



KILLER TYRES?

Five years ago, a tyre on the front nearside of a coach operated by Merseypride Travel blew out, causing an accident that killed the driver and two young adult passengers. One of those was Michael Molloy, whose mother Frances was involved last year in setting up a campaign group, Tyred (<https://is.gd/zexeji>). Since launch, it has received support from nine councils and public sector groups, including securing a ban of old tyres used in public sector vehicles in Merseyside. Tyred is currently petitioning for a parliamentary debate of MP Maria Eagle's proposed bill to restrict the use of old tyres on PSVs.

That is because Surrey coroner Richard Travers concluded in July 2013 that the tyre's age - it was 19 years old - was to blame for the blowout. Its tread depth was at 40% and there were no other visible signs of risk, according to the Eagle bill. (The firm's licence was revoked in a 2013 public inquiry and the company's transport manager, Tracey Hannell, was also

Has industry reaction to a deadly 2012 coach crash caused by a failure of a 19-year-old tyre been sufficient?

Will Dalrymple investigates

disqualified from operating buses and coaches in 2014.)

In the aftermath of the incident, the Department for Transport issued a short industry guidance document. It says, in part: "As a precaution, the Department for Transport strongly recommends that tyres over 10 years old should not be fitted to the front axles of buses and coaches. Such tyres should be fitted only to the rear axles of vehicles as part of a twin-tyre combination."

This is because tyres fitted to the front axle of a coach face not only significant lateral steering forces but also a large amount of braking forces, according to Rob Blurton, Michelin technical manager. Tyres made since 2000 indicate their age in a four-digit code on the side of the tyre, after the

DOT manufacturing code. The first two digits represent the week, the second two digits the year of manufacture.

The 10-year rule is now generally accepted in industry. For example, IRTE guidance on tyres (see link on p12) quotes the DfT document, and adds: "Although not enforceable, it is considered best practice not to fit any tyre over 10 years old." It observes that traffic commissioners see this as minimum standards, and will need to be assured that operators are using tyres that are fit for purpose. (Other activities by the institute include launching a scheme two years ago to offer a third-party accreditation of tyre technicians, called irtec tyre; also, its annual Skills Challenge for technicians (pp30-31) will again this year include a segment on tyre inspection.)

As tyres age, the rubber becomes more brittle. "Tyres degrade over time regardless of whether they are in service," said Sean Kane, president of US consultancy Safety Research & Strategies at a 2014 US National Transportation Safety Board

“Since service and storage conditions vary widely, accurately predicting the serviceable life of a tyre in advance is not possible”

ETRTO recommendations, edition 12

symposium. He attributes ‘thermo-oxidative degradation’ to age, ambient and operating temperatures, partial pressure of oxygen in the tyre, flex fatigue, and construction and compounding characteristics (see link).

Old tyres can show up degradation in the appearance of fine cracks or fissures forming on the surface. The key question is whether tell-tale signs of internal degradation are always visible. Bernie Cassidy, UK chief engineer, National Express, contends they are not, so it is vital to know the age of the tyre and ensure old tyres are not used. It limits tyre ages on all axles to 10 years for its own 550-coach fleet, and is reviewing extending that limit to non-drive axles for partner and hire vehicles, too.

Changes to the European Tyre and Rim Technical Organisation’s technical recommendations in September 2017 (see link) include new language on tyre ageing. The document says: “Serviceability of a tyre over time is a function of the storage conditions and [of] service conditions to which a tyre is subjected throughout its life. Since these conditions vary widely, accurately predicting the serviceable life of a tyre in advance is not possible. The older the tyre, the greater the chance that it will need to be replaced due to service-related conditions found upon inspection.”

Michelin’s voluntary user guidance also recommends not fitting tyres more than 10 years old on steering axles, not only for PSVs but also for all other commercial vehicles. The principal causes of tyre wear in use are load carried by the tyre, speed, inflation pressure, tyre maintenance and weather, says Blurton.

As for storage, Michelin also argues that tyres should be kept upright, avoiding humidity, ozone and sunlight, and that tyres should not be stacked for more than four weeks without



rotation. Blurton adds that truck tyre examination should be included every time the vehicle comes in for a workshop inspection. Finally, he advises that tyres over five years old should be inspected by a tyre professional.

THERE OUGHT TO BE A LAW

In general, the US NHTSA (National Highway Transportation Safety Administration), which has researched the safety risks of tyre ageing, argues that most vehicles would wear out their tyres before age-related degradation would pose a risk to safety. One important exception is vehicles used irregularly, such as small (15-person) bus conversions, drivers of which are advised to always check their tyres before travelling.

Tyred argues that non-binding guidance does not go far enough to guarantee the safety of coach passengers who, unlike drivers in HGVs, do not have the means to be able to check the tyres of their vehicle before every journey.

Legislation put forward by Maria Eagle in October 2017 would ban tyres older than 10 years on steering axles, require tyre checks and records at the annual inspection, and provide the

power to sanction rulebreakers.

In a response given in the House of Commons, then-minister of state for transport John Hayes hinted that the government would be conducting more research on the matter.

Industry and government reaction to the proposal has been mixed.

On one hand, the Tyre Industry Federation said that it sees no need for binding rules. In a prepared statement, it said that it deplors all road accident casualties and supports many initiatives to improve road safety, that it worked with DfT and traffic commissioners after the A3 coach crash to develop the guidance, which was distributed to every licensed bus and coach operator in the country.

But it added that since then, there have been no contraventions of the government recommendation not to fit tyres over 10 years old on the steering axle of buses and coaches. It concludes: “On the basis of the results achieved it is not clear to TIF what further preventive benefit can be had from additional regulation.”

On the other hand, the National Tyre Distributors Association has supported Tyred, and also has campaigned for a quality mark for the sale of part-worn tyres.

Coach operators Big Green Coach and National Express have also joined the campaign. Cassidy says: “We recognise what a huge responsibility it is to carry people’s friends and family around the country day in, day out. This means we only do what is safe, and we stop any unsafe behaviour. Tyre safety is a critical part of this.” 

FURTHER INFORMATION

Best Practice Guide for Bus & Coach Tyre Maintenance (IRTE) – <https://is.gd/ukisap>

European Tyre and Rim Technical Organisation recommendations – <https://is.gd/D7wdmj>

Sean Kane’s NTSB tyre ageing presentation – <https://is.gd/adirej>