NEETU SOLVENTS

greenox™
AdBlue®

To Go **Green,** Add GreenOx **AdBlue!**

Progress of BSIV implementation in the country

- From 1st April 2010: BS IV norms were introduced in 13 cities.
- Delhi (NCR), Mumbai, Chennai, Kolkata, Bengaluru, Hyderabad, Pune, Ahmedabad, Surat, Kanpur, Agra, Lucknow, Sholapur
- From 1st October 2015: States of J & K (Except Leh & Kargil), Punjab, Haryana, Himachal Pradesh, Uttarakhand, Certain districts of Uttar Pradesh and Rajasthan
- From 1st April 2016: States of Goa, Kerala, Karnataka, Telangana, Odisha, Union territories of Daman & Diu, Dadra & Nagar Haveli, Andaman & Nicobar Islands, Certain districts of Maharashtra and Gujarat
- From 1st April 2017: All new on-road vehicles are switched to BS IV technology
- By 2020: There is a plan announced by the Government for the nationwide implementation of BS VI

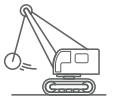
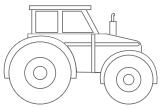
What are the two technologies available to meet the BSIV emission norms

A. Exhaust Gas Recirculation (EGR):

- Works by recirculating a portion of an engine's exhaust gas back to the engine cylinders to reduce Oxides of Nitrogen (NOx)

B. Selective Catalytic Reduction (SCR):

- SCR, is also an emissions control technology to clean NOx from the exhaust gases

APPLICATIONS			
	 Bus & Coach	 Marine (AUS32 and AUS40)	 Commercial Vehicles
Greenox Adblue is being used in the following applications	 Stationary Emission	 Construction Machinery	 Agricultural machinary

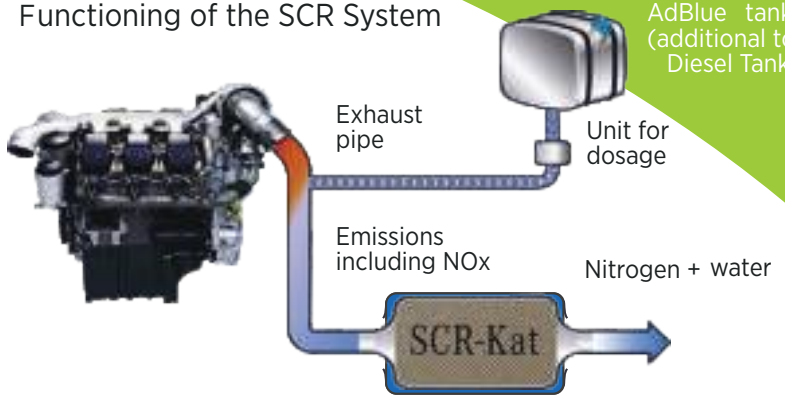
How does an SCR system work ?

- It is an after treatment technology that treats exhaust gas downstream of the engine
- Main purpose is to reduce level of NOx emitted from engines
- Small quantities of AdBlue® is injected into exhaust upstream of a catalyst, where it vaporizes and decomposes to form ammonia and carbon dioxide
- The ammonia (NH3) is the desired product which in conjunction to the SCR catalyst, converts the NOx to harmless nitrogen (N2) and water (H2O)

What are the advantages of using SCR ?

- SCR catalyst technology allows much greater NOx conversion efficiency,thereby allowing the engine to be fully optimized, which contributes to this fuel economy improvement.
- Heavy duty engines utilizing SCR will provide substantial fuel economy improvement, estimated up 3 to 5%.
- Another benefit to the improved fuel efficiency is less frequent DieselParticulate Filter (DPF) cleanout, thereby further reducing costs.

Functioning of the SCR System



SCR = Selective Catalytic Reduction

What is AdBlue® ?

- AdBlue® is a registered trademark for AUS32 or Aqueous Urea Solution
- AdBlue® is a trademark owned by The German Association of the Automotive Industry (VDA)
- The right to use the name AdBlue® can only be acquired by a license
- A non toxic, crystal clear & synthetically produced solution
- Used in SCR system to reduce NOx emissions from exhaust of diesel vehicles
- It is carried in an additional tank that is fitted by the vehicle manufacturer
- ISO 22241 standard ensures its consistent quality. In 2006, Euro pean heavy-duty diesel market, implemented SCR technology to enable trucks to meet the Euro IV and V limits
- An SCR system uses AdBlue® to reduce NOx to water vapor and atmospheric nitrogen
- SCR technology is more fuel efficient than EGR technology to the tune of 3-5%

What is VDA ?

- Verband der Automobilindustrie (VDA) is a German interest group of the German Automobile industry. Both automobile manufactures and automobile component suppliers are members of the same
- VDA QMC is certifying body which audits the plants of suppliers and certifies them to use the AdBlue® Brand name
- For using trademark, AdBlue® Supplier should hold VDA license

How much is the AdBlue® consumption rate ?

- AdBlue® consumption is expected to be approximately 4-6% of fuel consumption. It may vary depending on vehicle operation,duty cycle, geography, load ratings, etc.

How will I know if the AdBlue® product purchased is genuine ?

- AdBlue® should be procured from licensed VDA manufacturer only.
- The name AdBlue® can only be used by a license holder. The license is given to suppliers who follow the specific procedures approved by VDA.
- If product states its AdBlue® and has the ISO 22241 then it is a verified product.

Can I make AdBlue® myself ?

- AdBlue® manufacturing has strict requirements and the purity of ingredients is critical to the proper functioning and longevity of the SCR system.
- A wrong solution could damage the SCR system and cause issues in functioning of it. Hence it is advised to buy AdBlue® from a certified manufacturer.
- For more information about the quality standards, refer to ISO22241 which details specifications for AdBlue® quality, handling, testing, transportation storage, and refilling.

What is the shelf life of AdBlue® ?

- Recommended storage temperature for AdBlue® is between -11 deg C to 30 deg C
- At constant temperature up to 30deg C, the product will last 12 months minimum
- At constant temperature up to 35 deg C, the product will last 6 months minimum
- Locations with higher ambient temperature, AdBlue® tanks should be insulated or stored under shade with proper ventilation

What happens when a vehicle runs out of AdBlue® ?

- Vehicles that use AdBlue® have indicators on the dashboard that alert the driver of the quantity of AdBlue® on board. A gauge similar to a fuel gauge will indicate the level of AdBlue®.
- If the vehicle is operated such that one would run completely out of AdBlue®, vehicle power will be reduced making it compulsory for the driver to refill the AdBlue® tank.
- Make sure to carry some emergency supply along with the vehicle to reach the next AdBlue® refilling point.
- Once the tank has been refilled the engine will resume normal power levels.

Are there any special storage requirements for AdBlue® ?

- Dry, well-ventilated and properly covered area.
- Avoid direct sunlight
- Optimum storage temperature is 25 deg C (77 deg F), with temporary exposure to higher temperatures has little to no impact
- Being a corrosive liquid should only be stored in approved materials like high-density polyethylene (HDPE) or stainless steel
- Don't put AdBlue® in packaging of plastics with additives or non-ferrous metals & their alloys and carbon steel.

What equipment should be used to handle AdBlue® ?

- AdBlue® is corrosive in nature hence for storing do not use corrosive materials like copper, nickel, zinc, mild iron or aluminum.
- Do not use old diesel or oil containers or equipment to transfer AdBlue® into the tank. Dedicated equipment should be used to handle AdBlue® as even a small contamination of fuel/oil/lubricant can damage the SCR system of the vehicle.
- By mistake if AdBlue® is filled into the diesel tank or diesel is filled in the AdBlue® tank, it is advised not to start or move the vehicle. The tank will need to be first drained in such a situation.

What happens if foreign particles accidentally enter the AdBlue® tank ?

- The SCR system will recognize solutions other than AdBlue®, and the AdBlue® indicator light will appear notifying the driver
- Depending on the level of contamination in the tank, the vehicle may require servicing

NEETU SOLVENTS is able to provide tailor made solutions for large customers suitable to their requirement.

AdBlue® DOs & DON'Ts

1. DON'TS

- DON'T use AdBlue® as a diesel additive
- DON'T add AdBlue® in any fuel tank
- DON'T operate without AdBlue®
- DON'T use fuel or lubricants handling equipment for AdBlue®
- DON'T refill used AdBlue® containers
- DON'T store AdBlue® in direct sunlight
- DON'T put AdBlue® in packaging made of plastic with additives or nonferrous metals & their alloys and carbon steel

2. DO's

- AdBlue® product must conform to ISO 22241
- Only buy AdBlue® Licensed and registered by VDA
- Only use dedicated equipment for storage and dispensing
- Protect AdBlue® against any contamination of Fuel, Oil, Water, Dust, Dirt, Metals, Detergent etc.
- Should be stored away from direct sunlight
- Should be stored in the manufactures original container

GROUP OF COMPANIES

SUPREME ROAD TRANSPORT PVT. LTD.- DELHI
(TRANSPORT CONTRACTOR & FLEET OWNER)

SKY ALLOYS & POWER PVT. LTD. - RAIGARH, CHATISSGARH
(INTEGRATED STEEL PLANT)

NEETU SOLVENTS - CHOPNAKI, ALWAR
(SOLVENTS & CHEMICALS)

SULOACHNA ORGANICS P LTD. - SONIPAT
(MANUFACTURING OF THERMOSETTING PLASTICS)

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AdBlue®

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