



5437 | Winter Klenz ID

DESCRIPTION:

with Ice Check™ and Xtreme Torque®

Injector nozzle coking is not the only concern faced by modern high pressure common rail (HPCR) engines. Internal diesel injector deposits (IDID) are causing substandard performing injectors that lead to decreased power, decreased fuel economy, and increased regulated emissions. This coupled with other ailments, which can be present in ultra low sulfur diesel (ULSD) – require the need for a Premium Select $^{\text{m}}$ premium diesel additive (PDA).

Winter Klenz ID (WKID) 5437 is a Premium Select™ winterized PDA which imparts high performance qualities to diesel fuel. WKID 5437 was engineered to eliminate injector problems associated with today's HPCR engines, enhance many other qualities of fuel and may be used in traditional diesel engines. WKID 5437 provides "Premium Diesel Fuel" qualities to ULSD in terms of deposit control, corrosion, filter blocking tendency (FBT), lubricity, low temperature operability and cetane number. Its effective anti-gel component greatly improves cold temperature performance. Ice Check™ provides additional winter protection against freezeups. In addition WKID 5437 contains Xtreme Torque® a powerful cetane improver, for quicker cold starts and a maximum boost in power and performance and vastly superior IDID clean/keep clean additives.

COMPOSITION:

WKID 5437 contains the following additives:

- ☐ IDID Specific Additives
- ☐ Lubricity Agents
- Detergents
- Antifouling Agents
- □ Dispersants
- Rust Inhibitors
- Anti-Icing Additives
- ☐ Thermal Stability Rejuvenation Agents
- □ Stabilizers

- Anti-Oxidants
- Metal Deactivators
- Asphaltene Dissolution and Dispersion Agents
- Carboxylate Dissolution and Dispersion Agents
- Cetane Improvers
- ☐ Flow Improvers
- Anti-Gel Additives
- Filterability Rejevenation Agents
- Corrosion Inhibitors

PERFORMANCE CHARACTERISTICS:

Injector Deposit Control (Detergency) – WKID 5437 eliminates and prevents IDID formation and traditional nozzle coking deposits, thus improving/sustaining power, fuel economy, and regulated emissions caused by injector deposits.

Low Temperature Peformance – WKID 5437 lowers Pour Point, Cold Filter Plugging Point, and Low Temperature Fluidity. It prevents diesel fuel gelling and greatly improves cold temperature operability. Fuel can be treated with WKID 5437 to pass the ASTM D975 Low Temperature Performance requirements. Ice Check™ not only disperses water, but also lowers its freeze point for superior winter performance.

Cetane – WKID 5437 improves ignition efficiency, improves cold starts, reduces warmup time, smoothes engine operation, increases power and fuel economy. WKID 5437 is formulated with Xtreme Torque® to produce an increase power and fuel economy. WKID 5437 is formulated with Xtreme Torque® to produce an increase of 4 cetane numbers or 40 points, in responsive diesel fuels, at its optimum treatment rate.

Stability – Fuel can also be treated with WKID 5437 to improve stability of the treated fuel. Thermal stability may be measured by ASTM D6468 Thermal Stability Test as well as other commonly used storage stability tests. In responsive fuel, thermal stability can be rejuvenated.

Lubricity – WKID 5437 improves lubricity of diesel fuels in both the HFRR Test and the BOCLE Test, which is a critical factor in ULSD No. 2 and No. 1.



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Rust and Corrosion Protection – Prevents all types of rust and corrosion in fuel lines, strainers, pumps and injectors. Filter Blocking Tendency - WKID 5437 improves fuel flow through filters, in responsive fuels, as measured by ASTMD2068.

USES:

- Clean/Prevent IDID Reduce Regulated Emissions and Black Smoke П ☐ Clean Entire Fuel System ☐ Prevent Diesel Fuel Gelling
- Prevent lcing ☐ Highly Effective in Bio-Diesel Disperse Moisture Extend Filter Life
 - **Boost Power** Reduce Injector System Maintenance
 - Increase Cetane Number Extend Engine Life Dissolve and Disperse Asphaltenes ☐ Extend Fuel Storage Life
- Clean/Maintain Fuel Spray Pattern ☐ Increase/Maintain Fuel Economy Improve Cold Starts
- Dissolves and Disperses Carboxylates Rejuvenate Thermally Stressed Fuels Prevent Sludge Induced Filter Plugging П Reduce Combustion Noise П
 - ☐ Improve Flow through Filter(s)

APPLICATIONS:

WKID 5437 is an extremely versatile product that can be used in a wide range of effective treatment ratios from an economical 1:2000 to 1:500 for cleaning and maximum performance benefits or for non-responsive or poor quality diesel fuels.

WKID 5437 is recommended for ULSD. Use at 1:1000 for enhanced DW-10 (CEC F-98-08)/XUD-9 (CEC F-23-01) performance in suitable diesel fuels and optimal overall performance in most applications including lubricity in kerosene. Treat rates as low as 1:2000 may be used to provide significant enhancement of all properties in responsive fuels. Use at 1:500 for IDID DW-10C (CEC F-110-16(S)) performance, outstanding XUD-9 (CEC F-23-01) performance, to clean and prevent carboxylate and sticky IDID or to achieve specific target criteria in certain fuels.

The sulfur content of this diesel fuel additive does not exceed 15 ppm. This diesel fuel additive complies with the federal low sulfur content requirements for use in diesel motor vehicles and nonroad engines.

WKID 5437 is recommended for use at 1:1000 in biodiesel blends B6 through B10. Use at 1:500 in B11 through B20.

TYPICAL SPECIFICATIONS:

Appearance Yellow-Orange Viscosity, mm²/sec @ 40° C 2.5 125 Flash Point, °F 7.5-7.6 Density (#/qal) Pour Point, °F max. -22

Klenz ID® Product's HFRR Wear Scar Range 200 μm - 340 μm Baseline Diesel HFRR Wear Scar 610 µm

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