## Bulletin No:Parts 2013 – DR1152Date:31st July 2013Audience:Parts Managers, Collision IndustrySubject:Cam Sensor Fault Code after Collision Repair to Holden Cruze

There have recently been a number of reports from members of the collision industry that a cam sensor fault code has been activated on a small number of Holden Cruzes after minor front end collision damage has been repaired.

The characteristics of the fault are as follows;

- The fault has not been present before the collision repair took place.
- The fault may be continuous or intermittent after the collision repair has been completed.
- When inspected by a Holden authorised dealer, the cam sensor fault cannot be cleared even after replacement of associated parts.
- A magnetic field of more than 2 Gauss in the region of the cam sensor can be detected by a calibrated Gauss meter, and as high as 4 Gauss on associated parts like exhaust manifolds (normally both < 0.5 Gauss). Refer to pics attached below.

Holden engineers have inspected some vehicles in which the fault code is activated and note the following issues with the collision repairs that have been performed on these vehicles;

- Welding performed on components where it is not required in the Holden Approved Procedures. One specific example is the Front Reinforcement Bar which is attached using 8 bolts and does not need to be welded during replacement.
- Some welding was considered to be of poor quality and showing signs of failure.
- Several panel repairers could not provide dimensional checks to verify integrity of body structure prior to conducting repair.

Holden strongly advises that collision repairers adhere to the following recommendations regarding any font end damage of the Cruze:

### Holden authorised procedures:

1. It is critical that authorised Holden repair procedures are followed when repairing any Holden vehicle. Welding, particularly for front end damage, should not be carried out unless Holden explicitly state this is required in their procedures. Procedures can be found online at www.acdelcotds.com

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### Welding:

2. If the repair does require welding, repairers should follow the instructions specified in Holden approved procedures where available or when unavailable should follow industry standard best practices e.g. ensuring a good <u>local</u> earth is achieved and testing your welder/welding (perform test welds) settings before commencing repairs on the car. Always ensure perfect panel surface preparation for any welded surface, as high resistance during welding will most likely expose the vehicle to high magnetic fields, for longer than normal times. Holden engineers recommend only using "clamp type" earth connections, not "magnetic clamp" earths on the welding equipment. Additionally, if clear access to welding locations cannot be achieved, please ensure all sensitive parts are removed from the vehicle. If in doubt, remove parts, and store them at least 2 metres from welding equipment whilst repairs are being conducted.

#### Defective welding equipment:

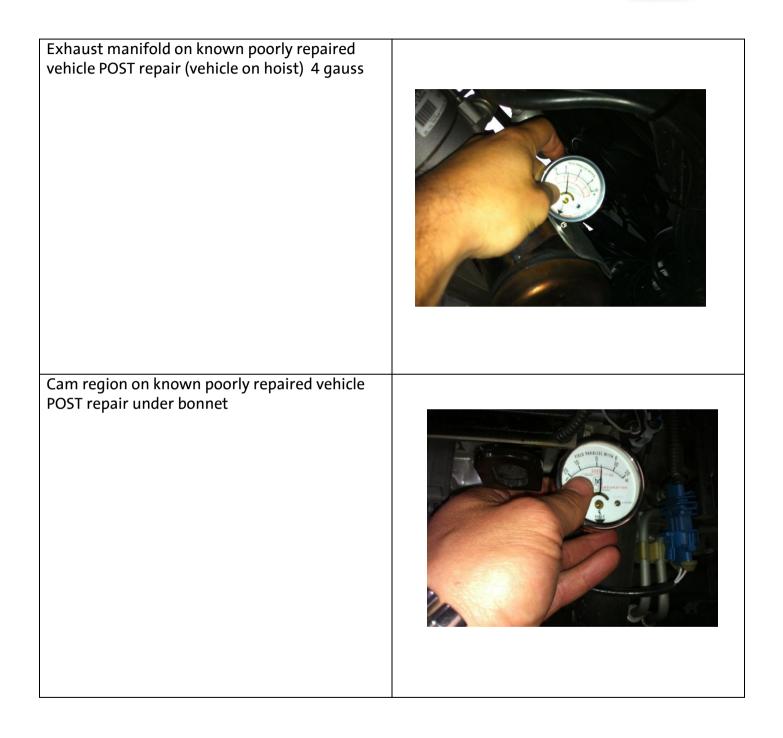
3. Defective welding equipment may be a possible cause of development of a magnetic field in vehicle components. Holden has examined vehicles without front end damage and have recorded only very low levels of magnetism. Using defective welding equipment may exacerbate the problem and result in the defective code being activated. Holden specifies that GM approved welders should be used.

Please see images below for further clarification:

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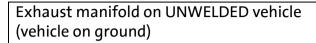
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