



FIX-N-FAX

Equipment Standard

Number 52c

Mandatory Compliance

Date: August 2011

Pre-Trip Air Brake System Test and Checks

CAUTION !!! BEFORE STARTING THESE TESTS AND CHECKS, THE VEHICLE'S WHEELS MUST BE CHOCKED.

Note: These tests along with the vehicle Pre-trip Inspection should be conducted as close to the beginning of the daily shift as possible. (ref. CVC34500.1)

- Check the air compressor belt (if applicable) for tightness and integrity.
- Check brake drums, brake linings, brake hoses, slack adjusters, and brake pots
- Check brake adjustment (ref. [Fix N Fax #52a](#))
- In-Cab Air Brake System Check
 1. Drain each air reservoir to 0 psi. This will allow most of the contaminants (water and oil) to be eliminated from the tank. Close drains.
 2. Start engine and run at fast idle after reaching operating oil pressure.
 3. Note the air compressor governor cut-out pressure. Governor cut-out pressure is approximately 120 psi. For vehicles equipped with ABS brakes, the cut-out pressure is approximately 130 psi
 4. Apply service brakes and note stoplight operation. Stoplight operation should occur with approximately 5/8" pedal travel or about 4-6 psi application air pressure.
 5. Drain air pressure from system by pumping brakes slightly and note governor cut-in pressure. The governor should cut-in at no lower than 85 psi. Continue to drain air pressure by pumping the brakes and note low air warning light and buzzer. The low air warning light and buzzer should activate between 55 and 75 psi.

6. With all the drain cocks closed, build up air pressure in the system to governed air pressure (120 psi or 130 psi for ABS system). Air pressure should build from 85 psi to 100 psi in 45 seconds (if the system has a larger storage tank configuration, the build up could take longer and still be safe).
7. The following air pressure loss tests should be made with the parking brake released:

- a. Stop the engine and observe the pressure gauge for two (2) minutes.
Pressure loss for one-minute should not exceed:
 1. 2 psi for a single vehicle
 2. 3 psi for a two-vehicle combination.
 3. 5 psi for three or more vehicles in combination.

If loss is excessive, contact your Unit Fleet Manager and report the air loss. You may continue to check for leaks at air line connections, application valve, relay valve, inversion valve (if used), governor, and any other items on “pressure” (supply) side of the air system. Ensure all air leaks are repaired before operating the vehicle.

- b. With full system air pressure (governed psi) turn off the engine. With the parking brake released, apply and hold a full foot valve application. Observe the pressure gauge for two (2) minutes (listen for air leaks).

Upon application of the foot valve there will be an initial pressure drop of approximately 10% from the original pressure reading. After the initial application pressure drop, the maximum pressure loss allowed should not exceed the following psi for one-minute during application:

1. 3 psi for a single vehicle.
2. 4 psi for a two-vehicle combination.
3. 6 psi for three or more vehicles in combination.

If loss is excessive, contact your Unit Fleet Manager and report the air loss. Check for leakage at the air line connections, double check valves, quick release valves, and any other component on the “application” (service) side of air system. Ensure any air leak is repaired before operating the vehicle.

- c. Air loss with trailer brakes applied (if applicable). Apply the hand valve before releasing the foot valve in the preceding test and check the maximum pressure drop for the following:
 1. 2 psi/min single towed vehicle
 2. 4 psi/min two or more towed vehicles
8. Apply and release service brakes. Sluggish application or release may indicate a leaking diaphragm, weak return springs, binding brake cam shaft, damaged or crimped air lines and damaged quick release valve.

Road Testing Brakes:

Brakes should only be tested on dry, clean, reasonably smooth and level roadway. A true test of brake performance cannot be made if the roadway is wet, greasy or covered with loose dirt so that all tires do not grip the road equally.

Testing will also be adversely affected if the roadway is crowned so as to shift the weight of vehicle toward the wheels on one side or if the roadway is so rough that the wheels tend to bounce.

Test brakes at no more than 10 mph with both light and heavy pedal pressure; however, avoid locking the wheels and sliding the tires. Check for any pulling to one side, unusual feel or delay in stopping action.