I. Exhausting Pressure

1. When exhausting pressure, position the gas spring port facing up.

2. Remove the port plug and sealing washer, (90.505.10), located on the bottom of the spring with the Port Servicing Tool, (90.320.8). Retain parts for use during reassembly.

3. Keeping face and hands clear of the port, use the Valve Bleed Tool, (90.245.4), or the Port Servicing Tool, (90.320.8), to depress the Compact Valve, (90.260). Cover the port with a cloth to absorb discharge.

4. After all the gas pressure is exhausted, be sure that the piston rod will freely retract into the tube manually. If not, try depressing the valve again. If still unsuccessful STOP and contact DADCO.

5. Exhaust nitrogen gas by opening the bleed valve on the control panel and verify that all pressure is relieved by manually retracting the piston rod into the tube. If the rod will not fully retract STOP and contact DADCO.

II. Port Maintenance

1S. Generally the valve does not need replacing. Only if the valve appears damaged, is leaking pressure or sticking, or the valve is facing up.

2S. Using the Port Servicing Tool, (90.320.8), start at the tab and begin to pry up the Spireloxit Retainer Ring.

3S. Once the hooked end of the tool is near either end of the c-ring, begin pushing it toward the outside of the gas spring can. The handles will absorb discharge. The handles will be positioned on the bottom of the tool below the c-ring.

4S. For a detailed explanation of c-ring removal see bulletin B15127A.

V. Spireloxit Retainer Ring and C-Ring Removal

1. Using the Port Servicing Tool, (90.320.8), start at the tab and begin to pry up the Spireloxit Retainer Ring.

2. Continue moving around the Spireloxit Retainer Ring until removed. Keep the ring for reassembly.

3. Tap the top of the rod until the rod and housing are below the retaining ring groove.

4. Remove the C-Style Retaining Ring, (90.285.80-1), using the C-Ring Removal Tool, (90.356). Position the hooked end of the tool below the c-ring. For best results locate the tool near either end of the c-ring.

5. Once the hooked end of the tool is firmly seated below the c-ring, begin pushing it toward the outside of the gas spring can. The handles will close naturally, and the c-ring will be extracted as you complete this motion. For a detailed explanation of c-ring removal see bulletin B15127A.

III. Rupture Disk

1. Check the port for deposits or burns and clean thoroughly. Inspect the service fitting and replace if it shows signs of damage. Lubricate threads and seats on the fitting and thread the service fitting into the gas spring port.

2. Install the new Seal onto the Rod Retainer.

3. Snap the new Piston Rider onto the Rod Retainer.

4. Slide the Cartridge Assembly onto the rod, making sure that the wiper end marked “TOP” is facing up.

5. Lubricate the seal with a few drops of the DADCO Assembly Oil, included in the seal kit.

6. Lubricate the inside wall of the Tube Assembly with all remaining DADCO Assembly Oil.

IV. Wiper Retainer Removal

1. Using a 2 mm allen wrench, start at the tab and begin to pry up the Spireloxit Retainer from the top of the gas spring and retain for reassembly.

2. Using the Port Servicing Tool, (90.320.8), open the wiper end marked “TOP” and push the wiper end marked “TOP” out of the rod.

3. Inspect the service fitting and replace if it shows signs of damage. Lubricate threads and seats on the fitting and thread the service fitting into the gas spring port.

VI. Rod & Cartridge Removal

1. To remove the Rod and Cartridge Assembly thread a T-Handle, (90.320.1 or 90.320.2), into the rod end. Pull the entire assembly out of the Tube Assembly. The spring body can be held in a vice (with soft jaws) while pulling out the assembly.

2. Once the cartridge and rod are removed from the Tube Assembly slide the cartridge off the rod and set aside for reassembly.

3. Remove the Piston Rider from the Rod Retainer and discard.

4. Remove the Seal from the Rod Retainer using the Port Servicing Tool, (90.20.8), and discard. Be careful not to scratch the rod.

5. Lightly polish the rod surface with an emery cloth (600 grit). Inspect the seal groove for any scratches or gouges. If the groove is damaged then the rod must be replaced.

6. Inspect the Tube Assembly for any damage, especially around the mouth of the Tube Assembly. Lightly polish out any scratches at the mouth of the Tube Assembly to avoid damaging seals during the reassembly process. If damage to the Tube Assembly is severe it must be replaced. Wash, clean and dry the inside thoroughly.

VII. Cleaning and Inspection

1. To remove the Rod and Cartridge Assembly thread a T-Handle, (90.320.1 or 90.320.2), into the rod end. Pull the entire assembly out of the Tube Assembly. The spring body can be held in a vice (with soft jaws) while pulling out the assembly.

2. Once the cartridge and rod are removed from the Tube Assembly slide the cartridge off the rod and set aside for reassembly.

3. Remove the Piston Rider from the Rod Retainer and discard.

4. Remove the Seal from the Rod Retainer using the Port Servicing Tool, (90.20.8), and discard. Be careful not to scratch the rod.

5. Lightly polish the rod surface with an emery cloth (600 grit). Inspect the seal groove for any scratches or gouges. If the groove is damaged then the rod must be replaced.

8. Inspect the Tube Assembly for any damage, especially around the mouth of the Tube Assembly. Lightly polish out any scratches at the mouth of the Tube Assembly to avoid damaging seals during the reassembly process. If damage to the Tube Assembly is severe it must be replaced. Wash, clean and dry the inside thoroughly.

VIII. Reassembly

1. Choose the appropriate seal kit. The seal kit number is laser marked on the back of the Tube Assembly. NOTE: Seal kits are not interchangeable among models.

2. Install the new Seal onto the Rod Retainer.

3. Snap the new Piston Rider onto the Rod Retainer.

4. Slide the Cartridge Assembly onto the rod, making sure that the wiper end marked “TOP” is facing up.

5. Lubricate the seal with a few drops of the DADCO Assembly Oil, included in the seal kit.

6. Lubricate the inside wall of the Tube Assembly with all remaining DADCO Assembly Oil.
VIII. Reassembly (Continued)

7. Place the rod and cartridge into the Tube Assembly. Use the Valve Bleed Tool, (90.360.4), or Port Servicing Tool, (90.320.8), to depress the valve to release any back pressure. Position the top of the cartridge just below the retaining ring groove.

8. Insert the C-Style Retaining Ring in the retaining ring groove using a DADCO C-Ring Installation Tool, (90.352). Be sure the C-Style Retaining Ring is fully seated in the retaining ring groove. For a detailed explanation of c-ring installation, see bulletin B01101D.

9. Thread the T-Handle, (90.320.1 or 90.320.2), into the end of the piston rod. Pull up on the T-Handle until the top of the cartridge is completely past the c-ring.

10. Insert the Spriodex Retaining Ring in the retaining ring groove using the Port Servicing Tool, (90.320.8). Be sure the Spriodex Retaining Ring is fully seated in the groove.

11. Install the Wiper Retainer. Tap with a soft mallet until the top of the Wiper Retainer flush with the top of the can. The rod wiper should be visible.

12. Thread the T-Handle, (90.320.1 or 90.320.2), into the end of the piston rod. Pull up on the T-Handle to verify the cartridge is completely past the c-ring. The rod must seat the cartridge assembly fully before continuing. Make sure the rod is extended to its proper stroke length. (If needed, depress the valve to facilitate full rod extension.)

IX. Charging

Self-Contained Mode

13. Using a 2 mm Allen wrench, tighten the three set screws at the top of the gas spring.

Linked Mode

14. Check for leaks at the top of the tube around the rod and at the base around the valve compartment by using mineral oil or water to test for leaks. Verify the pressure with a DADCO Load Cell using a DADCO Portable Test Stand, (90.305.3).

15. Securely re-install the Port Plug, (90.505.110).

16. Install the fitting into the port and pipe all gas springs back to the control panel, making sure that all connections are tight and that gas spring rods are extended.

17. Attach Charging Assembly (90.310.040) to the quick disconnect fill valve on the control panel and pressurize the system. Do not exceed the maximum charging pressure of 150 bar (2175 psi).

20. After reviewing this maintenance guide, if you require any additional training or have any questions please contact DADCO for assistance.

REPAIR TOOLS

Port Servicing Tool 90.320.8
Valve Bleed Tool 90.360.4
Quick Disconnect Charging Nipple: Self Contained 90.310.111 (G 1/8 Port)
T-Handle 90.320.1 (M6) 90.320.2 (M8)
C-Ring Installation Tool 90.352
C-Ring Removal Tool 90.356

SCLW PARTS LIST

(Model: 07500, 11800 and 18300)

Piston Rod 98.215.80...
Model Stroke
* Rod Wiper
* Wiper Retainer
* Set Screws (3)

Housing
**Piston Rider 98.22780...
Model

**Piston Seal 98.246.80...
Model

Rupture disk RD-40G

Compact Valve 90.505.110

SCLW PARTS LIST

(Model: 07500, 11800 and 18300)

Spiral Type Retaining Ring 98.25780...
Model

O-Ring Vent Cover

C-Style Retaining Ring 98.285.80...
Model

* These parts are not to be removed or replaced. ** These parts are included in the Seal Kit. Contact DADCO for assistance.