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Operating Instructions for:
PE39PED1BPR
PE39PED1PR
PE39YED1BPR
PE39YED1PR

CE

Original Instructions

PE39 Series
Compact Torque Wrench Pump

Form No. 1000542
Rev. 0 April 27, 2012

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Description:

The PE39 series hydraulic pump is designed to have a maximum of 690 Bar (10,000 PSI) at a flow rate of 639 cc/min (39 cu. in/min). All pumps come fully assembled and ready for work.

Compact Electric/Hydraulic Torque Wrench Pumps

Description

Universal Motor

The universal motor pump, shown in Figure 1, offers a lightweight and portable hydraulic pump option. It is capable of vertical or horizontal operation. Weight can be up to 23 kg (50 lbs).

Universal motor pumps come with a 1.89L (0.5 Gal) capacity hydraulic reservoir.

The motor is a 0.8 kW (1.04 HP) average, 115/230 VAC (nominal), 50/60 Hz single-phase. Current draw can be up to 14.5 Amps at 115V (15A time delay 250VAC 5x20mm fuse) and 7.2 Amps at 230V (10A time delay 250VAC 5x20mm fuse) and the sound level is rated at 87-92 dB. Operating temperatures 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.

Figure 1.
PE39 Series Pump

Control Valves

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

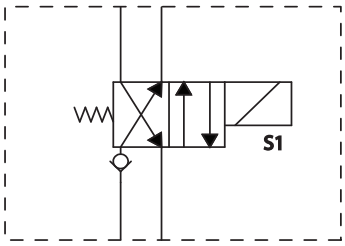
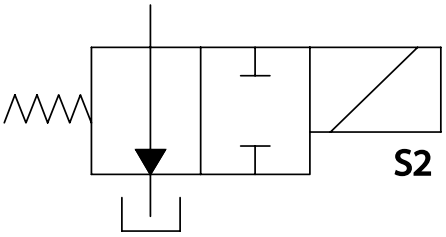
	Description	Motor	Control Switch	Pendant	Use with Cylinder Type	Valve No.
	Equipped with 2-position/4-way solenoid valve.	0.8 kW (1.04 HP average) 50/60 Hz, nominal 115 VAC, single-phase	Remote motor	See Figure 3. SPX Part No. 3000554	Hydraulic torque wrench	2002108 2-position/4-way, pump mounted, solenoid operated
	Valve Function		**Diagrams**			
2-position/ 4-way (Idle Valve)	Advance Position: (Solenoid "A") Pressure to "A" port, "B" port to tank Retract Position: (De-energized Solenoid "A") Pressure to "B" port, "A" port to tank NOTE: All ports OPEN to tank during transition between valve positions.					
2-position/ 2-way (Idle Valve)	Advance Position: Idle Valve CLOSED Pressure to "A" port, "B" port to tank Retract Position: Idle Valve CLOSED Pressure to "B" port, Idle Valve port to tank Idle Positon: Idle Valve OPEN "B" port to tank (through idle valve)					

Table 1. Pump Configuration

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Safety Symbols and Definitions

The safety signal word designates the degree or level of hazard seriousness.

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

WARNING: To 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 pump. If the operator cannot read these instructions, operating instructions and safety precautions must be read and discussed in the operator's native language.**
- **<u>These products are designed for general use in normal environments. These products are not designed for lifting and moving people, agri-food machinery, certain types of mobile machinery, or in special work environments such as: explosive, flammable, or corrosive. Only the user can decide the suitability of this product in these conditions or extreme environments. Hydraulic Technologies will supply information necessary to help make these decisions. Consult your nearest Hydraulic Technologies facility.</u>**

- **Safety glasses must be worn at all time 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.**

- **The owner of this tool must ensure that safety-related decals are installed, maintained, and replaced if they become hard to read.**

- **Shut OFF the motor before opening any connections in the system.**

Pump

WARNING: To prevent personal injury,

- **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.**
- **Retract the system before adding fluid to prevent overfilling the pump reservoir. An overfill can cause personal injury due to excess reservoir pressure created when tools are retracted.**

Electric Motor

WARNING: To prevent personal injury,

- **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.**

Hoses

WARNING: To prevent personal injury,

- **Before operating the pump, tighten all hose connections using the correct tools. Do not overtighten. Connections should be only secure and leak-free. Overtightening can cause premature thread failure or high pressure fittings to split at pressures lower than their rated capacities.**

- **Should a hydraulic hose rupture, burst, or need to be disconnected, immediately shut off the pump and shift the control valve twice to release pressure. Never attempt to grasp a leaking hose under pressure 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, heavy impact, or extreme heat or cold. Do not allow the hose to kink, twist, curl, or bend so tightly that the fluid flow within the hose is blocked or reduced. Periodically inspect the hose for wear, because any of these conditions can damage the hose and possibly result in personal injury.**
- **Do not use the hose to move attached equipment. Stress can damage the hose and possibly cause personal injury.**
- **Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive material 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 may result in personal injury.**

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Tools

DANGER: To prevent serious personal injury or death,

- **This pump is designed for torque wrench applications and should never be used for lifting.**
- **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 component before each shift or usage to prevent unsafe conditions from developing.**
- **Do not use tools if they are damaged, altered or in poor condition.**
- **The guide cannot cover every hazard or situation so always do the job with SAFETY FIRST.**

IMPORTANT

- **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.**

Initial Setup

1. Remove all packing materials from the assembled unit.
2. Inspect the unit upon arrival. The carrier, not the manufacturer, is responsible for any damage resulting from shipment.

Filling the Pump Reservoir

Pumps are shipped with 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 47 cSt @ 38°C (215 SUS @ 100°F). If low temperature requirements are needed, use hydraulic oil 5.1 cSt @ 100°C (451 cSt @ -40°C).

1. See Figure 2. Clean the area around the filler plug to remove debris. Debris in the hydraulic fluid can damage the polished surfaces and precision-fit components of this pump.
2. Remove the filler plug and insert a clean funnel with a filter.

CAUTION: Do not fill reservoir with the unit in the horizontal position. Do not over fill reservoir.

3. Add hydraulic fluid to the bottom edge of the filler plug hole with the unit in the upright (vertical) position.
4. Replace the filler plug.

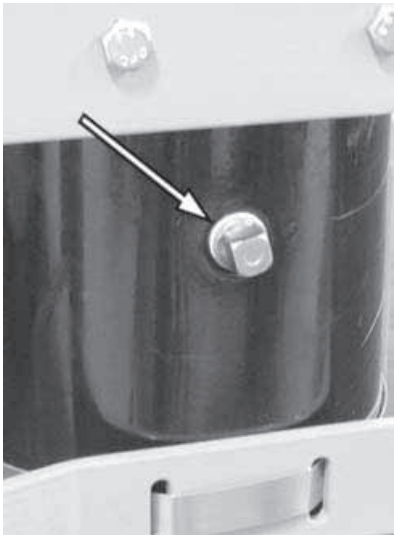

Figure 2.
Filler Plug

Hydraulic Connections

1. Clean the areas around the fluid ports of the pump and tools.
2. Clean all hose ends, couplers or union ends.
3. See Figure 3. Remove the protective covers from the hydraulic fluid outlets.
4. Connect the hose assembly to the hydraulic fluid outlet, and couple the hose to the tool.

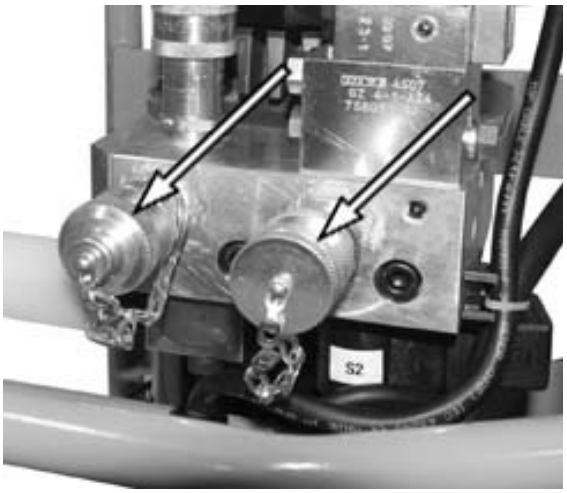

Figure 3.
Hydraulic Fluid Outlets

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Electric Motor

1. See Figure 4. Connect the motor control pendant.

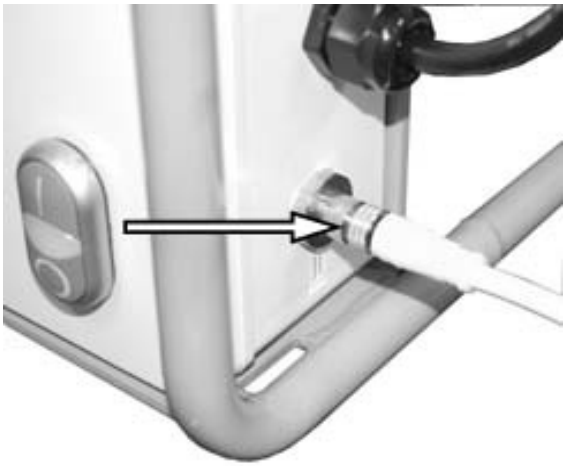

Figure 4.
Motor Control Pendant

2. Refer to Table 2. Minimum Recommended Gauge Table. See Figure 5. Connect the control box power cord to an appropriate power source. Never run the pump on long, light gauge extension cords.

Figure 5.
Connected to Power Source

Caution: To prevent equipment damage,

- **The correct voltage is required for the pump to operate. Verify the voltage rating on the pump 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. The motor nameplate can be accessed by removing the shroud.**
- **Check the voltage at the motor with the pump running at full pressure.**

3. Start the pump and shift as required.
4. Turn off the pump when not in use.
5. Disconnect the motor control pendant.
6. See Figure 6. Disconnect power source.

Figure 6.
Disconnected from Power Source

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

Table 2. Minimum Recommended Gauge Table

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 positioned higher than the hydraulic device, cycle the system several times. Check the reservoir fluid level and fill to correct level with Power Team hydraulic fluid as necessary. If there is a problem contact Hydraulic Technologies Technical Support. To locate a Power Team Authorized Hydraulic Service Center, contact your nearest Hydraulic Technologies facility or www.SPXBOLTINGSYSTEMS.com.

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Operating Instructions

Pump Control Operation

1. See Figure 7. Connect the power cord to an appropriate power source.

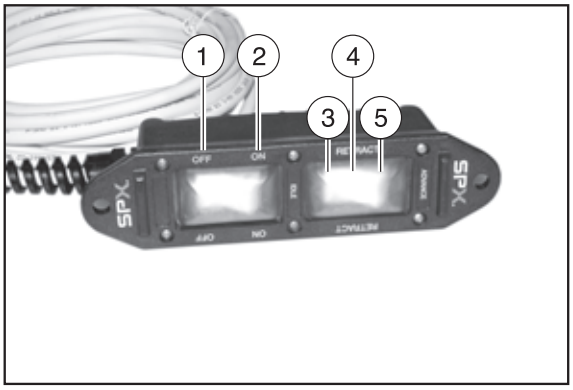
Figure 7.
Connected to Power Source

2. See Figure 8. Press the START (green) switch. Lamp (white) will illuminate and electrical power is supplied to the control system. Press the STOP (red) switch to remove electrical power from the control system. As long as the lamp is illuminated, there is electrical power to the control system.

Item	Description
1	Start (Green)
2	Lamp (White)
3	Stop (Red)

Figure 8.
Motor Control Switch

3. See Figure 9. Press the ON/OFF rocker switch to ON to start the motor. Press the ON/OFF rocker switch to OFF to stop the motor. This does not remove power from the control system.
4. Press and hold the ADVANCE/RETRACT/IDLE rocker switch to the ADVANCE position. Release when tool has reached the end of its stroke.
5. When the ADVANCE/RETRACT/IDLE is released, the rocker switch defaults to RETRACT. The pump is factory preset to 103 bar (1,500 psi) during RETRACT.
6. Pressing the ADVANCE/RETRACT/IDLE rocker switch to IDLE allows hydraulic fluid to cycle through the pump back to the tank.



Item	Description
1	OFF Position
2	ON Position
3	Idle Position
4	Retract Position
5	Advance Position

Figure 9.
Pendant Control

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Adjusting The Pressure Regulating Valve

1. The pump must be completely connected. Press the START (green) switch on the control box.
2. Using the pendant, press the ON/OFF rocker switch to ON.
3. Press and hold the ADVANCE/RETRACT/IDLE rocker switch to the ADVANCE position to start the motor and build pressure.
4. See Figure 10. Rotate pressure regulating valve to the desired pressure. Clockwise increases pressure, counterclockwise decreases pressure.
5. When the desired pressure is achieved, cycle the system again to verify correct pressure setting.
6. Using the pendant press the ON/OFF rocker switch to OFF.
7. Press the OFF (red) switch on the control box.

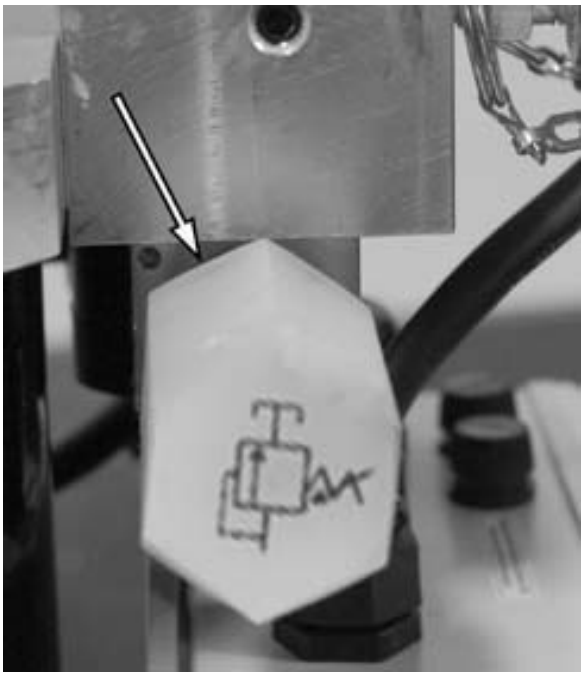

Figure 10.
Pressure Regulating Valve

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Performance Specifications

Pump	Motor RPM (Output)	Amp Draw at 690 Bar (10,000 PSI) (115V)	Amp Draw at 690 Bar (10,000 PSI) (230V)	dB A at Idle and 690 Bar (10,000 PSI)
PE39	4,500	14.5	7.2	92

Table 3. Drive Unit Requirements

Pump	Max. Pressure Output Bar (PSI)	Fluid Delivery* L/min (cu. in./min. @)		
		70 Bar (1,000 PSI)	345 Bar (5,000 PSI)	690 Bar (10,000 PSI)
PE39	690 (10,000)	0.90 (55)	0.80 (49)	0.64 (39)
*** Typical delivery. Actual flow varies with field conditions.**				

Table 4. Fluid Pressure Chart

General Maintenance

WARNING: To prevent personal injury,

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

System Evaluation

The components of your hydraulic system — pump, 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 Hydraulic Technologies Technical Support.

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:

- Excessive wear, bending, damage, or insufficient thread engagement.
- Leaking hydraulic fluid.
- Loose bolts, cap screws, or pipe plugs.
- Bent or damaged couplers or port threads.

Periodic cleaning

WARNING: Contamination of the hydraulic fluid could cause the valve to malfunction.

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.
- 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.

Hydraulic Fluid Level

1. Check the fluid level in the reservoir after each 10 hours of use. The fluid level should be level with the bottom of the fill hole when all cylinders are retracted and the unit is in the upright (vertical) position.
2. Drain, flush, and refill the reservoir with an approved Power Team hydraulic fluid after 300 hours of use. The frequency of fluid changes depends upon general working conditions, severity of use, the overall cleanliness and care given to the pump. Fluid should be changed more frequently when the system is not operated regularly indoors.

Adding Hydraulic Fluid to the Reservoir

1. See Figure 11. Disconnect the power source.
2. Clean the entire area around the filler plug.

Figure 11.
Disconnected from Power Source

3. See Figure 12. Remove the filler plug, and install a clean funnel with a filter.
4. Using a clean funnel with a filter, fill the reservoir with Power Team hydraulic fluid 47 cSt @ 38°C (215 SUS @ 100°F). If low temperature requirements are needed, use hydraulic Oil 5.1 cSt @ 100°C (451 cSt @ -40°C). Add hydraulic fluid to the bottom edge of the filler plug hole with the unit in the upright (vertical) position.

CAUTION: Do not fill reservoir with the unit in the horizontal position. Do not over fill reservoir.

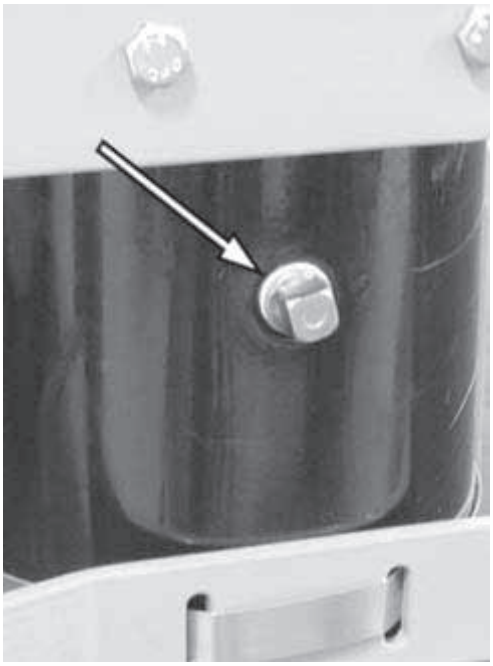

Figure 12.
Filler Plug

Hose Connections

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

Pipe thread sealant 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 tape could travel through the system and obstruct the flow of fluid or cause interference of precision-fit parts.

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.

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Draining and Flushing the Reservoir

1. Clean the filler plug.
2. See Figure 13. Remove the filler plug and drain the fluid.

CAUTION: Do not fill reservoir with the unit in the horizontal position. Do not over fill reservoir.

3. Using a clean funnel with a filter, fill the reservoir with Power Team hydraulic fluid 47 cSt @ 38°C (215 SUS @ 100°F). If low temperature requirements are needed, use hydraulic oil 5.1 cSt @ 100°C (451 cSt @ -40°C). Add hydraulic fluid to the bottom edge of the filler plug hole with the unit in the upright (vertical) position.
4. Connect the hydraulic hoses to the fittings.
5. Bleed the air from the system. Refer to Bleeding Air from the System.
6. Cycle the pump for 1–2 minutes.
7. Disconnect the hydraulic hoses from the motor and pump assembly.

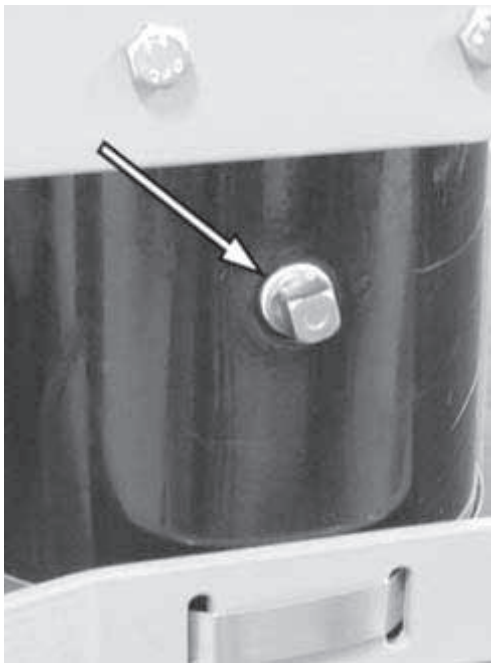

Figure 13.
Filler Plug

8. See Figure 14. Disconnect power cord from power source.

Figure 14.
Disconnected from Power Source

9. See Figure 15. Loosen the screw clamp.

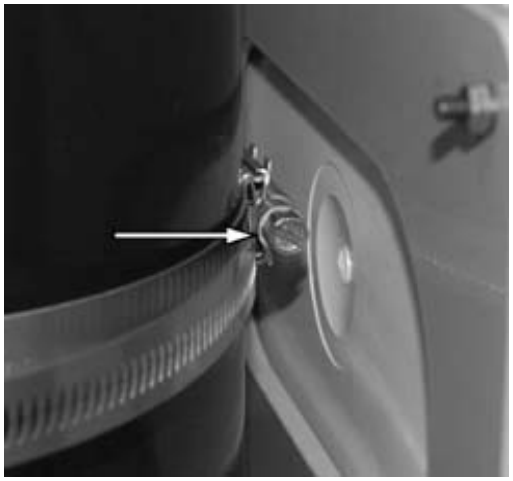

Figure 15.
Screw Clamp

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10. See Figure 16. Remove the filler plug and drain the fluid from the reservoir.

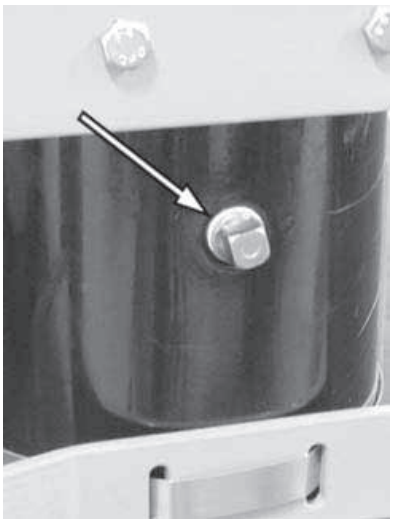

Figure 16.
Filler Plug

11. See Figure 17. Remove the 4 screws.
12. Remove the reservoir from the motor and pump assembly.
13. Clean the mating surfaces.
14. Clean the inside of the reservoir.

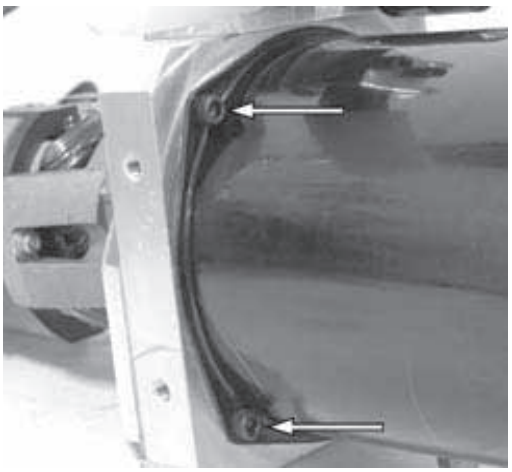

Figure 17.
Reservoir Screws

15. See Figure 18. Replace the inlet suction filter.
16. Place the reservoir (with new o-ring) on the pump and motor assembly. Tighten the screws to:
    - 5 Nm (45 in/lbs).
17. Remove the filler plug and insert a clean funnel with a filter. Fill the reservoir with Power Team hydraulic fluid 47 cSt @ 38°C (215 SUS @ 100°F) If low temperature requirements are needed, use hydraulic oil 5.1 cSt @ 100°C (451 cSt @ -40°C).

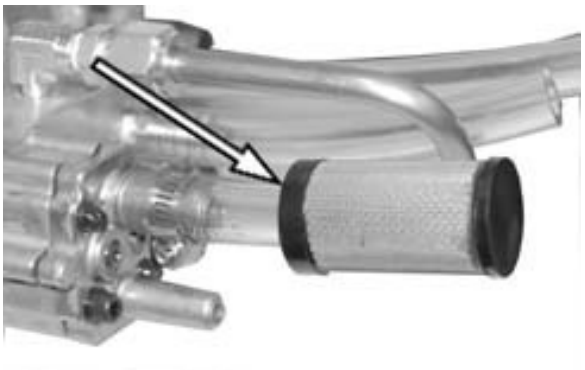

Figure 18.
Inlet Suction Filter

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18. See Figure 19. Tighten the screw clamp.

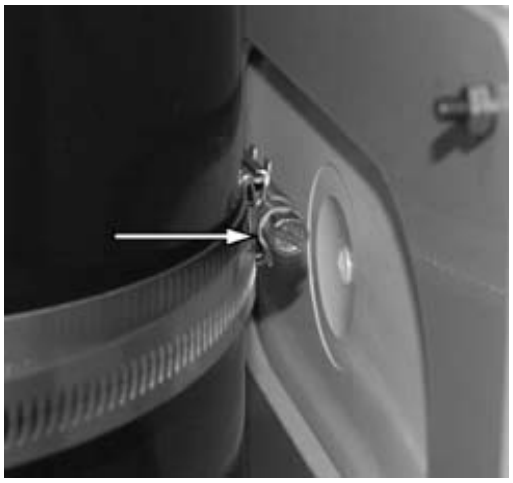

Figure 19.
Screw Clamp

Checking Brushes on Universal Motors

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

1. See Figure 20. Disconnect power cord from power source.

Figure 20.
Disconnected from Power Source

2. See Figure 21. Remove the three motor cover screws.

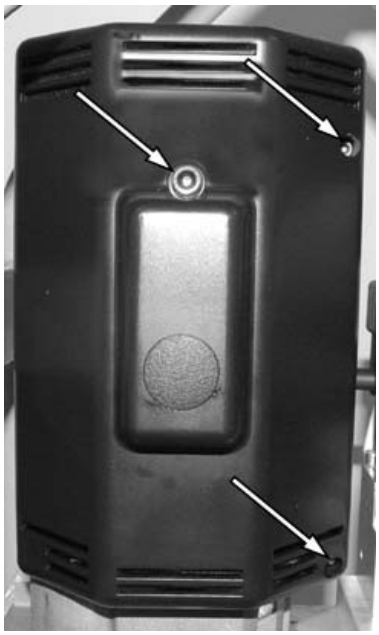

Figure 21.
Motor Cover Screws

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3. See Figure 22. Remove the three electric cover screws and remove the motor cover.

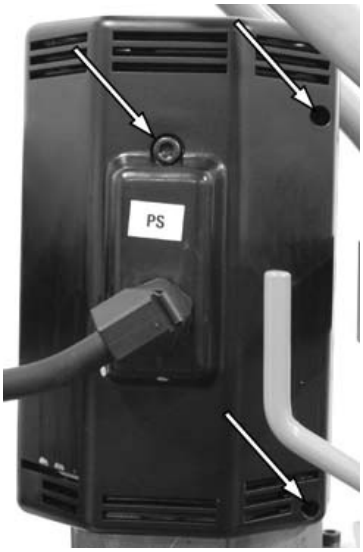

Figure 22.
Electric Cover Screws

4. See Figure 23. Use a screwdriver to remove the brush holder caps and the brush assemblies.

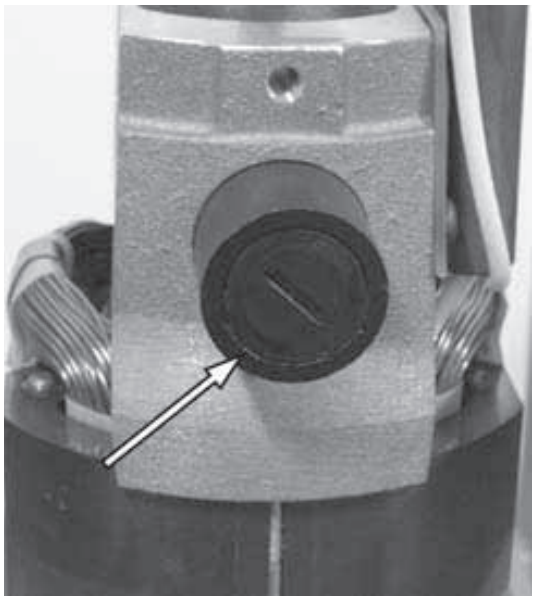

Figure 23.
Brush Holder

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5. See Figure 24. The brush assemblies must be replaced if they are 4.5 mm (1/8 in) or less.

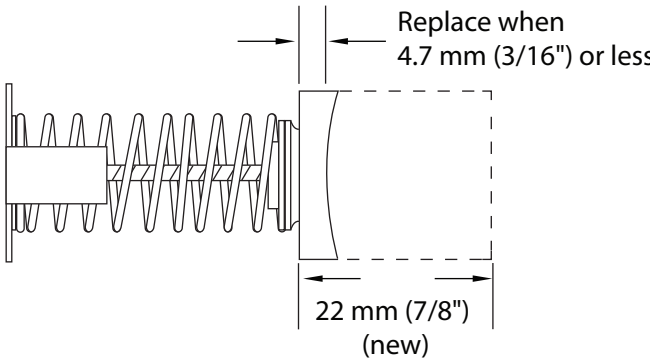

Figure 24.
Brush Inspection

6. See Figure 25. Install brush assemblies and brush holder caps.

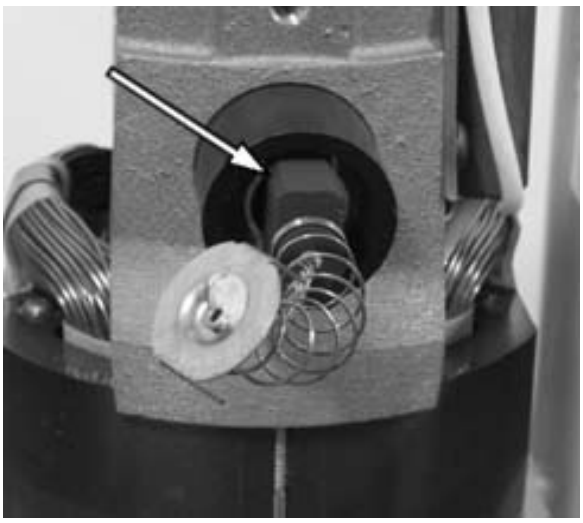

Figure 25.
Brush

7. See Figure 26. Position the electrical cover. Apply a small amount of Loctite 243 on end of the M6 bolt and install the bolt. Verify wires are not pinched or contacting the armature. Torque to 4.5-5 Nm (40-45 in/lbs).

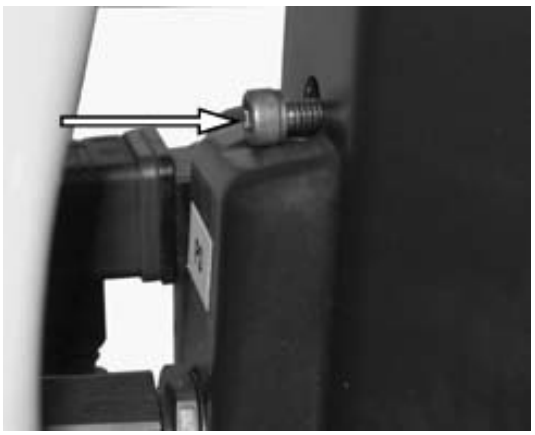

Figure 26.
Electric Cover Screw

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8. See Figures 27 and 28. Apply a small amount of Loctite number 243 on the end of the M4 bolts. Position the motor cover and install the bolts. Torque the bolts to 2.8-3.3 Nm (25-30 in/lbs).

Figure 27.
Electric Cover Screws

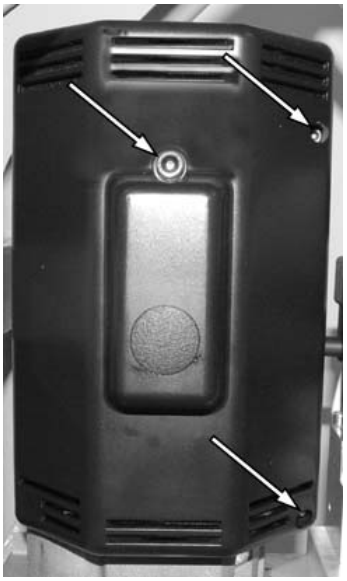

Figure 28.
Motor Cover Screws

9. See Figure 29. Apply a small amount of Loctite 243 on end of the M6 bolt and install the bolt. Torque to 3.3-3.9 Nm (30-35 in/lbs)

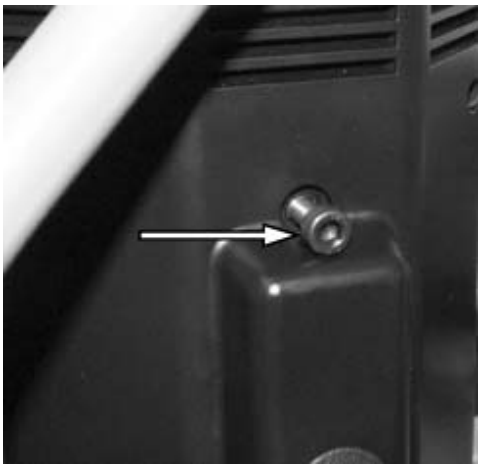

Figure 29.
Motor Cover Screw

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Fuse Replacement

1. See Figure 30. Disconnect power cord from power source.

Figure 30.
Disconnected from Power Source

2. See Figure 31. Remove the fuse holder.
3. Replace the fuse. On 115V (nominal) replace 15A time delay 250VAC 5x20mm fuse , 230V (nominal) replace 10A time delay 250VAC 5x20mm fuse.
4. To install, reverse the removal procedure.

Figure 31.
External Fuse Holder

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Troubleshooting Guide

WARNING: To prevent personal injury,

- **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 Hydraulic Technologies 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.*

Problem	Cause	Solution
Electric motor does not run.	1. Control system not powered.	*1. Push START (green) switch.*
	2. Unit is not plugged in.	*2. Plug in unit.*
	3. No voltage supply.	*3. Check line voltage.*
	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. Pendant not plugged in.	*6. Connect pendant.*
Electric motor will not shut off.	1. Defective motor controls.	*1. Disconnect unit from power supply; contact a Hydraulic Technologies 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 source; have qualified electrician review motor and circuit wiring.*
Pump delivers excess fluid pressure.	1. Faulty pressure gauge.	*1. Replace gauge.*
	2. Relief valve set incorrectly.	*2. Contact a Hydraulic Technologies Service Center.*

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Problem	Cause	Solution
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 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 Hydraulic Technologies service center.*
	6. Cold fluid or fluid too heavy. (Hydraulic fluid is of a higher viscosity than necessary.)	*6. Drain, flush, and refill reservoir using a lighter weight fluid. Refer to General Maintenance section.*
	7. Vacuum in reservoir.	*7. 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. Seal leaking pipe fittings with pipe sealant.*
	2. Leaking pressure switch seal.	*2. Replace pressure switch.*
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.*
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 Hydraulic Technologies Service Center.*

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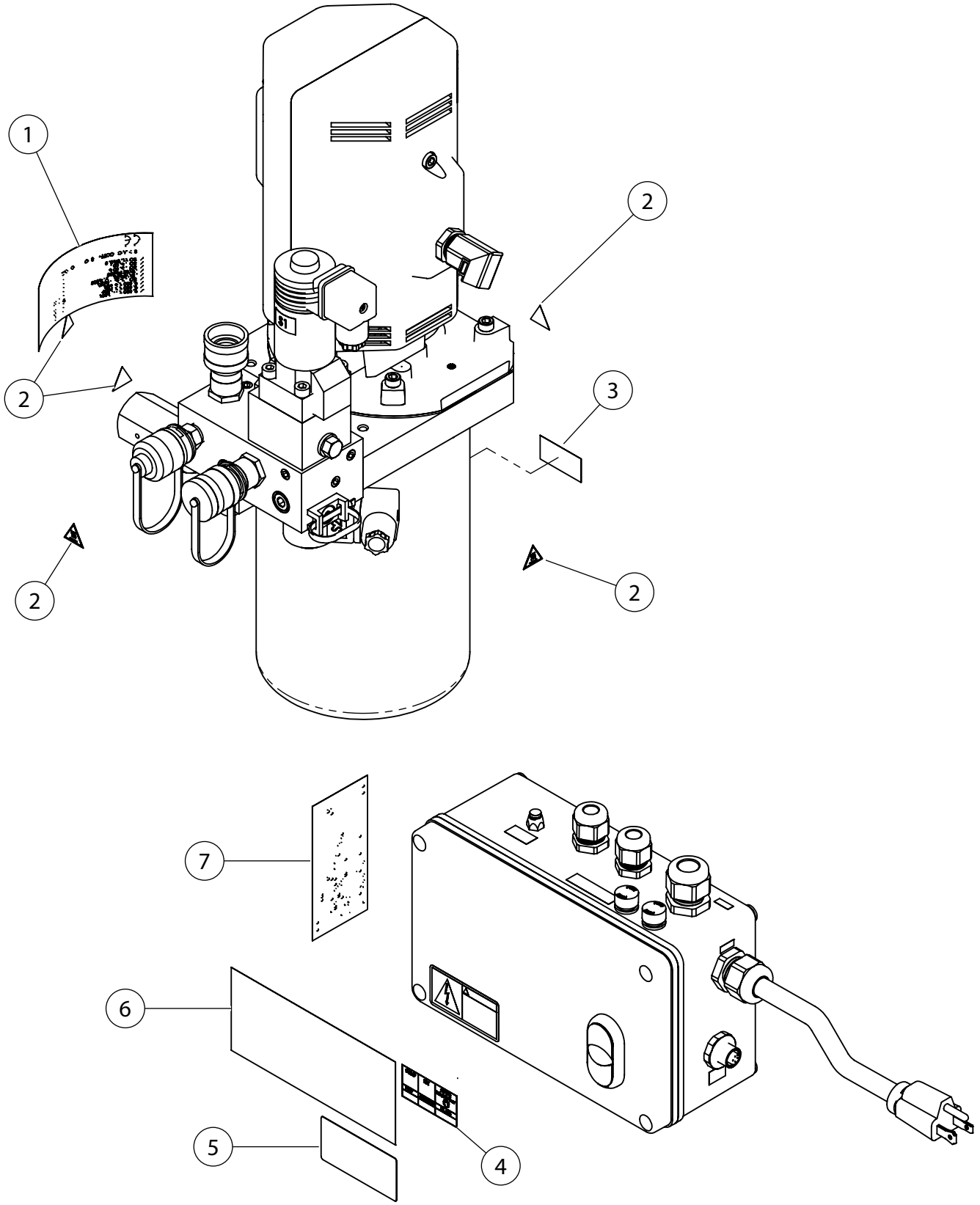
Parts List



Item No.	No. Req'd	Part No.	Description
1	1	**2002391**	DECAL, PLAS CERT CE US RECT 4.74 IN
2	5	**1000371**	DECAL, BURN HAZARD/HOT SURFACE, ISO
3	1	**1000550**	DECAL TANK FILL LINE
4	1	**1000662**	DECAL, PLAS CERT CE US RECT 2.24 IN
5	1	**1000608**	DECAL, PLAS INFO CAUT US RECT 3.0 IN
6	1	**1000543**	DECAL, SPX BOLTING SYSTEMS
7	1	**1000616**	DECAL, PLAS CERT CE US RECT 4.75 IN PE39YED1PR
	1	**1000617**	DECAL, PLAS CERT CE US RECT 4.75 IN PE39PED1PR
	1	**1000618**	DECAL, PLAS CERT CE US RECT 4.75 IN PE39YED1BPR
	1	**1000619**	DECAL, PLAS CERT CE US RECT 4.75 IN PE39PED1BPR
8	2	**12144**	BRUSH ASSEMBLY (NOT SHOWN)
9	1	**2001605**	FILTER, INLET SUCTION (NOT SHOWN)

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EC DECLARATION OF CONFORMITY

We declare that our electrically powered hydraulic pump assemblies Models:
PE39YED1PR, PE39PED1PR, PE39YED1BPR and **PE39PED1BPR**
To which this declaration relates are in conformity with the following:

EN, EN-ISO, ISO standards	Title
Per the provisions of the EMC Directive	2004/108 EC
EN_61000-4-2:2001	Electromagnetic Discharge Immunity test
EN_61000-4-3:2001	Radiated, Radio Frequency, Electromagnetic Field Immunity test
EN_61000-4-4:2001	Electrical Fast Transient / Burst Immunity test
EN_61000-4-5:2001	Surge immunity test
EN_61000-4-6:2001	Immunity to Conducted Disturbances, Induced by Radio-Frequency Fields
EN_61000-4-11:2001	Voltage Dip and Interrupt test
EN55011_2007	Industrial, Scientific and Medical (ISM) Radio Frequency Equipment-Electromagnetic Disturbance Characteristics-Limits and Methods of Measurement

EN, EN-ISO, ISO standards	Title
Per the provisions of the Machinery Safety Directive	2006/42 EC
EN_ISO 12100-1	Basic concepts, general principles for design - Part 1 Basic terminology, methodology
EN_ISO 12100-2	Basic concepts, general principles for design - Part 2 Technical Principles
EN ISO 14121-1:2007	Safety of machinery - Risk assessment - Part 1 Technical principles
EN 4413:2010	Hydraulic Fluid Power – general rules and safety requirements for systems & their components
EN ISO 13849-1:2006	Safety-related parts of control systems - Part 1
EN ISO 13849-2:2008	Safety-related parts of control systems - Part 2
EN 61310-2:2007	Safety of machinery - Indication, marking and actuation – Part 2 Requirements for marking

EN, EN-ISO, ISO standards	Title
Per the provisions of the Low Voltage Directive	2006/95 EC
EN_60204-1	Safety of Machinery –Electrical equipment of machines –Part 1 General requirements

EN, EN-ISO, ISO standards	Title
Per the provisions of the Noise Emission in the Environment by Equipment for Use Outdoors Directive	2000/14 EC
EN_3200L0014	Noise emission in the environment for use outdoors
ISO 3744:1994	Sound Power Level Measurements

We, the undersigned, hereby declare that the equipment specified conforms to the above European Communities Directive(s) and Standard(s).

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The Netherlands April 19, 2012

Christophe Bouvet, Managing Director

Andreas J. Klemm, Appl.Eng. Manager

Form No 1000542
Rev 0 Feb 2, 2012