual for Vehicle, Combat Engineer, Full-Tracked: M728 (NSN 2350-00-795-1797) (Hull).

TM 9-2350-222-34P-1

Direct Support and General Support Repair Parts and Special Tools List: Vehicle, Combat Engineer, Full-Tracked: M728 (NSN 2350-00-795-1797) (Hull).

TM 9-2350-253-10

Operator's Manual for Tank, Combat, Full-Tracked, 105-MM Gun, M60A3 (NSN 2350-00-148-6548) and TTS (Tank Thermal Sight) (NSN 2350-01-061-2306).

TM 9-2350-253-20-1

Organizational Maintenance Manual for Tank, Combat, Full-Tracked, 105-MM Gun, M60A3 (NSN 2350-00-148-6548) and (NSN 2350-01-061-2306) TTS (Tank Thermal Sight) Hull.

TM 9-2350-253-20P-1

Organizational Maintenance Repair Parts and Special Tools List for Tank, Combat, Full-Tracked: 105-MM Gun, M60A3 (NSN 2350-00-148-6548) and (NSN 2350-01-061 -2306) TTS (Tank Thermal Sight) Hull.

TM 9-2350-253-34-1

Direct Support and General Support Maintenance Manual for Tank, Combat, Full-Tracked: 105-MM Gun, M60A3 (NSN 2350-00-148-6548) and (NSN 2350-01-061-2306) TTS (Tank Thermal Sight) Hull.

TM 9-2350-253-34P-1

Direct Support and General Support Maintenance Repair Parts and Special Tools (Including Depot Maintenance Repair Parts and Special Tools) for Tank, 105-MM Gun, M60A3 (NSN 2350-00-148-6548) and Full-Tracked (NSN 2350-01-061-2306) TTS (Tank Thermal Sight) Hull.

TM 9-2350-257-10 Series

Operators Manual(s) for Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (Rise) (NSN 2350-00-116-9765) and M60A1 (Rise Passive) (NSN 2350-01-059-1503).

TM 9-2350-257-20-1 Series

Organizational Maintenance Manual(s) for Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (Rise) (NSN 2350-00-116-9765) and M60A1 (Rise Passive) (NSN 2350-01-059-1503) (Hull).

TM 9-2350-257-20P-1

Organizational Maintenance Repair Parts and Special Tools List: Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (Rise) W/E (NSN 2350-00-116-9765) Hull.

TM 9-2350-257-34-1

Direct Support and General Support Maintenance Manual for Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 Rise (NSN 2350-00-116-9765) and M60A1 (Rise Passive) (NSN 2350-01-059-1503) (Hull).

TM 9-2350-257-34P-1

Direct Support and General Support Maintenance Repair Parts and Special Tools. List (Including Depot Maintenance Repair Parts and Special Tools) for Tank, Combat, Full-Tracked: 105-MM Gun, M60A1 (Rise) W/E (NSN 2350-00-116-9765) (Hull/Automotive).

TM 9-2350-258-10

Operators Manual for Tank, Combat, Full-Tracked, 105-MM, M48A5 (NSN 2350-00-582-5595).

TM 9-2350-258-20-1

Organizational Maintenance Manual for Tank, Combat, Full-Tracked, 105-MM Gun, M48A5 (NSN 2350-00-582-5595).

TM 9-2350-258-20P-1

Organizational Maintenance Repair Parts and Special Tools Lists for Tank, Combat, Full-Tracked, 105-MM Gun, M48A5, (NSN 2350-00-582-5595) Hull.

TM 9-2350-258-34-1

Direct Support and General Support Maintenance Manual for Tank, Combat, Full-Tracked: 105-MM Gun, M48A5, (NSN 2350-00-582-5595) Hull.

TM 9-2350-258-34P-1

Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Tank, Combat, Full-Track: 105-MM Gun, M48A5 (NSN 2350-00-582-5595) Hull.

APPENDIX B ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. Introduction

B-1. Scope.

This manual lists and authorizes spares and repair parts and other special support equipment required for performance of organizational, direct support, and general support maintenance of the M60A1AVLB, M48A5AVLB, M60A3 combat tank and the M728 combat engineer vehicle. It authorizes the requisitioning, issue, and disposition of spares and repair parts as indicated by the Source, Maintenance, and Recoverability (SMR) codes.

B-2. General.

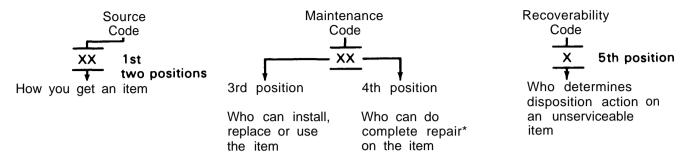
This Repair Parts and Special Tools List is divided into the following sections:

- a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed in NSN sequence.
- b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL for the performance of maintenance.
- c. Section IV. National Stock Number and Part Number Index. list, in National item identification number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

B-3. Explanation of Columns.

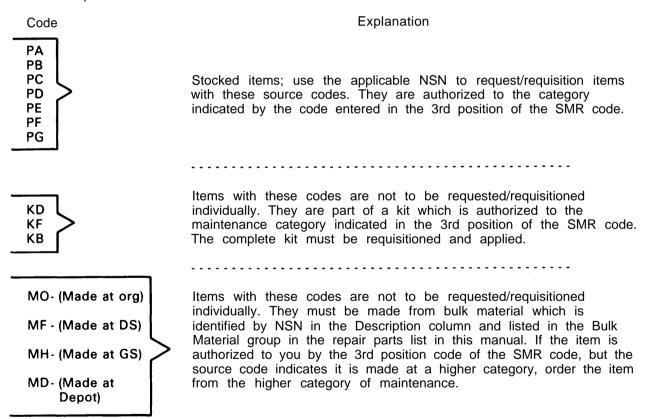
- a. Illustration (Column (1)). This column is divided as follows:
- (1) ((a) FIG NO.) Figure Number. Indicates the figure number illustrating an exploded view of a functional group.
- (2) ((b) ITEM NO.). Indicates the number used to identify items called out in the illustration.

b. SMR CODE (Column (2)). The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



^{*} Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first two positions of the SMR code. Explanations of source codes follow:



Code Explanation

- AO (Assembled by org)
- AF (Assembled by DS)
- AH (Assembled by GS)
- AD (Assembled by Depot)

Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the category of maintenance indicated by the source code. If the 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance.

- XA Do not requisition an "XA"-coded item. Order its next higher assembly. (Also refer to the NOTE below.)
- XB If an "XB" item is not available from salvage, order it using the FSCM and part number given.
- XC Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
- XD Item is not stocked. Order an "XD"-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, may be used as source of supply for items with the above source codes, except for those source coded "XA."

- (2) Maintenance Code. Maintenance codes tell you the category(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR Code as follows:
- (a) The maintenance code entered in the third position tells you the lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

Code Application/Explanation

- C -Crew or operator maintenance done within organizational maintenance.
- O -Organizational category can remove, replace, and use the item.
- F -Direct support category can remove, replace, and use the item.
- H -General support category can remove, replace, and use the item.
- L -Specialized repair activity can remove, replace, and use the item.
- D -Depot category can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair, (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

Code

Application/Explanation

- O -Organizational is the lowest category that can do complete repair of the item.
- F -Direct support is the lowest category that can do complete repair of the item.
- H -General support is the lowest category that can do complete repair of the item.
- L -Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item.
- D -Depot is the lowest category that can do complete repair of the item.
- Z -Nonreparable. No repair is authorized.
- B -No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.
- (3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes

Definition

- Z -Nonreparable item. When unserviceable, condemn and dispose of the item at the category of maintenance shown in 3rd position of SMR Code.
- O -Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational category.
- F -Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support category.

Recoverability

Definition

- H -Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support category.
- D -Reparable item. When beyond lower category repair capability, return to depot. Condemnation and disposal of item not authorized below depot category.
- L -Reparable item. Condemnation and disposal not authorized below specialized repair activity.
- A -Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
- c. National Stock Number (Column (3)). Lists the National stock number (NSN) assigned to the item. Use the NSN for requests/requisitions.
- d. FSCM (Column (4)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.
- e. Part Number (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE: When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered, but go ahead and use or furnish it as the replacement part.

- f. Description (Column (6)). This column includes the following information:
 - (1) The Federal item name and, when required, a minimum description to identify the item.
 - (2) Not Applicable.
 - (3) Items that are included in kits and sets are listed below the name of the kit or set.
- (4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- (5) NSN's for bulk materials are referenced in the description column in the line item entry for the item to be manufactured\fabricated.
 - (6) Not Applicable.

- (7) Not Applicable.
- (8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.
- g. U/M (Column (7)). The Unit of Measure (U/M) indicates the measure (e.g., foot, gallon, pound) or count (e.g., each, dozen, gross) of a listed item. A two-character alpha code (e.g., FT, GL, LB, EA, DZ, GR) appears in this column to indicate the measure or count. If the U/M code appearing in this column differs from the Unit of Issue (U/I) code listed in the Army Master Data File (AMDF), request the lowest U/I that will satisfy your needs.
- h. QTY INC IN UNIT (Column (8)). Quantity Incorporated in Unit (QTY INC IN UNIT) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers).

B-4. Special Information.

- a. Not Applicable.
- b. Bulk materials required to manufacture items are listed in the Bulk Material Group of this manual. NSN's for bulk materials are also referenced in the description column of the line entry for the item to be manufactured/fabricated. Detailed manufacturing instructions for items source coded to be manufactured or fabricated are found in TM9-2350-253-20, TM9-2350-253-34, TM9-2350-222-20, TM9-2350-222-34, TM5-5420-226-20, TM5-5420-226-34, TM5-5420-202-20, and TM5-5420-202-34.
- c. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in TM9-2350-253-20, TM9-2350-253-34, TM9-2350-222-20, TM9-2350-222-34, TM5-5420-226-20, TM5-5420-226-34, TM5-5420-202-20, and TM5-5420-202-34. Items that make up the assembly are listed immediately following the assembled item entry.
- d. Line item entries for repair kits and sets appear as the last entries in the repair parts listing for the figure in which their parts are listed as repair parts.
 - e. Not Applicable.
 - f. Not Applicable.
 - g. Not Applicable.

B-5. How to Locate Repair Parts

- a. When National Stock Number or Part Number is Not Known:
- (1) First. Using the table of contents, determine the functional group or subfunctional group to which the item belongs. This is necessary since figures are prepared for functional groups and subfunctional groups, and listings are divided into the same groups.
- (2) Second. Find the figure covering the functional group or subfunctional group to which the item belongs.
 - (3) Third. Identify the item on the figure and note the item number of the item.
- (4) Fourth. Refer to the Repair Parts List for the figure to find the line item entry for the item number noted on the figure.
 - b. When National Stock Number or Part Number is Known.
- (1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. The NSN index is in National Item Identification Number (NIIN)* sequence. The part numbers in the Part Number index are listed in ascending alphanumeric sequence. Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

*The NIIN consists of the last 9 digits of the NSN (i.e., 530<u>5-01-674-1467)</u>.

NIIN

(2) Second. After finding the figure and item number, verify that the item is the one you are looking for, then locate the item number in the repair parts list for the figure.

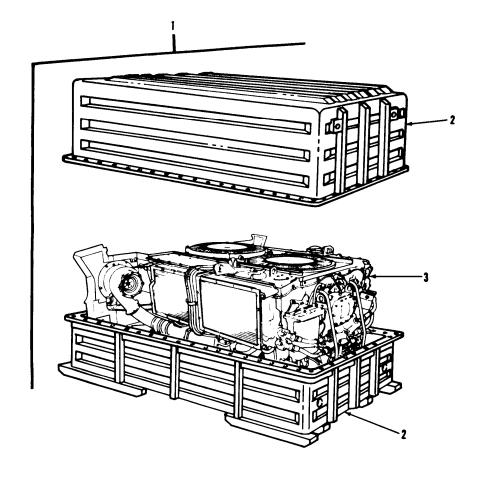


FIGURE B-1. DIESEL ENGINE MODELS 2CA, 2DA, AND SHIPPING CONTAINER.

Section II. Repair Parts List

ILL	1) .US- tion	(2)	(3)	(4)	(5)	(6)	(7)	(8) QTY
(a) FIG. NO.	(b)	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART Number	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
						GROUP 01 ENGINE GROUP 0100: ENGINE ASSEMBLY-DIESEL ENGINE MODEL 2CA, MODEL 2DA, AND SHIPPING CONTAINER		
B-1 B-1 B-1 B-1	1 2 3 3 3	PAFDL PAFDL PAFDL PAFDL	2815-01-149-1313 8145-00-856-8147 2815-01-149-1353	19207	5705074 10912269 12314611 12314641	ENGINE AND CONTAINER CONTAINER SHIPPING & STORAGE ENGINE (2CA ENGINE) ENGINE (2DA ENGINE)	EA EA	1 1 1 1 1

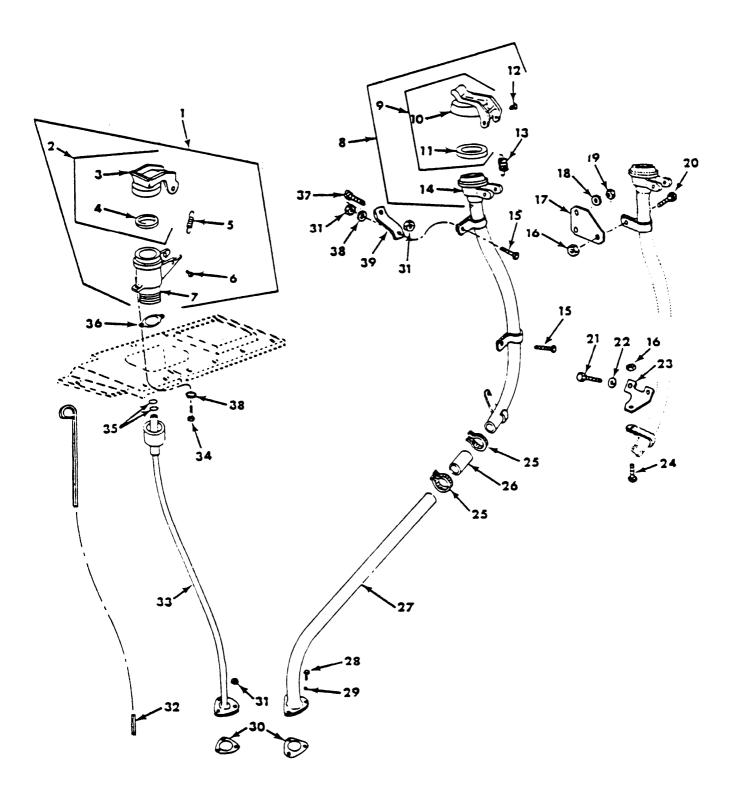


FIGURE B-2. OIL GAGE ROD TUBE, OIL FILLER TUBE, AND RELATED PARTS.

(1	us-	(2)	(3)	(4)	(5)	(6)	(7)	(8) QTY
(a) FIG. NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK Number	FSCM	PART Number	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
						GROUP 0106: ENGINE LUBRICATION SYSTEM- OIL GAGE ROD TUBE, OIL FILLER TUBE, AND RELATED PARTS		
B-2 B-2 B-2 B-2 B-2 B-2 B-2 B-2 B-2 B-2	1 2 3 4 5 6 6 7 8 8 9 10 11 12 13 14 14 15 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 39	PFOZZ PFOZZ PAOZZ PAOZZ PAOZZ PAOCZ PAOCZ PAOCZ PAOCZ PAOZZ	2815-00-406-4621 2990-00-897-2849 5330-00-599-0942 5360-00-410-5836 5305-00-206-3851 2815-01-145-8312 2990-00-897-2849 5330-00-599-0942 5305-00-206-3851 5360-00-410-5836 5306-00-050-1238 4730-00-909-8627 4710-00-192-9436 5305-00-051-4076 5330-00-530-2772 5330-00-679-4961 5310-00-088-0553 6680-00-423-4051 2815-00-399-5302 5306-00-225-9086 5330-01-013-7132 5330-00-410-9803 5306-00-182-2023 5310-00-407-9566 5340-01-145-8307 5340-00-409-2055	19207 19207	10935623 8761109 8717157 8717158 10935614 550559 10935619 11641922 12314593 8761109 8717157 8717158 550559 10935614 11641923 12314592 MS90727-32 MS935842-13 8357967-4 11641927 MS90727-34 110 5-16 8682523 MS21044N5 11684006 11684018 MS90726-31 MS9388-327 10935621 AN5H4A 7410218 12314591 11641928	CAP, FILLER NECK. CAP ASSEMBLY. CAP. PACKING, PREFORMED. SPRING, HELICAL, EXTENSION. SCREW, EXTERNALLY RELIEVED BODY. NECK. FILLER NECK (USE WITH 2C AND 2D ENGINES). CAP ASSEMBLY. CAP. PACKING, PREFORMED. SCREW, EXTERNALLY RELIEVED BODY. SPRING, HELICAL, EXTENSION. TUBE ASSEMBLY (USE WITH 2C AND 2D ENGINES). TUBE ASSEMBLY (USE WITH 2C AND 2D ENGINES). BOLT, MACHINE. CLAMP, HOSE. HOSE, NONMETALLIC (MAKE FROM NSN 4720-00-278-1110). TUBE ASSEMBLY, METAL. SCREW, CAP, HEXAGON. PACKING WITH RETAINER. GASKET. MUT, SELF-LOCKING. GAGE, ROD, LIQUID LEVEL. TUBE, OIL LEVEL GAGE ROD. BOLT, MACHINE. PACKING, PREFORMED. GASKET. BOLT, MACHINE. PACKING, PREFORMED. GASKET. BOLT, MACHINE. WASHER, LOCK. BRACKET, DOUBLE ANGLE (USE WITH 2CA AND 2DA ENGINES). BRACKET, DOUBLE ANGLE (USE WITH 2C AND 2D ENGINES). BRACKET, DOUBLE ANGLE (USE WITH 2C AND 2D ENGINES).	EA EA EA	

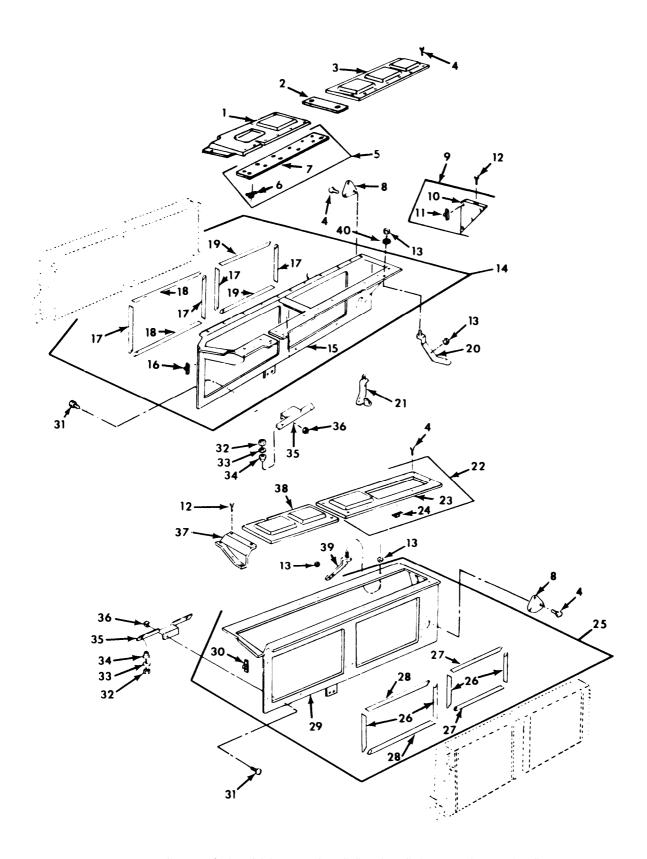


FIGURE B-3. OIL COOLER FRAMES, SHROUDS, AND RELATED PARTS.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ILL	US-	• •						QTY
(a) FIG. NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK Number	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
B-3	1 1 3 4 4 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOF XAOZZ PAOZZ MOOZZ MOOZZ MOOZZ PAOZZ PAFZZ MOOZZ PAFZZ PAFZZ	\$TOCK NUMBER 2815-00-394-9706 2815-00-399-5301 5306-00-741-4584 5306-00-741-4584 2815-00-410-1045 2815-00-394-9700 5310-00-486-0406 5305-00-019-2417 5310-00-019-2417 5310-00-019-2417 5310-00-392-9515 5310-00-486-0406 2930-01-038-8296 5340-01-010-8946 5310-00-486-0412 2930-00-392-9547	19207 19207	NUMBER 11684017 11683939 7414584 7414584 11684132 11683985 11683985-1 11684093-1 192417 MS21044N5 11684041 11684079-1 11684079-2 11684234 12254292 11684246 11684246-1 11684093-2 11684048 11684079-1 11684079-2 11684079-1 11684079-2 11684048 11684079-1 11684079-3 11684079-3 11684048-1 11684079-3 11684079-3	GROUP 0106: ENGINE LUBRICATION SYSTEM—OIL COOLER FRAMES, SHROUDS, AND RELATED PARTS COVER, ACCESS (LEFT BANK). COVER, ACCESS (LEFT BANK). BOLT, ASSEMBLED WASHER (USE WITH 2C AND 2D ENGINES). BOLT, ASSEMBLED WASHER (USE WITH 2CA AND 2DA ENGINES). COVER, ACCESS (LEFT AND RIGHT BANKS). COVER, ACCESS (LEFT BANK). COVER. NUT, PLAIN, PLATE (LEFT BANK). BOLT, ASSEMBLED WASHER (LEFT BANK). NUT, SELF—LOCKING, HEXAGON. FRAME. ENGINE OIL COOLER SUPPORT ASSEMBLY (LEFT BANK). FRAME. NUT, PLAIN, PLATE. RUBBER, STRIP (MAKE FROM NSN 9320—00—576—4981). RUBBER, STRIP (MAKE FROM NSN 9320—00—576—4981). BRACKET, COOLING FAN (LEFT BANK). COVER. NUT, PLAIN, PLATE (RIGHT BANK). FRAME, ENGINE OIL COOLER SUPPORT ASSEMBLY RUBBER, STRIP (MAKE FROM NSN 9320—00—576—4981).	EA E	IN
B-3 B-3 B-3 B-3 B-3 B-3 B-3	31 32 33 34 35 36 37 38 39 40	PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ	5305-00-912-5113 5310-00-274-9364 5365-00-486-0405 5325-00-276-6096 2520-00-394-9713 5310-00-982-4908 2815-00-397-3313 2815-00-432-0056 2930-01-005-1549 5310-00-081-4219	96906 96906 19207 88044 19207 96906 19207 19207 29201	MS51096-59 MS21045-7 11684106 AN931B9-13 11683954 MS21046-6 11683984 11683984 11682768 84001-1	SCREW, CAP, HEXAGON (LEFT AND RIGHT BANKS). NUT, SELF-LOCKING, (LEFT AND RIGHT BANKS). SPACER, SLEEVE (LEFT AND RIGHT BANKS). GROMMET, NONMETALLI (LEFT AND RIGHT BANKS). SUPPORT, OIL COOLER (LEFT AND RIGHT BANKS). NUT, SELF-LOCKING, (LEFT AND RIGHT BANKS). COVER, ACCESS (RIGHT BANK). BRACKET, COOLING FAN. WASHER, FLAT.	EA EA EA EA	12 12 12 6 12 1

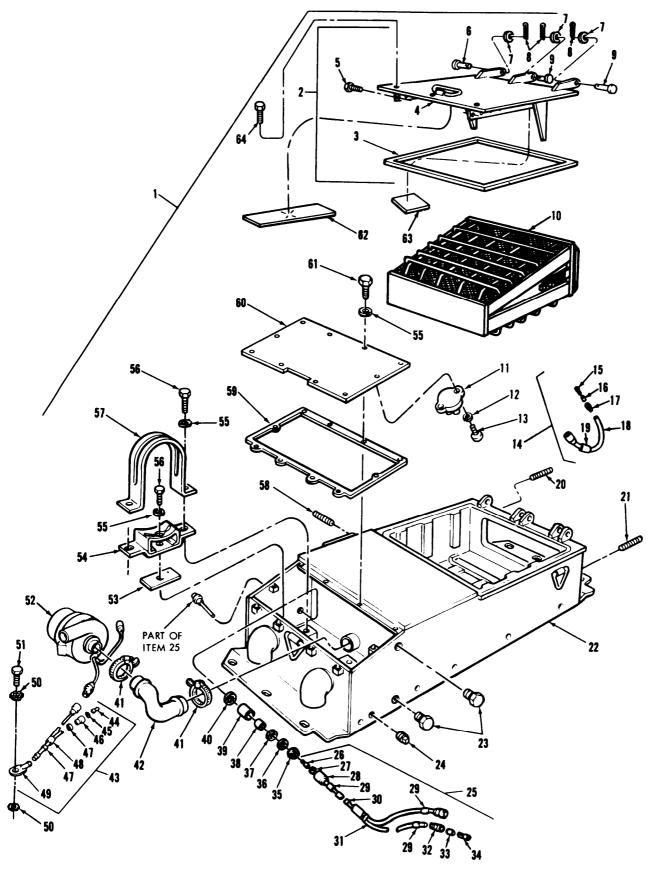


FIGURE B-4. ARMORED TOP LOADING AIR CLEANER AND RELATED PARTS (2C AND 2D ENGINES).

ILL) US-	(2)	(3)	(4)	(5)	(6)	(/)	(8)
TRAT				F	545-	DECORIDION	41/44	QTY
(a) IG. NO.	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U / III	UNI
						GROUP 03: FUEL SYSTEM		
						GROUP 0304:AIR CLEANER-ARMORED TOP LOADING AIR CLEANER AND RELATED PARTS (2C AND 2D ENGINES)		
B-4	1	PAODD	2940-01-035-9827	19204	12251922-1	AIR CLEANER, INTAKE ,LEFT	EA	
B-4	1	PAODD	2940-01-035-9826	19204	12251922-2	AIR CLEANER, INTAKE ,RIGHT	EA EA	
B-4 B-4	2	PAODD PCOZZ	5340-01-016-4429 5330-01-129-0642	19207 19207	12251910 12304136	GASKET	EA	
B-4	4	XADZZ	3330-01-123-0042	19207	12251908	DOOR.	EA	
B-4	5	PAOZZ	5306-01-091-3384	19207	12290914	BOLT, SELF-LOCKING PART OF KIT P/N 5705149	EA	
B-4	6	PAOZZ	5315-00-903-7885	96906	MS20392-7C55	PIN, STRAIGHT, HEAD	EA	
B-4	7	PAOZZ	5310-00-809-5998	96906	MS27183-18	WASHER, FLAT PART OF KIT P/N 5705149	EA	
B-4	8	PAOZZ	5315-00-816-1794	96906	MS24665-285	PIN, COTTER PART OF KIT P/N 5705149	EA	
B-4	9	PAOZZ	5315-00-778-9646	96906	MS20392-7C81	PIN, STRAIGHT, HEAD PART OF KIT P/N 5705149	EA	
B-4	10	PAOZZ	2940-01-142-8260	19207	11669740 M13516/1-1	FILTERCIRCUIT BREAKER	EA EA	1
B-4 B-4	11	PAOZZ PAOZZ	5925-00-026-4767 5310-00-045-4007	81349 96906	MS35338-41	WASHER, LOCK	EA	
B-4	13	PAOZZ	5305-00-889-3001	96906	MS35206-231	SCREW, MACHINE	EA	
B-4	14	PA000	2590-00-606-2346	19207	7383632	LEAD ASSEMBLY	EA	
B-4	15	PAOZZ	2520-00-692-4879	19207	8338564	TERMINAL ASSEMBLY	EA	1
B-4	16	PAOZZ	5970-00-833-8562	19207	8338562	INSULATOR, BUSHING	EA	
B-4	17	PAOZZ	5935-00-833-8561	19207	8338561	CONNECTOR	EA	
B-4	18	MOOZZ	0005 00 350 4640	81349	M13486/1-5	WIRE, ELECTRICAL (MAKE FROM NSN 6145-00-152-6499)	FT	
B-4	19	PAOZZ	9905-00-752-4649 5307-00-678-4760	81349 19207	M43436/1-1 8762863	BAND, MARKERSTUD, PLAIN	EA	
B-4 B-4	20 21	PAOZZ PAOZZ	5307-00-678-4760	19207	11659652	STUD, PLAIN.	EA	
B-4	22	XADDD	3307-00-210-0173	19207	12251911-1	HOUSING, LEFT	EA	
B-4	22	XADDD		19207	12251911-2	HOUSING, RIGHT	EA	
B-4	23	PAOZZ	4730-00-678-4749	19207	10863625	PLUG, PIPE PART OF KIT P/N 5705149	EA	1
B-4	24	PAOZZ	4730-00-580-6740	96906	MS20913-3J	PLUG, PIPE PART OF KIT P/N 5705149	EA	
B-4	25	PA000	2590-00-978-7335	19207	10940163	WIRING HARNESS	EA	-
B-4	26	PAOZZ	5999-00-057-2929	96906	MS27148-2 8338567	CONTACT, ELECTRICAL	EA EA	
B-4 B-4	27 28	PAOZZ PAOZZ	5310-00-833-8567 5935-00-572-9180	19207 19207	8338566	CONNECTOR	EA	
B-4	29	PAOZZ	9905-00-752-4649	81349	M43436/1-1	BAND. MARKER	EA	
B-4	30	MOOZZ		80244	1711725-96	INSULATION, SLEEVIN (MAKE FROM NSN 5970-00-284-8640)	FT	
B-4	31	MOOZZ		81349	M13486/1-5	WIRE, ELECTRICAL (MAKE FROM NSN 6145-00-152-6499)	FT	ı
B-4	32	PAOZZ	5935-00-833-8561	19207	8338561	CONNECTOR	EA	
B-4	33	PAOZZ	5970-00-833-8562	19207	8338562	INSULATOR, BUSHING	EA	
B-4	34	Į.	5940-00-399-6676	19207	8338564	TERMINAL ASSEMBLY	EA	
B-4	35	PAOZZ	5975-00-644-3682 5310-00-705-7352	19207 19207	7056641 7057352	NUT, COUPLING, ELEC	EA EA	
B-4 B-4	37	PAUZZ	5330-00-705-6661	19207	7056661	RETAINER, PACKING.	EA	
B-4	38	PAOZZ	5365-00-772-2972	19207	7722972	BUSHING, RUBBER	EA	
B-4	39	PAOZZ	4730-00-678-4750	19207	8762871	REDUCER, TUBE	EA	
B-4	40	PAOZZ	5330-00-078-4714	19207	10933723	GASKET	EA	
B-4	41	PAOZZ	4730-00-908-3193	96906	MS35842-12	CLAMP	EA	
B-4	42		4720-01-022-6070	19207	12251907	HOSE, PREFORMED	EA	
B-4	43	PA000	2590-00-974-9216	19207	10863589 MS27148-2	CONTACT, ELECTRICAL	EA EA	ı
B-4 B-4	44	PAOZZ	5999-00-057-2929 5310-00-833-8567	96906 19207	MS27148-2 8338567	WASHER, SLOTTED	EA	1
B-4	46	PAOZZ	5935-00-572-9180	19207	8338566	CONNECTOR	EA	
B-4	47	PAOZZ	9905-00-752-4649	81349		BAND, MARKER	EA	1
						CONTINUED NEXT PAGE		

TB 9-2300-378-14

US-	((7)	(8) YTQ
TION SMR NATIONAL FSCM PART DESCRIPTION OCCUPANT	N USABLE On Code		INC
ITEM NUMBER	ON CODE ARMORED TOP ND RELATED NGINES) 6145-00-152-6499) ARTS SEE GROUP 0304: BLY)	ERRER ERRERERER ERRERERERERERERERERERER	

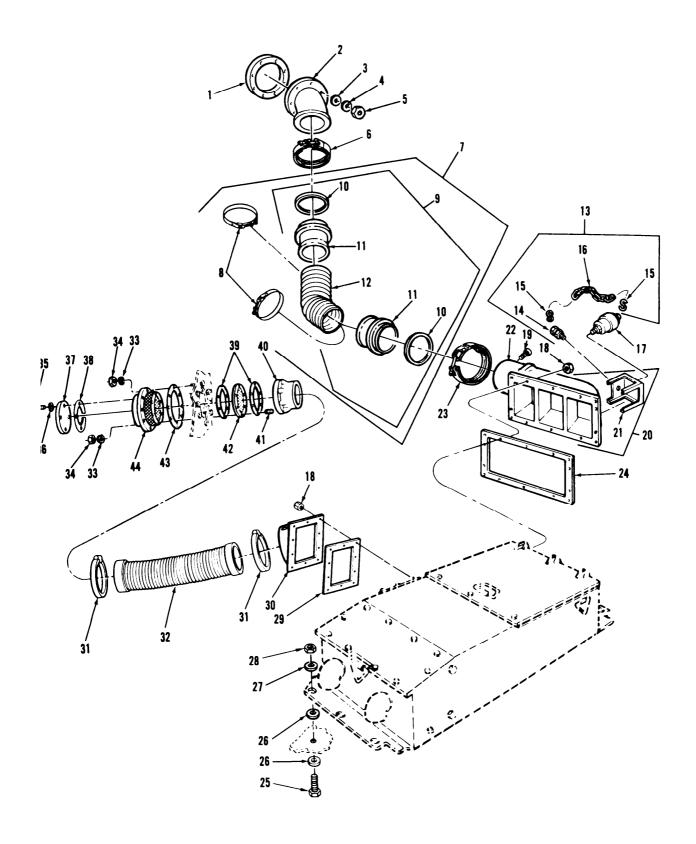


FIGURE B-5. AIR CLEANER HOSE ASSEMBLIES AND RELATED PARTS (2C AND 2D ENGINES).

(1) ILLUS-		(2)	(3)	(4)	(5)	(6)	(7)	(8) QTY
TRAT (a) FIG. NO.	(b)	SMR Code	NATIONAL STOCK Number	FSCM	PART Number	DESCRIPTION USABLE ON CODE	U/M	INC IN UNI
						GROUP 0304: AIR CLEANER-AIR CLEANER HOSE ASSEMBLY AND RELATED PARTS (2C AND 2D ENGINES)		
B-5	1	PAOZZ	5330-00-678-3488	19207	l -	GASKET	EA	2
B-5	2	PAOZZ	2940-00-105-2805	19207	11608144-2	ELBOW, AIR CLEANER ,RIGHT	EA] 1
B-5	2	PAOZZ	2940-00-105-2804	19207		ELBOW, AIR CLEANER , LEFT	EA	1
B-5	3	PAOZZ	5310-00-081-4219	96906	MS27183-12	WASHER, FLAT	EA	10
B-5	4	PAOZZ PAOZZ	5310-00-407-9566	96906 96906	MS35338-45 MS51968-5	WASHER, LOCK	EA	10
B-5 B-5	5 6	PAUZZ	5310-00-880-7746 5340-00-678-6178	19207	8711310	NUT, PLAIN, HEXAGON	EA	1
B-5	7	PA000	4720-01-121-1542	19207	12271067	HOSE ASSEMBLY	EA	
B-5	8	PAOZZ	4730-00-840-8989	96906	MS21920-43	CLAMP, HOSE	EA	
B-5	9	PA000	4720-01-119-7779	19207	12271066	HOSE. ASSEMBLY.	EA	
B-5	10	PCOZZ	5330-00-729-5049	19207	10870861	PACKING, PREFORMED	EA	
B-5	11	XAOZZ		19207	12271064	FLANGE	EA	
B-5	12	XAOZZ		19207	12271066-1	HOSE	EA	
B-5	13	A0000		19207	12304176	PLUG ASSEMBLY (USE WITH P/N 12304178-1 AND 12304178-2)	EA	
B-5	13	A0000		19207	12252143	PLUG ASSEMBLY (USE WITH P/N 12252354-1 AND	EΑ	
۰.	١.,	04077	4720 01 042 7670	10007	10050005	12252354-2)		
B-5	14	PAOZZ	4730-01-043-7679	19207	12252365 MS87006-13	PLUG	EA	
B-5 B-5	15 16	PAOZZ MOOZZ	4030-00-780-9350	96906 81348	RRC271	HOOK, CHAIN, SAFETY	EA FT	
B-5	17	PAOZZ	6685-01-055-5116	19207	11669029-1	RESTRICTION INDICAT (USE WITH P/N 12252354-1 AND	EA	
5-3	''	TAULL	0003-01-033-3110	13207	11003023-1	12252354-2)	-^	
B-5	17	PAOZZ	5895-01-134-8291	19207	11669717	RESTRICTION INDICAT (USE WITH P/N 12304178-1 AND 12304178-2)	EA	
B-5	18	PAOZZ	5310-00-950-0039	96906	MS21044N6	NUT, SELF-LOCKING	EA	2
B-5	19	PAOZZ	4730-00-221-2136	96906	M220913-1S	PLUG	EA	
B-5	20	PA000	4730-01-134-1957	19207	12304178-1	ELBOW, LEFT	EA	
B-5	20	PA000	4730-01-134-1958	19207	12304178-2	ELBOW, RIGHT	EΑ	
B-5	20	PAOZZ	2940-01-037-4976	19207	12252354-1	ELBOW, LEFT (REPLACE WITH P/N 12304178-1)	EA	
B-5	20	PAOZZ	2940-01-037-4977	19207		ELBOW, RIGHT (REPLACE WITH P/N 12304178-2)	EA	
B-5	21	PAOZZ		19207	i	SHIELD (USE WITH P/N 12304178-1 AND 12304178-2)	EA	-
B-5	22	XAOZZ		19207	12252352-1	ELBOW, LEFT (USE WITH P/N 12304178-1)	EA	
B-5 B-5	22 23	XAOZZ PAOZZ	4730-01-132-9086	19207	1	ELBOW, RIGHT (USE WITH P/N 12304178-2)	EA EA	l
B-5	24	PAOZZ	5330-01-128-5650	19207	12304168	CLAMP, LOOPGASKET	EA	
B-5	25	PAOZZ	5305-00-724-7223	96906	1	SCREW. CAP. HEX HEAD.	EA	1
B-5	26	PAOZZ	5310-01-124-6063	96906	MS21206-10	WASHER	EA	•
B-5	27	PAOZZ	5310-00-964-8588	19207	10910174-18	WASHER, FLAT	EA	1
B-5	28	PAOZZ	5310-00-763-8920	96906	MS51967-20	NUT, PLAIN, HEXAGON	EA	1
B-5	29	PAOZZ	5330-00-678-4699	19207	8762775	GASKET, AIR INTAKE	EA	
B-5	30	PAOZZ	2940-00-168-2246	19207	10863874	ELBOW, AIR CLEANER , RIGHT	EA	
B-5	30	PAOZZ	2940-01-080-8023	19207	12257993	ELBOW, AIR CLEANER , LEFT	EA	
B-5	31	PAOZZ	4730-00-062-7435	96906	MS21920-61R	CLAMP, HOSE	EA	
B-5	32	PAOZZ	4720-00-678-4700	19207	8762783	HOSE, PREFORMED	EA	
B-5	33	PAOZZ	5310-00-637-9541	96906	MS35338-46	WASHER, LOCK	EA	2
B-5	34	PAOZZ	5310-00-732-0559	96906	MS51968-8	NUT, PLAIN, HEXAGON	EA	2
B-5	35	PAOZZ PAOZZ	5306-00-225-8497	96906	MS90725-32	BOLT, MACHINE	EA	
B-5 B-5	36 37	PAOZZ PAOZZ	5310-00-167-0721 2940-00-933-9946	96906 19207	MS35333-41 8762777	WASHER, LOCK	EA EA	
B-5	38	PAOZZ	5330-00-678-3489	19207	10863870	GASKET, AIR CLEANER	EA	
B-5	39	PAOZZ	5330-00-078-3489	19207	11591585	GASKET	EA	
_ •	5		100 1004				-^	
	i i					CONTINUED NEXT PAGE		

TB 9-2300-378-14

ILL	1) US- TION	(2)	(3)	(4)	(5)	(6)		(8) QTY
(a)		SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
						GROUP 0304: AIR CLEANER-AIR CLEANER HOSE ASSEMBLY AND RELATED PARTS (2C AND 2D ENGINES) -CONTINUED		-
8-5 8-5 8-5 8-5 8-5	40 41 42 43 44	PAOZZ PAOZZ	2940-00-932-3565 5307-01-006-5515 2940-00-045-6873 5330-00-678-1851 2940-00-168-2243	96906	MS51864-104-16 11591586 8762781	FLANGE, AIR CLEANER. STUD, PLAIN. SCREEN. GASKET. AIR CLEANER, INTAKE.	EA	2 12 2 2 2 2

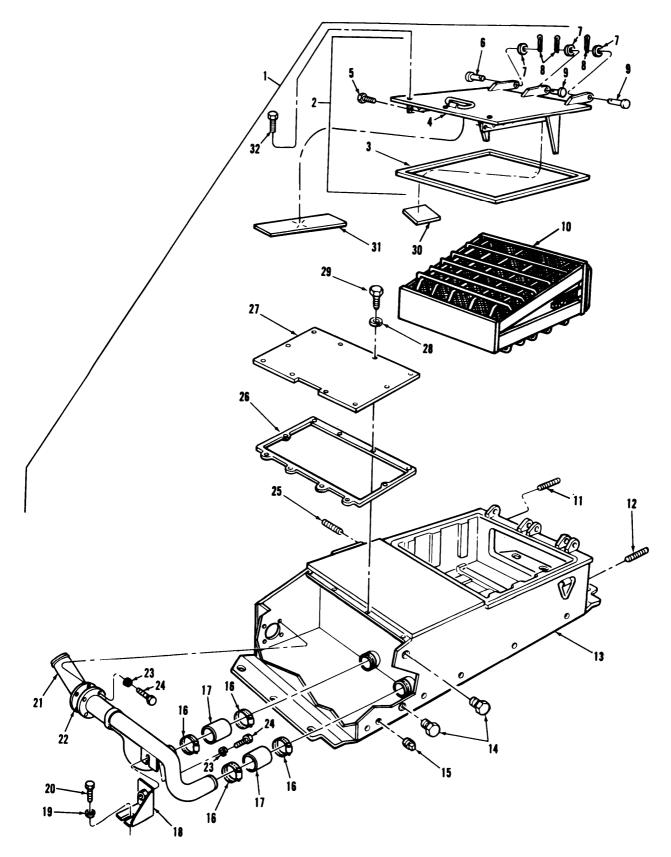
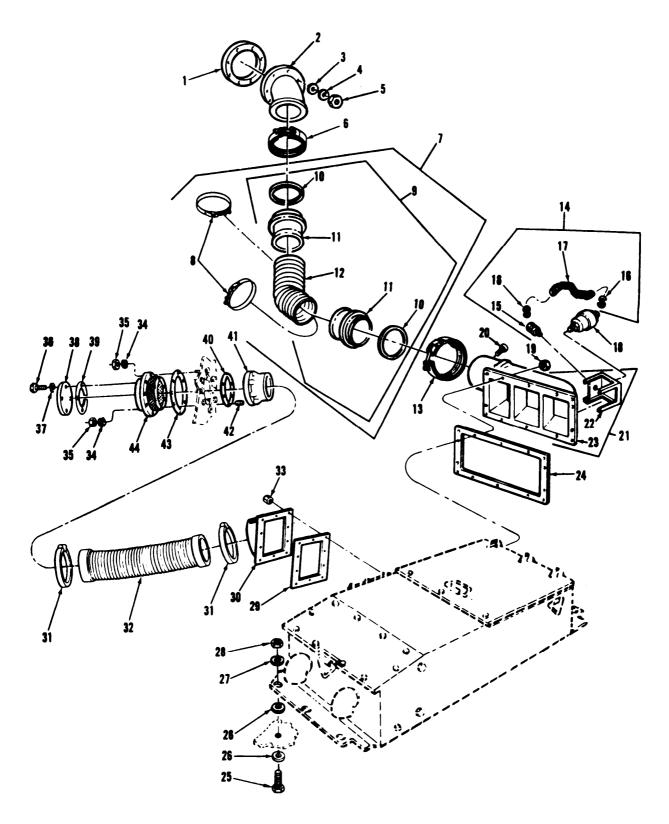


FIGURE B–6. ARMORED TOP LOADING AIR CLEANER AND RELATED PARTS (2CA AND 2DA ENGINES).

(1 ILLI TRAT	US-	(2) SMR	(3)	(4)	(5)	(6)		(8) QTY
(a) IG. NO.	(b) ITEM NO.	CODE	STOCK NUMBER	FSCM	PART Number	DESCRIPTION USABLE ON CODE	U/M	INC
						GROUP 0304: AIR CLEANER-ARMORED TOP LOADING AIR CLEANER AND RELATED PARTS (2CA AND 2DA ENGINES)		
B-6 B-6 B-6	1 1 2	PAODD PAODD PAODD	2940-01-152-2387 2940-01-152-2386 5340-01-016-4429	19207 19207 19207	12325888-2 12325888-1 12251910	AIR CLEANER ASSEMBLY, RIGHT	EA EA	
B-6 B-6	3	PCOZZ XADZZ	5330-01-129-0642	19207 19207	12304136 12251908	GASKET	EA EA	
B-6 B-6 B-6	5 6 7	PAOZZ PAOZZ PAOZZ	5306-01-091-3384 5315-00-903-7885 5310-00-809-5998	19207 96906 96906	12290914 MS20392-7C55 MS27183-18	BOLT, SELF-LOCKING	EA EA	
B-6 B-6	8 9	PAOZZ PAOZZ	5315-00-816-1794 5315-00-778-9646	96906 96906	MS24665-285 MS20392-7C81	PIN, COTTER PIN, STRAIGHT, HEAD	EA EA	
B-6 B-6 B-6	10 11 12	PAOZZ PAOZZ PAOZZ	2940-01-142-8260 5307-01-128-5681 5307-01-128-5682	19207 19207 19207	11669740 12304169-1 12304169-2	FILTER STUD, PLAIN STUD, PLAIN	EA EA	
B-6	13	XADDD	3307-01-120-3002	19207	12325885-2	HOUSING, AIR CLEANER (FOR USE WITH AIR CLEANER ASSEMBLY 12325888-2 ONLY)	EA	,
B-6 B-6	13	XADOD	4730-00-678-4749	19207	12325885-1	HOUSING, AIR CLEANER (FOR USE WITH AIR CLEANER ASSEMBLY 12325888-1 ONLY)	EA	
B-6 B-6	15 : 16 :	PAOZZ PAOZZ	4730-00-580-6740 4730-00-909-8627	96906 96906	MS20913-3J MS35842-13	PLUG, PIPE PLUG, PIPE CLAMP, HOSE	EA EA EA	
B-6 B-6 B-6	17 18 19	PAOZZ PAOZZ PAOZZ	5340-01-152-2515 5305-00-974-6623		MS521301A2-12-3 12304324 MS35338-140	HOSE BRACKET	EA EA	
B-6 B-6	20 21	PAOZZ PAOZZ	5305-00-374-0023 5306-00-226-4822 2815-01-152-2563		MS90728-29 12304319	WASHER, LOCK	EA EA EA	
B6	21	PAOZZ	2815-01-154-1396	19207	12304329	ASSEMBLY 12325888-2 ONLY)	EA	
B6	22	PAOZZ	5330-01-152-2486	19207	12304318	GASKET (FOR USE WITH AIR CLEANER ASSEMBLY 12325888-2 ONLY)	EA	
B6	22	PAOZZ PAOZZ	5330-01-152-2487 5310-00-933-8121	19207 96906	12304325 MS35338-139	GASKET (FOR USE WITH AIR CLEANER ASSEMBLY 12325888-1 ONLY)	EA	
B-6 B-6	24 25	PAOZZ PAOZZ	5305-00-068-0508 5307-00-178-8859	96906	MS90728-6	SCREW, CAP, HEX HEAD	EA EA EA	
B-6 B-6	26 27	PAOZZ PBOZZ	5330-01-035-9825 5340-01-152-2543	19207	12325889	GASKETCOVER	EA EA	
B-6 B-6 B-6	28 29 30	PAOZZ PAOZZ PAOZZ	5310-00-407-9566 5306-00-225-8498			WASHER, LOCK SCREW, CAP, HEX HEAD PLATE, I.D. (FOR USE WITH AIR CLEANER ASSEMBLY	EA EA EA	
B-6	30	PAOZZ	3	19207	11659642-73	12325888-2 ONLY)	EA	
B-6 B-6	31 32	PAOZZ PAOZZ	7690-01-038-7440 5306-01-091-3384	19207 19207	12252675 12290914	MARKER, I.D. BOLT, SELF-LOCKING	EA EA	



 $FIGURE\ B-7.\ AIR\ CLEANER\ HOSE\ ASSEMBLIES\ AND\ RELATED\ PARTS\ (2CAAND\ 2DA\ ENGINES).$

ILLUS- TRATION		(3)	(4)	(5)	(6)	, ,	(8) YTQ
(a) (b) FIG. ITE NO. NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
					GROUP 0304: AIR CLEANER-AIR CLEANER HOSE ASSEMBLIES AND RELATED PARTS (2CA AND 2DA ENGINES)		
B-7 B-7 B-7 B-7 B-7 B-7 B-7 B-7	1 XAOZZ 2 XAOZZ 3 PAOZZ 4 AOOOO 5 PAOZZ 6 PAOZZ 7 MOOZZ 8 PAOZZ 1 PAOOO 1 PAOOO 2 PAOZZ 1 PAOOO 2 PAOZZ 3 XAOZZ 3 XAOZZ 3 XAOZZ 4 PAOZZ 6 PAOZZ 6 PAOZZ 7 PAOZZ 7 PAOZZ 8 PAOZZ 9 PAOZZ 1 PAOZZ 1 PAOZZ 6 PAOZZ 7 PAOZZ 8 PAOZZ 9 PAOZZ 1 PAOZZ 1 PAOZZ 1 PAOZZ 1 PAOZZ 1 PAOZZ 2 PAOZZ 2 PAOZZ 2 PAOZZ 4 PAOZZ 2 PAOZZ 7 PAOZZ 8 PAOZZ 9 PAOZZ 1 PAOZZ 9 PAOZZ 1 PAOZZ 1 PAOZZ 1 PAOZZ 1 PAOZZ 1 PAOZZ 2 PAOZZ 2 PAOZZ 2 PAOZZ 2 PAOZZ 3 PAOZZ 4 PAOZZ 4 PAOZZ 5 PAOZZ 6 PAOZZ 7 PAOZZ 8 PAOZZ 7 PAOZZ 8 PAOZZ 9 PAOZZ 1 PAOZZ 1 PAOZZ	5330-00-678-3488 4730-01-144-4889 4730-01-144-4890 5310-00-081-4219 5310-00-407-9566 5310-00-880-7746 5340-00-678-6178 4720-01-121-1542 4730-00-840-8989 4720-01-119-7779 5330-00-729-5049 4730-01-132-9086 4730-01-043-7679 4030-00-780-9350 5895-01-134-8291 5310-00-814-0672 4730-01-134-1958 5330-01-128-5650 5305-00-724-7223 5310-01-134-1958 5330-01-128-5650 5305-00-724-7223 5310-01-124-6063 5310-00-964-8588 5310-00-763-8920 5330-00-678-4699 4730-01-144-4887 4730-01-144-4887 4730-01-144-4888 4730-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700 5310-00-950-0039 5310-00-678-4700	96906 96906 19207	RRC271 11669717 MS51943-36 MS20913-1S 12304178-1 12304178-2 12304177 12252352-1 12252352-2 12304168 MS90728-165 MS21206-10 10910174-18 MS51967-20 8762775 12304306 12304309 MS21920-61R 8762783 MS21044N6 MS35338-46 MS51968-8 MS90725-32 MS35333-41 8762777 10863870 12304299 8762784	GASKET. ELBOW, LEFT. ELBOW, RIGHT. WASHER, FLAT. WASHER, LOCK. NUT, PLAIN, HEXAGON. CLAMP ASSEMBLY. HOSE, ASSEMBLY. PACKING, PREFORMED. FLANGE. HOSE, CLAMP. PLUG RSTR IND ELBOW. PLUG RSTR IND ELBOW. PLUG RSTR IND ELBOW. PLUG. HOOK, CHAIN, SAFETY. CHAIN, WELDED (MAKE FROM NSN 4010-00-165-6064). RESTRICTION INDICAT. NUT, PLAIN, HEXAGON. PLUG. ELBOW, LEFT. ELBOW, RIGHT. SHIELD. ELBOW, RIGHT. SHELD. ELBOW, RIGHT. GASKET. SCREW, CAP, HEX HEAD. WASHER. NASHER. WASHER. HOSE, PREFORMED. NUT, SLAIN, HEXAGON. GASKET, AIR INTAKE. ELBOW, RIGHT. CLAMP, HOSE. HOSE, PREFORMED. NUT, SLEF-LOCKING. WASHER, LOCK. COVER, AIR CLEANER. GASKET. FLANGE, AIR CLEANER. GASKET. FLANGE, AIR CLEANER. STUD, PLAIN. GASKET. FLANGE, AIR CLEANER. STUD, PLAIN. GASKET. FLANGE, AIR CLEANER. STUD, PLAIN. GASKET. INTAKE, AIR.	EAA	2 2 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2

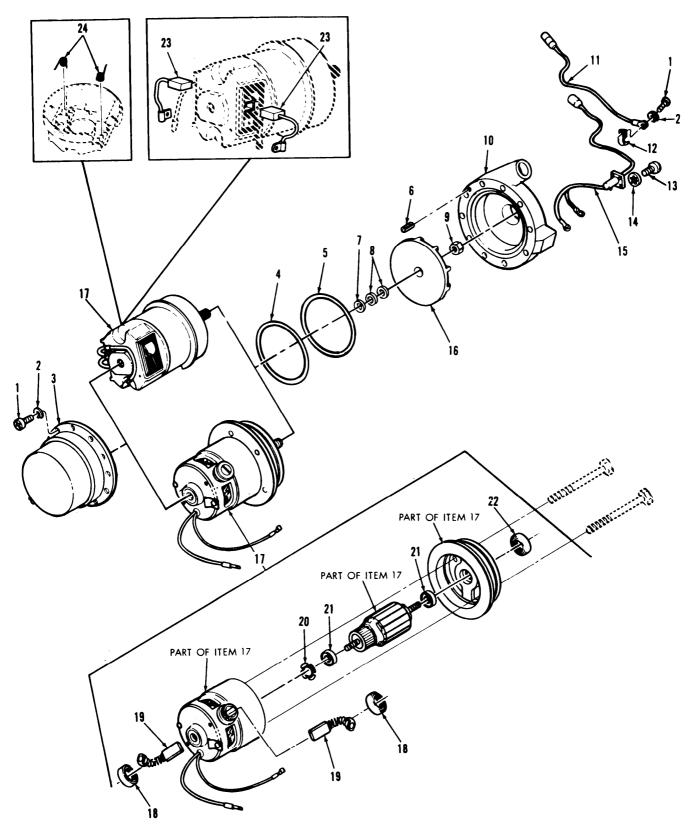


FIGURE B-8. AIR CLEANER CENTRIFUGAL FAN ASSEMBLY.

ILL	1) US- Tion	(2)	(3)	(4)	(5)	(6)	(7)	QTY
(a) FIG. NO.	(b)	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
						GROUP 0304: AIR CLEANER-AIR CLEANER CENTRIFUGAL FAN ASSEMBLY		
B-8 B-8 B-8 B-8 B-8 B-8 B-8 B-8	1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 17 17 18 19 20 21 22 23 24 4 5 7 7 8 9 17 4 5 7 7 8 9 18 19 20 21 22 23 24 24 25 23 24	PAFZZ PAFZZ PAFZZ KFFZZ KFFZZ KFFZZ KFFZZ KFFZZ PAFZZ KFFZZ KFFZZ KFFZZ KFFZZ KFFZZ KFFZZ FFZZ FFZZ PAFZZ	5305-00-984-6191 5310-00-559-0070 2920-00-103-9397 5315-00-882-1438 2940-00-930-8765 2940-00-886-5841 5340-00-900-2347 5305-00-984-4984 5310-00-579-0079 2920-00-770-1642 2940-00-043-0279 6105-01-092-1484 6105-00-801-8716	96906 19207 19207 96906 96906 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207	MS35333-38 10870920 10934405 MS9021-154 MS16562-193 10933966 10933967 MS21042-5 10905009 10870919 8728293 MS35206-227 MS35333-37 8728292 10933968 12270348 10905006 11669724 10898844 7759648-2 11669704 12304190 8728295	SCREW.MACHINE. WASHER, LOCK. COVER, ELEC MOTOR. PACKING, PREFORMED PART OF KIT P/N 5703549 AND 5705125. PACKING, PREFORMED PART OF KIT P/N 5703549 AND 5705125. PIN, SPRING. WASHER, FLAT PART OF KIT P/N 5703549 AND 5705125. WASHER, FLAT PART OF KIT P/N 5703549 AND 5705125. NUT, SELF-LOCKING PART OF KIT P/N 5703549 AND 5705125. NUT, SELF-LOCKING PART OF KIT P/N 5703549 AND 5705125. NUT, SELF-LOCKING PART OF KIT P/N 5703549 AND 5705125. NUT, SELF-LOCKING PART OF KIT P/N 5703549 AND 5705125. HOUSING, IMPELLER. LEAD, ELECTRICAL STRAP, RETAINING. SCREW, MACHINE. WASHER, LOCK. LEAD AND CAPACITOR. IMPELLER, FAN, CENTER. MOTOR, DIRECT CURRENT PART OF KIT P/N 5703549 (OPTIONAL WITH P/N 10905006). MOTOR, DIRECT CURRENT (OPTIONAL WITH P/N 12270348). BRUSH CAP PART OF KIT P/N 5705125. BRUSH, ELECTRICAL PART OF KIT P/N 5705125. SPACER PARTS KIT, AIR CLEANER. PACKING, PREFORMED. PACK	EA E	11 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

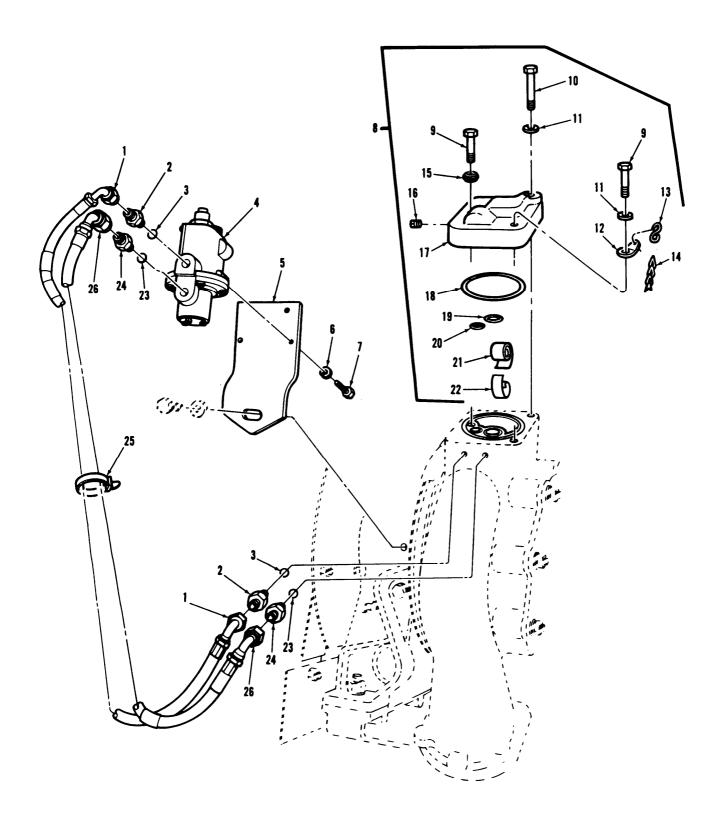


FIGURE B-9. TURBOCHARGER DUST DETECTOR SYSTEM (2CA AND 2DA ENGINES).

TRATION CODE NUMBER NATIONAL STOCK NUMBER STOCK NUMBER NUMB	(1) ILLUS-	(2)	(3)	(4)	(5)	(6)	(7)	` `
B-9	(a) (b) FIG. ITEM	1	STOCK	FSCM		USABLE ON	U/ M	UNI
	B-9 1 B-9 2 B-9 3 B-9 4 8-9 5 8-9 6 B-9 7 B-9 8 8-9 9 8-9 10 8-9 11 B-9 12 B-9 13 B-9 14 8-9 15 B-9 16 B-9 17 B-9 18 B-9 16 B-9 17 B-9 20 B-9 21 B-9 22 B-9 23 B-9 22 B-9 23 B-9 24 B-9 25 B-9 26	PAOZZ	4730-01-007-5232 5330-00-805-2966 5930-01-147-7912 5340-01-145-8262 5310-00-582-5965 5305-01-145-8287 5310-00-194-0636 4030-01-145-8293 4030-00-270-5436 4030-01-145-8293 4030-00-277-6352 5340-01-145-8310 5330-01-082-3761 4730-00-277-6352 5340-01-145-8293 5330-00-724-7902 4460-01-145-8299 5340-01-145-8291 5330-00-803-7491 4730-00-431-9307	00624 96906 96906 14314 19207 19207 96906 19207 19207 96906 19207 96906 19207 96906 19207 19207 96906 96906 96906 96906 96906 96906 96906	AE6040F0092-020 AE6040F0145-000 MS51525A4 MS28778-4 D52S-13 12275870 11657469-3 MS90727-4 12275866-1 12275866-1 12275867 MS87006-3 12275841 7033684-1 MS27769-1 12275869 MS9068-018 MS9068-018 MS9068-018 MS9068-013 12275840 12275840 12275868 MS9068-013 MS9068-013 MS9068-013 MS9068-013 MS9068-013 MS9068-013	GROUP 0305: TURBOCHARGER—TURBOCHARGER DUST DETECTOR SYSTEM (2CA AND 2DA ENGINES) ADAPTER, STRAIGHT, LEFT. ADAPTER, STRAIGHT ,RIGHT. ADAPTER, STRAIGHT. PACKING, PREFORMED. SWITCH, PRESSURE. BRACKET, MOUNTING. WASHER, LOCK. SCREW, CAP, HEXAGON. COVER, ASSEMBLY ,DUST. SCREW, EXTERNAL. WASHER, FLAT. CHAIN, FASTENER. HOOK, CHAIN S. CHAIN, WELDLESS. SEAL, PLAIN ENCASED. PLUG, PIPE. COVER, ACCESS. PACKING, PREFORMED. ADAPTER, STRAIGHT. STRAP, TIE—DOWN. ADAPTER, STRAIGHT, LEFT.	EA E	1

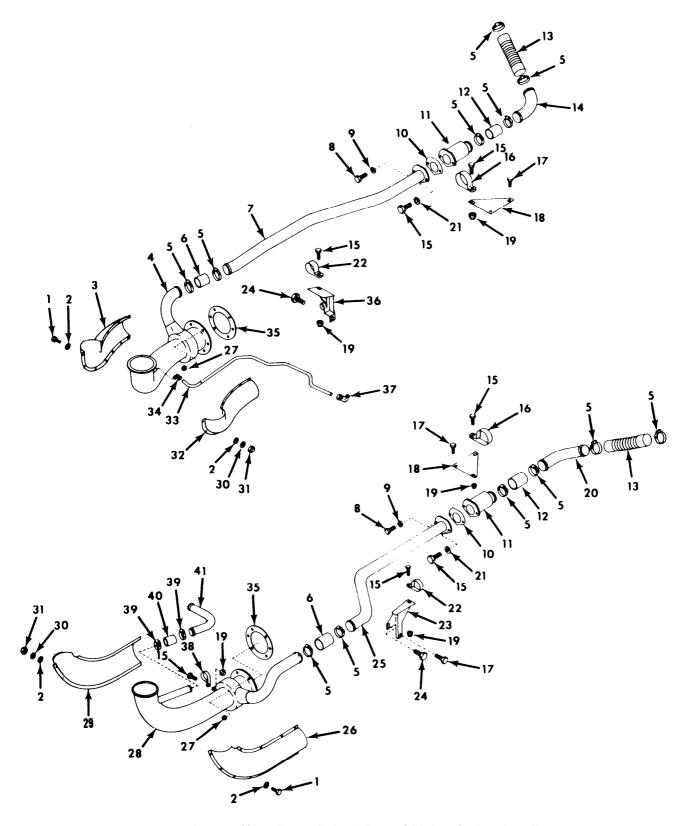


FIGURE B-10. DUST EJECTOR SYSTEM (2CA AND 2DA ENGINES).

	1) .US-	(2)	(3)	(4)	(5)	(6)	(7)	` `
	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
FIG.	ITEM	_	STOCK	96906 96906 19207 02978 96906 19207 19207 19207 19207 19207 19207 19207 21450 19207		USABLE	EA E	IN
B-10 B-10 B-10 B-10 B-10	37 38 39 40 41	PAOZZ PAOZZ PAOZZ PAOZZ PFOZZ	4730-01-003-6044 5340-00-282-7548 4730-00-908-3193 4720-00-896-6166 4710-01-150-4822	96906 96906 19207 19207 19207	MS51815-8 MS21333-52 11630499-1 10898794 12275880	ELBOW, PIPE TO TUBE	EA EA EA EA	1 1 2 1 1 1

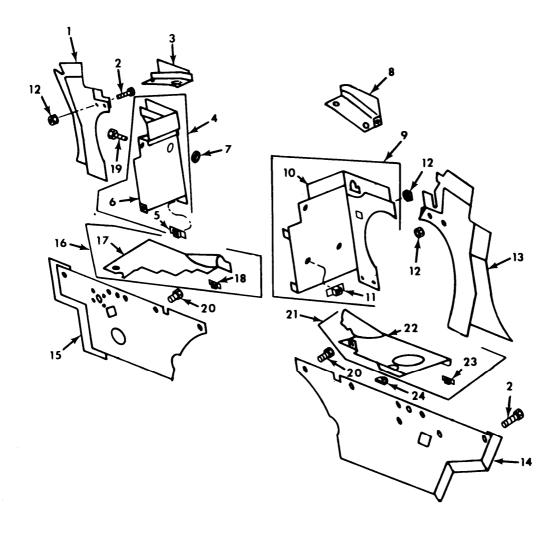


FIGURE B-11. ENGINE SHROUDS.

TRATION (a) (b) SMR NATIONAL FSCM PART (a) (b) CODE STOCK NUMBER NO. NO.		
1	PTION U/ USABLE ON CODE	QTY INC IN UNIT
B-11 1 PFOZZ 2815-00-446-1757 19207 10865272 SHROUD, AIR FLOW (USE WITH 20 12314599 PLATE, TURBOSUPERCHARGER (USE 13 14 15 15 15 16 16 15 16 16	ON CODE SYSTEM DS-ENGINE SHROUDS C AND 2D ENGINES)	UNIT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

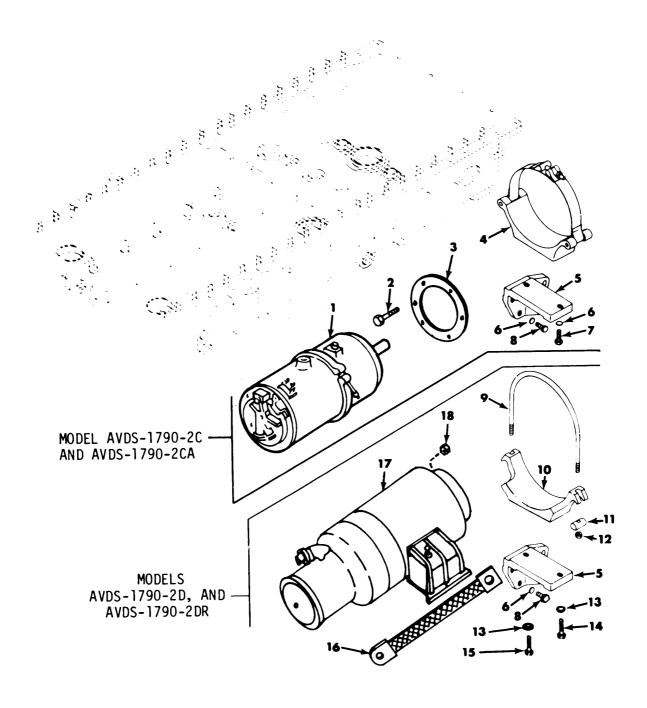


FIGURE B-12. ENGINE GENERATOR, CRADLE, BRACKET, AND ASSOCIATED PARTS.

	l) US- Fion	(2)	(3)	(4)	(5) PART	(6) DESCRIPTION	, ,	(8) YTQ
(a) FIG. NO.		CODE	STOCK NUMBER	rscm	NUMBER	USABLE ON CODE	0/11	INC IN UNIT
						GROUP 06: ELECTRICAL SYSTEM GROUP 0601: GENERATOR-ENGINE GENERATOR, CRADLE, BRACKET, AND ASSOCIATED PARTS		
B-12	1	PAOFD	2920-00-441-8137	19207	11655469	GENERATOR, ENGINE ACCESSORY	FA	١,
B-12	2	PAOZZ	5306-00-145-0876		MS35763-833	BOLT, SELF-LOCKING	1 '	6
B-12	3	PAOZZ	5330-00-318-4127	19207	8666738	GASKET	EA	1
B-12	4	PFOZZ	5340-01-048-6052	19207	11684162	CLAMP, LOOP	EA	1
B-12	5	PF0ZZ	2920-00-398-6540	19207	11685057	BRACKET, ENGINE ACCESSORY GENERATOR	EA	1
B-12	6	PAOZZ	5310-00-776-7318			WASHER, FLAT (USE WITH 2C ENGINE)	EA	4
B-12	7	XDOZZ	i	96906		SCREW, CAP, HEXAGON	EA	2
B-12	8	PAOZZ	5305-00-269-2806	1		SCREW, CAP, HEXAGON	EA	2
B-12	9	PAOZZ	5306-00-413-4373		10882750	BOLT, U	EA	1
B-12 B-12	10	PFOZZ PAOZZ	2590-01-145-4316	19207	12275797	CRADLE, GENERATOR	EA	1
B-12	11	PAUZZ	2920-00-455-5835 5310-00-088-0553	19207 96906	10882765 MS21044N5	BAR, CLAMPING, GENERATOR	1	2 2
B-12	13	PAOZZ	5310-00-088-0333	19207	7767318	WASHER, FLAT	-	2
B-12	14	PAOZZ	5305-00-269-3242		MS90727-66	SCREW, CAP, HEXAGON.		1
B-12	15	PAOZZ	5305-00-914-6131			SCREW, CAP, HEXAGON		;
B-12	16	PFOZZ	2590-00-499-1782	ı	11682595	LEAD, ELECTRICAL		i
B-12	17	PAOFD	2920-00-830-6660	19207	10889713	GENERATOR, ENGINE	1 -	li
B-12	18	PAOZZ	5310-00-950-0039	96906	MS21044N6	NUT, SELF-LOCKING, HEXAGON	EA	6

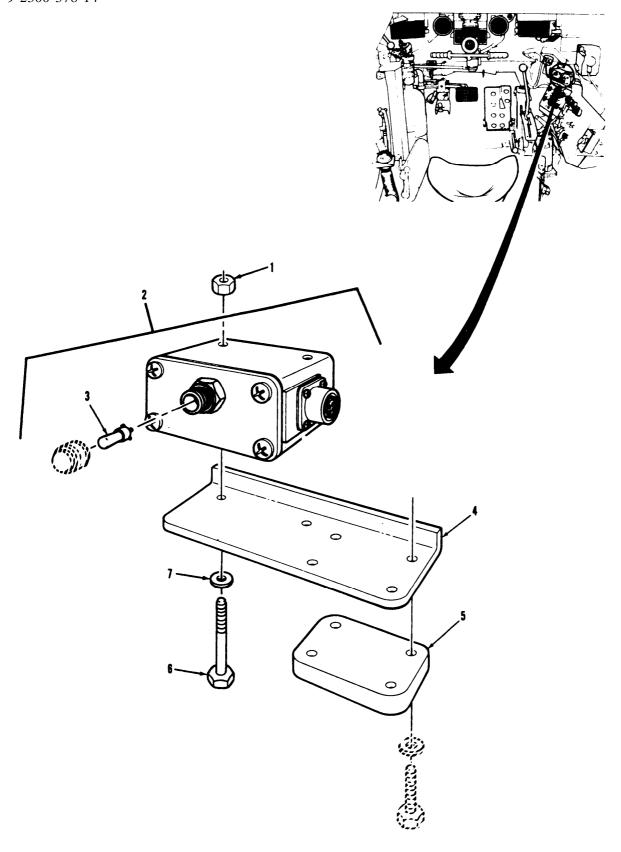


FIGURE B-13. ENGINE AIR CLEANER DUST DETECTOR BOX ASSEMBLY AND RELATED PARTS (M60A3).

ILL	1) US- Tion	(2)	(3)	(4) FSCM	(5) PART	(6) DESCRIPTION	, ,	(8) QTY
(a) FIG. NO.	(b) ITEM NO.	CODE	STOCK NUMBER	roum	NUMBER	USABLE ON CODE	0/=	INC IN UNIT
						GROUP 0608: MISCELLANEOUS ITEMS-ENGINE AIR CLEANER DUST DETECTOR BOX ASSEMBLY AND RELATED PARTS (M60A3)		
B-13 B-13 B-13 B-13 B-13 B-13	1 2 3 4 5 6 7	PAOZZ PAOOO PACZZ PAOZZ PAOZZ PAOZZ PAOZZ	5310-00-761-6882 2920-01-152-2385 6240-00-155-8707 5340-01-152-2514 5365-01-152-2538 5305-00-071-2513 5310-00-550-1130	96906 19207 96906 19207 19207 96906 96906	MS51967-2 12325931 MS25231-1819 12325914 12325915 MS90728-16 MS35333-40	NUT, PLAIN, HEXAGON. BOX ASSEMBLY. LAMP, INCAND. BRACKET. SPACER. SCREW. WASHER, LOCK.		2 1 1 1 1 2 2 2

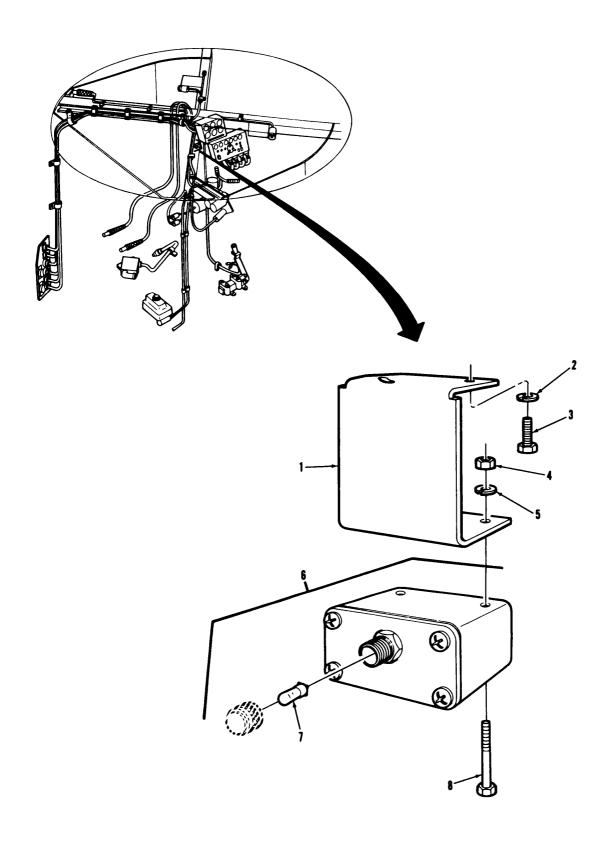


FIGURE B-14. ENGINE AIR CLEANER DUST DETECTOR BOX ASSEMBLY AND RELATED PARTS (M48A5AVLB AND M60A1AVLB).

(1	l) US-	(2)	(3)	(4)	(5)	(6)	(7)	` '
TRAT	(b)	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE	U/M	QTY INC IN
NO.	NO.		NUMBER			ON CODE		UNIT
						GROUP 0608: MISCELLANEOUS ITEMS-ENGINE AIR CLEANER DUST DETECTOR BOX ASSEMBLY AND RELATED PARTS (M48A5AVLB AND M60A1AVLB)		
B-14	1	PAOZZ		19207	12326097	BRACKET	EA	1
B-14	2	PAOZZ	5310-00-550-1130	96906	MS35333-40	WASHER, LOCK	1	2
B-14	3	PAOZZ	5305-00-068-7837	96906	MS90728-5	SCREW, CAP, HEXAGON	EA	2
B-14	4	PAOZZ	5310-00-761-6882	96906	MS51967-2	NUT, PLAIN, HEXAGON	EA	2
B-14	5	PAOZZ	5310-00-582-5965	96906	MS35338-44	WASHER, LOCK		2
B-14	6	PA000	2920-01-152-2385	19207	12325931	BOX ASSEMBLY		1
B-14 B-14	7 8	PACZZ PAOZZ	6240-00-155-8707 5305-00-071-2234	96906 96906	MS25231-1819 MS90725-17	LAMP, INCAND	1	1
5-14		7 7022	3303-00-071-2234	90900	m350723-17	SCREW, CAP, HEXAGON	EA	2

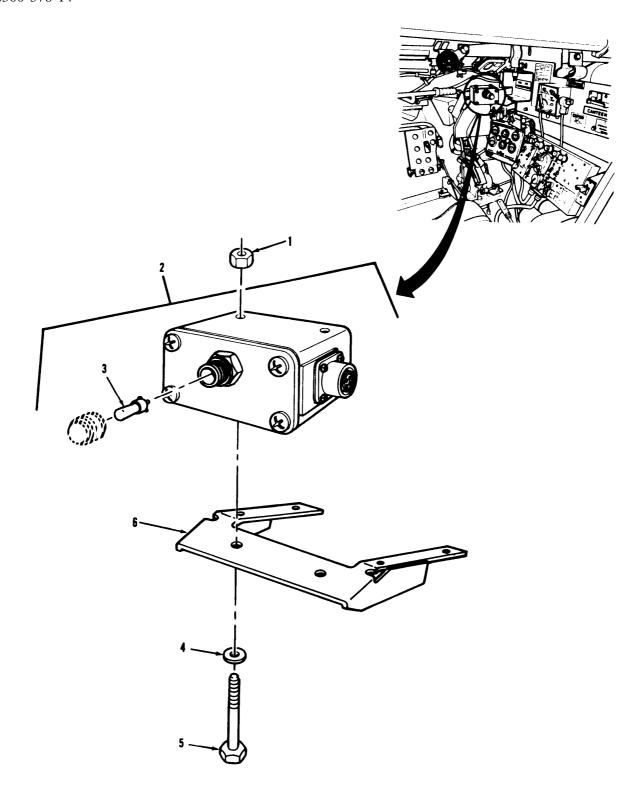


FIGURE B-15. ENGINE AIR CLEANER DUST DETECTOR BOX ASSEMBLY AND RELATED PARTS (M728).

1 .	1) .US-	(2)	(3)	(4)	(5)	(6)	(7)	(8)
i	(b)	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	QTY INC IN UNIT
						GROUP 0608: MISCELLANEOUS ITEMS-ENGINE AIR CLEANER DUST DETECTOR BOX ASSEMBLY AND RELATED PARTS (M728)		
B-15 B-15 B-15 B-15 B-15 B-15	1 2 3 4 5 6	PAOZZ PAOOO PACZZ PAOZZ PAOZZ PAOZZ	5310-00-761-6882 2920-01-152-2385 6240-00-155-8707 5310-00-550-1130 5303-00-071-2513	96906 19207 96906 96906 96906 19207	12325931 MS25231-1819 MS35333-40	NUT, PLAIN, HEXAGON. BOX ASSEMBLY. LAMP, INCAND. WASHER, LOCK. SCREW. BRACKET.	EA	2 1 1 2 2 1

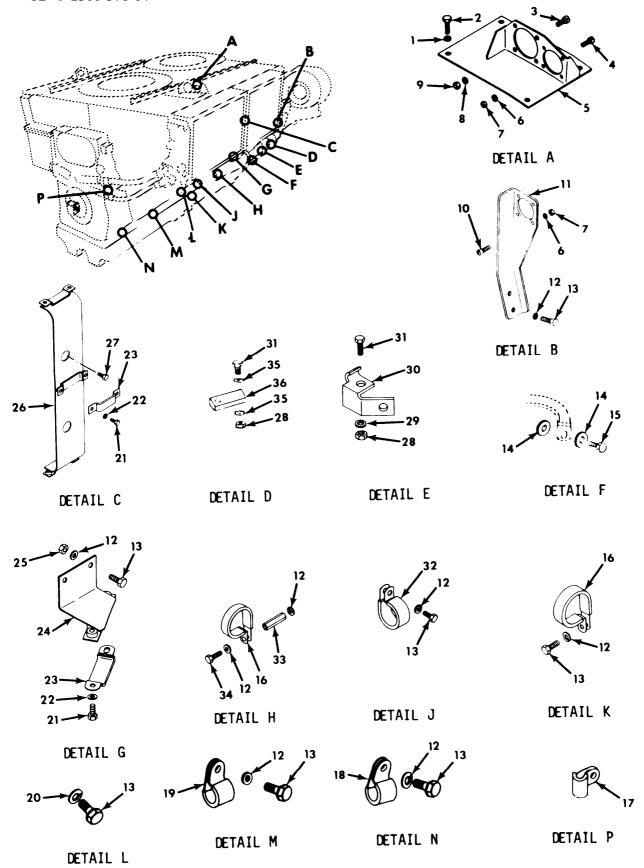


FIGURE B-16. ENGINE WIRING HARNESS BRACKETS AND CLAMPS (FIGURE 1 OF 3).

(1) ILLUS-	(2)		(4)	(5)	(6)	(7)	(8) QTY
TRATION (a) (b) FIG. ITEN NO. NO.	SMR	NATIONAL STOCK NUMBER	FSCM	PART Number	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
					GROUP 0613: HULL WIRING HARNESS-ENGINE WIRING HARNESS BRACKETS AND CLAMPS (FIGURE 1 OF 3)		
B-16	PAOZZ	5310-00-514-6674 5310-00-550-3503 5305-00-225-9091 5305-00-225-9091 5305-00-614-0274 5305-00-543-2752 2920-00-398-7097 2815-00-410-1150 5310-00-045-3299 5310-00-934-9757 5310-00-934-9757 5310-00-934-9757 5310-00-934-9758 5305-00-984-6193 2920-00-466-7464 5310-00-407-9566 5306-00-050-1238 5310-00-776-7318 5310-00-776-7318 5310-00-776-7318 5310-00-776-7318 5310-00-776-7318 5310-00-776-7318 5310-00-776-7318 5310-00-776-7318 5310-00-78-2808 5305-00-269-2808 5305-00-269-2808 5305-00-269-2808 5305-00-057-3034 5340-00-988-1162 5340-00-988-1162 5310-00-167-0721 5305-00-068-0500 5310-00-582-5965 5340-01-030-8726 2815-00-394-9701 5310-00-088-0553 2815-00-397-3283 5305-00-042-5592 5310-00-732-0558 5310-00-637-9541 6150-00-476-0381 5305-00-269-3213 5340-00-959-8422 5340-01-081-1686 5306-00-225-9088 5310-00-061-1258 6150-00-476-0371	24617 96906 12603 19207 96906	11684276-1 11673853 MS21044N5 .11673852 425592 MS51967-8 23E06 11673850 MS90725-62 10863816 12254369 MS90726-33	WASHER, LOCK (USE WITH 2C AND 2D ENGINES) WASHER, LOCK (USE WITH 2CA AND 2DA ENGINES) SCREW, CAP, HEXAGON (USE WITH 2C AND 2D ENGINES) SCREW, CAP, HEXAGON (USE WITH 2CA AND 2DA ENGINES) SCREW, MACHINE (USE WITH 2CAND 2CA ENGINES) SCREW, MACHINE (USE WITH 2CAND 2CA ENGINES) SCREW, MACHINE (USE WITH 2DAND 2DA ENGINES) SCREW, MACHINE (USE WITH 2DAND 2DA ENGINES) SCREW, MACHINE (USE WITH 2DAND 2DA ENGINES) SUPPORT, WIRING, GE (USE WITH 2DAND 2DA ENGINES) SUPPORT, WIRING, GE (USE WITH 2DAND 2DA ENGINES) WASHER, LOCK (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK (USE WITH 2DAND 2DA ENGINES) NUT, PLAIN, HEXAGON (USE WITH 2DAND 2DA ENGINES) NUT, PLAIN, HEXAGON (USE WITH 2CAND 2CA ENGINES) NUT, PLAIN, HEXAGON (USE WITH 2CAND 2CA ENGINES) NUT, PLAIN, HEXAGON (USE WITH 2CAND 2CA ENGINES) SCREW, MACHINE BRACKET, MOUNTING WASHER, LOCK BOLT, MACHINE WASHER, FLAT (USE WITH 2CAND 2CA ENGINES) SCREW, CAP, HEXAGON (USE WITH 2DAND 2DA ENGINES) SCREW, CAP, HEXAGON (USE WITH 2DAND 2DA ENGINES) CLAMP, LOOP CLAMP, LOOP CLAMP, LOOP CLAMP, LOOP CLAMP, LOOP (USE WITH 2CAND 2CA ENGINES) CLAMP, LOOP CLAMP, LOOP (USE WITH 2DAND 2DA ENGINES) WASHER, LOCK SCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK SCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK SCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK SCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK SCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK (USE WITH 2CAND 2CA ENGINES) SURSCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) WASHER, LOCK (USE WITH 2CAND 2CA ENGINES) SURSCREW, CAP, HEXAGON (USE WITH 2CAND 2CA ENGINES) SURSCREW, CAP, H	EA E	4 4 4 4 4 4 4 4 1 1 1 1 1 1 1 1 1 1 1 1

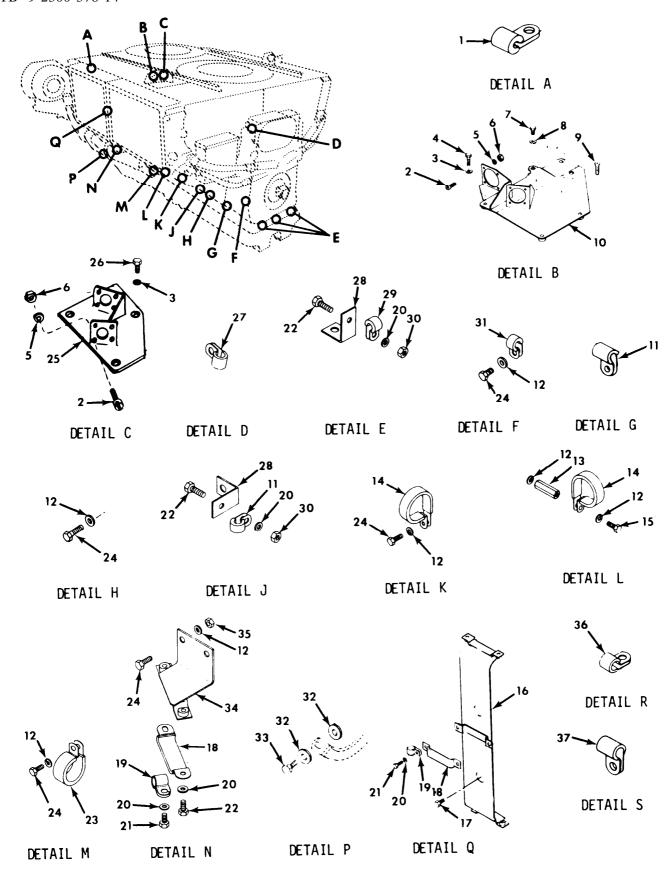


FIGURE B-17. ENGINE WIRING HARNESS BRACKETS AND CLAMPS (FIGURE 2 OF 3).

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ILL	US-	\-/		` ′				QTY
(a)	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC
B-17 B-17 B-17 B-17 B-17 B-17 B-17 B-17	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	PAOZZ	5340-00-057-3025 5305-00-614-0274 5310-00-514-6674 5306-00-051-4077 5310-00-934-9758 5305-00-267-8953 5310-00-550-1130 5305-00-993-1206 2920-01-065-2016 5340-00-057-3037 5310-00-407-9566 5340-01-081-1686 5340-01-077-1501 5306-00-225-9088 2815-00-475-8216 5305-00-042-5592 5340-01-030-6928 5340-00-088-1254 5310-00-582-5965 5305-00-225-3838	96906 96906 96906 96906 96906 96906 96906 19207 19207 19207 19207 24617 19207 96906 19207 96906	MS21333-108 MS35265-63 MS35335-34 MS90727-35 MS35338-43 MS35649-202 MS90727-5 MS35333-40 MS24668-22 12254374 MS21333-111 7410218 12254369 8338503 MS90726-33 11673855 425592 11684276-2 MS21333-104 11657469-3 MS90725-4	GROUP 0613: HULL WIRING HARNESS-ENGINE WIRING HARNESS BRACKETS AND CLAMPS (FIGURE 2 OF 3) CLAMP, LOOP (USE WITH 2C AND 2D ENGINES) SCREW, MACHINE. WASHER, LOCK. BOLT, MACHINE. WASHER, LOCK. NUT, PLAIN, HEXAGON. SCREW, CAP, HEXAGON. WASHER, LOCK. SCREW, CAP, SOCKET BRACKET, MOUNTING, CLAMP, LOOP. WASHER, LOCK. POST, ELECTRICAL-ME CLAMP, LOOP. BOLT, MACHINE. BRACKET, MOUNTING. SCREW, ASSEMBLED WASHER STRAP, RETAINING. CLAMP, LOOP. WASHER, LOCK. SCREW, ASSEMBLED WASHER STRAP, RETAINING. CLAMP, LOOP. WASHER, LOCK. SCREW, CAP, HEXAGON.	EA E	55 84 3 8 8 2 2 2 1 2 9 1 1 2 4 4 4 8 4
B-17 B-17 B-17 B-17 B-17 B-17 B-17 B-17	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37	PAOZZ	5305-00-225-3838 5305-00-068-0500 5340-00-959-8422 5306-00-050-1238 2815-00-397-3311 5305-00-225-9091 5340-00-107-4286 5340-00-984-8540 5340-00-976-7318 5305-00-269-2808 2815-00-394-9690 5310-00-088-0553 5340-00-057-3034 5340-00-057-3034	96906 96906 19207 96906 19207 96906 96906 96906 19207 96906 19207 96906 96906 96906	MS90725-3 10863816 MS90727-32 11673847 MS90726-36 MS21333-118 10863598 MS21333-102 MS51967-2 MS21333-112 7767318 MS90726-65 11673854 MS21044-N5 MS21333-3034	SCREW, CAP, HEXAGON. SCREW, CAP, HEXAGON. CLAMP, LOOP. BOLT, MACHINE. BRACKET, MOUNTING, (USE WITH 2C AND 2D ENGINES). SCREW, CAP, HEXAGON (USE WITH 2C AND 2D ENGINES). CLAMP, LOOP. BRACKET, ANGLE. CLAMP, LOOP. NUT, PLAIN, HEXAGON. CLAMP, LOOP. WASHER, FLAT. SCREW, CAP, HEXAGON. BRACKET, MOUNTING. NUT, SELF-LOCKING. CLAMP, LOOP (USE WITH 2CA AND 2DA ENGINES). CLAMP, LOOP (USE WITH 2CA AND 2DA ENGINES).	EA EA EA EA EA EA EA EA EA	4 8 2 7 1 4 1 1 4 3 4 1 1 2 1 1 2 1 3 3

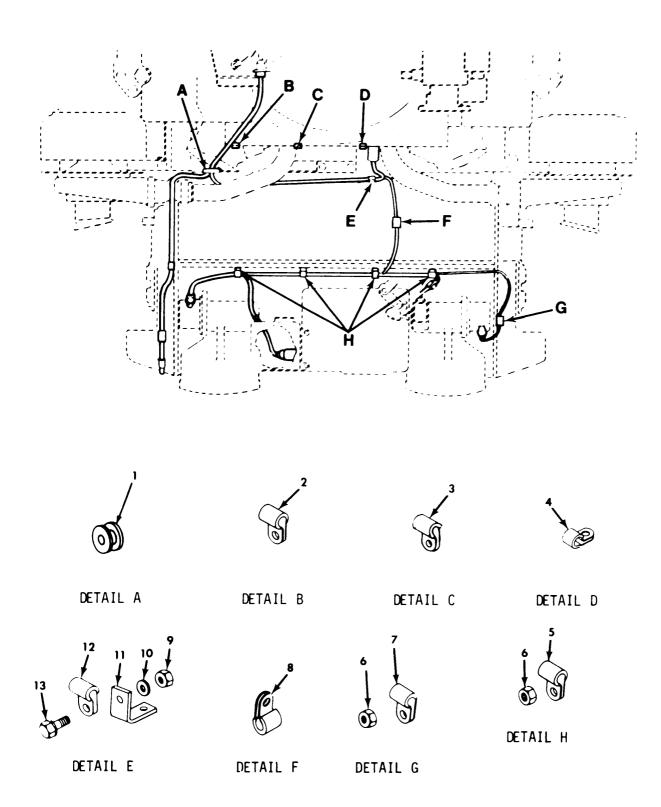


FIGURE B-18. ENGINE WIRING HARNESS BRACKETS AND CLAMPS (FIGURE 3 OF 3).

ILL	l) US- TION	(2) SMR	(3)	(4)	(5) PART	(6) DESCRIPTION		(8) QTY INC
(a) FIG. NO.	1 ' '	CODE	STOCK NUMBER	rsom	NUMBER	USABLE ON CODE	0/=	IN
						GROUP 0613: HULL WIRING HARNESS-ENGINE WIRING HARNESS BRACKETS AND CLAMPS (FIGURE 3 OF 3)		
B-18 B-18 B-18 B-18 B-18 B-18 B-18 B-18	1 2 3 4 5 6 7 8 9 10 11 12 13	PAOZZ PAOZZ PAOZZ PAOZZ XDOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ	5325-00-290-1960 5340-00-833-8476 5340-00-735-1617 5340-00-057-3025 5340-00-281-4425 5340-00-809-1490 5310-00-489-5663 5310-00-582-5965 5340-00-107-4286 5340-00-984-8540 5305-00-068-0500	96906 19207 96906 19207 96906 96906 96906 19207 19207 96906	MS21333-122 7351617 MS21333-108 7351807 MS51967-2 MS21333-96 MS21333-98 MS27151-24 11657469-3 10863598 MS21333-102	GROMMET, NONMETALLI CLAMP, LOOP CLAMP, LOOP CLAMP, LOOP (USE WITH 2CA AND 2DA ENGINES) CLAMP, LOOP NUT, PLAIN, HEXAGON. CLAMP, LOOP (USE WITH 2CA AND 2DA ENGINES) CLAMP, LOOP (USE WITH 2CA AND 2DA ENGINES) NUT, STAMPED. WASHER, LOCK. BRACKET, ANGLE CLAMP, LOOP SCREW, CAP, HEXAGON.	EA EA EA EA EA EA	1 1 2 1 4 1 1 1 6 1 1 1

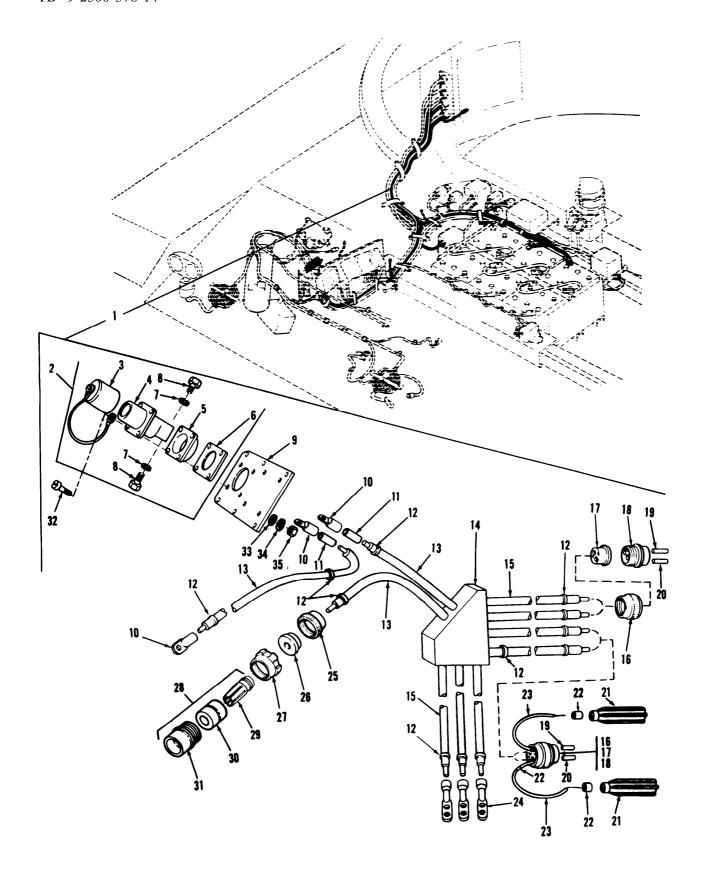


FIGURE B-19. BATTERY SLAVE AND STARTER RELAY CABLE ASSEMBLY (2CA ENGINE).

R-19			
SMR CODE STOCK NUMBER STOCK NUMBER NUMBER NUMBER STOCK NUMBER NUMBER NUMBER STOCK NUMBER N		1	QTY
B-19 1 PAOOO 2920-01-152-2560 19207 12325932 CABLE ASSEMBLY COVER CO	SABLE ON CODE	U/N	INC IN UNIT
B-19	SABLE ON CODE RY Y Y 17) 99)	EAAAAAAAAA EAAAAAAAAAAAAAAAAAAAAAAAAAA	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

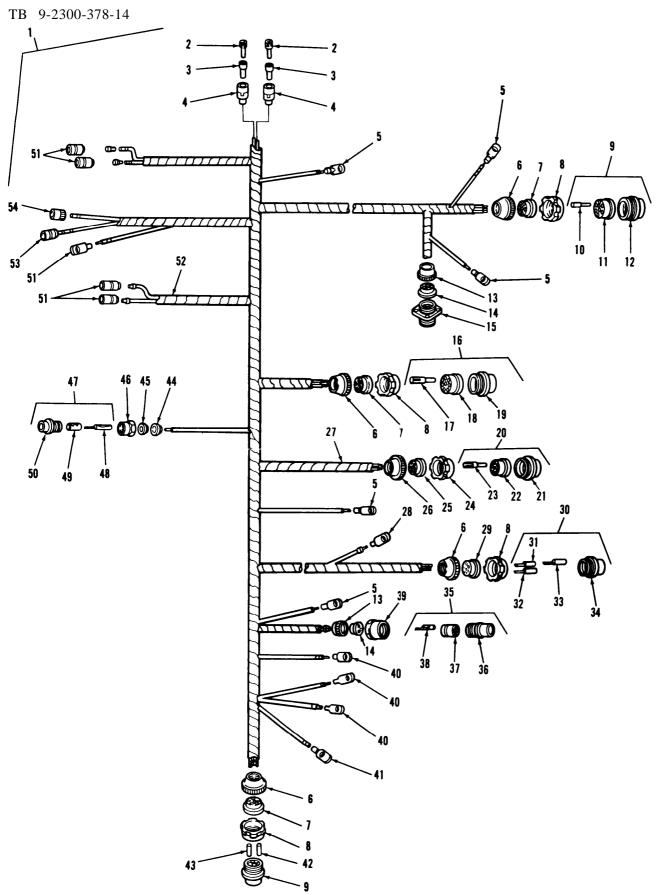


FIGURE B-20. FRONT MASTER CONTROL HARNESS ASSEMBLY (2CA ENGINE).

(1) ILLUS	S-	(2)	(3)	(4)	(5)	(6)	(7)	(8) QTY
FIG. I		SMR CODE	NATIONAL STOCK Number	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC
						GROUP 0613: HULL WIRING HARNESS-FRONT MASTER CONTROL HARNESS ASSEMBLY (2CA ENGINE)		
B-20 B-20 B-20 B-20 B-20 B-20 B-20 B-20	2 F 3 F 4 F 5 F 6 F 7 F 8 F 9 F 10 F 11 12 13 14 F 15 F 16 F 17 F 18 19 10 20 F 22 F 22 F 22 F 22 F 22 F 22 F 2	PAOOO PAOZZ	2920-01-152-2559 1015-00-798-2997 5940-00-399-6676 5970-00-833-8562 5935-00-677-4444 5940-00-705-6709 5935-00-333-9414 5365-00-772-2322 5310-00-655-9860 5935-00-686-2608 5999-00-485-8954 5935-00-772-2344 5935-00-772-2344 5935-00-772-0484 5935-00-686-2606 5999-00-485-8955 5935-00-754-9083 5935-00-754-9083 5935-00-257-1024 5999-00-485-8955 5975-00-771-6634 5365-00-90-5426 5310-00-393-6685	19207 19207	12325926 7982997 8338564 8338564 8338562 7064586 7056709 7723308 7722322 8701325 8724244 7716520 7723475 8701309 7722344 7720484 8724243 7716521 7723474 8701309 8724257 8344537 7716683 7716634 7722333 7716634 7722333 7723309 M13486/1-3 MS27142-2 7722323 8724246	WIRING HARNESS ASSEMBLY. TERMINAL (OPTIONAL WITH P/N 8338564). TERMINAL (OPTIONAL WITH 7982997). INSULATOR, BUSHING. INSERT, PLUG, ELEC. TERMINAL, LUG. CONNECTOR. BUSHING, RUBBER. NUT, SLEEVE. CONTACT, ELECTRICAL. BUSHING, RUBBER. SHELL, PLUG. CONNECTOR. GROMMET. CONNECTOR. CONNECTOR. CONNECTOR. INSERT, ELECTRICAL. SHELL, PLUG. CONNECTOR. ONNECTOR. SHELL, ELECTRICAL. INSERT, ELECTRICAL. INSERT, ELECTRICAL. CONNECTOR. NUT. BUSHING, RUBBER. NUT, PLAIN, KNURLED. CABLE, ELECTRICAL (MAKE FROM NSN 6145-00-161-1609). CONNECTOR, PLUG, ELEC. BUSHING, RUBBER. CONNECTOR, PLUG.	FT EA EA	
B-20 B-20 B-20 B-20 B-20 B-20 B-20 B-20	31	PAOOO PAOZZ PAOZZ PAOZZ PAOOO PAOZZ	5935-00-811-0942 5999-00-485-8954 5999-00-113-2954 5935-01-026-5900 5935-00-686-2605 5935-00-462-2913 5970-00-615-8884 5999-00-485-8954 5975-00-697-7769 5940-00-705-6707 5940-00-705-6706 9390-00-180-7289 9905-00-893-3570 5935-00-333-3088 5365-00-772-2343 5975-00-697-6991 5935-00-686-2610 5999-00-485-8954 5935-00-614-9136 5935-01-013-7520	19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207 19207	8724246 7716520 7716675 -8701309 8724231 8344527 8344324 7716520 7527645 7056707 7056706 8724763 M43436/1-3 7723306 7722343 7527643 8724199 7716520 8720680 8344522	CONNECTOR, PLUG CONTACT, ELECTRICAL CONTACT, ELECTRICAL INSERT SHELL PLUG SHELL ASSEMBLY SHELL, ELECTRICAL INSULATOR, BUSHING CONTACT, ELECTRICAL NUT TERMINAL, LUG TERMINAL, LUG NONMETALL IC ROD BAND MARKER CONNECTOR BUSHING, RUBBER NUT CONNECTOR ASSEMBLY CONTACT, ELECTRICAL INSERT, ELECTRICAL SHELL, ELECTRICAL	EA	7

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ILL	1) US-	(2)	(3)	(4)	(5)	(6)		(8) YTQ
(a) FIG. NO.	(b) c		STOCK	FSCM	PART Number	DESCRIPTION USABLE ON CODE		INC IN UNIT
						GROUP 0613: HULL WIRING HARNESS-FRONT MASTER CONTROL HARNESS ASSEMBLY (2CA ENGINE) -CONTINUED		
B-20 B-20 B-20 B-20	52 53		5935-00-167-7775 5940-00-113-8184 5935-00-813-4717	96906 81349 96906 96906	M13486/1-5 MS25036-150	CONNECTOR, PLUG	EA	5 V 1 1

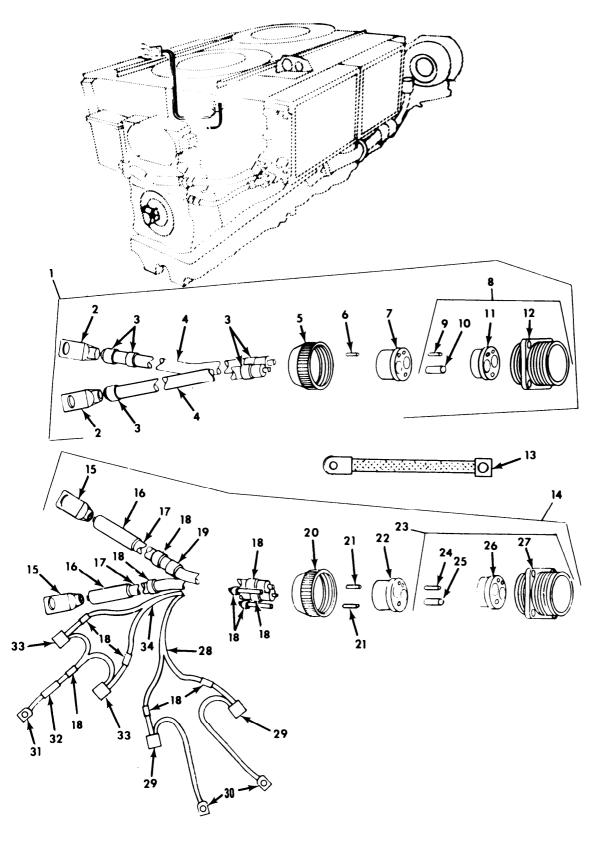


FIGURE B-21. STARTER WIRING HARNESS ASSEMBLY.

(1 ILLU		(2) (3)	(4)	(5)	(6)	(7)	` '
TRAT		SMR NATIONAL	FSCM	PART	DESCRIPTION		QTY
FIG.	(b) COD	l I	rscm	NUMBER	USABLE ON	U/ M	IN
NO.	NO.				CODE		
					GROUP 0613: HULL WIRING HARNESS-STARTER WIRING HARNESS ASSEMBLY		
B-21 B-21	1 PFOOC 2 PAOZZ 3 PAOZZ 5 PAOZZ 5 PAOZZ 6 PFOZZ 7 PAOZZ 10 PAOZZ 11 PAOZZ 12 XAOZZ 13 PFOZZ 14 PFOOC 15 PAOZZ 16 PAOZZ 17 PAOZZ 18 PAOZZ 20 PAOZZ 21 PFOZZ 21 PFOZZ 22 PAOZZ 22 PAOZZ 23 PAOZZ 24 PAOZZ 25 PAOZZ 25 PAOZZ 26 XAOZZ 27 XAOZZ 28 PAOZZ 29 PAOZZ 29 PAOZZ 31 PAOZZ 32 PAOZZ 33 PAOZZ 34 PAOZZ 35 PAOZZ 37 PAOZZ 38 PAOZZ 39 PAOZZ 31 PAOZZ 31 PAOZZ 32 PAOZZ 33 PAOZZ 33 PAOZZ 33 PAOZZ 34 PAOZZ 35 PAOZZ 36 PAOZZ 37 PAOZZ 38 PAOZZ 39 PAOZZ 31 PAOZZ 31 PAOZZ 32 PAOZZ 33 PAOZZ 33 PAOZZ 33 PAOZZ 34 PAOZZ 35 PAOZZ 36 PAOZZ 37 PAOZZ 38 PAOZZ 38 PAOZZ 39 PAOZZ 31 PAOZZ 31 PAOZZ 32 PAOZZ 33 PAOZZ 33 PAOZZ 33 PAOZZ 34 PAOZZ 35 PAOZZ 36 PAOZZ 37 PAOZZ 37 PAOZZ 38 PAOZZ 38 PAOZZ 39 PAOZZ 39 PAOZZ 31 PAOZZ 31 PAOZZ 32 PAOZZ 33 PAOZZ 33 PAOZZ 34 PAOZZ 35 PAOZZ 36 PAOZZ 37 PAOZZ 38 PAOZZ 38 PAOZZ 38 PAOZZ 38 PAOZZ 39 PAOZZ 31 PAOZZ 31 PAOZZ 32 PAOZZ 33 PAOZZ 33 PAOZZ 34 PAOZZ	.02Z 5940-00-735-5520 .02Z 9905-00-893-3570 .02Z 6145-00-705-6674 .02Z 5935-00-729-8217 .02Z 5365-00-682-2043 .000 5935-00-754-9078 .02Z 5999-00-771-6523 .02Z 5999-00-485-8954 .02Z 2590-01-008-1441 .02Z 2590-01-008-1441 .00Z 2590-01-073-4328 .00Z 5940-00-735-5520 .02Z 5970-00-221-5301 .02Z 5905-00-752-4649 .02Z 9905-00-752-4649 .02Z 9905-00-752-4649 .02Z 9905-00-893-3570 .02Z 9390-00-180-7289 .02Z 9390-00-180-7289 .02Z 9390-00-180-7289 .02Z 5999-00-485-8955 .02Z 5999-00-485-8955 .02Z 5999-00-485-8955 .02Z 5999-00-485-8955 .02Z 5999-00-485-8955 .02Z 5999-00-368-4852 .02Z 6145-00-772-2804 <t< td=""><td>19207 19207 81349 19207 77820 19207</td><td>11655454 7355520 M43436/1-3 7056674 60-37005-321 8724763 7388356 7971717 7716523 7716520 8701344 8701346 11682595-2 112875732 12314619 7355520 MILL631 7056674 M43436/1-1 M43436/1-1 M43436/1-3 60-37005-321 8724763 7388353 7716521 7716522 8701345 8701346 7722204 MS3106R10SLSC 7728778 MS21003-19 7056634 MS3106R10SL4SC 7720853</td><td>WIRING HARNESS. TERMINAL LUG. BAND, MARKER. WIRE, ELECTRICAL. NUT, BUSHING RETAINING. NONMETALLIC ROD. BUSHING, RUBBER. CONNECTOR, RECEPTACLE. CONTACT, ELECTRICAL. CONTACT, ELECTRICAL. INSERT, ELECTRICAL. LEAD, ELECTRICAL (USE WITH 2C AND 2CA ENGINES). LEAD, ELECTRICAL (USE WITH 2D AND 2DA ENGINES). CABLE ASSEMBLY (USE WITH 2C AND 2D ENGINES). CABLE ASSEMBLY (USE WITH 2CA AND 2DA ENGINES). TERMINAL LUG. INSULATION SLEEVING. WIRE, ELECTRICAL. BAND, MARKER (USE WITH 2CA AND 2DA ENGINES). BOND, MARKER. NUT, BUSHING RETAINER. NONMETALLIC ROD (USE WITH 2CA AND 2DA ENGINES). BUSHING, RUBBER. CONNECTOR, RECEPTACLE. CONTACT, ELECTRICAL. CONTACT, ELECTRICAL. INSERT SHELL. WIRE, ELECTRICAL (USE WITH 2CA AND 2DA ENGINES). TERMINAL LUG (USE WITH 2CA AND 2DA ENGINES). WIRE, ELECTRICAL.</td><td>EA EA E</td><td>1</td></t<>	19207 19207 81349 19207 77820 19207	11655454 7355520 M43436/1-3 7056674 60-37005-321 8724763 7388356 7971717 7716523 7716520 8701344 8701346 11682595-2 112875732 12314619 7355520 MILL631 7056674 M43436/1-1 M43436/1-1 M43436/1-3 60-37005-321 8724763 7388353 7716521 7716522 8701345 8701346 7722204 MS3106R10SLSC 7728778 MS21003-19 7056634 MS3106R10SL4SC 7720853	WIRING HARNESS. TERMINAL LUG. BAND, MARKER. WIRE, ELECTRICAL. NUT, BUSHING RETAINING. NONMETALLIC ROD. BUSHING, RUBBER. CONNECTOR, RECEPTACLE. CONTACT, ELECTRICAL. CONTACT, ELECTRICAL. INSERT, ELECTRICAL. LEAD, ELECTRICAL (USE WITH 2C AND 2CA ENGINES). LEAD, ELECTRICAL (USE WITH 2D AND 2DA ENGINES). CABLE ASSEMBLY (USE WITH 2C AND 2D ENGINES). CABLE ASSEMBLY (USE WITH 2CA AND 2DA ENGINES). TERMINAL LUG. INSULATION SLEEVING. WIRE, ELECTRICAL. BAND, MARKER (USE WITH 2CA AND 2DA ENGINES). BOND, MARKER. NUT, BUSHING RETAINER. NONMETALLIC ROD (USE WITH 2CA AND 2DA ENGINES). BUSHING, RUBBER. CONNECTOR, RECEPTACLE. CONTACT, ELECTRICAL. CONTACT, ELECTRICAL. INSERT SHELL. WIRE, ELECTRICAL (USE WITH 2CA AND 2DA ENGINES). TERMINAL LUG (USE WITH 2CA AND 2DA ENGINES). WIRE, ELECTRICAL.	EA E	1

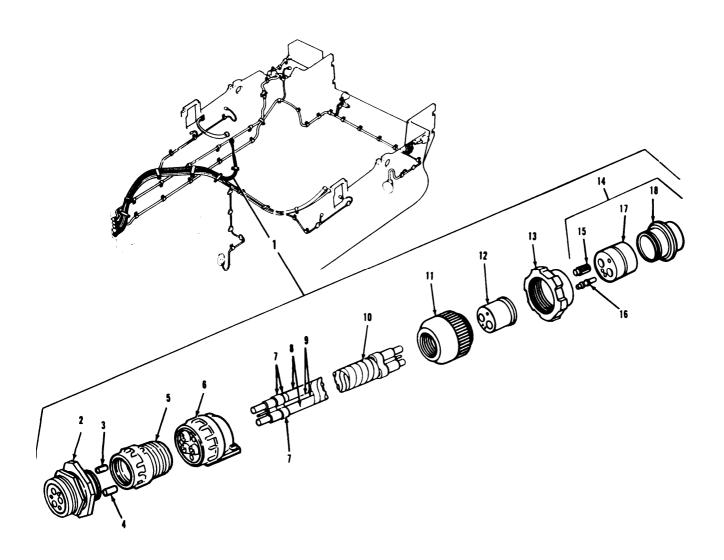


FIGURE B-22. STARTER FEED HARNESS ASSEMBLY (2CA ENGINE).

	l) US-	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a)	(b) ITEM NO.	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART Number	DESCRIPTION USABLE ON CODE		QTY INC IN UNIT
						GROUP 0613: HULL WIRING HARNESS-STARTER FEED HARNESS ASSEMBLY (2CA ENGINE)		
B-22 B-22 B-22 B-22 B-22 B-22 B-22 B-22	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	PAOOO PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ MOOZZ MOOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ	2920-01-152-2412 5935-00-134-0373 9390-00-464-4756 9390-00-180-7289 5935-00-987-2942 5935-00-107-1273 9905-00-893-3570 5935-00-729-8217 5365-00-682-2043 5310-00-678-4228 5935-00-685-9979 5999-00-485-8954	19207 19207 19207 19207 77820 81349 81349 81349 19207 19207 19207 19207 19207		WIRING HARNESS. CONNECTOR, RECEPTACLE. ROD, NONMETALLIC. ROD, NONMETALLIC. ADAPTER, CABLE CLAMP. CONNECTOR, PLUG. BAND MARKER. CABLE, ELECTRICAL (MAKE FROM NSN 6145-00-705-6674). WIRE, ELECTRICAL (MAKE FROM NSN 6145-00-152-6499). CABLE WRAP (MAKE FROM NSN 9330-01-047-4313). CONNECTOR. BUSHING, RUBBER. NUT, PLAIN ROUND. CONNECTOR, PLUG. CONNECTOR. CONTACT ELECTRICAL. INSERT, ELECTRICAL. SHELL, ELECTRICA.	EA	1 1 V V 1 1 1 9 V V V V 1 1 1 1 2 3 1 1

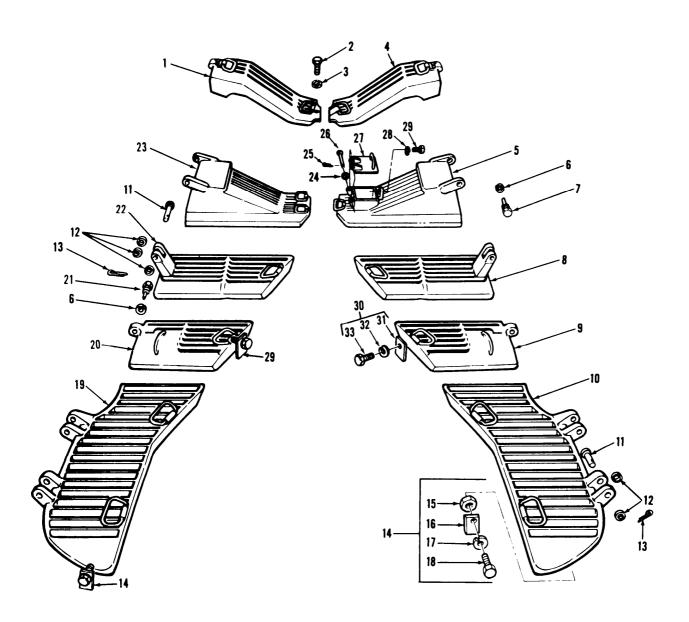


FIGURE B-23. GRILLE DOOR ASSEMBLIES AND RELATED PARTS.

(1	1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ILL	US-							QTY
TRAT	(b)	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON	U/M	INC IN UNIT
NO.	NO.		7.02			CODE		
						GROUP18: BODY AND HULL		
						GROUP1801: HULL ASSEMBLIES-GRILLE DOOR ASSEMBLIES AND RELATED PARTS		
B-23	1	PB000	2510-00-927-3305	19207	10864043	DOOR ASSEMBLY, INTAKE GRILLE, NO. 1, LEFT (USE WITH 2C	EA	1
B-23	1	PB000		19207	12326091	AND 2D ENGINES). DOOR ASSEMBLY, INTAKE GRILLE, NO. 1, LEFT (USE WITH 2DA	EA	3
B-23	1	PB000	5340-01-152-2542	19207	12325890	ENGINE). DOOR ASSEMBLY, INTAKE GRILLE, NO. 1, LEFT (USE WITH 2CA	EA	1
B-23	2	PAOZZ	5305-00-071-2069	96906	MS90728-113	ENGINE)	EA	
B-23	3	PAOZZ	5310-00-011-6121	96906	MS35338-67	WASHER, LOCK	EA	
B-23	4	PB000	2510-00-014-2483	19207	10924454	DOOR ASSEMBLY, INTAKE GRILLE, NO. 1, RIGHT (USE WITH 2C	EA	1
	1					AND 2D ENGINES)		
B-23	4	PB000		19207	12326087	DOOR ASSEMBLY, INTAKE GRILLE, NO. 1, RIGHT (USE WITH 2DA ENGINE)	EA]
B-23	4	PB000	5340-01-152-2541	19207	12325884	DOOR ASSEMBLY, INTAKE GRILLE, NO. 1, RIGHT (USE WITH 2CA ENGINE)	EA	
3-23	5	PB000	2510-01-082-3809	19207	11654555	DOOR, ACCESS, NO.2, RIGHT	EA	
3-23	6	PAOZZ	5310-00-011-6124	96906	MS35338-70	WASHER, LOCK	EA	
-23	7	PAOZZ	5305-00-678-6195	19207	10863629	SETSCREW	EA	ļ
-23	8	PB000	2510-00-080-7552	.19207	10863965	DOOR, ACCESS, INTAKE GRILLE, NO. 3, RIGHT	EA	
-23	9	PB000	2510-01-082-3811	19207	1	DOOR, ACCESS, NO. 4, RIGHT (M48A5AVLB ONLY)	EA	
-23	9	PB000	2510-00-115-4327	19207	10864147	DOOR, ACCESS, NO. 3, RIGHT	EA	
3-23	10	PB000	2510-01-082-3813	19207	12257503-2	DOOR, ACCESS, NO. 5, RIGHT (M48A5AVLB ONLY)	EA	
3-23	10	PB000	2510-00-105-6154	19207	10864206	DOOR, ACCESS, NO. 5, RIGHT	EA	
3-23	11	PAOZZ	5315-00-699-7760	19200	8671869	PIN, STRAIGHT, HEADED	EA	
3-23	12	PAOZZ PAOZZ	5310-00-809-8533 5315-00-059-0491	96906	MS27183-23 MS24665-372	WASHER, FLATPIN, COTTER (M48A5AVLB ONLY)	EA	
3-23 3-23	13	PAOZZ	5315-00-012-0123	96906		PIN, COTTER.	EA	
3-23	14	XD000	3313-00-012-0123	19207	7970529	BLOCK ASSY (OPTIONAL WITH BLOCK ASSEMBLY 10916563)	EA	
-23	14	XD000		19207	10916563	BLOCK ASSY (OPTIONAL WITH BLOCK ASSEMBLY 7970529)	EA	l
3-23	15	PAOZZ	5310-00-957-0022	96906	MS35690-1004	NUT, PLAIN, HEXAGON	EA	
3-23	16	XDOZZ		19207	7970528	BLOCK	EA	
3-23	17	PAOZZ	5310-00-820-6653	80045	23MS35338-50	WASHER, LOCK	EA	
-23	18	PAOZZ	5305-01-102-5513	19207	8734585	SCREW, CAP, HEXAGON H (USE WITH BLOCK ASSEMBLY 7970529 ONLY)	EA	
3-23	18	PAOZZ	5303-01-115-1847	19207	10916561	SCREW, MACHINE (USE WITH BLOCK ASSEMLBY 10916563 ONLY)	EA	
-23	19	PB000	2510-01-082-3812	19207	12257503-1	DOOR ASSEMBLY, NO. 5, LEFT (M48A5AVLB ONLY)	EA	
-23	19	PB000	2510-00-105-6155	19207	10864205	DOOR ASSEMBLY, NO. 5, LEFT	EA	
-23	20	PB000	2510-01-082-3810	1	12257502-1	DOOR ASSEMBLY, NO. 4, LEFT (M48A5AVLB ONLY)	EA	
-23	20	PB000	2510-00-226-2131	19207	10864146	DOOR ASSEMBLY, NO. 4, LEFT	EA	
-23	21	PAOZZ	5303-00-678-6196	1	10863630	SETSCREW	EA	
-23	22	PB000	2510-00-997-4524	19207	10863964	DOOR ASSY, GRILL TOP , NO. 3, LEFT	EA	
1–23 1–23	23	PB000 PA0ZZ	2510-00-487-9469 5310-00-809-5998	19207 96906	11654554-1 MS27183-18	DOOR, HATCH, VEHICLE , NO. 2, LEFT	EA	l
-23	25	PAOZZ	5315-00-839-5821	96906	MS24665-351	PIN, COTTER (M48A5AVLB AND M60A1AVLB ONLY)	EA	
-23	26	PAOZZ	5315-00-456-5948	i	11626375	PIN, STRAIGHT, HEADED (M48A5AVLB AND M60A1AVLB ONLY)	EA	
3-23	27	PB000	5420-01-085-7003	19207	11626427	COVER (M48A5AVLB AND M60A1AVLB ONLY)	EA	
3-23	28	PAOZZ	5310-00-820-6653	80045		WASHER, LOCK (M48A5AVLB AND M60A1AVLB ONLY)	EA	
3-23	29	PAOZZ	5303-00-724-5911	96906	(SCREW, CAP, HEXAGON H (M48A5AVLB AND M60A1AVLB ONLY)	EA	1
3-23	30	XD000		19207	12257511	BLOCK (M48A5AVLB ONLY)	EA	
B-23	31	XDOZZ		19207	12257511-1	BLOCK (M48A5AVLB ONLY)	EA	
B-23	32	PAOZZ	5310-00-820-6653	80045	23MS35338-50	WASHER, LOCK (M48A5AVLB ONLY)	EA	
						CONTINUED NEXT PAGE		
	L	L	L	L	l			L

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(1 ILL TRA1	US-	(2)	(3)	(4)	(5)	(6) DESCRIPTION		(8) QTY INC
(a) FIG. NO.	(b)	SMR CODE	NATIONAL STOCK Number	FSCM	PART Number	USABLE ON CODE		IN
		-				GROUP: 18 BODY, CAB, HOOD, AND HULL GROUP1801: HULL ASSEMBLIES-GRILLE DOOR ASSEMBLIES AND RELATED PARTS —CONTINUED		
B-23	33	PAOZZ	5303-00-724-5911	96906	MS90725-163	SCREW, CAP, HEXAGON H (M48A5AVLB ONLY)	EA	1

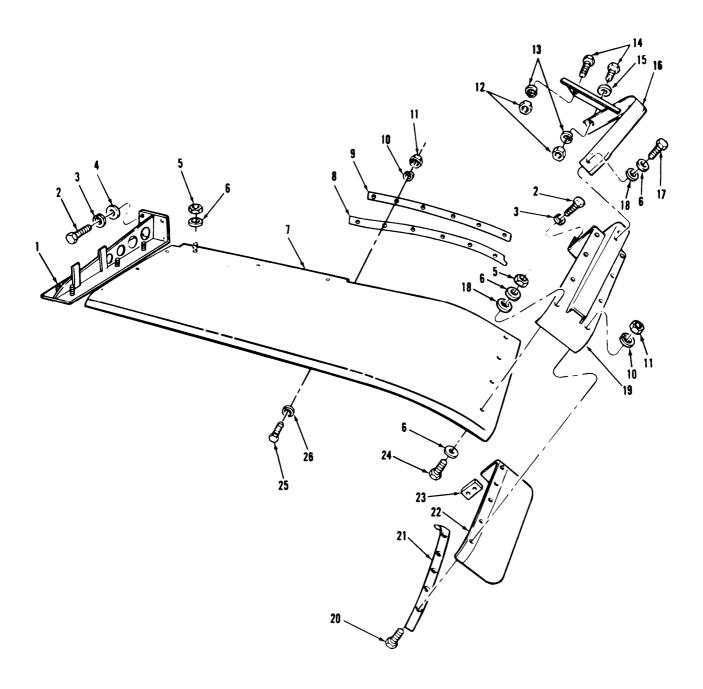


FIGURE B-24. FRONT FENDER AND RELATED PARTS.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ILI	LUS-	, ,		` '				QTY
TRA	TION	SMR	NATIONAL	FSCM	PART	DESCRIPTION	U/M	INC
(a)	(b)	CODE	STOCK		NUMBER	USABLE		IN
FIG.	1		NUMBER			ON	ŀ	UNIT
NO.	NO.					CODE	ļ	
						GROUP 1802-FENDERS-FRONT FENDER AND RELATED PARTS		
B-24 B-24 B-24 B-24 B-24 B-24 B-24 B-24	1 2 3 4 4 5 6 6 7 7 7 8 8 9 10 11 12 13 14 15 16 16 16 17 18 19 19 20 1 22 22 23 24 25	PAOZZ	2510-00-930-3226 2510-00-930-3229 5305-00-947-4352 5310-00-584-7888 5310-00-809-8533 5310-00-930-2214 5310-00-930-2035 2510-00-930-2034 2590-01-016-2024 2510-00-105-9917 5310-00-582-5965 5310-00-768-0319 5310-00-768-0318 5310-00-768-0318 5310-00-809-3079 2510-00-119-3907 2510-00-119-3907 2510-00-15-6144 5306-00-145-0876 5310-00-256-5530 5305-00-267-8974 2590-00-839-0156 2510-00-757-2750 2510-00-757-2750 2510-00-757-2750 2510-00-689-3213 5305-00-269-3213 5305-00-269-3213 5305-00-809-4058	11920 96906	MS51968-2 MS51967-14 MS35338-48 MS90725-116 MS27183-19 10940260-2 10940260-1 MS35763-833 MS27183-13 11637698-2 11637698-1 MS90726-8 10887138 10940256-2 10940256-1 10940255 MS90725-62	SUPPORT, FENDER, NO. 2, RIGHT. SUPPORT, FENDER, NO. 2, LEFT. SCREW, CAP, HEX HEAD. WASHER, LOCK. WASHER, LOCK. WASHER, FLAT. FENDER, VEHICULAR, FRONT RIGHT. FENDER, VEHICULAR, FRONT LEFT. ANTISQUEAK, FENDER. STRIP, FENDER, FILLER. WASHER, LOCK. NUT, PLAIN-HEXAGON. NUT, PLAIN-HEXAGON. NUT, PLAIN-HEXAGON. WASHER, LOCK. SCREW, CAP, HEX HEAD. WASHER, FLAT. GUARD, HEADLAMP, RIGHT. GUARD, HEADLAMP, LEFT. BOLT, SELF-LOCK ING. WASHER, FLAT. SUPPORT, FENDER, RIGHT FRONT. SUPPORT, FENDER, LEFT FRONT. SCREW, CAP, HEX HEAD. RETAINER, EXTENSION. EXTENSION, FENDER, RIGHT FRONT. EXTENSION, FENDER, RIGHT FRONT. SCREW, CAP, HEX HEAD. RETAINER, EXTENSION. EXTENSION, FENDER, RIGHT FRONT. SCREW, CAP, HEX HEAD. SCREW, CAP, HEX HEAD. SCREW, CAP, HEX HEAD. SCREW, CAP, HEX HEAD. WASHER, FLAT.	EA EA EA EA EA EA EA EA	1 1 16 16 8 20 32 1 1 2 2 6 26 4 4 4 12 1 1 1 4 4 12 1 1 1 2 8 12 12 12

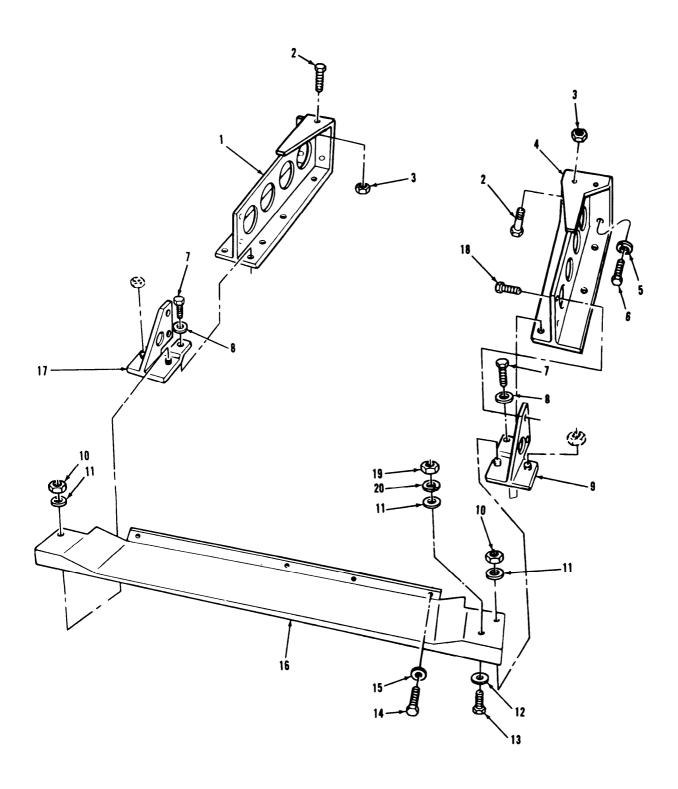
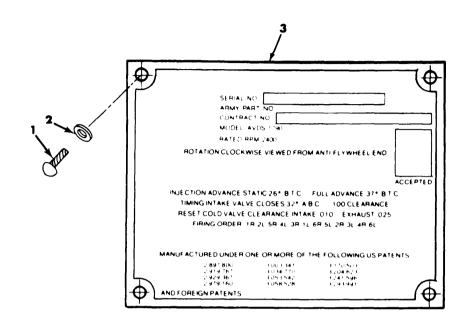


FIGURE B-25. FENDER SUPPORTS AND RELATED PARTS.

1 .	1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	US-				B	2500.27.00		YTQ
(a)	(b)	SMR Code	NATIONAL STOCK	FSCM	PART NUMBER	DESCRIPTION USABLE	U/M	INC
FIG.	ITEM		NUMBER			ON		UNIT
NO.	NO.					CODE	-	
						GROUP 1802: FENDERS-FENDER SUPPORTS AND RELATED PARTS		
B-25 B-25 B-25 B-25 B-25 B-25 B-25 B-25	1 1 2 3 4 4 5 6 7 8 9 10 11 12 13 14 15 16 16 16 17 17 18 19 20	PAOZZ	2510-01-077-1650 2510-00-074-8285 5305-00-071-2068 5310-00-225-6993 2510-01-174-9586 5310-00-584-7888 5305-00-947-4352 5305-00-068-0510 5310-00-987-1294 2510-00-105-2756 2510-00-105-2755 5310-00-930-8214 5310-00-625-3115 5310-00-269-3213 5305-00-115-9526 5310-00-728-9957 2510-00-455-1351 5340-00-571-7067 5340-01-006-4586 5306-01-017-2566 5310-00-732-0558 5310-00-637-9541	96906 19207 19207 96906 96906 96906 19207 19207 96906 19207 96906 19207 19207 19207 19207 19207 19207	12290526-2 12290526-1 MS90728-112 MS51922-33 12290527-2 MS35338-51 MS90728-60 10910174-16 8762504 8762503 MS51988-7 11654843 MS27183-14 MS90725-62 MS18154-58 10910174-22 11659711-2 11655113-1 MS35764-1289 MS35338-46	SUPPORT, FENDER NO. 3, RIGHT SUPPORT, FENDER NO. 3, LEFT SCREW, CAP, HEX HEAD NUT, SELF-LOCKING SUPPORT, FENDER NO. 4, LEFT SUPPORT, FENDER NO. 4, RIGHT WASHER, LOCK SCREW, CAP, HEX HEAD SCREW, CAP, HEXAGON. WASHER, FLAT BRACKET, EXTENSION , RIGHT BRACKET, EXTENSION , LEFT NUT, SELF-LOCKING WASHER, FLAT SCREW, CAP, HEX HEAD SCREW, CAP, HEX HEAD SCREW, CAP, HEX HEAD WASHER, FLAT EXTENSION, FENDER , RIGHT EXTENSION, FENDER , LEFT BRACKET, MOUNTING , RIGHT BRACKET, MOUNTING , RIGHT BRACKET, MOUNTING , LEFT BOLT, SELF-LOCKING. NUT, PLAIN, HEXAGON. WASHER, LOCK	EA EA EA EA EA EA	1 1 6 6 1 1 1 16 16 4 4 4 1 1 1 1 8 8 1 1 1 1 8 2 2 2 2



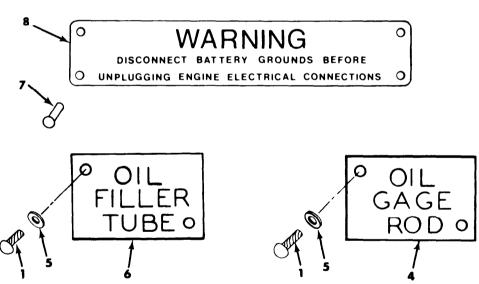


FIGURE B-26. DATA PLATE AND INSTRUCTION HOLDERS.

ILL	1) .us- tion	(2)	(3)	(4)	(5)	(6)		(8) QTY
(a)		SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
						GROUP 22: BODY CHASSIS AND HULL ACCESSORY ITEMS GROUP 2210: IDENTIFICATION PLATES AND ASSOCIATED PARTS-DATA PLATE AND INSTRUCTION HOLDERS		
B-26 B-26 B-26 B-26 B-26 B-26 B-26 B-26	7	PAOZZ PAHZZ PAHZZ PAHZZ PAHZZ PAHZZ PAOZZ PAOZZ PAOZZ PAOZZ	5305-00-253-5618 5305-00-253-5618 5310-00-167-0816 9905-01-021-2825 9905-01-160-2693 9905-01-026-9951 5310-00-656-0111 9905-00-407-5099 5320-00-753-3830	96906 89954 19207 19207 19207 19207 96906 19207	MS21318-27 11382363P6 11683967 12314617 11684134 12314646 MS15795-703 10882826 MS20613-4P5	SCREW DRIVE, ENGINE IDENTIFICATION PLATE TO CRANKCASE SCREW DRIVE, IDENTIFICATION PLATE TO OIL FILLER TUBE WASHER, FLAT PLATE, IDENTIFICATION (USE WITH 2C ENGINE) PLATE, IDENTIFICATION (USE WITH 2CA ENGINE) PLATE, IDENTIFICATION (USE WITH 2D ENGINE) PLATE, IDENTIFICATION (USE WITH 2DA ENGINE) WASHER, FLAT PLATE, IDENTIFICATION RIVET, SOLID PLATE, WARNING.	EA EA	4 4 4 1 1 1 1 4 1 8 2

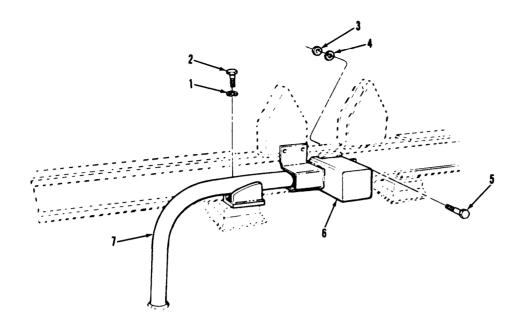
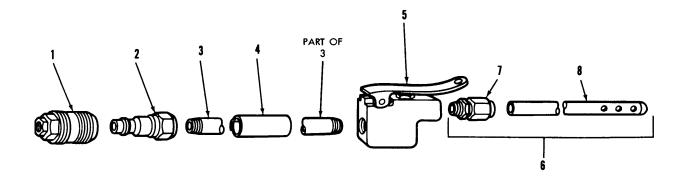


FIGURE B-27. HOLDDOWN CYLINDER ARMOR AND RELATED PARTS (M48A5AVLB AND M60A1AVLB).

ILL	1) US- Tion	(2)	(3)	(4)	(5)	(6) DESCRIPTION	, ,	(8) QTY INC
(a) FIG. NO.	(b) ITEM NO.	M NUMBER	STOCK	7.50	NUMBER	USABLE ON CODE		UNIT
						GROUP 2407: HYDRAULIC CYLINDERS—HOLDDOWN CYLINDER ARWOR AND RELATED PARTS (M48A5AVLB AND M60A1AVLB)		
B-27 B-27 B-27 B-27 B-27 B-27 B-27	1 2 3 4 5 6 6 7	PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ	5310-00-584-7889 5305-00-958-8475 5310-00-768-0318 5310-00-584-5272 5305-00-915-8087 2590-01-136-5252 5420-01-121-1232	96906 96906 96906 96906 96906 97403 19207 97403	MS90726-235 MS51967-14 MS35338-48 MS18154-113	WASHER, LOCK. SCREW, CAP, HEXAGON. NUT, PLAIN, HEXAGON. WASHER, LOCK. SCREW, CAP, HEXAGON H. COVER, ARMORED (USE WITH 2D ENGINE). COVER, ARMORED (USE WITH 2DA ENGINE). PIPE AND CLAMP ASSE.	EA	2 2 3 3 1 1



ILL TRAT	us-	(2)	(3)	(4)	(5) PART	(6) DESCRIPTION		(8) QTY
(a) FIG. NO.	(b) ITEM NO.	CODE	STOCK NUMBER		NUMBER	USABLE ON CODE		UNIT
						GROUP 26: TOOLS AND TEST EQUIPMENT GROUP 2604: SPECIAL TOOLS-V-PACK CLEANER ASSEMBLY COMPONENTS		
B-28 B-28 B-28 B-28 B-28 B-28 B-28	1 2 3 4 5 6 7 8	PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ PAOZZ	990501056-8812 473000-020-9973	81349 81349 19207 81349 19207 19207 96906 19207	M4109-60800C M4109-140800C 12301743 M43436/5-1 12301778 12326131 MS51500A5-4S 12326130	COUPLING HALF COUPLING HALF NIPPLE BAND MARKER. VALVE TUBE ASSSEMBLY ADAPTER TUBE	EA EA EA EA EA EA	1 1 1 1 1 1 1

ILL	1) .US-	(2)	(3)	(4)	(5)	(6)	(7)	(8) QTY
(a) FIG. NO.		SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION USABLE ON CODE	U/M	INC IN UNIT
						GROUP 95: GENERAL USE STANDARDIZED PARTS GROUP 9501: HARDWARE SUPPLIES AND BULK MATERIAL, COMMON-BULK MATERIAL		
BULK		PAOZZ	4010-00-165-6064	21450	RRC271-1-5C2-13	CHAIN, WELDED, TYPE 1, CLASS 5, STYLE 2, 23 LINKS PER FT, .125 THICK, STEEL	FT	
BULK		PAOZZ	4720-00-278-1110	81348	M1LH6000	HOSE, NONMETALLIC,	FT	
BULK		PAOZZ	5970-00-284-8640		1	INSULATION SLEEVING MILI631, TYPEF, GRADE B, FORM U, CLASS 1, TRANSPARENT, .182 ID.	FT	
BULK		PAOZZ	6145-00-152-6499	81349	M13486/1-5	WIRE, ELECTRICAL	FT	
BULK		PAOZZ	6145-00-161-1609	81349	M13486/1-3	WIRE, ELECTRICAL	FT	
BULK		PAOZZ	6145-00-254-6117	81349		CABLE, ELECTRICAL	1	
BULK		PAOZZ	6145-00-705-6674	81349		CABLE, ELECTRICAL		
BULK		PAOZZ PAOZZ	9320-00-576-4981	81349		RUBBER SHEET, CELLULAR		
BULK		PAOZZ	9330-01-047-4313	19207 81349	11644992-1 MILR46846-5-1.50	CABLE WRAP, .38 DIA, .035 THICK, .44 WIDE	FT	

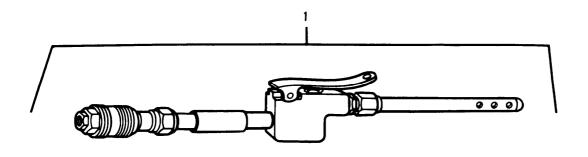


FIGURE B-29. V-PACK CLEANER ASSEMBLY.

	1) .US-	(2)	(3)	(4)	(5)	(6)	(7)	(8) QTY
(a)	IG. ITEM		1 1		PART NUMBER	DESCRIPTION USABLE ON CODE	U/N	INC IN UNIT
						GROUP 26: TOOLS AND TEST EQUIPMENT GROUP 2604: SPECIAL TOOLS -V-PACK CLEANER ASSEMBLY		
B-29	1	AO 000		19207	12326132	CLEANER, V-PACK (FOR COMPONENT PARTS SEE GROUP 2604: V-PACK CLEANER) BOI1 AUTH PER LETTERED COMPANY	EA	1

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX NATIONAL STOCK NUMBER CROSS-REFERENCE TO FIGURE NUMBER AND ITEM NUMBER

NATIONAL	FIGURE	ITEM	NATIONAL	FIGURE	ITEM
STOCK NUMBER	NO.	NO.	STOCK NUMBER	NO.	NO.
5310-00-011-6121	B-23	3	5305-00-071-2513	B-13	6
5310-00-011-6124	B-23	6	5975-00-074-2072	B-9	25
5315-00-012-0123	B-23	13	2510-00-074-8285	B-25	1
2510-00-014-2483	B-23	4	5330-00-078-4714	B-4	40
5310-00-014-5850	B-19	33	5310-00-080-6004	B-25	12
4140-00-016-2615	B-4	52	2510-00-080-7552	B-23	8
5305-00-019-2417	B-3	12	5310-00-081-4219	B-3	40
5305-00-019-2417	B-10	17	5310-00-081-4219	B-5	3
5305-00-019-2417	B-11	19	5310-00-081-4219	B-7	3
4730-00-020-9973	B-28	7	6105-00-084-7618	B-8	
5925-00-026-4767	B-4	11	5310-00-087-7493	B-24	18
5940-00-030-7275	B-19	24	5310-00-088-0553	B-2	31
5305-00-042-5592	B-16	27	5310-00-088-0553	B-3	13
5305-00-042-5592	B-17 B-8	17 16	5310-00-088-0553 5310-00-088-0553	B-11 B-12	12 12
2940-00-043-0279 5310-00-045-3296	B-16	8	5310-00-088-0553	B-12 B-16	25
5310-00-045-3296	B-17	5	5310-00-088-0553	B-10 B-17	35
5310-00-045-3296	B-17	34	5340-00-088-1254	B-17 B-17	19
5310-00-045-3299	B-19 B-16	6	5340-00-088-1255	B-17 B-18	7
5310-00-045-3299	B-16	6	5935-00-089-7917	B-19	31
5310-00-045-4007	B-4	12	5365-00-090-5426	B-20	25
2940-00-045-6873	B-5	42	2920-00-103-9397	B-8	3
5306-00-050-1238	B-2	15	2510-00-105-2755	B-25	9
5306-00-050-1238	B-10	15	2510-00-105-2756	B-25	9
5306-00-050-1238	B-16	13	2940-00-105-2804	B-5	2
5306-00-050-1238	B-17	24	2940-00-105-2805	B-5	2
5305-00-051-4076	B-2	28	5365-00-105-6138	B-24	23
5306-00-051-4077	B-17	4	2510-00-105-6144	B-24	16
5305-00-054-6652	B-10	1	2510-00-105-6154	B-23	10
5999-00-057-2929	B-4	26	2510-00-105-6155	B-23	19
5999-00-057-2929	B-4	44	2510-00-105-9917	B-24	9
5340-00-057-3025	B-17	1	2930-00-107-1221	B-11	4
5340-00-057-3025	B-18	4	5935-00-107-1273	B-22	6
5340-00-057-3029	B-17	27	5935-00-107-1275	B-19	18
5340-00-057-3034	B-16	17	5340-00-107-4286	B-17	28
5340-00-057-3034	B-17	36	5340-00-107-4286	B-18	11
5340-00-057-3037	B-17	11	5999-00-113-2954	B-20	32
5340-00-057-3043	R-16	18	5940-00-113-8184	B-20	53
5340-00-057-3043	B-17	31	5935-00-115-2307	B-19	21
5315-00-059-0491	B-23	13	2510-00-115-4327	B-23	9
5310-00-061-1258	B-16	3 5	5305-00-115-9526	B-25	14
4730-00-062-7435	B-5	31	2510-00-119-3907	B-24	16
4730-00-062-7435	B-7	31	5935-00-134-0373	B-22	2
5340-00-067-3868	B-17	37	5306-00-145-0876	B-12	2
5305-00-068-0500	B-16	21	5306-00-145-0876	B-24	17
5305-00-068-0500	B-17	22	6145-00-152-6499	BULK	-
5305-00-068-0500 5305-00-068-0501	B-18 B-4	13 51	6240-00-155-8707	B-13	3 7
5305-00-068-0506	B-10	8	6240-00-155-8707 6240-00-155-8707	B-14 B-15	3
5305-00-068-0507	B-24	25	6145-00-161-1609	BULK	3
5305-00-068-0508	B-6	24	6145-00-161-1609	B-21	34
5305-00-068-0510	B-25	7	4010-00-165-6064	BULK	34
5305-00-068-0510	B-9	7	5310-00-167-0721	B-5	36
5305-00-068-7837	B-14	3	5310-00-167-0721	B-7	36 37
5305-00-069-3019	B-14 B-10	24	5310-00-167-0721	B-16	20
5305-00-071-1770	B-24	14	5310-00-167-0816	B-26	2
5305-00-071-2068	B-25	2	5935-00-167-7775	B-20	51
5305-00-071-2069	B-23	2	2940-00-168-2243	B-5	44
5305-00-071-2234	B-14	8	2940-00-168-2246	B-5	30
5303-00-071-2513	B-15	5	2815-00-177-8216	B-11	9

TB 9-2300-378-14

NATIONAL STOCK NUMBER CROSS-REFERENCE TO FIGURE NUMBER AND ITEM NUMBER - CONTINUED

NATIONAL	FIGURE	ITEM	NATIONAL	FIGURE	ITEM
STOCK NUMBER	NO.	NO.	STOCK NUMBER	NO.	NO .
5340-00-178-6077	B-16	16	4720-00-278-1110	BULK	
5307-00-178-8859	B-4	58	5340-00-281-4425	B-18	5
5307-00-178-8859	B-6	25	5340-00-282-7548	B-10	38
9390-00-180-7289	B~19	20	5970-00-284-8640	BULK	
9390-00-180-7289	B~20	42	5325-00-290-1960	B-18	1
9390-00-180-7289	B-21	6	5940-00-314-0479	B-21	30
9390-00-180-7289	B-21	21	5330-00-318-4127	B-12	3
9390-00-180-7289	B-21	21	5365-00-318-8184	B-19	26
9390-00-180-7289	B~22	4	5935-00-333-3088	B-20	44
5330-00-180-9951	B-9	18	5935-00-333-9414	B-19	25
5306-00-182-2023	B-2	37	5935-00-333-9414	B-20	6
5306-00-182-2023	B-11	2	5999-00-368-4852	B-21	25
5325-00-182-4707	B-11	24	2930-00-392-9515	B-3	14
4710-00-192-9436	8-2	27	2930-00-392-9547	B-3	25
2990-00-193-8211	B-11 B-9	15	5310-00-393-6685	B-20	26
5310-00-194-0636 5305-00-206-3851	8-2	11 6	2815-00-394-9690 2815-00-394-9700	B-17	34
5305-00-206-3851	8-2	12	2815-00-394-9700	B-3 B-16	9 24
5310-00-209-0786	B-4	50	2815-00-394-9701	B-3	1
5310-00-209-1366	B-10	30	2520-00-394-9713	B-3	35
5307-00-218-8179	B-4	21	2815-00-397-3283	B-16	26
4730-00-221-2136	B-5	19	2815-00-397-3311	B-17	25
4730-00-221-2136	B-7	20	2815-00-397-3313	B-3	37
5970-00-221-5301	B~21	16	2920-00-398-6540	B-12	5
5305-00-225-3838	B-17	21	2815-00-398-6726	B-11	21
5310-00-225-6993	B-25	3	2920-00-398-7097	B-16	5
5306-00-225-8497	B-5·	35	2815-00-399-5301	B-3	3
5306-00-225-8497	B-7	36	2815-00-399-5302	B-2	33
5306-00-225-8498	B-4	61	5940-00-399-6676	B-4	34
5306-00-225-8498	B-6	29	5940-00-399-6676	B-20	2
5306-00-225-9086	B-2	34	2815-00-406-4615	B-2	8
5306-00-225-9088	B-16	34	2815-00-406-4621	B-2	1
5306-00-225-9088	B-17	15	9905-00-407-5099	B-26	6
5305-00-225-9091	B-16	2	5310-00-407-9566	B-2	38
5305-00-225-9091	B-16	2	5310-00-407-9566	B-4	55
5305-00-225-9091	B-17	26	5310-00-407-9566	B-5	4
2510-00-226-2131	B-23	20	5310-00-407-9566	B-6	28
5306-00-226-4822	B-6	20	5310-00-407-9566	B-7	4
5306-00-226-4824	B-4	56	5310-00-407-9566	B-10	21
5305-00-240-6668	B-19	32	5310-00-407-9566	B-16	12
5305-00-253-5618	B-26	1	5310-00-407-9566	B-17	12
5305-00-253-5618	B-26	1	5340-00-409-2055	B-2	39
6145-00-254-6117	BULK		2815-00-410-1045	B-3	8
2510-00-256-5530	B-24	19	2815-00-410-1131	B-11	8
2510-00-256-5531	B-24	19	2815-00-410-1150	B-16	5 5
5305-00-267-8953	B-17	7	5360-00-410-5836 5360-00-410-5836	B-2 B-2	13
5305-00-267-8974	B-24	20	5330-00-410-5836	B-2 B-2	36
5305-00-269-2800	B-19	8	5306-00-413-4373	B-12	9
5305-00-269-2806	B-12 B-16	8 15	2590-00-423-3622	B-21	í
5305-00-269-2808 5305-00-269-2808	B-16	15	6680-00-423-4051	B-2	32
5305-00-269-2808	B-17	33	4730-00-431-9307	B-9	24
5303-00-269-3213	B-25	13	2815-00-432-0056	B-3	38
5305-00-269-3213	B-16	31	5935-00-432-8967	B-21	29
5305-00-269-3213	B-24	24	5935-00-432-8967	B-21	33
5305-00-269-3242	B-12	14	2930-00-436-3197	B-11	21
4030-00-270-5436	B-9	13	2930-00-436-3208	B-11	16
5310-00-274-9364	B-3	32	2920-00-441-8137	B-12	1
5325-00-276-6089	B-11	7	2815-00-446-1757	B-11	1
5325-00-276-6096	B-3	34	2930-00-453-5376	B-11	14
4730-00-277-6352	B-9	16			

NATIONAL	FIGURE	ITEM	NATIONAL	FIGURE	ITEM
STOCK NUMBER	NO.	NO .	STOCK NUMBER	NO.	NO.
2510-00-455-1351	B-25	16	5310-00-584-7889	B-27	1
2510-00-455-1352	B-25	16	5330-00-599-0942	B-2	4
2920-00-455-5835	B-12	11	5330-00-599-0942	B-2	11
5315-00-456-5948	B-23	26	2590-00-606-2346	B-4	14
5935-00-462-2913	B-20	36	5305-00-614-0274	B-16	3
5935-00-462-6603	B-20	28	5305-00-614-0274	B-17	2
9390-00-464-4756	B-22	3	5935-00-614-9136	B-20	49
2920-00-466-7464	B-16	11	5970-00-615-8884	B-20	37
2815-00-475-8216	B-17	16	5310-00-625-3115	B-25	11
6150-00-476-0371	B-16	36	5310-00-637-9541	B-5	33
6150-00-476-0381	B-16	30	5310-00-637-9541	B-7	34
5999-00-485-8954	B-20	10	5310-00-637-9541	B-16	29
5999-00-485-8954	B-20	31	5310-00-637-9541	B-19	7
5999-00-485-8954	B-20	38	5310-00-637-9541	B-25	20
5999-00-485-8954	B-20	48	5975-00-644-3682	B-4	35
5999-00-485-8954	B-21	10	5310-00-655-9860	B-19	27
5999-00-485-8954	B-22	16	5310-00-655-9860	B-20	8
5999-00-485-8955	B-20	17	5310-00-656-0111	B-26	5
5999-00-485-8955	B-20	23	5935-00-677-4444	B-20	4
5999-00-485-8955 5365-00-486-0405	B-21 B-3	24 33	5330-00-678-1851	B-5	43
5310-00-486-0406	B-3	11	5330-00-678-1851	B-7	43
5310-00-486-0406	B-3	16	5330-00-678-3488 5330-00-678-3488	B-5 B-7	1
5310-00-486-0406	B-3	30	5330-00-678-3489	B-5	1 38
5310-00-486-0406	B-11	5	5330-00-076-3489	B-7	39
5310-00-486-0406	B-11	11	5310-00-678-4228	B-22	13
5310-00-486-0406	B-11	18	5365-00-678-4258	B-19	17
5310-00-486-0406	B-11	23	5330-00-678-4699	B-5	29
5310-00-486-0412	B-3	24	5330-00-678-4699	B-7	29
2510-00-487-9469	B-23	23	4720-00-678-4700	B-5	32
5310-00-489-5663	B-18	9	4720-00-678-4700	B-7	32
2590-00-499-1782	B-12	16	5330-00-678-4712	B-10	35
5310-00-514-6674	B-16	1	4730-00-678-4749	B-6	14
5310-00-514-6674	B-17	3	4730-00-678-4750	B-4	39
5330-00-530-2772	B-2	29	5307-00-678-4760	B-4	20
5305-00-543-2752	B-16	4	5340-00-678-6178	B-5	6
5305-00-543-2752	B-16	4	5340-00-678-6178	B-7	6
5310-00-550-1130	B-13	7	5305-00-678-6195	B-23	7
5310-00-550-1130	B-14	2	5303-00-678-6196	B-23	21
5310-00-550-1130	B-15	4	5330-00-679-4961	B-2	30
5310-00-550-1130	B-17	8	5365-00-682-2043	B-21	7
5310-00-550-3503	B-16	1	5365-00-682-2043	B-21	22
5935-00- 257-1024	B-20	22	5365-00-682-2043	B-22	12
5310-00-559-0070	B-8	2	5935-00-685-9979	B-22	14
5340-00-571-7067	B-25	17	5935-00-686-2605 5935-00-686-2606	B-20 B-20	35
5935-00-572-9180	B-4	28	5935-00-686-2608	B-20 B-20	16 9
5935-00-572-9180	B-4	46	5935-00-686-2610	B-20	47
9320-00-576-4981	BULK		5935-00-686-9374	B-19	28
5310-00-579-0079	B-8	14			
4730-00-580-6740	B-6	15	2520-00-692-1024	B-4	15
5310-00-582-5965	B-9	6	5975-00-697-6991	B-20	46
5310-00-582-5965	B-10	9	5975-00-697-7769	B-20	39
5310-00-582-5965 5310-00-582-5965	B-14 B-16	5	5315-00-699-7760	B-23	11
5310-00-582-5965	B-16 B-17	22 20	5970-00-705-6634	B-21	32
5310-00-582-5965	B-17 B-18	10	5330-00-705-6661	B-4	37
5310-00-582-5965	B-18 B-24	10	6145-00-705-6674	B-21	4
5310-00-584-5272	B-24 B-24	13	6145-00-705-6674	B-21	17
5310-00-584-5272	B-27	4	6145-00-705-6674	BULK	
5310-00-584-7888	B-24	3	5940-00-705-6706	B-20	41
5310-00-584-7888	B-25	5	5940-00-705-6707 5040-00-705-6700	B-20	40
1110 00 004 7000	5 25	•	5940-00-705-6709	B-4	49

TB 9-2300-378-14

NATIONAL STOCK NUMBER CROSS REFERENCE TO FIGURE NUMBER AND ITEM NUMBER - CONTINUED

NATIONAL	FIGURE	ITEM	NATIONAL	FIGURE	ITEM
STOCK NUMBER	NO .	NO.	STOCK NUMBER	NO .	NO.
5940-00-705-6709	B-20	5	5310-00-776-7318	B-12	13
5310-00-705-7352	B-4	36	5310-00-776-7318	B-16	14
5330-00-724-5541	B-9	19	5310-00-776-7318	B-16	14
5303-00-724-5911	B-23	29	5310-00-776-7318	B-17	32
5303-00-724-5911	B-23	33	5315-00-778-9646	B-6	9
5305-00-724-7223	B-5	25	4030-00-780-9350	B-5	15 16
5305-00-724-7223	B-7	25 20	4030-00-780-9350 1015-00-798-2997	B-7 B-20	2
5330-00-724-7902 5310-00-728-9957	B-9 B-25	15	6105-00-801-8716	B-8	17
5330-00-729-5049	B-5	10	5330-00-803-7491	B-9	23
5330-00-729-5049	B-7	10	5330-00-805-2966	B-9	3
5935-00-729-8217	B-21	5	5940-00-808-9212	B-19	10
5935-00-729-8217	B-21	20	5340-00-809-1490	B-18	8
5935-00-729-8217	B-22	11	5310-00-809-3079	B-24	15
5310-00-732-0558	B-16	28	5310-00-809-4058	B-24	26
5310-00-732-0558	B-25	19	5310-00-809-5997	B-24	6
5310-00-732-0559	B-5	34	5310-00-809-5998	B-6	7
5310-00-732-0559	B-7	35	5310-00-809-5998	B-23	24
5340-00-735-1617	B-18	3	5310-00-809-8533	B-23	12
5940-00-735-5520	B-21	2	5310-00-809-8533	B-24	4 30
5940-00-735-5520	B-21	15 4	5935-00-811-0942 5935-00-813-4717	B-20 B-20	54
5306-00-741-4584 5306-00-741-4584	B-3 B-3	4	5310-00-814-0672	B-7	19
5306-00-741-4584	B-11	20	5315-00-816-1794	B-6	8
5975-00-752-2746	B-11	16	5310-00-820-6653	B-23	17
9905-00-752-4649	B-4	19	5310-00-820-6653	B-23	28
9905-00-752-4649	B-4	29	5310-00-820-6653	B-23	32
9905-00-752-4649	B-4	47	2920-00-830-6660	B-12	17
9905-00-752-4649	B-19	22	5340-00-833-8476	B-18	2
9905-00-752-4649	B-21	18	5935-00-833-8561	B-4	17
9905-00-752-4649	B-21	18	5935-00-833-8561	B-4	32
5320-00-753-3830	B-26	7	5970-00-833-8562	B-4	16
5935-00-754-9078	B-21	8	5970-00-833-8562	B-4 B-20	33 3
5935-00-754-9080	B-21	23 20	5970-00-833-8562 5310-00-833-8567	B-20	27
5935-00-754-9083 2510-00-757-2749	B-20 B-24	20	5310-00-833-8567	B-4	45
2510-00-757-2749	B-24	22	2590-00-839-0156	B-24	21
5310-00-761-6882	B-13	1	5315-00-839-5821	B-23	25
5310-00-761-6882	B-14	4	4730-00-840-8989	B-5	8
5310-00-761-6882	B-15	1	4730-00-840-8989	B-7	8
5310-00-763-8920	B-5	28	8145-00-856-8147	B-1	2
5310-00-763-8920	B-7	28	5310-00-880-5976	B-10	2
5310-00-768-0318	B-24	12	5310-00-880-7746	B-5	5
5310-00-768-0318	B-27	3	5310-00-880-7746	B-7	5
5310-00-768-0319	B-24	11	5315-00-882-1438	B-8	6 11
2920-00-770-1642	B-8	15	2940-00-886-5841	B-8 B-4	13
5999-00-771-6523	B-19	30 9	5305-00-889-3001 9905-00-893-3570	B-19	12
5999-00-771-6523 5999-00-771-6523	B-21 B-22	15	9905-00-893-3570	B-20	43
5975-00-771-6634	B-20	24	9905-00-893-3570	B-21	3
5935-00-771-8192	B-20	11	9905-00-893-3570	B-21	19
5935-00-772-0484	B-20	15	9905-00-893-3570	B-22	7
5365-00-772-2322	B-20	7	4720-00-896-6166	B-10	40
5365-00-772-2323	B-20	29	2990-00-897-2849	B-2	2
5365-00-772-2343	B-20	45	2990-00-897-2849	B-2	9
5935-00-772-2344	B-20	14	5340-00-900-2347	B-8	12
6145-00-772-2804	B-21	28	2940-00-900-8554	B-8	_
5365-00-772-2972	B-4	38	5315-00-903-7885	B-4	6 6
5935-00-772-3307	B-20	13	5315-00-903-7885 4730-00-908-3193	B-6 B-4	41
5310-00-776-7318	B-12	6	4730-00-908-3193	B-10	39
			4,30-00-300 3133	2 10	

NATIONAL	FIGURE	ITEM	NATIONAL	FIGURE	ITEM
STOCK NUMBER	NO.	NO .	STOCK NUMBER	NO .	NO.
4730-00-909-8627	8-2	25	2590-01-008-1441	B-21	13
4730-00-909-8627	B-6	16	2590-01-008-1441	B-21	13
4730-00-909-8627	B-10	5	5340-01-010-8946	B-3	22
5305-00-912-5113	B-3	31	5330-01-013-7132	B-2	35
5305-00-914-6131	B-12	15	5935-01-013-7520	B-20	50
5305-00-915-8087	B-27	5	2590-01-016-2024	B-24	8
2510-00-927-3305 5330-00-930-1624	B-23 B-5	1 39	5340-01-016-4429 5340-01-016-4429	B-4	2
251 0 -00-930-2035	B-24	7	5340-01-016-4429	B-6 B-4	2 57
2510-00-930-3226	B-24	í	5306-01-017-2566	B-25	18
2510-00-930-3229	B-24	ī	9320-01-017-2743	B-4	53
5310-00-930-8214	B-24	5	9905-01-021-2825	B-26	3
5310-00-930-8214	B-25	10	4720-01-022-6070	B-4	42
2940-00-930-8765	B-8	10	5935-01-026-5900	B-20	33
2940-00-932-3565	B-5	40	9905-01-026-9951	B-26	3
2940-00-932-3565	B-7	41	5340-01-028-5260	B-4	54
5310-00-933-8121	B-6	23	5340-01-030-6928	B-17	18
2940-00-933-9946	B-5	37	5340-01-030-8726	B-16	23
2940-00-933-9946	B-7	38	5340-01-031-0420	B-4	60
5310-00-934-9757	B-16	7	5330-01-035-9825	B-4	59
5310-00-934-9757	B-16	7	5330-01-035-9825	B-6	26
5310-00-934-9758 5310-00-934-9758	B-16 B-17	9 6	2940-01-035-9826	B-4	1
5310-00-934-9758	B-17 B-19	35	2940-01-035-9827 2940-01-037-4976	B-4	1
5310-00-934-9761	B-19	31	2940-01-037-4977	B-5 B-5	20 20
5305-00-947-4352	B-24	2	7690-01-038-7440	B-3 B-4	62
5305-00-947-4352	B-25	6	7690-01-038-7440	B-6	31
5310-00-950-0039	B-5	18	2930-01-038-8296	B-3	21
5310-00-950-0039	B-7	33	4730-01-043-7679	B-5	14
5310-00-950-0039	B-12	18	4730-01-043-7679	B-7	15
5310-00-957-0022	B-23	15	5970-01-044-8391	B-19	6
5305-00-958-8475	B-27	2	9330-01-047-4313	BULK	
5340-00-959-8422	B-16	32	5340-01-048-6052	B-12	4
5340-00-959-8422	B-17	23	9905-01-051-5289	B-4	63
5310-00-964-8588	B-5	27	9905-01-051-5290	B-4	63
5310-00-964-8588	B-7	27	6685-01-055-5116	B-5	17
5305-00-974-6623	B-6	19	9905-01-056-8812	B-28	4
2590-00-974-9216 2590-00-978-7335	B-4 B-4	43 25	5340-01-059-0114	B-19	3
5310-00-982-4908	B-3	36	5935-01-059-0117 5330-01-059-4286	B-19 B-19	2 5
5310-00-982-4912	B-10	19	5935-01-062-5653	B-19 B-19	9
5305-00-984-4984	B-8	13	2920-01-065-2016	B-13 B-17	10
5305-00-984-6191	B-8	1	2520-01-073-4085	B-11	3
5305-00-984-6193	B-16	10	2920-01-073-4328	B-21	14
5340-00-984-8540	B-17	29	2510-01-074-9586	B-25	4
5340-00-984-8540	B-18	12	534 0-01-077-1501	B-17	14
5310-00-987-1294	B-25	8	2510-01-077-1650	B-25	1
5935-00-987-2942	B-22	5	2940-01-080-8023	B-5	30
5340-00-988-1162	B-16	19	5340-01-081-1686	B-16	33
5340-00-988-1162	B-16	19	5340-01-081-1686	B-17	13
5305-00-993-1206	B-17	9	5330-01-082-3761	B-9	15
4730-00-993-5002	B-10	34	2510-01-082-3809	B-23	5
2510-00 -9 97- 452 4	B-23	22	2510-01-082-3810 2510-01-082-3811	B-23	20
2930-00-998-4724	B-11	13	2510-01-082-3811 2510-01-082-3812	B-23	9
4730-01-003-6044	B-10	37	2510-01-082-3812 2510-01-082-3813	B-23	19
2930-01-005-1549	B-3	39	5420-01-085-7003	B-23 B-23	10 27
2930-01-005-1550	B-3	20	5940-01-091-1520	B-21	27 31
5340-01-006-4586	B-25	17	5306-01-091-3384	B-4	64
5307-01-006-5515	B-5	41	5306-01-091-3384	B-6	5
5307-01-006-5515	B-7	42			•
4730-01-007-5232	B-9	2			

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NATIONAL STOCK NUMBER CROSS-REFERENCE TO FIGURE NUMBER AND ITEM NUMBER - CONTINUED

NATIONAL	FIGURE	ITEM	NATIONAL	FIGURE	ITEM
STOCK NUMBER	NO.	NO.	STOCK NUMBER	NO.	NO.
5306-01-091-3384	B-6	3 2			_
6105-01-092-1484	B-8	17	5640-01-146-1898	B-10 B-10	3
4720-01-095-2429	B-10	6	4710-01-146-1900 4710-01-146-1901	B-10	25 7
5305-01-102-5513	B-23	18	4710-01-146-1909	B-10	20
5935-01-104-6333	B-21	11	4710-01-146-1910	B-10	14
9510-01-104-8931	B-19	19	6105-01-147-5170	B-8	• •
5303-01-115-1847	B-23	18	5930-01-147-7912	B-9	4
4720-01-119-7779	B-5	9	4710-01-150-4822	B-10	41
4720-01-119-7779	B-7	9	6150-01-150-9771	B-21	14
5420-01-121-1232	B-27	7	5310-01-151-2732	B-10	27
4720-01-121-1542	B-5	7 7	5330-01-152-2486 5330-01-152-2487	8-6 8-6	22 22
4720-01-121-1542 5310-01-124-6063	B-7 B-5	26	5340-01-152-2515	B-6	18
5310-01-124-6063	B-7	26	2920-01-152-2559	B-20	1
5330-01-128-5650	B-5	24	2815-01-152-2563	B6	21
5330-01-128-5650	B-7	24	2590-01-152-7118	B-11	1
5307-01-128-5681	B-6	11	2815-01-154-1396	B-6	22
5307-01-128-5682	B-6	12	2990-01-156-6225	B-10	11
5330-01-129-0642	8-4	3	4010-01-157-1343	B-9	14
5330-01-129-0642	B-6	3	5330-01-158-2069	B-7	40
4730-01-132-9086	B-5	23	2510-01-174-9585	B-25	4
4730-01-132-9086	B-7	13			
4730-01-134-1957	B-5	20			
4730-01-134-1957 4730-01-134-1958	B-7 B-5	21 20			
4730-01-134-1958	8-7	20 21			
4310-01-134-6587	B-4				
5895-01-134-8291	B-5	17			
5895-01-134-8291	B-7	18			
2590-01-136-5252	B-27	6			
294 0-01-144-4872	B-7	44			
4730-01-144-4887	B-7	3 0 3 0			
4730-01-144-4888	8-7 8-7	2			
4730-01-144-4889 4730-01-144-4890	8-7 8-7	2			
2590 -01-145-4316	B-12	10			
5340-01-145-8262	B-9	5			
5305-01-145-8286	B-9	9			
5305-01-145-8287	B-9	10			
5330-01-145-8290	B-10	10			
5340-01-145-8291	B-9	22			
4030-01-145-8293	B-9	12			
4460-01-145-8299	B-9	21			
5340-01-145-8301 5340-01-145-8302	B-10 B-10	18 36			
535 0-01-145-8303	B-10 B-10	22			
5340-01-145-8307	B-2	39			
5340-01-145-8310	B-9	17			
4710-01-145-8311	B-10	33			
2815-01-145-8312	B-2	8			
2815-01-146-1877	B-10	4			
2815-01-146-1878	B-10	28			
4720-01-146-1887	B-10	12			
4720-01-146-1888 5640-01-146-1889	B-10 B-10	13 32			
5640-01-146-1890	B-10 B-10	32 26			
5640-01-146-1891	B-10	29			
5340-01-146-1895	B-10	23			
		•			

1700	NOMBER OROGO REFERENCE	_ 10 1100	THE NOMBER AND THEM NOMB	
		E ITEM		NATIONAL FIGURE ITEM
FSCM PART NUMBER	STOCK NUMBER NO.	NO.	FSCM PART NUMBER	STOCK NUMBER NO. NO.
00624 AE6040ED112-020	B	9 26	96906 MS21333-122	5340-00-833-8476 B-18 2
00624 AE6040ED112-020		9 26	96906 MS21333-122	5340-00-057-3034 B-17 36
00624 AE6040F0092-020	B-		96906 MS21333-52	5340-00-282-7548 B-10 38
00624 AE6040F0145-000	B		96906 MS21333-96	5340-00-088-1255 B-18 7
88044 AN5-4A	5306-00-182-2023 B-1		96906 MS21333-98	5340-00-809-1490 B-18 8
88044 AN5H4A		2 37	96906 MS21920-43	4730-00-840-8989 B-5 8
88044 AN8C56A	5306-00-069-3019 B-1	0 24	96906 MS21920-43	4730-00-840-8989 B-7 8
88044 AN931-9-13	5325-00-276-6089 B-1	1 7	96906 MS21920-61R	4730-00-062-7435 B-5 31
88044 AN931B9-13	5325-00-276-6096 B-	3 34	96906 MS21920-61R	4730-00-062-7435 B-7 31
14314 D52S-13	*	9 4	96906 MS24665-285	B-4 8
81349 MILC3133	9320-00-576-4981BULK		96906 MS24665-285	5315-00-816-1794 B-6 8
81348 MILH6000	4720-00-278-1110BULK		96906 MS24665-351	5315-00-839-5821 B-23 25
81349 MILR46846-TYPE5-	- R-1	9 11	96906 MS24665-355	5315-00-012-0123 B-23 13
1.50ID-BLACK	DIII K		96906 MS24665-372	5315-00-059-0491 B-23 13
81349 MILR46846-5-1.50		1 16	96906 MS24668-22 96906 MS25036-150	5305-00-993-1206 B-17 9 5940-00-113-8184 B-20 53
81349 MIL1631 96906 MS15795-703	5970-00-221-5301 B-2 5310-00-656-0111 B-2		96906 MS25231-1819	6240-00-115-8184 B-20 53
96906 MS15795-703 96906 MS15795-806	5310-00-880-5976 B-1		96906 MS25231-1819	6240-00-155-8707 B-14 7
96906 MS16562-193	5315-00-882-1438 B-		96906 MS25231-1819	6240-00-155-8707 B-15 3
96906 MS18154-113	5305-00-915-8087 B-2		96906 MS27142-2	5935-00-462-6603 B-20 28
96906 MS18154-58	••••	5 14	96906 MS27144-1	5935-00-167-7775 B-20 51
96906 MS20392-7C55	5315-00-903-7885 B-	4 6	96906 MS27144-2	5935-00-115-2307 B-19 21
96906 MS20392-7C55	5315-00-903-7885 B-	6 6	96906 MS27148-2	5999-00-057-2929 B-4 26
96906 MS20392-7C81	B-	4 9	96906 MS27148-2	5999-00-057-2929 B-4 44
96906 MS20392-7C81	5315-00-778-9646 B-	6 9	96906 MS27151-24	5310-00-489-5663 B-18 9
96906 MS20613-4P5	5320-00-753-3830 B-2	6 7	96906 MS27183-10	5310-00-809-4058 B-24 26
96906 MS20913-1S		7 20	96906 MS27183-12	5310-00-081-4219 B-5 3
96906 MS20913-3J	_	4 24	96906 MS27183-12	5310-00-081-4219 B-7 3
96906 MS20913-3J		6 15	96906 MS27183-13	5310-00-087-7493 B-24 18
96906 MS21003-19		1 31	96906 MS27183-14	5310-00-080-6004 B-25 12
96906 MS21042-5 96906 MS21044-N5	B- 5310-00-088-0553 B-1	·8 9 7 35	96906 MS27183-17 96906 MS27183-18	5310-00-809-5997 B-24 6 B-4 7
96906 MS21044-N5		2 31	96906 MS27183-18	5310-00-809-5998 B-6 7
96906 MS21044N5		3 13	96906 MS27183-18	5310-00-809-5998 B-23 24
96906 MS21044N5		1 12	96906 MS27183-19	5310-00-809-3079 B-24 15
96906 MS21044N5	5310-00-088-0553 B-1	2 12	96906 MS27183-23	5310-00-809-8533 B-23 12
96906 MS21044N5	5310-00-088-0553 B-1	6 25	96906 MS27183-23	5310-00-809-8533 B-24 4
96906 MS21044N6		5 18	96906 MS27183-42	5310-00-014-5850 B-19 33
96906 MS21044N6		7 33	96906 MS27769-1	4730-00-277-6352 B-9 16
96906 MS21044N6		2 18	96906 MS28778-4	5330-00-805-2966 B-9 3
96906 MS21045-5		0 19	96906 MS28778-5 96906 MS3106R-14S-2S	5330-00-803-7491 B-9 23 5935-00-813-4717 B-20 54
96906 MS21045-7 96906 MS21046-6		·3 32 ·3 36	96906 MS3106R10SLSC	5935-00-813-4717 B-20 54 5935-00-432-8967 B-21 29
96906 MS21206-10		5 26	96906 MS3106R10SL4SC	5935-00-432-8967 B-21 29 5935-00-432-8967 B-21 33
96906 MS21206-10		7 26	96906 MS3367-1-9	5975-00-074-2072 B-9 25
96906 MS21318-27	5305-00-253-5618 B-2		96906 MS35206-227	5305-00-984-4984 B-8 13
96906 MS21318-27	5305-00-253-5618 B-2		96906 MS35206-231	5305-00-889-3001 B-4 13
96906 MS21333-102	5340-00-984-8540 B-1	7 29	96906 MS35206-243	5305-00-984-6191 B-8 1
96906 MS21333-102	5340-00-984-8540 B-1	8 12	96906 MS35206-245	5305-00-984-6193 B-16 10
96906 MS21333-104		7 19	96906 MS35265-45	5305-00-543-2752 B-16 4
96906 MS21333-108		7 1	96906 MS35265-45	5305-00-543-2752 B-16 4
96906 MS21333-108	5340-00-057-3025 B-1		96906 MS35265-63	5305-00-614-0274 B-16 3
96906 MS21333-109		7 37	96906 MS35265-63	5305-00-614-0274 B-17 2
96906 MS21333-110		6 17	96906 MS35333-37	5310-00-579-0079 B-8 14
96906 MS21333-111 96906 MS21333-112		7 11 6 18	96906 MS35333-38 96906 MS35333-40	5310-00-559-0070 B-8 2 5310-00-550-1130 B-13 7
96906 MS21333-112		7 31	96906 MS35333-40	5310-00-550-1130 B-13 / 5310-00-550-1130 B-14 2
96906 MS21333-112		6 19	96906 MS35333-40	5310-00-550-1130 B-14 2 5310-00-550-1130 B-15 4
96906 MS21333-113		6 19	96906 MS35333-40	5310-00-550-1130 B-17 8
96906 MS21333-118	5340-00-057-3029 B-1		96906 MS35333-41	5310-00-167-0721 B-5 36

	NAT I ONAL	FIGURE	ITEM			NATIONAL F	GURE	ITEM
FSCM PART NUMBER	STOCK NUMBER	NO.	NO.	FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.
96906 MS35333-41	5310-00-167-0721	B-7	37		MS51967-14	5310-00-768-0318		
96906 MS35333-41	5310-00-167-0721		20		MS51967-14	5310-00-768-0318		3
96906 MS35335-33	5310-00-209-0786 5310-00-514-6674	B-4	50		MS51967-2	5310-00-761-6882 5310-00-761-6882		1 4
96906 MS35335-34 96906 MS35335-34	5310-00-514-6674		1 3		MS51967-2 MS51967-2	5310-00-761-6882		1
96906 MS35335-36	5310-00-550-3503		1		MS51967-2	3310-00-701-0002	B-17	30
96906 MS35335-58	5310-00-209-1366		30		MS51967-2		B-18	6
96906 MS35338-139	5310-00-933-8121	B-6	23		MS51967-20	5310-00-763-8920	B-5	
96906 MS35338-140	5305-00-974-6623	B-6	19	96906	MS51967-20	5310-00-763-8920	B-7	28
96906 MS35338-41	5310-00-045-4007	B-4	12	96906	MS51967-8	5310-00-732-0558	B-16	28
96906 MS35338-43	5310-00-045-3296	B-16	8	96906	MS51967-8	5310-00-732-0558	B-25	19
96906 MS35338-43	5310-00-045-3296	B-17	5		MS51968-2	5310-00-768-0319	B-24	11
96906 MS35338-43	5310-00-045-3296		34		MS51968-5	5310-00-880-7746	B-5	5
96906 MS35338-44	5310-00-582-5965		5		MS51968-5	5310-00-880-7746	B-7	5
96906 MS35338-44	5310-00-582-5965		10		MS51968-8	5310-00-732-0559	B-5	
96906 MS35338-45	5310-00-407-9566	B-4	55		MS51968-8	5310-00-732-0559	B-7	35
96906 MS35338-45	5310-00-407-9566	B-5	4		MS51988-7	5310-00-930-8214 5310-00-930-8214		5
96906 MS35338-45	5310-00-407-9566 5310-00-407-9566	B-6 B-7	28 4	-	MS51988-7 MS521301A2-12-3	5310-00-930-6214	B-6	
96906 MS35338-45 96906 MS35338-46	5310-00-407-9566	B-7 B-5	33		MS87006-13	4030-00-780-9350	B-5	
96906 MS35338-46	5310-00-637-9541	B-7	34		MS87006-13	4030-00-780-9350	B-7	
96906 MS35338-46	5310-00-637-9541		7		MS87006-13	4030-00-270-5436	B-9	
96906 MS35338-46	5310-00-637-9541		20		MS9021-154	1000 00 270 0100	B-8	5
96906 MS35338-48	5310-00-584-5272		13		MS9068-013	5330-00-724-7902	B-9	_
96906 MS35338-48	5310-00-584-5272	B-27	4	96906	MS9068-018	5330-00-724-5541	B-9	19
80045 MS35338-50	5310-00-820-6653	B-23	28	96906	MS9068-038	5330-00-180-9951	B-9	18
96906 MS35338-51	5310-00-584-7888	B-24	3	96906	MS90725-116	5305-00-071-1770	B-24	14
96906 MS35338-51	5310-00-584-7888	B-25	5	96906	MS90725-163	5303-00-724-5911		
96906 MS35338-53	5310-00-584-7889		1		MS90725-163	5303-00-724-5911		
96906 MS35338-67	5310-00-011-6121		3		MS90725-17	5305-00-071-2234		8
96906 MS35338-70	5310-00-011-6124		6		MS90725-3	5305-00-068-0500		
96906 MS35446-7	5940-00-808-9212		10		MS90725-3	5305-00-068-0500		
96906 MS35489-27	5325-00-290-1960	•	1		MS90725-3	5305-00-068-0500		
96906 MS35648-202	5310-00-934-9758		9		MS90725-32	5306-00-225-8497	B-5 B-7	
96906 MS35649-202	5310-00-934-9758		6		MS90725-32 MS90725-33	5306-00-225-8497 5306-00-225-8498	B-7 B-4	
96906 MS35649-202 96906 MS35649-264	5310-00-934-9758 5310-00-934-9761		35 31		MS90725-33	5306-00-225-8498	B-4 B-6	
96906 MS35649-282	5310-00-934-9757		7		MS90725-4	5305-00-225-3838		
96906 MS35649-282	5310-00-934-9757		7		MS90725-5	5305-00-068-0501	B-4	
96906 MS35690-1004	5310-00-957-0022		15		MS90725-62	5305-00-269-3213	B-16	31
96906 MS35763-833	5306-00-145-0876		2		MS90725-62	5305-00-269-3213		
96906 MS35763-833	5306-00-145-0876				MS90725-62	5303-00-269-3213	B-25	13
96906 MS35764-1289	5306-01-017-2566	B-25	18	96906	MS90726-235	5305-00-958-8475		2
96906 MS35842-12	4730-00-908-3193	B-4	41	96906	MS90726-31	5306-00-225-9086	B-2	34
96906 MS35842-13	4730-00-909-8627	B-2	25	96906	MS90726-33	5306-00-225-9088	B-16	34
96906 MS35842-13	4730-00-909-8627	B-6	16	96906	MS90726-33	5306-00-225-9088	B-17	
96906 MS35842-13	4730-00-909-8627		5		MS90726-36	5305-00-225-9091		2
96906 MS45904-76	5310-00-061-1258		35		MS90726-36	5305-00-225-9091		2
96906 MS51096-59	5305-00-912-5113	B-3	31		MS90726-36	5305-00-225-9091		
96906 MS51500A5-4S	4730-00-020-9973		7		MS90726-57	5305-00-269-2800		8
96906 MS51525A4	4730-01-007-5232	B-9	2		MS90726-6	5305-00-068-0506		8 8
96906 MS51525A5 96906 MS51815-8	4730-00-431-9307 4730-01-003-6044	B-9 B-10	24 37		MS90726-63 MS90726-65	5305-00-269-2806 5305-00-269-2808		
96906 MS51815-8 96906 MS51820-6P	4730-01-003-6044		34		MS90726-65	5305-00-269-2808		
96906 MS51849-78	5305-00-240-6668		32		MS90726-65	5305-00-269-2808		
96906 MS51864-104-16	5307-01-006-5515	B-5	41		MS90726-7	5305-00-265-2606		
96906 MS51864-104-16	5307-01-006-5515	B-7			MS90726-8	5305-00-267-8974		
96906 MS51922-33	5310-00-225-6993		3		MS90727-32	5306-00-050-1238	B-2	
96906 MS51943-36	5310-00-814-0672	B-7			MS90727-32	5306-00-050-1238		
96906 MS51957-28	5305-00-054-6652		1		MS90727-32	5306-00-050-1238	B-16	13

		NATIONAL F	IGURE	LTEM			NATIONAL F	GURE	ITEM
FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.	FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.
96906	MS90727-32	5306-00-050-1238	B-17	24	19207	10863625		B-4	23
	MS90727-34	5305-00-051-4076	B-2	28		10863625	4730-00-678-4749	B-6	14
-	MS90727-35	5306-00-051-4077	B-17	4		10863629	5305-00-678-6195		7
	MS90727-4	5305-00-068-0512	B-9	7		10863630	5303-00-678-6196	-	21
96906	MS90727-5	5305-00-267-8953	B-17	7	19207	10863816	5340-00-959-8422	B-16	32
96906	MS90727-65		B-12	7	19207	10863816	5340-00-959-8422	B-17	23
96906	MS90727-65	5305-00-914-6131	B-12	15	19207	10863870	5330-00-678-3489	B-5	38
96906	MS90727-66	5305-00-269-3242	B-12	14	19207	10863870	5330-00-678-3489	B-7	39
96906	MS90728-112	5305-00-071-2068	B-25	2	19207	10863874	2940-00-168-2246	B-5	30
96906	MS90728-113	5305-00-071-2069	B-23	2	19207	10863964	2510-00-997-4524	B-23	22
96906	MS90728-16	5305-00-071-2513	B-13	6	19207	10863965	2510-00-080-7552	B-23	8
96906	MS90728-16	5303-00-071-2513	B-15	5	19207	10864007	5330-00-678-4712	B-10	35
96906	MS90728-165	5305-00-724-7223	B-5	25	19207	10864043	2510-00-927-3305	B-23	1
96906	MS90728-165	5305-00-724-7223	B-7	25	19207	10864146	2510-00-226-2131	B-23	20
	MS90728-183	5305-00-947-4352	B-24	2		10864147	2510-00-115-4327	B-23	9
	MS90728-183	5305-00-947-4352	B-25	6		10864205	2510-00-105-6155		
	MS90728-29	5306-00-226-4822	B-6	20		10864206	2510-00-105-6154	B-23	10
	MS90728-31	5306-00-226-4824	B-4	56		10865247	2930-00-453-5376	B-11	14
	MS90728-5	5305-00-068-7837	B-14	3		10865250	2930-00-436-3208		16
	MS90728-6	5305-00-068-0508	B-6	24		10865251			17
	MS90728-60	5305-00-068-0510	B-25	7		10865252	2930-00-436-3197		21
	MS9320-11	5310-00-194-0636	B-9			10865252		B-11	22
	MS9388-327	5330-01-013-7132	B-2			10865267	2815-00-177-8216	B-11	9
	M13436/1-1	9905-00-752-4649	B-19			10865268	2930-00-107-1221		4
	M13486/1-14		B-19			10865272	2815-00-446-1757	B-11	1
	M13486/1-14	C1 45 00 705 CC745	B-22	8		10865277	2930-00-998-4724	B-11	13
	M13486/1-14	6145-00-705-6674F				10870861	5330-00-729-5049	B-5	10
	M13486/1-15	C145 00 054 C1175	B-19	13		10870861	5330-00-729-5049	B-7	10
	M13486/1-15	6145-00-254-6117E		2.7		10870919	2940-00-886-5841	B-8	11
	M13486/1-3	6145 00 161 16005	B-20	21		10870920	2920-00-103-9397	B-8	3
	M13486/1-3	6145-00-161-1609E	B-4	10		10882750 10882760	5306-00-413-4373	B-12 B-11	9 10
	M13486/1-5 M13486/1-5		B-4			10882765	2920-00-455-5835	B-11	11
	M13486/1-5		B-4 B-4			10882826	9905-00-407-5099	B-12	6
	M13486/1-5		B-19			10887138	2590-00-839-0156		21
	M13486/1-5		B-20			10889713	2920-00-830-6660		17
	M13486/1-5		B-22	9		10898794	4720-00-896-6166		40
	M13486/1-5	6145-00-152-6499E		,		10898844	4720-00-030-0100	B-8	19
	M13516/1-1	5925-00-026-4767	B-4	11		10905006	6105-00-801-8716	B-8	17
	M220913-1S	4730-00-221-2136	B-5			10905009	2940-00-930-8765	B-8	10
	M4109-140800C	.,	B-28	2		10905010	4140-00-016-2615	B-4	
	M4109-60800C		B-28	1		10910174-16	5310-00-987-1294	B-25	8
81349	M43436/1-1	9905-00-752-4649	B-4	19		10910174-18	5310-00-964-8588	B-5	27
81349	M43436/1-1	9905-00-752-4649	B-4	29	19207	10910174-18	5310-00-964-8588	B-7	27
81349	M43436/1-1	9905-00-752-4649	B-4	47	19207	10910174-22	5310-00-728-9957	B-25	15
81349	M43436/1-1	9905-00-752-4649	B-21	18	19207	10912269	8145-00-856-8147	B-1	2
81349	M43436/1-1	9905-00-752-4649	B-21	18	19207	10916561	5303-01-115-1847	B-23	18
81349	M43436/1-3	9905-00-893-3570	B-19	12	19207	10916563		B-23	
81349	M43436/1-3	9905-00-893-3570	B-20	43	19207	10924454	2510-00-014-2483	B-23	4
81349	M43436/1-3	9905-00-893-3570	B-21	3	19207	10933723	5330-00-078-4714	B-4	40
81349	M43436/1-3	9905-00-893-3570	B-21	19	19207	10933966		B-8	7
	M43436/1-3	9905-00-893-3570	B-22	7		10933967		B-8	8
	M43436/5-1	9905-01-056-8812		4		10933968	2940-00-043-0279	B-8	16
	RRC271		B-5			10934405		B-8	4
	RRC271		B-7	17		10935282-2	4720-01-095-2429	B-10	6
	RRC271-1-5C2-13	4010-00-165-60648		_		10935447	5325-00-182-4707	B-11	
	10-74936-3	5935-00-107-1273		6		10935614	5360-00-410-5836	B-2	5
	10863589	2590-00-974-9216	B-4			10935614	5360-00-410-5836	B-2	
	10863598	5340-00-107-4286				10935619		B-2	7
19207	10863598	5340-00-107-4286	B-18	11	19207	10935621	5330-00-410-9803	B-2	36

		NATIONAL F	FIGURE	ITEM			NATIONAL	GURE	ITEM
FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.	FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.
19207	10935623	2815-00-406-4621	B-2	1	19207	11669740	2940-01-142-8260	B-6	10
	10940163	2590-00-978-7335	B-4	25		11673847	2815-00-397-3311	B-17	
	10940255	5365-00-105-6138		23		11673848	2920-00-398-7097	B-16	5
19207	10940256-1	2510-00-757-2749	B-24	22	19207	11673850	6150-00-476-0381	B-16	30
19207	10940256-2	2510-00-757-2750	B-24	22	19207	11673851	2920-00-466-7464	B-16	11
19207	10940260-1	2510-00-105-6144	B-24	16	19207	11673852	2815-00-397-3283	B-16	26
	10940260-2	2510-00-119-3907		16		11673853	2815-00-394-9701	B-16	
	10940267	2590-01-016-2024		8		11673854	2815-00-394-9690	B-17	
	10940271	2510-00-105-9917		9		11673855	2815-00-475-8216	B-17	
	10940272-1	2510-00-930-2034	B-24	7		11673856	6150-00-476-0371	B-16	36
	10940272-2 10952209	2510-00-930-2035 2510-00-930-3226		7 1		11674728 11674729	5935-01-059-0117 5330-01-059-4286	B-19 B-19	2
	10952209	2510-00-930-3229		1		11674729	5970-01-044-8391	B-19	5 6
	110 5-16	5330-00-530-2772	B-2	29		11675004	5340-01-059-0114	B-19	3
	11382363P6	5310-00-167-0816		2		11676228	5940-00-030-7275	B-19	
	11591585	5330-00-930-1624	B-5	39		11682345	03.0 00 000 72.0	B-19	4
	11591586	2940-00-045-6873	B-5	42		11682595	2590-00-499-1782	B-12	
19207	11602731	5935-00-107-1275	B-19	18	19207	11682595-2	2590-01-008-1441	B-21	13
19207	11602737	5935-00-134-0373	B-22	2	19207	11682595-2	2590-01-008-1441	B-21	13
19207	11608144-1	2940-00-105-2804	B-5	2	19207	11682725	2815-00-410-1150	B-16	5
	11608144-2	2940-00-105-2805	B-5	2		11682768	2930-01-005-1549	B-3	
	11626375	5315-00-456-5948		26		11683939	2815-00-399-5301	B-3	3
	11626427	5420-01-085-7003	B-23	27		11683941	2815-00-432-0056		38
	11630499-1	4730-00-908-3193	B-10	39		11683942	2815-00-398-6726	B-11	21
	11637698-1	2510-00-256-5530	B-24 B-24	19 19		11683942-1 11683954	2520-00-394-9713	B-11 B-3	35
	11637698-2 11641919	2510-00-256-5531 2990-00-193-8211		15		11683967	9905-01-021-2825		3
	11641922	2815-00-406-4615	B-2	8		11683977	9903-01-021-2023	B-11	6
	11641923	2013-00-400-4013	B-2			11683977	2815-00-410-1131	B-11	8
	11641927	4710-00-192-9436	B-2			11683984	2815-00-397-3313	B-3	37
	11641928	5340-00-409-2055	B-2			11683985	2815-00-394-9700	B-3	9
19207	11644992-1		B-22	10	19207	11683985-1		B-3	10
19207	11644992-1	9330-01-047-4313E	BULK		19207	11684006	6680-00-423-4051	B-2	32
19207	11654554-1	2510-00-487-9469	B-23	23	19207	11684017	2815-00-394-9706	B-3	1
	11654555	2510-01-082-3809		5		11684018	2815-00-399-5302	B-2	
	11654843	5310-00-625-3115				11684041	2930-00-392-9515	B-3	
	11655113-1	5340-01-006-4586	B-25	17		11684041-1		B-3	
	11655113-2	5340-00-571-7067	B-25	17		11684048	2930-00-392-9547	B-3	
	11655454	2590-00-423-3622		1		11684048-1		B-3	
	11655469 11657469-3	2920-00-441-8137 5310-00-582-5965	B-12 B-9	1 6		11684079-1 11684079-1		B-3 B-3	
	11657469-3	5310-00-582-5965	B-10	9		11684079-2		B-3	
	11657469-3	5310-00-582-5965		22		11684079-2		B-3	
	11657469-3	5310-00-582-5965				11684079-3		B-3	
	11657469-3	5310-00-582-5965				11684079-3		B-3	
19207	11659642-67	9905-01-051-5290	B-4		19207	11684093-1	5310-00-486-0406	B-3	11
19207	11659642-68	9905-01-051-5289	B-4	63	19207	11684093-1	5310-00-486-0406	B-3	16
19207	11659642-73		B-6	30	19207	11684093-1	5310-00-486-0406	B-3	30
	11659642-74		B-6			11684093-1	5310-00-486-0406	B-11	5
	11659652	5307-00-218-8179	B-4			11684093-1	5310-00-486-0406	B-11	
	116597-11-1	2510-00-455-1351				11684093-1	5310-00-486-0406	B-11	
	11659711-2	2510-00-455-1352	B-25			11684093-1	5310-00-486-0406	B-11	
	11669029-1	6685-01-055-5116	B-5			11684093-2	5310-00-486-0412 5365-00-486-0405	B-3	
	11669683 11669683	4730-01-132-9086 4730-01-132-9086	B-5 B-7			11684106 11684132	2815-00-410-1045	B-3 B-3	8
	11669704	7,30-01-132-3000	B-8			11684134	9905-01-026-9951		3
	11669717	5895-01-134-8291	B-5			11684162	5340-01-048-6052	B-12	4
	11669717	5895-01-134-8291	B-7			11684234	2930-01-005-1550	B-3	
	11669724		B-8			11684246	5340-01-010-8946	B-3	
19207	11669740		B-4	10	19207	11684246-1		B-3	23

							NATIONAL (LTEM
r c c M	PART NUMBER	NATIONAL F STOCK NUMBER	I GURE NO.	NO.	FSCM	PART NUMBER	NATIONAL F STOCK NUMBER	GURE NO.	NO.
rscm	PART NUMBER	STOCK NUMBER	110.	110.	1 3CM	FART NUMBER	STOCK HOMBER	110.	110.
19207	11684276-1	5340-01-030-8726	B-16	23	19207	12275844	2990-01-156-6225	B-10	11
	11684276-2	5340-01-030-6928		18		12275861	5350-01-145-8303	B-10	22
19207	11685057	2920-00-398-6540	B-12	5	19207	12275864		B-9	8
19207	12251898	9320-01-017-2743	B-4	53	19207	12275866-1	5305-01-145-8286	B-9	9
19207	12251902	5330-01-035-9825	B-4	59		12275866-2	5305-01-145-8287	B-9	10
	12251902	5330-01-035-9825	B-6	26		12275867	4030-01-145-8293	B-9	12
	12251904	5340-01-031-0420	B-4	60		12275868	5340-01-145-8291	B-9	22
	12251905	5340-01-016-4782	B-4	57		12275869	5340-01-145-8310	B-9	
	12251907	4720-01-022-6070	B-4	42		12275870	5340-01-145-8262	B-9	5
	12251908 12251908		B-4 B-6	4 4		12275880 12275883	4710-01-150-4822 4720-01-146-1887		41 12
	12251908	5340-01-016-4429	B-4	2		12275889	5640-01-146-1898		3
	12251910	5340-01-016-4429	B-6	2		12275890	5640-01-146-1889		32
	12251911-1	3340 01 010 1123	B-4	22		12275891	5640-01-146-1890		26
	12251911-2		B-4	22		12275892	5640-01-146-1891		29
	12251912	5340-01-028-5260	B-4	54	19207	12275894	5310-01-151-2732		27
19204	12251922-1	2940-01-035-9827	B-4	1	19207	12290526-1	2510-00-074-8285	B-25	1
19204	12251922-2	2940-01-035-9826	B-4	1	19207	12290526-2	2510-01-077-1650	B-25	1
19207	12252143		B-5	13	19207	12290527-1	2510-01-174-9585	B-25	4
	12252352-1		B-5	22		12290527-2	2510-01-074-9586		4
	12252352-1		B-7	23		12290914		B-4	5
	12252352-2		B-5			12290914	5306-01-091-3384	B-4	64
	12252352-2	2040 01 027 4076	B-7	23		12290914	5306-01-091-3384	B-6	5
	12252354-1	2940-01-037-4976	B-5	20		12290914	5306-01-091-3384	B-6	32
	12252354-2 12252365	2940-01-037-4977 4730-01-043-7679	B-5 B-5	20 14		12301743 12301778		B-28 B-28	3 5
	12252365	4730-01-043-7679	B-3 B-7			12301778	5330-01-129-0642	B-4	3
	12252675	7690-01-038-7440	B-4	62		12304136	5330-01-129-0642	B-6	3
	12252675	7690-01-038-7440	B-6	31		12304168	5330-01-128-5650	B-5	24
	12254292	2930-01-038-8296	B-3	21		12304168	5330-01-128-5650	B-7	24
	12254369	5340-01-081-1686		33		12304169-1	5307-01-128-5681		11
19207	12254369	5340-01-081-1686	B-17	13	19207	12304169-2	5307-01-128-5682	B-6	12
19207	12254374	2920-01-065-2016	B-17	10	19207	12304176		B-5	13
19207	12257172		B-19	14	19207	12304176		B-7	14
_	12257502-1	2510-01-082-3810	B-23	20		12304177		B-5	21
-	12257502-2	2510-01-082-3811	B-23	9.		12304177		B-7	
	12257503-1	2510-01-082-3812				12304178-1	4730-01-134-1957	B-5	
	12257503-2	2510-01-082-3813		10		12304178-1	4730-01-134-1957	B-7	
	12257511		B-23			12304178-2	4730-01-134-1958	B-5	20
	12257511-1 12257993	2940-01-080-8023	B-23 B-5	31 30		12304178-2 12304190	4730-01-134-1958	B-7 B-8	22
	12257993	5935-01-062-5653		9		12304190	5330-01-158-2069	B-7	
	12270348	6105-01-092-1484		17		12304299	4730-01-144-4887	B-7	
	12271064	0100 01 052 1404	B-5			12304307	2940-01-144-4872	B-7	
	12271064		B-7			12304309	4730-01-144-4888	B-7	30
	12271066	4720-01-119-7779	B-5	9	19207	12304318	5330-01-152-2486	B-6	22
	12271066	4720-01-119-7779	B-7	9	19207	12304319	2815-01-137-3895	B-6	21
19207	12271066-1		B-5	12	19207	12304324	5340-01-152-2515	B-6	18
19207	12271066-1		B-7	12	19207	12304325	5330-01-152-2487	B-6	22
	12271067	4720-01-121-1542	B-5	7		12304329	2815-01-154-1396	B-6	21
	12271067	4720-01-121-1542	B-7	7		12304341-1	4730-01-144-4889	_	2
	12275727	2520-01-073-4085		3		12304341-2	4730-01-144-4890		2
	12275732	2920-01-073-4328				12314561	5340-01-146-1895		23
	12275797	2590-01-145-4316				12314564	4710-01-146-1909		20
	12275822	5340-01-145-8301				12314565	4710-01-146-1900		25
	12275823 12275824	5340-01-145-8302 5330-01-145-8290				12314568 12314569	4710-01-146-1910 4710-01-146-1901		14 7
	12275831	4710-01-145-8311				12314574	4710-01-146-1901		13
	12275840	4460-01-145-8299	B-10			12314574	5340-01-145-8307	B-10	
	12275841	4010-01-157-1343	B-9			12314592	5540 OI 145-650/	B-2	
15207		.010 01 107-1040	5.5	• •	15201			D-2	. 7

		NATIONAL F	GURE	ITEM			NATIONAL F	IGURE	LTEM
FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.	FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.
1 00	7,111								
19207	12314593	2815-01-145-8312	B-2	8	19207	7056661	5330-00-705-6661	B-4	37
19207	12314598	2590-01-152-8806	B-11	13	19207	7056674	6145-00-705-6674	B-21	4
19207	12314599	2590-01-152-7118	B-11	1		7056674	6145-00-705-6674		17
	12314611	2815-01-149-1353	B-1	3		7056706	5940-00-705-6706		41
	12314617	9905-01-160-2693		3		7056707	5940-00-705-6707		40
	12314619	6150-01-150-9771		14		7056709	5940-00-705-6709	B-4	49
	12314637		B-10	16		7056709	5940-00-705-6709		5
	12314641		B-1	3		7057332-3 7057352	5340-00-178-6077 5310-00-705-7352	B-16 B-4	16 36
	12314646 12325884	5340-01-152-2541	B-26 B-23	3 4		7064586	5935-00-677-4444		4
	12325885-1	3540 01 152 2011	B-6	13		7347734	5310-00-045-3299		6
	12325885-2		B-6	13		7347734	5310-00-045-3299		6
	12325888-1	2940-01-152-2386	B-6	1		7351617	5340-00-735-1617		3
	12325888-2	2940-01-152-2387	B-6	1	19207	7351807	5340-00-281-4425	B-18	5
19207	12325889	5340-01-152-2543	B-6	27	19207	7355520	5940-00-735-5520	B-21	2
19207	12325890	5340-01-152-2542	B-23	1	19207	7355520	5940-00-735-5520	B-21	15
19207	12325914	5340-01-152-2514		4		7383632	2590-00-606-2346	B-4	14
19207	12325915	5365-01-152-2538		5	-	7388353	5935-00-754-9080		23
	12325926	2920-01-152-2559		1		7388355	5935-00-729-8217		11
	12325931	2920-01-152-2385	B-13	2		7388356	5365-00-682-2043		7
	12325931	2920-01-152-2385	B-14	6		7388356	5365-00-682-2043 5365-00-682-2043		22
	12325931	2920-01-152-2385 2920-01-152-2560	B-15 B-19	2		7388356 7410218	5310-00-407-9566	B-22	12 38
	12325932 12325933		B-19 B-22	1 1		7410218	5310-00-407-9566		21
	12326987	2720-01-132 2412	B-23	4		7410218	5310-00-407-9566		12
	12326091		B-23	1		7410218	5310-00-407-9566		12
	12326097		B-14	1		7414584	5306-00-741-4584	B-3	4
	12326119		B-27	6		7414584	5306-00-741-4584	B-3	4
	12326130		B-28	8	19207	7414584	5306-00-741-4584	B-11	20
	12326131		B-28	6	19207	7527643	5975-00-697-6991	B-20	46
1207	12326132		B-29	1	19207	7527645	5975-00-697-7769	B-20	39
19207	12326174		B-15	6	19207	7716520	5999-00-485-8954		10
97403	13211E3011	2590-01-136-5252		6		7716520	5999-00-485-8954		31
	13211E3231	5420-01-121-1232		7		7716520	5999-00-485-8954		38
	1684297		B-26	8		7716520	5999-00-485-8954		48
	1711725-96	5970-00-284-8640		20		7716520	5999-00-485-8954 5999-00-485-8954		10 16
	1711725-96	E20E 00 010 2417	B-4 B-3	30 12		7716520 7716521	5999-00-485-8955		17
	192417 192417	5305-00-019-2417 5305-00-019-2417		17		7716521	5999-00-485-8955		23
	192417	5305-00-019-2417		19		7716521	5999-00-485-8955		24
	23E06	5310-00-637-9541		29		7716522	5999-00-368-4852		25
	23MS35338-50	5310-00-820-6653		17		7716523	5999-00-771-6523		30
-	23MS35338-50	5310-00-820-6653		32		7716523	5999-00-771-6523	B-21	9
	425592	5305-00-042-5592		27	19207	7716523	5999-00-771-6523	B-22	15
	425592	5305-00-042-5592			19207	7716634	5975-00-771-6634		
02978	550559	5305-00-206-3851	B2	6		7716658	5999-00-113-2954		32
02978	550559	5305-00-206-3851	B-2	12		7716669	5935-00-089-7917		31
	5702404	6105-00-084-7618	B-8			7716675	5935-01-026-5900		33
	5703549	2940-00-900-8554	B-8			7716683	5935-00-257-1024		22
	5705074	2815-01-149-1313	B-1	1		7720484	5935-00-772-0484		15 34
	5705125	6105-01-147-5170	B-8			7720853 7722204	6145-00-162-6499 6145-00-772-2804		28
	5705149 60-37005-321	4310-01-134-6587 5935-00-729-8217	B-4	5		7722322	5365-00-772-2322		7
		5935-00-729-8217		20		7722322	5365-00-772-2323		29
	60-37005-321 60-42722-7S	5935-00-729-8217		28		7722323	5365-00-090-5426		25
	699772	2815-01-146-1877		4		7722343	5365-00-772-2343		45
	699883	2815-01-146-1878		28		7722344	5935-00-772-2344		14
	7033684-1	5330-01-082-3761	B-9	15		7722972	5365-00-772-2972		38
	7056634	5970-00-705-6634		32		7723306	5935-00-333-3088		44
	7056641	5975-00-644-3682	B-4	35		7723307	5935-00-772-3307	B-20	13

		NATIONAL F	IGURE	ITEM			NATIONAL F	GURE	ITEM
FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.	FSCM	PART NUMBER	STOCK NUMBER	NO.	NO.
19207	7723308	5935-00-333-9414	B-19	25	19207	8717158	5330-00-599-0942	B-2	11
19207	7723308	5935-00-333-9414	B-20	6		8720680	5935-00-614-9136		49
	7723309	5310-00-393-6685	B-20			8724199	5935-00-686-2610		47
	7723474		B-20			8724231	5935-00-686-2605		35
	7723475	5935-00-771-8192	B-20			8724243	5935-00-686-2606		16
	7728778	5940-00-314-0479		30		8724244	5935-00-686-2608		9
	7759648-2	5310-00-776-7318	B-8 B-12	6		8724246 8724257	5935-00-811-0942 5935-00-754-9083		30 20
	7767318 7767318	5310-00-776-7318	B-12			8724404	5935-00-685-9979		14
	7767318	5310-00-776-7318	B-16			8724763	9390-00-180-7289		20
	7767318	5310-00-776-7318	B-16			8724763	9390-00-180-7289		42
	7767318	5310-00-776-7318	B-17	32	19207	8724763	9390-00-180-7289	B-21	6
19207	7970528		B-23	16	19207	8724763	9390-00-180-7289	B-21	21
19207	7970529		B-23	14	19207	8724763	9390-00-180-7289		21
19207	7971717	5935-00-754-9078	B-21	8		8724763	9390-00-180-7289	B-22	4
	7982997	1015-00-798-2997	B-20	2		8724768	9510-01-104-8931		19
	8089700	5935-00-987-2942	B-22	5		8724769	9390-00-464-4756	B-22	3
	8338503	5340-01-077-1501	B-17			8728292 8728293	2920-00-770-1642 5340-00-900-2347		15
	8338561	5935-00-833-8561	B-4 B-4			8728293 8728294	5340-00-900-2347	B-8 B-8	12 24
	8338561 8338562	5935-00-833-8561 5970-00-833-8562	B-4			8728295		B-8	23
	8338562	5970-00-833-8562	B-4	33		8734585	5305-01-102-5513	B-23	18
	8338562	5970-00-833-8562	B-20	3		8761109	2990-00-897-2849	B-2	2
	8338564	2520-00-692-4879	B-4			8761109	2990-00-897-2849	B-2	9
	8338564	5940-00-399-6676	B-4	34	19207	8762503	2510-00-105-2755	B-25	9
	8338564	5940-00-399-6676	B-20	2	19207	8762504	2510-00-105-2756	B-25	9
19207	8338566	5935-00-572-9180	B-4	28	19207	8762775	5330-00-678-4699	B-5	29
19207	8338566	5935-00-572-9180		46		8762775	5330-00-678-4699	B-7	29
	8338567	5310-00-833-8567	B-4	27		8762777	2940-00-933-9946	B-5	37
	8338567	5310-00-833-8567	B-4			8762777	2940-00-933-9946	B-7	38
	8344324	5970-00-615-8884	B-20			8762780	5330-00-678-3488	B-5 B-7	1 1
	8344522 8344527	5935-01-013-7520 5935-00-462-2913	B-20 B-20	50		8762780 8762781	5330-00-678-3488 5330-00-678-1851	B-7	43
	8344537	3933-00-462-2913	B-20			8762781	5330-00-678-1851	B-7	43
	8357967-4		B-2			8762783	4720-00-678-4700	B-5	32
	8376776	5365-00-318-8184		26		8762783	4720-00-678-4700	B-7	32
	8395482	5975-00-752-2746	B-19			8762784	2940-00-932-3565	B-5	40
19207	8395483	5365-00-678-4258	B-19	17	19207	8762784	2940-00-932-3565	B-7	41
29201	84001-1	5310-00-081-4219	B-3	40	19207	8762785	2940-00-168-2243	B-5	44
19207	8666738	5330-00-318-4127	B-12	3		8762863	5307-00-678-4760	B-4	20
	8671869	5315-00-699-7760	B-23			8762863-1	5307-00-178-8859	B-4	58
	8682523	5330-00-679-4961	B-2			8762863-1	5307-00-178-8859	B-6	25
	8701249	5310-00-678-4228	B-22		19207	8762871	4730-00-678-4750	B-4	39
	8701309 8701309		B-19 B-20						
	8701309		B-20						
	8701309		B-20						
	8701310		B-22						
19207	8701325	5310-00-655-9860	B-19	27					
19207	8701325	5310-00-655-9860	B-20	8					
	8701344	5935-01-104-6333	B-21						
	8701344		B-22						
	8701345		B-21						
	8701346		B-21						
	8701346 8711310	5340-00-678-6178	B-21 B-5	6					
	8711310	5340-00-678-6178	B-7	6					
	8717157	5545 50-075-0176	B-2	3					
	8717157		B-2						
	8717158	5330-00-599-0942	B-2	4					

APPENDIX C EXPENDABLE SUPPLIES AND MATERIAL LIST

Section I. INTRODUCTION

C-1. Scope.

This appendix lists expendable supplies and materials you will need to operate and maintain the improved clean air induction system. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

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 material (e.g., Use sealer compound, item 4, appendix C).
- b. Column 2- Level. This column identifies the lowest level of maintenance that requires the listed item.
 - C Operator/Crew
 - O Organizational Maintenance
 - F Direct Support Maintenance
 - H General Support Maintenance
- c. Column 3 National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.
- d. Column 4- Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the part number followed by the Federal Supply Code for Manufacturer (FSCM) in parentheses if applicable.
- e. Column 5- Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea., in., pr.). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

ITEM	LEVEL	NATIONAL STOCK NUMBER	DESCRIPTION	U/M
1	O	8040-00-664-4318	Adhesive, Rubber (MMM-A-1617, Type II)	PT
2	O	8040-00-902-3871	Adhesive, Sealer (MIL-A-46106A)	OZ
3	O		Compound Locking (MIL-A-46163, Type I Grade L)	
4	O	8030-00-275-8110	Compound, Sealer (MIL-S-11031/ MMM-A-1617, Type II)	OZ
5	C	6850-00-880-7616	Compound, Silicone (MIL-S-8660)	OZ
6	O	7390-00-990-7391	Detergent, Liquid	DR
7	O	9920-00-292-9946	Pipe Cleaners	PG
8	O		Primer, Grade F	

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR. General, United States Army Chief of Staff

MILDRED E. HEDBERG

Brigadier General, United States Army
The Adjutant General

Distribution:

Official:

To be distributed in accordance with DA Form 12-37, Operator's and Organizational Maintenance and Direct support and General Support Maintenance requirements for Tank, Combat, Full Track, 105-MM, M60A1 Hull and M60A1 AOS; Vehicle, Combat Engineer, Full Tracked, M728; Tank, Combat, Full Tracked, 105-MM, M60A1 RISE and M60A1 RISE PASSIVE; Tank, Combat, Full Tracked, 105-MM, M48A5 and Tank, Combat, Full Tracked, 105-MM, M60A3 and TTS.

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PUBLICATION NUMBER

TB 9-2300-378-14

PUBLICATION DATE Sept 85

PUBLICATION TITLE Air Induction System Maintenance

BE EXAC	CT PIN-E	POINT WHE	ERE IT IS	
PAGE NO	PARA- GRAPH	FIGURE NO	TABLE NO	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
3		Z		Item 10. Change illustration. Reason: Tube end shown assembled on wrong side of lever cam.
09		51		Item 3. The NSN and P/N are not listed on the AMDF nor the MCRL. Request correct NSN and P/N be Furnished.
2-8			2-	Preventive Maintenance Checks and Services. Item 7 under "Items to be inspected" should be changed to read as follows: Firing linkage and firing mechanism pawl.
12	1-6a			Since there are both 20-and 30-round magazines for this rifle, data on both should be listed.
				SAMPLE

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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

TEMPERATURE

491°F - 321 = °C 212° Fahrenheit is equivalent to 100° Celsius 90° Fahrenheit is equivalent to 32.2° Celsius 32° Fahrenheit is equivalent to 0° Celsius % °C + 32 = °F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO MUL	TIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards		
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gailons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	
Miles per Hour	Kilometers per Hour	
TO CHANCE	70	

TO CHANGE	TO MULT	IPLY BY
Centimeters	Inches	0.394
Meters		3.280
Meters	Yards	1.094
Kilometers		0.62
Square Centimeters		0.155
Square Meters		10.764
Square Meters		1.196
Square Kilorheters		0.386
Square Hectometers		2.471
Cubic Meters		35.315
Cubic Meters		
Milliliters		1.308
Liters		0.034
Liters		2.113
Liters	Quarts	1.057
Grams		0.264
Kilograms		0.035
	Pounds	2.205
Metric Tons	Short Tons	1 102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2 354
Kilometers per Hour	Miles per Hour	0 621



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