Introduction of Automotive Oil





S-OIL CORPORATION

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History of LUBRICANTS



1989.07

Launched the brand of DRAGON, the oldest lubricant brand in Korea



2005.05

Launched the brand of SSU, eco-friendly synthetic engine oil

2008.05

Established S-OIL Total Lubricants Co., Ltd. as a J/V with France' TOTAL



2010.06

Completed the Onsan Plant of S-OIL Total Lubricants Co., Ltd



2014.05

Launched the 100% synthetic oil of S-OIL 7



2017.10

Opened the logistic center in Onsan, Korea



2018.08

Achieved zero accident for 10 consecutive years



2019.10

Launched new S-OIL 7 package



S-OIL in GLOBAL

6th	Crude Oil Refinery Capability 669 KBD
2nd	Lube Base Oil Production Capability 45 KBD
3rd	PX Production Capability 1,850 KTA

(2019 Year)

S-OIL SEVEN

Reboot your engine with original K-Lube !

New Product Category

	PCMO	HDDO	A/O Others
Color	GOLD	BLACK	MCO
	RED	BLUE	ATF MTF, Gear Specialty
#Number	#9 Fully Synthetic	#7 Synthetic	#5 Mineral



What is S-OIL 7 ?

S-OIL 7 is the brand name of a full synthetic and synthetic lubricant based on the S-OIL-made HVI/VHVI (High Viscosity Index/Very High Viscosity Index-Group II/III) class base oil and PAO (Poly Alpha Olefin) that maximizes five main features required for a cutting-edge engine.

This brand embodies the meanings of 'Forward' for improving the car's technical performance and 'Ascend' for enhancing the driver's experience.

Composition of Product Label

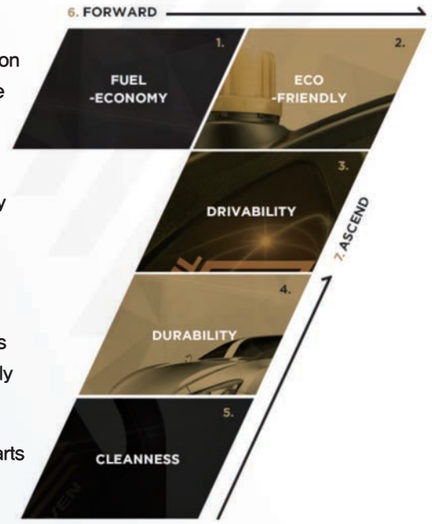


1. Fuel-Economy
Helps to cut fuel consumption to save on car maintenance costs

2. Eco-Friendly
Protects the environment by minimizing air pollutant emissions

3. Drivability
Makes the engine and parts work smoothly and efficiently

4. Durability
Prevents the engine and parts from damages or wear-out



5. Cleanness
Keeps the car's insides clean by inhibiting the formation of and eliminating foreign substances and impurities

6. Forward
A horizontal axis that signifies cars (machine)'moving in a forward direction. It represents maximization of five main features to make the car deliver the best performance

7. Ascend
A vertical axis that signifies the driver's satisfaction level. It represents improving the driving experience by making the driver satisfied with the vehicle performance ('reduced noise', 'no vibration' and 'smooth driving')

Gasoline and Passenger Diesel Engine Oil

S-OIL 7 GOLD #9 PAO C3 0W-40

FULL PAO

ACEA C3, API SN/CF, MB 229.31/229.51, BMW LL-04, VW 502.00/505.00

DPF

- All vehicles with gasoline, automotive diesel or LPG engines
- Vehicles with DOHC, Turbocharger, Direct Injection Systems, Catalytic converters
- Diesel vehicles fitted with after-treatment devices including EGR, DPF



S-OIL 7 GOLD #9 C3 5W-30

Fully Synthetic

ACEA C3, API SN/CF, MB 229.51/229.31, BMW LL-04, VW 502.00/505.00

DPF

- Passenger cars with gasoline and diesel engine
- Vehicles with DOHC, Turbocharger, CRDI, Catalytic converters
- Diesel vehicles equipped with after-treatment devices including EGR, DPF



S-OIL 7 GOLD #9 A3/B4 5W-30

Fully Synthetic

ACEA A3/B4, API SL, VW 502.00/505.00

- Passenger cars, RV, light truck, SUV with gasoline and diesel engine
- Particularly vehicles driving in modern start-stop traffic conditions



Gasoline Engine Oil

S-OIL 7 RED #9 SN PLUS 0W-20

Fully Synthetic

API SN PLUS/CF, ILSAC GF-5

- All passenger cars that run on gasoline
- Vehicles equipped with DOHC, Turbocharger, GDI are suggested to apply API SN PLUS, ILSAC GF-5 engine oil



S-OIL 7 RED #9 SN 5W-30

Fully Synthetic

API SN/CF, ILSAG GF-5

- All passenger cars that run on gasoline
- Vehicles with DOHC, Turbocharger, GDI
- Vehicles equipped with gasoline engine with is suggested to apply API SN, ILSAG GF-5 engine oil



Reboot your engine with original K-Lube !

S-OIL 7 BLACK #9 LS 10W-40

Fully Synthetic

**ACEA E4/E6/E7/E9, Volvo VDS-4,
Cummins CES 20081, API CJ-4,
Mack EO-O Premium Plus, Caterpillar ECF-3,
MB 228.31/228.51, Renault Truck RLD-3,
Deutz DQC IV-10 LA, MTU Category 2.1/3.1,
MAN M3271-1/3477/3575, Detroit Diesel 93K218**

- Suitable for most OEMs including Benz, Volvo, Cummins for Euro IV, V VI engines.
- Light trucks, RVs, SUVs, Heavy trucks, Buses with diesel engines.
- Particularly suited for latest EURO VI to older generation engines fitted with after treatment devices including DPF, EGR and SCR.



S-OIL 7 BLUE #7 CK-4 10W-30

Synthetic Technology

**API CK-4/CJ-4, VDS-4.5, CES 20086,
ACEA E9-16, Mack EO-S-4.5, Caterpillar ECF-3,
MB 228.31, RLD-4, DEUTZ DQC III-10 LA, MTU Category 2.1,
Detroit DFS93K222, Ford WSS-M2C171-F1**

- Suitable for most OEMs including Benz, Volvo, Cummins for Euro IV, V, VI engines
- Light trucks, RVs, SUVs, Heavy trucks, Buses with diesel engines
- Particularly suited for latest general EURO VI to older generation engines fitted with after treatment devices including DPF, EGR and SCR



S-OIL 7 BLUE #9 CJ-4/SL 10W-40

Fully Synthetic

**API CJ-4/SL, ACEA E9/E7, MB 228.31,
Renault RLD-3, MAN M3575,
MACK EO-O PP, Cummins CES 20081, Caterpillar ECF-3**

- Light trucks, RVs, SUVs, Heavy trucks, Buses with diesel engines
- Especially diesel vehicles with European engine under high pressure and temperature
- Particularly suited for latest EURO VI to older generation engines fitted with after treatment devices including DPF, EGR and SCR



S-OIL 7 BLUE #7 CI-4/SL 15W-40

Synthetic Technology

**API CI-4/SL, CH-4, CF, CF-4, CD,
ACEA E7, MB 228.3/229.1, MAN 3275,
MTU 2, Volvo VDS-3, Mack EO-M Plus,
Renault RLD/RLD-2, Cummins 20076,77,78, CAT ECF-2,
ECF-1-a, Deutz DQC III-10, Detroit DDC 93K215, DHD-1**

- Excellent detergent system helps keep pistons and other engine parts clean for long engine life.
- Good thermal breakdown resistance ensures engine protection under modern engine's severe conditions.
- This low SAPS (Sulfated Ash, phosphorus, sulfur) engine oil can reduce the blockage of filter for exhaust gas treatment.



S-OIL 7 BLUE #7 CH-4/SJ 10W-30

Synthetic Technology

API CH-4/SJ, CF, CF-4, CD

- Suitable to all turbocharged or normally aspirated Diesel engines of civil works machines, trucks, fishing boats, locomotives.
- Suitable for Diesel stationary engines (energy production).



S-OIL 7 BLUE #5 CF-4/SG 20W-50

Synthetic Technology

API CF-4/SG, CD

- Developed to answer to the very severe technical constraints of the new low– emission Diesel engines
- For all turbocharged or normally aspirated diesel engines of vehicles operating in the most severe conditions whatever the seasons
- Responds to the API CF–4 specifications for new low emission engines using low sulphur fuels



Reboot your engine with original K-Lube !

S-OIL 7 BLUE #9 CNG BEST LL 15W-40

Fully Synthetic

API CF, Cummins CES 20074, Detroit Diesel Series 50&60

- All Buses, trucks with CNG Engines
- Suitable to use in LPG/LNG Engines



S-OIL 7 BLUE #5 CNG BEST 15W-40

Fully Synthetic

Cummins CES 20074, Detroit Diesel Series 50&60

- All Buses, trucks with CNG Engines



S-OIL 7 ATF MULTI

Multi-Purpose 4/5/6/8 Automatic Transmission Fluid

GM Dexron II/IID/IIE/IIIG/IIIH/VI, FORD Mercon, NISSAN Matic D/J/K/W/S, JASO M315 1A, TOYOTA D-II/T/T-III/T-IV/T-WS, SP-II/III/IV/IV-RR

- Exceptional friction and anti-shudder performances with advanced technology
- Excellent viscosity stability in operation
- Excellent thermal stability and resistance to oxidation



S-OIL 7 ATF VI

6/7/8 Speed Automatic Transmission Fluid

GM Dexron VI, FORD Mercon LV, Mazda FZ, MB 236.12/14/15/41, HYUNDAI KIA SP-IV/SP-H IV/SP-IV RR, Mitsubishi ATF J-3, NISSAN Matic S, TOYOTA T-WS, JASO 1A, Honda DW-1, ZF Lifeguardfluid 6/6 Plus/8

- Excellent viscosity stability in operation
- Exceptional friction and anti-shudder performances
- Enhanced fuel economies thanks to low viscosity and excellent low temperature performance



S-OIL 7 ATF III

For Automatic Transmission

GM DEXRON III H-Specification, FORD MERCON, ALLISON C-4/TES-389

- Automatic or semi-automatic transmissions and torque converters of all passenger cars, light commercial vehicles and industrial vehicles, when the manufacturer requires an ATF(Automatic Transmission Fluid) GM DEXRON III
- Suitable for use all transmissions of passenger cars, trucks, buses and Public works machineries when a fluid type ALLISON C-4 is required
- Hydraulic systems when a fluid type GM DEXRON III is required



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S-OIL SEVEN MTF, GEAR

| Manual Transmission Fluid |

S-OIL 7 MTF FX

For Manual Transmission

API GL-4

- High viscosity index
- Increased Extreme–Pressure and antiwear properties for an optimized lubrication of manual gear boxes
- Excellent antifoam, anticorrosion, antirust properties



S-OIL 7 GEAR HD 75W-90

For Differential Gear

API GL-5, US MIL-L-2105D

- High viscosity index providing a good lubrication and allowing easy gear changes at low as well as high temperatures
- Benefits of a low viscosity at low temperature
- Very high Extreme–Pressure properties



S-OIL 7 GEAR LSD 75W-90

For Final Drive/Heavy Duty Differential/LSD Axle Gear

API GL-5, Suitable for conventional Japanese OEM's LSD

- Manual transmission, transaxles and Differentials which require API GL–5 level performance lubricants
- Limited–slip hypoid differentials fitted in all kind of vehicles including cars, trucks and buses
- Especially suitable for Japanese OEMs' limited slip differential design



S-OIL SEVEN 4T RIDER

| Motorcycle Oil |

S-OIL 7 4T RIDER #9 SN/MA2 10W-30

Fully Synthetic

API SN, JASO MA2

- All type of modern 4–stroke motorcycle engines of all cubic capacities, for most severe condition of use
- Adapted for gear boxes lubrication and oil immersed clutches
- Suitable for bikes where API SN (and below) and JASO MA or MA2 specification are recommended



S-OIL 7 4T RIDER #7 SL/MA 10W-40

Synthetic Technology

API SL, JASO MA

- All type of modern 4–stroke motorcycle engines of all cubic capacities, for most severe condition of use
- Adapted for gear boxes lubrication and oil immersed clutches



S-OIL 7 4T RIDER #5 SG 15W-40

Premium Oil

API SG/CF-4

- All type of modern 4–stroke motorcycle engines of all cubic capacities, for most severe condition of use
- Adapted for gear boxes lubrication and oil immersed clutches



Reboot your engine with original K-Lube !

S-OIL 7 4T SCOOTER #9 SN/MB 10W-30

Fully Synthetic

API SN, JASO MB

- Recommended for the modern 4–stroke motorcycle engines such as scooters and mopeds
- Not recommended for use in wet clutch application
- Adapted for gear boxes lubrication and dry clutches such as CVT technology



S-OIL 7 2T RIDER #5 TC/FC

Premium Oil

API TC, JASO FC

- All types of two stroke motorcycle engines of all cubic capacities : motorcycles, scooters, mopeds
- For premixing with gasoline at the ratio recommended by the engine capacities manufacturer



S-OIL 7 SUPER COOLANT

All Seasons Antifreeze/Coolant

- Production line of car maker
- Industrial cooling system, vessel refrigerator system.



S-OIL 7 POWER STEERING FLUID

Smooth Power Steering Performance

Automotive hydraulic system of power steering wheel and shock absorber, ISO VG 32

- With superb stability at high temperature, the product protects all types of compo–nents along with exceptional shear stability against mechanical shear phenomenon
- With antioxidant added, it has extended lifespan because of minimal deteriorate since generation of sludge and acid materials caused by oxidation is minimized
- It assures even operations by preventing cavitation through defoaming agents



S-OIL 7 BRAKE FLUID DOT-4

DOT-4 Brake Fluid for longer operation

ISO 4925 (Class 4), FMVSS 116, SAE J1704 (DOT-4)

- S–OIL BRAKE FLUID DOT–4 meets and exceeds the requirements of the following specifications for DOT–4 brake fluid.



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