## **ENGINEERING CHANGE NOTICE**

Notice Date: Jan. 9, 2019

<u>Short Description</u>: Clevis on shaft modified for ease of manufacture, and improved performance.

Creator: Adrian Prince, ME

Affected Products: All PQ12 actuators.

Date new parts will be in service: Estimated: February 15, 2019.

<u>Reason for Change</u>: Low manufacturing yield and inconsistency between parts identified a need for an improved shaft design. The molded internal thread of the shaft results in variable axial play (backlash) between parts and along the length of stroke.

<u>Details of the Change</u>: The shaft's inner thread has been changed from a molding process to a machining operation and thus there is a requirement for a through hole to remove chips.

To maintain shaft strength, the clevis width has been enlarged from 3mm to 5.8mm. A stainless steel sleeve has been inserted into the tip of the shaft to ensure the screw does not become contaminated.

No change has been made to the supplied mounting hardware as all pieces remain compatible with the updated shaft tip.



Figure 1: PQ12 Actuator with new clevis on shaft



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Figure 2: Close-up of new clevis



Figure 3: Close-up of old clevis

Affected Parts: PQ12 Shaft Part #: 10324

Customers Affected:

All users of the PQ12 actuator that do not use the supplied hardware and instead use a custom mount for the shaft end of the actuator.

Due to the difficulty of producing the old shaft design, we cannot continue to produce it, and it will no longer be available.



Figure 5: Updated PQ12 Dimensional Drawing (Modified dimensions circled in red)



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