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### **DOOR MIRROR SYSTEM**

### < SYSTEM DESCRIPTION >

# SYSTEM DESCRIPTION

# DOOR MIRROR SYSTEM

Description INFOID:0000000007468771

In regards to the Automatic drive position with door mirror system, it refer to <u>ADP-19, "MANUAL FUNCTION: System Description"</u>.

## Component Description

INFOID:0000000007468772	

Component	Function		
Door mirror remote control switch	It supplies power to mirror motor through mirror switch and changeover switch.		
Door mirror	It makes mirror face operate from side to side and up and down with the mirror control switch operation.		

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### **INSIDE MIRROR SYSTEM**

### < SYSTEM DESCRIPTION >

# **INSIDE MIRROR SYSTEM**

# System Description

INFOID:0000000007468773

The sensor built in inside mirror detects the headlight of the vehicle behind and automatically changes the light transmission to decrease the brightness.

# **Component Description**

INFOID:0000000007468774

Component	Function		
Auto anti-dazzling inside mirror	It automatically changes the light transmittance according to the brightness of the light from the headlight of the vehicle behind.		

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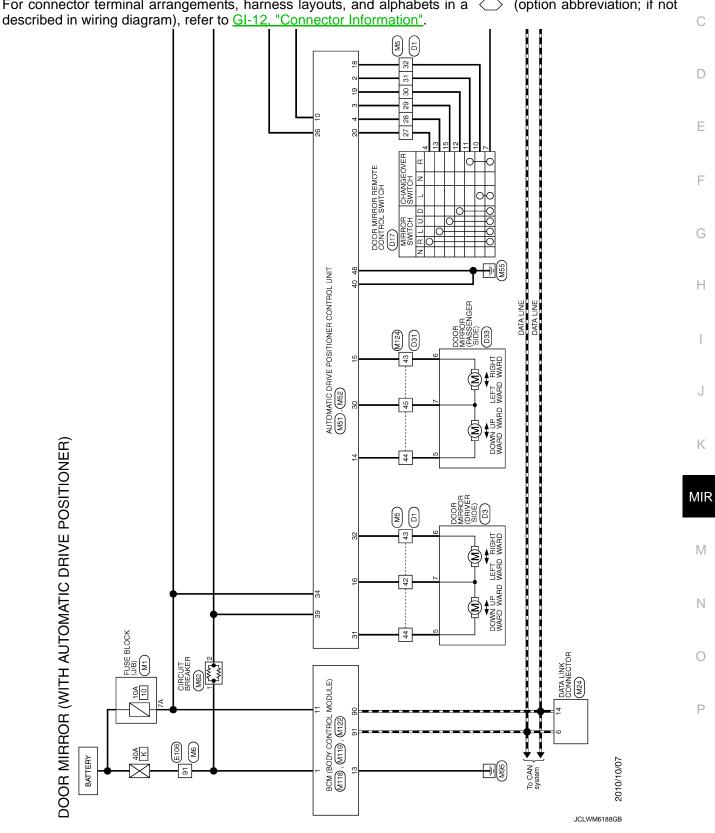
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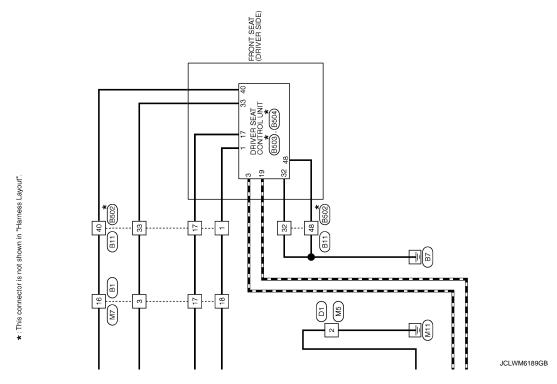
# DTC/CIRCUIT DIAGNOSIS

# **DOOR MIRROR**

Wiring Diagram - DOOR MIRROR (WITH AUTOMATIC DRIVE POSITIONER) -

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not





Wiring Diagram - DOOR MIRROR SYSTEM (WITHOUT AUTOMATIC DRIVE POSI-

TIONER) -INFOID:0000000007468775

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JCLWM6196GB

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not

described in wiring diagram), refer to GI-12, "Connector Information". В C DOOR MIRROR (DRIVER SIDE) D ↑ RIGHTWARD

↑ LEFTWARD

↑ UPWARD

↑ DOWNWARD Е F (D31) Н DOOR MIRROR (WITHOUT AUTOMATIC DRIVE POSITIONER) J K MIR MIRROR SWITCH M FUSE BLOCK (J/B) (M1) Ν 0 2010/10/07 Р

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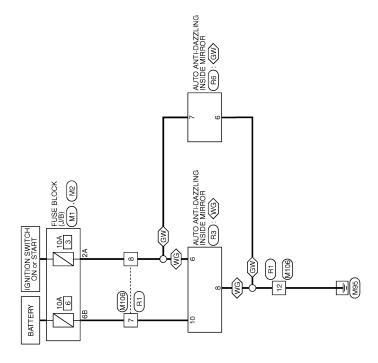
# **AUTO ANTI-DAZZLING INSIDE MIRROR SYSTEM**

# Wiring Diagram - INSIDE MIRROR SYSTEM -

INFOID:0000000007468776

For connector terminal arrangements, harness layouts, and alphabets in a (option abbreviation; if not described in wiring diagram), refer to GI-12, "Connector Information".





INSIDE MIRROR

JRLWC1008GB

< ECU DIAGNOSIS INFORMATION >

# **ECU DIAGNOSIS INFORMATION**

# DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

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Reference Value INFOID:0000000007804950

### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condit	ion	Value/Status
SET SW	Sot quitab	Push	ON
SE1 300	Set switch	Release	OFF
MEMORY OWA	Manager switch 4	Push	ON
MEMORY SW1	Memory switch 1	Release	OFF
MEMORY CWO	Mamany quitab 0	Push	ON
MEMORY SW2	Memory switch 2	Release	OFF
CLIDE CW ED	Cliding quitab (frant)	Operate	ON
SLIDE SW-FR	Sliding switch (front)	Release	OFF
SLIDE SW-RR	Cliding awitch (root)	Operate	ON
SLIDE SW-KK	Sliding switch (rear)	Release	OFF
DECLN CW ED	Declining quitab (frant)	Operate	ON
RECLN SW-FR	Reclining switch (front)	Release	OFF
DEOLN OW DD	Deal's in a state (and )	Operate	ON
RECLN SW-RR	Reclining switch (rear)	Release	OFF
LIET ED OWLID	Littie en envitele forest (con)	Operate	ON
LIFT FR SW-UP	Lifting switch front (up)	Release	OFF
LIET ED OW DN	Littie en envitele format (element)	Operate	ON
LIFT FR SW-DN	Lifting switch front (down)	Release	OFF
LIET DD OW LID	Lifting quitab room (up)	Operate	ON
LIFT RR SW-UP	Lifting switch rear (up)	Release	OFF
LIET DD OW DN	Lifting quitab room (down)	Operate	ON
LIFT RR SW-DN	Lifting switch rear (down)	Release	OFF
MIR CON SW-UP	Mirror switch	Up	ON
WIR CON SW-UP	WIITOI SWILCTI	Other than above	OFF
MIR CON SW-DN	Mirror quitab	Down	ON
MIR CON SW-DIN	Mirror switch	Other than above	OFF
MIR CON SW-RH	Mirror switch	Right	ON
WIIN CON SVV-NIT	WILLOL SWITCH	Other than above	OFF
MIR CON SW-LH	Mirror switch	Left	ON
IVIIIX COIN SVV-LIT	WILLIAM SWILCH	Other than above	OFF
MIR CHNG SW-R	Changoover switch	Right	ON
WIIN CHING SW-K	Changeover switch	Other than above	OFF
MIR CHNG SW-L	Changeover switch	Left	ON
WIIN CHING SVV-L	Changeover Switch	Other than above	OFF
TILT SW-UP	Tilt switch	Up	ON
TILI UVV-UF	THE SWILCH	Other than above	OFF
TILT SW-DOWN	Tilt switch	Down	ON
TIET OVV DOVVIN	THE SWILOTT	Other than above	OFF

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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Con	dition	Value/Status		
TEL 5000 0W 5D	T. I	Forward	ON		
TELESCO SW-FR	Telescopic switch	Other than above	OFF		
TEL 5000 0W DD	Tilt ovvitale	Backward	ON		
TELESCO SW-RR	Tilt switch	Other than above	OFF		
CODWARD CW	Coathadi	Folded down	ON		
FORWARD SW	Seat back	Other than above	OFF		
A/A LIZ INLOW	Dower wells in quitab	Pressed	ON		
WALK-IN SW	Power walk-in switch	Other than above	OFF		
FWD LIMIT SW	Soot cliding	Front edge	ON		
-VVD LIIVIIT SVV	Seat sliding	Other than above	OFF		
SEAT BELT SW	Seat belt	Fastened	ON		
SEAI DELI SW	Seat beit	Other than above	OFF		
DETENT OW*1	A/T selector lever	P position	OFF		
DETENT SW <sup>*1</sup>	W I Selector level	Other than above	ON		
PARK BRAKE SW <sup>*2</sup>	Parking brake	Applied	ON		
PARK BRAKE SW -	Faiking blake	Release	OFF		
STARTER SW	Ignition position	Cranking	ON		
STARTER SW	ignition position	Other than above	OFF		
SLIDE PULSE	Seat sliding	Forward	The numeral value decreases *3		
		Backward	The numeral value increases *3		
		Other than above	No change to numeral value*3		
	Seat reclining	Forward	The numeral value decreases *3		
RECLN PULSE		Backward	The numeral value increases *3		
		Other than above	No change to numeral value*3		
		Up	The numeral value decreases *3		
LIFT FR PULSE	Seat lifter (front)	Down	The numeral value increases *3		
		Other than above	No change to numeral value <sup>*3</sup>		
		Up	The numeral value decreases *3		
LIFT RR PULSE	Seat lifter (rear)	Down	The numeral value increases *3		
		Other than above	No change to numeral value*3		
MIR/SEN RH U-D	Door mirror (passenger s	side)	Change between 3.4 (close to peak) 0.6 (close to valley)		
MIR/SEN RH R-L	Door mirror (passenger side)		Change between 3.4 (close to left edge) 0.6 (close to right edge)		
MIR/SEN LH U-D	Door mirror (driver side)		Change between 3.4 (close to peak) 0.6 (close to valley)		
MIR/SEN LH R-L	Door mirror (driver side)		Change between 0.6 (close to left edge) 3.4 (close to right edge)		
TILT SEN	Tilt position		Change between 1.2 (close to top) 3.4 (close to bottom)		
TELESCO SEN	Telescopic position		Change between 3.4 (close to top) 0.8 (close to bottom)		

<sup>\*1:</sup> A/T model

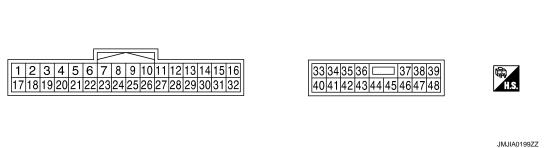
Revision: 2013 February MIR-10 2012 G Coupe

<sup>\*2:</sup> M/T model

<sup>\*3:</sup> The value at the position attained when the battery is connected is regarded as 32768.

< ECU DIAGNOSIS INFORMATION >

# TERMINAL LAYOUT



### PHYSICAL VALUES

	nal No. color)	Description				Voltage (V)
+	-	Signal name	Input/ Out- put	Condition		Voltage (V) (Approx)
1 (L/W)	Ground	UART communication (RX)	Input	Ignition switch ON		2mSec/div
3 (R/Y)	_	CAN-H	_	-	_	_
4	Ground	Sliding limit switch	Innut	Seat sliding front		0
(O/B)	Ground	signal		Seat switch & pow pressed	er walk-in switch is	5
5 (L)	Ground	Seat belt buckle switch signal (driv-	Input	Seat belt fastened & seat switch pressed		5
(L)		er side)		Other than above		0
8	Ground	Parking brake	Input	Parking brake	Applied	0
(L/Y)		switch signal		ŭ	Release	Battery voltage
9 (W/G)	Ground	Reclining sensor signal	Input	Seat reclining	Operate	10mSec/div
					Stop	0 or 5
10 (P/B)	Ground	Lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate	10mSec/div
					Stop	0 or 5

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< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description				Voltage (V)
+	-	Signal name	Input/ Out- put	Condition		(Approx)
11 (BR)	Ground	Sliding switch backward signal	Input	Sliding switch	Operate (backward)	0
(5.1)		baokwara digirar			Release	Battery voltage
12 (SB)	Ground	Reclining switch backward signal	Input	Reclining switch	Operate (backward)	0
(02)		baokwara signar			Release	Battery voltage
13 (LG/R)	Ground	Lifting switch (front) downward signal	Input	Lifting switch (front)	Operate (downward)	0
(20/11)		downward orginal		(ii oi it)	Release	Battery voltage
14 (G/B)	Ground	Lifting switch (rear) downward signal	Input	Lifting switch (rear)	Operate (downward)	0
(0/2)		downward digital		(rodr)	Release	Battery voltage
16 (O)	Ground	Sensor power sup- ply	Out- put	-	_	Battery voltage
17 (Y/R)	Ground	UART communication (TX)	Out- put	Ignition switch ON	I	10mSec/div 2V/div JMJIA0121ZZ
19 (V)	_	CAN-L	_	-	_	_
21 (L/Y)	Ground	Detention switch switch	Input	A/T selector lever	P position  Except P position	20mSec/div  AMAMAMAMAMA  SV/div  JMJIA0120ZZ
24 (R)	Ground	Sliding sensor signal	Input	Seat sliding	Operate	10mSec/div 2V/div JMJIA0119ZZ
					Stop	0 or 5
25 (Y/B)	Ground	Lifting sensor (front) signal	Input	Seat lifting (front)	Operate	10mSec/div
					Stop	0 or 5

< ECU DIAGNOSIS INFORMATION >

	nal No. color)	Description				Voltage (V)
+	-	Signal name	Input/ Out- put	Condition		Voltage (V) (Approx)
26 (Y)	Ground	Sliding switch for- ward signal	Input	Sliding switch	Operate (forward)	0
(-)					Release	Battery voltage
27 (R/G)	Ground	Reclining switch forward signal	Input	Reclining switch	Operate (forward)	0
( /		2 2 3 2			Release	Battery voltage
28 (W/B)	Ground	Lifting switch (front) upward signal	Input	Seat lifting switch (front)	Operate (upward)	0
(		ap man a anginan		()	Release	Battery voltage
29 (P/L)	Ground	Lifting switch (rear) upward signal	Input	Seat lifting switch (rear)	Operate (upward)	0
( ' )		1, 2, 2, 3, 2,		( /	Release	Battery voltage
30	Ground	Power walk-in	Input	Power walk-in	Pressed	0
(P)		switch signal	•	switch	Other than above	Battery voltage
31 (GR)	Ground	Sensor ground	_	-	_	0
32 (B/W)	Ground	Ground (signal)	-	_		0
33 (R)	Ground	Power source (C/B)	Input	-	_	Battery voltage
35 (W/R)	Ground	Sliding motor for- ward output	Out-	Seat sliding	Operate (forward)	Battery voltage
(**/12)		ward output	put	out	Release	0
36 (G/Y)	Ground	Reclining motor for- ward output signal	Out-	Seat reclining	Operate (forward)	Battery voltage
(0/1)		ward output signal	put		Release	0
37 (G/W)	Ground	Lifting motor (front) downward output	Out- put	Seat lifting (front)	Operate (downward)	Battery voltage
(0/11)		downward output	pat		Stop	0
38 (L/Y)	Ground	Lifting motor (rear) upward output	Out- put	Seat lifting (rear)	Operate (upward)	Battery voltage
(41)		upwara output	put		Stop	0
39 (R/B)	Ground	Lifting motor (rear) downward output	Out- put	Seat lifting (rear)	Operate (downward)	Battery voltage
(1.4,0)		23mmara output	Put		Stop	0
40 (R/W)	Ground	Power source (Fuse)	Input	_		Battery voltage
				Seat back is folder walk-in switch pre	d down and power ssed	0
41 (Y/G)	Ground	Forward switch signal	Input	Seat back is fold using is operation	ip and seat reclin-	battery voltage
				Seat back is fold usin switch is presse	ip and power walk-	5
42	Ground	Sliding motor back-	Out-	Seat sliding	Operate (backward)	Battery voltage
(W)		ward output	put		Stop	0

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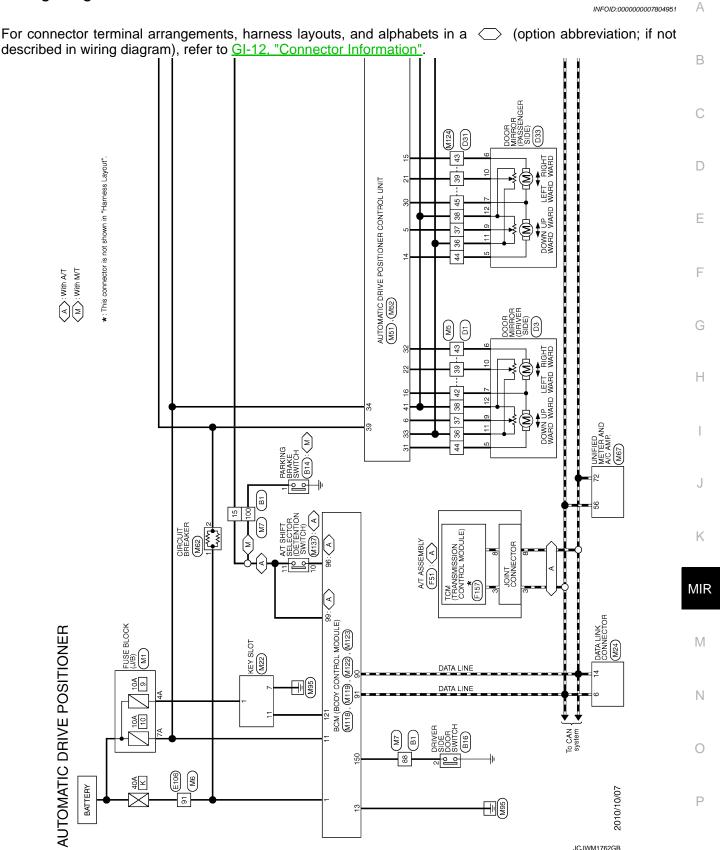
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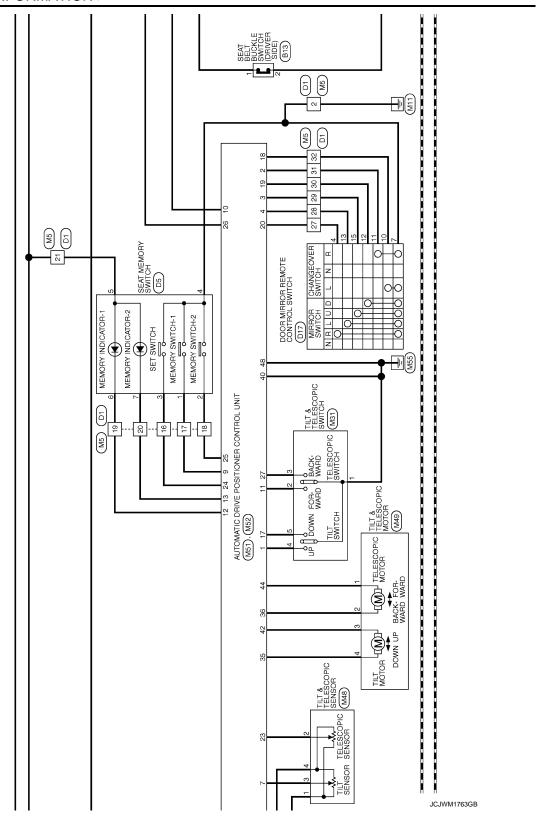
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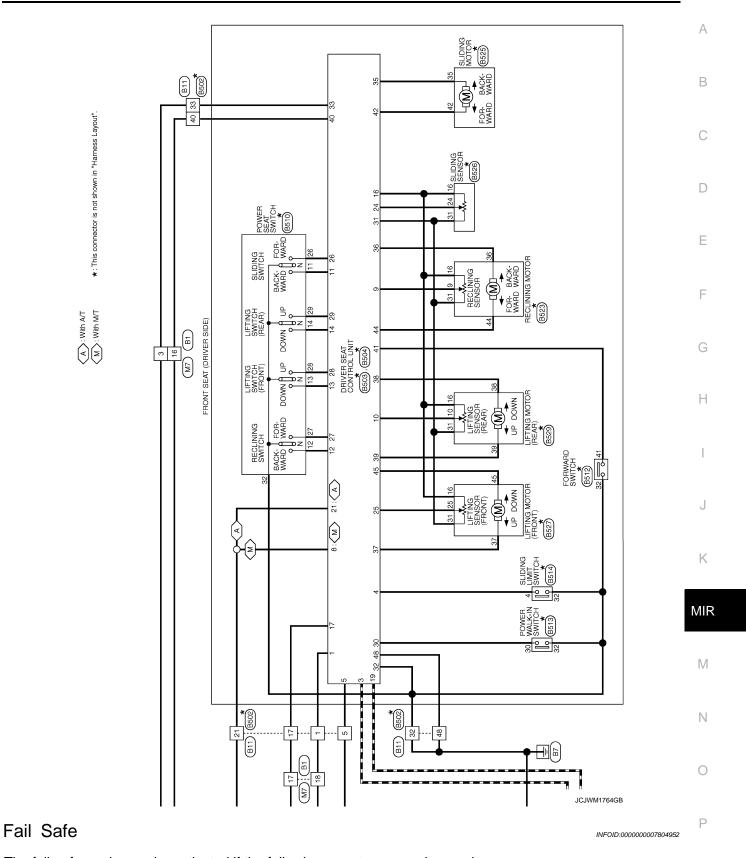
	nal No. color)	Description				Voltage (		Voltage (V)
+	-	Signal name	Input/ Out- put	Con	dition	(Approx)		
44 (P)	Ground	Reclining motor backward output	Out-	Seat reclining	Operate (backward)	Battery voltage		
(F)		backwaru output	put		Stop	0		
45 (L/R)	Ground	Lifting motor (front)	Out-	Seat lifting (front)	Operate (upward)	Battery voltage		
(L/IX)		upwaru output	put		Stop	0		
48 (B)	Ground	Ground (power)	_	_		0		

< ECU DIAGNOSIS INFORMATION >

# Wiring Diagram - AUTOMATIC DRIVE POSITIONER CONTROL SYSTEM -







The fail-safe mode may be activated if the following symptoms are observed.

< ECU DIAGNOSIS INFORMATION >

Operating in fail-safe mode	Malfunction Item	Related DTC	Diagnosis
	CAN communication*1	U1000	With ADP: ADP-48
	CAN communication	01000	Without ADP: ADP-48
Only manual functions operate normally.	T:14 +1	B2118	With ADP: ADP-53
ony manaarana operato nomiany.	Tilt sensor*1	B2118	Without ADP: ADP-53
	Telescopic sensor	B2119	<u>ADP-56</u>
	Detent switch	B2126	<u>ADP-59</u>
	Parking brake switch	B2127	<u>ADP-61</u>
Only manual functions, except door mirror, operate normally.	UART communication	B2128	ADP-63
Only manual functions, except seat sliding, operate normally.	Seat sliding output	B2112	ADP-49
Only manual functions, except seat reclining, operate normally.	Seat reclining output	B2113	<u>ADP-51</u>

<sup>\*1:</sup> Driver seat without automatic driver positioner system display only "U1000 CAN COMM CIRCUIT" and "B2112 SEAT SLIDE".

DTC Index

CONSULT	Tim	ing <sup>*1</sup>		
display	Current mal- function	Previous mal- function	Item	Reference page
CAN COMM CIRCUIT*2	0 1-39		CAN communication	With ADP: ADP-48
[U1000]	0	1-39	CAN communication	Without ADP: ADP-48
SEAT SLIDE*2	0	1-39	Cost alida matar autaut	With ADP: ADP-49
[B2112]	0	1-39	Seat slide motor output	Without ADP: ADP-49
SEAT RECLINING [B2113]	0	1-39	Seat reclining motor output	ADP-51
TILT SENSOR [B2118]	0	1-39	Tilt sensor input	ADP-53
TELESCO SENSOR [B2119]	0	1-39	Telescopic sensor input	ADP-56
DETENT SW* <sup>2</sup> [B2126]	0	1-39	Detention switch condition	ADP-59
PARKING BRAKE [B2127]	0	1-39	Parking brake switch condition	ADP-61
UART COMM [B2128]	0	1-39	UART communication	ADP-63

<sup>\*1.</sup> 

<sup>• 0:</sup> Current malfunction is present

<sup>• 1-39:</sup> Displayed if any previous malfunction is present when current condition is normal. The numeral value increases by one at each IGN ON to OFF cycle from 1 to 39. The counter remains at 39 even if the number of cycles exceeds it. However, the counter is reset to 1 if any malfunction is detected again, the normal operation is resumed and the ignition switch is turned from OFF to ON.

<sup>\*2:</sup> Driver seat without automatic driver positioner system display only "U1000 CAN COMM CIRCUIT" and "B2112 SEAT SLIDE".

< ECU DIAGNOSIS INFORMATION >

# AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

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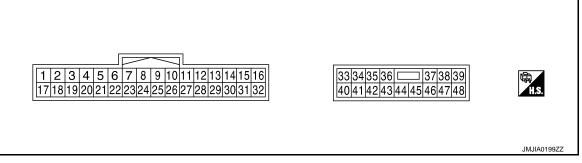
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### **TERMINAL LAYOUT**



## PHYSICAL VALUES

	nal No. color)	Description		Conditi	on	Voltage (V)
+	_	Signal name	Input/ Output	Condition		(Approx.)
1	Ground	Tilt switch upward signal	Innut	Tilt switch	Operate (upward)	0
(Y)	Ground	Till Switch upward Signal	Input	input Tilt switch	Other than above	5
2		Changeover switch RH		Changeover	RH	0
(LG)	Ground	signal	Input	switch position	Neutral or LH	5
3	Cround	Mirror switch upward sig-	Innut	Mirror outitob	Operated (upward)	0
(G)	Ground	nal	Input	Input Mirror switch -	Other than above	5
4	Ground	Mirror switch leftward sig-	lanut.	Input Mirror switch	Operated (leftward)	0
(Y)	Ground	nal	input		Other than above	5
5 (R)	Ground	Door mirror sensor (RH) upward/downward signal	Input	Mirror face (door n	nirror RH)	Change between 3.4 (close to pea 0.6 (close to valley)
6 (GR)	Ground	Door mirror sensor (LH) upward/downward signal	Input	Mirror face (door n	nirror LH)	Change between 3.4 (close to pea 0.6 (close to valley)
7 (BG)	Ground	Tilt sensor signal	Input	Tilt position		Change between 1.2 (close to top 3.8 (close to bottom)
9					Press	0
(BR)	Ground	Memory switch 1 signal	Input	Memory switch 1	Other than above	5
10 (V)	Ground	UART communication (TX)	Output	Ignition switch ON		2mSec/div 2V/div JMJIA0118ZZ

### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description	Condition	n n	Voltage (V)	
+	_	Signal name	Input/ Output	Condition	on	(Approx.)
11 (GR)	Ground	Telescopic switch forward signal	Input	Telescopic switch	Operate (forward)	0
(OIT)		Signal			Other than above	5
12 (BG)	Ground	Memory indictor 1 signal	Output	Memory indictor 1	Illuminate Other than	1
(50)					above	Battery voltage
13 (P)	Ground	Memory indictor 2 signal	Output	Memory indictor 2	Other than above	Battery voltage
14	Ground	Door mirror motor (RH)	Output	Door mirror RH	Operate (upward)	Battery voltage
(W)	Ground	upward output	Output	Deer minter two	Other than above	0
15	Ground	Door mirror motor (RH)	Output	Door mirror RH	Operate (leftward)	Battery voltage
(BG)	Ground	leftward output	Output	Door million Kiri	Other than above	0
		Door mirror motor (LH) downward output			Operate (down- ward)	Battery voltage
16	Ground	downward output	Output	tput Door mirror (LH)	Other than above	0
(Y)		Door mirror motor (LH)			Operate (rightward)	Battery voltage
		rightward output			Other than above	0
17 (BR)	Ground	Tilt switch downward sig-	Input	Tilt switch	Operate (down- ward)	0
(DIV)		Tical			Other than above	5
18	Ground	Changeover switch LH	Input	Changeover	LH Neutral or	0
(W)		signal	,	switch position	RH	5
19 (SB)	Ground	Mirror switch downward signal	Input	Mirror switch	Operate (down- ward)	0
(36)		Signal			Other than above	5
20	C**********	Mirror switch rightward	المست	Mirror switz-	Operate (rightward)	0
(L)	Ground	signal	Input Mirror switch	IVIIIIOI SWITCH	Other than above	5
21 (L)	Ground	Door mirror sensor (RH) leftward/rightward signal	Input	Door mirror RH pos	sition	Change between 3.4 (close to le edge) 0.6 (close to right edge)
22 (B)	Ground	Door mirror sensor (LH) leftward/rightward signal	Input	Door mirror LH pos	sition	Change between 0.6 (close to le edge) 3.4 (close to right edge)
23 (P)	Ground	Telescopic sensor signal	Input	Telescopic position		Change between 0.8 (close to to 4.4 (close to bottom)

# < ECU DIAGNOSIS INFORMATION >

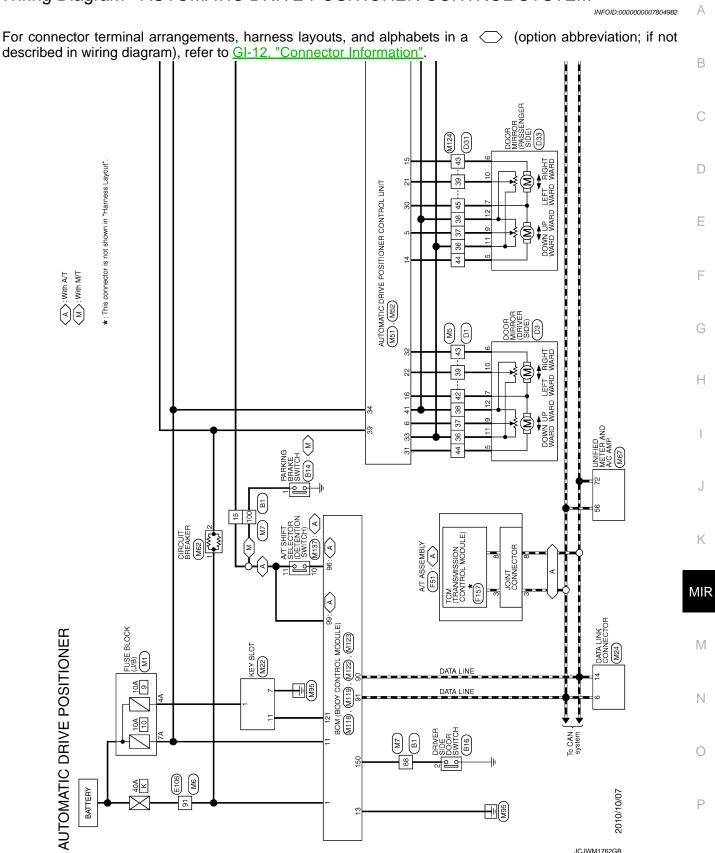
Terminal No. (Wire color)		Description		Conditi		Voltage (V)
+	_	Signal name	Input/ Output	Conditi	OH	(Approx.)
24 (R)	Ground	Set switch signal	Input	Set switch	Press Other than above	0 5
25 (V)	Ground	Memory switch 2 signal	Input	Memory switch 2	Press Other than above	5
26 (P)	Ground	UART communication (RX)	Input	Ignition switch ON		10mSec/div 2V/div JMJIA0121ZZ
27 (G)	Ground	Telescopic switch back- ward signal	Input	Telescopic switch	Operate (backward) Other than	0 5
		Door mirror motor (RH)			above Operate (down- ward)	Battery voltage
30	Ground	downward output	Output	Door mirror (RH)	Other than above	0
(SB)		Door mirror motor (RH)		,	Operate (rightward)	Battery voltage
		rightward output			Other than above	0
31	Ground	Door mirror motor (LH)	Output	Door mirror (LH)	Operate (upward)	Battery voltage
(G)		upward output		,	Other than above	0
32	Ground	Door mirror motor (LH)	Output	Door mirror (LH)	Operate (leftward)	Battery voltage
(L)		leftward output			Other than above	0
33 (W)	Ground	Sensor power supply	Input	_		5
34 (V)	Ground	Power source (Fuse)	Input	_		Battery voltage
35 (L)	Ground	Tilt motor upward output	Output	Steering tilt	Operate (upward) Other than above	Battery voltage
36		Telescopic motor forward		Steering telescop-	Operate (forward)	Battery voltage
(GR)	Ground	output signal	Output	ic	Other than above	0
39 (W)	Ground	Power source (C/B)	Input	_		Battery voltage
40 (B)	Ground	Ground	_	_		0

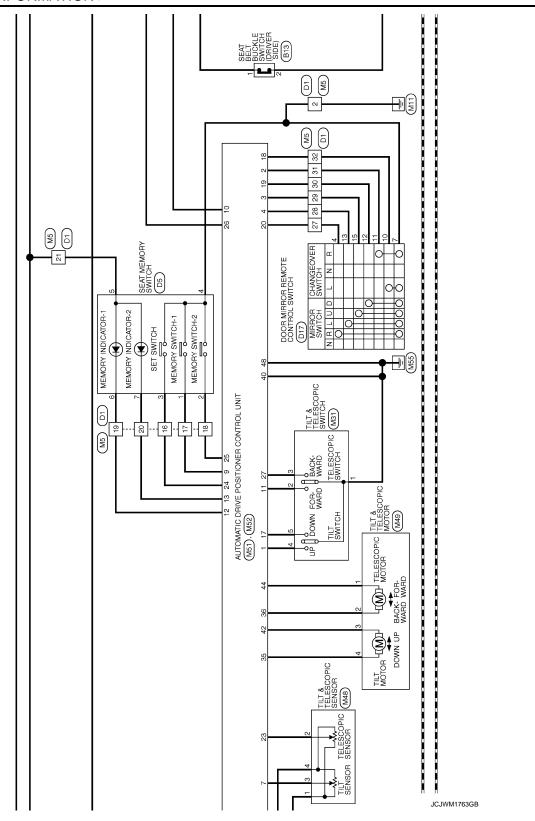
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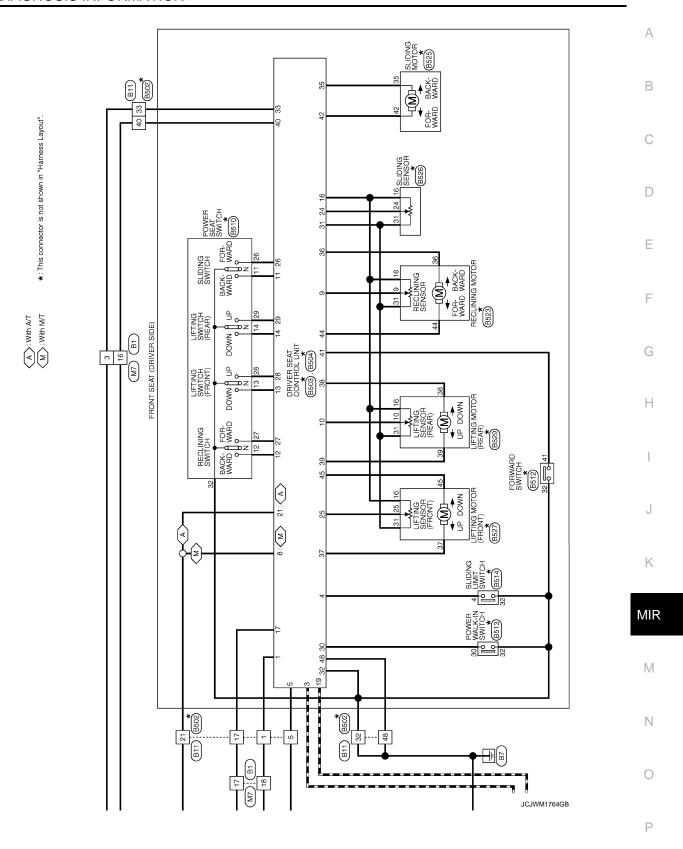
## < ECU DIAGNOSIS INFORMATION >

	nal No. e color)	Description		Condition	on.	Voltage (V)
+	_	Signal name	Input/ Output	Condition		(Approx.)
41 (Y)	Ground	Sensor ground	_	_		0
42 (BG)	Ground	Tilt motor downward out-	Output	Steering tilt	Operate (down- ward)	Battery voltage
(66)		put				0
44	Ground	Telescopic motor back-	Output	Steering telescop-	Operate (backward)	Battery voltage
(G)	Ground	ward output	Output	Output ic		0
48 (B)	Ground	Ground	_	_		0

# Wiring Diagram - AUTOMATIC DRIVE POSITIONER CONTROL SYSTEM -



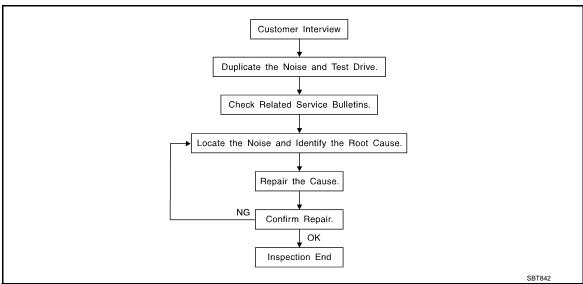




# SYMPTOM DIAGNOSIS

### SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow



#### **CUSTOMER INTERVIEW**

Interview the customer if possible, to determine the conditions that exist when the noise occurs. Use the Diagnostic Worksheet during the interview to document the facts and conditions when the noise occurs and any of customer's comments; refer to <a href="MIR-30">MIR-30</a>, "Diagnostic Worksheet". This information is necessary to duplicate the conditions that exist when the noise occurs.

- The customer may not be able to provide a detailed description or the location of the noise. Attempt to obtain all the facts and conditions that exist when the noise occurs (or does not occur).
- If there is more than one noise in the vehicle, perform a diagnosis and repair the noise that the customer is concerned about. This can be accomplished by performing a cruise test on the vehicle with the customer.
- After identifying the type of noise, isolate the noise in terms of its characteristics. The noise characteristics
  are provided so the customer, service adviser and technician are all speaking the same language when
  defining the noise.
- Squeak (Like tennis shoes on a clean floor)
   Squeak characteristics include the light contact/fast movement/brought on by road conditions/hard surfaces
   higher pitch noise/softer surfaces = lower pitch noises/edge to surface = chirping
- Creak (Like walking on an old wooden floor)
   Creak characteristics include firm contact/slow movement/twisting with a rotational movement/pitch dependent on materials/often brought on by activity.
- Rattle (Like shaking a baby rattle)
   Rattle characteristics include the fast repeated contact/vibration or similar movement/loose parts/missing clip or fastener/incorrect clearance.
- Knock (Like a knock on a door)

  Knock (Like a knock on a door)
  - Knock characteristics include hollow sounding/sometimes repeating/often brought on by driver action.
- Tick (Like a clock second hand)
   Tick characteristics include gentle contacting of light materials/loose components/can be caused by driver action or road conditions.
- Thump (Heavy, muffled knock noise)
   Thump characteristics include softer knock/dead sound often brought on by activity.
- Buzz (Like a bumblebee)
   Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending up on the person. A noise that a technician may judge as acceptable may be very irritating to the customer.
- Weather conditions, especially humidity and temperature, may have a great effect on noise level.

#### DUPLICATE THE NOISE AND TEST DRIVE

#### < SYMPTOM DIAGNOSIS >

If possible, drive the vehicle with the customer until the noise is duplicated. Note any additional information on the Diagnostic Worksheet regarding the conditions or location of the noise. This information can be used to duplicate the same conditions when the repair is reconfirmed.

If the noise can be duplicated easily during the test drive, to help identify the source of the noise, try to duplicate the noise with the vehicle stopped by doing one or all of the following:

- 1) Close a door.
- 2) Tap or push/pull around the area where the noise appears to be coming from.
- 3) Rev the engine.
- Use a floor jack to recreate vehicle "twist".
- 5) At idle, apply engine load (electrical load, half-clutch on M/T models, drive position on A/T models).
- 6) Raise the vehicle on a hoist and hit a tire with a rubber hammer.
- Drive the vehicle and attempt to duplicate the conditions the customer states exist when the noise occurs.
- If it is difficult to duplicate the noise, drive the vehicle slowly on an undulating or rough road to stress the vehicle body.

#### CHECK RELATED SERVICE BULLETINS

After verifying the customer concern or symptom, check ASIST for Technical Service Bulletins (TSBs) related to that concern or symptom.

If a TSB relates to the symptom, follow the procedure to repair the noise.

#### LOCATE THE NOISE AND IDENTIFY THE ROOT CAUSE

- 1. Narrow down the noise to a general area. To help pinpoint the source of the noise, use a listening tool (Chassis ear: J-39570, Engine ear and mechanics stethoscope).
- 2. Narrow down the noise to a more specific area and identify the cause of the noise by:
- Removing the components in the area that is are suspected to be the cause of the noise. Do not use too much force when removing clips and fasteners, otherwise clips and fastener can be broken
- or lost during the repair, resulting in the creation of new noise. Tapping or pushing/pulling the component that is are suspected to be the cause of the noise. Do not tap or push/pull the component with excessive force, otherwise the noise will be eliminated only tem-
- Feeling for a vibration by hand by touching the component(s) that is are suspected to be the cause of the
- Placing a piece of paper between components that are suspected to be the cause of the noise.
- Looking for loose components and contact marks. Refer to MIR-28, "Inspection Procedure".

#### REPAIR THE CAUSE

- If the cause is a loose component, tighten the component securely.
- If the cause is insufficient clearance between components:
- Separate components by repositioning or loosening and retightening the component, if possible.
- Insulate components with a suitable insulator such as urethane pads, foam blocks, felt cloth tape or urethane tape. A Nissan Squeak and Rattle Kit (J-43980) is available through the authorized Nissan Parts Department.

#### **CAUTION:**

#### Never use excessive force as many components are constructed of plastic and may be damaged. NOTE:

Always check with the Parts Department for the latest parts information.

The following materials are contained in the Nissan Squeak and Rattle Kit (J-43980). Each item can be ordered separately as needed.

URETHANE PADS [1.5 mm (0.059 in) thick]

Insulates connectors, harness, etc.

76268-9E005:  $100 \times 135$  mm  $(3.94 \times 5.31 \text{ in})/76884-71L01$ :  $60 \times 85$  mm  $(2.36 \times 3.35 \text{ in})/76884-71L01$ 

71L02:15  $\times$  25 mm (0.59  $\times$  0.98 in)

INSULATOR (Foam blocks)

Insulates components from contact. Can be used to fill space behind a panel.

73982-9E000: 45 mm (1.77 in) thick,  $50 \times 50$  mm (1.97  $\times$  1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick,  $50 \times 50$  mm (1.97  $\times$  1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30  $\times$  50 mm (1.18  $\times$  1.97in)

FELT CLOTHTAPE

Used to insulate where movement does not occur. Ideal for instrument panel applications.

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### < SYMPTOM DIAGNOSIS >

68370-4B000: 15  $\times$  25 mm (0.59  $\times$  0.98 in) pad/68239-13E00: 5 mm (0.20 in) wide tape roll

The following materials, not found in the kit, can also be used to repair squeaks and rattles.

**UHMW (TEFLON) TAPE** 

Insulates where slight movement is present. Ideal for instrument panel applications.

SILICONE GREASE

Used in place of UHMW tape that is be visible or does not fit. Will only last a few months.

SILICONE SPRAY

Used when grease cannot be applied.

**DUCT TAPE** 

Used to eliminate movement.

#### CONFIRM THE REPAIR

Confirm that the cause of a noise is repaired by test driving the vehicle. Operate the vehicle under the same conditions as when the noise originally occurred. Refer to the notes on the Diagnostic Worksheet.

### Inspection Procedure

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Refer to Table of Contents for specific component removal and installation information.

#### INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

- The cluster lid A and instrument panel
- 2. Acrylic lens and combination meter housing
- Instrument panel to front pillar garnish
- 4. Instrument panel to windshield
- 5. Instrument panel mounting pins
- 6. Wiring harnesses behind the combination meter
- 7. A/C defroster duct and duct joint

These incidents can usually be located by tapping or moving the components to duplicate the noise or by pressing on the components while driving to stop the noise. Most of these incidents can be repaired by applying felt cloth tape or silicon spray (in hard to reach areas). Urethane pads can be used to insulate wiring harness.

#### **CAUTION:**

Never use silicone spray to isolate a squeak or rattle. If the area is saturated with silicone, the recheck of repair becomes impossible.

#### **CENTER CONSOLE**

Components to pay attention to include:

- Shifter assembly cover to finisher
- 2. A/C control unit and cluster lid C
- 3. Wiring harnesses behind audio and A/C control unit

The instrument panel repair and isolation procedures also apply to the center console.

#### **DOORS**

Pay attention to the following:

- 1. Finisher and inner panel making a slapping noise
- 2. Inside handle escutcheon to door finisher
- Wiring harnesses tapping
- 4. Door striker out of alignment causing a popping noise on starts and stops

Tapping or moving the components or pressing on them while driving to duplicate the conditions can isolate many of these incidents. The areas can usually be insulated with felt cloth tape or insulator foam blocks from the Nissan Squeak and Rattle Kit (J-43980) to repair the noise.

#### **TRUNK**

Trunk noises are often caused by a loose jack or loose items put into the trunk by the customer. In addition look for the following:

- Trunk lid dumpers out of adjustment
- 2. Trunk lid striker out of adjustment

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#### < SYMPTOM DIAGNOSIS >

- The trunk lid torsion bars knocking together
- A loose license plate or bracket

Most of these incidents can be repaired by adjusting, securing or insulating the item(s) or component(s) causing the noise.

#### SUNROOF/HEADLINING

Noises in the sunroof/headlining area can often be traced to one of the following:

- Sunroof lid, rail, linkage or seals making a rattle or light knocking noise
- Sunvisor shaft shaking in the holder
- 3. Front or rear windshield touching headlining and squeaking

Again, pressing on the components to stop the noise while duplicating the conditions can isolate most of these incidents. Repairs usually consist of insulating with felt cloth tape.

#### SEATS

When isolating seat noise it's important to note the position the seats in and the load placed on the seat when the noise occurs. These conditions should be duplicated when verifying and isolating the cause of the noise. Cause of seat noise include:

- Headrest rods and holder
- A squeak between the seat pad cushion and frame
- The rear seatback lock and bracket

These noises can be isolated by moving or pressing on the suspected components while duplicating the conditions under which the noise occurs. Most of these incidents can be repaired by repositioning the component or applying urethane tape to the contact area.

UNDERHOOD

Some interior noise may be caused by components under the hood or on the engine wall. The noise is then transmitted into the passenger compartment.

Causes of transmitted underhood noise include:

- 1. Any component mounted to the engine wall
- 2. Components that pass through the engine wall
- Engine wall mounts and connectors 3.
- Loose radiator mounting pins
- Hood bumpers out of adjustment
- Hood striker out of adjustment

These noises can be difficult to isolate since they cannot be reached from the interior of the vehicle. The best method is to secure, move or insulate one component at a time and test drive the vehicle. Also, engine RPM or load can be changed to isolate the noise. Repairs can usually be made by moving, adjusting, securing, or insulating the component causing the noise.

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< SYMPTOM DIAGNOSIS >

### Diagnostic Worksheet

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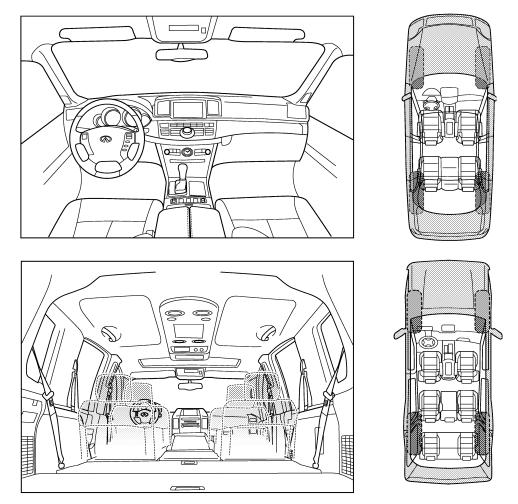
# SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

#### Dear Infiniti Customer:

We are concerned about your satisfaction with your Infiniti vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Infiniti right the first time, please take a moment to note the area of the vehicle where the squeak or rattle occurs and under what conditions. You may be asked to take a test drive with a service consultant or technician to ensure we confirm the noise you are hearing.

### I. WHERE DOES THE NOISE COME FROM? (circle the area of the vehicle)

The illustrations are for reference only, and may not reflect the actual configuration of your vehicle.



Continue to page 2 of the worksheet and briefly describe the location of the noise or rattle. In addition, please indicate the conditions which are present when the noise occurs.

II. WHEN DOES IT OCCUR? (please o	_					
anytime	after si	_				
1st time in the morning	☐ when it	_				
☐ only when it is cold outside ☐ only when it is hot outside	☐ ary or a	dusty condit	lions			
Only when it is not outside	□ ouilei.					
III. WHEN DRIVING:	IV. WHAT	TYPE OF I	NOISE			
through driveways	☐ squeak	(like tenni	s shoes o	n a clean floor)		
over rough roads	,	-	-	d wooden floor)		
over speed bumps		ike shaking				
only about mph		(like a knoc		•		
on acceleration		e a clock se		•		
coming to a stop	☐ thump	(heavy, mu	imea knoc	(K NOISE)		
I I on turne: lett right or either (circle)	□ buzz (li	ika a humb		,		
on turns: left, right or either (circle) with passengers or cargo	☐ buzz (li	ike a bumb		,		
with passengers or cargo	□ buzz (li	ike a bumb		,		
	_	ike a bumb		,		
□ with passengers or cargo     □ other:     □ after driving miles or r	_ minutes			,		
□ with passengers or cargo     □ other:     □ after driving miles or r  TO BE COMPLETED BY DEALERSH	_ minutes			,		
□ with passengers or cargo     □ other: miles or r     □ after driving miles or r  TO BE COMPLETED BY DEALERSH	_ minutes			,		
□ with passengers or cargo     □ other: miles or r     □ after driving miles or r  TO BE COMPLETED BY DEALERSH	_ minutes				<b>_</b>	
□ with passengers or cargo     □ other: miles or r     □ after driving miles or r  TO BE COMPLETED BY DEALERSH	_ minutes IP PERSONNE	L	le bee)	Initials of person performing		
□ with passengers or cargo     □ other:     □ after driving miles or r  TO BE COMPLETED BY DEALERSH Test Drive Notes:	_ minutes IP PERSONNE	L	le bee)	Initials of person		
□ with passengers or cargo     □ other:     □ after driving miles or r  TO BE COMPLETED BY DEALERSH Test Drive Notes:  Vehicle test driven with customer	_ minutes IP PERSONNE	L	le bee)	Initials of person		N
with passengers or cargo other: after driving miles or r  TO BE COMPLETED BY DEALERSH Test Drive Notes:  Vehicle test driven with customer - Noise verified on test drive	_ minutes IP PERSONNE	L	le bee)	Initials of person		N
□ with passengers or cargo     □ other:     □ after driving miles or r  TO BE COMPLETED BY DEALERSH Test Drive Notes:  Vehicle test driven with customer	minutes  IP PERSONNE	L	le bee)	Initials of person		N
with passengers or cargo other: after driving miles or r  TO BE COMPLETED BY DEALERSH Test Drive Notes:  Vehicle test driven with customer - Noise verified on test drive - Noise source located and repaired	minutes  IP PERSONNE	YES N	NO .	Initials of person		N

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### **PRECAUTIONS**

#### < PRECAUTION >

# **PRECAUTION**

### **PRECAUTIONS**

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

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

#### WARNING:

Always observe the following items for preventing accidental activation.

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision that would result in air bag inflation, 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 "SRS AIR BAG".
- Never use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

#### **WARNING:**

Always observe the following items for preventing accidental activation.

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

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## Precaution for Battery Service

Before disconnecting the battery, lower both the driver and passenger windows. This will prevent any interference between the window edge and the vehicle when the door is opened/closed. During normal operation, the window slightly raises and lowers automatically to prevent any window to vehicle interference. The automatic window function will not work with the battery disconnected.

### **PREPARATION**

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# **PREPARATION**

Commercial Service Tools

	Tool name	Description	
Remover tool	JMKIA3050ZZ	Removes the clips, pawls and metal clips	

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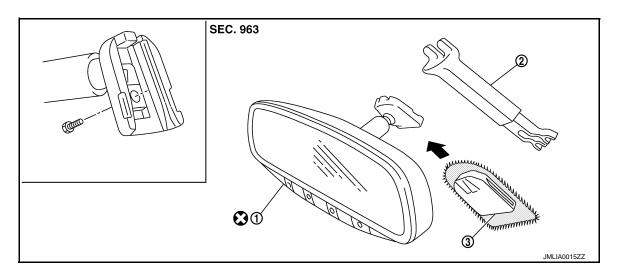
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# REMOVAL AND INSTALLATION

# **INSIDE MIRROR**

Exploded View



- 1. Inside mirror
- 2. Inside mirror finisher (if equipped)
- 3. Mirror base

Refer to GI-4, "Components" for symbols in the figure.

### Removal and Installation

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#### **REMOVAL**

- 1. Remove inside mirror finisher (if equipped).
- 2. Remove nut of mirror base.
- 3. Slide the mirror upward to remove.
- 4. Disconnect the connector (if equipped).

#### **INSTALLATION**

Install in the reverse order of removal.

### **DOOR MIRROR**

### < REMOVAL AND INSTALLATION >

## **DOOR MIRROR**

# DOOR MIRROR ASSEMBLY

DOOR MIRROR ASSEMBLY: Exploded View

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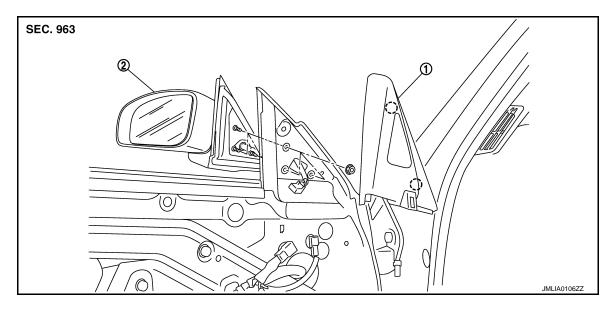
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### **REMOVAL**

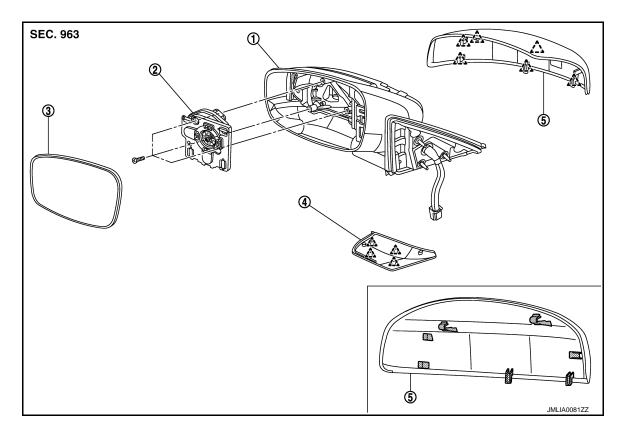


Corner cover

2. Door mirror assembly

( ) : Clip

### **DISASSEMBLY**



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#### DOOR MIRROR

#### < REMOVAL AND INSTALLATION >

- 1. Mirror assembly
- 2. Door mirror actuator
- 3. Glass mirror

4. Base cover

5. Door mirror cover

? : Pawl

### DOOR MIRROR ASSEMBLY: Removal and Installation

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#### **REMOVAL**

- 1. Remove the door finisher. Refer to <a href="INT-12">INT-12</a>, "Removal and Installation".
- 2. Remove the corner cover.
- 3. Disconnect the door mirror harness connector.
- 4. Remove the door mirror mounting nuts, and remove the door mirror assembly.

### **INSTALLATION**

Install in the reverse order of removal.

### DOOR MIRROR ASSEMBLY: Disassembly and Assembly

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#### DISASSEMBLY

- 1. Remove the pawls and disassemble the base cover.
- 2. Remove the glass mirror. Refer to MIR-37, "GLASS MIRROR: Disassembly and Assembly".
- 3. Remove the mirror cover. Refer to MIR-38, "DOOR MIRROR COVER: Disassembly and Assembly".
- 4. Remove the screws and mirror actuator from the housing assembly.

#### **ASSEMBLY**

Assemble in the reverse order of disassemble.

#### **CAUTION:**

After installation, visually check that pawls are securely engaged.

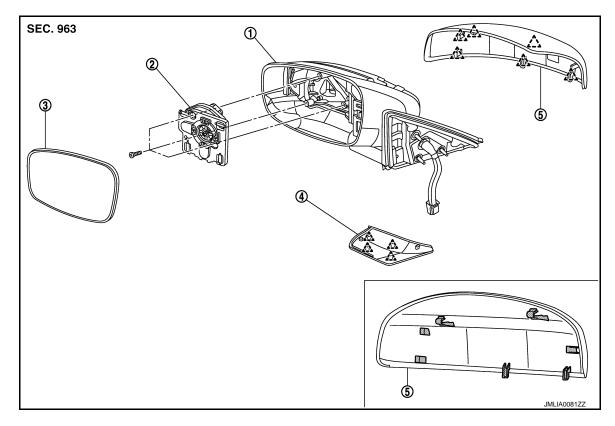
**GLASS MIRROR** 

DISASSEMBLY

GLASS MIRROR: Exploded View

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- Mirror assembly
- Base cover
- : Pawl

- Door mirror actuator
- Door mirror cover
- Glass mirror

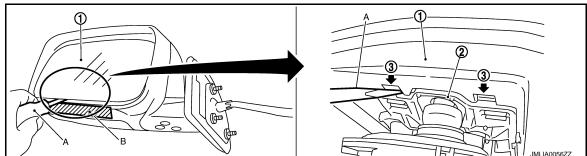
# GLASS MIRROR: Disassembly and Assembly

#### DISASSEMBLY

- 1. Remove the pawls and disassemble the base cover.
- Place the glass mirror upward.
- 3. Put a strip of protective tape (B) on housing assembly.
- As shown in the figure, insert a small flat-bladed screwdriver (A) into the recess between glass mirror (1) and actuator (2). Push up two pawls (3) to remove glass mirror lower half side.

### NOTE:

- When pushing up pawls do not attempt to use one recess only. Be sure to push up with both recesses.
- Insert a small flat-bladed screwdriver into recesses, and push up while rotating (twisting) to make work easier.



- Remove both terminals of mirror heater attachment.
- Lightly lift up lower side of glass mirror, and detach two pawls of upper side as if pulling it out. Disassemble glass mirror from actuator.

#### NOTE:

Be certain not to allow grease on sealing agent in center of mirror or back side of glass mirror.

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#### < REMOVAL AND INSTALLATION >

#### **ASSEMBLY**

Assemble in the reverse order of disassemble.

#### **CAUTION:**

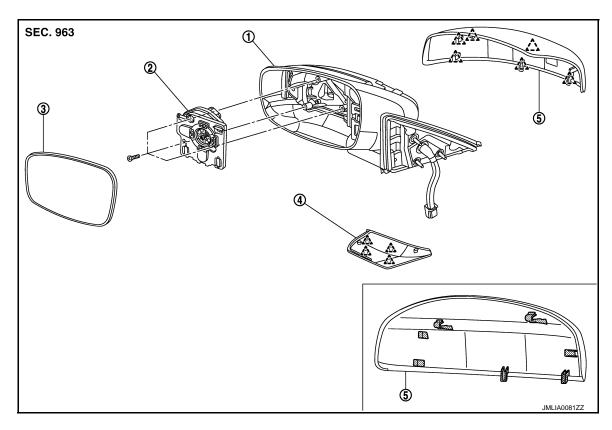
After installation, visually check that pawls are securely engaged.

DOOR MIRROR COVER

DOOR MIRROR COVER: Exploded View

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#### DISASSEMBLY



- 1. Mirror assembly
- 2. Door mirror actuator
- 3. Glass mirror

Base cover

5. Door mirror cover

^ : Pawl

# DOOR MIRROR COVER: Disassembly and Assembly

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#### **CAUTION:**

Never damage the mirror bodies.

### **DISASSEMBLY**

- 1. Remove the glass mirror. Refer to MIR-37, "GLASS MIRROR: Disassembly and Assembly".
- 2. Remove the pawls, and disassemble the door mirror cover from the mirror assembly.

#### **ASSEMBLY**

Install in the reverse order of removal.

#### **CAUTION:**

After installation, visually check that pawls are securely engaged.

### DOOR MIRROR REMOTE CONTROL SWITCH

< REMOVAL AND INSTALLATION >

## DOOR MIRROR REMOTE CONTROL SWITCH

Exploded View

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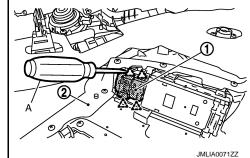
Refer to INT-12, "Exploded View"

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## Removal and Installation

### **REMOVAL**

- 1. Remove the power window main switch finisher (2). Refer to PWC-83, "Removal and Installation"
- 2. Remove door mirror remote control switch (1) from power window main switch finisher (2) using remover tool (A).



: Pawl

### **INSTALLATION**

Install in the reverse order of removal.

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