Checklist for the Bendix® Air System Inspection Cup (BASIC) Test

Note: Follow all standard safety precautions. Only for vehicles using an air dryer.

Service Writer - Please fill out the information in this section. ➔

Also, indicate any customer complaint below. ➔

Number of Days Since Air Tanks Were Last Drained: _____ Date: _____ Vehicle #: _____

Engine SN _____ Vehicle Used for: _____ Typical Load: _____ (lbs.)

No. of Axles: ____ (tractor) ____ (trailer) No. of Lift Axles: ____ Technician's Name: _____

Checklist for Technician

Customer's Complaint (Please check all that apply)	**Have you confirmed complaint? ➔**
"Relay valve ❑ leaks oil / ❑ malfunctions"	❑ no ❑ yes*
"Dash valve ❑ leaks oil / ❑ malfunctions"	❑ no ❑ yes*
❑ "Air dryer leaks oil"	❑ no ❑ yes*
❑ "Governor malfunction"	❑ no ❑ yes*
❑ "Oil in gladhands"	❑ no ❑ yes*
how much oil did you find? _____	
❑ "Oil on ground or vehicle exterior"	❑ no ❑ yes*
amount described: _____	
❑ "Short air dryer cartridge life" replaces every: _____ ❑ miles, ❑ kms, or ❑ months	
❑ "Oil in air tanks" amount described: _____ We will measure amount currently found when we get to step B of the test.	
❑ "Excessive engine oil loss" amount described: _____	
Is the engine leaking oil?	❑ no ❑ yes*
Is the compressor leaking oil?	❑ no ❑ yes*
❑ Other complaint: _____	
❑ No customer complaint.	

* Note: A confirmed complaint above **does NOT** mean that the compressor must be replaced: the full BASIC test below will investigate the facts.

BASIC test starts here:

STEP A - Select one:

- ❑ This is a low air use vehicle: Line haul (single trailer) with 5 or less axles, **or**
- ❑ This is a high air use vehicle: Garbage truck, transit bus, bulk unloader, or line haul with 6 or more axles. **Then go to Step B.**

STEP B - Measure the Charging System Contents

1. Park and chock vehicle on level ground. Drain the air system by pumping the service brakes.
2. Completely drain **ALL** the air tanks into a single **BASIC** cup.
3. If there is less than one unit of contents total, end the test now and return the vehicle to service. Vehicle passes.
4. **If more than one oil unit of water (or a cloudy emulsion mixture) is found:**
   (a) Change the vehicle's air dryer cartridge - see Footnote 1,
   (b) Conduct the 4 minute leakage test (Step D),
   (c) **STOP the inspection**, and **check the vehicle again after 30 days** - see Footnote 2. STOP + CK.

Otherwise, go to Step C.

Note for returning vehicles that are being retested after a water/ cloudy emulsion mixture was found last time and the air dryer cartridge replaced: If more than one oil unit of water or a cloudy emulsion mixture is found **again,** stop the BASIC test and consult the air dryer's Service Data sheet troubleshooting section.

Footnote 1: Note: Typical air dryer cartridge replacement schedule is every 3 yrs/ 300K miles for low air use vehicles and every year/100K miles for high air use vehicles.

Footnote 2: Caution: To get an accurate reading for the amount of oil collected during a 30 day period, ask the customer not to drain the air tanks before returning. (Note that 30-90 days is the recommended air tank drain schedule for vehicles equipped with a Bendix air dryer that are properly maintained.) If, in cold weather conditions, the 30 day air tank drain schedule is longer than the customer's usual draining interval, the customer must determine, based on its experience with the vehicle, whether to participate now, or wait for warmer weather. See the cold weather tips in Bendix Bulletins TCH-008-21 and TCH-008-22 (included in Appendix B of the Advanced Troubleshooting Guide).

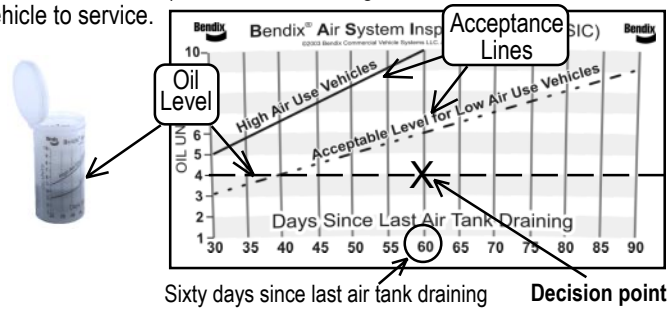
STEP C - How to Read the BASIC Test Chart

Use the chart (label) on the BASIC test cup to decide the action to take. Use the lower acceptance line for low air use vehicles, and upper line for high air use vehicles (from Step A).

1. Record days since air tanks were last drained. _____ days ➔	**2.** Record amount of oil found: _____ units ➔	**3. Action to take** ➔
If number of days is: 30-60 days (high air use) or 30-90 days (low air use) ➔	if oil level is **at or below** acceptance line for number of days ➔	**System OK. Return to service.** STOP TEST
	if oil level is **above** acceptance line for number of days ➔	**Go to Step D**
Otherwise . . . ➔ (if the number of days is unknown, or outside the limits above)	if oil level is **at or below** 30-day acceptance line ➔	**System OK. Return to service.** STOP TEST
	if oil level is **above** 30-day acceptance line ➔	**Stop inspection. Test again after 30 days. See Footnote 2.** STOP + CK.

BASIC Test Example

An oil level of 4 units in a sixty-day period is within the acceptance area (at or below the line) for both low and high air use vehicles. Return the vehicle to service.



Sixty days since last air tank draining — **Decision point**

STEP D - Air Brake System Leakage Test

Park the vehicle on level ground and chock the wheels. Build system pressure to governor cut-out and let the pressure stabilize for one minute.

1: Observe the dash gauges for two additional minutes without the service brakes applied. **2:** Release the parking brake and apply the service brakes (you may use a block of wood to hold the pedal in position). Allow the air pressure to stabilize, and then observe the dash gauges for 2 minutes. **If you see a noticeable decrease** of the readings, repair leaks and repeat this test to confirm that air leaks have been repaired. Return vehicle to service, but please repeat BASIC test at next service interval. Note: Leaks can also be present in the charging system, parking brakes, and/or other components.

If no air leakage was detected, and if you are conducting this test after completing Step C, go to Step E.

STEP E - If no air leakage was detected in Step D

Replace the compressor. Note: If the compressor is within warranty period, please follow standard warranty procedures. Attach the completed checklist to warranty claim.

If, after a compressor was already replaced, the vehicle fails the BASIC test again, do not replace the compressor again, instead use the Advanced Troubleshooting Guide to investigate the cause(s).