

CAST MASTER OPERATING INSTRUCTIONS

7/15/96

Set the thermostat dial to 700 degrees F. Plug the pot in and fill with the alloy suitable for the bullets to be cast. More lead may be added after the pot is up to temperature.

The amount of lead being poured is controlled by two means : 1. The orifice plate
2. The adjusting screw on the valve bracket.

The orifice plate is held in place on the bottom of the valve assembly by means of two allen screws. The size of this orifice plate is stamped on the plate with the drill size used for drilling the orifices. The orifice plate can be removed for pouring ingots, thus increasing the pour rate and saving you time.

The adjustment on the valve bracket controls the amount of travel on the valve arm, this is to fine tune the amount of lead pour for casting with molds. To adjust the pour rate, loosen the jam nut and turn the allen screw clockwise to decrease the pour rate and counterclockwise to increase the pour rate. If adjustment of the opening of the valve is not sufficient to pour enough lead through the plate, the orifice should be changed to a larger size. The reverse is true if too much lead is being poured and cannot be controlled by adjusting the arm.

If scum and/or dirt plugs the orifices in the valve assembly, the orifice plate can be easily removed for cleaning. Loosen and remove the two allen head screws and the orifice plate should fall out. The orifice plate is grooved to aid in its removal should it stick, but care should be exercised to avoid damage to the plate and its orifices.

Fluxing is the area where most bullet casters fall down. They allow their bullet metal to remain in the pot too long without fluxing at frequent enough intervals. Fluxing is necessary to keep the metal clean from impurities and suspended oxidized lead particles. When the pot is heated initially and lead is added, a gray scum will float to the top. Flux the pot at this time and stir this scum into the lead mixture, the impurities will float to the top and can then be skimmed off. Magma's bullet lube is an excellent lead flux.

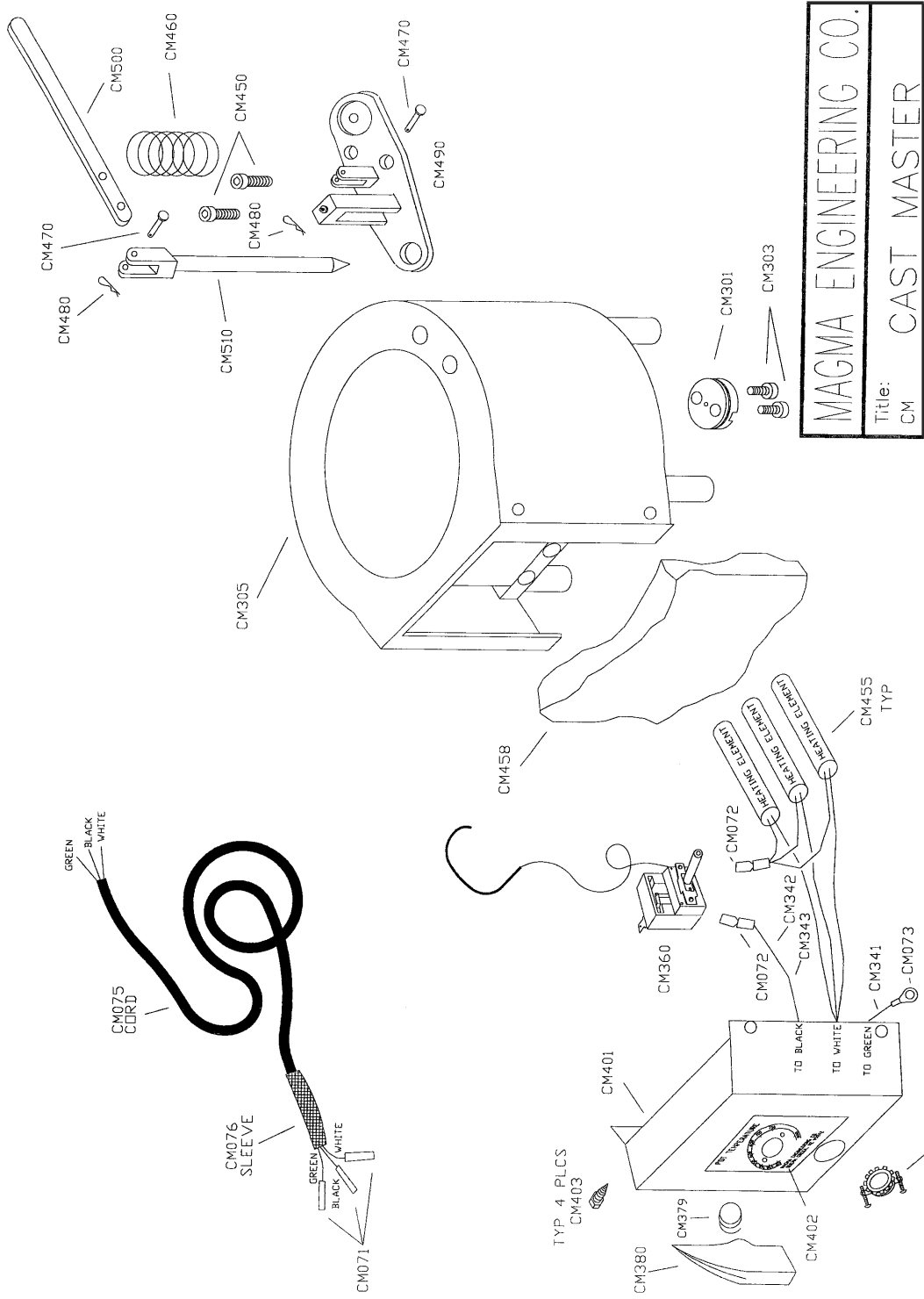
ADJUSTMENT OF THERMOSTAT

The thermostat is carefully calibrated in our plant, however replacement thermostats will need adjustment when you receive them. A thermometer must be used to calibrate the pot.

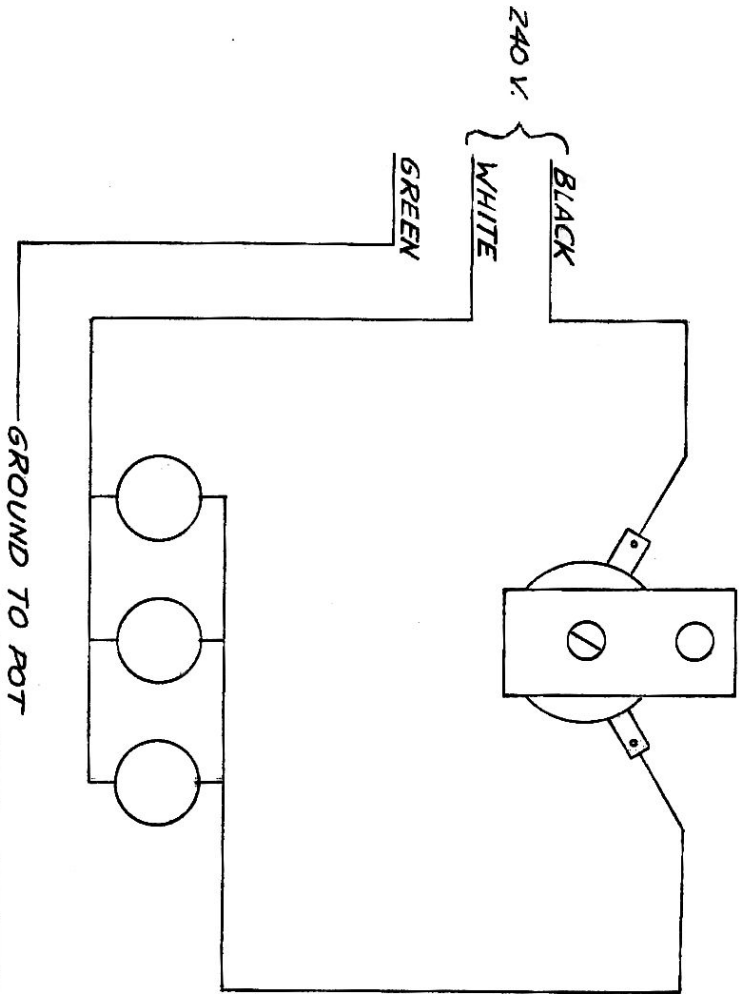
Increase or decrease the temperature by the following procedure :

1. Loosen the small set screw on the thermostat knob.
2. Remove the knob.
3. Using a small screwdriver, insert it in the hollow stem and engage the adjusting screw. Turn the screw to the left or counterclockwise to increase the temperature. To lower the temperature turn clockwise.
4. Temperature adjustments should be made in 1/8 turn increments. Allow the temperature to raise or lower to the new setting before making further adjustments.

MAKE ADJUSTMENTS SLOWLY IN SMALL INCREMENTS



MAGMA ENGINEERING CO.
 Title: **CAST MASTER**
 CM



<i>MAGMA ENGINEERING CO.</i>	
SCALE: NONE	APPROVED BY:
DATE: 5-1-84	DRAWN BY: RIC
	REVISED
<i>CAST MASTER - WIRING DIAGRAM</i>	

MAGMA ENGINEERING CO.
Parts List

Item	Description
CM001	CAST MASTER
CM001D	CAST MASTER DIGITAL TEMP CONTROLL...
CM002	CAST MASTER W/O VALVE ASSY
CM071	YELLOW BUTT CONNECTOR
CM072	HI TEMP QUICK DISCONNECT
CM073	HI TEMP RING CONNECTOR
CM074	PIGGY BACK ELEC. CONNECTOR
CM075	CAST MASTER 8' CORD
CM202	8-32 NUT
CM301	SINGLE HOLE ORIFICE PLATE
CM302	#44 SINGLE HOLE ORFICE PLATE
CM303	SCREWS
CM341	GROUND WIRE ASSY
CM342	HOT WIRE ASSEMBLY
CM343	HIGH TEMP WIRE
CM360	THERMOSTAT CM
CM370	8-32 X 1 1/2 SCREW
CM379	THERMOSTAT TENSION SPRING
CM380	CAST MASTER KNOB
CM390	ROMEX CONNECTOR
CM401	POT COVER
CM402	TEMPERATURE LABLE
CM403	SHEET METAL SCREWS
CM450	1/4 - 20 X 1/2 SHCS
CM455	CAST MASTER HEATING ELEMENT
CM460	VALVE SPRING
CM470	3/16 X 1/2" CLEVIS PIN
CM480	COTTER PINS
CM490	VALVE BRACKET
CM491	VALVE STOP SCREW
CM500	CAST MASTER HANDLE
CM510	CAST MASTER VALVE STEM