



Manual Flame Sensing Control (M Models) Gas Conversion Kit

INSTALLER: Leave these instructions with consumer.
CONSUMER: Retain for future reference.



This kit is for gas conversion of an AFD Fire Unit. The procedure must be performed by a qualified professional service technician. Reference the tables below to ensure you have the correct conversion kit model for your AFD unit.

To convert, locate the appropriate section for your kit model number, then follow the steps.

Model (by series)	Conversion Kit Model #	
	From Propane to Natural Gas	From Natural to Propane Gas
520, 530, 610, 629, 640, 645, 725, 726	MCK-01-NAT	MCK-01-LP
635	MCK-01-NAT	MCK-09-LP
765, 770	MCK-01-NAT	MCK-10-LP
435, 586, 653, 755, 759, 782, 783, 784	MCK-02-NAT	MCK-02-LP
642, 731	MCK-03-NAT	MCK-03-LP
430, 431, 680, 681, 685, 686, 732, 733, 744, 751, 752, 753	MCK-04-NAT	MCK-04-LP
715, 716	MCK-05-NAT	MCK-05-LP
211, 215, 216, 580, 588, 589, 688, 689	MCK-06-NAT	MCK-06-LP
695	MCK-07-NAT	MCK-07-LP
690	MCK-08-NAT	MCK-08-LP

Table 1

TOOLS REQUIRED

- Open-end adjustable crescent wrench (2)
- Phillip's screwdriver
- 1¹/₃₂" nut driver (or equivalent)

BEFORE YOU BEGIN

- **Ensure the unit is OFF and completely cool, and the gas supply to the unit is turned OFF.**
- Read the appropriate section for your kit model number completely prior to beginning conversion.
- Ensure that any components that are removed/loosened during this process are completely re-tightened.
- Configuration of the unit's components may vary. Examples are shown (conversion method will be the same).
- If your AFD unit is new, it is best to first perform this gas conversion kit procedure. Then continue with the normal installation of the unit. If your AFD unit is already installed, you may need to remove components and media. See the following section.

Important: When removing components, take care not to loosen other attached components. Use two open-end adjustable crescent wrenches.

Important: Apply only joint compounds that are resistant to all gasses to all male pipe fittings except flare fittings. Make sure to tighten every joint securely.

GAIN ACCESS TO BURNER AND VALVE ASSEMBLIES

For models with a storage door or direct access to beneath the burner, the conversion can be done without removing the burner or any decorative media.

Note: If converting to propane and an L.P. tank retention kit is being installed, it is recommended to remove the decorative media (as it may spill out during installation).

For models without a storage door, remove all decorative media and remove/set aside the burner assembly. (Reference the owner's manual for details.)

For Lantern models, remove the storage door, all decorative media, and remove/set aside the burner assembly.

For Firefall models, remove the outer rear panel, decorative media, storage door, and remove/set aside the burner assembly. (Reference the owner's manual for details).

Important: Ensure the thermocouple and gas connections are undamaged. Handle with care.

APPLY RATING PLATE CONVERSION LABEL

Locate the rating plate. Cut to size then apply the supplied rating plate conversion label over the existing label as shown in Fig. 2-1.

INSTALL L.P. TANK RETENTION KIT (if applicable)

When converting to propane gas (and an L.P. cylinder is being used), an L.P. Tank Retention Kit must also be installed (purchased separately). See Table 2 below for details, and contact your local dealer.

Follow the separate instructions provided with the retention kit for installation details.

PERFORM CONVERSION

Continue on to the following CONVERSION INSTRUCTIONS section that is appropriate for your specific conversion kit model.

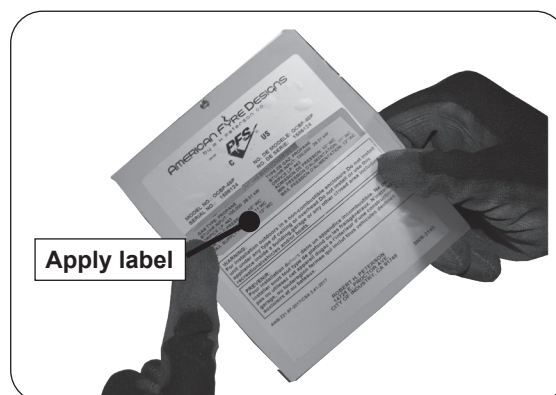


Fig. 2-1 Apply rating plate conversion label

Model (by series)	Tank Retention Kit Model #
520, 530, 770, 775	8306
610, 640, 645	8300
629, 731	8301
635, 642	8302
695	8304
715, 716, 765	8305
725, 726	8303

Table 2 Model chart (if applicable)

PARTS LIST

- Fuel injector
- Regulator
- Flex connector (w/adapters), 1/2" O.D. x 24"

CONVERSION

Note: Ensure the storage door, or media and burner, are removed (only as needed).

1. Disconnect the L.P. regulator hose assembly from the old gas supply, if applicable (A).
2. Disconnect the L.P. regulator hose assembly and adapter from the valve (B).
3. Disconnect the flex connector (attached to the burner), the adapter, and the air mixer (in that order, see C).
4. Connect the new fuel injector, then adapter, then flex connector (D).
5. Connect the regulator to the valve (E).
6. Connect the adapter and flex connector to the regulator (F).
7. Connect to the new gas supply as appropriate for your setup, if applicable (G). Reference the owner's manual for details.
8. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
9. Reinstall the burner assembly (if removed). Reference the owner's manual for details.
10. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
11. Replace the decorative media or storage door (as applicable). Reference the owner's manual for details.

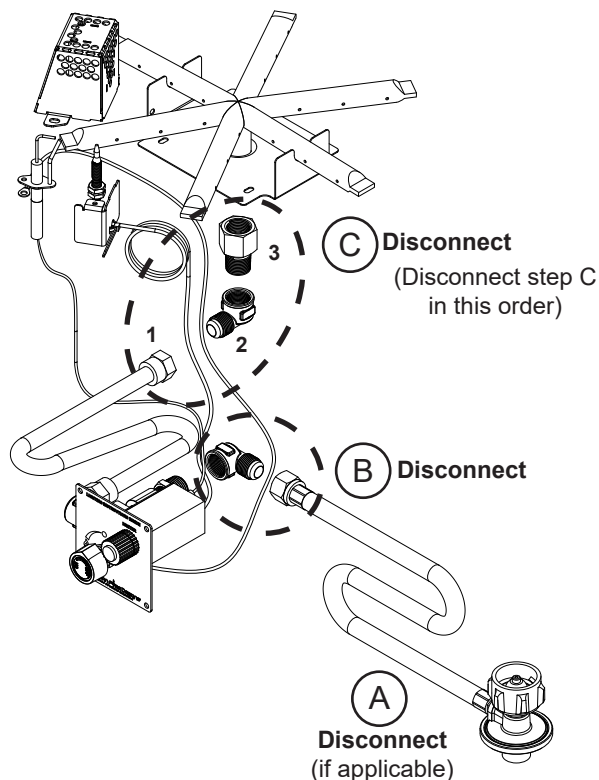


Fig. 3-1 Original configuration (L.P. gas)

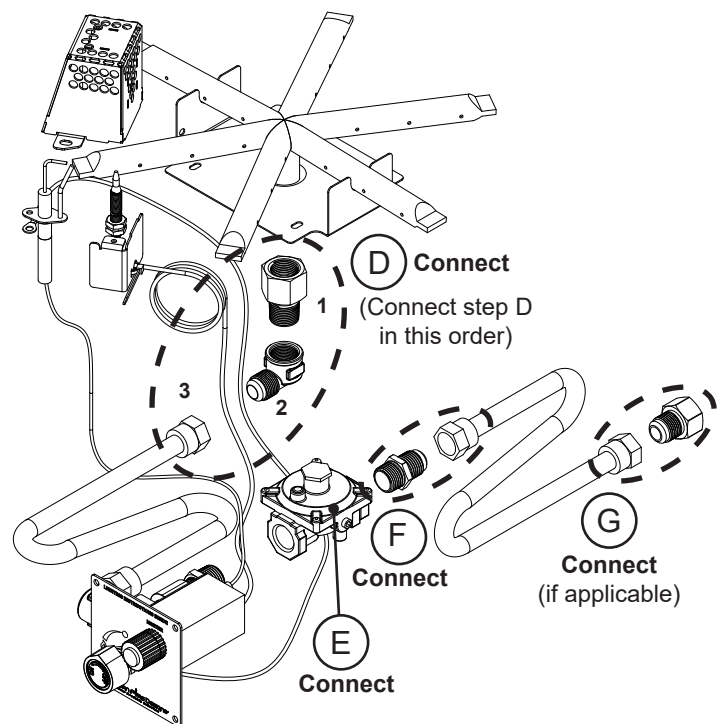


Fig. 3-2 New configuration (Nat. gas)

Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Air mixer
- L.P. regulator hose assembly (w/adaptor)

CONVERSION

Note: Ensure the storage door, or media and burner, are removed (only as needed).

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the regulator from the valve (B).
(The flex connector and adapter attached to the regulator can be removed all at once.)
3. Disconnect the flex connector (attached to the burner), the adapter, and the fuel injector (in that order, see C).
4. Connect the new air mixer, then adapter, then flex connector (D).
5. Connect the adapter and L.P. regulator hose assembly to the valve (E).
6. Connect to the new gas supply as appropriate for your setup, if applicable (F). Reference the owner's manual for details.
7. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
8. Reinstall the burner assembly (if removed). Reference the owner's manual for details.
9. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
10. Replace the decorative media or storage door (as applicable). Reference the owner's manual for details.

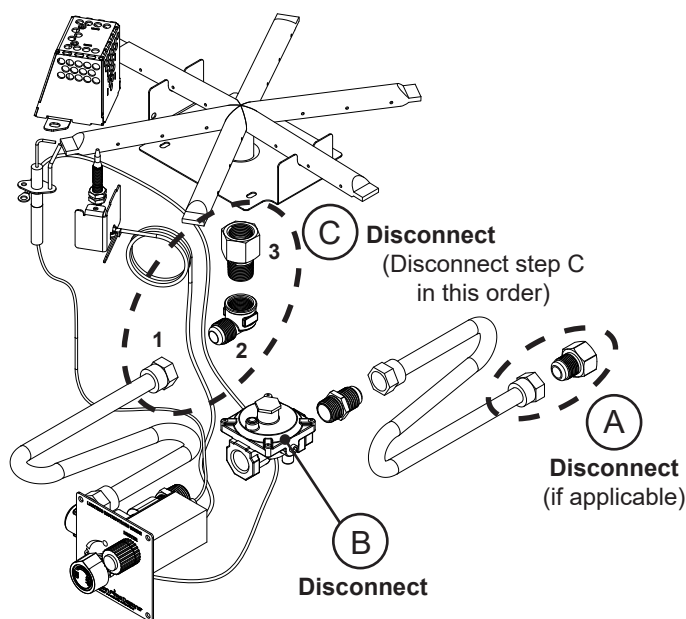


Fig. 4-1 Original configuration (Nat. gas)

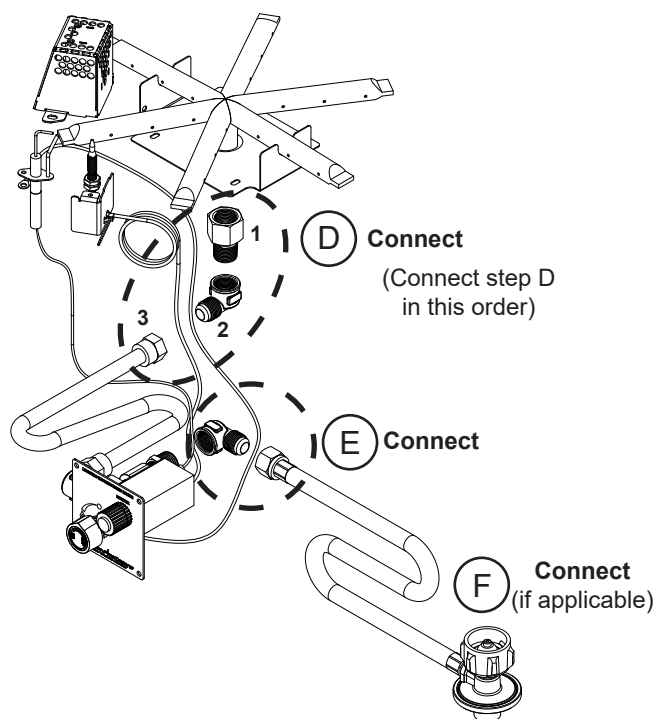


Fig. 4-2 New configuration (L.P. gas)

Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Fuel injector

CONVERSION

Note: Ensure the media and burner are removed.

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the flex connector (attached to the burner), the adapter, and the air mixer (in that order, see B).
3. Connect the new fuel injector, then adapter, then flex connector (C).
4. Convert the regulator (D):
 - a. Unscrew and remove the cap and the attached converter (D1).
 - b. Remove the converter by carefully pulling it away from the center of the cap (D2). Then turn the converter around and replace it carefully. It will snap into place. Check that you can read the gas type (D3).
 - c. Replace the cap into the regulator (D4).
5. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
6. **LEAK TEST:** Turn on gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off gas supply and contact local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
7. Reinstall the burner assembly. Reference the owner's manual for details.
8. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
9. Replace the decorative media. Reference the owner's manual for details.

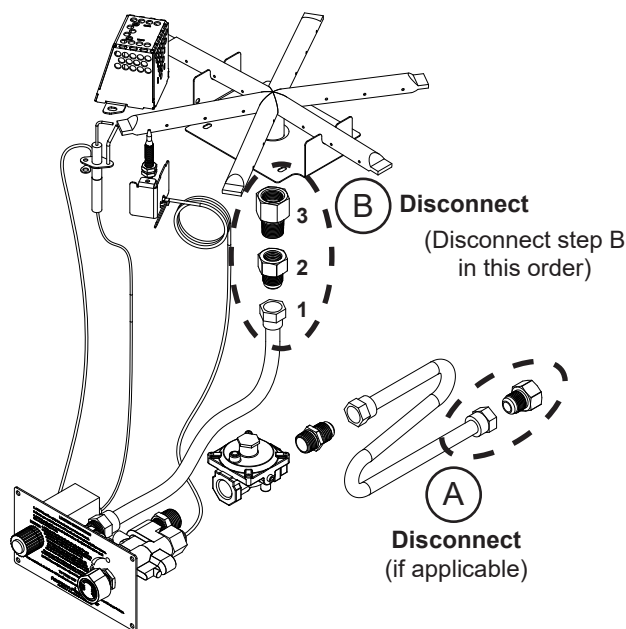


Fig. 5-1 Original configuration (L.P. gas)

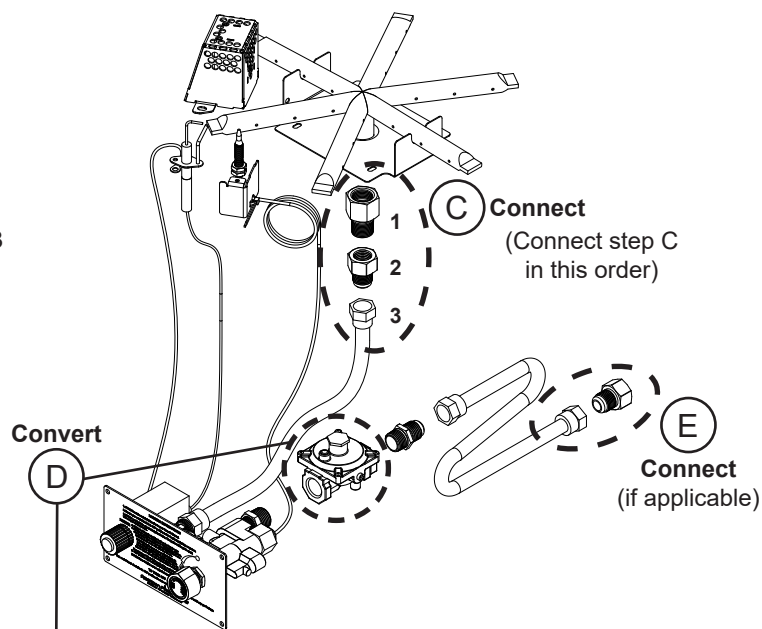
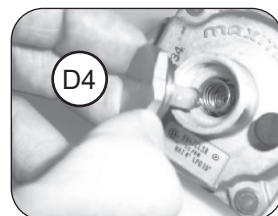
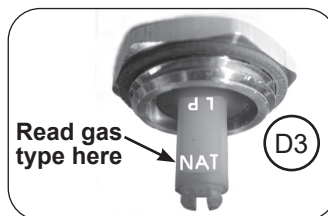
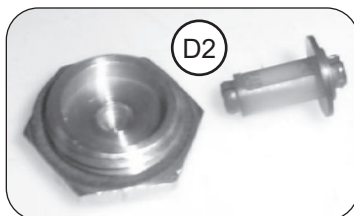
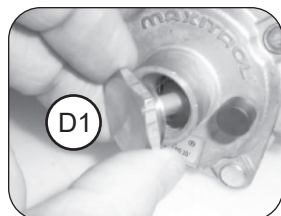


Fig. 5-2 New configuration (Nat. gas)



Although your unit's configuration may vary, conversion method is the same.

CONVERSION INSTRUCTIONS: MCK-02-LP & MCK-04-LP

PARTS LIST

- Air mixer

CONVERSION

Note: Ensure the media and burner are removed.

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the flex connector (attached to the burner), the adapter, and the fuel injector (in that order, see B).
3. Connect the new air mixer, then adapter, then flex connector (C).
4. Convert the regulator (D):
 - a. Unscrew and remove the cap and the attached converter (D1).
 - b. Remove the converter by carefully pulling it away from the center of the cap (D2). Then turn the converter around and replace it carefully. It will snap into place. Check that you can read the gas type (D3).
 - c. Replace the cap into the regulator (D4).
5. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
6. **LEAK TEST:** Turn on gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off gas supply and contact local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
7. Reinstall the burner assembly. Reference the owner's manual for details.
8. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
9. Replace the decorative media. Reference the owner's manual for details.

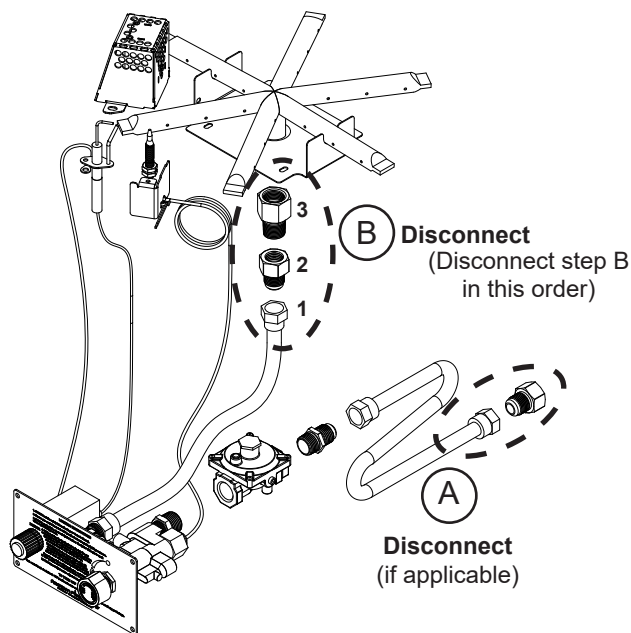


Fig. 6-1 Original configuration (Nat. gas)

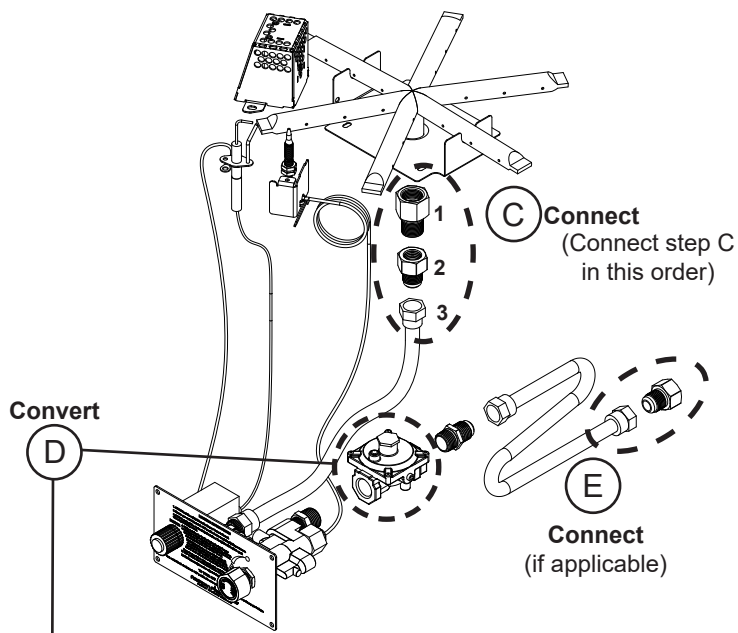
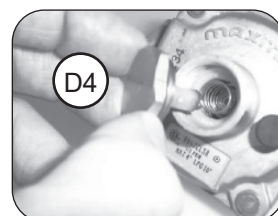
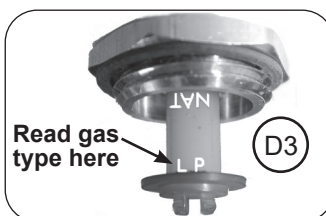
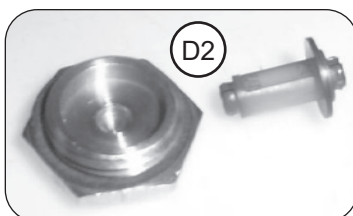
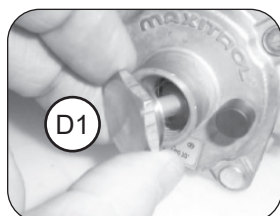


Fig. 6-2 New configuration (L.P. gas)



Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Fuel injector
- Regulator
- Flex connector (w/adapters), 1/2" O.D. x 24"

CONVERSION

Note: Ensure the storage door, media, and burner are removed.

1. Disconnect the L.P. regulator hose assembly from the old gas supply, if applicable (A).
2. Disconnect the L.P. regulator hose assembly and adapter from the valve (B)
3. Unfasten the igniter electrode and ground wire from the burner plate using a Phillips screwdriver (C).
4. Disconnect the flex connector (attached to the burner), the adapter, and the air mixer (in that order, see D).
5. Connect the new fuel injector, then adapter, then flex connector (E).
6. Connect the igniter electrode and ground wire to the burner plate using a Phillips screwdriver and 11/32" nut driver (F).
7. Connect the regulator to the valve (G).
8. Connect the adapter and flex connector to the regulator (H).
9. Connect to the new gas supply as appropriate for your setup, if applicable (I). Reference the owner's manual for details.
10. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
11. Reinstall the burner assembly. Reference the owner's manual for details.
12. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
13. Replace the decorative media and storage door. Reference the owner's manual for details.

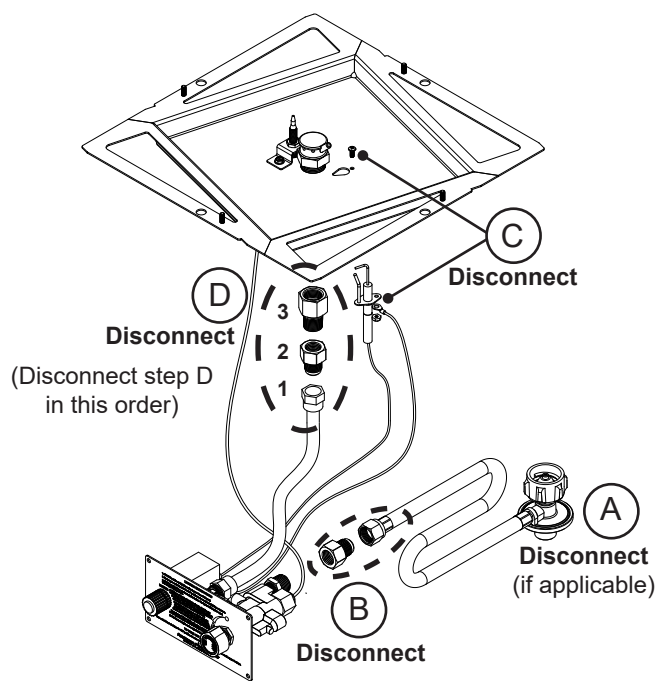


Fig. 7-1 Original configuration (L.P. gas)

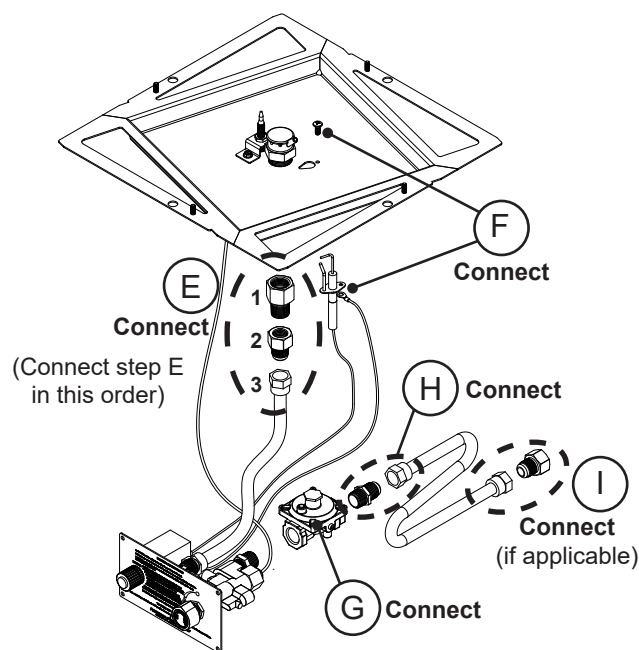


Fig. 7-2 New configuration (Nat. gas)

Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Air mixer
- L.P. regulator hose assembly (w/adapter)

CONVERSION

Note: Ensure the storage door, media, and burner are removed.

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the regulator from the valve (B).
(The flex connector and adapter attached to the regulator can be removed all at once.)
3. Unfasten the igniter electrode and ground wire from the burner plate using a Phillips screwdriver (C).
4. Disconnect the flex connector (attached to the burner), the adapter, and the fuel injector (in that order, see D).
5. Connect the new air mixer, then adapter, then flex connector (E).
6. Connect the igniter electrode and ground wire to the burner plate using a Phillips screwdriver and $11/32$ " nut driver (F).
7. Connect the adapter and L.P. regulator hose assembly to the valve (G).
8. Connect to the new gas supply as appropriate for your setup, if applicable (H). Reference the owner's manual for details.
9. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
10. Reinstall the burner assembly. Reference the owner's manual for details.
11. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
12. Replace the decorative media and storage door. Reference the owner's manual for details.

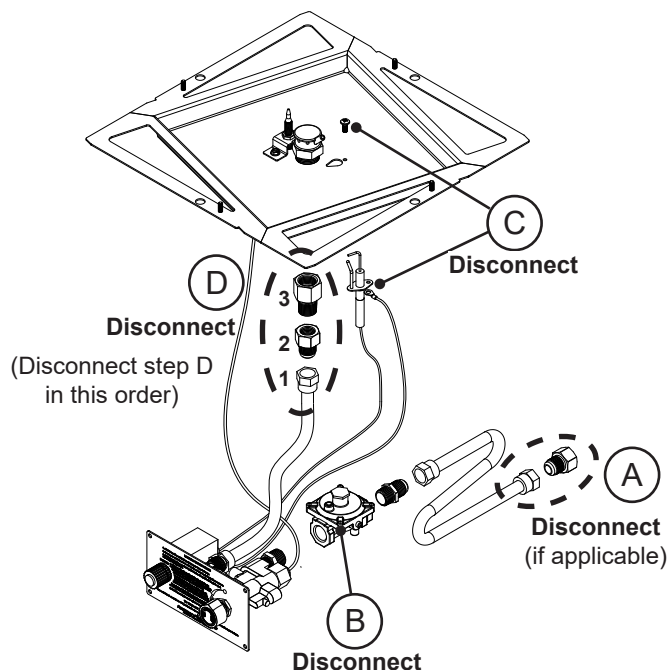


Fig. 8-1 Original configuration (Nat. gas)

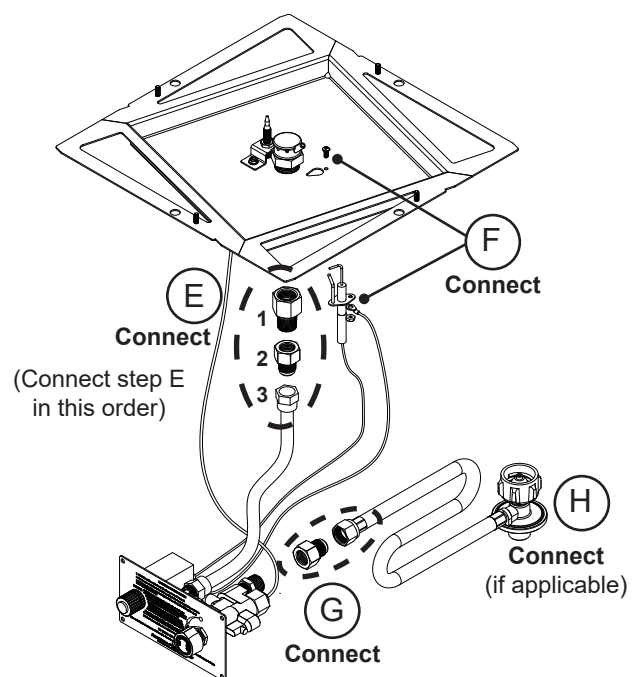


Fig. 8-2 New configuration (L.P. gas)

Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Fuel injector (2)

CONVERSION

Note: Ensure the media and burner are removed.

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the flex connector (attached to the burner), the adapter, and the air mixer (in that order, see B).
3. Connect the new fuel injector, then adapter, then flex connector (C). Repeat step 2-3 on second burner.
4. Convert the regulator (D):
 - a. Unscrew and remove the cap and the attached converter (D1).
 - b. Remove the converter by carefully pulling it away from the center of the cap (D2). Then turn the converter around and replace it carefully. It will snap into place. Check that you can read the gas type (D3).
 - c. Replace the cap into the regulator (D4).
5. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
6. **LEAK TEST:** Turn on gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off gas supply and contact local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
7. Reinstall the burner assembly. Reference the owner's manual for details.
8. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
9. Replace the decorative media. Reference the owner's manual for details.

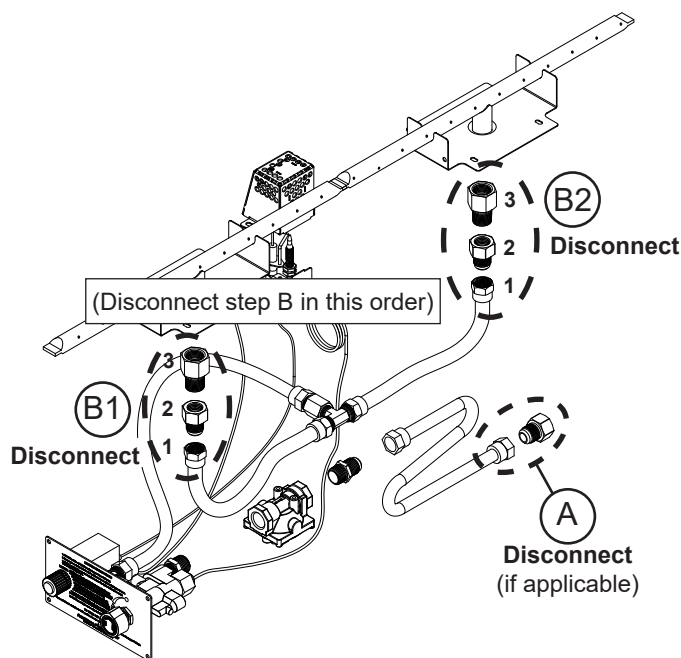


Fig. 9-1 Original configuration (L.P. gas)

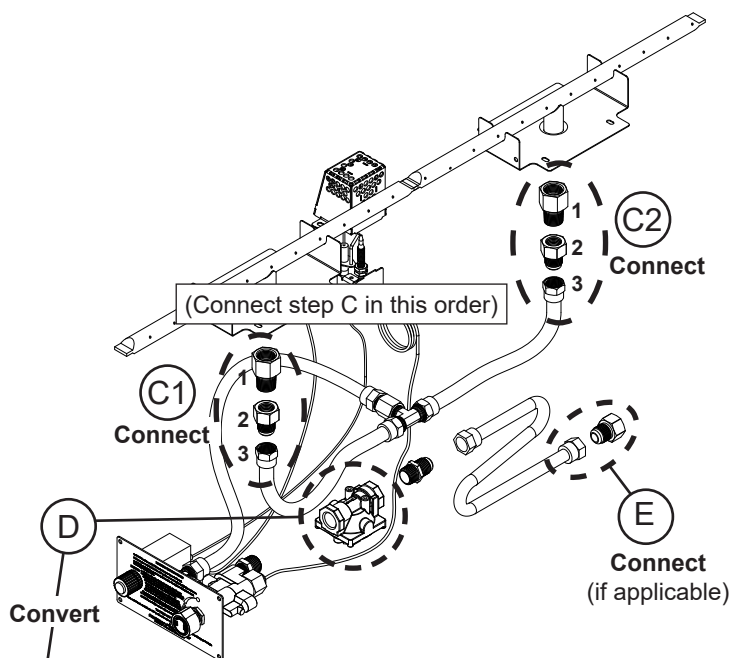
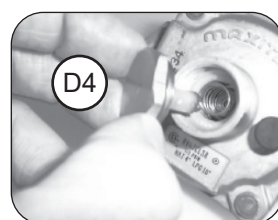
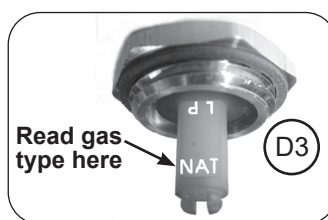
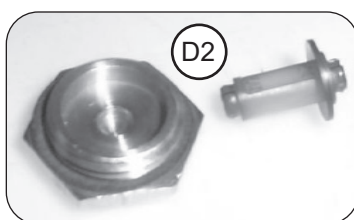
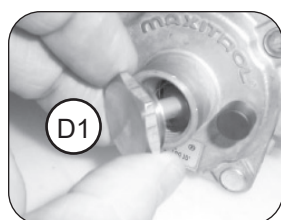


Fig. 9-2 New configuration (Nat. gas)



Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Air mixer (2)

CONVERSION

Note: Ensure the media and burner are removed.

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the flex connector (attached to the burner), the adapter, and the fuel injector (in that order, see B).
3. Connect the new air mixer, then adapter, then flex connector (C). Repeat step 2-3 on second burner.
4. Convert the regulator (D):
 - a. Unscrew and remove the cap and the attached converter (D1).
 - b. Remove the converter by carefully pulling it away from the center of the cap (D2). Then turn the converter around and replace it carefully. It will snap into place. Check that you can read the gas type (D3).
 - c. Replace the cap into the regulator (D4).
5. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
6. **LEAK TEST:** Turn on gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off gas supply and contact local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
7. Reinstall the burner assembly. Reference the owner's manual for details.
8. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
9. Replace the decorative media. Reference the owner's manual for details.

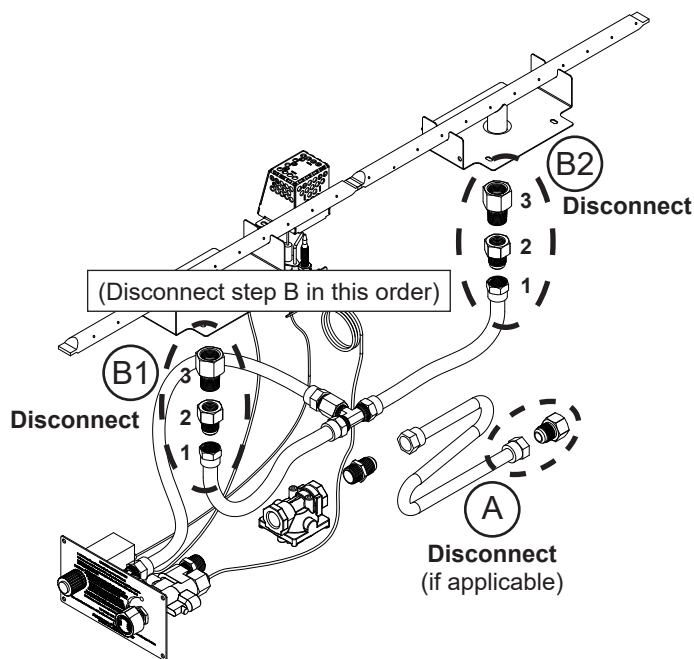


Fig. 10-1 Original configuration (Nat. gas)

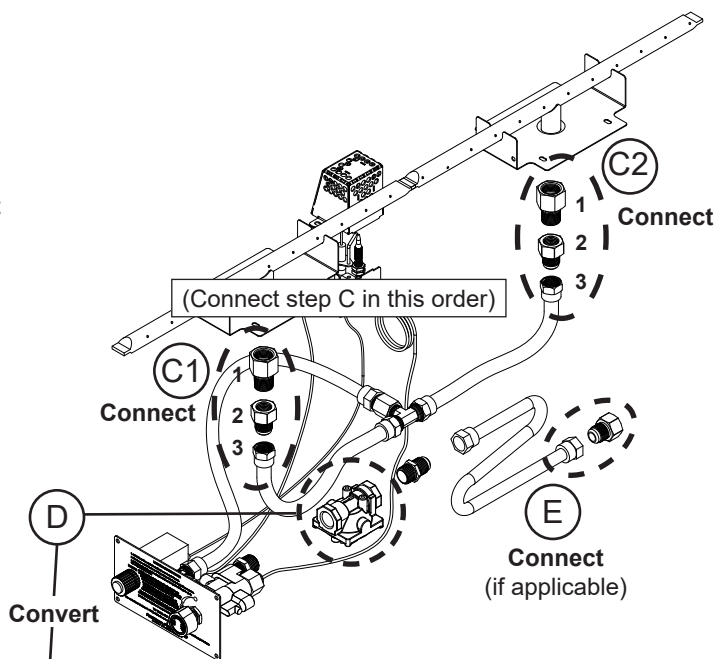
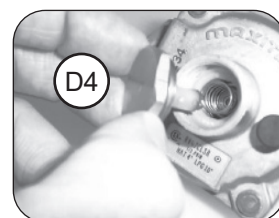
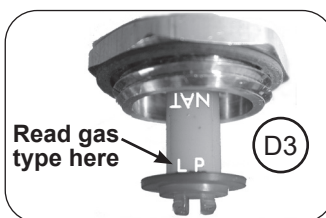
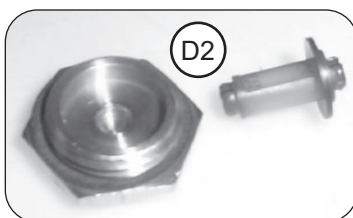
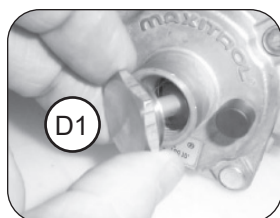


Fig. 10-2 New configuration (L.P. gas)



Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Fuel injector
- Regulator
- Flex connector (w/adaptor), 1/2" O.D. x 24"

CONVERSION

Note: Ensure the storage door, media, burner, and outer rear panel are removed.

1. Disconnect the L.P. regulator hose assembly from the old gas supply, if applicable (A).
2. Disconnect the L.P. regulator hose assembly from the adapter on the valve (B).
3. Disconnect the flex connector (attached to the burner), the adapter, and the air mixer (in that order, see C).
4. Connect the new fuel injector, then adapter, then flex connector (D).
5. Connect the flex to the adapter on the valve (E).
6. Connect to the new gas supply as appropriate for your setup, if applicable (F). Reference the owner's manual for details.
7. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
8. Reinstall the burner assembly. Reference the owner's manual for details.
9. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
10. Replace the decorative media, storage door, and reinstall the outer rear panel. Reference the owner's manual for details.

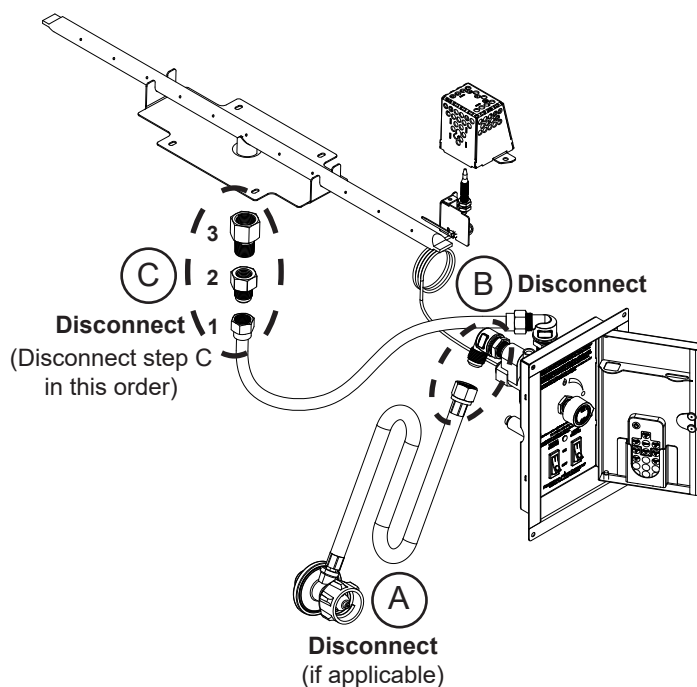


Fig. 11-1 Original configuration (L.P. gas)

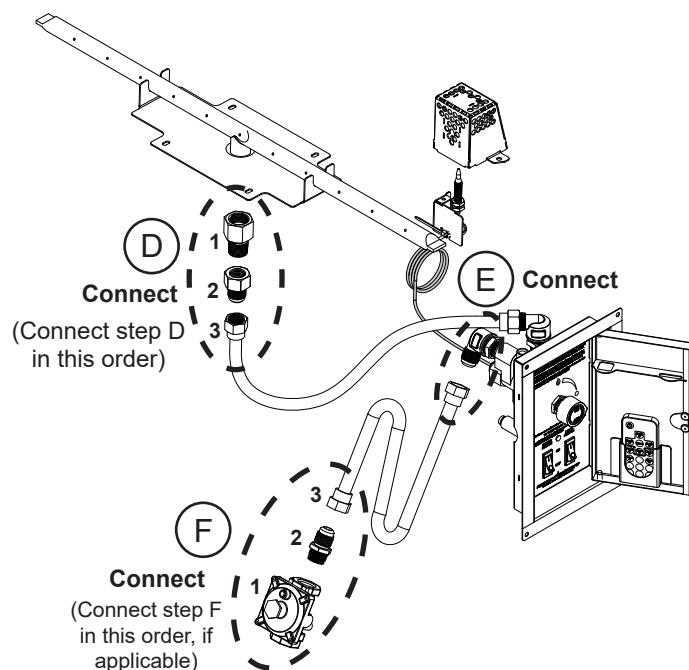


Fig. 11-2 New configuration (Nat. gas)

Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Air mixer
- L.P. regulator hose assembly

CONVERSION

Note: Ensure the storage door, media, burner, and outer rear panel are removed.

1. Disconnect the flex connector and regulator from the old gas supply, if applicable (A).
2. Disconnect the flex from the adapter attached to the valve (B).
3. Disconnect the flex connector (attached to the burner), the adapter, and the fuel injector (in that order, see C).
4. Connect the new air mixer, then adapter, then flex connector (D).
5. Connect the L.P. regulator hose assembly to the adapter on the valve (E).
6. Connect to the new gas supply as appropriate for your setup, if applicable (F). Reference the owner's manual for details.
7. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
8. Reinstall the burner assembly. Reference the owner's manual for details.
9. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
10. Replace the decorative media, storage door, and reinstall the outer rear panel. Reference the owner's manual for details.

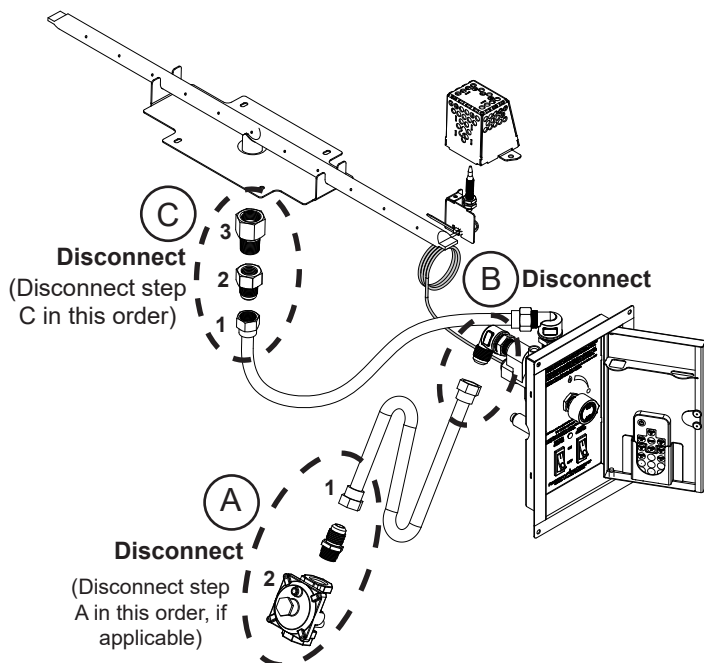


Fig. 12-1 Original configuration (Nat. gas)

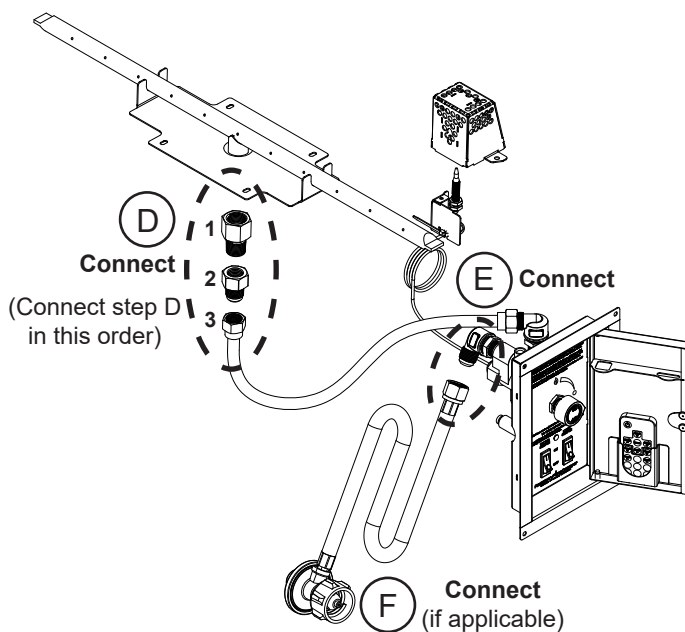


Fig. 12-2 New configuration (L.P. gas)

Although your unit's configuration may vary, conversion method is the same.

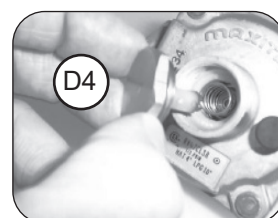
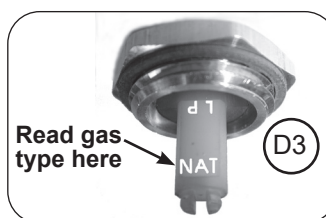
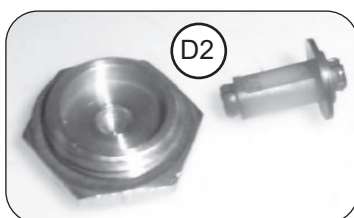
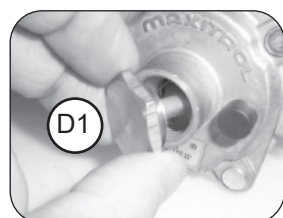
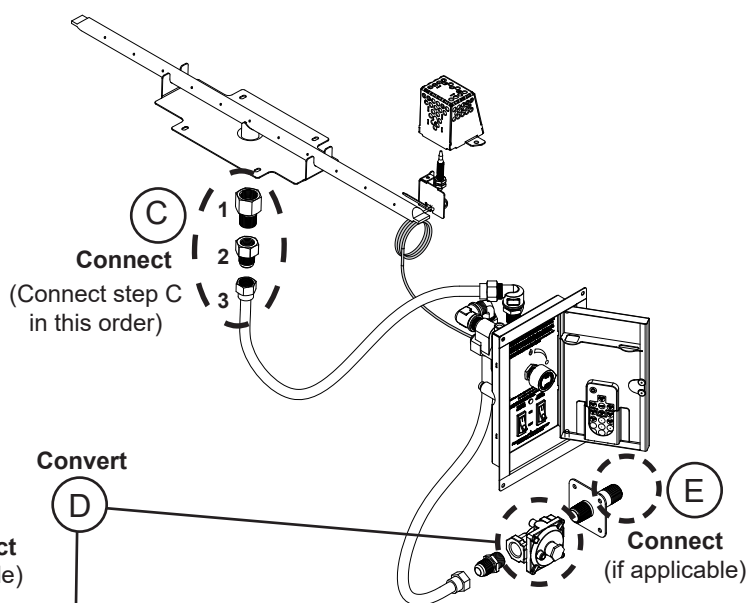
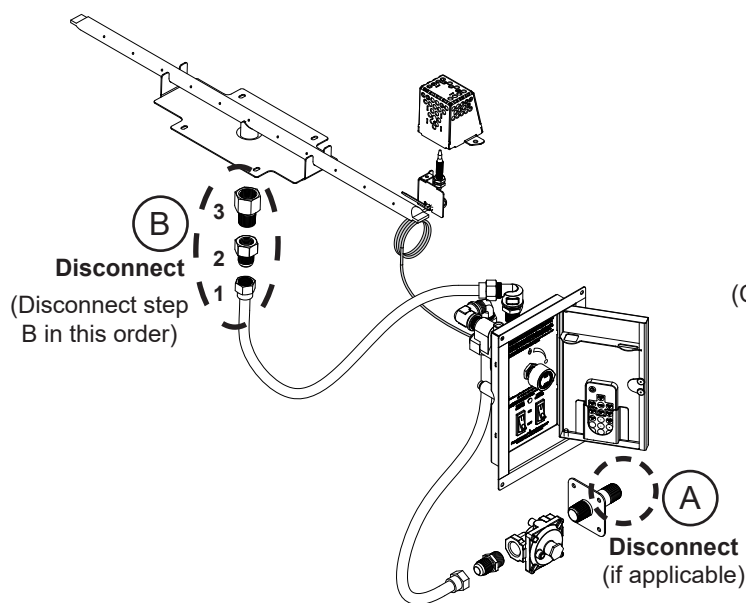
PARTS LIST

- Fuel injector

CONVERSION

Note: Ensure the storage door, media, burner, and outer rear panel are removed.

1. Disconnect the old gas supply that is connected to the stub on the rear of the Firefall, if applicable (A).
2. Disconnect the flex connector (attached to the burner), the adapter, and the air mixer (in that order, see B).
3. Connect the new fuel injector, then adapter, then flex connector (C).
4. Convert the regulator (D):
 - a. Unscrew and remove the cap and the attached converter (D1).
 - b. Remove the converter by carefully pulling it away from the center of the cap (D2). Then turn the converter around and replace it carefully. It will snap into place. Check that you can read the gas type (D3).
 - c. Replace the cap into the regulator (D4).
5. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
6. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
7. Reinstall the burner assembly. Reference the owner's manual for details.
8. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
9. Replace the decorative media, storage door, and reinstall the outer rear panel. Reference the owner's manual for details.



Although your unit's configuration may vary, conversion method is the same.

PARTS LIST

- Air mixer
- L.P. regulator hose assembly

CONVERSION

Note: Ensure the storage door, media, burner, and outer rear panel are removed.

1. Disconnect the old gas supply that is connected to the stub on the rear of the Firefall, if applicable (A).
2. Disconnect the flex connector (attached to the burner), the adapter, and the fuel injector (in that order, see B).
3. Connect the new air mixer, then adapter, then flex connector (C).
4. Convert the regulator (D):
 - a. Unscrew and remove the cap and the attached converter (D1).
 - b. Remove the converter by carefully pulling it away from the center of the cap (D2). Then turn the converter around and replace it carefully. It will snap into place. Check that you can read the gas type (D3).
 - c. Replace the cap into the regulator (D4).
5. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
6. **LEAK TEST:** Turn on the gas supply, and test at all connections for leaks using a soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. **NEVER USE A FLAME TO CHECK FOR LEAKS.**
7. Reinstall the burner assembly. Reference the owner's manual for details.
8. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
9. Replace the decorative media, storage door, and reinstall the outer rear panel. Reference the owner's manual for details.

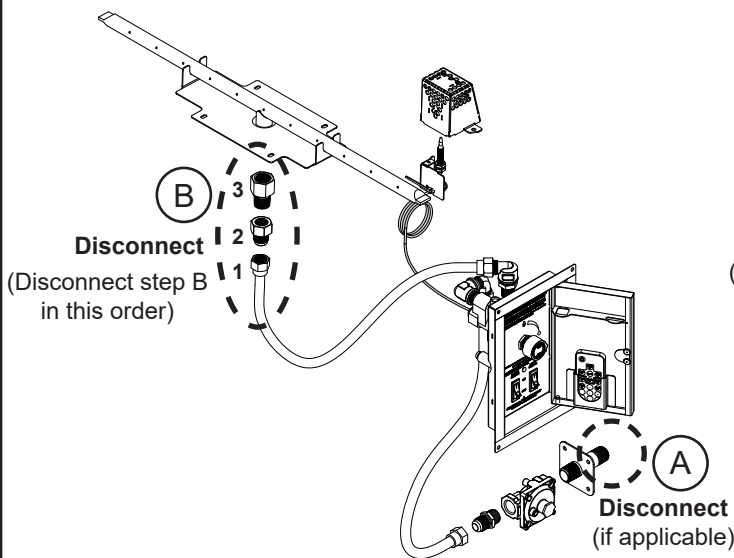


Fig. 14-1 Original configuration (Nat. gas)

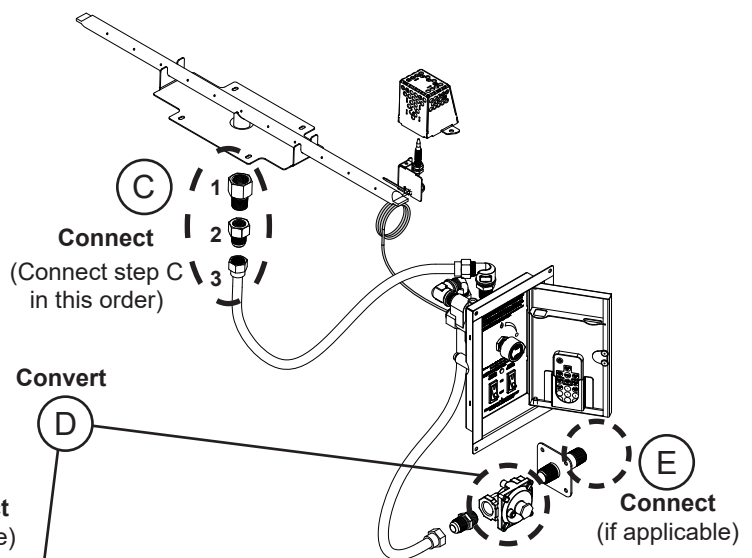
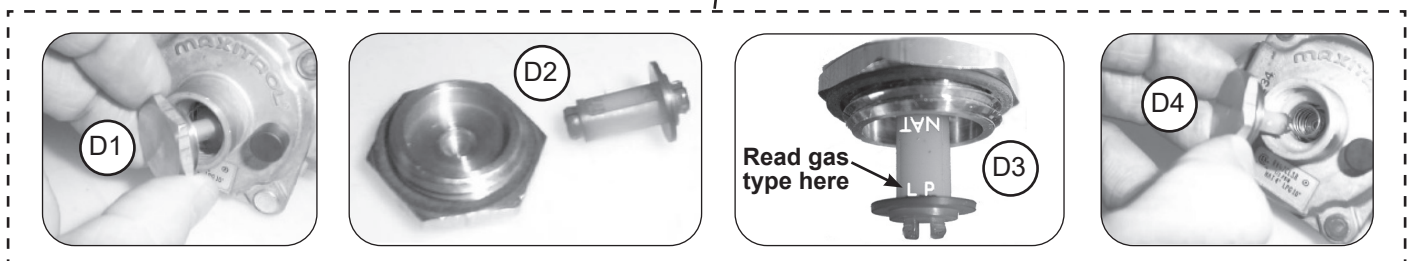


Fig. 14-2 New configuration (L.P. gas)



Although your unit's configuration may vary, conversion method is the same.