# **PHILIPS**

## **Qwik Tech Tips**

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The Difference Between Quality Air Coils and Those of a Lesser Quality

## **FEATURED PRODUCT**

## **CLEAR-VU™ Battery Jumpers**

- Translucent cable allows you to see corrosion
- Heavy wall shrink tubing stops water & contaminants from entering charging system
- Rope-style stranding for flexibility



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### Part 2 of 2

In addition to understanding the different types of material used in the fabrication of air coils, below are also a few other means to determine if an air coil is of a higher quality or not.

## Coil 'Clapping' Sound

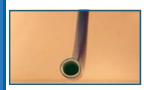
One measure you can take is to gather the coils and 'clap' them together. They should not sound like hard, light plastic which has a higher pitched sound. Typically the material is better, when it sounds deeper and denser with a lower pitch.





## Air Coil Layering Types

There are two types of layering. Type A - which is smooth (mono/single wall) with no internal braid, and Type B (dual wall) - which has internal braiding. In most cases, the smaller and tighter the braid, the more reinforcement there is throughout the walls of the air coil, and the better the product is. Look at several types of air coils to see how tight the "diamond pattern" is — the smaller the pattern, the stronger the air coil. It should be noted that while Type A layering is permitted, to our knowledge there has not been a single-layer, unreinforced material known today that can withstand DOT qualifications testing.





### Fittings

There are several types of fittings, from 1 piece non-compression to 4 piece compression fittings. An example of one of these fittings is a three piece compression fitting which is made up of a nut, ferrule and fitting body. This type of fitting allows for installation without spinning the cable. There are also barbed fittings, which offer protection to the ends of the hose as well as adding an extra preventative measure to help keep the fitting inserted into the hose.



Air coils with one piece fittings are inconvenient. The fitting is connected to the tractor by twisting and turning the entire cable around and around in a circle. This can hinder the ease of installation because added caution has to be used to keep the air coil from becoming tangled in the other coils already installed.

In conclusion, the pitch of the air coils, air coil layering, and fittings are all factors to consider when determining the quality of an air coil. As discussed previously in part one, air coils made from Nylon 11 and 12 (PA11 & PA12) far surpass those made from Polyurethane and Nylon 6/6 in strength, durability, flexibility, and memory recoil. With the knowledge of all these factors combined, a determination can be made as to the quality of any air coil.



- When "clapping" the coils together, a denser lower pitched sound indicates good quality air coils.
- Air coils utilizing type B layering with a tighter "diamond pattern" braid offer better reinforcement and less kinking.
- Air coils with three to four piece compression fittings and/or barbed fittings offer easier connection and added protection.
- Air coils made from Nylon 11 and 12 (PA11 & PA12) far surpass those made from Polyurethane and Nylon 6/6 in strength, durability, flexibility, and memory recoil.

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