

The ConMet Connection

A Quarterly Publication of Consolidated Metco, Inc.

Fall 2007 Volume 4

PreSet® Hub and Rotor Assemblies for Air Disc Brakes – What’s New?

With pending new government mandates from the National Highway Transportation Safety Administration for shorter stopping distances, air disc brakes will become a viable option on heavy-duty vehicles in the not too distant future. As a result, it is important that fleets and owner/operators understand not only air disc brake technology, but the hub and rotor options available from ConMet for use with the various air disc brake packages.

Now that air disc brakes are available as an option at several OEM's, many drivers, technicians and fleet managers are already experiencing the benefits of air disc brake technology. They include:

- Significantly less fade
- Shorter stopping distances
- Safer conditions during emergency braking
- More consistent braking performance
- Reduced maintenance requirements
- Straighter line braking with less pull to either side

There are currently three types of hub/rotor combinations currently in production at ConMet for use with air disc brakes. Two are referred to as “bolt on” rotors – Flat and U-shaped. The third is what’s called a Splined rotor.

U-Shaped Rotor

U-shaped rotors are the most conventional of the different rotor designs. The bolted connection between the hub and the U-shaped rotor runs cooler than most other rotor designs due to the mass of material included in its structure. This benefit is offset by a significant weight penalty. This rotor design is currently available with PreSet Hub bearing technology for virtually all brake configurations including those offered by Bendix, Haldex and Meritor Wabco.

Flat-Shaped Rotor

The lightest design of the bolt-on rotors is a flat-shaped design. An aluminum hub with a flat-shaped rotor can be as much as 45 lbs. lighter than an iron hub with a U-shaped rotor.

The PreSet Aluminum



Iron PreSet Hub and U-Shaped Rotor Assembly.



Aluminum PreSet Hub and Flat-Shaped Rotor Assembly.

Hub with a flat rotor was designed and tested by ConMet and currently approved for use with the Bendix brake at Utility Trailer Manufacturing.

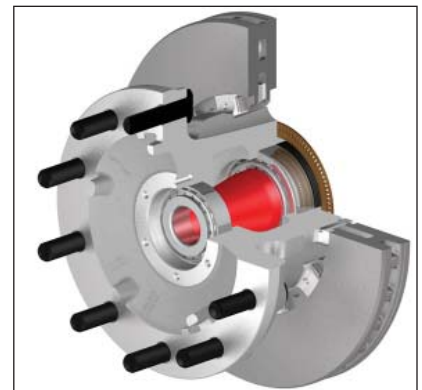
Splined Rotor

In cooperation with Bendix Spicer Foundation Brake, ConMet has developed hubs for their unique splined rotor technology. The splined rotor is unique in that it “floats” rather than being

“bolted” to the hub. This design can reduce the potential for rotor heat cracking and may extend pad life depending on the application. “Splined” rotors are unique to the Bendix brake package and available with PreSet Hub technology in both lightweight aluminum and ductile iron.

There are more designs being developed and field tested as of this writing but are not yet in production. Working with the brake companies and the OEM's, ConMet is committed to providing the most lightweight, low maintenance, cost effective solution for air disc brake applications in the future.

A complete understanding of hub and rotor assemblies will go a long way towards the correct application of disc brakes on heavy-duty trucks. While the experience with air disc brake technology in the U.S. is still in its infancy, expect more development and on-highway performance testing to improve overall performance and life-cycle cost to address the upcoming stopping distance requirements.



Aluminum PreSet Hub and Splined Rotor Assembly.