



SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR

**PART MANUAL - 26374
REV. C**

Revised: 5/02

SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR



TABLE OF CONTENTS

Super Shot 125 Melter with Air Compressor	5
Safety Precautions.....	6-7
Limited Warranty.....	7
Warranty Claim Instructions.....	8
Specifications.....	9
Introduction.....	10
Operating Instructions	
Machine Start Up.....	11-12
Air Compressor.....	12
Dispensing the Material/Active Pump Protection.....	13
Loading the Machine/Shutdown and Clean-Out Procedure/Storing Machine.....	14
Instructions For Ordering Parts/Electric Hose Care and Cautions.....	15
Hose Transport Instructions.....	16
Maintenance	
Maintenance Instructions.....	17
Maintenance Chart/Service Instructions.....	18
Recommended Fluids and Lubricants/Typical Specifications.....	19
Super Shot Pump Replacement	20
Super Shot Pump Replacement Diagram.....	21
Trouble Shooting	
Trouble Shooting Guide - Hose Does Not Heat.....	22
Hose Circuit Schematic.....	23
Trouble Shooting Guide - Hose Does Not Heat.....	24
Trouble Shooting Guide - Material Does Not Dispense When Pump is Activated...	24
Hose Circuit Schematic.....	25
Trouble Shooting Guide - Material Does Not Dispense When Pump is Activated...	26
Trouble Shooting Guide - Pump Rotates But No Material is Discharged.....	26
Trouble Shooting Guide - Material Dispensing Rate is Too Slow.....	26
Hose Circuit Schematic.....	27
RTD Sensor - OHMS vs. Temperature.....	28
Diesel Burner Electrode Adjustments/Diesel Burner Settings.....	29
Burner Schematic.....	30
Burner Trouble Shooting.....	31
Trouble Shooting Hydraulics Schematic.....	32
Trouble Shooting Hydraulics.....	33
Parts	
SS 125 DC Diagram and Parts.....	34-39
Tank Detail Diagram and Parts.....	40-41
Control Box Assembly Diagram and Parts.....	42-43
Engine Assembly Diagram and Parts.....	44-45
Hydraulic Valve Assembly Diagram and Parts.....	46
Pump/Agitator Assembly Diagram and Parts.....	47
Air Compressor Assembly Diagram and Parts.....	48
Flow Control Valve Assembly Diagram and Parts.....	49
Diesel Burner Diagram and Parts.....	50-51
Hydraulic Diagram and Parts.....	52-55
Electrical Cables Diagram and Parts.....	56-57

SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR

This manual is furnished with each new **CRAFCO SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR**. This manual will help your machine operators learn to run the melter applicator properly and understand its mechanical functions for trouble-free operation.

Your **CRAFCO SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR** is designed to give excellent service and save maintenance expense. However, as with all specially engineered equipment, you can get best results at minimum costs if:

1. You operate your machine as instructed in this manual.
2. Maintain your machine regularly as stated in this manual.



WARNING: The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Operate in well ventilated area only. Engine exhaust is deadly.



SAFETY PRECAUTIONS

- High operating temperatures of sealant and machine require protective clothing and gloves be worn by operator.



- Always wear eye protection.

- Observe all **CAUTION AND WARNING** signs posted on machine.



- Avoid the entrance of water into any part of the machine. Water will displace heat transfer oil or sealant, which could be hazardous to personnel surrounding the machine when it reaches operating temperatures.

- Avoid bodily contact with hot sealant material or heat transfer oil, serious burns may result.

- Read Operator Manual thoroughly before operating machine.

- Make sure operator is familiar with machine operation.

- Do not operate in closed building or confined areas.

- Shut-down burner and engine prior to refilling diesel tank.

- When adding solid material to sealant tank, stop mixer, lift lid, place material onto lid and close lid before restarting mixer. Hot material could splash and cause serious burns if this procedure is not followed.

- Keep hands, feet, and clothing away from all moving parts.

- Always keep a fire extinguisher near the unit. Maintain extinguisher properly and be familiar with its use.



- **DO NOT** exceed 525° F. for heat transfer oil temperature.

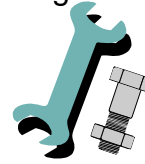
- **DO NOT** overfill heat transfer oil level. Expansion of oil during heat up could cause overflow. With machine in level position, check oil each day before starting burner, add oil to top mark on dipstick if required (at 70° F.). **Use only recommended heat transfer oil and change after 500 hours of operation or one year, whichever occurs first.**

- Follow operating instructions for starting and shut-down of burner. See operating instructions.

- Calibrate temperature control prior to initial operation and each 50 hours of operation. See temperature control calibration.

SAFETY PRECAUTIONS

- Replace any hoses which show signs of wear, fraying, or splitting. Be sure all fittings and joints are tight and leak-proof, each time machine is used.
- Precaution is the best insurance against accidents.
- The Super Shot 125 Melter should not be left unattended with burner lit.
- Tighten all bolts and screws after every 100 hours of operation.
- Crafco, Inc. assumes no liability for an accident or injury incurred through improper use of the machine.



LIMITED WARRANTY

Crafco, Inc., through its authorized distributor, will replace for the original purchaser free of charge any parts found upon examination by the factory at Mesa, Arizona, to be defective in material or workmanship. This warranty is for a period within 60 days of purchase date, but excludes engine or components, tires, and battery as these items are subject to warranties issued by their manufacturers.

After 60 days, Crafco, Inc., warrants structural parts, excluding heating system, hydraulic components, material pump and hoses, hot oil pump, applicator valves, and electrical components for a period of (1) one year from date of delivery. Crafco, Inc., shall not be liable for parts that have been damaged by accident, alteration, abuse, improper lubrication/maintenance, normal wear, or other cause beyond our control.

The warranty provided herein extends only to the repair and/or replacement of those components on the equipment covered above and does not cover **labor** costs. The warranty does not extend to incidental or consequential damages incurred as a result of any defect covered by this warranty.

All transportation and labor costs incurred by the purchaser in submitting or repairing covered components must be bore by the purchaser.

Crafco, Inc. specifically disavows any other representation, warranty, or liability related to the condition or use of the product.



WARNING: Use of replacement parts other than genuine Crafco parts may impair the safety or reliability of your equipment and nullifies any warranty.

WARRANTY CLAIM INSTRUCTIONS

Please follow the instructions stated below when calling in a Warranty Claim. Failure to follow these procedures may be cause to void the warranty.

1. Call your local CrafcO Distributor. If you do not know who your local distributor is, call a CrafcO Customer Service Representative, (Toll Free 1-800-528-8242) for name, location, and telephone number.
2. On contacting the distributor, be prepared to identify the machine type, model number, and serial number, also, the date of purchase if available.
3. Should the cause of the malfunction be a defective part, the distributor will advise you of the procedure to follow for a replacement.
4. The warranty is valid only for parts, which have been supplied or recommended by CrafcO, Inc.

If you have any additional questions regarding warranty repairs and parts, please do not hesitate to call toll free 1-800-528-8242.

CRAFCO, INCORPORATED
235 SOUTH HIBBERT DRIVE
MESA, AZ 85210
480-655-8333
Toll Free 1-800-528-8242

SPECIFICATIONS

Vat Capacity.....	125 Gallons
Melt Capacity.....	90 Gallons/Hour
Heat Transfer Oil Required.....	34 Gallons at 70° F
Tank Construction.....	Double Boiler Type
Tank Opening Size.....	14" X 18"
Maximum Heat Input.....	250,000 BTU's
Burner and Temperature Control.....	Diesel-Forced Air Thermostatic Control
Engine - Isuzu..... Model 3LD1C - Diesel	Three Cylinder 37 BHP @ 3,600 rpm
Hydraulic Drive Mechanism.....	All Hydraulic with infinite speed on Material Pump
Mixer.....	Full Sweep Mixer with 2 horizontal paddles Vertical risers
Axle.....	Dual - 3,500lb. Torsional
Tires (4).....	185R-14/8 ply rating
Dry Weight.....	Approximately 4,020 lbs.
Diesel Tank Capacity.....	32 Gallons
Hydraulic Tank Capacity.....	32 Gallons
Air Compressor.....	38.2CFM rated @ 100 PSI Air Pressure Setting

SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR OPERATING INSTRUCTIONS

INTRODUCTION

The CRAFCO SUPER SHOT 125 DIESEL MELTER WITH AIR COMPRESSOR was developed to melt CRAFCO Brand Sealant. However, it will work well with most road asphalt and federal specification crack or joint sealant.

DO NOT operate machine without following these instructions:

1. Fill fuel tank with diesel fuel (use #1 in cold weather, #2 in warm weather).
2. Check engine crankcase oil level (refer to Engine Operator's Manual).
3. Check hydraulic fluid level, at 70° F. Add fluid if necessary.
4. Check heat transfer oil level, at 70° F., the oil should be at the full mark on the dipstick. **DO NOT** overfill or spillage may occur when oil is heated and expands.
5. All toggle switches should be turned “**OFF**” and both temperature control dials at minimum settings.
6. Remember that safe operation of this equipment is the operator's responsibility.
7. Check oil in Air Compressor (Refer to Compressor Operator's Manual).



CAUTION:

Extreme care must be used when operating this equipment. Safety is the result of being careful and paying attention to details. Remember the diesel flame is about 2,200° F. Certain exposed parts of this machine, when operating reach 500° F.; the sealant as high as 400° F. and the hydraulic fluid may reach 200° F. Always wear protective clothing, hard-soled shoes, and eye protection. Be sure that all joints and fittings are tight and leak proof. Immediately replace any hose, which shows any signs of wear, fraying, or splitting. Tighten all bolts, nuts, and screws every 250 hours.

MACHINE START UP

TO START BURNER

1. Fully open the damper vent.
2. Start engine per Engine Manual.
3. Turn "POWER" toggle switch at control box "ON".
4. Set hot oil temperature at 500°F. and material temperature at manufacturers recommended temperature.



CAUTION:

If burner does not ignite the first time, turn toggle switch to "OFF." Turn toggle switch to "ON" again. Burner should ignite. If burner still does not ignite, determine cause of malfunction (see Trouble Shooting Guide Pg. 22-26).

NOTE: The solid material in the tank melts first around the walls and bottom of the material tank. Material temperature sensor is located by the wall; therefore, it is possible that at the beginning of the melting process the indicated temperature reaches operating value, but the material closer to the center of the tank is still solid. This is normal and when the heated hose is ready for operation, most of the material in the tank will be melted and heated to application temperature.

5. Allow the heating oil to continue to heat. When sealant material reaches 275°F. mixer may be engaged by turning the toggle switch at hydraulic control panel "ON". If the mixer does not move, allow the material to heat longer. Jamming of mixer causes hydraulic oil to overheat and machine damage could occur. **NOTE: Mixer speed is preset at the factory and cannot be adjusted. Mixer cannot be engaged until material reaches 275°F.**
6. Hose will automatically turn "ON" when material temperature reaches approximately 275°F. See Operating Instructions. Adjust the temperature dial to 380°F. or manufacturers recommended temperature. The hose will come up to temperature in approximately 30 minutes. After the hose is hot, the light in the control box marked "heated hose" will turn off and the temperature may be reduced to approximately 360°F. It is advisable to run the hose at the recommended temperature setting.

NOTE!! The hose must be up to 325°F. before dispensing can take place. If hose does not dispense when trigger is activated then allow material to heat longer. If hose still does not dispense material then shut machine down and locate plug in the line and remove.

IMPORTANT!! DO NOT twist or kink hose. Avoid sharp bends and continuous twisting. Maintain minimum, 10 inch bend radius. **DO NOT** exceed 400°F. setting on hose controller!! **DO NOT** move or bend hose when cold. Damage may result. **DO NOT** leave hose "ON" for longer than 30 minutes without dispensing material. Coking will occur and permanently damage hose. **DO NOT** remove hose from boom during operation, kinking will occur.

MACHINE START UP

IT IS STRONGLY RECOMMENDED THAT THE HOSE BE STORED IN THE HOSE HANGER WHEN NOT IN USE OR WHEN IN TRANSIT. THIS WILL HELP PREVENT TWISTING OR KINKING.

7. The heated hose supplied with the machine is Teflon lined with steel over braid. It has a heating element, which runs down the hose to heat the material within the hose. The hose is covered with high temperature, durable rubber hose. The wand has an aluminum tube to protect both the wand and the operator. The pistol grip actuator is equipped with an electric switch which when depressed sends a signal to actuate the pump. At the end of the wand, a high temperature elastomeric output valve is attached. The valve is pressure actuated and opens automatically when fluid pressure is applied. The wand is equipped with a trigger lock to prevent accidental pump actuation when not pumping material. The trigger should be in the “**LOCKED**” position at all times except when intentionally pumping material.

AIR COMPRESSOR

The SUPER SHOT 125 Compressor unit is designed to assist in the cleaning of debris from cracks and joints. Always use approved high pressure air hoses with properly installed fittings. DO NOT use frayed or worn hoses. A cold air lance is supplied, consult hot air lance manufacturer which hot air lance can be used with this compressor.

The engine R.P.M. is factory set for maximum air compressor performance.

Consult Crafc0, Inc. or your hot air lance dealer for the appropriately sized lance used on a 38.2@100 PSI CFM compressor.

The compressor is operated hydraulically and disengaged when maximum air pressure setting in storage tank is reached. If the compressor is not needed, turn off at toggle switch in control box.



DISPENSING THE MATERIAL



NOTE: PROTECTIVE CLOTHING, GLOVES, HARD SOLED SHOES, AND FACE SHIELD OR SAFETY GLASSES SHOULD BE WORN WHEN OPERATING OR FILLING THIS EQUIPMENT. READ ENTIRE MANUAL BEFORE OPERATING.

The wand is equipped with a disposable duckbill valve on the end, which shuts off the flow of material when the pump is turned off and prevents excessive dripping of material. This valve also directs the material into a stream for easy application into the crack. Other sealing tips are available. See your local distributor for options.

Some difficulty may be encountered when starting up on cold days. Although the wand is designed to heat the material all the way down to the tip, on cold days it may be necessary to place the tip of the wand under the lid to facilitate material melting in the valve. Insert the wand tip for only a short time before proceeding.

When the material and the hose have reached proper application temperature, you are ready to dispense material. Turn the pump speed control to the lowest setting by turning the speed control knob fully counter clockwise. With the wand tip inserted into the top of the melter, depress trigger on the wand and slowly increase pump speed by turning the speed control knob clockwise until the pump motor starts to turn. Material should start to flow from the tip of the duckbill valve. Adjust the pump speed for the desired rate of flow for the application and dispense material as required. The rate of flow may be varied while the pump is running by rotating the control knob.



NEVER POINT THE WAND AT ANY PART OF THE BODY OR AT ANY OTHER PERSON. HOT MATERIALS CAN CAUSE SEVERE BURNS. WEAR PROTECTIVE EQUIPMENT WHEN FILLING OR OPERATING THE EQUIPMENT. READ MANUAL BEFORE OPERATING EQUIPMENT.



ACTIVE PUMP PROTECTION

The pump is completely encircled by a protective screen. The screen shall not allow anything larger than 1/2" (1.27 cm) in size to pass from the sealant tank into the pump suction port. The screen shall continuously rotate 360 around the pump whenever the sealant agitator is engaged. The *active screen* will protect the pump from foreign object damage and will self clean as it rotates around the sealant pump and suction port.

LOADING THE MACHINE

When loading solid material into the sealant tank, the mixer will stop when the lid is lifted.

To load, lift the lid, place the material on the lid and close lid. Following this procedure will prevent the hot material from splashing and causing serious burns to personnel.

The solid material must be added at intervals, which will allow the mixer to rotate without jamming. If blocks of material are fed in too quickly, jamming will result and slow down the melting process.

SHUTDOWN AND CLEAN-OUT PROCEDURE

When shutting down the machine for the day, there are several schools of thought about how much material to leave in the machine. Crafcoc recommends leaving the melter about half full. This will give a fairly rapid heat up rate in the morning, but will allow enough material to start dispensing right away when the material becomes molten.

1. Reverse the pump for approximately 30 seconds.
2. Turn the "POWER" toggle switch "**OFF**".
3. Store the hose in the hose hanger per transport decal on machine.
IMPORTANT!! DO NOT kink or twist hose, as permanent damage will result.
4. Turn the mixer toggle switch to "**OFF**".
5. Shut the engine down by turning the key to the "**OFF**" position.

STORING MACHINE

The melter should be stored in an area where moisture cannot enter the machine heating system such as hot oil, controls, etc. Extended down time can cause moisture build up in heating oil tank.

If there is any suspicion that moisture may have collected in heat transfer oil, warm heat transfer fluid to 300° F for 2 to 3 hours to evaporate the moisture.

INSTRUCTIONS FOR ORDERING PARTS

Parts may be ordered from your local CRAFCO distributor or directly from CRAFCO, Inc. if a distributor is not available in your area. When ordering parts, give the following information:

1. Part Number.
2. Machine Model.
3. Serial Number.

Write, telephone, or fax:

CRAFCO, INCORPORATED
420 N. Roosevelt Ave.
Chandler, AZ 85226-2601
Phone: 602-276-0406
Fax: 480-961-0513
Toll Free: 1-800-528-8242



ELECTRIC HOSE CARE AND CAUTIONS



Twisting and kinking of the electric hose (used on LF, BAX, SS60, SS125, and SS250 Melter) is the number one cause of hose failure.

When this happens, the electric heating wires are shorted out to the metal hose cover and the hose stops heating.

This type of failure is not covered under the CrafcO warranty.

To help prevent twisting and kinking and the resulting hose damage, the operator should:

- a. Not move or use hose unless it has been turned on at least 30 minutes and set at a minimum temperature of 300° F.
- b. Make sure hose swivel between hose and wand moves freely.
- c. Limit the hose bending to a radius of 10 inches.
- d. Avoid bending the hose over sharp edges such as the edge of the frame or tank.
- e. Avoid twisting.
- f. Do not exceed 400° F. on the hose controller or material temperature.
- g. Follow all instructions of the melter as well as those in the instruction manual.

HOSE TRANSPORT INSTRUCTIONS

1. Remove hose from jib support and rotate jib support towards front of machine until it locks into position.
2. Wrap hose on hose hanger two complete wraps (Approximately 20 inch diameter).
3. Store wand in support hook.

CAUTION:



Hose damage will occur if:

- a. Hose is bent or moved when cold.
- b. Hose is twisted or bent at less than a 10-inch radius.
- c. Hose is moved prior to being turned on at least 35 minutes and set at 380° F.
- d. Operator crosses over or under hose causing hose to twist or wires between hose and wand connection to twist or wrap up.
- e. Swivel is cold and not free to move allowing hose to twist.
- f. Hose to wand wiring is pulled, stressed, or used to support the wand.

MAINTENANCE INSTRUCTIONS

ENGINE

See Engine Owner Manual for operating and maintenance instructions.



HYDRAULIC SYSTEM

Check hydraulic fluid daily. Change hydraulic filter every 250 hours of operation. Change hydraulic fluid every 500 hours of operation.

HEAT TRANSFER OIL

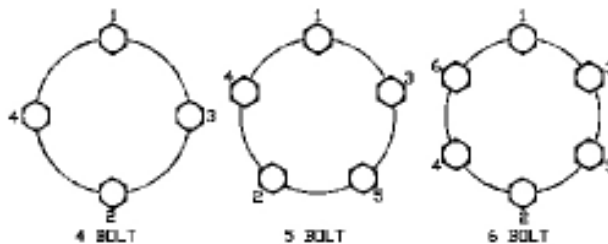
Check oil level every 8 hours of operation. Change oil every 500 hours of operation.

WHEEL BEARINGS

Re-pack wheel bearings every 24,000 miles or every two years, using a good grade of bearing grease.

LUG NUTS

Wheel nuts/bolts should be torqued before first road use and after each wheel removal. Check and retorque after the first 10 miles, 25 miles, and again at 50 miles. Check periodically thereafter. Torque in stages. 1st stage 20-25 ft.lbs., 2nd stage 50-60 ft.lbs., 3rd stage 90-120 ft.lbs.



TIGHTENING SEQUENCE

BRAKES

Check brakes daily. Refer to DEXTER AXLE Operation Maintenance Service Manual located in the manual box.

TONGUE JACK

Lubricate tongue jack, using a good grade of bearing grease.

MIXER BEARING

Lubricate every 50 hours with good quality, high temperature grease.

TEMPERATURE CONTROL CALIBRATION

Check control knob calibration weekly.

1. Calibrate by aligning the line on the control knob with the calibration line on the scale plate (See Fig. 1).

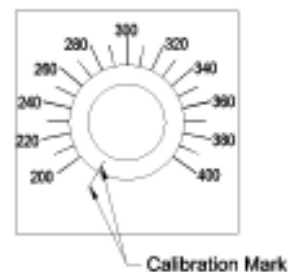


Fig. 1

MAINTENANCE CHART

		HOURS			
LOCATION	PROCEDURE	8	50	250	500
Engine check oil level	See Engine Instruction Manual.	*			
Other engine maintenance	See Engine Operating and Maintenance Instructions.				
Battery	Check water level weekly.				
Heat transfer oil	Check.	*			
Heat transfer oil	Change.				*
Hydraulic oil filter	Change.			*	
Hydraulic oil	Check oil.	*			
Hydraulic oil	Change oil.				*
Burner	Check burner box insulation.				*
	Clean cad cell.				*
	Check electrodes.				*
	Check blower brushes.				*
	Check nozzle pressure.				*
Wheel bearings	Clean & re-pack using a good grade of bearing grease.	Every 24,000 miles or every two years.			
Tongue jack	Grease, using good grade of bearing grease.	Once a year.			

SERVICE INSTRUCTIONS

1. Conduct a general inspection of your machine at least once a week. Replace all worn or damaged parts, make any necessary adjustments and tighten all loose nuts or screws.
2. Keep regular replacement items in stock for emergency repairs, to avoid costly "down" time.
3. Watch for leaks. Tighten fitting or repair as necessary.
4. Clean machine externally periodically. Check with sealant manufacturer for recommendation.
5. Follow recommended maintenance procedures on maintenance chart.

RECOMMENDED FLUIDS AND LUBRICANTS

APPLICATION	RECOMMENDED	FULL POINT
Engine oil	Refer to Isuzu owners manual.	6.7 Qts.
Diesel	#1 Cold climate #2 Warm climate	32 Gals.
Hydraulic oil	Rondo Oil - HD - 68 Texaco	32 Gals.
Heat transfer oil	Regal R&O 68	34 Gals.
Air Compressor	Refer to Compressor Manual	

The following is a list of suitable Heat Transfer Oil to be used in CrafcO equipment.

PRODUCER	PRODUCT NAME	PRODUCT NUMBER
Texaco	Regal	R&O 68
Exxon	Caloria	HT 43
Arco	Rubilene	--
Citgo	Sentry	R&O 68
Gulf Oil Co.	Security	R&O 68
Shell Oil Co.	Therma	C
Chevron	Chevron Heat Transfer Oil	--
Conoco	Heat Transfer Oil	R&O 68

TYPICAL SPECIFICATIONS

ISO	68	Viscosity Index	95-100
Flash Point, COC	445° F.	Pour Point	0° F.
Viscosity @ 100° F.-SUS	325	Carbon Residue	1%
Viscosity @ 210° F.-SUS	50		



WARNING:

The Heat Transfer Oil in this machine is a grade that has been tested and recommended by CrafcO, Inc. The addition of any grade of oil not specifically recommended by CrafcO, Inc., shall be cause for warranties to be voided.

All oils subjected to high temperatures deteriorate with time and lose many of their characteristics. Tests conducted by CrafcO, Inc. have determined that for best results and safety, the Heat Transfer Oil in this machine must be drained and replaced with CrafcO, Inc. recommended oil after five hundred (500) hours of operation or one (1) year, whichever occurs first.

SUPER SHOT PUMP REPLACEMENT

Step 1

Bring melter up to temperature as preparation for draining the material tank. Remove pipe cap located at rear of machine and drain tank (**CAUTION!! EXTREMELY HOT MATERIAL**).

Step 2

Remove both guards from the motor mount to access the chain and sprockets.

Step 3

Rotate agitator until connecting link is accessible. Disassemble the connecting link and remove the drive chain.

Step 4

Loosen set screw in the lower coupling half between the hydraulic motor and the drive shaft.

Step 5

Remove the (4) hydraulic hoses and cap off all ports. Note: Mark hoses for ease of replacement.

Step 6

Remove the (4) bolts holding motor mount on top of melter. Lift off motor mounting and set aside.

Step 7

Remove (2) bolts holding agitator shaft bearing. Note: Do not remove bearing from agitator shaft.

Step 8

When unit has cooled sufficiently, remove (6) bolts holding paddles on top of screen. Remove paddles from tank.

Step 9

Remove pump drive shaft from center of agitator shaft then lift agitator shaft and screen assembly as high as possible and insert screw driver into shaft hole. This will support the assembly while removing the pump from the tank.

Step 10

Remove the (6) bolts, which fasten the pump to the tank. Lift the pump from the material tank (**CAUTION!! THE PUMP WEIGHS APPROXIMATELY 90LBS.**)

Step 11

IMPORTANT: Clean any sealant from top of pump mounting plate and clean-out shaft holes. **WARNING!!! PREMATURE PUMP WEAR WILL OCCUR IF THIS IS NOT DONE**

Disassembly of Material Pump

Step 11

Remove the (2) bolts, which hold the pump plates together. Disassemble the (3) plates from each other (**NOTE: as pump is being disassembled make note of the orientation of holes in each plate**).

Step 12

Clean all pump parts thoroughly before beginning to reassemble the pump.

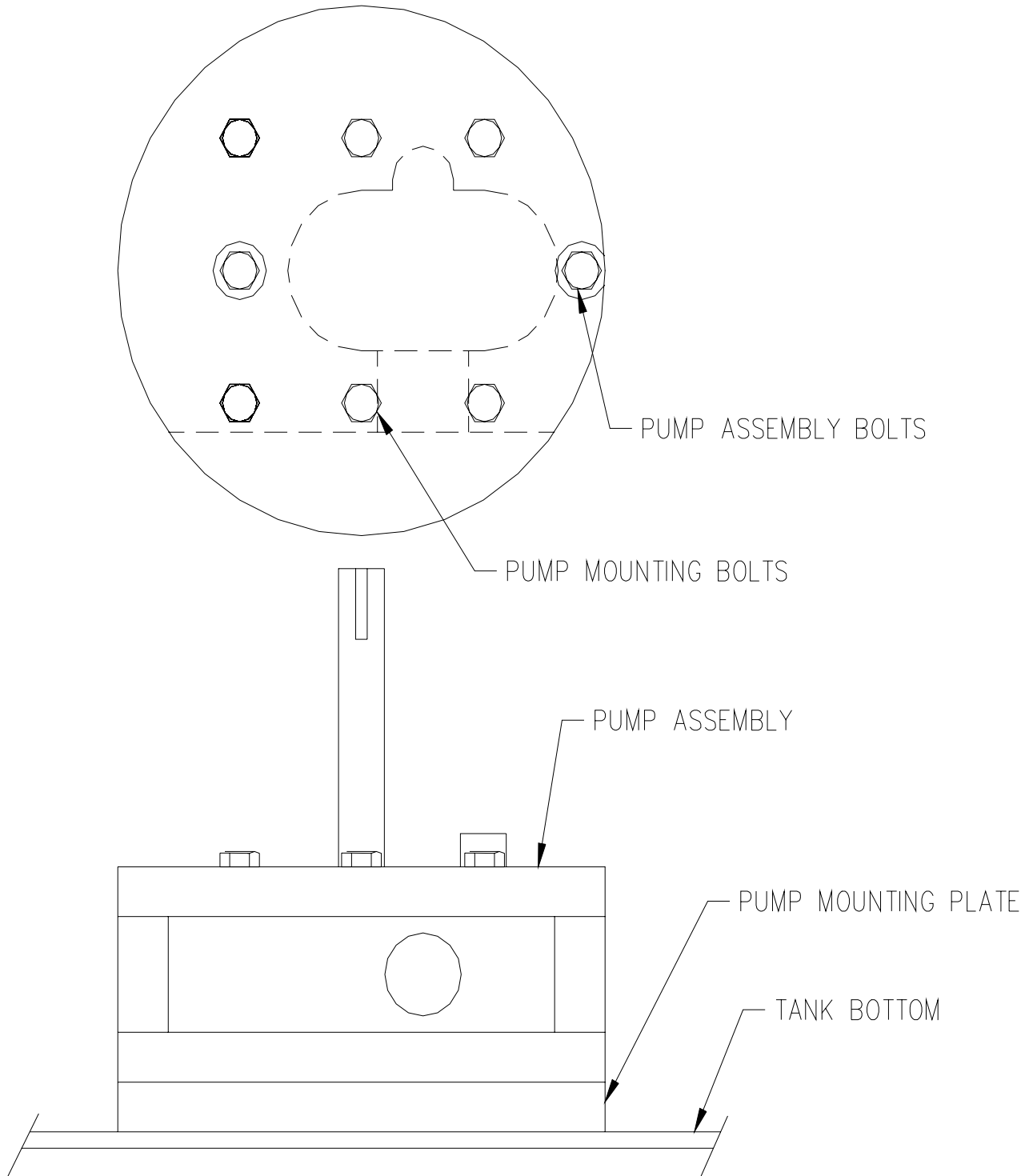
Step 13

Assemble the pump, check for free movement of the pump gears. If gears do not turn freely, loosen bolts slightly and align plates until the gears turn freely. Torque all the bolts to 35 ft. lbs.

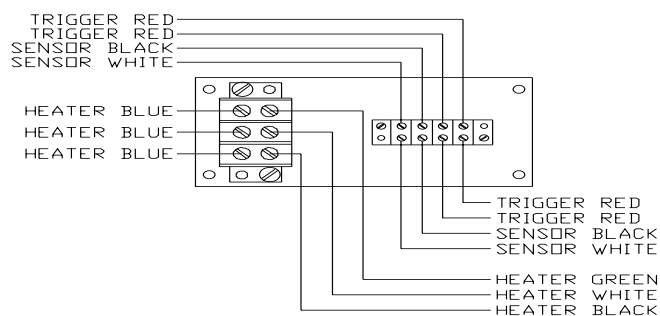
Step 14

Install all parts in machine starting at: **Step 10** and working backward to **Step 1**.

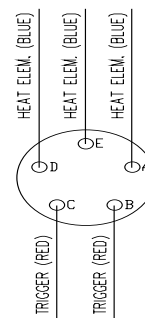
SUPER SHOT PUMP REPLACEMENT



TROUBLE SHOOTING GUIDE



KETTLE END



WAND END

HOSE DOES NOT HEAT

Step 1: Is the “MATERIAL” temperature at 275°F?

YES: Go to step 2

NO: Turn “POWER” toggle switch “ON”.

Step 2: Is “HEATED HOSE” light illuminated?

YES: Go to step 3

NO: Check for tripped circuit breaker in front panel.

YES: Reset circuit breaker.

NO: Remove front panel and check for 12 volts at pink wire terminal #2 of the material Pak-Stat.

YES: Go to step 2a.

NO: Check for 12 volts at pink wire terminal #9 of the hose Pak-Stat.

Step 2a: Check for 12 volts at #3 terminal (pink wire) on the hose Pak-Stat.

YES: Go to step 2b.

NO: Check wire connections or go to step 1.

Step 2b: Check for 12 volts at #4 terminal (blue wire) when Pak-Stat is on.

YES: Go to step 3.

NO: Check the ohms between black and white wires at terminals #6 and #7.

(NOTE: One of the sensor wires must be disconnected to check resistance) See page 28 for the corresponding temperature reading. Temperature reading should match LCD readout.

YES: Replace Pak-Stat

NO: Replace hose.

Step 3: Check for 12 volts at “BATT” terminal on generator.

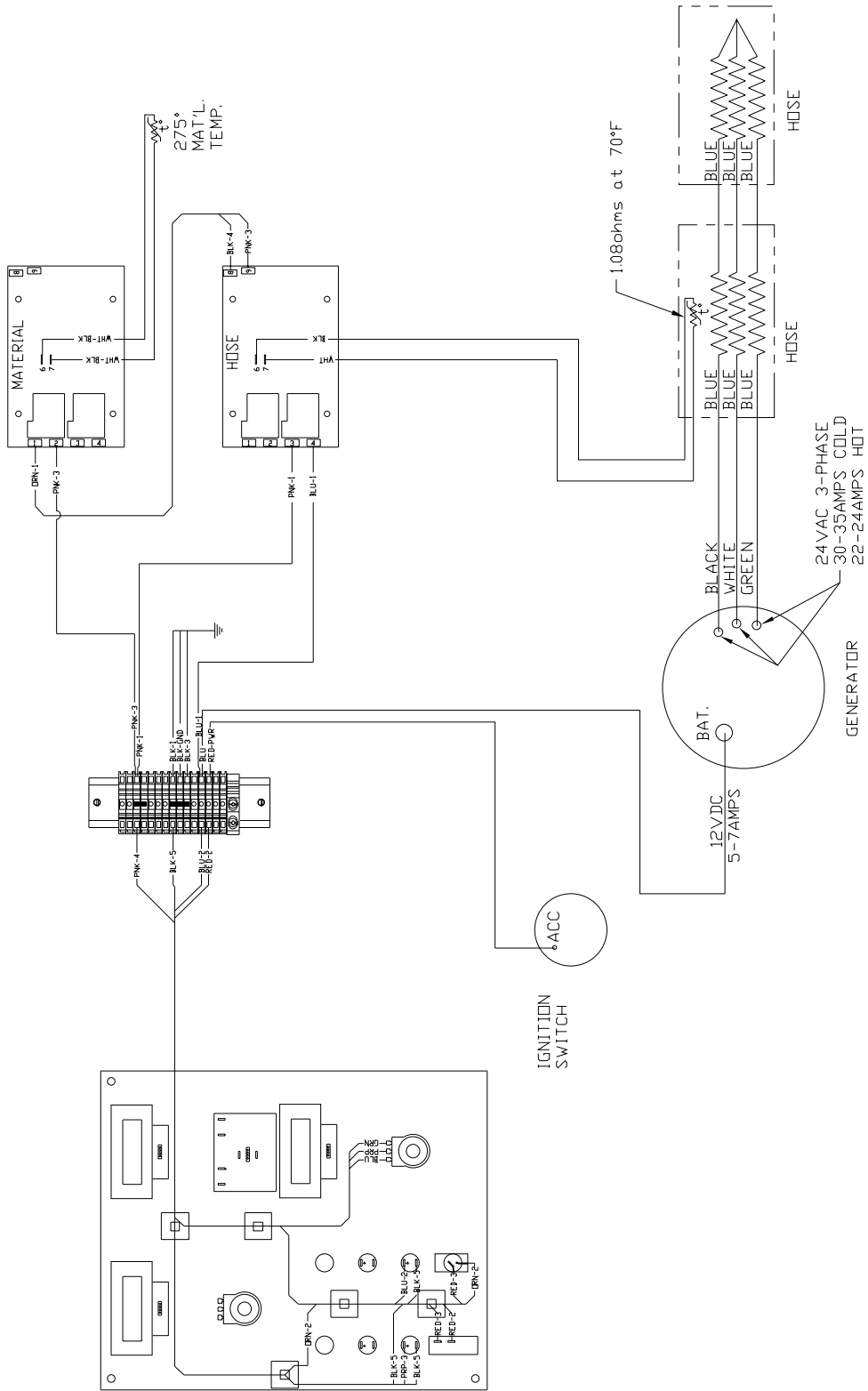
YES: Go to step 4

NO: Check 12 volts at terminal strip (blue wire) in control box.

Step 4: Check for 24 volts AC at the “BLACK”, “WHITE” and “GREEN” wires on the generator. (Check between blk and wht, blk and grn, wht and grn)

YES: Go to step 5.

NO: Replace generator.



HOSE CIRCUIT

TROUBLE SHOOTING GUIDE

Step 5: Check for 30 amps (cold) or 22-24 amps (hot) at the 3 blue wires in the junction box. **(Always use a clamp-on AMP meter to perform this test)**

YES: Hose should be operating properly.

NO: Go to step 6.

Step 6: Check for continuity between three heating element wires (blue) in junction box. **(NOTE: Wires must be disconnected from terminal block)**

YES: Go to step 7.

NO: Check continuity between terminals "A", "E", and "D" at the wand.

YES: Wand is Ok. Go to step 7.

NO: Replace wand.

Step 7: Check for continuity between element wires (blue) and the fitting of the hose.

YES: Replace hose.

NO: Hose is OK.

MATERIAL DOES NOT DISPENSE WHEN PUMP IS ACTIVATED

Step 1: Is the motor coupling turning?

YES: Go to step 2.

NO: Has the sealant had sufficient time to completely melt?

YES: Go to step 2.

NO: Has the hose had sufficient time to reach operating temperature?

YES: Go to step 2.

NO: Allow hose to heat up to operating temperature.

Step 2: Is the "MATERIAL" temperature at 275°F ?

YES: Go to step 3.

NO: Allow material to heat longer or turn "POWER" toggle switch "ON".

Step 3: Is the "PUMP" light illuminated?

YES: Go to step 4.

NO: Hose temperature must be at 325°F before the pump will activate.

Step 4: Check for 12 volts at terminals #12 (red-blk wire) and terminal #14 (green wire) of the relay. **(NOTE: Terminal #12 will have 12 volts when the key is "ON". Terminal #14 will have 12 volts when trigger is activated.)**

YES: Go to step 4a.

NO: Check continuity of red trigger wires in junction box.

Yes: Go to step 5.

No: Check for continuity between terminals "C" and "B" on wand when the trigger is activated.

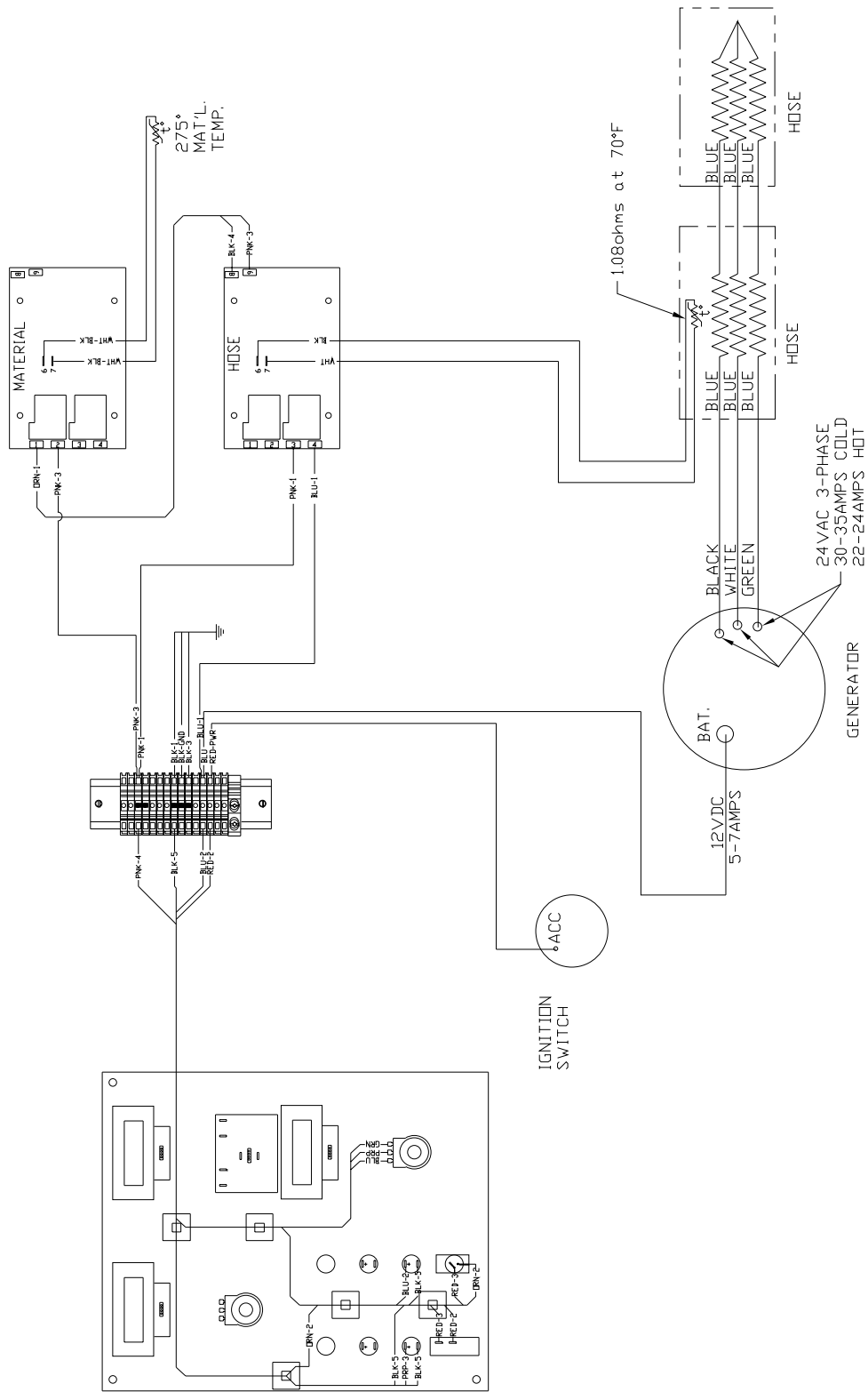
YES: Go to step 5.

NO: Replace trigger or check for poor connections.

Step 4a: Check relay by pressing the white test button on top of relay. **(CAUTION: Pump will dispense material)**

YES: Go to step 5.

NO: Replace relay.



HOSE CIRCUIT

TROUBLE SHOOTING GUIDE

Step 5: Is the top right light on hydraulic valve illuminated (looking at the rear of the hydraulic valve) when trigger is activated?

YES: Replace hydraulic cartridge.

NO: Go to step 4.

PUMP ROTATES BUT NO MATERIAL IS DISCHARGED

Step 1: Has the sealant and heated hose had sufficient time to reach temperature?

YES: Go to step 2.

NO: Allow the sealant and hose to heat longer.

Step 2: Check material outlet pipe and connection between hose and wand for obstruction.

YES: Remove obstruction and reassemble hose connection.

NO: Go to step 3.

Step 3: Is there an obstruction at the pump suction?

YES: Reverse material pump for 30 seconds.

NO: Refer to page 20 for pump removal if required.

MATERIAL DISPENSING RATE IS TOO SLOW

Step 1: Check speed control knob for desired flow adjustment.

YES: Go to step 2.

NO: Adjust to desired flow.

Step 2: Is there enough material in the tank?

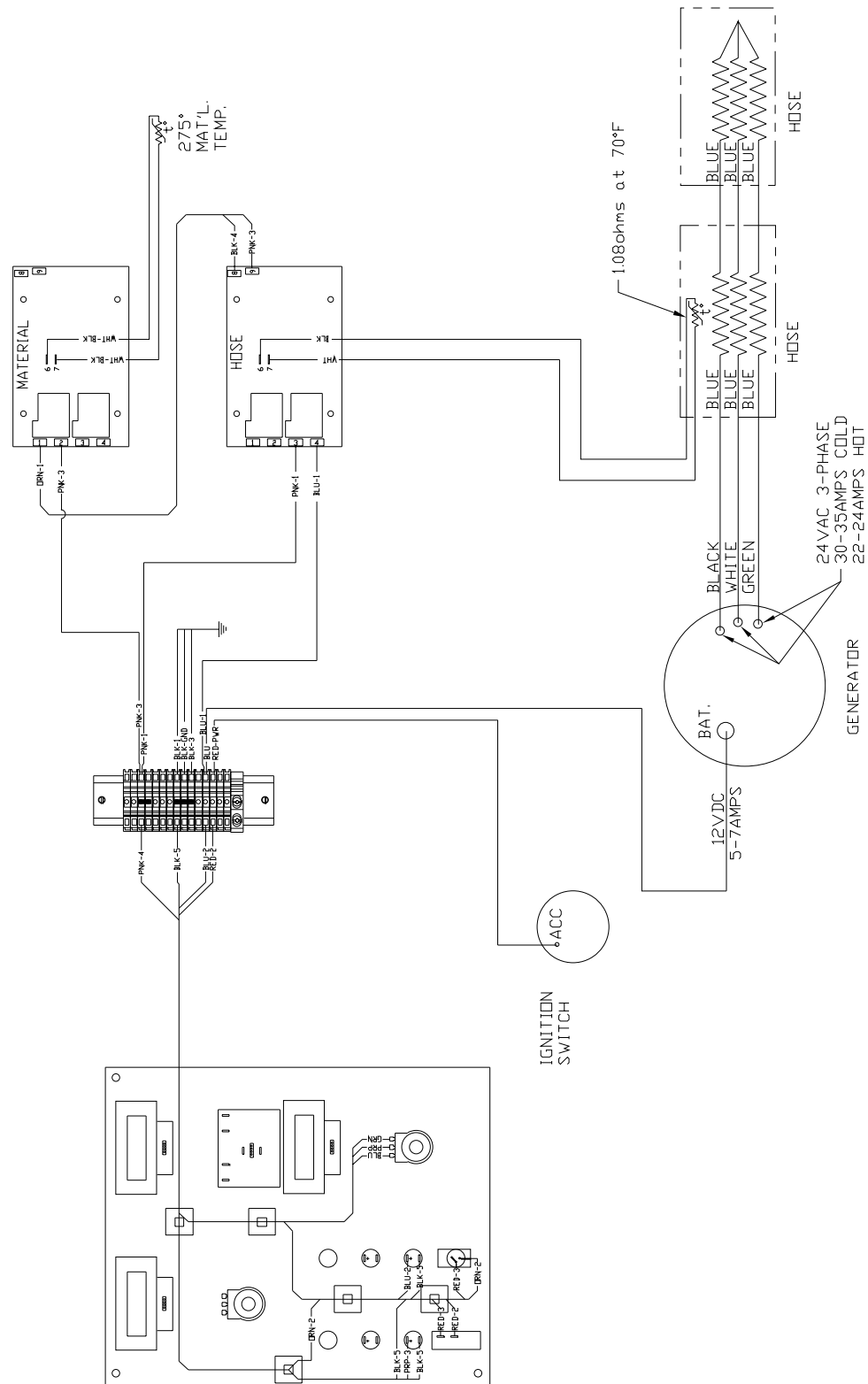
YES: Go to step 3.

NO: Add enough material to bring tank level above the screen.

Step 3: Check material outlet pipe and connection between hose and wand for obstruction.

YES: Remove obstruction and reassemble hose connection.

NO: Pump is worn out (See page 20 for pump removal and installation).



HOSE CIRCUIT

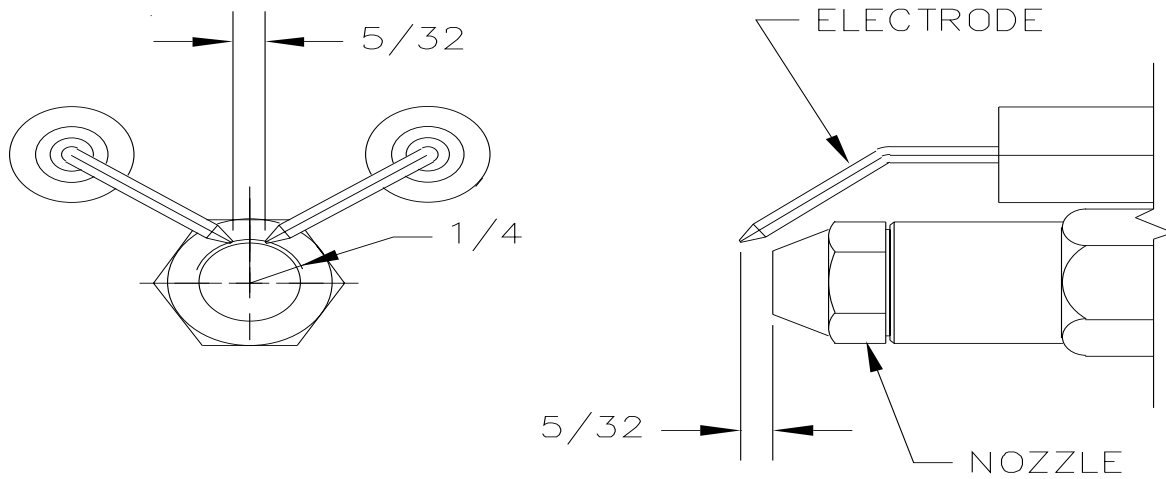
RTD SENSOR - OHMS vs. TEMPERATURE

The following chart shows what the Ohm reading would be for a given temperature. This is to be used when trouble shooting the burner and the hose. The following are the instructions for use.

1. Measure the resistance(Ohms) of the sensor in question with an Ohm meter.
2. Find the reading in the chart.
3. Follow the row to the left and get the temperature in 10° increment, then follow the column up to get the 1° increment. **Example: 1573 Ohms = 302°**

°F	0	1	2	3	4	5	6	7	8	9
0	930.3	932.5	934.7	936.9	939.1	941.3	943.4	945.6	947.8	950.0
10	952.2	954.3	956.5	958.7	960.9	963.0	965.2	967.4	969.6	971.8
20	973.9	976.1	978.3	980.5	982.6	984.8	987.0	989.1	991.3	993.5
30	995.7	997.8	1000.0	1002.2	1004.3	1006.5	1008.7	1010.9	1013.0	1015.2
40	1017.4	1019.5	1021.7	1023.9	1026.0	1028.2	1030.4	1032.5	1034.7	1036.9
50	1039.0	1041.2	1043.4	1045.5	1047.7	1049.8	1052.0	1054.2	1056.3	1058.5
60	1060.7	1062.8	1065.0	1067.1	1069.3	1071.5	1073.6	1075.8	1077.9	1080.1
70	1082.2	1084.4	1086.6	1088.7	1090.9	1093.0	1095.2	1097.3	1099.5	1101.6
80	1103.8	1106.0	1108.1	1110.3	1112.4	1114.6	1116.7	1118.9	1121.0	1123.2
90	1125.3	1127.5	1129.6	1131.8	1133.9	1136.1	1138.2	1140.4	1142.5	1144.7
100	1146.8	1149.0	1151.1	1153.2	1155.4	1157.5	1159.7	1161.8	1164.0	1166.1
110	1168.3	1170.4	1172.5	1174.7	1176.9	1179.0	1181.1	1183.3	1185.4	1187.5
120	1189.7	1191.8	1194.0	1196.1	1198.2	1200.4	1202.5	1204.6	1206.8	1208.9
130	1211.0	1213.2	1215.3	1217.5	1219.6	1221.7	1223.9	1226.0	1228.1	1230.3
140	1232.4	1234.5	1236.7	1238.9	1240.9	1243.0	1245.2	1247.3	1249.4	1251.6
150	1253.7	1255.8	1258.0	1260.1	1262.2	1264.3	1266.5	1268.6	1270.7	1272.8
160	1275.0	1277.1	1279.2	1281.3	1283.5	1285.6	1287.7	1289.8	1292.0	1294.1
170	1296.2	1298.3	1300.4	1302.6	1304.7	1306.8	1308.9	1311.0	1313.2	1315.3
180	1317.4	1319.5	1321.6	1323.8	1325.9	1328.0	1330.1	1332.2	1334.3	1336.5
190	1338.6	1340.7	1342.8	1344.9	1347.0	1349.1	1351.2	1353.4	1355.5	1357.6
200	1359.7	1361.8	1363.9	1366.0	1368.1	1370.2	1372.4	1374.5	1376.6	1378.7
210	1380.8	1382.9	1385.0	1387.1	1389.2	1391.3	1393.4	1395.5	1397.6	1399.7
220	1401.8	1403.9	1406.0	1408.1	1410.3	1412.4	1414.5	1416.6	1418.7	1420.8
230	1422.9	1425.0	1427.1	1429.2	1431.3	1433.4	1435.5	1437.6	1439.6	1441.7
240	1443.8	1445.9	1448.0	1450.1	1452.2	1454.3	1456.4	1458.5	1460.6	1462.7
250	1464.8	1466.9	1469.0	1471.1	1473.2	1475.3	1477.3	1479.4	1481.5	1483.6
260	1485.7	1487.8	1489.9	1492.0	1494.1	1496.1	1498.2	1500.3	1502.4	1504.5
270	1506.6	1508.7	1510.8	1512.8	1514.9	1517.0	1519.1	1521.2	1523.3	1525.3
280	1527.4	1529.5	1531.6	1533.7	1535.7	1537.8	1539.9	1542.0	1544.1	1546.1
290	1548.2	1550.3	1552.4	1554.5	1556.5	1558.6	1560.7	1562.8	1564.8	1566.9
300	1569.0	1571.1	1573.1	1575.2	1577.3	1579.4	1581.4	1583.5	1585.6	1587.7
310	1589.7	1591.8	1593.9	1595.9	1598.0	1600.1	1602.2	1604.2	1606.3	1608.4
320	1610.4	1612.5	1614.6	1616.6	1618.7	1620.8	1622.8	1624.9	1627.0	1629.0
330	1631.1	1633.2	1635.2	1637.3	1639.3	1641.4	1643.5	1645.5	1647.6	1649.7
340	1651.7	1653.8	1655.8	1657.9	1660.0	1662.0	1664.1	1666.1	1668.2	1670.2
350	1672.3	1674.4	1676.4	1678.5	1680.5	1682.6	1684.6	1686.7	1688.7	1690.8
360	1692.9	1694.9	1697.0	1699.0	1701.1	1703.1	1705.2	1707.2	1709.3	1711.3
370	1713.4	1715.4	1717.5	1719.5	1721.6	1723.6	1725.7	1727.7	1729.8	1731.8
380	1733.9	1735.9	1737.9	1740.0	1742.0	1744.1	1746.1	1748.2	1750.2	1752.3
390	1754.3	1756.3	1758.4	1760.4	1762.5	1764.5	1766.6	1768.6	1770.6	1772.7
400	1774.7	1776.8	1778.8	1780.8	1782.9	1784.9	1786.9	1789.0	1791.0	1793.1
410	1795.1	1797.1	1799.2	1801.2	1803.2	1805.3	1807.3	1809.3	1811.4	1813.4
420	1815.4	1817.5	1819.5	1821.5	1823.6	1825.6	1827.6	1829.6	1831.7	1833.7
430	1835.7	1837.8	1839.8	1841.8	1843.8	1845.9	1847.9	1849.9	1851.9	1854.0
440	1856.0	1858.0	1860.0	1862.1	1864.1	1866.1	1868.1	1870.2	1872.2	1874.2
450	1876.2	1878.2	1880.3	1882.3	1884.3	1886.3	1888.3	1890.4	1892.4	1894.4
460	1896.4	1898.4	1900.5	1902.5	1904.5	1906.5	1908.5	1910.5	1912.6	1914.6
470	1916.6	1918.6	1920.6	1922.6	1924.6	1926.6	1928.7	1930.7	1932.7	1934.7
480	1936.7	1938.7	1940.7	1942.7	1944.7	1946.8	1948.8	1950.8	1952.8	1954.8
490	1956.8	1958.8	1960.8	1962.8	1964.8	1966.8	1968.8	1970.8	1972.8	1974.8
500	1976.8	1978.8	1980.8	1982.9	1984.9	1986.9	1988.9	1990.9	1992.9	1994.9
510	1996.9	1998.9	2000.9	2002.9	2004.9	2006.9	2008.8	2010.8	2012.8	2014.8
520	2016.8	2018.8	2020.8	2022.8	2024.8	2026.8	2028.8	2030.8	2032.8	2034.8
530	2036.8	2038.8	2040.8	2042.8	2044.7	2046.7	2048.7	2050.7	2052.7	2054.7
540	2056.7	2058.7	2060.7	2062.7	2064.6	2066.6	2068.6	2070.6	2072.6	2074.6
550	2076.6	2078.5	2080.5	2082.5	2084.5	2086.5	2088.5	2090.4	2092.4	2094.4

DIESEL BURNER ELECTRODE ADJUSTMENTS



DIESEL BURNER SETTINGS

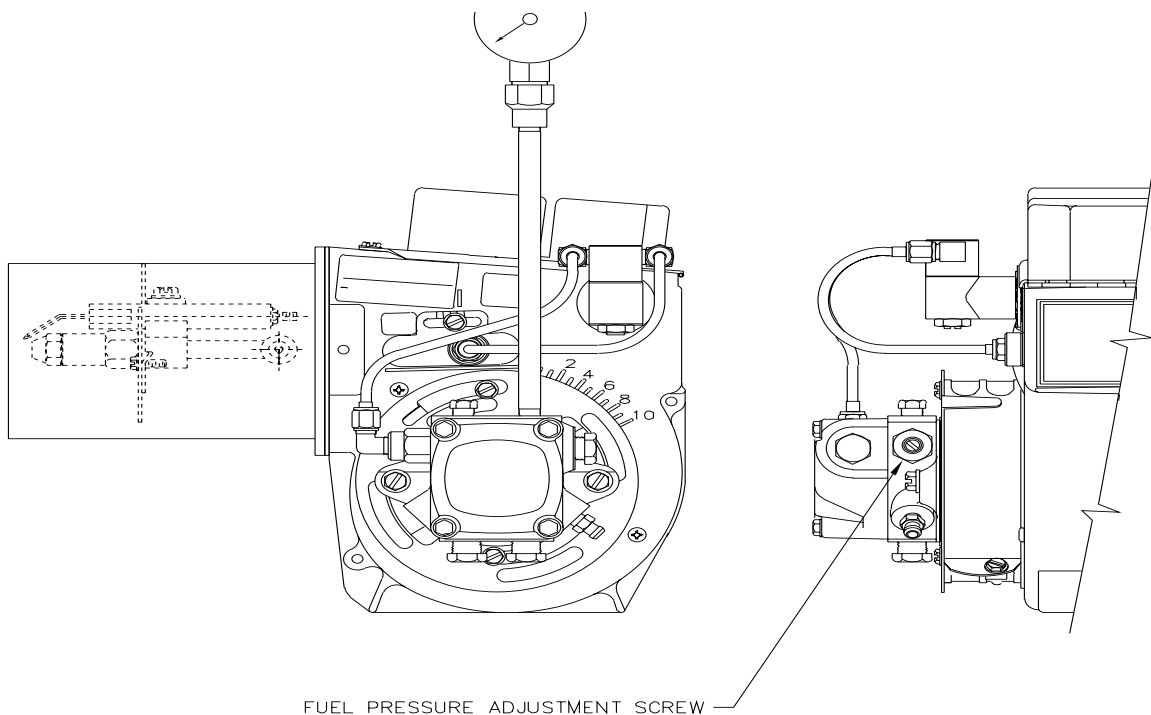
Air Shutter = 7

Air Band = 0

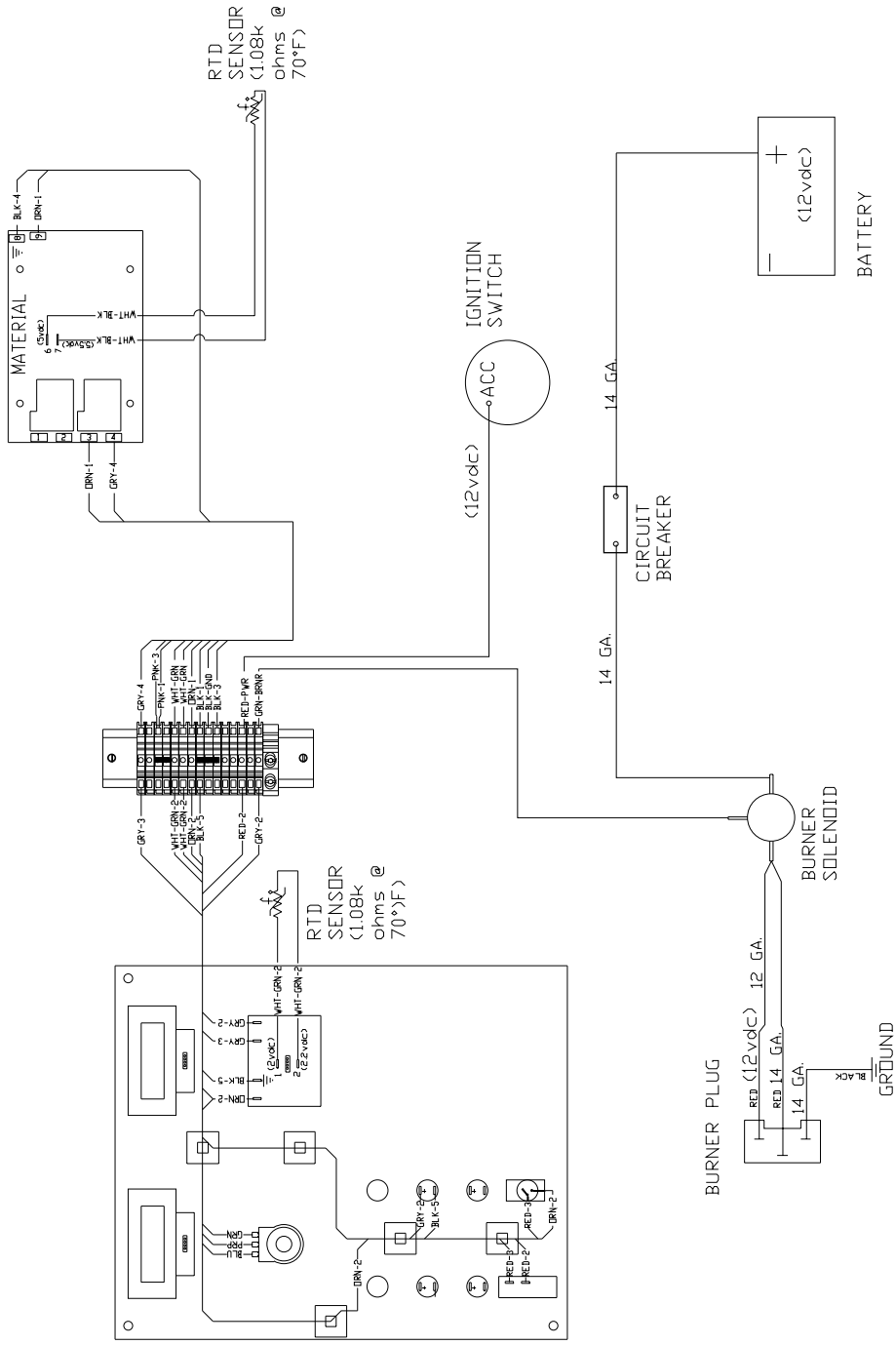
Fuel Pressure = 140 PSI

Adjustment Plate = 3

Use fuel and hydraulic pressure gauge kit part number 29960.



BURNER SCHEMATIC



NOTE:
ALL WIRE 18 GA.
GENERAL PURPOSE
EXCEPT AS NOTED

DIESEL BURNER CIRCUIT

BURNER TROUBLE SHOOTING

BURNER WILL NOT IGNITE

Step 1: Check for 12 volts at “POWER” toggle switch.

No: Engine key “OFF”
Toggle switch “OFF”
Blown fuse
Broken wire

YES: 12 volts at terminal #4 on “MATERIAL” Pak-Stat

NO: Bad Pak-Stat
Faulty sensor

YES: Check for 12 volts at terminal #7 on “OIL” Pak-Stat

NO: Bad Pak-Stat
Faulty sensor

YES: Check for 12 volts at solenoid (frame).

NO: Bad solenoid
Bad connection at battery
Faulty circuit breaker
Broken or loose wire

YES: Faulty DC Controller, poor ground / loose wire
Faulty or dirty flame
Faulty igniter transformer, cracked electrode (ceramic)
Incorrect igniter gap
Faulty fuel solenoid
Bleed fuel pump / check fuel pump coupling
Fuse under DC Controller
Blower motor relay
Faulty blower motor
Alternator charging @ 14 volts
Faulty 12 volt battery



BURNER LIGHTS BUT SHUTS DOWN AFTER 15 SEC.

Faulty flame eye
Broken, loose flame eye sensor wires, receptacle
Faulty DC Controller

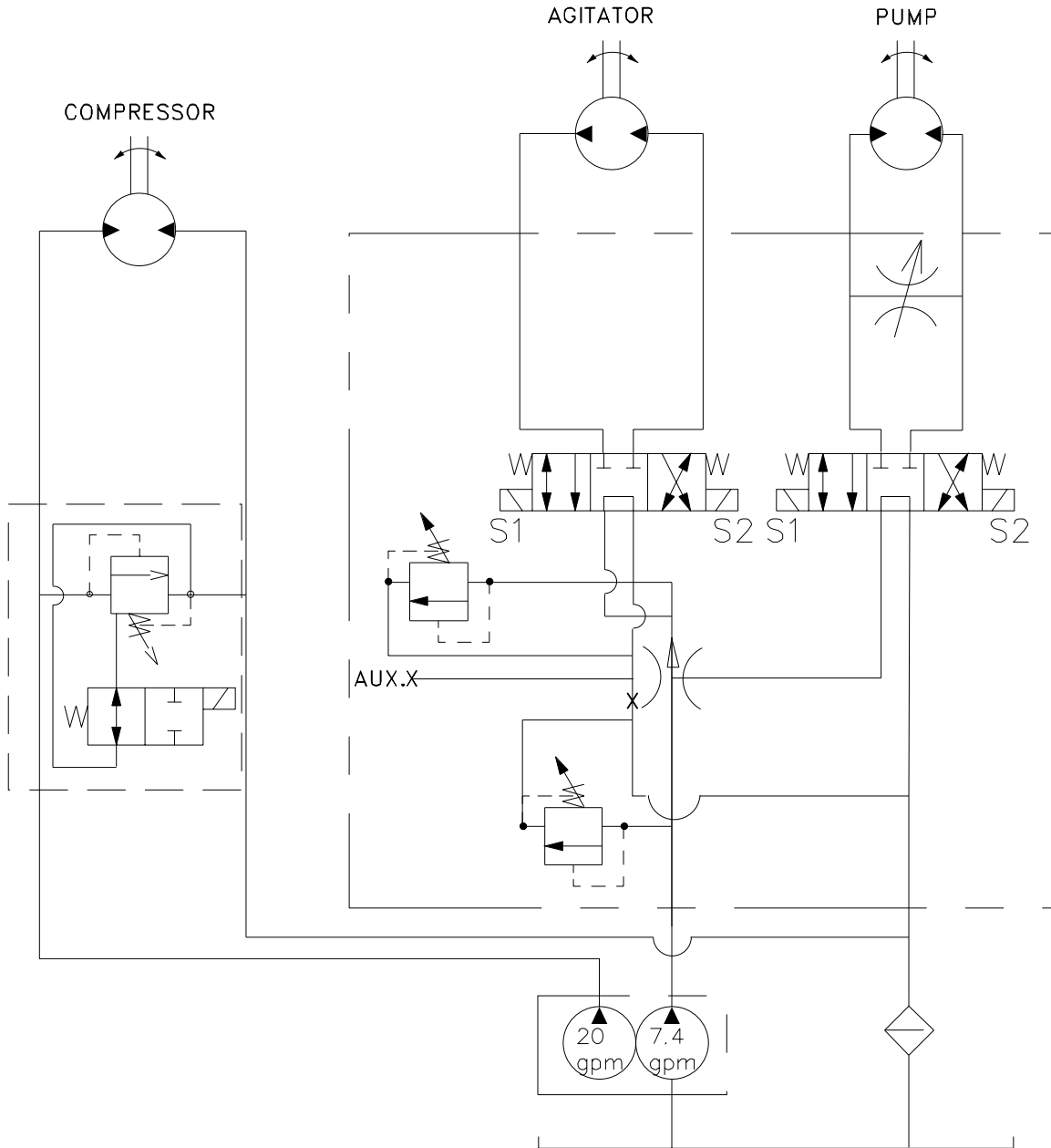
BURNER LIGHTS BUT WILL NOT RELIGHT

Bad connection at battery
Broken or loose wires
Faulty DC Controller
Alternator charging at 14 volts
Faulty 12 volt battery

EXCESSIVE SMOKE FROM BURNER EXHAUST

Air vent incorrectly set - set at 7
Blower motor not turning at correct speed
Alternator charging at 14 volts
Faulty 12 volt battery

TROUBLE SHOOTING HYDRAULICS

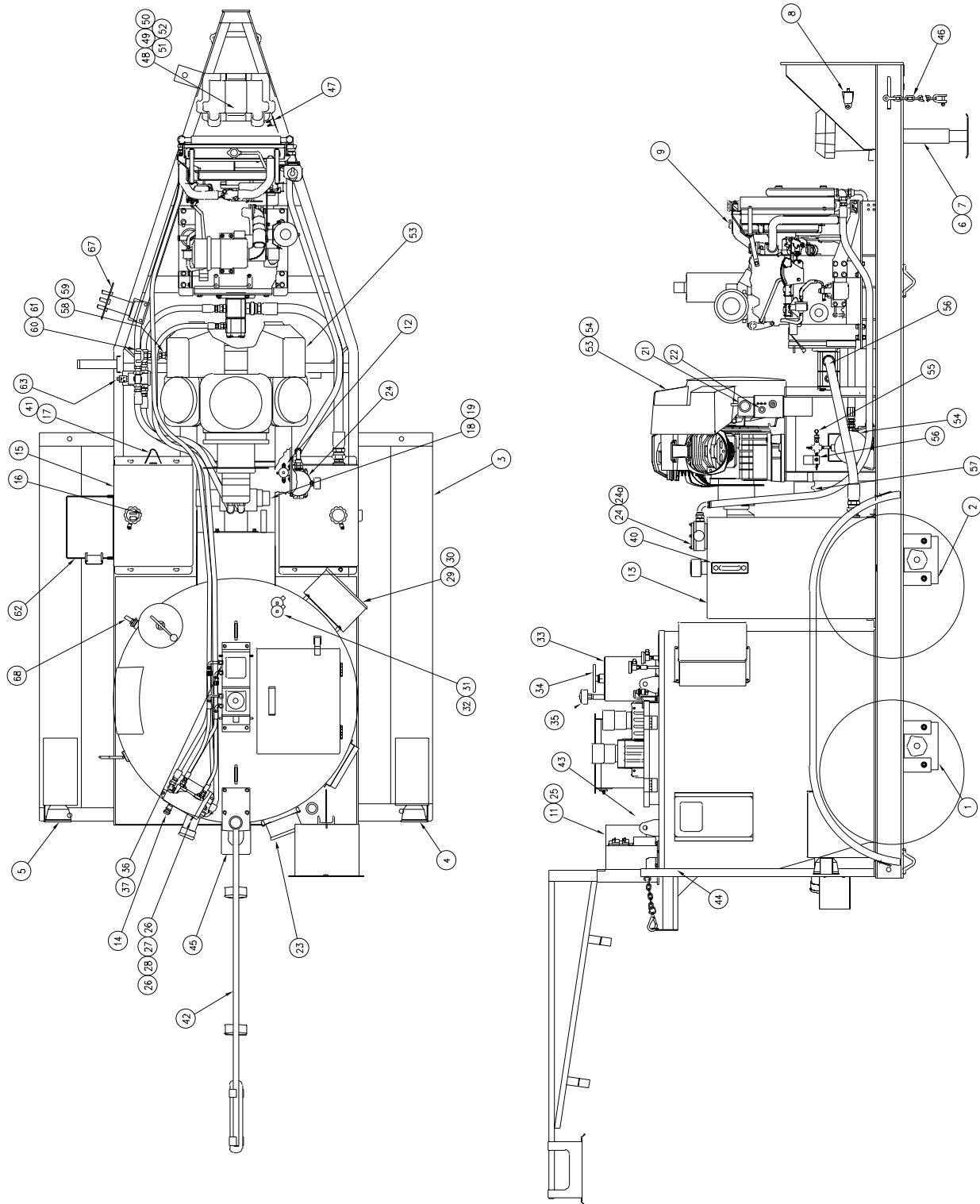


Primary pump flow = 20.3 GPM @ 2850 RPM
 Secondary pump flow = 7.5 GPM @ 2850 RPM
 Relief Valve (RVA) = 1300 PSI
 Relief Valve (RVM) = 1800 PSI
 Compressor Relief Valve = 1800 PSI

TROUBLE SHOOTING HYDRAULICS

PROBLEM	CAUSE	REMEDY
Mixer will not rotate.	Sealant temperature too low.	Continue to heat material.
Mixer will not rotate.	Too many blocks placed at one time.	Continue to heat material.
Mixer will not rotate.	Inadequate hydraulic flow/pressure.	Check hydraulic fluid level.
Mixer will not rotate.	Toggle switch turned off.	Reset pressure, check flow if necessary.
Material pump will not rotate.	Material in tank not to operating temperature.	Continue heating material.
Material pump will not rotate.	Inadequate hydraulic flow/pressure.	Check hydraulic fluid level. Reset pressure, check flow as necessary.
Material pump will not rotate.	Material pump damaged.	Remove and replace.
Material pump will not rotate.	Foreign object lodged in pump.	Remove pump, clean & replace.
Material pump will not rotate.	Temperature at wand tip is inadequate.	Set wand tip inside material tank.
When applying sealant it stops flowing from applicator wand.	Tank fluid level too low for material to flow into pump.	Add more material or continue heating material until more liquid material is available.
Pump rotates, but will not pump material.	Material cold, inlet still solid. Hose not to temperature. Temperature at wand tip is inadequate.	Continue to heat material. Allow to heat longer. Set wand tip inside material tank.
Pump does not rotate.	Bad wire connection. Bad switch at wand handle. Hydraulic cartridge failure. Hydraulic coil failure.	Find and repair. Remove and replace. Remove and replace. Remove and replace.
Slow heat up of sealant.	Built up of coked material on inside of material tank. Low heating oil level. Low heating oil temperature.	Allow machine to cool. Remove deposits and flush with solvent. Make sure fluid level is correct. Set at recommended temperature.

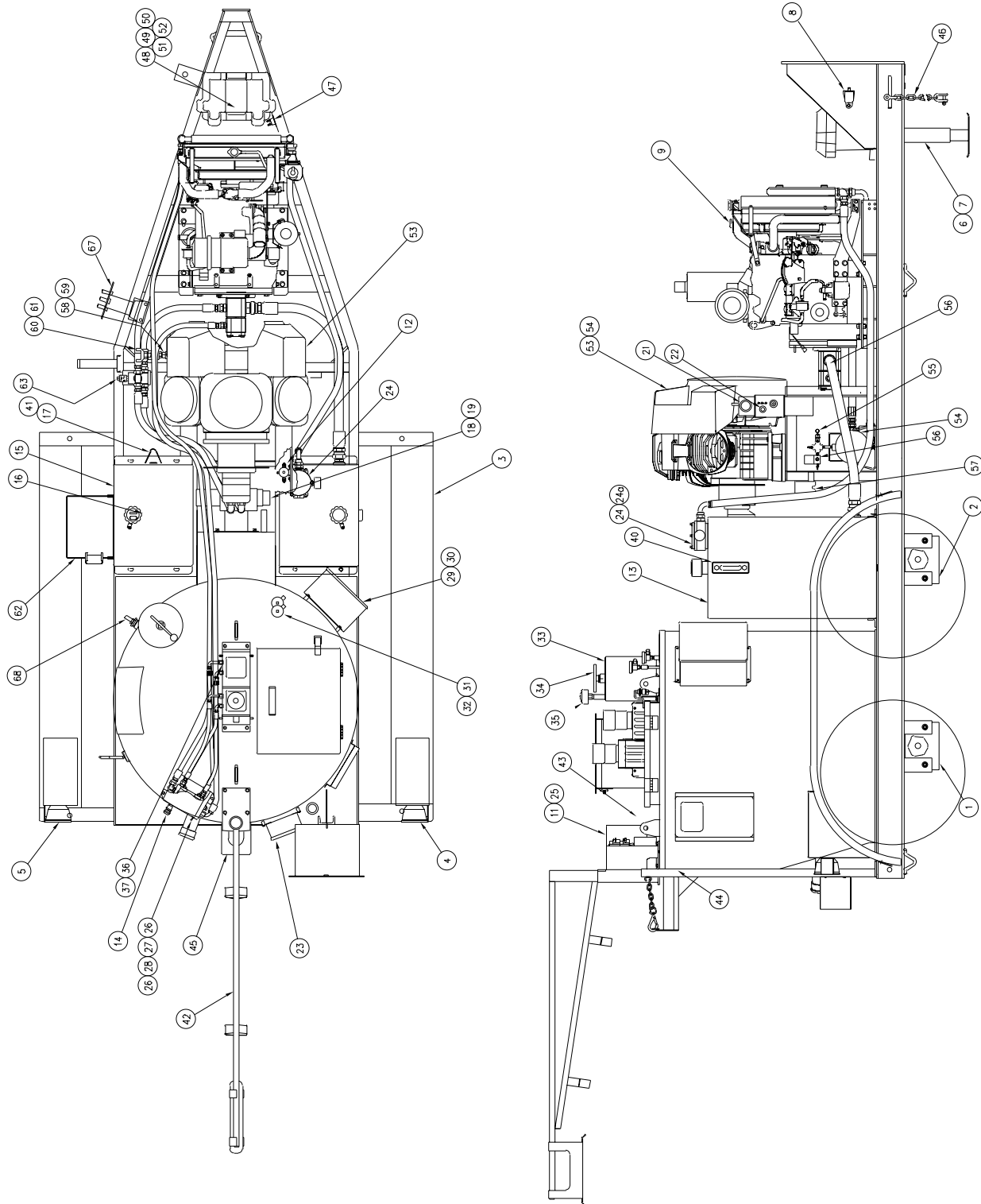
SS 125 DIESEL MELTER WITH AIR COMPRESSOR



SS 125 DIESEL MELTER WITH AIR COMPRESSOR

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	41743	4	TIRE AND WHEEL ASSEMBLY
2	43616	2	TORSIONAL AXLE ASSEMBLY
3	41170	2	FENDER ASSEMBLY - L.H.
4	24022	1	TAIL LIGHT - R.H.
5	24023	1	TAIL LIGHT - L.H.
6	23082	1	TONGUE JACK
7	23095	1	SWIVEL BUSHING - TONGE JACK
8	23117	1	BREAKAWAY SWITCH
9	43848	1	ENGINE ASSEMBLY
10	29399	4	ISOMOUNT (NOT SHOWN)
11	44821	1	COVER - CONTROL VALVE
12	39602	1	SOLENOID
13	43595	1	HYDRAULIC TANK ASSEMBLY
14	44820	1	CONTROL VALVE ASSEMBLY
15	43592	1	FUEL TANK ASSEMBLY
16	43579	1	FILLER/BREATHER
17	44825	1	SIGHT GAUGE TUBE
18	41891	1	14 VOLT BURNER
19	41893	1	BURNER COVER (NOT SHOWN)
20	50009	1	MUFFLER, SOLENOID VALVE (NOT SHOWN)
21	24076	1	HOUR METER
22	41948	1	KEY AND TUMBLER
23	44027	1	JUNCTION BOX - HOSE
24	44804	1	HYDRAULIC FILTER ASSEMBLY
24a	44805	-	HYDRAULIC FILTER ELEMENT
25	44819	1	BRACKET - CONTROL VALVE

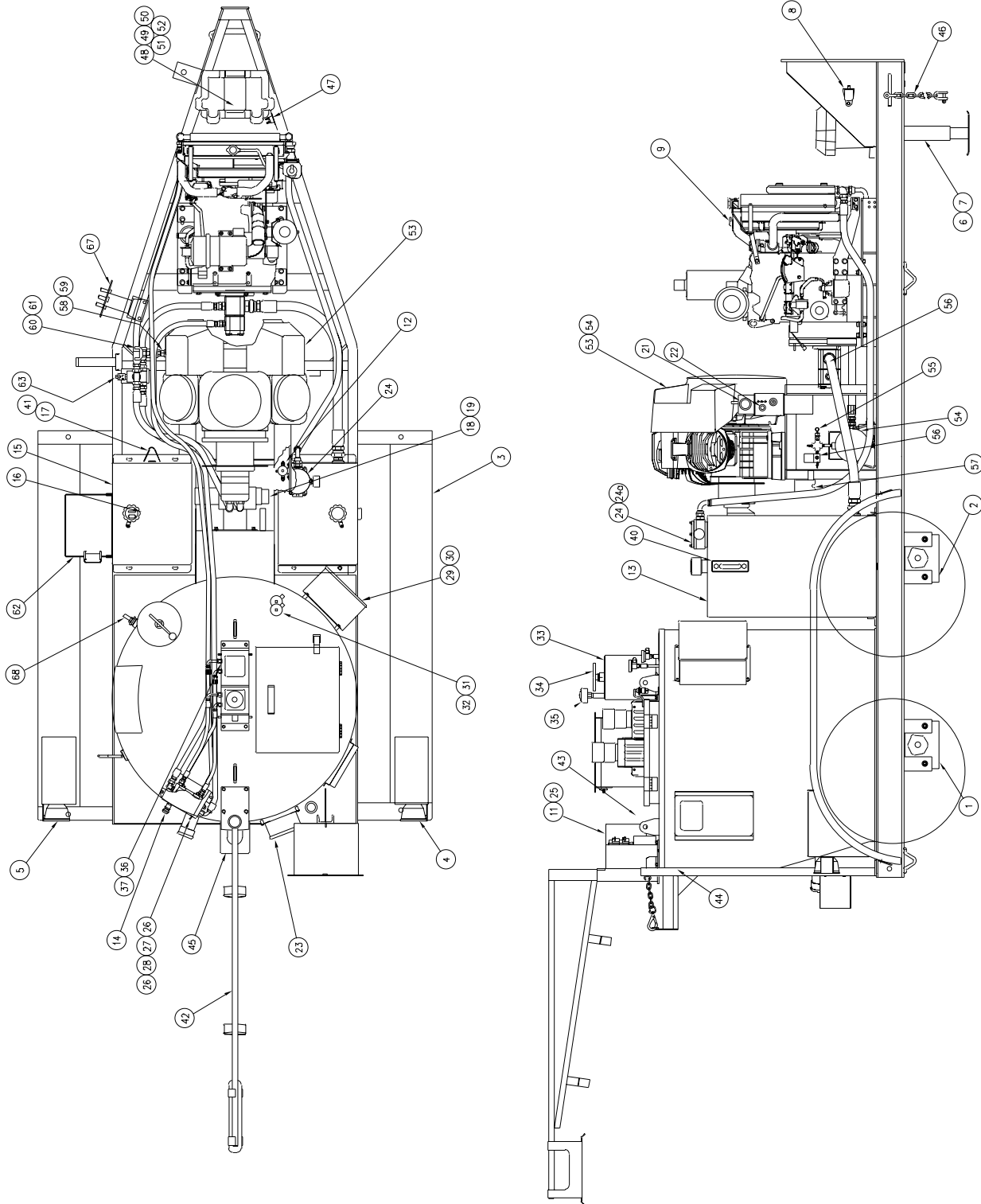
SS 125 DIESEL MELTER WITH AIR COMPRESSOR



SS 125 DIESEL MELTER WITH AIR COMPRESSOR

NUMBER	PART NUMBER	QTY.	DESCRIPTION
26	32513	1	TOGGLE SWITCH - PUMP REVERSE
27	51678	1	TOGGLE SWITCH - AGITATOR
28	50720	2	BOOT - SWITCH
29	45050	1	CONTROL BOX ASSEMBLY
30	50074	4	SPACER - CONTROL BOX
31	43465	2	SENSOR
32	51065	2	CORD GRIP
33	43355	1	OVERFLOW TANK
34	43673	1	DIPSTICK
35	26025	1	AIR BREATHER
36	44832	1	PUMP/AGITATOR MOTOR ASSEMBLY
37	43307	2	CHAIN GUARD ASSEMBLY
38	24095	1	STROBE LIGHT (OPTIONAL) (NOT SHOWN)
39	43672	1	MOUNTING BRACKET - STROBE LIGHT (NOT SHOWN)
40	44807	1	SIGHT GAUGE - HYDRAULIC OIL
41	44817	2	FITTING - DIESEL SIGHT GAUGE
42	43828	1	BOOM
43	44823	1	BOOM BASE
44	43827	1	HOSE HANGER ASSEMBLY
45	43821	1	HEAT GUARD
46	20130	2	SAFETY CHAIN
47	31512	1	CIRCUIT BREAKER
48	24000	1	BATTERY
49	24002	1	BATTERY BOX
50	27174	1	BATTERY CABLE - (-) 27"

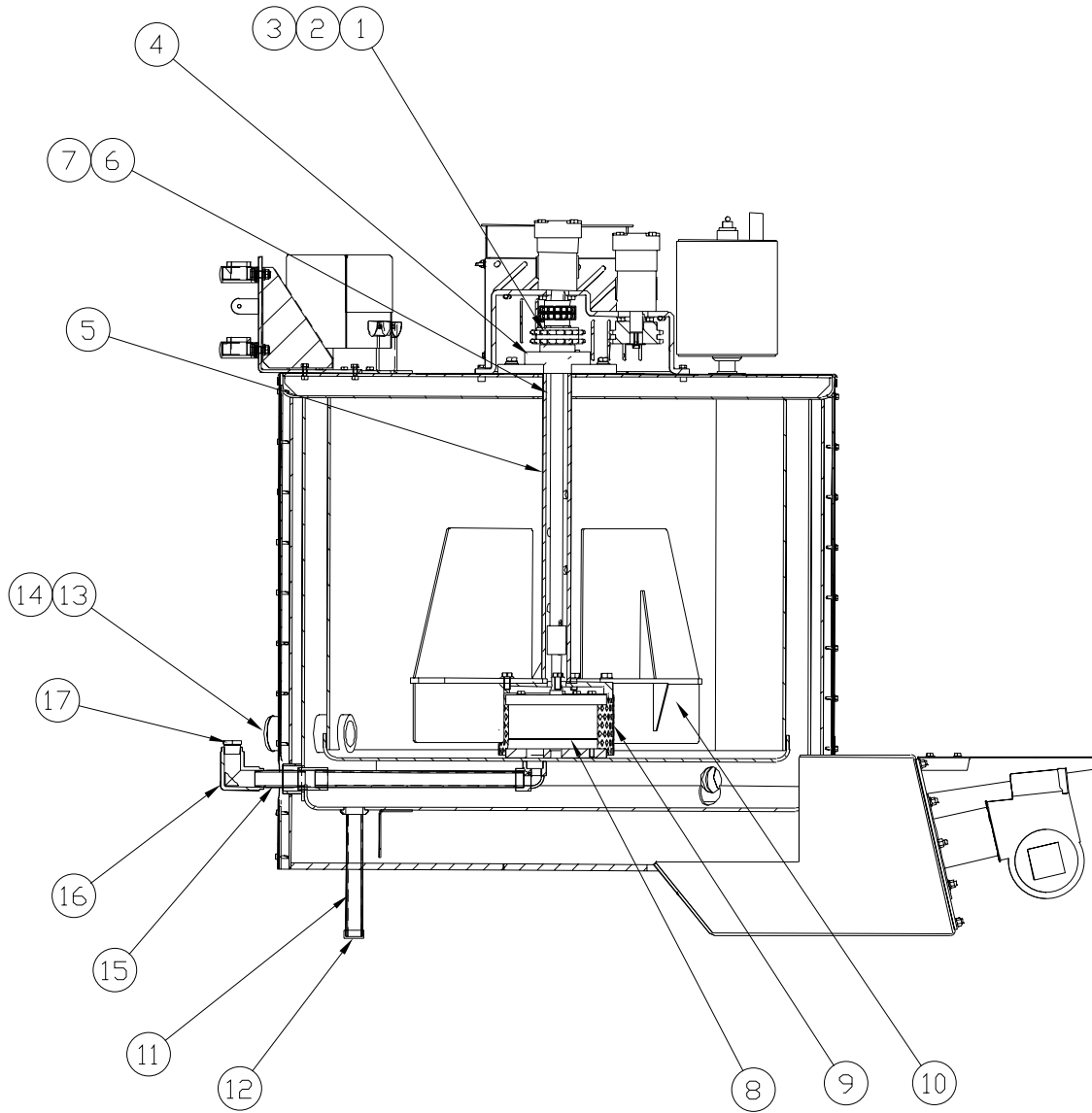
SS 125 DIESEL MELTER WITH AIR COMPRESSOR



SS 125 DIESEL MELTER WITH AIR COMPRESSOR

NUMBER	PART NUMBER	QTY.	DESCRIPTION
51	24015	1	BATTERY CABLE - (+) 38"
52	37038	1	BATTERY CABLE - GROUND
53	43875	1	AIR COMPRESSOR
54	42624	1	AIR TANK
55	42629	1	SAFETY VALVE
56	43736	1	SOLENOID AIR VALVE
57	42621	1	PRESSURE CONTROL VALVE
58	29214	1	1/2" BALL VALVE
59	42603	1	WATER SEPARATOR
60	42702	1	1/2" SWIVEL ADAPTOR
61	42643	1	1/2" AIR HOSE FITTING
62	43842	1	DRIP PAN
63	44826	1	HYDRAULIC VALVE - COMPRESSOR
64	51700	1	15' ELECTRIC HEATED HOSE (NOT SHOWN)
65	51055	1	48" ELECTRIC HEATED WAND (NOT SHOWN)
66	43768	1	WAND HANDLE (NOT SHOWN)
66	43540	OPT.	SPARE TIRE MOUNT
67	24190	OPT.	OVERNIGHT HEATER
68	43411	OPT.	TIP ADAPTER
69	27162R	OPT.	3" DISK W/ RESTRICTOR
70	27163R	OPT.	4" DISK W/ RESTRICTOR
71	27170	OPT.	3/8 ROUND SEALING TIP
72	27171	OPT.	1/2" ROUND SEALING TIP
73	27173	OPT.	3/4" SEALING SHOE
74	27146	OPT.	1/4" ELONGATED SEALING TIP

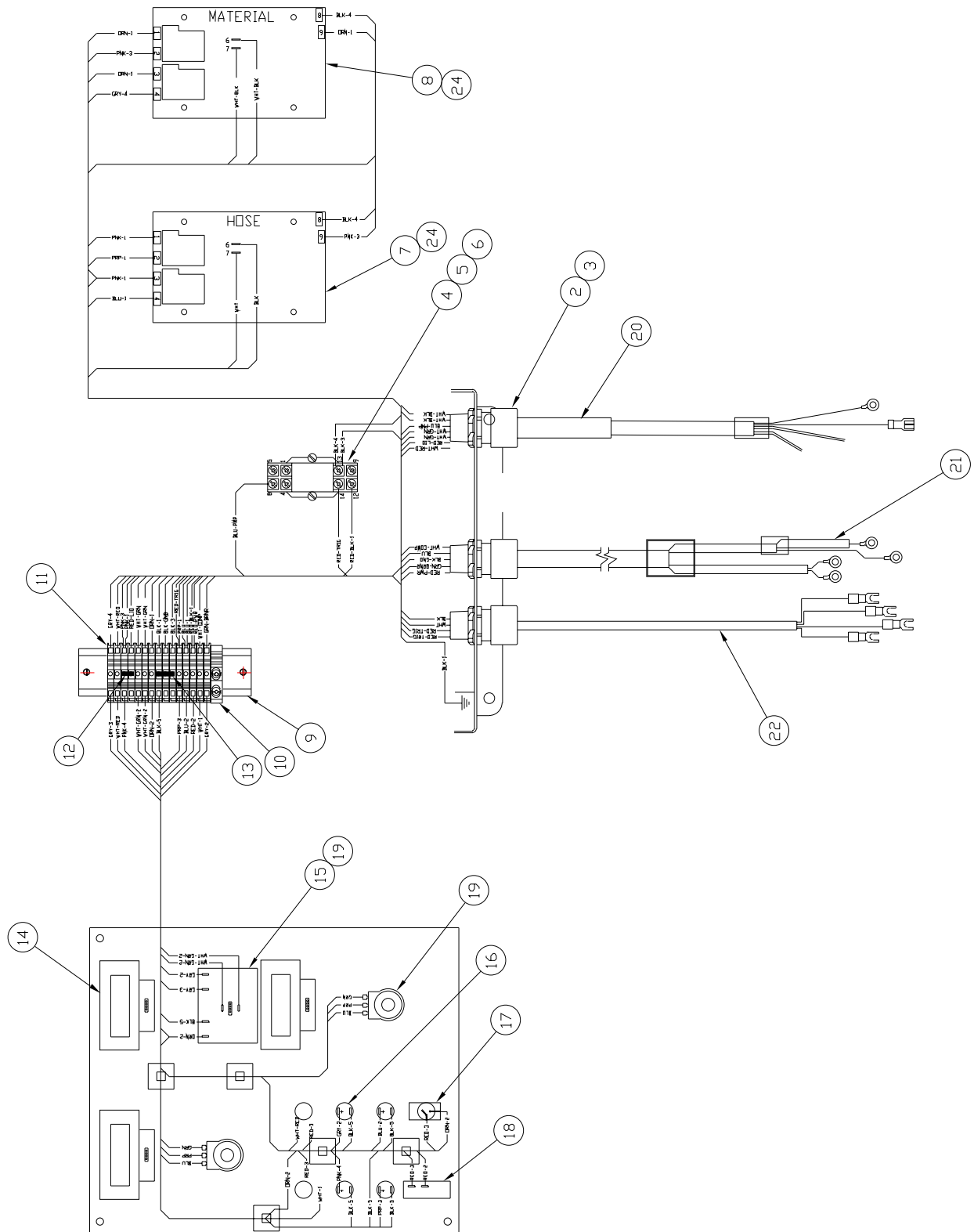
TANK DETAIL



TANK DETAIL

ITEM	PART NUMBER	QTY	DESCRIPTION
1	44165	1	SPROCKET - DRIVEN
2	44163	1	KEY, SPROCKET
3	43321	1	CHAIN - DRIVE
4	43760	1	BEARING, FLANGED
5	43753	1	SHAFT - AGITATOR
6	43641	1	SHAFT, DRIVE - PUMP
7	31368	1	KEY - DRIVE SHAFT
8	43677	1	PUMP, MATERIAL
9	43655	1	SCREEN - PUMP
10	43649	2	PADDLE - AGITATOR
11	28132	1	1" X 10" LG. PIPE NIPPLE
12	28270	1	1" PIPE CAP
13	28046	1	2" X 4" LG. PIPE NIPPLE
14	28273	1	2" PIPE CAP
15	28039	1	1" X 4" LG. PIPE NIPPLE
16	28210	1	1" PIPE ELBOW
17	28351	1	1" X 3/4" REDUCER BUSHING

CONTROL BOX ASSEMBLY

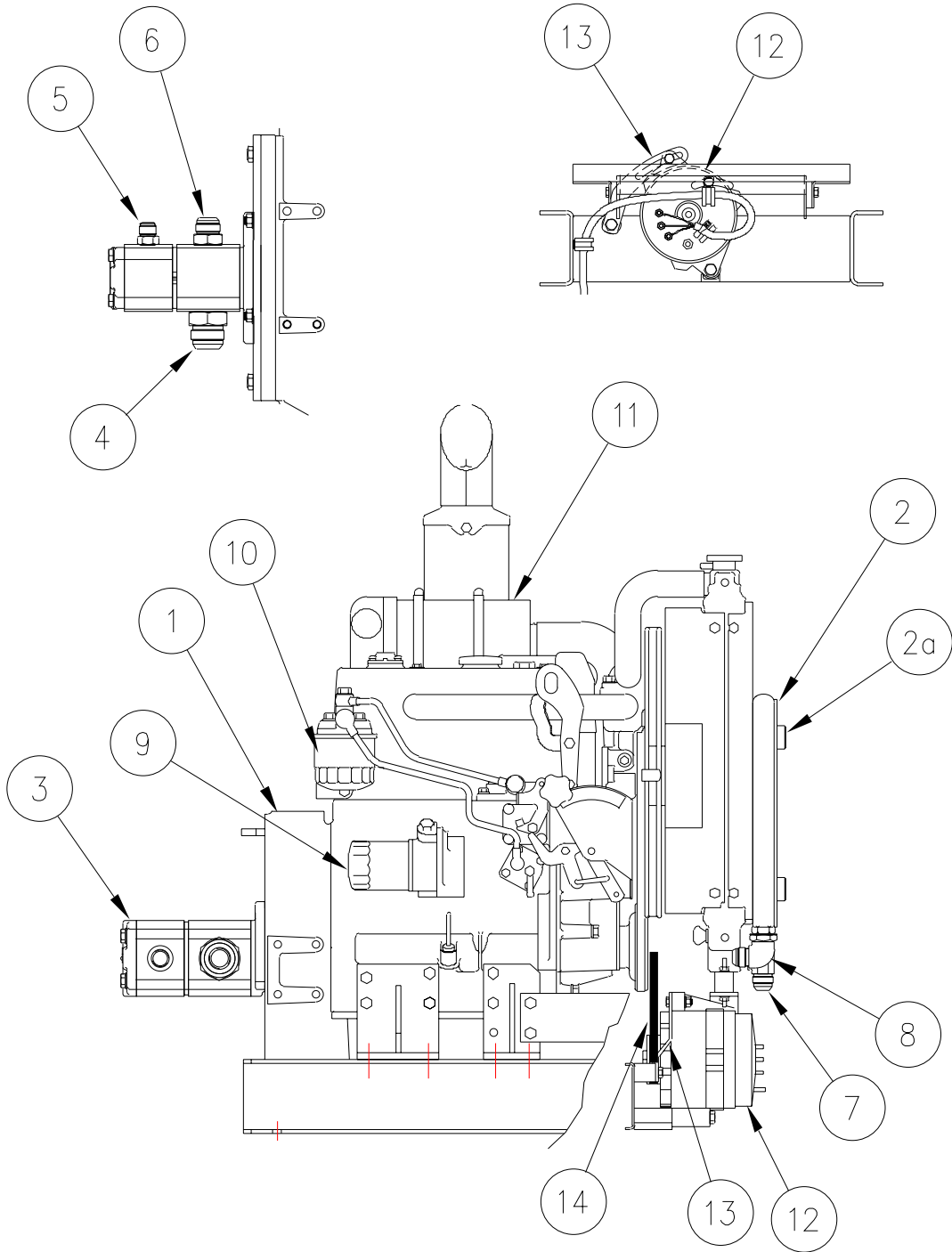


CONTROL BOX ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43665	1	ENCLOSURE (NOT SHOWN)
2	24021	3	CORD CONNECTOR - "BLUE"
3	50280	3	1/2" CONDUIT NUT
4	51662	1	SOCKET - RELAY
5	51661	1	RELAY
6	51663	1	HOLD DOWN SPRING
7	51691	1	TEMPERATURE CONTROLLER, 400° / 325°
8	51672	1	TEMPERATURE CONTROLLER, 400° / 275°
9	51688	1	MOUNTING RAIL
10	51687	2	END BRACKET
11	51685	15	FEED THROUGH TERMINAL
12	51686	1	2-POLE JUMPER
13	51689	1	3-POLE JUMPER
14	50251	3	DIGITAL READOUT
15	43391	1	TEMPERATURE CONTROLLER, 150°-550°
16	51651	4	LIGHT, 12VDC
17	50719	1	TOGGLE SWITCH
18	51665	1	CIRCUIT BREAKER, 15 AMP
19	50593	3	KNOB
20	43926	1	CABLE ASSY. - SENSOR
21	43927	1	CABLE ASYSY. - POWER
22	43928	1	CABLE ASSY. - TRIGGER/SENSOR
23	51684	2	RIBBON CABLE, 36" (NOT SHOWN)
24	51670	8	SPACER, PAK-STAT

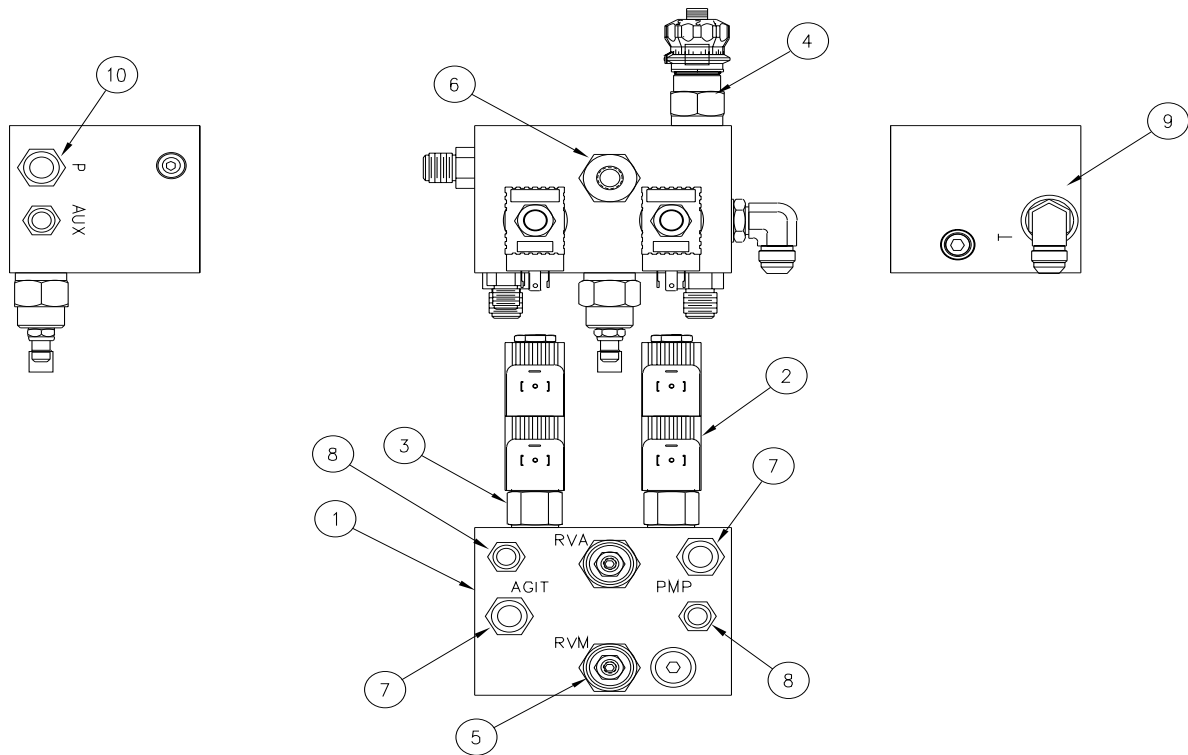
ENGINE ASSEMBLY

PRESET ENGINE SPEED = 2850 RPM
HOSE GENERATOR OUTPUT = 30 AMPS COLD
24 VAC 3-PHASE



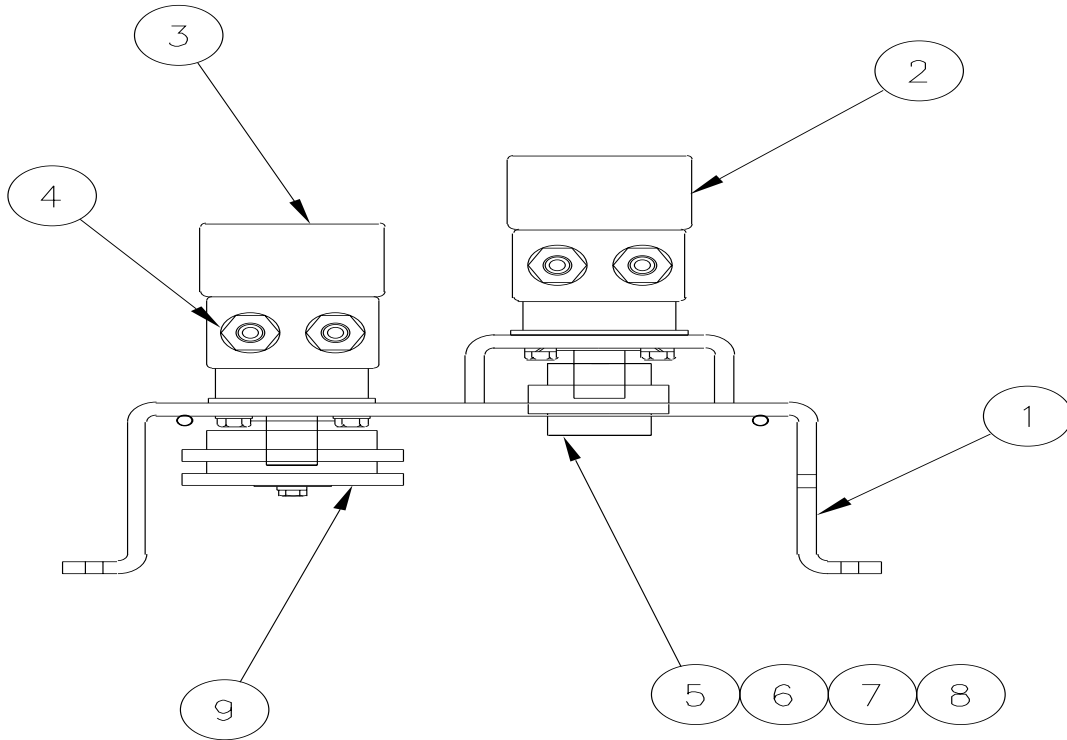
ENGINE ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43869	1	37 HP ENGINE
2	43873	1	HYDRAULIC OIL COOLER
2a	42657	2	MOUNTING KIT - OIL COOLER
3	44803	1	HYDRAULIC OIL PUMP
4	29885	1	1 1/4 STRAIGHT THREAD O-RING ADAPTER
5	29812	1	5/8 STRAIGHT THREAD O-RING ADAPTER
6	29819	1	3/4 STRAIGHT THREAD O-RING ADAPTER
7	29900	1	3/4 STRAIGHT THREAD O-RING RUN TEE
8	29918	1	3/4 STRAIGHT THREAD O-RING ELBOW
9	43851	1	OIL FILTER
10	41867	1	FUEL FILTER
11	43865	1	AIR FILTER ELEMENT
12	43612	1	GENERATOR, 24VAC
13	43899	1	ADJUSTMENT BRACKET, GENERATOR
14	43613	1	DRIVE BELT, GENERATOR



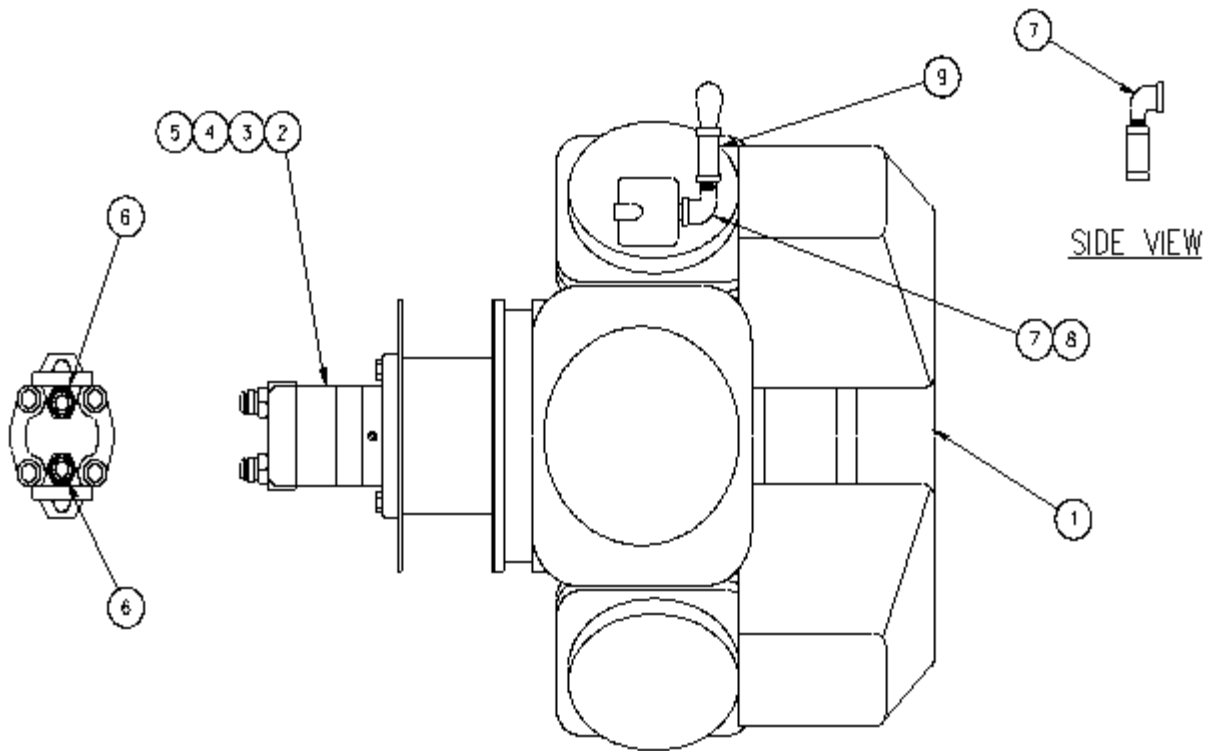
HYDRAULIC VALVE ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	44800	1	HYDRAULIC VALVE ASSEMBLY
2	43854	3	COIL-CONTROL VALVE
3	44810	1	CARTRIDGE - PUMP
4	44813	1	FLOW CONTROL
5	44812	2	RELIEF VALVE
6	44811	1	FLOW CONTROL, 1.5 GAL.
7	29919	2	9/16-18 O-RING X 3/4-16 TUBE ADAPTER
8	40311	2	9/16-18 O-RING X 9/16-18 TUBE ADAPTER
9	29896	1	3/4-16 O-RING ELBOW ADAPTER
10	29897	1	3/4-16 STR. THRD. O-RING ADAPTER



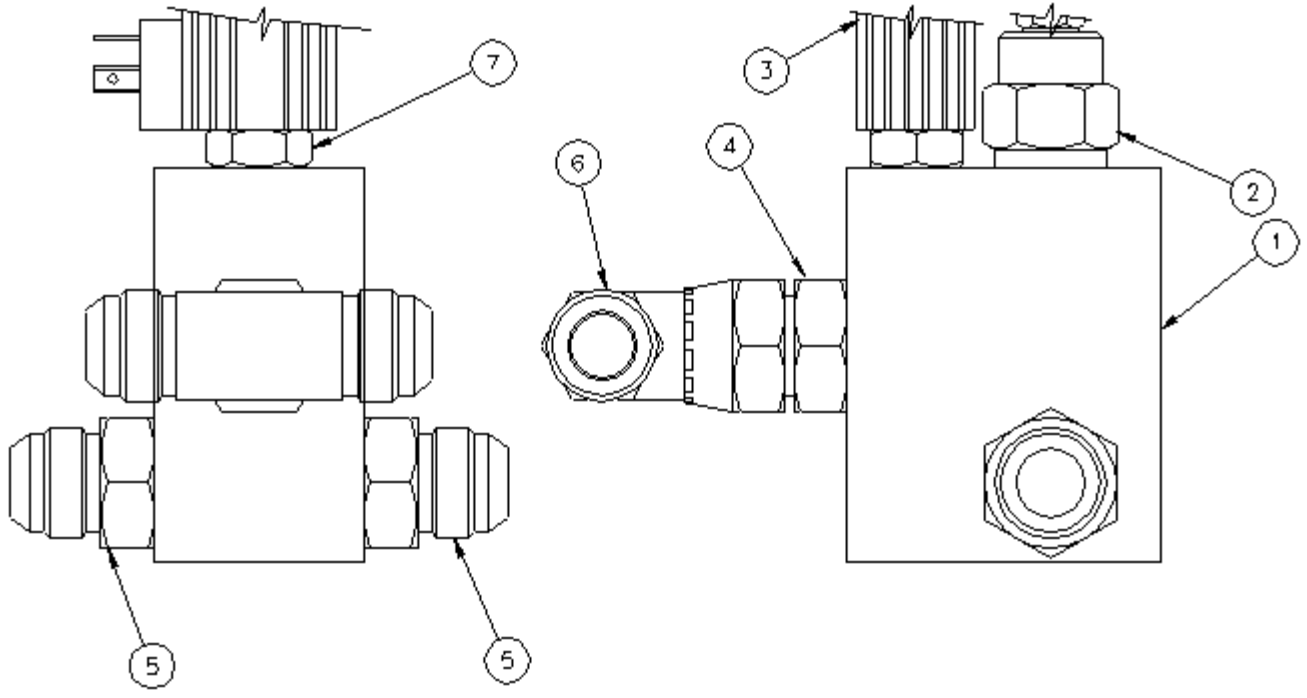
PUMP / AGITATOR ASSEMBLY

PUMP / AGITATOR ASSEMBLY			
NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43345	1	MOUNTING BRACKET - MOTORS
2	44809	1	HYDRAULIC MOTOR - PUMP
3	22027	1	HYDRAULIC MOTOR - AGITATOR
4	22029	4	3/8 TUBE X 5/8 O-RING ADAPTOR
5	26002	2	SPROCKET - CHAIN COUPLING
6	26016	1	CHAIN - COUPLING
7	26030	1	CONNECTING LINK - CHAIN
8	31368	1	KEY, 1/4 X 7/8
9	43323	1	SPROCKET - AGITATOR DRIVE



AIR COMPRESSOR ASSEMBLY

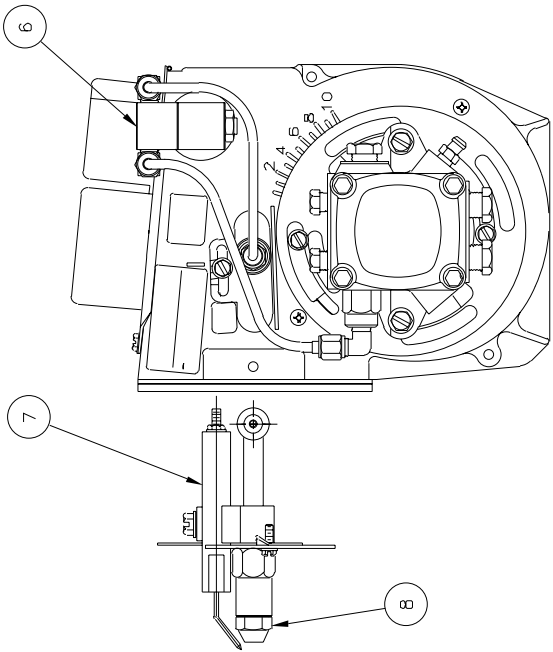
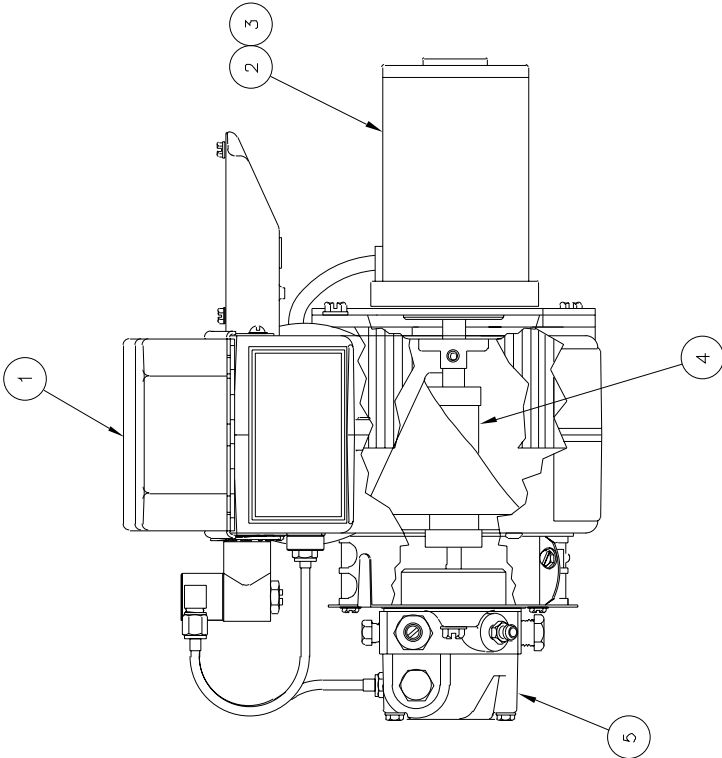
NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43875	1	AIR COMPRESSOR
2	43874	1	HYDRAULIC MOTOR
3	43707	1	COUPLING HALF - MOTOR
4	43709	1	COUPLING SLEEVE
5	43708	1	COUPLING HALF - COMPRESSOR
6	29819	2	STRAIGHT THREAD O-RING ADAPTER
7	28003	1	1/2" CLOSE NIPPLE
8	28238	2	1/2" STREET ELBOW
9	28178	1	1/2" COUPLING



FLOW CONTROL VALVE ASSEMBLY

FLOW CONTROL VALVE ASSEMBLY			
NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	44808	1	MANIFOLD ASSEMBLY
2	-	1	CARTRIDGE, RELIEF VALVE
3	43853	1	COIL, 12 VDC
4	29819	1	3/4 STRAIGHT THREAD O-RING ADAPTER
5	29821	2	3/4 STRAIGHT THREAD O-RING X 5/8 TUBE
6	29970	1	3/4 SWIVEL NUT BRANCH TEE
7	-	1	CARTRIDGE VALVE

DIESEL BURNER

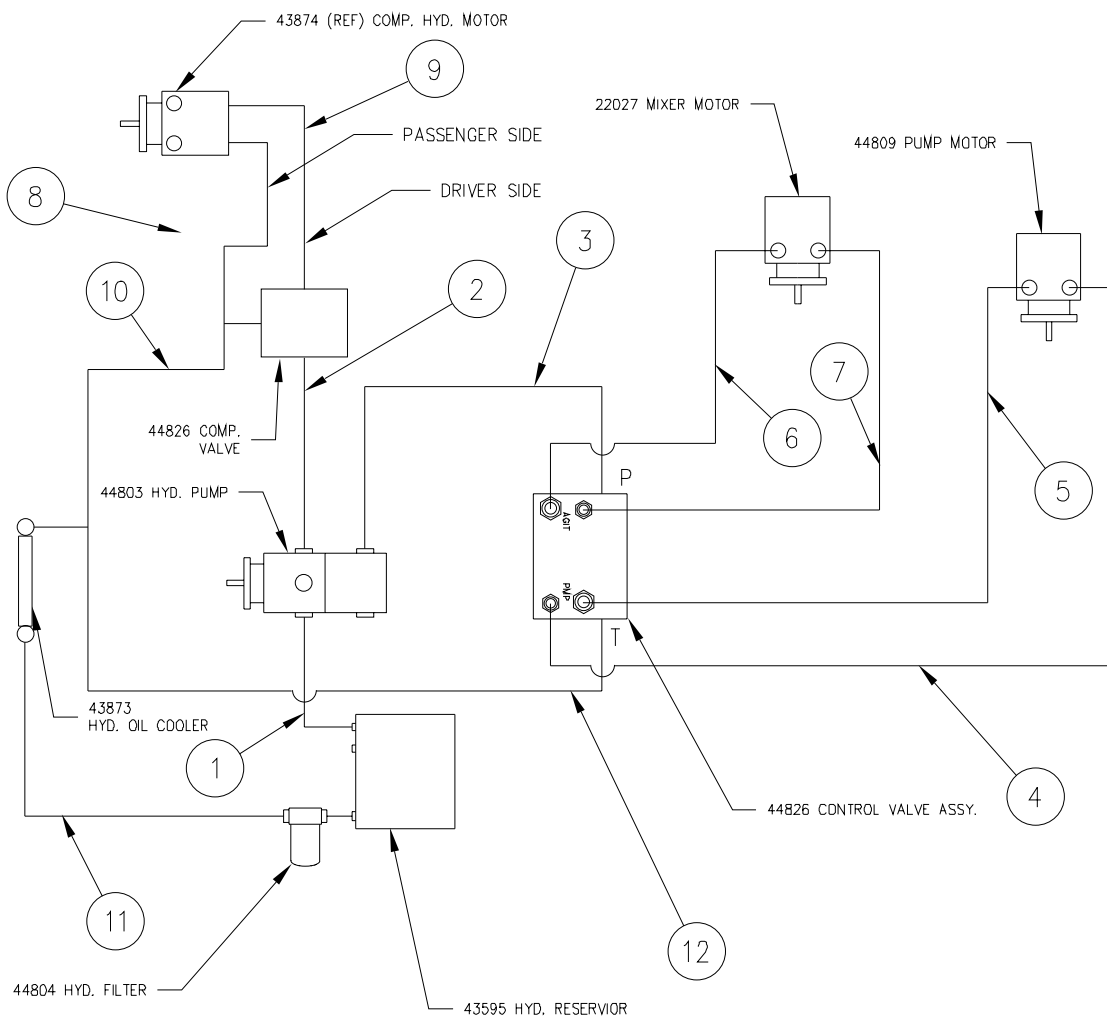


DIESEL BURNER

ITEM	PART NUMBER	QTY	DESCRIPTION
1	41949	-	IGNITION TRANSFORMER
2	41890	-	BLOWER MOTOR
3	41934	-	BRUSH KIT - MOTOR
4	41970	-	COUPLING - FUEL PUMP
5	41979	-	PUMP - FUEL
6	41888	-	SOLENOID - FUEL
7	41993	-	ELECTRODE
8a	41883	-	NOZZLE (SS125D, SS125DC, SS125DCRC)
8b	41881	-	NOZZLE (SS250D, SS250DC, SS250DRC)
8c	42559	-	NOZZLE (350D, 400D)
9	41870	-	CAD EYE (NOT SHOWN)
10	42335	-	DC CONTROLLER (NOT SHOWN)

HYDRAULIC DIAGRAM

Primary pump flow = 20.3 GPM @ 2850 RPM
Secondary pump flow = 7.5 GPM @ 2850 RPM
Relief Valve (RVA) = 1300 PSI
Relief Valve (RVM) = 1800 PSI
Compressor Relief Valve = 1800 PSI

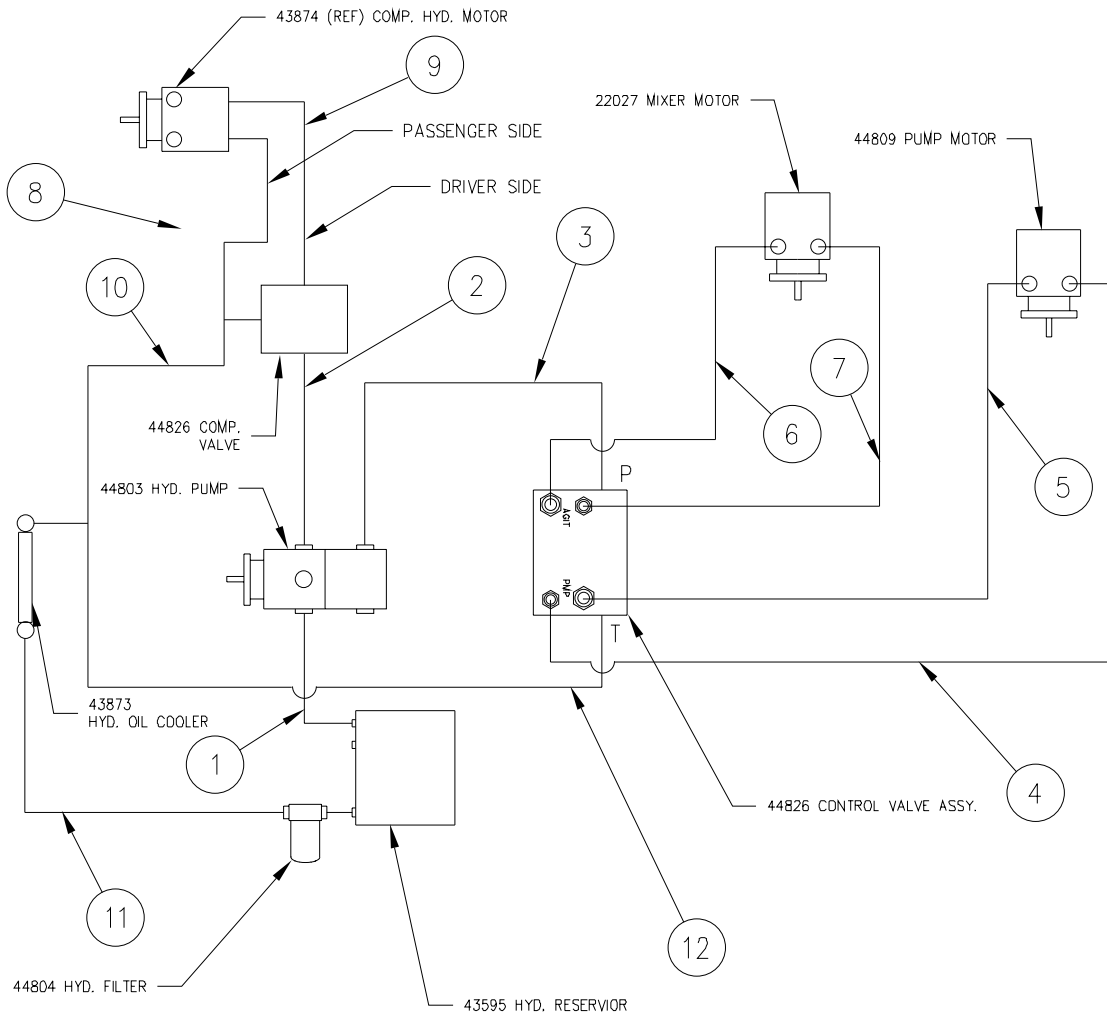


HYDRAULIC DIAGRAM

1. HYDRAULIC RESERVOIR TO HYDRAULIC PUMP SUCTION		
1	29885	1 1/4 STRAIGHT THREAD. O-RING ADAPTER
1	C20-20FJ-20FJ-38	HYDRAULIC HOSE ASSEMBLY 1 1/4 X 38" LG.
1	29985	1 1/4 STRAIGHT THREAD O-RING ADAPTER
2. HYDRAULIC PUMP PRESSURE TO COMPRESSOR VALVE "1" PORT		
1	29819	3/4 STRAIGHT THREAD O-RING ADAPTER
1	AX10-12FJ-10FJ-25	HYDRAULIC HOSE ASSEMBLY 5/8 X 25"
1	29821	3/4 STRAIGHT THREAD O-RING X 5/8 TUBE
3. HYDRAULIC PUMP PRESSURE TO CONTROL VALVE "P" PORT		
1	29812	5/8 STR. THRD. O-RING ADAPTER
1	AX8-8FJ9L-10FJ-124	HYDRAULIC HOSE ASSEMBLY 1/2 X 124
1	29897	1/2 STRAIGHT THREAD O-RING ADAPTER
4. HYDRAULIC VALVE "A" PORT TO HYD. MOTOR (MATL PUMP)		
1	29919	3/8 STRAIGHT THREAD O-RING X 1/2 TUBE ADAPTER
1	AX6-8FJ-6FJ9-18	HYDRAULIC HOSE ASSEMBLY 3/8 X 18"
1	22029	5/8 STRAIGHT THREAD O-RING X 3/8 TUBE ADAPTER
5. HYDRAULIC MOTOR (MATL PUMP) TO HYD. VALVE "B"		
1	22029	5/8 STRAIGHT THREAD O-RING X 3/8 TUBE ADAPTER
1	AX6-6FJ-6FJ9L-20	HYDRAULIC HOSE ASSEMBLY 3/8 X 20"
1	40311	3/8 STRAIGHT THREAD O-RING ADAPTOR
6. HYDRAULIC VALVE "A" TO HYD. MOTOR (MIXER)		
1	29919	3/8 STRAIGHT THREAD O-RING X 1/2 TUBE ADAPTER
1	AX6-8FJ-6FJ9L-26	HYDRAULIC HOSE ASSEMBLY 3/8 X 26"
1	22029	5/8 STRAIGHT THREAD O-RING X 3/8 TUBE ADAPTER
7. HYDRAULIC MOTOR (MIXER) TO HYDRAULIC VALVE "B"		
1	22029	5/8 STRAIGHT THREAD O-RING X 3/8 TUBE ADAPTER
1	AX6-6FJ-6FJ9-24	HYDRAULIC HOSE ASSEMBLY 3/8 X 24"
1	40311	3/8 STRAIGHT THREAD O-RING ADAPTOR
8. HYDRAULIC MOTOR (COMP.) TO "2" PORT COMP. VALVE		
1	29819	3/4 STRAIGHT THREAD O-RING ADAPTER
1	AX12-12FJ9-12FJ-45	HYDRAULIC HOSE ASSEMBLY 3/4 X 45"
1	29970	3/4 SWIVEL NUT BRANCH TEE
1	29819	3/4 STRAIGHT THREAD O-RING ADAPTER

HYDRAULIC DIAGRAM

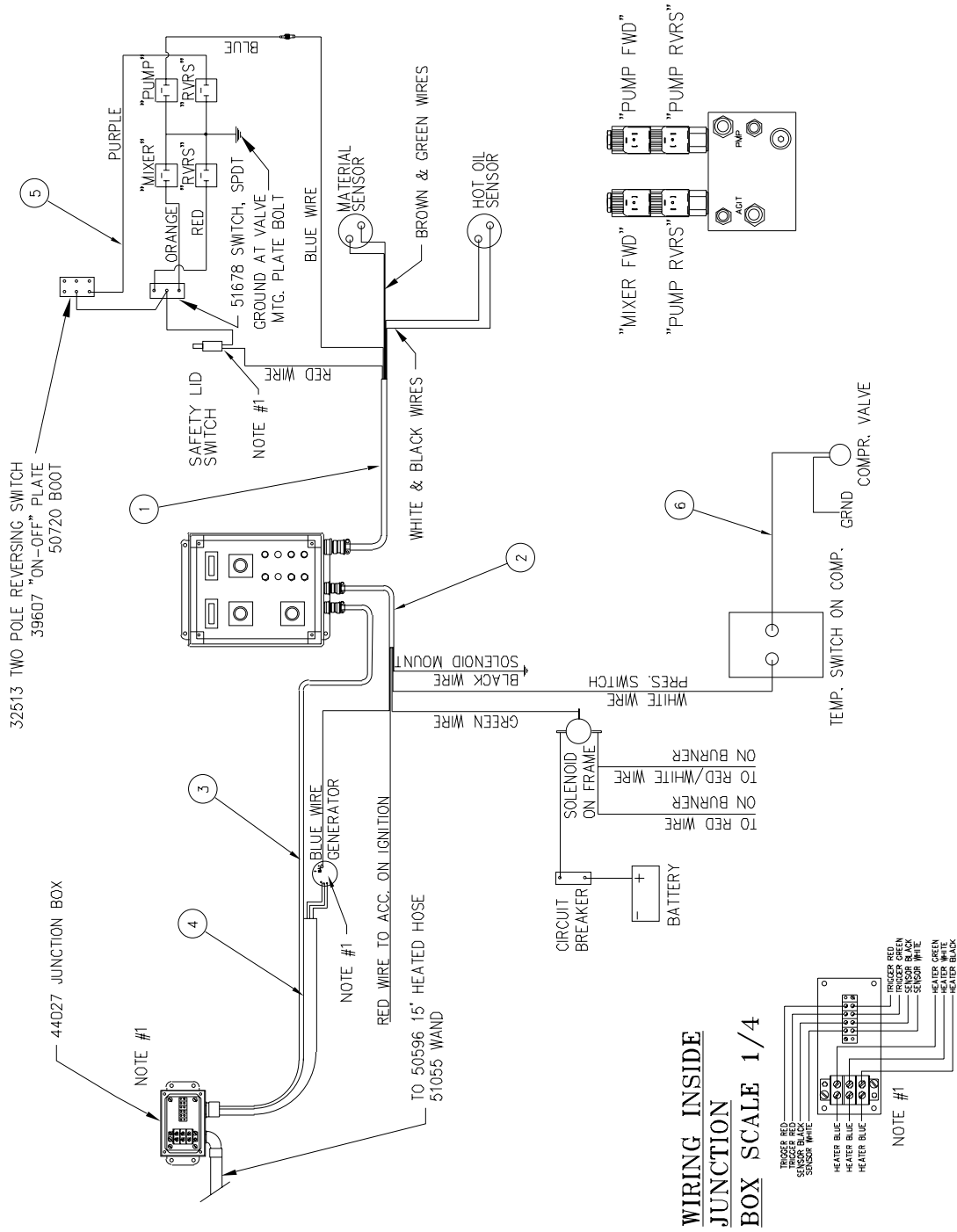
Primary pump flow = 20.3 GPM @ 2850 RPM
 Secondary pump flow = 7.5 GPM @ 2850 RPM
 Relief Valve (RVA) = 1300 PSI
 Relief Valve (RVM) = 1800 PSI
 Compressor Relief Valve = 1800 PSI



HYDRAULIC DIAGRAM

9. COMPRESSOR VALVE "1" TO HYDRAULIC MOTOR (COMP)		
1	29821	3/4 STRAIGHT THREAD O-RING X 5/8 TUBE ADAPTER
1	AX10-12FJ9-10FJ-46	HYDRAULIC HOSE ASSEMBLY 5/8 X 46"
1	29819	3/4 STRAIGHT THREAD O-RING ADAPTER
10. COMPRESSOR VALVE "2" PORT TO HYD. OIL COOLER (ROAD SIDE)		
1	29970	3/4 SWIVEL NUT BRANCH TEE
1	AX12-12FJ-12FJ9-49	HYDRAULIC HOSE ASSEMBLY 3/4 X 49"
1	29900	STRAIGHT THREAD O-RING RUN TEE
11. OIL COOLER (CURB SIDE) TO HYDRAULIC FILTER		
1	29916	3/4 STRAIGHT THREAD O-RING ADAPTER
1	AX12-12FJ9-12FJ-88	HYDRAULIC HOSE ASSEMBLY 3/4 X 88"
1	29816	1" STRAIGHT THREAD O-RING X 3/4 TUBE ADAPTER
12. HYDRAULIC VALVE "T" PORT TO OIL COOLER (ROAD SIDE)		
1	29896	1/2 STRAIGHT THREAD O-RING 90° ELBOW
1	AX8-8FJ-12FJ-138	HYDRAULIC HOSE ASSEMBLY 1/2 X 138"
1	29900	3/4 STRAIGHT THREAD O-RING RUN TEE

ELECTRICAL CABLES



ELECTRICAL CABLES

ITEM	PART NUMBER	QTY	DESCRIPTION
1	43926	1	SENSOR CABLE ASSEMBLY
2	43927	1	POWER CABLE ASSEMBLY
3	43928	1	TRIGGER/SENSOR CABLE ASSEMBLY
4	43902	1	HOSE CABLE ASSEMBLY
5	43921	1	CABLE ASSEMBLY - VALVE
6	43886	1	COMPRESSOR CABLE ASSEMBLY
7	24015	1	BATTERY CABLE, 38" - POSITIVE (NOT SHOWN)
8	32602	1	BATTERY CABLE, 20" - NEGATIVE (NOT SHOWN)
9	27174	1	BATTERY CABLE, 20" - ENG. GND (NOT SHOWN)

**Pioneering Leadership and
Innovation in Quality
Pavement Maintenance
Products.**



**235 South Hibbert • Mesa, Arizona 85210
480-655-8333 • Watts 1-800-528-8242
Fax 480-655-1712**

©Copyright 2002 by Crafco, Inc.