

SECTION **CHG**
CHARGING SYSTEM

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PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000012200356

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the "SRS AIR BAG" and "SEAT BELT" of this Service Manual.

WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.
- Improper repair, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

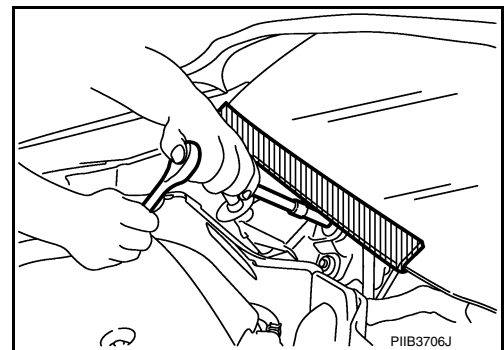
Always observe the following items for preventing accidental activation.

- When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, never use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the ignition OFF, disconnect the battery or batteries, and wait at least 3 minutes before performing any service.

Precaution for Procedure without Cowl Top Cover

INFOID:000000012965269

When performing the procedure after removing cowl top cover, cover the lower end of windshield with urethane, etc to prevent damage to windshield.



Precautions For Xenon Headlamp Service

INFOID:000000012965331

WARNING:

Comply with the following warnings to prevent any serious accident.

- Disconnect the battery cable (negative terminal) or the power supply fuse before installing, removing, or touching the xenon headlamp (bulb included). The xenon headlamp contains high-voltage generated parts.
- Never work with wet hands.
- Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Never turn the xenon headlamp ON in other conditions. Connect the power supply to the vehicle-side connector.

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PRECAUTIONS

< PRECAUTION >

(Turning it ON outside the lamp case may cause fire or visual impairments.)

- Never touch the bulb glass immediately after turning it OFF. It is extremely hot.

CAUTION:

Comply with the following cautions to prevent any error and malfunction.

- Install the xenon bulb securely. (Insufficient bulb socket installation may melt the bulb, the connector, the housing, etc. by high-voltage leakage or corona discharge.)
- Never perform HID circuit inspection with a tester.
- Never touch the xenon bulb glass with hands. Never put oil and grease on it.
- Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.
- Never wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).

Precaution for Power Generation Voltage Variable Control System

INFOID:000000012200357

CAUTION:

For model with power generation voltage variable control system, the battery current sensor that is installed to the battery cable at the negative terminal measures the charging/discharging current of the battery, and performs various controls. If the electrical component or the ground wire is connected directly to the battery terminal, the current other than that being measured with the battery current sensor is charging to or discharging from the battery. This condition causes the malfunction of the control, and then the battery discharge may occur. Do not connect the electrical component or the ground wire directly to the battery terminal.

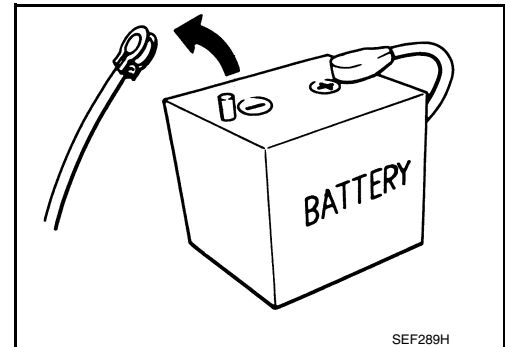
Precautions for Removing Battery Terminal

INFOID:000000012965332

When disconnecting the battery terminal, pay attention to the following.

- Always use a 12V battery as power source.
- Never disconnect battery terminal while engine is running.
- When removing the 12V battery terminal, turn OFF the ignition switch and wait at least 30 seconds.
- For vehicles with the engine listed below, remove the battery terminal after a lapse of the specified time:

D4D engine	: 20 minutes	YS23DDT	: 4 minutes
HRA2DDT	: 12 minutes	YS23DDTT	: 4 minutes
K9K engine	: 4 minutes	ZD30DDTi	: 60 seconds
M9R engine	: 4 minutes	ZD30DDTT	: 60 seconds
R9M engine	: 4 minutes		
V9X engine	: 4 minutes		
YD25DDTi	: 2 minutes		



NOTE:

ECU may be active for several tens of seconds after the ignition switch is turned OFF. If the battery terminal is removed before ECU stops, then a DTC detection error or ECU data corruption may occur.

- After high-load driving, if the vehicle is equipped with the V9X engine, turn the ignition switch OFF and wait for at least 15 minutes to remove the battery terminal.

NOTE:

- Turbocharger cooling pump may operate in a few minutes after the ignition switch is turned OFF.
- Example of high-load driving
 - Driving for 30 minutes or more at 140 km/h (86 MPH) or more.
 - Driving for 30 minutes or more on a steep slope.
- For vehicles with the 2-batteries, be sure to connect the main battery and the sub battery before turning ON the ignition switch.

NOTE:

If the ignition switch is turned ON with any one of the terminals of main battery and sub battery disconnected, then DTC may be detected.

- After installing the 12V battery, always check "Self Diagnosis Result" of all ECUs and erase DTC.

NOTE:

The removal of 12V battery may cause a DTC detection error.

PREPARATION

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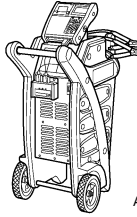
PREPARATION

PREPARATION

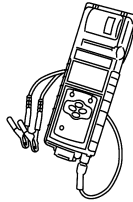
Special Service Tools

INFOID:0000000012200359

Tool number (Kent-Moore No.) Tool name	Description
<p>— (—) Model GR8-1200 NI Multitasking battery and electrical diagnostic station</p>	<p>Tests batteries, starting and charging systems and charges batteries. For operating instructions, refer to diagnostic station instruction manual.</p>
<p>— (—) Model EXP-800 NI Battery and electrical diagnostic analyzer</p>	<p>Tests batteries and charging systems. For operating instructions, refer to diagnostic analyzer instruction manual.</p>



AWIA1239ZZ



JSMIA0806ZZ

Commercial Service Tools

INFOID:0000000012200360

Tool name	Description
<p>Power tool</p>	<p>Loosening bolts, nuts and screws</p>



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COMPONENT PARTS

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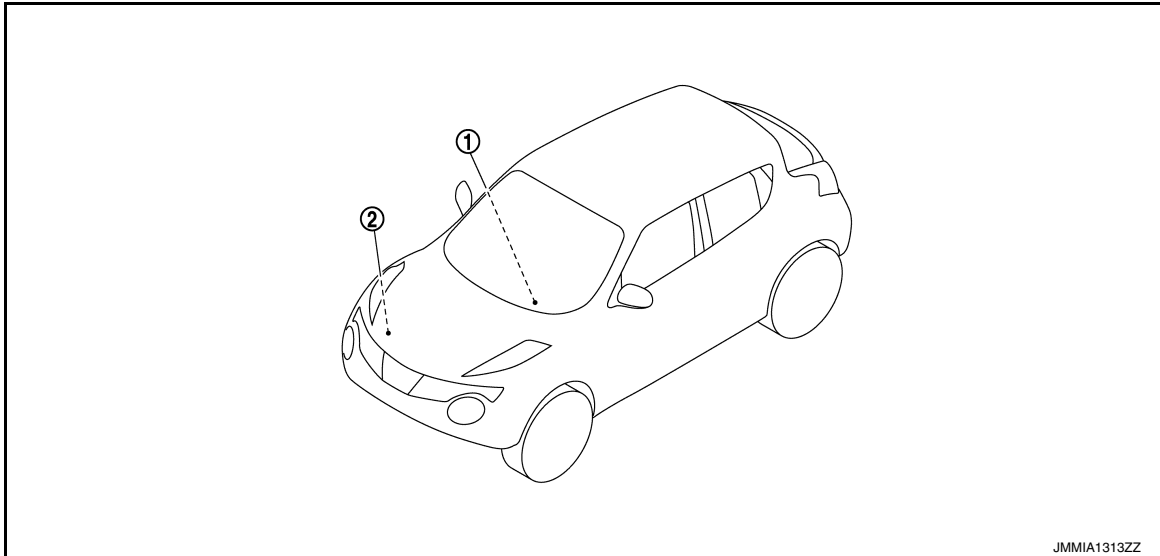
SYSTEM DESCRIPTION

COMPONENT PARTS

CHARGING SYSTEM

CHARGING SYSTEM : Component Parts Location

INFOID:0000000012200361



JMMIA1313ZZ

1. Charge warning lamp (On the combination meter) 2. Alternator

CHARGING SYSTEM : Component Description

INFOID:0000000012200362

Component part		Description
Alternator	"B" terminal	Refer to CHG-25, "Description" .
	"S" terminal	Refer to CHG-29, "Description" .
	"L" terminal	Refer to CHG-26, "Description" .
Combination meter (Charge warning lamp)		The IC voltage regulator warning function activates to illuminate the charge warning lamp, if any of the following symptoms occur while alternator is operating: <ul style="list-style-type: none">• Excessive voltage is produced.• No voltage is produced.

POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM

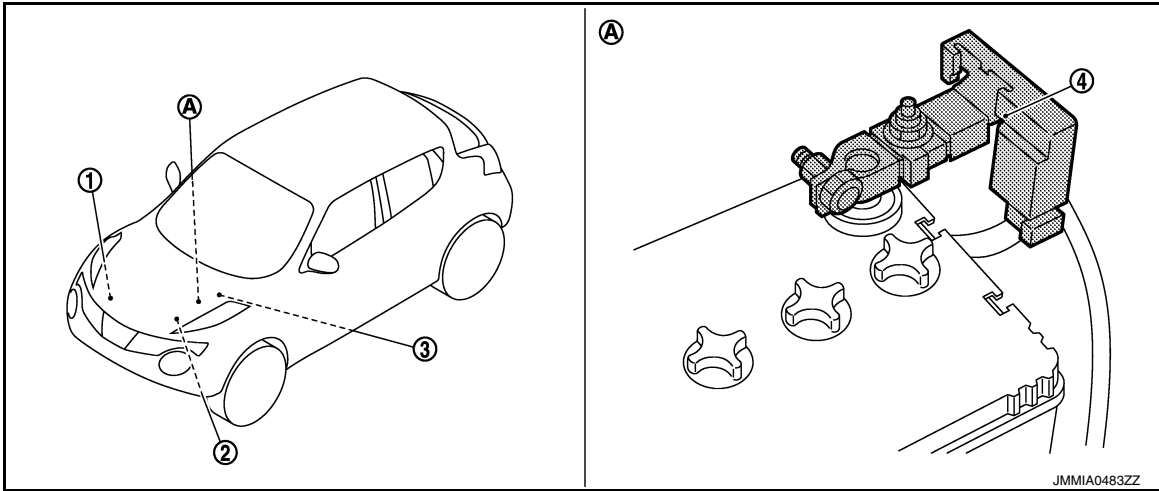
POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM : Component

COMPONENT PARTS

< SYSTEM DESCRIPTION >

Parts Location

INFOID:000000012200363



- 1. Alternator
- 2. ECM
Refer to [EC-27, "ENGINE CONTROL SYSTEM : Component Parts Location"](#) (For NISMO RS models) or [EC-600, "ENGINE CONTROL SYSTEM : Component Parts Location"](#) (Except for NISMO RS models)
- 3. IPDM E/R
Refer to [PCS-5, "Component Parts Location"](#).
- 4. Battery current sensor (with battery temperature sensor)
- A. Battery

POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM : Component Description

INFOID:000000012200364

Component part	Description
Alternator (IC voltage regulator)	IC voltage regulator controls the power generation voltage by the target power generation voltage based on the received power generation command signal. When there is no power generation command signal, the alternator performs the normal power generation according to the characteristic of the IC voltage regulator.
Battery current sensor (with battery temperature sensor)	Battery current sensor is installed to the battery cable at the negative terminal, and it detects the charging/discharging current of the battery and sends the voltage signal to ECM according to the current value.
ECM	Battery current sensor detects the charging/discharging current of the battery. ECM judges the battery condition based on this signal. ECM judges whether to perform the power generation voltage variable control according to the battery condition. When performing the power generation voltage variable control, ECM calculates the target power generation voltage according to the battery condition and sends the calculated value as the power generation command value signal to IPDM E/R.
IPDM E/R	IPDM E/R converts the received power generation command value into the power generation command signal (PWM signal) and sends it to the IC voltage regulator.

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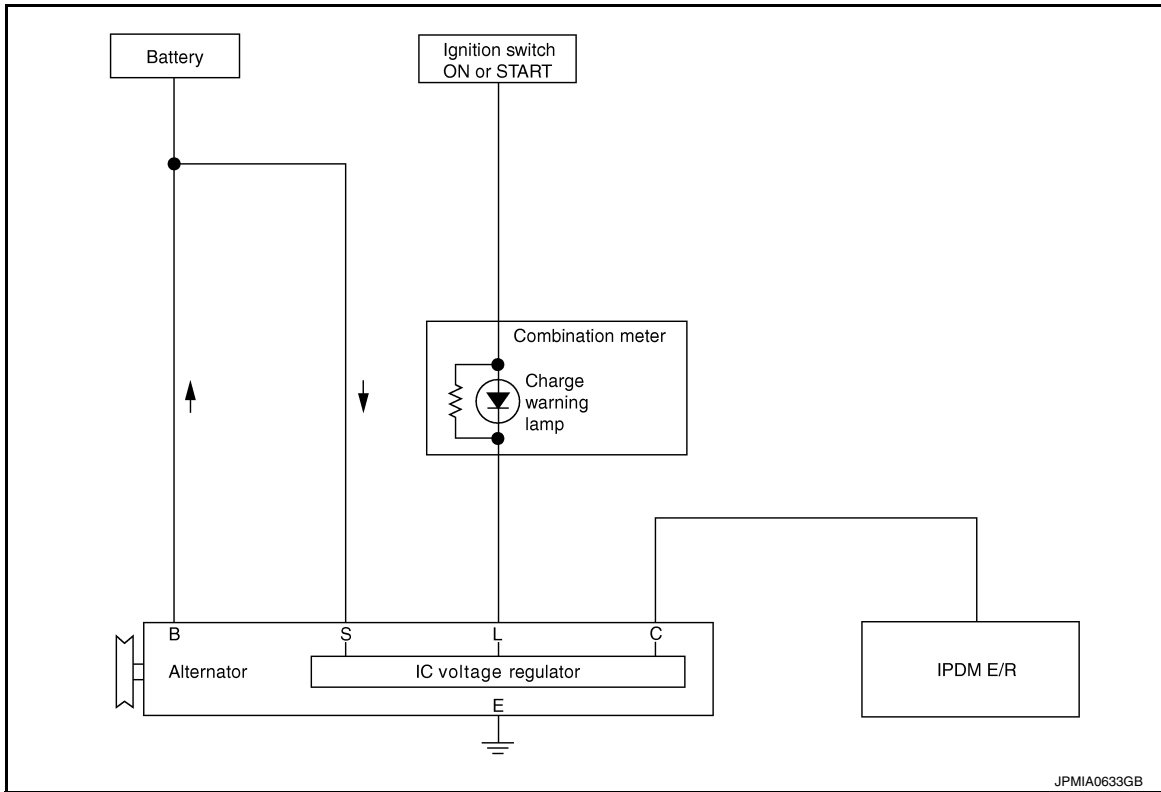
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CHARGING SYSTEM

CHARGING SYSTEM : System Diagram

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CHARGING SYSTEM : System Description

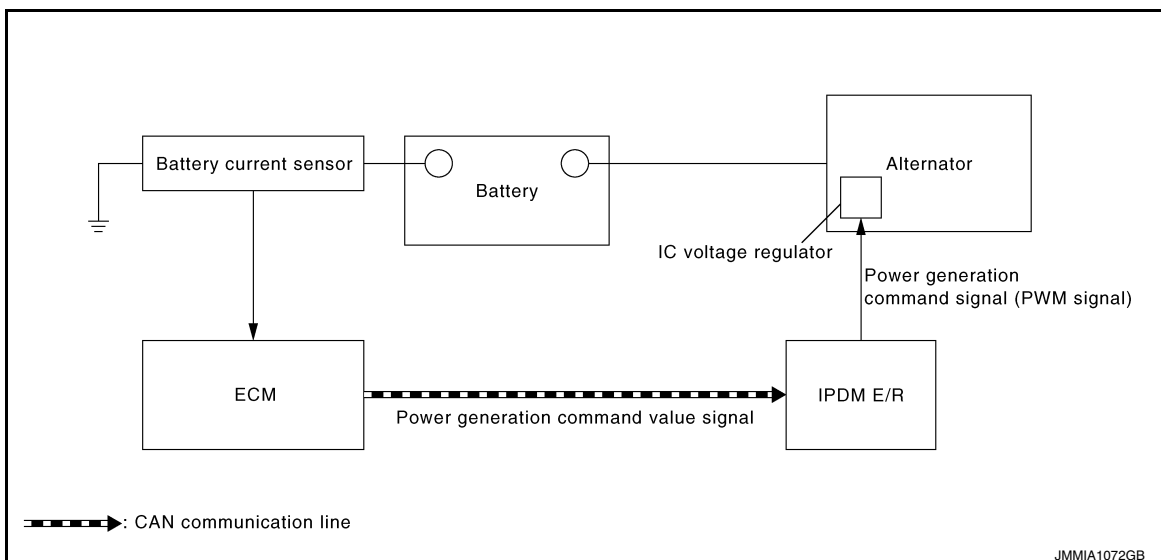
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The alternator provides DC voltage to operate the vehicle's electrical system and to keep the battery charged. The voltage output is controlled by the IC voltage regulator.

POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM

POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM : System Diagram

INFOID:000000012200367



POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM : System De-

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INFOID:000000012200368

By performing the power generation voltage variable control, the engine load due to the power generation of the alternator is reduced and fuel consumption is decreased.

NOTE:

When any malfunction is detected in the power generation voltage variable control system, the power generation is performed according to the characteristic of the IC voltage regulator of the alternator.

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CHARGING SYSTEM

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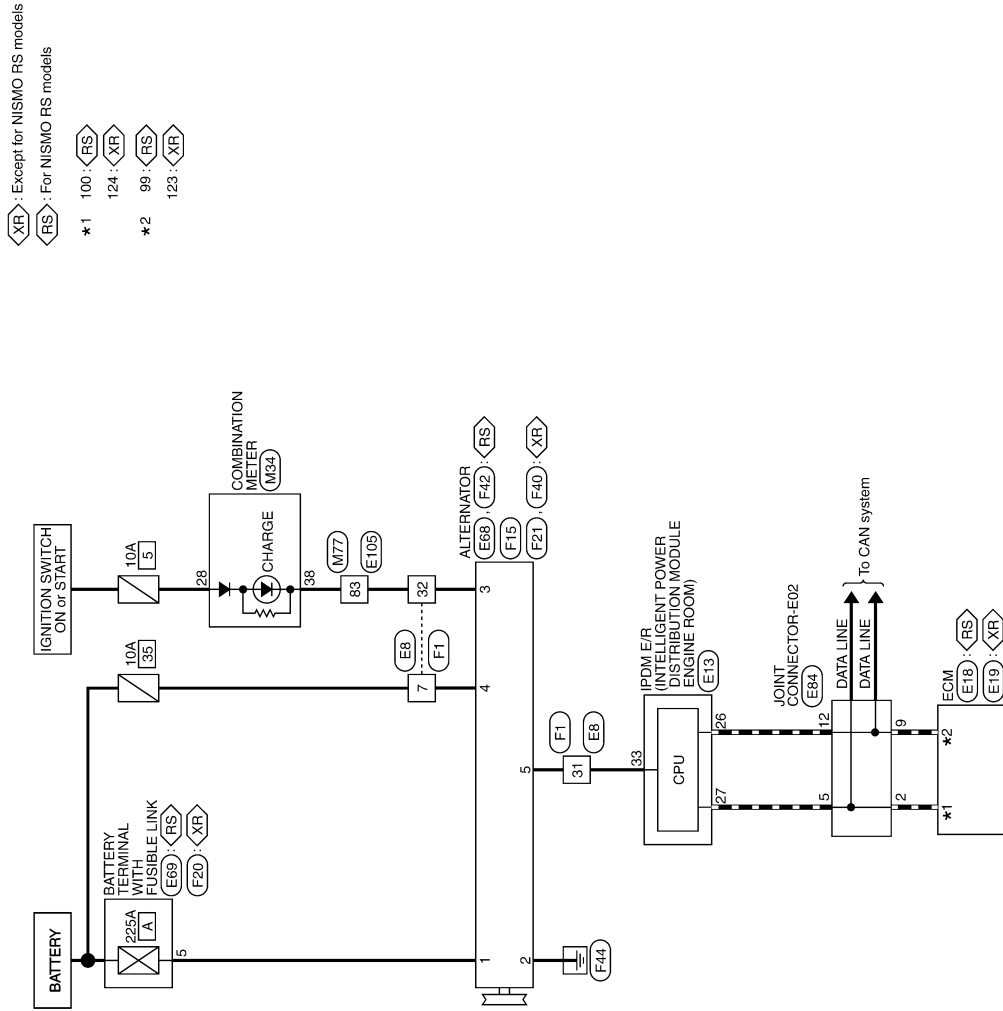
WIRING DIAGRAM

CHARGING SYSTEM

Wiring Diagram

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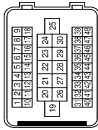
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CHARGING SYSTEM

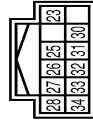
Connector No.	E18
Connector Name	WIRE TO WIRE
Connector Type	3SA33BMP-RS10-36Z2



Terminal No.	Color Of Wire	Signal Name (Specification)
1	P	-
2	L	-
3	O	-
4	LG	[For NISMO RS] -[Except for NISMO RS]
5	V	-
6	O	-
7	BR	-
10	R	-
11	G	[Except for NISMO RS] -[For NISMO RS]
12	G	-
13	B	-
14	L	[For NISMO RS] -[Except for NISMO RS]
15	LG	[For NISMO RS] -[Except for NISMO RS]
16	B	-
17	GR	-
18	W	-
19	L/B	-
20	L/W	-
21	G	-
22	G	[For NISMO RS] -[Except for NISMO RS]
23	B	[For NISMO RS] -[Except for NISMO RS]
23	SHIELD	[For NISMO RS]
24	P	-
25	R	-
26	B	-
27	B	-
28	LG	-
28	SB	-
30	P	[Except for NISMO RS] -[For NISMO RS]
31	G	-

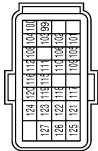
32	V	-
33	BR	-
34	W	[Except for NISMO RS] -[For NISMO RS]
37	Y	[With intelligent key] -[Without intelligent key]
37	LG	-
38	SB	-
39	B	-
40	P	-
41	V	-
42	L	-
43	BR	[For NISMO RS] -[Except for NISMO RS]
44	BR	[For NISMO RS] -[Except for NISMO RS]
45	BR	-
46	Y	-
47	SB	-
48	LG	[With intelligent key] -[Without intelligent key]
48	Y	-

Connector No.	E13
Connector Name	POP/VE INTELLIGENT POWER DISTRIBUTION MODULE (ENGINE ROOM)
Connector Type	TH12FW-NH



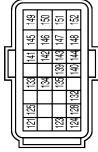
Terminal No.	Color Of Wire	Signal Name (Specification)
23	SB	-
25	BR	-
26	P	-
27	L	-
28	Y	-
30	V	-
31	Y	-
32	R	-
33	G	-
34	L	-

Connector No.	E18
Connector Name	ECM
Connector Type	RN24GFC-R2B-RH



Terminal No.	Color Of Wire	Signal Name (Specification)
99	P	-
100	L	CAN COMMUNICATION LINE (CAN-L) CAN COMMUNICATION LINE (CAN-H)
101	V	SENSOR POWER SUPPLY
102	R	ACCELERATOR PEDAL POSITION SENSOR 1
103	BR	PNP SIGNAL
104	R	DATA LINK CONNECTOR
105	GR	SENSOR GROUND
106	Y	POWER SUPPLY FOR ECM (BACKUP)
108	GR	CLUTCH PEDAL POSITION SWITCH
109	O	IGNITION SWITCH
110	P	ASCD STEERING SWITCH
111	B	SENSOR GROUND
112	BR	ECM RELAY (SELF SHUT-OFF)
115	R	STOP LAMP SWITCH
116	G	BRAKE PEDAL POSITION SWITCH
117	G	FUEL PUMP RELAY
118	O	SENSOR POWER SUPPLY
119	W	ACCELERATOR PEDAL POSITION SENSOR 2
120	Y	SENSOR GROUND
121	G	POWER SUPPLY FOR ECM
122	G	THROTTLE CONTROL MOTOR POWER SUPPLY
123	GR	ECM GROUND
124	GR	ECM GROUND
125	L	AUT SENSOR 1 HEATER
126	W	HEATED OXYGEN SENSOR 2 HEATER
127	GR	ECM GROUND

Connector No.	E19
Connector Name	ECM
Connector Type	RN24FB-R2B-LH



Terminal No.	Color Of Wire	Signal Name (Specification)
121	L	EVAP CONTROL SYSTEM PRESSURE SENSOR
123	P	CAN COMMUNICATION LINE (CAN-L) CAN COMMUNICATION LINE (CAN-H)
124	L	CAN COMMUNICATION LINE (CAN-H)
125	G	SENSOR POWER SUPPLY
128	SB	FUEL TANK TEMPERATURE SENSOR
132	GR	CLUTCH PEDAL POSITION SWITCH
133	LG	IGNITION SWITCH
134	P	ASCD STEERING SWITCH
135	B	SENSOR GROUND
139	R	STOP LAMP SWITCH
140	G	BRAKE PEDAL POSITION SWITCH
141	L	EVAP CONDENSER VENT CONTROL VALVE
142	O	SENSOR POWER SUPPLY
143	W	ACCELERATOR PEDAL POSITION SENSOR 2
144	Y	SENSOR GROUND
145	G	POWER SUPPLY FOR ECM
146	O	SENSOR POWER SUPPLY
147	GR	ECM GROUND
148	Y	SENSOR GROUND
149	GR	ECM GROUND
150	R	ACCELERATOR PEDAL POSITION SENSOR 1
151	GR	SENSOR GROUND
152	GR	ECM GROUND

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CHARGING SYSTEM

Connector No.	E68
Connector Name	ALTERNATOR
Connector Type	24240_65445



Terminal No.	1	Color Of Wire	B/R	Signal Name [Specification]	-
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Connector No.	E69
Connector Name	BATTERY TERMINAL WITH FUSIBLE LINK
Connector Type	25340_79906



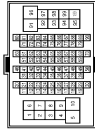
Terminal No.	5	Color Of Wire	B/R	Signal Name [Specification]	-
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Connector No.	E84
Connector Name	JOINT CONNECTOR-E02
Connector Type	A12FL



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
2	L	-
3	L	-
4	L	-
5	L	-
6	L	-
7	P	-
8	P	-
9	P	-
10	P	-
11	P	-
12	P	-

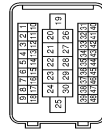
Connector No.	E105
Connector Name	WIRE TO WIRE
Connector Type	TH801MW_C516-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	Y	-
2	Y	-
3	Y	-
4	P	-
5	P	-
6	P	-
7	W	-
8	B	-
9	R	-
10	R	-
11	W	-
12	B	-
13	R	-
14	SHIELD	-
34	BE	-
35	R	-
36	B	-
37	P	-
52	R	-
53	BR	-
54	V	-
55	BE	-
58	G	-
59	Y	-
62	Y	-
63	V	-

64	LG	-
65	R	-
66	R	-
67	W	-
68	5B	-
69	5B	-
70	BR	-
71	LG	-
72	V	-
73	L	-
74	L	-
75	L	-
76	R	-
77	B	-
78	B	-
79	W	-
80	L	-
81	W	-
82	Y	-
83	Y	-
84	LG	-
85	P	-
86	BE	-
90	SHIELD	-
91	G	-
92	R	-
95	BR	-
96	P	-
97	GR	-
98	W	-
99	V	-
100	O	-

Connector No.	F1
Connector Name	WIRE TO WIRE
Connector Type	SAA345FB-RS10-S12Z



Terminal No.	Color Of Wire	Signal Name [Specification]
1	P	-
2	L	-
3	W	-
4	BR	-
5	LG	-
6	LG	-
7	LG	-

10	R	-	[Except for NSMO RS]
11	Y	-	[For NSMO RS]
12	G	-	[For NSMO RS]
13	G	-	[For NSMO RS]
14	G	-	[For NSMO RS]
15	BR	-	[Except for NSMO RS]
16	P	-	[For NSMO RS]
17	5B	-	[For NSMO RS]
18	G	-	[For NSMO RS]
19	G	-	[For NSMO RS]
20	BR	-	[For NSMO RS]
21	G	-	[For NSMO RS]
22	BR	-	[For NSMO RS]
23	Y	-	[Except for NSMO RS]
24	R	-	[For NSMO RS]
25	R	-	[For NSMO RS]
26	B	-	[For NSMO RS]
27	B	-	[For NSMO RS]
28	R	-	[For NSMO RS]
29	W	-	[For NSMO RS]
30	GR	-	[Except for NSMO RS]
31	R	-	[For NSMO RS]
32	5G	-	[For NSMO RS]
33	5G	-	[For NSMO RS]
34	P	-	[For NSMO RS]
37	G	-	[Without Intelligent Key]
37	GR	-	[With Intelligent Key]
38	R	-	[For NSMO RS]
39	GR	-	[For NSMO RS]
40	P	-	[For NSMO RS]
41	BR	-	[For NSMO RS]
41	V	-	[Except for NSMO RS]
42	L	-	[For NSMO RS]
42	L	-	[Except for NSMO RS]
43	L	-	[For NSMO RS]
43	W	-	[For NSMO RS]
44	BR	-	[Except for NSMO RS]
44	G	-	[For NSMO RS]
45	BR	-	[For NSMO RS]
46	R	-	[For NSMO RS]
47	Y	-	[With Intelligent Key]
48	GR	-	[Without Intelligent Key]
48	Y	-	[With Intelligent Key]

CHARGING SYSTEM

< WIRING DIAGRAM >

CHARGING SYSTEM

Connector No.	F15
Connector Name	ALTERNATOR
Connector Type	H0378



Terminal No.	Color Of Wire	Signal Name [Specification]
3	LG	-
4	G	-
5	BG	-

Connector No.	F20
Connector Name	BATTERY TERMINAL WITH FUSIBLE LINK
Connector Type	Z5340_79906



Terminal No.	5
Color Of Wire	B/R
Signal Name [Specification]	-

Connector No.	F21
Connector Name	ALTERNATOR
Connector Type	Z5340_6745



Terminal No.	1
Color Of Wire	B/R
Signal Name [Specification]	-

Connector No.	F40
Connector Name	ALTERNATOR
Connector Type	Z5340_1400D



Terminal No.	2
Color Of Wire	B
Signal Name [Specification]	-

Connector No.	F42
Connector Name	ALTERNATOR
Connector Type	EJ46



Terminal No.	2
Color Of Wire	B
Signal Name [Specification]	-



Connector No.	M34
Connector Name	COMBINATION METER
Connector Type	TH40PW-NH



Terminal No.	1	
Color Of Wire	L	
Signal Name [Specification]	CAN-H	
2	P	CAN-L
4	Y	VEHICLE SPEED SIGNAL (8-PULSE)
5	G	PADDLE SHIFTER UP SWITCH SIGNAL
6	BR	FUEL LEVEL SENSOR SIGNAL
7	R	AIR BAG SIGNAL
8	P	-
9	W	SEAT BELT BUCKLE SWITCH SIGNAL (DRIVER SIDE)
10	SB	PARKING BRAKE SWITCH SIGNAL
11	G	BRAKE FLUID LEVEL SWITCH SIGNAL
13	GR	ILLUMINATION CONTROL SIGNAL
14	R	WASHER FLUID LEVEL SWITCH SIGNAL
15	R	MANUAL MODE SHIFTER SIGNAL
17	G	WASHER LEVEL SWITCH SIGNAL
18	R	SECURITY SIGNAL
19	GR	AMBIENT SENSOR SIGNAL
20	R	AMBIENT SENSOR GROUND
21	B	GROUND
22	B	GROUND
23	B	GROUND
24	L	FUEL LEVEL SENSOR GROUND
25	B	VDC GROUND
26	V	PADDLE SHIFTER DOWN SWITCH SIGNAL
27	LG	BATTERY POWER SUPPLY
28	GR	IGNITION SIGNAL
29	V	PASSENGER SEAT BELT WARNING SIGNAL
31	P	A/C AUTO-APP. CONNECTION RECOGNITION SIGNAL
36	Y	MANUAL MODE SIGNAL
37	G	NON-MANUAL MODE SIGNAL
38	P	ALTERNATOR SIGNAL

Connector No.	M77
Connector Name	WIRE TO WIRE
Connector Type	TH08PW-CSI0-TM4



Terminal No.	Color Of Wire	Signal Name [Specification]
1	L	-
4	V	-
6	P	-
10	R	-
11	R	-
12	LG	-
13	V	-
14	SHIELD	-
34	LG	-
35	SB	-
36	B	-
37	P	-
52	R	-
53	L	-
54	SB	-
55	P	-
56	LG	-
59	Y	-
62	W	-
63	W	-
64	G	-
65	GR	-
66	Y	-
67	V	-
68	R	-
70	V	-
71	R	-
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76	W	-
78	LG	-
79	V	-
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85	BR	-

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CHARGING SYSTEM

< WIRING DIAGRAM >

CHARGING SYSTEM

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87	SHIELD	-
88	BT	-
89	Y	-
90	I	-
91	GR	-
92	C	-
93	R	-
94	LG	-

JRMW15149GB

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow (With EXP-800 NI or GR8-1200 NI)

INFOID:0000000012200370

CHARGING SYSTEM DIAGNOSIS WITH EXP-800 NI OR GR8-1200 NI

To test the charging system, use the following special service tools:

- EXP-800 NI Battery and electrical diagnostic analyzer
- GR8-1200 NI Multitasking battery and electrical diagnostic station

NOTE:

Refer to the applicable Instruction Manual for proper charging system diagnosis procedures.

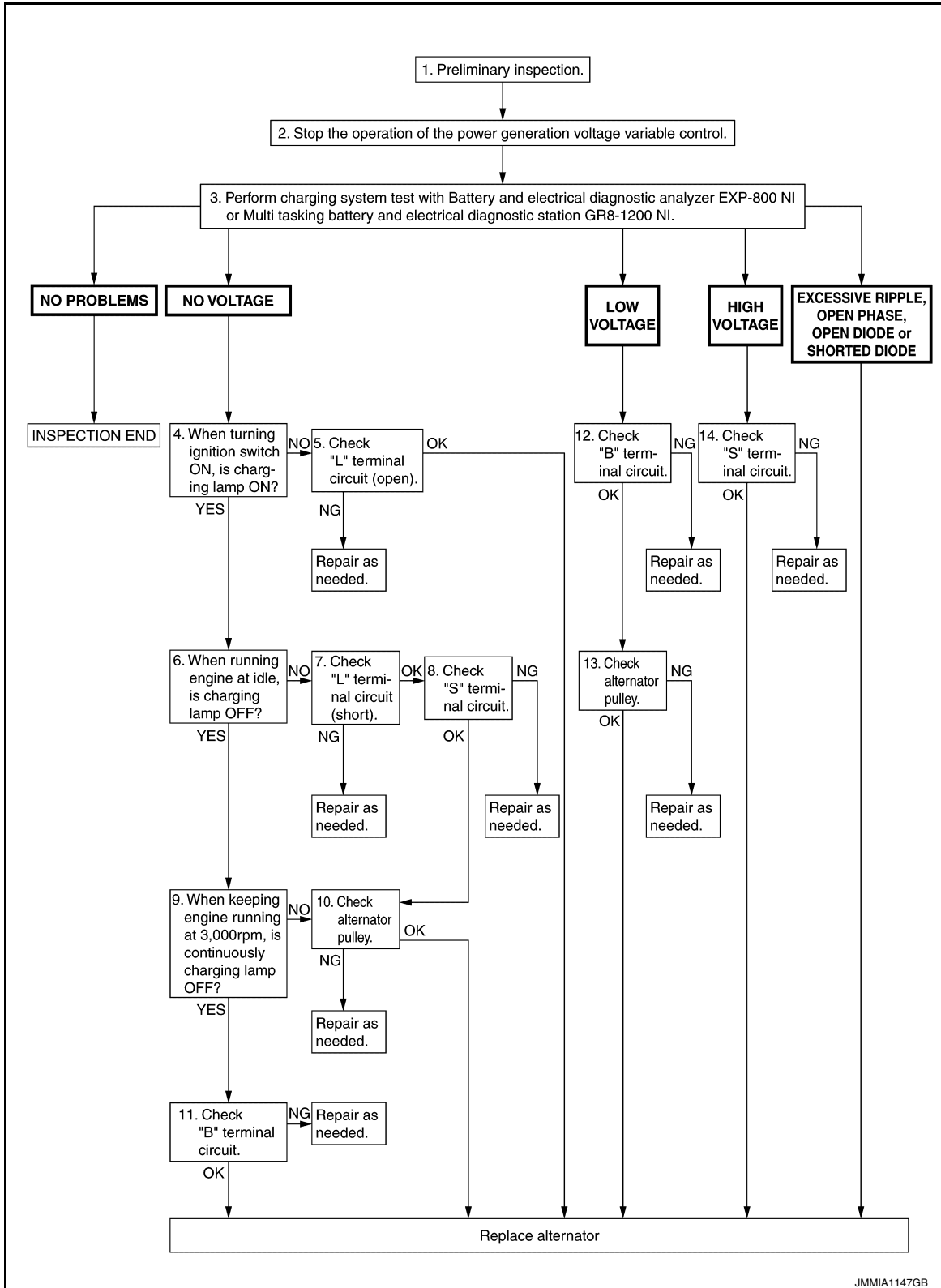
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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

OVERALL SEQUENCE



DETAILED FLOW

NOTE:

To ensure a complete and thorough diagnosis, the battery, starter and alternator test segments must be done as a set from start to finish.

1. PRELIMINARY INSPECTION

Perform the preliminary inspection. Refer to [CHG-22, "Inspection Procedure"](#).

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

>> GO TO 2.

2. STOP POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM

Stop the operation of the power generation voltage variable control in either of the following procedures.

- After selecting “ENGINE” of “SELECT SYSTEM” using CONSULT, set the DUTY value of “ALTERNATOR DUTY” to 0 % by selecting “ALTERNATOR DUTY” of “Active Test”. Continue “Active Test” until the end of inspection. (When the DUTY value is 0 or 100 %, the normal power generation is performed according to the characteristic of the IC voltage regulator of the alternator.)
- Turn the ignition switch OFF, and disconnect the battery current sensor connector. [However, DTC (P1550 - P1554) of the engine might remain. After finishing the inspection, connect the battery current sensor connector and erase the self-diagnosis results history of the engine using CONSULT.]

>> GO TO 3.

3. DIAGNOSIS WITH EXP-800 NI OR GR8-1200 NI

Perform the charging system test using Multitasking battery and electrical diagnostic station GR8-1200 NI or Battery and electrical diagnostic analyzer EXP-800 NI. Refer to the applicable Instruction Manual for proper testing procedures.

Test result

NO PROBLEMS>>Charging system is normal and will also show “DIODE RIPPLE” test result.

NO VOLTAGE>>GO TO 4.

LOW VOLTAGE>>GO TO 12.

HIGH VOLTAGE>>GO TO 14.

EXCESSIVE RIPPLE, OPEN PHASE, OPEN DIODE or SHORTED DIODE>>Replace the alternator. Perform “DIODE RIPPLE” test again using Multitasking battery and electrical diagnostic station GR8-1200 NI or Battery and electrical diagnostic analyzer EXP-800 NI to confirm repair.

4. INSPECTION WITH CHARGE WARNING LAMP (IGNITION SWITCH IS ON)

Turn the ignition switch ON.

Does the charge warning lamp illuminate?

YES >> GO TO 6.

NO >> GO TO 5.

5. “L” TERMINAL CIRCUIT (OPEN) INSPECTION

Check “L” terminal circuit (open). Refer to [CHG-26, "Diagnosis Procedure"](#).

Is the “L” terminal circuit normal?

YES >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

NO >> Repair as needed.

6. INSPECTION WITH CHARGE WARNING LAMP (IDLING)

Start the engine and run it at idle.

Does the charge warning lamp turn OFF?

YES >> GO TO 9.

NO >> GO TO 7.

7. “L” TERMINAL CIRCUIT (SHORT) INSPECTION

Check “L” terminal circuit (short). Refer to [CHG-28, "Diagnosis Procedure"](#).

Is the “L” terminal circuit normal?

YES >> GO TO 8.

NO >> Repair as needed.

8. “S” TERMINAL CIRCUIT INSPECTION

Check “S” terminal circuit. Refer to [CHG-29, "Diagnosis Procedure"](#).

Is the “S” terminal circuit normal?

YES >> GO TO 10.

NO >> Repair as needed.

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

9. INSPECTION WITH CHARGE WARNING LAMP (ENGINE AT 3,000 RPM)

Increase and maintain the engine speed at 3,000 rpm.

Does the charge warning lamp remain off?

YES >> GO TO 11.

NO >> GO TO 10.

10. INSPECTION OF ALTERNATOR PULLEY

Check alternator pulley. Refer to [CHG-34, "MR16DDT : Inspection"](#).

Is alternator pulley normal?

YES >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

NO >> Repair as needed.

11. "B" TERMINAL CIRCUIT INSPECTION

Check "B" terminal circuit. Refer to [CHG-25, "Diagnosis Procedure"](#).

Is "B" terminal circuit normal?

YES >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

NO >> Repair as needed.

12. "B" TERMINAL CIRCUIT INSPECTION

Check "B" terminal circuit. Refer to [CHG-25, "Diagnosis Procedure"](#).

Is "B" terminal circuit normal?

YES >> GO TO 13.

NO >> Repair as needed.

13. INSPECTION OF ALTERNATOR PULLEY

Check alternator pulley. Refer to [CHG-34, "MR16DDT : Inspection"](#).

Is alternator pulley normal?

YES >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

NO >> Repair as needed.

14. "S" TERMINAL CIRCUIT INSPECTION

Check "S" terminal circuit. Refer to [CHG-29, "Diagnosis Procedure"](#).

Is the "S" terminal circuit normal?

YES >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

NO >> Repair as needed.

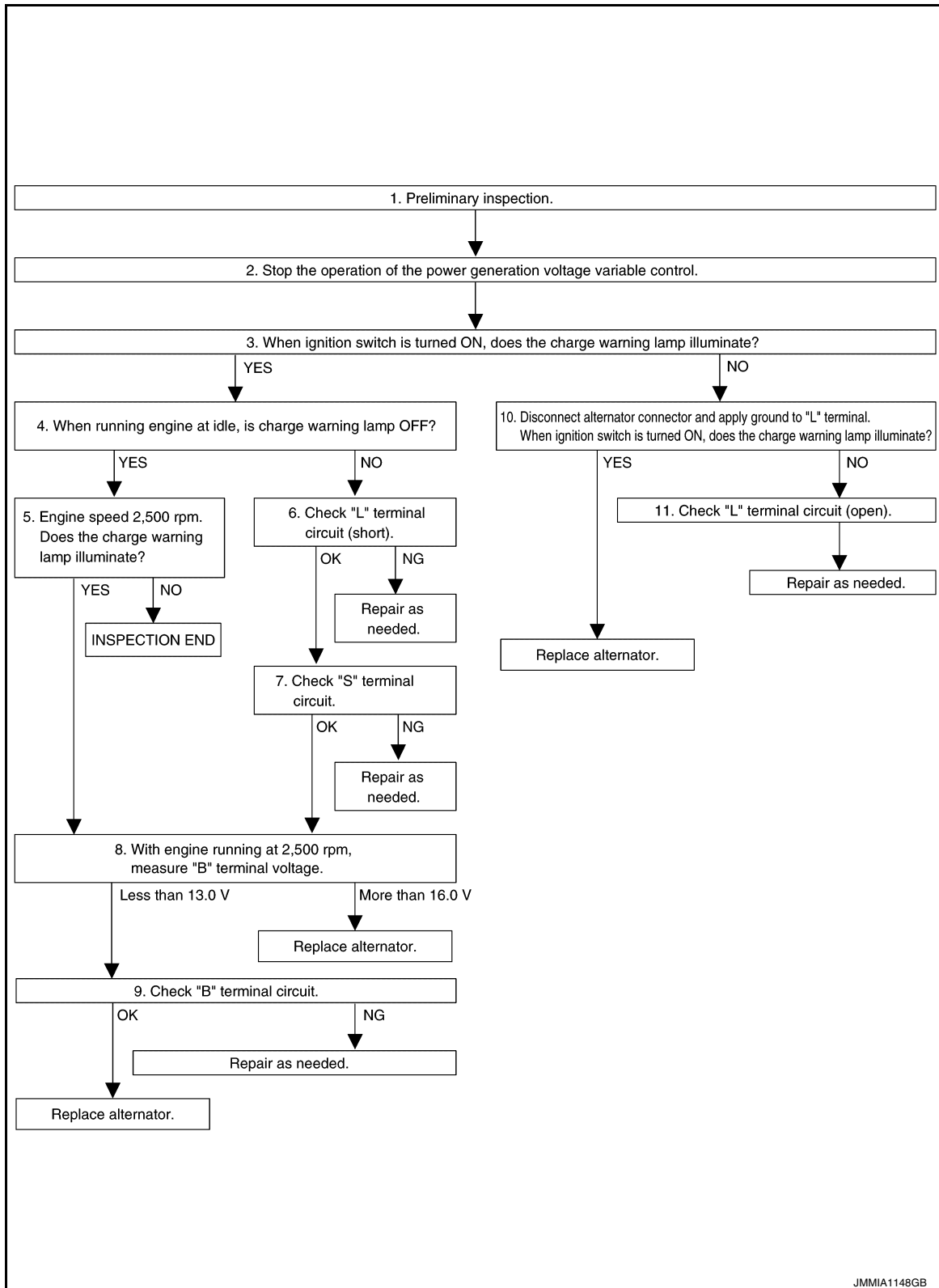
DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

Work Flow (Without EXP-800 NI or GR8-1200 NI)

INFOID:000000012200371

OVERALL SEQUENCE



DETAILED FLOW

1. PRELIMINARY INSPECTION

Perform the preliminary inspection. Refer to [CHG-22, "Inspection Procedure"](#).

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DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

>> GO TO 2.

2. STOP POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM

Stop the operation of the power generation voltage variable control in either of the following procedures.

- After selecting "ENGINE" of "SELECT SYSTEM" using CONSULT, set the DUTY value of "ALTERNATOR DUTY" to 0 % by selecting "ALTERNATOR DUTY" of "Active Test". Continue "Active Test" until the end of inspection. (When the DUTY value is 0 or 100 %, the normal power generation is performed according to the characteristic of the IC regulator of the alternator.)
- Turn the ignition switch OFF, and disconnect the battery current sensor connector. [However, DTC (P1550 - P1554) of the engine might remain. After finishing the inspection, connect the battery current sensor connector and erase the self-diagnostic results history of the engine using CONSULT.]

>> GO TO 3.

3. INSPECTION WITH CHARGE WARNING LAMP (IGNITION SWITCH IS TURNED ON)

When ignition switch is turned ON

Does the charge warning lamp illuminate?

YES >> GO TO 4.

NO >> GO TO 10.

4. INSPECTION WITH CHARGE WARNING LAMP (IDLING)

Start the engine and run it at idle.

Does the charge warning lamp turn OFF?

YES >> GO TO 5.

NO >> GO TO 6.

5. INSPECTION WITH CHARGE WARNING LAMP (ENGINE AT 2,500 RPM)

Increase and maintain the engine speed at 2,500 rpm.

Does the charge warning lamp illuminate?

YES >> GO TO 8.

NO >> INSPECTION END

6. "L" TERMINAL CIRCUIT (SHORT) INSPECTION

Check "L" terminal circuit (short). Refer to [CHG-28, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 7.

NO >> Repair as needed.

7. "S" TERMINAL CIRCUIT INSPECTION

Check "S" terminal circuit. Refer to [CHG-29, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair as needed.

8. MEASURE "B" TERMINAL VOLTAGE

Start engine. With engine running at 2,500 rpm, measure "B" terminal voltage.

What voltage does the measurement result show?

Less than 13.0 V >> GO TO 9.

More than 16.0 V >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

9. "B" TERMINAL CIRCUIT INSPECTION

Check "B" terminal circuit. Refer to [CHG-25, "Diagnosis Procedure"](#).

Is the inspection result normal?

YES >> Replace alternator. Refer to [CHG-33, "MR16DDT : Removal and Installation"](#).

NO >> Repair as needed.

10. INSPECTION WITH CHARGE WARNING LAMP (IGNITION SWITCH IS ON)

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

1. Disconnect alternator connector and apply ground to "L" terminal.
2. Turn the ignition switch ON.

Does the charge warning lamp illuminate?

YES >> Replace alternator. Refer to [CHG-33. "MR16DDT : Removal and Installation"](#).

NO >> GO TO 11.

11.CHECK "L" TERMINAL CIRCUIT (OPEN)

Check "L" terminal circuit (open). Refer to [CHG-26. "Diagnosis Procedure"](#).

>> Repair as needed.

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CHARGING SYSTEM PRELIMINARY INSPECTION

< BASIC INSPECTION >

CHARGING SYSTEM PRELIMINARY INSPECTION

Inspection Procedure

INFOID:000000012200372

1. CHECK BATTERY TERMINALS CONNECTION

Check if battery terminals are clean and tight.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair battery terminals connection.

2. CHECK FUSE

Check for blown fuse and fusible link.

Unit	Power source (Power supply terminals)	Fuse No.
Alternator	Battery ("S" terminal)	35
Combination meter	Ignition switch ON ("L" terminal)	5

Is the inspection result normal?

YES >> GO TO 3.

NO >> Be sure to eliminate the cause of malfunction before installing new fuse.

3. CHECK "E" TERMINAL CONNECTION (ALTERNATOR GROUND)

Check if "E" terminal (alternator ground) is clean and tight.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair "E" terminal (alternator ground) connection.

4. CHECK DRIVE BELT TENSION

Check drive belt tension. Refer to [EM-21, "Inspection"](#) (For NISMO RS models) or [EM-186, "Inspection"](#) (Except for NISMO RS models).

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair as needed.

POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM OPERATION INSPECTION

< BASIC INSPECTION >

POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM OPERATION INSPECTION

Inspection Procedure

INFOID:000000012200373

CAUTION:

When performing this inspection, always use a charged battery that has completed the battery inspection. (When the charging rate of the battery is low, the response speed of the voltage change will become slow. This can cause an incorrect inspection.)

1. CHECK ECM (CONSULT)

Perform ECM self-diagnosis with CONSULT. Refer to [EC-84, "CONSULT Function"](#) (For NISMO RS models) or [EC-667, "CONSULT Function"](#) (Except for NISMO RS models).

Self-diagnostic results content

No malfunction detected>> GO TO 2.

Malfunction detected>> Check applicable parts, and repair or replace corresponding parts.

2. CHECK OPERATION OF POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM

1. Connect CONSULT and start the engine.
2. Check that the selector lever is in "P" or "N" position (CVT models) or shifter lever is in neutral position (M/T models) and that all of the electric loads and A/C, etc. are turned OFF.
3. Select "ALTERNATOR DUTY" at "Active Test" of "ENGINE", and then check the value of "BATTERY VOLT" monitor when DUTY value of "ALTERNATOR DUTY" is set to 40.0 %.

"BATTERY VOLT"

2 seconds after setting the DUTY value of "ALTERNATOR DUTY" to 40.0 % : 12 - 13.6 V

4. Check the value of "BATTERY VOLT" monitor when DUTY value of "ALTERNATOR DUTY" is set to 80.0%.

"BATTERY VOLT"

20 seconds after setting the DUTY value of "ALTERNATOR DUTY" to 80.0 % : +0.5 V or more against the value of "BATTERY VOLT" monitor when DUTY value is 40.0 %

Is the measurement value within the specification?

YES >> INSPECTION END

NO >> GO TO 3.

3. CHECK IPDM E/R (CONSULT)

Perform IPDM E/R self-diagnosis with CONSULT. Refer to [PCS-14, "CONSULT Function \(IPDM E/R\)"](#).

Self-diagnostic results content

No malfunction detected>> GO TO 4.

Malfunction detected>> Check applicable parts, and repair or replace corresponding parts.

4. CHECK HARNESS BETWEEN ALTERNATOR AND IPDM E/R

1. Turn ignition switch OFF.
2. Disconnect alternator connector and IPDM E/R connector.
3. Check continuity between alternator harness connector and IPDM E/R harness connector.

Alternator		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
F15	5	E13	33	Existed

4. Check continuity between alternator harness connector and ground.

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POWER GENERATION VOLTAGE VARIABLE CONTROL SYSTEM OPERATION INSPECTION

< BASIC INSPECTION >

Alternator harness connector		Ground	Continuity
Connector	Terminal		
F15	5		Not existed

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> Repair harness or connector between IPDM E/R and alternator.

B TERMINAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

B TERMINAL CIRCUIT

Description

INFOID:0000000012200374

"B" terminal circuit supplies power to charge the battery and to operate the vehicle's electrical system.

Diagnosis Procedure

INFOID:0000000012200375

1. CHECK "B" TERMINAL CONNECTION

1. Turn ignition switch OFF.
2. Check if "B" terminal is clean and tight.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair "B" terminal connection. Confirm repair by performing complete Charging system test using EXP-800 NI or GR8-1200 NI (if available). Refer to the applicable Instruction Manual for proper testing procedures.

2. CHECK "B" TERMINAL CIRCUIT

Check voltage between alternator "B" terminal and ground.

For NISMO RS models

Terminals		Voltage (Approx.)
(+)	(-)	
Alternator "B" terminal	Terminal	Battery voltage
E68	1	

Except for NISMO RS models

Terminals		Voltage (Approx.)
(+)	(-)	
Alternator "B" terminal	Terminal	Battery voltage
F21	1	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Check harness for open between alternator and fusible link.

3. CHECK "B" TERMINAL CONNECTION (VOLTAGE DROP TEST)

1. Start engine, then engine running at idle and warm.
2. Check voltage between battery positive terminal and alternator "B" terminal.

For NISMO RS models

(+) Terminal	Terminals		Voltage (Approx.)
	Alternator "B" terminal	Terminal	
Battery positive terminal	E68	1	Less than 0.2 V

Except for NISMO RS models

(+) Terminal	Terminals		Voltage (Approx.)
	Alternator "B" terminal	Terminal	
Battery positive terminal	F21	1	Less than 0.2 V

Is the inspection result normal?

YES >> "B" terminal circuit is normal. Refer to [CHG-15, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-19, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

NO >> Check harness between battery and alternator for poor continuity.

L TERMINAL CIRCUIT (OPEN)

< DTC/CIRCUIT DIAGNOSIS >

L TERMINAL CIRCUIT (OPEN)

Description

INFOID:000000012200376

The "L" terminal circuit controls the charge warning lamp. The charge warning lamp illuminates when the ignition switch is set to ON or START. When the alternator is providing sufficient voltage with the engine running, the charge warning lamp will go off. If the charge warning lamp illuminates with the engine running, a malfunction is indicated.

Diagnosis Procedure

INFOID:000000012200377

1. CHECK "L" TERMINAL CONNECTION

1. Turn ignition switch OFF.
2. Check if "L" terminal is clean and tight.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair "L" terminal connection. Confirm repair by performing complete Charging system test using EXP-800 NI or GR8-1200 NI (if available). Refer to the applicable Instruction Manual for proper testing procedures.

2. CHECK "L" TERMINAL CIRCUIT (OPEN)

1. Disconnect alternator connector.
2. Apply ground to alternator harness connector terminal.
3. Check condition of the charge warning lamp with the ignition switch in the ON position.

Alternator harness connector	Terminal	Ground	Condition	
			Ignition switch position	Charge warning lamp
F15	3		ON	Illuminate

Does it illuminate?

YES >> "L" terminal circuit is normal. Refer to [CHG-15, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-19, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

NO >> GO TO 3.

3. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

1. Disconnect the battery cable from the negative terminal.
2. Disconnect the combination meter connector.
3. Check continuity between alternator harness connector and combination meter harness connector.

Alternator harness connector		Combination meter harness connector		Continuity
Connector No.	Terminal No.	Connector No.	Terminal No.	
F15	3	M34	38	Existed

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harness or connector.

4. CHECK HARNESS CONTINUITY (OPEN CIRCUIT)

Check continuity between combination meter harness connector M34 terminal 28 and 10A fuse [No.5 located in the fuse block (J/B)].

Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harness.

5. CHECK POWER SUPPLY CIRCUIT

1. Connect the battery cable to the negative terminal.
2. Check voltage between combination meter harness connector and ground.

L TERMINAL CIRCUIT (OPEN)

< DTC/CIRCUIT DIAGNOSIS >

Terminals		(-)	Condition	Voltage (Approx.)
(+)				
Combination meter harness connector	Terminal			
M34	28	Ground	When the ignition switch is in ON position	Battery voltage

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Inspect the power supply circuit. Refer to [PG-43, "Wiring Diagram - IGNITION POWER SUPPLY -](#)
[".](#)

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L TERMINAL CIRCUIT (SHORT)

< DTC/CIRCUIT DIAGNOSIS >

L TERMINAL CIRCUIT (SHORT)

Description

INFOID:000000012200378

The "L" terminal circuit controls the charge warning lamp. The charge warning lamp illuminates when the ignition switch is set to ON or START. When the alternator is providing sufficient voltage with the engine running, the charge warning lamp will go off. If the charge warning lamp illuminates with the engine running, a malfunction is indicated.

Diagnosis Procedure

INFOID:000000012200379

1. CHECK "L" TERMINAL CIRCUIT (SHORT)

1. Turn ignition switch OFF.
2. Disconnect alternator connector.
3. Turn ignition switch ON.

Does charge warning lamp illuminate?

YES >> GO TO 2.

NO >> Refer to [CHG-15, "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-19, "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

2. CHECK HARNESS CONTINUITY (SHORT CIRCUIT)

1. Turn ignition switch OFF.
2. Disconnect the battery cable from the negative terminal.
3. Disconnect combination meter connector.
4. Check continuity between combination meter harness connector and ground.

Combination meter harness connector		Ground	Continuity
Connector No.	Terminal No.		
M34	38		Not existed

Is the inspection result normal?

YES >> Replace combination meter.

NO >> Repair the harness.

S TERMINAL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

S TERMINAL CIRCUIT

Description

INFOID:0000000012200380

The output voltage of the alternator is controlled by the IC voltage regulator at the "S" terminal detecting the input voltage.

The "S" terminal circuit detects the battery voltage to adjust the alternator output voltage with the IC voltage regulator.

Diagnosis Procedure

INFOID:0000000012200381

1. CHECK "S" TERMINAL CONNECTION

1. Turn ignition switch OFF.
2. Check if "S" terminal is clean and tight.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair "S" terminal connection. Confirm repair by performing complete Charging system test using EXP-800 NI or GR8-1200 NI (if available). Refer to the applicable Instruction Manual for proper testing procedures.

2. CHECK "S" TERMINAL CIRCUIT

Check voltage between alternator harness connector and ground.

Terminals		Voltage (Approx.)
(+)	(-)	
Alternator harness connector	Terminal	Battery voltage
F15	4	

Is the inspection result normal?

YES >> Refer to [CHG-15. "Work Flow \(With EXP-800 NI or GR8-1200 NI\)"](#) or [CHG-19. "Work Flow \(Without EXP-800 NI or GR8-1200 NI\)"](#).

NO >> Check harness for open between alternator and fuse.

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CHARGING SYSTEM

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

CHARGING SYSTEM

Symptom Table

INFOID:000000012200382

Symptom	Reference
Discharged battery	Refer to CHG-15, "Work Flow (With EXP-800 NI or GR8-1200 NI)" or CHG-19, "Work Flow (Without EXP-800 NI or GR8-1200 NI)" .
The charge warning lamp does not illuminate when the ignition switch is set to ON.	
The charge warning lamp does not turn OFF after the engine starts.	
The charging warning lamp turns ON when increasing the engine speed.	

ALTERNATOR

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

ALTERNATOR

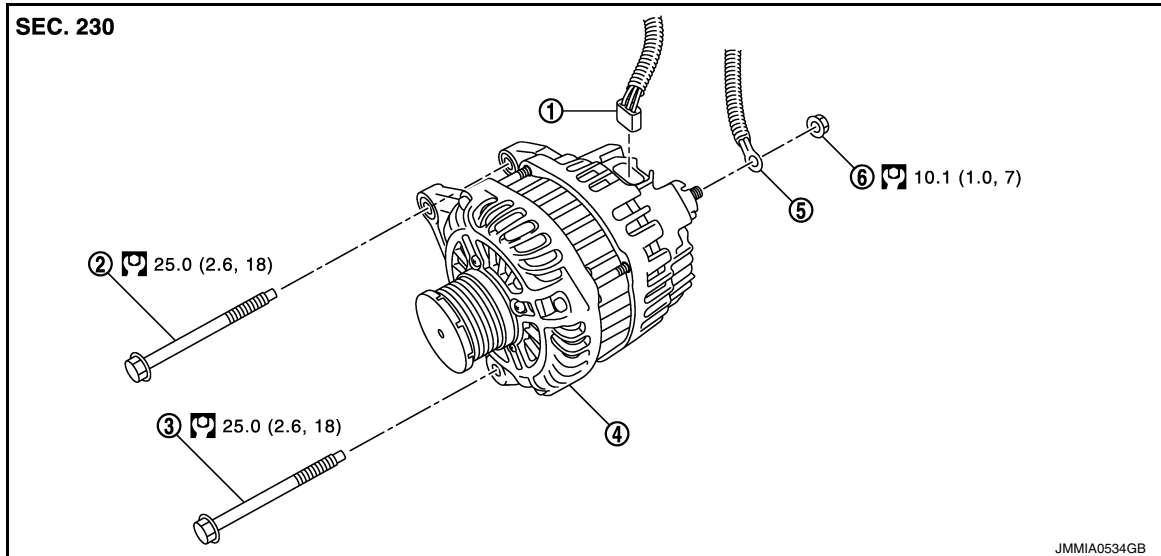
MR16DDT

MR16DDT : Exploded View


INFOID:000000012200383

REMOVAL

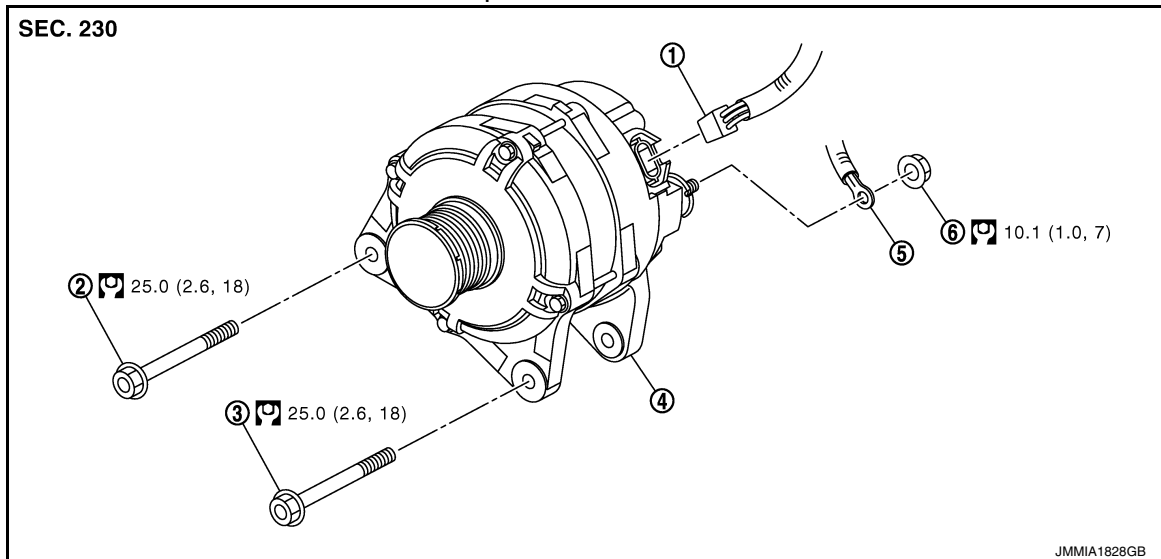
MR for NISMO RS models




- | | | |
|-------------------------|-------------------------------------|-------------------------------------|
| 1. Alternator connector | 2. Alternator mounting bolt (upper) | 3. Alternator mounting bolt (lower) |
| 4. Alternator | 5. "B" terminal harness | 6. "B" terminal nut |

 : N·m (kg-m, ft-lb)

MR except for NISMO RS models



- | | | |
|-------------------------|-------------------------------------|-------------------------------------|
| 1. Alternator connector | 2. Alternator mounting bolt (upper) | 3. Alternator mounting bolt (lower) |
| 4. Alternator | 5. "B" terminal harness | 6. "B" terminal nut |

 : N·m (kg-m, ft-lb)

DISASSEMBLY

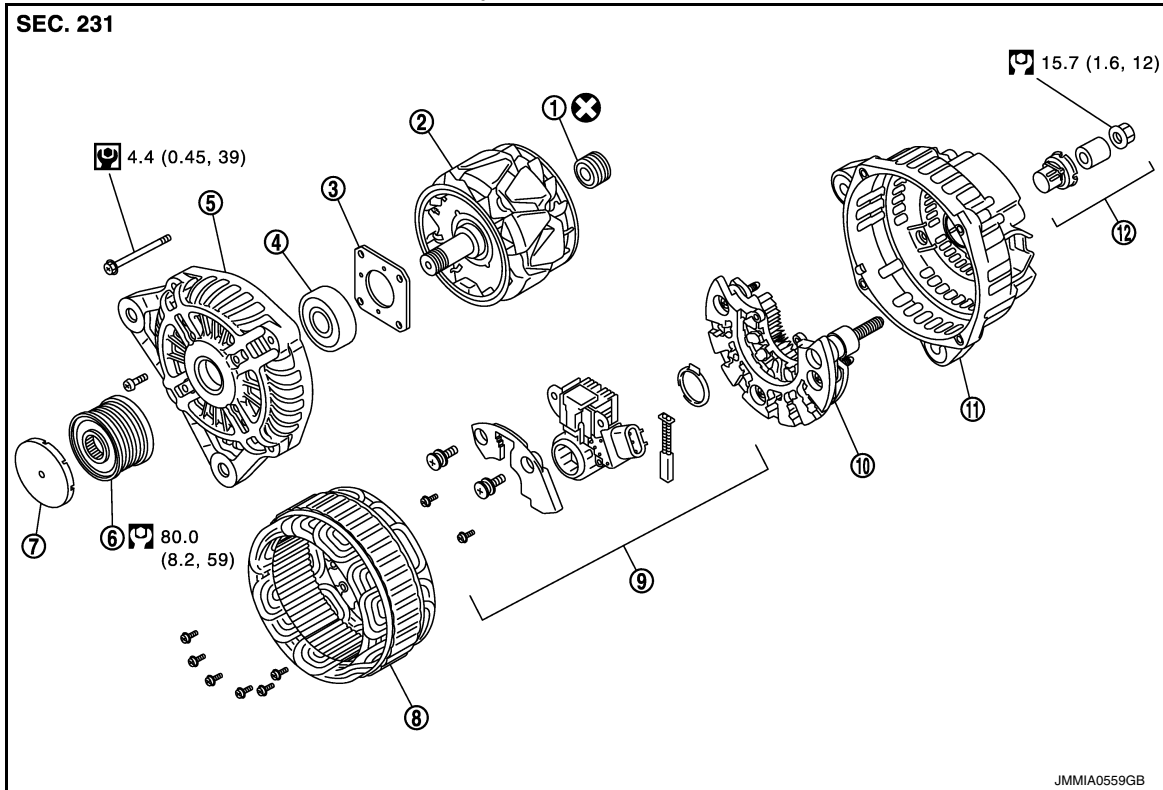
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CHG

ALTERNATOR

< REMOVAL AND INSTALLATION >

Type: A002TJ1381



- | | | |
|--------------------|---------------------------|----------------------------------|
| 1. Rear bearing | 2. Rotor assembly | 3. Retainer |
| 4. Front bearing | 5. Front bracket assembly | 6. Pulley |
| 7. Pulley cap | 8. Stator assembly | 9. IC voltage regulator assembly |
| 10. Diode assembly | 11. Rear bracket assembly | 12. Terminal set |

⊗ : Always replace after every disassembly.

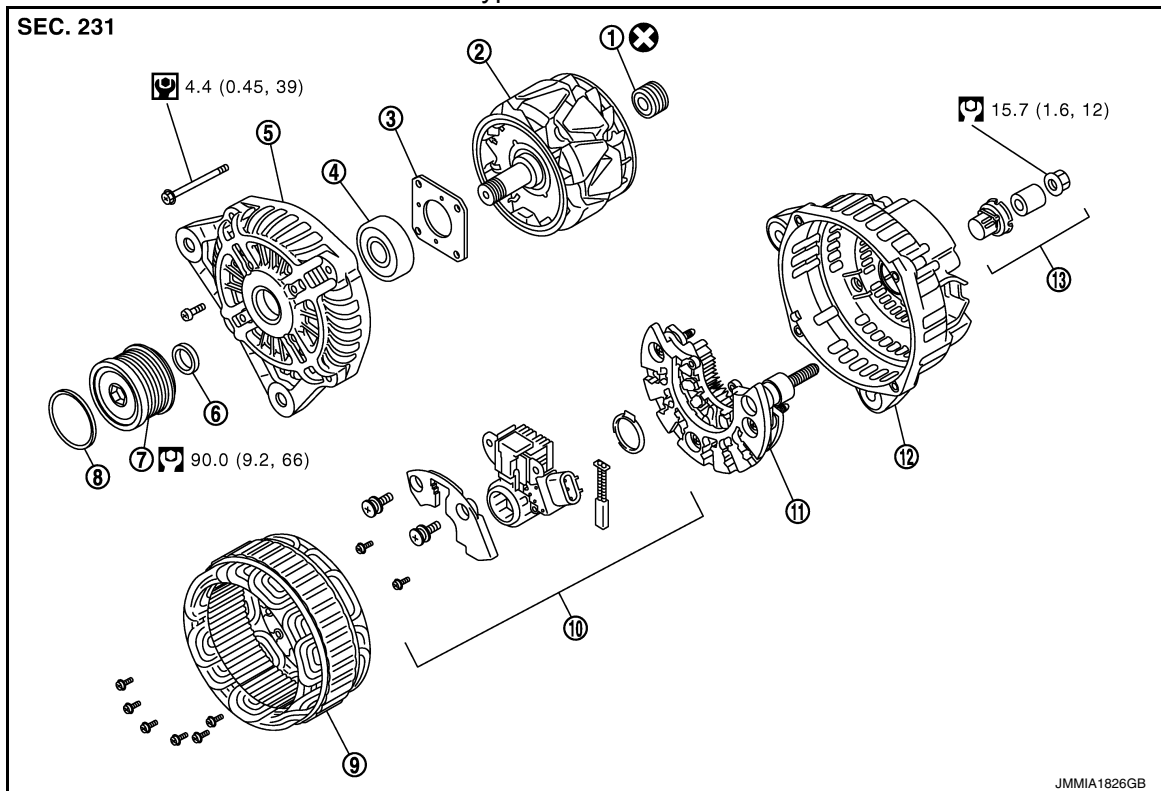
☞ : N·m (kg-m, in-lb)

☞ : N·m (kg-m, ft-lb)

ALTERNATOR

< REMOVAL AND INSTALLATION >

Type: A002TJ2081



- | | | |
|-----------------------------------|---------------------------|---------------------------|
| 1. Rear bearing | 2. Rotor assembly | 3. Retainer |
| 4. Front bearing | 5. Front bracket assembly | 6. Washer |
| 7. Pulley | 8. Pulley cap | 9. Stator assembly |
| 10. IC voltage regulator assembly | 11. Diode assembly | 12. Rear bracket assembly |
| 13. Terminal set | | |

⊗ : Always replace after every disassembly.

⊕ : N·m (kg-m, in-lb)

⊖ : N·m (kg-m, ft-lb)

MR16DDT : Removal and Installation

INFOID:0000000012200384

REMOVAL

1. Disconnect the battery cable from the negative terminal. Refer to [PG-105, "Removal and Installation"](#).
2. Remove charge air cooler. Refer to [EM-32, "Removal and Installation"](#) (MR for NISMO RS models) or [EM-194, "Removal and Installation"](#) (MR except for NISMO RS models).
3. Remove drive belt. Refer to [EM-20, "Removal and Installation"](#) (MR for NISMO RS models) or [EM-185, "Removal and Installation"](#) (MR except for NISMO RS models).
4. Disconnect alternator connector.
5. Remove "B" terminal nut and disconnect "B" terminal harness.
6. Remove alternator mounting bolt (upper).
7. Completely loosen alternator mounting bolt (lower), and pull it out until the bolt head is in contact with the side member. And then, remove the alternator by pulling it forward.

NOTE:

The alternator can be removed together with the bolts by pulling it forward and using the thermostat housing bolt hole cutout.

8. Remove alternator forward from the vehicle.

INSTALLATION

Note the following items, and then install in the reverse order of removal.

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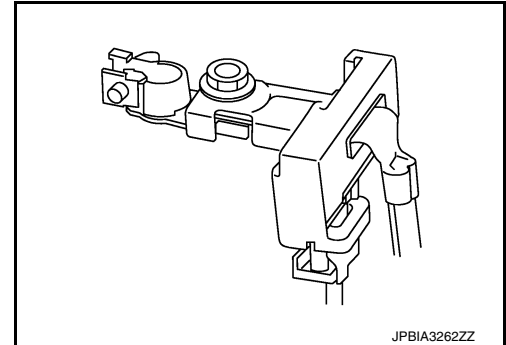
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ALTERNATOR

< REMOVAL AND INSTALLATION >

CAUTION:

- Temporarily tighten the alternator bolts in order from the lower to the upper, and then tighten them in order from the upper to the lower.
- For the alternator, the front side (pulley side) surface is the reference surface. Fit the reference surface to the alternator mounting part, and then tighten the bolts.
- Be careful to tighten "B" terminal nut to the specified torque.
- Install alternator and check tension of belt. Refer to [EM-21, "Inspection"](#) (MR for NISMO RS models) or [EM-186, "Inspection"](#) (MR except for NISMO RS models).
- For this model, the power generation voltage variable control system that controls the power generation voltage of the alternator has been adopted. Therefore, the power generation voltage variable control system operation inspection should be performed after replacing the alternator, and then check that the system operates normally. Refer to [CHG-23, "Inspection Procedure"](#).
The battery current sensor is installed to the battery cable at the negative terminal.



MR16DDT : Inspection

INFOID:0000000012200385

ALTERNATOR PULLEY INSPECTION

Perform the following.

- Make sure that alternator pulley does not rattle.
- Make sure that alternator pulley nut is tight. Refer to [CHG-31, "MR16DDT : Exploded View"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Alternator

INFOID:0000000012200386

Type		A002TJ1381	A002TJ2081
		MITSUBISHI make	
Nominal rating	[V - A]	12 -110	
Ground polarity		Negative	
Minimum revolution under no-load (When 13.5 V is applied)	[rpm]	Less than 1,300	
Hot output current (When 13.5 V is applied)	[A/ rpm]	More than 95/2,500 More than 116/5,000	
Regulated output voltage	[V]	14.1 – 14.7 V*	

*: Adjustment range of power generation voltage variable control is 11.4 – 15.6 V.

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