Consumers Union

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Mr. Joe Scott
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Mr. Scott:

We understand that the National Highway Traffic Safety Administration (NHTSA) is considering a proposal to require enhanced tire performance to prevent the catastrophic effects associated with rapid air loss of a tire, often referred to in the media as a “blow-out." Consumers Union (CU) is taking this opportunity to provide our recommendations to NHTSA on this issue.

In the last year, blow-out related failures were widely reported on Firestone all-terrain tires (Firestone ATX, ATX II, and Wilderness AT) equipped on Ford SUVs and trucks. These tire failures often resulted in loss of vehicle control and rollover, causing many occupant injuries and fatalities.

Blow-out failures are catastrophic, often deflating in split seconds in an explosive manner, sometimes leaving little of the tire intact. A blow-out failure can occur when the tire’s integrity is seriously compromised by a number variables: road hazard damage; tire defect; and overheating due to excessive stress when over-loading, under-inflating, or operating at excessive speed. Maintaining or regaining control of a sedan after experiencing this failure is much easier than in an SUV. The instability caused by blow-outs is mainly an issue with SUVs and other less stable vehicles. SUVs widespread popularity has made tire failures a much more serious safety problem because the consequences of such failures are more likely to be serious injury or death.

No one disputes the dismal results to the consumer, but the Firestone phenomenon is better defined as air loss due to tire tread separation failure. Moreover, the ensuing research shows that true blowout failures are not unique to any one brand of tire or vehicle. CU recognizes that no tire can be economically designed to eliminate blow-out failures completely, aside from going to a non-pneumatic tire as found in current run-flat tire technology. But this technology is in its infancy, limited to certain size tires and vehicle applications, and there is not sufficient widespread use to determine its usefulness in deterring tire-related accidents.

CU, however, does believe that blow-out failures and related deaths and injuries may be reduced by encouraging the design of more robust tires, discouraging tire repair, investigating new technologies to sense probable or impending blow-out failures, and

improving vehicle design and control systems that can help the driver maintain control of a vehicle that has experienced a blow-out.

- Creating more challenging test procedures for endurance and high speed (temperature resistance) by updating the FMVSS tire standards would require tire manufacturers to develop more robust tire designs. Doing so would provide a wider margin of safety in the tire design that would help prevent failures that occur due to over-loading or under-inflating the tire.
- Faulty tire repair or a repair performed on an irreparable tire can lead to failure once the tire back in service. Many tire companies do not warranty tires and void the speed rating for any repaired tire. CU believes that given the difficulties of regulating proper repair, more stringent repair procedures and practices should be implemented and enforced, or tire repair should be discontinued.
- The advent of "smart tire technology" and the requirement of tire pressure monitoring systems (see CU's comments on these systems, which are mandated for study and implementation under the TREAD Act, submitted August 24, 2001) can inform a driver of most tire problems before a failure occurs. CU believes that NHTSA's regulations for tire pressure monitoring systems should only allow for those systems that measure air pressure directly. Such systems can provide low-pressure warnings in an individual tire, and the technology exists to provide cavity air temperature to provide another means of warning the driver of dangerous heat build-up. CU believes that wheel rotation systems currently available on some vehicles do not adequately detect low tire pressure and should be not be used as part of this requirement.
- Investigation of tire / wheel technologies that incorporates a secondary tire inside the primary tire, or a dual tire / wheel system should be explored. Both principles have been used in special applications (after-market products and racing). These systems would not eliminate the effects of blow-out failures, but they would provide a backup tire that would lessen the possibility of abrupt loss of vehicle control.
- Vehicle manufacturers should be encouraged to develop vehicles or vehicle aides to make them more easily controlled in the event of a tire blow-out. This could include improved vehicle design systems to sense blow-outs before they occur through vibration monitoring, and stability control systems that could help maintain vehicle control after a blow-out has occurred.

CU will gladly supplement any of the above comments should you need further details or explanation. We look forward to working with you on the important issue of improving tires and making them more resistant to the hazards of tire blow-outs.

Sincerely,

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