FACT SHEET

Gearbox AL306

AL306 is a 6-speed automatic gearbox dimensioned for gross combination weights of up to 36 tonnes.

The gearbox has a ratio span that makes it suitable for vehicles in distribution, fire, municipal service operations, garbage and also light construction.

It is very gentle on the truck since it automatically lets the engine operate within its best rev range, and because the hydraulic power transmission absorbs all snatch and unevenness in the driveline.

In the gearbox’s torque converter, engine torque is multiplied to provide high starting traction. The software that controls the gearbox provides optimal fuel economy and driving comfort.

Oil change intervals vary, depending on oil type and driving conditions. For more information. See the Repair & Maintenance Instructions.

Torque converter boosts power when starting from standstill

Power from the engine is transferred to the gearbox via a torque converter. Here the engine’s torque is multiplied hydraulically, giving considerable starting traction. Gear changes are faster and the lock-up is activated earlier. The converter optimises transmission efficiency and reduces heat rejection. Its stiffness, lower gear and absorption curve reduce fuel consumption.

Kick-down function for maximum acceleration

The kick-down function selects a gear for maximum acceleration. When the kickdown switch on the accelerator pedal is engaged, the system changes the gearshift strategy to maximise vehicle acceleration. When suitable (e.g. depending on engine speed), this leads to a downshift.

Sales variant: TKDM-ECO.

FEATURES AND BENEFITS

- High vehicle productivity thanks to excellent starting properties and smooth gear changes that cover the entire speed range.
- Torque converter with automatic lock-up function gives high efficiency rating and improved fuel economy.
- Ergonomic, convenient operation using push-buttons.
- Optional, integrated retarder that supplements the vehicle’s own braking system, contributing to lower operating costs.
- Power take-off can be engaged while driving.
- Engine water cooling of gearbox oil.
Automatic lock-up function promotes high efficiency rating and improved fuel economy
To avoid power loss, the torque converter features an automatic direct coupling (lock-up), locking the pump wheel to the turbine wheel in 2nd to 6th gears. Thanks to this early lock-up at low ratios a high efficiency is achieved.

Ergonomic, convenient operation using push-buttons
The gearbox is conveniently operated via push-buttons in the instrument panel (FL) or on the engine tunnel (FE). The ergonomically and logically laid out control panel has a clear display. Information is also shown in the vehicle’s information display unit.

Hydraulic retarder gives effective braking function
The gearbox can be equipped with an integrated hydraulic retarder (RET-TPT). It is an effective supplement to the vehicle’s own brakes and reduces wheel brake wear. The ABS compatible retarder is compact and lightweight; adding just 37 kg to the vehicle’s weight. Maximum braking torque is 1800 Nm.

Prepared for fitting of power take-offs
AL306 is prepared for fitting of a range of different side mounted power take-offs with pump or flange connection (FL) or top mounted power take-offs with pump connection (FE).

Advanced software, improving fuel economy and driving comfort

Auto Neutral function
The Auto Neutral function is available in two versions. One of them is working on the service brake and the other on the parking brake.

Fuel economy
The software is by default set from factory in “performance mode”. The driver can press the button “mode” on the selector to switch over to “economy mode” when driving circumstances allows. When conditions permit, a “Super Economy mode” with approx. 300 rpm lower shift points will become automatically active, without any driver’s action.

Enhanced converter load release
This function makes the gearbox simulate neutral position when stopping in order to avoid energy loss in the converter, reducing fuel usage and emissions. The Auto Neutral function provides full neutral at stop with locked output.

Load based shift schedule
The gearbox automatically selects an appropriate calibration mode, based on topography and vehicle load conditions. Input is given via a precision inclinometer inside the gearbox. The gearbox is equipped with two modes, normal and performance. Normal mode is selected automatically by the system. This reduces engine revs by 300 rpm when permitted by driving conditions.

Vehicle acceleration control
Adapts acceleration in relation to load and topography.
FACT SHEET

Gearbox AL306

SPECIFICATION

Type designation: AL306
Type: Fully automatic planetary gearbox
Max input torque, depending on application: Up to 1695 Nm
Max gross combination weight: 36 tonnes
Weight, dry: 261 kg
Oil volume, 1st filling: 28 l
Retarder weight: 37 kg
Max braking torque retarder at: 1000-2000 r/min: 1760 Nm
Max stall ratio in the torque converter: TC421: 1.77:1