05HRZ–01

ON–VEHICLE INSPECTION

1. DESCRIPTION

The wireless door lock remote control system and smart key system have the memory call function.
The memory call function utilizes the transmitter key ID to recall recorded seat position, outer mirror position, tilt and telescopic position, and seat belt anchor position preferences.

- The driver seat ECU records all the positions. When each ECU detects an operation (see charts below) the driver seat ECU outputs a signal to restore all the positions.

2. CHECK IF MEMORY CALL FUNCTION OF WIRELESS DOOR LOCK CONTROL SYSTEM AND SMART KEY SYSTEM ARE CANCELLED

(a) After a door is unlocked by the transmitter, perform an ”operation” from the chart below. Check that the ”position” to the right of each operation can function and is not limited in any way. Check the remaining operations and positions in the same way.

OK:

Operation	Position
Driver door is opened	Driver seat
Driver door is opened	Outer mirror
Driver door is opened	Seat belt anchor
Key is insert to the key cylinder*1 Engine switch is pushed*2	Tilt and telescopic

HINT:
*1: Wireless door lock control system
*2: Smart key system

(b) If a position is not fully functional, the memory call function may have been cancelled. Perform memory registration again.

3. CHECK MOVEMENT OF ALL POSITIONS FOR MEMORY CALL FUNCTION

HINT:
After a door is unlocked by the transmitter, check that each position (driver seat, outer mirror, seat belt anchor, and tilt and telescopic) accurately moves to a recorded position.

(a) Check driver seat position.

OK:

Operation	Driver Seat Position Operation
Driver door is opened	Slide forward and rearward
Driver door is opened	Reclining forward and rearward
Driver door is opened	Front vertical raise upward and downward
Driver door is opened	Lifter upward and downward
Driver door is opened	Headrest upward and downward
Driver door is opened	Cushion forward and rearward

(1) If the result is not as specified, inspect the driver seat.

(b) Check outer mirror position.

OK:

Operation	Outer Mirror Position Operation
Driver door is opened	Vertical mirror position
Driver door is opened	Horizontal mirror position

(1) If the result is not as specified, inspect the outer mirror.

(c) Check seat belt anchor position.

OK:

Operation	Seat Belt Anchor Position Operation
Driver door is opened	Vertical position

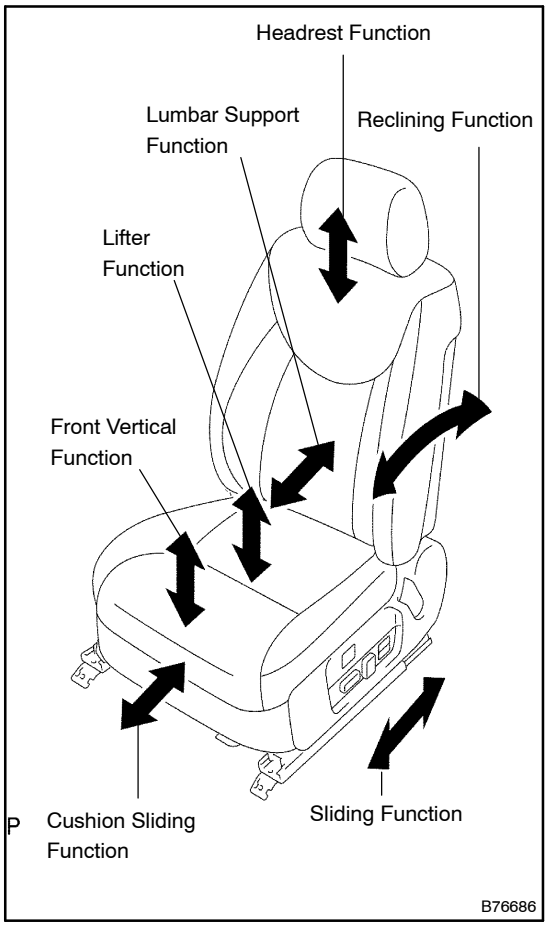
(1) If the result is not as specified, inspect the seat belt anchor.

(d) Check tilt and telescopic position.
OK:

Operation	Tilt and telescopic Position Operation
Key is insert to the key cylinder*1 Engine switch is pushed*2	Vertical tilt position
Key is insert to the key cylinder*1 Engine switch is pushed*2	Telescopic flexibility (lengthening and shortening)

HINT:
*1: Wireless door lock control system
*2: Smart key system

(1) If the result is not as specified, inspect the tilt and telescopic.



4. CHECK FRONT POWER SEAT FUNCTION

(a) Check the basic functions.

(1) Operate the power seat switches and check to make sure each seat function works:

- Sliding
- Front vertical
- Lifter
- Reclining
- Lumbar support
- Cushion sliding
- Headrest

5. CHECK POWER SEAT MOTOR ASSY (SLIDING, FRONT VERTICAL, LIFTER, RECLINING, CUSHION SLIDING AND HEADREST)

(a) Check the PTC operation inside the power seat motor.

HINT:
The PTC thermistor's resistance increases when the power seat switch is held down even after the power seat has been moved to the maximum in one direction. After the resistance increases, current is shut off to prevent a short circuit.

NOTICE:

Perform steps (1) to (4) for the full range of motion for each power seat function.

(1) Choose a power seat function. Operate the power seat switch and move the seat to the maximum in one direction. Keep the seat in that position for approximately 60 seconds.

(2) Operate the power seat switch again and continue to try to move the seat in the same direction as in step (1). Measure the amount of time elapsed before the electrical current is automatically cut. Check if electrical current has shut off by making sure the sound of the motor has stopped.

Headrest only:

Standard: 4 to 60 seconds

Others:

Standard: 4 to 90 seconds

(3) After the current has stopped, release the power seat switch and wait for approximately 60 seconds.

(4) Operate the same power seat switch and move the seat to the opposite extreme of direction in step (1). Check that the motor operates.

6. CHECK LUMBAR SUPPORT ADJUSTER ASSY

(a) Check the PTC operation inside the power seat motor.

NOTICE:

The inspection should be performed with the seat installed in the vehicle.

(1) Operate the lumbar support switch and move the lumbar support to either the foremost or rearmost position. Keep the seat in that position for approximately 60 seconds.

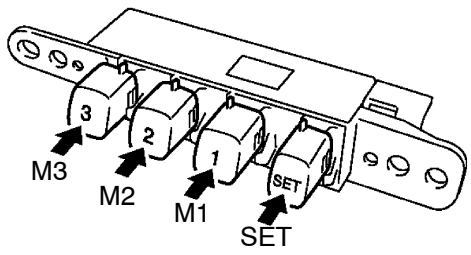
(2) Operate the lumbar support switch again and continue to try to move the lumbar support in the same direction as in step (1). Measure the amount of time elapsed before the electrical current is automatically cut. Check if electrical current has shut off by making sure the sound of the motor has stopped.

Standard: 4 to 90 seconds

(3) After the current has stopped, release the lumbar support switch and wait for approximately 60 seconds.

(4) Operate the lumbar support switch and move the seat to the opposite extreme of direction in step (1). Check that the motor operates.

Driving Position Memory Switch



7. CHECK MEMORY AND REACTIVATION FUNCTION

(a) Turn the ignition switch to the ON position and move the shift lever into the P position.

(b) Check the M1 switch.

(1) Using the seat switches, fully slide the seat forward, fully recline the seatback forward, and fully raise the seat cushion and headrest.

(2) Press and hold down switches M1 and SET. Check that the buzzer sounds for 0.5 seconds, signaling that the seat position has been recorded.

(3) Change the position of the seat and then press the M1 switch. Check that the buzzer sounds for 0.1 seconds and the seat automatically moves to the position in step (b)–(1).

(c) Check the M2 switch.

(1) Using the seat switches, move the seat (slide), seatback, seat cushion and headrest to positions other than the ones in step (b). Any new seat position is fine.

(2) Press and hold down switches M2 and SET. Check that the buzzer sounds for 0.5 seconds, signaling that the seat position has been recorded.
(3) Change the position of the seat and then press the M2 switch. Check that the buzzer sounds for 0.1 seconds and the seat automatically moves to the position in step (c)–(1).

(d) Check the M3 switch.
(1) Using the seat switches, fully slide the seat rearward, fully recline the seatback rearward and fully lower the seat cushion and headrest.
(2) Press and hold down switches M3 and SET. Check that the buzzer sounds for 0.5 seconds, signaling that the seat position has been recorded.
(3) Change the position of the seat and then press the M3 switch. Check that the buzzer sounds for 0.1 seconds and the seat automatically moves to the position in step (d)–(1).

(e) Check that the switches M1, M2 and M3 cause the seat to move to the recorded seat positions under these conditions: turn the ignition switch to the LOCK position, remove the key from the key cylinder, open the driver side door and press M1, M2 or M3 within 30 seconds.

(f) Check that the following procedures will erase the recorded seat positions of switches M1, M2 and M3: press and hold the power seat slide switch, disconnect the battery's negative terminal cable, and wait for at least 1 minute.

(g) When replace the seat ECU, restore the seat's memory.
(1) Using the seat switches, fully slide the seat forward, fully recline the seatback forward, and fully raise the seat cushion and headrest.
(2) Using the seat switches, fully slide the seat rearward, fully recline the seatback rearward and fully lower the seat cushion and headrest.

HINT:
This will restore the seat's memory of the seat's maximum positions. However, it will not restore any recorded seat positions to switches M1, M2 or M3.

(h) Attempt to record a seat position by pressing and holding the SET switch and two other switches (among M1, M2 and M3). No seat position should be recorded. Check this by pressing M1, M2 or M3 and making sure that the seat does not move.

HINT:
This step will only be true if step (f) was performed properly, whereby all previously recorded set positions were erased.