



IMPORTANT PRODUCT INFORMATION

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ZF AUTOMATIC CAR TRANSMISSIONS

The case for oil servicing and the use of approved oil and filtersThe oil is supposed to be lifetime fill – why change it?

- ❖ The oil in a modern automatic transmission is a highly engineered component as it serves many functions including lubrication, cooling, hydraulic application of clutches and power transmission via the torque converter.
- ❖ Modern transmissions utilise overlapping application of clutch packs at gear changes (instead of freewheels) and controlled slip of the torque converter lock up clutch which puts greater stresses on the oil.
- ❖ To meet these challenges partially synthetic oils have been developed for ZF 5, 6 and 8 speed transmissions which are maintenance free under normal operating conditions. However, as some degradation of the oil inevitably occurs over time and usage, **ZF recommends oil and filter changes after 50,000 to 75,000 miles to ensure optimum performance.**
- ❖ Oil degradation can lead to complaints such as judder, noises and a deterioration in gear change quality.
- ❖ Some car manufacturers already recommend oil servicing at 60,000 miles and others are starting to put greater emphasis on the technical benefits rather than 'cost of ownership'.

Why use approved oil?

- ❖ There were many approved oils for the simpler 3 and 4 speed transmissions, however it is only feasible to exhaustively develop and test one oil to meet all the demands imposed on a modern transmission.
- ❖ Claims are made that alternative oils are equivalent but whilst they might have the same basic characteristics such as viscosity they won't have the same crucial additive packages which are closely guarded secrets of the oil companies.
- ❖ The consequences of using unapproved oils might not be immediately apparent but there are well-documented cases of problems such as judder and noises occurring after thousands of miles in service.



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Why change the filter?

- ❖ A correctly operating filter ensures that potentially damaging particles are taken out of circulation thereby optimising the transmission operating conditions and extending life.

Why use approved filters?

- ❖ Filtration is a science in itself. Too little can lead to significantly sized particles circulating the transmission causing wear and risking the seizure of finely toleranced parts e.g. pistons in the bores of the mechatronic unit. Too much filtration can lead to vital additives being extracted from the oil and also blockage of the filter.
- ❖ An approved filter ensures correct sealing. This cannot be guaranteed with non-genuine parts allowing the possibility of unfiltered oil to circulate the transmission giving the associated risks of failure and premature wear.

Oil change kits are now available for all ZF 5, 6 and 8 speed car automatic transmissions which include all the parts required for an oil change. Below is an illustration of the 6 speed transmission kit.

