

Diesel Motor Oils

Synthetic SAE 5W-30, 15W-40 and 30 and Synthetic Blend 15W-40 API CI-4, CH-4, CG-4, CF, CF-2, SJ, SL, as labeled

AMSOIL® synthetic diesel motor oils help decrease downtime and increase profits.

Wear control – AMSOIL® synthetic diesel motor oils have been proven to keep wear rates lower than conventional oils do (see page 7). Synthetic basestocks reduce friction more effectively than conventional basestocks do, which lowers wear rates and helps keep engine heat from climbing excessively. Outstanding quality antiwear additives protect surfaces from wear in conditions in which a full lubricating film does not develop.

Acid neutralization and soot control – AMSOIL® synthetic diesel motor oils are 12 Total Base Number (TBN) oils and have been proven to neutralize acids and control corrosion for longer periods than conventional oils do (see page 7). The top-quality detergents responsible for long-term acid neutralization also inhibit deposit formation on hot engine surfaces. AMSOIL® synthetic diesel motor oils' highly effective dispersants control soot and other contaminants for long-lasting protection against wear and sludge formation.

Low temperature fluidity – AMSOIL® synthetic diesel motor oils remain fluid in low temperatures. Low temperature fluidity helps engines start in cold temperatures and ensures rapid cold-temperature post-startup protection.

Chemical and physical stability – AMSOIL® synthetic diesel motor oils offer superior thermal, oxidative and shear stability. Thermal stability allows them to work in high temperatures without undergoing molecular breakdown with consequent increases in oil consumption and formation of sludge precursors. Oxidative stability allows them to work in high temperatures without undergoing chemical changes leading to oil thickening, loss of lubri-

cating ability, and sludge and acid formation. Shear stability keeps them from falling out of viscosity grade and losing their ability to protect against metal-to-metal contact and wear in engine operating temperatures as a result of shear forces.

Fuel economy – AMSOIL® synthetic diesel motor oils' low coefficient of friction improves fuel economy by reducing the loss of power to friction. Fuel economy increases of five percent are common with AMSOIL® synthetic diesel motor oils.

Extended drain intervals – Fleet demonstrations show AMSOIL® synthetic diesel motor oils protect engines more effectively for extended drain intervals than conventional oils do for conventional drain intervals (see pages 7 and 8). Many truckers use AMSOIL® synthetic diesel motor oils indefinitely, using oil analysis as their guide to oil changes.

Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil

AMSOIL® Series 3000 Synthetic 5W-30 Heavy Duty Diesel Oil, formulated for diesel and gasoline engine use, offers a combination of engine protection and fuel economy unmatched by other oils. Independent lab tests show Series 3000

“AMSOIL® gives our equipment the best protection from wear while allowing it to start easier, run cooler and get the best fuel efficiency possible.”

– D.D., TEXAS

outprotects other popular diesel oils – even 15W-40 grade oils – by a wide margin (see graph below).

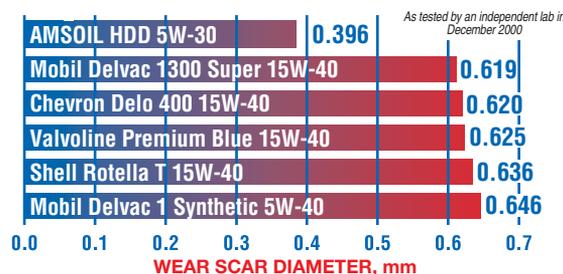
Series 3000 improves fuel economy. Testing performed by an independent facility showed that class 8 trucks with AMSOIL® Series 3000 in the engines and AMSOIL® synthetic lubricants in the drivetrains obtained up to 8.2 percent more mpg than matched trucks lubricated with conventional products.

It's a proven long drain oil. An ongoing Class 8 fleet demonstration shows Series 3000 used continuously for 80,000 miles offers better TBN and viscosity retention, soot control and wear prevention than does a popular conventional 15W-40 oil changed at 20,000-mile intervals.



Four-Ball Wear Test (ASTM D4172B)

(40 kg pressure @ 150°C, 1800 rpm for 1-hour duration)



The Smaller the Wear Scar, the Better the Protection.

Synthetic 15W-40 Heavy Duty Diesel and Marine Oil

AMSOIL® Synthetic 15W-40 Heavy Duty Diesel and Marine Oil has been proven superior to conventional oils in fleet demonstrations and countless miles of over-the-road use. AMSOIL® Synthetic 15W-40 Heavy Duty Diesel and Marine Oil increases fuel economy, reduces wear rates, provides extended drain service and saves truckers significant money.

15W-40 Synthetic Blend Gasoline & Diesel Motor Oil

AMSOIL® Synthetic Blend Gasoline and Diesel Motor Oil offers the advantages of a synthetic at a more

affordable price. AMSOIL® Synthetic Blend Gasoline and Diesel Motor Oil provides high and low temperature protection, thermal and oxidative stability and retention of TBN, dispersancy and viscosity. It is an ideal extended drain lubricant.

Synthetic SAE 30 Diesel Motor Oil

AMSOIL® Synthetic SAE 30 Diesel Motor Oil offers high and low temperature service and protection. Its low temperature fluidity is superior to that of conventional 15W-40 motor oils. Its shear stability, low volatility and high temperature film strength make it ideal for high-stress applications.



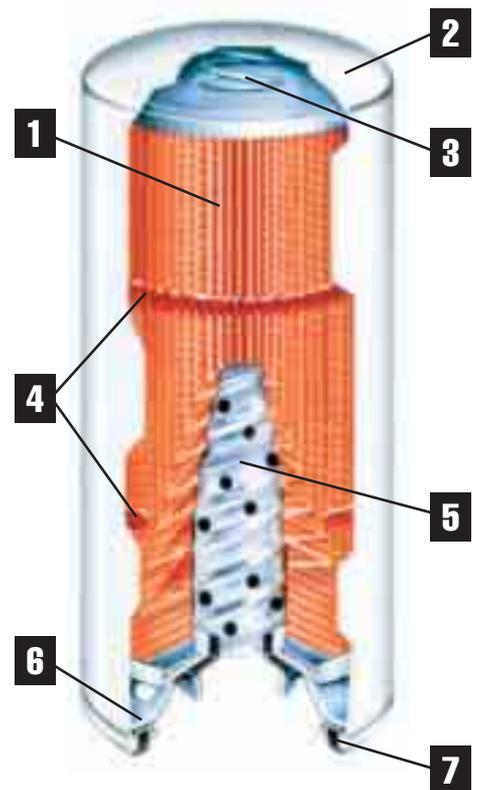
Super Duty Oil Filters

Ample capacity and rugged construction provide exceptional performance and extended service life.

The AMSOIL® Super Duty Oil Filter is constructed for superior performance and extended drain service in heavy-duty engines. It offers 20 percent greater efficiency than competitive filters and more than twice the capacity of competitive filters. What makes the Super Duty Oil Filter superior to the competition?

1. Its high strength cellulose fiber-glass blend media offers superior contaminant holding capacity compared to using only glass or synthetic media.
2. The heavy-duty all-metal can provides powerful protection against burst and pulse damage.
3. A steel coil spring helps the filter keep its shape and maintain a positive load pressure on the adapter seal, which prevents leakage.

4. Two evenly spaced glue bead supports help ensure flow through the entire pleat surface and reduce media fatigue between oil changes. Flow through the entire pleat and reduced media fatigue increase dirt particle capture.
5. A fluted-rib steel spiral center tube offers excellent protection against pressure surge damage.
6. A double-rolled, tuck lock seam joining the heavy-duty baseplate to the can offers outstanding protection against leakage, even during high pressure operations.
7. A high-strength gasket resists heat damage and corrosion for extended seal life.



**By-Pass/Full Flow
Combination Filter**

**AMSOIL® also
offers Hastings Filters
for virtually all heavy-
duty applications**



SDF 70 – For Mack trucks (Full Flow)

Replaces Mack 485GB3191, Donaldson P553191, Fleetguard LF3379, Fram PH49A, Wix 51791

SDF 71 – For Detroit Diesel trucks (Full Flow)

Replaces Detroit Diesel 23518671, Donaldson P550911, Fleetguard LF3333, Fram PH3612, Wix 51811

SDF 72 – For Cummins engines (Full Flow)

Replaces Cummins 3313287, Donaldson P551670, Fleetguard LF3325, Fram PH3375, Wix 61670

SDF 73 – For Caterpillar equipment (Full Flow)

Replaces Caterpillar 1R0716, Donaldson P554005, Fleetguard LF3374, Fram PH3335, Wix 51792

SDF 74 – For Cummins engines with Full Flow/By-Pass Combination Filter.

Replaces Cummins 3318853, Donaldson P553000, Fleetguard LF3000, Fram HPH6349, Wix 51748

SDF 75 – For Cummins engines (By-Pass)

Replaces Cummins 3304232, Donaldson P550777, Fleetguard LF777, Fram P3555A, Wix 51749

SDF 77 – For Detroit Diesel engines (Full Flow)

Replaces AC Delco PF2100, Baldwin Filters B495, Fram PH7405, Hastings Filters LF250, Wix 51971

Dual Gard By-Pass Oil Filtration System

The AMSOIL® Dual Gard By-Pass Oil Filtration System treats oil to ultrafine filtration, which increases engine and oil life and enhances engine performance.

By-Pass Filter elements remove submicron sized particles, keeping oil analytically clean. Clean oil lubricates and cools efficiently because its coefficient of friction is low. It promotes superior piston ring seal, which improves compression and engine power, and reduces blow-by, oil consumption and fuel dilution.



Oil lasts longest when clean, since its additives are not consumed by contaminant control.

By-Pass Filter elements also remove water. Water removal inhibits the formation of acids, rust and sludge.

The Dual Gard system allows the installation of two AMSOIL® Spin-On By-Pass Oil Filter elements, which doubles the by-pass filter element change intervals. The system also makes room for a larger volume of lubricating oil, which allows the oil to run cooler and rest more. Both increase oil durability.

Synthetic Gear Lubes

API GL 2 - 5, API MT-1, SAE 75W-90, 80W-90, 75W-140, 85W-140

AMSOIL® synthetic gear lubes keep differentials and EP gear-lube equipped transmissions running clean, protected and at top-efficiency.



Load-bearing and extreme pressure protection – AMSOIL® synthetic gear lubes are formulated to protect gears operating in heavily loaded conditions, whether or not the gears operate with full film lubrication. Superior film strength and viscosity retention offer superior protection in full film regimes, while top-quality extreme pressure agents protect when a full lubricating film does not separate gear surfaces.

The thermal durability of AMSOIL® synthetic gear lubes ensures extreme pressure protection after extended exposure to extreme temperatures.

The extreme pressure agents in conventional gear lubes sometimes lose their effectiveness after extended exposure to high temperatures, leaving gears vulnerable to metal-to-metal contact and wear.

Friction-reduction – AMSOIL® synthetic gear lubes reduce friction effectively, which reduces power losses, reduces excessive gear temperatures by up to 50°F and increases fuel economy. In fact, an independent research institute found that trucks with AMSOIL® Series 2000 Synthetic 75W-90 Gear Lube in the differentials obtained up to 4.83 percent more miles per gallon than matched trucks with a conventional gear lube in the differentials.

High and low temperature performance – AMSOIL® synthetic gear lubes maintain their viscosity better with changes in temperature than conventional lubes do, which allows them to protect over a broader temperature range.

They maintain better low temperature fluidity than conventional gear lubes do, while also protecting better in higher temperatures.

Extended drains – In commercial vehicles operated in normal conditions, AMSOIL® synthetic gear lubes

“I’m convinced the only thing that saved the differentials was the AMSOIL® Gear Lube.”

– C.K., TEXAS

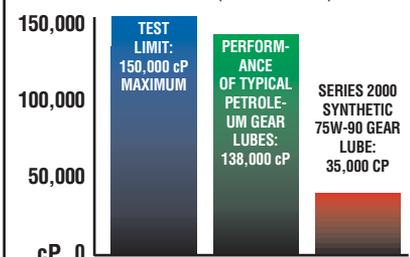
may be used up to five times longer than conventional petroleum gear lubes may be used.

More – AMSOIL® synthetic gear lubes provide limited slip capability, and may be used in limited slip differentials without special additives.

AMSOIL® synthetic gear lubes also provide outstanding protection against rust, which is important for stored equipment.

Cold Temperature Performance

ASTM D3829 (-40°C/-40°F)



Lower Viscosity Means Better Cold Temperature Fluidity, Reducing Wear At Start-Up.

Diesel Fuel Additives

AMSOIL® Diesel Fuel Additive Concentrate

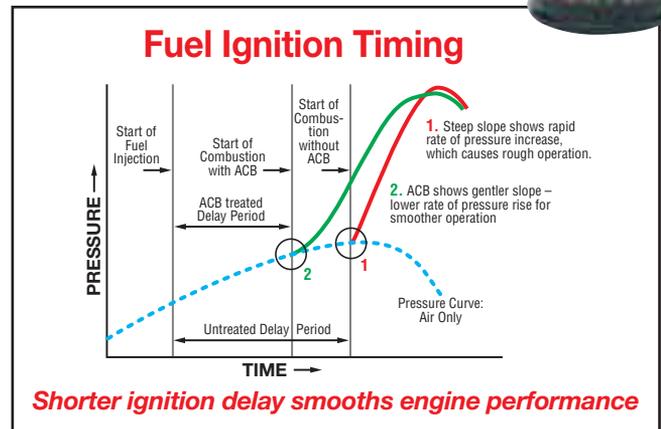
AMSOIL® Diesel Fuel Additive Concentrate maintains injector cleanliness, increases fuel system life, reduces exhaust emissions, stabilizes fuel and improves cold temperature fuel performance. It contains lubricity agents, corrosion inhibitors and anti-rust agents to reduce system wear. Its cleaning agents remove deposits and keep new ones from forming, which ensures injector cleanliness for superior power and fuel economy and reduced emissions. Its wax crystal suppressants and deicing agents keep diesel fuel flowing at temperatures as much as 20° F colder than those at which it otherwise would flow. Moisture inhibitors and other agents stabilize stored fuel.



AMSOIL® Cetane Boost

AMSOIL® Cetane Boost increases cetane by three to seven numbers. It contains fuel cetane enhancers, which increase startability, combustion efficiency and power, and decrease engine knock, smoke and emissions.

AMSOIL® Diesel Fuel Additive Concentrate and Cetane Boost are compatible and may be mixed in the fuel tank. Both are alcohol-free for seal and component compatibility.



“Just after using AMSOIL® Diesel Concentrate and AMSOIL Cetane Boost, the performance difference was like night and day.”

— M.M., COLORADO

Synthetic Powershift Transmission Fluids

Synthetic SAE 10W, 30, 50

AMSOIL® Synthetic SAE 50 Powershift Transmission Fluid exceeds Fuller CD-50 performance specifications and is ideal for use in Fuller, Rockwell, Spicer, Fabco, Warner and other large truck manual transmissions.

Superior wear protection - AMSOIL® Synthetic Powershift Transmission Fluids are formulated for superior wear protection. Formulated without viscosity index improvers, they maintain grade throughout service life, providing long-term protection against equipment wear, even when equipment is frequently subjected to sustained periods of applied pressure or high horsepower and high torque.

High and low temperature performance - AMSOIL® Synthetic Powershift Transmission Fluids provide superior protection in high temperatures, inhibiting the formation



of varnish, deposits and sludge, while their excellent heat transferring abilities help hot-running equipment operate up to 50°F cooler. In low temperatures, AMSOIL® Synthetic Powershift Transmission Fluids flow readily for dependable startup and post-startup protection.

Extended drains - AMSOIL® Synthetic Powershift Transmission Fluids provide two to five times the service life of conventional petroleum fluids if kept free of dirt and moisture. They may be used for 250,000 miles or five years (whichever comes first) in manual transmissions.

Synthetic Greases

NLGI No. 2, GC-LB

AMSOIL® synthetic extreme pressure lithium complex greases offer outstanding protection and extended service lives.

Load-bearing and extreme pressure protection – AMSOIL® synthetic extreme pressure lithium complex greases offer outstanding protection in high load and extreme pressure operations, due to the great film strength of synthetic basestocks, the mechanical stability of lithium complex thickeners and the protective shield provided by extreme pressure agents.

Friction-reduction – AMSOIL® synthetic extreme pressure lithium complex greases' low coefficient of friction helps keep wear rates low and efficiency high by minimizing friction.

High and low temperature performance – Outstanding thermal and oxidative stability allow AMSOIL® synthetic greases to protect in higher temperatures than conventional greases can without breaking down or forming deposits. Outstanding cold temperature pumpability allows them to protect in lower temperatures than conventional greases do.

More – Excellent washout resistance and corrosion inhibition offer



outstanding protection in wet applications or for stored equipment.

Series 2000 Synthetic Racing Grease

AMSOIL® Series 2000 Synthetic Racing Grease is formulated for high speed/ high temperature and low-speed/ high load applications. It provides the load-bearing capacity of a heavy-duty grease and the high-temperature protection of a multi-purpose grease.

Synthetic Heavy Duty Greases

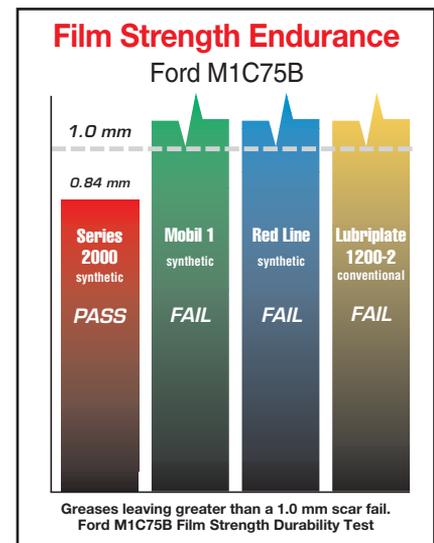
AMSOIL® Synthetic Heavy Duty Greases are moly-fortified greases formulated for low-speed high-load applications. They provide dependable performance in extreme pressure conditions.

“Series 2000 Racing Grease offers superior heat dissipation. Bearings don't need packing as often.”

– D.N., MINNESOTA

Synthetic Multi-Purpose Greases

AMSOIL® Synthetic Multi-Purpose Greases are formulated for high speed/high temperature service. Their outstanding thermal and oxidative stability inhibits deposit formation and grease breakdown in high temperature applications. Their superior friction reducing ability helps keep high speed components operating in their optimal temperature range and helps keep them running clean.



Fifth Wheel and Open Gear Compound

AGMA 14R, NLGI No. 1

AMSOIL® Synthetic Fifth Wheel and Open Gear Compound provides outstanding truck tractor fifth wheel lubrication and protection.

AMSOIL® Synthetic Fifth Wheel and Open Gear Compound adheres to metal surfaces that are dirty or otherwise poorly prepared for lubrication, making it ideal for hard-to-service equipment operating in hostile environments.

AMSOIL® Synthetic Fifth Wheel and Open Gear Compound resists water washout, protecting fifth wheels that are exposed to water.



Top-quality anti-rust and anti-corrosion agents protect surfaces from the rust and corrosion water exposure may cause.

AMSOIL® Synthetic Fifth Wheel and Open Gear Compound offers superior protection in high and low temperatures. It does not flake in low temperatures or soften in high temperatures.

AMSOIL® Synthetic Fifth Wheel and Open Gear Compound sprays on. It's quick, neat and economical to use.



Oil Analyzers Inc.

Oil analysis enables maintenance personnel to evaluate motor oil service life and engine condition and save significantly on downtime, equipment repair and oil-related costs.

Oil Analyzers Inc. puts technologically advanced testing equipment in the hands of experienced diagnosticians.

Accurate, reliable Oil Analyzers Inc. findings may be used to reduce equipment replacements and repairs, reduce the volume of lubricant pur-

chased and destined for disposal and reduce equipment downtime.

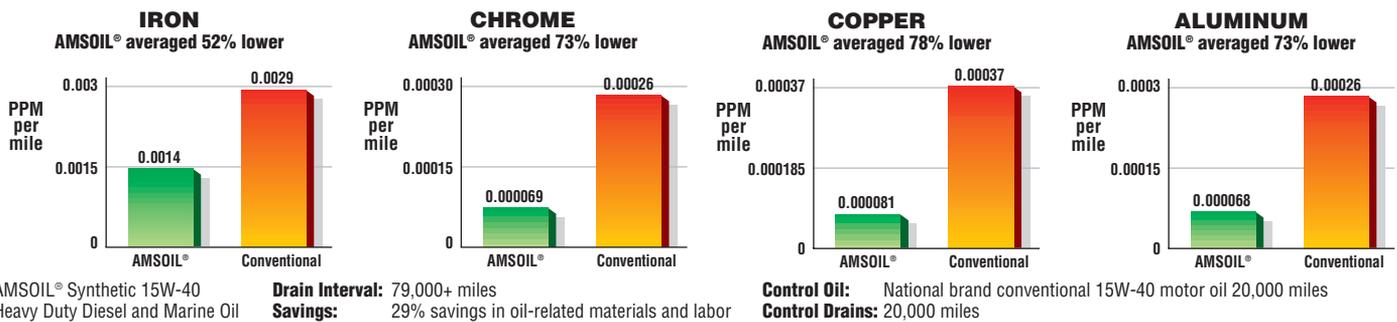
Oil Analyzers Inc. normally turns out reports one working day after sample is received. When a time-sensitive condition is detected, OAI calls with the information.

Oil Analyzers Inc. kits include everything required for analysis: sample gathering materials, sample testing and, in the U.S., return postage.

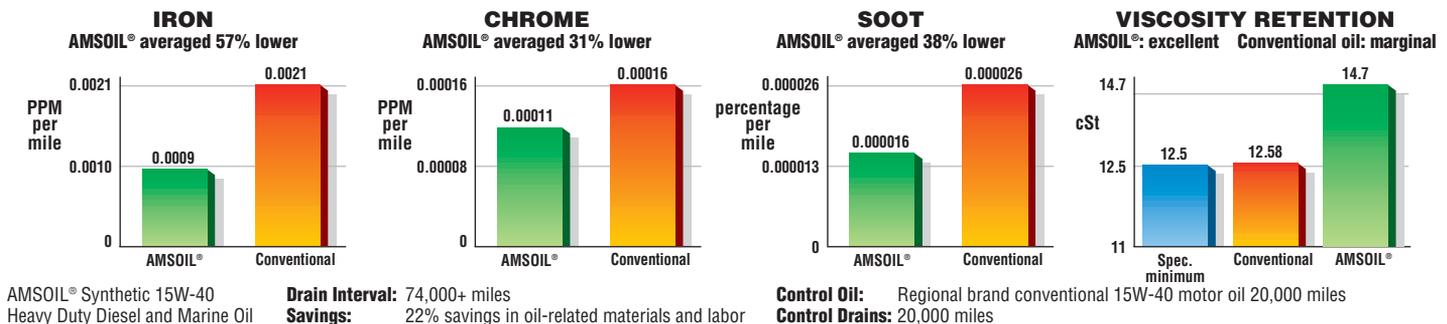
Oil Analyzers Inc. offers a quantity discount over the single kit price on orders of 10 or more kits.

Demonstrations and Tests

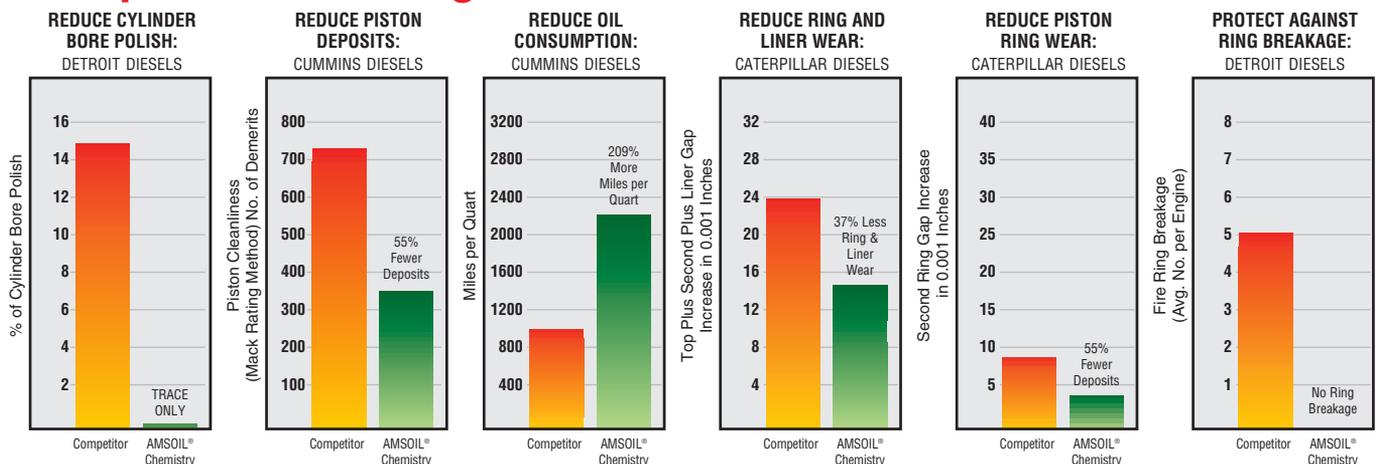
OVER-THE-ROAD FLATBED FLEET



GROCERY WAREHOUSE FLEET



Independent Lab Engine Tests



409,000 Miles Without an Oil Change

After 409,000 miles without an oil change, the AMSOIL®-protected Mack engine in this 1990 truck was as wear-free as an engine in comparable service treated to TWENTY TIMES the oil changes.

Colonial Heights, Virginia – “I didn’t see any surprises in there at all,” said owner/operator Haywood Gray of his 1990 Mack E7-400 engine.

Using AMSOIL® Synthetic 15W-40 Heavy Duty Diesel and Marine Oil and the AMSOIL® By-Pass Oil Filter, Gray ran the engine 409,000 miles without once changing the oil.

When the E7-400 engine was torn down by the local Mack dealership and its parts examined by an independent certified engine

rater, it showed light to moderate wear throughout.

In fact, according to the engine rater, the parts could have been put right back in the engine. “I see no reason why the engine couldn’t run on,” he said.

Oil analysis confirmed the rater’s findings: the sample of used AMSOIL® Synthetic 15W-40 Heavy Duty Diesel and Marine Oil contained 1/6 the lead and 1/3 the iron allowed by Mack condemnation limits ... after 409,000 miles without an oil change.

That’s protection – that’s AMSOIL®!



Independent Engine Rater Findings



“No wear at all”



“Very, very good”



“No scuffing. No cavitation”



“Very, very light wear”



“Light wear”



“Minimal wear”

AMSOIL® products and Dealership information are available from your local AMSOIL® Dealer.

