



# Product Data Sheet



## Monarch Diesel Ultra CK-4 / FA-4 Heavy Duty Diesel Engine Oil

**(Not for use in Gasoline Engines)**

Monarch Diesel Ultra CK-4 / FA-4 oils are formulated for extended drain service in the most demanding applications requiring API Service Category CK-4 or FA-4 as well as the latest OEM's (Original Equipment Manufacturer's) for the following engine specifications:

- EGR (Exhaust Gas Re-circulation)
- ACERT (Advanced Combustion Emission Reduction Technology)
- DPF (Diesel Particulate Filter) technology
- other exhaust after treatment devices

**Monarch Diesel Ultra 10W-30 CK-4 (#132 CK)** Can be used in applications where the diesel fuel sulfur content is up to 500ppm (0.05% wt.) However, when using Diesel Supreme Ultra in engines using diesel fuel with sulfur greater than 15ppm (0.0015% wt.) after treatment exhaust systems durability and/or drain interval may be affected.

**Monarch Diesel Ultra 10W-30 FA-4 (#132 FA)** is designed for use in High Speed 4-Stroke cycle diesel engines to meet 2017 model year on highway greenhouse gas (GHG) emission standards. This formula is designed for use in applications where the maximum sulfur content of diesel fuel is <15ppm (0.0015% wt.).

**Monarch Diesel Ultra 10W-30 FA-4 is NOT interchangeable or backwards compatible with any previous diesel engine oil category.**

### Performance Features

- Meets the needs of today's high-performance, fuel efficient, low emission diesel engines.
- Advanced corrosion protection.
- Enhanced oxidation stability, valve train wear and deposit control.
- Excellent protection of modern engines in addition to older models.

### Customer Benefits

- Superior protection of engine hardware throughout the drain interval.
- Better cold flow properties for easier starting in colder weather.
- Overall increased engine protection
- More effectual shear stability for better viscosity control.
- Reduction of high temperature deposits.

Meets the Requirements of: (*see notes)	
API CK-4	API CJ-4
API CI-4 PLUS	CUMMINS CES 20086
DETROIT DIESEL DDC DFS93K222	MACK EO-S-4.5
VOLVO VDS-4.5	CAT ECF-3
FORD WSS-M2C171-F1	ACEA E9-16 (2016)
MB-APPROVAL 228.31	RENAULT TRUCK RLD-4
MTU TYPE 2.1	DEUTZ DQC III-10 LA
*API FA-4	
*CUMMINS CES 20087	*DETROIT DIESEL DFS93K223





## Typical Properties

Monarch Diesel Ultra 10W-30			
Product Number	132 CK	*132 FA	Test Method
API Service Category	CK-4	FA-4	-
Base Stock	Semi-Synthetic	Semi-Synthetic	-
Kinematic Viscosity @ 40°C	80.7	67.4	ASTM D445
Kinematic Viscosity @ 100°C	11.8	9.9	ASTM D7042
Viscosity Index	140	130	-
CCS @ -25°C	< 7000	< 7000	ASTM D5293
HTHS Viscosity, cP	3.5	3.1	ASTM D4683
Evaporative Loss NOACK, %	11	11	ASTM D5800
TBN, mgKOH/g	10	10	ASTM D2896
TAN, mgKOH/g	3	3	ASTM D664
Specific Gravity	0.87	0.87	-
Sequence I, II, III	0/0	0/0 (20/0 seq. II)	ASTM D892
Flash Point °C	>220	>220	ASTM D92
API	30.7	30.5	-
Lbs/Gal	7.26	7.27	-
Color	<7.0	<7.0	ASTM D1500

These properties are typical of the current production. Variations that do not affect product performance are to be expected depending on blending and manufacturing locations. The information above is subject to change without notice.

### Health and Safety:

This product is unlikely to have any adverse health implications or safety hazards when used for its intended application. Avoid contact with skin, use resistant gloves when handling used oil. If skin comes in contact wash immediately with soap and water. For complete information on safe handling and product characteristics please refer to the Safety Data Sheet (SDS) found on our website. [www.royalmfg.com](http://www.royalmfg.com) or call (918)-584-2671.

### Packaging options:



Quarts



1 Gal Jugs



5 Gal Pails



55 Gal Drums



275/330 Gal Totes



>2000 Gal Bulk