

After reviewing the comments, NHTSA has determined that there is no reason to modify the proposed initial brake temperatures. Commenters provided no convincing data or arguments to support their requested changes to initial brake temperatures that have been proposed in the NPRM and the two SNPRMs.

D. Equipment Requirements

1. Lining Wear Indicator

In the 1991 SNPRM (Notice 5), NHTSA proposed that the harmonized standard include requirements to warn the driver about excessive brake wear. Specifically, this warning could be done either by a device that warns a driver that lining replacement is necessary or by a device that provides a visual means of checking brake lining wear from outside the vehicle. The agency believed that this proposal would reduce the likelihood that cars would be driven with excessively worn brake linings.

Advocates recommended that all cars have an in-cab visual or audible alarm, stating that an outside visual check would be ineffective, therefore resulting in many owners being unaware of brake lining deterioration. Advocates further stated that the increasing intervals between maintenance checks required of newer cars means that repair personnel would not have an opportunity to discover brake lining wear before it reaches dangerous levels. Honda commented that, for drum brakes, inspection holes on drums may be insufficient to spot the areas of worst brake wear, and recommended allowing removal of the brake drum.

After reviewing the comments, NHTSA continues to believe that the proposed requirements for warning drivers about excessive brake wear are appropriate. Section S5.1.2 of FMVSS No. 135 requires a manufacturer to warn of worn brake linings in one of two ways: (1) An acoustic or optical device warning the driver at his or her driving position, or (2) a visual means of checking brake lining wear from the outside or underside of the vehicle, using tools or equipment normally supplied with the vehicle. The agency notes that FMVSS No. 105 does not require an in-cab warning indicator. Based on this fact, the agency disagrees with Advocates about the need to mandate an in-cab visual or audible alarm.

NHTSA has decided not to adopt Honda's request to allow the removal of the drum brake to identify the wear status. The agency believes that it has provided appropriate ways to determine excessive brake wear. The agency is

concerned that adopting Honda's request might be detrimental to safety.

VW, Fiat, Mercedes Benz, GRRF, and Toyota requested that the agency permit the use of the International Organization for Standardization (ISO) brake symbol, a circle with two arcs outside the circle on opposite sides, for the brake wear indicator in lieu of the proposed words. The commenters stated that symbols are more appropriate for a harmonized standard.

NHTSA has decided to permit use of the ISO symbol as a supplement to the words "brake wear." Nevertheless, the agency believes that it would be inappropriate to allow only the ISO symbol as an alternative to the required words. The agency believes that the symbol's meaning would be unclear or ambiguous to a driver, since in this country they are not generally understood to represent the concept of brake wear.

2. ABS Disabling Control Switch

In the 1991 SNPRM (Notice 5), NHTSA proposed (S5.3.2) to prohibit, for vehicles equipped with ABS, a manual control that would fully or partially disable the ABS. Previous notices did not address an automatic disabling switch. The subject was discussed within GRRF, however, and it was decided that R13H would not allow a disabling switch.

JAMA, and Toyota requested a change in the regulatory text to permit ABS disabling switches for off-road vehicles. The commenters stated this is necessary because ABS tends to lengthen stopping distances in rough, gravelly, or muddy terrain. MVMA, Chrysler and Ford opposed permitting a manual ABS disabling switch, but wanted the agency to allow an intelligent or automatic switch (*i.e.*, one not controlled by the vehicle occupants) to accommodate off-road conditions.

NHTSA has decided not to permit either a manual or an automatic ABS disabling switch. The agency notes that no commenter requested any kind of ABS-disabling switch for passenger cars, which are the subject of this rulemaking. Moreover, Mercedes, MVMA, Ford, and Chrysler stated that passenger cars should not have an ABS disabling switch. While those commenters favoring an ABS disabling switch focused on its use for off-road vehicles, FMVSS No. 135 applies only to passenger cars as defined in § 571.3(b). These definitions preclude including MPV's as passenger cars. The agency therefore believes that there is no reason to permit an ABS-disabling switch under the new standard.

3. Vehicle and Reservoir Labeling

In the 1991 SNPRM (Notice 5), NHTSA proposed requirements for the reservoir label in S5.4.3 and the warning indicators in S5.5.5. The agency tentatively concluded that it would be inappropriate to allow use of ISO symbols with respect to these devices, except that such symbols could be used in addition to the required labeling to enhance clarity. The agency noted that this was consistent with FMVSS No. 101, Controls and Displays and past agency decisions made in response to petitions for inconsequential noncompliance based on the use of ISO symbols in place of words or symbols required by FMVSS No. 101.² The agency has denied these petitions in cases where it believed that the symbol's meaning would not be readily apparent to drivers.

VW, Fiat, Mercedes Benz, and Toyota commented that the agency should permit use of the ISO brake symbol in FMVSS No. 135 in lieu of the words "brake," "park," or "parking brake," and in lieu of the words "ABS" or "anti-lock" for ABS failure. GRRF stated that symbols are more appropriate for international use than words in any single language.

Notice 5 and this final rule (Section S5.5.5(a)) allow the use of ISO symbols in addition to the required labeling for the purpose of clarity. However, the agency has decided not to allow the ISO symbol alone to be used as a substitute for the required words. NHTSA believes that the ISO symbol can be ambiguous to some drivers since the ISO symbol, is not universally understood to represent brakes. The agency notes that the commenters did not provide any data showing that the ISO brake failure warning indicator is clearly understood by drivers in countries in which it is currently in use. Moreover, the meaning of the symbol is not readily apparent from its appearance, in contrast to some symbols, such as the one for horns, whose meaning is understandable on its face.

Fiat and the GRRF requested that S5.4.3 be amended to allow the ISO brake fluid symbol to be used on the brake reservoir instead of DOT fluid designations.

NHTSA has decided not to allow the ISO symbol instead of the DOT brake fluid designations (*e.g.*, DOT 3, DOT 4, and DOT 5). The purpose of this requirement is to inform drivers about what kind of brake fluid to add to their vehicles and to avoid use of an improper fluid. The agency notes that

² NHTSA notes that FMVSS No. 101 allows the use of some ISO symbols, but not the ones at issue.