

TGS LEVER

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DIAGNOSIS

1. TGS LEVER

DTC	Malfunction	Help tips
P1000-1	Defective program memory	<p>Cause: The calculated checksum value is not consistent with the stored checksum value.</p> <p>Symptom:</p> <ul style="list-style-type: none"> - Solenoid valve is inoperative. - Backup lamp is OFF. - CAN bus is OFF. - All shift lever position indicators are OFF. <p>Action:</p> <ul style="list-style-type: none"> - Reset the unit by cycling the ignition switch (OFF → ON) several times.
P1000-2	Defective data memory	<p>Cause: The malfunction is occurred during the RAM memory test with the ignition ON.</p> <p>Symptom:</p> <ul style="list-style-type: none"> - Solenoid valve is inoperative. - Backup lamp: OFF - CAN bus: OFF - All shift lever position indicators: OFF <p>Action:</p> <ul style="list-style-type: none"> - If the malfunction stays after turning the ignition switch from OFF to ON, replace the TGS lever.
P1000-3	Faulty MCU reset	<p>Cause: The malfunction is occurred during the microprocessor test with the ignition ON.</p> <p>Symptom:</p> <ul style="list-style-type: none"> - Solenoid valve is inoperative. - Backup lamp is OFF. - CAN bus is OFF. - All shift lever position indicators are OFF. <p>Action:</p> <ul style="list-style-type: none"> - Reset the unit by cycling the ignition switch (OFF → ON) several times.
P1000-4	Faulty MCU data process	
P1000-5	Faulty MCU watchdog function	
P1000-6	Too long MCU data throughput time	
P1750-2	Low battery voltage	<p>Cause: The battery voltage is low. (Specified value: less than 8.0 ± 0.3 V for 50 ms)</p> <p>Symptom:</p> <ul style="list-style-type: none"> - All shift lever position indicators are OFF. <p>Action:</p> <ul style="list-style-type: none"> - The operation is automatically resumed if the battery voltage is over 8.7 ± 0.3 V for 50 ms. - Check the shift lever connector and power line for contact.
P1817-1	Faulty backup lamp operating current	<p>Cause: The operating current is over 14 ~ 36 A for 50 ms when the backup lamp is in ON condition.</p> <p>Symptom:</p> <ul style="list-style-type: none"> - Backup lamp is OFF. - Current shift lever indicator is flashing. - Indicator "R" is flashing in "R" position. <p>Action:</p> <ul style="list-style-type: none"> - Check the input and output wirings of backup lamp for open and short.
P1832-1	Faulty solenoid operating current	<p>Cause: The solenoid valve operating current is over 3 ~ 5 A when the solenoid is operating.</p> <p>Symptom:</p> <ul style="list-style-type: none"> - Solenoid valve is OFF. - Current shift lever indicator is flashing. <p>Action:</p> <ul style="list-style-type: none"> - The operation is automatically resumed since the interior temperature is normally within the solenoid operating temperature range. If the problem stays, check the power to the shift lever.

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P1833-2	Open solenoid valve circuit	<p>Cause: The solenoid valve circuit is open or short to battery for 50 ms when the solenoid valve is OFF.</p> <p>Symptom: - Solenoid valve is OFF. - Current shift lever indicator is flashing.</p> <p>Action: - Check the power terminal to the shift lever.</p>
P1856-1	Short shift lever position signal (to B+)	<p>Cause: The shift lever position sensor or the power supply is malfunctioning.</p> <p>Symptom: - All shift lever position indicators are flashing.. - The incorrect lever position signal is transmitted through the CAN line.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 100 ms. - Check the power supply terminal to the shift lever.</p>
P1856-2	Open or short shift lever position signal (to GND)	<p>Cause: The shift lever position sensor is open or short to ground.</p> <p>Symptom: - All shift lever position indicators: flashing. - The incorrect lever position signal is transmitted through the CAN line.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 100 ms. - Check the power supply terminal to the shift lever.</p>
P1856-3	Abnormal shift lever position signal	<p>Cause: The shift lever position sensor signal is incorrect.</p> <p>Symptom: - All shift lever position indicators are flashing. - The incorrect lever position signal is transmitted through the CAN line.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 100 ms. - Check the power supply terminal to the shift lever.</p>
P1856-4	Incorrect shift lever position sensor coding	<p>Cause: The calibration value of shift lever position sensor is not stored or not consistent with the stored value.</p> <p>Symptom: - All shift lever position indicators are flashing. - The incorrect lever position signal is transmitted through the CAN line.</p> <p>Action: - Reset the unit by cycling the ignition switch (OFF → ON) several times. - Check the shift lever and replace it if necessary.</p>
P1860-2	Faulty vehicle speed signal	<p>Cause: The vehicle speed is detected as 300 km/h.</p> <p>Symptom: - The gear is shifted as for the vehicle speed is 0 km/h. - Current shift lever position indicator is flashing.</p> <p>Action: - The operation is automatically resumed if the fault is not detected. * For the shift lever, the vehicle speed data is needed to the solenoid valve operation for R/P lock and N lock function.</p>
P1875-3	Faulty CAN bus OFF signal	<p>Cause: The CAN bus OFF condition of the CAN controller is detected for 3 times in the unit.</p> <p>Symptom: - Cannot send the CAN message. - Current shift lever position indicator is flashing.</p> <p>Action: - Check the CAN communication line for open or short. - Check the shift lever and replace it if necessary. * CAN Bus OFF: The status that the CAN communication is totally interrupted if there is an error in the sent/received data through the CAN communication in the unit.</p>

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P1876-1	Abnormal CAN communication (vehicle speed)	<p>Cause: There is no vehicle speed signal via CAN communication for 500 ms.</p> <p>Symptom: - The gear is shifted as for the vehicle speed is 0 km/h. - Current shift lever position indicator is flashing.</p> <p>Action: - Check the CAN communication line.</p>
P1910-1	High battery voltage	<p>Cause: The battery voltage is too high. (Specified value: Over 16.3 ± 0.3 V for 50 ms)</p> <p>Symptom: - All shift lever position indicators: OFF</p> <p>Action: - The operation is automatically resumed if the battery voltage is over 16.3 ± 0.3 V for 50 ms. - Check the shift lever power supply line.</p>
P1912-1	Open/Short shift lever tip switch signal (to B+)	<p>Cause: The shift lever tip switch signal is open or short to B+.</p> <p>Symptom: - Indicator "M" is flashing due to malfunction when the shift lever is in manual mode position. - If the shift lever is not in "M" position, the malfunction is overridden.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 50 ms. - Check the shift lever tip switch.</p>
P1912-2	Short shift lever tip switch signal s(to GND)	<p>Cause: The shift lever tip switch signal is open or short to ground.</p> <p>Symptom: - Indicator "M" is flashing due to malfunction when the shift lever is in the manual mode position. - If the shift lever is not in "M", the malfunction is overridden.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 50 ms. - Check the shift lever tip switch.</p>
P1912-3	Abnormal shift lever tip switch signal	<p>Cause: The shift lever tip switch signal is faulty.</p> <p>Symptom: - Indicator "M" is flashing due to malfunction when the shift lever is in the manual mode position. - If the shift lever is not in "M" position, the malfunction is overridden.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 50 ms. - Check the shift lever tip switch.</p>
P1912-4	Open/Short steering wheel tip switch signal (to B+)	<p>Cause: The steering wheel tip switch signal is open or short to B+.</p> <p>Symptom: - Indicator "M" is flashing due to malfunction when the shift lever is in the manual mode position. - If the shift lever is not in "M" position, the malfunction is overridden. - The operation is automatically resumed if the fault is not detected for 50 ms.</p> <p>Action: - Check the steering wheel's tip switch.</p>
P1912-5	Open/Short steering wheel tip switch signal (to GND)	<p>Cause: The steering wheel tip switch signal is open or short to ground.</p> <p>Symptom: - Indicator "M" is flashing due to malfunction when the shift lever is in the manual mode position. - If the shift lever is not in "M" position, the malfunction is overridden.</p> <p>Action: - The operation is automatically resumed if the fault is not detected for 50 ms. - Check the steering wheel tip switch.</p>

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P1912-6	Abnormal steering wheel tip switch signal	Cause: The steering wheel tip switch signal is faulty. Symptom: <ul style="list-style-type: none"> - Indicator "M" is flashing due to malfunction when the shift lever is in the manual mode position. - If the shift lever is not in "M" position, the malfunction is overridden. Action: <ul style="list-style-type: none"> - The operation is automatically resumed if the fault is not detected for 50 ms. - Check the steering wheel tip switch.
P1912-7	Defective tip switch	Cause: The manual mode switch operates for 50 ms when the shift lever is P, R or N positions. Symptom: <ul style="list-style-type: none"> - Indicator "M" flashes if the shift lever is in D. - The mode is recognized as the manual mode even if the shift lever is in "D" position. Action: <ul style="list-style-type: none"> - The operation is automatically resumed if the fault is not detected for 50 ms and the shift lever is in P, R or N positions.
P1927-8	Faulty TCU shift	Check the TCU if there is errors related to the A/T shift.
P1928-4	Defective TCU CAN communication	Cause: The up/down shift command is not delivered to the TCU (faulty tip switch). <ul style="list-style-type: none"> - There is no CAN signal for 500 ms. Symptom: <ul style="list-style-type: none"> - Indicator "M" is flashing due to malfunction when the shift lever is in the manual mode position. - If the shift lever is not in "M" position, the malfunction is overridden. Action: <ul style="list-style-type: none"> - Check the CAN communication line.