

Injlectronics

TECHNICAL BULLETIN

MERCEDES BENZ TRANSMISSION CONTROL

#T0150

Make: Mercedes Benz

Model: Continuously Variable Transmission (CVT) repair

The continuously variable transmission (CVT) is an automatic transmission that can change seamlessly through a continuous range of effective gear ratios. Mercedes-Benz introduced their version of the CVT, known as "Autotronic", in 2004 for the 2005 model year A-Class. And later in 2005 for the 2006 model year B-Class.

Owners of the Mercedes Benz A & B class models built between 2005 to 2015 have reported to Injlectronics technicians numerous faults, all of which can appear intermittently including;

- The vehicle's transmission will not select drive or keeps slipping or going into limp mode
- A distinct lack of power when pulling away from a stop
- Illumination of transmission fault messages displayed on the dash

Fault codes include:

- P0722 - The RPM signal from component Y3/9b5 (CVT output RPM sensor) is not available
- P0896 - Impermissible adjustment of the step-down ratio in the CVT
- P0793 - The RPM signal from component Y3/9b4 (CVT secondary RPM sensor) is not available
- P0717 - The RPM signal from component Y3/9b3 (CVT primary RPM sensor) is not available
- P0703 - The gear ratio in the CVT is not permissible
- P2722 - Impermissible closing of hydraulic brake 'Reverse Gear' has occurred in the CVT when the selector lever 'N' was engaged
- P2731 - Impermissible closing of hydraulic clutch 'Forward gear' has occurred in the CVT when the selector lever 'N' was engaged
- P0894 - The steel thrust belt in the CVT is slipping
- P1634 - Component Y3/9n1 is defective or the voltage supply is faulty

Diagnosis of a faulty CVT unit can be difficult as the fault is often intermittent and due to the nature of the fault, there can be a large number of fault codes to work through.

Fault codes related to the RPM signal not being available can be diagnosed with the use of a scan tool, where transmission live data can be read. If the live data show a loss of the signal from either the primary or secondary speed sensors, the fault can be diagnosed as the CVT unit itself.

For other faults relating to the steel thrust belt or Impermissible closing of hydraulic brake 'Reverse Gear', it is recommended that a complete check of the transmissions wiring and components be completed looking for any faults and damage. It is recommended that the vehicles transmission oil level and condition is also checked as this can reveal much larger issues. If the customer has been driving for an extended period in a limp-home mode, this can cause damage to the steel belts themselves.

If the CVT unit is at fault, Injlectronics can offer a prompt repair service of the customer's own unit.

Be sure to remove the unit from the transmission with great care to ensure the legs of the CVT are not damaged. It is also advised to check the transmission pan for any signs of debris related to the steel bands. Remove the CVT unit from the valve body and clean any excess fluid before shipping. Injlectronics can also supply and program replacement units in the case of the customer's unit being unrepairable.

Repair Part Number: CVTABREP

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