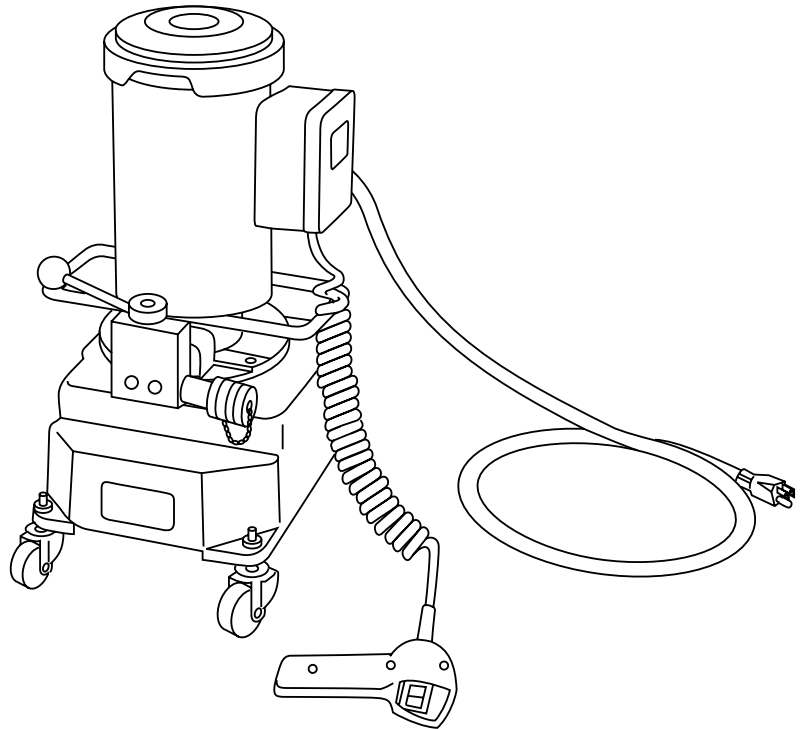


INSTRUCTION MANUAL



960 PS Series Hydraulic Power Pumps

Beginning with Serial Number KS17000




Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

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Description

The Greenlee 960 PS Series Hydraulic Pumps are electrically powered, two-stage pumps that develop a maximum of 689.5 bar (10,000 psi). The pumps are intended to provide hydraulic power for an accessory with a single-acting ram (hydraulic cylinder) such as a Greenlee conduit bender or cable cutter.

	⚠ CAUTION
	<p>Fill unit with hydraulic oil before operating pump.</p> <p>Failure to fill unit with oil will result in damage to the pump.</p>

Safety

Safety is essential in the use and maintenance of Greenlee tools and equipment. This manual and any markings on the tool provide information for avoiding hazards and unsafe practices related to the use of this tool. Observe all of the safety information provided.

Purpose of this Manual

This manual is intended to familiarize all personnel with the safe operation and maintenance procedures for the following Greenlee tools:

960 PS Series Hydraulic Pumps

Keep this manual available to all personnel.

Replacement manuals are available upon request at no charge.

All specifications are nominal and may change as design improvements occur. Greenlee Textron shall not be liable for damages resulting from misapplication or misuse of its products.

Mobil DTE is a registered trademark of Mobil Oil Corporation.

KEEP THIS MANUAL

IMPORTANT SAFETY INFORMATION**SAFETY
ALERT
SYMBOL**

This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.

⚠ DANGER

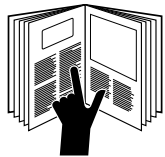
Immediate hazards which, if not avoided, **WILL** result in severe injury or death.

⚠ WARNING

Hazards which, if not avoided, **COULD** result in severe injury or death.

⚠ CAUTION

Hazards or unsafe practices which, if not avoided, **MAY** result in injury or property damage.

**⚠ DANGER**

Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.

Failure to observe this warning will result in severe injury or death.

⚠ DANGER

Do not connect the pump to any system or system component other than those supplied by Greenlee. Other manufacturers' components may not withstand the maximum pressure and may fail. Nearby personnel can be injured by flying components and hydraulic oil.

Failure to observe this warning will result in severe injury or death.

⚠ DANGER

Do not alter the internal high-pressure relief valve setting. Altering this setting will change the maximum pressure the pump can develop, which can cause a component failure. Nearby personnel can be injured by flying components and hydraulic oil.


Failure to observe this warning will result in severe injury or death.


**⚠ DANGER**

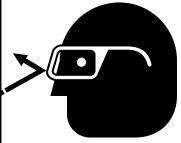
Do not use this pump in a hazardous environment. Hazards include flammable liquids, gases, or other materials. Using this pump in a hazardous environment can result in a fire or explosion.

Failure to observe these warnings will result in severe injury or death.


IMPORTANT SAFETY INFORMATION

	<p style="text-align: center;">⚠ WARNING</p> <p>Electric shock hazard:</p> <ul style="list-style-type: none"> • Do not expose power tools to rain. • Do not immerse the pendant switch in water or other liquid. <p>Failure to observe these warnings can result in severe injury or death.</p>
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	<p style="text-align: center;">⚠ WARNING</p> <p>Skin injection hazard:</p> <p>Oil under pressure easily punctures skin, causing serious injury, gangrene, or death. If injured, seek medical help immediately to remove oil.</p> <ul style="list-style-type: none"> • Do not use hands to check for leaks. • Depressurize the hydraulic system before servicing or disconnecting the hose.
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	<p style="text-align: center;">⚠ WARNING</p> <p>Wear eye protection when operating or servicing this tool.</p> <p>Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.</p>
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<p>⚠ WARNING</p>
<p>Inspect pump, hoses, couplers, and fittings for wear or damage. Replace worn, damaged, or missing components with Greenlee replacement parts. Worn or damaged components can fail, resulting in injury.</p> <p>Failure to observe this warning can result in severe injury or death.</p>

	<p style="text-align: center;">⚠ CAUTION</p> <p>Fill unit with hydraulic oil before operating pump.</p> <p>Failure to fill unit with oil will result in damage to the pump.</p>
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<p>⚠ CAUTION</p>
<ul style="list-style-type: none"> • The pump is heavy and requires two persons to lift. Improper lifting can result in injury. • Do not use hose or cord to pull, lift, or carry the equipment. Misuse will damage the hose or cord. <p>Failure to observe these precautions can result in injury or property damage.</p>

<p>IMPORTANT</p>
<p>Make sure all hose fittings are properly seated before starting the pump. Incomplete connections may not allow the accessory's ram to retract after the hydraulic operation is finished.</p>

<p>IMPORTANT</p>
<p>Procedure for depressurizing the hydraulic system:</p> <ol style="list-style-type: none"> 1. Disconnect the pump from the power source. 2. Rotate the release lever clockwise. 3. Disconnect the hose slowly to release any trapped pressure.

Note: Keep all decals clean and legible, and replace when necessary.

Specifications

Capacities

Pumping Capacity at 6.89 bar (100 psi)	4.92 l/min (300 in ³ /min)
Pumping Capacity at 689 bar (10,000 psi)	0.98 l/min (60 in ³ /min)
Reservoir Capacity	7.5 l (8 qt)
Usable Oil Volume	5.9 l (6.25 qt)

Duty Cycle

0 bar to 413.7 bar (0 psi to 6000 psi)	continuous use
413.7 bar to 689.5 bar (6000 psi to 10,000 psi)	intermittent use

(this limitation is for motor protection only)

Power Source..... 115 VAC, 60 Hz

Dimensions

Length	30.5 cm (12")
Width	26.75 cm (10.5")
Height	65 cm (25.5")
Weight/Mass	42 kg (92 lb)

Greenlee Hydraulic Oil (Mobil DTE® 13M)

Part No. 905 1059.3 / 4016GB	1 gallon
Part No. 905 0806.8 / 4017GB	1 quart

Abbreviations


- SA Single Action Valve, Greenlee Part No. 501 5644.6
- PS Pendant Switch, Greenlee Part No. 503 2363.6
- PSL Pendant Switch, Los Angeles County
(specifically wired and labeled to meet the electrical code
of Los Angeles County, CA)

Setup

Hydraulic Connection

1. Clean all couplers, threaded fittings, and ports.
2. Remove any dust plugs from couplers.
3. Hand-tighten all couplers firmly. Do not use tools.
4. Install hydraulic oil. Refer to the "Specifications" section of this manual to determine the correct type of hydraulic oil.

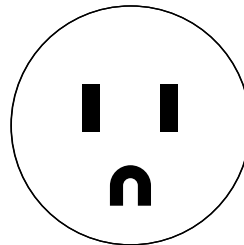
Electrical Connection

	<p>⚠ WARNING</p>
	<p>Electric shock hazard:</p> <ul style="list-style-type: none"> • Do not modify the plug provided with the tool. • Connect this tool to a grounded receptacle on a 15-amp GFCI-protected circuit. <p>Failure to observe these warnings can result in severe injury or death.</p>

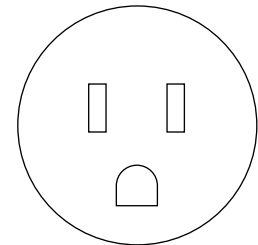
This tool must be grounded. In the event of a malfunction or breakdown, an electrical ground provides a path of least resistance for the electric current. This path of least resistance is intended to reduce the risk of electric shock.

This tool's electric cord has a grounding conductor and a grounding plug as shown. Do not modify the plug. Connect the plug to a corresponding 15-amp GFCI protected receptacle that is properly installed and grounded in accordance with all national and local codes and ordinances.

Do not use an adapter.



Plug



Receptacle

Extension cord specifications:

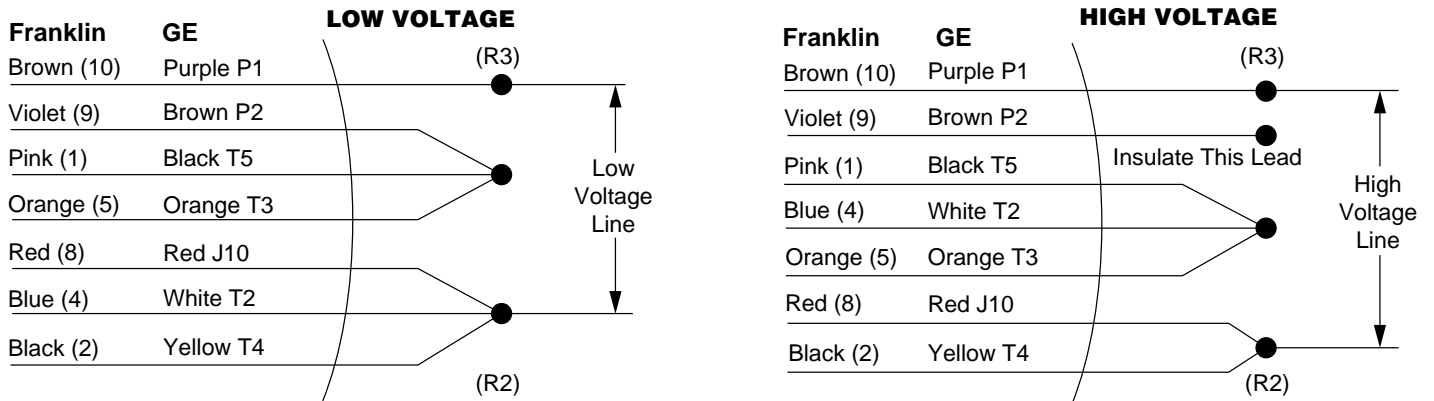
Diameter 2.5 mm² (12 AWG)

Length 30 m (100 ft)

Use only three-wire extension cords. Use of an inadequate extension cord will cause the motor to stall.

Motor Wiring Diagram

CONNECTIONS FOR CW ROTATION (VIEW FROM LEAD END OF MOTOR)



The 960 pump is equipped with a NEMA 5-15 plug for connection to a standard outlet on a 115-volt, 15-amp, 60 Hz, single-phase circuit.

The PSL models are specifically wired and labeled to meet the electrical code of Los Angeles County, California. They are equipped with a NEMA 5-20 plug for connection to a NEMA 5-20 receptacle on a 115-volt, 15-amp, 60 Hz, single-phase circuit.

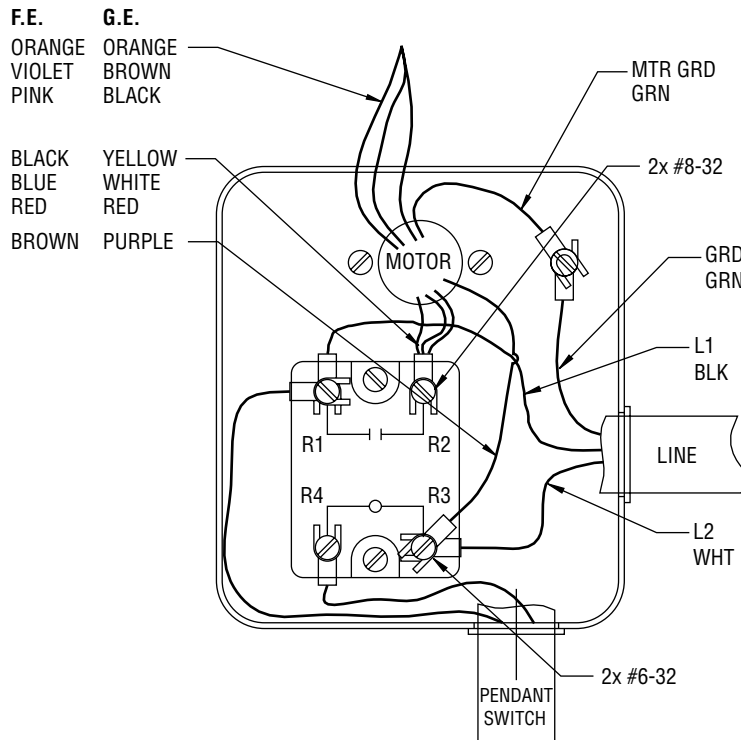
For operation at 230 volts, Greenlee suggests returning the pump to the factory.

To convert the pump to 230-volt operation:


- Re-wire the unit according to the wiring diagram that corresponds to the motor on your pump. Then replace the plug with a NEMA 6-15 plug.
- Solid state relay (Part No. 918 6403.8), motor, switch, and all other components are suitable for 230-volt operation.

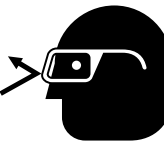
Note: Greenlee will not be held liable for injuries or damage resulting from re-wiring the pump.

- Occasionally check oil temperature after pump is operated. The recommended operating temperature is 38 °C to 50 °C (100 °F to 125 °F).



Operation

	⚠ DANGER
	<p>Do not use this pump in a hazardous environment. Hazards include flammable liquids, gases, or other materials. Using this pump in a hazardous environment can result in a fire or explosion.</p> <p>Failure to observe these warnings will result in severe injury or death.</p>

	⚠ WARNING
	<p>Wear eye protection when operating or servicing this tool.</p> <p>Failure to wear eye protection can result in serious eye injury from flying debris or hydraulic oil.</p>

Changing Accessories

Before changing the hydraulic accessory that is connected to the pump, follow this procedure for depressurizing the system.

IMPORTANT
<p>Procedure for depressurizing the hydraulic system:</p> <ol style="list-style-type: none">1. Disconnect the pump from the power source.2. Rotate the release lever clockwise.3. Disconnect the hose slowly to release any trapped pressure.

Note: Starting the motor without a tool attached to the pump will cause the pump to immediately build an internal pressure of 689.5 bar (10,000 psi). If this happens, shut off the pump and turn the valve lever clockwise to release the hydraulic pressure.

1. Move release valve lever clockwise.
2. Check reservoir oil level. The oil level should be within 13 mm (1/2") of the top of the reservoir. If oil level is too low, refer to "Adding Oil" under "Maintenance and Service" in this manual.
3. Turn the dipstick two turns counterclockwise.
Note: Operating the pump without loosening the dipstick will result in poor pump performance.
4. Connect the pump to an appropriate power supply.
5. Start motor and allow pump to idle for a few minutes. This will allow the hydraulic fluid to work through the system and prime the pump.
6. Stop the motor. Turn the lever counterclockwise.
7. Start the motor to advance the hydraulic ram. When finished, stop the motor. Turn the lever clockwise to release the pressure.
Note: Starting the pump while the lever is in the clockwise position may cause the ram to extend.
Turning the lever counterclockwise while the pump is running may release the pressure.
8. During periods of heavy use, occasionally stop the pump and check the oil temperature. The recommended operating temperature is 38 °C to 50 °C (100 °F to 125 °F).
9. Tighten the dipstick.

Maintenance and Service

Maintenance Schedule

Every time the pump is used:

- Check the oil reservoir level. The oil level should be approximately 13 mm (1/2") from the top of the reservoir. If the oil level is low, refer to "Adding Oil" in this section of this manual.
- Listen for unusual noises and observe the operation of the pump for changes in performance. Either situation may indicate that maintenance or repairs are necessary.

Periodically:

Examine the hydraulic oil for changes in color or viscosity, and the presence of dirt or other contamination.

Cleaning

- Periodically clean the exterior of the pump and motor. Use a vacuum cleaner to clean the ventilation openings.
- Clean the area around the reservoir vent, and be sure the vent breather hole is open.
- Keep all hose connections clean and use protective caps or plugs when couplers are not in use.

Inspecting Oil

Inspect the oil occasionally. A change in appearance, such as darkening or thickening, indicates that the oil needs to be replaced. Continued use of the oil after it should be replaced will cause accelerated wear of system components and will void the warranty.

Adding Oil

⚠ CAUTION

Do not use brake fluid. Brake fluid will ruin the seals.

Refer to the "Specifications" section of this manual to determine the correct type of hydraulic oil and Greenlee part number.

1. Rotate the valve lever in the clockwise position.
2. Disconnect the pump from the power supply.
3. Clean the area around the fill hole.
4. Remove the reservoir pipe plug.
5. Use Greenlee hydraulic fluid or an equivalent high grade light hydraulic oil. Refer to "Specifications" in this manual.
6. Pour the oil through a clean funnel with a filter screen.
7. Add oil until the oil level is within 13 mm (1/2") from the reservoir cover.
8. Replace the pipe plug.

Purging (Bleeding) Air from the System

Erratic performance may be caused by air in the hydraulic fluid.

Note: Position the pump so that it is above the accessory. Position the accessory so the hose connection is upward. This will allow any air in the accessory to escape into the hose and travel upward to the pump reservoir.

1. Remove any items (conduit, cable, etc.) from the hydraulic accessory.
2. Rotate the valve clockwise.
3. Turn the dipstick two turns counterclockwise.
4. Connect the pump to an appropriate power supply.
5. Start the hydraulic pump and advance the ram (hydraulic cylinder) of the accessory to a full stroke and repeat several times. Stop pump and rotate valve clockwise to retract ram. As the ram retracts, the oil in the hose will return to the reservoir in the pump.

Draining and Flushing the System

1. Thoroughly clean the pump exterior.
2. Remove the motor mounting plate screws.
3. Remove the pump system from the reservoir.
Note: Do not damage the motor mounting plate gasket, intake screen, or relief valve when removing the pump.
4. Clean the interior of the reservoir and fill with clean kerosene. Do not use solvents.
5. Rinse the intake screen.
6. Place the pump system into the reservoir and replace the motor mounting plate screws.
7. Connect a hose to the pump. Insert the other end of the hose into the pump reservoir at the fill hole.
8. Run the pump for a few minutes. While the pump is running, rotate the control lever several times. Start and stop the pump several times to cycle the unloading valve.
Note: Do not operate pump for more than a few minutes as system is not designed to operate with kerosene.
9. Remove the hose and pump assembly from the reservoir. Drain and clean the reservoir interior. Allow the reservoir to dry.
10. Reassemble the pump system.
11. Fill the reservoir. Refer to "Adding Oil" in this section of the manual.

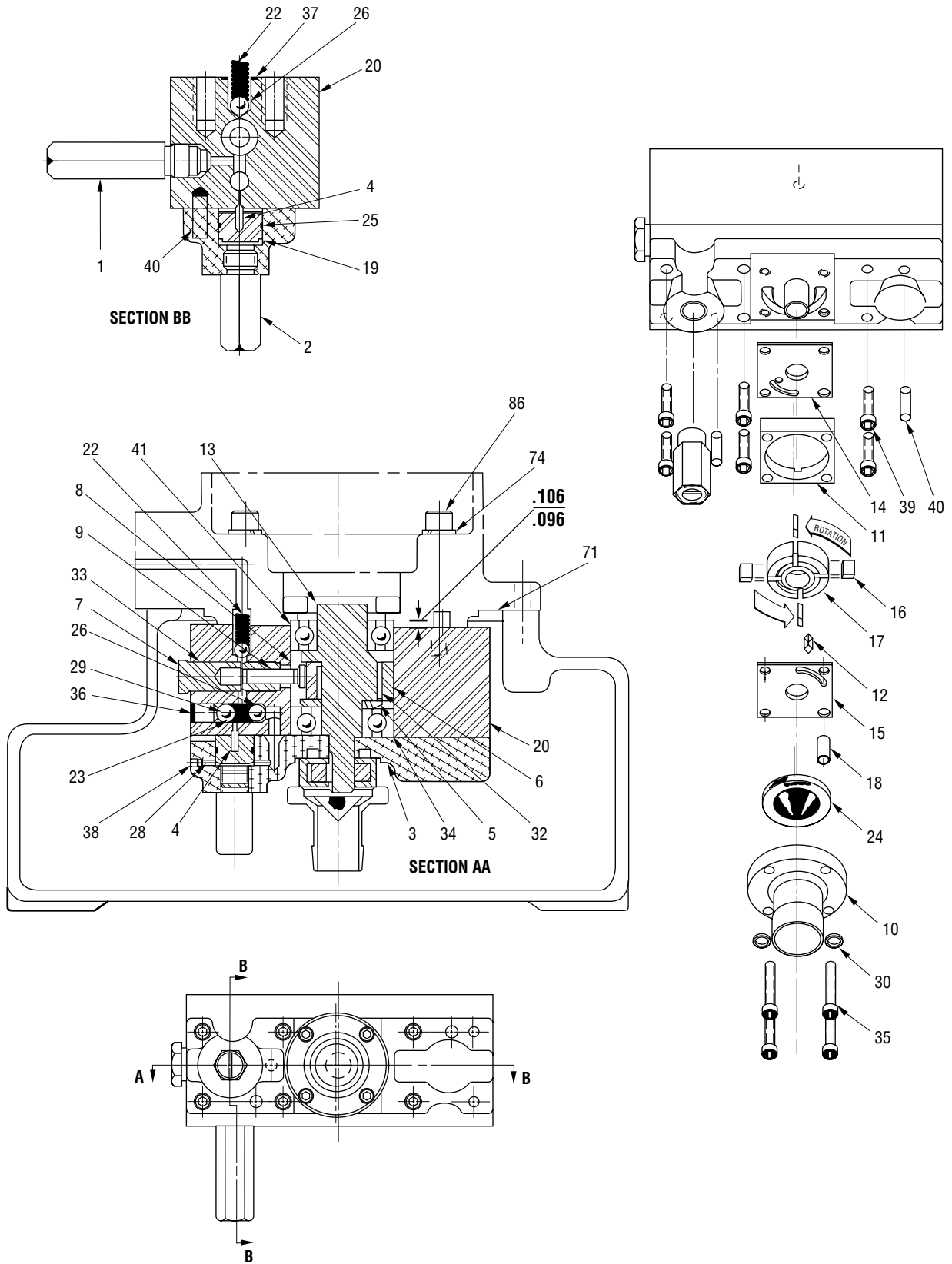
Motor Maintenance

When repairs are necessary, send the motor to one of the motor manufacturer's authorized service stations.

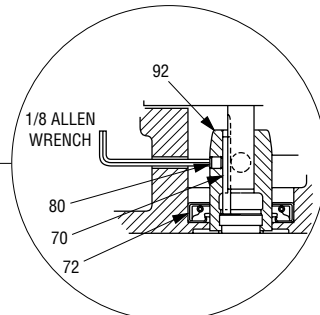
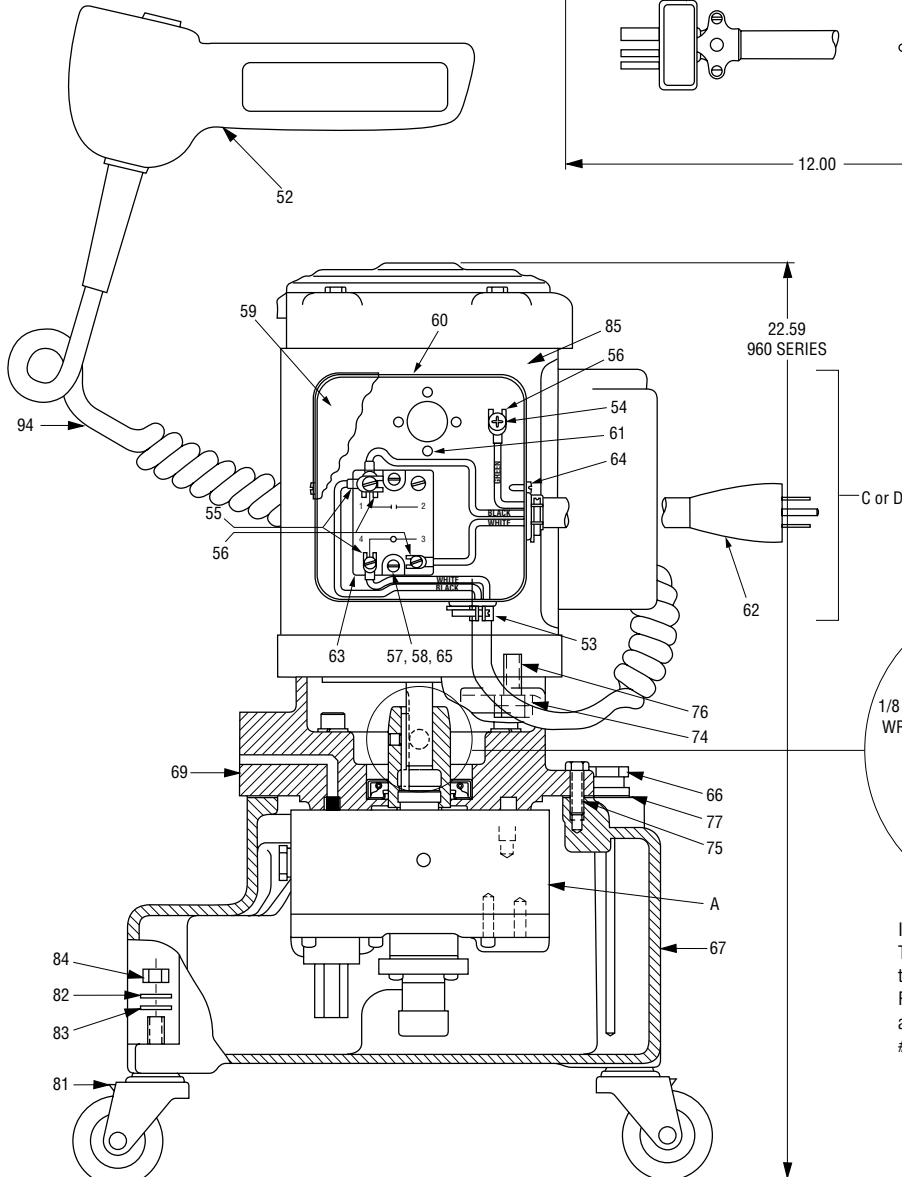
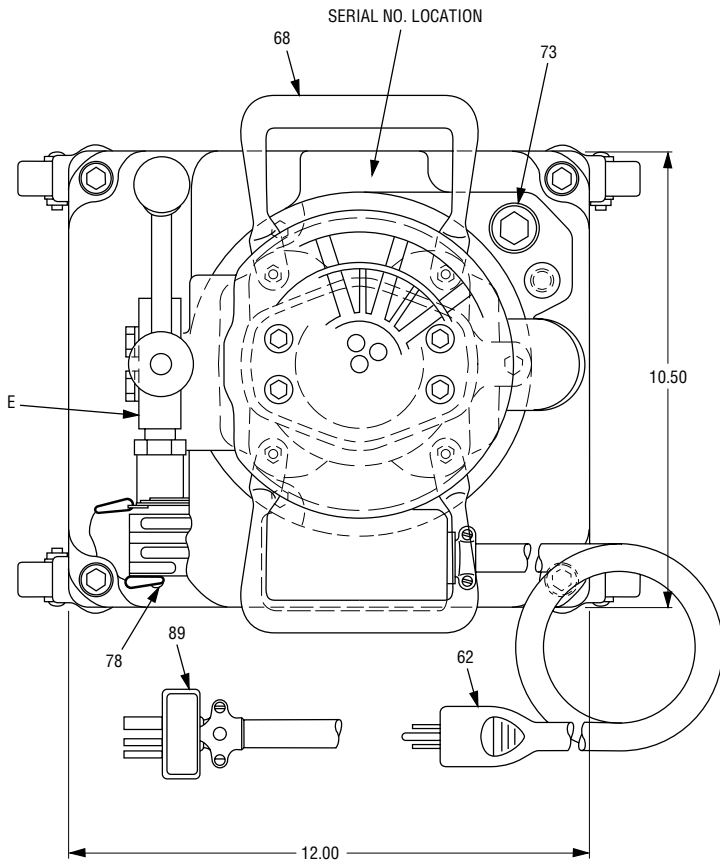
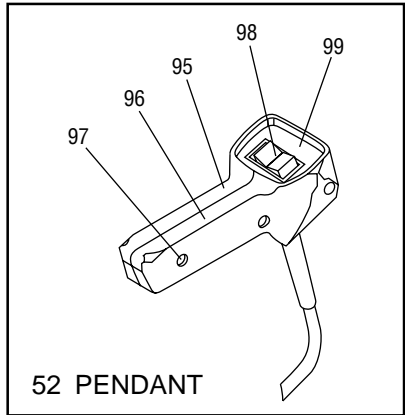
Troubleshooting

Problem	Probable Cause	Probable Remedy
Motor does not run.	Voltage supplied is too low, or no power at outlet.	Check the voltage at the power supply. Refer to the "Specifications" section of this manual for required voltage.
	Extension cord is too long or wire gauge is too light.	Use a shorter or heavier gauge extension cord.
	Relay is faulty.	Replace relay (63).
	Motor is faulty.	Repair or replace motor.
Pump develops little pressure (low-pressure system failure).	Oil level is low.	Check oil level. Refer to "Adding Oil" in this manual.
	Clogged intake screen.	Clean or replace intake screen (24).
	Faulty low-pressure relief valve.	Replace valve (2).
	Faulty low-pressure system.	Repair low-pressure system. Purchase Vane Repair Kit. Refer to the repair kits at the end of the parts list.
Pump develops substantial pressure, but doesn't complete the hydraulic operation (high-pressure system failure).	Low-pressure system failure.	Refer to the causes and remedies described under low-pressure system failure.
	Faulty high-pressure relief valve.	Replace valve (1).
	Sticking plunger.	Replace plunger (8) and bushing (9).
	Leaking ball.	Re-finish the seats for the 9/32" balls. Replace the 9/32" balls (26).
	Sticking low pressure plunger.	Replace plunger (19).
Pressure buildup is erratic.	Oil level is low.	Check oil level. Refer to "Operation" in this manual.
	Air in hydraulic system.	Refer to "Purging (Bleeding) Air from the System."
	Dirt in the hydraulic system.	Refer to "Draining and Flushing the System."
	Faulty high-pressure relief valve.	Replace valve (1).
	Sticking plunger.	Replace plunger and bushing (8, 9).

Illustration



Illustration



Item #92 is threaded onto Item #13. To remove, place a long bolt through the hole in the side of the pump block. Rotate the eccentric until the screw acts as a stop. Use a wrench to loosen #92 from #13.

Parts List

960-SA-PS consists of A, C, E, 2, 66–86, and 92

Key	Part No.	Description	Qty
A	501 8236.6	Block unit, pump (includes items 1 and 3–41).....	1
C	502 0721.0	Cord unit, PS power and enclosure with 15-amp plug (includes items 52–65)	1
D	501 8477.6	Cord unit, PSL power and enclosure with 20-amp plug (includes items 52–65 and 89)	1
E	501 5644.6	Single-action valve for -SA series pumps	1
F		Twin-action valve for -TA series pumps	1
		Subplate for TA valve	1
1	500 6067.8	Valve unit, high pressure relief	1
2	501 7766.4	Valve unit, low pressure relief	1
3	501 8194.7	Plate, pump mounting	1
4	500 3493.6	Pin, seal, .125 x .500	1
5	501 8871.2	Spacer, .790 x 1.62 x .187	1
6	501 1855.2	Race, outer	1
7	501 1862.5	Plug, plunger, high pressure	1
8	501 9060.1	Plunger, high pressure	1
9	501 9059.8	Bushing, plunger, high pressure	1
10	502 0424.6	Block, intake	1
11	501 4861.3 **	Plate, pump	1
12	501 4862.1 **	Key, square, .125 x .375	1
13	501 4876.1	Shaft, eccentric	1
14	501 7130.5 **	Plate, top	1
15	501 7131.3 **	Plate, bottom	1
16	501 7135.6 **	Vane, pump	4
17	501 7136.4 **	Rotor	1
18	501 7467.3	Dowel, hollow	1
19	501 8195.5	Plunger, check valve	1
20	501 8237.4	Block, pump	1
22	500 6111.9 *	Spring, compression, .219 x .281 x .875	1
23	501 4865.6 *	Spring, compression, .225 x .281 x .656	1
24	502 1175.7	Screen, intake	1
25	905 0014.8 *	O-ring, 5/8 x 3/4 x 1/16	1
26	905 0436.4 *	Ball, steel, 9/32 diameter	2
28	905 0677.4 *	Ball, steel, 5/32 diameter	1
29	905 0681.2 *	Ball, steel, 3/8 diameter	1
30	905 1526.9	Washer, lock, .172 x .267 x .045 spring	4
32	502 2611.8	Roller, .125 x .750 Torrington (set of 30 rollers)	1
33	905 1524.2 *	O-ring, 1/2 x 5/8 x 1/16	1
34	905 0989.7	Bearing, ball, .787 x 2.04 x .590	1
35	905 0994.3	Screw, cap, #8–32 x 1.25 socket head	4
36	905 1111.5	Screw, set, 7/16–20 x .500 socket head	1
37	905 2817.4 *	O-ring, 7/16 x 9/16 x 1/16	1
38	905 1241.3	Screw, set, #10–32 x .187 socket flat point	1
39	905 1471.8	Screw, cap, #10–32 x .875 socket head	6
40	905 1472.6	Pin, dowel, .250 x .750	2
41	905 1473.4	Bearing, ball, .984 x 2.04 x .590	1
52	503 2363.6	Switch unit, pendant (includes items 94 – 98)	1
53	918 5117.3	Connector, two screw	2
54	905 3194.9	Screw, self-tapping, #10–16 x .250 Phillips head	1
55	918 5287.0	Terminal, flanged fork	2
56	918 5757.0	Terminal, locking fork	3
57	905 0633.2	Nut, hex, #8-32	2

Parts List (cont'd)

Key	Part No.	Description	Qty
58	905 0685.5	Washer, lock, #8.....	2
59	503 5912.6	Cover, relay enclosure.....	1
60	503 6049.3	Base, relay enclosure.....	1
61	905 3281.3	Screw, self-tapping, #10-16 x .625 Phillips head.....	2
62	918 6074.1	Cord, electric.....	1
63	918 6403.8	Relay, solid state.....	1
64	905 2240.0	Screw, self-tapping, #6-20 x .375 Phillips head.....	2
65	905 1440.8	Screw, machine, #8-32 x .375 round head.....	2
66	501 5646.2	Dip stick.....	1
67	501 5695.0	Reservoir.....	1
68	501 2663.6	Handle, lifting.....	2
69	501 8292.7	Plate, motor mounting.....	1
70	501 4852.4	Key, motor shaft (supplied with motor).....	1
71	501 5701.9 *	Gasket, reservoir.....	1
72	905 0320.1 *	Seal, oil, 1.37 x 2.37 x .312.....	1
73	905 0734.7	Plug, pipe, 3/4, NPTF socket.....	1
74	905 0506.9	Washer, lock, 3/8.....	8
75	905 0522.0	Screw, cap, 5/16-18 x 1.00 hex head.....	3
76	905 0532.8	Screw, cap, 3/8-16 x 1.25 hex head.....	4
77	905 0387.2 *	O-ring, 7/16 x 5/8 x 3/32.....	1
78	905 0807.6	Coupler, quick, 3/8" (TAPS model has quantity of 2).....	1
80	905 1269.3	Screw, set, 1/4-20 x .250 socket head.....	1
81	905 1428.9	Caster, swivel.....	4
82	905 2836.0	Washer, shakeproof, 3/8.....	8
83	905 1434.3	Washer, flat, 13/32 x 13/16 x 1/16.....	4
84	905 1435.1	Nut, hex, 3/8-16.....	4
85		Motor unit (refer to the "Motor Parts List").....	1
86	905 1474.2	Screw, cap, 3/8-24 x 2.50 socket head.....	4
89	918 5558.6	Plug, 3-wire, 125 V, 20 amp.....	1
92	501 8238.2	Adapter, drive shaft.....	1
94	503 2362.8	Cord unit.....	1
95	501 3901.9	Handle, left half.....	1
96	503 1902.7	Handle, right half.....	1
97	905 3441.7	Screw, self-tapping, #6-20 x .625 pan head.....	3
98	918 6189.5	Switch, rocker, single-pole, momentary ON.....	1
Decals			
99	503 2370.9	Decal, face plate (ON/OFF).....	1
	501 2121.9	Decal, Greenlee safety.....	1
	501 2214.2	Decal, caution.....	1
	501 5832.5	Decal, arrow.....	1
	500 7248.6	Decal, extension cord.....	1
	502 1366.0	Decal, vent caution.....	1
	502 1395.4	Tag, vent caution.....	1
	503 4316.5	Decal, read IM.....	1
	503 5031.5	Decal, nameplate.....	1
	503 2370.9	Decal, face plate.....	1
	503 5472.8	Decal, schematic.....	1
	500 2581.3	Decal, caution.....	1
	502 2510.3	Decal, caution.....	1
Repair Kits			
	501 8416.4	Kit, packing repair (includes all items with *)	
	502 0697.4	Kit, vane repair (includes all items with **)	
	503 5476.0	Kit, relay replacement (convert from mechanical relay to solid state relay)	
	501 8443.1	Enclosure, relay (includes 59, 60, and 64)	
	501 8280.3	Caster set	

Motor Parts List

Motors from General Electric, Franklin Electric, and Dayton have been used on this series of pumps. To identify the motor, refer to the manufacturer's name, part number and description on the motor nameplate.

Motor, 1-1/2 HP @ 3600 RPM, 115/230 VAC, 60 Hz, Single Phase

Greenlee Part No.	G. E. Part No.	Description	Qty
* 918 5300.1	5KC48SG332T	Motor	1
918 5351.6	8753704AZP20	Capacitor	1
918 5356.7	111B277AAP1	Cover, cap	1
918 5726.0	114A882AAGT	Fan	1
918 5361.3	114C922AAP1	Canopy cover, fan	1

Greenlee Part No.	Franklin Part No.	Description	Qty
* 918 5300.1		Motor	1
918 6550.6	275464-132	Capacitor	1
918 6551.4	276856-101	Cover, cap	1
918 6552.2	296114-101	Fan	1
918 6553.0	297673-102	Canopy cover, fan	1

Motor, 1-1/2 HP @ 3600 RPM, 115/230 VAC, 60 Hz, Single Phase

Greenlee Part No.	G. E. Part No.	Description	Qty
918 5466.0	5KC48SG573T	Motor	1
918 5466.0	5KC48SG952T	Motor	1
918 5701.5	111A277P1	Capacitor	1
918 5356.7	111B277AAP1	Cover, cap	1
918 5726.0	114A882AAG7	Fan	1
918 5361.3	114C922AAP1	Canopy cover, fan	1

Greenlee Part No.	Franklin Part No.	Description	Qty
918 5466.0	113007420	Motor	1
918 6550.6	275464-132	Capacitor	1
918 6551.4	276856-101	Cover, cap	1
918 6552.2	296114-101	Fan	1
918 6553.0	297673-102	Canopy cover, fan	1

Motor, 1 HP @ 1800 RPM, 115/230 VAC, 60 Hz, Single Phase

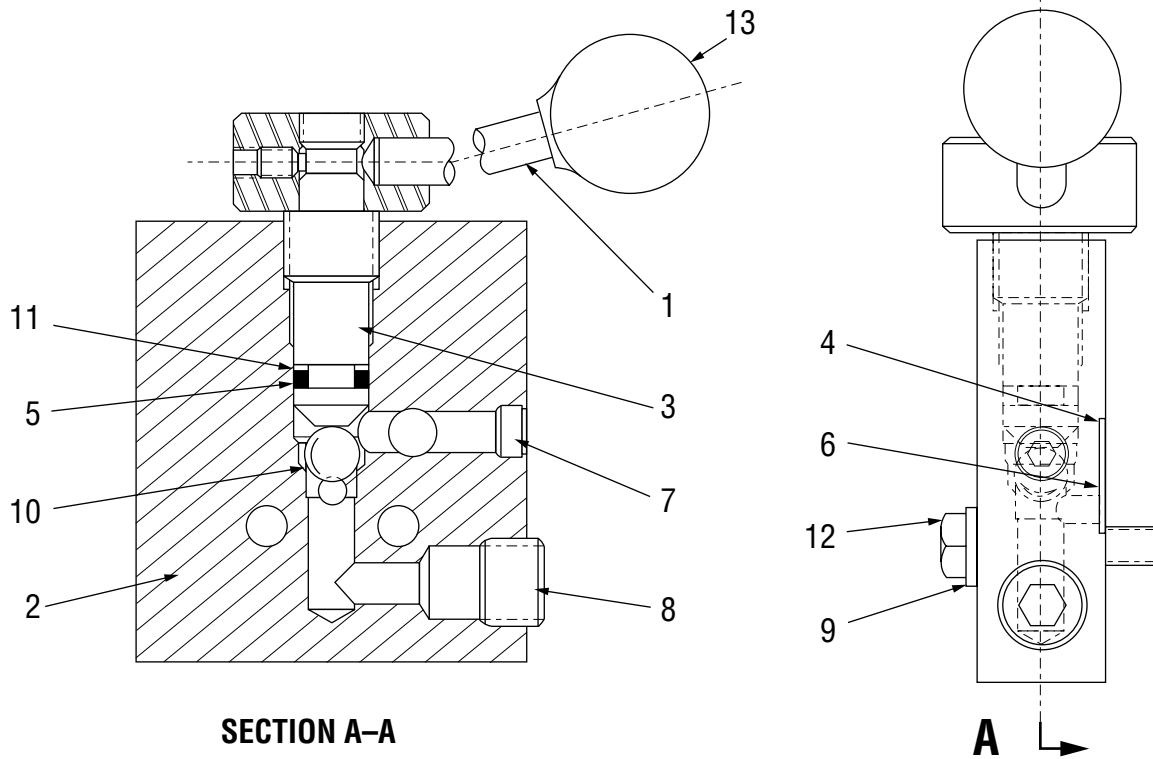
Greenlee Part No.	G. E. Part No.	Description	Qty
918 5183.1	5KC43PG782T	Motor	1
918 5349.4	8753704AX16	Capacitor	1
918 5353.2	118276AAP1	Cover, cap	1
918 5389.3	114A882AAG1	Fan	1
918 5361.3	114C922AAP1	Canopy cover, fan	1

Greenlee Part No.	Franklin Part No.	Description	Qty
918 5183.1	1112050101	Motor	1
918 6518.2	275463-102	Capacitor	1
918 6519.0	290312-101	Cover, cap	1
918 6552.2	296114-101	Fan	1
918 6553.0	297673-420	Canopy cover, fan	1

Greenlee Part No.	Dayton Part No.	Description	Qty
918 5183.1	6K674	Motor	1
918 6039.3	3R505	Capacitor	1
918 6040.7	2R831	Cover, cap	1
918 6041.5	2R901	Canopy cover, fan	1

* 918 5300.1 can be replaced with 918 5466.0 on pendant switch unit.

SA Control Valve



SECTION A-A

Key	Part No.	Description	Qty
1	501 0027.0	Handle unit, control	1
2	501 5645.4	Block, control valve	1
3	501 5705.1	Shaft, control valve	1
4	905 0168.3	O-ring, 3/8 x 1/2 x 1/16	1
5	905 0411.9	O-ring, 3/8 x 9/16 x 3/32	1
6	905 0418.6	O-ring, 1/4 x 3/8 x 1/16	1
7	905 0501.8	Plug, 1/8 pipe	1
8	905 0807.6	Coupler, quick 3/8	2
9	905 0505.0	Washer, lock 5/16 x 9/16 x 1/16	2
10	905 0714.2	Ball, steel 7/16	1
11	905 0747.9	Ring, backup 3/8 x 9/16	1
12	905 1172.7	Screw, hex head cap, 5/16-24 x 1-1/2	2
13	905 0431.3	Knob	1



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