



U.S. Department  
of Transportation

**Federal Railroad  
Administration**

# Memorandum

Date: June 15, 1998

Reply to Att. of: MP&E 98-26

Subject: Handbrakes - Articulated Cars

From: Edward R. English  
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To: Regional Administrators, Deputy Regional Administrators,  
Motive Power & Equipment Specialists and Inspectors

Handbrake performance requirements as specified in Title 49 CFR Part 231 include the following:

Must be an efficient design;

Must operate in harmony with the power brake;

Must provide equal or greater total force on the brake shoes as the brake cylinder with 50 psi air pressure;

One handbrake per car.

The Association of American Railroads (AAR) is more specific in their requirements in that a minimum braking ration of 11 percent must be achieved at the brake shoes with a specified force output at the handbrake (equivalent to 125 pounds on the rim of the wheel). Further, the handbrake force must act on one-half of the axles including the "B" end truck. If these requirements cannot be met with a single handbrake, a second handbrake must be applied with appropriate stencilling at each handbrake location.

On some articulated multi-platform cars, it is not feasible to apply the handbrake force to half the axles with one handbrake and a second handbrake has been applied at the opposite end ("A" end) of car.

The Federal Railroad Administration takes no exception to this practice if the following conditions are met:

- ! Stencils must be placed adjacent to each handbrake advising that the car is equipped with two handbrakes.
- ! Each handbrake shall be so located that it can be safely operated while car is in motion.
- ! The handbrake force should comply with AAR Standards.

Please be governed accordingly.

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