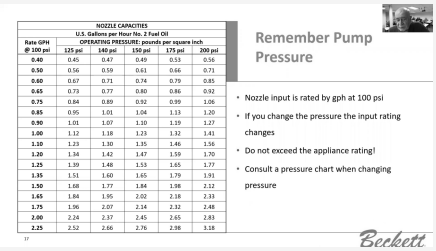
Oil Burner Cheat Sheet

by Brooklynoil via cheatography.com/174403/cs/36631/

Oil Nozzle Pressures



Nozzle Spray Pattern

Nozzle Selection

Always check boiler manufacturer for nozzle size and setting first based on boiler requirements and BTU needs

Rule of thumb (NOT ALWAYS) If gun has a retention head use a 60 Degree or less

CAD Cell Diagnosis

Testing Ohms for CAD Cell

Good CAD Cell	Dark/No Light 20K+ Ohms
	Light/Fire On Low Numbers 400-800 Ohms
Bad CAD Cell	Light/Fire is on Ohms reading in the thousands or 0

Pump Solenoid Test

Cleancut should be 400-500 ohms, Suntec 494-526 ohms and Riello 1215-1485 between terminals 1&2. Outside these parameters, you have a bad coil.

Testing Oil Pump/Supply Line

Put on Pressure Gauge on Pump Outlet

Run pump for a few seconds then shut down.

Once shut down pressure will drop 20%, if pump does NOT hold at this pressure and continues to fall = Bad Pump

Vacuum Test- micro bubbles start @ 6" of vacuum issues at 8"-10"

Place Vacuum Gauge INLINE on inlet of pump, DONT run pump dry

Start burner and OPEN bleeder....Close bleeder @ 15" vacuum and shut off burner

Pump should hold vacuum for 5 minutes, if 15" CANNOT be achieved or CANNOT HOLD for 5 minutes, CHANGE PUMP

To test SUPPLY LINE for leaks.. Shut OFF TANK supply and install Vacuum Gauge Inline

Start Burner then Close Valve BETWEEN Pump and Vacuum Gauge @ 10-15" and shut down burner

Vacuum should hold for 10 minutes

Combustion Testing

Primary Controls

Intermittent-Spark is contsantly ON	Stack Switch (Thermo Primary) Most Common Honeywell RA117A

Primary Controls (cont)

Interrupted-Spark shuts off after ignition of flame	Power (HOT) Line 1, Neutral to Line 2, Motor & Oil Solenoid to "Motor" (Line 3), If its has Interrupted Control wire to "-ING" (Line 4), For Intermittent Control Connect to "Motor" (Line 3)
Intermittent CANNOT be used for Interrupted Controls, But you adapt a Interrupted Control for a Intermittent Control	Two Wire Thermostats Connect "W" & "B"--- Three Wire RED to "R" WHITE to "W" BLACK to "B"