

Table 5-3. Troubleshooting (Cont)

TROUBLE	PROBABLE CAUSE	REMEDY
Ammeter indicates excessive charge rate when batteries are fully charged.	<ul style="list-style-type: none"> <li>a. Defective wiring in charging circuit.</li> <li>b. Ammeter defective.</li> <li>c. Alternator regulator assembly defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Repair or replace as required.</li> <li>b. Replace ammeter.</li> <li>c. Adjust or replace alternator regulator assembly. Refer to engine manual.</li> </ul>
Alternator overheats.	<ul style="list-style-type: none"> <li>a. Defective wiring.</li> <li>b. Alternator regulator assembly defective.</li> <li>c. Alternator assembly defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Check and repair or replace.</li> <li>b. Replace alternator regulator assembly. Refer to engine manual.</li> <li>c. Repair alternator assembly. Refer to engine manual.</li> </ul>
Wheel wobbles.	<ul style="list-style-type: none"> <li>a. Wheel bent.</li> <li>b. Wheel loose on hub.</li> <li>c. Wheel bearing defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace wheel.</li> <li>b. Tighten nuts.</li> <li>c. Replace wheel bearing.</li> </ul>
Wheel bearing overheats.	<ul style="list-style-type: none"> <li>a. Wheel bearing defective.</li> <li>b. Lack of lubrication.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace bearing.</li> <li>b. Pack wheel bearings.</li> </ul>
Tire wear abnormal.	<ul style="list-style-type: none"> <li>a. Wheel loose on hub.</li> <li>b. Improper tire inflation.</li> </ul>	<ul style="list-style-type: none"> <li>a. Tighten nuts.</li> <li>b. Inflate tires to proper pressure.</li> </ul>
Parking brake does not hold.	<ul style="list-style-type: none"> <li>a. Parking brake actuating mechanism not adjusted properly.</li> <li>b. Broken actuating cables or mounting.</li> <li>c. Brakes out of adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>a. Adjust mechanism.</li> <li>b. Replace defective parts.</li> <li>c. Adjust brakes.</li> </ul>
Brakes will not release.	<ul style="list-style-type: none"> <li>a. Parking brake actuator defective or out of adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>a. Adjust parking brake or repair actuating mechanism.</li> </ul>
Brakes will not apply	<ul style="list-style-type: none"> <li>a. Broken or disconnected hydraulic line.</li> <li>b. Hydraulic fluid low.</li> <li>c. Brakes out of adjustment</li> <li>d. Brake shoes worn.</li> <li>e. Surge brake actuator defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Connect or replace hydraulic line.</li> <li>b. Fill master cylinder with clean hydraulic fluid.</li> <li>c. Adjust brakes.</li> <li>d. Refer to overhaul personnel.</li> <li>e. Repair surge brake actuator.</li> </ul>

Table 5-3. Troubleshooting (Cont)

TROUBLE	PROBABLE CAUSE	REMEDY
Brakes apply but braking is not adequate.	<ul style="list-style-type: none"> <li>a. Brake shoes and drums are wet.</li> <li>b. Hydraulic fluid low.</li> <li>c. Air in hydraulic system.</li> <li>d. Surge brake actuator leaking.</li> <li>e. Brake drum broken or cracked.</li> </ul>	<ul style="list-style-type: none"> <li>a. Allow unit to set until brakes dry or apply brakes slowly and tow unit until heat from braking evaporates moisture. CAUTION Do not tow unit for long duration with brakes applied. Excessive friction will cause glazing of brake shoes.</li> <li>b. Fill master cylinder with clean hydraulic fluid.</li> <li>c. Bleed air from hydraulic lines.</li> <li>d. Repair surge brake actuator.</li> <li>e. Replace brake drum or refer to overhaul personnel.</li> </ul>
Brakes apply too slowly.	<ul style="list-style-type: none"> <li>a. Air in hydraulic system.</li> <li>b. Restricted hydraulic line.</li> <li>c. Hydraulic fluid low.</li> <li>d. Surge brake actuator defective.</li> </ul>	<ul style="list-style-type: none"> <li>a. Bleed air from hydraulic lines.</li> <li>b. Remove hydraulic line and clear restriction or replace line. Install and bleed air from line.</li> <li>c. Fill master cylinder with clean hydraulic fluid.</li> <li>d. Repair surge brake actuator.</li> </ul>
Brakes release too slowly.	<ul style="list-style-type: none"> <li>a. Restriction in hydraulic line.</li> <li>b. Shoe movement binding on backing plate.</li> </ul>	<ul style="list-style-type: none"> <li>a. Remove hydraulic line and clear restriction or replace line. Install and bleed air from line.</li> <li>b. Lubricate pivot points.</li> </ul>
Brakes apply uneven or grab.	<ul style="list-style-type: none"> <li>a. Grease or moisture on linings.</li> <li>b. Scored or cracked brake drum.</li> <li>c. Loose wheel bearing.</li> <li>d. Brake drum out of round.</li> </ul>	<ul style="list-style-type: none"> <li>a. Clean grease from linings and drums. If wet, allow unit to sit until brakes dry or apply brakes slowly and tow unit until heat from brakes evaporates moisture. CAUTION Do not tow unit for long duration with brakes applied. Excessive friction will cause glazing of brake shoes.</li> <li>b. Replace drum. Refer to overhaul personnel.</li> <li>c. Replace wheel bearing.</li> <li>d. Replace drum. Refer to overhaul personnel.</li> </ul>



## SECTION VI

### REPAIR INSTRUCTIONS

**6-1. REPAIR INSTRUCTIONS.** This section contains disassembly, cleaning, inspection, repair or replacement, and assembly of the repairable components of the Series 750 RPDQ Rotary Air Compressor. Refer to the engine manual for repair instructions for the engine and engine accessories.

**6-2. PRELIMINARY PROCEDURES.** Before removal or disassembly of the repairable components, the following preliminary procedures should be followed.

- a. Set the parking brake.
- b. Disconnect the battery cables from the batteries, remove batteries from the unit and store in a suitable heated storage area.

#### **WARNING**

Never attempt to disassemble any part of the air compressor without first relieving all air pressure from the entire system.

- c. Make certain that all air pressure is relieved from the air system by opening the air service valves.
- d. Place a container under the radiator drain, loosen radiator cap, open radiator drain and drain off coolant. Place container under the engine, remove engine block drain plug and drain coolant from engine. Close drains after coolant flow stops.
- e. Place a container under engine, open engine drain valve and drain lubricating oil from engine. Close valve when oil flow stops.
- f. Place a container under the oil separator tank, remove separator drain plug, open drain valve and drain compressor lubricating oil from tank. Install drain plug when oil flow stops and close drain valve.
- g. Place a container under fuel tanks, loosen filler caps, remove drain plugs and drain fuel from the tanks. Install drain plugs when fuel flow stops.

#### **WARNING**

Provide a well ventilated area for cleaning with solvents or other chemicals. Repeated or prolonged inhalation of solvent fumes can cause illness or death. When cleaning or air drying with compressed air, the air pressure must not exceed 30 psi at the air nozzle to avoid injury.

#### **NOTE**

The manufacturer recommends the replacement of gaskets and preformed packing (o-rings) at overhaul; therefore, no cleaning of these parts is covered by this manual.

**6-3. GENERAL CLEANING.** Clean all disassembled metal parts using a cleaning solvent that is in accordance with Federal Specification P-D-680, or equivalent. Wipe nonmetallic parts with a clean, lint-free cloth moistened with this solvent and air dry. Specific cleaning of components which differs from this general cleaning method is contained in paragraphs pertaining to that component.

**6-4. PAINTED SURFACES.** After cleaning, all painted surfaces requiring paint touch-up should have applied pretreatment primer in accordance with Military Specification MIL-P-15328, or equivalent. Application should be in accordance with MIL-T-704. After pretreatment, apply one coat of a commercial grade red oxide primer, or equivalent. Finish paint shall be Color Number 14064, Green, per Federal Standard 595.

**6-5. INSPECTION, REPAIR, OR REPLACEMENT.** Refer to tables 6-1, 6-2, and 6-3 for inspection, repair or replacement, spring data, and a table of limits. Table 6-4, Torque Limits, is provided as a reference. Specific torque limits necessary at assembly are provided in the text. Inspection, repair, or replacement not found in tables 6-1, 6-2, and 6-3 is detailed in text portion of Disassembly and Assembly paragraphs.

**6-6. DISASSEMBLY AND ASSEMBLY.** Disassembly and assembly procedures for major components is covered in the following paragraphs. Disassembly and assembly of these components is covered in detail in subsequent paragraphs.

#### NOTE

Disassembly should be limited to the extent necessary to gain access to, or remove, a part or component requiring repair or replacement.

- a. Discharge Service Valves and Piping. Unscrew and remove the service valves (1, figure 8-1), manifold (3), globe valves (4), close nipples (5), pipe cross (6), pipe nipple (8), pipe elbow (9), pipe nipple (10), and reducing bushing (11).
- b. Remove the two air cleaner caps (12, figure 8-1) and rain cap (13).
- c. Remove nuts, lock washers, and screws securing exhaust muffler elbow (14). Remove the elbow (14) and muffler gasket (15). Remove nuts, lock washers, and screws securing muffler (19) to bellows (16). Remove screws, lock washers, and flat washers securing muffler mounting bands (20) to support brackets (21). Remove muffler (19) from unit. Remove gasket (17). Remove nuts, lock washers, and screws securing exhaust bellows (16) to engine and remove bellows (16) and gasket (18). Remove locknuts, screws, mounting straps, and muffler bands (20) from muffler only when necessary. Remove locknuts, flat washers, and support brackets (21). Remove nuts, lock washers, and vibration isolators (22).
- d. Loosen hose clamps (24, 27) and remove air cleaner hoses (23), restriction indicator hose (25) and connector, and engine intake hose (26). Remove nuts and screws securing hose transition (28), remove transition (28), mounting strap (29), restriction indicator hose (30) and connector. Remove screws and lock washers securing compressor intake adapter (31), remove the adapter (31), damper control assembly (33) and gaskets (32).
- e. Loosen hose clamps (35), remove air cleaner hose (36), remove screws, lock washers, and flat washers securing air cleaner assemblies (34) and remove the air cleaners (34). Remove nuts, lock washers, screws, and air cleaner band mounting brackets (37).
- f. Housing Group (38, figure 8-1). Disassemble the housing components only to the extent necessary. See figure 8-4 for details.

#### NOTE

Specific disassembly procedures for the housing assembly are not provided. Only those housing components providing access to a repairable item should be removed.

- g. Compressor Oil Filter Group (39, figure 8-1). Disconnect oil hose assembly from thermal bypass assembly (40). Remove the two cap screws and lock washers securing oil filter to compressor. Remove the oil filter group (39) from the unit and remove gasket from flange. Assemble in the reverse of disassembly.

Table 6-1. Inspection, Repair, and Replacement

COMPONENT	INSPECTION	REPAIR AND REPLACEMENT
Battery cables and batteries (figure 8-18)	<ul style="list-style-type: none"> <li>a. Inspect battery cable clamp terminals for corrosion and tightness on battery terminals.</li> <li>b. Inspect cables for evidence of burning and insulating cover breaks.</li> <li>c. Inspect batteries for loose terminals, missing cell caps, and cracks in case.</li> </ul>	<ul style="list-style-type: none"> <li>a. Remove corrosion with a solvent or wire brush and lubricate with MIL-L-7866 grease. If clamp terminals do not make tight connection, replace terminal.</li> <li>b. Replace all defective cables.</li> <li>c. Replace missing cell caps. Replace batteries that have loose terminals or cracked cases.</li> </ul>
Air cleaner assemblies (figure 8-3)	<ul style="list-style-type: none"> <li>a. Inspect element for enlarged holes and rupture.</li> <li>b. Inspect unloader for tears, hardening, and deterioration.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace a damaged element.</li> <li>b. Replace damaged unloader.</li> </ul>
Damper valve assembly (figure 8-2)	<ul style="list-style-type: none"> <li>a. Inspect damper valve for any distortion and bending of shaft.</li> <li>b. Inspect the detent spring. Refer to table 6-2.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace the damper valve and shaft if damaged.</li> <li>b. Replace defective spring.</li> </ul>
Compressor oil filter (figure 8-5)	<ul style="list-style-type: none"> <li>a. Inspect element for any cracks or other defect.</li> <li>b. Inspect connectors, hoses, and fittings for damaged threads and leakage.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace a damaged element.</li> <li>b. Replace all defective parts.</li> </ul>
Thermal bypass valve (figures 8-6, 8-7)	<ul style="list-style-type: none"> <li>a. Inspect connectors, hoses, and fittings for damaged threads and leakage.</li> <li>b. Inspect power element for distortion, jamming, or any other defect.</li> <li>c. Inspect springs for broken coils. Refer to table 6-2.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace all defective parts.</li> <li>b. Replace a faulty power element.</li> <li>c. Replace defective springs.</li> </ul>
Radiator and oil cooler (figures 8-8)	<ul style="list-style-type: none"> <li>a. Inspect oil cooler for leakage in accordance with paragraph 6-14.</li> <li>b. Inspect radiator for leakage in accordance with paragraph 6-14.</li> </ul>	<ul style="list-style-type: none"> <li>a. Repair oil cooler leaks by soldering or brazing. If damaged beyond this repair, replace the cooler.</li> <li>b. Repair radiator leaks by soldering or brazing. If damaged beyond this repair, replace radiator assembly.</li> </ul>

Table 6-1. Inspection, Repair, and Replacement (Cont)

COMPONENT	INSPECTION	REPAIR AND REPLACEMENT
Air line system (figure 8-9)	<ul style="list-style-type: none"> <li>a. Inspect all air line hose assemblies for deterioration, damaged threads, and connection leakage.</li> <li>b. Inspect the element of strainer assembly for clogging of mesh and damage.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace all damaged hose assemblies and fittings with damaged threads.</li> <li>b. Replace element if damaged. If clogged, clean in solvent, Specification P-D-680.</li> </ul>
Fuel and oil line system (figure 8-15)	<ul style="list-style-type: none"> <li>a. Inspect all fuel and oil hose assemblies for deterioration, damaged threads, and connection leakage.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace all damaged hose assemblies and fittings with damaged threads.</li> </ul>
Oil separator assembly (figure 8-10)	<ul style="list-style-type: none"> <li>a. Inspect non-return valve for worn facing washer, bent stem, and free movement in bore of piston.</li> <li>b. Inspect piston for any nicks that may cause binding in housing bore and for cracks.</li> <li>c. Inspect non-return valve spring for broken coils and distortion. Refer to table 6-2.</li> <li>d. Inspect oil separator element for enlarged holes, rupture, or any other defect.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace any defective part of non-return valve.</li> <li>b. Remove any raised portion or nicks with a metal scraper. Remove minor scratches with fine emery cloth. Replace piston if other defects are noted.</li> <li>c. Replace defective spring.</li> <li>d. Replace a damaged element.</li> </ul>
Air pressure regulator (figure 8-11)	<ul style="list-style-type: none"> <li>a. Inspect diaphragm for cuts, tears, and deterioration.</li> <li>b. Inspect springs for broken coils and distortion. Refer to table 6-2.</li> <li>c. Inspect valve and seat for any evidence of wear and burring.</li> </ul>	<ul style="list-style-type: none"> <li>a. Any defect is cause for replacement.</li> <li>b. Replace defective springs.</li> <li>c. Replace these components if defect is in evidence.</li> </ul>
Blowdown valve assembly (figure 8-12)	<ul style="list-style-type: none"> <li>a. Inspect all fittings for damaged threads and cracks.</li> <li>b. Inspect blowdown valve for any visible damage.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace all defective parts.</li> <li>b. Blowdown valve is not repairable. Replace a damaged valve.</li> </ul>

Table 6-1. Inspection, Repair, and Replacement (Cont)

COMPONENT	INSPECTION	REPAIR AND REPLACEMENT
Speed control linkage (figure 8-13)	<ul style="list-style-type: none"> <li>a. Inspect springs for broken coils and distortion. Refer to table 6-2.</li> <li>b. Inspect control rods for bending and condition of threads.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace defective springs.</li> <li>b. Replace defective control rods.</li> </ul>
Air compressor (figure 8-14)	<ul style="list-style-type: none"> <li>a. Inspect all springs for broken coils and distortion. Refer to table 6-2.</li> <li>b. Inspect intake control diaphragm for rupture and deterioration.</li> <li>c. Inspect intake valve for cracks, distortion, and condition of seat.</li> <li>d. Inspect rotor blades for breaks, chips, and wear. Refer to table 6-3.</li> <li>e. Inspect rotor and stator for cracks, raised metal, such as burrs, and for wear. Inspect rotor blade slots for any burrs and chipping. Refer to table 6-3.</li> <li>f. Inspect bearings for freedom of rotation, wear, and any other defect.</li> <li>g. Inspect rotor shaft for journal wear and concentricity. Refer to table 6-3.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace defective springs.</li> <li>b. Replace a damaged diaphragm.</li> <li>c. Replace a damaged intake valve.</li> <li>d. Replace damaged or worn blades.</li> <li>e. Raised metal (burrs) may be removed with a metal scraper; then smooth the surface with emery cloth.</li> <li>f. Replace defective bearings. Refer to paragraph 6-21 for disassembly.</li> <li>g. Replace damaged shaft.</li> </ul>
Instrument panel (figure 8-17)	<ul style="list-style-type: none"> <li>a. Inspect all wires for damaged insulation and tightness of terminal connections. Inspect wires for evidence of shorts and burning.</li> <li>b. Inspect all gauges for loose mounting and broken faces.</li> <li>c. Inspect all gauges for proper function. Correct readings are:  Engine RPM:  1200 idle - 2100 full load  Oil Pressure:  70-75 PSI at 2100 RPM  Water Temperature:  170°F - 190°F  Air Pressure:  80 - 105 PSI loaded  115 - 120 PSI unloaded</li> </ul>	<ul style="list-style-type: none"> <li>a. Tighten connections as required. Damaged insulation may be repaired by wrapping with insulation tape, MIL-I-15126. If wires show evidence of shorts and burning, replace wire assembly.</li> <li>b. Tighten mounting as required. Replace all damaged gauges.</li> <li>c. Replace all gauges which do not function properly.</li> </ul>



Table 6-1. Inspection, Repair, and Replacement (Cont)

COMPONENT	INSPECTION	REPAIR AND REPLACEMENT
Instrument panel (figure 8-17) (Cont)	<ul style="list-style-type: none"> <li>d. Inspect all hoses for deterioration, condition of threads, and leaking connections.</li> <li>e. Inspect control cables for kinks and breaks.</li> </ul>	<ul style="list-style-type: none"> <li>d. Replace all defective hose assemblies.</li> <li>e. Replace defective control cables.</li> </ul>
Surge brake actuator and brakes lines (8-20, 8-22)	<ul style="list-style-type: none"> <li>a. Inspect surge brake safety break-away cable for broken strands and connection to lever and hook.</li> <li>b. Inspect actuator boot for cracks and cuts.</li> <li>c. Inspect brake hydraulic lines for kinks and rupture and fittings for leakage.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace breakaway cable if damaged. Make certain connections are tight. Repair as necessary.</li> <li>b. Replace damaged boot. Make certain clamps are tight.</li> <li>c. Replace damaged brake lines and fittings. Fill and bleed brake system.</li> </ul>
Drawbar and front axle group (figure 8-19, 8-20, 8-21)	<ul style="list-style-type: none"> <li>a. Inspect center arm hinge pin for cracks, distortion and wear.</li> <li>b. Inspect steering knuckle for any cracks or breaks. Check hinge pin hole diameter.</li> <li>c. Inspect spindles for cracks, damaged threads, and excessive wear.</li> <li>d. Inspect wheel bearings for freedom of rotation, gritty action, and wear.</li> <li>e. Inspect spindle seals for cut or deteriorated sealing surfaces.</li> <li>f. Inspect hubs for cracks and bearing bore wear.</li> <li>g. Inspect tie rods for cracks, bends, and damaged threads.</li> <li>h. Inspect springs for broken leaves and broken shackle bushings.</li> <li>i. Inspect spring shackles and axle beam for cracks and breaks.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace damaged hinge pin.</li> <li>b. Replace damaged steering knuckle and spindle assembly.</li> <li>c. Replace damaged steering knuckle and spindle assembly.</li> <li>d. Replace defective bearings.</li> <li>e. Replace damaged seals.</li> <li>f. Replace damaged hubs.</li> <li>g. Replace if damaged.</li> <li>h. Replace spring if broken.</li> <li>i. Replace defective parts.</li> </ul>

Table 6-1. Inspection, Repair, and Replacement (Cont)

COMPONENT	INSPECTION	REPAIR AND REPLACEMENT
Parking brake and rear axle (figure 8-23, 8-24)	<ul style="list-style-type: none"> <li>a. Inspect parking brake lever for any cracks, breaks, and binding.</li> <li>b. Inspect parking brake cable assemblies for any kinks, breaks in cable, and damaged threads.</li> <li>c. Inspect sealing surface of seals for cuts and deterioration.</li> <li>d. Inspect bearings for freedom of rotation, gritty action, and wear.</li> <li>e. Inspect hub for cracks and bearing bore wear.</li> <li>f. Inspect brake drum for cracks, scoring, and scratches.</li> <li>g. Inspect brake rigging yokes and shaft for cracks, breaks, and distortion.</li> <li>h. Inspect springs for broken leaves and cracked shackle bushings.</li> <li>i. Inspect axle spindle for cracks, scoring, and wear. Inspect axle beam for cracks.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace lever assembly if damaged. Adjust as necessary.</li> <li>b. Replace a damaged cable assembly.</li> <li>c. Replace damaged seals.</li> <li>d. Replace defective bearings.</li> <li>e. Replace damaged hub.</li> <li>f. If damaged, replace drum.</li> <li>g. Replace all damaged parts.</li> <li>h. Replace damaged springs.</li> <li>i. Replace axle beam and spindle assembly if damaged.</li> </ul>
Brake assembly (figure 8-25)	<ul style="list-style-type: none"> <li>a. Inspect all springs for broken coils and distortion.</li> <li>b. Inspect brake shoes for cracks, distortion, and excessive lining wear.</li> <li>c. Inspect strut for cracks, distortion, and deformation of end slots.</li> <li>d. Inspect brake lever for cracks and distortion.</li> <li>e. Inspect push rod ends for any cracks and deformed slots.</li> <li>f. Inspect cylinder assembly for cracks, damaged threads, and for free actuation.</li> </ul>	<ul style="list-style-type: none"> <li>a. Replace damaged springs.</li> <li>b. Replace damaged brake shoe assemblies.</li> <li>c. Replace damaged struts.</li> <li>d. Replace if damaged.</li> <li>e. Replace damaged push rods.</li> <li>f. Replace defective cylinder assembly.</li> </ul>

Table 6-1. Inspection, Repair, and Replacement (Cont)

COMPONENT	INSPECTION	REPAIR AND REPLACEMENT
Brake assembly (figure 8-25) (Cont)	<p>g. Inspect backing plate for cracks and distortion.</p> <p>h. Inspect all other parts for cracks, breaks, damaged threads, and distortion.</p>	<p>g. Replace damaged backing plate.</p> <p>h. Replace all damaged parts.</p>
Fuel tanks and main frame (figure 8-26)	<p>a. Inspect fuel level sending unit ground wire for damaged terminal lugs and frayed insulation.</p> <p>b. Inspect fuel level sending unit for bent float rod, damaged float, and any other defect.</p> <p>c. Inspect fuel tanks for cracked seams, damaged threads, missing filler caps, and any other defect.</p> <p>d. Inspect all felt strips for tearing, hardening, and missing pieces.</p> <p>e. Inspect frame weldment and attached members for broken welds.</p>	<p>a. Insulation may be repaired by wrapping with insulation tape, MIL-I-15126. If wire strands are broken or lugs damaged, replace wire assembly.</p> <p>b. Float rod may be straightened carefully. Replace if any other defect is detected.</p> <p>c. Replace missing filler caps. Chase threads if possible to repair and replace plugs or fittings. Repair or replace fuel tanks as necessary.</p> <p>d. Replace felt strips as necessary.</p> <p>e. Repair frame and member weldments as necessary.</p>

Table 6-2. Spring Data

FIG. & INDEX NO.	DESCRIPTION	TEST FORCE (LBS) (WHEN APPLICABLE)		LG UNDER TEST (IN.)	FREE LENGTH (IN.)	ACTIVE COILS	OD (IN.)
		MIN	MAX				
8-2-6	Damper detent spring				1	6	0.688
8-7-12	Relief valve spring				1-5/8	12	0.353
8-7-14	Shuttle spring		15	7/8	1-3/16	4-1/2	0.830
8-7-19	Plunger spring		24	11/16	1-1/16	6	0.642
8-10-39	Min press. valve spring				6-1/8	10	2.013
8-11-7	Press. regulator spring				1-3/8	6	0.500
8-13-9	Control rod spring				4-5/16	22	0.572
8-13-3	Return spring				7-3/8	110	0.467
8-13-26	Throttle rod spring				2	8	0.965
8-14-48	Piston spring				3	4	3.925
8-14-52	Guide spring				3-5/8	22	0.478
8-14-62	Relief spring				1	12	0.262
8-14-108	Relief spring				7/8	6	0.544

Table 6-3. Table of Limits

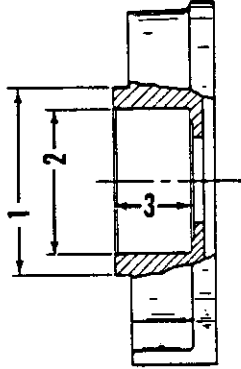
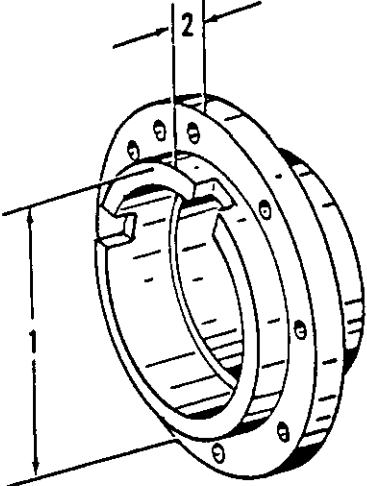
REF NO.	DESCRIPTION	
	COMPRESSOR END COVERS (Both ends)	
1	Mounting register dia ..... 7.747 in. min 7.750 in. max	
2	Bearing bore diameter ..... 5.9055 in. min 5.9071 in. max	
3	Bearing bore depth..... 3.115 in. min 3.125 in. max	
	BEARING RETAINING COVERS	
1	Mounting register dia ..... 5.902 in. min 5.904 in. max	
2	Mounting flange to face ..... 0.615 in. min 0.620 in. max	

Table 6-3. Table of Limits (Cont)

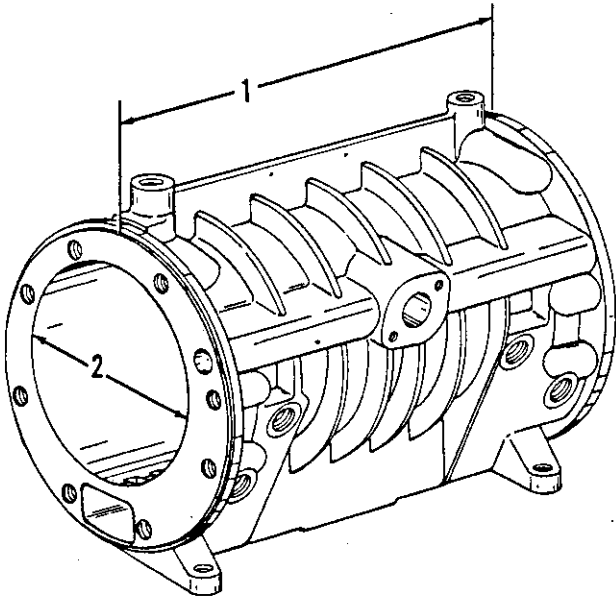
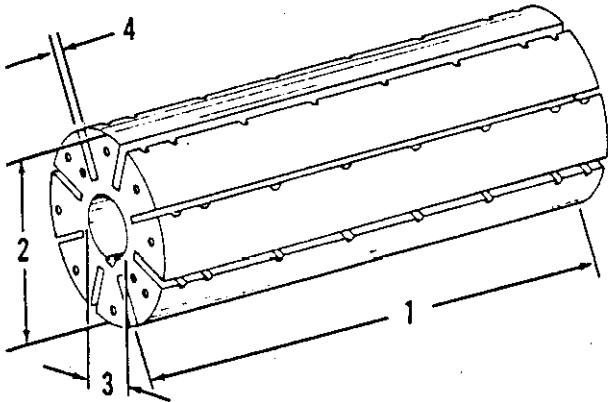
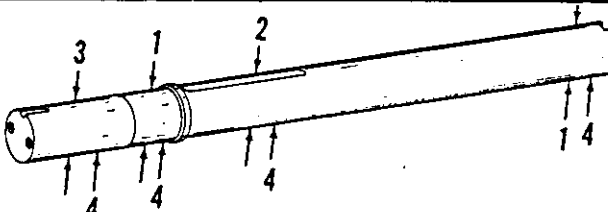
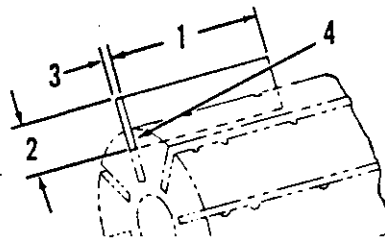
REF NO.	DESCRIPTION	
1	COMPRESSOR (Cont):	
2	STATOR	
1	Length ..... 19.007 - 19.010 in.	
2	Bore ..... 9.798 - 9.804 in.	
1	ROTOR	
2	Length ..... 18.993 - 18.996 in.	
3	Diameter ..... 8.497 - 8.500 in.	
4	Bore ..... 2.7583 - 2.7593 in.	
1	Blade slot ..... 0.312 - 0.315 in.	
1	SHAFT	
2	Bearing journals ..... 2.7567 - 2.7574 in.	
3	Rotor journal ..... 2.7567 - 2.7574 in.	
4	Coupling journal ..... 2.749 - 2.750 in.	
1	Concentricity (TIR) ..... 0.001 in.	
1	BLADES (new)	
2	Length ..... 6.318 - 6.320 in.	
3	Height ..... 2.185 - 2.190 in.	
4	Thickness ..... 0.3088 - 0.3118 in.	
1	Slot clearance ..... 0.0002 - 0.0062 in.	

Table 6-4. Torque Limits

GENERAL TORQUE LIMITS – COMPRESSOR			
SIZE	TORQUE (FT LB)	SIZE	TORQUE (FT LB)
1/4-20	6	9/16-12	60
1/4-28	8	9/16-18	66
5/16-18	11	5/8-11	104
5/16-24	12	5/8-18	116
3/8-16	20	3/4-10	143
3/8-24	22	3/4-16	140
7/16-14	33	7/8-9	218
7/16-20	35	7/8-14	217
1/2-13	45	1-8	322
1/2-20	47	1-14	291

h. Thermal Bypass Valve Group (40, figure 8-1). Disconnect the oil hoses from the thermal bypass valve. Remove the two lock nuts and cap screws securing the thermal bypass valve to the frame. Remove the thermal bypass valve group (40) from the unit. Assemble in the reverse of disassembly.

i. Radiator and Cooler Group (41, figure 8-1). Remove the hardware attaching the assembly to the frame. Disconnect the upper and lower radiator hoses from the engine. Disconnect the radiator drain to the extent necessary to lift assembly away from unit. Remove the fan guards. Disconnect oil lines from oil cooler. Attach a chain hoist, or other lifting device, to the assembly and lift the radiator and oil cooler assembly (41) off unit. Assemble in the reverse of disassembly.

j. Air Lines System (43, figure 8-1). Disconnect the air lines and fittings as necessary for overhaul. Assemble in the reverse of disassembly. Tag each line when removed for assembly reference.

k. Oil Separator Group (44, figure 8-1). Remove discharge piping from separator, paragraph 6-6a. Remove compressor discharge hose adapter from separator tank. Disconnect air lines. Disconnect oil hose assembly from bottom of separator tank. Remove attaching hardware. Attach a lifting device to the eyes on separator cover and remove separator assembly (44) from unit. Assemble in the reverse of disassembly.

l. Speed Control Linkage Group (45, figure 8-1). Disconnect speed control linkage from engine governor and compressor. Remove the two cap screws and lock washers securing speed control to flywheel housing adapter. Remove the speed control linkage group (45) from the unit. Assemble in the reverse of disassembly.

m. Air Compressor Assembly and Mounting Group (46, figure 8-1). Disconnect air lines from compressor. Remove screws and washers securing mounting feet to bracket. Remove the cap screws and lock washers securing adapter to engine flywheel housing. Attach a lifting device to the compressor and remove from unit. Assemble in the reverse of disassembly.

n. Mullion and Control Box Assembly (12, figure 8-4). Disconnect wiring harness leads from gauge terminals, air hose, oil hose and tachometer cable from rear of instrument box. Remove water temperature sensing bulb from engine. Remove compressor oil temperature sensing bulb from discharge elbow. Disconnect stop cable from governor. Remove nuts, lock washers, flat washers, and screws securing instrument box assembly to mullion panel. Remove the instrument box assembly. Assemble in the reverse of disassembly. Refer to figure 1-6 for wiring diagram.

o. Fuel and Oil System (47, figure 8-1). Disconnect and remove fuel and oil lines and fittings as necessary to accomplish overhaul. See figure 8-15 for details. Tag lines for assembly reference. Assemble in the reverse of disassembly.

p. Engine Assembly (48, figure 8-1). Disassemble fan guards from radiator shroud. Disconnect the two radiator hoses. Remove locknuts, screws, and snubbing washers securing engine to front engine mount (49). Remove locknuts, screws, flat

washers, and front engine vibration mounts (50). Remove screws, lock washers, locknuts, snubbing washers, and rear engine mount (51). Remove locknuts, screws, flat washers, rear engine vibration mounts (52) and engine mounting base (53). Remove screws, lock washers, and engine cooling fan (42). Remove tachometer cable (54). Assemble engine assembly on unit in reverse of disassembly. Refer to figure 1-6 for wiring diagram.

q. Tires and Wheels (55, figure 8-1). Deflate and remove the tires (55). Remove valve stems and wheels as required. Assemble in the reverse of disassembly. Refer to table 1-1 for inflation pressure.

r. Axle Group (56-61, figure 8-1). Disassemble this group only when necessary and to extent required for overhaul. Assemble in the reverse of disassembly.

s. Fuel Tank Mounting and Main Frame Group (62, figure 8-1). Disassemble this group only when necessary and to extent required for overhaul. Assemble in the reverse of disassembly.

**6-7. DETAILED COMPONENT DISASSEMBLY AND ASSEMBLY.** The following paragraphs cover in detail the disassembly, special inspection and cleaning, and assembly of removed repairable components. Components not found in these paragraphs are considered nonrepairable and should be replaced as an assembly. All references to figure numbers and index numbers are those found in Section VIII, except as otherwise noted.

**6-8. BATTERY CABLES, BATTERIES, AND BATTERY MOUNTING (figure 8-18).** Disassemble the battery cables, batteries, and battery mounting in order of key index numbers assigned on figure 8-18. Assemble in the reverse of disassembly.

**6-9. AIR CLEANER ASSEMBLY (figure 8-3).**

a. Disassemble the air cleaner assembly in the order of key index numbers assigned on figure 8-3.

b. Immerse and clean element (4) in a container of water and low-sudsing household type detergent. Rinse thoroughly with clean water and air dry.

#### NOTE

Replace element after eight cleanings.

c. Assemble the air cleaner assembly in the reverse of disassembly.

**6-10. DAMPER CONTROL ASSEMBLY (figure 8-2).** Disassemble the damper control assembly in the order of key index numbers assigned on figure 8-2. Assemble in the reverse of disassembly.

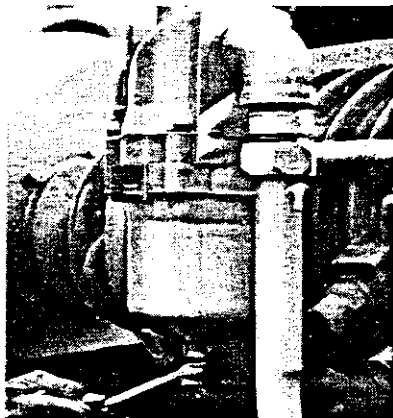
**6-11. COMPRESSOR OIL FILTER GROUP (figure 8-5).**

a. Disassemble the compressor oil filter group in the order of key index numbers assigned on figure 8-5.

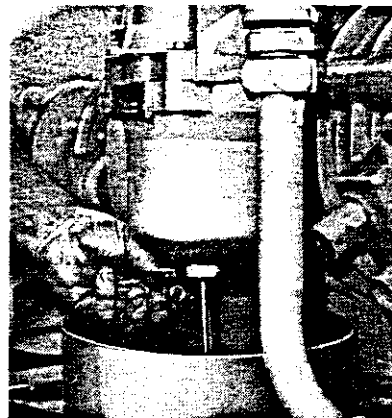
b. Clean the housing (8) and element (12) in a container of solvent, Specification P-D-680. Wipe the housing (8) dry with a clean, lint-free cloth. Dry the element (12) with compressed air.



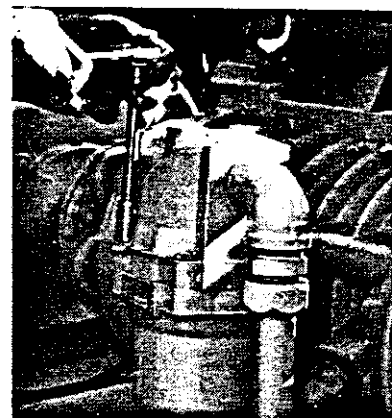
Agitate and soak the element (12) in solvent to clean. Do not scrape or wire brush the element as damage may occur. Refer to figure 6-1.



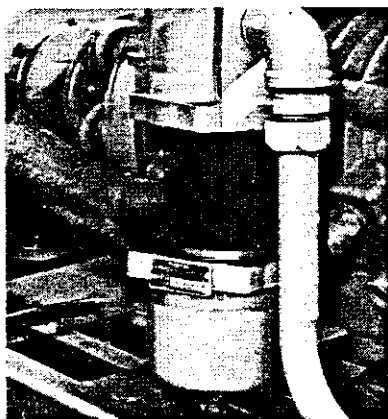
Loosen drain plug



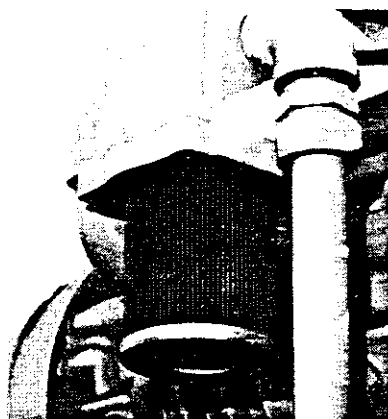
Drain oil filter



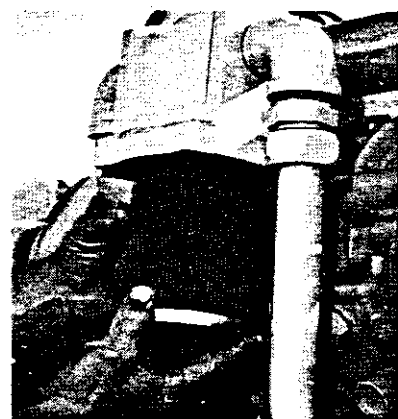
Remove head bolts



Remove housing



Element



Remove element



Wash housing



Wash element



Dry element

*Figure 6-1. Compressor oil filter cleaning*



## NOTE

If a varnish condition is in evidence on the compressor oil filter element, the compressor oil separator, oil cooler, and oil filter must be cleaned. See paragraph 6-17 following for special oil separator cleaning procedure.

- c. If a varnish condition exists, a prolonged soaking in methyl ethyl ketone (MEK) will remove the varnish.

## WARNING

Methyl ethyl ketone (MEK) is toxic and flammable. Use in a well ventilated area.

- d. Assemble compressor oil filter in reverse of disassembly.

6-12. THERMAL BYPASS VALVE GROUP (figure 8-6). Disassemble the thermal bypass valve group in the order of key index numbers assigned on figure 8-6. Assemble in the reverse of disassembly.

6-13. THERMAL BYPASS VALVE ASSEMBLY (figure 8-7). Disassemble the thermal bypass valve assembly in the order of key index numbers assigned on figure 8-7. Assemble in the reverse of disassembly.

## CAUTION

Do not overtighten nut (6). Overtightening can cause distortion of power element (5), resulting in malfunction.

6-14. RADIATOR AND OIL COOLER GROUP (figure 8-8).

- a. Disassemble the radiator and oil cooler group in the order of key index numbers assigned on figure 8-8.

b. Flush and drain the oil cooler (27, figure 8-8) with solvent, Specification P-D-680, or equivalent. Plug the outlet connection and fill the oil cooler with clean compressor oil. Apply air pressure of from 4 to 10 psi to inlet connection and check oil cooler for leaks. Mark each leak detected. Remove the air pressure and drain oil from the cooler. Solder or braze all leaks detected. Recheck as described above.

c. Flush and drain the radiator assembly (38, figure 8-8) with solvent. Plug or cap the inlet and outlet openings, remove radiator cap and fill radiator with clean water. Apply air pressure of from 4 to 10 psi at filler neck. Check for leaks and mark any detected. Remove air pressure and drain water from radiator. Solder or braze all leaks detected. Recheck as described above. If leaks are such that they cannot be repaired in this manner, replace radiator.

- d. Assemble the radiator and oil cooler group in the reverse of disassembly.

6-15. AIR LINE SYSTEM (figure 8-9). Disassemble the air line system, to the extent necessary, in the order of key index numbers assigned on figure 8-9. All defective parts shall be replaced. Assemble in the reverse of disassembly.

6-16. FUEL AND OIL LINE SYSTEM (figure 8-15). Disassemble the fuel and oil line system, to the extent necessary, in the order of key index numbers assigned on figure 8-15. All defective parts shall be replaced. Assemble in the reverse of disassembly.

6-17. OIL SEPARATOR GROUP (figure 8-10). Disassemble the oil separator group in the order of key index numbers assigned on figure 8-10. Special cleaning is as follows.

- a. When a varnish condition is detected during cleaning of compressor oil filter, paragraph 6-11, mix a super detergent, such as THERMA-SOLVE CONCENTRATE, manufactured by Pennsylvania Refining Company, Cleveland, Ohio, with the compressor oil in the separator in a ratio of one gallon of THERMA-SOLVE to each ten gallons of oil.
- b. Operate the compressor under normal conditions for 40-60 hours allowing the treated oil to dissolve and suspend the varnish.
- c. After the above period of operation, stop the compressor while running under full load. This procedure will allow maximum air to mix with the oil and force the maximum amount of oil from the oil cooler into the separator tank.
- d. Place a container under the separator tank and while the oil is still hot, remove separator drain plug and drain all of the oil from the tank. Install the drain plug.
- e. Remove and replace the separator element.

### **WARNING**

Destroy used element to prevent accidental reuse. Over pollution of metal salts collecting on the element can become a hazardous condition by lowering the flash point and causing a fire in the separator.

- f. Clean the compressor oil filter (paragraph 6-11).
- g. Remove the oil separator filler plug, fill the tank to overflow with clean oil, and install the filler plug.

### **NOTE**

As an aid in preventing varnish buildup, THERMA-SOLVE CONCENTRATE may be added to the compressor oil at a ratio of one quart of THERMA-SOLVE to each ten gallons of oil approximately 40 hours prior to scheduled oil change.

- h. Assemble the oil separator in the reverse of disassembly.

6-18. AIR PRESSURE REGULATOR ASSEMBLY (figure 8-11). Disassemble air pressure regulator assembly in the order of key index numbers assigned on figure 8-11. Assemble in the reverse of disassembly.

6-19. BLOWDOWN VALVE ASSEMBLY (figure 8-12). Disassemble blowdown valve assembly in order of key index numbers assigned on figure 8-12. Assemble in the reverse of disassembly.

### **NOTE**

The blowdown valve (6) is not repairable. Do not disassemble.

6-20. SPEED CONTROL LINKAGE GROUP (figure 8-13). Disassemble the speed control linkage group, to extent necessary, in the order of key index numbers assigned on figure 8-13. Assemble in the reverse of disassembly.

6-21. AIR COMPRESSOR ASSEMBLY AND MOUNTING GROUP (figure 8-14). Disassembly of this group is essentially in the order of key index numbers assigned on figure 8-14, sheets 1 and 2. Details other than index number sequence follow.

- a. Disassemble the air compressor assembly and mounting in order of key index numbers 1 through 97.

#### NOTE

Inner race of bearing (95) will remain on end of rotor shaft (102).

- b. Remove drive end cover, rotor, and shaft combination (index numbers 98, 99, 100, 102, 103, 104, and 105) as a group.

#### NOTE

Do not disassemble this group of parts unless inspection reveals that defective parts need replacing.



Since excessive heat causes softening of metal, any inner bearing race heated for removal from shaft must be discarded and the entire bearing shall be replaced. Never heat bearing inner race unless it is intended to replace entire bearing.

- c. If drive end cover, rotor, and shaft combination requires disassembly, remove bearing inner race (95) from shaft (102) with gear puller or the equivalent. If bearing inner race cannot be removed with gear puller, heat the race evenly with a torch and remove from shaft as quickly as possible.

- d. Remove rotor (98) from shaft (102), remove key (99) from shaft (102) keyway.

#### NOTE

Make note of the drain holes in the rotor (98) blade slots. These holes shall be on the rotation leading edge when installed on rotor shaft.

- e. Pull drive end cover (100) off shaft. Bearing (103) face ring will fall free. Remove bearing (103) outer race from end cover (100) bore. Remove self tapping screws (105) and rotation plate (104) only when replacement is necessary.

- f. Remove bearing (103) inner race from rotor shaft (102) with gear puller or equivalent. If bearing inner race cannot be removed with gear puller, heat the inner race evenly with a torch and remove as quickly as possible. Observe CAUTION preceding step c above.

- g. Disassemble the remainder of the compressor assembly in order of key index numbers (106 through 117).

- h. Assembly is essentially the reverse of disassembly and the steps following. Apply a light film of clean compressor oil on all preformed packing (o-rings) to ease assembly. Assemble components (106 through 116) to stator (117) in reverse order of index numbers.

#### NOTE

If drive end cover, rotor and shaft assembly was disassembled, assemble components of this assembly (98, 99, 100, 102, 103, 104, 105) as follows.

## CAUTION

Do not use a torch or any similar heating methods on bearing inner races. Excessive or uneven heat will cause softening of the metal. To prevent galling the rotor shaft, do not allow an inner race to cool before it is installed.

- i. Heat inner races of bearings (103, 95) by submerging in hot cooking oil and heat to 350°F maximum. While inner race of bearing (103) is still hot, assemble on shaft (102) to position against shaft shoulder. Assemble key (99) in shaft (102) keyway. Assemble rotor (98) on shaft (102) with oil drain holes in the rotor blade slots positioned on rotation leading edge. While inner race of bearing (95) is still hot, assemble on shaft (102) to position against shaft shoulder.
- j. After bearing inner races have cooled to room temperature, assemble bearing (103) face ring and outer race, and the drive end cover (100) on shaft (102).
- k. If rotation plate (104) was removed from end cover (100), assemble with screws (105).
- l. Assemble preformed packing (101) on drive end of stator (117), carefully slide drive end cover, rotor and shaft assembly into stator bore.
- m. Dip rotor blades (97) in clean compressor oil and slide into rotor slots from non-drive end of stator (117).
- n. If pipe plug (96) was removed from end cover (91), install pipe plug. Assemble bearing (95) outer race in end cover (91) bore.
- o. Assemble preformed packing (94) on non-drive end of stator (117). Assemble end cover (91) to stator with seal washers (93) and cap screws (92). Assemble bearing retainer (88) to end of shaft (102) with lock washers (90) and cap screws (89). Assemble gasket (87), bearing cover (84), and secure to end cover with lock washers (86) and cap screws (85). Assemble remainder of rotor-stator assembly (83 through 64).
- p. Rotate the coupling (64) in direction of rotation by hand to ensure free rotation with no binding or rubbing.
- q. To test for air leakage, bolt the rotor-stator assembly to a stand on the stator discharge flange. Use a gasket between flange and stand mating surfaces.
- r. Close off intake opening with a gasket and blank flange.
- s. Install a gasket and flange on the stator oil filter connection. Equip the flange with an air pressure gauge capable of registering at least 125 psi, an on-off line valve, and a suitable "quick change" air hose connection to accommodate test facility air hose.
- t. Connect test air supply to "quick change" connection. Turn line valve on and subject the rotor-stator to an air pressure of 100 psi, plus or minus 10 psi, indicated on air pressure gauge.
- u. Use a soap and water solution applied with a brush on stator, end covers, and all sealing surfaces to test for any leakage. Leakage will be indicated by bubbling of the solution.
- v. Relieve the test air pressure, remove the test fixtures, make repair or replacement necessary to correct any leakage, and retest as outlined above.
- w. After pressure test, assemble the remainder of compressor assembly and mounting in reverse sequence of index numbers (63 through 1).

6-22. INSTRUMENT BOX ASSEMBLY (figure 8-17). Remove hose assemblies and wiring harness leads as necessary for disassembly. Disassemble wire assemblies and instrument box components, to extent necessary, in order of key index numbers assigned on figure 8-17. The individual name plates and screws need not be removed unless replacement is required. Assemble in the reverse of disassembly. Refer to figure 1-6 for wiring diagram.

6-23. DRAWBAR AND FRONT AXLE GROUP (Figures 8-19-8-21). Disassemble the drawbar and front axle group in the order of index numbers assigned on figures 8-19-8-21. Assemble drawbar and front axle group in the reverse of disassembly and adjust front wheel toe-in as follows (with front and rear wheels and tires installed).

- a. Insert thumbtack or pin markers into the front center of the tire tread on each front wheel. Carefully measure the distance between the markers.
- b. Push the vehicle backwards in a straight line until the markers are positioned at the back of the wheel. Again measure the distance between the markers. The measured distance between the markers when at the rear must exceed the distance when markers are at the front by 1/4 inch.
- c. If toe-in is not correct, remove cotter pins (25, figure 8-21) and nuts from ball joint (26). Disengage ball joint from steering knuckles (43, 44).
- d. Using a straight edge along the sides of the front and rear wheels, position the front wheels so that proper toe-in is obtained.
- e. Loosen nuts (29) and turn ball joint (26) in or out on the tie rods (31) until the ball joint end aligns with steering knuckle hole.
- f. Insert ball joint end through steering knuckles (43, 44).
- g. Recheck toe-in and, if correct, tighten nuts (29) and secure ball joint (26) with nut and cotter pins (25).

6-24. HANDBRAKE LEVER, CROSS SHAFT, AND REAR AXLE GROUP (Figures 8-23, 8-24). Disassemble the handbrake lever, cross shaft, and rear axle group in the order of index numbers assigned on figures 8-23 and 8-24 only to the extent necessary. Assemble in the reverse of disassembly.

6-25. BRAKE ASSEMBLY (Figure 8-25). Disassemble the brake assembly to extent necessary in the order of index numbers assigned on figure 8-25. Use brake spring pliers to remove and install springs (2). Assemble brake assembly in the reverse of disassembly. Adjust brakes as follows:



Block front wheels to prevent unit from slipping off jack while adjusting brakes.

- a. Using a jack, raise the trailer so that the wheel to be adjusted is off the ground. Actuate the handbrake lever several times to center shoes on the drums.
- b. Release brakes completely. Make certain that lever is in the off position.
- c. Pry the grommet (1, figure 8-25) from the adjusting hole in the brake backing plate (21).
- d. Insert a screwdriver through the adjusting hole so that the end of the blade engages the star wheel on the adjusting screw (11). Rotate the trailer wheel, turn the adjusting screw (11) tightening the brake shoes against the brake drum until the wheel will not turn.

- e. Rotate the adjusting screw in the opposite direction just enough to fully release the brake, with no brake lining drag when wheel is rotated.
- f. Remove screwdriver; install grommet (1), lower trailer, and move jack to the other side of trailer.
- g. Adjust brake on the other wheel in the same manner.
- h. To adjust handbrake lever, turn the adjusting knob on the end of the lever (6, figure 8-23) clockwise to increase the force applied to the brakes by the connecting linkage.
- i. If excessive force is required to apply brakes, turn the lever adjusting knob counterclockwise until lever can be moved to the "on" position with normal hand force.
- j. If handbrake lever cannot be adjusted in the above manner, it may be necessary to adjust the connecting linkage. To make this adjustment, turn the adjusting knob on the handbrake lever fully counterclockwise; then, turn the knob four or five turns clockwise.
- k. Remove cotter pin (2, figure 8-23) and yoke pin (3). Loosen nut (5) and turn rod yoke (4) farther onto the rod (1) to shorten the effective length of the rod.
- l. Connect the yoke (4, figure 8-23) to the cross shaft lever and install yoke pin (3) and cotter pin (2). Adjust handbrake lever as described in steps h and i above.

6-26. HYDRAULIC BRAKE LINES AND FITTINGS (Figure 8-22). Disassemble the hydraulic brake lines and fittings, to extent necessary, in order of index numbers assigned on figure 8-22. Assemble in the reverse of disassembly. Adjust the hydraulic brakes as follows:

- a. Remove filler cap (12, figure 8-20) and fill surge brake actuator master cylinder with clean automotive brake fluid to the indicator below the filler opening. Install the filler cap.
- b. To bleed the hydraulic system, use a wooden or metal bar approximately 4 feet long to serve as a lever to manually operate surge brake actuator mechanism. Place the bar through the lunette eye. Use a loop of the safety chain as a fulcrum about 8 inches below the eye.
- c. Remove bleeder plug (29, figure 8-20). Allow fluid to fill the chamber completely and install and tighten bleeder plug.
- d. Purge one wheel cylinder at a time. Connect a bleeder hose (transparent tubing is preferable) to wheel cylinder bleeder screw. Using a clean jar or can of fluid, submerge free end of bleed line in the fluid. Loosen wheel cylinder bleeder screw and bleed until emerging fluid is free of air bubbles. Tighten wheel cylinder bleeder screw, remove bleeder line, and purge the other wheel cylinder in like manner.
- e. After both wheel cylinders are bled, loosen bleeder plug on surge brake actuator master cylinder to check that no air is trapped in the accumulator. When fluid is free of air bubbles, tighten the bleeder plug.

#### NOTE

Be careful not to pump master cylinder reservoir empty or air will be introduced into the system. Brakes will not function properly unless all air is removed from system.

- f. When system is completely bled, apply pressure to surge brake actuator and check for leaks. Check and fill actuator master cylinder with fluid, as necessary.

6-27. FUEL TANK MOUNTING AND MAIN FRAME GROUP (Figure 8-26). Disassemble the fuel tanks, mounting, and main frame group, to extent necessary, in the order of index numbers assigned on figure 8-26. Assemble in the reverse of disassembly.



## SECTION VII TESTING-INSPECTION

**7-1. GENERAL.** This section contains component testing and other specific inspection not covered in section VI. Dimensional limits and torque data are found in tables 6-3 and 6-4. Specific test or inspection data are referenced to these tables or detailed in the following paragraphs. Table 6-1 should also be referenced for Inspection, Repair, or Replacement.

### NOTE

Figure numbers referenced throughout this section will be found in Section VIII, Illustrated Parts Breakdown, unless otherwise specified.

### 7-2. TESTING-INSPECTION.

**7-3. ROTOR-STATOR ASSEMBLY LEAKAGE TEST.** Test the compressor rotor-stator assembly after overhaul and prior to assembly of complete compressor as follows. The compressor rotor-stator assembly consists of items 64 through 117, figure 8-14.

- a. Rotate the coupling by hand in the direction of rotation to ensure free rotation with no binding or rubbing.
- b. Bolt the rotor-stator assembly to a stand or test bench on the stator discharge flange. Use a gasket between the flange and stand mating surfaces.
- c. Close off intake opening with a gasket and blank flange.
- d. Install a gasket and flange on the stator oil filter connection. Equip the flange with an air pressure gauge capable of registering at least 125 psi, an on-off type line valve, and a suitable "quick-change" air hose connection to accommodate the test facility air hose.
- e. Connect test air supply hose to "quick-change" connection. Turn line valve to "on" position and subject the rotor-stator assembly to an air pressure of 100 psi,  $\pm$  10 psi, indicated on air pressure gauge.
- f. Use a soap and water solution applied with a brush on stator, end covers, and all sealing surfaces to test for any leakage. Leakage will be indicated by bubbling of the solution.
- g. Relieve the test air pressure, remove the test fixtures, make any repairs or replacement necessary to correct any leakage. Retest as outlined above.
- h. After pressure test of rotor-stator assembly, complete assembly of compressor.

**7-4. DRIVE BELT TENSION ADJUSTMENT.** Refer to figure 7-1 for drive belt tension adjustment.

**7-5. SPEED CONTROL LINKAGE ADJUSTMENT.** Refer to paragraph 5-3 and figure 5-1 of this manual for speed control linkage adjustment.

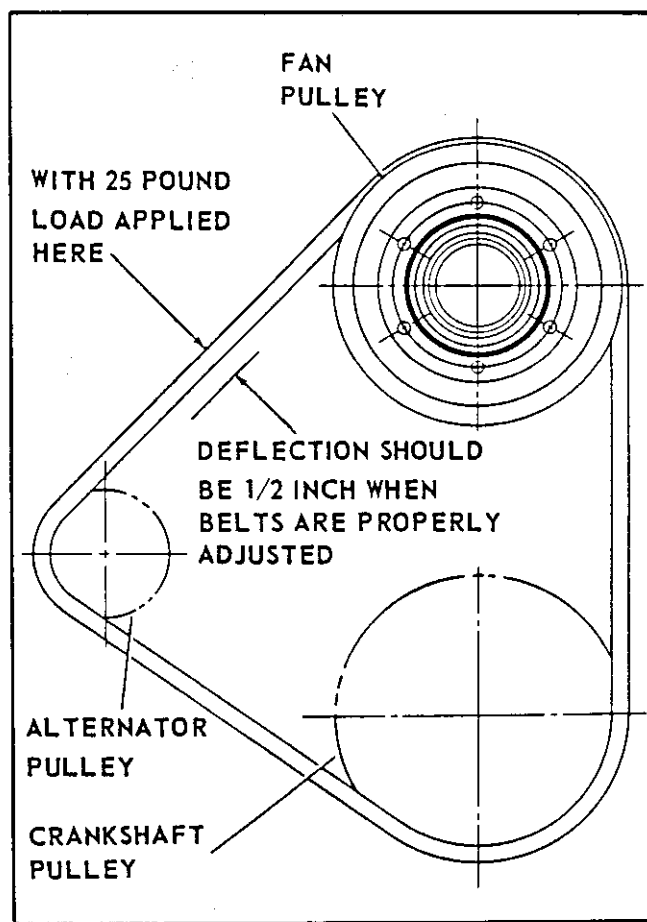


Figure 7-1. Drive belt adjustment



7-6. AIR PRESSURE REGULATOR ADJUSTMENT. Refer to paragraph 5-4 and figure 5-2 of this manual for air pressure regulator adjustment.

7-7. BRAKE DRUM TURNING. When inspection reveals scoring and scratches in brake shoe contact bore of brake drum, the drum may be machined in the following manner.

#### NOTE

Bearings and seals shall be removed from hub when turning brake drum.

- a. Mount the brake drum on a lathe registering with hub bearing bores so that drum bore will be turned concentric with hub bores.
- b. Turn the drum bore removing just enough material to remove score and scratch marks and to make drum bore concentric with hub bores.
- c. When drum bore exceeds 12.090 inches diameter, replace the drum.

7-8. FINAL ASSEMBLY-AIR PRESSURE TEST. After all air end components have been assembled, perform an air pressure test to determine if there are any leaks as follows.

- a. Close all discharge air service valves.
- b. Remove the oil filler plug, packing, and adapter from the oil separator assembly. Install a 1-1/2 NPT to 1/4 NPT reducing bushing in the oil filler elbow.
- c. Install a male half of a "quick change" air hose connection in the reducing bushing installed above.
- d. Connect an air supply hose line to the "quick-change" connection and subject the components to an air pressure of 100 psi.
- e. Check all tubing, piping, hoses, and fittings in the air end system at their joints or connections. Use a soap and water solution applied with a brush to check for leaks. Leaks will be indicated by bubbling of the solution.
- f. Repair any leaks found, release air pressure, remove test items installed, and install oil filler adapter, packing, and filler plug removed in step b above.

7-9. UNIT RUN-IN. After overhaul, the unit shall be run-in for a period of four hours to allow for break-in of engine and compressor and to repair any leaks or malfunctions of the unit. To perform this run-in, follow the steps below.

- a. Select a sight as near level as possible.

#### NOTE

Out-of-level should not exceed 15 degrees in any direction during operation of this equipment.

- b. Set the parking brakes.
- c. Check engine coolant level in radiator. Proper level is 2 inches below filler neck.
- d. Fill the fuel tanks.
- e. Check engine oil level and fill as necessary.

- f. Check compressor oil separator oil level and fill to overflow, as necessary.
- g. Check and adjust drive belt tension (figure 7-1).
- h. Check level of battery electrolyte and fill as necessary. Correct level is 3/8 inch above plates. Check battery cables for tightness on terminal.
- i. Start the unit as outlined in paragraph 4-33 of this manual. Adjust the speed control linkage in accordance with paragraph 5-3 and figure 5-1. As necessary, adjust air pressure regulator in accordance with paragraph 5-4 and figure 5-2.
- j. Check readings of all gauges. Normal operating condition readings are listed in paragraph 4-33.1.
- k. After run-in period, stop the unit in accordance with paragraph 4-34.

**7-10. TROUBLESHOOTING.** During unit run-in period, and during operation, troubles that may be encountered, their probable causes, and possible remedies are listed in table 5-3.



## SECTION VIII

### ILLUSTRATED PARTS BREAKDOWN

**8-1. INTRODUCTION.** This Illustrated Parts Breakdown covers the major components and detail parts of the 600 RPDQ, Trailer Mounted, Diesel Engine Driven, 750CFM, 100 PSI, Rotary Air Compressor manufactured by Davey Compressor Company, Cincinnati, Ohio 45242.

8-2. Abbreviations and symbols used in the following parts lists are in accordance with Military Standard, MIL-STD-12, or are defined below.

- (AP) - This abbreviation, found in Description column, indicates the part is an "attaching part" for the next higher assembly or component.
- \* - This symbol, found in the Part Number column, indicates the part is a component of a kit. A footnote at the bottom of the parts list page will indicate the kit number where part may be found.
- † - This symbol, found in the Part Number column, also indicates the part is a component of a kit. A footnote at the bottom of the parts list page will indicate the kit number where part may be found.

**8-3. MAINTENANCE PARTS LISTS.** The maintenance parts lists consists of illustrations and related parts lists. Each illustration has been assigned a figure number which appears on the first line of each parts list page applicable to that figure. This figure number is not repeated beyond the first line entry. Index numbers are assigned to each part illustrated. The index number appears in the Figure & Index No. column. Parts not illustrated, such as hidden or standard hardware type items, are listed in the Maintenance Parts List but do not have index numbers assigned.

**8-4. PART NUMBER COLUMN.** The Part Number column lists the true manufacturer's part number. When a vendor item part number appears in this column, a manufacturer's five digit code appears in the Description column. A listing of these codes appears in a later paragraph. Also, when the part number listed is a vendor's number, the Davey part number assigned to that item will appear in the Description column. The abbreviation COML in this column indicates a "Commercial" off-the-shelf item that should be ordered by the full description appearing in the Description column. The words NO NUMBER indicates that no part number is assigned to that line item. This entry is usually assigned to a group of related parts that is not considered as an assembly and should not be purchased as such. Repairable items for this type of entry appear either immediately below the NO NUMBER entry or on a subsequent parts list. Part numbers in this column, other than the above described conditions, are the Davey Compressor Co. assigned numbers. These entries do not reflect a five digit manufacturer's code in the Description column.

**8-5. DESCRIPTION COLUMN.** The Description column contains the identifying noun description of a part followed by necessary adjectives and further description of the part, such as size, etc. Other entries in this column are the abbreviation (AP) to indicate an "attaching part", five digit manufacturer's code (see para 8-4), the assigned Davey part number (see para 8-4), and references to either the next higher assembly (NHA) or another figure for details.

**8-6. UNITS PER ASSY COLUMN.** The Units Per Assembly column lists the quantity of parts used at that location. This number; therefore, is not necessarily the total number of parts used in the end item. The abbreviation REF indicates a reference item that is called out elsewhere in the Maintenance Parts List. The abbreviation AR indicates the part is used "as required."

**8-7. USABLE ON CODE COLUMN.** Part variations between different models are indicated by letter symbols placed in this column. When parts are used on all models, the column is left blank. Only one model is covered by this publication; therefore the column is left blank.

**8-8. MANUFACTURERS' CODES.** The five digit Manufacturer's Code is used to identify the manufacturer of a vendor item used in this equipment. The code appears in parentheses in the Description column following the description of the part involved. Applicable codes are listed below. The prime contractor's code is also listed below but not used in the Description column. The absence of a manufacturer's code in the Description column indicates that the part listed is a prime manufacturer's part or a commercial off-the-shelf item. The following codes are in accordance with Federal Supply Code For Manufacturers Cataloging Handbook H4-1 and H4-2.

CODE	MANUFACTURER'S NAME AND ADDRESS	CODE	MANUFACTURER'S NAME AND ADDRESS
00736	Filter Products Div. of North American Rockwell Corp. Air-Maze Plant 25000 Miles Road Cleveland, Ohio 44128	16004	Davey Compressor Co. 11060 Kenwood Road Cincinnati, OH 45242
01428	Superior Ball Joint Co. Div. of Tuthill Pump Co. P.O. Box 227 1202 S. Quality Dr. New Haven, Indiana 46774	17284	Mercury Metal Products 1201 South Mercury Drive Schaumburg, IL 60172
01930	Amerock Corp. 4000 Auburn St. Rockford, Illinois 61103	18265	Donaldson Co., Inc. 1400 West 94th St. Minneapolis, MN 55431
03479	Murphy, Frank W., Mfg. Inc. P.O. Box 45248 Tulsa, Oklahoma 74145	19728	Prestolite Co., The Division of Eltra Corp. P.O. Box 931 511 Hamilton St. Toledo, Ohio 43601
08484	Breeze Corporations Inc. 700 Liberty Ave. Union, New Jersey 07083	22938	Prototype Development, Inc. 7750 Hub Parkway Cleveland, OH 44125
09393	Rochester Gauges Inc. of Texas P.O. Box 20180 Dallas, Texas 75220	24144	Great Lakes Diesel Co. 5370 West 130th St. Cleveland, OH 44142
09527	Faria, Thomas G., Co. Faria Road Uncasville, CT 06382	24161	Gates Rubber Co. 999 South Broadway Denver, Colorado 80217
11083	Caterpillar Tractor Co. 100 N. Adams Peoria, Illinois 61602	34494	Kunkle Valve Co. 121 S. Clinton Fort Wayne, IN 46802
14892	Bendix Corp., The Brake and Steering Div. 410 W. Bendix Drive South Bend, Ind. 46619	51600	Rollway Bearing Co., Inc. 7622 Morgan Rd. Syracuse, NY 13088
15605	Cutler-Hammer Inc. 4201 N. 27th St. Milwaukee, Wis. 53216	56878	Standard Pressed Steel Co. Box 608 Benson East Jenkintown, PA 19046
		57733	Stewart-Warner Corp. 1826 Diversey Parkway Chicago, IL 60614

CODE	MANUFACTURER'S NAME AND ADDRESS	CODE	MANUFACTURER'S NAME AND ADDRESS
60038	Timken Roller Bearing Co. 1835 Dueber Ave. S.W. Canton, OH 44706	79136	Waldes Kohinoor Inc. 47-16 Anstel Place Long Island City, NY 11101
71177	Buckeye Forge Div. Gulf and Western Industrial Products Co. 9217 Miles Ave. Cleveland, OH 44105	79470	Weatherhead Co., The 300 East 131st St. Cleveland, OH 44108
71724	Crane Packing Co. 6400 Oakton St. Morton Grove, IL 60053	80753	Griffin Lamp Co. Highway 61 South Shelby, Mississippi 38774
72219	Conbraco Industries, Inc. 51 E. Matthews, P.O. Box 247 Matthews, NC 28105	81860	Barry Div. of Barry Wright Corp. 700 Pleasant St. Watertown, Mass. 02172
74400	Hobbs Division Stewart-Warner Corp. Yale Blvd. and Ash St. Springfield, IL 62705	84483	KSM Welding Systems Div. A Div. of Omark Industries Inc. 301 New Albany Road Moorestown, NJ 08057
75272	Kickhaefer Mfg. Co. 1964 Wisconsin Ave. Grafton, WI 53024	86579	Precision Rubber Products Corp. 3110 Oakridge Drive Dayton, OH 45417
77060	Packard Electric Division of General Motors Corp. 408 Dana St. N.E. Warren, OH 44481	87930	Tower Mfg. Corp. 158 Pine St. Providence, RI 02903
78912	Garlock Inc., Plastics Div. 602 N. 10th St. Camden, NJ 08101	92863	Marvel Engineering Co. 7227 North Hamlin Ave. Chicago, IL 60645
		93072	Toledo Stamping and Mfg. Co. 99 Fearing Blvd., P.O. Box 596 Toledo, OH 43601

**8-9. ENGINE COMPONENTS.** Refer to Caterpillar engine manuals, Operation Guide, Parts Book, and Service Manual, supplied separately, for all engine data. Following is a listing of engine groups applicable to arrangement used for this unit application.

**APPLICABLE ENGINE GROUPS  
MODEL 3306T INDUSTRIAL ENGINE  
BASIC ENGINE ARRANGEMENT  
7N3386  
(Davey Part Number 65128)**

Reference Group No.	Description	Cat Parts Book Page No.
3N6986	Alternator Group .....	303
7N3386	Basic Engine Arrangement .....	18, 19
6N9958	Electric Shut-Off Group .....	280
3N5870	Exhaust Elbow Adapter Group .....	136
5L7661	Exhaust Elbow Group .....	137
3N5658	Fan Adapter Group .....	69
3N7210	Fan Drive Group .....	66
3N5626	Fan Pulley Group .....	63
7N3496	Flywheel Group (Modified per Davey Dwg 81319) .....	74
8N1963	Front Support Fastener Group .....	69
3N3392	Fumes Disposal Group .....	90
6N1058	Glow Plug Group .....	286
6N983	Glow Plug Mounting Group .....	287
1N5331	Governor Control Group .....	225
3N3271	Housing and Regulator Group .....	115
6N2554	Manual Governor Shut-Off Group .....	230
6N6656	Service Meter Group .....	320
7N6505	Starting Motor Group .....	246
4N1402	Tachometer Drive Group .....	323
7N950	Water Separator Group .....	241

**APPLICABLE ENGINE GROUPS  
MODEL 3306T INDUSTRIAL ENGINE  
BASIC ENGINE ARRANGEMENT**

7N7775

(Davey Part Number 65128)

Reference Group No.	Description	Cat Parts Book Page No.
3N6986	Alternator Group .....	303
7N7775	Basic Engine Arrangement .....	32,33
6N9958	Electric Shut-Off Group .....	280
3N5870	Exhaust Elbow Adapter Group .....	136
5L7661	Exhaust Elbow Group .....	137
3N5658	Fan Adapter Group .....	69
3N7210	Fan Drive Group .....	66
3N5626	Fan Pulley Group .....	63
7N3496	Flywheel Group (Modified per Davey Dwg 81319) .....	74
8N1963	Front Support Fastener Group .....	69
3N3392	Fumes Disposal Group .....	90
6N1058	Glow Plug Group .....	286
6N983	Glow Plug Mounting Group .....	287
1N5331	Governor Control Group .....	225
3N3271	Housing and Regulator Group .....	115
6N2554	Manual Governor Shut-Off Group .....	230
6N6656	Service Meter Group .....	320
7N6505	Starting Motor Group .....	246
4N1402	Tachometer Drive Group .....	323
7N950	Water Separator Group .....	241





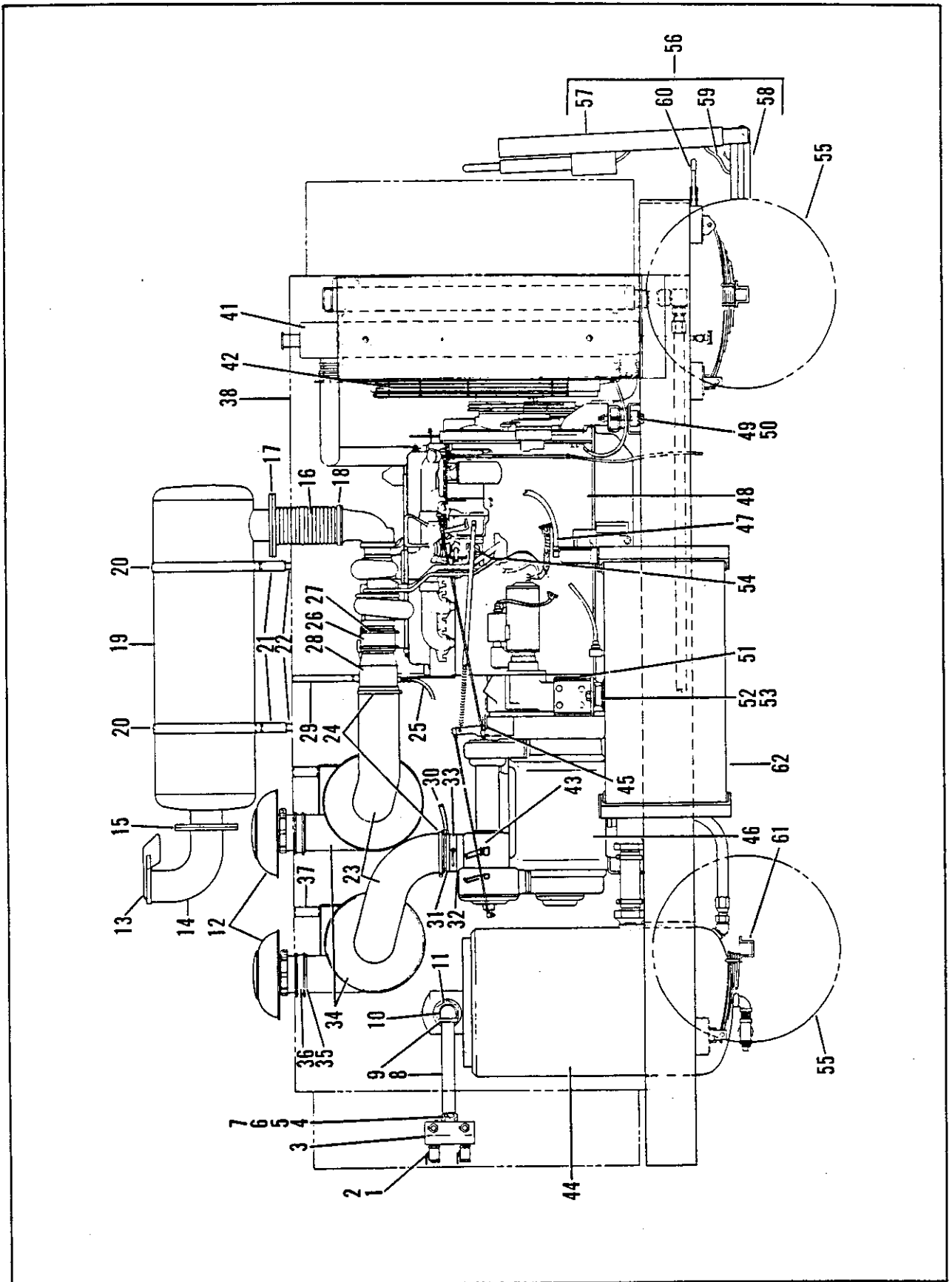


Figure 8-1. Rotary compressor, Model 3M750 RPDQ (sheet 1 of 2)

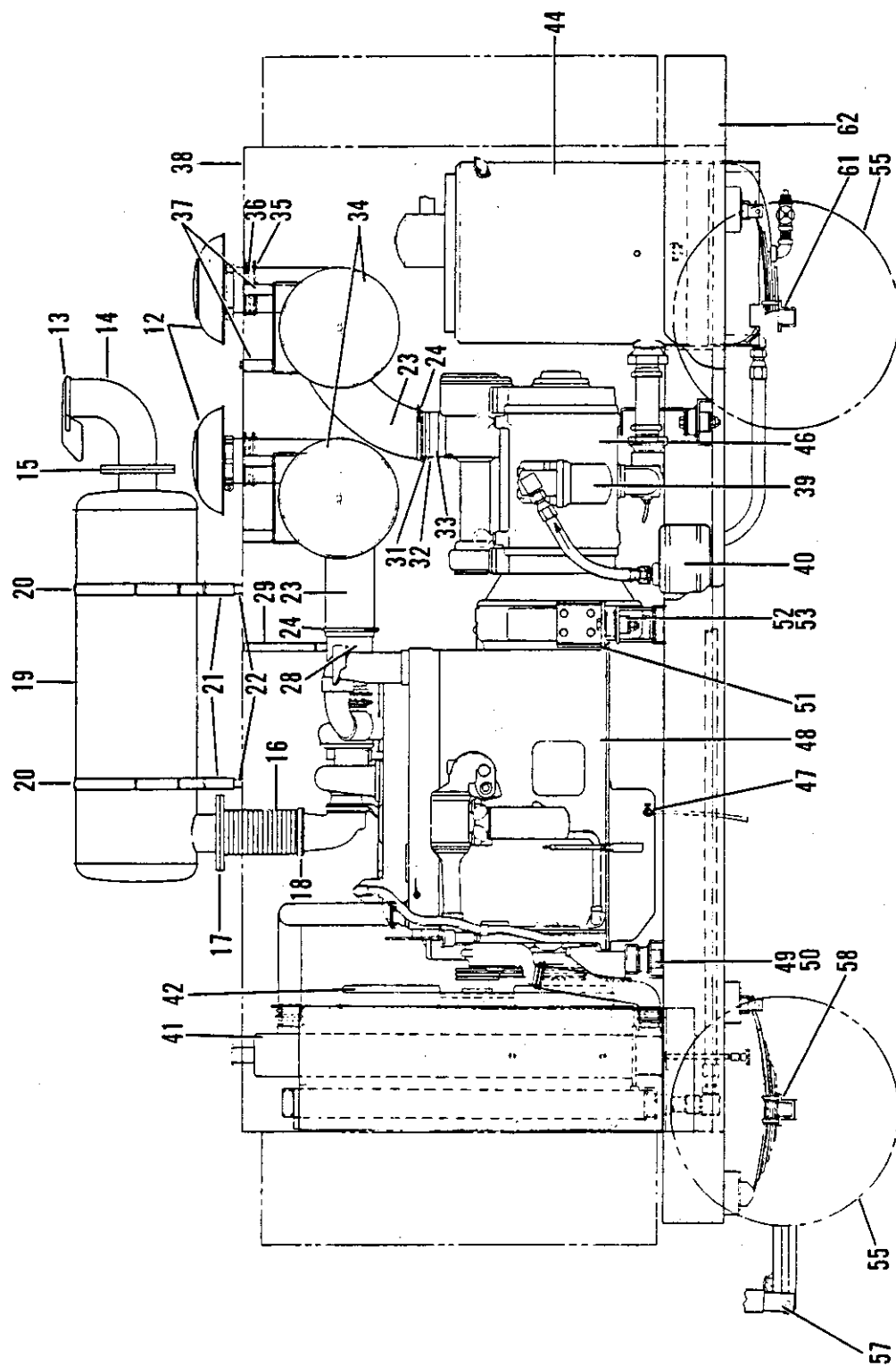


Figure 8-1. Rotary compressor, Model 3M750 RPDQ (sheet 2 of 2)

# MAINTENANCE PARTS LISTS

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		1 2 3 4 5 6 7		
8-1-	80505	COMPRESSOR, Rotary, diesel engine driven, four wheel trailer mounted, . 750 CFM, 100 PSI, Model 3M750 RPDQ	1	
-1	VM-75	. VALVE ASSEMBLY, Plug (87373) (16004 PN 63997) . . . . .	4	
-2	Deleted			
-3	60825	. MANIFOLD, Air, service valve . . . . .	1	
-4	50181	. VALVE, Globe (79911) (Davey 43132) . . . . .	2	
-5	219813	. NIPPLE, Pipe, close, 1-1/2 NPT . . . . .	3	
-6	179470	. CROSS, Pipe, 1-1/2 NPT . . . . .	1	
-7	Deleted			
-8	67740	. NIPPLE, Pipe, 1-1/2 NPT x 16-1/2 in. lg . . . . .	1	
-9	179454	. ELBOW, Pipe, 90°, 1-1/2 NPT . . . . .	1	
-10	67738	. NIPPLE, Pipe, 1-1/2 NPT x 14 in. lg . . . . .	1	
-11	67758	. BUSHING, Reducing, 3 x 1-1/2 NPT . . . . .	1	
-12	GAHOO-0164	. CAP, Air cleaner (18265) (Davey 61430) . . . . .	2	
-13	FB-0046	. CAP, Rain, muffler (17284) (Davey 61949) . . . . .	1	
-14	81821	. ELBOW, Exhaust muffler . . . . .	1	
	220086	. NUT, Hex, 3/4-10 NC (AP) . . . . .	8	
	131046	. WASHER, Lock split, 3/4 in. (AP) . . . . .	8	
	428775	. SCREW, Cap, hex hd, 3/4-10NC x 2-1/2 in. lg (AP) . . . . .	8	
-15	81919	. GASKET, Muffler . . . . .	1	
-16	81820	. BELLOWS, Exhaust . . . . .	1	
	220086	. NUT, Hex, 3/4-10 NC (AP) . . . . .	8	
	131046	. WASHER, Lock, split, 3/4 in. (AP) . . . . .	8	
	428775	. SCREW, Cap, hex hd, 3/4-10 NC x 2-1/2 in. lg (AP) . . . . .	8	
-17	81919	. GASKET, Muffler . . . . .	1	
	124589	. NUT, Hex, 5/8-11NC (AP) . . . . .	4	
	121574	. WASHER, Lock, split, 5/8 in. (AP) . . . . .	4	
	428691	. SCREW, Cap, hex hd, 5/8-11 NC x 2 in. lg (AP) . . . . .	4	
-18	81145	. GASKET, Engine exhaust . . . . .	1	
-19	81819	. MUFFLER, Exhaust . . . . .	1	
	120233	. SCREW, Cap, hex hd, 3/8 - 16 NC x 1 in. lg (AP) . . . . .	4	
	120382	. WASHER, Lock, split, 3/8 in. (AP) . . . . .	4	
	120394	. WASHER, Flat, 3/8 in. (AP) . . . . .	4	
-20	62814	. BAND, Muffler . . . . .	2	
	443335	. LOCKNUT, Hex, 3/8-16 NC (AP) . . . . .	2	
	122145	. SCREW, Cap, hex hd, 3/8 - 16 NC x 1-1/4 in. lg (AP) . . . . .	2	
	82651	. STRAP, Muffler mounting (AP) . . . . .	2	
-21	81868	. BRACKET, Muffler support . . . . .	2	
	443333	. LOCKNUT, Hex, 5/16 - 18 NC (AP) . . . . .	4	
	120393	. WASHER, Flat, 5/16 in. (AP) . . . . .	4	
-22	81694	. VIBRATION ISOLATOR, Muffler support bracket . . . . .	4	
	120376	. NUT, Hex, 5/16 - 18 NC (AP) . . . . .	4	
	120214	. WASHER, Lock, split, 5/16 in. (AP) . . . . .	4	
-23	80963	. HOSE, Air cleaner, 6 in. ID x 33 in. lg . . . . .	2	
-24	M96H	. CLAMP, Hose (08484) (AP) (Davey 38361) . . . . .	4	
-25	44468	. HOSE ASSEMBLY, Restriction indicator . . . . .	1	
	B68X5	. CONNECTOR, Male (79470) (Davey 41935) . . . . .	1	
-26	81973	. HOSE, Engine intake, 5 in. ID x 6-1/2 in. lg . . . . .	1	
-27	M88H	. CLAMP, Hose (08484) (AP) (Davey 61039) . . . . .	2	
-28	81870	. TRANSITION, Hose . . . . .	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) . . . . .	2	
	9419376	. SCREW, Hex serr wash hd, 1/4-20 NC x 1 in. lg (AP) . . . . .	2	
-29	81918	. STRAP, Mounting, transition (AP) . . . . .	1	
-30	44362	. HOSE ASSEMBLY, Restriction indicator . . . . .	1	
	B68X5	. CONNECTOR, Male (79470) (Davey 41935) . . . . .	1	
-31	61538	. ADAPTER, Compressor intake . . . . .	1	
	122194	. SCREW, Cap, hex hd, 3/8 - 16 NC x 2-1/2 in. lg (AP) . . . . .	4	
	120382	. WASHER, Lock, split, 3/8 in. (AP) . . . . .	4	
-32	49195	. GASKET, Adapter . . . . .	2	
-33	63983	. DAMPER CONTROL ASSY (See figure 8-2) . . . . .	1	

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		1 2 3 4 5 6 7		
8-1-34	CD1623500	AIR CLEANER ASSEMBLY (00736) (Davey 62812) (See figure 8-3) ..	2	
-35	M96H	CLAMP, Hose (08484) (AP) (Davey 38361) .....	4	
-36	80912	HOSE, Air cleaner (AP) .....	2	
	120233	SCREW, Cap, hex hd, 3/8-16 NC x 1 in. lg (AP) .....	8	
	120382	WASHER, Lock, split, 3/8 in. (AP) .....	8	
	120394	WASHER, Flat, 3/8 in. (AP) .....	8	
-37	69078	BRACKET, Band mounting (AP) .....	4	
	120377	NUT, Hex, 3/8 - 16 NC (AP) .....	8	
	120382	WASHER, Lock, split, 3/8 in. (AP) .....	8	
	122145	SCREW, Cap, hex hd, 3/8-16 NC x 1-1/4 in. lg (AP) .....	8	
-38	No Number	HOUSING GROUP (See figure 8-4) .....	1	
-39	No Number	OIL FILTER GROUP, Compressor (see figure 8-5) .....	1	
-40	No Number	THERMAL BYPASS VALVE GROUP (See figure 8-6) .....	1	
-41	No Number	RADIATOR AND COOLER GROUP (See figure 8-8) .....	1	
-42	81857	FAN, Engine cooling .....	1	
	122040	SCREW, Cap, hex hd, 5/16 - 18 NC x 1-1/2 in. lg (AP) .....	6	
	120214	WASHER, Lock, split, 5/16 in. (AP) .....	6	
-43	No Number	AIR LINE SYSTEM (See figure 8-9) .....	1	
-44	No Number	OIL SEPARATOR GROUP (See figure 8-10) .....	1	
	443343	LOCKNUT, Hex, 5/8-11 NC (AP) .....	4	
	428685	SCREW, Cap, hex hd, 5/8 - 11 NC x 1-3/4 in. lg (AP) .....	4	
	131016	WASHER, Flat, 5/8 in. (AP) .....	8	
	82603	INSULATION, Separator tank .....	3	
-45	No Number	SPEED CONTROL LINKAGE GROUP (See figure 8-13) .....	1	
-46	62404	AIR COMPRESSOR ASSEMBLY AND MOUNTING GROUP .....	1	
		(See figure 8-14)		
-47	No Number	FUEL AND OIL LINE SYSTEM (See figure 8-15) .....	1	
-48	69290	ENGINE ASSEMBLY, Caterpillar 3306T, Arrangement 7N9638 .....	1	
	272685	LOCKNUT, Hex, 3/4-10 NC (AP) .....	3	
	428793	SCREW, Cap, hex hd, 3/4 - 10 NC x 4 in. lg (AP) .....	1	
	9431120	SCREW, Cap, hex hd, 3/4-10 NC x 6-1/2 in. lg (AP) .....	2	
	80907	WASHER, Snubbing (AP) .....	2	
-49	80322	ENGINE MOUNT, Front (AP) .....	1	
-50	512-4-N-S	VIBRATION MOUNT (81860) (Davey 80840) (AP) .....	2	
	443339	LOCKNUT, Hex, 1/2 - 13 NC (AP) .....	4	
	122433	SCREW, Cap, hex hd, 1/2 - 13 NC x 1-1/2 in. lg (AP) .....	4	
	120396	WASHER, Flat, 1/2 in. (AP) .....	4	
-51	80326	ENGINE MOUNT, Rear (AP) .....	2	
	428217	SCREW, Cap, hex hd, 5/8 - 11 NC x 1-1/2 in. lg (AP) .....	8	
	121574	WASHER, Lock, split, 5/8 in. (AP) .....	8	
	272685	LOCKNUT, Hex, 3/4 - 10 NC (AP) .....	2	
	433499	SCREW, Cap, hex hd, 3/4 - 10 NC x 5 in. lg (AP) .....	2	
	80907	WASHER, Snubbing (AP) .....	2	
-52	512-4-N-S	VIBRATION MOUNT (81860) (Davey 80840) (AP) .....	2	
-53	80324	BASE, Engine mounting (AP) .....	2	
	443339	LOCKNUT, Hex, 1/2 - 13 NC (AP) .....	8	
	122433	SCREW, Cap, hex hd, 1/2 - 13 NC x 1-1/2 in. lg (AP) .....	8	
	120396	WASHER, Flat, 1/2 in. (AP) .....	10	
-54	61902	CABLE, Drive, tachometer .....	1	
-55	81243	TIRE, Tubeless, H78-15 ST, 6 ply .....	4	
-56	81591	RUNNING GEAR ASSEMBLY, Four wheel (22938 P/N 473) .....	1	
-57	5-3504	DRAWBAR ASSEMBLY (See figure 8-19) (22938) .....	1	
-58	473-2296	FRONT AXLE ASSEMBLY (See figure 8-21) (22938) .....	1	
-59	No Number	HYDRAULIC BRAKE LINES AND FITTINGS (See figure 8-22) ....	1	
-60	473-5906	HANDBRAKE LEVER AND CROSS SHAFT (See figure 8-23) .....	1	
		(22938)		
-61	473-2246	REAR AXLE ASSEMBLY (See figure 8-24) (22938) .....	1	
-62	No Number	FUEL TANK MOUNTING AND FRAME GROUP (See figure 8-26) ....	1	

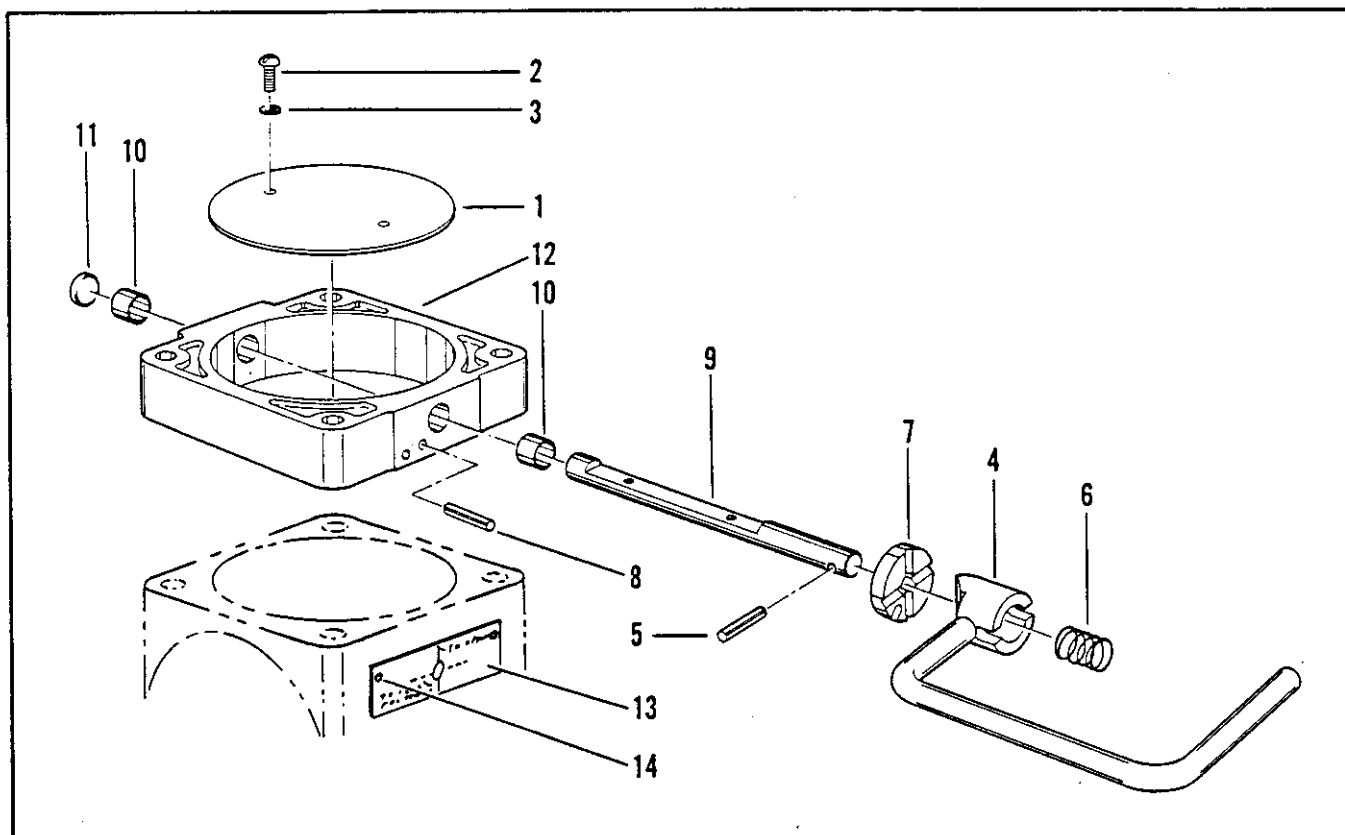


Figure 8-2 Damper control assembly

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
8-2-	63983	CONTROL ASSEMBLY, Damper (see figure 8-1-33 for NHA).....							REF	
-1	62805	. PLATE, Damper .....							1	
-2	132908	. SCREW, Machine, rd hd, no. 10-32 NC x 1/2 in. lg (AP) .....							2	
-3	120217	. WASHER, Lock, split, no. 10 (AP) .....							2	
-4	64736	. HANDLE ASSEMBLY .....							1	
-5	21-S-187-1250	. PIN, Spring (AP) (56878) (Davey 30788) .....							1	
-6	63744	. SPRING .....							1	
-7	63628	. PLATE, Detent .....							1	
-8	21-S-187-1250	. PIN, Spring (56878) (Davey 30788) .....							1	
-9	63742	. SHAFT .....							1	
-10	08DU08	. BUSHING (78912) (Davey 40858) .....							2	
-11	PC-0625	. PLUG, Expansion (75272) (Davey 63739) .....							1	
-12	63740	. BODY.....							1	
-13	64652	. PLATE, Instruction .....							1	
-14	145372	. SCREW, Drive, no. 4 x 1/4 in. lg (AP) .....							2	

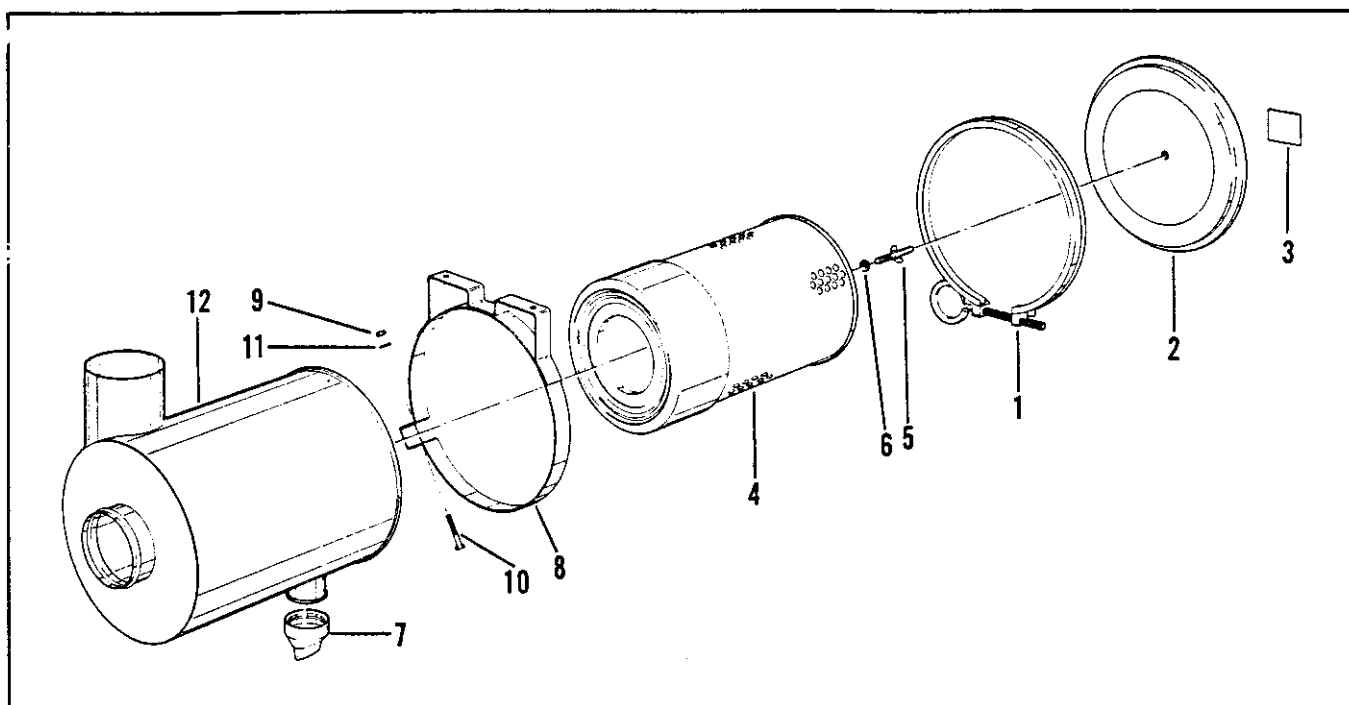


Figure 8-3. Air cleaner assembly

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
8-3-	CD1623500	CLEANER ASSEMBLY, Air (00736) (Davey 62812) ..... (see figure 8-1-34 for NHA)							REF	
-1	CD1626001-311	. CLAMP ASSEMBLY, Cover (00736) .....							1	
-2	CD1623-101	. COVER (00736) .....							1	
-3	A1986802	. DECAL (00736) (Davey 63302) .....							1	
-4	CD1626001-826	. ELEMENT, Filter (00736) (Davey 62813) .....							1	
-5	CD0511-212	. BOLT, Wing (AP) (00736) .....							1	
-6	A19892-56	. WASHER, Seal (AP) (00736) .....							1	
-7	CD0511500-170	. VALVE, Unloader (00736) .....							1	
-8	CD1626001-240	. BRACKET ASSEMBLY, Mounting (00736) (Davey 62814) .....							2	
-9	120377	. NUT, Hex, 3/8-16 NC (AP) .....							1	
-10	122188	. SCREW, Cap, hex hd, 3/8-16 NC x 2-1/4 in. lg (AP) .....							1	
-11	120382	. WASHER, Lock, split, 3/8 in. (AP) .....							1	
-12	CD1623500-156	. BODY, Filter (00736) .....							1	

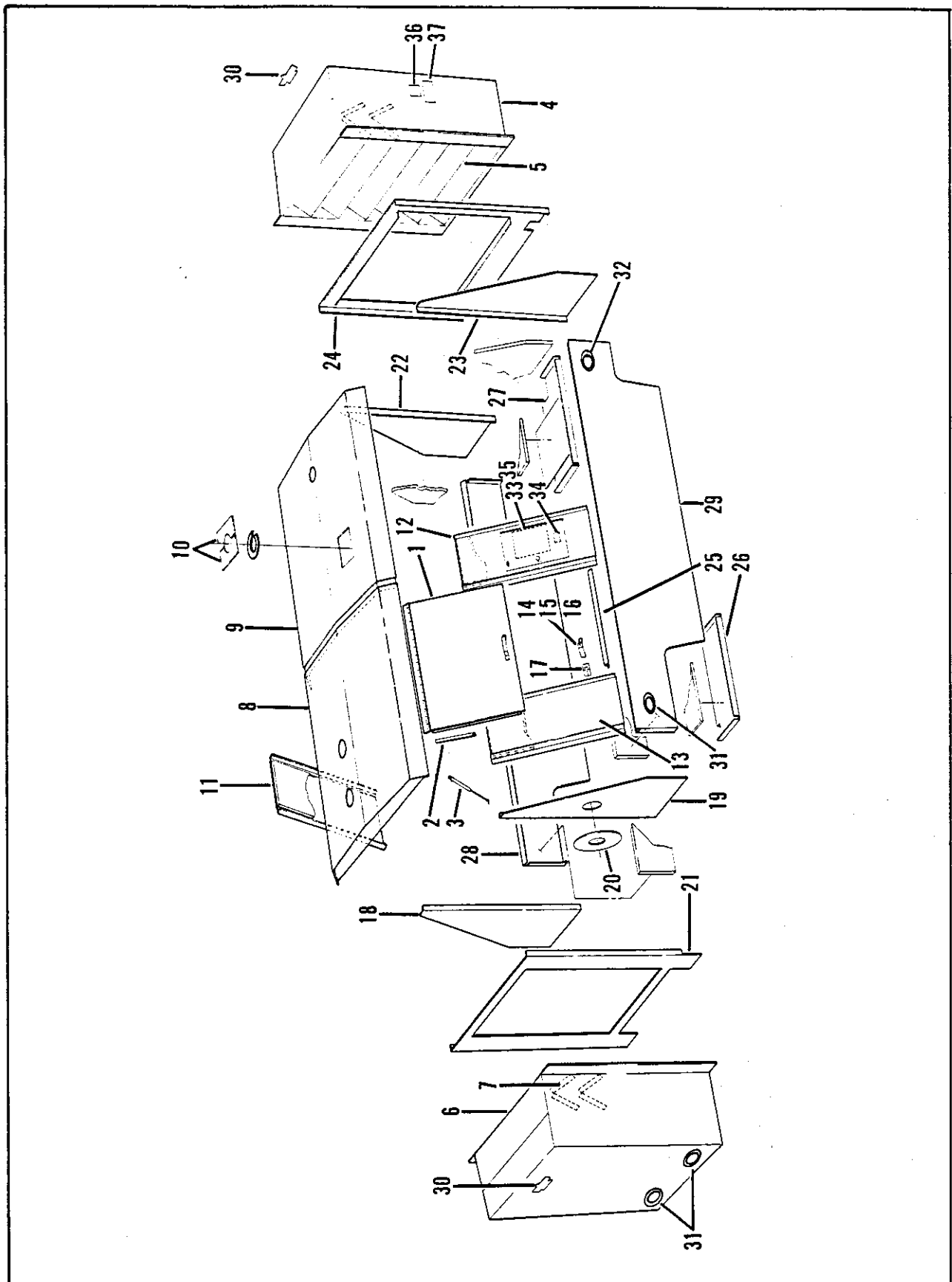


Figure 8-4. Housing group



FIG. & INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON CODE
8-4-	No Number	HOUSING GROUP (See figure 8-1-38 for NHA) .....	REF	
-1	80722	. DOOR, Side .....	4	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	16	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	16	
	82558	. INSULATION, Door .....	4	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	60	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	60	
-2	51210	. GASKET, Door, 119-11/16 in. per door .....	478-3/4 in.	
-3	81456	. SPRING ASSEMBLY, Gas, door .....	8	
	443333	. LOCKNUT, Hex, 5/16 - 18 NC (AP) .....	16	
	81454	. BALL STUD .....	16	
	81453	. SPRING, Gas .....	8	
-4	82567-1	. ENCLOSURE, Baffle, front .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	12	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	12	
	68749-2	. WEATHER STRIP, 146 in. lg .....	1	
-5	82566	. LOUVER, Baffle .....	6	
	273771	. SCREW, Hex serr wash flg 1/4 - 20 NC x 1/2 in. lg (AP) .....	24	
	80075	. NUT, Caged, 1/4 - 20 NC (AP) .....	24	
	82570	. INSULATION, Louver .....	6	
	82572	. INSULATION, Baffle, side .....	2	
	82574	. INSULATION, Baffle, cap .....	2	
	82571	. INSULATION, Baffle, back .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	108	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	108	
-6	82568	. ENCLOSURE, Baffle, rear .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	12	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	12	
	68749-2	. WEATHER STRIP, 146 in. lg .....	1	
-7	82566	. LOUVER, Baffle .....	6	
	273771	. SCREW, Hex serr wash flg, 1/4-20 NC x 1/2 in. lg (AP) .....	24	
	80075	. NUT, Caged, 1/4 - 20 NC (AP) .....	24	
	82570	. INSULATION, Louver .....	6	
	82573	. INSULATION, Baffle, side .....	2	
	82574	. INSULATION, Baffle, cap .....	1	
	82571	. INSULATION, Baffle, back .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	108	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	108	
-8	80720	. ROOF, Separator end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	10	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	10	
	82556	. INSULATION, Roof, separator end .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	41	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	41	
-9	80721	. ROOF, Cooler end .....	1	
	82557	. INSULATION, Roof, cooler end .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	43	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	43	
-10	81785	. COVER PLATE, Exhaust .....	2	
	80476	. SCREW, Self-tapping, no. 10 x 1/2 in. lg (AP) .....	8	
-11	81105	. MULLION, Door .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	4	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	4	
	82554	. INSULATION, Mullion .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	11	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	11	
-12	81781	. MULLION AND CONTROL BOX ASSEMBLY (See figure 8-16) .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	4	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	4	
	82553	. INSULATION, Mullion and control box assembly .....	1	

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
		1 2 3 4 5 6 7		
8-4-13	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	5	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	5	
	80327	. SIDE PANEL .....	4	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	28	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	28	
	82552	. INSULATION, Side panel .....	4	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	44	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	44	
	-14 27327	. EYE, Latch .....	8	
	-15 27329	. SPRING, Latch .....	8	
-16	27328	. BRACKET, Latch .....	8	
	-17 81925	. BRACKET, Eye latch .....	8	
	115295	. NUT, Hex, no. 10 - 32 NF (AP) .....	16	
	120217	. WASHER, Lock, split, no. 10 (AP) .....	16	
	132915	. SCREW, Rd hd, no. 10 - 32 NF x 3/4 in. lg (AP) .....	16	
	120391	. WASHER, Flat, no. 10 (AP) .....	16	
	-18 80316	. END PANEL, Left side, separator end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	6	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	6	
	82551	. INSULATION, End panel .....	1	
-19	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	5	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	5	
	80317	. END PANEL, Right side, separator end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	6	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	6	
	82550	. INSULATION, End panel .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	5	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	5	
	-20 81104	. COVER PLATE, Discharge .....	1	
	80476	. SCREW, Self-tapping, No. 10 x 1/2 in. lg (AP) .....	4	
-21	80328	. END PANEL, Separator end .....	1	
	-22 81117	. END PANEL, Left side, cooler end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	6	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	6	
	82550	. INSULATION, End panel .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	5	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	5	
	-23 81116	. END PANEL, Right side, cooler end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	6	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	6	
-24	82551	. INSULATION, End panel .....	1	
	009-479	. CLIP, Welding pin (84483) (AP) (Davey 80053) .....	5	
	009-131	. PIN, Welding (84483) (AP) (Davey 80052) .....	5	
	-25 80330	. END PANEL, Cooler end .....	1	
	81115	. RAIL, Door .....	4	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	16	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	16	
	-26 81728	. TRAY, Right side, separator end .....	1	
	81729	. TRAY, Left side, separator end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	28	
-27	132277	. SCREW, Flat hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	4	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	24	
	51233	. DAMPENER, Vibration .....	AR	
	-28 81730	. TRAY, Battery, right side (see figure 8-18 for battery mounting group) ..	1	
	81731	. TRAY, Left side, cooler end .....	1	
	9416918	. NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....	28	
	132277	. SCREW, Flat hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	4	
	274825	. SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....	24	
	51233	. DAMPENER, Vibration .....	AR	
	-28 81121	. FENDER, Left side .....	1	

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
8-4-29	81122	.	FENDER, Right side .....						1	
	9416918	.	NUT, Lock, hex serr flg, 1/4 - 20 NC (AP) .....						20	
	274825	.	SCREW, Hex serr wash hd, 1/4 - 20 NC x 3/4 in. lg (AP) .....						20	
	51233	.	DAMPENER, Vibration.....						AR	
-30	DELETED									
-31	81741	.	DATA PLATE, Transportation .....						1	
-32	GFM	.	IDENTIFICATION PLATE .....						1	
-33	81740	.	INSTRUCTION PLATE, Operating.....						1	
	190734	.	LOCKNUT, Hex, no. 4-40 (AP) .....						4	
	68749	.	SCREW, Self-tapping, no. 4-40 x 1/4 in. lg (AP) .....						4	
-34	6N1056	.	DECAL, Heat-Start switch (11083) (Davey 81289) .....						1	

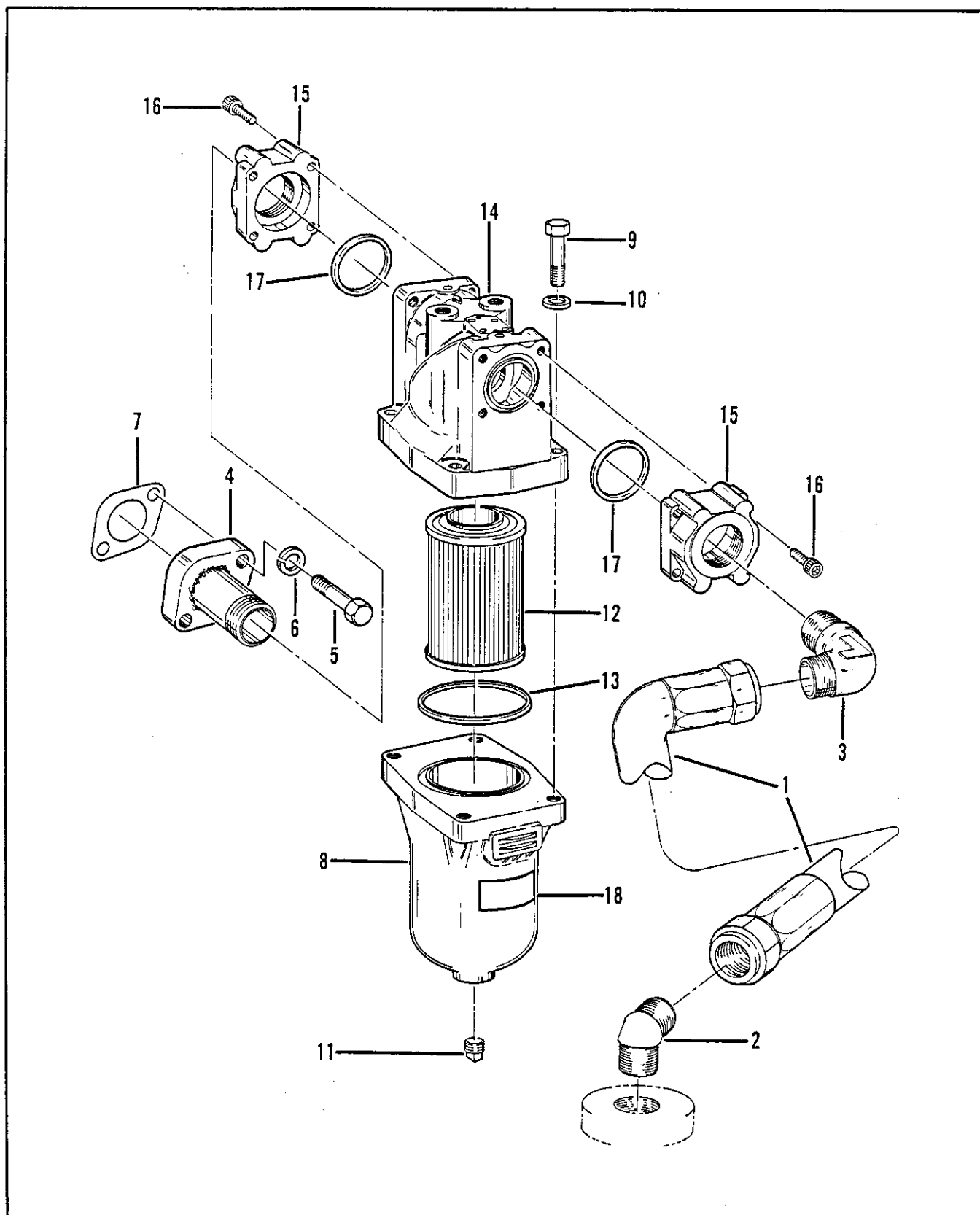


Figure 8-5. Compressor oil filter group