



Memorandum

U.S. Department
of Transportation

**Federal Railroad
Administration**

Date: June 22, 2000

Reply to Att. of: MP&E 00-03

Subject: Draft Gear Arrangements and Cushioning Devices - §§215.127 & 215.129

From: Edward R. English
Director, Office of Safety Assurance and Compliance

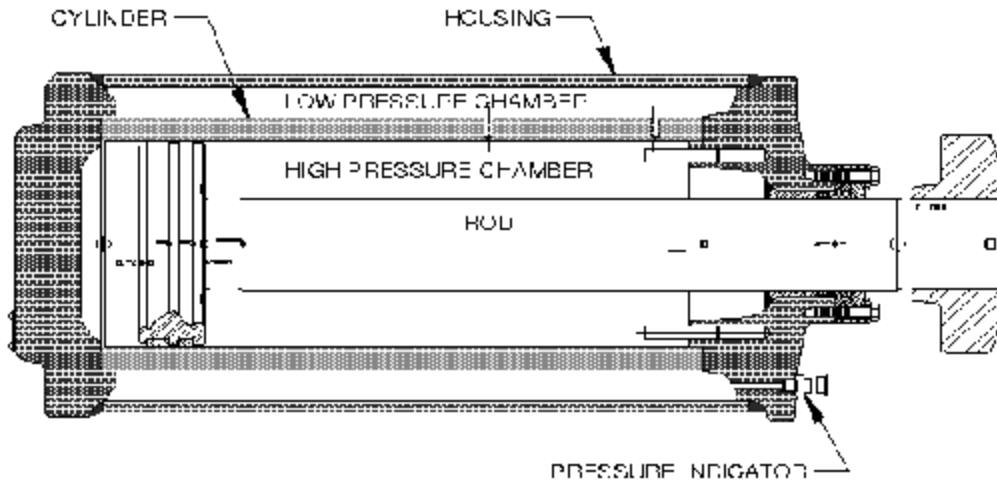
To: Regional Administrators, Deputy Regional Administrators,
Motive Power & Equipment Specialists and Inspectors

In late-1999, an MP&E Technical Resolution Committee reviewed FRA's MP&E Enforcement Manual's interpretations regarding draft gear arrangements and cushioning devices. Specifically, the Committee considered the use of cushioning device pressure indicators (see attached figures) in determining the condition of a cushioning device.

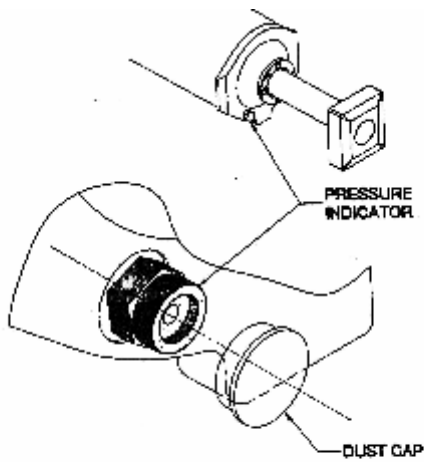
Based on the technical data presented at the meeting and the recommendations made by the Committee, FRA has determined that cushioning unit pressure indicators are **not** sufficiently reliable for FRA inspectors to determine the operating status of a cushioning unit based on the indication provided by these devices. The unreliability of the indicators is due to the variable buff and draft forces exerted on cushioning devices while freight cars are in use in train yards. Therefore, FRA inspectors should not rely on cushioning unit pressure indicators to determine the operational status of a cushioning device. However, once a freight car is placed on a repair track, the pressure indicator would be a useful tool to aid a railroad in determining the operating status of the cushioning device. Based on these determinations, FRA believes it is necessary to restate, with slight modification, the existing guidance contained in FRA's MP&E Enforcement Manual for FRA inspectors to use when determining the operating status of a cushioning device.

A cushioning unit should not be considered defective if it is losing only a minute amount of fluid through "seepage." The primary concern is an excessive loss of fluid that could render the cushioning unit inoperative. Therefore, a cushioning unit is defective if it is leaking fluid in clearly formed droplets. "Clearly formed droplets" means a **fresh** accumulation of oil (not dirty or dried) which continually forms into beads. Thus, if clearly formed droplets are present the cushioning unit is defective and must be repaired, regardless of the indication provided by the pressure indicator. If a car is in a repair shop the railroad may use the pressure indicator to aid in determining the operating status of the cushioning unit.

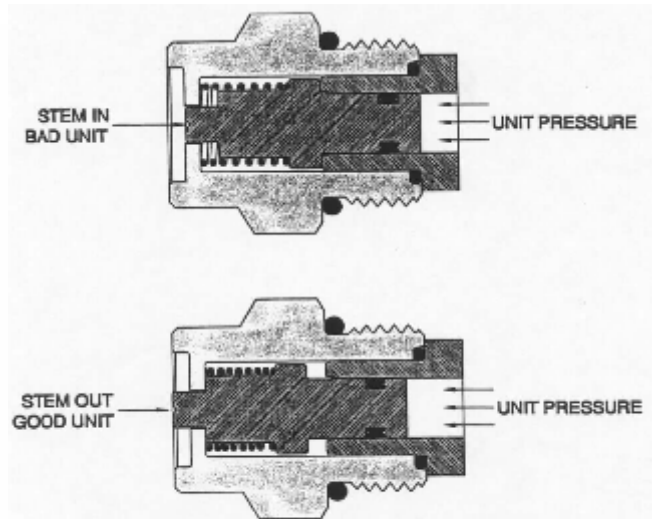
If there are any questions, contact your Regional Specialist.



TYPICAL CUSHIONING UNIT CONSTRUCTION



PRESSURE INDICATOR LOCATION



PRESSURE INDICATOR OPERATION