

RETREAD RELIABILITY

RESEARCHERS AT THE UNIVERSITY OF MICHIGAN CONDUCTED A COMPREHENSIVE STUDY ON TRUCK RETREAD TIRE RELIABILITY.

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Truck tires are a renewable truck component given the ability to replace tire tread using advanced manufacturing methods. Many tire manufacturers within the US operate or support tire retreading businesses that utilize sophisticated tire inspection and manufacturing technology with high quality control. Tire tread is a consumable part of the tire which gradually wears down from road travel. The casing of the tire is less affected by proper and ordinary road travel so its potential service life may greatly exceed that of the tread rubber. Replacing the tread allows the full potential of the tire asset to be utilized providing full economic benefit to the vehicle owner and ensuring that tires are not discarded prematurely.

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There have been unsubstantiated concerns over the years about retread tire safety brought on by the assumption that tire tread debris along the nation's highways was primarily caused by retread rubber bonding failure – which is to say, the separation of the tread from the casing. With sponsorship from National Highway Traffic Safety Administration, researchers at the University of Michigan conducted a comprehensive study on truck retread tire safety which found that road hazards and operating conditions such as low tire pressure were the main causes of tire failure and that both new and retread tires were equally vulnerable to failure. The study collected approximately 86,000 pounds of tire/rubber casings and debris from new and retread

KEY TAKEAWAYS

Researchers at the University of Michigan conducted a comprehensive study on truck retread tire reliability.

- **Myth: Tire tread debris on the highway is mainly caused by retreads.**
- **The main causes of tire failure are road hazards and low tire pressure.**
- **New and retread tires are equally vulnerable to failure and tire maintenance is critical to successful performance.**

tires within five states; Arizona, California, Florida, Indiana, and Virginia. Samples were examined by tire experts to determine the tire type and cause of failure.

The top three reasons that the casings were removed from service at truck stops were road hazards (32%), maintenance/operational factors (30%), and over-deflected operation (14%). Analysis of tire fragments found on the roadside revealed that the two dominant reasons for their condition were 39% from road hazards and 30% due to excessive heat.

The study also examined national crash databases and found that truck crashes attributable to tire failure are very rare with less than 1% of truck crashes involving tire failure.

The results of the study clearly show that tire maintenance is critical to successful tire performance. The monitoring of tire pressure is an essential part of preventative maintenance as are regular inspections of tire tread and casing condition.

Comprehensive tire management programs greatly reduce the probability of on-road tire failure and prolong tire life.