
NFPA 1911 and tire replacement on emergency apparatus

by Tom Jenson, Code Specialist, State Fire Marshal Division

It was brought to our attention that Section 8.3.6 of the 2017 edition of NFPA 1911, Standard for the Inspection, Maintenance, Testing and Retirement of In-Service Emergency Vehicles, has requirements (or recommendations) to replace tires on emergency apparatus at seven-year intervals or more frequently based on tread wear. This first appeared in the 2007 edition of NFPA 1911 and has remained unchanged.

We inquired reasons behind this requirement with NFPA's technical committee on this standard. The following is from one of the committee members. The member also provided several websites that can be provided if needed.

Although neither National Highway Transportation Safety Administration (NHTSA) nor DOT have formally adopted regulations which set a specific truck tire service life requirement (primarily due to strong lobbying efforts from the US Rubber Manufacturers' Association, which opposes such regulations due to increased litigation exposure), a 6- to 10-year service life requirement for commercial truck tires are currently in place in both Europe and Japan, and the need for such regulation has been frequently made a subject of discussion in the US regulatory agencies' rule-making processes. Some states

(e.g. New York, New Jersey, California and Hawaii) have jumped into the breach with their own tire-age requirements.

Most tire engineers and technical experts recognize that the chemical compounds essential to tire bonding and structural integrity clearly degrade over time, and that other factors (e.g. heat, moisture penetration, storage conditions, sunlight exposure, etc.) can accelerate the degradation process. Most tire and vehicle manufacturers recommend tire replacement in the 6- to 10-year time frame, regardless of mileage or wear condition. There's plenty of science to support these recommendations.

Whether or not your department chooses to follow NFPA or other standards for your SOP or SOGs, this is a recognized standard regarding the inspection, maintenance, testing and retirement of in-service emergency vehicles. Many of you have older apparatus with original tires with good treads that you have not considered replacing. We would recommend discussing this with your fleet maintenance personnel. Tires are an important component to arriving safely on the emergency scene and returning crews to their quarters.