

Cable Support for UNDER the Trailer

Cable support between the tractor and trailer is a frequently discussed topic. However, support for the lines that run underneath the trailer are just as important. Failure to keep brake hoses or tubing from chaffing, or kinking under the trailer carries a 4 point severity under CSA guidelines.

Most, if not all, 45-foot trailers or longer, have a sliding suspension which allows the axles to adjust, sliding back and forth, underneath the trailer. This, in conjunction with a sliding 5th wheel, allows for any necessary adjustments to evenly distribute the weight of the cargo across all axles. With this sliding movement, air lines and ABS cables under the trailer need to have the ability to decrease and lengthen with the suspension as it slides. The slack in these lines is supported just in front of the first inside axle at the rear of the trailer with one or more sliding axle springs. If the air lines and cables are not properly supported, they can sag too low to the ground or be pulled too taut when the sliding axle is adjusted. Placement and quality of these springs matter and the following should be considered when installing or replacing them:

1. The length of the frame on the sliding suspension will determine if one or two springs should be used to support the air lines and cables. Longer trailers usually have longer sliding suspensions, requiring more slack in the lines to accommodate for a maximum adjustment in the suspension. So a 53' trailer will typically use two springs to support this extra slack in the lines, versus a 45' trailer which may only need one spring.

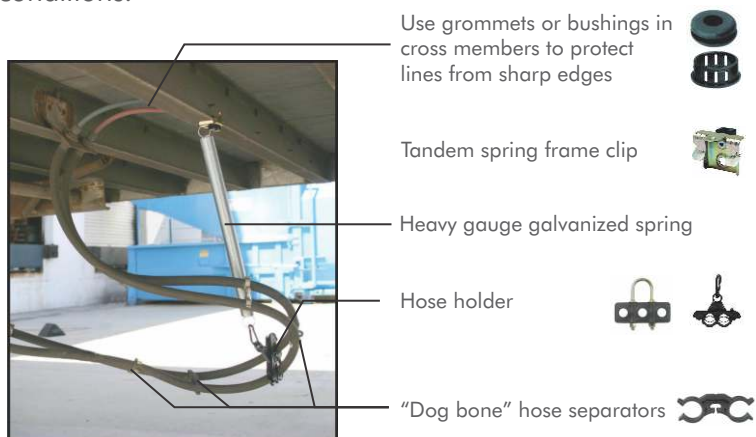
2. There is no set location to mount sliding axle springs on the cross members of the trailer. Springs should be installed so that the air lines and cables hang in a neutral position when the sliding suspension is moved all the way forward. There shouldn't be too much cable hanging down. When the suspension is slid all the way back, the cables should not be pulled too tight.

3. Using a shorter, 16" spring may be ideal, versus a longer 20" spring. While this may not always be the case, shorter springs keep the cables higher up off the ground, creating less potential for dragging if springs begin to lose recoil memory.

4. Not all springs are the same. It is always good to check with the manufacturer to determine the working length of the springs. Some springs may be the same length when in a resting state, but might actually stretch to different lengths when fully extended.

5. Springs should be made of heavy gauge wire to be able to stretch and remain in the same position for long periods of time with the ability to recoil back to their original position when in a resting state.

6. Springs made with galvanized wire help prevent corrosion. This is especially important considering they are in close proximity to the ground and spinning wheels where moisture, chemicals and debris can get kicked up in harsh weather conditions.



TIPS

- The tandem clip used to attach the spring to the trailer cross members should be installed on the front side of the cross member with the clip pushed all the way into the beam. If the clip is not tapped in correctly, the spring could become loose, and fall.
- Use hose separators (commonly referred to in the industry as "dog bones") to keep air lines separated from one another. Rubber air lines rubbing up against one another can cause damage.
- Use rubber grommets or nylon insulated bushings to protect air lines from sharp edges when feeding them through holes in the trailer's cross members.

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