



# HEAT EXCHANGER CONDENSATION KIT INSTALLATION INSTRUCTIONS FOR ALL YPAL UNITS

INSTALLATION

New Release

Form 100.50-N19 (1006)

## HEAT EXCHANGER CONDENSATION KITS

- 50 – 65 TON UNIT - PART NUMBER 326-44075-000
- 70 – 85 TON UNIT – PART NUMBER 326-44076-000
- 90 – 105 TON UNIT – PART NUMBER 326-44077-000
- 106 – 130 TON UNIT – PART NUMBER 326-44078-000

## TOOLS REQUIRED

1. 5/16" magnetic socket
2. 3/8" magnetic socket
3. 12" extension for drill and socket
4. Two awls
5. Two flat blade screw drivers
6. A Philips screw driver
7. A Philips bit for 12" extension
8. Two pipe wrenches for 2" pipe unions
9. Disposable rubber gloves
10. Heat Exchanger Condensation Kit. – One kit is required for each heat exchanger installed in the unit.

## MANPOWER AND INSTALLATION TIME

Because of the need to remove the gas heat external door from the unit, two technicians will be required to install the retrofit kits. It should take two technicians 1 hour to install the heat exchanger drain pan kit in a unit with a 375,000 BTU (single section) heat option. It should take 1-1/2 hours to complete the installation on a unit with 2 heat sections and 2 hours on a unit with 3 heat sections.

BILL OF MATERIALS		
ITEM	QTY	DESCRIPTION
1	1	LEFT HAND HEAT EXCHANGER CONDENSATE PAN
2	1	RIGHT HAND HEAT EXCHANGER CONDENSATE PAN
3	2	#10 SELF DRILLING SCREWS
4	2	TY-RAPS
5	2	24 INCH LONG DRAIN TUBES
6	1	INDUCER SHIELD
7	1	TUBE OF HIGH TEMPERATURE RTV
8	2	CLAMP, TUBE
9	1	INSTRUCTIONS

## INSTALLATION PROCEDURE

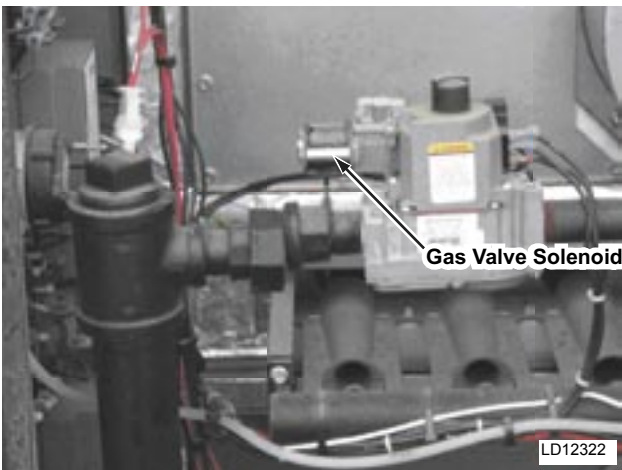
1. Remove the power from the unit.
2. Turn off the external gas shut off valve.
3. Remove the screws that fasten the external furnace vent (chimney) to the unit post.
4. Remove the external door from the heat exchanger compartment by removing the screws from one side of the hinge.
5. Remove the screws that fasten the flue outlets to the unit post. Use flat blade screw driver to break seal between the flue outlet to the post.



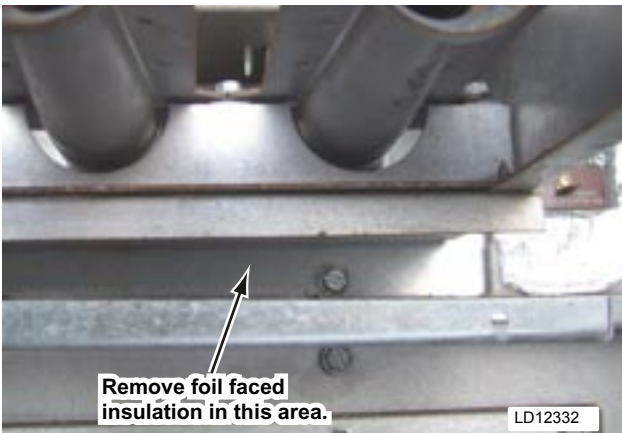
6. Remove the post that the furnace vent was attached to from the unit.
7. Disconnect the gas manifold(s) from the main gas train by opening the union(s).



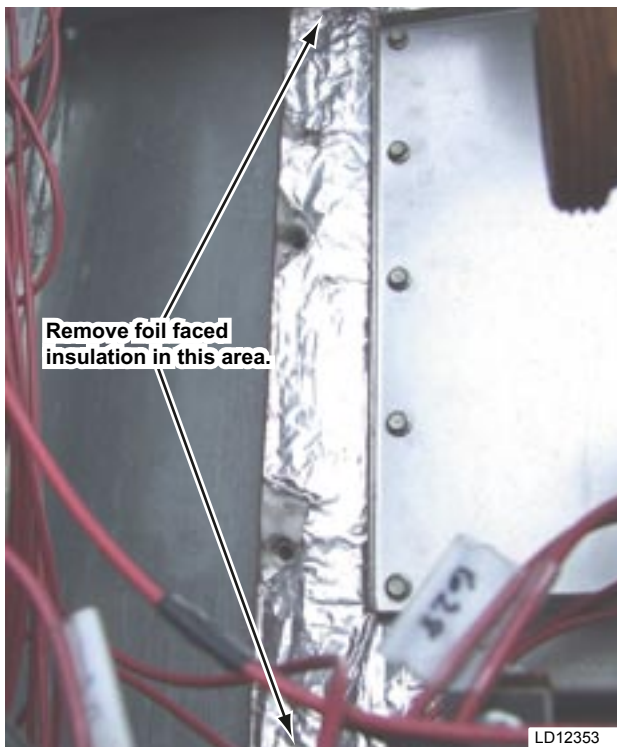
***When opening the union, make sure the pipe wrench does not come in contact with the solenoid of the gas valve. Contact with the solenoid could result in the damage to mounting bracket of the solenoid valve.***



8. Remove the foil faced insulation between the bottom of the burner assembly and the bottom of the burner heat exchanger cover.

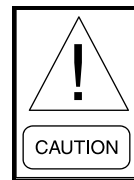
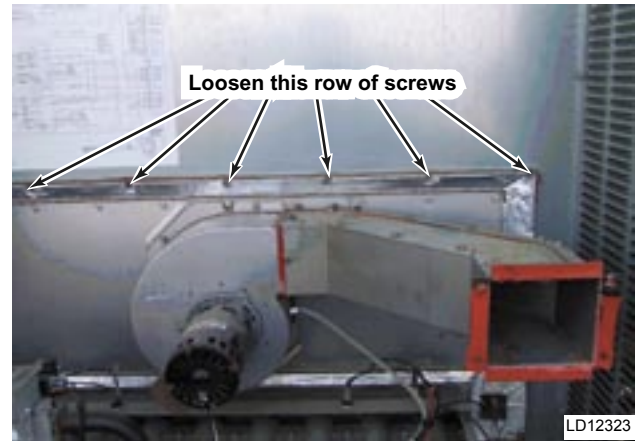


9. Remove the foil faced insulation from the left side of the burner heat exchanger cover plate.



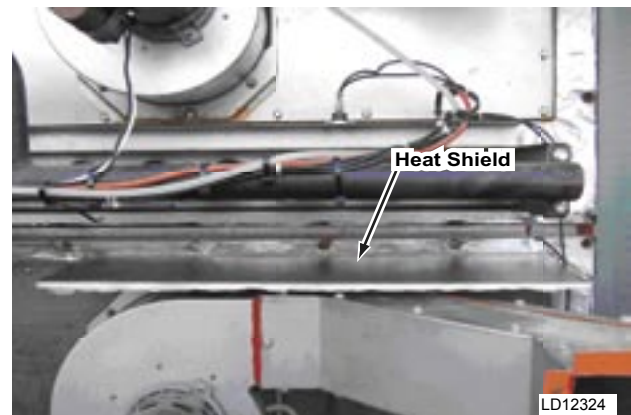
10. *This step can be omitted when there is only one heat exchanger present.* Install the inducer heat shield on the bottom heat exchanger when two heat exchangers are present or bottom and middle heat exchanger when three heat exchangers are present. To install the shield follow the steps below.

- a. Loosen the top row of screws that fasten the inducer heat exchanger panel to the vestibule panel.



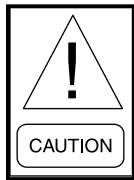
***Be careful not to damage the seal between the inducer and the vent pipe during the installation of the heat shield or condensate drain pans.***

- b. Slide the short flange of the heat shield between the vestibule panel and the inducer heat exchanger panel, insulation side down. Position the heat shield so that the slotted holes in the shield align with the first six screws on the right hand side.
- c. Re-tighten the screws loosened in step 10a.



11. Remove the screws, which fasten all the heat exchangers vestibule panels to the support frame using a 3/8-inch magnetic socket with a 12 inch extension. Retain the screws for reinstallation at a later time.

12. Use a straight bit screwdriver to separate each of the heat exchanger assemblies from the support frame.
13. Install the 24 inch long drain tubes to the drain tube connection of right and left hand condensate pans. Use the clamps supplied with the kit to hold the tube to the pan. Position the clamps away from the outside edge of the pan.
14. Lift and pull the top heat exchanger using the inducer motor and housing and insert the flange of the left and right hand heat exchanger condensate pans between the top heat exchanger vestibule panel and the support frame.

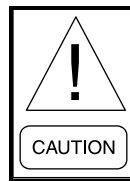
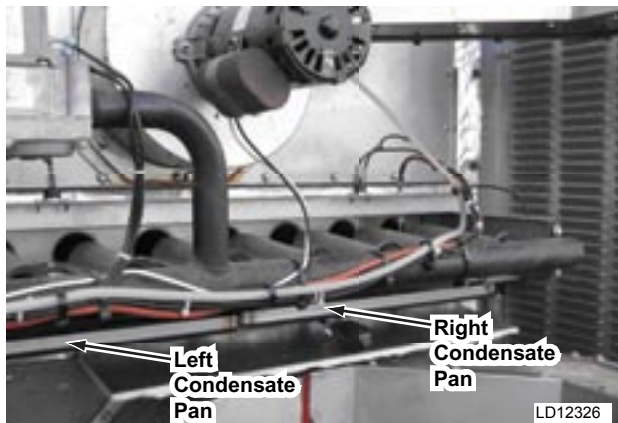


***Never use the burner assembly to lift or manipulate the heat exchanger assembly. Use the inducer motor and housing to align the heat exchanger assembly and the holes. The use of the burner assembly for this purpose could result in misalignment of the burners resulting in combustion issues.***

15. Use two awls to align the top left and right holes in the heat exchanger assembly with the corresponding holes in the support frame and reinstall the top row of screws removed in step 11.

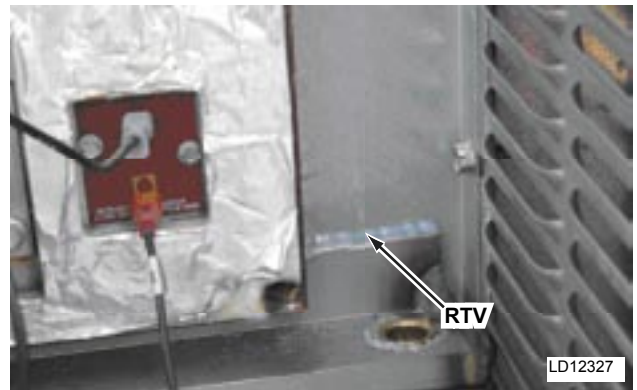


16. Reinstall and tighten all screws removed in Step 11 along the bottom and sides of the vestibule panel.

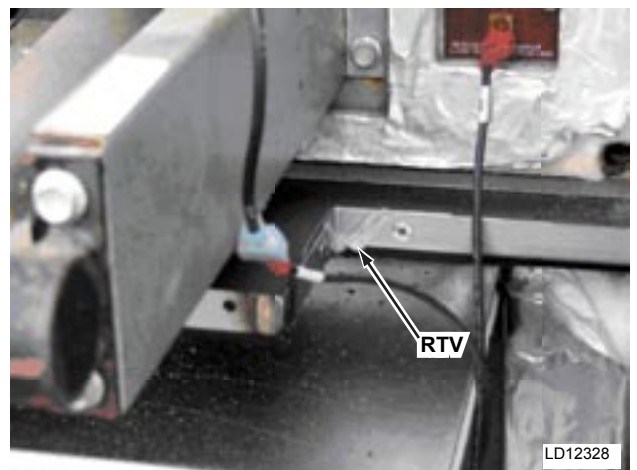


***Verify the left and right hand condensate pans slope back towards the heat exchanger.***

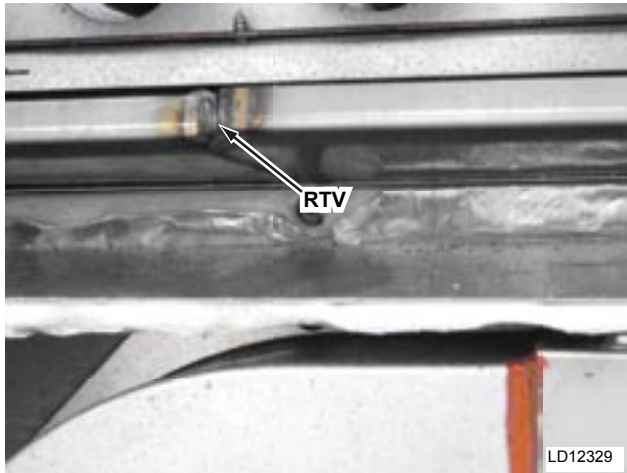
17. Repeat steps 11-16 for each of the remaining heat exchanger assemblies working from the top to the bottom.
18. Apply the high temperature RTV, supplied with the kit, to the right hand edge between the right hand condensate pan and the heat section support frame.



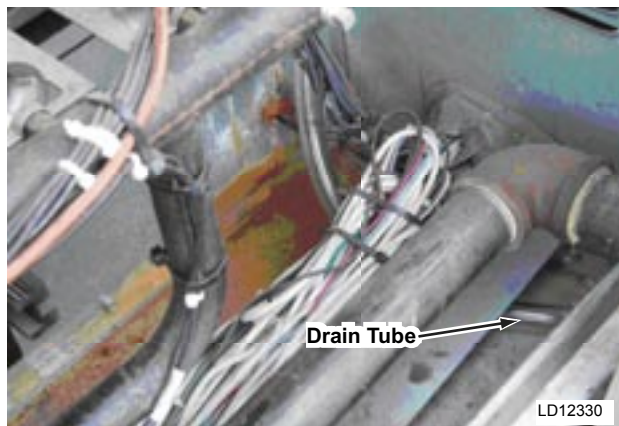
19. Apply the high temperature RTV, supplied with the kit, to the left hand edge between the left hand condensate pan and the heat section support frame.
20. Apply high temperature RTV to seal the stepped corner of the left and right hand condensate pans.



21. Apply the high temperature RTV supplied with the kit to the bottom of the joint between the left and right hand heat exchanger condensate pans on all heat exchanger assemblies.



22. Position the tubes so that they drain into the side rail of the unit.



23. For the upper heat exchanger sections shorten the 24-inch tubes supplied with the kit so they extend into the heat exchanger condensate pan of the heat exchanger assembly directly below. Cut the tube at a 45 degree angle.

24. Use the ty-rap and a self-drilling screw, supplied with the kit, to fasten the drain tube to the heat exchanger frame.



25. Check to see if a black rubber block is installed in the base rail to the right of the heat exchanger. If it is remove it. **The black rubber block to the left of the heat exchanger must remain in place.**
26. Reinstall the post, flue extensions, external flue (chimney) and door removed in steps 3, 4, 5 and 6.
27. Reconnect the unions between the gas manifold(s) and the main gas train.
28. Open the external gas shut off valve and loosen the unions to bleed the air out of the lines.
29. Tighten the union connections and leak check the unions using a soap solution or other material suitable for the purpose. **Never use a flame!**
30. Turn the power to the unit back on and verify the operation of all the gas heat sections.

