

## FEATURED PRODUCT

### 4-in-1 Electrical & Air Assembly

- Spiral wrapped for an organized, clean look
- Large grips for great coupling/uncoupling leverage and acts as strain relief
- Swivel end brass fittings
- Outstanding kink and abrasion resistance
- Includes hanging clamp and clip for easy installation



VISIT US ON THE WEB  
AT

[www.phillipsqwiktechtips.com](http://www.phillipsqwiktechtips.com)

TO BE ADDED TO OUR  
MAILING LIST AND  
FOR ALL  
PAST ISSUES

## Proper Airline Selection (Part 1 of 2)

When selecting airlines for a tractor/trailer most know that it is recommended, and in some cases even required by law, to choose air lines with the following features:

- Airline assemblies that display the appropriate markings which signify compliance with DOT regulations. (Required by law)
- Swivel fittings on the tractor end to avoid corkscrewing during installation.
- Spring guards; to protect the hose or tubing from a sharp bend at or near the fitting.
- Added handle grips at the trailer end to provide protection from kinking of air lines during glad-hand connection and disconnection.
- Coiled assemblies that extend to their maximum expected service length and return to their retracted position without sag.

However, the biggest factor that needs to be taken into consideration when choosing air lines is the proper overall working length that should be used.

In all cases, the length of the assembly must be adequate enough to ensure that the airlines are not stretched beyond a safe degree at their maximum expected service length, but must also be short enough to be protected from abrasion, snagging or tangling when in a relaxed state. To ensure that these standards are met you must determine the proper length of the air assembly based on a number of factors.



These include the lead length, whether straight air lines or coiled assemblies are being used, the type of airline suspension method, and the positioning of the tractor/trailer when taking measurements.

We will begin by discussing lead length which is usually the straight uncoiled section on either end of a coiled air assembly, and is considered part of the total working length.

### Lead length on the tractor side:

According to SAE J702 the tractor connections on newer vehicles must be mounted low to allow easier access. This makes hook ups more accessible but requires that the lines have a longer lead and some type of suspension system. Lead length is usually 12", 40", 48" & 72" with the most common being 48". These longer leads are generally suspended using one of three methods: a slider bar with single or dual tender springs, a pogo stick, or fixed connection to the back of the cab. On older vehicles, you might find that the connections on the tractor are more than 18" above the tractor frame/deck plate, in which case a short lead is often used.

### Lead length on the trailer side:

Lead length on the trailer side of the assembly should generally be between 6" and 12". Since the installation locations on trailers are usually very low, the use of leads that are longer than this will more than likely cause sagging of the lines.

After determining lead length, the remaining factors that need to be taken into consideration can be explored. Although it should be noted that lead length does not necessarily always need to be determined first.

In next month's tech tips, we will continue to discuss these remaining factors which include the type of airline you'll use and airline suspension method, as well as measurements of the truck in varying positions.



- When choosing air assemblies be sure to take into consideration display of appropriate markings, swivel fittings, spring guards, added handle grips and good recoil memory.
- The length of an air assembly must not be stretched beyond a safe degree at the maximum expected service length, but must also be short enough to be protected from abrasion, snagging or tangling when in a relaxed state.
- Longer leads are used on the tractor end, while shorter leads should be used on the trailer end.