

This bulletin is a simple step-by-step seal kit maintenance guide for DADCO's HP Non-Rotating Air Cylinders (HP.N Series). Proper repair requires careful examination of all component parts and replacement of any that are worn or damaged. All DADCO replacement parts are available from factory stock. After reviewing this maintenance guide, if you require any additional training or have any questions please contact DADCO for assistance.

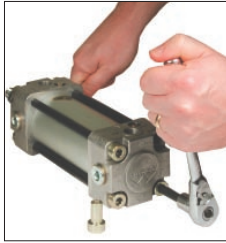


**CAUTION:** Always wear safety goggles when performing any maintenance work.

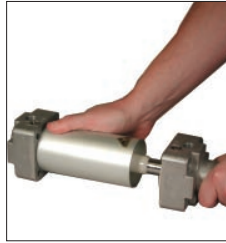
### Seal Kit Repair Instructions



1. Unhook the cylinder from the air supply.



2. Remove the tie rod nuts from the rear head using a socket drive allen wrench. Retain nuts for use during reassembly.



3. Remove the tie rods then remove the front head assembly.



4. Remove the dampening washer, save for reassembly.



5. Remove the front cushion seal and discard.



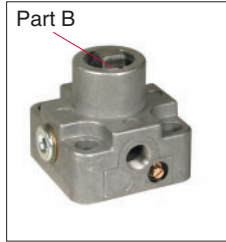
6. Insert the new front cushion seal with the flat side down. Reinstall the dampening washer, be sure to line up the washer with the groove in the head.



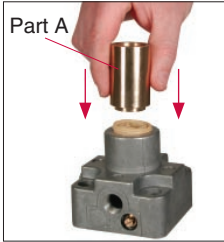
7. Use the notch in the head to remove the rod seal. Be careful not to damage or scratch the inside of the head. Discard the rod seal.



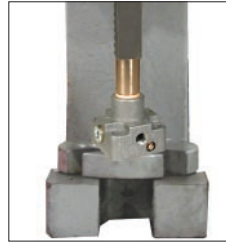
8. For installation of the new rod seal use DADCO's Rod Seal Installation Tool. Refer to page 2 to select the appropriate tool for your cylinder.



9. Place Part B of the Rod Seal Installation Tool into the front head.



10. Place the new rod seal, ridged side up, over Part B and slide down. Place Part A of the Rod Seal Installation Tool on top of the seal.



11. Position the front head on the base of the arbor press, leaving Part B of the Rod Seal Installation Tool in place. Press the rod seal into place using the arbor press. Set aside.



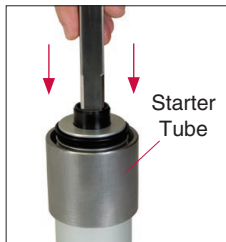
12. Remove the rod and piston assembly from the tube.



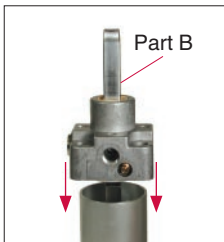
13. Remove the piston seals, being careful not to scratch the surface of the piston. Discard used seals. Guide tape will be loose when the piston is removed from the tube.



14. Install the new piston seals and make sure the guide tape is in place before installation.



15. For installation of the rod and piston assembly use DADCO's Starter Tube (refer to page 2). Place the starter tube on top of the tube and carefully guide the rod and piston assembly into the tube. Maintain alignment and ensure the piston seals and guide tape remain in place.



16. Retrieve the front head. With Part B of the Rod Seal Installation Tool still in place, position the front head over the tube. Insert the machined end of Part B into the tapped hole in the piston rod. Square Part B with the piston rod. Slide the front head down ensuring alignment of the ports between the front and rear heads.



17. Insert the four tie rods. To ensure proper alignment, square the heads using a flat surface (ex., granite block).



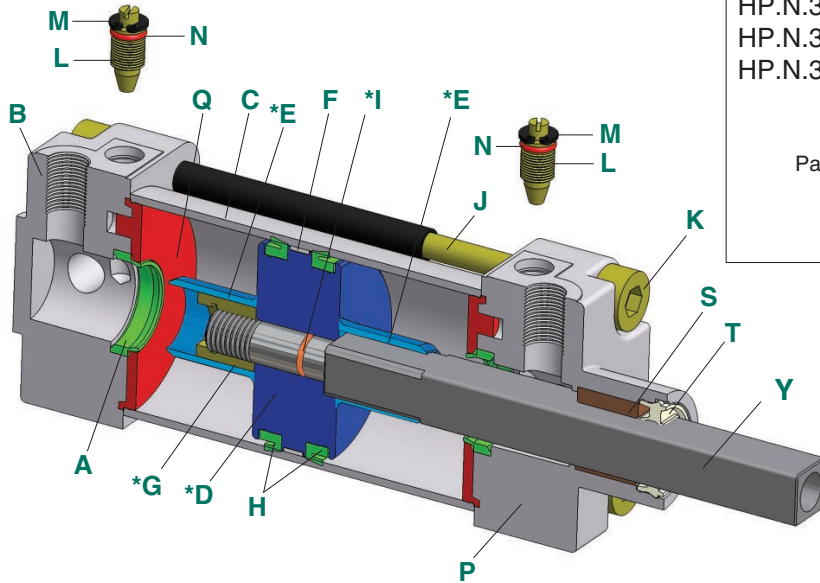
18. Replace the tie rod nuts using a medium strength liquid thread locker on the threads before re-installing. Alternate tightening of each tie rod nut a half turn until all tie rod nuts are secure. See page 2 for torque values. This completes the repair of your HP.N Series Air Cylinder.

**NOTE:** If necessary, remove the rear head to replace the rear cushion seal, performing steps 3-6 on the rear head.

# HP.N Series Air Cylinder Seal Kit Installation

## HP.N Series Seal Kit Installation

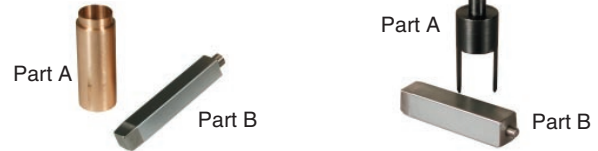
### Parts List



### Rod Seal Installation Tool

Use the Rod Seal Installation Tool to correctly insert the rod seal.

HP.N.357.032 (32 mm bore)    HP.S.357 (80/100 mm bore)  
 HP.N.357.040 (40 mm bore)  
 HP.N.357.050 (50/63 mm bore)



### Starter Tube

Use the starter tube to guide the piston and rod assembly into the tube.

HP.350.032    HP.350.063  
 HP.350.040    HP.350.080  
 HP.350.050    HP.350.100



Parts List	Quantity Required	Part Number					
		ø32	ø40	ø50	ø63	ø80	ø100
<b>A</b> Cushion Seal	2	IP470949	IQ470950	IR470951	IR470951	IT470953	IU470954
<b>B</b> Rear Head	1	IP600460	IQ600461	IR600462	IS600463	IT600214	IU600215
<b>C</b> Tube	1	IP05Z__	IQ05Z__	IR05Z__	IS05Z__	IT05Z__	IU05Z__
<b>F</b> Guide Tape	1	IP417725	IQ417726	IR417727	IS417728	IT417521	IU417467
<b>H</b> Piston Seal	2	IP480969	IQ480970	IR480971	IS480972	IT480973	IU480974
<b>J</b> Tie Rod	4	IP75M__	IQ75M__	IR75M__	IS75M__	IT75M__	IU75M__
<b>K</b> Tie Rod Nut <i>Torque Value</i>	8	IP852201 8 lbs.ft.	IQ852201 8 lbs.ft.	IR852203 18 lbs.ft.	IS852203 18 lbs.ft.	IT852205 34 lbs.ft.	IT852205 62 lbs.ft.
<b>L</b> Regulating Screw	2	IP502240	IQ502241	IR502242	IS502243	IT502244	IU502245
<b>M</b> Retaining Ring	2	IP857278	IP857278	IR857279	IS857280	IS857280	IU857281
<b>N</b> Adj. Screw O-Ring	2	IP450979	IP450979	IR450981	IS450982	IT450983	IU450984
<b>Q</b> Dampening Washer	2	IP450860	IQ450861	IR450862	IS450863	IT450864	IU450865
<b>***S</b> Rod Bearing	1	IP407646	IQ407467	IR407648	IR407648	IT407649	IT407649
<b>****P</b> Front Head Assembly	1	IP307646	IQ307647	IR307648	IS307648	IT307649	IU307657
<b>T</b> Rod Seal/Wiper/Ring	1	IP477646	IQ477647	IR477648	IR477648	IT477649	IT477649
<b>**Y</b> Piston Rod Assembly	1	IP00N__	IQ00N__	IR00N__	IS00N__	IT00N__	IU00N__
Seal Kit <i>Contains A, H &amp; T</i>		IP007646	IQ007647	IR007648	IS007648	IT007649	IU007657

\* Not sold separately: Piston (D), Piston O-Ring (I), Piston Nut (G) and Cushion Spears (E).

\*\* Includes D, I, G and E. When ordering, please note the stroke length in addition to the part number.

\*\*\* Should be replaced at the factory.

\*\*\*\* Includes Front Head with Rod Bearing, Rod Seal/Wiper/Ring, Regulating Screw, Retaining Ring, Adj. Screw O-Ring, Dampening Washer, and Cushion Seal.

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Every effort has been made to have all illustrations and drawings accurately represent the product as it was at the time this bulletin was printed. However, so that we effectively may continue to meet the requirements of DADCO customers, some product changes may occur during the life of this bulletin without prior notice.