OIL BOILER CLEAN AND TUNE

I. HEAT EXCHANGER

1. Visually check the heat exchanger for any cracks and, if present, document with photographs.
2. If the heat exchanger is cracked **stop all work and immediately contact the weatherization provider.**

II. CLEAN

A. Combustion Area

1. Clean boiler passageways.
2. Brush down all dirt, soot, and rust from heat exchanger sections.
3. Brush down and vacuum all flue passageways within the boiler.
4. Clean blast tube and flame head.
5. Replace nozzle with same size or lower size, if de-rating is possible or desirable.
6. Replace oil line filter element.
7. Brush down and vacuum remainder of combustion chamber so that it is free of dirt, soot, and loose rust.
8. Check to ensure combustion chamber is airtight.

B. Flue

1. Clean and check barometric damper for proper operation.

C. Distribution

1. Check circulating pump. Lubricate bearings, if possible.
2. Check that zone valves are functioning properly.
3. Purge expansion tank. If water is rusty or has sludge, drain, flush and refill the system and check for leaks.
4. Check that fill and safety valves are functioning properly.
5. Purge air valves and bleed radiators. Check and add water to the correct PSI specifications for the boiler.
6. Check each radiator for output.

III. TUNE

A. Combustion

1. Inspect the fuel line for leaks and repair any leaks that are present.
2. Adjust primary air shutter to obtain the highest CO_2 or lowest O_2 in the flue, without making the smoke test higher than number 2 and the draft, at breech, no higher than .06 inches of water column.
3. Adjust the burner so there is no flame impingement.
4. Measure amperage of burner control, combined with any other load that may be on the low voltage control circuit, and set thermostat heat anticipator to match.
5. Adjust combustion as needed to meet BPI 1200 standard of <400 PPM air free for carbon monoxide local code, whichever is more stringent.