

DEPARTMENT OF TRANSPORTATION**National Highway Traffic Safety Administration**

[Docket No. NHTSA-2002-12005; Notice 2]

International Truck and Engine Corp.; Denial of Application for Inconsequential Noncompliance

The National Highway Traffic Safety Administration (NHTSA) is denying a petition from International Truck and Engine Corporation (International) of Fort Wayne, Indiana, for exemption from the notification and remedy requirements of 49 U.S.C. 30118 and 30120 for a noncompliance with 49 CFR 571.104, Federal Motor Vehicle Safety Standard (FMVSS) No. 104, "Windshield Wiping and Washing Systems." International applied for the exemption under 49 U.S.C. 30118(d) and 49 U.S.C. 30120(h) and petitioned NHTSA for a decision that the noncompliance is inconsequential to motor vehicle safety. We published a notice of receipt of the International application on April 11, 2002, allowing for a 30-day comment period (67 FR 17757). There were no comments submitted.

International discovered the noncompliance in 7,630 medium duty trucks it manufactured between October 24, 2000, and October 22, 2001. In those vehicles, if the windshield washer system is filled with water and frozen, a fuse in the windshield washer electrical circuit can blow when the washer system is actuated, rendering the system inoperative. The system thus fails to meet a performance requirement in FMVSS No. 104 which, by reference to SAE Recommended Practice J942, "Passenger Car Windshield Washer Systems," requires the washer system to withstand operation in a completely frozen state.

We are denying this petition because International has not adequately demonstrated that the noncompliance does not increase the risk that an operator will experience a safety problem, in this case a non-functional washer system, that FMVSS No. 104 is intended to protect against. In determining inconsequentiality, the agency traditionally has considered whether a noncompliance is likely to increase the risk that occupants will experience a safety problem that a requirement was established to address (Cosco, Inc., Denial of Application for Decision of Inconsequential Noncompliance, 64 FR 29408 (June 1, 1999) (NHTSA-98-4033-2)). In the case of the noncomplying International trucks, we believe that a vehicle

operator is at increased risk of experiencing reduced visibility as a result of a nonfunctional windshield washer system.

Background

The pertinent performance requirement for windshield washer systems is paragraph S4.2.2 of FMVSS No. 104 which states in relevant part, "Each multipurpose passenger vehicle, truck, and bus shall have a windshield washing system that meets the requirements of SAE Recommended Practice J942, November 1965. * * *" SAE J942 includes paragraph 3.2, System Strength, which states, "The windshield washer system must be capable of withstanding the loads induced when the nozzles are blocked and tested in accordance with test procedures established in paragraph 4.2." Paragraph 4.2.2(b) of SAE J942 states the following: "The system shall be filled with water and frozen for 4 hr. and then actuated repeatedly for a 1 minute period."

In International's tests of the washer system in the subject trucks, when the washer system was operated in a water-filled and frozen condition in accordance with the requirement above, a five-ampere rated electrical fuse blew one-quarter second after washer switch actuation, interrupting the washer pump circuit. The system thus failed to comply with S4.2.2 of FMVSS No. 104.

Discussion

In its application for inconsequential noncompliance, International made the following points:

- The intent of section 3.2, "System Strength" in SAE J942 is "that the system should withstand the test parameters specified without inducing permanent damage to the electrical system components of the washer system" such as a cracked fluid reservoir or fluid lines, damaged spray nozzles, or overloaded activation switch, washer pump motor, or connecting wires. International stated that those components are effectively protected from permanent damage in the non-complying International vehicles by the five-ampere fuse.
- The system passes all other specified J942 requirements and, if a ten-ampere fuse is installed in the washer circuit, it passes the "System Strength" requirement for operation under frozen conditions. However, a five-ampere fuse does a better job of protecting the system components.
- There is very little likelihood of the washer fluid freezing in an actual operating environment because International's recommended fluid

mixture yields a freezing point of -48 degrees C (-54 degrees F).

- With a vehicle population of 19,880 comprising various models in operation for 13 months, International has had "no reported field problems" and only 16 warranty claims related to the washer system, none of which were due to frozen fluid in the system.

In response, we would first point out that neither FMVSS 104 nor J942 contains any limitation concerning "permanent damage" to the system when subjected to the applicable test procedures. Paragraph 3.2 of J942 states only that the system "shall be capable of withstanding the loads induced" when it is tested in accordance with the procedures in section 4 of J942. We believe a blown fuse in the washer circuit indicates that the system was unable to withstand the loads induced in the frozen condition and is no less a failure than if the washer switch or pump motor had been damaged. We disagree with International's understanding of the requirement in paragraph 3.2 of SAE J942, *i.e.*, that it is intended to proscribe "permanent damage" to the washer system electrical components including the electric pump motor, the actuation switch, and the connecting wires. We believe that, in order to comply with this requirement, the washer system must remain fully functional after being frozen.

International also stated that the washer system passes the compliance test if a ten-ampere fuse is installed, but the system is better protected with the five-ampere fuse. However, by this logic, it would appear that one of the other system components besides the fuse may be at risk of failure, which is the type of problem that FMVSS 104 test procedures are intended to guard against. On one hand, if the five-ampere fuse is too weak, then it would appear that International merely neglected to specify a sufficiently high fuse rating in the design of the washer system. On the other hand, if installing a higher-rated fuse puts other system electrical components at risk of being overloaded, then it is evident that the system as a whole is not robust enough to sustain frozen system operation in the required manner. The fact that the fuse fails before one of the other circuit components such as the pump motor or switch is not a redeeming factor with regard to compliance. In either case, the system does not meet the performance requirement.

With respect to availability of the washer system, we do not agree with International's assertion that a frozen reservoir "makes the availability of the

system during vehicle operation no greater than the situation with a blown fuse." If the system becomes disabled due to being frozen but also has a blown fuse, then a vehicle operator would be left without the use of a functioning washer system even after the system is thawed by engine heat or by the addition of the correct fluid mixture. For example, an operator in a harsh winter environment who attempts to activate the washer system might find that it is frozen and wait for it to thaw out, which it would be likely to do once the vehicle was warmed up. In a noncomplying truck, the washer system would still be inoperable even after thawing out. Furthermore, an operator who had neglected to maintain the washer fluid mixture might be alerted to the frozen condition of the fluid by the failure of the system to spray when actuated. The operator might then be able to correct the fluid mixture and, in a complying vehicle, continue driving with an operational washer system.

International asserts that the freezing point of the washer system when the

recommended fluid mixture is used is so low that the system is very unlikely to freeze under foreseeable conditions. While this may be true, vehicles are unlikely to have exactly the recommended mixture and could, in fact, have a diluted mixture with a higher freezing point. We do not see any compelling reason to question whether the frozen-system requirement in FMVSS No. 104 has a realistic basis, and International did not provide any supporting information in that regard. Also, the fact that the standard specifies filling and testing the system using only water does not mean that systems filled with only water are anticipated in the actual operating environment. As a practical matter, it is easier to freeze the system for the purpose of a compliance test when it contains just water instead of a mixture with a lower freezing point.

If International believes that washer systems should be tested with an appropriate washer fluid mixture, or that the frozen washer system test is unreasonable because of the low likelihood of washer fluid freezing in

actual use, the company is entitled to present relevant safety data, research, and related information to NHTSA in the form of a petition for rulemaking to amend the current safety standard.

In consideration of the foregoing, NHTSA has decided that the applicant has not met its burden of persuasion, and that the noncompliance may have an adverse effect on the safety of the subject vehicles. Accordingly, International's application is denied and the company must provide notification of the noncompliance as required by 49 U.S.C. 30118. Also, International must provide a free remedy for the noncompliance to each first purchaser of an affected vehicle bought within ten calendar years of the time notice is given, as required by 49 U.S.C. 30120(g).

(49 U.S.C. 30118, 30120; delegations of authority at 49 CFR 1.50 and 501.8)

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Stephen R. Kratzke,

Associate Administrator for Rulemaking.

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