

FEATURED PRODUCT

STA-LOCK™ Cast Iron Swinger Gladhands

- LIVE SWIVEL – Gladhand swivels 180° without kinking air lines or causing potential leaks.
- Cast iron housing for durability.
- When not in use, gladhand is automatically returned to closed position, protecting the air system.
- Designed for chassis and trailers where gladhands are exposed to possible damage.



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

Part 1 of 2

In determining the quality of an air coil - strength, durability, flexibility, memory recoil and performance in hot and cold temperatures are all factors which are taken into consideration. A good air coil is made of only the highest quality material. In the trucking industry we have seen many different types of materials used in the fabrication of air lines. These materials range from superior to less than ideal.

History of Nylon 11 & 12

Nylon 11, or Polyamide 11 (PA11), is a natural nylon made using the Castor bean. It is an excellent material used in the production of air coils because it offers high burst pressure, durability, excellent resistance to abrasion and chemicals, and flexibility with a rubbery texture. However, a shortage in Castor beans between 2002 and 2003 brought about the use of Nylon 12 which is the synthetic for Nylon 11. Nylon 12's core component, Butadiene, is stiffer than Nylon 11, but offers many of the other same benefits as Nylon 11.

Nylon 12, or Polyamide 12 (PA12), has been manufactured in the past by several different companies in Europe. Recently it has been reduced down to only a few companies. Nylon 12 is used predominantly in two applications worldwide; automotive tubing applications and solar panel production applications. With the majority of the supplies being sold to the solar panel manufactures over automotive, this has created yet another circumstance where new materials such as polyurethane, Nylon 6/6 and Hytrel are being utilized in the place of Nylon 11 or 12. These materials all have their pros and cons.

Other Available Materials

Polyurethane – Polyurethane is flexible, but provides little or no resistance to abrasion, and by itself, cannot meet SAE or DOT minimum pressure requirements.

Nylon 6/6 - Nylon 6/6 is very stiff, lacking flexibility and has very poor recoil memory. The material is very susceptible to sever kinking, which will result in downtime and frequent replacement of coils, not to mention CSA points against a driver and fleet.

Hytrel - There are several grades of Hytrel that can meet requirements of SAE and DOT. The higher the grade numeral the more flexible the material, but the lesser the numeral, it becomes very stiff like Nylon 6/6, and lacks sufficient recoil ability.

So in comparison, anything made with Nylon 11 or 12 (PA11 or 12), is far more superior then an air coil made with low grade polyurethane or Nylon 6/6.



Next month's Qwik Tech Tips will discuss how to determine the quality of an air coil.

- Nylon 11 (PA11) is an excellent material used in the production of air coils because it offers high burst pressure, durability, excellent resistance to abrasion and chemicals, and flexibility with a rubbery texture.
- Nylon 12 which is stiffer than Nylon 11, offers many of the other same benefits as Nylon 11.
- A shortage in Nylon 12 brought about the introduction of other materials such as polyurethane, Nylon 6/6 and Hytrel.
- 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.