



Air Power Systems Co., Inc.  
8178 E. 44<sup>th</sup> St.  
Tulsa, OK 74145  
(918) 622-5600 FAX: (918) 622-5469

# C-3526-DMK4 Cylinder Installation Instructions

Rev: )A, 12/01/15  
Approved By: Mike O'Malley  
II #: II-162

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**Note: Cylinders are delivered disassembled and must be assembled to install.**

**Tools Needed:** 3/16" Hex Driver

## Stage 1: Prepare Valve for Installation

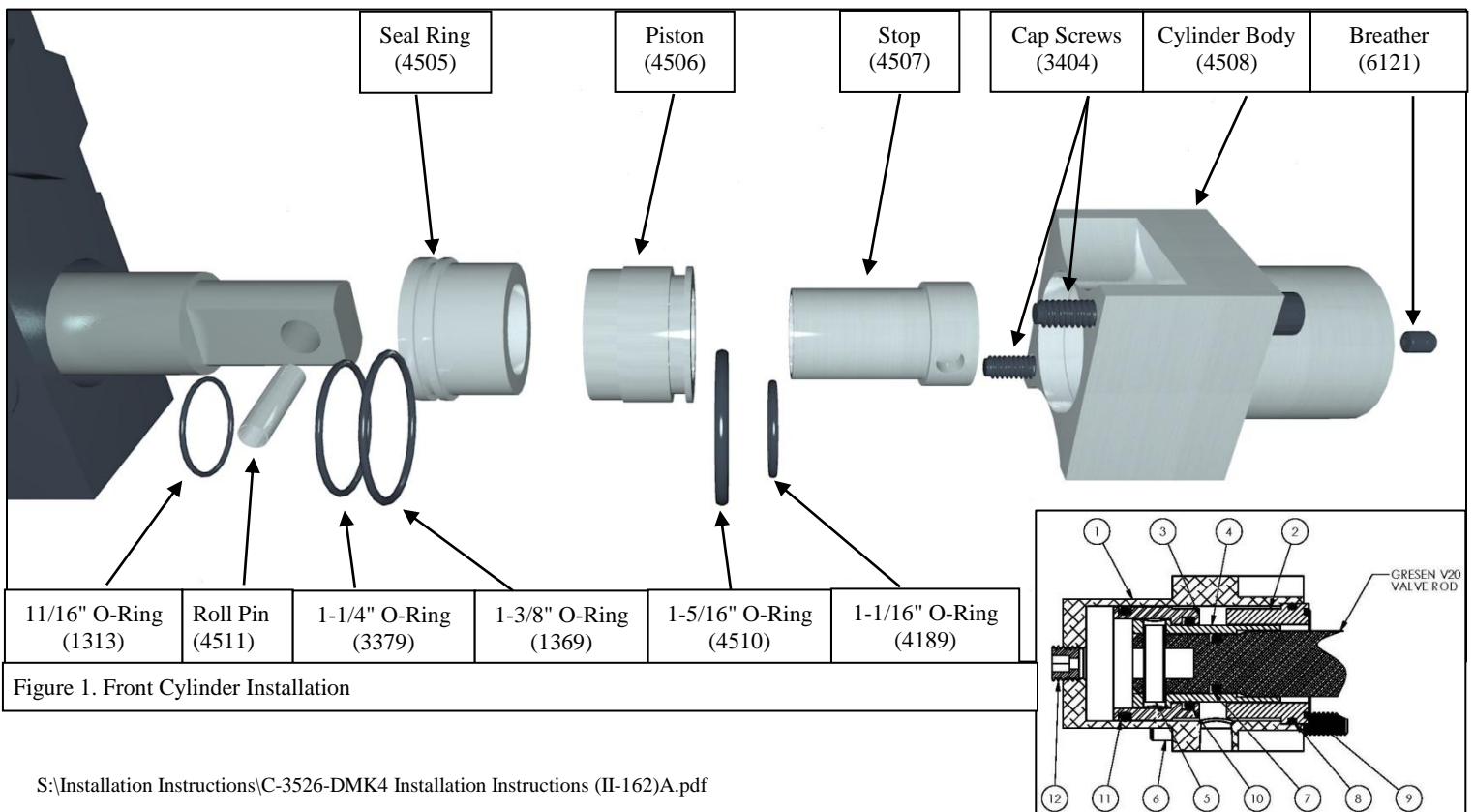
**Tools Needed:** 3/16" Hex Wrench

1. Inspect Valve Spool and Valve Face to insure they are free of any foreign substance (dust, dirt, etc.).
2. If needed, remove old/pre-existing Cap Screws holding Spring Cover on Valve Housing. Discard old/pre-existing Cap Screws and Spring Cover.
3. Remove old/pre-existing manual detent on spool.

## Stage 2: Install Front Cylinder

**Tools Needed:** 3/16" Hex Wrench

4. Extend Valve Spool out of Valve Body as far as possible.
5. Install 11/16" O-Ring (1313) on Valve Spool.
6. Install 1-1/16" O-Ring (4189) and 1-5/16" O-Ring (4510) on Piston (4506).
7. Install 1-3/8" O-Ring (1369) and 1-1/4" O-Ring (3379) on Seal Ring (4505).
8. Lubricate interior O-Ring on Piston and slide Piston over Front Float Stop (4507) with large opening toward cross-hole of Stop. Ensure cross-hole is accessible.
9. Lightly lubricate O-Ring on Spool and slide Seal Ring over Valve Spool and into contact with surface of Valve Body ensuring face seal (1-1/4" O-Ring in face of Seal Ring) seats against housing.
10. Slide Piston and Stop over Valve Spool.
11. Align cross-hole of Stop with cross-hole in Valve Spool.
12. Insert Roll Pin (4511) through cross-holes in Stop and Valve Spool ensuring Roll Pin is below flush with surface of Stop on both sides.
13. Lightly lubricate exterior O-Rings and install Cylinder Body (4508) over Piston assembly and secure to Valve Body using Cap Screws (3404). Tighten Cap Screws to 12 ft-lbs.
14. Install 1/8" NPT Breather (6121) in rear fitting port of Cylinder Body.





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## Stage 3: Prepare Valve for Installation

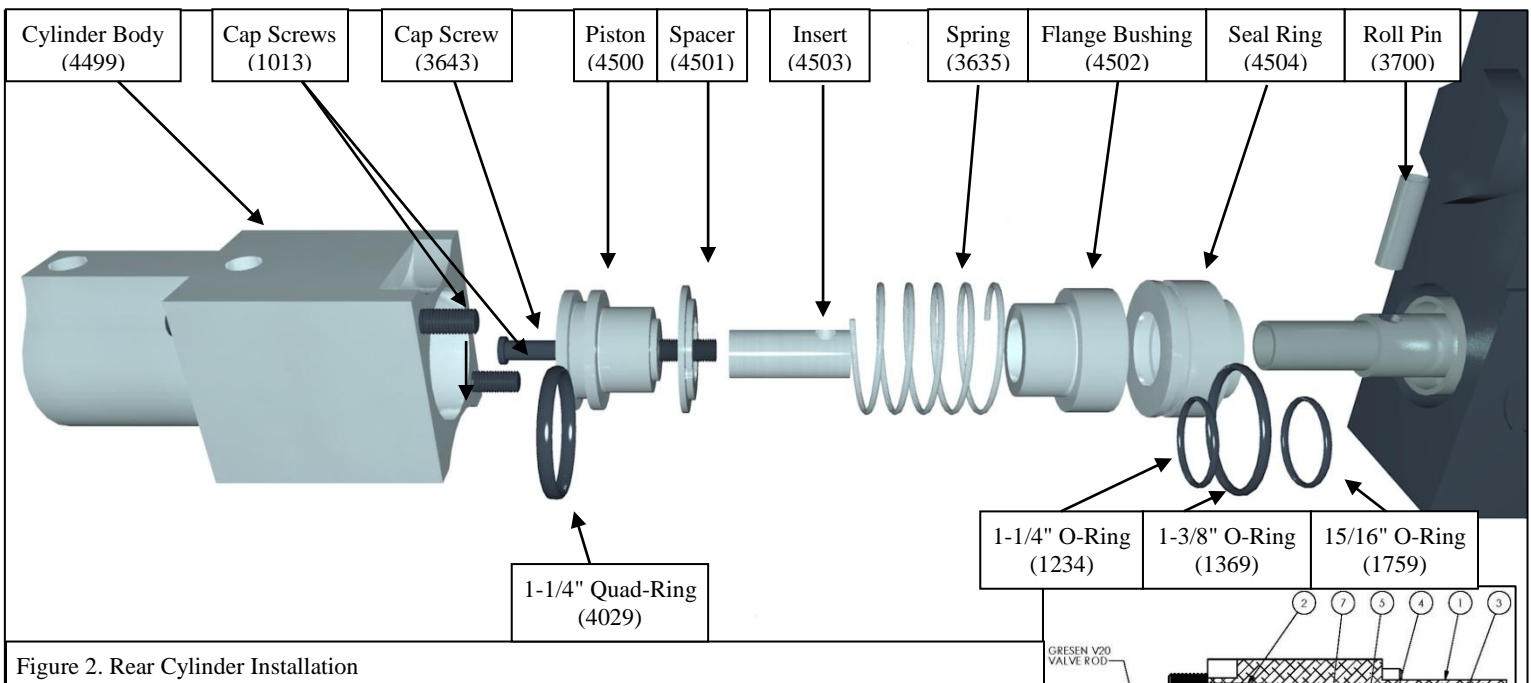
**Tools Needed:** 3/16" Hex Wrench

1. Inspect Valve Spool and Valve Face to insure they are free of any foreign substance (dust, dirt, etc.).
2. If needed, remove old/pre-existing Cap Screws holding Spring Cover on Valve Housing. Discard old/pre-existing Cap Screws and Spring Cover.
3. If needed, remove Shoulder Bolt holding Spring Cups and Spring. Discard old/pre-existing Shoulder Bolt, Spring Cups, Spring, O-Ring, large Washer, and manual detent. **Note: Small Spacer must remain in place for reuse. Remove and discard the larger spacer.**

## Stage 4: Install Rear Cylinder

**Tools Needed:** 3/16" Hex Wrench

4. Install Threaded Rear-Float Insert (4503) with threads to outside with Roll Pin (3700) ensuring Roll Pin is below flush with Insert on both sides.
5. Install 1-1/4" O-Ring (1234) 1-3/8" O-Ring (1369), and 15/16" O-Ring (1759) on Seal Ring (4504) and slide over Valve Spool and into contact with Valve Face ensuring face seal (1-1/4" O-Ring) seats against valve housing.
6. Install Flange Bushing (4502) over Valve Spool.
7. Install Spring (3635) and Spacer (4501) over Valve Spool.
8. Install Quad Ring (4029) on Piston (4500).
9. Install Piston (4500) against Spacer. Apply Loctite to threads of Cap Screw (3643) and thread through Piston and into threaded portion of Insert. Tighten to 12 ft-lbs.
10. Lightly lubricate outer O-Ring (1-3/8" (1369)) and Quad Ring (4029) and install Cylinder Body (4499) over Piston assembly. Secure Cylinder Body to Valve Body using Cap Screws (1013). Tighten Cap Screws to 12 ft-lbs.
11. Install fittings and airlines and test for proper operation. **APPLY THREAD SEALANT TO ALL FITTINGS.**





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## C-3526-DMK4 Front Cylinder Kit

Cylinder Body Front - Float (4508)	(1)	<input type="checkbox"/>
Ring, Seal Front - Float (4505) Assembly	(1)	<input type="checkbox"/>
O-Ring 2-026 1 3/8 OD 1 1/4 ID (1369)	(1)	<input type="checkbox"/>
O-Ring 2-024 1 1/4 OD 1 1/8 ID (3379)	(1)	<input type="checkbox"/>
Piston, Front - Float (4506) Assembly	(1)	<input type="checkbox"/>
O-Ring 2-118 1 1/16 OD 7/8 ID (4189)	(1)	<input type="checkbox"/>
O-Ring 2-122 1 5/16 OD 1 1/8 ID (4510)	(1)	<input type="checkbox"/>
Stop, Front - Float (4507)	(1)	<input type="checkbox"/>
Pin-Roll 1/4 x 7/8 LG (4511)	(1)	<input type="checkbox"/>
Cap Screws 1/4-20 x 1 1/4 SH (3404)	(2)	<input type="checkbox"/>
O-Ring 2-112 11/16 OD 1/2 ID (1313)	(1)	<input type="checkbox"/>
Breather 1/8 NPT (6121)	(1)	<input type="checkbox"/>



## C-3526-DMK4 Rear Cylinder Kit

Cylinder Body, Rear - Float (4499)	(1)	<input type="checkbox"/>
Ring, Seal Rear - Float (4504) Assembly	(1)	<input type="checkbox"/>
O-Ring 2-214 1 1/4 OD 1 ID (1234)	(1)	<input type="checkbox"/>
O-Ring 2-026 1 3/8 OD 1 1/4 ID (1369)	(1)	<input type="checkbox"/>
O-Ring 2-116 1 15/16 OD 3/4 ID (1759)	(1)	<input type="checkbox"/>
Piston, Rear - Float (4500) Assembly	(1)	<input type="checkbox"/>
Quad Ring 4-214 1 1/4 OD 1 ID (4029)	(1)	<input type="checkbox"/>
Spacer, Rear - Float (4501)	(1)	<input type="checkbox"/>
Insert, Threaded Rear - Float (4503)	(1)	<input type="checkbox"/>
Spring 1.04 ID 1.24 OD 1.87 LG (3635)	(1)	<input type="checkbox"/>
Bushing, Flange Rear - Float (4502)	(1)	<input type="checkbox"/>
Pin-Roll, 7/32 x 11/16 LG (3700)	(1)	<input type="checkbox"/>
Cap Screws 1/4-20 x 2 3/4 SH (1013)	(2)	<input type="checkbox"/>
Cap Screws 1/4-20 x 1 1/4 SH (3643)	(1)	<input type="checkbox"/>