

## AMSOIL Filter Change Recommendations

### Lube Filters

- **EaO:** Always change filter at time of oil change; up to 25,000 miles or one year, whichever comes first, when used in conjunction with AMSOIL synthetic motor oil in normal service, or 15,000 miles or one year, whichever comes first, in severe service.
- **Ea15K:** Always change filter at time of oil change; up to 15,000 miles or one year, whichever comes first, when used in conjunction with AMSOIL synthetic motor oil in normal and severe service.
- **EaHD:** Always change filter at time of oil change; up to 60,000 miles or one year, whichever comes first, when used in conjunction with AMSOIL Synthetic motor oil in normal and severe service.
- **EaOM:** Always change filter at time of oil change, when used in conjunction with AMSOIL Synthetic motor oil in normal and severe service.
- **WIX, MANN, Donaldson and other aftermarket filters:** OEM\*\* recommendations.

*Note: When using AMSOIL extended-drain synthetic oils with an OEM\*\* or aftermarket oil filter from outside the AMSOIL product offering, change filter at OEM\*\* recommendation.*

### Air Filters

- **EaAU:** Up to 4 years depending on environment and how often the filter is cleaned.
- **WIX, MANN and Donaldson:** OEM\*\* recommendations or restriction gauge.

## AMSOIL Antifreeze/Coolant Change Recommendations

**Passenger Car/Light Truck Antifreeze & Coolant (ANTPC):** Recommended in passenger cars and light trucks for up to 150,000 miles or 5 years, whichever comes first.

**Heavy-Duty Antifreeze & Coolant (ANTHD):** Recommended in heavy-duty and off-road applications for up to 600,000 miles, 12,000 hours or 6 years, whichever comes first.

*Note: Heavy-Duty Antifreeze & Coolant can be used in non-heavy-duty applications, but with a drain interval of 150,000 miles or five years, whichever comes first.*

**Propylene Glycol Antifreeze & Coolant (ANT):** Recommended in passenger cars and light trucks for up to 150,000 miles or 5 years, whichever comes first. Recommended in heavy-duty and off-road applications for up to 600,000 miles, 12,000 hours or 6 years, whichever comes first.

## Drivetrain Applications and Service Intervals

### Automatic Transmission Fluid Recommendations

**Signature Series Multi-Vehicle Synthetic Automatic Transmission Fluid (ATF) and Signature Series Fuel-Efficient Synthetic Automatic Transmission Fluid (ATL):** Recommended for use in most domestic and foreign automotive and light truck automatic transmissions. Follow the vehicle manufacturer's normal-service drain interval in normal service or double the vehicle manufacturer's severe-service drain interval in severe service. Not for use with belt- or chain-type CVT transmissions or Ford\* Type F applications.

**OE Multi-Vehicle Synthetic Automatic Transmission Fluid (OTF) and OE Fuel-Efficient Synthetic Automatic Transmission Fluid (OTL):** Recommended for use in most domestic and foreign automotive and light truck automatic transmissions. Follow the vehicle manufacturer's drain interval recommendations. Not for use with belt- or chain-type CVT transmissions or Ford Type F applications.

**Torque-Drive® Synthetic Heavy-Duty Automatic Transmission Fluid (ATD):** AMSOIL recommends for use in all heavy-duty automatic transmissions requiring any of the following specifications: Allison\* TES-295, TES-389, C-4; ZF\* TE-ML 03D, TE-ML 04D, TE-ML 14A, TE-ML 14B, TE-ML 14C, TE-ML 17C, TE-ML 20B, TE-ML 20C; Voith\* 55.6336, 55.6335; GM\* DEXRON\* III; Ford\* MERCON\* V; Mercedes-Benz\* 236.10, 236.91; MAN\* 339 Type V-1, 339 Type V-2, 339 Type Z-1, 339 Type Z-2, 339 Type Z-3, 339F; Volvo\* 97340, 97341. Intervals may be extended with qualified used oil analysis. Not for use with CVT transmissions.

**Synthetic Super Shift® Racing Transmission Fluid (ART):** Recommended for use in racing and high-performance applications where no-slip clutch performance is desired. No set drain interval recommendation is made. Not for use with CVT transmissions.

*\*As defined by the OEM. Where absent, severe service should be defined as excessive engine idling, continuous stop-and-go city driving, and frequent towing, plowing or hauling and dusty-condition driving.*

**Synthetic CVT Fluid (CVT):** Recommended for use in most domestic and foreign automotive and light truck belt- and chain-type continuously variable transmissions (CVTs). Follow the vehicle manufacturer's drain interval recommendations.

*\*\* Original equipment manufacturer*

## Manual Transmission Oil Recommendations

**SAE 50 Long-Life Synthetic Transmission Oil (FTF):** Recommended for use in manual transmissions requiring an SAE 50 lubricant. Follow OEM drain intervals up to 500,000 miles or five years.

**Synthetic Manual Transmission & Transaxle Gear Lube (MTG):** Recommended for synchronized manual transmissions and transaxles that require 75W-85, 75W-90 or 80W-90 API GL-4 extreme-pressure gear lube, and replaces GM\* part #12346190 and Chrysler\* part #4874459. Excellent for muscle car transmissions and Gear Vendors\* gear splitters, among many other applications. Under normal operating conditions AMSOIL MTG will last two times longer than conventional petroleum GL-4 gear oils. Where the OEM\*\* recommends synthetic oils, follow that drain interval (such as NV 4500). See AMSOIL G2077 for further details.

**Synthetic Manual Synchronesh Transmission Fluid (MTF):** Recommended for automotive and light truck applications that use a highly friction-modified synchronesh transmission fluid. Transmissions and transaxles include some models of New Venture\*, Tremec\*, Land Rover\*, MG\*, Mini Cooper\* and Honda\*. AMSOIL MTF is a direct replacement for GM and Chrysler synchronesh fluids. Recommended for 50,000-mile service intervals or longer (up to 150,000 miles) as indicated in the owner's manual.

### Differential Gear Lube Recommendations

- **Severe Gear® Synthetic Extreme Pressure (EP) Lubricants 75W-90 (SVG), 75W-110 (SVT) & 75W-140 (SVO)**
- **Long Life Synthetic Gear Lubes 75W-90 (FGR) & 80W-140 (FGO) • Synthetic Gear Lube 80W-90 (AGL)**

Consult the owner's manual or the original equipment manufacturer (OEM) to establish normal or severe service.

Product	Cars, SUVs, Light Trucks (normal service)	Cars, SUVs, Light Trucks (severe service)	Heavy-Duty Class 8 Line Haul	Vocational/Delivery	Heavy-Duty Off-Road
SVG SVT SVO	Drain at 100,000 miles of service or according to the owner's manual, whichever is longer.	Drain at 50,000 miles of service or according to the owner's manual, whichever is longer.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>250,000</b> miles or three years, whichever comes first.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>120,000</b> miles or three years, whichever comes first.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>100,000</b> miles or two years, whichever comes first.
FGR FGO	Drain at 100,000 miles of service or according to the owner's manual, whichever is longer.	Drain at 50,000 miles of service or according to the owner's manual, whichever is longer.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>500,000</b> miles or five years, whichever comes first.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>180,000</b> miles or three years, whichever comes first.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>100,000</b> miles or two years, whichever comes first.
AGL	Drain at 100,000 miles of service or according to the owner's manual, whichever is longer.	Drain at 50,000 miles of service or according to the owner's manual, whichever is longer.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>250,000</b> miles or three years, whichever comes first.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>120,000</b> miles or three years, whichever comes first.	Follow the OEM** drain interval (miles or hours) for synthetic oil up to <b>100,000</b> miles or two years, whichever comes first.

- For non-differential service such as MT-1 manual transmission applications, consult owner's manual or the OEM\*\* for a synthetic oil service interval. Where no **synthetic oil** service interval exists, drain at twice the interval for petroleum oil.
- Gear oils should be changed more frequently when operating in dusty or dirty conditions unless the gear system is sealed or equipped with membrane-type breathers.
- AMSOIL does not support extended drain intervals where water contamination occurs. Check and service the gear oil frequently when water contamination is possible.

\* All trademarked names are the property of their respective owners and may be registered marks in some countries. No affiliation or endorsement claim, express or implied, is made by their use.

\*\*OEM – original equipment manufacturer



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# Product Recommendation and Drain Interval Chart

# AMSOIL Synthetic Motor Oil Maximum Recommended Drain Intervals

RECOMMENDATIONS ARE FOR WHICHEVER COMES FIRST, MILEAGE OR TIME.	A	B
	Personal vehicles with gasoline-fueled engines	Personal light truck vehicles with diesel-fueled engines
<b>Normal:</b> Up to 25,000 miles, 700 hours of operation or 1 year.	ASL, ATM, ASM, AZO, ALM, AMR, AZF	
<b>Severe:</b> Up to 15,000 miles, 700 hours of operation or 1 year.		
<b>Normal &amp; Severe:</b> Up to 2X OEM** recommendations for conventional petroleum oil, not to exceed 15,000 miles or 1 year.		
<b>Normal &amp; Severe:</b> Extended intervals based on oil analysis or use the longest drain recommendation of the OEM**.	OEM, OEF, OET, OEZ	ADP, ADO, ADN
<b>Normal &amp; Severe:</b> Up to 12,000 miles/one year or longer based on vehicle OEM** recommendations.	XLM, XLF, XLT, XLO, XLZ	
<b>Normal &amp; Severe:</b> 3X OEM** recommendations, not to exceed 50,000 miles/600 hours or 1 year.		HDD <sup>1,4,5</sup> , AME <sup>4,5</sup> , ACD <sup>4,5</sup>
<b>Normal &amp; Severe:</b> 3X OEM** recommendations, not to exceed 60,000 miles/600 hours or 1 year		
<b>Normal &amp; Severe:</b> 2X OEM** recommendations, not to exceed 25,000 or one year, which ever comes first.		DEO, DME, DHD, DZF
<p>*All trademarked names are the property of their respective owners and may be registered marks in some countries. No affiliation or endorsement claim, express or implied, is made by their use.</p> <p>**OEM – original equipment manufacturer</p> <p><b>Note:</b> AMSOIL recommends checking the oil frequently to maintain proper fill levels and maximum engine protection.</p> <p><b>Vehicles that must follow OEM** drain intervals:</b> 1. Mazda* RENESIS with rotary engine 2. Subaru* vehicles equipped with turbochargers 3. GM* vehicles equipped with HFV6 engines 4. Vehicles using biodiesel greater than 10% (B10) or E85 fuels.</p>		

## Vehicles Prone to Sludge

The engines identified in the following chart have been reported to be prone to sludge. The use of AMSOIL synthetic motor oils at regular drain intervals established by the vehicle manufacturer will reduce the likelihood of sludge formation, provide the best protection and ensure that the vehicle manufacturer honors any extended warranty.

Make	Engine	Model and Year	Warranty Coverage
<b>Audi*/Volkswagen* (1) (2)</b>	1.8L 4-cyl Turbo	1997-2004 Audi A4 1998-2005 Volkswagen Passat	Eight years/unlimited mileage
<b>Chrysler*/Dodge* (3)</b>	2.7L V6	1998-2002 Chrysler Concorde 1998-2002 Chrysler Sebring 1998-2002 Dodge Intrepid 1998-2002 Dodge Stratus	None, handled on a case-by-case basis
<b>Toyota* (4)</b>	2.2L 4-cyl (5SFE)	1997-2001 Toyota Camry 1999-2001 Toyota Solara 1997-1999 Toyota Celica	Eight years/unlimited mileage
<b>Lexus*/Toyota (4)</b>	3.0L V6 (IMZ-FE)	1997-2002 Lexus ES300 1999-2002 Lexus RX300 1997-2002 Toyota Camry 1999-2002 Toyota Solara 1998-2002 Toyota Sienna 1997-2002 Toyota Avalon 2001-2002 Toyota Highlander	Eight years/unlimited mileage
<b>Saab* (5)</b>	2.0L 4-cyl Turbo	2000-2002 9-3 2000-2003 9-3 Convertible	Eight years/unlimited mileage
	2.3L 4-cyl Turbo	1999-2003 9-5 1999-2002 9-3 Viggen	

- Source:** Audi of America, Inc. Warranty Extension Letter
- Source:** Volkswagen of America, Inc. Warranty Extension Letter
- Source:** ConsumerReports.org
- Source:** Toyota Motor Sales, USA Inc., Customer Support Program Letter
- Source:** Saab Cars USA, Inc. Special Warranty Coverage Letter

C	D	E	F	G
European automobiles with gasoline or diesel engines	Street rods and vehicles with high-performance and racing engines	Four-stroke motorcycle engines	Four-stroke scooter engines	Four-stroke ATV/UTV engines
		MCF, MCV, MCT, MCS, MVI (on-road use)		
AFL, AEL, EFM, EFO	ZRT <sup>2</sup> , ZRF <sup>2</sup> , RD20 <sup>2</sup> , RD30 <sup>2</sup> , RD50 <sup>2</sup> , RD60 <sup>2</sup>	DB40, DB50, DB60 (off-road use)	ASO, ASE <sup>3</sup>	AUV40, AUV50, AFF
<p><b>Application Guidelines:</b> 1 – Formulated to maximize fuel efficiency. 2 – Consider application and viscosity needs. Where engines are modified, the vehicle owner assumes responsibility for oil change intervals. 3 – Product has excellent performance and is a secondary recommendation. 4 – Drain intervals may be extended beyond AMSOIL recommendations in accordance with oil analysis or OEM** recommendations. 5 – Normal and severe service are defined by the OEM**. Refer to owner's manual. 6 – Extended drain intervals are not recommended for performance-modified engines, when using biofuels containing more than 10 percent ethanol or 15 percent biodiesel (B15) or for 2007-2009 Caterpillar* C13 and C15 on-highway engines. Extend drain intervals beyond OEM** recommendations in these instances only with oil analysis. <b>Note:</b> 2007-2010 Dodge*, Ford* and GM* turbodiesel pickups are also not recommended for extended drain intervals when using DHD.</p>				

**Normal Service** defined as – Personal vehicles frequently traveling greater than 10 miles at a time and not operating under severe service.

**Gasoline Engine Severe Service** defined as – Commercial or fleet vehicles, excessive idling, frequent towing, hauling, plowing or driving in dusty conditions.

**Diesel Engine Severe Service** defined as – Extensive engine idling, daily short-trip driving less than 10 miles (16 km) or frequent dusty-condition driving.

**Modifications and Alterations** – Engines operating under modified conditions (non-stock) are excluded from extended drain recommendations. Examples include the use of performance ECM tuning, non-OEM\*\* approved exhaust, fuel or air induction systems and the use of fuels other than those recommended for normal operation by the manufacturer.

**Oil filtration** – Extended oil drain intervals are based on the user following AMSOIL-recommended filter service intervals. See oil filter recommendation on next panel.

## Application Description and Examples

- A Personal vehicles with gasoline-fueled engines:** Personal passenger cars, pick-up trucks, SUVs and vans, both turbo and non-turbo-charged
- B Personal light-truck vehicles with diesel-fueled engines:** Personal pickup trucks, SUVs and vans, both turbo and non-turbo-charged
- C European Automobiles:** Audi\*, BMW\*, Mercedes-Benz\*, Volkswagen\*, Mini-Cooper\*, Opel\*, Porsche\*, GM and Renault\*, both gasoline and diesel
- D High-Performance and Racing Engines:** Street rods, muscle cars, race cars, 4x4 off-road and modified street/track vehicles
- E Four-Stroke Motorcycle Engines:** All American, Japanese and most European motorcycles including street, sport, touring and off-road bikes
- F Four-Stroke, Two-Wheeled Scooter Engines:** All American, Japanese, European and Chinese scooters, both air- and water-cooled
- G Four-Stroke ATV and Snowmobile Engines:** Arctic Cat\*, Bombardier\*/Ski-Doo\*/Can-Am\*, Honda\*, Kawasaki\*, Polaris\*, Suzuki\*, Yamaha\*, etc.
- H Four-Stroke Marine Craft w/Gasoline-Fueled Engines:** Honda, Mercury\*, Yamaha, Johnson\*/Evinrude\*, Bombardier/BRP\*, Suzuki, Nissan\*, Tohatsu\*, OMC\*, Volvo Penta\*, Mercruiser\*, Chevrolet\*, Ford, Chrysler Marine\*, Crusader\* and Marine Power\*
- I Four-Stroke Gasoline-Fueled or Diesel-Fueled Small & Compact Engines:** Garden, lawn and utility tractors, lawn mowers, generators, light towers, pumps, welders and other compact four-stroke gasoline-fueled engines
- J Commercial, fleet and motor homes with gasoline engines:** All fleet, delivery, municipal and emergency vehicles, school and charter buses (any vehicle or equipment used for non-personal use) as well as RVs/motor homes
- K Heavy-duty on/off-road applications, marine and motor homes with diesel engines:** Over-the-road tractors; all fleet, delivery, municipal and emergency vehicles, school & charter buses; off-road equipment, compact diesel engines and diesel-powered marine craft as well as RVs/motor homes

H	I	J	K	L
Four-stroke snowmobile engines	Four-stroke marine craft with gasoline-fueled engines	Four-stroke gasoline- or diesel-fueled small/compact engines	Commercial or fleet vehicles and motor homes with gasoline engines	Heavy-duty on/off-road applications, fleet, marine and motor homes with diesel engines
				AMO <sup>4</sup> , ARO <sup>4</sup>
			ASL, ATM, HDD, AZO AMO, ARO, ASM, ALM	
	WCT, WCF, WCM, AME (Inboards & I/O)		AME <sup>4,5</sup> , ACD <sup>4,5</sup> , DEO <sup>1,4,5</sup> , DME <sup>4,5</sup> , DHD, DZF	
AFF	WCT, WCF (outboards & personal watercraft)	ASE, ACD, AMO	OEM, OEF, OET, OEZ	ADP, ADO, ADN
			XLM, XLF, XLT, XLO, XLZ	
				HDD <sup>1,4,5</sup> , AME <sup>4,5</sup> , ACD <sup>4,5</sup>
				DEO, DME, DHD, DZF
<p><b>All intervals are for “mechanically sound” equipment defined as:</b> Engines that are in good working condition and do not, for example, leak or consume excessive amounts of oil, are not worn out, do not overheat, do not leak antifreeze, and have properly working emissions control systems. AMSOIL recommends repairing malfunctioning engines prior to the installation of AMSOIL synthetic motor oils.</p>				

## Brief Product Descriptions

**Signature Series Synthetic Motor Oil (ASM 0W-20), (ALM 5W-20), (AZO 0W-30), (ASL 5W-30), (ATM 10W-30), (AZF 0W-40), (AMR 5W-50):** Highest-performing product for automotive gasoline engines • Longest life • Best high-temperature deposit control • Best cold-flow properties • Best wear protection • Ideal for turbos & direct injection • Maximizes fuel efficiency

**XL Synthetic Motor Oil (XLZ 0W-20), (XLM 5W-20), (XLF 5W-30), (XLT 10W-30), (XLO 10W-40):** Excellent cleaning power • Extra protection that lasts up to 12,000 miles or 1 year, whichever comes first • API-licensed to meet the requirements commonly found in owner's manuals • Excellent reduced-cost option to Signature Series Synthetic Motor Oil • Purchasing bid appropriate

**OE Synthetic Motor Oil (OEZ 0W-20), (OEM 5W-20), (OEF 5W-30), (OET 10W-30):** • Protects against wear • Fights sludge and deposits • API licensed to meet the requirements commonly found in owner's manuals • Priced competitively with other standard-drain synthetic motor oils • Purchasing bid appropriate

**Z-ROD™ Synthetic Motor Oil (ZRT 10W-30), (ZRF 20W-50):** High-zinc, high-phosphorus formulation engineered specifically for classic cars and performance vehicles • Provides extra protection for flat-tappet cams, lifters, rockers and other areas susceptible to wear • Maximum protection during long-term storage

**Premium Protection Synthetic Motor Oil (AMO 10W-40), (ARO 20W-50):** Heavily fortified with zinc/phosphorus anti-wear additives • Provides extra protection in flat-tappet, high-performance, heavy-duty and high-mileage applications • Excellent for gasoline and diesel engines • Wet-clutch compatible

**DOMINATOR® Synthetic Racing Oil (RD20 5W-20), (RD30 10W-30), (RD50 15W-50), (RD60 SAE 60):** Provides superior protection and performance for high-rpm, high-temperature racing and high-performance applications • Effectively reduces friction for maximum power and cooler engine temperatures

**European Car Formula Synthetic Motor Oil (EFO 0W-40), (AEL 5W-30), (AFL 5W-40), (EFM 5W-40):** Best-performing product for European diesel- and gasoline-fueled engines • Fulfills the viscosity and high-performance requirements of VW\*, Porsche\*, BMW\*, Mercedes-Benz\* and others • Low-SAPS (AEL), Mid-SAPS (AFL) and Full-SAPS (EFM) formulations

**Formula 4-Stroke® Power Sports 0W-40 Synthetic Motor Oil (AFF):** Best-performing product for ATVs and snowmobiles • Excellent hot- and cold-temperature performance • Reduces friction, heat and wear • Anti-rust for off-season storage

**Synthetic Marine Engine Oil (WCT 10W-30), (WCF 10W-40), [WCM 25W-40 (Synthetic Blend)]:** Best-performing oil for gasoline-fueled four-stroke outboards, inboards, I/O and personal watercraft • NMMA licensed FC-W Catalyst Compatible • Engineered for maximum anti-wear, anti-rust protection • Excellent for high-horsepower, high-rpm engines, as well as all-day trolling conditions

**Synthetic Small Engine Oil (ASE 10W-30), (ASF 10W-40):** Fights heat and deposits • Preserves power • Reduces oil consumption

**Formula 4-Stroke® 10W-40 Synthetic Scooter Oil (ASO):** Primary recommendation for four-stroke scooter applications • Can also be used in scooter transmissions and gearboxes that require 10W-40 oil • Thermally stable • Wet-clutch compatible

**Synthetic V-Twin Motorcycle Oil (MVI 20W-40), (MCV 20W-50), (MCS SAE 60):** Best-performing oil for motorcycle engines, transmissions and, where appropriate, primary chaincases • Long life • Reduces friction, heat and wear • Superior high-temperature deposit control • Excellent off-season rust protection

**Synthetic Metric Motorcycle Oil (MCT 10W-30), (MCF 10W-40):** Best-performing oil for motorcycle engines and transmissions • Long life • Reduces friction, heat and wear • Superior high-temperature deposit control • Excellent off-season rust protection

**Synthetic Dirt Bike Oil (DB40 10W-40), (DB50 10W-50), (DB60 10W-60):** Delivers confidence in clutch feel • Superior protection against gear, bearing and piston wear • Maximizes horsepower • Helps extend clutch life

**Synthetic ATV/UTV Engine Oil (AUV40 10W-40), (AUV50 5W-50):** Formulated to deliver upgraded performance compared to OEM\*\* fluids • Outstanding severe-service performance • Protects hot, high-revving engines against wear for worry-free operation

**Signature Series Max-Duty Synthetic Diesel Oil (DHD 5W-30), (DZF 0W-40), (DEO 5W-40), (DME 15W-40):** Max-duty protection against wear • Significantly exceeds industry requirements • Full specification coverage • Reduced oil consumption • Extended drain intervals

**Heavy-Duty Synthetic Diesel Oil (ADO 5W-30), (ADN 10W-30), (ADP 15W-40):** Heavy-duty protection against wear • Reduced oil consumption • Excels in extreme temperatures

**CI-4+ Synthetic Diesel Oils (HDD 5W-30), (ACD 10W-30/SAE 30), (AME 15W-40) :** Provides additional high-quality options for pre-2007 diesel applications not equipped with diesel particulate filters (DPF) • Help control soot thickening, oxidation and wear • Control acids from combustion blow-by and exhaust gas recirculation • Extended drain intervals