



FIX-N-FAX

Equipment Standard

Number 52b

Mandatory Compliance

Date: August, 2011

Driver/Operator Brake System Maintenance

CAUTION !!! ALWAYS CHOCK WHEELS WHEN DRAINING AIR TANKS OR ADJUSTING BRAKES.

Air Reservoir Tank:

As air is compressed in the air compressor it is heated and infused with moisture and contaminants (oil). When this heated air begins to cool in the air tanks the moisture and contaminants condense and begin to fill the air tank with water and oil.

Air tanks must be drained daily to keep this moisture and oil from entering further into the braking system. If the air tanks have a “spitter” drain valve or the vehicle is equipped with an air dryer, the tanks will be drained weekly (or more frequently when used in adverse moist conditions.)

Air Compressor

- Maintain the correct compressor drive belt tension (if belt driven). The “Rule of Thumb” for checking the belt tension is: belt deflection at the mid-point between pulleys should be equal to the width of the belt’s back edge
- The compressor air intake filter should to be inspected during the operator’s Preventive Maintenance Inspection or more often depending on conditions.

Compressor Air Cleaner:

1. Compressors equipped with dry type air cleaners are to be replaced every year or more frequently as driving conditions require.
 2. Compressors receiving air through the engine air cleaner require no additional maintenance other than maintenance normally required for the engine air cleaner.
- While driving the vehicle with no brake applications being made, the compressor should maintain maximum air reservoir pressure without continuous cycling.

When inspecting the system, ensure the following:

- Pressure drop upon full application does not exceed 8-12 psi.
- Push rod travel is within tolerances on all chambers
- Drums, bearings, and tires are not overheating.
- Parking / spring brake operation

External Conditions Which May Affect Brake Performance:

- **TIRES**

Vehicle tires having unequal contact with the road will cause unequal braking. Tires must be equally inflated, the tread pattern of the right and left tires must be close to equal and the tire size and manufacturer must be identical for each axle.

- **VEHICLE LOADING**

When a vehicle is unequally loaded, the most heavily-loaded wheels require more braking power causing vehicle instability. A heavily-loaded vehicle requires more braking effort. A vehicle loaded heavier than its designed maximum weight, or Gross Vehicle Weight Rating (GVWR), is unsafe and in violation of state law.

- **WHEEL BEARINGS**

A loose wheel bearing may allow for inconsistent drum to shoe contact causing erratic brake action.

- **FRONT END ALIGNMENT**

Misalignment of the front end will cause the brakes to pull to one side.

- **AXLE SEAL OIL LEAKS**

Axle oil seal leaks can cause the brake shoes to become contaminated with oil, causing uneven braking, that can adversely affect vehicle's stability.

Trouble Shooting:

The driver must be aware of the condition of the vehicle's braking system at all times. The vehicle operator can do this by:

- SEEING the pressure gauges
- HEARING the warning signals
- FEELING the braking response of the vehicle

From these methods of observation, the driver should be able to notice defects developing and be aware service or adjustments are required.

The extent of repairs to be completed by the driver will depend upon the amount of mechanical experience/training of the driver, the availability of repair service and the physical location of the operation.

Suggested Maintenance and Repair Levels:

	Driver Level	Repair Technician or Shop Level
Compressor	Air filter service, Drive belt adjustment	Belt replacement, overhaul, exchange, major plumbing repair
Adjustments	Slack adjusters may be adjusted by the driver if the driver has been trained (<u>manual slack adjusters only</u>)	Slack adjuster replacement, brake relining, chamber or diaphragm replacement, etc.
Reservoirs	Draining, drain cock replacement, minor leaks from fitting	Relief valve adjustment, governor settings
Valves		Valve and component overhaul or complete unit exchanges, etc

Maintenance:

The driver is responsible for the daily inspection of the air brake system prior to operation of the vehicle.

During the Pre-use and the Preventive Maintenance Inspection, the operator should run through the procedure in the pre-service Air Brake System Test and Check outlined in [Fix-n-Fax 52c](#).