



ENGINEERING ACCEPTANCE - TECHNICAL NOTE

Subject: Overall Braking Performance (Retardation) Indicators

Advice to: CCBs and VABs

Reference: Standard: [GM/RT2045](#) Issue: 2 Clause: B7.1.5

Applies when: Carrying out design scrutiny of braking systems.

Note's Purpose: To clarify when the fitment of retardation rate indicators is required.

Background: Within [GM/RT2045](#) there is a requirement on new vehicles for each braking system or the overall braking performance (retardation) to be displayed to the driver. This was introduced to cover situations where there is more than one braking system on a vehicle, for example rheostatic combined with pneumatic or retarder combined with pneumatic.

Thus, during a rheostatic or retarder only phase of the brake application, there would be little or no brake cylinder pressure indication and hence no brake application confirmation to the driver. Inclusion of a retardation indicator provides to the driver a visual confirmation that the braking systems are functioning. Alternatively the individual systems can be monitored separately. However, this requirement only applies to those vehicles that are provided with more than one braking system.

In the majority of cases where only a single system (typically pneumatic) is available, the current practice of indicating brake cylinder pressure on the vehicle with the operative driving position is sufficient to monitor the braking performance (retardation).

Requirements: The responsibility of the design CCB and EA signatory is to:

- 1) Verify the type of braking system/s fitted to a vehicle.
- 2) Verify that, where combined systems are provided, that the overall retardation of the vehicle can be indicated to the driver or that the individual systems can be monitored separately.

It is normally the case that when only one form of braking system is provided, that the traditional method of monitoring vehicle retardation via brake cylinder pressure is sufficient.

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