

# JOB PROCEDURES

## TEMPORARY HEATERS (Oil-fired)

*\*This information does not take precedence over OH&S. All employees should be familiar with the Saskatchewan Employment Act and the OH&S Regulations.*

APPROVED BY:	REVIEWED REVISOR DATE:
MATERIAL & EQUIPMENT REQUIRED	PERSONAL PROTECTIVE EQUIPMENT
extension cord, fire extinguisher, fuel (diesel or kerosene)	Foot Protection

### JOB STEPS

1. Installation:

- The recommendations of local authorities having jurisdiction must be followed. For recommended installation practices refer to C.S.A. Standard 8139.
- When firing the unit in an enclosed area, 3 square feet must be provided to allow the free entry of the air required for operation.
- For electrical supply, use 3-wire receptacle with "U" ground.
- Do not operate the unit in partly ventilated areas without a flue pipe or in close proximity to combustible surfaces materials
- Installation clearances: Top - 3 inches; Sides - 6 inches; Burner end - 2 feet; Discharge end - 10 feet; Flue Pipe - 18 inches; Floor - Combustible.

2. Flue Pipe Connections:

- When the heater is connected to a flue pipe the flue pipe shall terminate in a vertical section at least 2 feet long.
- Horizontal runs should have rise ratio of 1 in 10 away from the heater
- The chimney should have .02" WC draft to ensure safe operation of the unit. Where down draft are liable to occur, a vent cap should be used.

3. General operating safeguards:

- do not start heater when excess oil has accumulated in chamber
- do not fill tank while unit is operating
- do not shut off by disconnecting supply cord
- never use extension cords smaller than 12 A.W.G.; if cord is longer than 50', use 10 A.W.G. minimum
- do not use gasoline, crankcase oil or heavier than No. 2 furnace oil
- electrical requirement - 20 amp circuit OHV 350-11, 30 amp circuit OHV 500

4. To start heater:

- flip switch to OFF position
- plug in supply cord to 115 volt outlet
- flip switch to MANUAL position
- for thermostat operation, flip switch to THERM position

5. If heater fails to start:

- press MANUAL RESET button on burner relay
- check fuel level, (2-4 gallons to start)
- check for low voltage condition and 115 volt supply
- check fuel filter and suction tubing
- check nozzle assembly

6. To stop heater:

- flip switch to OFF position
- CAUTION - firing will stop but fan will automatically continue to cycle until unit cools down

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### SPECIFICATIONS

Model	Maximum Input	Nozzle Size	Pump Pressure	Fuel Tank Cap	Fuse Size	Electrical Supply
OHV 350 -11	320,000 BTU/HR	2.25 USGPH 60° Solid	100 PSI Max	35 Imp. Gal	15 Amp	115 Volt 1 Phase 60 Cycle
OHV 500	420,000 BTU/HR	3.00 USGPH 60° Solid	100 PSI Max	35 Imp. Gal	15 Amp	115 Volt 1 Phase 60 Cycle

### Troubleshooting Guide

<p>1. Burner will not start:</p> <ul style="list-style-type: none"> <li>- check fuse (replace)</li> <li>- check manual reset oil burner motor</li> <li>- check to ensure no light is reflected to the sensor</li> <li>- check high limit (replace)</li> <li>- change sensor</li> </ul>
<p>2. Delayed ignition:</p> <ul style="list-style-type: none"> <li>- check for proper electrode setting</li> <li>- check the isolators for cracks or for a conducting coat of soot or oil; cracks sometimes occur under the electrode bracket causing a short circuit</li> <li>- check that the air shutter is not overly open</li> <li>- check that the pump pressure is properly set</li> <li>- change nozzle</li> <li>- check fuel filter - if dirty, replace</li> </ul>
<p>3. Smoky fire:</p> <ul style="list-style-type: none"> <li>- check the burner fan blade - clean <i>if</i> dirty</li> <li>- check combustion chamber for cracks or burn out</li> <li>- check nozzle - if clogged, it could produce an off centre fire resulting in a smoky fire</li> <li>- check centre leg on nozzle assembly to ensure nozzle is centered in the 4" tube</li> <li>- check for loose nozzle</li> </ul>
<p>4. Burner starts up, then locks out at the relay:</p> <ul style="list-style-type: none"> <li>- check sensor and clean</li> <li>- check yellow wires between sensor and relay</li> <li>- replace sensor</li> <li>- replace relay</li> </ul>
<p>5. Main fan will not come on - unit shuts down on high limit:</p> <ul style="list-style-type: none"> <li>- check fan switch</li> <li>- check motor to see if power is getting to motor</li> <li>- replace fan switch</li> <li>- replace motor the</li> </ul>
<p>6. Unit on but cycles on high limit:</p> <ul style="list-style-type: none"> <li>- check air flow - ensure both ducts are in and clear</li> <li>- check pump pressure; unit could be over firing</li> <li>- check that proper nozzle is installed place</li> <li>- check high limit</li> </ul>
<p>7. - If unit has been reset a number of times without ignition there will be an accumulation of oil in the combustion chamber. Tilt the unit up at the burner end to let the excess oil drain out of the secondary chamber.</p> <ul style="list-style-type: none"> <li>- Allow unit to drain for 15-20 minutes or until all oil has drained out.</li> <li>- Open electrical box and jumper fan switch so that the burner and fan start together. There will be a smoky fire a few minutes until the excess oil, that has sprayed on the walls of the combustion chamber, has burnt off</li> <li>- When unit has stabilized and the burner set up to operate properly, shut off the switch. Let fan cool down the chamber and stop. Remove the jumper across the fan switch and close the electrical panel. The unit should operate normally - if not, refer to #2.</li> </ul>