

CALIBRATION

1. DESCRIPTION

(a) After replacing any VSC related components or performing front wheel alignment adjustment, clear and read the sensor calibration data.

Follow the chart below to perform calibration.

Part to be Replaced / Operation	Necessary Operation
Brake booster with master cylinder (Skid control ECU)	Yaw rate and acceleration sensor zero point calibration
Yaw rate and acceleration sensor	1. Clearing zero point calibration data 2. Yaw rate and acceleration sensor zero point calibration
Front wheel alignment adjustment	1. Clearing zero point calibration data 2. Yaw rate and acceleration sensor zero point calibration

2. OBTAIN ZERO POINT OF YAW RATE AND ACCELERATION SENSOR (When Using the Techstream)

NOTICE:

- While obtaining the zero point, keep the vehicle stationary and do not vibrate, tilt, move, or shake it.
- Be sure to perform this procedure on a level surface (with an inclination of less than 1 degree).

(a) Clear the zero point calibration data.

(1) Turn the power switch off.

(2) Check that the steering wheel is centered.

(3) Check that park (P) is selected.

(4) Connect the Techstream to the DLC3.

(5) Turn the power switch on (IG).

(6) Turn the Techstream on.

(7) Select the skid control ECU to clear the zero point calibration data using the Techstream. Enter the following menus: Chassis / ABS/VSC/TRAC / Utility / Reset Memory.

(8) Turn the power switch off.

NOTICE:

If the power switch is turned on (IG) for more than 15 seconds with park (P) is selected after the zero point of the yaw rate and acceleration sensor has been cleared, only the zero point of the yaw rate sensor will be stored. If the vehicle is driven under these conditions, the skid control ECU will store the zero point calibration for the acceleration sensor as not being completed. The skid control ECU will then also indicate this as a malfunction of the VSC system using the indicator light.

(b) Perform the zero point calibration of the yaw rate and acceleration sensor.

(1) Turn the power switch off.

(2) Check that the steering wheel is centered.

(3) Check that park (P) is selected.

NOTICE:

DTCs C1210 (Zero Point Calibration of Yaw Rate Sensor Undone) and C1336 (Zero Point Calibration of Acceleration Sensor Undone) will be stored if park (P) is not selected.

(4) Connect the Techstream to the DLC3.

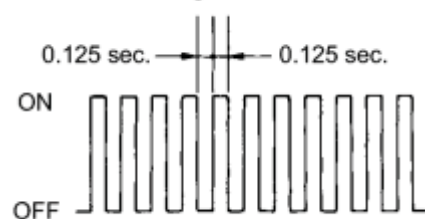
(5) Turn the power switch on (IG).

(6) Turn the Techstream on.

(7) Switch the skid control ECU to Test Mode using the Techstream. Enter the following menus: Chassis / ABS/VSC/TRAC / Utility / Test Mode.

(8) After Test Mode has been entered, keep the vehicle stationary on a level surface for 2 seconds or more.

Test Mode Blinking Pattern:



(9) Check that the ABS warning, brake warning / yellow (minor malfunction) and slip indicator lights come on for several seconds and then blink in Test Mode.

- If the ABS warning, brake warning / yellow (minor malfunction) and slip indicator lights do not blink, perform zero point calibration again.
- The zero point calibration is performed only once after the system enters Test Mode.
- Calibration cannot be performed again until the stored data is cleared.

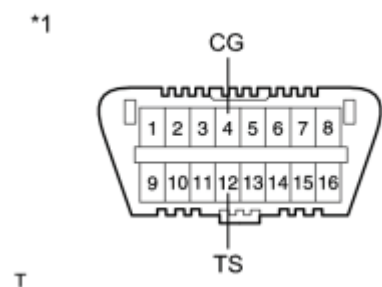
(10) Turn the power switch off and disconnect the Techstream.

3. OBTAIN ZERO POINT OF YAW RATE AND ACCELERATION SENSOR (When not Using the Techstream)

NOTICE:

- While obtaining the zero point, keep the vehicle stationary and do not vibrate, tilt, move, or shake it.
- Be sure to perform this procedure on a level surface (with an inclination of less than 1 degree).

- (a) Clear the zero point calibration data.
- (1) Turn the power switch off.
- (2) Check that the steering wheel is centered.
- (3) Check that park (P) is selected.
- (4) Turn the power switch on (IG).



(5) Using SST, connect and disconnect terminals TS and CG of the DLC3 4 times or more within 8 seconds.

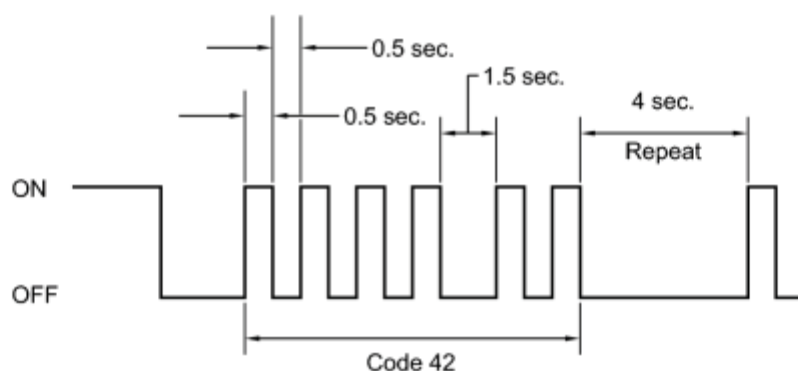
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Text in Illustration

*1	Front view of DLC3
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(6) Check that no codes other than ABS code 42, VSC code 45 and electronically controlled brake system code 48, 66, or 95 are stored in the diagnostic system.

Trouble Code Blinking Pattern (Example Code 42):



HINT:

The ABS warning, brake warning / yellow (minor malfunction) and slip indicator lights do not indicate a normal system code.

NOTICE:

If the power switch is turned on (IG) for more than 15 seconds with park (P) is selected after the zero point of the yaw rate and acceleration sensor has been cleared, only the zero point of the yaw rate sensor will be stored. If the vehicle is driven under these conditions, the skid control ECU will store the zero point calibration for the acceleration sensor as not being completed. The skid control ECU will then also indicate this as a malfunction of the VSC system using the indicator light.

(7) Turn the power switch off.

(b) Perform the zero point calibration of the yaw rate and acceleration sensor.

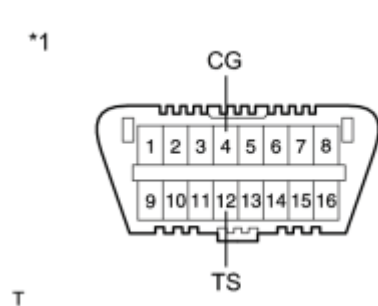
(1) Turn the power switch off.

(2) Check that the steering wheel is centered.

(3) Check that park (P) is selected.

NOTICE:

DTCs 36 (Zero Point Calibration of Yaw Rate Sensor Undone) and 98 (Zero Point Calibration of Acceleration Sensor Undone) will be recorded if park (P) is not selected.



(4) Using SST, connect terminals TS and CG of the DLC3.

SST: 09843-18040

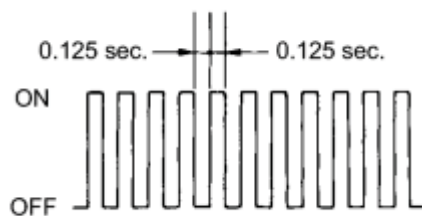
Text in Illustration

*1	Front view of DLC3
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(5) Turn the power switch on (IG).

(6) After Test Mode has been entered, keep the vehicle stationary on a level surface for 2 seconds or more.

Test Mode Blinking Pattern:



(7) Check that the ABS warning, brake warning / yellow (minor malfunction) and slip indicator lights come on for several seconds and then blinks in Test Mode.

- If the ABS warning, brake warning / yellow (minor malfunction) and slip indicator lights do not blink, perform zero point calibration again.
- The zero point calibration is performed only once after the system enters Test Mode.
- Calibration cannot be performed again until the stored data is cleared.

(8) Turn the power switch off and disconnect SST from the DLC3.