

DAVEY Model 250 RPV

Permanane Rotary Compressor

OPERATION AND MAINTENANCE MANUAL

WITH

PARTS LIST

DAVEY COMPRESSOR COMPANY
11060 KENWOOD ROAD
CINCINNATI, OHIO 45242

CONTRACT DLA700-85-C-8195
MIPR NO.: N0024985RCD233

DAVEY MODEL 19M250RPDQ
COMPRESSOR UNIT ASSEMBLY
NSN4310-00-879-8724

USN REGISTRATION NO.: USN31-07062
MANUAL STOCK NO. 1H-7610-LL- L84-5233

CONTENTS

COMPRESSOR UNIT OPERATION, MAINTENANCE, AND PARTS LIST
ENGINE, OPERATION, MAINTENANCE, PARTS LIST AND ENGINE
ACCESSORIES MAINTENANCE AND PARTS LISTS.

DAVEY

*built to
serve and endure*

THE DAVEY COMPRESSOR CO.

MPL-176-85

11060 KENWOOD ROAD
CINCINNATI, OHIO 45242

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
5-24-89	3615-6	.	.	.	HUB AND DRUM				1	
-90	3201913	.	.	.	BRAKE ASSY LH (14892) (See figure 5-25 for details)				1	
	3201914	.	.	.	BRAKE ASSY RH (14892) (See figure 5-25 for details)				1	
-91	MS51986-12	.	.	.	NUT (AP) (96906)				8	
	MS35338-47	.	.	.	WASHER, Lock (AP) (96906)				8	
-92	411-20010-2	.	.	.	BEAM, Axle				1	



FOREWORD

This manual is designed to provide you, the operator, with sufficient knowledge of the operation, use and maintenance of the Davey portable rotary compressor to realize the full capability of this machine.

It is recommended that all sections of this manual be read carefully, and if any doubt exists about the function of any part of the compressor, that you contact our nearest dealer or representative for clarification.

It is not intended to cover the operation, use and maintenance of the engine in this manual, except in such instances where special equipment has been added to the engine. The engine or equipment supplier's manual should be referred to for detailed instructions.

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE		
					1	2
5-24	No Number	RUNNING GEAR GROUP (See figure 5-1 for NHA)	REF			
-1	91905	WHEEL (34281)	4			
-2	4630-1	NUT, Wheel (22938)	12			
	4912	SCREW, Cap, hex hd, 1/2 - 20	12			
	411-20510	FRONT AXLE ASSEMBLY (22938)	1			
-3	443339	NUT, Lock (AP) 1/2-13	4			
-4	60734	WASHER, Channel (AP) 1/2 in.	4			
-5	122446	SCREW, Cap, hex hd, (AP) 1/2 - 13 x 1-3/4 in. lg	4			
	4-4251	BRACKET ASSEMBLY, Spring, front	2			
-6	4601-33	NUT, Lock (22938)	1			
-7	4901-19	SCREW, Cap hex hd (22938)	1			
-8	4251	BRACKET, Spring	1			
	1-4251	BRACKET ASSEMBLY, Spring, hook end	2			
-9	MS24665-538	PIN, Cotter (96906)	1			
-10	5403-1	PIN, Hinge (22938)	1			
-11	4251	BRACKET, Spring, (22938)	1			
-11A	1-3502	DRAWBAR ASSEMBLY (22938)	1			
-12	MS24665-624	PIN, Cotter (96906)	1			
-13	5416	PIN, Hinge (22938)	1			
	3906-270	TIE ROD ASSEMBLY (22938)	2			
-14	MS24665-285	PIN, Cotter (96906)	2			
-15	4602-1	NUT, Jam, RH (22938)	1			
	4602-2	NUT, Jam, LH (22938)	1			
-16	3950-1	JOINT, Ball, RH (22938)	1			
	3950-2	JOINT, Ball, LH (22938)	1			
-17	3900-233	TUBE, Tie rod (22938)	1			
	3-3854	CENTER ARM ASSEMBLY (22938)	1			
-18	MS24665-623	PIN, Cotter (96906)	1			
-19	5400-5	PIN, Center arm (22938)	1			
-20	4701-3	WASHER, Flat (22938)	1			
-21	3855	LATCH, Drawbar (22938)	1			
-22	MS9047-300	PIN, Roll (96906)	1			
-23	4006	SPRING, Latch (22938)	1			
-24	3854	ARM, Center (22938)	1			
-25	MS14001-1	FITTING, Grease (96906)	6			
-26	MS15003-1	FITTING, Grease (96906)	2			
	13-3615	HUB ASSEMBLY (22938)	2			
-27	6323	CAP, Grease (22938)	1			
-28	MS24665-360	PIN, Cotter (96906) furnished with spindle	1			
-29	4600-1	NUT, Spindle (22938) furnished with spindle	1			
-30	4702-1	WASHER, Spindle (22938)	1			
-31	L44649	CONE, Bearing, outer (60038)	1			
-32	6317	SEAL, Grease (22938)	1			
-33	L68149	CONE, Bearing inner (60038)	1			
-34	L44610	CUP, Bearing outer (60038)	1			
-35	L68111	CUP, Bearing outer (60038)	1			
-36	4603-1	STUD, Hub, wheel (22938)	6			
-37	3615	HUB (22938)	1			
-38	3-3800	SPINDLE AND KNUCKLE ASSY, RH (22938)	1			
	4-3800	SPINDLE AND KNUCKLE ASSY, LH (22938)	1			
-39	MS16562-81	PIN, Roll (96906)	2			
-40	5401	PIN, King (22938)	2			
-41	1-4010-2	SPRING ASSEMBLY (22938)	2			
-42	4601-7	NUT, Hex (AP) (22938)	8			
-43	5100-15	U-BOLT, Spring (22938)	4			
-44	5600-8	PLATE, Spring (22938)	2			
-45	411-205X-1	BEAM, Axle	1			
	411-5901	HANDBRAKE LEVER AND CROSS SHAFT ASSEMBLY	REF			
-46	1-5919	LEVER ASSEMBLY, Brake (22938)	1			
-47	443335	NUT, Lock, 3/8 - 16 NC (AP)	2			

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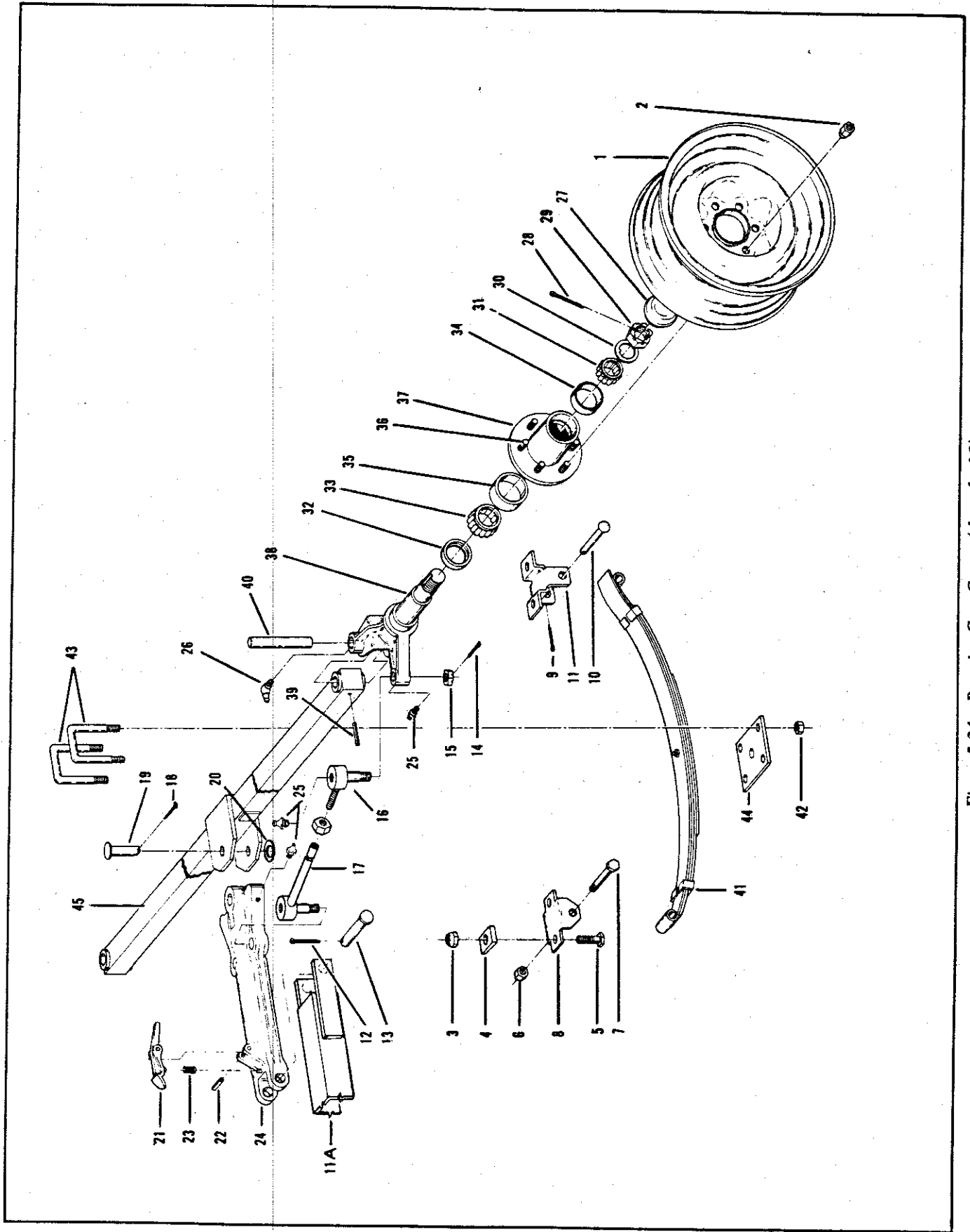


Figure 5-24. Running Gear Group (sheet 1 of 2)



SECTION 1 INTRODUCTION AND DESCRIPTION

1-1. DESCRIPTION.

The Davey Permavane Portable Compressor consists of a rotary type air compressor directly coupled to and driven by a heavy duty industrial type engine. The compressor-prime mover unit assembly is mounted on a rugged, channel section, welded steel frame. The standard running gear is two or four wheel spring mounted, and has pneumatic tire wheels. Tandem axle, steel wheels, or skid mounting are optional. A functionally designed housing with tool box provides weather protection.

Compressor operating components include an oil cooler, air cleaner, combination air receiver-oil separator, oil filter, indicating instruments and regulating devices. Engine accessories include a cooling radiator, fuel supply tank and muffler. A speed control linkage mechanism is provided to regulate engine speed and compressor intake in relation to air demand.

1-2. MAJOR COMPONENTS.

1-3. ROTARY COMPRESSOR ASSEMBLY. The compressor is an oil flooded, sliding vane, rotary type. It is rigidly supported from an adapter which is bolted to the flywheel housing of the engine. A pilot flange insures and maintains proper alignment.

The rotor is mounted on a shaft which is supported at each end by ball bearings. The rotor is en-

closed in a sealed eccentric-bored stator and is located so that it is constantly concentric with a cutaway portion of the stator. The vanes are inserted radially in longitudinal slots in the rotor. Multi-staged cooling oil injection provides cooling, sealing and lubrication during the air compression cycle.

a. AIR CYCLE. (See figure 1-1.) Free air is drawn into the stator through the air cleaner and intake control. The air enters through large ports in the end cover at a point where the vanes are well out of the rotor slots, thus filling the space segments between the vanes with air. In rotation, the vanes are moved radially inward in their slots by the bore wall. The volume between the vanes decreases, thus compressing the trapped air. At the rated point of compression, the discharge ports are reached and the compressed air passes into the discharge chamber. Oil is injected during the above cycle to cool the air, seal all leakage and lubricate all rubbing parts. The discharge chamber is positioned at the bottom of the stator to favor natural oil drainage.

The air is delivered into the receiver-oil separator where three stages of oil separation remove virtually all oil particles from the air before final discharge.

b. OIL CYCLE. (See figure 1-2.) After oil is separated from the compressed air, it accumulates

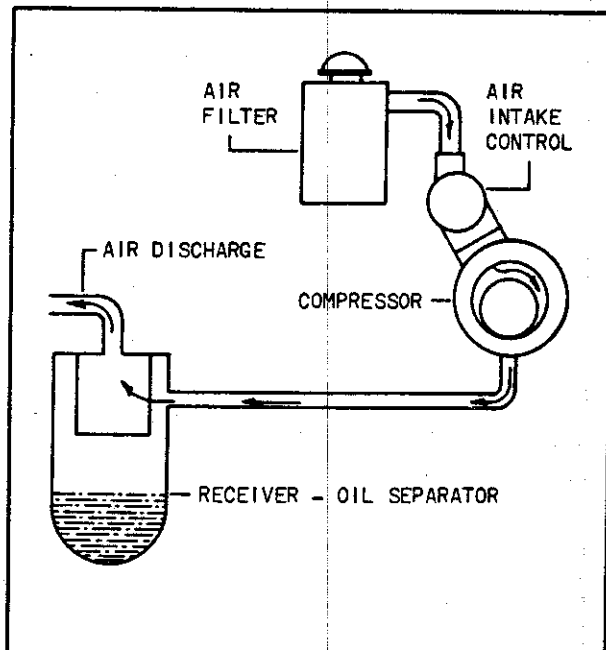


Figure 1-1. Air cycle schematic diagram

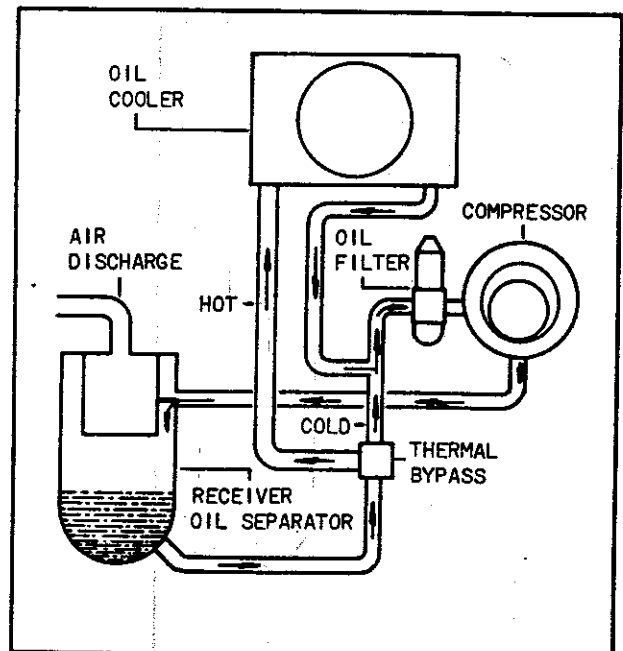


Figure 1-2. Oil cycle schematic diagram

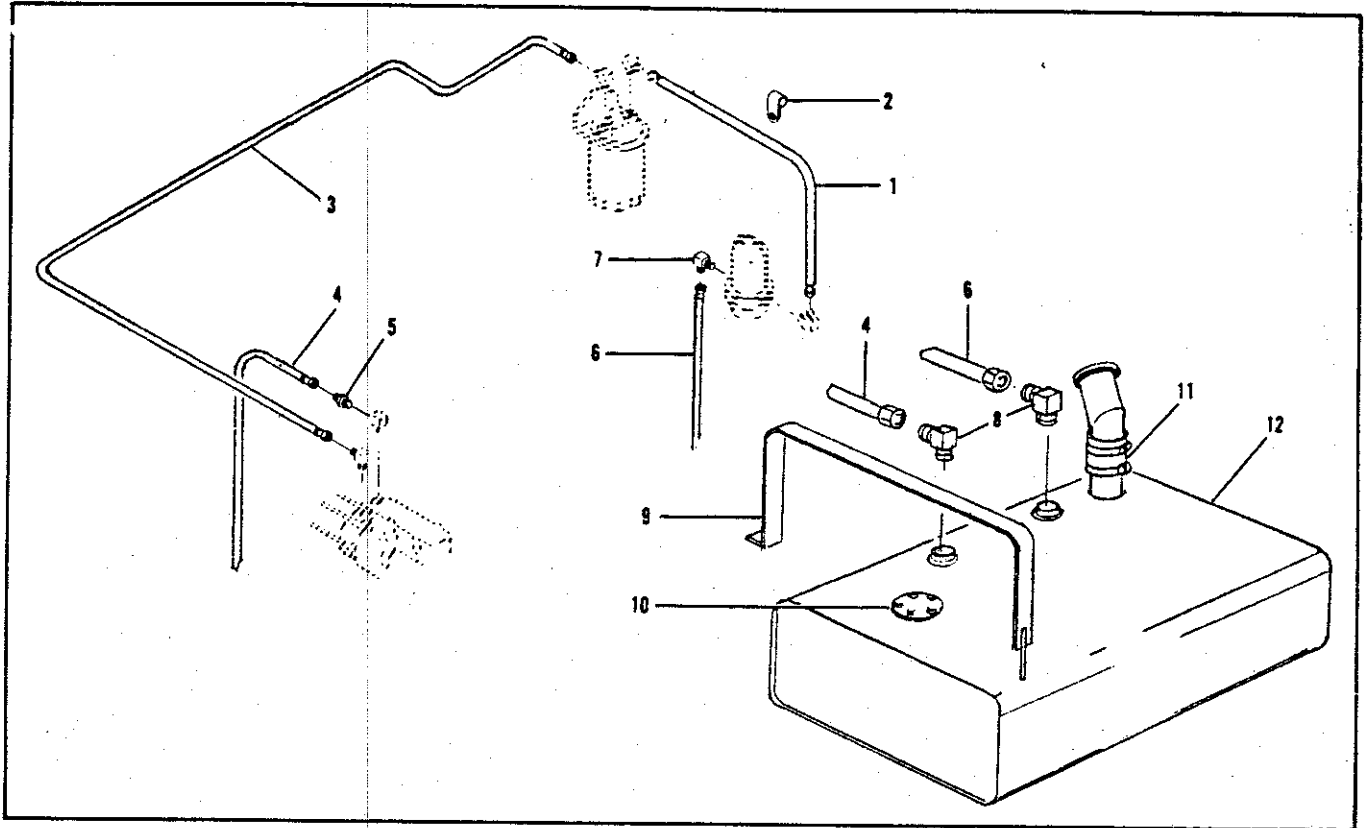


Figure 5-22. Fuel Lines and Tank Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY							USABLE ON CODE	
			1	2	3	4	5	6	7		
5-22		FUEL LINES AND TANK GROUP (See figure 5-1 for NHA).....								REF	
-1	80509	. HOSE ASSEMBLY								1	
-2	23681	. CLAMP, Hose								1	
-3	80508	. HOSE ASSEMBLY								1	
	23681	. CLAMP, Hose								1	
-4	61091	. HOSE ASSEMBLY								1	
-5	40783	. ADAPTER								1	
-6	61081	. HOSE ASSEMBLY								1	
-7	41000	. ELBOW								1	
-8	28890	. ELBOW								2	
-9	48301	. STRAP, Tank mounting								2	
	443339	. NUT, Lock, 1/2 - 13								2	
	120396	. WASHER, Flat, 1/2 in.								2	
	120378	. NUT, Hex, 1/2 - 13								2	
	120384	. WASHER, Lock, 1/2 in.								2	
	122433	. SCREW, Cap hex hd, 1/2 - 13 x 1-1/2 in. lg								2	
-10	44741	. COVER, Gauge flange								1	
	44427	. GASKET, Cover								1	
	132908	. SCREW, Mach, rd hd, 10-32 x 1/2 in. lg								5	
	28150	. WASHER, Lock, No. 10								5	
-11	63188	. HOSE, Filler neck								1	
	46330	. CLAMP, Hose								2	
-12	63607	. TANK, Fuel								1	
	CA-565	. CAP, Fuel tank (18163)								1	
	No Number	. NECK, Filler								1	
	143933	. PLUG, Pipe, 1/4 in.								1	
	14048	. WEBBING, (not shown) 64 in. lg								2	



SECTION 2 OPERATING INSTRUCTIONS

2-1. PREPARATION FOR USE.

This equipment should be located so that it is nearly level on the operating site. The angle of out-of-level operation should not exceed 15 degrees either lengthwise or sidewise. Check engine and compressor oil levels carefully before operating out-of-level. They should be full, but not overfilled. The following procedures should be observed before starting the unit.

a. INSPECTION OF NEW EQUIPMENT.

(1) Check all of the equipment against the packing list. Examine identification plates for positive identification of the equipment. Record the unit and compressor serial numbers page 5-1 for future reference. Include unit model, unit serial number, and compressor model number when ordering spare parts.

(2) Inspect for and tighten any loose nuts or bolts.

(3) Inspect the controls, instruments, and gauges for damage or loose mountings.

(4) If supplied, inspect the air service hoses for kinks and loose connections.

(5) Inspect the electrical wiring for cuts, fraying and loose connections.

(6) Inspect all tubing and piping for loose connections or damage.

(7) Check all accessories for damage and loose mountings.

b. SERVICING NEW EQUIPMENT.

(1) Lubricate the air compressor as indicated by the lubrication chart, figure 2-1. Fill the fuel tank with the recommended grade of fuel and fill the radiator with coolant. (See Engine Manual in Part II.)

(2) Perform the operator's daily before-operation services described in Section 3 of this manual.

(3) Perform the preventive maintenance services as specified in Section 3 of this manual.

2-2. LUBRICATION.

Refer to figure 2-1, "Lubrication Chart", for the manufacturer's recommended lubricants and servicing intervals.

a. ENGINE. Refer to Engine Manual in Part II for initial lubrication procedure.

b. COMPRESSOR. Oil capacity of the compressor is 33 quarts.

(1) Check oil level in the receiver-oil separator by removing the filler plug and visually check level. If oil is low, fill to overflow with oil specified in figure 2-1. Recheck oil level after operating fifteen minutes (with unit stopped).

(2) Run the unit until warm before shutting down to drain oil. Remove filler plug and allow sufficient time for all oil to drain. Drain oil by opening valve at the bottom of the receiver-separator.

NOTE

BE SURE TO CLOSE DRAIN VALVE BEFORE REFILLING.

c. AIR CLEANER. The air cleaner is of the dry, replaceable element type. It is important to service the air cleaner regularly. Excessive wear and poor performance will result if the air cleaner is clogged or allows contamination to enter the engine or compressor. Dirt entering the compressor will eventually settle on the separator element and will produce a high pressure drop across the separator. Refer to maintenance instructions in Section 3 for service procedures and intervals for cleaning the air cleaner.

2-3. OPERATING CONTROLS AND INDICATING INSTRUMENTS (figure 2-2).

a. RECEIVER AIR PRESSURE GAUGE. Indicates unit air pressure in PSI.

b. ENGINE OIL PRESSURE GAUGE. Indicates oil pressure in the engine oil gallery. A pressure switch is mounted on the back of the gauge and the diesel fuel pump solenoid is wired through the switch as a safety measure. If the engine oil pressure falls below four psi, the unit will automatically shut down.

c. AMMETER. The ammeter indicates the charging or discharging rate of the battery. Refer to figure 2-3 for wiring diagram.

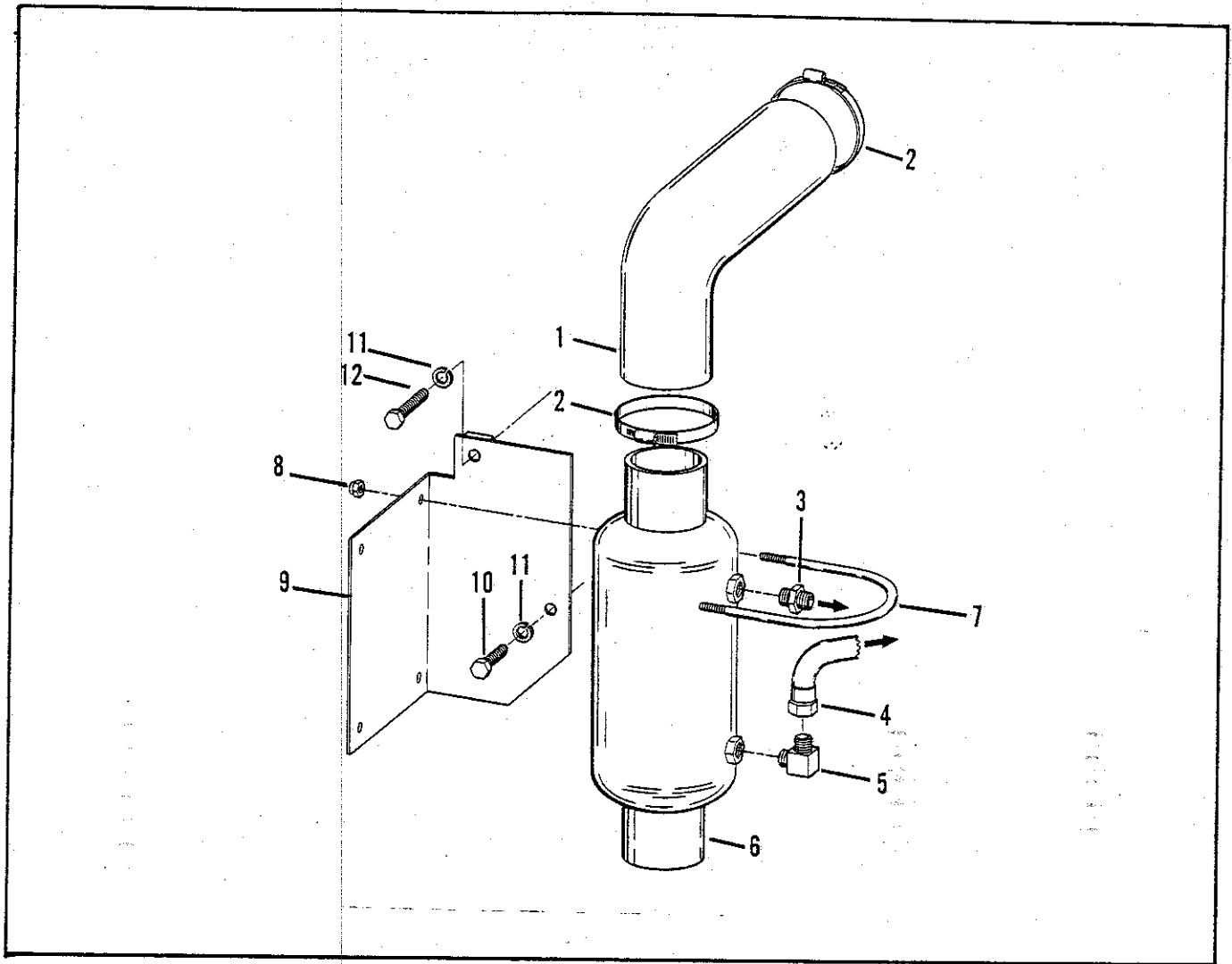


Figure 5-21.1. Engine Oil Cooler Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY							USABLE ON CODE	
			1	2	3	4	5	6	7		
5-21.1	No Number	ENGINE OIL COOLER GROUP (See figure 5-1 for NHA)								REF	
-1	46221	. HOSE (24161 PN 4276-8514)								1	
-2	46330	. CLAMP, Hose (08484 PN M36H)								2	
-3	23672	. ADAPTER, Tube (79470 PN C5205X8)								1	
-4	80504	. HOSE ASSEMBLY								1	
-5	23679	. ELBOW, Tube (79470 PN C5405X8)								1	
-6	80501	. EXCHANGER, Heat (28265 PN 40-3095502)								1	
-7	80503	. U-BOLT (AP)								2	
-8	443335	. NUT, Lock (AP) (24617)								4	
-9	80502	. BRACKET								1	
-10	122408	. SCREW, Cap (AP) (24617)								1	
-11	120384	. WASHER, Lock (AP) (24617)								2	
-12	122433	. SCREW, Cap (AP) (24617)								1	



REF NO.	ITEM	INSTRUCTION	OPERATING PERIOD	LUBRICANT
1	Handbrake lever and linkage	Clean, oil mechanism sparingly	500 hrs	OC
2	Compressor oil filter	Remove, clean and dry element. Soak in oil before installing	*100 hrs	OC
3	Engine oil filler	Check oil level and fill as necessary (also refer to Engine Manual, Part II)	Daily	OC
4	Engine oil filter	Refer to Engine Manual, Part II	REF	REF
5	Towbar	Clean, oil pivot points sparingly	500 hrs	OC
6	Door hinges	Clean, oil hinges sparingly	500 hrs	OC
7	Wheel Bearings	Remove wheels, clean hubs, spindles, and repack.	1000 hrs	WB
8	Springs	Clean and brush on oil sparingly	1000 hrs	OC
9	Oil separator	Check oil level, add as necessary Drain tank and refill.	Daily **500 hrs	OC OC
10	Front axle steering	Clean fittings, grease nine fittings	1000 hrs	WB

*Replace element if badly clogged.

**Replace element every 4000 hrs.

SYMBOL	LUBRICANT	Below	32° F to	Over
		32° F(†)	75° F	75° F
OC	Heavy Duty Motor Oil - Series 3 or Supplement 1 (MS-Motor Severe designation). (MIL-L-2104)	SAE 10	SAE 20	SAE 30
WB	General Purpose Grease. (MIL-G-10924)	No. 0	No. 0	No. 1

†When operating in temperature below 0° F, use OES MIL-L-10925 oil in compressor. Refer to Part II for engine recommendations.

Figure 2-1. Lubrication chart (sheet 2 of 2)

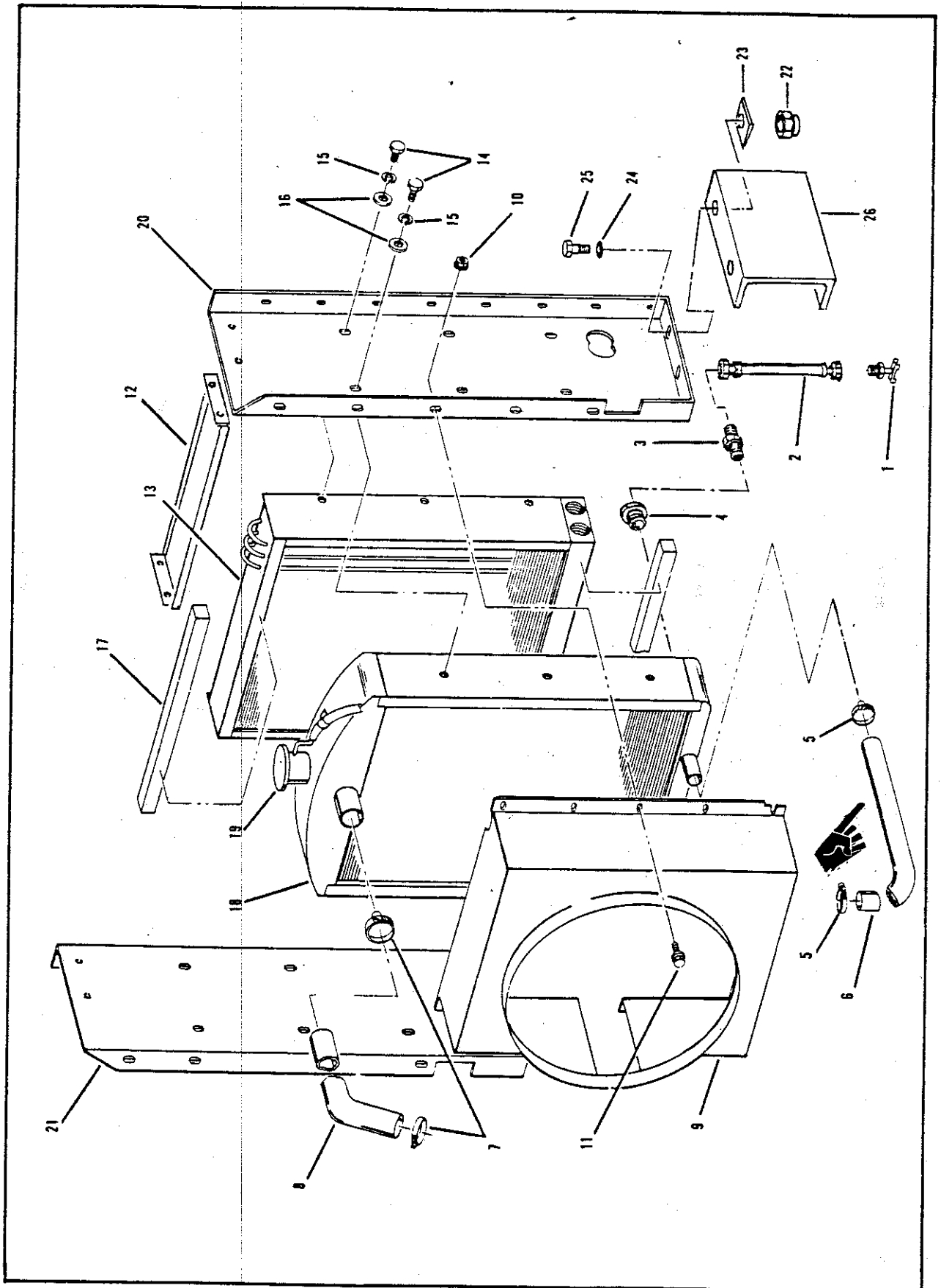


Figure 5-21. Compressor Oil Cooler and Radiator Group



1. **STOP CONTROL.** The engine stop control, when pulled outward, actuates the fuel injection pump shutoff lever thereby stopping the engine. Refer to Part II for engine fuel injection pump details.

m. **AIR CLEANER RESTRICTION INDICATOR.** This indicator monitors the air pressure drop through the air cleaner. When the pressure drop is satisfactory, the indicator shows green. When intake air is restricted by dirt or any other reason, the indicator shows red. After restriction has been cleared, reset indicator by pressing down on the cap of the indicator until green is showing.

n. **COLD WEATHER STARTING AID CONTROL (QUICK START).** This cable is used to inject cold weather starting aid fuel into the engine air intake. Do not operate until start switch is depressed. Do not leave cylinder installed in unit in warm weather. Accidental use could result in engine damage.

2-4. STARTING THE UNIT.

a. Open the housing side doors and instrument panel door.

b. Perform the before operation procedures listed in figure 3-1. (Also, refer to Engine Manual, Part II.)

c. Open the air outlet service valves. Pull the engine stop cable (9, figure 2-2) all the way out to stop position. Press the start switch (11) for approximately three seconds to crank the engine a few revolutions; then release the start switch.

d. Push the engine stop cable (9) all the way in toward panel. Pull compressor unloader handle (7) out and lock by turning handle clockwise.

e. In cool weather, below 40°F (4.4°C) use cold weather starting aid control (6, figure 2-2). Do not operate control until start switch (11) and bypass switch (10) are pressed.

CAUTION

If engine fails to start within 20 seconds, release switches (10, 11) and allow the starter to cool for 1 to 2 minutes before attempting another start.

f. Press the start switch (11) and oil pressure bypass switch (10) simultaneously. (Actuate cold weather starting aid handle as necessary.)

g. When engine starts, release the start switch (11) but continue to hold oil pressure bypass switch (10) until engine oil pressure gauge (2) indicates a pressure of approximately 10 psi; then, release bypass switch (10).

CAUTION

If engine oil pressure does not register within three to five seconds after engine starts, release bypass switch and determine cause of no engine oil pressure.

h. After engine starts, unlock idle control (8) by turning handle counterclockwise and pull handle out to fast idle; lock handle by turning clockwise. Allow engine to run at fast idle until engine temperature reaches 140°F.

i. When operating temperature is reached, unlock compressor unloader handle (7) and idle control handle (8) and push these handles in and lock by turning clockwise. Close the air outlet valves.

j. Check the readings on all gauges. Normal operating readings are:

Air pressure gauge	90 to 100 psi
Engine oil pressure gauge	40 to 60 psi
Engine water temperature gauge	160° to 185°F

k. Close side panel doors. Unit is now ready for use and will cycle through load and unload automatically in relation to air demand.

CAUTION

Do not allow equipment to operate unattended for prolonged periods. The operator should observe all gauges periodically to be certain unit is operating normally and listen to the unit for any abnormal noises. Observance of these precautions can prevent serious damage to the unit.

NOTE

This unit is equipped with safety devices to automatically stop the unit in the event of low engine oil pressure, high engine coolant temperature, high compressor air temperature, and engine overspeed. Do not attempt to restart unit until cause for such automatic stop has been determined.

2-5. STOPPING THE UNIT.

a. Close the air outlet service valves and allow the unit to run unloaded for five minutes.

b. Pull the engine stop control (9, figure 2-2) outward until engine stops; then, push inward to the run position.

c. Perform the after operation procedures found in table 3-1. Close housing side doors and instrument panel door.

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
5-19	44897	OIL FILTER-BYPASS ASSY, Compressor (see figure 5-18 for NHA)	REF	
-1	28219	. HOUSING, Oil filter	1	
-2	28545	. NUT, Retaining (AP)	1	
-3	24649	. PACKING, Preformed, o-ring	1	
-4	28412	. PACKING, Preformed, o-ring	1	
-5	120377	. NUT, Hex, 3/8-16 NC	2	
-6	28218	. ELEMENT, Oil filter	1	
-7	45070	. STUD, Element	1	
-8	43369	. PLUG, Bypass	1	
-9	44066	. VALVE, Bypass	1	
-10	43371	. SPRING, Bypass valve	1	
-11	46218	. COVER	1	
-12	9421633	. SCREW, Cap, sch, 5/16-18NC x 3-1/4 in. lg	4	
-13	28147	. WASHER, Lock, internal tooth, 5/16 in.	4	
-14	27293	. PACKING, Preformed, o-ring	2	
-15	40679	. SPRING	1	
-16	44698	. CONNECTION	1	
-17	121900	. SCREW, Cap, hex hd, 1/4-20 x 1 in. lg	1	
-18	46174	. GUIDE, Spring	1	
-19	46175	. PLUNGER	1	
-20	40678	. SPRING	1	
-21	24999	. PACKING, Preformed, o-ring	1	
-22	29941	. SHUTTLE	1	
-23	40434	. POWER ELEMENT	1	
-24	5300-1-4-28	. NUT, Spring (AP) (79136) (16004 PN 49275)	1	
-25	5000-37	. RING, Retaining (79136) (16004 PN 44449)	1	
-26	131014	. WASHER, Flat, no. 6	1	
-27	44501	. SPRING	1	
-28	24527	. BALL, Steel	1	
-29	43367	. BODY, Bypass	1	
-30	143934	. PLUG, Pipe, sq hd, 3/8 NPT	1	
-31	63301*	. DECAL, Oil filter	1	

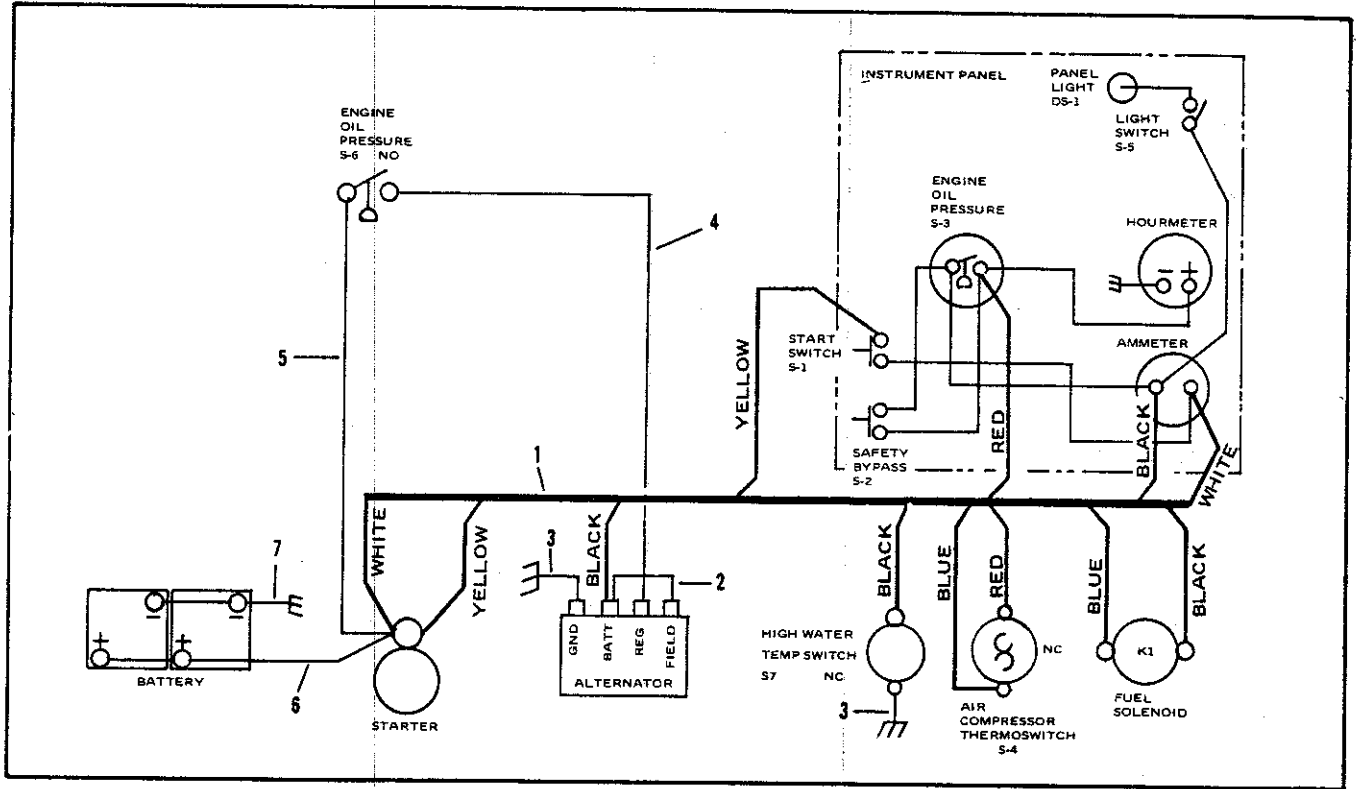


Figure 2-7. Wiring Diagram

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
5-18-59	63196	RETAINER, Bearing	1	
-60	143932	PLUG, Pipe, 1/8 NPT	1	
-61	46875	COVER, Intake end	1	
-62	428217	SCREW, Cap, hx hd, 5/8 - 11 NC x 1-1/2	5	
-63	26393	WASHER, Sealing	6	
-64	428712	SCREW, Cap, hx hd, 5/8 - 11 NC x 3-3/4	1	
-65	44428	O-RING	1	
-66	48185	COUPLING, Drive	1	
-67	48479	SCREW, Special 3/4 - 10 x 1-3/4 (SAE 5)	1	
-68	131046	WASHER, Lock, split, 3/4	1	
-69	46882	RETAINER, Gripspring	1	
-70	46890	GRIPSPRING	2	
-71	46889	KEY, Dowel, coupling	1	
-72	46872	COVER, Seal, oil	1	
-73	143932	PLUG, Pipe, 1/8 NPT	1	
-74	122027	SCREW, Cap, hex hd 5/16 - 18 NC x 1-1/4	6	
-75	120214	WASHER, Lock, split, 5/16	6	
-76	47325	GASKET	1	
-77	46879	SEAL, Oil	1	
-78	46886	O-RING	1	
-79	47716	SLEEVE, Oil seal	1	
-80	46878	SLEEVE	1	
-81	24978	O-RING	1	
-82	48187	ADAPTER, Compressor	1	
-83	428703	SCREW, Cap hx hd, 5/8 - 11 NC x 3	6	
-84	26393	WASHER, Sealing	6	
-85	44443	GASKET, Adaptor	1	
-86	44428	O-RING	1	
-87	41000	ELBOW, Tube	1	
-88	44798	BLADE, Rotor	8	
-89	No Number	ROTOR, End cover and shaft assy	REF	
-90	46868	BEARING, Ball, drive end	1	
-91	47215	ROTOR, Compressor	1	
-92	46887	COVER, End, non drive	1	
-93	46873	SHAFT, Rotor	1	
-94	24986	KEY, Dowel	1	
-95	44972	PLATE, Identification	1	
-96	145369	PIN, Drive	2	
-97	9314	BALL, Steel	1	
-98	43392	PLUG, Valve	2	
-99	24964	O-RING	2	
-100	43394	SPRING, Valve	2	
-101	43393	VALVE, Relief	2	
-102	24636	BOLT, Eye	1	
-103	47352	STATOR, Compressor	1	
-104	120918	SCREW, Hx hd, 3/8 - 16 x 1-1/2 (AP)	12	
-105	120382	WASHERS, Lock, 3/8 (AP)	12	



SECTION 3 MAINTENANCE INSTRUCTIONS

3-1. PREVENTIVE MAINTENANCE.

To ensure that the equipment is ready for operation at all times, it must be inspected systematically by the operator before operation, during operation, and after operation (see figure 3-1); biweekly, quarterly and every 1000 hours of operation (see figure 3-2). The biweekly interval will be equivalent to a maximum of 100 hours of use. The quarterly interval will be equivalent to 3 months or a maximum of 500 hours of use, whichever occurs first. In this manner, defects will be discovered and corrected before they result in serious damage or failure.

The necessary preventive maintenance services will be performed before operation. Defects discovered during operation of the unit will be noted for correction to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noticed during operation which would damage the equipment if operation were continued. After-operation services will be performed at intervals based on the normal operation of the equipment. Reduce interval to compensate for abnormal conditions.

3-2. ENGINE MAINTENANCE. Refer to Engine Manual in Part II for all engine maintenance procedures.

3-3. CORRECTIVE MAINTENANCE. Major maintenance will normally not be required, provided that normal maintenance is observed. It is essential that oil be changed regularly and that oil filters and air cleaner are inspected and serviced regularly. Cleanliness of these components is extremely important.

WARNING

Do not attempt any disassembly or repair of the unit until all air pressure has been relieved. Blowdown valve will relieve pressure in about 10 seconds after shutdown.

3-4. DISASSEMBLY OF AIR COMPRESSOR UNIT. (Fig. 5-1). Disassembly of the air compressor unit or any of

the major components is accomplished by following the order of the key index numbers assigned to figures in section five of this manual. Many of the components can be removed and replaced without disturbing the rest of the assembly. Disassemble to the extent required to accomplish repair.

a. Disassembly of Air Compressor. (Fig. 5-18). Disconnect all tubing or hose assemblies and the intake control cable and cable clip. For blade and rotor inspection, it is only necessary to remove nondrive end cover (61) with intake control and bearing cover attached. To remove intake control body (44), parts (27 thru 38) must be removed to gain access to bolt (51) within the intake control body.

Do not disassemble rotor and drive end cover assembly (89) unless it is determined that a part must be replaced. To disassemble rotor and drive end cover assembly, refer to figure 3-3. Remove nondrive end bearing inner race by first applying a suitable gear puller. If inner race fails to move, apply heat from a torch and heat the inner race evenly. Apply gear puller and remove race.

NOTE

Discard bearing races that have been removed by applying heat. Replace with entire new bearing.

3-5. CLEANING.

a. Wash all metal parts with solvent, Federal Specification P-D-680, or a commercial equivalent prior to inspection.

b. Strip off all gaskets and clean surface where sealing compound was used.

c. If varnish exists, carefully scrape off or soak components in commercial solvents available for this purpose.

CAUTION

Be sure to observe manufacturer's instructions and precautions.

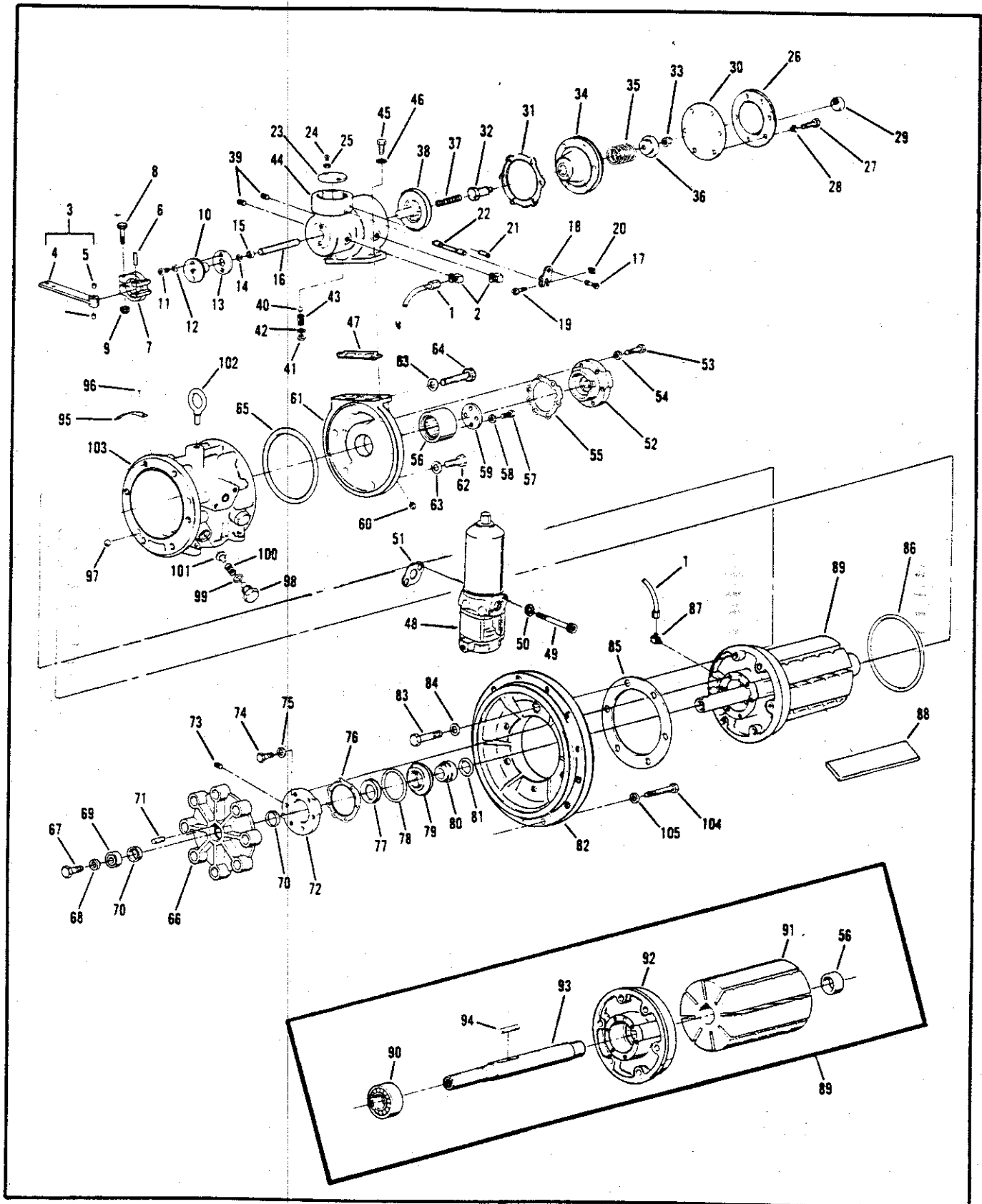


Figure 5-18. Compressor Group



100 HOURS (2 Weeks)	500 HOURS (3 Months)	1000 HOURS (6 Months)	PROCEDURE
X			AIR CLEANER — Inspect the air cleaner for loose connections and mountings.
X			Tighten any loose connections or mounting hardware. Replace a clogged or defective air cleaner.
X			TIRES — Check air pressure; maintain at 36 psi.
X			REGULATORS, CHECK VALVES, SAFETY VALVES, GAUGES. Inspect the condition of all gauges, valves and safety valves. Start the air compressor and see that all gauges read correctly and that the glass is not cracked. Inspect the condition of all safety valves to see they are working properly.
X			Tighten any loose mounting screws and connections. Replace any defective or damaged gauges, check valves, and safety valves.
X			Check settings of safety valves and pressure gauges.
X			FAN AND SHROUDS — Inspect the engine fan assembly for insecure mounting and improper operation. Check fan and alternator belts for proper tension.
	X		LUBRICATION — Drain oil in rotary compressor and engine and refill with clean oil of type and grade specified on lubrication chart.
X			Remove compressor oil filter. Clean or replace.
	X		APPEARANCE — Inspect the general appearance of the air compressor, paying particular attention to dirt, illegible markings of identification, and poor condition of the paint surfaces.
	X		HOOD, SIDE PANELS — Inspect the doors, side panels, and cover panels for loose or missing nuts and screws and damaged hinges, latches, and panels.
	X		CONTROLS, WIRING — Inspect all controls and instruments on the control panel for damaged or improper operation. Inspect all controls and instruments for loose mountings and connections and damaged wiring. Clean the accumulated dust and dirt from the control panel. Tighten any loose connections and replace damaged controls, instruments, or wiring.
	X		Check condition, gap and clean engine spark plugs. Replace any defective plug. (Gasoline engine driven units.)
	X		Check battery voltage and recharge if voltage is low. If condition persists, check ignition system per Engine Manual.
		X	WHEEL BEARINGS — Remove, clean out old grease and repack per lubrication chart, figure 2-1.

Figure 3-2. Periodic inspection chart

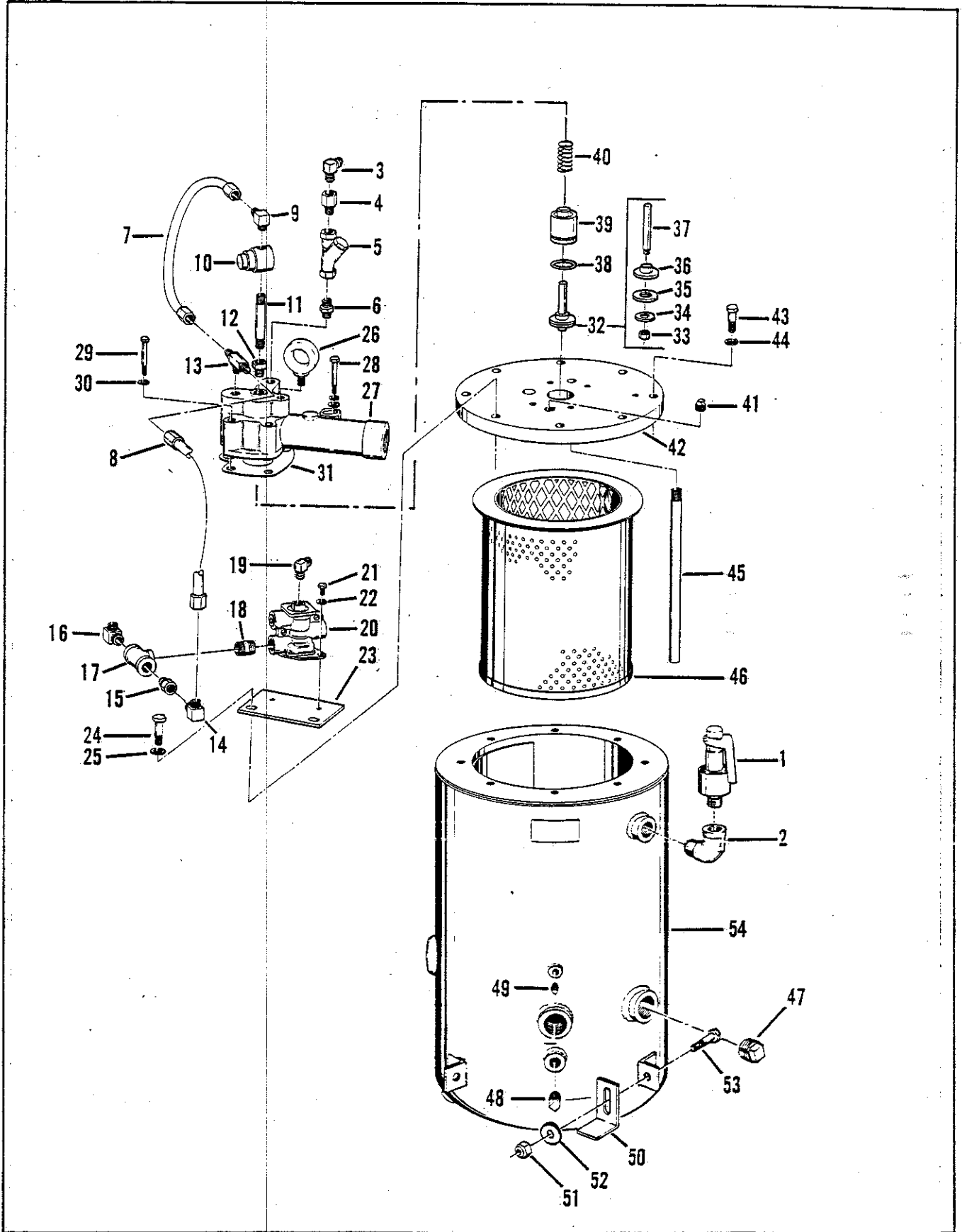


Figure 5-17. Oil Separator Assembly

ing instructions. Heat bearing inner races (1 and 7) evenly in hot cooking oil to a maximum of 350°F. Install inner race (7) on shaft to shoulder. Assemble outer race (6) and spacer (5) on bearing inner race. Press bearing and shaft into cover (9). Place key (3) in shaft and slide rotor on shaft, making sure relief slots in rotor are leading in the direction of rotation (Fig. 3-4). Place heated bearing inner race (1) on shaft to shoulder. Complete assembly, referring to Figures 5-18 and 3-5.

b. Hold O-rings (65 and 86, Fig. 5-18) in place on end covers (61 and 92) with grease until secured in reassembly.

c. Gripsprings: During reassembly of the compressor, it is essential that the gripsprings (70, Fig. 5-18) be installed in the correct sequence. Improper installation of the gripsprings will result in slippage between the shaft and the coupling and cause excessive wear. Refer to Figure 3-5 and assemble the gripsprings as follows:

(1) Install smaller gripspring (3) on shaft (2) with beveled edge out.

(2) Position larger gripspring (4) over gripspring (3) so that the beveled edges meet.

(3) Install key (8) on shaft. Slide coupling (1) on shaft and over key and gripsprings until it seats.

(4) Position second larger gripspring (4) in coupling with beveled edge facing outward.

(5) Install second smaller gripspring (3) on shaft. Be sure beveled edges of gripsprings (3 and 4) match.

(6) Position gripspring retainer (7) and secure with washer (5) and bolt (6).

d. Service the unit per paragraphs 2-1 and 2-2 before restarting compressor.

3-8. ENGINE SPEED CONTROL LINKAGE ADJUSTMENT (Figure 3-7). After replacing or due to normal wear of a component affecting the speed of the compressor may require the adjustment of the linkage to obtain the desired RPM. Adjust linkage as follows:

a. Start unit (Paragraph 2-4) and allow it to operate until normal operating temperature is attained.

b. Close the air service valves.

c. Pull UNLOADER handle out and lock.

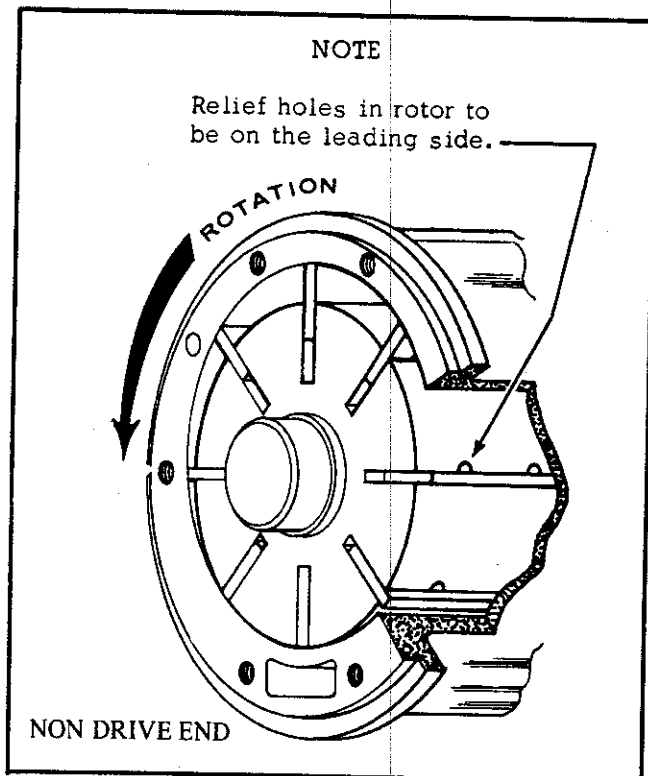


Figure 3-4. Compressor rotor installation

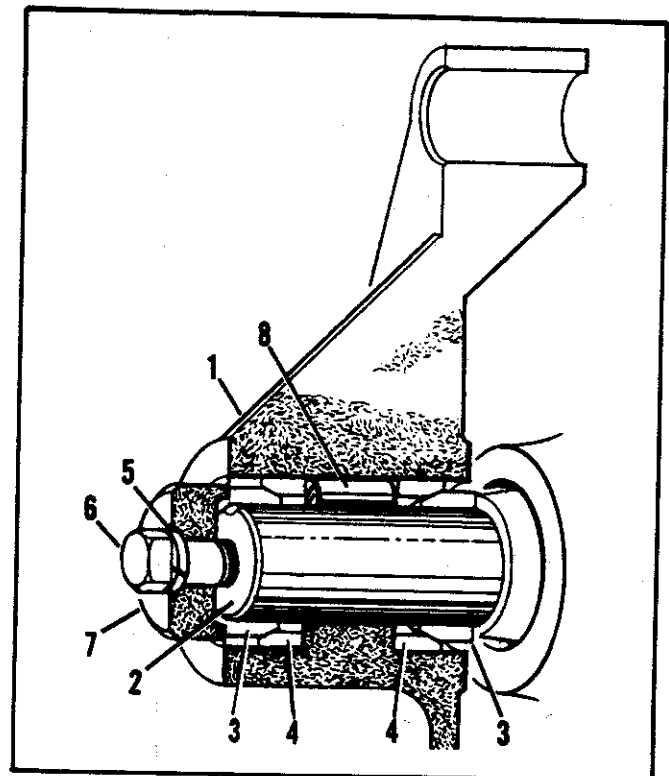


Figure 3-5. Gripspring installation

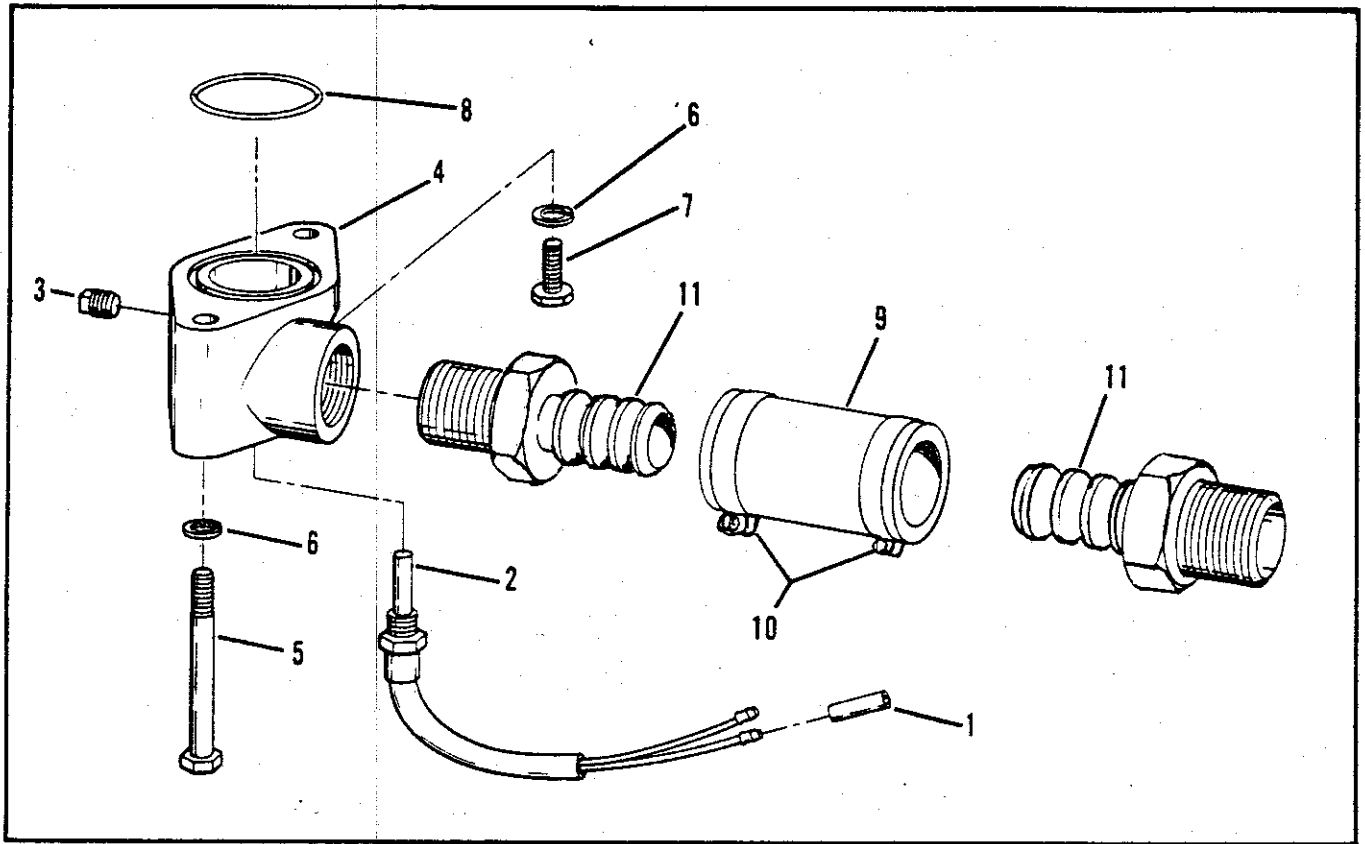
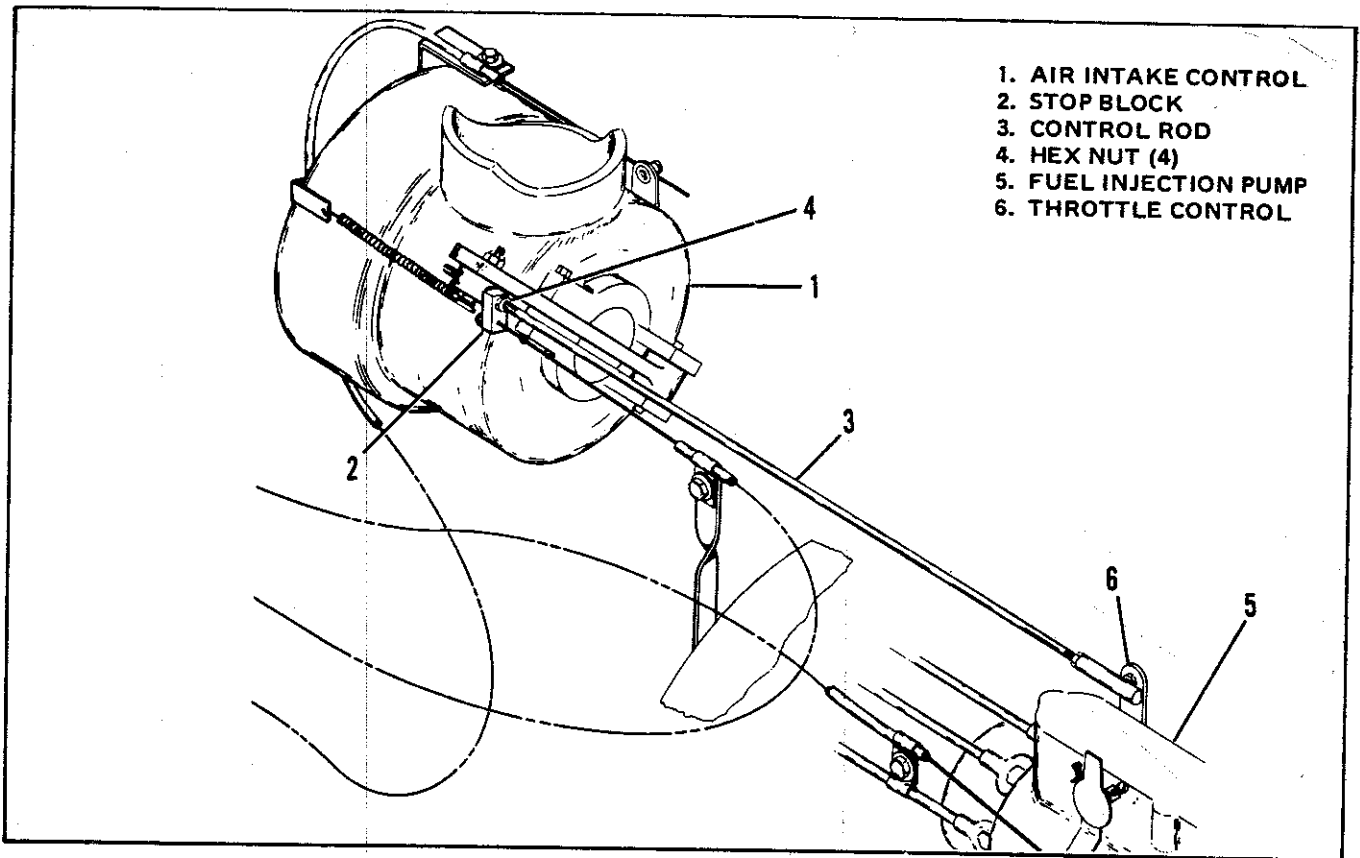


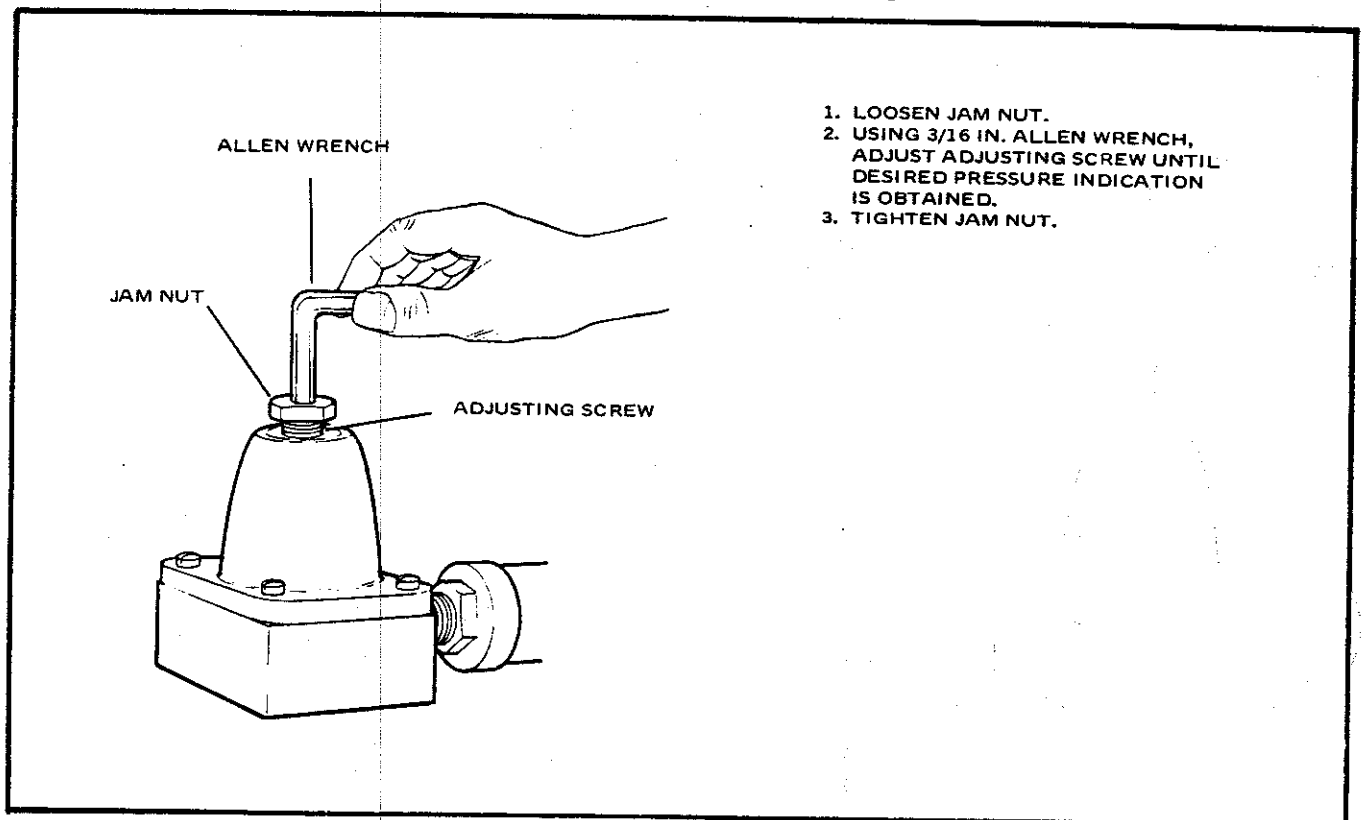
Figure 5-15. Compressor Discharge Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY							USABLE ON CODE	
			1	2	3	4	5	6	7		
5-15	No Number	COMPRESSOR DISCHARGE GROUP (See figure 5-1 for NHA)								REF	
-1	23921	. CONNECTOR, Wire								2	
-2	48414	. THERMOSWITCH								1	
-3	143935	. PLUG.....								1	
-4	68521	. CONNECTION, Discharge								1	
-5	122207	. SCREW, Cap, hex hd, 3/8-16 NC x 3 in. lg								1	
-6	120382	. WASHER, Lock								2	
-7	120233	. SCREW, Cap, hx hd, 3/8-16 NC x 1 in. lg								1	
-8	24549	. O-RING								1	
-9	80969	. HOSE, Discharge								1	
-10	68294	. CLAMP								2	
	122027	. BOLT, Hex hd, 5/16 - 18 NC x 1-1/4 in. lg								2	
	109524	. NUT, 5/16 - 18 NC								2	
	120393	. WASHER, Flat, 5/16 in.								2	
-11	68293	. ADAPTER, Discharge								2	



1. AIR INTAKE CONTROL
2. STOP BLOCK
3. CONTROL ROD
4. HEX NUT (4)
5. FUEL INJECTION PUMP
6. THROTTLE CONTROL

Figure 3-7. Engine Speed Control Linkage



1. LOOSEN JAM NUT.
2. USING 3/16 IN. ALLEN WRENCH, ADJUST ADJUSTING SCREW UNTIL DESIRED PRESSURE INDICATION IS OBTAINED.
3. TIGHTEN JAM NUT.

Figure 3-8. Air Pressure Regulator Adjustment

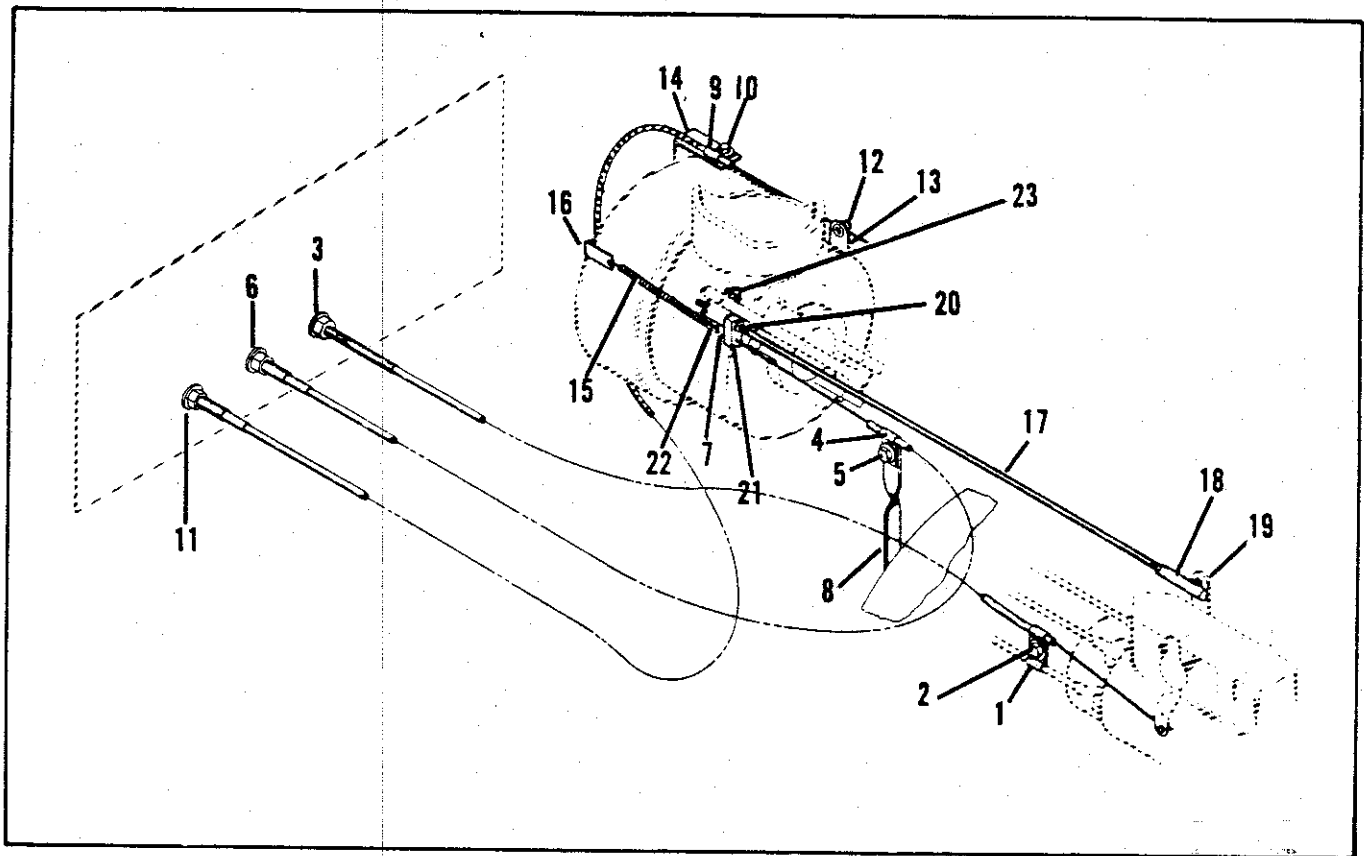


Figure 5-13. Speed Control Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY							USABLE ON CODE	
			1	2	3	4	5	6	7		
5-13	No Number	SPEED CONTROL GROUP (See figure 5-1 for NHA)								REF	
-1	60886	. CLIP								2	
-2	273771	. SCREW, Cap, serr fl								1	
	9416918	. NUT, Serr fl								1	
-3	8188	. CABLE, Control, Stop engine (see figure 5-9)								REF	
-4	60886	. CLIP								1	
-5	273771	. SCREW, Cap, serr fl								1	
	9416918	. NUT, Serr fl								1	
-6	27854	. CABLE, Control, idle (see figure 5-9).....								REF	
-7	20588	. STOP, Wire								1	
-8	65878	. BRACKET, Throttle cable								1	
-9	60886	. CLIP								1	
-10	273771	. SCREW, Cap serr fl								1	
	9416918	. NUT, Serr fl								1	
-11	27854	. CABLE, Control, unloader (see figure 5-9)								REF	
-12	67981	. STOP, Wire								1	
-13	30024	. ARM, Lever								1	
-14	44506	. BRACKET, Cable, unload								1	
-15	27365	. SPRING, Throttle								1	
-16	62620	. BRACKET, Spring, throttle								1	
-17	65876	. ROD, Control								1	
-18	9665	. JOINT, Ball								1	
-19	443332	. NUT, Lock (AP)								1	
-20	120367	. NUT, Hex (AP)								5	
-21	27359	. BLOCK, Stop								1	
-22	18952	. STOP, Block								1	
-23	443332	. NUT, Lock (AP)								1	



SECTION 4 TROUBLE SHOOTING

4-1. TROUBLE SHOOTING. The following chart gives common troubles, their probable causes

and suggested remedies. For engine troubles, refer to Part II.

TROUBLE	PROBABLE CAUSE	REMEDY
COMPRESSOR OVER-HEATS	Dirty oil cooler	Clean the cooling fins.
	Low oil level	Fill with oil as specified in the lubrication chart.
	Sticking thermal bypass valve	Dismantle and clean.
	Oxidized oil	Dismantle compressor and separator. Clean using Oakite Composition No. 111, Oakite Products, Inc. Reassemble. Replace oil separator element. Fill with oil, specified on lubrication chart.
	Blade damaged or stuck in slots	Clean or replace blades. If varnish deposits are excessive, clean compressor as specified above.
NOISY COMPRESSOR OPERATION	Lack of lubricant	Fill to oil levels specified in the lubrication chart. If it is determined that damage has occurred due to lack of lubrication, follow procedure below.
	Loose, worn or damaged internal or external parts	Tighten all accessible external attaching parts and components. If it is determined that internal parts are the cause of the trouble, remove compressor unit for overhaul.
COMPRESSOR NOT COMPRESSING TO FULL CAPACITY OR PRESSURE	Leak in piping	Shut down pressure; check piping for leaks with soap and water solution. Repair or replace defective piping or fittings. If unloader is leaking, remove for overhaul.
	Air service valve open or leaking	Close the service valve or replace as necessary.
	Safety valve leaking	Replace safety valve.

NOTE

If the equipment fails to compress to full capacity or pressure, check all piping connections and components for leaks.

WARNING

Do not attempt any adjustment or repair to the unit until all air pressure has been relieved.

Figure 4-1. Trouble Shooting Chart

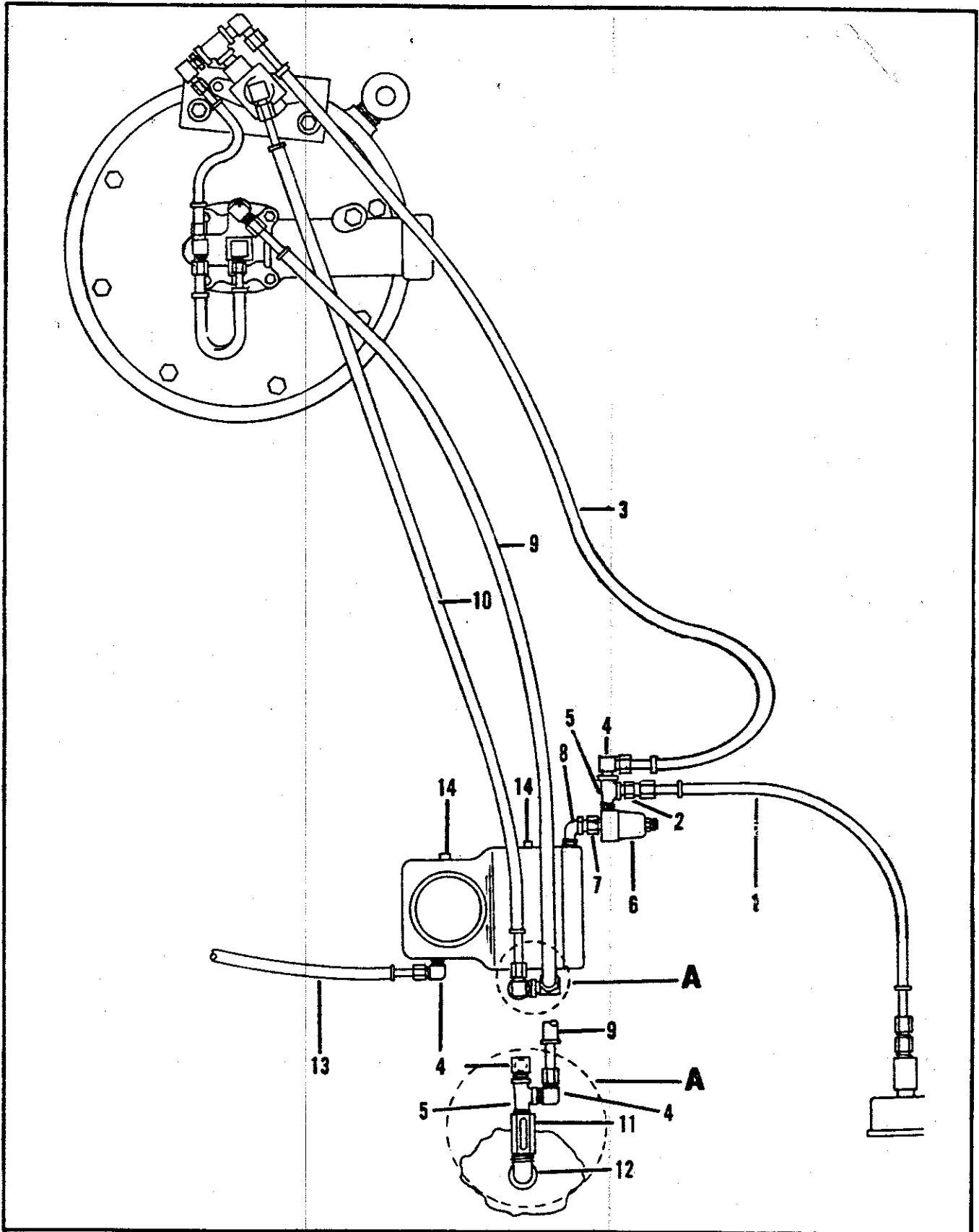


Figure 5-11. Air Control Lines Group



TROUBLE	PROBABLE CAUSE	REMEDY
COMPRESSOR FAILS TO LOAD AND UNLOAD (Cont)	Damaged intake valve	Inspect for damaged seat or back-up washer.
ENGINE RETURNS TO IDLE, COMPRESSOR FAILS TO UNLOAD	Faulty intake control	Check for sticking intake valve, punctured diaphragm in intake control assembly, damaged or plugged lines to intake control.
EXCESSIVE OIL IN DISCHARGE LINE	Dirty oil return valves, or saturated oil separator element	Disassemble, clean, and assemble oil return valves. Should this remedy fail to correct the problem, install new oil separator element.
ENGINE STALLS OR SHUTS DOWN DURING OPERATION	Oil safety switch cutting out due to low engine oil pressure	Refer to Engine Manual in Part II.
	Engine overspeed switch shutting down the unit	Engine running at speed exceeding 2250 ± 50 rpm. Refer to Engine Manual in Part II.
	High compressor air temperature	Check compressor oil supply and cooling system. Check operation of thermal bypass valve.
	High engine coolant temperature.	Check coolant level in radiator and fill as necessary. Check radiator hoses and radiator for leaks and repair as necessary.

Figure 4-1. Trouble Shooting Chart (cont)

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE		
					1	2
5-10	No Number	HOUSING GROUP (See figure 5-1 for NHA)	REF			
-1	67145	DOOR, R.H.	1			
-2	80258	DOOR, Curb side L.H.	1			
	9416918	NUT, 1/4-20 (AP) (24617)	10			
	273771	SCREW, 1/4 - 20 x 1/2 (AP) (24617)	10			
-3	67335	PANEL, Door support, R.H.	1			
	67334	PANEL, Door support, L.H.	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	20			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	20			
-4	80254	DOOR, Instrument panel	1			
	80476	SCREW, Self-tapping (AP) (24617)	5			
	80961	INSTRUMENT PANEL ASSY (See figure 5-9 for details)	REF			
	273771	SCREW, 1/4 - 20 x 1/2 (AP) (24617)	REF			
-5	80257	PANEL, Door support/instrument panel	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	6			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	10			
-6	80259	ROOF	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	10			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	10			
	273771	SCREW, 1/4 - 20 x 1/2 (AP) (24617)	10			
-7	No Number	QUICK-START GROUP (See figure 5-6)	REF			
-8	80135	COVER, Housing support	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	10			
	273771	SCREW, 1/4 - 20 x 1/2 (AP) (24617)	10			
-9	*61872	DECAL, Fill to overflow	1			
-10	*63303	DECAL, Oil recommendation	1			
-11	80956	PANEL, Side	2			
	9416918	NUT, 1/4 - 20 (AP) (24617)	14			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	14			
-12	80958	PANEL, End, front, R.H.	1			
	80959	PANEL, End, front, L.H. (not shown)	1			
	9416918	NUT, 1/4 - 20	14			
	274825	SCREW, 1/4 - 20 x 3/4	14			
-13	†27327	EYE, Door latch	5			
	†27328	BRACKET, Door, latch	5			
	†27329	SPRING, Door, latch	5			
-14	67982	PLATE, Instruction	1			
	9426053	SCREW, Self-tapping, no. 4-40 x 1/4	4			
-15	67987	FLOOR, Tool box	2			
	9416918	NUT, 1/4 - 20 (AP) (24617)	14			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	14			
-16	80955	BAFFLE ASSY, Sound	1			
	273771	SCREW, 1/4 - 20 x 2-1/2 (AP) (24617)	14			
-17	80727	PANEL, End, R.H.	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	7			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	7			
-18	DELETED					
	DELETED					
-19	80728	PANEL, End, L.H.	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	7			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	7			
-20	80726	SUPPORT, Rear housing	1			
	9416918	NUT, 1/4 - 20 (AP) (24617)	19			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	5			
-21	67146	PANEL, Back, tool box	2			
	9416918	NUT, 1/4 - 20 (AP) (24617)	8			
	274825	SCREW, 1/4 - 20 x 3/4 (AP) (24617)	8			
	273771	SCREW, 1/4 - 20 x 1/2 (AP) (24617)	18			
-22	80862	PLUG, Sheet metal	5			
-23	80957	SUPPORT, Housing, front	1			

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY.	USABLE ON CODE
5-9	No Number	INSTRUMENT PANEL GROUP (See figure 5-1 for NHA)	REF	
-1	45302	HOSE ASSEMBLY, Restriction indicator to air cleaner	1	
-2	41935	ADAPTER, Tube	1	
-3	LP-3864R-36	CABLE, Quick-start (see figure 5-7 for NHA)	REF	
-4	27854	CABLE, Control, unloader	1	
-5	8188	CABLE, Control, engine stop	1	
-6	27854	CABLE, Control, idle	1	
-7	63702	PLATE, Ident, unloader	1	
-8	61619	PLATE, Ident, stop	1	
-9	41997	PLATE, Ident, idle	1	
-10	60488	PLATE, Ident, oil pressure, engine	1	
-11	61618	PLATE, Ident, start	1	
-12	61624	PLATE, Ident, safety override	1	
-13	60491	PLATE, Ident, water temperature, engine	1	
-14	60487	PLATE, Ident, receiver pressure	1	
-15	66161	PLATE, Ident, ammeter	1	
-16	66162	PLATE, Ident, hourmeter	1	
-17	41998	PLATE, Ident, lamp	1	
-18	68018	PLATE, Ident, restriction indicator	1	
-19	9426053	SCREW, Self tapping, No. 4 x 1/4" lg	24	
	80961	INSTRUMENT PANEL ASSEMBLY	1	
	273771	SCREW, Mach, serrated hd, (AP), 1/4-20 UNC x 1/2" lg	8	
-20	29188	WIRE ASSEMBLY, Ammeter to lamp switch, yellow	1	
-21	49059	WIRE ASSEMBLY, Ammeter to start switch, blue	1	
-22	49292	WIRE ASSEMBLY, Ammeter to pressure switch, black	1	
-23	49493	WIRE ASSEMBLY, Safety switch to pressure switch, brown	1	
-24	49057	WIRE ASSEMBLY, Safety switch to pressure switch, green	1	
-25	24855	TERMINAL	3	
-26	14439	SWITCH, Pressure	1	
-27	41899	ELBOW, Tube, 1/8 pipe to 5/16 tube	1	
-28	144082	TEE, Pipe, 1/8 NPT	1	
-29	28888	ADAPTER, Tube, 1/4 pipe to 3/8 tube	1	
-30	144068	COUPLING, Pipe, 1/4 NPT	1	
-31	80223	LAMP ASSEMBLY BULB, 12V	1	
-32	27670	SWITCH, Toggle, lamp	1	
-33	27671	PLATE, Switch	1	
-34	45899	INDICATOR, Restriction, air cleaner	1	
-35	80255	MANIFOLD, Restriction indicator	1	
-36	9414204	SCREW, Mach, serrated flange, 1/4-20 UNC x 3/8" lg	2	
-37	60135	GAUGE, Hourmeter	1	
-38	48271	GAUGE, Ammeter	1	
-39	14950	GAUGE, Receiver pressure, air	1	
-40	62085	GAUGE, Pressure, oil, engine	1	
-41	68265	GAUGE, Temperature, water, engine	1	
-42	14073	SWITCH, Safety override	1	
-43	14073	SWITCH, Start	1	
-44	80960	PANEL	1	

ANNEX

CONTRACTOR'S
PART NUMBER

426816
428217
428703
428712
43024
43132
44209
443331
443332
443335
443339
443343
446362
454425
45899
46330
46868
46869
46890
47690
48271
48641

80503
60135
60739
60886
61039
61054
61055
61119
62085
62234
62303
62337
64141
64916
65610
65644
67742
67800
67910
67981
68293
68294
70218
80139
80141
80146
80196
80197
80233
80476
80969

ACTUAL MANUFACTURER'S
FSCM

24617
24617
24617
24617
79470
79911
79470
24617
24617
24617
24617
24617
24617
24617
18265
08484
51600
51600
15291
04845
09527
15801

24161
33955
06762
75272
08484
08484
08484
04845
09393
80885
72962
24161
79227
43990
98660
98660
24617
24617
72962
70436
87373
79154
24161
17284
17633
76700
81860
81860
80753
78189
12197

ACTUAL MANUFACTURER'S
PART NUMBER

426816
428217
428703
428712
68X5A
50181
69X5X4
443331
443332
443335
443339
443343
446362
454425
RAX00-2325
M36H
LPU5310
E-5310-B
ABC4920
8600A2-1-4
4015-98
08-81,T15,B8,L1,
P2,E3 NC
TYPE4684 -CF
52435-001
310
CO-0309
M88H
M60H
M52H
24X110-MONEL
2550-108
1821
21NTU-058
TYPE 4684-CF
SA-6Y20
R14-200-R35A
PF10-4
PF20-4
444261
444255
52NTE-066
FT191-4
RO-188-24-24
710HC-34
3177-1006
2-1-2
1WB-111G
16816-AJ
22003-14
22003-13
233-12
TEKS/3
S-569

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
5-8	No Number	AIR CLEANER GROUP (See figure 5-1 for NHA)							REF	
-1	61055	. CLAMP, Hose							2	
-2	80981	. HOSE, Air intake, engine, 3" ID x 15" lg							1	
-3	61054	. CLAMP, Hose							2	
-4	80982	. HOSE, Air intake, compressor, 3-1/2" ID x 23" lg							1	
-5	67701	. PIPE, Toe, compressor intake							1	
-6	41899	. ELBOW, 90°, 1/8" pipe to 5/16" tube							1	
	144067	. COUPLING, Pipe, 1/8 NPT							1	
-7	61039	. CLAMP, Hose							2	
-8	70218	. HOSE, Hump, manifold to cleaner							1	
-9	48387	. MANIFOLD, Air intake							1	
-10	GAH00-0165	. CAP, Air cleaner (18265) (Davey 48334)							1	
-11	62113	. BAND, Mounting, air cleaner							2	
-12	120233	. SCREW, Cap, hex hd, 3/8-16NC x 1" lg							4	
-13	120382	. WASHER, Lock, 3/8" ID							4	
-14	446362	. WASHER, Flat, 3/8" ID							4	
-15	48367	. CLAMP, Tube							1	
-16	48314	. TUBE, Air cleaner							1	
-17	FWG14-0077	. AIR CLEANER ASSEMBLY (18265) (Davey 48318)							1	
-18	P10-0866	. CLAMP ASSEMBLY (18265)							1	
-19	P10-6773	. CUP ASSEMBLY (18265)							1	
-20	P10-6771	. BAFFLE ASSEMBLY							1	
-21	P01-7335	. GASKET							1	
-22	P11-7331	. ELEMENT ASSEMBLY							1	
-23	P01-6984	. SCREW, Thumb (18265)							1	
-24	P01-8462	. GASKET							1	
-25	No Number	. BODY, Air cleaner							-	
-26	63302	. DECAL, Air cleaner service							1	

MANUFACTURER'S CODE, NAME AND ADDRESS

00624	Aeroquip Corp., Aircraft Div. Jackson Plant 300 S. East Ave. Jackson, MI 49203	15801	Fenwal Electronics Div. of Kidde Inc. 63 Fountain St. Farmingham, MA 01701
00736	Air Maze Div. of International Inc. 25000 Miles Road Cleveland, OH 44128	16004	Davey Compressor Co. 11060 Kenwood Road Cincinnati, OH 45242
01428	Superior Ball Joint 1200 S. Quality Dr. Newhaven, IN 46774	16764	Delco-Remy Div. of General Motors Corp. 2401 Columbus Ave. Anderson, IN 46011
04845	Automatic Switch Co. 56A Hanover Road Florham Park, NJ 07932	17284	Mercury Metal Products 1201 South Mercury Drive Schaumburg, IL 60172
05469	Bearings Inc. 3634 Euclid Ave. P.O. Box 6925 Cleveland, OH 44101	17633	Kinetics Corp. 3820 Colerain Ave. Cincinnati, OH 45223
06762	Ridgeway Mfg. Corp. 1405 Sixteenth St. Racine, WI 53403	18265	Donaldson Co., Inc. 1400 West 94th St. Minneapolis, MN 55431
08484	Breeze Corporations Inc. 700 Liberty Ave. Union, NJ 07083	22938	Prototype Development Inc. 7750 Hub Parkway Cleveland, OH 44125
09393	Rochester Gauges Inc. of Texas P.O. Box 20180 Dallas, Texas 75220	24161	Gates Rubber Co. 999 S. Broadway Denver, CO 80217
09527	Faria, Thomas G., Co. Faria Rd. Uncasville, Conn. 06382	24617	General Motors Corp. 3044 Grant Blvd. W. Detroit, MI 48203
12197	Empex Industrial Hose Div. of Master Processing Corp. 6925 Paramount Blvd. P.O. Box 710 Long Beach, CA 90801	28265	White Engine Inc. 101 11th St. S. E. Canton, OH 44707
14652	United Brass Works Inc. S. Main Ext. Randleman, NC 27317	33955	Teleflex Inc., Electrical Systems Division 1816 57th St. Sarasota, FL 33580
15291	Adjustable Bushing Corp. 11905 Vose St. North Hollywood, CA 91605	34281	Kelsey Products Div. Kelsey-Hayes Company 38481 Huron River Dr. Romulus, MI 48174
15605	Cutler-Hammer Inc. 4201 N. 27th St. Milwaukee, WIS 53216	34494	Kunkle Valve Co., Inc. 121 S. Clinton Fort Wayne, IN 46802
		43990	Norgren CA Co. 5400 S. Delaware St. Littleton, CO 80120

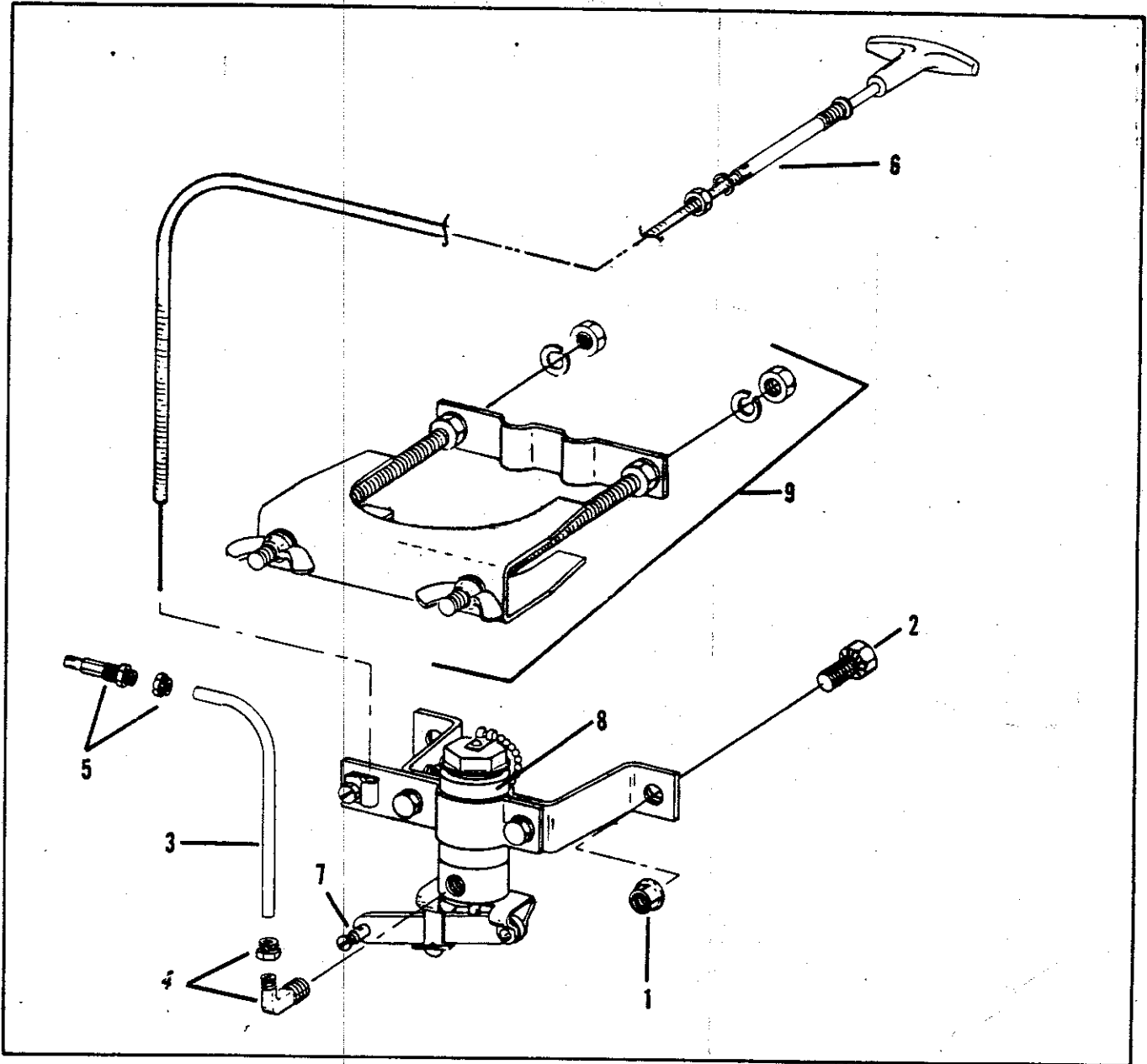


Figure 5-7. Quick-Start Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
S-7	No Number	QUICK-START GROUP (See figure 5-1 for NHA)	REF	
-1	9416918	NUT, Lock	2	
-2	274473	SCREW, Mach	2	
	46246	KIT, QUICK START	1	
-3	LP-3239	TUBE, Fuel line (61112)	1	
-4	LP-1698	FITTING, Angle valve (61112)	1	
-5	LP-2377-11	FITTING, Engine manifold (61112)	1	
-6	LP-3864R-36	CABLE, Control (mounted on instrument panel, figure 5-9)(61112)	1	
-7	LP-2814	STOP ASSEMBLY, Cable (61112)	1	
-8	QS-2-1TC	VALVE ASSEMBLY, Quick-Start (61112)	1	
-9	LP-2299	CLAMP ASSEMBLY, Cylinder mounting (61112)	1	

81860 Barry Div. of Barry Wright
Barry Wright Corp.
Watertown, MA 02172

84760 Stanadyne/Hartford Div.
P.O. Box 1440
Hartford, CT 06102

86579 Precision Rubber Products Corp.
311 Oakridge Drive
Dayton, OH 45417

87373 Parker-Hannifin Corp.
Hose Product Div.
30240 Lakeland Blvd.
Wickliffe, OH 44092

87930 Tower Mfg. Corp.
25 Reservoir Ave.
Providence, RI 02907

96906 Military Standards Promulgated
By Standardization Division
Directorate of Logistic
Services DSA

98660 Flodar Corp., Div. of
Alco Standard Corp.
16911 ST. Clair Ave.
Cleveland, OH 44110

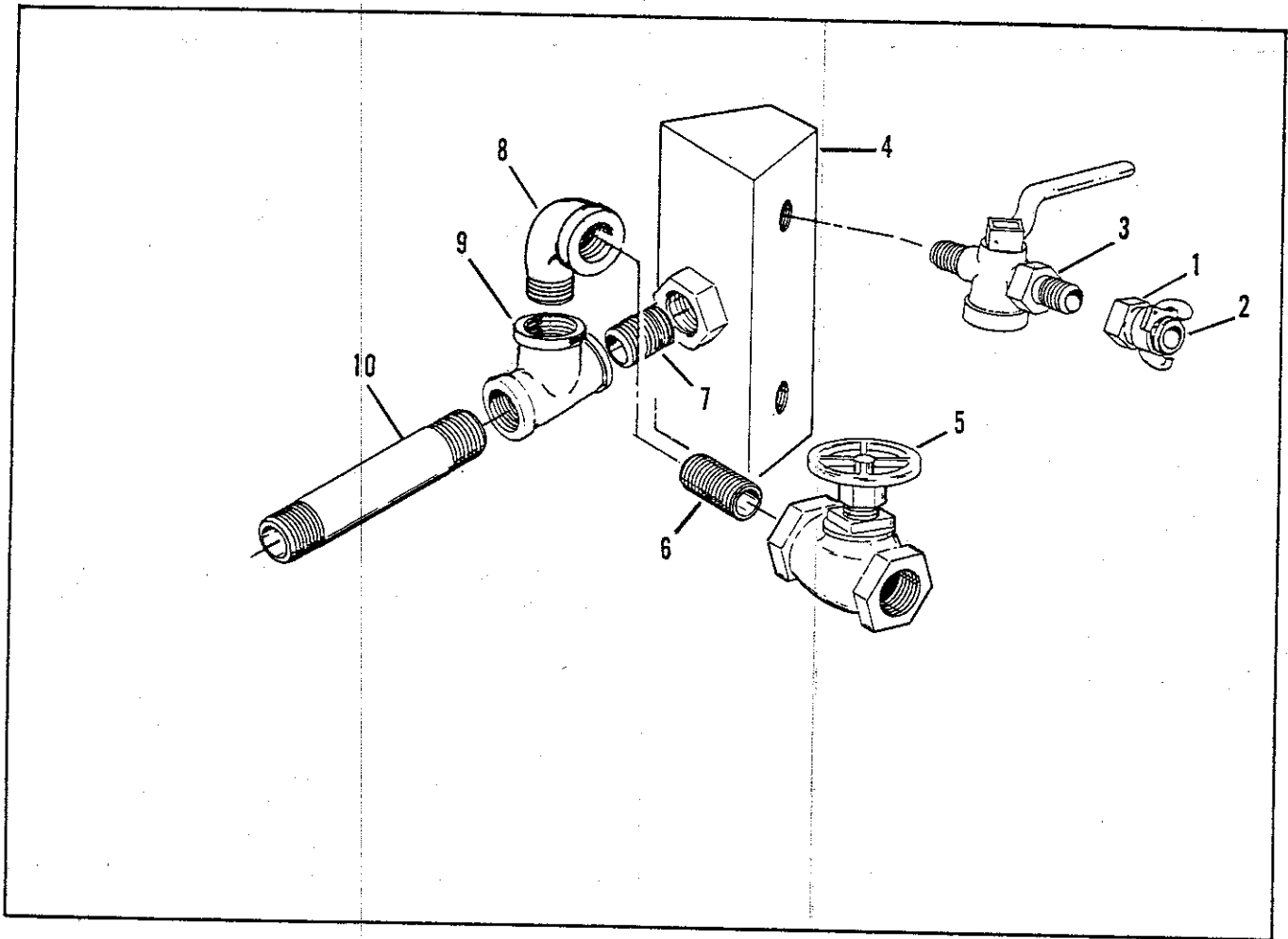


Figure 5-5. Discharge Manifold Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
5-5	No Number	AIR SERVICE VALVE AND MANIFOLD GROUP							REF	
		(See figure 5-1 for NHA)								
-1	UF-75-M	COUPLING, Hose (87373) (16004 PN 24045)							4	
-2	UG	SEAL, Coupling (87373)							4	
-3	VM-75	VALVE ASSY., Plug (87373) (16004 PN 63997)							4	
-4	60825	MANIFOLD, Service, air							1	
-5	43132	VALVE, Globe, 1-1/2 NPT							1	
-6	219813	NIPPLE, Close, 1-1/2 NPT							1	
-7	219813	NIPPLE, Close, 1-1/2 NPT							1	
-8	179444	ELBOW, Street, 90°, 1-1/2 NPT							1	
-9	179430	TEE, Pipe, 1-1/2 NPT							1	
-10	219823	NIPPLE, Pipe, 1-1/2 NPT x 3" lg							1	

**SECTION 5
PARTS LISTS****5-1. INTRODUCTION.**

This section contains illustrated parts lists for the Davey PERMAVANE Series Portable Compressor. Index numbers are in order of disassembly except that attaching hardware follow the part which they secure. In some instances, hardware, fittings and some accessories are not indexed if it is not deemed necessary. They are identified either by Davey part number or commercial designation and are listed in most suitable sequence of disassembly.

5-2. INSTRUCTIONS FOR ORDERING PARTS.

a. ALL PARTS ARE SHIPPED F.O.B. Cincinnati, Ohio, USA., EXCEPT parcel post packages and United Parcel Service (UPS) which are prepaid and billed to customer on invoice.

b. WHEN ordering by telegram or telephone, be sure to send us confirming order.

c. WHEN in doubt as to any item send in sketch, or the old part (prepaid) and specify on order "as per sketch" or "as per sample."

NOTE

Do not send part (sample), or any returned goods, without prior authorization.

d. IF you return old part as sample be sure to advise us that you are doing so, and put a tag on part with your name and address for identification. Also advise disposition of old part.

e. ALWAYS give the SERIAL NUMBER and MODEL NUMBER of compressor. This is shown on the serial number plate attached to the unit.

ATTENTION

Write in your UNIT MODEL, UNIT SERIAL NO. and COMP. MODEL now! Parts shipment will be quicker and more accurate when you give this information with your parts order.

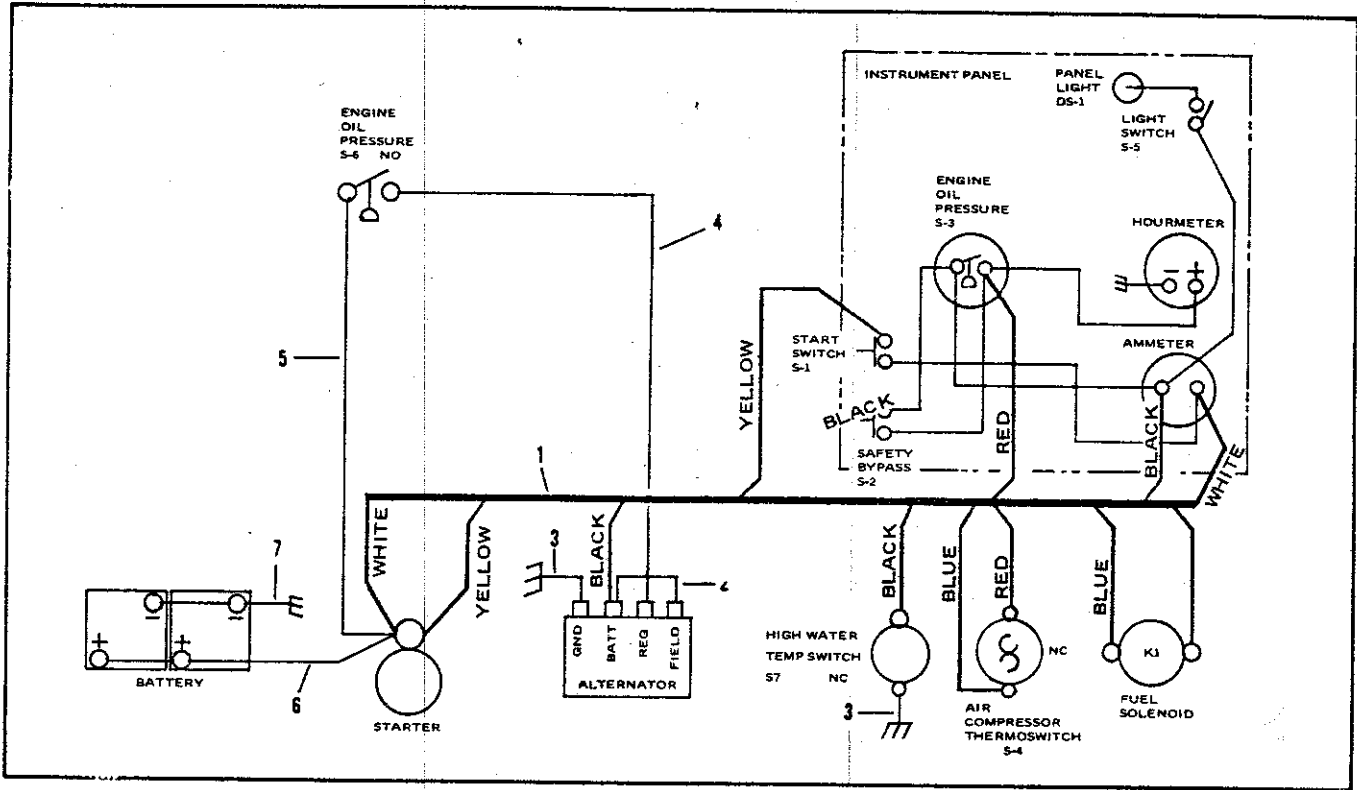


Figure 5-3. Electrical Wiring Group

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION							UNITS PER ASSY	USABLE ON CODE
		1	2	3	4	5	6	7		
5-3	No Number	ELECTRICAL WIRING GROUP (See figure 5-1 for NHA)							REF	
-1	81491	. WIRING HARNESS							1	
-2	68466	. WIRE ASSEMBLY							1	
-3	66394	. WIRE ASSEMBLY							2	
-4	68597	. WIRE ASSEMBLY, With diode							1	
-5	66584	. WIRE ASSEMBLY							1	
-6	49791	. CABLE, Battery to starter							1	
-7	49791	. CABLE, Battery ground							1	

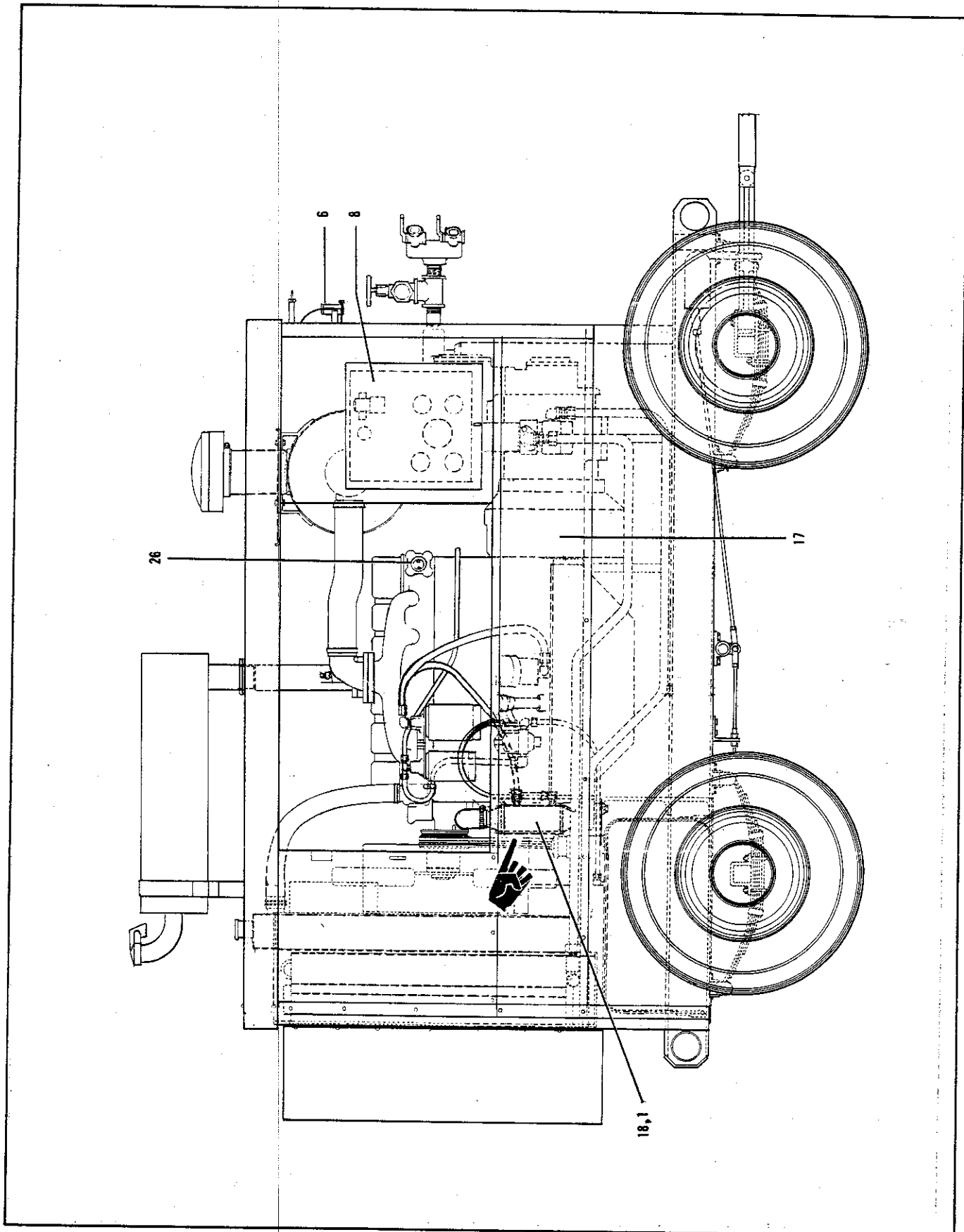


Figure 5-1. Unit Assembly (sheet 2 of 3)

FIG. & INDEX NO.	PART NUMBER	DESCRIPTION	UNITS PER ASSY	USABLE ON CODE
5-1	80932	UNIT ASSEMBLY, 19M250RPV	1	
-1	No Number	. BATTERY GROUP, (See figure 5-2 for details)	1	
-2	No Number	. ELECTRICAL WIRING GROUP (See figure 5-3 for details)	1	
-3	No Number	. MUFFLER GROUP (See figure 5-4 for details)	1	
-4	No Number	. AIR SERVICE VALVE AND MANIFOLD GROUP	1	
		(See figure 5-5 for details)		
-5	No Number	. OIL FILLER GROUP (See figure 5-6 for details)	1	
-6	No Number	. QUICK START GROUP (See figure 5-7 for details)	1	
-7	No Number	. AIR CLEANER GROUP (See figure 5-8 for details)	1	
-8	No Number	. INSTRUMENT PANEL GROUP (See figure 5-9 for details)	1	
-9	No Number	. HOUSING GROUP (See figure 5-10 for details)	1	
-10	No Number	. AIR CONTROL LINES GROUP (See figure 5-11 for details)	1	
-11	No Number	. SPEED CONTROL GROUP (See figure 5-13 for details)	1	
-12	No Number	. COMPRESSOR OIL LINES GROUP (See figure 5-14 for details)	1	
-13	No Number	. COMPRESSOR DISCHARGE GROUP (See figure 5-15 for details)	1	
-14	No Number	. OIL SEPARATOR DRAIN GROUP (See figure 5-16 for details)	1	
-15	No Number	. OIL SEPARATOR GROUP (See figure 5-17 for details)	1	
-16	No Number	. COMPRESSOR GROUP (See figure 5-18 for details)	1	
-17	No Number	. COMPRESSOR DRIVE GROUP (See figure 5-20 for details)	1	
-18	No Number	. OIL COOLER AND RADIATOR GROUP (See figure 21 for details) ..	1	
-18.1	No Number	. ENGINE OIL COOLER GROUP (See figure 21.1 for details) ..	1	
-19	No Number	. FUEL LINES AND TANK GROUP (See figure 5-22 for details)	1	
-20	60884	. HOSE ASSY, Engine to oil pressure gauge	1	
-21	14439	. SWITCH, Pressure, oil	1	
-22	44209	. ELBOW, 1/4 pipe to 5/16 tube	1	
-23	144035	. BUSH, Reducing, 1/4 to 1/8 in.	1	
-24	67800	. TEE, Street, 1/4 NPT	1	
-25	14026	. COCK, Drain	1	
-26	48641	. SWITCH, Highwater temperature	1	
-27	D3400X258	. DIESEL ENGINE ASSEMBLY (28265) (16004 Part No. 80269)	1	
		(see Part II for engine parts list)		
-28	No Number	. ENGINE MOUNTING GROUP (See figure 5-23 for details)	1	
-29	81241	. TIRE, Tubeless, H78-15B, 4 ply	4	
	TR-416S	. VALVE, Pneumatic (79934)	4	
-30	No Number	. RUNNING GEAR GROUP (See figure 5-24 for details)	1	
-31	67821	. SAFETY CHAIN ASSEMBLY	1	
-32	48302	. PAN, Fuel tank	1	
	121900	. SCREW, Cap, hex hd, 1/4 - 20 NC x 1 in. lg	5	
	120380	. WASHER, Lock, 1/4 in.	5	
-33	80127	. FRAME ASSEMBLY	1	