

## DTC INSPECTION [START STOP UNIT]

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### CMDTC Self Test

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - (1) Select "Self Test".
  - (2) Select "All CMDTCs".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the start stop unit. (See CLEARING DTC [START STOP UNIT].)

### ODDTC Self Test

1. Connect the M-MDS to the DLC-2.
2. After the vehicle is identified, select the following items from the initialization screen of the M-MDS.
  - (1) Select "Self Test".
  - (2) Select "Modules".
  - (3) Select "SSU".
3. Verify the DTC according to the directions on the screen.
  - If any DTCs are displayed, perform troubleshooting according to the corresponding DTC inspection.
4. After completion of repairs, clear all DTCs stored in the start stop unit. (See CLEARING DTC [START STOP UNIT].)

### Snap shot data

- The data for all DTCs currently detected is stored.

### Snap shot data table

—: Not applicable

Snapshot data item	Unit		Data contents	Data read/use method	Corresponding data monitor items
AAT	°C	°F	Ambient temperature	—	—
APP_STATUS	Accelerator Pedal Off/ Under20%/ Over20%/FAIL		Accelerator pedal position status	—	—
CFG_STATUS	Config Complete/Not Configured/ Config Error		Instrument cluster configuration status	—	—
ECT_STATUS	Under 0 degrees C/0 - Under 80 degrees C/Over 80 degrees C/ FAIL		Engine coolant temperature status	—	—
IC_VPWR	V		Instrument cluster power supply voltage	<ul style="list-style-type: none"> <li>• The start stop unit constantly receives the power supply voltage value of the instrument cluster sent via CAN signal from the instrument cluster.</li> <li>• If a DTC is detected, the start stop unit records the power supply voltage of the instrument cluster when the DTC was detected, and it is displayed in the M-MDS.</li> </ul>	VPWR*1

Snapshot data item	Unit		Data contents	Data read/use method	Corresponding data monitor items
IG-ON_TIMER	hh:mm:ss *2		<p>Elapsed time since ignition was switched ON (engine off or on)</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>The instrument cluster records the elapsed time since the ignition was switched ON (engine off or on).</li> </ul>	<ul style="list-style-type: none"> <li>The start stop unit constantly receives the elapsed time since the ignition was switched ON (engine off or on) sent via CAN signal from the instrument cluster.</li> <li>If a DTC is detected, the start stop unit records the elapsed time since the ignition was switched ON (engine off or on) when the DTC was detected, and it is displayed in the M-MDS.</li> </ul>	—
PWR_MODE_KEY	Key Out/Key Recently Out (Position 0)/ Accessory (Position 1)/ Post Ignition (Position 2)/ Ignition On (Position 2)/ Running (Position 2)/ Running - Starting		<ul style="list-style-type: none"> <li>Key Out: Ignition switched off</li> <li>Key Recently Out (Position 0): Elapsed time <b>within 3 s</b> since ignition was switched off</li> <li>Accessory (Position 1): Ignition is switched to ACC</li> <li>Post Ignition (Position 2): Elapsed time <b>within 3 s</b> since ignition was switched ON (engine off or on)</li> <li>Ignition On (Position 2): Ignition switched ON (engine off)</li> <li>Running (Position 2): Ignition switched ON (engine on)</li> <li>Running - Starting: Cranking condition</li> </ul>	<ul style="list-style-type: none"> <li>The start stop unit constantly receives the ignition switch status sent via CAN signal from the instrument cluster.</li> <li>If a DTC is detected, the start stop unit records the ignition switch status when the DTC was detected, and it is displayed in the M-MDS.</li> </ul>	—
RPM_STATUS	Engine Stop/ Under1500rpm/ Over1500rpm/ FAIL		Engine speed status	<ul style="list-style-type: none"> <li>The start stop unit constantly receives the engine speed sent via CAN signal from the instrument cluster.</li> <li>If a DTC is detected, the start stop unit records the engine speed when the DTC was detected, and it is displayed in the M-MDS.</li> </ul>	TACHOMTR*1
SHIFT_STATUSES	P/N/D/R/FAIL		Selector lever position status	<ul style="list-style-type: none"> <li>The start stop unit constantly receives the selector lever position sent via CAN signal from the instrument cluster.</li> <li>If a DTC is detected, the start stop unit records the selector lever position when the DTC was detected, and it is displayed in the M-MDS.</li> </ul>	—
TOTAL_DIST	km	Miles	Accumulated total traveled distance from completion of vehicle until start stop unit detects DTC (Odometer value in instrument cluster)	<p>The total traveled distance from which the start stop unit detects DTCs to the present can be calculated by performing the following procedure.</p> <ol style="list-style-type: none"> <li>Verify the odometer value in the instrument cluster.</li> <li>Verify the snapshot data item TOTAL_DIST.</li> <li>Subtract 2 from 1.</li> </ol>	—

Snapshot data item	Unit	Data contents	Data read/use method	Corresponding data monitor items
TOTAL_TIME	hh:mm:ss <sup>*2</sup>	Accumulated total elapsed time since vehicle completion until start stop unit detects a DTC  <b>Note</b> • When the ROOM fuse is removed, and the ignition is switched off, the time is not included in the elapsed time.	The elapsed time from which the start stop unit detects DTCs to the present can be calculated by performing the following procedure. 1. Verify the instrument cluster PID item TOTAL_TIME. 2. Verify the snapshot data item TOTAL_TIME. 3. Subtract 2 from 1.	TOTAL_TIME <sup>*1</sup>
TRNS_NUM_L	Initial/No.1/No.2/No.3/No.4/No.5/No.6	Registration number of the remote transmitter	If the start stop unit detects DTC B13D3:16 (Low remote transmitter battery voltage), inspect the remote transmitter in which the malfunction is occurring using the following procedure to display the registration number of the remote transmitter that was operated. 1. Verify the registration number of the remote transmitter in the snapshot data. 2. Display the start stop unit PID item RF_TRNS_NUM and inspect the battery voltage of the remote transmitter having the same registration number as the recorded remote transmitter registration number.	—
VPWR	V	Start stop unit power supply voltage	—	VPWR_B2
VPWR_B1	V	Start stop unit power supply voltage (ROOM fuse)	—	VPWR_B1
VSPD_STATUS	Stop/0-10km/h/ Over10km/h/ FAIL	Vehicle speed status	• The start stop unit constantly receives the vehicle speed sent via CAN signal from the instrument cluster. • If a DTC is detected, the start stop unit records the vehicle speed when the DTC was detected, and it is displayed in the M-MDS.	SPEEDOMTR <sup>*1</sup>

<sup>\*1</sup> : Instrument cluster PID (See PID/DATA MONITOR TABLE [INSTRUMENT CLUSTER].)

<sup>\*2</sup> : The seconds may be indicated after the decimal point.