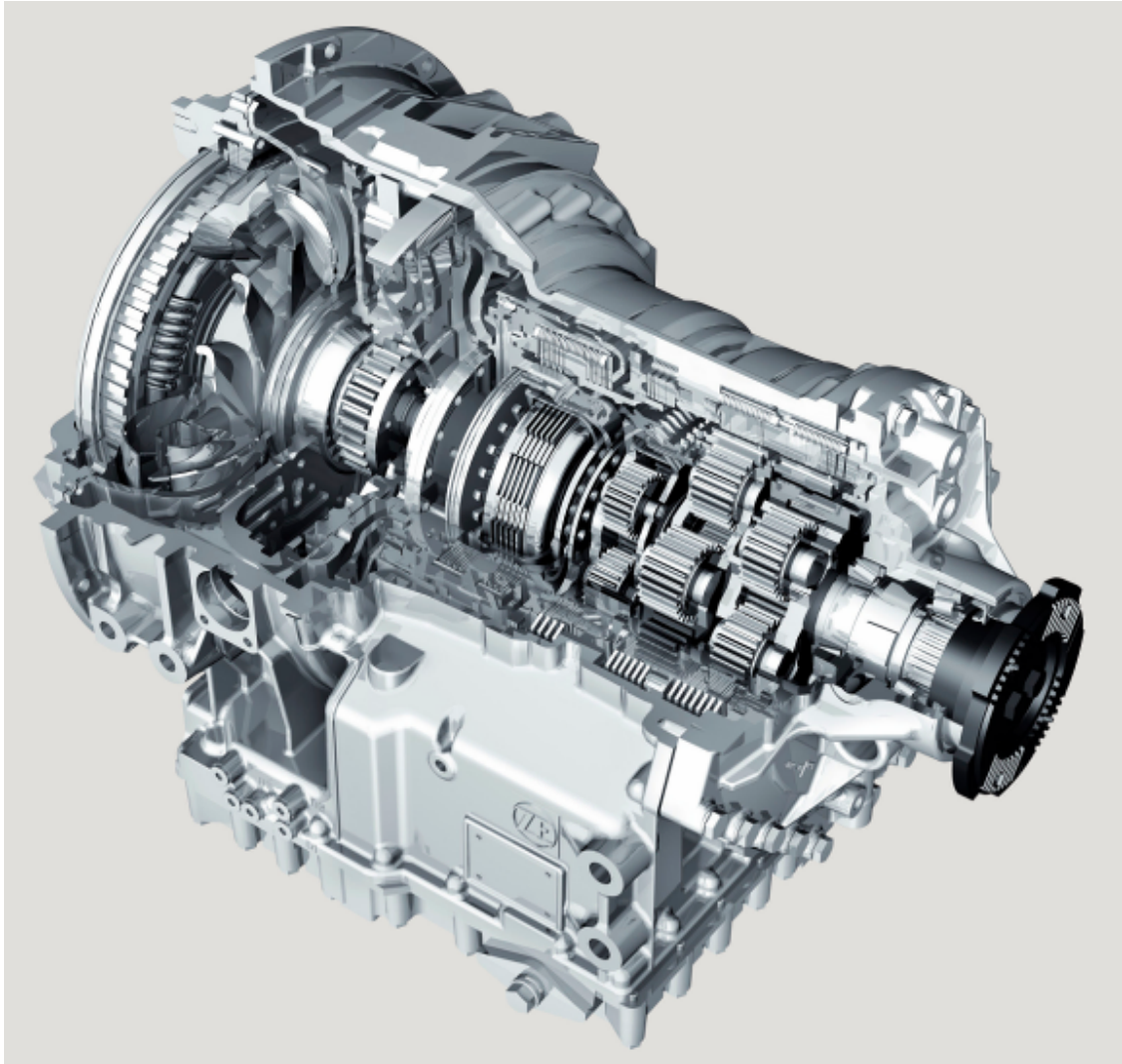# ZF Transmission for OMSI

Credits

Script by Krtz07 (OMSI Forums)
This modification would not be possible if not for the help of:
David lee – General Advice, Sounds, General functionality of the gearbox, Engine file, etc
David Jung – General Advice
omsikenli - (OMSI forum screen name) – General functionality of the gearbox and sounds.
scania_n270ub – Sounds of the SD92

Installation

All files needs to be installed into the Omsi\Vehicles directory. If these files are not installed in the proper location, then errors will occur.

Terms and Conditions

Script – The actual programming code of the transmission does not include values. These files has an *.OSC file extension

Consist files - Files that define the transmission and its chrematistics. These files has an *.txt file extension

Modification for the Sd200/Sd202

At this stage, Modifications to this script are not allowed to be publicly released on the Sd200 and Sd202 buses, yet the modifications to the consist files are allowed on these buses. This is prevent conflict with later updates and/or patches of the modification.

However, the script needs to be downloaded and installed separately from the official link or a mirror link. This helps to insure the stability of the OMSI. Modifications to the sounds are allowed, but the name of the sounds file needs to be renamed to something else then what is included within the package. This is prevent conflict with later updates and/or patches of the modification If any modification to the script is perform then send a pm to krtz07 on the OMSI forums.

Those who want to developed another transmission eg.. ZF ecolife, or Astronic, off of this script, they are welcomed to do so. Just insure that the file name is different and the revision history is in tact within the script file.

Add on Buses

If someone wishes to include the script and consist file of the transmission onto their add-on bus, they are welcomed to do so. The ZF script and its files being modified, may be freely distributed within the add on bus package.

Tutorial of the Transmission

Included in the package are three different generations of the ZF Ecomat. The 1980-1985 Version, Ecomat I, and the Ecomat II. Within these script consist files, the specific type of transmission e.g. 502 can be specified in the consist files.

4 to 6 gears; designated as 4HP, 5HP, 6HP

[const]
antrieb_ecomat_gears
6

1: Torque converter will lock up in first gear
2: Torque converter will lock up in second gear
3_ Torque converter lock up in both gears

Not Implemented Yet
[const]
lock_up_type
2

There are many changes which are made to this script since the voith transmission, the shifting points on the Ecomat II operates on a different parameter compared to the Ecomat I.

If LBSS is enabled, The antrieb_getr_autoSwUpkickdnSpd1..7 consist values are ignored in favor by the LBSS/ TOPODYN option. The LBSS/ TOPODYN option determines which speeds that the bus should shift at depending on acceleration and other conditions.

[const]
antrieb_LBSS_enable
1

The sensitivity of the TOPODYN can be adjusted within the consist file

From Consist file

```
[newcurve]
LBSS_Range

[pnt]
0
2250

[pnt]
0.76
1750
```


The higher the range, the more sensitive the TOPODYN shifting pattern is, currently the TOPODYN is mapped to the RPM range of the Man D2066 engine, and the default MAN D2566 engine. You can change it to whatever is. Be sure that the other corresponding patterns are also calibrated to work with the shifting pattern as well..

While TOPODYN is disabled, the sim will use the points given. To determine the shifting point by rpm, the formula is **Engine RPM divided by Current Ratio**.

The antrieb_hold_gear value tells omsi how long to hold the gear before shifting up and down, this is to prevent rapid shifting movements within omsi. The Hold gear has a built-in value to insure that the bus will not stall out. Only gears 2 through 6 have this installed.

[const]
antrieb_hold_gear
2.4
Number of Seconds passed

brake_early_kickdown, when the braking is at 25% or over, the transmission will shift more rapidly down into the last gear