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PARKING BRAKE AND ACTUATION

PARKING BRAKE (G2400939)

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PRINCIPLES OF OPERATION

For a detailed description of the electric park brake, refer to the relevant Description and Operation section in the workshop manual. REFER to: [Electric Park Brake](#) (206-05 Parking Brake and Actuation, Description and Operation).

INSPECTION AND VERIFICATION

 CAUTIONS:

- Diagnosis by substitution from a donor vehicle is **NOT** acceptable. Substitution of control modules does not guarantee confirmation of a fault, and may also cause additional faults in the vehicle being tested and /or the donor vehicle.
- Please note this is a sealed unit and no attempt must be made to open the actuator as it will invalidate any warranty claim.

 NOTES:

- If a control module or a component is at fault and the vehicle remains under manufacturer warranty, refer to the Warranty Policy and Procedures manual, or determine if any prior approval program is in operation, prior to the installation of a new module/component.
- Generic scan tools may not read the codes listed, or may read only 5-digit codes. Match the 5 digits from the scan tool to the first 5 digits of the 7-digit code listed to identify the fault (the last 2 digits give extra information read by the Jaguar Land Rover approved diagnostic equipment).
- When performing voltage or resistance tests, always use a digital multimeter that has the resolution ability to view 3 decimal places. For example, on the 2 volts range can measure 1mV or 2 K Ohm range can measure 1 Ohm. When testing resistance always take the resistance of the digital multimeter leads into account.
- Check and rectify basic faults before beginning diagnostic routines involving pinpoint tests.

1. Verify the customer concern
2. Visually inspect for obvious signs of damage and system integrity

Visual Inspection

MECHANICAL

ELECTRICAL

MECHANICAL	ELECTRICAL
■ Electric park brake actuators ■ Rear brake calipers ■ Rear brake discs ■ Rear brake pads	■ Fuses ■ Wiring harnesses and connectors ■ Anti-lock brake system control module ■ Electric park brake switch ■ Electric park brake actuators

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step

4. If the cause is not visually evident, verify the symptom and refer to the Symptom Chart, alternatively check for Diagnostic Trouble Codes (DTCs) and refer to the DTC Index

5. Check the JLR claims submission system for open campaigns. Refer to the corresponding bulletins and SSMs which may be valid for the specific customer complaint and complete the recommendations as required

SYMPTOM CHART

SYMPTOM	POSSIBLE CAUSES	ACTION
The electric park brake will not engage or release (with no electric park brake warning message)	■ Electric park brake left /right actuator incorrectly installed ■ Rear left/right brake pads excessively worn ■ Service brake incorrectly adjusted following brake pads change ■ Rear left/right brake pad (s) seized (in caliper) ■ Rear left/right brake caliper slide(s) seized ■ Rear left/right brake caliper piston(s) seized ■ Electric park brake system fault	■ Check the installation of the electric park brake actuators ■ Check the rear brake pads for excessive wear ■ Refer to the relevant section of the workshop manual and perform routine - Service Mode Deactivation ■ Check the rear brake pads for seizure ■ Check the rear brake caliper slides for seizure ■ Check the rear brake caliper pistons for seizure ■ Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index

SYMPTOM	POSSIBLE CAUSES	ACTION
The electric park brake will not engage or release (with electric park brake warning message)	■ Electric park brake left /right actuator incorrectly installed ■ Rear left/right brake pads excessively worn ■ Rear left/right brake pad (s) seized (in caliper) ■ Rear left/right brake caliper slide(s) seized ■ Rear left/right brake caliper piston(s) seized ■ Parking brake system fault	■ Check the installation of the electric park brake actuators ■ Check the rear brake pads for excessive wear ■ Check the rear brake pads for seizure ■ Check the rear brake caliper slides for seizure ■ Check the rear brake caliper pistons for seizure ■ Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index
No communication with the anti-lock brake system control module	■ Anti-lock brake system control module power or ground circuit open circuit, high resistance ■ High speed CAN bus (chassis) circuit short circuit to ground, short circuit to power, open circuit, high resistance ■ High speed CAN bus (powertrain) circuit short circuit to ground, short circuit to power, open circuit, high resistance ■ FlexRay bus circuit short circuit to ground, short circuit to power, open circuit, high resistance	■ Refer to the electrical circuit diagrams and check the anti-lock brake system control module power and ground circuits for open circuit, high resistance. Repair the wiring harness as necessary ■ Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus (chassis) circuit for short circuit to ground, short circuit to power, open circuit, high resistance. Repair the wiring harness as necessary ■ Using the manufacturer approved diagnostic system, perform a CAN network integrity test. Refer to the electrical circuit diagrams and check the high speed CAN bus (powertrain) circuit for short circuit to ground, short circuit to power, open circuit, high resistance. Repair the wiring harness as necessary ■ Refer to the electrical circuit diagrams and check the FlexRay bus circuit for short circuit to ground, short circuit to power, open circuit, high resistance. Repair the wiring harness as necessary
PARK BRAKE FAULT warning message displayed in the message center	■ Wheel/tire size incorrect ■ Electric park brake system fault	■ Check that the wheels and tires comply with the manufacturer's specification for the vehicle ■ Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index

SYMPTOM	POSSIBLE CAUSES	ACTION
Brakes drag	■ Electric park brake left /right actuator incorrectly installed ■ Rear left/right brake pads uneven wear ■ Rear left/right brake pads excessively worn ■ Rear left/right brake pad (s) seized (in caliper) ■ Rear left/right brake caliper slide(s) seized ■ Rear left/right brake caliper piston(s) seized ■ Parking brake system fault	■ Check the installation of the electric park brake actuators ■ Check the rear brake pads for uneven wear ■ Check the rear brake pads for excessive wear ■ Check the rear brake pads for seizure ■ Check the rear brake caliper slides for seizure ■ Check the rear brake caliper pistons for seizure ■ Using the manufacturer approved diagnostic system, check the anti-lock brake system control module for related DTCs and refer to the relevant DTC index

DTC INDEX

For a list of Diagnostic Trouble Codes (DTCs) that could be set on this vehicle, please refer to Section 100-00.

REFER to: [Diagnostic Trouble Code Index - DTC: Anti-Lock Brake System Control Module \(ABS\)](#) (100-00 General Information, Description and Operation).