

SECTION **MIR**
MIRRORS

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DOOR MIRROR SYSTEM

< SYSTEM DESCRIPTION >

SYSTEM DESCRIPTION

DOOR MIRROR SYSTEM

Description

INFOID:000000008160351

In regards to the Automatic drive position with door mirror system, it refer to [ADP-19, "MANUAL FUNCTION : System Description"](#).

Component Description

INFOID:000000008160352

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:000000008160353

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:000000008160354

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.

DOOR MIRROR


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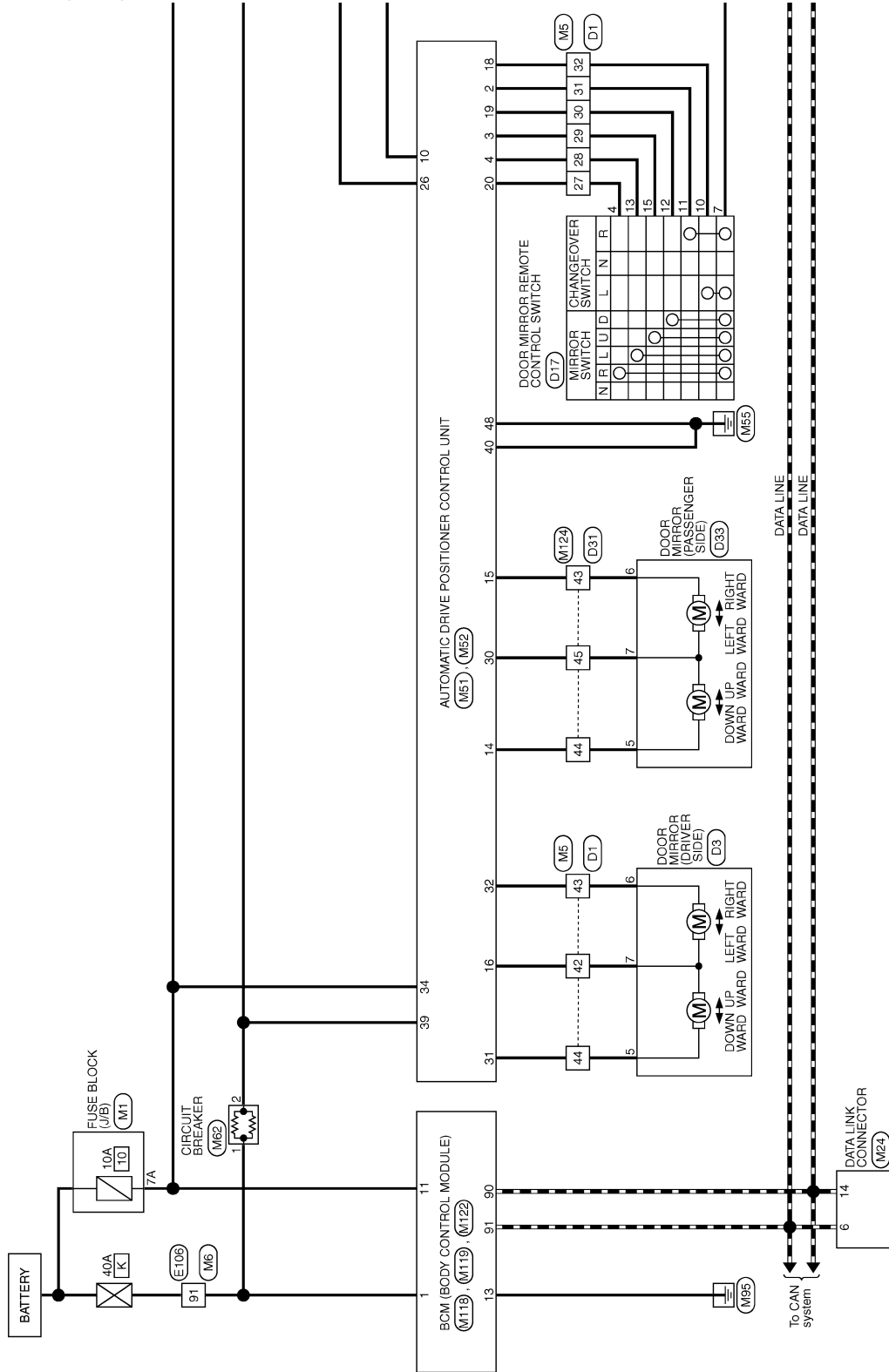
DOOR MIRROR

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

INFOID:000000008160355

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

DOOR MIRROR (WITH AUTOMATIC DRIVE POSITIONER)



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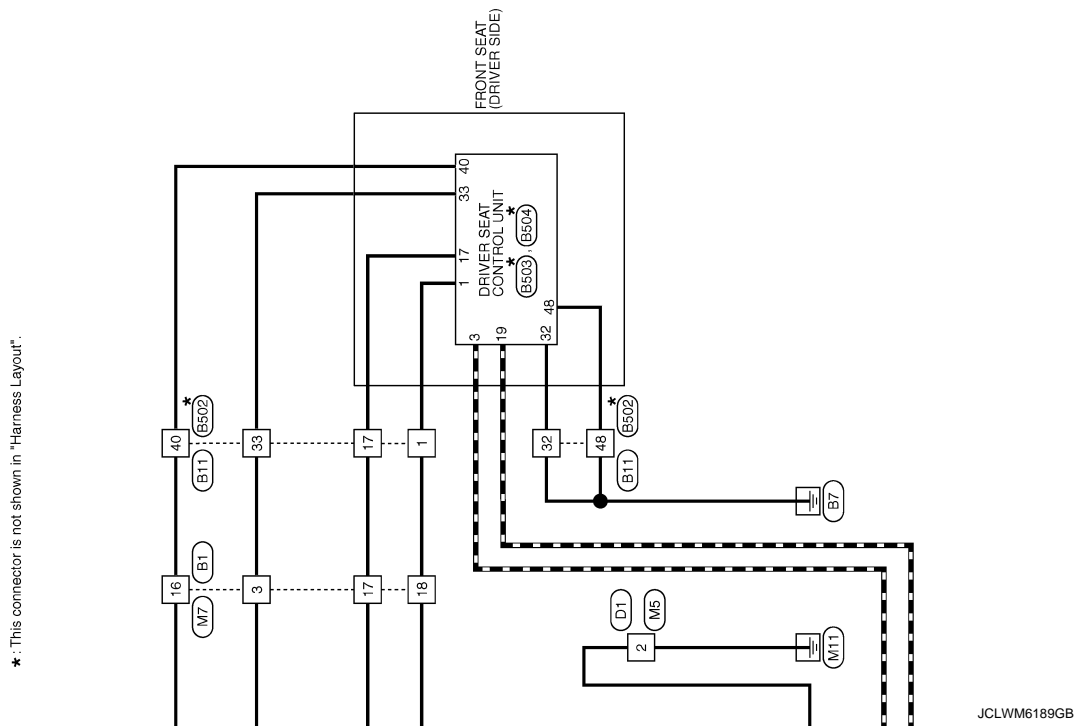
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DOOR MIRROR

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

DOOR MIRROR

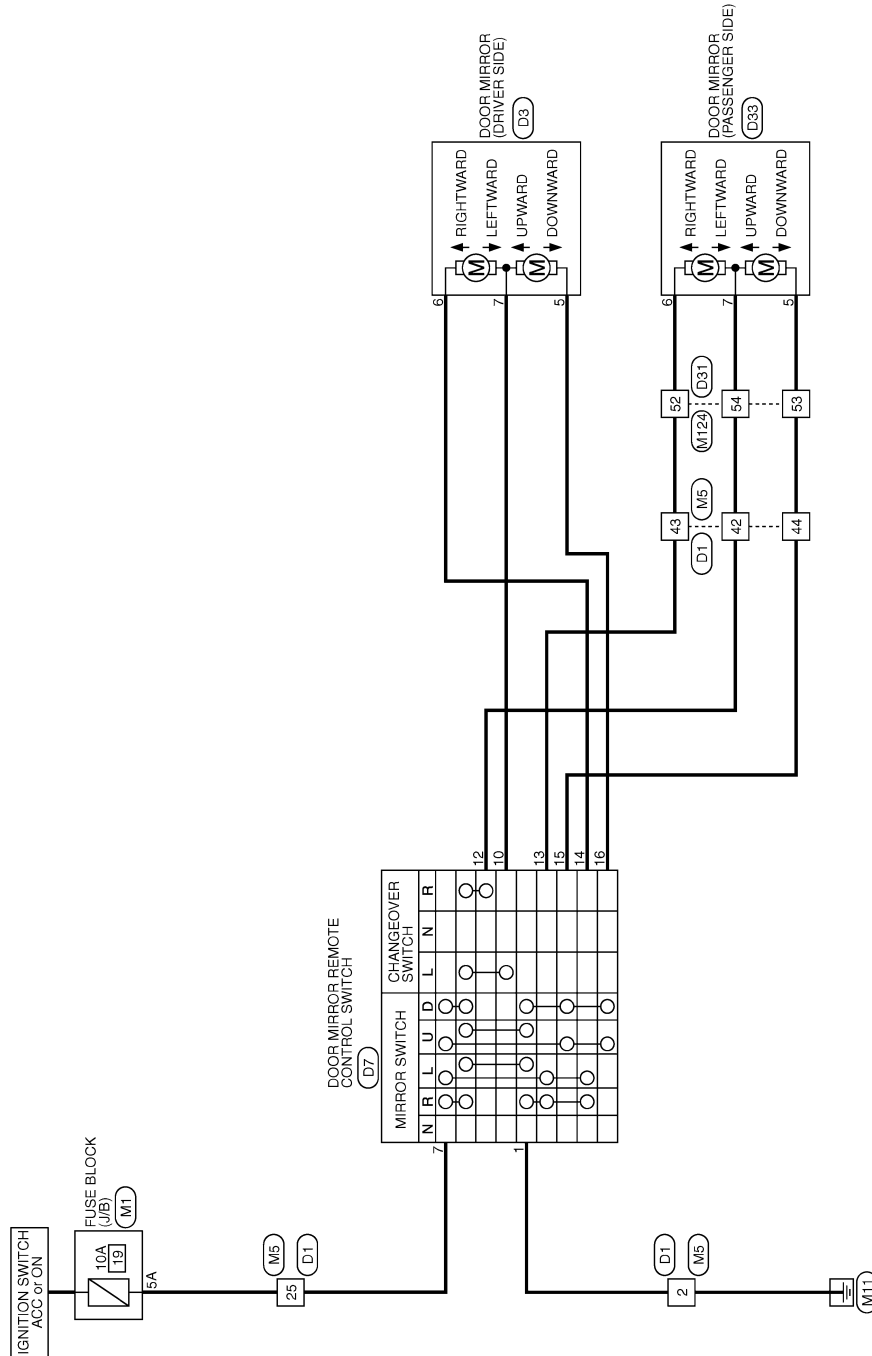
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TIONER) -

INFOID:000000008160356

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

DOOR MIRROR (WITHOUT AUTOMATIC DRIVE POSITIONER)



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
AUTO ANTI-DAZZLING INSIDE MIRROR SYSTEM



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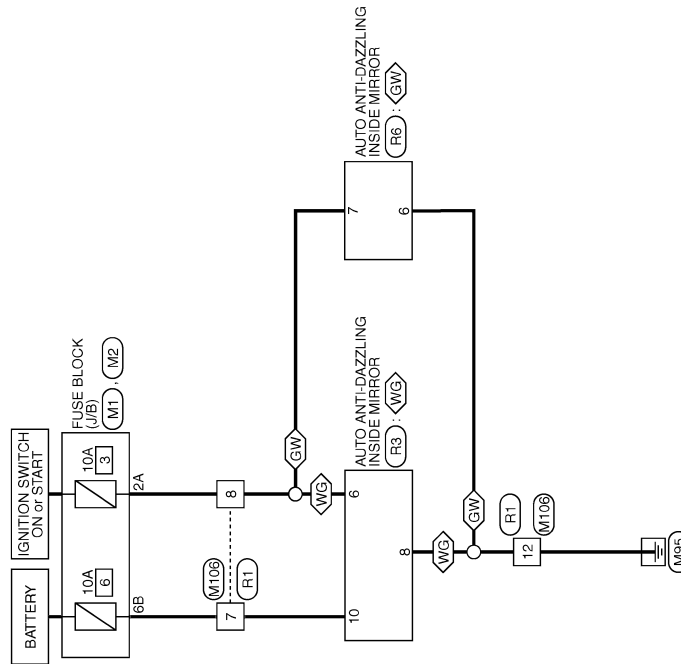
AUTO ANTI-DAZZLING INSIDE MIRROR SYSTEM

Wiring Diagram - INSIDE MIRROR SYSTEM -

INFOID:000000008160357

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

 : With UGDO
 : Without UGDO



INSIDE MIRROR

2011/07/13

JRLWC1008GB

DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

Reference Value

INFOID:000000008814781

VALUES ON THE DIAGNOSIS TOOL

NOTE:

The following table includes information (items) inapplicable to this vehicle. For information (items) applicable to this vehicle, refer to CONSULT display items.

CONSULT MONITOR ITEM

Monitor Item	Condition	Value/Status	
SET SW	Set switch	Push	ON
		Release	OFF
MEMORY SW1	Memory switch 1	Push	ON
		Release	OFF
MEMORY SW2	Memory switch 2	Push	ON
		Release	OFF
SLIDE SW-FR	Sliding switch (front)	Operate	ON
		Release	OFF
SLIDE SW-RR	Sliding switch (rear)	Operate	ON
		Release	OFF
RECLN SW-FR	Reclining switch (front)	Operate	ON
		Release	OFF
RECLN SW-RR	Reclining switch (rear)	Operate	ON
		Release	OFF
LIFT FR SW-UP	Lifting switch front (up)	Operate	ON
		Release	OFF
LIFT FR SW-DN	Lifting switch front (down)	Operate	ON
		Release	OFF
LIFT RR SW-UP	Lifting switch rear (up)	Operate	ON
		Release	OFF
LIFT RR SW-DN	Lifting switch rear (down)	Operate	ON
		Release	OFF
MIR CON SW-UP	Mirror switch	Up	ON
		Other than above	OFF
MIR CON SW-DN	Mirror switch	Down	ON
		Other than above	OFF
MIR CON SW-RH	Mirror switch	Right	ON
		Other than above	OFF
MIR CON SW-LH	Mirror switch	Left	ON
		Other than above	OFF
MIR CHNG SW-R	Changeover switch	Right	ON
		Other than above	OFF
MIR CHNG SW-L	Changeover switch	Left	ON
		Other than above	OFF

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DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition		Value/Status
TILT SW-UP	Tilt switch	Up	ON
		Other than above	OFF
TILT SW-DOWN	Tilt switch	Down	ON
		Other than above	OFF
TELESCO SW-FR	Telescopic switch	Forward	ON
		Other than above	OFF
TELESCO SW-RR	Tilt switch	Backward	ON
		Other than above	OFF
FORWARD SW	Seat back	Folded down	ON
		Other than above	OFF
WALK-IN SW	Power walk-in switch	Pressed	ON
		Other than above	OFF
FWD LIMIT SW	Seat sliding	Front edge	ON
		Other than above	OFF
SEAT BELT SW	Seat belt	Fastened	ON
		Other than above	OFF
DETENT SW* ¹	A/T selector lever	P position	OFF
		Other than above	ON
PARK BRAKE SW* ²	Parking brake	Applied	ON
		Release	OFF
STARTER SW	Ignition position	Cranking	ON
		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
RECLN PULSE	Seat reclining	Forward	The numeral value decreases * ³
		Backward	The numeral value increases * ³
		Other than above	No change to numeral value * ³
LIFT FR PULSE	Seat lifter (front)	Up	The numeral value decreases * ³
		Down	The numeral value increases * ³
		Other than above	No change to numeral value * ³
LIFT RR PULSE	Seat lifter (rear)	Up	The numeral value decreases * ³
		Down	The numeral value increases * ³
		Other than above	No change to numeral value * ³
MIR/SEN RH U-D	Door mirror (passenger 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)	

DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

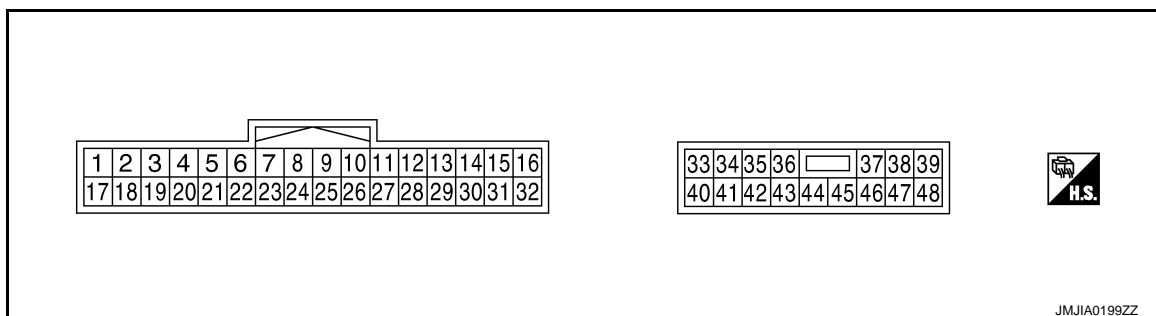
Monitor Item	Condition	Value/Status
TILT SEN	Tilt position	Change between 1.2 (close to top) 3.4 (close to bottom)
TELESCO SEN	Telescopic position	Change between 3.4 (close to top) 0.8 (close to bottom)

*1: A/T model

*2: M/T model

*3: The value at the position attained when the battery is connected is regarded as 32768.

TERMINAL LAYOUT

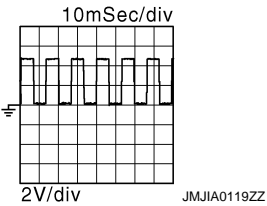
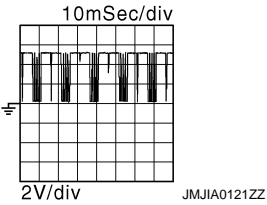
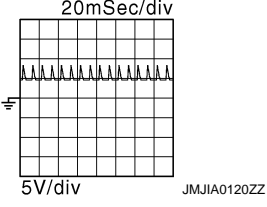
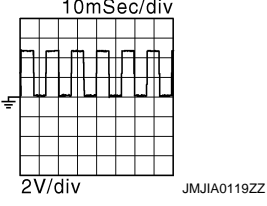


PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx)	
+	-	Signal name	Input/ Out- put			
1 (L/W)	Ground	UART communica- tion (RX)	Input	Ignition switch ON	 2mSec/div 2V/div JMJA0118ZZ	
3 (R/Y)	—	CAN-H	—	—	—	
4 (O/B)	Ground	Sliding limit switch signal	Input	Seat sliding front edge	0	
				Seat switch & power walk-in switch is pressed	5	
5 (L)	Ground	Seat belt buckle switch signal (driv- er side)	Input	Seat belt fastened & seat switch pressed	5	
				Other than above	0	
8 (L/Y)	Ground	Parking brake switch signal	Input	Parking brake	Applied	0
					Release	Battery voltage
9 (W/G)	Ground	Reclining sensor signal	Input	Seat reclining	Operate	 10mSec/div 2V/div JMJA0119ZZ
					Stop	0 or 5

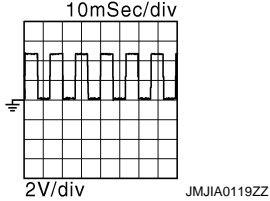
DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx)
+	-	Signal name	Input/ Output		
10 (P/B)	Ground	Lifting sensor (rear) signal	Input	Seat lifting (rear)	Operate 
					Stop
11 (BR)	Ground	Sliding switch backward signal	Input	Sliding switch	Operate (backward)
					Release
12 (SB)	Ground	Reclining switch backward signal	Input	Reclining switch	Operate (backward)
					Release
13 (LG/R)	Ground	Lifting switch (front) downward signal	Input	Lifting switch (front)	Operate (downward)
					Release
14 (G/B)	Ground	Lifting switch (rear) downward signal	Input	Lifting switch (rear)	Operate (downward)
					Release
16 (O)	Ground	Sensor power sup- ply	Output	—	Battery voltage
17 (Y/R)	Ground	UART communica- tion (TX)	Output	Ignition switch ON	
19 (V)	—	CAN-L	—	—	—
21 (L/Y)	Ground	Detention switch switch	Input	A/T selector le- ver	P position
					Except P position 
24 (R)	Ground	Sliding sensor sig- nal	Input	Seat sliding	Operate 
					Stop

DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx)	
+	-	Signal name	Input/ Out- put			
25 (Y/B)	Ground	Lifting sensor (front) signal	Input	Seat lifting (front)	Operate 	
					Stop	0 or 5
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
					Release	Battery voltage
28 (W/B)	Ground	Lifting switch (front) upward signal	Input	Seat lifting switch (front)	Operate (upward)	0
					Release	Battery voltage
29 (P/L)	Ground	Lifting switch (rear) upward signal	Input	Seat lifting switch (rear)	Operate (upward)	0
					Release	Battery voltage
30 (P)	Ground	Power walk-in switch signal	Input	Power walk-in switch	Pressed	0
					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- put	Seat sliding	Operate (forward)	Battery voltage
					Release	0
36 (G/Y)	Ground	Reclining motor for- ward output signal	Out- put	Seat reclining	Operate (forward)	Battery voltage
					Release	0
37 (G/W)	Ground	Lifting motor (front) downward output	Out- put	Seat lifting (front)	Operate (downward)	Battery voltage
					Stop	0
38 (L/Y)	Ground	Lifting motor (rear) upward output	Out- put	Seat lifting (rear)	Operate (upward)	Battery voltage
					Stop	0
39 (R/B)	Ground	Lifting motor (rear) downward output	Out- put	Seat lifting (rear)	Operate (downward)	Battery voltage
					Stop	0
40 (R/W)	Ground	Power source (Fuse)	Input	—	Battery voltage	

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DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >


Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx)
+	-	Signal name	Input/ Out- put		
41 (Y/G)	Ground	Forward switch signal	Input	Seat back is folded down and power walk-in switch pressed	0
				Seat back is fold up and seat reclining is operation	battery voltage
				Seat back is fold up and power walk-in switch is pressed	5
42 (W)	Ground	Sliding motor backward output	Output	Seat sliding	Operate (backward) Battery voltage
				Stop	0
44 (P)	Ground	Reclining motor backward output	Output	Seat reclining	Operate (backward) Battery voltage
				Stop	0
45 (L/R)	Ground	Lifting motor (front) upward output	Output	Seat lifting (front)	Operate (upward) Battery voltage
				Stop	0
48 (B)	Ground	Ground (power)	—	—	0

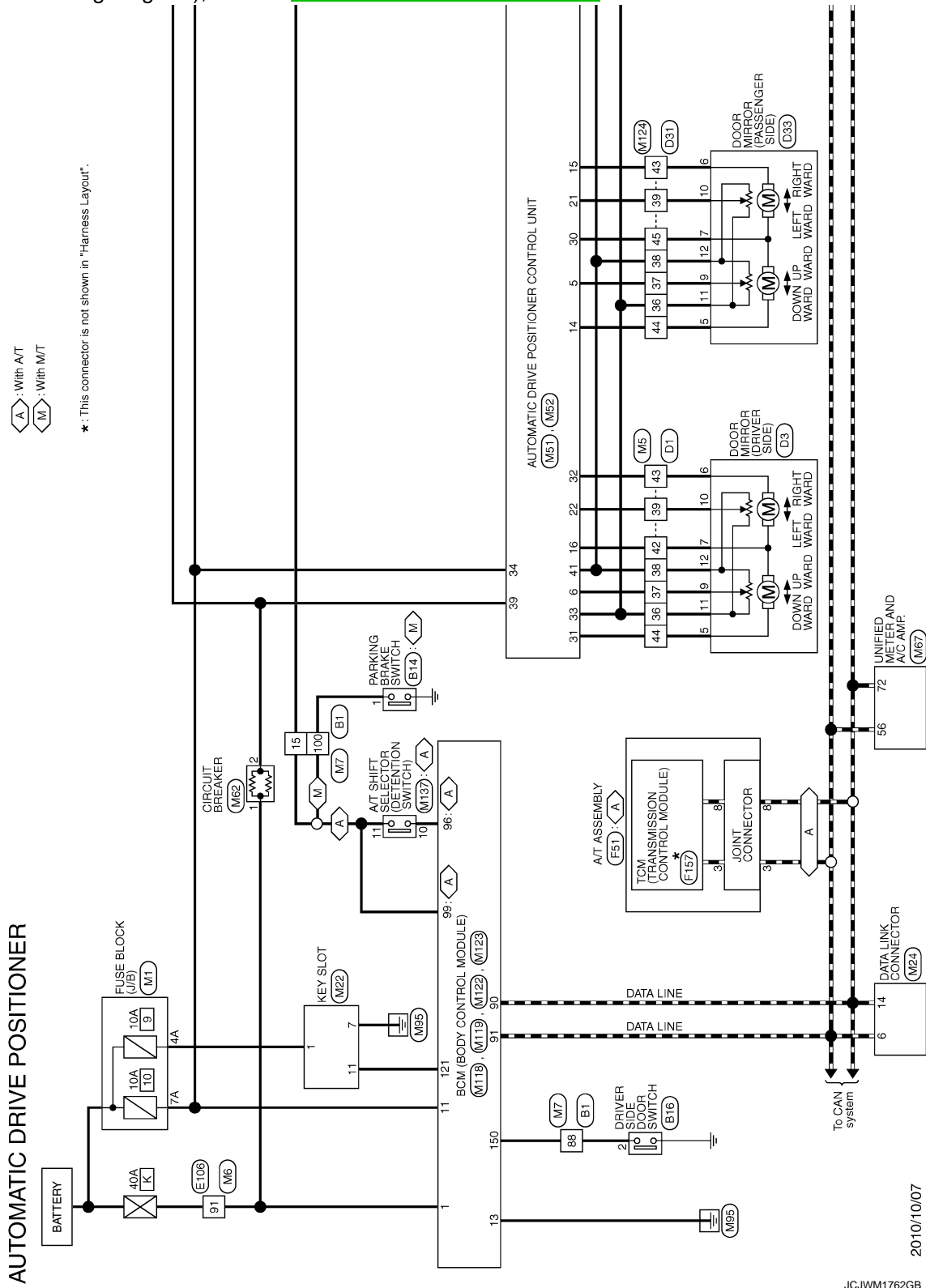
DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

Wiring Diagram - AUTOMATIC DRIVE POSITIONER CONTROL SYSTEM -

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



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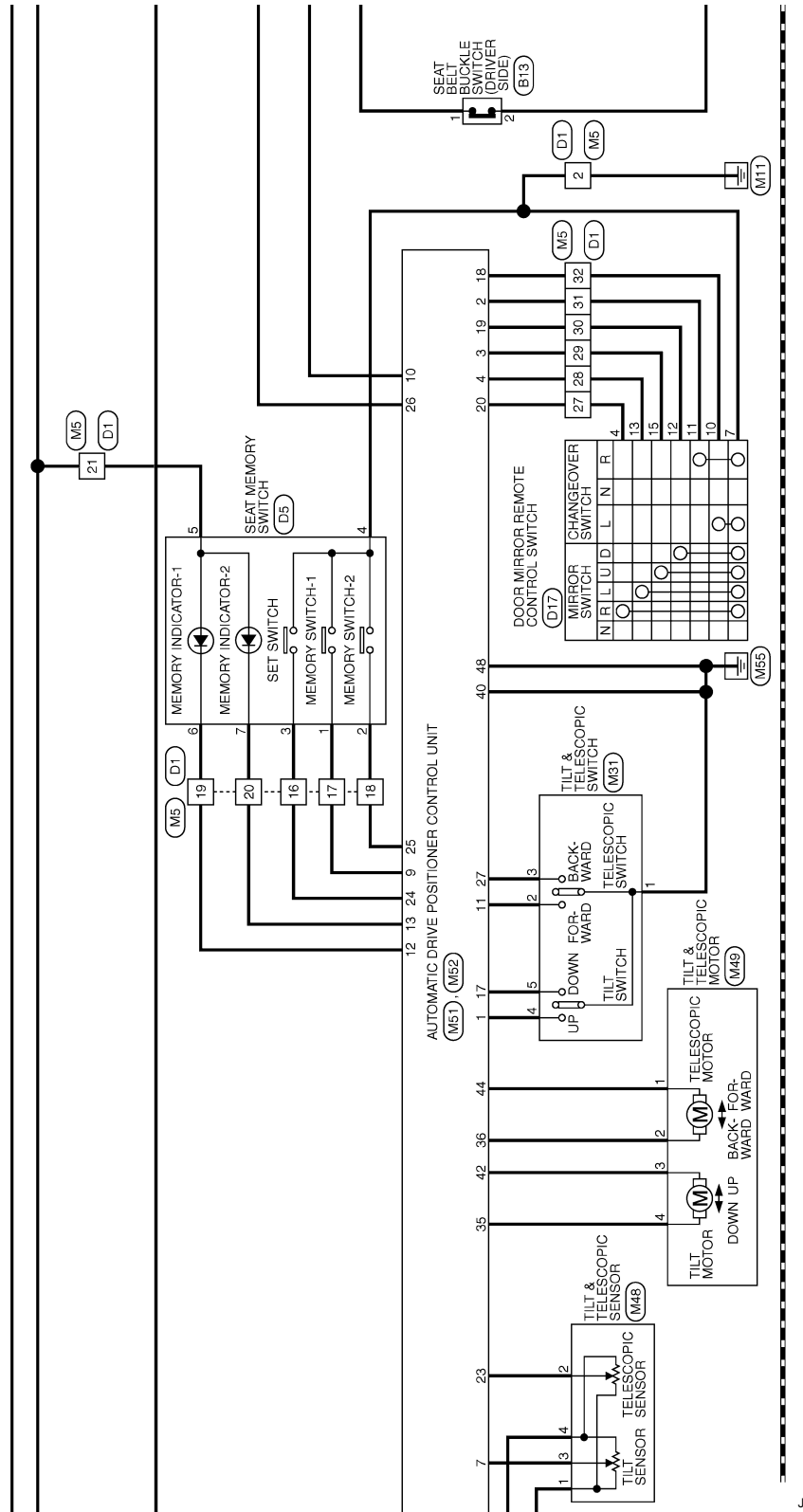
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DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

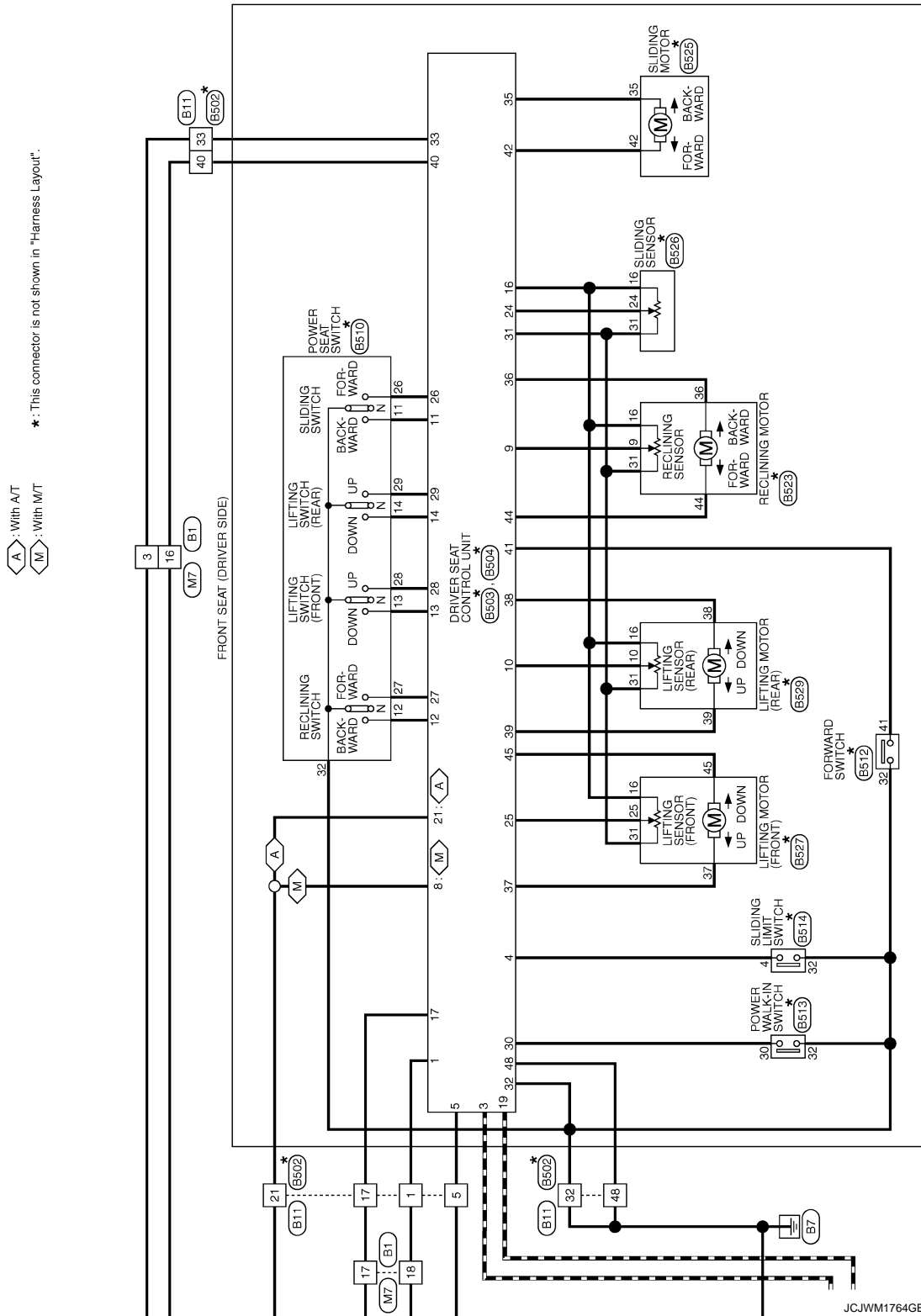
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DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >



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Fail Safe

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

INFOID:000000008814783

DRIVER SEAT CONTROL UNIT (WITH AUTOMATIC DRIVE POSITIONER)

< ECU DIAGNOSIS INFORMATION >

Operating in fail-safe mode	Malfunction Item	Related DTC	Diagnosis
Only manual functions operate normally.	CAN communication*1	U1000	With ADP: ADP-48
			Without ADP: ADP-48
	Tilt sensor*1	B2118	With ADP: ADP-53
			Without ADP: ADP-53
	Telescopic sensor	B2119	ADP-56
	Detent switch	B2126	ADP-59
Parking brake switch	B2127	ADP-61	
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	ADP-51

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

DTC Index

INFOID:000000008814784

CONSULT display	Timing*1		Item	Reference page
	Current malfunction	Previous malfunction		
CAN COMM CIRCUIT*2 [U1000]	0	1-39	CAN communication	With ADP: ADP-48
				Without ADP: ADP-48
SEAT SLIDE*2 [B2112]	0	1-39	Seat slide motor output	With ADP: ADP-49
				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*2 [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

*1:

- 0: Current malfunction is present
- 1-39: 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.

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

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

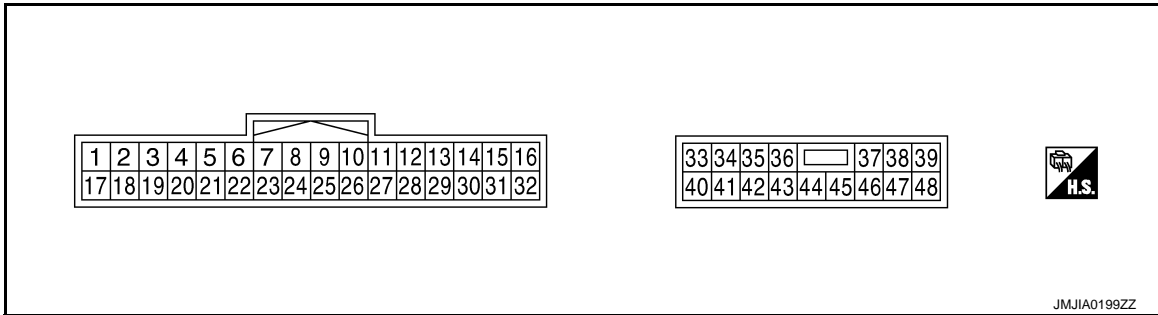
< ECU DIAGNOSIS INFORMATION >

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

Reference Value

INFOID:000000008814785

TERMINAL LAYOUT



PHYSICAL VALUES

Terminal No. (Wire color)		Description		Condition		Voltage (V) (Approx.)
+	-	Signal name	Input/ Output			
1 (Y)	Ground	Tilt switch upward signal	Input	Tilt switch	Operate (upward)	0
					Other than above	5
2 (LG)	Ground	Changeover switch RH signal	Input	Changeover switch position	RH	0
					Neutral or LH	5
3 (G)	Ground	Mirror switch upward signal	Input	Mirror switch	Operated (upward)	0
					Other than above	5
4 (Y)	Ground	Mirror switch leftward signal	Input	Mirror switch	Operated (leftward)	0
					Other than above	5
5 (R)	Ground	Door mirror sensor (RH) upward/downward signal	Input	Mirror face (door mirror RH)	Change between 3.4 (close to peak) 0.6 (close to valley)	
6 (GR)	Ground	Door mirror sensor (LH) upward/downward signal	Input	Mirror face (door mirror LH)	Change between 3.4 (close to peak) 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 (BR)	Ground	Memory switch 1 signal	Input	Memory switch 1	Press	0
					Other than above	5
10 (V)	Ground	UART communication (TX)	Output	Ignition switch ON		

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx.)	
+	-	Signal name	Input/ Output			
11 (GR)	Ground	Telescopic switch forward signal	Input	Telescopic switch	Operate (forward)	0
					Other than above	5
12 (BG)	Ground	Memory indicator 1 signal	Output	Memory indicator 1	Illuminate	1
					Other than above	Battery voltage
13 (P)	Ground	Memory indicator 2 signal	Output	Memory indicator 2	Illuminate	1
					Other than above	Battery voltage
14 (W)	Ground	Door mirror motor (RH) upward output	Output	Door mirror RH	Operate (upward)	Battery voltage
					Other than above	0
15 (BG)	Ground	Door mirror motor (RH) leftward output	Output	Door mirror RH	Operate (leftward)	Battery voltage
					Other than above	0
16 (Y)	Ground	Door mirror motor (LH) downward output	Output	Door mirror (LH)	Operate (downward)	Battery voltage
					Other than above	0
		Door mirror motor (LH) rightward output			Operate (rightward)	Battery voltage
					Other than above	0
17 (BR)	Ground	Tilt switch downward signal	Input	Tilt switch	Operate (downward)	0
					Other than above	5
18 (W)	Ground	Changeover switch LH signal	Input	Changeover switch position	LH	0
					Neutral or RH	5
19 (SB)	Ground	Mirror switch downward signal	Input	Mirror switch	Operate (downward)	0
					Other than above	5
20 (L)	Ground	Mirror switch rightward signal	Input	Mirror switch	Operate (rightward)	0
					Other than above	5
21 (L)	Ground	Door mirror sensor (RH) leftward/rightward signal	Input	Door mirror RH position	Change between 3.4 (close to left edge) 0.6 (close to right edge)	
22 (B)	Ground	Door mirror sensor (LH) leftward/rightward signal	Input	Door mirror LH position	Change between 0.6 (close to left edge) 3.4 (close to right edge)	
23 (P)	Ground	Telescopic sensor signal	Input	Telescopic position	Change between 0.8 (close to top) 4.4 (close to bottom)	

AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition	Voltage (V) (Approx.)	
+	-	Signal name	Input/ Output			
24 (R)	Ground	Set switch signal	Input	Set switch	Press	0
					Other than above	5
25 (V)	Ground	Memory switch 2 signal	Input	Memory switch 2	Press	0
					Other than above	5
26 (P)	Ground	UART communication (RX)	Input	Ignition switch ON		
27 (G)	Ground	Telescopic switch backward signal	Input	Telescopic switch	Operate (backward)	0
					Other than above	5
30 (SB)	Ground	Door mirror motor (RH) downward output	Output	Door mirror (RH)	Operate (downward)	Battery voltage
					Other than above	0
		Door mirror motor (RH) rightward output			Operate (rightward)	Battery voltage
					Other than above	0
31 (G)	Ground	Door mirror motor (LH) upward output	Output	Door mirror (LH)	Operate (upward)	Battery voltage
					Other than above	0
32 (L)	Ground	Door mirror motor (LH) leftward output	Output	Door mirror (LH)	Operate (leftward)	Battery voltage
					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)	Battery voltage
					Other than above	0
36 (GR)	Ground	Telescopic motor forward output signal	Output	Steering telescopic	Operate (forward)	Battery voltage
					Other than above	0
39 (W)	Ground	Power source (C/B)	Input	—	Battery voltage	
40 (B)	Ground	Ground	—	—	0	

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AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

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

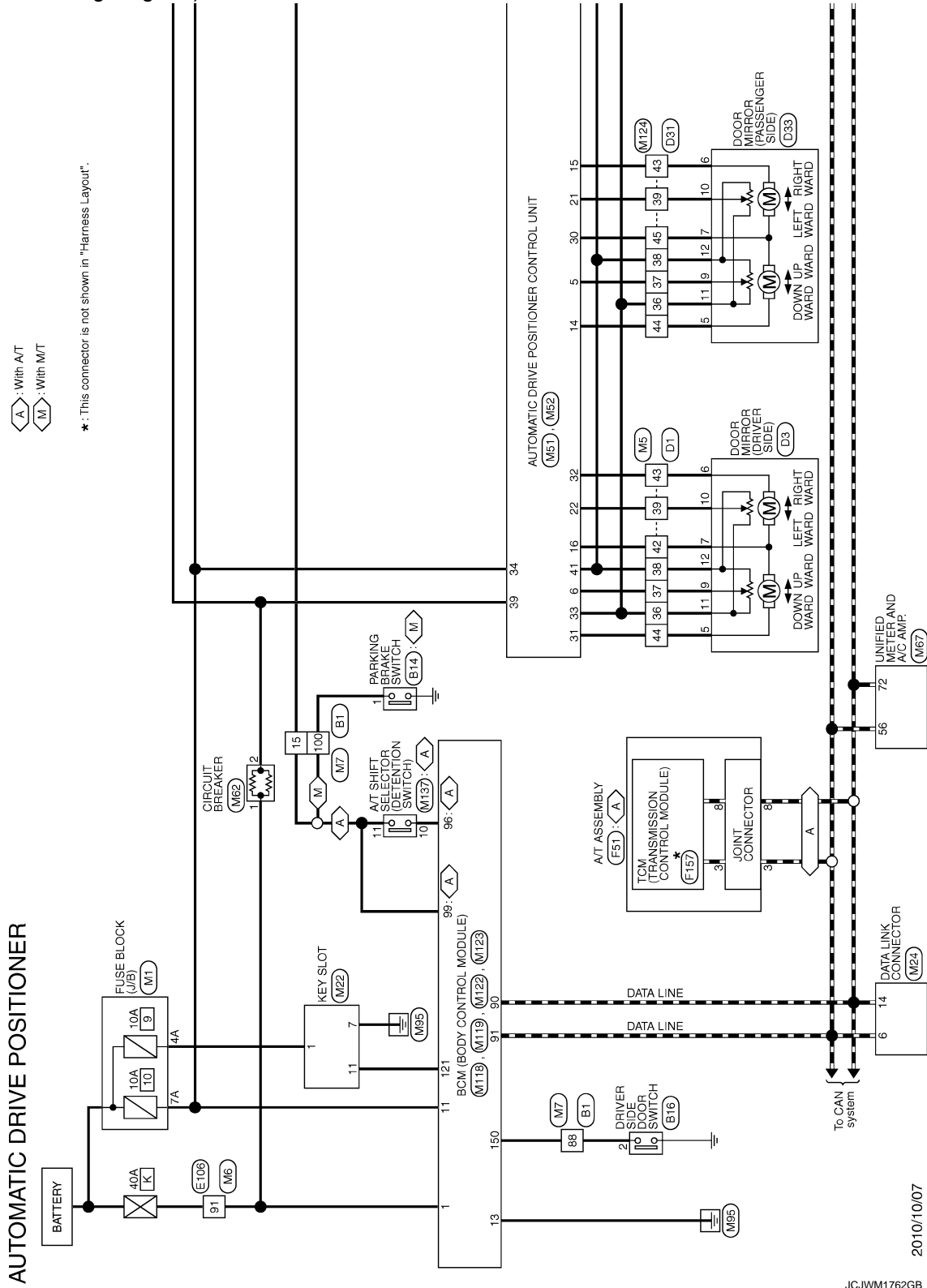
AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >

Wiring Diagram - AUTOMATIC DRIVE POSITIONER CONTROL SYSTEM -

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



2010/10/07

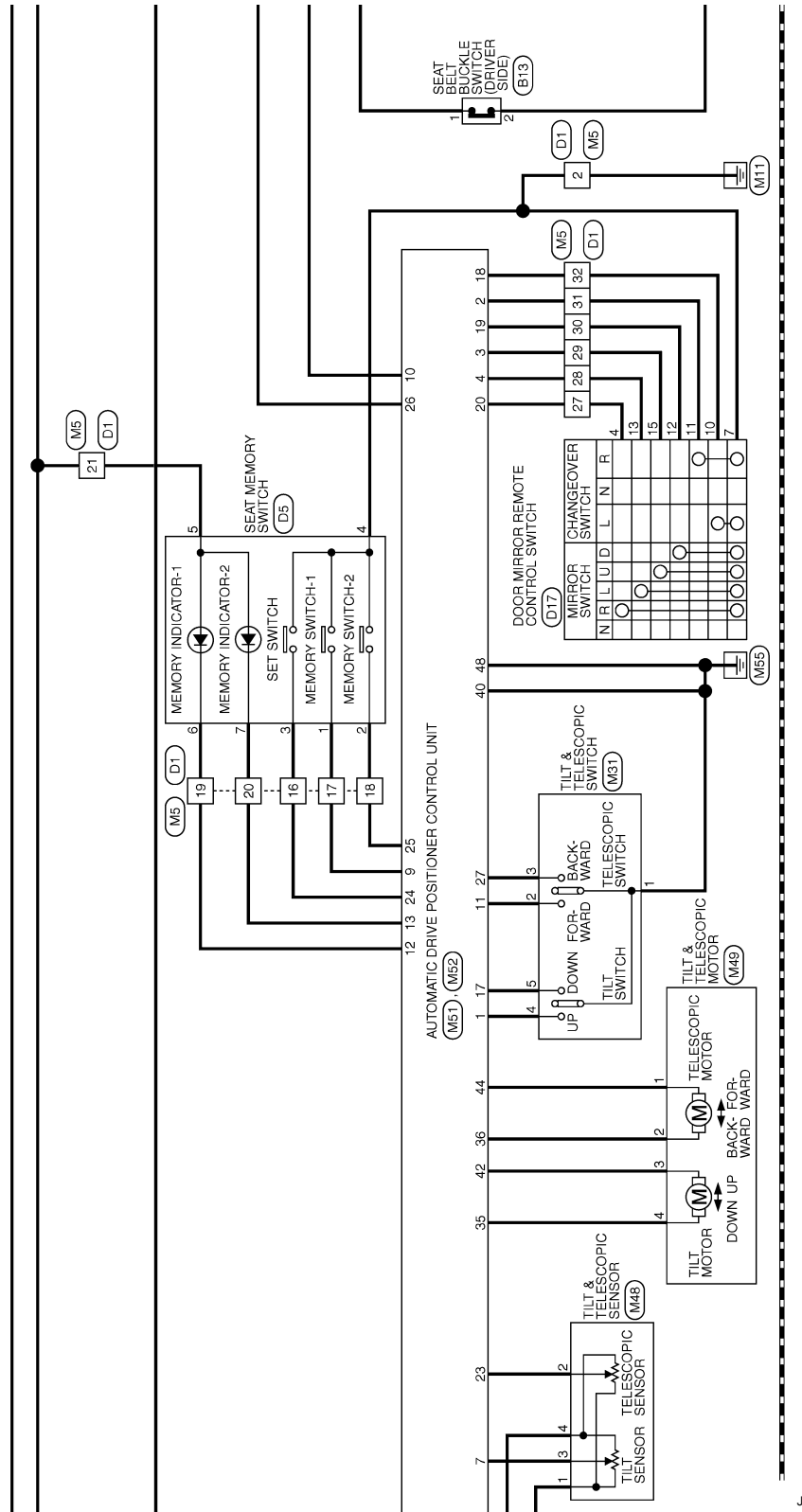
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AUTOMATIC DRIVE POSITIONER CONTROL UNIT

< ECU DIAGNOSIS INFORMATION >



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SQUEAK AND RATTLE TROUBLE DIAGNOSES

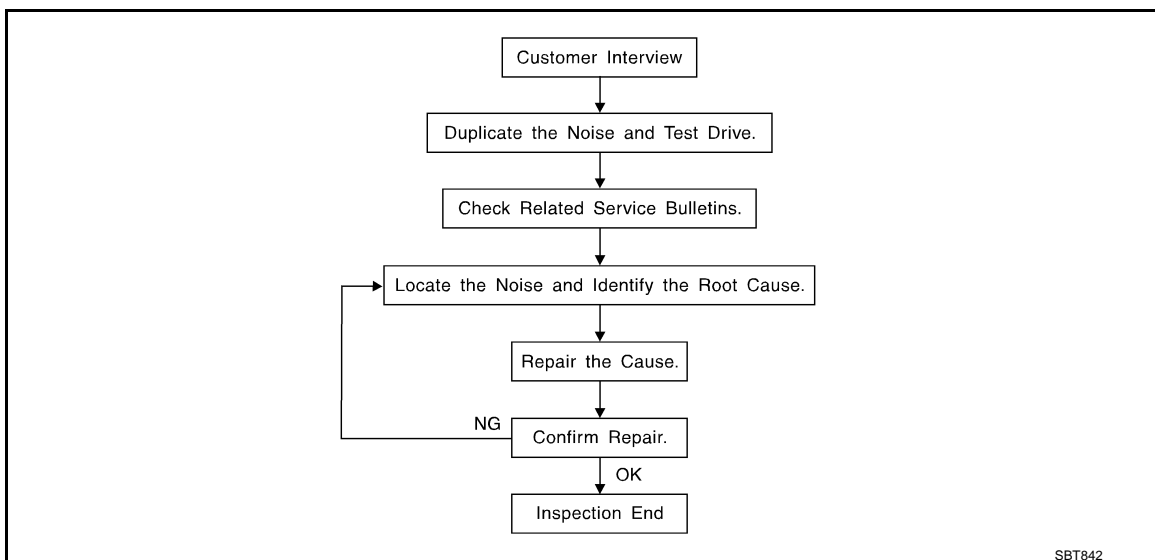
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SYMPTOM DIAGNOSIS

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

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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 [MIR-30, "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 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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< 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.
 - 4) 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 temporarily.
 - Feeling for a vibration by hand by touching the component(s) that is are suspected to be the cause of the noise.
 - 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 × 135 mm (3.94 × 5.31 in)/76884-71L01: 60 × 85 mm (2.36 × 3.35 in)/76884-71L02: 15 × 25 mm (0.59 × 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 × 50 mm (1.97 × 1.97 in)/73982-

50Y00: 10 mm (0.39 in) thick, 50 × 50 mm (1.97 × 1.97 in)

INSULATOR (Light foam block)

80845-71L00: 30 mm (1.18 in) thick, 30 × 50 mm (1.18 × 1.97in)

FELT CLOTHTAPE

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

68370-4B000: 15 × 25 mm (0.59 × 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

INFOID:000000008160365

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. The cluster lid A and instrument panel
2. Acrylic lens and combination meter housing
3. 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:

1. 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
3. 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:

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

SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

3. The trunk lid torsion bars knocking together

4. 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:

1. Sunroof lid, rail, linkage or seals making a rattle or light knocking noise

2. 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:

1. Headrest rods and holder

2. A squeak between the seat pad cushion and frame

3. 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

3. Engine wall mounts and connectors

4. Loose radiator mounting pins

5. Hood bumpers out of adjustment

6. 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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SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

Diagnostic Worksheet

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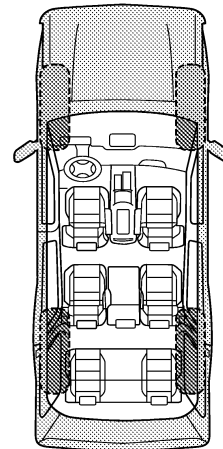
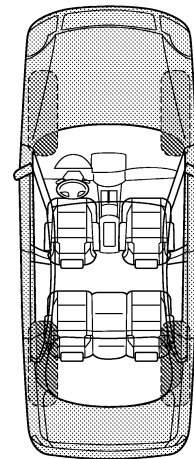
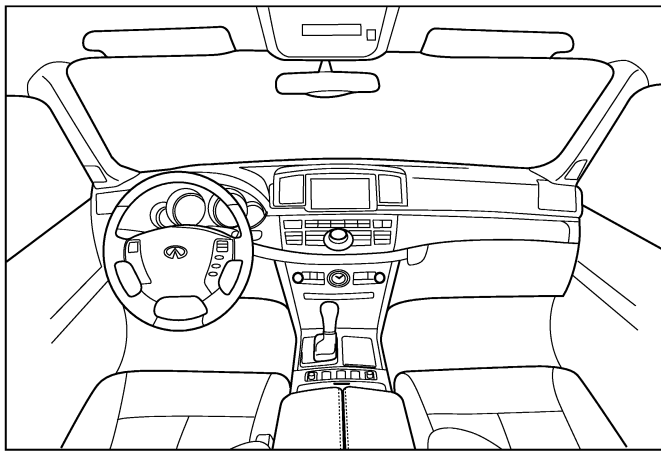
SQUEAK & RATTLE DIAGNOSTIC WORKSHEET

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.

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SQUEAK AND RATTLE TROUBLE DIAGNOSES

< SYMPTOM DIAGNOSIS >

SQUEAK & RATTLE DIAGNOSTIC WORKSHEET - page 2

Briefly describe the location where the noise occurs:

II. WHEN DOES IT OCCUR? (please check the boxes that apply)

- | | |
|---|--|
| <input type="checkbox"/> anytime | <input type="checkbox"/> after sitting out in the rain |
| <input type="checkbox"/> 1st time in the morning | <input type="checkbox"/> when it is raining or wet |
| <input type="checkbox"/> only when it is cold outside | <input type="checkbox"/> dry or dusty conditions |
| <input type="checkbox"/> only when it is hot outside | <input type="checkbox"/> other: |

III. WHEN DRIVING:

- through driveways
- over rough roads
- over speed bumps
- only about ____ mph
- on acceleration
- coming to a stop
- on turns: left, right or either (circle)
- with passengers or cargo
- other: _____
- after driving ____ miles or ____ minutes

IV. WHAT TYPE OF NOISE

- squeak (like tennis shoes on a clean floor)
- creak (like walking on an old wooden floor)
- rattle (like shaking a baby rattle)
- knock (like a knock at the door)
- tick (like a clock second hand)
- thump (heavy, muffled knock noise)
- buzz (like a bumble bee)

TO BE COMPLETED BY DEALERSHIP PERSONNEL

Test Drive Notes:

	YES	NO	Initials of person performing
Vehicle test driven with customer	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise verified on test drive	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Noise source located and repaired	<input type="checkbox"/>	<input type="checkbox"/>	_____
- Follow up test drive performed to confirm repair	<input type="checkbox"/>	<input type="checkbox"/>	_____

VIN: _____ Customer Name: _____
W.O.# _____ Date: _____

This form must be attached to Work Order

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

INFOID:000000008160367

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.**

Precaution for Battery Service

INFOID:000000008160368

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

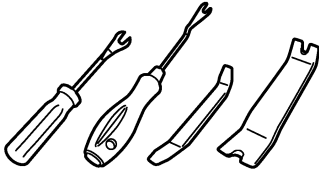
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PREPARATION

PREPARATION

Commercial Service Tools

INFOID:000000008160369

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

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INSIDE MIRROR

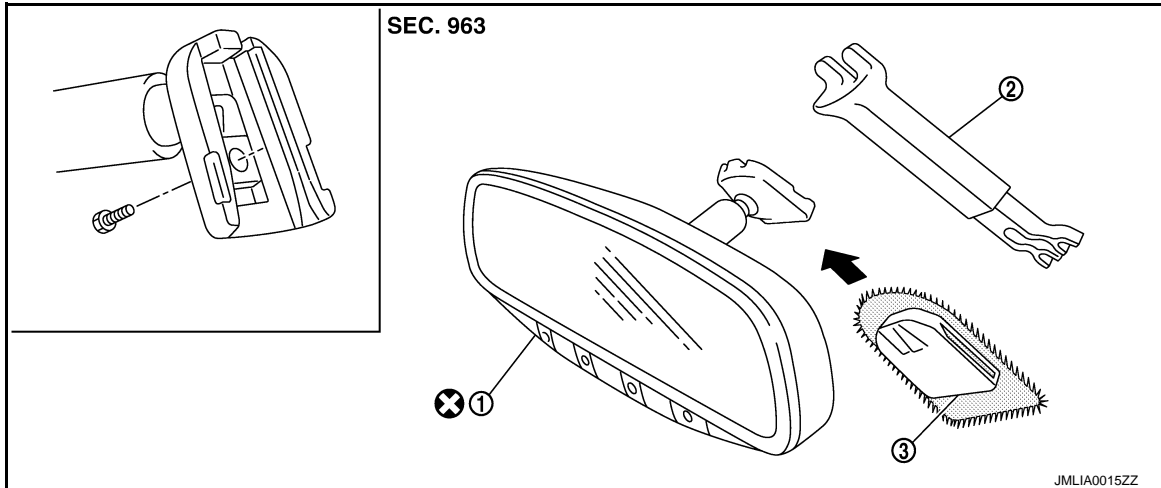
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

INSIDE MIRROR

Exploded View

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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

INFOID:000000008160371

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 >

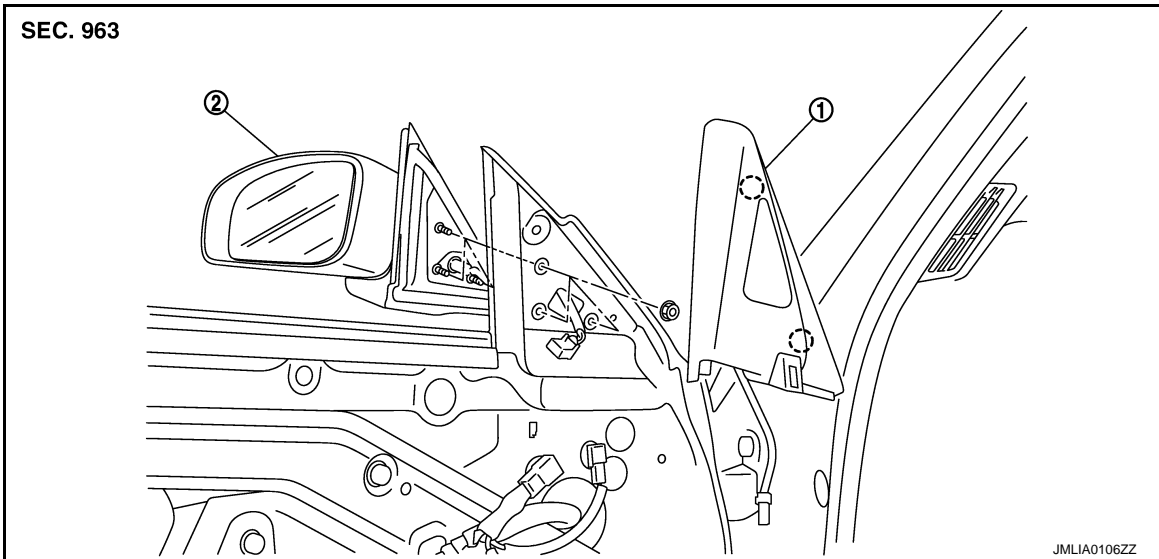
DOOR MIRROR

DOOR MIRROR ASSEMBLY

DOOR MIRROR ASSEMBLY : Exploded View

INFOID:000000008160372

REMOVAL

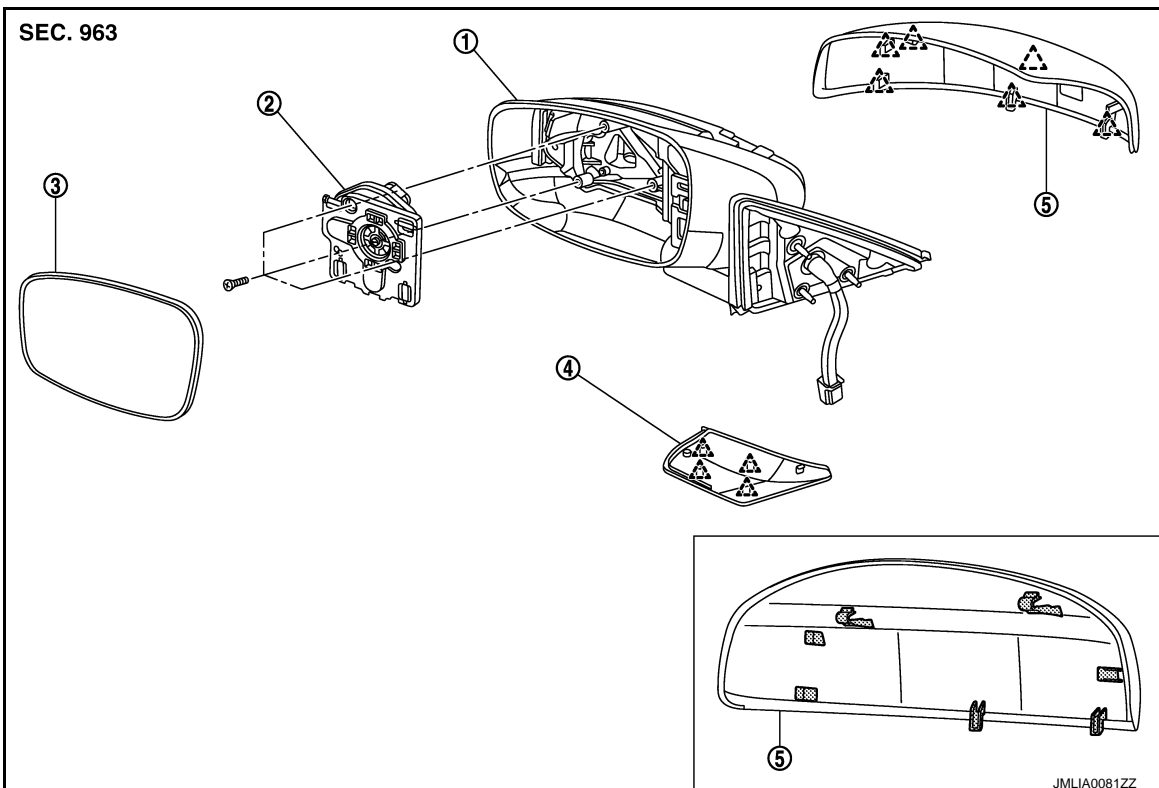


1. Corner cover

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

INFOID:000000008160373

REMOVAL

1. Remove the door finisher. Refer to [INT-12, "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

INFOID:000000008160374

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

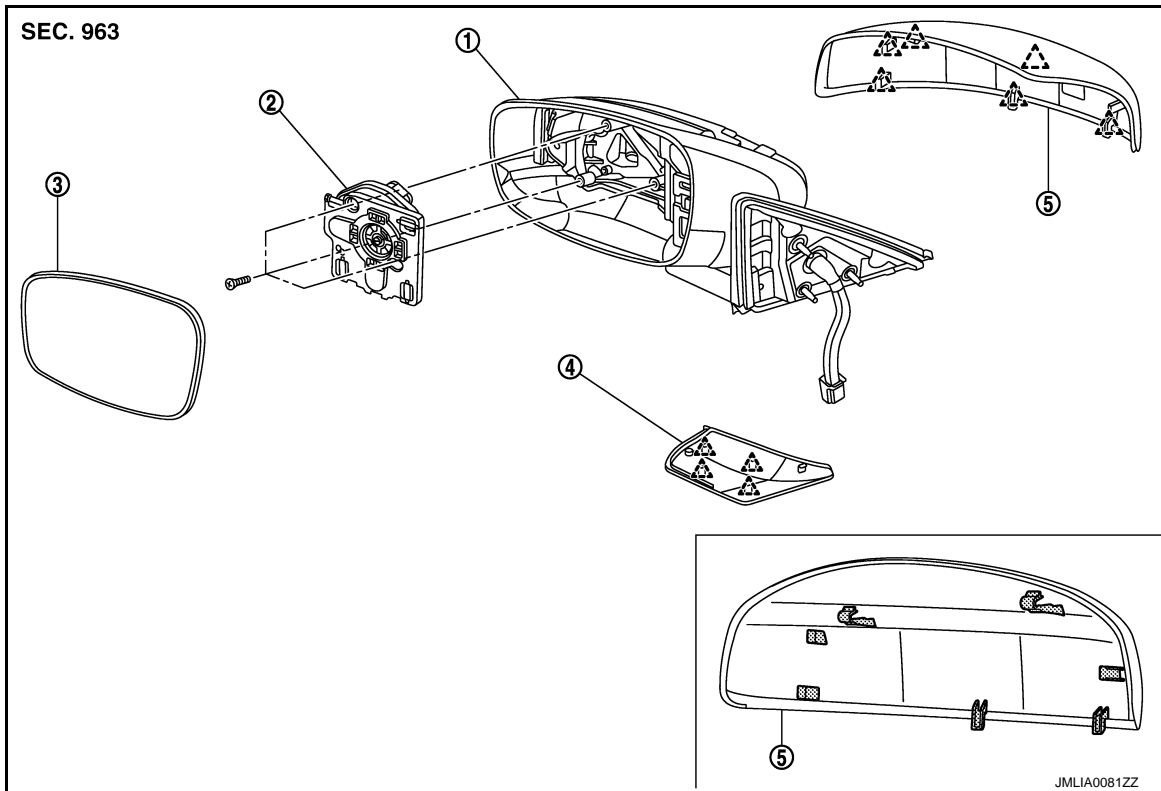
GLASS MIRROR : Exploded View

INFOID:000000008160375

DISASSEMBLY

DOOR MIRROR

< REMOVAL AND INSTALLATION >



- | | | |
|--------------------|-------------------------|-----------------|
| 1. Mirror assembly | 2. Door mirror actuator | 3. Glass mirror |
| 4. Base cover | 5. Door mirror cover | |

△ : Pawl

GLASS MIRROR : Disassembly and Assembly

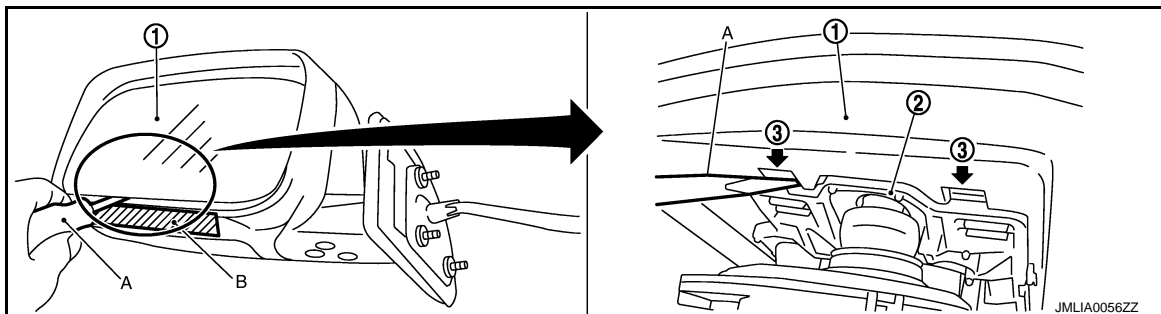
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DISASSEMBLY

1. Remove the pawls and disassemble the base cover.
2. Place the glass mirror upward.
3. Put a strip of protective tape (B) on housing assembly.
4. 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.



5. Remove both terminals of mirror heater attachment.
6. 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.

DOOR MIRROR

< REMOVAL AND INSTALLATION >

ASSEMBLY

Assemble in the reverse order of disassemble.

CAUTION:

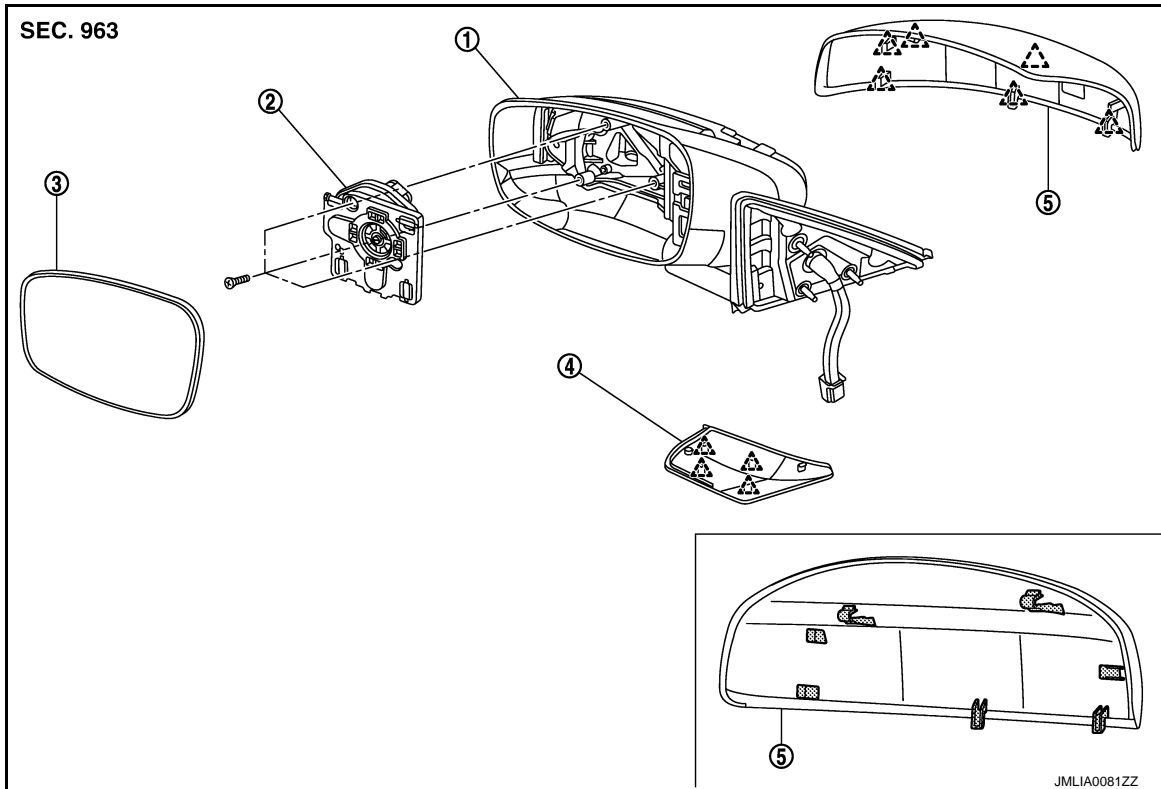
After installation, visually check that pawls are securely engaged.

DOOR MIRROR COVER


DOOR MIRROR COVER : Exploded View

INFOID:000000008160377

DISASSEMBLY



- | | | |
|--------------------|-------------------------|-----------------|
| 1. Mirror assembly | 2. Door mirror actuator | 3. Glass mirror |
| 4. Base cover | 5. Door mirror cover | |

 : Pawl

DOOR MIRROR COVER : Disassembly and Assembly

INFOID:000000008160378

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

INFOID:000000008160379

Refer to [INT-12. "Exploded View"](#)

Removal and Installation

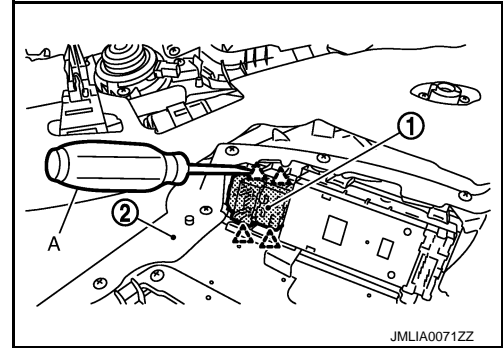
INFOID:000000008160380

REMOVAL

1. Remove the power window main switch finisher (2).
Refer to [PWC-84. "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.

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

MIR