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#PI0281G: Underbody Component Corrosion - (Apr 6, 2018)

Subject: Underbody Component Corrosion

Models: 2019 and Prior GM Passenger Cars and Trucks (including Medium Duty Low Cab Forward)

Attention: This PI also applies to any of the above models that may be Export from North America vehicles.

This PI has been revised to add the 2018-2019 Model Years. Please discard PI0281F.

The following information may be helpful when addressing underbody component corrosion with customers.

Some customers may comment that one or more of their vehicle's underbody components are showing some form of corrosion.

This corrosion may be red in appearance (rust) if the component is steel, forged iron or cast iron.

This corrosion may also be grey or white in color if the component is constructed of an aluminum alloy.

Note: Extended outside storage may increase the opportunity for brake rotor rust. Vehicle braking systems tend to be self-cleaning while vehicles are in use, preventing any build-up of corrosion on the brake rotor surfaces. At times more extensive corrosion can cause pulsation due to thickness variation. This usually happens when the vehicle is parked for long periods of time in humid type conditions and the braking surface area under the pads corrode at a different rate compared to the rest of the braking surface area. Cleaning up of braking surfaces (burnishing) can be accomplished by 10-15 moderate stops from 56-64♦km/h (35-40♦mph) with cooling time between stops. If multiple, moderate braking stops do not correct this condition, refer to the latest version of Corporate Bulletin Number 00-05-22-002 - Disc Brake Warranty Service and Procedures for additional information.

Corrosion Protection

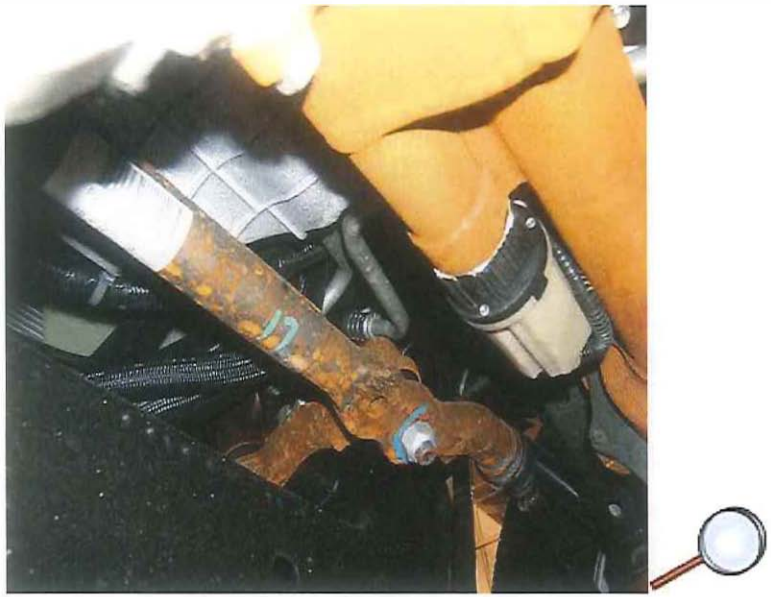
General Motors uses a large variety of materials in the manufacture of vehicles. Many of these components undergo an extensive corrosion protection process. These components include major body structures, powertrain, wiring and electrical components and various other areas of the vehicle. General Motors engineering determines the effects of corrosion on every vehicle component.

Acceptable Corrosion

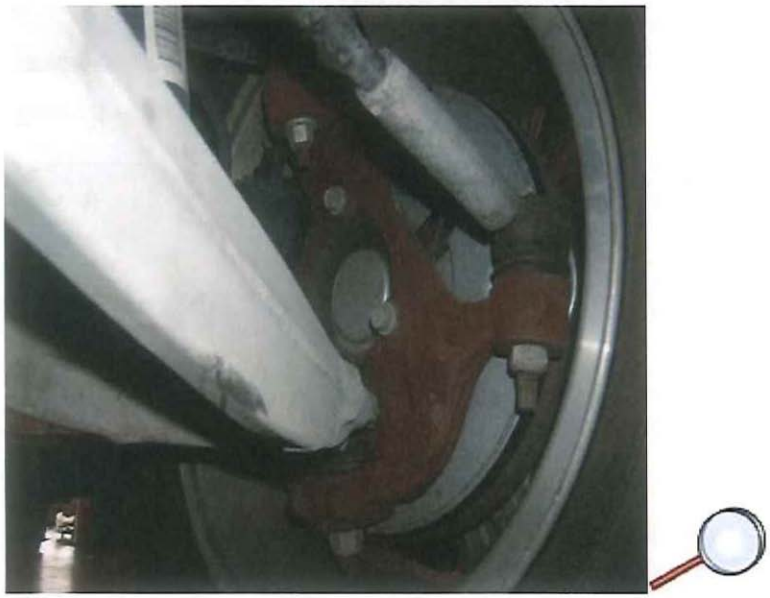
General Motors has determined that the performance of some components is not affected by surface corrosion and no longer takes preventative steps on these parts.

Rust

This corrosion may be red or brown in appearance if the component is made of steel, forged iron or cast iron.

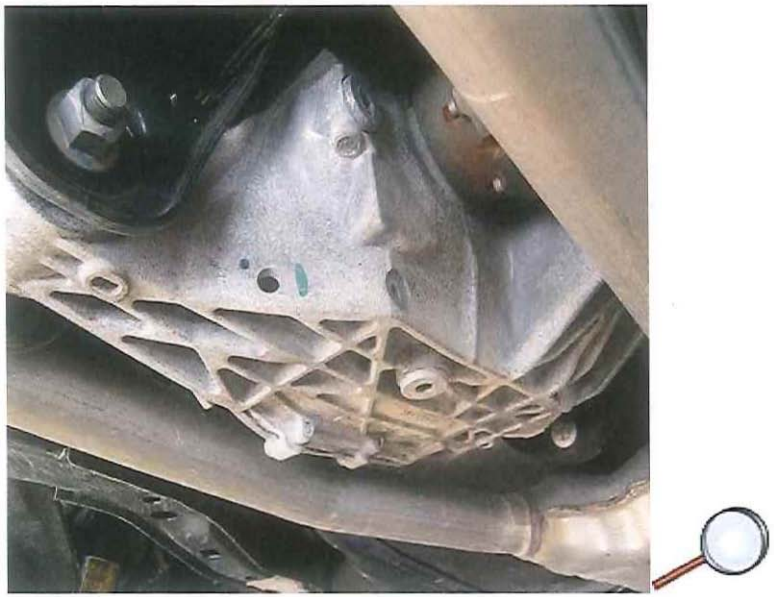


Steering linkage



Steering knuckle

Leaf spring



Rear differential housing

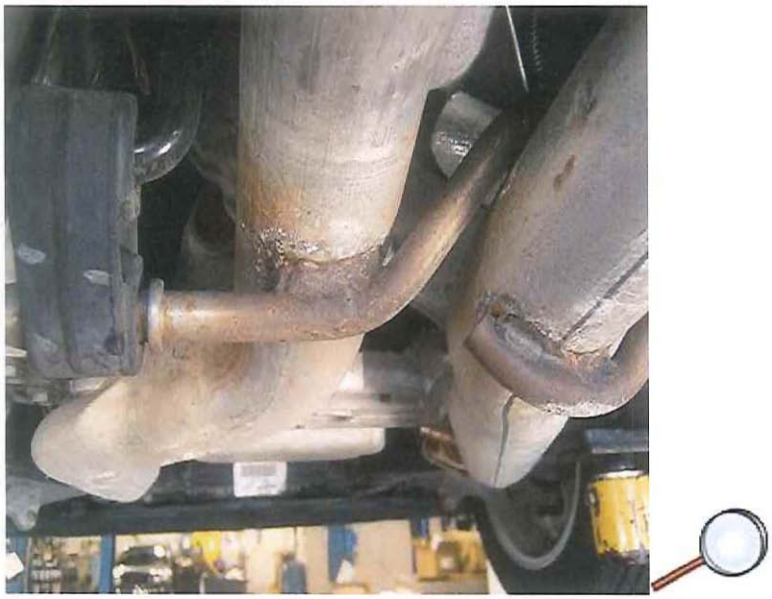
Exhaust system components

Note: During transit between the plant and the dealer, some of the exhaust system components may corrode as a result of salt exposure. These exhaust parts are made of a bare mild-grade stainless steel that will oxidize, or appear rusty. Over time, these components will have a uniform rust-like discoloration, which should be considered a normal condition.

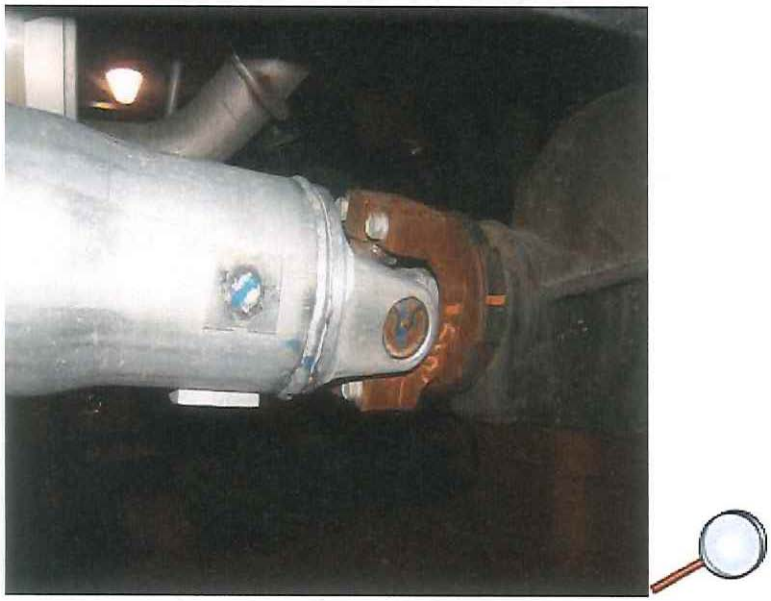
Recommendation

No repair or consideration should be given for this condition. Surface corrosion on unprotected components will vary with age and exposure. Corrosion on these components has no detrimental impacts, either in short or long term durability.

Under hood components



Tie rod end



Propshaft yoke

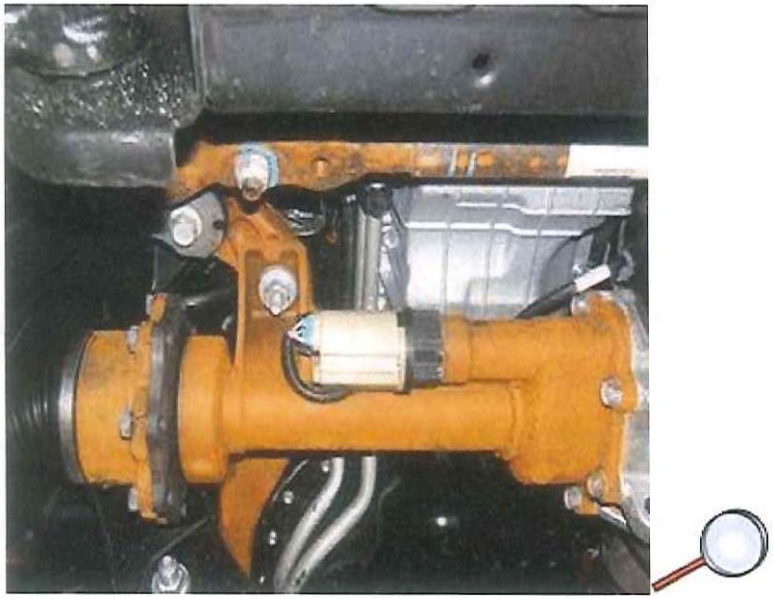
These are typical underbody or mechanical components such as but not limited to propshafts, propshaft yokes, U-joint, steering knuckles, brake rotors and calipers, axle housings, springs, shock absorbers, suspension control arms, tie rod ends and exhaust system components. As the rust ages, it turns from an orange-red like appearance to a darker brown like appearance.

Aluminum Oxidation

Cast aluminum alloy components may appear to have a grey or white coating on the surface commonly known as "surface oxidation." Uncoated aluminum alloys begin to oxidize as soon as it is exposed to the atmosphere. This coating does not affect the serviceability or performance of the component.

Many mechanical components are cast in aluminum alloys, these components may include, but are not limited to oil pans, valve covers, transmission and transfer case housings, steering gears and axle housings.

Typical Appearance



Front axle housing