

Electronic gearshifting mechanism practice task list - fault verification

Phenomenon		Does the instrument panel display the gear positions?	Does the displayed gear positions change with the movement of the gear-levershift lever ?	Can the heavy current be supplied?	Is READY available?	Is driving possible?	Is the driving speed limited?	Does any fault alarm lamp come on? (Is what information displayed?)	Is there any scan tool DTC and abnormal data flow found?	Do any other abnormalities occur?
The gear-levershift lever is damaged.	Damaged in P gear.	Y (N)	N	Y	Y	N	N	The ESC lamp comes on.		Power off is unavailable.
	Damaged in D gear.	Y (D currently)	N	Y	Y	Y	N	The ESC lamp comes on.		Power off is unavailable.
The P gear locking block is damaged.	Damaged in P gear.	Y (flashing)	N	Y	Y	N	N	N		Power off is available.
	Damaged in N gear.	Y	Y	Y	Y	Y	N	N		P gear can be displayed by the instrument panel, but P gear is actually unavailable.
The angle sensor is damaged.	Damaged in P gear.	N (P flashing)	N	Y	Y	N	N	N		Power off is available.
	Damaged in N gear.	N (P flashing)	N	Y	Y	N	N	N		Power off is available.
P gear locking motor is damaged.	Damaged in P gear.	Y	Y	Y	Y	N	N	N		Power off is available.
	Damaged in N gear.	Y	Y	Y	Y	Y	N	N		Power off is available.

- Summary:**
- Whether the vehicle can be powered with heavy current and the ready display has nothing to do with the P gear locking module, the angle sensor, and the P gear locking motor, as well as whether PEPS receives the P gear signal transmitted by the shift control unit (lever).
 - The instrument panel shows ready, but the vehicle does not necessarily travel.
 - Whether the MCU distributes power to the motor is related to whether the P gear locking module receives the P gear locking position signal from the angle sensor.
 - During the running of the vehicle, if any part of the gear-levershift lever, P gear locking module, angle sensor, and P gear locking motor is damaged, it will not affect the vehicle to continue running, but the gear position displayed by the instrument panel may be different. At this time, if the customer stops the vehicle and powers it off, the vehicle will not travel after power-on again (the MCU needs to receive the P gear unlocking successful signal before it can distribute power).
 - The damage to the angle sensor in N gear will cause D gear to be shifted and the motor can not distribute power. Damage to the P gear locking module and the P gear locking motor will have no effect on the power distribution.
 - Whether the vehicle is powered off is only related to whether the PEPS receives the P gear signal transmitted by the shift control unit (lever), but has nothing to do with the P gear locking module, the angle sensor, and the P gear locking motor.