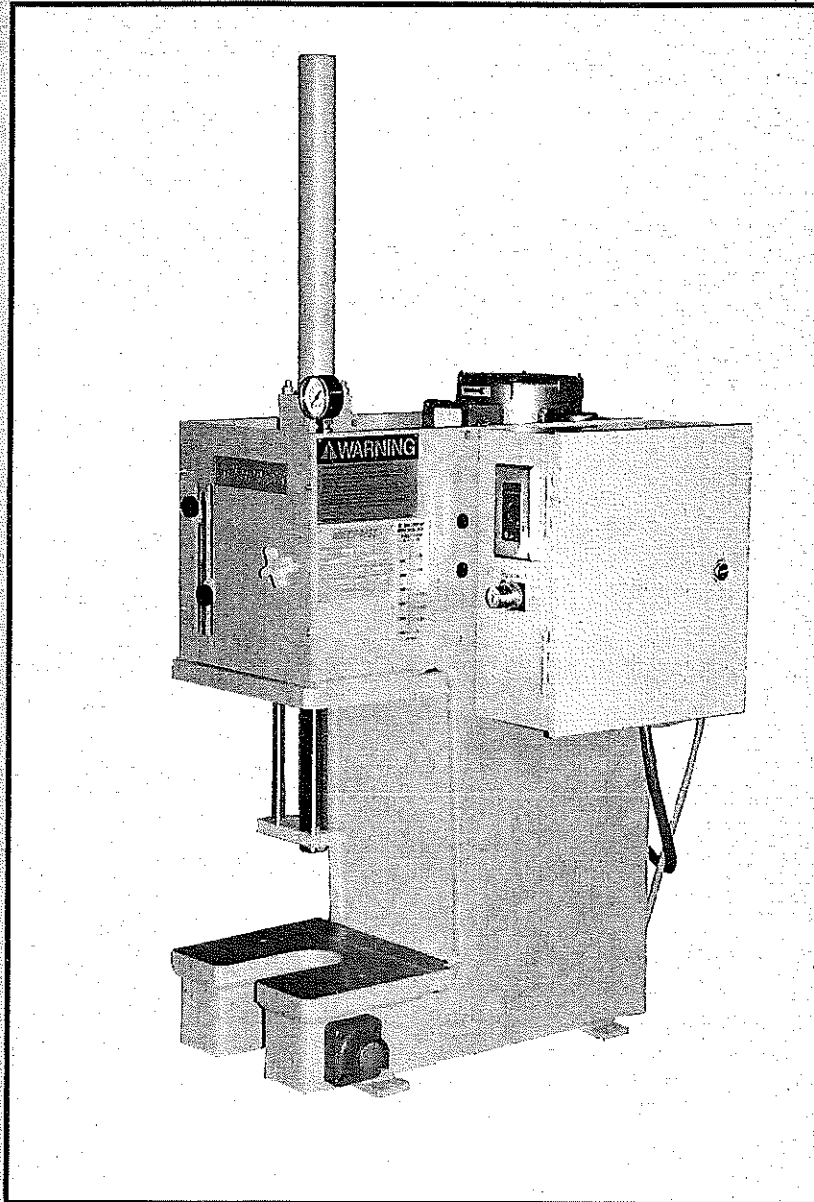


BULLETIN W5A-123-96

QPI MULTIPRESS, INC

HYDRAULIC EQUIPMENT OPERATING INSTRUCTIONS AND SERVICE MANUAL



SERIES W5A 1, 2, & 3 TON

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INTRODUCTION

SERVICE POLICY

The simplicity of MULTIPRESS equipment, the unitized construction of its major components and observance of the instructions in this manual assure ease of servicing by the user.

All field service requested by the user and rendered by our factory representatives will be charged at the established rate per day plus expenses. MULTIPRESS equipment may be sent to our factory for inspection and service only upon receipt of purchase order for such service.

Electric current characteristics required by user, to be specified at time of order.

MULTIPRESS EQUIPMENT WARRANTY

If any MULTIPRESS equipment part of our manufacture which, after prepaid shipment to our factory and upon inspection at our factory or by a qualified factory representative, is proven defective in workmanship or material, it will be replaced free of charge providing that, within a period of six months from date of shipment from our factory it is still owned by the original purchaser and being used in recommended service and using an oil meeting our recommended specifications.

Parts other than of our manufacture bear only such warranties as their manufacturers allow. When upon inspection by a qualified representative, it is indicated that these parts are defective, we will endeavor to secure from the manufacturer the benefits of such warranties for our customers. Please refer to MULTIPRESS standard terms of sale for additional information.

SAFETY

It is suggested for the user to be familiar with ANSI B11.2-1995, "American National Standard for Machine Tools - Hydraulic Power Presses - Safety Requirements for Construction, Care, and Use", for personal safety of the press operator.

Copies can be ordered from : AMT - The Association For Manufacturing Technology
7901 WESTPARK DRIVE
McLEAN, VIRGINIA 22102-4269
PH 703-893-2900 FAX 703-893-1151

Revised 3/15/97

INSTALLATION

GENERAL

This manual is intended for reference when installing and preparing MULTIPRESS equipment for operation and is for normal maintenance, repair and upkeep of equipment.

INSTALLATION INSTRUCTIONS

After removing press from shipping crate, stand the press upright near the area where it will be anchored. Care should be taken to avoid twisting or dropping of the press during unpacking and transportation to the area of operation.

BENCH

If your press is to be mounted on a MULTIPRESS bench, position press on bench and bolt firmly in place using shims to compensate for any unevenness between top of bench and press. Bolt bench firmly to the floor.

ELECTRIC

Your standard press is wired to be connected to current characteristics as specified when ordered. Connection of press to users' power source should be accomplished by qualified personnel.

CAUTION

Do not permit electric motor to operate before press reservoir is filled with oil or to operate in the wrong direction of rotation. See STARTING PUMP & MOTOR page 6 and direction of rotation arrow plate on pump motor assembly.

RECOMMENDED OIL SPECIFICATIONS

Warranty for MULTIPRESS equipment applies only when the proper hydraulic fluid has been used and oil contamination level is equal to or better than NAS....1638...CLASS NO.8 OR BETTER.
NO PARTICLES OVER 200 MICRON.

Certain basic physical and chemical properties are necessary for proper operation of the MULTIPRESS. The following basic properties should be presented to the fluid supplier for their recommendation of a product for use in this MULTIPRESS.

VISCOSITY @ 100° F - 100 SUS/ PLUS OR MINUS 16 SUS

VISCOSITY INDEX - 90 OR HIGHER

RUST & OXIDATION INHIBITORS - YES

ANTI-FOAM ADDITIVE - YES

Specific gravity .882-.887 @ 60F/ 60F (API Gravity 29-31)

It is suggested that the fluid supplier provide the user with certification that their product meets the above requirements.

FILLING THE OIL RESERVOIR

CLEANLINESS is the most important requisite in proper maintenance of oil hydraulic equipment. Of the few maintenance difficulties encountered in the operation of oil hydraulic equipment, many of them are directly traceable to dirt or foreign matter in the oil.

EXTREME CARE should be exercised in maintaining a clean supply of oil in the reservoir and hydraulic system of your MULTIPRESS equipment at all times. Make certain that no lint, dirt, abrasive scale or other foreign materials enters the hydraulic system. Trouble free operation over a long period of time may be obtained from the press by taking these precautions with the oil in the press. See MULTIPRESS EQUIPMENT WARRANTY on page 3.

The oil reservoir is filled thru the oil filler cap which is located on top of the reservoir. Lift the filler cap and fill the reservoir with any clean oil meeting our recommended oil specifications above. Approximately 22 qts. are required to fill the reservoir to within 1" of the top of the reservoir. Contaminants are sometimes found even in new oil, so a filter cart should be employed to transfer oil into reservoir.

CAUTION

Never operate press if oil level is low, or if the oil temperature is greater than 150° F. The use of a cooler is recommended when fluid temperatures are expected to exceed 130° F.

SEQUENCE OF OPERATION

STARTING THE PUMP & MOTOR

IMPORTANT: Prior to start-up, start and stop the electric motor in order to check for proper rotation. There are arrows clearly marked on the pump indicating the correct rotation. If this is incorrect, check the wiring to the motor leads. Lower the setting of the RELIEF VALVE page 19 by loosening LOCKNUT and then turning KNOB counterclockwise until loose but not removed. See PRESSURE ADJUSTMENT plate on right side of press.

CAUTION

If the motor is permitted to operate in the wrong direction of rotation, the pump will be damaged after only a few seconds due to lack of oil to lubricate its precision machined internal parts. When the oil in the reservoir is at the proper level and the pump is operating in the correct direction of rotation, the pump will prime itself and provide adequate lubrication.

CAUTION

If the press has been shipped to you with the ram extended, it is necessary to put the selector switch in the JOG UP position and then actuate the pushbuttons. The ram should go up, if the motor and pump are operating in correct direction of rotation.

NOTE

Ram may not retract if RELIEF VALVE has been backed out too far.

INCHING

Set the selector switch to JOG DOWN. Simultaneously actuate and maintain actuation of both CYCLE START buttons to the desired position of ram. Release of either button allows the ram to stop. Set the selector switch to JOG UP. Actuation of the dual pushbuttons allows the ram to move up.

NOTE

Upper prox 1PRS must be actuated at top of stroke before switching to CYCLE mode. If this switch is not made, unit will not cycle.

SET-UP

JOG the press to your desired lower stop position allowing ram to exert full pressure against a part or block.

NOTE

Set up tooling before setting pressure on ram.

Adjust pressure by opening the GAGE VALVE, loosening relief valve LOCKNUT and turning the relief valve KNOB on front of press. Clockwise increases pressure, counterclockwise decreases pressure. Set the selector switch and JOG the ram up just off the work. Set the lower prox 2PRS to that point. This adjustment allows you to select where the PLC takes over to approach the work, achieve tonnage and time reverse. JOG the ram to your upper stop position. Set the upper prox 1PRS at that position. After setting ram pressure, close GAGE VALVE to avoid damage to gage.

NOTE

Ram must contact a set up block, or work piece to deliver force, so GAGE can be read.

CYCLING

Simultaneously actuate and maintain actuation of both CYCLE START buttons. Ram extends till lower prox 2PRS no longer senses RAM GUIDE BAR. Ram continues down, contacts work, achieves tonnage and time reverses. Release of CYCLE START buttons before lower prox 2PRS is made, retracts ram to its upper stop position.

NOTE

If lower prox 2PRS is set too high and a long work stroke is required, the timer may have to be adjusted.

MAINTENANCE

GENERAL

The establishment and implementation of maintenance schedules is essential for the reliable operation of hydraulic press equipment. The elapsed time for periodic maintenance and inspection is based upon environmental and operating conditions (including hours of operation) which are known only to the user of the equipment. Therefore it is the responsibility of the user to insure that the instructions outlined in this manual are carried out on a time table which will insure reliable and efficient operation of the equipment.

It is the responsibility of the user to maintain the MULTIPRESS equipment at all times in day-to-day operation. The Manufacturer suggests that the following maintenance and service procedures be implemented and regularly practiced by the user.

WARNING

When any malfunction in MULTIPRESS equipment is encountered during the operation or inspection of press, operator(s) should immediately stop the press. Have qualified personnel interrupt the electrical power. Conspicuously tag press indicating malfunction. Report it to the proper authorities. Do not run the press until the malfunction has been eliminated.

MAINTENANCE AND INSPECTION

The following chart is provided to point out specific check points and the schedule that should be applied for each point. Any (ITEM, ROUTINE or PERIODIC) inspection points not included in this list but considered to be pertinent to the maintenance of the Press, should be included. If in doubt, consult the factory.

ITEM TO BE INSPECTED	SCHEDULED INSPECTION		MALFUNCTION							
	DAILY ROUTINE	PERIODIC	DAMAGED KINKED OR DENTED	WORN	BROKEN OR CRACKED	HYDRAULIC	MECHANICAL	ELECTRICAL	MISALIGNMENT	OUT OF ADJUSTMENT
FRAME		✓			✓					
ELECTRIC MOTOR		✓	✓					✓	✓	
STARTER		✓						✓		
PUMPS		✓				✓	✓		✓	
VALVES		✓				✓	✓			✓
GAUGES		✓	✓		✓					
SWITCHES		✓	✓	✓	✓		✓	✓		
OPERATING CONTROLS	✓	✓	✓	✓	✓		✓			✓
TOOLING	✓	✓	✓	✓	✓		✓		✓	
FEED AND/OR EJECTION MECHANICAL	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
OIL LEAKS	✓	✓								
HYDRAULIC LINES - PIPE, TUBE, HOSE		✓	✓		✓		✓			
HYDRAULIC FITTINGS		✓			✓		✓			
ELECTRICAL LINES - WIRE, CABLE, CONDUIT		✓	✓	✓	✓		✓	✓		
GASKETS, SEALS & O-RINGS		✓		✓		✓	✓			
RAM PACKING		✓	✓	✓		✓	✓			
OIL LEVEL TOO LOW OR TOO HIGH	✓	✓								
OIL CONTAMINATION TOO HIGH		✓								

DAILY INSPECTION

Before operating MULTIPRESS equipment each operator should make inspection checks indicated on page 7. These checks should be after each shift change.

In addition, the following inspection checks should be made by each operator before operating press and after any break time.

1. Make sure that each component is the proper condition and position for start up and be aware of any movement which will occur during start up procedure.
2. Check for foreign objects which may cause injury or damage and remove before start up.
3. Check for leaks.
4. Connect electric power to starter box and then actuate MOTOR START push button. With the motor running and driving the hydraulic pump make the following inspection checks.
 - a. Check for oil leaks.
 - b. Make sure each component is in the proper position to start cycling.
 - c. Make sure press operates in manner prescribed by sequence of operations.

SAMPLE ROUTINE LOG

If any check points are malfunctioning or could lead to a malfunction, a written report should be generated, indicating the problem and what was done to correct it and then made a part of the press history.

MALFUNCTION CHECK POINTS

OPERATING PSI	NO. OF CYCLES	OIL LEAKS	OIL LEVEL	OIL TEMP	HYD. COMP'S.	ELECT. COMP'S.	MECH. COMP'S.	INSPECT. DATE	NOTES REMARKS

PERIODIC INSPECTION

At regularly scheduled intervals the users' maintenance department should check each part of the MULTIPRESS equipment for those items listed on pages 7 and 8 and record below.

In addition, each component of the PRESS should be checked for proper performance as follows.

1. Make sure that all devices function in accordance with the electrical circuit and sequence of operations.
2. Check all mechanical linkage.
3. Check pressure setting of Manifold Relief Valve.
4. Check system for leaks.

SAMPLE PERIODIC LOG

If any check points are found to be malfunctioning or could lead to a malfunction, a written report should be made, indicating the problem and what was done to correct it and then made a part of the history of the press.

[illegible]

RELIEF VALVE SERVICE

At times the relief valve is prevented from operating satisfactorily by the presence of lint, pipe scale, or foreign matter. This may cause fluctuating pressure or pressure failure.

Quite often this condition can be corrected by starting pump, loosening Relief Valve Locknut, turning Relief Valve Knob (CCW). Oil circulating through Relief Valve to reservoir may wash out foreign matter within the valve. Then reset to desired pressure.

CYLINDER SERVICE

PRESS	CYLINDER	ROD END PACKING KIT	POSITIVE STOP ROD END PACKING KIT
W5A-1	507-00133	507-00128	
W5A-1P	507-00134	507-00128	507-00126
W5A-2	507-00135	507-00153	
W5A-2P	507-00136	507-00153	507-00126
W5A-3	507-00030	507-00127	
W5A-3P	507-00032	507-00127	507-00126

Disrupt electrical power to Press before servicing. To service the cylinder, remove all tooling from ram. Remove Ram Guide Assembly. Disconnect hydraulic lines from Cylinder. Loosen or disconnect lines at the manifold to prevent being bent or kinked. Remove four nuts from anchor bolts.

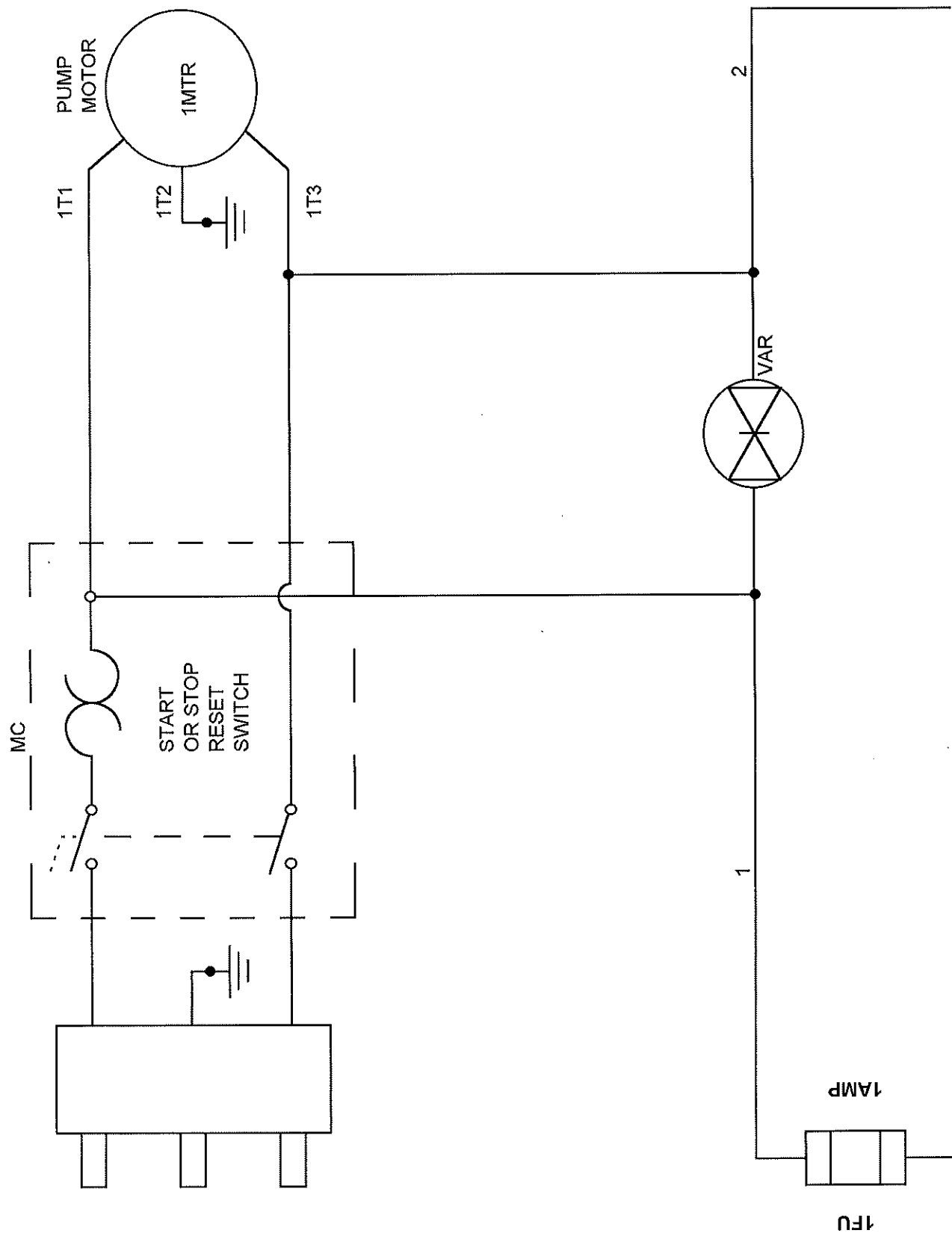
When ordering cylinder packing and/or parts be sure to include the cylinder brand name, model and serial numbers. Also include Press model and serial numbers to insure receiving the correct parts.

NOTES

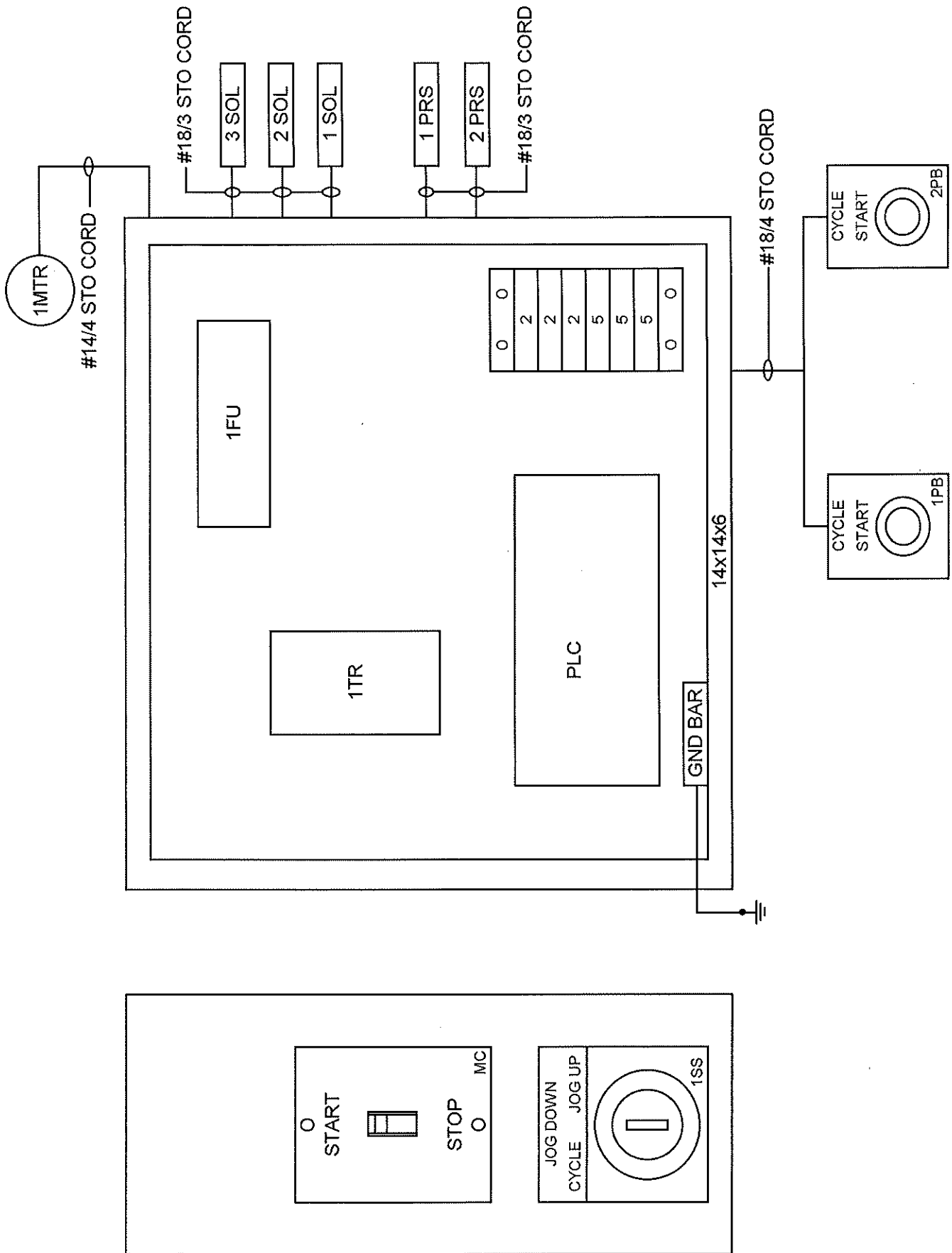
When hydraulic lines and fittings have been taken loose or replaced, care must be taken to assure all lines have been securely tightened to prevent leaks and ingestion of air into system which would cause permanent damage to unit.

When components have been removed some additional cycling may be required to insure the entrapped air is removed and smooth operation occurs.

SINGLE PHASE MOTOR START



SINGLE PHASE ENCLOSURE



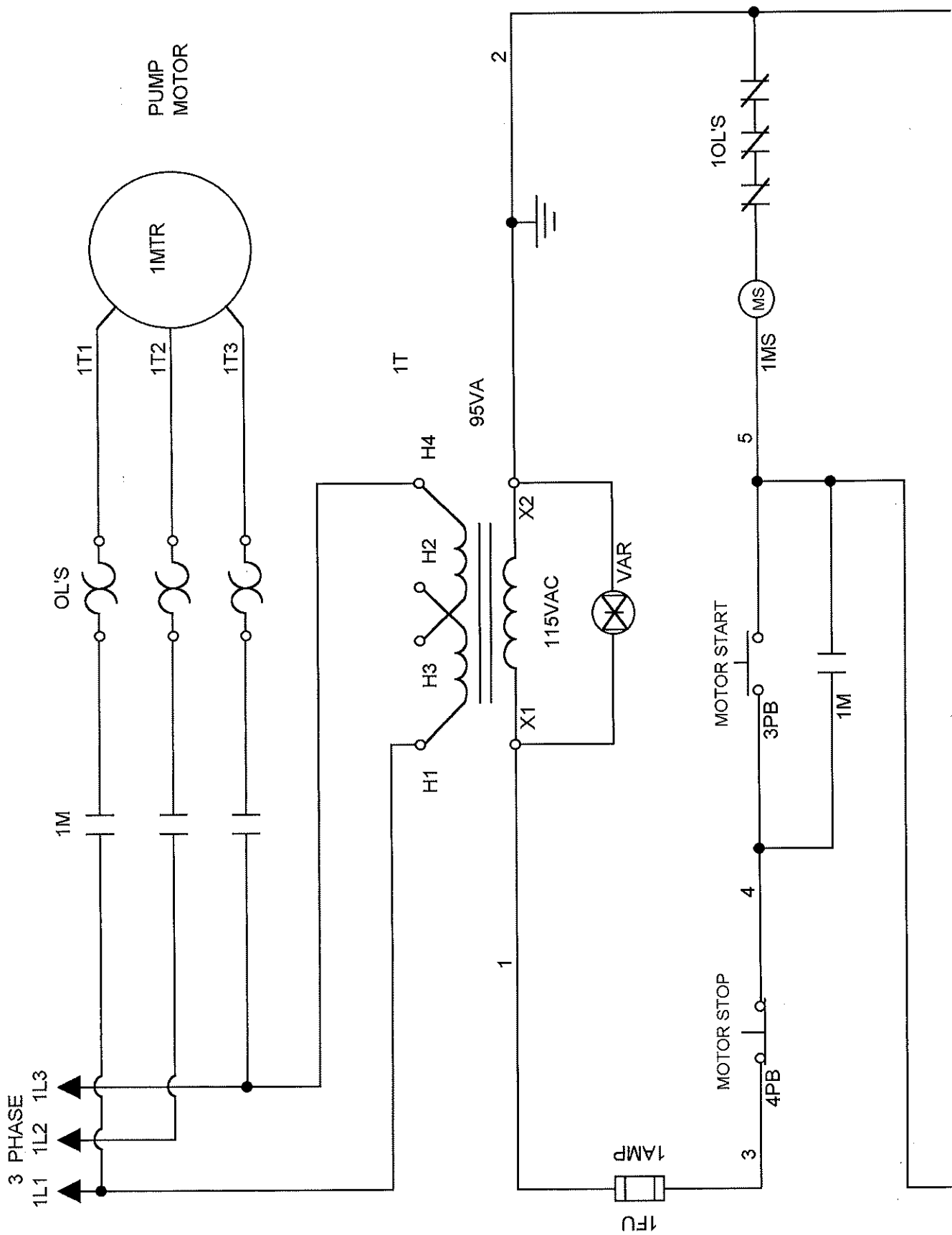
SINGLE PHASE COMPONENTS

CODE NO.	SYMBOL	DESCRIPTION
135-71001	1 MTR	MOTOR - ELECTRIC, 3/4 HP (SEE NAMEPLATE FOR SPEC.)
142-10002	MC	SWITCH - START, STOP MOTOR MANUAL SINGLE PHASE
108-62029	1 FU	FUSE - GLASS TUBE, SLO BLO, 1.5 AMP
010-14172	1 & 2 PB	SWITCH - PUSH-BUTTON, GREEN MUSHROOM HEAD WITH 1 N.O. - 1 N.C. CONTACTS
153-10022	1 SS	SWITCH - SELECTOR, 3 POSITION MAINTAIN ALL POSITIONS WITH CYLINDER LOCK WITH NAMEPLATE MARKED " CYCLE - JOG DOWN - JOG UP "
114-20055	1 & 2 PRS	SWITCH - PROXIMITY, 12mm SENSOR 1 N.O. CONTACT WITH 360 DEGREE LED
719-10129	PLC	CONTROLLER - PROGRAMMABLE, 10 PT AC INPUT 6 PT RELAY OUTPUT, 120 VAC POWER SUPPLY
766-10033	1 TR	RELAY - TIMER, ON DELAY, 120 VAC COIL WITH ADJ. RANGE OF .1 TO 10 SECONDS
764-30005	VAR	VARISTOR - RATED FOR 130 VOLTS - 20 AMPS

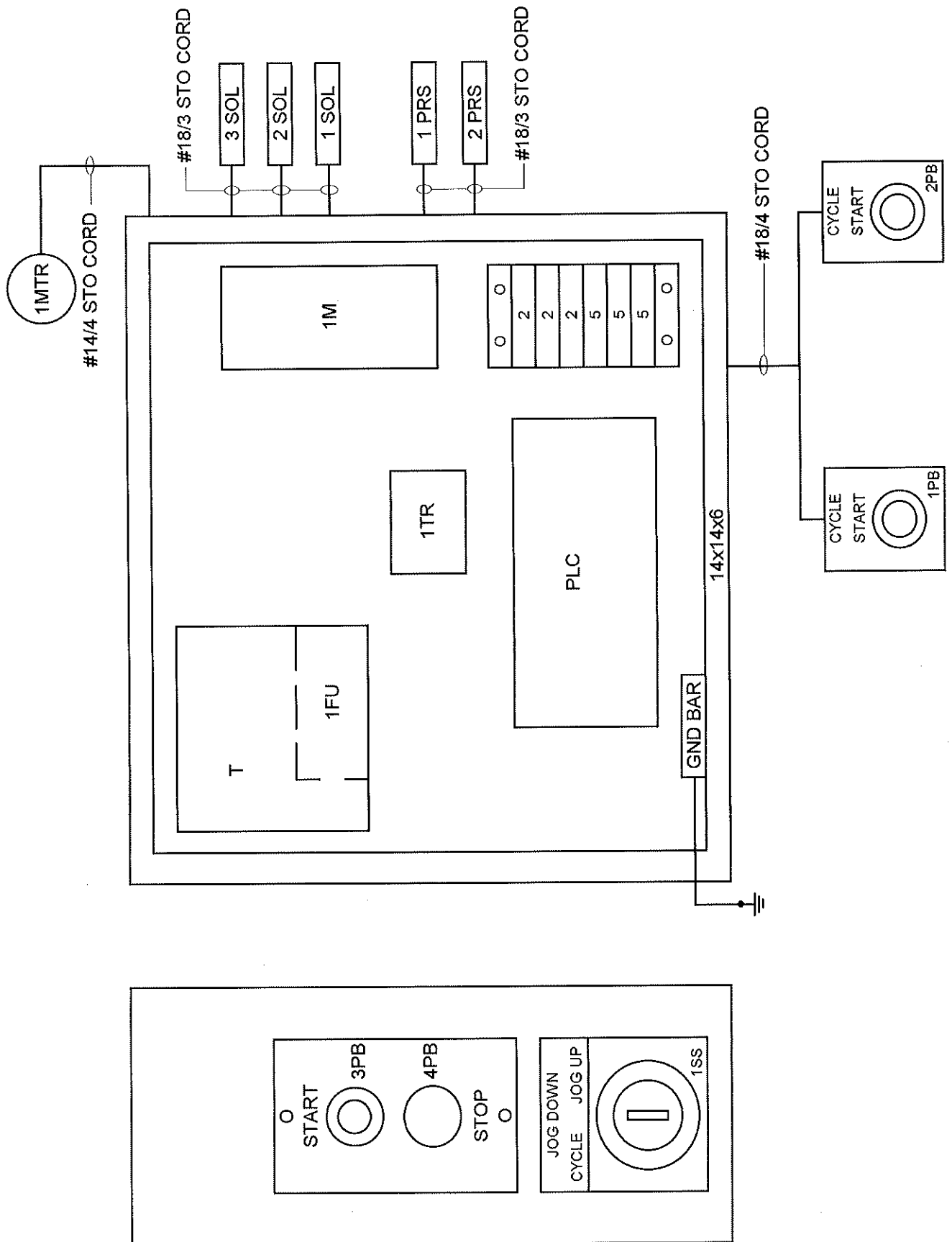
PROXIMITY SWITCH LOCATION

114-20055	1 PRS	NORMALLY OPEN - TO BE ACTUATED AT THE TOP OF THE RAM RETRACTING STROKE. (RAM RETRACTED)
114-20055	2 PRS	NORMALLY OPEN - TO BE ACTUATED NEAR THE END OF THE RAM EXTENDING STROKE. (PINCH POINT, START TIMER)

3 PHASE MOTOR START



3 PHASE ENCLOSURE



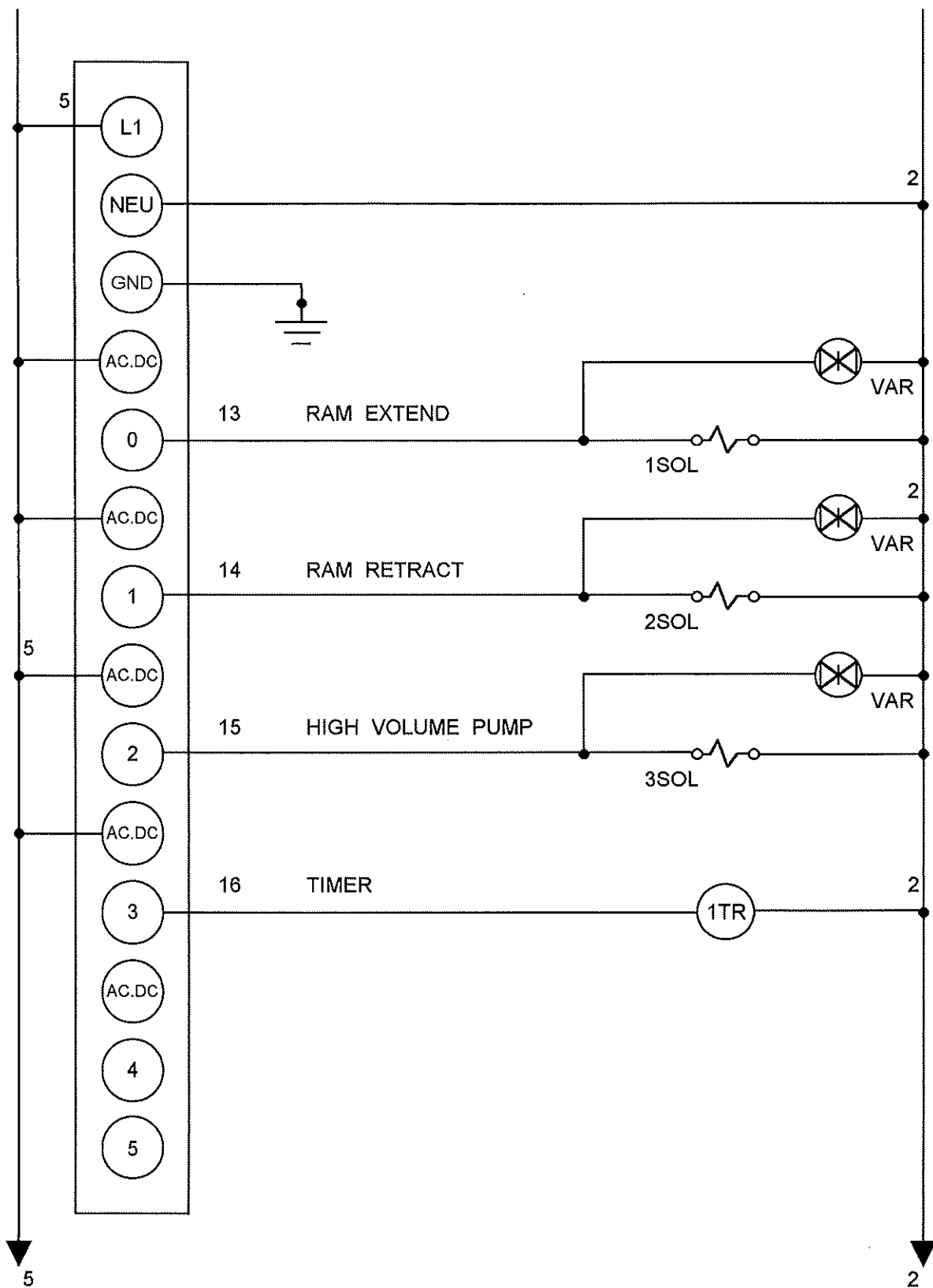
THREE PHASE COMPONENTS

CODE NO.	SYMBOL	DESCRIPTION
135-71002	1 MTR	MOTOR - ELECTRIC, 3/4 HP (SEE NAMEPLATE FOR SPEC.)
101-45047	1 M	STARTER - MOTOR, AC OPEN TYPE CONTACT "IEC" 120V - 60HZ
105-91041	T	TRANSFORMER - 95 VA, (SEE NAMEPLATE FOR SPEC.)
152-15070	3 & 4 PB	SWITCH - KIT, PUSH-BUTTON START AND STOP
108-62029	1 FU	FUSE - GLASS TUBE, SLO BLO, 1 AMP
010-14172	1 & 2 PB	SWITCH - PUSH-BUTTON, GREEN MUSHROOM HEAD WITH 1 N.O. - 1 N.C. CONTACTS
153-10022	1 SS	SWITCH - SELECTOR, 3 POSITION MAINTAIN ALL POSITIONS WITH CYLINDER LOCK WITH NAMEPLATE MARKED " CYCLE - JOG DOWN - JOG UP "
114-20055	1 & 2 PRS	SWITCH - PROXIMITY, 12 mm SENSOR 1 N.O. CONTACT WITH 360 DEGREE LED "ISSC"
719-10129	PLC	CONTROLLER - PROGRAMMABLE, 10 PT AC INPUT 6 PT RELAY OUTPUT, 120 VAC POWER SUPPLY
766-10033	1 TR	TIMER - ON DELAY, SPDT, 120 VAC COIL TIME RANGE OF 0 TO 12 SECONDS
764-30005	VAR	VARISTOR - RATED FOR 130 VOLTS - 20 AMPS

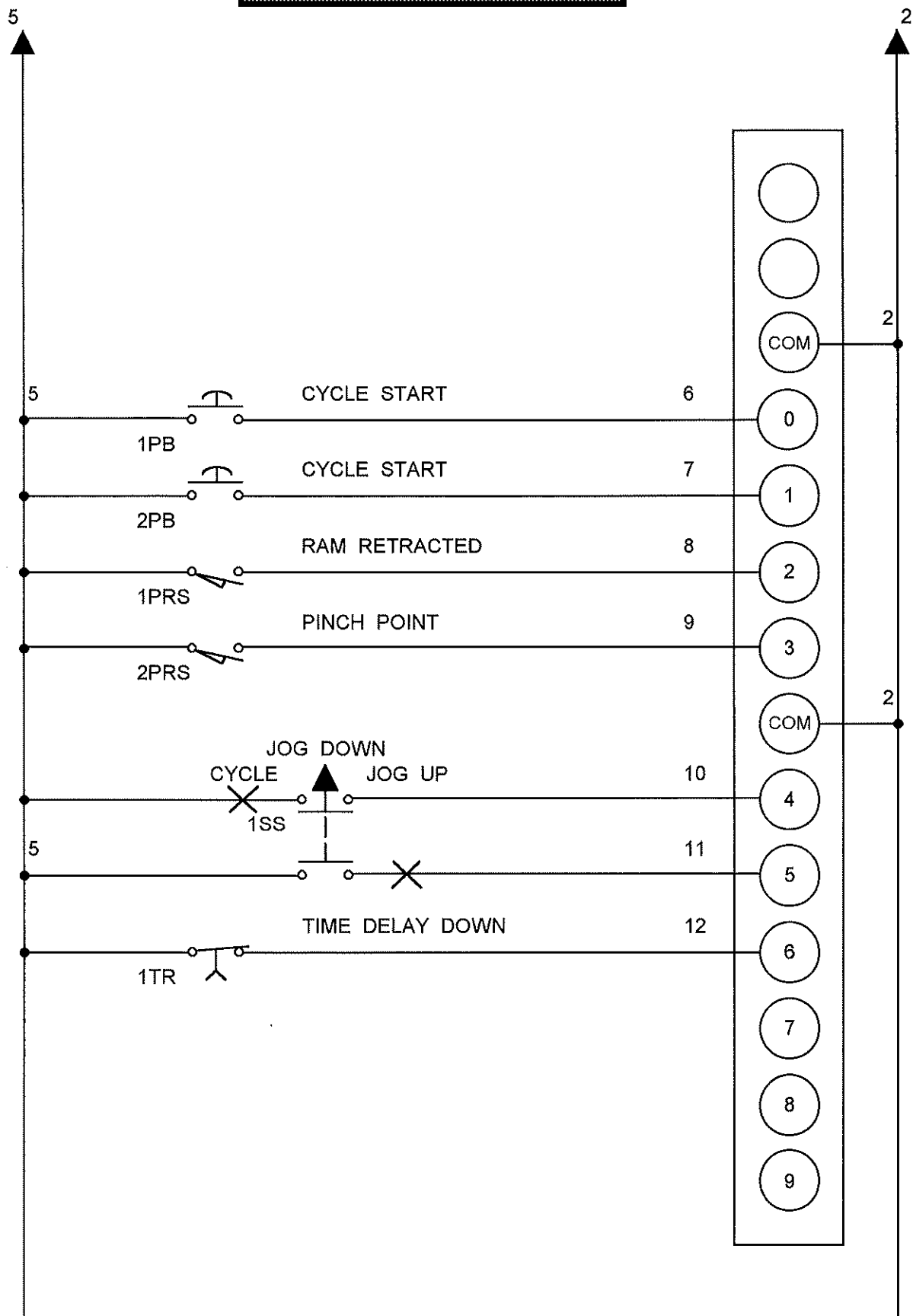
PROXIMITY SWITCH LOCATION

114-20055	1 PRS	NORMALLY OPEN - TO BE ACTUATED AT THE TOP OF THE RAM RETRACTING STROKE. (RAM RETRACTED)
114-20055	2 PRS	NORMALLY OPEN - TO BE ACTUATED NEAR THE END OF THE RAM EXTENDING STROKE. (PINCH POINT, START TIMER)

PLC OUTPUT



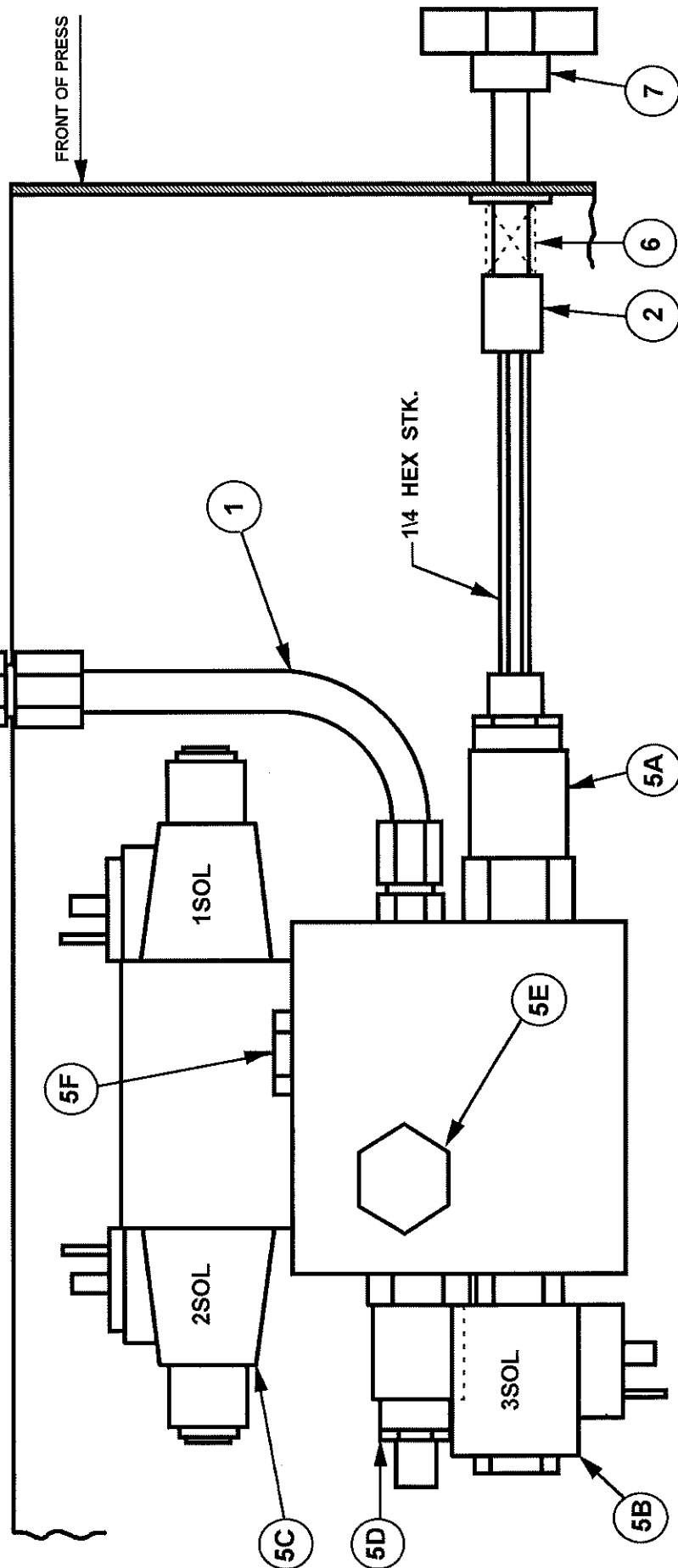
PLC INPUT



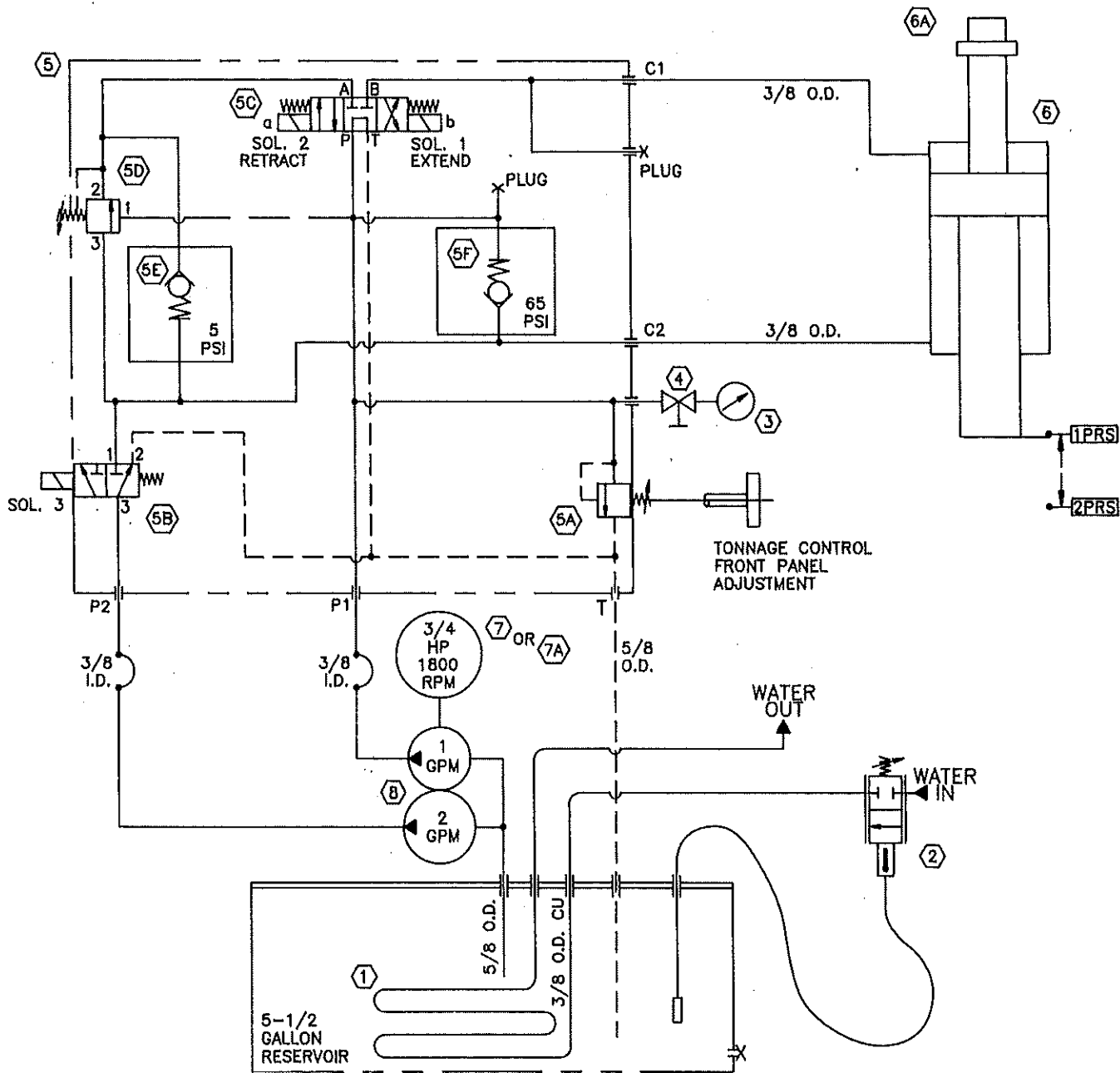
MANIFOLD ASSEMBLY

AMT	CODE NO	DESCRIPTION	ITEM
1	040-02566-A	GAGE TUBING	1
1	040-02931-A	COUPLING	2
1	501-99904	GAGE	3
1	514-16002	NEEDLE VALVE	4
1	513-50266	RELIEF VALVE	5A
1	513-50267	DIRECTIONAL VALVE	5B
1	513-50269	DIRECTIONAL VALVE	5C
1	513-50268	SEQUENCE VALVE	5D
1	513-50264	CHECK VALVE	5E
1	513-50265	CHECK VALVE	5F
1	031-38448	SPRING	6
1	040-02931-A	HAND KNOB	7

040-02874-A



W5A HYDRAULIC CIRCUIT

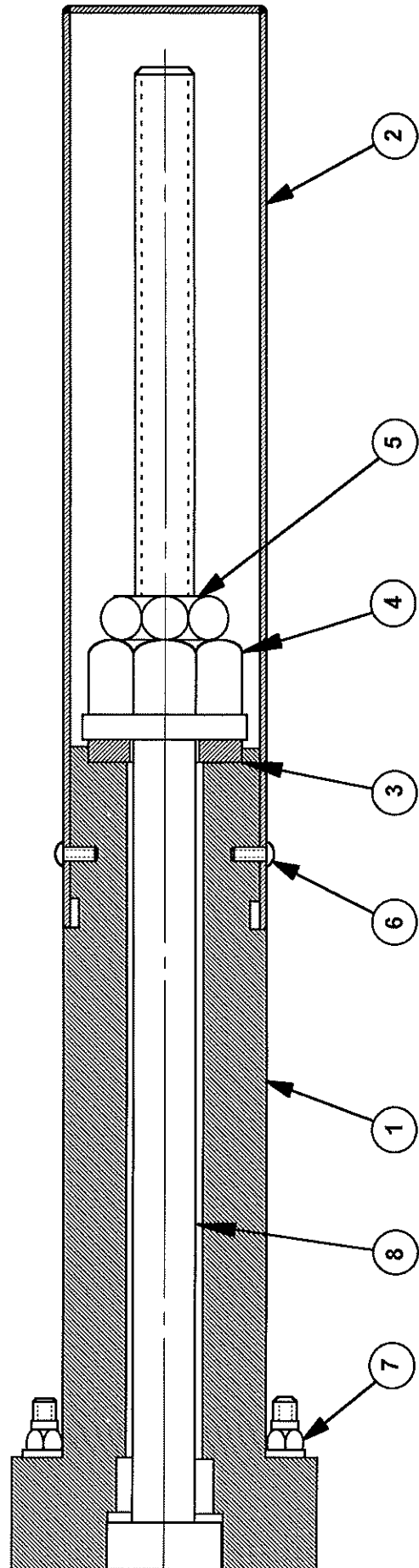


CYCLE	- DE-ENERGIZED + ENERGIZED	SOL. 1 EXTEND	SOL. 2 RETRACT	SOL. 3 FAST
IDLE		-	-	-
FAST EXTEND, DIFFERENTIAL FLOW, TO PINCH POINT PROXIMITY SWITCH 2		+	-	+
RAM EXTEND, FULL PRESSURE OR TIME DELAY		+	-	+
RAM RETURN TO PROXIMITY SWITCH 1 SETTING		-	+	+
JOG CYCLE				
JOG DOWN		+	-	-
JOG UP		-	+	-

W5A HYDRAULIC CIRCUIT COMPONENTS							
ITEM	CODE NO.	QTY.	DESCRIPTION				
1	010-12507	OPT.	COOLING ASSEMBLY				
2	515-24603	OPT.	THERMOSTAT VALVE				
3	501-99904	1	PRESSURE GAUGE				
4	514-16004	1	NEEDLE VALVE				
5	040-02874-A	1	MANIFOLD PACKAGE				
5A	513-50266	1	RELIEF VALVE 1600 PSI				
5B	513-50267	1	DIRECTIONAL VALVE 2 POS 3-WAY				
5C	513-50269	1	DIRECTIONAL VALVE 4-WAY DBL SOL				
5D	513-50268	1	SEQUENCE VALVE 1000 PSI				
5E	513-50264	1	CHECK VALVE 5 PSI				
5F	513-50265	1	CHECK VALVE 65 PSI				
6		1	HYDRAULIC CYLINDER				
			BORE	ROD	STROKE	PRESSURE	DRAWING
1 TON	507-00133	OPT.	1 1/2	1"	6"	1132	MI-00140-D
2 TON	507-00135	OPT.	2"	1 3/8	6"	1273	MI-00142-D
3 TON	507-00030	OPT.	2 1/2	1 3/4	6"	1222	23-7822-D
6A		1	HYDRAULIC CYLINDER W/ POSITIVE STOP				
			BORE	ROD	STROKE	PRESSURE	DRAWING
1 TON	507-00134	OPT.	1 1/2	1"	6"	1375	MI-00141-D
2 TON	507-00136	OPT.	2"	1 3/8	6"	1411	MI-00143-D
3 TON	507-00032	OPT.	2 1/2	1 3/4	6"	1304	23-9084-D
7	135-71002	1	3/4 HP MOTOR 3 PHASE				
7A	135-71001	ALT.	3/4 HP MOTOR SINGLE PHASE				
8	512-42096	1	DOUBLE GEAR PUMP				

POSITIVE STOP ASSEMBLY

PRESS	AMT	PART NO.	DESCRIPTION	ITEM	PRESS	AMT	PART NO.	DESCRIPTION	ITEM
W5A-1P	1	030-72829	INSERT RETAINER	1	W5A-1P	1	335-19100	JAM NUT	5
W5A-2P	1	030-72832			W5A-2P	1	335-23100		
W5A-3P	1	030-72560			W5A-3P	1	335-23100		
W5A-1P	1	030-72830	CAP	2	W5A-1P	2	310-08040	#8-32 NC x 1/4 SCREW	6
W5A-2P	1	030-72561			W5A-2P	2	310-08040		
W5A-3P	1	030-72561			W5A-3P	2	310-08040		
W5A-1P	1	030-72831	INSERT	3	W5A-1P	4	333-11000	1/4-28 NF LOCK NUT	7
W5A-2P	1	030-28502			W5A-2P	4	333-13000	5/16-24 NF LOCK NUT	
W5A-3P	1	030-28502			W5A-3P	4	333-13000	5/16-24 NF LOCK NUT	
W5A-1P	1	340-00047	NUT	4	W5A-1P	1	507-00134	CYLINDER	8
W5A-2P	1	340-00045			W5A-2P	1	507-00136	WITH POSITIVE	
W5A-3P	1	340-00045			W5A-3P	1	507-00032	STOP ROD	



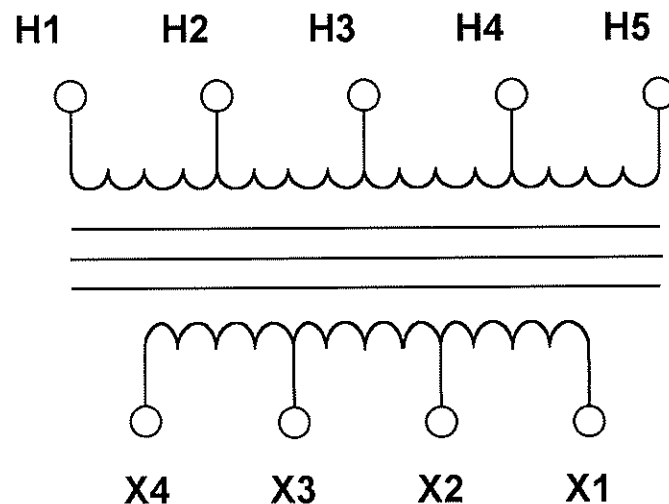
W5A PARTS COMMON 000-01211

AMT	PART NO.	DESCRIPTION	LOCATION	SYM.	ITEM
1	040-02965-D	FRAME	FRAME		1
1	000-01153-C	RELIEF VALVE STEM ASS'Y	FRAME		2
1	031-10131-B	NAME PLATE	FRAME		3
1	040-00094-B	WARNING PLATE	FRAME		4
1	031-18823-B	INSIGNIA PLATE	FRAME		5
8	320-10204	DRIVE SCREW	FRAME		6
1	040-02874-A	MANIFOLD PACKAGE	MANIFOLD	M	7
4	370-15070	FHSCS 3/8-24 NF x 7/8	MANIFOLD	M	8
1	512-42096	DOUBLE GEAR PUMP	PUMP	PMP	9
4	366-14080	HHCS 5/16-18 NC x 1"	PUMP	PMP	10
4	346-10020	LOCKWASHER 5/16	PUMP	PMP	11
1	450-11008	STRAIGHT THREAD ELBOW	SUCTION	S	12
2	606-20559	GROMMET	SUCTION & TANK	S&T	13
2	477-10010	NUT	SUCTION & TANK	S&T	14
2	481-10010	INCH SLEEVE	SUCTION & TANK	S&T	15
4'	803-10065	TUBING	SUCTION & TANK	S&T	16
1	452-11010	STRAIGHT THREAD CONNECTOR	TANK	T	17
2	040-02699-A	HYDRAULIC HOSE	PRESSURE 1 & 2	P1&P2	18
3	450-10606	STRAIGHT THREAD ELBOW	PRESSURE 1 & 2	P1&P2	19
4	452-10606	STRAIGHT THREAD CONNECTOR	TC, BC, P2, G	TC,BC,P2,G	20
2	450-10608	STRAIGHT THREAD ELBOW	TOP & BOTTOM CYLINDER	TC&BC	21
1	031-90725-B	CAUTION TAG	GAGE	G	22
1	040-02566-A	TUBING	GAGE	G	23
1	457-10604	MALE CONNECTOR	GAGE	G	24
1	514-16004	NEEDLE VALVE	GAGE	G	25
1	501-99904	GAGE	GAGE	G	26
1	040-02990-B	RESERVOIR COVER	RESERVOIR	RSVR	27
1	487-25010	OIL FILLER	RESERVOIR	RSVR	28
3'	606-20391	GASKET STRIP	RESERVOIR	RSVR	29
1	488-10012	HEX HEAD PLUG	RESERVOIR	RSVR	30
1	488-50004	MAGNETIC PLUG	RESERVOIR	RSVR	31
4	368-12080	SHCS 1/4-20 NC x 1/2	MOTOR	MTR	32
4	341-12005	RETAINER NUT	MOTOR	MTR	33
8	320-65014	PHILLIPS OVAL HD # 8-32 NC x 1 1/4	CYCLE START BUTTON	CSB	34
4	368-12040	SHCS 1/4-20 NC x 1/2	ENCLOSURE	ENCL	35
4	345-10012	WASHER 1/4	ENCLOSURE	ENCL	36

W5A SPREADSHEET									
MODEL	VOLTAGE	PRESS ASSY	PROX ASSY	3/4 HP GEP 1800 RPM MOTOR	ELECTRIC CYLINDER	PRESSURE CONVERSION PLATE	CYLINDER ADAPTER PLATE	TC TUBING	BC TUBING
W5A-1	120-1-60	000-01213	000-01039	135-71001	000-01239	040-01480-A	040-01485-B	040-02996-A	040-02997-A
	230-3-60	000-01214	000-01039	135-71002	000-01241	040-01480-A	040-01485-B	040-02996-A	040-02997-A
	220/380/415-3-50	000-01215	000-01039	135-71002	000-01240	040-01480-A	040-01485-B	040-02996-A	040-02997-A
	460-3-60	000-01216	000-01039	135-71002	000-01242	040-01480-A	040-01485-B	040-02996-A	040-02997-A
W5A-1P	120-1-60	000-01217	000-01039	135-71001	000-01239	040-01481-A	040-01485-B	040-02996-A	040-02997-A
	230-3-60	000-01218	000-01039	135-71002	000-01241	040-01481-A	040-01485-B	040-02996-A	040-02997-A
	220/380/415-3-50	000-01219	000-01039	135-71002	000-01240	040-01481-A	040-01485-B	040-02996-A	040-02997-A
	460-3-60	000-01220	000-01039	135-71002	000-01242	040-01481-A	040-01485-B	040-02996-A	040-02997-A
W5A-2	120-1-60	000-01221	000-01037	135-71001	000-01239	040-01482-A	040-01486-B	040-02998-A	040-02999-A
	230-3-60	000-01222	000-01037	135-71002	000-01241	040-01482-A	040-01486-B	040-02998-A	040-02999-A
	220/380/415-3-50	000-01223	000-01037	135-71002	000-01240	040-01482-A	040-01486-B	040-02998-A	040-02999-A
	460-3-60	000-01224	000-01037	135-71002	000-01242	040-01482-A	040-01486-B	040-02998-A	040-02999-A
W5A-2P	120-1-60	000-01225	000-01037	135-71001	000-01239	040-01483-A	040-01486-B	040-02998-A	040-02999-A
	230-3-60	000-01226	000-01037	135-71002	000-01241	040-01483-A	040-01486-B	040-02998-A	040-02999-A
	220/380/415-3-50	000-01227	000-01037	135-71002	000-01240	040-01483-A	040-01486-B	040-02998-A	040-02999-A
	460-3-60	000-01228	000-01037	135-71002	000-01242	040-01483-A	040-01486-B	040-02998-A	040-02999-A
W5A-3	120-1-60	000-01229	000-01035	135-71001	000-01239	031-90724-A		040-03000-A	040-03001-A
	230-3-60	000-01230	000-01035	135-71002	000-01241	031-90724-A		040-03000-A	040-03001-A
	220/380/415-3-50	000-01231	000-01035	135-71002	000-01240	031-90724-A		040-03000-A	040-03001-A
	460-3-60	000-01232	000-01035	135-71002	000-01242	031-90724-A		040-03000-A	040-03001-A
W5A-3P	120-1-60	000-01233	000-01035	135-71001	000-01239	040-01484-A		040-03000-A	040-03001-A
	230-3-60	000-01234	000-01035	135-71002	000-01241	040-01484-A		040-03000-A	040-03001-A
	220/380/415-3-50	000-01235	000-01035	135-71002	000-01240	040-01484-A		040-03000-A	040-03001-A
	460-3-60	000-01236	000-01035	135-71002	000-01242	040-01484-A		040-03000-A	040-03001-A
W5A PARTS COMMON 000-01211									
W5A COOLER ASSY 000-01209									
ELECTRIC PRESS ASSY 000-01213									

UNIVERSAL TRANSFORMER

PRESSES FOR OTHER THAN USA STD.
POWER SYSTEMS ARE FURNISHED WITH
UNIVERSAL TRANSFORMERS CONNECTED
AS SHOWN BELOW.



CONNECTS LINE FOR RESPECTIVE VOLTAGE					OUTPUT VOLTS	
H1 - H2	H1 - H3	H1 - H4	H1 - H5	X1 - X2	X1 - X3	X1 - X4
208			520	85	100	110
220	380	440	550	91	110	120
230	400	460	575	95	115	125
240	416	480	600	99	120	130

TROUBLE SHOOTING	
PROBLEM	POSSIBLE CAUSE
RAM STARTS DOWN - NO FAST DIFFERENTIAL APPROACH	SEQUENCE VALVE 5D SET TOO LOW - INCREASE THE SETTING
RAM APPROACH AND RETURN SPEEDS ARE 1/3 OF NORMAL	DIRECTIONAL VALVE 5B NOT OPERATING - CHECK 3SOL OR VALVE SPOOL
RAM BOTTOMS OUT ON RETURN STROKE	1PRS (PROX) DEFECTIVE OR MAY NOT BE ACTUATED
RAM REVERSES WHEN CYCLE START BUTTON(S) RELEASED AFTER THE PINCH POINT	2PRS (PROX) DEFECTIVE OR MAY NOT BE ACTUATED
RAM DRIFTS DOWN AT IDLE POSITION	CHECK VALVE 5F DEFECTIVE OR KEPT OPEN BY PARTICLES IN DIRTY OIL
MOTOR RUNS, BUT RAM DOES NOT CYCLE	TANG SHAFT OF THE PUMP BROKEN OR SUCTION LINE IS LOOSE OR 1FU BURNED OUT
OIL TEMPERATURE ABOVE 135 °F	COOLING WATER PRESSURE OR FLOW RATE TOO LOW - CALCIFIED COOLING COILS OR DEFECTIVE WATER REGULATING VALVE
RAM COMES DOWN AND STAYS DOWN AT FULL PRESSURE	DIRECTIONAL VALVE 5C DEFECTIVE - SPOOL STUCK OR RETURN SPRING BROKEN
RAM CHATTERS AT FAST APPROACH	SEQUENCE VALVE 5D SETTING IS TOO CLOSE TO DIFFERENTIAL PRESSURE - INCREASE THE SETTING

NOTES

CHANGES/CORRECTIONS TO BULLETIN W5A-123-96

POSITIVE STOP ASSEMBLY - PAGE 22

ITEM 7 PART NO. IS NOW 340-00048
REVISE TO 333-11000

ITEM 7 PART NO. IS NOW 340-00041
REVISE TO 333-13000 (2 PLACES)

W5A PARTS COMMON 000-01211 - PAGE 23

ITEM 21 PART NO. IS NOW 450-10806
REVISE TO 450-10608

3 PHASE COMPONENTS - PAGE 16

1 & 2 PB PART NO. IS NOW (NOT SHOWN)
ADD/REVISE TO (S11-14172-B)

SINGLE PHASE COMPONENTS - PAGE 13

1 & 2 PB PART NO. IS NOW (NOT SHOWN)
ADD/REVISE TO (S11-14172-B)

SPECIFICATIONS - PAGE 4 (RAM END SPECIFICATIONS)

THE RAM END HAS A ½ - 13UNC - 2B THREADED HOLE X 1.12 DEEP FOR
CUSTOMER TOOLING ATTACHMENT.

SETUP PROCEDURE - PAGE 6

LOWER PROX SWITCH SHOULD NOT BE SET ANY HIGHER THAN ¼"
BEFORE WORK PIECE IS CONTACTED IF POSSIBLE. ALSO IT IS
SUGGESTED THAT CUSTOMER BE FAMILIAR WITH ANSI-B11-2-1995 (SEE
SAFETY PAGE 3).

MULTIPRESS



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