

SCR: FREQUENTLY ASKED QUESTIONS

2010 Emissions Standards and the RV Industry

Q: What are the new EPA 2010 diesel emissions standards?

A: EPA 2010 diesel engine emissions standards reduce the amount of nitrous oxide (NOx) emissions into the atmosphere for cleaner air and a cleaner environment. EPA mandates are pretty common and have been passed in '94, '98, '02, '07 and now in 2010.

Q: What is SCR?

A: SCR stands for Selective Catalytic Reduction. SCR simply adds a Diesel Exhaust Fluid (DEF) into the exhaust gas and filters it through a catalyst to convert NOx into nitrogen and water which is released into the air. It is the next-generation technology that almost every diesel engine manufacturer is using to comply and the technology that almost all RV and commercial truck OEMs have chosen to comply with the new 2010 Emissions Standards.

Q: Is there an alternative solution available to meet the 2010 EPA requirements?

A: Only one manufacturer is pursuing a divergent path from the rest of the industry, opting to intensify the EGR technology used to reach the EPA 2007 standards, calling it Advanced EGR (AEGR). However, all other motorhome and engine OEMs have selected SCR because of its proven technology and benefits to the RV owner and the environment.

Q: Why are the overwhelming majority of engine, truck and motorhome manufacturers using SCR?

A: Because SCR is a Simple, Clean and Reliable technology:

- Simple: SCR is built upon existing technology and simply adds a Diesel Exhaust Fluid (DEF) and a catalyst to remove additional particulates and emissions.
- Clean: SCR technology has been certified by the EPA to meet its new standards.
- Reliable: Although relatively new to North America, SCR is a proven technology that has been in use in Europe since 2006 with over 600,000 SCR equipped commercial vehicles in service over hundreds of millions of miles. In addition, more than 30 million test miles were run in the U.S. before SCR was released to the market.

Q: Are there other benefits of SCR technology?

A: Yes, many. In addition to meeting 2010 emissions standards, SCR gives you 5 to 8 percent better fuel economy, more torque and more horsepower versus a similarly equipped EPA 2007 engine using EGR technology.

Q: Does either SCR or AEGR require additional components or add additional weight?

A: Yes, they both do. SCR requires only the addition of a DEF tank and SCR catalyst, while AEGR will require a larger engine to achieve similar horsepower and torque ratings, a larger radiator for cooling and, in some cases, an additional turbo. In the end, both of these technologies are expected to add a similar amount of additional weight to the motorhome.



Driven By You

2010 Emissions Standards and the RV Industry (continued)

Q: How easy is it to refill the DEF tank?

A: It's hassle-free. DEF is as simple and quick to refill as windshield wiper fluid and is readily available at thousands of travel centers and auto-parts supply stores nationwide.

Q: Is there any additional maintenance associated with SCR?

A: The DEF filter must be changed every 200,000 miles – THAT'S IT. Aside from this, there is no added maintenance for SCR-equipped engines. Owners simply follow the same scheduled maintenance intervals as they do currently.

Q: Is DEF expensive?

A: No, it actually saves you money. The cost of DEF is similar to a gallon of diesel and a little DEF goes a long way. The average diesel motorhome can go from New York to Los Angeles on a single 10-gallon tank of DEF. So the 5 to 8 percent improvement in fuel economy versus older technologies actually puts money back in your pocket.

Q: Are SCR and DEF safe?

A: Yes, DEF is two-thirds water, and is safer than most other fluids used in a car or truck, including oil, fuel, antifreeze and brake fluid.

Q: Will the DEF freeze?

A: DEF can freeze, however the DEF tank is insulated and the SCR system utilizes heated lines to ensure that DEF is ready upon start-up and does not freeze while the vehicle is operating.

Q: Will the DEF degrade?

A: Although DEF can degrade, it requires intense, direct heat of 125° F degrees over a long period of time to do so. Since the DEF tank is under the coach and out of the sunlight, it is extremely unlikely that the temperature of the DEF would reach 125° F degrees for any sustained period of time.

Q: What happens if I run out of DEF?

A: The gauge within the coach will alert you several times for several days before your DEF tank is empty. However, should you ignore the warnings, the RV will experience a gradual derate – or slow down – until the DEF is refilled.

Q: What if I add water to the DEF tank?

A: A sensor is constantly gauging exhaust emissions levels. If DEF is replaced with water, the sensor will detect emissions outside the EPA range, and act as though the coach is out of fluid.