## FREEZE FRAME DATA

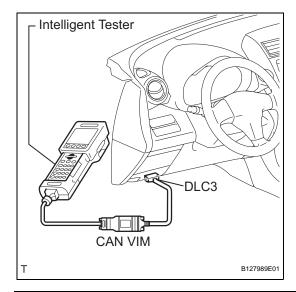
## 1. FREEZE FRAME DATA

HINT:

- Whenever a DTC is detected or the ABS operates, the skid control ECU stores the current vehicle (sensor) state as freeze frame data.
- The skid control ECU stores the number of times (maximum: 31) the ignition switch has been turned from OFF to ON since the last time the ABS was activated. However, if the vehicle was stationary or running at a low speed (7 km/h [4.3 mph] or less), or if a DTC is detected, the skid control ECU stops counting.
- Freeze frame data at the time the ABS operates:
   The skid control ECU stores and updates the data whenever the ABS system operates.
   When the ECU stores data at the time a DTC is detected, the data stored when the ABS operated is erased.
- Freeze frame data at the time a DTC is detected:
   When the skid control ECU stores data at the time a
   DTC is detected, no updates will be performed until
   the data is cleared.



- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch ON.
- (c) Turn the tester on.
- (d) From the display on the tester, select "FREEZE FRAME DATA".



Item (Display)	Measurement Item	Reference Values
FREEZE TIME	Elapsed time after freeze frame data recorded	Min.: 0 ms Max.: 500 ms
#IG ON	Number of ignition switch ON operations since freeze frame data stored	1 to 31
BUZZER	Skid control buzzer signal	ON: Skid control buzzer ON OFF: Skid control buzzer OFF
STOP LAMP SW	Stop light switch signal	ON: Stop light switch ON OFF: Stop light switch OFF
PARKING BRAKE SW	Parking brake switch signal	ON: Parking brake switch ON OFF: Parking brake switch OFF
BRK PEDAL SW	Brake pedal load sensing switch signal	ON: Brake pedal released OFF: Brake pedal depressed

Item (Display)	Measurement Item	Reference Values
GEAR POSITION	Gear position information	FAIL 1st 2nd 3rd 4th 5th 6th P, N R NOT R
LEVER POSITION	Shift lever position information	FAIL 1st 2nd 3rd 4th 5th 6th/B D/M P, N R
OPERATED SYSTEM	Operated system status	ABS: ABS activated VSC: VSC activated TRC: TRC activated BA: BA activated FAIL: Fail safe mode activated HA-CTRL: Hill-start assist control activated SYS: System prohibited NON: No system activated
MAS CYL PRESS 1	Master cylinder pressure sensor reading	Brake pedal released: 0.3 V to 0.9 V Brake pedal depressed: 0.8 V to 4.5 V
M/C Sensor Grade	Master cylinder pressure sensor change	Min.: -30 MPa/s Max.: 225 MPa/s
YAW RATE	Yaw rate sensor reading	Min.: -128 deg/s Max.: 127 deg/s
STEERING SEN	Steering sensor reading	Left turn: Increase Right turn: Decrease
LATERAL G	Lateral G	Min.: -25.11 m/s <sup>2</sup> Max.: 24.91 m/s <sup>2</sup>
FORWARD&REA G	Forward and backward G	Min.: -25.11 m/s <sup>2</sup> Max.: 24.91 m/s <sup>2</sup>
FR WHEEL SPD	FR wheel speed	Min.: 0 km/h (0 mph) Max.: 326.4 km/h (202.8 mph)
FL WHEEL SPD	FL wheel speed	Min.: 0 km/h (0 mph) Max.: 326.4 km/h (202.8 mph)
RR WHEEL SPD	RR wheel speed	Min.: 0 km/h (0 mph) Max.: 326.4 km/h (202.8 mph)
RL WHEEL SPD	RL wheel speed	Min.: 0 km/h (0 mph) Max.: 326.4 km/h (202.8 mph)
VEHICLE SPD	Vehicle speed	Min.: 0 km/h (0 mph) Max.: 326.4 km/h (202.8 mph)
SPD GARDE	Vehicle speed grade	Min.: -25.11 m/s <sup>2</sup> Max.: 24.91 m/s <sup>2</sup>
ENGINE TORQUE	Real engine torque	Min.: -1024 Nm Max.: 1023 Nm
ACCELERATOR %	Accelerator pedal opening angle %	Min.: 0% Max.: 128%
INSPECTION MODE	Inspection mode	OTHER: Normal INSPECT: Service