P/N 100-10006929 Rev. 00
Effective: 10-22-2025
Replaces: NEW

INSTALLATION INSTRUCTIONS

MODULATING GAS VALVE REPLACEMENT KIT
XVERS (POWERED BY KOR) BOILERS (SIZES: 3507 & 4007 ONLY)

⚠ WARNING **These instructions are for use by qualified personnel specifically trained and experienced in the installation of this type of heating equipment and related system components. Installation and service personnel may be required to be licensed in some states. Persons not qualified shall not attempt to install this equipment nor attempt repairs according to these instructions.**

⚠ WARNING **Make sure water, gas, and power have been turned OFF before making any repairs or servicing this equipment. Make sure the heat exchanger is not under any pressure before attempting to service this part. Allow the appliance to cool before attempting this installation.**

⚠ DANGER **SHOCK HAZARD: Make sure the electrical power to the unit is disconnected to avoid damage to components, potential serious personal injury or death.**

SCOPE: The details of this document provide information for replacing the modulating gas valve and adding a tubing bracket on Raypak XVers (powered by KOR) boilers (sizes: 3507 and 4007 only).

RAYPAK INCLUDED PARTS:

Kit Number	Description	Qty.
018954F	Dungs Gas Valve	1
	Tubing Bracket	1
	Tubing	4 ft.
	Cable Tie (7-1/2")	2
	Cable Tie (3-7/8")	4
	Cap (1/4")	1
	Screw (10 X 3/8")	2

TOOLS REQUIRED:

Description
• 6 mm Hex Key
• Calibrated Torque Wrench
• Slotted & Phillips Head Screwdrivers
• Drill and Drill Bit (5/16")

GAS VALVE & TUBING BRACKET INSTALLATION INSTRUCTIONS:

1. Turn off the electrical power to the unit at the breaker panel and at the unit's power switch.
2. Turn off gas to the unit's manual shut-off valve.
3. Close the incoming water valves.
4. Allow the unit to cool down before proceeding.
5. Release the four (4) snap fasteners to remove the unit's front panel. Vertically lift the side-panels from the unit. Place the panels aside for re-assembly.

NOTE: Before disconnecting any wires from the gas valve, take a clear photo or label each wire according to its terminal location to ensure accurate reassembly.

6. Using a flathead screwdriver, remove the retaining screw securing the gas valve's wiring cover. Carefully lift and detach the wiring cover to expose and unplug the four (4) terminal connections. See **Figure 1**.
7. Using a 6 mm hex key, remove the eight (8) socket head cap screws securing the gas valve to the inlet and outlet flanges. Each flange is fastened with four (4) screws. See **Figure 1**.
8. Detach the flex tubing from the bottom of the gas valve. See **Figure 2**.
9. Detach the flex tubing from the left-side of the solenoid valve. See **Figure 3**.
10. The gas valve can now be removed from the unit.

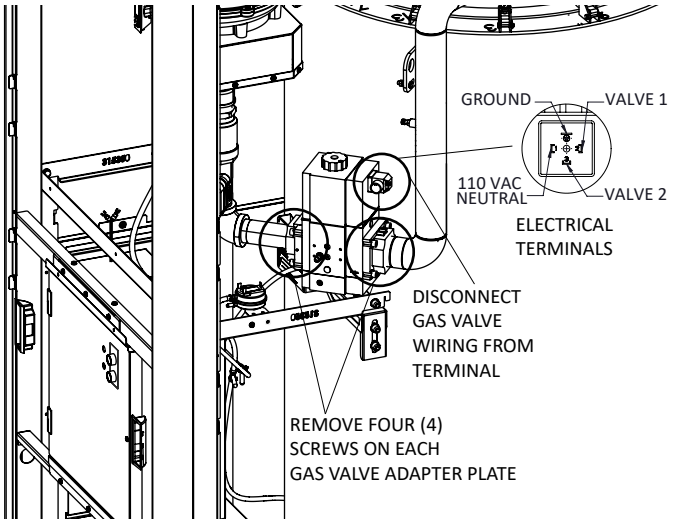

Figure 1. Remove Valve Wiring and Screws

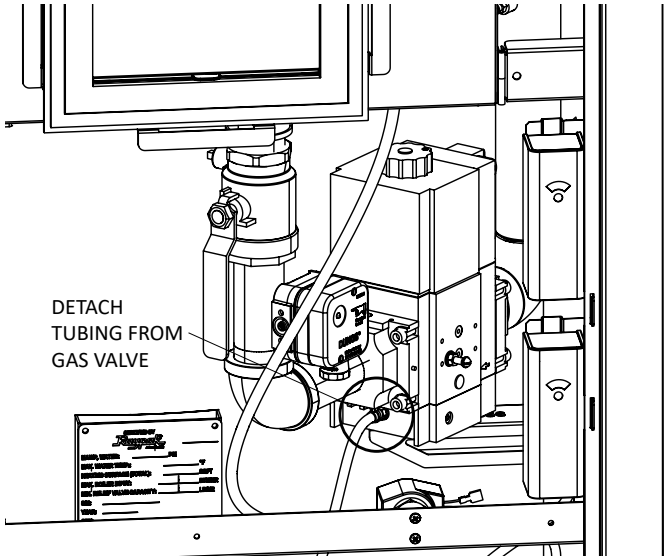

Figure 2. Detach Tubing from Gas Valve

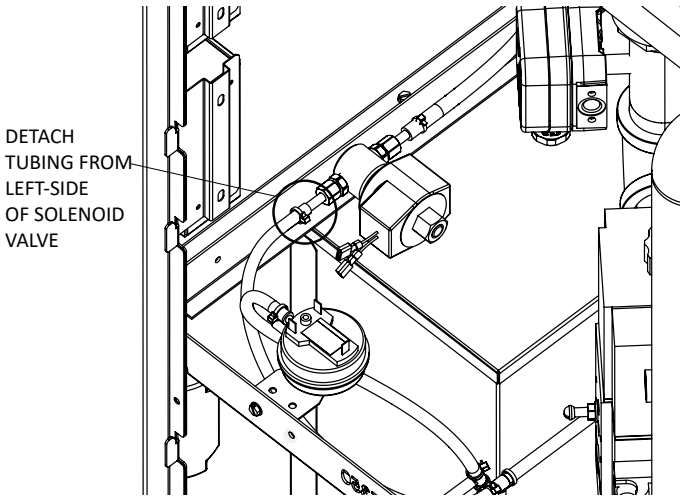

Figure 3. Detach Tubing from Solenoid Valve

11. Install the replacement gas valve by reversing the disassembly steps outlined in Steps 10 through 6. Ensure proper alignment of the valve with the inlet and outlet flanges, and torque all fasteners in a crisscross pattern to 134 in/lbs. +/- 10%.
12. Using a 5/16-inch drill bit, drill two holes in the rear panel of the control box to install the tubing bracket. Before drilling, position the bracket as shown in **Figure 4** to ensure proper alignment and to potentially avoid contact with internal components.
13. Fasten the tubing bracket using the two (2) 3/8-inch self-tapping screws included in this kit.

TIP: *To ensure proper alignment, loosely thread both screws before fully tightening. Use a power driver with moderate torque to avoid stripping the threads, and confirm the bracket is flush against the mounting surface before final tightening.*

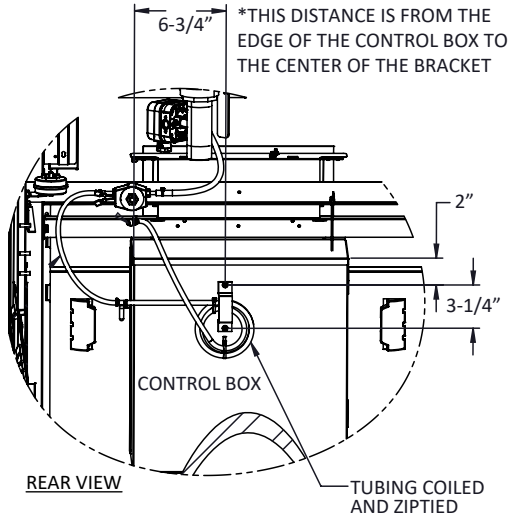

Figure 4. Bracket Mounting Position

14. Using the 4-feet of tubing supplied in this kit, connect the longer end to the designated port on the gas valve and the shorter end to the left-side port (looking from the rear) of the solenoid valve. Secure all tubing connections using the provided zip-ties, ensuring the tubing is properly seated and free of kinks or stress points. See **Figure 5.**

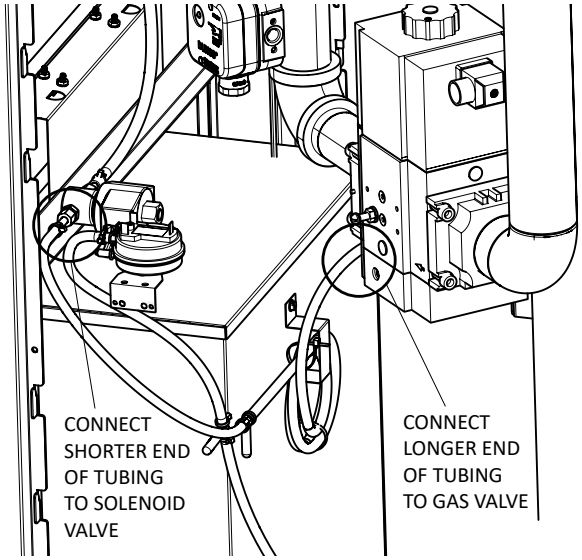

Figure 5. Connect Tubing to Valves

15. After mounting the bracket and completing all tubing connections, verify the gas supply pressures to ensure the gas valve is operating correctly.

NOTE: Refer to Page 88 of the XVers with KOR Installation Manual for instructions on verifying gas supply pressures. Scan the QR code to access the manual.

16. Reinstall the unit's panels, then follow steps 3 through 1 in reverse order to restore the unit to operational status.
17. While the unit is running, use a gas analyzer to measure combustion values. Confirm that the CO_2 percentage and CO levels fall within the acceptable ranges specified in **Table A** below.
18. This completes the installation.

Model Sizes	CO_2% High-Fire		CO_2% Low-Fire		Nat. Gas CO ppm	Pro. CO ppm
	Nat. Gas	Pro.	Nat. Gas	Pro.		
3507-4007	9.0 to 9.8%	10.6 to 11.4%	8.5 to 9.5%	10.5 to 11.2%	<150	<150

Model Sizes	O2% High-Fire		O2% Low-Fire	
	Nat. Gas	Pro.	Nat. Gas	Pro.
3507-4007	5.1 to 3.7	4.8 to 3.6	6.0 to 4.2	5.0 to 3.9

Table A. High-Fire and Low-Fire CO_2% & O2 Values