



Bendix Air Disc Brakes

Optimum Performance.
Optimum Engineering.

*Bendix® brand foundation brake
products are brought to you by:*

**Bendix Spicer
Foundation Brake LLC**

AIR DISC BRAKES

Air Drum
Brakes

Air Disc
Brakes

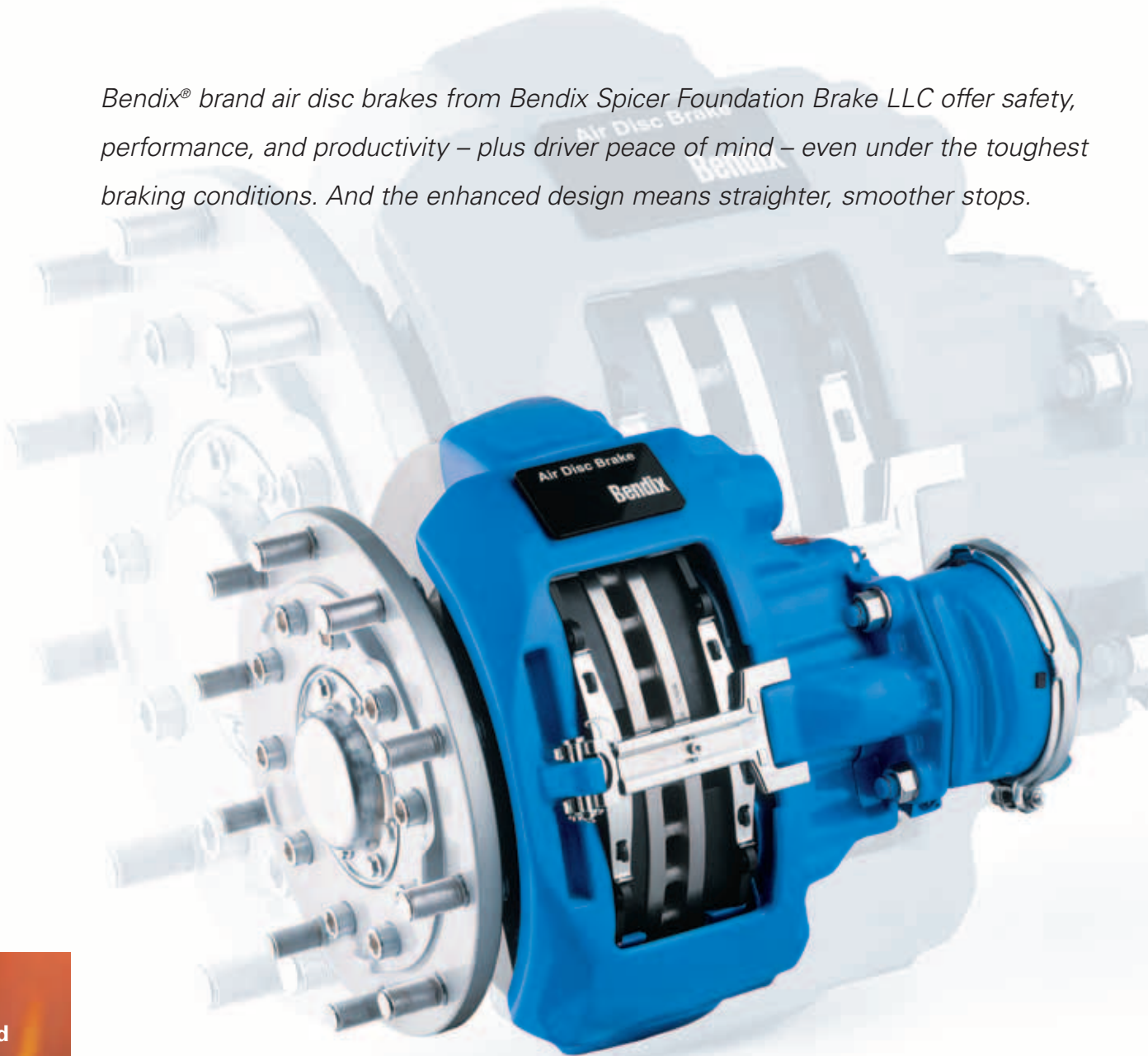
Air Brake
Chambers

Slack
Adjusters

Hydraulics

A major breakthrough in safety, performance, and productivity

Bendix® brand air disc brakes from Bendix Spicer Foundation Brake LLC offer safety, performance, and productivity – plus driver peace of mind – even under the toughest braking conditions. And the enhanced design means straighter, smoother stops.



Advanced
engineering
provides
significantly
longer brake
system life.

Not all disc brakes are the same.

Created from the power and expertise of global R&D and precision design, our air disc brakes offer a two-pin floating caliper design that balances wheel packaging and reliability. This unique two-pin design utilizes fewer components than four-pin air disc brakes. The decreased number of components provides more stringent overall dimensional accuracy, consistent force distribution, and longer brake system life.

Dual, internally adjusted pistons allow the Bendix® ADB22X™ air disc brake to offer the most precise brake adjustment, better force distribution, and more even pad wear than any single piston caliper design. In addition, the Bendix® ADB22X™ brake is the lightest dual piston design available.

Other key benefits:

- Internal automatic brake adjustment allows the brakes to always be in a state of optimum adjustment.
- Virtually no brake fade and no degradation in stopping power.
- Straight, stable stops due to minimized brake force variation between brakes.
- Optional integrated pad- and rotor-wear sensing optimizes pad and rotor life and minimizes the number of required maintenance checks.
- Optimized friction pairing results in minimal fade and maximized pad and rotor life.
- Global reach and expertise. Bendix Spicer Foundation Brake, Bendix, and its German affiliate, Knorr-Bremse, have more than 10 million air disc brakes in service worldwide and produce nearly 2 million air disc brakes annually.

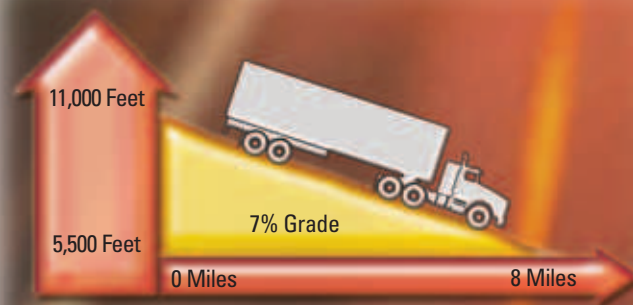
Superior performance on long downhill grades.

There are two types of brake fade – mechanical and friction. In an air disc brake, as heat builds up, the rotor expands toward the pads, thus significantly removing mechanical fade from the equation.

With the Bendix® ADB22X™ air disc brake, brake fade is nearly eliminated by optimizing the friction couple.

At Bendix Spicer Foundation Brake, we developed the metallurgy in our 17-inch rotor and paired it with our advanced friction material specifically designed to optimize friction performance at high temperatures, thus significantly reducing brake fade and maximizing brake pad and rotor life. As a result, there is virtually no degradation in stopping power when brake temperatures rise under heavy use.

Superior Performance On Long Downhill Grades



Compact design minimizes weight and maintenance.

Bendix air disc brakes feature a mono-block caliper design, which makes the brake more compact than two-piece caliper designs. The mono-block design also offers better sealing from the environment for

better protection from the elements. Engineered to fit most truck wheel-end envelopes, Bendix air disc brakes offer commercial vehicle drivers top performance, durability, and long life.

Stopping power that is smooth, straight, and safe

Constant brake pedal effectiveness and passenger car-like feel.

As a result of an optimized friction couple, Bendix® air disc brakes maintain their effectiveness in severe driving situations. This results in brake pedal forces that do not vary dramatically, providing the driver with a passenger car-like feel.

Bendix air disc brakes are preferred by virtually all drivers who have experienced their performance, stability, and feel. This can aid in driver retention and recruiting, and also extends added value throughout the entire operation for a fleet that runs on Bendix® air disc brakes.

Brake Pedal Force



Improved drivability and feel in severe braking conditions

Greater stability during stops.

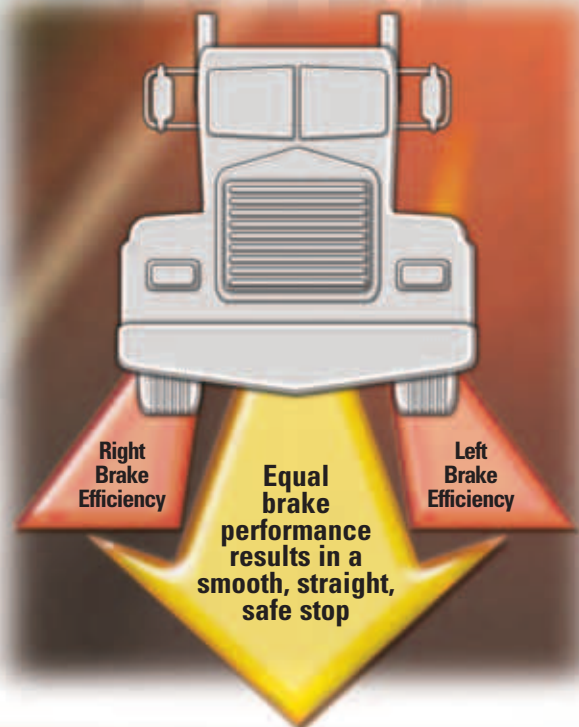
Bendix air disc brake technology dramatically improves in-line braking stability. Our air disc brake system's inherent high efficiency (95%) and low hysteresis (<10%) mean there is a negligible difference between the left side and right side performance, and that brake force is being applied and maintained efficiently to all air disc brake wheel-ends.

The result? The air disc brake equipped vehicle more easily comes to a

straight, stable stop. The right to left side brake performance of other brake designs can vary up to three times as much, making steering corrections necessary to keep the vehicle on its intended path.

With consistent brake performance, a vehicle with Bendix air disc brakes at all wheel-ends also benefits from improved overall brake balance.

Performance Improvements



Dual synchronized pistons provide even force distribution, resulting in more even pad wear, reduced heat, and noise elimination.

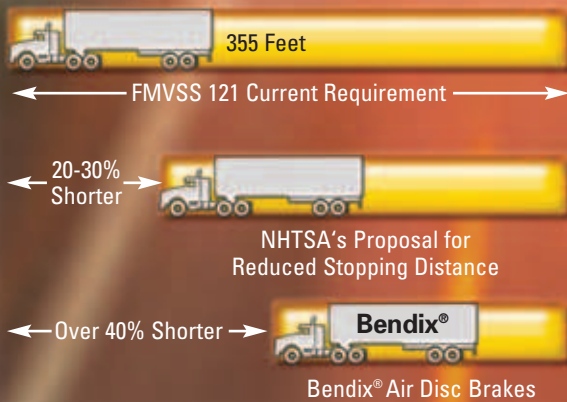
Shorter stopping distances.

From 60 mph, a typical 56,470 lb. GVW tractor equipped with Bendix® air disc brakes and coupled to a control trailer (non-braked) will stop more than 40% shorter than the current 355-foot federal requirement of FMVSS 121.

What's more, with air disc brakes, drivers gain immeasurable peace of mind knowing they will always have the braking force needed to stop safely or negotiate a grade.

Stopping Distance From 60 MPH

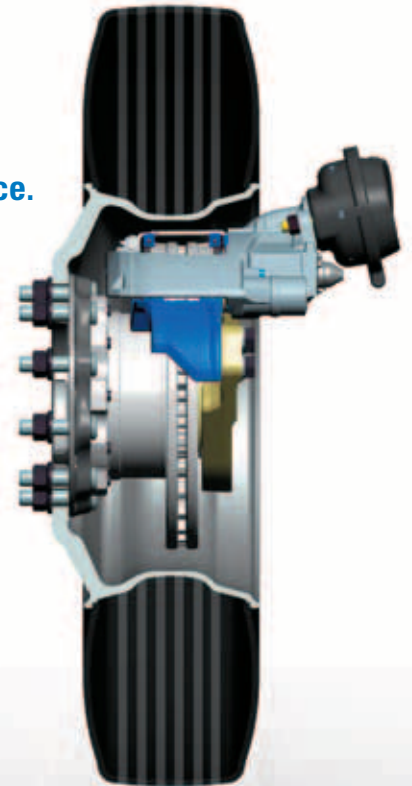
GVW: 56,470 lbs. with Non-Braked Control Trailer



Dramatically reduced downtime during service.

Changing air disc brake pads takes less than half the time it typically takes to change drum linings, reducing downtime and labor costs.

Every component has been engineered to provide a longer service life. This means drivers spend less time waiting around for service – and more time driving, providing significant savings in maintenance, labor, and downtime.



Bendix® Air Disc Brakes



Advanced engineering from the industry leader

Reduced part number complexity and component proliferation.

With Bendix® air disc brakes, the same size brake unit can be used on all axles. Traditional brake designs require different components on the steer, drive, and trailer axles, increasing the number of different parts required to fully service the brake system. Bendix air disc brakes mean there are fewer parts to buy, fewer parts to stock, and fewer brake inventory management costs.

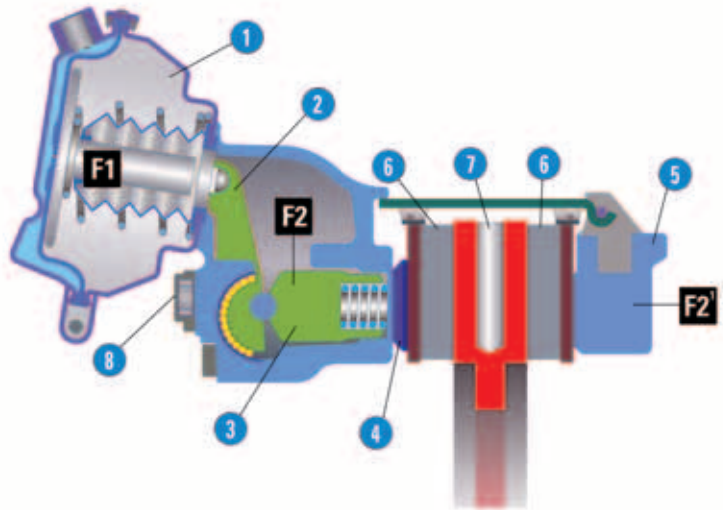


Design Characteristics	Feature	Bendix Air Disc Brake Advantage
Brake Size	22.5"	Designed to fit most truck wheel-end envelopes and offer drivers top performance.
Available Brake Torque	Up to 15,000 ft. lbs.	Complete range of application coverage.
Adjustment	Dual Synchronized	Increased performance, stability, and safety.
Caliper Construction	Mono-block Construction	More compact than two-piece caliper models. The mono-block design also offers better sealing (and better protection) from the external environmental elements.
Unit Weight	78 lbs.	Lightest dual piston caliper available.
Pad Wear Volume	43.05 cu. in.	Increased pad life, extended service intervals, reduced maintenance.
Pistons	Dual Pistons	Even force distribution, more even pad wear, reduced heat, noise elimination.
Wear Sensing	Three Available Configurations	Optimizes pad and rotor service life to help reduce maintenance costs and downtime.
Caliper Guidance	Two-pin Design	More stringent overall dimensional accuracy. Two-pin design uses fewer components.

The compact mono-block design provides excellent sealing and protection.

Bendix® Air Disc Brakes – Models ADB22X™, SN7™, SN6™, and SK7™

1. Pneumatic brake chamber forces the pushrod against the lever with force **F1**.
2. Eccentric lever multiplies force **F1** and applies force **F2** to beam.
3. Beam transmits force **F2** to a pair of threaded tubes and tappets.
4. Dual tappets spread force **F2** evenly across surface of inner brake pad.
5. Sliding caliper distributes forces **F2** and **F2'** equally between inboard and outboard brake friction pad.
6. Special brake pads, made of a carefully selected blend of materials for high stopping power and long life, apply forces **F2** and **F2'** to rotor.
7. Heavy duty ventilated rotor is specifically designed to minimize heat distortion and optimize thermal stress endurance. As pads grip rotor, vehicle decelerates.
8. These wear sensors provide a continuous voltage signal that indicates pad and rotor condition.



Your Single Complete Source.

You may know our products and heritage as Dana®, Eaton®, Spicer®, or simply Bendix®. Names you've come to trust for world-class performance, quality, and superior support. Today, that legacy of foundation brake superiority continues under one brand name – Bendix® – as a part of Bendix Spicer Foundation Brake LLC.

From sales and service professionals you deal with face-to-face – including both Bendix and Roadranger® representatives, part of our extensive

field network – there is an entire team working behind the scenes to produce top quality, high performing products for you.

From R&D to engineering, from production to quality control and on-time distribution, rest assured you have the full support of an industry leader at work for you. Plus, we stand behind our products with complete warranty protection from one of the best programs in the industry.

One out of every three North American commercial vehicles manufactured today is built with Bendix® foundation brakes.

Many top fleets spec only our brakes both on their new trucks and trailers, as well as for their all-makes replacement parts. Bendix Spicer Foundation Brake is your complete source for brake design, manufacturing, hardware, and support for foundation brake solutions, actuation systems, and components.



Talk to your Bendix® or Roadranger® representative. Call 1-866-610-9709 or visit www.foundationbrakes.com today.



Bendix Spicer
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The Roadranger® System Features
Bendix Spicer Foundation Brakes

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