



Reduced Stopping Distance Regulations

In July of 2009, the National Highway Traffic Safety Administration (NHTSA) issued an amendment to FMVSS No.121 relative to stopping distances to be implemented in two phases:

Reduced Stopping Distances Phase I & II						
Date of Implementation	Vehicle Type	Tractor GVWR (lbs.)	New Distance Unloaded	New Distance Loaded	Old Distance Unloaded	Old Distance Loaded
August 1, 2011	3 Axle Tractor	Up to 59,600	235 ft.	250 ft.	335 ft.	355 ft.
	3 Axle Tractor	59,600 – 70,000	235 ft.	250 ft.	335 ft.	355 ft.
	3 Axle Tractor	Above 70,000	235 ft.	310 ft.	335 ft.	355 ft.
August 1, 2013	2 Axle Tractor	Inclusive	235 ft.	250 ft.	335 ft.	355 ft.
	4+ Axle Tractor	Up to 85,000	235 ft.	250 ft.	335 ft.	355 ft.
	4+ Axle Tractor	Above 85,000	235 ft.	310 ft.	335 ft.	355 ft.

Safety first at Haldex

Safety has always been a core focus for Haldex. NHTSA's continuing mission of increasing safety on today's roadways is an effort Haldex is proud to support at many levels throughout the heavy-duty industry.

Haldex friction products and FMVSS 121 RSD Performance Requirements

- GG 2020 and GR 2015 brake linings have been certified to comply with FMVSS 121 RSD performance requirements and testing protocols.
- RSD performance validation through on-vehicle testing was conducted on behalf of Haldex by LINK Commercial Vehicle Testing at TRC (Transportation Research Center, Inc.).

FMVSS 121 dynamometer performance requirements

All Haldex friction materials satisfy the retardation, brake power and recovery specifications of NHSTA FMVSS 121 to assure compliance within this requirement regardless of the vehicle manufacturer and/or vehicle configuration.

RSD CERTIFIED GG 2020 • GR 2015

Engineered stability

The high-performance legacy of Grey-Rock brake linings is built on decades of providing best-in-class stability.

Advanced friction compounds deliver highly stable brake linings that help you manage the rigors of variable load and road environments and the ever-growing demands for both safety and economy.

GG 2020 Premium
RSD Certified
23,000 lb. axle



GR 2015 Premium
RSD Certified
20,000 lb. axle



The right choice

Brake linings should always be chosen based on the unique application environment YOU operate in.

Don't sacrifice brake performance – or your ROI – to a choice someone else made for you. Exercise your right to choose and upgrade to a high-performance aftermarket option.



Reduced Stopping Distance FAQ



Fleets should take the time to ensure they understand the factors that affect safe braking performance, especially on vehicles that have been in service for a period beyond a year. Stopping performance on these “utilized” vehicles is typically reduced over time. The natural course of wear on wheel end and brake system components – as well as maintenance practices and driver braking habits – commonly result in decreased stopping performance.



Fleets often ask these questions:

Does the original brake lining supplied by the OEM have to be used for aftermarket replacement?

NO.

Are there aftermarket brake linings that are certified to meet FMVSS 121 reduced stopping distances?

YES. For example Haldex **GG 2020** and **GR 2015** have been certified according to FMVSS 121 criteria.

What are the requirements for linings used to service vehicles manufactured under this new rule?

There are currently no federal motor carrier safety regulations governing aftermarket friction material or performance requirements, thus end users (fleets) are not required to verify that vehicles meet the new FMVSS 121 stopping distance requirements.

Once in the field, trucks and tractors are subject to a 20 mph stopping distance requirement under Federal Motor Carrier Safety Regulation (CFR 49 393), or an alternative brake retardation force requirement measured by a device known as a “Performance Based Brake Tester.” These requirements are not new and will not change with the new stopping distance rule.

Will the new ruling require a radical redesign of braking systems on Class 8 tractors?

NO. There are no specific design requirements. New vehicles must meet Reduced Stopping Distance requirements, while still complying with all other existing performance requirements (FMVSS 121, etc.). OEMs may choose a variety of methods to increase braking force. Foundation brake enhancements could include:

- Increased brake drum diameter on the front axle
- Wider brake shoes (front and rear)
- Increased brake chamber size
- Longer brake adjuster arm
- More robust S-cam bushings
- Brake linings with increased coefficient of friction
- Re-enforcement of other components to reduce deflection



OEMs may also choose to direct more air pressure to the front axle brakes, taking advantage of their increased capacity. In most cases, a combination of these methods will be utilized to meet the requirements. OEMs may also offer air disc brakes as an option to increase performance.

Will Haldex friction products qualify as acceptable replacement linings on vehicles manufactured under this new rule?

YES. Tractor manufacturers will likely choose to incorporate a combination of enhancements to produce more “brake power” during stopping to achieve the required distances. Some may choose to utilize brake lining material with higher coefficient of friction as part of the solution. In many cases, using Haldex friction in place of the OEM friction material yields a variety of performance enhancements including reduced lining wear, less brake fade and increased brake power.

For all your friction needs, specify Haldex.

Contact your Haldex sales professional.

United States 816-891-2470
Canada 519-621-6722
Mexico 52-81-81569500

For additional contact information or to learn more about Haldex, please visit haldex.com

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