

Seal and O-ring Installation Instructions

Supplement to Fisher™ 685 Series Instruction Manuals

This supplement contains information for installing the following parts kits into a Fisher 685, 685SE, or 685SR actuator:

Actuator Size	Part Number
10	R685X000402
12	R685X000412
14	R685X000302
16	R685X000422
18	R685X000432
20	R685X000442
22	R685F000012
24	R685X000452
26	R685X000462
28	R685X000472

Note

Refer to the applicable 685 Series Instruction Manual listed below, available from your Emerson sales office, Local Business Partner, or at Fisher.com, for all other information regarding Fisher 685 series actuators.

- Fisher 685 Actuator, [D103626X012](#)
- Fisher 685SE and 685SR Actuator, [D103799X012](#)

Included Parts

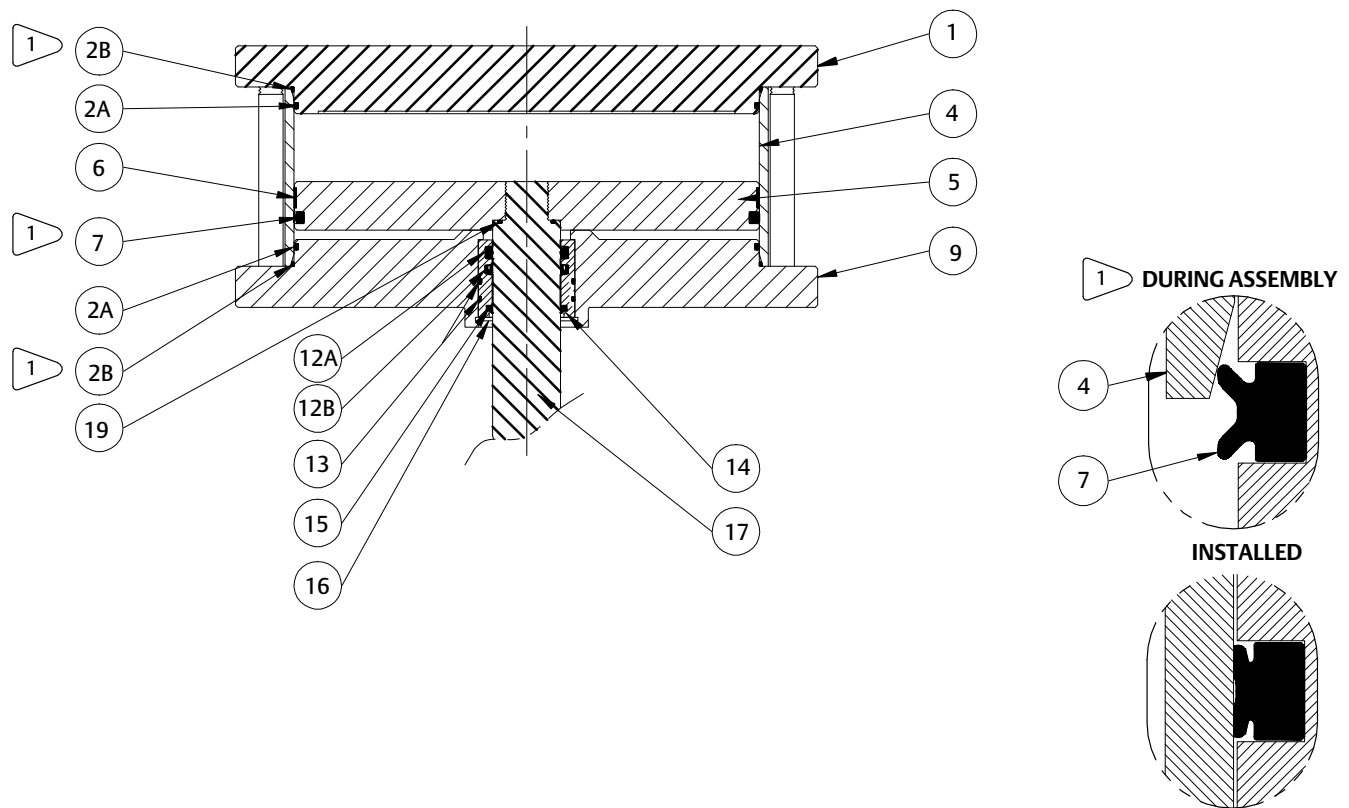
Key	Description	Quantity	Key	Description	Quantity
15	Piston Rod Wiper Seal	1	6	Piston Wear Ring	1
13	Bearing O-ring	2	7	Piston Lip Seal	1
12A	Bearing T-Seal	1	2A	Upper/Lower Head O-ring	2
12B	Bearing U-Cup Seal	1	2B	Upper/Lower Head Crush Seal	2
19	Piston Rod O-ring	1	100	Krytox GPL 202 Actuator Grease	1 tube

Installation into a 685 Actuator (figure 1)

Follow the Seal and O-ring Replacement instructions listed in the Fisher 685 Actuator instruction manual, [D103626X012](#), but take note of the following differences :

1. Key 2 and 12 have two pieces (an A and B) that should be installed at the same time
2. Key 7, 12A, and 12B respectively have lip seal, T-seal, and U-Cup seal profiles
3. Key 100 is Krytox GPL 202 actuator grease

Figure 1. Typical 685 Actuator with Seal Kit Installed



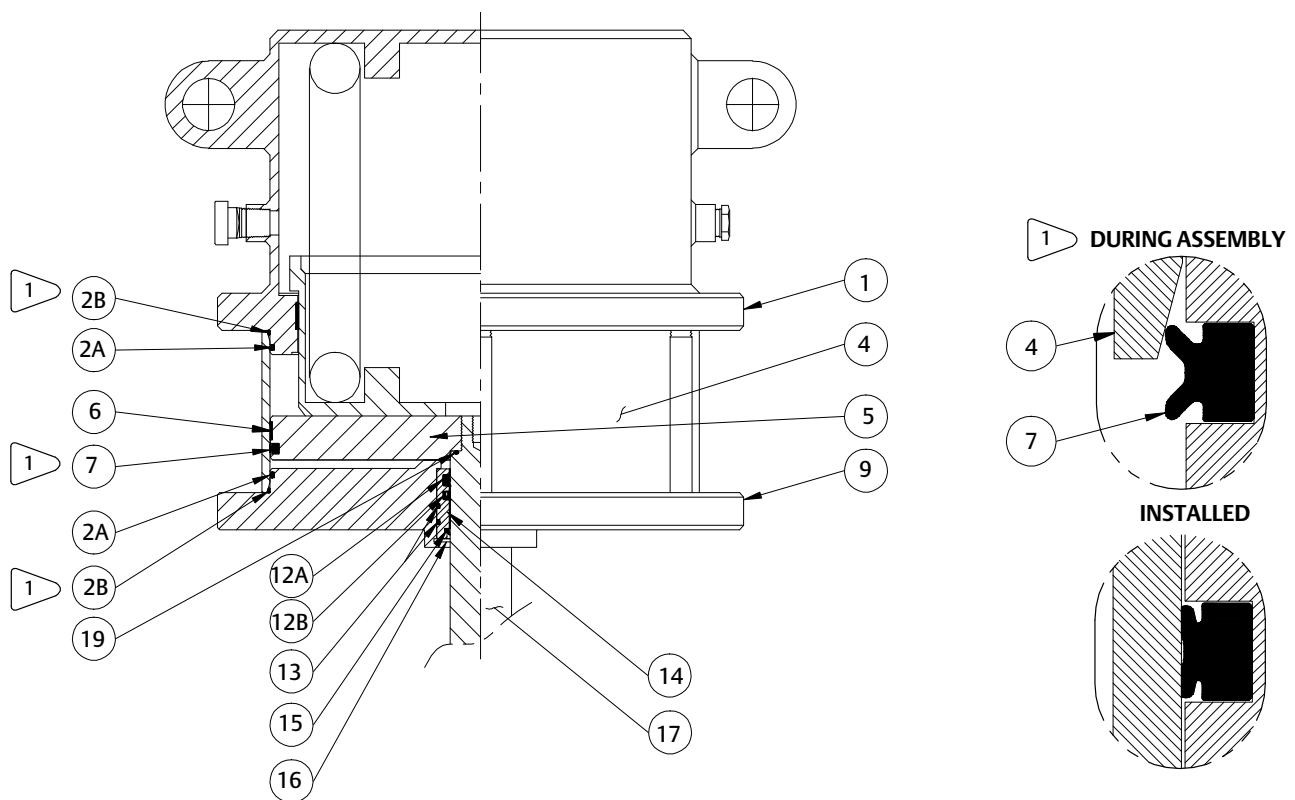
1 THE CYLINDER (KEY 4) HAS A 15° LEAD IN CHAMFER TO ASSIST WITH ASSEMBLY OF THE PISTON LIP SEAL (KEY 7); TAKE CARE DURING ASSEMBLY BY MAKING SURE THE LIP OF THE SEAL IS COMPRESSED; THE SEAL SHOULD NOT BE ROLLED AND PINCHED BY THE CYLINDER. THIS 15° LEAD IN CHAMFER ALSO SECURES THE UPPER/LOWER HEAD CRUSH SEALS (KEY 2B) AGAINST THE INSIDE CORNERS OF THE UPPER AND LOWER HEADS (KEY 1 AND 9).

Installation into a 685SE or 685SR Actuator (figure 2 and 3)

Follow the Seal and O-ring Replacement instructions listed in the Fisher 685SE and 685SR Actuator instruction manual, [D103799X012](#), but take note of the following differences:

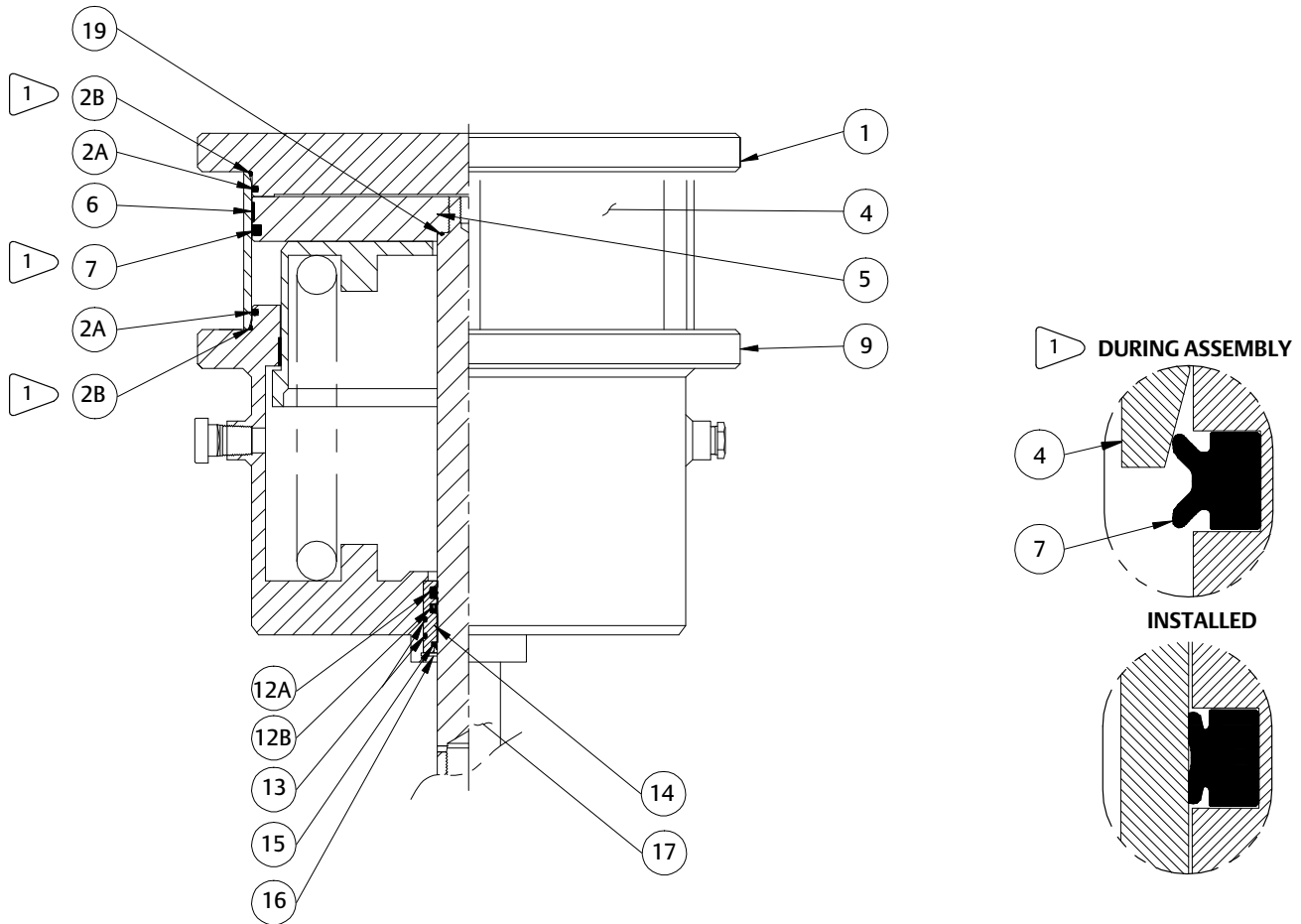
1. Key 2 and 12 have two pieces (an A and B) that should be installed at the same time
2. Key 7, 12A, and 12B respectively have lip seal, T-seal, and U-Cup seal profiles
3. Key 100 is Krytox GPL 202 actuator grease

Figure 2. Typical 685SE Actuator with Seal Kit Installed



1 THE CYLINDER (KEY 4) HAS A 15° LEAD IN CHAMFER TO ASSIST WITH ASSEMBLY OF THE PISTON LIP SEAL (KEY 7); TAKE CARE DURING ASSEMBLY BY MAKING SURE THE LIP OF THE SEAL IS COMPRESSED; THE SEAL SHOULD NOT BE ROLLED AND PINCHED BY THE CYLINDER. THIS 15° LEAD IN CHAMFER ALSO SECURES THE UPPER/LOWER HEAD CRUSH SEALS (KEY 2B) AGAINST THE INSIDE CORNERS OF THE UPPER AND LOWER HEADS (KEY 1 AND 9).

Figure 3. Typical 685SR Actuator with Seal Kit Installed



1 THE CYLINDER (KEY 4) HAS A 15° LEAD IN CHAMFER TO ASSIST WITH ASSEMBLY OF THE PISTON LIP SEAL (KEY 7); TAKE CARE DURING ASSEMBLY BY MAKING SURE THE LIP OF THE SEAL IS COMPRESSED; THE SEAL SHOULD NOT BE ROLLED AND PINCHED BY THE CYLINDER. THIS 15° LEAD IN 1 CHAMFER ALSO SECURES THE UPPER/LOWER HEAD CRUSH SEALS (KEY 2B) AGAINST THE INSIDE CORNERS OF THE UPPER AND LOWER HEADS (KEY 1 AND 9).

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