Tire Safety Seminar Summary

Steve Malysiak, Michelin America's Truck Tire Field Engineer, presented the one-hour seminar and answered all 37 questions submitted on the Tire Information sheets. Every attendee received a new version of Michelin's "RECREATIONAL VEHICLE TIRE GUIDE, HOW TO GET THE MOST FROM YOUR TIRES". To get your own free copy call 1-800-677-3322, Option #2.

Steve covered all sizes that owners filled in on their tire information sheets and explained tire size, aspect ratio, and DOT Nomenclature.

He covered why tire pressures should match the tire size maximum load on that axle to the pressure in the book's load chart. The book shows how to determine each tire's load. All tire manufacturers must meet or exceed the same Tire & Rim Association standards for a given size and load rating, regardless of construction materials.

Overpressure causes different tire failures than underpressure. Overpressure reduces tire patch size, traction, and tread life. A chart was presented showing how much overpressure reduces tread life. Example, a tire load/pressure that should be at 65 psi but run at 80 psi will have 75% of its designed tread life while one that should be at 60 psi and run at 80 psi will have 70% of its designed tread life due to the smaller footprint.

All steel construction is more robust for commercial applications, including multiple recapping. The downside is a LT225/75R16 E weighs 10 pounds more, cost $30 more, has stiffer sidewall and harsher ride. If a steel tire is 20% below its recommended pressure, it should be remove from vehicle & taken to dealer to check for ruptured cables. Do not re-inflate on vehicle. Fabric sidewalls tires of the same load rating have the same capacity as steel sidewall.

Tire pressures should be checked when the tire is cold and driven less than one mile. Steve used his master gauge to check some attendees gauges after the seminar and found many were not accurate. He recommended using an accurate gauge and verifying against a master gauge. He also recommended the use of metal valve caps on stems to seal and protect the valve.

Replace tires when the wear strip shows or when sidewall cracks are 2/32". Have dealer check older tires when cracks are more than 1/32". Steve recommended replacing the driving tire at 2/32" tread depth for greater traction. Tires age differently in different environments and conditions. As the tire rolls and flexes, the waxes and emollients migrate to the surface, replenishing protection. There is no set age to change tires, but he recommended closer inspections after six years.

Tire manufacturing date is on one side of the tire sidewall and are the last numbers in the DOT molded in information. See the book for details. Not all manufacture's complied to this recommended standard on all tires before January 1, 2002 (0102)

Extend tire life by washing before long term storage, increase storage pressure to maximum on the sidewalls, place barriers between storage floor/ground surface and cover tires to protect from UV damage. Michelin does not recommend any tire protection dressings because they may contain petroleum products, alcohols or silicones that can accelerate the aging process over a long period of time. Tires in use last longer than those in storage.

Michelin has no restriction as to the method of rotation but recommends including the spare and changing direction of rotation to achieve the maximum life of a set of tires. If wear is even, there is no need to rotate tires. Spares should be covered to protect from direct sunlight.

Tire repairs from a puncture should be made from the inside with a patch and plug/insert and the casing inspected. Never repair a nail hole “on the wheel”. An LT tire with Perforations larger than ¼” diameter should be scrapped.

A slow leak with Aluminum wheels can be caused by oxidation between the “O” ring, valve stem, and the wheel. Bubble check the valve stem where it comes out of the wheel.

If a blow out happens, step on the accelerator and steer straight ahead. Do not brake. With control maintained, slow down and pull over.

Truck Rut Sensitivity Summary (0-10, with 10= high, 75 owners reporting)

There was a major difference in opinions of Truck Rut Sensitivity between a stock suspension with F/S (ragwalls) and S/S (all steel) tires. 2/3 of those with F/S tires had values of #4 or less. 3/4 of those with S/S tires had values of #5 or more, with none below #2. Tire pressure or tire size did not seem to have any impact. 92% were E load rated tires. 57% were S/S tires. Clearly, fabric sidewall produced greatly reduced truck rut sensitivity.

F/S tires (D & E, 16.5 & 16) with stock suspensions show the largest number of owners reporting truck rut sensitivity at #2 with nothing beyond #6. Only one owner with a stock suspension reported #0 truck rut sensitivity. His coach had the original combination of radial steel wheels with 8.75R16 D “radial construction” Cooper tires.

The S/S tires with stock suspension showed the largest grouping at #8 with some as high at #10. Suspension modifications dropped that grouping to #7 with nothing beyond #8. Changing from S/S to F/S tires indicated greater improvements than suspension modifications.

All others reporting 0 or 1 sensitivity had multiple modifications, with 2/3 having either 4 bag or TRU-TRACK type rear suspension modifications. One had both and another had a 4 bag in combination with a front wheel spacer.

11 of those reporting #2 sensitivity had Fabric sidewall radial tires with stock suspensions Two more had changed to a single heavier stabilizer bar. Only 3 reported #2 sensitivity with all steel (S/S) radials, 2 with a stock suspension and 1 with multiple suspension modifications.

There is no single magic bullet of suspension modification. Many with multiple modifications had lower values. Others with those same modifications had much higher values. All of these coaches are 25 years or older so worn parts enter into the values. The value itself is the owner's opinion and what one owner would see as a 4 another may see as a 6. Modifications were more successful in further reducing truck rut sensitivity with the F/S tires than the S/S tires.

I did not attempt to establish a relationship of the Truck Rut Sensitivity to the imbalance found during coach tire load weighing. There were to many imbalanced variables to reach any conclusions in that sample size.

Weigh-in Summary

47 of the 123 coaches at the rally had their coaches weighed. The Michelin scales were available 2 days before the rally, but 1/3 of the attendees were already parked. The owner of every weighed coach was given a card with each tire load recorded. The scales had manufacture’s calibration seals that were within their recalibration due date.

The main purpose of the weigh-in was to enable the owners to match axle pressures to maximum axle loads, maximizing tire life and safety. A second purpose was to find large side-to-side imbalances and misadjusted front torsion bars.

The results show some coaches were imbalanced and overweight.

34% front and 17% of the rears had side-to-side imbalanced loads of 200 pounds or more. The maximum front imbalance load was 550 lbs. This pointed out the need to weigh each GMC tire individually and not just front and rear totals as done by most drive on commercial scales.

58% of the coach’s had a frame twisting front imbalance with a rear imbalance on the opposite side.

The maximum front tire load was 2,480 pounds along with an imbalance of 480 pounds. 6% of the coaches with more than 250 lbs imbalance exceeded the original D tire load rating. None of the rear tire loads exceeded D tire load rating. 92% of those 75 reporting on the tire information sheet had E rated tires.

57% of the front tire total loads exceeded the GMC specification of 4,200 pounds. 76 % of the total rear tire loads exceeded the GMC specification of 7,500 pounds.

It was suggested that those with high front tire loads or imbalanced loads look into

shifting weighty items, adjusting the front torsion bars, or both.