

SCS

SECTION

SUSPENSION CONTROL SYSTEM

A
B
C
D

SCS

CONTENTS

<p style="text-align: center;">Bilstein DampTronic</p> <p>BASIC INSPECTION 4</p> <p>DIAGNOSIS AND REPAIR WORK FLOW 4 Work Flow (GT-R certified NISSAN dealer)4</p> <p>FUNCTION DIAGNOSIS 7</p> <p>Bilstein DampTronic SYSTEM 7 System Diagram (GT-R certified NISSAN dealer).....7 System Description (GT-R certified NISSAN dealer)7 Component Parts Location (GT-R certified NISSAN dealer)9 Component Description (GT-R certified NISSAN dealer)10</p> <p>DIAGNOSIS SYSTEM (E-SUS CONTROL UNIT)11 CONSULT-III Function (GT-R certified NISSAN dealer) 11</p> <p>COMPONENT DIAGNOSIS13</p> <p>C1D01 VEHICLE SPEED SIGNAL13 Description (GT-R certified NISSAN dealer) 13 DTC Logic (GT-R certified NISSAN dealer)13 Diagnosis Procedure (GT-R certified NISSAN dealer) 13</p> <p>C1D02 YAW RATE/SIDE/DECEL G SENSOR...14 Description (GT-R certified NISSAN dealer) 14 DTC Logic (GT-R certified NISSAN dealer) 14 Diagnosis Procedure (GT-R certified NISSAN dealer) 14</p> <p>C1D03 STEERING ANGLE SENSOR16 Description (GT-R certified NISSAN dealer) 16 DTC Logic (GT-R certified NISSAN dealer) 16 Diagnosis Procedure (GT-R certified NISSAN dealer) 16</p>	<p>C1D04, C1D05 TORQUE SIGNAL17 Description (GT-R certified NISSAN dealer)17 DTC Logic (GT-R certified NISSAN dealer)17 Diagnosis Procedure (GT-R certified NISSAN dealer)17</p> <p>C1D06 ENGINE SPEED SIGNAL 18 Description (GT-R certified NISSAN dealer)18 DTC Logic (GT-R certified NISSAN dealer)18 Diagnosis Procedure (GT-R certified NISSAN dealer) 18</p> <p>C1D07 STOP LAMP SWITCH19 Description (GT-R certified NISSAN dealer)19 DTC Logic (GT-R certified NISSAN dealer)19 Diagnosis Procedure (GT-R certified NISSAN dealer)19</p> <p>C1D08 ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)20 Description (GT-R certified NISSAN dealer)20 DTC Logic (GT-R certified NISSAN dealer)20 Diagnosis Procedure (GT-R certified NISSAN dealer)20</p> <p>C1D09 BRAKE FLUID PRESSURE SIGNAL ...21 Description (GT-R certified NISSAN dealer)21 DTC Logic (GT-R certified NISSAN dealer)21 Diagnosis Procedure (GT-R certified NISSAN dealer)21</p> <p>C1D10 FRONT VERTICAL G SENSOR22 Description (GT-R certified NISSAN dealer)22 DTC Logic (GT-R certified NISSAN dealer)22 Diagnosis Procedure (GT-R certified NISSAN dealer)22 Component Inspection (GT-R certified NISSAN dealer)23</p> <p>C1D11 REAR VERTICAL G SENSOR24 Description (GT-R certified NISSAN dealer)24 DTC Logic (GT-R certified NISSAN dealer)24</p>
---	--

F
G
H
I
J
K
L
M
N
O
P

Diagnosis Procedure (GT-R certified NISSAN dealer)	24	Diagnosis Procedure (GT-R certified NISSAN dealer)	39
Component Inspection (GT-R certified NISSAN dealer)	25	Component Inspection (GT-R certified NISSAN dealer)	40
C1D12 SHOCK ABSORBER ACTUATOR	26	C1D23 CONTROL UNIT	41
Description (GT-R certified NISSAN dealer)	26	Description (GT-R certified NISSAN dealer)	41
DTC Logic (GT-R certified NISSAN dealer)	26	DTC Logic (GT-R certified NISSAN dealer)	41
Diagnosis Procedure (GT-R certified NISSAN dealer)	26	Diagnosis Procedure (GT-R certified NISSAN dealer)	41
Component Inspection (GT-R certified NISSAN dealer)	27		
C1D13 SHOCK ABSORBER ACTUATOR	28	U1000 CAN COMM CIRCUIT	42
Description (GT-R certified NISSAN dealer)	28	Description (GT-R certified NISSAN dealer)	42
DTC Logic (GT-R certified NISSAN dealer)	28	DTC Logic (GT-R certified NISSAN dealer)	42
Diagnosis Procedure (GT-R certified NISSAN dealer)	28	Diagnosis Procedure (GT-R certified NISSAN dealer)	42
Component Inspection (GT-R certified NISSAN dealer)	29		
C1D14 SHOCK ABSORBER ACTUATOR	30	U1010 CONTROL UNIT (CAN)	43
Description (GT-R certified NISSAN dealer)	30	Description (GT-R certified NISSAN dealer)	43
DTC Logic (GT-R certified NISSAN dealer)	30	DTC Logic (GT-R certified NISSAN dealer)	43
Diagnosis Procedure (GT-R certified NISSAN dealer)	30	Diagnosis Procedure (GT-R certified NISSAN dealer)	43
Component Inspection (GT-R certified NISSAN dealer)	31		
C1D15 SHOCK ABSORBER ACTUATOR	32	POWER SUPPLY AND GROUND CIRCUIT	44
Description (GT-R certified NISSAN dealer)	32	Description (GT-R certified NISSAN dealer)	44
DTC Logic (GT-R certified NISSAN dealer)	32	Diagnosis Procedure (GT-R certified NISSAN dealer)	44
Diagnosis Procedure (GT-R certified NISSAN dealer)	32		
Component Inspection (GT-R certified NISSAN dealer)	33	ECU DIAGNOSIS	45
C1D16 CONTROL UNIT	34	E-SUS CONTROL UNIT	45
Description (GT-R certified NISSAN dealer)	34	Reference Value (GT-R certified NISSAN dealer)...	45
DTC Logic (GT-R certified NISSAN dealer)	34	Wiring Diagram - Bilstein DampTronic SYSTEM - (GT-R certified NISSAN dealer)	48
Diagnosis Procedure (GT-R certified NISSAN dealer)	34	Fail-safe (GT-R certified NISSAN dealer)	52
		DTC Inspection Priority Chart (GT-R certified NISSAN dealer)	53
C1D17 BATTERY POWER SUPPLY	35	DTC Index	53
Description (GT-R certified NISSAN dealer)	35		
DTC Logic (GT-R certified NISSAN dealer)	35	SYMPTOM DIAGNOSIS	55
Diagnosis Procedure (GT-R certified NISSAN dealer)	35	E-SUS MODE LAMP DOES NOT TURN ON ...	55
C1D19, C1D20 MODE SWITCH	37	Description (GT-R certified NISSAN dealer)	55
Description (GT-R certified NISSAN dealer)	37	Diagnosis Procedure (GT-R certified NISSAN dealer)	55
DTC Logic (GT-R certified NISSAN dealer)	37		
Diagnosis Procedure (GT-R certified NISSAN dealer)	37	PRECAUTION	57
Component Inspection (GT-R certified NISSAN dealer)	38	PRECAUTIONS	57
C1D21, C1D22 MODE LAMP	39	Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	57
Description (GT-R certified NISSAN dealer)	39	Precautions for terminology	57
DTC Logic (GT-R certified NISSAN dealer)	39	Precautions for diagnosis	57
		General Precautions	57
		ON-VEHICLE REPAIR	58
		E-SUS CONTROL UNIT	58
		Exploded View (GT-R certified NISSAN dealer)	58

Removal and Installation (GT-R certified NISSAN dealer)	58	REAR VERTICAL G SENSOR	60	
FRONT VERTICAL G SENSOR	59	Exploded View (GT-R certified NISSAN dealer)	60	A
Exploded View (GT-R certified NISSAN dealer)	59	Removal and Installation (GT-R certified NISSAN dealer)	60	
Removal and Installation (GT-R certified NISSAN dealer)	59	SHOCK ABSORBER ACTUATOR	61	B
		Removal and Installation (GT-R certified NISSAN dealer)	61	C

SCS

F
G
H
I
J
K
L
M
N
O
P

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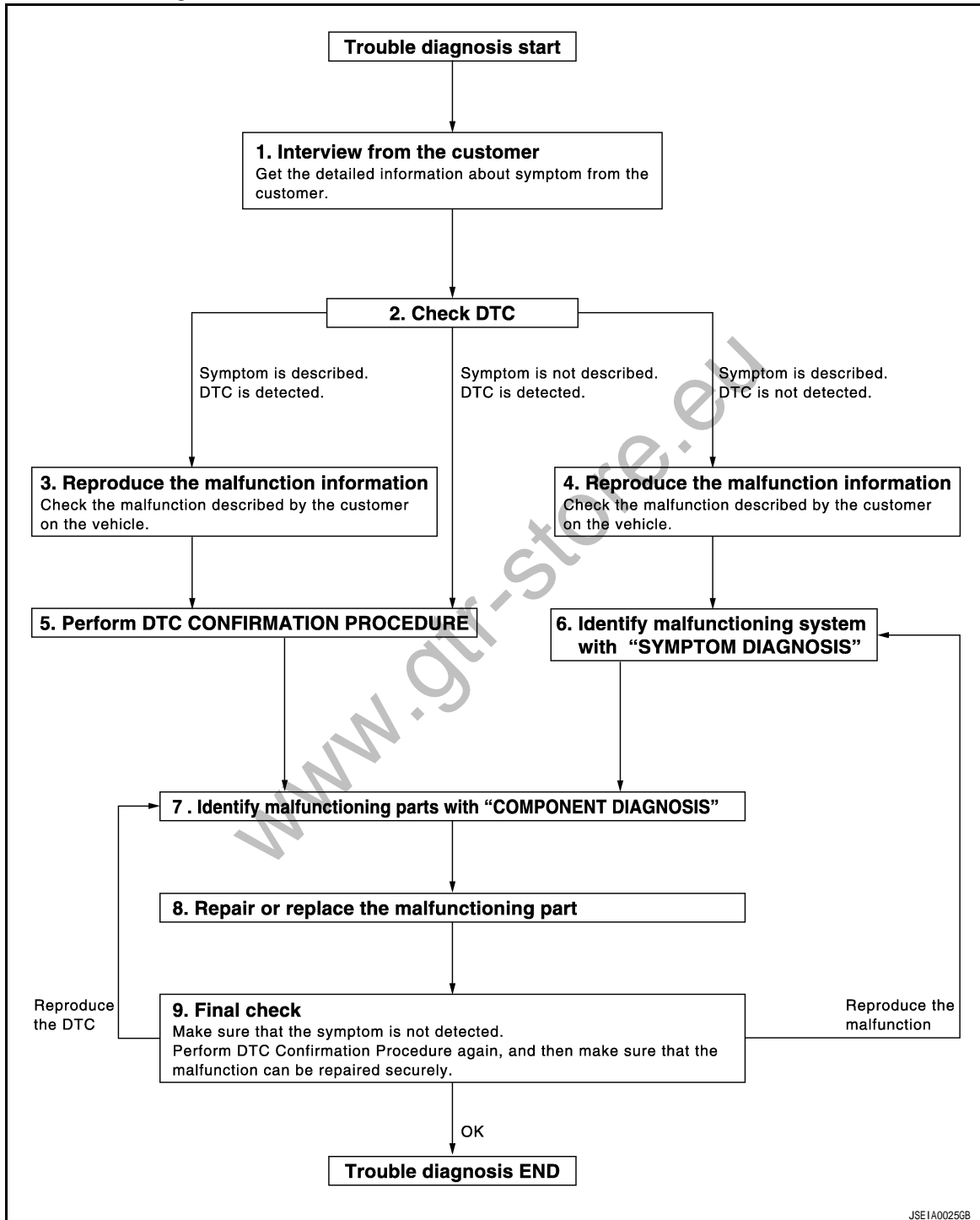
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow (GT-R certified NISSAN dealer)

INFOID:000000003853069

Outline of Trouble Diagnosis Flowchart



Details of Trouble Diagnosis Flowchart

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurs.

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[Bilstein DampTronic]

>> GO TO 2.

2. CHECK DTC

1. Check for DTC.
2. If a DTC exists, perform the following operations.
 - Records the DTCs.
 - Erase DTCs
 - Check that the root cause clarified with DTC matches to the malfunction information described by the customer.
3. Check also the related service information or others.

Do malfunction information or DTC exist?

- Malfunction information and DTC exist. >>GO TO 3.
- Malfunction information exists but no DTC. >>GO TO 4.
- No malfunction information, but DTC exists. >>GO TO 5.

3. REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction described by the customer on the vehicle.
Record the status of each signal when a symptom occurs with "Data Monitor" in CONSULT-III.
Inspect the relation of the information and the condition when it occurs.

>> GO TO 5.

4. CHECK THE MALFUNCTION

Check the malfunction described by the customer on the vehicle.
Record the status of each signal when a symptom occurs with "Data Monitor" in CONSULT-III.
Inspect the relation of the information and the condition when it occurs.

>> GO TO 6.

5. PERFORM "DTC CONFIRMATION PROCEDURE"

Perform the "DTC conformation procedure" to the detected DTC and check that the DTC is detected again.
Refer to [SCS-53, "DTC Inspection Priority Chart \(GT-R certified NISSAN dealer\)"](#) when multiple DTCs are detected, and then judge the order for performing the diagnosis.

Is any DTC detected?

- YES >> GO TO 7.
- NO >> Follow [GI-6, "How to Follow Test Groups in Trouble Diagnosis"](#) to check.

6. IDENTIFY MALFUNCTIONING SYSTEM WITH "SYMPTOM DIAGNOSIS"

Use the "Symptom diagnosis" from the symptom inspection result in step 4. Then identify where to start performing the diagnosis based on the possible causes and the symptoms.

>> GO TO 7.

7. IDENTIFY MALFUNCTIONING PARTS WITH "COMPONENT DIAGNOSIS"

Perform the inspection with the "component diagnosis" of the applicable system.

NOTE:

The "component diagnosis" mainly consists of the check for an open circuit.
The circuit check in the diagnosis procedure also requires the check for a short circuit. Refer to [GI-41, "Circuit Inspection"](#) for details.

>> GO TO 8.

8. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

1. Repair or replace the part detected as malfunctioning.
2. After repairing or replacing, reinstall/reconnect parts or connectors removed/disconnected in the "component diagnosis", and then erase the DTC.

A
B
C
D
F
G
H
I
J
K
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M
N
O
P

SCS

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[Bilstein DampTronic]

>> GO TO 9.

9.FINAL CHECK

Perform the “DTC confirmation procedure” or “component Inspection” to check that the repair is correctly performed. Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 3 or 4.

Is the check result normal?

- YES >> Trouble diagnosis is completed.
- NO-1 >> The DTC is reproduced. GO TO 7.
- NO-2 >> The symptom is reproduced. GO TO 6.

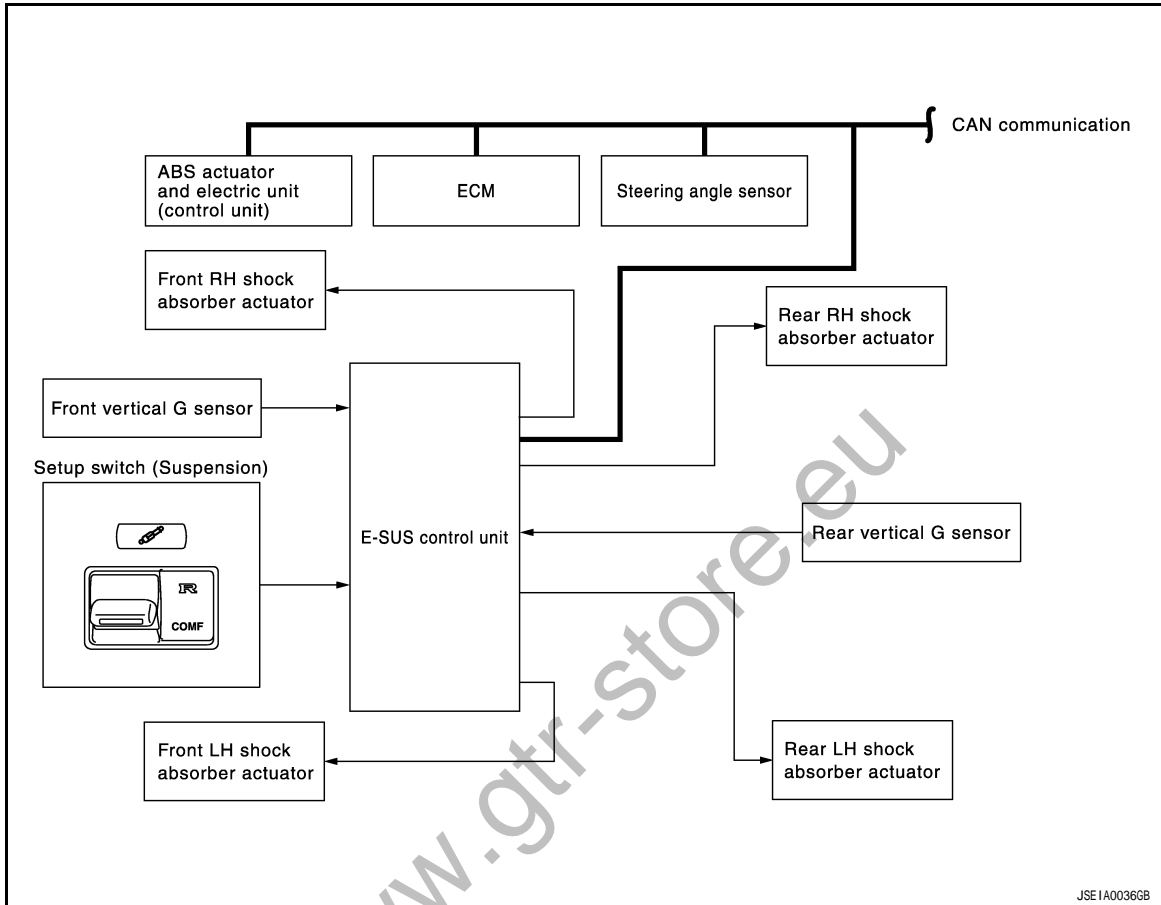
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FUNCTION DIAGNOSIS

BILSTEIN DAMPTRONIC SYSTEM

System Diagram (GT-R certified NISSAN dealer)

INFOID:000000003853070



System Description (GT-R certified NISSAN dealer)

INFOID:000000003853071

Description

- The Bilstein DampTronic system mainly consists of the components such as the E-SUS control unit, front vertical G sensor, rear vertical G sensor, and shock absorber actuators on each wheel.
- It calculates the command values to be transmitted the shock absorber actuator on each wheel based on the information from ECM, ABS actuator and electric unit (control unit) and steering angle sensor and information from the front vertical G sensor and rear vertical G sensor via CAN communication.
- The shock absorber actuator on each wheel controls the damping force based on the command values calculated by E-SUS control unit.
- Can perform the self-diagnosis with CONSULT-III.
- Communicates the signal from each control unit via CAN communication.

Control unit	Signal status
Steering angle sensor	Transmits mainly the following signals to E-SUS control unit via CAN communication. <ul style="list-style-type: none"> • Steering angle speed signal

A
B
C
D
SCS
F
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BILSTEIN DAMPTRONIC SYSTEM

< FUNCTION DIAGNOSIS >

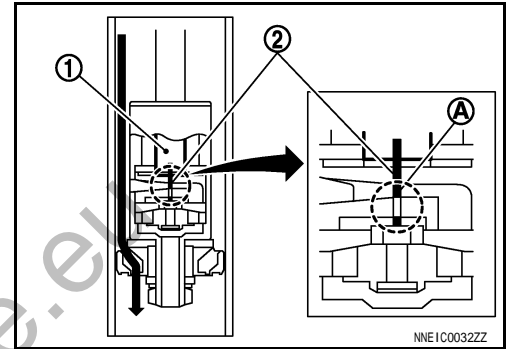
[Bilstein DampTronic]

Control unit	Signal status
ABS actuator and electric unit (control unit)	Transmits mainly the following signals to E-SUS control unit via CAN communication. <ul style="list-style-type: none"> • Vehicle speed signal • Brake pressure control signal • Stop lamp switch signal • ABS operation signal • Side G sensor signal
ECM	Transmits mainly the following signals to E-SUS control unit via CAN communication. <ul style="list-style-type: none"> • Engine speed signal

Operation principle

- When the shutter is closed
Because the shutter (2) is closed (A) by the solenoid core (1), the maximum oil channel resistance and high damping force are obtained.

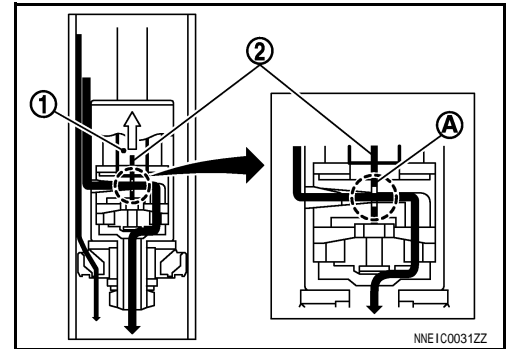
← : Oil passage



- When the shutter is open
Because the shutter (2) is opened (A) by the activated solenoid core (1) and the oil flows through 2 different passages, the minimum oil flow rate and low damping force are obtained.

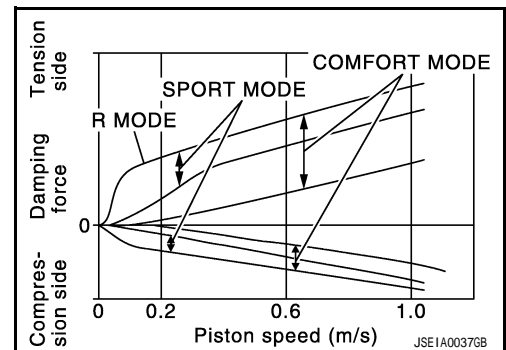
⇐ : Shutter moving direction

← : Oil passage



Operation characteristics

- Changes the damping force range image of the shock absorber by switching the switch.

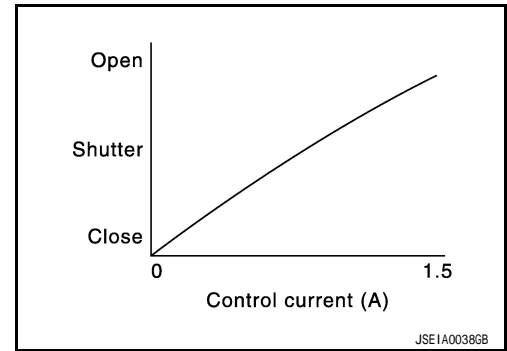


BILSTEIN DAMPTRONIC SYSTEM

< FUNCTION DIAGNOSIS >

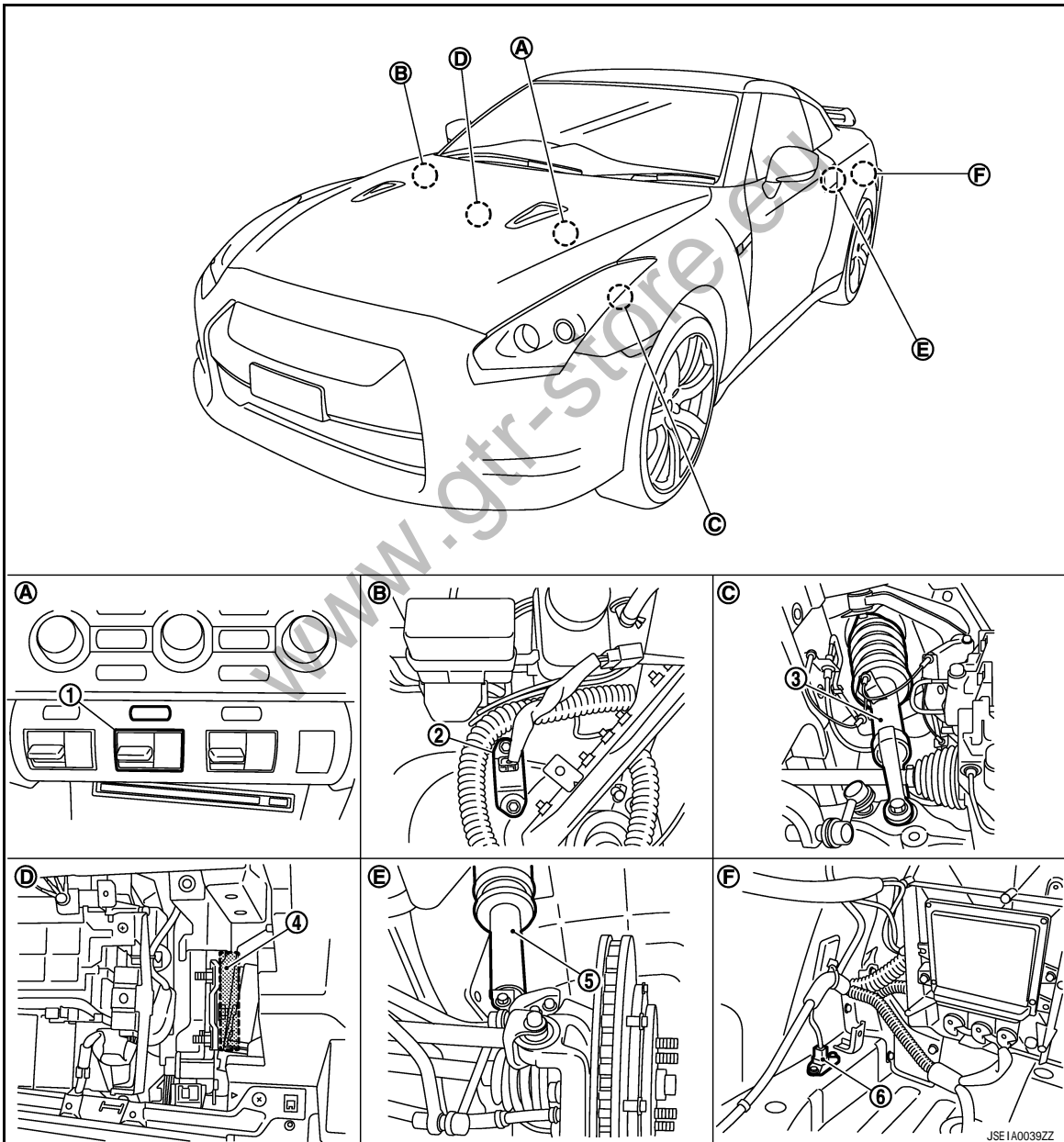
[Bilstein DampTronic]

- Changes the damping force depending on the output current to the shock absorber actuators.



Component Parts Location (GT-R certified NISSAN dealer)

INFOID:000000003853072



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BILSTEIN DAMPTRONIC SYSTEM

< FUNCTION DIAGNOSIS >

[Bilstein DampTronic]

- | | | |
|-------------------------------|---|--|
| 1. Set-up switch (suspension) | 2. Front vertical G sensor | 3. Front shock absorber
(with integrated shock absorber actuator) |
| 4. E-SUS control unit | 5. Rear shock absorber
(with integrated shock absorber actuator) | 6. Rear vertical G sensor |
| A. Instrument center panel | B. Right strut tower | C. In front wheel well |
| D. Rear of glove box | E. In rear wheel well | F. Trunk room left back |

Component Description (GT-R certified NISSAN dealer)

INFOID:000000003853073

Component	Reference/function
E-SUS control unit	SCS-34, "Description (GT-R certified NISSAN dealer)"
Front vertical G sensor	SCS-22, "Description (GT-R certified NISSAN dealer)"
Rear vertical G sensor	SCS-24, "Description (GT-R certified NISSAN dealer)"
Shock absorber actuator	SCS-26, "Description (GT-R certified NISSAN dealer)"
Set-up switch (suspension)	SCS-37, "Description (GT-R certified NISSAN dealer)"
Steering angle sensor	Transmits the steering angle sensor signal to E-SUS control unit via CAN communication.
ABS actuator and electric unit (control unit)	Transmits mainly the following signal to E-SUS control unit via CAN communication. <ul style="list-style-type: none"> • Vehicle speed signal • Brake pressure control signal • Stop lamp switch signal • ABS operation signal • Side G sensor signal
ECM	Transmits mainly the following signals to E-SUS control unit via CAN communication. <ul style="list-style-type: none"> • Engine speed signal

DIAGNOSIS SYSTEM (E-SUS CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[Bilstein DampTronic]

DIAGNOSIS SYSTEM (E-SUS CONTROL UNIT)

CONSULT-III Function (GT-R certified NISSAN dealer)

INFOID:000000003853074

FUNCTION

The CONSULT-III performs the following functions using the CAN combination of data reception, command instruction, and transmission from E-SUS control unit via the communication line.

Diagnostic test mode	Function
ECU identification	E-SUS control unit part number can be read.
Self-diagnosis result	Self-diagnostic results can be read and erased quickly. *
Data monitor	Input/Output data in the E-SUS control unit can be read.
Active test	CONSULT-III drives some actuators via E-SUS, and changes some command signal values within the specified range.

*: If the memory in E-SUS control unit is erased, the DTC diagnosis result is also erased.

ECU IDENTIFICATION

Displays the part number stored in the control unit.

SELF-DIAGNOSIS RESULT

Display Item List

Refer to [SCS-53, "DTC Index"](#).

DATA MONITOR

Display Item List

Monitor item (Unit)	Remarks
VEHICLE SPEED (km/h) or (MPH)	Vehicle speed recognized by E-SUS control unit
SIDE G-SENSOR (G)	Side G recognized by E-SUS control unit
ST ANGLE SPD (deg/s)	Steering angle speed recognized by E-SUS control unit
ESTIMATED TRQ (Nm)	Estimated torque recognized by E-SUS control unit
REQUESTED TRQ (Nm)	Required torque recognized by E-SUS control unit
ENGINE SPEED (rpm)	Engine speed recognized by E-SUS control unit
F G-SEN OUT VOL (V)	Output voltage from front vertical G sensor
R G-SEN OUT VOL (V)	Output voltage from rear vertical G sensor
F G-SEN VOLTAGE (V)	Power supply voltage for front G sensor
R G-SEN VOLTAGE (V)	Power supply voltage for rear G sensor
FR ACTUATOR CRNT (A)	Control current for front RH wheel shock absorber actuator operation
FL ACTUATOR CRNT (A)	Control current for front LH wheel shock absorber actuator operation
RR ACTUATOR CRNT (A)	Control current for rear RH wheel shock absorber actuator operation
RL ACTUATOR CRNT (A)	Control current for rear LH wheel shock absorber actuator operation
BATTERY VOLT (V)	Battery voltage supplied to E-SUS control unit
MODE SW UP (V)	Signal voltage for mode change switch UP operation
MODE SW DOWN (V)	Signal voltage for mode change switch DOWN operation
BRK FLD PRESS (bar)	Fluid pressure recognized by E-SUS control unit when brake is applied
STP LAMP SW (On/Off)	Brake pedal operation status recognized by E-SUS control unit
ABS SIGNAL (On/Off)	ABS operation status recognized by E-SUS control unit
FAIL MODE SIG (On/Off)	E-SUS control unit is in fail-safe status.
R MODE LAMP (On/Off)	Illumination status of R mode lamp
COMF MODE LAMP (On/Off)	Illumination status of COMFORT mode lamp

DIAGNOSIS SYSTEM (E-SUS CONTROL UNIT)

< FUNCTION DIAGNOSIS >

[Bilstein DampTronic]

IGN (On/Off)	Ignition switch status recognized by E-SUS control unit
CONTROL MODE (R/SPORT/COMF)	Each control mode status R: R mode SPORT: SPORT mode COMF: COMFORT mode

ACTIVE TEST

CAUTION:

- **Always perform while the vehicle is stopped.**
- **When the shock absorber actuator active test is performed, a DTC may be detected, therefore be always erase the malfunction history after the operation is completed.**
- Shock absorber actuator
The control signal from CONSULT-III forces activation of the shock absorber actuator. The check can be performed by confirming the operation noise.

Test item	Display Item	Display	
		Operation half cycle	
SHOCK ABSORBER ACTUATOR	FRONT RIGHT ACTUATOR	0.1 seconds– 1 second (cycles 0.1 seconds)	
	FRONT LEFT ACTUATOR		
	REAR RIGHT ACTUATOR		
	REAR LEFT ACTUATOR		

- Mode lamp
The control signal from CONSULT-III forces activation of the mode lamp (ON/OFF) for check.

Test item	Display Item	Display	
		Illumination status	
MODE LAMP	R	ON	OFF
	COMF	ON	OFF

COMPONENT DIAGNOSIS

C1D01 VEHICLE SPEED SIGNAL

Description (GT-R certified NISSAN dealer)

INFOID:000000003853075

The vehicle speed signal is transmitted from the ABS actuator and electric unit (control unit) to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853076

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D01	VEHICLE SPEED SIG	<ul style="list-style-type: none"> A malfunction is detected in the vehicle speed signal output from the ABS actuator and electric unit (control unit) to CAN communication. No transmission of vehicle speed signal from the ABS actuator and electric unit (control unit). 	<ul style="list-style-type: none"> Harness or connector (CAN communication line) ABS actuator and electric unit (control unit) E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D01" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-13, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853077

1. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

With CONSULT-III

Perform ABS actuator and electric unit (control unit) self-diagnosis.

Is DTC detected?

- YES >> Check the detected DTC items. Refer to [BRC-101, "DTC No. Index"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

With CONSULT-III

Check the "VEHICLE SPEED" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D02 YAW RATE/SIDE/DECEL G SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D02 YAW RATE/SIDE/DECEL G SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:000000003853078

The side G sensor signal is transmitted from the ABS actuator and electric unit (control unit) to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853079

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D02	SIDE G-SENSOR SIG	<ul style="list-style-type: none">A malfunction is detected in the side G sensor signal output from the yaw rate/side/decel G sensor to CAN communication.No transmission from the yaw rate/side/decel G sensor.	<ul style="list-style-type: none">Harness or connector (CAN communication line)ABS actuator and electric unit (control unit)E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

④ With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.
- Perform "ERASE MEMORY" in self-diagnosis.
- Perform self-diagnosis of E-SUS control unit again.

Is DTC "C1D02" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-14, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853080

CAUTION:

In the Bilstein DampTronic system, because it is difficult to distinguish a sensor malfunction from normal operation when the vehicle turns sharply such as spin turning, turning while accelerating, or drift driving, or when CONSULT-III is connected to the vehicle, the vehicle enters the fail-safe status and a DTC is stored once. If the normal operation is restored later, it is not a malfunction. At that time, erase the self-diagnosis memory. If the normal operation is not restored, perform the following diagnosis procedure.

1. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

④ With CONSULT-III

Perform ABS actuator and electric unit (control unit) self-diagnosis.

Is DTC detected?

- YES >> Check the detected DTC items. Refer to [BRC-101, "DTC No. Index"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

④ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

④ With CONSULT-III

C1D02 YAW RATE/SIDE/DECEL G SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

Check the "SIDE G-SENSOR" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection.
Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

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B
C
D
F
G
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J
K
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M
N
O
P

SCS

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C1D03 STEERING ANGLE SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D03 STEERING ANGLE SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:000000003853081

The steering angle sensor signal is transmitted from the steering angle sensor to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853082

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D03	ST ANGLE SPEED SIG	<ul style="list-style-type: none">A malfunction is detected in the steering angle speed sensor signal output from the steering angle sensor to CAN communication.No transmission of the steering angle speed signal from the steering angle sensor.	<ul style="list-style-type: none">Harness or connector (CAN communication line)Steering angle sensorE-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓟ With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D03" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-16, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853083

1. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Ⓟ With CONSULT-III

Perform ABS actuator and electric unit (control unit) self-diagnosis.

Is DTC detected?

YES >> Check the detected DTC items. Refer to [BRC-101, "DTC No. Index"](#).

NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

Ⓟ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).

NO >> GO TO 3.

3. CHECK INFORMATION

Ⓟ With CONSULT-III

Check "ST ANGLE SPD" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D04, C1D05 TORQUE SIGNAL

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D04, C1D05 TORQUE SIGNAL

Description (GT-R certified NISSAN dealer)

INFOID:000000003853084

The estimated torque signal and required torque are transmitted from ECM to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853085

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D04	ESTIMATED TORQUE	<ul style="list-style-type: none">A malfunction is detected in the estimated torque signal output from ECM to CAN communication.No transmission of the estimated torque signal from ECM.	<ul style="list-style-type: none">Harness or connector (CAN communication line)ECME-SUS control unit
C1D05	REQUESTED TORQUE	No transmission of the required torque signal from ECM.	<ul style="list-style-type: none">Harness or connector (CAN communication line)ECME-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D04" or "C1D05" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-17, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853086

1. PERFORM SELF-DIAGNOSIS OF ECM

With CONSULT-III

Perform ECM self-diagnosis.

Is DTC detected?

- YES >> Check the detected DTC items. Refer to [EC-550, "DTC Index \(GT-R certified NISSAN dealer\)"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

With CONSULT-III

Check "ESTIMATED TRQ" and "REQUESTED TRQ" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D06 ENGINE SPEED SIGNAL

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D06 ENGINE SPEED SIGNAL

Description (GT-R certified NISSAN dealer)

INFOID:000000003853087

The engine speed signal is transmitted from ECM to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853088

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D06	ENG SPEED SIG	<ul style="list-style-type: none">A malfunction is detected in the engine speed signal output from ECM to CAN communication.No transmission of the engine speed signal from ECM.	<ul style="list-style-type: none">Harness or connector (CAN communication line)ECME-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓜ With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D06" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-18, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853089

1. PERFORM SELF-DIAGNOSIS OF ECM

Ⓜ With CONSULT-III

Perform ECM self-diagnosis.

Is DTC detected?

- YES >> Check the detected DTC items. Refer to [EC-550, "DTC Index \(GT-R certified NISSAN dealer\)"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

Ⓜ With CONSULT-III

Perform self-diagnosis of E-SUS control unit.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

Ⓜ With CONSULT-III

Check the "ENGINE SPEED" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D07 STOP LAMP SWITCH

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D07 STOP LAMP SWITCH

Description (GT-R certified NISSAN dealer)

INFOID:000000003853090

The stop lamp switch signal is transmitted from the ABS actuator and electric unit (control unit) to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853091

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D07	STOP LAMP SW SIG	No transmission of stop lamp switch signal from the ABS actuator and electric unit (control unit).	<ul style="list-style-type: none">• Harness or connector (CAN communication line)• ABS actuator and electric unit (control unit)• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

④ With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "C1D07" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-19, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853092

1. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

④ With CONSULT-III

Perform ABS actuator and electric unit (control unit) self-diagnosis

is DTC detected?

- YES >> Check the detected DTC items. Refer to [BRC-101, "DTC No. Index"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

④ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

④ With CONSULT-III

Check "STP LAMP SW" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D08 ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D08 ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

Description (GT-R certified NISSAN dealer)

INFOID:000000003853093

The ABS operation signal is transmitted from the ABS actuator and electric unit (control unit) to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853094

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D08	ABS SIGNAL	No transmission of ABS operation signal from the ABS actuator and electric unit (control unit)	<ul style="list-style-type: none">• Harness or connector (CAN communication line)• ABS actuator and electric unit (control unit)• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

④ With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "C1D08" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-20, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853095

1. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

④ With CONSULT-III

Perform ABS actuator and electric unit (control unit) self-diagnosis.

Is DTC detected?

- YES >> Check the detected DTC items. Refer to [BRC-101, "DTC No. Index"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

④ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

④ With CONSULT-III

Check "ABS SIGNAL" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D09 BRAKE FLUID PRESSURE SIGNAL

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D09 BRAKE FLUID PRESSURE SIGNAL

Description (GT-R certified NISSAN dealer)

INFOID:000000003853096

The brake pressure control signal is transmitted from the ABS actuator and electric unit (control unit) to E-SUS control unit via CAN communication.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853097

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D09	BRK FLD PRESS SIG	<ul style="list-style-type: none">A malfunction is detected in the brake pressure control signal output from the ABS actuator and electric unit (control unit) to CAN communication.No transmission of brake pressure control signal from the ABS actuator and electric unit (control unit).	<ul style="list-style-type: none">Harness or connector (CAN communication line)ABS actuator and electric unit (control unit)E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

④ With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D09" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-21, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853098

1. PERFORM SELF-DIAGNOSIS OF ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT)

④ With CONSULT-III

Perform ABS actuator and electric unit (control unit) self-diagnosis.

Is DTC detected?

- YES >> Check the detected DTC items. Refer to [BRC-101, "DTC No. Index"](#).
- NO >> GO TO 2.

2. PERFORM SELF-DIAGNOSIS

④ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is another DTC detected?

- YES >> Check the detected DTC items. Refer to [SCS-53, "DTC Index"](#).
- NO >> GO TO 3.

3. CHECK INFORMATION

④ With CONSULT-III

Check "BRK FLD PRESS" of "DATA MONITOR" for E-SUS control unit. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

- YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.
- NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D10 FRONT VERTICAL G SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D10 FRONT VERTICAL G SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:000000003853099

Detects the vertical G applied at vehicle front, and outputs it to E-SUS control unit in analog voltage.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853100

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D10	F VERTICAL G-SEN	<ul style="list-style-type: none">A malfunction occurs in the output voltage from the front vertical G sensor.A malfunction occurs in the supply voltage to the front vertical G sensor.	<ul style="list-style-type: none">Harness or connectorFront vertical G sensorE-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓟ **With CONSULT-III**

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D10" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-22, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853101

1. CHECK FRONT VERTICAL G SENSOR POWER SUPPLY CIRCUIT

- Turn the ignition switch OFF to ON.

CAUTION:

Never start the engine.

- Check the voltage between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Voltage
Connector	Terminal		
M110	15	Ground	Approx. 4.75 – 5.25 V

- Turn the ignition switch OFF.
- Check the continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Continuity
Connector	Terminal		
M110	8	Ground	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

2. CHECK FRONT VERTICAL G SENSOR HARNESS

- Disconnect the E-SUS control unit harness connector and front vertical G sensor harness connector.
- Check the continuity between the E-SUS control unit harness connector and front vertical G sensor harness connector terminals.

C1D10 FRONT VERTICAL G SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

E-SUS control unit		Front vertical G sensor		Continuity
Connector	Terminal	Connector	Terminal	
M110	15	E50	3	Existed
	4		1	
	8		2	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

3. CHECK FRONT VERTICAL G SENSOR

Check the front vertical G sensor. Refer to [SCS-23. "Component Inspection \(GT-R certified NISSAN dealer\)".](#)

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the front vertical G sensor. Refer to [SCS-59. "Exploded View \(GT-R certified NISSAN dealer\)".](#)

4. PERFORM DATA MONITOR

 With CONSULT-III

1. Start the engine.
2. Select "F G-SEN OUT VOL" and "F G-SEN VOLTAGE" in "DATA MONITOR" for E-SUS control unit.
3. Drive the vehicle and check whether it is within the following range.

F G-SEN OUT VOL : Approx. 2.35 – 2.77 V

F G-SEN VOLTAGE : Approx. 4.75 – 5.25 V

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection.

NO >> Replace E-SUS control unit. Refer to [SCS-58. "Exploded View \(GT-R certified NISSAN dealer\)".](#)

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000003853102

1. CHECK FRONT VERTICAL G SENSOR OUTPUT VOLTAGE

1. Connect the E-SUS control unit harness connector and front vertical G sensor harness connector.
2. Turn the ignition switch ON.
CAUTION:
Never start the engine.
3. Check the voltage between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Voltage
Connector	Terminal		
M110	4	Ground	Approx. 2.35 – 2.65 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the front vertical G sensor. Refer to [SCS-59. "Exploded View \(GT-R certified NISSAN dealer\)".](#)

C1D11 REAR VERTICAL G SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D11 REAR VERTICAL G SENSOR

Description (GT-R certified NISSAN dealer)

INFOID:000000003853103

Detects the vertical G applied at vehicle rear, and outputs it to E-SUS control unit in analog voltage.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853104

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D11	R VERTICAL G-SEN	<ul style="list-style-type: none">A malfunction occurs in the output voltage from the rear vertical G sensor.A malfunction occurs in the supply voltage to the rear vertical G sensor.	<ul style="list-style-type: none">Harness or connectorRear vertical G sensorE-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

ⓐ With CONSULT-III

- Turn the ignition switch OFF to ON.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D11" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-24, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853105

1. CHECK REAR VERTICAL G SENSOR POWER SUPPLY CIRCUIT

- Turn the ignition switch OFF to ON.
CAUTION:
Never start the engine.
- Check the voltage between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Voltage
Connector	Terminal		
M110	21	Ground	Approx. 4.75 – 5.25 V

- Turn the ignition switch OFF.
- Check for continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Continuity
Connector	Terminal		
M110	13	Ground	Existed

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

2. CHECK REAR VERTICAL G SENSOR HARNESS

- Disconnect the E-SUS control unit harness connector and rear vertical G sensor harness connector.
- Check the continuity between the E-SUS control unit harness connector and rear vertical G sensor harness connector terminals.

C1D11 REAR VERTICAL G SENSOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

E-SUS control unit		Rear vertical G sensor		Continuity
Connector	Terminal	Connector	Terminal	
M110	21	B51	3	Existed
M110	6	B51	1	
M110	13	B51	2	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

3. CHECK REAR VERTICAL G SENSOR

Check the rear vertical G sensor. Refer to [SCS-25. "Component Inspection \(GT-R certified NISSAN dealer\)".](#)

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the rear vertical G sensor. Refer to [SCS-60. "Exploded View \(GT-R certified NISSAN dealer\)".](#)

4. PERFORM DATA MONITOR

 With CONSULT-III

1. Start the engine.
2. Select "R G-SEN OUT VOL" and "R G-SEN VOLTAGE" in "DATA MONITOR" for E-SUS control unit.
3. Drive the vehicle and check whether it is within the following range.

R G-SEN OUT VOL : Approx. 2.35 – 2.77 V

R G-SEN VOLTAGE : Approx. 4.75 – 5.25 V

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection.

NO >> Replace E-SUS control unit. Refer to [SCS-58. "Exploded View \(GT-R certified NISSAN dealer\)".](#)

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000003853106

1. CHECK REAR VERTICAL G SENSOR OUTPUT VOLTAGE

1. Connect the E-SUS control unit harness connector and rear vertical G sensor harness connector.
2. Turn the ignition switch OFF to ON.
CAUTION:
Never start the engine.
3. Check the voltage between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Voltage
Connector	Terminal		
M110	6	Ground	Approx. 2.35 – 2.65 V

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the rear vertical G sensor. Refer to [SCS-60. "Exploded View \(GT-R certified NISSAN dealer\)".](#)

C1D12 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D12 SHOCK ABSORBER ACTUATOR

Description (GT-R certified NISSAN dealer)

INFOID:000000003853107

Integrated into each the shock absorbers on 4 wheels opens or closes the shutter by moving the solenoid core vertically with the control current from E-SUS control unit to regulate the damping force.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853108

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D12	FR ACTUATOR SIG	An open or short circuit is detected in the front RH shock absorber actuator.	<ul style="list-style-type: none">• Harness or connector• Malfunction of the front RH shock absorber actuator• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓟ With CONSULT-III

1. Start the engine and drive. Or perform "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST" for E-SUS control unit. Refer to [SCS-11, "CONSULT-III Function \(GT-R certified NISSAN dealer\)"](#).
2. Perform self-diagnosis of E-SUS control unit.

Is DTC "C1D12" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-26, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853109

1. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (1)

1. Disconnect the E-SUS control unit harness connector.
2. Check the resistance between the E-SUS control unit harness connector.

E-SUS control unit		Resistance
Connector	Terminal	
M110	11	Approx. 2.4 Ω
	10	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (2)

1. Disconnect the front RH shock absorber actuator harness connector.
2. Check the continuity between the E-SUS control unit harness connector and front RH shock absorber actuator harness connector.

E-SUS control unit		Front RH shock absorber actuator		Continuity
Connector	Terminal	Connector	Terminal	
M110	11	E134	1	Existed
	10		2	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

C1D12 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

3. CHECK SHOCK ABSORBER ACTUATOR

Perform the front RH shock absorber actuator. Refer to [SCS-27, "Component Inspection \(GT-R certified NISSAN dealer\)"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the front RH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

4. PERFORM DATA MONITOR

 **With CONSULT-III**

1. Start the engine and drive the vehicle at 5 km/h (3 MPH) or more.
2. Switch between "SPORT mode" or "COMFORT mode" of the set-up switch (suspension).
3. Select "FR ACTUATOR CRNT" of "DATA MONITOR" for E-SUS control unit.
4. Drive the vehicle and check whether it is within the following range.

FR ACTUATOR CRNT : Approx. 0 – 1.5 A

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000003853110

1. PERFORM ACTIVE TEST

 **With CONSULT-III**

1. Connect the E-SUS control unit harness connector and front RH shock absorber actuator harness connector.
2. Select "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST".
3. On the display, change the "Operation half cycle", and check that the operation noise is heard from the actuator.

Test item	Display Item	Display
		Operation half cycle
SHOCK ABSORBER ACTUATOR	FRONT RIGHT ACTUATOR	0.1 seconds – 1 second (cycle in 0.1 seconds)

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the front RH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

A
B
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SCS

C1D13 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D13 SHOCK ABSORBER ACTUATOR

Description (GT-R certified NISSAN dealer)

INFOID:000000004057433

Integrated into each the shock absorbers on 4 wheels opens or closes the shutter by moving the solenoid core vertically with the control current from E-SUS control unit to regulate the damping force.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000004057434

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D13	FL ACTUATOR SIG	An open or short circuit is detected in the front LH shock absorber actuator.	<ul style="list-style-type: none">• Harness or connector• Malfunction of the front LH shock absorber actuator• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓟ With CONSULT-III

1. Start the engine and drive. Or perform "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST" for E-SUS control unit. Refer to [SCS-11, "CONSULT-III Function \(GT-R certified NISSAN dealer\)".](#)
2. Perform self-diagnosis of E-SUS control unit.

Is DTC "C1D13" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-28, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)".](#)

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000004057435

1. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (1)

1. Disconnect the E-SUS control unit harness connector.
2. Check the resistance between the E-SUS control unit harness connector.

E-SUS control unit		Resistance
Connector	Terminal	
M110	17	Approx. 2.4 Ω
	12	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (2)

1. Disconnect the front LH shock absorber actuator harness connector.
2. Check the continuity between the E-SUS control unit harness connector and front LH shock absorber actuator harness connector.

E-SUS control unit		Front LH shock absorber actuator		Continuity
Connector	Terminal	Connector	Terminal	
M110	17	E132	1	Existed
	12		2	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

C1D13 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

3. CHECK SHOCK ABSORBER ACTUATOR

Perform the front LH shock absorber actuator. Refer to [SCS-29, "Component Inspection \(GT-R certified NISSAN dealer\)"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the front LH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

4. PERFORM DATA MONITOR

 With CONSULT-III

1. Start the engine and drive the vehicle at 5 km/h (3 MPH) or more.
2. Switch between "SPORT mode" or "COMFORT mode" of the set-up switch (suspension).
3. Select "FL ACTUATOR CRNT" of "DATA MONITOR" for E-SUS control unit.
4. Drive the vehicle and check whether it is within the following range.

FL ACTUATOR CRNT : Approx. 0 – 1.5 A

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000004057436

1. PERFORM ACTIVE TEST

 With CONSULT-III

1. Connect the E-SUS control unit harness connector and front LH shock absorber actuator harness connector.
2. Select "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST".
3. On the display, change the "Operation half cycle", and check that the operation noise is heard from the actuator.

Test item	Display Item	Display
		Operation half cycle
SHOCK ABSORBER ACTUATOR	FRONT LEFT ACTUATOR	0.1 seconds – 1 second (cycle in 0.1 seconds)

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the front LH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

C1D14 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D14 SHOCK ABSORBER ACTUATOR

Description (GT-R certified NISSAN dealer)

INFOID:000000004057608

Integrated into each the shock absorbers on 4 wheels opens or closes the shutter by moving the solenoid core vertically with the control current from E-SUS control unit to regulate the damping force.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000004057609

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D14	RR ACTUATOR SIG	An open or short circuit is detected in the rear RH shock absorber actuator.	<ul style="list-style-type: none">• Harness or connector• Malfunction of the rear RH shock absorber actuator• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓟ With CONSULT-III

1. Start the engine and drive. Or perform "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST" for E-SUS control unit. Refer to [SCS-11, "CONSULT-III Function \(GT-R certified NISSAN dealer\)"](#).
2. Perform self-diagnosis of E-SUS control unit.

Is DTC "C1D14" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-30, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000004057610

1. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (1)

1. Disconnect the E-SUS control unit harness connector.
2. Check the resistance between the E-SUS control unit harness connector.

E-SUS control unit		Resistance
Connector	Terminal	
M110	20	Approx. 2.4 Ω
	14	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (2)

1. Disconnect the rear RH shock absorber actuator harness connector.
2. Check the continuity between the E-SUS control unit harness connector and rear RH shock absorber actuator harness connector.

E-SUS control unit		Rear RH shock absorber actuator		Continuity
Connector	Terminal	Connector	Terminal	
M110	20	E302	1	Existed
	14		2	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

C1D14 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

3. CHECK SHOCK ABSORBER ACTUATOR

Perform the rear RH shock absorber actuator. Refer to [SCS-31, "Component Inspection \(GT-R certified NISSAN dealer\)"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the rear RH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

4. PERFORM DATA MONITOR

 **With CONSULT-III**

1. Start the engine and drive the vehicle at 5 km/h (3 MPH) or more.
2. Switch between "SPORT mode" or "COMFORT mode" of the set-up switch (suspension).
3. Select "RR ACTUATOR CRNT" of "DATA MONITOR" for E-SUS control unit.
4. Drive the vehicle and check whether it is within the following range.

RR ACTUATOR CRNT : Approx. 0 – 1.5 A

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000004057611

1. PERFORM ACTIVE TEST (E-SUS CONTROL UNIT)

 **With CONSULT-III**

1. Connect the E-SUS control unit harness connector and rear RH shock absorber actuator harness connector.
2. Select "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST".
3. On the display, change the "Operation half cycle", and check that the operation noise is heard from the actuator.

Test item	Display Item	Display
		Operation half cycle
SHOCK ABSORBER ACTUATOR	REAR RIGHT ACTUATOR	0.1 seconds – 1 second (cycle in 0.1 seconds)

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the front RH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

C1D15 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D15 SHOCK ABSORBER ACTUATOR

Description (GT-R certified NISSAN dealer)

INFOID:000000004057614

Integrated into each the shock absorbers on 4 wheels opens or closes the shutter by moving the solenoid core vertically with the control current from E-SUS control unit to regulate the damping force.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000004057615

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D15	RL ACTUATOR SIG	An open or short circuit is detected in the rear LH shock absorber actuator.	<ul style="list-style-type: none">• Harness or connector• Malfunction of the rear LH shock absorber actuator• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

Ⓟ With CONSULT-III

1. Start the engine and drive. Or perform "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST" for E-SUS control unit. Refer to [SCS-11, "CONSULT-III Function \(GT-R certified NISSAN dealer\)".](#)
2. Perform self-diagnosis of E-SUS control unit.

Is DTC "C1D15" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-32, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)".](#)

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000004057616

1. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (1)

1. Disconnect the E-SUS control unit harness connector.
2. Check the resistance between the E-SUS control unit harness connector.

E-SUS control unit		Resistance
Connector	Terminal	
M110	16	Approx. 2.4 Ω
	18	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2. CHECK SHOCK ABSORBER ACTUATOR CIRCUIT (2)

1. Disconnect the rear LH shock absorber actuator harness connector.
2. Check the continuity between the E-SUS control unit harness connector and rear LH shock absorber actuator harness connector.

E-SUS control unit		Rear LH shock absorber actuator		Continuity
Connector	Terminal	Connector	Terminal	
M110	16	E102	1	Existed
	18		2	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

C1D15 SHOCK ABSORBER ACTUATOR

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

3. CHECK SHOCK ABSORBER ACTUATOR

Perform the rear LH shock absorber actuator. Refer to [SCS-33, "Component Inspection \(GT-R certified NISSAN dealer\)"](#).

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the rear LH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

4. PERFORM DATA MONITOR

 **With CONSULT-III**

1. Start the engine and drive the vehicle at 5 km/h (3 MPH) or more.
2. Switch between "SPORT mode" or "COMFORT mode" of the set-up switch (suspension).
3. Select "RL ACTUATOR CRNT" of "DATA MONITOR" for E-SUS control unit.
4. Drive the vehicle and check whether it is within the following range.

RL ACTUATOR CRNT : Approx. 0 – 1.5 A

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000004057617

1. PERFORM ACTIVE TEST

 **With CONSULT-III**

1. Connect the E-SUS control unit harness connector and rear LH shock absorber actuator harness connector.
2. Select "SHOCK ABSORBER ACTUATOR" in "ACTIVE TEST".
3. On the display, change the "Operation half cycle", and check that the operation noise is heard from the actuator.

Test item	Display Item	Display
		Operation half cycle
SHOCK ABSORBER ACTUATOR	REAR LEFT ACTUATOR	0.1 seconds – 1 second (cycle in 0.1 seconds)

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the rear LH shock absorber. Refer to [SCS-61, "Removal and Installation \(GT-R certified NISSAN dealer\)"](#).

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C1D16 CONTROL UNIT

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D16 CONTROL UNIT

Description (GT-R certified NISSAN dealer)

INFOID:000000003853123

- Controls the shock absorber actuators on 4 wheels according to the signals from each sensor.
- If any malfunction occurs in the electrical system, stops the control signal to the shock absorber, making it in the equivalent status to R mode (fixed damping force).

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853124

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D16	CONTROL UNIT	A malfunction occurs inside the E-SUS control unit.	E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

ⓑ With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "C1D16" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-34, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853125

1. PERFORM SELF-DIAGNOSIS

ⓑ With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform self-diagnosis of E-SUS control unit and check whether DTC "C1D16" is detected.

CAUTION:

Even when a record exists in the diagnosis history, replace E-SUS control unit.

Is DTC "C1D16" detected?

YES >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

NO >> Check pin terminal and connection of each harness connector for damage or loose connection. Repair or replace error-detected parts.

C1D17 BATTERY POWER SUPPLY

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D17 BATTERY POWER SUPPLY

Description (GT-R certified NISSAN dealer)

INFOID:000000003853126

Power supply for E-SUS control unit.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853127

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D17	BATTERY VOLT	A malfunction is detected in the battery supply voltage to E-SUS control unit.	<ul style="list-style-type: none">• Harness or connector• E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "C1D17" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-35. "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853128

1. CHECK E-SUS CONTROL UNIT GROUND

1. Turn the ignition switch OFF.
2. Disconnect the E-SUS control unit harness connector.
3. Check the continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Continuity
Connector	Terminal		
M110	22	Ground	Existed

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Repair or replace an applicable harness or connector.

2. CHECK E-SUS CONTROL UNIT POWER SUPPLY

1. Start the engine.
CAUTION:
Always hold the vehicle stopped.
2. Check the voltage between the E-SUS control unit harness connector terminals.

E-SUS control unit		Voltage
Connector	Between terminals	
M110	23 – 22	Battery voltage
	19 – 22	

Is the measured value "9.5 V" or less?

- YES >> Check the following items, and repair or replace the malfunctioning parts.
- Open circuit in 15 A fuse (#37)
 - Short circuit between the 15 A fuse (#37) connector and E-SUS control unit harness connector terminal 23
 - Open circuit between the battery and E-SUS control unit harness connector terminal 23

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C1D17 BATTERY POWER SUPPLY

[Bilstein DampTronic]

< COMPONENT DIAGNOSIS >

- Open circuit in 10 A fuse (#45)
- Short circuit between the 10 A fuse (#45) connector and E-SUS control unit harness connector terminal 19
- Short circuit between the 10 A fuse (#45) connector and set-up switch (suspension) harness connector terminal 18
- Open circuit between the ignition switch and E-SUS control unit harness connector terminal 19
- Battery or ignition switch

NO >> GO TO 3.

3. CHECK TERMINAL

Check that there is no malfunction in the pin terminals and connection of the E-SUS control unit harness connector.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace error-detected parts.

4. CHECK E-SUS CONTROL UNIT SIGNAL

④ **With CONSULT-III**

1. Connect the E-SUS control unit harness connector.
2. Start the engine.

CAUTION:

Always hold the vehicle stopped.

3. Check the value of "BATTERY VOL" on "DATA MONITOR" screen for E-SUS control unit.

Is the value in "DATA MONITOR" "16 V" or more?

YES >> Perform the diagnosis by symptom for the charging system. Refer to [CHG-15. "Symptom Table"](#).

NO >> Replace E-SUS control unit. Refer to [SCS-58. "Exploded View \(GT-R certified NISSAN dealer\)"](#).

C1D19, C1D20 MODE SWITCH

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D19, C1D20 MODE SWITCH

Description (GT-R certified NISSAN dealer)

INFOID:000000003853129

The set-up switch (suspension) can be switched to R mode, SPORT mode, or COMFORT mode manually.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853130

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D19	MODE SW UP	<ul style="list-style-type: none">An open or short circuit occurs within the set-up switch (suspension) circuit.A malfunction occurs in the power supply for the set-up switch (suspension).	<ul style="list-style-type: none">Harness or connectorInternal malfunction of the set-up switch (suspension)E-SUS control unit
C1D20	MODE SW DOWN	<ul style="list-style-type: none">An open or short circuit occurs within the set-up switch (suspension) circuit.A malfunction occurs in the power supply for the set-up switch (suspension).	<ul style="list-style-type: none">Harness or connectorInternal malfunction of the set-up switch (suspension)E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

 With CONSULT-III

- Turn the ignition switch OFF to ON.
- Switch between "R mode" and "COMFORT mode" of the set-up switch (suspension) at least once for each mode.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D19" or "C1D20" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-37. "Diagnosis Procedure \(GT-R certified NISSAN dealer\)".](#)
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853131

1. CHECK SET-UP SWITCH (SUSPENSION)

Check the set-up switch (suspension). Refer to [SCS-38. "Component Inspection \(GT-R certified NISSAN dealer\)".](#)

Is the inspection result normal?

- YES >> GO TO 2.
- NO >> Replace the set-up switch (suspension).

2. CHECK SET-UP SWITCH (SUSPENSION) CIRCUIT (1)

Check the continuity between the set-up switch (suspension) harness connector and ground.

Set-up switch (suspension)		—	Continuity
Connector	Terminal		
M73	17	Ground	Existed

Is the inspection result normal?

- YES >> GO TO 3.
- NO >> Repair or replace the malfunctioning harness or connector.

3. CHECK SET-UP SWITCH (SUSPENSION) CIRCUIT (2)

- Disconnect the E-SUS control unit harness connector.

C1D19, C1D20 MODE SWITCH

[Bilstein DampTronic]

< COMPONENT DIAGNOSIS >

- Check the continuity between the E-SUS control unit harness connector and set-up switch (suspension) harness connector.

E-SUS control unit		Set-up switch (suspension)		Continuity
Connector	Terminal	Connector	Terminal	
M110	2	M73	6	Existed
	7		24	

- Check the continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Continuity
Connector	Terminal		
M110	2	Ground	Not existed
	7		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the malfunctioning harness or connector.

4. CHECK E-SUS CONTROL UNIT OUTPUT SIGNAL

- Connect the E-SUS control unit harness connector.
- Turn the ignition switch ON.
CAUTION:
Never start the engine.
- Check the voltage between the set-up switch (suspension) harness connector.

Set-up switch (suspension)		Voltage
Connector	Terminal	
M73	6 – 17	Approx. 3.48 – 3.57 – 3.66 V
	24 – 17	

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection.

NO >> Replace E-SUS control unit. Refer to [SCS-58. "Exploded View \(GT-R certified NISSAN dealer\)"](#).

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000003853132

1. CHECK SET-UP SWITCH (SUSPENSION)

- Turn the ignition switch OFF.
- Remove the set-up switch (suspension) harness connector.
- Check the resistance between the set-up switch (suspension) harness connector.

Set-up switch (suspension)			Resistance
Connector	Terminal		
M73	6	17	Set-up switch (suspension): Up Approx. 950 – 1000 – 1050 Ω
		17	Set-up switch (suspension): Neutral or down 0 Ω
	24	17	Set-up switch (suspension): Down Approx. 950 – 1000 – 1050 Ω
		17	Set-up switch (suspension): Neutral or up 0 Ω

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the set-up switch (suspension).

C1D21, C1D22 MODE LAMP

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D21, C1D22 MODE LAMP

Description (GT-R certified NISSAN dealer)

INFOID:000000003853133

The mode lamp illuminates in R mode or COMFORT mode by switching the set-up switch (suspension).

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853134

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D21	R MODE LAMP	<ul style="list-style-type: none"> An open or short circuit occurs within the set-up switch (suspension) mode lamp circuit. A malfunction occurs within the set-up switch (suspension) mode lamp circuit. 	<ul style="list-style-type: none"> Harness or connector Internal malfunction of the set-up switch (suspension) E-SUS control unit
C1D22	COMF MODE LAMP	<ul style="list-style-type: none"> An open or short circuit occurs within the set-up switch (suspension) mode lamp circuit. A malfunction occurs within the set-up switch (suspension) mode lamp circuit. 	<ul style="list-style-type: none"> Harness or connector Internal malfunction of the set-up switch (suspension) E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

 With CONSULT-III

- Turn the ignition switch OFF to ON.
- Switch between "R mode" and "COMFORT mode" of the set-up switch (suspension) at least once for each mode.
- Perform E-SUS control unit self-diagnosis.

Is DTC "C1D21" or "C1D22" detected?

YES >> Proceed to diagnosis procedure. Refer to [SCS-39. "Diagnosis Procedure \(GT-R certified NISSAN dealer\)".](#)

NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853135

1. CHECK SET-UP SWITCH (SUSPENSION) MODE LAMP POWER SUPPLY

- Turn the ignition switch OFF.
- Disconnect the set-up switch (suspension) harness connector.
- Check the voltage between the set-up switch (suspension) harness connector.

Set-up switch (suspension)		Ground	Measuring condition	Voltage
Connector	Terminal			
M73	18	Ground	Ignition switch: ON	Battery voltage
			Ignition switch: OFF	Approx. 0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check the following items, and repair or replace the malfunctioning parts.

- Open circuit in 10 A fuse (#45)
- Short circuit between the 10 A fuse (#45) connector and set-up switch (suspension) harness connector terminal 18
- Open circuit between the ignition switch and set-up switch (suspension) harness connector terminal 18
- Battery or ignition switch

C1D21, C1D22 MODE LAMP

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

2. CHECK SET-UP SWITCH (SUSPENSION) MODE LAMP CIRCUIT

1. Disconnect the E-SUS control unit harness connector.
2. Check the continuity between the E-SUS control unit harness connector and set-up switch (suspension) harness connector.

E-SUS control unit		Set-up switch (suspension)		Continuity
Connector	Terminal	Connector	Terminal	
M110	5	M73	19	Existed
	9		8	Existed

3. Check the continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		Ground	Continuity
Connector	Terminal		
M110	5	Ground	Not existed
	9		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

3. CHECK SET-UP SWITCH (SUSPENSION) MODE LAMP

Check the set-up switch (suspension) mode lamp. Refer to [SCS-40, "Component Inspection \(GT-R certified NISSAN dealer\)"](#).

Is the inspection result normal?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection.

NO >> Replace the set-up switch (suspension).

Component Inspection (GT-R certified NISSAN dealer)

INFOID:000000003853136

1. PERFORM ACTIVE TEST

ⓑ With CONSULT-III

1. Connect the E-SUS control unit harness connector.
2. Connect the set-up switch (suspension) connector.
3. Select "MODE LAMP" in "ACTIVE TEST".
4. On the display, touch "ON" or "OFF", and check that the system operates as shown in the table below.

Test item	Display Item	Display Item	
		Illumination status	
		ON	OFF
MODE LAMP	R	ON	OFF
	COMF		

Is the inspection result normal?

YES >> INSPECTION END

NO >> Replace the set-up switch (suspension).

C1D23 CONTROL UNIT

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

C1D23 CONTROL UNIT

Description (GT-R certified NISSAN dealer)

INFOID:000000003853137

Performs good/no good judgment of the E-SUS control unit reprogramming.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853138

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
C1D23	C/U REPRO ERROR	A malfunction is detected at E-SUS control unit reprogramming.	E-SUS control unit

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

④ With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "C1D23" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-41. "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853139

1. PERFORM E-SUS CONTROL UNIT REPROGRAMMING

④ With CONSULT-III

Reprogram E-SUS control unit.

Is it been completed successfully?

- YES >> GO TO 2.
- NO >> GO TO 3.

2. PERFORM SELF-DIAGNOSIS

④ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is DTC "C1D23" detected?

- YES >> GO TO 3.
- NO >> INSPECTION END

3. PERFORM E-SUS CONTROL UNIT REPROGRAMMING AGAIN

④ With CONSULT-III

1. Reprogram E-SUS control unit.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "C1D23" detected?

- YES >> Replace E-SUS control unit. Refer to [SCS-58. "Exploded View \(GT-R certified NISSAN dealer\)"](#).
- NO >> GO TO 4.

4. ERASE ERROR RECORD

Erase the memory of E-SUS control unit self-diagnosis result (history).

>> END

U1000 CAN COMM CIRCUIT

Description (GT-R certified NISSAN dealer)

INFOID:000000003853140

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-board multiplex communication line with high data communication speed and excellent error detachability. A modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, 2 control units are connected with 2 communication lines (CAN H-line and CAN L-line) allowing a high rate of information communication with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853141

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
U1000	CAN COMM CIRCUIT	E-SUS control unit does not communicates the CAN communication signal for 2 seconds or more.	CAN communication malfunction

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

ⓐ With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "U1000" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-42, "Diagnosis Procedure \(GT-R certified NISSAN dealer\)"](#).
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853142

1. PERFORM SELF-DIAGNOSIS

ⓐ With CONSULT-III

Perform E-SUS control unit self-diagnosis.

Is DTC "U1000" detected?

- YES >> Perform the CAN diagnosis. Refer to [LAN-14, "Trouble Diagnosis Flow Chart"](#).
- NO >> INSPECTION END

U1010 CONTROL UNIT (CAN)

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

U1010 CONTROL UNIT (CAN)

Description (GT-R certified NISSAN dealer)

INFOID:000000004062354

CAN (Controller Area Network) is a serial communication line for real time applications. It is an on-board multiplex communication line with high data communication speed and excellent error detachability. A modern vehicle is equipped with many electronic control units, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, 2 control units are connected with 2 communication lines (CAN H-line and CAN L-line) allowing a high rate of information communication with less wiring. Each control unit communicates data but selectively reads required data only.

DTC Logic (GT-R certified NISSAN dealer)

INFOID:000000003853144

DTC DETECTION LOGIC

DTC	Display Item	Malfunction detected condition	Possible causes
U1010	CONTROL UNIT (CAN)	A malfunction is detected at the initial diagnosis of CAN controller for E-SUS control unit.	E-SUS control unit malfunction

SCS

DTC REPRODUCTION PROCEDURE

1. DTC REPRODUCTION PROCEDURE

With CONSULT-III

1. Turn the ignition switch OFF to ON.
2. Perform E-SUS control unit self-diagnosis.

Is DTC "U1010" detected?

- YES >> Proceed to diagnosis procedure. Refer to [SCS-43. "Diagnosis Procedure \(GT-R certified NISSAN dealer\)".](#)
- NO >> INSPECTION END

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853145

1. CHECK E-SUS CONTROL UNIT

Check that there is no malfunction in the pin terminals and connection of the E-SUS control unit harness connector.

Is the inspection result normal?

- YES >> Replace E-SUS control unit. Refer to [SCS-58. "Exploded View \(GT-R certified NISSAN dealer\)".](#)
- NO >> Repair or replace the malfunctioning harness or connector.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[Bilstein DampTronic]

POWER SUPPLY AND GROUND CIRCUIT

Description (GT-R certified NISSAN dealer)

INFOID:000000003853146

E-SUS control unit that controls the Bilstein DampTronic system is powered through a fuse or fusible link.

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853147

1. CHECK E-SUS CONTROL UNIT POWER SUPPLY

1. Turn the ignition switch OFF.
2. Disconnect the E-SUS control unit harness connector.
3. Check the voltage between the E-SUS control unit harness connector.

E-SUS control unit		Voltage
Connector	Between terminals	
M110	23 – 22	Battery voltage
	19 – 22	0 V

4. Turn the ignition switch ON.
CAUTION:
Never start engine.
5. Check the voltage between the E-SUS control unit harness connector.

E-SUS control unit		Voltage
Connector	Between terminals	
M110	23 – 22	Battery voltage
	19 – 22	

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check the following items, and repair or replace the malfunctioning parts.

- Open circuit in 15 A fuse (#37)
- Short circuit between the 15 A fuse (#37) connector and E-SUS control unit harness connector terminal 23
- Open circuit between the battery and E-SUS control unit harness connector terminal 23
- Open circuit in 10 A fuse (#45)
- Short circuit between the 10 A fuse (#45) connector and E-SUS control unit harness connector terminal 19
- Short circuit between the 10 A fuse (#45) connector and set-up switch (suspension) harness connector terminal 18
- Open circuit between the ignition switch and E-SUS control unit harness connector terminal 19
- Battery or ignition switch

2. CHECK E-SUS CONTROL UNIT GROUND

1. Turn the ignition switch OFF.
2. Check the continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		Continuity
Connector	Terminal	
M110	22 – Ground	Existed

Is the inspection result normal?

YES >> INSPECTION END

NO >> Repair or replace the malfunctioning harness or connector.

E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

ECU DIAGNOSIS

E-SUS CONTROL UNIT

Reference Value (GT-R certified NISSAN dealer)

INFOID:000000003853161

VALUES ON THE DIAGNOSIS TOOL

Monitor item	Condition	Value/Status
VEHICLE SPEED	Vehicle stopped	0 km/h (MPH)
	While driving for a time after the engine starts. CAUTION: Check tire pressure in normal condition.	Almost in accordance with the speedometer display. (Within $\pm 10\%$)
SIDE G-SENSOR	When stopped	Approx. 0 G
	At cornering	-2.0 – 2.0 G
ST ANGLE SPD	steering and holding	Approx. 0 deg/s
	Steering	0 – 1000 deg/s
ESTIMATED TRQ	<ul style="list-style-type: none"> Engine: At idle speed after warm-up Selector lever: P or N position 	Approx. 4 – 20 Nm
REQUESTED TRQ	<ul style="list-style-type: none"> Engine: At idle speed after warm-up Selector lever: P or N position 	Approx. 26 Nm
ENGINE SPEED	Engine stop	0 rpm
	Engine speed: 400 rpm or more	Almost in accordance with tachometer display (Within $\pm 10\%$)
F G-SEN OUT VOL	When stopped	Approx. 2.23 – 2.77 V
	While driving	Approx. 0.95 – 4.2 V
R G-SEN OUT VOL	When stopped	Approx. 2.23 – 2.77 V
	While driving	Approx. 0.95 – 4.2 V
F G-SEN VOLTAGE	Always	Approx. 4.75 – 5.25 V
R G-SEN VOLTAGE	Always	Approx. 4.75 – 5.25 V
FR ACTUATOR CRNT	Vehicle stopped or R mode	0 A
	While driving	Approx. 0 – 1.5 A
FL ACTUATOR CRNT	Vehicle stopped or R mode	0 A
	While driving	Approx. 0 – 1.5 A
RR ACTUATOR CRNT	Vehicle stopped or R mode	0 A
	While driving	Approx. 0 – 1.5 A
RL ACTUATOR CRNT	Vehicle stopped or R mode	0 A
	While driving	Approx. 0 – 1.5 A
BATTERY VOLT	Always	Battery voltage
MODE SW UP	UP operation	Approx. 1.34 – 2.08 – 2.79 V
	Neutral	Approx. 3.48 – 3.57 – 3.66 V
MODE SW DOWN	DOWN operation	Approx. 1.34 – 2.08 – 2.79 V
	Neutral	Approx. 3.48 – 3.57 – 3.66 V
BRK FLD PRESS	Brake deactivated	Approx. 0 bar
	Brake activated	-40 – 300 bar
STP LAMP SW	Depress the brake	On
	Do not depress the brake	Off

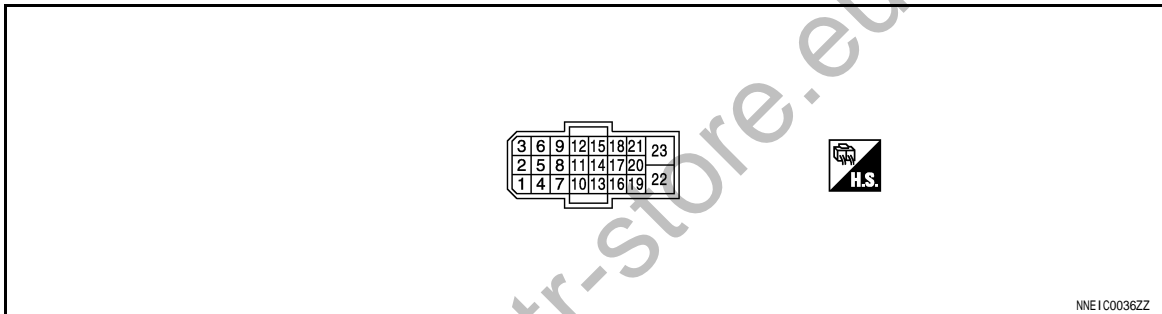
E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

Monitor item	Condition	Value/Status
ABS SIGNAL	ABS is activated	On
	ABS is not activated	Off
FAIL MODE SIG	In fail-safe mode	On
	Normal	Off
R MODE LAMP	R mode	On
	Other than R mode	Off
COMF MODE LAMP	COMFORT mode	On
	Other than COMFORT mode	Off
IGN	Ignition switch: ON	On
	Ignition switch: OFF	Off
CONTROL MODE	R mode	R
	SPORT mode	SPORT
	COMFORT mode	COMF

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
1 (P)	—	CAN-H	—	—	—
2 (P)	Ground	Set-up switch (suspension) up-side output voltage	Output	Set-up switch UP operation	Approx. 1.34 – 2.08 – 2.79 V
				Set-up switch neutral	Approx. 3.48 – 3.57 – 3.66 V
3 (L)	—	CAN-L	—	—	—
4 (W)	Ground	Front vertical G sensor output voltage	Input	Ignition switch ON	Approx. 2.35 – 2.65 V
5 (O)	—	Set-up switch (suspension) R mode lamp voltage	—	—	—
6 (BR)	Ground	Rear vertical G sensor output voltage	Input	Ignition switch ON	Approx. 2.35 – 2.65 V
7 (R)	Ground	Set-up switch (suspension) down-side output voltage	Output	Set-up switch DOWN operation	Approx. 1.34 – 2.08 – 2.79 V
				Set-up switch neutral	Approx. 3.48 – 3.57 – 3.66 V
8 (G)	Ground	Front vertical G sensor ground	—	Always	0 V

E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

Terminal No. (Wire color)		Description		Condition	Value (Approx.)
+	-	Signal name	Input/ Output		
9 (LG)	—	Set-up switch (suspension) COM-FORT mode lamp voltage	—	—	—
10 (R)	—	Front RH shock absorber actuator LOW terminal	—	—	—
11 (G)	—	Front RH shock absorber actuator HI terminal	—	—	—
12 (L)	—	Front LH shock absorber actuator LOW terminal	—	—	—
13 (G)	Ground	Rear vertical G sensor ground	—	Always	0 V
14 (SB)	—	Rear RH shock absorber actuator LOW terminal	—	—	—
15 (R)	Ground	Front vertical G sensor power supply	Output	Ignition switch ON	Approx. 4.75 – 5.25 V
16 (BR)	—	Rear LH shock absorber actuator HI terminal	—	—	—
17 (P)	—	Front LH shock absorber actuator HI terminal	—	—	—
18 (Y)	—	Rear LH shock absorber actuator LOW terminal	—	—	—
19 (R)	Ground	Ignition power supply	Input	Ignition switch: ON	Battery voltage
				Ignition switch: OFF	0 V
20 (V)	—	Rear RH shock absorber actuator HI terminal	—	—	—
21 (R)	Ground	Rear vertical G sensor power supply	Output	Ignition switch ON	Approx. 4.75 – 5.25 V
22 (B)	Ground	Ground	—	Always	0 V
23 (L)	Ground	E-SUS control unit power supply	Input	Always	Battery voltage

CAUTION:

Never extend connector terminals forcibly, when checking voltage using a circuit tester for voltage inspection.

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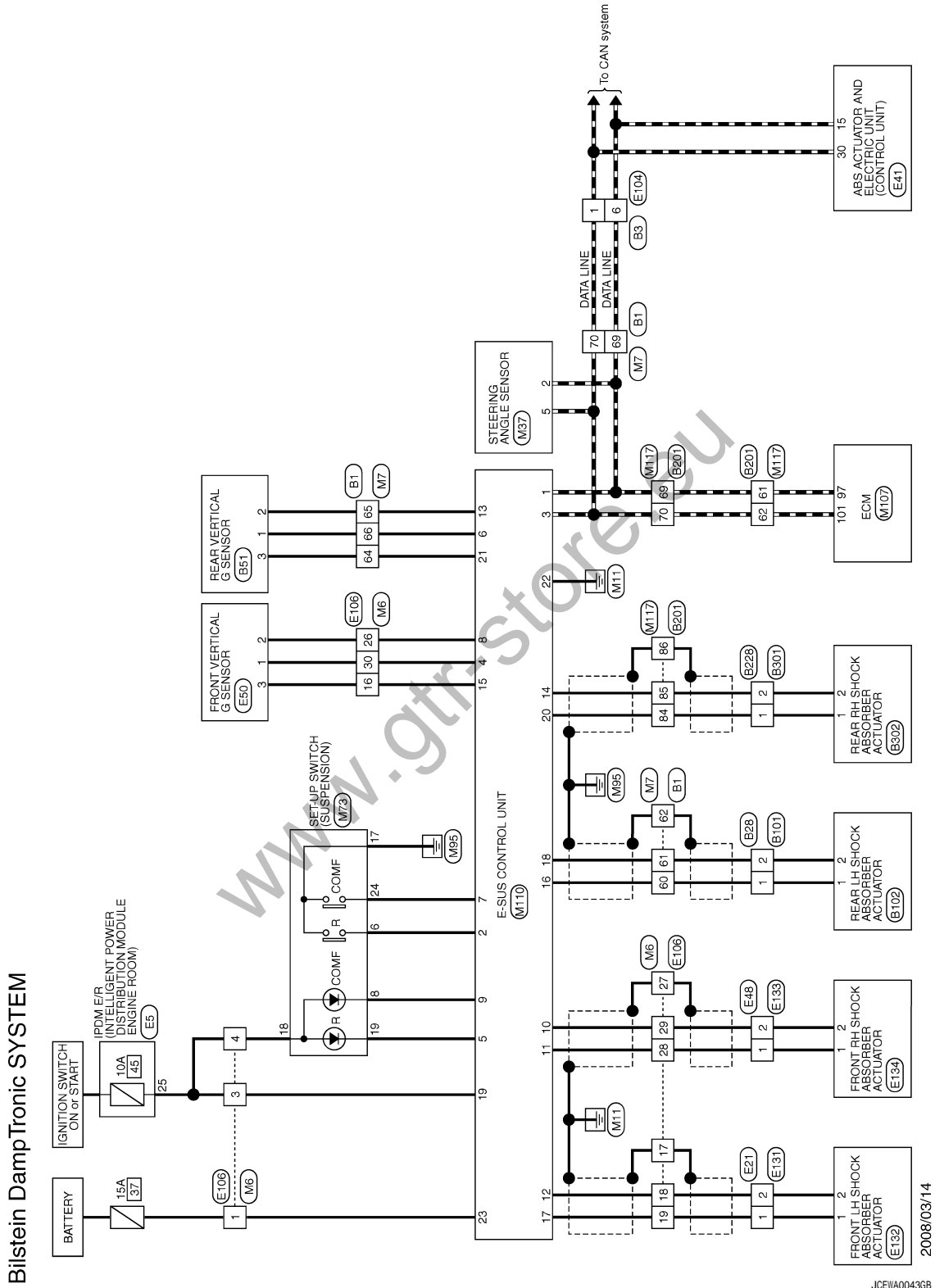
E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

Wiring Diagram - Bilstein DampTronic SYSTEM - (GT-R certified NISSAN dealer)

INFOID:00000000385162



2008/03/14

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E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

Bilstein DampTronic SYSTEM

Connector No.	B51
Connector Name	REAR VERTICAL G SENSOR
Connector Type	AAZ03FBE1



Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	SENSOR SIG
2	G	SENSOR-
3	R	SENSOR+

Connector No.	B23
Connector Name	WIRE TO WIRE
Connector Type	RH02MB



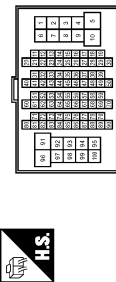
Terminal No.	Color of Wire	Signal Name [Specification]
1	BR	-
2	Y	-

Connector No.	B3
Connector Name	WIRE TO WIRE
Connector Type	NS12FW-GS



Terminal No.	Color of Wire	Signal Name [Specification]
1	L	-
6	P	-

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Type	TH00FW-GS16-TM4



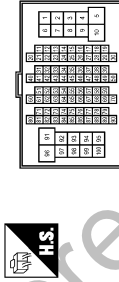
Terminal No.	Color of Wire	Signal Name [Specification]
60	BR	-
61	Y	-
62	SHIELD	-
64	R	-
65	G	-
66	BR	-
69	P	-
70	L	-

Connector No.	B228
Connector Name	WIRE TO WIRE
Connector Type	RH02MB



Terminal No.	Color of Wire	Signal Name [Specification]
1	Y	-
2	BR	-

Connector No.	B201
Connector Name	WIRE TO WIRE
Connector Type	TH00FW-GS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
61	P	-
62	Y	-
69	P	-
70	L	-
84	Y	-
85	BR	-
88	SHIELD	-

Connector No.	B102
Connector Name	REAR LH SHOCK ABSORBER ACTUATOR
Connector Type	HIRSCHMANN 305-242-001



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	HI SIGNAL
2	B	LO SIGNAL

Connector No.	B101
Connector Name	WIRE TO WIRE
Connector Type	RH00PE



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	B	-

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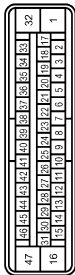

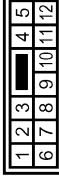







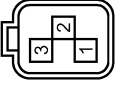
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E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

Bilstein DampTronic SYSTEM

Connector No. E301	WIRE TO WIRE RH02FB	 	Connector No. E21	WIRE TO WIRE RH02MB	 
Terminal No. 1 2	Color of Wire W B	Signal Name [Specification] — —	Terminal No. 1 2	Color of Wire P L	Signal Name [Specification] — —
Connector No. E41	ABS ACTUATOR AND ELECTRIC UNIT (CONTROL UNIT) AEZ46FB-AJ24	 	Connector No. E04	WIRE TO WIRE NS12MH-CS	 
Terminal No. 15 30	Color of Wire P L	Signal Name [Specification] CAN-L CAN-H	Terminal No. 1 6	Color of Wire L P	Signal Name [Specification] — —
Connector No. E48	WIRE TO WIRE RH02MB	 	Connector No. E5	FPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) TH02FW-CS12-IM-IV	 
Terminal No. 1 2	Color of Wire G R	Signal Name [Specification] — —	Terminal No. 25	Color of Wire O	Signal Name [Specification] —
Connector No. E48	WIRE TO WIRE RH02MB	 	Connector No. E50	FRONT VERTICAL G SENSOR AA330FB1	 
Terminal No. 1 2	Color of Wire G R	Signal Name [Specification] — —	Terminal No. 1 2 3	Color of Wire W L O	Signal Name [Specification] SENSOR SIG SENSOR- SENSOR*

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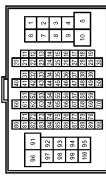
E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

Bilstein DampTronic SYSTEM

Connector No.	E106
Connector Name	WIRE TO WIRE
Connector Type	TRIGUNV-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	V	-
3	O	-
4	O	-
16	O	-
17	SHIELD	-
18	L	-
19	P	-
26	L	-
27	SHIELD	-
28	G	-
29	R	-

Connector No.	E133
Connector Name	WIRE TO WIRE
Connector Type	RH02PE



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	B	-

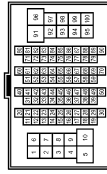
30	W	-
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Connector No.	E131
Connector Name	WIRE TO WIRE
Connector Type	RH02FB



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	-
2	B	-

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Type	TRIGUNV-CS16-TM4



Terminal No.	Color of Wire	Signal Name [Specification]
1	R	-
3	R	-
4	G	-
16	R	-
17	SHIELD	-
18	L	-
19	P	-
26	G	-
27	SHIELD	-
28	G	-
29	R	-

Connector No.	E132
Connector Name	FRONT LH SHOCK ABSORBER ACTUATOR
Connector Type	HIRSCHMANN 905-242-001



Terminal No.	Color of Wire	Signal Name [Specification]
1	W	HI SIGNAL
2	B	LO SIGNAL

30	W	-
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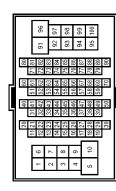
E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

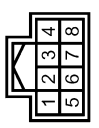
Bilstein DampTronic SYSTEM

Connector No.	M7
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4




Terminal No.	Color of Wire	Signal Name [Specification]
60	BR	-
61	Y	-
62	SHIELD	-
64	R	-
65	G	-
66	BR	-
69	P	-
70	L	-

Connector No.	M37
Connector Name	STEERING ANGLE SENSOR
Connector Type	TH08FW-NH




Terminal No.	Color of Wire	Signal Name [Specification]
2	P	CAN-L
5	L	CAN-H

Connector No.	M10
Connector Name	E-SUS CONTROL UNIT
Connector Type	FEC21FB-FH2



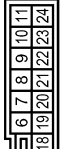
Terminal No.	Color of Wire	Signal Name [Specification]
1	P	CAN-L
2	P	R MODE SW SIG
3	L	CAN-H
4	W	FRONT G SENSOR SIG
5	O	R MODE LAMP SIG
6	BR	REAR G SENSOR SIG
7	R	COMF MODE SW SIG
8	G	FRONT G SENSOR-
9	LG	COMF MODE LAMP SIG
10	R	FR SHOCK ABSORBER ACTUATOR HI SIG
11	G	FR SHOCK ABSORBER ACTUATOR LOW SIG

Connector No.	M117
Connector Name	WIRE TO WIRE
Connector Type	TH80MW-CS16-TM4



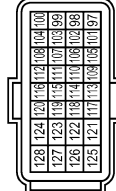
Terminal No.	Color of Wire	Signal Name [Specification]
61	P	-
62	L	-
69	P	-
70	L	-
84	V	-
85	SB	-
86	SHIELD	-

Connector No.	M73
Connector Name	SET-UP SWITCH
Connector Type	TK24FW-1V



Terminal No.	Color of Wire	Signal Name [Specification]
6	P	E-SUS R MODE SW SIG
8	LG	E-SUS COMF MODE LAMP SIG
17	B	SW GND
18	G	IGN
19	O	E-SUS R MODE LAMP SIG
24	R	E-SUS COMF MODE SW SIG

Connector No.	M107
Connector Name	ECM
Connector Type	RH24FGY-R28-R-LH-Z



Terminal No.	Color of Wire	Signal Name [Specification]
97	P	VEHCAN-LI
101	L	VEHCAN-HI

JCEWA00476B

INFO/ID:000000003853163

Fail-safe (GT-R certified NISSAN dealer)

Bilstein DampTronic system

- When detecting any malfunction in each component of the system, it enters the fail-safe status (the Bilstein DampTronic system control is deactivated).
- At the same time when the system enters the control stop status, it becomes the equivalent status to R mode (fixed damping status).

E-SUS CONTROL UNIT

[Bilstein DampTronic]

< ECU DIAGNOSIS >

- Even if the set-up switch (suspension) is operated in the fail-safe status, no lamp illuminates in R mode or COMFORT mode.

DTC Inspection Priority Chart (GT-R certified NISSAN dealer)

INFOID:000000003853164

When multiple DTCs are detected simultaneously, check one by one depending on the following priority list.

Priority	Priority order item (DTC)
1	<ul style="list-style-type: none"> • U1000 CAN COMM CIRCUIT • U1010 CONTROL UNIT (CAN)
2	Other than the above

DTC Index

INFOID:000000003853164

DTC	Display Items	Reference
C1D01	VEHICLE SPEED SIG	SCS-13, "DTC Logic (GT-R certified NISSAN dealer)"
C1D02	SIDE G-SENSOR SIG	SCS-14, "DTC Logic (GT-R certified NISSAN dealer)"
C1D03	ST ANGLE SPEED SIG	SCS-16, "DTC Logic (GT-R certified NISSAN dealer)"
C1D04	ESTIMATE TRQ SIG	SCS-17, "DTC Logic (GT-R certified NISSAN dealer)"
C1D05	REQST TRQ SIG	SCS-17, "DTC Logic (GT-R certified NISSAN dealer)"
C1D06	ENG SPEED SIG	SCS-18, "DTC Logic (GT-R certified NISSAN dealer)"
C1D07	STOP LAMP SW SIG	SCS-19, "DTC Logic (GT-R certified NISSAN dealer)"
C1D08	ABS SIGNAL	SCS-20, "DTC Logic (GT-R certified NISSAN dealer)"
C1D09	BRK FLD PRESS SIG	SCS-21, "DTC Logic (GT-R certified NISSAN dealer)"
C1D10	F VERTICAL G-SEN	SCS-22, "DTC Logic (GT-R certified NISSAN dealer)"
C1D11	R VERTICAL G-SEN	SCS-24, "DTC Logic (GT-R certified NISSAN dealer)"
C1D12	FR ACTUATOR SIG	SCS-26, "DTC Logic (GT-R certified NISSAN dealer)"
C1D13	FL ACTUATOR SIG	SCS-28, "DTC Logic (GT-R certified NISSAN dealer)"
C1D14	RR ACTUATOR SIG	SCS-30, "DTC Logic (GT-R certified NISSAN dealer)"
C1D15	RL ACTUATOR SIG	SCS-32, "DTC Logic (GT-R certified NISSAN dealer)"
C1D16	CONTROL UNIT	SCS-34, "DTC Logic (GT-R certified NISSAN dealer)"
C1D17	BATTERY VOLT	SCS-35, "DTC Logic (GT-R certified NISSAN dealer)"
C1D19	MODE SW UP	SCS-37, "DTC Logic (GT-R certified NISSAN dealer)"
C1D20	MODE SW DOWN	SCS-37, "DTC Logic (GT-R certified NISSAN dealer)"

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E-SUS CONTROL UNIT

< ECU DIAGNOSIS >

[Bilstein DampTronic]

DTC	Display Items	Reference
C1D21	R MODE LAMP	SCS-39. "DTC Logic (GT-R certified NISSAN dealer)"
C1D22	COMF MODE LAMP	SCS-39. "DTC Logic (GT-R certified NISSAN dealer)"
C1D23	C/U REPRO ERROR	SCS-41. "DTC Logic (GT-R certified NISSAN dealer)"
U1000	CAN COMM CIRCUIT	SCS-42. "DTC Logic (GT-R certified NISSAN dealer)"
U1010	CONTROL UNIT (CAN)	SCS-43. "DTC Logic (GT-R certified NISSAN dealer)"

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E-SUS MODE LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

[Bilstein DampTronic]

SYMPTOM DIAGNOSIS

E-SUS MODE LAMP DOES NOT TURN ON

Description (GT-R certified NISSAN dealer)

INFOID:000000003853172

No mode lamp illuminates when the set-up switch (suspension) is switched to “R mode” or “COMFORT mode”.

Diagnosis Procedure (GT-R certified NISSAN dealer)

INFOID:000000003853173

1. CHECK SET-UP SWITCH (SUSPENSION) MODE LAMP POWER SUPPLY

1. Turn the ignition switch OFF.
2. Remove the set-up switch (suspension).
3. Check the voltage between the set-up switch (suspension) connector terminals.

Set-up switch (suspension)		—	Measuring condition	Voltage
Connector	Terminal			
M73	18	Ground	Ignition switch: ON	Battery voltage
			Ignition switch: OFF	Approx. 0 V

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check the following items, and repair or replace the malfunctioning parts.

- Open circuit in 10 A fuse (#45)
- Short circuit between the 10 A fuse (#45) connector and set-up switch (suspension) harness connector terminal 18
- Open circuit between the ignition switch and set-up switch (suspension) harness connector terminal 18
- Battery or ignition switch

2. CHECK SET-UP SWITCH (SUSPENSION) CIRCUIT

1. Disconnect the E-SUS control unit harness connector.
2. Check the continuity between the E-SUS control unit connector and set-up switch (suspension) harness connector.

E-SUS control unit		Set-up switch (suspension)		Continuity
Connector	Terminal	Connector	Terminal	
M110	5	M73	19	Existed
	9		8	

3. Check the continuity between the E-SUS control unit harness connector and ground.

E-SUS control unit		—	Continuity
Connector	Terminal		
M110	5	Ground	Not existed
	9		

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the malfunctioning harness or connector.

3. PERFORM ACTIVE TEST

 With CONSULT-III

1. Connect the E-SUS control unit harness connector.
2. Connect the set-up switch (suspension) connector.
3. Select “MODE LAMP” in “ACTIVE TEST”.

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E-SUS MODE LAMP DOES NOT TURN ON

< SYMPTOM DIAGNOSIS >

[Bilstein DampTronic]

4. On the display, touch "ON" or "OFF", and check that the system operates as shown in the table below.

Test item	Display Item	Display Item	
		Illumination status	
		ON	OFF
MODE LAMP	R	ON	OFF
	COMF		

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the set-up switch (suspension).

4.PERFORM SELF-DIAGNOSIS

④ **With CONSULT-III**

1. Perform E-SUS control unit self-diagnosis.

Is DTC "D1D21" or "D1D22" detected?

YES >> Go to [SCS-53, "DTC Index"](#).

NO >> GO TO 5.

5.CHECK INFORMATION

Check the information and malfunction history of "DATA MONITOR" for each DTC. Refer to [SCS-45, "Reference Value \(GT-R certified NISSAN dealer\)"](#).

Is each data within standard values?

YES >> Check pin terminal and connection of each harness connector for damage or loose connection.

NO >> Replace E-SUS control unit. Refer to [SCS-58, "Exploded View \(GT-R certified NISSAN dealer\)"](#).

PRECAUTION

PRECAUTIONS

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

INFOID:000000004166501

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 AIRBAG" and "SEAT BELT" of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, 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 the "SRS AIRBAG".
- 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 for terminology

INFOID:0000000003853174

The Bilstein DampTronic is the trademark owned by ThyssenKrupp Bilstein Suspension GmbH, Germany.

Precautions for diagnosis

INFOID:0000000003853176

- In the Bilstein DampTronic system, when CONSULT-III active test is performed, a DTC may be detected, therefore always erase the malfunction history after the operation is completed.
- In the Bilstein DampTronic system, because it is difficult to distinguish a sensor malfunction from normal operation when the vehicle turns sharply such as spin turning, turning while accelerating, or drift driving, or when CONSULT-III is connected to the vehicle, the vehicle enters the fail-safe status and a DTC is stored once. If the normal operation is restored later, it is not a malfunction. At that time, erase the self-diagnosis memory. Perform "Diagnosis Procedure" [SCS-4. "Work Flow \(GT-R certified NISSAN dealer\)"](#) if the normal condition is not restored.
- When disconnecting the harness connector from E-SUS control unit, disconnect it only after checking that the lock lever on the harness connector is opened.

General Precautions

INFOID:0000000004185871

CAUTION:

After finishing servicing, check that all the tools and waste are stored in a customary place.

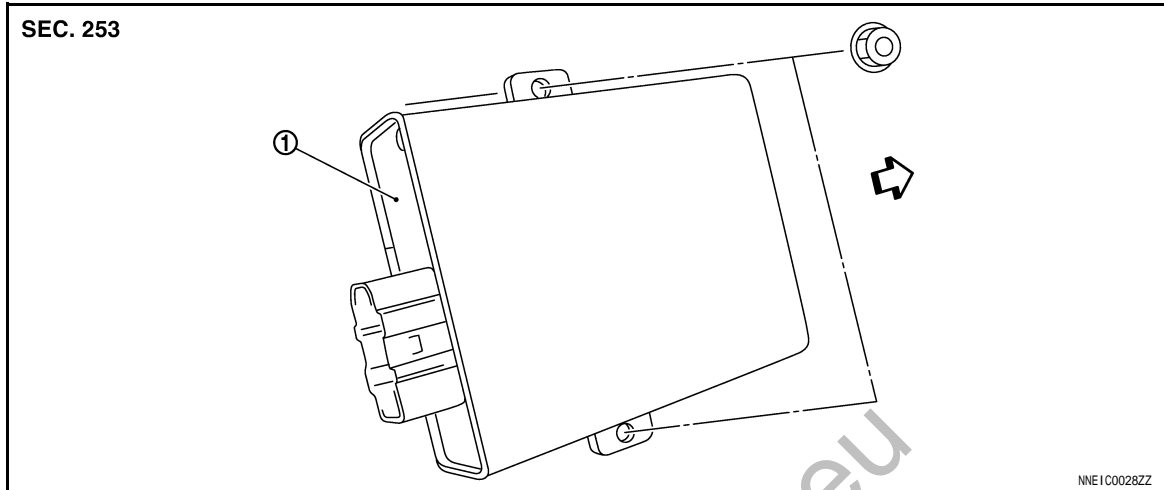
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ON-VEHICLE REPAIR

E-SUS CONTROL UNIT

Exploded View (GT-R certified NISSAN dealer)

INFOID:000000003853177



1. E-SUS control unit

↔: Vehicle front

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003853178

REMOVAL

1. Turn the ignition switch OFF.
2. Remove the glove box assembly. Refer to [IP-11, "Exploded View"](#).
3. Remove the lower instrument panel RH. Refer to [IP-11, "Exploded View"](#).
4. Remove the ECM.
5. Disconnect the E-SUS control unit connector.
CAUTION:
Always open the lock lever on the harness connector before disconnecting it.
6. Remove the E-SUS control unit mounting nuts.
7. Remove E-SUS control unit.

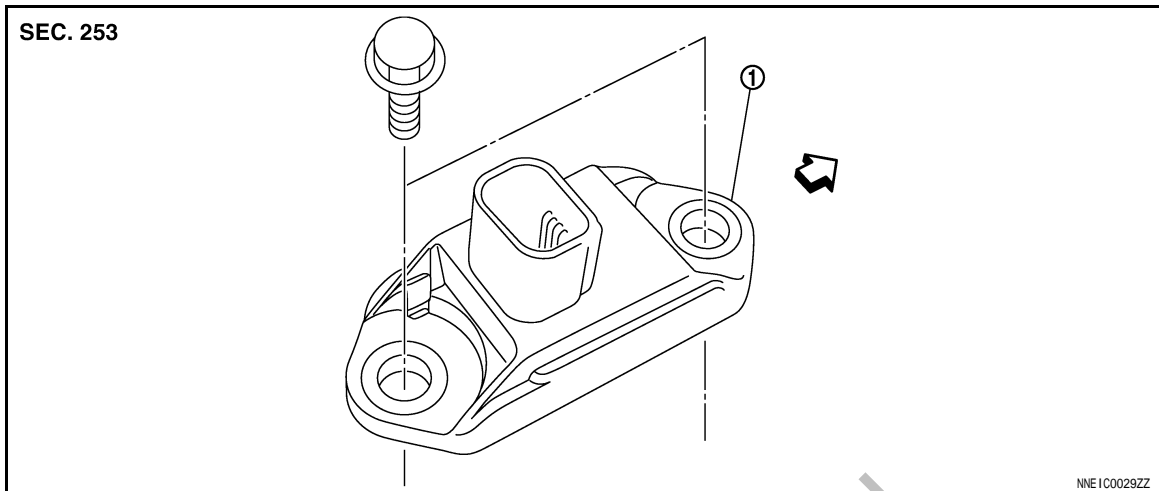
INSTALLATION

Install in the reverse order of removal.

FRONT VERTICAL G SENSOR

Exploded View (GT-R certified NISSAN dealer)

INFOID:000000003853179



1. Front vertical G sensor

↶: Vehicle front

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003853180

REMOVAL

1. Turn the ignition switch OFF.
2. Remove the RH cowl top panel. Refer to [EXT-25, "Exploded View"](#).
3. Disconnect the front vertical G sensor connector.
4. Remove the front vertical G sensor mounting bolts.
5. Remove the front vertical G sensor.

INSTALLATION

Install in the reverse order of removal.

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REAR VERTICAL G SENSOR

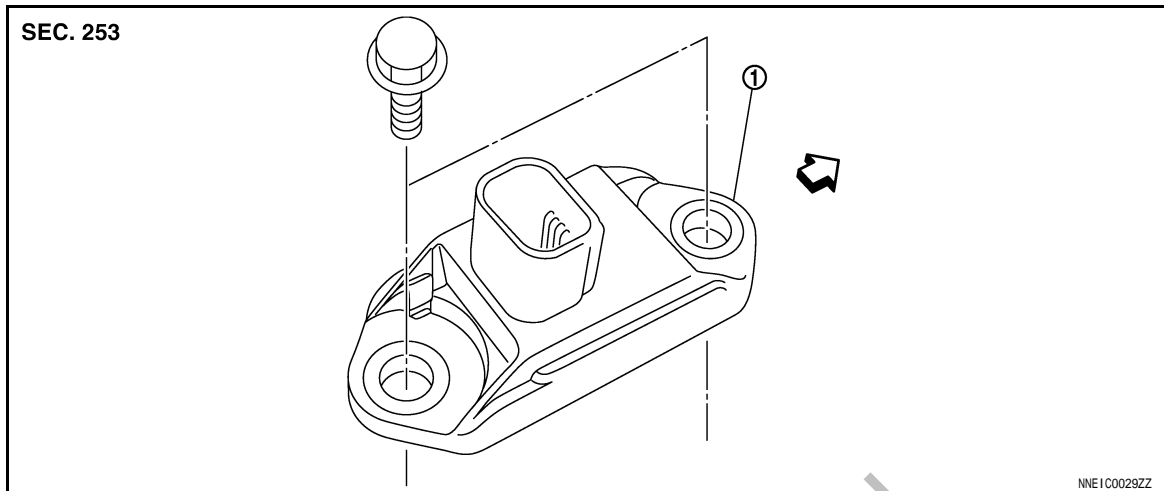
< ON-VEHICLE REPAIR >

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REAR VERTICAL G SENSOR

Exploded View (GT-R certified NISSAN dealer)

INFOID:000000003853181



1. Rear vertical G sensor

↶: Vehicle front

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003853182

REMOVAL

1. Turn the ignition switch OFF.
2. Remove the rear wheel well finisher (LH). Refer to [INT-25. "Exploded View"](#).
3. Disconnect the rear vertical G sensor connector.
4. Remove the rear vertical G sensor mounting bolts.
5. Remove the rear vertical G sensor.

INSTALLATION

Installation is the reverse order of removal.

SHOCK ABSORBER ACTUATOR

< ON-VEHICLE REPAIR >

[Bilstein DampTronic]

SHOCK ABSORBER ACTUATOR

Removal and Installation (GT-R certified NISSAN dealer)

INFOID:000000003853183

Refer to [FSU-10. "Exploded View"](#) (front shock absorber), [RSU-10. "Exploded View"](#) (rear shock absorber) for removal and installation.

CAUTION:

Never disassemble the shock absorber because the shock absorber actuator is integrated into the shock absorber.

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