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| Model Year Start: 2023 | Model: Prius Prime | Prod Date Range: [12/2022 -] |
| Title: POWER ASSIST SYSTEMS: POWER STEERING SYSTEM: Abnormal Feel at Steering End Position; 2023 - 2024 MY Prius Prius Prime [12/2022 -] | | |

Abnormal Feel at Steering End Position

SYSTEM DESCRIPTION

This vehicle employs end position contact shock reduction control for column EPS, designed to protect components by suppressing torque input when steering mechanism components reach their end position, and contributing to a feeling enhanced steering quality through reduction of the steering end position contact sound.

CAUTION / NOTICE / HINT

NOTICE:

- If components related to the steering gear are replaced without first disconnecting the cable from the negative auxiliary battery terminal, the learned value of the steering end position stored in the vehicle may deviate from the actual steering end position, affecting steering feel.
- In the following situations, perform end position learning:
 - When components related to the steering gear have been replaced.

PROCEDURE

1. CLEAR STEERING END POSITION INFORMATION

NOTICE:

When components related to the steering gear have been replaced, perform end position learning.

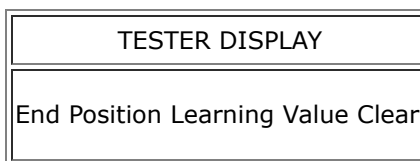
(a) Center the steering wheel and set the front tires in the straight-ahead position.

(b) Clear the end position learning value.

(1) When using the GTS:

1. Follow the instructions on the GTS screen to clear the end position learning value.

Chassis > EMPS > Utility



(2) When not using the GTS:

1. Turn the ignition switch to ON.
2. Disconnect the cable from the negative auxiliary battery terminal for the specified period of time.

for M20A-FXS: Click here [INFO](#)

for 2ZR-FXE: Click here [INFO](#)

3. Connect the cable to the negative auxiliary battery terminal.

for M20A-FXS: Click here [INFO](#)

for 2ZR-FXE: Click here [INFO](#)

NEXT



2. PERFORM STEERING END POSITION LEARNING

- (a) Start the engine.
- (b) Turn the steering wheel all the way to the left and right alternatingly, 1 time in each direction.

NEXT



3. CHECK STEERING END POSITION LEARNING

Chassis > EMPS > Data List

| TESTER DISPLAY | MEASUREMENT ITEM | RANGE | NORMAL CONDITION | DIAGNOSTIC NOTE |
|--|---|--|--|-----------------|
| Status of Learned Left/Right End Position for End Torque Limit Control | Shows steering rack end learning status | Left Direction (Unlearned) & Right Direction (Unlearned) / Left Direction (Unlearned) & Right Direction (Temporary Position) / Left Direction (Unlearned) & Right Direction (Decision Position) / Left Direction (Temporary Position) & Right Direction (Unlearned) / Left Direction (Temporary Position) & Right Direction (Decision Position) / Left Direction (Temporary Position) & Right Direction (Temporary Position) / Left Direction (Temporary Position) & Right Direction (Decision Position) / Left Direction (Decision Position) & Right Direction (Unlearned) / Left Direction (Decision Position) & Right Direction (Temporary Position) / Left Direction (Decision Position) & Right Direction (Decision Position) / Reading Impossibility | Left Direction (Decision Position) & Right Direction (Decision Position) | - |

Chassis > EMPS > Data List

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|--|
| TESTER DISPLAY |
| Status of Learned Left/Right End Position for End Torque Limit Control |

OK:

The Data List value displays "Left Direction (Decision Position) & Right Direction (Decision Position)".

HINT:

If the result is other than "Left Direction (Decision Position) & Right Direction (Decision Position)", perform the procedure again from Step 1.

NEXT  **END**

