

# UREA INJECTION SYSTEM



## ITS FUNCTION



The role of the urea injection system is to **inject a fluid called AdBlue®** (a mixture of demineralised water and urea) **into the vehicle's exhaust stream** before the gases pass through the SCR catalyst.

When exposed to high temperatures, urea breaks down into ammonia ( $\text{NH}_3$ ) and carbon dioxide ( $\text{CO}_2$ ). **The ammonia then reacts with the nitrogen oxides in the exhaust gases** to form nitrogen ( $\text{N}_2$ ) and water vapour ( $\text{H}_2\text{O}$ ), **substances that are harmless to the environment.**

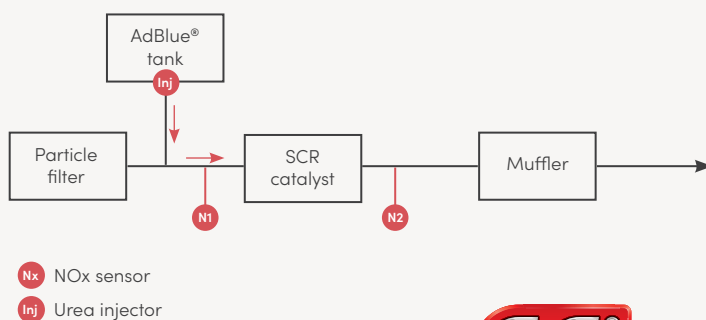
## GOOD TO KNOW

The SCR system consists of several **key components**, and their location varies according to the vehicle:

- **The AdBlue® tank:** generally located at the rear of the vehicle, close to the fuel tank, but separate to avoid any mixing.
- **The urea injector:** located in the exhaust line, upstream of the SCR catalytic converter, often between the engine and the exhaust gas filtration system.
- **The SCR catalyst:** located directly in the exhaust line, after the urea injector.
- **NOx sensors:** placed before and after the SCR catalyst to measure the levels of nitrogen oxides in the exhaust gases and ensure that the system is working properly.



## ILLUSTRATION



## TO REMEMBER

The SCR system is **highly effective in reducing NOx emissions**, enabling powered-diesel vehicles to meet the most stringent emissions standards, including Euro 6.

The system does, however, add a degree of complexity and **requires regular maintenance**, such as replenishing AdBlue® and replacing faulty NOx sensors.



### TECHNICAL HOTLINE

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