SECTION GW

GLASSES, WINDOW SYSTEM & MIRRORS

CONTENTS

CAN COMMUNICATION

PFP:23710

System Description

EIS002PE

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

CAN Communication Unit For LHD Models with Tyre Pressure Monitoring System

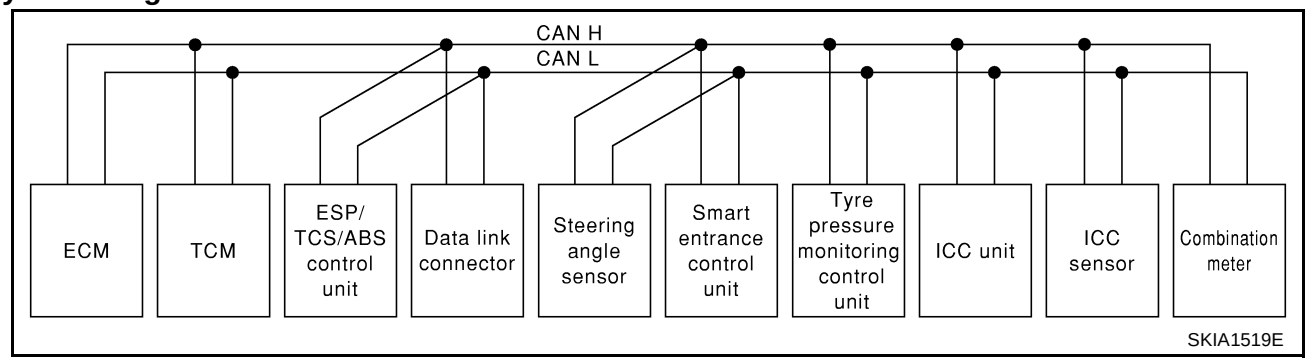
EIS002PF

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DDTi
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
ICC unit	×								
ICC sensor	×								
Combination meter	×	×	×	×	×	×	×	×	×
CAN communication type	GW-4, "TYPE 1"	GW-5, "TYPE 2"	GW-6, "TYPE 3"	GW-7, "TYPE 4"	GW-8, "TYPE 5"	GW-9, "TYPE 6"			
Can system Trouble diagnosis	LAN-36, "CAN SYSTEM (TYPE 1)"	LAN-63, "CAN SYSTEM (TYPE 2)"	LAN-83, "CAN SYSTEM (TYPE 3)"	LAN-102, "CAN SYSTEM (TYPE 4)"	LAN-121, "CAN SYSTEM (TYPE 5)"	LAN-138, "CAN SYSTEM (TYPE 6)"			

TYPE 1

System diagram



Input/output signal chart

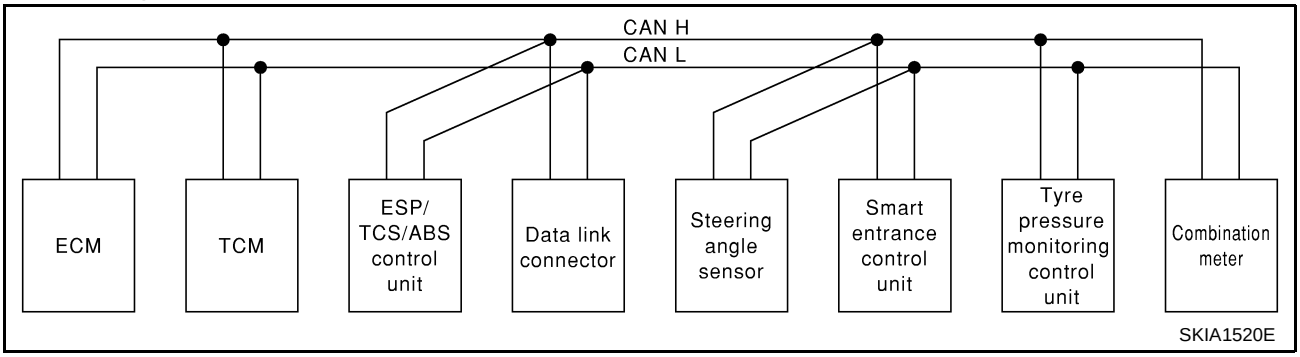
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Engine speed signal	T	R	R				R		R
Accelerator pedal position signal	T	R	R				R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal			T				R		
ICC system display signal							T		R
ICC sensor signal							R	T	
ESP operation signal	R		T				R		
TCS operation signal	R		T				R		
ABS operation signal	R	R	T				R		
Stop lamp switch signal		R	T						
Steering wheel angle sensor signal			R	T					
Wheel speed sensor signal			T				R		
Rear window defogger signal	R				T				
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal			T						R
	R								T
Seat belt reminder signal					R				T

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Headlamp switch signal					T				R
Flashing indicator signal					T				R
Engine cooling fan speed signal	T				R				
Child lock indicator signal					T				R
Door switches state signal					T				R
Key ID signal	R				T				
	T				R				
A/C compressor signal	T				R				
Tire pressure signal						T			R

TYPE 2

System diagram



Input/output signal chart

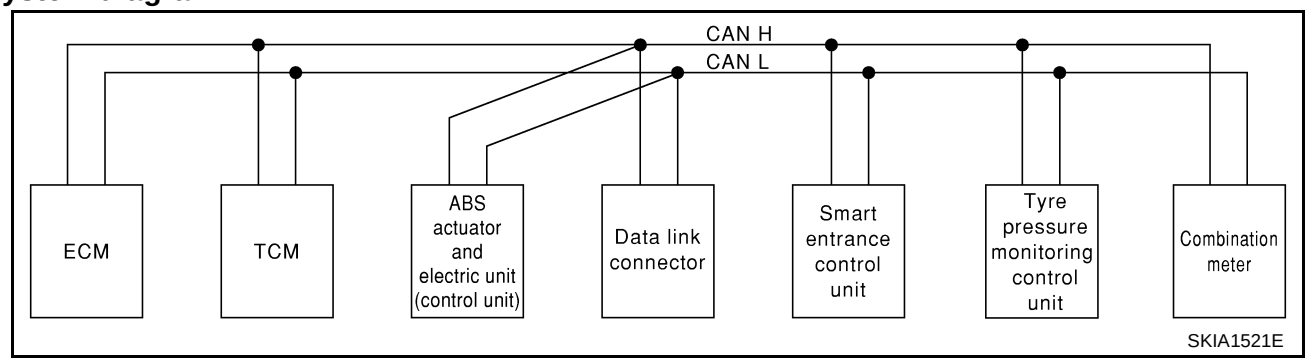
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R	T			
Rear window defogger signal	R				T		
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature signal	T						R

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Fuel consumption signal	T						R
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal					R		T
Headlamp switch signal					T		R
Flashing indicator signal					T		R
Engine cooling fan speed signal	T				R		
Child lock indicator signal					T		R
Door switches state signal					T		R
Key ID signal	R				T		
	T				R		
A/C compressor signal	T				R		
Tire pressure signal						T	R

TYPE 3

System diagram



Input/output signal chart

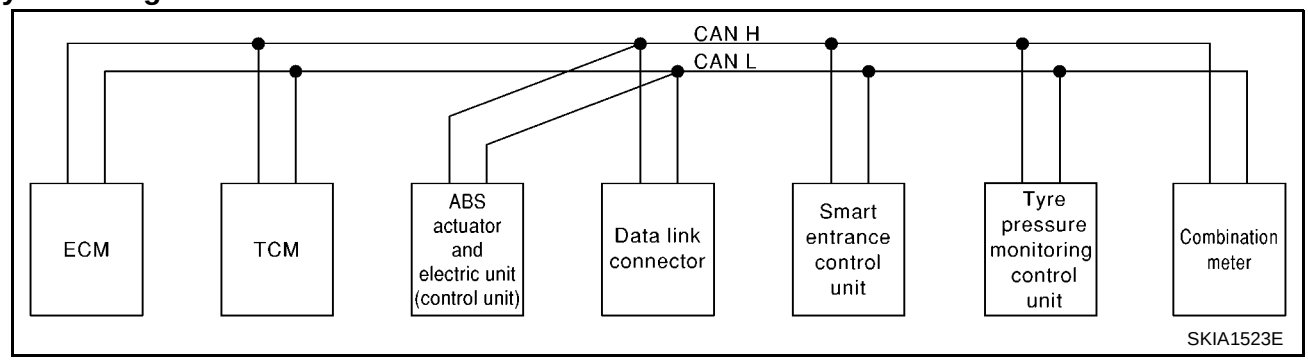
T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tire pressure signal					T	R

TYPE 4

System diagram



Input/output signal chart

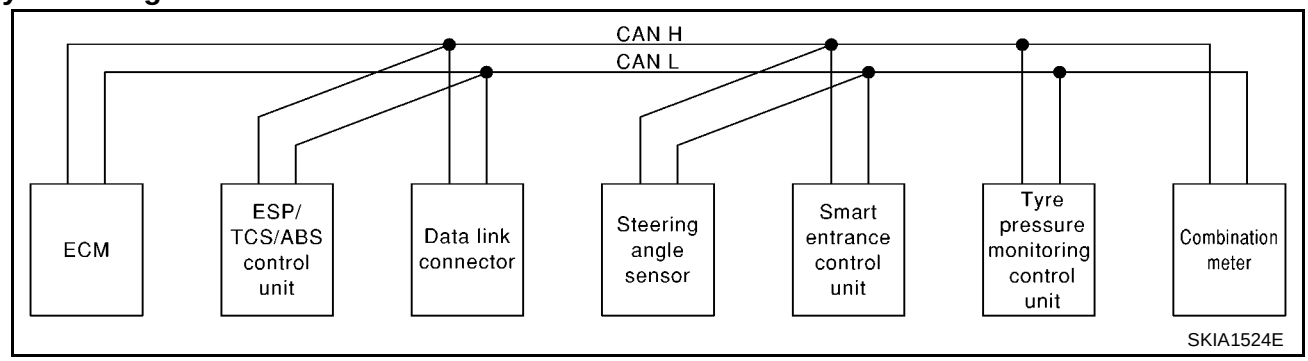
T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tire pressure signal					T	R

TYPE 5

System diagram



Input/output signal chart

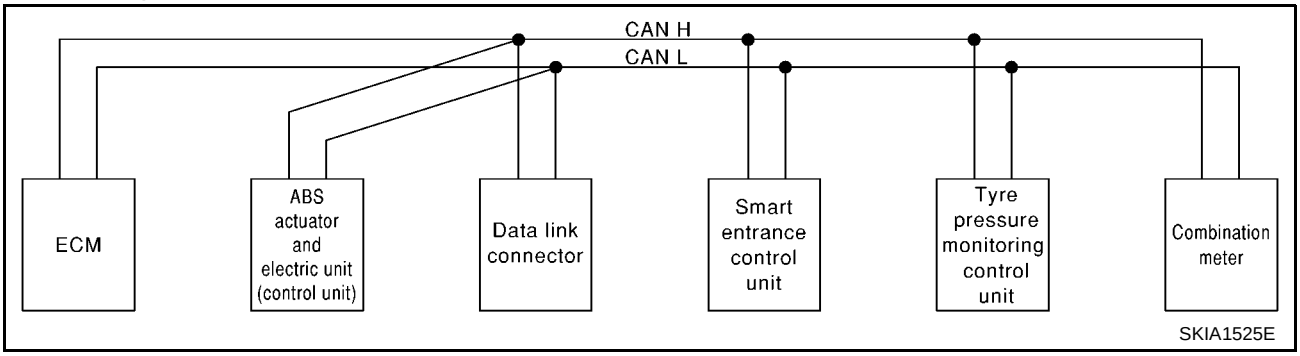
T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Accelerator pedal position signal	T	R				
ESP operation signal	R	T				
TCS operation signal	R	T				
ABS operation signal	R	T				
Steering wheel angle sensor signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal		T				R
	R					T
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tire pressure signal					T	R

TYPE 6

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T				R
Rear window defogger signal	R*1		T		
Heater fan switch signal	R*1				T
Air conditioner switch signal	R				T
MI signal	T				R
Glow lamp signal*2	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal			R		T
Headlamp switch signal			T		R
Flashing indicator signal			T		R
Engine cooling fan speed signal	T		R		
Child lock indicator signal			T		R
Door switches state signal			T		R
Key ID signal	R		T		
	T		R		
A/C compressor signal	T		R		
Tire pressure signal				T	R

*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

CAN Communication Unit For LHD Models without Tyre Pressure Monitoring System

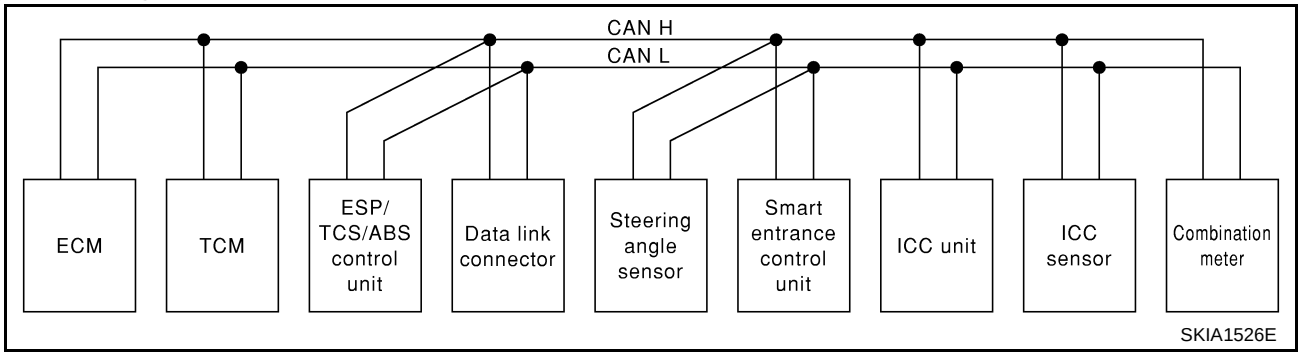
EIS002PG

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DDTi
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
Smart entrance control unit	×	×	×	×	×	×	×	×	×
ICC unit	×								
ICC sensor	×								
Combination meter	×	×	×	×	×	×	×	×	×
Can communication type	GW-10, "TYPE 7"	GW-12, "TYPE 8"	GW-13, "TYPE 9"	GW-14, "TYPE 10"	GW-14, "TYPE 11"	GW-15, "TYPE 12"			
Can system Trouble diagnosis	LAN-156, "CAN SYSTEM (TYPE 7)"	LAN-179, "CAN SYSTEM (TYPE 8)"	LAN-195, "CAN SYSTEM (TYPE 9)"	LAN-210, "CAN SYSTEM (TYPE 10)"	LAN-225, "CAN SYSTEM (TYPE 11)"	LAN-238, "CAN SYSTEM (TYPE 12)"			

TYPE 7

System diagram



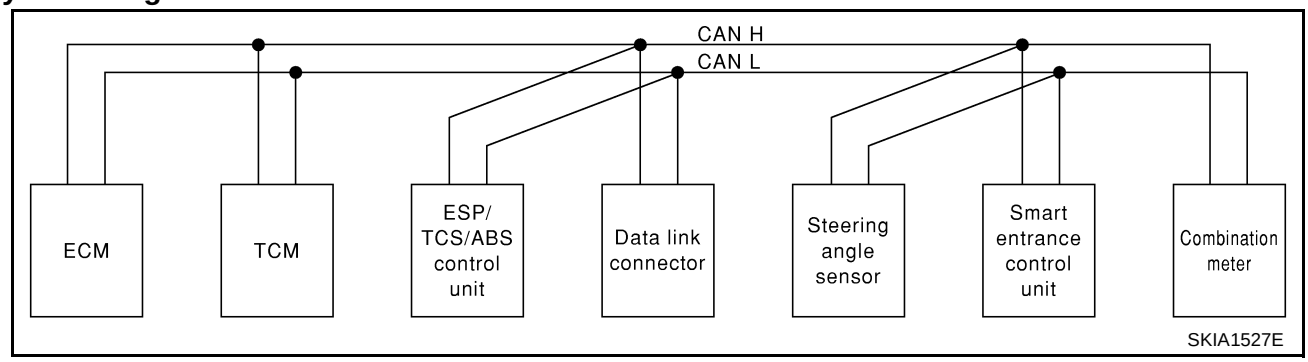
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	ICC unit	ICC sensor	Combination meter
Engine speed signal	T	R	R			R		R
Accelerator pedal position signal	T	R	R			R		
Closed throttle position signal	T					R		
ICC steering switch signal	T					R		
Shift pattern signal		T				R		
Parking brake switch signal			T			R		
ICC system display signal						T		R
ICC sensor signal						R	T	
ESP operation signal	R		T			R		
TCS operation signal	R		T			R		
ABS operation signal	R	R	T			R		
Stop lamp switch signal		R	T					
Steering wheel angle sensor signal			R	T				
Wheel speed sensor signal			T			R		
Rear window defogger signal	R				T			
Heater fan switch signal	R							T
Air conditioner switch signal	R							T
Primary pulley revolution signal	R	T				R		
Secondary pulley revolution signal	R	T				R		
ICC operation signal	R					T		
Brake switch signal	R					T		
MI signal	T							R
Current gear position signal		T						R
Engine coolant temperature signal	T					R		R
Fuel consumption signal	T							R
Vehicle speed signal			T					R
	R							T
Seat belt reminder signal					R			T
Headlamp switch signal					T			R
Flashing indicator signal					T			R
Engine cooling fan speed signal	T				R			
Child lock indicator signal					T			R
Door switches state signal					T			R
Key ID signal	R				T			
	T				R			
A/C compressor signal	T				R			

TYPE 8

System diagram



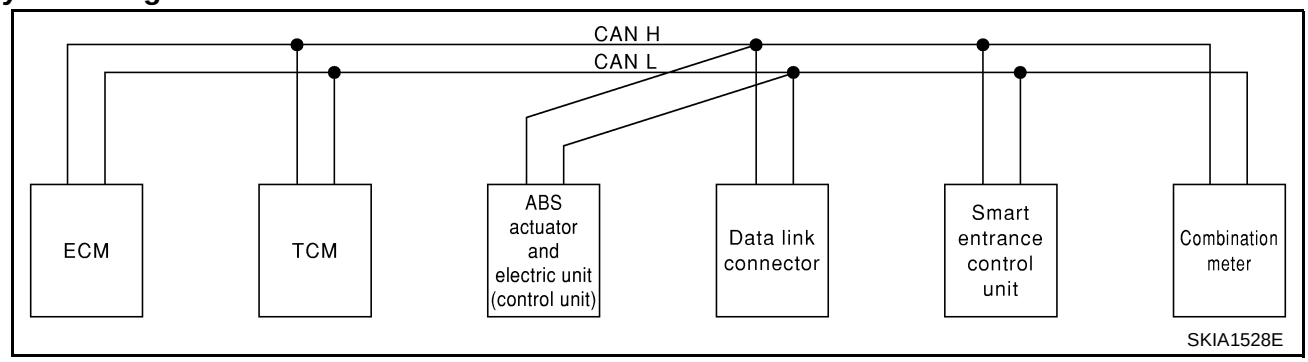
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combina-tion meter
Engine speed signal	T	R	R			R
Accelerator pedal position signal	T	R	R			
ESP operation signal	R		T			
TCS operation signal	R		T			
ABS operation signal	R	R	T			
Stop lamp switch signal		R	T			
Steering wheel angle sensor signal			R	T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	

TYPE 9

System diagram



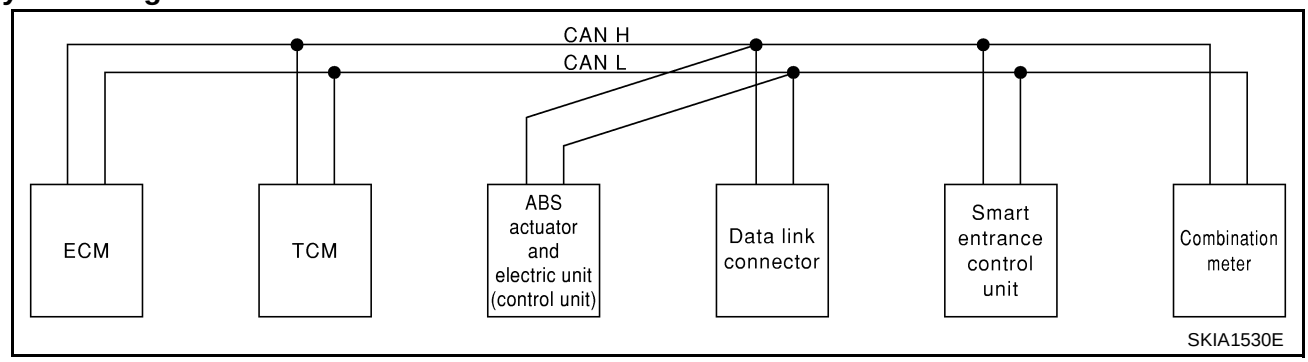
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
Primary pulley revolution signal	R	T			
Secondary pulley revolution signal	R	T			
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

TYPE 10

System diagram



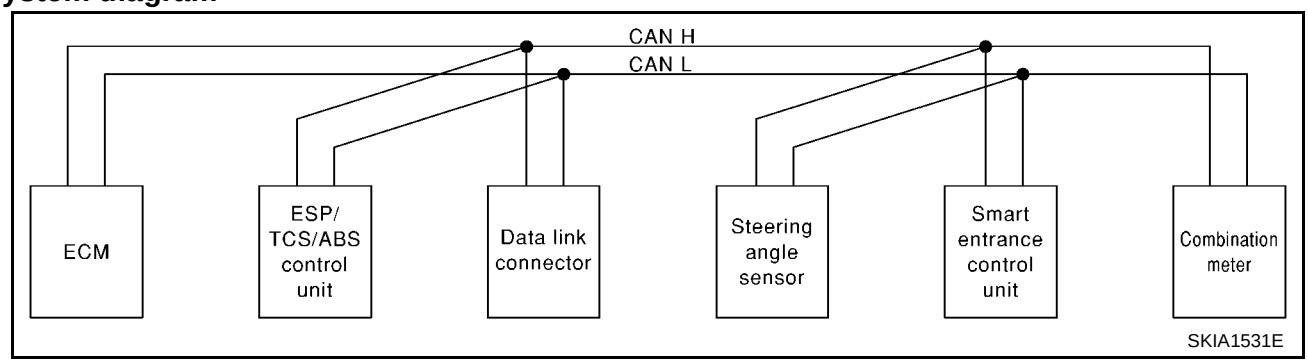
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

TYPE 11

System diagram



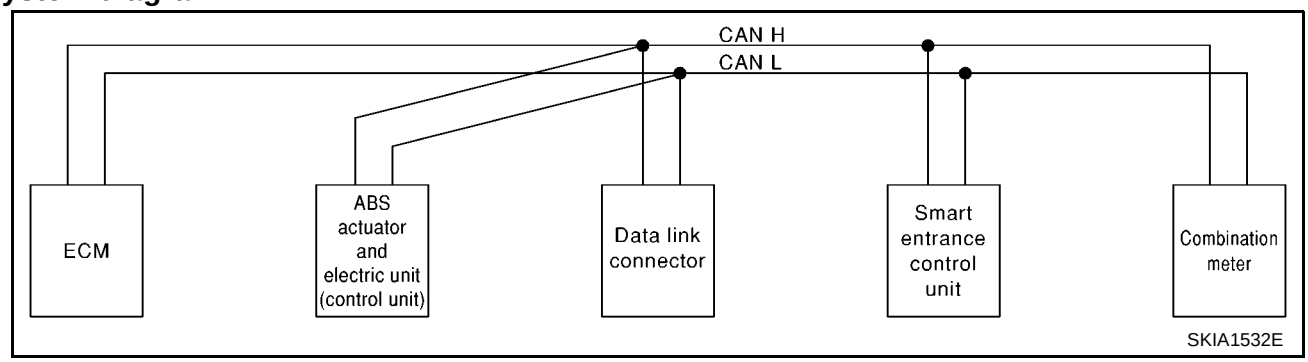
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Accelerator pedal position signal	T	R			
ESP operation signal	R	T			
TCS operation signal	R	T			
ABS operation signal	R	T			
Steering wheel angle sensor signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

TYPE 12

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T			R
Rear window defogger signal	R*1		T	
Heater fan switch signal	R*1			T

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Air conditioner switch signal	R			T
MI signal	T			R
Glow lamp signal*2	T			R
Engine coolant temperature signal	T			R
Fuel consumption signal	T			R
Vehicle speed signal		T		R
	R			T
Seat belt reminder signal			R	T
Headlamp switch signal			T	R
Flashing indicator signal			T	R
Engine cooling fan speed signal	T		R	
Child lock indicator signal			T	R
Door switches state signal			T	R
Key ID signal	R		T	
	T		R	
A/C compressor signal	T		R	

*1: Except YD22DDTi engine model
*2:YD22DDTi engine model only

CAN Communication Unit For RHD Models with Tyre Pressure Monitoring System

EIS002PH

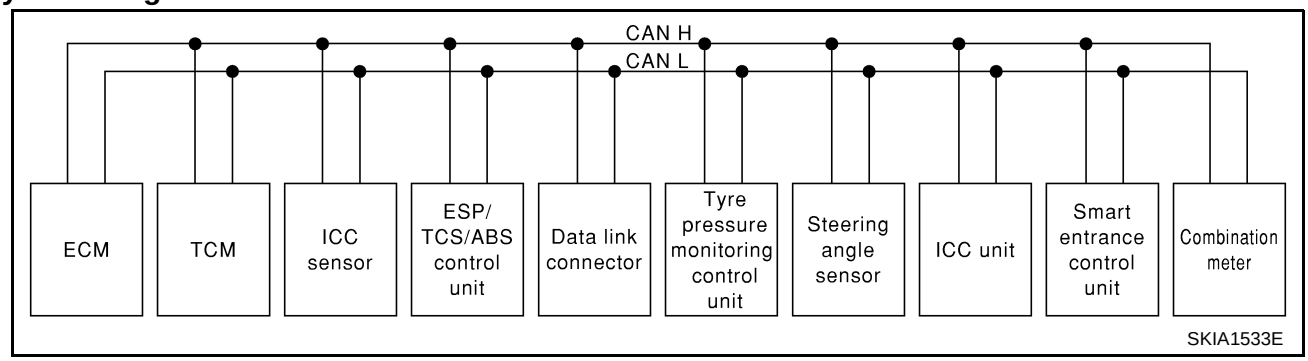
Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DDTi
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ICC sensor	×								
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
ICC unit	×								
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×

Body type	Sedan/Wagon						
Axle	2WD						
Engine	QR20DE		QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT		A/T	6M/T	5M/T		6M/T	
Brake control	ESP	ABS		ESP	ABS			
ICC system	Applicable	Not applicable						
CAN communication unit								
CAN communication type	GW-17, "TYPE 13"	GW-18, "TYPE 14"	GW-19, "TYPE 15"	GW-20, "TYPE 16"	GW-21, "TYPE 17"	GW-22, "TYPE 18"		
Can system Trouble diagnosis	LAN-254, "CAN SYSTEM (TYPE 13)"	LAN-282, "CAN SYSTEM (TYPE 14)"	LAN-304, "CAN SYSTEM (TYPE 15)"	LAN-324, "CAN SYSTEM (TYPE 16)"	LAN-344, "CAN SYSTEM (TYPE 17)"	LAN-362, "CAN SYSTEM (TYPE 18)"		

TYPE 13

System diagram



Input/output signal chart

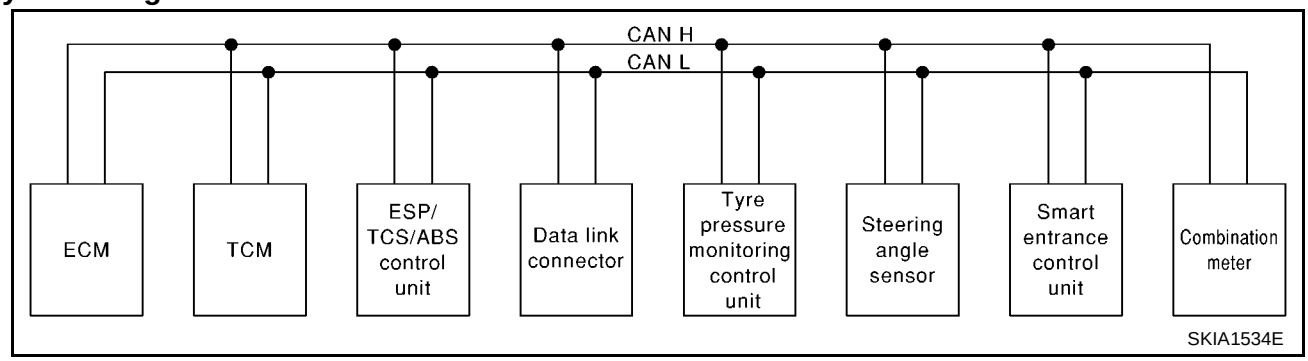
T: Transmit R: Receive

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R		R			R		R
Accelerator pedal position signal	T	R		R			R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal				T			R		
ICC system display signal							T		
ICC sensor signal			T				R		
ESP operation signal	R			T			R		
TCS operation signal	R			T			R		
ABS operation signal	R	R		T			R		
Stop lamp switch signal		R		T					

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Steering wheel angle sensor signal				R		T			
Wheel speed sensor signal				T			R		
Rear window defogger signal	R							T	
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal				T					R
	R								T
Seat belt reminder signal								R	T
Headlamp switch signal								T	R
Flashing indicator signal								T	R
Engine cooling fan speed signal	T							R	
Child lock indicator signal								T	R
Door switches state signal								T	R
Key ID signal	R							T	
	T							R	
A/C compressor signal	T							R	
Tire pressure signal					T				R

TYPE 14

System diagram



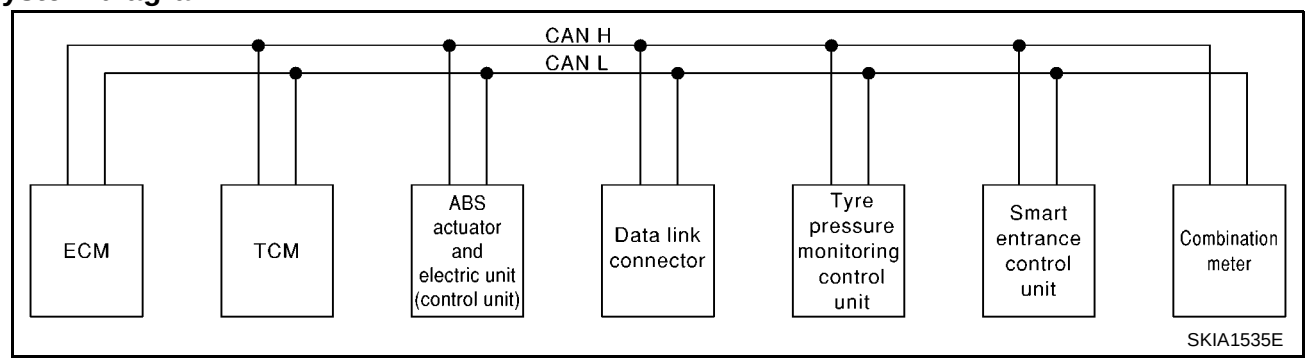
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R		T		
Rear window defogger signal	R					T	
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature	T						R
Fuel consumption signal	T						R
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal						R	T
Headlamp switch signal						T	R
Flashing indicator signal						T	R
Engine cooling fan speed signal	T					R	
Child lock indicator signal						T	R
Door switches state signal						T	R
Key ID signal	R					T	
	T					R	
A/C compressor signal	T					R	
Tire pressure signal				T			R

TYPE 15

System diagram



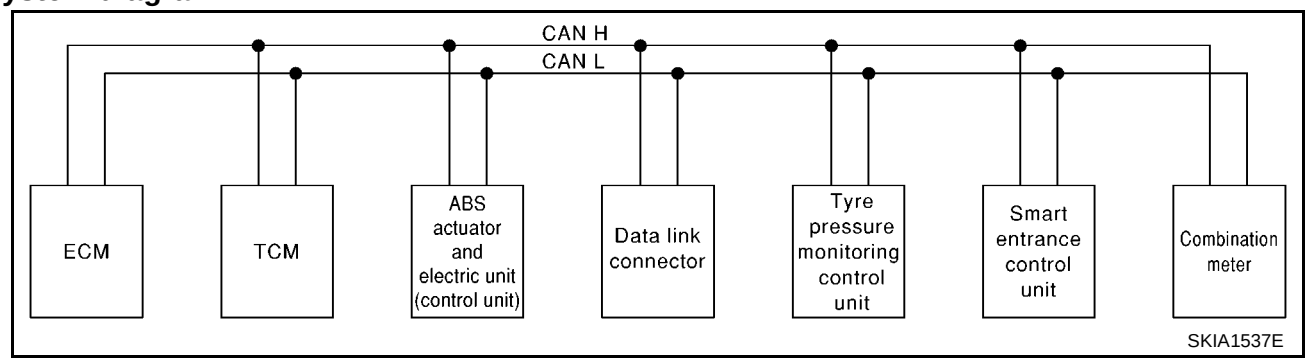
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tire pressure signal				T		R

TYPE 16

System diagram



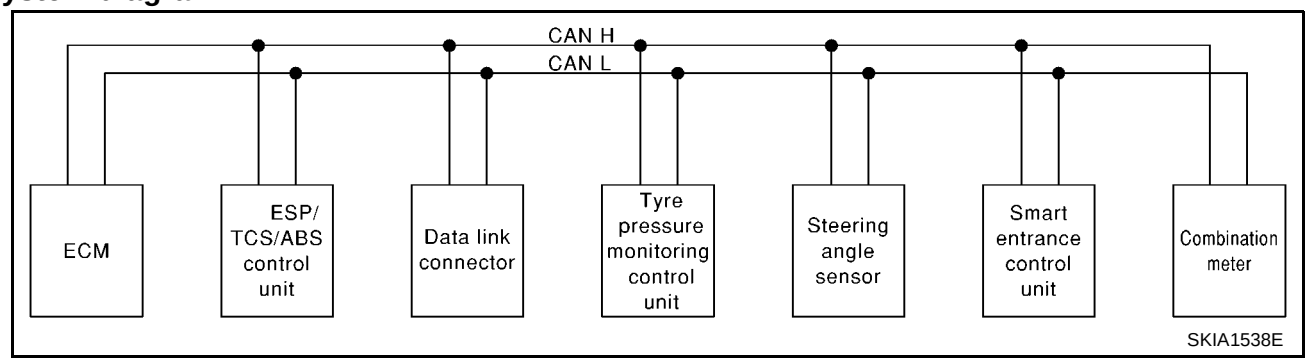
Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tire pressure signal				T		R

TYPE 17

System diagram



Input/output signal chart

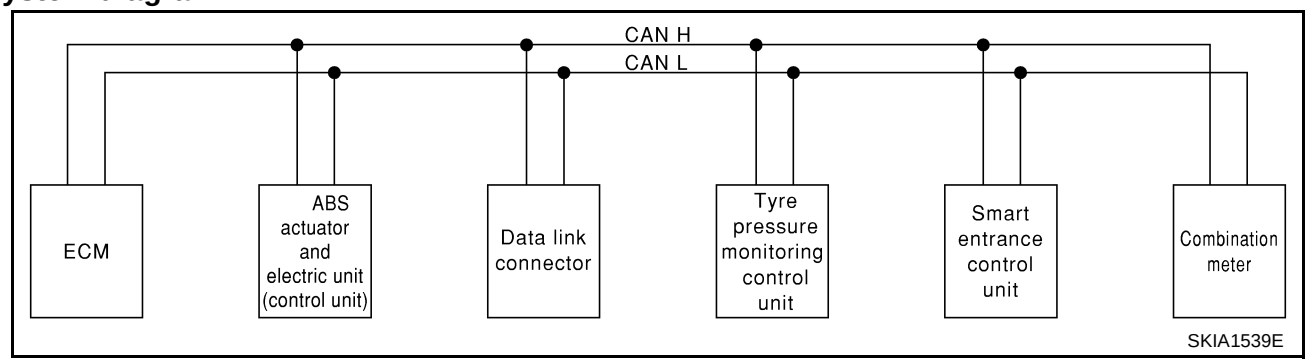
T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R				R
Accelerator pedal position signal	T	R				
ESP operation signal	R	T				

Signals	ECM	ESP/ TCS / ABS control unit	Tyre pressure monitoring control unit	Steering angle sensor	Smart entrance control unit	Combination meter
TCS operation signal	R	T				
ABS operation signal	R	T				
Steering wheel angle sensor signal		R		T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
MI signal	T					R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal		T				R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	
Tire pressure signal			T			R

TYPE 18

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Engine speed signal	T				R
Rear window defogger signal	R*1			T	
Heater fan switch signal	R*1				T
Air conditioner switch signal	R				T
MI signal	T				R

Signals	ECM	ABS actuator and electric unit (control unit)	Tyre pressure monitoring control unit	Smart entrance control unit	Combination meter
Glow lamp signal*2	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	
Tire pressure signal			T		R

*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

CAN Communication Unit For RHD Models without Tyre Pressure Monitoring System

EIS002PI

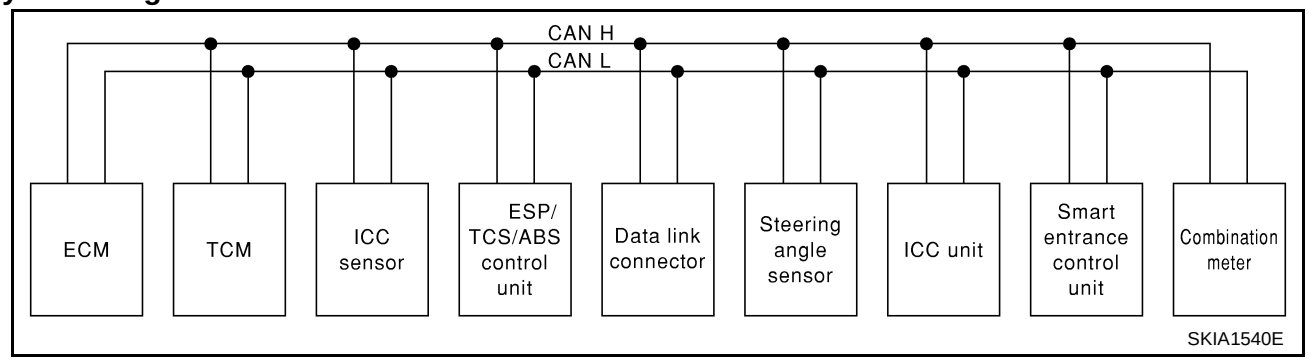
Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DDTi
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ICC sensor	×								
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
ICC unit	×								
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Combination meter	×	×	×	×	×	×	×	×	×

Body type	Sedan/Wagon						
Axle	2WD						
Engine	QR20DE	QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT	A/T	6M/T	5M/T		6M/T	
Brake control	ESP	ABS	ESP	ABS			
ICC system	Applicable	Not applicable					
CAN communication unit							
Can communication type	GW-24, "TYPE 19"	GW-25, "TYPE 20"	GW-26, "TYPE 21"	GW-27, "TYPE 22"	GW-28, "TYPE 23"	GW-29, "TYPE 24"	
Can system Trouble Diagnosis	LAN-379, "CAN SYSTEM (TYPE 19)"	LAN-404, "CAN SYSTEM (TYPE 20)"	LAN-422, "CAN SYSTEM (TYPE 21)"	LAN-438, "CAN SYSTEM (TYPE 22)"	LAN-454, "CAN SYSTEM (TYPE 23)"	LAN-469, "CAN SYSTEM (TYPE 24)"	

TYPE 19

System diagram



Input/output signal chart

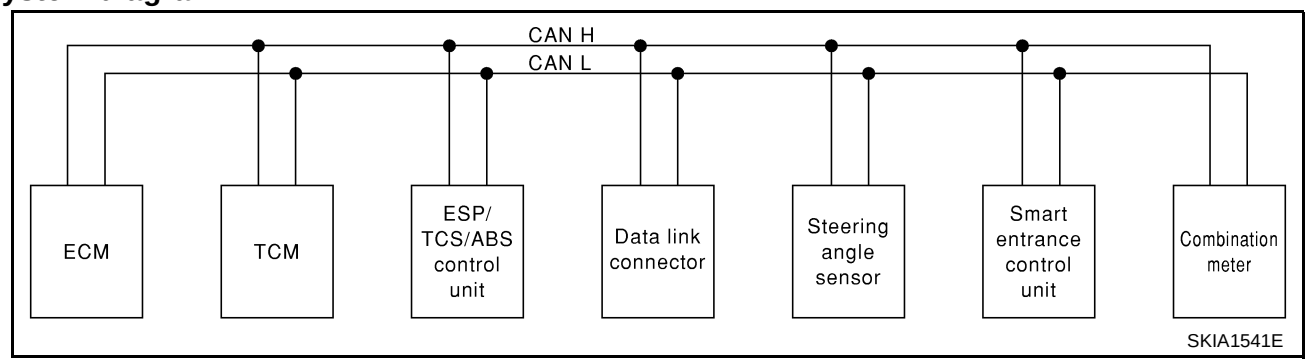
T: Transmit R: Receive

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Engine speed signal	T	R		R		R		R
Accelerator pedal position signal	T	R		R		R		
Closed throttle position signal	T					R		
ICC steering switch signal	T					R		
Shift pattern signal		T				R		
Parking brake switch signal				T		R		
ICC system display signal						T		R
ICC sensor signal			T			R		
ESP operation signal	R			T		R		
TCS operation signal	R			T		R		
ABS operation signal	R	R		T		R		
Stop lamp switch signal		R		T				
Steering wheel angle sensor signal				R	T			

Signals	ECM	TCM	ICC sensor	ESP/ TCS / ABS control unit	Steering angle sensor	ICC unit	Smart entrance control unit	Combination meter
Wheel speed sensor signal				T		R		
Rear window defogger signal	R						T	
Heater fan switch signal	R							T
Air conditioner switch signal	R							T
Primary pulley revolution signal	R	T				R		
Secondary pulley revolution signal	R	T				R		
ICC operation signal	R					T		
Brake switch signal	R					T		
MI signal	T							R
Current gear position signal		T						R
Engine coolant temperature signal	T					R		R
Fuel consumption signal	T							R
Vehicle speed signal				T				R
	R							T
Seat belt reminder signal							R	T
Headlamp switch signal							T	R
Flashing indicator signal							T	R
Engine cooling fan speed signal	T						R	
Child lock indicator signal							T	R
Door switches state signal							T	R
Key ID signal	R						T	
	T						R	
A/C compressor signal	T						R	

TYPE 20

System diagram



Input/output signal chart

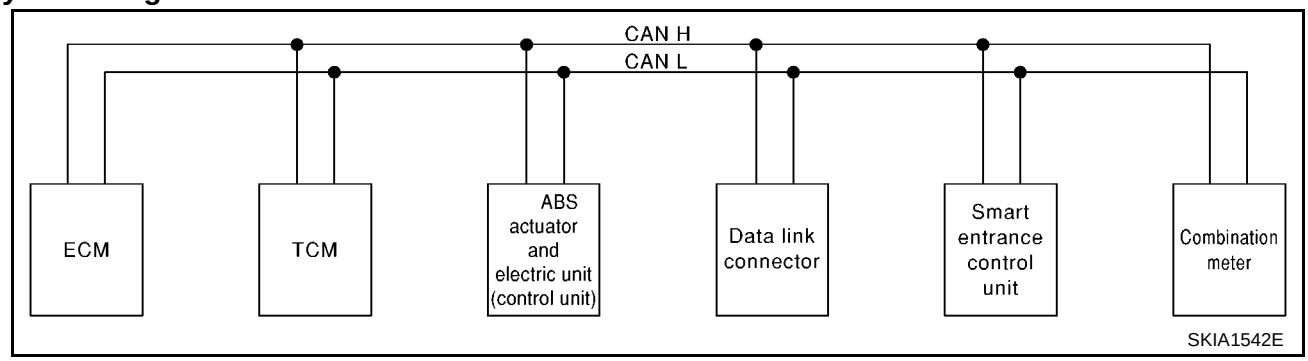
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R	R			R
Accelerator pedal position signal	T	R	R			
ESP operation signal	R		T			

Signals	ECM	TCM	ESP/TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
TCS operation signal	R		T			
ABS operation signal	R	R	T			
Stop lamp switch signal		R	T			
Steering wheel angle sensor signal			R	T		
Rear window defogger signal	R				T	
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T
Seat belt reminder signal					R	T
Headlamp switch signal					T	R
Flashing indicator signal					T	R
Engine cooling fan speed signal	T				R	
Child lock indicator signal					T	R
Door switches state signal					T	R
Key ID signal	R				T	
	T				R	
A/C compressor signal	T				R	

TYPE 21

System diagram



Input/output signal chart

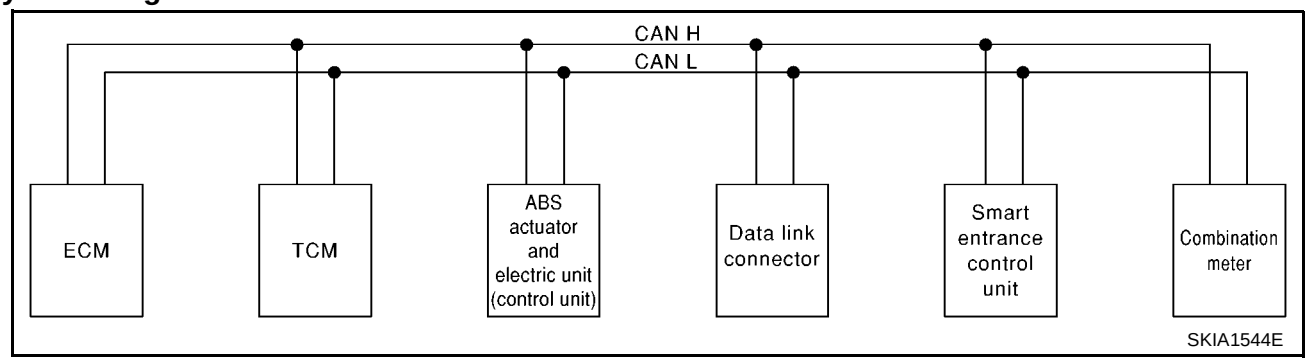
T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
Primary pulley revolution signal	R	T			
Secondary pulley revolution signal	R	T			
MI signal	T				R
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

TYPE 22

System diagram



Input/output signal chart

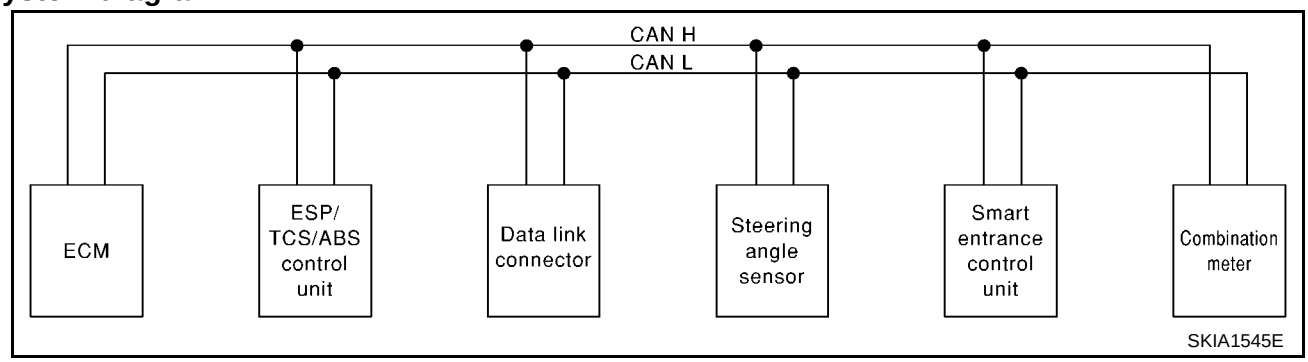
T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Stop lamp switch signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Current gear position signal		T			R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R
Vehicle speed signal			T		R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

TYPE 23

System diagram



Input/output signal chart

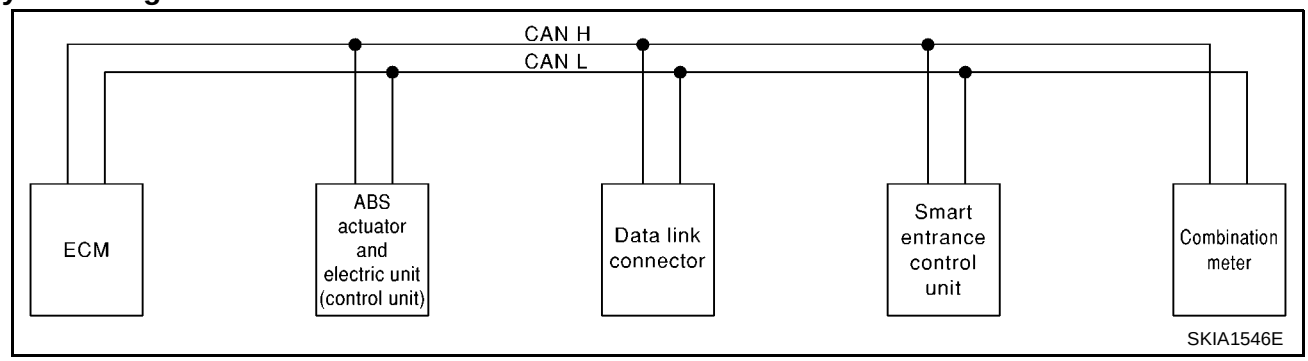
T: Transmit R: Receive

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Engine speed signal	T	R			R
Accelerator pedal position signal	T	R			
ESP operation signal	R	T			
TCS operation signal	R	T			
ABS operation signal	R	T			
Steering wheel angle sensor signal		R	T		
Rear window defogger signal	R			T	
Heater fan switch signal	R				T
Air conditioner switch signal	R				T
MI signal	T				R
Engine coolant temperature signal	T				R
Fuel consumption signal	T				R

Signals	ECM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Combination meter
Vehicle speed signal		T			R
	R				T
Seat belt reminder signal				R	T
Headlamp switch signal				T	R
Flashing indicator signal				T	R
Engine cooling fan speed signal	T			R	
Child lock indicator signal				T	R
Door switches state signal				T	R
Key ID signal	R			T	
	T			R	
A/C compressor signal	T			R	

TYPE 24

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Engine speed signal	T			R
Rear window defogger signal	R*1		T	
Heater fan switch signal	R*1			T
Air conditioner switch signal	R			T
MI signal	T			R
Glow lamp signal*2	T			R
Engine coolant temperature signal	T			R
Fuel consumption signal	T			R
Vehicle speed signal		T		R
	R			T
Seat belt reminder signal			R	T
Headlamp switch signal			T	R
Flashing indicator signal			T	R
Engine cooling fan speed signal	T		R	
Child lock indicator signal			T	R
Door switches state signal			T	R

Signals	ECM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Combination meter
Key ID signal	R		T	
	T		R	
A/C compressor signal	T		R	

*1: Except YD22DDTi engine model
*2: YD22DDTi engine model only

PRECAUTIONS

PFP:00001

Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

EIS002G8

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 and SB section of this Service Manual.

WARNING:

- **To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.**
- **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 harness connectors.**

Precautions

EIS002G9

- When removing or disassembling any part, be careful not to damage or deform it. Protect parts, which may get in the way with cloth.
- When removing parts with a screwdriver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If a clip is deformed or damaged, replace it.
- If an unreusable part is removed, replace it with a new one.
- Tighten bolts and nuts firmly to the specified torque.
- After re-assembly has been completed, make sure each part functions correctly.
- Remove stains in the following way.

Water-soluble stains:
Dip a soft cloth in warm water, and then squeeze it tightly. After wiping the stain, wipe with a soft dry cloth.
Oil stain:
Dissolve a synthetic detergent in warm water (density of 2 to 3% or less), dip the cloth, then clean off the stain with the cloth. Next, dip the cloth in fresh water and squeeze it tightly. Then clean off the detergent completely. Then wipe the area with a soft dry cloth.

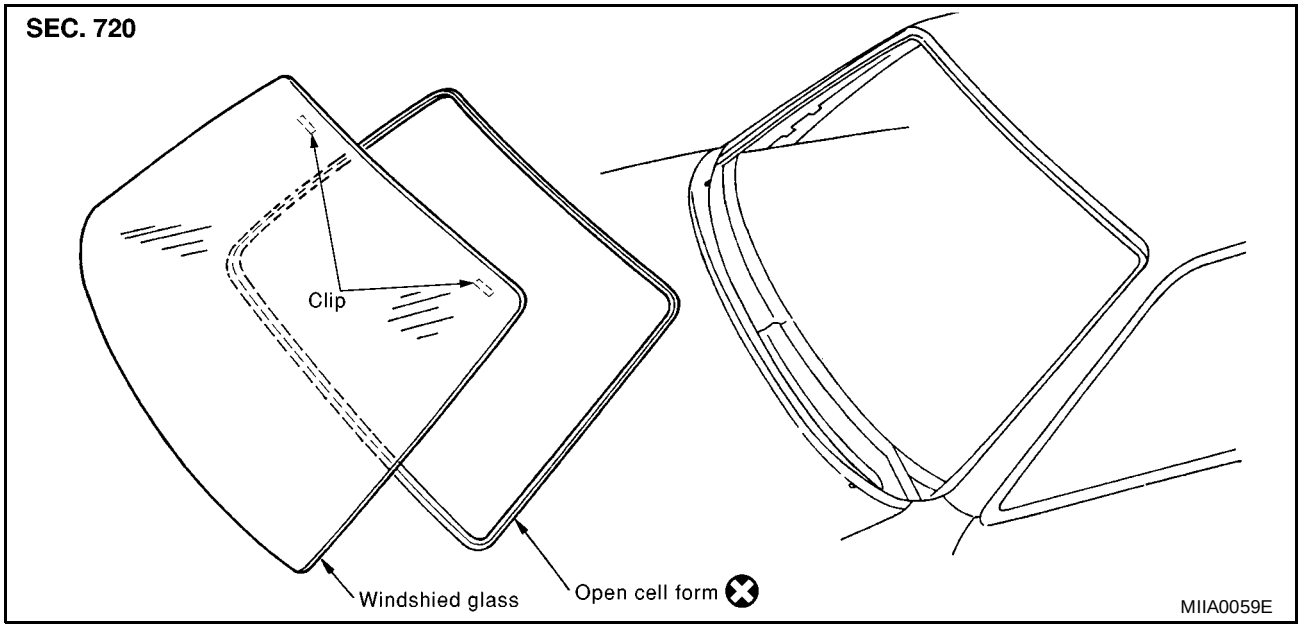
- Do not use any organic solvent, such as thinner or benzine.

WINDSHIELD GLASS AND MOLDING

PFP:72700

Removal and Installation

EIS002GA

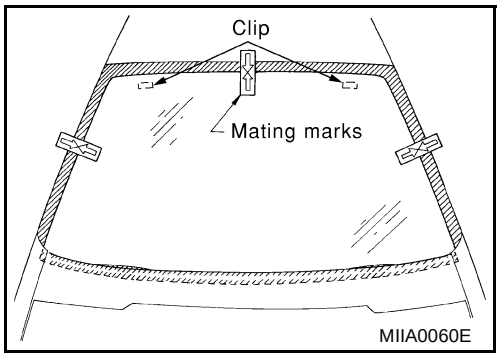


REMOVAL

1. Remove the front pillar garnish and headlining. Refer to EI-25, "BODY SIDE TRIM" and EI-32, "HEADLINING" .
2. Remove the cowl top cover. Refer to EI-13, "COWL TOP" .
3. Apply a protective tape around the windshield glass to protect the painted surface from damage.

After removing moldings, remove glass using piano wire or power cutting tool and an inflatable pump bag.

- If a windshield glass is reversed, mark the body and the glass with mating marks.



WARNING:

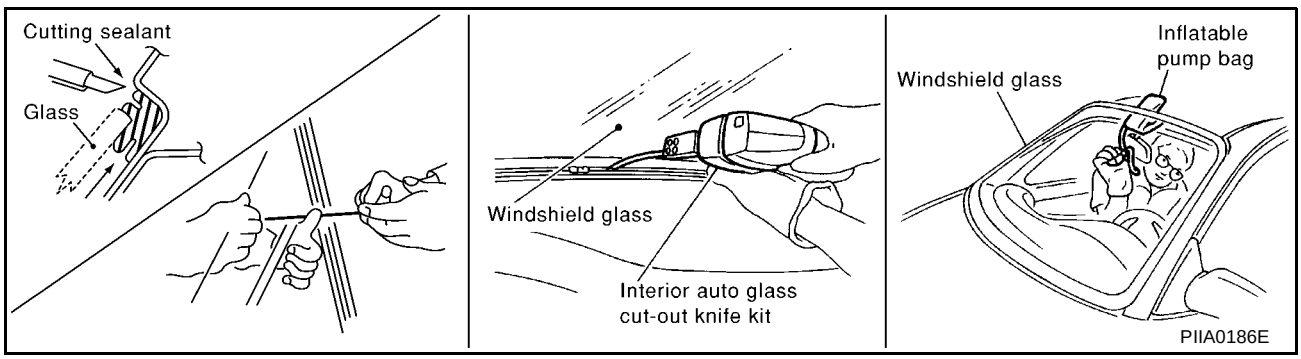
When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

CAUTION:

When a windshield glass is reused, do not use a cutting knife or power cutting tool.

NOTE:

- Be careful not to scratch the glass when removing.
- Do not set or stand the glass on its edge. Small chips may develop into cracks.



INSTALLATION

- Use a genuine Nissan Urethane Adhesive Kit or equivalent and follow the instructions furnished with it.
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.

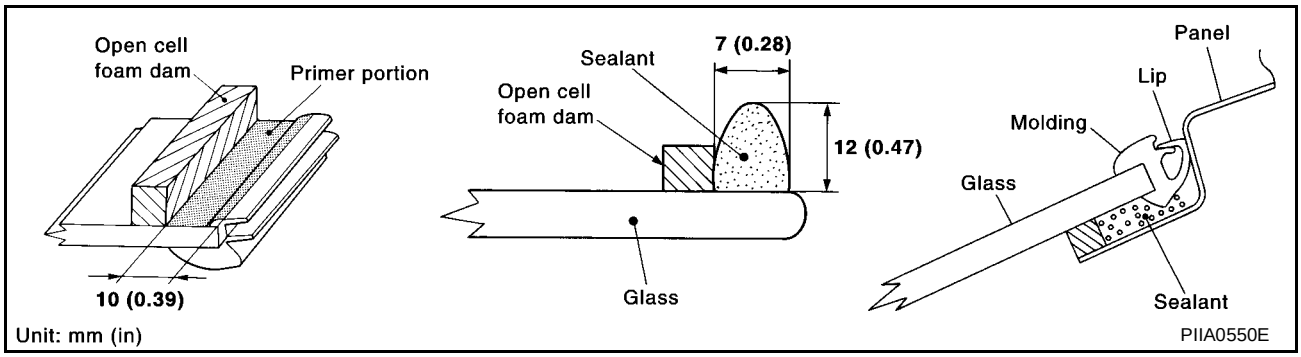
- The molding must be installed securely so that it is in position and leaves no gap.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.

WARNING:

- **Keep heat and open flames away as primers and adhesive are flammable.**
- **The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.**
- **Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.**
- **Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the windshield in case of an accident.**

CAUTION:

- **Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.**
- **Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.**
- **Do not leave primers or adhesive cartridge unattended with their caps open or off.**
- **The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidities. The curing time will increase under higher temperatures and lower humidities.**



Repairing Water Leaks for Windshield

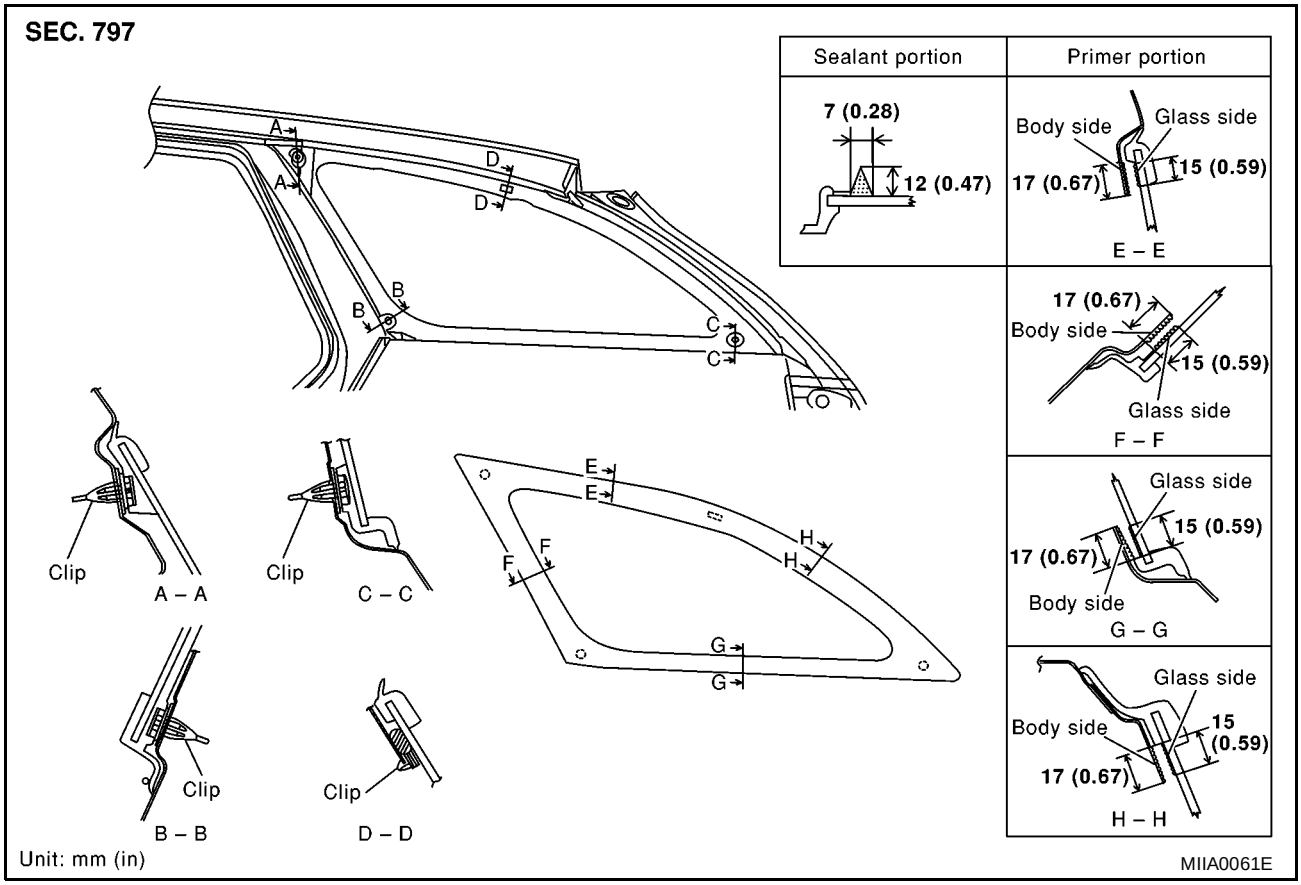
Leaks can be repaired without removing and reinstalling glass.
If water is leaking between the urethane adhesive material and body or glass, determine the extent of leakage. This can be done by applying water to the windshield area while pushing glass outward.
To stop the leak, apply primer (if necessary) and then urethane adhesive to the leak point.

SIDE WINDOW GLASS

PFP:83300

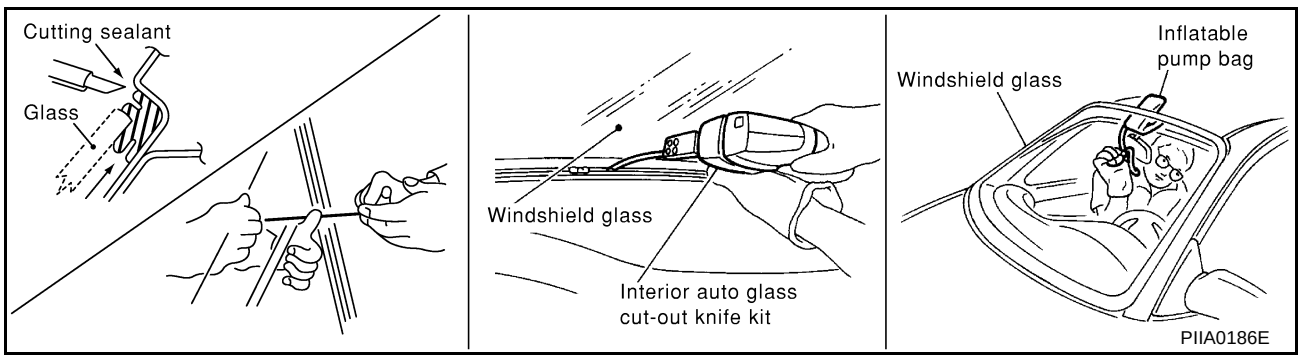
Removal and Installation

EIS002GB



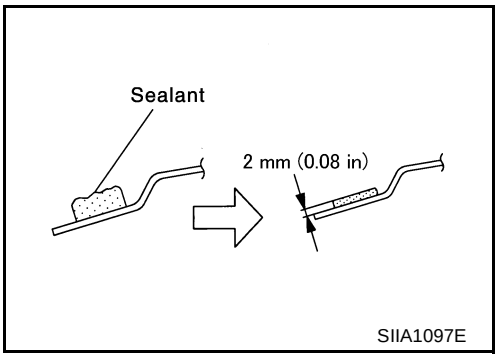
REMOVAL

1. Remove luggage side upper finisher. Refer to EI-25, "BODY SIDE TRIM" .
2. Remove printed antenna connector.
3. Apply protective tape on body panels around side window glass to protect painted surfaces from damage.
4. While removing the clips, remove glass from the vehicle.



INSTALLATION

1. With a knife, scrape off remaining adhesive left around on the side of vehicle body to as thin and flat as 2 mm (0.08 in).



2. Apply primers.
3. Apply primer on areas where adhesive contacts on the side of vehicle body.
4. After applying primer, apply adhesive along glass edge.
5. Press entire surface of glass lightly to fit it completely.
6. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.

NOTE:
After installing glass, open the door windows until adhesive has had enough time to cure properly. Do not drive the vehicle during this period.

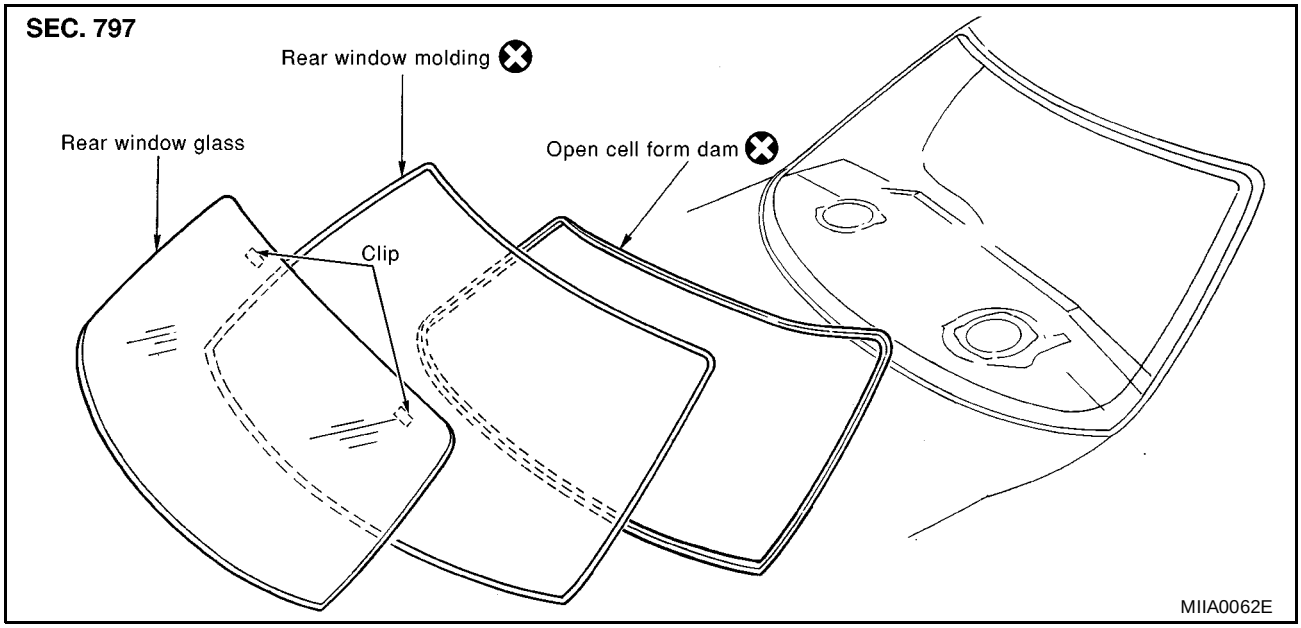
7. Check that there is no leak from the outside.
8. Remove protective tape.
9. Install removed parts.

REAR WINDOW GLASS AND MOLDING

PFP:79712

Removal and Installation

EIS002GC

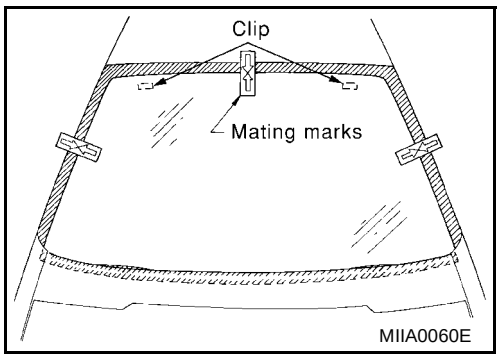


REMOVAL

1. Remove the headlining. Refer to EI-32, "HEADLINING" .
2. Remove rear pillar garnish and rear parcel shelf finisher. Refer to EI-25, "BODY SIDE TRIM" and EI-29, "REAR PARCEL SHELF FINISHER" .
3. Remove rear window defogger connector, printed antenna connector and body ground connector.
4. Apply a protective tape around the rear window glass to protect the painted surface from damage.

After removing moldings, remove glass using piano wire or power cutting tool and an inflatable pump bag.

- If a rear window glass is reversed, mark the body and the glass with mating marks.



WARNING:

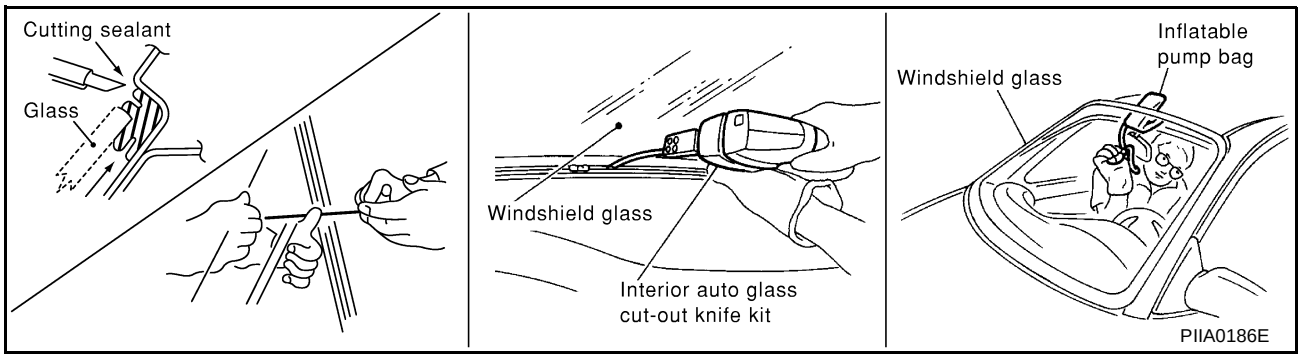
When cutting the glass from the vehicle, always wear safety glasses and heavy gloves to help prevent glass splinters from entering your eyes or cutting your hands.

CAUTION:

When a rear window glass is reused, do not use a cutting knife or power cutting tool.

NOTE:

- Be careful not to scratch the glass when removing.
- Do not set or stand the glass on its edge. Small chips may develop into cracks.



INSTALLATION

- Use a genuine Nissan Urethane Adhesive Kit or equivalent and follow the instructions furnished with it.

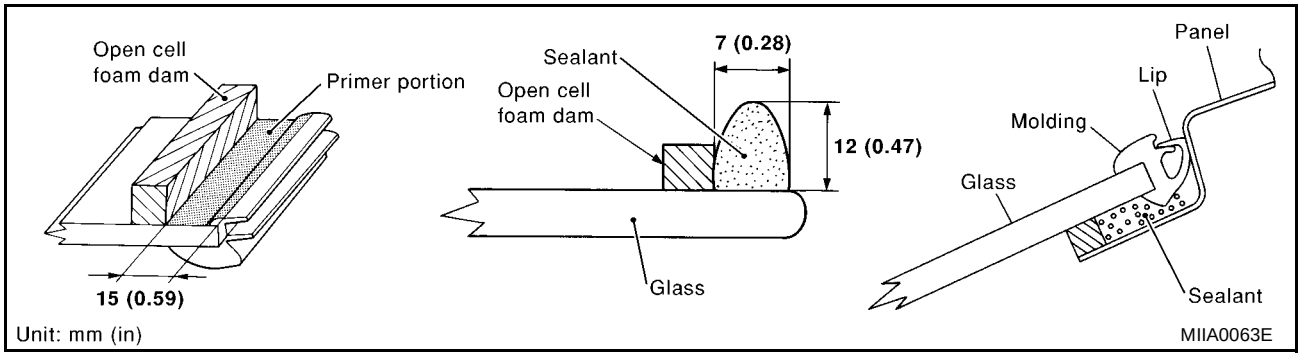
- While the urethane adhesive is curing, open a door window. This will prevent the glass from being forced out by passenger compartment air pressure when a door is closed.
- The molding must be installed securely so that it is in position and leaves no gap.
- Inform the customer that the vehicle should remain stationary until the urethane adhesive has completely cured (preferably 24 hours). Curing time varies with temperature and humidity.

WARNING:

- **Keep heat and open flames away as primers and adhesive are flammable.**
- **The materials contained in the kit are harmful if swallowed, and may irritate skin and eyes. Avoid contact with the skin and eyes.**
- **Use in an open, well ventilated location. Avoid breathing the vapors. They can be harmful if inhaled. If affected by vapor inhalation, immediately move to an area with fresh air.**
- **Driving the vehicle before the urethane adhesive has completely cured may affect the performance of the windshield in case of an accident.**

CAUTION:

- **Do not use an adhesive which is past its usable term. Shelf life of this product is limited to six months after the date of manufacture. Carefully adhere to the expiration or manufacture date printed on the box.**
- **Keep primers and adhesive in a cool, dry place. Ideally, they should be stored in a refrigerator.**
- **Do not leave primers or adhesive cartridge unattended with their caps open or off.**
- **The vehicle should not be driven for at least 24 hours or until the urethane adhesive has completely cured. Curing time varies depending on temperature and humidities. The curing time will increase under higher temperatures and lower humidities.**



Repairing Water Leaks for Rear Window Glass

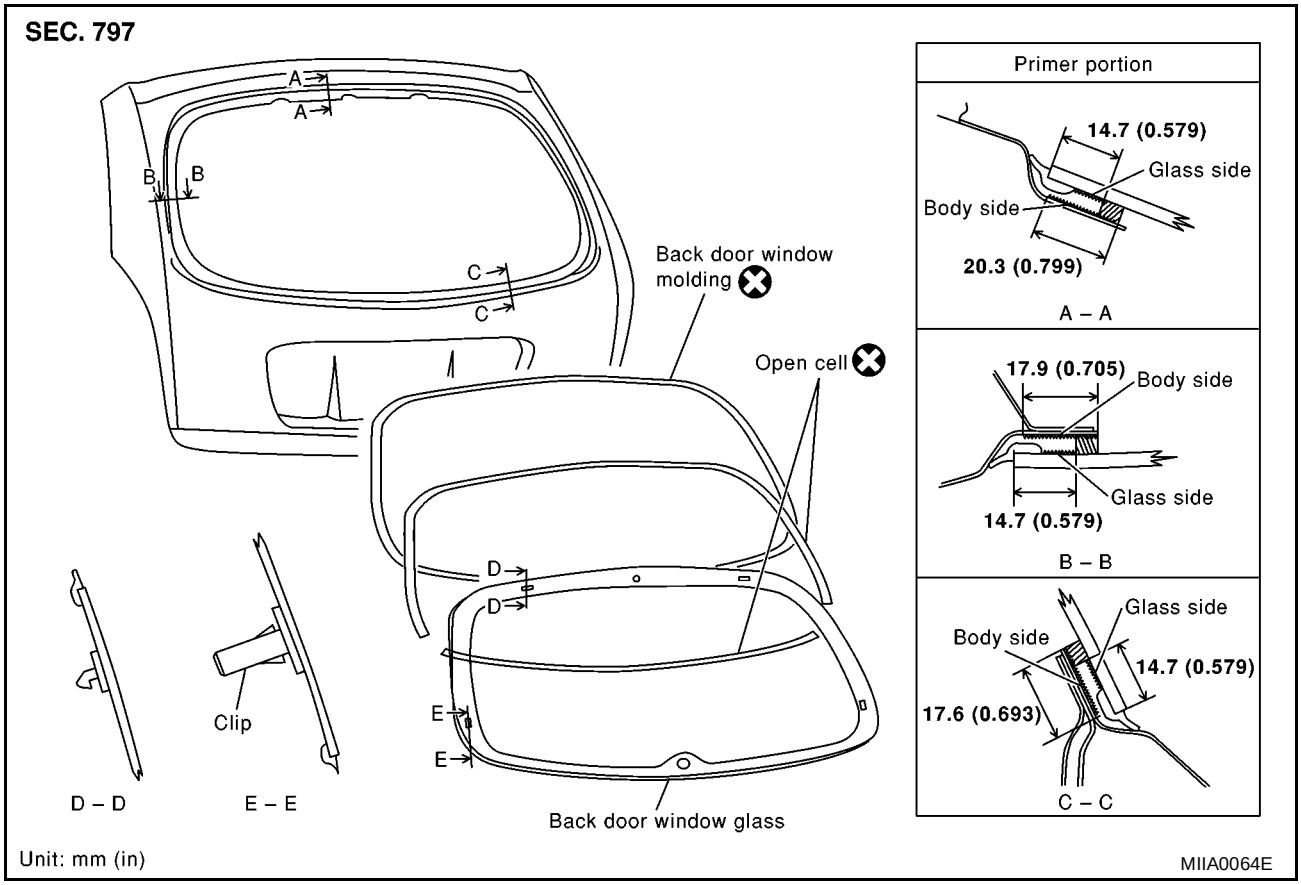
Leaks can be repaired without removing and reinstalling glass.
If water is leaking between the urethane adhesive material and body or glass, determine the extent of leakage. This can be done by applying water to the windshield area while pushing glass outward.
To stop the leak, apply primer (if necessary) and then urethane adhesive to the leak point.

BACK DOOR WINDOW GLASS

PFP:90300

Removal and Installation

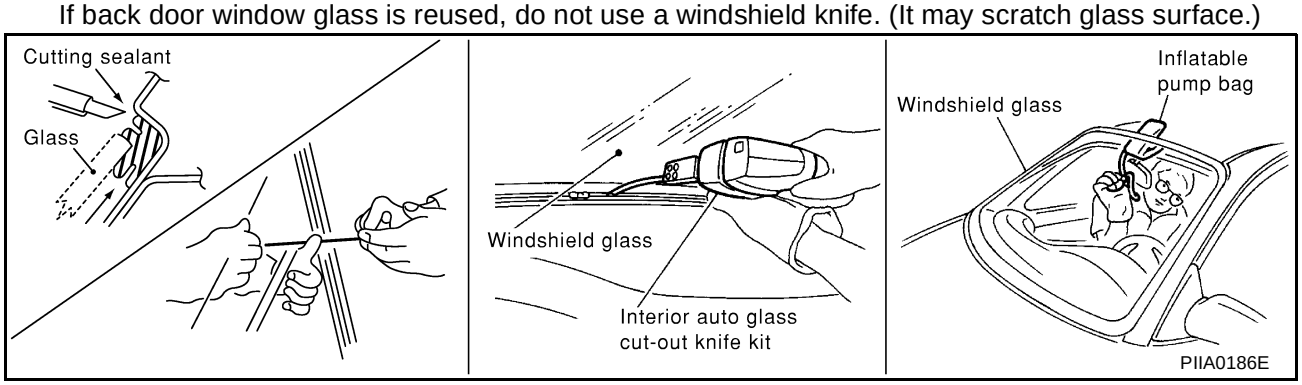
EIS002GD



REMOVAL

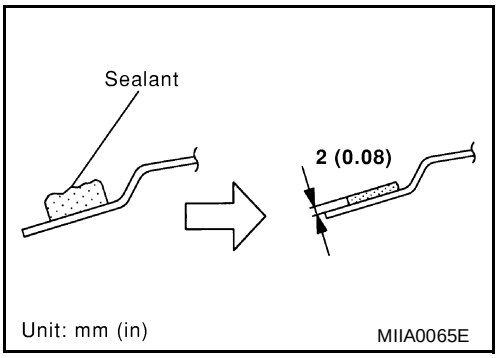
1. Remove back door finisher. Refer to EI-25, "BODY SIDE TRIM" .
2. Remove rear wiper arm. Refer to WW-40, "Removal and Installation for Rear Wiper Arms" .
3. Remove rear washer nozzle. Refer to WW-42, "Removal and Installation for Rear Washer Nozzle" .
4. Remove high-mounted stop lamp. Refer to LT-57, "STOP LAMP" .
5. Remove rear defogger connectors and printed antenna.
6. Apply a protective tape around the back door window glass (molding) to prevent the paint surface from being damaged.
7. Using a pair of pliers or similar tool, draw out all bonding molding left in flanged area on the body and remove it completely from bonding surface on glass.
8. Cut adhesive.
   - Depending on the tool in use, follow the procedures below.

   NOTE:
   If back door window glass is reused, do not use a windshield knife. (It may scratch glass surface.)



INSTALLATION

1. With a knife, scrape off remaining adhesive left around on the side of vehicle body to as thin and flat as 2 mm (0.08 in).
2. When reusing glass, using a knife or spatula, remove bonding remainder on glass so that glass edge becomes smooth.



3. Apply primers.
4. After applying primer, apply adhesive along glass edge.
5. Press the entire surface of glass lightly to fit it completely.
6. Using a spatula, repair any adhesive overflow or shortage to make the surface smooth.

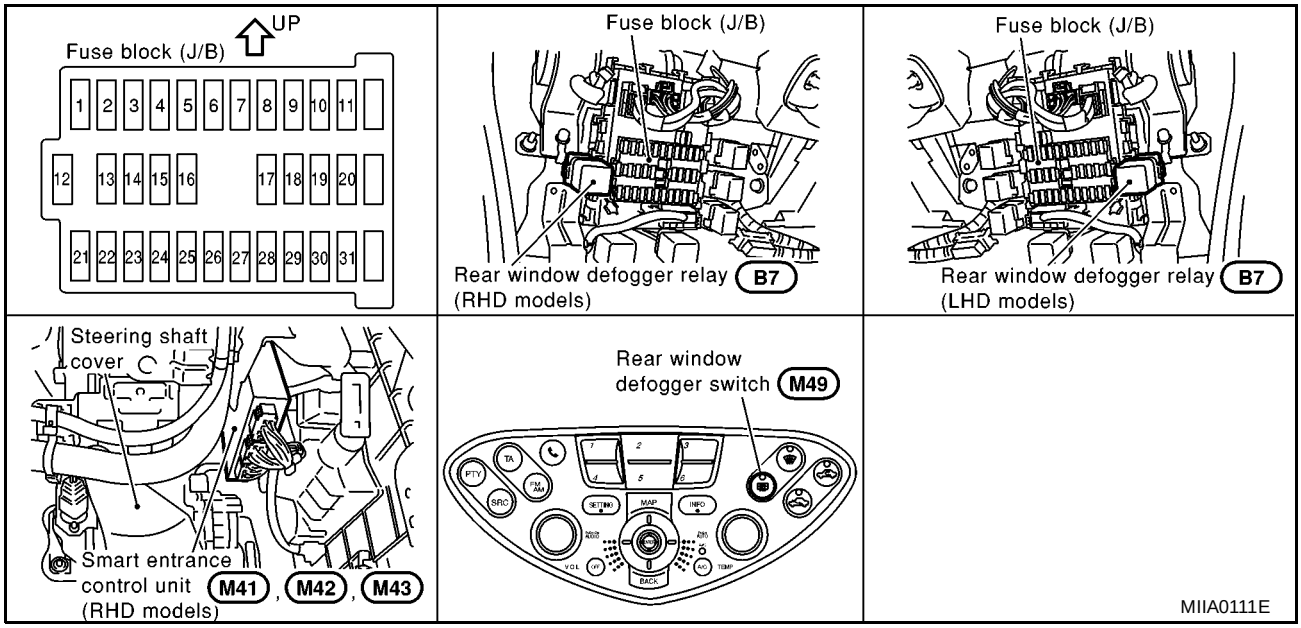
   NOTE:
   After installing glass, open the door windows until after adhesive has had enough time to cure properly. Do not drive the vehicle during this period.
7. Check that there is no leak from the outside.
8. Remove protective tape.
9. Install removed parts.

REAR WINDOW DEFOGGER

PFP:25350

Component Parts and Harness Connector Location

EIS002GE



System Description

EIS002GF

The rear window defogger system is controlled by smart entrance control unit. The rear window defogger operates only for approximately 15 minutes.
Power is supplied at all times

- to rear window defogger relay terminal 3
- through 20A fuse [No. 7, located in the fuse block (J/B)] and
- to rear window defogger relay terminal 6 (with door mirror defogger)
- through 10A fuse [No. 23, located in the fuse block (J/B)].
- to smart entrance control unit terminal 56
- through 10A fuse [No. 12, located in the fuse block (J/B)].

With the ignition switch in the ON or START position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to rear defogger relay terminal 1 and
- to smart entrance control unit terminal 31.

Ground is supplied to terminal 53 of smart entrance control unit through body grounds M16, M50 and M70.
When the multifunction switch (rear window defogger switch) is turned ON, ground is supplied

- through terminal 9 of the multifunction switch (rear window defogger switch)
- to smart entrance control unit terminal 22.

Terminal 31 of the smart entrance control unit then supplies ground to the rear window defogger relay terminal 2.
With power and ground supplied, the rear window defogger relay is energized.
Power is supplied

- through terminals 5 and 7 of the rear window defogger relay
- to the rear window defogger and door mirror defogger.

The rear window defogger has an independent ground.
With power and ground supplied, the rear window defogger filaments heat and defog the rear window.
When the system is activated, the rear window defogger indicator illuminates in the multifunction switch (rear window defogger switch).
Power is supplied

- to terminal 10 of the multifunction switch (rear window defogger switch)
- from terminal 2 of rear window defogger relay.

CAN Communication

EIS002PJ

SYSTEM DESCRIPTION

CAN (Controller Area Network) is a serial communication line for real time application. It is an on-vehicle multiplex communication line with high data communication speed and excellent error detection ability. Many electronic control units are equipped onto a vehicle, and each control unit shares information and links with other control units during operation (not independent). In CAN communication, control units are connected with 2 communication lines (CAN H line, CAN L line) allowing a high rate of information transmission with less wiring. Each control unit transmits/receives data but selectively reads required data only.

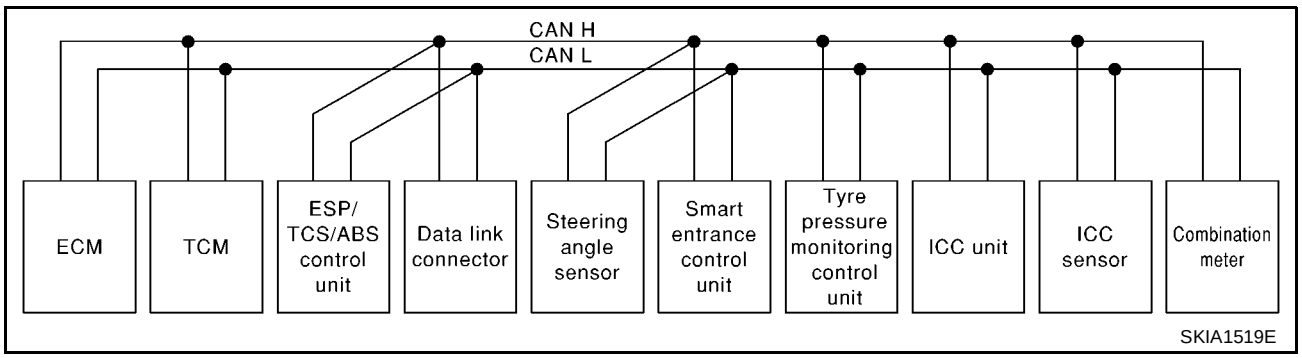
CAN COMMUNICATION UNIT FOR LHD MODELS WITH TYPE PRESSURE MONITORING SYSTEM

Go to CAN system, when selecting your car model from the following table.

Body type	Sedan/Wagon								
Axle	2WD								
Engine	QR20DE			QG18DE	QR20DE	QG16DE	QG18DE	QR20DE	YD22DD Ti
Transmission	CVT			A/T	6M/T	5M/T		6M/T	
Brake control	ESP		ABS		ESP	ABS			
ICC system	Applicable	Not applicable							
CAN communication unit									
ECM	×	×	×	×	×	×	×	×	×
TCM	×	×	×	×					
ESP/TCS/ABS control unit	×	×			×				
ABS actuator and electric unit (control unit)			×	×		×	×	×	×
Data link connector	×	×	×	×	×	×	×	×	×
Steering angle sensor	×	×			×				
Smart entrance control unit	×	×	×	×	×	×	×	×	×
Tyre pressure monitoring control unit	×	×	×	×	×	×	×	×	×
ICC unit	×								
ICC sensor	×								
Combination meter	×	×	×	×	×	×	×	×	×
CAN communication type	GW-4, "TYPE 1"	GW-5, "TYPE 2"	GW-6, "TYPE 3"	GW-7, "TYPE 4"	GW-8, "TYPE 5"	GW-9, "TYPE 6"			
Can system Trouble diagnosis	LAN-36, "CAN SYSTEM (TYPE 1)"	LAN-63, "CAN SYSTEM (TYPE 2)"	LAN-83, "CAN SYSTEM (TYPE 3)"	LAN-102, "CAN SYSTEM (TYPE 4)"	LAN-121, "CAN SYSTEM (TYPE 5)"	LAN-138, "CAN SYSTEM (TYPE 6)"			

Type 1

System diagram



Input/output signal chart

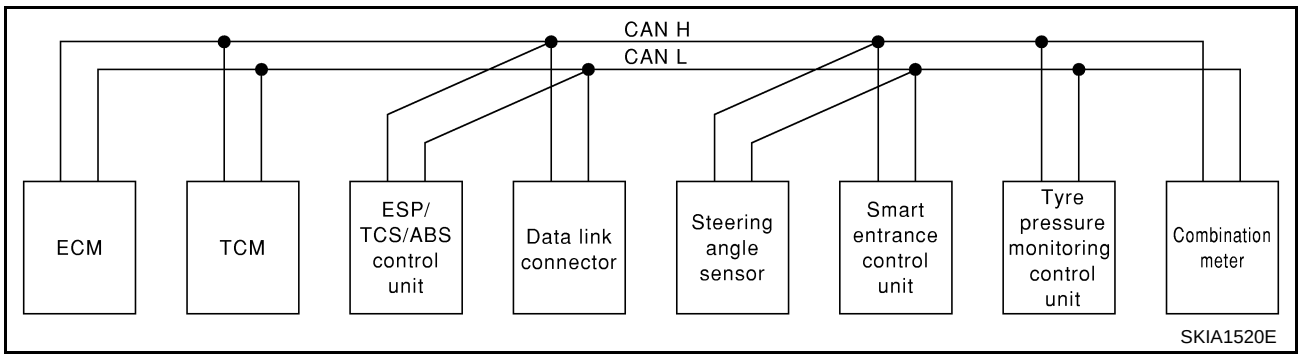
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Engine speed signal	T	R	R				R		R
Accelerator pedal position signal	T	R	R				R		
Closed throttle position signal	T						R		
ICC steering switch signal	T						R		
Shift pattern signal		T					R		
Parking brake switch signal			T				R		
ICC system display signal							T		R
ICC sensor signal							R	T	
ESP operation signal	R		T				R		
TCS operation signal	R		T				R		
ABS operation signal	R	R	T				R		
Stop lamp switch signal		R	T						
Steering wheel angle sensor signal			R	T					
Wheel speed sensor signal			T				R		
Rear window defogger signal	R				T				
Heater fan switch signal	R								T
Air conditioner switch signal	R								T
Primary pulley revolution signal	R	T					R		
Secondary pulley revolution signal	R	T					R		
ICC operation signal	R						T		
Brake switch signal	R						T		
MI signal	T								R
Current gear position signal		T							R
Engine coolant temperature signal	T						R		R
Fuel consumption signal	T								R
Vehicle speed signal			T						R
	R								T
Seat belt reminder signal					R				T

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	ICC unit	ICC sensor	Combination meter
Headlamp switch signal					T				R
Flashing indicator signal					T				R
Engine cooling fan speed signal	T				R				
Child lock indicator signal					T				R
Door switches state signal					T				R
Key ID signal	R				T				
	T				R				
A/C compressor signal	T				R				
Tire pressure signal						T			R

Type 2

System diagram



Input/output signal chart

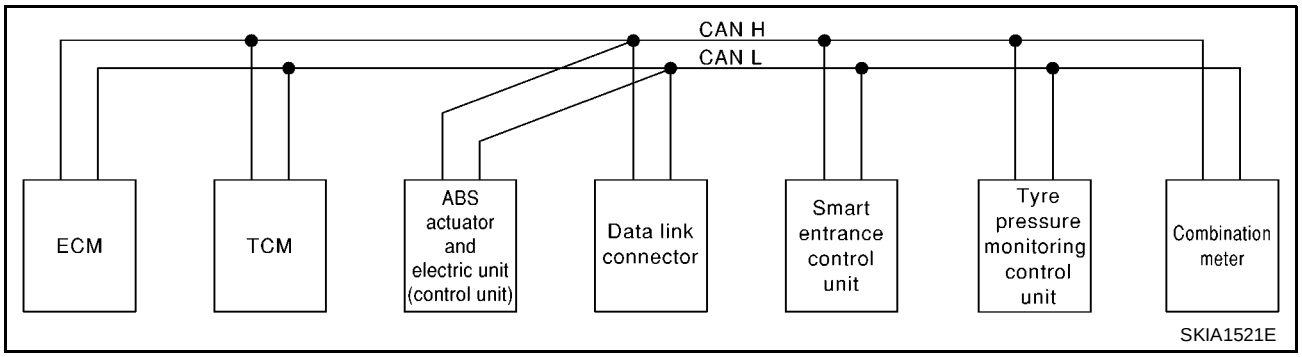
T: Transmit R: Receive

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R	R				R
Accelerator pedal position signal	T	R	R				
ESP operation signal	R		T				
TCS operation signal	R		T				
ABS operation signal	R	R	T				
Stop lamp switch signal		R	T				
Steering wheel angle sensor signal			R	T			
Rear window defogger signal	R				T		
Heater fan switch signal	R						T
Air conditioner switch signal	R						T
Primary pulley revolution signal	R	T					
Secondary pulley revolution signal	R	T					
MI signal	T						R
Current gear position signal		T					R
Engine coolant temperature signal	T						R

Signals	ECM	TCM	ESP/ TCS / ABS control unit	Steering angle sensor	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Fuel consumption signal	T						R
Vehicle speed signal			T				R
	R						T
Seat belt reminder signal					R		T
Headlamp switch signal					T		R
Flashing indicator signal					T		R
Engine cooling fan speed signal	T				R		
Child lock indicator signal					T		R
Door switches state signal					T		R
Key ID signal	R				T		
	T				R		
A/C compressor signal	T				R		
Tire pressure signal						T	R

Type 3

System diagram



Input/output signal chart

T: Transmit R: Receive

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Engine speed signal	T	R				R
Stop lamp switch signal		R	T			
Rear window defogger signal	R			T		
Heater fan switch signal	R					T
Air conditioner switch signal	R					T
Primary pulley revolution signal	R	T				
Secondary pulley revolution signal	R	T				
MI signal	T					R
Current gear position signal		T				R
Engine coolant temperature signal	T					R
Fuel consumption signal	T					R
Vehicle speed signal			T			R
	R					T

Signals	ECM	TCM	ABS actuator and electric unit (control unit)	Smart entrance control unit	Tyre pressure monitoring control unit	Combination meter
Seat belt reminder signal				R		T
Headlamp switch signal				T		R
Flashing indicator signal				T		R
Engine cooling fan speed signal	T			R		
Child lock indicator signal				T		R
Door switches state signal				T		R
Key ID signal	R			T		
	T			R		
A/C compressor signal	T			R		
Tire pressure signal					T	R

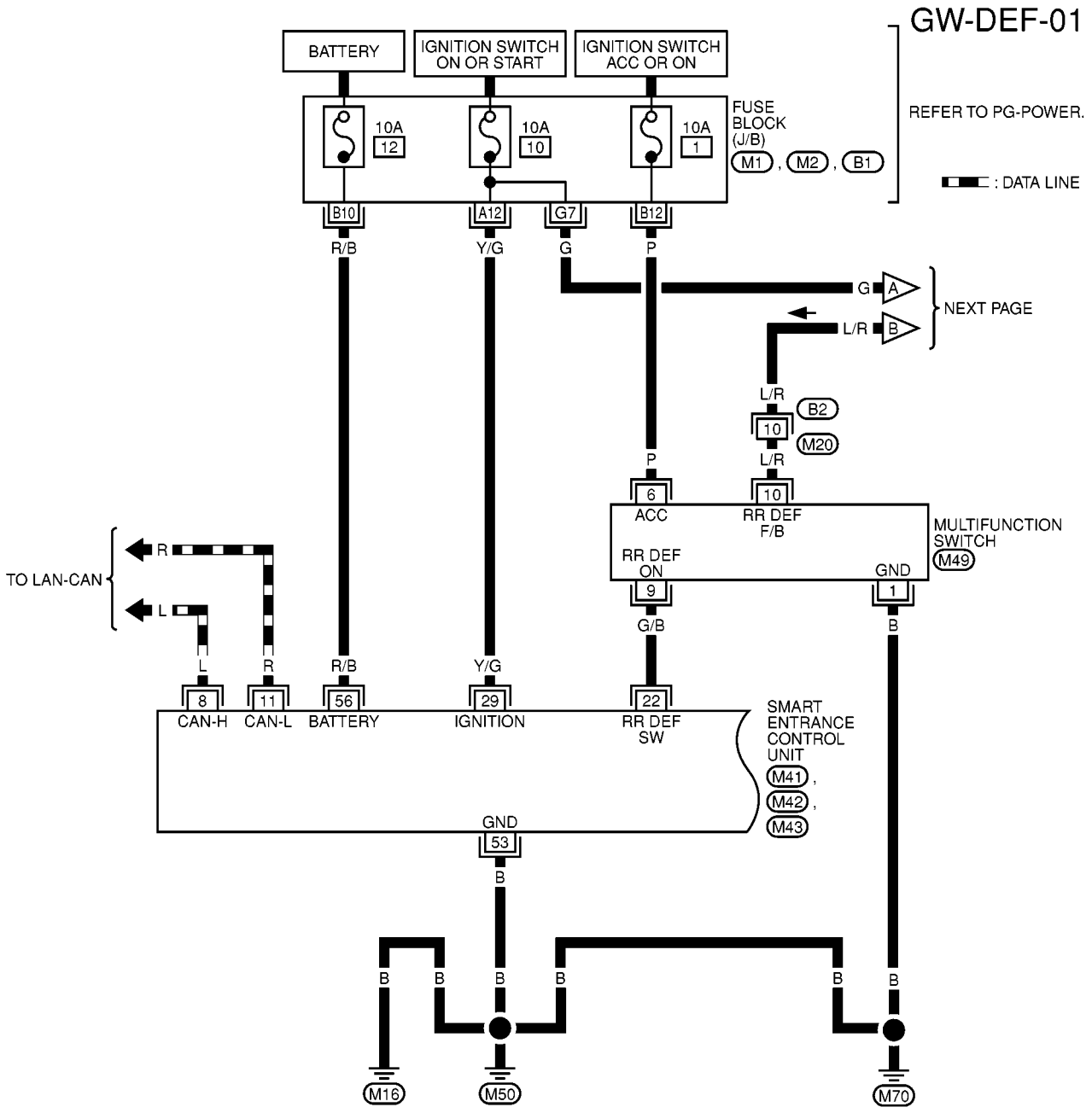
Type 4

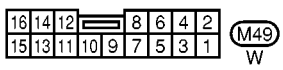
Type 5

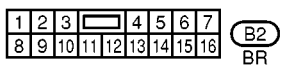
Type 6

Wiring Diagram –DEF–

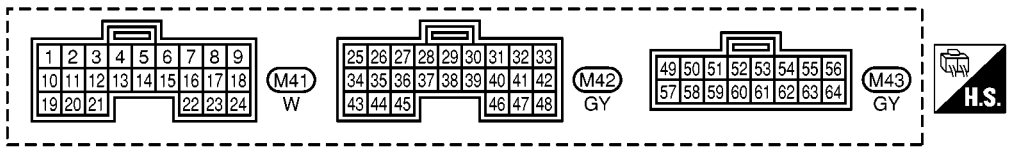
EIS002GG





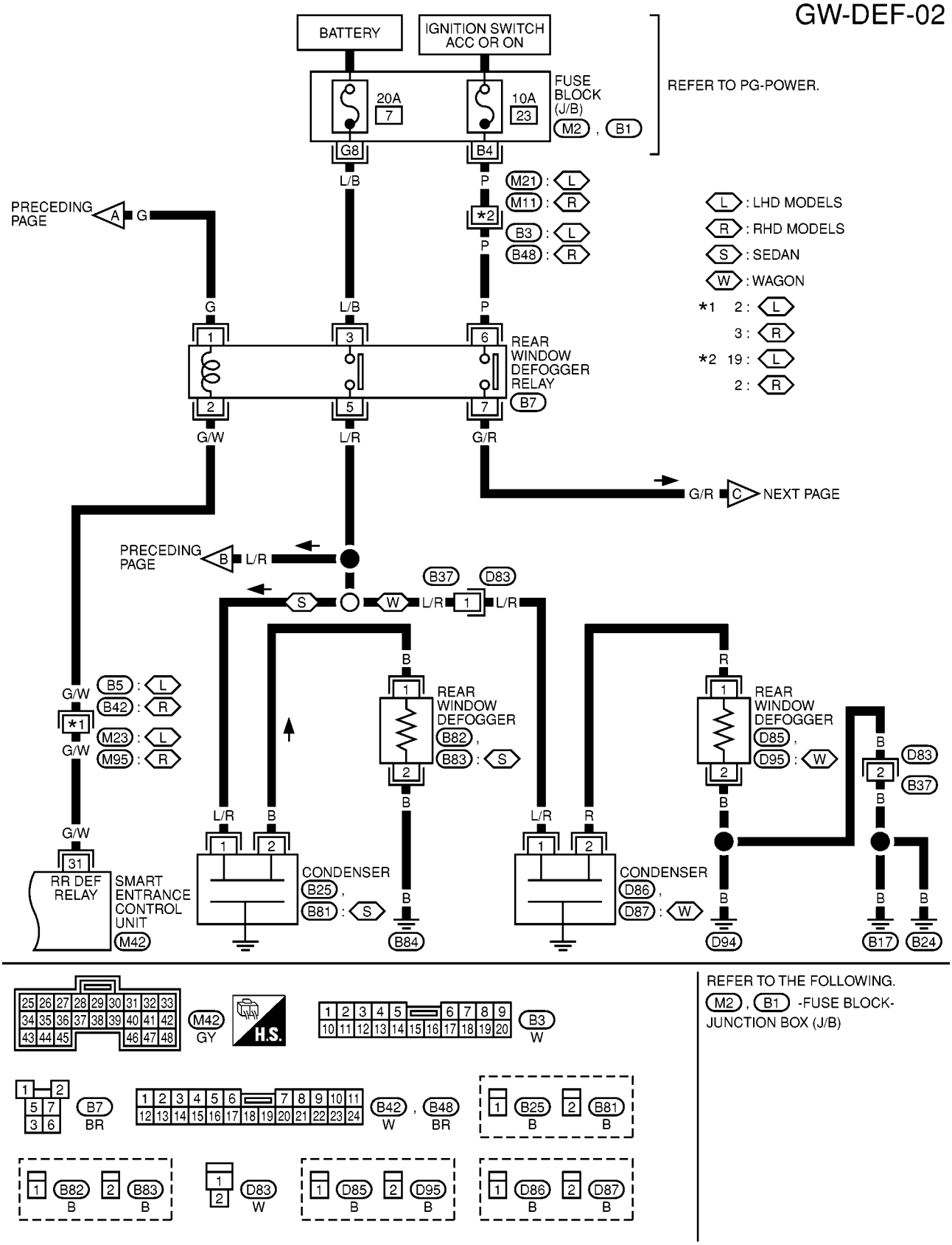


REFER TO THE FOLLOWING.
M1, M2, B1 -FUSE BLOCK-JUNCTION BOX (J/B)



MKWA0171E

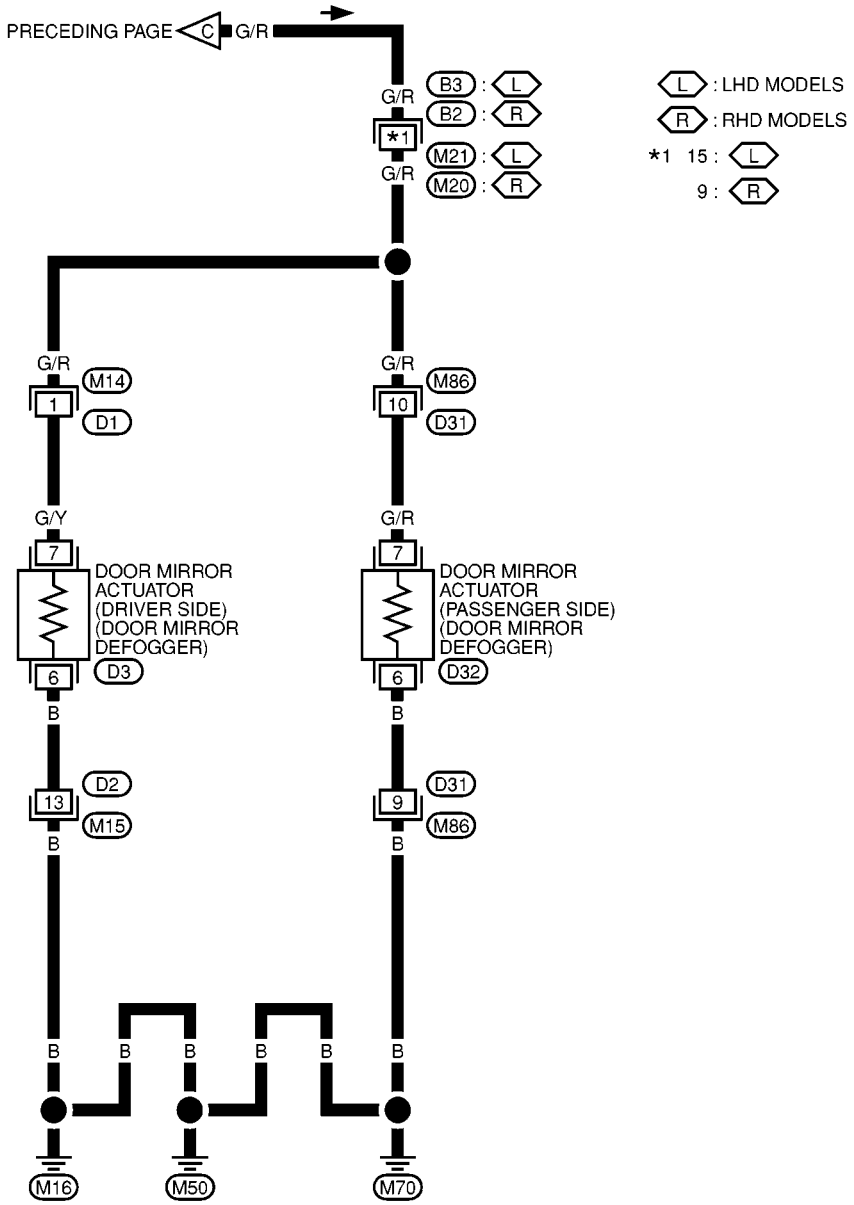
GW-DEF-02

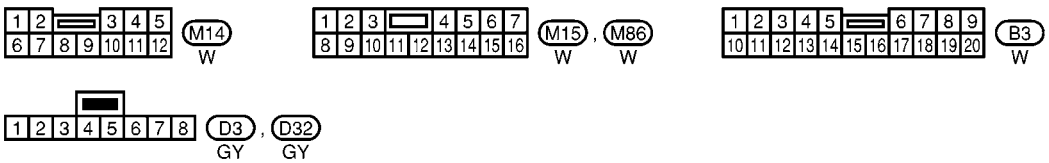


REFER TO THE FOLLOWING.
M2, B1 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0147E

GW-DEF-03





MKWA0148E

Terminals and Reference Value for Smart Entrance Control Unit

EIS002GH

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
22	G/B	Multifunction switch (Rear window defogger switch) signal	Multifunction switch (Rear window defogger switch) ON	0V
			Multifunction switch (Rear window defogger switch) OFF	Battery voltage
29	Y/G	IGN power supply	—	Battery voltage
31	G/W	Rear window defogger relay control signal	Multifunction switch (Rear window defogger switch) ON	Battery voltage
			Multifunction switch (Rear window defogger switch) OFF	0V
53	B	Ground	—	0V
56	R/B	BAT power supply	—	Battery voltage

Terminals and Reference Value for Multifunction Switch (Rear Window Defogger Switch)

EIS002PA

TERMINAL	WIRE COLOR	ITEM	CONDITION	DATA (DC)
1	B	Ground	—	0V
6	P	ACC power supply	Ignition switch “ACC” or “ON” position	Battery voltage
9	G/B	Rear window defogger switch signal	Rear window defogger switch ON	Battery voltage
10	L/R	Rear window defogger indicator signal	Rear window defogger switch ON	Battery voltage

Preliminary Check

EIS002GI

First perform the “SELF-DIAG RESULTS” in “SMART ENTRANCE” with CONSULT-II, when perform the each trouble diagnosis.

POWER SUPPLY AND GROUND CIRCUIT INSPECTION

1. CHECK FUSE INSPECTION

Check the following.

Part	Terminal No.	Ampere	Power source	Fuse No.
Smart entrance control unit	29	10A	IGN power supply	#10
	56	10A	BAT power supply	#12
Rear window defogger relay	1	10A	IGN power supply	#17
	3	20A	BAT power supply	#7

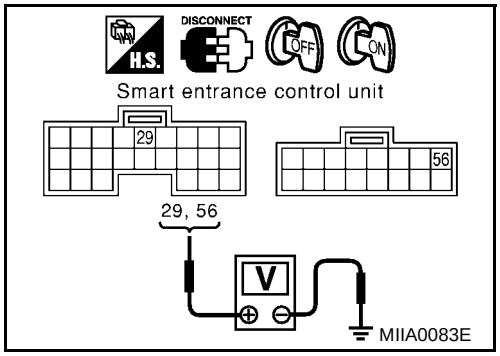
OK or NG

OK >> GO TO 2.
NG >> Replace fuse

2. CHECK POWER SUPPLY AND IGNITION INPUT SIGNAL

Check voltage between smart entrance control unit connector M42, M43 terminals 29 and 56 and ground.

Terminals			Condition	Voltage (V)
(+)		(–)		
Connector	Terminal			
M42, M43	29 (Y/G)	Ground	Ignition switch ON or START	Battery voltage
	56 (R/B)		Ignition switch OFF	Battery voltage



OK or NG

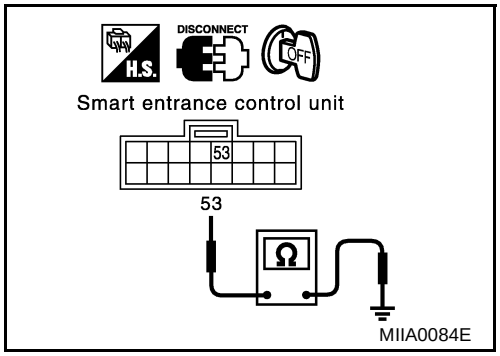
OK >> GO TO 3.
NG >> Check the following.

- Harness for open or short between time control unit and fuse

3. CHECK CONTROL UNIT GROUND CIRCUIT

Check continuity between time control unit connector M43 terminal 53 and ground.

Terminals			Condition	Continuity
Connector	Terminal			
M43	53 (B)	Ground	Ignition switch OFF	Should exist



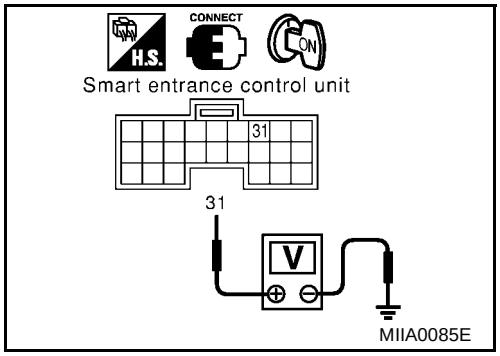
OK or NG

OK >> GO TO 4.
NG >> Repair or replace harness.

4. CHECK REAR WINDOW DEFOGGER OUTPUT SIGNAL

1. Turn ignition switch to ON position.
2. Check voltage between time control unit harness connector M42 terminal 31 and ground.

Terminals			Condition	DATA (DC)
(+)		(–)		
Connector	Terminal			
M42	31 (G/W)	Ground	Rear defogger switch OFF	0V
			Rear defogger switch ON	Battery voltage



OK or NG

OK >> Check the following.

- Harness for open or short between 10A fuse [No. 10, located in the fuse block (J/B)] and rear window defogger relay.
- Harness for open or short between rear window defogger relay and smart entrance control unit.
- Rear window defogger relay. Refer to GW-52, "REAR WINDOW DEFOGGER RELAY" .
- Rear window defogger filament. Refer to GW-52, "FILAMENT CHECK" and GW-53, "FILAMENT REPAIR" .

NG >> GO TO 2.

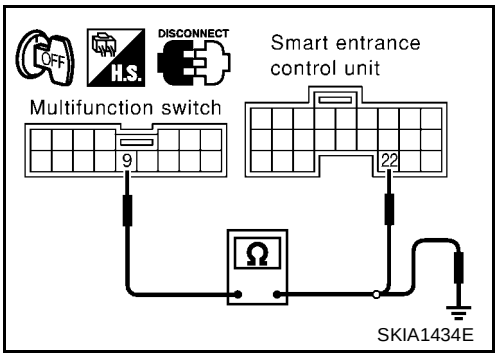
Rear Window Defogger Does Not Operate

EIS002PB

1. HARNESS INSPECTION

1. Turn the ignition switch OFF.
2. Disconnect Multifunction switch connector and smart entrance control unit connector.
3. Check continuity between Multifunction switch and smart entrance control unit.

Terminals				Continuity
Multifunction switch		Smart entrance control unit		
Connector	Terminal (Wire color)	Connector	Terminal (Wire color)	
M49	9 (G/B)	M41	22 (G/B)	YES



4. Check continuity between Multifunction switch and body ground.

Terminals			Continuity
Multifunction switch		(–)	
Connector	Terminal (wire color)		
M49	9 (G/B)	Ground	NO

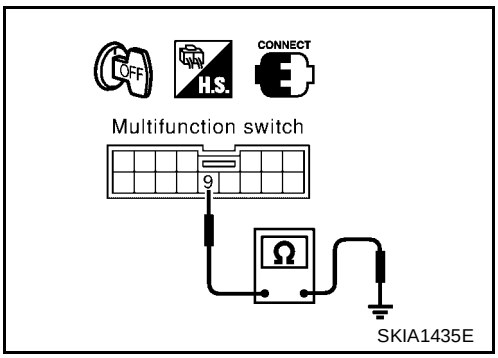
OK or NG

OK >> GO TO 2.
NG >> Malfunction in harness between Multifunction switch and smart entrance control unit.

2. CHECK REAR WINDOW DEFOGGER ON SIGNAL.

1. Connect Multifunction switch connector and smart entrance control unit connector.
2. Turn the ignition switch ON.
3. Check continuity between Multifunction switch and body ground when rear window defogger switch is operated.

Terminals			Continuity	
Multifunction switch		(–)		
Connector	Terminal (wire color)		Press switch	Release switch
M49	9 (G/B)	Ground	YES	NO



OK or NG

OK >> Replace smart entrance control unit.
NG >> Replace Multifunction switch.

Rear Defogger Indicator Lamp Does Not Illuminate.

EIS002PC

1. CHECK POSITION OF IGNITION SWITCH.

Is ignition switch ON?

OK or NG

OK >> GO TO 2.
NG >> Rear window defogger does not operate if ignition switch is not ON.

2. CHECK OPERATION OF REAR WINDOW DEFOGGER.

Does rear window defogger operate when rear window defogger switch is turned ON? (Does fogging disappear?)

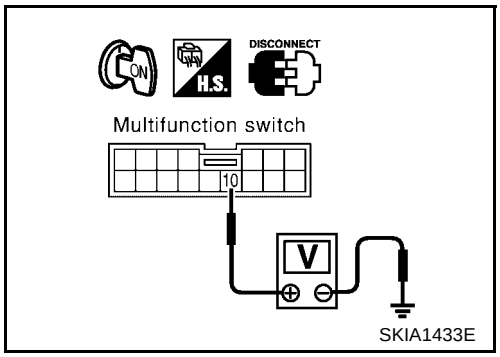
OK or NG

OK >> GO TO 3.
NG >> GW-51, "Rear Window Defogger Does Not Operate" item.

3. CHECK REAR WINDOW DEFOGGER INDICATOR LAMP SIGNALS.

Disconnect Multifunction switch connector. Check voltage between Multifunction switch terminal 10 and body ground.

Terminals			Voltage (V)
(+)		(–)	
Connector	Terminal (wire color)		
M49	10 (L/R)	Ground	Battery voltage



OK or NG

OK >> Replace Multifunction switch.
NG >> Malfunction in harness between Multifunction switch and rear defogger.

Electrical Components Inspection

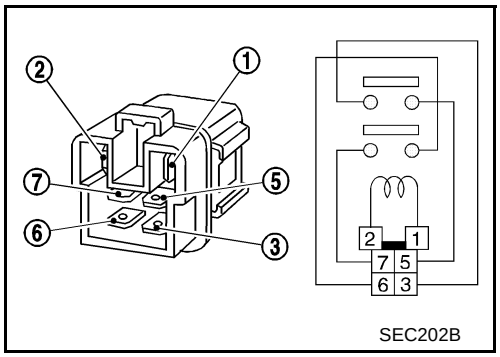
EIS002GJ

REAR WINDOW DEFOGGER RELAY

Check continuity between terminals 3 and 5, 6 and 7.

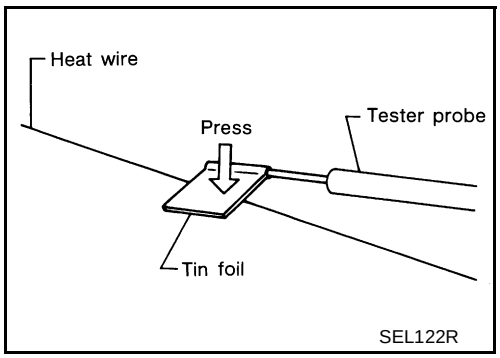
NOTE:
6 and 7: with door mirror defogger.

Condition	Continuity
12V direct current supply between terminals 1 and 2	Yes
No current supply	No

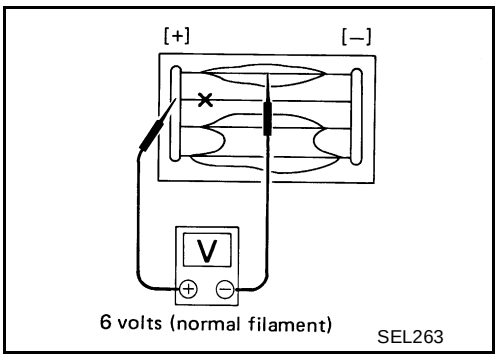


FILAMENT CHECK

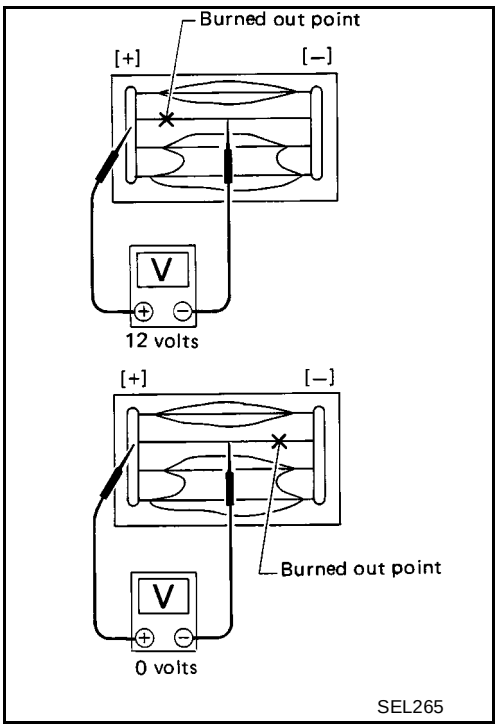
1. When measuring voltage, wrap tin foil around the top of the negative probe. Then press the foil against the wire with your finder.



2. Attach probe circuit tester (in Volt range) to middle portion of each filament.



3. If a filament is burned out, circuit tester registers 0 or battery voltage.
4. To locate burned out point, move probe to left and right along filament. Test needle will swing abruptly when probe passes the point.



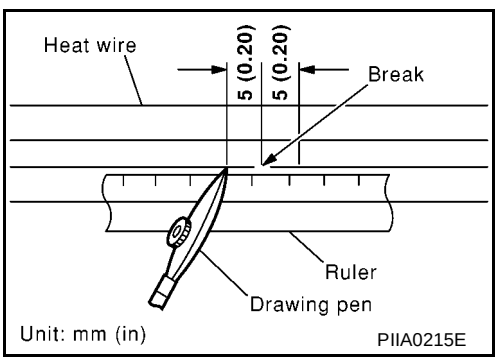
FILAMENT REPAIR

Repair Equipment

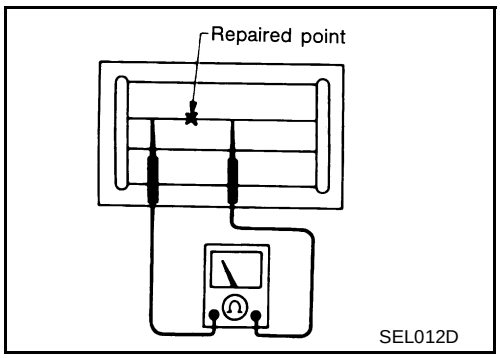
- Conductive silver composition (Dupont NO. 4817 or equivalent)
- Ruler 30 cm (11.8 in) long
- Drawing pen
- Heat gun
- Alcohol
- Cloth

Repairing Procedure

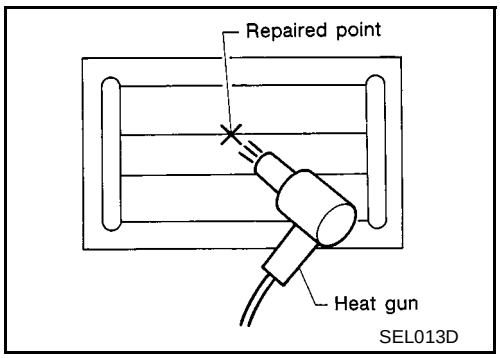
1. Wipe broken heat wire and its surrounding area clean with a cloth dampened alcohol.
2. Apply a small amount of conductive silver composition to tip of drawing pen.
   Shake silver composition container before use.
3. Place ruler on glass along broken line. Deposit conductive silver composition on break with drawing pen. Slightly overlap existing heat wire on both sides [preferably 5 mm (0.20 in)] of the break.



4. After repair has been completed, check repaired wire for continuity. This check should be conducted 10 minutes after silver composition is deposited.
   Do not touch repaired area while test is being conducted.



5. Apply a constant stream of hot air directly to the repaired area for approximately 20 minutes with a heat gun. A minimum distance of 3 cm (1.2 in) should be kept between repaired area and hot air outlet.
   If a heat gun is not available, let the repaired area dry for 24 hours.

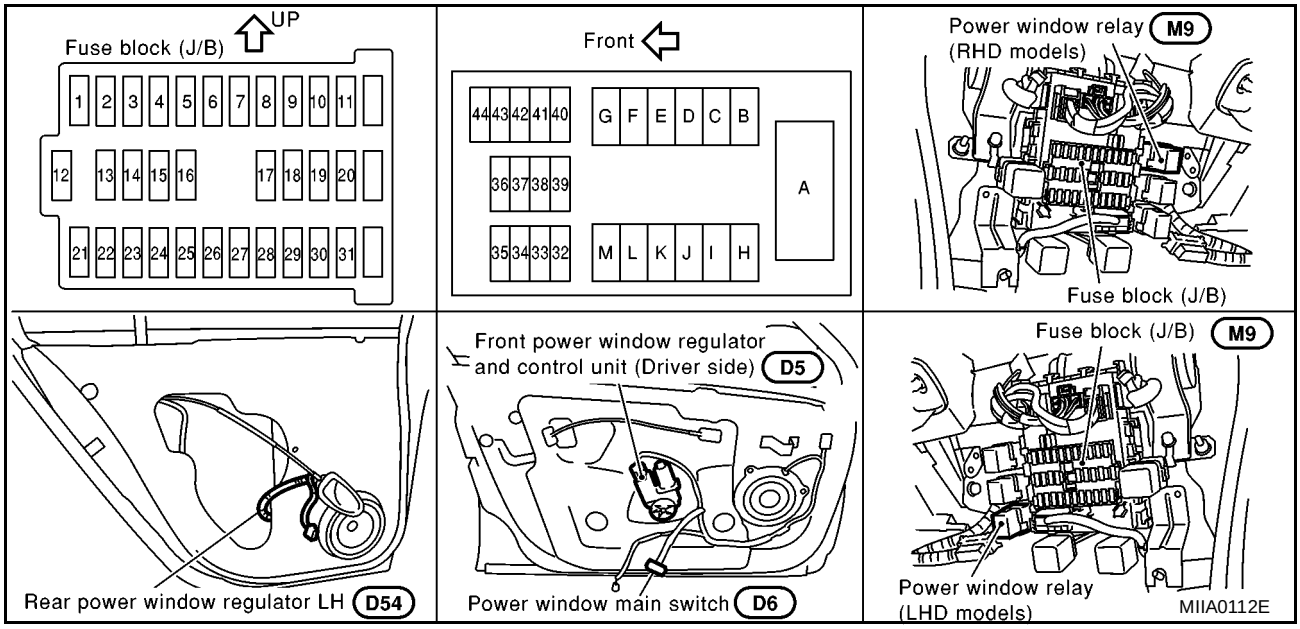


POWER WINDOW SYSTEM

PFP:25401

Component Parts and Harness Connector Location

EIS002GK



System Description

EIS002GL

Power is supplied at all times

- from 40A fusible link (letter **B** , located in the fuse and fusible link box)
- to circuit breaker-1 terminal 1
- through circuit breaker-1 terminal 2
- to power window relay terminal 5
- to circuit breaker-2 terminal 1
- through circuit breaker-2 terminal 2
- to front power window regulator and control unit terminal 3.

With ignition switch in ON or START position, power is supplied

- through 10A fuse [No. 10, located in the fuse block (J/B)]
- to power window relay terminal 1.

Ground is supplied to power window relay terminal 2

- through body grounds M16, M50 and M70.

The power window relay is energized and power is supplied

- through power window relay terminal 3
- to power window main switch terminal 2,
- to passenger side power window switch terminal 2,
- to rear power window switch LH and RH terminals 2.

MANUAL OPERATION

Front Door (Driver Side)

Ground is supplied

- to front power window regulator and control unit terminal 4 and power window main switch terminal 3
- through body grounds M16, M50 and M70.

WINDOW UP

When the driver's window switch in the power window main switch is pressed in the up position, power is supplied

- to driver side power window regulator and control unit terminal 3
- through driver side power window regulator and control unit terminal 5.

Ground is supplied

- to power window main switch terminal 4
- through power window main switch terminal 3.

Then, the motor raises the window until the switch is released.
WINDOW DOWN
When the driver's window switch in the power window main switch is pressed in the down position, power is supplied

- to driver side power window regulator and control unit terminal 3
- through driver side power window regulator and control unit terminal 6

Ground is supplied

- to power window main switch terminal 5
- through power window main switch terminal 3.

Then, the motor lowers the window until the switch is released.

Front Door (Passenger Side)

Ground is supplied

- to power window main switch terminal 7
- through body grounds M16, M50 and M70.

NOTE:
Numbers in parentheses are terminal numbers, when power window switch is pressed in the UP and DOWN positions respectively.
POWER WINDOW MAIN SWITCH OPERATION
Power is supplied

- through power window main switch (6, 7)
- to passenger side power window switch (6, 7).

The subsequent operation is the same as the passenger side power window switch operation.
PASSENGER SIDE POWER WINDOW SWITCH OPERATION
Power is supplied

- through passenger side power window switch (4, 5)
- to passenger side power window regulator (2, 1).

Ground is supplied

- to passenger side power window regulator (1, 2)
- through passenger side power window switch (4, 5)
- to passenger side power window switch (6, 7)
- through power window main switch (6, 7).

Then, the motor raises or lowers the window until the switch is released.

Rear Door

Rear door windows will raise and lower in the same manner as passenger's door window.

AUTO OPERATION

The power window AUTO feature enables the driver to open or close the driver's window without holding the window switch in the down or up position.
The AUTO feature operates on the driver's window.

POWER WINDOW LOCK

The power window lock is designed to lock operation of all windows except for driver's window.
When the lock switch is pressed to pressed to lock position, ground of the sub-switches in the power window main switch is disconnected. This prevents the power window motors from operating.

TIME FUNCTION

With the timer function, driver power window can be operated for approximately 15 minutes after ignition switch is turned OFF (positions other than ON). However, the timer will be reset when a specific signal, such as driver door open (door switch ON) $\rightarrow$ close (door switch OFF), or ignition switch OFF $\rightarrow$ ON, is input.

DRIVER WINDOW ANTI-PINCH FUNCTION

During raising operation of driver power window, if door control module detects that foreign object is pinched, power window lowers approximately 150 mm (5.91 in).

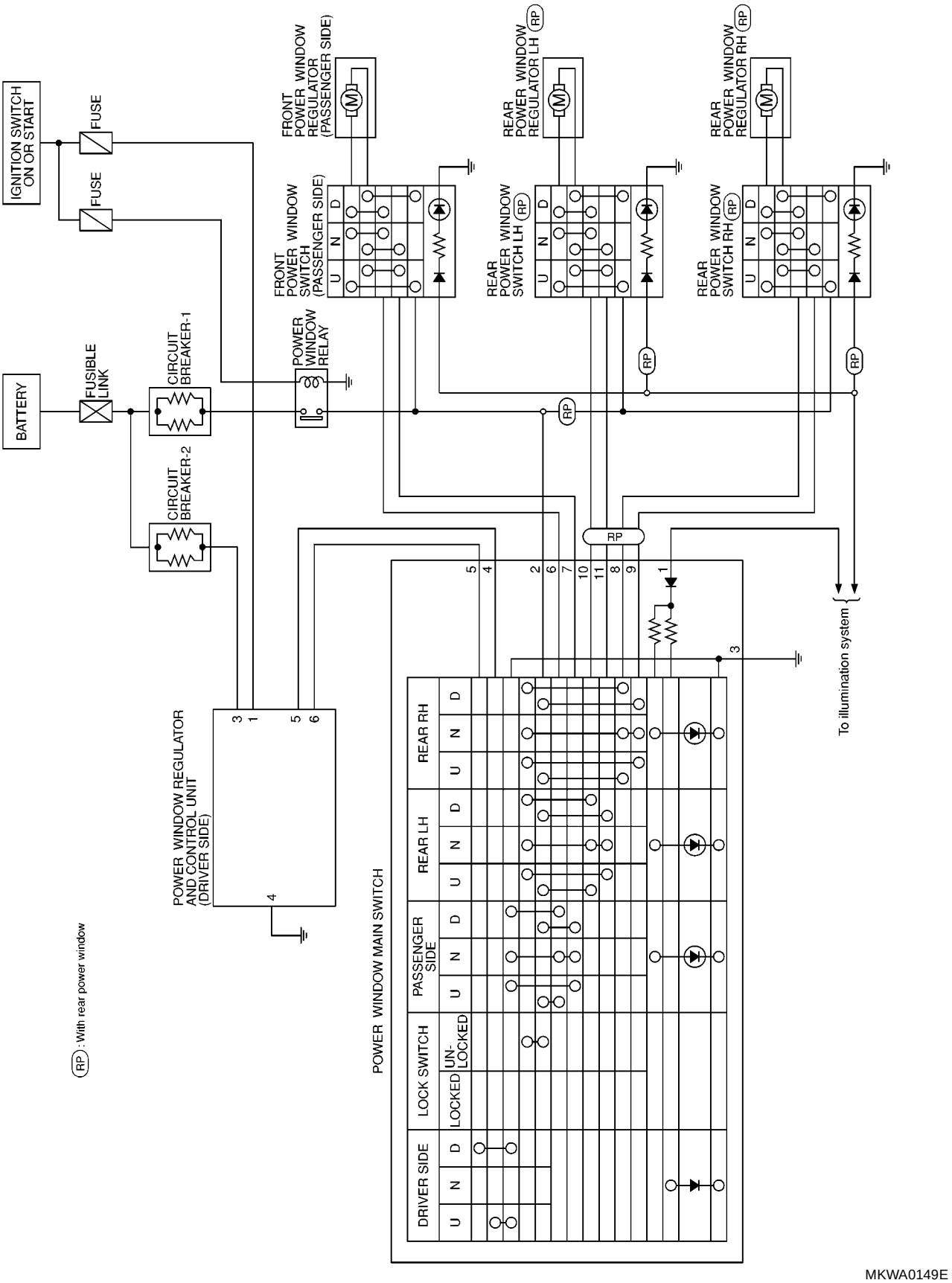
NOTE:
Depending on environment and driving conditions, if a similar impact or load is applied to power window, it may lower.

Operation Conditions

- Driver door window is between fully-open and just before fully-closed position (when the limit switch is ON).
- During automatic operation when ignition switch is turned ON.
- During automatic or manual operation when ignition switch is other than ON position (when the timer operates).

Schematic

EIS002GM

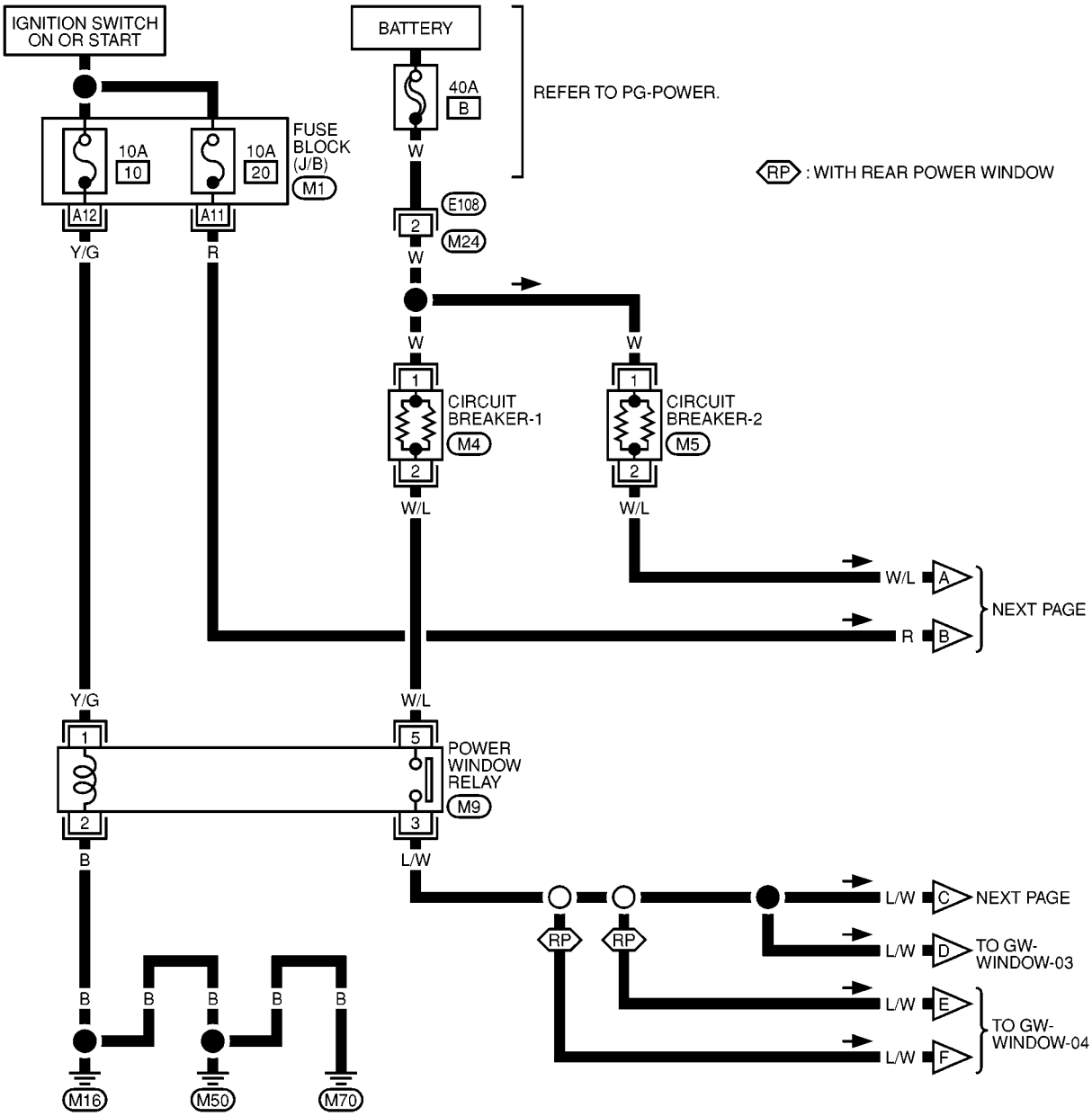


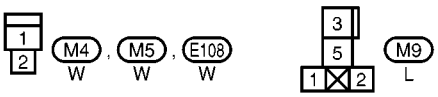
MKWA0149E

Wiring Diagram – WINDOW – (LHD models)

EIS002GN

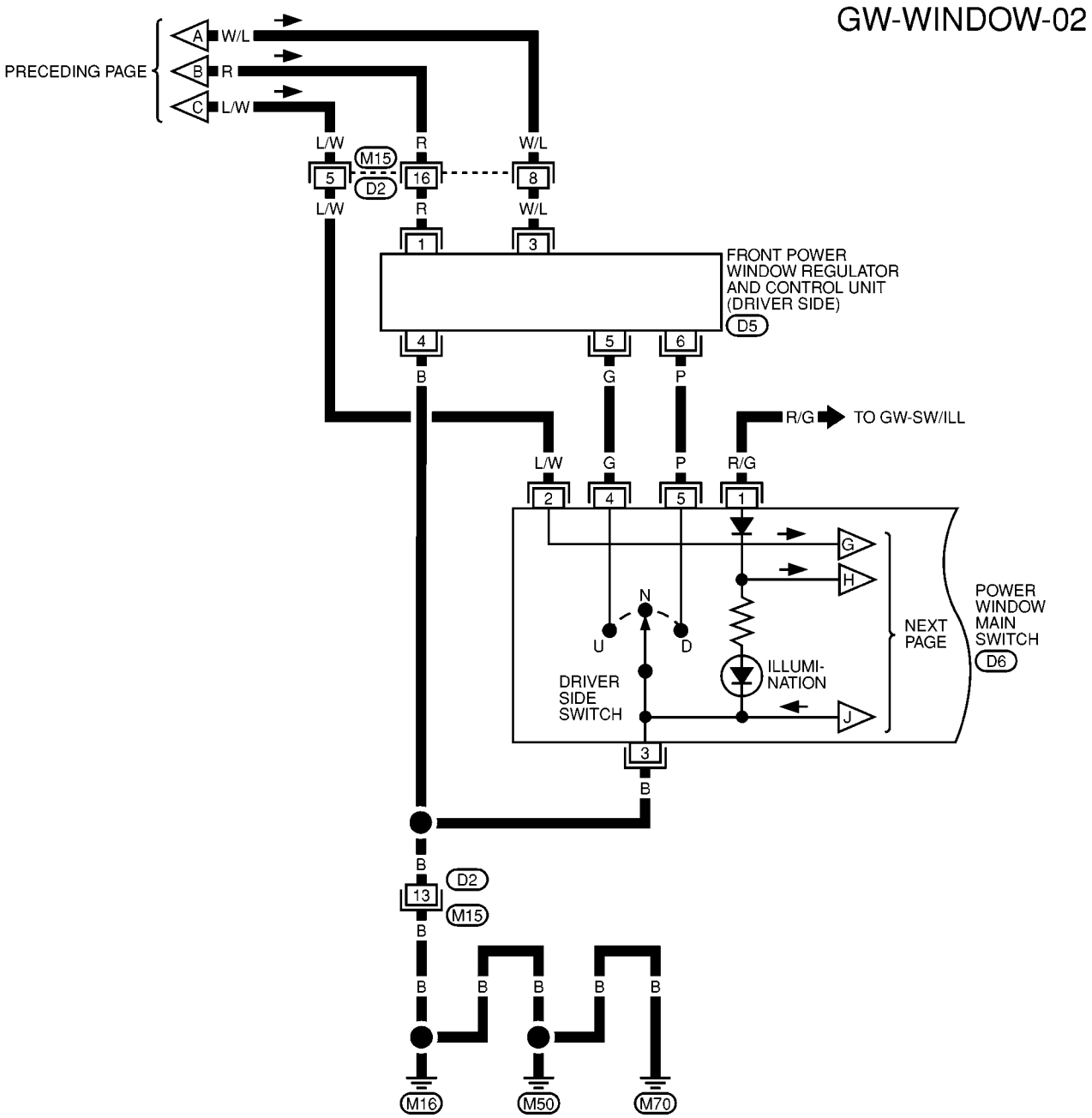
GW-WINDOW-01

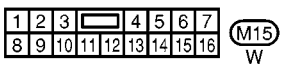


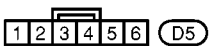


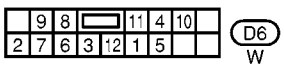
REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0150E


GW-WINDOW-02
PRECEDING PAGE
A W/L
B R
C L/W
L/W
M15
R
W/L
5
D2
16
8
L/W
R
W/L
1
3
FRONT POWER WINDOW REGULATOR AND CONTROL UNIT (DRIVER SIDE)
D5
4
5
6
B
G
P
R/G
TO GW-SW/ILL
L/W
G
P
R/G
2
4
5
1
G
H
N
U
D
NEXT PAGE
POWER WINDOW MAIN SWITCH
D6
ILLUMI-NATION
DRIVER SIDE SWITCH
J
3
B
B
D2
13
M15
B
B
B
B
B
B
M16
M50
M70

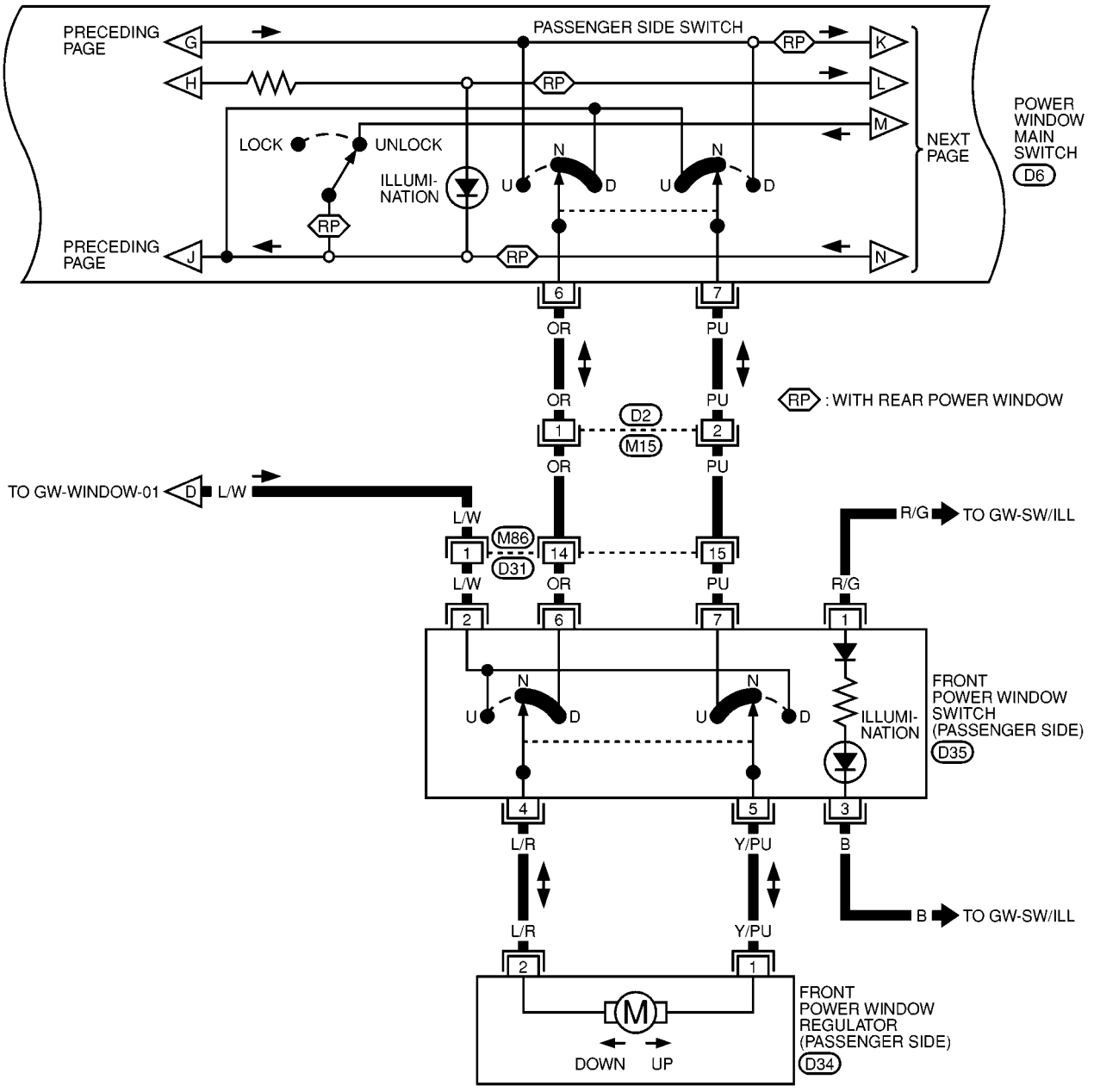

1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
M15
W


1 2 3 4 5 6
D5


9 8 11 4 10
2 7 6 3 12 1 5
D6
W

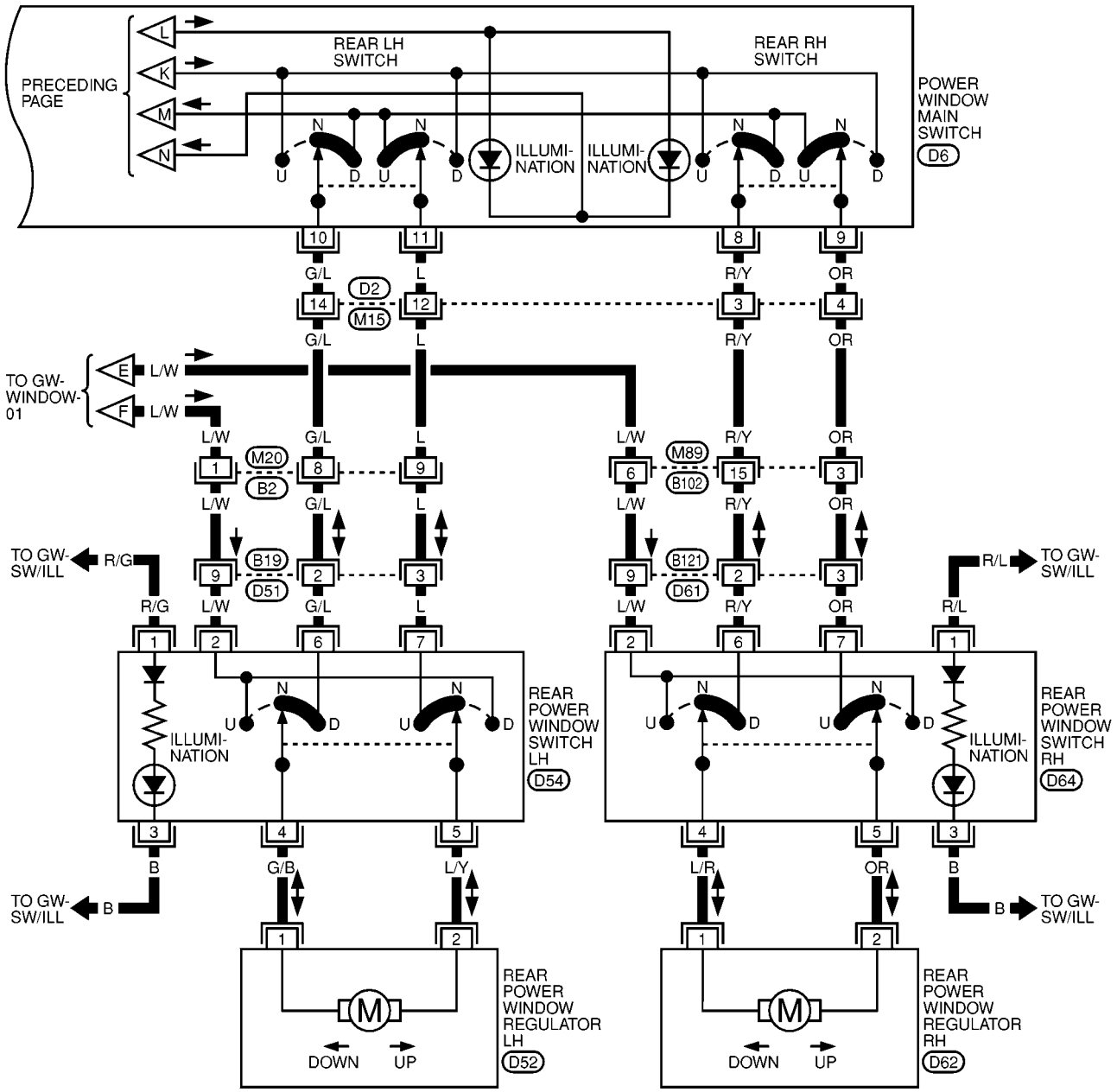
MKWA0151E

GW-WINDOW-03



MKWA0152E

GW-WINDOW-04

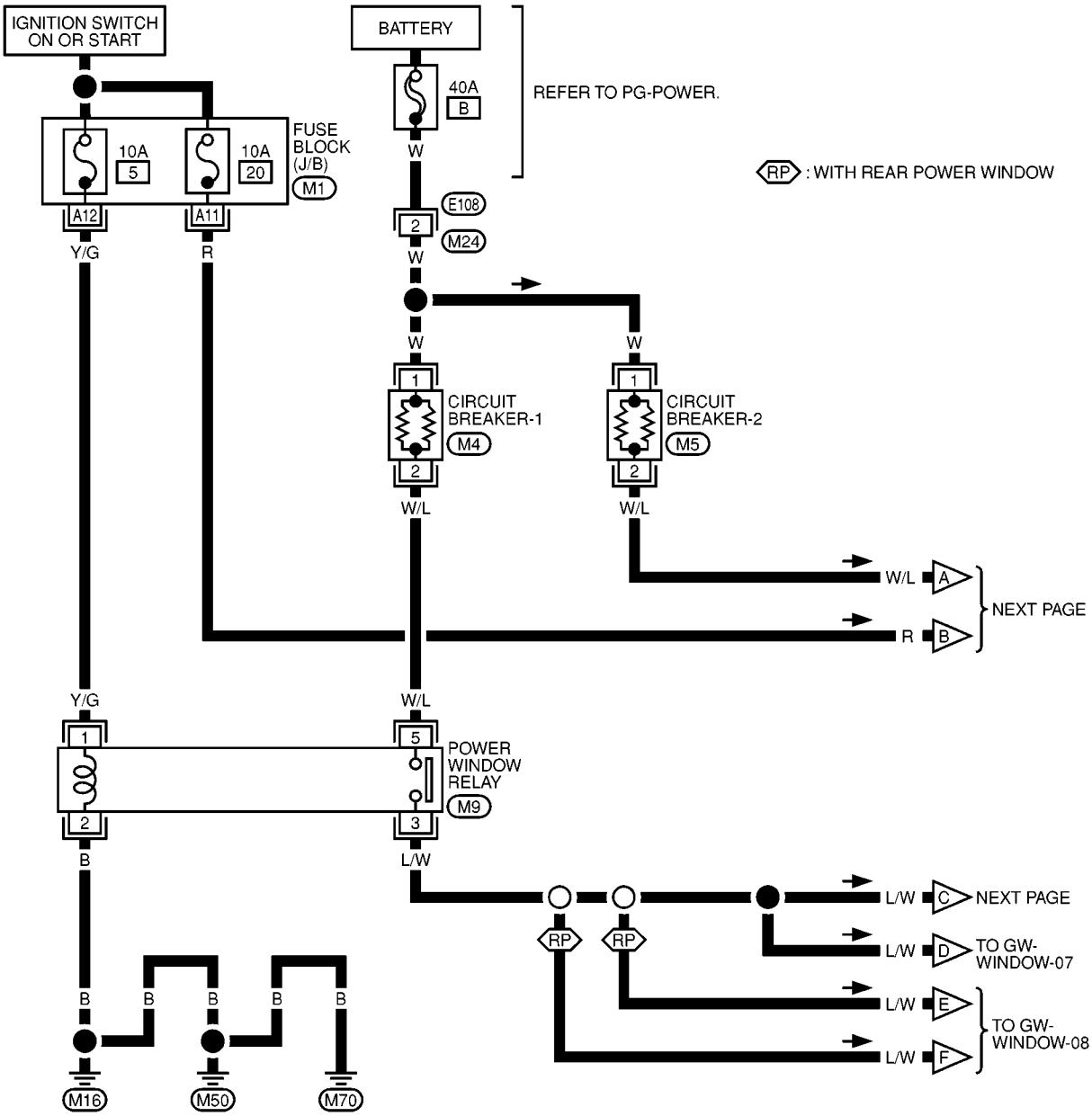


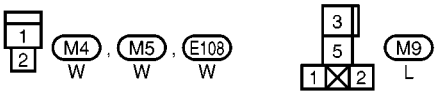
MKWA0153E

Wiring Diagram – WINDOW – (RHD models)

EIS002GO

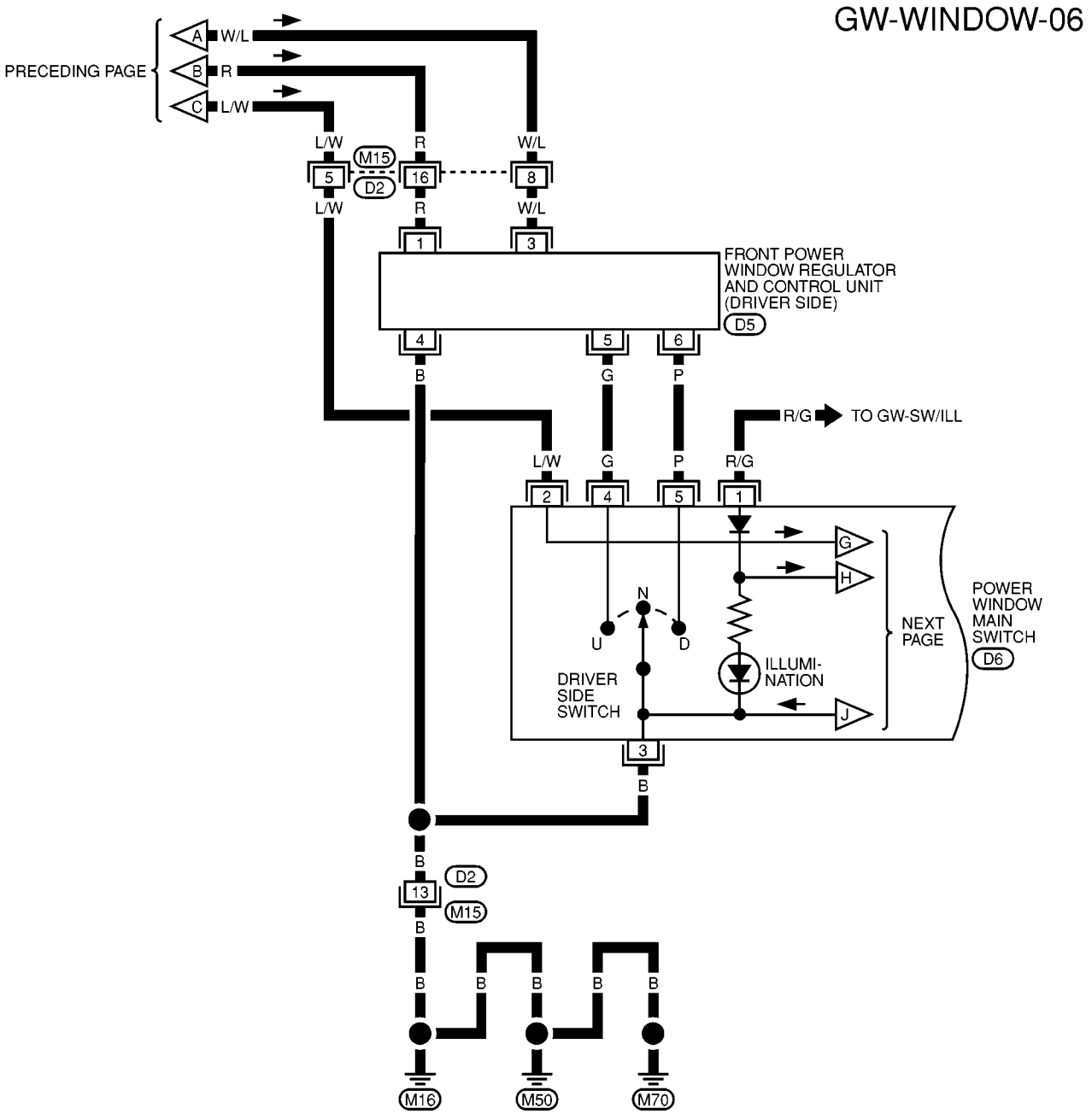
GW-WINDOW-05

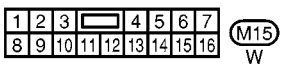


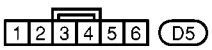


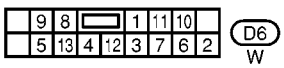
REFER TO THE FOLLOWING.
M1 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0154E


GW-WINDOW-06
PRECEDING PAGE
A W/L
B R
C L/W
L/W
M15
R
W/L
5
D2
16
8
L/W
R
W/L
1
3
FRONT POWER WINDOW REGULATOR AND CONTROL UNIT (DRIVER SIDE)
D5
4
5
6
B
G
P
R/G
TO GW-SW/ILL
L/W
G
P
R/G
2
4
5
1
G
H
N
U
D
NEXT PAGE
POWER WINDOW MAIN SWITCH
D6
ILLUMI-NATION
DRIVER SIDE SWITCH
J
3
B
B
D2
13
M15
B
B
B
B
B
B
M16
M50
M70

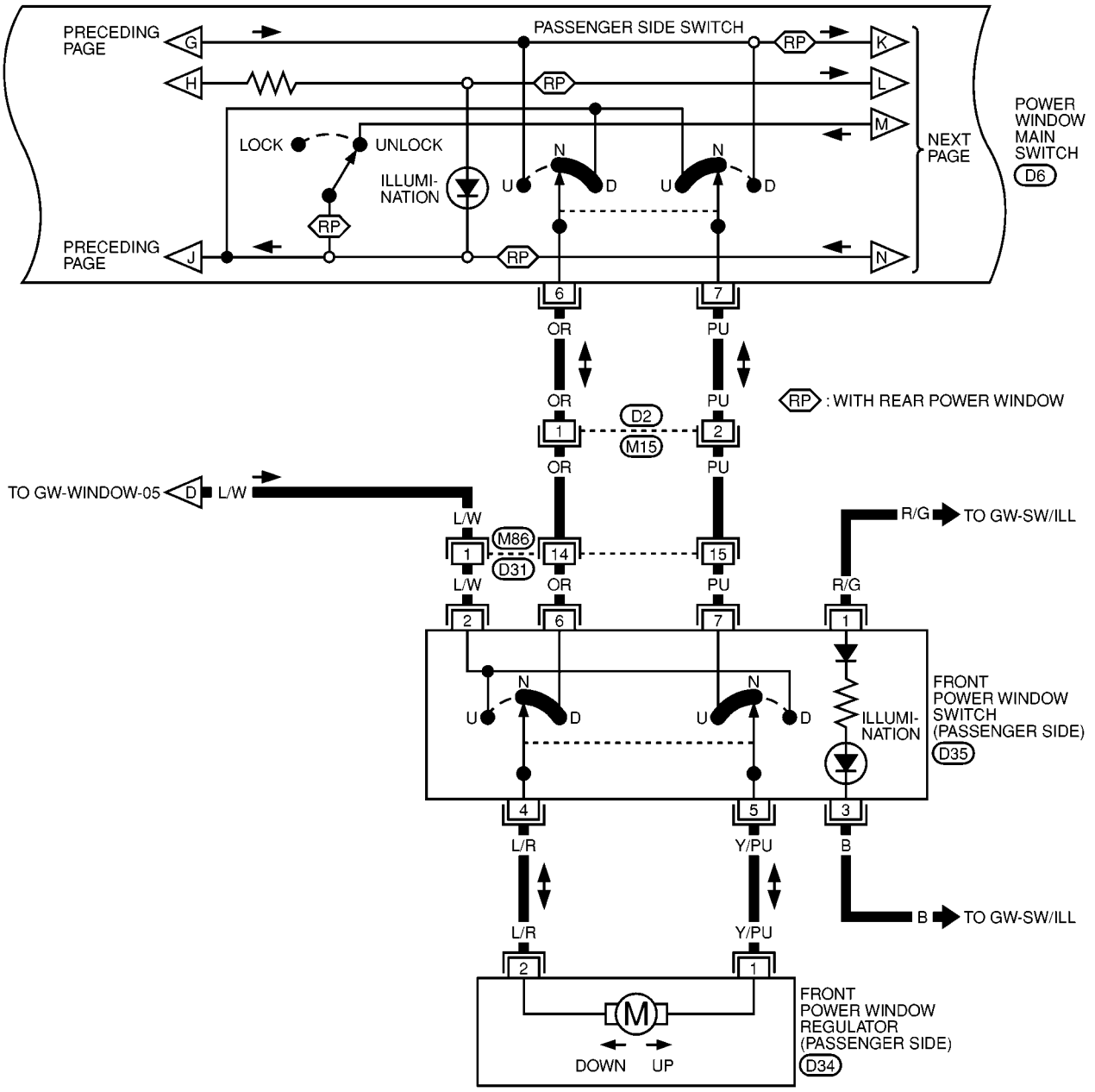

1 2 3 4 5 6 7
8 9 10 11 12 13 14 15 16
M15
W

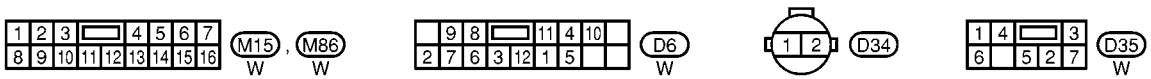

1 2 3 4 5 6
D5


9 8 1 11 10
5 13 4 12 3 7 6 2
D6
W

MKWA0155E

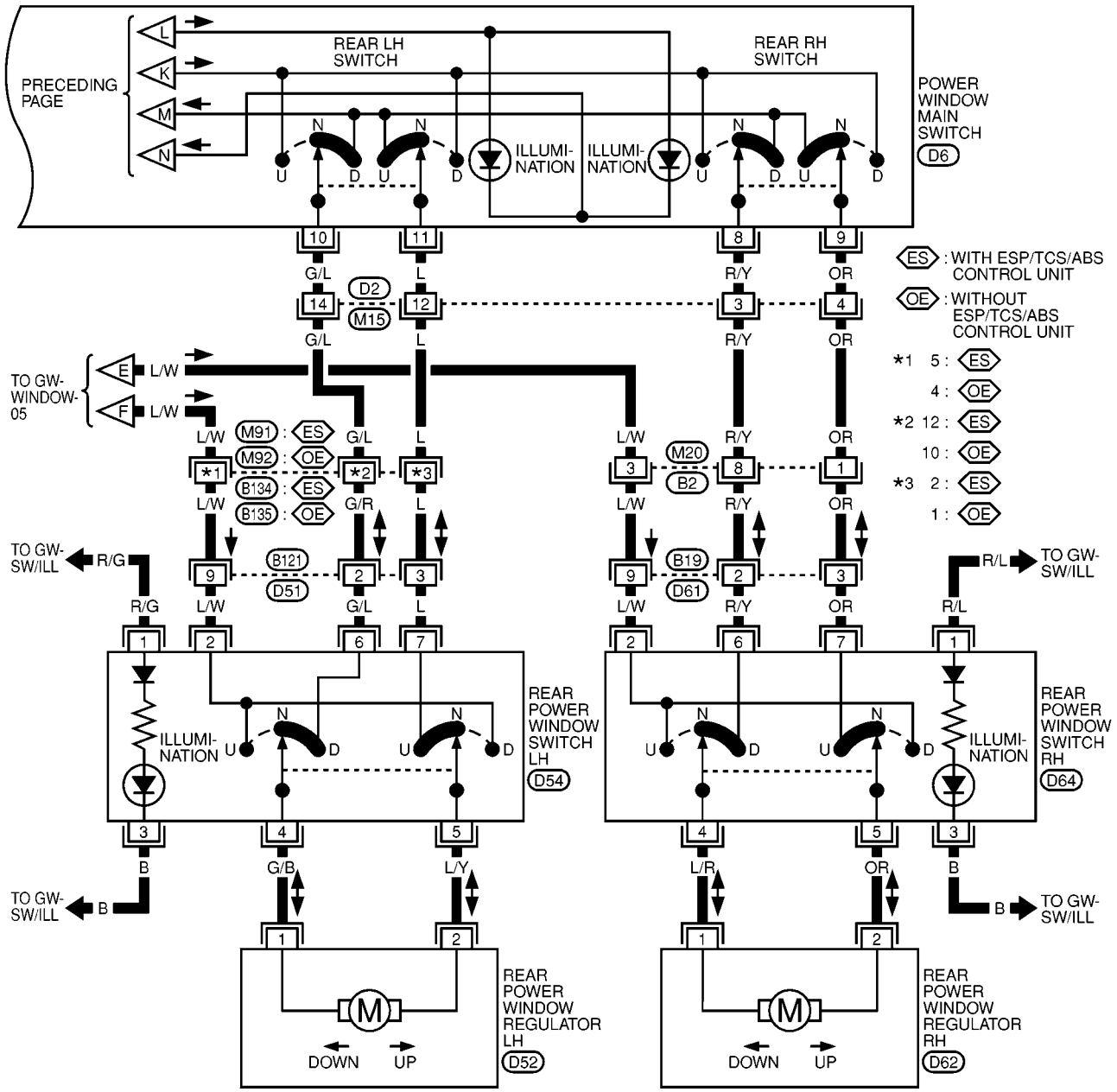
GW-WINDOW-07

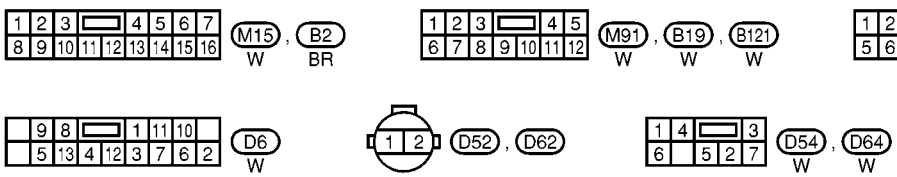




MKWA0156E

GW-WINDOW-08





MKWA0157E

Terminal and Reference Value for Power Window Main Switch

EIS002GP

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V)
2	L/W	BAT power supply	—	Battery voltage
		Passenger and rear RH/LH power window switch power supply	—	Battery voltage
4	G	Driver power window motor DOWN signal	When DOWN operation.	Battery voltage
			Other than above.	Approx.0
5	P	Driver power window motor UP signall	When UP operation.	Battery voltage
			Other than above.	Approx. 0
6	OR	Passenger power window DOWN signal	Main switch passenger switch UP operation.	Approx. 0
			Main switch passenger switch DOWN operation.	Battery voltage
			Main switch passenger switch UP operation.	Battery voltage
			Other than above.	Approx. 0
7	PU	Passenger power window UP signal	Main switch passenger switch DOWN operation.	Approx. 0
			Main switch passenger switch UP operation.	Battery voltage
			Main switch passenger switch DOWN operation.	Battery voltage
			Other than above.	Approx. 0
8	R/Y	Rear RH power window DOWN signal	Main switch rear RH switch DOWN operation.	Battery voltage
			Main switch rear RH switch UP operation.	Approx. 0
			Main switch rear RH switch DOWN operation.	Battery voltage
			Main switch rear RH switch UP operation.	Battery voltage
			Other than above.	Approx. 0
9	OR	Rear RH power window UP signal	Main switch rear RH switch DOWN operation.	Battery voltage
			Main switch rear RH switch DOWN operation.	Approx. 0
			Main switch rear RH switch UP operation.	Battery voltage
			Main switch rear RH switch DOWN operation.	Battery voltage
			Other than above.	Approx. 0

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V)
10	G/L	Rear LH power window DOWN signal	Main switch rear RH switch DOWN operation.	Battery voltage
			Main switch rear LH switch UP operation.	Approx. 0
			Main switch rear LH switch DOWN operation.	Battery voltage
			Main switch rear LH switch UP operation.	Battery voltage
			Other than above.	Approx. 0
11	L	Rear LH power window UP signal	Main switch rear RH switch DOWN operation.	Battery voltage
			Main switch rear LH switch DOWN operation.	Approx. 0
			Main switch rear LH switch UP operation.	Battery voltage
			Main switch rear LH switch DOWN operation.	Battery voltage
			Other than above.	Approx. 0

Terminal and Reference Value for Each Door's Power Window Switch

EIS002GQ

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V)
2	L/W	Power window switch power supply	—	Battery voltage
4	L/R	Power window motor UP signal	When UP operation.	Battery voltage
			Other than above.	Approx. 0
5	Y/PU	Power window motor DOWN signal	When DOWN operation.	Battery voltage
			Other than above.	Approx. 0
6	OR	Power window DOWN signal	Power window switch DOWN operation.	Approx. 0
			Power window switch UP operation.	Approx. 0
			Power window switch DOWN operation.	Battery voltage
			Power window switch UP operation.	Battery voltage
			Other than above.	Approx. 0
7	PU	Power window UP signal	Power window switch UP operation.	Approx. 0
			Power window switch DOWN operation.	Approx. 0
			Power window switch UP operation.	Battery voltage
			Power window switch DOWN operation.	Battery voltage
			Other than above.	Approx. 0

Trouble Diagnoses

EIS002GR

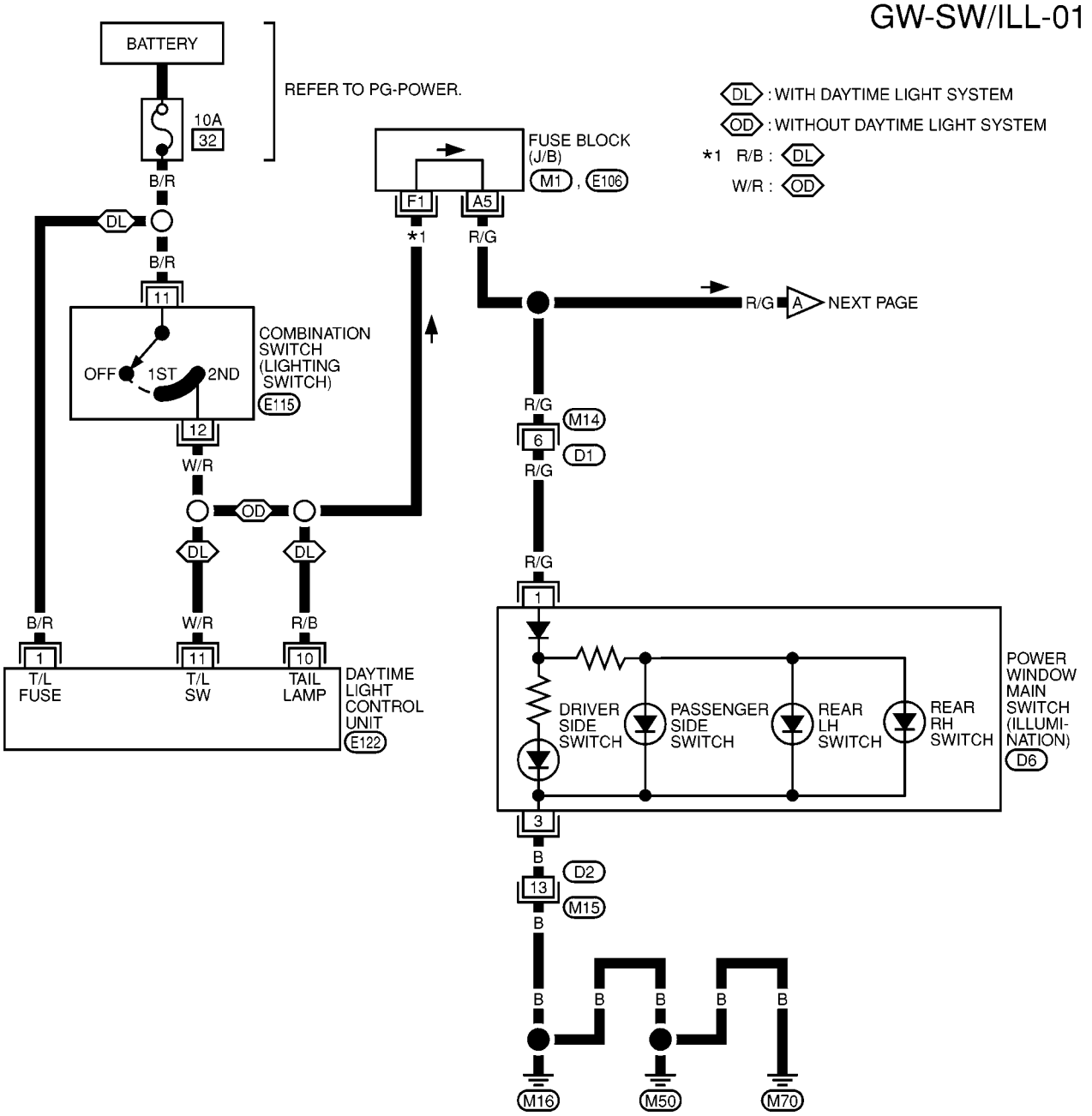
Symptom	Possible cause	Repair order
None of the power windows can be operated using any switch.	1. 10A fuse, 40A fusible link 2. M4 circuit breaker-1 3. M5 circuit breaker-2 4. Power window relay 5. M4 circuit breaker-1 6. M5 circuit breaker-2 7. Ground circuit 8. Power window main switch	1. Check 10A fuse [No. 10, located in fuse block (J/B)] Turn ignition switch “ON” and verify positive battery voltage is present at terminal 1 (Y/G) of power window relay. 2. Check 40A fusible link (letter **B** , located in fuse and fusible link box) and M4 circuit breaker-1. Verify positive battery voltage is present at terminal 5 (W/L) of power window relay. 3. Check 40A fusible link (letter **B** , located in fuse and fusible link box) and M5 circuit breaker-2. Verify positive battery voltage is present at terminal 3 (W/L) of driver side power window regulator and control unit. 4. Check M4 circuit breaker-1. 5. Check power window relay. 6. Check driver side power window regulator and control unit. 7. Check the following. – Check harness between M4 circuit breaker-1 and 40A fusible link (letter **B,** located in fuse and fusible link box). – Check harness between M4 circuibt breaker-1 and power window main switch terminal 5. 8. Check the following. – Check ground circuit of power window main switch. – Check power window relay ground circuit. – Check power window main switch.
Driver side power window cannot be operated but other windows can be operated.	1. Driver side power window regulator and control unit circuit 2. Driver side power window regulator and control unit 3. Power window main switch	1. Check harness between power window main switch and driver side power window regulator and control unit for open or short circuit. 2. Check driver side power window regulator and control unit. 3. Check power window main switch.
One or more power windows except driver's side window cannot be operated.	1. Power window sub-switches 2. Power window regulators 3. Power window main switch 4. Power window circuit	1. Check power window sub-switch. 2. Check power window regulator. 3. Check power window main switch. 4. Check the following. – Check harness between the power window relay terminal 3 (L/W) and power window relay. – Check harnesses between power window main switch and power window sub-switch for open/short circuit. – Check harnesses between power window sub-switch and power window regulator for open/short circuit.
Power windows except driver's side window cannot be operated using power window main switch but can be operated by power window sub-switch.	1. Power window main switch	1. Check power window main switch.
Driver side power window automatic operation does not function properly.	1. Power window main switch	1. Check power window main switch.

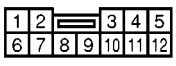
Power Window Switch Illumination

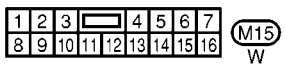
EIS002N8

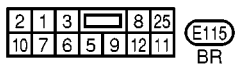
WIRING DIAGRAM — SW/ILL — (LHD MODELS)

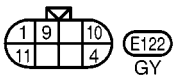
GW-SW/ILL-01

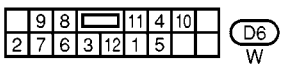








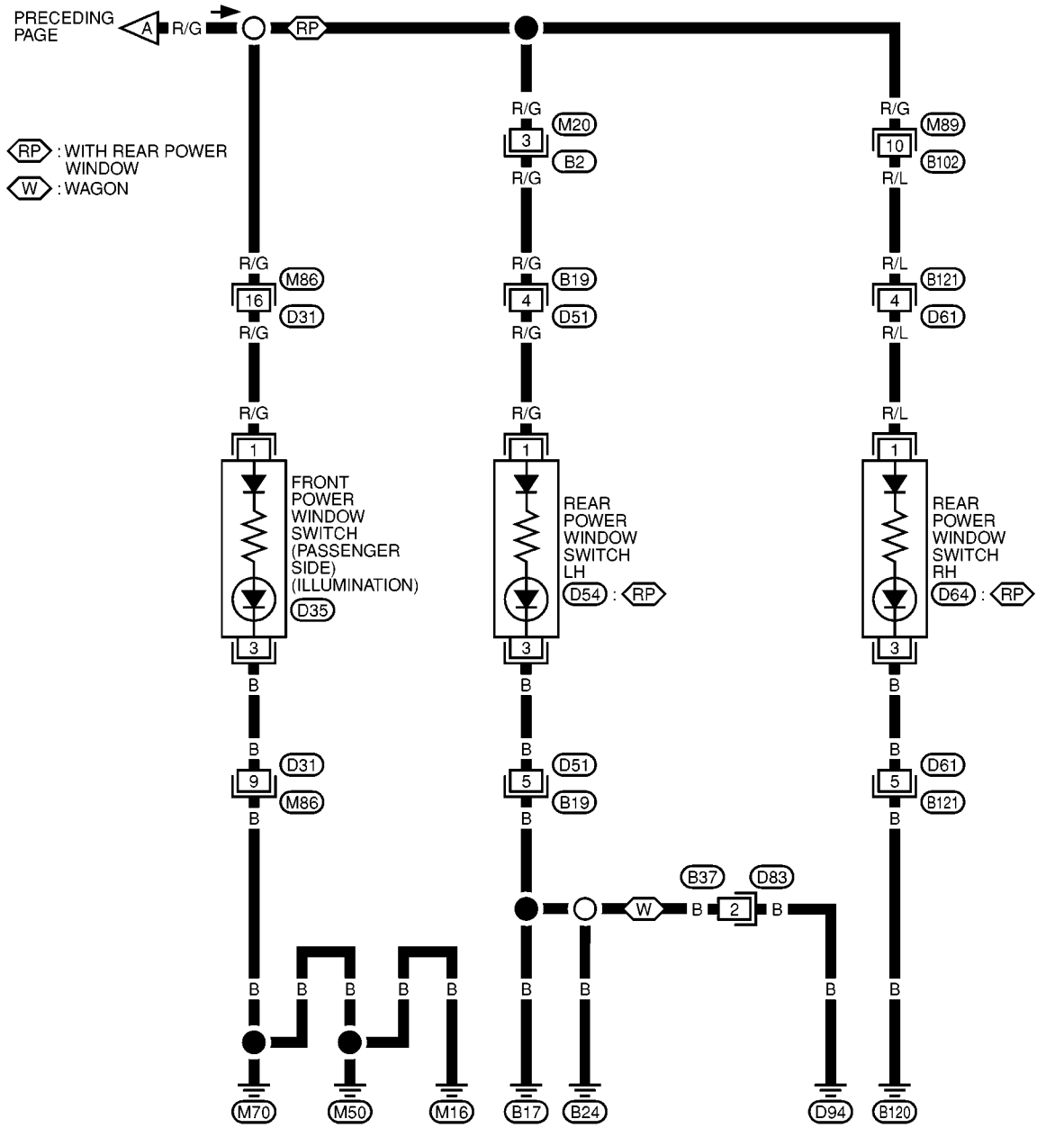


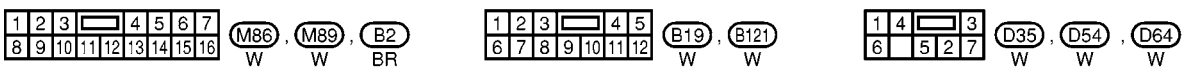


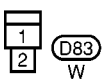
REFER TO THE FOLLOWING.
M1 , E106 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0158E

GW-SW/ILL-02



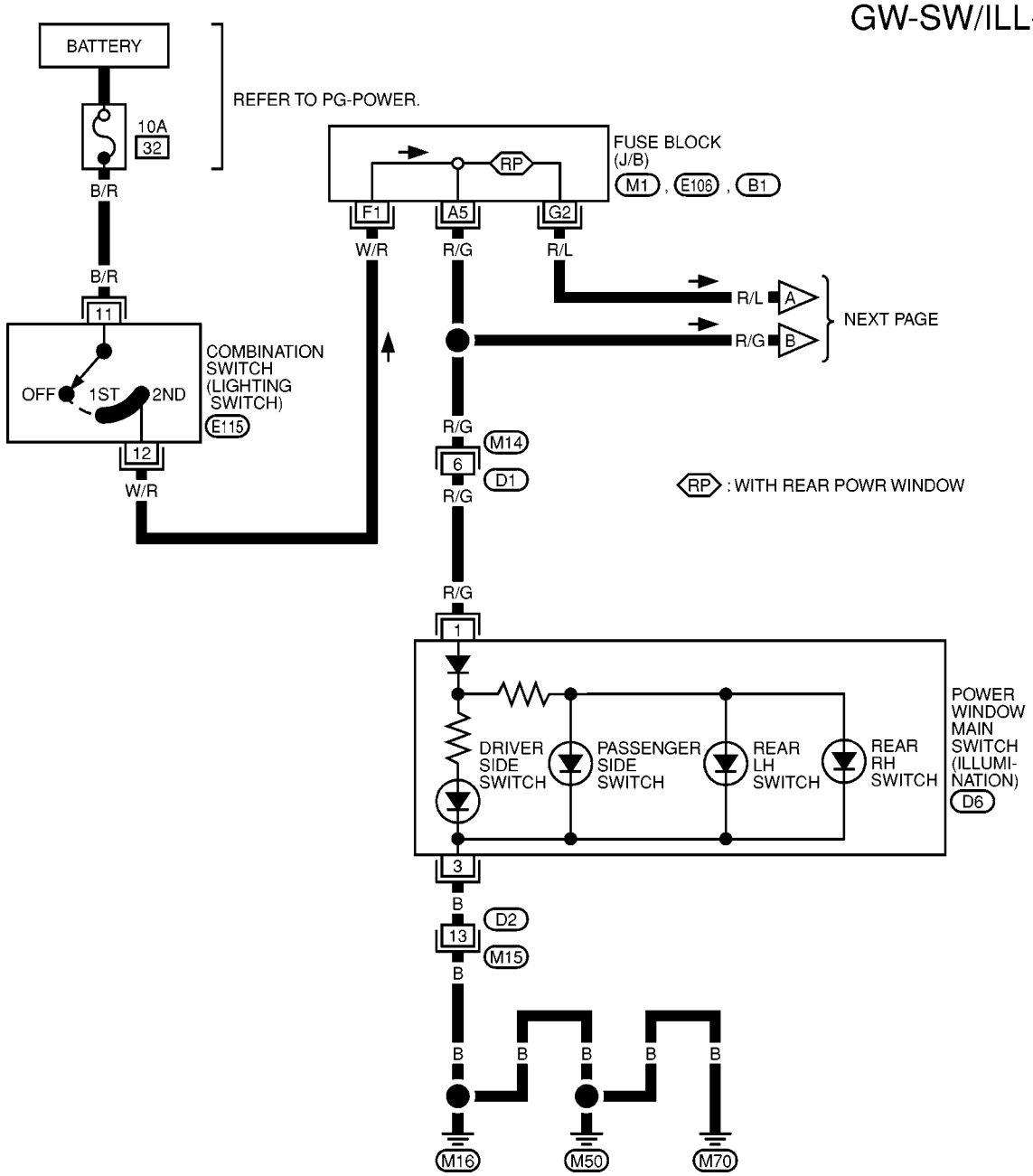


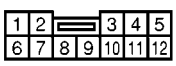


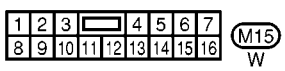
MKWA0159E

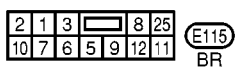
WIRING DIAGRAM — SW/ILL — (RHD MODELS)

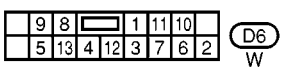
GW-SW/ILL-03





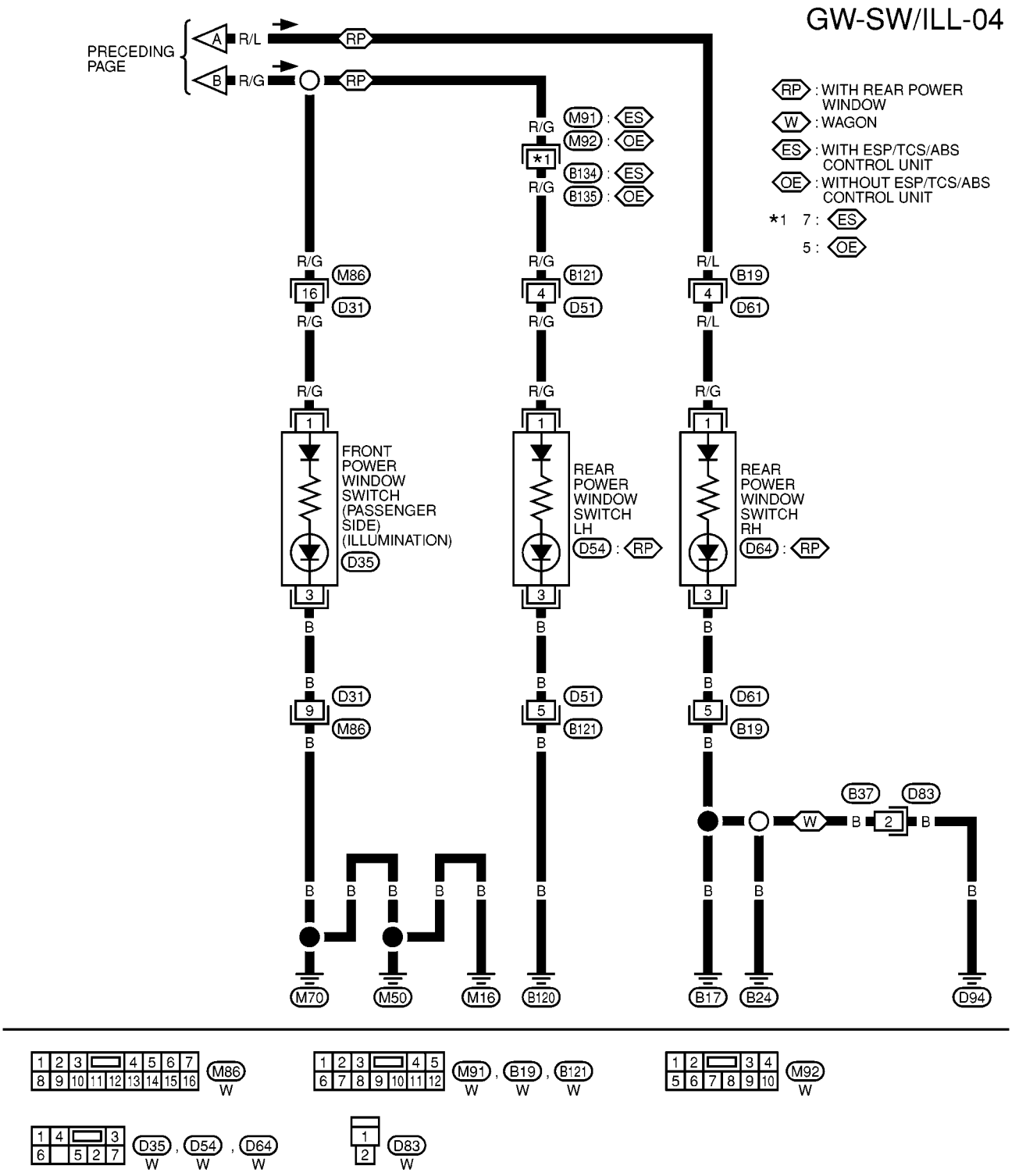






REFER TO THE FOLLOWING.
M1 , E106 , B1 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0160E


GW-SW/ILL-04
PRECEDING PAGE
A R/L
B R/G
RP
RP : WITH REAR POWER WINDOW
W : WAGON
ES : WITH ESP/TCS/ABS CONTROL UNIT
OE : WITHOUT ESP/TCS/ABS CONTROL UNIT
*1 7 : ES
5 : OE
M91 : ES
M92 : OE
B134 : ES
B135 : OE
*1
M86
D31
B121
D51
B19
D61
FRONT POWER WINDOW SWITCH (PASSENGER SIDE) (ILLUMINATION)
D35
REAR POWER WINDOW SWITCH LH
D54 : RP
REAR POWER WINDOW SWITCH RH
D64 : RP
B37
D83
W
M70
M50
M16
B120
B17
B24
D94

M86
W
M91 , B19 , B121
W W W
M92
W
D35 , D54 , D64
W W W
D83
W

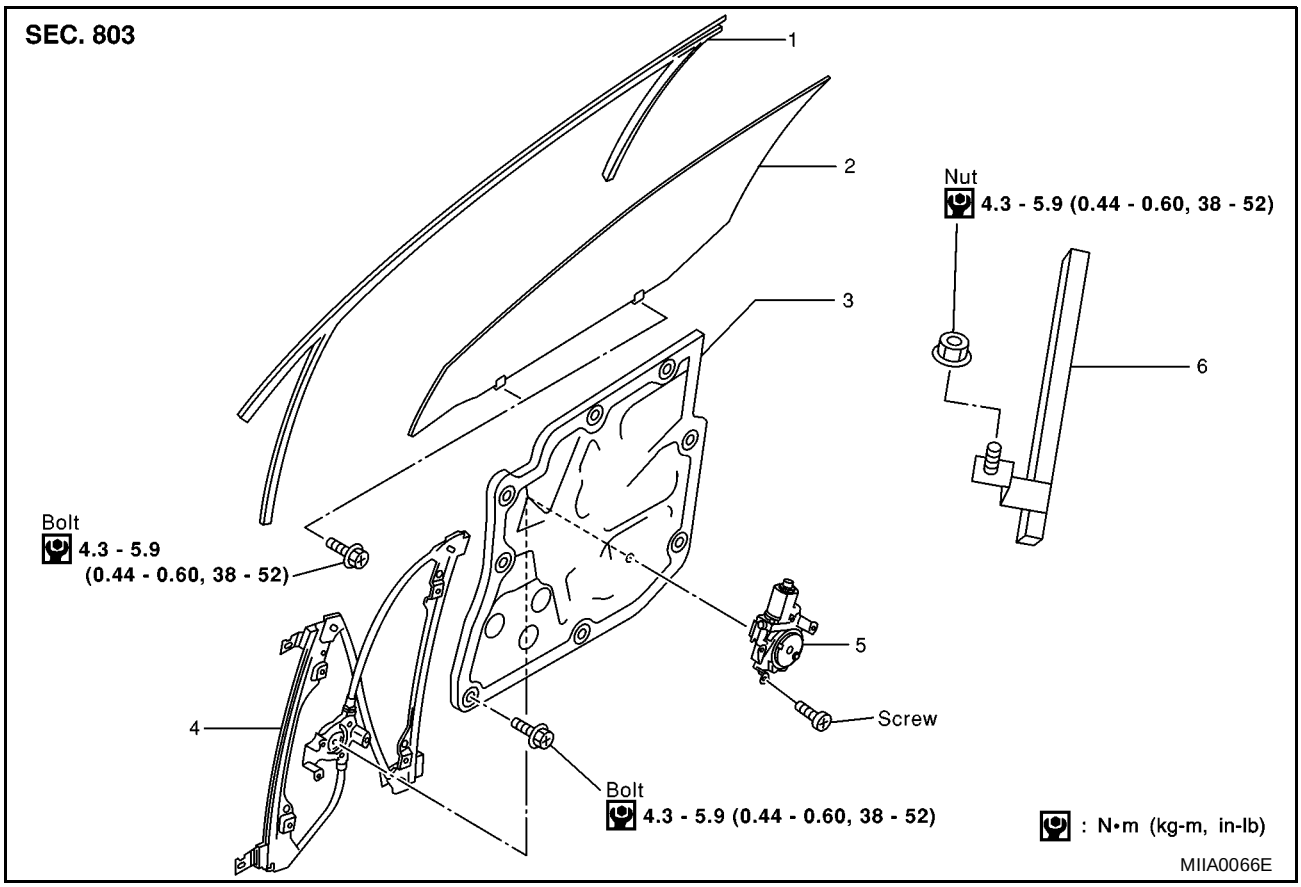
MKWA0161E

FRONT DOOR GLASS AND REGULATOR

PFP:80300

Removal and Installation

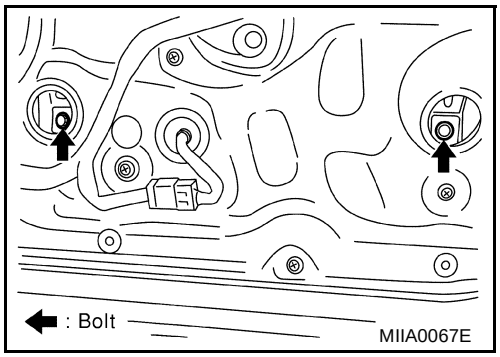
EIS002GU



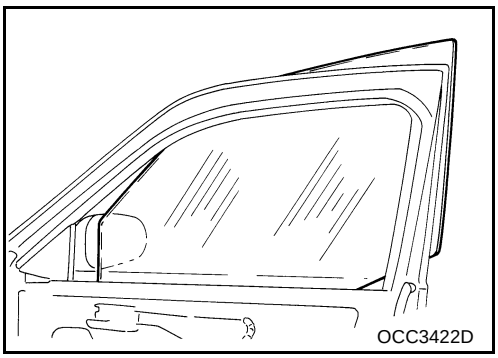
1. Door glass run (Front door)
2. Front door glass
3. Module assembly
4. Regulator assembly
5. Power window motor
6. Lower sash rear

1. Remove front door finisher. Refer to EI-22, "Removal and Installation" .
2. Remove sealing screen.

   NOTE:
   If sealing screen is reused, cut the butyl-tape so that a part of butyl-tape remains on the sealing screen.
3. Operate power window main switch to raise or lower the door window until the door glass mounting bolts appear.
4. Remove door glass mounting bolts.

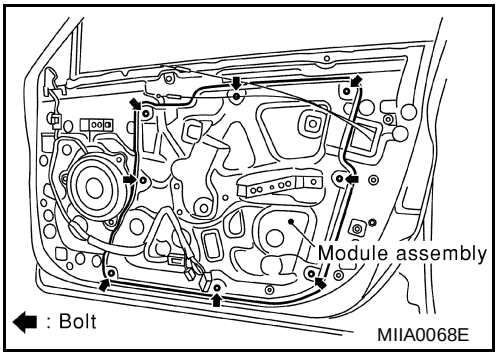


5. While holding door window, raise it at the rear end to pull glass out of the sash toward the outside.

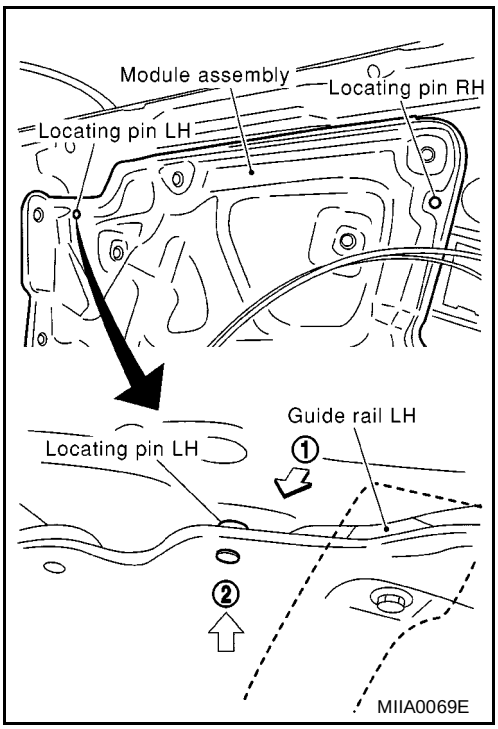


6. Disconnect regulator assembly connector.
7. Remove regulator assembly.

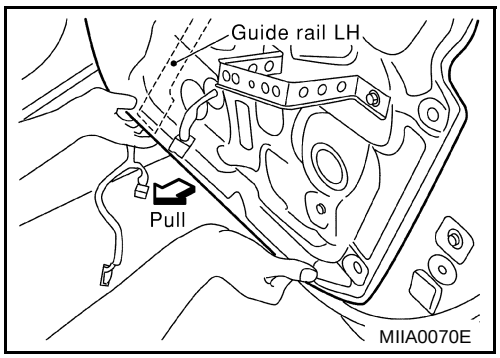
Install in the reverse order of removal.



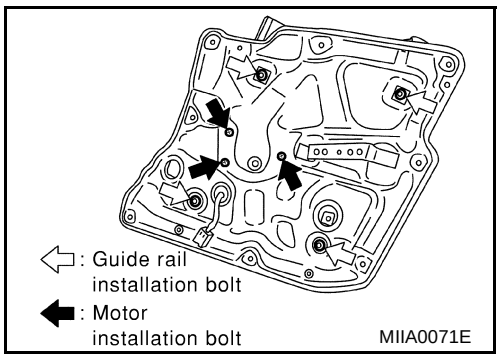
8. Pull out left-side locating pin of module assembly from door panel. Using right-side locating pin as a suppor point, lift up left-side part of module assembly.



9. Pull lower part of module assembly toward you, and pull out lower part of guide rail (left).
10. Pull out right-side locating pin, and then pull out module assembly downward.



11. Remove harness connector laid for module assembly, and then remove harness clip from behind.
12. Remove power window motor and guidrail from module assembly.

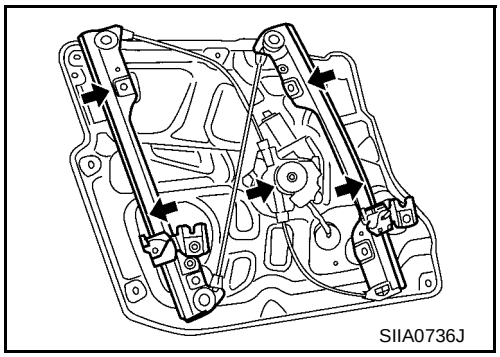


INSPECTION AFTER REMOVAL

- Check regulator assembly for the following items. If a malfunction is detected, replace or grease it.

Wire wear
Regulator deformation
Grease condition for each sliding part

- The arrows in the figure show body grease application points.



INSPECTION AFTER INSTALLATION

Setting of Limit Switch (Driver)

If any of the following work has been done, set the limit switch (integrated in the motor).

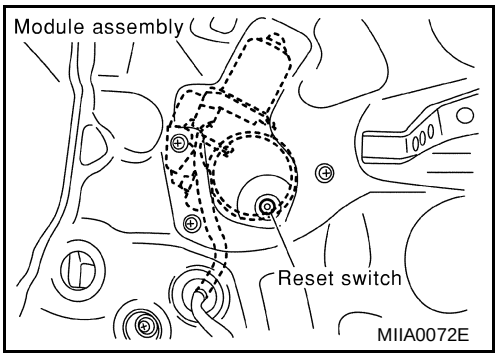
- Removal and installation of regulator
- Removal and installation of motor from the regulator
- Operate regulators as a unit
- Removal and installation of glass
- Removal and installation of glass run

Reset Operation

After installing each component to the vehicle, follow the steps below.

1. Raise glass to the top dead center.
2. While pressing and holding reset switch, lower glass to the bottom dead center.
3. Release reset switch, and check that reset switch returns to the original position. Then raise glass to the top dead center.

   NOTE:
   Do not operate glass automatically to raise glass to the top dead center.



FITTING INSPECTION

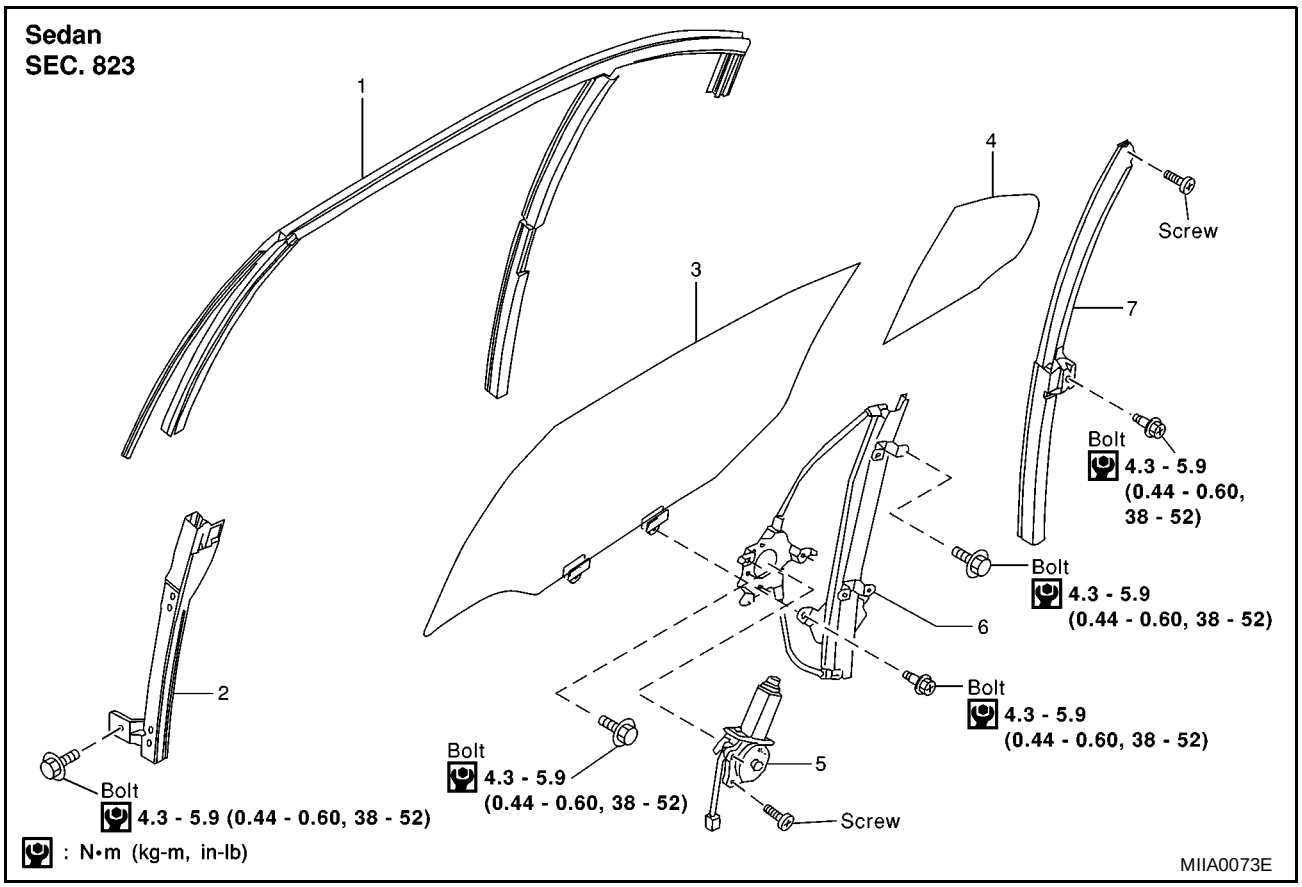
- Check that glass is securely fit into glass run groove.
- While raising and lowering the window, check for abnormal operation.

REAR DOOR GLASS AND REGULATOR

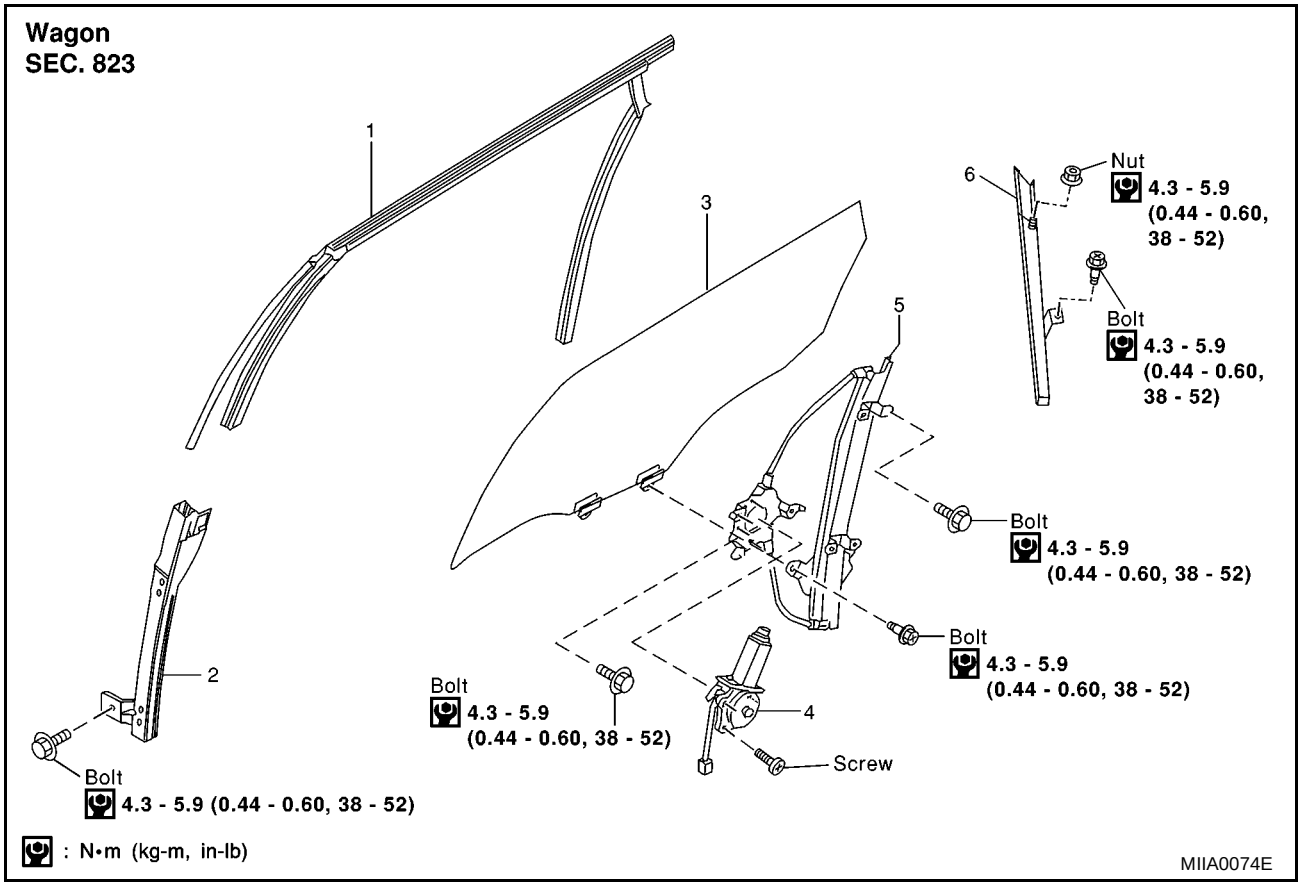
PFP:82300

Removal and Installation

EIS002GV



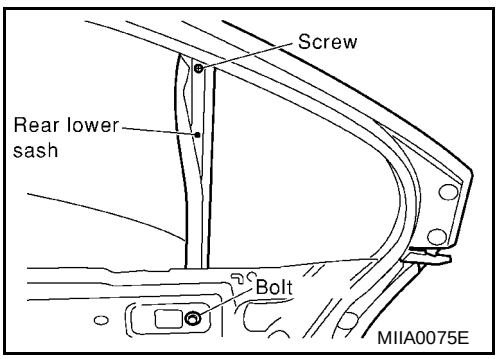
1. Door glass run (Rear door)
2. Front lower sash
3. Rear door glass
4. Partition glass
5. Power window motor
6. Regulator assembly
7. Rear lower sash



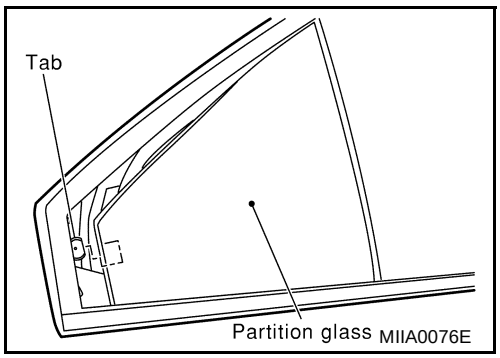
1. Door glass run (Rear door)
2. Front lower sash
3. Rear door glass
4. Power window motor
5. Regulator assembly
6. Rear lower sash

1. Remove door outside molding. (For wagon models) Refer to EI-15, "Removal and Installation" .
2. Remove rear door finisher. Refer to EI-15, "Removal and Installation" .
3. Remove sealing screen.

   NOTE:
   If sealing screen is reused, cut the butyl-tape so that a part of butyl-tape remains on the sealing screen.
4. Operating power window switch, raise or lower the door window until the carrier plate mounting bolts appear.
5. Remove carrier plate mounting bolts, and place glass on the door inner.
   Following removal procedures are as follows:
   - Sedan: after following 6 to 8 procedures, do the 12 and later.
   - Wagon: after following 9 to 11 procedures, do the12 and later.
6. Remove rear lower sash mounting bolt and screw, and lower glass to the bottom dead center.
7. Pull out the rear lower sash toward the lower side.

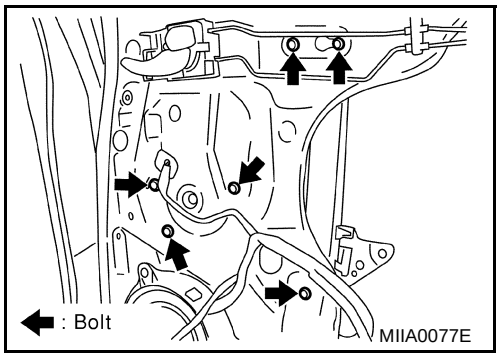


8. Remove partition glass.



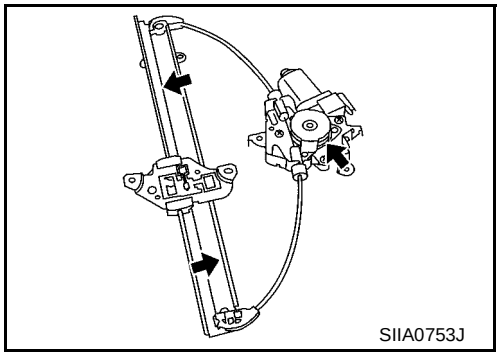
9. Remove corner cover.
10. Remove rear lower sash mounting bolt and nut.
11. Move rear lower sash forward, and pull out stud bolt, and pull out the rear lower sash toward the lower side.
12. Pull out the door window toward the outside of the door to remove.
13. Disconnect regulator assembly connector.
14. Remove regulator assembly mounting bolts through the access hole.

Install in the reverse order of removal.



INSPECTION AFTER REMOVAL

- Check regulator assembly for the following items. If a malfunction is detected, replace or grease it.
  Gear wear
  Regulator deformation
  Spring damage
  Grease condition for each sliding part
- The arrows in the figure show body grease application points.



FITTING INSPECTION

- Check that glass is securely fit into glass run groove.
- While raising and lowering the window, check for unusual operation.

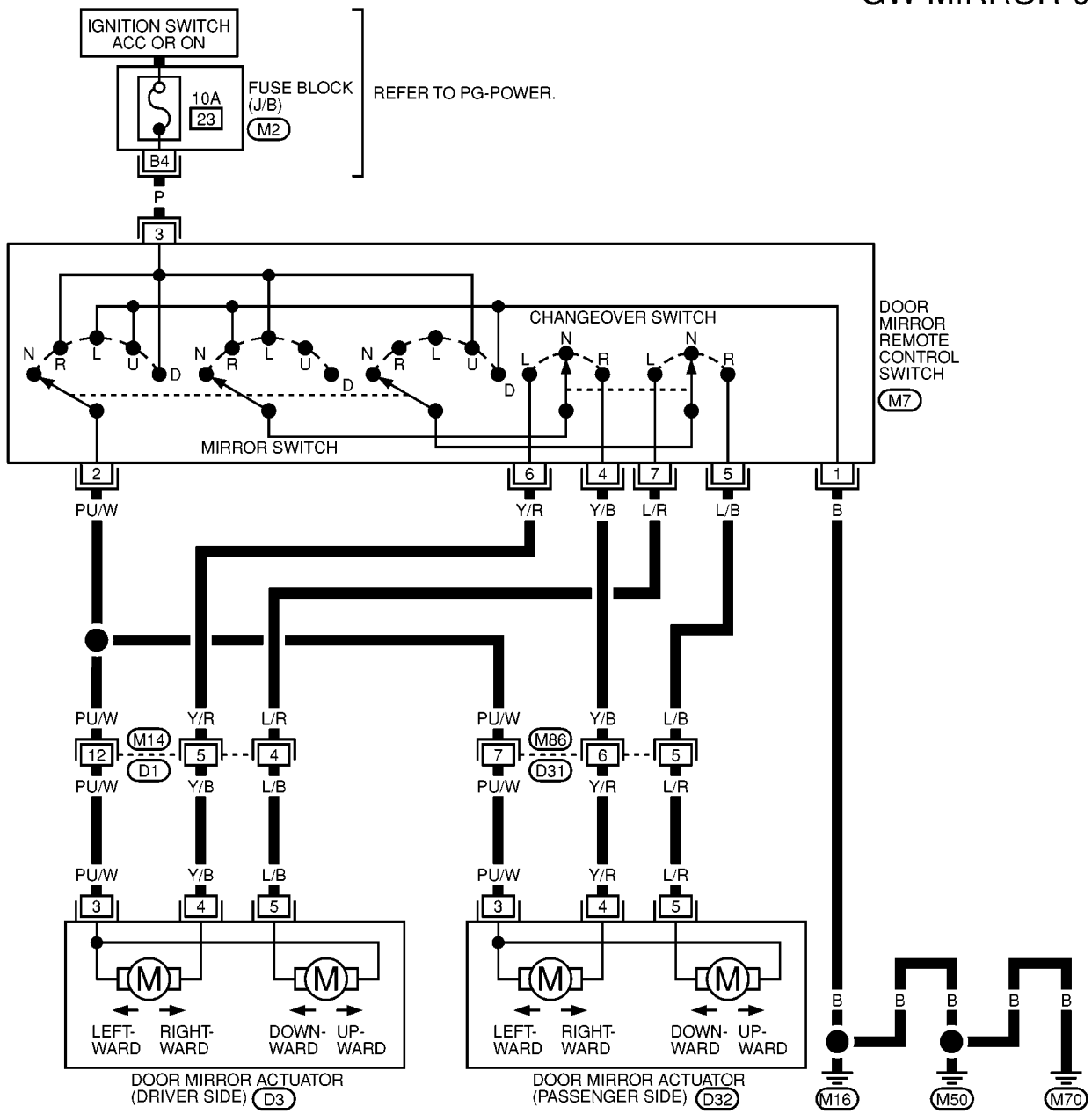
DOOR MIRROR

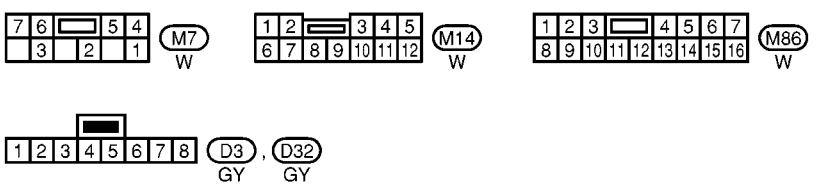
PFP:96301

Wiring Diagram –MIRROR– LHD Models

EIS002GW

GW-MIRROR-01





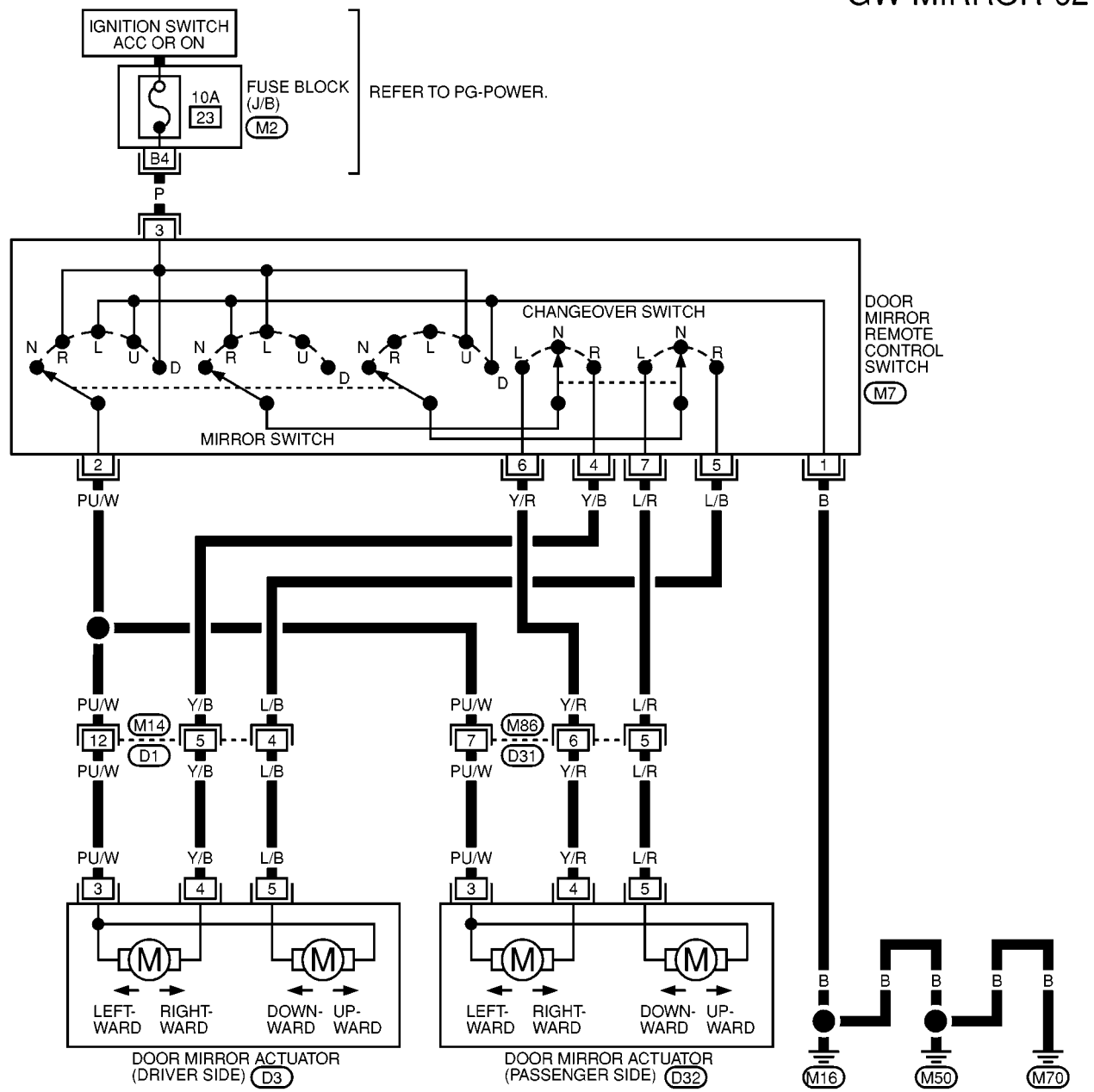
REFER TO THE FOLLOWING.
M2 -FUSE BLOCK-JUNCTION BOX (J/B)

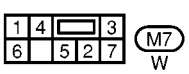
MKWA0162E

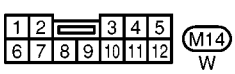
Wiring Diagram –MIRROR– RHD Models

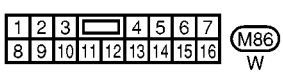
EIS002GX

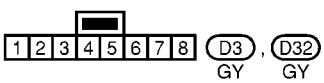
GW-MIRROR-02









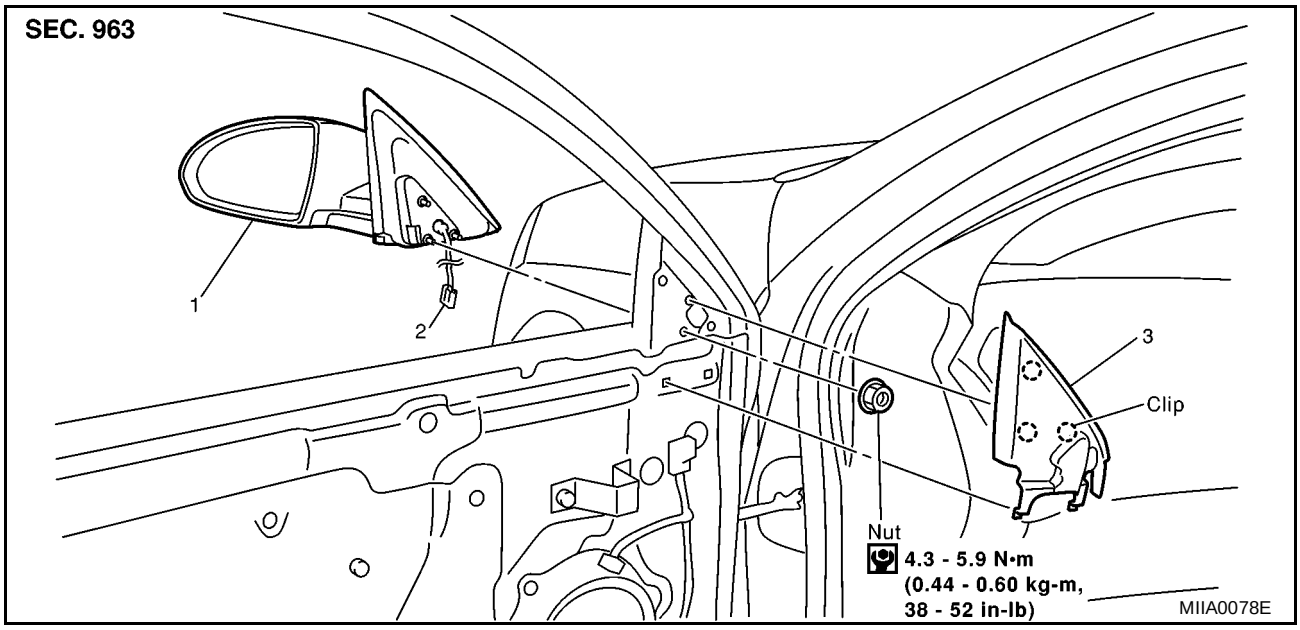


REFER TO THE FOLLOWING.
M2 -FUSE BLOCK-JUNCTION BOX (J/B)

MKWA0163E

Removal and Installation

EIS002GY



1. Door mirror
2. Connector
3. Corner cover

REMOVAL

1. Remove front door finisher. Refer to EI-22, "Removal and Installation" .
2. Remove corner cover.
3. Remove door mirror harness connector.
4. Remove door mirror mounting nuts, and remove door mirror assembly.

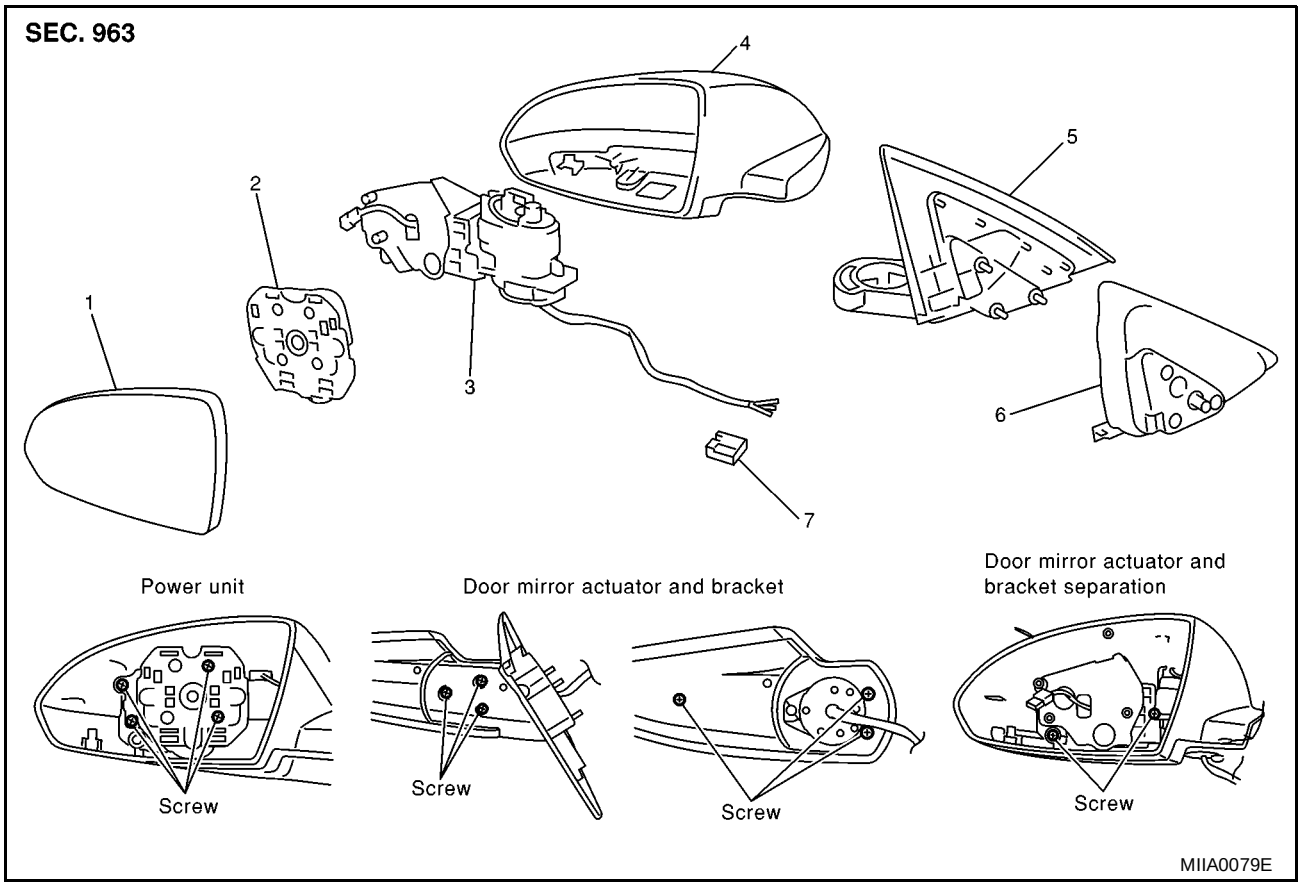
NOTE:
Be careful not to damage door mirror assembly.

INSTALLATION

Install in the reverse order of removal.

Disassembly and Assembly

EIS002GZ



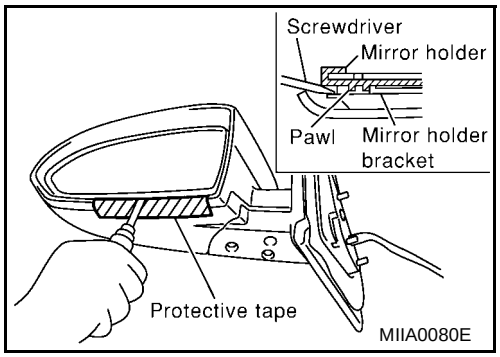
1. Mirror body
2. Power unit
3. Bracket
4. Housing
5. Base
6. Packing
7. Connector

DISASSEMBLY

1. Pull out all the terminals from the harness connector.

   NOTE:
   Before pulling out the terminal, note the connector terminal arrangement.
2. Turn the mirror glass surface upward.
3. Apply a protective tape to the housing.
4. Insert a narrow slotted screwdriver in the concave gap between mirror glass and power unit to push up tabs (2 locations) on mirror holder to disengage lower part of mirror holder, and remove mirror body assembly.

   NOTE:
   When pushing up the tabs, do not forcefully push up only 1 concave but try to push up using 2 concave positions.
5. Remove packing.
6. Remove base.
7. Remove power unit, and disconnect the connector.



ASSEMBLY

1. Connect power unit connector. Install bracket.
2. Install base to the housing.
3. Place power unit and mirror body assembly in a horizontal position.
4. Engage upper tabs of mirror glass with power unit. Then, press lower part of mirror glass down until the lower part snaps to allow engagement of lower tabs.

NOTE:
After installation, visually check that the lower tabs (2) are securely engaged when viewed from the bottom of mirror surface.

5. Install the packing to the base.
6. Insert the harness terminal into the connector.

NOTE:
Make sure to insert the harness terminal into the correct connector. Do not confuse the locations.