

The AD-9 air dryer is a desiccant type, discharge line filtration system that removes solid and vapor contaminants and provides dry air to the brake system. It incorporates an automatic drain valve which is controlled by the compressor governor. The AD-9 is designed for vehicles that utilize compressors of up to 25cfm displacement and where normal compressor loaded time is no more than 60 seconds and unloaded time is 30 seconds or greater.

The AD-9 is offered in two different physical sizes. The smaller, and more common, AD-9 contains a 200 cu. in. purge volume and is intended for most truck and tractor applications. The larger version, or extended purge model, has a 300 cu. in. purge volume and is intended for higher air usage vehicles such as transit coaches. In addition to the two sizes, a special version of the AD-9 is available for use on European style air systems that incorporate the unloader function in a separate valve known as the Discharge Line Unloader (DLU) valve. When the AD-9, DLU model, is used in this type of system, the need for the Discharge Line Unloader valve is eliminated.

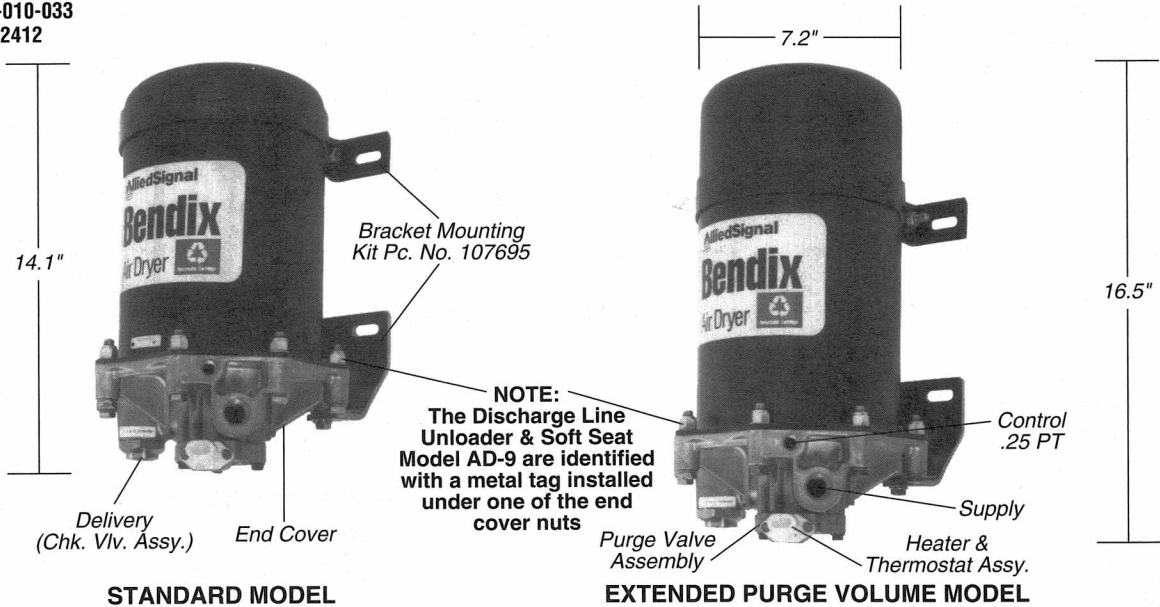
All AD-9 Air Dryers are equipped with either a 12 or 24 volt, 75 watt heater and thermostat assembly which is now serviceable as a separate assembly.

For additional maintenance and technical information see Service Data Sheet SD-08-2412.

**WEIGHT - 28 LBS. APPROX. (STD. AD-9)**

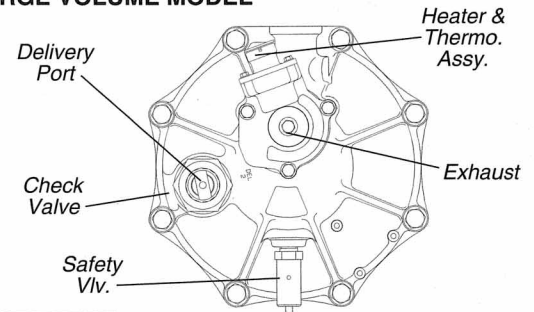
**VMRS NO. - 13-010-033**

**DEVICE CODE - 2412**

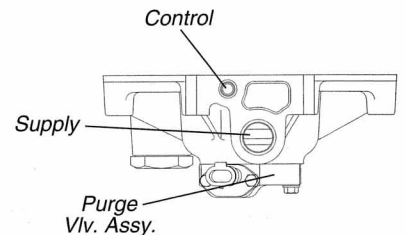


### Universal Kits & Replacement Assemblies

| Part No. | Description                         |
|----------|-------------------------------------|
| 107796   | Service New - Desiccant Cartridge   |
| 107794   | Reman. Exchg. - Desiccant Cartridge |
| 109579   | 24 Volt Heater & Thermo.            |
| 109578   | 12 Volt Heater & Thermo.            |
| 107798   | Purge Valve Assy. Maintenance Kit   |
| 107695   | Bracket Kit                         |

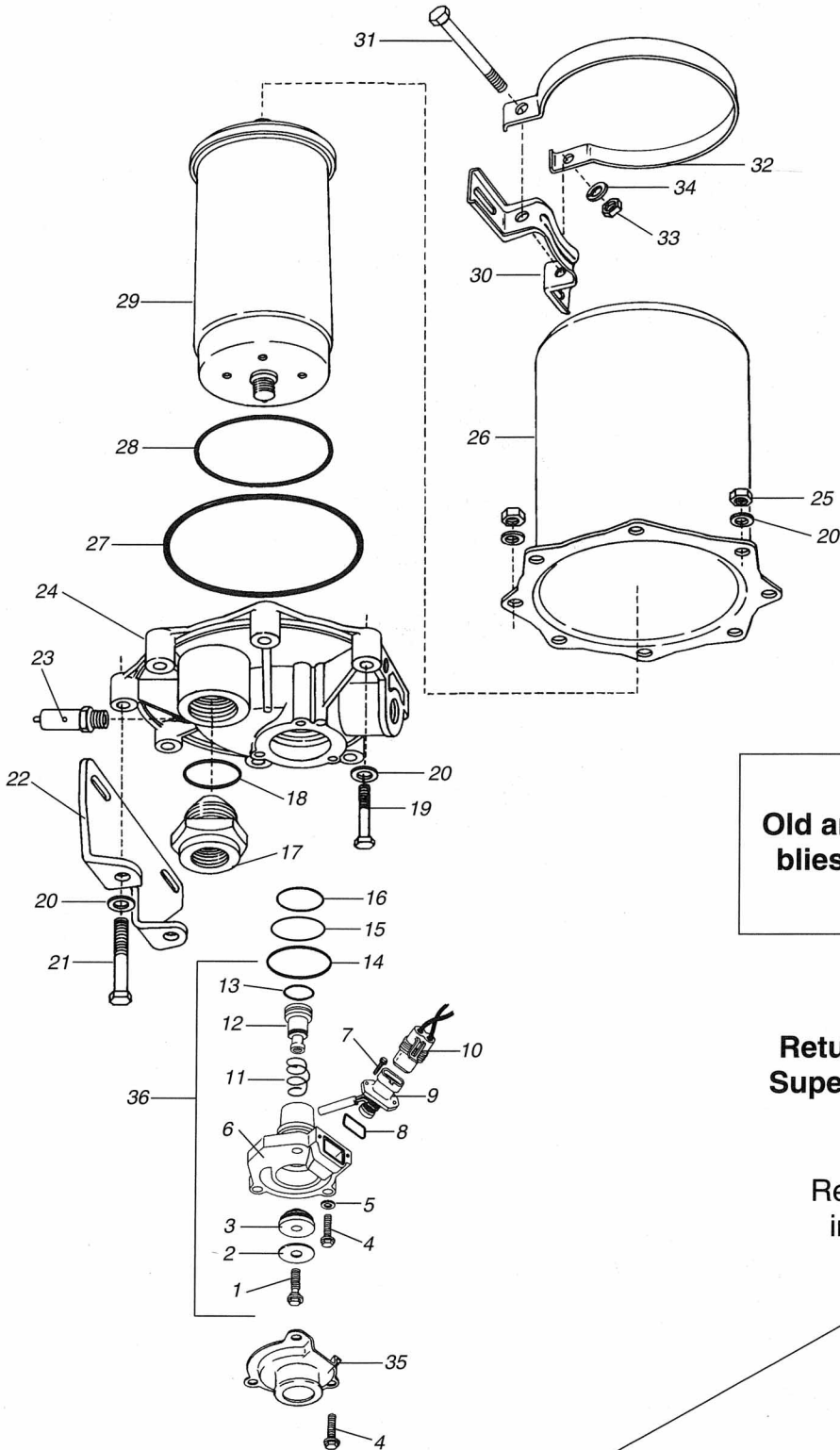


**End Cover Bottom View**



**End Cover Side View**

| AD-9 Service Part No. | AD-9 Reman. Exch. Part No. | End Cover Information and Detail |                             |                   |                          |                                      |   |                      | Comments                      |
|-----------------------|----------------------------|----------------------------------|-----------------------------|-------------------|--------------------------|--------------------------------------|---|----------------------|-------------------------------|
|                       |                            | End Cover Assy. Compl. New       | Supply & Delivery Port Size | Check Valve Assy. | Purge Valve Assy.        |                                      |   | Heater & Thermo. Kit |                               |
|                       |                            |                                  |                             |                   | Heater Voltage (75 Watt) | Purge Vlv. Assy. Compl. w/Heater New | Purge Vlv. Assy. Compl. w/Heater Reman. |                      |                               |
| 65224                 | —                          | 65229                            | .75" PT                     | 107799            | 24                       | 109570                               | 109695                                  | 109579               |                               |
| 65225                 | 109685                     | 65231                            | .50" PT                     | 107800            | 12                       | 109569                               | 109686                                  | 109578               |                               |
| 65226                 | 109687                     | 65230                            | .75" PT                     | 107799            | 12                       | 109569                               | 109686                                  | 109578               |                               |
| 65227                 | 109688                     | 65229                            | .75" PT                     | 107799            | 24                       | 109570                               | 109695                                  | 109579               | Extended Purge                |
| 65228                 | —                          | 65230                            | .75" PT                     | 107799            | 12                       | 109569                               | 109686                                  | 109578               | Extended Purge                |
| 65243                 | —                          | 65231                            | .50" PT                     | 107800            | 12                       | 109569                               | 109686                                  | 109578               | Extended Purge                |
| 65453                 | —                          | 65454                            | .50" PT                     | 107800            | 24                       | 109570                               | 109695                                  | 109579               | Extended Purge                |
| 65499                 | —                          | 65498                            | .50" PT                     | 107800            | 12                       | 109580                               | —                                       | 109578               | Discharge Line Unloader Model |
| 65605                 | —                          | 65604                            | .50" PT                     | 107800            | 24                       | 109599                               | —                                       | 109579               | Discharge Line Unloader Model |
| 65649                 | —                          | 65653                            | .75" PT                     | 107799            | 24                       | 109570                               | 109695                                  | 109579               | Soft Seat                     |
| 65650                 | 109689                     | 65654                            | .50" PT                     | 107800            | 12                       | 109569                               | 109686                                  | 109578               | Soft Seat                     |
| 65651                 | 109690                     | 65655                            | .75" PT                     | 107799            | 12                       | 109569                               | 109686                                  | 109578               | Soft Seat                     |
| 65652                 | 109691                     | 65653                            | .75" PT                     | 107799            | 24                       | 109570                               | 109695                                  | 109579               | Soft Seat - Extended Purge    |



**IMPORTANT**  
 Old and new purge valve assemblies are interchangeable in all AD-9 Air Dryers

**Obsolete**  
 Return for Core Credit Toward  
 Superseding Reman. Assembly

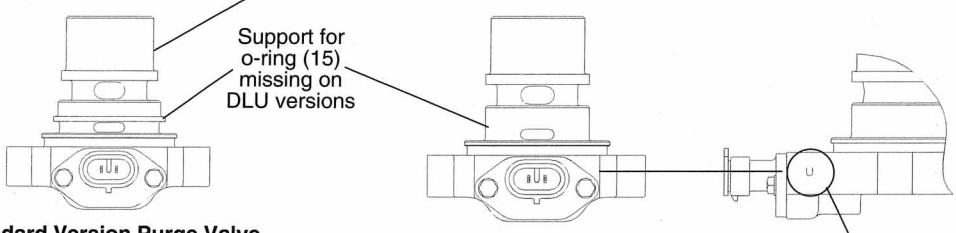


Replace obsolete units with  
 interchangeable Reman.  
 assys. below

**Standard Version Purge Valve  
 Assy.**  
 New 109569 - 12 V  
 Reman 109686 - 12 V  
 New 109570 - 24 V  
 Reman 109695 - 24 V

**Discharge Line Unloader Purge  
 Valve Assy.**  
 New 109580 - 12 V  
 New 109599 - 24 V

Letter "U" Stamped Here  
 to Identify DLU Version



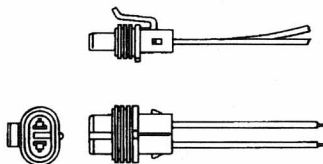
**AD-9 Air Dryer Parts List  
Kits and Service Replacement Assemblies**

| Key | Description                       | New Replmt Purge Vlv. Assy. Complt. w/Heater<br>109569 - 12v<br>109570 - 24v | Reman Purge Vlv. Assy. Complt. w/Heater<br>109686 - 12v<br>109695 - 24v | New Replmt Purge Vlv. Assy. Complt. w/Heater (DLU)<br>109580 - 12v<br>109599 - 24v | Desiccant Cartridge Kit<br>New - 107796<br>Reman - 107794 | Purge Vlv. Maint. Kit<br>107798 | Heater & Thermo Kit<br>109578 - 12v<br>109579 - 24v<br>(See Note 1) | Check Vlv. Maint. Kit<br>107799 - 3/4"<br>107800 - 1/2" | Mounting Brkt. Kit<br>107695 |
|-----|-----------------------------------|--|---|--|---|---------------------------------|---|---|------------------------------|
| 1   | Purge Valve Shoulder Bolt         |  |   |  |   | X                               |   |   |                              |
| 2   | Exhaust Diaphragm                 |  |   |  |   | X                               |   |   |                              |
| 3   | Purge Valve                       |  |   |  |   | X                               |   |   |                              |
| 4   | 1/4" Tapping Screw                | X-3  | X-3   | X-3  |   | X-3                             |   |   |                              |
| 5   | Flat Washer                       | X-3  | X-3   | X-3  |   |                                 |   |   |                              |
| 6   | Purge Valve Housing               |  |   |  |   |                                 |   |   |                              |
| 7   | #8 Self Tapping Screw             |  |   |  |   |                                 | X-2   |   |                              |
| 8   | Sealing Ring                      |  |   |  |   |                                 | X   |   |                              |
| 9   | Heater & Thermostat Assy.         |  |   |  |   |                                 | X   |   |                              |
| 10  | Wire Harness & Connector          | 298948   |   |  |   |                                 |   |   |                              |
| 11  | Spring                            |  |   |  |   | X                               |   |   |                              |
| 12  | Purge Piston                      |  |   |  |   |                                 |   |   |                              |
| 13  | O-Ring                            |  |   |  |   | X                               |   |   |                              |
| 14  | O-Ring                            | X  | X   | X  |   | X                               | X   |   |                              |
| 15  | O-Ring                            | X  | X   |  |   | X                               | X   |   |                              |
| 16  | O-Ring                            | X  | X   | X  |   | X                               | X   |   |                              |
| 17  | Check Valve Assy.                 |  |   |  |   |                                 |   | X   |                              |
| 18  | Check Valve O-Ring                |  |   |  |   |                                 |   | X   |                              |
| 19  | 3/8" x 2 1/8" End Cover Cap Screw |  |   |  |   |                                 |   |   |                              |
| 20  | 3/8" Special Washer               |  |   |  |   |                                 |   |   | X-4                          |
| 21  | 3/8" x 2 3/8" Bracket Cap Screw   |  |   |  |   |                                 |   |   | X-2                          |
| 22  | Lower Mounting Bracket            |  |   |  |   |                                 |   |   | X                            |
| 23  | Safety Valve                      | 285849   |   |  |   |                                 |   |   |                              |
| 24  | End Cover                         |  |   |  |   |                                 |   |   |                              |
| 25  | Lock Nut                          |  |   |  |   |                                 |   |   | X-2                          |
| 26  | Housing                           |  |   |  |   |                                 |   |   |                              |
| 27  | O-Ring                            |  |   |  | X   |                                 |   |   |                              |
| 28  | O-Ring                            |  |   |  | X   |                                 |   |   |                              |
| 29  | Desiccant Cartridge Assy.         |  |   |  | X   |                                 |   |   |                              |
| 30  | Upper Mounting Brkt.              |  |   |  |   |                                 |   |   | X                            |
| 31  | 5/16" x 4 1/2" Upper Brkt. Bolt   |  |   |  |   |                                 |   |   | X                            |
| 32  | Upper Brkt. Strap                 |  |   |  |   |                                 |   |   | X                            |
| 33  | 5/16" Nut                         |  |   |  |   |                                 |   |   | X                            |
| 34  | 5/16" Lock Washer                 |  |   |  |   |                                 |   |   | X                            |
| 35  | Exhaust Cover (See Note 2)        | 112399   |   |  |   |                                 |   |   |                              |
| 36  | Complete Purge Valve Assy.        | X  | X   | X  |   |                                 |   |   |                              |

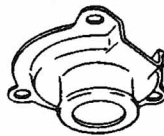
**GENERAL:** All kits and replacement parts and assemblies can be used in any version of the AD-9 unless otherwise noted.

**Note 1:** These heater and thermostat kits are for use in the new replacement purge valve assemblies and can not be installed in the old configuration purge valve assembly.

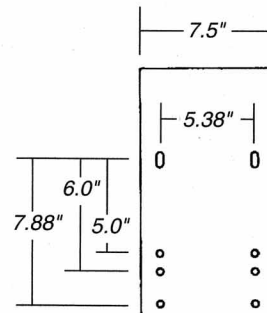
**Note 2:** The service AD-9 Air Dryers listed are not supplied with an extended exhaust cover, however the extended exhaust cover Pc No. 112399 can be installed on any new purge valve assemblies to allow the connection of a hose to direct expelled contaminants, away from the vehicle. This exhaust cover is available as a separate item.



**Wiring Harness & Connector  
Pc. No. 298948**

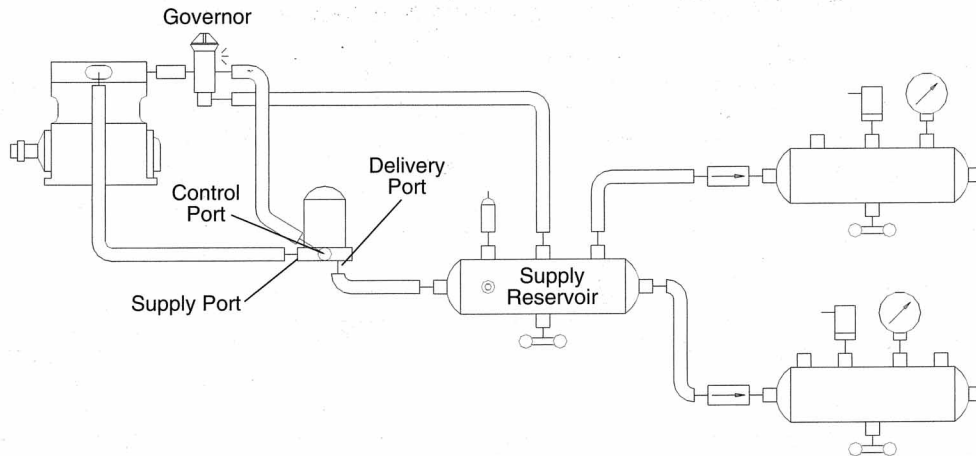


**Extended Exhaust Cover  
Pc. No. 112399**

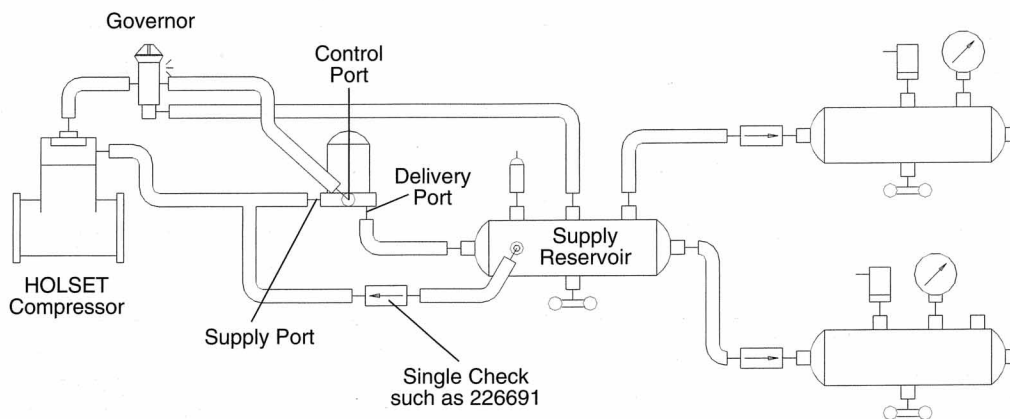


**Universal Mounting Plate  
Pc. No. 248478  
(Can be used to mount ANY Air Dryer to vehicle)**

**AD-9 in Standard Charging System**



**Holset Compressor and Soft Seat AD-9 Charging System**



**DLU Model AD-9 in Discharge Line Unloader Charging System  
(Discharge Line Unloader Valve Replaced by AD-9)**

