



E-Z POUR 400 DIESEL MELTER DOUBLE PUMPER

**PART MANUAL - 26231
Rev. C**

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E-Z POUR 400 DIESEL MELTER DOUBLE PUMPER

This manual is furnished with each new **CRAFECO E-Z POUR 400 DIESEL MELTER - DOUBLE PUMPER**. The manual will help your machine operators learn to run the sealer properly and understand its mechanical functions for trouble-free operation.

Your **CRAFECO E-Z POUR 400 DIESEL MELTER - DOUBLE PUMPER** is designed to give excellent service and save maintenance expense. However, as with all specifically engineered equipment, you can get best results at minimum costs if:

- (1) You operate your machine as instructed in this manual, and
- (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 tanks.

- 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.

SAFETY PRECAUTIONS

- Replace any hoses which show signs of wear, fraying, or splitting. Be sure all fittings and joints are tight and leak-proof.

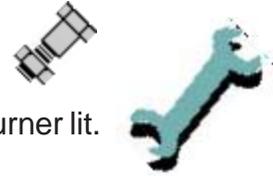
- Precaution is the best insurance against accidents.

- The E-Z Pour 400 Diesel 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.

- Refer to Compressor Manual for operating procedures & safety precautions.



E-Z POUR 400 DIESEL MELTER DOUBLE PUMPER 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 borne 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.....	400 Gallons
Melt Capacity.....	250 Gallons/Hour
Heat Transfer Oil Required.....	55 Gallons at 70° F
Tank Construction.....	Double Boiler Type
Tank Opening Size (2).....	16" X 24"
Maximum Heat Input.....	Diesel, Burner- 425,000 BTU
Burner and Temperature Control.....	Automatic-Digital
Engine - Isuzu.....	3 Cylinder 33 HP @ 3000 rpm
Drive Mechanism.....	All hydraulic with infinite speed forward & reverse action.
Mixer.....	Full sweep mixer with 2 blades.
Axle (2).....	6,000 lbs.capacity each.
Tires (4).....	LT 235/85 R16 (Load Range E) (3042 lbs. capacity each)
Dry Weight.....	Approximately 5,600 lbs.
Diesel Tank	30 Gallons

OPERATING INSTRUCTIONS

INTRODUCTION

The CRAFCO E-Z Pour 400 Diesel Melter was developed to melt CRAFCO Brand Sealants. However, it will work equally well with all road asphalts and federal specification crack or joint sealants.

DO NOT operate machine without reading operator's manual, being thoroughly familiar with controls, and following these instructions:

1. Fill engine fuel tank with diesel fuel (use #1 in cold weather, #2 in warm weather).
2. Check engine crankcase oil (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 at the top mark. **DO NOT** overfill, or spillage may occur when oil is heated and expands.
5. All valves should be in closed position and "POWER" switch "OFF". Temperature dials at minimum setting.
6. Applicator hose can be kept warm and ready for use by storing in heating chamber before using machine. Close heating doors after hose and wand have been coiled in chamber.
7. Remember that safe operation of this equipment is the operator's responsibility.

LOADING THE MACHINE

When loading solid material into the sealant tank, the mixer must be momentarily stopped, the lid lifted, the material placed on the lid and the lid closed again before the mixer is restarted. 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 are fed too quickly, jamming will result and slow down the melting process.



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 sole 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

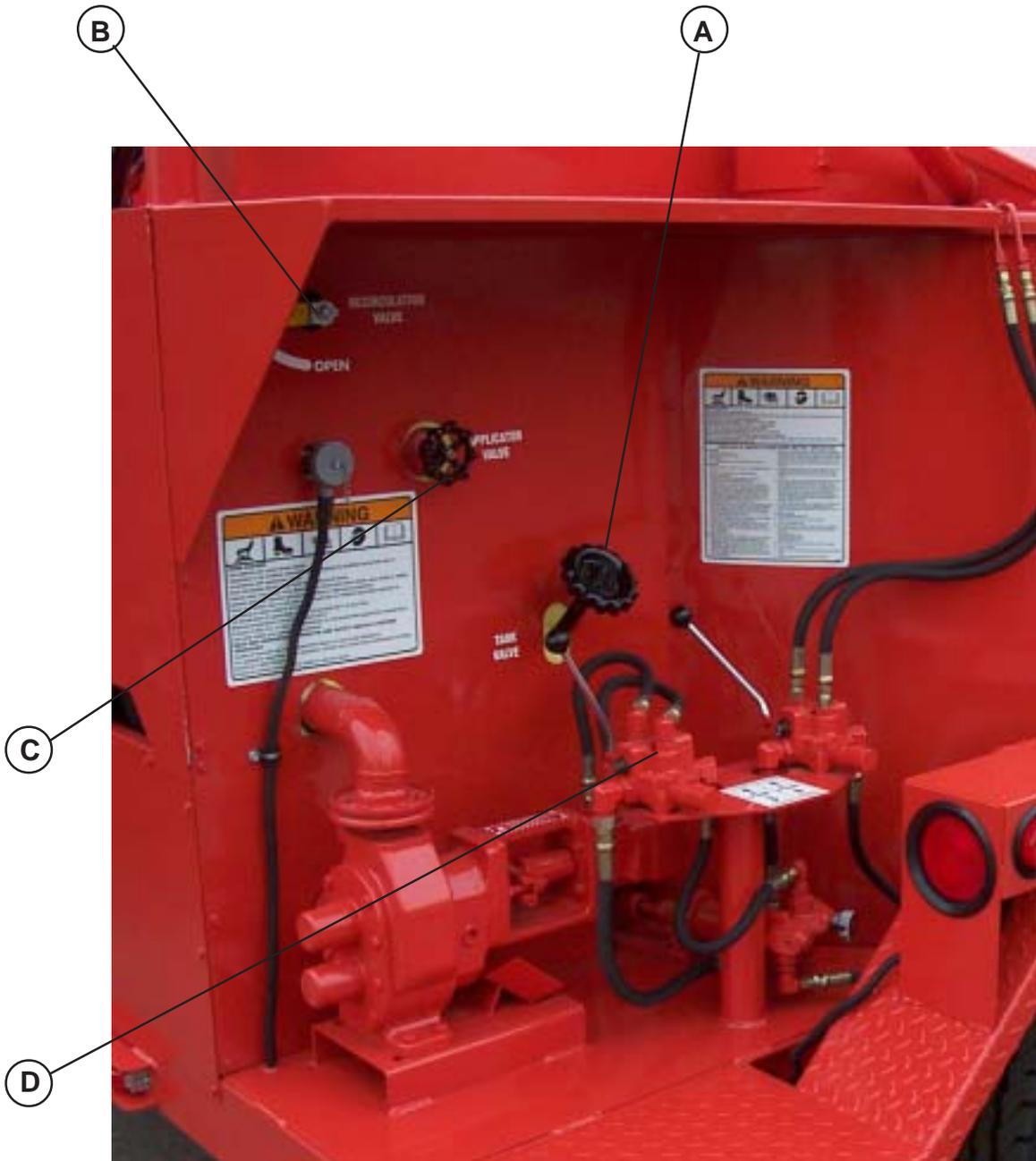
1. Fully open the damper vent.
2. Start engine per Engine Manual.
3. Turn "POWER" toggle switch at control box "ON" (Page 13, item J)
4. Set hot oil temperature at 500F. (Page 13, item H) and material temperature at manufacturesrecommended temperature. (Page 13, item F)

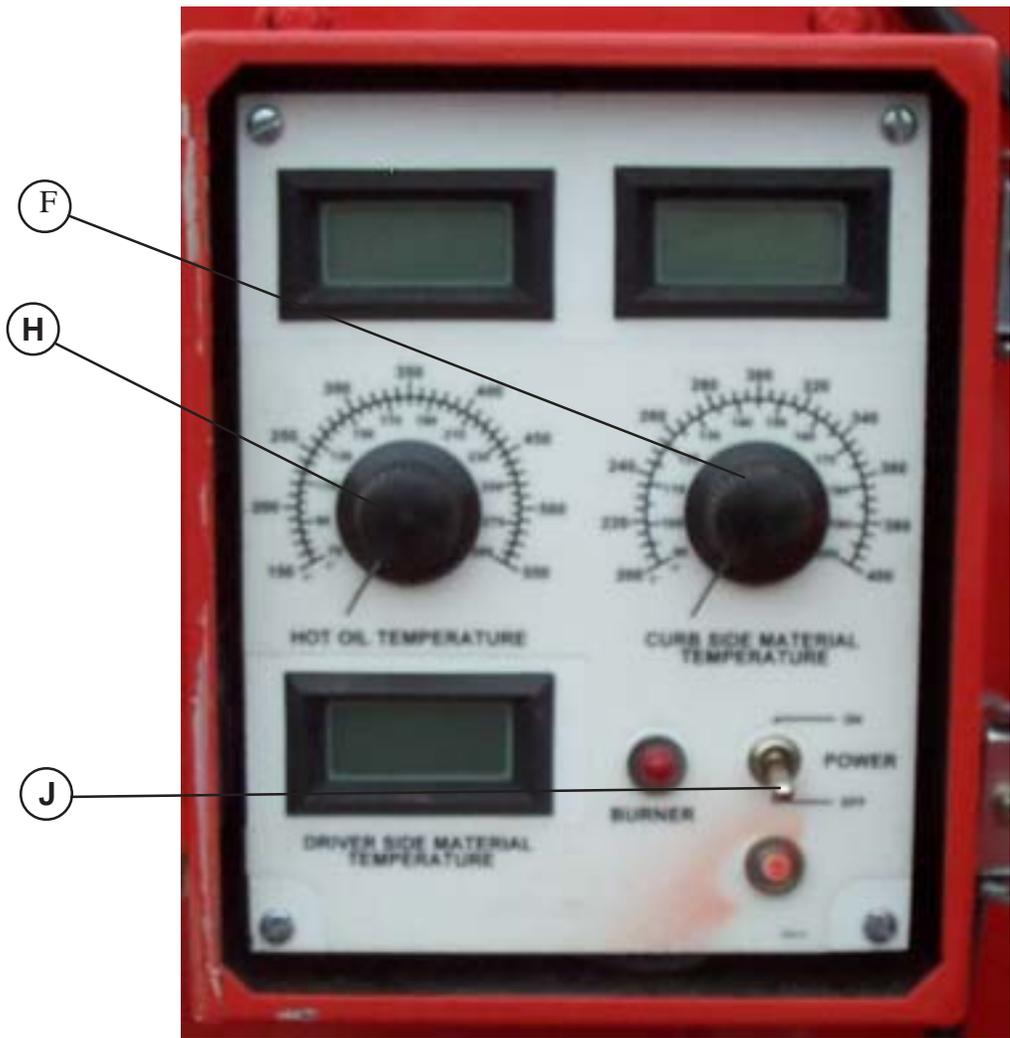
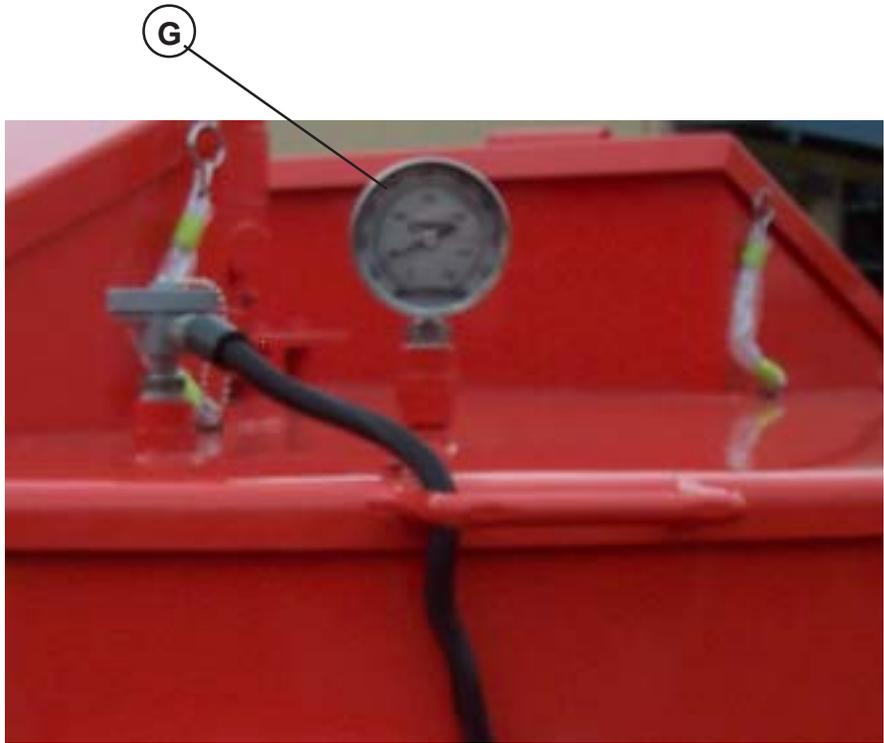


CAUTION:

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).

5. Allow the heating oil to continue to heat. When sealant material reaches 275F. mixer may be engaged by moving the agitator level either forward or backward. If mixer does not move, allow material to heat longer. Jamming of mixer shaft causes hydraulic oil to over heat and machine damage will occur. (Page 13, item G)
6. When sealant reaches correct application temperature, open main tank valve (Page 12, item A), open recirculation valve (Page 12, item B) and close applicator valve (Page 12, item C). Put sealant pump in reverse (Suction) mode. When pump turns freely, reverse sealant pump flow (Discharge) (Page 12, item D). This circulates sealant back into tank.
7. Check the sealant temperature in control box. This indicates the temperature of sealant flowing through lines.
8. When application of sealant is desired, remove the hose from the rear of machine. Attach hose to hand applicator. Be sure to hand tighten only. Place applicator in rear tank opening, with the hand wand valve in the **ON** position.
9. Open applicator valve (Page 12, item C).
10. Close the recirculation valve (Page 12, item B). **IMPORTANT:** Adjust the valve to get the desired amount of flow from the applicator wand given your applicator needs. You do not need to close the valve all the way for application. If material does not flow from wand, the hose may need to be warmed. Heat hose by placing in heating chamber to liquify sealant in hose, then repeat procedure.
11. Extreme care should be taken when changing or installing applicator tips. If the material is hot the material pump **must** be put in the "**SUCTION**" mode. This will insure against hot material pumped from wand. ***Sealant material is hot and can cause skin burns.***
12. To apply sealant to joint, remove hand applicator from rear tank opening. **Make sure** the hand wand valve is closed. When applicator wand is over joint, open hand valve and apply sealant.
13. To prevent hose from cooling, place the applicator wand in the rear tank opening when not to be used for 2 minutes or more. Always close hand wand prior to inserting wand in tank opening. Open hand valve to recirculate back into tank and keep hose warm.





RTD SENSOR - OHMS vs. TEMPERATURE

The following chart shows what the ohm reading would be for a given temperature. 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

START UP PROCEDURES FOR SECOND MATERIAL PUMP E-Z 400 DOUBLE PUMPER

1. Follow steps numbers 6 through 13 in your Operators Manual page 11 after you have completed the steps for the first material pump.
2. If the operator does not need to use the second pump through out the day he must still circulate the material in the plumbing of the second pump for approximately 5 minutes so that the material in the pump does not jell or harden from reheating one too many times. Do this at least one time per use of unit.
3. When shutting down the pump follow the steps on page 16, steps 2 through 5.

SHUTDOWN AND CLEAN-OUT PROCEDURE

1. Turn the temperature dial to “**OFF**”.
2. Move mixer control valve to “**OFF**” position.
3. Close recirculation valve.
4. Put material pump in suction mode. With hand applicator valve open, disconnect wand and return hose to heat chamber. Close applicator valve. Open recirculation valve. Close main tank valve.
5. Return material pump control valve to “**OFF**” position.
6. Turn off engine.
7. Return wand to heat chamber.

STORING MACHINE

The E-Z Pour 400 Diesel Double Pumper should be stored in an area to prevent moisture from entering machine. This will allow the moisture condensation to settle to the bottom rear of the heat transfer oil tank, above the drain plug. After extended periods of time, the water can be drained by removing the plug and replacing it when all water is displaced.



CAUTION:

If there is any suspicion that moisture is still present after draining, warm heat transfer oil to 300° F. for 2 or 3 hours to evaporate any moisture.

INSTRUCTION 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 from Name Plate

Write, telephone, or fax:

CRAFCO, INC.
235 SOUTH HIBBERT
MESA, AZ 85210
480-655-8333
480-655-1712
Toll Free: 1-800-528-8242

MAINTENANCE INSTRUCTIONS

ENGINE:

See engine owners manual for additional 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::

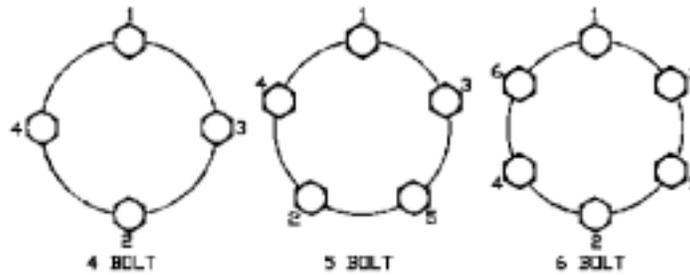
Check oil level every 8 hours of operation. Change oil every 500 hours of operation.

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 retorqued 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 Operator Maintenance Service Manual located in the manual box.

TONGUE JACK:

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

SEALANT PUMP:

Adjust pump packing periodically. A slight drippage (several drops per minute) should be allowed. Refer to Pump Section for details.

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).

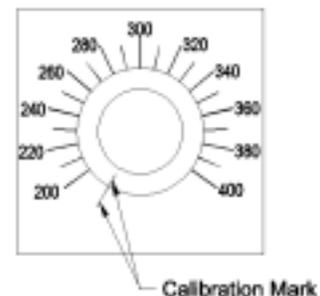


Fig. 1

MAINTENANCE CHART

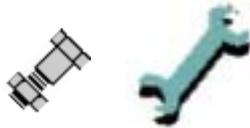
		HOURS			
LOCATION	PROCEDURE	8	50	250	500
Engine check oil level	See Engine Instruction Manual.	*			
Other engine maintenance	See Engine Operating and Maintenance Instructions.				
Battery	Check water level weekly.				
Heat transfer oil	Check.	*			
Heat transfer oil	Change.				*
Hydraulic oil filter	Change.			*	
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.			

GENERAL MAINTENANCE ITEMS

RECOMMENDED QUANTITY	DESCRIPTION	PART NO.
1 Set	Packing, Sealant Pump	29990
1	Sealant Hose Assembly	27009
1	Engine Oil Filter	45381
1	Engine Fuel Filter	41867
1	Hydraulic Filter	44805
1	Air Filter	45382

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. Refer to General Maintenance Items.
3. Watch for leaks - tighten packing on pumps as necessary.
4. Clean machine externally periodically. Check with sealant manufacturer for recommendation.
5. Follow recommended maintenance procedures on maintenance chart.

RECOMMENDED FLUIDS & LUBRICANTS

APPLICATION	RECOMMENDED	FULL POINT
Engine Oil	Refer to Isuzu Engine Operating Manual.	
Diesel	#1 Cold Climate #2 Warm Climate	30 Gal.
Hydraulic Oil	RONDO OIL-HD-68 Texaco	28 Gal.
Heat Transfer Oil		51 Gal.

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

PRODUCER	PRODUCT NAME	PRODUCT NO.
Texaco	Regal	R&O 68
Gulf	Harmony	68
Shell	Thermia	"C"
Exxon	Teresstic	68
Phillips	Magnus	68
Chevron USA	Heat Transfer Oil #1	
Conoco	Dectol R&O	68
Union Oil	Turbine Oil	68

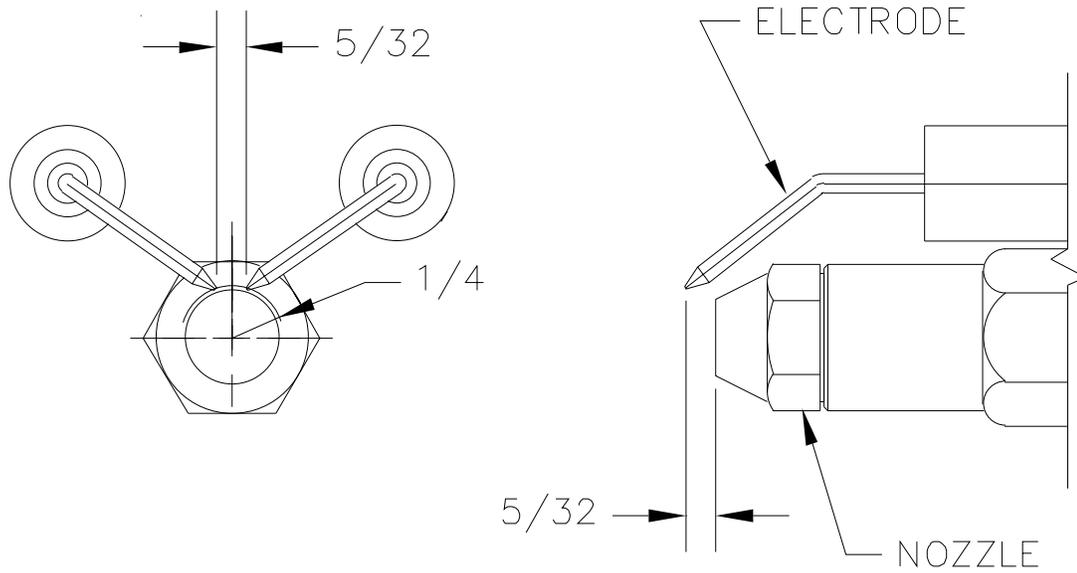


WARNING:

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 the warranty to be void.

All oils subjected to high temperatures deteriorate with time and lose many of their characteristics. Test 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.

DIESEL BURNER ELECTRODE ADJUSTMENTS



DIESEL BURNER SETTINGS

Air Shutter = 5
Air Band = 5
Fuel Pressure = 140 PSI
Adjustment Plate = 3

TROUBLE SHOOTING GUIDE

PROBLEM	CAUSE	REMEDY
Mixer will not rotate.	Sealant temperature too low.	Continue to heat material.
	Too many blocks placed at one time.	Continue to heat material & try reversing mixer.
	Inadequate hydraulic flow/pressure.	Check hydraulic fluid level. Reset pressure/check flow if necessary.
Material pump will not turn.	Material in tank not to operating temperature.	Continue heating material.
	Inadequate hydraulic, flow/pressure.	Check hydraulic fluid level. Reset pressure/check flow as necessary.
	Material pump damaged or foreign object lodged in pump.	Replace/Remove.
Sealant will not recirculate back into tank through recirculation valve.	Material in tank not to correct temperature.	Continue heating material.
	Drain valve closed.	Open valve.
	Material still cold in suction line. Recirculation valve closed.	Make sure compartment temperature is adequate to melt material. Open valve.
Sealant material flows through recirculation valve but will not flow through application hand wand.	Application valve not open.	Open valve.
	Recirculation valve still open or damaged internally.	Close valve or replace.
	Hose/wand still cold.	Leave in chamber until hot.
When applying sealant it stops flowing from applicator wand.	Hand applicator valve was left in off position too long.	Heat hose by placing in heat chamber to liquify sealant.
	Too many blocks of material added to tank. Cold material entered pump & stopped flow.	Heat hose by placing in heating chamber to liquify sealant.
	Tank fluid level too low for material to flow into pump.	Continue heating material until more liquid material is available.
Pump rotates, but will not pump material.	Material pump worn or damaged.	Replace/Repair.
	Pump rotating in wrong direction.	Reverse control lever.
	Foreign object lodged in inlet line to pump.	Dislodge by reversing pump or disassemble inlet line.
	Material cold, inlet still solid.	Continue to heat material.
	Block of sealant over drain.	Dislodge by reversing mixer and pump.
Slow heat up of sealant.	Build up of coked or crystallized material on inside of material tank.	Allow machine to cool. Remove deposits and flush with solvent.
	Burner not operating.	See Burner Trouble Shooting Guide.
	Low heating oil level.	Make sure fluid level is correct.
	Low heating oil temperature.	Set at recommended temperature.
	Heating oil old or has crystallized.	Replace it as recommended every 500 hours.

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
Bleed fuel system if white or blue smoke appears through exhaust stack

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 3-5
Blower motor not turning at correct speed
Alternator charging at 14 volts
Faulty 12 volt battery

PUMP SECTION PACKING INSTRUCTIONS

Operate the pump under normal conditions and, after a short run-in period, examine packing for leakage. If leakage is excessive tighten locknuts evenly until there is only slight leakage from the packing rings. This slight leakage is a necessary and normal condition for packing and allows for expansion and proper seating.



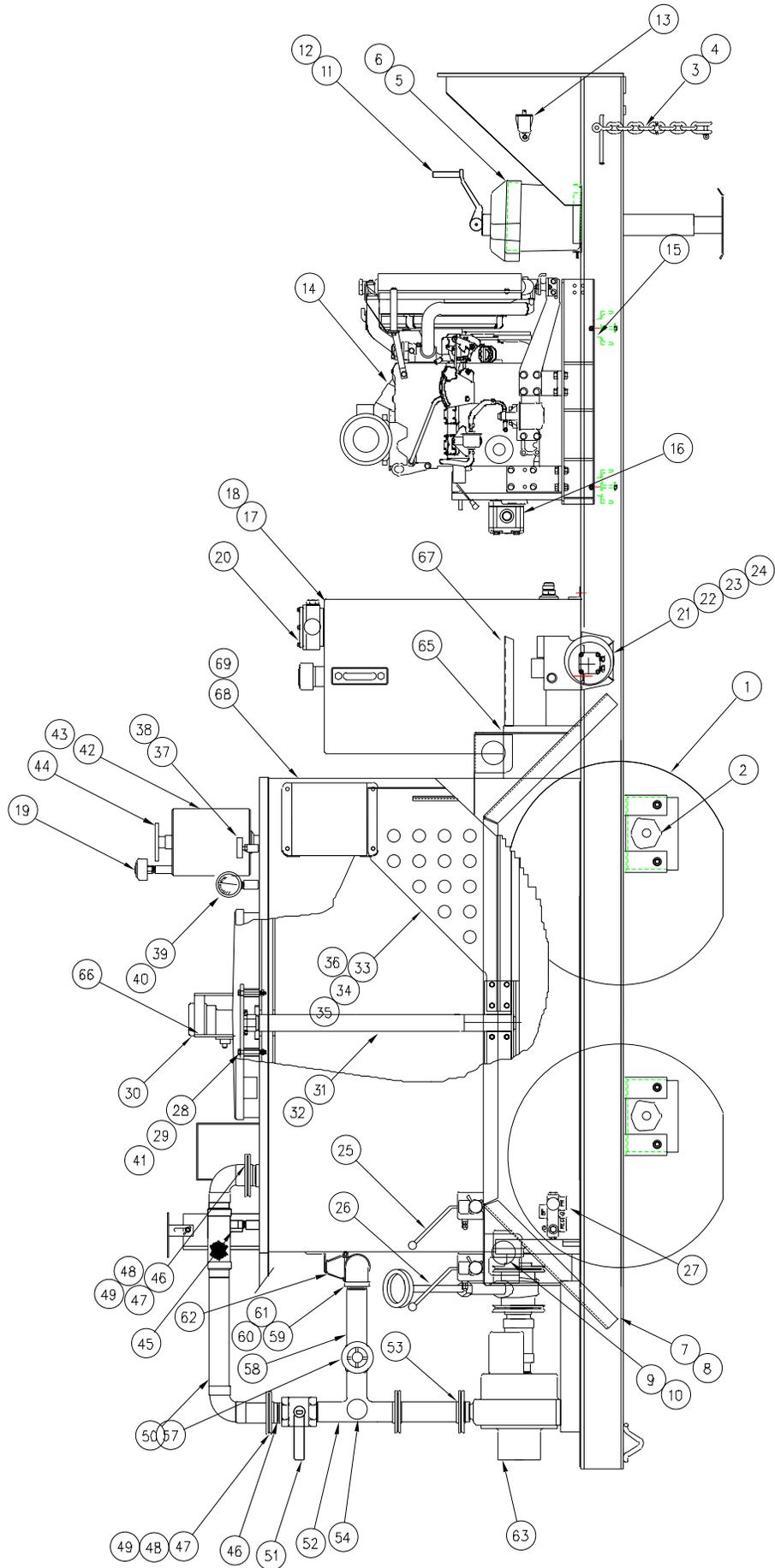
NOTE:

WHERE LIQUID IS BEING HANDLED, THAT IS HAZARDOUS OR VOLATILE, FULL PRECAUTIONS SHOULD BE TAKEN DURING THE RUN-UP PERIOD.

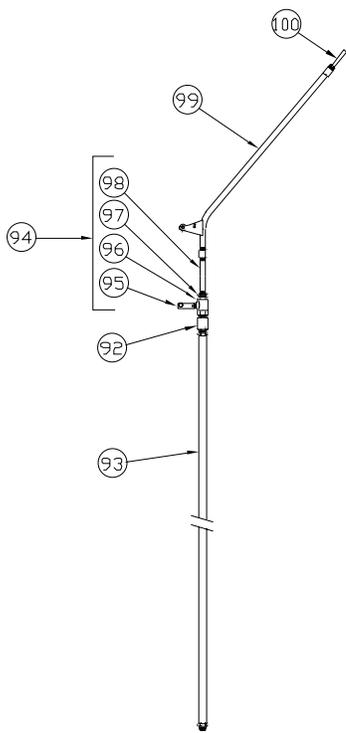
To replace packing remove key, two nuts and clips, packing gland and packing rings. (Packing hooks are commercially available to assist in removing the packing rings). Clean the shaft and adjacent parts. Examine the shaft, if it is excessively worn or scored, replacement of pump may be necessary.

Insert packing rings, making sure the joints are staggered 180 degrees. Use split ring bushings to seat each ring before adding the next ring. The rings must not be taped or seated in place too tightly. When the packing box is sufficiently full to allow entry of the packing gland (about 1/4") reassemble the packing gland, clips and nuts. Draw up evenly on the packing gland to assure proper seating of the packing, and then loosen nuts about 1/2 turn. Do not cock the packing gland. (This could cause binding or heating of the shaft).

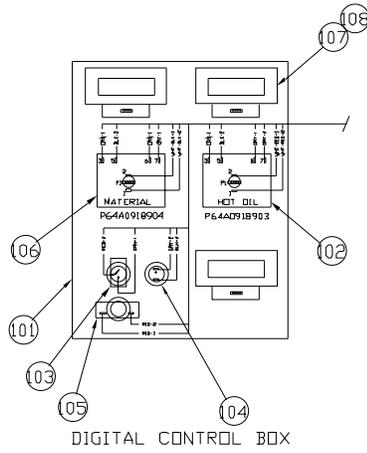
E-Z 400 DIESEL MELTER - DOUBLE PUMPER



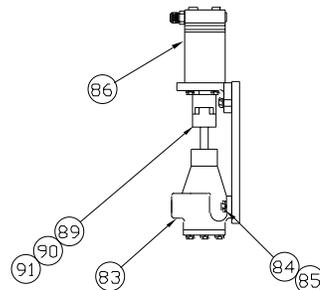
E-Z 400 DIESEL MELTER - DOUBLE PUMPER



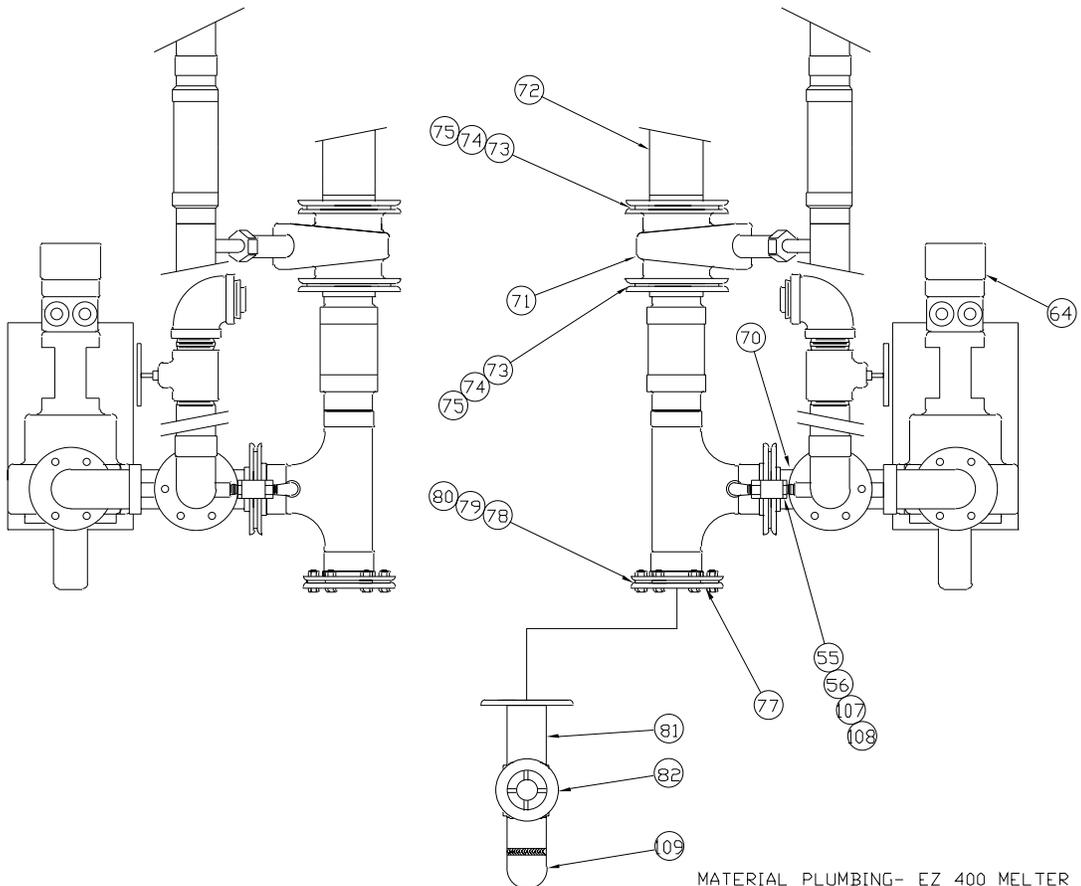
MATERIAL HOSE AND WAND ASSY



DIGITAL CONTROL BOX



HOT OIL PUMP



MATERIAL PLUMBING- EZ 400 MELTER

PARTS LIST FOR E-Z 400 DIESEL MELTER - DOUBLE PUMPER

NUMBER	PART NUMBER	QTY	DESCRIPTION
1	90100	4	16" TIRE AND RIM
2	45704	2	6000# TORSIONAL AXLE
3	20130	2	3/8 X 48" SAFETY CHAIN
4	20132	2	9/16 SHACKLE CONNECTOR
5	24000	1	12 VOLT BATTERY (GROUP 24)
6	24002	1	ENCLOSED BATTERY BOX
7	45720	1	FENDER ASSEMBLY
8	45720	1	FENDER ASSEMBLY
9	44771,44772	2	LIGHT (4" STOP)-- LIGHT (2 1/2" SIDE)
10	44769	4	2 1/2 YELLOW CLEARANCE LIGHT
11	23082	1	TONGUE JACK SIDE MOUNT
12	23095	1	JACK SWIVEL BUSHING
13	23117	1	BREAKAWAY SWITCH UNIT
14	45390	1	37 HP ISUZU ENGINE
15	29399	4	ISOMOUNT 3/8-16 THREAD INSERT
16	42664	1	P315B DOUBLE HYDRAULIC PUMP
17	43591	1	32 GAL DIESEL TANK ASSEMBLY
18	43590	1	32 GAL HYDRAULIC TANK ASSEMBLY
19	26025	1	AIR BREATHER & ELEMENT 1/2"L R-A
20	44805	1	FILTER ELEMENT (REPLACEMENT)
21	41891	1	ADC 14 VOLT BURNER
22	44785	1	BURNER NOZZLE
23	41890	1	14 V BLOWER MOTOR (SERVICE)
24	41888	1	FUEL SOLENOID (SERVICE)
25	41093	1	AGITATOR CONTROL VALVE

PARTS LIST FOR E-Z 400 DIESEL MELTER - DOUBLE PUMPER

NUMBER	PART NUMBER	QTY	DESCRIPTION
26	41092	2	MATERIAL PUMP CONTROL VALVE
27	41573	1	FLOW DIVIDER PRIORITY
28	42573	1	MIXER MOTOR MOUNT
29	40030	4	PIPE SPACER (HYDRAULIC MOTOR)
30	45706	1	MIXER MOTOR
31	42780	1	AGITATOR SHAFT ASSEMBLY 400G
32	45739	1	PIVOT PIN WEAR PLATE
33	45713	2	PADDLE ASSEMBLY
34	28731	8	3/8" - 16 THREAD X 1" BOLT
35	28647	8	3/8" LOCK WASHER
36	28526	8	3/8" - 16 ESNA-TYPE LOCK-NUT
37	43465	1	RTD SENSOR
38	28342	1	3/8 X 1/4 BUSHING
39	40078	1	12" TEMPERATURE GAUGE BTM MOUNT
40	28177	2	3/8 PIPE COUPLING
41	28736	4	3/8 X 2 1/2 BOLT
42	43355	1	OVER-FLOW TANK ASSEMBLY
43	43763	1	AIR RELIEF ASSEMBLY
44	44141	1	DIPSTICK ASSEMBLY HO TANK
45	25057	1	9" TEMPERATURE GAUGE BOTTOM MOUNT
46	22030	3	FLANGED NIPPLE ASSEMBLY
47	29050	4	2" FLANGE GASKET - 6 HOLE
48	28731	24	3/8" - 16 THREAD X 1" BOLT
49	28538	24	3/8 LOCKNUT
50	41678	1	PIPE ASSEMBLY UPPER 200

PARTS LIST FOR E-Z 400 DIESEL MELTER - DOUBLE PUMPER

NUMBER	PART NUMBER	QTY	DESCRIPTION
51	41246	2	RECIRCULATION VALVE
52	42785	1	FLANGE TEE
53	42555	1	PIPE ASSEMBLY DOUBLE ELBOW
54	55120	1	SENSOR
55	28237	2	3/8 X 90 DEGREE STREET ELBOW
56	28282	2	3/8" PIPE PLUG
57	29270	2	BRONZE GATE VALVE-2"
58	28110	1	2" X 8" PIPE NIPPLE
59	28213	2	PIPE ELBOW 2" 90 DEGREE
60	41291	1	CROSS FEED PIPE
61	28358	1	2 X 1 HEX HEAD REDUCING BUSHING
62	26078	1	2" CLEVIS HANGER (260)
63	43140	1	MATERIAL PUMP (JACKETED)
64	22027	2	HYDRAULIC MOTOR
65	45710	1	EXTENDED BURNER BOX
66	45708	2	LID ASSEMBLY
67	43114	1	LID ASSEMBLY
68	42794	2	OUTER TANK WRAP
69	41813	1.5	INSULATION-2" KAOWOOL
70	42529	1	MATERIAL PUMP SUCTION
71	29292	1	FLANGED GATE VALVE-3"
72	41039	1	DRAIN PIPE EXT ASSEMBLY
73	29060	2	GASKET - 3" CIRC FLANGE 8 HOLE
74	28731	16	3/8"-16 THREAD X 1" BOLT
75	28538	16	3/8"-16 STOVER C-TOP NUT

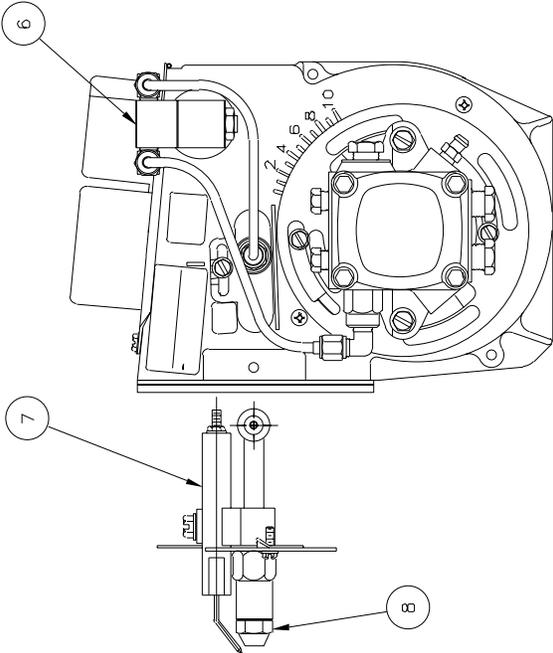
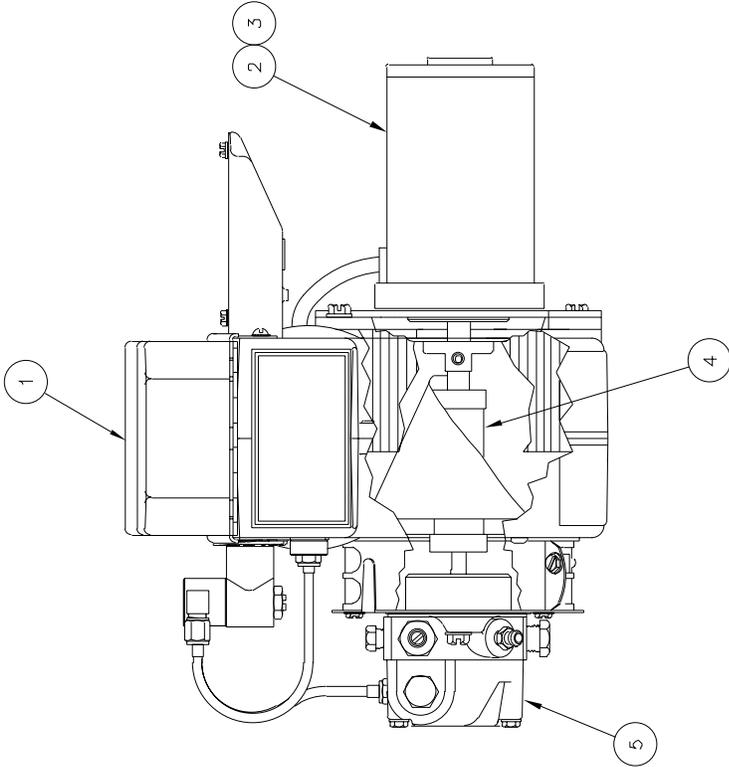
PARTS LIST FOR E-Z 400 DIESEL MELTER - DOUBLE PUMPER

NUMBER	PART NUMBER	QTY	DESCRIPTION
76	41268	2	VALVE HANDLE EXTENSION
77	29161	1	2-1/2 BLIND FLANGE
78	41043	2	2.94" FLANGE GASKET
79	28731	12	3/8"-16 THREAD X 1" BOLT
80	28538	12	3/8"-16 STOVER C-TOP NUT
81	41929	1	2-1/2 FLANGE ADAPTER
82	29270	2	BRONZE GATE VALVE - 2"
83	41280	1	HOT OIL CIRCULATING PUMP
84	28714	2	1/4 - 20 X 3-1/2 BOLT
85	28646	2	5/16" LOCK WASHER
86	22302	1	HYDRAULIC MOTOR
87	29202	2	BRONZE BALL VALVE- 3/8"
88	28002	2	CLOSE NIPPLE-XL-BLK 3/8
89	41180	1	1/2 BORE COUPLING HALF
90	41695	1	COUPLING HALF 5/8" BORE
91	41182	1	SPIDER FOR 070 COUPLING
92	27048	2	SWIVEL-MALE/FEMALE
93	27009	2	20' SEALANT HOSE
94	41208	2	HANDLE ASSEMBLY W/VALVE
95	27080	2	HAND GUN VALVE HANDLE ASSEMBLY
96	29240	2	BRONZE BALL VALVE - 1"
97	28351	2	1 X 3/4 HEX HEAD PIPE BUSHING
98	28100	2	3/4" X 8" NIPPLE
99	41629	2	HAND WAND ASSEMBLY
100	27171	2	SEALING TIP ASSEMBLY

PARTS LIST FOR E-Z 400 DIESEL MELTER - DOUBLE PUMPER

NUMBER	PART NUMBER	QTY	DESCRIPTION
101	45830	1	DIESEL CONTROL BOX ASSEMBLY
102	43391	1	PAKSTAT 150-550
103	20719	1	TOGGLE SWITCH
104	51651	1	PILOT LIGHT 12VDC
105	51665	1	15 AMP CIRCUIT BREAKER
106	43397	2	PAKSTAT 200-400
107	50251	3	DIGITAL READOUT
108	51698	3	CABLE- RIBBON 5"
109	40125	1	SPOUT ASSEMBLY
PARTS NOT ILLUSTRATED			
	24054	1	BATTERY CABLE- 20"
	31512	1	CIRCUIT BREAKER
	32602	1	20" CRESCENT BATTERY CABLE
	24076	1	HOUR METER

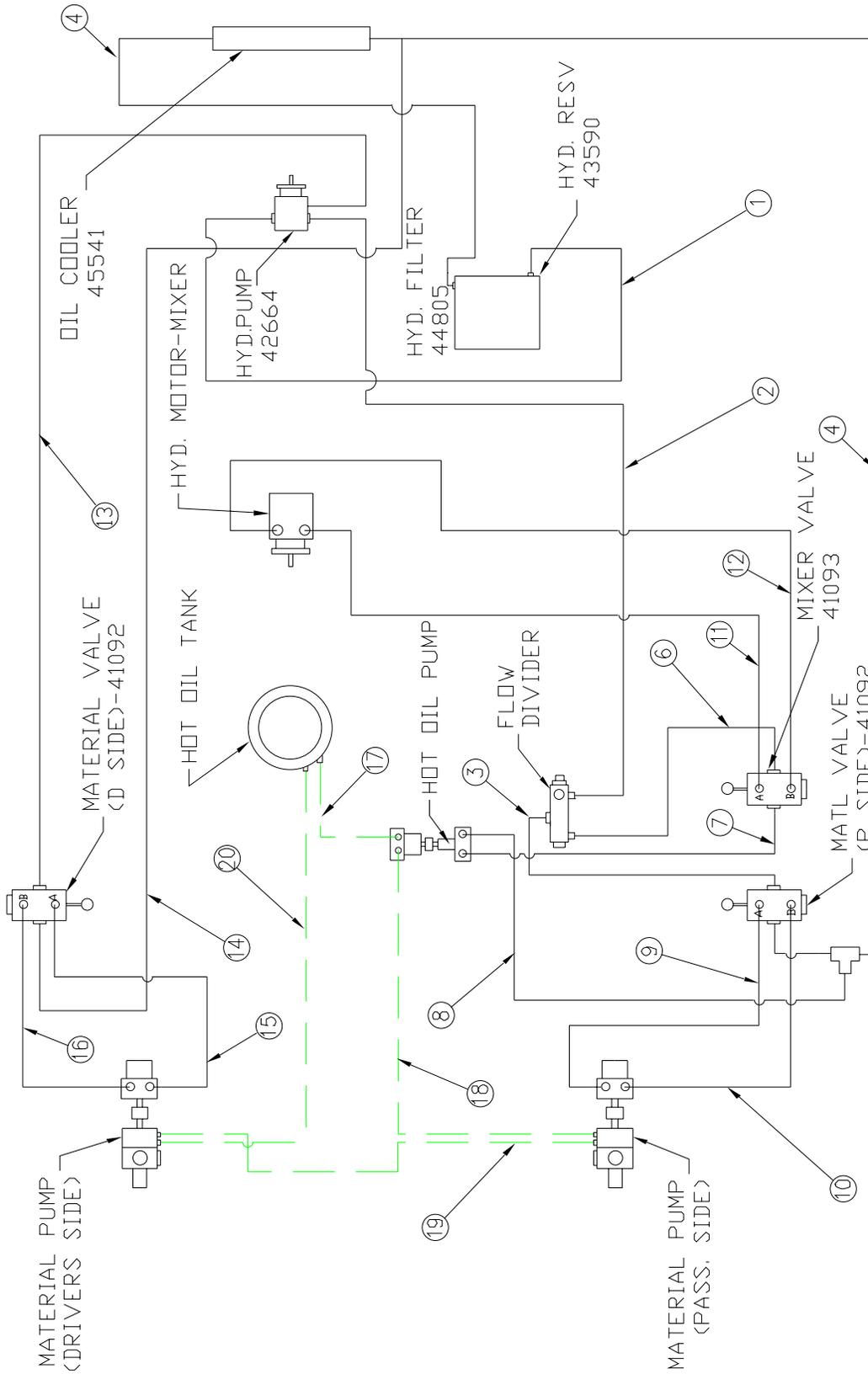
DIESEL BURNER



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)
8d	44785	-	NOZZLE (EZ400) (AFTER 2005)
	41870	-	CAD EYE (NOT SHOWN)
	42335	-	DC CONTROLLER (NOT SHOWN)
	44786	-	BURNER FLAME RETAINER (NOT SHOWN) USE WITH 44785 NOZZLE

HYDRAULIC PIPING DIAGRAM E-Z 400 DIESEL MELTER - DOUBLE PUMPER



**HYDRAULIC PIPING SCHEMATIC
400 DOUBLE PUMPER**

— HYDRAULIC LINES
- - - HOT OIL LINES

HYDRAULIC PIPING - E-Z POUR 400 DIESEL MELTER DOUBLE PUMPER

1. HYDRAULIC RESERVOIR TO HYDRAULIC PUMP (SUCTION)		
1	29930	STRAIGHT ADAPTOR
1	C20-20FJ-20FJ-36	HYDRAULIC HOSE ASSEMBLY 1-1/4 X 36" LONG
1	29888	STRAIGHT ADAPTOR - "O" RING
2. HYDRAULIC PUMP PRESSURE TO FLOW DIVIDER VALVE ("IN" PORT)		
1	29862	90 DEGREE ELBOW ADAPTOR - "O" RING
1	AX8-10FJ-10FJ-48	HYDRAULIC HOSE ASSEMBLY 1/2 X 48" LONG
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	42519	TUBE ASSEMBLY
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	29815	PIPE SWIVEL CONNECTOR
1	28348	3/4 X 1/2 REDUCING BUSHING
3. FLOW DIVIDER VALVE ("PB" PORT) TO MATERIAL VALVE ("IN" PORT)		
1	28348	3/4 X 1/2 REDUCING BUSHING
1	29876	ELBOW ADAPTOR
1	AX6-6FJ-6FJ-18	HYDRAULIC HOSE ASSEMBLY 3/8 X 18" LONG
4. MATERIAL VALVE ("OUT" PORT) TO HYDRAULIC FILTER (RETURN)		
1	29813	90 DEGREE ELBOW ADAPTOR
1	AX8-10FJ-10FJ-19	HYDRAULIC HOSE ASSEMBLY 1/2 X 19" LONG
1	29811	SWIVEL RUN TEE
1	29805	BULKHEAD CONNECTOR
1	29807	BULKHEAD LOCKNUT
1	42519	TUBE ASSEMBLY
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	AX8-10FJ-12FJ9-86	HYDRAULIC HOSE ASSEMBLY 1/2 X 86" LONG
1	29900	3/4" O-RING RUN TEE
1	-	HYDRAULIC OIL COOLER
1	29916	3/4" TUBE ELBOW
1	AX12-12FJ-12FJ9-59	HOSE ASSEMBLY 3/4" X 59" LONG
1	29816	STRAIGHT ADAPTOR
5. HYDRAULIC FILTER ("OUT" PORT) TO HYDRAULIC RESERVOIR		
1	43590	HYDRAULIC OIL TANK

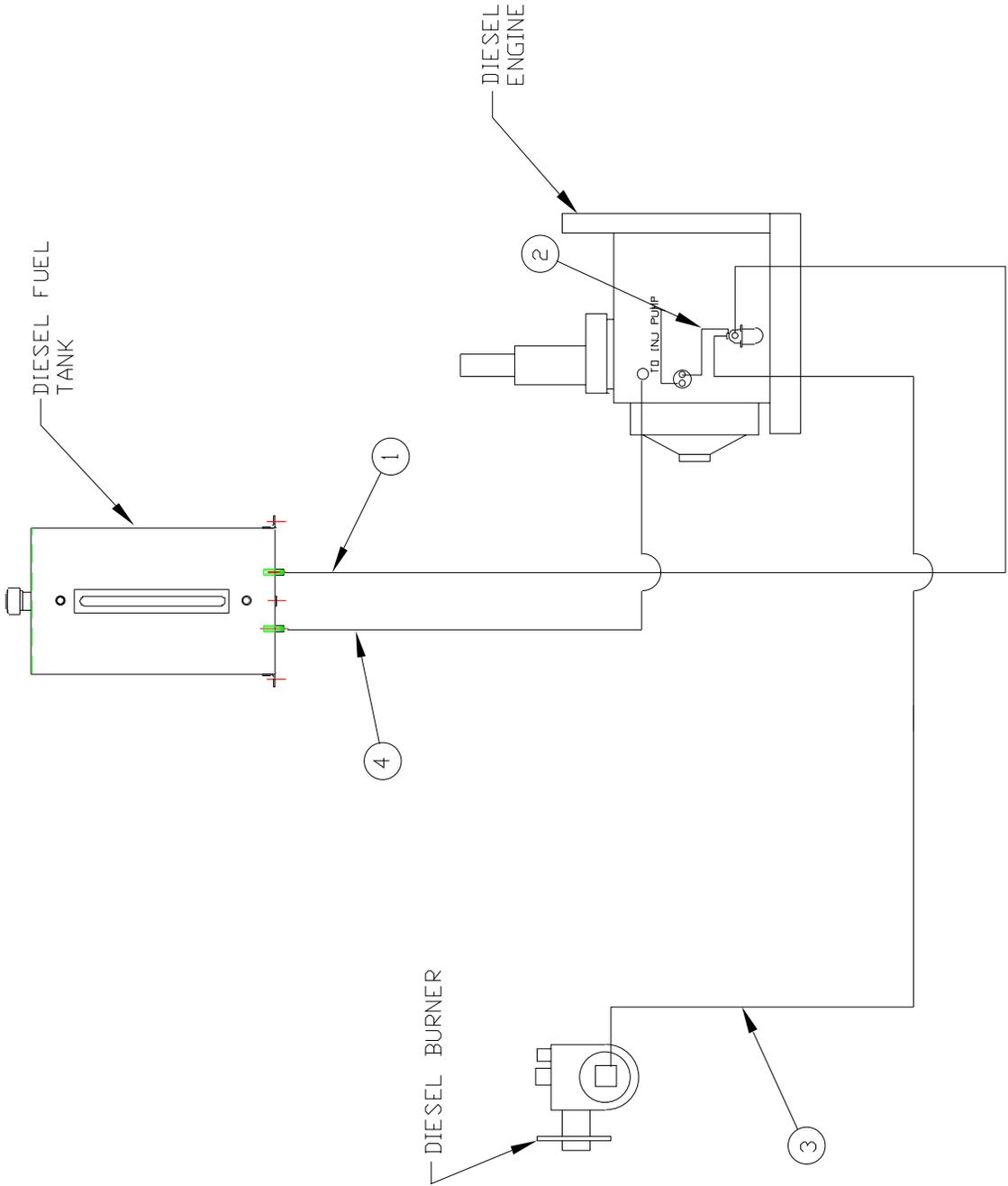
**HYDRAULIC PIPING - E-Z POUR 400 DIESEL MELTER
DOUBLE PUMPER**

6. FLOW DIVIDER VALVE ("REG" PORT) TO MIXER VALVE ("IN" PORT)		
1	28347	3/4 x 3/8 REDUCING BUSHING
1	29872	90 DEGREE ELBOW ADAPTOR
1	AX6-6FJ-6FJ-18	HYDRAULIC HOSE ASSEMBLY 3/8 X 18" LONG
7. MIXER VALVE ("OUT" PORT) TO HYDRAULIC MOTOR FOR HOT OIL PUMP (REAR PORT)		
1	AX6-6FJ-6FJ-18	HYDRAULIC HOSE ASSEMBLY 3/8 X 18" LONG
8. HYDRAULIC MOTOR FOR HOT OIL PUMP (FRONT PORT) TO TEE LINE LINE 4		
1	AX6-6FJ-6FJ-18	HYDRAULIC HOSE ASSEMBLY 3/8 X 18" LONG
1	29809	REDUCER 5/8 TO 3/8 TUBE
1	29810	TUBE NUT
9. MATERIAL VALVE ("A" PORT) TO HYDRAULIC MOTOR FOR MATERIAL PUMP ("BOTTOM" PORT)		
1	AX6-6FJ-6FJ-18	HYRAULIC HOSE ASSEMBLY 3/8 X 18" LONG
1	22029	STRAIGHT ADAPTOR
10. MATERIAL VALVE ("B" PORT) TO HYDRAULIC MOTOR FOR MATERIAL PUMP ("TOP" PORT)		
1	AX6-6FJ-6FJ-18	HYDRAULIC HOSE ASSEMBLY 3/8 X 18" LONG
1	22029	STRAIGHT ADAPTOR
11. MIXER VALVE ("A" PORT) TO HYDRAULIC MOTOR FOR MIXER (L.H. PORT)		
1	AX6-6FJ-6FJ-34	HOSE ASSEMBLY 3/8 X 34" LONG (400 ONLY)
1	29808	TUBE UNION
1	42550	TUBE ASSEMBLY
1	22029	STRAIGHT ADAPTOR
12. MIXER VALVE ("B" PORT) TO HYDRAULIC MOTOR FOR MIXER (CURB SIDE PORT)		
1	AX6-6FJ-6FJ-34	HOSE ASSEMBLY 3/8 X 34" LONG (400 ONLY)
1	29808	TUBE UNION
1	42551	TUBE ASSEMBLY
1	22029	STRAIGHT ADAPTOR
13. HYDRAULIC PUMP TO MATERIAL VALVE (DRIVER'S SIDE) "IN" PORT		
1	29812	5/8" TUBE X O RING
1	AX8-10FJ-10FJ-53	HOSE ASSEMBLY 1/2" X 53"
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	42519	TUBE ASSEMBLY
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	AX6-6FJ-6FJ-18	HOSE ASSEMBLY 1/2" X 18" LONG

HYDRAULIC PIPING - E-Z POUR 400 DIESEL MELTER DOUBLE PUMPER

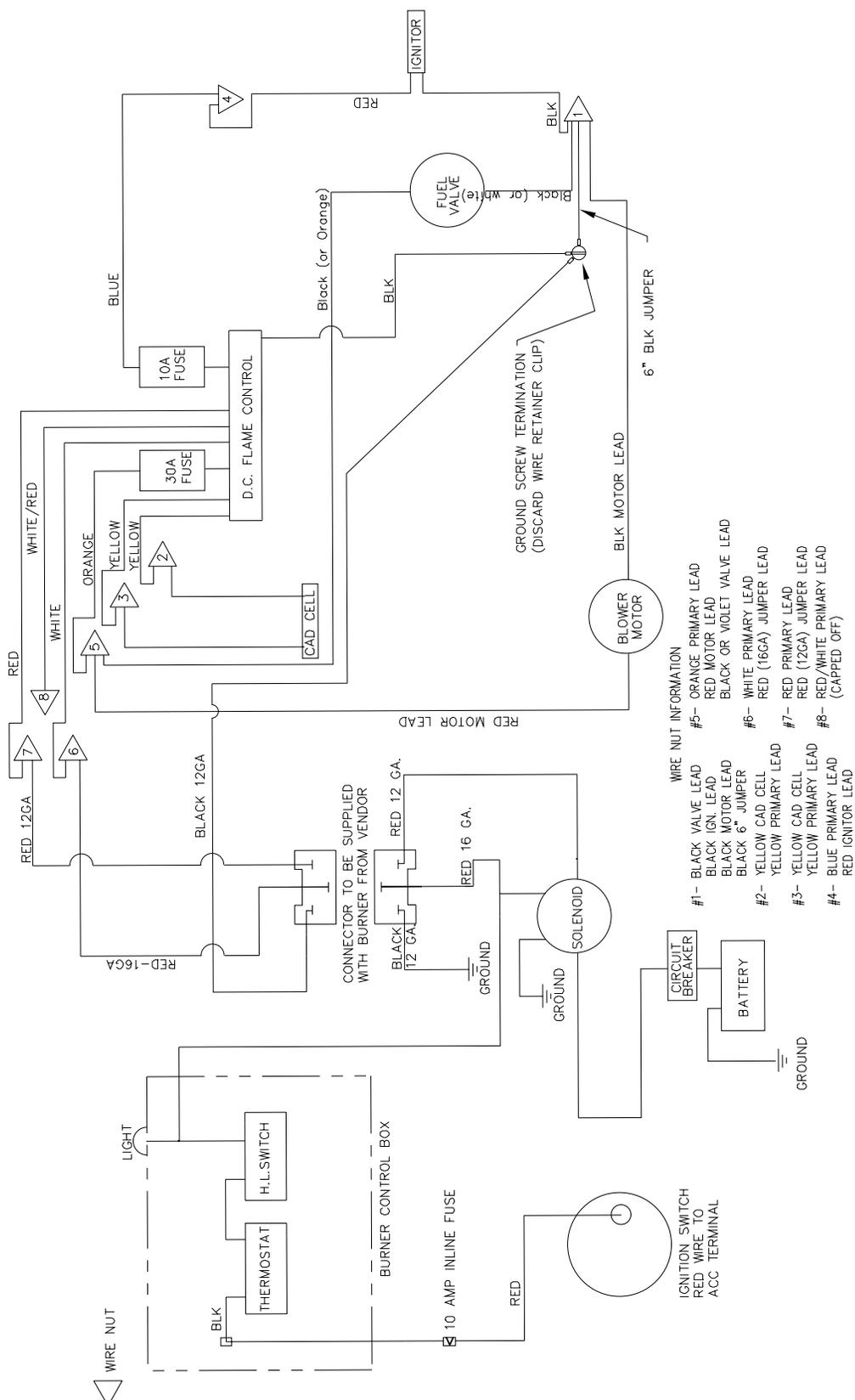
14. MATERIAL VALVE "OUT" PORT TO HYDRAULIC OIL COOLER		
1	AX8-10FJ-10FJ-22	HOSE ASSEMBLY 1/2" X 22" LONG
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	42519	TUBE ASSEMBLY
1	29805	BULKHEAD CONNECTOR
1	29807	LOCKNUT
1	AX8-10FJ-12FJ-59	HYDRAULIC HOSE 1/2" X 59" LONG
15. MATERIAL VALVE ("A" PORT) TO HYDRAULIC MOTOR FOR MATERIAL PUMP ("BOTTOM" PORT)		
1	29841	STRAIGHT ADAPTOR
1	AX6-6FJ-6FJ-24	HOSE ASSEMBLY 3/8" X 24" LONG
1	22029	STRAIGHT ADAPTOR
16. MATERIAL VALVE ("B" PORT) TO HYDRAULIC MOTOR FOR MATERIAL PUMP ("TOP" PORT)		
1	29841	STRAIGHT ADAPTOR
1	AX6-6FJ-6FH-24	HOSE ASSEMBLY 3/8" X 24" LONG
1	22029	STRAIGHT ADAPTOR
HOT OIL PIPING		
17. HOT OIL TANK (R.H. PORT) TO HOT OIL PUMP (FRONT PORT) - SUCTION		
1	41499	HOT OIL VALVE
1	29845	90 DEGREE ELBOW ADAPTOR
1	41404	HOSE ASSEMBLY S.S. COVER (1/2 X 22 1/2" LONG)
1	29844	STRAIGHT ADAPTOR
18. HOT OIL PUMP (REAR PORT) TO MATERIAL PUMP (TOP PORT)		
1	29844	STRAIGHT ADAPTOR
1	41404	HOSE ASSEMBLY S.S. COVER (1/2 X 22 1/2" LONG)
1	40316	STRAIGHT ADAPTOR
19. MATERIAL PUMP PASS. SIDE (BOTTOM PORT) MATERIAL PUMP DRIVER SIDE (BOTTOM PORT)		
1	40316	STRAIGHT ADAPTOR
1	41403	HOSE ASSEMBLY S.S. COVER (1/2 X 44 1/2" LONG)
1	40316	STRAIGHT ADAPTOR
20. MATERIAL PUMP (TOP PORT) TO HOT OIL TANK (L.H. PORT)		
1	40316	STRAIGHT ADAPTOR
1	41404	HOSE ASSEMBLY S.S. COVER (1/2 X 22 1/2" LONG)
1	29844	STRAIGHT ADAPTOR
1	41499	HOT OIL VALVE

**DIESEL PIPING DIAGRAM
E-Z 400 DIESEL MELTER - DOUBLE PUMPER**



**DIESEL PIPING DIAGRAM
E-Z POUR 400 DIESEL MELTER - DOUBLE PUMPER**

1. DIESEL FUEL TANK TO FUEL FILTER		
1	26782	HOSE PUSH ON MALE 90
1	26767	PUSH ON SWIVEL
1	29591	FUEL HOSE 5/16 X 96" LONG
2	26080	GEAR CLAMP
2. DIESEL FUEL PUMP TO FUEL FILTER (SUPPLIED WITH ENGINE)		
3. FUEL FILTER TO DIESEL BURNER		
1	29580	FUEL HOSE 5/16 X 80" LONG
2	26080	GEAR CLAMP
1	26782	PUSH ON FITTING MALE 90
1	26767	HOSE PUSH ON SWIVEL
4. DIESEL ENGINE TO TANK (RETURN)		
1	29591	FUEL 3/16 X 96" LONG
2	26080	GEAR CLAMP
1	26782	HOSE PUSH-ON MALE 90
1	29767	HOSE PUSH ON SWIVEL



- WIRE NUT INFORMATION
- #1- BLACK VALVE LEAD
 - BLACK IGN. LEAD
 - BLACK MOTOR LEAD
 - BLACK OR VIOLET VALVE LEAD
 - BLACK 6" JUMPER
 - #2- YELLOW CAD CELL
 - YELLOW PRIMARY LEAD
 - #3- YELLOW CAD CELL
 - YELLOW PRIMARY LEAD
 - #4- BLUE PRIMARY LEAD
 - RED IGNITOR LEAD
 - #5- ORANGE PRIMARY LEAD
 - RED MOTOR LEAD
 - BLACK OR VIOLET VALVE LEAD
 - #6- WHITE PRIMARY LEAD
 - RED (16GA) JUMPER LEAD
 - #7- RED PRIMARY LEAD
 - RED (12GA) JUMPER LEAD
 - #8- RED/WHITE PRIMARY LEAD
 - (CAPPED OFF)

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

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AN **ERGON** COMPANY

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