Product Information News

August 18, 2004

CYLINDER VALVE DISASSEMBLY AND REPAIR

MSA has changed its cylinder valve Insert from a clear nylon seat to a black nylon seat. The black nylon has a raised black center to reduce the air flow through the cylinder valve over the first 1/2 turn of the handwheel. This helps reduce the thrust that could cause a cylinder to become airborne in the event it is mishandled and dropped with the valve partially open. This will not affect the flow of air to the SCBA, since users are always instructed to open the cylinder valve fully before use (about 3 rotations of the handwheel).

This change represents a product improvement, to provide additional safety in the event that cylinders are mishandled, and is not covered under warranty. Users are not required to make this change, but may do so at their discretion.

This PIN Article details the replacement of the old style insert with the new black nylon seat. The part number for the new black insert is the same as the old insert (P/N 488858).

For convenience, place a copy of this PIN Article in the CARE Manual Binder.

The inspection and maintenance procedure authorized in this PIN Article is classified Certified Maintenance and must be performed by a MSA CARE Certified Air Mask Technician. Refer to the illustrated parts list in figure 1 as an additional reference.

MSA Safety Products Division • ISO 9001 CERTIFIED Quality System • MSA Instrument Division

For More Information: Call (1-800-MSA-2222) or Visit Our Website at (www.MSAnet.com)

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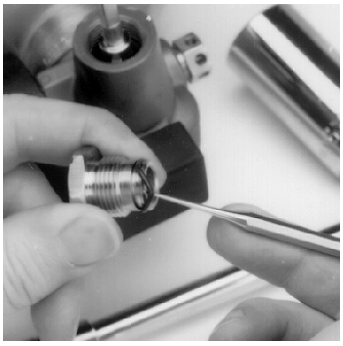
DISASSEMBLY AND REPAIR

REMOVING THE HANDWHEEL

1. Using the spanner wrench, remove the locknut and spring. Remove the handwheel from the top of the valve stem.

2. Place a 7/8" socket (deep-well) on the packing gland flats. Unscrew the packing gland from the valve body. Pull the stem out of packing gland. Remove the O-ring and valve stem washer from the packing gland.



Note: The O-ring removal tool can be used to remove O-ring from the packing gland.

3. Place the valve stem back in the valve body.

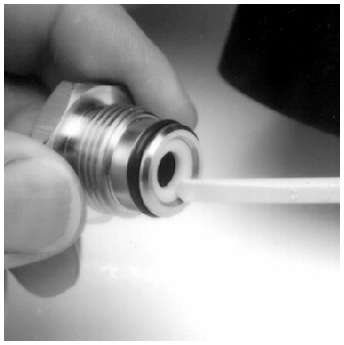
4. Replace the handwheel on the valve stem. Turn the stem until the slot drops onto the insert. Turn the handwheel counter-clockwise until the insert can be removed.

Note: If the insert is white or shows signs of wear or damage it must be replaced.

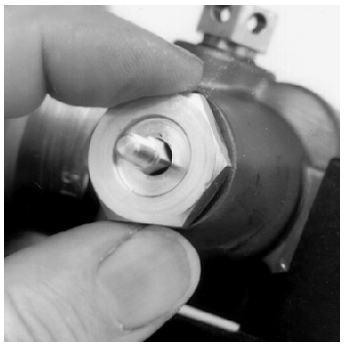
INSTALLING THE BLACK NYLON INSERT

1. Using the valve stem, install the new black insert in the valve body. Thread the stem clockwise until the insert is fingertight.
2. Place a thin film of Christo-Lube lubricant on a new O-ring. Place the O-ring on the packing gland.

3. Place a new washer into the packing gland. Press the washer down to its seat.



4. Insert the stem into the valve body. Turn the stem until the slot drops onto the insert. Thread the packing gland into the cylinder valve until it is finger tight.



5. Turn the valve stem counter-clockwise until the stem stops. Be sure the gland does not turn.

6. Using the inch-pound torque wrench with a 7/8" socket (deep-well), tighten the packing gland to 85-105 in.lbs.

7. The valve stem square must fit into the square hole in the handwheel. Place the handwheel on the stem and check the valve for proper motion. The handwheel should move freely.
8. Replace the spring. Be sure that the valve is fully open to allow the locknut to be installed more easily.
9. Put one drop of Loctite #222 on the stem threads.

10. Using the locknut spanner wrench, press the locknut against the spring and tighten clockwise until it is flush with the top of the handwheel.

11. Open and close the valve completely several times to seat the stem, insert, and the valve stem gasket.
12. Leak test the valve.

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