

# Quick Start Instructions

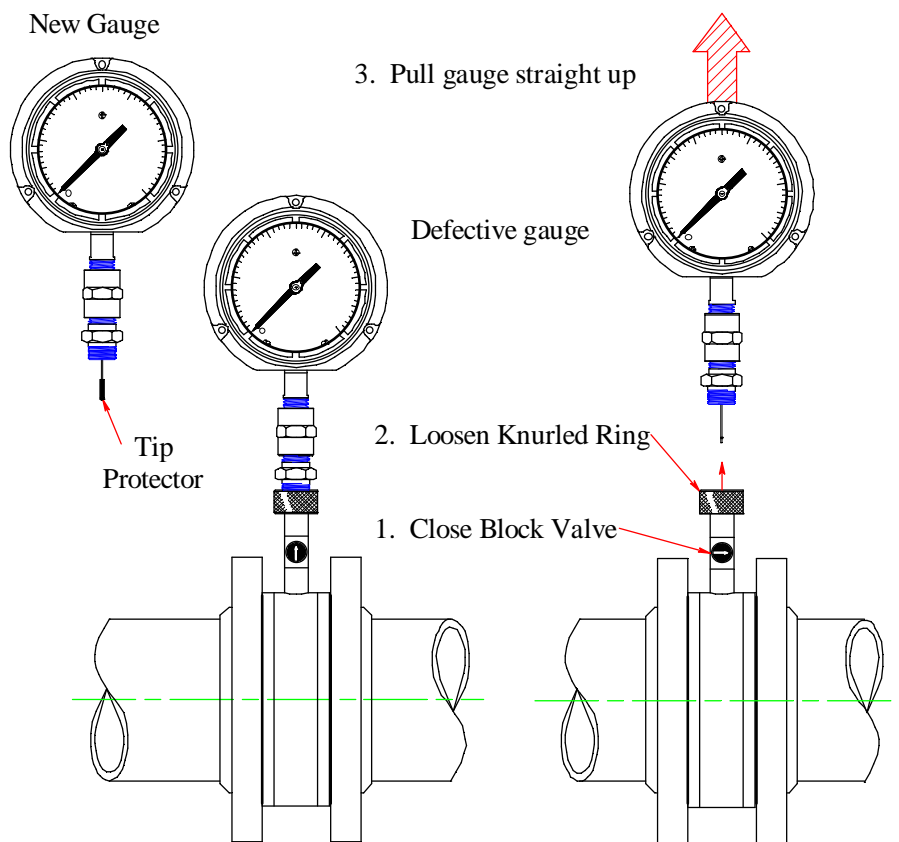
## Changing Instruments on an Onyx Isolator Ring

How to replace a defective gauge (or other instrument) and replace it with a new gauge:

Make sure you have a new gauge at hand. The new gauge **must** be vacuum filled with silicone oil and it must be connected to an Onyx stinger fitting. Pre-filled gauge and stinger assemblies are available from the factory, or you can prepare a gauge yourself with the Onyx Syringe Kit. The only tools you might need are a pair of channel lock pliers and a ¼" Allen key.

**Important:** Do **NOT** separate the gauge and stinger fitting. Doing so will compromise the integrity of the vacuum fill which is essential to reliable accurate operation.

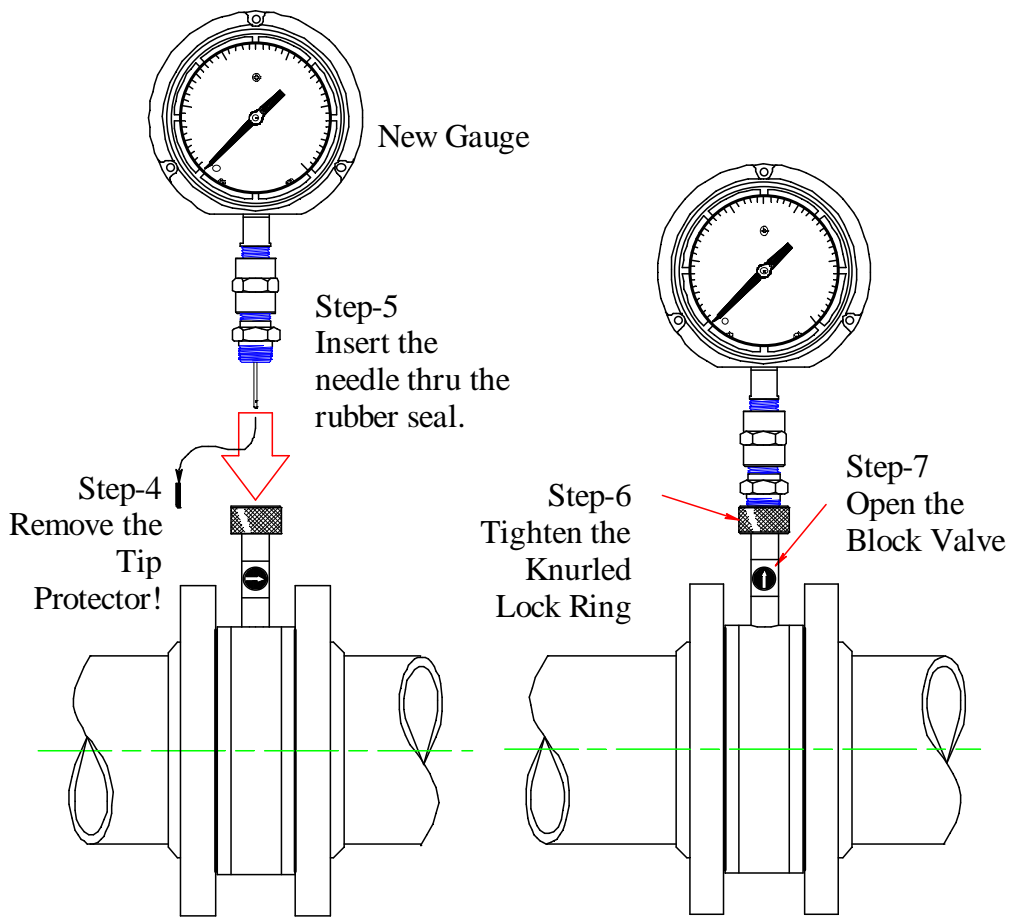
Before removing the old gauge, reduce the line pressure as close to zero as practical. Turn off the pump if there is one connected to the process line.



**Step-1:** Close the block valve in the mounting post.

**Step-2:** Loosen the knurled lock ring. If you can't loosen the ring by hand, a pair of channel lock pliers should persuade it to cooperate.

**Step-3:** When the knurled lock ring is free from the stinger, pull straight up on the gauge with a firm, gentle pressure until the stinger needle pulls free from rubber diaphragm in the Module Seal.

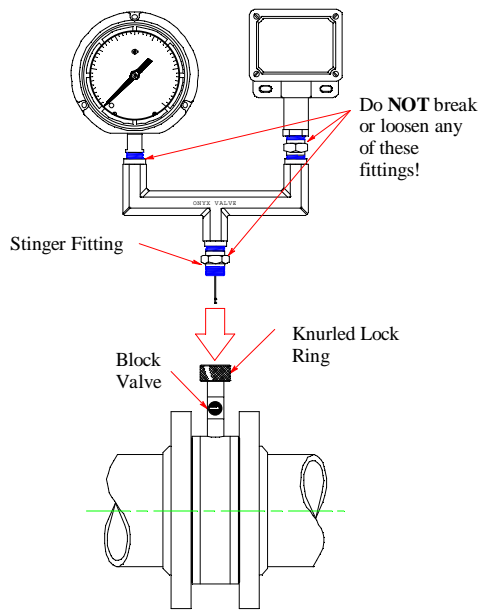


**Step-4:** On the new gauge, *remove the rubber tip protector.*

**Step-5:** Take the new gauge, position the stinger needle right over the rubber diaphragm in the Module Seal and applying firm steady pressure insert the needle through the original hole in the Module Seal until the bottom of the stinger fitting hits home. Don't force it. If it doesn't go in readily, use an Allen key and loosen the module seal about 1/8 turn and try again.

**Step-6:** Replace the knurled lock ring and thread it back onto the new stinger fitting. Turn the gauge into any position convenient for viewing. Use a channel lock to snug it up so it doesn't vibrate loose.

**Step-7:** Open the Block Valve.



The “gauge” can be just a gauge by itself, or it might be a complete assembly consisting of a gauge and switch, or a gauge and a transmitter, or any other combination of pressure instruments. In this case, the same procedure applies.

You extract and replace the entire manifold assembly *as one piece*.

**CAUTION:** This assembly is vacuum filled with instrument oil. Do NOT loosen or separate any pipe fittings, or the instrument will not function properly and the warranty is void.

**If you notice fill fluid weeping from the module seal:**

Occasionally the module seal will weep a few drops of the fill fluid. If this happens, temporarily remove the gauge assembly from the isolator ring. Insert a 1/4” Allen hex key into the module seal as shown in the picture on the right and turn 1/8 of a turn clockwise to tighten the seal. Then replace the gauge.



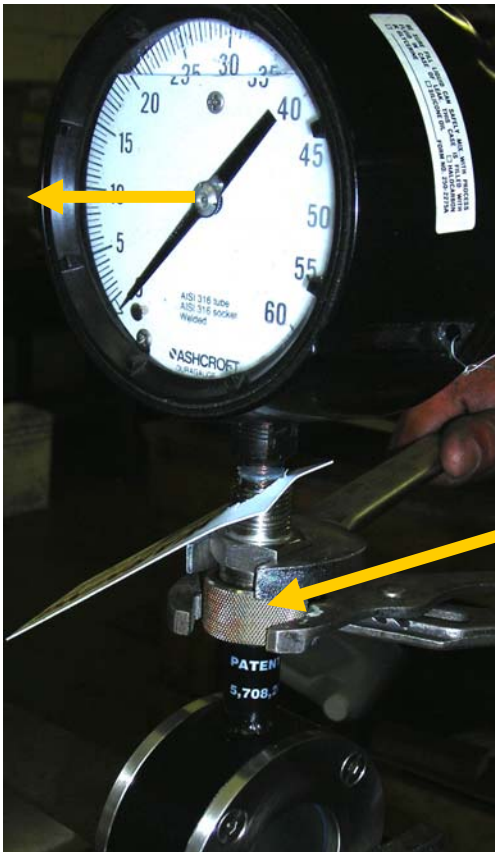
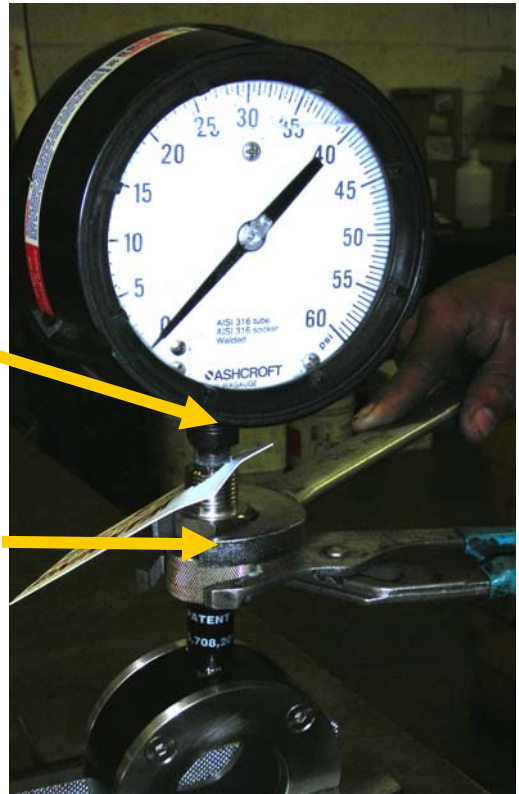
If the module seal is too tight to insert the stinger fitting, loosen the adjustment a little bit by rotating the hex key anti-clockwise. Just a few degrees of rotation with the hex key should be sufficient to reinsert the stinger.

## How to Turn the Gauge to Face a New Direction

Onyx Isolator Rings are usually assembled with the gauge axis parallel to the axis of the process pipe. This allows for the most compact configuration for shipping purposes. However, if you wish, it is possible to rotate the gauge to face any desired direction without compromising the integrity of the vacuum fill.

**DO NOT LOOSEN THE CONNECTION BETWEEN THE STINGER FITTING AND THE GAUGE.** Failure to observe this precaution could cause the fill fluid to leak, compromising the integrity of the vacuum fill.

To rotate the gauge, loosen the **knurled lock ring** on the module seal. This can usually be loosened by hand, but if it is too tight, you can use channel lock pliers.



Use an open-end wrench to keep the stinger fitting from rotating, and use the channel lock pliers to loosen the knurled ring as shown in the picture.

Rotate the knurled ring clockwise as viewed from above to loosen it. You just have to break the lock ring free, 1/8 turn is more than adequate. Don't remove it completely. The gauge will now rotate freely to face any desired direction.

Turn the gauge as desired, and use the channel lock pliers to re-tighten the lock ring.

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Questions?  
Call Onyx Valve Co.  
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