



Service Operations

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SERVICE NEWS LETTER

016

DATE: MARCH 31, 1991
TO: DEALER SERVICE MANAGER
FROM: SERVICE OPERATIONS DEPARTMENT
RE: AIR BRAKE "FOOT" VALVE LEAKAGE
FILE: POLICY SECTION OF THE TECHNICAL BULLETIN BINDER

An increase in brake valve replacement has been reported by the field. All replaced brake valves had a complaint of constant leakage of air through the exhaust port at the bottom of the valve. In several cases more than one brake valve assembly has been replaced on the same vehicle within a short period of time.

Investigation of these valves revealed that the leakage was due to contaminating debris caught between the exhaust valve rubber sealing cushion and the ridge seat cast into the valve's lower body (see the illustration, items 42 and 44).

Further investigation revealed this debris to be particles of rust. These particles were found to be imbedded in the rubber sealing cushion, preventing complete sealing of the cushion to its seat in the lower body.

The formation of rust in the air system may be attributed to the air tanks. This rust may be inhibited by the proper maintenance recommended in the Owner's Manual. The air in the tanks should be bled daily, especially when the vehicle is not equipped with an air drier. All the air should be bled from the system to stem the occurrence of water in the tanks.

Nissan Diesel Motor Co., Ltd., treats the inside of all the air lines with a special coating during manufacture of the air lines to stem the occurrence of rust in them.

To assure the replacement of a brake valve assembly will correct the customer's air leakage problem the first time, the cause of the problem must be addressed. UD Dealers are advised to remove the exhaust valve assembly in any brake valve assemblies being replaced so a determination can be made as to the cause of the valve failure. If the contaminating debris is found to be the cause, proceed as follows:

1. Before installing the replacement brake valve assembly, remove the air tanks and fill them with "Safety-Kleen" or other similar cleaning solution. Flush out the tanks, noting the debris that washes out.

If the debris that washes out indicates flakes of rust, the air tanks should be replaced since no amount of flushing will assure the removal of the flakes.

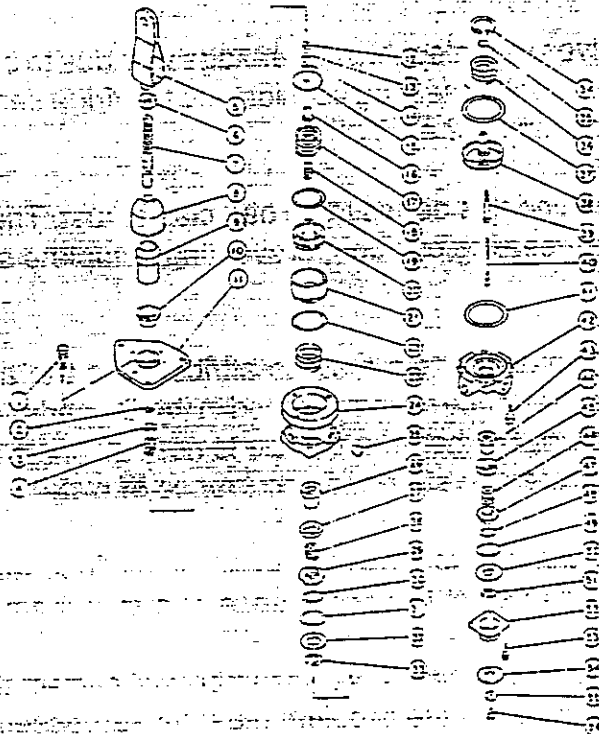
2. Locate the two air supply lines from the air tanks to the brake valve "supply" ports and blow them out. Every effort should be made to determine the kind of debris that exists in the air lines. It may be necessary to fill the lines with "Safety-Kleen" before if the lines exhibit rusty flakes during the initial blow out described. All debris must be removed from the lines.

The recommended method is to blow out lines from BOTH directions.

3. Install the new brake valve and re-connect all the air lines.
4. The UD Dealer should stress to the customer the importance of completely draining his air tanks daily.

The customer also has the option of installing an air drier on the vehicle which will eliminate the collection of water in the air tanks. **Maintenance of the air drier must be performed at least yearly to assure proper operation and protection of the air system.**

5. UD Dealers should stock the UD air drier rebuild kits in preparation for servicing UD Trucks equipped with this option which may require this important periodic service.



Exploded view of the brake valve

CS-92 3022

1 Bolt	18 Spring seat	29 O-ring retainer	43 Bolt
2 O-ring	19 Sub spring seat	30 O-ring	44 Lower valve
3 Stem disk	17 Air spring	31 O-ring	45 Valve retainer
4 Stem spring	18 Sub spring	32 Special washer	46 Valve spring
5 Valve	19 O-ring	33 Retaining ring	47 O-ring retainer
6 Nut	20 Piston	34 Retaining ring	48 O-ring
7 Push rod	21 Bushing	35 O-ring	49 O-ring
8 Dust cover	22 O-ring	36 Renew piston spring	50 Special washer
9 Plunger	23 Piston return spring	37 O-ring	51 Retaining ring
10 Bushing	24 Upper body	38 Renew piston	52 Exhaust cover
11 Mount plate	25 Plug	39 Sleeve	53 Bolt
12 Nut	26 Upper valve	40 Stem	54 Exhaust check
13 Lock washer	27 Valve retainer	41 O-ring	55 Retaining washer
14 Special washer	28 Valve spring	42 Lower body	56 Forming screw

* indicates repair kit