

Fire Unit Gas Conversion Kit Instructions (Key Valve Models)

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
510, 520, 530, 610, 611, 612, 625, 626, 629, 630, 631, 640, 645, 652, 655, 660, 675, 676, 711, 725, 762, 765, 770, 775	CK-20-NAT	CK-22-LP
635, 650, 651, 712	CK-20-NAT	CK-23-LP
435, 653, 745, 755, 782, 783, 784	CK-21-NAT	CK-24-LP
715	CK-25-NAT	CK-26-LP
698, 699	CK-37-NAT	CK-38-LP
693, 694	CK-63-NAT	CK-64-LP
642, 731	CK-55-NAT	CK-57-LP
410, 411, 420, 421, 430, 431, 680, 681, 685, 686, 732, 733, 741, 742, 743, 744, 751, 752, 753	CK-56-NAT	CK-58-LP
688	CK-93-NAT	CK-94-LP
689	CK-89-NAT	CK-90-LP

TOOLS REQUIRED

- Open-end adjustable crescent wrench (2)
- Phillips-head screwdriver

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).

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.

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 Firefall models, remove the outer rear panel, decorative media, and remove/set aside the burner assembly. (Reference the owner's manual for details on panel removal. For burner removal, refer to the appropriate conversion section in this manual.)

APPLY CONVERSION LABEL

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



Fig. 2-1 Apply conversion label

PARTS LIST

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

CONVERSION

Note: Ensure the 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). Retain the adapter for reuse.
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 nipple and regulator to the valve (E).
6. Connect the adapter (reuse from step #2) 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).
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.

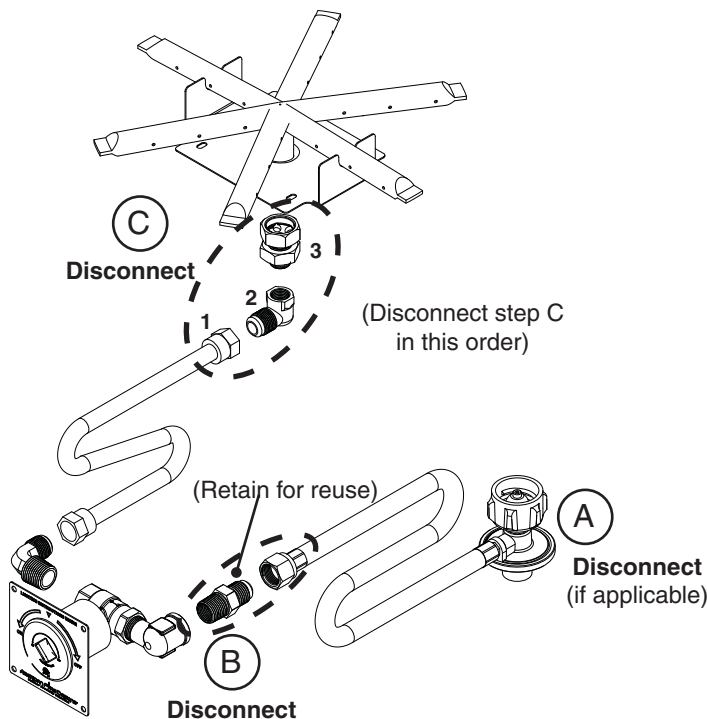


Fig. 3-1 Original configuration (L.P. gas)

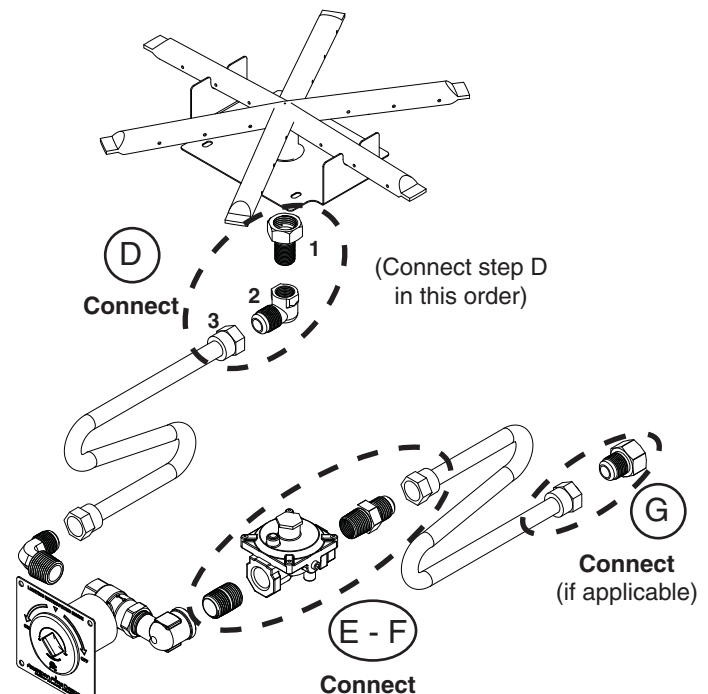


Fig. 3-2 New configuration (Nat. gas)

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

PARTS LIST

- Air mixer
- L.P. regulator hose assembly

CONVERSION

Note: Ensure the 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 flex connector and adapter from the regulator (B). Retain the adapter for reuse.
3. Disconnect the regulator and nipple from the valve (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 adapter (reuse from step #2) and L.P. regulator hose assembly to the valve (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).
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.

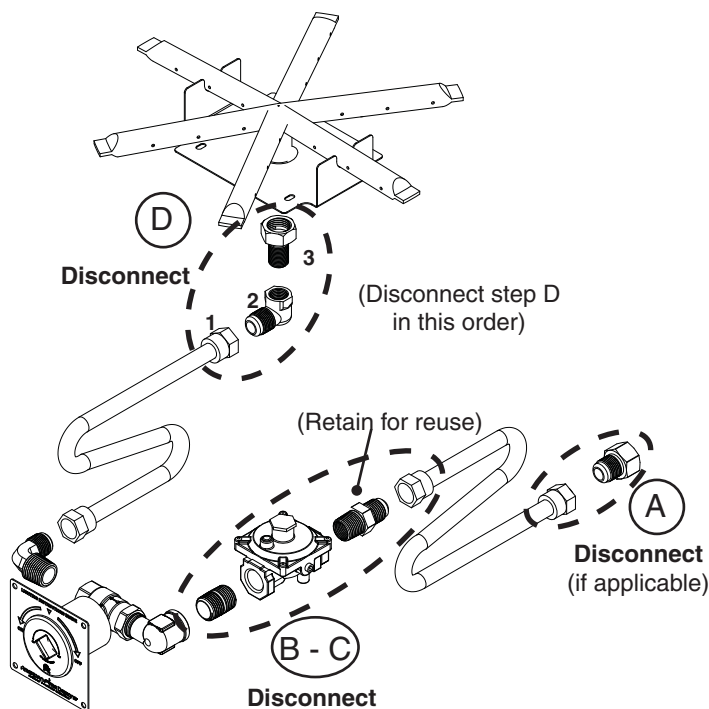


Fig. 4-1 Original configuration (Nat. gas)

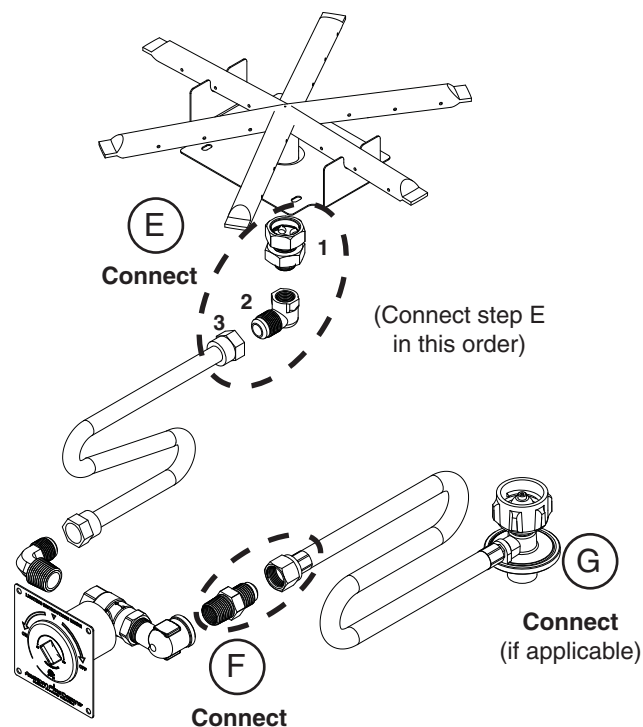


Fig. 4-2 New configuration (L.P. gas)

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.
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.

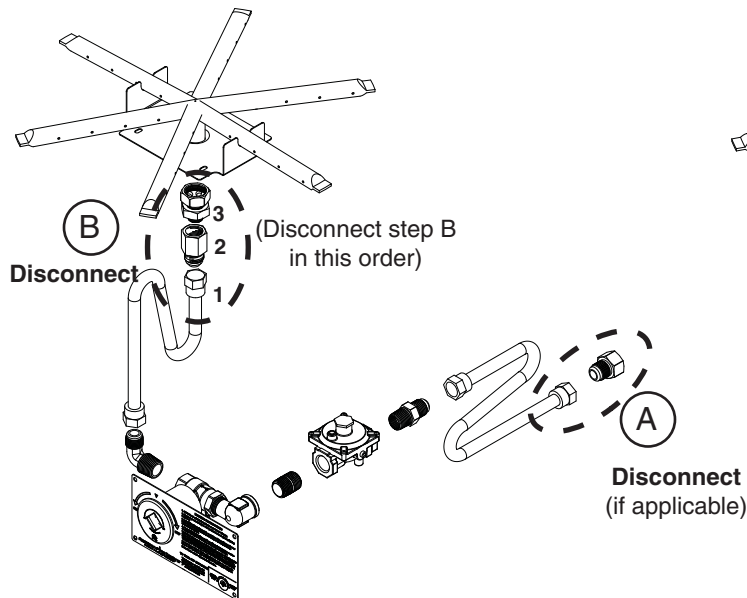


Fig. 5-1 Original configuration (L.P. gas)

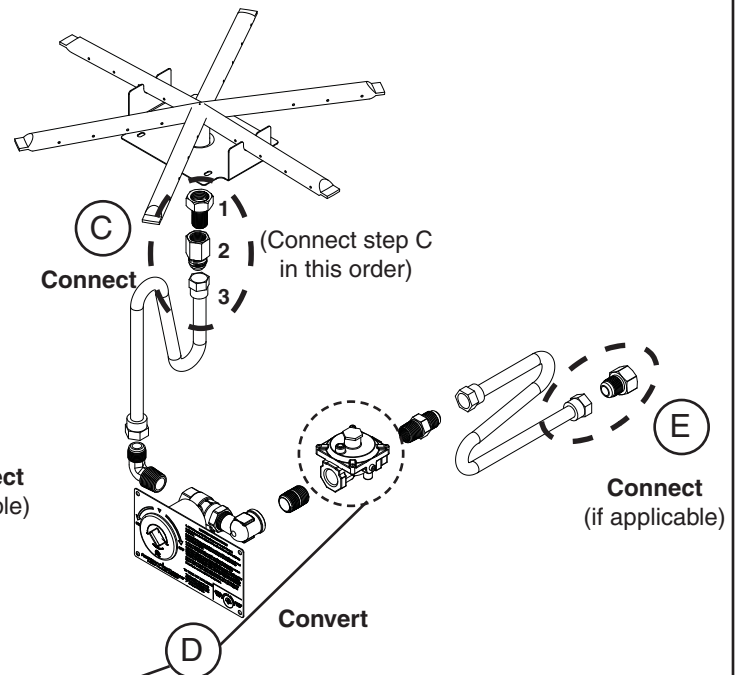
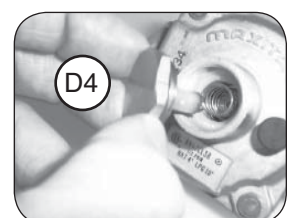
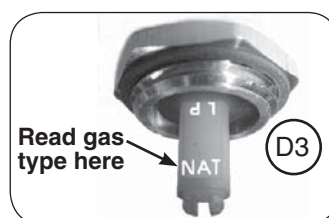
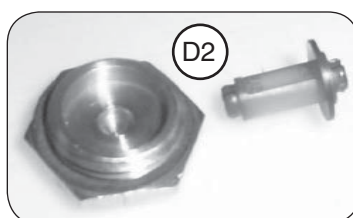
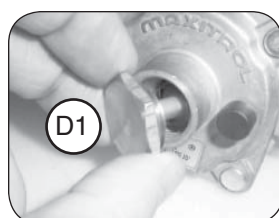


Fig. 5-2 New configuration (Nat. gas)



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

CONVERSION INSTRUCTIONS: CK-24-LP & CK-58-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.
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.

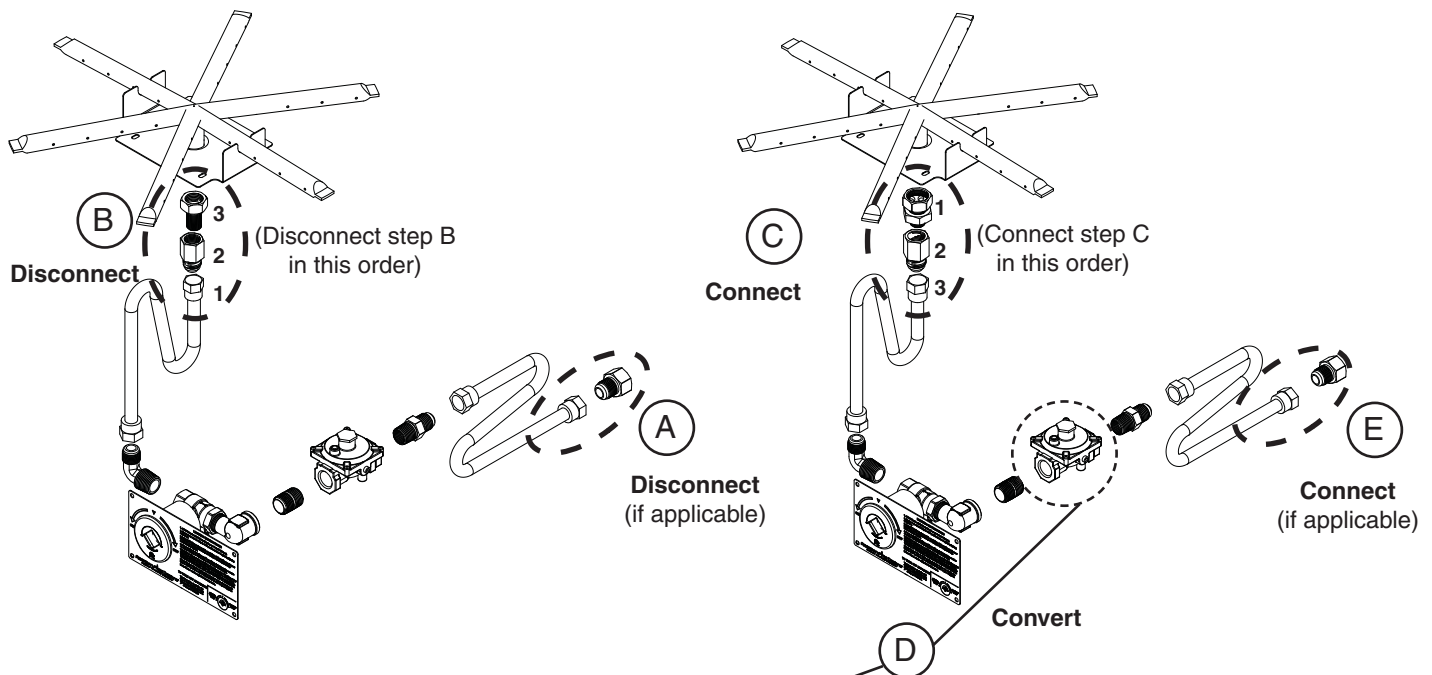
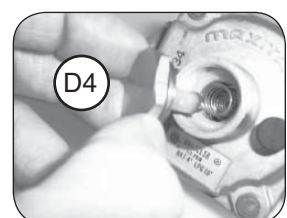
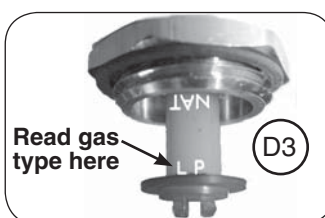
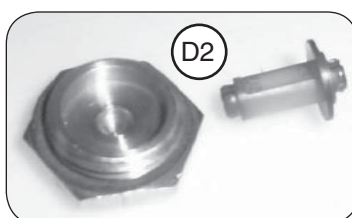
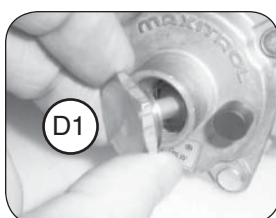


Fig. 6-1 Original configuration (Nat. gas)

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



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

PARTS LIST

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

CONVERSION

Note: Ensure the storage door is 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). Retain the adapter for reuse.
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 nipple and regulator to the valve (E).
6. Connect the adapter (reuse from step #2) 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. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
10. Replace the storage door.

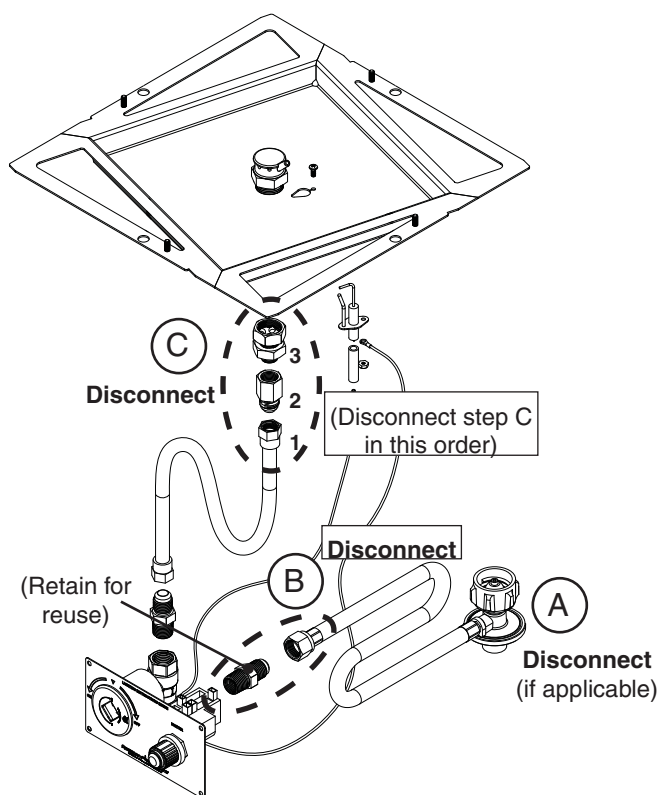


Fig. 7-1 Original configuration (L.P. gas)

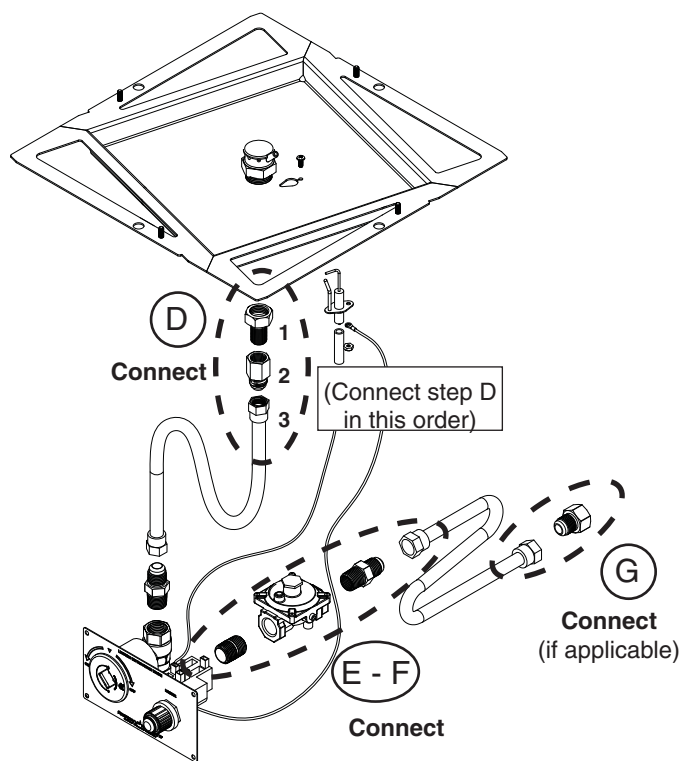


Fig. 7-2 New configuration (Nat. gas)

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

PARTS LIST

- Air mixer
- L.P. regulator hose assembly

CONVERSION

Note: Ensure the storage door is removed.

1. Disconnect the flex connector and adapter from the old gas supply, if applicable (A).
2. Disconnect the flex connector and adapter from the regulator (B). Retain the adapter for reuse.
3. Disconnect the regulator and nipple from the valve (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 adapter (reuse from step #2) and L.P. regulator hose assembly to the valve (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. **LIGHTING TEST:** Prior to proceeding, perform a lighting test (see lighting instructions in your owner's manual for lighting your burner).
10. Replace the storage door.

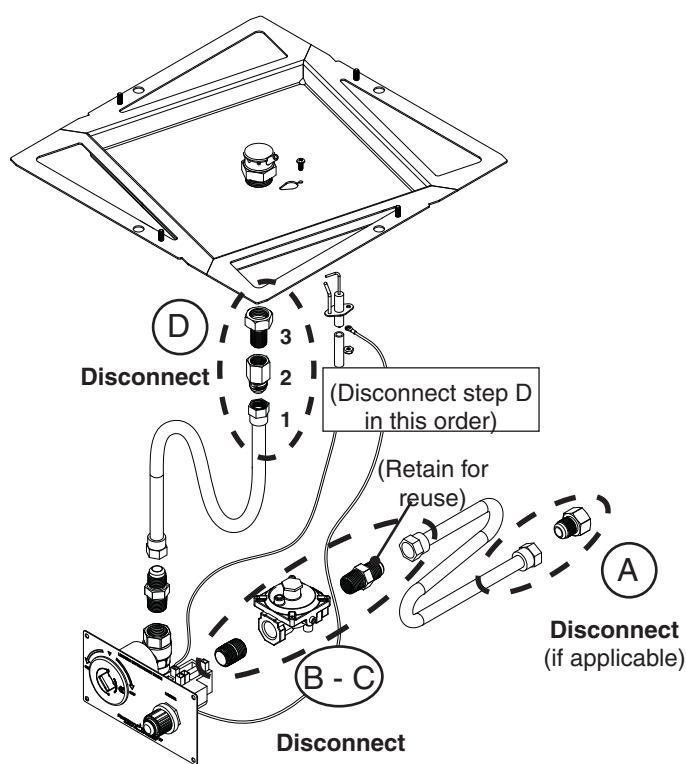


Fig. 8-1 Original configuration (Nat. gas)

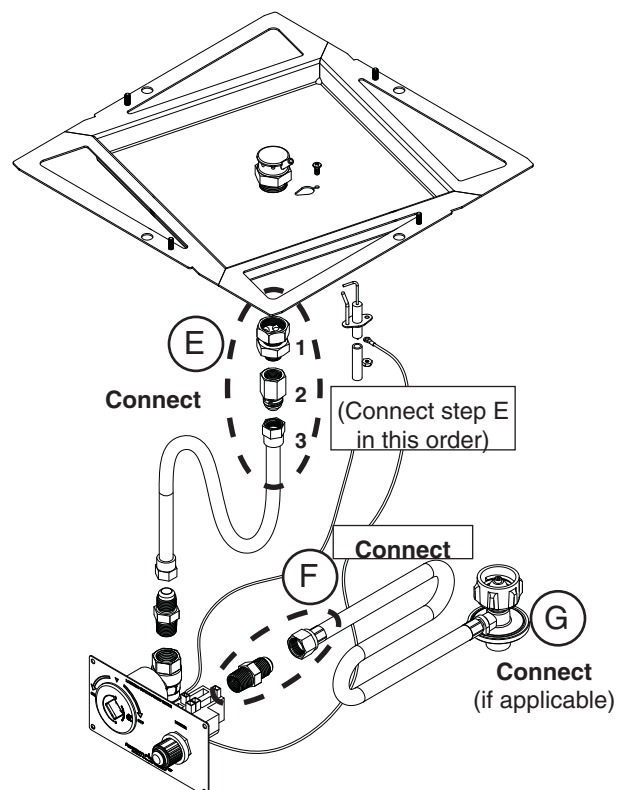


Fig. 8-2 New configuration (L.P. gas)

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

PARTS LIST

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

CONVERSION

Note: Ensure the outer rear panel is 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. Use a Phillips screwdriver to unfasten the 4 screws on the burner assembly. Then carefully remove the burner and set it off to the side (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 flex to the adapter on the valve (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 (H).
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 and reinstall the outer rear panel. Reference the owner's manual for details.

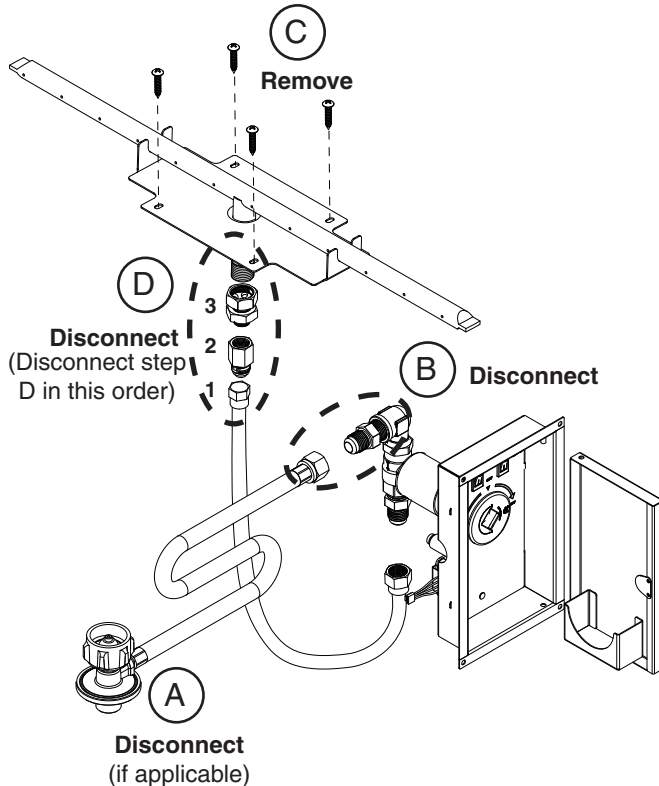


Fig. 9-1 Original configuration (L.P. gas)

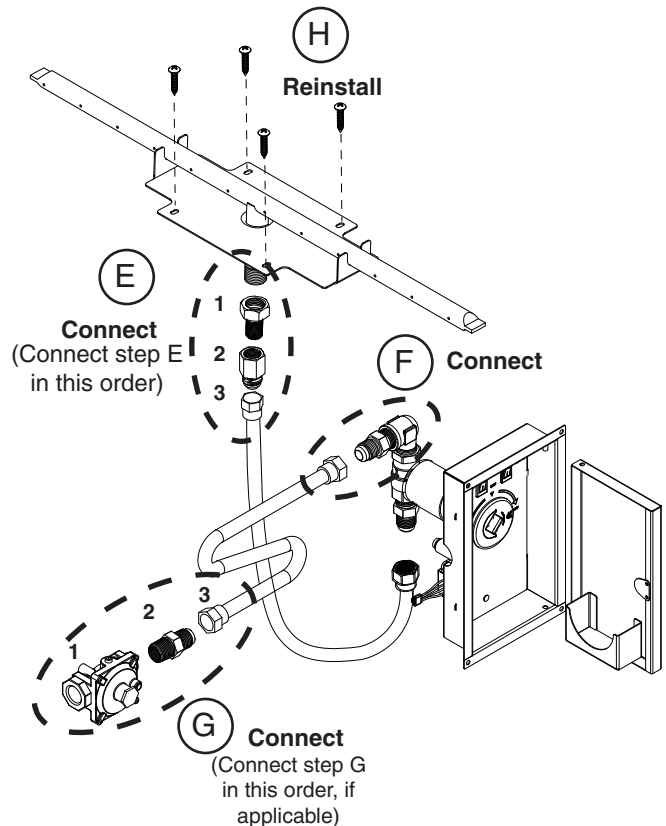


Fig. 9-2 New configuration (Nat. gas)

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

CONVERSION INSTRUCTIONS: CK-38-LP & CK-64-LP

PARTS LIST

- Air mixer
- L.P. regulator hose assembly

CONVERSION

Note: Ensure the outer rear panel is 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. Use a Phillips screwdriver to unfasten the 4 screws on the burner assembly. Then carefully remove the burner and set it off to the side (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 L.P. regulator hose assembly to the adapter on the valve (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 (H).
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 and reinstall the outer rear panel. Reference the owner's manual for details.

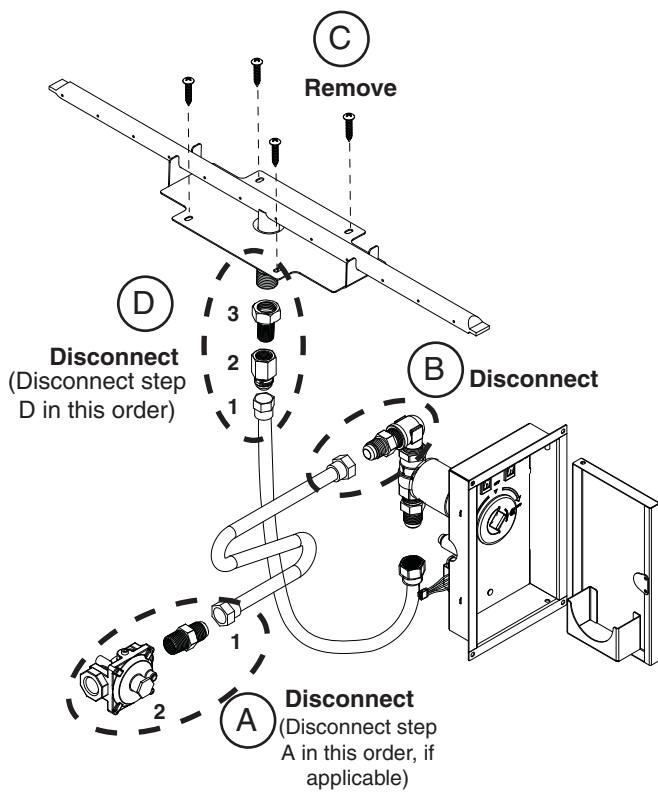


Fig. 10-1 Original configuration (Nat. gas)

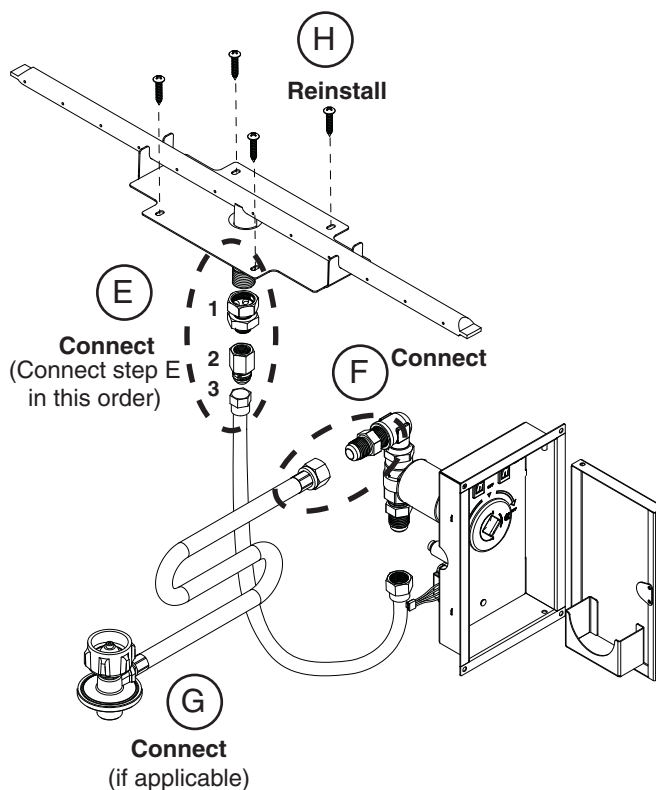


Fig. 10-2 New configuration (L.P. gas)

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

PARTS LIST

- Fuel injector (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.
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.

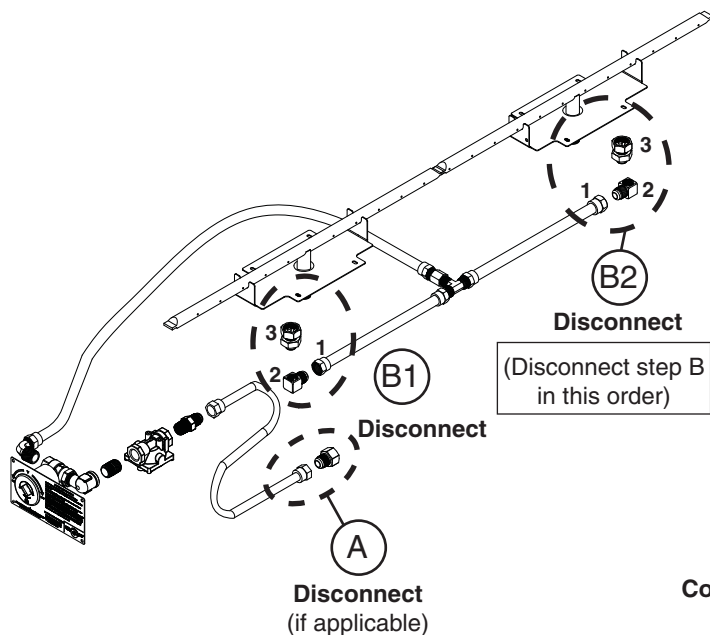


Fig. 11-1 Original configuration (L.P. gas)

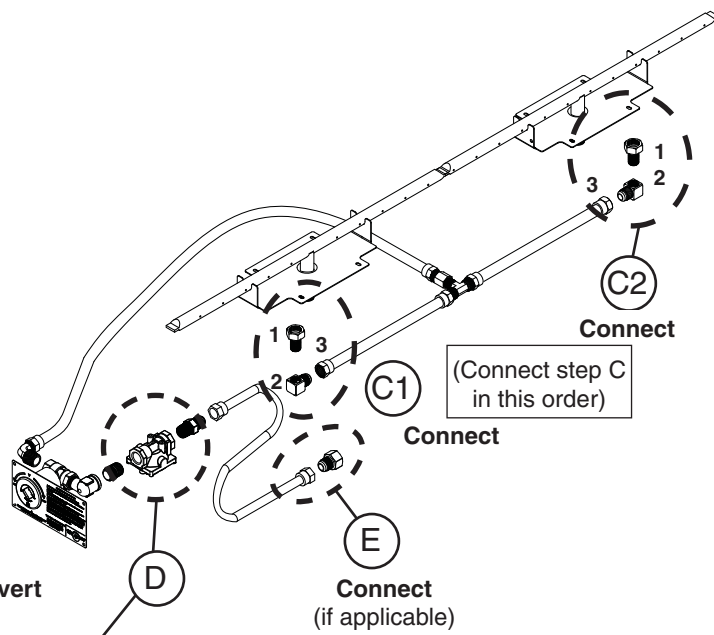
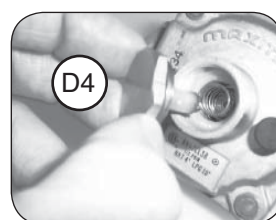
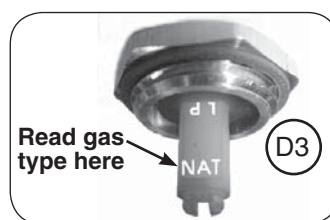
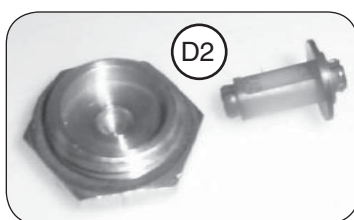
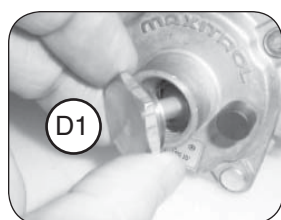


Fig. 11-2 New configuration (Nat. gas)



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

PARTS LIST

- Air mixer (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.
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.

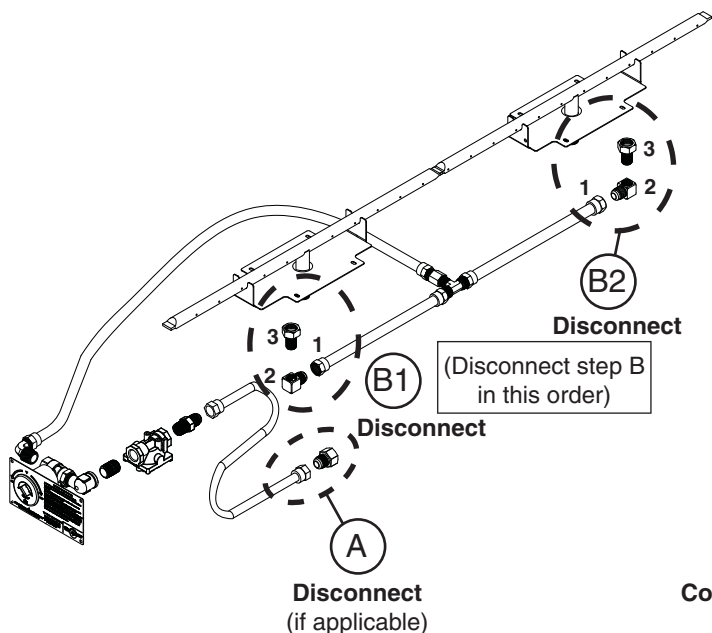


Fig. 12-1 Original configuration (Nat. gas)

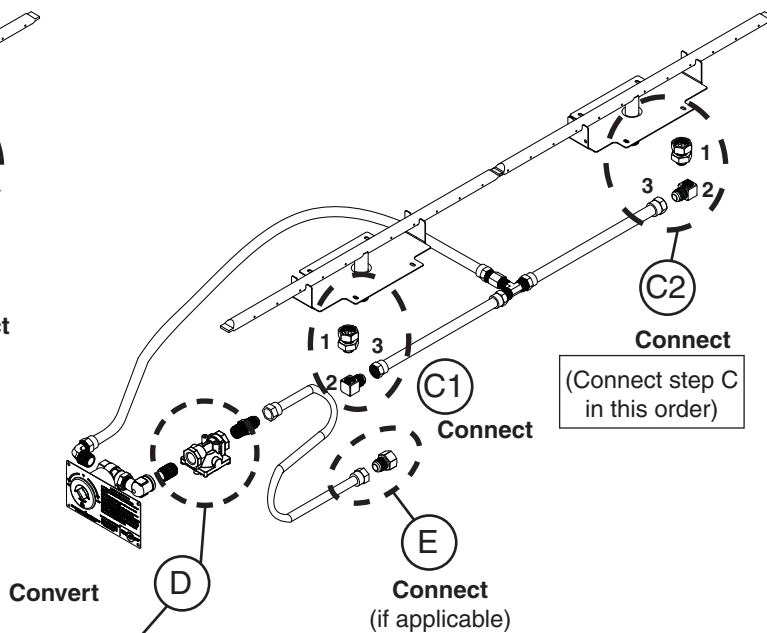
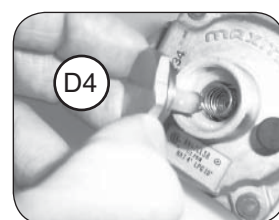
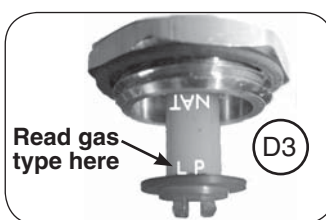
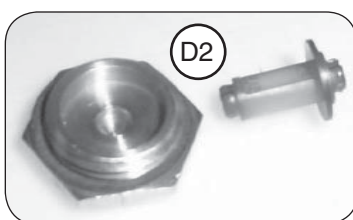
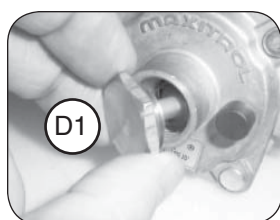


Fig. 12-2 New configuration (L.P. gas)



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

PARTS LIST

- Orifice (2)
- Air shutter

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. Remove the flex connector attached to the orifice holder. Then remove the orifice holder. See B.
3. Remove the orifice from the holder (B).
4. Install the new orifice for the new gas type, slide the supplied air shutter over the burner pipe, and reinstall the orifice holder (C). (The air shutter is for Nat. gas only.)
5. Reconnect the flex connector. (C). Repeat step 2-5 on second burner.
6. 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).
7. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
8. **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.**
9. Reinstall the burner assembly.
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. Reference the owner's manual for details.

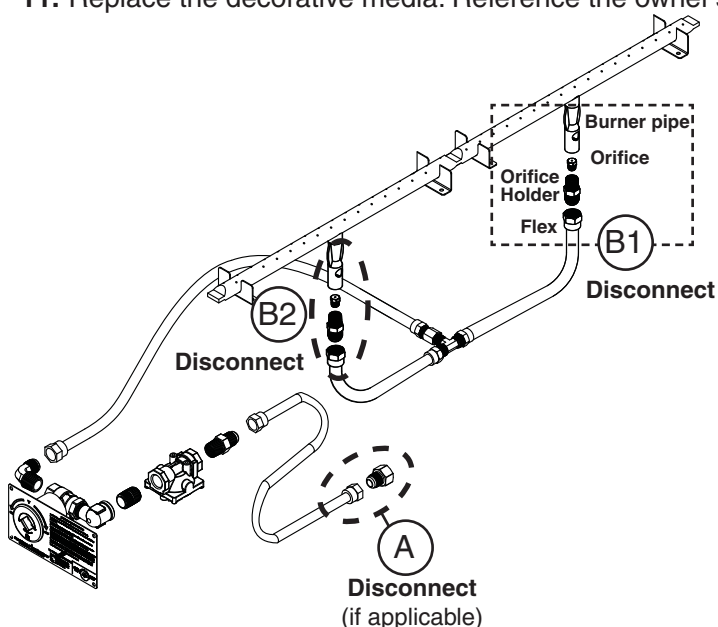


Fig. 13-1 Original configuration (L.P. gas)

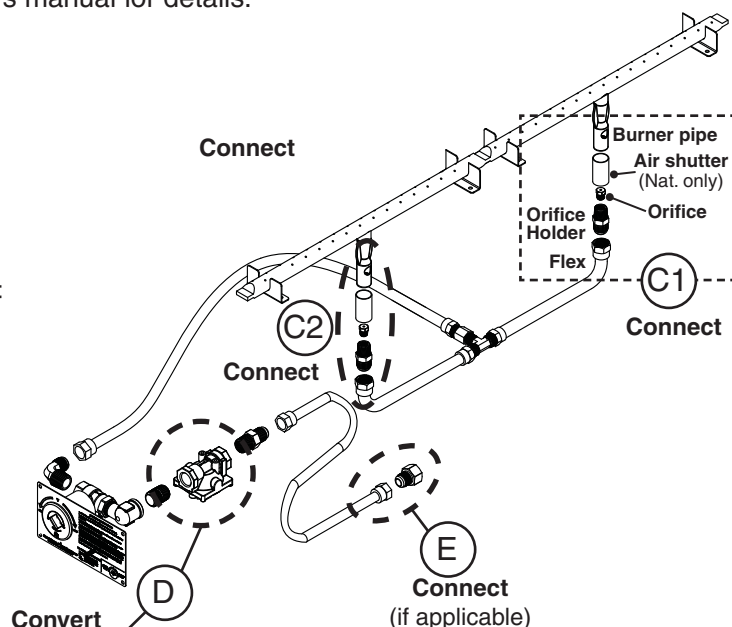
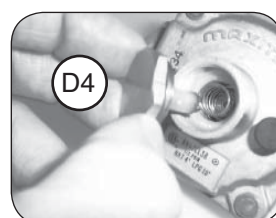
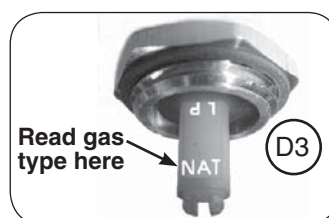
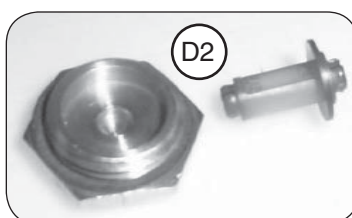
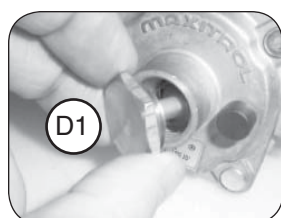


Fig. 13-2 New configuration (Nat. gas)



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

PARTS LIST

- Orifice (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. Remove the flex connector attached to the orifice holder. Then remove the orifice holder. See B.
3. Remove the orifice from the holder (B).
4. Discard the air shutter from the burner pipe (B). (The air shutter is not to be used for L.P. gas.)
5. Install the new orifice for the new gas type, reinstall the orifice holder, and reconnect the flex connector. (C). Repeat step 2-5 on second burner.
6. 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).
7. Connect to the new gas supply as appropriate for your setup, if applicable (E). Reference the owner's manual for details.
8. **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.**
9. Reinstall the burner assembly.
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. Reference the owner's manual for details.

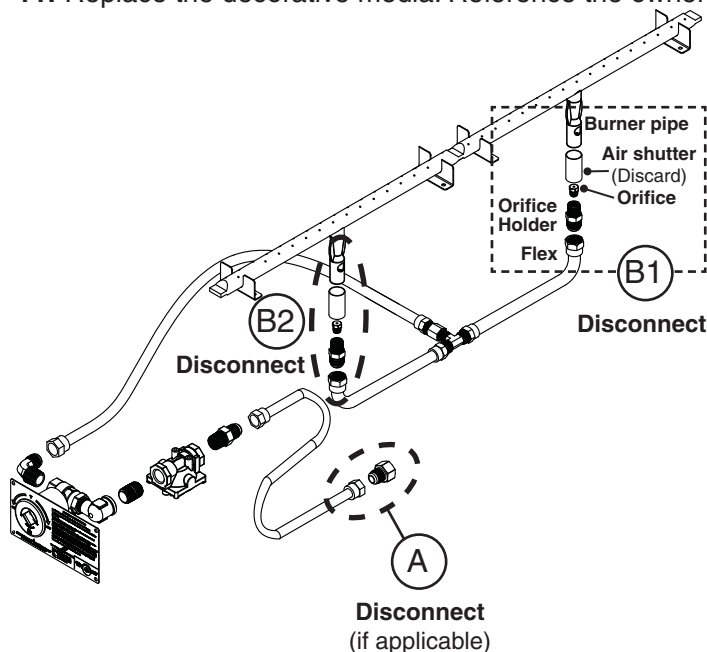


Fig. 14-1 Original configuration (Nat. gas)

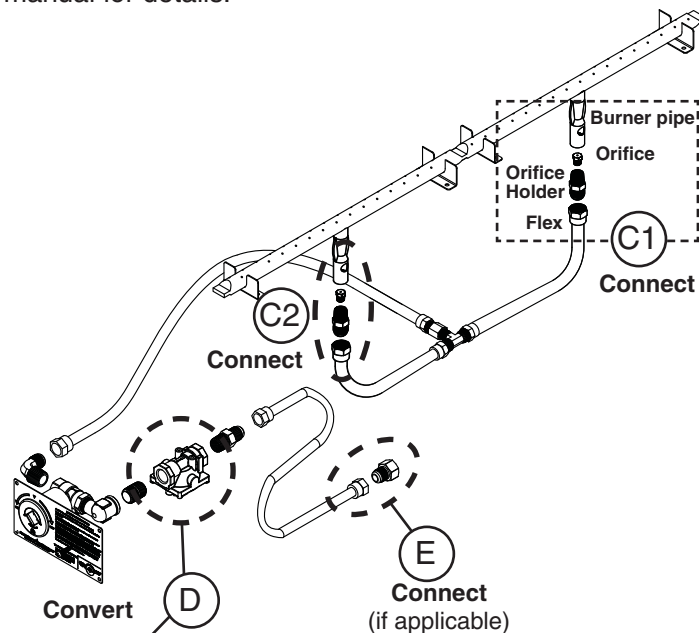
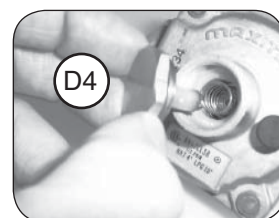
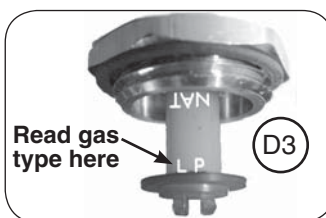
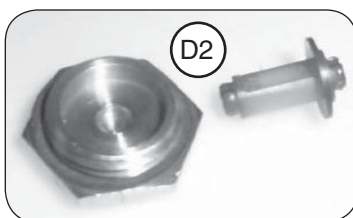
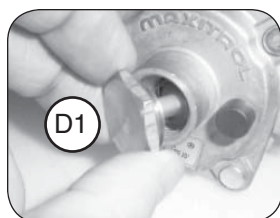


Fig. 14-2 New configuration (L.P. gas)



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