

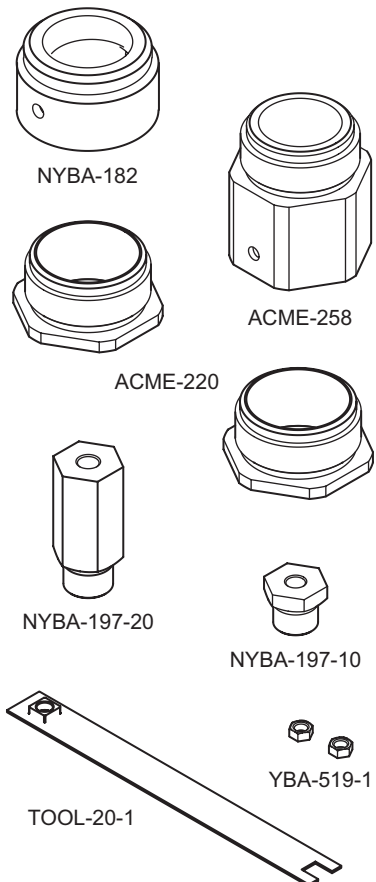
**Adapter for AV-607-1
 Schneider Electric SmartX Linkage,
 M400A, M800A and M1500A Forta Actuators, and
 VB-9XXX 1-1/2" and 2" Valves
 General Instructions**

Application

The AV-608 linkage adapter kit is designed to fit the Schneider Electric AV-607-1 linkage kit or the M400A, M800A and M1500A Forta actuators to the discontinued 1-1/2" and 2" VB-9XXX valves.

Features

- Compatible with Schneider Electric VB-9XXX 1-1/2" and 2" valves and SmartX or M400A, M800A and M1500A Forta actuators
- Kit contains necessary parts for either application



Applicable Literature

F-Number	Description	Audience	Purpose	
F-27599	M400A (VB), M800A (VB) and M1500A (VB) Forta Actuator General Instructions	<ul style="list-style-type: none"> – Sales Personnel – Application Engineers – Installers – Service Personnel – Start-up Technicians 	<p>Describes the actuator's features, specifications, and possible applications. Provides step-by-step mounting instructions and wiring instructions for the actuator/linkage assemblies.</p>	
F-26642	MA40-704X, MA4X-707X, MA4X-715X Schneider Electric Spring Return Two-Position SmartX Actuators General Instructions			
F-26644	MF4X-7XX3 Schneider Electric Spring Return Floating SmartX Actuator General Instructions			
F-26645	MS4X-7XX3 Schneider Electric Spring Return Proportional SmartX Actuator General Instructions			
F-26742	MA40-717X Spring Return Direct Coupled SmartX Actuator General Instructions			
F-26748	MS40-717X Schneider Spring Return Direct Coupled SmartX Actuator General Instructions			
F-26749	MF40-7173 Schneider Electric Spring Return Direct Coupled SmartX Actuator General Instructions			
F-27215	MF41-6153/MS41-6153 Series Non-spring return Rotary Electronic Damper Actuators General Instructions			
F-27082	AV-607-1, AV-609-1 Schneider Electric SmartX Linkages for 1-1/2" to 6" Globe Valves General Instructions			<p>Describes the linkages' specifications and possible applications. Provides step-by-step mounting instructions for the actuator/linkage assemblies.</p>
F-26646	MX4X-7XXX, MX4X-6XXX Series Schneider Electric SmartX Actuator Selection Guide			<p>Provides actuator specifications and part number cross referencing of phased out actuators with the new Schneider Electric direct-coupled actuators.</p>
F-26752	VX-7000 and VX-9000 Series Linked Globe Valve Assemblies and MX4X-7XXX and MX4X-6XXX Series Actuator/Linkage Assemblies with Schneider Electric SmartX Actuators, Selection Guide	<p>Provides features, specifications, mounting dimensions, and other criteria useful to the selection of linked globe valve assemblies and actuator/linkage assemblies with Schneider Electric SmartX actuators.</p>		
F-11366	Valve Selection Chart Steam (two-way valves only)	<ul style="list-style-type: none"> – Application Engineers – Installers – Service Personnel – Start-up Technicians 	<p>Provides charts, equations, and diagrams to assist in the configuration of valve system applications. TOOL-150, valve sizing slide rule may be purchased separately</p>	
F-11080	Valve Selection Chart Water			
F-13755	CA-28 Control Valve Sizing			<p>Provides information on how to install the adapter on globe valves up to 2".</p>
F-27234	AV-811 Forta to Globe valve adapter kit			<p>Describes Schneider Electric' recommended water treatment practices.</p>
F-26080	EN-205 Water System Guidelines			

Inspection

Inspect package for damage. If damaged, notify carrier immediately. If undamaged, open the package and inspect for obvious damage. Return damaged products.

Requirements

- Training: Installer must be a qualified, experienced technician.
- Tools (not provided):
 - Measuring scale graduated in 1/16" increments
 - Two 5/16" open-end wrenches or TOOL-20-1 for jam nuts
 - 3/4 to 2" spanner wrench for linkage adapter
 - 1-3/8" open-end wrench for valve adapter
 - 1-5/8" open-end wrench for valve mounting nut
 - Vise grip or pliers
 - Appropriate power supply (see the applicable actuator General Instructions sheet for power requirements)



Warning: Electrical shock hazard! Contact with live circuits can result in severe injury or death.

- Disconnect the power supply (line power) at the breaker or fuse before and during installation of an actuator to prevent electric shock and equipment damage.
- Make all connections in accordance with the wiring diagram and in accordance with national and local electrical codes. Use copper conductors only.

Failure to observe these warnings can result in severe injury or death and can damage the equipment.

General Installation

The AV-608 kit contains parts for the AV-607 linkage and Schneider Electric jackscrew style actuators. Save the unused parts and instructions for other applications.

Allow at least 5" (127 mm) above the actuator or actuator/linkage assembly for removal and reattachment to the installed valve.

Valve Styles

Identify the valve body and follow the specific instructions on the following pages.

- Style A valve bodies were discontinued in August, 1997
- Some style B valve bodies were discontinued in 1994 (date code 9404)

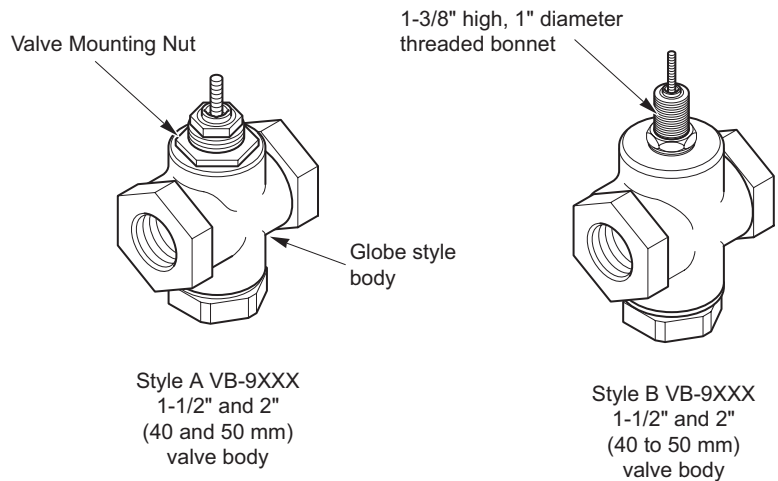


Figure-1 Valve Body Identification.

Table-1 Model Chart – Valve Bodies

Model	Type	Description
VB-921X	2-Way stem up open	Seat on bottom, closed when stem down
VB-922X	2-Way stem up closed	Seat on top, closed when stem up
VB-931X	3-Way mixing	Seat on top and bottom, one inlet closed when stem up or down

Mounting AV-607-1 Linkage to Valve Body

AV-607-1 Linkage

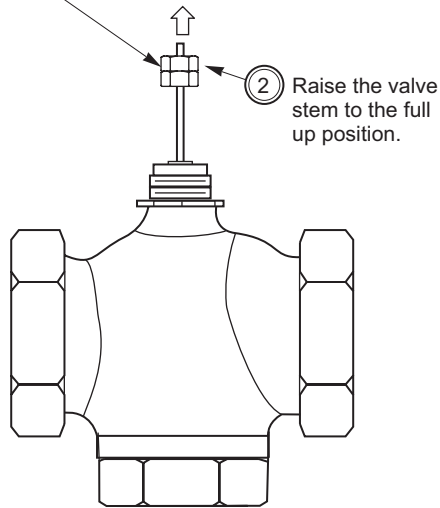
To attach the linkage to the valve body, refer to the subsection that applies to the specific valve body.

AV-607-1 Linkage and Style A Valve Bodies

1. Remove any previously installed actuator and linkage parts.
2. Assemble the linkage to the valve, according to Figure-2.

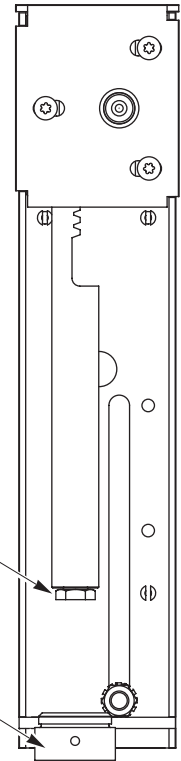
Note: If necessary for ease of assembly, remove the actuator from the linkage.

① Install two YBA-519-1 jam nuts on the valve stem, 3/16" from the top of the valve stem and lock together using TOOL-20-1 or 5/16" open-end wrenches. The second nut enables you to hold or rotate the valve stem if necessary.



③ Install the NYBA-197-10 Adapter into the rack end and tighten with a 5/8" open-end wrench.

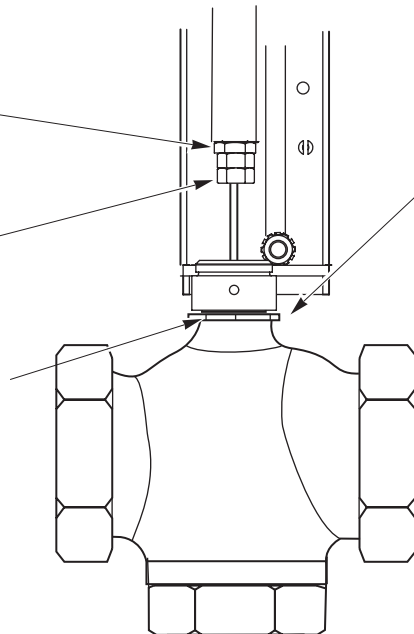
④ Install the NYBA-182 Adapter into the bottom of the rack housing and tighten with a 3/4 to 2" spanner wrench.



⑤ Rotate the linkage, fully engaging the stem until the NYBA-197-10 contacts the jam nuts.

⑥ Lock the nuts securely against the adapter using TOOL-20-1 or 5/16" open-end wrenches.

⑦ While holding the valve mounting nut, rotate the entire linkage, threading the mounting nut onto the NYBA-182 Adapter.



⑧ Orient the linkage on the valve as desired and then using TOOL-37 or an 1-5/8" open-end wrench, lock the assembly into place.

⑨ Rotate the pinion shaft with pliers in both directions, confirming the seats are reached for close off. If necessary, remove the linkage cover with a Torx screwdriver and observe the rack. The valve seats should control the stroke, not the linkage cover or rack teeth.

If stem up **closed** valves do not seat, increase the stroke by returning to Step 1 and lowering the two jam nuts on the stem as needed.

Figure-2 Assembling the AV-607-1 Linkage Onto a Style A Valve Body.

AV-607-1 Linkage and Style B Valve Bodies

1. Remove any previously installed actuator and linkage parts.
2. Assemble the linkage to the valve, according to Figure-3.

Note: If necessary for ease of assembly, remove the actuator from the linkage.

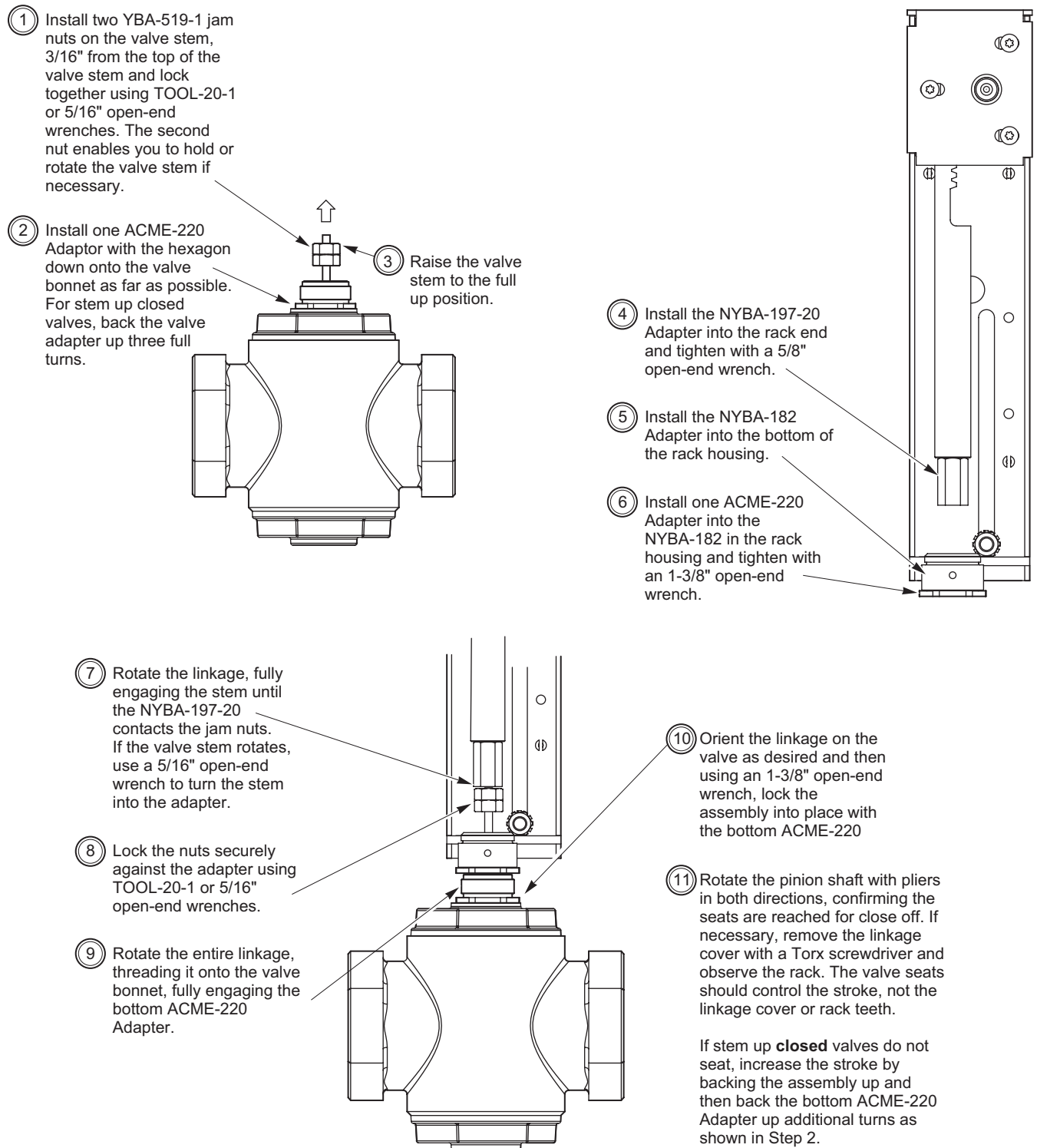


Figure-3 Assembling the AV-607-1 Linkage Onto a Style B Valve Body.

Mounting M400A, M800A and M1500A Forta Actuators to Valve Body

M400A , M800A and M1500A Forta Style Actuators

To mount the actuator to the valve body, refer to the subsection that applies to the specific valve body.

M400A, M800A and M1500A Forta and Style A Valve Bodies

1. Remove any previously installed actuator and linkage parts.
2. Assemble the new linkage to the valve, according to Figure-4.

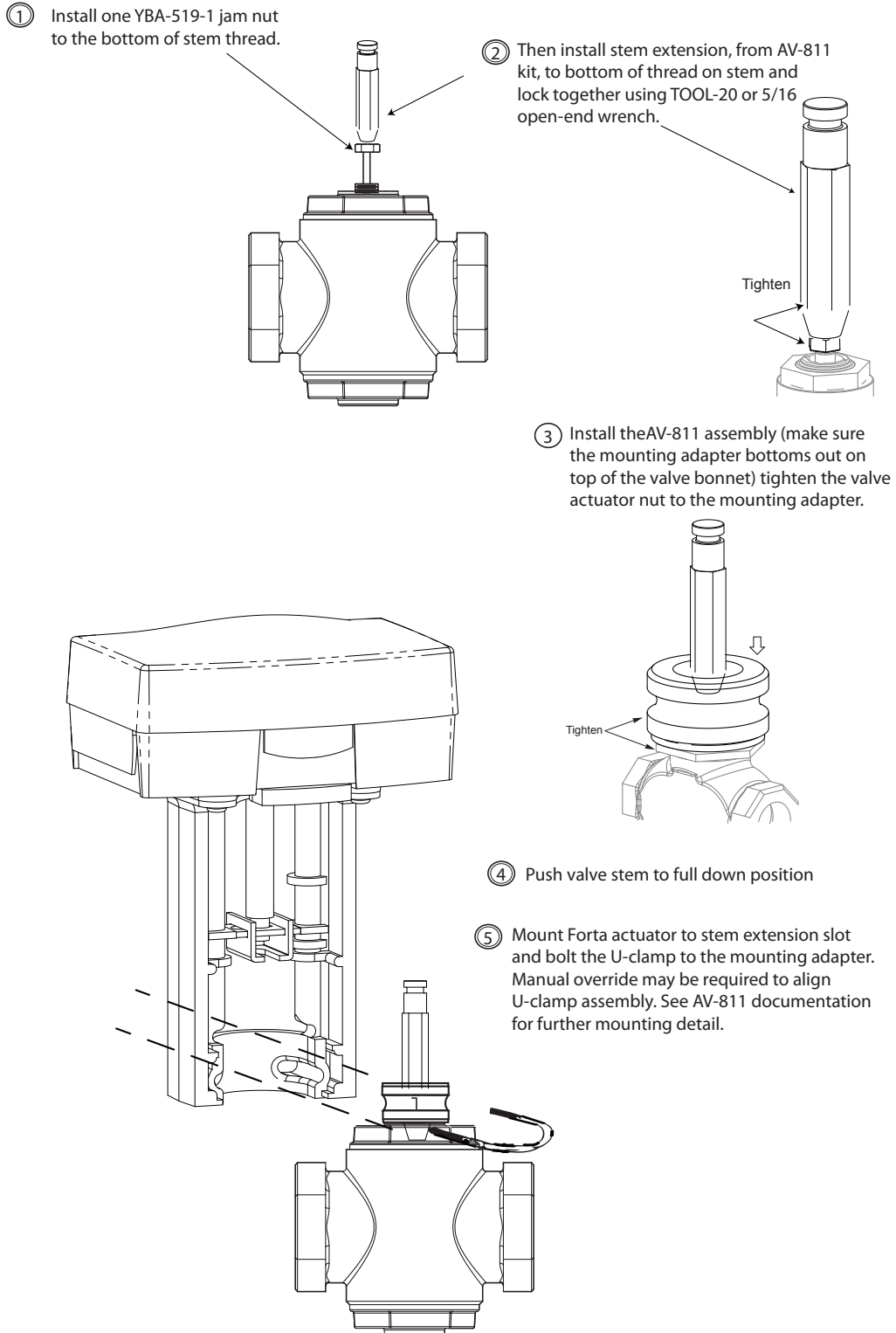


Figure-4 Assembling the Forta Actuator Onto a Style A Valve Body.

M400A, M800A and M1500A Forta Actuators and Style B Valve Bodies

1. Remove any previously installed actuator and linkage parts.
2. Assemble the new linkage to the valve, according to Figure-5.

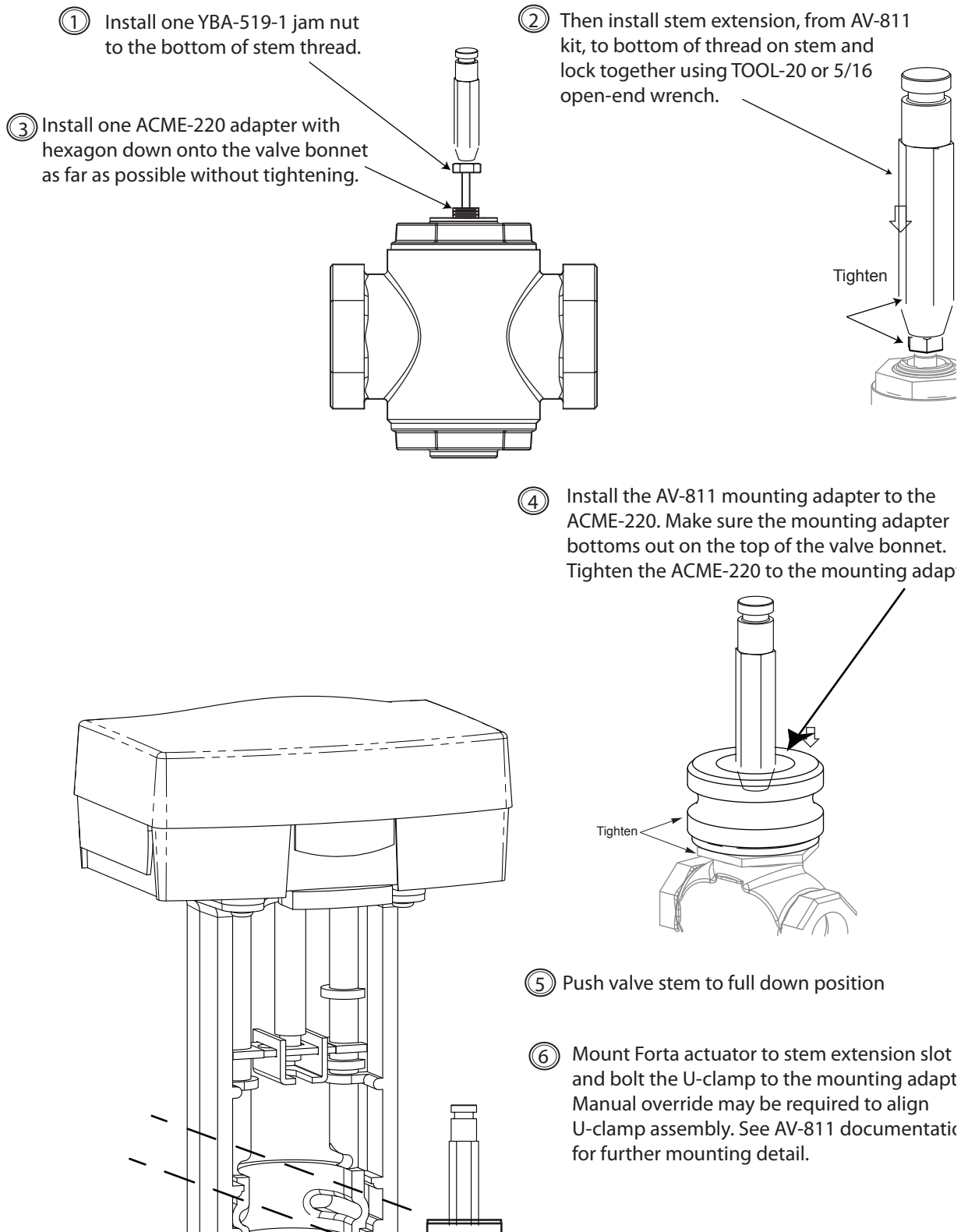


Figure-5 Assembling the Forta Actuator onto a Style B Valve Body.

