When The Going Gets Tough

The Tough **Go Further**

ENGINE WEAR?

POWER ROBBING DEPOSITS?

COSTLY DOWNTIME?

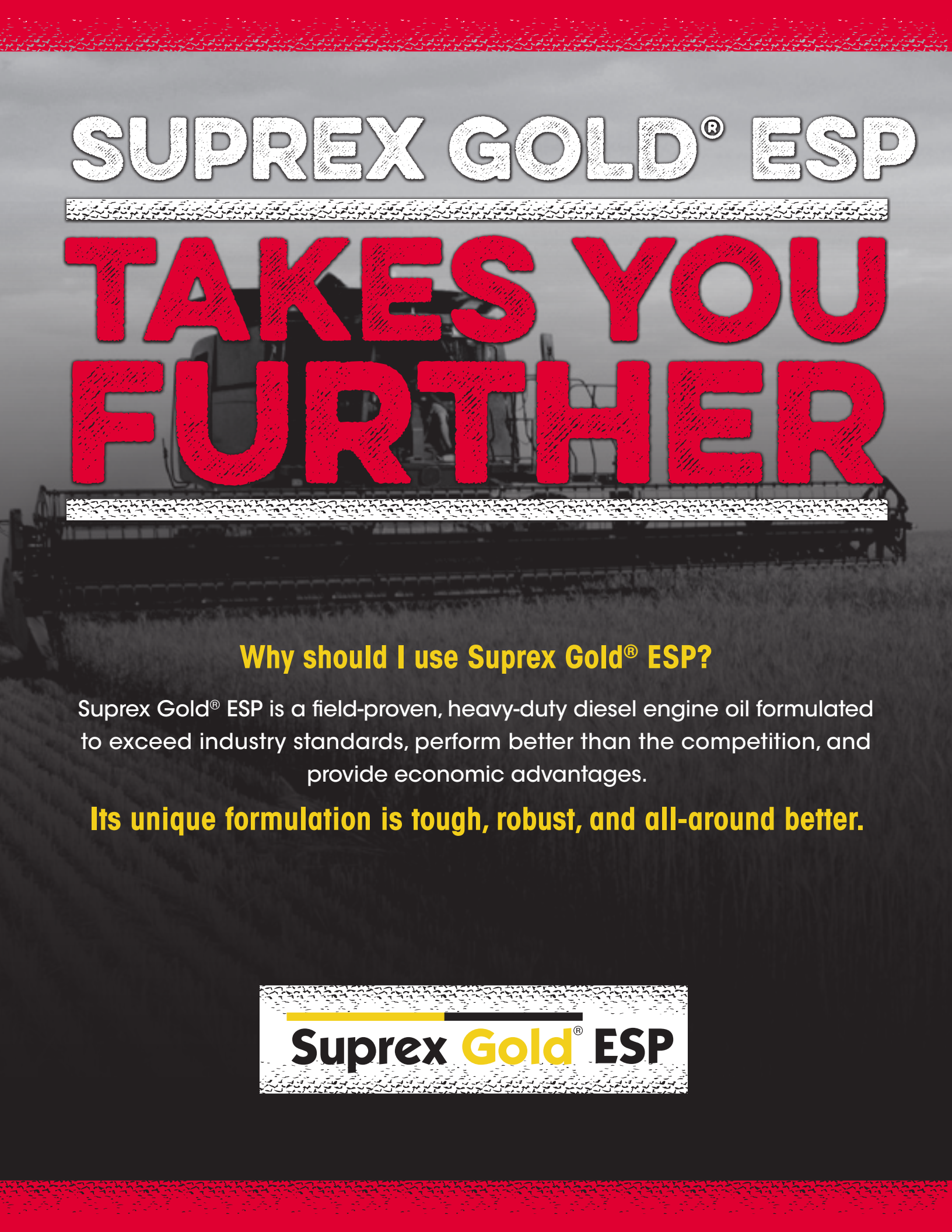
Your Questions. **Our Answers.**

Suprex Gold® ESP

Fuels | Lubricants | Knowledge | Service

SUPREX GOLD® ESP

TAKES YOU FURTHER



Why should I use Suprex Gold® ESP?

Suprex Gold® ESP is a field-proven, heavy-duty diesel engine oil formulated to exceed industry standards, perform better than the competition, and provide economic advantages.

Its unique formulation is tough, robust, and all-around better.

Suprex Gold® ESP

WHAT MAKES SUPREX GOLD ESP TOUGH?

Suprex Gold ESP is engineered to last after other lubricants break down.

Viscosity

Protection is maximized at temperature extremes. Suprex Gold ESP lubricates faster in cold temperatures for easier starts and flows quicker throughout the engine to provide lubrication during the critical time when most engine wear occurs.

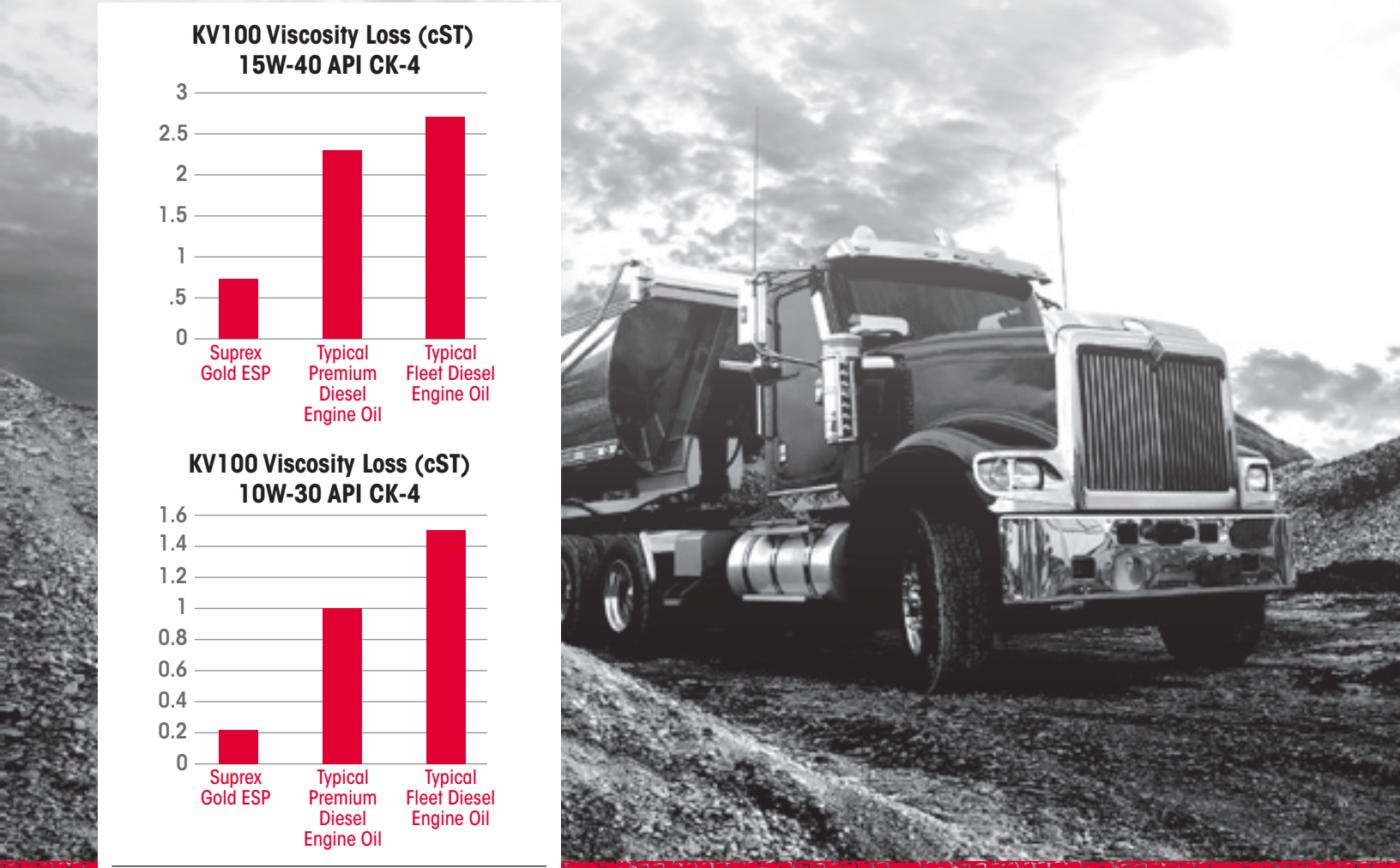
Inside the engine at operating temperatures, Suprex Gold ESP's shear-stable viscosity modifier technology resists mechanical shear and maintains viscosity to ensure oil stays in grade.

After other oils shear down, Suprex Gold ESP still maintains the lubricating film thickness required to protect vital engine parts from abrasive wear.

Oxidation and Corrosion

Engine oil oxidation leads to oil degradation and is accelerated at higher operating temperatures in late-model engines. Antioxidants in Suprex Gold ESP minimize oxidation.

Total Base Number (TBN) is a quantitative measure of a lubricant's ability to neutralize corrosive acids that attack engine metals. Suprex Gold ESP is formulated to protect engines from corrosive wear with a high fresh-oil TBN that is retained throughout the oil drain interval and beyond. In fact, recent fleet field trials proved that Suprex Gold ESP can safely provide corrosive wear protection significantly longer than OEM drain interval recommendations.



KV100 Viscosity Loss (cST)
15W-40 API CK-4

KV100 Viscosity Loss (cST)
10W-30 API CK-4

Mechanical shear performance maintained after 90 cycles shear.
*Kurt Orbahn 90 cycle shear test

WHY IS SUPREX GOLD ESP

ROBUST?

Robust technology formulated into Suprex Gold ESP takes performance to a new level.

Mechanical wear is minimized

Suprex Gold ESP contains one of the most shear-stable viscosity index improvers to ensure a strong lubricating film between internal moving parts.

Suprex Gold ESP disperses soot particles in suspension and prevents them from forming large particles that can cause abrasive wear.

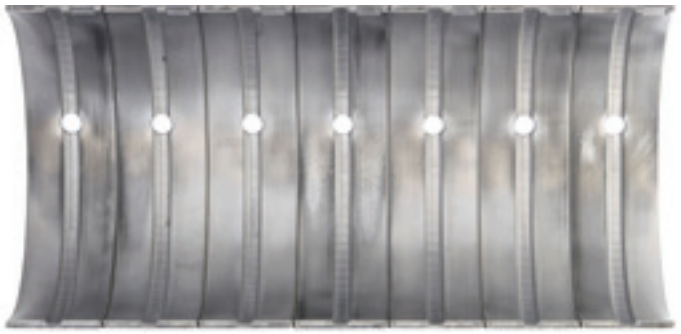
Corrosive wear is minimized

To protect engine hardware from corrosive wear, robust chemistry in Suprex Gold ESP controls damaging acids in two critical ways. First, strong antioxidants minimize the rate of acid production by reducing oil oxidation. Second, strong detergent chemistry and high levels of TBN neutralize the remaining acids. This one-two punch results in a knockout to corrosive wear.

Cummins engine tear down after 500,000 miles using Suprex Gold ESP.

OIL DRAIN INTERVALS AT 50,000 MILES.

Main Bearings Upper



Lead remains in place, and copper layer is not exposed.

Top - Liner 1 Thrust

Cross-hatching still prominent, showing minimal wear.

Lower

Anti-Thrust

HOW IS SUPREX GOLD ESP

BETTER?

Suprex Gold ESP doesn't just meet industry standards; it leaves them in the dust.

- Performance beyond the latest API CK-4 specifications
- Maintains viscometric properties to support extended drain intervals
- Minimizes air entrainment and maintains lubricating oil film to prevent abrasive wear
- Controls oxidation, deposits, and formation of acids
- Controls oil consumption and reduces costs of make-up oil
- Neutralizes acids with strong TBN chemistry to support extended drain intervals*
- Limits abrasive wear by suspending and dispersing soot particles
- Better cold-temperature pumpability

**Utilize used oil analysis and check your OEM owner's manual if looking to extend oil drain intervals.*

WHAT ARE THE SUPREX GOLD ESP

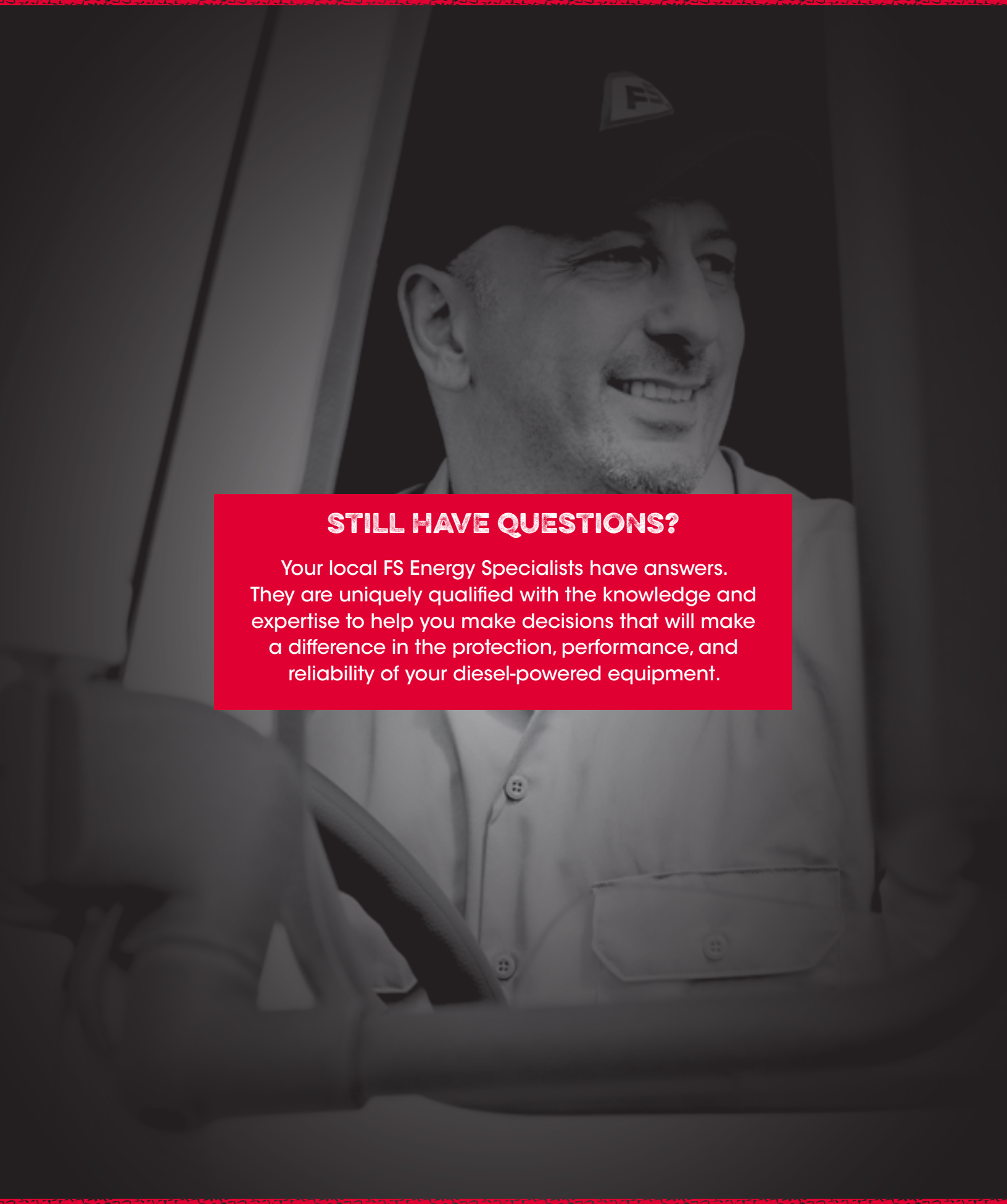
SPECIFICATIONS?

Suprex Gold ESP
SAE 15W-40
API CK-4/SN

Suprex Gold ESP
Synthetic Blend
SAE 10W-30
API CK-4

Suprex Gold ESP
Full Synthetic
SAE 5W-40
API CK-4/SN

Industry Group/OEM	Performance Claims	Suprex Gold ESP SAE 15W-40	Suprex Gold ESP SAE 10W-30	Suprex Gold ESP SAE 5W-40
API	CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4	✓	✓	✓
API	SN, SM, SL, SJ	✓		✓
ACEA	E9, E7	✓	✓	✓
Mack	EOS-4.5, EO-O Premium Plus, EO-N	✓	✓	✓
Volvo	VDS-4.5, VDS-4, VDS-3	✓	✓	✓
Caterpillar	ECF-3, ECF-2	✓	✓	✓
Cummins	CES 20086, CES 20081	✓	✓	✓
Detroit Diesel	DFS 93K222, DFS 93K218	✓	✓	✓
Daimler	MB 228.31*	✓	✓	✓
Ford	WSS M2C171-F1	✓	✓	✓
MAN	M3575*	✓	✓	✓
MTU	Category 2.1*	✓	✓	✓
Renault	RLD-4, RLD-3	✓	✓	✓



STILL HAVE QUESTIONS?

Your local FS Energy Specialists have answers. They are uniquely qualified with the knowledge and expertise to help you make decisions that will make a difference in the protection, performance, and reliability of your diesel-powered equipment.

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