5 Key Components of Friction Selection

Make sure you have the following information at hand when selecting the brakes for your vehicle or fleet.

1. The mechanics of your brake set up
2. The temperature range of your application
3. Your true cost of ownership related to brake shoes
4. The build date and RSD coverage of your vehicle
5. Your expectations of the friction based on the vehicle

See the following slides for more in-depth details.

1. Brake Set Up Mechanics

Not all vehicles are built the same and the details of each wheel can vary. Below are some key items to note before reviewing friction options.

- **GAWR**
  - Gross Axle Weight Rating
- **AL Factor**
  - Slack length x Chamber Diameter
- **RR (Rolling Radius) or SLR (Static Load Radius)**
  - The distance from the road surface to the horizontal centerline of the wheel, under dual load.
- **Brake Size**
  - Width and Diameter

Compare the specifications of your vehicle listed above to the test conditions to determine if the results or certification truly apply to your application.

2. Are your brakes running hot?

Duty Cycle

- How frequently are you stopping?
- City vs. Highway

Terrain

- Level ground versus mountainous

Cooling

- How effective is your vehicle at cooling brakes, think about airflow and driving speeds

Average loading

- **Over loading** - Be honest, are you pushing the limits, running hot?
- **Dynamic loads** - static torque to hold against slosh
- **Cubed out** - Running light, don't over torque and cause skid / ABS
- **Vocation**
  - Line haul – focused on mileage and corrosion resistance, 3-5 year on the trucks
  - Refuse – focused on wear at high temperature, 3-5 months on the truck
  - Vocational – focused on performance. Time on the truck can vary greatly by application, often time being a season for many vacations

Don't focus on trying to measure temperature, there are way too many variables to accurately do so. The bottom line--you need to know whether or not you are running your brakes hot. While precise temperature measurement is not feasible, a general idea of vehicle use is a good predictor of temperature.

3. Understand Your Total Cost of Brake Service

Know your costs – complete costs, not just the price of the shoes.

- Labor Costs
- Down Time
- Drum Costs
- Impact of CSA scores
- Current Service interval

Your brake shoe selection impacts every one of these items. Make sure you understand where you are today, and select brake shoes that will improve your overall maintenance budget.

4. Keep your vehicle stopping as it was designed

Know your Stopping Distance

Based on the build date of your vehicle, it may have been built compliant to reduced stopping distance (RSD) regulations.

- **Warning Labels** - Be on the lookout for RSD warning labels on new OE shoes and Bendix aftermarket shoes. These labels indicate an RSD-equipped truck and stress the importance of relining with RSD-certified friction.
- **Build Dates and Application** – Compare the build date and vehicle type to Bendix literature BW7528 on the Bendix online document library (Bendix.com) to see if your vehicle was subject to these new mandates.
- **Understand the impact** – By downgrading your vehicle with non-compliant friction, you run the risk of adding 5 car lengths to your stopping distance. What could that cost you?

5. Know Your Expectations

Based on the life cycle of the vehicle and your future plans, what friction is right for you?

- **I'm trading it in** – Economy frictions can become attractive but still make certain you select product from a quality remanufacturer. The last thing you want is to have an issue and be spending more money on a truck that is leaving the fleet. Consider a selection from the Bendix® Basic friction category.
- **I'm keeping it long term** – Knowing your full cost of ownership and considering that you will be seeing the full cycle of this set of brakes, make sure you select a high quality friction that will minimize your cost per mile, maximize your uptime and keep your vehicle performing safely. Consider Bendix ® Advanced and OE friction offerings.
- **Uncertain** – Although it may be tempting to go cheap when uncertain, the downside would be if you decide to keep the vehicle and have to do additional service based on saving a few bucks up front. Go with a standard grade product from a quality remanufacturer. Consider Bendix Advanced friction offerings.