

DEUTZ Expert Series

Technical Guidance for Reliable Engine Operation

Operating Liquids

Selection & Application Guidance



TECHNICAL REFERENCE SHEET

The performance and reliability of your engine depend on more than just maintenance intervals. Correct specification and application of key components and consumables is essential to long-term efficiency and uptime.



At a Glance

Product	Function	When to Use
DEUTZ Oils	Lubrication & protection	Continuous operation
InSyPro® Plus	Cleans injection system	Deposit risk / biodiesel
StartBoost	Improves ignition	Low usage / storage
FlowBoost	Cold flow improvement	Low temperatures
PowerBlue	Optimises SCR	All SCR systems

Core Principles

› Designed as a System

DEUTZ engines and operating liquids are developed together to ensure compatibility across lubrication, combustion, and after-treatment systems.

› Fuel Quality Variability

Fuel composition is no longer consistent, increasing the need for stabilisation and system protection.

› Environmental Conditions Matter

Temperature and duty cycle directly influence fluid behaviour and performance.

› After-Treatment Sensitivity

Modern emissions systems require precise fluid behaviour to operate efficiently and avoid faults.

Practical Applications

- › Long idle periods or low usage → Use **StartBoost** to maintain fuel stability and starting reliability.
- › Cold weather operation → Use **FlowBoost** to prevent waxing and blockage (waxing typically begins around 0°C and can become critical below -5°C, depending on fuel quality).
- › Variable or biodiesel fuel → Use **InSyPro® Plus** to protect injectors and performance.
- › Daily operation / core protection → Use **DEUTZ Oils** + **PowerBlue** for full system performance.

DEUTZ Engine Oils	DEUTZ Additives	DEUTZ PowerBlue
› Developed and tested in DEUTZ engines › Protect against wear, deposits, and corrosion › Support long-term efficiency	Targeted solutions for specific challenges: › Fuel degradation › Cold flow issues › Injection system deposits	› Improves SCR dosing performance › Reduces consumption and downtime › Enhances system reliability

Fuel Quality Considerations

Modern diesel fuel characteristics:

- › Contain higher biodiesel content.
- › Can degrade within a few months, especially in low-use equipment. Are more prone to microbial growth (“diesel bug”).



Result:

Increased risk of deposits, instability, and system contamination.

Solution:

Targeted additives help stabilise fuel and maintain system cleanliness.

DEUTZ Expert Advice

Fluid-related issues often develop gradually and are not immediately visible. Incorrect or non-approved liquids can impact performance, efficiency, and component life over time.

DEUTZ Expert Advice

Fuel-related problems are frequently misdiagnosed as mechanical faults. Variability in fuel quality and storage conditions is a common cause of poor performance.

Common Fluid-Related Issues & Likely Causes

Issue	Likely Cause	How to Check	Action
Hard starting after downtime	Fuel degradation / low cetane or oxidation	Longer crank time, especially after storage	Use StartBoost to improve ignition quality and stabilise fuel
Loss of power / reduced fuel efficiency	Injector deposits or fuel atomisation	Gradual drop in performance without fault, increased fuel consumption	Use InSyPro® Plus to clean and protect the injection systems
Blocked fuel filters (cold conditions)	Wax crystallisation in diesel fuel	Occurs typically below 0°C and the engine may stall or struggle to start	Use FlowBoost to improve cold flow and prevent blockage
Increased oil consumption	Incorrect oil spec, oil degradation or engine wear	More frequent top-ups, possible exhaust smoke under load (in some cases)	Check oil specification and condition; use approved DEUTZ Engine Oil
SCR warnings / increased AdBlue® consumption	DEF crystallisation, poor spray behaviour or contamination	Warning lights, higher DEF usage, possible derating	Use PowerBlue to improve dosing performance and system efficiency

Potential Effects of Incorrect Fluid Selection

- ▶ **Gradual injector fouling** → reduced performance and higher fuel consumption.
- ▶ **Increased engine wear** → shortened service life.
- ▶ **Fuel instability** → starting issues after storage.
- ▶ **Blocked filters in cold conditions** → unexpected downtime.
- ▶ **SCR system inefficiencies** → increased AdBlue® consumption and fault codes.

Best Practice for Fuel & Fluid Management

- ▶ Avoid long-term storage of untreated diesel.
- ▶ Keep tanks as full as possible to reduce condensation.
- ▶ Use stabilisers for low-usage equipment.
- ▶ Monitor fuel condition in seasonal equipment.
- ▶ Always use approved oil specifications.

For application-specific guidance please contact your
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