



extra Motor Protection Formula
XMF for longer lasting engines

www.aral-lubricants.com



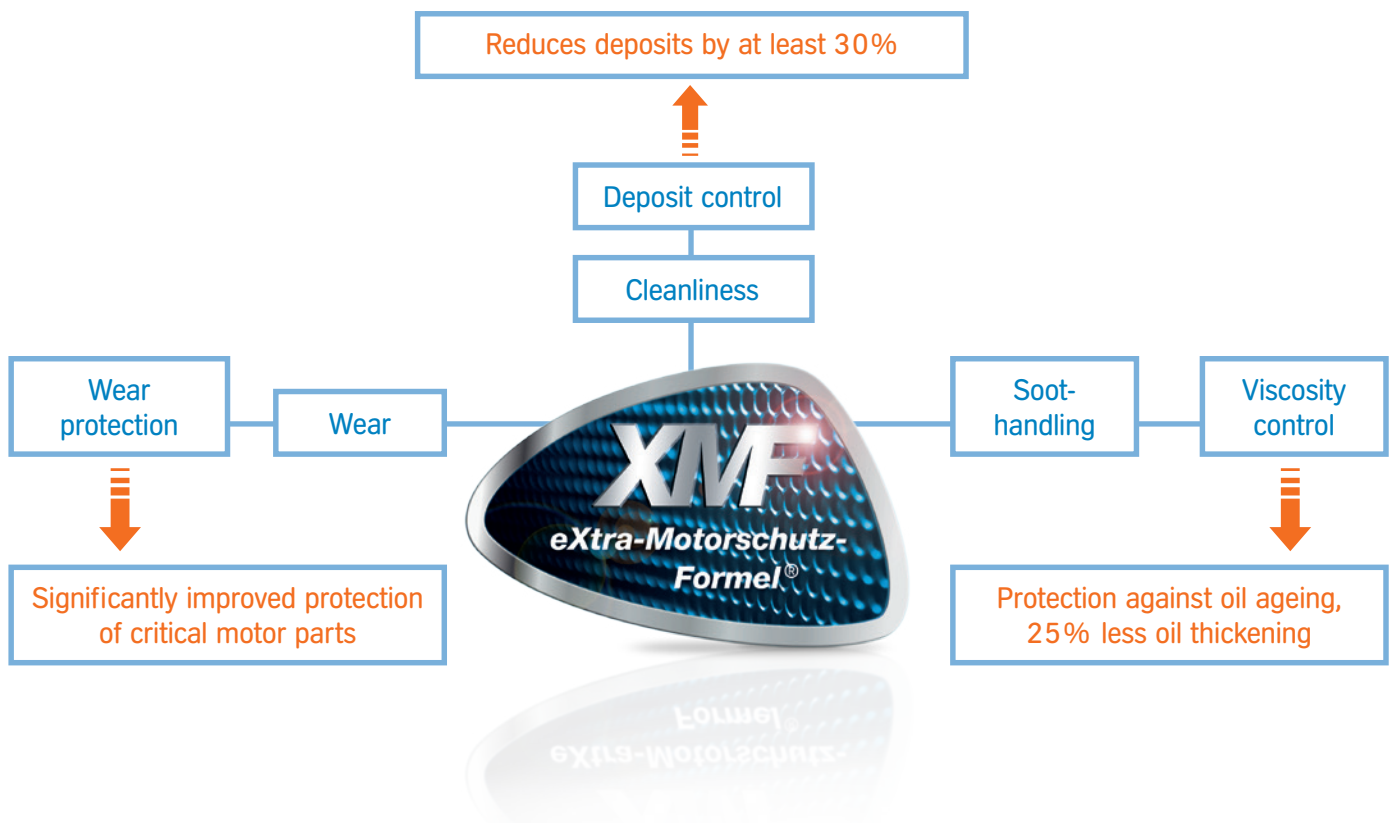
The Best Turboral Ever!

Aral Aktiengesellschaft
Geschäftsbereich Schmierstoffe



55 Years of Turboral

For generations, we have been developing products with the best possible protection for your machinery and components. New eXtra Motor Protection Formula XMF has further improved Aral Turboral products. These heavy-duty oils reduce deposits and minimise wear. Engines remain even cleaner and run longer.



Aral motor protection technology

» Longer motor service life » Less oil ageing » Increased motor cleanliness

Constant use means that motors are exposed to intense levels of contamination. If they cannot be neutralised, contaminants may turn into deposits. Deposits are one of the main causes of decreased motor efficiency and their eventual failure.

Turboral oils with eXtra Motor Protection Formula XMF contain components that counteract the formation and adhesion of destructive deposits in sensitive motor parts and contribute to longer motor service life.

The Latest Generation of Aral Engine Protection

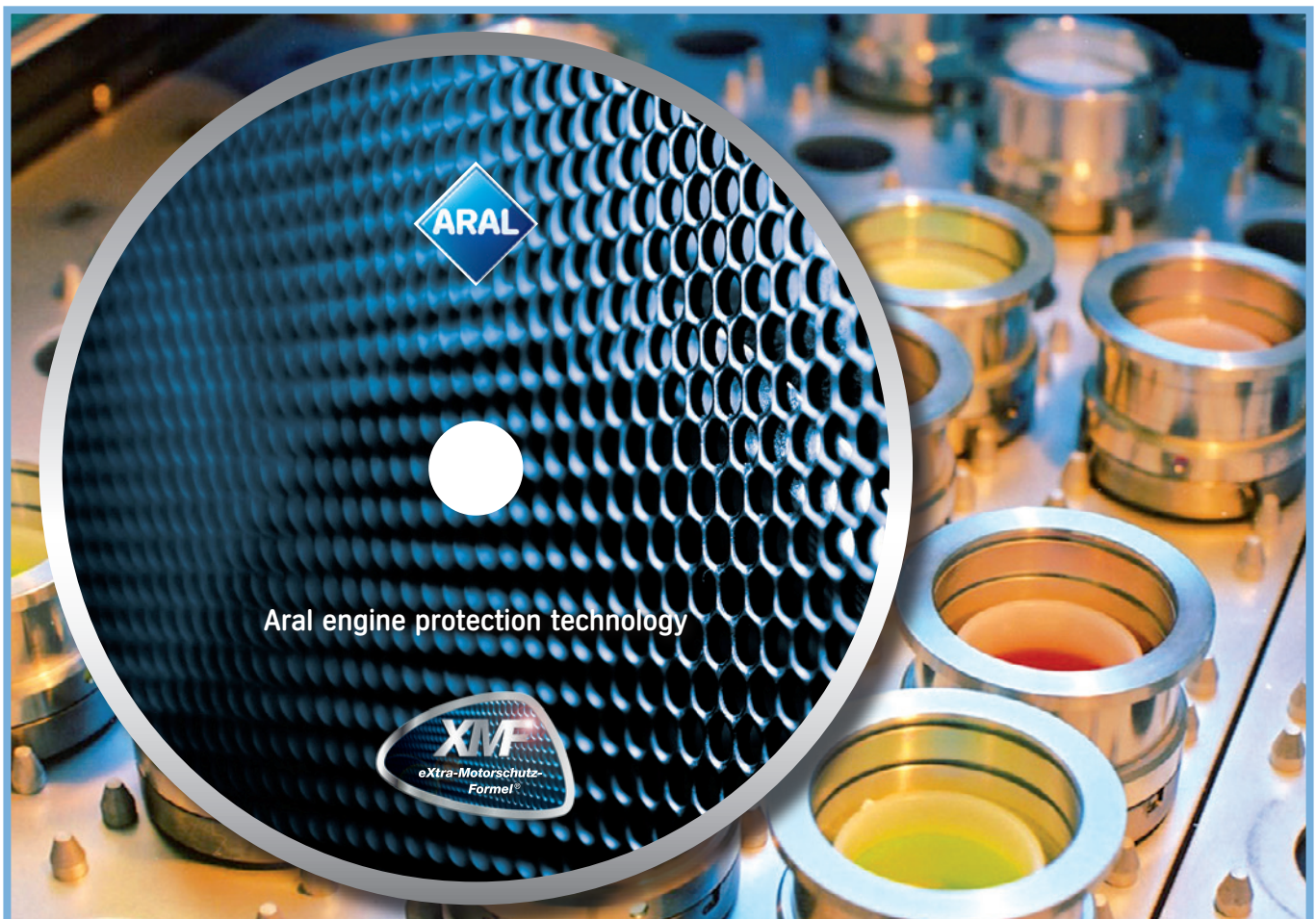
Without eXtra Motor Protection Formula XMF

Sludge and dirt particles adhere to the engine, blocking the filter and impeding the flow of oil.



With eXtra Motor Protection Formula XMF

Reduced dirt and sludge deposits, so the oil can flow freely to the important engine parts.



Aral SuperTurboral 5W-30

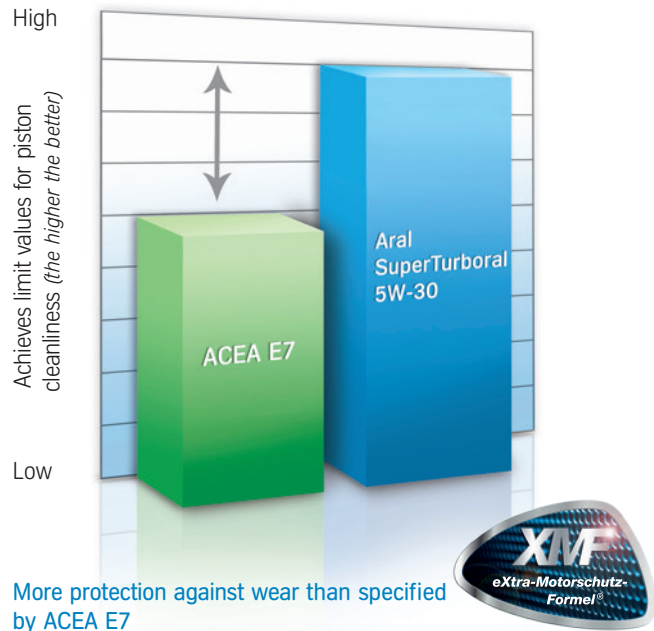
Low-friction engine oil in Aral Synthetic-Technology for use in almost all commercial vehicles from European manufacturers. Meets all XMF performance requirements.

Advantages:

- Fuel savings of up to 4% against a 15W-40 viscosity oil
- For extended drain intervals up to 150,000 km
- Optimal cold-start characteristics

Specifications:

ACEA E4, E7 • MB-Approval 228.5 • MAN M 3277 • Volvo VDS-3 • Scania LDF-3 • Renault RVI RLD-2 • MTU oil category 3 • Cummins CES 20077 • Deutz DQC III-10 • Mack EO-N



Aral SuperTurboral LA 5W-30

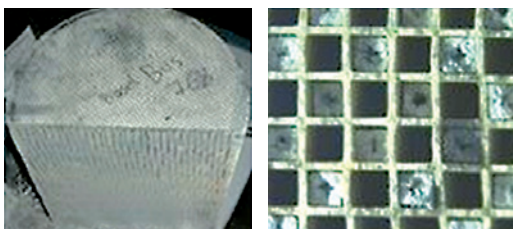
Aral SuperTurboral LA 5W-30 is an engine oil in Aral Synth-Technology for use in almost all commercial vehicles from European manufacturers that require a low SAPS engine oil. The unique Aral Synth-Technology delivers the cleanest engine lubricating system possible. It can be used for Euro 3, Euro 4, Euro 5 and Euro 6 engines, even for temperatures below -30°C , for the longest drain intervals (please observe manufacturer specifications!). Meets all XMF performance requirements.

Advantages:

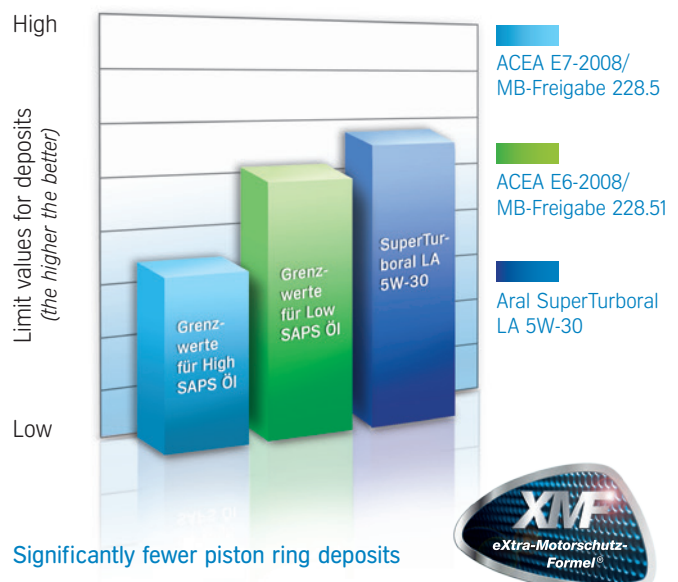
- Minimised sulphated ash, phosphorus and sulphur components (low SAPS engine oil)
- Tested against the latest ACEA E6-2008 requirements
- Excellent low-temperature properties for rapid engine lubrication, even below -30°C
- Fuel-savings potential by a reduction in interior friction

Specifications:

ACEA E6, E7, E9 • API CJ-4 • MB-Approval 228.51 • MAN M 3677, M 3477 • Volvo VDS-3, VDS-4 • Renault RLD-2, RLD-3 RXD • DAF • Deutz DQC IV-10LA • Caterpillar ECF-3 • JASO DH-2 • MACK EO-N, MACK EO-O Premium Plus • Cummins CES 20081



Aral SuperTurboral LA 5W-30 maintains exhaust after-treatment system efficiency and assures compliance with the legally stipulated emission levels over the long term.



Aral MegaTurboral LA 10W-40

This low SAPS, high-performance diesel engine oil in Aral Synth-Technology also prevents deposits on pistons, piston rings, cams, rocker arms and all other highly stressed engine parts to a significant extent. Meets all XMF performance requirements.

Advantages:

- Minimised sulphated ash, phosphorus and sulphur components (low SAPS engine oil)
- Optimised exhaust after-treatment effectiveness for Euro 5 limit value compliance
- Reduces the risk of oil thickening

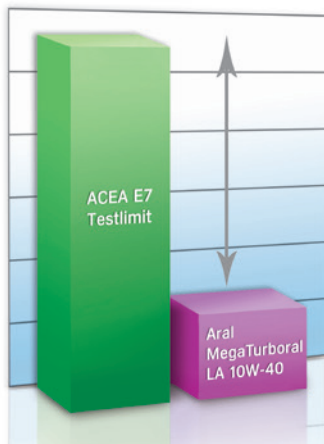
Specifications:

ACEA E6, E7, E9 • API CJ-4 • MB-Approval 228.51 • Renault RVI RLD-3 • MAN M 3477, M 3271 • Volvo VDS 4, CNG • DAF • Deutz DQC IV-10LA • MTU Oil category 3.1 • Caterpillar ECF-3 • JASO DH-2 • Mack EO-O Premium Plus • Cummins CES 200081 • can be used for Iveco Trucks that required for ACEA E6, E7, E9

High

Filter blockage from sludge
(the lower the better)

Low

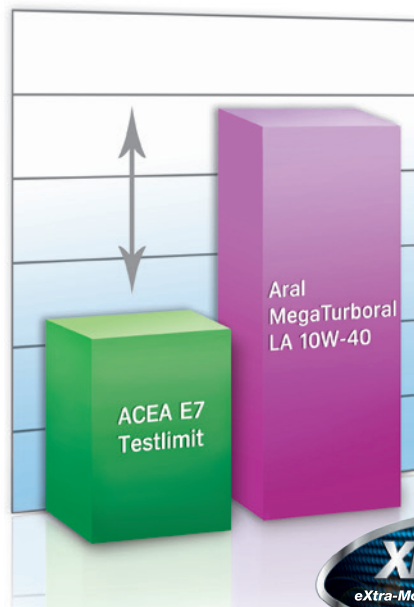


Significant reduction in sludge results and reduced wear on injector nozzles.

High

Piston cleanliness
(the higher the better)

Low



Significantly improved piston cleanliness



Aral MegaTurboral 10W-40

The low-friction engine oil in Aral Synth-Technology for current diesel engines approved for extended drain intervals. Not suitable for vehicles that require low SAPS engine oil. Meets all XMF performance requirements.

Advantages:

- Minimal wear due to load-bearing oil film, even under extreme thermal stress and mechanical loads
- Excellent cold-start performance

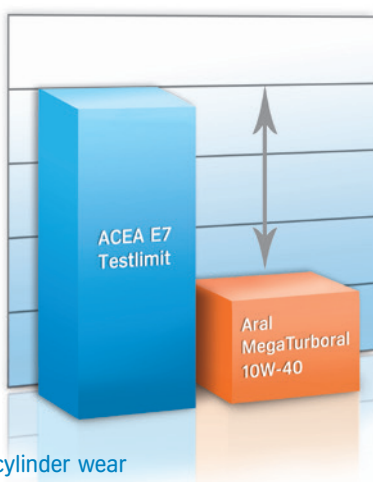
Specifications:

ACEA E6, E7, E9 • API CJ-4 • MB-Approval 228.51 • MAN M 3277, M 3477 • Volvo VDS-3, VDS-4 • Renault RLD-2, RLD-3 RXD • DAF • Deutz DQC IV-10LA • Caterpillar ECF-3 • JASO DH-2 • MACK EO-N, MACK EO-O Premium Plus

High

Average cylinder wear
(the lower the better)

Low



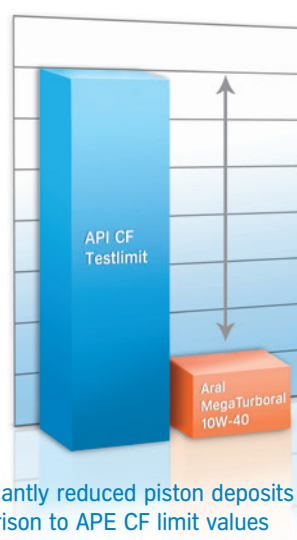
Less cylinder wear

Special protection for piston cleanliness

High

Piston deposits
(the lower the better)

Low



Significantly reduced piston deposits in comparison to APE CF limit values



Aral MegaTurboral VR 10W-40

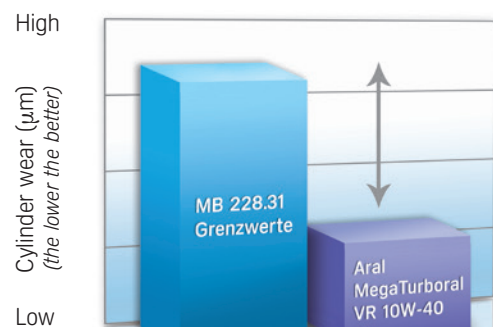
High-performance engine oil in Aral Synth-Technology for state-of-the-art diesel vehicles with low SAPS technology that require oil as per ACEA E9 or API CJ-4. This oil was developed for commercial vehicles used in on-road and off-road conditions. Meets all XMF performance requirements.

Advantages:

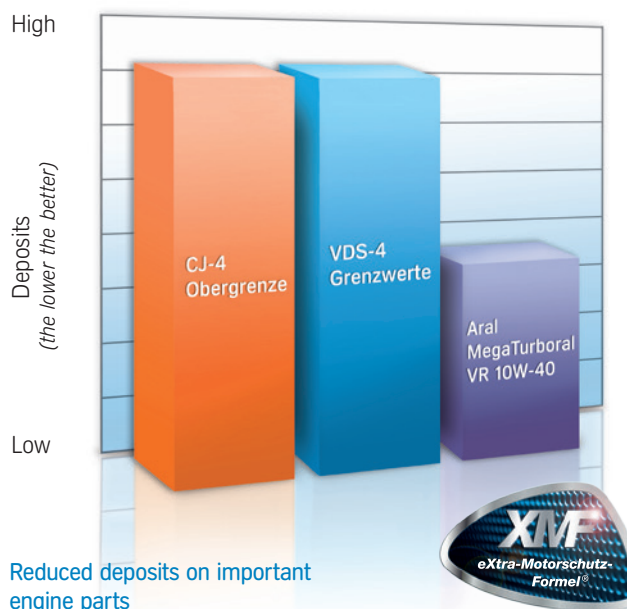
- Enables the longest drain intervals (as per manufacturer specification), even under extremely difficult conditions
- Optimises after-treatment effectiveness and guarantees assured compliance with specified emission limit values

Specifications:

ACEA E9 • API CJ-4 • MB-Approval 228.31 •
MAN M 3275 • Volvo VDS-4 • Renault RLD, RLD-3 •
Deutz DQC III-10LA • Caterpillar ECF-3 • Cummins CES 20081 •
Mack EO-O Premium Plus



Reduces wear on the cylinder and cam shaft to significantly below 50% of the limit value



Reduced deposits on important engine parts

Aral Turboral 10W-40

The low-friction engine oil in Aral Synth-Technology for mixed fleets with both diesel and internal combustion engines. With extremely high-performance additives and fuel-savings potential, plus a very broad range of applications. Meets all XMF performance requirements.

Advantages:

- Good cold-start performance and rapid supply of oil to the engine
- Effective prevention of cold sludge and black sludge

Specifications:

ACEA E3, E5, E7 • API CI-4/SL • MB-Approval 228.3 • MAN M 3275 • Volvo VDS-2
• Renault RLD • DAF HP-1/HP-2 • Deutz DQC III-10 • MTU Ölkategorie Typ 2
• Caterpillar ECF-2 • Cummins CES 20076, CES 20077, CES 20078 • Mack EOM-Plus



Aral Turboral 15W-40

Mineral-oil-based engine oil with outstanding performance capacity and an additive package designed especially for use in commercial vehicles. Meets all XMF performance requirements.

Advantages:

- Outstanding engine cleanliness, even for extremely difficult operating conditions
- Prevents formation of cold sludge and black sludge
- Large reserves for extended drain intervals and difficult operating conditions, e.g. stop-and-go operation

Specifications:

ACEA E3, E5, E7 • API CI-4/SL • MB-Approval 228.3 • MAN M 3275 • Volvo VDS-2 • Renault RLD • Caterpillar ECF-2 • Cummins CES 20076, CES 20077



Aral Turboral 10W, 20W-20, 30, 40

Mineral-oil-based, single-purpose engine oil with high-performance additives.

Advantages:

- Can also be used as hydraulic fluid in hydraulic clutches, retarders and transmissions

Specifications:

Aral Turboral SAE 10W: API CF/SF • MB-Approval 228.0/ 235.27 • Voith Retarder oil class A
Aral Turboral SAE 20W-20: API CF/SF • MB-Approval 228.0/ 235.27 • Voith Retarder oil class A
Aral Turboral SAE 30: API CF
Aral Turboral SAE 40: API CF/CF-2

Aral Traktoral 10W-40

Type STOU mineral-oil-based, all-purpose tractor oil. Thanks to its all-purpose properties, it is suitable for engines (SDI and turbo diesel), transmissions (in particular, with wet brakes) and hydraulics. Reliable and economical with top viscosity performance and high protection against wear.

Specifications:

ACEA E2 • API CF-4/SF/GL-4 • ZF TE-ML 06D • meets MF M1144, M1139 • JDM J27 • meets Ford ESN-M2C159-B • can be used if the following specifications are recommended: JD J20C, Case MS1207, Ford M2C134D, M2C86B



The best Turboral ever – for longer lasting engines.

	Saves fuel	Reduces wear	Low temperature properties	Reduces deposits	More time between oil changes	Sludge-carrying ability
Aral SuperTurboral 5W-30	+++	+++	+++	+++	+++	+++
Aral SuperTurboral LA 5W-30	+++	+++	+++	+++	+++	+++
Aral MegaTurboral LA 10W-40	++	+++	++	+++	+++	+++
Aral MegaTurboral 10W-40	++	+++	++	+++	+++	+++
Aral MegaTurboral VR 10W-40	++	+++	++	+++	+++	+++
Aral Turboral 10W-40	++	+++	++	+++	++	+++
Aral Turboral 15W-40		++	+	++	++	++
Aral Turboral 10W, 20W-20, 30, 40		+		+		+
Aral Traktoral 10W-40	+	+	++	++	+	

The eXtra Motor Protection Formula XMF
gives you the best Turboral ever – for longer
lasting engines.



The cleaner,
safer option!



www.aral-lubricants.com



The big boys are going on a diet.

We rely on Aral products to ensure that everything keeps running smoothly. The modern Turborals with eXtra Motor Protection Formula XMF keep our engines clean. We're still relying on proven quality made in Germany.



eXtra Motor Protection Formula XMF fights the build-up and adherence of harmful deposits. It's an anti-deposit technology that means superior protection for cleaner and therefore longer lasting engines.



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Please ask your Aral representative for questions around order quantities, prices etc.

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