

proposal, an expanded list of telltales of particular safety significance—the telltales for any brake system malfunction, the air bag malfunction, the side air bag malfunction, low tire pressure, passenger air bag off, high beam, turn signal, and seat belt—could be in a common space but not with any other of these telltales. If one of these telltales were activated, it would be required to displace any other symbol or message in that common space while the underlying condition that caused the telltale's activation exists. This modified requirement would continue to ensure that these telltales, if activated, would always be visible to the driver.

I. Identification of Multi-Function Controls

Over the past several years, we have addressed several requests for interpretation asking how FMVSS 101's requirements for identifying controls apply to advanced design concepts that use one control to access many vehicle functions, with the control's functions displayed on a screen remote from the control. These interpretations include a June 8, 2000 interpretation to a manufacturer whose identity is confidential, a February 28, 2001 interpretation to Mazda, and a January 10, 2002 interpretation to Porsche.

In interpreting FMVSS 101 over the years, we have sought to interpret it in a broad manner in light of new technology. As we explained in our letter to Porsche, however, there is a limit to how much we can do by interpretation as opposed to conducting rulemaking to facilitate the use of new technology.

We believe that FMVSS 101's current requirement that the identification for controls "be placed on or adjacent to the control" has a particular potential to restrict the use of advanced design concepts. The system that Porsche asked about included a "combination multi-function switch/rotary dial," similar to a joystick, located on the center console between the driver's seat and the front passenger seat, and a small display screen on the dashboard. The display screen provided the identification for the various functions of the dial, which changed as different functions were selected. Thus, the dial needed to be operated in conjunction with the display screen. As we explained in our letter to Porsche, however, the dial (*i.e.*, the control) and the related display (which provided the identification for functions of the control) could not be considered to be "adjacent" to each other, given the distance between them.

We have tentatively concluded that FMVSS 101 is unnecessarily design restrictive with respect to multi-function controls that use remote displays to identify the various functions of the controls, such as Porsche's control. As we noted in our letter to Porsche, the use of this type of system may be intuitive to persons who are familiar with computers and/or video games, since use of the multi-function switch/rotary dial is analogous to the use of a computer mouse or video game controller. Also, for reasons of ergonomics, there may be advantages to separating the control and the display. In the case of the system identified by Porsche, the control between the driver seat and front passenger seat is easily reached by the driver without having to lean forward, and the location of the display on the instrument panel enables the driver to see the identification for the multi-function system without having to look down to the console, away from the road.

On November 23, 2001, the agency received a petition for rulemaking from the Alliance of Automobile Manufacturers (the Alliance) to eliminate the adjacency requirement from the current 49 CFR 571.101, Section S5.2.1(a). The agency granted the petition and is taking up the issue in this rulemaking. The Alliance contends that the current language of S5.2.1(a) " * * * has become an inadvertent design restriction on technologically advanced vehicle control and display systems. The Alliance believes that such an amendment is needed to facilitate the introduction of advanced vehicle control and display systems that can enhance vehicle safety by reducing the need for a driver to take his or her eyes off (sic) the roadway to operate multiple vehicle controls and by reducing the potential for driver confusion that could arise from 'information overload' from multiple identification symbols on a single control." The Alliance proposed the following language to replace the current S5.2.1(a):

(a)(1) Except as specified in § 5.2.1(b), any vehicle system operated by a hand-operated control listed in column 1 of Table 1 that has a symbol designated for it in column 3 of that table shall be identified by either the symbol designated in column 3 (or symbol substantially similar in form to that shown in column 3) or the word or abbreviation shown in column 2 of that table. Any such control for which no symbol is shown in Table 1 shall be identified by the word or abbreviation shown in column 2. Words or symbols in addition to the required symbol, word or abbreviation may be used at the manufacturer's discretion for the purpose of clarity. Any vehicle system operated by such

a control for which column 2 of Table 1 and/or column 3 of Table 1 specifies "Mfr. Option" shall be identified by the manufacturer's choice of a symbol, word or abbreviation, as indicated by that specification in column 2 and/or column 3.

(2) Under the conditions of S6, each hand operated control listed in column 1 of Table 1 shall be visible to the driver and each identification required by subsection (a)(1) shall be visible to the driver when the control is operating the corresponding vehicle system. Hand-operated controls listed in column 1 of Table 1 may be combined. Except as provided in S5.2.1.1, S5.2.1.2, and S5.2.1.3, when identification required by subsection (a)(1) is required by this section to be visible to the driver, it shall appear to the driver perceptually upright. The vehicle's owner's manual must explain the operation and identification of the hand operated controls listed in column 1 of Table 1.

It is not our desire to hinder technical advances in this area, if there are no safety concerns. However, we have the following concerns about the Alliance proposal:

(1) We note that the Alliance did not provide data to support its claim that these "advanced vehicle control and display systems" can, in fact, reduce the amount of time the driver needs to look away from the road to locate and operate controls while driving;

(2) Although it would drop the adjacency requirement, the proposal does not define what proper identification would be. Can a control be said to be truly identified if there is no visual clue as to which label belongs with which control?;

(3) The Alliance's suggested requirement that the identification need only be visible to the driver when the control is operating the corresponding vehicle system raises the question of how the driver will be able to locate the control for a system that is not currently operating, but when the need for it arises, may be urgent. For example, access to windshield wiper controls becomes critical when a sudden rainstorm begins. Control identification is probably most important in terms of driver distraction when the vehicle system desired is not operating, but operation is desired to begin.

(4) The Alliance's proposed explanatory text, " * * * controls * * * may be combined" is irrelevant since the current standard does not prohibit the combination of controls. However, it raises the question, are there controls that should not be combined? An example would be the headlight switch. If the headlight switch were part of a multi-function control, would it be too easy for the driver to inadvertently flash the headlights, or for the driver to have trouble locating the headlight switch quickly?