

SERVICE CAMPAIGN BULLETIN

TITLE:	Electronic Parking Brake (EPB) Caliper Bolt Check - FED
CAMPAING REFERENCE	03H
DOCUMENT NUMBER:	11 C 008
AFFECTED VEHICLES:	McLaren 12C Coupe and Spider
SITUATION:	Engineering at McLaren Automotive have identified that there is a number of McLaren vehicles which may have been fitted with EPB caliper bolts with the incorrect thread lock which may result in torque relaxation in the bolts.
PROCEDURE:	Please follow the procedure outlined in this document which explains how to check the bolts and what should be the next steps.

Preparation work:

1. Please refer to AA-RM-02A04-04-007 - Lift vehicle on lifting platform
2. Please refer to AA-RM-03B03-01-001 - Remove/install wheel to remove both rear wheels

Instructions:

Care Point: The instructions below must be carried out on both sides so in total four EPB bolts must be checked.

Care Point: Is not required to remove the EPB actuator electrical connector (1) at this stage.

1. Using a paint pen, mark one line on each bolt (2) and (3). The paint mark must cross from the head of the bolt to the EPB caliper (4).

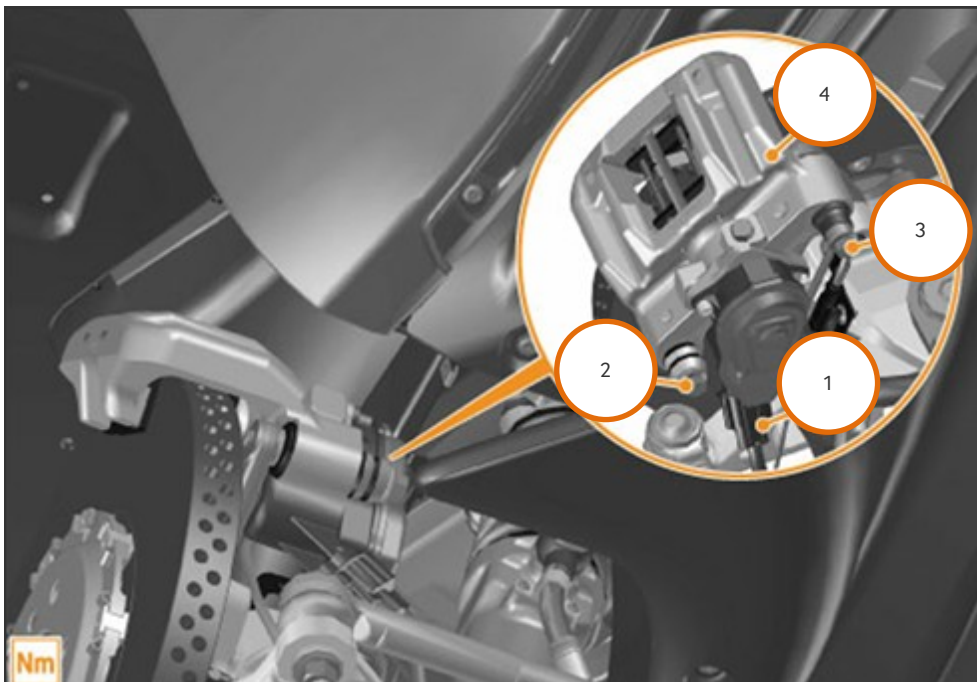
Care Point: The torque applied to check the EPB caliper bolts must be loosening torque (anti-clock wise). To check loosening torque it is necessary to use an appropriate torque wrench and not a standard torque wrench which is used to torque-up bolts.

Care Point: Do not apply more than 40Nm of loosening torque to the EPB caliper bolts during the check.

2. Apply 40Nm loosening (anti-clock wise) torque using a torque wrench to bolts.
3. Remove the torque wrench and check paint marks. If the applied loosening (anti-clock wise) torque has moved one or both bolts then the EPB caliper bolts and EPB carrier bracket needs to be replaced with new ones.

Care Point: Only replace EPB caliper bolts and the EPB carrier bracket of the side that has failed the torque check.

4. If the applied loosening (anti-clock wise) torque has not moved the EPB caliper bolts, no further action is required. Install components in reverse order.



Removal:

Care Point: Ensure that the EPB is not applied.

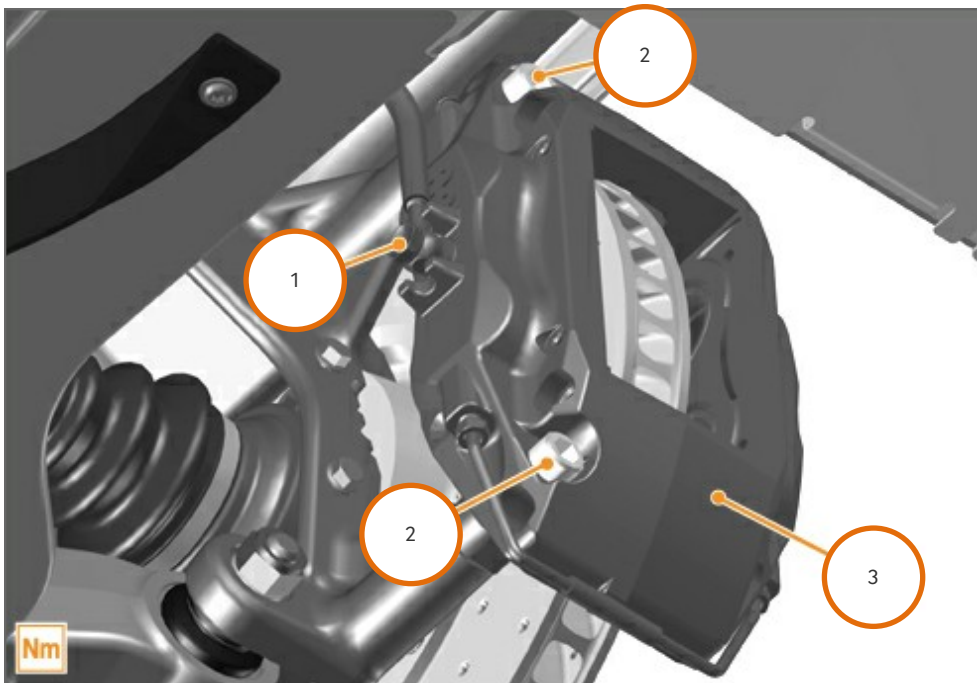
1. Remove EPB caliper bolts M10 x 85 33Nm.
2. Remove the EPB caliper.
3. To replace the EPB carrier bracket the brake disc caliper should be detached and secured and the brake disc should be removed.

Care Point: Do not remove banjo bolt (1).

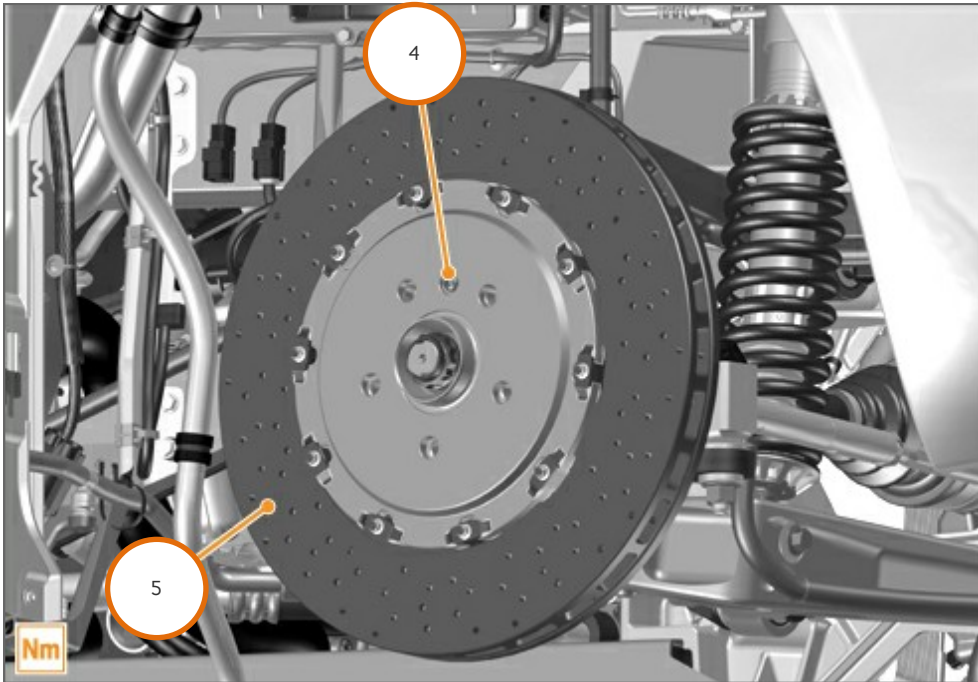
Care Point: Do not let caliper hang on brake hose.

4. Remove brake caliper bolts (2)
CCM discs M12 x 85 93Nm
Iron discs M12 x 66 71Nm

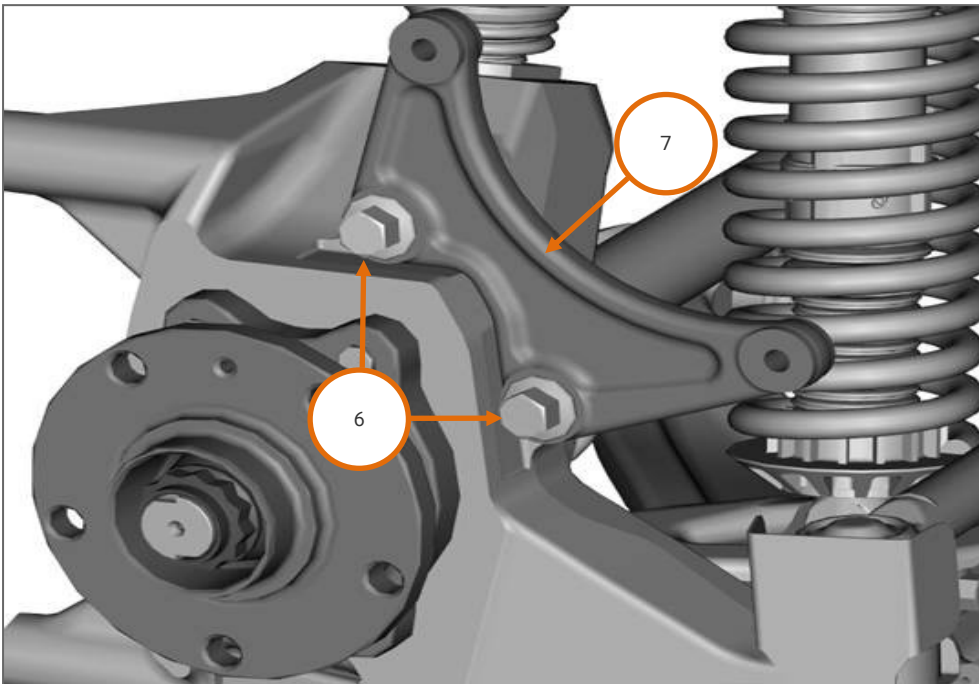
5. Detach caliper (3) and hang in suitable location with cable tie.



- 6. Remove bolt (4) M6 x 15 10Nm.
- 7. Remove brake disc (5).



- 8. Remove EPB carrier bracket bolts (6) M12 x 35 120Nm.
- 7. Remove EPB carrier bracket (7).

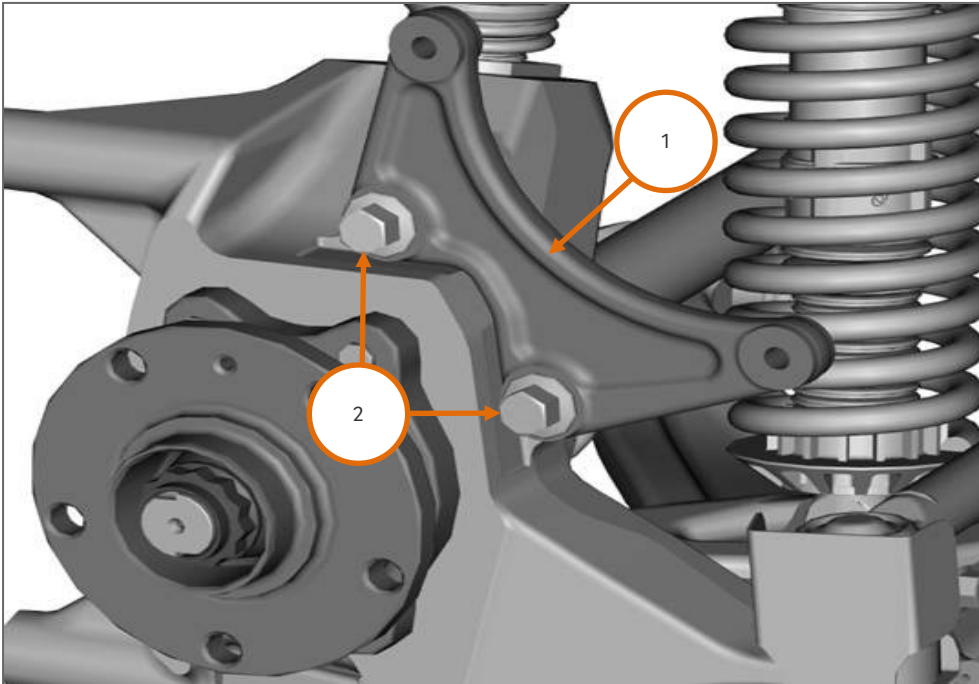


Installation:

Care Point: The installation procedure is identical for both sides.

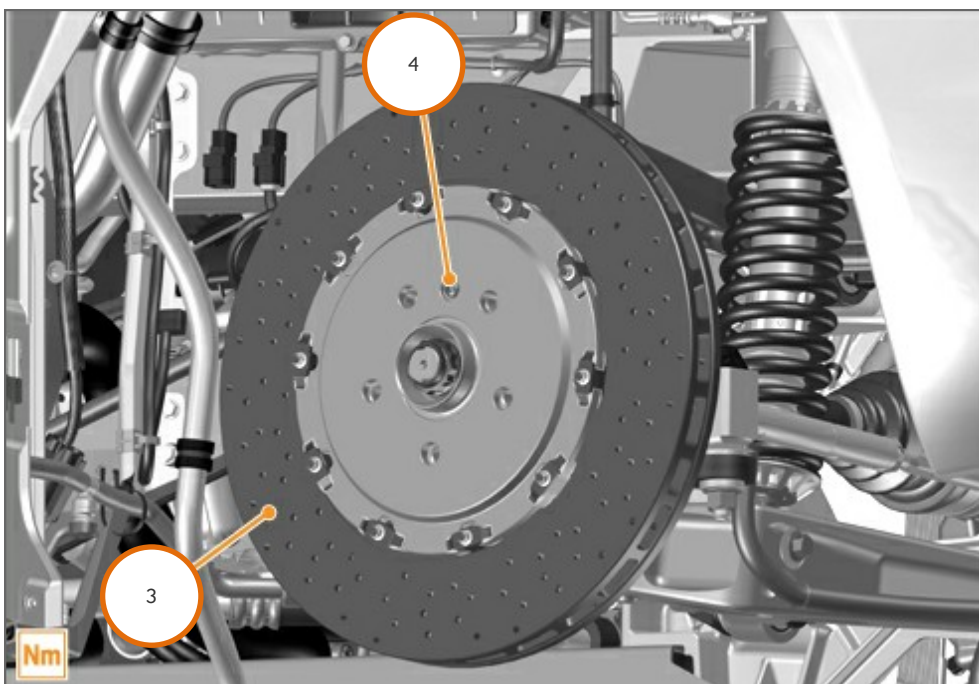
Care Point: The EPB carrier bracket is different for Iron and CCM discs and the CCM one is also handed.

1. Install the new EPB carrier bracket (1) with new bolts (2) M12 x 35 120Nm.



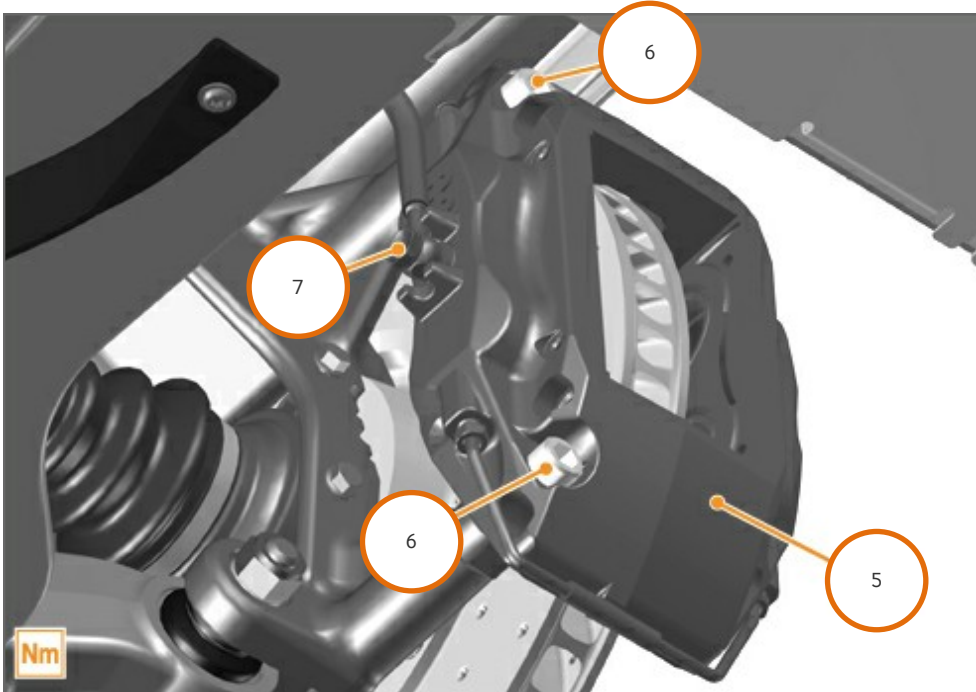
2. Install brake disc (3).

3. Install new bolt (4) M6 x 15 10Nm.

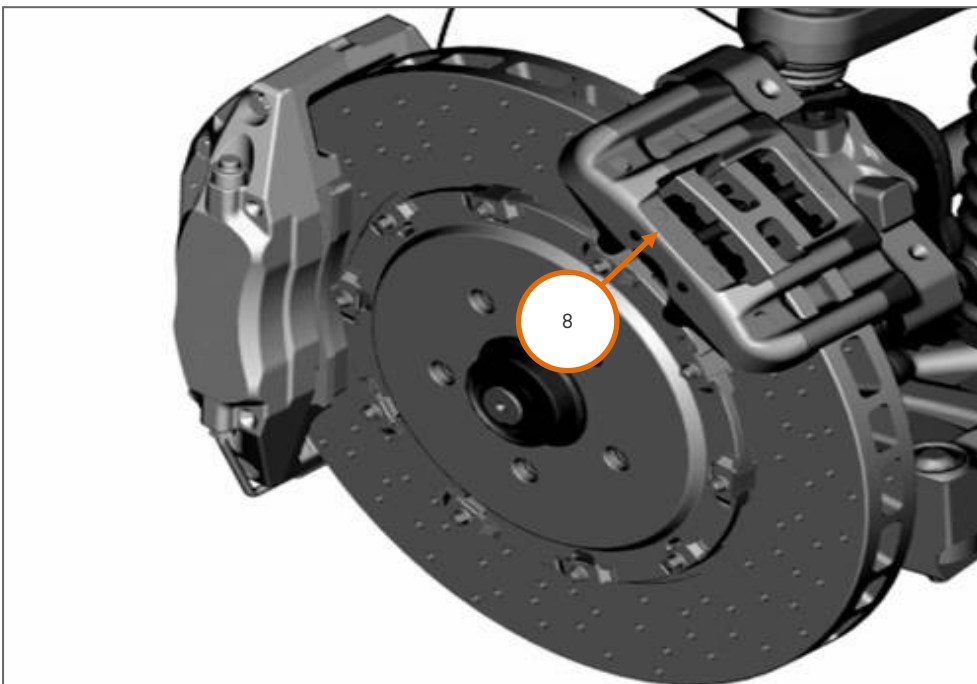


- 4. Install brake caliper (5).
- 5. Install new brake caliper bolts (6)
CCM discs M12 x 85 93Nm
Iron discs M12 x 66 71Nm

Care Point: Ensure that the brake pipe (7) is properly fitted.

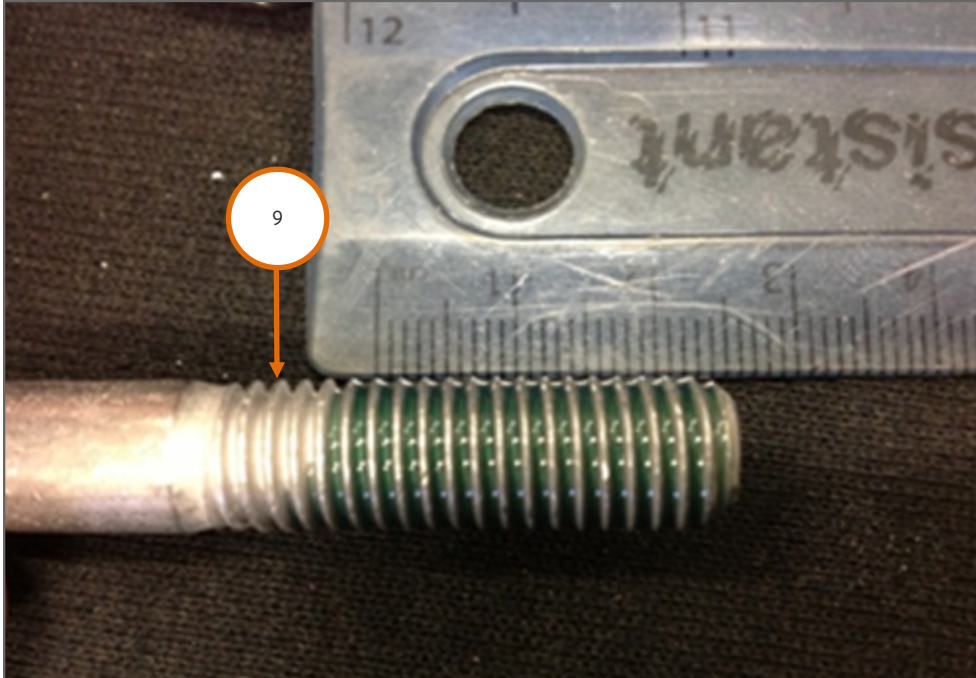


- 6. Install EPB caliper (8).



Care Point: When replacing EPB caliper bolts, ensure the first 25mm of the bolt thread has an even distribution of Loctite 270 or Loctite 2701 around its circumference leaving approximately 6 to 7 threads clean towards the shank of the bolt (9).

Care Point: Some EPB caliper bolts will have 25mm thread length i.e. shorter than others. Ensure that Loctite 270 or 2701 is applied to the whole length of the thread.

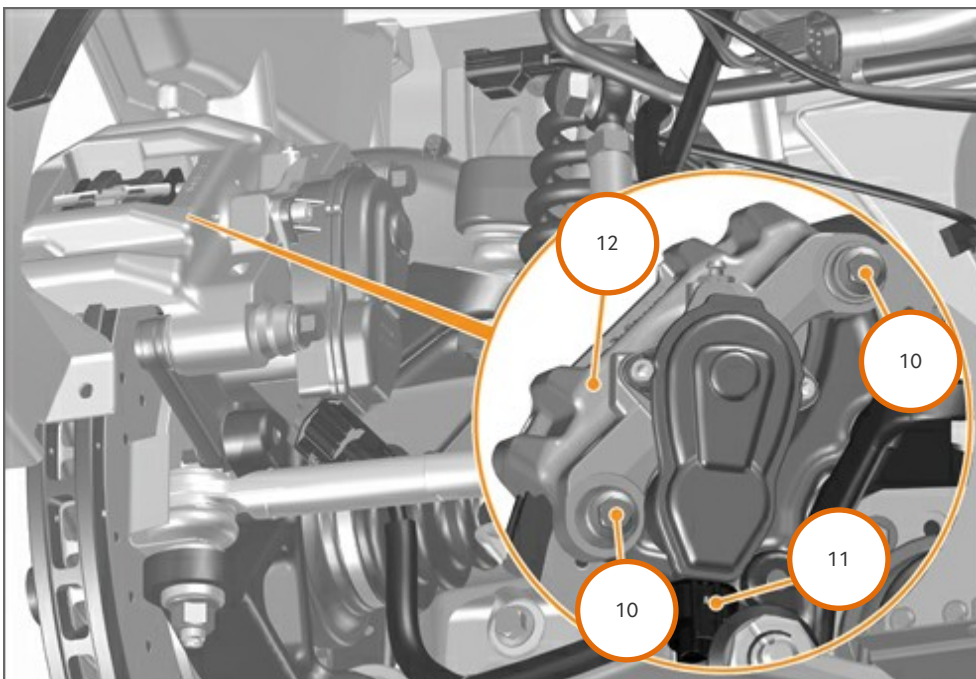


7. Install new EPB caliper bolts (10) M10 x 85 33Nm.

Care Point: Ensure audible 'click' can be heard on connector installation.

Care Point: Conduct a pull test to ensure EPB actuator electrical connector is correctly fitted.

8. Install the EPB actuator electrical connector (11) to the EPB caliper (12).



9. Install components in reverse order.
10. Check functionality of the EPB brakes.

Please contact your Regional Aftersales Manager should you have any questions relating to the information contained in this bulletin.

Warranty Information: If the EPB caliper bolts and EPB carrier bracket require replacement an additional time of 0.3 hours per side could be claimed in the Additional Costs section of the warranty claim.

WARRANTY INFORMATION

DESCRIPTION	RESOLUTION CODE	TOTAL REPAIR TIME
EPB Bolt Check Only	BOC20113A1999902	0.7 hours

PARTS INFORMATION

DESCRIPTION	PART NUMBER	QUANTITY	ORDER PROCESS
EPB Caliper Bolt Kit - Iron	11C0431CP	1 per side	Unipart
EPB Caliper Bolt Kit - LH - CCM	11C0437CP	1 per side	Unipart
EPB Caliper Bolt Kit - RH - CCM	11C0581CP	1 per side	Unipart
Torque wrench *	N/A	1 unit	Locally

Care Point: An initial stock of the above kits will be auto-issued to each dealer from Unipart. If more parts are required please order via Unipart.

*If the appropriate torque wrench is not available in the workshop, an anti-clockwise direction torque wrench can be locally sourced with the following recommended specifications. The cost of the torque wrench will be covered by McLaren if is within the defined cost range below;

Torque control in both the clockwise and anti-clockwise directions
 Torque range: 8-60Nm
 Cost range: £100 - 150 GBP