MODEL	DATE	NUMBER
S-TYPE XJ, XK	28 FEB 2008	JTB00084 (Issue 1)

SERVICE

TECHNICAL BULLETIN

THIS BULLETIN REPLACES XJ206-07 AND S206-08.
CHANGES ARE NOT HIGHLIGHTED.

SECTION: 206

Electronic Parking Brake: Diagnostic Aid

AFFECTED VEHICLE RANGE:

S-TYPE (X200)	**VIN:**	**M45255 - N91220**
	Model Year:	**2003 - 2008**
XJ (X350)	**VIN:**	**G00442 - Onwards**
	Model Year:	**2004 - Onwards**
XK (X150)	**VIN:**	**B00001 - Onwards**
	Model Year:	**2007 - Onwards**

CONDITION SUMMARY:

ELECTRONIC PARKING BRAKE (EPB) ACTUATOR DIAGNOSTICS

Situation: This bulletin has been developed to act as a diagnostic aid in the course of diagnosis and repair the following customer concerns of the Electronic Parking Brake (EPB) actuator:

- Electronic parking brake fails to apply effectively (the parking brake may not apply at all; or the parking brake performance may be below the required standard).
- Electronic parking brake fails to release properly (brake drag).
- Red brake warning lamp illuminated (constant or flashing).
- Message center displays 'Parking Brake Fault' or 'Cannot Apply Parking Brake'

Diagnostic Trouble Codes (DTC) C1801-00 (C1801), C1802-00 (C1802), or C1803-00 (C1803 may also be logged.

Action: If a customer should express the above concern and one or more of the DTC's are stored, follow the Diagnostic Procedure outlined below in this bulletin.

PARTS:

No parts necessary

TOOLS:

IDS DVD 111 and the Midtronics PSC-550 Vehicle Power Supply

DIAGNOSTIC PROCEDURE

INITIAL VISUAL INSPECTION

1. Place the vehicle on a suitable lift.
2. Visually inspect the parking brake cable installation, parking brake caliper levers and general condition of the brakes.
   - Ensure the caliper levers are returning fully to their stops.
   - Confirm the cable routing is correct
   - Confirm that the cable is securely fixed at all abutment points and is free to move within the C-clip.
   - Where cable routing goes over the top of the stabilizer bar drop links, confirm that the stabilizer bar rubber deflector blocks are fitted, and that the brake cables have not been getting trapped behind the stabilizer bar drop links (look for tell-tale marks on the links and/or cables).

△ **NOTE: Global Technical Reference (GTR) lookup sequence is as follows: GTR Home > NAS > Model > Service Information > Model Year > Workshop Manual > 2: Chassis -- Section 206: Brake System**

△ **NOTE: Refer to the correct section by reference to VIN and based on whether the vehicle is fitted with high performance brakes or not.**

3. Rectify any obvious faults.
4. If no obvious faults are found or further guidance is needed to rectify faults, please proceed to the next stage of this bulletin. Refer to GTR Sections 206-05 (parking Brake and Actuation) and GTR Section 206-04 (Rear Disc Brake).
5. If any faults were found and rectified, it will be necessary to re-calibrate the parking brake after rectification. See 'Parking Brake Calibration' procedure.

PREPARE THE PARKING BRAKE FOR DETAILED INSPECTION

⚠ **CAUTION: Jaguar IDS DVD 111 or later and Midtronics PSC-550 Vehicle Power Supply must be connected to the vehicle battery during diagnosis.**

1. Install the Midtronics PSC-550 Vehicle Power Supply to the vehicle.
2. Connect the IDS to the vehicle and begin a new diagnostic session by entering the correct VIN for the current vehicle.
3. Follow the IDS prompts to read the vehicle configuration.
4. Select 'YES' when prompted 'Do you wish to read diagnostic trouble codes?'.
5. Follow all on-screen instructions to complete this task.
6. Select 'Vehicle Configuration' tab when the 'Content Model' is displayed.
7. Select 'Electronic Parking Brake'.
8. Select 'Release to Service Position' (S-TYPE/XJ) or 'Parking Brake Unjam Procedure'(XK) '.

⚠ **CAUTION: When using the special service tool, take care to operate in the 'release' direction. Actuator motor damage may result if the tool is operated in the 'apply' direction for any length of time).**

9. If the parking brake will not release using IDS, use the special service tool to fully release the parking brake. Refer to GTR Section 'Parking Brake Cable Tension Release' (in Section 206-05) for details of using the special service tool.

10. If the parking brake will not release using IDS or the special service tool and the only DTCs logged are C1801-00 (C1801), C1802-00 (C1802) or C1803-00 (C1803) then there may be a mechanical fault with the EPB Actuator. In this case the EPB Actuator will have to be replaced.

CALIPER INSPECTION

1. Remove the parking brake cables from the brake calipers.
2. Inspect the brake discs, pads and calipers as follows:
   - Check the discs and pads to ensure they are within the recommended wear specification. Look also for evidence of brake drag (binding brakes, signs of excessive heat build-up).
   - Ensure that the parking brake lever fully returns to its stop. Rock the lever by hand. You should be able to feel it hitting a positive stop.
   - Remove the brake pads (GTR Section 206-04). Ensure that the caliper pistons and slide pins are not seized.
   - Using the appropriate special tool, back off the caliper adjuster mechanism (GTR Section – Rear Brake Pads), ensuring the adjuster backs off freely.
   - Assemble the pads back into the caliper.
   - Install the caliper back into position.
   - Reset the caliper adjusters by pumping the foot brake at least 10 times in the case of the integrated parking brake and service brake caliper, or by manually operating the parking brake lever in the case of the dedicated parking brake caliper, used on some of the supercharged vehicles.

CABLE INSPECTION

1. Check the parking brake cables for visible damage or kinks.

△**NOTE: Refer to diagrams in Appendix 1 of this Bulletin to confirm correct cable routing.**

2. Check the cable routing is correct.
3. Check that the secondary cables move freely within their outer sleeves.
4. On vehicles where the cable routing goes over the top of the stabilizer bar links, confirm that the rubber deflector blocks on top of the stabilizer bar links are securely fixed and that there is no indication that the cables have been dropping down to the rear side of the stabilizer bar links.
5. Check that the cable abutments are correctly located and that the abutment retaining tags are intact. When the cables are slack, it should not be possible to pull them out of the abutment brackets.
6. Check that the parking brake primary C-clip is securely fixed in position and that the cable is free to slide within the C-clip. Ensure that the primary cable is not damaged where it passes through the C-clip.
7. Connect the cables to the calipers.

PARKING BRAKE CALIBRATION

△**NOTE: After carrying out any work on the parking brake or rear brake calipers and discs, the parking brake requires calibration.**

1. Carry out a 30-second power reset on the EPB Module:
   - Switch the ignition 'off'.
   - Remove the EPB Fuse (check wiring diagram in GTR to confirm which fuse to remove).
   - **OR** disconnect the battery ground cable.
2. After replacing the fuse or reconnecting the battery, start the engine.

3. Confirm that the message 'NOT CALIBRATED' or 'APPLY FOOT AND PARKING BRAKE' is displayed on the instrument cluster message centre. This indicates that the parking brake is in calibration mode.
4. Firmly apply and release the foot brake five times.
5. Lightly hold your foot on the brake pedal.
6. Apply the parking brake by using the EPB switch.
7. Release the parking brake using the switch.
8. Release the foot brake.
9. Confirm that the brake warning lamp is not illuminated on the instrument pack and that the 'NOT CALIBRATED' or ' APPLY FOOT AND PARKING BRAKE' messages are no longer displayed in the message centre.
10. Apply and release the parking brake five additional times using the EPB switch to ensure no error is present.

IF PARKING BRAKE FAULTS ARE STILL PRESENT

1. If any of the 'C1800' parking brake faults re-occur after carrying out the actions detailed in this bulletin, it may be necessary to renew the EPB Actuator.

APPENDIX 1

FIGURE 1: EPB Cable Routing – S-TYPE and XJ (Normally Aspirated: pre-06MY) and S-TYPE, XJ and XK (07MY-onwards: all derivatives except XKR) (Plan View).

Figure 1

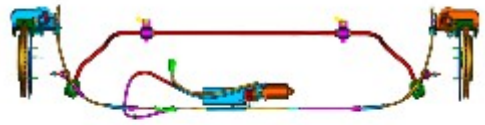

FIGURE 2: EPB Cable Routing – S-TYPE and XJ (Normally Aspirated: pre-06MY) and S-TYPE, XJ and XK (07MY-onwards: all derivatives). Primary cable routing around subframe (viewed from underneath vehicle).

Figure 2

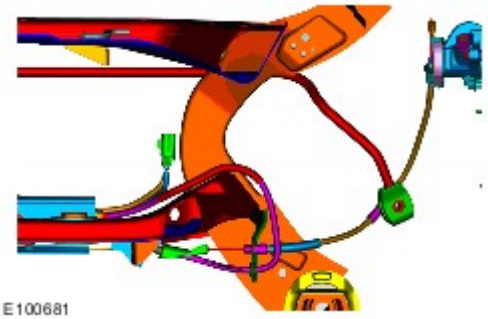

FIGURE 3: EPB Cable Routing – S-TYPE and XJ (Normally Aspirated: pre-06MY) and S-TYPE, XJ and XK (07MY-onwards – all derivatives). Detail of cable routing over stabilizer bar deflector blocks.

Figure 3

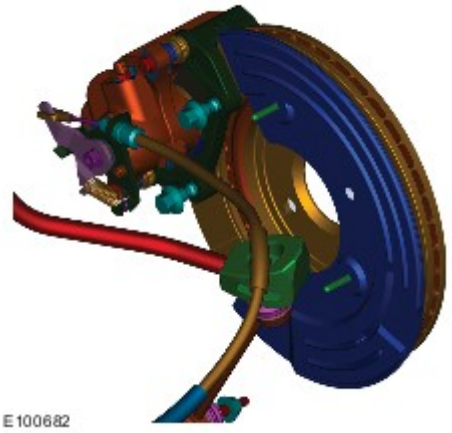

FIGURE 4: Detail of outer cable abutment. Ensure that the abutment retaining clips are intact so that the outer cable does not pull out, even when slack.

Figure 4

FIGURE 5: Detail of C-clip. Ensure that the cable and clip are fixed into position and that the cable is not damaged and free to move within the clip.

Figure 5

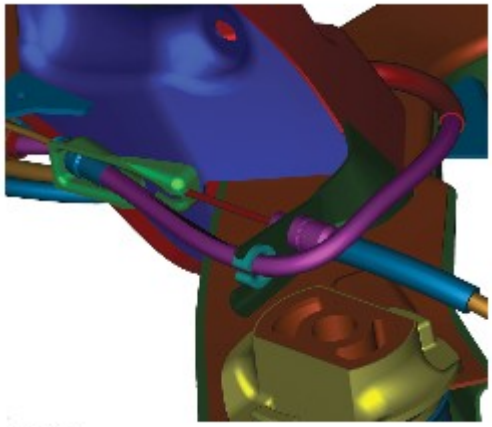

FIGURE 6: EPB Cable Routing – S-TYPE 'R' and XJR (Supercharged: pre-06MY) (Plan View).

Figure 6

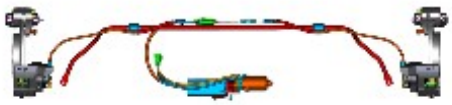

FIGURE 7: EPB Cable Routing – S-TYPE 'R' and XJR (Supercharged: pre-06MY). Primary cable routing over subframe.

Figure 7

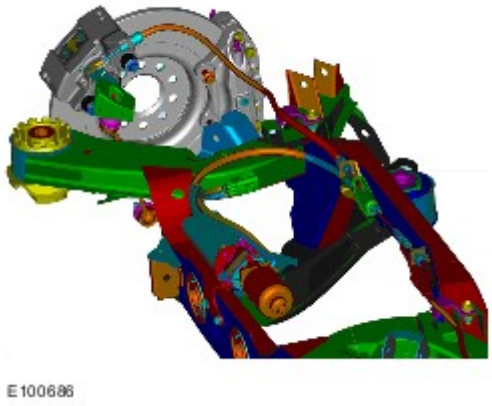

FIGURE 8: EPB Cable Routing – XKR (Supercharged: 07MY-onwards) (Plan View).

Figure 8

FIGURE 9: EPB Cable Routing – XKR (Supercharged: 07MY-onwards). Primary cable routing around subframe.

Figure 9