

27 September 2005

Dr. Jeffrey Runge  
Administrator  
National Highway Traffic Safety Administration  
Room 5220  
400 Seventh Street, S.W.  
Washington, DC 20590

Dear Dr Runge,

**RE: Petition For Reconsideration**  
**Docket No. NHTSA 2005-22251**  
**Federal Motor Vehicle Safety Standard No 138**  
**Tire Pressure Monitoring Systems**

On August 6<sup>th</sup> 2003 the Court of Appeals for the Second Circuit found that in Public Citizen Inc Versus Mineta that the TREAD Act unambiguously mandates TPMSs capable of monitoring each tire up to a total of four tires and that this effectively precludes any system or options that cannot detect, or result in non detection of, under-inflation in any combination of those four tires.

Ultimately, the Court vacated the rule in its entirety and directed NHTSA to issue a new rule in a manner consistent with the Second Circuit's opinion such that the legislation embodied in FMVSS 138 intent to keep the motoring public safe from the risks of driving on improperly inflated tires.

We respectfully submit that in its present form NHTSA 2005 22251 is inconsistent with the Court's ruling and still fails to maximize consumer safety. Consequently, ETV feels compelled to restate important points that were put forward during the comment period on NHTSA 2005 20586 but have disappointingly not been adopted in the rule making.

**1. Spare Tire**

Legislative compliance of "Direct sensor" TPMS is only satisfied if the rule mandates the vehicle's spare tire be fitted with a sensor. If a spare tire without a sensor is introduced into active service (in direct TPMS) all four tires cease to be monitored thus contravening the legislative requirement. Importantly, non-sensor tires can mask other tire reporting in "tell-tale only" TPMS implementations.

It is outrageous and plainly not acceptable to justify the compromising of safety legislation on the grounds that there is a "disincentive for manufacturers" or that it represents an "increased cost of the rule". There is no remedy or escape from the fact that the requirement at law is to monitor all four active tires at all times and to maximize safety by reporting tire abnormality to the driver as quickly as possible.

## **2. Reporting Time**

Time to report remains a critical issue.

Whilst the agency's data demonstrates that a 20 minute reporting interval may be acceptable for tires running at 25% placard at rated loads and speeds for that length of time, the agency's data also reveals that catastrophic tire failure is a certainty when the under-inflation pressure approaches zero pressure ("flat" state) under load and at rated speed within the 20 minute reporting interval. The agency's data on tire failure modes between 25% and 100% under-inflation has not been referenced in its decision to deny immediate reporting as soon as the vehicle's ignition is placed in the on/run state. The agency's dynamometer data demonstrates that the 25% alarm point is a threshold point which represents a safe operating tire pressure with a "margin of built-in consumer safety". However, the agency's data reveals that the really dangerous zone lies anywhere between 25% to 100% under-inflation and "27% of passenger cars in the United States had at least one under-inflated tire in the 25% to 100% placard region" [1].

As stated in its Comments on NHTSA-2004-19054 NPRM, ETV believes that to maximize safety, it is vital for a TPMS to activate and report tire status immediately upon vehicle ignition. This should occur whilst the vehicle is stationary or parked, before a driver moves off into traffic with any 25% to 100% under-inflated tires which are the real danger within the 20 minute report interval. Cost effective technology (VisiTyre) is available for immediate reporting.

### **Technology Neutral or Safety Neutral?**

The rule's 20 minute reporting time appears to be blatantly crafted to accommodate TPMS technology (indirect TPMS) that takes this long to correctly report one to four tires, where pressures have fallen below the legislated activation floor alarm point.

Whilst this is admirable for NHTSA's stated aim of the rule to be Technology Neutral and allow specific TPMS offerings (Indirect systems), the 20 minute reporting interval is deplorable from a safety standpoint. The 20 minute reporting time exposes the vehicle occupants to the possibility of catastrophic tire failure for 25% to 100% under-inflation, because the driver may be unaware for up to 20 minutes that one or more dangerously under-inflated are vulnerable to failure.

Therefore, the clear intent of the TREAD Act's FMVSS 138 legislative requirement for TPMS to maximize consumer safety has been weakened rather than strengthened by NHTSA-2005-22251.

It is accepted that NHTSA must balance the safety of the motoring public against any "over-the-top" restrictive regulatory frameworks. However, when death and injury continue to result from under-inflated tires and legislation has been introduced to enforce safety in this area then NHTSA must choose

safety first, especially when cost effect technology is available to deliver the required safety.

To reiterate on our earlier comments, the motoring public has a right to expect a mandated automotive safety technology to perform its intended function prior to the vehicle becoming mobile, a situation which seems to be just plain common sense and is the case for all other vehicle safety systems.

### **Available Technology**

The state of current TPMS Development does provide technology that is capable of providing immediate reporting on ignition, evidenced by ETV Corporation's VisiTyre TPMS, VisiTyre is a battery-less direct sensor TPMS and was demonstrated (NHTSA representatives were invited) at the SAE World Congress 2005 in Detroit.

Therefore, the motoring public has available to it a system that can be genuinely regarded as a safety product, meeting the expectation of immediate status reporting before and during the vehicle's motion, which we believe was the intent of the legislators of the TREAD Act.

### **Conclusion**

ETV Corporation specifically recommends that to comply with legislation and to maximize safety for all direct TPMSs, the spare tire must be "*TPMS Enabled*" so as to not render the system inoperable when the spare is introduced into active service, and that the Minimum Standard must be that all TPMS *must* begin report immediately on ignition.

ETV respectfully tenders this Petition for Reconsideration in the interests of ensuring that the motoring public of the USA is provided with a true safety system as intended by the TREAD Act legislation.

Sincerely,

*Phillip A. Cohen*

Phillip A. Cohen  
Chief Technical Officer  
ETV Corporation Pty Limited

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[1] NHTSA Research Note "Traffic Safety Facts" DOT HS 809 846 May 2005  
Kristen K. Thiriez, Eric Ferguson, Rajesh Subramanian