



# What is The Truth About

# RSD

## What is the Federal Reduced Stop Distance (RSD)?

### Reduced Stop Distance Frequently Asked Questions

For the detailed rule go to [www.nhtsa.gov/Laws+&+Regulations/Brakes](http://www.nhtsa.gov/Laws+&+Regulations/Brakes)

(Official website of the National Highway Traffic Safety Administration)

The RSD Mandate is an amendment to FMVSS 121 (d) that requires most **NEW** vehicles to achieve reduced stopping distances of 250 feet, and certain severe duty vehicles to stop within 310 feet. **This requirement applies only to NEW vehicles.**

Compliance Date*	Vehicle Configuration	Gross Axle Vehicle Weight Rating	NEW Stop Distance	Pre-2012 Stop Distance	Percentage Reduction
Unchanged	Buses	10,000 +	280	280	0%
Aug. 1, 2011	3 Axles Tractor	0 - 59,600 lbs	250	355	30%
Aug. 1, 2013	2 Axles	ALL	250	355	30%
	3 Axles	59,601 – 70,000	250	355	30%
		70,001 +	310	355	13%
	4 or more Axles	0 – 85,000	250	355	30%
		85,001 +	310	355	13%

\*All vehicles manufactured after this date must meet the corresponding requirements on the build date only.



Fleets are not required to maintain brake replacements to the exact standard set at the time of manufacture. Thus, there is no requirement for the aftermarket.

<http://www.fmcsa.dot.gov/regulations/title49/section/393.40>

(Official website of the Federal Motor Carrier Safety Administration)

## How will RSD vehicles achieve shorter stop distances?

To increase torque and reduce stopping distances in drum brakes, manufacturers generally will utilize frictions with higher coefficients of friction. Also, they will increase the total surface area by increasing the shoe and drum width and diameter.

Fleets can expect to see OEM drive axle brake specs now include both 16.5" x 7" and 16.5" x 8.625". At the same time, 15" x 4" steer axle brakes will now be replaced by 16.5" x 5" and 16.5" x 6" steer axle brakes.

Many manufacturers are also now using air disc brakes, which meet the RSD requirements.

## If my vehicle came with RSD brakes, does the law say I have to replace them with RSD brakes?

No. While it is always advisable to use the best friction for your needs, **FMVSS 121 only applies to a vehicle's stop distance at the time of manufacture.** Given the number of components in a braking system, and their tendency to wear,

it is impossible for a fleet to guarantee that any vehicle will maintain "like new" performance in any system. Therefore, FMVSS 121 does not, apply to aftermarket brakes. In addition, if you are using remanufactured shoes (rather than brand new brake shoes), there is no possible way to know if the braking power of the friction will perform similarly to the OEM brakes that met the RSD requirements. Every used shoe will have its own separate wear issues.

## Will I have to retrofit my trailers and tractors to comply with the new regulations?

No. FMVSS 121(d) pertains ONLY to vehicles built on or after the respective phase dates of August 1, 2011 or August 1, 2013. **Vehicles built prior to those dates were built with particular engineering and should not be re-engineered without the express written consent of the OEM.**

## Can I retrofit my pre-2012 vehicle with RSD brakes?

While you can retrofit a vehicle for improved performance, you must be aware that increased torque in some steer axle brakes will now over-torque the vehicle's infrastructure and cause unintended consequences.

**Fleets are cautioned to be wary of anyone suggesting they should retrofit without considering all of the ramifications.**

For more information on RSD,  
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