

# Cruiser Advance Plus

## Multigrade Diesel Engine Oil

### Uraian

**CRUISER ADVANCE PLUS** adalah pelumas generasi terbaru berkualitas tinggi untuk mesin diesel. Diformulasikan untuk memenuhi perkembangan terbaru dalam teknologi mesin diesel.

**CRUISER ADVANCE PLUS** juga merupakan pelumas multigrade yang diformulasikan dengan aditif VII (Viscosity Index Improver), yang membuatnya sangat stabil dan memberikan konsistensi kekentalan yang baik. Ini memberikan pelumasan yang optimal pada suhu tinggi maupun rendah dengan kemampuan kerja aditif deterjen-dispersan sangat bagus, yang memberikan dampak pembersihan total kerak karbon pada mesin diesel dan sesuai dengan teknologi bahan bakar biodiesel.

**CRUISER ADVANCE PLUS** memberikan perlindungan efektif terhadap deposit, keausan, korosi, dan pada suhu tinggi tidak membentuk busa pada piston. Ini juga memiliki stabilitas oksidasi dan mengendalikan jelaga

**CRUISER ADVANCE PLUS** tersedia dalam dua varian, **CRUISER ADVANCE PLUS 15W-40** dan **CRUISER ADVANCE PLUS 20W-50**.

### Aplikasi

**CRUISER ADVANCE PLUS** direkomendasikan untuk digunakan pada mesin diesel putaran tinggi, terutama mesin diesel injeksi langsung terbaru, dengan emisi rendah dan mesin diesel dengan ruang bakar pra-pembakaran yang memerlukan pelumas dengan standar CI-4/SL.

**CRUISER ADVANCE PLUS** juga dapat digunakan dalam mesin diesel yang memerlukan layanan API di bawah pelumas CI-4/SL. Pelumas mesin diesel generasi baru dengan layanan API CI-4 ini memenuhi spesifikasi teknis dari produsen mesin diesel terkemuka seperti Caterpillar, Isuzu, Toyota, MTU, MAN, MACK, Mitsubishi, Scania, Volvo.

### Description

**CRUISER ADVANCE PLUS** is a high quality new generation lubricant for diesel engines. It is formulated to meet the latest development in diesel engine technology.

**CRUISER ADVANCE PLUS** is also multigrade lubricant formulated with VII (Viscosity Index Improver) agents, which makes it extremely stable and gives an excellent viscosity consistency. It provides optimum lubrication at both high and low temperatures with improved dispersancy and detergent power which assuring total cleaning of diesel engine and comply with biodiesel fuel technology.

**CRUISER ADVANCE PLUS** provides effective protection against deposit build up, wear, corrosion, foaming on pistons during high temperature operation. It also possesses excellent oxidation stability and soot control.

**CRUISER ADVANCE PLUS** is available in two variants, **CRUISER ADVANCE PLUS 15W-40** and **CRUISER ADVANCE PLUS 20W-50**.

### Application

**CRUISER ADVANCE PLUS** is primarily recommended for use in high RPM diesel engines, especially the latest direct injection low emission diesel engines and pre-combustion chamber diesel engines requiring a lubricant that meets CI-4/SL standards.

**CRUISER ADVANCE PLUS** can also be used in diesel engines requiring an API service lower than CI-4/SL lubricant. This new generation diesel engine API service CI-4 Lubricants meets the technical specifications of leading diesel engine manufactures such as Caterpillar, Isuzu, Toyota, MTU, MAN, MACK, Mitsubishi, Scania, Volvo.

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### Spesifikasi

**CRUISER ADVANCE PLUS** meets API service CI-4, CH-4, CG-4, CF-4, CF, SL, Mack EO-M+, EO-N, ACEA E7-12, MB 228.3, MAN M3275, Renault RLD-2, Volvo VDS-3, Cummins CES 2076/77/78, CAT EFC-1A, CAT EFC-2, Deautz III, JASO DH-1, Global DHD-1, DDC93K215, Allison C-4 standards.

### Specification Meets

**CRUISER ADVANCE PLUS** meets API service CI-4, CH-4, CG-4, CF-4, CF, SL, Mack EO-M+, EO-N, ACEA E7-12, MB 228.3, MAN M3275, Renault RLD-2, Volvo VDS-3, Cummins CES 2076/77/78, CAT EFC-1A, CAT EFC-2, Deautz III, JASO DH-1, Global DHD-1, DDC93K215, Allison C-4 standards.

### Keuntungan

- ▶ Kontrol deposit piston yang sangat baik pada suhu tinggi.
- ▶ Perlindungan aus yang sangat baik dan kendali jelaga untuk mencegah pengentalan pelumas.
- ▶ Kendali busa maksimum.
- ▶ Karakteristik multigrade memberikan kekentalan optimal selama operasi pada suhu tinggi dan rendah.
- ▶ Cocok untuk digunakan dalam mesin diesel maupun mesin bensin.

### Advantages

- ▶ Excellent high-temperature piston deposit control.
- ▶ Excellent wear protection and shoot control to prevent lubricant thickening.
- ▶ Maximum foam control
- ▶ Multi-grade characteristic provide optimum viscosity during high and low temperature operation
- ▶ Suitable for use in both diesel and gasoline engines

### Typical Data of Cruiser Advance Plus

Characteristics	Unit	15W-40	20W-50	Test Method
Colour		L3.5	L3.5	ASTM D1500
Density at 15°C	Kg/L	0.8738	0.8875	ASTM D4052
Kinematic Viscosity @ 40°C	cSt	116.84	175.6	ASTM D445
Kinematic Viscosity @ 100°C		15.38	19.00	
Viscosity Index		138	123	ASTM D2270
Flash Point, (COC)	°C	232	242	ASTM D92
Pour Point	°C	27	30	ASTM D97
CCS Viscosity @°C	cP	5373(-20°C)	8132(-15°C)	ASTM D5293
Sequence I, 24°C	ml	0/0	0/0	ASTM D892
Sequence II, 93.5°C		10/0	10/0	
Sequence III, 24°C after 93.5°C		0/0	0/0	
Total Base Number	mg KOH/g	11.242	11.25	ASTM D2896

\*the typical character mention present mean values