1. DESCRIPTION
The Viking Model D-2 Air Pressure Maintenance Device is a pressure regulator that automatically reduces the supply air pressure to a preset requirement when connected to a constantly maintained air supply.

2. LISTINGS AND APPROVALS
- UL listed: VIOT
- ULc Listed: VIOTC
- FM Approved: Pressure Maintenance Devices
- New York City Board of Standards and Appeals: Calendar No. 219-76-SA
- VdS Approved

3. TECHNICAL DATA
Specifications:
- A. Replaceable air filter.
- B. Ball check to prevent backflow.
- C. Restriction 1/16” (1.59 mm) to prevent rapid repressurization of a system.
- D. 1/4” (8 mm) tapped inlet and outlet.
- E. Minimum Recommended Ambient Temperature: 40 °F (4 °C)

Material Standards:
Refer to Figure 2.

Ordering Information:
Shipping weight: 3 pounds, 8 ounces (1.59 kg).
Available preassembled with bypass trim. Order Viking Part Number 07459 (includes Model D-2 Air Pressure Maintenance Device, Part Number 02280C). See Figure 1.

4. INSTALLATION
The Viking Model D-2 Air Pressure Maintenance Device regulates and restricts air flow.
1. The air or nitrogen supply provided to the Viking Model D-2 Air Pressure Maintenance Device must be continuous, clean, dry, and oil free.
2. Install the Viking Model D-2 Air Pressure Maintenance Device in the air or nitrogen supply piping between two valves to allow isolation of the device for maintenance and adjustment. A union should be installed between the outlet of the air pressure maintenance device and the downstream isolation valve for servicing.
3. Bypass piping may be provided to allow initial pressurization of system piping more rapidly than the restricted airflow through the air pressure maintenance device will allow. Bypass trim must include a valve which must be closed for the air pressure maintenance device to function. See Product Note above.
4. The air pressure maintenance device must be located in an area where the minimum ambient temperature is 40 °F (4 °C) or higher, and not subject to mechanical damage.
5. Determine the appropriate pressure to be maintained in the system. Refer to System Data and Technical Data for the system and components used.
6. If adjustment is necessary, refer to paragraph 6-A RESETTING.

5. OPERATION
Air pressure setting is factory set at 40 psi (2.8 bar) [inlet pressure to 175 psi (12 bar)]. Outlet pressure setting range is 5 to 75 psi (0.34 to 5.2 bar) ±2 psi (0.14 bar). Air pressure setting may be readjusted after installation. See paragraph 6-A, RESETTING. Refer to System Data and Technical Data for the system and components used.

6. INSPECTION, TESTS AND MAINTENANCE
The Viking Model D-2 Air Pressure Maintenance Device should be checked for correct pressure regulation after installation or repair by noting the air pressure reading within the system. If adjustment is necessary, refer to paragraph 6-A RESETTING. The filter should also be inspected and replaced or cleaned as required.
A. RESETTING (Refer to Figure 2.)
On installation or after repair, adjustment may be necessary.
1. Turn the air supply on and check the downstream pressure for desired reading.
2. If adjustment of the downstream pressure is necessary:
   a. Turn off the air supply. Relieve air pressure on the system side of the air pressure maintenance device.
   b. Loosen the lock nut (3).
   c. Turn the adjusting screw (1) clockwise to increase pressure or counter-clockwise to decrease pressure.
   d. Tighten the lock nut (3).

B. DISASSEMBLY (Refer to Figure 2.)
WARNING: DO NOT DISCONNECT OR DISASSEMBLE THE AIR PRESSURE MAINTENANCE DEVICE WITHOUT CLOSING THE INLET AND OUTLET ISOLATION VALVES. (REFER TO FIGURE 1.)
CAUTION: SYSTEM AIR PRESSURE WILL BE TRAPPED BETWEEN THE OUTLET OF THE AIR PRESSURE MAINTENANCE DEVICE AND THE DOWNSTREAM CONTROL VALVE. RELIEVE PRESSURE BEFORE PROCEEDING WITH DISASSEMBLY.
1. Carefully loosen the union between the outlet of the air pressure maintenance device (AMD) and the downstream control valve to relieve pressure.
2. To prevent accidental tripping of the system, manually maintain system air pressure at a constant level while the AMD is out of service.
3. Place the AMD in the upright position and remove the six cover screws (6) using a Phillips head screwdriver.
4. Separate the cover (4) from the body (9).
5. Remove the spring (11), the spring retainer (5), and diaphragm assembly (7) from the body (9).
6. The Schrader valve assembly (8) is now visible inside the body (9).

C. INSTALLATION OF NEW PARTS AND REASSEMBLY (Refer to Figure 2.)
To Replace the Schrader Valve Assembly (8) only:
1. Use a socket wrench with a 7/16” socket to unthread it from the body (9). Install the new Schrader valve assembly (8) and tighten with a 7/16” socket. If this is the only part to be replaced, the AMD can now be reassembled.
   a. Install the diaphragm assembly (7).
   b. Place the spring retainer (5) in the center of the diaphragm assembly (7).
   c. Remove the adjustment screw (1) from the cover (4).
   d. Place the cover (4) onto the body (9).
   e. Install the six cover screws (6) using a Phillips head screwdriver.
   f. Place the spring (11) in the center of the cover (4).
   g. Reinstall the adjustment screw (1).
The AMD is now ready to be tested and installed into the valve trim. Note: When placing system in operation, open the INLET globe valve first!
To Replace the Parts Included in the Repair Kit:
1. Remove the six cover screws (6) from the cover (4) of the AMD using a Phillips head screwdriver.
2. Separate the cover (4) from the body (9).
3. Remove the spring (2), the spring retainer (5), and the diaphragm assembly (7).
4. Rotate the AMD upside down to access the filter cap (18). Remove the filter cap (18) from the valve housing (10) using a socket wrench with a 1-1/4” socket.
5. With the filter (17) exposed, remove the filter seal (16) using a small flathead screwdriver. The filter (17) should now fall easily out of the filter cap (18).
6. Remove the valve housing (10) from the body (9) using a socket wrench with a 1-1/4” socket.
7. Install the new valve housing (10) into the body (9).
8. While holding the filter cap (18), insert the new filter (17) and new filter cap (18) onto the body (9) and tighten with the 1-1/4” socket.
9. Rotate the AMD back into the upright position. Place the new diaphragm assembly (7) into the body (9).
10. Set the spring retainer (5) in the center of the diaphragm assembly (7).
11. Unthread the adjustment screw (1) from the cover (4) by hand.
12. Place the cover (4) onto the body (9).
13. Install the six cover screws (6) using a Phillips head screwdriver.
14. Place the spring (11) in the center of the cover (4).
15. Reinstall the adjustment screw (1).
The AMD is now ready to be tested and installed into the valve trim. Note: When placing system in operation, open the INLET globe valve first!
7. AVAILABILITY
The Viking Air Pressure Maintenance Device is available through a network of domestic and international distributors. See the Viking Corp. Web site for closest distributor or contact The Viking Corporation.

8. GUARANTEES
For details of warranty, refer to Viking’s current list price schedule or contact Viking directly.

Figure 1
Air Maintenance Device and Preassembled Trim with Bypass
(Viking Part Number 07459)
The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com
Visit the Viking website for the latest edition of this technical data page: www.vikinggroupinc.com

A = 4-13/16" (122 mm) ± 1/4" (6.4 mm) depending on pressure setting
B = 2-5/32" (54.8 mm)

**Figure 2**
Air Maintenance Device
(Viking Part Number 02280C)

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
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<tr>
<td>1</td>
<td>02273A</td>
<td>Adjustment Screw</td>
<td>Brass UNS-C36000</td>
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<tr>
<td>2</td>
<td>01791A</td>
<td>Spring</td>
<td>Stainless Steel UNS-S30200</td>
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<td>3</td>
<td>02275A</td>
<td>Lock Nut</td>
<td>Brass UNS-C36000</td>
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<tr>
<td>4</td>
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<td>Cover</td>
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<td>5</td>
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<td>Spring Retainer</td>
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<td>6</td>
<td>04505A</td>
<td>Screw, R.H.P.D. #10-24 x 5/8 Lg.</td>
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<td>8</td>
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<td>Schrader Valve Assembly</td>
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<td>Retainer, Orifice Plate</td>
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<td>02181A</td>
<td>Filter Seal</td>
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<td>17</td>
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<td>Filter</td>
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<td>Filter Cap</td>
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-- Indicates replacement part is not available.

**SUB-ASSEMBLY**

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<td>Repair Kit</td>
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Replaces page 127a-d, dated November 25, 2013.
(Added P65 Warning.)