PLAY IT SAFE!

**OPERATION, MAINTENANCE,
AND INSTALLATION
MANUAL**

FOR

M-SERIES
COMPACTORS

INCLUDING THESE MODELS:

M-450X, M-600X, M-600XW, M-800XW

Marathon Equipment Co. **0042-M-SERIES-0420**

CONTENTS

1 OPERATION

INTRODUCTION 1-1

THANK YOU FOR PURCHASING A MARATHON RAMJET “M” SERIES HORIZONTAL COMPACTOR.

This product is designed to give you reliable service and superior performance for years to come. To guarantee top performance and the safest operation of the compactor, each person involved in the operation, maintenance, and installation of the compactor should read and thoroughly underst and the instructions in this manual and follow all warnings.

The employer involved in the operation, maintenance, and installation of the compactor should read and underst and the most current version of the following applicable standards:

ANSI Standard No. Z245.2, “Safety Requirements for Stationary Compactors ”
(**a copy of this standard may be obtained from Marathon Equipment Company**)

A copy of this standard may be obtained from:
ENVIRONMENTAL INDUSTRIES ASSOCIATION
4301 Connecticut Avenue, NW Suite 300
Washington D.C. 20008

OSHA 29 CFR, Part 1910.147,
“The control of hazardous energy (lockout/tagout)”

Any service or repairs contained in this manual should be performed by factory authorized personnel only.

IF YOU SHOULD NEED FURTHER ASSISTANCE, PLEASE CONTACT YOUR DISTRIBUTOR. YOU WILL NEED TO PROVIDE THE COMPACTOR SERIAL NUMBER, INSTALLATION DATE, AND ELECTRICAL SCHEMATIC NUMBER TO YOUR DISTRIBUTOR.

IF YOU HAVE ANY SAFETY CONCERNS WITH THE EQUIPMENT, OR NEED FURTHER INFORMATION, PLEASE CONTACT US AT:

Marathon Equipment Company
P.O. Box 1798
Vernon, Al 35592-1798
Attn: Field Service Department
1-800-633-8974

1 OPERATION

PRE-OPERATION INSTRUCTIONS 1-2

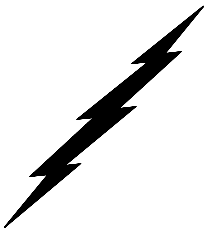
STAY CLEAR OF ALL INTERNAL PARTS OF THE COMPACTOR DURING OPERATION. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH!

NEVER ENTER ANY PART OF THE COMPACTOR UNLESS THE DISCONNECT SWITCH HAS BEEN LOCKED-OUT AND TAGGED-OUT. See Lock-Out & Tag-Out instructions in the Maintenance section. Before starting the compactor, be sure no one is inside. Be certain that everyone is clear of all points of operation and pinch point areas before starting.

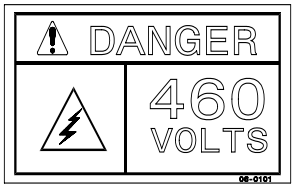
THE EMPLOYER SHOULD ALLOW ONLY AUTHORIZED AND TRAINED PERSONNEL TO OPERATE THIS COMPACTOR. This compactor is equipped with a key operated locking system. The key(s) should be in the possession of only authorized personnel.

DO NOT REMOVE ACCESS COVERS EXCEPT FOR SERVICING. Only authorized service personnel should be allowed inside. All access doors on the compactor body should always be secured in place when the unit is operating. **See Lock-Out & Tag-Out instructions in the Maintenance section.**

Before operating the compactor, make sure that the ratchets and claws (or chains) are securely attached to the receiver container.



ONLY AUTHORIZED PERSONNEL SHOULD BE ALLOWED INSIDE THE PANEL BOX. The panel box contains high voltage components. **See Lock-Out & Tag-Out Instructions in the Maintenance section.**

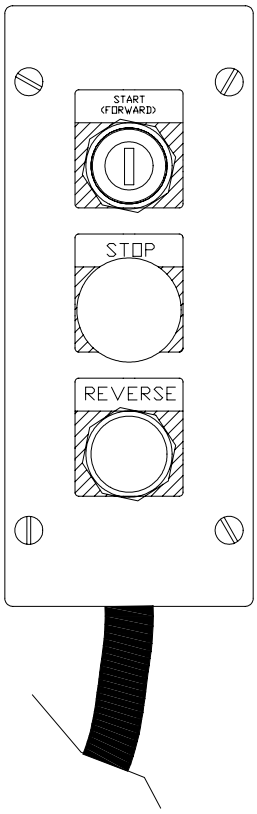


FEDERAL REGULATION PROHIBITS OPERATION BY PERSONS UNDER 18 YEARS OF AGE.

If the compactor is equipped with a security gate or doghouse with security door, **BE SURE THAT THE SECURITY GATE OR DOOR IS CLOSED BEFORE THE COMPACTOR IS STARTED.**

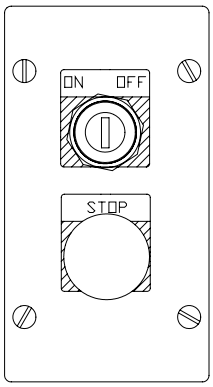
CONTROLS FOR UNITS WITH 20HP POWER PACK 1-3

OPERATOR CONTROLS
(ON SEALTITE)



Optional:

HAULER CONTROLS
(MOUNTED ON CONTAINER END OF MACHINE)



CONTROL DESCRIPTION

OPERATOR CONTROLS:

1. KEYED START(FORWARD) SWITCH - Starts the machine in the forward direction. Insert key into switch, rotate key approximately 130 degrees to the right (clockwise direction), and push the key in. The key is to prevent unauthorized use.
   NOTE: If the ram is not in the fully retracted position, pressing this switch will start the ram moving to the rear position. This key has to be held in until the ram starts in forward direction.
2. EMERGENCY STOP BUTTON - Stops the machine in the event of an emergency. This button can be used anytime the machine needs to be stopped.
3. REVERSE BUTTON - Pressing this button causes the ram to move in the rearward direction, if the ram is moving in the forward direction.

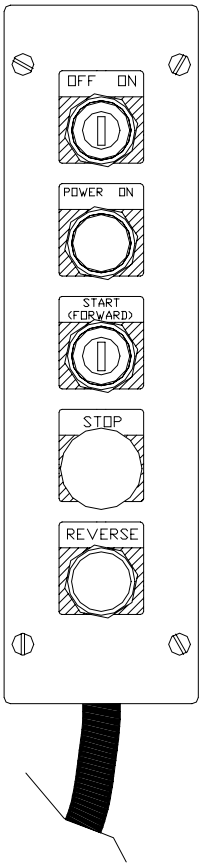
HAULER CONTROLS:

1. KEYED ON/OFF SWITCH - Turns the operator controls on or off while the hauler empties the container. This switch prevents the machine from pushing material onto the ground while the container is gone.
2. EMERGENCY STOP BUTTON - Stops the machine in the event of an emergency. This button can be used anytime the machine needs to be stopped.

CONTROLS FOR UNITS WITH 30HP POWER PACK 1-4

OPERATOR CONTROLS:

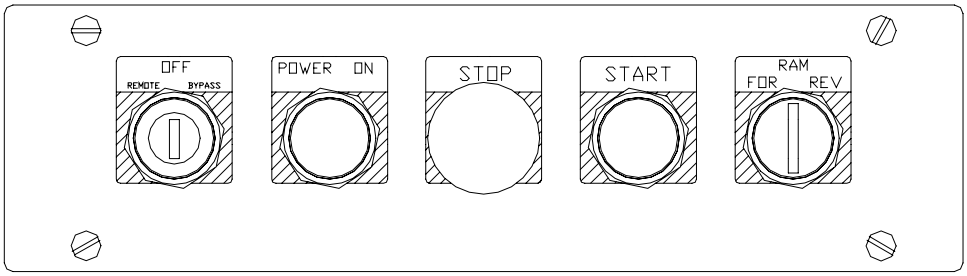
(Mounted on sealtite)



1. KEYED ON/OFF SWITCH - Turns power to the programmable controller on and off. Switch must be in the “ON” position for the Hauler Controls to operate.
2. POWER ON PUSH BUTTON - Pressing this button turns the power to the operator controls on. When pressed, this button should illuminate.
3. KEYED START(FORWARD) SWITCH - Starts the machine in the forward direction. Insert key into switch, rotate key approximately 130 degrees to the right (clockwise direction), and push the key in. The key is to prevent unauthorized use.
   NOTE: If the ram is not in the fully retracted position, pressing this switch will start the ram moving to the rear position. This key has to be held in until the ram starts in the forward direction.
4. EMERGENCY STOP BUTTON - Stops the machine in the event of an emergency. This button can be used anytime the machine needs to be stopped.
5. REVERSE BUTTON - Pressing this button causes the ram to move in the rearward direction, if the ram is moving in the forward direction.

HAULER CONTROLS: JOG STATION

(Mounted on container end of machine)



1. KEYED REMOTE/OFF/BYPASS SWITCH - REMOTE allows the operator controls to operate. OFF turns the control power off. BYPASS allows the Jog Station controls to operate.
2. POWER ON PUSH BUTTON - Pressing this button turns the power to the jog controls on and off. When pressed, this button should illuminate.
3. EMERGENCY STOP BUTTON - Stops the machine in the event of an emergency. This button can be used anytime the machine needs to be stopped.
4. START BUTTON - Pressing this button starts the power unit.
5. FOR/REV BUTTON - Turning this switch causes the ram to go forward or rearward.

OPERATING INSTRUCTIONS 1-5

⚠ WARNING

Use ONLY Marathon reinforced receiver containers with Marathon M-Series Compactors. Use of a non-OEM receiver container with a Marathon M-Series Compactor could result in container damage, property damage, and/or personal injury – up to and including death.

MACHINES WITH 20HP POWER UNITS:

1. Place material into charge chamber.
2. Insert key into the Keyed START Switch.
3. Rotate key clockwise approximately 130 degrees and press the key inward to start motor.
   NOTE: If the motor does not start, check to insure the jog control switch is in the "ON" position.
4. Hold the key inward until the ram starts in the forward direction. The unit will continue to run until the ram has extended fully forward and fully retracted, completing one cycle.
5. Repeat steps 3 and 4 until the ram stops in the forward position. This will indicate the container is full and needs to be emptied.

MACHINES WITH 30HP POWER UNITS:

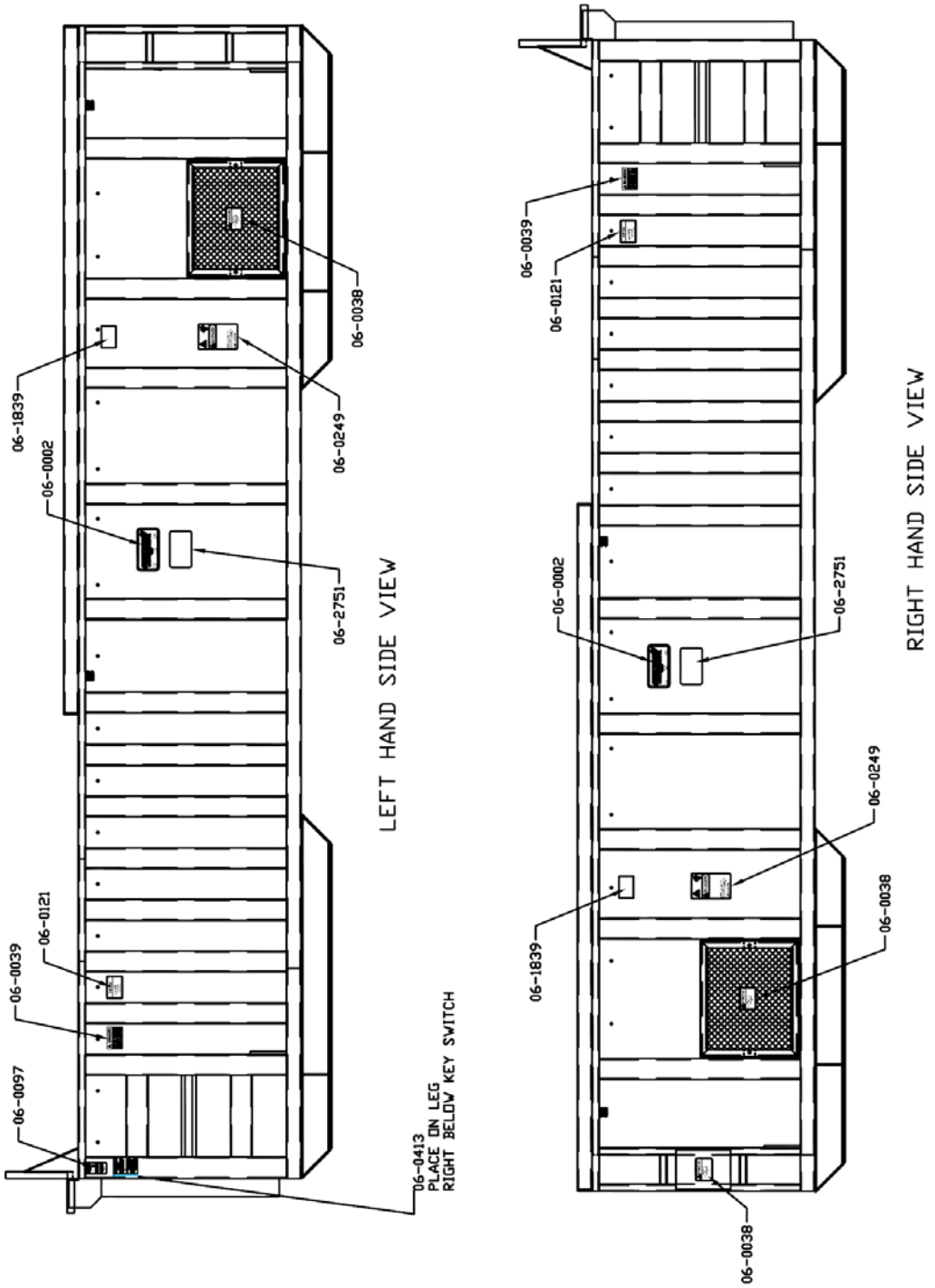
1. Place material into charge chamber.
2. Insert key into the keyed ON/OFF Switch. Turn to the "ON" position.
3. Press the green POWER ON push button. This button will illuminate when pressed.
4. Insert key into the keyed START switch.
5. Rotate key clockwise approximately 130 degrees and press the key inward to start motor.
   NOTE: If the motor does not start, check to insure the jog control switch is in the "REMOTE" position.
6. Hold the key inward until the ram starts in the forward direction. The unit will continue to run until the ram has extended fully forward and fully retracted, completing one cycle.
7. Repeat steps 5 and 6 until the ram stops in the forward direction. This will indicate the container is full and needs to be emptied.

NOTE: Units ordered with a Continuous Cycle option will have a start up alarm. When the Start switch is pressed, it will have to be pressed and held for a full twenty (20) seconds. The start up alarm will sound for the first five (5) seconds, and the red beacon will flash for the full twenty (20) seconds, then the motor will start. If this switch is released before the motor starts, this step will have to be repeated.

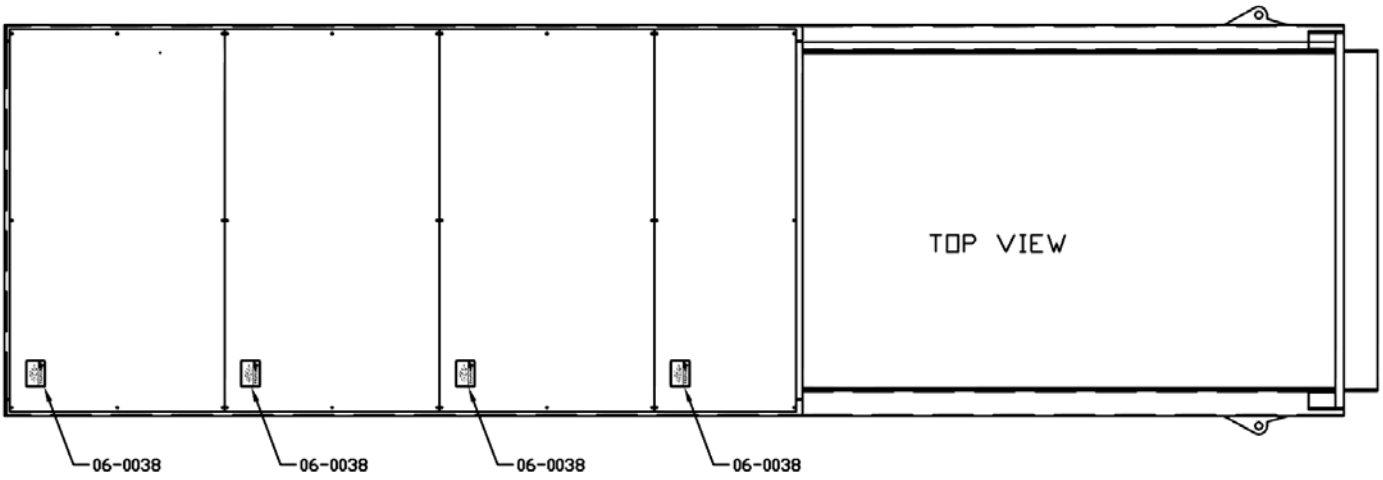
DECAL PLACEMENT 1-6

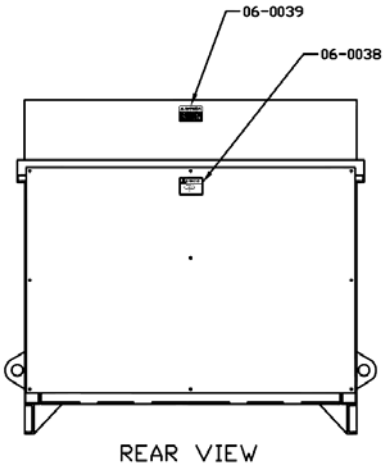
WARNING DECAL REQUIREMENTS

When your compactor leaves the factory, the following warning decals are installed for protection. These decals are subject to wear and abuse due to the nature of the refuse handling operation. **THESE DECALS MUST BE MAINTAINED**. Additional decals may be purchased from your distributor or from Marathon Equipment Company.



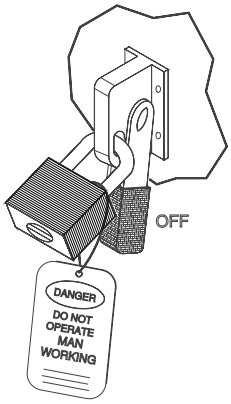
DECAL PLACEMENT 1-7





PART #	DESCRIPTION	QTY
06-0002	RAMJET STATIONARY AND SELF-CONTAINED COMPACTORS	2
06-0038	DANGER: CRUSHING/SHEARING HAZARD!	8
06-0039	DANGER: DO NOT ENTER	3
06-0097	MARATHON SERIAL PLATE	1
06-0121	CAUTION: FEDERAL REGULATION PROHIBITS...	2
06-0249	DANGER: HAZARDOUS VOLTAGE ...LOCK OUT & TAG OUT	2
06-0413	WARNING: CRUSH HAZARD!	1
06-1839	AMERICAN FLAG	2
06-2751	MARATHON COMPACTION & RECYCLING SOLUTIONS	1

LOCK-OUT & TAG-OUT INSTRUCTIONS 2-1



FOREWORD: **Before entering any part of the compactor, be sure that all sources of energy have been shut off, all potential hazards have been eliminated, and the compactor is locked-out and tagged-out in accordance with OSHA and ANSI requirements.** If the ram is pressing against a load, move the ram rearward before shutting the comp actor down. The specific lock-out and tag-out instructions may vary from comp any to company (i.e. multiple locks may be required, or other machinery may need to be locked-out and t agged-out). The following instructions are provided as minimum guidelines.

INSTRUCTIONS

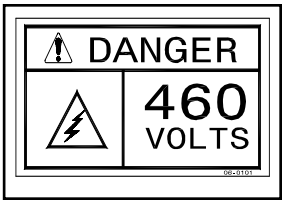
1. Move the main disconnect lever to the OFF position.

2. Padlock the disconnect lever with a keyed p adlock and take the key with you.

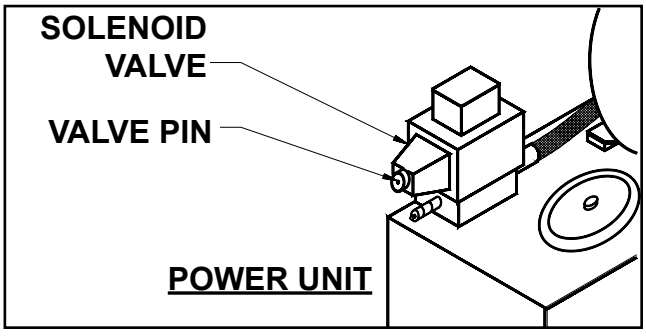
3. Along with the p adlock, place an appropriate, highly visible, warning tag on the disconnect lever. The tag should provide a warning such as: " Danger: Do not operate equipment. Person working on equipment. Warning: Do not energize without the permission of _____."

4. After locking and tagging the compactor, try to start and operate the compactor (as outlined in the Operating Instructions) to make sure the lock-out and tag-out is effective. If the lock-out and t ag-out is effective, remove the key from the keyswitch and take with you.

ELECTRICAL: The p anel box cont ains high volt age components. Only authorized service personnel should be allowed inside the box. Authorized service personnel should be allowed inside the box only af ter the compactor has been locked-out and tagged-out.



HYDRAULIC: Stored hydraulic energy must be removed from the compactor hydraulic circuit for complete lock-out and tag-out. Make sure that this energy has been relieved by manually depressing the solenoid valve pin located in the center of the coil end of the directional control valve.



2 MAINTENANCE

WARNING: NEVER ENTER ANY PART OF THE COMPACTOR UNTIL THE UNIT HAS BEEN LOCKED OUT AND TAGGED OUT.

DAILY

1. Check oil level in reservoir . Level should be 3/4 of the sight gauge with the ram retracted fully.
2. Check for oil leaks.
3. Check oil filter indicator on the power unit reservoir. Change filter if necessary.
4. Check for any unsafe conditions in the compactor area.

WEEKLY

1. Clean air breather on reservoir.
2. Visually inspect oil filter indicator.
3. Verify proper operation of the photocell (if applicable).

MONTHLY

1. Check for any unsafe condition such as exposed electrical lines or operator obstructions in the operating area.
2. Check external hoses for chafing, rubbing, or other deterioration and damage.
3. Lubricate the ram hold down bars using an all purpose grease.
4. Check unit for cracked welds, bowing, and structural deterioration.
5. Remove cleanout cover(s) from the side(s) of the comp actor body. Clean out the debris from behind the ram. Replace cover(s) when cleanout is complete.

THREE MONTHS

1. Check hydraulic cylinder, internal hoses, and connections for leakage: check hoses for chafing and wear.
2. Check all decals to be sure they all are readable and in good condition.

SIX MONTHS

1. Change return oil filter.
2. Send oil sample out for evaluation. Change if required. See recommended oils on the next page.
3. Check the compactor structure for cracked welds or other damage.
4. Check motor starter contacts on the motor starter in the panel box.

PERIODIC MAINTENANCE 2-3

ANNUALLY

1. Change the hydraulic oil or filter it twice through a 3 micron filter . If the oil is filtered, a sample should be analyzed and additives mixed with the oil if required.
2. Lubricate the electric motor bearings per the manufacturers suggestions.
3. Check the cylinder pins for wear. Rotate the cylinder rod 180 degrees.

FILTER MAINTENANCE

1. The hydraulic filter(s) should be cleaned at regular yearly intervals.
2. The filter may be removed from the unit by disconnecting the union on the suction side of the pump, removing the four bolts retaining the suction flange, and lifting the filter from the reservoir . Units with multi-sectioned pumps may be removed by removing the four bolts from the pump flange and the four bolts on the suction flange.
3. Care should be exercised in cleaning the filter to insure that the element is not torn. Clean the element with a soft brush and standard industrial solvent.
4. Replace the filter after cleaning and tighten the connections securely. Pump noise and a "crackle" sound is most often caused by air entering the pump suction line. Tightening the suction fittings will usually eliminate the problem.
5. For units with external return line filters, these filters should be replaced when performing filter maintenance.

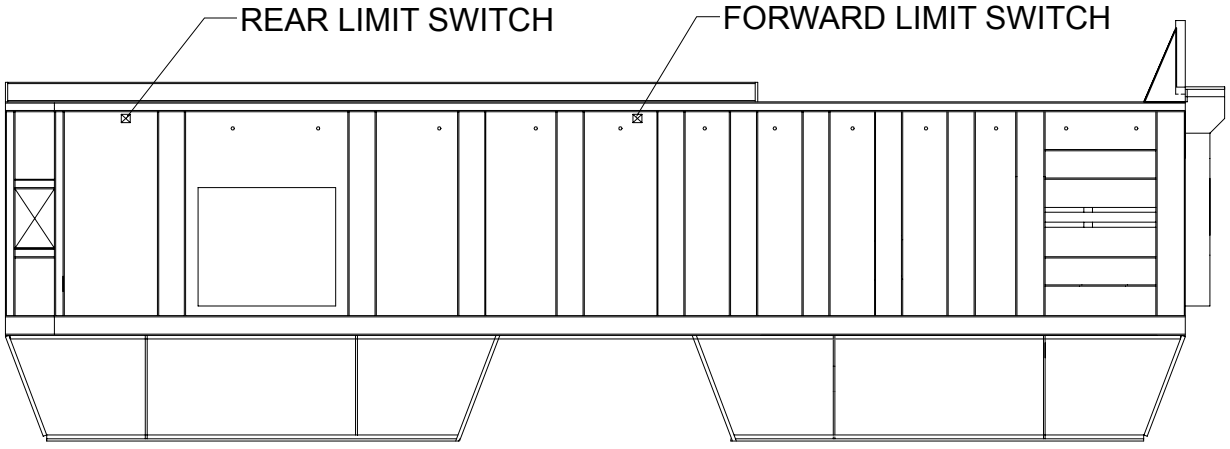
RECOMMENDED OILS

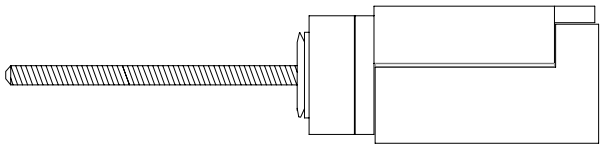
1. Union - Unax-46, Unax-AW46
2. Gulf - Harmony 47, Harmony 48-AW
3. Exxon - Teresstic 46, Nuto 46
4. Texaco - Rando 46
5. Chevron - AW 46
6. Shell -Turbo 46, Tellus 46
7. Quaker State - Dextron ll (ATF)
8. Citgo - Pacemaker 46, Tellus - AW46
9. Amoco - (Rycon)

LIMIT SWITCH ADJUSTMENT 2-4

WARNING: NEVER ENTER ANY PART OF THE COMPACTOR OR PERFORM ANY MAINTENANCE UNTIL THE UNIT HAS BEEN LOCKED OUT AND TAGGED OUT.

Note: Adjustment on limit switches is to stop the ram 3/4” from the end of the cylinder stroke, Forward and Rearward.





LIMIT SWITCH
WHISKER TYPE
03-0903

CHARTS - 20HP POWER UNIT 2-5

FUSES AND CIRCUIT BREAKERS

THREE PHASE

MOTOR SIZE	VAC	FULL LOAD AMP.	DUAL ELEMENT FUSE MAX. SIZE	CIRCUIT BREAKER MAX. SIZE	SERVICE DISCONNECT AMP.
20 HP	208	59.4	100	125	100
	230	54	90	125	100
	460	27	45	60	60
	575	22	35	50	60

WIRE SIZE

MOTOR SIZE	VAC	100’	200’	300’
20 HP	208	#4	#1	1/O
	230	#4	#2	#1
	460	#10	#8	#6
	575	#10	#10	#8

Wire size based on 75 deg. C. temperature rating of insulation.
30 deg. C.(86 deg. F.) ambient temperature.

NOTE: The fuse, circuit breaker, and disconnect sizes may change if a conveyor is used. Please contact **MARATHON EQUIPMENT COMPANY** Technical Service Department, at 1-800-633-8974, for correct sizes.

CHARTS - 30HP POWER UNIT 2-6

FUSES AND CIRCUIT BREAKERS

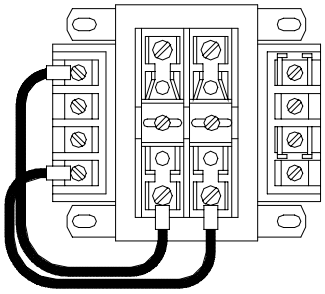
THREE PHASE

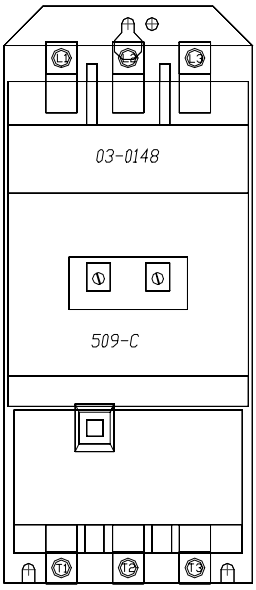
MOTOR SIZE	VAC			
	208	230	460	575
30 HP FLA (MAIN MOTOR)	88	80	40	32
1 HP FLA (FAN MOTOR)	4.6	4.2	2.1	1.7
FUSE DUAL ELEMENT MAX. SIZE	150	125	70	50
INVERSE TIME BREAKER	200	200	100	80
SERVICE DISCONNECT AMP.	200	200	100	60
WIRE SIZE				
100’	#2	#2	#6	#8
200’	1/O	#1	#6	#8
300’	3/O	2/O	#4	#6

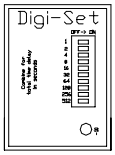
Wire size based on 75 deg. C. temperature rating of insulation.
30 deg. C.(86 deg. F.) ambient temperature.

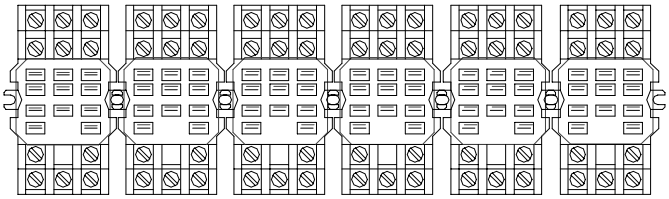
NOTE: The fuse, circuit breaker, and disconnect sizes may change if a conveyor is used. Please contact **MARATHON EQUIPMENT COMPANY** Technical Service Department, at 1-800-633-8974, for correct sizes.

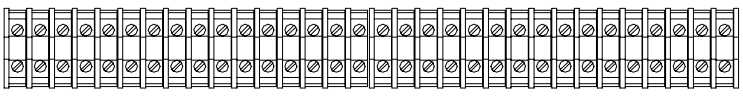
PANEL BOX ARRANGEMENT - STANDARD 2-7



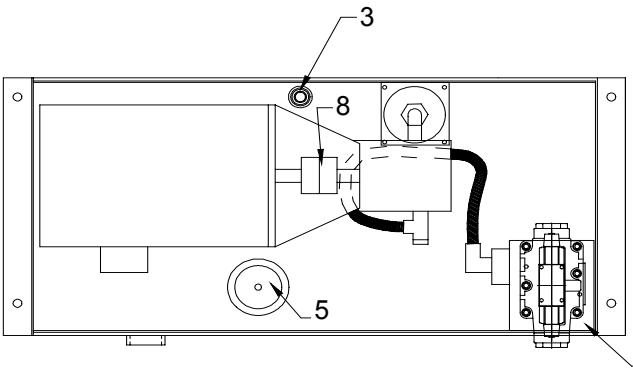




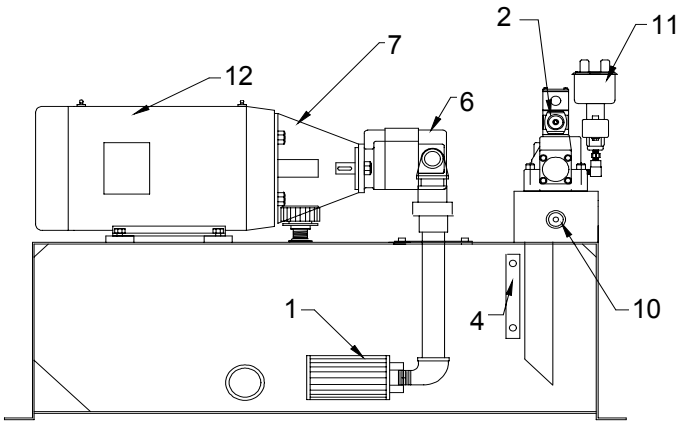




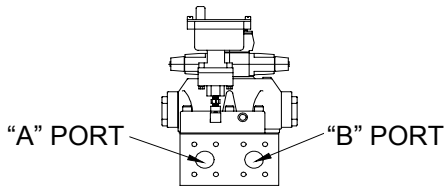
POWER UNIT - 20HP/18GPM 2-8



REF #	PART #	DESCRIPTION
1	02-0051	SUCTION FILTER
2	02-0081	DIRECTIONAL CONTROL VALVE
3	02-0197	BREATHER
4	02-0015	SIGHT GAUGE
5	02-0219	CLEAN OUT COVER
6	02-0259	PUMP, 18GPM
7	02-0397	PUMP/MOTOR ADAPTER
8	02-0398	HUB COUPLING
9	02-3043	SUBPLATE
10	02-3113	RELIEF VALVE
11	03-0014	PRESSURE SWITCH, DUAL
12	03-0347	MOTOR, 20HP



NOTE: Check for proper rotation on motor before beginning. Rotation should be clockwise (observed from the motor end).



HOSE PORTS ON SUBPLATE

NOTE: Check oil level before beginning. Oil level should be 3/4 up the sight gauge with the ram in the fully retracted position. Check the recommended oil chart for the

PRESSURE SETTINGS FOR 20HP/18GPM POWER UNITS 2-9

The following adjustments will need to be made with the power unit running.
See START-UP SEQUENCE and PRE OPERATING INSTRUCTIONS.

1. Remove the forward limit switch.

2. Loosen the lock nut on the relief cartridge at the manifold, and adjust the relief counter clockwise several turns.

3. Remove the cap on the adjustment screw of the pressure switch. This can be done by loosening the two (2) small phillips head screws and rotating the cap counter clockwise. After removing the cap, turn the adjustment screw counter clockwise several turns.

4. Start motor (see operating instructions).

5. Manually extend the ram to the fully forward position.

6. Holding the ram in the forward direction, adjust the relief to 2300psi. While holding this pressure, adjust the pressure switch clockwise until the machine shuts down.

7. The pressure switch is now set, but the top of the pressure switch will need to be loosened to continue. To do this, loosen the two (2) flat head screws at the ends of the pressure switch. This will prevent the machine from shutting down while performing the next setting.

8. Restart the motor (see operating instructions).

9. Manually extend the ram to the fully forward position.

10. Holding the ram in the forward direction, adjust the relief to 2500psi.

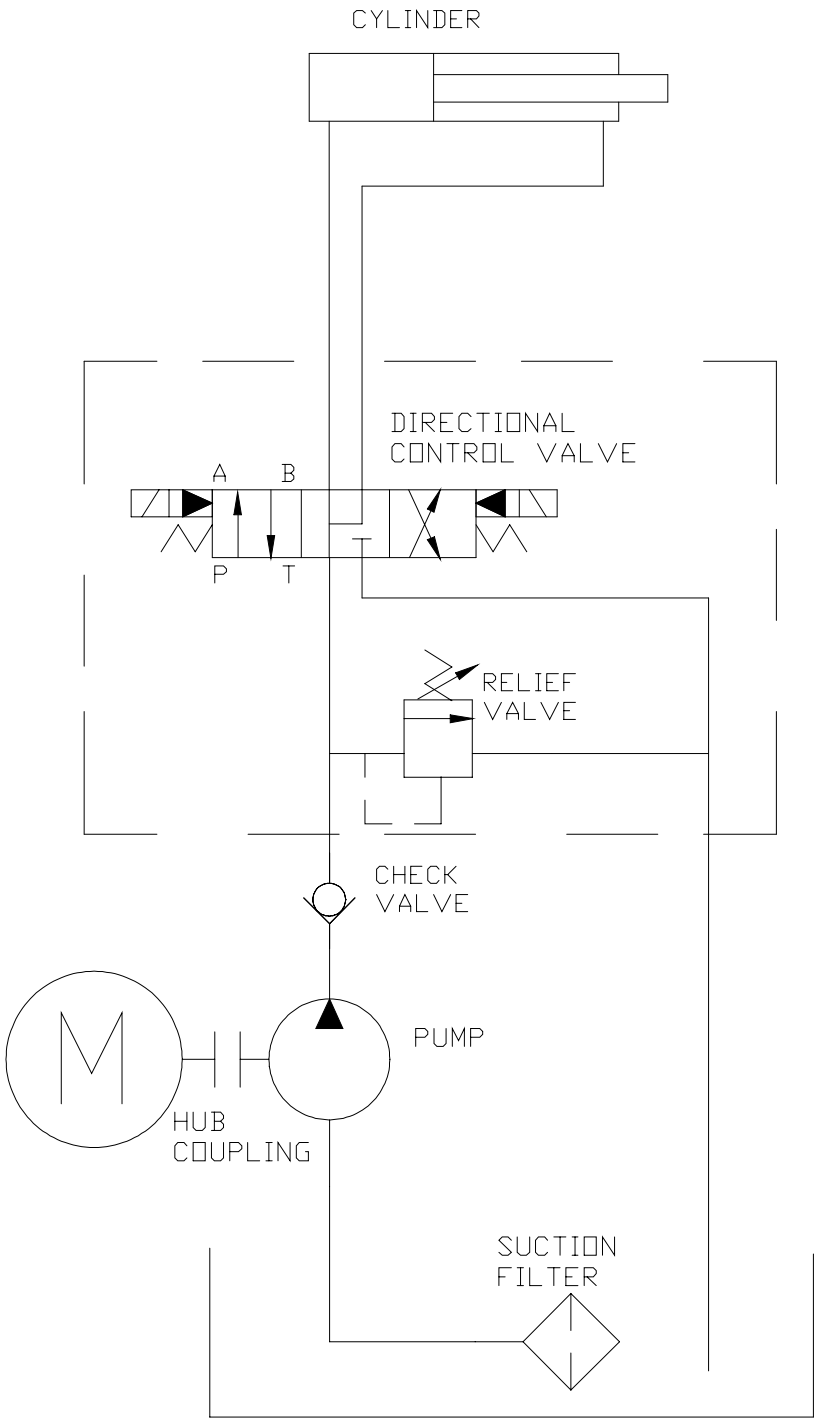
11. Tighten the lock nut on the relief cartridge.

12. Tighten the two (2) flat head screws on the pressure switch top, and replace the cap.

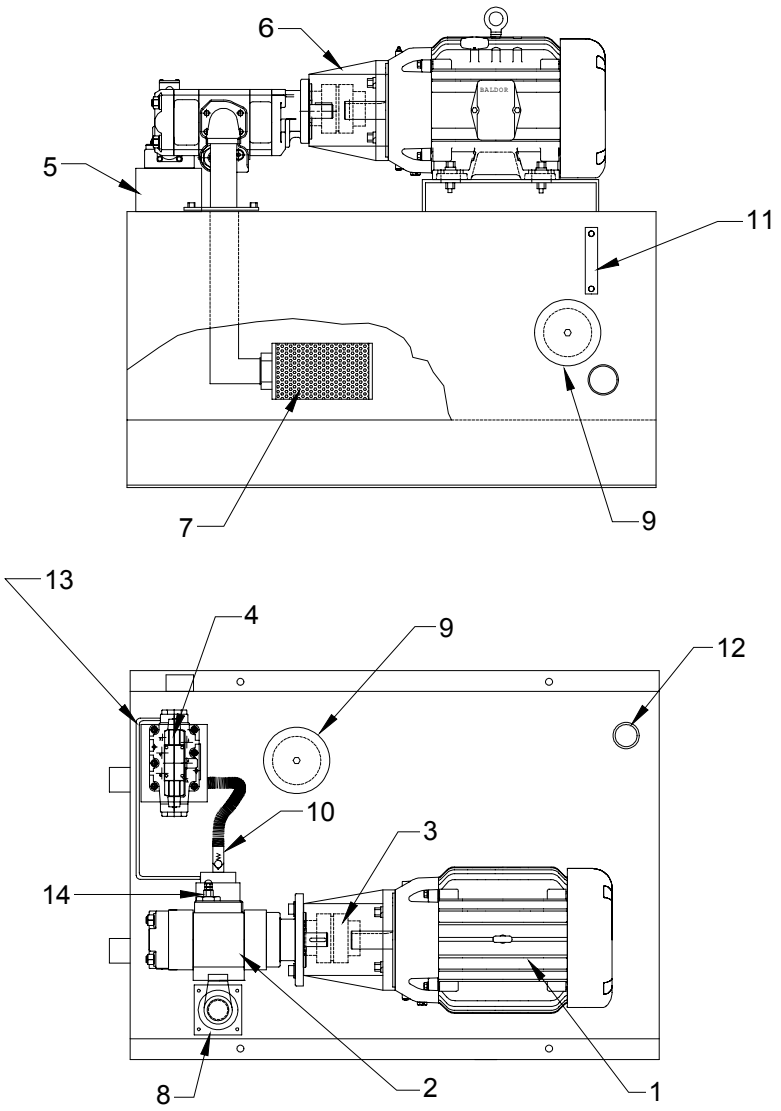
13. Replace the front limit switch.

NOTE: If the Advance Warning option is used on this machine, the advance warning pressure will set at 2100psi.

HYDRAULIC SCHEMATIC - 20HP/18GPM 2-10



POWER UNIT 20HP/50GPM 2-11



REF #	PART #	DESCRIPTION	REF#	PART #	DESCRIPTION
1.	03-1071	MOTOR 20HP	8.	02-1065	SUCTION FLANGE
2.	02-1086	PUMP 50GPM	9.	02-0219	CLEAN OUT COVER
3.	02-0932	HUB COUPLING	10.	02-0970	CHECK VALVE
4.	02-0667	VALVE	11.	02-0215	SIGHT GAUGE
5.	02-3043	SUBPLATE	12.	02-0647	BREATHER
6.	02-0662	PUMP/MOTOR ADAPTER	13.	NPN	PILOT LINE
7.	02-0938	SUCTION FILTER	14.	NPN	UNLOADING VALVE

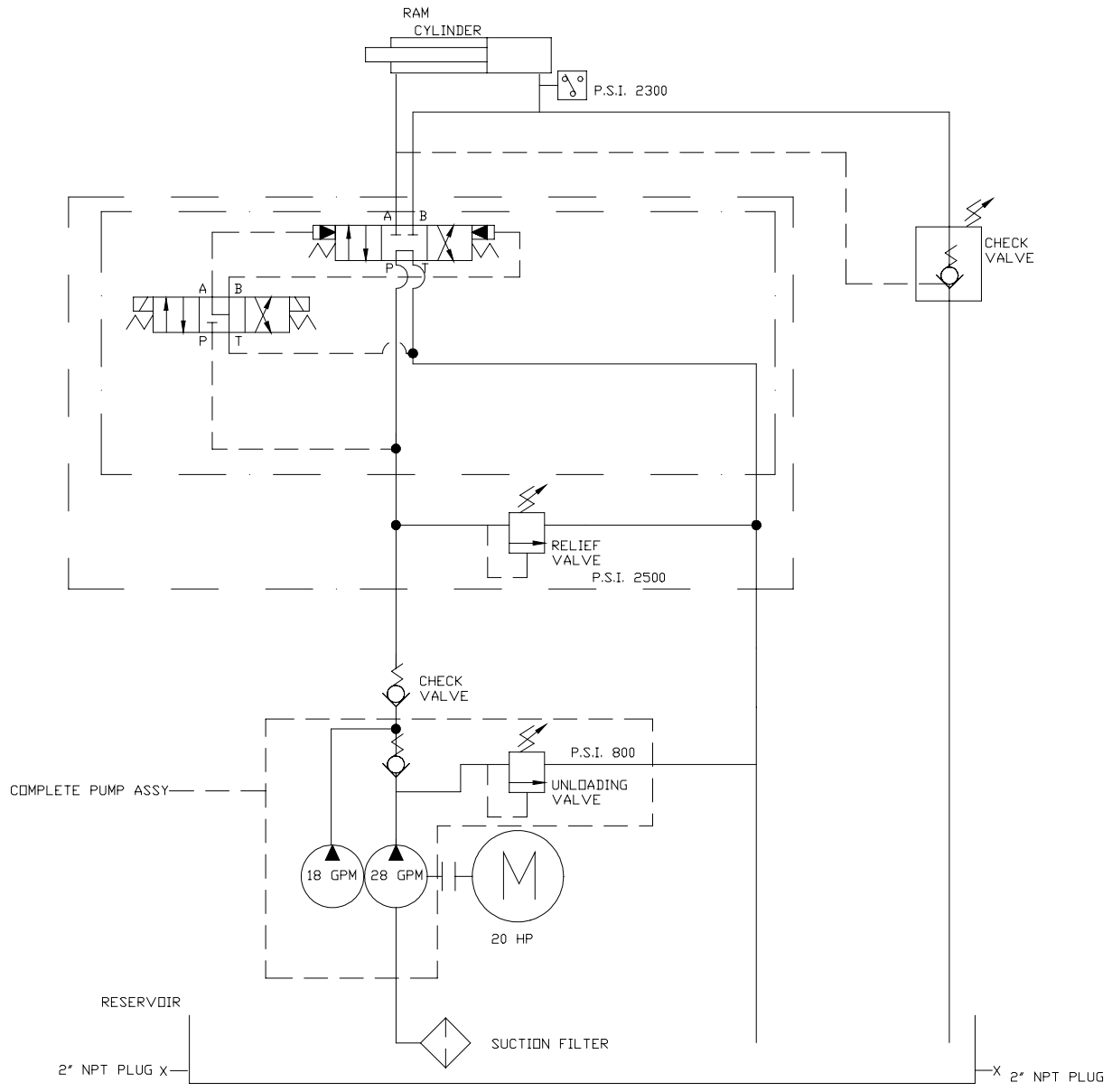
PRESSURE SETTINGS FOR 20HP/50GPM POWER UNITS 2-12

The following adjustments will need to be made with the power unit running.
See START-UP SEQUENCE and PRE OPERATING INSTRUCTIONS.

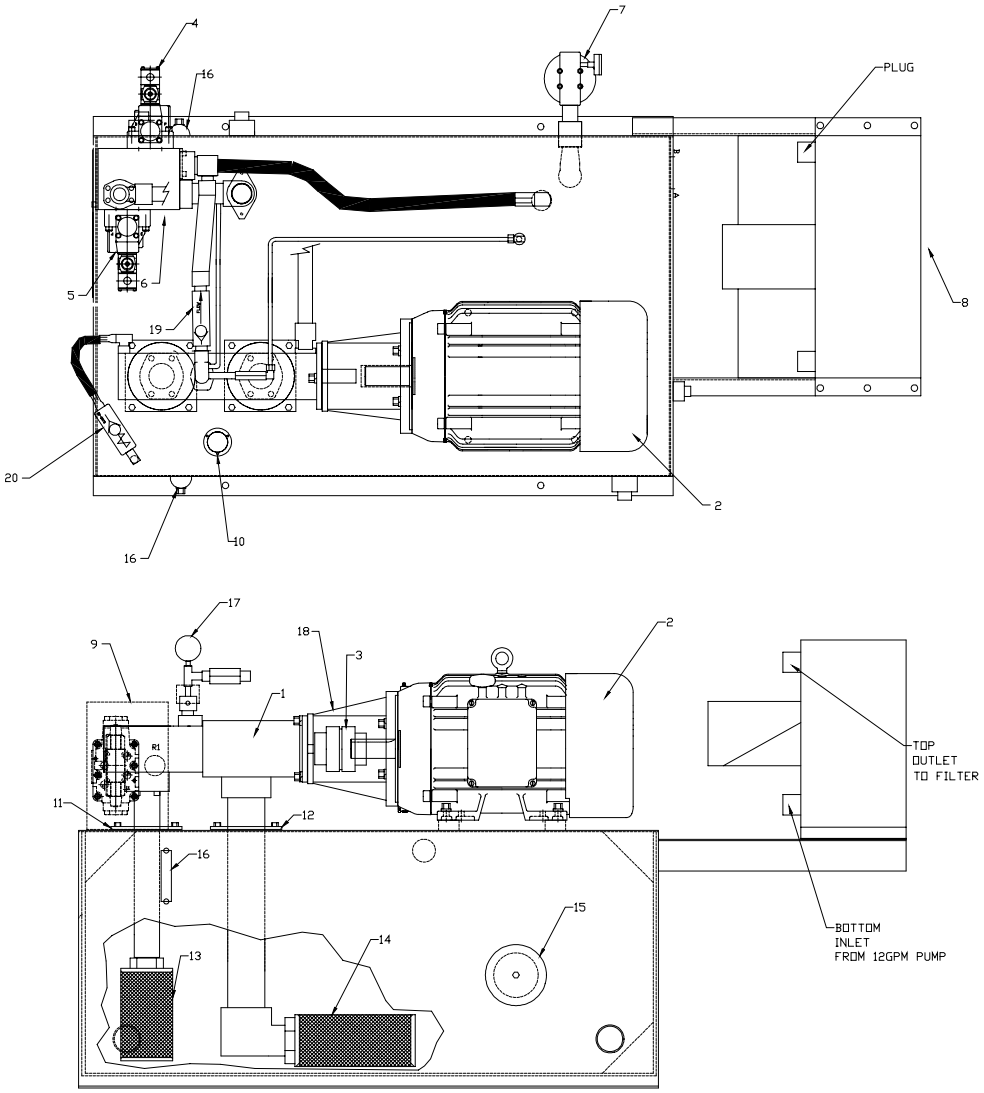
1. Remove the forward limit switch.
2. Loosen the lock nut on the relief cartridge at the manifold, and adjust the relief counter clockwise several turns.
3. Remove the cap on the adjustment screw of the pressure switch. This can be done by loosening the two (2) small phillips head screws and rotating the cap counter clockwise. After removing the cap, turn the adjustment screw counter clockwise several turns.
4. Loosen the lock nut on the unloading valve of the high flow section of the pump.
5. Start motor (see operating instructions).
6. Manually extend the ram to the fully forward position.
7. Holding the ram in the forward direction, adjust the relief to 800psi. At 800psi the high flow pump should drop out. Adjust the unloading valve on the pump until the high flow pump dumps its flow back to tank. A distinct sound difference can be heard in the pump when this happens. Tighten the lock nut on the unloading valve.
8. While holding the ram in the forward direction, adjust the relief to 2300psi. Holding this pressure, adjust the pressure switch clockwise until the machine shuts down.
9. The pressure switch is now set, but the top of the pressure switch will need to be loosened to continue. To do this, loosen the two (2) flat head screws at the ends of the pressure switch. This will prevent the machine from shutting down while performing the next setting.
10. Restart the motor (see operating instructions).
11. Manually extend the ram to the fully forward position.
12. Holding the ram in the forward direction, adjust the relief to 2500psi.
13. Tighten the lock nut on the relief cartridge.
14. Tighten the two (2) flat head screws on the pressure switch top, and replace the cap.
15. Replace the front limit switch.

NOTE: If the Advance Warning option is used on this machine, the advance warning pressure will set at 2100psi.

HYDRAULIC SCHEMATIC - 20HP/50GPM 2-13



POWER UNIT - 30HP/75GPM 2-14



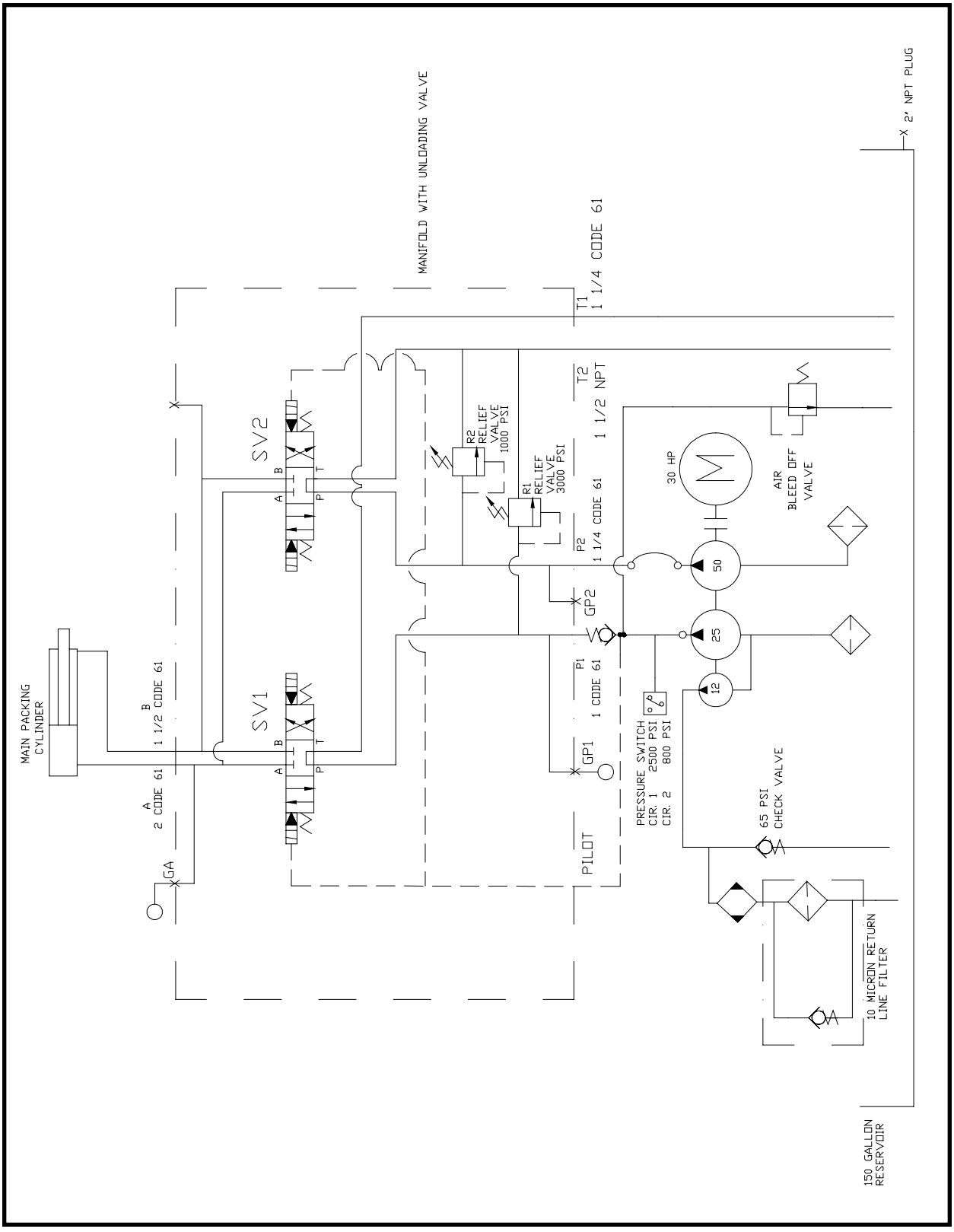
REF#	PART #	DESCRIPTION	REF #	PART #	DESCRIPTION
1.	02-3019	Pump, 75gpm	11.	02-0620	Suction Flange, 2 1/2"
2.	03-1179	Motor, 30hp	12.	02-0621	Suction Flange, 3"
3.	02-0664	Hub Coupling	13.	02-0623	Suction Filter, 2 1/2"
4.	02-3021	Valve	14.	02-0668	Suction Filter, 3"
5.	02-0667	Valve	15.	02-0219	Clean Out Cover
6.	02-0645	Relief Valve	16.	02-0215	Sight Gauge
7.	02-3015	Return Line Filter	17.	02-0700	Pressure Gauge
8.	02-0863	Oil Cooler	18.	02-0662	Pump/Motor Adapter
9.	02-3022	Manifold	19.	02-1031	Check Valve
10.	02-0647	Breather	20.	02-0970	Check Valve

PRESSURE SETTINGS - 30HP/75GPM 2-15

The following adjustments will need to be made with the power unit running.
See START-UP SEQUENCE and PRE OPERATING INSTRUCTIONS.

1. Loosen the lock nuts on R1 and R2.
2. Remove the caps from the top of the Pressure Switches.
3. Remove the front limit switch.
4. Turn the MANUAL/CONTINUOUS CYCLE selector switch to the MANUAL position.
5. Turn the FOR/REV switch to the FORWARD position and hold.
6. Adjust R1 to 800 psi. While continuing to hold 800 psi adjust the Pressure Switch Circuit 2 clockwise until the input light on the programmable controller comes on (refer to your electrical schematic for the correct input).
7. Adjust R1 to 1000 psi. While continuing to hold 1000 psi adjust R2 until the high flow pump drops out. When the high flow pump drops out there will be a distinctive difference in the sound the pump makes. You may want to adjust R2 in and out several times to get this setting as close as possible. When R2 is has been set, tighten R2 lock nut.
8. Adjust R1 to 2500 psi. While continuing to hold 2500 psi adjust the Pressure Switch Circuit 1 clockwise until the input light on the programmable controller comes on (refer to your electrical schematic for the correct input). After the input light comes on the machine will run for 5 (five) seconds and shut down.
9. Loosen the top of on the Pressure switch to prevent the machine from shutting down. Restart the machine.
10. Adjust R1 to 3000 psi. Tighten R1 lock nut.
11. Replace the top and caps on the pressure switch.
12. Replace the front limit switch.

HYDRAULIC SCHEMATIC - 30HP/75GPM 2-16



3 INSTALLATION

CONCRETE PAD REQUIREMENTS 3-1

CAUTION:

REVIEW THIS MANUAL BEFORE STARTING THE INSTALLATION. STUDY THE JOBSITE AND INSTALLATION REQUIREMENTS CAREFULLY TO BE CERTAIN ALL NECESSARY SAFEGUARDS AND OR SAFETY DEVICES ARE PROVIDED TO PROTECT ALL PERSONNEL AND EQUIPMENT DURING THE INSTALLATION AND AS A COMPLETED SYSTEM. SPECIAL ATTENTION IS DIRECTED TO THE EXTRACT FROM AMERICAN NATIONAL STANDARDS INSTITUTE Z245.2. A copy may be obtained from Marathon Equipment Company.

Marathon Equipment Co. does not assume responsibility for the installation procedures of this equipment. Conformance to applicable local, state, and federal laws concerning installation rests with the customer.

CONCRETE PAD

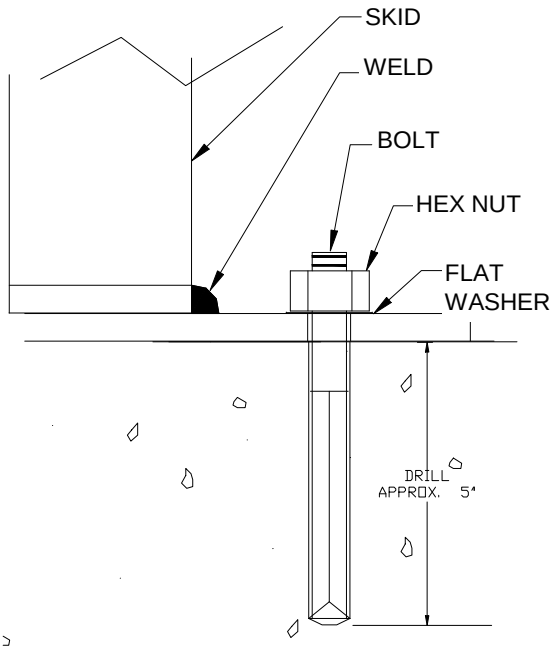
1. Preferred dimensions of the concrete pad are 10'0" wide and a length of 5'0" greater than the length of the compactor and container. It should be of minimum 3,000 PSI concrete steel reinforced, 6" thick. It is preferred that the concrete pad be flush with the surrounding ground level. NOTE: Containers with four ground rollers must be installed on a level pad.

2. To provide accessibility, concrete pad should be positioned to allow 28" of clearance from outer most protrusion of the lock system of compactor/container to a wall, building, structure, or container to allow adequate ingress/egress to equipment. Allow a minimum of 45' of clear space from end of pad for container handling vehicle.

   Note: The clearances given are minimums. Your installation may require greater clearances depending on the site and the hauling equipment that will be used.

ANCHORING

The skid plates should be anchored to concrete pad using eight (8) min. 1” x 6” long anchor bolts to secure the skid plates to the concrete. It is best if these holes are drilled in the concrete after prelocating the compactor in its desired location. Holes in the skid plates are 1-5/16” Dia. to permit the use of a 1-1/8” Dia. concrete bit. The holes in the concrete should be approximately 5” deep. When the compactor has been permanently located, **shim to compensate for unevenness in pad**. Set anchor bolts, tighten all nuts securely, and weld the skids to the skid plates. Container guides (optional) should be anchored in the same manner, spacing between guides determined by rail spacing of the container.



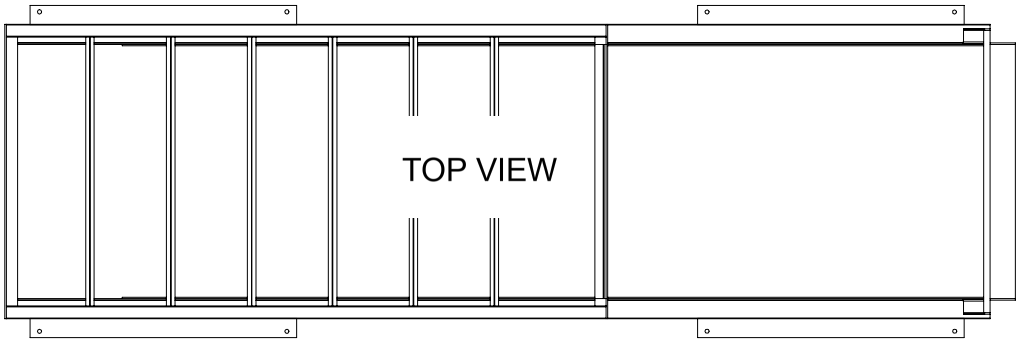
Anchoring of Skid Plates (shipped loose).

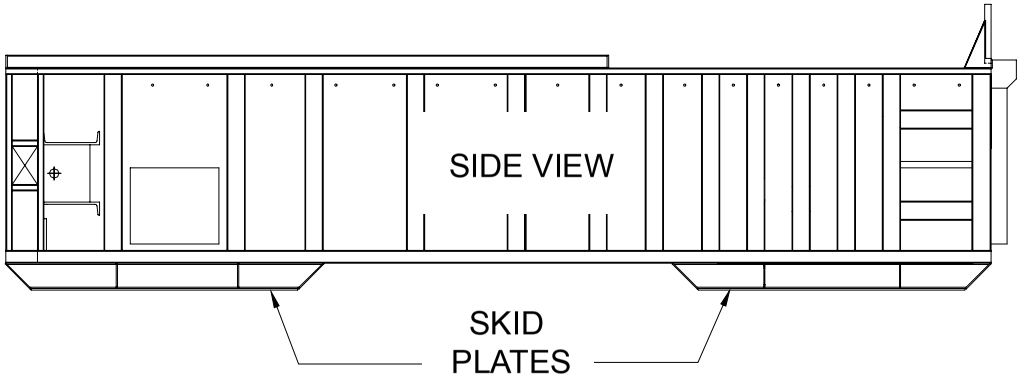
1. Position compactor to the desired location.

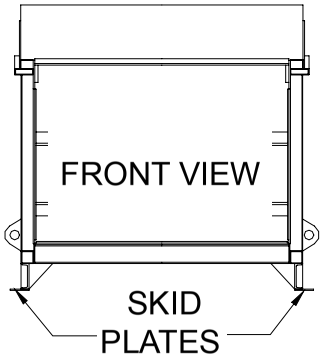
2. Align skid plates under the skids. Center from end to end, and flush with the inside of the skid.

3. Anchor the skid plates using (2) two 1” anchor bolts per plate (customer furnished, red head type recommended). Eight (8) total.

4. Weld compactor skids to the skid plates.



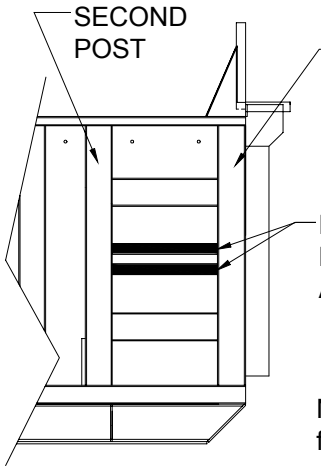




STEEL INSTALLATION PROCEDURES 3-3

RATCHETS/CLAWS FOR CONTAINER CONNECTION **('XW' models only)**

The ratchets, claws, and ratchet pinning plates are shipped loose on 'XW' models. This is done to insure proper location of the pinning plates in the field. The pinning plates should be located vertically between the first and second side post on the compactor. They should be flux-cored welded, triple pass, 3/8" fillet all around.



DOCK INSTALLATION

If the appropriate accessories are ordered from Marathon Equipment Co., the compactor will be furnished with either a four-sided hopper or a three-sided hopper with a hinged gate. THESE ACCESSORIES SHOULD NOT BE ALTERED AS THEY ARE MANUFACTURED IN ACCORDANCE WITH THOSE STANDARDS WHICH PREVAIL AT THE TIME OF MANUFACTURE.

If the compactor cannot be directly abutted to the dock or if there is any difference in height between the dock and the comp actor, an appropriately sturdy transition section should be provided by the customer and securely affixed to the dock. Along with the transition section, a cont ainer guidance/stop mechanism should be inst alled to assure that the cont ainer does not damage the comp actor during placement. Optional container guides with stop s are available from Marathon and are recommended for proper placement of the container.

CHUTE-FED INSTALLATION

Compactors installed in this arrangement are normally fed "through-the-wall". The lower edge of the access hole in the wall should be a MINIMUM of 42" (and, if possible, not more than 58") from the inside floor level. A security door (in accordance with local code) should be installed in the wall opening. In the absence of a local code, this door should be constructed of 3/16" thick steel or of steel hollow core design and be lockable from the inside of the building .

STEEL INSTALLATION PROCEDURES 3-4

CONTAINER GUIDES

If container guides (optional) are used with the comp actor and cont ainer, each guide should be anchored to the concrete pad using two (2) 3/4" X 6" (minimum) anchor bolts. These bolts should be concrete anchors or exp ansion type anchor bolt s. To allow for construction variations, it is best if these holes are drilled in the concrete af ter prelocating the cont ainer guides in their desired location. When the guides have been placed in position, and the anchor bolts have set, tighten all nuts securely.

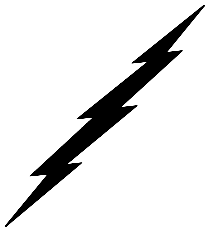
DECALS

Be certain that the appropriate decals are in their proper locations at all times on the machine. For decal locations, see “DECALS” and “DECAL PLACEMENT” in the Operation section of this manual.

NOTE: INSTALLATION IS NOT COMPLETE UNTIL ALL DECALS ARE IN PLACE.

ELECTRICAL & HYDRAULIC INSTALLATION 3-5

The panel box contains high voltage components. Only authorized service personnel should be allowed inside. See Lock-Out & Tag-Out instructions in the maintenance section.



For units without a lockable fused disconnect in the p anel box, a lockable fused disconnect switch (customer furnished) must be inst alled and be within sight of the compactor's electrical panel box location, not to exceed 50'0" from the comp actor. This fused disconnect switch should be sized in accordance with the comp actor (see Fuse and Circuit Breaker Chart).

CAUTION: All equipment should be grounded per National Electric Code.

REMOTE POWER PACK INSTALLATION

1. If the power unit is remote, it should be installed and anchored as required by the customer. If push buttons are mounted in the face of the panel box, be certain these controls are located as to be in a convenient, but not hazardous, location to the customer.
   CAUTION: Controls must be located so that the Mushroom (Emergency) S top Button is readily accessible to the operator and within three (3) feet of the charging chamber access. **If installation requires the control st ation to be located in a more remote area, a second Emergency S top Button should be added and installed in the manner described above.**

2. Connect the hydraulic hoses between the comp actor body and the power unit. The rear port on the cylinder is “A” port. The front port on the cylinder is “B” port. Refer to the POWER UNIT diagrams in the Maintenance section of this manual for proper hose connection to the valve subplate.

3. The limit switch is connected to the power unit with Sealtite. To install,bolt the limit switch to the pre-drilled hole p attern outside the comp actor body (right-hand side towards the rear for comp actors with power unit connection on the right-hand side; left-hand side towards the rear for comp actors with power unit connection on the left-hand side). Other comp actor mounted electrical options are color coded and referenced to the schematic shipped with the comp actor. Make sure all wires are connected properly. Check local codes to assure that Sealtite is acceptable.

ELECTRICAL & HYDRAULIC INSTALLATION 3-6

PUSHBUTTON CONTROL STATION

If a remote push button station is furnished, it will be factory wired using Sealtite. If it is necessary to disconnect it from the panel box, (to install the pushbutton station inside a building), exercise care that these wires are reconnected as originally furnished. (Check local codes to be certain that Sealtite is acceptable.)

CAUTION: Controls must be located so that the Mushroom (Emergency) Stop Button is readily accessible to the operator and within three (3) feet of the charging chamber access. If installation requires this push button control station to be located in a more remote area, a second Emergency Stop Button should be added and installed in the manner described above.

ELECTRICAL CONNECTIONS

1. Run power lines between fused disconnect switch (customer furnished) and compactor's electrical panel box, in accordance with local electrical codes, using knock-outs in bottom of panel box. See Fuse & Circuit Breaker Chart for Motors and Wire Size Chart, in the Maintenance Section, to determine the proper service disconnect amperage rating and the proper wire size.
   NOTE: High legs should be installed to L3 on motor starter.

2. Check voltage at fused disconnect switch to be certain it is the same as is shown on compactor or remote power pack.

START-UP INSTRUCTIONS

1. With the ram fully retracted, check to be sure the oil reservoir is full to the 3/4 level on the sight gauge (Refer to the maintenance chart for hydraulic oil recommendations). The hydraulic system pressure has been factory set and the entire unit has been operated prior to shipment. **CAUTION: MAKE SURE PERSONS AND MATERIAL ARE CLEAR OF CHARGE BOX AREA.**

2. Put fused disconnect switch in "ON" position when ready to start machine. Depress the start button and check the pump shaft for proper rotation. Look at the hub coupling rotation through the slot in the pump-to-motor adapter. Looking from the motor end, rotation should be clockwise.

   CAUTION: If the pump rotates backward, stop immediately. The pump will be damaged if it is operated in reverse even for short periods. Reversing any two incoming power lines will change the motor/pump rotation.

3. **Make sure that the operators are trained in the proper use of this equipment.**