SECTION MIR
MIRRORS

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000006695905

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. Information necessary to service the system safely is included in the “SRS AIR BAG” and “SEAT BELT” of this Service Manual.

The vehicle may be equipped with a passenger air bag deactivation switch. Because no rear seat exists where a rear-facing child restraint can be placed, the switch is designed to turn off the passenger air bag so that a rear-facing child restraint can be used in the front passenger seat. The switch is located in the center of the instrument panel, near the ashtray. When the switch is turned to the ON position, the passenger air bag is enabled and could inflate for certain types of collision. When the switch is turned to the OFF position, the passenger air bag is disabled and will not inflate. A passenger air bag OFF indicator on the instrument panel lights up when the passenger air bag is switched OFF. The driver air bag always remains enabled and is not affected by the passenger air bag deactivation switch.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the “SRS AIR BAG”.**
- **Do not 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.**
- **The vehicle may be equipped with a passenger air bag deactivation switch which can be operated by the customer. When the passenger air bag is switched OFF, the passenger air bag is disabled and will not inflate. When the passenger air bag is switched ON, the passenger air bag is enabled and could inflate for certain types of collision. After SRS maintenance or repair, make sure the passenger air bag deactivation switch is in the same position (ON or OFF) as when the vehicle arrived for service.**

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

WARNING:

- **When working near the Air Bag Diagnosis Sensor Unit or other Air Bag System sensors with the ignition ON or engine running, DO NOT 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 Necessary for Steering Wheel Rotation after Battery Disconnect

INFOID:0000000006695906

NOTE:

- Before removing and installing any control units, first turn the ignition switch to the LOCK position, then disconnect both battery cables.
- After finishing work, confirm that all control unit connectors are connected properly, then re-connect both battery cables.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If a DTC is detected, perform trouble diagnosis according to self-diagnosis results.

For vehicle with steering lock unit, if the battery is disconnected or discharged, the steering wheel will lock and cannot be turned.

If turning the steering wheel is required with the battery disconnected or discharged, follow the operation procedure below before starting the repair operation.

OPERATION PROCEDURE

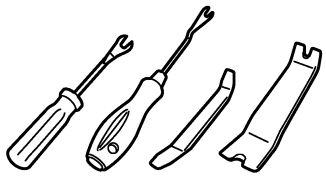
1. Connect both battery cables.
   NOTE:
   Supply power using jumper cables if battery is discharged.
2. Turn the ignition switch to ACC position.
   (At this time, the steering lock will be released.)
3. Disconnect both battery cables. The steering lock will remain released with both battery cables disconnected and the steering wheel can be turned.
4. Perform the necessary repair operation.
5. When the repair work is completed, re-connect both battery cables. With the brake pedal released, turn the ignition switch from ACC position to ON position, then to LOCK position. (The steering wheel will lock when the ignition switch is turned to LOCK position.)
6. Perform self-diagnosis check of all control units using CONSULT-III.

PREPARATION

PREPARATION

Commercial Service Tools

INFOID:0000000006486937

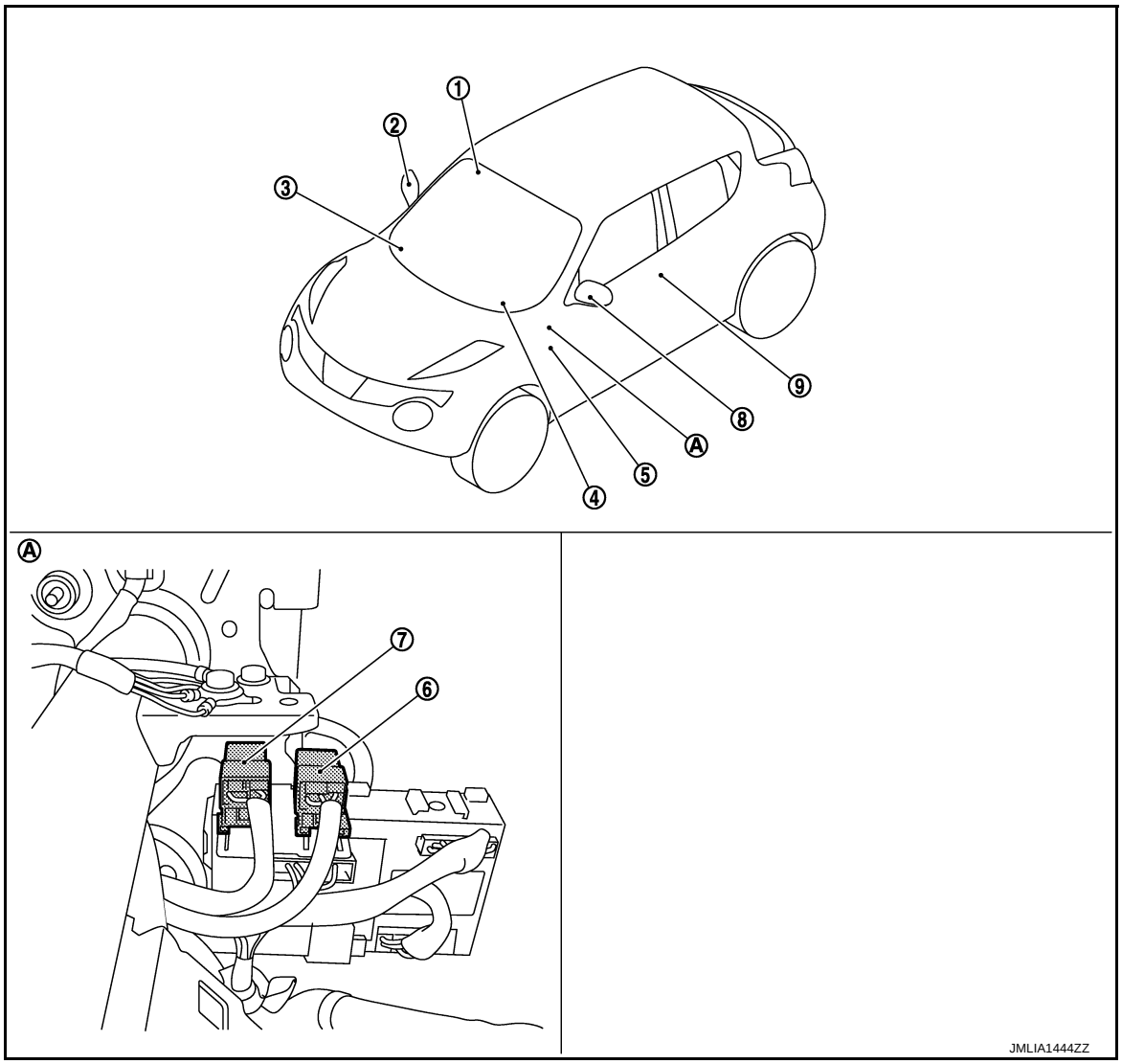
Tool name	Description
Remover tool  JMKIA3050ZZ	Removes the clips, pawls and metal clips

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000006486939



1. Door request switch (driver side)
2. Door mirror (driver side)
3. Remote keyless entry receiver Refer to DLK-21, "Component Parts Location"
4. Door mirror remote control switch
5. BCM Refer to BCS-6, "BODY CONTROL SYSTEM : Component Parts Location"
6. Door mirror close relay
7. Door mirror open relay
8. Door mirror (passenger side)
9. Door request switch (passenger side)

A. Front LH of passenger room

Component Description

INFOID:0000000006486940

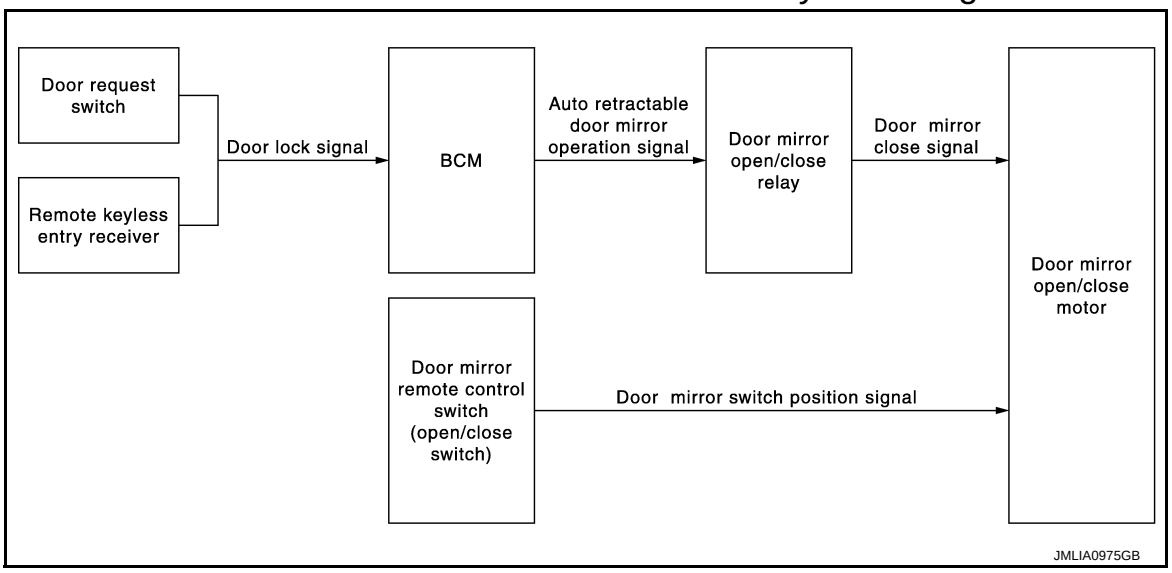
Item	Function
BCM	Auto retractable door mirror system is operated when door lock signal is received from Intelligent Key or door request switch.
Remote keyless entry receiver	Receives Intelligent Key operation signal and transmits to BCM
Door request switch	Transmits door lock/unlock operation signal to BCM
Door mirror remote control switch (open/close switch)	• Door mirror is retracted by open/close switch. • Auto retractable door mirror function operates for AUTO side only.
Door mirror (open/close motor)	Door mirror is retracted by open/close switch.
Door mirror open relay	• Power supply is supplied to motor when door mirror is opening. • This is the ground circuit when auto retractable door mirror is operating.
Door mirror close relay	• Power supply is supplied to motor when door mirror is closed. • Power supply is supplied to motor when auto retractable door mirror is operating.
Door mirror remote control switch (mirror switch)	It supplies power to mirror motor through mirror switch and changeover switch.
Door mirror remote control switch (chengeover switch)	It transmits the LH/RH control of door mirror that supplies power.
Door mirror motor	It makes mirror face operate from side to side and up and down via integrated motor.

SYSTEM

AUTO RETRACTABLE DOOR MIRORR FUNCTION

AUTO RETRACTABLE DOOR MIRORR FUNCTION : System Diagram

INFOID:0000000006486941



AUTO RETRACTABLE DOOR MIRORR FUNCTION : System Description

INFOID:0000000006486942

BCM retracts door mirror when door lock signal is received from Intelligent Key or door request switch.

OPERATION CONDITION

The system operates under the following conditions.

- Ignition switch: OFF
- Open/Close switch: AUTO

1. Press lock button of Intelligent Key or door request switch when the system is in operation condition.
2. Door mirror open/close relay turns ON for approximately 6 seconds. Door mirror is retracted.

NOTE:

- Auto retractable door mirror system is not operated when BCM detects door lock signal from power window main switch of door key cylinder switch.
- ON/OFF of auto retractable door mirror system can be set on “WORK SUPPORT” of “INTELLIGENT KEY”of “BCM” using CONSULT-III. Refer to DLK-43, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) (With Super Lock)" (With super lock) DLK-219, "INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) (Without Super Lock)" (Without super lock).

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000006683087

APPLICATION ITEM
CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description
Work Support	Changes the setting for each system function.
Self Diagnostic Result	Displays the diagnosis results judged by BCM.
CAN Diag Support Monitor	Monitors the reception status of CAN communication viewed from BCM. Refer to CONSULT-III operation manual.
Data Monitor	The BCM input/output signals are displayed.
Active Test	The signals used to activate each device are forcibly supplied from BCM.
Ecu Identification	The BCM part number is displayed.
Configuration	• Read and save the vehicle specification. • Write the vehicle specification when replacing BCM.

SYSTEM APPLICATION
BCM can perform the following functions for each system.

NOTE:

It can perform the diagnosis modes except the following for all sub system selection items.

×: Applicable item

System	Sub system selection item	Diagnosis mode		
		Work Support	Data Monitor	Active Test
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Exterior lamp	HEAD LAMP	×	×	×
Wiper and washer	WIPER	×	×	×
Turn signal and hazard warning lamps	FLASHER	×	×	×
• Automatic A/C • Manual A/C	AIR CONDITONER		×	×*2
• Intelligent Key system • Engine start system	INTELLIGENT KEY	×	×	×
Combination switch	COMB SW		×	
Body control system	BCM	×		
NVIS - NATS	IMMU	×	×	×
Interior room lamp battery saver	BATTERY SAVER	×	×	×
Back door open	TRUNK		×	
Theft warning alarm	THEFT ALM	×	×	×
—	RETAINED PWR*1		×	
Signal buffer system	SIGNAL BUFFER		×	×

NOTE:

- *1: This item is displayed, but not used.
- *2: For models with automatic A/C, this diagnosis mode is not used.

FREEZE FRAME DATA (FFD)

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays on CONSULT-III.

CONSULT screen item	Indication/Unit	Description	
Vehicle Speed	km/h	Vehicle speed of the moment a particular DTC is detected	
Odo/Trip Meter	km	Total mileage (Odometer value) of the moment a particular DTC is detected	
Vehicle Condition	SLEEP>LOCK	Power position status of the moment a particular DTC is detected	While turning BCM status from low power consumption mode to normal mode (Power supply position is “LOCK”)
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is “OFF”.)
	LOCK>ACC		While turning power supply position from “LOCK” to “ACC”
	ACC>ON		While turning power supply position from “ACC” to “IGN”
	RUN>ACC		While turning power supply position from “RUN” to “ACC” (Vehicle is stopping and selector lever is except P position.)
	CRANK>RUN		While turning power supply position from “CRANKING” to “RUN” (From cranking up the engine to run it)
	RUN>URGENT		While turning power supply position from “RUN“ to “ACC” (Emergency stop operation)
	ACC>OFF		While turning power supply position from “ACC” to “OFF”
	OFF>LOCK		While turning power supply position from “OFF” to “LOCK”
	OFF>ACC		While turning power supply position from “OFF” to “ACC”
	ON>CRANK		While turning power supply position from “IGN” to “CRANKING”
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is “OFF”.) to low power consumption mode
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is “LOCK”.) to low power consumption mode
	LOCK		Power supply position is “LOCK” (Ignition switch OFF with steering is locked.)
	OFF		Power supply position is “OFF” (Ignition switch OFF with steering is unlocked.)
	ACC		Power supply position is “ACC” (Ignition switch ACC)
	ON		Power supply position is “IGN” (Ignition switch ON with engine stopped)
	ENGINE RUN		Power supply position is “RUN” (Ignition switch ON with engine running)
	CRANKING		Power supply position is “CRANKING” (At engine cranking)
IGN Counter	0 - 39	The number of times that ignition switch is turned ON after DTC is detected • The number is 0 when a malfunction is detected now. • The number increases like 1 → 2 → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. • The number is fixed to 39 until the self-diagnosis results are erased if it is over 39.	

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) (With Super Lock)

INFOID:0000000006683088

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode • On: Operate • Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
TRUNK/GLASS HATCH OPEN	**NOTE:** This item is displayed, but cannot be monitored
PANIC ALARM SET	**NOTE:** This item is displayed, but cannot be monitored
TRUNK OPEN DELAY	**NOTE:** This item is displayed, but cannot be monitored
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode • On: Operate • Off: Non-operation
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode • Lock Only: Door lock operation only • Unlock Only: Door unlock operation only • Lock/Unlock: Lock and unlock operation • Off: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode • Horn Chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • Off: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode • On: Operate • Off: Non-operation
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
AUTO LOCK SET	Auto door lock operation time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
ANSWER BACK FUNCTION	Buzzer reminder function mode by Intelligent Key button can be selected from the following with this mode • On: Operate • Off: Non-operation
TAKE OUT FROM WIN WARN SET	**NOTE:** This item is indicated, but not used
RETRACTABLE MIRROR SET	Auto retractable door mirror function mode can be changed to operation with this mode • On: Operate • Off: Non-operation

SELF-DIAG RESULT

Refer to BCS-67, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
CLUTCH SW*1	Indicates [On/Off] condition of clutch interlock switch
BRAKE SW 1	Indicates [On/Off]*2 condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
S/L -LOCK	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L -UNLOCK	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY -F/B	Indicates [On/Off] condition of steering lock relay
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states
S/L LOCK-IPDM	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L UNLK-IPDM	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY-REQ	Indicates [On/Off] condition of steering lock relay
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [Km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored
TRNK/HAT MNTR	**NOTE:** This item is displayed, but cannot be monitored
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key
RKE-TR/BD	**NOTE:** This item is displayed, but cannot be monitored
RKE-PANIC	**NOTE:** This item is displayed, but cannot be monitored
RKE-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key

Monitor Item	Condition
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing
RKE OPE COUN2	**NOTE:** This item is displayed, but cannot be monitored

*1: It is displayed but does not operate on CVT models.

*2: OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

ACTIVE TEST

Test item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operate • Off: Non-operation
INSIDE BUZZER	This test is able to check warning chime in combination meter operation • Take Out: Take away warning chime sounds when CONSULT-III screen is touched • Key: Key warning chime sounds when CONSULT-III screen is touched • Knob: OFF position warning chime sounds when CONSULT-III screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: “KEY” Warning lamp illuminates when CONSULT-III screen is touched • KEY IND: “KEY” Warning lamp blinks when CONSULT-III screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
LCD	This test is able to check meter display information • BP N: Engine start operation indicator lamp indicate when CONSULT-III screen is touched • BP I: Engine start operation indicator lamp indicate when CONSULT-III screen is touched • ID NG: This item is displayed, but cannot be monitored • ROTAT: This item is displayed, but cannot be monitored • SFT P: Shift P warning lamp indicate when CONSULT-III screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: Key warning lamp indicator when CONSULT-III screen is touched • NO KY: Key warning lamp indicator when CONSULT-III screen is touched • OUTKEY: Engine start operation indicator lamp indicate when CONSULT-III screen is touched • LK WN: Engine start operation indicator lamp indicate when CONSULT-III screen is touched
FLASHER	This test is able to check security hazard lamp operation The hazard lamps are activated after “LH/RH/Off” on CONSULT-III screen is touched
P RANGE	This test is able to check CVT shift selector power supply • On: Operate • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when “ON” on CONSULT-III screen is touched
PUSH SWITCH INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT-III screen is touched
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after “ON” on CONSULT-III screen is touched.
TRUNK/BACK DOOR	This test is able to check back door opener actuator open operation. This actuator opens when “Open” on CONSULT-III screen is touched.
RETRACTABLE MIRROR	This test is able to check auto retractable door mirror operation • On: Operate • Off: Non-operation

INTELLIGENT KEY : CONSULT-III Function (BCM - INTELLIGENT KEY) (Without Su-

per Lock)

INFOID:0000000006684291

WORK SUPPORT

Monitor item	Description
INSIDE ANT DIAGNOSIS	This function allows inside key antenna self-diagnosis
LOCK/UNLOCK BY I-KEY	Door lock/unlock function by door request switch mode can be changed to operation in this mode • On: Operate • Off: Non-operation
ENGINE START BY I-KEY	Engine start function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
TRUNK/GLASS HATCH OPEN	**NOTE:** This item is displayed, but cannot be monitored
PANIC ALARM SET	**NOTE:** This item is displayed, but cannot be monitored
TRUNK OPEN DELAY	**NOTE:** This item is displayed, but cannot be monitored
LO- BATT OF KEY FOB WARN	Intelligent Key low battery warning mode can be changed to operation with this mode • On: Operate • Off: Non-operation
ANTI KEY LOCK IN FUNCTI	Key reminder function mode can be changed to operation with this mode • On: Operate • Off: Non-operation
HAZARD ANSWER BACK	Hazard reminder function mode by door request switch and Intelligent Key button can be selected from the following with this mode • Lock Only: Door lock operation only • Unlock Only: Door unlock operation only • Lock/Unlock: Lock and unlock operation • Off: Non-operation
ANS BACK I-KEY LOCK	Buzzer reminder function (lock operation) mode by door request switch can be selected from the following with this mode • Horn Chirp: Sound horn • Buzzer: Sound Intelligent Key warning buzzer • Off: Non-operation
ANS BACK I-KEY UNLOCK	Buzzer reminder function (unlock operation) mode by door request switch can be changed to operation with this mode • On: Operate • Off: Non-operation
SHORT CRANKING OUTPUT	Starter motor can operate during the times below • 70 msec • 100 msec • 200 msec
CONFIRM KEY FOB ID	It can be checked whether Intelligent Key ID code is registered or not in this mode
AUTO LOCK SET	Auto door lock operation time can be changed in this mode • MODE 1: OFF • MODE 2: 30 sec • MODE 3: 1 minute • MODE 4: 2 minutes • MODE 5: 3 minutes • MODE 6: 4 minutes • MODE 7: 5 minutes
ANSWER BACK FUNCTION	Buzzer reminder function mode by Intelligent Key button can be selected from the following with this mode • On: Operate • Off: Non-operation

Monitor item	Description
TAKE OUT FROM WIN WARN SET	**NOTE:** This item is indicated, but not used
RETRACTABLE MIRROR SET	Auto retractable door mirror function mode can be changed to operation with this mode • On: Operate • Off: Non-operation

SELF-DIAG RESULT

Refer to BCS-67, "DTC Index".

DATA MONITOR

Monitor Item	Condition
REQ SW -DR	Indicates [On/Off] condition of door request switch (driver side)
REQ SW -AS	Indicates [On/Off] condition of door request switch (passenger side)
REQ SW -BD/TR	Indicates [On/Off] condition of back door request switch
PUSH SW	Indicates [On/Off] condition of push-button ignition switch
CLUTCH SW*1	Indicates [On/Off] condition of clutch interlock switch
BRAKE SW 1	Indicates [On/Off]*2 condition of stop lamp switch power supply
BRAKE SW 2	Indicates [On/Off] condition of stop lamp switch
DETE/CANCL SW	Indicates [On/Off] condition of P position
SFT PN/N SW	Indicates [On/Off] condition of P or N position
S/L -LOCK	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L -UNLOCK	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY -F/B	Indicates [On/Off] condition of steering lock relay
UNLK SEN -DR	Indicates [On/Off] condition of driver door UNLOCK status
PUSH SW -IPDM	Indicates [On/Off] condition of push-button ignition switch
IGN RLY1 -F/B	Indicates [On/Off] condition of ignition relay 1
DETE SW -IPDM	Indicates [On/Off] condition of P position
SFT PN -IPDM	Indicates [On/Off] condition of P or N position
SFT P -MET	Indicates [On/Off] condition of P position
SFT N -MET	Indicates [On/Off] condition of N position
ENGINE STATE	Indicates [Stop/Stall/Crank/Run] condition of engine states
S/L LOCK-IPDM	Indicates [On/Off] condition of steering lock unit (LOCK)
S/L UNLK-IPDM	Indicates [On/Off] condition of steering lock unit (UNLOCK)
S/L RELAY-REQ	Indicates [On/Off] condition of steering lock relay
VEH SPEED 1	Display the vehicle speed signal received from combination meter by numerical value [Km/h]
VEH SPEED 2	Display the vehicle speed signal received from ABS or VDC or TCM by numerical value [Km/h]
DOOR STAT-DR	Indicates [LOCK/READY/UNLK] condition of driver side door status
DOOR STAT-AS	Indicates [LOCK/READY/UNLK] condition of passenger side door status
ID OK FLAG	Indicates [Set/Reset] condition of key ID
PRMT ENG STRT	Indicates [Set/Reset] condition of engine start possibility
PRMT RKE STRT	**NOTE:** This item is displayed, but cannot be monitored
TRNK/HAT MNTR	**NOTE:** This item is displayed, but cannot be monitored
RKE-LOCK	Indicates [On/Off] condition of LOCK signal from Intelligent Key
RKE-UNLOCK	Indicates [On/Off] condition of UNLOCK signal from Intelligent Key

< SYSTEM DESCRIPTION >

Monitor Item	Condition
RKE-TR/BD	**NOTE:** This item is displayed, but cannot be monitored
RKE-PANIC	**NOTE:** This item is displayed, but cannot be monitored
RKE-MODE CHG	Indicates [On/Off] condition of MODE CHANGE signal from Intelligent Key
RKE OPE COUN1	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing
RKE OPE COUN2	**NOTE:** This item is displayed, but cannot be monitored

*1: It is displayed but does not operate on CVT models.

*2: OFF is displayed when brake pedal is depressed while brake switch power supply is OFF.

ACTIVE TEST

Test item	Description
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation • On: Operate • Off: Non-operation
INSIDE BUZZER	This test is able to check warning chime in combination meter operation • Take Out: Take away warning chime sounds when CONSULT-III screen is touched • Key: Key warning chime sounds when CONSULT-III screen is touched • Knob: OFF position warning chime sounds when CONSULT-III screen is touched • Off: Non-operation
INDICATOR	This test is able to check warning lamp operation • KEY ON: “KEY” Warning lamp illuminates when CONSULT-III screen is touched • KEY IND: “KEY” Warning lamp blinks when CONSULT-III screen is touched • Off: Non-operation
INT LAMP	This test is able to check interior room lamp operation • On: Operate • Off: Non-operation
LCD	This test is able to check meter display information • BP N: Engine start operation indicator lamp indicate when CONSULT-III screen is touched • BP I: Engine start operation indicator lamp indicate when CONSULT-III screen is touched • ID NG: This item is displayed, but cannot be monitored • ROTAT: This item is displayed, but cannot be monitored • SFT P: Shift P warning lamp indicate when CONSULT-III screen is touched • INSRT: This item is displayed, but cannot be monitored • BATT: Key warning lamp indicator when CONSULT-III screen is touched • NO KY: Key warning lamp indicator when CONSULT-III screen is touched • OUTKEY: Engine start operation indicator lamp indicate when CONSULT-III screen is touched • LK WN: Engine start operation indicator lamp indicate when CONSULT-III screen is touched
FLASHER	This test is able to check security hazard lamp operation The hazard lamps are activated after “LH/RH/Off” on CONSULT-III screen is touched
P RANGE	This test is able to check CVT shift selector power supply • On: Operate • Off: Non-operation
ENGINE SW ILLUMI	This test is able to check push-ignition switch illumination operation Push-ignition switch illumination illuminates when “ON” on CONSULT-III screen is touched
PUSH SWITCH INDICATOR	This test is able to check LOCK indicator in push-ignition switch operation LOCK indicator in push-ignition switch illuminates when “ON” on CONSULT-III screen is touched
BATTERY SAVER	This test is able to check interior room lamp operation. The interior room lamp will be activated after “ON” on CONSULT-III screen is touched.

Test item	Description
TRUNK/BACK DOOR	This test is able to check back door opener actuator open operation. This actuator opens when “Open” on CONSULT-III screen is touched.
RETRACTABLE MIRROR	This test is able to check auto retractable door mirror operation • On: Operate • Off: Non-operation

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

List of ECU Reference

INFOID:0000000006486945

ECU	Reference
BCM	BCS-41, "Reference Value"
	BCS-64, "Fail-safe"
	BCS-66, "DTC Inspection Priority Chart"
	BCS-67, "DTC Index"

WIRING DIAGRAM

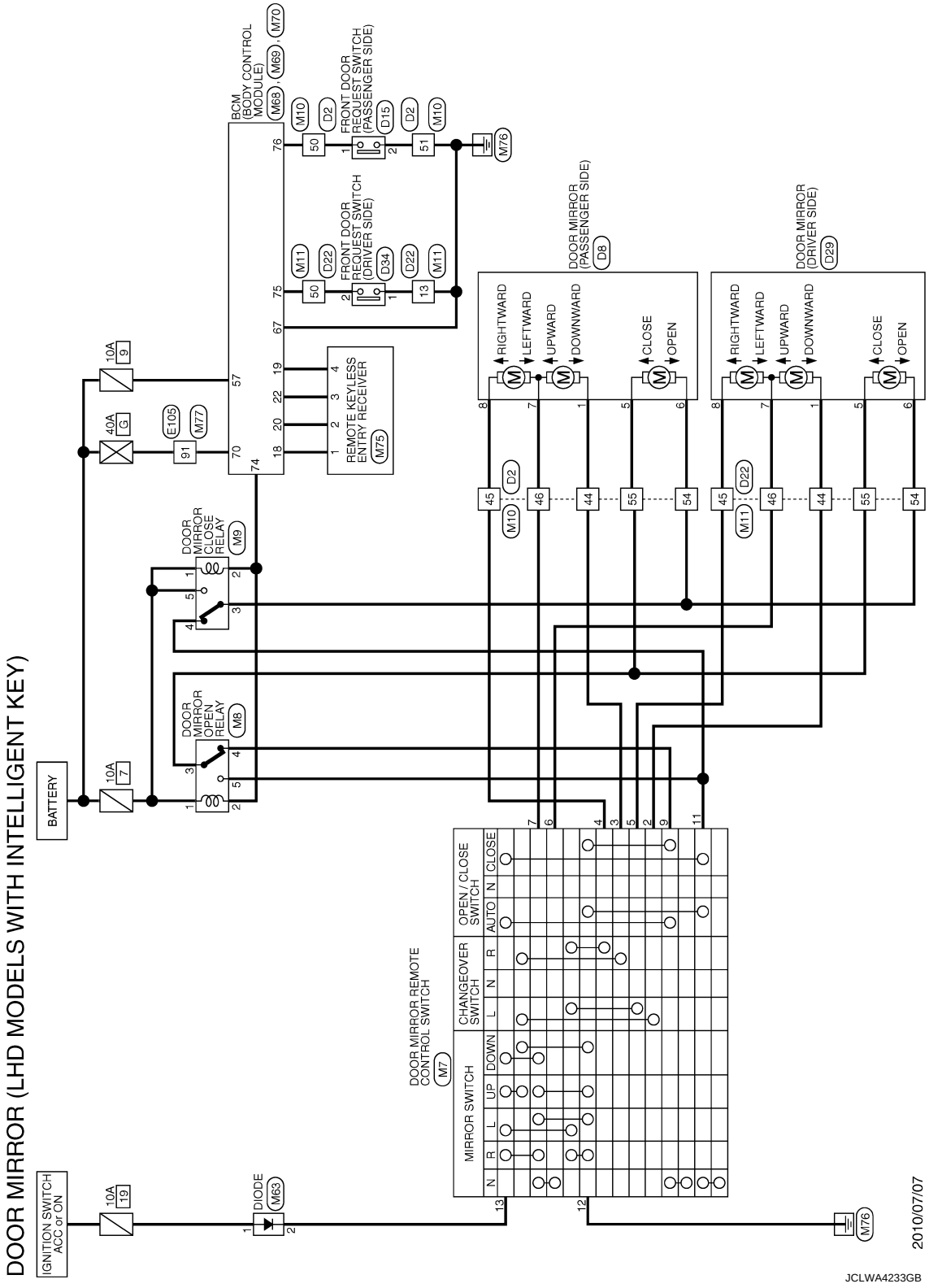
DOOR MIRROR SYSTEM (WITH INTELLIGENT KEY)

LHD

LHD : Wiring Diagram

INFOID:0000000006486946

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

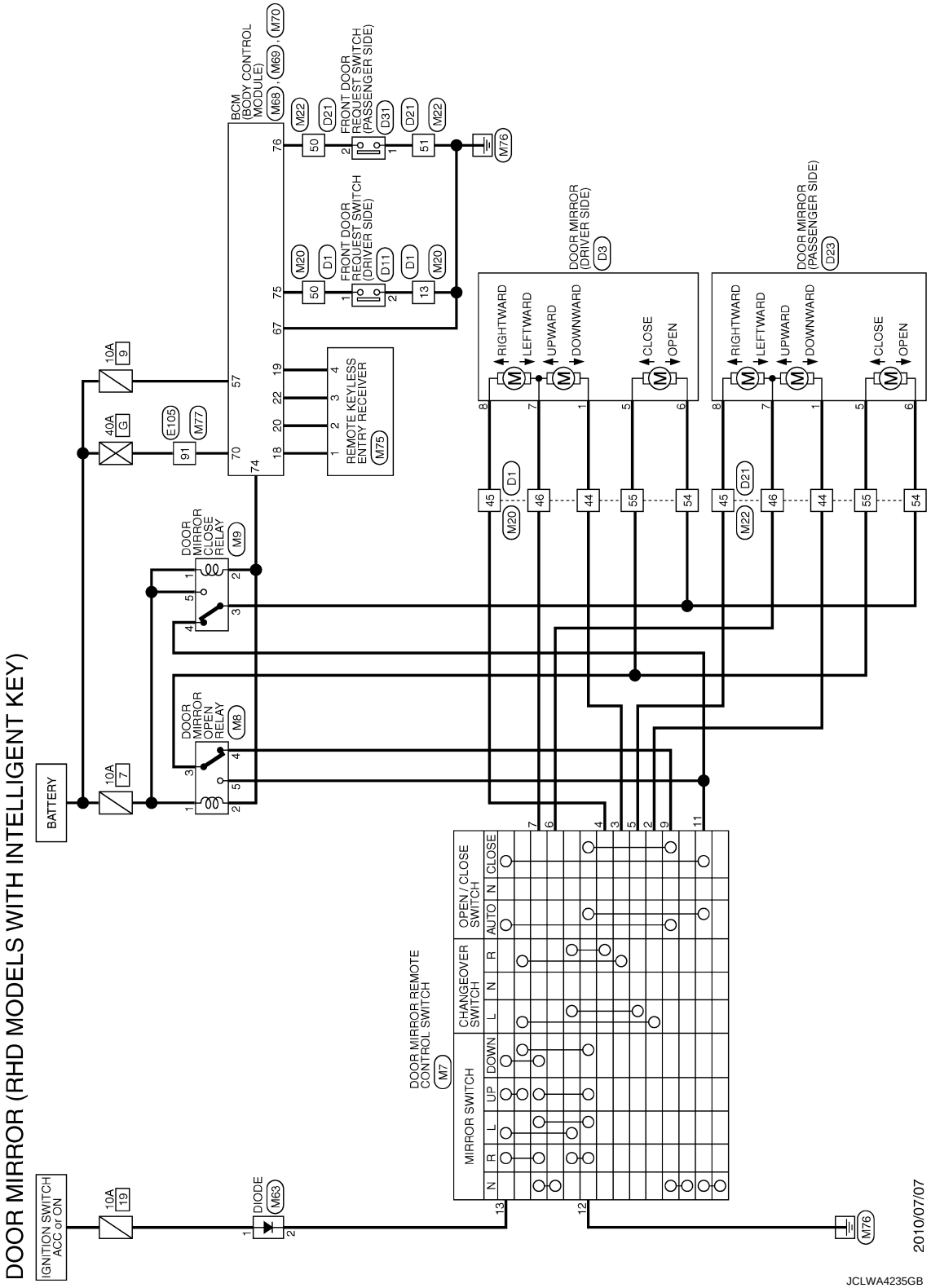


RHD

RHD : Wiring Diagram

INFOID:0000000006708437

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



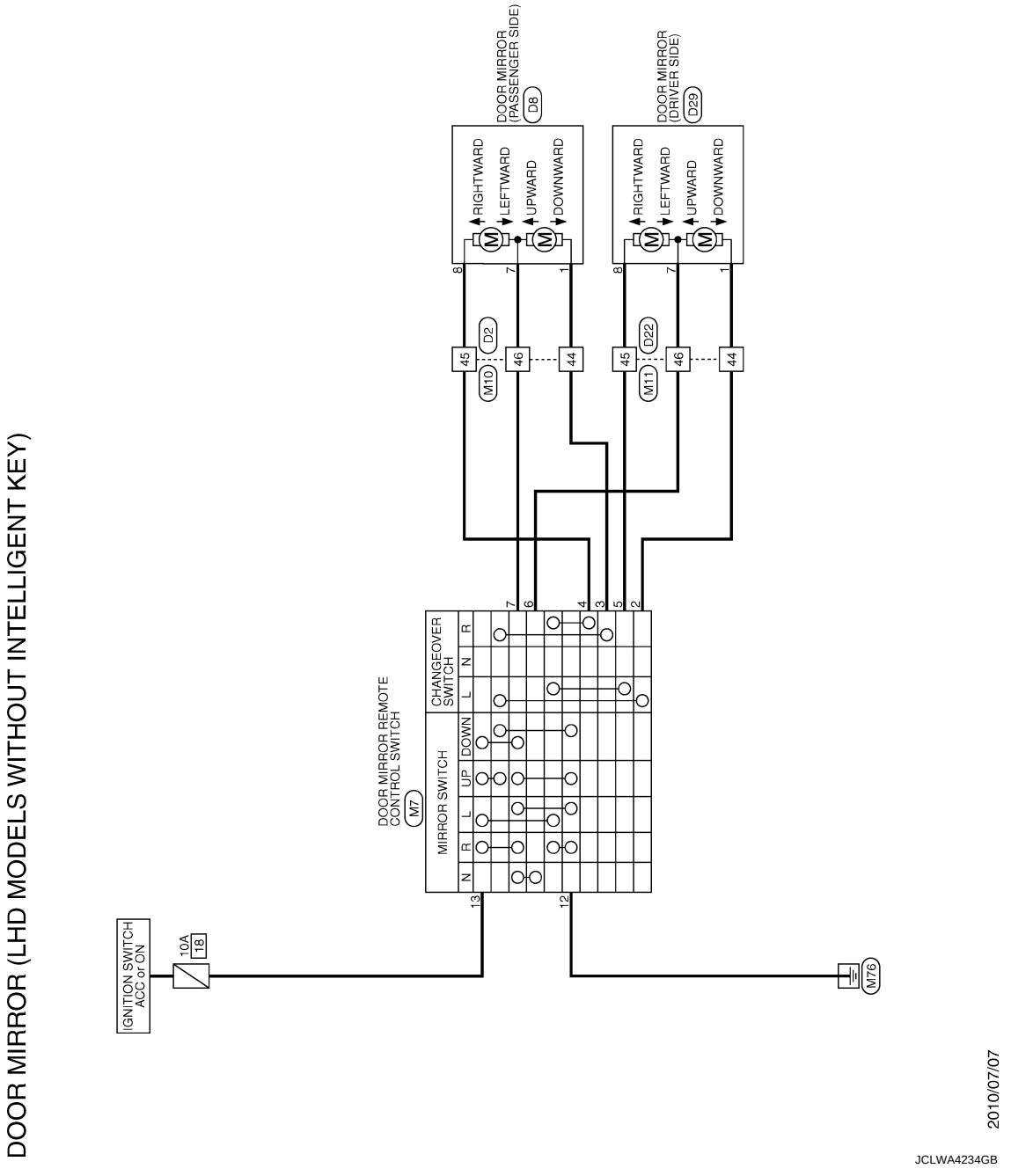
DOOR MIRROR SYSTEM (WITHOUT INTELLIGENT KEY)

LHD

LHD : Wiring Diagram

INFOID:0000000006708441

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

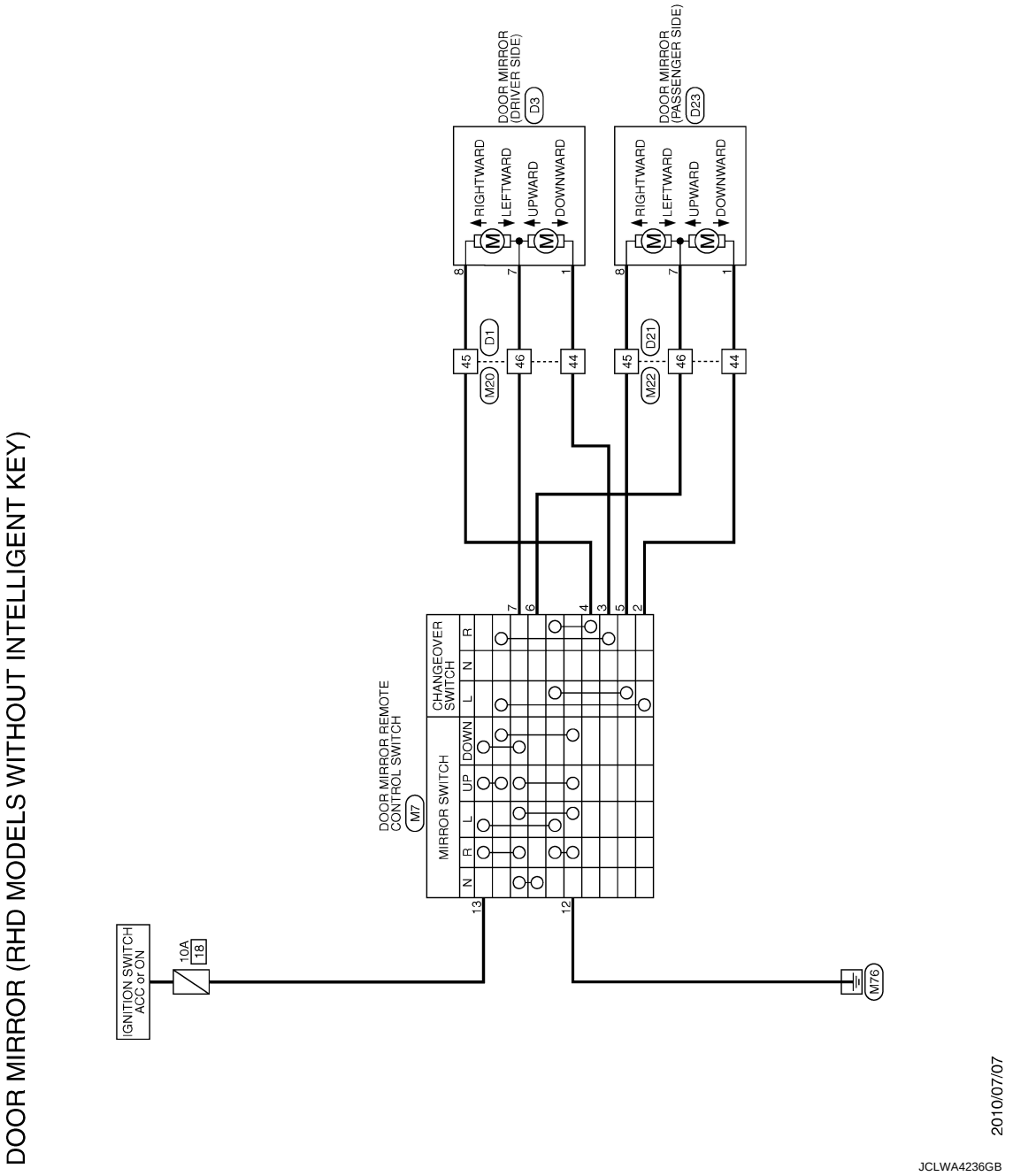


RHD

RHD : Wiring Diagram

INFOID:0000000006708442

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



BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000006486947

DETAILED FLOW

1.OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much malfunction information (conditions and environment when the malfunction occurred) as possible when the customer brings the vehicle in.

>> GO TO 2.

2.REPRODUCE THE MALFUNCTION INFORMATION

Check the malfunction on the vehicle that the customer describes.
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

3.IDENTIFY THE MALFUNCTIONING SYSTEM WITH “SYMPTOM DIAGNOSIS”

Use “Symptom diagnosis” from the symptom inspection result in step 2. Then identify where to start the diagnosis based on possible causes and symptoms.

>> GO TO 4.

4.IDENTIFY MALFUNCTIONING PARTS WITH “COMPONENT DIAGNOSIS”

Perform the diagnosis with “Component diagnosis” of the applicable system.

>> GO TO 5.

5.REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6.FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Is the malfunctioning part repaired or replaced?

YES >> Trouble diagnosis is completed.
NO >> GO TO 3.

DTC/CIRCUIT DIAGNOSIS

DOOR MIRROR REMOTE CONTROL SWITCH (MIRROR SWITCH/ CHANGEOVER SWITCH)

Component Inspection

INFOID:0000000006486948

1.CHECK MIRROR SWITCH & CHANGEOVER SWITCH

1. Turn ignition switch OFF.
2. Disconnect door mirror remote control switch connector.
3. Check door mirror remote control switch.

Door mirror remote control switch			condition		Continuity
Terminal			Change over switch	Mirror switch	
Driver side (RHD models), Passenger side (LHD models)	13	7	RIGHT	RIGHT	Existed
	12	4			
	13	4		LEFT	
	12	7			
	13	3		UP	
	12	7			
	13	7		DOWN	
	12	3			
Driver side (LHD models), Passenger side (RHD models)	13	6	LEFT	RIGHT	
	12	5			
	13	5		LEFT	
	12	6			
	13	2		UP	
	12	6			
	13	6		DOWN	
	12	2			

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace door mirror remote control switch.

DOOR MIRROR (OPEN/CLOSE MOTOR)

Component Function Check

INFOID:0000000006486954

1.CHECK DOOR MIRROR RETRACT FUNCTION

1. Turn ignition switch ON.
2. Operate open/close switch. Check that door mirror operates normally.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to MIR-25, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006486955

1.CHECK DOOR MIRROR REMOTE CONTROL SWITCH POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect door mirror remote control switch connector.
3. Turn ignition switch ON.
4. Check voltage between door mirror remote control switch harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Door mirror remote control switch			
Connector	Terminal		
M7	13	Ground	Battery voltage

Is the inspection result normal?

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

2.DETECT MALFUNCTIONING PART

Check the following.
- 10 A fuse (#19)
- Harness for open or short between door mirror remote control switch harness connector and battery terminal.

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace the malfunctioning parts.

3.CHECK DOOR MIRROR REMOTE CONTROL SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between door mirror remote control switch harness connector and ground.

Door mirror remote control switch		Ground	Continuity
Connector	Terminal		
M7	12		Existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connector.

4.CHECK DOOR MIRROR OPEN RELAY AND DOOR MIRROR CLOSE RELAY INPUT SIGNAL

1. Connect door mirror remote control switch connector.
2. Disconnect door mirror open relay and door mirror close relay connector.
3. Turn ignition switch ON.
4. Check voltage between door mirror open relay and door mirror close relay harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Door mirror open/close relay					
Connector	Terminal				
M8	4	Ground	Door mirror remote control switch (open/close switch)	Auto	12
				Other than above	0
M9				Close	12
				Other than above	0

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 5.

5. CHECK HARNESS CONTINUITY-1

1. Turn ignition switch OFF.
2. Disconnect door mirror remote control switch connector.
3. Check continuity between door mirror remote control switch harness connector and door mirror open/close relay harness connector.

door mirror remote control switch		Door mirror open/close relay		Continuity
Connector	Terminal	Connector	Terminal	
M7	9	M8	4	Existed
	11	M9		

4. Check continuity between door mirror remote control switch harness connector and ground.

door mirror remote control switch		Ground	Continuity
Connector	Terminal		
M7	9		Not existed
	11		

Is the inspection result normal?

YES >> GO TO 10.
NO >> Repair or replace harness.

6. CHECK DOOR MIRROR MOTOR INPUT SIGNAL

1. Turn ignition switch OFF.
2. Connect door mirror open relay and door mirror close relay connector.
3. Disconnect door mirror (driver side) connector and door mirror (passenger side) connector.
4. Turn ignition switch ON.
5. Check voltage between door mirror connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
Door mirror					
Connector	Terminal				
D8 (LHD models) D3 (RHD models)	5	Ground	Door mirror remote control switch (open/close switch)	Auto	12
				Close	0
	6			Auto	0
				Close	12
D29 (LHD models) D23 (RHD models)	5			Auto	12
				Close	0
	6			Auto	0
				Close	12

Is the inspection result normal?

YES >> GO TO 8.
NO >> GO TO 7.

7. CHECK HARNESS CONTINUITY-2

1. Turn ignition switch OFF.
2. Disconnect door mirror open relay connector and door mirror close relay connector.
3. Check continuity between door mirror harness connector and door mirror open relay and door mirror close relay harness connector.

door mirror		Door mirror open/close relay		Continuity
Connector	Terminal	Connector	Terminal	
D8 (LHD models) D3 (RHD models)	5	M8	3	Existed
	6	M9		
D29 (LHD models) D23 (RHD models)	5	M8		
	6	M9		

4. Check continuity between door mirror harness connector and ground.

door mirror			Continuity
Connector	Terminal		
D8 (LHD models) D3 (RHD models)	5	Ground	Not existed
	6		
D29 (LHD models) D23 (RHD models)	5		
	6		

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace harness.

8. CHECK DOOR MIRROR OPEN RELAY

Check door mirror open relay.
Refer to MIR-28, "Component Inspection (Door Mirror Open Relay)".

Is the inspection result normal?

YES >> GO TO 9.
NO >> Replace door mirror open relay.

9. CHECK DOOR MIRROR CLOSE RELAY

Check door mirror close relay.
Refer to MIR-28, "Component Inspection (Door Mirror Close Relay)".

Is the inspection result normal?

YES >> GO TO 10.
NO >> Replace door mirror close relay.

10. CHECK DOOR MIRROR REMOTE CONTROL SWITCH

Check door mirror remote control switch (open/close switch).
Refer to MIR-28, "Component Inspection (Door Mirror Remote Control Switch)".

Is the inspection result normal?

YES >> Replace door mirror open/close motor.
NO >> Replace door mirror remote control switch.

11. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident".

>> INSPECTION END

Component Inspection (Door Mirror Remote Control Switch)

INFOID:0000000006486949

1.CHECK OPEN/CLOSE SWITCH

1. Turn ignition switch OFF.
2. Disconnect door mirror remote control switch connector.
3. Check door mirror remote control switch.

Door mirror remote control switch		Condition		Continuity
Terminal				
13	9	Open/close switch	AUTO	Existed
12	11			
13	11		CLOSE	
12	9			

Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace door mirror remote control switch.

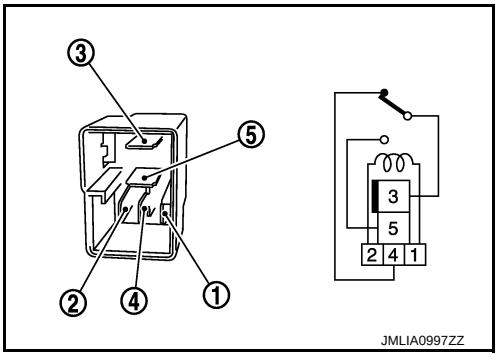
Component Inspection (Door Mirror Open Relay)

INFOID:0000000006487277

1.CHECK DOOR MIRROR OPEN RELAY

1. Turn ignition switch OFF.
2. Remove door mirror open relay.
3. Check the continuity between door mirror open relay terminals under the following conditions.

Terminal		Condition	Continuity
4	3	No current supply	Existed
		12 V direct current supply between terminals 1 and 2.	Not existed
5		12 V direct current supply between terminals 1 and 2.	Existed
		No current supply	Not existed



Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace door mirror open relay.

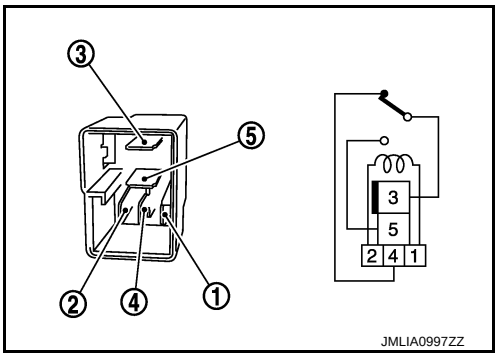
Component Inspection (Door Mirror Close Relay)

INFOID:0000000006487279

1.CHECK DOOR MIRROR OPEN/CLOSE RELAY

1. Turn ignition switch OFF.
2. Remove door mirror close relay.
3. Check the continuity between door mirror close relay terminals under the following conditions.

Terminal		Condition	Continuity
4	3	No current supply	Existed
		12 V direct current supply between terminals 1 and 2.	Not existed
5		12 V direct current supply between terminals 1 and 2.	Existed
		No current supply	Not existed



Is the inspection result normal?

YES >> INSPECTION END.

NO >> Replace door mirror close relay.

AUTO RETRACTABLE DOOR MIRROR CIRCUIT

Component Function Check

INFOID:0000000006486951

1.CHECK FUNCTION

1. Turn the door mirror open/close switch to “AUTO”.
2. Turn ignition switch ON.
3. Select “INTELLIGENT KEY” of “BCM” using CONSULT-III.
4. Select “RETRACTABLE MIRROR” in “ACTIVE TEST” mode.
5. Touch “On” check that it works normally.

Is the inspection result normal?

YES >> INSPECTION END
NO >> Refer to MIR-30, "Diagnosis Procedure"

Diagnosis Procedure

INFOID:0000000006486952

1.CHECK DOOR MIRROR OPEN RELAY AND DOOR MIRROR CLOSE RELAY POWER SUPPLY

1. Turn ignition switch OFF.
2. Disconnect door mirror open relay and door mirror close relay connector.
3. Check voltage between door mirror open relay and door mirror close relay harness connector and ground.

(+)		(–)	Voltage (V) (Approx.)
Door mirror open/close relay			
Connector	Terminal		
M8	1	Ground	Battery voltage
M9	1		
	5		

Is the inspection result normal?

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

2.DETECT MALFUNCTIONING PART

Check the following.
- 10 A fuse (#7)
- Harness for open or short between door mirror remote control switch harness connector and battery terminal.

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace the malfunctioning parts.

3.CHECK BCM INPUT SIGNAL CIRCUIT

1. Disconnect BCM connector.
2. Check continuity between door mirror open relay and door mirror close relay harness connector and BCM harness connector.

Door mirror open/close relay		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M8	2	M70	74	Existed
M9				

3. Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M70	74		Not existed

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace harness or connector.

4. CHECK OPEN/CLOSE MOTOR GROUND CIRCUIT

1. Disconnect door mirror remote control switch connector.
2. Check continuity between door mirror remote control switch harness connector and door mirror open relay harness connector.

door mirror remote control switch		Door mirror open relay		Continuity
Connector	Terminal	Connector	Terminal	
M7	11	M8	5	Existed

3. Check continuity between door mirror remote control switch harness connector and ground.

door mirror remote control switch		Ground	Continuity
Connector	Terminal		
M7	11		Not existed

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK DOOR MIRROR OPEN RELAY

Check door mirror open relay.
Refer to MIR-32, "Component Inspection (Door Mirror Open Relay)"

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness or connector.

6. CHECK DOOR MIRROR CLOSE RELAY

Check door mirror close relay.
Refer to MIR-32, "Component Inspection (Door Mirror Close Relay)"

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace harness or connector.

7. CHECK BCM FUNCTION

1. Turn the door mirror open/close switch to AUTO.
2. Connect door mirror remote control switch connector, door mirror open relay, door mirror close relay and BCM connector.
3. Turn ignition switch ON.
4. Select “INTELLIGENT KEY” of “BCM” using CONSULT-III.
5. Select “RETRACTABLE MIRROR” in “ACTIVE TEST” mode.
6. Touch “On” and check voltage between BCM harness connector and ground.

(+)		(–)	Condition		Voltage (V) (Approx.)
BCM					
Connector	Terminal				
M70	74	Ground	RETRACTABLE MIRROR	ON	0
				OFF	Battery voltage

Is the inspection result normal?

YES >> GO TO 8.
NO >> Replace BCM. Refer to BCS-93, "Removal and Installation".

8. CHECK INTERMITTENT INCIDENT

Refer to GI-42, "Intermittent Incident"

>> INSPECTION END

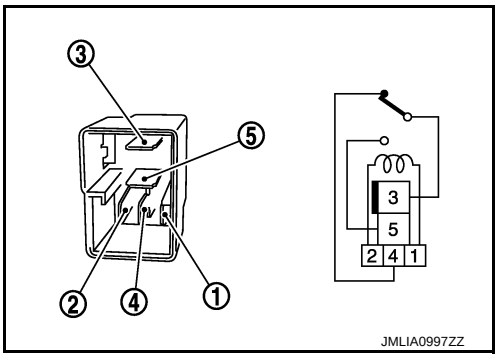
Component Inspection (Door Mirror Open Relay)

INFOID:0000000006487290

1.CHECK DOOR MIRROR OPEN RELAY

1. Turn ignition switch OFF.
2. Remove door mirror open relay.
3. Check the continuity between door mirror open relay terminals under the following conditions.

Terminal		Condition	Continuity
4	3	No current supply	Existed
		12 V direct current supply between terminals 1 and 2.	Not existed
5		12 V direct current supply between terminals 1 and 2.	Existed
		No current supply	Not existed



Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace door mirror open relay.

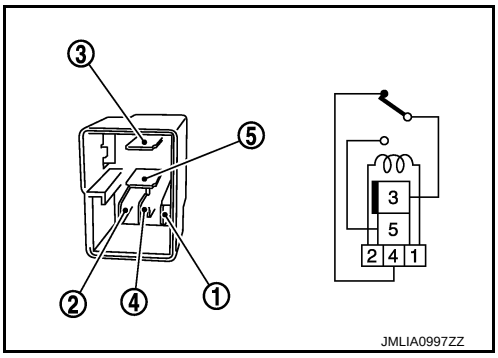
Component Inspection (Door Mirror Close Relay)

INFOID:0000000006487291

1.CHECK DOOR MIRROR OPEN/CLOSE RELAY

1. Turn ignition switch OFF.
2. Remove door mirror close relay.
3. Check the continuity between door mirror close relay terminals under the following conditions.

Terminal		Condition	Continuity
4	3	No current supply	Existed
		12 V direct current supply between terminals 1 and 2.	Not existed
5		12 V direct current supply between terminals 1 and 2.	Existed
		No current supply	Not existed



Is the inspection result normal?

YES >> INSPECTION END.
NO >> Replace door mirror close relay.

SYMPTOM DIAGNOSIS

ELECTRIC FOLDABLE DOOR MIRROR DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000006486957

1.CHECK DOOR MIRROR (OPEN/CLOSE MOTOR) CIRCUIT

Check door mirror (open/close motor) circuit.
Refer to MIR-25, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CONFIRM THE OPERATION

Confirm the operation again.

Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> GO TO 1.

AUTO RETRACTABLE DOOR MIRROR DOES NOT OPERATE

Diagnosis Procedure

INFOID:0000000006486958

1.CHECK INTELLIGENT KEY AND DOOR REQUEST SWITCH OPERATION

Check operation of Intelligent Key and door request switch.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning parts.

2.CHECK DOOR MIRROR (OPEN/CLOSE MOTOR) CIRCUIT

Check door mirror (open/close motor) circuit.
Refer to MIR-25, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 3.
NO >> Repair or replace the malfunctioning parts.

3.CHECK AUTO RETRACTABLE DOOR MIRROR CIRCUIT

Check auto retractable door mirror circuit.
Refer to MIR-30, "Component Function Check".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Repair or replace the malfunctioning parts.

4.CONFIRM THE OPERATION

Confirm the operation again.

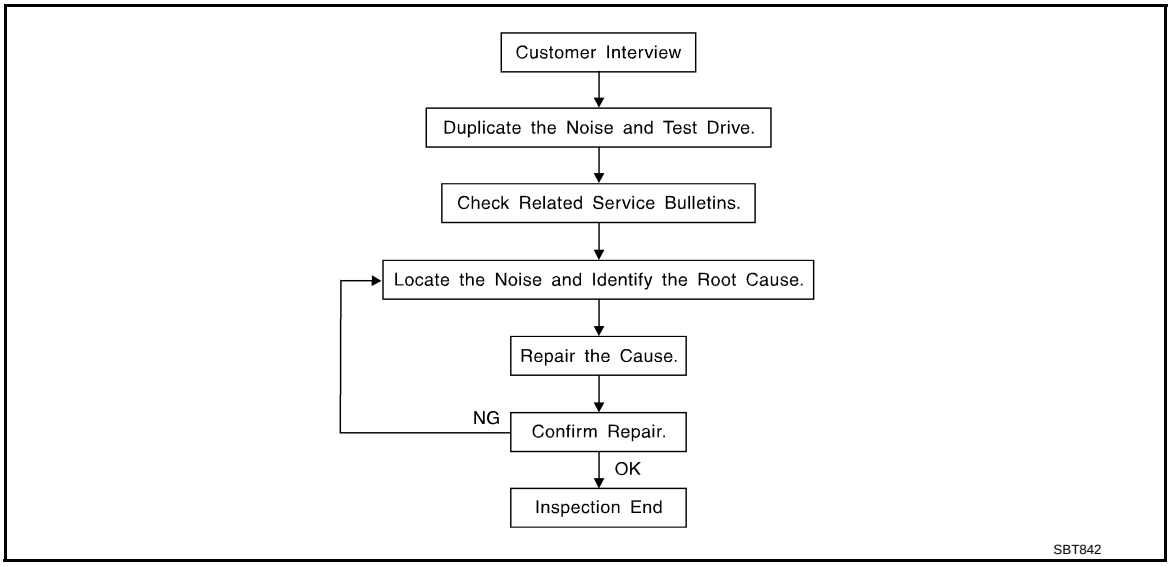
Is the inspection result normal?

YES >> Check intermittent incident. Refer to GI-42, "Intermittent Incident".
NO >> GO TO 1.

SQUEAK AND RATTLE TROUBLE DIAGNOSES

Work Flow

INFOID:0000000006695887



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 the customer's comments; refer to MIR-39, "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, be sure to diagnose and repair the noise that the customer is concerned about. This can be accomplished by a test drive 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 bumble bee)
  Buzz characteristics include high frequency rattle/firm contact.
- Often the degree of acceptable noise level will vary depending upon 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

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 model, drive position on A/T model).
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.

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 (Engine Ear or 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 is are suspected to be the cause of the noise.
- Looking for loose components and contact marks.
  Refer to MIR-37, "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. These insulators are available through the authorized Nissan Parts Department.

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

- URETHANE PADS
  Insulates connectors, harness, etc.
- INSULATOR (Foam blocks)
  Insulates components from contact. Can be used to fill space behind a panel.
- INSULATOR (Light foam block)
- FELT CLOTHTAPE
  Used to insulate where movement does not occur. Ideal for instrument panel applications.
  The following materials, not available through NISSAN Parts Department, 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.
  Note: 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:0000000006695888

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

INSTRUMENT PANEL

Most incidents are caused by contact and movement between:

1. 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 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
3. 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 is important to note the position the seat is 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. 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.

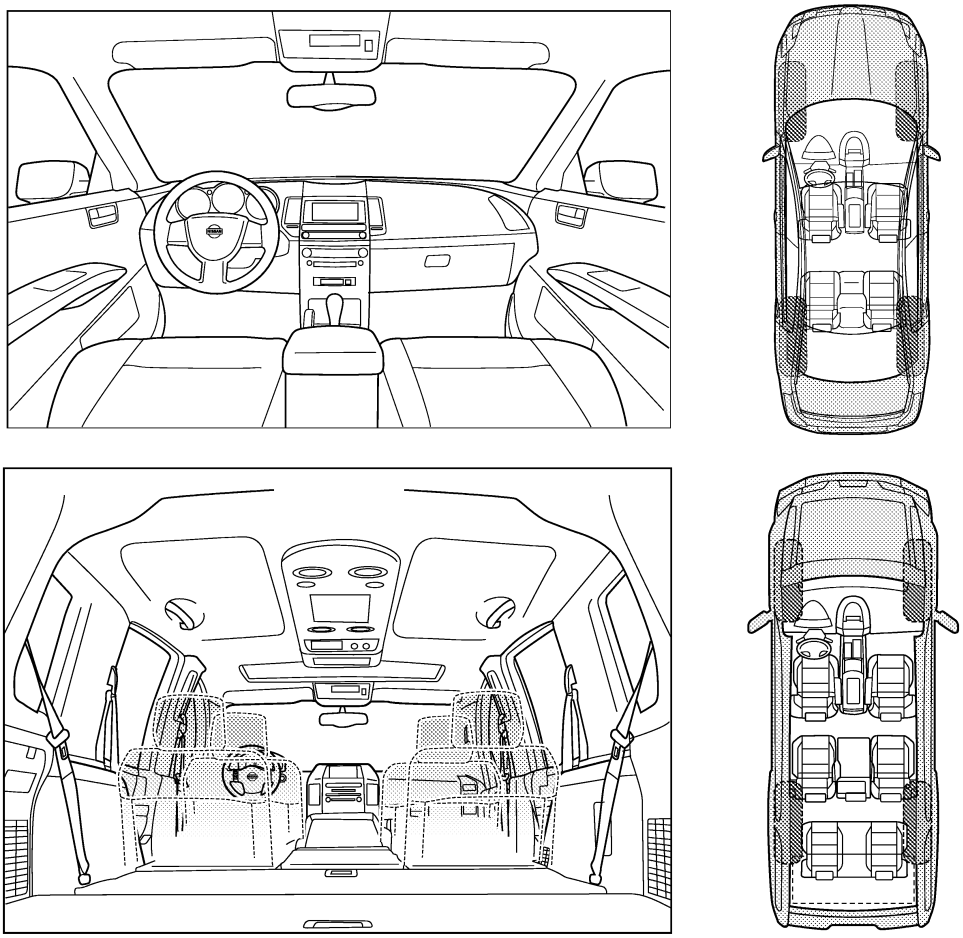
Diagnostic Worksheet

INFOID:0000000006695889

SQUEAK & RATTLE
DIAGNOSTIC WORKSHEET

Dear Nissan Customer:
We are concerned about your satisfaction with your Nissan vehicle. Repairing a squeak or rattle sometimes can be very difficult. To help us fix your Nissan 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 advisor 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.

PIIB8740E

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)

- ☐ anytime
- ☐ 1st time in the morning
- ☐ only when it is cold outside
- ☐ only when it is hot outside
- ☐ after sitting out in the rain
- ☐ when it is raining or wet
- ☐ dry or dusty conditions
- ☐ 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	☐	☐	_____
- Noise verified on test drive	☐	☐	_____
- Noise source located and repaired	☐	☐	_____
- Follow up test drive performed to confirm repair	☐	☐	_____

VIN: _____ Customer Name: _____

W.O.# _____ Date: _____

This form must be attached to Work Order

PIIB8742E

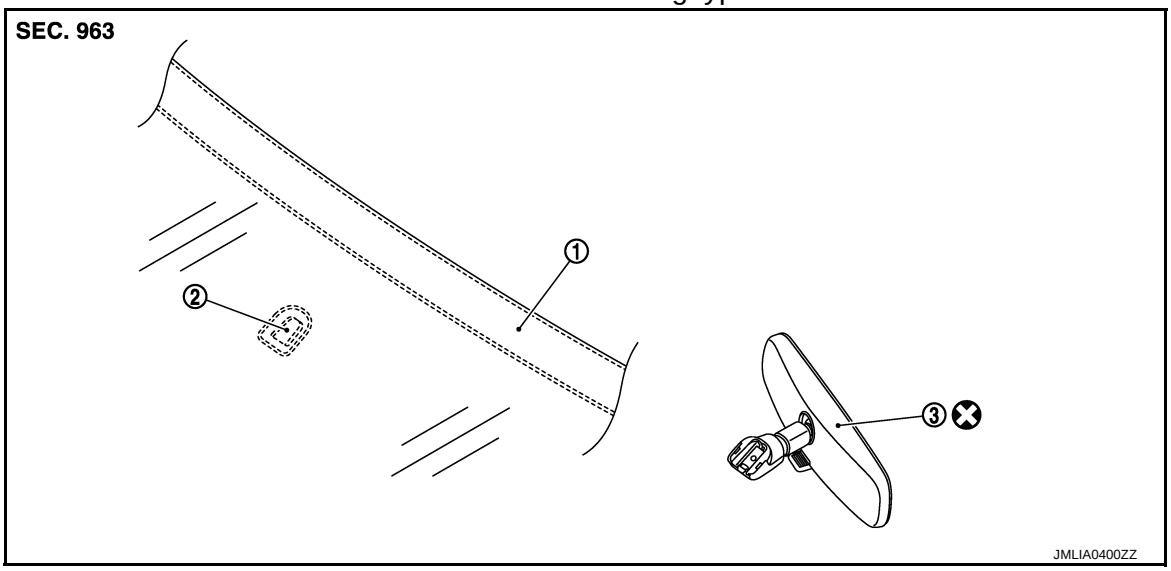
REMOVAL AND INSTALLATION

INSIDE MIRROR

Exploded View

INFOID:0000000006624812

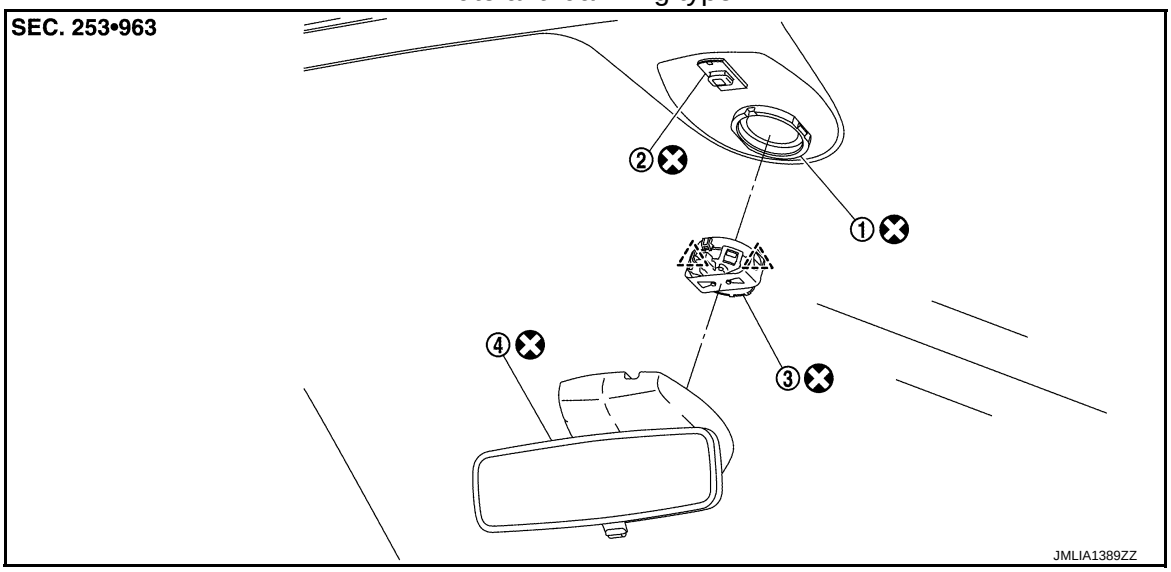
Manual anti-dazzling type



1. Windshield glass
2. Mirror base
3. Inside mirror assembly

⊗ : Do not reuse

Auto anti-dazzling type



1. Rain sensor bracket
2. Mirror base
3. Rain sensor
4. Inside mirror assembly

△ : Pawl

⊗ : Do not reuse

Removal and Installation

INFOID:0000000006624813

CAUTION:

Never reuse the inside mirror assembly disassembled from mirror base.

Manual anti-dazzling type

REMOVAL

Slide the inside mirror assembly upward to remove.

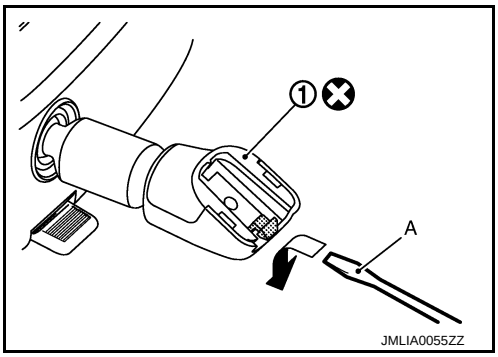
NOTE:

Insert flat-bladed screwdriver (A) under the inside mirror (1).

Slide the inside mirror to the upper side while pushing the pawl downward.

CAUTION:

Never use excessive force to remove the inside mirror because it is inserted tightly into the mirror base.



INSTALLATION

Install in the reverse order of removal.

Auto anti-dazzling type

REMOVAL

Slide the inside mirror assembly upward to remove.

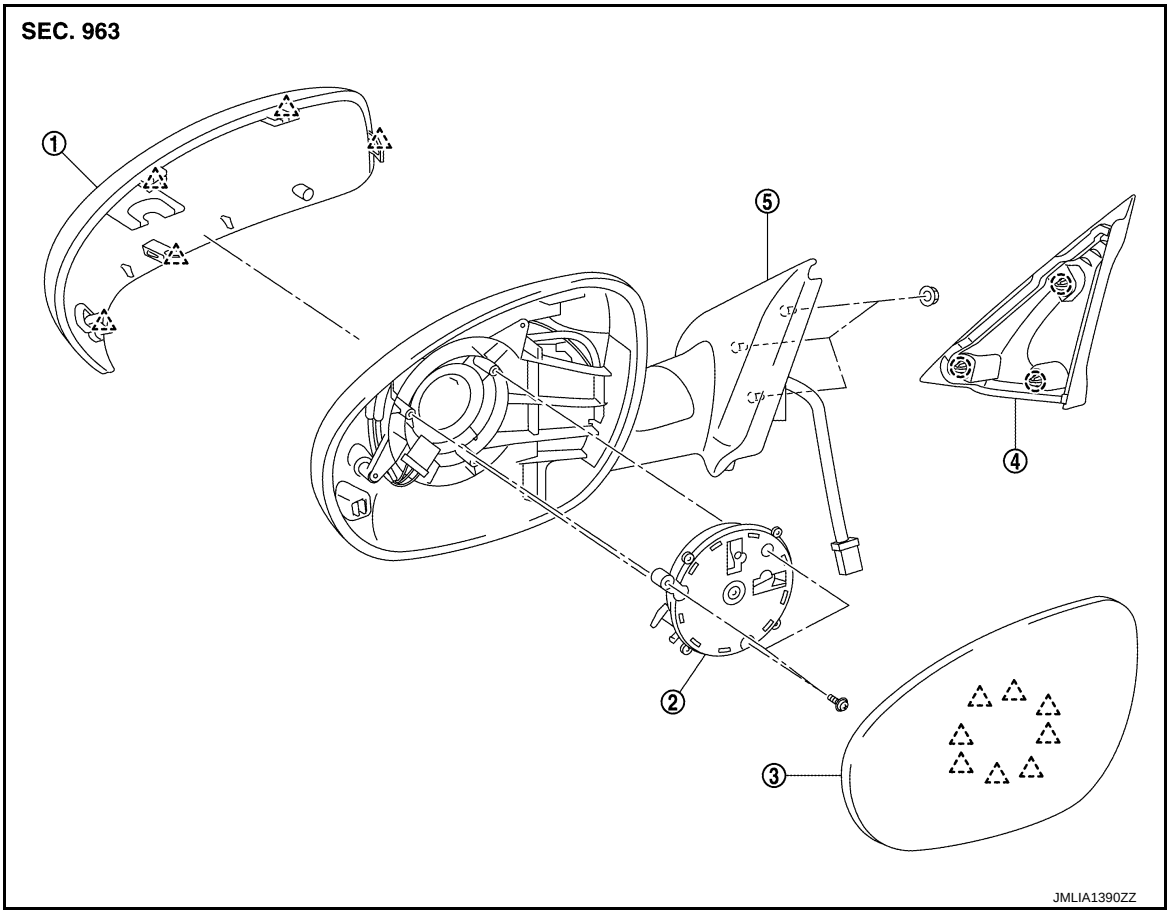
INSTALLATION

Install in the reverse order of removal.

OUTSIDE MIRROR

Exploded View

INFOID:0000000006486964



1. Door mirror cover
2. Actuator
3. Glass mirror
4. Door mirror corner cover
5. Door mirror assembly

: Clip

: Pawl

DOOR MIRROR ASSEMBLY

DOOR MIRROR ASSEMBLY : Removal and Installation

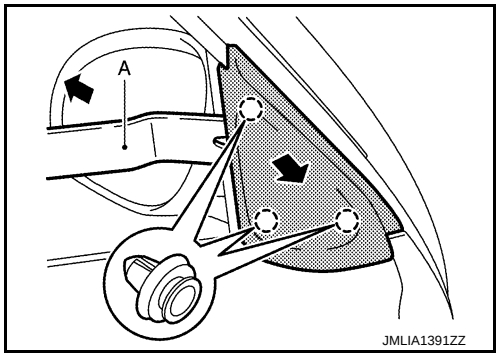
INFOID:0000000006486965

CAUTION:
When removing, always use a remover tool that is made of plastic.

REMOVAL

1. Disengage door mirror corner cover fixing clips with a remover tool (A) and then remove door mirror corner cover.

: Clip



2. Remove front door finisher. Refer to INT-13, "Removal and Installation".
3. Disconnect door mirror harness connector.
4. Remove door mirror mounting nuts, and then remove door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

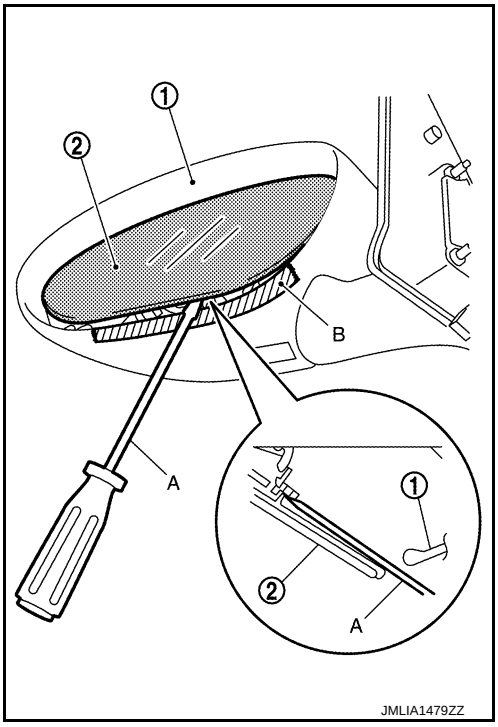
GLASS MIRROR

GLASS MIRROR : Removal and Installation

INFOID:0000000006486966

REMOVAL

1. Place the glass mirror upward.
2. Put a strip of protective tape (B) on mirror body (1).
3. Insert a small flat-bladed screwdriver (A) into the recess at lower side between glass mirror (2) and actuator, and push up pawls to remove glass mirror lower side.
   NOTE:
   Insert a small flat-bladed screwdriver into recesses, and push up while rotating (twisting) to make work easier.



4. Remove glass mirror from mirror body.

INSTALLATION

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

CAUTION:

After installation, visually check that pawls are securely engaged.

DOOR MIRROR COVER

DOOR MIRROR COVER : Removal and Installation

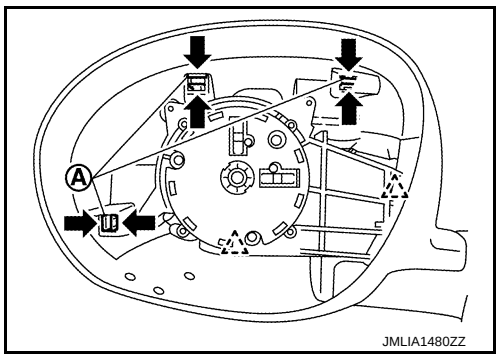
INFOID:0000000006486967

REMOVAL

1. Remove door mirror assembly from the door panel. Refer to MIR-43, "DOOR MIRROR ASSEMBLY : Removal and Installation".
2. Remove the glass mirror. Refer to MIR-44, "GLASS MIRROR : Removal and Installation".

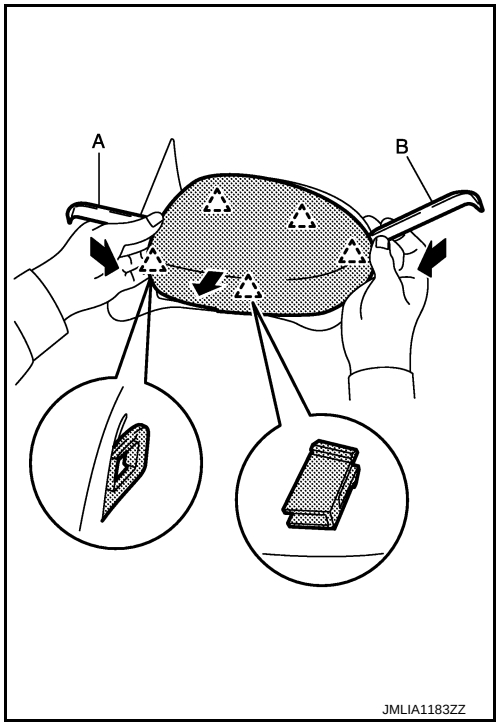
3. Disengage door mirror cover fixing pawls while pressing the pawls toward the direction of the arrows.

: Pawl

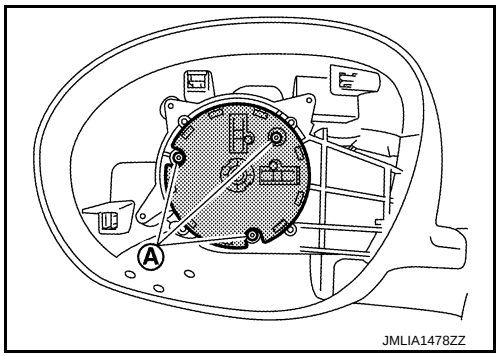


4. Insert two remover tools (A) and (B) between door mirror cover and mirror body to disengage the pawls, and then remove door mirror cover.

: Pawl



5. Remove actuator fixing screws (A).



6. Disconnect actuator harness connector and then remove actuator from door mirror.

INSTALLATION

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

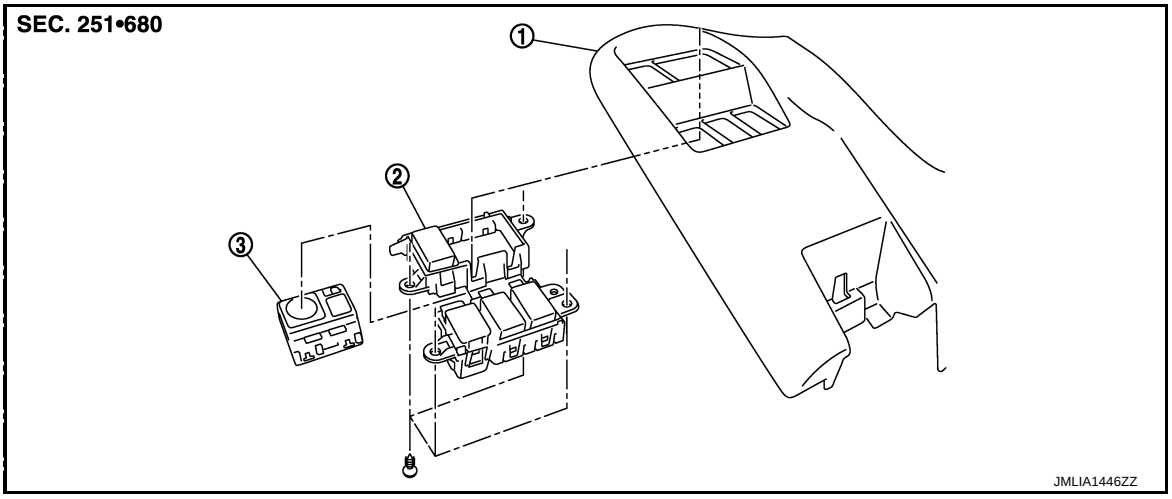
CAUTION:

After installation, visually check that pawls are securely engaged.

DOOR MIRROR REMOTE CONTROL SWITCH

Exploded View

INFOID:0000000006609104



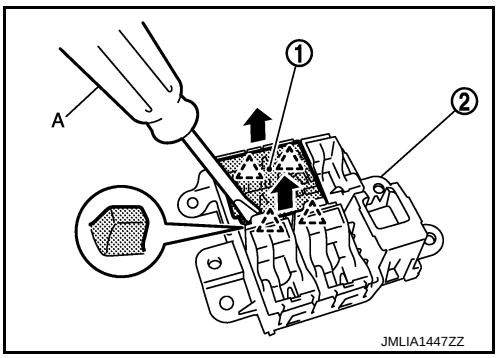
1. Instrument lower panel
2. Switch bracket
3. Door mirror remote control switch

Removal and Installation

INFOID:0000000006609105

REMOVAL

1. Remove the instrument lower panel. Refer to IP-13, "Removal and Installation".
2. Remove mounting screws and remove switch bracket from instrument lower panel.
3. Remove door mirror remote control switch (1) from switch bracket (2) using flat-bladed screwdriver (A).



: Pawl

INSTALLATION

Install in the reverse order of removal.