SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CHANGE	ISSUE NO. : MSB-14EXML17-001	DATE : 2014-05-15
SUBJECT : ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE		<DESTINATION/MODEL> (MMNA/USTP/EUR/G.EXP/ GCC/MMAL/NZ/CHINA) <M/Y> 13-15
GROUP : ENGINE/EMISSION CONTROL(Gr:17)		OUTLANDER/OUTLANDER PHEV(GF0W)

1. Description :

Please refer to the attached document for the information about the change of mention in the applicable service manual. (The data list reference table of ACC has been amended)

2. Affected service manuals :

Please refer to the attached document (Attached sheet 1)

3. About the details :

Please refer to the attached document (Attached sheet 4-11)

MMNA

Applicable manual	Pub. No.	Applicable title (INFO ID)	Contents
2014 OUTLANDER Service Manual	MSCD-007B-2014	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-17601-01)	Refer to attached sheet 4, 5
2015 OUTLANDER Service Manual	MSCD-007B-2015	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-17601-01)	Refer to attached sheet 4, 5

EU

Applicable manual	Pub. No.	Applicable title (INFO ID)	Contents
2013 OUTLANDER Workshop Manual	CGFE13E1-CD (English) CGFF13E1-CD (French) CGFG13E1-CD (German) CGFS13E1-CD (Spanish) CGFI13E1-CD (Italian)	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-17600-01)	Refer to attached sheet 6, 9
2014 OUTLANDER/ OUTLANDER PHEV Workshop Manual	CGFE14E2-CD (English) CGFF14E2-CD (French) CGFG14E2-CD (German) CGFS14E2-CD (Spanish) CGFI14E2-CD (Italian)	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-17601-01)	Refer to attached sheet 7, 9
2014.5 OUTLANDER/ OUTLANDER PHEV Workshop Manual	CGFE14E3-CD (English) CGFF14E3-CD (French) CGFG14E3-CD (German) CGFS14E3-CD (Spanish) CGFI14E3-CD (Italian)	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-17601-01)	Refer to attached sheet 7, 9

G.EXP/GCC

Applicable manual	Pub. No.	Applicable title (INFO ID)	Contents
2014 OUTLANDER Workshop Manual	PWRE1303R (English) PWRS1304R (Spanish)	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-34700-01)	Refer to attached sheet 10, 11

MMAL/NZ/CHINA

Applicable manual	Pub. No.	Applicable title (INFO ID)	Contents
2013 OUTLANDER Workshop Manual	AU900304 (MMAL) DRAFT (NZ, CHINA)	Gr.17: ADAPTIVE CRUISE CONTROL SYSTEM (ACC) DATA LIST REFERENCE TABLE (M172-00-242-25100-01)	Refer to attached sheet 8, 9

DATA LIST REFERENCE TABLE

M1172002402176

⚠ CAUTION

- **Road test always needs two people: one driver and one observer.**
- **When shifting the selector lever to "D" position the brakes should be applied so that the vehicle does not move forward.**

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Item No.	Check item	Check condition	Normal condition
01	ECU power supply voltage	Ignition switch: "ON"	Battery positive voltage
02	Radar temperature	Ignition switch: "ON"	–30 to 95 °C
03	Number of target	Ignition switch: "ON"	No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	Not exist
			Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"	40 to 180 km/h (25 to 112 mph)
09	Relative distance (target vehicle)	Ignition switch: "ON"	6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"	–50 to 52 m
11	Curve radius	Ignition switch: "ON"	–1 to 1 1/m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	Reduction
			Normal
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Under self test
			RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)	–1.1 to 1.1 m/s^2
		Running	–10 to 10 m/s^2
45	FL wheel speed	Running	The speedometer display and the scan tool (M.U.T.-III) display almost agree with each other. (m/s)
46	FR wheel speed	Running	
47	RL wheel speed	Running	
48	RR wheel speed	Running	
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)	Lock
		Ignition switch: "ACC"	ACC
		Ignition switch: "ON"	ON
		Ignition switch: "START"	Start

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Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Released	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW on
			Cruise control switch (CANCEL switch): Pressed	Cancel SW on
			Cruise control switch (SET – switch): Pressed	Set SW on
			Cruise control switch (RES + switch): Pressed	Resume SW on
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM switch: Pressed	ON
			FCM switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON" System: ON	Cruise control switch (cruise control ON/OFF switch): After released	All OFF
			Cruise control switch (ACC ON/OFF switch): After released	
		Ignition switch: "ON" System: OFF	Cruise control switch (cruise control ON/OFF switch): After pressing the switch for certain period	Cruise ON
			Cruise control switch (ACC ON/OFF switch): After pressing the switch for briefly	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"		Standby
				Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"		Normal
				Fail
				Fail with DTC
56	Transmission fail	Ignition switch: "ON"		Limp home OFF
				Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"		OK
				Not initialized
				Fault
				Fault and not initialized

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Item No.	Check item	Check condition	Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	OFF
			Standby
			Active
			Accelerator override
			Temporary failure
			System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	Normal
			Fail
			Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km (mile)
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km (mile)
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km (mile)
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km (mile)
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km (mile)
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km (mile)
90	ACC: target acceleration (MAX)	Ignition switch: "ON"	–10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"	–10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"	–10 to 10 m/s^2
109	FCM: brake prefill request	Ignition switch: "ON"	OFF
			ON
110	FCM: brake assist request	Ignition switch: "ON"	OFF
			ON
111	FCM: auto brake request	Ignition switch: "ON"	OFF
			ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	Not exist
			Exist at standby
			Exist at active

Insert the attached sheet 5 <New>

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Item No.	Check item	Check condition	Normal condition
115	ACC display request (Set distance)	Ignition switch: "ON"	OFF
			Standby (Far)
			Standby (Middle)
			Standby (Near)
			Active (Far)
			Active (Middle)
			Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
118	ACC warning request	Ignition switch: "ON"	No
			Brake warning
			Apply brake
			Auto canceled
			Not available
			Curve limit
			Speed limit
			No forward vehi.
			Wiper working
			RADAR failure
			system failure
119	FCM warning request	Ignition switch: "ON"	No
			Warning
			Auto brake
			Auto brake action
			OFF
			Distance (Far)
			Distance (Near)
			RADAR failure
			System failure
122	FCM display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
123	ACC/FCM tone alarm request	Ignition switch: "ON"	No
			Tone alarm 1
			Tone alarm 2
			Tone alarm 3
			Tone alarm 4
180	Service alignment status	Ignition switch: "ON"	Inactive
			Active

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Item No.	Check item	Check condition	Normal condition
188	Service alignment progress	Ignition switch: "ON"	0 to 100 %
189	Tunnel detected	Ignition switch: "ON"	Yes
			No
190	Speed threshold exceeded	Ignition switch: "ON"	Yes
			No
191	Acceleration threshold exceeded	Ignition switch: "ON"	Yes
			No
192	Cornering threshold exceeded	Ignition switch: "ON"	Yes
			No
222	Current angle offset vertical	Ignition switch: "ON"	±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"	±3.0 °or less

Insert the attached sheet 5 <New>

Item No.	Check item	Check condition		Normal condition
01	ECU power supply voltage	Ignition switch: "ON"		Battery positive voltage
02	Radar temperature	Ignition switch: "ON"		–30 to 95 °C
03	Number of target	Ignition switch: "ON"		No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	A target vehicle is NOT in front of your vehicle.	Not exist
			A target vehicle is in front of your vehicle.	Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"		40 to 180 km/h (25 to 112 mph)
09	Relative distance (target vehicle)	Ignition switch: "ON"		6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"		–50 to 52 m
11	Curve radius	Ignition switch: "ON"		–1 to 1 1/m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	The system suppresses the radar emission.	Reduction
			Normal	Normal
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	The radar works normally.	Normal
			The radar tests its own detection performance.	Under self test
			The detection performance is deteriorated due to a contaminated radar.	RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)		–1.1 to 1.1 m/s^2
		Running		–10 to 10 m/s^2
45	FL wheel speed	Running		The speedometer display and the scan tool (M.U.T.-III) display almost agree with each other. (m/s)
46	FR wheel speed	Running		
47	RL wheel speed	Running		
48	RR wheel speed	Running		
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)		Lock
		Ignition switch: "ACC"		ACC
		Ignition switch: "ON"		ON
		Ignition switch: "START"		Start

Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Release all the switches.	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW on
			Cruise control switch (CANCEL switch): Pressed	Cancel SW on
			Cruise control switch (SET – switch): Pressed	Set SW on
			Cruise control switch (RES + switch): Pressed	Resume SW on
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM ON/OFF switch: Pressed	ON
			FCM ON/OFF switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON"	The ACC system and the cruise control: OFF	All OFF
			The cruise control: ON	Cruise ON
			The ACC system: ON	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"	The ACC system: stand-by	Standby
			The ACC system is under control	Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"	The ACC system is normal	Normal
			The ACC system is deactivated temporarily.	Fail
			The ACC system fails (a diagnosis code sets)	Fail with DTC
56	Transmission fail	Ignition switch: "ON"	The transmission is normal	Limp home OFF
			The transmission fails	Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"	The steering angle sensor is normal	OK
			The steering angle sensor is NOT initialised.	Not initialized
			The steering angle sensor fails.	Fault
			The steering angle sensor fails and is not initialised.	Fault and not initialized

Item No.	Check item	Check condition		Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system: stand-by	Standby
			The ACC system is under control	Active
			The ACC system is under control (The vehicle is being accelerated by depressing the accelerator pedal)	Accelerator override
			The ACC system is deactivated temporarily.	Temporary failure
			The ACC system fails.	System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	The ACC system is normal	Normal
			The ACC system is deactivated temporarily.	Fail
			The ACC system fails (a diagnosis code sets)	Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km (mile)
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km (mile)
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km (mile)
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km (mile)
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km (mile)
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km (mile)
90	ACC: target acceleration (MAX)	Ignition switch: "ON"		−10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"		−10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"		−10 to 10 m/s^2
109	FCM: brake prefill request	Ignition switch: "ON"	The FCM system does not request the pre-fill braking.	OFF
			The FCM system requests the pre-fill braking.	ON
110	FCM: brake assist request	Ignition switch: "ON"	The FCM system does not request the brake assist.	OFF
			The FCM system requests the brake assist.	ON

Item No.	Check item	Check condition		Normal condition
111	FCM: auto brake request	Ignition switch: "ON"	The FCM system does not request the automatic braking.	OFF
			The FCM system requests the automatic braking.	ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	The ACC system does not detect any vehicle travelling ahead.	Not exist
			The ACC system detects a vehicle travelling ahead (during standby).	Exist at standby
			The ACC system detects a vehicle travelling ahead (under control).	Exist at active
115	ACC display request (Set distance)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system distance is set to "Standby (far)".	Standby (Far)
			The ACC system distance is set to "Standby (middle)".	Standby (Middle)
			The ACC system distance is set to "Standby (near)".	Standby (Near)
			The ACC system distance is set to "Active (far)".	Active (Far)
			The ACC system distance is set to "Active (middle)".	Active (Middle)
			The ACC system distance is set to "Active (near)".	Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system: ON	ON
			The ACC radar calibration has not been completed.	Flash

Item No.	Check item	Check condition		Normal condition
118	ACC warning request	Ignition switch: "ON"	The ACC system warning is not displayed.	No
			The ACC system warning is displayed (approaching warning is activated)	Brake warning
			The ACC system warning is displayed (the vehicle is stationary)	Apply brake
			The ACC system warning is displayed (the system is cancelled automatically)	Auto canceled
			The ACC system warning is displayed (the system control cannot be triggered)	Not available
			The ACC system warning is displayed (the system control cannot be triggered as the vehicle speed is out of range).	Speed limit
			The ACC system warning is displayed (the system control cannot be triggered as there is a vehicle travelling ahead).	No forward vehi.
			The ACC system warning is displayed (the ACC system is deactivated temporarily)	RADAR failure
			The ACC system warning is displayed (the system fails)	system failure

Item No.	Check item	Check condition		Normal condition
119	FCM warning request	Ignition switch: "ON"	The FCM system warning is not displayed.	No
			The FCM system warning is displayed (warning is activated)	Warning
			The FCM system warning is displayed (during braking)	Auto brake
			The FCM system warning is displayed (after braking)	Auto brake action
			The FCM system warning is displayed (The FCM system is switched off)	OFF
			The FCM system warning is displayed (The distance is set to "Far").	Distance (Far)
			The FCM system warning is displayed (The distance is set to "Near").	Distance (Near)
			The FCM system warning is displayed (the FCM system is deactivated temporarily)	RADAR failure
			The FCM system warning is displayed (the system fails).	System failure
122	FCM display request (Indicator)	Ignition switch: "ON"	The FCM system: OFF	OFF
			The FCM system: ON	ON
			The FCM radar calibration has not been completed.	Flash
123	ACC/FCM tone alarm request	Ignition switch: "ON"	No ACC/FCM tone alarm	No
			The ACC control is started, the ACC speed set switch is pressed to hold, or the FCM warning timing is switched	Tone alarm 1
			The FCM is switched off	Tone alarm 2
			The system cannot detect any vehicle travelling ahead while the ACC system is under control.	Tone alarm 3
			The ACC control cannot be triggered.	Tone alarm 4
180	Service alignment status	Ignition switch: "ON"	The radar calibration is NOT in progress.	Inactive
			The radar calibration is in progress.	Active
188	Service alignment progress	Ignition switch: "ON"		0 to 100 %

Item No.	Check item	Check condition		Normal condition
189	Tunnel detected	Ignition switch: "ON"	The system detects a tunnel while the radar calibration is in progress.	Yes
			The system does not detect any tunnel while the radar calibration is in progress.	No
190	Speed threshold exceeded	The vehicle is driven at the specified speed or more while the radar calibration is in progress.		Yes
		The vehicle is driven within the specified speed range while the radar calibration is in progress.		No
191	Acceleration threshold exceeded	The vehicle is accelerated more than the specified while the radar calibration is in progress.		Yes
		The vehicle is accelerated within the specified range while the radar calibration is in progress.		No
192	Cornering threshold exceeded	The system detects the curve, which is out of the specified range, while the radar calibration is in progress.		Yes
		The system detects the curve, which is within the specified range, while the radar calibration is in progress.		No
222	Current angle offset vertical	Ignition switch: "ON"		±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"		±3.0 °or less

DATA LIST REFERENCE TABLE

M1172002402176

⚠ CAUTION

- **Road test always needs two people: one driver and one observer.**
- **When shifting the selector lever to "D" position the brakes should be applied so that the vehicle does not move forward.**

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Item No.	Check item	Check condition	Normal condition
01	ECU power supply voltage	Ignition switch: "ON"	Battery voltage
02	Radar temperature	Ignition switch: "ON"	–30 to 95 °C
03	Number of target	Ignition switch: "ON"	No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	Not exist
			Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"	40 to 180 km/h
09	Relative distance (target vehicle)	Ignition switch: "ON"	6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"	–50 to 52 m
11	Curve radius	Ignition switch: "ON"	–32800 to 32700 m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	Not emitted
			Emitted
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Under self test
			RADAR Blocked
19	ACC Maximum set speed	Ignition switch: "ON"	180 km/h or less
40	Steering angle sensor	Vehicle stopped (the steering wheel is in the neutral position)	-6 to 6 deg
		Running	-850 to 850 deg
41	Yaw rate sensor	Vehicle stopped (level)	-3.6 to 3.6 deg/s
		Running	-100 to 100 deg/s
42	Lateral acceleration	Vehicle stopped (level)	–1.1 to 1.1 m/s^2
		Running	–10 to 10 m/s^2
43	Distance travelled by left wheel	Ignition switch: "ON"	Nearly the same as the speedometer display
44	Distance travelled by right wheel	Ignition switch: "ON"	Nearly the same as the speedometer display

Insert the attached sheet 9 <New>

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Item No.	Check item	Check condition		Normal condition
45	FL wheel speed	Running		The speedometer display and the M.U.T.-III display almost agree with each other. (During stop: approximately 0.7km/h)
46	FR wheel speed	Running		
47	RL wheel speed	Running		
48	RR wheel speed	Running		
49	Ignition switch state	Ignition switch: "LOCK"(OFF)		Lock
		Ignition switch: "ACC"		Off and acc
		Ignition switch: "ON"		Run
		Ignition switch: "START"		Start
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Released	SW all OFF
			Cruise control switch (speed limiter switch): Pressed	Main SW ON
			Cruise control switch (cruise control switch): Pressed	SW ON
			Cruise control switch (CANCEL switch): Pressed	Cancel SW ON
			Cruise control switch (SET – switch): Pressed	Set SW ON
			Cruise control switch (RES + switch): Pressed	Resume SW ON
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM switch: Pressed	ON
			FCM switch: Released	OFF

Insert the attached sheet 9 <New>

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Item No.	Check item	Check condition		Normal condition
53	Vehicle control state from engine	Ignition switch: "ON" System: ON	Cruise control switch (cruise control ON/OFF switch): After released	All OFF
			Cruise control switch (speed limiter ON/OFF switch): After released	
			Cruise control switch (ACC ON/OFF switch): After released	
		Ignition switch: "ON" System: OFF	Cruise control switch (cruise control ON/OFF switch): After pressing the switch for certain period	CC ON
			Cruise control switch (speed limiter ON/OFF switch): After pressed	ASL ON
			Cruise control switch (ACC ON/OFF switch): After pressing the switch for briefly	ACC ON
54	ACC state from engine	Ignition switch: "ON"		ACC Standby
				ACC Active
55	ACC fail from engine	Ignition switch: "ON"		Not fail (Engine)
				Without diagnosis code (Engine)
				With diagnosis code (Engine)
56	Transmission fail	Ignition switch: "ON"		Limp home OFF
				Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"		OK
				Not initialised
				Fault
				Fault and not initialised
58	ACC state from ASC	Ignition switch: "ON"		OFF
				Standby
				Active
				Accelerator override
				Temporary failure
				System failure
59	ACC fail from ASC	Ignition switch: "ON"		Not fail (ASC)
				Without diagnosis code (ASC)
				With diagnosis code (ASC)

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Item No.	Check item	Check condition	Normal condition
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
90	ACC target acceleration MAX	Ignition switch: "ON"	−10 to 10 m/s^2
96	ACC target acceleration MIN	Ignition switch: "ON"	−10 to 10 m/s^2
102	FCM target acceleration	Ignition switch: "ON"	−10 to 10 m/s^2
108	ACC stat	Ignition switch: "ON"	OFF
			Standby
			Active
			Accelerator override
			Temporary failure
			System failure
			Shut OFF
109	FCM brake prefill request	Ignition switch: "ON"	OFF
			ON
110	FCM brake assist request	Ignition switch: "ON"	OFF
			ON
111	FCM auto brake request	Ignition switch: "ON"	OFF
			ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	Not exist
			Exist at standby
			Exist at active

Insert the attached sheet 9 <New>

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Item No.	Check item	Check condition	Normal condition
115	ACC display request (Set distance)	Ignition switch: "ON"	OFF
			Standby (Far)
			Standby (Middle)
			Standby (Near)
			Active (Far)
			Active (Middle)
			Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
118	ACC display request (Set speed)	Ignition switch: "ON"	40 to 180 km/h
119	ACC warning request	Ignition switch: "ON"	No
			Brake warning
			Apply brake
			Auto canceled
			Not available
			Curve limit
			Speed limit
			No forward vehi.
			Wiper working
			RADAR failure
			system failure
120	FCM warning request	Ignition switch: "ON"	No
			Warning
			Auto brake
			Auto brake action
			OFF
			Distance (Far)
			Distance (Near)
			RADAR failure
			System failure
121	ACC display request (Set speed unit)	Ignition switch: "ON"	km (km/h)
			mile (mph)
122	FCM display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
123	ACC/FCM buzzer request	Ignition switch: "ON"	No
			Buzzer 1
			Buzzer 2
			Buzzer 3
			Buzzer 4
180	Service alignment status	Ignition switch: "ON"	Inactive
			Active
188	Service alignment progress	Ignition switch: "ON"	0 to 100 %
189	Tunnel detected	Ignition switch: "ON"	Yes
			No
190	Speed threshold exceeded	Ignition switch: "ON"	Yes
			No
191	Acceleration threshold exceeded	Ignition switch: "ON"	Yes
			No
192	Cornering threshold exceeded	Ignition switch: "ON"	Yes
			No
222	Current angle offset vertical	Ignition switch: "ON"	±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"	±3.0 °or less

Insert the attached sheet 9 <New>

DATA LIST REFERENCE TABLE

M1172002402176

⚠ CAUTION

- **Road test always needs two people: one driver and one observer.**
- **When shifting the selector lever to "D" position the brakes should be applied so that the vehicle does not move forward.**

<Old>

Item No.	Check item	Check condition	Normal condition
01	ECU power supply voltage	Ignition switch: "ON"	Battery voltage
02	Radar temperature	Ignition switch: "ON"	–30 to 95 °C
03	Number of target	Ignition switch: "ON"	No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	Not exist
			Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"	40 to 180 km/h
09	Relative distance (target vehicle)	Ignition switch: "ON"	6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"	–50 to 52 m
11	Curve radius	Ignition switch: "ON"	–1 to 1 1/m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	Reduction
			Normal
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Under self test
			RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)	–1.1 to 1.1 m/s^2
		Running	–10 to 10 m/s^2
45	FL wheel speed	Running	The speedometer display and the M.U.T.-III display almost agree with each other. (m/s)
46	FR wheel speed	Running	
47	RL wheel speed	Running	
48	RR wheel speed	Running	
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)	Lock
		Ignition switch: "ACC"	ACC
		Ignition switch: "ON"	ON
		Ignition switch: "START"	Start

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Released	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW on
			Cruise control switch (CANCEL switch): Pressed	Cancel SW on
			Cruise control switch (SET – switch): Pressed	Set SW on
			Cruise control switch (RES + switch): Pressed	Resume SW on
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM switch: Pressed	ON
			FCM switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON" System: ON	Cruise control switch (cruise control ON/OFF switch): After released	All OFF
			Cruise control switch (ACC ON/OFF switch): After released	
		Ignition switch: "ON" System: OFF	Cruise control switch (cruise control ON/OFF switch): After pressing the switch for certain period	Cruise ON
			Cruise control switch (ACC ON/OFF switch): After pressing the switch for briefly	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"		Standby
				Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"		Normal
				Fail
				Fail with DTC
56	Transmission fail	Ignition switch: "ON"		Limp home OFF
				Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"		OK
				Not initialised
				Fault
				Fault and not initialised

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	OFF
			Standby
			Active
			Accelerator override
			Temporary failure
			System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	Normal
			Fail
			Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
90	ACC: target acceleration (MAX)	Ignition switch: "ON"	–10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"	–10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"	–10 to 10 m/s^2
109	FCM: brake prefill request	Ignition switch: "ON"	OFF
			ON
110	FCM: brake assist request	Ignition switch: "ON"	OFF
			ON
111	FCM: auto brake request	Ignition switch: "ON"	OFF
			ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	Not exist
			Exist at standby
			Exist at active

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
115	ACC display request (Set distance)	Ignition switch: "ON"	OFF
			Standby (Far)
			Standby (Middle)
			Standby (Near)
			Active (Far)
			Active (Middle)
			Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
118	ACC warning request	Ignition switch: "ON"	No
			Brake warning
			Apply brake
			Auto canceled
			Not available
			Curve limit
			Speed limit
			No forward vehi.
			Wiper working
			RADAR failure
			system failure
119	FCM warning request	Ignition switch: "ON"	No
			Warning
			Auto brake
			Auto brake action
			OFF
			Distance (Far)
			Distance (Near)
			RADAR failure
			System failure
120	ACC display request (Set speed)	Ignition switch: "ON"	40 to 180 km/h
121	ACC display request (Set speed unit)	Ignition switch: "ON"	km (km/h)
			mile (mph)
122	FCM display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
123	ACC/FCM buzzer request	Ignition switch: "ON"	No
			Buzzer 1
			Buzzer 2
			Buzzer 3
			Buzzer 4
180	Service alignment status	Ignition switch: "ON"	Inactive
			Active
188	Service alignment progress	Ignition switch: "ON"	0 to 100 %
189	Tunnel detected	Ignition switch: "ON"	Yes
			No
190	Speed threshold exceeded	Ignition switch: "ON"	Yes
			No
191	Acceleration threshold exceeded	Ignition switch: "ON"	Yes
			No
192	Cornering threshold exceeded	Ignition switch: "ON"	Yes
			No
222	Current angle offset vertical	Ignition switch: "ON"	±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"	±3.0 °or less

Insert the attached sheet 9 <New>

DATA LIST REFERENCE TABLE

M1172002402251

⚠ CAUTION

- **Road test always needs two people: one driver and one observer.**
- **When shifting the selector lever to "D" position the brakes should be applied so that the vehicle does not move forward.**

<Old>

Item No.	Check item	Check condition	Normal condition
01	ECU power supply voltage	Ignition switch: "ON"	Battery voltage
02	Radar temperature	Ignition switch: "ON"	–30 to 95 °C
03	Number of target	Ignition switch: "ON"	No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	Not exist
			Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"	40 to 180 km/h
09	Relative distance (target vehicle)	Ignition switch: "ON"	6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"	–50 to 52 m
11	Curve radius	Ignition switch: "ON"	–32800 to 32700 m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Reduction
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Under self test
			RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)	–1.1 to 1.1 m/s^2
		Running	–10 to 10 m/s^2
45	FL wheel speed	Running	The speedometer display and the M.U.T.-III display almost agree with each other. (During stop: approximately 0.7km/h)
46	FR wheel speed	Running	
47	RL wheel speed	Running	
48	RR wheel speed	Running	
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)	Lock
			OFF
		Ignition switch: "ACC"	ACC2
			ACC
		Ignition switch: "ON"	ON
		Ignition switch: "START"	Start

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Released	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW ON
			Cruise control switch (CANCEL switch): Pressed	Cancel SW ON
			Cruise control switch (SET – switch): Pressed	Set SW ON
			Cruise control switch (RES + switch): Pressed	Resume SW ON
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM switch: Pressed	ON
			FCM switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON" System: ON	Cruise control switch (cruise control ON/OFF switch): After released	All OFF
			Cruise control switch (ACC ON/OFF switch): After released	
		Ignition switch: "ON" System: OFF	Cruise control switch (cruise control ON/OFF switch): After pressing the switch for certain period	Cruise ON
			Cruise control switch (ACC ON/OFF switch): After pressing the switch for briefly	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"		ACC Standby
				ACC Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"		Normal
				Fail
				Fail with DTC
56	Transmission fail	Ignition switch: "ON"		Limp home OFF
				Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"		OK
				Not initialised
				Fault
				Fault and not initialised

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	OFF
			Standby
			Active
			Accelerator override
			Temporary failure
			System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	Normal
			Fail
			Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
90	ACC: target acceleration (MAX)	Ignition switch: "ON"	−10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"	−10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"	−10 to 10 m/s^2
108	ACC control stat (ACC/FCM ECU)	Ignition switch: "ON"	OFF
			Standby
			Active
			Accelerator override
			Temporary failure
			System failure
			Shut OFF
109	FCM: brake prefill request	Ignition switch: "ON"	OFF
			ON
110	FCM: brake assist request	Ignition switch: "ON"	OFF
			ON
111	FCM: auto brake request	Ignition switch: "ON"	OFF
			ON

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	Not exist
			Exist at standby
			Exist at active
115	ACC display request (Set distance)	Ignition switch: "ON"	OFF
			Standby (Far)
			Standby (Middle)
			Standby (Near)
			Active (Far)
			Active (Middle)
			Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
118	ACC warning request	Ignition switch: "ON"	No
			Brake warning
			Apply brake
			Auto canceled
			Not available
			Curve limit
			Speed limit
			No forward vehi.
			Wiper working
			RADAR failure
			system failure
119	FCM warning request	Ignition switch: "ON"	No
			Warning
			Auto brake
			Auto brake action
			OFF
			Distance (Far)
			Distance (Near)
			RADAR failure
			System failure
120	ACC display request (Set speed)	Ignition switch: "ON"	40 to 180 km/h
121	ACC display request (Set speed unit)	Ignition switch: "ON"	km (km/h)
			mile (mph)
122	FCM display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash

Insert the attached sheet 9 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
123	ACC/FCM buzzer request	Ignition switch: "ON"	No
			Buzzer 1
			Buzzer 2
			Buzzer 3
			Buzzer 4
180	Service alignment status	Ignition switch: "ON"	Inactive
			Active
188	Service alignment progress	Ignition switch: "ON"	0 to 100 %
189	Tunnel detected	Ignition switch: "ON"	Yes
			No
190	Speed threshold exceeded	Ignition switch: "ON"	Yes
			No
191	Acceleration threshold exceeded	Ignition switch: "ON"	Yes
			No
192	Cornering threshold exceeded	Ignition switch: "ON"	Yes
			No
222	Current angle offset vertical	Ignition switch: "ON"	±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"	±3.0 °or less

Insert the attached sheet 9 <New>

Item No.	Check item	Check condition		Normal condition
01	ECU power supply voltage	Ignition switch: "ON"		Battery voltage
02	Radar temperature	Ignition switch: "ON"		–30 to 95 °C
03	Number of target	Ignition switch: "ON"		No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	A target vehicle is NOT in front of your vehicle.	Not exist
			A target vehicle is in front of your vehicle.	Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"		40 to 180 km/h
09	Relative distance (target vehicle)	Ignition switch: "ON"		6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"		–50 to 52 m
11	Curve radius	Ignition switch: "ON"		–1 to 1 1/m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	The system suppresses the radar emission.	Normal
			Normal	Reduction
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	The radar works normally.	Normal
			The radar tests its own detection performance.	Under self test
			The detection performance is deteriorated due to a contaminated radar.	RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)		–1.1 to 1.1 m/s^2
		Running		–10 to 10 m/s^2
45	FL wheel speed	Running		The speedometer display and the M.U.T.-III display almost agree with each other. (m/s)
46	FR wheel speed	Running		
47	RL wheel speed	Running		
48	RR wheel speed	Running		
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)		Lock
		Ignition switch: "ACC"		ACC
		Ignition switch: "ON"		ON
		Ignition switch: "START"		Start

Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Release all the switches.	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW on
			Cruise control switch (CANCEL switch): Pressed	Cancel SW on
			Cruise control switch (SET – switch): Pressed	Set SW on
			Cruise control switch (RES + switch): Pressed	Resume SW on
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM ON/OFF switch: Pressed	ON
			FCM ON/OFF switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON"	The ACC system and the cruise control: OFF	All OFF
			The cruise control: ON	Cruise ON
			The ACC system: ON	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"	The ACC system: stand-by	Standby
			The ACC system is under control	Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"	The ACC system is normal	Normal
			The ACC system is deactivated temporarily.	Fail
			The ACC system fails (a diagnosis code sets)	Fail with DTC
56	Transmission fail	Ignition switch: "ON"	The transmission is normal	Limp home OFF
			The transmission fails	Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"	The steering angle sensor is normal	OK
			The steering angle sensor is NOT initialised.	Not initialised
			The steering angle sensor fails.	Fault
			The steering angle sensor fails and is not initialised.	Fault and not initialised

Item No.	Check item	Check condition		Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system: stand-by	Standby
			The ACC system is under control	Active
			The ACC system is under control (The vehicle is being accelerated by depressing the accelerator pedal)	Accelerator override
			The ACC system is deactivated temporarily.	Temporary failure
			The ACC system fails.	System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	The ACC system is normal	Normal
			The ACC system is deactivated temporarily.	Fail
			The ACC system fails (a diagnosis code sets)	Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km
90	ACC: target acceleration (MAX)	Ignition switch: "ON"		−10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"		−10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"		−10 to 10 m/s^2
109	FCM: brake prefill request	Ignition switch: "ON"	The FCM system does not request the pre-fill braking.	OFF
			The FCM system requests the pre-fill braking.	ON
110	FCM: brake assist request	Ignition switch: "ON"	The FCM system does not request the brake assist.	OFF
			The FCM system requests the brake assist.	ON

Item No.	Check item	Check condition		Normal condition
111	FCM: auto brake request	Ignition switch: "ON"	The FCM system does not request the automatic braking.	OFF
			The FCM system requests the automatic braking.	ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	The ACC system does not detect any vehicle travelling ahead.	Not exist
			The ACC system detects a vehicle travelling ahead (during standby).	Exist at standby
			The ACC system detects a vehicle travelling ahead (under control).	Exist at active
115	ACC display request (Set distance)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system distance is set to "Standby (far)".	Standby (Far)
			The ACC system distance is set to "Standby (middle)".	Standby (Middle)
			The ACC system distance is set to "Standby (near)".	Standby (Near)
			The ACC system distance is set to "Active (far)".	Active (Far)
			The ACC system distance is set to "Active (middle)".	Active (Middle)
			The ACC system distance is set to "Active (near)".	Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system: ON	ON
			The ACC radar calibration has not been completed.	Flash

Item No.	Check item	Check condition		Normal condition
118	ACC warning request	Ignition switch: "ON"	The ACC system warning is not displayed.	No
			The ACC system warning is displayed (approaching warning is activated)	Brake warning
			The ACC system warning is displayed (the vehicle is stationary)	Apply brake
			The ACC system warning is displayed (the system is cancelled automatically)	Auto canceled
			The ACC system warning is displayed (the system control cannot be triggered)	Not available
			The ACC system warning is displayed (the system control cannot be triggered as the vehicle speed is out of range).	Speed limit
			The ACC system warning is displayed (the system control cannot be triggered as there is a vehicle travelling ahead).	No forward vehi.
			The ACC system warning is displayed (the ACC system is deactivated temporarily)	RADAR failure
			The ACC system warning is displayed (the system fails)	system failure

Item No.	Check item	Check condition		Normal condition
119	FCM warning request	Ignition switch: "ON"	The FCM system warning is not displayed.	No
			The FCM system warning is displayed (warning is activated)	Warning
			The FCM system warning is displayed (during braking)	Auto brake
			The FCM system warning is displayed (after braking)	Auto brake action
			The FCM system warning is displayed (The FCM system is switched off)	OFF
			The FCM system warning is displayed (The distance is set to "Far").	Distance (Far)
			The FCM system warning is displayed (The distance is set to "Near").	Distance (Near)
			The FCM system warning is displayed (the FCM system is deactivated temporarily)	RADAR failure
			The FCM system warning is displayed (the system fails).	System failure
120	ACC display request (Set speed)	Ignition switch: "ON"		40 to 180 km/h
121	ACC display request (Set speed unit)	Ignition switch: "ON"		km (km/h)
				mile (mph)
122	FCM display request (Indicator)	Ignition switch: "ON"	The FCM system: OFF	OFF
			The FCM system: ON	ON
			The FCM radar calibration has not been completed.	Flash
123	ACC/FCM buzzer request	Ignition switch: "ON"	No ACC/FCM tone alarm	No
			The ACC control is started, the ACC speed set switch is pressed to hold, or the FCM warning timing is switched	Buzzer 1
			The FCM is switched off	Buzzer 2
			The system cannot detect any vehicle travelling ahead while the ACC system is under control.	Buzzer 3
			The ACC control cannot be triggered.	Buzzer 4

Item No.	Check item	Check condition		Normal condition
180	Service alignment status	Ignition switch: "ON"	The radar calibration is NOT in progress.	Inactive
			The radar calibration is in progress.	Active
188	Service alignment progress	Ignition switch: "ON"		0 to 100 %
189	Tunnel detected	Ignition switch: "ON"	The system detects a tunnel while the radar calibration is in progress.	Yes
			The system does not detect any tunnel while the radar calibration is in progress.	No
190	Speed threshold exceeded	The vehicle is driven at the specified speed or more while the radar calibration is in progress.		Yes
		The vehicle is driven within the specified speed range while the radar calibration is in progress.		No
191	Acceleration threshold exceeded	The vehicle is accelerated more than the specified while the radar calibration is in progress.		Yes
		The vehicle is accelerated within the specified range while the radar calibration is in progress.		No
192	Cornering threshold exceeded	The system detects the curve, which is out of the specified range, while the radar calibration is in progress.		Yes
		The system detects the curve, which is within the specified range, while the radar calibration is in progress.		No
222	Current angle offset vertical	Ignition switch: "ON"		±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"		±3.0 °or less

DATA LIST REFERENCE TABLE

M1172002402347

⚠ CAUTION

- **Road test always needs two people: one driver and one observer.**
- **When shifting the selector lever to "D" position the brakes should be applied so that the vehicle does not move forward.**

<Old>

Item No.	Check item	Check condition	Normal condition
01	ECU power supply voltage	Ignition switch: "ON"	Battery voltage
02	Radar temperature	Ignition switch: "ON"	–30 to 95 °C
03	Number of target	Ignition switch: "ON"	No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	Not exist
			Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"	40 to 180 km/h
09	Relative distance (target vehicle)	Ignition switch: "ON"	6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"	–50 to 52 m
11	Curve radius	Ignition switch: "ON"	–32800 to 32700 m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Reduction
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	Normal
			Under self test
			RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)	–1.1 to 1.1 m/s^2
		Running	–10 to 10 m/s^2
45	FL wheel speed	Running	The speedometer display and the M.U.T.-III display almost agree with each other. (During stop: approximately 0.7km/h)
46	FR wheel speed	Running	
47	RL wheel speed	Running	
48	RR wheel speed	Running	
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)	Lock
		Ignition switch: "ACC"	ACC
		Ignition switch: "ON"	ON
		Ignition switch: "START"	Start

Insert the attached sheet 11 <New>

<Old>

Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Released	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW ON
			Cruise control switch (CANCEL switch): Pressed	Cancel SW ON
			Cruise control switch (SET – switch): Pressed	Set SW ON
			Cruise control switch (RES + switch): Pressed	Resume SW ON
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM switch: Pressed	ON
			FCM switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON" System: ON	Cruise control switch (cruise control ON/OFF switch): After released	All OFF
			Cruise control switch (ACC ON/OFF switch): After released	
		Ignition switch: "ON" System: OFF	Cruise control switch (cruise control ON/OFF switch): After pressing the switch for certain period	Cruise ON
			Cruise control switch (ACC ON/OFF switch): After pressing the switch for briefly	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"		Standby
				Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"		Normal
				Fail
				Fail with DTC
56	Transmission fail	Ignition switch: "ON"		Limp home OFF
				Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"		OK
				Not initialised
				Fault
				Fault and not initialised

Insert the attached sheet 11 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	OFF
			Standby
			Active
			Accelerator override
			Temporary failure
			System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	Normal
			Fail
			Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"	Total driving distance km
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"	Total driving distance km
90	ACC: target acceleration (MAX)	Ignition switch: "ON"	−10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"	−10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"	−10 to 10 m/s^2
109	FCM: brake prefill request	Ignition switch: "ON"	OFF
			ON
110	FCM: brake assist request	Ignition switch: "ON"	OFF
			ON
111	FCM: auto brake request	Ignition switch: "ON"	OFF
			ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	Not exist
			Exist at standby
			Exist at active

Insert the attached sheet 11 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
115	ACC display request (Set distance)	Ignition switch: "ON"	OFF
			Standby (Far)
			Standby (Middle)
			Standby (Near)
			Active (Far)
			Active (Middle)
			Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
118	ACC warning request	Ignition switch: "ON"	No
			Brake warning
			Apply brake
			Auto canceled
			Not available
			Curve limit
			Speed limit
			No forward vehi.
			Wiper working
			RADAR failure
			system failure
119	FCM warning request	Ignition switch: "ON"	No
			Warning
			Auto brake
			Auto brake action
			OFF
			Distance (Far)
			Distance (Near)
			RADAR failure
			System failure
122	FCM display request (Indicator)	Ignition switch: "ON"	OFF
			ON
			Flash
123	ACC/FCM buzzer request	Ignition switch: "ON"	No
			Buzzer 1
			Buzzer 2
			Buzzer 3
			Buzzer 4
180	Service alignment status	Ignition switch: "ON"	Inactive
			Active

Insert the attached sheet 11 <New>

<Old>

Item No.	Check item	Check condition	Normal condition
188	Service alignment progress	Ignition switch: "ON"	0 to 100 %
189	Tunnel detected	Ignition switch: "ON"	Yes
			No
190	Speed threshold exceeded	Ignition switch: "ON"	Yes
			No
191	Acceleration threshold exceeded	Ignition switch: "ON"	Yes
			No
192	Cornering threshold exceeded	Ignition switch: "ON"	Yes
			No
222	Current angle offset vertical	Ignition switch: "ON"	±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"	±3.0 °or less

Insert the attached sheet 11 <New>

Item No.	Check item	Check condition		Normal condition
01	ECU power supply voltage	Ignition switch: "ON"		Battery voltage
02	Radar temperature	Ignition switch: "ON"		–30 to 95 °C
03	Number of target	Ignition switch: "ON"		No. 0 to 15
04	Target vehicle existence	Ignition switch: "ON"	A target vehicle is NOT in front of your vehicle.	Not exist
			A target vehicle is in front of your vehicle.	Exist
08	Relative speed (target vehicle)	Ignition switch: "ON"		40 to 180 km/h
09	Relative distance (target vehicle)	Ignition switch: "ON"		6 m or more
10	Lateral offset (target vehicle)	Ignition switch: "ON"		–50 to 52 m
11	Curve radius	Ignition switch: "ON"		–1 to 1 1/m
12	Radar emission status	• Perform a test run of the vehicle. • Cruise control: active	The system suppresses the radar emission.	Normal
			Normal	Reduction
13	Radar performance	• Perform a test run of the vehicle. • Cruise control: active	The radar works normally.	Normal
			The radar tests its own detection performance.	Under self test
			The detection performance is deteriorated due to a contaminated radar.	RADAR Blocked
42	Lateral acceleration	Vehicle stopped (level)		–1.1 to 1.1 m/s^2
		Running		–10 to 10 m/s^2
45	FL wheel speed	Running		The speedometer display and the M.U.T.-III display almost agree with each other. (m/s)
46	FR wheel speed	Running		
47	RL wheel speed	Running		
48	RR wheel speed	Running		
49	Ignition switch (input)	Ignition switch: "LOCK"(OFF)		Lock
		Ignition switch: "ACC"		ACC
		Ignition switch: "ON"		ON
		Ignition switch: "START"		Start

Item No.	Check item	Check condition		Normal condition
50	ACC switch state	Ignition switch: "ON"	Cruise control switch: Release all the switches.	SW all OFF
			Cruise control switch (cruise control switch): Pressed	ACC/CC: SW on
			Cruise control switch (CANCEL switch): Pressed	Cancel SW on
			Cruise control switch (SET – switch): Pressed	Set SW on
			Cruise control switch (RES + switch): Pressed	Resume SW on
51	ACC distance switch state	Ignition switch: "ON"	Cruise control switch (ACC distance switch): Pressed	ON
			Cruise control switch (ACC distance switch): Released	OFF
52	FCM switch state	Ignition switch: "ON"	FCM ON/OFF switch: Pressed	ON
			FCM ON/OFF switch: Released	OFF
53	Vehicle control state (ENG ECU)	Ignition switch: "ON"	The ACC system and the cruise control: OFF	All OFF
			The cruise control: ON	Cruise ON
			The ACC system: ON	ACC ON
54	ACC control state (ENG ECU)	Ignition switch: "ON"	The ACC system: stand-by	Standby
			The ACC system is under control	Active
55	ACC fail state (ENG ECU)	Ignition switch: "ON"	The ACC system is normal	Normal
			The ACC system is deactivated temporarily.	Fail
			The ACC system fails (a diagnosis code sets)	Fail with DTC
56	Transmission fail	Ignition switch: "ON"	The transmission is normal	Limp home OFF
			The transmission fails	Limp home ON
57	Steering angle sensor state	Ignition switch: "ON"	The steering angle sensor is normal	OK
			The steering angle sensor is NOT initialised.	Not initialised
			The steering angle sensor fails.	Fault
			The steering angle sensor fails and is not initialised.	Fault and not initialised

Item No.	Check item	Check condition		Normal condition
58	ACC control state (ASC ECU)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system: stand-by	Standby
			The ACC system is under control	Active
			The ACC system is under control (The vehicle is being accelerated by depressing the accelerator pedal)	Accelerator override
			The ACC system is deactivated temporarily.	Temporary failure
			The ACC system fails.	System failure
59	ACC fail state (ASC ECU)	Ignition switch: "ON"	The ACC system is normal	Normal
			The ACC system is deactivated temporarily.	Fail
			The ACC system fails (a diagnosis code sets)	Fail with DTC
63	ODO at latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km
64	ODO at 2nd latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km
65	ODO at 3rd latest temporary fail (Engine)	Ignition switch: "ON"		Total driving distance km
66	ODO at latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km
67	ODO at 2nd latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km
68	ODO at 3rd latest temporary fail (ASC)	Ignition switch: "ON"		Total driving distance km
90	ACC: target acceleration (MAX)	Ignition switch: "ON"		−10 to 10 m/s^2
96	ACC: target acceleration (MIN)	Ignition switch: "ON"		−10 to 10 m/s^2
102	FCM: target deceleration	Ignition switch: "ON"		−10 to 10 m/s^2
109	FCM: brake prefill request	Ignition switch: "ON"	The FCM system does not request the pre-fill braking.	OFF
			The FCM system requests the pre-fill braking.	ON
110	FCM: brake assist request	Ignition switch: "ON"	The FCM system does not request the brake assist.	OFF
			The FCM system requests the brake assist.	ON

Item No.	Check item	Check condition		Normal condition
111	FCM: auto brake request	Ignition switch: "ON"	The FCM system does not request the automatic braking.	OFF
			The FCM system requests the automatic braking.	ON
114	ACC display request (Forward vehicle)	Ignition switch: "ON"	The ACC system does not detect any vehicle travelling ahead.	Not exist
			The ACC system detects a vehicle travelling ahead (during standby).	Exist at standby
			The ACC system detects a vehicle travelling ahead (under control).	Exist at active
115	ACC display request (Set distance)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system distance is set to "Standby (far)".	Standby (Far)
			The ACC system distance is set to "Standby (middle)".	Standby (Middle)
			The ACC system distance is set to "Standby (near)".	Standby (Near)
			The ACC system distance is set to "Active (far)".	Active (Far)
			The ACC system distance is set to "Active (middle)".	Active (Middle)
			The ACC system distance is set to "Active (near)".	Active (Near)
116	ACC display request (Indicator)	Ignition switch: "ON"	The ACC system: OFF	OFF
			The ACC system: ON	ON
			The ACC radar calibration has not been completed.	Flash

Item No.	Check item	Check condition		Normal condition
118	ACC warning request	Ignition switch: "ON"	The ACC system warning is not displayed.	No
			The ACC system warning is displayed (approaching warning is activated)	Brake warning
			The ACC system warning is displayed (the vehicle is stationary)	Apply brake
			The ACC system warning is displayed (the system is cancelled automatically)	Auto canceled
			The ACC system warning is displayed (the system control cannot be triggered)	Not available
			The ACC system warning is displayed (the system control cannot be triggered as the vehicle speed is out of range).	Speed limit
			The ACC system warning is displayed (the system control cannot be triggered as there is a vehicle travelling ahead).	No forward vehi.
			The ACC system warning is displayed (the ACC system is deactivated temporarily)	RADAR failure
			The ACC system warning is displayed (the system fails)	system failure

Item No.	Check item	Check condition		Normal condition
119	FCM warning request	Ignition switch: "ON"	The FCM system warning is not displayed.	No
			The FCM system warning is displayed (warning is activated)	Warning
			The FCM system warning is displayed (during braking)	Auto brake
			The FCM system warning is displayed (after braking)	Auto brake action
			The FCM system warning is displayed (The FCM system is switched off)	OFF
			The FCM system warning is displayed (The distance is set to "Far").	Distance (Far)
			The FCM system warning is displayed (The distance is set to "Near").	Distance (Near)
			The FCM system warning is displayed (the FCM system is deactivated temporarily)	RADAR failure
			The FCM system warning is displayed (the system fails).	System failure
122	FCM display request (Indicator)	Ignition switch: "ON"	The FCM system: OFF	OFF
			The FCM system: ON	ON
			The FCM radar calibration has not been completed.	Flash
123	ACC/FCM buzzer request	Ignition switch: "ON"	No ACC/FCM tone alarm	No
			The ACC control is started, the ACC speed set switch is pressed to hold, or the FCM warning timing is switched	Buzzer 1
			The FCM is switched off	Buzzer 2
			The system cannot detect any vehicle travelling ahead while the ACC system is under control.	Buzzer 3
			The ACC control cannot be triggered.	Buzzer 4
180	Service alignment status	Ignition switch: "ON"	The radar calibration is NOT in progress.	Inactive
			The radar calibration is in progress.	Active
188	Service alignment progress	Ignition switch: "ON"		0 to 100 %

Item No.	Check item	Check condition		Normal condition
189	Tunnel detected	Ignition switch: "ON"	The system detects a tunnel while the radar calibration is in progress.	Yes
			The system does not detect any tunnel while the radar calibration is in progress.	No
190	Speed threshold exceeded	The vehicle is driven at the specified speed or more while the radar calibration is in progress.		Yes
		The vehicle is driven within the specified speed range while the radar calibration is in progress.		No
191	Acceleration threshold exceeded	The vehicle is accelerated more than the specified while the radar calibration is in progress.		Yes
		The vehicle is accelerated within the specified range while the radar calibration is in progress.		No
192	Cornering threshold exceeded	The system detects the curve, which is out of the specified range, while the radar calibration is in progress.		Yes
		The system detects the curve, which is within the specified range, while the radar calibration is in progress.		No
222	Current angle offset vertical	Ignition switch: "ON"		±3.5 °or less
223	Current angle offset horizontal	Ignition switch: "ON"		±3.0 °or less