SECTION SB
SEAT BELTS

CONTENTS

PRECAUTIONS

PFP:00001

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

EHS000MW

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 harnesses or harness connectors.**

Precaution for Seat Belt Service

EHS000BE

CAUTION:

- **Before removing the seat belt pre-tensioner assembly, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.**
- **Do not use electrical test equipment for seat belt pre-tensioner connector.**
- **After replacing or reinstalling seat belt pre-tensioner assembly, or reconnecting seat belt pre-tensioner connector, check the system function. Refer to SRS-17, "SRS Operation Check" .**
- **Do not use disassemble buckle or seat belt assembly.**
- **Replace anchor bolts if they are deformed or worn out.**
- **Never oil tongue and buckle.**
- **If any component of seat belt assembly is questionable, do not repair. Replace the whole seat belt assembly.**
- **If webbing is cut, frayed, or damaged, replace seat belt assembly.**
- **When replacing seat belt assembly, use a genuine seat belt assembly.**

AFTER A COLLISION

WARNING:

Inspect all seat belt assemblies including retractors and attaching hardware after any collision. NISSAN recommends that all seat belt assemblies in use during a collision be replaced unless the collision was minor and the belts show no damage and continue to operate properly. Failure to do so could result in serious personal injury in an accident. Seat belt assemblies not in use during a collision should also be replaced if either damage or improper operation is noted. Seat belt pre-tensioner should be replaced even if the seat belts are not in use during a frontal collision in which the air bags are deployed.

Replace any seat belt assembly (including anchor bolts) if:

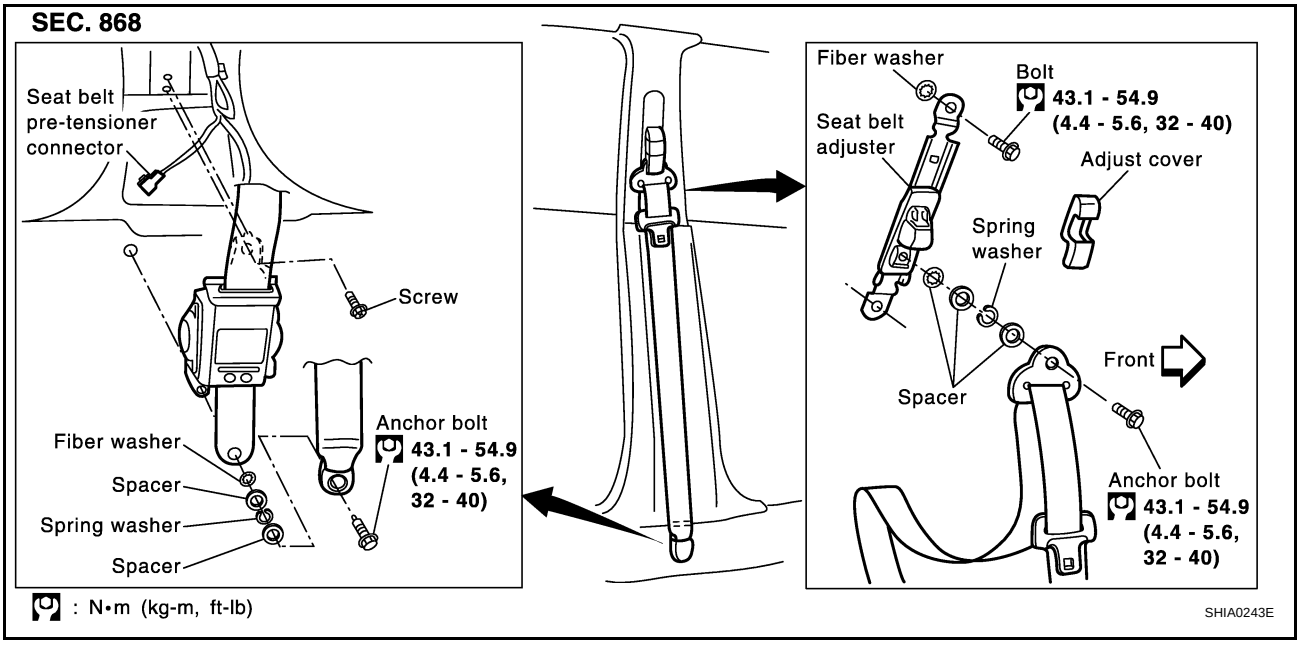
- The seat belt was in use at the time of a collision (except for minor collisions and the belts, retractors and buckles show no damage and continue to operate properly).
- The seat belt was damaged in an accident. (i.e. torn webbing, bent retractor or guide, etc.)
- The seat belt attaching point was damaged in an accident. Inspect the seat belt attaching area for damage or distortion and repair as necessary before installing a new seat belt assembly.
- Anchor bolts are deformed or worn out.
- The seat belt pre-tensioner should be replaced even if the seat belts are not in use during the collision in which the air bags are deployed.

SEAT BELTS

PFP:86884

Removal and Installation of Front Seat Belt

EHS0005W

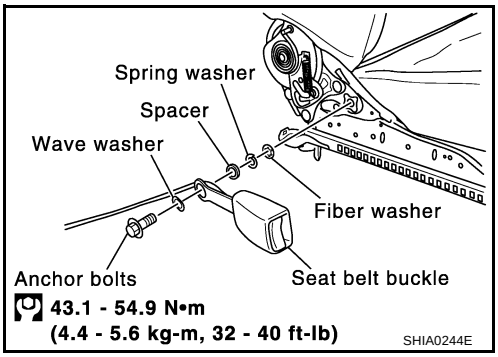


CAUTION:

Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.

REMOVAL

1. Remove adjuster cover.
2. Remove shoulder anchor bolt.
3. Slide the floor anchor cover.
4. Remove floor anchor bolt.
5. Remove pre-tensioner seat belt retractor fixing screws to remove seat belt assembly.
6. Remove front seat. Refer to SE-26, "Removal and Installation" .
7. Remove screw, and remove seat cushion inner finisher.
8. Remove anchor bolt to remove seat belt buckle.



INSTALLATION

CAUTION:

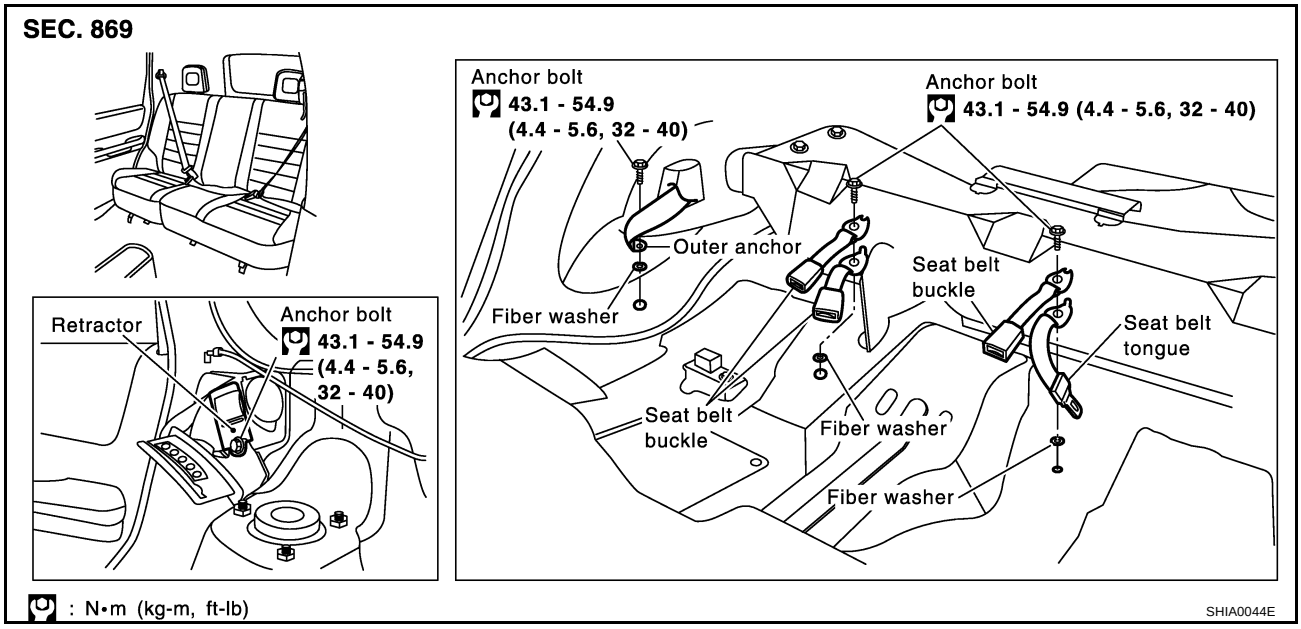
Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.

Install in the reverse order of removal.

Removal and Installation of Rear Seat Belt

EHS0005X

REMOVAL/WITH 2-POINT TYPE REAR CENTER SEAT BELT

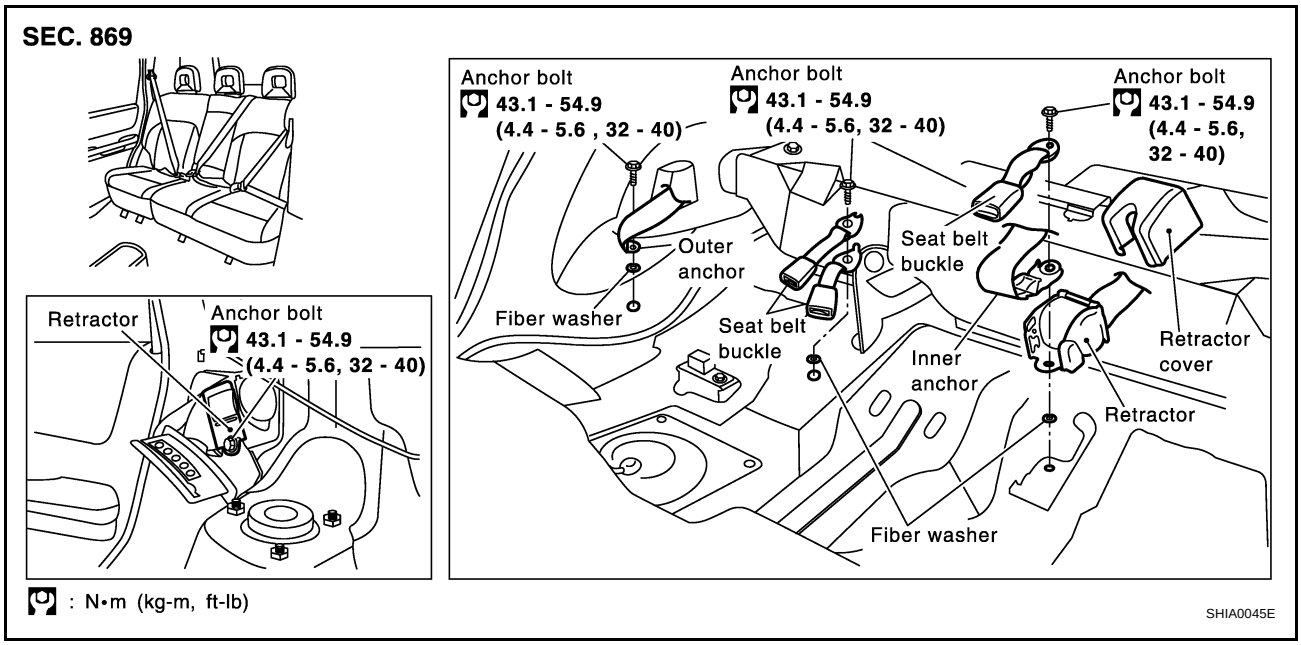


1. Fold rear seat cushion up.
2. Remove luggage side lower finisher. Refer to EI-35, "Removal and Installation" .
3. Remove outer anchor and floor anchor bolts.
4. Remove anchor bolts securing seat belt retractor. Remove seat belt assembly.

INSTALLATION/WITH 2-POINT TYPE REAR CENTER SEAT BELT

Install in the reverse order of removal.

REMOVAL/WITH 3-POINT TYPE REAR CENTER SEAT BELT

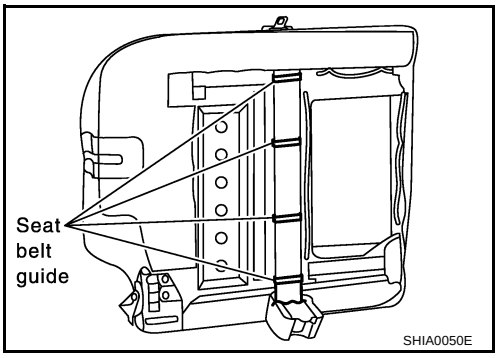


LH/RH Rear Seat Belt

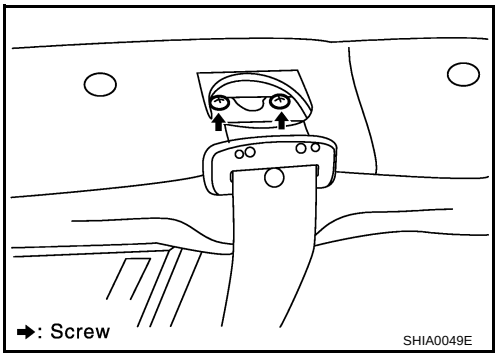
1. Fold rear seat cushion up.
2. Remove luggage side lower finisher. Refer to EI-35, "Removal and Installation" .
3. Remove outer anchor and floor anchor bolts.
4. Remove rear seat belt retractor.

Center Rear Seat Belt

1. Fold rear seat cushion up.
2. Remove seat belt retractor cover.
3. Remove anchor bolts securing center seat belt retractor.
4. Remove rear seatback. Refer to SE-33, "SEATBACK" .
5. Remove rear seatback board.
6. Remove hog ring securing upper portion of rear seatback trim.
7. Remove rear seat belt guide.



8. Remove screws securing rear seat belt.
9. Remove rear center seat belt assembly from rear seatback.



INSTALLATION /WITH 3-POINT TYPE REAR CENTER SEAT BELT

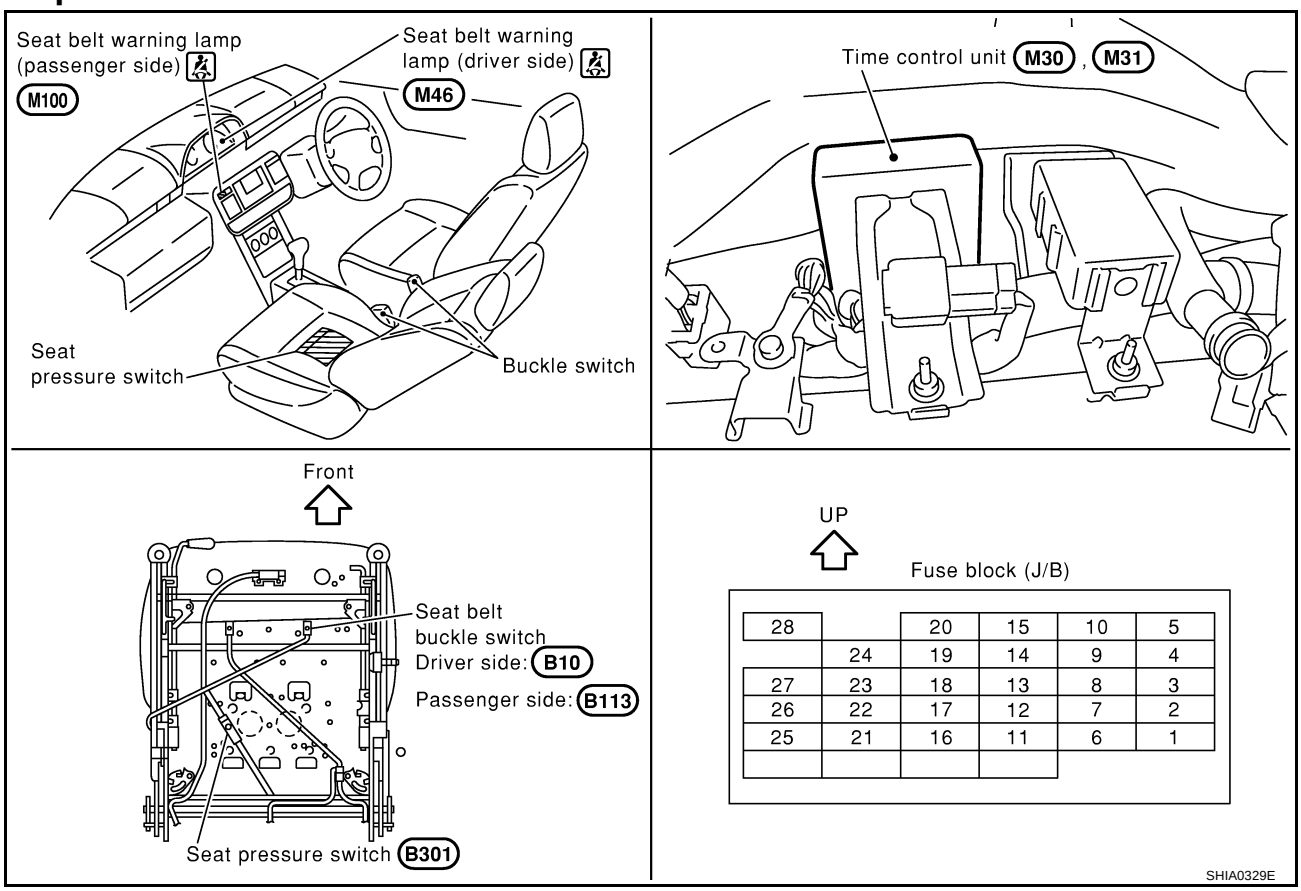
Install in the reverse order of removal.

SEAT BELT WARNING SYSTEM

PFP:25045

Component Parts and Harness Connector Location

EHS000H6



System Description

EHS000GP

Power is supplied at all times,

- to time control unit terminal 1
- through 10A fuse [No. 28, located in fuse block (J/B)].

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

- to time control unit terminal 1
- through 10A fuse [No. 5, located in fuse block (J/B)].
- to combination meter terminal 2
- through 10A fuse [No. 11, located in the fuse block (J/B)],

Ground is supplied at all times,

- to time control unit terminal 16
- through body ground M27 and M70.

When drive the vehicle, unified meter control unit transmits a vehicle speed signal to time control unit,

- through unified meter control unit terminal 33
- to time control unit terminal 36.

SEAT BELT OPERATION

( ): without power seat

Driver Side

When driver side seat belt is unfastened,
ground is supplied

- to time control unit terminal 21
- through seat belt buckle switch terminal 13 (1)

- through seat belt buckle switch terminal 14 (2)
- through body ground B8 and B18.

Then time control unit recognizes the driver seat belt buckle switch signal.

Passenger Side

When passenger side belt is unfastened and occupant is sitting,
ground is supplied

- to time control unit terminal 22
- through seat belt buckle switch terminal 13 (1)
- through seat pressure switch terminal 3
- through seat pressure switch terminal 4
- through body ground B107 and B119.

Then time control unit recognizes the passenger seat belt buckle switch signal.

SEAT BELT WARNING CHIME AND SEAT BELT WARNING LAMP

Driver side

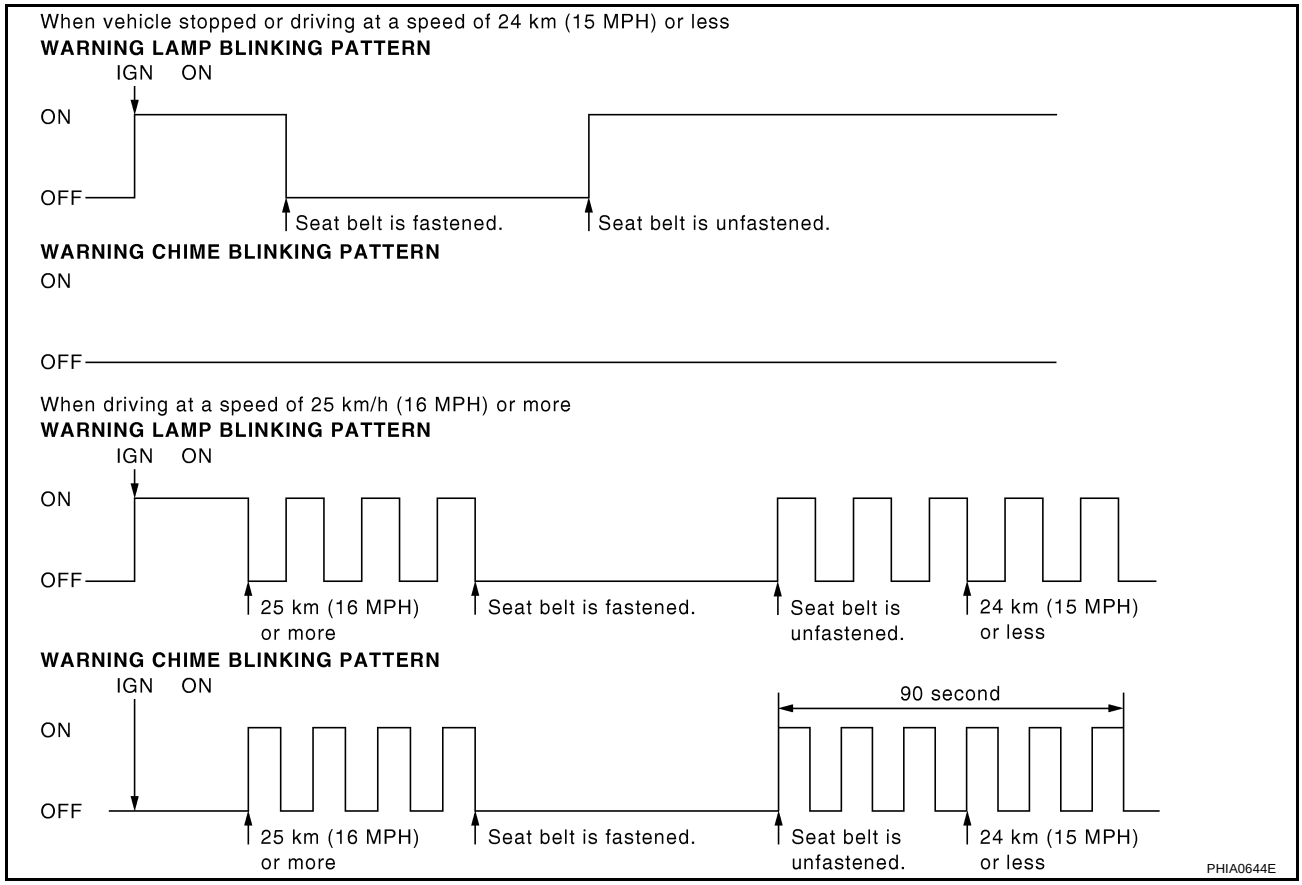
When the vehicle speed exceeds 25 km/h (16 MPH) with front driver side seat belt unfastened (seat belt switch ON), warning chime will sound for approximately 90 seconds and seat belt warning lamp is flashed.
If the seat belt are fastened, then unfastened again, warning chime will sound and seat belt warning lamp is flashed.

Passenger side

When the vehicle speed exceeds 25 km/h (16 MPH) with front passenger side seat belt unfastened (seat belt switch ON) and occupant is sitting (seat pressure switch is ON), warning chime will sound for approximately 90 seconds and seat belt warning lamp is flashed.
If the seat belt are fastened, then unfastened again, warning chime will sound and warning lamp is flashed.

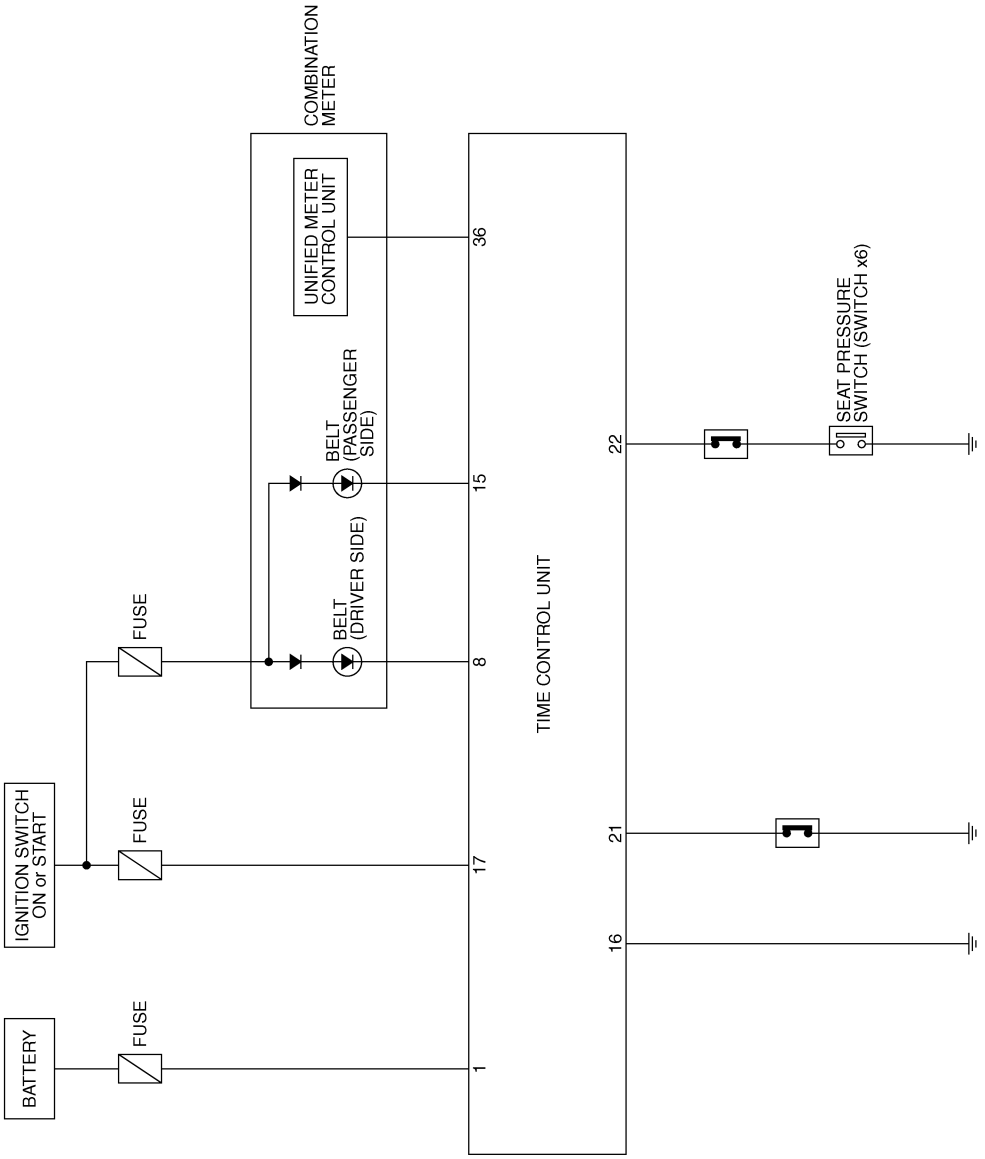
Time Chart for Seat Belt Warning Lamp and Chime

EHS000H5



Schematic

EHS001FG

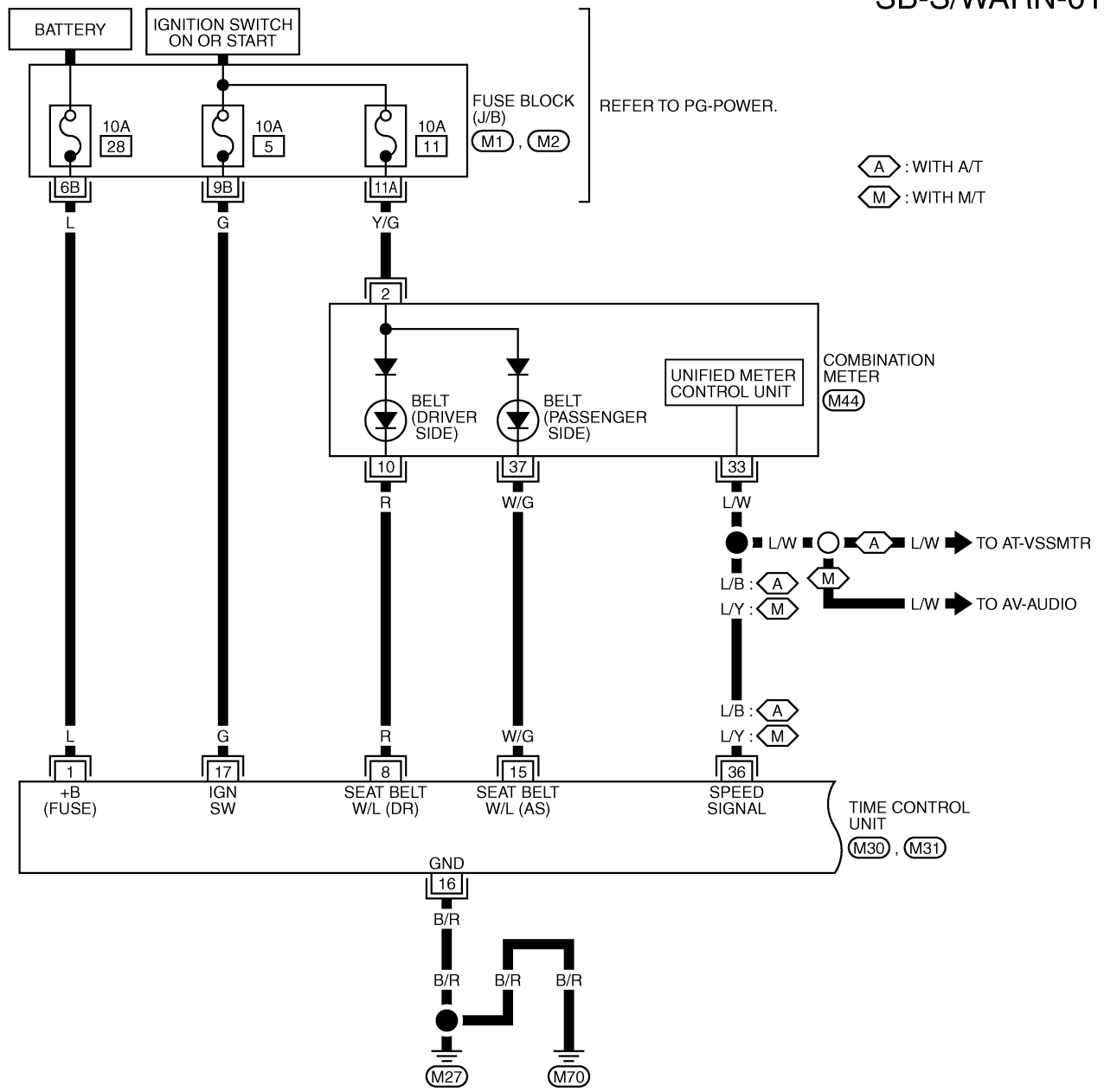


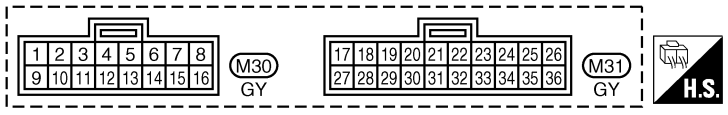
THWB0001E

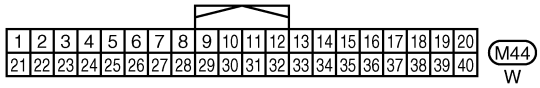
Wiring Diagram —S/WARN—/For LHD models

EHS000GR

SB-S/WARN-01



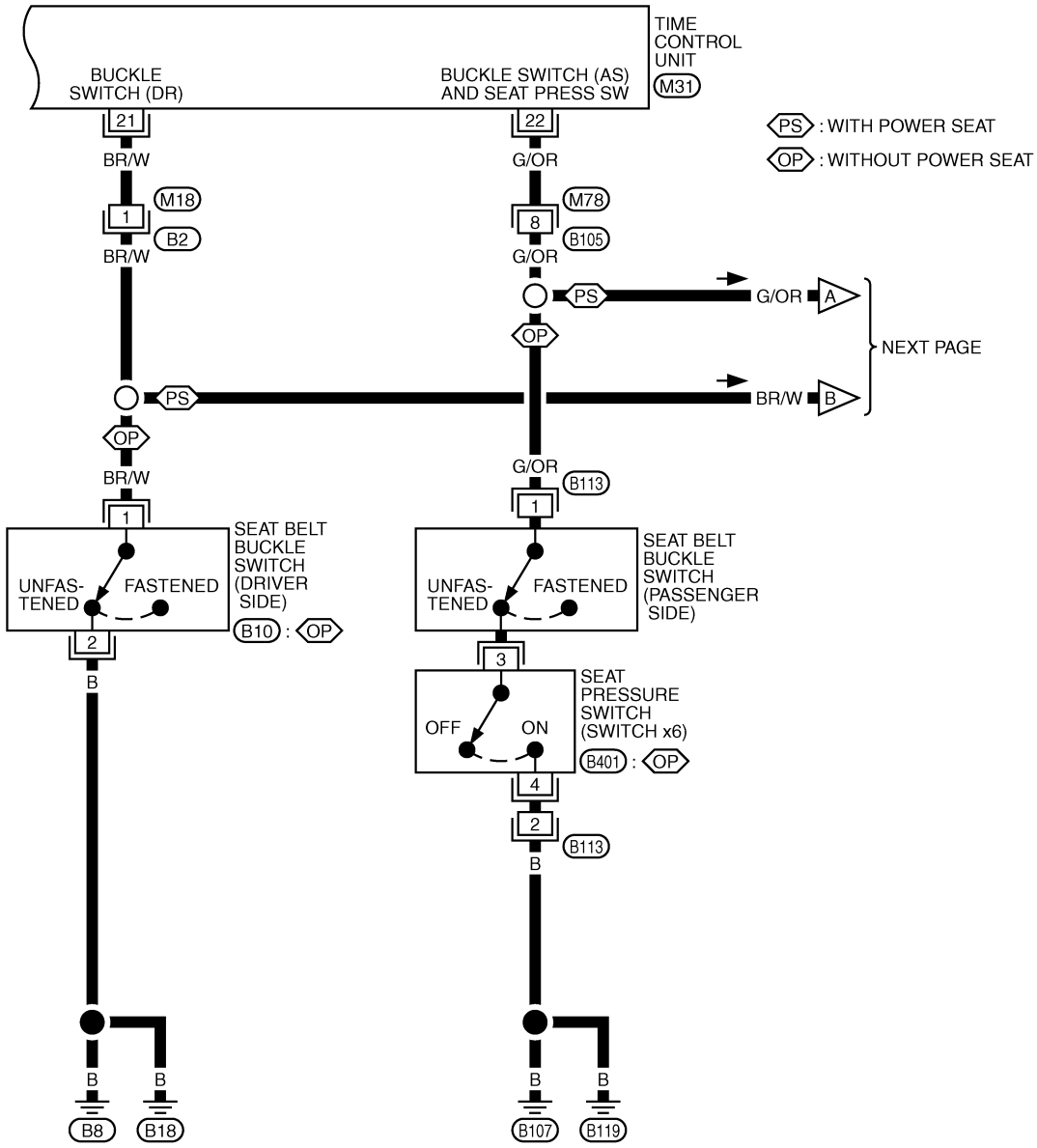


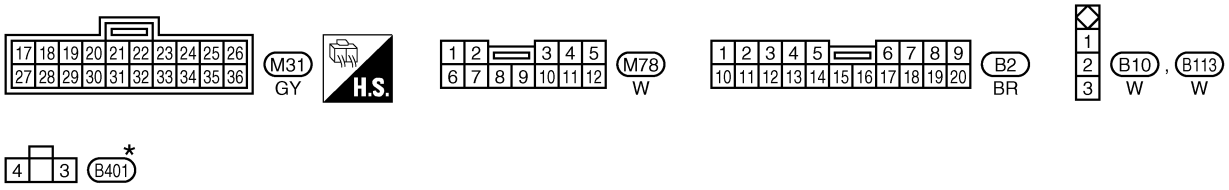


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)

THWB0002E

SB-S/WARN-02

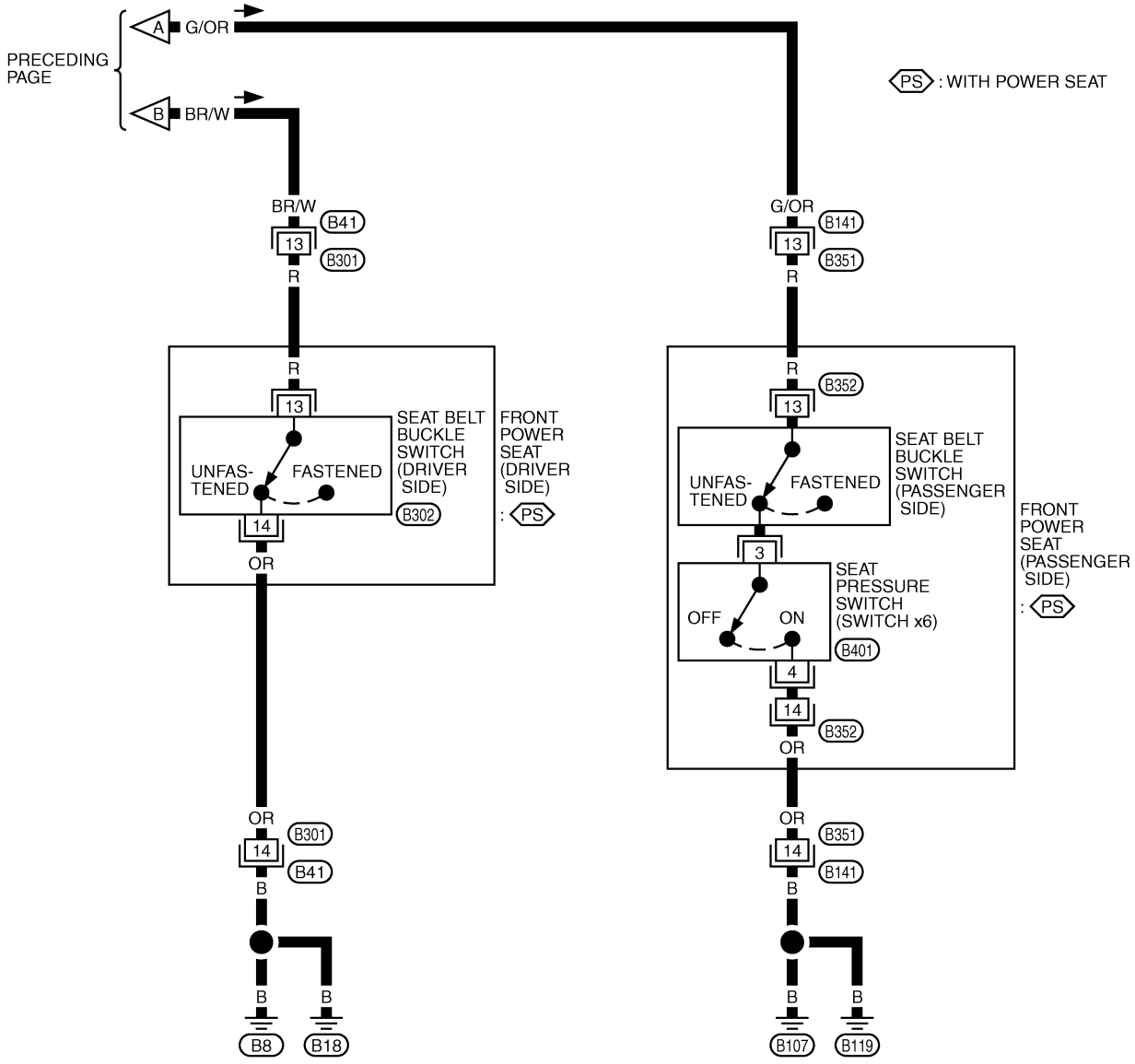


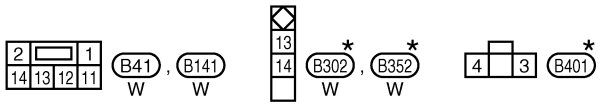


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

THWB0003E

SB-S/WARN-03





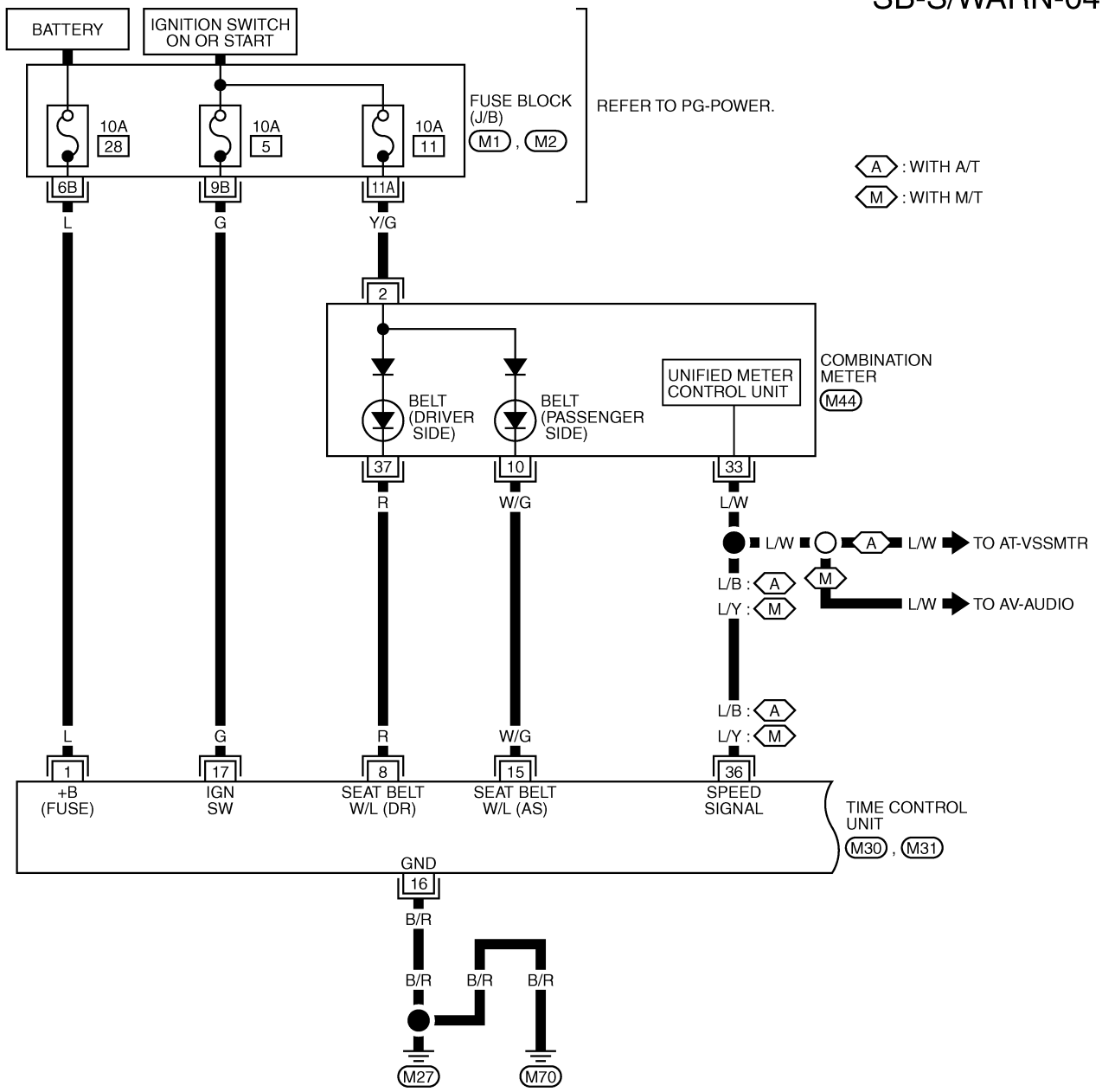
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

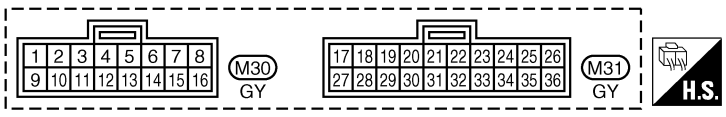
THWB0004E

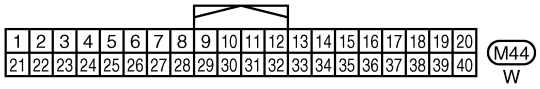
Wiring Diagram —S/WARN—/For RHD models

EHS000H1

SB-S/WARN-04



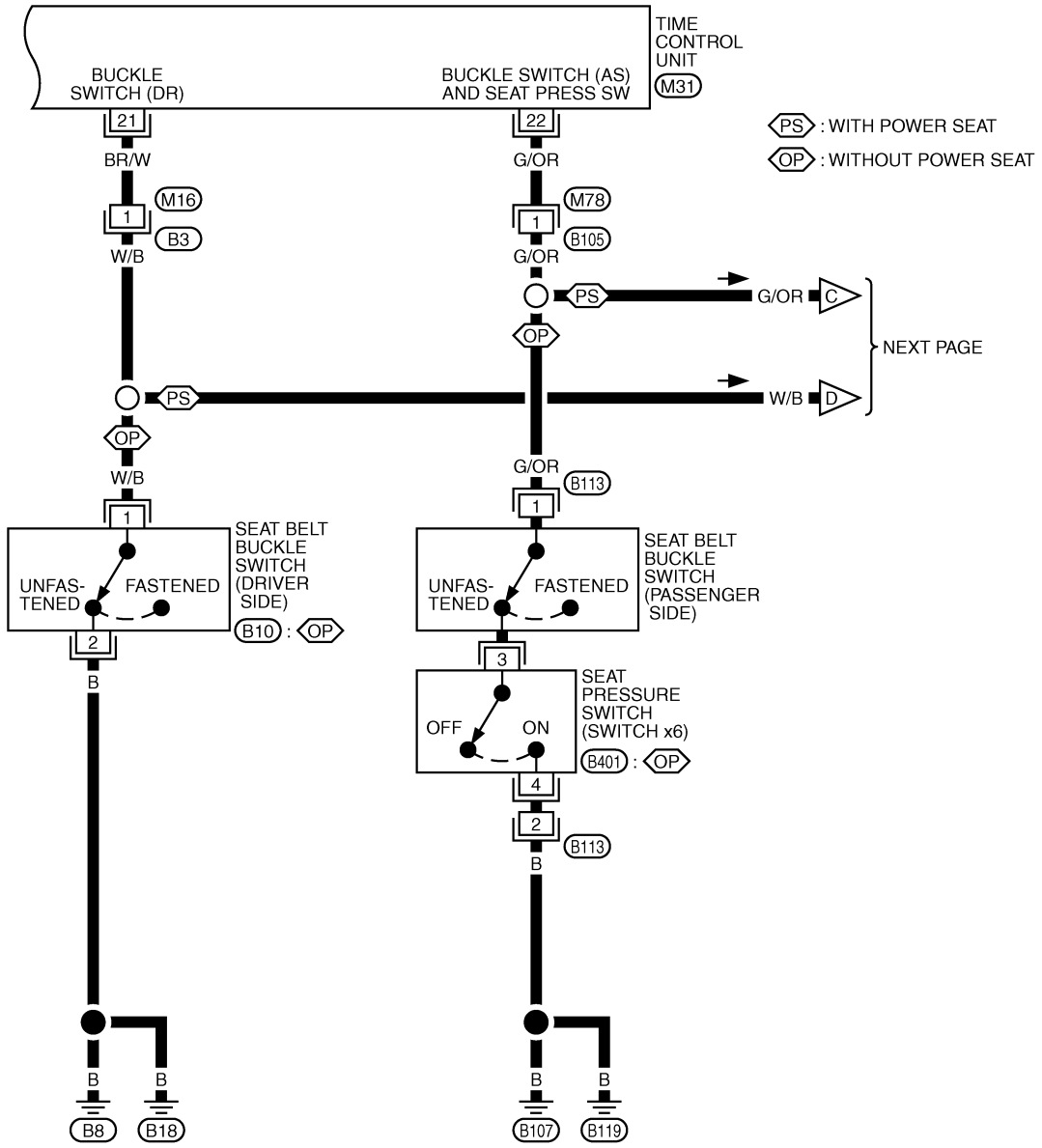


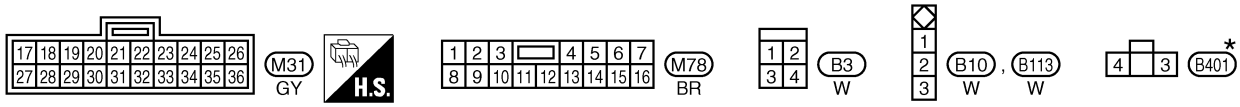


REFER TO THE FOLLOWING.
M1 , M2 -FUSE BLOCK-JUNCTION BOX (J/B)

THWB0005E

SB-S/WARN-05

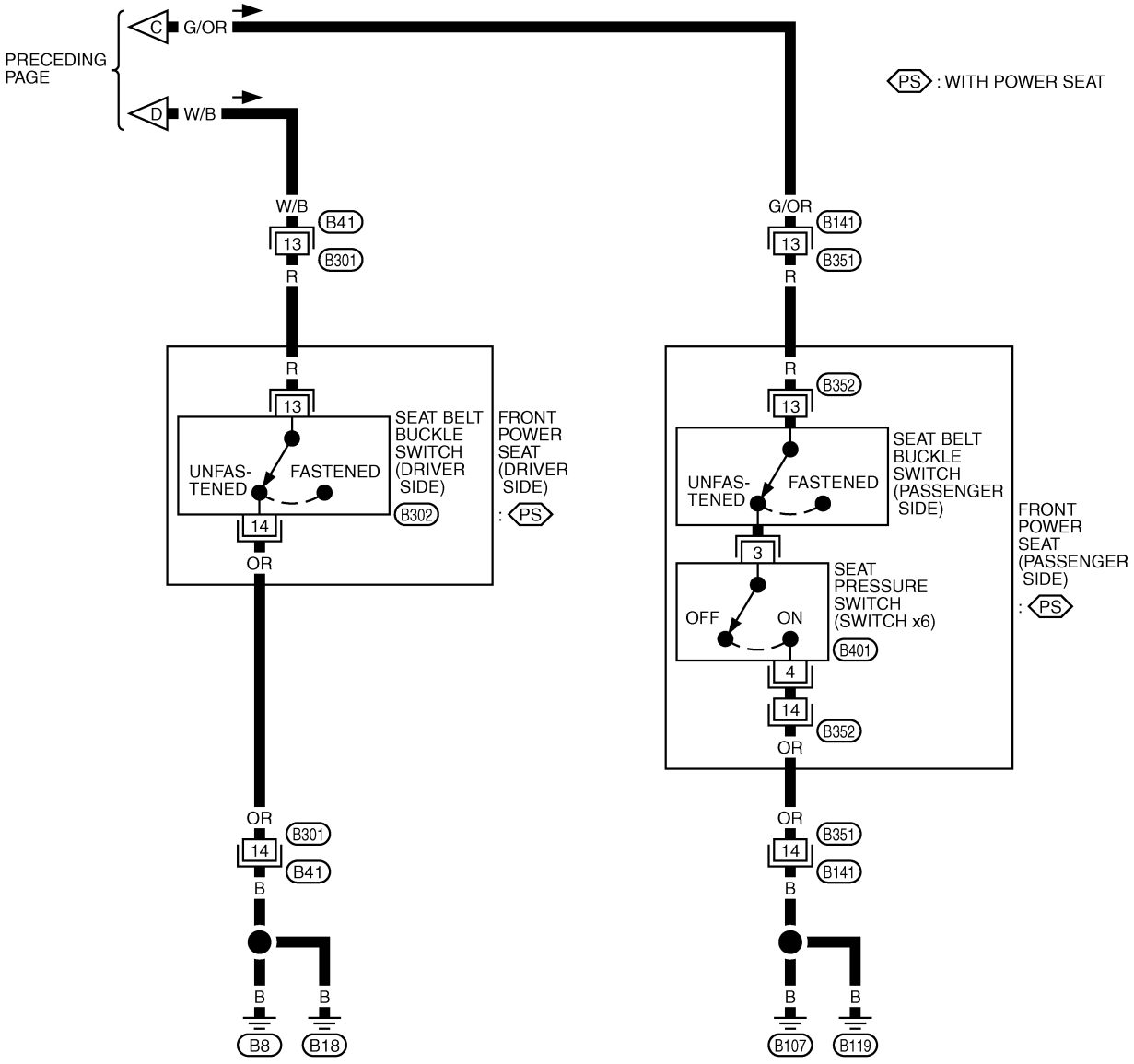


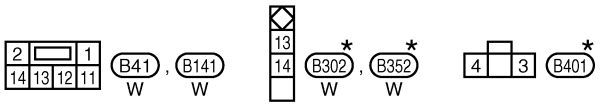


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

THWB0006E

SB-S/WARN-06



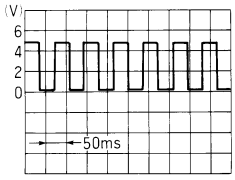


*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

THWB0007E

Terminal and Reference Value for Time Control Unit

EHS000H3

TERMINAL	WIRE COLOR	ITEM	CONDITION	VOLTAGE (V)
1	L	Battery power supply	—	Battery voltage
8	R	Seat belt warning lamp (driver side) signal	Seat belt warning lamp (driver side) is illuminated.	0
			Seat belt warning lamp (driver side) is not illuminated.	Battery voltage
15	W/G	Seat belt warning lamp (passenger side) signal	Seat belt warning lamp (passenger side) is illuminated.	0
			Seat belt warning lamp (passenger side) is not illuminated.	Battery voltage
16	B/R	Ground	Turn ignition switch ON	0
17	G	Ignition switch ON or START signal	Turn ignition switch ON or START	Battery voltage
21	BR/W	Seat belt buckle switch (driver side) signal	Seat belt buckle switch (driver side) is unfastened.	0
			Seat belt buckle switch (driver side) is fastened.	Battery voltage
22	G/OR	Seat belt buckle switch (passenger side) signal	Seat belt buckle switch (passenger side) is unfastened.*	0
			Seat belt buckle switch (passenger side) is fastened.*	Battery voltage
36	LB (A/T models) L/Y (M/T models)	Vehicle speed signal	When the vehicle speed is approx. 40km (25MPH).	 ELF1080D

NOTE:
*: When seat pressure switch is ON.

Work Flow

EHS001FQ

1. Check the symptom and customer's requests.
2. Understand the outline of system. Refer to SB-6, "System Description" .
3. According to the trouble diagnosis chart, repair or replace the cause of the malfunction. Refer to SB-16, "Trouble Diagnosis Chart by Symptom" .
4. Does power seat system operate normally? If Yes, GO TO 5, If No, GO TO 3.
5. INSPECTION END.

Trouble Diagnosis Chart by Symptom

EHS000GS

NOTE:
Always check the “Work Flow” before troubleshooting. Refer to SB-16, "Work Flow" .

Symptom	Diagnoses/Service procedure	Reference page
Seat belt warning system do not operate.	Time control unit power supply and ground check	SB-16
Seat belt warning lamp (driver side) do not illuminated.	1. Seat belt warning lamp check (driver side)	SB-17
	2. Seat belt buckle switch check	SB-20
	3. If the above system are normal, replace time control unit.	—
Seat belt warning lamp (passenger side) do not illuminated.	1. Seat belt warning lamp check (passenger side)	SB-19
	2. Seat belt buckle switch and seat pressure switch check	SB-22
	3. If the above system are normal, replace time control unit.	—
Seat belt warning lamp does not illuminated (both driver side and passenger side)	Seat belt warning lamp power supply check	SB-17
Seat belt chime does not activate.(Seat belt warning lamp is operated)	Vehicle speed signal check	SB-24

Time Control Unit Power Supply and Ground Circuit Check

EHS001FV

1. CHECK FUSE

Check the following.

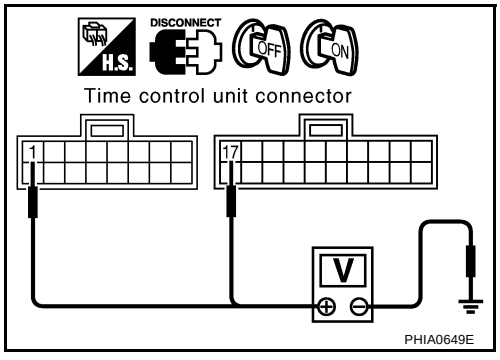
- Check 10A fuse [No. 5, located in the fuse block (J/B)].
- Check 10A fuse [No. 28, located in the fuse block (J/B)].

OK or NG

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

2. CHECK POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect time control unit connector.
3. Check voltage between time control unit and ground.



Connector	Terminals (Wire color)		Condition	Voltage (V) (Approx.)
	(+)	(–)		
M30	1 (L)	Ground	Ignition switch OFF	Battery voltage
M31	17 (G)		Ignition switch ON	Battery voltage

OK or NG

OK >> GO TO 3.
NG >> Repair or replace time control unit power supply circuit.

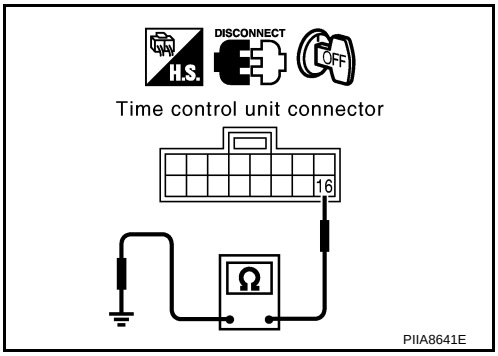
3. CHECK GROUND CIRCUIT

Check continuity between time control unit harness connector M30 terminal 16 (B/R) and ground.

16 (B/R) - Ground : Continuity should exist.

OK or NG

OK >> Replace time control unit.
NG >> Replace harness or connector.



Seat Belt Warning Lamp Power Supply Check

EHS000GT

1. CHECK FUSE

Check 10A fuse [No.11, located in fuse block (J/B)].
Refer to PG-2, "POWER SUPPLY ROUTING" .

OK or NG

OK >> GO TO 2.
NG >> If fuse is blown, be sure to eliminate cause of malfunction before installing new fuse. Refer to PG-2, "POWER SUPPLY ROUTING" .

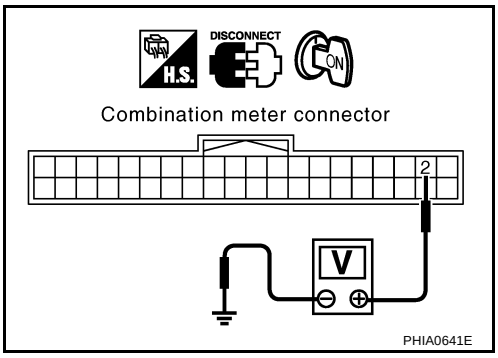
2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect combination meter connector.
2. Turn ignition switch “ON”.
3. Check voltage between combination meter connector M44 terminal 2 (Y/G) and ground.

2 (Y/G) – Ground : Battery voltage.

OK or NG

OK >> Replace combination meter.
NG >> Repair or replace harness between combination meter and fuse block (J/B).



Seat Belt Warning Lamp Check (Driver side)

EHS001DO

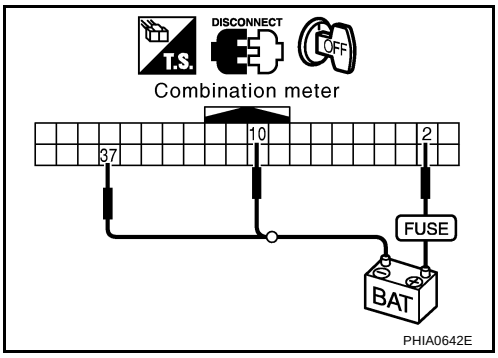
1. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Connect battery power supply to combination meter connector M44 terminals 2 and 10 (LHD models) 37 (RHD models), and check the illumination.

LHD models
2 (BAT+) – 10 (BAT-)
RHD models
2 (BAT+) – 37 (BAT-)

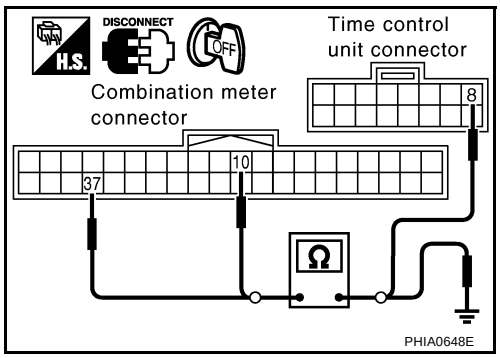
OK or NG

OK >> GO TO 2.
NG >> Replace combination meter.



2. CHECK SEAT BELT WARNING LAMP CIRCUIT HARNESS CONTINUITY

1. Disconnect time control unit connector.
2. Check the following.



LHD models

- Check continuity between combination meter connector M44 terminal 10 (R) and time control unit connector M30 terminal 8 (R).

10 (R) – 8 (R) : Continuity should exist.

- Check continuity between combination meter connector M44 terminal 10 (R) and ground.

10 (R) – Ground : Continuity should not exist.

RHD models

- Check continuity between combination meter connector M44 terminal 37 (R) and time control unit connector M30 terminal 8 (R).

37 (R) – 8 (R) : Continuity should exist.

- Check continuity between combination meter connector M44 terminal 37 (R) and ground.

37 (R) – Ground : Continuity should not exist.

OK or NG

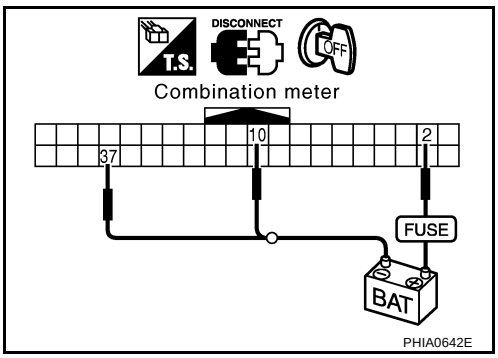
OK >> Seat belt warning lamp (Driver side) is OK.
NG >> Repair or replace harness between combination meter and time control unit.

Seat belt Warning Lamp Check (Passenger Side)

EHS000GU

1. CHECK SEAT BELT WARNING LAMP CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect combination meter connector.
3. Connect battery power supply to combination meter connector M44 terminals 2 and 37 (LHD models) 10 (RHD models), and check the illumination.



LHD models

2 (BAT+) – 37 (BAT-)

RHD models

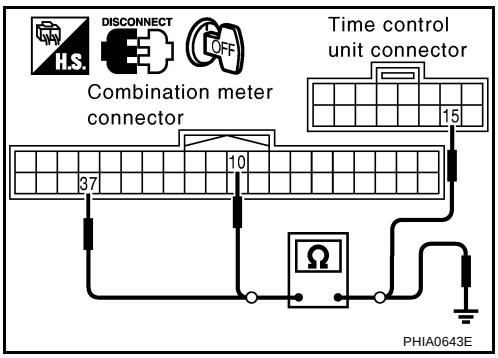
2 (BAT+) – 10 (BAT-)

OK or NG

OK >> GO TO 2.
NG >> Replace combination meter.

2. CHECK SEAT BELT WARNING LAMP CIRCUIT HARNESS CONTINUITY

1. Disconnect time control unit connector.
2. Check the following.



LHD models

– Check continuity between combination meter connector M44 terminal 37 (W/G) and time control unit connector M30 terminal 15 (W/G).

37 (W/G) – 15 (W/G) : Continuity should exist.

– Check continuity between combination meter connector M44 terminal 37 (W/G) and ground.

37 (W/G) – Ground : Continuity should not exist.

RHD models

– Check continuity between combination meter connector M44 terminal 10 (W/G) and time control unit connector M30 terminal 15 (W/G).

10 (W/G) – 15 (W/G) : Continuity should exist.

– Check continuity between combination meter connector M44 terminal 10 (W/G) and ground.

10 (W/G) – Ground : Continuity should not exist.

OK or NG

OK >> Seat belt warning lamp (Passenger side) is OK.
NG >> Repair or replace harness between combination meter and time control unit.

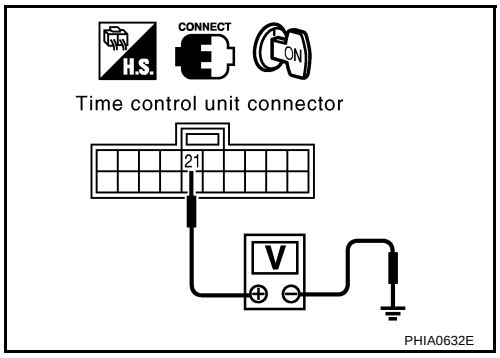
Seat Belt Buckle Switch Check

EHS000GW

1. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE) INPUT SIGNAL

1. Turn ignition switch “ON”.
2. Check voltage between time control unit connector M31 terminal 21 (BR/W) and ground.

Terminal (Wire color)		Condition	Voltage (V) (Approx.)
(+)	(–)		
21 (BR/W)	Ground	Driver side seat belt buckle switch Fasten	Battery voltage
		Driver side seat belt buckle switch Unfasten	0



OK or NG

OK >> Seat belt buckle switch (driver side) is OK.
NG >> GO TO 2.

2. CHECK SEAT BELT BUCKLE SWITCH HARNESS CONTINUITY

1. Turn ignition switch “OFF”.
2. Disconnect time control unit connector and seat belt buckle switch (driver side) connector.
3. Check the following.

with power seat

– Check continuity between time control unit connector M31 terminal 21 (BR/W) and seat belt buckle switch (driver side) connector B302 terminal 13 (R).

21 (BR/W) – 13 (R) : Continuity should exist.

– Check continuity between time control unit connector M31 terminal 21 (BR/W) and ground.

21 (BR/W) – Ground : Continuity should not exist.

without power seat

– Check continuity between time control unit connector M31 terminal 21 (BR/W) and seat belt buckle switch (driver side) connector B10 terminal 1 (*).

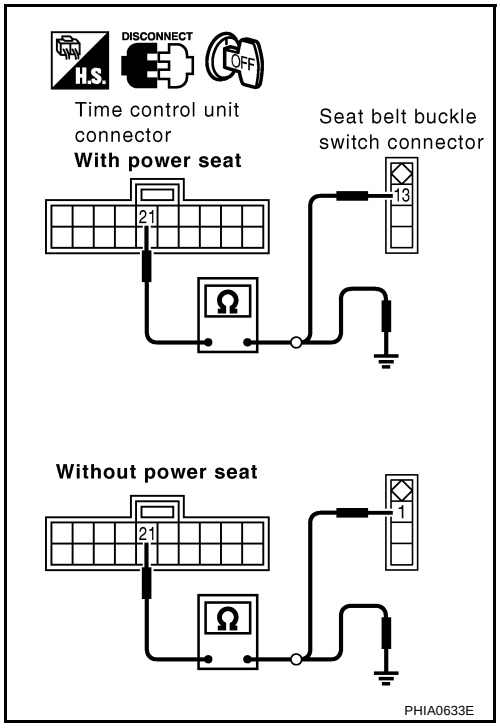
21 (BR/W) – 1 (*) : Continuity should exist.

– Check continuity between time control unit connector M31 terminal 21 (BR/W) and ground.

21 (BR/W) – Ground : Continuity should not exist.

NOTE:
* :

LHD models :BR/W
RHD models :W/B



OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between time control unit and seat belt buckle switch.

3. CHECK SEAT BELT BUCKLE SWITCH (DRIVER SIDE)

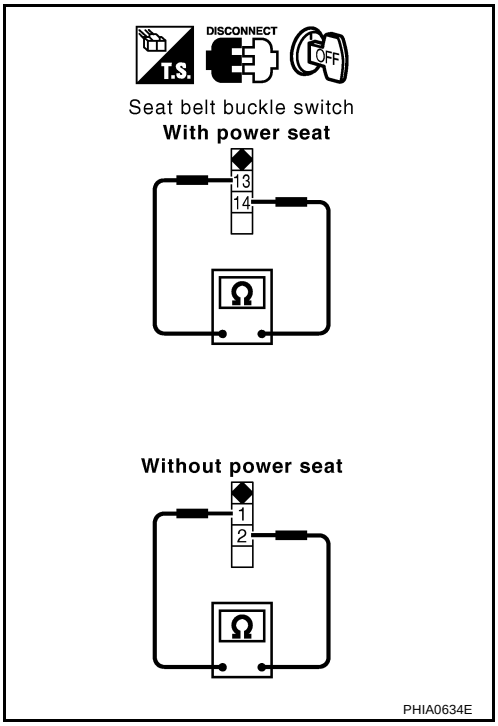
Check continuity between seat belt buckle switch (driver side) terminals 13 (1) and 14 (2).

Terminal		Condition	Continuity
13 (1)	14 (2)	Driver side seat belt buckle switch Fasten	No
		Driver side seat belt buckle switch Unfasten	Yes

( ): without power seat

OK or NG

OK >> GO TO 4.
NG >> Replace seat belt buckle switch (driver side).



4. CHECK SEAT BELT BUCKLE SWITCH GROUND CIRCUIT

1. Check the following.

with power seat

– Check harness continuity between seat belt buckle switch (driver side) connector B302 terminal 14 (OR) and ground.

14 (OR) – Ground : Continuity should exist.

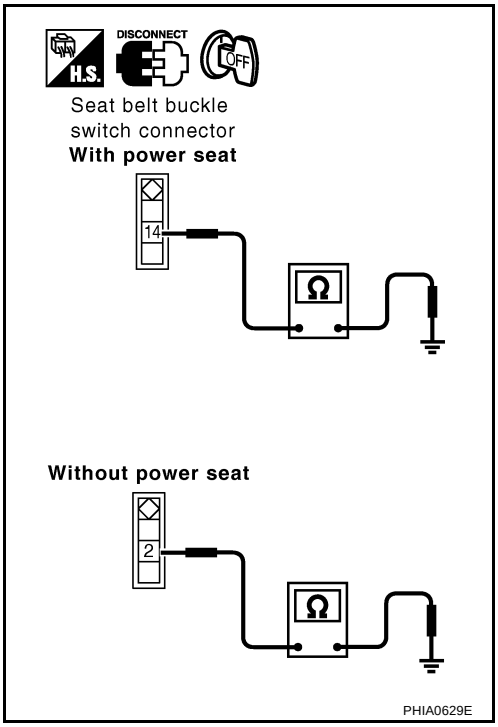
without power seat

– Check harness continuity between seat belt buckle switch (driver side) connector B10 terminal 2 (B) and ground.

2 (B) – Ground : Continuity should exist.

OK or NG

OK >> Check the condition of the harness and connector.
NG >> Repair or replace harness between seat belt buckle switch and ground.



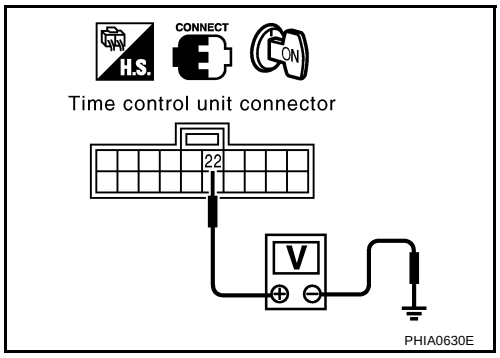
Seat Belt Buckle Switch and Seat Pressure Switch Check

EHS000GX

1. CHECK TIME CONTROL UNIT INPUT SIGNAL

1. Turn ignition switch “ON”.
2. Check voltage between time control unit connector M31 terminal 22 (G/OR) and ground.

NOTE:
When performing the following procedure, a person is sitting on the passenger side seat. (As a result, the seat pressure sensor is turned ON.)



Terminal (wire color)		Condition	Voltage (V)
(+)	(–)		
22 (G/OR)	Ground	Passenger side seat belt buckle switch Fasten and seat pressure switch ON.	Battery voltage
		Passenger side seat belt buckle switch Unfasten and seat pressure switch OFF.	0

OK or NG

OK >> Seat belt buckle switch (passenger side) is OK.
NG >> GO TO 2.

2. CHECK SEAT BELT BACKLE SWITCH CIRCUIT HARNESS CONTINUITY

1. Turn ignition switch “OFF”.
2. Disconnect time control unit connector and seat belt buckle switch (passenger side) connector.
3. Check the following.

with power seat

– Check continuity between time control unit connector M31 terminal 22 (G/OR) and seat belt buckle switch (passenger side) connector B352 terminal 13 (R).

22 (G/OR) – 13 (R) : Continuity should exist.

– Check continuity between time control unit connector M31 terminal 22 (G/OR) and ground.

22 (G/OR) – Ground : Continuity should not exist.

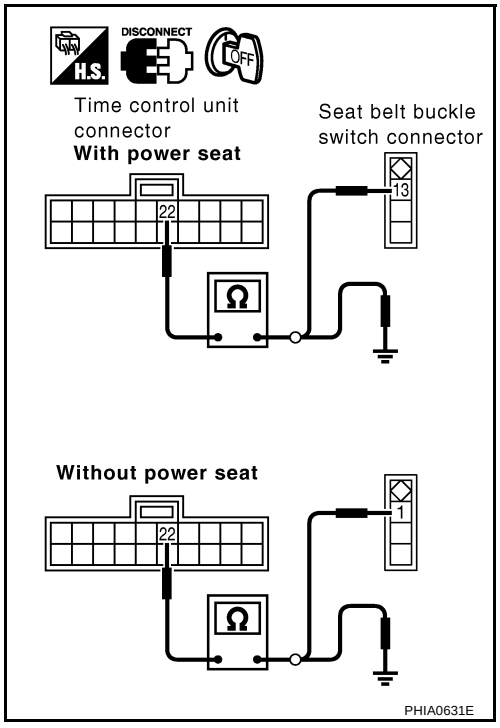
without power seat

– Check continuity between time control unit connector M31 terminal 22 (G/OR) and seat belt buckle switch (passenger side) connector B113 terminal 1 (G/OR).

22 (G/OR) – 1 (G/OR) : Continuity should exist.

– Check continuity between time control unit connector M31 terminal 22 (G/OR) and ground.

22 (G/OR) – Ground : Continuity should not exist.



OK or NG

OK >> GO TO 3.
NG >> Repair or replace harness between time control unit and seat belt buckle switch.

3. CHECK SEAT BELT BUCKLE SWITCH (PASSENGER SIDE)

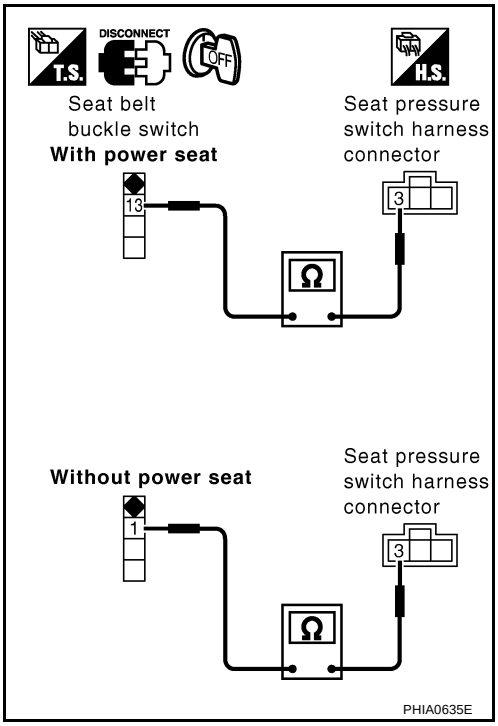
1. Disconnect seat pressure switch harness connector.
2. Check continuity between seat belt buckle switch (passenger side) harness connector B352 (B113) terminal 13 (1) and seat belt pressure switch harness connector B401 terminal 3.

Terminal		Condition	Continuity
13 (1)	3	Passenger side seat buckle switch Fasten	No
		Passenger side seat buckle switch Unfasten	Yes

NOTE:
( ): without power seat

OK or NG

OK >> GO TO 4.
NG >> Replace seat belt buckle switch (passenger side).



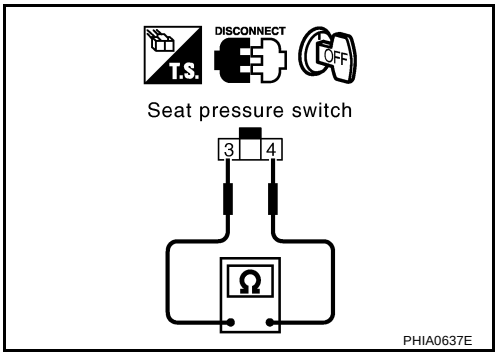
4. CHECK SEAT PRESSURE SWITCH

Check continuity between seat pressure switch terminal 3 and 4.

Terminal		Condition	Continuity
3	4	Seat pressure switch ON	Yes
		Seat pressure switch OFF	No

OK or NG

OK >> GO TO 5.
NG >> Replace seat pressure switch.



5. HARNESS CONTINUITY INSPECTION

Check continuity between seat pressure switch harness connector B401 terminal 4 (*) and ground.

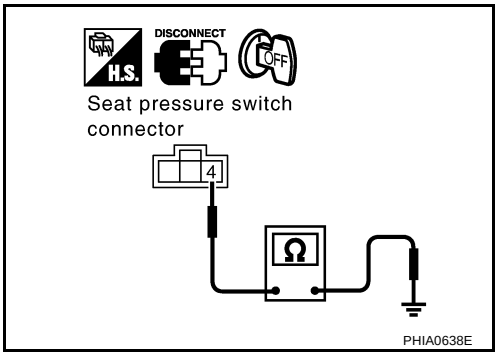
4 (*) – Ground : Continuity should exist.

NOTE:
* :

With power seat models :OR
Without power seat models :B

OK or NG

OK >> Check the condition of the harness and connector.
NG >> Repair or replace harness between seat pressure switch and seat belt buckle switch.

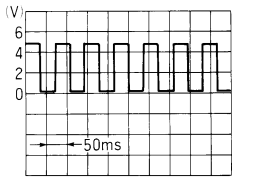


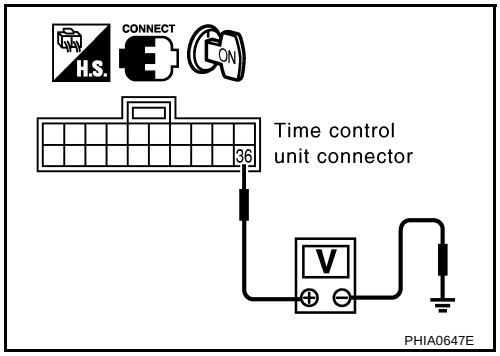
Vehicle Speed Signal Inspection

EHS000GZ

1. VEHICLE SPEED INPUT SIGNAL INSPECTION

Check the signal between control unit connector M31 terminal 36 (*) and ground with oscilloscope when vehicle speed is approx. 40 km/h (25 MPH).

Terminal		Voltage
(+)	(–)	
36 (L/B: A/T models) (L/Y: M/T models)	Ground	 ELF1080D



OK or NG

OK >> Vehicle speed signal is OK.
NG >> GO TO 2.

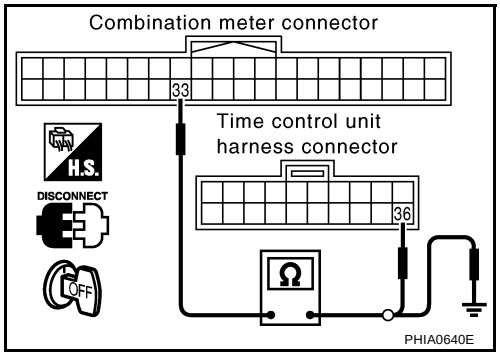
2. HARNESS CONTINUITY INSPECTION

1. Turn ignition switch “OFF”.
2. Disconnect time control unit connector and combination meter harness connector.
3. Check continuity between combination meter connector M44 terminal 33 (L/W) and time control unit M31 terminal 36 (L/W).

   33 (L/W) – 36 (L/W) : Continuity should exist.

4. Check continuity between combination meter connector M44 terminal 33 (L/W) and ground.

   33 (L/W) – Ground : Continuity should not exist.



OK or NG

OK >> Vehicle speed signal circuit is OK. Further inspection is necessary. Refer to DI-20, "How to Proceed With Trouble Diagnosis" .
NG >> Replace or replace harness between combination meter and time control unit.