CRAFCO™ INC
AN ERGON COMPANY

LAB MELTER

PART MANUAL - 26348
Rev. “A”

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SAFETY PRECAUTIONS

- High operating temperatures of Sealant and Heat Transfer oil require protective clothing and gloves be worn by operator.
- Always wear eye protection.
- Avoid the entrance of water into any part of the melter. Water will displace heat transfer oil or sealant which could be hazardous to personnel surrounding the machine.
- Avoid bodily contact with hot sealant material or heat transfer oil. Serious burns may result.
- Read Operator Manual thoroughly before operating melter.
- Make sure operator is familiar with melter operation.
- Stop mixer when adding sealant sample to sealant can.
- 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 450F (235C) for heat transfer oil temperature.
- Do Not overfill heat transfer oil level. Expansion of oil during heat up could cause overflow. Use only recommended heat transfer oil and change at 500 hours of operation. Change at earlier interval if heat transfer oil becomes contaminated with sealant or shows signs of breakdown.
- Calibrate heat transfer oil reservoir thermometer prior to initial operation and at least every two weeks thereafter.
  Precaution is the best insurance against accidents.
- Crafco, Inc. assumes no Liability for an accident or injury incurred through improper use of this melter.

SPECIFICATIONS

Heat transfer oil vat capacity	Approximately 6 1/2 gallons @ 70F
Melter Can	4 1/2" Dia x 7.0" tall, 48 oz can, Model 404x 700
Heating	Two 4700 watt. 240 volt fire rod, P/N 9526L24A14 (Watlow), or two 900 watt 120 volt, TMO-1091G (Chromolox)
Temperature Control	Thermostatec control
Agitator Mechanism	Chain driven, clockwise, 35 RPM
Gear reducer	Boston P/N F713-50-B56

OPERATING INSTRUCTIONS

Do Not Operate Lab Melter without reading Operator Manual and being thoroughly familiar with the melting unit.

1. Be sure tank drain valve is in the closed position.

2. Heating element switch is in the Off position.

3. Add required amount of heat transfer oil to melter reservoir. Make sure heat transfer oil is above the thermometer and thermostat probe inside heat transfer oil vat.

4. Turn on the switch for heating elements and turn thermostat knob to desired temperature. (Usually 450F)

5. Monitor temperature readout . It will take approximately 1-1 1/2 hours for heat transfer oil to reach 450F.

6. When readout reads 450F, check and recalibrate temperature dial to match readout. To correct thermometer reading, on some models , there is a small screw on the back of the thermometer. You do not need to remove themometer to adjust the calibration screw.

7. If your melter is equipped with an air stirrer, turn it on and set at an RPM high enough to circulate oil but which will not make a vortex and suck air in to hot oil.

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).

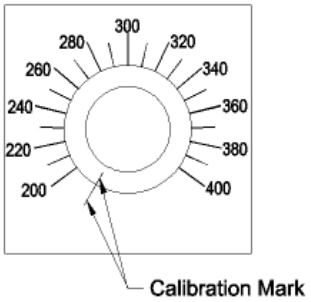


Fig. 1

LOADING SAMPLE (S) INTO LAB MELTER

1. Insert empty sample can (with stirrer paddle inside) into the melter opening. Make sure can clamp is loose. With the help of the paddle, push the can down until it rests on the can support bars on the bottom of the melter. While holding the can, position hose clamp around the can and the welded clip on the melter top. Tighten the hose clamp with a screw driver. DO NOT over tighten the clamp screw. This will deform the can and cause the paddle to rub against the inside of the can and wear a hose through it.

2. With the can secured, the mixing paddle can be connected to mixer drive shaft. To prevent any material segregation in the melted sample, the lower edge of the paddle must be no more than 1/8"-1/4" (3-5mm) above the bottom of the can.
First, insert the coupler to paddle shaft. Then, lower paddle into can until it rests on the bottom of the can. Align paddle shaft with drive shaft and move coupler onto upper shaft approximately half way. Tighten lower set screw on flat section of paddle shaft.
Then, raise the paddle 1/8"-1/4" from bottom of can and tighten the set screw on upper part of coupler to flat part of drive shaft.

3. For sample preparation, sample addition, material heating, temperature monitoring and sample pouring, refer to ASTM D5167-91.

Note: Before adding any material to can, turn on the mixer switch to be sure paddle is not rubbing against the can. If paddle is rubbing the can, it will wear a hole in the can and sample may become contaminated.
If rubbing, the paddle may need to be raised or can centered under paddle by loosening the can hose clamp.

The can is now ready to be loaded with sealant sample.

SAFETY

1. When adding sample(s) to melter can, turn of mixer switch.

2. When handling sample can containing hot material, wear leather gloves and safety glasses with side shields. Hot material or heat transfer oil can cause serious skin burns.

3. To prevent accidental test specimen contamination, wipe off outside of sample can after removal from melter.

4. Check temperature of sample when it is being heated. DO NOT heat material above the manufacturer recommended safe heating temperature.

MAINTENANCE

1. Change heat transfer oil after 500 hours of operation or sooner if contaminated.
   Heat transfer oil oxidizes and becomes thick, loosing its heat transferring characteristics. To change heating oil, warm oil to 250F. Disconnect power from the melter. Using extreme care, open the drain valve and empty hot oil into a metal can. Dispose of old oil in accordance with state, federal and local regulations covering hazardous waste disposal.

2. Heating element durability depends on the type of heat transfer oil. Breakdown of oil causes corrosion and element failure.
   To replace damaged heating element, drain melter as shown above. Install new element (Crafco p/n 40434). In addition, it is recommended the electrical plug on electrical cord be changed. Tighten element and install new heat transfer oil. Use a high quality, slow oxidizing heat transfer oil such as Mar-Temp 2525. Check for leaks.

TROUBLESHOOTING

Slow heat up of sealant

1. Low heat transfer oil level- Oil should cover the heating elements.
2. Low heat transfer oil temperature setting- Recommended- 400F-450F
3. Heat transfer oil damaged due to oxidation or contamination- See Maintenance and Troubleshooting above.
4. Inoperative heating element- Check and replace if needed.
5. Damaged thermostat- Check and replace if needed

Melter is not operating (no hot oil heating)

1. No power- Check and correct
2. Heating element switch faulty- Check and replace if needed
3. Low thermostat setting- Reset to 400F-450F
4. Faulty thermostat- Check and replace if needed. See Page 10 for electrical diagram.
5. Faulty heating element (s)- Check and replace if needed.
6. Thermostat probe not covered with heat transfer oil- Add oil if needed
7. Thermostat damaged, incorrectly calibrated, or not submerged in heat transfer oil- Check and correct. (See Fig 1 page 7)

Mixing paddle not rotating

1. Mixer switch damaged- Check and replace if needed
2. Mixer motor damaged- Check and replace if needed
3. Paddle coupling set screw(s) loose- Retighten

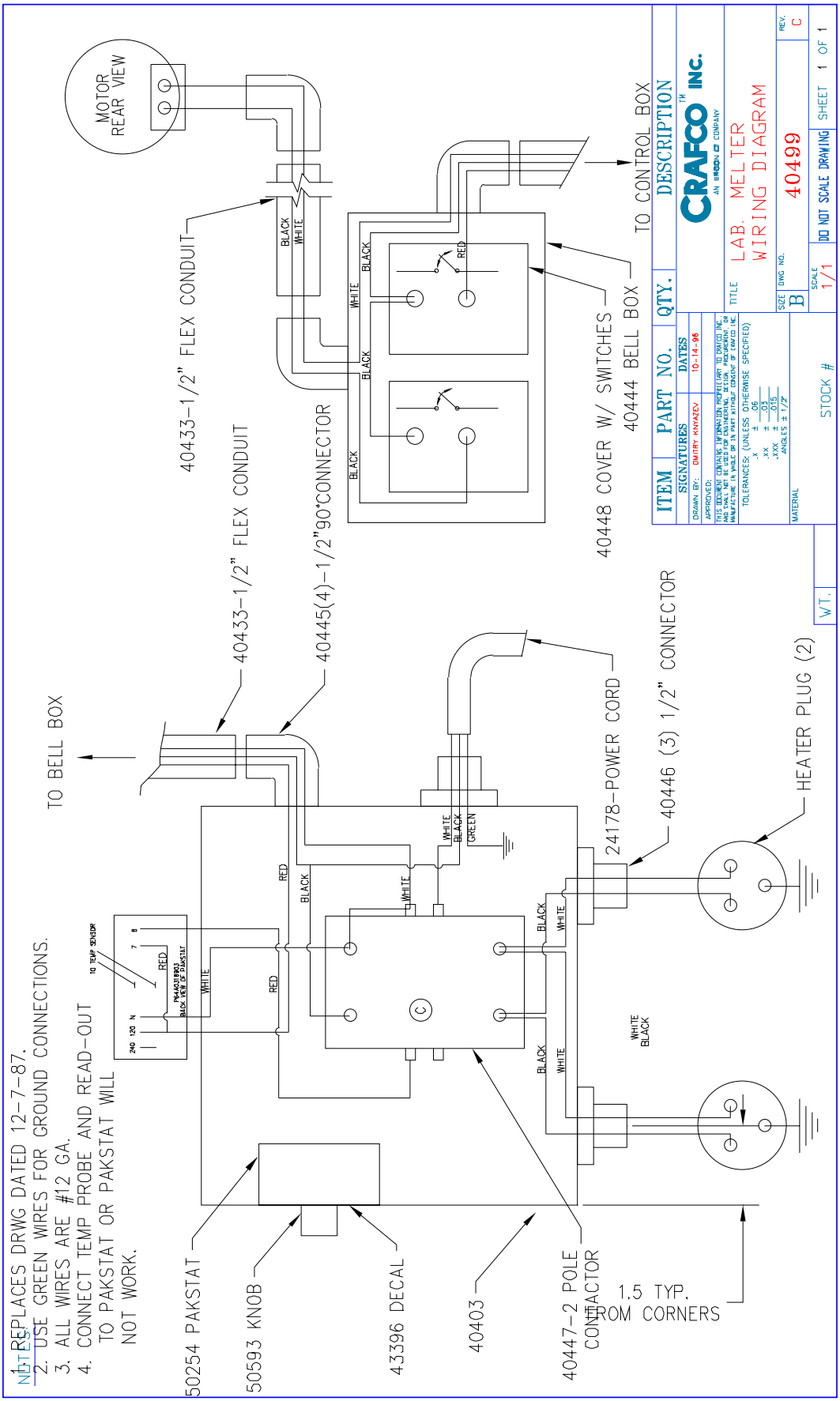
Heating oil contamination is sample can

1. Paddle touching sample can and rubs hole in can- See page 8- Item 3

Sealant temperature is higher or lower than desired temperature

1. Thermostat setting incorrect- Calibrate if needed
2. Thermostat sensor not covered with heat transfer oil- Add oil if needed
3. Temperature gauge incorrectly calibrated, faulty, or not covered by heat transfer oil- Check and correct problem

ELECTRICAL SCHEMATIC- LAB MELTER



SUPPLIER LIST

Sample can suppliers (48oz tall can 404 x 700)

Supplier	Phone
Paramount Can Co.	(714) 562-8410
Ribelin Can Co.	(602) 894-9716
Freund Can Co.	(312) 224-4230

Heat transfer oil- Martemp 2525- Crafco P/N 40905

Supplier	Phone
Houghton International	(610) 666-4000

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

For best results and safety, the heat transfer oil in this melter must be drained and replaced with new heat transfer oil every 500 hours of operation. Earlier change intervals may be needed if oil becomes contaminated with sealant material.

Crafco has determined that Martemp 2525 has exceptional heat transfer characteristics for use in this melter.

Any other brands should be approved through Crafco, Inc. customer service

Crafco, Inc. assumes no Liability for an accident or injury incurred through improper use of the melter.

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