Bolting Systems®

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Operating Instructions and Parts List For:

PE55TWP-4-BS
PE55TWP-BS
PE55TWP-4-CF-BS
PE55TWP-220-BS
PE55TWP-4-220-BS
PE55TWP-4-220-CF-BS

ELECTRIC HYDRAULIC PUMP

10,000 PSI

Form No. 1000679
Rev. 7 Nov. 6, 2023

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Form No. 1000679
Rev. 7 Nov. 6, 2023

DESCRIPTION

The 55 series hydraulic pumps are designed to have a maximum of 690 bar (10,000 psi) at a flow rate of 902 cc/min. (55 cu. in/min.). With the four-tool manifold the pump can control up to four tools at the same time. All pumps come fully assembled, less fluid, and ready for work.

Universal Motor

The universal motor offers a lightweight and portable hydraulic pump option. It is possible to start the motor under full load and, with the valve options available. The motor is a 0.8 kW (1-1/8 HP), 115 / 230 nominal VAC, 50/60 cycle single-phase. Current draw can be up to 25 amps at 115V and 13 amps at 230V. Sound level is rated at 87-92 dBA (max).

Reservoir

9.5L (2.5 Gal) or 38L (10 Gal) capacity hydraulic reservoir.

Operating Temperature

Recommended operating temperature range is -25°C to +50°C (-13°F to 122°F). If temperatures are at extremes of the operating range, it is recommended to use hydraulic fluids that are rated for those temperatures. It is recommended that you use the cooling fan option for elevated ambient temperature or continuous duty.

NOTE:

- **Carefully inspect the pump upon arrival. The carrier, not the manufacturer, is responsible for any damage resulting from shipment.**
- **Read and carefully follow these instructions. Most problems with new equipment are caused by improper operation or installation.**
- **The hydraulic power unit can be ordered with “building block” flexibility. The customer can choose from a variety of motors, controls, reservoirs, and other options. Because of the many options available, these instructions will include directions for options that your particular pump may not have.**
- **Do not change motors without consulting the pump manufacturer’s Technical Services Department.**

SAFETY SYMBOLS AND DEFINITIONS

Safety symbols are used to identify any action or lack of action that can cause personal injury. Your reading and understanding of these safety symbols is very important.

⚠ DANGER: Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION: Used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

IMPORTANT: Important is used when action or lack of action can cause equipment failure, either immediate or over a long period of time.

SAFETY PRECAUTIONS

These instructions are intended for end-user application needs. For a detailed parts list or to locate a Power Team Authorized Hydraulic Service Center contact your nearest Power Team facility. A list of all Power Team facilities is located at the end of this document.

⚠ WARNING: To help prevent personal injury,

- **The following procedures must be performed by qualified, trained personnel who are familiar with this equipment. Operators must read and understand all safety precautions and operating instructions included with the device. If the operator cannot read these instructions, operating instructions and safety precautions must be read and discussed in the operator's native language.**
- **These components are designed for general use in normal environments. These components are not specifically designed for lifting and moving people, agri-food machinery, certain types of mobile machinery or special work environments such as: explosive, flammable, or corrosive. Only the user can decide the suitability of this machinery in these conditions or extreme environments. Power Team will supply information necessary to help make these decisions. Consult your nearest Power Team facility.**

General

- **Safety glasses must be worn at all times by the operator and anyone within sight of the unit. Additional personal protection equipment may include: face shield, goggles, gloves, apron, hard hat, safety shoes, and hearing protection.**
- **Operation, repair, or maintenance of hydraulic equipment should be performed by a qualified person who understands the proper function of hydraulic equipment per local directives and standards.**

- **Hydraulic equipment must be assembled correctly and then checked for proper function before use. Use hydraulic components of the same hydraulic pressure ratings. An appropriate hydraulic pressure gauge is recommended to monitor pressure.**
- **Never place your hands or other body parts near a hydraulic fluid leak. Never use your hands or other body parts to check for a possible leak. High pressure fluid can be injected under your skin causing serious injury and/or infection.**

Safety Precautions Continued

- **High pressure fluid is present throughout a hydraulic system. Always use caution when operating, repairing, or maintaining this equipment. Before beginning any work on any hydraulic system component, stop the equipment, disconnect from its power source, and relieve all pressure in all parts of the system. Do not tamper with the internal hydraulic relief valve settings.**
- **Avoid exposing hydraulic equipment (especially hoses) to extreme high or low temperatures. Damage to equipment or failure may result and cause loss of control or injury to the operator.**
- **Exercise caution to avoid the risk of fire.**

- **Do not drop any hydraulic system components. Damage to the equipment and/or injury may result.**
- **Avoid slipping or falling by cleaning up any oil spills.**
- **Avoid back injury by always lifting equipment carefully.**
- **It is strongly recommended to view the Power Team Hydraulic Safety video tape before using hydraulic equipment.**

Hydraulic Hose

- **Before operating the pump, all hose connections must be tightened with the proper tools. Do not overtighten. Connections should only be tightened securely and leak-free. Overtightening can cause premature thread failure or high pressure fittings to split at pressures lower than their rated capacities.**
- **Always shut off the electric motor before breaking any connections in the system.**

- **Should a hydraulic hose ever rupture, burst, or need to be disconnected, immediately shut off the pump. Never attempt to grasp a leaking pressurized hose with your hands. The force of escaping hydraulic fluid could cause serious injury.**

- **Do not subject the hose to potential hazard such as fire, sharp surfaces, extreme heat or cold, or heavy impact. Do not let the hose kink, twist, curl or bend so tightly that oil flow within the hose is blocked or reduced. Periodically inspect the hose for wear, because any of these conditions can damage the hose.**
- **Do not use the hose to move attached equipment. Stress can damage the hose, causing personal injury.**
- **Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive materials such as creosote-impregnated objects and some paints. Consult the manufacturer before painting a hose. Never paint the couplers. Hose deterioration due to corrosive materials can result in personal injury.**
- **Avoid straight line tubing connections in short runs (See Figure 1). Straight line runs do not provide for expansion and contraction due to pressure and/or temperature changes.**
- **Eliminate stress in the tube lines. Long tubing runs should be supported by brackets or clips. Tubes through bulkheads must have bulkhead fittings. This makes easy removal possible and helps support the tubing.**
- **Carefully inspect all hoses and fittings prior to use. Before each use, check entire hose for cuts, leaks, abrasion or bulging of cover, or damage or movement of couplings. If any of these conditions exist, replace the hose immediately. NEVER attempt to repair the hose.**

Pump

- **Do not exceed the hydraulic pressure rating noted on the pump nameplate or tamper with the internal high pressure relief valve. Creating pressure beyond rated capacities can result in personal injury.**
- **Before replenishing the oil level, retract the system to prevent overfilling the pump reservoir. An overfill can cause personal injury due to excess reservoir pressure created when the wrenches are retracted.**
- **The load must be under operator control at all times.**
- **Do not connect pump to hydraulic system powered by another pump.**

Power Supply

- **Electrical work must be performed and tested by a qualified electrician per local directives and standards.**
- **Disconnect the pump from the power supply and relieve pressure before removing the motor case cover or performing maintenance or repair.**
- **Check the total amperage draw for the electrical circuit you will be using. For example: Do not connect a pump that may draw 25 amps to a 20 amp fused electrical circuit.**
- **Never use an ungrounded power supply with this unit.**
- **Changing the voltage is an involved and, if incorrectly performed, hazardous procedure. Consult the manufacturer for specific information before attempting rewiring.**
- **Wire pump motors for counterclockwise rotation when viewed from the shaft end of the motor.**
- **Do not attempt to increase the power line capacity by replacing a fuse with another fuse of higher value. Overheating the power line may result in fire.**
- **Exposing electric pumps to rain or water could result in an electrical hazard.**
- **Avoid conditions that can cause damage to the power cord, such as abrasion, crushing, sharp cutting edges, or corrosive environment. Damage to the power cord can cause an electrical hazard.**

Circuit Breakers

⚠WARNING : If motor stops due to an overload or power outage:

- **Universal Motor: Move motor switch to OFF and control valve to neutral. Let motor cool or wait until power is restored. Reset circuit breaker switch in power panel. (The pump motor doesn't have a circuit breaker.)**
- **Single-phase Motor: Thermal overload switch will break circuit to the motor. Move motor switch to OFF and control valve to neutral. Allow motor to cool before switching on again, or wait until power is restored.**
- **Three-phase Motor: A magnetic starter switch breaks circuit to the motor. Move the motor switch to OFF and control valve to neutral. Remove the cover on motor control box. Let the motor cool or wail until power is restored. One of three reset buttons must be pushed in to reset motor. Replace cover.**

Tools

⚠ DANGER

- **Do not exceed rated capacities of the tools. Excess pressure may result in personal injury.**
- **Read and understand all safety and warning decals and instructions for devices attached.**
- **Inspect each tool and coupler before each shift or usage to prevent unsafe conditions from developing.**
- **Do not use tools if they are damaged, altered or in poor condition.**
- **Do not use tools with bent or damaged couplers or damaged port threads.**

- **Avoid pinch points or crush points that can be created by the tool.**
- **Never use extreme heat to disassemble hydraulic tools. Metal fatigue and/or seal damage will result and can lead to unsafe operating conditions.**

IMPORTANT:

- **Keep the tool clean at all times.**
- **Use an approved, high-grade pipe thread sealant to seal all hydraulic connections. PTFE tape can be used if only one layer of tape is used, and it is applied carefully (two threads back) to prevent the tape from being pinched by the coupler and broken off inside the pipe end. Any loose pieces of tape could travel through the system and obstruct the flow of fluid or cause jamming of precision-fit parts.**
- **Always use protective covers on disconnected quick couplers.**

Hydraulic Fluids

- **Properly dispose of all fluids, components and assemblies at the end of their useful life according to the applicable local waste-treatment and environmental regulations.**
- **Hydraulic fluid should be compatible with all hydraulic components.**

Transport

- **Do not lift hydraulic pump by any electrical cord, hose or coupler. To safely transport, always use the carrying handle, roll cage or suitable lifting aid, along with assistance and proper lifting techniques.**

Note: The guide cannot cover every hazard or situation so always do the job with SAFETY FIRST.

1. Filling the Reservoir

NOTE: Most pumps are shipped without hydraulic fluid in the reservoir. Hydraulic fluid may have been shipped in a separate container, but if hydraulic fluid is needed, use only approved Power Team hydraulic fluid rated at AW 46 47 cSt @ 38°C (215 SUS @ 100°F). If low temperature requirements are needed, use hydraulic fluid 5.1 cSt @ 100°C (451 cSt @ -40°C).

A. Clean the area around the filler cap to remove debris. Debris in the hydraulic fluid can damage the polished surfaces and precision-fit components of this pump.

B. Remove the filler cap and insert a clean funnel with a filter.

C. Fill the reservoir with hydraulic fluid to 1.3-3.8 cm (0.5-1.5 in.) from the cover plate.

D. Install the filler cap. Verify the breather-hole is open, if applicable.

E. Clean up any oil spillage to avoid causing a safety and/or environmental hazard.

2. Hydraulic Connections

A. Clean the areas around the fluid ports of the pump and wrench.

B. Inspect all threads and fittings for signs of wear or damage, replace as needed.

C. Clean all hose ends, couplers or union ends.

D. Remove the thread protectors from the hydraulic fluid outlets. Connect the hose assembly to the hydraulic fluid outlet, and couple the hose to the tool. Although a high-grade, non-hardening thread sealant is preferred, PTFE tape may be used to seal hydraulic connections if only one layer of tape is used. Apply carefully to prevent the tape from being pinched by the coupler and broken off inside the pipe end. Any loose pieces of tape could travel through the system and obstruct the flow of oil.

⚠CAUTION: To prevent personal injury from leaking hydraulic fluid, seal all hydraulic connections with a high-quality, non-hardening, pipe thread sealant.

IMPORTANT: Sealant tape or non-hardening sealer tape can be used to seal hydraulic connections if only one layer of tape is used. Apply tape carefully, two threads back, to prevent it from being pinched by the coupler and broken off inside the system. Loose pieces of sealant could travel through the system and obstruct the flow of fluid or cause jamming of precision-fit parts.

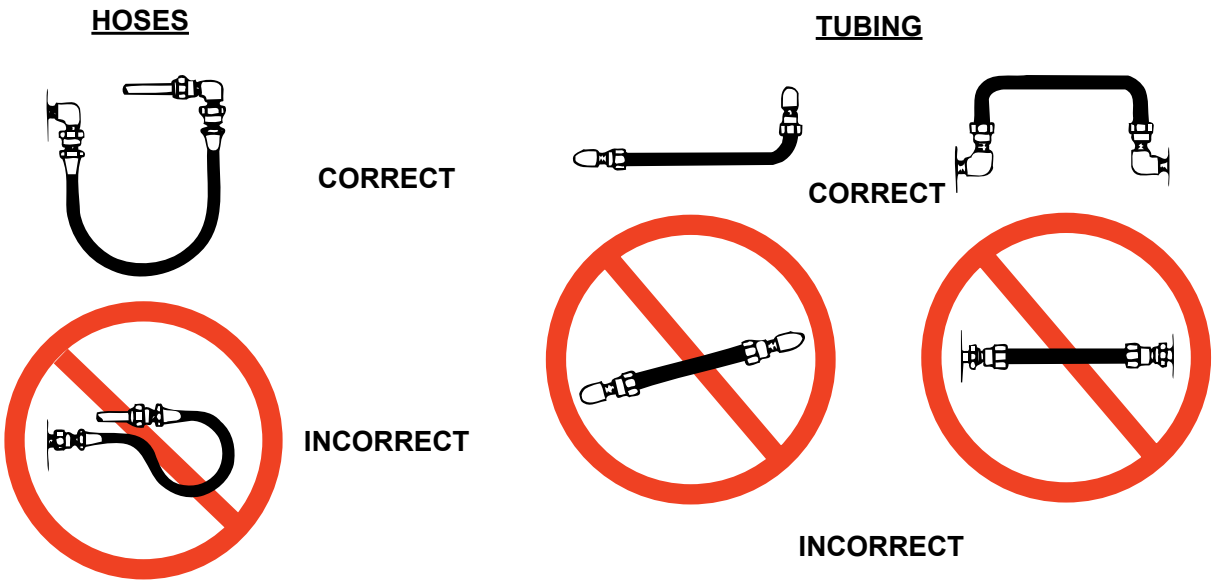

Fig. 1. Hoses and Tubing Connections

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3. Electric Motor Operation

⚠ WARNING: Electrical work must be performed and tested by a qualified electrician per local directives and standards.

Universal Motor: The universal motor is wired for 115 or 230 volts, 50/60 cycles according to the customer's request. **This motor cannot be rewired.**

A. Verify the valve is in the neutral or hold position (If applicable).

B. Connect the power cord to an appropriate power source.

⚠ CAUTION

- **The correct voltage is required for the pump to operate. Verify the voltage rating on the pump motor name plate matches the outlet or power source you are using. Low voltage may cause: an overheated motor; a motor that fails to start under load; motor surging when trying to start; or a stalled motor before maximum pressure is reached.**
- **Check the voltage at the motor with the pump running at full pressure.**
- **Never run the motor on long, light gauge (small cross-section) extension cords. Refer to the minimum recommended gauge (cross-section) chart below.**

AMPS at Maximum Hyd. Pressure	Electrical Cord Size AWG (mm^2) 3.2 Volt Drop			
	Length of Electrical Cord			
	0-25 ft. (0-8 m)	25-50 ft. (8-15 m)	50-100 ft. (15-30 m)	100-150 ft. (30-46 m)
6	18 (0.75)	16 (1)	14 (1.5)	12 (2.5)
10	18 (0.75)	14 (1.5)	12 (2.5)	10 (4)
14	16 (1)	12 (2.5)	10 (4)	8 (6)
18	14 (1.5)	12 (2.5)	8 (6)	8 (6)
22	14 (1.5)	10 (4)	8 (6)	6 (10)
26	12 (2.5)	10 (4)	8 (6)	6 (10)
30	12 (2.5)	10 (4)	6 (10)	4 (16)

Table 1. Minimum Recommended Gauge

C. Start the pump and shift as required.

D. Turn off the pump when not in use.

4. Adjusting the Hydraulic Gauge

Automatic Dump Valve

To monitor line pressure when using an automatic dump valve, a tee fitting is used between the valve and the pressure switch to adapt a hydraulic pressure gauge.

Locate the adjustment screw on the gauge (See Figure 2) and make adjustments as needed with a screwdriver. The adjustment screw is located on the lower right back rim of the gauge. You must reach under the portion of the shroud that the gauge is mounted in.

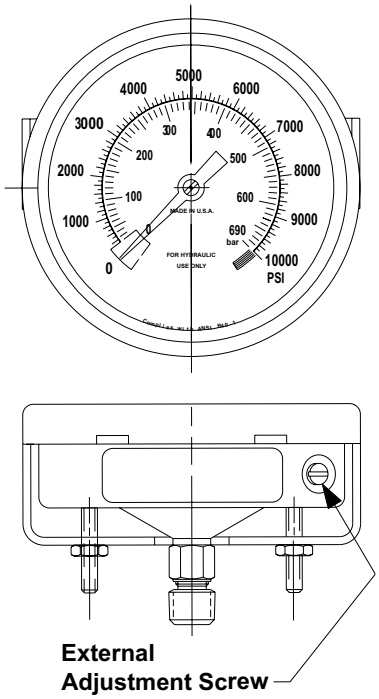

Figure 2

5. Bleeding Air from the System

After all connections are made, the hydraulic system must be bled of any trapped air. With no load on the system and the pump vented and positioned higher than the hydraulic device, cycle the system several times. Check the reservoir fluid level and fill to proper level with Power Team hydraulic fluid as necessary. If there is a problem contact the Power Team.

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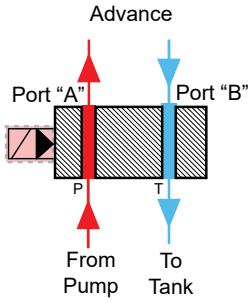
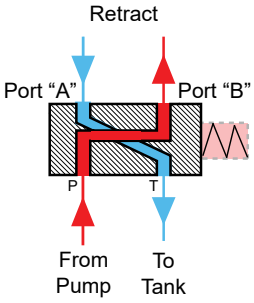
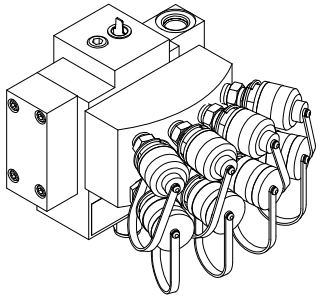
Max. Capacity: 690 bar (10,000 psi)

	Valve Function	Use with Cylinder Type	Valve No.
PE55TWP-4-BS **PE55TWP-4-220-BS** **PE55TWP-4-CF-BS** **PE55TWP-4-220-CF-BS**	SOLENOID "ON"  SOLENOID "OFF" 	Torque Wrench only NOT FOR LIFTING	3000113BK (4-way, 2-Position, Open Center, Solenoid/ Pneumatic Controlled, Pilot Operated, 4 Tool)
		Diagram	
			

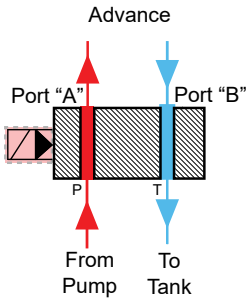
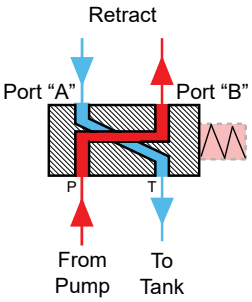
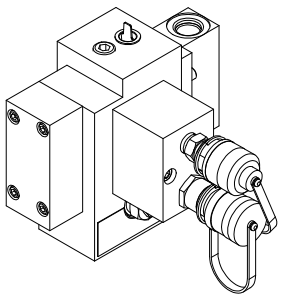
	Valve Function	Use with Cylinder Type	Valve No.
PE55TWP-220-BS **PE55TWP-BS**	SOLENOID "ON"  SOLENOID "OFF" 	Torque Wrench only NOT FOR LIFTING	421293BK (4-way, 2-Position, Open center, Solenoid/ Pneumatic Controlled, Pilot Operated, 1 Tool)
		Diagram	
			

Table 2. Pump Configurations

PERFORMANCE SPECIFICATION

The information in the following charts can be used as a basis to determine if the system is performing as expected during operation.

Pump	RPM	Amp Draw at 690 bar (10,000 psi) (115V)	Amp Draw at 690 bar (10,000 psi) (230V)	dBA at Idle and 690 bar (10,000 psi)
PE55TWP-4-BS	12,000	25	15	90/89

Table 3. Drive Unit Requirements

Pump	Max. Pressure Output bar (psi)	Fluid Delivery (cu. in./min.. @)					
		0 bar (0 psi)	7 bar (100 psi)	50 bar (700 psi)	70 bar (1,000 psi)	345 bar (5,000 psi)	690 bar (10,000 psi)
PE55TWP-4-BS	690 bar (10,000 psi)	704	-	440	-	74	56
Typical delivery. Actual flow varies with field conditions.							

Table 4. Fluid Pressure Chart

1. Priming the Pump

When operating the pump for the first time

A. Valve and hose connections must be tight, and the reservoir must be filled to the proper oil level.

B. Jog the pump several times to build pressure. If the pump doesn't build pressure, it may not be primed. Disconnect a hose from the system and route it back to the pump reservoir. Run the pump until a steady flow of oil is observed free of suspended air bubbles. Reconnect the hose to the system.

C. Run the tool several times to eliminate air from the system. For more complete instructions, refer to the section titled "Bleeding Air from the System."

D. The pump is now ready to be put into regular operation.

IMPORTANT: After eliminating trapped air from system, retract the wrenches and refill the pump reservoir to 1/2" from the top of the filler hole.

2. Motor Control Operation

A. Connect the power cord to an appropriate power source.

B. Place the motor control switch in the ON position or the REMOTE position, if applicable. Refer figure 3.

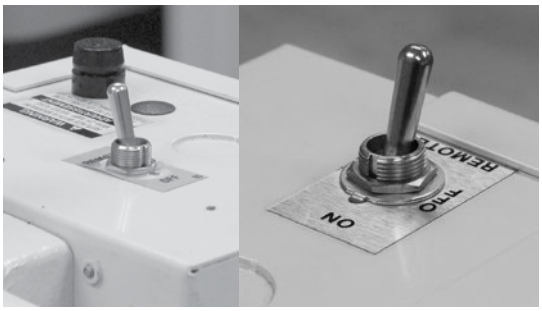


Fig. 3. Motor Control Switches

C. Refer to figure 4. Press rocker switch so it is in the OFF position.

D. While the rocker switch is in the OFF position, depress and release the SET button. This arms the system and the pump is ready to use.

E. Depress the rocker switch to the ADVANCE position and motor will start and tool will advance. Release rocker switch to select RETRACT and tool will return to starting position. At this point the rocker switch can again be depressed to ADVANCE to start cycle over until fastener is tight.

F. Depress rocker switch to OFF position to stop pump.

NOTE: If pump is turned off by operator or if the built in retract timer shuts down the unit, follow C, D and E sequence above to ensure restart.

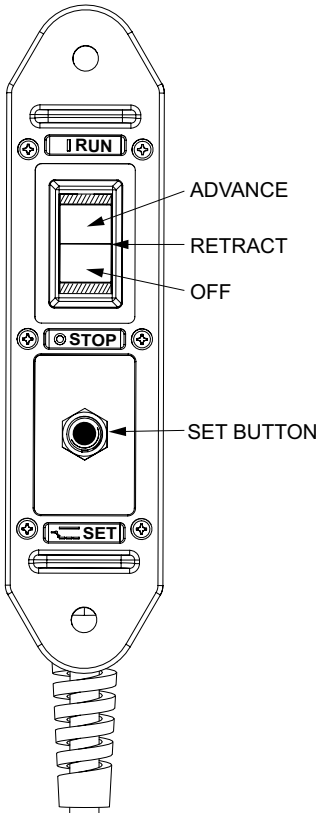


Fig. 4. Hand Pendant Controller

3. Pressure Regulating Controls

User adjustable relief valve (if equipped): All others are factory preset

NOTE: For easy adjustment of the pressure regulating valve, always adjust the pressure by increasing to the desired pressure setting.

A. Loosen the locknut on the pressure regulating valve, and back the adjusting screw or knob out a few turns by turning it in a counterclockwise (CCW) direction (See Figure 5). This will decrease the setting to a lower than desired pressure.

B. The pump must be completely connected electrically and hydraulically. Start the pump and build pressure.

C. Slowly turn the adjusting screw or knob in a clockwise (CW) direction. This gradually increases the pressure setting. When the desired pressure is reached, cycle the pump again to verify correct pressure setting. Once set, lock the adjusting screw in position by tightening the locknut. Shut off the pump.

IMPORTANT: The pressure range is from 1,000 to 10,000 PSI (69 to 690 BAR) depending on the pump model.

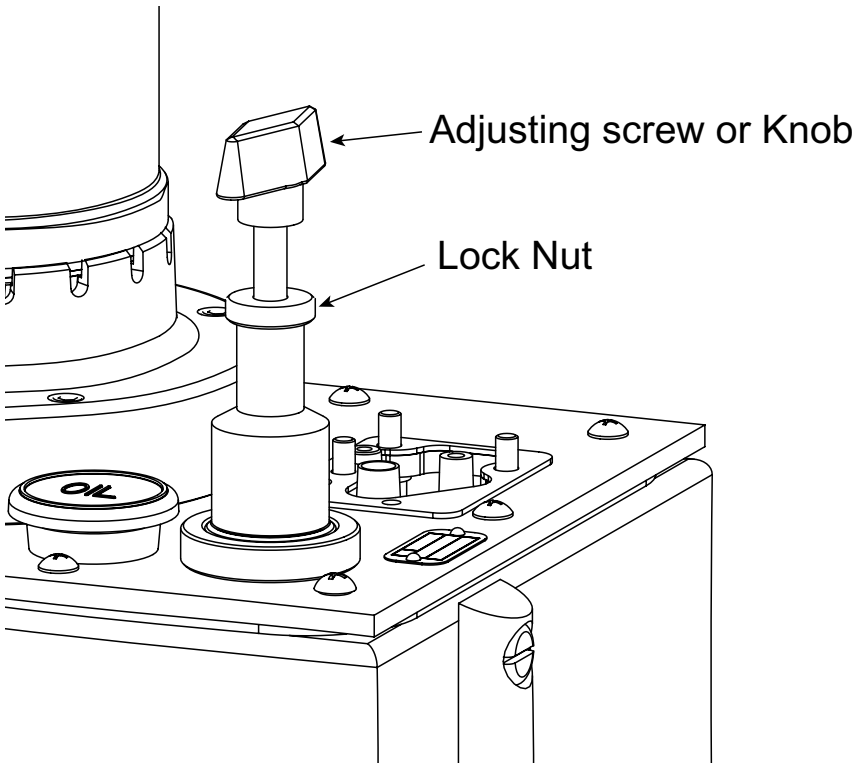


Fig. 5. Pressure Regulator Valve

⚠ WARNING: To prevent personal injury,

- **Disconnect the unit from the power supply before performing maintenance or repair procedures.**
- **Repairs and maintenance are to be performed in a dust-free area by a qualified technician.**

1. System Evaluation

The components of your hydraulic system — tools, pumps, hoses, and couplings — all must be:

- Rated for the same maximum operating pressure.
- Correctly connected.
- Compatible with the hydraulic fluid used.

A system that does not meet these requirements can fail, possibly resulting in serious injury. If you are in doubt about the components of your hydraulic system, contact Power Team Technical Support.

2. Inspection

Keep a dated and signed inspection record of the equipment. Before each use, the operator or other designated personnel should visually inspect for the following conditions:

- Cracked or damaged tool.
- Excessive wear, bending, damage, or insufficient thread engagement.
- Leaking hydraulic fluid.
- Scored or damaged piston rod.
- Incorrectly functioning or damaged heads and caps.
- Loose bolts or cap screws.
- Damaged or incorrectly assembled accessory equipment.
- Modified, welded, or altered equipment.
- Bent or damaged couplers or port threads.

3. Periodic Cleaning

⚠ WARNING: Contamination of the hydraulic fluid could cause the valve to malfunction. Loss of the load or personal injury could result.

Establish a routine to keep the hydraulic system as free from debris as possible.

- Seal unused couplers with dust covers.
- Keep hose connections free of debris. Equipment attached to a tool must be kept clean.
- Keep the breather-hole in the filler cap clean and unobstructed.
- Use only Power Team hydraulic fluid. Replace hydraulic fluid as recommended, or sooner if the fluid becomes contaminated. Never exceed 300 hours of use between fluid changes.

4. Hydraulic Fluid Level

A. Check the fluid level in the reservoir after each 10 hours of use. The fluid level should be 1.3 cm (0.5 in.) from the top of the fill hole when all cylinders are retracted.

B. Drain, flush, and refill the reservoir with an approved, high-grade hydraulic oil after every 300 hours of use. The frequency of oil changes depends upon general working conditions, severity of use, the overall cleanliness and care given to the pump.

5. Draining and Flushing the Reservoir

IMPORTANT: Clean the pump exterior before the pump interior is removed from the reservoir.

A. Remove the ten screws fastening the motor and pump assembly to the reservoir.

IMPORTANT: Do not damage the gasket or bump the filter or pressure regulating valves when lifting the pump and motor off the reservoir. See Figure 6.

B. Clean the inside of the reservoir, and fill with a suitable Power Team hydraulic fluid. Rinse the filter clean.

C. Place the pump and motor assembly back onto the reservoir, and secure with two machine screws assembled on opposite corners of the cover plate.

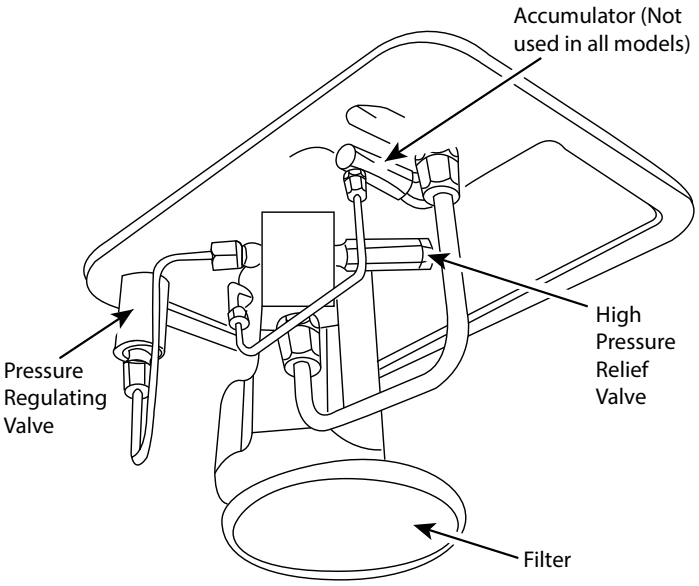


Fig. 6. Pump Assembly

IMPORTANT: The hydraulic flow control valve must be in the neutral position for the following step. If the pump is equipped with a valve that has only an advance or retract position, place the valve in the advance position, and connect a hose to the advance port on the valve. Place the other end of the hose into the oil filler plug hole.

D. Run the pump for several minutes. Then disconnect the motor and pump assembly, and drain and clean the inside of the reservoir.

E. Fill the reservoir with an approved, high-grade hydraulic oil. Place the pump and motor assembly (with gasket) on the reservoir, and thread the ten screws. Tighten securely and evenly.

6. Adding Hydraulic Fluid to the Reservoir

A. Retract the cylinder(s) devices.

B. Disconnect the power supply.

C. Clean the entire area around the filler plug.

D. Remove the filler plug, and install a clean funnel with a filter.

E. Use only Power Team hydraulic fluid AW 46 47 cSt @ 38°C (215 SUS @ 100°F).

F. If low temperature requirements are needed, use hydraulic fluid 5.1 cSt @ 100°C (451 cSt @ -40°C).

7. Sound Reduction - Electrically Powered Motor

The electrically powered hydraulic pump operates in the 90-95 dBA range. If further sound reduction is desired, any of the following options will help reduce the sound level.

A. Install a pressure switch to automatically shut off the motor when maximum pressure is reached (holding cycle).

B. Install casters (7.5L (2 Gallon) reservoir only).

C. Contact Power Team Hydraulic Technology technical support for products more suitable to your application.

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8. Hose Connections

⚠CAUTION :To prevent personal injury from leaking hydraulic fluid, seal all hydraulic connections with a high-quality, non-hardening, pipe thread sealant.

IMPORTANT: Sealant tape or non-hardening sealer tape can be used to seal hydraulic connections if only one layer of tape is used. Apply tape carefully, two threads back, to prevent it from being pinched by the coupler and broken off inside the system. Loose pieces of sealant could travel through the system and obstruct the flow of fluid or cause jamming of precision-fit parts.

9. Storage

Store the unit in a dry, well-protected area where it will not be exposed to corrosive vapors, dust, or other harmful elements. If a unit has been stored for an extended period of time, it must be thoroughly inspected before it is used.

10. Checking Brushes on Universal Motors

To help prevent premature failure of the armature, check the brushes periodically:

A. Remove the metal brush cover plates.

B. Remove the brush holder caps and brush assemblies.

C. The brush assemblies must be replaced if they are 4.5mm (1/8") long or less. See Figure 7.

D. Install brush assemblies, brush holder caps, and metal brush cover plates.

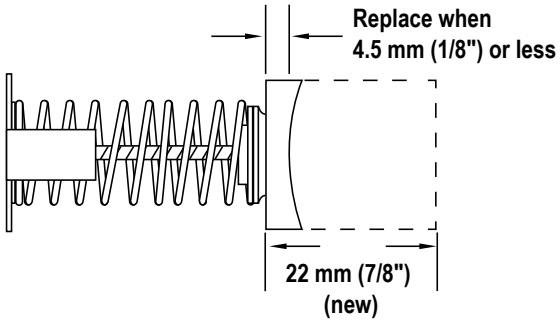

Fig. 7. Brush Inspection

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TROUBLESHOOTING GUIDE

⚠ WARNING

- **Repair work or troubleshooting must be performed by qualified personnel who are familiar with this equipment.**
- **Disconnect the power supply before removing the electrical cover. Electrical work should be performed by a qualified electrician.**

- **Check for system leaks by using a hand pump to apply pressure to the suspect area. Watch for leaking fluid and follow it back to its source. Never use your hand or other body parts to check for a possible leak.**

NOTES:

- **For a detailed parts list or to locate a Power Team Authorized Hydraulic Service Center, contact your nearest Power Team facility.**
- **Plug the outlet ports of the pump when checking for leakage to determine if the leakage is in the pump or in the tool.**

TROUBLE	CAUSE	SOLUTION
Electric motor does not run.	1. Pump not turned ON.	1. Position switch to ON position or push the START button.
	2. Unit is not plugged in.	2. Plug in unit.
	3. No voltage supply.	3. Check line voltage. Check reset button on power panel.
	4. Worn brushes.	4. Replace brushes.
	5. Circuit breaker tripped because total amperage draw too high for existing circuit.	5. Use an alternate circuit or have a qualified electrician add an additional circuit.
	6. Overheated motor (single-phase motor). Magnetic starter disengaged (three-phase motor). Thermal protector open.	6. Wait for motor to cool before restarting. Reset thermal protector. (Single-phase motor will reset automatically.)
	7. Faulty thermal protector (single-phase motor). Faulty magnetic starter (three-phase motor).	7. Replace defective parts.
Electric motor will not shut off.	1. Defective motor controls.	1. Disconnect unit from power supply; contact a Power Team Service Center.
Electric motor stalls, surges, overheats, or will not start under load.	1. Low voltage	1. Refer to electric motor information in Initial Setup section.
	2. Electrical cord size too small.	2. Refer to electrical cord chart in Initial Setup section.
Electrical overload protector keeps tripping.	1. Wired incorrectly.	1. Disconnect unit from power supply; have qualified electrician review motor and circuit wiring.

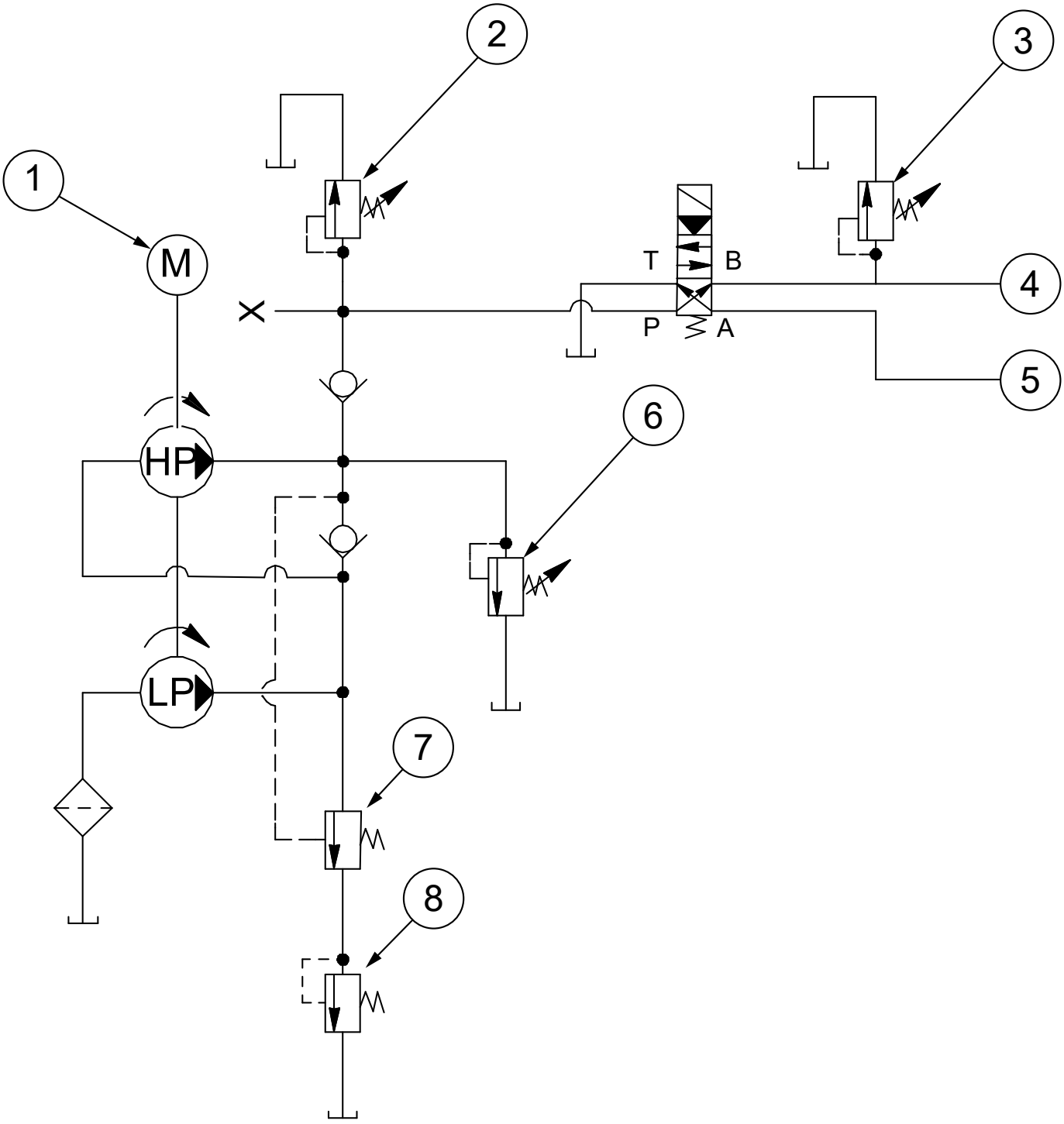
Troubleshooting Guide Continued

TROUBLE	CAUSE	SOLUTION
Pump delivers excess fluid pressure.	1. Faulty pressure gauge.	1. Replace gauge.
	2. Relief valve set incorrectly.	2. Contact a Power Team Service Center.
Pump is not delivering fluid, or delivers only enough fluid to advance connected components partially or erratically or operation to slow.	1. Fluid level too low.	1. Add fluid, refer to filling the pump reservoir in Initial Setup section.
	2. Loose-fitting coupler to component.	2. Verify quick-disconnect couplings to tools are completely coupled. Couplers may need to be replaced because ball check does not stay open due to wear.
	3. Air in system.	3. Refer to Initial Setup in this manual to bleed air from system.
	4. Air leak in suction line.	4. Check and tighten suction line.
	5. Debris in pump or filter plugged.	5. Clean pump filter. If problem persists, disconnect from power supply contact authorized Power Team service center.
	6. Fluid bypasses through the tool.	6. Remove tool; cap hoses. Check pump and valve for leaks.
	7. Cold fluid or fluid too heavy. (Hydraulic fluid is of a higher viscosity than necessary.)	7. Drain, flush, and refill reservoir using a lighter weight fluid. Refer to General Maintenance section.
	8. External relief valve or low pressure unloading valve out of adjustment.	8. Refer to Adjusting the Pressure Regulating Valve.
	9. Power unit/reservoir capacity is too small for the size of the tool(s) used.	9. Use smaller tool(s) or larger reservoir.
	10. Vacuum in reservoir.	10. Clean plugged vent in filler plug.
Pump builds pressure but cannot maintain pressure.	1. Fluid leakage.	1. Look for external leaks. If no fluid leakage is visible, the problem is internal. If using a double-acting tool, remove it from the system to ensure the leak is not in the tool. Seal leaking pipe fittings with pipe sealant.
	2. Leaking pressure switch seal.	2. Replace pressure switch.

Troubleshooting Guide Continued

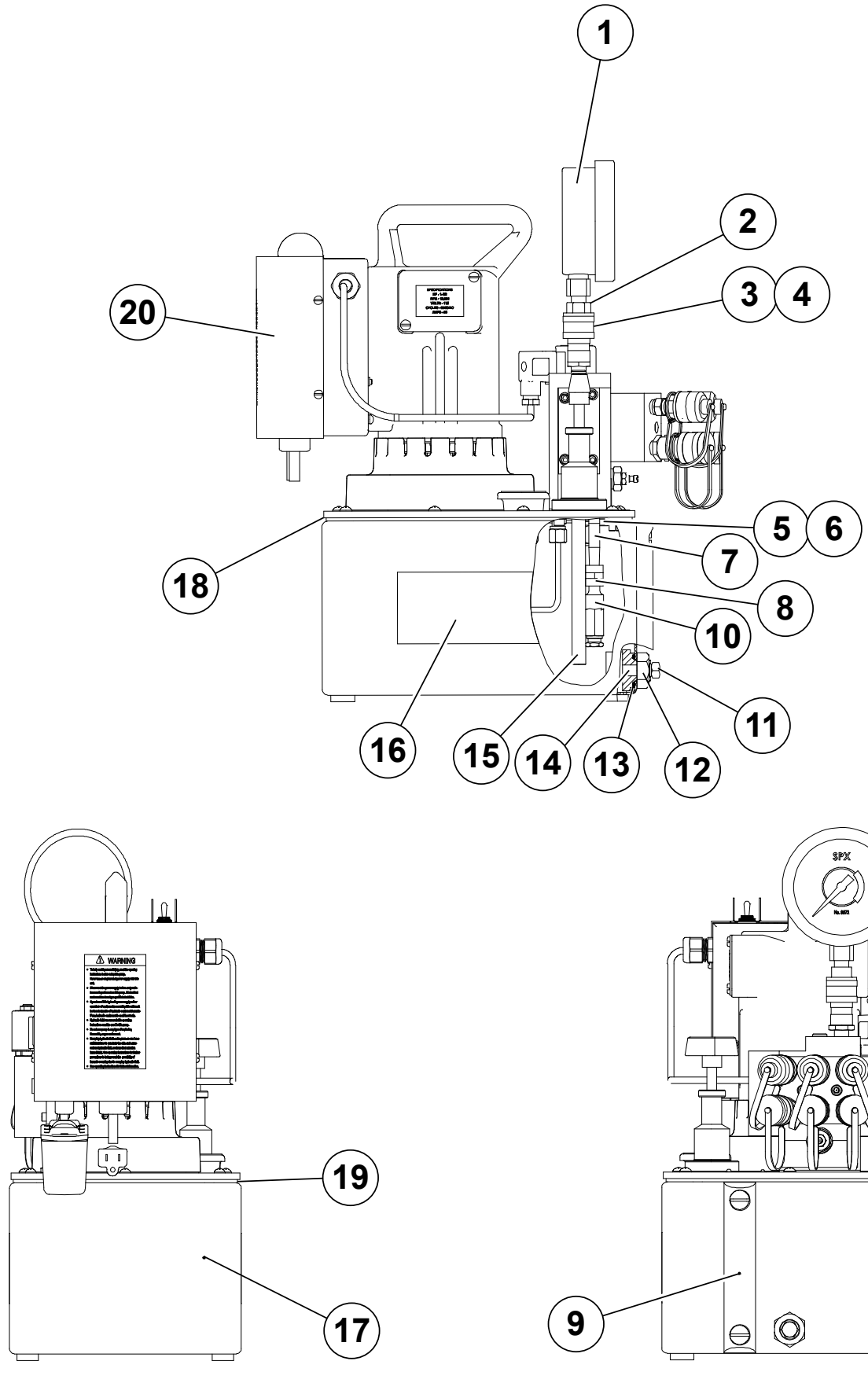
TROUBLE	CAUSE	SOLUTION
Pump does not build to full pressure.	1. Faulty pressure gauge.	1. Replace pressure gauge.
	2. Check for external leakage.	2. Seal faulty pipe fittings with pipe sealant.
	3. Check external pressure regulator. Check relief valve setting.	3. Refer to Adjusting the Pressure Regulating Valve.
	4. Look for internal leakage in double-acting tools.	4. Remove tool from pump. If pump builds full pressure, tool is defective.
	5. Inadequate air pressure (air motor only).	5. Refer to Initial Setup section.
Erratic action	1. Air in system.	1. Check for leaks. Refer to bleeding procedure.
	2. Internal leakage in attached components.	2. Refer to manufacture's information for attached component.
	3. Attached component sticking or binding.	3. Refer to manufacture's information for attached component.
	4. Malfunctioning valve.	4. Verify connections. Contact authorized Power Team Service Center.

HYDRAULIC SCHEMATIC



ITEM	DESCRIPTION
1	MOTOR
2	HIGH PRESSURE RELIEF VALVE 717 BAR (10,400 PSI)
3	RETRACT PORT PRESSURE CONTROL 110 BAR (1,600 PSI)
4	RETRACT
5	ADVANCE
6	EXTERNAL PRESSURE REGULATOR 703 BAR (10,200 PSI)
7	LOW PRESSURE UNLOADING VALVE 69 BAR (1,000 PSI)
8	SUPERCHARGE PRESSURE REGULATOR 14 BAR (200 PSI)

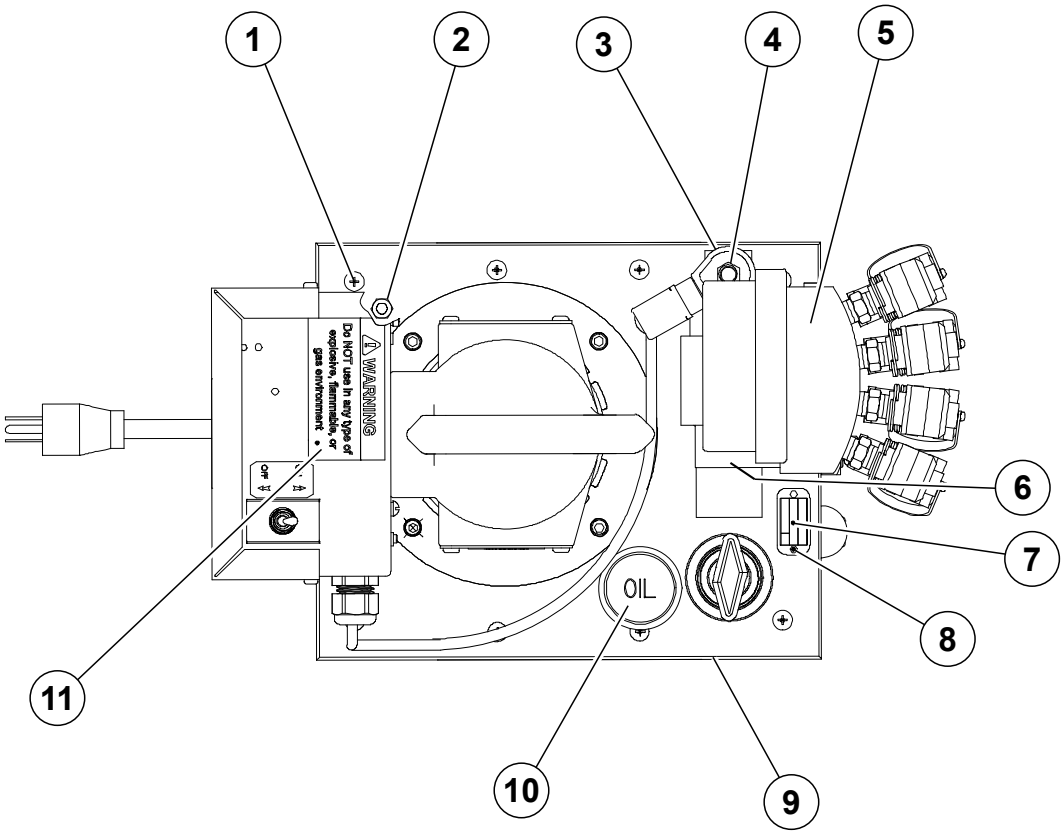
Basic Pump Assembly Side View



Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	9072	GAUGE	1
2	*251411	QUICK PLUG COUPLER	1
3	*251410	QUICK COUPLER	1
4	*252364	DUST CAP	1
5	10008	SCREW, 1/4-20 X 0.75 (Note: Apply Loctite ® #243 or equivalent to threads and torque to 12-14 Nm (110-120 in-lbs.))	3
6	10245	LOCK WASHER	3
7	15456	STRAIGHT FITTING	1
8	18841	STRAIGHT FITTING	1
9	350431	FLUID LEVEL GAUGE	1
10	21278-15	RELIEF VALVE	1
11	17147	PLUG FITTING	1
12	10396	JAM NUT	1
13	14725	O-RING	1
14	351000	DRAIN	1
15	200609	DRAIN TUBE	1
16	1000543	SPX BOLTING SYSTEMS 6" x 2.6" DECAL	2
17	65599BK2	TANK PT 02.00 GAL	1
18	3000646	COVER PLATE ASSEMBLY (115 VAC)	1
19	40164	RESERVOIR RECT GASKET	1
20	3000114	MOTOR CONTROL ASSEMBLY(115 VAC)	1
	3000116	MOTOR CONTROL ASSEMBLY(230 VAC)	1
PARTS INCLUDED BUT NOT SHOWN			
	21091	DRIVE COUPLING	1
Part numbers marked with an asterisk (*) are contained in valve assembly (No. 3000113)			

Basic Pump Assembly Top View



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	10177	ROUND SCREW	10	
2	251599	BREATHER FILTER VENT	1	
3				Torque cartridge valve body to 12-14 Nm (110-120 in-lbs)
4				Torque valve solenoid retaining nut to .6 Nm (5 in-lbs)
5	3000113BK	DIRECTIONAL VALVE	1	
6	351095	VALVE GASKET	1	
7	251906	PRODUCT NAME PLATE	1	
8	10575	DRIVE SCREW	2	
9	40164	RESERVOIR RECT GASKET	1	
10	350925	FILLER CAP	1	
11	250447	DECAL, WARNING NO USE HAZ ENVIROMENT	1	

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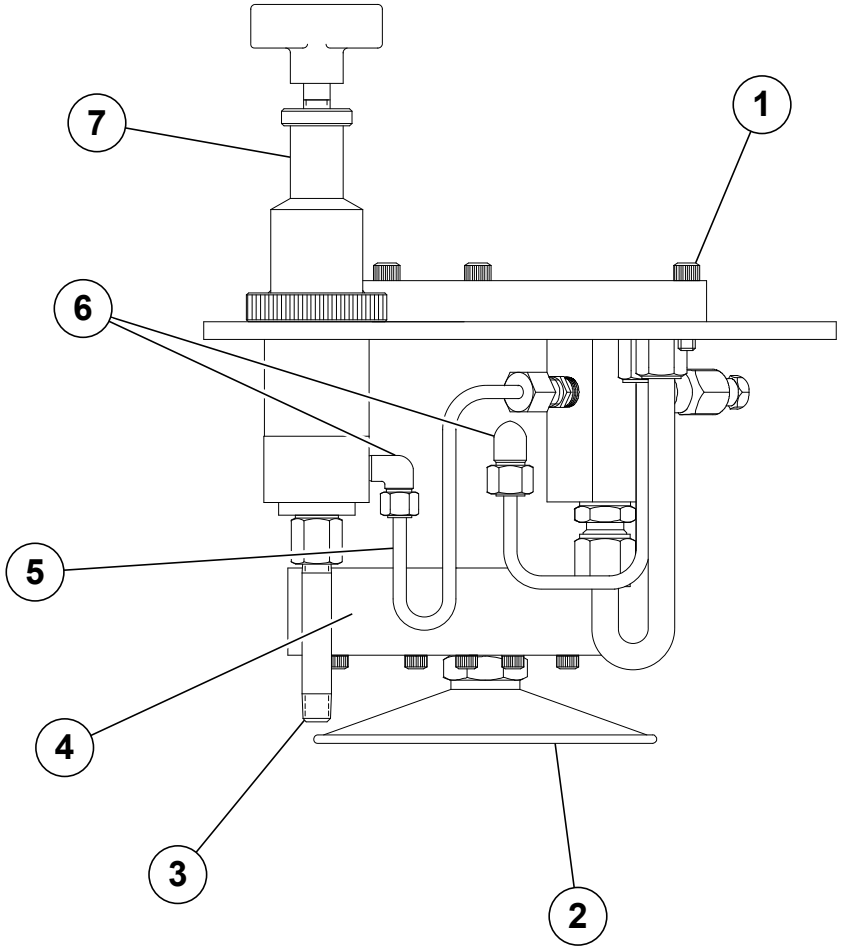
Cover Plate Assembly #3000646



ITEM	PART NO.	DESCRIPTION	QTY.
1	10016	SCREW, SHC 1/4-20 X 1.00 HEX HD	3
2	21344	FILTER SCREEN	1
3	15456	STRAIGHT FITTING	1
4	41064-2	PUMP BASIC - USE 27207 FOR REP PARTS	1
5	252056	PRESSURE REGULATOR TUBE	1
6	16177	TUBE FITTING	2
7	420963	PRESSURE REGULATOR	1

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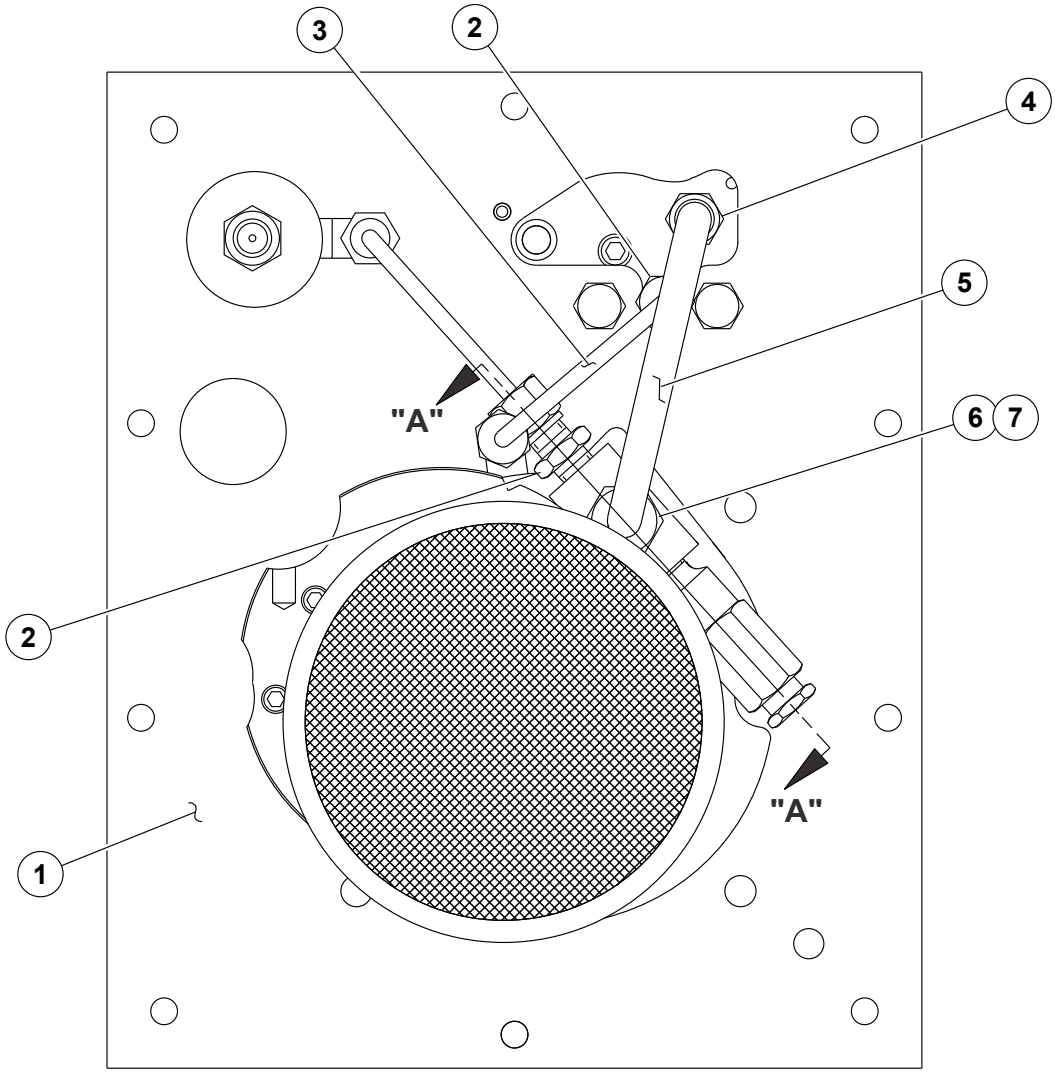
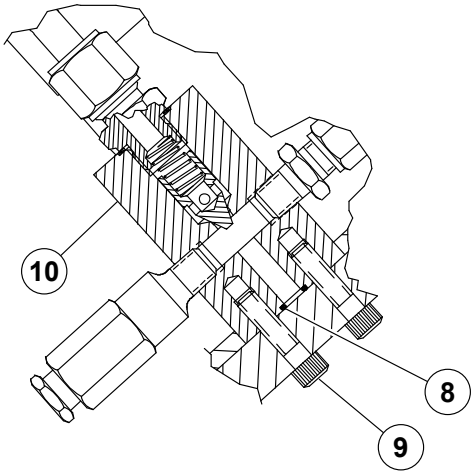
Cover Plate Assembly Bottom View #3000646



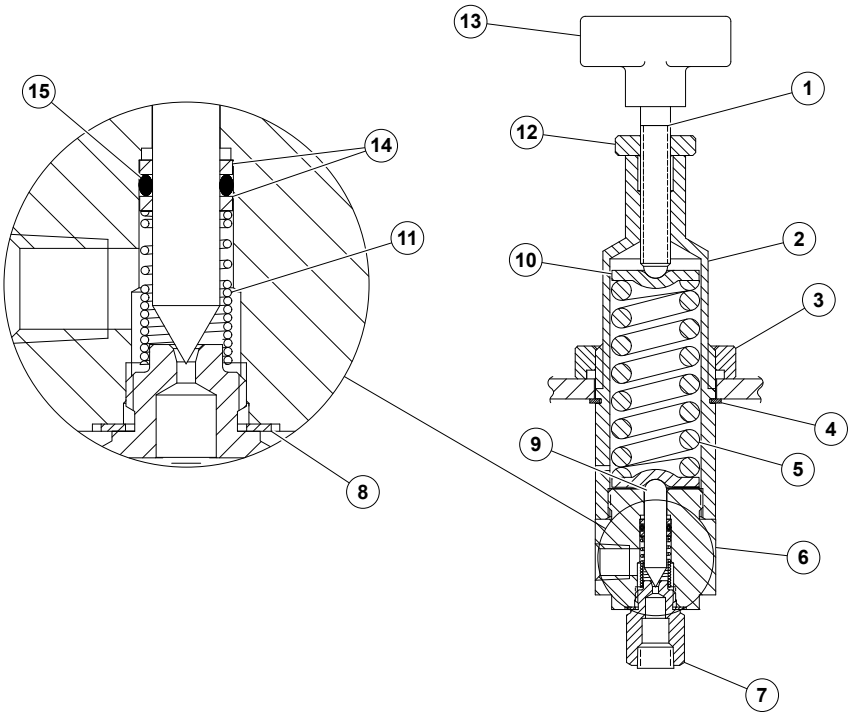


SECTION "A-A"

Parts List Continued

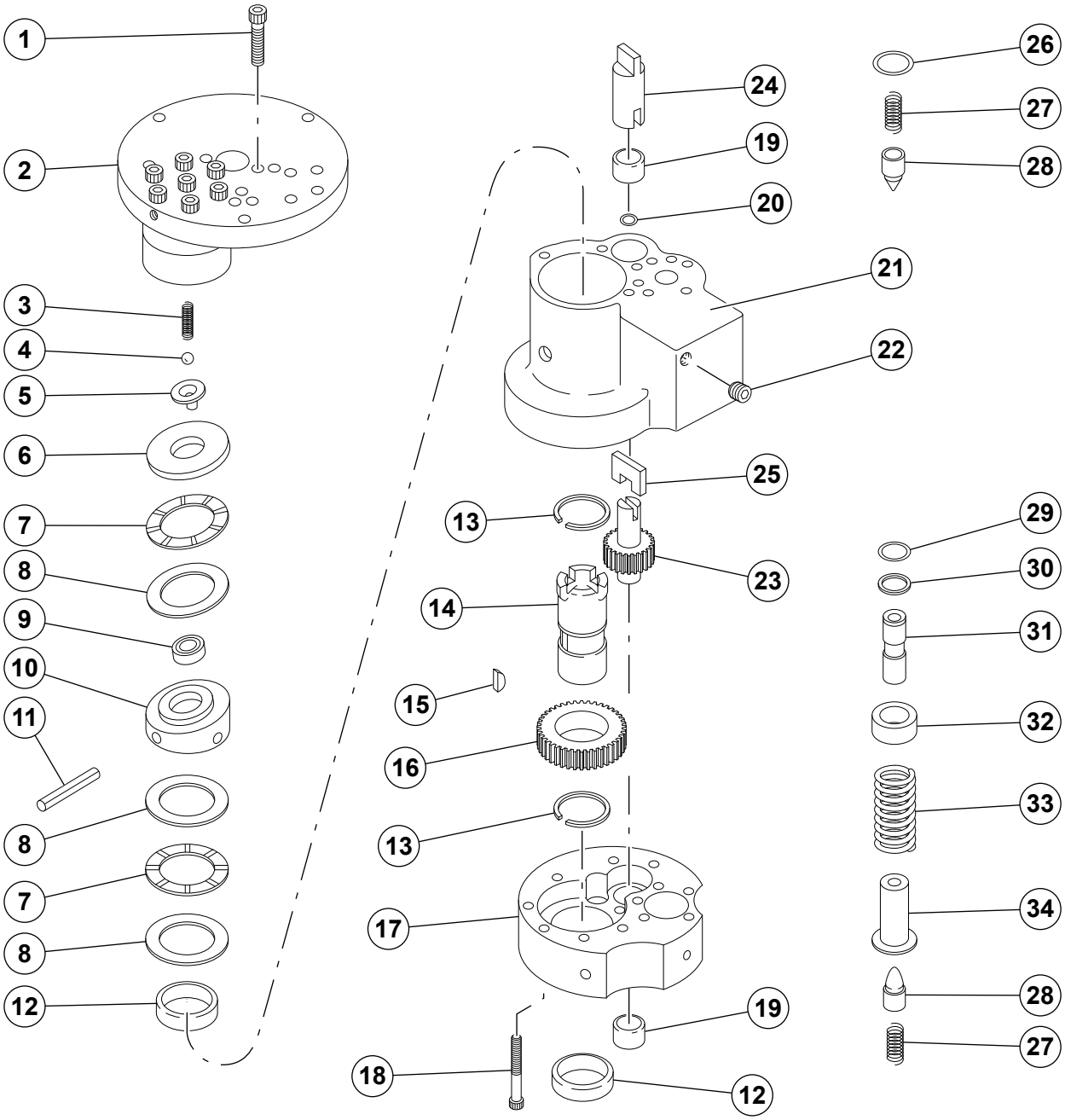
ITEM	PART NO.	DESCRIPTION	QTY.
1	65043BK2	COVER PLATE (Machined)	1
2	14844	STRAIGHT FITTING	2
3	252055	PRESSURE REGULATOR TUBE	1
4	10661	STRAIGHT TUBE FITTING	1
5	351203	OIL LINE TUBE	1
6	10430	SLEEVE TUBE	1
7	10431	FITTING, NUT 5/8-18 F (3/8 OD Tube)	1
8	10266	O-RING	1
9	10015	SCREW, 1/4-28 X 1.00 (Torque to 15-20 Nm (130-180 in-lbs.))	2
10	21277-2	CHECK AND 10000 PSI RELIEF VALVE	1

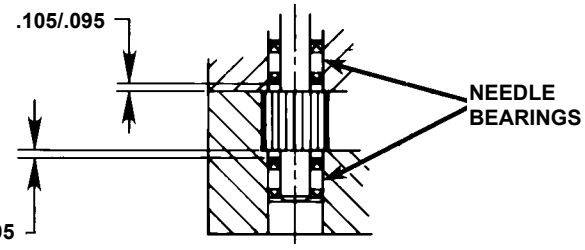
Pressure Regulator #420963



ITEM	PART NO.	DESCRIPTION	QTY.
1	215721	ADJUSTMENT STEM (Note: Assemble to Locknut (Item #12) with Loctite® #242 or equivalent.)	1
2	350943	BODY VALVE	1
3	251578	KNURLED NUT	1
4	250637	EXTERNAL RETAINING RING	1
5	215429	COMPRESSION SPRING	1
6	420891	REGULATOR BODY	1
7	*350944	FITTING SEAT	1
8	*14874	SOFT COPPER WASHER	1
9	*309079	POPPET	1
10	215428	SPRING RETAINER	2
11	215431	SPRING SLEEVE (Note: Assemble closed coils of spring form towards fitting seat (Item #7))	1
12	215683	REGULATOR LOCK NUT	1
13	215693	KNOB	1
14	*215430	WASHER	2
15	10266	O-RING	1
Part numbers marked with an asterisk (*) are contained in repair kit (No. 9633-KIT).			

Basic Pump #41064-2



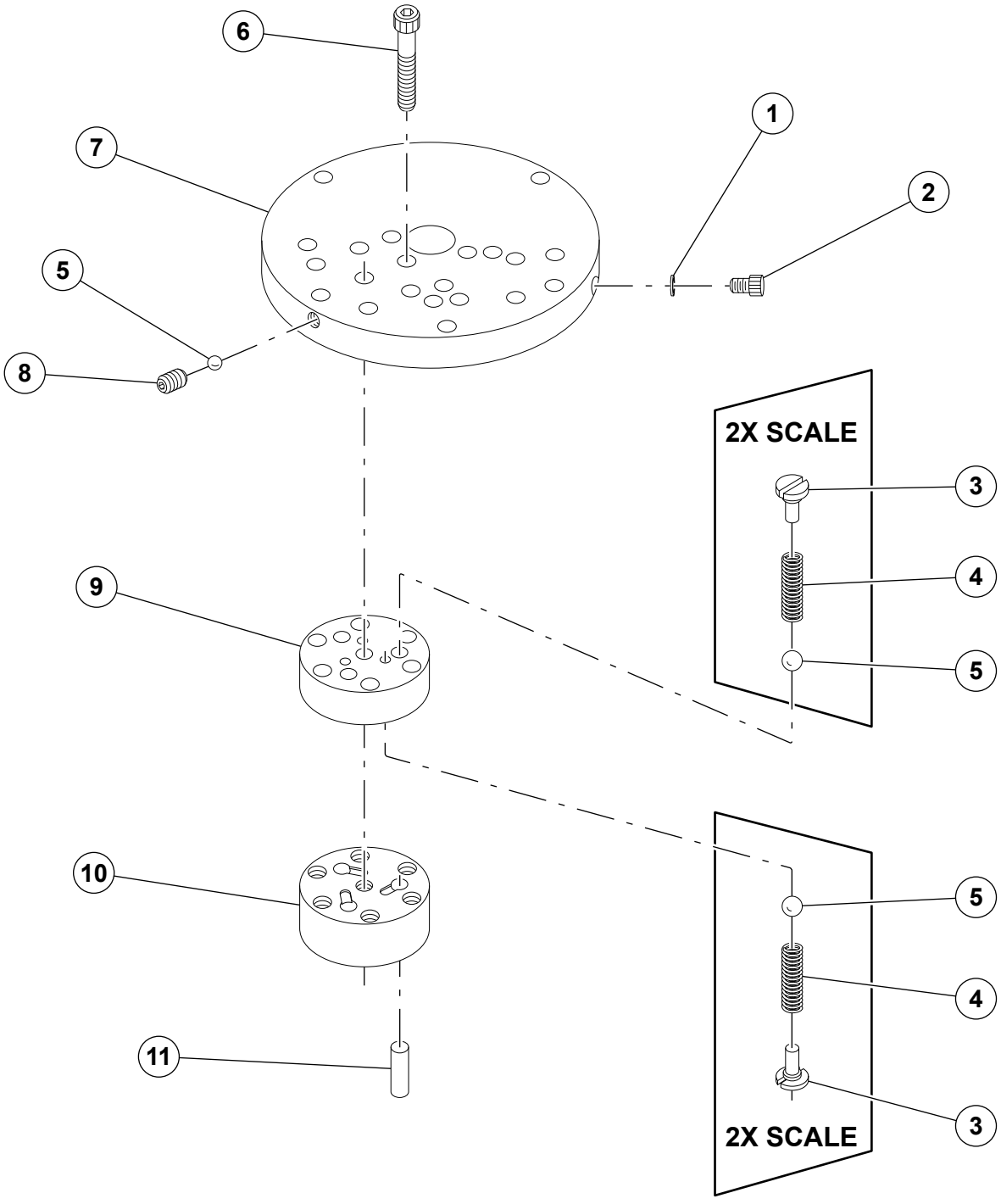


When replacing the needle bearings on the driver gear of the basic pump, the dimensions shown must be as specified

Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	10020	SCREW, 1/4-20 X 1.25 (Torque to 19-21 Nm (170-190 in-lbs.))	9
2	33113	HIGH PRESSURE PUMP	1
3	10361	SPRING COMPRESSION	1
4	10375	STEEL BALL	1
5	23547	BEARING TOP PLATE	1
6	23548	TOP PLATE	1
7	11228	THRUST BEARING	2
8	11813	BEARING RACE	3
9	11814	BALL BEARING	1
10	23549	10 DEGREE ANGLE PLATE	1
11	11955	SPRING SLOTTED PIN	1
12	11064	NEEDLE BEARING	2
13	11261	EXTERNAL RETAINING RING	2
14	23556	SHAFT	1
15	11821	WOODRUFF KEY	1
16	23574	DRIVE GEAR	1
17	40072	PUMP END PLATE	1
18	10001	SCREW, #10-32 X 1.75 (Torque to 6-7 Nm (50-60 in-lbs.))	13
19	11198	NEEDLE BEARING	2
20	10266	O-RING	1
21	40071	PUMP BODY	1
22	10427	PLUG FITTING	1
23	20774	DRIVE GEAR	1
24	21092	ADAPTER	1
25	21093	"C" KEY	1
26	10303	O-RING	1
27	10425	SPRING COMPRESSION	2
28	20771	POPPET	2
29	10271	O-RING	1
30	12389	BACKUP WASHER	1
31	20849	SPOOL	1
32	23255	SPRING GUIDE	1
33	10426	SPRING COMPRESSION	1
34	23256	SPRING GUIDE	1

High Pressure Pump Assembly #33113

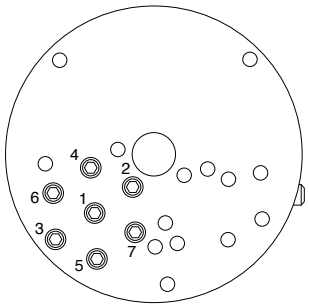


ITEM	PART NO.	DESCRIPTION	QTY.
1	10442	COPPER WASHER	1
2	10002	SOC. HD. CAP SCREW (Torque to 16-18 Nm (140-160 in-lbs.))	1
3	*24549	VALVE GUIDE	6
4	*10445	COMPRESSION SPRING	6
5	*12223	STEEL BALL	7
6	*10023	SOC. HD. CAP SCREW (Torque to 19-20 Nm (170-180 in-lbs.))	7
7	*50411	TOP PLATE	1
8	10519	SOC. SET SCREW (Torque to 7-8 Nm (65-70 in-lbs.))	1
9	*40630	VALVE HEAD	1
10	*41062	PUMP BARREL	1
11	*21628	PISTON	3
***Consult factory when replacing items marked with an asterisk (*)**			

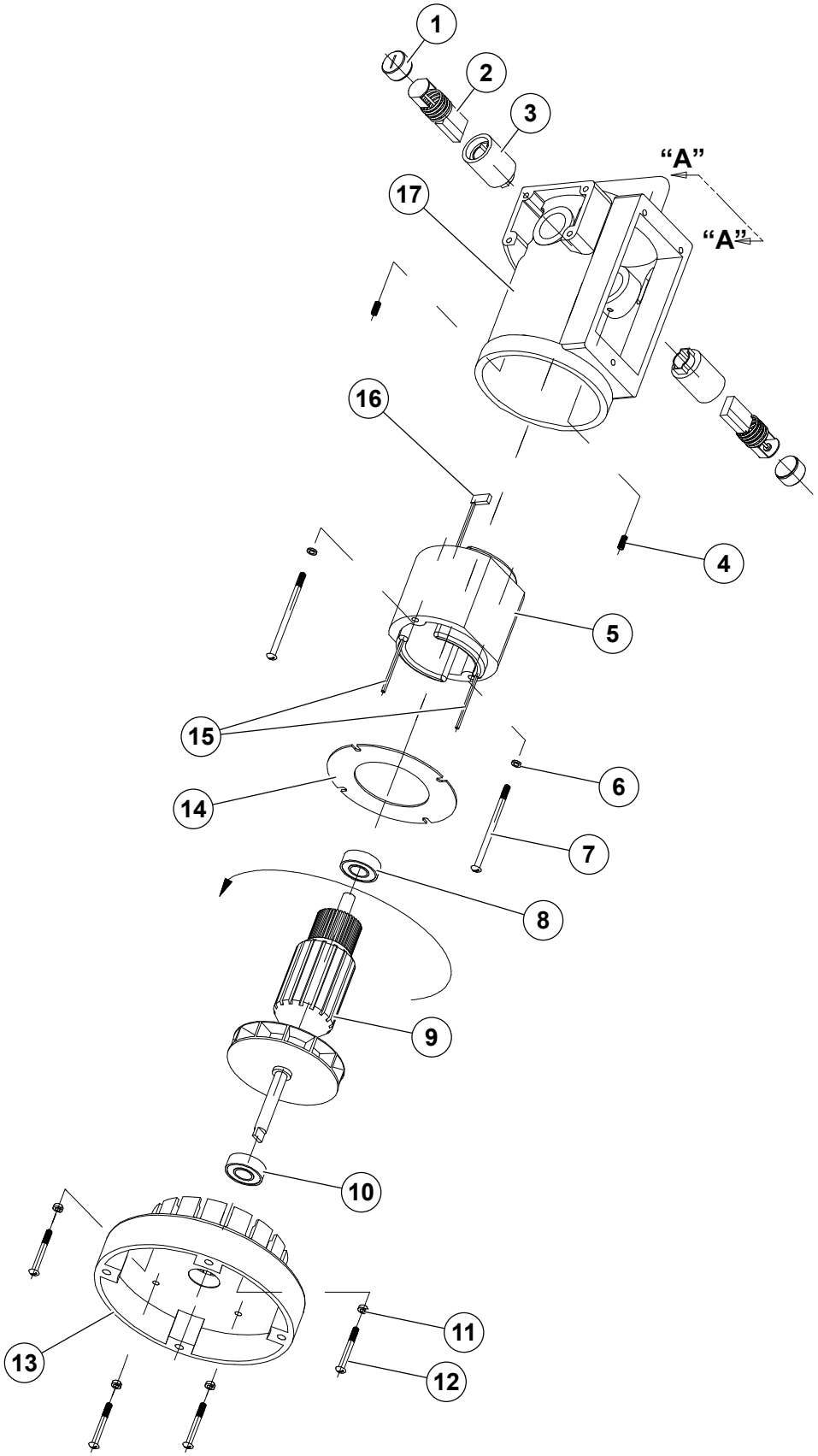
High Pressure Pump Assembly

Bolt Tightening Sequence

Assemble in sequence shown. Lubricate under heads and on threads. Torque to 20.5 Nm (180 in. lbs).



Exploded View of Motor #53337 / #53338



Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	10806	BRUSH HOLDER CAP	2	
2	10804	BRUSH (115 VAC)	2	
	2001708	BRUSH (230 VAC)	2	
3	10805	BRUSH HOLDER	2	Brush Holders (P/N 10805) must be installed with slot and dimple facing the open end of the motor shell casing. Apply Loctite® #680 or equivalent between brush holder and bore.
4	10133	KNURLED CUP SET SCREW	2	
5	10802	FIELD, 115 VOLT	1	Stator must be installed with p/n and date up (must be visible through the rectangular opening in the motor shell casing.)
	58841F	FIELD, 230 VOLT	1	
6	12356	INTERNAL TOOTH WASHER	2	
7	10170	ROUND SCREW	2	Parts need to be replaced, do not use thread locker.
8	10438	BALL BEARING	1	Press bearings into armature and install as a unit into the motor shell casing. Apply Loctite® #277 or equivalent between outer race and bore. Place motor in upright position while Loctite® #277 or equivalent cures.
9	10800	115 VOLT ARMATURE	1	Counterclockwise rotation from shaft in.
	58841A	230 VOLT ARMATURE	1	
10	10439	BALL BEARING	1	Press bearings into armature and install as a unit into the motor shell casing. Apply Loctite® #277 or equivalent between outer race and bore. Place motor in upright position while Loctite® #277 or equivalent cures.
11	10241	LOCK WASHER	4	
12	10169	PAN SCREW	4	Torque to 2.5 Nm (22 in-lbs.)
13	40059WH2	MOTOR BASE	1	

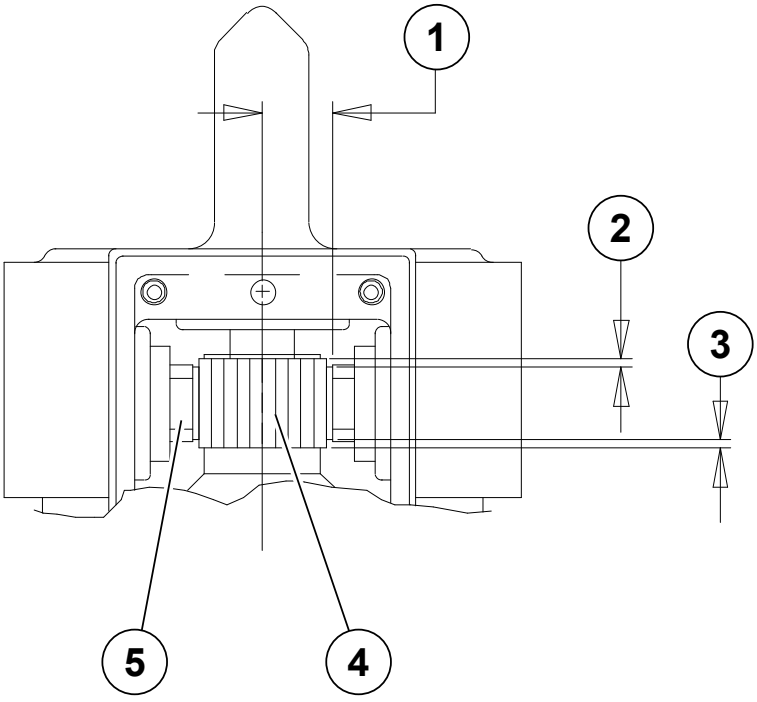
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
14	20786	BAFFLE PLATE	1	
15				Line leads must be rotated through the rectangular opening in the motor shell casing.
16				Insert flag terminals into adjacent brush holders.
17	61901WH2	MOTOR SHELL	1	

Brush Holder

Brush Holder and Armature Installation Specifications

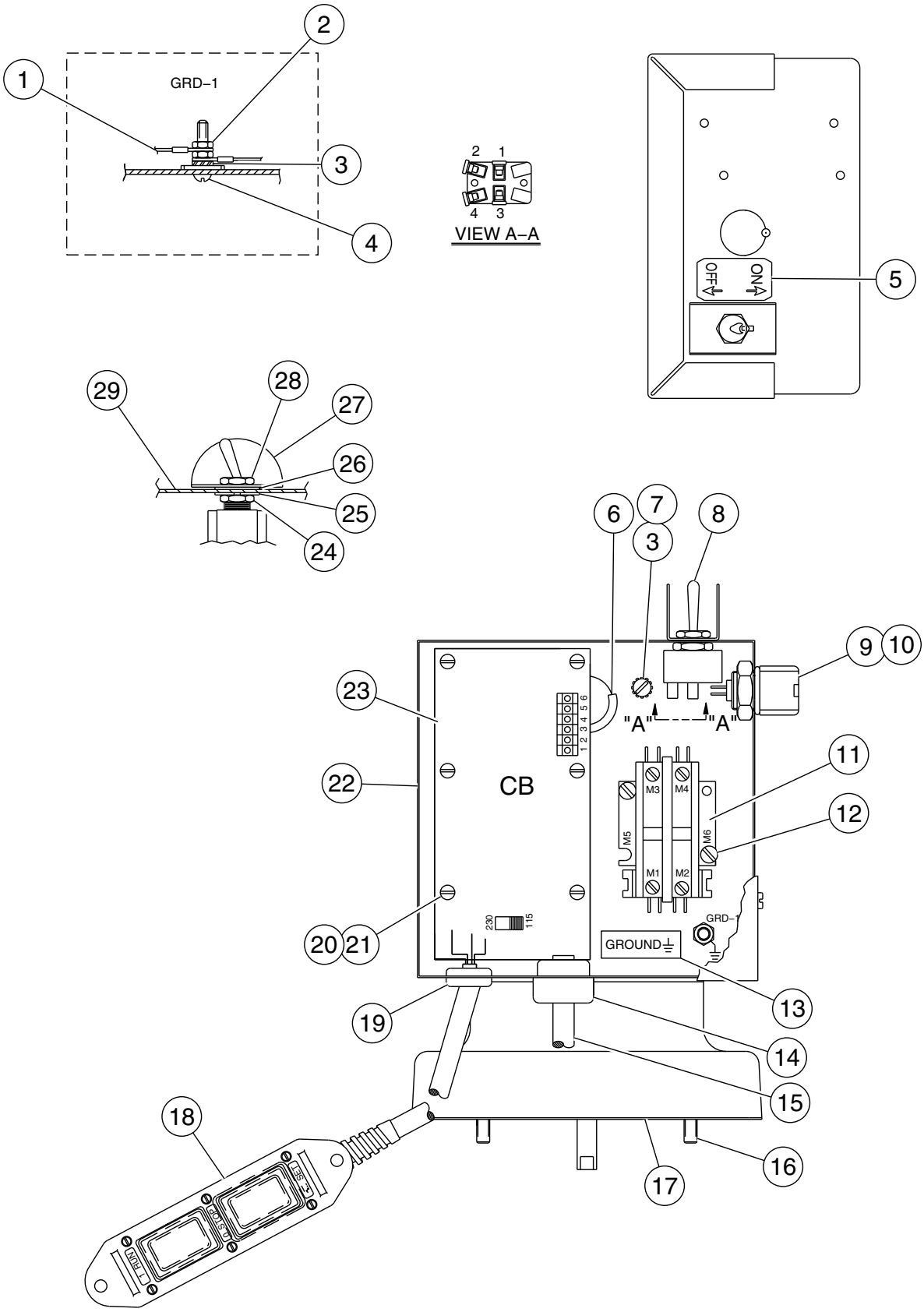
When replacing brushes or the armature, the dimensions shown must be specified.

VIEW "A-A"



ITEM	DESCRIPTION
1	17-18 MM (.677 - .702) BOTH SIDES
2	.51 MM (.020) MINIMUM TYPICAL
3	.51 MM (.020) MINIMUM TYPICAL
4	ARMATURE
5	BRUSHES

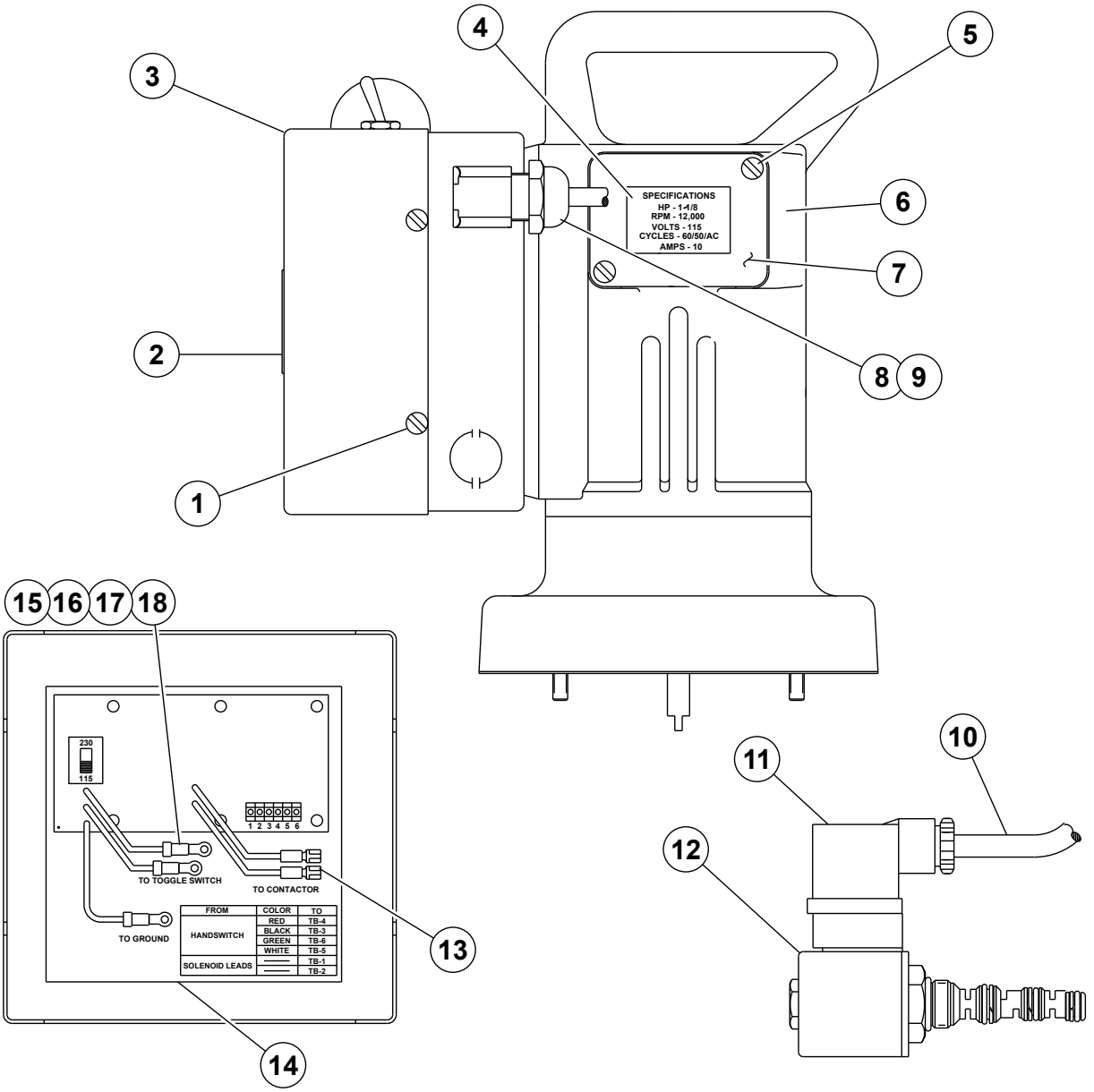
Motor Control Assembly #3000114 / #3000116

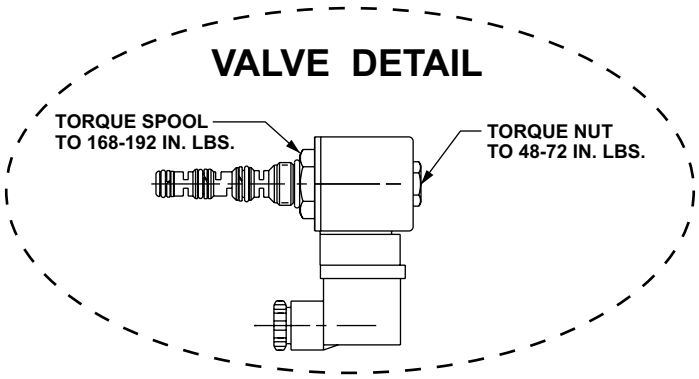


Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1		POWER CORD GROUND (Note: Must be isolated between nuts and can be at top or bottom of stack.)	1
2	10197	HEX NUT	2
3	11108	EXTERNAL TOOTH LOCK WASHER (Note: Separated lock washer must be adjacent to metal box. More washers can be used if desired.)	4
4	11856	ROUND SCREW	1
5	205409	LABEL ON/OFF DECAL	1
6	15497	RUBBER GROMMET	1
7	10164	ROUND SCREW	3
8	12958	TOGGLE SWITCH	1
9	216666	BUSHING, STR REL .230/.470 OD 1/2 NPT	1
10	216680	CONDUIT LOCK NUT	1
11	420718-1	2 POLE CONTACTOR (115 VAC)	1
	420718-2	2 POLE CONTACTOR (230 VAC)	1
12	11539	ROUND SCREW	6
13	205189	LABEL GROUND SCREW	1
14	210112	BUSHING, STR REL .370/.430 OD .875 HOLE	1
15	307440	CORD SJTO 12/3 8' LG 115V	1
	308752	CABLE 14/3 SJTO	8 ft
16	10022	SCREW, SHC 1/4-20 X 1.50	4
17	30650	MOTOR BASE GASKET	1
18	351160	HAND W/20 FOOT CORD CONTROL	1
19	15993	BUSHING, STR REL .325/.360 OD .625 HOLE	1
20	260071	ROUND SCREW	4
21	10196	HEX NUT	6
22	51218WH2	ELECTRICAL CONTROL BOX	1
23	421477	CIRCUIT BOARD	1
24		HEX NUT	2
25		ANTI-ROTATION KEY WASHER	1
26		INTERNAL TOOTH LOCK WASHER	1
27	352061	SWITCH GUARD	1
28		HEX NUT	1
29		CONTROL BOX	1

Motor and Control Box Assembly #3000114 / #3000116



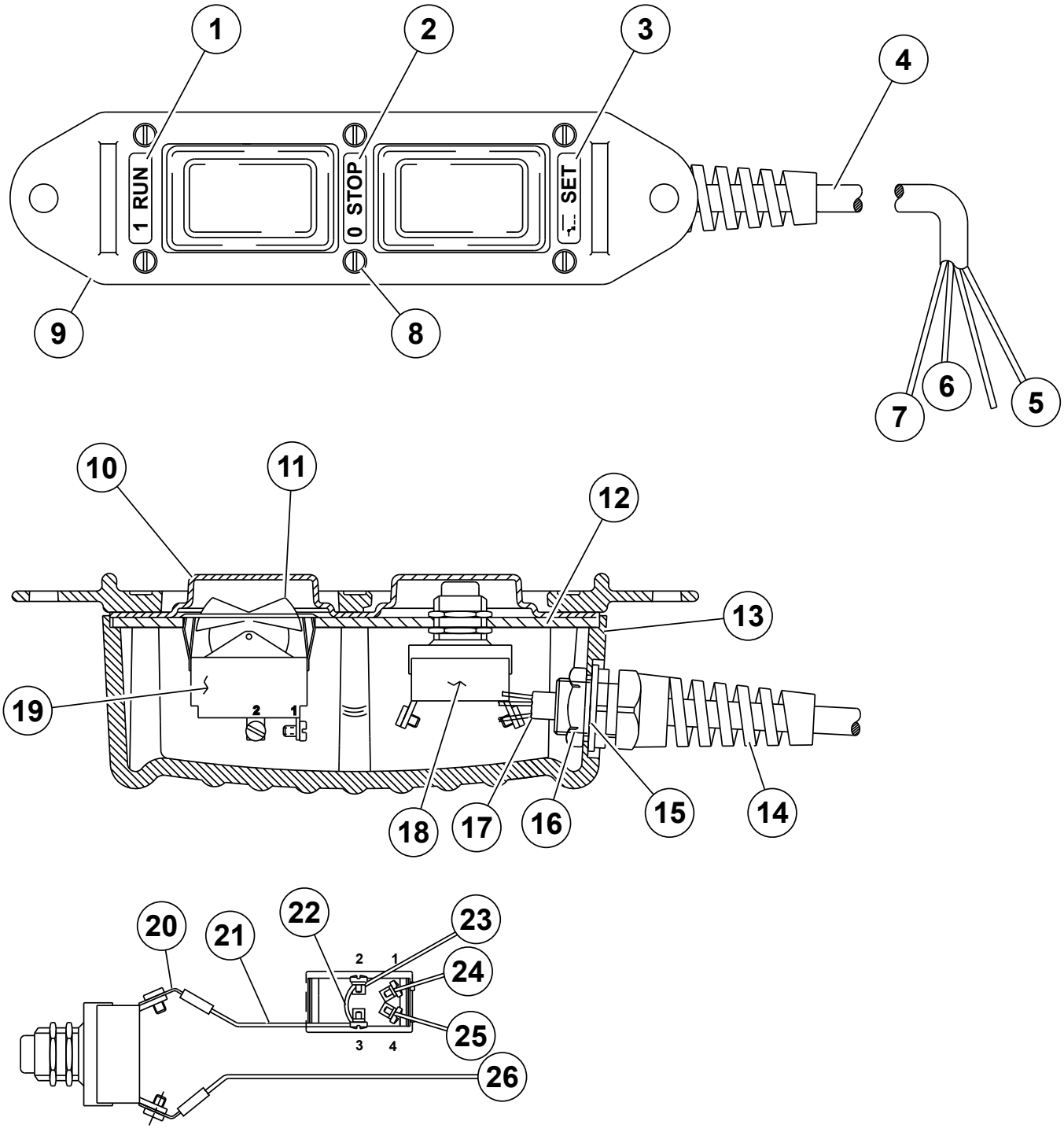


Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	14812	PAN SCREW	4
2	200188	WARNING IMPORTANT DECAL	1
3	43126WH2	CONTROL BOX COVER	1
4	215164	SPECIFICATIONS DECAL (115 VAC)	1
	215163	SPECIFICATIONS DECAL (230 VAC)	1
5	11539	ROUND SCREW	6
6	53338	ELECTRIC MOTOR (115 VAC)	1
	53337	ELECTRIC MOTOR (230 VAC)	1
7	21008	MOTOR COVER	2
8	216666	BUSHING, STR REL .230/.470 OD 1/2 NPT	1
9	216680	CONDUIT LOCK NUT	1
10	253592	CABLE	1.9
11	253405	STRAIN RELIEF CONNECTOR	1
	EF-5005*	HIRSCHMANN SOCKET (UNRECT) BLACK **(Note: After 27 July 2022)**	1
12	351843	SOLENOID 4 WAY VALVE (115 VAC)	1
	351844	SOLENOID 4 WAY VALVE (230 VAC)	1
	2010590*	VALVE, SOLENOID 4 WAY 4000 PSI **(Note: After 27 July 2022)**	1
	2010591*	VALVE, SOLENOID 4 WAY 4000 PSI **(Note: After 27 July 2022)**	1
13	16615	QUICK DISCONNECT FEMALE TERMINAL	6
14	351513	LABEL MOTOR CONTROL DECAL (115 VAC)	1
15	12311	TERMINAL, RING TONGUE 14-16 AWG #6 STUD	4
16	10443	TERMINAL, RING TONGUE 14-16 AWG #10 STUD	1
17	10458	TERMINAL, RING TONGUE 16-22 AWG #10 STUD	1
18	11208	TERMINAL, RING TONGUE 10-12 AWG #10 STUD	3
PARTS INCLUDED BUT NOT SHOWN			
	12746	BLACK WIRE	0.66
	10196	HEX NUT	2
	12743	WHITE WIRE	0.66

Part numbers marked with an asterisk (*) are replaced with service kit 3001259 or 3001260. 3001259 if the valve is 120VAC. 3001260 if the valve is 240VAC.

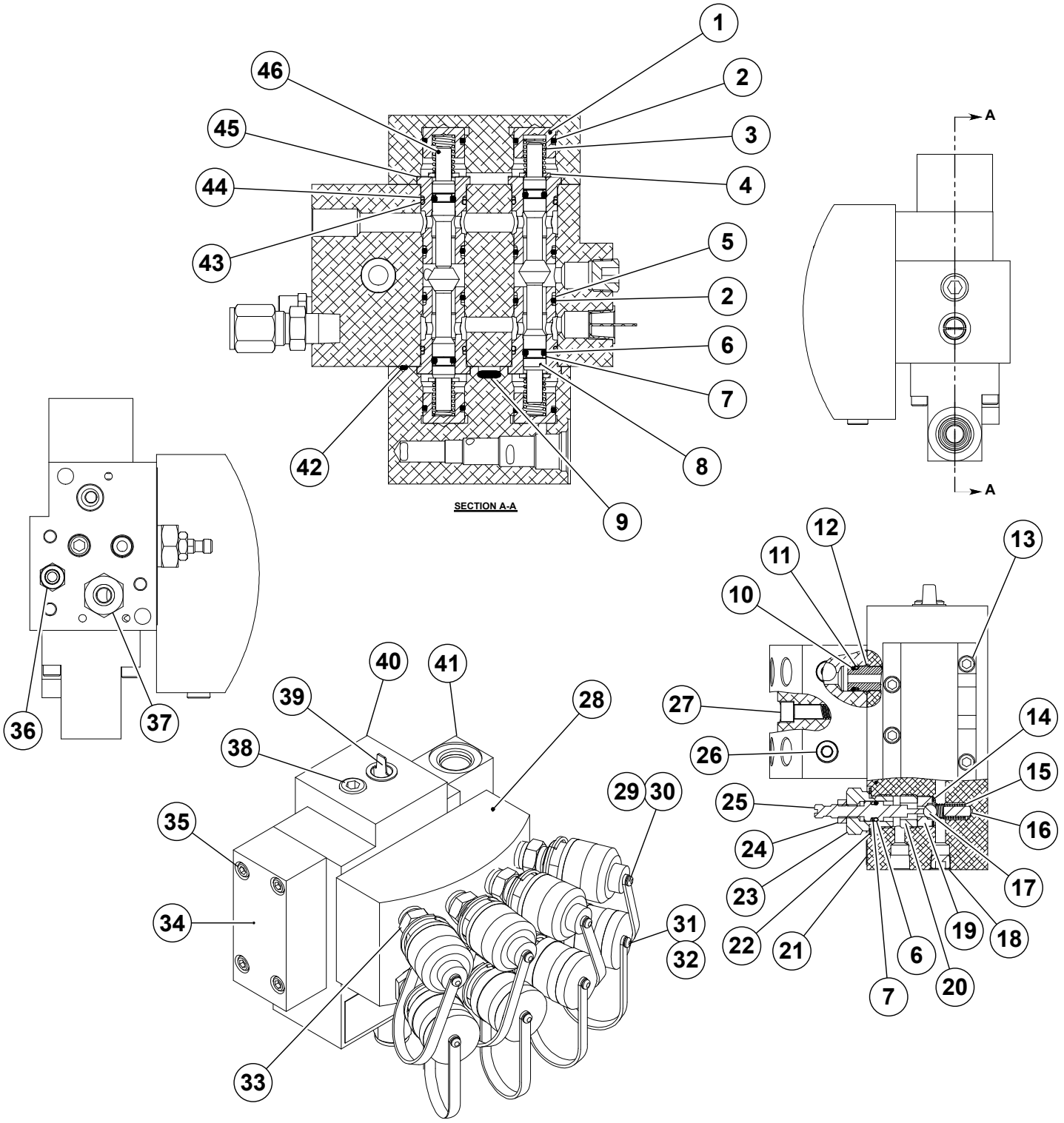
Remote Hand Switch #351160



Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	253105	LABEL RUN DECAL	1	
2	253106	LABEL STOP DECAL	1	
3	253107	LABEL SET DECAL	1	
4	11391	CABLE	21	
5	19837	HEAT SHRINK YELLOW TUBING	0.17	
6	16782	HEAT SHRINK RED TUBING	0.17	
7		BROWN WIRE		
8	250248	SCREW	6	
9	251044	PLASTIC HAND PENDANT COVER	1	
10	420050-2	REMOTE HAND SWITCH GASKET	1	
11		MOMENTARY POSITION OF ROCKER SWITCH		(Circuit #1)
12	420050-5	SWITCH MOUNTING PLATE	1	
13	420050-4	SWITCH HOUSING	1	
14	251818	STRAIN RELIEF CONNECTOR	1	
15	253607	RUBBER GASKET	1	
16	251802	LOCKNUT, PG11 THD HEX REGULAR	1	
17		STRIP JACKET		
18	253197	PUSH BUTTON SWITCH	1	
19	2002345	ROCKER SWITCH DPTT	1	
20	10525	RING TONGUE TERMINAL STUD	8	
21	13402	BLACK WIRE	0.62	
22	13402	BLACK WIRE	0.62	
23				Black
24				Circuit #2 green
25				Circuit #1 white
26		RED HEAT SHRINK		Both ends of the green wire
PARTS INCLUDED BUT NOT SHOWN				
	4453-AA	NYLON BUSHING	1	

Valve Assembly #3000113BK



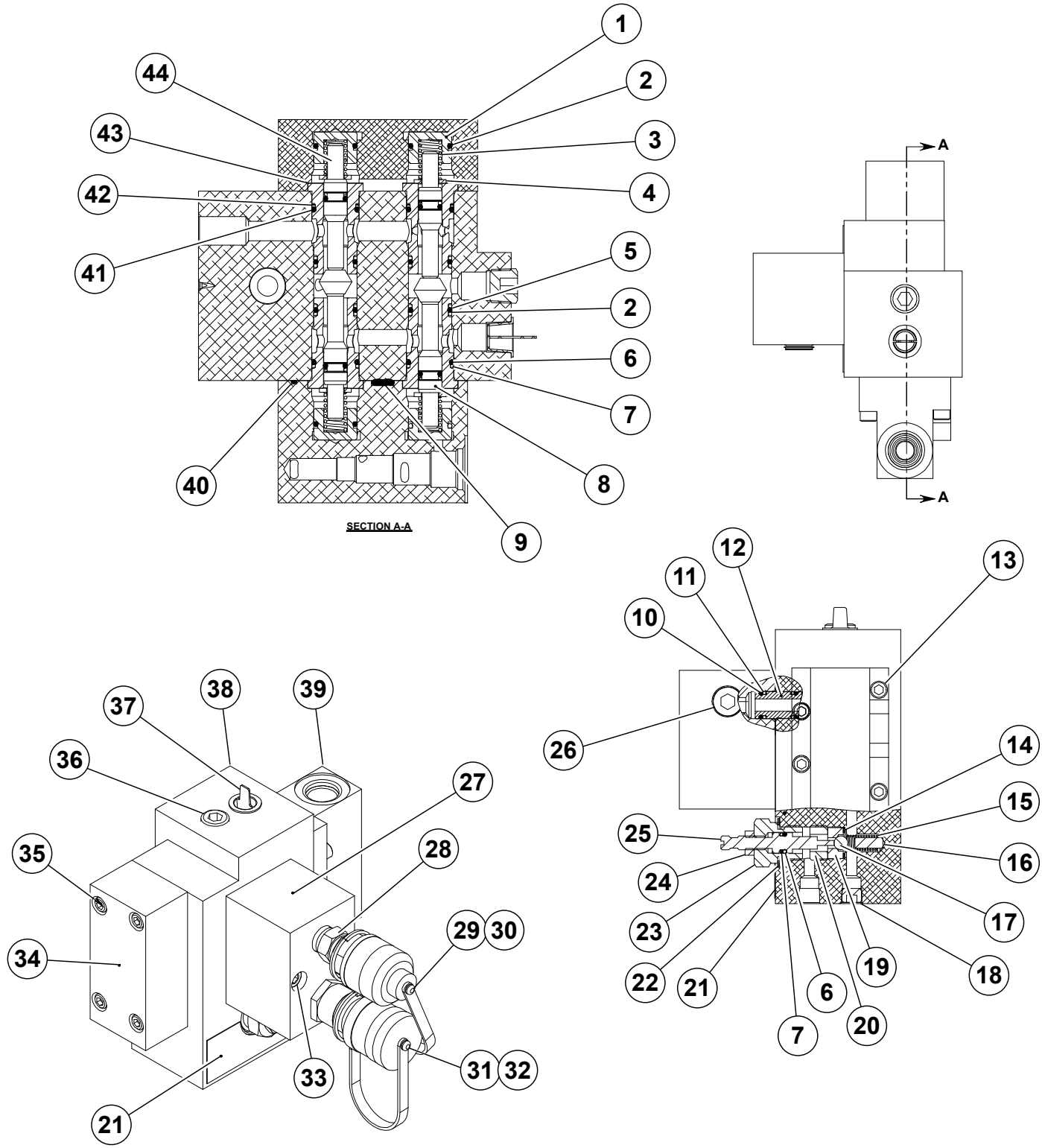
Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	22070	PISTON	4
2	**11284	O-RING	8
3	10362	SPRING COMPRESSION	4
4	209541	STEEL PLAIN WASHER	4
5	**12391	BACKUP WASHER	8
6	**10266	O-RING	5
7	**12184	BACKUP WASHER	4
	**12184	BACKUP WASHER	1
8	**2002148	SPOOL POPPET (Note: Assemble in this end only.)	2
9	**10269	O-RING	1
10	**10268	O-RING	4
11	**11863	BACKUP WASHER	4
12	21094	BUSHING	2
13	14426	SCREW, SHC 10-24 X 1.00 (Torque to 6-8 Nm (50-70 in-lbs.))	4
14	12042	PLAIN COPPER WASHER	1
15	10361	SPRING COMPRESSION	1
16	12955	DOWEL PIN	1
17	10375	STEEL BALL	1
18	251279	PLUG FITTING (Torque to 14 Nm (120 in-lbs.))	1
19	351200	REPLACEABLE SEAT	1
20	212735	SCREW, HOL LCK 5/8-18 X 0.31 (Torque to 34 Nm (300 in-lbs.))	1
21	252164	INSTRUCTIONS DECAL	1
22	252099	SPECIAL WASHER	1
23	252053	VALVE CAP (Torque to 34 Nm (300 in-lbs.))	1
24	10383	HEX JAM NUT	1
25	351257	BUSHING	1
26	10427	PLUG FITTING (Torque to 28 Nm (250 in-lbs.))	2
27	10854	SCREW, SHC 1/4-20 X 1.75 (Torque to 19 Nm (165 in-lbs.))	2
28	421856BK	MANIFOLD BODY	1
29	*251411	QUICK PLUG COUPLER	4
30	*252365	DUST CAP	4
31	*251410	QUICK COUPLER	4
32	*252364	DUST CAP	4
33	*10672	STRAIGHT FITTING	4
34	420902BK	LEFT END CAP	1
35	11151	SCREW, SHC 10-24 X 1.25 (Torque to 6-8 Nm (50-70 in-lbs.))	4
36	14844	STRAIGHT FITTING	1
37	10661	STRAIGHT TUBE FITTING	1
38	10479	PLUG FITTING	1
39	1400-AA	PLASTIC PACKAGING PLUG	1
40	65095BK	VALVE BODY	1

Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
41	64648BK	RIGHT END CAP	1
42	10265	O-RING	6
43	**10302	O-RING	4
44	**12392	BACKUP WASHER	4
45	**2002146	SEAT CARTRIDGE	4
46	**2002147	ACTUATOR SPOOL (Note: Assemble in this end only.)	2
PARTS INCLUDED BUT NOT SHOWN			
	3000590	POWER TEAM VALVE KIT	0
Note: PTFE tape is to be used.			
Part numbers marked with an asterisk (*) are contained in valve assembly (No. 3000113) **Part numbers marked with a double asterisk (**) are contained in repair kit (No. 3000590)**			

Valve Assembly #421293BK



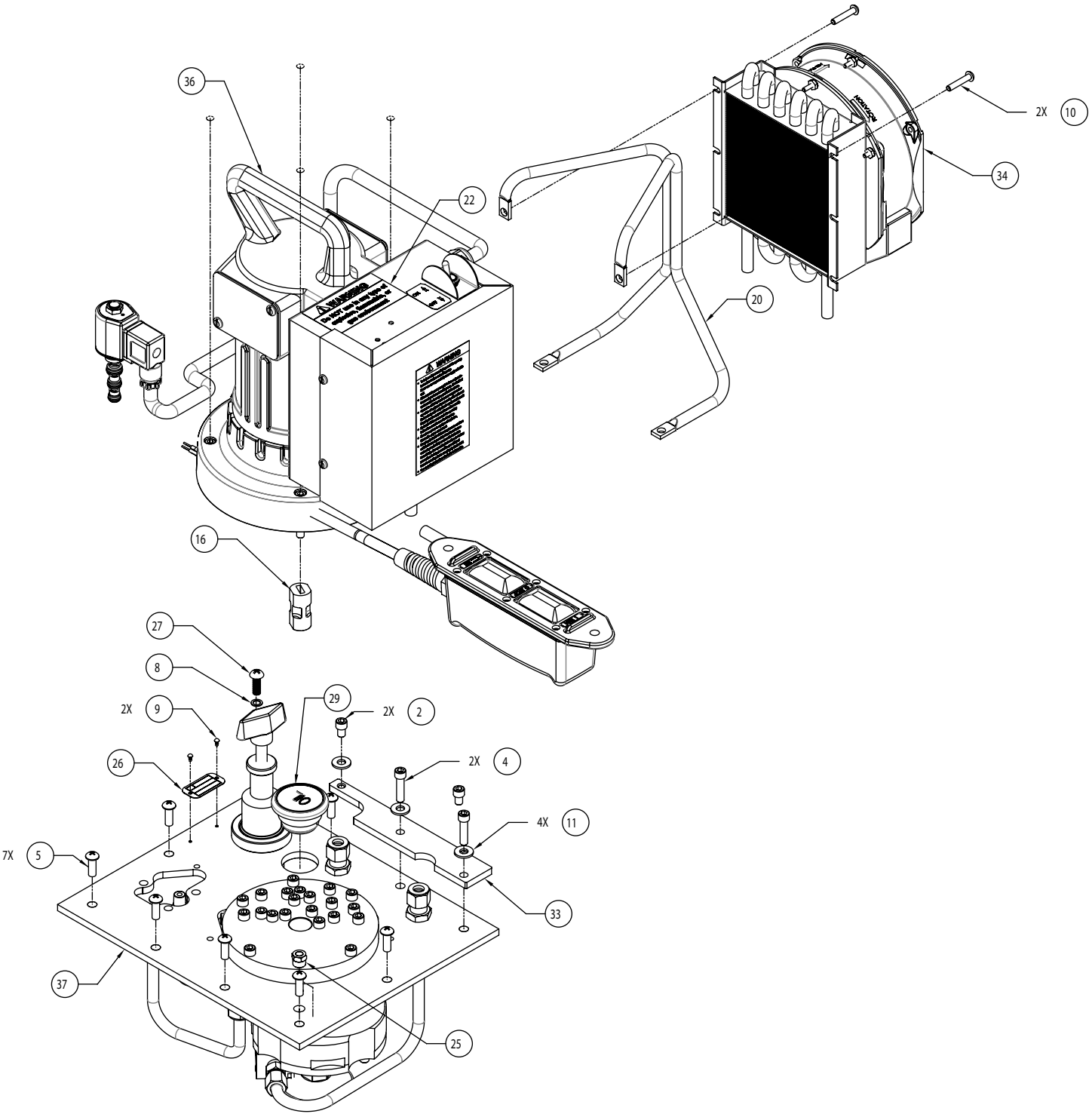
Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	22070	PISTON	4
2	**11284	O-RING	8
3	10362	SPRING COMPRESSION	4
4	209541	PLAIN STEEL WASHER	4
5	**12391	BACKUP WASHER	8
6	**10266	O-RING	4
6	**10266	O-RING	1
7	**12184	BACKUP WASHER	4
	**12184	BACKUP WASHER	1
8	**2002148	SPOOL POPPET (Note: Assemble in this end only)	2
9	**10269	O-RING	1
10	**10268	O-RING	4
11	**11863	BACKUP WASHER	4
12	21094	BUSHING	2
13	14426	SCREW, SHC 10-24 X 1.00 (Torque to 6-8 Nm (50-70 in-lbs.))	4
14	12042	PLAIN COPPER WASHER	1
15	10361	SPRING COMPRESSION	1
16	12955	DOWEL PIN	1
17	10375	STEEL BALL	1
18	251279	PLUG FITTING (Torque to 14 Nm (120 in-lbs.))	1
19	351200	REPLACEABLE SEAT	1
20	212735	SCREW, HOL LCK 5/8-18 X 0.31 (Torque to 34 Nm (300 in-lbs.))	1
21	252164	INSTRUCTIONS DECAL	1
22	252099	SPECIAL WASHER	1
23	252053	VALVE CAP (Torque to 34 Nm (300 in-lbs.))	1
24	10383	HEX JAM NUT	1
25	351257	BUSHING	1
26	14972	PLUG FLUSH FITTING (Torque to 28 Nm (250 in-lbs.))	1
27	351319BK	MANIFOLD BODY	1
28	*10672	STRAIGHT FITTING	1
29	*251411	QUICK PLUG COUPLER	1
30	*252365	DUST CAP	1
31	*251410	QUICK COUPLER	1
32	252364	DUST CAP	1
33	10854	SCREW, SHC 1/4-20 X 1.75 (Torque to 17-20 Nm (150-180 in-lbs.))	2
34	420902BK	LEFT END CAP	1
35	11151	SCREW, SHC 10-24 X 1.25	4
36	10479	PLUG FITTING	1
37	1400-AA	PLASTIC PACKAGING PLUG	1
38	65095BK	VALVE BODY	1

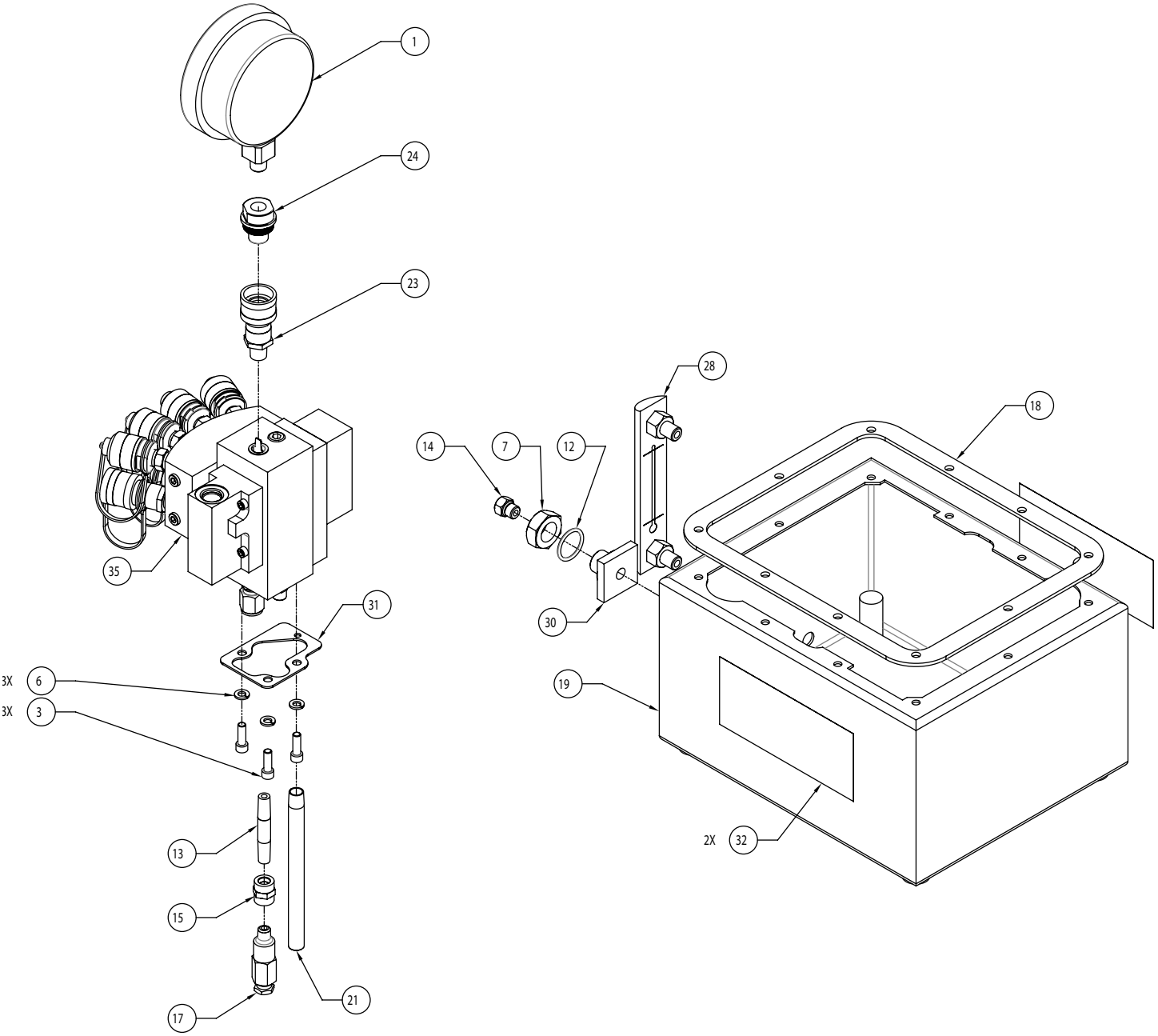
Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
39	64648BK	RIGHT END CAP	1
40	10265	O-RING	6
41	**10302	O-RING	4
42	**12392	BACKUP WASHER	4
43	**2002146	SEAT CARTRIDGE	4
44	**2002147	ACTUATOR SPOOL (Note: Assemble in this end only.)	2
PARTS INCLUDED BUT NOT SHOWN			
	3000590	POWER TEAM VALVE KIT	0
Note: PTFE tape is to be used.			
Part numbers marked with an asterisk (*) are contained in valve assembly (No. 3000113) **Part numbers marked with a double asterisk (**) are contained in repair kit (No. 3000590)**			

Oil Cooled Hydraulic Pump 10,000 PSI



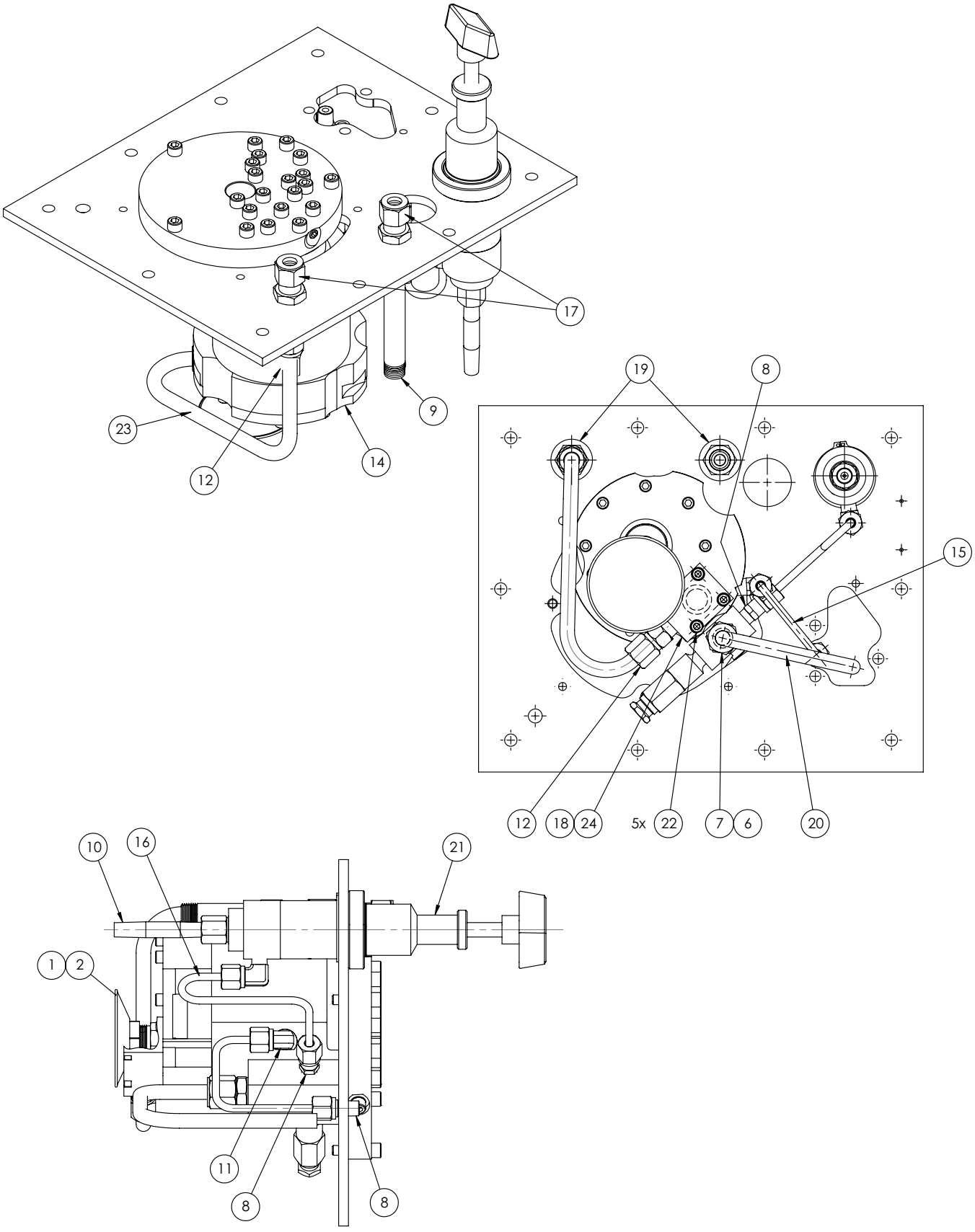
Oil Cooled Hydraulic Pump 10,000 PSI Continued



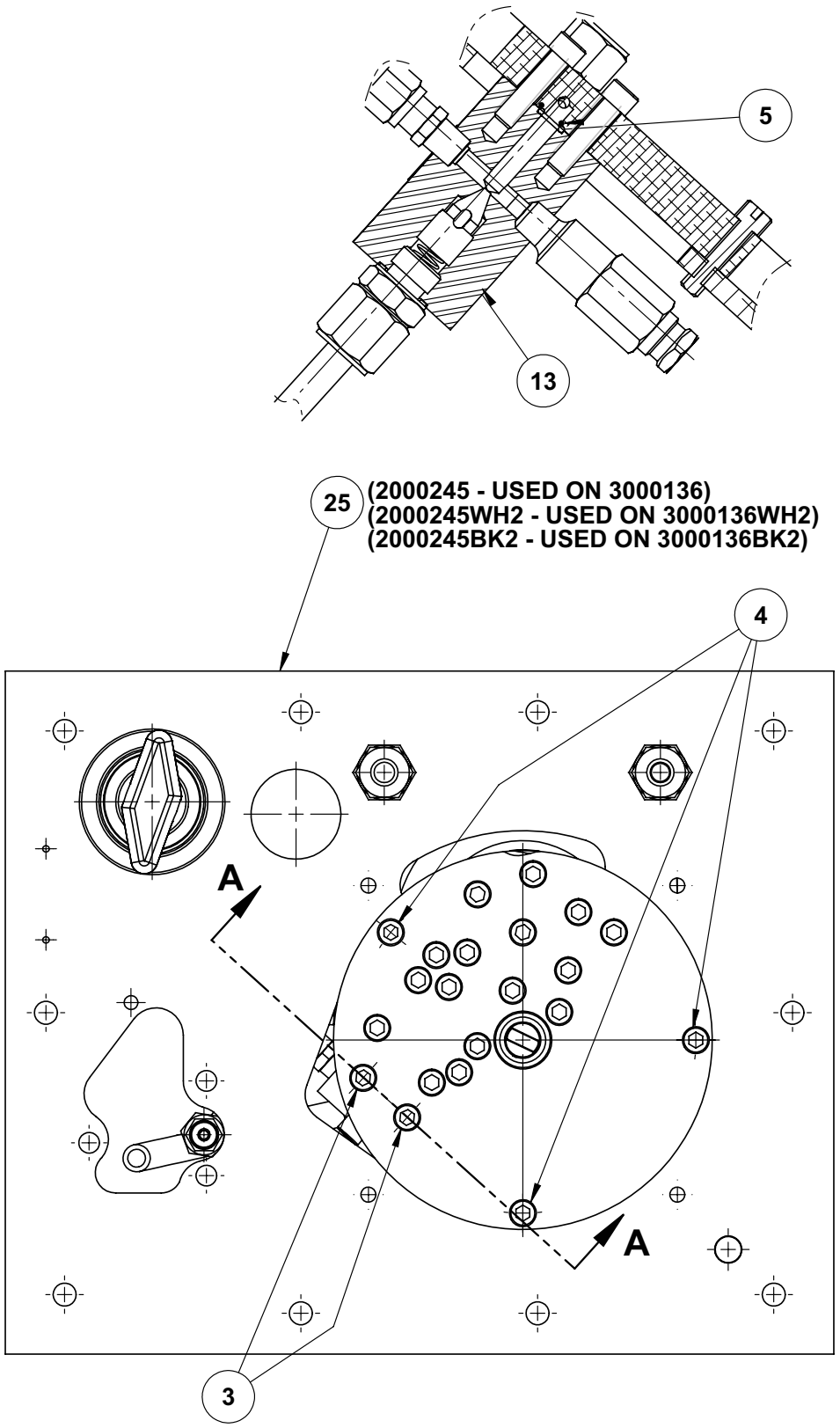
Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	9072	GAUGE, 10000 PSI, 4” DIA, CAL. (SPX)	1
2	10002	SCREW, 1/4-20UNC X 0.375IN SHC G8 ST BOX	2
3	10008	SCREW, SHC 1/4-20 X 0.75	3
4	10016	SCREW, SHC 1/4-20 x 1.00	2
5	10177	SCREW. RND 1/4-20 X 0.75	7
6	10245	WASHER, LOCK 0.490 x0.260	3
7	10396	NUT, JAM, 3/4-16 UNF	1
8	10442	WASHER, PLAIN 0.25X0.37X0.03 COPR	1
9	10575	SCREW, DRIVE RD 2 X 0.19 STD B18.6.4	2
10	11856	SCREW, RND 10-24 X 1	2
11	12719	WASHER, PLAIN 0.28 x 0.63 x 0.07 STEL	4
12	14725	O-RING (-119) 0.924ID X 0.103 NITRILE 70	1
13	15456	FITTING, STR 1/8 NPT M x 1/8 NPT M 2.5”	1
14	17147	FITTING, PLUG 7/16-20 ORB HEX	1
15	18841	FITTING, STR 1/8 NPTF F x 1/8 NPTF F	1
16	21091	COUPLING, DRIVE	1
17	21278-15	VALVE, RELIEF 1500 PSI	1
18	40164	GASKET, COVER PLATE	1
19	65599BK2	TANK PT 02.00 GAL ALUM BLK VERT WELD 11	1
20	65888BK2	CAGE, ROLL	1
21	200609	TUBE, DRAIN .50 OD X 6.00	1
22	250447	DECAL, WARNING NO USE HAZ ENVIROMENT	1
23	251410	COUPLER, QUICK	1
24	251411	COUPLER, QUICK PLUG	1
25	251599	VENT, BREATHER FILTER	1
26	251906	PLATE, PRODUCT NAME	1
27	253371	SCREW, RND 1/4-20 X 0.75	1
28	350431	GAUGE, FLUID LEVEL	1
29	350925	CAP, FILLER	1
30	351000	DRAIN	1
31	351095	GASKET, VALVE	1
32	1000543	DECAL, SPX BOLTING SYSTEMS	2
33	2000246	BRACKET, OIL COOLER MTG	1
34	2000578	FAN, COOLER 230V, ASSEMBLY	1
35	3000113BK	VALVE DIRECTIONAL - 3P3W	1
36	3000116	MOTOR AND CONTROL ASSEMBLY - 200V, 50/60 Hz, W/VALVE ASSEMBLY	1
37	3000136BK2	COVERPLATE ASSEMBLY	1

Coverplate Assembly #3000136



Coverplate Assembly #3000136 (Continued)



Parts List Continued

ITEM	PART NO.	DESCRIPTION	QTY.
1	4683-AA	PLUMBING FITTING 9/16 M x 3/8 M	1
2	5343-AA	FILTER	1
3	10015	SCREW, SHC 1/4-28 x 1.00	2
4	10016	SCREW, SHC 1/4-20 x 1.00	3
5	10266	O-RING (-010) 0.239IDX0.070 NITRILE 70	1
6	10430	TUBE, SLEEVE 3/8 DIA.	1
7	10431	FITTING, NUT 5/8-18 F (3/8 OD Tube)	1
8	14844	FITTING, STR 1/8 NPTF M x 7/16-20 M	2
9	15426	FITTING, STRAIGHT 1/4 NPTF M x 1/4 NPTF M	1
10	15456	FITTING, STR 1/8 NPT M x 1/8 NPT M 2.5”	1
11	16177	FITTING, 90D ELB 1/8 NPTF M x 3/16 TUBE	2
12	17634	FITTING, STR 1/4 NPTF M X 3/8 TUBE	2
13	21277-2	VALVE, CHECK AND 10,000 PSI RELIEF	1
14	41064-2	BASIC PUMP ASSEMBLY	1
15	252055	OIL LINE ASSY	1
16	252056	OIL LINE ASSY	1
17	252483	FITTING, BULKHEAD	2
18	253035	O-RING - 9/16 ID X 3/32 WIDE	1
19	253143	WASHER, SEAL	2
20	351203	TUBE, OIL LINE	1
21	420963	REGULATOR ASSEMBLY - EXTERNAL PRESSURE	1
22	2000242	SCREW, SOCKET HEAD CAP #10-32 x 2-1/2	5
23	2000243	TUBE, OIL LINE	1
24	2000244	BLOCK, ADAPTER (Note: Unloading for cooler)	1
25	2000245	PLATE, COVER	1

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