

INSTALLATION INSTRUCTIONS

FOR REPLACEMENT HEAT EXCHANGER DOOR (WTR3080 & WTR30002) FOR MODELS: WB 50/51 - 210/211, WA 125 - 200, KB 80/81 - 500/501, AW/OK/OA 150/151 - 500/501, SNR126-065, SNR(SNA)150/151-100, SNR200/201-100, SNA285/286-125, SNA400/401-125, & SNA500/501-125

⚠ WARNING

For an appliance already installed, you must turn off gas supply, turn off power and allow appliance to cool before proceeding. Components may be **HOT!** Failure to comply could result in severe personal injury, death, or substantial property damage.

Recommended tools:

- T20 and T25 Torx Driver
- 5/16" Nut Driver
- Pipe Wrench
- Step Ladder: For SNR / SNA Models Only
- 10 mm Socket or Wrench
- #4 and #6 Allen Wrench
- #2 Phillips Screwdriver

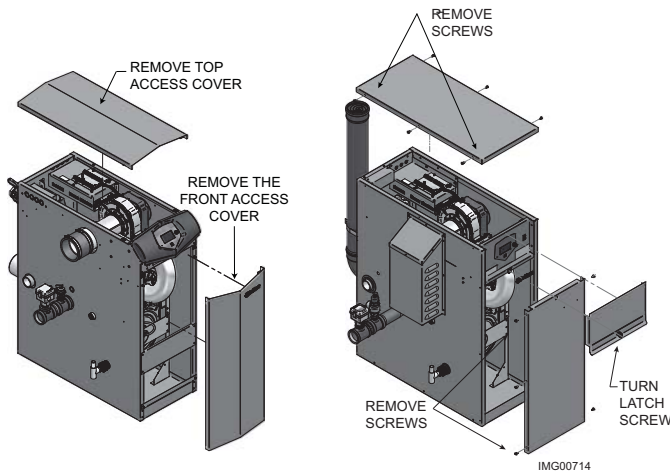
List of kit components

Kit Number	Model	Part Number	Component Description
WTR3080	KB 80/81- 500/501 AW/OK/OA 150/151-500/501 SNR126-065 SNR150/151-100 SNR200/201-100 SNA285/286-125 SNA400/401-125 SNA500/501-125	WTR2076	Heat Exchanger Door
		FIB2168	Door Insulation
		GKT2451	Burner Gasket
		GKT2443	Venturi Gasket (Models 80/81 - 285/286)
		GKT2444	Venturi Gasket (Model 399/400)
WTR30002	WB 50/51 - 210/211 WA 125 - 200	WTR2021	Heat Exchanger Door
		FIB2291	Door Insulation
		GKT2436	Blower Gasket
		GKT2451	Burner Gasket

To gain access to the interior of the appliance – Models KB 80/81 - 500/501 & AW/OK/OA 150/151 - 500/501

1. Turn OFF power at the source.
2. Turn OFF gas supply to the appliance.
3. Remove the top and front access covers (see FIG.'s 2-1 and 2-2).
4. Follow the replacement procedure in this instruction sheet to replace the heat exchanger door.

Figure 2-1 Remove front access cover – Models KB/AW 80/150 - 500 & KB/AW 81/151 - 501



To gain access to the interior of the appliance - Models WB 50/51 - 210/211 & WA 125 - 200

1. Turn OFF power at the source. Turn OFF gas to the appliance.
2. Remove the front access cover (no tools required for removal) (FIG. 1-1).
3. Disconnect the ribbon cable from the control board. Remove the four (4) screws securing the bezel to the front of the unit and remove the bezel (FIG. 1-1).
4. Follow the replacement procedure in this instruction sheet to replace the heat exchanger door.

Figure 1-1 Remove cover and bezel : Models WB 50/51 - 210/211

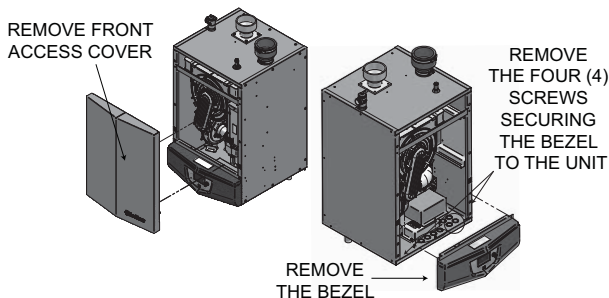


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To gain access to the interior of the appliance – Models SNR126-065, SNR150/151-100, SNR200/201-100, SNA285/286-125, SNA400/401-125, & SNA500/501-125

NOTICE

Installation for the replacement heat exchanger door on Models SNR & SNA will require a step ladder for accessibility.

1. Turn OFF power at the source. Turn OFF gas to the appliance.
2. Remove the upper bezel by loosening the screws on the left and right sides (FIG. 3-1).
3. Remove the screws located on the top to remove the top panel as shown in FIG. 3-1. A step ladder will be required at this time.
4. Follow the replacement procedure in this instruction sheet to replace the heat exchanger door.

Figure 3-1 Remove upper bezel & top panel – Models SNR150-100, SNR200-100, SNA285-125, SNA400-125 & SNA500-125

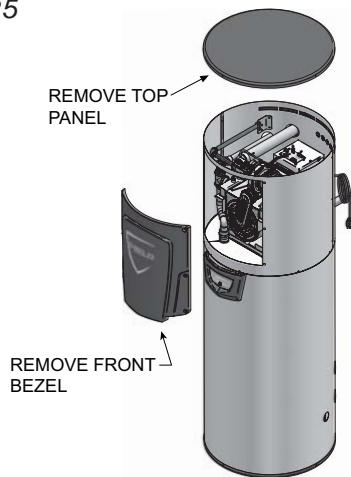
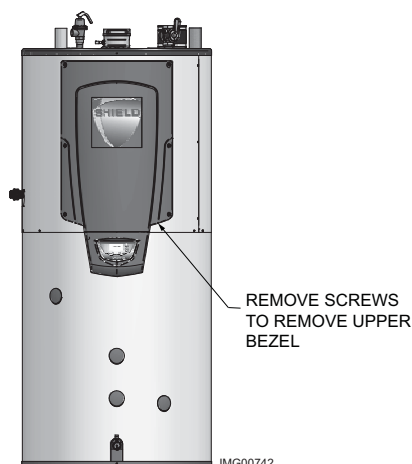


Figure 3-2 Remove upper bezel – Models SNR126-065, SNR151-100, SNR201-100, SNA286-125, SNA401-125 & SNA501-125



Replacement procedure - Models WB 50/51 - 210/211 & WA 125 - 200

1. Remove the two (2) screws securing the gas valve venturi to the inlet of the combustion blower.
2. Disconnect the main harness connector from the top of the combustion blower. Disconnect the second harness from the bottom of the combustion blower (see FIG. 4-1).
3. Disconnect the flame sense wire, spark ignitor wire, and ground wires from the front of the heat exchanger door as shown in FIG. 4-2.
4. Remove the six (6) nuts holding the heat exchanger door to the heat exchanger. Remove the heat exchanger door with the blower and gas/air arm still attached (FIG. 4-3).
5. Remove the ignitor and ignitor gasket from the front of the heat exchanger door (FIG. 4-4).
6. Remove the flame sensor and flame sensor gasket from the front of the heat exchanger door (FIG. 4-4).
7. Remove the gas/air arm (with the blower attached) from the heat exchanger door (FIG. 4-5).
8. Remove the burner and burner gasket from the heat exchanger door (FIG. 4-6).
9. Install the door insulation provided in the kit properly lining it up with the ignitor and flame sensor positions onto the new heat exchanger door (FIG. 4-7).
10. Re-install the burner and burner gasket (if gasket is damaged, replace with the one provided in the kit) removed in Step 8 into the new heat exchanger door.
11. Re-install the ignitor and ignitor gasket along with the flame sensor and flame sensor gasket removed in Steps 5 and 6 into the new heat exchanger door.
12. Reattach the gas/air arm and blower to the new heat exchanger door.
13. Reassemble the unit with the exception of the front access cover.
14. Turn ON power at the source and turn ON gas to the appliance. Check for gas leaks using the bubble test. Repair any leaks before proceeding.
15. Replace the front access cover and resume operation.

WARNING

Do not check for gas leaks with an open flame – use the bubble test. Failure to use the bubble test or check for gas leaks can cause severe personal injury, death, or substantial property damage.

Figure 4-1 Remove both harnesses from blower

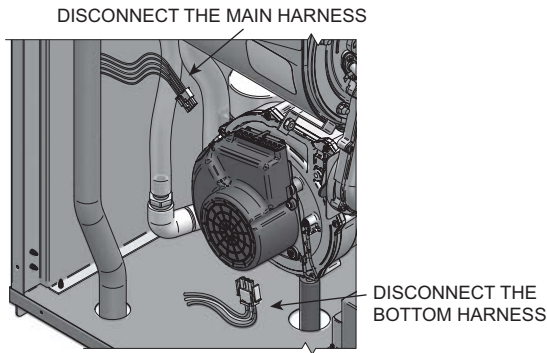


Figure 4-2 Disconnect flame sense wire, spark ignitor wire, and blower

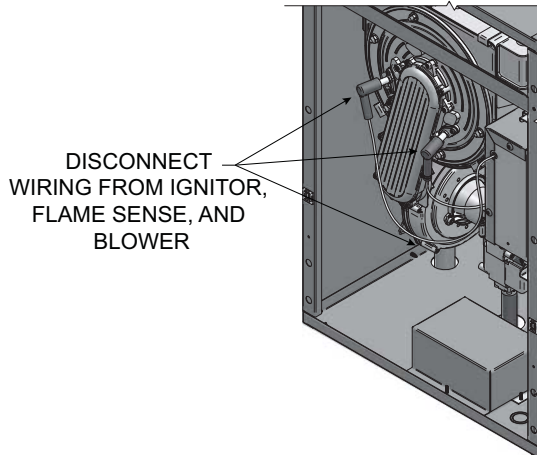


Figure 4-3 Remove heat exchanger door, gas/air arm and blower

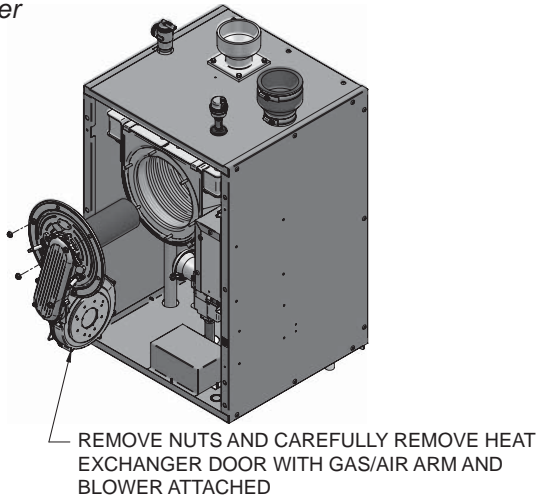


Figure 4-4 Remove the flame sensor, flame sensor gasket, ignitor, and ignitor gasket

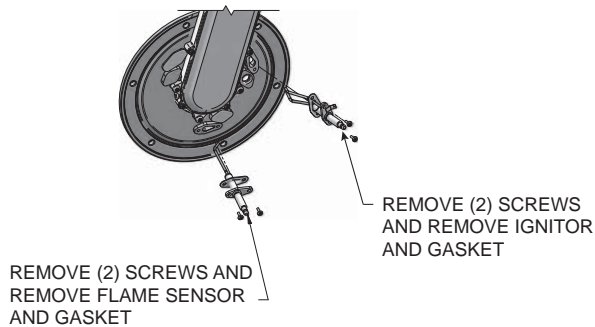


Figure 4-5 Remove the gas/air arm from the heat exchanger door

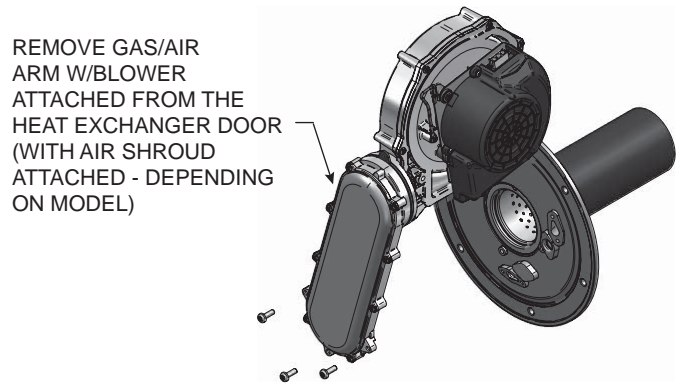
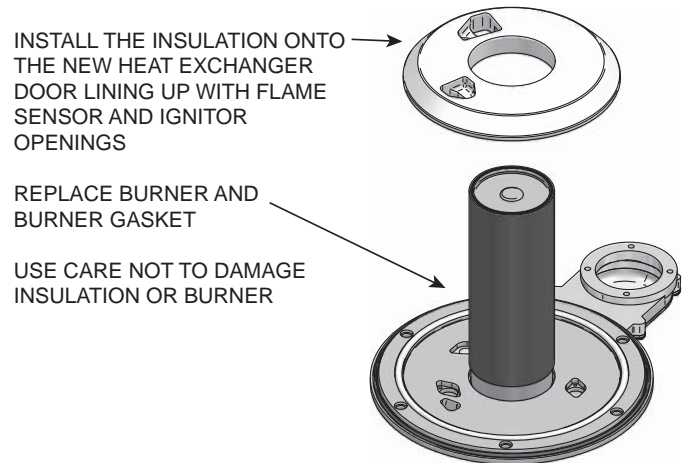


Figure 4-6 Remove burner and burner gasket



Figure 4-7 Install insulation onto the new heat exchanger door



Replacement procedure – Models KB 80/81 - 500/501; AW/OK/OA 150/151 - 500/501; SNR150-100, SNR200-100, SNA285-125, SNA400-125, & SNA500-125

1. **For KB/AW/OK/OA Models Only:** Disconnect the ribbon cable from the display board. Remove the bezel from the front of the unit (see FIG. 5-1 & 5-2, depending on model).
2. Disconnect the valve venturi from the combustion blower (FIG.'s 5-3 and 5-4) (except on KB/AW 500 models after serial number H07, KB/AW 501 and SNA500-125, see note below). If the venturi gasket is damaged, replace the venturi gasket with the gasket provided in the kit when reassembling the unit.

NOTE: On Models KB /AW 500 after serial number H07, KB/AW 501 and SNA500-125, disconnect the gas train assembly by disconnecting the union. Disconnect the air inlet from the fan assembly by loosening the band clamp(s) as depicted in FIG.'s 5-5 and 5-6 according to the model.

4. Disconnect the main harness connector from the top of the combustion blower. Disconnect the second harness from the bottom of the combustion blower (see FIG. 5-7).
5. Disconnect the flame sense wire, spark ignitor wire, and ground wires from the front of the heat exchanger door as shown in FIG. 5-8.
6. Remove the six (6) nuts holding the heat exchanger door to the heat exchanger and remove the heat exchanger door with the blower and gas/air arm still attached (FIG. 5-8).
7. Remove the ignitor and ignitor gasket from the front of the heat exchanger door (FIG. 5-9).
8. Remove the flame sensor and flame sensor gasket from the front of the heat exchanger door (FIG. 5-9).
9. Remove the gas/air arm (with the blower attached) from the heat exchanger door (FIG. 5-10).
10. Remove the burner and burner gasket from the heat exchanger door (FIG. 5-11).
11. Install the door insulation provided in the kit by properly lining it up with the gasket openings on the new heat exchanger door (FIG. 5-12).
12. Re-install the burner and burner gasket (if gasket is damaged, replace with the one provided in the kit) removed in Step 10 onto the new heat exchanger door.
13. Re-install the ignitor and ignitor gasket along with the flame sensor and flame sensor gasket removed in Steps 7 and 8 onto the new heat exchanger door.
14. Reattach the gas/air arm and blower to the new heat exchanger door.
15. Reassemble the unit with the exception of the top and front access covers.

16. Turn ON power at the source and turn ON gas to the appliance. Check for gas leaks using the bubble test. Repair any leaks before proceeding.
17. Replace the top and front access covers and resume operation.

WARNING

Do not check for gas leaks with an open flame – use the bubble test. Failure to use the bubble test or check for gas leaks can cause severe personal injury, death, or substantial property damage.

Figure 5-1 Remove bezel and ribbon cable - For KB/AW Models

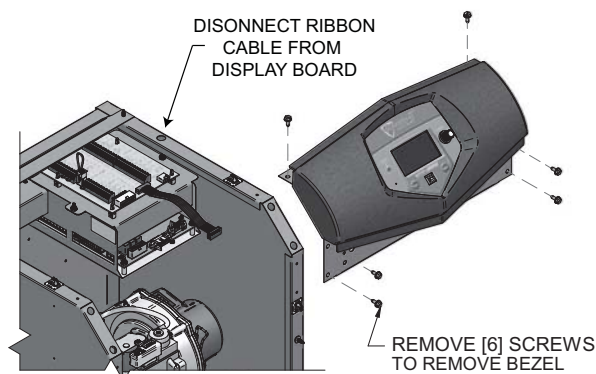


Figure 5-2 Remove bezel and ribbon cable - For OK/OA Models

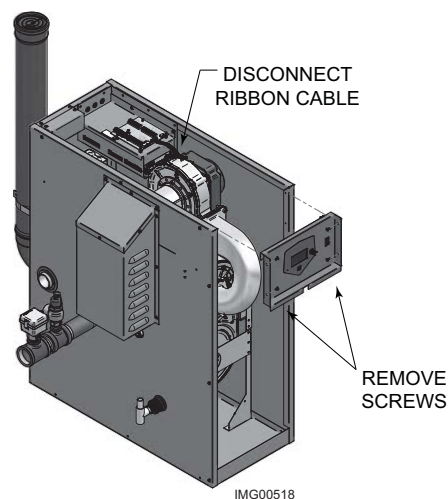
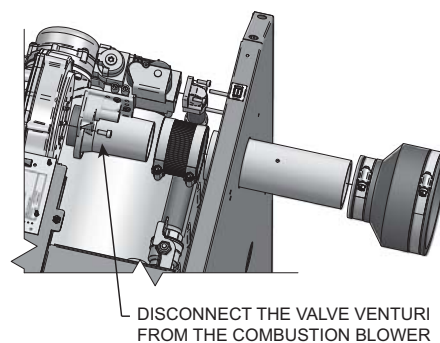
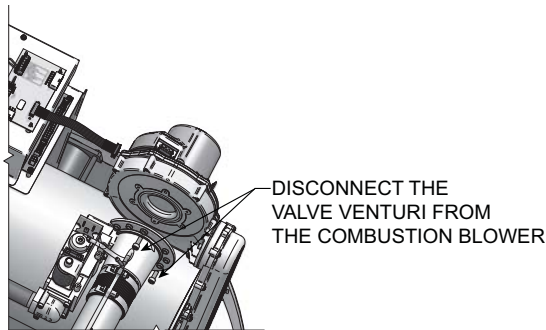


Figure 5-3 Disconnect valve/venturi assembly from the blower – Models KB/AW/OK/OA



NOTE: Model KB/AW 285 shown for illustration purposes.

Figure 5-4 Disconnect valve/venturi assembly from the blower – Models SNR/SNA



NOTE: Model SNA400-125 shown for illustration purposes.

Figure 5-5 Disconnect gas train and air inlet from the blower assembly – KB/AW500 after serial number H07 and KB/AW 501

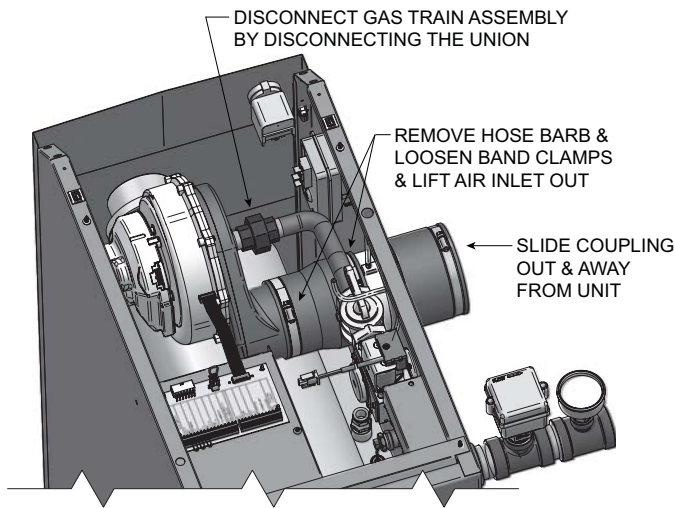


Figure 5-6 Disconnect gas train and air inlet from the blower assembly – SNA500-125

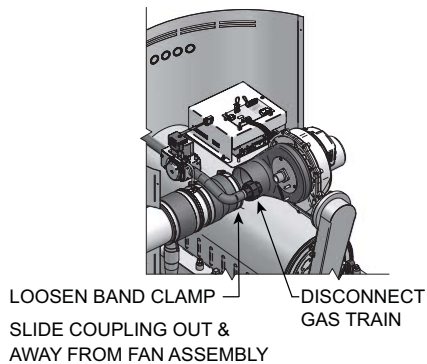


Figure 5-7 Disconnect harnesses from blower



NOTE: Side panel removed from diagram for better view.

Figure 5-8 Disconnect flame sense wire, spark ignitor wire, ground wires and heat exchanger door

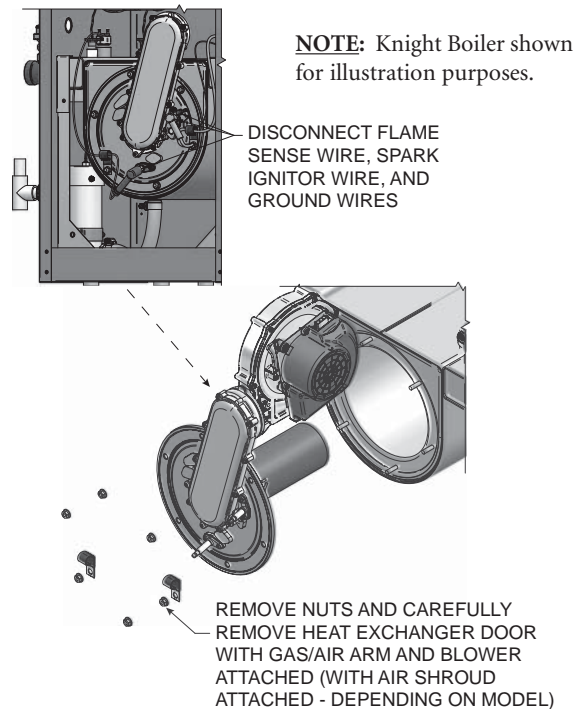


Figure 5-9 Remove the flame sensor, flame sensor gasket, ignitor, and ignitor gasket

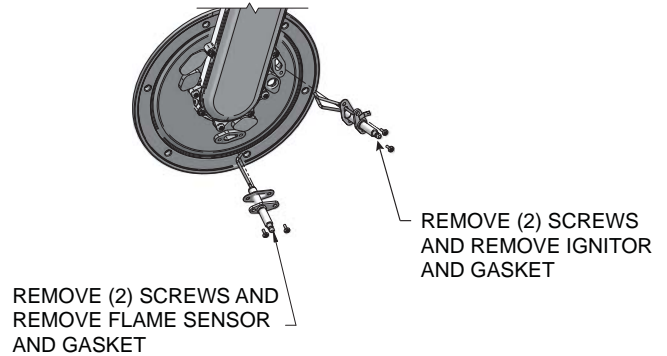


Figure 5-10 Remove the gas/air arm from the heat exchanger door

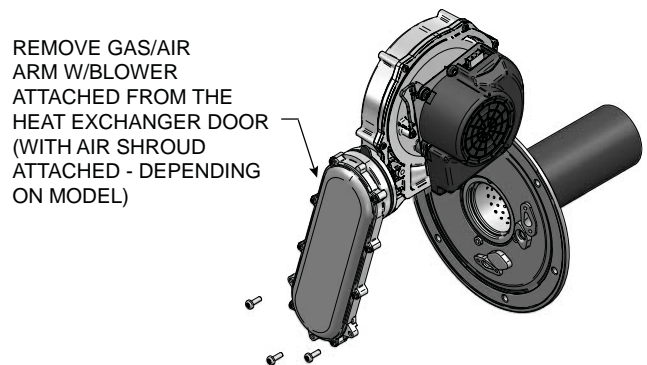


Figure 5-11 Remove burner and burner gasket

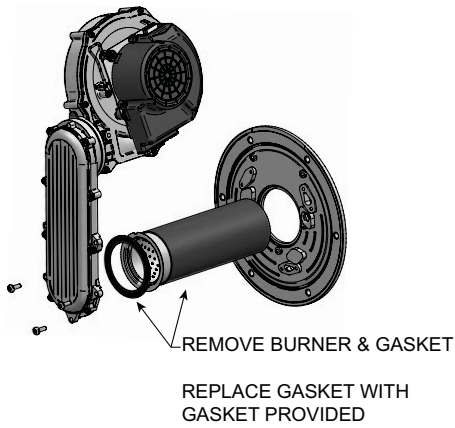
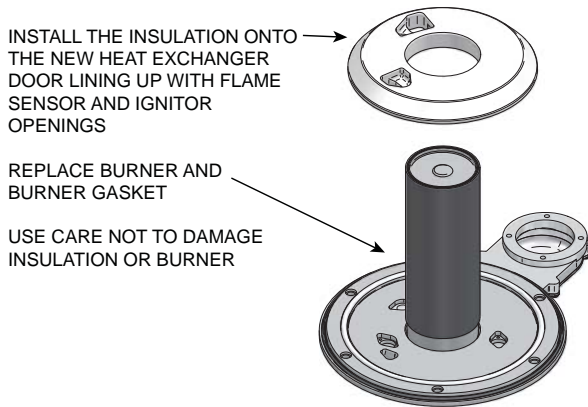


Figure 5-12 Install insulation onto the new heat exchanger door



Replacement procedure – Models SNR126-065, SNR(SNA)151-100, SNR201-100, SNA286-125, SNA401-125, & SNA501-125

1. Remove the wiring from the fan, ignitor and flame rod (FIG. 6-1)
2. **For Models SNR126-065, SNR(SNA)151-100, SNA286-125, SNA401-125:** Remove the Allen head screws from the venturi.
For Model SNA501-125: Loosen the union and band clamp (FIG. 6-2).
3. Remove the six (6) 10 mm nuts from the heat exchanger door. The fan, gas/air arm and heat exchanger plate may now be removed together (FIG. 6-3).
4. Access the burner by removing the T25 Torx head screws from the gas/air arm.
5. Remove the burner by pulling the burner through the heat exchanger plate.
6. Remove the ignitor, flame rod and fiber board from the heat exchanger door (FIG. 5-9, on page 5).
7. Reinstall the parts removed in Step 7 onto the new heat exchanger door. Install the replacement heat exchanger door and reassemble the unit.
8. Turn ON power at the source and turn ON gas to the appliance. Check for gas leaks using the bubble test. Repair any leaks before resuming operation.

WARNING

Do not check for gas leaks with an open flame – use the bubble test. Failure to use the bubble test or check for gas leaks can cause severe personal injury, death, or substantial property damage.

Figure 6-1 Remove wiring from fan, ignitor and flame rod

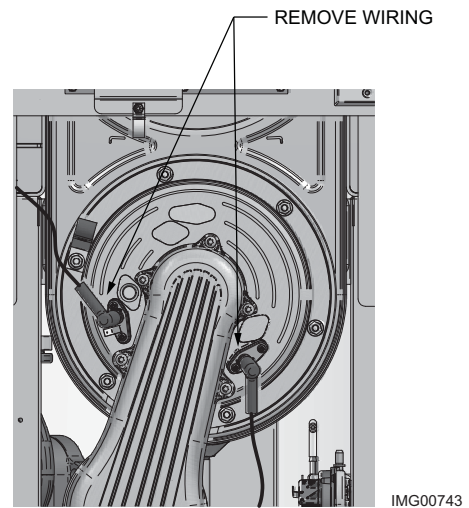


Figure 6-2 Loosen union and band clamp

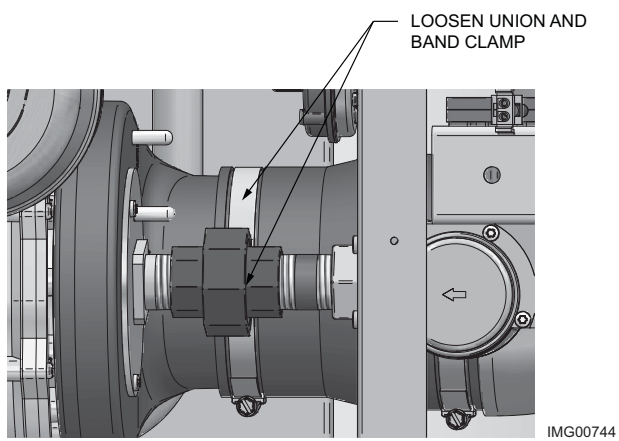
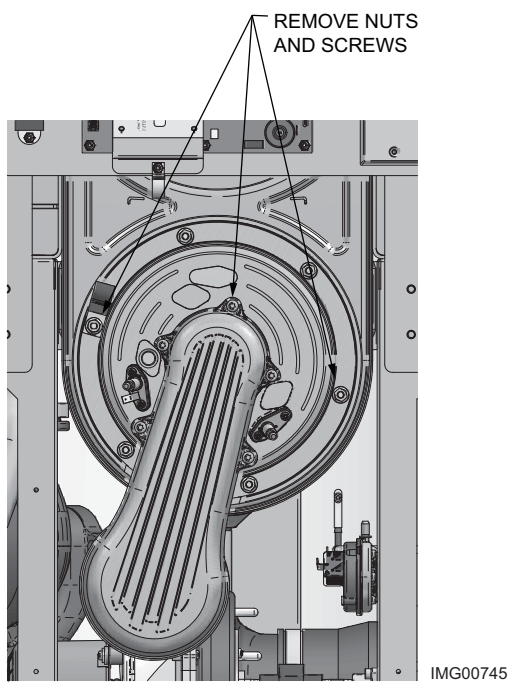


Figure 6-3 Remove nuts and screws to remove gas/air arm



⚠ WARNING

The combustion chamber door insulation in this product contains ceramic fiber material. Ceramic fibers can be converted to cristobalite in very high temperature applications. The International Agency for Research on Cancer (IARC) has concluded, “Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1).”:

- Avoid breathing dust and contact with skin and eyes.
- Use NIOSH certified dust respirator (N95). This type of respirator is based on the OSHA requirements for cristobalite at the time this document was written. Other types of respirators may be needed depending on the job site conditions. Current NIOSH recommendations can be found on the NIOSH website at <http://www.cdc.gov/niosh/homepage.html>. NIOSH approved respirators, manufacturers, and phone numbers are also listed on this website.
- Wear long-sleeved, loose fitting clothing, gloves, and eye protection.
- Apply enough water to the combustion chamber lining to prevent airborne dust.
- Remove the combustion chamber lining from the boiler and place it in a plastic bag for disposal.
- Wash potentially contaminated clothes separately from other clothing. Rinse clothes washer thoroughly.

NIOSH stated First Aid.

- Eye: Irrigate immediately.
- Breathing: Fresh air.

Revision Notes: Revision B (INS7240 Rev B) reflects the revision of Figures 5,6,7,8,9,10, and 11 to remove the bezel; and the addition of Figures 15 and 17.

Revision C (ECO C02860) reflects the addition of Models SNR150-100, SNR200-100, SNA285-125, SNA400-125 & SNA500-125.

Revision D (ECO C05579) reflects the addition of kit WTR30002 for WB50/51-210/211 and the update of model numbers following Knight upgrade.

Revision E (ECO C09727) reflects the addition of KB Upgrade Models, the addition of the general warning on page 1 and the reformat of cautionary statements and procedures throughout the instruction sheet.

Revision F (ECO C11868) reflects the addition of OK/ OK Models and associated figures.

Revision G (ECO C12869) reflects the addition of WA and Shield Redesign models and images.