Komatsu EU Stage IV Engines and Adblue®

Komatsu began production of EU Stage IV engines in 2014. We already know how important it is to invest in progressive engineering improvements to reduce emissions; EU Stage IV technology and AdBlue® builds on this foundation and continues to be integrated into Komatsu's production blue print. Even though engine improvements have long been a hallmark of the Komatsu product line, EU Stage IV engines are seeing much lower emission levels and quite noticeable reductions in fuel consumption, including the consumption of AdBlue®.

FAQ:

What exactly is AdBlue®?

Adblue® is the trade name for what is known as **DEF (Diesel Exhaust Fluid)**. In its simplest form, it's a solution that is used to reduce the damaging emissions (NOx) from the exhausts of the diesel engines in your machines. It's almost common place in diesel machinery and vehicles across the country and its prevalence stands only to increase as litigation surrounding emissions becomes more rigorous.

Is it dangerous?

In short, no. DEF is a clear, non-toxic liquid that's non-flammable and non-explosive. However it can be corrosive, so if you get any on your hands, simply rinse it off. Use CLEAN dispensing equipment when filling up to prevent contamination. If your contamination warning appears on the dash, contact us immediately.

Where do I put AdBlue®?

Usually the DEF filler is identified by a **clearly labelled tank** behind a lockable cover. The DEF cap is **blue** as per the industry standard.

How much AdBlue® do I need in my machine?

We recommend you stock about 5% of your diesel consumption, although the average consumption is nearer to 3%. As a general rule of thumb, we suggest you fill up your DEF whenever you fill up with diesel. Contact us for more information on this.

How do I store AdBlue®?

You should store it in plastic containers made of polyethylene or polypropylene. The liquid can corrode certain plastics so stainless steel is probably your best option. You should store it in cool place, preferably below 20 degrees. We understand this isn't always possible if it's stored at around 20 degrees, it'll last for about 12 months before being spoiled. Conversely, the higher temperature it's stored in, the quicker it'll spoil.

Ok, how do I get my hands on some?

From us! Just give us a call and we'll arrange delivery. Pricing will be available soon.

Ok, so I understand more about AdBlue®. What's Stage IV all about?

The new regulations that we spoke about earlier require the reduction of NOx emissions to one tenth or below of levels required by earlier rules. So we had Stage III for a bit, now the powers that be require you to have Stage IV. Over the years Komatsu has consistently engaged in the research, development, manufacture and improvement of diesel engines anyway. But these new developments reduce environmental impact and improve fuel economy too.

What machines have Stage IV engines?

Most new Komatsu machines are. Any heavy machine that's been unveiled by Komatsu in the last year will probably have a stage IV engine; including dash 11 excavators, dash 18 bulldozers, and so on.

How is Stage IV different to Stage III?

For a few reasons, mainly because the technology is more advanced…

- The new system combines a Komatsu Diesel Particulate Filter (KDPF) and Selective Catalytic Reduction (SCR). It's all integrated into the machine's on-board diagnostics systems and KOMTRAX™, Komatsu's telematics system, which constantly monitors the machine's health and ensures control of equipment in all work conditions.

- A Heavy-duty cooled Exhaust Gas Recirculation (EGR) system in included which reduces NOx and helps to lower fuel consumption, as an additional benefit.

- The Komatsu Variable Geometry Turbocharger (KVGT) system features Komatsu-original hydraulic technology for variable control of intake air-flow and supplies proper airflow according to load conditions. The machine's control system uses the KVGT to provide precise exhaust temperature management for the regeneration process. The system achieves high efficiency combustion, further purification of exhaust gas and improved fuel economy.

- The Heavy-duty High-Pressure Common Rail (HPCR) fuel injection system uses higher-pressure injection for better fuel atomisation, reducing both Particulate Matter (PM) emissions and fuel consumption under the wide range of engine-operating conditions.