



*The First in Synthetics*®

## Synthetic Universal Automatic Transmission Fluid

*Outstanding performance in domestic and import cars, trucks, SUVs and commercial vehicles.*

### PRODUCT DESCRIPTION

AMSOIL Synthetic Universal Automatic Transmission Fluid (ATF) is engineered to outperform conventional automatic transmission fluids and exceed the performance requirements of most North American, European and Asian vehicles. This sophisticated formulation provides outstanding performance and protection in the severe operating conditions of today's most advanced transmission designs.

Automatic transmissions have become increasingly complex as vehicle manufacturers strive to improve efficiency while satisfying consumer demands. Smaller, smoother-shifting transmissions with longer fluid-life capabilities and heavier load capacities are now standard in modern transmission design. Traditional ATFs, however, are unable to meet these extreme requirements, and new fluids have emerged with each new advancement in transmission engineering. AMSOIL first introduced a synthetic automatic transmission fluid in 1980 and remains the leader in transmission fluid quality. AMSOIL Synthetic Universal ATF is formulated with the highest-quality synthetic fluids and additives. It exceeds the most stringent industry standards and is universally recommended for a wide range of transmissions. AMSOIL Synthetic Universal ATF

### FULLY FORTIFIED

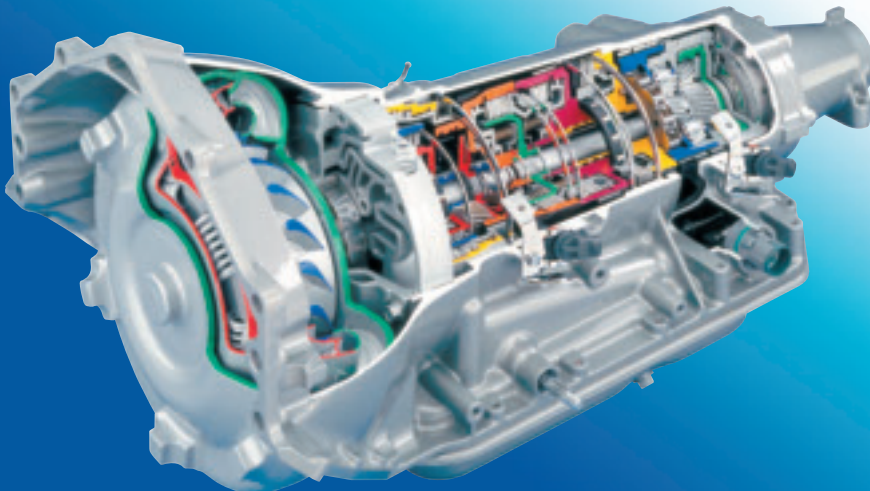
- **Anti-wear/extreme-pressure agents** (extend gear life)
- **Durable friction modifiers** (anti-shudder)
- **Anti-oxidants** (extend fluid life)
- **Seal conditioners** (reduce leaks)
- **Detergents and dispersants** (keep clean and control deposits)
- **Corrosion inhibitors** (control rust)
- **Anti-foam agents** (improve hydraulic function)



reduces confusion, misapplications and inventories. It eliminates the need for costly and suspect "one-treatment-covers-all" additives. The quality and performance of AMSOIL Synthetic Universal ATF is guaranteed.

### Exceptional Hot- and Cold-Temperature Performance

**Thermal Stability** – Hot temperatures are no excuse for poor reliability. Naturally heat resistant and heavily fortified with anti-oxidants, AMSOIL ATF exceeds the most demanding oxidation requirements. AMSOIL ATF delivers outstanding protection against sludge and varnish deposits that clog narrow oil passages and contribute to clutch glazing. Transmissions can operate hotter and longer with AMSOIL ATF than with conventional fluids.



### HIGH TEMPERATURE TESTS

Ford MERCON® V required oxidation test (ABOT)

**300 HOURS – PETROLEUM**

**600 HOURS – AMSOIL**

*AMSOIL ATF resists oxidation two times longer than required for petroleum ATFs.*

## TYPICAL TECHNICAL PROPERTIES

### AMSOIL Synthetic Universal Automatic Transmission Fluid (ATF)

Kinematic Viscosity @ 100°C, cSt (ASTM D-445)	7.6
Kinematic Viscosity @ 40°C, cSt (ASTM D-445)	38.9
Viscosity Index (ASTM D-2270)	168
Flash Point, °C (°F) (ASTM D-92)	234 (453)
Pour Point, °C (°F) (ASTM D-97)	-53 (-63)
FZG Load Stage Pass (ASTM D-5182)	12
Four-Ball Wear Test, Scar in mm; 40 kg, 75°C, 1200 rpm, 1hr (ASTM D-4172B)	.41
Brookfield Viscosity @ -40°C, cP (ASTM D-2983)	9800

**Cold-Temperature Fluidity** – Cold, thick automatic transmission fluid lengthens shift times and reduces energy efficiency (fuel economy). AMSOIL Synthetic ATF is wax-free and delivers extraordinary cold-flow properties (< -60°F pour point). Shifting is more responsive, energy efficiency is improved and warm-up times are reduced.

#### OUTSTANDING WEAR PROTECTION

Varying speeds and loads causes torque multiplication and extreme stress on gears and bearings. To prevent wear damage consistent with low-quality fluid and ruptured fluid film, AMSOIL formulated Synthetic Universal ATF with high film strength (shear stability) and premium anti-wear/extreme-pressure additives (boundary film barrier). AMSOIL Synthetic ATF protects transmissions during severe-duty service.

#### FRICITION DURABILITY

Today's transmissions are smaller and must withstand higher horsepower and torque while delivering smoother shifts, all with longer fluid life recommendations. AMSOIL Synthetic ATF is formulated with friction modifier additives that deliver outstanding clutch-holding capacity (static friction), torque-transfer ability (dynamic friction) and anti-shudder properties (slipping torque-converter clutches).

#### EXTENDS FLUID SERVICE LIFE

Most drivers are unaware that transmissions commonly operate under severe service and require shorter fluid drain intervals. AMSOIL Synthetic Universal ATF is a long-life fluid capable of extended service intervals. It provides an extra margin of protection, especially when fluid change intervals are missed or during heavy use; even during abuse. Drivers can count on AMSOIL Synthetic Universal ATF to provide protection beyond conventional fluids.

#### APPLICATIONS

AMSOIL Synthetic Universal ATF is recommended for transmissions, hydraulics, power steering and other applications requiring any of the following specifications:

- GM DEXRON® III-H
- Ford MERCON® & MERCON V
- Chrysler ATF+4®
- Toyota Type T-III and T-IV
- Honda Z-1 (Not CVT)
- Diamond SP II & III (Mitsubishi/Hyundai/Kia)
- Mazda ATF-III, ATF-MV
- Subaru ATF
- Nissan Matic D, J & K
- Idemitsu K-17
- BMW LA2634
- LT 71141
- Audi G-052-025-A2 & G-052-162-A1
- Volvo 97340
- MB 236.1, 236.2, 236.5, 236.6, 236.7, 236.9 & 236.10
- JWS 3309
- NAG 1
- ETL-7045E, ETL-8072B & N402
- Voith 55.6335.XX (G607, G1363)
- ZF TE-ML 03D, 04D, 09, 14A, 14B, 14C, 16L, 17C
- Allison C-4, TES 389

*\*Not for use with CVT or Ford Type F applications.*

#### SERVICE LIFE

Recommended for 50,000 miles in severe service\* and 100,000 miles in normal service;\* or per vehicle manufacturer-recommended intervals, whichever is longer.

*\*As defined by vehicle or transmission manufacturer*

#### HEALTH & SAFETY

This product is not expected to cause health concerns when used for the intended application and according to the recommendations in the Material Safety Data Sheet (MSDS). An MSDS is available via the Internet at [www.amsoil.com](http://www.amsoil.com) or upon request at (715) 392-7101.

**Keep Out of Reach of Children.** Don't pollute – return used oil to collection centers.

For AMSOIL warranty information visit [www.amsoil.com](http://www.amsoil.com).

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

