Honeywell

Integrated Valve Train

INSTALLATION INSTRUCTIONS

APPLICATION

These Integrated Gas Valve Train component installation instructions are for small valves (3/4 in. to 2 in.) and large valves (2 in. to 3 in.) are identical except where noted.

INSTALLATION

When Installing this product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check ratings given in these instructions and on the product to make sure the product is suitable for your application.
3. Make sure the installer is a trained, experienced service technician.
4. Use these instructions to check out product operation after installation.

⚠ WARNING

Fire or Explosion Hazard.
Can cause property damage, serious injury or death.
Perform the safety shutdown test any time work is done on a gas system.
Make sure gas is turned off before starting installation.

Bolt Torque Specifications

Torque specifications for the two bolt sizes are:
- 3/8 in. 16 bolts: 13 lb-ft.
- 1/2 in.-13 bolts: 25 lb-ft.

Valve Assembly Precautions (Fig. 1)

1. Use new, properly reamed, pipe, free from chips.
2. Do not thread pipe too far into pipe adapter. Valve distortion or malfunction can result from excess pipe in the valve.
3. Do not attach valve actuator until valve body installation is complete.
4. Make sure O-ring sealing surfaces are clean.
5. Apply moderate amount of good quality pipe dope, resistant to the action of liquid propane (LP) gas only on the pipe threads.
6. Make sure the gas flow is in the direction of the arrow on the gas valve casting.

NOTE: Gas flow in the V4297S Normally Open Vent Valve can be in either direction.

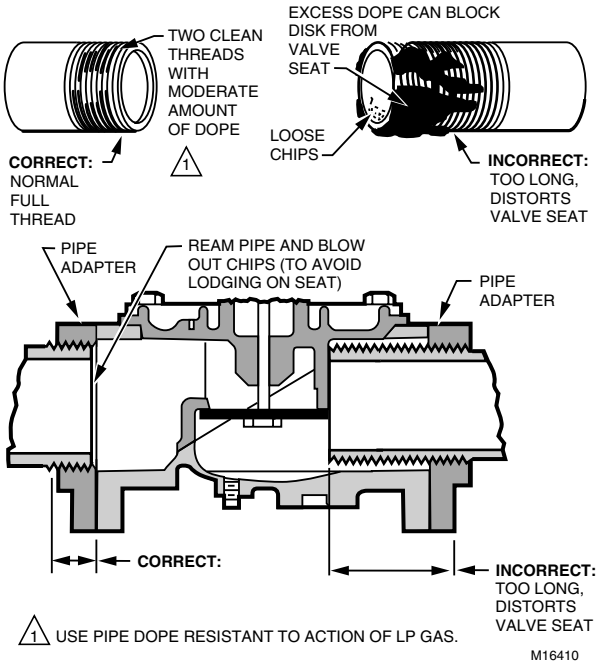

Fig. 1. Preparing pipes.

Connecting Upstream or Downstream Pipe Adapter to Valve (Fig. 2)

1. Using the grease packet provided (or equivalent, general purpose, lithium grease), grease the O-ring. Make sure the grease is applied evenly around the entire O-ring.
2. Insert the O-ring into the O-ring groove.
3. Assemble the pipe adapter to the valve using the three bolts, nuts and lock washers as shown in Fig. 2.

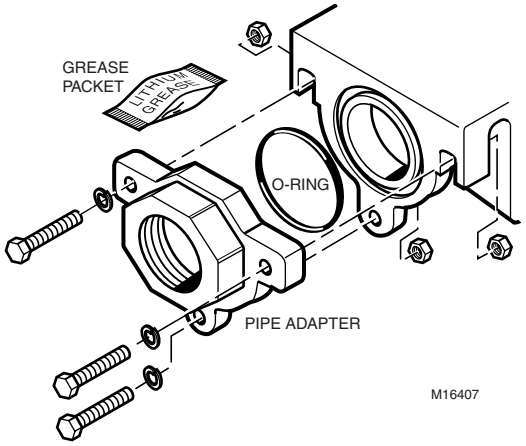

Fig. 2 Connecting the pipe adapter to the valve.

Connecting V4297S Normally Open Vent Valve (NOVV) Between Two Valves (Fig. 3)

1. Using the grease packet provided (or equivalent, general purpose, lithium grease), grease the O-ring of the first valve. Make sure the grease is applied evenly around the entire O-ring.
2. Insert the O-ring into the O-ring groove.
3. Assemble the NOVV to the first valve using the three bolts, nuts and lock washers as shown in Fig. 3.
4. Using the grease packet provided (or equivalent, general purpose lithium grease), grease the O-ring of the second valve. Make sure the grease is applied evenly around the entire O-ring.
5. Insert the O-ring into the O-ring groove.
6. Assemble the NOVV to the second valve using the three bolts, nuts and lock washers as shown in Fig. 3.

IMPORTANT

All bolts should be pointing out of the NOVV.

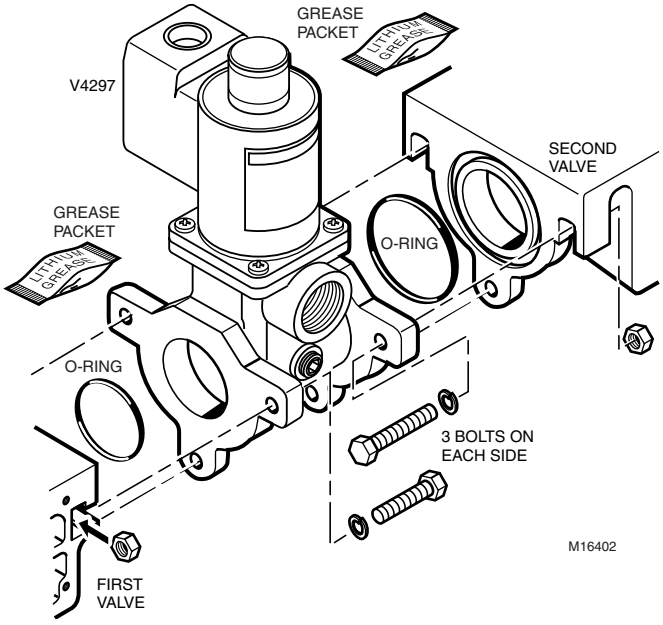

Fig. 3. Connecting the normally open vent valve between two valves.

Connecting Normally Open Vent Valve Adapter Between Two Valves (Fig. 4)

1. Using the grease packet provided (or equivalent, general purpose, lithium grease), grease the O-ring of the first valve. Make sure the grease is applied evenly around the entire O-ring.
2. Insert the O-ring into the O-ring groove.
3. Assemble the NOVV adapter to the first valve using the three bolts, nuts and lock washers as shown in Fig. 4.
4. Using the grease packet provided (or equivalent, general purpose lithium grease), grease the O-ring of the second valve. Make sure the grease is applied evenly around the entire O-ring.
5. Insert the O-ring into the greased O-ring groove.
6. Assemble the NOVV adapter to the second valve using the three bolts, nuts and lock washers as shown in Fig. 4.

NOTE: Use the three smaller bolts provided with the large NOVV Adapter to connect the downstream side of the NOVV adapter with the second valve.

IMPORTANT

Be sure that all bolts point out of the NOVV adapter.

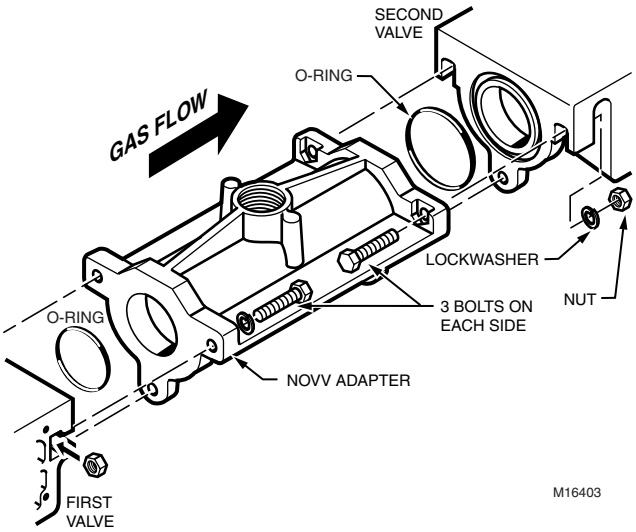

Fig. 4. Connecting the normally open vent valve adapter between two valves.

Connecting Two Valves in Series (Fig. 5)

1. Using the grease packet provided (or equivalent, general purpose lithium grease), grease the O-ring of the first valve. Make sure the grease is applied evenly around the entire O-ring.
2. Insert the first O-ring into the O-ring groove.
3. Using the grease packet provided (or equivalent, general purpose lithium grease), grease the O-ring of the second valve. Make sure the grease is applied evenly around the entire O-ring.
4. Insert the second O-ring into the O-ring groove.
5. Assemble the first valve to the second valve using the three bolts, nuts and lock washers as shown in Fig. 5.

IMPORTANT

Point the top two bolts upstream and the third bolt downstream when connecting two valves in series.

Connecting a C6097 Pressure Switch to a Valve (Fig. 6)

1. Remove the 1/4 in. (6 mm) NPT plug from the side of the valve.
2. Remove the label holding the O-ring in place on the C6097 and make sure the O-ring seal is in place.
3. Remove the C6097 Cover by removing the cover screws.
4. Mount the C6097 Pressure Switch on the valve using the two screws provided.
5. Replace the C6097 Cover.

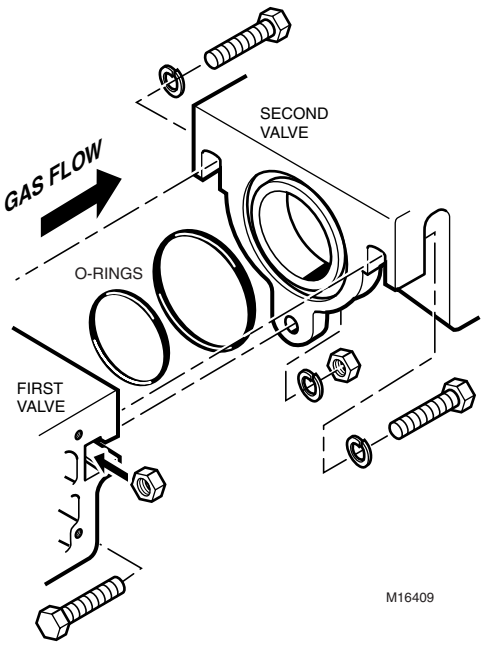

Fig. 5. Connecting two valves in series.

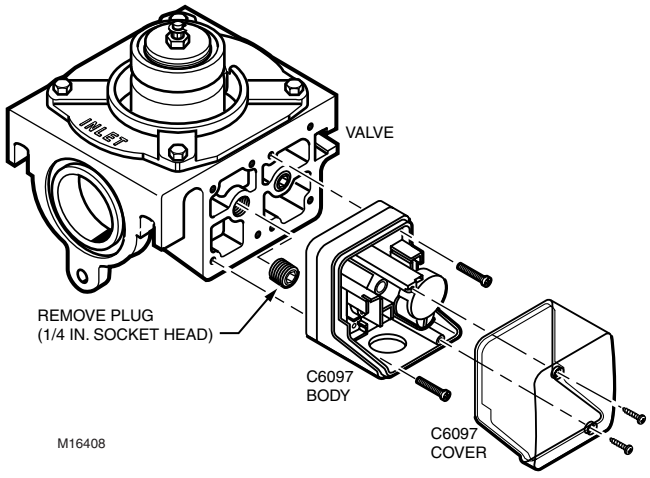

Fig. 6. Connecting C6097 Pressure Switch to Valve.

Completing the Assembly (Fig. 7):

1. Assemble the upstream and downstream pipes to the valve train.
2. Apply a parallel jaw wrench only to the pipe adapter flat next to the pipe being inserted (Fig. 7). A wrench applied to the valve body itself, or to the end farthest from the pipe being inserted, can distort the casting, causing a malfunction. Do not use the valve as a lever.
3. Make sure the gas flow is in the same direction as the arrow on the valve body.
4. Paint the pipe adapters and valve train components with a rich soap and water solution to check for bubbles that indicate a gas leak at the pipe adapter and valve mating surfaces.
5. Make sure the power supply is disconnected from the powered components. Mount the actuators on the valve bodies and complete the electrical and linkage connections by following the instructions packed with the actuators and solenoid valves.

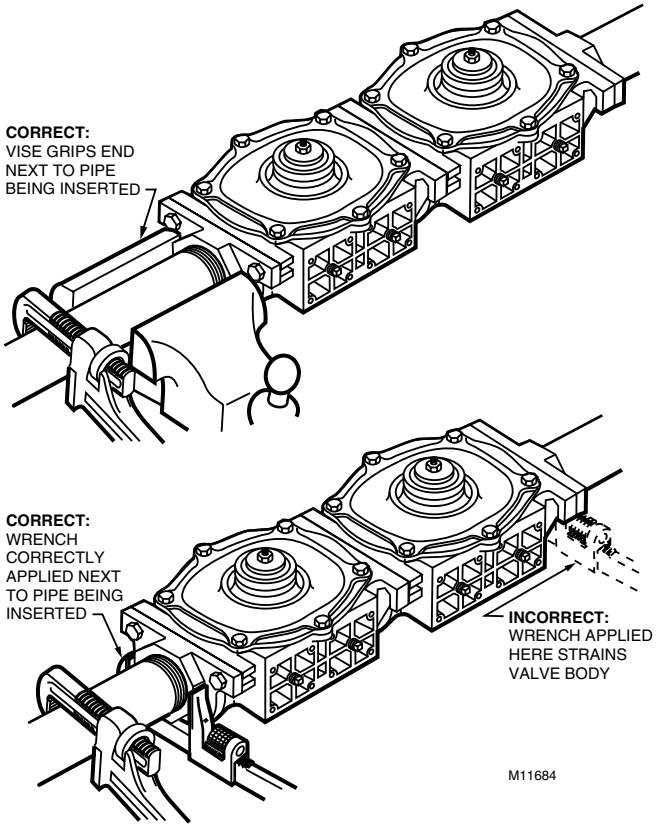

Fig. 7. Completing the valve train.

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Printed in U.S.A. on recycled paper containing at least 10% post-consumer paper fibers.