WOODWARD

Application Note 51625
(Revision -, 4/2020)
Original Instructions

RVP-200
Preserving Factory Calibration during Installation

RVP-200 Preserving Factory Calibration during Installation

Introduction

The RVP-200 product manual 26539 describes proper installation procedures. Deviation from these procedures can cause internal components to lose their factory calibrated alignment.

Description

The valve trim consists of a factory aligned tube and disc. Any non-axial loads during pipeline installation can cause radial misalignment between the disc and tube. This causes poor seating of the disc, and can damage the edge of the disc, both of which result in rapid wear, increased friction, position errors, and/or excessive seat leakage. Figure 1 shows a simplified partial section with the affected components identified, as well as directional definitions.

Figure 2 shows an exaggerated example of how misalignment causes damage. As little as .002 inches (.051 mm) can result in performance degradation.

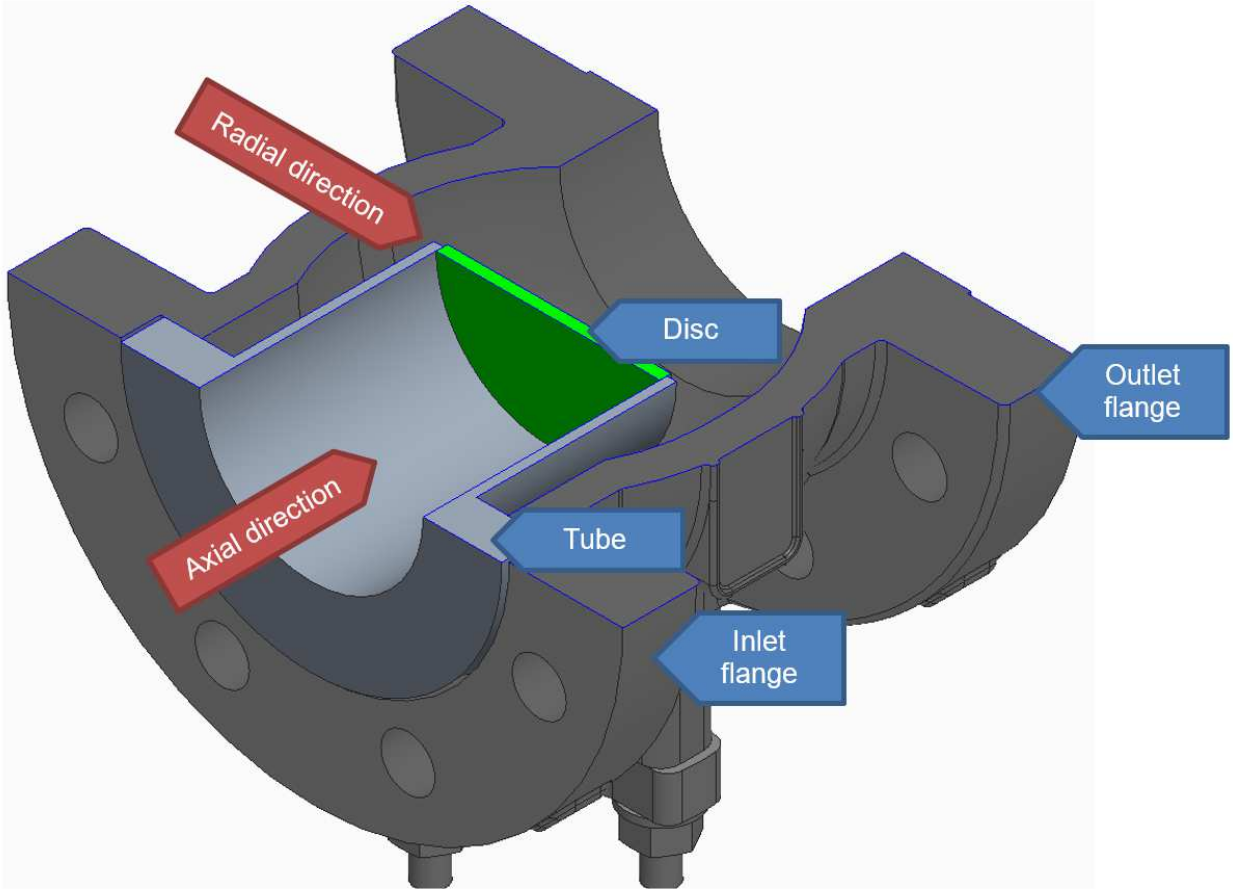

Figure 1. Partial Section of RVP-200 with housing orientation and valve trim identified

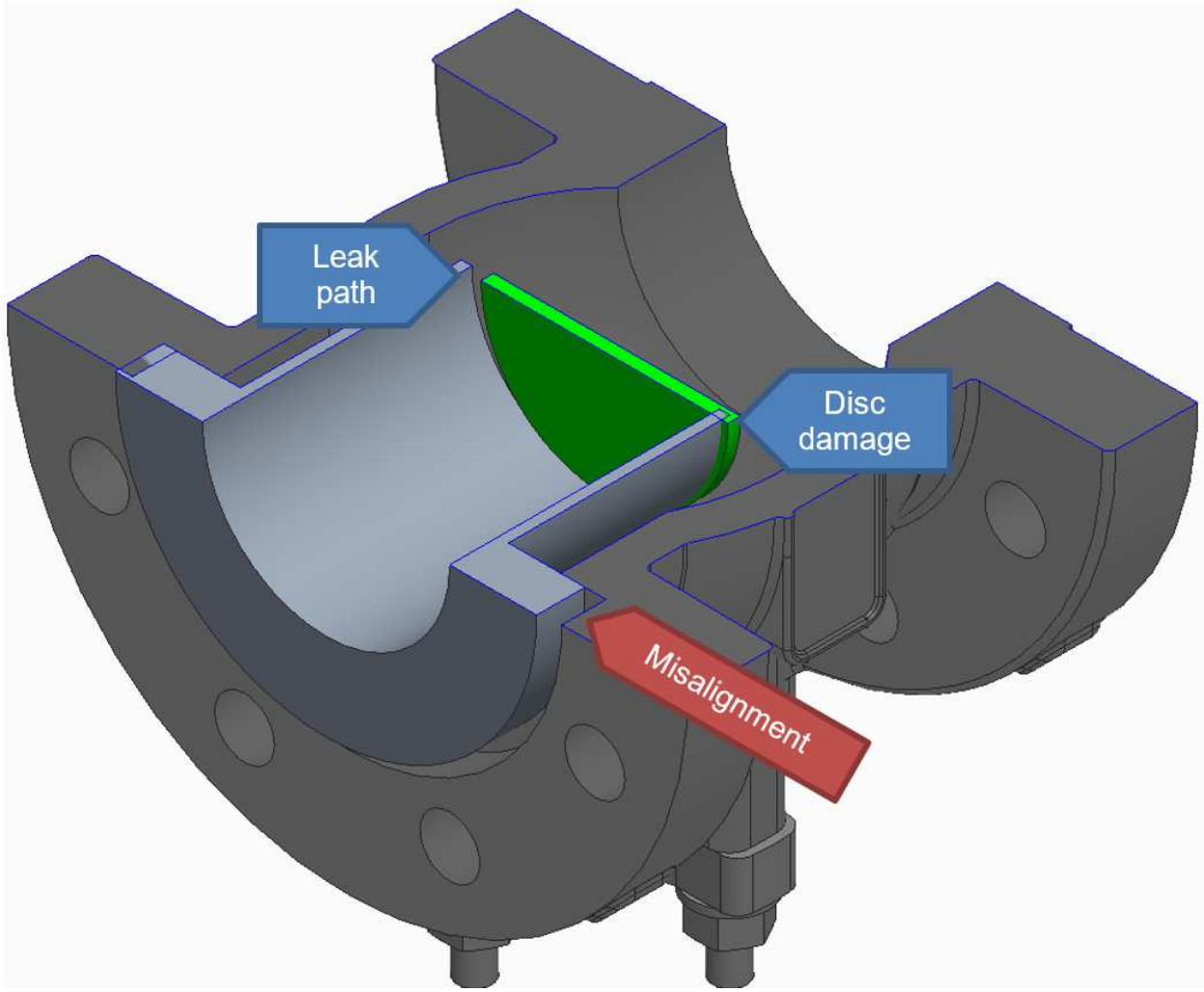

Figure 2. Partial section showing exaggerated misalignment and resulting performance degradation

Design Update

Beginning in mid-2020, Woodward will offer an updated design which provides increased resistance to inadvertent non-axial loads during pipeline installation. Always follow handling and installation procedures described in the product manual.

The updated design adds four (4) set screws around the tube that restrain the position of the sleeve as illustrated in Figure 3. Do not attempt to adjust these factory calibrated screws. Adjusting the screws reduces their effectiveness and can damage the valve trim.

Six-inch flange size valves also have an additional retaining feature added. Previous designs used four bolts mounted in the axial direction to retain the tube during installation. The updated design adds an additional four bolts (Figure 4) to further improve retention forces.

NOTICE **No hardware adjustments are possible. Do not attempt to service any part of the unit.**

Contact your local Woodward Full Service Distributor for details.

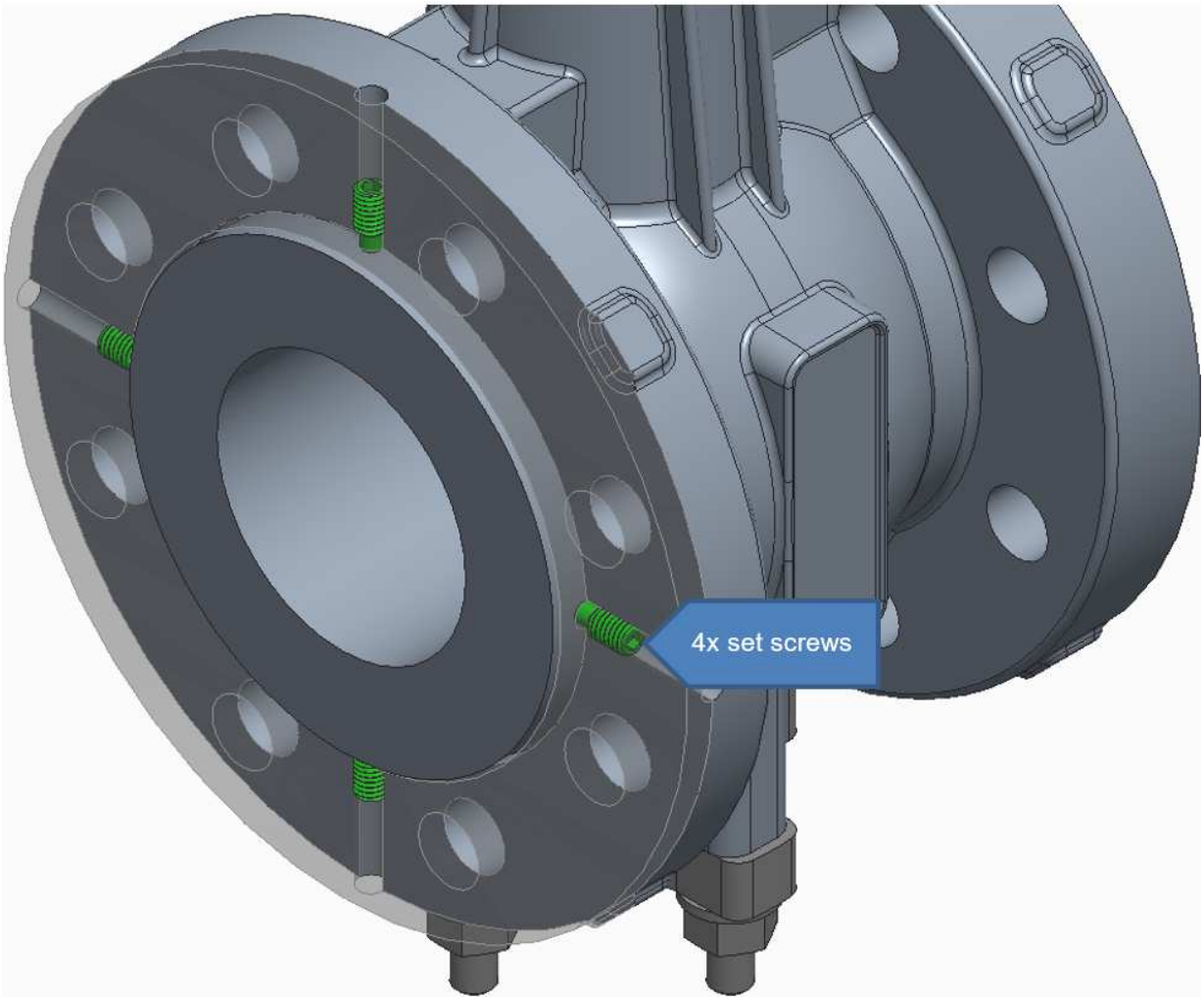

Figure 3. Partially transparent view of updated design showing set screws that provide greater alignment stability

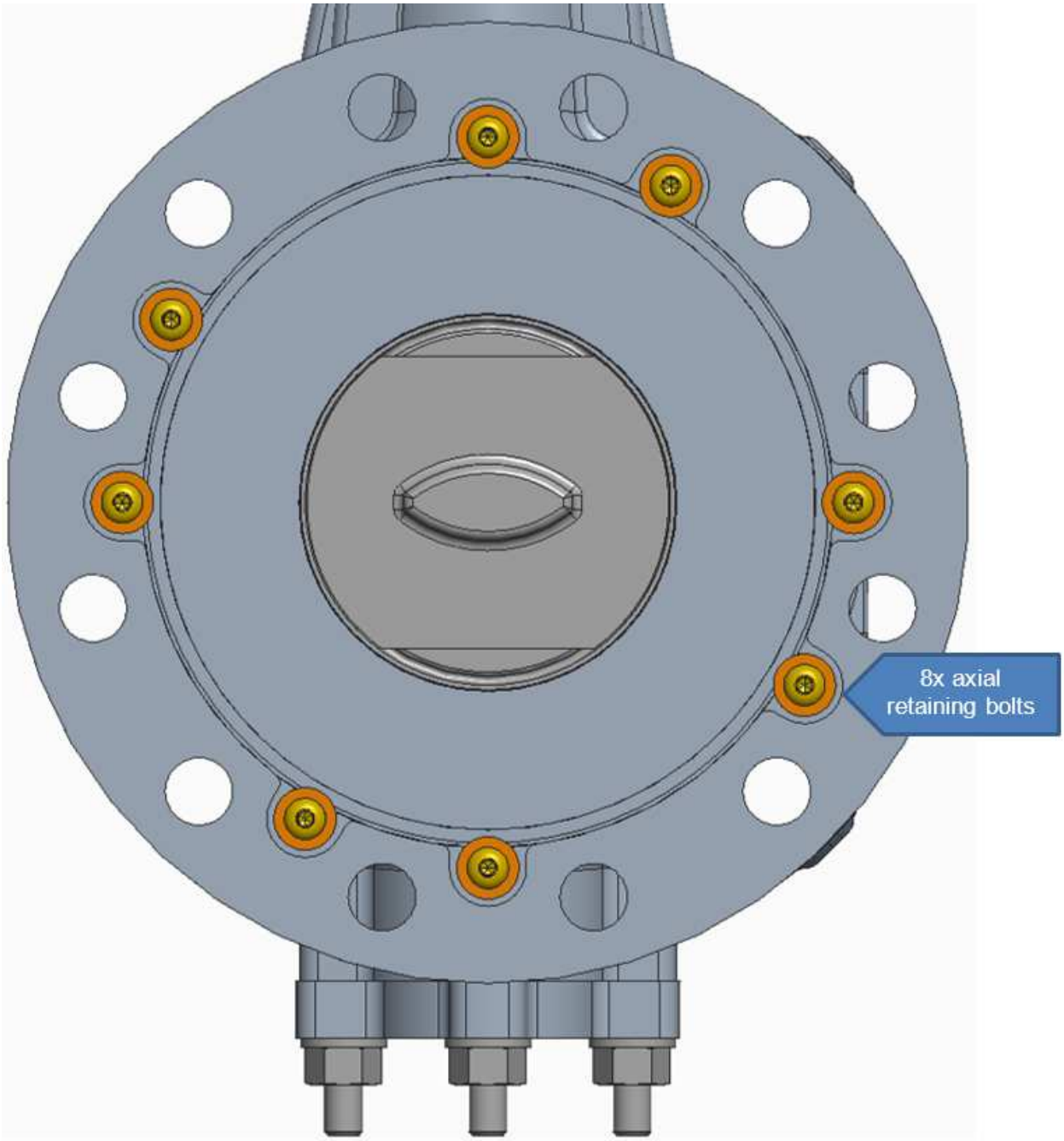

Figure 4. Six-inch valve with additional axial retaining bolts

Table 1. Installation Tips

Common Problem	Solution
Unevenly applied flange bolt torque causes tube misalignment	Follow torqueing procedure in product manual 26593
Tube face slides against pipework when aligning valve	Always complete connection of inlet flange before attempting to align the discharge flange to piping. Never loosen the inlet to help move the outlet into position
Pipe flanges are not parallel	Always complete connection of inlet flange before attempting to align the discharge flange to piping.
Edge of tube bumps pipework when positioning valve	Provide adequate clearance for the inlet flange

Released

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Please reference publication 51625.

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