# Your Ultimate Source for OEM Repair Manuals

FactoryManuals.net is a great resource for anyone who wants to save money on repairs by doing their own work. The manuals provide detailed instructions and diagrams that make it easy to understand how to fix a vehicle.

## 2018 Chevrolet Malibu Service and Repair Manual

Go to manual page

1. Access the Service Programming System (SPS) and follow the on-screen instructions.
2. On the SPS Supported Controllers screen, select K40P Seat Memory Control Module – Passenger - Programming and follow the on-screen instructions.
3. Clear DTCs.

**Unsuccessful Programming Recovery**

In the event of an interrupted or unsuccessful programming event, perform the following steps:

1. Ignition ON. Ensure the control module, DLC and programming tool connections are secure and the SPS software is up to date.
2. Verify the control module can be reprogrammed.
    - **If the control module cannot be reprogrammed**

    1. Ignition OFF for one minute, ignition ON.
    2. Verify the control module can be reprogrammed.
        - If the control module cannot be reprogrammed, replace the control module.
        - If the control module can be reprogrammed.
    3. All OK.

    - **If the control module can be reprogrammed**

3. All OK.

**Repair Instructions**

Perform the Diagnostic Repair Verification after completing the repair.

Control Module References for Control Module replacement, programming and setup

| Parameter | System State | Expected Value | Description |
|---|---|---|---|
| Calculated Air Flow | — | Varies g/s | This parameter displays the air flow as calculated by the control module. |
| Calculated BARO | — | Varies kPa | This parameter displays the barometric pressure as calculated by the control module. |
| Calculated Catalyst Temperature Bank 1 or 2 | — | Varies °C/°F | This parameter displays the catalyst temperature in bank 1 or 2 as calculated by the control module. |
| Calculated Engine Oil Temperature | — | Varies °C/°F | This parameter displays the estimated (modeled) engine oil temperature (as a function of engine coolant temperature and other parameters). |
| Camshaft Position | — | Varies ° | This parameter displays the position of the intake camshaft for bank 1 in terms of degrees of camshaft rotation (advance) from the park position (a value of zero represents the park position). |
| Camshaft Position Active Counter | — | Counts | This parameter displays a rolling count of the number of primary cam position sensor pulses. A change in the value of this parameter indicates primary camshaft position sensor activity |
| Camshaft Position Actuator Solenoid Control Circuit High Voltage Test Status | — | OK | This parameter displays the state of the camshaft position actuator solenoid control circuit. The parameter displays Malfunction if the camshaft position signal circuit is shorted to voltage. |
| Camshaft Position Actuator Solenoid Control Circuit Low Voltage Test Status | — | OK | This parameter displays the state of the camshaft position actuator solenoid control circuit. The parameter displays Malfunction if the camshaft position signal circuit is shorted to ground. |
| Camshaft Position Actuator Solenoid Control Circuit Open Test Status | — | OK | This parameter displays the state of the camshaft position actuator solenoid control signal circuit. The parameter displays Malfunction if the camshaft position signal circuit is open. |
| Camshaft Position Command | — | Percentage | This parameter displays the commanded duty cycle from the engine control module for the intake camshaft phase of the Throttle Position for bank 1. |
| Camshaft Position | — | Engine Idle Speed | This parameter displays the engine speed as calculated by |

| Parameter | Expected Value | Description |
|---|---|---|
| | | disengaged in 2WD and neutral. |
| Transfer Case Motor | 0 Amps | This parameter displays the current draw in amperage that the motor is currently drawing from the transfer case control module. |
| Transfer Case Position | 2 High | This parameter displays the current mode the transfer case is in as indicated by the transfer case control module. |
| Trans. Fluid Temp | Varies | This parameter displays the transmission fluid temperature in degrees Celsius. |
| TR Switch Status | Park | This parameter displays the current gear the transmission is in. |
| Vehicle Speed | Varies | This parameter displays vehicle speed in kilometers per hour. |

**Scan Tool Output Controls**

| Output Control | Description |
|---|---|
| **NOTE**<br>**Important**<br>Transmission must be in transmission neutral for any of these output controls to operate.<br>Refer to the scan tool manual for complete scan tool operating instructions. | |
| 2WD High Indicator Light | This function allows the technician to command the 2WD high indicator light, within the transfer case shift control switch, on or off. |
| 4WD High Indicator Light | This function allows the technician to command the 4WD high indicator light, within the transfer case shift control switch, on or off. |

5. Front drive axle clutch gear shim (7)

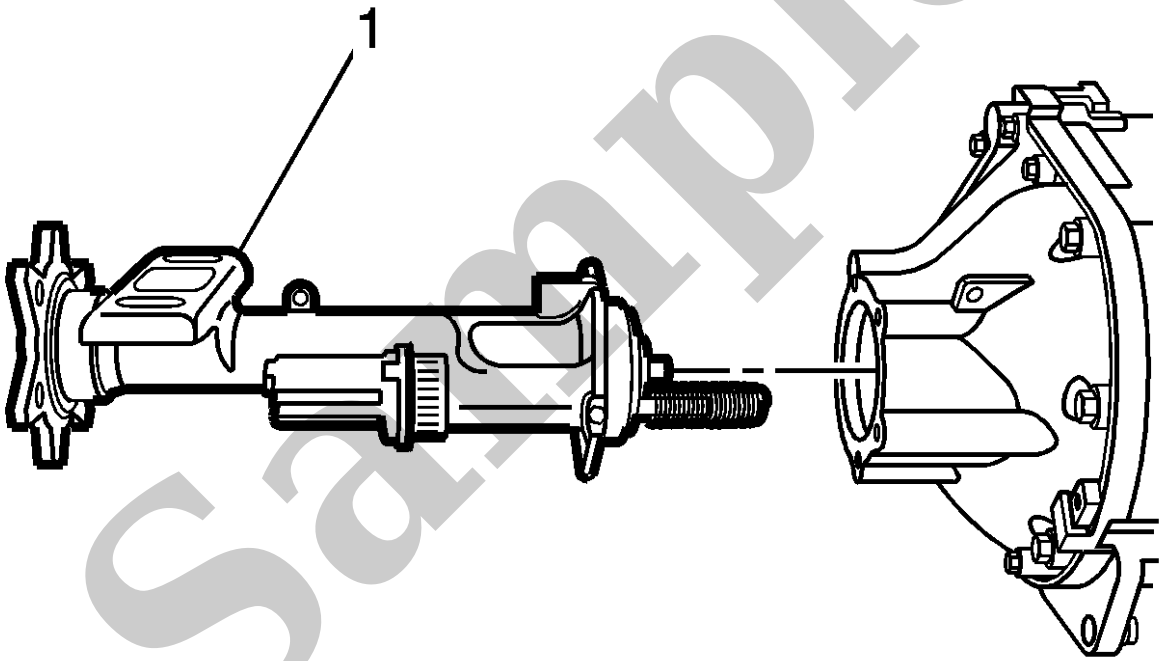
6. Shifter fork (11)

7. Shifter fork rod (10)

8. Shifter fork spring (12)

9. Inner Axle shaft housing gasket (5)

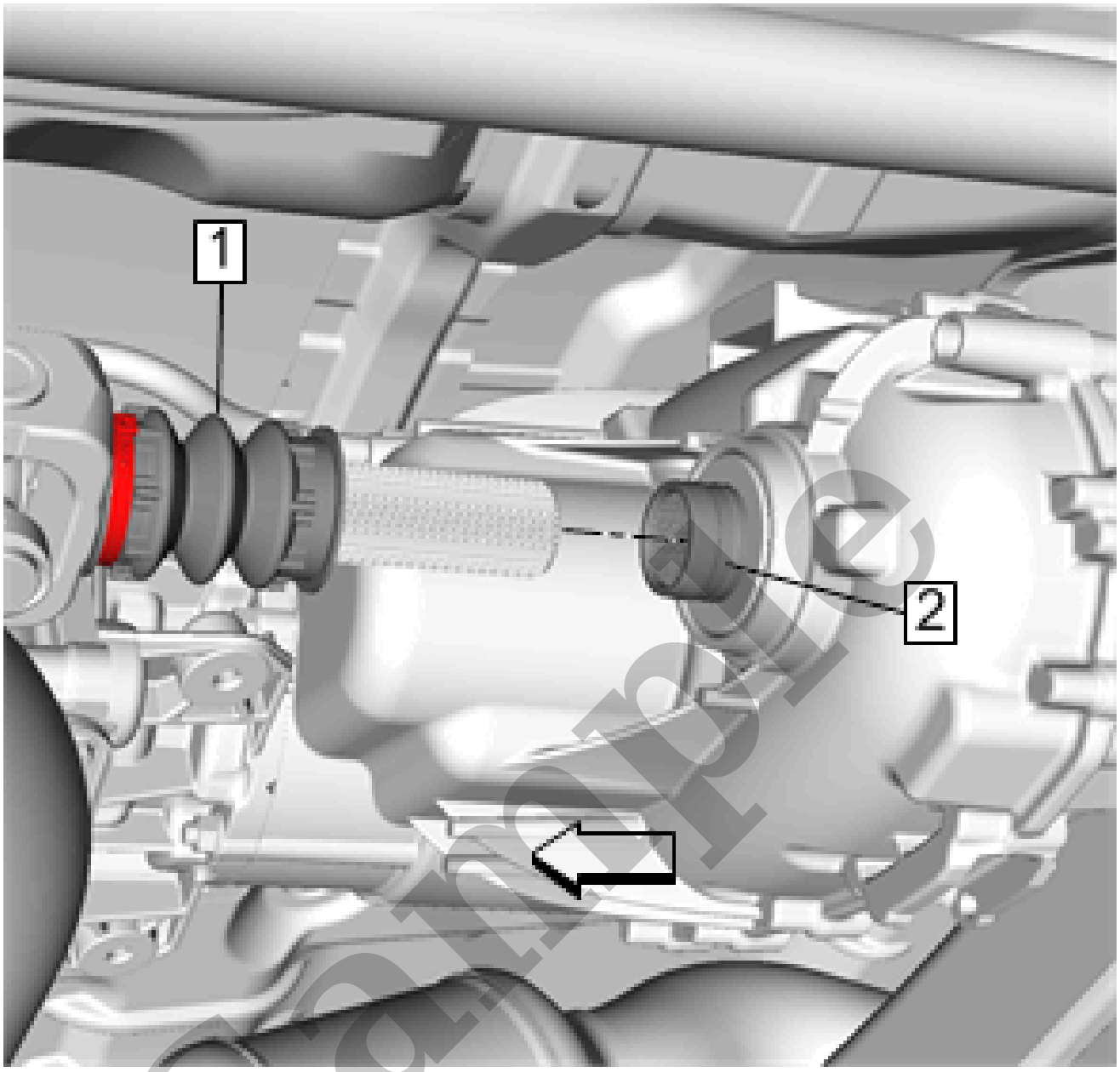
5. Install the axle housing gasket on to the differential carrier.





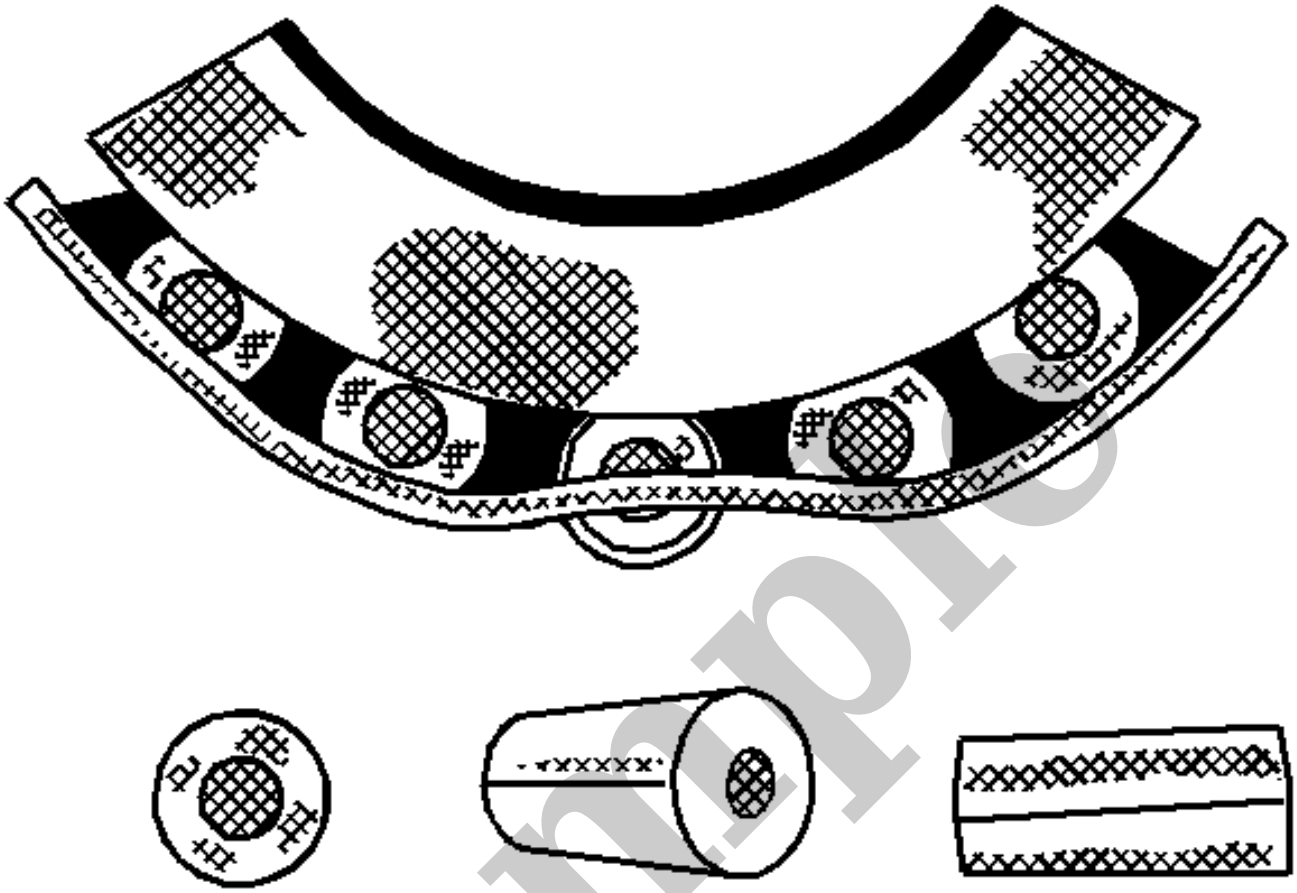

6.

Install the inner axle shaft housing assembly (1) to the differential carrier assembly.

7. 


   Lift the front of the front axle propeller shaft above the front drive axle and slide the front axle propeller shaft spline (1) forward to disengaging it from the transfer case output shaft (2).

8. Move the rear of the front axle propeller shaft (1) to left side of the transfer case and slide the front axle propeller shaft rearward.



A damaged cage due to improper handling or improper tool usage. Replace the bearing.

**Cage Wear**

## Phantom Phone Calls

A customer may report that the OnStar® system is attempting and/or completing phone calls which the operator of the vehicle did not initiate.

It is important to know which type of reported phantom phone call the operator is reporting. Some phone calls of this nature are considered normal and cannot be addressed other than through education, while others may require some remedial action to resolve. When attempting resolve, it is very important to determine under which circumstances the reported Phantom Phone call resulted.

The following are different scenarios:

- The vehicle may receive an incoming call just like any other phone. Typically the customer will hear the phone ringing in the vehicle. This scenario also includes incoming Bluetooth calls.
- Because the button assembly and associated wiring feeds voltage back to the OnStar® system based on the amount of voltage drop through each of the buttons, should the return line be partially shorted to voltage the system could interpret this voltage as a key press. If one of the buttons voltage is simulated, such as the Blue button. The system will make a phone call just as if the button had been pressed by the operator of the vehicle. Refer to the OnStar Button Malfunction document for diagnostics.
- Internal module fault. Some customers may report a condition where "Phone Unavailable" message is heard after the vehicle door is opened or key is cycled. The technician may find a DTC stored in the Telematics module (example: U1500 or B1000). Refer to diagnostics for the DTC making sure to follow any applicable Bulletins or PIs.
- Unwanted Hands free calling activation. A customer may report that the "Ready!" or "OnStar® Ready!" message is heard while driving. The customer may also advise that this seems to happen mostly while making a turn. In some cases it has been found that the customer is inadvertently pressing the "push to talk" button on the steering wheel controls. On rare occasions, other issues in the steering column or Steering Wheel Control system may induce this event.

The majority of reported Phantom Phone Calls can be attributed to accidental button presses or customer induced concern. In some cases an incoming call may be mistaken as a phantom call concern. It is important to verify all aspects of the customer concern in order to properly duplicate and diagnose the condition. If the concern points to normal operation and customer induced concern, please communicate to the customer this condition is a normal operating characteristic of their vehicle.

## Back-up Battery (If Equipped)

**NOTE**

**Note**

        - 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.**
4. Verify that a test lamp illuminates between the B+ circuit terminal 10 and ground.
    - **If the test lamp does not illuminate.**

      Repair the open/high resistance in the circuit
    - **If the test lamp illuminates.**
5. Ignition ON, rear seat entertainment system ON.
6. Test for 5 V or greater between the control circuit terminal 9 and ground.
    - **If less than 5 V.**

      Repair the open/high resistance in the circuit
    - **If 5 V or greater.**
7. Ignition OFF.
8. Verify the LVDS cable is properly connected at the P22 Video Display, A33 Media Disc Player and all in-line connectors, and there is no damage to the cable or connections.
    - **If connection problems or cable damage is noted.**

      Perform the appropriate repair or replacement to correct any issues.
    - **If no connection problems or cable damage is noted.**
9. Connect the X2 harness connector at the P22 Video Display.
10. **NOTE**

    **Note**

    In the following steps, the test tools are used to create a jumper for the LVDS cable from the operating display to the inoperative display.

    Disconnect the X1 harness connector at the operating P22 Video Display.
11. Connect the EL-50334-4 Type A female to Mini B female Adapter to the harness of the operating P22 Video Display. Connect the EL-50334-14 Infotainment Test Cable to the adapter.
12. Disconnect the X1 harness connector at the inoperative P22 Video Display. Connect the EL-50334-14 Infotainment Test Cable to the inoperative P22 Video Display.