

# Mechanical Setting of Disk/Stem Taper Pins

## Purpose

The purpose of this document is to provide instructions on how to mechanically set the taper pins used in some disk/stem assemblies, including but not limited to: Fisher® 7600, 7700, 7800, 9100, 9200, and 9500 series butterfly valves. Note that these instructions do not apply to constructions that use straight pins (or grooved straight pins).

## Inspection:

If either the disk or shaft is being reused, it is recommended that they are inspected for defects to ensure they will perform as desired.

If the shaft is not in like-new condition, it is a candidate for repair or replacement.

- The shaft surface that mates with packing should be absolutely straight, smooth, and free of nicks, scratches, or pitting. Check for straightness by placing the shaft in a lathe, in V-blocks, or on a granite table. Make sure the splines are straight by looking down the end of the shaft. Examine the bearing contact surfaces for any signs of wear or galling. Also make sure that the holes the taper pins go through are not worn or egg-shaped.

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### Note

Note: If taper pin holes have been widened by loosening of taper pins or otherwise damaged, install a new disk/shaft assembly.

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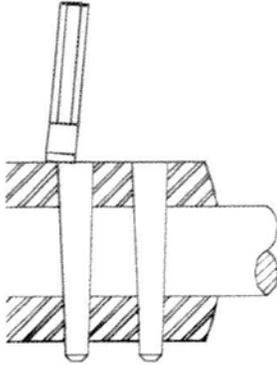
- Also inspect the edge of the disk to ensure it is in fairly good condition (depending on the valve's intended shutoff rating). If the disk is bent, eroded, or corroded, consider replacement.

## Installation:

1. Install the disk and shaft into the valve body.
2. Insert the pins into the larger end of the pin holes. Drive with a hammer to seat the pins. To ensure proper seating, impact the pin until the exposed portion is equal to 1/8 inch.
3. Grind the large end of the pins below the surface of the disk.
4. To stake the pins, deform the metal at the outer perimeter of the pinholes in three locations to secure the pins inside. Ensure that disk material has been deposited over the pins in order to prevent them from slipping out.
5. For elastomer-lined valves, consult the appropriate product literature for instructions on coating the taper pin with sealant.



Figure 1: Stake the pins by deforming disk material in three locations from the circumference of each pinhole over the pins.



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