

CGA Cylinder Valve Plug Replacement

092.061.00

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 **Warning:**

Avon Protection requires replacement of the cylinder valve plug at the earliest possible date. The plug insert may become dislodged and partially or completely block the flow of air to the user. This could potentially result in death or serious injury.

Avon Protection has become aware of a potential issue regarding the cylinder valve plug, identified as Item 8 in the exploded view diagram on the second to last page of this document.

In certain instances the plug insert may become dislodged, blocking the cylinder valve outlet, resulting in the inability to close the cylinder valve, or potentially blocking/restricting the airflow from the cylinder valve. Instances of the plug becoming dislodged are most often associated with extremely rapid filling and discharging of the cylinder. This was identified through internal testing and there have not been any reports of this happening in the field. Avon Protection recommends replacing potential impacted cylinder valve plugs as a precautionary and urgent matter.

A method of detection could be a rapid reduction in air pressure within the system, which may be verified via the Console mounted pressure gauge.

User responses to the rapid reduction in air pressure would be to begin immediate egress to a breathable air environment. If no air is available from the cylinder, the EBSS may be utilized, as the EBSS functionality is unaffected by the plug.

You are receiving this technical bulletin because your organization has been identified as a possible recipient of affected cylinder valves. Avon Protection requires replacement of the cylinder valve plug assembly. This notice impacts specific lots of cylinder valve plugs (PN 092-061-XX), related to

cylinders, cylinder valves, SCBA's, and spare part shipments. This includes both the individual plug, PN 092-061-00, and service kit, PN 092-061-99.

This Avon Technical Bulletin provides users with the following information related to the replacement:

- How to identify affected units
- Entities authorized to provide the replacement
- How to request replacement plugs
- Replacement and testing instructions
- Requisite tools and replacement components
- Reporting requirements for units that are reworked

Identification of affected units:

Units will carry serial number labels located on the cylinder valve as shown in the photo below. The affected serial numbers are:

Valves: 500011534001 thru 500021973084

Cylinders: 500011087001 thru 500022121010

**Entities authorized to provide the service:**

The cylinder valve plug replacement may be conducted by Avon factory technicians, distributor Service Center technicians, and End User certified technicians, after reviewing this bulletin and completing any necessary certification training.

All technicians performing this plug replacement must complete the online training found at the link below:

www.avon-protection.com/cylvalveplug

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Mandatory replacement of the plug must be completed following these instructions.

Thin Blade Screwdriver
Leak Detection Solution – (Ex. Snoop)

Replacement Plug Request Process:

To initiate the plug replacement request process:

- A. Contact your **Local Distributor**
or
- B. Avon Protection Customer Service:
888-286-6440

customerservice@avon-protection.com

Plug Replacement and Testing Instructions:

Note: Any maintenance on the valve that requires disassembly should be conducted by a technician who is well trained in the hazards of high pressure equipment. Never attempt to service a cylinder valve while there is any pressure in the cylinder. Open the valve completely to be sure it is empty. If the gauge indicates pressure but you think the cylinder is empty, contact Avon Protection Customer Service for advice by calling: **888-286-6440**.

Tools & Parts Required:

Breathing Air Fill Station (**Certified Grade D or better breathing air**)
Replacement Plugs – **PN 092.061.00**
Bonnet O-rings – **PN 054068**
Chistolube MCG-111 – **PN 047002**
O-ring Installation Tool – **Avon provided**
Automatic Center Punch – **Avon provided**
3/8" socket (3/8" drive) or Nut Driver
3/4" Deep socket (3/8" drive)
3/8" Drive Ratchet
Calibrated Torque Wrench (3/8" drive) – (**CDI Model 2502LDIN or equivalent**)
Plastic Pick (o-ring removal)

**Plug Removal:**

1. Drain the cylinder by opening the cylinder valve such that the air may **SLOWLY** release from the cylinder. Draining the cylinder too quickly may result in a rapid release of high pressure air, which may result in difficulty restraining the cylinder. Draining too quickly will also cause the valve to become extremely cold resulting in moisture condensing then freezing on the valve. Also, draining multiple cylinders simultaneously may be loud, Avon requires the use of hearing protection if louder than 95 dB.

Prior to working on the valve, verify that the cylinder valve is fully open and the pressure is 0 psig as indicated on the cylinder valve gauge.

WARNING:

Never attempt to service the cylinder valve while there is any pressure in the cylinder. Open the valve completely to be sure it is empty. If the gauge shows pressure but you think the cylinder is empty, contact Avon Protection Customer Service for advice by calling: **888-286-6440**.

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- Remove the handwheel plug by working a thin screwdriver between the plug and the handwheel and prying upwards. Then use a 3/8 inch socket to remove the locknut.



- Use a 3/4 inch deep socket to remove the bonnet/stem. Do not remove the stem assembly from the bonnet.
- Use a plastic pick to remove the large O-ring from the bonnet. Metallic tools may damage the sealing surface and should not be used.



- Unscrew plug assembly (Item 8), which should move easily by hand. If difficult to remove there may be pressure on the other side of the plug, please contact Avon Protection. Retain the plug for return to Avon Protection.

- Inspect and verify the plug cavity in the valve body is clean and free of debris. .



Plug Installation:

- Replace the plug assembly by threading it into the valve until the plug tab is level with the valve body.
- Lubricate then replace the bonnet O-ring (Item 9) using the supplied O-ring installation tool.
- Screw bonnet/stem assembly into valve by hand until the O-ring on the bonnet makes contact with the body. If the bonnet will not seat, verify engagement between plug and stem, and that plug is threaded into valve body adequately. Use a 3/4 inch socket and torque wrench to torque the bonnet to 144 in.-lbs. (12 ft.-lbs.).

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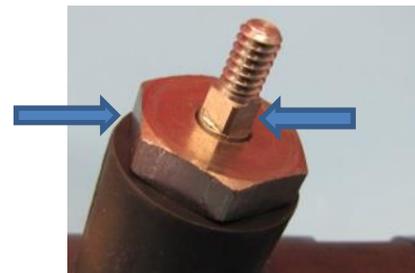
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Leak Inspection:

1. Install cylinder into approved fill station. Slowly fill cylinder to 500 psi, then check for leaks using a leak detection solution.
2. Apply solution to these points and observe any bubbles indicating a leak.

4. Use handwheel to fully open then close valve. Remove handwheel and verify bonnet is fully seated to the valve body, and stem is approximately as shown in the photo labeled as correct. An incorrectly seated bonnet is shown for reference.



Correct 1



Incorrect 1

3. If no leaks are detected, continue filling to its rated full pressure and repeat leak check as stated in Step 2 above.
4. **Note:** Stop filling and drain cylinder at any time a leak is detected.
5. If there are no leaks, rinse off leak detection solution with plain water and dry with a soft cloth or by using low pressure clean air.
6. Install handwheel, washer, and lock nut. Tighten lock nut until it makes contact with the washer, and then further tighten one-quarter turn. Close the cylinder valve fully and remove from the fill station.
7. Use the leak detection solution to verify no leaks are detected inside the cylinder valve outlet.

5. Use handwheel to open cylinder valve two complete turns, then remove handwheel.

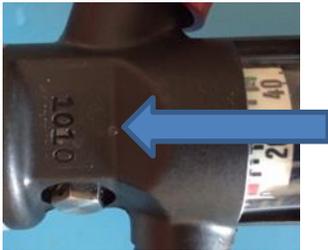
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8. If there are no leaks, rinse off leak detection solution with plain water and dry with a soft cloth or by using low pressure clean air.
9. Mark the valve in the location shown using the Automatic Center Punch. Only valves that have been updated and positively passed the leak test may be marked using the punch.



3. Submit the completed form to Avon Protection Customer Service at:
 - A. customerservice@avon-protection.com
or
 - B. FAX to: 410-273-1301
4. Upon receipt of the test form, Avon Protection Customer Service will provide a return authorization number and information to return the replaced plug assemblies.

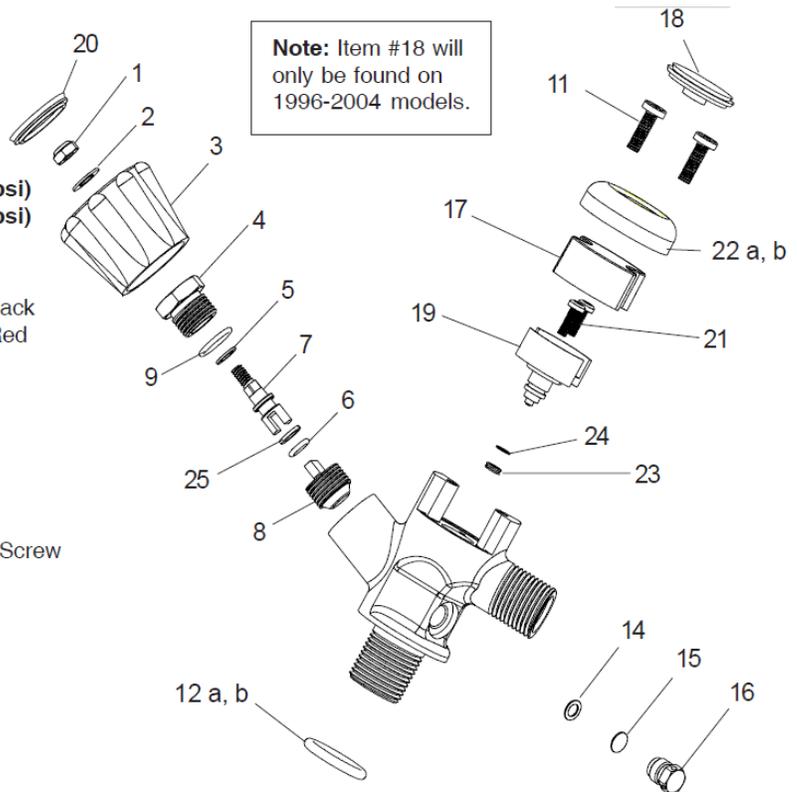
Reporting:

1. Document the work performed by recording the Serial Number of the unit, Lot Number of replacement plug, date, technician name, and final pressure test results, on the attached Cylinder Valve Plug Replacement Test Form (last page). The form is a fillable pdf, however it may be printed and filled out manually, then submitted to Customer Service.
2. Note any anomalies on the test form.

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#	Part No.	Description
	092.043.00	Cylinder Valve Assy (4500 psi)
	092.043.02	Cylinder Valve Assy (2216 psi)
1	092.064.00	..... #10-24 Stainless Locknut
2	092.055.00	..... Washer, Stainless
3a	092.046.00	..... Low Pressure Handwheel, Black
3b	092.046.01	..... High Pressure Handwheel, Red
4	092.057.00	..... Bonnet
5	031.122.00	..... Washer, Thrust, Nylatron
6	054.001.44	..... O-ring
7	092.058.00	..... Stem
8	092.061.00	..... Valve Plug Assembly
9	054068	..... O-ring
10	092.044.00	..... Valve body
11	092.063.00	..... #10-24 X 5/8 inch Pan Head Screw
12a	054.204.00	..... O-ring, High Pressure
12b	092.016.00	..... O-ring, Low Pressure
13	092.054.00	..... Tube
14	092.025.00	..... Washer, Sealing
15a	092.024.00	..... Burst Disc, 4500 psi
15b	092.018.00	..... Burst Disc, 2216 psi
16	092.019.00	..... Body, Burst Disc
17	092.050.00	..... Lens, Gauge, Cylinder Valve
18	092.049.00	..... Plug for Bumper
19a	092.053.00	..... Gauge, 4500 psi
19b	092.053.02	..... Gauge, 2216 psi
20	092.047.00	..... Plug for Handwheel
21	092.062.00	..... #6-32 X 3/8 inch SS Socket Screw
22a	092.048.00	..... Bumper (1996-2004)
22b	092006	..... Bumper (Post 2004)
23	054.205.00	..... O-ring, 1/8 inch ID with Backup Washer
24	031.412.00	..... Washer, Flat
25	054032	..... Backup Washer



Note: Item #18 will only be found on 1996-2004 models.

