

Burner Installation Instructions

Burner Installation Instructions for EXB/TRB Series Boilers

NOTICE

IMPORTANT: 5 Section boilers shipped less-burner are factory equipped with V shaped combustion chamber liner. V liner is only required for certain burner types. It is not required for Carlin burners. Remove the V liner, if equipped, before installing the Carlin burner.

Installation Procedure

1. Burner is configured at the factory for 0.75gph firing rate. If product is a 4075, then proceed to step 21.
2. All other configurations, burner will need correct nozzle and head bar installed along with air band settings. Proceed to step 3.
3. Use Table 1. Select boiler size to being configured (i.e 5135, 5 section boiler with a 1.35gph firing rate). Select proper nozzle and head bar required. Note nozzle size is stamped on each nozzle and head bars are stamped for identification.
4. Loosen and rotate two screw clamps securing ignitor in place. Swing ignitor plate open.
5. Disconnect nozzle line heater harness.
6. Unscrew oil line fitting and thumb nut at burner housing.
7. Pull threaded end of oil tube into blower housing.
8. Rotate combustion head assembly 180° so electrodes are upside down. This places electrode insulators out of way for easy removal from air tube.
9. Remove combustion head assembly by pulling assembly up and out of housing. See Figure 1. Handle assembly with care to avoid bending/moving electrodes, or damaging electrode ceramic insulators.
10. Loosen clamp screw on retention ring assembly. See Figure 2. Slide retention ring assembly off of nozzle adapter.
11. Remove nozzle by holding nozzle adapter securely, taking care not to damage electrodes.
12. Replace with nozzle identified in Table 1 and tighten.
13. Replace retention ring assembly. Slip one of the riveted arms through gap between electrode tips. Align this arm straight up, with ring clamp firmly against nozzle shoulder. Tighten clamping screw.
14. Check electrode settings. Position electrodes as shown in Figure 2. Settings are critical in ensuring reliable ignition. Once electrodes are set, check all clamps to ensure securely tightened.
15. Remove current head bar from side of burner and replace with head bar identified in step 3, from Table 1. Tighten in place.
16. Re-insert combustion head assembly into air tube upside down so electrode insulators clear. Rotate assembly so oil tube is aligned with blower housing and slide in to position.
17. Pull oil tube through opening in head bar and tighten oil line fitting and thumb nut at burner housing.
18. Connect nozzle line heater harness.
19. Swing ignitor plate closed. Rotate two screw clamps and tighten.
20. Adjust air band to setting identified in Table 1.
21. Place burner gasket over burner air tube. Insert burner into swing door. Secure with four 5/16-18 x 3/4" bolts provided and tighten.
22. Connect burner harness to plug on boiler.
23. Burner installation is complete. Install boiler per Installation, Operation and Maintenance Manual.
24. Follow start-up procedure in Installation and Maintenance Manual.

TABLE 1 - CARLIN MODEL EZ-LF SETTINGS

BOILER NO.	COMBUSTION CHAMBER LINER	FIRING RATE	NOZZLE MFR.	NOZZLE TYPE	PUMP PRESSURE [PSI]	HEAD BAR	AIR BAND SETTING
4075	OVAL	0.75	DANFOSS	0.60 x 60 AS	160	0.60/0.65	25%
4095	OVAL	0.95	DELAVAN	0.75 x 45 W	160	0.75	35%
4110	OVAL	1.10	DELAVAN	0.85 x 60 A	165	0.75	50%
5100	NONE	1.00	HAGO	0.75 x 60 B	175	0.75	35%
5115	NONE	1.15	DELAVAN	0.85 x 45 A	180	0.85/1.00	40%
5135	NONE	1.35	DANFOSS	1.10 x 60 AB	150	1.10/1.25	45%

Above settings are preliminary settings only. Final adjustments must be made using combustion test instruments as previously outlined in the Operating Instructions

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Figure 1 - Combustion Head Assembly

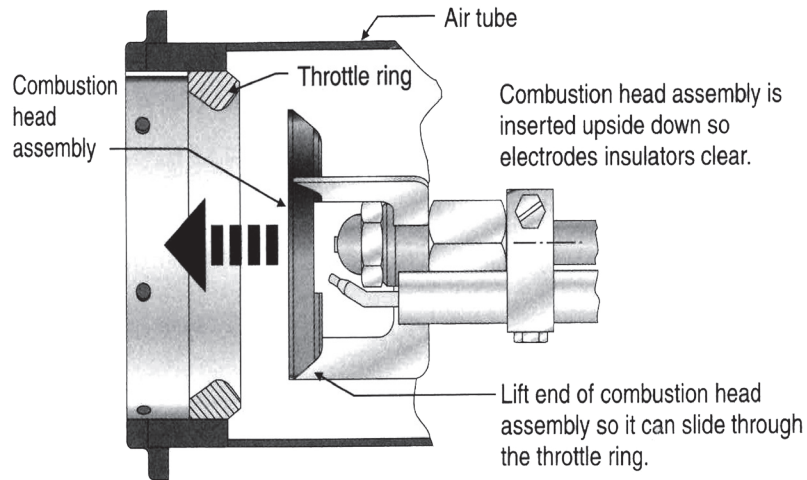


Figure 2 - Electrode Placement, Retention Ring Assembly and Nozzle Adapter

