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2019 Chevrolet Equinox Service and Repair Manual

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YOUR CURRENT VEHICLE

K83 Park Brake Control Module: Programming and Setup

K83 Park Brake Control Module: Programming and Setup

NOTE

Note

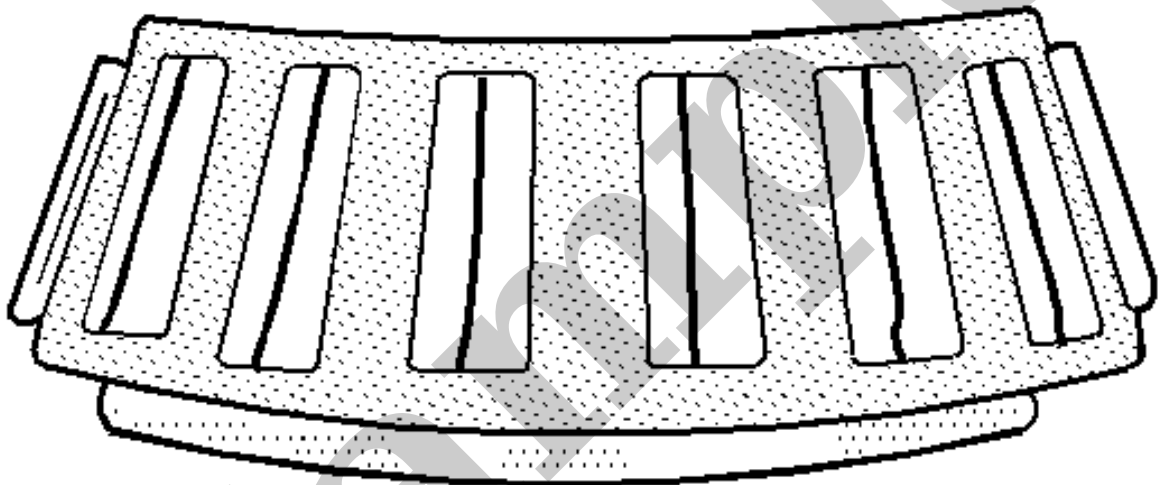
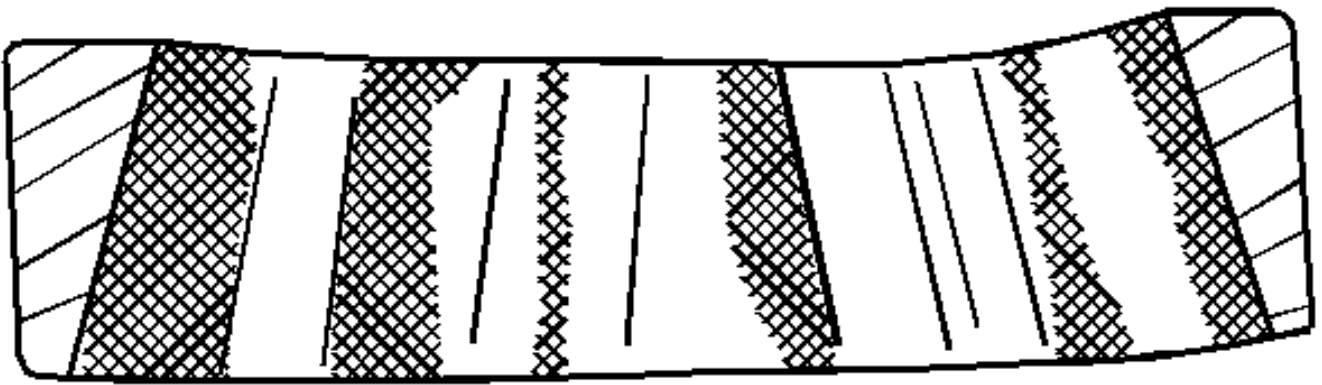
- DO NOT program a control module unless directed to by a service procedure or a service bulletin. If the control module is not properly configured with the correct calibration software, the control module will not control all of the vehicle features properly.
- Ensure the programming tool is equipped with the latest software and is securely connected to the data link connector. If there is an interruption during programming, programming failure or control module damage may occur.
- Stable battery voltage is critical during programming. Any fluctuation, spiking, over voltage or loss of voltage will interrupt programming. When required, install a battery maintainer or power supply that provides a steady and stable voltage. Do not use a battery charger, as charging voltage will often fluctuate when connected to the vehicle. This may interrupt programing. If a battery maintainer is not available, connect a fully charged 12 V jumper or booster pack disconnected from the AC voltage supply.
- Turn OFF or disable systems that may put a load on the vehicles battery such as; interior lights, exterior lights (including daytime running lights), HVAC, radio, etc.
- During the programming procedure, follow the SPS prompts for the correct ignition switch position.
- Clear DTCs after programming is complete. Clearing powertrain DTCs will set the Inspection/Maintenance (I/M) system status indicators to NO.

Replace and Program ECU or Reprogram ECU

To program a replacement or an existing ECU, perform the following procedure:

| Parameter | System State | Expected Value | Description |
|---|--------------|---------------------------------|---|
| Cruise Control On/Off Switch | — | Off | This parameter displays the state of the On/Off switch input to the control module . The scan tool will display On when the cruise On/Off switch is ON. The scan tool will display Off when the cruise ON/OFF switch is OFF. |
| Cruise Control Resume/Acceleration Switch | — | Inactive | This parameter displays the state of the Resume/Accel switch input to the control module When the cruise control switch is in the On position and the Resume/Accel switch is activated, the scan tool displays On. When the Resume/Accel switch is released the scan tool displays Off. |
| Cruise Control Set/Coast Switch | — | Inactive | This parameter displays the state of the Set/Coast switch input to the control module from the cruise control system. When the cruise control switch is in the on position and the Set/Coast switch is activated, the scan tool displays Active. When the Set/Coast switch is released the scan tool displays Inactive. |
| Cruise Control Disengage 1–8 History | Cruise ON | Reason for Cruise Disengagement | These parameters indicate the last 8 reasons the ECM disengaged the cruise control. Reason 1 contains the most recent reason. The reasons may include the following: Brake Pedal Initialize, Cancel, Clutch, Coast Disengage, Coast Speed Low, TAC Inhibit, Accel Rate, Decel Rate, High Speed, Illegal Mode, Low Speed, None, Cruise Sw OFF, Over Set Speed, S/C On Speed Hi, ECM Inhibit, Simul S/C-R/A, TCS, Under Set Speed, DLC Override, Memory DTC, Eng Run Time, Engine Speed, DTC Set, RPM Limit, First Gear, APP Override, Low Voltage, D Whl Spd Low, D Whl Spd Hi, Cruise S/S, Cruise Sw Data, ECT Overtemp, VSES, Trans. DTC, BPP Data, BPP DTC, Park Brake, ACC Inhibit, ACC Brake DTC, ACC Option, ACC Brake Inop, PTO Active. |
| Cylinder 1, 2, 3, 4, 5, 6, 7 or 8 Balancing Rate | — | Varies | These parameters display the adjustment in fuel volume for each cylinder as calculated by the control module. The scan tool will display a negative balancing rate if the fuel volume is lowered. The scan tool will display a positive balancing rate if the fuel volume is increased. |
| Cylinder 1, 2, 3, 4, 5, 6, 7 or 8 Compression Test Time After TDC | — | Varies | This parameter displays the captured time it takes for the crankshaft to travel from Top Dead Center (TDC) to a calculated distance in degrees. The ECM stores the value |

| Output Control | Description |
|---------------------------|--|
| PC Solenoid 5 Command | <ul style="list-style-type: none"> Transmission range DTCs must not be active. If a transmission range DTC is active, the message "Engine running with transmission DTC present" appears on the scan tool display. |
| Service Clean Procedure | <ul style="list-style-type: none"> The scan tool is used to start and stop the transmission cleaning procedure algorithm. The following control limits apply: <ul style="list-style-type: none"> The engine must be running. The message "Engine not Running" will appear on the scan tool if this control is attempted without the engine running. There cannot be active transmission DTCs. The message "Transmission Fault present" will appear on the scan tool if this control is attempted with transmission DTCs active. The transmission range must be Park or Neutral. The message "Transmission not in PARK or NEUTRAL" will appear on the scan tool if this control is attempted with the transmission in any range other than Park or Neutral. The vehicle speed cannot exceed 8 km/h (5 mph). The message "Vehicle Speed too high" will appear on the scan tool if this control is attempted with a vehicle speed greater than 8 km/h (5 mph). The engine speed cannot exceed 2500 RPM. The message "Engine Speed too high" will appear on the scan tool if this control is attempted with an engine speed greater than 2500 RPM. The transmission oil temperature must be at a normal operating temperature. The message "Transmission oil temperature out of range" will appear on the scan tool if this control is attempted without a transmission oil temperature between 70–110°C (158–230°F). |
| Reset Transmission Adapts | <ul style="list-style-type: none"> The scan tool is used to start and stop the transmission Fast Learn Adapt algorithm. The following control limits apply: <ul style="list-style-type: none"> The engine must be running. The message "Engine not Running" will appear on the scan tool if this control is attempted without the engine running. There cannot be active transmission DTCs. The message "Transmission Fault present" will appear on the scan tool if this control is attempted with transmission DTCs active. |
| Shift Solenoid 1 | <ul style="list-style-type: none"> The TCM commands Shift Solenoid 1 and Shift Solenoid 2 ON and OFF. When the ignition is ON, and the engine is OFF, there are no limits to this control. The solenoid remains ON until commanded OFF, and vice versa. When the output control is exited, the solenoid state is determined by the TCM. When the engine is running, the following control limits apply: |



Surface indentations in the race way caused by the rollers under impact loading or caused from vibration while the bearing is not rotating. Replace a rough or noisy bearing.



YOUR CURRENT VEHICLE

Rear Propeller Shaft Replacement

Rear Propeller Shaft Replacement (With M5U, 2WD)

Removal Procedure

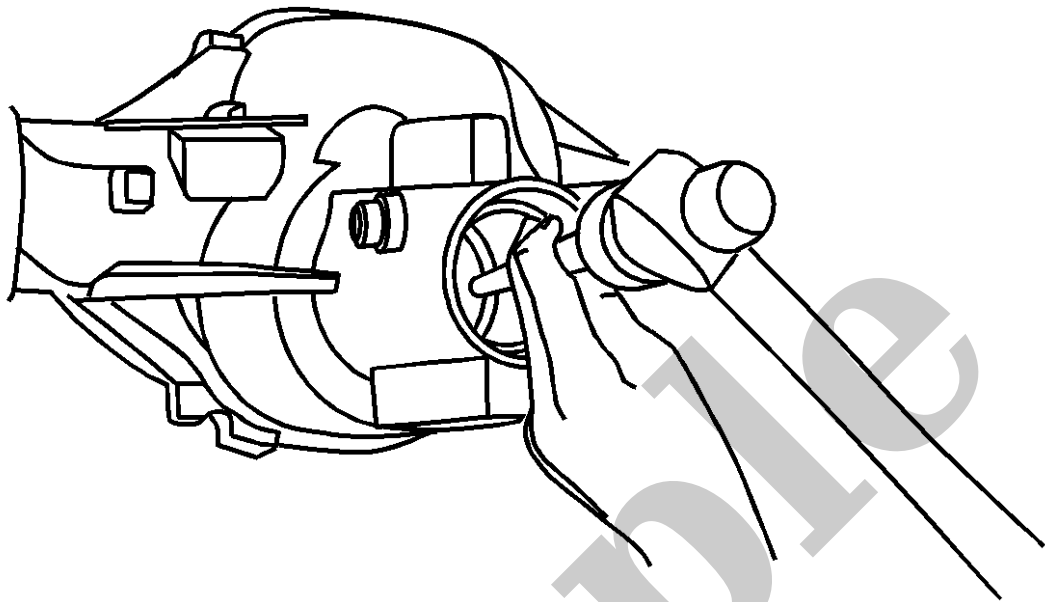
1. NOTE

Note

Observe and accurately reference mark all driveline components relative to the propeller shaft and axles before disassembly. These components include the propeller shafts, the drive axles, the pinion flanges, the output shafts, etc. All components must be reassembled in the exact relationship to each other as they were when removed. In addition, published specifications and torque values, as well as any measurements made prior to disassembly must be followed.

Raise the vehicle. [Lifting and Jacking the Vehicle](#)





7.

NOTE

Note

Move the drift back and forth between one side of the cup and the other in order to work the cups out of the housing evenly.

Using a hammer and a brass drift in the slots provided, remove the inner pinion bearing cup from the axle housing.

Assemble Procedure

YOUR CURRENT VEHICLE

Special Tools

Special Tools

| Illustration | Tool Number/Description |
|---|---|
|  | EL-50334-20 Multi-Media Interface Tester (MIT) |
|  | EL-50334-50 USB Cable and Adapter Kit |
|  | EL-48028 Digital Radio Test Antenna |
| | EL-49903-1 Test Antenna, Navn-Cell Comn |



Video Entertainment System Remote Control Malfunction

Video Entertainment System Remote Control Malfunction (with DNU)

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.

Circuit/System Description

The second row overhead display is located in the headliner. The display screen shows video from the media disc player, or an AUX input device. When equipped with RPO DNU, a 3rd row overhead display is added to the system.

The overhead displays receive power and ground from the vehicle harness. A discrete control circuit from the media disc player is used to control the power state of the displays. The displays receive all other video, audio, and control information via the LVDS cable.

The 2nd row display contains the infrared transmitters for the wireless headphones. During operation, the infrared transmitters may be visible as illuminated LEDs. The LEDs are not on visible on the 3rd row display. Both displays contain an infrared receiver for the remote control.

The wireless remote control is used to operate the system from the rear seat. Infrared signals from the remote control are received by the infrared receivers in each of the overhead displays. The remote control can be used to turn the rear screens on or off, to change system settings, and to select the source for the screens from the media available to the infotainment system.

Refer to the Owners Manual for additional information on remote control functions.

Reference Information

Schematic Reference

