

## DATA LIST/ACTIVE TEST

### 1. DATA LIST

HINT:

According to the DATA LIST displayed on the hand-held tester, you can read the value and status of the switch, sensor, actuator and so on without parts removal. Reading the DATA LIST as the first step of troubleshooting is one of the methods to shorten labor time.

- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON.
- From the display on the tester, read the "DATA LIST".

Item	Measurement Item / Range (Display)	Normal Condition	Diagnostic Note
ABS MOT RELAY	ABS motor relay / ON or OFF	ON : Motor relay ON OFF : Motor relay OFF	-
SOL RELAY	Solenoid relay / ON or OFF	ON : Solenoid relay ON OFF : Motor relay OFF	-
VSC / TRC OFF SW	TRAC control switch / ON or OFF	ON : TRAC control switch ON OFF : TRAC control switch OFF	-
AIR BLD SUPPORT	Air bleed support / ON or OFF	ON : Support ON OFF : Support OFF	-
IDLE SW	Main idle switch / ON or OFF	ON : Accelerator pedal released OFF : Accelerator pedal depressed	-
STOP LIGHT SW	Stop lamp switch / ON or OFF	ON : Brake pedal depressed OFF : Brake pedal released	-
PKB SW	Parking brake switch / ON or OFF	ON : Parking brake applied OFF : Parking brake released	-
ABS OPERT FR	ABS operation (FR) / BEFORE or OPERATE	BEFORE : No ABS operation (FR) OPERATE : During ABS operation (FR)	-
ABS OPERT FL	ABS operation (FL) / BEFORE or OPERATE	BEFORE : No ABS operation (FL) OPERATE : During ABS operation (FL)	-
ABS OPERT RR	ABS operation (RR) / BEFORE or OPERATE	BEFORE : No ABS operation (RR) OPERATE : During ABS operation (RR)	-
ABS OPERT RL	ABS operation (RL) / BEFORE or OPERATE	BEFORE : No ABS operation (RL) OPERATE : During ABS operation (RL)	-
WHEEL SPD FR	Wheel speed sensor (FR) reading / min.: 0 km/h (0 MPH), max.: 326 km/h (202 MPH)	Actual wheel speed	Similar speed as indicated on speedometer
WHEEL SPD FL	Wheel speed sensor (FL) reading / min.: 0 km/h (0 MPH), max.: 326 km/h (202 MPH)	Actual wheel speed	Similar speed as indicated on speedometer

Item	Measurement Item / Range (Display)	Normal Condition	Diagnostic Note
WHEEL SPD RR	Wheel speed sensor (RR) reading / min.: 0 km/h (0 MPH), max.: 326 km/h (202 MPH)	Actual wheel speed	Similar speed as indicated on speedometer
WHEEL SPD RL	Wheel speed sensor (RL) reading / min.: 0 km/h (0 MPH), max.: 326 km/h (202 MPH)	Actual wheel speed	Similar speed as indicated on speedometer
DECELERAT SENS	Deceleration sensor 1 reading / min.: -1.869 G, max.: 1.869 G	Approximately $0 \pm 0.13G$ at a stationary condition	Reading changes when vehicle is bounced
DECELERAT SENS2	Deceleration sensor 2 reading / min.: -1.869 G, max.: 1.869 G	Approximately $0 \pm 0.13G$ at a stationary condition	Reading changes when vehicle is bounced
IG VOLTAGE	ECU power supply voltage / TOO LOW / NORMAL	TOO HIGH: 14 V or over NORMAL: 9.5 V to 14 V TOO LOW: Below 9.5 V	-
SFRR	ABS solenoid (SFRR) / ON or OFF	ON : Operate OFF : Not operate	-
SFRH	ABS solenoid (SFRH) / ON or OFF	ON : Operate OFF : Not operate	-
SFLR	ABS solenoid (SFLR) / ON or OFF	ON : Operate OFF : Not operate	-
SFLH	ABS solenoid (SFLH) / ON or OFF	ON : Operate OFF : Not operate	-
SRRR (SRR)	ABS solenoid (SRRR (SRR)) / ON or OFF	ON : Operate OFF : Not operate	-
SRRH (SRH)	ABS solenoid (SRRH (SRH)) / ON or OFF	ON : Operate OFF : Not operate	-
SRLR	ABS solenoid (SRLR) / ON or OFF	ON : Operate OFF : Not operate	-
SRLH	ABS solenoid (SRLH) / ON or OFF	ON : Operate OFF : Not operate	-
SMF (BA-SOL)	TRAC solenoid (SMF) / ON or OFF	ON : Operate OFF : Not operate	-
SMR	TRAC solenoid (SMR) / ON or OFF	ON : Operate OFF : Not operate	-
THROTTLE	Throttle position sensor/ Min.: 0 deg, Max.: 125 deg	Release accelerator pedal: Approx. 0 deg. Depress accelerator pedal: Approx. 90 deg.	-
ENGINE SPD	Engine Speed/ Min.: 0 rpm, Max.: 6,000 rpm	Actual engine speed	-
VEHICLE SPD	Maximum wheel speed sensor reading / min.: 0 km/h (0 MPH), max.: 326 km/h (202 MPH)	Actual vehicle speed	Similar speed as indicated on speedometer
YAW RATE	Yaw rate sensor/ Min.: -128 deg/s, Max.: 128 deg/s	Min.: -128 deg/s Max.: 128 deg/s	-
YAW ZERO VALUE	Memorized zero value/ Min.: -128 deg/s, Max.: 128 deg/s	Min.: -128 deg/s Max.: 128 deg/s	-
STEERING ANG	Steering sensor/ Min.: -1152 deg, Max.: 1150.875 deg	Left turn: Increase Right turn: Decrease	-

Item	Measurement Item / Range (Display)	Normal Condition	Diagnostic Note
MAS CYL PRS 1	Master cylinder pressure sensor 1 reading / min.: 0 V, max.: 5 V	When brake pedal is released : 0.3 to 0.9 V	Reading increases when brake pedal is depressed
TEST MODE	Test mode / NORMAL or TEST	NORMAL : Normal mode TEST : During test mode	–
#CODES	Number of DTC recorded / min.: 0, max.: 255	Min.: 0, max.: 39	–
SPD SEN FR	FR speed sensor open detection / OPEN or NORMAL	OPEN : Momentary interruption	–
SPD SEN FL	FL speed sensor open detection / OPEN or NORMAL	OPEN : Momentary interruption	–
SPD SEN RR	RR speed sensor open detection / OPEN or NORMAL	OPEN : Momentary interruption	–
SPD SEN RL	RL speed sensor open detection / OPEN or NORMAL	OPEN : Momentary interruption	–
YAWRATE SEN	Yaw rate sensor open detection	OPEN : Momentary interruption	–
DECELE SEN	G sensor open detection	OPEN : Momentary interruption	–
STEERING SEN	Steering sensor open detection	OPEN : Momentary interruption	–
M/C SEN 1	Master Cylinder pressure sensor 1 open detection	OPEN : Momentary interruption	–
EFI COM	EFI communication open detection	OPEN : Momentary interruption	–

## 2. ACTIVE TEST

### HINT:

Performing the ACTIVE TEST using the hand-held tester allows the relay and actuator, etc. to operate without removing any parts. Performing the ACTIVE TEST as the first step of troubleshooting is one of the methods to shorten labor time.

It is possible to display the DATA LIST during the ACTIVE TEST.

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the ignition switch to the ON position.
- (c) According to the display on the tester, perform the "ACTIVE TEST".

### HINT:

The ignition switch must be turned to the ON position to proceed to the ACTIVE TEST using the hand-held tester.

Item	Vehicle Condition / Test Details	Diagnostic Note
SFRR	Turns ABS solenoid (SFRR) ON / OFF	Operation of solenoid (clicking sound) can be heard
SFRH	Turns ABS solenoid (SFRH) ON / OFF	Operation of solenoid (clicking sound) can be heard
SFLR	Turns ABS solenoid (SFLR) ON / OFF	Operation of solenoid (clicking sound) can be heard
SFLH	Turns ABS solenoid (SFLH) ON / OFF	Operation of solenoid (clicking sound) can be heard
SRRR	Turns ABS solenoid (SRRR) ON / OFF	Operation of solenoid (clicking sound) can be heard
SRRH	Turns ABS solenoid (SRRH) ON / OFF	Operation of solenoid (clicking sound) can be heard
SRLR	Turns ABS solenoid (SRLR) ON / OFF	Operation of solenoid (clicking sound) can be heard
SRLH	Turns ABS solenoid (SRLH) ON / OFF	Operation of solenoid (clicking sound) can be heard
SMF (BA-SOL)	Turns TRAC solenoid SMF (BA-SOL) ON / OFF	Operation of solenoid (clicking sound) can be heard
SMR	Turns TRAC solenoid SMR ON / OFF	Operation of solenoid (clicking sound) can be heard
SFRR & SFRH	Turns ABS solenoid SFRR & SFRH ON / OFF	Operation of solenoid (clicking sound) can be heard
SFLR & SFLH	Turns ABS solenoid SFLR & SFLH ON / OFF	Operation of solenoid (clicking sound) can be heard
SRH & SRR	Turns ABS solenoid SRH & SRR ON / OFF	Operation of solenoid (clicking sound) can be heard
SRLR & SRLH	Turns ABS solenoid SRLR & SRLH ON / OFF	Operation of solenoid (clicking sound) can be heard

## DIAGNOSTICS – ABS WITH EBD &amp; BA &amp; TRAC &amp; VSC SYSTEM

Item	Vehicle Condition / Test Details	Diagnostic Note
SFRH & SFLH	Turns ABS solenoid SFRH & SFLH ON / OFF	Operation of solenoid (clicking sound) can be heard
SOL RELAY	Turns ABS solenoid relay ON / OFF	Operation of solenoid (clicking sound) can be heard
ABS MOT RELAY	Turns ABS motor relay ON / OFF	Operation sound of motor can be heard
ABS WARN LIGHT	Turns ABS warning light ON / OFF	Observe combination meter
VSC WARN LIGHT	Turns VSC warning light ON / OFF	Observe combination meter
VSC / TRAC OFF IND	Turns VSC / TRAC OFF indicator ON / OFF	Observe combination meter
SLIP INDI LIGHT	Turns SLIP indicator light ON / OFF	Observe combination meter
BRAKE WRN LIGHT	Turns BRAKE warning light ON / OFF	Observe combination meter
VSC / BR WARN BUZ	Turns VSC / BRAKE warning buzzer ON / OFF	Buzzer can be heard