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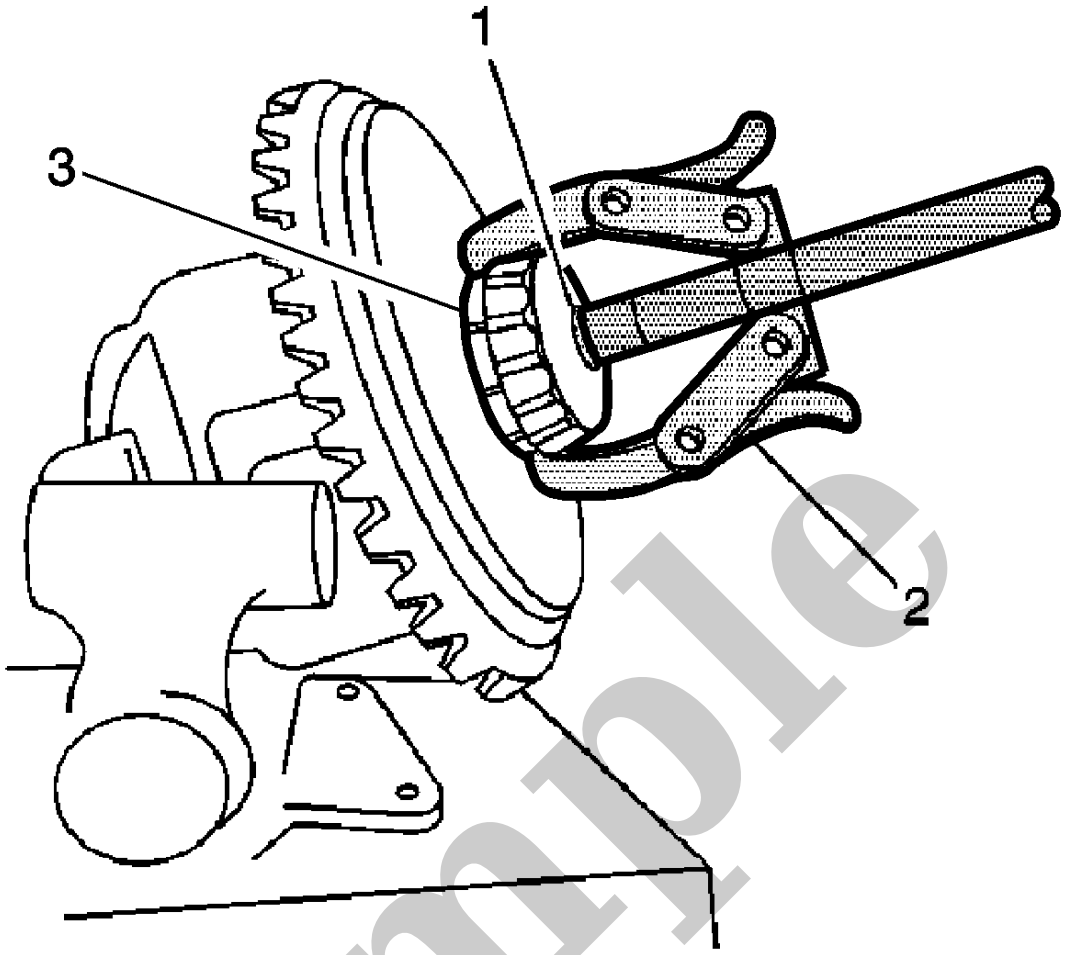
2023 Chevrolet Silverado 4500 HD 5500 HD 6500 HD Service and Repair Manual

Go to manual page

DTC	Diagnostic Procedure
P2319	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P0351-P0358, P2300, P2301, P2303, P2304, P2306, P2307, P2309, P2310, P2312, P2313, P2315, P2316, P2318, P2319, P2321, or P2322
P2321	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P0351-P0358, P2300, P2301, P2303, P2304, P2306, P2307, P2309, P2310, P2312, P2313, P2315, P2316, P2318, P2319, P2321, or P2322
P2322	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P0351-P0358, P2300, P2301, P2303, P2304, P2306, P2307, P2309, P2310, P2312, P2313, P2315, P2316, P2318, P2319, P2321, or P2322
P250A	Displays and Gauges - DTC P250A
P2534	Wiring Systems and Power Management - DTC P2534 or P2535
P2535	Wiring Systems and Power Management - DTC P2534 or P2535
P2537	Wiring Systems and Power Management - DTC P2537
P2544	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P150C, P155D, P15F2, P1762, P1773, P1775, P188B, P18EF, P1919, or P2544
P254F	Bolted Exterior Body Panels and Closures - DTC P254F
P2561	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P00FF, P069E, P06EC, P0700, P0800, P0A7B, P0AC4, P0CA1, P1700, P1E00, P2561, P25A2, P25AF, P25C9, P26C8, or P26C9
P257D	Bolted Exterior Body Panels and Closures - DTC P257D-P257F
P257E	Bolted Exterior Body Panels and Closures - DTC P257D-P257F
P257F	Bolted Exterior Body Panels and Closures - DTC P257D-P257F
P25A2	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P00FF, P069E, P06EC, P0700, P0800, P0A7B, P0AC4, P0CA1, P1700, P1E00, P2561, P25A2, P25AF, P25C9, P26C8, or P26C9
P25AF	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P00FF, P069E, P06EC, P0700, P0800, P0A7B, P0AC4, P0CA1, P1700, P1E00, P2561, P25A2, P25AF, P25C9, P26C8, or P26C9
P25C9	Engine Controls and Fuel - 5.3L (L83) or 6.2L (L86) - DTC P00FF, P069E, P06EC, P0700, P0800, P0A7B, P0AC4, P0CA1, P1700, P1E00, P2561, P25A2, P25AF, P25C9, P26C8, or P26C9

Parameter	System State	Expected Value	Description
Particulate Matter Sensor Control Unit Communication Status	—	Ready	This parameter displays the communication status of the particulate matter sensor control unit.
Particulate Matter Sensor Identifier	—	#	This parameter displays the value sent from the sensor control unit to engine control module to provide sensor build information in order for the software to compensate for sensor variations.
Particulate Matter Sensor Measurement	—	Active	This parameter displays the status of the particular matter sensor.
Particulate Matter Sensor Operation	—	Allowed	This parameter displays if the exhaust temperature dew point is reached to allow the particulate matter sensor to operate.
Particulate Matter Sensor Regeneration	—	Inactive	This parameter displays Active when the particulate matter sensor is regenerating.
Particulate Matter Sensor Status	—	Ready	This parameter displays the status of the particulate matter sensor.
Particulate Matter Sensor Temperature	—	°C (°F)	This parameter displays the current temperature of the particulate matter sensor in Celsius and Fahrenheit.
Pilot Injection	—	Inactive	Pilot Injection Active indicates that pilot injections are active.
Positive Crankcase Ventilation Heater Command	—	On/Off	This parameter displays the current command of the positive crankcase ventilation heater.
Positive Crankcase Ventilation Heater Control Circuit High Voltage Test Status	—	OK	This parameter displays the state of the positive crankcase heater control circuit. The parameter displays Malfunction if the positive crankcase heater control circuit is shorted to voltage.
Positive Crankcase Ventilation Heater Control Circuit Low Voltage Test Status	—	OK	This parameter displays the state of the positive crankcase heater control circuit. The parameter displays Malfunction if the positive crankcase heater control circuit is shorted to ground.



2.

Install the J-22888-20A (2) and the **J-8107-2** ***side bearing puller pilot*** (1) as shown.

3. Remove the differential side bearings (3) using the J-22888-20A.

11. Remove the differential assembly from the vise.

Front Drive Axle Inner Shaft Replacement

Front Drive Axle Inner Shaft Replacement (Right Side)

Removal Procedure

1. Raise the vehicle. Lifting and Jacking the Vehicle
2. Drain the differential carrier. Front Axle Lubricant Replacement
3. Remove the power steering assist motor. Power Steering Assist Motor Replacement

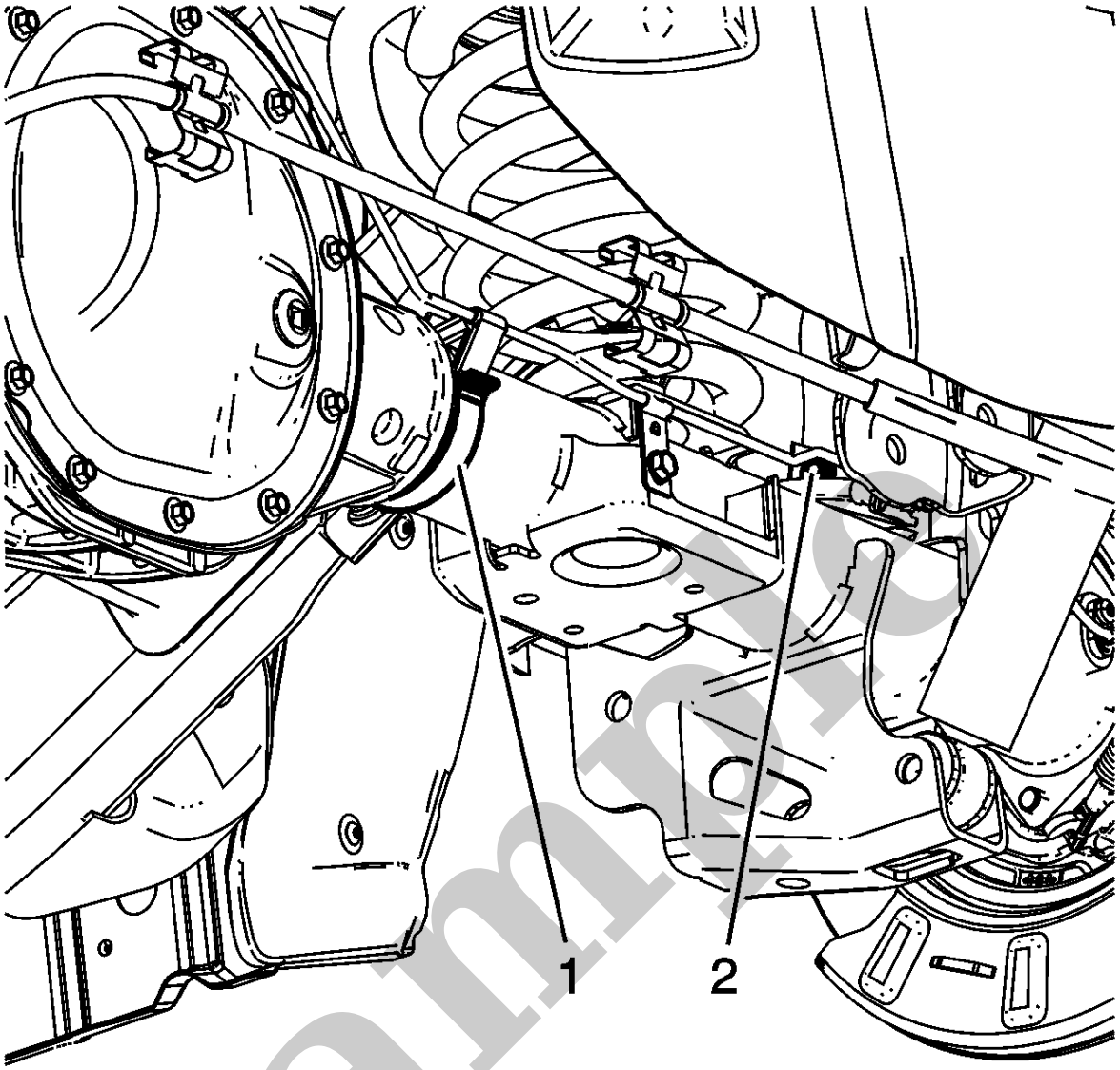
YOUR CURRENT VEHICLE

Pinion and Ring Gear Inspection

Pinion and Ring Gear Inspection

Ring and pinion gears are matched sets. When replacement of one or the other is necessary, both the ring and pinion gear must be replaced.

- Check the pinion and ring gear teeth for cracking, chipping, scoring, or excessive wear.
- Check the pinion gear splines for wear.
- Check the pinion flange/yoke splines for wear.
- Check the fit of the pinion gear splines on the pinion flange/yoke.
- Check the sealing surface of the pinion flange/yoke for nicks, burrs or rough tool marks that could damage the seal and cause an oil leak.
- Check for worn or broken parts and replace as necessary.



18.

Remove the rear brake pipe from the retaining strap (1).

19. Remove the brake pipe retaining bracket bolt (2).

- **If the cable is not the correct part or damage is noted advise the customer.**
- **If no issues with the cable**

7. Connect a compatible USB device to the USB port and attempt to play audio.
8. Verify audio from the device is heard through the vehicles speakers.
   - **If audio is not heard through the vehicles speakers.**

     Refer to Auxiliary Audio Input Malfunction
   - **If audio is heard through the vehicles speakers.**
9. Verify the radio detects the device wireless or when plugged in by automatically launching Android Auto or noting a change in the Phone Projection/Android Auto icon on the Home screen.
   - **If the radio does not automatically launch Android Auto or no change in the Phone Projection/Android Auto icon.**
     1. Perform a device reset by holding both the Home and Power buttons on the device.
     2. Verify the radio detects the connected device when plugged in by automatically launching Android Auto or noting a change in the Phone Projection/Android Auto icon on the Home screen.
        - If the radio does not automatically launch Android Auto or no change in the Phone Projection/Android Auto icon.
     3. Attempt to launch the application by pressing the Phone Projection/Android Auto icon within the Home screen.
        - If the application does not launch
     4. Perform the 3 vehicle Factory Resets located in Setting>System>Return to Factory Settings.
     5. Attempt to launch the application by pressing the Phone Projection/Android Auto icon within the Home screen.
        - If the application does not launch

          Replace the A11 Radio.
        - If the application does launch

          All OK
   - **If the radio does automatically launch Android Auto.**
10. All OK.

Repair Instructions

DTC B127E

DTC B127E (MAH/MBC)

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 Descriptor

DTC B127E 00	Front Video Display Output Signal

Circuit/System Description

The infotainment display and controls are a separate component from the radio, combined into an assembly. The assembly is supplied battery voltage and ground from the vehicle harness. The human machine interface control module communicates digital video data for on-screen display through a dedicated cable containing the LVDS data circuits.

Control information, touch communications and dimming level for the display are communicated via a LIN serial data circuit to the human machine interface control module.

If the human machine interface control module detects the display is not responding to the output on the LVDS circuits, the human machine interface control module sets the DTC.

Diagnostic Aids

Extended exposure to high temperatures, especially when in direct sunlight may result in the display becoming inoperative. Under these conditions, it may be normal for the display to shut down to preve