

GEARS does not endorse new products but makes this new information available to readers. If you have a new product, please email the press release information with applicable digital photo or drawing to fpasley@atra.com or send by mail to GEARS, 2400 Latigo Avenue, Oxnard, CA 93030.

Ford Introduces Next Generation Automatic Transmission Fluid (ATF) into Future Transmissions

by Ron Romano and Chintan Ved, Ford Motor Company

Automatic transmission fluids (ATFs) are the most complex of all the lubricating fluids in the transportation industry. ATFs are an important part of the transmission design in the ever-growing need for integrating technology to improve fuel economy and durability.



Ford plans to roll out the next generation of transmission fluid to be licensed under the name Mercon-LV. This new fluid will be a single, factory-filled fluid for Ford designed and built transmissions beginning with some 2008 vehicles.

The reasons for this undertaking are to provide a common automatic transmission fluid for all Ford automatic transmission plants worldwide, improve customer satisfaction by maintaining consistency of shift feel over high mileage, and simplify ATF complexity in service. The development efforts for the common fluid had to take many factors into account, such as:

How critical is fluid? ATF acts as the blood for transmissions. With significant advances in step ratio transmission technology, ATF is expected to deliver on multiple fronts. Reduced fluid sump size, advanced friction materials, and increased operating temperatures are drivers for ATF technology evolution.

Key requirements for ATF are:

- Stable Friction Coefficients
- Lubricating Film Thickness
- Wear Resistance
- Heat Transfer
- Anti-Foaming
- Reduced Drag Loss

Fluid Development: Ford factory fill ATFs go through a rigorous validation

process which typically takes 3-4 years with a significant cost commitment.

Key steps in ATF development are:

- Fluid Specific Qualification, Screening and Development Tests
- Various Component Tests
- Dynamometer Tests
- Vehicle Tests (includes calibration and durability)

Material compatibility with various friction materials, seals, coatings, non-ferrous metals and non-dimensional chemicals is always a challenge, which takes a lot of time mainly because of its broad scope, and the need for disclosure of proprietary materials used by suppliers.

For example, there was a situation where a supplier didn't fully disclose the material used in some of the parts it supplied for automatic transmissions. The presence of only 0.1% (1 part per 1000) of the critical fluid compound caused failures in the field. This just highlights the critical nature of chemical interactions.

Fluid Color:

• In many cases, fluid discoloration is a normal characteristic of the chemical compound and in itself doesn't indicate that a fluid needs to be changed.

• Oils and fluids should be changed at the specified interval as identified in the Scheduled Maintenance Guide or in conjunction with a repair.

• Flushing is a viable way to change fluid for many vehicle subsystems during scheduled maintenance, and should only be done using the same fluid required to finish the maintenance procedure.

• Additional chemicals or additives aren't required for factory recommended maintenance.

Service Fluids: Mercon LV is formulated with an appropriate balance of all additives to maintain correct performance for the transmission's specified fluid service intervals. Any change to the balance of the additives will alter fluid performance, resulting in risk of transmission malfunction.

The all-new Mercon LV is recommended for use in applications which have been designed for low viscosity ATF and was introduced in some 2008 vehicles. Mercon LV was designed to reduce drag losses, improve consistent shift feel and oxidation stability, and has enabled Ford to increase the service fluid change intervals for multiple transmission applications.

Sonnax Introduces New AW50-40LE/42LE Repair Kits

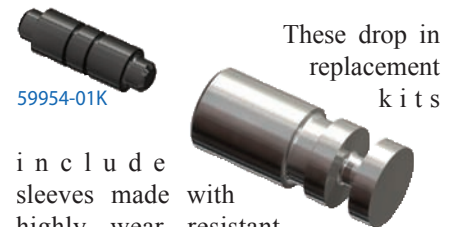


Sonnax has released two new kits to solve common complaints in AW50-40LE/42LE valve bodies. The Main Boost Valve and Sleeve Kit (59954-03K) prevents these problems:

- Excessive pressure
- Broken parts
- Delayed engagements

The Lockup Control Plunger and Sleeve (59954-01K) eliminates:

- TCC apply/release problems
- Converter codes
- Burned converters

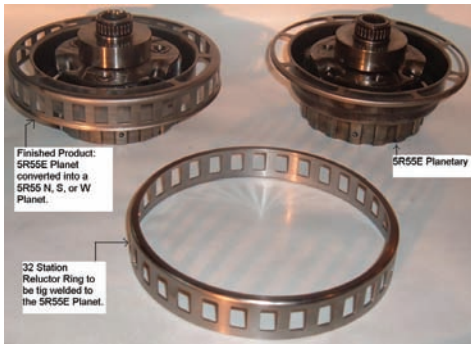


These drop in replacement kits include sleeves made with highly wear resistant billet aluminum, and hard-coat anodized valves to prevent wear. Annular grooves have been added to prevent side loading and extend the life of your valve body.

To learn more about these kits or other Sonnax transmission solutions, drop by their web site at www.sonnax.com.

Transforce Industries 32 Station Reluctor Ring

Transforce Industries is pleased to



present its newest product, a 32 Station Reluctor Ring. The ring is to be Tig welded to the 5R55E planet in order to convert the planet to a 5R55 N, S, or W planet.

In Canada, the reductor ring can be purchased through:

Transforce Industries
Ph: (902) 860-1474
transforceind@eastlink.ca
www.transforceindustries.com

Parts 4 Automatic Transmissions
Ph: (780) 452-8660
1-888-452-8660
www.parts4transmissions.com

New TransTec Kit Fits GM 4L60/65/70E 2006-Up with V8 Engines

Corteco originally supplied the upper and lower valve body spacer plate gaskets for the GM 4L60/65/70E transmission as well as the snap-in filters in TransTec® overhaul kits. In some 2006 and all 2007-up units with a V8 engine, General Motors now includes a bonded valve body plate with the screens between the plate and the gaskets already installed.

In light of the changes made at GM, Corteco is proud to announce the availability of overhaul kit number 2525 for 2006-up GM 4L60/65/70E in vehicles equipped with V8 engines. This addition to the GM 4L60E family contains the bonded plate with screens. This application is also available with a *Duraprene® pan gasket as overhaul kit number DP2525.

TransTec® overhaul kit numbers 2472 and DP2472 are still available and contain the valve body gaskets for vehicles with V6 engines.

For your convenience, TransTec will offer this new bonded plate with

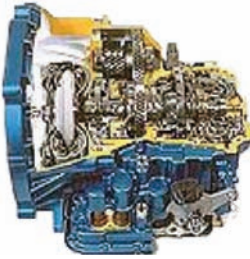
screens separately; the TransTec® item number is B10102.

The new overhaul kits and the bonded valve body plate are in stock and available for immediate shipment.

* Duraprene® is a registered trademark of Freudenberg-NOK.

Also from TransTec: New TransTec Kit Aisin TF80/81-40LE

TransTec is pleased to announce the availability of TransTec® overhaul kit number 2522. This kit covers the front wheel drive, four-speed Aisin found in 2004-up Chevrolet Aveo, Daewoo Kalos and Genra models. This unit can also be found abroad in the Pontiac Wave, Suzuki Swift, Chevy Lova and Holden TK Barina.



FEATURED COMPONENTS

| Description | TransTec® Number |
|--------------------------|------------------|
| Cork & Rubber Pan Gasket | B11534 |
| Front Seal | B29172 |
| Right Axle Seal | B37099 |
| Left Axle Seal | B37098 |
| Valve Body Gasket-Upper | B36435 |
| Valve Body Gasket-Lower | B36436 |
| Sealing Ring Kit | 3521 |

Kit number 2522 is in stock and available for immediate delivery.

Solenoid Dyno Introduces New 5R110W Adapter

Solenoid Dyno has a new adapter for 5R110W transmissions. It enables you to check the low/reverse clutch, direct clutch, intermediate clutch, coast clutch, torque converter clutch, overdrive clutch, and line pressure control solenoids, all with one adapter.



The relationship between current flow through the solenoid windings and the pressure output of the solenoid enables you to pick out the good ones

from the bad ones. And it can help you identify solenoids that are sticking or out of range.

When you have a transmission failure, being able to check the solenoids lets you determine whether solenoid replacement will fix the problem, or if other repairs are needed.

For more information about this new adapter or any of the Solenoid Dyno line, call toll-free 888-765-3966 or 888-SOL-DYNO. Or you can contact them by email at rsylvis@sbce-global.net.

RatioTek Announces New Service Kit for Ford E4OD and 4R100



Improve transmission operation and lockup performance on Ford E4ODs and 4R100s with a new service kit from RatioTek.

The new kit, part number RT-E4OD/4R, comes with three, high-tech accumulator body regulator valves made from precision ground hardened steel. These valves provide stick-free operation compared to the factory aluminum valves, and offer 20% greater torque for clutches and converter lockup.

The new kit comes with spring selections for adjusting shift firmness and includes directions to provide modifications for improved lube flow. And the kit comes with easy-to-read instructions, to make installation a snap.

To learn more about this new valve body service kit or other products offered by RatioTek, call 626-968-2754, or check out their web site at www.ratiotek.com.

Precision of New Hampton, Inc. Makes Booth Visitors Winners

Precision would like to thank everyone who stopped by our booth at the 2008 ATRA Powertrain Expo in Las Vegas last October.

TJ Schmidt of Palouse County Trans



And we'd like to congratulate TJ Schmidt of Palouse County Trans on winning the Dale Earnhart, Jr. racing jacket. Also, congratulations to Monte McCall of Monte's Motor on winning the Jimmie Johnson racing gloves.

Monte McCall of Monte's Motor



Tracerline® Universal A/C Dye Safe for Hybrid Vehicles

After laboratory testing, Tracer Products has announced that its Tracerline® concentrated universal/POE fluorescent leak detection dye is safe to use in *all* hybrid vehicle air conditioning systems.

Hybrids are typically equipped with a hermetic electric compressor. The electric motor inside these compressors is exposed to liquid refrigerant and lubricant. It's critical that no materials be added to these systems which could cause the motor windings to deteriorate or be damaged.

Tracer Products maintains that its POE-based dye continues to be the best method for pinpointing refrigerant leaks while having no negative effects on the system's insulation properties,



individual components, or overall performance.

Two OEMs are presently using this dye on their hybrid assembly lines, and others are expected to come on board soon.

For more information about Tracerline® universal/POE A/C dye, call toll-free 1-800-641-1133. Outside the United States and Canada, call 516-333-1254 or visit our web site at www.tracerline.com.

Vince Fischelli Introduces New Book: Vehicle Electrical Troubleshooting Shortcuts



Diagnose vehicle electrical problems quickly and avoid costly mistakes from misdiagnosis to changing unnecessary parts.

Technicians, stand up and cheer: There's no longer any need for dedicated and expensive automotive electrical testers to test vehicle electrical circuits. The troubleshooting techniques in Vince Fischelli's new book, *Vehicle Electrical Troubleshooting Shortcuts*, demonstrate that only a digital multimeter (DMM) and a current clamp are needed to perform these tests.

Test the battery for cranking power in ten seconds. Test a slow cranking problem in three quick steps that take less than two minutes. Test any charging system in sixty seconds. Best of all, perform these electrical tests with just a DMM and a current clamp!

Specific sections cover electrical terminology, how to read schematic diagrams, how to use a DMM, and how vehicle circuits work. Each section includes review questions with answers as well as troubleshooting worksheets that help technicians learn the correct electrical test procedure to use in a given situation. Batteries and battery circuits, cranking circuits, and generator/alternator systems are all covered,

including those charging systems controlled by on-board computers.

Vehicle Electrical Troubleshooting Shortcuts by Vince Fischelli is just \$78. Get your copy today at sales@veejer.com and at www.veejer.com/shortcuts.html

Tracer Products New Kit Tough on Leaks, Easy on the Budget!

Tracer Products has unveiled the extremely affordable Tracerline®



TP-8627 EZ-Ject™ Leak Detection Kit that saves technicians time and trouble when trying to pinpoint leaks in air conditioning and fluid systems. The heart of the kit is the high-intensity, 6-LED OPTI-Lite™ flashlight, that's so powerful it makes even the smallest leaks clearly visible.

Another important component of the kit is the EZ-Ject™ multi-dose dye injector, a fast and easy way to add fluorescent dye to multiple A/C systems. A simple turn of the handle injects the *exact* amount of dye into the system. And there's no mess to clean up!

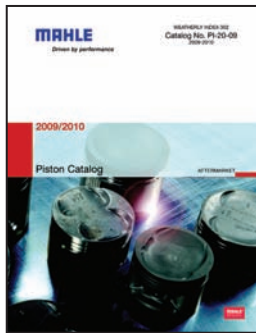
The kit contains a 0.5-oz universal A/C dye cartridge that services *up to 14 vehicles*. Also included are a 1-oz bottle of Dye-Lite™ All-In-One™ dye for oil, fuel, ATF, power steering, and hydraulic systems, a 1-oz bottle of Dye-Lite™ coolant dye, an 8-oz spray bottle of GLO-AWAY™ dye cleaner, and fluorescence-enhancing glasses. All are conveniently stored in a sturdy plastic carrying case.

For more information about the TP-8627 EZ-Ject™ Leak Detection Kit, call toll-free 1-800-641-1133. Outside the United States and Canada, call 516-333-1254, or visit their web site at www.tracerline.com.

MAHLE Clevite Inc. Introduces New MAHLE Original® Piston Catalog (PI-20-09)

MAHLE Clevite Inc. is pleased to announce the release of its new MAHLE

Original® Light Vehicle Piston Catalog (PI-20-09), featuring over 600 new part numbers. The catalog offers a new, user-friendly layout for quick and easy reference to diagrams, make/model indexes and more.



In connection with the new MAHLE Clevite brand strategy, the catalog introduces the new MAHLE Original part numbering system, translating the previous Clevite numbering system into the new MAHLE Original part numbers. In addition, the new catalog features competitor numbers to contribute to its functionality.

“The new MAHLE Original Piston Catalog serves as the first step in helping to develop a first rate piston offering,” said David Garmenn, Engine Parts Team Leader, MAHLE Clevite Inc. “The catalog provides a guide to translate the previous Clevite part numbering system into the new MAHLE Original numbers, as well as a guide that clarifies the old MAHLE piston numbers into the new MAHLE Original program. The catalog’s part numbering system is an ideal way to ease the brand transition.”

For more information on MAHLE Original pistons and the full line of MAHLE Clevite brands, visit www.mahleclevite.com, or contact your local sales representative.

New Torque Converter Improves Gas Mileage

New from Blumenthal Automatics, the patented Power Lock Fuel Saver™ Torque Converter



increases MPG and saves an average of 20-46% on fuel economy.

The Power Lock Fuel Saver™ Torque Converter is available for Ford, GM and Dodge vehicles. Its innovative

design virtually eliminates slip, reduces internal temperatures, and increases transmission life.

For more information, visit their web site at www.fuelsaverconverter.com or call, toll-free 888-236-4800.

PX3™ Xtreme Oil Booster Powers Jegs Engine Masters Challenge Winners

In the competition for the 2008 Jeg’s Engine Masters Challenge, the winner and 5 of the 6 top finishers used PX3 Xtreme Oil Booster to gather as much horsepower and torque as possible from their builds. Conducted under strict rules, the Engine Masters Challenge pits engine builder against engine builder in the quest to garner the most HP and torque.



PX3 Xtreme Oil Booster has changed the rules on benefits from additives. PX3 Xtreme Oil Booster is a specially formulated Synthetic Lubricant enhancer. Dyno test proven, PX3 Xtreme Oil Booster increases horsepower and torque up to 5%. According to users, it increases gas mileage up to 10%. It works with all engine oils, protects against heat, and reduces friction.

In addition it reduces engine smoking, helps prevent engine knock, provides better ring seal and won’t cause corrosion of internal engine components. It’s safe for all automotive gasoline and diesel engines and won’t void manufacturer’s warranties. PX3 is recommended for all high performance, racing and street vehicle applications and can also be used as an engine assembly lubricant.

Congratulations to these winners of the competition:

- First Place / John Kaase Racing Engines
 - Second Place/ BES Racing
 - Third Place /Almost Kaase’s
 - Fifth Place /Power Shop
 - Sixth Place /MPG Heads
- PX3 is available at leading auto-

otive retailers. For more information, stop by their web site at www.PX3lubricants.com or call 816/765-5011.

Adapt-A-Case Introduces New Z Buddy for ZF5HP30 ...and more!

The durable yet simple design of the original Drum Buddy return-spring compressor device has taken the automatic transmission rebuilding industry by storm! What’s next? After calls for a larger design were heard, the engineers decided to tackle one of the most challenging drums yet.



Recognize this drum? Nothing to fear as the “Z Buddy” is here. Note the ease of access to the snap ring. Also visible is the heavy duty ball bearing beneath the knob.

The C-clutch (reverse) drum of the ZF5HP30 uses a 24T diaphragm spring for piston return. It must be compressed to service the lip seals, a known cause for failure in these transmissions. If the seals don’t suffer blow out, the lugs retaining the top snap ring of the drum can. Good used loaded drums are difficult to come by, and the seals’ condition unknown. New drums arrive bare, so the original piston must be reused. Whatever the scenario is, to know it’s done right, it must come apart.

To make life easier, Adapt-A-Case added a ball bearing under the oversized tri-knob. With little resistance, the spring compresses easily.

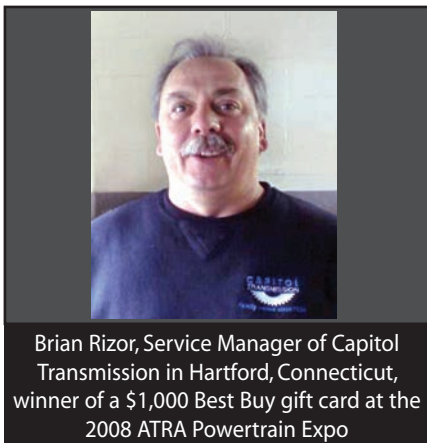
As with the original Drum Buddy, additional applications for its use will come as time passes. The measurements of the compression surface are: OD: 7.375” ID: 6.750”

Designed for a lifetime of daily use!

For more information, stop by their web site at www.ADAPTACASE.com.

Corteco Awards \$1000 Gift Card at ATRA’s 2008 Powertrain Expo

Brian Rizer, service manager of Capitol Transmission in Hartford,



Brian Rizer, Service Manager of Capitol Transmission in Hartford, Connecticut, winner of a \$1,000 Best Buy gift card at the 2008 ATRA Powertrain Expo

Connecticut, won a \$1000 Best Buy gift card from Corteco at the ATRA Powertrain Expo 2008 at the Las Vegas Hilton. Brian won the gift card in a random drawing from hundreds of contestants who visited Corteco's booth at the show.

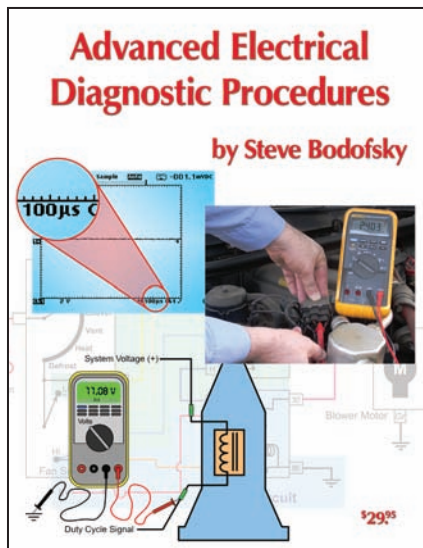
Corteco, a Division of Freudenberg-NOK, offers premium brands including TransTec® transmission and power steering kits and components. Corteco provides solutions and value to its customers through high-velocity supply chain management, production kitting and packaging, distribution and logistics, full-line application development, and premium, high-quality products and services.

Freudenberg-NOK is the American joint-venture partnership between Freudenberg & Co. in Germany and NOK Corp. in Japan. Together the companies make up the world's largest producer of elastomeric seals and custom-molded products.

New Electrical Diagnostic Procedures Guide from ATRA's Steve Bodofsky

It shouldn't come as much of a surprise that electrical problems make up the most common issues facing shops today's repair shops. The key to dealing with those problems is a thorough understanding of electrical principles and diagnostic strategies.

Last year, ATRA Senior Editor Steve Bodofsky introduced a fresh look on electricity and electrical circuits in his book, *Building Blocks of Electrical Diagnosis*. *Building Blocks* covers the principles and laws governing electrical circuits and how they apply to actual circuits.



Now he's gone a step further with his new book, *Advanced Electrical Diagnostic Procedures*. This book covers real-world diagnostic procedures designed to help today's technicians identify and pinpoint electrical problems.

Advanced Electrical Diagnostic Procedures picks up where *Building Blocks* left off, to help you become a better, more competent electrical diagnostician.

In it, you'll learn how to analyze a typical wiring schematic. You'll discover the easy way to isolate a short circuit. You'll grasp the ins and outs of a voltage drop test. And you'll find out how to measure resistances down to a billion ohms!

To learn more about these great training guides or to order your copies, stop by Bodofsky's web site, www.AutoTechNow.com, or call, toll free, 1-800-259-1745. Each book is just \$29.95 plus shipping, or save \$10 by buying both books for just \$49.95 plus shipping.

Smart Blend Introduces Multi-Vehicle CVT Transmission Fluid

Smart Blend Synthetics announces the release of its fully formulated, multi-vehicle, Continuously Variable Transmission fluid (CVT) with advanced SYNTEUM® tech-



nology. Smart Blend's multi-vehicle CVT fluid is specifically designed and formulated to meet the performance requirements and specifications for all continuously variable transmissions.

Smart Blend Synthetics fully formulated CVT fluid ensures proper performance and operation of continuously variable transmissions.

Smart Blend Synthetics is a leader in the formulation and development of a wide variety of transmission and professional automotive service-related products. The development of a fully formulated CVT fluid meets market demand and coincides with the company's philosophy and mission statement of "Innovation, Leadership and Quality."

Smart Blend Synthetics' fully formulated, multi-vehicle, continuously variable transmission fluid will make servicing continuously variable transmissions more profitable and reduce inventory costs by eliminating the need to stock multiple OEM CVT fluids.

For more information about Smart Blend Synthetics One Formula products, stop by their web site at www.smartblend.com, or call toll free, 1-888-422-9099.

TransTec Introduces New ZF6HP26 Bonded Valve Body Plates

ZF offers several different valve body plates for the ZF6HP26 based on application. Corteco is pleased to announce the availability of these bonded valve body plates for the ZF6HP26 series. See the chart for plate ID.

| OEM Number | Number Stamped on Plate | TransTec® Number |
|--------------|-------------------------|------------------|
| 1068.227.052 | 1068.327.180 | B10365 |
| 1068.227.035 | 1068.327.141 | B10375 |
| 1068.227.051 | 1068.327.179 | B10376 |
| 1068.227.047 | 1068.327.163 | B10377 |
| 1068.227.053 | 1068.327.189 | B10378 |

All plates are in stock and available for immediate shipment.

