

# Gearbox Electronic Control Unit for Saurer 6DM and 10DM Trucks



Drop-in replacement for the Saurer factory ECU «Oerlikon-Buehrle Ueberdrehesicherung»,  
Swiss Army designation ALN 775-6797 «GETRIEBESTEUERUNG - COMMANDE DES VITESSES»



This product is a modern plug-and-play replacement solution, fully compatible with the existing truck wiring and connectors, for the discontinued original unit. It can be installed in just a few minutes using the existing mounting holes and only requires a #4 flat screwdriver to fasten the four captive mounting screws.

This product offers better accuracy as well as a few added functionalities and safety features compared to the original factory unit. It is built using high-quality state-of-the-art electronic components and was engineered with adequate margins to provide many years of dependable operation.

The microcontroller-based design supports firmware updates, making it possible to add new features in the future (updates cannot be performed by the user and are subject to fees).

The Saurer 6DM (4×4) and the Saurer 10DM (6×6) share the same powertrain and therefore also the same gearbox ECU.



## Functionality

- **Overdrive gear control**  
Switches between normal and overdrive gears (so-called half-gears), at the press of the overdrive pushbutton (next to the gear selector lever).  
The green overdrive dashboard indicator lamp («hare») signals that the overdrive gear is selected.  
Automatically switches to normal gear when stopping in neutral gear (comfort function).
- **Engine overspeed protection (improved accuracy)**  
Flashes the red overspeed indicator lamp («n<sup>-1</sup>↗») above 2400 rpm engine speed.  
Automatically shifts the gearbox to neutral above 2650 rpm engine speed.  
Automatically re-engages the selected gear after 1 s below 2600 rpm engine speed.
- **Sensor fault detection (improved safety)**  
Automatically detects a faulty sensor or sensor wiring.  
Signaled by the red overspeed indicator lamp («n<sup>-1</sup>↗») lighting up continuously.  
The gearbox is then locked in neutral for safety reasons until the fault is cleared.  
The diagnostic circuit was improved to detect both open and short circuit faults.
- **Gear lever fault detection (improved safety)**  
Automatically detects multiple gears being selected at the same time or otherwise invalid gear signals and prevents any gear from being inserted.  
Also signaled by the red overspeed indicator lamp («n<sup>-1</sup>↗») lighting up continuously.  
The gearbox is then locked in neutral for safety reasons until the fault is cleared.
- **Engine anti-stall protection (improved safety)**  
While the vehicle is moving, the engine brake is automatically disabled if no gears are engaged, regardless of the reason (gear shift, neutral gear selected or activation of the engine overspeed protection), as well as below 700 rpm engine speed (safety improvement).  
In case of an emergency braking, the engine brake is automatically opened below 700 rpm engine speed. This prevents the engine from stalling and guarantees that the vehicle remains steerable.  
Engine stop (using the engine brake) is only possible at standstill and in neutral gear.
- **Starter motor control (improved safety)**  
Engine cranking is always possible in neutral gear, regardless of vehicle speed (safety improvement).  
(The original ECU only enabled the starter motor if stopped and with the gear lever in neutral.)

## Technical specifications

Supply voltage	18 .. 32 V
Supply current (incl. solenoid valves)	1.5 A max @ 28 V
Operating temperature range	-40 .. 85 °C
IP rating (connectors mated)	IP 66
Dimensions (excluding connectors)	220 x 120 x 81 mm
Weight	1.55 kg
Warranty	24 months