

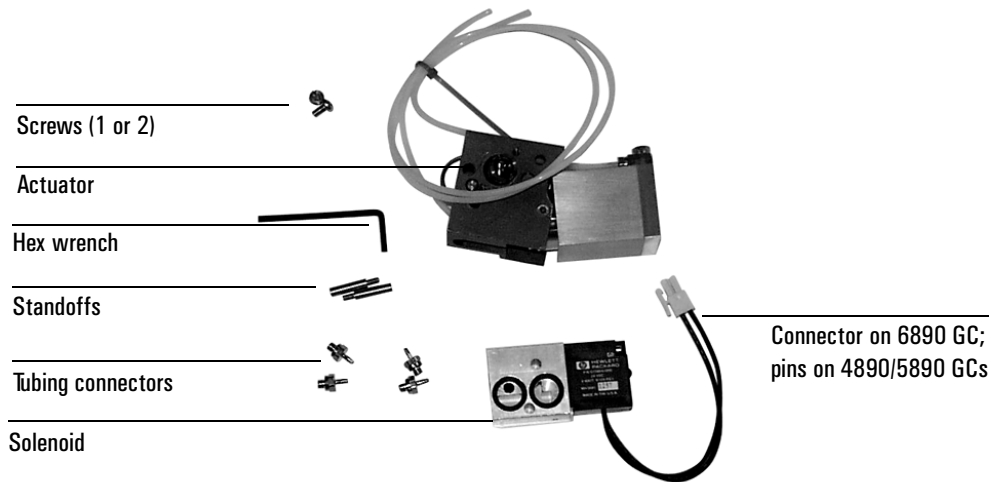
# Installing the G2743A/G2745A Valve Actuator Kits

This document describes the installation of a valve actuator on the 4890 Series, 5890 Series, and 6890 Series Gas Chromatographs (GC).

The kits contain:

<b>Description</b>	<b>G2743A kit (6890 GC)</b>	<b>G2745A kit (4890/5890 GC)</b>
Tubing connector	2	2
Screw, machine M4 × 8 mm		2
Screw, machine M4 × 12 mm	2	
Actuator assembly	1	1
Solenoid valve*	1	1
Installation sheet (this document)	1	1

\* Solenoid valve includes standoff screws and fittings



**Figure 1. Part identification**

### **Tools required**

T-10 and T-20 Torx™ drivers

Flat-blade screwdriver

3 mm hex key

7/64-inch hex key

4 mm hex key

## Installing the actuator on a heated valve box

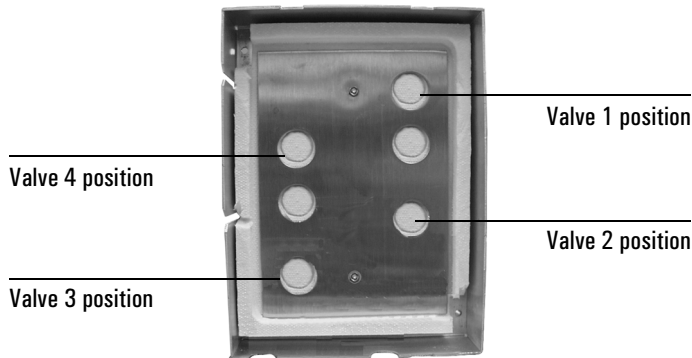
---

### WARNING

The valve box is insulated with a fibrous material that can cause irritation to the skin, eyes, and mucous membranes. Always wear gloves when working with the insulation. If the insulation is flaky/crumbly, wear protective eyewear and a respirator.

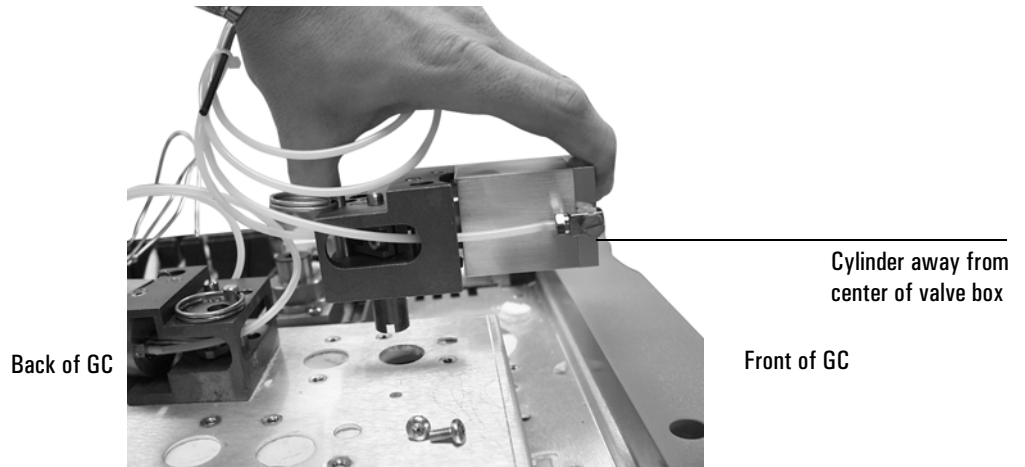
---

1. Install the heated zone kit (if purchased) as described in the instructions included with that accessory. Leave the GC covers off and the power cord disconnected.
2. Hold the upper valve box over a trash can, then remove the pre-cut insulation from the appropriate hole in the upper valve box. Remove any excess or loose pieces from around the hole.



3. Close the valve box.

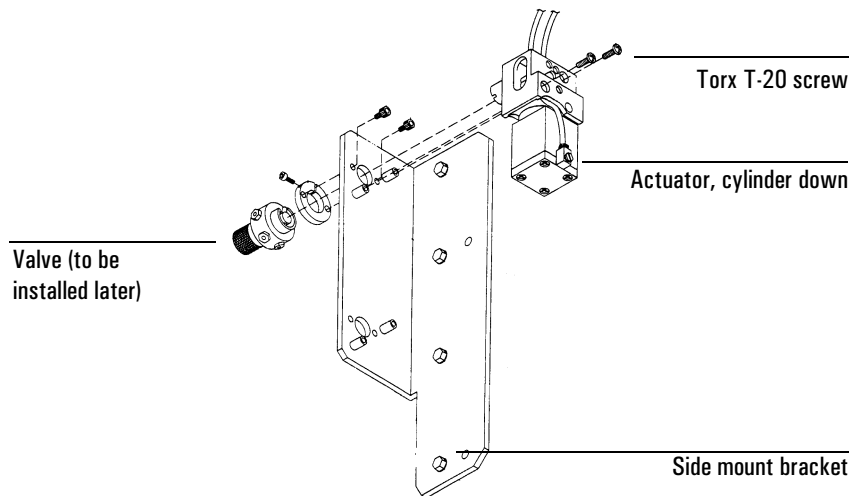
4. Align the actuator assembly over the appropriate valve position. Note that the cylinder always mounts away from the center of the valve box. Insert the actuator drive shaft through the hole.



5. Fasten the actuator to the upper valve box with two T-20 Torx screws.

## Installing the actuator on a side mount bracket

1. Install the side mount bracket on the left side of the GC using four machine screws (6890 GC) or four self-tapping screws (4890/5890 GC).
2. Attach the clamp ring to the back of the bracket with two screws.
3. Align the actuator assembly with the upper or lower standoffs. The cylinder must be down. Insert the actuator drive through the hole in the bracket, and secure with two T-20 Torx screws.



## Installing the solenoid on a 4890/5890 GC

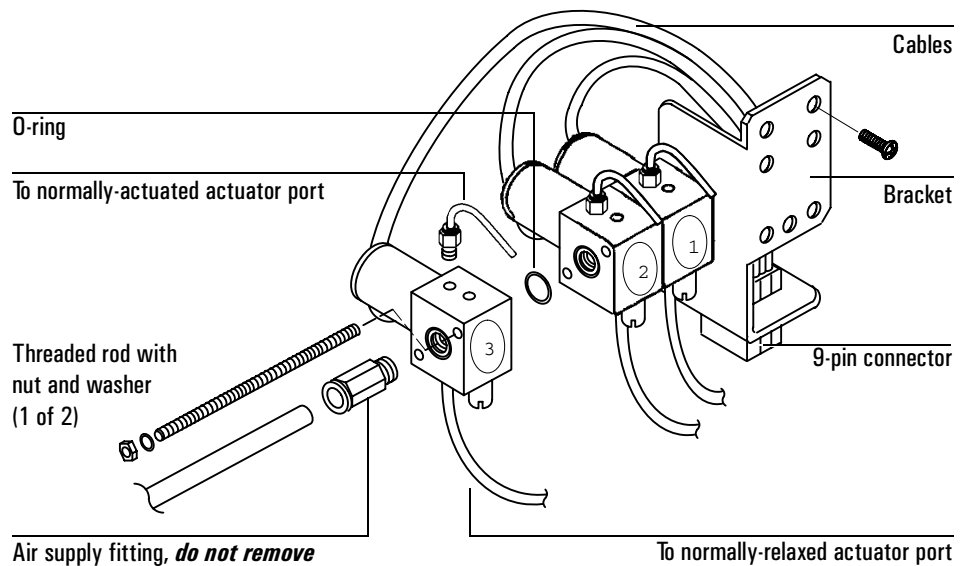
1. If they are not already removed, remove the electronics cover and the GC right side cover.
2. Install the two tubing connectors into the new solenoid valve.

---

### Caution

---

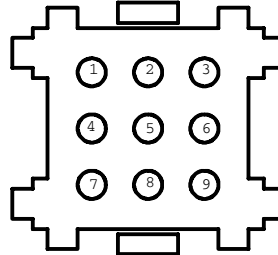
Do not remove the air supply fitting shown below. This fitting is cemented in place and must not be disturbed.



3. Remove the nuts that hold the existing solenoids to the solenoid bracket.
4. Separate the end solenoid with the air fitting from the others. Insert the new solenoid between the end solenoid and the others. Be sure that there are O-rings on both sides of the solenoid.
5. Adjust the threaded rods and tighten the nuts.

- Insert the cable pins in the top (wired side) of the connector. Press them down until they lock.

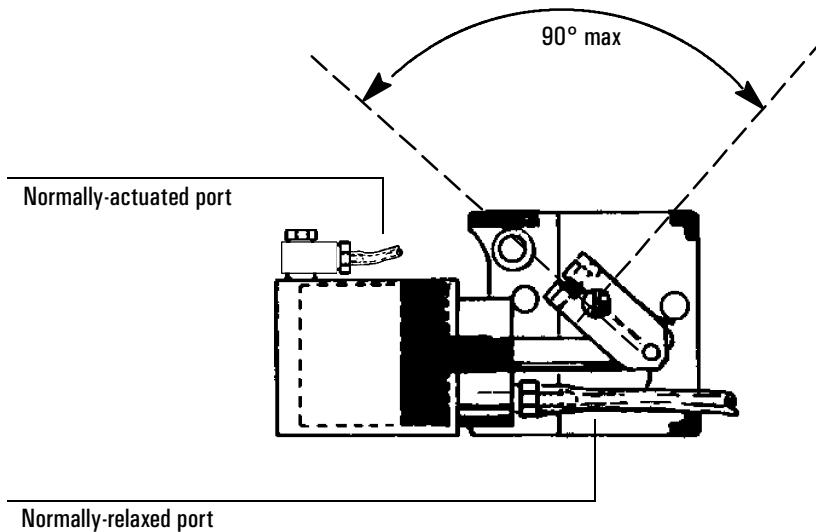
Wire color	Controls	Number
Blue	(SOLENOID 1)	1
Blue	(SOLENOID 2)	2
Blue	(SOLENOID 2)	3
Blue	(SOLENOID 1)	4
Grn/Wl	(GROUND)	5
Blue	(SOLENOID 4)	6
Blue	(SOLENOID 3)	7
Blue	(SOLENOID 3)	8
Blue	(SOLENOID 4)	9



AS SEEN FROM WIRED SIDE

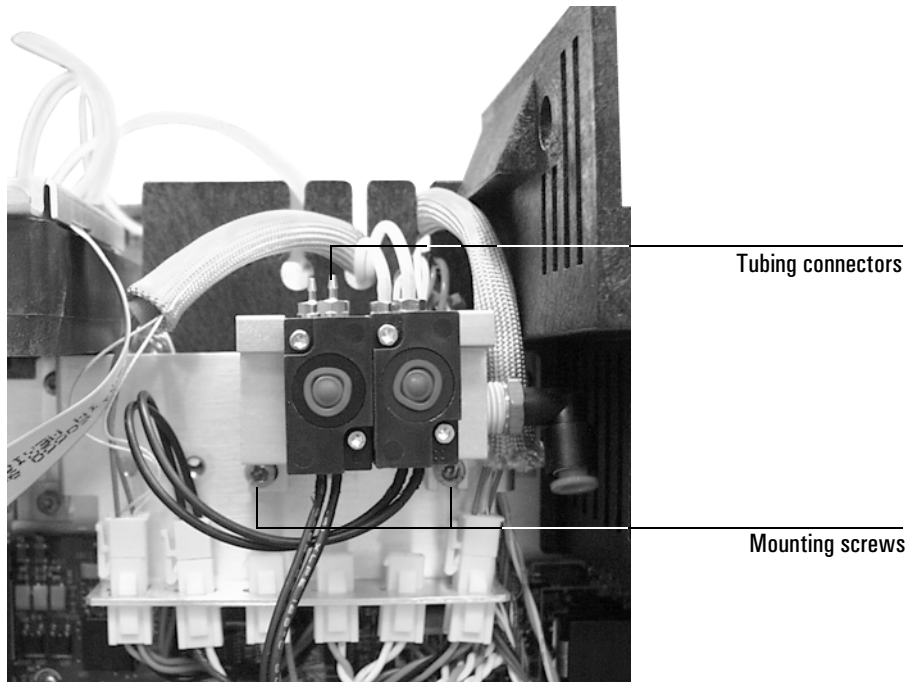
View the connector from the back (wired) side.  
Pin 1 is farthest from the solenoid mount.

- Connect the tubing from the actuator to the solenoid.



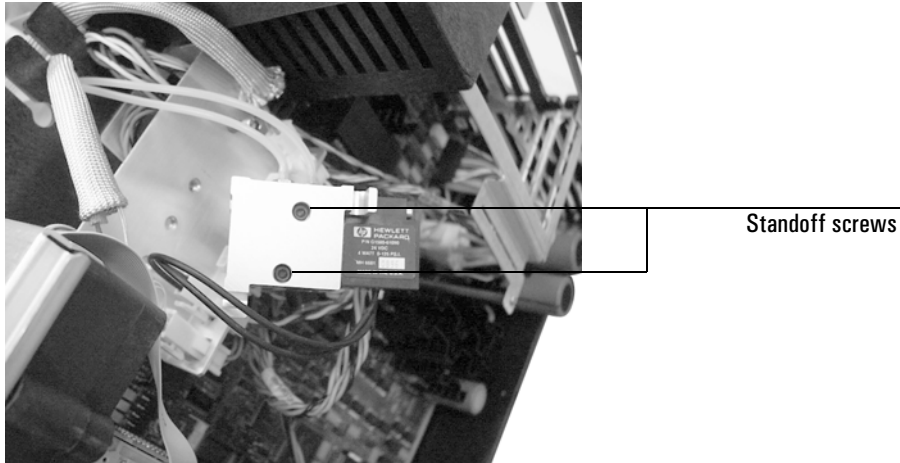
## Installing the solenoid on a 6890 GC

1. If they are not already removed, remove the electronics cover and the GC right side cover.
2. Install the two tubing connectors into the top of the new solenoid valve.
3. Use a 4 mm hex key to remove the two mounting screws that secure the solenoid block to the bracket.

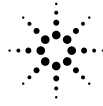




4. Use a 7/64-inch hex key to remove the two screws that hold the end plates and solenoids together.



5. Screw the two standoff screws supplied with your actuator kit into the standoff screws in the existing solenoid valve, then install the new solenoid valve. Be sure the O-rings are properly seated in the solenoid.
6. Re-assemble the end plates onto the solenoid assembly.
7. Re-install the assembly onto the bracket.
8. Cut the tie-wrap around the tubing leading from the actuator and route the tubing as shown in the next figure. The tubing from the side of the actuator connects to the outside fitting on the solenoid (the fitting farthest from the main board). Trim the tubing as needed to keep installation neat. See page 10.

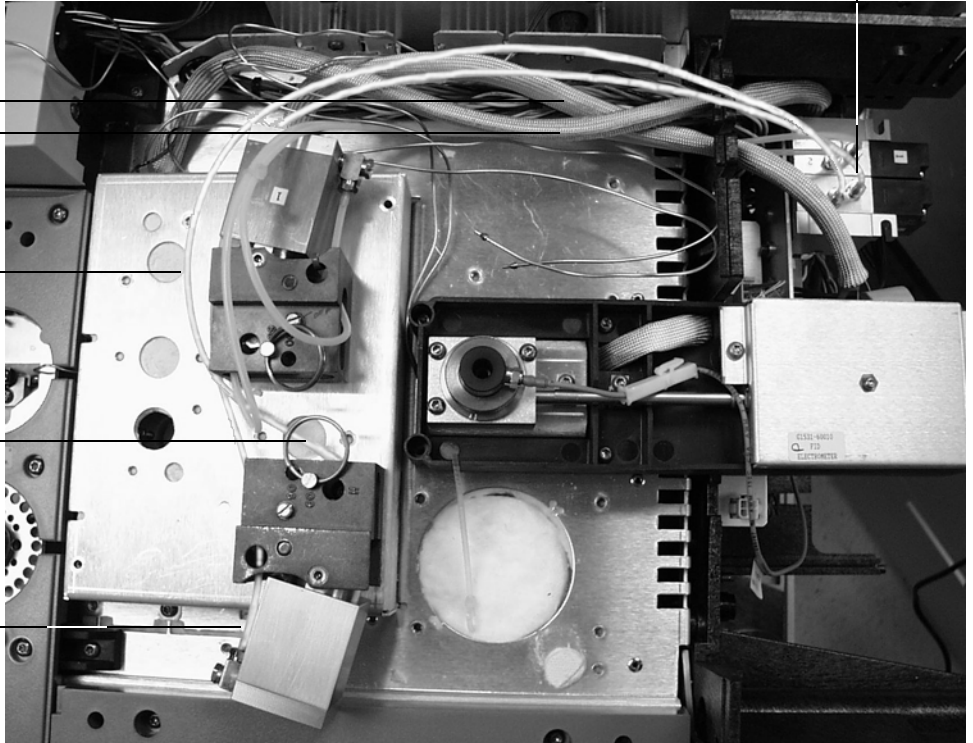


Solenoid outside fitting

Heater/sensor  
cables

To solenoid inside  
fitting

To solenoid outside  
fitting



The actuator installation is complete.

