

DEPARTMENT OF THE ARMY TECHNICAL MANUAL  
TM 11-900  
DEPARTMENT OF THE AIR FORCE TECHNICAL ORDER  
TO 35C2-3-35-1  
C 4

POWER UNITS PE-75-C, -D, -J, -K, -P, -S, -T,  
-U, -W, -AA, -AB, -AC, -AD, AND -AE

TM 11-900 }  
TO 35C2-3-35-1 }  
CHANGES No. 4 }

DEPARTMENTS OF THE ARMY  
AND THE AIR FORCE  
WASHINGTON 25, D.C., 4 April 1963

TM 11-900/TO 35C2-3-35-1, 20 September 1945, is changed as follows:

*Note.* The parenthetical reference to previous changes (*example: page 2 of C 2*) indicates that pertinent material was published in that Changes.

*Page 1, paragraph 1a, line 9.* Change (See par. 7.) to: (See par. 6.).  
Paragraph 1. Add paragraphs 1.1 and 1.2

### 1.1. Index of Publications

(Added)

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, Changes, or additional publications pertaining to your equipment. DA Pam 310-4 is an index of current technical manuals, technical bulletins, supply bulletins, lubrication orders, and modification work orders that are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc.) and the latest changes and revisions of each equipment publication.

### 1.2. Forms and Records

(Added)

*a. Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

*b. Report of Damaged or Improper Shipment.* Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication 378 (Navy), and AFR 71-4 (Air Force).

*c. Comments on Manual.* Forward all comments on this publication direct to—Commanding Officer, U.S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, N.J. (DA Form 1598 (Record of Comments on Publications), DA Form 2496 (Disposition Form), or letter may be used.)

Page 2, paragraph 2a, last line. Delete (See par. 43, item 9.).

Paragraph 3, last line. Change Champion 5—Commercial 18 mm to: Champion Type No. XEJ-8.

Page 3, paragraph 4, note. Change (See par. 7.) to: (par. 6.).

Page 5, paragraph 5a(4), line 4. Change (See fig. 1) to: (fig. 25).

Page 6, paragraph 5b, line 11. Change See par. 50e to: par. 50d.

Paragraph 5c. Delete subparagraph c.

Page 7, paragraph 5c. Delete the note after subparagraph (2).

Page 8, paragraph 6a, line 20. Delete "TB 11-900-1, December 1944, describes the field failure of round wire throttle links formerly supplied on model ZZ gas engines."

Page 9, paragraph 6c. Make the following changes:

Subparagraph (1), last line. Change figure 5 to: figure 6.

Subparagraph (3), line 8. Change (See fig. 80.) to: (fig. 79.).

Page 11, paragraph 6d, line 3. Change (par. 66), to: (par. 60).

Page 12, paragraph 6e, last line. Delete (See par. 43.).

Paragraph 6f, line 4. Change (See fig. 6.) to: (fig. 7.).

Page 16, paragraph 10. Delete the second sentence.

Page 19, paragraph 12j. Change (See par. 43, item 43.) to: (par. 39a.).

Page 21, paragraph 13b, last line. Delete: **and section VIII.**

Page 26, paragraph 16e, line 2. Change (par. 53) to: (par. 37).

Page 27, paragraph 16e. Make the following changes:

Subparagraph (2). Delete: (See par. 43, item 9.).

Subparagraph (3). Delete: (See par. 43, item 11.).

Paragraph 17d. Change (See par. 53.) to: (par. 37.).

Page 31, paragraph 21, chart, Corrective measures column, lines 9, 16, 19, and 26. Change 53 to: 37.

Page 32. Make the following changes:

Change the title of section VII to: **OPERATOR'S MAINTENANCE.**

Delete paragraphs 22 through 34 and substitute:

## Section VII. OPERATOR'S MAINTENANCE

(Superseded)

### 22. Scope of Operator's Maintenance

The maintenance duties assigned to the operator of Power Units PE-75-(\*) are listed below with a reference to the paragraphs covering the specific maintenance function. The duties assigned do not require tools or test equipment other than those issued with the unit (par. 23).

a. Daily maintenance service and inspection (par. 26).

b. Cleaning (par. 27).

c. Repair of fuel filter (par. 28).

### 23. Tools Required for Operator's Maintenance

a. Pliers, FSN 5120-223-7297.

b. Screwdriver, FSN 5120-277-9491.

c. Wrench, FSN 5120-293-2432.

d. Wrench TL-476/U, FSN 5120-240-5328.

### 24. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent trouble, to reduce *downtime*, and to insure that the equipment is serviceable.

a. *Systematic Care.* The procedures given in paragraphs 25 through 28 cover systematic care essential to proper upkeep of the equipment when the equipment is used separately. If this equipment is used as part of a *set* or *system*, follow the procedures established in the *set* or *system* manual. If this equipment is operated separately, the cleaning operations (par. 27) should be performed once each day the equipment is used and not less than once each week.

b. *Maintenance Service and Inspection.* The daily maintenance service and inspection chart (par. 26) outlines inspections to be made at a specific interval. For equipments operated separately, these inspections are made to maintain combat serviceability; that is, to maintain the equipment in good general (physical) condition and in good operating condition. To assist operators to maintain combat serviceability, the chart indicates what to inspect, how to inspect, and what the normal conditions are. Additional information is referenced in the *References* column. If the defect cannot be corrected by the operator, higher echelon maintenance or repair is required. Records and reports of maintenance must be made in accordance with TM 38-750.

### 25. Maintenance Service and Inspection Periods

Maintenance service and inspections of the PE-75-(\*) are required on a daily basis. Paragraph 26 specifies services and inspections that must be accomplished daily and under special conditions listed below.

a. When the equipment is initially installed.

b. When the equipment is reinstalled after removal for any reason.

c. At least once each week if the equipment is maintained in standby condition.

d. Immediately before going on a mission and as soon as possible after completion of the mission.

## 26. Daily Maintenance Service and Inspection Chart

Item No.	Procedure		References
	Item	Normal condition or result	
1	<b>UNIT: Inspect the equipment for:</b> a. Completeness. b. Proper installation. c. Cleanliness.	a. Equipment is complete. b. Installation is correct. c. Unit is clean and dry inside and outside; free of corrosion, dirt, fungus, grease, and rust.	a. App. IV. b. Part one, sec. III. c. Par. 27.
2	<b>FUEL: Check level of fuel in tank.</b>	Tank is filled to filler neck.	Par. 13f.
3	<b>LEAKAGE:</b> a. Inspect fuel tank filler cap, fuel line, fuel (gas) filter, and carburetor for fuel leakage. b. Inspect engine joints, oil filler cap, and crankcase cover-plate oil seal for oil leakage.	a. Filler cap, fuel line, fuel filter, and carburetor are clean, dry, and tight. b. Engine joints and oil filler cap are tight and do not leak. Crankcase cover-plate oil seal does not leak	a. Figs. 4 and 5. b. Figs. 1 and 92.
4	<b>LUBRICATION: Check level and condition of crankcase oil.</b>	Crankcase is filled to filler neck, and oil does not contain dirt or sand.	Par. 13b
5	<b>TOOLS AND EQUIPMENT:</b> a. Inspect tools and equipment for breakage and wear. b. Inspect tools for rust, dirt, and lack of lubrication; inspect toolbox for rust and dirt. c. Check method of storing tools, and check stock of spare parts.	a. Tools and equipment are complete and usable. b. Tools are free from rust and corrosion and are coated with a film of oil; toolbox is clean and dry. c. All tools are stored in toolbox. No overstockage of spare parts exists, and authorized parts that are not present are ordered on valid requisitions.	a. App. III and IV. b. Par. 27. c. None.

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6	<b>AIR CLEANER: Inspect for oil leakage; remove wingnut, cover, and filter, and check oil level.</b> <i>Note.</i> Every three days, remove, drain, clean, and refill air cleaner with fresh oil.	No leakage around cover (fig. 30) and elbow gaskets; oil level is at level mark.	Fig. 20.
7	<b>PREPARATION FOR STARTING:</b> a. Open fuel shutoff valve by rotating it fully counterclockwise. b. Close carburetor choke valve by rotating choke lever clockwise.	a. None. b. None.	a. Fig. 10. b. Fig. 11.
8	<b>START: Slip knotted end of starter rope (fig. 12) into notch of starter pulley. Use a quick, steady pull on rope to crank engine.</b>	Engine starts.	Par. 15e.
9	<b>ENGINE PERFORMANCE:</b> <i>Caution: Rotate choke lever counterclockwise (fig. 11) as engine warms up so that fuel will not dilute crankcase oil.</i> a. After engine starts, allow it to warm up for 10 to 15 minutes. During this warmup period, slowly rotate choke lever counterclockwise until engine operates smoothly with choke lever fully counterclockwise. <i>Caution: Do not apply load to engine until engine reaches operating temperature.</i> b. Apply load. c. Inspect for fuel and oil leakage. d. Check engine temperature and amount of exhaust smoke.	a. Engine idles smoothly. b. Governor operates smoothly to maintain constant engine speed. c. No leakage from fuel system or lubricated parts. d. No smoke from engine surface; paint is not blistered. Exhaust smoke is nearly invisible.	a. Par. 16. b. Fig. 1. c. Figs. 4, 5, and 20. d. Par. 21.

Item No.	Procedure		References
	Item	Normal condition or result	
10	<b>GENERATOR PERFORMANCE:</b> a. Inspect generator brushes for arcing. b. Check generator housing temperature. c. Measure generator output voltage.	a. No arcing between brushes and commutator or sliprings. b. Stator block and bearing housings are not too hot to touch. c. 120 volts.	a. Figs. 41, 42, and 43. b. Figs. 41, 42, and 43. c. Par. 2.
11	<b>STOP:</b> Push and hold stop button on engine housing.	Engine stops.	Fig. 15.
12	<b>AFTER OPERATION SERVICE:</b> Fill fuel tank (par. 13f) and crankcase (par. 13b); inspect sediment bowl for dirt and water. Record total hours of operation on DA Form 2408-1, and cover unit with cover provided for that purpose (app. IV).	Fuel level is at tank filler neck; oil level is at crankcase filler neck; sediment bowl is free from dirt and water.	Par. 28.

## 27. Cleaning

Inspect the exterior of the equipment. The exterior surfaces should be free from dirt, dust, grease, oil, rust, and corrosion. Inspect the tools and spare parts; they should be free from dirt, dust, rust, and corrosion. The tools should be covered with a film of Oil, Lubricating, Preservative, Special (PL-Special).

**Warning:** Prolonged breathing of cleaning compound is dangerous; provide adequate ventilation. Cleaning compound is flammable; do not use near a flame.

**Caution:** Keep the cleaning compound (par. 30) out of the fuel tank, the crankcase, the crankcase breather, the air cleaner, and the interior of the generator.

a. Remove loose dirt and dust with a brush and a clean soft cloth. Remove ground-in dirt with a cloth dampened (not wet) with cleaning compound.

b. Remove grease and oil with a cloth dampened with cleaning compound.

c. Remove gum deposits with denatured alcohol (par. 30).

## 28. Repair of Fuel Filter

a. Close the fuel shutoff valve (fig. 10).

**Caution:** When removing the sediment bowl, be careful not to spill fuel on the engine.

b. Release the wing screw on the fuel filter yoke (fig. 32).

c. Remove and clean (par. 27) the sediment bowl, the filter, and the gasket.

Page 34. Delete figure 16.

Page 35. Delete figure 17.

Page 42. Make the following changes:

Change the title of section VIII to: **ORGANIZATIONAL MAINTENANCE.**

Delete paragraphs 35 through 38 and substitute:

### Section VIII. ORGANIZATIONAL MAINTENANCE (Superseded)

## 29. Scope of Organizational Maintenance

a. This section contains instructions covering second echelon maintenance of Power Unit PE-75-(\*). The section includes instructions for performing preventive maintenance and periodic maintenance services that are performed by the organizational repairman. Preventive maintenance is the responsibility of personnel at all echelons of maintenance and includes the inspection, testing, and repair or replacement of parts, subassemblies, and units that inspection and testing indicate would probably fail before the next scheduled periodic

are described in detail in paragraph 6 and in the maintenance instructions where a description is applicable.

b. Second echelon maintenance of Power Unit PE-75- (\*) includes:

- (1) Preventive maintenance (pars. 31-34).
- (2) Lubrication (par. 35).
- (3) Troubleshooting (par. 37).
- (4) Testing muffler (par. 38).
- (5) Repairs and adjustments (par. 39).

c. Maintenance forms and records to be used and maintained on this equipment are specified in TM 38-750. Paragraph 1.2 contains additional information concerning submission of specific forms.

### 30. Tools, Materials, and Test Equipment Required for Organizational Maintenance

A list of parts authorized for second echelon maintenance appears in TM 11-6115-206-20P. A general mechanics tool set (FSN 5180-754-0641) and a Multimeter AN/URM-105 are required for organizational maintenance. Lubricants are listed in the War Department lubrication order (fig. 20). The required materials are listed below.

- a. Alcohol, denatured, FSN 6810-264-6583.
- b. Brush.
- c. Cleaning Compound, FSN 7930-395-9542.
- d. Cleaning cloth.
- e. Oil, Lubricating, Preservative, Special (PL-Special).

### 31. Weekly Maintenance

Perform the maintenance functions described in the weekly maintenance service and inspection chart (par. 32) once each week. A week is defined as 7 calendar days of 8-hour-per-day operation. Adjustment of the maintenance interval must be made to compensate for any unusual operating conditions. All deficiencies and shortcomings will be recorded, and those not corrected during the service and inspection will be reported immediately to higher echelon using forms and procedures specified in TM 38-750. Equipment that has a deficiency that cannot be corrected by second echelon should be deadlined in accordance with TM 38-750. Perform all the services listed in the weekly maintenance service and inspection chart in the sequence listed. Whenever a *Normal condition or result* is not observed, take corrective action in accordance with the information listed under *References*.

### 32. Weekly Maintenance Service and Inspection Chart

Item No.	Procedure		References
	Item	Normal condition or result	
1	<b>LUBRICATION:</b> <i>Caution: Do not flush the crankcase.</i> Drain and refill crankcase. Lubricate hinges, locks, generator-belt-drive adjustment screw (fig. 2), and throttle control lever and link (fig. 13).	Lubricated parts do not show signs of overlubrication or underlubrication.	Fig. 20.
2	<b>DRIVE BELTS AND PULLEYS:</b> a. Inspect drive belts for grease, oil, and wear. <i>Caution: A tight belt will cause rapid wear of engine and generator bearings.</i> b. Check drive belt tension. c. Inspect pulleys for grease, oil, wear, rough surfaces, and looseness. d. Check alignment of engine and generator pulleys.	a. Drive belts are clean and not cracked or frayed. b. When belt is depressed with thumb, deflection is $\frac{3}{4}$ inch (fig. 64). c. Pulleys are clean and tight; surfaces that contact belts are smooth. d. When T-square is placed against hubs of outside pulleys, right-angle arm of T-square is lined up with crossmembers of skid base.	a. Par. 60a(3). b. Par. 60a(3). c. Par. 60a(3). d. Par. 60b.
3	<b>FUEL FILTER:</b> Clean fuel filter and inspect it for damage.	Filter and screen are not bent, gasket is not worn, and bowl is not cracked or chipped.	Par. 28.
4	<b>FUEL TANK:</b> a. Remove fuel tank cap and inspect it for dirt; inspect gasket for damage, and blow through air vent in cap.	a. Cap is clean; gasket is not worn or broken and air vent is open.	a. Par. 27.

Item No.	Procedure		References
	Item	Normal condition or result	
	b. Replace cap and inspect tank and fuel line connections for leakage and looseness.	b. Tank and fuel line are mounted securely and do not leak.	b. Par. 61c.
5	<b>CARBURETOR:</b> Inspect carburetor for damage, leakage, and looseness.	Carburetor is not bent or dented; all manifold and fuel line connections are tight and do not leak. Carburetor valves do not leak. <i>Note.</i> If carburetor is damaged, replace it.	Par. 61f.

### 33. Monthly Maintenance

Perform the maintenance functions described in the monthly maintenance service and inspection chart (par. 34) once each month. A month is defined as approximately 30 calendar days of 8-hour-per-day operation. If the equipment is operated 16 hours a day, the monthly maintenance should be performed at 15-day intervals. Adjustment of the maintenance interval must be made to compensate for any unusual operating conditions. Equipment maintained in a standby (ready for immediate operation) condition must have monthly maintenance performed on it. See TB SIG 23 for maintenance of equipment in limited storage. All deficiencies and shortcomings will be recorded, and those not corrected during the service and inspection will be reported immediately to higher echelon using forms and procedures specified in TM 38-750. Perform all the services listed in the monthly maintenance and inspection chart in the sequence listed. Whenever a *Normal condition or result* is not observed, take corrective action in accordance with the information listed under *References*. Remove rust and corrosion from metal surfaces by lightly sanding them with fine sandpaper. Brush two thin coats of paint on the bare metal to protect it from further corrosion. Refer to applicable cleaning and refinishing practices specified in TM 9-2851, (Painting Instructions for Field Use).

## 34. Monthly Maintenance Service and Inspection Chart

Item No.	Procedure		References
	Item	Normal condition or result	
1	<b>UNIT:</b> Inspect the equipment for: <ol style="list-style-type: none"> <li>Completeness.</li> <li>Proper installation.</li> <li>Cleanliness.</li> <li>Preservation.</li> </ol>	<ol style="list-style-type: none"> <li>Equipment is complete.</li> <li>Installation is correct.</li> <li>Unit is clean and dry inside and outside; free of corrosion, dirt, fungus, grease, and rust.</li> <li>Painted surfaces are free of bare spots, corrosion, and rust.</li> </ol>	<ol style="list-style-type: none"> <li>App. IV.</li> <li>Part one, sec. III.</li> <li>Par. 27.</li> <li>Par. 33.</li> </ol>
2	<b>PUBLICATIONS:</b> Check that pertinent publications are available.	<ol style="list-style-type: none"> <li>Technical manuals are complete and in usable condition.</li> <li>All Changes pertinent to the manual and a current lubrication order are on hand.</li> </ol>	<ol style="list-style-type: none"> <li>App. IV.</li> <li>DA Pam 310-4.</li> </ol>
3	<b>MODIFICATION WORK ORDERS:</b> Check DA Pam 310-4 to determine whether new applicable MWO's have been published.	All URGENT MWO's are completed. All ROUTINE MWO's are scheduled. All completed MWO's are recorded on DA Form 2408-5.	None.
4	<b>FUEL:</b> Check level of fuel in tank.	Tank is filled to filler neck.	Par. 13f.
5	<b>LEAKAGE:</b> <ol style="list-style-type: none"> <li>Inspect fuel tank filler cap, fuel line, fuel (gas) filter, and carburetor for fuel leakage.</li> <li>Inspect engine joints, oil filler cap (fig. 1), and crankcase cover-plate oil seal (fig. 93) for oil leakage.</li> </ol>	<ol style="list-style-type: none"> <li>Filler cap, fuel line, fuel filter, and carburetor are clean, dry, and tight.</li> <li>Engine joints and oil filler cap are tight and do not leak. Crankcase cover-plate oil seal does not leak.</li> </ol>	<ol style="list-style-type: none"> <li>Figs. 4 and 5, replace filler cap gasket.</li> <li>Par. 61t.</li> </ol>

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6	<b>LUBRICATION:</b> <b>Caution: Do not flush crankcase.</b> Drain and refill crankcase. Lubricate hinges, locks, generator-belt-drive adjustment screw (fig. 2), and throttle control lever and link (fig. 13).	Lubricated parts do not show signs of overlubrication or underlubrication.	Fig. 20.
7	<b>TOOLS AND EQUIPMENT:</b> <ol style="list-style-type: none"> <li>Inspect tools and equipment for breakage and wear.</li> <li>Inspect tools for rust, dirt, and lack of lubrication; inspect toolbox for rust and dirt.</li> <li>Check method of storing tools, and check stock of spare parts.</li> </ol>	<ol style="list-style-type: none"> <li>Tools and equipment are complete and usable.</li> <li>Tools are free from rust and corrosion and are coated with a film of oil; toolbox is clean and dry.</li> <li>All tools are stored in toolbox. No overstockage of spare parts exists, and authorized parts that are not present are ordered on valid requisitions.</li> </ol>	<ol style="list-style-type: none"> <li>App. III and IV.</li> <li>Par. 27.</li> <li>None.</li> </ol>
8	<b>DRIVE BELTS AND PULLEYS:</b> <ol style="list-style-type: none"> <li>Inspect drive belts for grease, oil, and wear.  <b>Caution: A tight belt will cause rapid wear of engine and generator bearings.</b></li> <li>Check drive belt tension.</li> <li>Inspect pulleys for grease, oil, wear, rough surfaces, and looseness.</li> <li>Check alignment of engine and generator pulleys.</li> </ol>	<ol style="list-style-type: none"> <li>Drive belts are clean and not cracked or frayed.</li> <li>When belt is depressed with thumb, deflection is <math>\frac{3}{4}</math> inch (fig. 64).</li> <li>Pulleys are clean and tight; surfaces that contact belts are smooth.</li> <li>When T-square is placed against hubs of outside pulleys, right-angle arm of T-square is lined up with crossmembers of skid base.</li> </ol>	<ol style="list-style-type: none"> <li>Par. 60a(3).</li> <li>Par. 60a(3).</li> <li>Fig. 59 for tightening set-screws.</li> <li>Par. 60b.</li> </ol>
9	<b>FUEL FILTER:</b> Clean fuel filter and inspect it for damage.	Filter and screen are not bent, gasket is not worn, and bowl is not cracked or chipped.	Par. 28 for cleaning; replace damaged parts.

Item No.	Procedure		References
	Item	Normal condition or result	
10	<b>AIR CLEANER:</b> a. Disassemble air cleaner, clean all parts, and inspect them for damage. b. Secure air cleaner to elbow, refill bowl (fig. 20), and check mounting for looseness.	a. Parts are not bent, dented, or damaged. b. Cleaner mounts rigidly to elbow.	a. Par. 39a. b. Par. 39a.
11	<b>FUEL TANK:</b> a. Remove fuel tank cap and inspect it for dirt; inspect gasket for damage, and blow through air vent in cap. b. Replace cap and inspect tank and fuel line connections for leakage and looseness.	a. Cap is clean; gasket is not worn or broken and air vent is open. b. Tank and fuel lines are mounted securely and do not leak.	a. Par. 27. b. Par. 61c.
12	<b>MANIFOLDS, CYLINDER HEAD, MUFFLER, AND EXHAUST PIPE:</b> a. Inspect intake manifold elbow (fig. 69) and locking nut for fuel mixture leakage. Inspect baffle (fig. 93) for dirt. b. Inspect exhaust manifold for leakage and dirt. c. Inspect cylinder head for leakage and dirt. d. Inspect muffler and exhaust pipe for damage and loose mounting hardware.	a. Elbow and locking nut are dry. Baffle and area around baffle are clean. b. No carbon streaks around exhaust manifold elbow and nipple connection (fig. 65). c. No carbon streaks around cylinder head gasket (fig. 70) or lock screws. d. Muffler and exhaust pipe are not cracked or broken and are rigidly mounted.	a. Par. 61h. b. Par. 61b. c. Par. 61i. d. Par. 61b.
13	<b>SPARK PLUG:</b> a. Inspect for leakage around spark plug gasket.	a. Area around spark plug is free from carbon	a. Par. 37.

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	b. Remove (par. 61e) and clean spark plug. Inspect insulator and electrodes for damage. c. Measure gap between electrodes.	streaks. b. Insulator is not cracked or broken; electrodes are not burned. c. 0.025 inch.	b. Par. 39b. c. Par. 39b.
14	<b>COMPRESSION:</b> Insert compression gage (app. III) into spark plug opening in cylinder head. Crank engine several times and record gage indication on DA Form 2404.	None.	None.
15	<b>GOVERNOR AND LINKAGE:</b> Inspect governor lever (fig. 25) and linkage for looseness, wear, and damage. <i>Note.</i> Do not lubricate governor or linkage.	Governor lever is tightly secured to shaft; linkage is not worn or damaged.	Par. 39c.
16	<b>CARBURETOR:</b> Inspect carburetor for damage, leakage, and looseness.	Carburetor is not bent or dented; all manifold and fuel line connections are tight and do not leak. Carburetor valves do not leak. <i>Note.</i> If carburetor is damaged, replace it.	Par. 61f.
17	<b>VALVE MECHANISM:</b> a. Remove valve cover plate (par. 61g) and inspect valve mechanism for wear, damage, and lack of lubrication. b. Measure valve clearance. c. Inspect valve cover plate (fig. 93) and gasket for wear.	a. Valves do not stick, and valve springs are secure and not cracked or broken. The entire mechanism is well lubricated. b. See paragraph 65. c. Cover plate is not bent or dented; gasket is not cracked or broken.	a. None. b. Fig. 76. c. None.
18	<b>MAGNETO:</b> a. Remove starter pulley (par. 61l), blower case, and flywheel from engine.	a. None.	a. None.

Item No.	Procedure		References
	Item	Normal condition or result	
	<p>b. Remove dust cap from magneto assembly, check alignment of contact points, and inspect assembly for damage and wear.</p> <p>c. Inspect bearing (fig. 94) oil-retainer ring for leakage.</p> <p>d. Turn crankshaft until gap between points is as wide as possible, and measure gap width.</p>	<p>b. Points are aligned and not pitted; wiring is clean and insulation is not cracked or broken.</p> <p>c. Oil-retainer ring does not leak.</p> <p>d. 0.020 inch.</p>	<p>b. Par. 39d.</p> <p>c. None.</p> <p>d. Par. 39d.</p>
19	<p><b>CRANKCASE BREATHER:</b>  <b>Caution: Do not remove cambric (cloth) valve from breather assembly.</b></p> <p>a. Remove cover (fig. 29) by lightly tapping bottom of cover rim. Remove retainer and filter.  <i>Note.</i> On models equipped with open-tube type breather assembly (fig. 4), remove both retainers.</p> <p>b. Remove remainder of assembly by unscrewing it from crankcase; clean assembly.</p> <p>c. Inspect assembly for damage.</p> <p>d. Pull filter apart to remove lumps, and lubricate filter (fig. 20).</p> <p>e. Screw breather assembly to crankcase. Replace cap by covering it with cloth and tapping cap in place with a 1½-inch pipe coupling.</p>	<p>a. None.</p> <p>b. None.</p> <p>c. Cap and breather are not bent or dented.</p> <p>d. None.</p> <p>e. None.</p>	<p>a. None.</p> <p>b. Par. 27.</p> <p>c. Figs. 4 and 5 for replacing entire assembly.</p> <p>d. None.</p> <p>e. None.</p>
20	<p><b>FRAME AND SKID MOUNTINGS:</b> Inspect frame and skid base (fig. 1) for damage and loose mounting.</p>	<p>Frame and skid base are not bent, dented, or cracked. Mounting hardware is complete and tight.</p>	<p>None.</p>

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21	<p><b>GENERATOR:</b></p> <p>a. Inspect generator (fig. 2) for looseness and damage.</p> <p>b. Check level of grease in bearing grease cups (figs. 41, 42, and 43), and turn each cup one-half turn. Record action on DA Form 2408-2.</p>	<p>a. Generator is secured tightly to skid base; generator case is not dented, cracked, or broken.</p> <p>b. Cups contain enough grease to lubricate bearings until next scheduled inspection.</p>	<p>a. None.</p> <p>b. Fig. 20.</p>
22	<p><b>COMMUTATOR AND SLIPRINGS:</b></p> <p>a. Remove cover plate from generator (fig. 18), and inspect commutator and collector (slip) rings (fig. 61) for dirt, oil, grease, and roughness.</p> <p>b. Inspect brush holders (fig. 62) for dirt. Inspect brushes for wear and free movement in brush holders. Inspect for contact between brush surfaces and commutator and sliprings.</p> <p>c. Inspect wires and terminals for dirt, grease, oil, looseness, and damage.</p>	<p>a. Commutator and sliprings are clean and smooth.  <i>Note.</i> The surfaces of the commutator and slip rings will become mahogany-colored after being in service for a short time; this is a normal condition.</p> <p>b. Brush holders are free from dirt, grease, and oil. Brushes are not worn close to brush holders, move freely in holders, and whole contacting surface of each brush contacts commutator or slipring.</p> <p>c. All connections are tight; wiring is clean and insulation is not cracked or broken.</p>	<p>a. Par. 58.</p> <p>b. Par. 59.</p> <p>c. Par. 27.</p>
23	<p><b>OUTLET AND FILTER BOX:</b></p> <p>a. Remove cover from outlet and filter box (fig. 2); inspect inside of box for dirt, grease, and oil.</p> <p>b. Inspect capacitors and coils (fig. 47) for damage and loose connections.</p>	<p>a. Capacitors, coils, outlets, and terminals are clean and dry.</p> <p>b. Capacitors and coils are not bent, dented, or cracked; all terminals are tight.</p>	<p>a. Par. 27.</p> <p>b. Par. 56a(1).</p>
24	<p><b>PREPARATION FOR STARTING:</b></p> <p>a. Open fuel shutoff valve (fig. 10) by rotating it fully counterclockwise.</p>	<p>a. None.</p>	<p>a. None.</p>

Item No.	Procedure		References
	Item	Normal condition or result	
	b. Close carburetor choke valve by rotating choke lever (fig. 11) clockwise.	b. None.	b. None.
25	START: Slip knotted end of starter rope (fig. 12) into notch of starter pulley. Use a quick, steady pull on rope to crank engine.	Engine starts.	Par. 37.
26	<p>ENGINE PERFORMANCE:</p> <p><b>Caution: Reset choke lever (fig. 11) as engine warms up so that fuel will not dilute crankcase oil.</b></p> <p>a. After engine starts, allow it to warm up for 10 to 15 minutes. During this warmup period, slowly rotate choke lever counterclockwise until engine operates smoothly with choke lever fully counterclockwise.</p> <p><b>Caution: Do not apply load to engine until engine reaches operating temperature.</b></p> <p>b. Apply load.</p> <p>c. Inspect for fuel and oil leakage.</p> <p>d. Check engine temperature and amount of exhaust smoke.</p>	<p>a. Engine idles smoothly.</p> <p>b. Governor operates smoothly to maintain constant engine speed; engine does not knock.</p> <p>c. No leakage from fuel system or lubricated parts (fig. 20).</p> <p>d. No smoke from engine surface; paint is not blistered. Exhaust smoke is nearly invisible.</p>	<p>a. Par. 37.</p> <p>b. Pars. 37 and 39c.</p> <p>c. Par. 61c and d.</p> <p>d. Par. 37.</p>
27	<p>GENERATOR PERFORMANCE:</p> <p>a. Inspect generator brushes (figs. 41, 42, and 43) for arcing.</p>	a. No arcing between brushes and commutator or sliprings.	a. Par. 37.

	b. Check generator housing temperature.	b. Stator block and retainers are not too hot to touch.	b. Par. 37.
	c. Check generator output voltage (par. 56b).	c. 120 volts.	c. Par. 37.
28	STOP: Push and hold stop button (fig. 15) on engine housing.	Engine stops.	Fig. 10 for closing fuel shutoff valve.
29	AFTER OPERATION SERVICE: Fill fuel tank (par. 13f) and crankcase (par. 13b); inspect sediment bowl for dirt and water. Record total hours of operation on DA Form 2408-1, and cover unit with cover provided for that purpose (app. IV).	Fuel level is at tank filler neck; oil level is at crankcase filler neck. Sediment bowl is free from dirt and water.	Par. 28.

### 35. Lubrication

a. A month consists of 30 days of normal 8-hour operation. If the equipment is operated more than 8 hours per day, the lubrication intervals should be adjusted accordingly. For example, if the equipment is operated 24 hours a day instead of 8, the grease cups that hold the lubricant for the generator bearings must be turned every 10 days.

b. After each tool has been cleaned, wipe it with a cloth moistened with Oil, Lubricating, Preservative, Special (PL-Special).

c. When the equipment is operated in a desert area, see paragraph 18b for lubrication instructions.

Page 45. Make the following changes:

Change the title of section IX to: **TROUBLESHOOTING PROCEDURES.**

Delete paragraphs 39 through 43 and substitute:

### 36. Troubleshooting

(Superseded)

Troubleshooting of this equipment is based on the operational check contained in the monthly service and inspection chart. To troubleshoot the equipment, perform all functions that are referenced to the monthly service and inspection chart (par. 34) starting with item number 13 in the chart, and proceed through the items until an abnormal condition or result is observed. When an abnormal condition or result is observed, note the item number and, if paragraph 37 is referenced, turn to the corresponding item number in the troubleshooting chart (par. 37). Perform the checks and corrective measures indicated in the troubleshooting chart. If these corrective measures do not result in correction of the trouble, higher echelon maintenance is required. Paragraph 38 contains step-by-step instructions for performing the muffler test.

### 37. Troubleshooting Chart

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
13	Carbon streaks around spark plug gasket.	a. Spark plug loose. b. Spark plug threads damaged. c. Cylinder head threads damaged.	a. Tighten spark plug. b. Replace spark plug (par. 61e). c. Remove spark plug and inspect threads around hole in cylinder head for damage.
25	Engine does not start.	a. Fuel line clogged.  b. Ignition cable loose or damaged.  c. Throttle valve (fig. 39) stuck or not properly adjusted.	<b>Caution: Be careful not to spill fuel on engine.</b> a. Close fuel shutoff valve (fig. 10), and disconnect fuel (gas) line (fig. 18) from carburetor; open fuel shutoff valve and check fuel flow. If fuel does not flow, clean fuel line (par. 61c) and fuel filter (par. 28). If fuel does flow, replace carburetor (par. 61f). b. Remove spark plug (par. 61e), hold cable terminal 1/8-inch from exposed metal of spark plug hole (fig. 27), and turn engine with starter rope (fig. 12). If a strong spark appears across 1/8-inch gap, clean spark (par. 39b) and adjust or replace spark plug. If no spark appears, check ignition cable and magneto. c. Turn throttle lever adjusting screw (fig. 11) in a clockwise direction. If engine does not start, disconnect carburetor from intake manifold elbow (par. 61f); check throttle valve for looseness.

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
		<p>d. Carburetor needle valve not properly adjusted.</p> <p>e. Governor lever (fig. 13) or link between governor lever and throttle valve loose.</p> <p>f. Magneto breaker (contact) points worn, pitted, or not properly adjusted.</p>	<p><b>Caution: Do not force needle valve against valve seat.</b></p> <p>d. Turn needle valve (fig. 11) clockwise as far as possible; then turn it counterclockwise one turn.</p> <p>e. Adjust governor (par. 39c); replace worn link (par. 61f and 61g).</p> <p>f. Clean and adjust or replace breaker points (pars. 61l and 39d).</p>
26	<p>a. Engine does not idle smoothly after warm-up period.</p> <p>b. Engine knocks.</p>	<p>(1) Ignition cable loose or damaged.</p> <p>(2) Spark plug fouled or damaged.</p> <p>(3) Magneto breaker points sticking.</p> <p>(4) Air-fuel mixture or idling speed incorrect.</p> <p>(5) Flywheel loose (violent engine vibration).</p> <p>(6) Crankcase oil level low.</p> <p>(1) Low octane fuel.</p>	<p>(1) Remove spark-plug shield (par. 61e), and check ignition cable and connection to spark plug. Tighten loose connection; replace defective cable.</p> <p>(2) Remove (par. 61e) and clean or replace spark plug.</p> <p><i>Note.</i> If plug is cleaned, adjust gap between electrodes (par. 39b).</p> <p>(3) Check breaker point condition (par. 61l) and adjustment (par. 39d).</p> <p>(4) Adjust carburetor idler valve (par. 39e) and needle valve (par. 39f).</p> <p>(5) Tighten flywheel nut (par. 61n).</p> <p>(6) Check crankcase oil level (fig. 20).</p> <p>(1) Use higher octane fuel.</p>

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	<p>c. Engine overheats.</p> <p>d. Backfiring or excessive exhaust smoke.</p>	<p>(2) Crankcase oil level low.</p> <p>(1) Choke valve closed.</p> <p>(2) Crankcase oil level low.</p> <p>(3) Carburetor needle valve not properly adjusted.</p> <p>(4) Air cleaner clogged.</p> <p>(5) Governor lever (fig. 13) or link between governor lever and throttle valve loose.</p> <p>(6) Muffler clogged.</p> <p>d. Air-fuel mixture incorrect.</p>	<p>(2) Check crankcase oil level (fig. 20).</p> <p>(1) Rotate carburetor choke lever (fig. 11) counterclockwise.</p> <p>(2) Check crankcase oil level (fig. 20).</p> <p>(3) Adjust carburetor needle valve (par. 39f).</p> <p>(4) Clean and refill air cleaner (par. 39a).</p> <p>(5) Adjust governor (par. 39c); replace worn link (par. 61f and g).</p> <p>(6) Remove muffler (par. 61b) and test it (par. 38).</p> <p>d. Adjust carburetor needle valve screw (par. 39f).</p>
27	<p>a. Arcing between generator brushes and commutator or collector (slip) rings.</p> <p>b. Stator block too hot to touch.</p>	<p>(1) Commutator or sliprings dirty or rough (figs. 41, 42, and 43).</p> <p>(2) Brushes worn.</p> <p>(3) Brushes stuck or incorrectly seated.</p> <p>(1) Load is excessive.</p> <p>(2) Air vents are blocked (figs. 1 and 63).</p>	<p>(1) Clean commutator or sliprings (par. 58).</p> <p>(2) Replace brushes (par. 59).</p> <p>(3) If there are carbon streaks on commutator or sliprings, clean and reseal brushes (par. 59).</p> <p>(1) Compare actual load with rated load (par. 3).</p> <p>(2) Clear vents.</p>

23

Item No.	Trouble symptom	Probable trouble	Checks and corrective measures
	<p>c. Retainer (figs. 41, 42, and 43) too hot to touch.</p> <p>d. No generator output voltage; generator does not deliver rated output power.</p>	<p>c. Bearing damaged or not lubricated enough.</p> <p>(1) Commutator or sliprings dirty or rough.</p> <p>(2) Brushes worn.</p> <p>(3) Brushes stuck or incorrectly seated.</p> <p>(4) Open connection in generator (fig. 45) or outlet and filter box.</p> <p>(5) Armature incorrectly wound.</p> <p>(6) Belt drive loose.</p>	<p>c. Check level of grease in bearing grease cups (fig. 20). Check generator drive shaft for looseness.</p> <p>(1) Clean commutator or sliprings (par. 58).</p> <p>(2) Replaces brushes (par. 59).</p> <p>(3) Measure voltage between adjacent (not opposite) commutator brushes (par. 56b(2)); clean and reseal brushes (par. 59).</p> <p>(4) Repair or replace defective wiring; tighten loose connections.</p> <p>(5) Reverse dc brush leads (figs. 41, 42, and 43).</p> <p>(6) Adjust belt tension (par. 60a(3)).</p>

### 38. Muffler Test

(Superseded)

After long periods of use, the muffler may become clogged. Test the muffler for clogging as follows:

- a. Direct a stream of water into the muffler end that was removed from the exhaust manifold (par. 61b).
- b. Check the flow of water from the exhaust end of the muffler.
- c. If the water runs slowly from the exhaust end, replace the muffler.

### 39. Repairs and Adjustments

(Superseded)

#### a. Air Cleaner Repair.

- (1) Remove the wingnut (fig. 30) from the air cleaner stud.
- (2) Remove the cover and the filter element from the bowl.
- (3) Remove the remainder of the air cleaner assembly from the elbow.
- (4) Pour the oil from the bowl.
- (5) Clean all parts with cleaning compound.
- (6) Inspect all parts for damage and replace damaged parts.
- (7) Replace the bowl and gasket on the elbow.
- (8) Refill the bowl to the level mark with oil (fig. 20).
- (9) Replace the cover and gasket and tighten the wingnut on the stud.

#### b. Spark Plug Gap Adjustment.

- (1) Clean the electrodes with a spark plug cleaner. If a spark plug cleaner is not available, replace the spark plug.  
**Caution: Do not bend the center electrode of the spark plug.**
- (2) Bend the outer electrode until the gap (fig. 27) between the electrodes is 0.025 inch.

c. *Governor Lever Reset.* If the governor lever (fig. 25) is loose or is removed from the governor crank, reset the governor and linkage as follows:

- (1) Loosen the two capscrews that secure the governor lever to the governor crank. (Earlier models of the engines are equipped with a cast iron governor lever having only one securing screw.)
- (2) Rotate the governor lever clockwise as far as it will go; rotate the governor crank clockwise until it strikes a *stop* in the crankcase.
- (3) Tighten the capscrews and release the governor lever.

d. *Magneto Contact Points Adjustment.* Clean the contact points with a carborundum contact-point file before either aligning the points or adjusting the gap between the points. Ignition timing is not necessary. The magneto assembly is timed correctly when the flywheel is

assembled on the crankshaft with a key and secured with the flywheel nut. Do not attempt to change the timing by relocating parts or filing the crankshaft. To align and adjust the points, proceed as follows:

- (1) Loosen the contact spring bolt (fig. 28).
- (2) Move the contact spring assembly until the contact points are aligned and tighten the contact spring bolt.
- (3) Turn the crankshaft until the gap between the contact points is as wide as possible.
- (4) Loosen the contact block screws.
- (5) Insert a  $\frac{1}{16}$ -inch gage between the contact spring and the round end of the contact block, and tighten the contact block screws. Remove the gage.
- (6) Release the locknut on the contact point screw (fig. 94), and adjust the contact point screw for an 0.020-inch gap between the points. Tighten the locknut.

*e. Carburetor Idler Valve Adjustment.* The idler valve controls the amount of air-fuel mixture fed to the cylinder when there is either little or no load and the idling speed is slow. Adjust the idling speed as follows:

- (1) Rotate the choke lever (fig. 11) fully counterclockwise.
- (2) Remove the load from the equipment.
- (3) Raise the idling device by rotating it clockwise.

**Caution: Do not force the idler valve screw against the valve seat.**

- (4) Turn the idler valve screw (fig. 14) clockwise as far as possible and then turn it counterclockwise one-half to three-quarters of a turn.

*f. Carburetor Needle Valve Adjustment.* The needle valve controls the amount of fuel in the air-fuel mixture. Adjust the needle valve as follows:

- (1) Rotate the choke lever (fig. 11) fully counterclockwise.

**Caution: Do not force the needle valve against the valve seat.**

- (2) Turn the needle valve clockwise as far as possible and then turn it counterclockwise  $1\frac{1}{4}$  turns.
- (3) Apply the load to the equipment.
- (4) Adjust the needle valve to a position where the engine operates smoothly.

Paragraphs 40 through 43, not used.

Page 47. Delete figure 22.

Page 52. Delete figure 23.

Page 53. Delete figure 24.

Page 69, paragraph 45. Delete the third sentence.

Page 70, paragraph 46. Make the following changes:

Subparagraph *b*(2). Change (See fig. 48.) to: (fig. 47.).

Subparagraph *b*(3). Change (fig. 49) to: (fig. 48).

Subparagraph *b*(5). Change (See fig. 48.) to: (fig. 47.).

Subparagraph *c*. After the heading add: (par. 27).

Page 72, paragraph 48*c*. Delete subparagraph *c*.

Page 74. Delete figure 36.

Page 75. Delete note and substitute:

*Note.* See paragraph 1.2 to report either failure or unsatisfactory performance of equipment.

Page 76, paragraph 49*b*(4), last line. Change (See par. 15*e*.) to: (par. 15*b*.).

Page 79, paragraph 49*b*(7), last line. Change (See par. 16*c*.) to: (par. 16*a*.).

Page 87. Delete section XII (page 1 of C 2).

Page 94, paragraph 55*b*, line 2. After See generator trouble chart add: (par. 37).

Page 104, paragraph 58, line 1. Change require to: **acquire**.

Page 107, paragraph 60*a*. Make the following changes:

Subparagraph (3)*b*, last line. Change 3*b* to: (3)*a*).

Subparagraph (3)*c*, last line. Change remove to: **removal**.

Subparagraph (5)*a*. Change (See fig. 9.) to: (fig. 10.).

Page 108, paragraph 60*a*(5)*b*. Change (See fig. 8.) to: (fig. 9.).

Line 3. Delete subparagraph (*e*) and substitute:

(*c*) (Superseded) Disassemble the fuel filter bowl and screen (fig. 32). Open the fuel shutoff valve and drain the fuel tank (fig. 10).

Paragraph 60*a*(5)*d*. Delete subparagraph (*d*) and substitute:

(*d*) (Superseded) Remove the needle valve from the carburetor by unscrewing the packing nut (fig. 11) and allow the carburetor to drain completely.

Page 109, paragraph 61.

Subparagraph *a*(3). Delete the last sentence and substitute: To repair the air cleaner, see paragraph 39*a*.

Subparagraph *b*(3). Delete the first sentence and substitute: Test the muffler according to the instructions given in paragraph 38.

Page 111, paragraph 61*e*(4). Change paragraph 43, item 32 to: paragraph 39*b*.

Page 112, after paragraph 61*g*. Delete *Note* and substitute: *g.1.* (Superseded) *Disassembling, Repairing, and Reassembling Carburetor*.

**Caution: Disassemble and reassemble the carburetor as follows;**

(1) Remove the needle valve (fig. 96), packing nut, packing, valve guide, washer, and nozzle; clean the nozzle and the needle valve (par. 27).

(2) Remove the three mounting screws that secure the upper (fig. 31) and lower carburetor bodies.

- (3) Separate the two bodies slowly to break the gasket bond.
- (4) Pull out the brass pin that holds the carburetor float to the hinge.
- (5) Remove the float and drop the inlet (float) valve from its valve seat.

**Caution:** Do not clean any small holes in the carburetor with wire or any material that will damage the parts.

- (6) Unscrew the inlet valve seat with a screwdriver and clean the inlet valve and its seat (par. 27). During reassembly ((8) below), replace worn or damaged parts with new parts.
- (7) Remove and clean the idling valve (fig. 39).
- (8) Replace the idling valve in the upper carburetor body.
- (9) Screw the inlet valve seat (fig. 31) into the upper carburetor body and insert the inlet valve into its seat.
- (10) Secure the float to the hinge with the brass pin.
- (11) Invert the upper carburetor body and place a flat, straight piece of steel across the float.
- (12) Measure the distance between the float and each flange on the carburetor body. If the distances *are not* equal, bend the float hinge tang until the distances *are* equal.
- (13) Assemble the upper and lower carburetor bodies and tighten the three mounting screws.
- (14) Replace the nozzle (fig. 96), washer, valve guide, packing, packing nut, and needle valve.

Page 120, paragraph 61k(5)(d), line 3. Change (See par. 13e.) to: (par. 13f.).

Page 123, paragraph 61p(2). Change figure 65 to: figure 80.

Page 130, paragraph 61t(4), line 3. Change figure 56 to: figure 60

Page 131, paragraph 61u(7). Change paragraph 43, item 37. to: paragraph 39d.

Page 132, paragraph 61v(2), last line. Change figure 72 to: figure 73.

Page 136, paragraph 63. Delete subparagraphs *a* through *e* and substitute: "See TB SIG 23 for preservation of equipment that will be idle for more than 14 days."

Page 137, paragraph 64.

## 64. Cleaning Fuel Tank and Fuel Line

(Superseded)

**Caution:** Do not spill fuel on the engine.

- a.* Close the fuel shutoff valve (fig. 10) and disconnect the fuel line (par. 61c) from the carburetor and the fuel filter.
- b.* Remove the fuel tank (par. 61d) from the engine and the fuel filter from the fuel tank.
- c.* With the fuel tank partly filled with gasoline or cleaning compound and the fuel tank cap secured to the tank, shake the tank to clean its interior surfaces.

*d.* Remove the fuel tank cap and pour the liquid through the filler neck.

*e.* Clean the tank cap (par. 27) and blow through its air vent.

*f.* Disassemble the fuel filter (par. 28) (including the shutoff valve, packing nut, and packing), and clean the parts (par. 27).

*g.* Assemble the fuel filter and shutoff valve and connect the fuel filter to the tank; open the shutoff valve and blow through the fuel filter fuel-line connection (fig. 95) into the tank.

*h.* Support the fuel tank temporarily; blow through the fuel line and connect it to the tank.

*i.* Pour fresh gasoline into the tank, and allow the gasoline to flow through the fuel filter and out from the fuel line.

*j.* Disconnect the fuel line and blow through it again to remove loose material.

*k.* Secure the tank to the engine and reconnect the fuel line.

Page 138, paragraph 65, left-hand column. Change Intake valve seat (45° chamfer) to: Intake valve seat (45° chamfer). Change Exhaust valve seat (45° chamfer) to: Exhaust valve seat (45° chamfer).

Page 140. Delete paragraphs 68, 69 (page 2 of C 2), and 70.

Paragraph 76 (page 4 of C 3), chart, "Action" column. Make the following changes:

Item 2, change counterclockwise to: clockwise.

Item 4, change clockwise to: counterclockwise.

Page 141 (page 2 of C 2).

## APPENDIX I

### REFERENCES

(Superseded)

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Lubrication Orders, and Modification Work Orders.
SB 11-100	Serviceability Standard for Signal Equipment in Hands of Troops.
TB SIG 23	Preservation (Rustproofing) of Engines and Air Compressors.
TB SIG 69	Lubrication of Ground Signal Equipment.
TM 9-2851	Painting Instructions for Field Use.
TM 11-483	Radio Interference Suppression.
TM 11-661	Electrical Fundamentals (Direct Current).
TM 11-681	Electrical Fundamentals (Alternating Current).
TM 11-6115-206-20P	Organizational Maintenance Repair Parts and Special Tools List: Power Units PE-75-C, -D, -J, -K, -T, -U, -W, -AA, -AB, -AC, -AD, -AE, and -AF.
TM 38-750	The Army Equipment Record System and Procedures.

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Instl (2) except	JBUSMC (2)
Ft Monmouth (63)	Units org under fol TOE (2 cy
USATC AD (2)	ea):
USATC Armor (2)	1-7           6-301
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Lexington (12)	6-300           9-227

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NG: State AG (3); units—same as Active Army except allowance is one copy each unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.