# PHILIPS

# Qwik Tech Tip

How to Measure Coiled Electrical Cables Properly

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### FEATURED PRODUCT

# Tracker Bar Spring Kit

• Quick change - Save up to 5 minutes

Stretches to 40" at35 lbs. of pull force

• Keep cables off deck plates, avoid fines!

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TO BE ADDED TO OUR MAILING LIST AND FOR ALL PAST ISSUES Length is one of the most important issues in a coiled electrical cable. Too short and it could pull out on an average turn, too long and it will drag on the deckplate. Coiled electrical cables are typically offered in 12 foot (using on average nearly 14 feet of cable) and 15 foot (using over 17 feet of cable) lengths. Which length is right for your trucks and how is the best way to measure?

SAE defines a cable's "Working Length" or "Elastic Limit" as the extended length of the coiled portion plus the lead lengths at both ends (minus plugs). It's important to look to SAE J2222 to determine the true "Elastic Limit" because that measure is critical to getting the best length cable (which actually might be shorter than you think – saving you money). SAE J2222 requires that a cable pull free from the receptacle at a force greater than 25 lbs to determine the "Elastic Limit" of that cable. In other words, a 15 foot coiled electrical cable should measure 15 feet when pulled at a force of 25 lbs. To properly measure for your trucks, follow these easy instructions:

STEP 1: Measure straight line distance from back of cab to front of trailer with cab in normal driving position.

STEP 2: Turn cab to maximum right hand turning distance (used in backing) then measure the distance from tractor socket to trailer socket position

STEP 3: (See image 1) Simulate the use of pogo stick and re-measure (STEP 1 & 2). Note: when simulating use of pogo stick, determine the best length of the straight lead and coil length

Step 4: (See image 1) Simulate the use of a tractor bar and re-measure (STEP 1 & 2). Note: when simulating use of tracker bar, determine the best length of the straight lead and coil lengths.



- Coiled electrical cables typically come in two lengths 12' and 15'
- Using the right length is important from both a cost and operational standpoint
- Reference SAE J2222 for best definition of "Elastic Limit"
- A cable that is too short could pull out on average turn; if it's too long it could drag on deckplate (and could be a waste of money).
- Use simple measuring technique (Step 1-4) above to determine proper length for your tractor/ trailer combinations.