Kit # R20770

The FT Series, wall combi, 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 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 1318).

⚠ 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.

⚠ CAUTION

This combination boiler has already been set to burn natural gas, but can be converted to burn LP gas. Before placing the combination boiler into operation, verify that the type of gas supplied to your combination boiler.

Steps 1 thru 25

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.)
3. Using a Phillips screwdriver, remove the 4 screws on the front cover. See Figure A.
4. Locate the Gas Inlet Pipe at the top left of the unit as shown in Figure A, and loosen the Brass Fittings at both ends of the Gas Inlet Pipe.
5. Completely unthread the brass fitting on the blower end of the Gas Inlet Pipe and then carefully swing the Gas Inlet Pipe to the left or right, just enough so that it is out of the way. See Figure B.
6. Remove the existing natural gas nozzle or orifice. If your unit is a 199, note that the flat side of the orifice is towards the blower. Save the packing for re-use. See Figure C.
7. Install the new LP (propane) nozzle or orifice. Re-use the packing from previous.
8. Return the Gas Inlet Pipe to its original position and tighten both of the brass fittings.

Model	Natural Gas (NG) part #	Propane Gas (LP) part #	
FTCW140	FT1412N	FT1412P	Nozzle
FTCW199	FT1780	FT1802	Orifice

Table A. Gas Conversion Parts

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⚠ 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.

⚠ 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.

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

	ON	OFF	ON	ON
	ON	OFF	OFF	ON
	OFF	ON	ON	ON
MBH	N/A	140	N/A	199

REFERENCE ONLY. DO NOT CHANGE

Table B DIP Switch Settings

Figure D

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 D.

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

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 check the CO_2 measurement for MAX fire. Refer to Table C for acceptable MAX fire combustion readings **Do NOT attempt to 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 check the CO_2 measurement for MIN fire. Refer to Table C 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 CO_2.

FTCW140

Figure E

FTCW199

NOTE: Installer is required to verify combustion settings as part of the installation process.
CO should not exceed 200 ppm.

CO_2 value		Natural Gas (NG)		Propane Gas (LP)	
		2″ VENT	3″ VENT	2″ VENT	3″ VENT
FTCW (ALL Sizes)	MAX FIRE	8.5 - 10.5%		9.5 - 11%	
	MIN FIRE	8 - 10%		9 - 10.5 %	

Table C

Manifold pressure		'NG' type combustibility	'LP' type combustibility
		2"/3" VENT	2"/3" VENT
FTCW140	MAX FIRE	-0.216" WC	-0.216" WC
	MIN FIRE	0.002" WC	0.079" WC
FTCW199	MAX FIRE	-0.314"WC	-0.173"WC
	MIN FIRE	-0.015"WC	-0.015"WC

Table D

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 CO_2 at both are within acceptable levels. Be sure to put the adjustment port cap screw back onto the valve when done.

22. Once the CO_2 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 F. Then apply that sticker adjacent to the rating plate.

24. Remove your combustion analyser from the Test Port and be sure to thread the Test Port plug back into position.

25. Re-connect outdoor reset if it was disconnected, 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 F (Conversion label)

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