SERVICE BULLETIN

MITSUBISHI MOTORS

GLOBAL AFTER SALES OFFICE, MITSUBISHI MOTORS CORPORATION

PURPOSE : CHANGE	ISSUE NO. : MSB-15EX13_17_54-001	DATE : 2015-12-08
SUBJECT : Changes of the inspection procedures of AS&G system for the vehicles with the Q-85 battery		<DESTINATION/MODEL> (As per attached sheet 1) <M/Y> 11-16
GROUP : Gr:13(Fuel)/Gr:17(Emission control)/Gr:54(Chassis electrical)		

1. Description :

Please refer to the attached document for the information about the change of mention in the applicable service manual.
(1)Inspection procedure 5 regarding AS&G system abnormal has been changed
(2)The procedure of ”BATTERY LIFE CHECK<Vehicles with AS&G system>” has been moved to Gr:54A

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 7-17)

Note :
For Peugeot 4008 and Citroen C4 AIRCROSS, please refer to the attached sheets 8 and 10 for these vehicles.

Attached sheet 1)

For overseas market

EU

Applicable manual	Pub. No.	Applicable title(Info-ID)	Contents
2011 LANCER/ LANCER SPORTBACK Workshop Manual	CG1E11E1-CD (English) CG1F11E1-CD (French) CG1G11E1-CD (German) CG1S11E1-CD (Spanish) CG1I11E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9> (M177-00-280-05400-01)	Attached sheet 7
		Added below "BATTERY TEST" (M541-00-122-08501-01)	Attached sheet 8
2012 LANCER/ LANCER SPORTBACK Workshop Manual	CGSE12E1-CD (English) CGSF12E1-CD (French) CGSG12E1-CD (German) CGSS12E1-CD (Spanish) CGSI12E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9, 4J1> (M177-00-280-13900-01)	Attached sheet 9
		Added below "BATTERY TEST" (M541-00-122-25601-01)	Attached sheet 8
2013 LANCER/ LANCER SPORTBACK Workshop Manual	CCAE13E1-CD (English) CCAF13E1-CD (French) CCAG13E1-CD (German) CCAS13E1-CD (Spanish) CCAI13E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9, 4J1> (M177-00-280-13900-01)	Attached sheet 9
		Added below "BATTERY TEST" (M541-00-122-25601-01)	Attached sheet 8
2015 LANCER/ LANCER SPORTBACK Workshop Manual	CCAE15E1-CD (English) CCAF15E1-CD (French) CCAG15E1-CD (German) CCAS15E1-CD (Spanish) CCAI15E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9, 4J1> (M177-00-280-13900-01)	Attached sheet 9
		Added below "BATTERY TEST" (M541-00-122-25601-01)	Attached sheet 8
2016 LANCER/ LANCER SPORTBACK Workshop Manual	CCAE16E1-CD (English) CCAF16E1-CD (French) CCAG16E1-CD (German) CCAS16E1-CD (Spanish) CCAI16E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-28100-01)	Attached sheet 7
		Added below "BATTERY TEST" (M541-00-122-63200-01)	Attached sheet 8
2011 ASX Workshop Manual	CGWE11E2-CD (English) CGWF11E2-CD (French) CGWG11E2-CD (German) CGWS11E2-CD (Spanish) CGWI11E2-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9> (M177-00-280-04301-01)	Attached sheet 10
		Added below "BATTERY TEST" (M541-00-122-10401-01)	Attached sheet 8
2012 ASX Workshop Manual	CGWE12E1-CD (English) CGWF12E1-CD (French) CGWG12E1-CD (German) CGWS12E1-CD (Spanish) CGWI12E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9> (M177-00-280-04301-01)	Attached sheet 10
		Added below "BATTERY TEST" (M541-00-122-10401-01)	Attached sheet 8
2013 ASX Workshop Manual	CGAE13E2-CD (English) CGAF13E2-CD (French) CGAG13E2-CD (German) CGAS13E2-CD (Spanish) CGAI13E2-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9> (M177-00-280-21400-01)	Attached sheet 10
		Added below "BATTERY TEST" (M541-00-122-32001-01)	Attached sheet 8
2014 ASX Workshop Manual	CGAE14E1-CD (English) CGAF14E1-CD (French) CGAG14E1-CD (German) CGAS14E1-CD (Spanish) CGAI14E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9> (M177-00-280-21400-01)	Attached sheet 10
		Added below "BATTERY TEST" (M541-00-122-32001-01)	Attached sheet 8
2015 ASX Workshop Manual	CGAE15E1-CD (English) CGAF15E1-CD (French) CGAG15E1-CD (German) CGAS15E1-CD (Spanish) CGAI15E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4A9> (M177-00-280-21400-01)	Attached sheet 10
		Added below "BATTERY TEST" (M541-00-122-32001-01)	Attached sheet 8
2015.5 ASX Workshop Manual	CGAE15E2-CD (English) CGAF15E2-CD (French) CGAG15E2-CD (German) CGAS15E2-CD (Spanish) CGAI15E2-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-25800-01)	Attached sheet 10
		Added below "BATTERY TEST" (M541-00-122-55700-01)	Attached sheet 8

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)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4J1> (M177-00-280-17300-01)	Attached sheet 11
		Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-25800-01)	Attached sheet 12
		Added below “BATTERY TEST” (M541-00-122-31901-01)	Attached sheet 8
2014 OUTLANDER/ OUTLANDER PHEV Workshop Manual	CGFE14E2-CD (English) CGFF14E2-CD (French) CGFG14E2-CD (German) CGFS14E2-CD (Spanish) CGFI14E2-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4J1> (M177-00-280-17300-01)	Attached sheet 11
		Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-19500-01)	Attached sheet 12
		Added below “BATTERY TEST” (M541-00-122-47201-01)	Attached sheet 8
2016 OUTLANDER/ OUTLANDER PHEV Workshop Manual	CGFE16E1-CD (English) CGFF16E1-CD (French) CGFG16E1-CD (German) CGFS16E1-CD (Spanish) CGFI16E1-CD (Italian)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) <4J1> (M177-00-280-17300-01)	Attached sheet 11
		Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-19500-01)	Attached sheet 12
		Added below “BATTERY TEST” (M541-00-122-47201-01)	Attached sheet 8
2013 SPACE STAR Workshop Manual	C A0E13E1-CD (English) C A0F13E1-CD (French) C A0G13E1-CD (German) C A0S13E1-CD (Spanish) C A0I13E1-CD (Italian)	Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - M/T> (M131-30-030-02900-01)	Attached sheet 13
		Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - CVT> (M131-30-030-03000-01)	Attached sheet 14
		Added below “BATTERY TEST” (M541-00-122-34201-01)	Attached sheet 8
2015 SPACE STAR Workshop Manual	C A0E15E1-CD (English) C A0F15E1-CD (French) C A0G15E1-CD (German) C A0S15E1-CD (Spanish) C A0I15E1-CD (Italian)	Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - M/T> (M131-30-030-02900-01)	Attached sheet 13
		Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - CVT> (M131-30-030-03000-01)	Attached sheet 14
		Added below “BATTERY TEST” (M541-00-122-34201-01)	Attached sheet 8
2015.5 SPACE STAR Workshop Manual	C A0E15E2-CD (English) C A0F15E2-CD (French) C A0G15E2-CD (German) C A0S15E2-CD (Spanish) C A0I15E2-CD (Italian)	Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - M/T> (M131-30-030-02900-01)	Attached sheet 13
		Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - CVT> (M131-30-030-03000-01)	Attached sheet 14
		Added below “BATTERY TEST” (M541-00-122-34201-01)	Attached sheet 8

Applicable manual	Pub. No.	Applicable title(Info-ID)	Contents
2016 SPACE STAR Workshop Manual	C A0E16E1-CD (English) C A0F16E1-CD (French) C A0G16E1-CD (German) C A0S16E1-CD (Spanish) C A0I16E1-CD (Italian)	Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - M/T> (M131-30-030-02900-01)	Attached sheet 13
		Inspection Procedure 22: AS&G System Abnormal (auto stop not carried out) <Vehicles with AS&G system - CVT> (M131-30-030-03000-01)	Attached sheet 14
		Added below “BATTERY TEST” (M541-00-122-58000-01)	Attached sheet 8

HONG KONG

Applicable manual	Pub. No.	Applicable title(Info-ID)	Contents
2012 LANCER/ LANCER EX Workshop Manual	PWME1111R (English) PWMS1112R (Spanish)	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-12800-01)	Attached sheet 15, 16
		Added below “BATTERY TEST” (M541-00-122-56800-01)	Attached sheet 8

GENERAL EXPORT (JAPAN SPEC)

Applicable manual	Pub. No.	Applicable title(Info-ID)	Contents
2015 DELICA D:5 Workshop Manual	PWRE1407R	Inspection Procedure 5: AS&G System Abnormal (auto stop not carried out) (M177-00-280-23600-01)	Attached sheet 15, 17
		Added below “BATTERY TEST” (M541-00-122-49401-01)	Attached sheet 8

<Old>

STEP 11. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 12.
NO : Go to Step 15.

STEP 12. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 14.
NO : Go to Step 13.

STEP 13. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase by approximately 9 A. <Vehicles with halogen type headlamp>**
   - **When the headlamp is lit, the numerical value should increase by approximately 6 A. <Vehicles with discharge type headlamp>**

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 14. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the

<New>
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engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table) and adjust the electrical load so that the displayed value should be 30 ± 2 A.
   - Item No. 169: Vehicle Consumption Current
3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with data lists of the engine-ECU.
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Charging). After the battery is charged, go to Step 16.

NO : Replace the battery.

<New> 14 <Old>

STEP ~~15~~. M.U.T.-III data list

- Item 12: Idle stop enable (A/C-ECU)
- Item 13: Idle stop enable (engine-ECU)

OK: "Enable" is displayed

Q: Is the check result normal?

<New> 15 <Old>

YES : Go to Step ~~16~~.

NO <"Disable" is displayed in item 12.> : The A/C-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the A/C-ECU (Refer to GROUP 55A – General Information).

NO <"Disable" is displayed in item 13.> : The engine-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the engine-ECU (Refer to GROUP 13A – General Information).

<New> 15 <Old>

STEP ~~16~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 11. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase by approximately 9 A. <Vehicles with halogen type headlamp>**
   - **When the headlamp is lit, the numerical value should increase by approximately 6 A. <Vehicles with discharge type headlamp>**

Q: Is the check result normal?

YES : Go to Step 12.
NO : Replace the battery current sensor.

STEP 12. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 13.
NO : Go to Step 14.

STEP 13. Judge the battery life.

- Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 14.
NO : Replace the battery.

<Added>

BATTERY LIFE CHECK <Vehicles with AS&G system>

1. Connect the M.U.T.-III to the diagnosis connector (For how to connect the M.U.T.-III, refer to GROUP 00 – Diagnosis function).
2. Disconnect the negative (–) cable from the battery.

   NOTE: When the negative battery terminal is disconnected, some diagnosis codes may be erased.
3. Charge the battery fully by using an external battery charger (Refer to Charging).
4. Install the battery, leave the engine idling and turn off lamps and all accessories.
5. Ensure that the data list for the engine-ECU shows "OFF", and then stop the engine (Refer to GROUP 13 – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag
6. Turn the ignition switch to "ON" position (But do not start the engine). Adjust the vehicle consumption current by turning on and off lamps and accessories while you observe the current.
   - Item No. 169: Vehicle Consumption Current

Battery type	Vehicle consumption current (A)
Q-85	11 to 13

   NOTE:
   - *We recommend that you should adjust the current by changing the blower fan stage with other accessories off.*
   - *The current should be within the range shown, otherwise incorrect check result will be caused.*
7. Observe the conditions described at step 6, and then discharge the battery until data list item No.165 shows "ON".
8. Abort the battery discharge, and start the engine. Run the engine for 10 seconds and observe the data list for the engine-ECU to determine any battery deterioration.
   - Item No. 152: Check battery flag

   "Check battery flag" shows "ON":
   Replace the battery.

   "Check battery flag" shows "OFF":
   Go to Step 9.
9. Stop the engine, discharge the battery while you observe the conditions described at step 6. Measure how long it takes until the battery voltage reaches 10.5 V (one hour in maximum).

   NOTE:
   - *A diagnosis code may be set when the battery voltage drops.*
   - *On completion, check any diagnosis code(s) for all systems. Then erase them if necessary.*

The battery voltage drops to 10.5 V or less within one hour:
Replace the battery.

The battery voltage is higher than 10.5 V within one hour:
Charge the battery by using an external battery charger, and check that the AS&G system works.

<Old>

STEP 11. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 12.
NO : Go to Step 15.

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Insert the attached sheet 9 (3/3)

STEP 12. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table <4A9>, Refer to GROUP 13F – Troubleshooting – Data List Reference Table <4J1>).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 14.
NO : Go to Step 13.

STEP 13. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table <4A9>, Refer to GROUP 13F – Troubleshooting – Data List Reference Table <4J1>).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase by approximately 9 A. <Vehicles with halogen type headlamp>**
   - **When the headlamp is lit, the numerical value should increase by approximately 6 A. <Vehicles with discharge type headlamp>**

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 14. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table <4A9>, Refer to GROUP 13F – Troubleshooting – Data List Reference Table <4J1>) and adjust the electrical load so that the displayed value should be 30 ± 2 A.
   - Item No. 169: Vehicle Consumption Current
3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with data lists of the engine-ECU.
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Charging). After the battery is charged, go to Step 16.

NO : Replace the battery.

<New> 14 <Old>

STEP ~~15~~. M.U.T.-III data list

- Item 12: Idle stop enable (A/C-ECU)
- Item 13: Idle stop enable (engine-ECU)

OK: "Enable" is displayed

Q: Is the check result normal?

<New> 15 <Old>

YES : Go to Step ~~16~~.

NO <"Disable" is displayed in item 12.> : The A/C-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the A/C-ECU (Refer to GROUP 55A – General Information).

NO <"Disable" is displayed in item 13.> : The engine-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the engine-ECU (Refer to GROUP 13A – General Information <4A9>, Refer to GROUP 13F – General Information <4J1>).

<New> 15 <Old>

STEP ~~16~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 11. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13A – Troubleshooting – Data List Reference Table <4A9>, Refer to GROUP 13F – Troubleshooting – Data List Reference Table <4J1>).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase by approximately 9 A. <Vehicles with halogen type headlamp>**
   - **When the headlamp is lit, the numerical value should increase by approximately 6 A. <Vehicles with discharge type headlamp>**

Q: Is the check result normal?

YES : Go to Step 12.
NO : Replace the battery current sensor.

STEP 12. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 13.
NO : Go to Step 14.

STEP 13. Judge the battery life.

- Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 14.
NO : Replace the battery.

<Old>

STEP 11. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 12.
NO : Go to Step 15.

STEP 12. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 14.
NO : Go to Step 13.

STEP 13. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase by approximately 9 A. <Vehicles with halogen type headlamp>**
   - **When the headlamp is lit, the numerical value should increase by approximately 6 A. <Vehicles with discharge type headlamp>**

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 14. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the

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engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table) and adjust the electrical load so that the displayed value should be 30 ± 2 A.
   - Item No. 169: Vehicle Consumption Current
3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with data lists of the engine-ECU.
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Charging). After the battery is charged, go to Step 16.

NO : Replace the battery.

<New> 14 <Old>

STEP ~~15~~. M.U.T.-III data list

- Item 12: Idle stop enable (A/C-ECU)
- Item 13: Idle stop enable (engine-ECU)

OK: "Enable" is displayed

Q: Is the check result normal?

<New> 15 <Old>

YES : Go to Step ~~16~~.

NO <"Disable" is displayed in item 12.> : The A/C-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the A/C-ECU (Refer to GROUP 55 – General Information).

NO <"Disable" is displayed in item 13.> : The engine-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the engine-ECU (Refer to GROUP 13D – General Information).

<New> 15 <Old>

STEP ~~16~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 11. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase by approximately 9 A. <Vehicles with halogen type headlamp>**
   - **When the headlamp is lit, the numerical value should increase by approximately 6 A. <Vehicles with discharge type headlamp>**

Q: Is the check result normal?

YES : Go to Step 12.
NO : Replace the battery current sensor.

STEP 12. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 13.
NO : Go to Step 14.

STEP 13. Judge the battery life.

- Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 14.
NO : Replace the battery.

<Old>

STEP 10. Confirm the check result.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.

b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.

Q: Is any of the items above true?

YES : Go to Step 11.
NO : Go to Step 14.

STEP 11. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 13.
NO : Go to Step 12.

STEP 12. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase.**

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 13. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table) and adjust the electrical load so that the displayed value should be 30 ± 2 A.
   - Item No. 169: Vehicle Consumption Current
3. Continue the conditions of Step 2 for 120 seconds and

<New>

Insert the attached sheet 11 (3/3)

discharge the battery.

4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with data lists of the engine-ECU.
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Charging). After the battery is charged, go to Step 15.

NO : Replace the battery.

<New> 13 <Old>

STEP ~~14~~. M.U.T.-III data list

- Item 12: Idle stop enable (A/C-ECU)
- Item 13: Idle stop enable (engine-ECU)

OK: "Enable" is displayed

Q: Is the check result normal?

YES : Go to Step ~~15~~. <Old> <New> 14

NO <"Disable" is displayed in item 12.> : The A/C-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the A/C-ECU.

NO <"Disable" is displayed in item 13.> : The engine-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the engine-ECU.

<New> 14 <Old>

STEP ~~15~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 10. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase.**

Q: Is the check result normal?

YES : Go to Step 11.
NO : Replace the battery current sensor.

STEP 11. Confirm the check result.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.

Q: Is any of the items above true?

YES : Go to Step 12.
NO : Go to Step 13.

STEP 12. Judge the battery life.

Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 13.
NO : Replace the battery.

STEP 5. Check the hydraulic unit (integrated with ASC-ECU) part number.

Q: Is the check result normal? <New> <Old> 24

YES : Go to Step ~~25~~.

NO : Replace the hydraulic unit (integrated with ASC-ECU).

STEP 6. M.U.T.-III data list

- Item 4: Engine hood

OK:
Close (Hood: Closed)
Open (Hood: Opened)

NOTE: If the engine hood is opened, the AS&G indicator/ display in the combination meter should blink.

Q: Is the check result normal?

YES : Go to Step 7.

NO : Perform the troubleshooting of the engine hood latch switch circuit (Refer to GROUP 54A – ETACS – Input Signal Procedures – The Hood Latch Switch Signal is not Sent to The ETACS-ECU).

STEP 7. M.U.T.-III data list

- Item 15: Ambient temperature

OK: At ambient temperature (atmospheric temperature) or equivalent

Q: Is the check result normal?

YES : Go to Step 8.

NO : Perform the troubleshooting of the ambient temperature sensor (Refer to GROUP 55 – Troubleshooting – Symptom Chart).

STEP 8. M.U.T.-III data list

- Refer to Data List Reference Table.
  a. Item 30: Brake lamp SW

Q: Is the check result normal?

YES : Go to Step 11.

NO : Go to Step 9.

STEP 9. M.U.T.-III data list

- Check the data lists of the ETACS-ECU (Refer to GROUP 54A – Troubleshooting – Data List Reference Table).
- Item 290: Stop lamp switch

OK: ON (Depress the brake pedal), OFF (Release the brake pedal)

Q: Is the check result normal? <New> <Old> 24

YES : Go to Step ~~25~~.

NO : Go to Step 10.

<New>
Insert the attached sheet 12 (4/4)

<Old>

STEP 21. Confirm the check result.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.

b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.

Q: Is any of the items above true?

YES : Go to Step 22.
NO : Go to Step 25.

STEP 22. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 24.
NO : Go to Step 23.

STEP 23. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 24. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table) and adjust the electrical load so that the displayed value should be 30 ± 2 A.
   - Item No. 169: Vehicle Consumption Current
3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and

check on the battery deterioration with data lists of the engine-ECU.

- Item No. 152: Check battery flag

OK: OFF (Engine: Idle operation)

5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Charging). After the battery is charged, go to Step 25.

NO : Replace the battery.

<New>

24

<Old>

STEP ~~25~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 21. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Go to Step 22.
NO : Replace the battery current sensor.

STEP 22. Confirm the check result.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.

Q: Is any of the items above true?

YES : Go to Step 23.
NO : Go to Step 24.

STEP 23. Judge the battery life.

Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 24.
NO : Replace the battery.

Attached sheet 13 (1/3)

<Old>

STEP 10. Confirm the check result.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.

b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.

Q: Is any of the items above true?

YES : Go to Step 11.
NO : Go to Step 14.

<New>

Insert the attached sheet 13 (3/3)

STEP 11. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data list (Refer to Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 13.
NO : Go to Step 12.

STEP 12. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data list.
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase.**

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 13. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the M.U.T.-III data list.
   - Item No. 169: Vehicle Consumption Current
   - Adjust the electrical load so that the displayed value should be 30 ± 2 A.
3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and

check on the battery deterioration with M.U.T.-III data list.
- Item No. 152: Check battery flag

OK: OFF (Engine: Idle operation)

5. After checking that the data list item No. 152 is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that M.U.T.-III data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Charging). After the battery is charged, go to Step 15.

NO : Replace the battery.

<New> 13 <Old>

STEP ~~14~~. M.U.T.-III data list
- Item 204: Idle stop enable (A/C-ECU)

OK: "Enable" is displayed

Q: Is the check result normal? <New> 14 <Old>

YES : Go to Step ~~15~~.

NO : The A/C-ECU would possibly output the auto stop prohibition signal. Recheck the auto stop prohibition signal of the A/C-ECU.

<Old>

<New> 14

STEP ~~15~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the engine-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 10. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data list.
   - Item No. 169: Vehicle Consumption Current

   OK:
   - **When the headlamp is lit, the numerical value should increase.**

Q: Is the check result normal?

YES : Go to Step 11.
NO : Replace the battery current sensor.

STEP 11. Confirm the check result.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.

Q: Is any of the items above true?

YES : Go to Step 12.
NO : Go to Step 13.

STEP 12. Judge the battery life.

Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 13.
NO : Replace the battery.

STEP 9. M.U.T.-III other system data list

- Check the data lists of the ETACS-ECU (Refer to GROUP 54A – Troubleshooting – Data List Reference Table).
- Item 290: Stop lamp switch

  OK: ON (Depress the brake pedal), OFF (Release the brake pedal)

Q: Is the check result normal?

YES : Go to Step ~~25~~. <Old> <New> 24

NO : Go to Step 10.

STEP 10. Check the stop lamp switch.

Check the stop lamp switch (Refer to GROUP 35A – Brake pedal – Stop Lamp Switch Check).

Q: Is the check result normal?

YES : Check the abnormality of relevant stop lamp switch circuit.

NO : Replace the stop lamp switch.

STEP 11. M.U.T.-III data list

- Item 184: Driver's side door SW

  OK:
  Open (Driver's side door: Opened)
  Close (Driver's side door: Closed)

NOTE: If the driver's side door is opened, the AS&G indicator/ display in the combination meter should blink.

Q: Is the check result normal?

YES : Go to Step 12.

NO : Perform the troubleshooting of the driver's side door switch circuit (Refer to GROUP 54A – ETACS – Input Signal Procedures – The Front Door Switch (RH) Signal is not Sent to The ETACS-ECU).

STEP 12. M.U.T.-III data list

- Item 192: Seat belt fasten status

  OK:
  Fastened (Driver's seat belt: Fastened)
  Not fastened (Driver's seat belt: Not fastened)

NOTE: If the driver's seat belt is unfastened, the AS&G indicator in the combination meter should blink.

Q: Is the check result normal?

YES : Go to Step 13.

NO : Check the relevant to the seat belt in accordance with "Check Procedure for Each Multi Information Display Screen" of the combinations meter (Refer to GROUP 54A – Combination Meter – Symptom Procedures).

<Old>

STEP 21. Confirm the check result.

NOTE: If the conditions below are satisfied, go to "YES" regardless of the check result on Step 2.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer reading exceeds 262,140 km.

Q: Does the check result on Step 2 indicate other than 0 km?

YES : Go to Step 22.
NO : Go to Step 25.

STEP 22. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the M.U.T.-III data list (Refer to Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 24.
NO : Go to Step 23.

STEP 23. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the M.U.T.-III data list (Refer to Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 24. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the M.U.T.-III data list (Refer to Data List Reference Table) and adjust the electrical load so that the displayed

<New>
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value should be 30 ± 2 A.
- Item No. 169: Vehicle Consumption Current

3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with M.U.T.-III data list (Refer to Data List Reference Table).
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Charging). After the battery is charged, go to Step 25.

NO : Replace the battery.

<Old>

<New>

24

STEP ~~25~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the engine-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 21. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the M.U.T.-III data list (Refer to Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Go to Step 22.
NO : Replace the battery current sensor.

STEP 22. Confirm the check result.

NOTE: If the conditions below are satisfied, go to "YES" regardless of the check result on Step 2.

- Check the following items.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer reading exceeds 262,140 km.

Q: Does the check result on Step 2 indicate other than 0 km?

YES : Go to Step 23.
NO : Go to Step 24.

STEP 23. Judge the battery life.

Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 24.
NO : Replace the battery.

STEP 10. M.U.T.-III data list

- Check the data lists of the ETACS-ECU (Refer to GROUP 54A – Troubleshooting – Data List Reference Table).
- Item 290: Stop lamp switch

  OK: ON (Depress the brake pedal), OFF (Release the brake pedal)

Q: Is the check result normal?

YES : Go to Step ~~27~~. <Old> <New> 26

NO : Go to Step 11.

STEP 11. Check the stop lamp switch.

Check the stop lamp switch (Refer to GROUP 35A – Brake pedal – Stop Lamp Switch Check).

Q: Is the check result normal?

YES : Check the abnormality of relevant stop lamp switch circuit.

NO : Replace the AS&G OFF switch.

STEP 12. M.U.T.-III data list

- Item 35: Driver's side door SW

  OK:
  Open (Driver's side door: Opened)
  Close (Driver's side door: Closed)

NOTE: If the driver's side door is opened, the AS&G indicator/display in the combination meter should blink.

Q: Is the check result normal?

YES : Go to Step 13.

NO : Perform the troubleshooting of the driver's side door switch circuit (Refer to GROUP 54A – ETACS – Input Signal Procedures – The Front Door Switch (RH) Signal is not Sent to The ETACS-ECU).

STEP 13. M.U.T.-III data list

- Item 10: Seat belt fasten status

  OK:
  Fastened (Driver’s seat belt: Fastened)
  Not fastened (Driver’s seat belt: Not fastened)

NOTE: If the driver’s seat belt is unfastened, the AS&G indicator/display in the combination meter should blink.

Q: Is the check result normal?

YES : Go to Step 14.

NO : Check the relevant to the seat belt in accordance with "Check Procedure for Each Multi Information Display Screen" of the combinations meter (Refer to GROUP 54A – Combination Meter – Symptom Procedures – Check Procedure for Each Multi Information Display Screen).

<Old>

STEP 23. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 24.
NO : Go to Step 27.

STEP 24. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 26.
NO : Go to Step 25.

STEP 25. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 26. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table) and adjust the electrical load so that the displayed value should

<New>

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be 30 ± 2 A.
- Item No. 169: Vehicle Consumption Current

3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with data lists of the engine-ECU.
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Charging). After the battery is charged, go to Step 27.

NO : Replace the battery.

<Old>

<New>

26

STEP ~~27~~. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 23. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13D – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Go to Step 24.
NO : Replace the battery current sensor.

STEP 24. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 25.
NO : Go to Step 26.

STEP 25. Judge the battery life.

Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 26.
NO : Replace the battery.

<New>
Insert the attached sheet 17 (3/3)

<Old>

STEP 23. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 24.
NO : Go to Step 27.

STEP 24. M.U.T.-III data list

1. Disconnect the negative (–) cable from the battery (this can delete backup data).
2. Charge the battery (Refer to GROUP 54A – Battery – On-vehicle Service – Charging).
3. As soon as the battery is charged, leave the engine idling and turn off lamps and all accessories.
4. Check the data lists of the engine-ECU (Refer to GROUP 13C <4J1> – Troubleshooting – Data List Reference Table).
   - Item No. 165: Charging battery mode flag

   OK: The display status "ON" is changed to "OFF" within approximately 10 minutes.

Q: Is the check result normal?

YES : Turn the ignition switch to "ON" position after stopping the engine. Then go to Step 26.
NO : Go to Step 25.

STEP 25. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C <4J1> – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Replace the battery.
NO : Replace the battery current sensor.

STEP 26. Judge the battery life.

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C <4J1> – Troubleshooting – Data List Reference Table) and adjust the electrical load so that the displayed value

should be 30 ± 2 A.
- Item No. 169: Vehicle Consumption Current

3. Continue the conditions of Step 2 for 120 seconds and discharge the battery.
4. Run the engine for 10 seconds after the engine start and check on the battery deterioration with data lists of the engine-ECU.
   - Item No. 152: Check battery flag

   OK: OFF (Engine: Idle operation)
5. After checking that the data list item No. 152 of the engine-ECU is displayed, swiftly turn the ignition switch to "LOCK" (OFF) position and leave it for 10 seconds.
6. Repeat Steps 1-5 four times. Check that data list item No. 152 always shows "OFF".

Q: Is the check result normal?

YES : Recharge the battery because the battery is discharged during the check. (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Charging). After the battery is charged, go to Step 27.

NO : Replace the battery.

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STEP 27. Check the trouble symptom.

Q: Does the trouble symptom persist?

YES : Replace the AS&G-ECU.

NO : Intermittent malfunction (Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunctions).

<New>

STEP 23. M.U.T.-III data list

1. Turn the ignition switch to "ON" position (But do not start the engine).
2. Check the data lists of the engine-ECU (Refer to GROUP 13C <4J1> – Troubleshooting – Data List Reference Table).
   - Item No. 169: Vehicle Consumption Current

   OK: When the headlamp is lit, the numerical value should increase.

Q: Is the check result normal?

YES : Go to Step 24.
NO : Replace the battery current sensor.

STEP 24. Make certain the check result.

NOTE: If the situation falls under any of the following items, go to "YES" whether or not the check result in Step 2.

a. After a malfunction occurs, the negative (–) cable is disconnected from the battery once.
b. After a malfunction occurs, the connector is disconnected from the engine-ECU once.
c. The odometer shown on the combination meter is beyond 262,140 km.

Q: Is the check result in Step 2 other than "0 km"?

YES : Go to Step 25.
NO : Go to Step 26.

STEP 25. Judge the battery life.

Judge the battery life (Refer to GROUP 54A – Battery – On-vehicle Service – Battery Life Check).

Q: Is the check result normal?

YES : Go to Step 26.
NO : Replace the battery.