

Kit # R20773

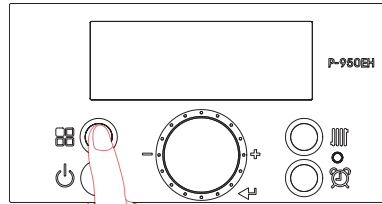
The FT Series, heating only, condensing boiler is configured for Natural Gas (NG) from the factory. A Natural Gas to Propane Conversion Kit is included with every FT. The gas conversion kit will show you how to convert your FT boiler to propane gas. If your FT does not have the bag containing the conversion kit, a replacement kit can be obtained. Contact the manufacturer and request a replacement gas conversion kit.

NOTICE

If your installation altitude is greater than 2000 ft, check that the 'High Altitude' Installer Setting has been adjusted to suit your installation altitude. Refer to Section 4.12 of the Installation and Operation Instructions (Document 1342).

WARNING

This gas conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. The information in these instructions must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit. Installation must conform to local codes and the latest edition of the National Fuel Gas Code, ANSI Z223.1 and CAN-B149.1. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for gas conversion.



ON / OFF

Steps 1 thru 24

1. Turn OFF the FT. The ON / OFF button is located at the bottom left of the Control Display.
2. Turn OFF the GAS and WATER supply to the FT (valves are located on the plumbing pipes.)



Model	Nat Gas (NG) Part #	Propane (LP) Part #
FTHW 80	FT1854	FT1857
FTHW 100	FT1855	FT1858
FTHW 120	FT1856	FT1859
FTHW 140	FT1083N	FT1083P
FTHW 199	FT1780	FT1802

Nozzles



Orifice



Table A. Gas Conversion Parts

CAUTION

This boiler has been assembled at the factory to burn natural gas, but can be converted to burn LP gas. Be sure to confirm that the gas at this installation is propane gas (LP), before performing this conversion, and then placing the boiler into operation.

WARNING

This conversion shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, an explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper and complete installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instruction supplied with the kit. Installation must conform to local codes and the latest edition of the National Fuel Gas Code, ANSI Z223.1 and CAN-B149.1. Failure to follow instructions could result in serious injury or property damage. The qualified agency performing this work assumes responsibility for gas conversion.



AVERTISSEMENT

Ce conversion doit être installé par un organisme de service conformément aux instructions du fabricant et tous les codes et les exigences de l'autorité compétente. Si les informations contenues dans ces instructions n'est pas suivi à la lettre, un incendie, une explosion ou de la production de monoxyde de carbone mais résultat causant des dommages matériels, des blessures ou des pertes de vie. Le service est responsable pour la bonne et complète l'installation de ce kit. L'installation n'est pas correcte et complète jusqu'à ce que le fonctionnement de l'appareil converti est vérifiée comme spécifié dans le manuel d'instruction fourni avec le kit. L'installation doit être conforme aux codes locaux et la dernière édition du National Code de gaz combustible, ANSI Z223.1 et peut-B149.1. Non-respect des instructions peut entraîner des blessures graves ou des dommages matériels. L'organisme qualifié effectuant ce travail suppose la responsabilité de conversion au gaz.

H2375200C

3. Using a Phillips screwdriver, remove the 4 screws on the front cover. See Figure A.

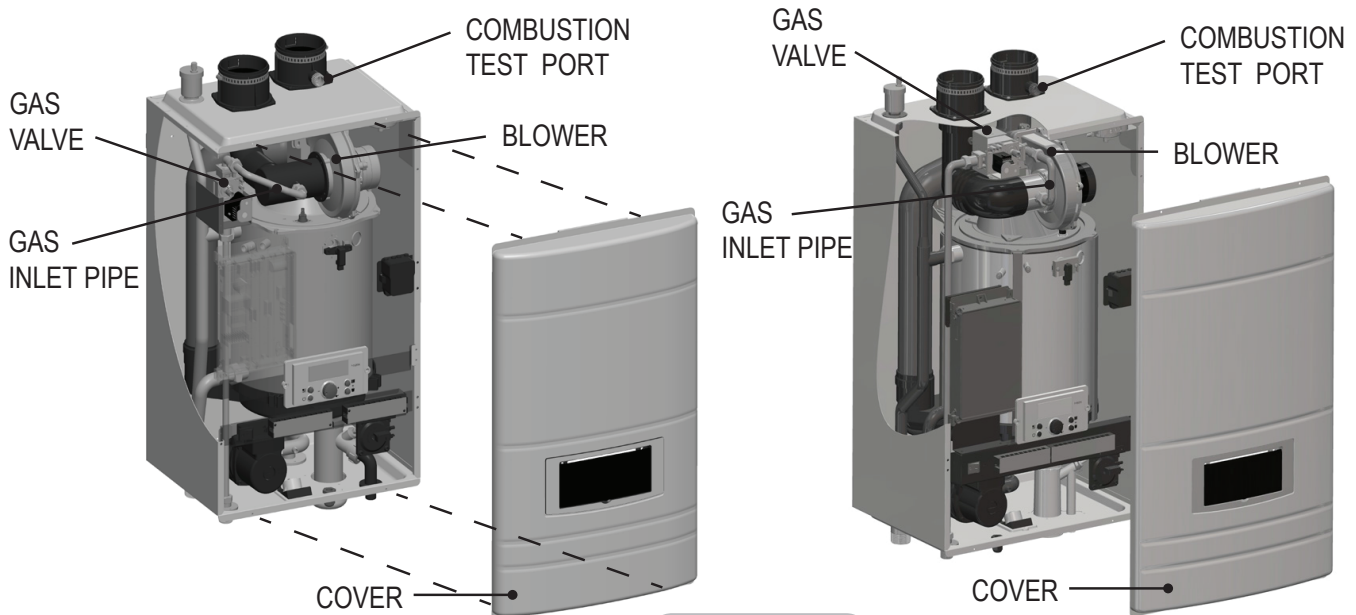


Figure A

(FTHW 80/100/120/140)

(FTHW 199)

- 4.** Locate the Gas Inlet Pipe at the top of the unit as is shown in Figure A, and loosen the Brass Fittings at both ends of the Gas Inlet Pipe.
- 5.** Completely un-thread the Brass Fittings at the blower end of the Gas Inlet Pipe, and then carefully swing the Gas Inlet Pipe to the left, just enough so that it is out of the way. See Figure B.

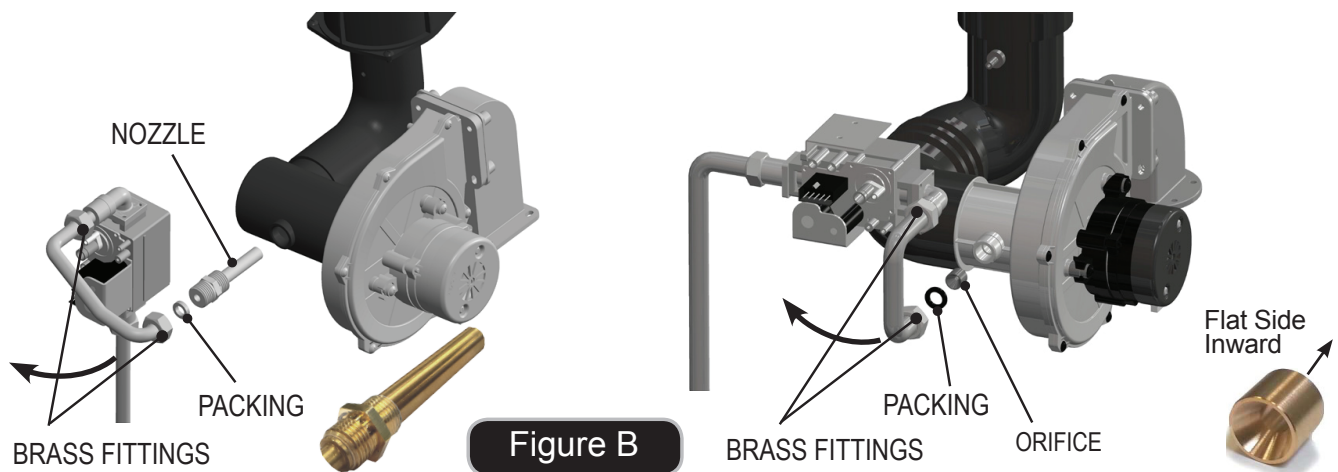


Figure B

(FTHW 80/100/120/140)

(FTHW 199)

- 6.** Remove the existing Natural Gas Nozzle (or Orifice). Save the Packing for re-use. It is also advised to save the nozzle or orifice just in case the unit needs to be converted back to natural gas at any time in the future.
- 7.** Replace the old Nozzle (or Orifice) with the new one for LP (propane). Re-use the Packing from previous.
- 8.** Return the Gas Inlet Pipe to its original position and tighten both of the Brass Fittings.

ON	OFF
MIN Fire	Normal Operation
MAX Fire	Normal Operation
NG Natural	LP Propane
3" Vent Size	2" Vent Size

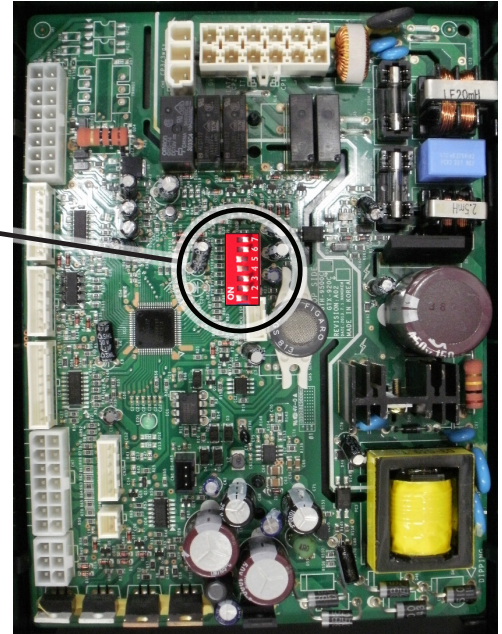


Figure C

REFERENCE ONLY. DO NOT CHANGE

MBH 80 100 120 140 N/A 199

Table B DIP Switch Settings

9. Per Table B, set DIP Switch 5 to OFF for LP Propane.
10. Turn ON the GAS and WATER supply to the FT.
11. Turn ON the FT.
12. Connect a manometer to the manifold pressure port. For dual port manometers, use the positive pressure side. Check for proper manifold gas pressure. Refer to Table C.

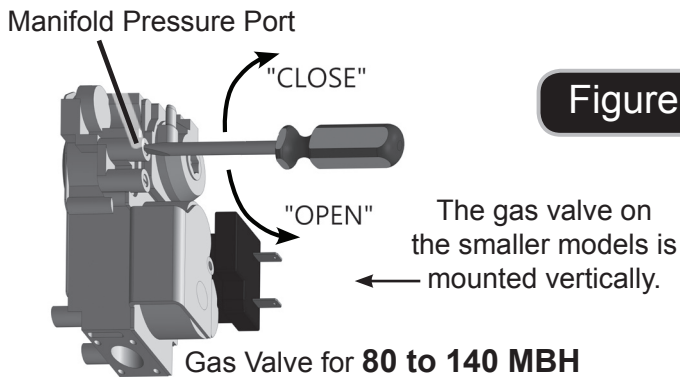
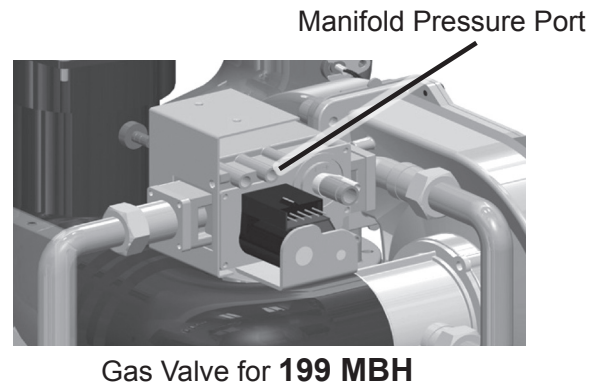


Figure D



Manifold pressure		Propane Gas (LP)	Natural Gas (NG)
FTHW 80/100	Max fire	-0.102" WC	-0.102" WC
	Min fire	0.00" WC	0.00" WC
FTHW 120/140	Max fire	-0.216" WC	-0.216" WC
	Min fire	0.00" WC	0.00" WC
FTHW 199	Max fire	-0.173 WC	-0.134" WC
	Min fire	-0.015" WC	-0.015" WC

Table C

13. Establish a call for heat. You may need to disconnect the outdoor reset if you are making this gas conversion during warm weather.

CO ₂ value		Propane Gas (LP)		Natural Gas (NG)	
		2" VENT	3" VENT	2" VENT	3" VENT
All sizes	Max fire	9.5~11%		8.5~10.5%	
	Min fire	9~10.5 %		8~10%	

Table D

14. Setup your combustion analyser and place the sensor into the combustion test port
15. Per **Table B for Max Fire**, change dip switch 6 to ON and 7 to OFF. The unit will cycle up to MAX fire.
16. WAIT for your combustion analyser to stabilize. This may take up to 3 minutes depending on your combustion analyser. Then measure the CO₂ for MAX fire. Refer to Table C for acceptable MAX fire combustion readings **Do NOT adjust CO₂ at MAX Fire. ONLY in MIN Fire, so...**
17. Per **Table B for MIN Fire**, change dip switch 6 to OFF and 7 to ON. The unit will cycle down to MIN Fire.
18. WAIT for your combustion analyser to stabilize. Then measure the CO₂ for MIN fire. Refer to Table D for acceptable MIN fire combustion readings
19. Open the Gas Valve Adjustment Port by removing the cap screw with a 4mm Allen wrench.
20. Then use the 4 mm Allen wrench to make a minor adjustment (1/8 turn) to either increase or decrease CO₂.
21. It may be necessary to go back and forth between HI Fire and LOW Fire several times (and making adjustments only at LOW Fire), before CO₂ at both are within acceptable levels. Be sure to put the adjustment port cap screw back onto the valve when done.
22. Once the CO₂ and manifold pressure measurements for both MIN and MAX Fire are acceptable per Table C, set DIP switches 6 and 7 to the OFF position for Nominal Fire (normal operation).
23. Write in the correct conversion date and the technicians name to the included gas conversion sticker. See Figure E. Then apply that sticker adjacent to the rating plate.
24. Put the boiler cover back on and assemble/tighten the 4 screws that hold the cover in place.

This unit was converted on ___/___/___ to ___gas
 with kit #_____by_____
 (name and company _____
 accountable)_____

Cette unité a été converti ___/___/___ ten ___gaz
 en utilisant le kit numéro _____ par_____
 (nom et société _____
 responsable)_____

Figure E (Conversion label)

H2375200C