

**SERVICE BULLETIN**

**Subject: Installation of Concentric Slave Cylinder (CSC)**

**CPD Part No:  
OPE204C**

**Issue Date:** March 2018  
**Specific Vehicle:** Alfa Romeo, Fiat, Opel, Saab  
**Specific Model:**

**Alfa Romeo:** 159  
**Fiat:** Croma (194)  
**Opel:** Astra G, Astra H, Combo, Corsa C, Corsa D, Meriva, Signum, Tigra, Vectra B, Vectra C, Zafira  
**Saab:** 9-3

**I. Installation Procedure**

- a) Replace the gasket (2) and the CSC (1), tighten by hand to begin with.
- b) Make sure the bolts are tightened evenly to prevent the cylinder from tilting.
- c) Next insert the adaptor (3) into the CSC via the opening in the transmission housing. There will be an audible click when the adaptor is correctly engaged.
- d) Tighten the three fixing bolts with spring washers on the CSC to 10 (+1) Nm.
- e) Installation Procedure
- f) Complete the installation by connecting the above on the open end of the tube on the CSC.
- g) A click sound should be heard for a complete attachment.

- **Prior assembling the CSC, confirm the used gaskets are removed.**
- **Take note of specification from manufacturer.**

**I. MANDATORY Bleeding Procedure**

A brake bleeding device should not be connected and switched on during manual bleeding. If the clutch pedal is actuated with a brake bleeding device connected, the concentric slave cylinder can be “over-pressurized”. An “over-pressurized” concentric slave cylinder is no longer able to function and must be replaced! Manual bleeding should be carried out using the following process:

- a) **DO NOT COMPRESS THE CSC BY HAND** to replicate bearing movement before installation as the increased air pressure can cause the back plate to move out of position and as the chamber is not filled with hydraulic fluid damage can also be caused to the internal seals

- b) **DO NOT DEPRESS THE PEDAL IN QUICK SUCCESSION** when bleeding; this can cause the cylinder to overstroke and damage the end cap; depress just once and wait for hydraulic system to stabilize (risk of over pressure inside CSC)
- c) Depress clutch pedal;
- d) Open bleed valve;
- e) Keep clutch pedal depressed until fluid appears – Do not release!
- f) Close bleed valve;
- g) Release clutch pedal slowly;

**Do not depress the clutch pedal in quick succession during bleeding; Depress slowly once at a time.**

The clutch bleeding cycle must be repeated 20 to 25 times (recommended) to guarantee complete bleeding. Top up the level of the fluid in the reservoir between the cycles. The level of the fluid must not drop below the minimum mark on the reservoir during bleeding!

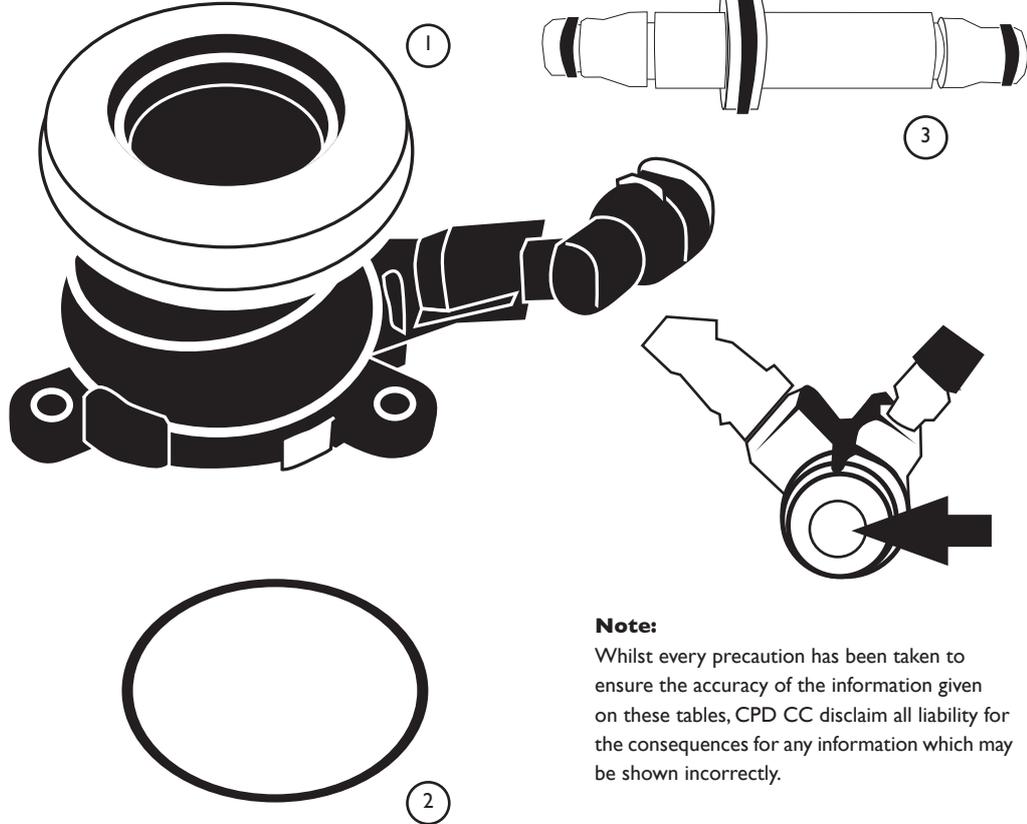
Problems with bleeding mainly occur in concentric slave cylinders with bleed valves in the hydraulic line. It is recommended only bleeding these systems manually.

- **Always use DOT3 OR DOT4 brake fluid as recommended by service manual. Do not use mineral oil**
- **Perform manual bleeding for CSC**

## 2. Brake Fluid / Clutch System / CSC cleanliness

Contamination may cause sporadic leaks when dirt articles accumulate under the sealing lip and may also cause permanent leaks when the lip seal swells

- Exclusively use brake fluid with at least DOT 3. When open, do not store the fluid longer than one year.
- Change the fluid at planned interval (Refer to car owners' manual)
- Drain the old fluid and rinse the line system with sufficiently new fluid.
- Remove the compensating reservoir and clean it carefully.
- The entire CSC system must be free from oil and grease. Otherwise the lip seals swell.
- Avoid grease on hands and oil on cleaning rags.
- Avoid using silicone in assembly.
- Make sure to remedy any leaks on engine and gearbox. Make sure that the gear bell housing is sufficiently sealed.
- In order to avoid contamination during repair work, always close hydraulic and pipe connectors properly,



### Note:

Whilst every precaution has been taken to ensure the accuracy of the information given on these tables, CPD CC disclaim all liability for the consequences for any information which may be shown incorrectly.