

Manual Transmission Fluid

AMSOIL 75W-90 MANUAL TRANSMISSION & TRANSAXLE GEAR LUBE

Product Code: MTGQT-EA



Product Description

AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube is a 100% synthetic gear oil built to protect manual transmissions and transaxles from the punishment of towing, spirited driving, and everyday use. It replaces 75W-85, 75W-90, and 80W-90 conventional gear oils with a formula that shifts smoother, lasts longer, and handles heat far better than petroleum-based fluids.

Manual transmissions take a beating that most people don't think about. Every shift creates metal-on-metal contact between gears and synchronizers. Towing a trailer with a stick-shift truck, running through gears in a weekend muscle car, or just commuting in a front-wheel-drive transaxle all generate heat and mechanical shear that break down conventional gear oils. When the oil thins out or degrades, shifts get notchy, synchros wear prematurely, and gear noise creeps in.

SHEAR-STABLE PROTECTION UNDER LOAD

Conventional GL-4 gear oils lose viscosity as they get worked between gear teeth. This product is shear-stable, meaning it maintains its protective film thickness even under the rigorous mechanical action inside transmissions like the NV-4500, which is notorious for retaining heat in its cast-iron housing. The formula includes extreme-pressure additives that prevent metal contact during shock-loading conditions common when towing or hauling with turbodiesel trucks. In Four-Ball Wear testing (ASTM D4172B at 40 kg, 75 degC, 1200 rpm, 1 hr), it produced a wear scar of just 0.40 mm.

SMOOTH, FAST SHIFTS IN ANY WEATHER

Cold, thick gear oil is the enemy of quick shifts. This formula is friction-modified and flows readily at low temperatures, with a Brookfield viscosity of 28,425 cP at -40 degC (ASTM D2983) and a pour point of -56 degC (ASTM D97). That translates to easier gear engagement on cold mornings in a Mazda Miata transaxle or a Toyota manual transmission. The high viscosity index of 181 (ASTM D2270) means it stays fluid when cold but maintains a robust film at operating temperature, with a kinematic viscosity of 14.0 cSt at 100 degC.

PROTECTS BRASS SYNCHRONIZERS AND CLASSIC TRANSMISSION INTERNALS

Many gear oils rated GL-5 contain aggressive sulfur-phosphorus additives that attack the brass synchronizers found in most manual transmissions. This product meets API GL-4 requirements, providing the extreme-pressure protection transmissions need without damaging yellow metals. That makes it the right choice for classic Muncie, Borg Warner, Saginaw, Ford Toploader, Dearborn, and New Process transmissions in hot rods and muscle cars, as well as modern front-wheel-drive transaxles in vehicles from Hyundai, Kia, Mazda, Subaru, Toyota, Volkswagen, Nissan, Infiniti, Lexus, Mitsubishi, Suzuki, and Land Rover.

RESISTS THERMAL BREAKDOWN AND REDUCES LEAKS

High operating temperatures accelerate oil oxidation, which produces sludge, varnish, and acidic byproducts that eat away at seals

and shorten component life. The synthetic base oils in this formula resist thermal degradation far better than conventional fluids, and the flash point of 226 degC (439 degF) reflects that thermal stability. Seal conditioners are built into the formula to keep seals pliable and reduce leaks, which is especially valuable in vehicles that sit for extended periods between drives.

SPECIFICATIONS AND COMPATIBILITY

This gear lube is designed for applications requiring API GL-4 performance in 75W-85, 75W-90, or 80W-90 viscosity grades. It also meets ZF TE-ML 02B, 17A specifications, Chrysler MS-9070, MAN 341-Z2 (formerly MAN 341 ML), and MB 235.5. It directly replaces GM part #12346190 and Chrysler part #4874459 for use in NV-4500 transmissions found in Ram 2500 and 3500 trucks, as well as GM heavy-duty pickups.

SERVICE LIFE

Under normal operating conditions, AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube lasts two times longer than conventional petroleum GL-4 gear oils. For applications where the OEM recommends synthetic oil, such as the NV-4500, follow the OEM-recommended drain interval.

Technical Specifications

Property	Value	Test Method
Kinematic Viscosity @ 100 degC, cSt	14.0	ASTM D445
Kinematic Viscosity @ 40 degC, cSt	80.3	ASTM D445
Viscosity Index	181	ASTM D2270
Flash Point, degC (degF)	226 (439)	ASTM D92
Pour Point, degC (degF)	-56 (-69)	ASTM D97
Four-Ball Wear Test (40 kg, 75 degC, 1200 rpm, 1 hr), Scar, mm	0.40	ASTM D4172B
Brookfield Viscosity @ -40 degC, cP	28,425	ASTM D2983
Foam Stability	0/0, 0/0, 0/0	ASTM D892
Copper Corrosion 3 hr, 121 degC	1B	ASTM D130

Frequently Asked Questions

Q1: What vehicles and transmissions use AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube?

AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube is designed for manual transmissions and transaxles requiring 75W-85, 75W-90, or 80W-90 gear lube meeting API GL-4. It meets GL-4 performance required by some models of Acura, Hyundai, Infiniti, Kia, Land Rover, Lexus, Mazda, Mitsubishi, Nissan, Subaru, Suzuki, Toyota, Volkswagen, Hino, Mitsubishi-Fuso, and Zeto. It also replaces GM part #12346190 and Chrysler part #4874459 for use in NV 4500 transmissions, and is ideal for classic muscle-car transmissions such as Muncie, Borg Warner, Saginaw, Ford Top Loader, Dearborn, and New Process.

Q2: How does AMSOIL 75W-90 Gear Lube protect manual transmissions from heat and pressure?

AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube maintains its viscosity despite rigorous mechanical action, providing a thick lubricating film even under extreme stress. It contains extreme-pressure additives that protect against wear, while resisting thermal degradation and oxidation for excellent performance in high-temperature applications. This combination of properties makes it particularly effective at protecting against wear caused by the high-horsepower, large-displacement engines common to hot rods and muscle cars.

Q3: What specifications does AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube meet?

AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube exceeds API GL-4 performance requirements and meets several OEM specifications including ZF TE-ML 02B, 16A, 17A, and 19A; Chrysler MS-9070; MAN 341-Z2 (formerly MAN 341 ML); and MB 235.5. These certifications make it suitable for a wide range of domestic, European, and Asian manual transmissions and transaxles across auto/light truck, motorcycle, ATV, UTV, snowmobile, marine, heavy-duty, and agricultural applications.

Q4: How does AMSOIL 75W-90 manual transmission gear lube compare to conventional gear oils?

AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube delivers better overall performance than conventional oils. Its friction-modified formula and excellent cold-flow properties promote smooth, fast engagement of synchronizers and gears, while conventional oils often struggle with shift quality in cold temperatures. It also maintains viscosity under rigorous mechanical action better than conventional gear oils, providing more consistent extreme-pressure protection and longer service life that can reduce maintenance costs.

Q5: How does AMSOIL 75W-90 Gear Lube help with shifting and extend equipment life?

AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube is friction-modified with excellent cold-flow properties to promote smooth, fast engagement of synchronizers and gears. It protects brass synchronizers from wear, which is critical for maintaining shift quality over time. By exceeding API GL-4 performance requirements, it provides excellent gear protection, extreme-temperature performance, and durability that promote maximum longevity and reduced maintenance costs.

Q6: Is AMSOIL 75W-90 Manual Transmission Gear Lube safe for seals and brass synchronizers?

Yes, AMSOIL 75W-90 Manual Transmission & Transaxle Gear Lube is specifically formulated to protect brass synchronizers and offers excellent seal compatibility. It includes seal conditioners designed to reduce leaks during long storage periods, making it a strong choice for vehicles that may sit for extended periods, such as classic muscle cars and seasonal-use equipment. It also inhibits rust and corrosion, providing comprehensive protection for all internal transmission components.

Available Product Codes

Product Code	Package Size	Unit of Measure
MTGPK-EA	Quart Easy-Pack	Each
MTGPK-CA	Quart Easy-Pack	Case of 12
MTGQT-EA	Quart Bottle	Each
MTGQT-CA	Quart Bottle	Case of 12
MTG05-EA	5 Gallon Pail	Each
MTG55-EA	55 Gallon Drum	Each

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