

Federal Regulations pertaining to Air Brake Tubing & Hose – Use of Spring Guards

Periodically, a mechanic or inspector will observe that spring guards may not exist on tractor-trailer air brake hose hookup lines and will refer to FMVSS CFR 393.45.

The only excerpt from this CFR that relates to spring guard protection is as follows:

“ (c) Nonmetallic brake tubing. Coiled nonmetallic brake tubing may be used for connections between towed and towing vehicles or between the frame of a towed vehicle and the unsprung subframe of an adjustable axle of that vehicle if --

(c)(1) The coiled tubing has a straight segment (pigtail) at each end that is guard at least 2 inches in length and is encased in a spring or similar device which prevents the tubing from kinking at the fitting at which it is attached to the vehicle; and

(c)(2) The spring guard or similar device has at least 2 inches of closed coils or similar surface at its interface with the fitting and extends at least 1 1/2 inches into the coiled segment of the tubing from its straight segment. “

This requirement is for coiled nonmetallic tubing only and does not related to hose. Rubber air brake hose manufactured to SAE J1402 has a significantly thicker wall and is less prone to abrasion and kinking as is a nonmetallic tube manufactured to SAE J844.

This does not mean that hoses should not be properly protected from chafing, kinking and other mechanical abuse and care should be taken to ensure that hoses are properly installed and routed to prevent this abuse. Spring guards and other protective methods are available from Tectran should their use be desired.

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