

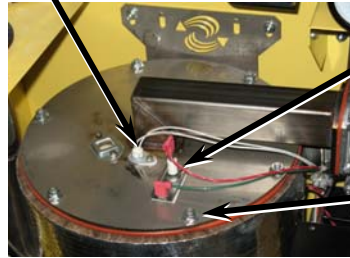


Step 1 Open Front Cover

Turn off power to system and close main manual gas valve when servicing.

1. Loosen the (4) screws holding the upper front boiler jacket access panel and set the panel aside.
2. Remove the (2) screws holding the jacket top cover on, tilt up and slide forward to remove.

Hot Surface Ignitor



Flame rod

Burner flange nuts

Step 2 Disconnect Gas Line and Burner Fan Electrical Connections

1. Shut off gas supply. Remove the direct air intake and the associated gas valve reference hose.
2. Using two wrenches disconnect the flexible gas line below at the flare fitting.
3. Disconnect electrical wiring from burner head. Models may have a single large connector or individual connectors for fan, ignitor, and flame rod. Disconnect the two electrical wiring connectors at the fan housing. The connector holding clips are on the sides of the three pin connector and on the back of the four pin connector. They are both press-to-release type. Disconnect the electrical wiring connector connecting the wires to the top of the burner.
4. Remove the (6) burner flange nuts holding the burner flange to the top of the heat exchanger.
5. Lift the burner and flange straight up about 2 inches and rotate the fan toward you. Tilt the fan down while picking up on the burner. Lift it high enough to remove it from the boiler. **Gently loosen the refractory if it adheres to the pressure vessel.**
6. Place the burner on a flat surface with the nozzle pointing upward. Do not touch the mesh burner head and be careful not to damage the igniter or sense rod.



Step 3 Clean Turbulators, Flame Rod and Burner Sight Glass

1. Remove (6) turbulators. If they all look clean, you're done. Otherwise twist and clean all turbulators. **Never operate the boiler without all turbulators installed.**
2. If it looks like the boiler needs to be flushed, remove the condensate trap and place a bucket or tray below the condensate outlet and spray the furnace area with a citric acid based cleaner and a soft brush. Then rinse thoroughly with clean water and push back down into the tube.
3. If the condensate trap was removed, then reinstall the trap.
4. When using the citrus cleaner, wear eye protection and rubber gloves. Use of cleaners containing chlorine, sodium or other acids will void the warranty.
5. Clean the burner sight glass and double check insulation around igniter.
6. Thoroughly clean the flame rod with scotch brite or similar cleaning pad.



Annual Tune Up & Inspection, Accel CS Boiler



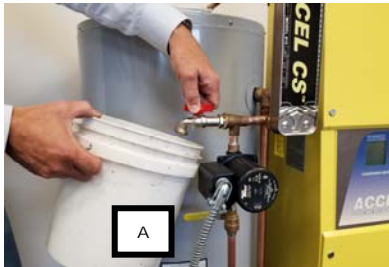
Step 4 Reinstall Burner and Check Wiring

1. Inspect burner flange gasket and replace if necessary.
2. Reverse the removal instructions to reinstall the burner.
3. Using a thin blade screwdriver verify all the screws attaching the electrical wiring on the connectors on the burner control, on the Condensing Manager, and inside the electrical junction box are tight.



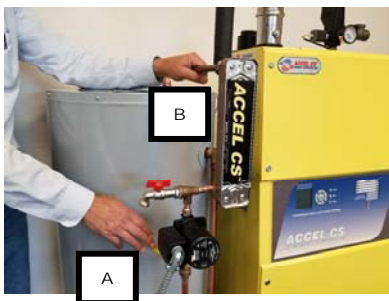
Step 5 Check Condensate Parts

1. Remove boiler stand front cover. Clean the condensate trap. Verify that the sealing ball is present inside of the trap.
2. Check the condensate neutralizer pH and for an adequate amount of neutralizing chips, replace as needed.



Step 6 Backflush Plate Heat Exchanger

1. Close valve (A) underneath the domestic hot water circulator.
2. Open drain valve above the circulator to backflush the heat exchanger.
3. If domestic water supply is "hard" (calcium or lime), consider installing Scale Stopper (Item no. 10-0650).
4. Set temperature feeding hot water tank (above heat exchanger) by adjusting ball valve (A) below the bronze circulator. Adjust the ball valve with the burner running and a continuous flow of hot water from a fixture. You should be able to briefly hold your hand on pipe (B).



Step 7 Check Zone Valves

Manually open and allow zone valves to close several times to see that they move freely.





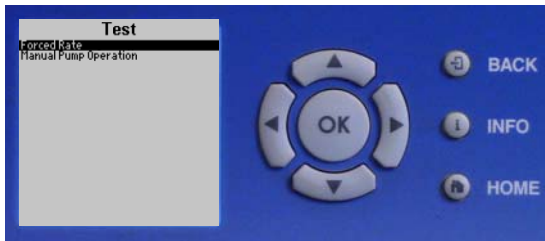
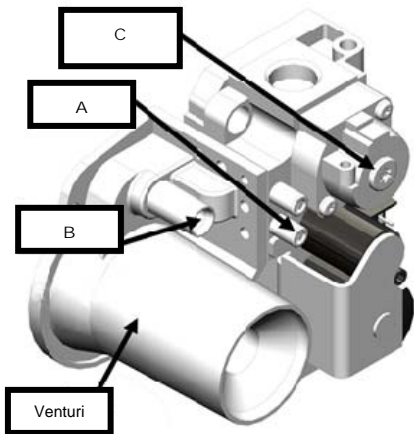
Step 8 Start Burner & Check Combustion.

Check & Record: Refer to manual for recommended settings.

1. Start appliance.
2. Check incoming gas pressure range: Natural Gas 3.5" – 10.5"w.c.
LPG 8" – 13"w.c.

Close manual gas shutoff valve. Open gas valve outlet pressure tap (A) ½ turn and connect a manometer hose over the port. Open gas shutoff valve and test the pressure with the burner running at high fire and all other gas appliances running so the reading is above the minimum shown. Then verify that with no gas flow and the burner off and all other gas appliances off that the maximum gas pressure does not exceed the maximum shown above.

3. Ensure you have a sufficient heat (or hot water) demand to allow the unit to run at full rate without shutting off on due to high temperature.
4. Run appliance at maximum fan speed (See Table in Boiler manual for specific model). For newer systems: INFO button → Test → Forced rate → Set High Fire → Start Test. For systems without this option: INFO button → Advanced Setup → Modulation Config → CH Max Modulation Rate. Use left and right arrows only. To delete prior setting, arrow to DEL and press OK repeatedly until cleared, and then use arrows to enter maximum RPM.
5. Check that O2 reading is between 4.2% and 4.8% (4.5% target). Adjust throttle screw (B) if necessary. Turn throttle screw clockwise to increase O2 and counter clockwise to decrease O2.
6. Keep burner running until completely stabilized, make adjustment when necessary.
7. Set appliance to minimum fan speed for offset adjustment with "Set Low Fire" on most systems, or by adjusting the max modulation rate to ~ 50-100 RPM above the minimum modulation rate via "Modulation Config" as shown in step 4.
8. Remove offset cap screw (C) with Torx T-40 screw driver or 5 mm hex key.
9. Check that offset O2 reading is between 4.2% and 4.8% (4.5% O2 target). Adjust if necessary. Turn counter clockwise to increase O2 and clockwise to decrease O2 reading. Adjust in very small increments, and allow to stabilize between adjustments.
10. Repeat High Fire and Low Fire O2 tests until readings are stable with no adjustments needed. If you are running out of time on the 5 minute test, tap Stop Test twice quickly to restore another 5 minute session.
11. Press "Stop Test" for Forced Rate adjustments, or if modulation rate set, reset the fan speed to maximum RPM (see Item 3 above). Verify speed is at maximum RPM. To view current fan speed, press "Home".
12. Perform carbon monoxide test two minutes after light off. If the carbon monoxide exceeds 400 ppm air-free after two minutes of operation, shut off boiler immediately and repeat "Prepare for Start Up" checklist found in installation manual.



Step 9 Low Water Cutoff Test

1. Every year: Press "TEST" button on LWCO while burner is firing. Confirm the "LOW WATER" LED turns on and the burner shuts off.
2. Every 5 years: Remove LWCO and clean sensing probe. Reinstall the LWCO and confirm TEST and burner operation. Never use pipe dope of any kind on plastic LWCO threads. Use only Teflon tape.