

AdBlue(AUS32) is essential for next-generation diesel engines

To cope with the increasingly stringent diesel engine exhaust regulations, car manufacturers have taken various measures to cope with the regulations. One of them is the "SCR system".

"SCR system" The SCR system includes urea for vehicles and Selective Catalytic Reduction (SCR). The urea for vehicles enters the burned exhaust gas from the urea cylinder, which has been converted into ammonia (Ammonia, NH₃) by the hot exhaust gas. Ammonia reacts with nitrogen oxides (NO_x) in the catalytic converter to convert them into nitrogen (Nitrogen) and water that do not affect the natural environment. The ratio of diesel to urea is usually 20: 1 (that is, every 20L Diesel requires 1L of urea). The SCR system is the name of a system for purifying nitrogen oxides (NO_x) emitted by diesel engines. In order to explain the principle briefly, the harmful substances nitrogen oxides (NO_x) are converted into ammonia (NH₃) to decompose nitrogen oxides (NO_x) Releases harmful nitrogen and water in pairs to the atmosphere.

Environmentally-friendly automotive urea (Diesel exhaust fluid), officially known as AUS32, called DEF (Diesel Exhaust Fluid) in the United States and Canada, and AdBlue in Europe, commonly referred to as urea for vehicles, China named it as a nitrogen oxide reducing agent in 2012. All refer to the same product, which is an exhaust reduction substance used in diesel vehicles. AdBlue is synthesized from 32.5% urea and 67.5% deionized pure water.

Among them, AdBlue is a registered trademark of the German Automobile Industry Association (Verband der Automobilindustries). It must be approved by the German Automobile Industry Association to meet the ISO 22241 standard before it can be used for authorization.

Do I need to replace the AdBlue urea SCR system with ammonia? Some people may already have thought of it. However, ordinary urea water that is not AdBlue has a strong pungent odor and turns into a flammable gas when it is gasified, so if it is added to a car that generates a lot of heat, it cannot be used for safety reasons because There are risk factors in the operation. On the other hand, AdBlue added to the urea SCR system is a colorless and harmless liquid, so there is no danger. In the urea SCR system, AdBlue is injected into a high-temperature catalyst to hydrolyze AdBlue itself, and nitrogen oxides (NO_x) are decomposed by ammonia gas produced by hydrolysis. Because only a series of decompositions are done in the catalyst, ammonia can be used to decompose nitrogen oxides (NO_x) without producing dangerous and irritating odors.

Incidentally, AdBlue is a premium urea water dedicated to the urea SCR system, so please note that not all urea water is AdBlue. To use the AdBlue trademark, you need to pass the AdBlue Verband der Automobilindustrie certification. Now that you know why the urea SCR system requires AdBlue (AUS32), you need to pay attention to many of the following when handling it.

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Convenient and practical, can be purchased directly at the gas station, with NOVAX AdBlue (AUS32)

Recently, the number of cars equipped with urea SCR systems has increased, and AdBlue sales have become common. AdBlue has no problem filling directly at the gas station.

AdBlue (AUS32) consumes the same way as fuel, if it is exhausted, the engine cannot be restarted!

AdBlue (AUS32) is an essential SCR system. Urea water is a colorless and harmless liquid used in cosmetics, medicines and fertilizers, so no special qualification is required to handle it.

AdBlue (Advanced Urea Water) Supplement Needed Every Run

In the urea SCR system, AdBlue (AUS32) is injected into the exhaust gas and consumed in the same way as the fuel, so it is used in a large amount. Its low fuel consumption, high power and clean exhaust gas are attractive, but because it requires more replenishment than traditional engines, it is more troublesome.

AdBlue (AUS32) consumes 1L for every 100 kilometers

According to your driving habits, the distance that AdBlue can travel per liter is about 100 kilometers. Depending on the model and size, the demand is not the same, so frequent replenishment is required.

After exhausting AdBlue (AUS32), the engine will not start

The fuel capacity of AdBlue (AUS32) varies depending on the vehicle model. When the range is less than 5,000 kilometers, the warning light / warning message will light up. Although you can continue to run even if AdBlue is depleted during driving, please note that once the engine is turned off, it may not be possible to restart.

AdBlue (AUS32) may freeze

Urea water AdBlue (AUS32) has the same crystallinity as water. However, the freezing temperature of urea water is about minus 11 degrees. Even if AdBlue (AUS32) freezes, the engine will not start and you can run. In addition, when the engine starts, the heater will defrost AdBlue, so AdBlue injection will restart from the melting point.

