

Q. Long life with carefree performance is something every transmission repair facility expects to have with transmission fluid. And at one time it was easy and carefree, now we are seeing more and more manufacturers requiring specific fluids for their transmissions, why?

A. In my opinion, this is half marketing, half technology. Let me explain; When automatic transmissions started to become common and popular in the late 1940's, many of the deficiencies of earlier fluids (straight mineral oils, mainly engine oil) showed that fluids used in automatic transmissions had to perform many demanding tasks that were beyond the capabilities of the available oils of the time.

The tasks the fluids had to perform were no small matter. They had to transmit power to the torque converters, while optimally performing in the hydraulic control system for shifting; friction control and energy transmission for bands and clutches; lubrication of hard parts, bearings, bushings and seals; and last but certainly not least, heat transfer for the removal of all of this generated heat as the transmission changed speed ratio between the engine and drive wheels.

It quickly became evident that ATF's would be the most sophisticated and most difficult of all lubricants to formulate. General Motors took the lead in 1949 and the first automatic transmission fluid specification was issued for "Type A" ATF. From 1949 until about 1960, most passenger car automatic transmissions required the use of "Type A" or "Type A, Suffix A" transmission fluid. Ford however, was not thrilled about specifying a transmission fluid for use in a Ford vehicle that was approved by General Motors! So in 1961, Ford released their fluid specification (M2C33-D) which would eventually evolve into the Ford Type F (1967) and Type G for Europe (1972).

The passage of the Environmental Species Act of 1972 changed the direction of transmission fluid development forever by eliminating the use of sperm whale oil as an additive for transmission fluids. When a suitable replacement for the sperm whale oil was not readily available, it resulted in immense sums of time and money being spent to research, develop, and manufacture additive packages that worked as well as the sperm whale oil. It was this huge R&D cost in new fluid additive packages that convinced OEM's to release their own specific ATF requirement for their transmissions, a fluid tested and trademarked by them.

Once this decision to differentiate and trademark their own ATF generated unexpected new sales, the collaboration amongst the OEM's to create a universal fluid specification for all automatic transmissions took a backseat to corporate identity and profits.

The OEM's used this opportunity to make 'exclusive use requirements' that could now be imposed on the customer and vehicle service industry. These specific use requirements were justified by the OEM's in the name of improved protection and claims of "fill for life". The end result has been a proliferation of ATF fluid types that vary by OEM, and available from them, at inflated prices and limited to the dealerships.

Lest I be misunderstood, I feel it is important to note that the fluids specified by the OEM's are tested and designed to meet their specific fluid requirements and will protect

the transmissions they are designed to be used in. There are transmission fluids that meet or exceed the OEM requirements available today, that will work as well, or even better than the OEM specified fluid. This is another of those situations where knowledge is power from the standpoint of being knowledgeable enough about specific fluid requirements to be able to select the proper ATF to substitute when availability or price is a factor.