## Premier Diesel and Gasoline Engine Oil

Advanced anti-oxidant chemistry reduces high temperature deposits by as much as 50% over conventional oils

- API CK-4
- Daimler MB 228.31\*, 229.2
- Caterpillar ECF-3
- Deutz DQC
- Ford WSS-M2C171-F1\*\*
- JASO DH-2
- DFS 93K222\*
- Mack EOS 4.5
- Cummins CES 20100
- Pacca
- GM 6094M, Dexos 1 Gen 2
- Ford WSS-M2C946-B1-5W30
- Chrysler MS 6395M

- API SN<sup>1</sup>, SN PLUS<sup>1</sup>, SP<sup>1</sup> PLUS
- MTU Type 2.1\*
- E7/E11(2022)\*
- Cummins CES 20086/20087
- III-18 LA\*
- Volvo VDS 4.5
- China D1
- MAN 3775\*
- Renault RLD 3
- ILSAC GF-6
- Ford WSS-M26945-B1-5W20
- Ford WSS-M2C947-B1-0W20
- MIL L 46152D and CID A A 52039B



No compromises here. SWEPCO 310 exceeds the industry's most demanding performance requirements, especially for 2017 and later low emission over-the-road diesel engines.

SWEPCO 310 Premier Engine Oil is a high performance synthetic, multi-grade, long drain engine oil, especially formulated to provide industry leading protection from heat, wear and contaminants.

SWEPCO 310 not only meets, but exceeds, the unique service requirements of diesel engines equipped with low emission systems, such as diesel particulate filters (DPF), exhaust gas recirculation (EGR) and diesel oxidation catalysts (DOC).

To meet the cleanliness challenges of these modern engine systems and **ultra-low sulfur diesel fuels**, SWEPCO 310 has been carefully formulated to provide:

- Superior engine & filter cleanliness
- Superior oxidation resistance for longer drain service
- Added control of abrasive wear, particularly in liners and top rings
- Backwards compatible with older engines
- Ideal for gasoline engines, provides better cleanliness and wear protection in today's engines

- 0W20 available for modern gasoline engines
- High, stable TBN for longer service life and better protection from corrosive gases and contaminants
- Superior film thickness and shear stability

SWEPCO 310 achieves this new level of performance with the very finest *Syntheon*<sup>TM</sup> synthetic base stock blends and the most advanced additive chemistry, including **Moly**<sup>XP</sup>, SWEPCO's proprietary anti-wear/extreme pressure additive and proprietary state-of-the-art anti-oxidant chemistry.

For those who require the absolute best in performance from new generation over-the-road diesel engines, SWEPCO 310 is the very best choice. Because it is backwards compatible, it provides a new generation of protection for older diesel engines, off-road diesel equipment, gasoline engines and mixed fleets.

Compatible with all gasoline emission controls.

Protect your engines with the *premium* choice ... SWEPCO 310.

Feature	Benefit
Syntheon ™ Synthetic Base Stock Blends	<ul> <li>Insure more uniform viscosity over a wide temperature range</li> <li>Help improve high temperature oxidation and thermal stability</li> <li>Better low temperature flow characteristics help reduce start-up wear</li> <li>Extend service life</li> </ul>
Multi-Grade	<ul> <li>Meets the requirements of more than one viscosity grade, resulting in a lubricant that bears the benefits of both viscosities</li> <li>Made to lubricate effectively over a wider temperature range than a single grade oil allowing you to keep lubrication simple year-round</li> </ul>
Moly <sup>XP</sup>	<ul> <li>Acts as a synergist along with other anti-wear additives to eliminate premature wear and reduce friction</li> <li>Helps improve fuel economy by reducing friction and drag</li> <li>Insures protection from extreme pressures</li> </ul>
State-of-the-Art Oxidation Inhibitors	<ul> <li>Reduce oil thickening and deposits by as much as 50%; extend oil life</li> <li>Help prevent sludge, varnish and carbon deposits that result from oxidation</li> </ul>
TBN Booster/Stabilizer	<ul><li>Increase ability to neutralize harmful acids and corrosives</li><li>Lengthen service life</li></ul>
Rust and Corrosion Inhibitor	<ul> <li>Builds a chemical bond with the surface to keep moisture and acids from penetrating and attacking the surfaces</li> </ul>
Anti-Foam Additive	<ul> <li>Can lower oil operating temperatures by 25-50° F by dispersing the foam and releasing the trapped heat</li> </ul>
Oiliness Additive	Enables the oil to penetrate the surface for better lubrication
Anti-wear Inhibitor	<ul><li>Helps prevent friction and wear</li><li>Helps prevent metal to metal contact</li></ul>
Detergent Additive	• Helps keep engine parts clean, neutralizes acids formed during combustion
Dispersant Additive	<ul> <li>Helps keep solid contaminants in the oil in colloidal suspension, preventing sludge and varnish deposits on engine parts</li> </ul>
Pour Point Depressant Additive	Gives the oil better low temperature flow characteristics     Helps to reduce low temperature start-up wear
Viscosity Index Improver Additive	Less high temperature thinning and low temperature thickening
Saves Fuel	• Increased "oiliness" provides anti-friction film to reduce fuel consumption
Long Life	Works harder for a longer period of time thus easing the cost and your worries about waste oil disposal
Lab Tec <sup>SM</sup> Fluid Analysis Program	Maximizes equipment and lubricant life and pinpoints impending problems     Reduces waste
Multi-Purpose	Meets both diesel and gasoline specifications

## Exceeds Performance Requirements of the Following Specifications:

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•	API CK-4	•	API SN1, SN	Typical Properties:		
			PLUS <sup>1</sup> , SP <sup>1</sup> PLUS	SAE Engine Oil Grade5W3010W3015W405W400W205W20		
•	Daiminor Mid 220.01 ,	•	MTU Type 2.1*	API Spec(s)CK4/FA4/SP+CK4/FA4/SP+CK4/SP+SP+SP+		
			W10 13p0 2.1	Viscosity, cSt @ 40° C59.16		
	229,2			Viscosity, cSt @ 100° C10.1212.7515.614.788.017.76		
•	Caterpillar ECF-3	•	E7/E11(2022)*	Viscosity Index159145146160164158		
	Deutz DQC		Cummins CÉS	Pour Point °F/°C40404035C(-31F)40(-40)40(-40)40(-40)		
	Dediz DQO			Flash Point °F430430440420420		
			20086/20087	Flash Point °C221		
•	Ford WSS-M2C171-F1**	•	III-18 LA*	Lb/Gal7.1047.1847.1767.1137.0017.007		
	JASO DH-2		Volvo VDS 4.5	TBN111111		
•	*	•		Sulfated Ash, % wt<1<1<1<1<1		
•	DFS 93K222*	•	China D1			
•	Mack EOS 4.5	•	MAN 3775* NOTE: Check for availability of all grades in all market areas.			
•	Cummins CES 20100	•	Renault RLD 3			

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