



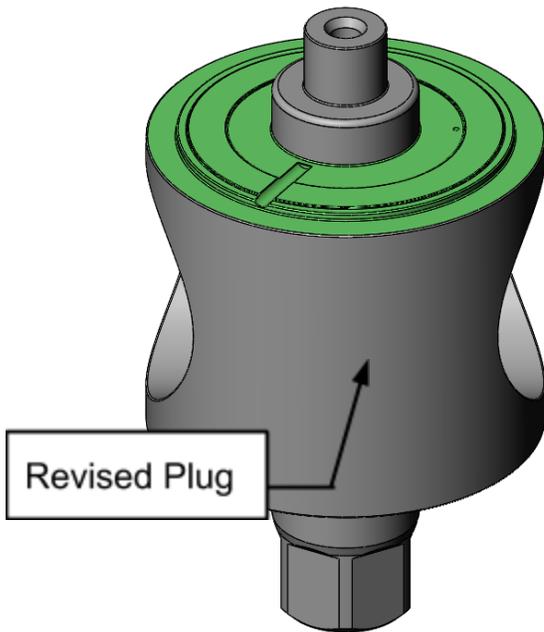
## 5" VALVE UPDATE

MSI Technical Bulletin 073

Subject: Notification of changes to the 5" valve plug.

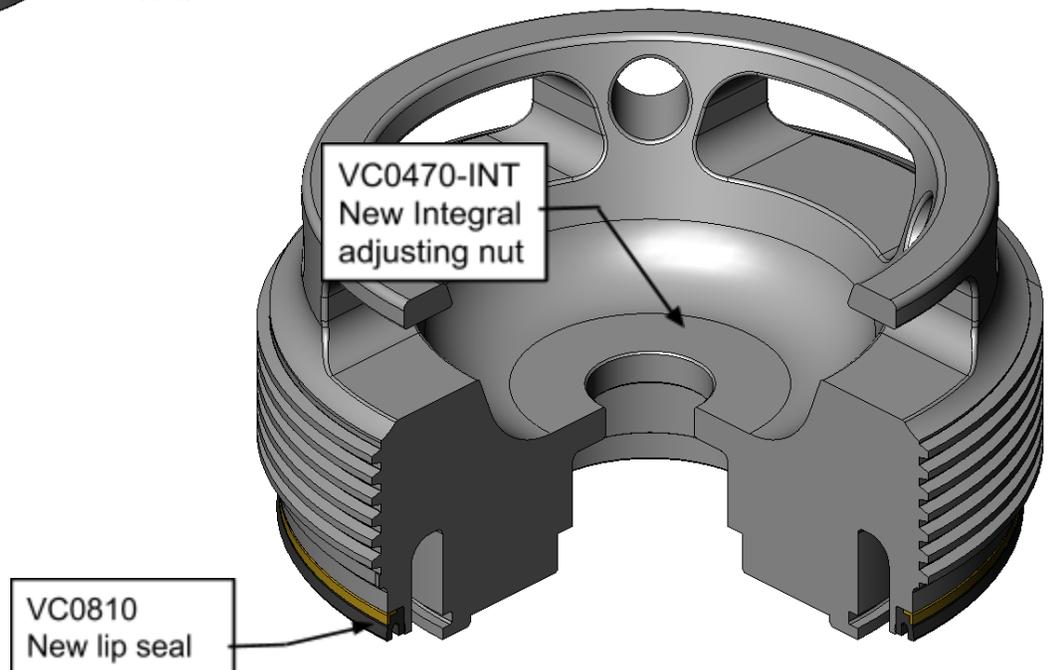
MSI recently developed an integral adjusting nut that required minor modifications to the 5" valve plug. The changes involved modifying the nut facing side of the plug shown in green below for the reasons explained herein.

*Note: The integral and two-piece adjusting nuts are both available.*

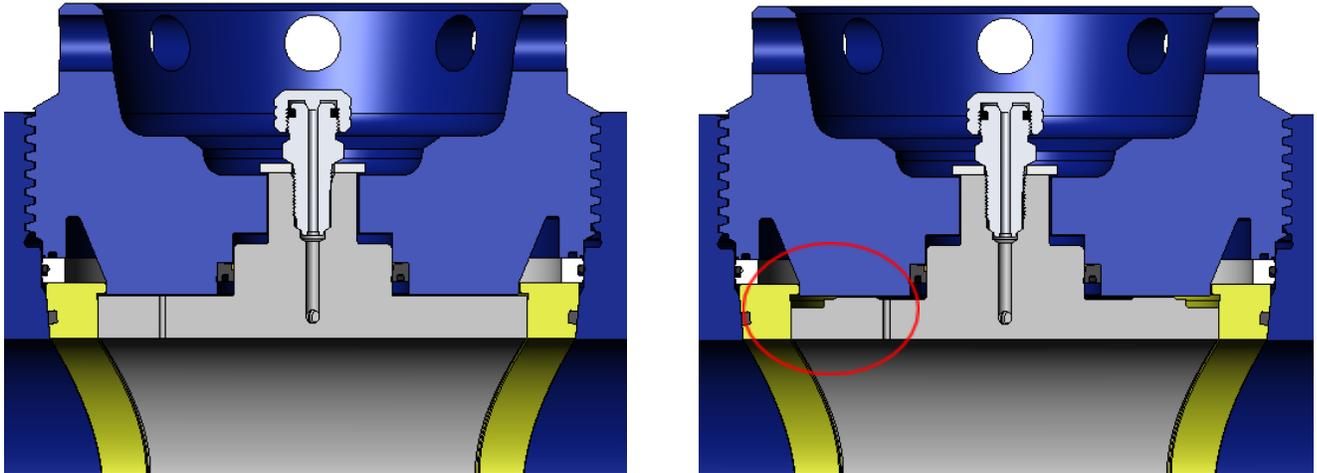


Improvements:

- The new features allow for lubrication to reach the plug seal more efficiently during the greasing procedure.
- Pressure is relieved into the bore more efficiently through the weep hole. This decreases the chances of the pressure locking event to occur. *NOTE: There are other factors that could contribute to a pressure locking event, such as over tightening the adjusting nut or lack of lubrication.*
- The revised plug is compatible with all existing valves in the field, but also allows for the newly available integral adjusting nut to be used.
- These changes to the plug apply to both GreaSeal and non-GreaSeal plugs.
- The GEN II adjusting nut is compatible with GEN I and II inserts.



The image below shows a typical assembly (left) and the same assembly with the revised plug (right) for comparison. As mentioned before, the revised plug is fully compatible with existing assemblies.

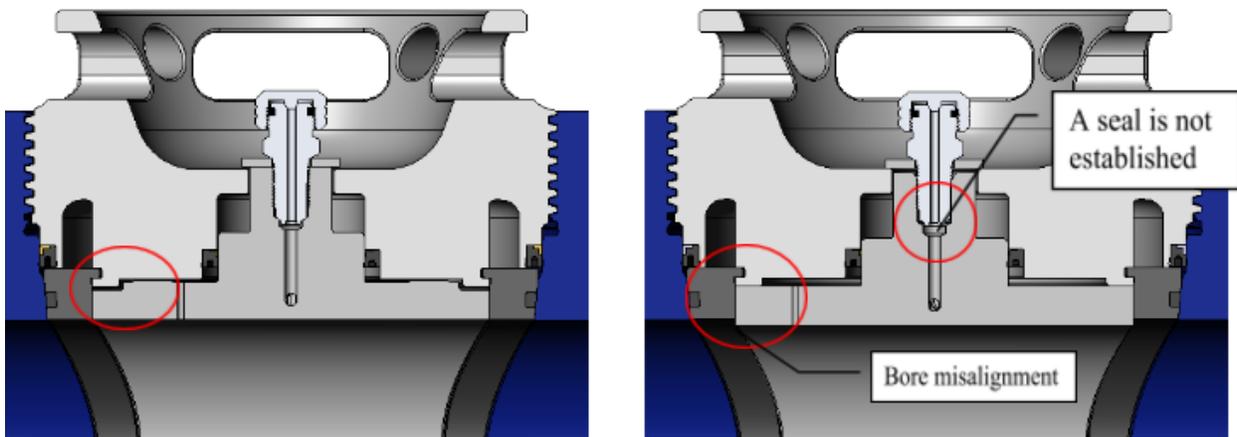


**Caution: Legacy valve plugs without the recent modifications will not work with the new integral adjusting nut:**

- The grease fitting (on a GreaSeal plug) will not be allowed to fully seat into the plug to create an internal seal; therefore it will leak
- There will be a misalignment between the inserts' bore and plug bore that can't be corrected

The image below shows the revised valve plug and new integral adjusting nut, and how they interact with the valve inserts. The groove feature on the adjusting nut accepts the flange feature on the valve inserts. The revised plug allows for that interaction to happen.

**This shouldn't be attempted. The integral adjusting nut should always be used in conjunction with the improved valve plug and with Split inserts.**



## Greasing:

While it is recognized that valve greasing practices can be successfully conducted in many ways the following has been identified as a preferred, but not mandatory, approach to greasing a 5" MSI plug valve.

- 1) Following valve assembly, with plug in the open position:
  - a) Apply grease through one body fitting, then actuate.
  - b) Repeat 'a' for second body fitting.
    - i) Repeat 'a' and 'b' steps until no more popping noises occur, this indicates body is charged and grease has displaced most air from the sealing areas.
  - c) If using a GreaSeal plug, apply grease through plug fitting.
    - i) This will charge the lube conduits in the plug and establish the preliminary grease o-ring on the surface of the plug.

NOTE: Apply grease to 3,000 psi, if possible, or until pressure stops increasing on grease pump. Grease may be observed exiting the weep hole of the plug during pumping, which prevents grease gun pressure from increasing further. This is normal and is not necessary to continue pumping. Proceed to next step.

- 2) Field use, with plug in the closed position:
  - a) Apply grease through plug fitting to form a grease seal. Greasing pressure must exceed line pressure, if present.
    - i) Do not actuate.
- 3) Field use, with plug in the open position:
  - a) Apply grease through body fittings. Greasing pressure must exceed line pressure, if present.
    - i) Do not actuate.

You may contact an MSI representative at [sales@diwmsi.com](mailto:sales@diwmsi.com) or [engineering@diwmsi.com](mailto:engineering@diwmsi.com) for additional information.

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