

# Proper Burn Adjustment

If the flue draft is  $.05''+$ , then the **flame should be bright yellow**, an orange flame indicates a fuel rich flame. To check this, wear safety glasses and use caution while viewing flame and keep back at least 18" from view port. Raise the cover on the view port, located above the left burner mounting bolt. Close the cover after checking.

With good fuel, the metering pump providing the correct amount of fuel, and the **air shutter set at 7 for Model 200** and 5 for a Model 140, the CO<sub>2</sub> should be around 11%. The ohm reading should be between 250 and 500 ohms. There should be no black on the smoke spot. A service person can check these as follows.

See Draft Gauge Set Up and Checks (N15) for instructions on reading the **flue draft**. Make sure that it is **.05" to .06" WC while burner is running**.

Start the burner and test the CO<sub>2</sub> following the instructions that came with the test kit. If the CO<sub>2</sub> is not between 10-11%, loosen the air shutter lock screw and adjust the air shutter to achieve a 11% CO<sub>2</sub>. To increase CO<sub>2</sub>, close the air shutter. To decrease CO<sub>2</sub>, open the air shutter.

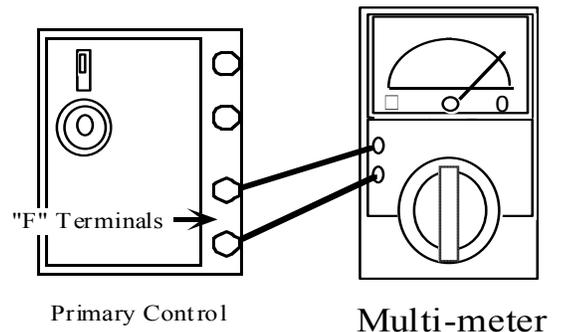
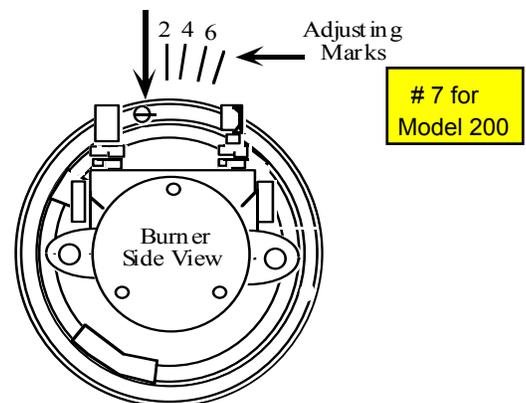
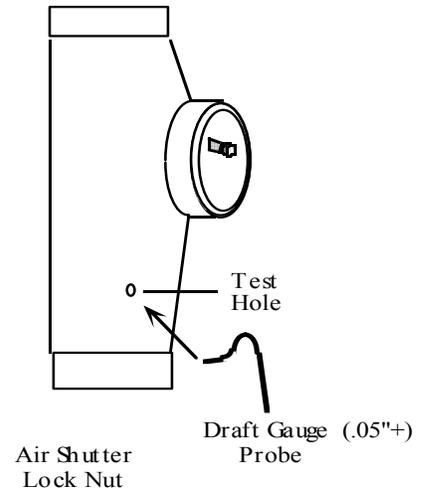
After adjusting the CO<sub>2</sub>, take a smoke test and compare it with the chart that came with your test kit. You should have a zero/trace smoke spot. Don't worry about a yellow- brown color on the smoke spot. This is normal when burning used oil because noncombustible compounds are present.

**The flame should be bright yellow.** Put the **draft gauge probe** back in the flue pipe test hole. During operation a **gray-white ash will build up on the probe**. This indicates normal clean combustion.

Next, take an **ohm reading**. While the burner is running, attach the leads from an analog multi-meter (a digital meter will not work) to the "F" terminals on the primary control. The reading **should be 250-500 ohms**.

Secure all adjustment screws and nuts. Start and stop the burner several times to make sure there are no significant rumbles or pulsations.

Check the unit for any oil leaks. Then enjoy the savings from your used oil.



**RECOMMENDED SETTINGS:**  
for Bright Yellow/White Flame

Air Shutter: # 7 (model 200)  
Fuel Pump Pressure: 5-10 psi  
Fuel Pump Suction/Vacuum: 0-8"  
Air Compressor Output: 9 psi



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