



SUPER SHOT 60 MELTER

PART MANUAL - 26300

REV. A

Revised: 6/99

SUPER SHOT 60 MELTER

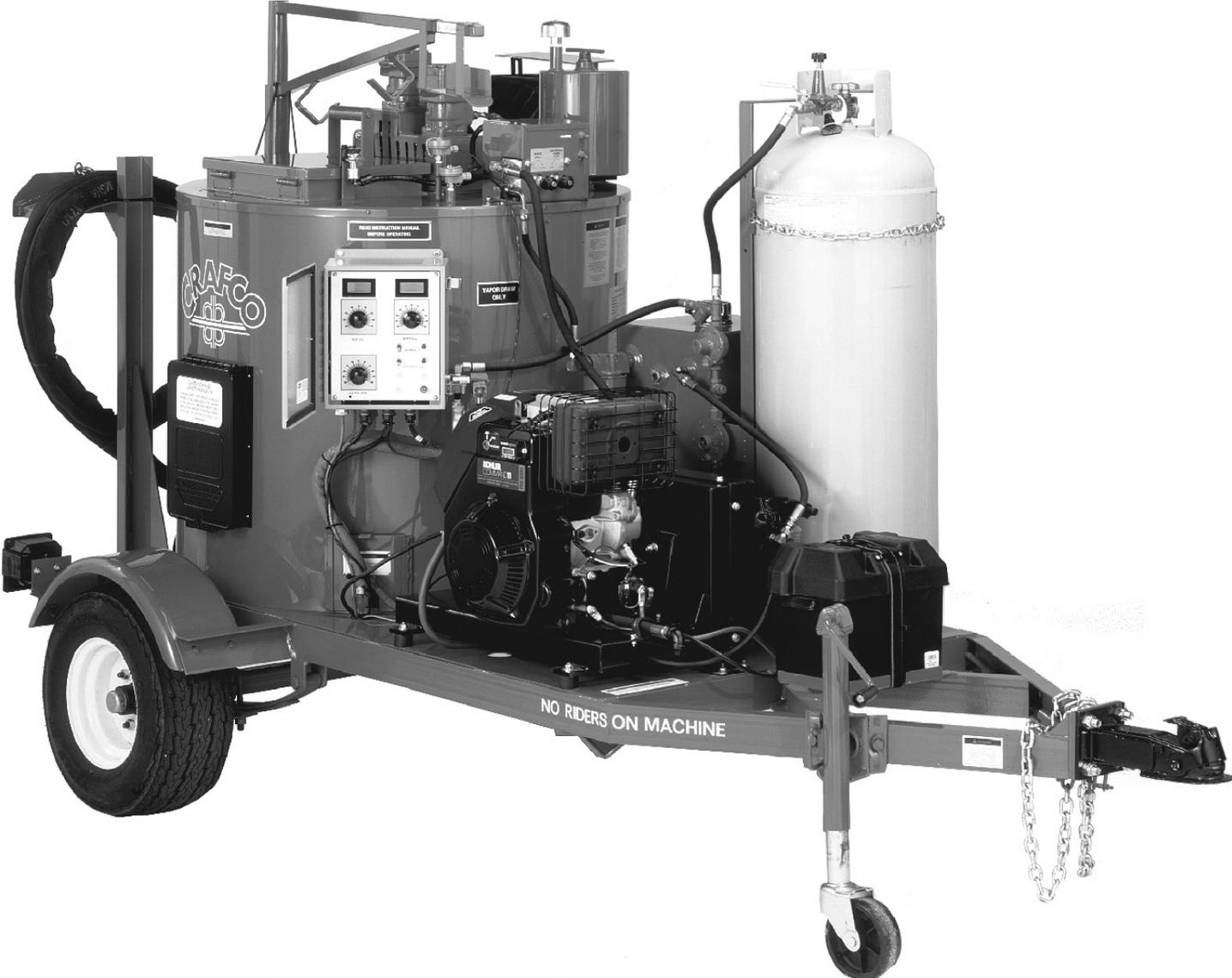


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SUPER SHOT 60 MELTER

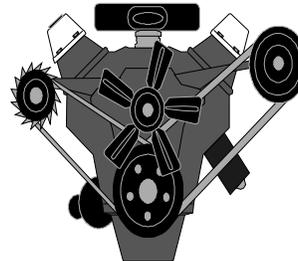
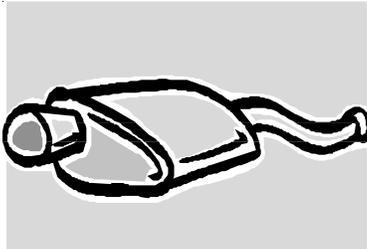
This manual is furnished with each new **CRAFCO SUPER SHOT 60 MELTER**. This manual will help your machine operators learn to run the melter applicator properly and understand its mechanical functions for trouble-free operation.

Your **CRAFCO SUPER SHOT 60 MELTER** 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, hard soled shoes and heat resistant 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.

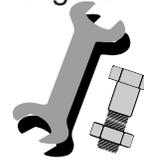
- **DO NOT** overfill heat transfer oil level. Expansion of oil during heat up could cause overflow. With machine in level position, check oil each day before starting burner, add oil to top mark on dipstick if required (at 70° F.). **Use only recommended heat transfer oil and change after 500 hours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

- Follow operating instructions for starting and shut-down of burner. Instructions are mounted on control box.

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

SAFETY PRECAUTIONS

- Replace any hoses which show signs of wear, fraying, or splitting. Be sure all fittings and joints are tight and leak-proof.
- Precaution is the best insurance against accidents.
- The Super Shot 60 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 Crafcro Distributor. If you do not know who your local distributor is, call a Crafcro 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 Crafcro, Inc.

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

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

SPECIFICATIONS

Vat Capacity.....	60 Gallons
Melt Capacity.....	40 Gallons/Hour
Heat Transfer Oil Required.....	21 Gallons at 70° F
Tank Construction.....	Double Boiler Type
Tank Opening Size.....	12" X 15"
Maximum Heat Input.....	Vapor Burner 180,000 BTU's
Burner and Temperature Control.....	Automatic - Fail Safe
Engine - Kohler.....	Single Cylinder
Model CH-14 - Propane Fueled	14 BHP @ 3,600 rpm
Drive Mechanism.....	All Hydraulic with infinite speed on Mixer and Material Pump
Mixer.....	Full Sweep Mixer with 2 horizontal paddles
Axle.....	Single - 2,000 lb. Capacity
Tires (2).....	20.5 X 8 X 10 - 4 ply rating (1,005 lb. capacity each)
Dry Weight.....	Approximately 1,500 lbs.
Propane Bottle (1).....	100 lbs.
Generator.....	2,000 Watt - 12 Volt

SUPER SHOT 60 MELTER

INTRODUCTION

The CRAFCO SUPER SHOT 60 MELTER was developed to melt CRAFCO Brand Sealant. However, it will work equally well with all road asphalt and federal specification crack or joint sealant.

DO NOT operate machine without following these instructions:

1. Fill propane tank.
2. Check engine crankcase oil level (refer to Engine Operator's Manual).
3. Check hydraulic fluid level, at ambient temperature. Add fluid if necessary to bring to correct level.
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.



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. Open LPG tank valve.
2. Open line valve at cylinder.
3. Start engine per instruction below.
4. Turn “ON” burner toggle switch at control box. Follow directions on control box.
5. Set hot oil temperature at 500° F and material temperature at manufacturers recommended temperature.
6. Turn on the hose controller when hot oil reaches approximately 300° F.



CAUTION:

If burner does not ignite the first time, turn temperature dial to off. Turn temperature dial to desired setting. Burner should ignite. If burner still does not ignite, determine cause of malfunction (see Trouble Shooting Guide).

STARTING THE ENGINE

Choke engine, turn the ignition key to start position. Engine should start. After engine starts, allow to warm up before using hydraulics or generator.

HEATED HOSE, WAND, AND CONTROLLER



CAUTION:

The hose must be up to temperature before dispensing can take place. **IMPORTANT!! DO NOT** twist or kink hose. Avoid sharp bends and continuous twisting. Maintain minimum 10” bend radius. **DO NOT** exceed 400 degrees!! **DO NOT** move or bend hose when cold. Damage may result.

The heated hose supplied with the machine is Teflon lined with a stainless steel overbraid. It has a heating element which runs down the hose to heat the material within the hose. The hose is insulated with silicone foam rubber and is covered with a durable rubber outer covering. 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 elasomeric 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.

Turn the hose toggle switch to the “ON” position. Adjust the temperature dial to approximately 400 degrees. The hose will come up to temperature in approximately 30 minutes. After the hose is hot, the light in the control box will turn off and the temperature may be reduced to approximately 360 degrees. It is advisable to run the hose at the lowest temperature setting possible.

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.

STARTING THE MIXER

When the sealant material reaches a liquid state, engage the mixer by moving the toggle switch to “ON” (switch located on hydraulic panel.) If the mixer does not move, allow material to heat longer. Jamming of mixer shaft causes hydraulic oil to over heat and machine damage could occur. Remember, mixer does not start with melter lid open. Mixer speed is preset at the factory and cannot be adjusted.



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 shall be completely encircled by a protective screen. The screen shall not allow anything larger than 3/16" (.48 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, CrafcO 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. Turn the burner toggle switch "**OFF**" position.
2. Turn the hose toggle switch to the "**OFF**" position.
3. Store the hose in the hose hanger. **IMPORTANT!! DO NOT** kink or twist hose, as permanent damage will result.
4. Turn the mixer toggle switch to "**OFF**" position.
5. Turn the engine off at the engine key switch.
6. Turn LPG off at line valve and valve at LPG bottle.

STORING MACHINE

The melter should be stored in an area where moisture cannot enter 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
235 SOUTH HIBBERT DRIVE
MESA, AZ. 85210
Phone: 480-655-8333
Fax: 480-655-8333
Toll Free: 1-800-528-8242



ELECTRIC HOSE CARE AND CAUTIONS



Twisting and kinking of the electric hose (used on LF, BAX, SS60, and SS125 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. Do not move or use hose unless it has been turned on a least 35 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.
- h. Avoid pulling hose beyond it's limits.

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

Check oil every 8 hours of operation. Change after the first 5 hours of operation and change every 100 hours thereafter.

See engine owners manual for additional operating and maintenance instructions.

HYDRAULIC SYSTEM

Check hydraulic fluid every 8 hours. Change hydraulic filter every 250 hours. Change hydraulic fluid 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.

TONGUE JACK

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



TEMPERATURE CONTROL CALIBRATION

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

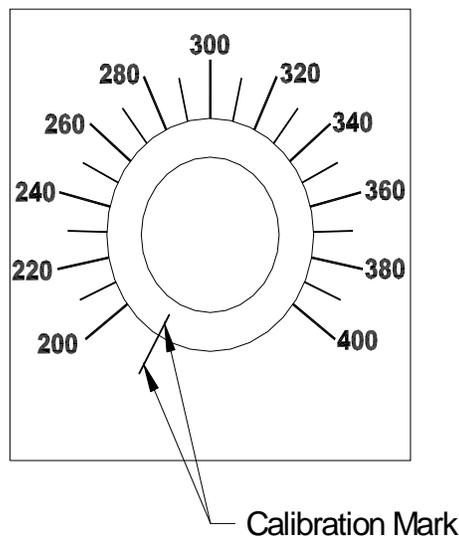


Fig. 1

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 every 250 hours.			*	
Hydraulic oil	Check oil.	*			
Hydraulic oil	Change oil.				*
Hydraulic oil	For proper oil, see Recommended Fluids & Lubricants.				

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 Kohler Owners Manual.	4 Pts.
LPG	Propane	100 Lbs.
Hydraulic oil	Rondo Oil - HD - 68 Texaco	24 Gals.
Heating oil	Regal R&O 68	23 Gals.

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 10

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.

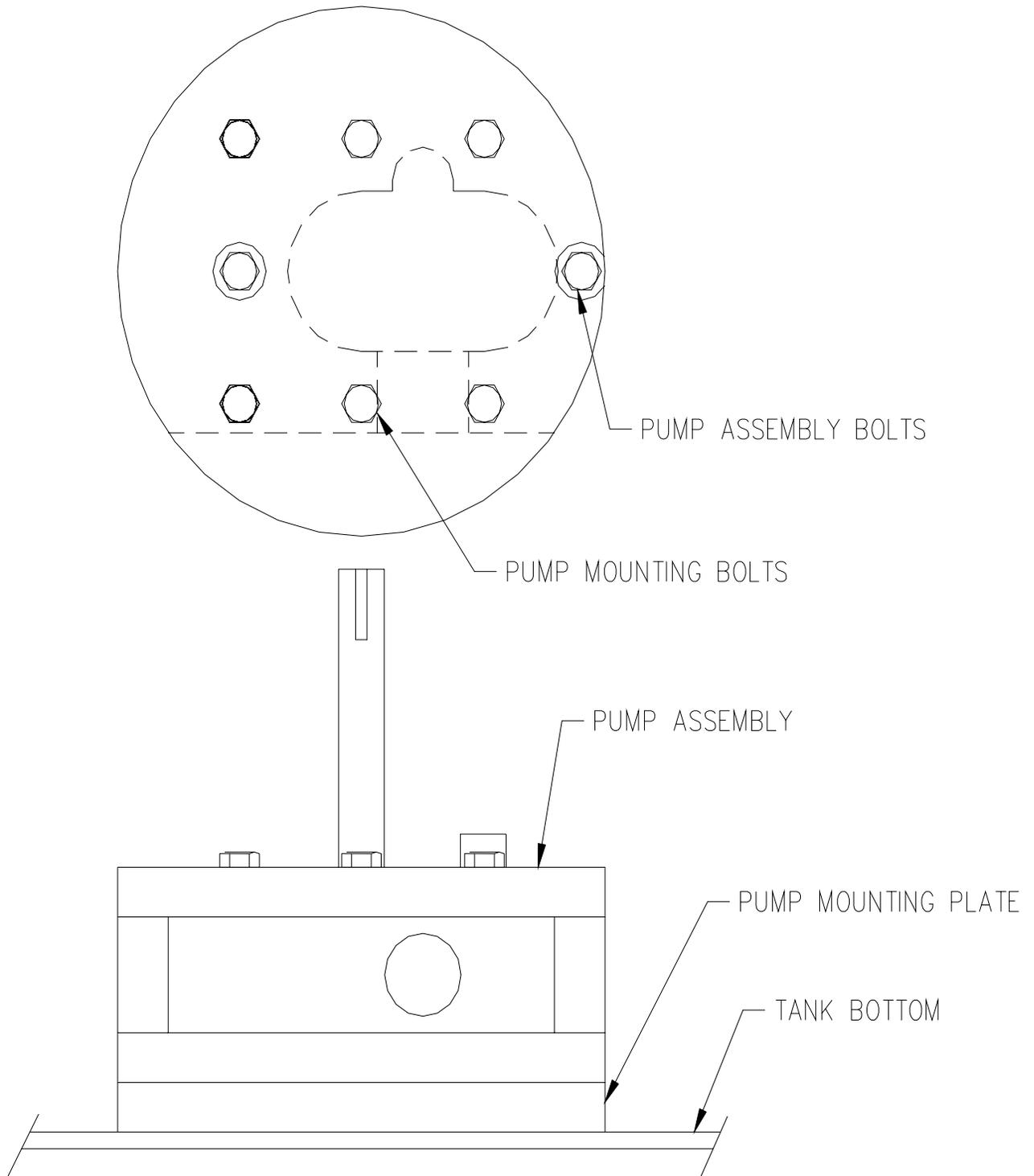
Step 13

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.

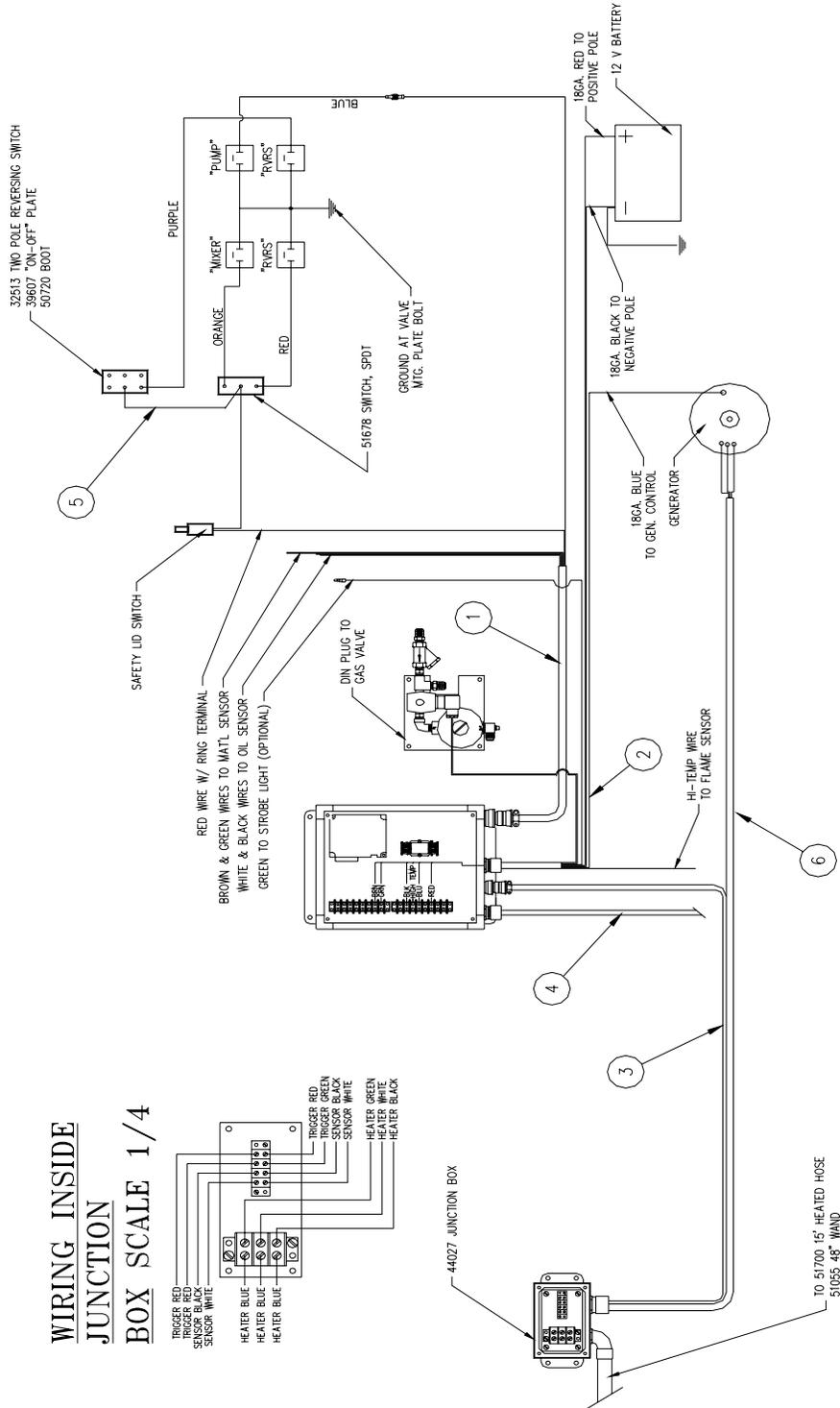
Step 14

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

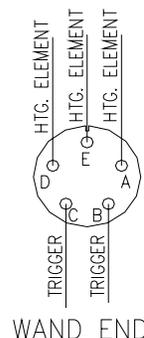
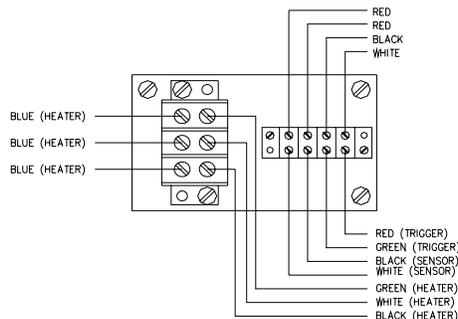
SUPER SHOT PUMP REPLACEMENT



ELECTRICAL SCHEMATIC



TROUBLE SHOOTING GUIDE



HOSE DOES NOT HEAT

Step 1: Is the "HEATED HOSE" switch "ON"?

YES: Go to step 2

NO: Turn 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 purple wire on hose switch.

YES: Go to step 2a.

NO: Check for 12 volts at circuit breaker in front panel.

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

YES: Go to step 2b.

NO: Check wire connections or replace switch.

Step 2b: Check for 12 volts at #7 terminal (blue wire) when Pak-Stat is on.

YES: Go to step 3

NO: Replace Pak-Stat.

YES: Check wire connections (red wire) between circuit breaker and toggle switch

NO: Check wire connections between "ACC" terminal on ignition switch and "A" terminal (#2 plug) from the left.

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

YES: Go to step 4

NO: Check wire connections between "D" terminal (#2 plug) at control box to blue wire at generator.

Step 4: Check for 24 volts AC at the "BLACK", "WHITE" and "GREEN" wires on the generator.

YES: Go to step 5.

NO: Replace generator.

Step 5: Check for 1.08K (1080) OHMS resistance of the hose sensor (black and white wire) at the junction box. (**NOTE: One of the sensor wires must be disconnected to check resistance**)

YES: Go to step 6

NO: Send hose to your Crafcro distributor for repair.

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 wire connections between hose and wand.

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

YES: Replace hose.

NO: Hose is OK.

TROUBLE SHOOTING GUIDE

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 "HEATED HOSE" switch "ON"?

YES: Go to step 3.

NO: Turn switch "ON".

Step 3: Is the "HEATED HOSE" light "ON"?

YES: Go to step 4.

NO: Check for tripped circuit breaker on front panel.(If display is operating,circuit breaker is ok)

YES: Reset circuit breaker.

NO: Check all wire connections.

Step 4: Is the top right light on hydraulic valve illuminated (looking from rear of machine) when trigger is activated?

YES: Replace hydraulic cartridge.

NO: Disconnect wand and check continuity between "C" and "B" on wand when trigger is activated.

YES: Go to step 5

NO: Replace switch or check for poor wire connection.

Step 5: Then reassemble plug and check continuity at the two red wires in junction box.

YES: Go to step 8.

NO: Check all wire connections between junction box and wand.

Step 6: Check for 12 volts at "D" terminal (#3 plug) of control box.

NO: Check connections between "B" terminal (#1 plug) and "D" (#3 plug).

PUMP ROTATES BUT NO MATERIAL IS DISCHARGED

Step 1: Has the sealant had sufficient time to completely melt?

YES: Go to step 2.

NO: Allow the sealant to melt longer.

Step 2: The heated hose is not up to temperature.

YES: Go to step 3.

NO: Allow heated hose to heat longer.

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

YES: Remove obstruction and reassemble hose connection.

NO: Go to step 4.

Step 4: Is there an obstruction at the pump suction?

YES: Reverse material pump for 30 seconds.

NO: Refer to page 20 for pump removal.

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 4.

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 Pump Removal and Installation).

HOSE TROUBLE SHOOTING

PROBLEM	CAUSE	REMEDY
Hose does not heat.	Generator wire loose.	Tighten nut.
	Generator belt loose.	Tighten belt.
	Bad connection at control box.	Tighten plug.
	Bad connection between hose and wand.	Tighten plug.
	Hose kinked and shorted wires.	Replace hose.
	Generator not producing voltage.	Replace generator.
	Bad sensor in hose.	Send to Crafc0 for repair.
Hose heats partially.	Hose kinked and wires shorted.	Replace hose.
Hose light flickers.	Bad Pak-Stat (Temp. Controller)	Replace Pak-Stat.
Hose does not pump.	Bad wire connection.	Repair loose wire.
	Bad switch.	Replace switch.
	Cartridge failure on hydraulic valve.	Replace cartridge on valve.
	Coil failure on hydraulic valve.	Replace coil on valve.
#1 on LED display.	Open circuit on the sensor.	Repair broken or loose wire.
NEG number on LED display.	Short in the sensor.	Replace bad wire.
Readout incorrect.	Sensor resistance below 1080 ohms at 70°F. (21.1°C)	Replace sensor.
Display is blank.	Polarity of plug to Pak-Stat.	Check for P1 to 1 connection.

BURNER TROUBLE SHOOTING



BURNER WILL NOT IGNITE

Step 1: Check for 12 volts at toggle switch.

No: Then toggle switch is "OFF"
Fuse is "Blown"
Broken wire

Yes: Then go to Step 2

Step 2: Check for 12 volts at terminal #7 on material temperature thermostat.

No: Then material temperature thermostat is bad

Yes: Then go to Step 3

Step 3: Check for 12 volts at terminal #7 on oil temperature thermostat.

No: Then oil temperature thermostat is bad

Yes: Then go to Step 4

Step 4: Check for 12 volts at power terminal of spark control module.

No: Then there is a bad connection or a broken wire

Yes: Then there is a Faulty spark control module
Faulty ignitor or ignitor wire
Reposition ignitor
Check for clogged burner orifice
Inadequate gas flow/or pressure
Faulty "ASCO" gas valve

BURNER LIGHTS BUT SHUTS DOWN IN 3.5 SECONDS

Faulty ignitor
Broken or loose flame sensor wire
Faulty spark control module

BURNER LIGHTS BUT WILL NOT RELIGHT

Calibrate thermostat
Blown fuse
Faulty spark control module
Faulty sensor

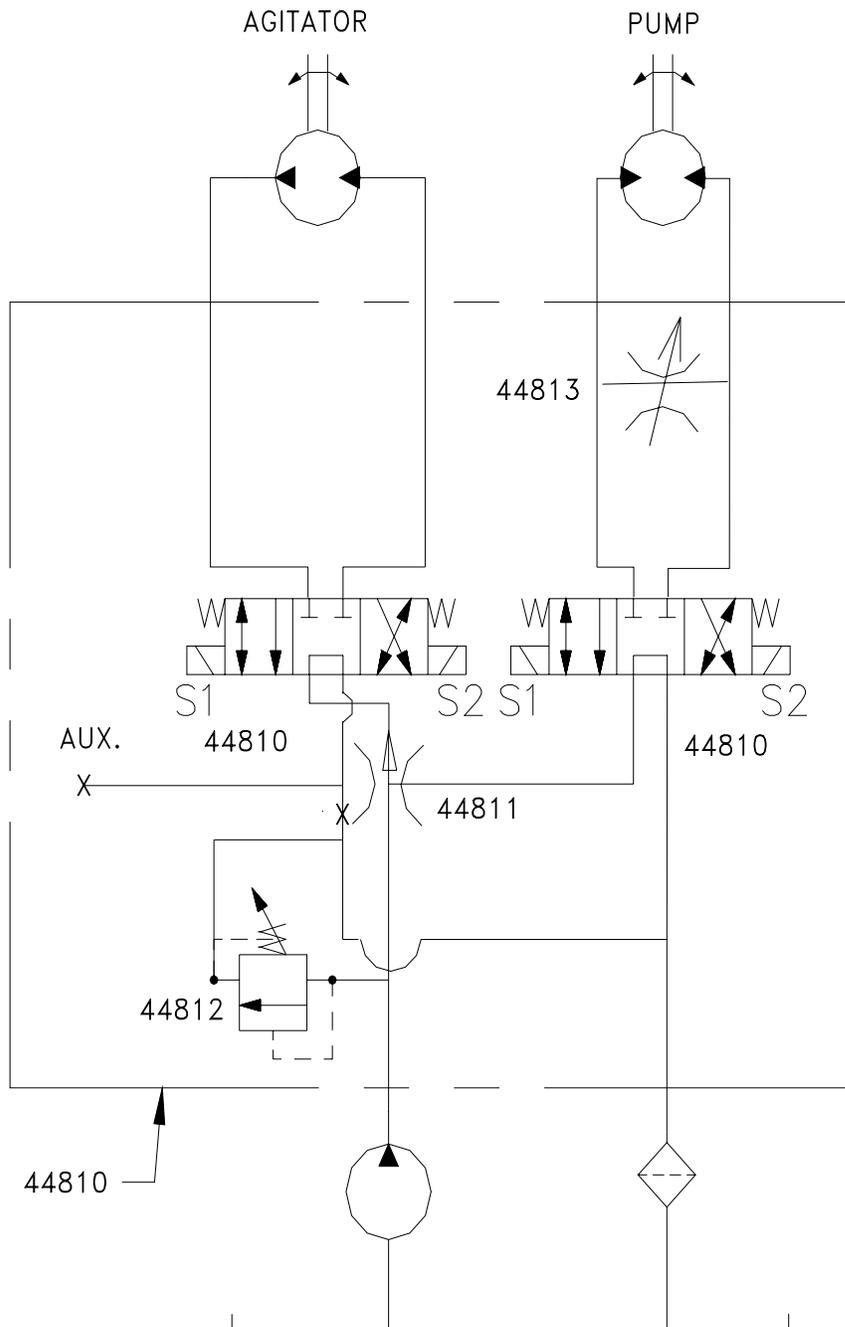
BURNER WILL NOT SHUT OFF @ TEMPERATURE SETTING

Calibrate thermostat
Dirt in "ASCO" valve
Faulty sensors

TROUBLE SHOOTING HYDRAULICS

PROBLEM	CAUSE	REMEDY
Mixer will not rotate.	Sealant temperature too low. Too many blocks placed at one time. Inadequate hydraulic flow/pressure. Toggle switch turned off.	Continue to heat material. Continue to heat material. Check hydraulic fluid level. Reset pressure, check flow if necessary.
Material pump will not activate.	Material in tank not to operating temperature. Inadequate hydraulic flow/pressure. Material pump damaged or foreign object lodged in pump.	Continue heating material. Check hydraulic fluid level. Reset pressure, check flow as necessary. Remove and replace.
When applying sealant it stops flowing from applicator wand.	Tank fluid level too low for material to flow into pump.	Add more material or heating material until more liquid material is available.
Pump extends, but will 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 extend.	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.	Build up of coked material on inside of material tank. Burner not operating/low LPG pressure.	Allow machine to cool. Remove deposits and flush with solvent. Repair/adjust.

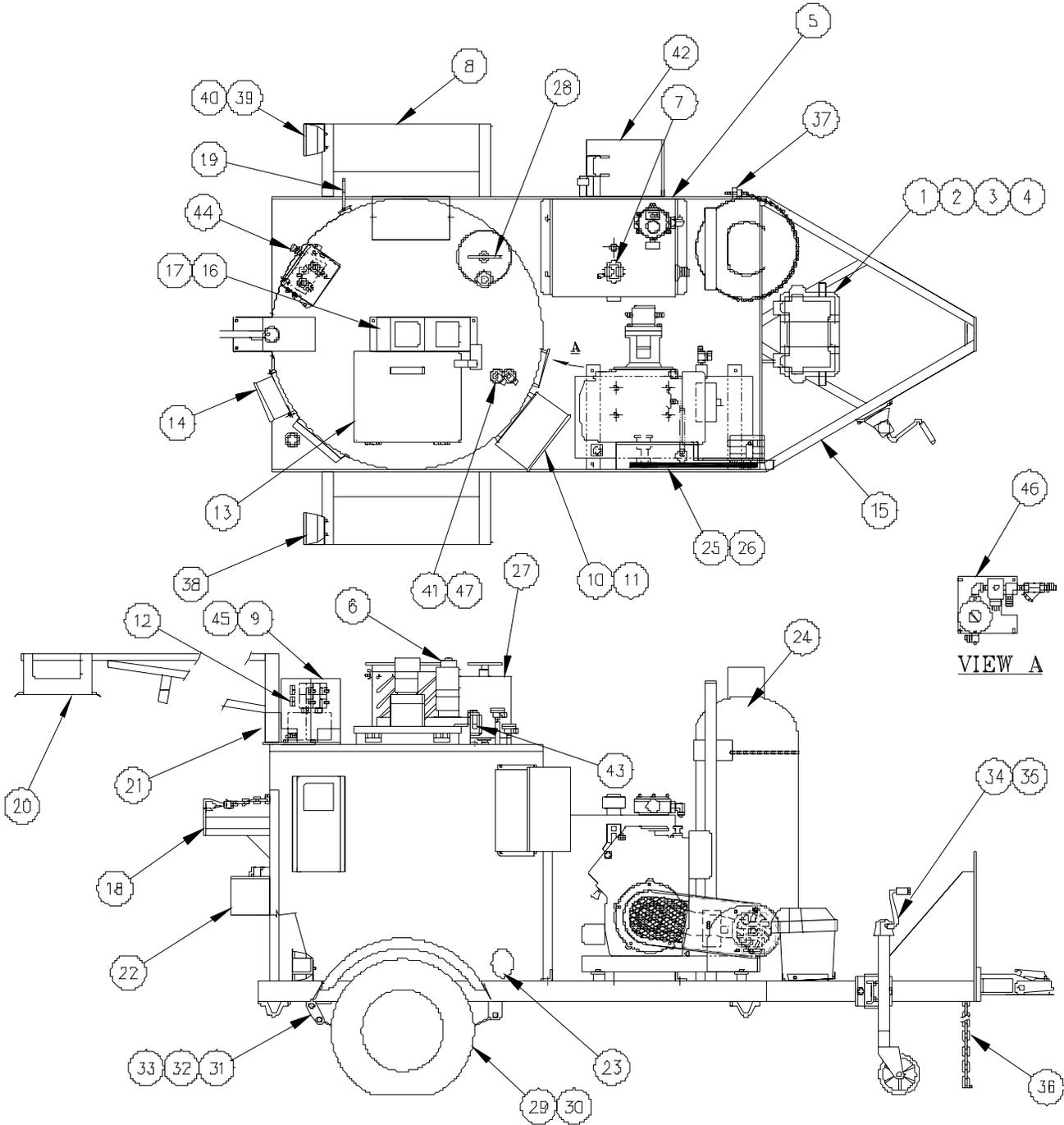
HYDRAULICS SCHEMATIC



SS60 MELTER ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	24002	1	BATTERY BOX
2	24000	1	12 VOLT BATTERY
3	37038	1	BATTERY CABLE (-)
4	32602	1	BATTERY CABLE (-)
5	43595	1	HYDRAULIC TANK ASSEMBLY
6	26025	1	AIR BREATHER
7	43579	1	FILLER/BREATHER
8	40120	2	FENDER ASSEMBLY
9	44819	1	MOUNTING BRACKET - HYDRAULIC VALVE
10	44040	1	CONTROL BOX ASSEMBLY
11	50074	4	MOUNTING SPACER
12	51678	1	SWITCH - AGITATOR
13	43338	1	LID ASSEMBLY
14	44027	1	JUNCTION BOX
15	43301	1	FRAME ASSEMBLY
16	44832	1	PUMP/AGITATOR MOTOR ASSEMBLY
17	43727	2	CHAIN GUARD
18	43477	1	HOSE HANGER
19	43368	1	WAND BRACKET
20	43828	1	HOSE BOOM
21	44823	1	BOOM MOUNTING BASE
22	43821	1	HEAT GUARD
23	43333	1	BURNER DOOR
24	25118	1	LPG BOTTLE
25	55335	1	POWER PACK COMPLETE

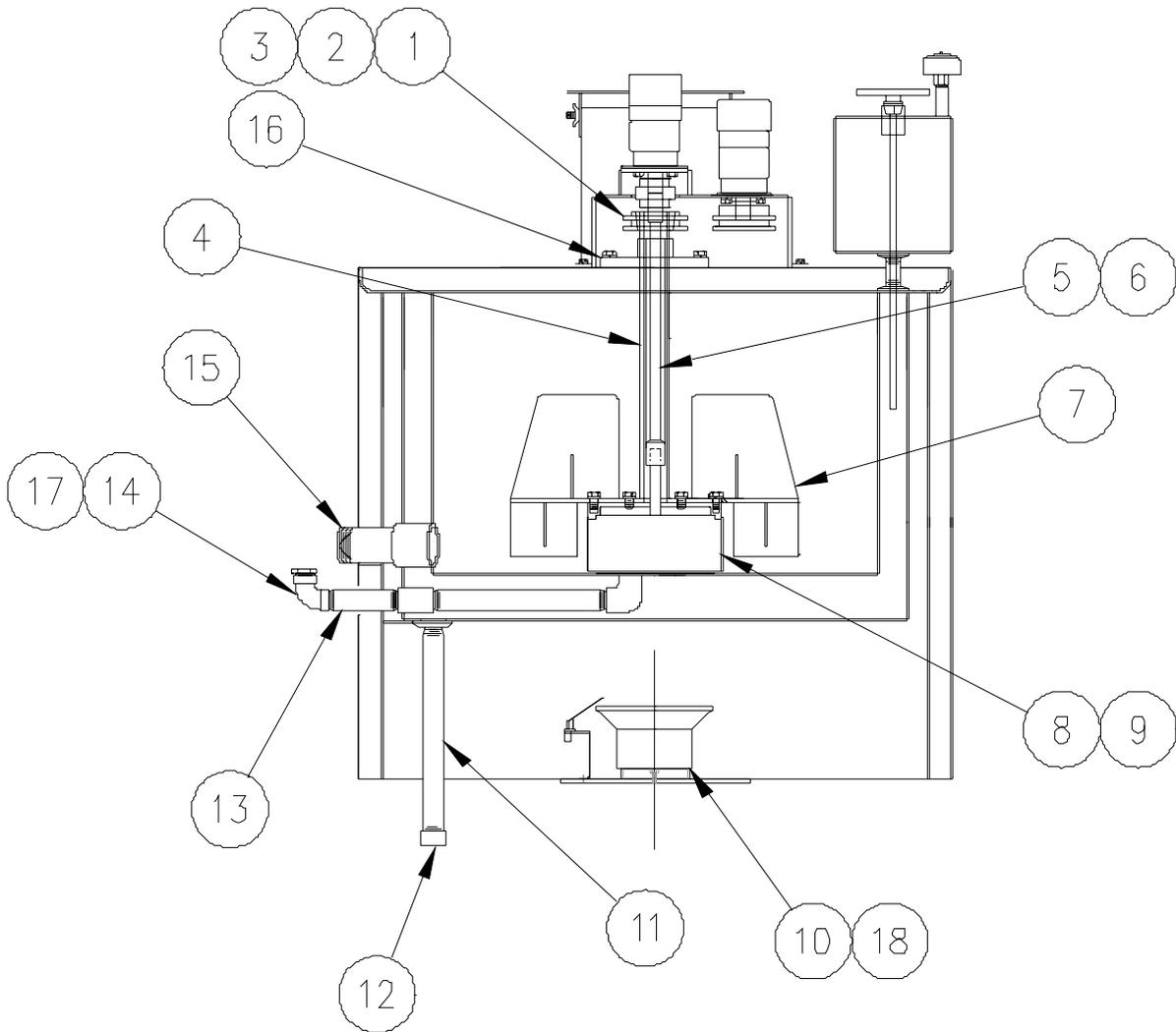
SS60 MELTER ASSEMBLY



SS60 MELTER ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
26	41636	4	ISOMOUNT
27	43355	1	OVERFLOW TANK
28	43374	1	DIPSTICK - OVERFLOW TANK
29	40100	1	AXLE ASSEMBLY WITH SPRINGS
30	40873	2	TIRE ASSEMBLY WITH RIM
31	23100	6	BOLT FOR AXLE
32	23105	6	LOCKING NUT
33	23075	2	PIVOT LINK
34	40105	1	SWIVEL JACK
35	40106	1	JACK BRACKET
36	40121	2	SAFETY CHAIN
37	26032	1	BLACK KNOB
38	24022	1	RH TAIL LIGHT
39	24023	1	LH TAIL LIGHT
40	26099	1	LICENSE PLATE BRACKET
41	43465	2	RTD SENSOR
42	43456	1	DRIP PAN
43	39608	1	SWITCH - LID
44	44820	1	HYDRAULIC VALVE ASSEMBLY
45	44821	1	COVER, HYDRAULIC VALVE
46	43430	1	GAS MANIFOLD
47	51065	2	CORD GRIP
48	44804	1	HYDRAULIC OIL FILTER ASSEMBLY
48a	44805	-	FILTER ELEMENT
48b	44838	-	O-RING - HYDRAULIC FILTER
48c	44839	-	GASKET - HYDRAULIC FILTER

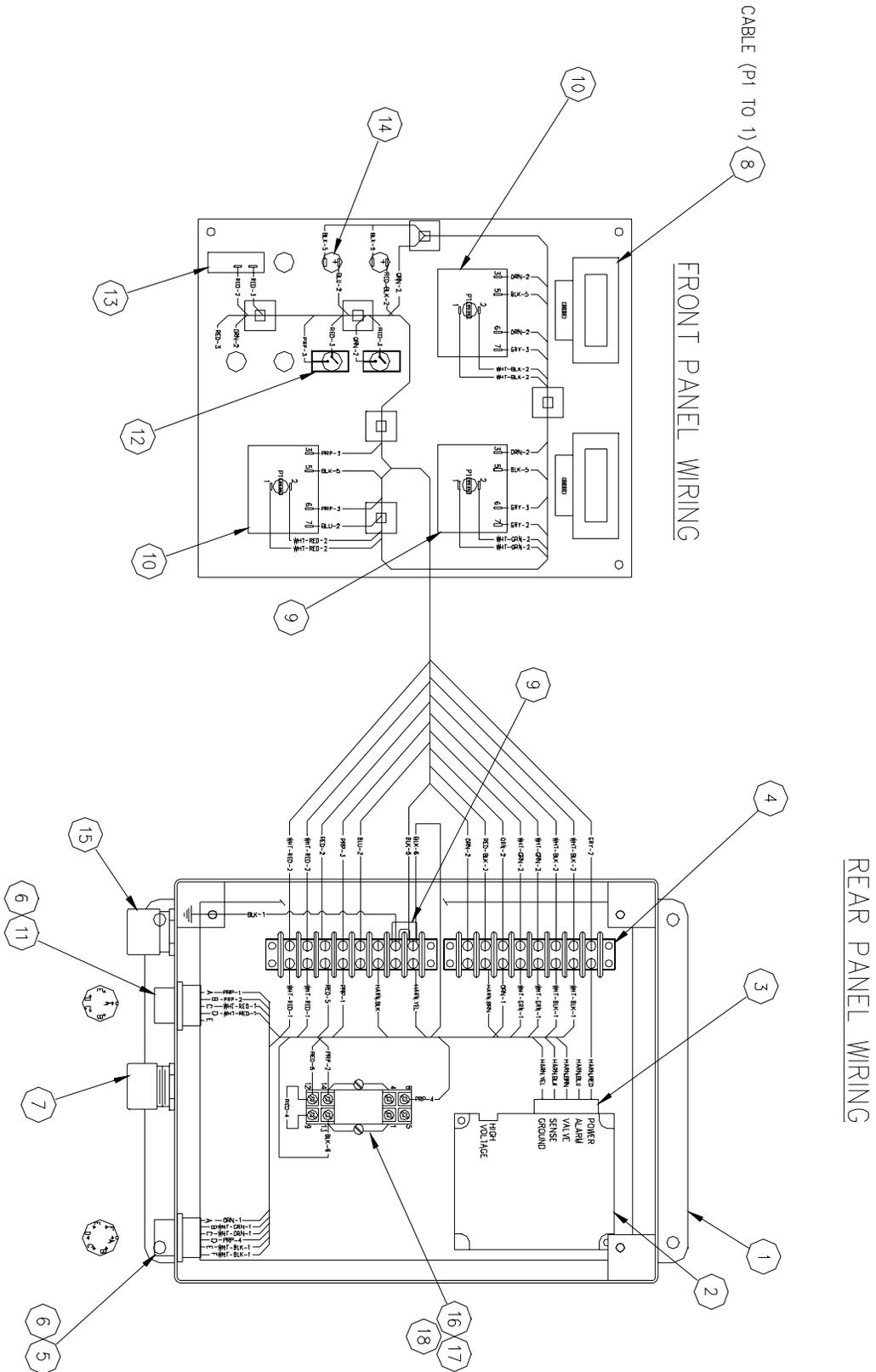
TANK DETAIL



TANK DETAIL

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43322	1	SPROCKET - DRIVEN
2	43321	1	CHAIN - DRIVE
3	26030	1	CONNECTING LINK - CHAIN
4	43340	1	MIXER SHAFT
5	43324	1	DRIVE SHAFT - PUMP
6	40084	1	KEY, 3/16 SQ. X 7/8 LG.
7	43325	2	PADDLE ASSEMBLY
8	43426	1	PUMP ASSEMBLY
9	43335	1	STRAINER ASSEMBLY
10	43123	1	BURNER ASSEMBLY
11	28174	1	1" X 15" PIPE NIPPLE
12	28270	1	1" PIPE CAP
13	28055	1	1" X 5" PIPE NIPPLE
14	28210	1	1" PIPE ELBOW
15	28060	1	2" X 5" PIPE NIPPLE
16	50012	1	BEARING
17	28351	1	1" X 3/4" REDUCER BUSHING
18	43153	1	IGNITOR ASSEMBLY (NOT INCLUDED W/ ITEM#10)

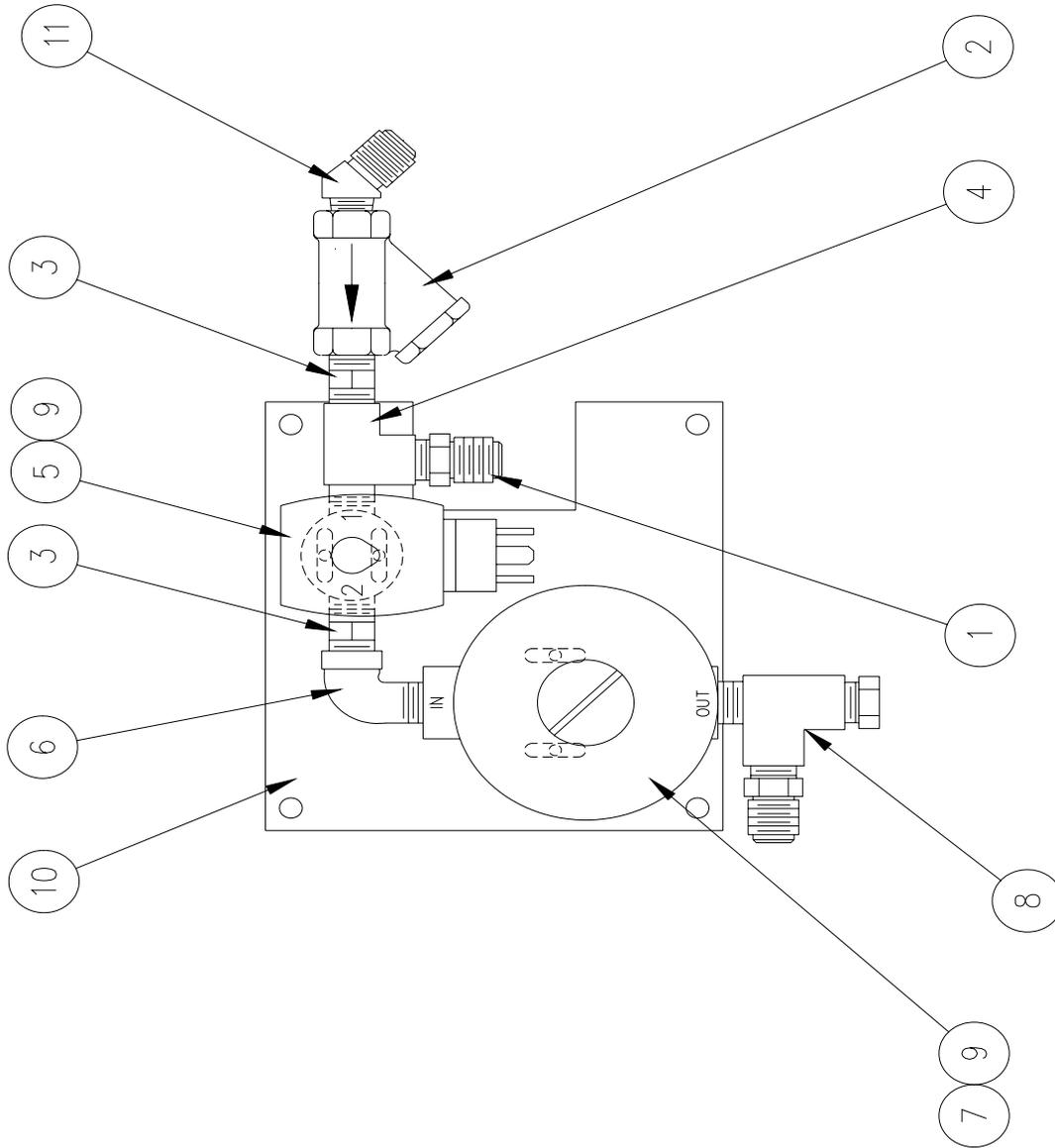
CONTROL BOX ASSEMBLY



CONTROL BOX ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43665	1	ENCLOSURE REWORK
2	25278	1	SPARK CONTROL MODULE
3	50559	1	WIRING HARNESS
4	50250	2	TERMINAL STRIP
5	50215	1	RECEPTACLE 5 - PIN
6	50344	3	GASKET
7	24024	1	CORD GRIP
8	50251	2	DIGITAL READOUT
9	43391	1	PACSTAT CONTROLLER (150-550)
10	43397	2	PACSTAT CONTROLLER (200-400)
11	50517	2	RECEPTACLE 6 - PIN
12	50719	2	TOGGLE SWITCH
13	51665	1	CIRCUIT BREAKER - 15 AMP
14	51651	2	INDICATOR LAMP
15	24021	1	CORD GRIP
16	51661	1	RELAY, DPDT 12VDC
17	51662	1	RELAY SOCKET
18	51663	1	HOLD DOWN SPRING

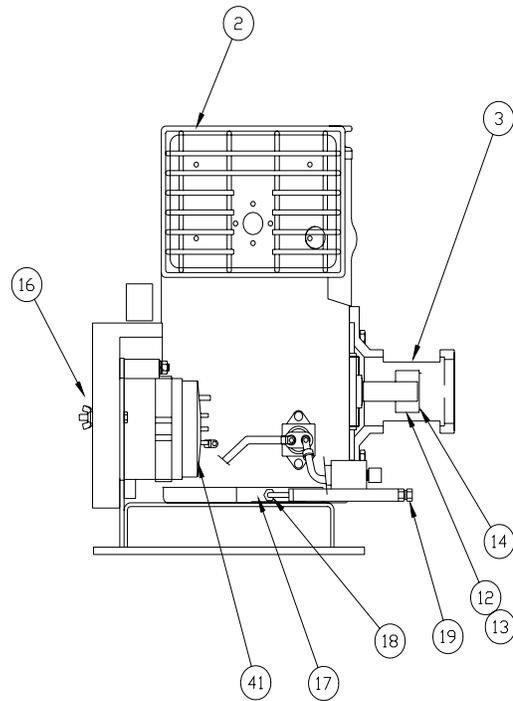
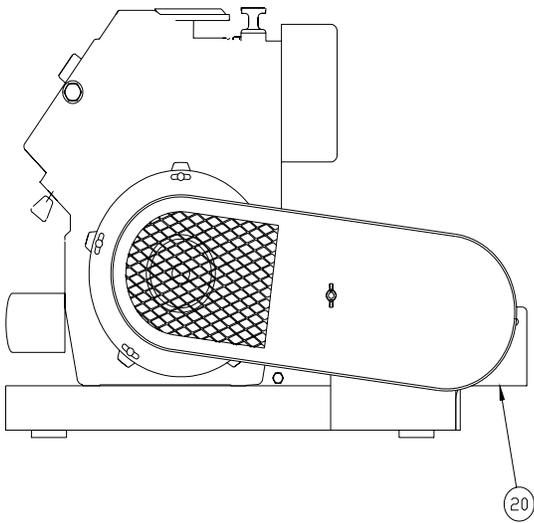
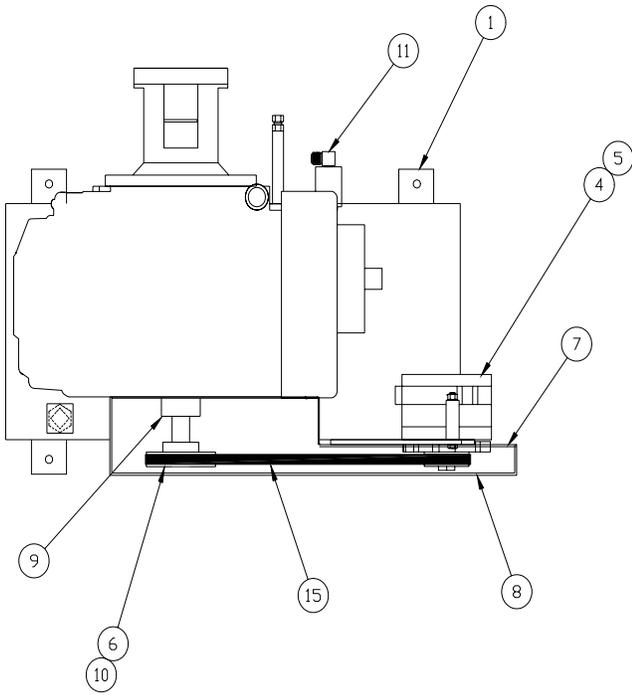
GAS MANIFOLD ASSEMBLY



GAS MANIFOLD ASSEMBLY

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	29839	2	1/4 NPT X 3/8 JIC ADAPTOR
2	25208	1	1/4 STRAINER
3	51401	2	1/4 HEX PIPE NIPPLE
4	29980	1	1/4 STREET TEE
5	25236	1	SOLENOID VALVE
6	28236	1	1/4 STREET ELBOW
7	25087	1	FISHER REGULATOR
8	43441	1	3/8 JIC TEST PORT ELBOW
9	28825	4	8-32 X 3/8 THR. CUT SCREW
10	43761	1	MANIFOLD MOUNTING PLATE

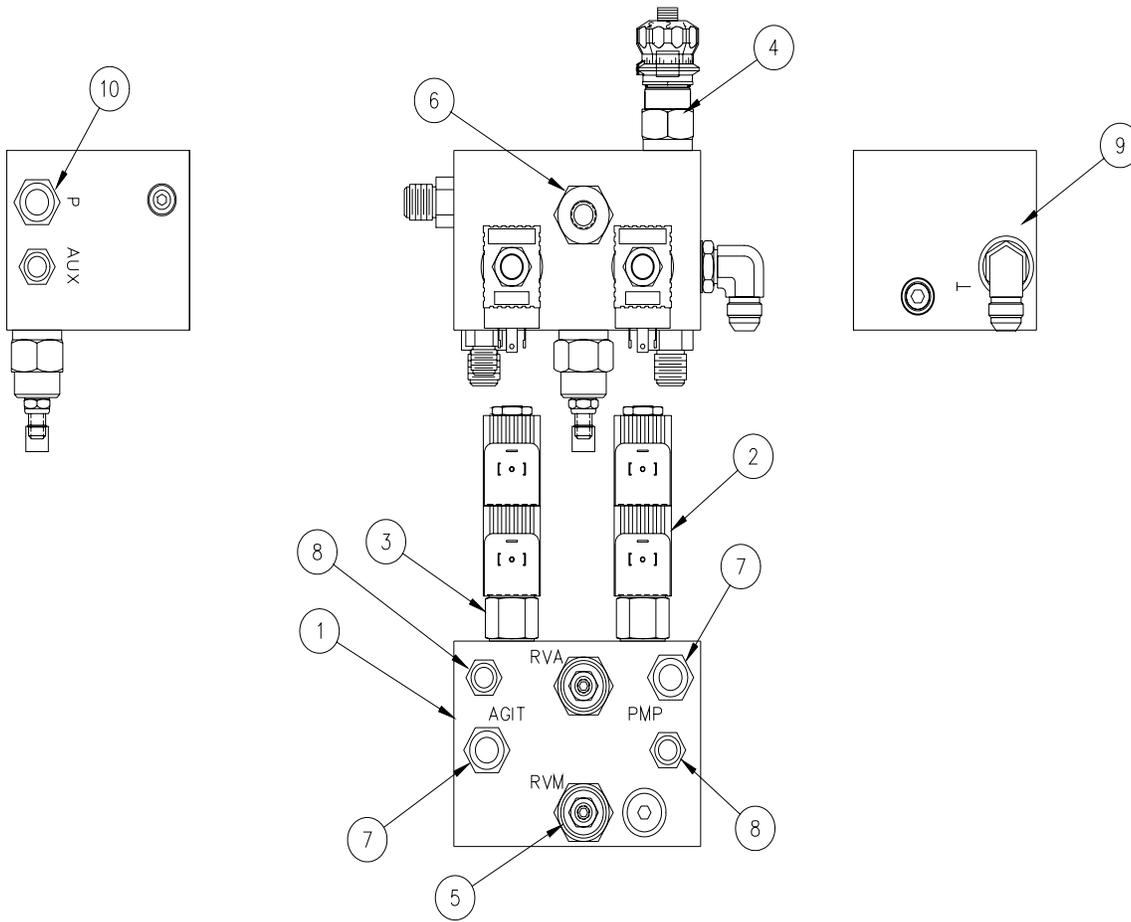
POWER - PACK ASSEMBLY



POWER - PACK ASSEMBLY

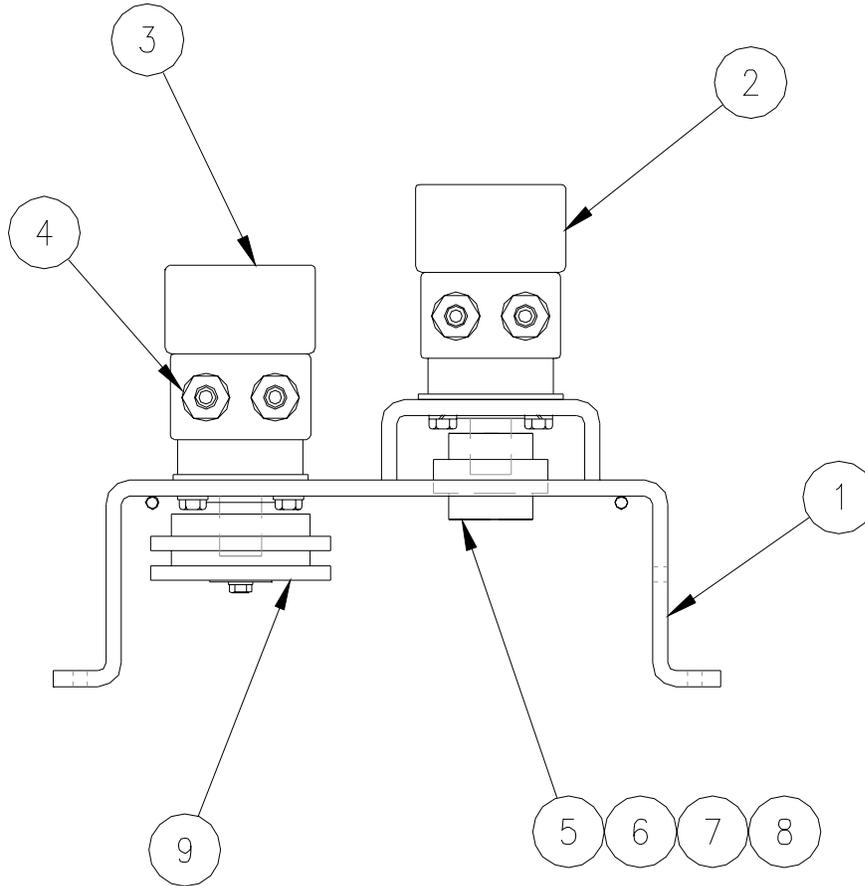
NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	55339	1	MOUNTING BASE - ENGINE
2	43480	1	ENGINE, 14 HP
3	44806	1	HYD. PUMP ADAPTOR
4	43612	1	GENERATOR, 24 VAC
5	43887	3	TERMINAL BOOT
6	55340	1	PULLEY, DRIVE
7	55337	1	BELT GUARD - INNER
8	55338	1	BELT GUARD - OUTER
9	55341	1	DRIVE SHAFT, FRONT
10	50066	1	BUSHING, TAPERLOCK - 1"B
11	29871	1	3/8 J X 1/4 NPT ELBOW
12	44829	1	1" BORE COUPLING
13	27017	1	SHAFT KEY
14	44830	1	SPIDER, COUPLING
15	43557	1	BELT, AX-39
16	28619	1	5/16-18 WING NUT
17	29834	1	3/8 NPT X 3/8 J ADAPTOR
18	SEE DESC.	1	AX6-6MP-6FJ9-8 HOSE
19	28267	1	3/8 PIPE CAP
20	55358	1	ALTERNATOR BRACKET REAR SUPPORT

HYDRAULIC VALVE ASSEMBLY



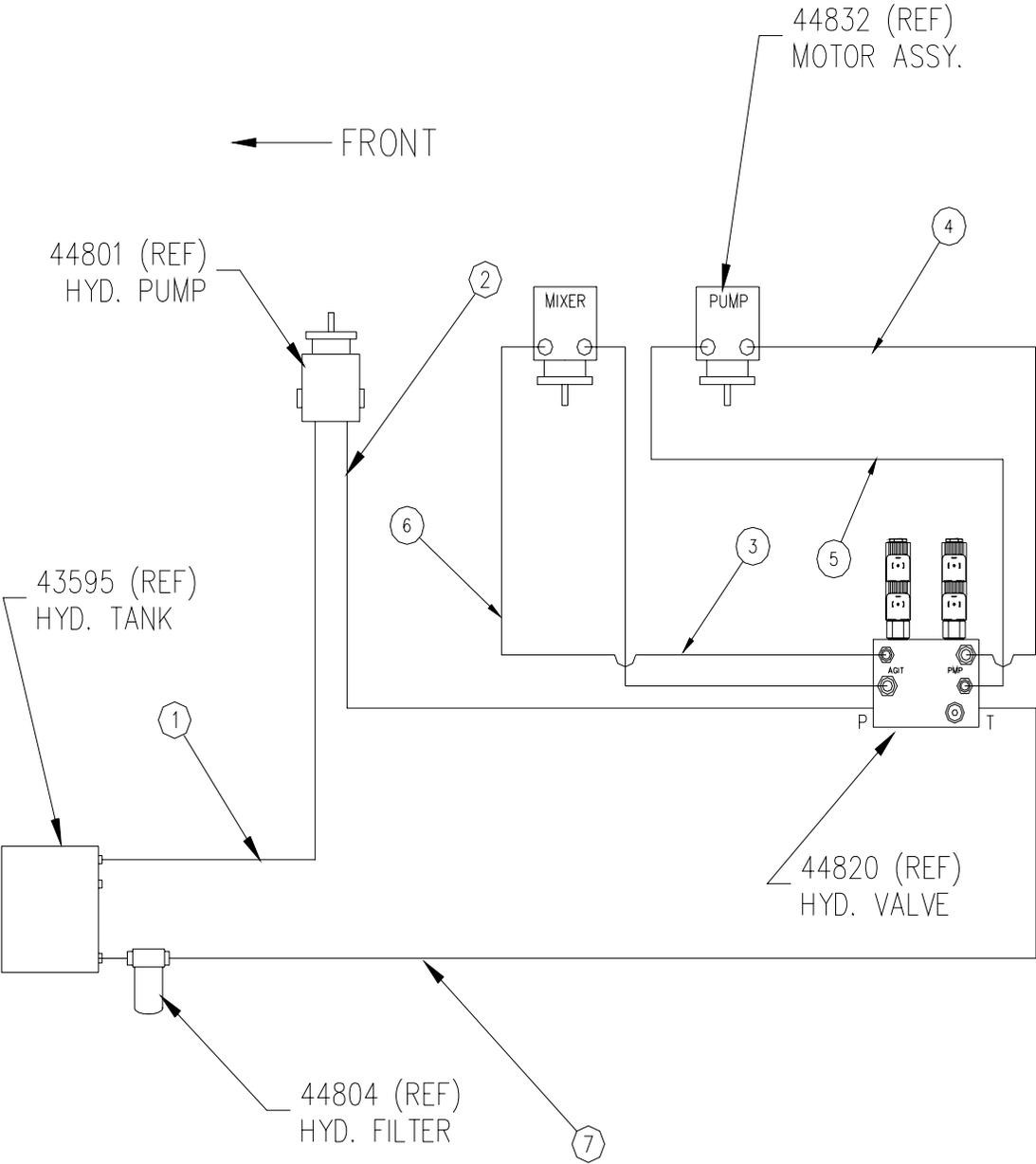
NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	44800	1	HYDRAULIC VALVE ASSEMBLY
2	43854	3	COIL-CONTROL VALVE
3	44810	1	CARTRIDGE - PUMP
4	44813	1	FLOW CONTROL
5	44812	2	RELIEF VALVE
6	44811	1	FLOW CONTROL, 1.5 GAL.
7	29919	2	9/16-18 O-RING X 3/4-16 TUBE ADAPTER
8	40311	2	9/16-18 O-RING X 9/16-18 TUBE ADAPTER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

PUMP/AGITATOR ASSEMBLY



NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43345	1	MOTOR MOUNTING BRACKET
2	44809	1	HYDRAULIC MOTOR - PUMP
3	22027	1	HYDRAULIC MOTOR - AGITATOR
4	22029	4	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 1/4 X 7/8
9	43323	1	SPROCKET - AGITATOR DRIVE

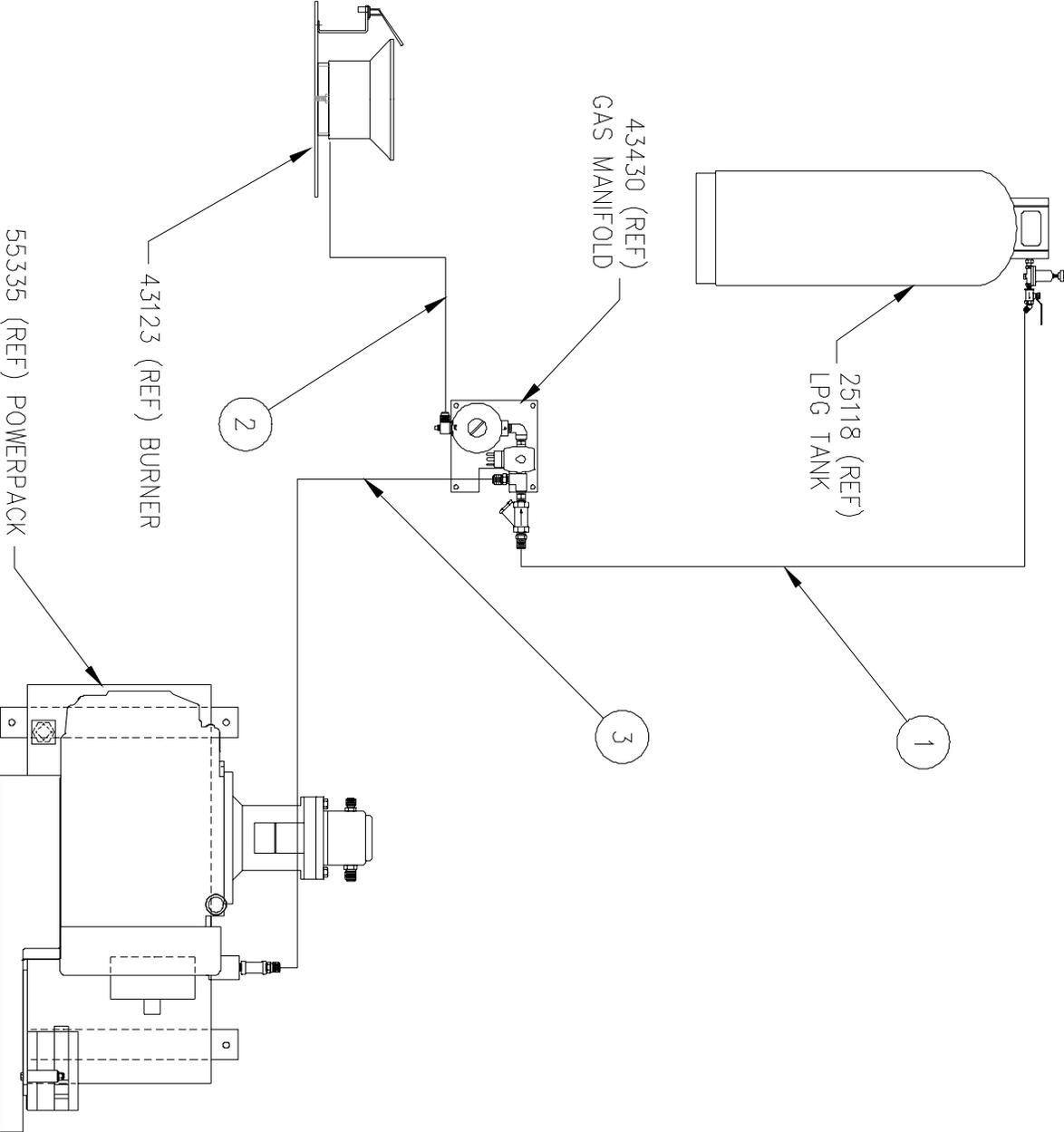
HYDRAULIC DIAGRAM



HYDRAULIC DIAGRAM

1. HYD. RESERVIOR TO HYD. PUMP (SUCTION)		
1	29915	1' TUBE X 1 1/4 O-RING ELBOW
1	C12-16FJ-12FJ9-14	HYD. HOSE ASSY., 3/4 X 14"
1	29916	3/4 TUBE X 3/4 O-RING ELBOW
2. HYD. PUMP "PRESS" PORT TO HYD. VALVE "P" PORT		
1	29862	5/8 TUBE X 5/8 O-RING ELBOW
1	AX8-10FJ-8FJ9L-70	HYD. HOSE ASSY., 1/2 X 70"
1	29869	3/8 TUBE X 1/2 O-RING ELBOW
3. HYD. VALVE ("TO AGIT" PORT) TO MIXER PORT		
1	40311	3/8 TUBE X 3/8 O-RING ADAPTER
1	AX6-8FJ-6FJ9-20	HYD. HOSE ASSY., 3/8 X 20"
1	22029	3/8 TUBE X 5/8 O-RING ADAPTER
4. HYD. VALVE ("PUMP A" PORT) TO PUMP MOTOR		
1	29919	1/2 TUBE X 3/8 O-RING ADAPTER
1	AX6-8FJ-6FJ9-15	HYD. HOSE ASSY., 3/8 X 15"
1	22029	3/8 TUBE X 5/8 O-RING ADAPTER
5. PUMP MOTOR TO HYD. VALVE ("PUMP B" PORT)		
1	22029	3/8 TUBE X 5/8 O-RING ADAPTER
1	AX6-6FJ-6FJ9L-17	HYD. HOSE ASSY., 3/8 X 17"
1	40311	3/8 TUBE X 3/8 O-RING ADAPTER
6. MIXER MOTOR TO HYD. VALVE ("FROM AGIT" PORT)		
1	22029	3/8 TUBE X 5/8 O-RING ADAPTER
1	AX6-6FJ-6FJ9L-22	HYD. HOSE ASSY., 3/8 X 22"
1	29919	1/2 TUBE X 3/8 O-RING ADAPTER
7. HYD. VALVE "T" PORT TO HYD. FILTER		
1	29869	3/8 TUBE X 1/2 O-RING ELBOW
1	AX8-8FJ-12FJ9-84	HYD. HOSE ASSY., 1/2 X 84"
1	29816	3/4 TUBE X 1 O-RING ADAPTER

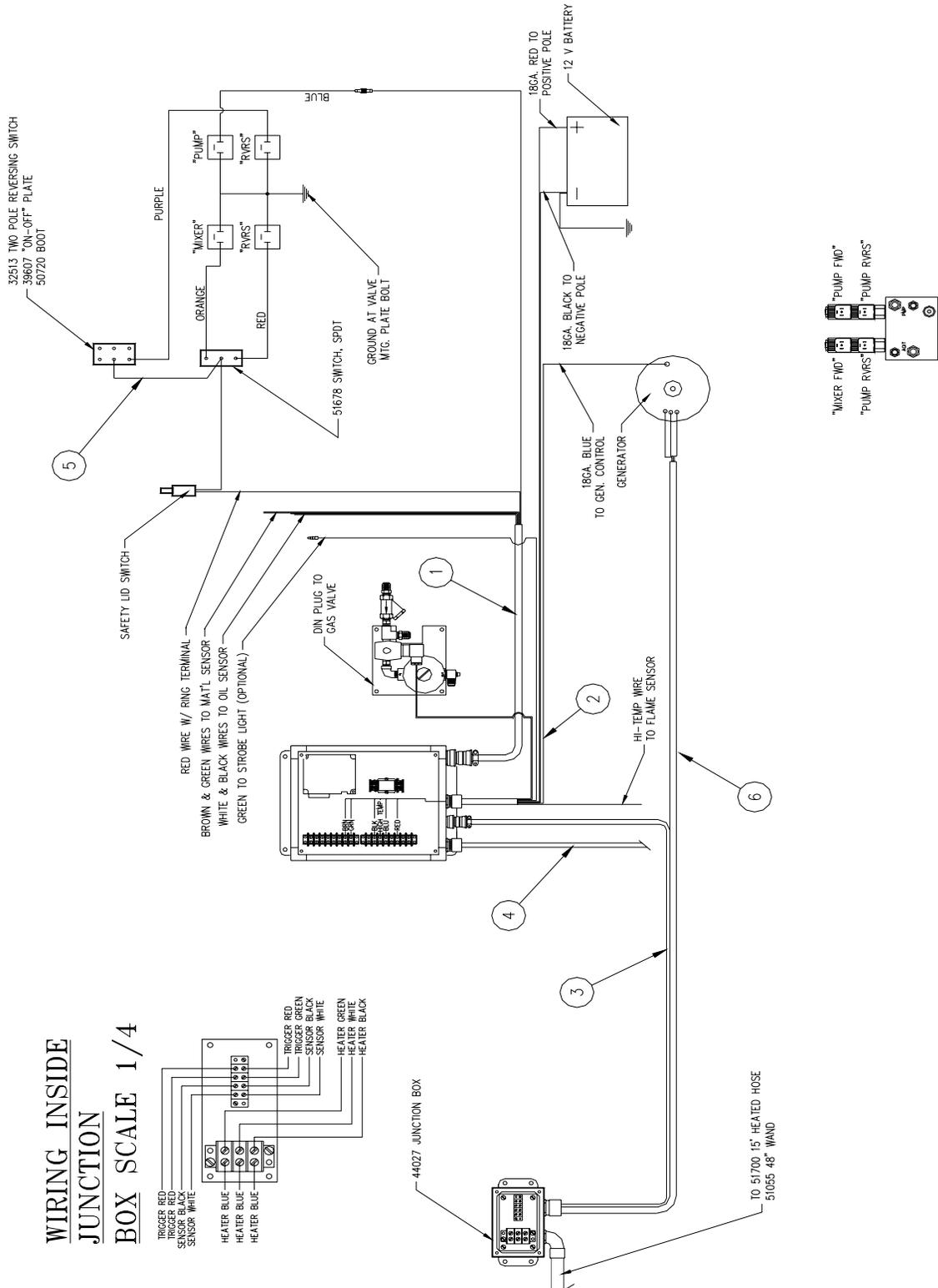
LPG SCHEMATIC



LPG SCHEMATIC

1. L.P.G. TANK TO MANIFOLD		
1	25073	SPUD AND REGULATOR ASSY., CONTAINS:
1	25123	TANK SPUD
1	25066	REGULATOR
1	28001	1/4 CLOSE
1	29195	1/4 BALL VALVE
1	29857	3/8 TUBE X 1/4 NPT 45 ELBOW
1	25131	HOSE ASSY., 3/8 X 60"
1	29839	3/8 TUBE X 1/4 NPT ADAPTOR
2. MANIFOLD TO BURNER		
1	43441	3/8 TUBE X 3/8 NPT ELBOW W/TEST PORT
1	25128	FIREJACKET HOSE ASSY., 3/8 X 23"
1	29959	3/8 TUBE X 3/4 NPT FEM. ELBOW
3. MANIFOLD TO POWERPACK		
1	29839	3/8 TUBE X 1/4 NPT ADAPTOR
1	25131	HOSE ASSY., 3/8 X 60"
1	29871	3/8 TUBE X 1/4 NPT ELBOW

ELECTRICAL SCHEMATIC



ELECTRICAL SCHEMATIC

NUMBER	PART NUMBER	QTY.	DESCRIPTION
1	43687	1	SENSOR CABLE
2	43489	1	BURNER CABLE
3	43903	1	TRIGGER/SENSOR CABLE
4	50438	1	HI-VOLTAGE WIRE TO BURNER IGNITOR
5	43922	1	CABLE ASSY, LID SWITCH
6	43921	1	CABLE ASSY, VALVE
7	43900	1	HOSE CABLE

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