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SAFETY PRECAUTIONS

IN GENERAL

When using rotating head cutting equipment, basic safety precautions should always be followed to reduce the risk of personal injury.

Operate this tool only in accordance with specific operating instructions.

WARNING:

Do not override the deadman switch on the power unit. Locking down, obstructing, or in any way defeating the deadman switch on the power drive unit may result in serious injury.

DRESS CONSIDERATIONS

Use standard safety equipment. Hard hats, safety shoes, safety harnesses, protective clothes, and other safety devices should always be used when appropriate.

Use safety glasses. Do not operate cutting tools without eye protection.

Dress properly. Do not wear loose clothing or jewelry. They can be caught in rotating and moving parts. Avoid slippery floors or wear nonskid footwear. If you have long hair, wear protective hair covering to contain it.

WORK AREA

Keep the work area clean. Cluttered work areas and benches invite injuries.

Consider the work area environment. Keep the area well lit. Keep electrical cords, cables, rags, rigging straps, and etc. clear of rotating equipment. Do not use power-cutting tools in the presence of flammable liquids and gasses.

Keep visitors away. Do not let visitors or untrained personnel at or near operating tools. Enforce eye protection requirements for all observers.

Do not over reach. Keep proper footing at all times.

Stay alert. Watch what you are doing. Use common sense. Do not operate tools when you are tired.

TOOL CARE

Maintain tools with care. Keep tools in good operating condition. Sharp tool bits perform better and safer than dull tool bits. Well maintained tools function properly when needed.

Check for damaged parts. If a tool has malfunctioned, been dropped or hit, it must be checked for damage. Run no-load tests and feed function checks. Do a complete visual inspection.

Electric motors. Use only with proper AC voltage power sources and observe all normal electric shock hazard procedures.

Do not abuse power and control cords. Pulling or running over cords and cables can result in electrical shock hazards and malfunctions. Keep control and power cords out of all cutting fluids and water.

Hydraulic drives. Observe proper procedures for electrically driven power sources. Avoid damage to hydraulic lines. Keep quick-disconnects clean. Grit contamination causes malfunctions.

Air tools. Check the exhaust muffler. Broken or damaged mufflers can restrict air flow or cause excessive noise. Use air motors only with a filtered, lubricated and regulated air supply. Dirty air, low-pressure air or over pressure air will cause malfunctions, including delayed starting.

AREA EQUIPMENT

Secure work. Whenever possible use clamps, vises, chains and straps to secure pipe.

Make sure the tool is secured; it is safer to have both hands free to operate the tool.

TOOL USE

Use the right tool and tool bit for the job. Do not use a tool, which is incorrect for the job you are doing.

Keep the tool bits fully engaged in the tool bit holders. Loose bits are a safety hazard.

Disconnect power supply during setup and maintenance. Use all 'Stop' or Shut off' features available when changing or adjusting tool bits, maintaining the tool, or when the tool is not in use.

Remove adjusting keys and wrenches before applying power to the equipment. Develop a habit of checking the tool before turning it on to make sure that all keys and wrenches have been removed.

Do not force tools. Tools and tool bits function better and safer when used at the feed and speed rate for which they were designed.

Do not reach into rotating equipment. Do not reach into the rotating head stock to clear chips, to make adjustments, or to check surface finish. A machine designed to cut steel will not stop for a hand or an arm.

Handle chips with care. Chips have very sharp edges and are hot. Do not try to pull chips apart with our hands; they are very tough.

Avoid unintentional starts. Do not carry or handle tools with your hand on the operating switches or levers. Do not lay the tool down in a manner that will start the drive. Do not allow the tool to flip around or move when adjusting or changing tool bits.

Store idle tools properly. Disconnect tools from the power source and store in a safe place. Remove tool bits for safe handling of the tool.

GENERAL DESCRIPTION

The Model 757RSS (P/N 01-0757) Remote Start/Stop Hydraulic Power supply is a variable-volume (0 to 12 gpm [0 to .75 lt./sec]), pressure-responsive (0 to 1800 psi [0 to 126.5 kgs/sq. cm]), reversible-flow power unit for supplying hydraulic power to cutting and weld end preparation pipe lathes with integral hydraulic motors.

The Pendant provides stop/start functions.

Variable flow is provided for with a PTO Cable Control at the Power Supply.

The Pendant allows operation up to 105' (32 m) away from the power supply by addition of a Pendant Extension Cable and Hydraulic Hoses.

For portability, the power supply is integrated into a cart frame with wheels and castors.

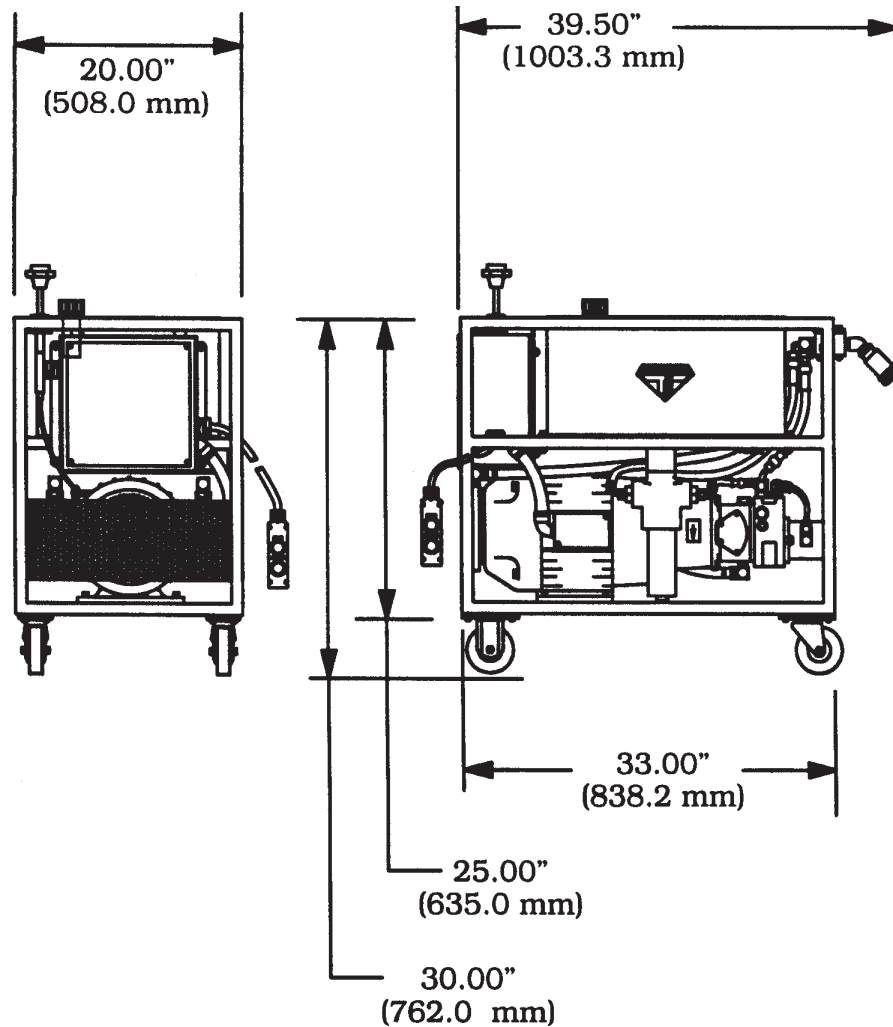
SPECIFICATIONS

Model 757RSS, Hydraulic Power Supply

Weight: 330 lbs. (150 kg) without oil

Power Requirements: 7.5 hp, 3 phase, 460 VAC, 50/60 Hz

Envelope, Model 757RSS, Hydraulic Power Supply



ELECTRIC CONTROL FEATURES

Magnetic starter, with a 24 VAC starting coil and Overload Protection Circuit Breaker.

The unit is controlled with a Remote Pendant, which provides Stop/Start functions.

Variable Volume and Reverse Flow is provided for at the Unit with a Push/Pull Rotary Control.

The pendant is supplied with a 2' (.6 m) Cable which connects to the Control Box.

The Extension Cables may be added up to 105' (32 m) maximum.

HYDRAULIC CHARACTERISTICS

Variable volume: 0 to 10 gpm (0 to 37.8 lt./min).

WARNING: Operation below 2 gpm (7.6 lt./min) is not recommended.

Volume control: Mechanical Swash Plate Control

Pressure:

0 to 1800 psi (0 to 126.5 kgs/sq. cm) forward

0 to 1400 psi (0 to 98.4 kg/sq. cm) reverse.

Pilot-operated by-pass (pressure limiting) valves (2) are included in the forward and reverse flow lines.

A closed loop system has been designed in for minimum heat generation.

A full flow return "loop" 10-micron Filter is in the system to prevent contamination from circulating through the pump.

The Filter Assembly incorporates a visual Filter Clogging Indicator.

The tank Suction Line contains a 10-micron Filter.

COOLING

A Heat Exchanger is built into the Reservoir Return Line.

HYDRAULIC RESERVOIR

The Reservoir has a capacity of 11 gallons (41 lt.)

The Reservoir includes a Level and a Temperature Gauge.

HYDRAULIC FLUID COMPATIBILITY

The system requires a petroleum-based hydraulic fluid.

Ethylene glycol/water based fluids may also be used; however, it is recommended that you contact the factory regarding specifics of operation on those types of fluids.

MAINTENANCE

HYDRAULIC FILTER

Change the Hydraulic Filter after every 1000 hours maximum or at any time the visual clogging indicator on the full flow filter indicates contaminated filter.

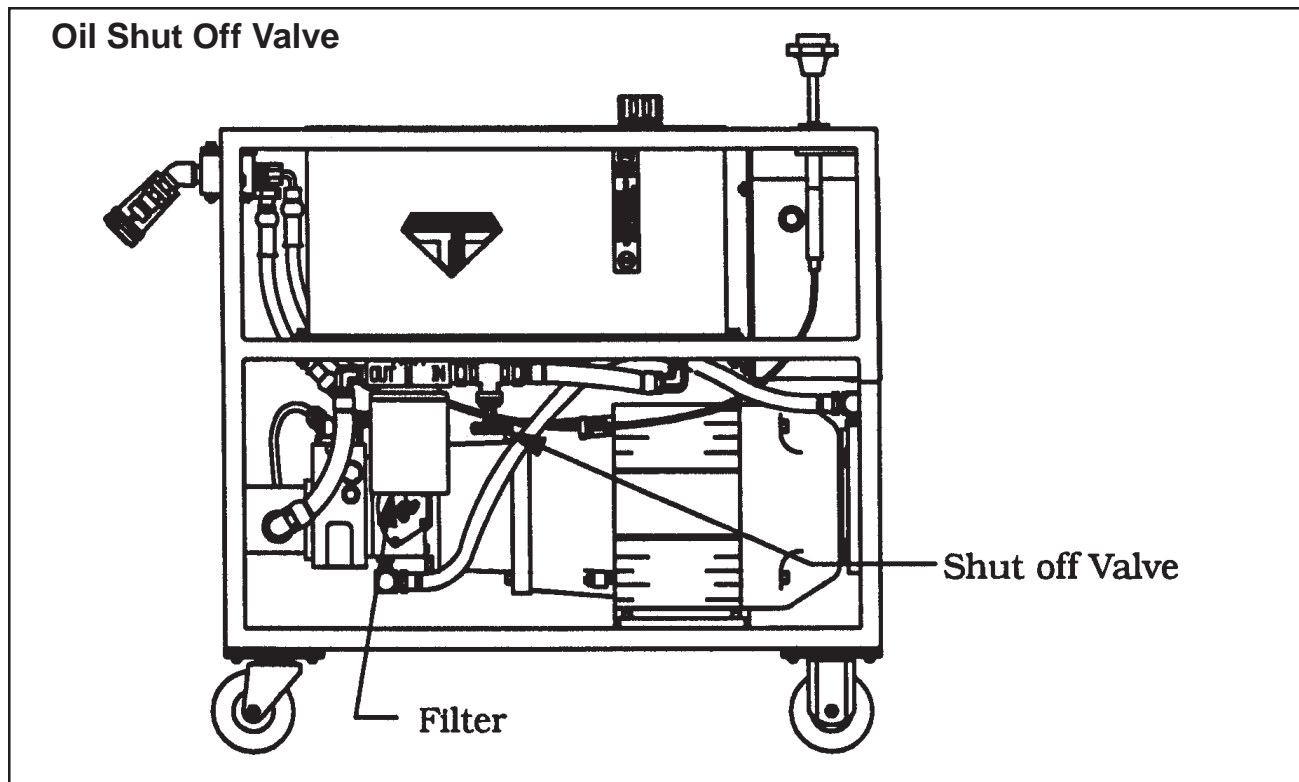
A small red plug “pops up” when pressure differential becomes excessive.

NOTE: Turn the Shut-off Valve off before attempting to change either filter.

Place a drain pan under the filter before attempting to remove the old filter.

CAUTION: Make sure that the Shut-off Valve is open before starting the unit up.

Change at a higher frequency for extremely dusty conditions.



HYDRAULIC FLUID

Fill the hydraulic reservoir with the recommended fluid (normally Automatic Transmission Fluid, ATF Type F) to the indicated mark.

Alternate fluids are listed in the section 'Recommended Hydraulic fluids' later in this booklet.

If long lengths of new hydraulic hoses (which are not full of fluid) are connected, then additional fluid will have to be added after the lines have been filled.

An additional 1.6 gallons (6 lt.) of fluid is required when 100' (50' [12.7 m] hose set) of 5/8" (16 mm) diameter hose is connected to the power supply.

Drain and refill after every 2000 hours.

Drain and refill more frequently if the oil becomes contaminated.

A visual observation through the sight glass level indicator is required.

HYDRAULIC HOSES

Visually inspect Hydraulic Hoses and replace if damaged.

For detailed testing, a test rig consisting of a male quick disconnect, a 10 gpm (38 lt./min) minimum capacity flow meter, a 2000 psi (140.6 kgs/sq. cm) pressure gauge, a shut-off valve (rated at 2000 psi, (140.6 kgs/sq. cm) and a female quick disconnect may be coupled between the hoses.

Open the shut-off valve to full volume flow at low pressure, which will be obtained with "full" actuation of the control knob.

By closing down the shut-off valve of the test rig, reduced flow at a higher pressure is obtained and full bypass pressure is obtained and indicated at zero flow.

OPERATION

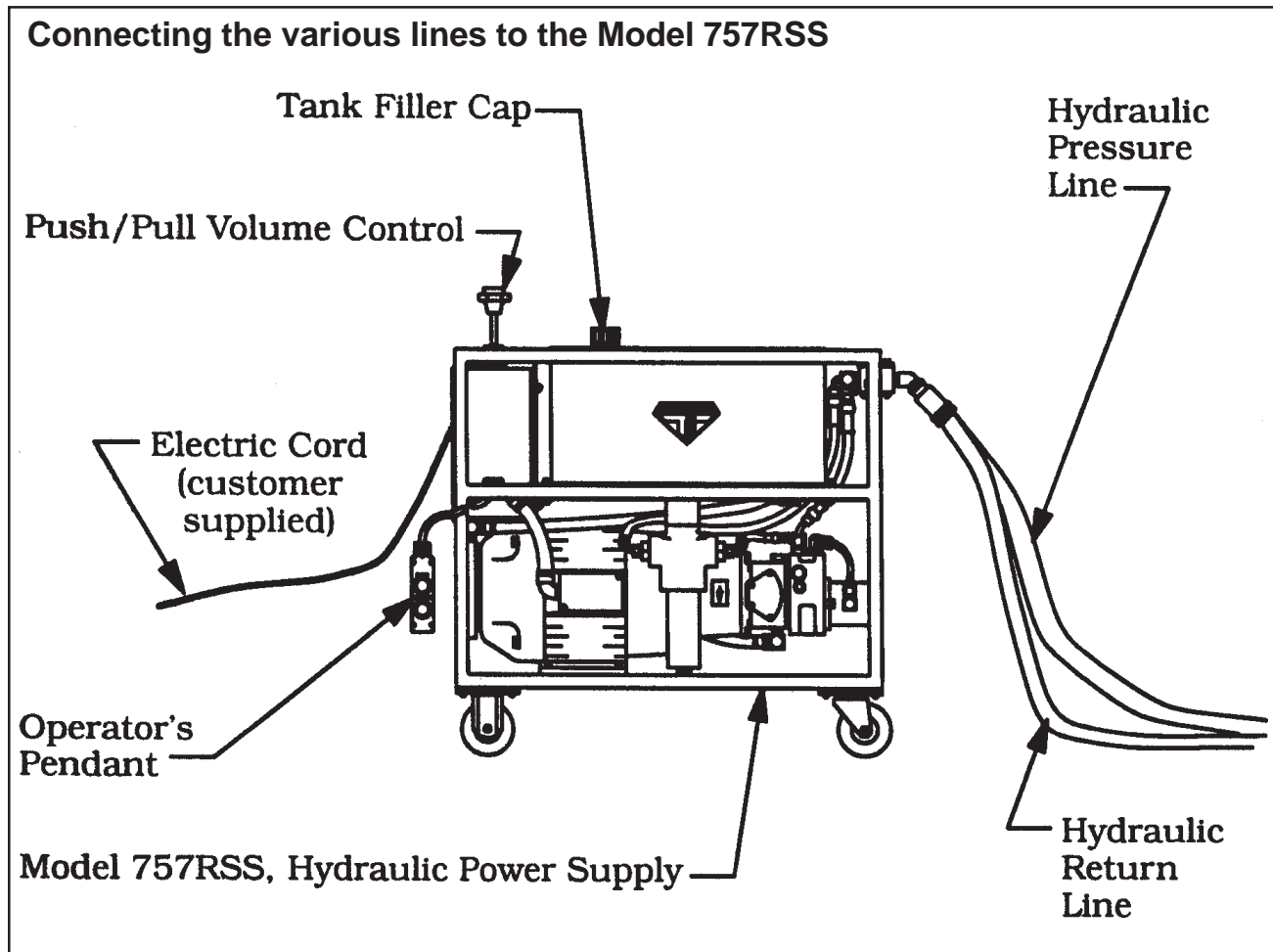
DANGER: Keep the control box door closed.

There IS 240 VAC, 380 VAC or 460 VAC within the system.

CONNECT THE OPERATOR'S PENDANT TO THE MODEL 757RSS

WARNING: Be sure that electrical power has been disconnected to the Hydraulic Power Supply before attempting to connect or disconnect the Operator's Pendant.

Failure to do so will cause the fuse in the electrical box to blow as well as possible damage to the connector on the Operator's Pendant.



Before any operation takes place, inspect the quick disconnects for contamination and clean if required when connecting hydraulic hoses.

Verify that the slide lock sleeves on the quick disconnects are fully engaged.

CONNECT THE HYDRAULIC HOSES TO THE UNIT

The quick disconnects on the hydraulic supply are pre-installed to match the forward flow line on all TRI TOOL Inc. equipment with the female hose quick disconnect being the forward or high pressure line.

Connect the hoses to the machine to be used.

Check the level of hydraulic fluid in the reservoir.

There is a minimum of 11 gallons (41 liters) required.

An additional 1.6 gallons (6 lt.) of fluid is required for every 100' (50 ' [12.7 m] hose set) of 5/8" (16 mm) diameter hose connected to the power supply.

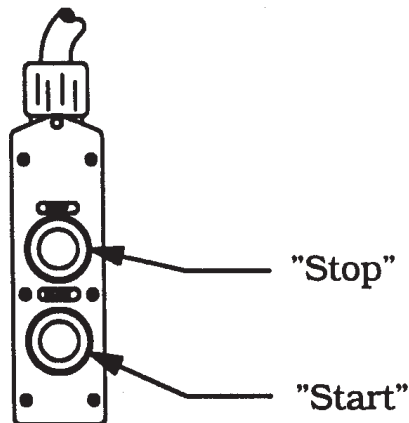
CONNECT THE UNIT TO A POWER SOURCE.

Check the motor rotation if any main power re-connections have been made since the initial set-up checks.

The unit is wired to match the source power.

Push down on the START Button to start the unit.

Operator's Pendant



WARNING: The Hydraulic Pump will be damaged if it is driven backwards.

The charge pump doesn't circulate oil if rotated in the reverse direction and therefore overheats in about 10 seconds of continuous reverse running.

The motor has a run direction arrow.

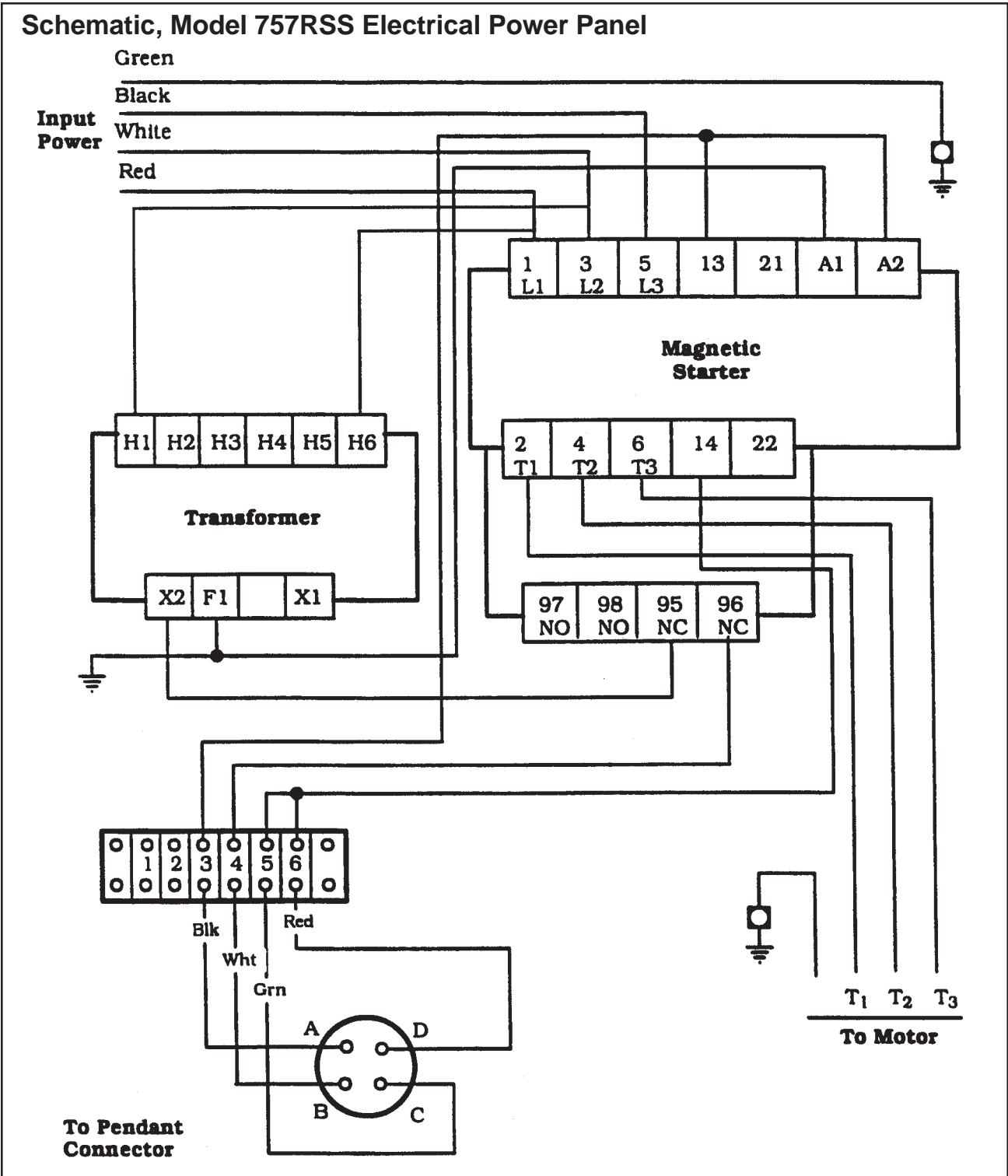
The motor fan can be viewed through a hole in the top of the housing or the pump to motor coupling can be viewed through the adapter port.

If necessary, reverse the two power leads to the starter as it is normally required to change the direction of a 3 phase motor,

Proceed with the operation per the appropriate machine operation instructions.

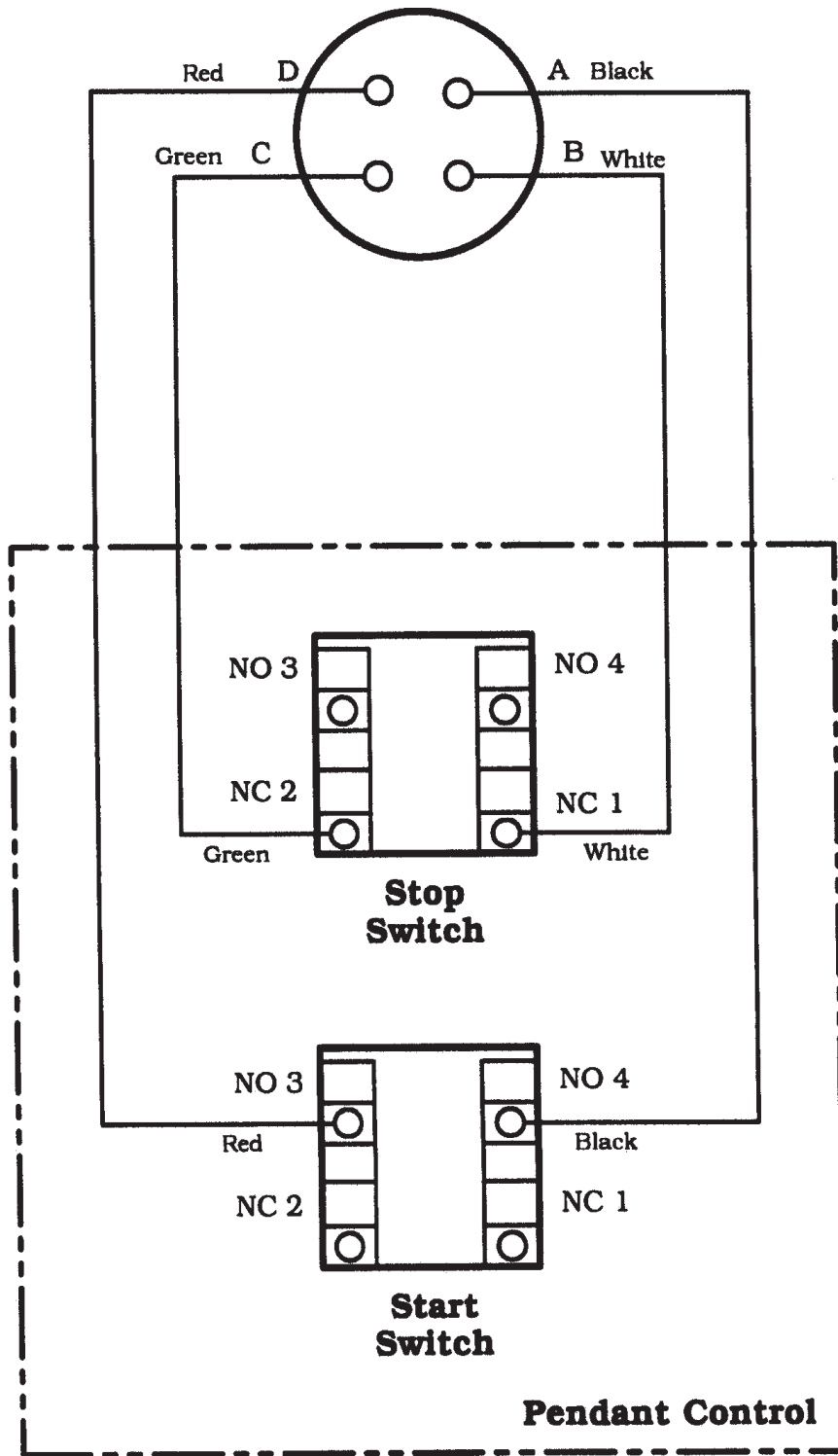
SCHEMATICS

Carriage Schematic

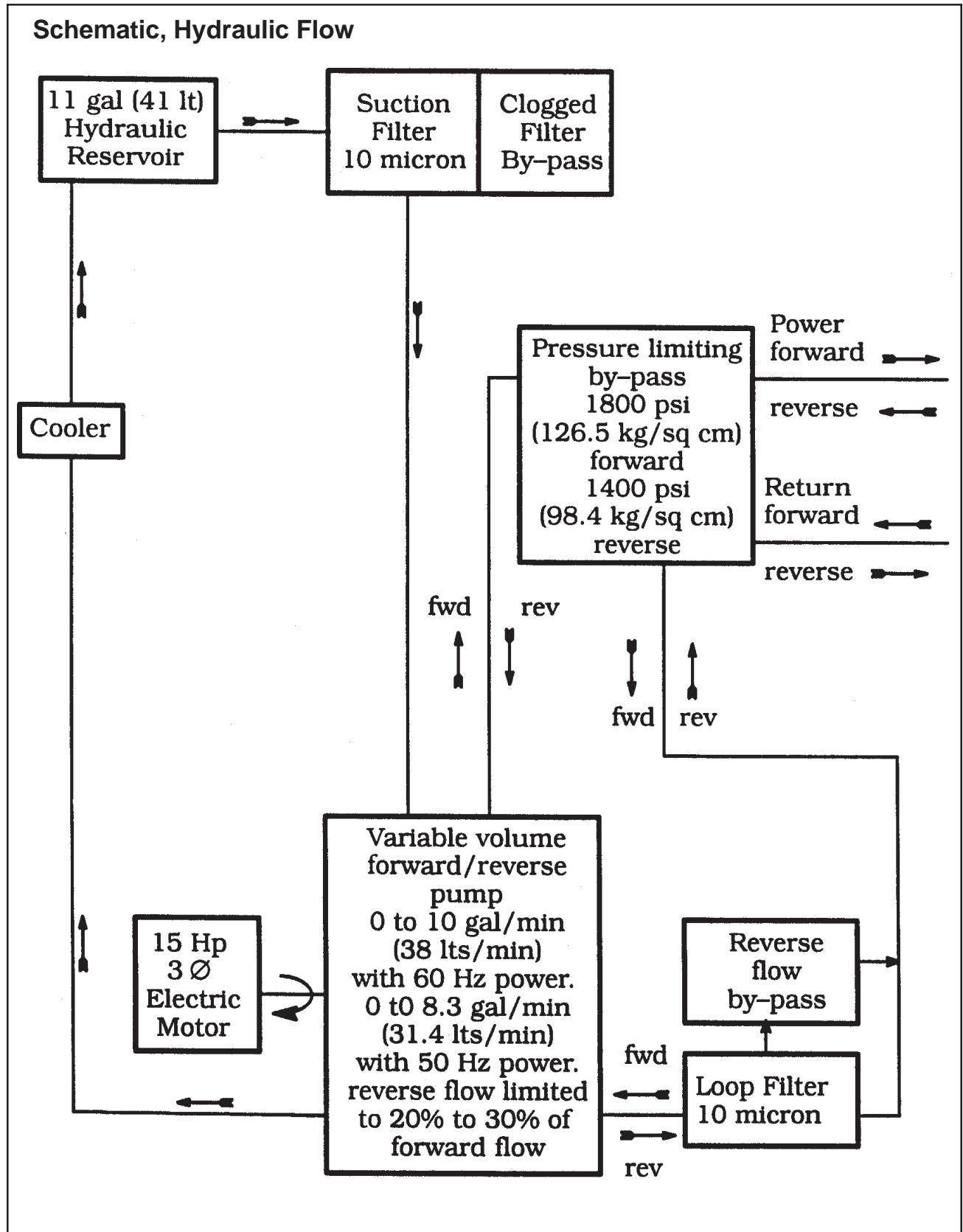


Pendant Schematic

Schematic, Operator's Pendant



Hydraulic Schematic



RECOMMENDED HYDRAULIC FLUIDS

Any Automatic Transmission Fluid, Type F (ATF Type F) or as an alternate, one of the fluids listed below:

Manufacturer	Brand Name	Viscosity @ 40C (104F) (cSt)	Viscosity @ 100C (212F) (cSt)	Viscosity Index	API Gravity (degrees)
Chevron	ATF Type F	37.2	7.3	165	32.8
Citgo	Transgard ATF Type F	--	7.4	165	--
ConocoPhillips	ATF Type F	43.0	7.6	145	--
ConocoPhillips	Kendall ATF Type F	34.3	7.0	174	--
Exxon - Esso	ATF Type F	37.0	7.5	180	--
Mobil	ATF Type F	36.0	7.2	150	31.4
Pennzoil	ATF Type F	34.0	7.1	152	30.5
Shell	Donax TF	35.5	7.4	--	--
Shell	FormulaShell ATF Type F	39.0	7.4	165	30.5
Texaco	Havoline ATF Type F	37.2	7.3	165	32.8
Quaker State	ATF Type F	34.0	7.1	152	--
Valvoline	ATF Type F	35.8	7.3	178	--
Chevron	Rykon 32	32.0	6.0	153	33.0
Chevron	Rykon 46	46.0	8.0	157	32.0
ConocoPhillips	Super Hydraulic Oil 32	31.0	5.4	104	32.6
ConocoPhillips	Super Hydraulic Oil 46	46.0	6.8	100	31.6
Exxon	Nuto H 32	32.0	5.4	104	--
Exxon	Nuto H 46	46.0	6.7	104	--
Mobil	DTE 24	32.0	5.0	98	31.0
Mobil	DTE 25	44.0	7.0	98	30.0
Shell	Tellus 32	32.0	5.4	99	31.0
Shell	Tellus 46	46.0	6.7	98	30.0
Texaco	Rando HD 32	30.4	5.2	99	32.6
Texaco	Rando HD 46	43.7	6.5	97	31.8

NOTE:

The operating temperature, environment and the duty cycle should be considered when selecting alternate hydraulic fluids.

In general, if a fluid that is not listed is to be used, select a high quality hydraulic fluid that has the following properties:

- Viscosity at 40° C of between 30 and 46 centistokes (cSt)
- Viscosity index of at least 95.
- API gravity of between 30 and 33°.

The viscosity index is a measure of how much the fluid's viscosity changes as its temperature changes. The higher the viscosity index number the less the fluid's viscosity is effected by temperature and the better it is for use in the system. Most ATF, Type F fluids have viscosity index numbers around 165 whereas, most standard hydraulic fluids have viscosity index numbers around 100.

API gravity, is a measure of the density a hydraulic fluid compared to water. If the API gravity is greater than 10, it is lighter and floats on water; if less than 10, it is heavier and sinks. API gravity is used to compare the relative densities of hydraulic fluids. For example, with two hydraulic fluids, the one with the higher API gravity will float on the one with the lower API gravity. Although mathematically API gravity has no units, it is nevertheless referred to as being in "degrees".

ACCESSORIES

The following accessories are available for use with the Model 757RSS Hydraulic Power Supply from TRI TOOL Inc.

1. Extension Kit, Hose and Pendant, 25' (7.6 m)(P/N 05-0224)
One 30' (9.1 m) Pendant Cable
One 25' (7.6 m) x 5/8" (16 mm) Pressure Hose
One 25' (7.6 m) x 5/8" (16 mm) Return Hose

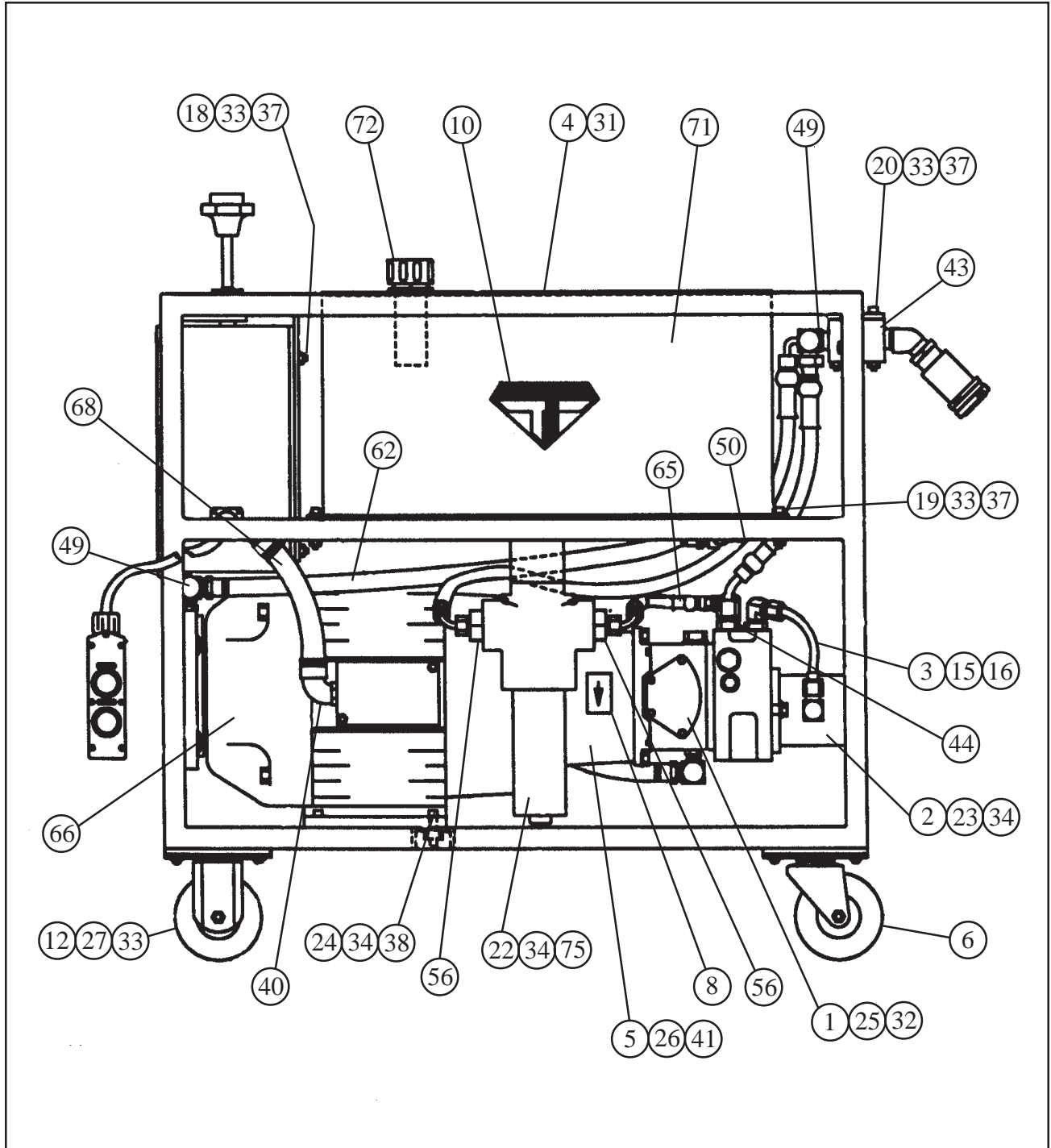
2. Extension Kit, Hose and Pendant, 50' (15.2 m)(P/N 05-0225)
One 55' (16.8 m) Pendant Cable
One 50' (15.2 m) x 5/8" (16 mm) Pressure Hose
One 50' (15.2 m) x 5/8" (16 mm) Return Hose

3. Extension Kit, Hose and Pendant, 100' (30.5 m)(P/N 05-0226)
One 105' (32.0 m) Pendant Cable
One 100' (30.5 m) x 5/8" (16 mm) Pressure Hose
One 100' (30.5 m) x 5/8" (16 mm) Return Hose

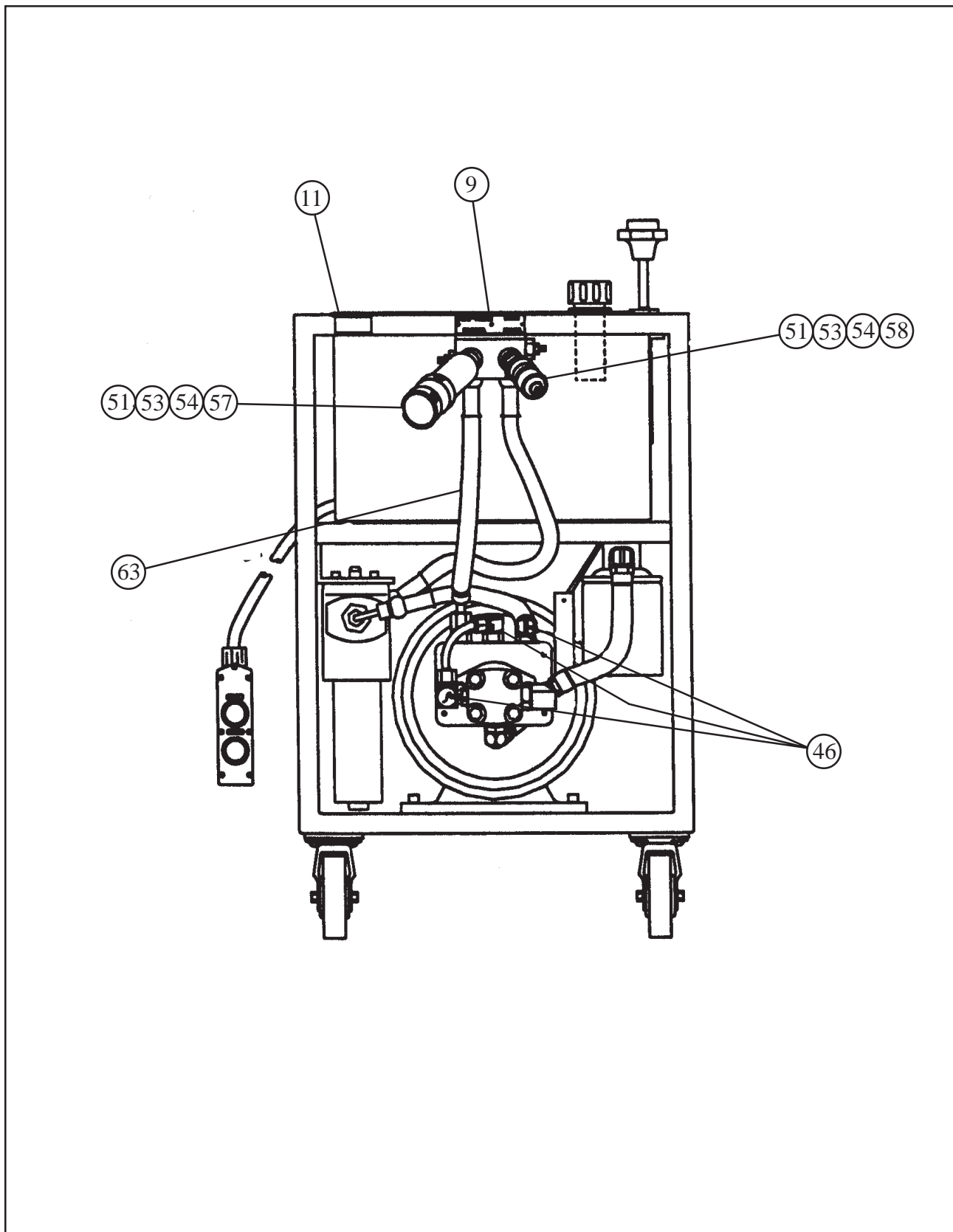
ILLUSTRATED PARTS BREAKDOWN

MODEL 757RSS (P/N 01-0757)

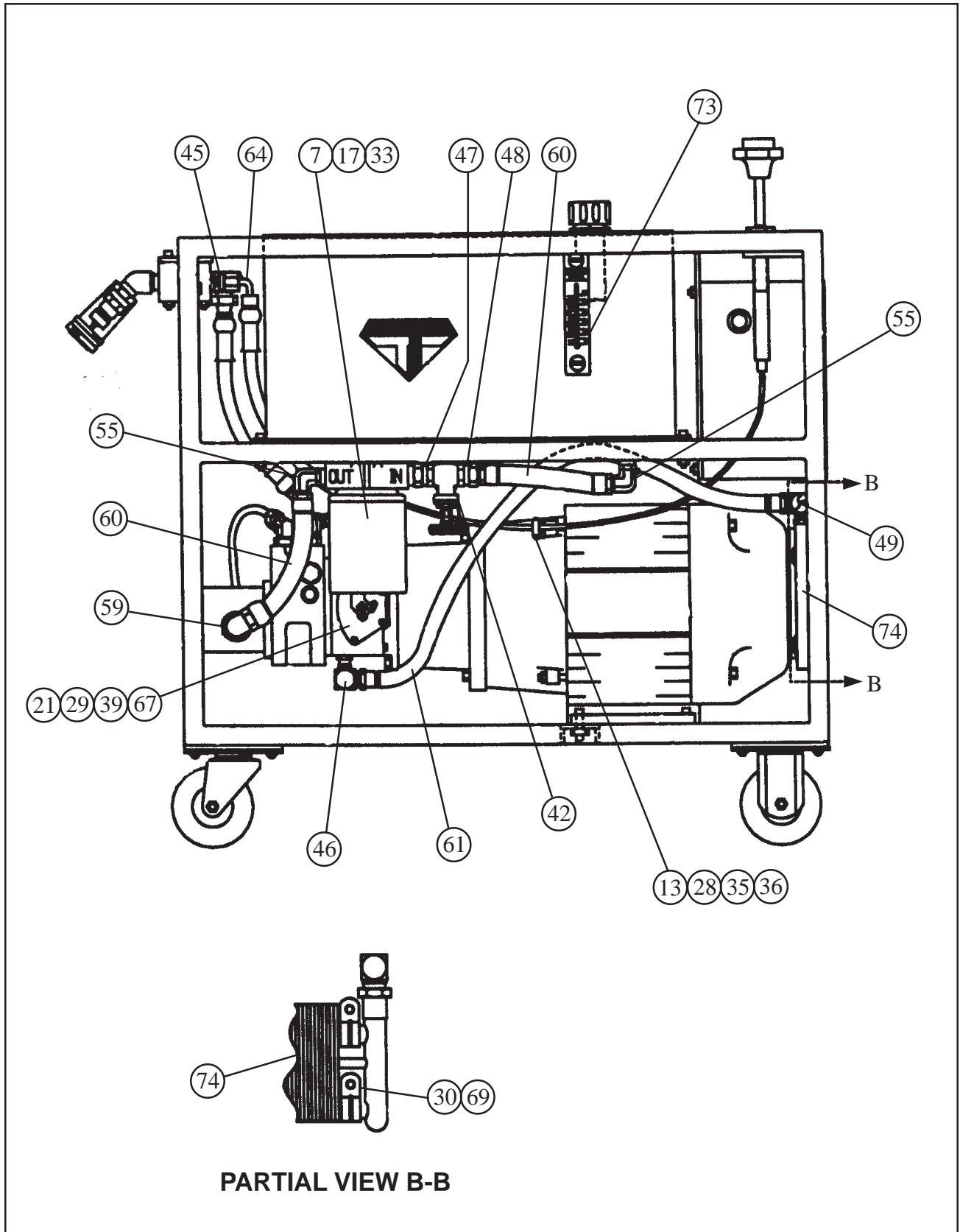
MODEL 757RSS, HYDRAULIC POWER SUPPLY, RIGHT SIDE



MODEL 757RSS, HYDRAULIC POWER SUPPLY, FRONT END

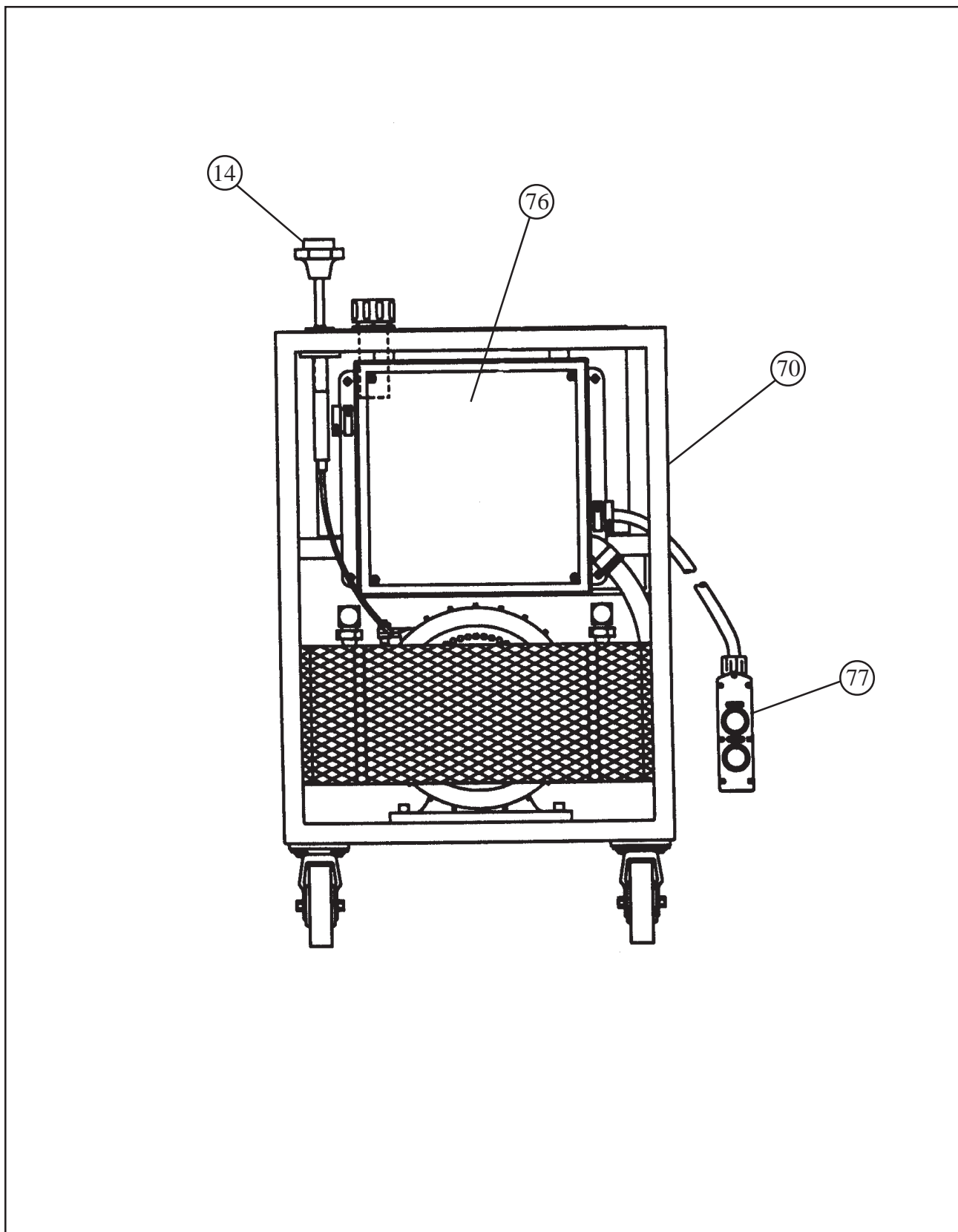


MODEL 757RSS, HYDRAULIC POWER SUPPLY, LEFT SIDE



PARTIAL VIEW B-B

MODEL 757RSS HYDRAULIC POWER SUPPLY, BACK END



Model 757RSS, Hydraulic Power Supply

Parts List, Model 757RSS, Hydraulic Power Supply (P/N 01-0757)

Item No.	Part No.	Description	Qty
1.	07-0016	PUMP	1
2.	07-0017	PUMP, CHARGE	1
3.	22-0086	TUBING	6" (16 cm)
4.	24-1264	PLATE, COVER	1
5.	27-0473	ADAPTER, PUMP/MOTOR	1
6.	30-0053	CASTER, SWIVEL	2
7.	30-0058	FILTER ASSY	1
8.	30-0105	LABEL	1
9.	30-0384	LABEL	1
10.	30-0482	LABEL	2
11.	30-2061	LABEL	1
12.	30-2184	CASTER, RIGID	2
13.	30-2194	CLAMP, CABLE	1
14.	30-2267	CABLE, PUSH/PULL	1
15.	30-2268	NUT, FERRULE	2
16.	30-2269	FERRULE	2
17.	33-0040	SCREW, CAP, 1/4-20 X 3/4	2
18.	33-0042	SCREW, CAP, 1/4-20 X 1	4
19.	33-0045	SCREW, CAP, 1/4-20 X 1 3/4	4
20.	33-0047	SCREW, CAP, 1/4-20 X 2 1/4	2
21.	33-0059	SCREW, CAP, 5/16 -18 X 1 3/4	1
22.	33-0070	SCREW, CAP, 3/8-16 X 7/8	4
23.	33-0071	SCREW, CAP, 3/8-16 X 1	2
24.	33-0073	SCREW, CAP, 3/8-16 X 1 1/2	4
25.	33-0106	SCREW, CAP, 1/2-13 X 1 1/4	2
26.	33-0107	SCREW, CAP, 1/2-13 X 1 1/2	4
27.	33-0285	SCREW, BUTTON, 1/4-20 X 1/2	16
28.	33-0316	SCREW, BUTTON, #10-32 X 1	1
29.	33-0501	SCREW, SET, 1/4-20 X 3/8, CUP PT	1
30.	33-1856	SCREW, SELF TAPPING	4
31.	33-1857	SCREW, SELF DRILLING, #8 X 1	10
32.	34-0020	WASHER	2
33.	34-0026	WASHER	28
34.	34-0028	WASHER	10
35.	35-0007	NUT, HEX, 5/16-18 X 7/32	1
36.	35-0013	NUT, HEX, #10-32 X 1/8	1
37.	35-0055	NUT, LOCK, 1/4-20 X 5/16	10
38.	35-0095	NUT, LOCK, 3/8-16 X 7/16	4
39.	35-0190	NUT, LOCK, 5/16-18 X 23/64	1

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Parts List, Model 757RSS, Hydraulic Power Supply (P/N 01-0757) Continued

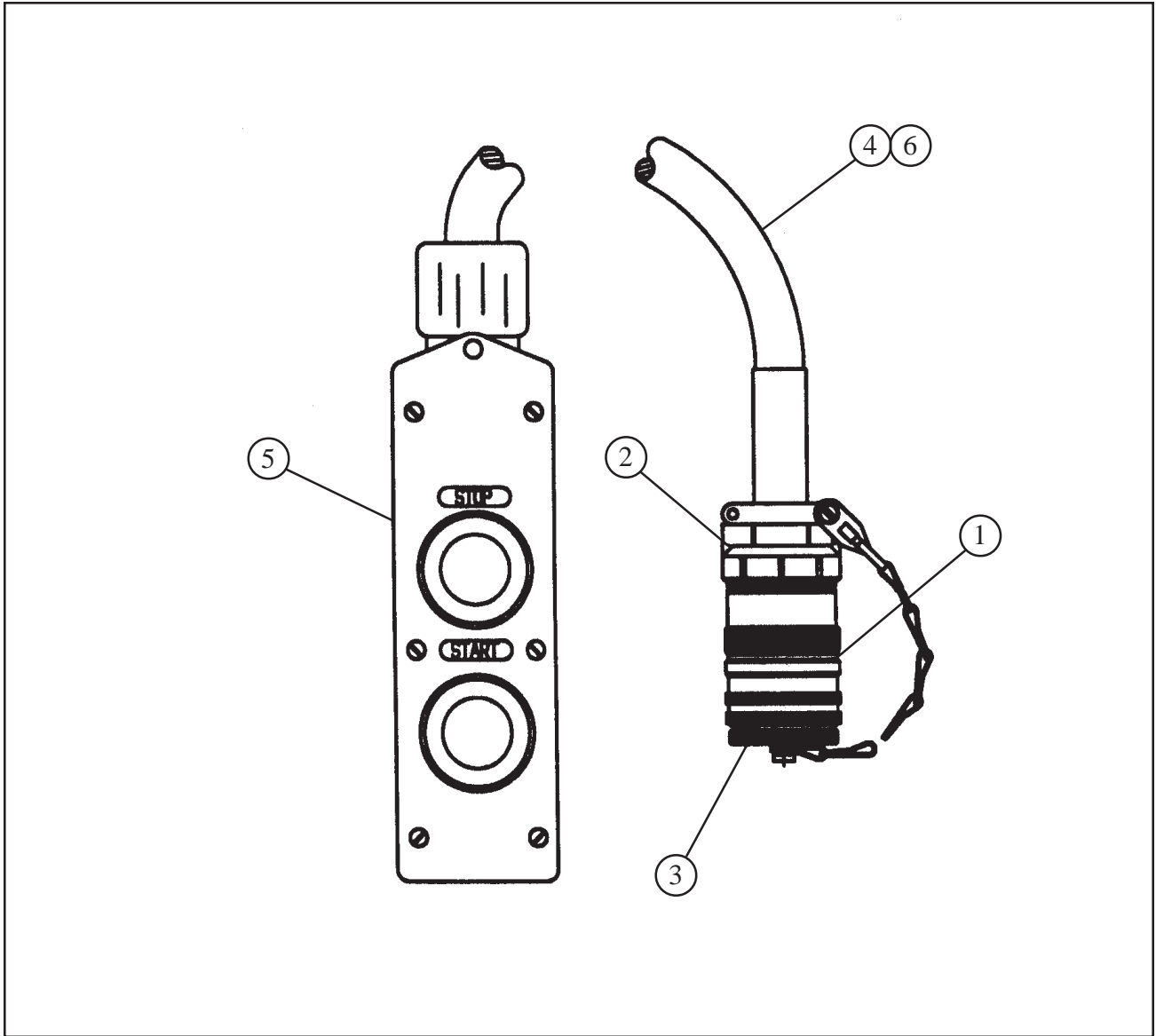
Item No.	Part No.	Description	Qty
40.	70-0015	CONNECTOR	1
41.	51-0038	COUPLER	1
42.	53-0014	VALVE, GATE	1
43.	53-0060	VALVE, CROSS-PORT RELIEF	1
44.	54-0002	ADAPTER	1
45.	54-0011	ADAPTER	1
46.	54-0026	ELBOW, 90 DEG.	4
47.	54-0030	FITTING	1
48.	54-0047	FITTING	1
49.	54-0053	FITTING, 90 DEG.	3
50.	54-0057	FITTING, 90 DEG.	1
51.	54-0106	REDUCER	2
53.	54-0335	PLUG, DUST	2
54.	54-0123	ELBOW, 45 DEG	2
55.	54-0137	ELBOW, 90 DEG.	2
56.	54-0205	ADAPTER	2
57.	54-0333	QD, HYD, FEMALE	1
58.	54-0334	QD, HYD, MALE	1
59.	54-0363	ELBOW, 45 DEG.	1
60.	55-0160	HOSE ASSY.	2
61.	55-0188	HOSE ASSY, 31"	1
62.	55-0189	HOSE ASSY, 22"	1
63.	55-0191	HOSE ASSY, 1/2"	1
64.	55-0192	HOSE ASSY, 34"	1
65.	55-0193	HOSE ASSY, 9"	1
66.	58-0005	MOTOR, ELECTRIC	1
67.	63-0127	ARM, ACTUATOR	1
68.	70-0016	SEALTITE	7" (18 cm)
69.	70-0275	CLAMP	4
70.	71-0021	FRAME	1
71.	72-0007	RESERVOIR, ASSY	1
72.	75-0012	CAP, FILTER	1
73.	75-0108	GAUGE	1
74.	75-0109	HEAT EXCHANGER	1
75.	75-0110	FILTER ASSY, PRESSURE	1
76.	76-0036	PANEL, CONTROL	1
77.	70-0466	PENDANT ASSY, CONTROL	1

TRI TOOL INC.

Parts List, Panel, Electrical (P/N 76-0036)

Item No.	Part No.	Description	Qty
1.	33-0200	SCREW, CAP, #10-32 X 1/2	4
2.	33-0266	SCREW, BUTTON, #4-40 X 3/8	4
3.	33-0279	SCREW, BUTTON, #10-24 X 1/2	4
4.	34-0171	WASHER, FLAT	4
5.	35-0001	NUT, HEX	4
6.	35-0402	NUT, LOCK W/ NYLON INSERT	4
7.	40-0015	CONDUIT, CONNECTOR	1
8.	70-0018	WIRE, #12 AWG, RED	"
9.	70-0153	TERMINAL, INSULATED, SNAP, 12-10	13
10.	70-0182	FUSE, TIME DELAY	1
11.	70-0190	BOARD, TERMINAL, 6 PIN	1
12.	70-0191	WIRE, #12 AWG, BLACK	"
13.	70-0376	LUG, GROUND	2
14.	70-0410	WIRE, #10 AWG, GREEN	"
15.	70-0412	RING, TONGUE, TERMINAL	1
16.	70-0424	BOX, CONTROL	1
17.	70-0425	PANEL	1
18.	70-0443	STARTER, MAGNETIC, CONTACTOR	1
19.	70-0445	TRANSFORMER	1
20.	70-0461	CONNECTOR, RECEPTACLE, BOX	1
21.	70-0465	CAP, DUST, AND CHAIN ASSY	1
22.	70-0467	FUSE KIT, SECONDARY	1
23.	70-0474	STRAIN RELIEF	1
24.	70-0475	NUT, LOCK, CONDUIT	1
25.	70-0476	NUT, LOCK, CONDUIT	1
26.	70-0477	RELAY, OVERLOAD	1
NOT SHOWN:			
	70-0468	CABLE, 14/4, SOW-A	1

OPERATOR'S PENDANT ASSEMBLY (P/N 70-0466)



Parts List, Operator's Pendant (P/N 70-0466)

Item No.	Part No.	Description	Qty
1.	70-0462	CONNECTOR, STRAIGHT PLUG	1
2.	70-0463	CLAMP, CABLE	1
3.	70-0464	PLUG, DUST	1
4.	70-0468	CABLE, 14/4, SOW-A	2'
5.	70-0469	PENDANT STATION	1
6.	70-0470	TERMINAL, RING TONGUE, INSULATED	4