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2016 Chevrolet Impala Service and Repair Manual

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YOUR CURRENT VEHICLE

Anti-Corrosion Treatment and Repair

Anti-Corrosion Treatment and Repair

Corrosion Preventative Paint (Chassis Coating) and Primer Coatings

NOTE

Note

Always use these products according to their manufacturer's recommendations. Corrosion Resistant paint and primers will only function properly when mixed properly and when applied to a properly prepared metal surface. Always follow paint manufacturers recommendations for application and use of Corrosion Preventative Paint Products.

Corrosion Preventative Primers are also referred to as Direct to Metal or DTM primers. Extensive testing is done for corrosion resistance and adhesion of these products. Most paint manufacturers require a bare metal treatment chemical first be applied before the paint or primer product is applied. These coatings are very important to providing a properly prepared metal surface for the paint or primer to perform properly. The GM Approved Primers are listed in the GM Approved Refinish Materials book. The latest revision of the GM Approved Refinish Materials booklet is located on the GM Genuine Parts website at www.genuinegmparts.com.

Corrosion Preventative Paint Products are recommended for under-carriage areas like frames, drive line and suspension components that often show corrosion and need to be painted in the field. Any place where bare metal is exposed for any reason or where corrosion prevention is desired from a paint like product that will not likely be top coated with color can use this Corrosion Preventative Paint. A Phosphate metal treatment MUST be applied to the cleaned and dried surface that is free of corrosion scale. This Phosphate prep works well on both Aluminum and steel. While sandblasting can be performed for corrosion removal, it is not necessary for these products to work properly. Application of this product must be performed to Manufacturer's recommendations for them to work properly. See product listing below for Corrosion Preventative Paint Products.

8. **NOTE**

   Note

   It may take up to 2 min for all vehicle systems to power down before an accurate ground or low reference circuit continuity test can be performed.

   Ignition/Vehicle & All vehicle systems » Off

9. Test for less than 10 Ω between the test points:Ground circuit terminal 3 X6&Ground
   - **If 10 Ω or greater**
     1. Ground Connection »Disconnect
     2. Test for less than 2 Ω between the test points:Ground circuit terminal 3 X6&Ground Connection
        - If 2 Ω or greater » Repair the open/high resistance in the circuit.
        - If less than 2 Ω » Repair the open/high resistance in the ground connection.
   - **If less than 10 Ω**
10. Test or replace the component:

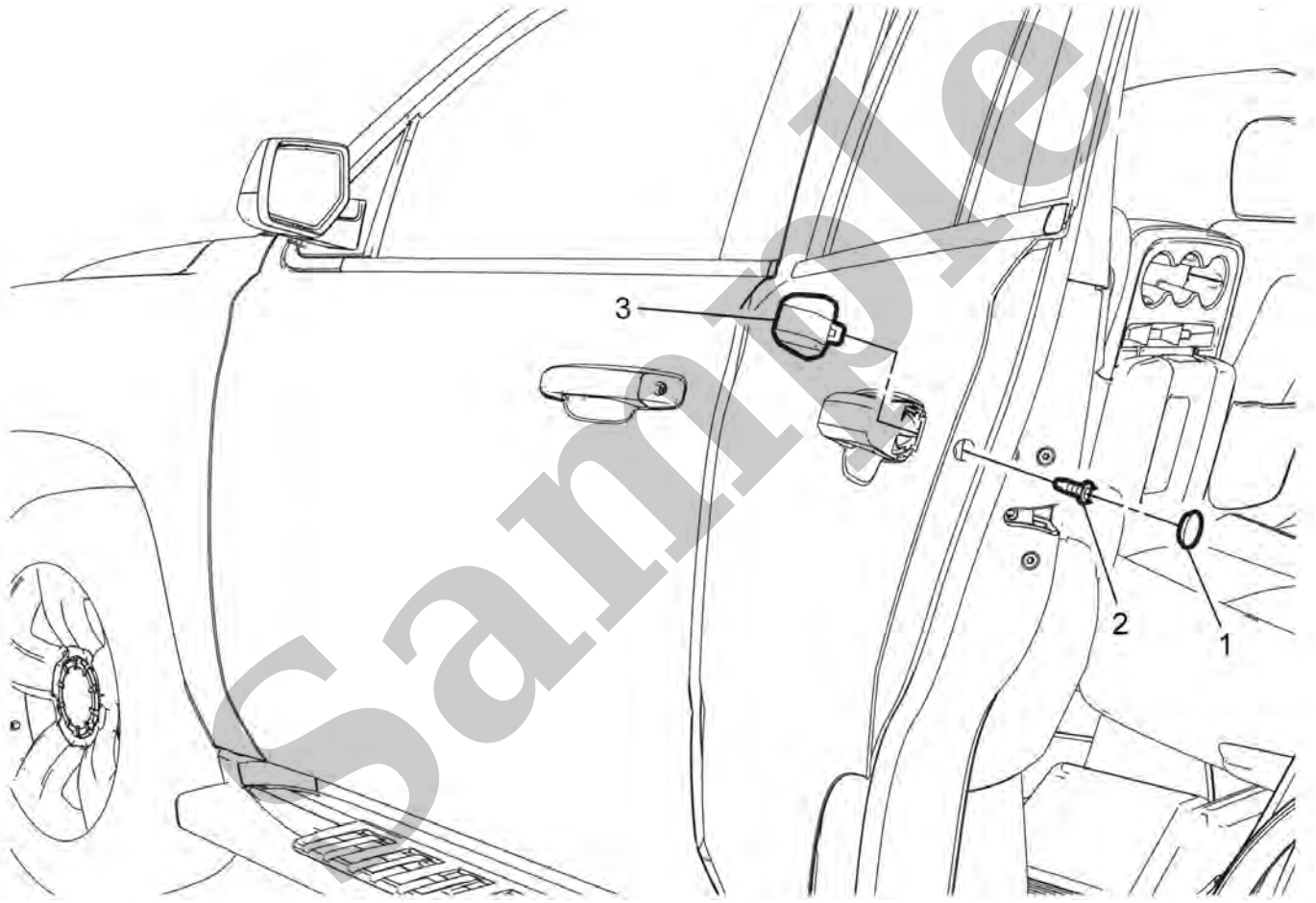
- A23D Door Latch Assembly - Driver
- A23P Door Latch Assembly - Passenger
- A23LR Door Latch Assembly - Left Rear
- A23RR Door Latch Assembly - Right Rear
- M27 Fuel Fill Door Unlatch Actuator

Component Testing

1. Ignition/Vehicle » Off
2. Disconnect the appropriate electrical connector:
   - A23D Door Latch Assembly - Driver
   - A23P Door Latch Assembly - Passenger
   - A23LR Door Latch Assembly - Left Rear
   - A23RR Door Latch Assembly - Right Rear

Rear Side Door Lock Cylinder Opening Cover Replacement

Rear Side Door Lock Cylinder Opening Cover Replacement (Short Wheelbase)



Rear Side Door Lock Cylinder Opening Cover Replacement

Callout	Component Name
1	Rear Side Door Access Hole Cover **NOTE** **Note**

HW Hard-Wired

HW Hard-Wired

DD Serial Data - GMLAN High Speed

DD Serial Data - GMLAN High Speed

HW Hard-Wired

HW Hard-Wired

HW Hard-Wired

HW Hard-Wired

DF Serial Data Chassis Expansion Bus

DA Serial Data

KSG CRUISE CONTROL: AUTOMATIC, ADAPTIVE, WITH STOP/GO

Schematics RPO Code List

P16 P16 Instrument Cluster

S48E S48E Multifunction Switch - Center Console

B22 B22 Brake Pedal Position Sensor

K9 K9 Body Control Module

K20 K20 Engine Control Module

K71 K71 Transmission Control Module

K17 K17 Electronic Brake Control Module

Q5 Q5 Brake Pressure Modulator

B5RR B5RR Wheel Speed Sensor - Right Rear

B5LR B5LR Wheel Speed Sensor - Left Rear

B5RF B5RF Wheel Speed Sensor - Right Front

B5LF B5LF Wheel Speed Sensor - Left Front

B129 B129 Cruise Control Vehicle Distance Sensor Module

B99 B99 Steering Wheel Angle Sensor

K36 K36 Inflatable Restraint Sensing and Diagnostic Module

This vehicle is equipped with a TRW EBC460 brake system. The electronic brake control module and the brake pressure modulator are serviced separately. The brake pressure modulator uses a four circuit configuration to

YOUR CURRENT VEHICLE

DTC C124F, C1250, or C1251

DTC C124F, C1250, or C1251

Diagnostic Instructions

- Perform the Diagnostic System Check - Vehicle prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions provides an overview of each diagnostic category.

DTC Descriptors

DTC C124F	Lateral Acceleration Sensor Circuit Low Voltage
DTC C1250	Lateral Acceleration Sensor Circuit High Voltage
DTC C1251	Lateral Acceleration Sensor Performance

For symptom byte information refer to Symptom Byte List.

Circuit/System Description

The yaw rate, lateral acceleration and longitudinal acceleration sensors are combined into one multi-axis acceleration sensor, internal to the inflatable restraint sensing and diagnostic module. The multi-axis acceleration sensor communicates with the electronic brake control module and transmission control module via serial data. The electronic brake control module activates the stability control function depending on the multi-axis acceleration sensor input. The inflatable restraint sensing and diagnostic module uses the multi-axis acceleration sensor to determine if the vehicle is in a roll over or near collision incident. The transmission control module sets these DTCs.

- If any hydraulic component is removed or disconnected, it may be necessary to bleed all or part of the brake system.
- The torque values specified are for dry, non-lubricated fasteners.
- Perform the service operations on a clean bench, free from all mineral oil materials.

1. Remove the brake caliper from the vehicle. Refer to Front Brake Caliper Replacement.
2. Drain the brake fluid from the brake caliper.
3. **CAUTION**

   Caution

   Use clean cloths to pad interior of caliper housing during piston removal. Use just enough air to ease the pistons out of the bores. If the pistons are blown out, even with the padding provided, it may be damaged.

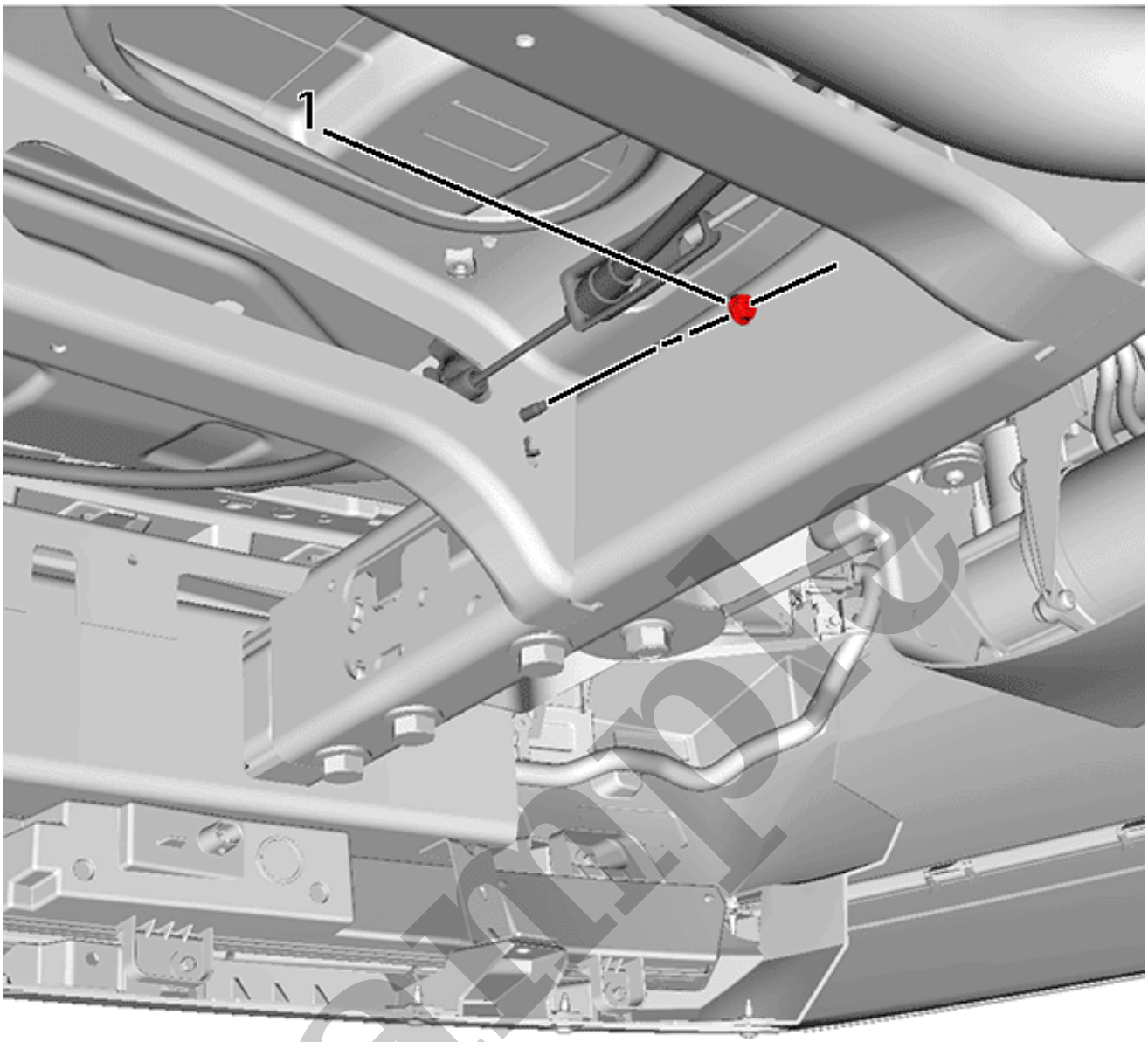
   Place a 25 mm (1 in) block of wood between the caliper and the piston.
4. Install a large C-clamp over the body of the brake caliper with the C-clamp ends against the rear of the caliper body and against the block of wood.
5. Carefully remove the brake caliper piston by directing low pressure compressed air into the brake caliper inlet hole.
6. Remove the C-clamp from the caliper.
7. Remove the block of wood from the caliper.
8. Install clean cloths to pad the interior of the caliper housing between the remaining caliper piston and the caliper body.
9. To cover the open caliper bore, place a 25 mm (1 in) block of wood between the caliper body and the brake caliper dust boot seal.
10. Install a large C-clamp over the body of the brake caliper with the C-clamp ends against the rear of the caliper body and against the block of wood.
11. Carefully remove the brake caliper piston by directing low pressure compressed air into the brake caliper inlet hole.
12. Remove the C-clamp form the caliper.

Brake Pedal Return Spring Replacement

Brake Pedal Return Spring Replacement (without JF4)

Removal Procedure

1. Block the drive wheels.



13.

Install the parking brake cable bracket nut (1) and tighten to ***9 N·m (80 lb in)*** .