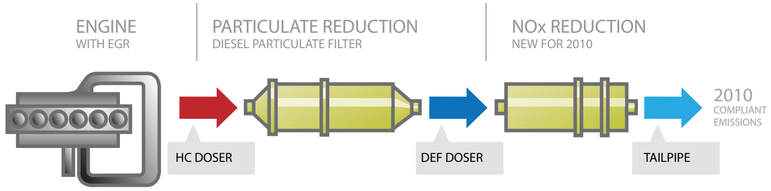
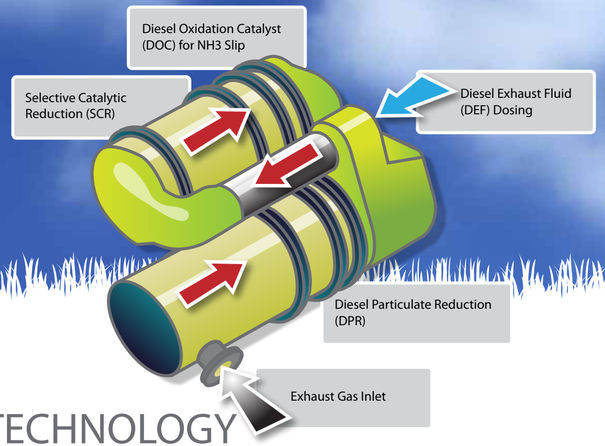
WHAT IS SCR?

Selective Catalytic Reduction (SCR) is one of the most cost-effective and fuel-efficient vehicle emissions control technologies available to reduce diesel engine emissions.

As the overwhelming choice of medium and heavy-duty truck and engine manufacturers in North America to meet 2010 emissions standards, SCR diesel emissions control technology is being adopted into multiple upcoming product lines.



SCR is an aftertreatment process that treats exhaust gas downstream of the engine. The technology is designed to permit nitrogen oxide (NOx) reduction reactions to take place in an oxidizing atmosphere. It is called "selective" because it reduces levels of NOx using ammonia as a reductant within a catalyst system. The reducing agent reacts with NOx to convert the pollutants into nitrogen, water and tiny amounts of carbon dioxide (CO2) - natural elements common to the air we breathe everyday. The reductant source is usually automotive-grade urea, otherwise known as Diesel Exhaust Fluid (DEF), which can be rapidly hydrolyzed to produce the oxidizing ammonia in the exhaust stream. SCR technology alone can achieve NOx reductions in excess of 90%.



HINO SCR TECHNOLOGY

Hino Trucks has adopted SCR and developed state-of-the-art technologies to implement emission controls that meet or exceed the 2010 EPA emissions standards with near-zero levels of all regulated particulates [0.01 g/hp-hr] and NOx, [0.2 g/hp-hr] including hydrocarbons and carbon monoxide.

For Hino Trucks, the ability to meet strict emissions and fuel efficiency guidelines affordably without compromising driving power and performance is paramount. The ability to reduce emissions to near-zero levels while also delivering a 3-5% fuel savings distinguishes SCR as one of the only emissions control technologies that is as good for your business as it is for the environment. The net result is a more cost effective vehicle that's kinder to the environment.

FLEET COMMONALITY IN DESIGN: The standardized design for the SCR unit developed by Hino means that your fleet will continue to provide the same ease of maintenance. The SCR unit, along with the DPR tank is located under the passenger entry on most 2010 compliant Hino models.

TECHNOLOGY THAT DELIVERS USABILITY: Operating an SCR equipped Hino is straightforward and simple, both for the driver and the fleet owner. New display features for the driver include Diesel Exhaust Fluid [DEF] level monitoring, warning lights and audio assisted warning. In fact, Hino Trucks will monitor the DEF fluid level within the instrument cluster.

From a driver's standpoint, it does not get any easier; simply refill the DEF tank at normal refill intervals. Filling your truck with DEF is not much different than re-fueling with diesel; however the usage ratio is significantly less. The DEF dose rate is on average 1-2% DEF for each gallon of fuel consumed. The DEF tank on a Hino truck will accommodate 4.7 gallons of DEF which allows the vehicle to travel as many as 8,000 miles between DEF tank refills (on highway usage).

DIESEL EXHAUST FLUID

Diesel Exhaust Fluid (DEF) is a solution made up of purified water and 32.5 percent automotive-grade urea that is used as a carrying agent for the ammonia needed to reduce nitrogen oxide (NOx) emissions from vehicles into nitrogen, water and carbon dioxide (CO2).

Diesel Exhaust Fluid is monitored for quality and certified by the American Petroleum Institute (API), ensuring that Diesel Exhaust Fluid is a stable, non-toxic, odorless and completely safe solution. The urea used for Diesel Exhaust Fluid is considered automotive-grade. Urea in additional forms is widely distributed for many other industrial and agricultural needs, including emissions control at public utilities and power plants.

For the majority of Hino Trucks chassis configurations, the DEF tank will be located under the cab on the exterior of the frame rail and will be conducive to quick and easy fill ups. Hino customers will be able to purchase DEF in two gallon jugs from many different locations including dealers, truck stops, fuel station convenience stores, fuel distributors, and auto parts stores across the country. For those customers who have their own fuel island they can purchase DEF in 55 gallon drums or 275 gallon totes from a Hino dealer.

DEF CHARACTERISTICS
Shelf life of DEF is 24 month (closed vessel)
Storage temperature can range from at 20° -100° F
Biodegradable
Stable, non-flammable solution
Becomes slushy at 12°F
Thawing of DEF in Hino testing is within 26 minutes
(EPA10 requirement for thawing is within 70 minutes)

DEF at HINO TRUCK DEALERS
DEF will be mandatorily stocked at all Hino Trucks Dealers in 2 gallon jugs (shelf stock), dealers will also have the ability to stock and sell:
• 55 gallon drums
• 275 gallon IBC's

LEARN MORE AT HINOSCR.COM

QUESTIONS

Will Selective Catalytic Reduction (SCR) have any influence on the oil change intervals required to properly maintain my engine?
SCR uses a flow through aftertreatment device downstream from the DPF, so it does not put any excess load on engine itself and therefore will not change the required engine oil change interval.

Will an SCR equipped truck drive any differently?
Drivability will not change.

Does SCR need additional maintenance?
Our SCR system is designed for long term durability and reliability. Therefore, the only added maintenance requirement is the replacement of a DEF sediment filter every 220,000 miles (360,000 km).

Does SCR influence engine power output?
No, the SCR system does not contribute to changes in engine power.

What will happen if I run out of DEF?
To comply with the EPA2010 requirements we have incorporated a comprehensive on board warning system to prevent un-timely engine shutdowns. In addition, the vehicle will be allowed to operate in a "limp home" condition making it possible to operate the vehicle for a short distance.

Visit **www.hinoscr.com** for more Q&A

ROAD TESTED:

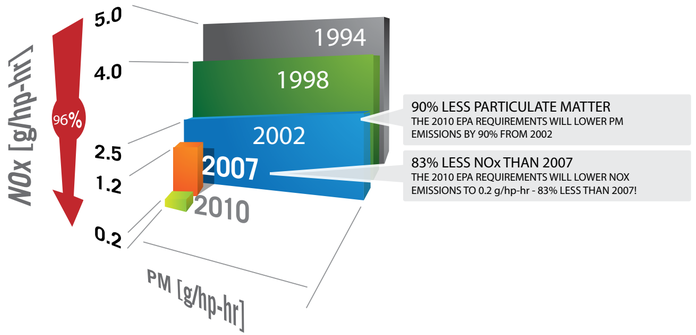
With 100's of thousands of road tested miles under our belt, Hino SCR technology leaves nothing to chance.
Don't be fooled by what others tell you about DEF usage and management of the SCR solution. At Hino we put it to the test so that you don't have to.

HINO TRUCKS
A Toyota Group Company

NEAR ZERO EMISSIONS.

The EPA 2010 emissions regulation calls for more than an 80% reduction in NOx over 2007 emissions levels – 96% lower than levels in 1994! Hino Trucks has selected the most environmentally friendly, reliable solution to meet this challenge - Selective Catalytic Reduction or SCR.

New Hino Trucks with SCR technology will meet all 2010 emissions standards with near-zero levels of all regulated particulates and NOx, including hydrocarbons and carbon monoxide.



90% LESS PARTICULATE MATTER
THE 2010 EPA REQUIREMENTS WILL LOWER PM EMISSIONS BY 90% FROM 2002

83% LESS NOx THAN 2007
THE 2010 EPA REQUIREMENTS WILL LOWER NOX EMISSIONS TO 0.2 g/hp-hr - 83% LESS THAN 2007!

SCR is the best choice for meeting the EPA10 regulations for many reasons. It is a proven technology with more than 600,000 vehicles globally currently operating with SCR. Also, SCR is a long term solution with over 30 years of technology advancements. Another benefit of SCR is that it enables the engine to operate under optimized combustion conditions and does not require any complex engine subsystem modifications.

Hino SCR provides some key benefits not just to the environment, but to owners as well. SCR offers improved fuel economy of 3 to 5%. It also offers customers confidence in a robust, durable solution and proven technology.

Hino is proud to join you in helping to create a cleaner environment.

HINO TRUCKS™
A Toyota Group Company

LEARN MORE AT HINOSCR.COM

Visit www.HinoScr.com for more information about Hino SCR, the 2010 EPA Regulations and Diesel Exhaust Fluid.

HINO TRUCKS™
A Toyota Group Company

Hino Motors Sales U.S.A., INC.
41180 Bridge Street
Novi, MI 48375

[T] 248.699 9300
[F] 248.699 9310

HINO TRUCKS 25th ANNIVERSARY 1984-2009 AMERICA

25 YEARS - EVOLVING EXCELLENCE
Hino Trucks is proud to celebrate 25 years in America, and it's thanks to you, our customers and clients, who demand more from a truck than just good looks.
Hino Trucks. Business In Motion.

HINO TRUCKS™ EPA 2010
A Toyota Group Company

HINO +SCR =CLEAN!