

## 84003 Series SteamForm™

Trim Installation Guide for Horizontally Installed SteamForm  
Valves with Bolted Bonnet (model numbers ending in “AB”)

Instruction Manual (Rev. A)



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## About this Manual

- The information in this manual is subject to change without prior notice.
- The information contained in this manual, in whole or part, shall not be transcribed or copied without Baker Hughes's written permission.
- Please report any errors or questions about the information in this manual to your local supplier.
- These instructions are written specifically for the 84003 SteamForm™ valve with bolted bonnet, and do not apply for other valves outside of this product line.

## Warranty

Items sold by Baker Hughes are warranted to be free from defects in materials and workmanship for a period of one year from the date of shipment provided said items are used according to Baker Hughes recommended usages. Baker Hughes reserves the right to discontinue manufacture of any product or change product materials, design or specifications without notice.

### **Note - prior to installation:**

- ***The valve must be installed, put into service and maintained by qualified and competent professionals who have undergone suitable training.***
- ***All surrounding pipelines must be thoroughly flushed to ensure all entrained debris has been removed from the system.***
- ***Under certain operating conditions, the use of damaged equipment could cause a degradation of the performance of the system which may lead to personal injury or death.***
- ***Changes to specifications, structure, and components used may not lead to the revision of this manual unless such changes affect the function and performance of the product.***

## Safety Guidelines



This is the safety alert symbol. It alerts you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



This symbol indicates a potentially hazardous situation, which if not avoided, could result in serious injury or death.



This symbol indicates a potentially hazardous situation, which if not avoided, could result in serious injury.



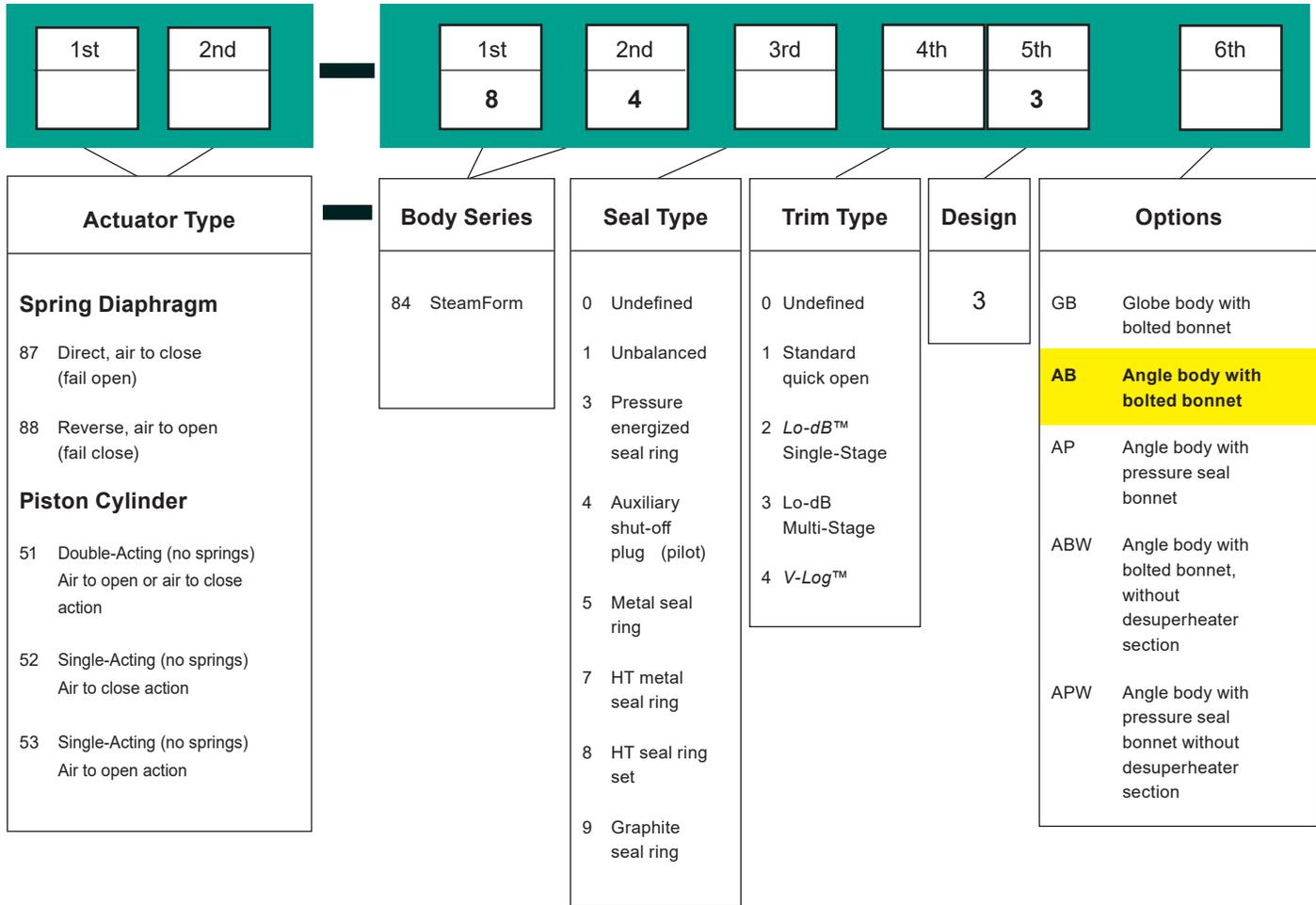
This symbol indicates a potentially hazardous situation, which if not avoided, could result in minor or moderate injury.



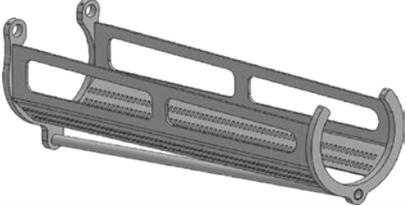
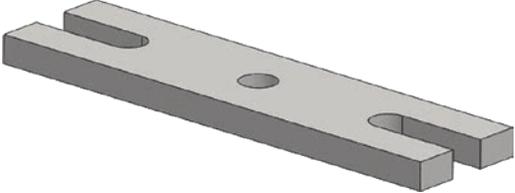
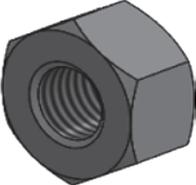
When used without the safety alert symbol , indicates a potentially hazardous situation, which if not avoided, could result in property damage.

**Note:** Indicates important facts and conditions.

# Numbering System



# Installation Kit Contents

Part	Description	Qty
	Installation Cradle	1
	Hold-Down Tie	3
	Hold-Down Bolt	6
	Hold-Down Nut	6
	Cradle Adjustment Bolts	4
	Spare Set of Trim Set Screws	8
	Swivel Hoist Rings for Diffuser	2
	Swivel Hoist Rings for Cage	2

# 1. Secure Installation Cradle for Trim Assembly

Position installation cradle vertically as shown in Figure 1. Use hold-down ties and bolts to secure the installation cradle to the grating as shown in Figure 2.

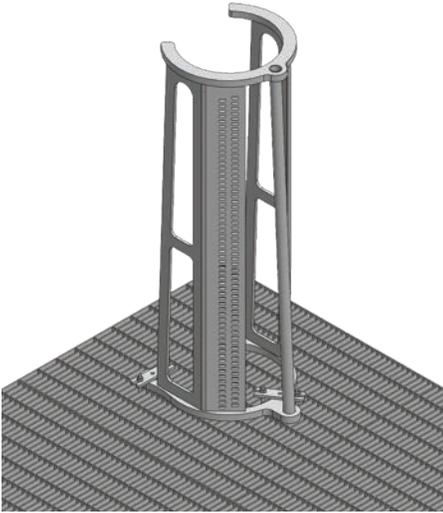


Figure 1 - 84003 Installation Cradle

## **⚠ WARNING**

To prevent risk of falling parts, ensure no personnel is below grating during installation.

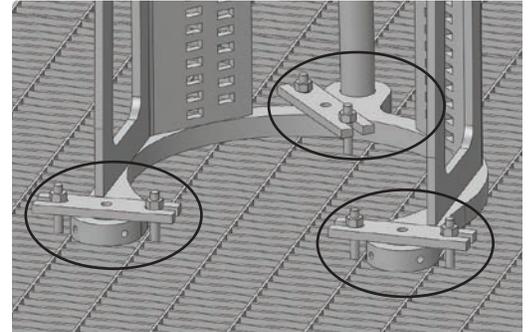


Figure 2 - Hold-down Ties and Bolts

# 2. Install Diffuser into Cradle

Install seat ring diffuser into the top of the installation cradle as shown in Figure 3 using the appropriate hoist rings provided with the installation kit as indicated in Figure 4. Once secured into cradle, remove the lifting rings from the seat ring diffuser.

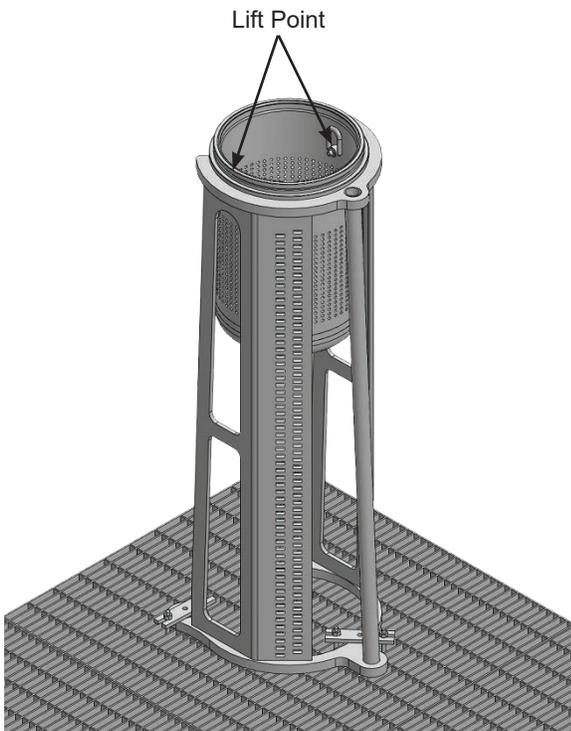


Figure 3 - Seat Ring Diffuser

## **⚠ WARNING**

Remove hoist rings.

Diffuser Lifting Holes Here, Use Swivel Type Hoist Rings

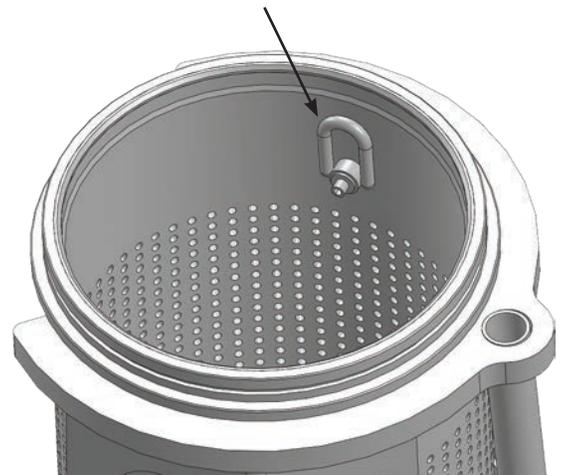


Figure 4 - Swivel Type Hoist Rings

### 3. Locate cage and Plug Subassembly, and position near the installation cradle using the provided lift rings. Install Lifting Rings onto Cage.

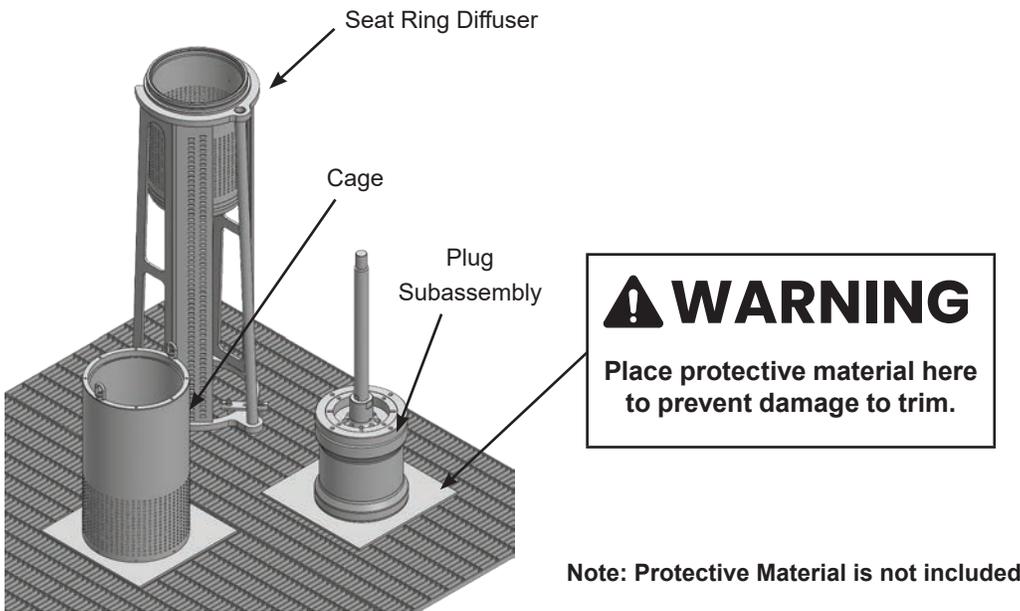


Figure 5 - Lift Rings Installation

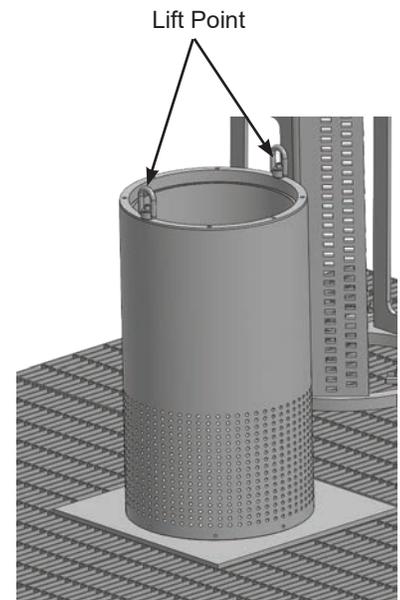


Figure 6 - Lift Rings

### 4. Install Cage Over Plug Subassembly

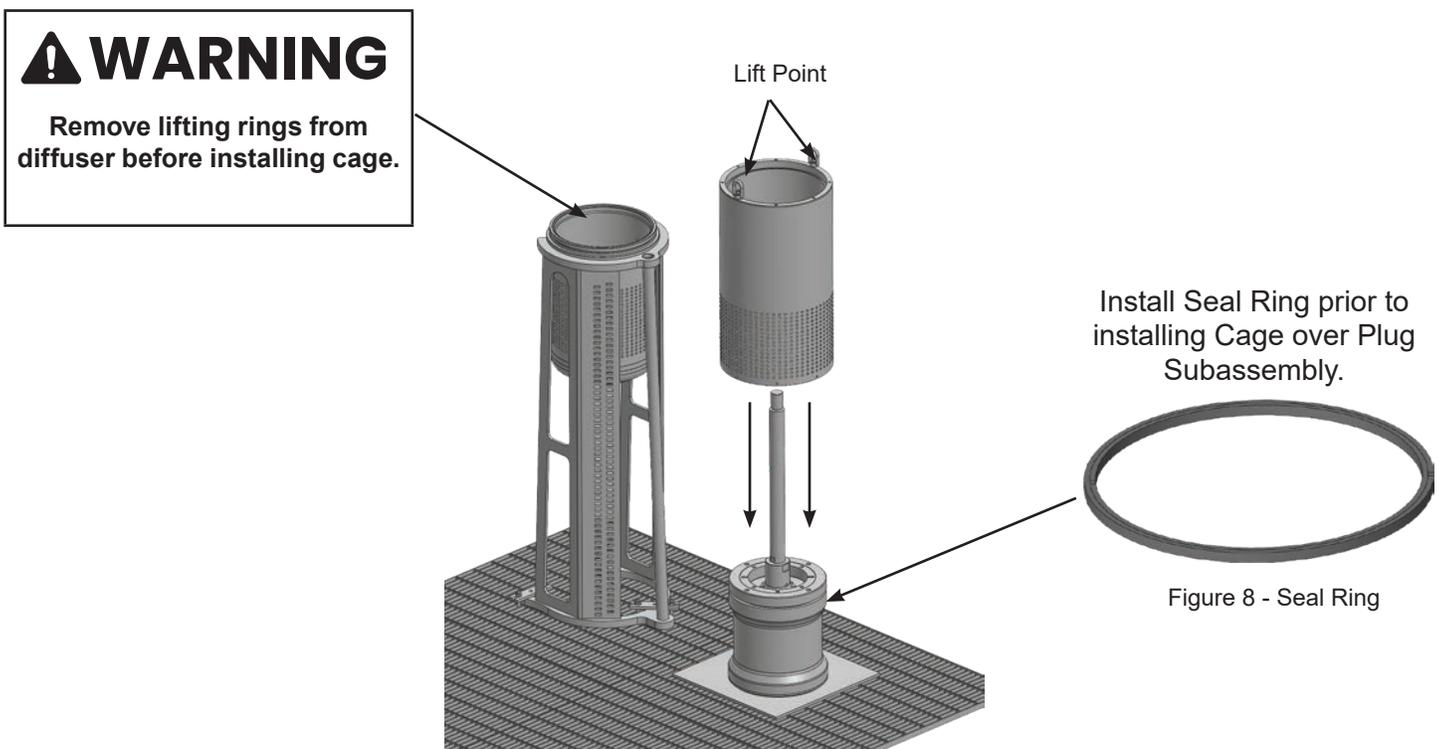


Figure 7 - Cage Over Plug Subassembly

Figure 8 - Seal Ring

## 5. Install Lifting Rings onto Plug Subassembly

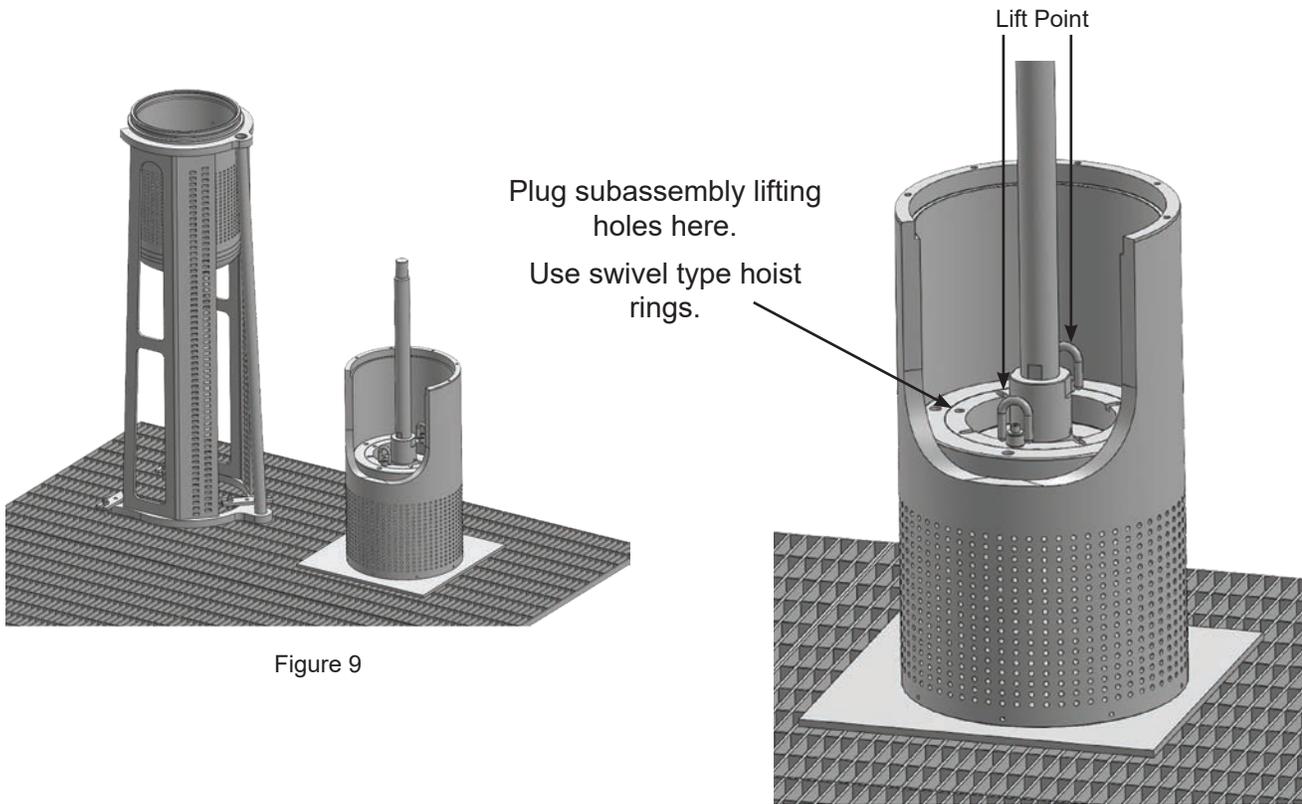


Figure 9

Figure 10 - Plug Subassembly Lifting Holes

## 6. Lift Plug Subassembly and Cage and Position onto Seat Ring Diffuser

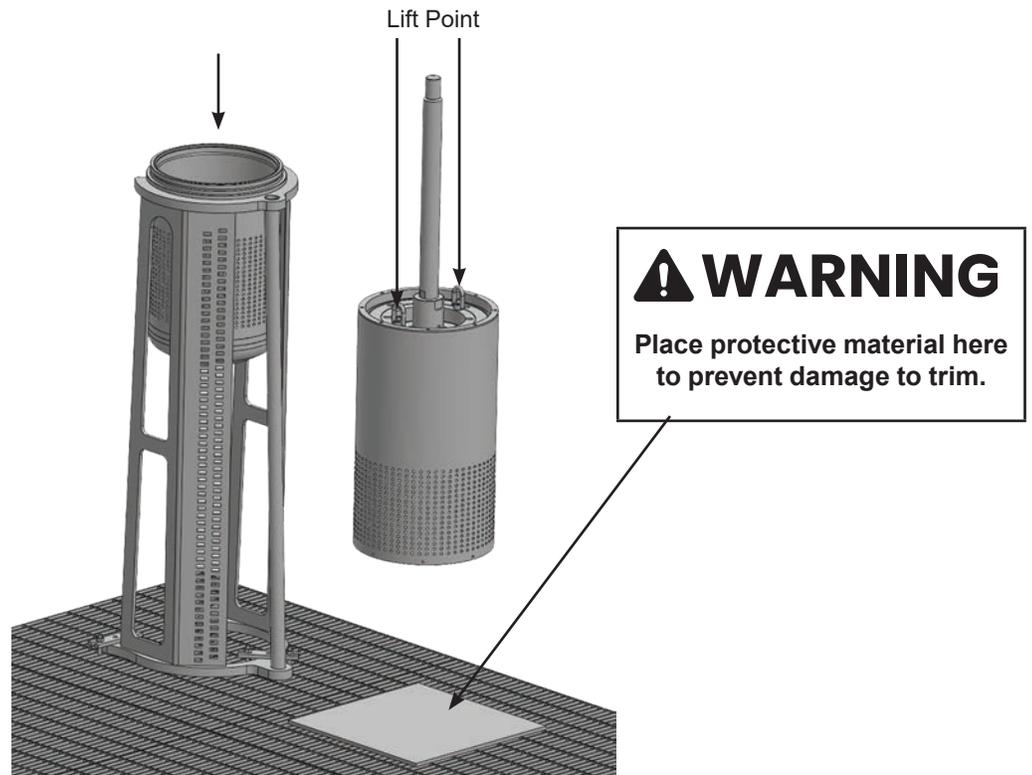


Figure 11 - Seat Ring Diffuser Placement

## 7. Secure the Cage to the Diffuser Using Set Screws

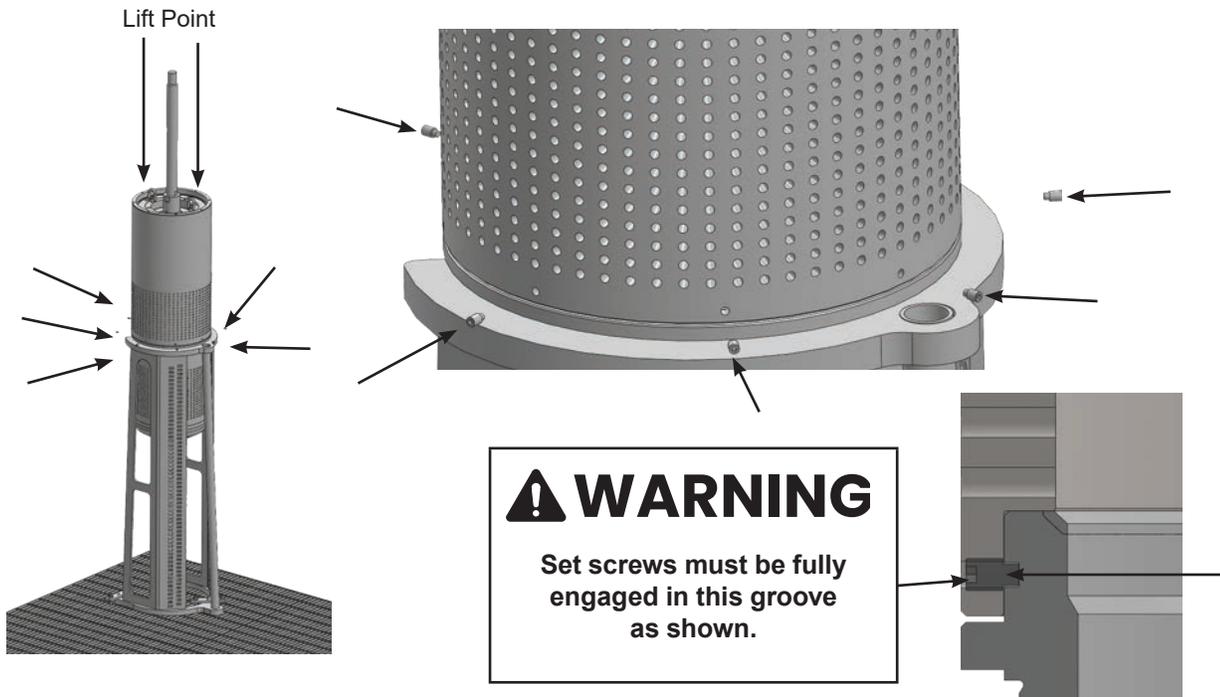


Figure 12 - Cage to Diffuser Set Screws

## 8. Lift Plug Subassembly, Cage and Diffuser as One Piece (Cartridge)

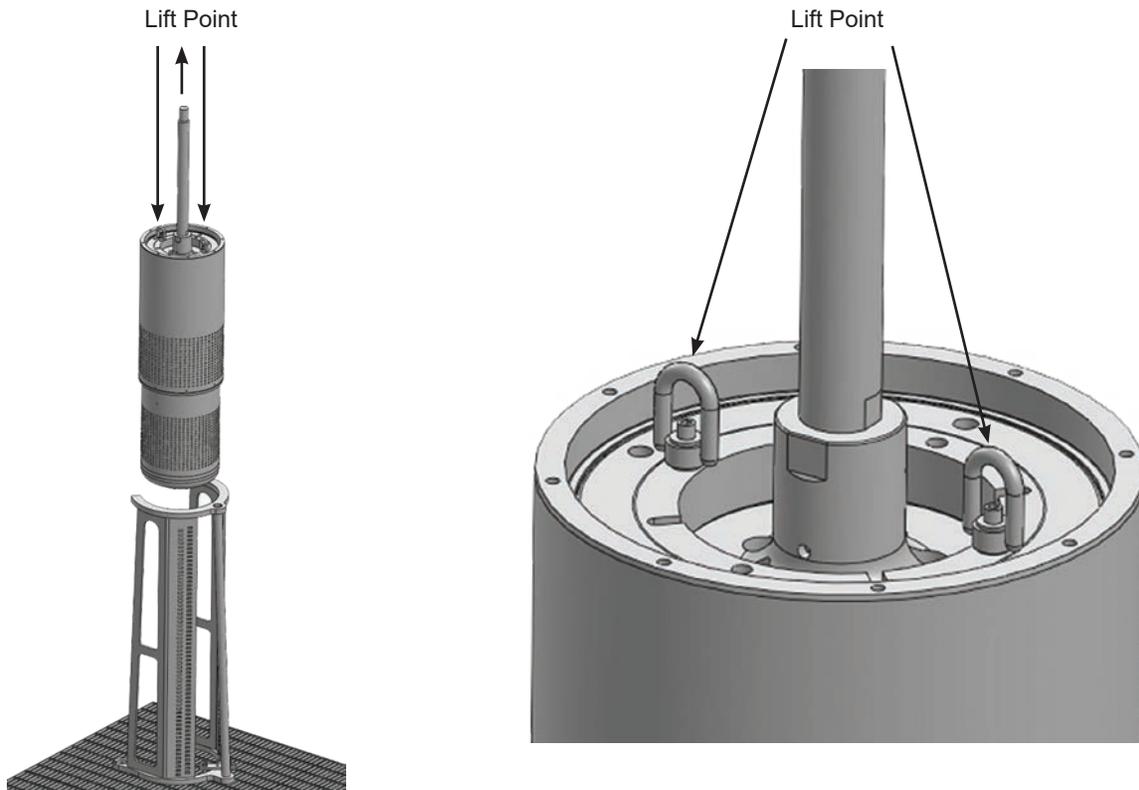


Figure 13 - Lift Plug Subassembly, Cage and Diffuser

## 9. Install Seat Ring Gasket

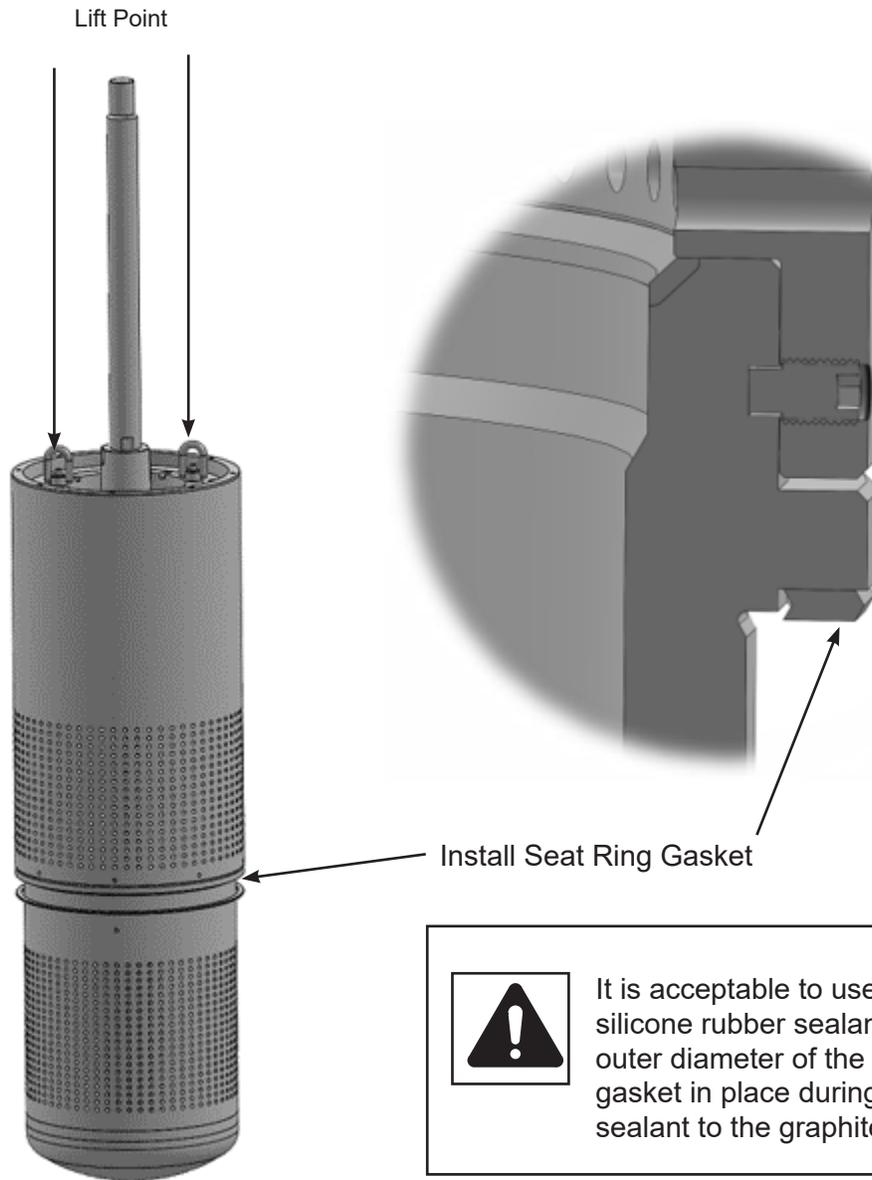


Figure 14 - Installing Seat Ring Gasket

# 10. Remove Installation Cradle from Grating and Install onto Valve Body

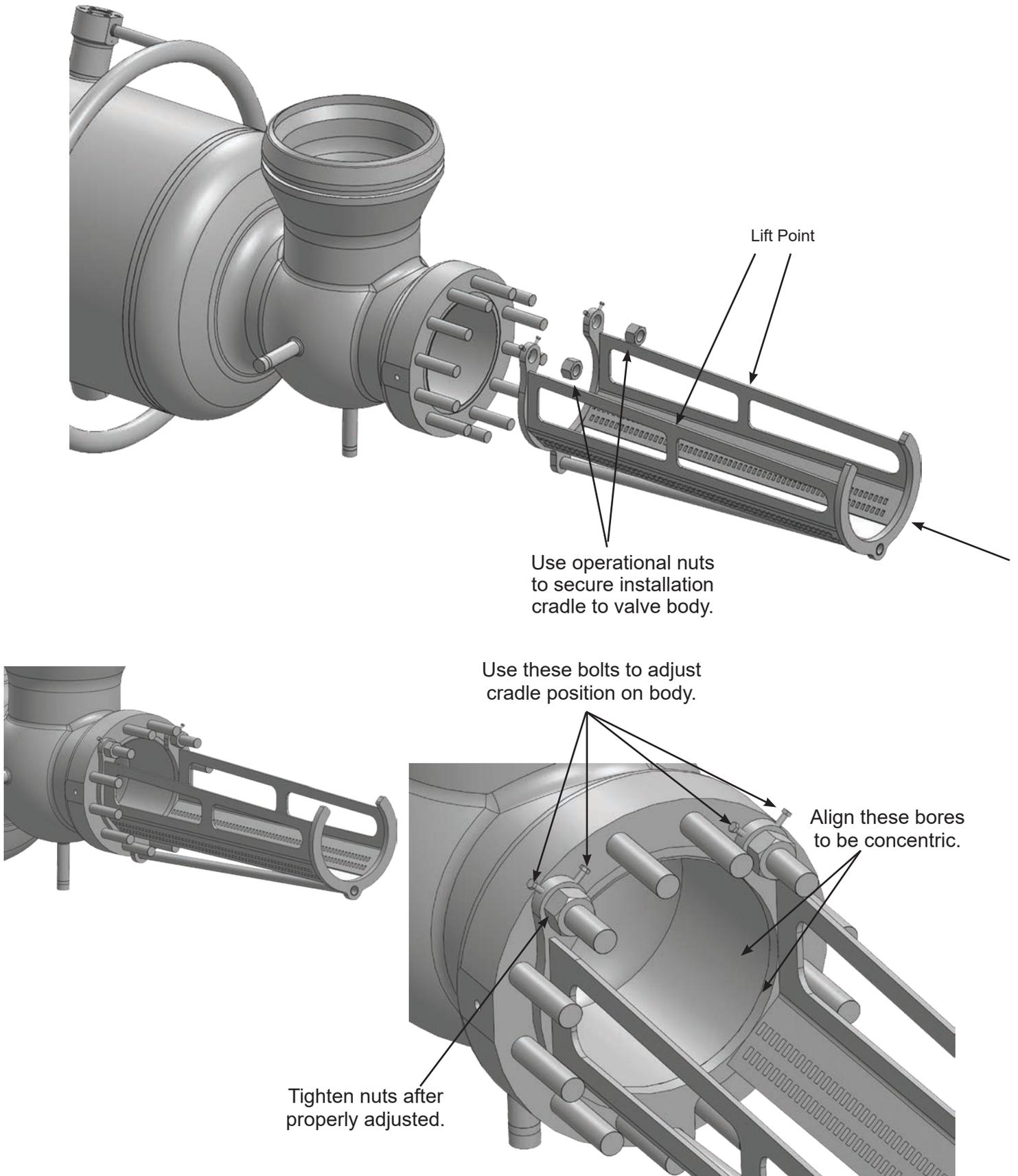


Figure 15 - Installing onto Valve Body

## 11. Lift Trim Assembly Using Lift Points on Plug. Place into Assembly Cradle.

\* Ensure seat ring gasket is installed prior to installing trim, see section 9.

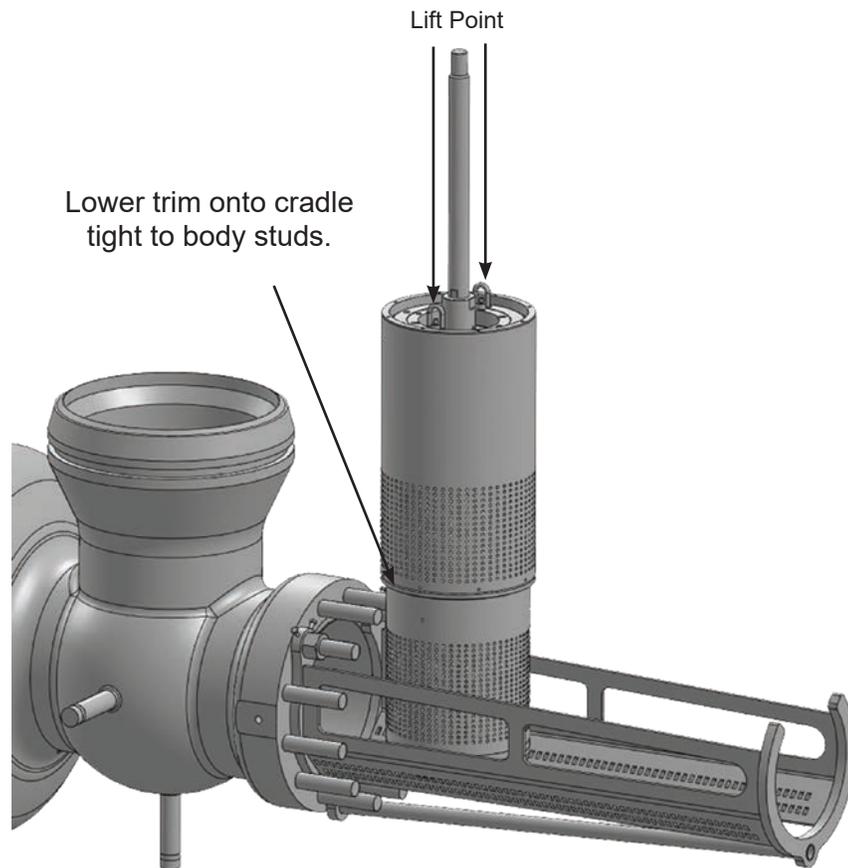


Figure 16 - Placement into Assembly Cradle

## 12. Lower Trim Assembly (Cartridge) into the Cradle

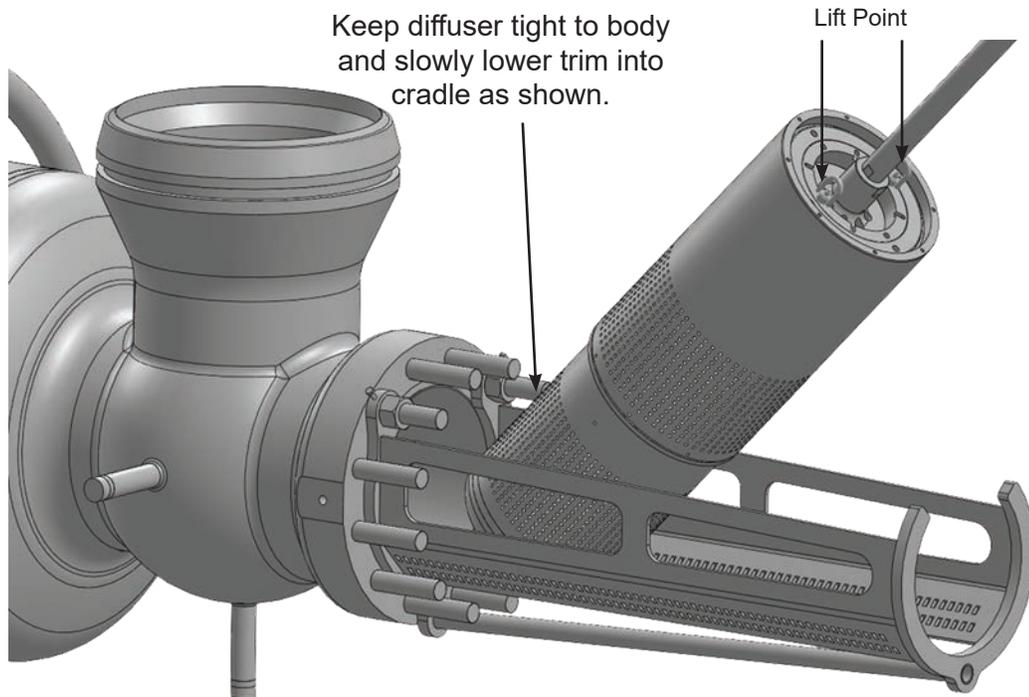


Figure 17 - Lowering Trim Assembly into Cradle

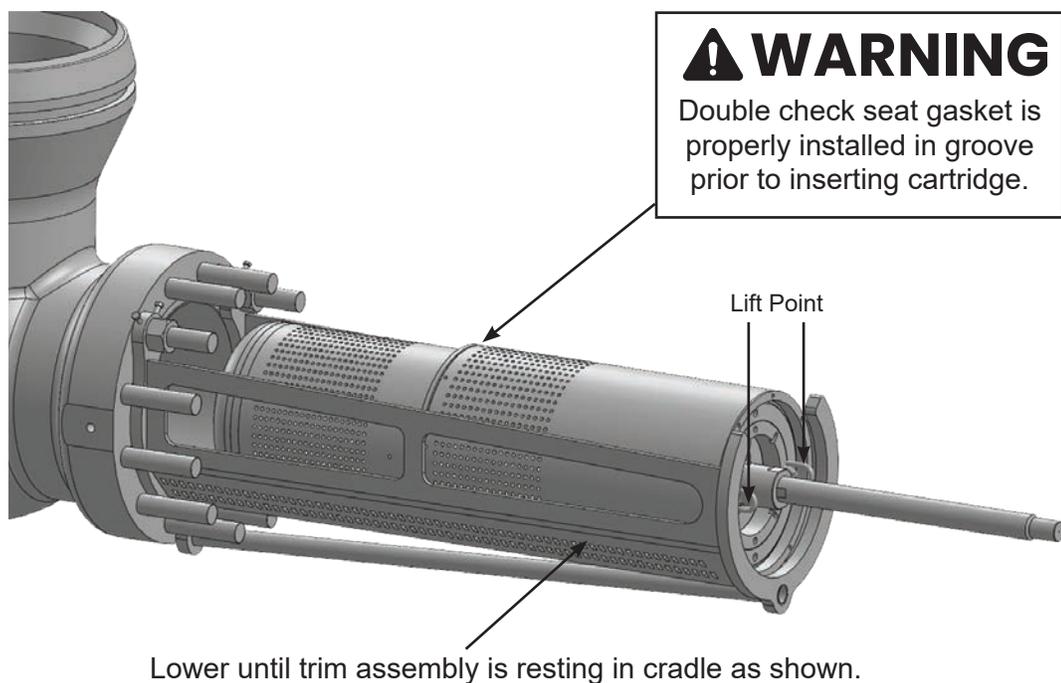


Figure 18 - Lowering Trim Assembly into Cradle

# 13. Slide Trim Assembly (Cartridge) into Valve Body

Note: Pry Bars are not included

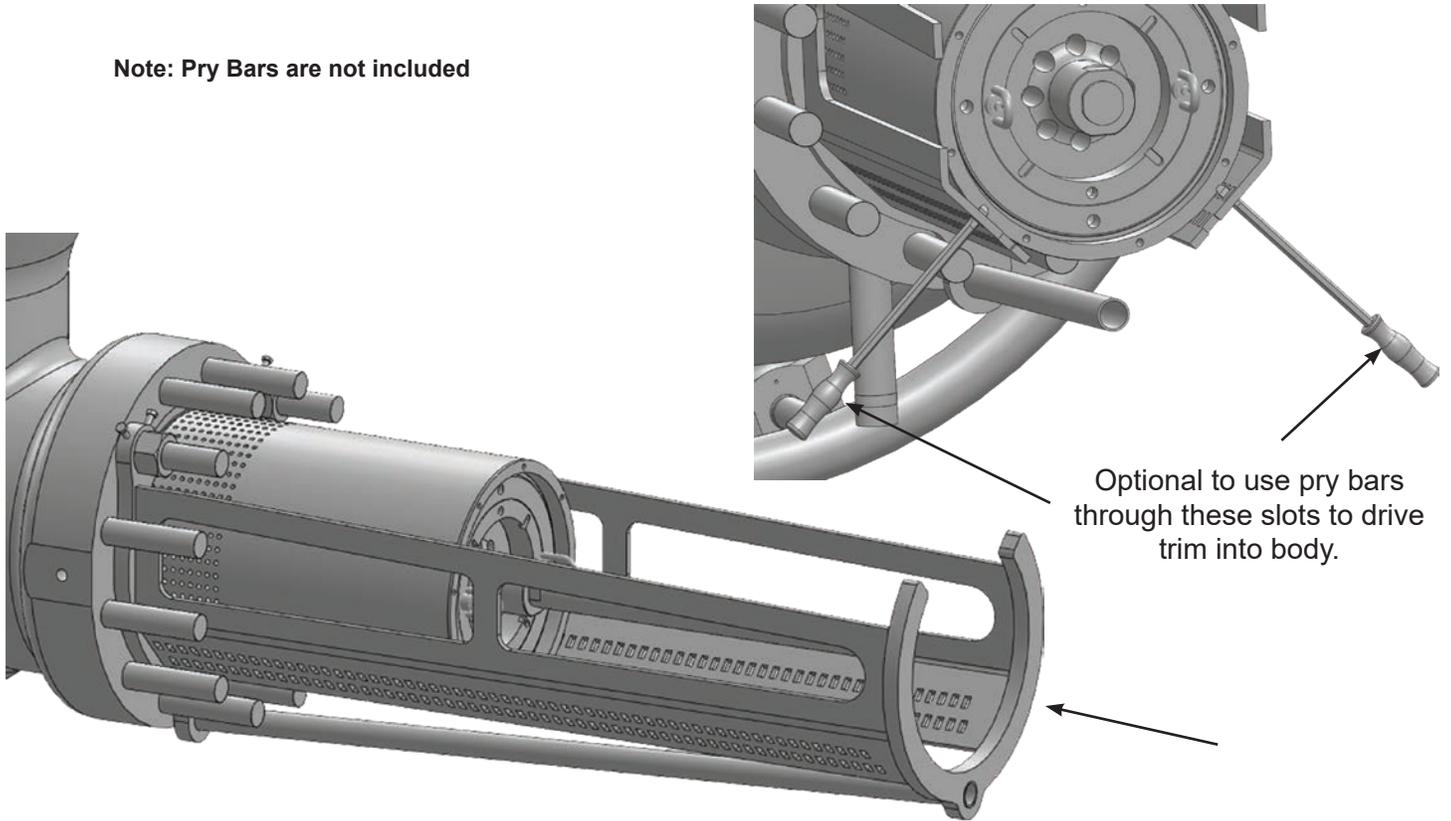


Figure 19 - Slide Trim Assembly into Valve Body

## 14. Slide Trim Fully into Valve Body.

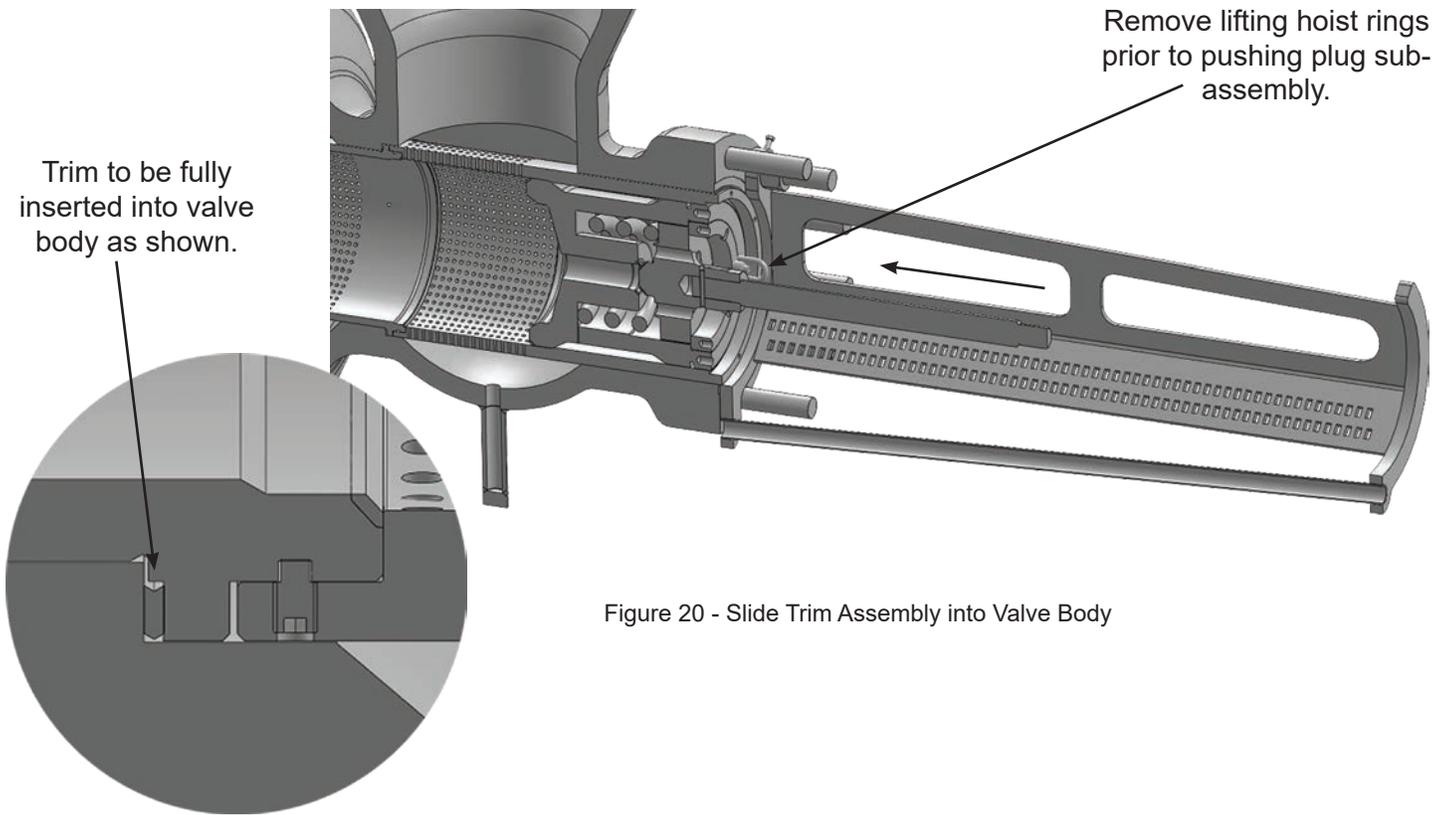


Figure 20 - Slide Trim Assembly into Valve Body

## 15. Push Plug Subassembly Fully into Cage.

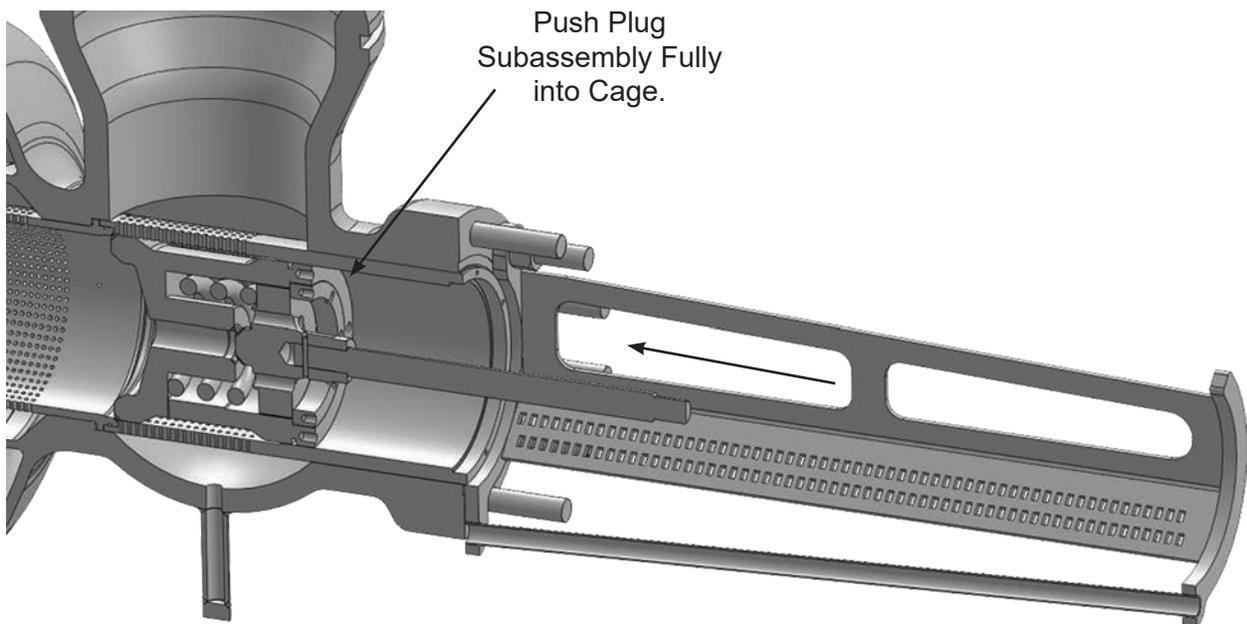


Figure 21 - Plug Assembly into Cage

## 16. Remove Cradle from Assembly

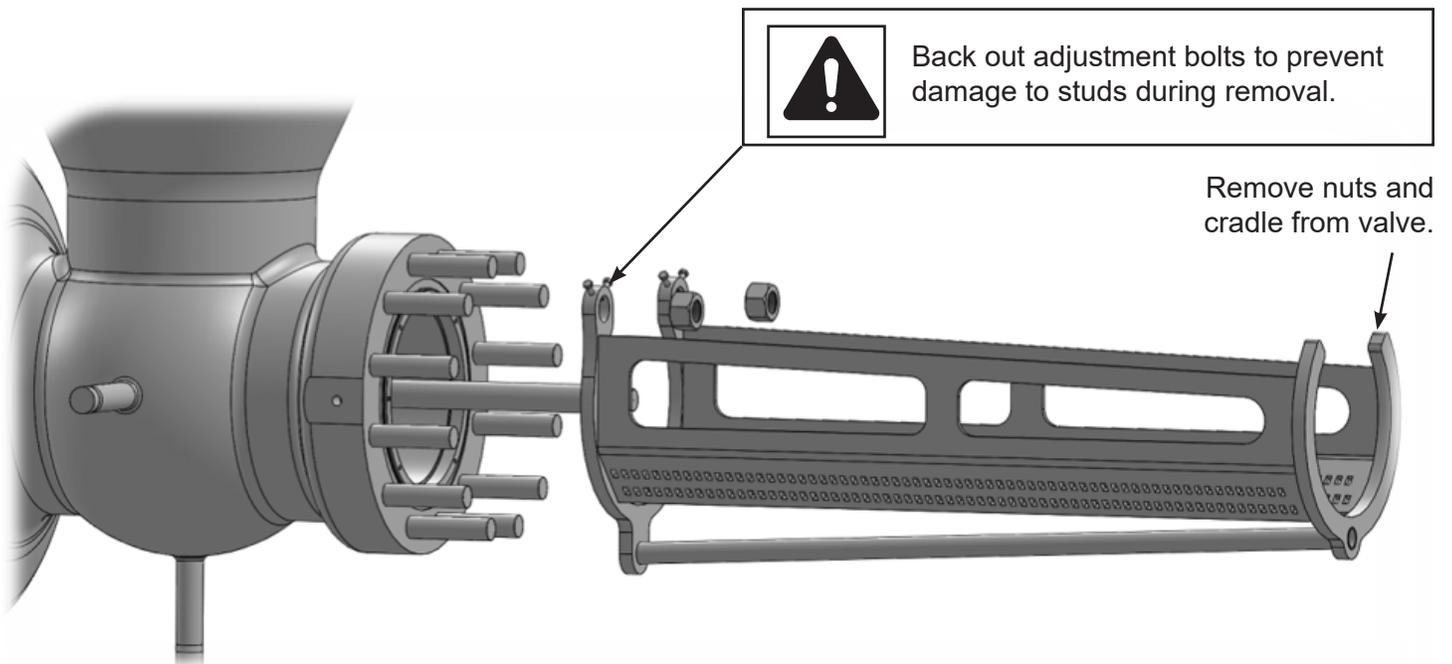


Figure 22 - Removing Cradle from Assembly

## 17. Install Remaining Valve Components Per Valve Assembly Drawing

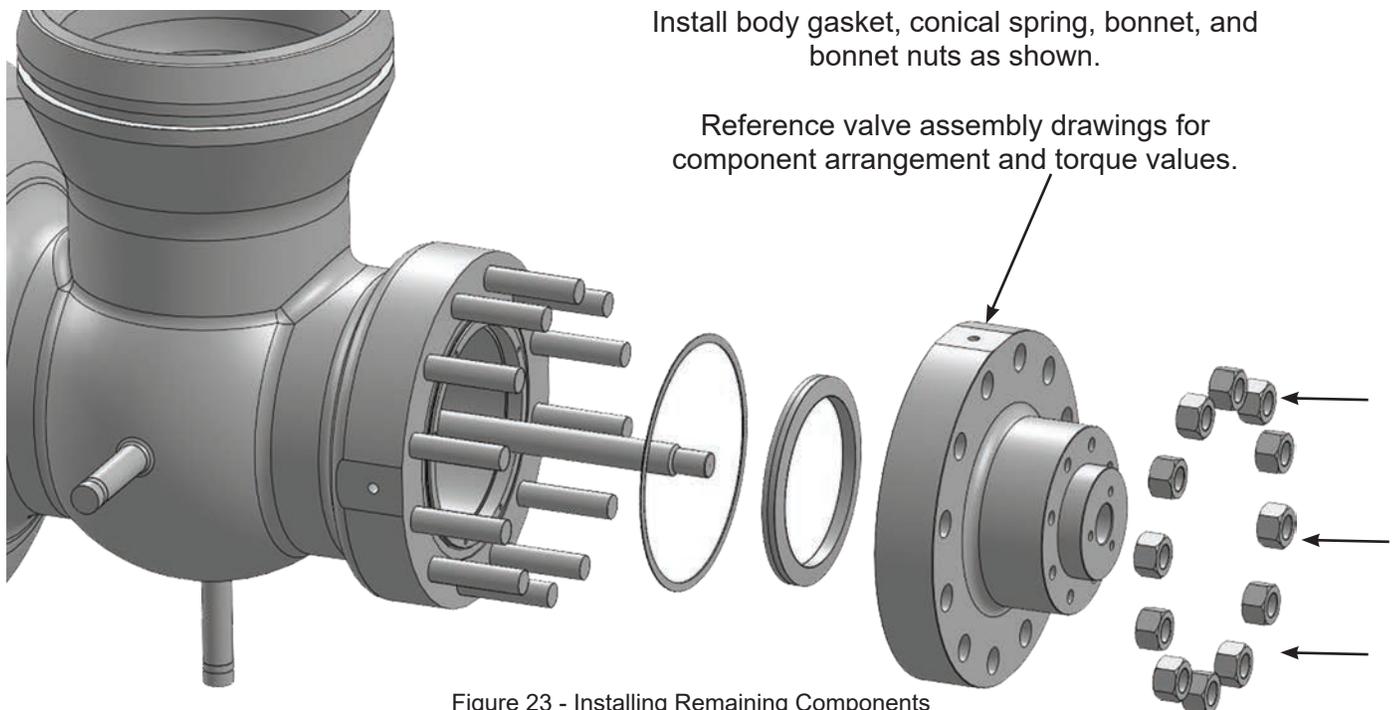


Figure 23 - Installing Remaining Components

## 18. Install Packing Components and Actuator

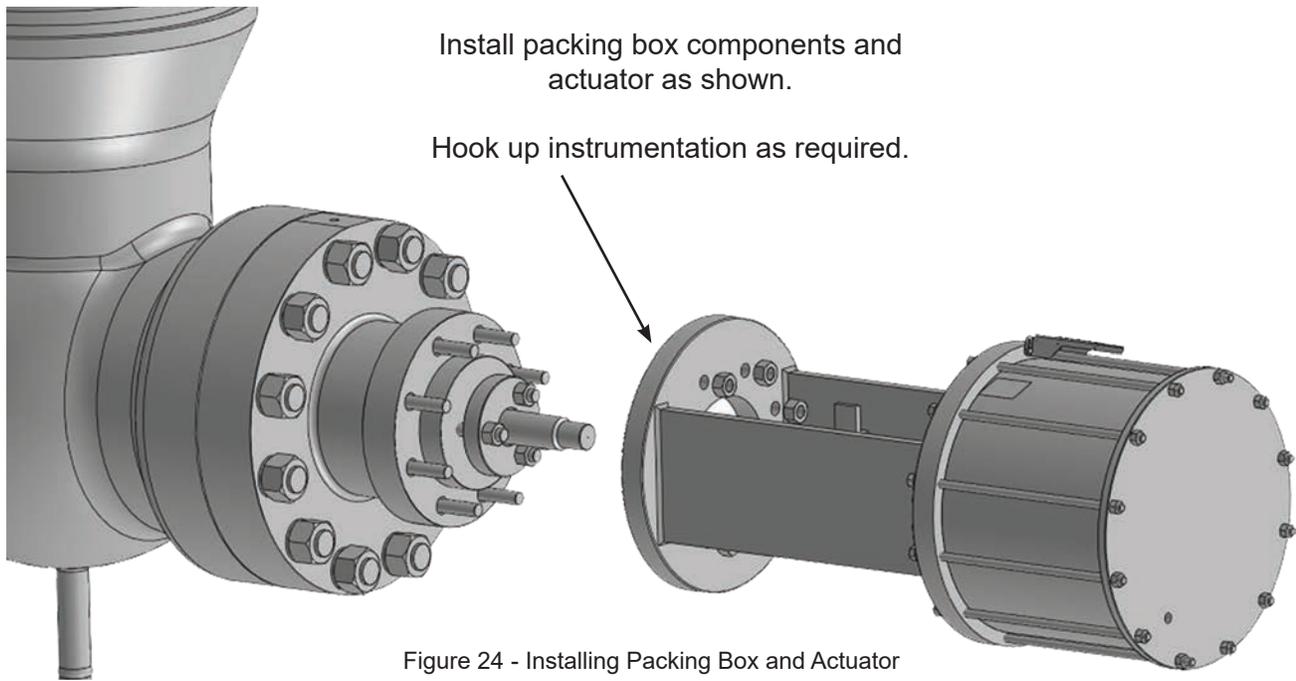


Figure 24 - Installing Packing Box and Actuator

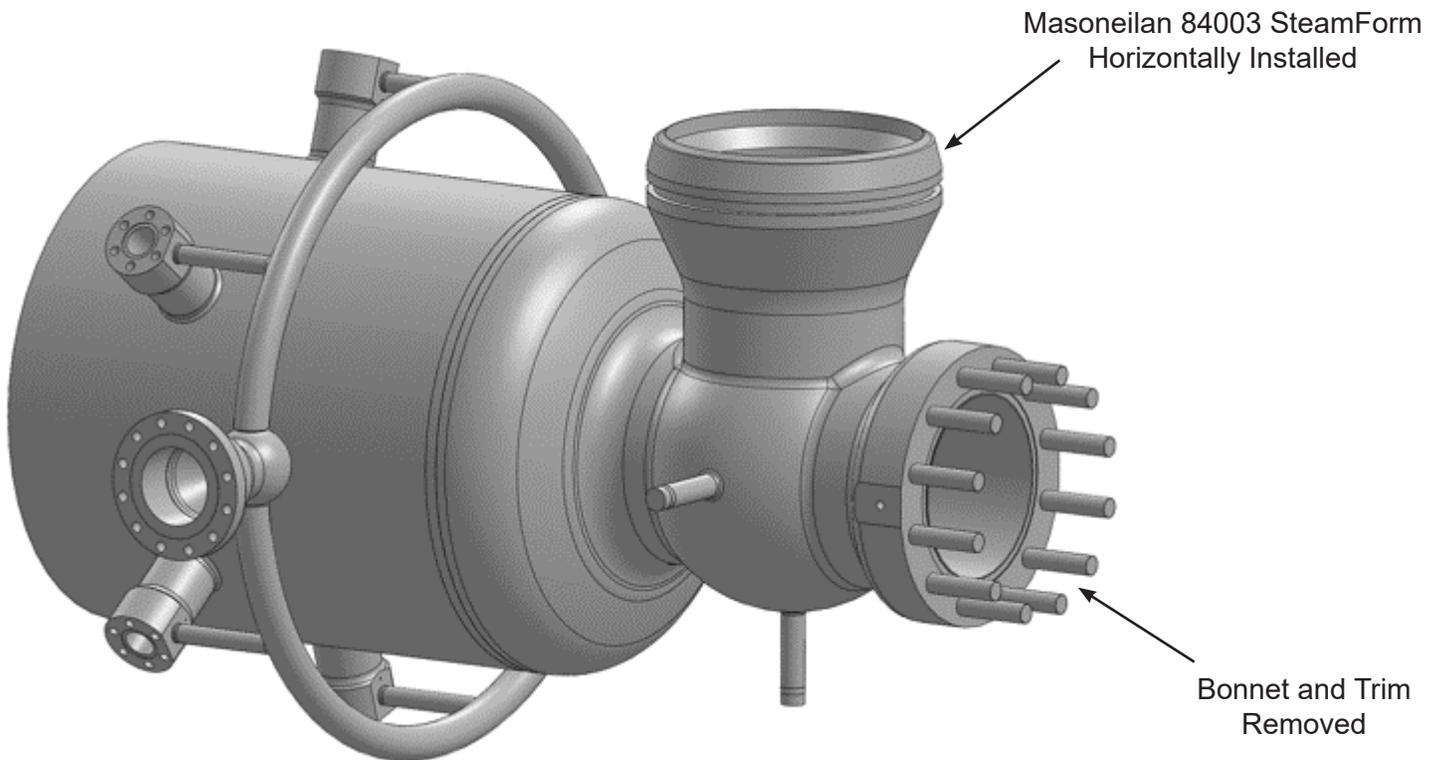


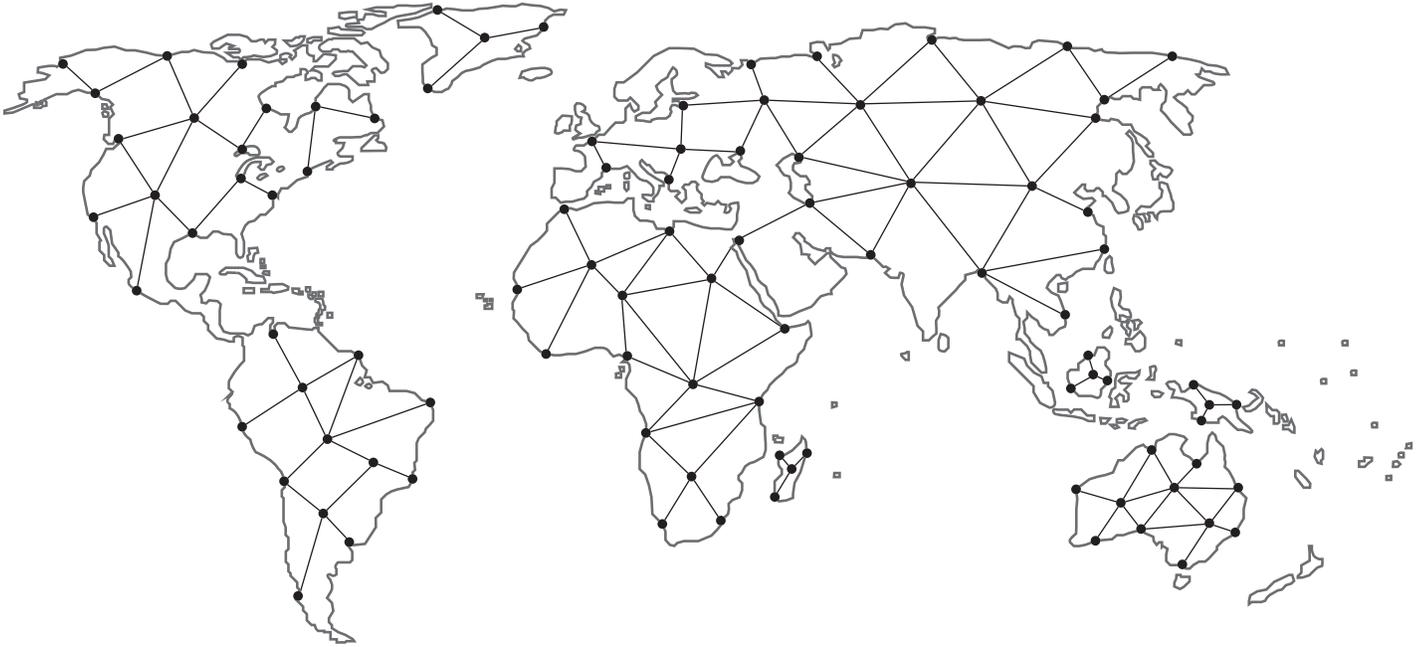
Figure 25 - 84003 SteamForm Horizontally Installed

**\*\* USE THIS GUIDE IN REVERSE ORDER FOR VALVE DISASSEMBLY\*\***



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