Vehicle-Specific Transmission Fluids

WITH O.E. TECHNOLOGY

For Asian Applications

idemitsu

Idemitsu ATF formulations are exclusively designed to meet the needs of specific Asian vehicle transmission applications. Each formula uniquely differs with respect to viscosity, oxidation prevention, friction durability, aeration control and wear protection.

If you're looking for dependable performance and unmatched satisfaction for your Asian-brand vehicle customers, try out these application-specific Idemitsu ATF formulations.

WHY YOU SHOULD ALWAYS USE IDEMITSU ATF

- Precisely engineered formulas match OEM friction materials and exact viscosity requirements, providing "dialed-in" performance
- Excellent anti-shudder durability, oxidation stability and deposit control
- Smoother shifting and higher torque capacity for high-energy clutch engagements
- Precise friction enables increased utilization and controlled slipping of torque converter lockup clutch for improved fuel economy
- Reduced warranty claims and repair call-backs

The Case For Vehicle-Specific ATF

There are critical areas in new transmission designs that have unique lubrication needs and require specific lubricant characteristics. Generally, the more gears incorporated in a transmission, the more efficient it becomes.

To accommodate the increasing number of gear sets, the clutch packs have become smaller and the total surface area of the clutch plates have been reduced. ATFs must provide a precise balance of frictional properties that provide the exact coefficient of friction specific to the OEM design that allows proper clutch heat transfer and wear protection.

In addition, the increased use of the torque converter lockup clutch requires controlled friction properties that enable the hardware to deliver significant efficiency improvements. When ATF friction properties are not compatible with the torque converter lockup clutch material, the transmission produces shudder (vibration), and drivability is negatively impacted.

These two friction requirements require a delicate balance of friction modifier additive chemistry stabilized by a robust combination of antioxidants and specifically engineered lubricant fluid (or base oil) technology in order to deliver the performance required for smooth and consistent vehicle launches and shifting throughout the entire life of the oil.

Working with individual OEMs, Idemitsu has engineered technologies to meet these precise property requirements.

The Case Against Generic Multi-Vehicle ATF

Multi-vehicle ATF was introduced so that a service shop or quick-lube would not have to carry so many different fluids. That formula may have worked years ago, but not today.

Because OEM transmission fluid specifications have become so differentiated, it is no longer possible to meet the requirements of the majority of vehicles with only a few ATF products. So called "multi-vehicle" ATFs still represent a significant volume of ATF market share, but the number of applications that can be claimed by a single formulation are becoming much more limited.

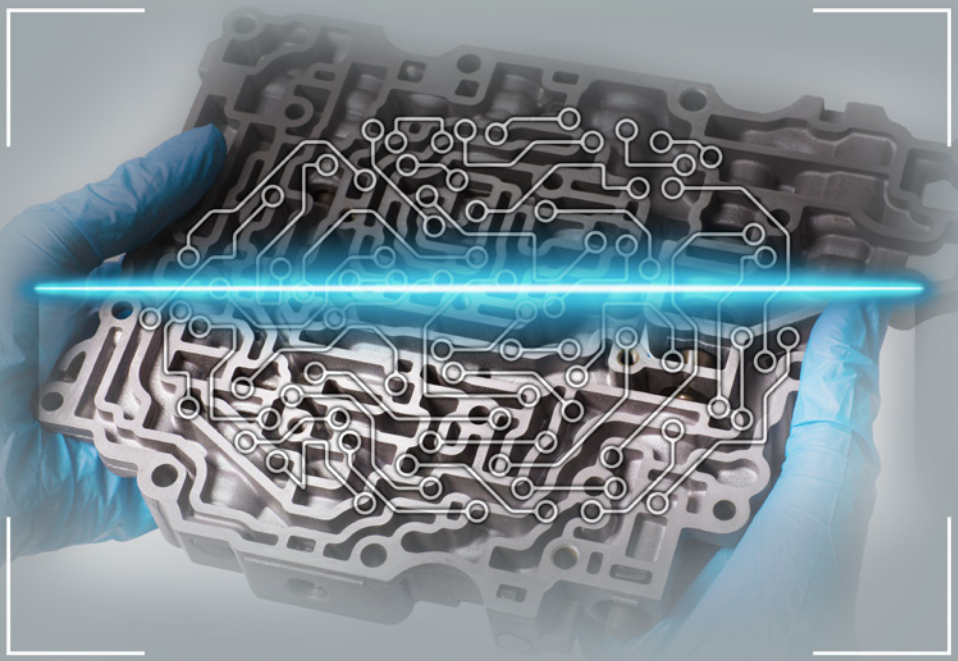
Generally, multi-vehicle ATFs provide reduced performance and longevity due to compromises required to be able to make a multi-vehicle application claim. In many cases, the friction properties of the fluid may be significantly different than what an OEM has specified, or the fluid may be lacking in another important area. It may not show up immediately, but over time, the results can include reduced efficiency, clutch plate glazing, excess heat generation, accelerated wear, overall degraded vehicle performance and, ultimately, reduced transmission life.

Idemitsu produces custom ATF and CVTF formulations that conform to original OEM standards, so there is no doubt the fluid will perform.

The Challenges of CVT Technology

In recent years, continuously variable transmissions (CVTs) have emerged as another viable alternative, and can offer improved fuel economy. But this also presents unique lubrication challenges that must be met to realize its optimal performance and potential fuel economy benefits.

Instead of gears, CVTs employ a pushbelt or chain between two variable-diameter pulleys that allow the transmission to produce an infinite number of gear ratios. Idemitsu's advanced CVTF technology with enhanced torque capacity enables CVT manufacturers to reduce clamping forces and optimize fluid control systems to deliver even further improved fuel economy. This, combined with Idemitsu's innovative low viscosity technologies, enables new CVT designs to deliver not only increased fuel economy, but also improved durability and longer service life.



WHY YOU SHOULD AVOID A MULTI-VEHICLE ATF

- Cannot meet all OEM specification requirements for applications they're recommended for
- Performance, durability and/or material compatibility may be compromised
- Potential voiding of OEM warranty coverage
- Only OEM-specific ATFs can guarantee smooth performance and protection over the entire life

Vehicle-Specific Formulations

Deliver Improved Wear Protection & Extended Service Life

AUTOMATIC TRANSMISSION FLUIDS:

HK4 — **Hyundai/Kia**
with SP-IV specs
1 QT PART NO: 30040100-75000C020

HK — **Hyundai/Kia/Mitsubishi**
with SP-III specs
1 QT PART NO: 30040097-75000C020
5 QT PART NO: 30040097-95300C020

TLS — **Toyota/Lexus/Scion**
with T-IV specs
1 QT PART NO: 30040093-75000C020
5 QT PART NO: 30040093-95300C020

TLS-LV — **Toyota/Lexus/Scion**
with WS specs
1 QT PART NO: 30040096-75000C020
5 QT PART NO: 30040096-95300C020

H PLUS — **Honda**
with Z-1® and DW-1® specs
1 QT PART NO: 30040090-75000C020
5 QT PART NO: 30040090-95300C020

HP — **Subaru**
(2005 & later) with HP specs
1 QT PART NO: 30040099-75000C020
5 QT PART NO: 30040099-95300C020

M — **Mazda**
with M-V (M5) specs
1 QT PART NO: 30040092-75000C020

S — **Nissan/Infiniti**
with Matic-S/J/D specs
1 QT PART NO: 30040101-75000C020
5 QT PART NO: 30040101-95300C020

CONTINUOUSLY VARIABLE TRANSMISSION FLUIDS:

N3 — **Nissan/Infiniti**
with NS-3 specs
1 QT PART NO: 30041102-75000C020

N — **Nissan/Infiniti**
with NS-2 specs
1 QT PART NO: 30040091-75000C020
5 QT PART NO: 30040091-95300C020

TLS-FE — **Toyota/Lexus/Scion**
with FE specs
1 QT PART NO: 30041103-75000C020

IT'S A SIMPLE FACT:

No other manufacturer can match the quality and brand-specific formulations of Idemitsu Transmission Fluids.

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