

New, retreaded tires fail at same rates

By Miles Moore

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WASHINGTON—New and retreaded medium truck tires have pretty much the same failure rates and modes on U.S. highways, according to a survey of truck tire debris performed for the National Highway Traffic Safety Administration (NHTSA) by the University of Michigan Transportation Research Institute (TRI).

The report was received warmly by the retread industry, which hailed it as a vindication both of the high quality of retreads on the market today and the industry's consistent position that failed retreads do not disproportionately comprise truck tire "alligators" littering the nation's highways.

To obtain a representative sample of truck tires, tire forensic scientists at TRI gathered discarded casings at five truck stops in Florida, Indiana, California, Arizona and Virginia, and tire debris along random sections of interstate highways in the same states.

The casings and debris were then examined to determine whether they were new or retreaded and, as much as possible, what caused them to fail or be taken out of service.

Of the 300 casings examined, the newest was about a year old, the oldest 17 years, according to the survey. Roughly 60 percent

were new tires, with the majority of the retreaded casings on their first retreading and a product of the precure process. All of this was expected, considering tire industry norms, the report said.

Road hazards represented the biggest cause of the casings' being removed from service (32 percent), according to the report. Maintenance/operational factors were second with 30 percent and overdeflected operation third with 14 percent.

The 1,196 tire fragments ranged from small sections of tread or belt to virtually complete, detached tread-belt packages, according to the study.

Of the fragments studied, approximately 18 percent came from new truck tires and 68 percent from retreaded tires, with the rest of indeterminable origin, the report said.

These figures, the report continued, closely match the estimates of new and retread truck tires in current service.

"Indeed, the OE vs. retread proportions of the collected tire debris broadly correlated with accepted industry expectations," it said. "Additionally, there was no evidence to suggest that the proportion of tire fragments/shreds from retread tires was overrepresented in the debris items collected."

Road hazards were to blame in 38 percent of the tire debris collected, the study said. Ev-



Tire Business photo by Bruce Davis

A study by the University of Michigan's Transportation Research Institute found retreads and new tires fail at about the same rates on highways.

idence of excessive heat signifying underinflation was found in another 30 percent.

"These results suggest that the majority of tire debris found on the nation's highways is not a result of manufacturing/process deficiencies," the survey said in conclusion. Tire failure and debris also are rarely the cause of a truck crash, factoring in less than 1 percent of all such accidents, it said.

The study's authors suggested topics for further research, including a longitudinal study of the tire life cycle and a separate study of failure in medium wide-base truck tires.

Harvey Brodsky, managing director of the Tire Retread & Repair Information Bureau (TRIB), hailed the report as a confirmation of the general excellence of retreads.

"What can I say, other than it made my day?" he said. "If anyone has any doubts that retreads perform like new tires, all they have to do is read this survey."

The study proves that improper tire maintenance is the main cause of all truck tire failures, according to Mr. Brodsky.

"Underinflation is the biggest culprit of all, overinflation a close second, and overloading a tractor-trailer makes a tire underinflated by definition," he said. "One thing

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we're definitely going to stress in the future is that you have to have the proper level of inflation for the load.

"It's not enough to put 100 pounds of air in a truck tire. That can actually be overinflation if you're dealing with a load of feathers."

Improper tire repairs also are a serious truck tire safety problem, Mr. Brodsky said.

"There's only one proper way to repair a tire: Remove it from the wheel, make sure it's a candidate for repair, and then repair it from the inside out with a plug and patch. There are no two ways about it, and any tire repair company will back me."

Not all retreads perform perfectly, Mr. Brodsky said, but the adjustment rates for retreads made by reputable companies are actually below that of new tire makers, at a fraction of 1 percent.

"We knew this would be the result of the survey from the day it began," he said. "Now we have to continue to educate the motoring public."