AMSOIL ATF Exceeds Latest General Motors DEXRON®-III Requirements

As automatic transmissions have become increasingly complex, the performance requirements of transmission fluids have increased. Reduced fluid sump volumes, continuously slipping torque converter clutches, six-speed transmissions and increased power densities significantly increase the level of stress put on a lubricant. In response, General Motors recently introduced a higher quality factory fill ATF, and in order to ensure their transmissions continue to receive adequate protection, they have upgraded their DEXRON®-III specification for service fill transmission fluids.

"If we look at the kinds of fluids that are being blended out in the marketplace some of them are a long way away in terms of performance from our current factory fill, because they are still based on blends that had been formulated a number of years earlier," said GM Transmission Fluid Group Leader Roy Fewkes. "The objective of the DEXRON® specification is to make sure that GM customers, wherever they are in the world, have a fluid that is appropriate for their transmission. So there was a need for us to upgrade the specification in order to make sure that the service fill fluids in the market are more representative of the factory fill performance that the transmission has been designed for."

To ensure protection for transmissions with reduced sump volumes and higher operating temperatures, the new DEXRON®-III specification requires a longer Oxidation Test. Fluids are now required to maintain performance for 450 hours, up from 300. GM expects the new oxidation requirements will be the most difficult for lubricant manufacturers to meet. In addition, DEXRON®-III calls for quicker de-aeration times to accommodate smaller sump volumes.

Because today's transmissions must handle increased torque and transmit more power, thermal stability is crucial for DEXRON®-III fluids. The combination of higher operating temperatures and reduced oil volumes calls for fluids that can not only maintain performance at higher temperatures, but also for longer periods of time.

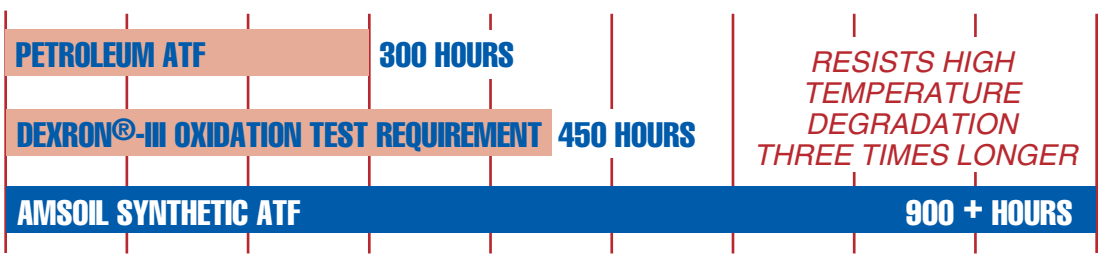
Electronically controlled converter clutches, implemented to improve transmission efficiency and fuel economy, are sensitive to the frictional properties of lubricants. Because friction modifiers are adversely affected by increased temperatures and fluid oxidation, GM introduced a new EC3 Low Speed Friction Test to ensure friction performance is maintained for as long as possible.

The increased quality standards of the new DEXRON®-III specification could signal the end of Group I base stock use in ATF formulations. "The basic additive performance will essentially remain the same and people will have to adjust formulation in order to get them past things like the Oxidation Test," says Fewkes. "But essentially what it [the new DEXRON®-III specification] is doing is driving the formulations away from Group I towards Group II base stocks."

AMSOIL Synthetic Automatic Transmission Fluid (ATF) exceeds the requirements of the new DEXRON®-III transmission fluid specification. It resists thermal and oxidative degradation up to three times longer than conventional fluids and twice as long as the new 450-hour DEXRON®-III test requirement. It protects clutches, planetary gears, valves, pumps and seals from damaging sludge and varnish deposits and ensures cool, smooth transmission operation for intervals up to three times longer than recommended by the vehicle manufacturer.

HIGH TEMPERATURE FLUID LIFE TESTS

Tests Used Are GM'S THOT and Ford's ABOT Measuring TAN Increase



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