

SECTION **RSU** REAR SUSPENSION

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

CONTENTS

RSU

PRECAUTION	2	REMOVAL AND INSTALLATION	7
PRECAUTIONS	2	REAR SUSPENSION ASSEMBLY	7
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"	2	Component	7
Precaution for Rear Suspension	2	UNIT REMOVAL AND INSTALLATION	9
PREPARATION	3	SHOCK ABSORBER	9
PREPARATION	3	Removal and Installation	9
Commercial Service Tool	3	Disposal	9
SYMPTOM DIAGNOSIS	4	LEAF SPRING	10
NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING	4	Removal and Installation	10
NVH Troubleshooting Chart	4	STABILIZER BAR	14
PERIODIC MAINTENANCE	5	Removal and Installation	14
REAR SUSPENSION ASSEMBLY	5	SERVICE DATA AND SPECIFICATIONS (SDS)	16
On-Vehicle Inspection and Service	5	SERVICE DATA AND SPECIFICATIONS (SDS)	16
STABILIZER BAR	6	General Specification (Rear)	16
Inspection	6	Wheelarch Height (Unladen*1)	16

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

INFOID:0000000011069654

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

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

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery and wait at least three minutes before performing any service.

Precaution for Rear Suspension

INFOID:0000000011069655

- When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.
* Fuel, radiator coolant, and engine oil are full. Spare tire, jack, hand tools, and mats are in their designated positions.

PREPARATION

< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:0000000011069656

Tool name	Description
Power tool	Loosening nuts, screws and bolts
 PIIB1407E	

A

B

C

D

RSU

F

G

H

I

J

K

L

M

N

O

P

NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:0000000011069657

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace the parts.

Reference page															
Possible cause and SUSPECTED PARTS															
Symptoms	Noise	×	×	×	×	×	×	×	×	×	×	×	×	×	×
	Shake	×	×	×	×		×	×			×	×	×	×	×
	Vibration	×	×	×	×	×			×		×	×			×
	Shimmy	×	×	×	×						×	×	×	×	×
	Shudder	×	×	×							×	×	×	×	×
	Poor quality ride or handling	×	×	×	×	×	×				×	×	×		
			Improper installation, looseness	Shock absorber deformation, damage or deflection	Bushing deterioration	Parts interference	Spring fatigue	Suspension looseness	PROPELLER SHAFT	REAR FINAL DRIVE	AXLE	TIRES	ROAD WHEEL	BRAKES	STEERING
		RSU-5	RSU-9	RSU-5	RSU-5	RSU-10	RSU-5	DLN-138, "NVH Troubleshooting Chart"	DLN-192, "NVH Troubleshooting Chart" (C200), DLN-224, "NVH Troubleshooting Chart" (M226 without ELD), DLN-247, "NVH Troubleshooting Chart" (M226 with ELD)	RAX-6, "NVH Troubleshooting Chart" (C200), RAX-18, "NVH Troubleshooting Chart" (M226)	WT-44, "NVH Troubleshooting Chart"	WT-44, "NVH Troubleshooting Chart"	BR-7, "NVH Troubleshooting Chart"	ST-5, "NVH Troubleshooting Chart"	

x: Applicable

REAR SUSPENSION ASSEMBLY

< PERIODIC MAINTENANCE >

PERIODIC MAINTENANCE

REAR SUSPENSION ASSEMBLY

On-Vehicle Inspection and Service

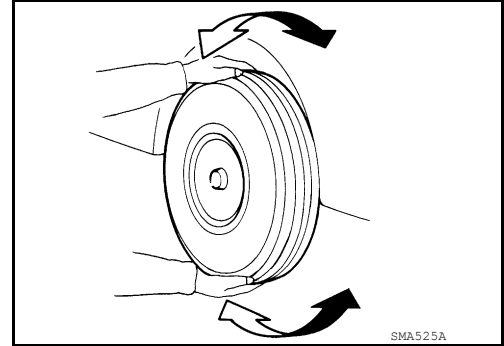
INFOID:0000000011069658

- Check the rear suspension parts for any excessive play, cracks, wear, and other damage.
- Shake each rear wheel to check for any excessive play as shown.
- Tighten all of the nuts and bolts to the specified torque.

CAUTION:

When installing the components with rubber bushings, the final tightening of the nuts and bolts must be done with the vehicle in an unladen condition (the fuel, engine coolant, and engine oil full; the spare tire, jack, hand tools and mats in their designated positions) with the tires on the ground.

- Check the shock absorbers for oil leaks, deformation, and other damage.
- Check the shock absorber bushings for excessive wear and other damage.



A

B

C

D

RSU

F

G

H

I

J

K

L

M

N

O

P

STABILIZER BAR

< PERIODIC MAINTENANCE >

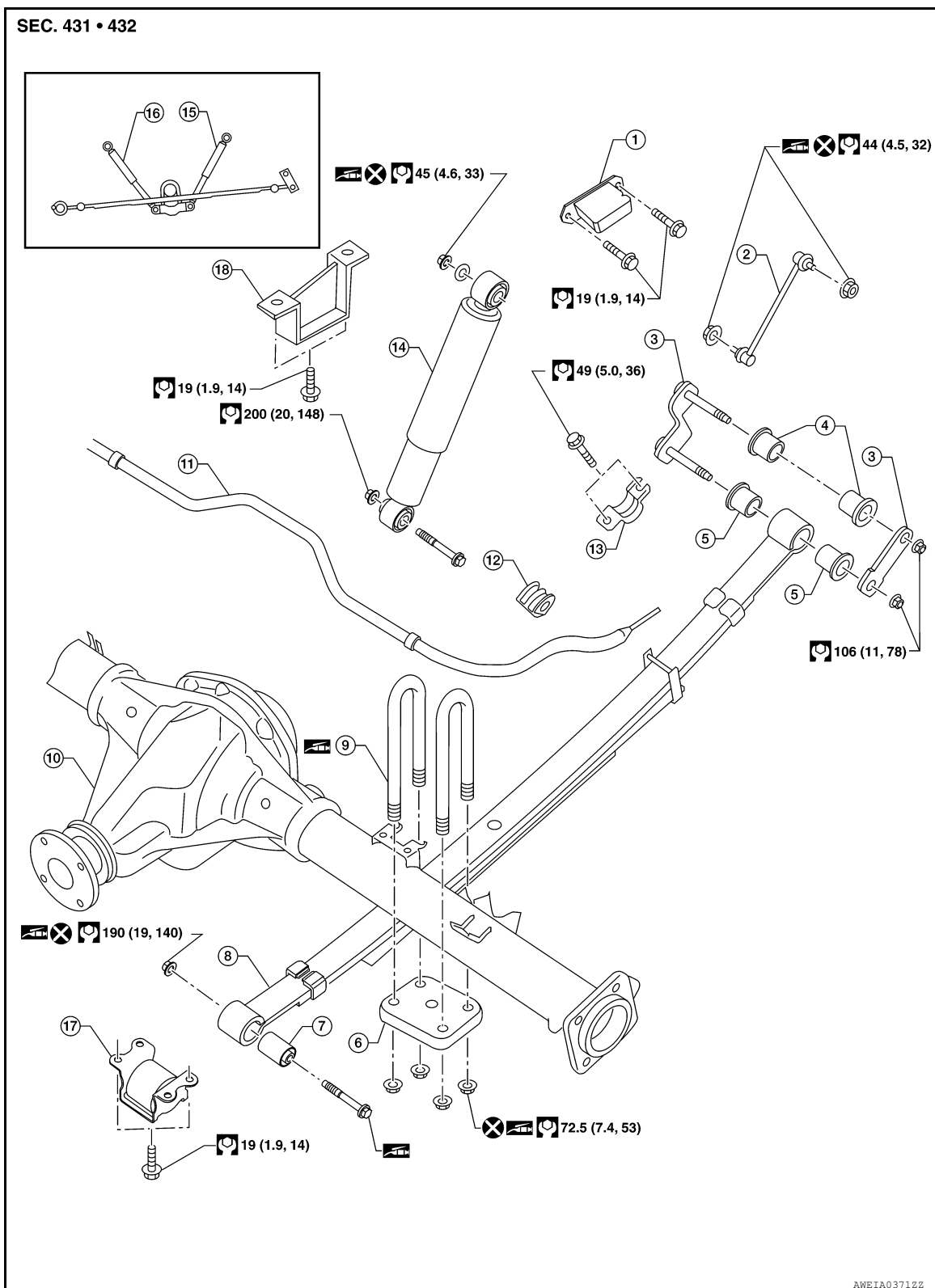
STABILIZER BAR

Inspection

INFOID:0000000011069659

- Check stabilizer bar for any deformation, cracks, or damage and replace if necessary.
- Check rubber bushings for deterioration, or cracks and replace if necessary.

INFOID:0000000011069660



REAR SUSPENSION ASSEMBLY

< REMOVAL AND INSTALLATION >

- | | | |
|--------------------------------|-------------------------------|-----------------------------------|
| 1. Bumper | 2. Connecting rod | 3. Rear spring shackle |
| 4. Rear spring shackle bushing | 5. Rear spring bushing (rear) | 6. Rear spring pad |
| 7. Rear spring bushing (front) | 8. Rear leaf spring | 9. Rear spring clip U-bolts |
| 10. Rear final drive | 11. Stabilizer bar | 12. Bushing |
| 13. Stabilizer bar clamp | 14. Shock absorber | 15. Shock absorber (LH) |
| 16. Shock absorber (RH) | 17. Dynamic damper | 18. Torque arrester (If equipped) |

CAUTION:

When installing the components with rubber bushings, the final tightening of the nuts and bolts must be done with the vehicle in an unladen condition (the fuel, engine coolant, and engine oil full; the spare tire, jack, hand tools and mats in their designated positions) with the tires on the ground.

SHOCK ABSORBER

< UNIT REMOVAL AND INSTALLATION >

UNIT REMOVAL AND INSTALLATION

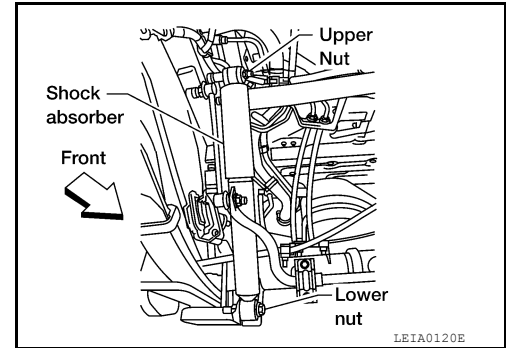
SHOCK ABSORBER

Removal and Installation

INFOID:0000000011069661

REMOVAL

1. Remove the shock absorber upper and lower nuts and bolts using power tool.



2. Remove the shock absorber.

INSPECTION AFTER REMOVAL

Inspect the shock absorber for any oil leaks, cracks, or deformations. Replace the shock absorber as necessary.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

Do not reuse shock absorber upper nut.

- Apply multi-purpose grease to the shock absorber upper nut and stud.

Shock absorber upper and lower nuts : Refer to [RSU-7, "Component"](#).

Disposal

INFOID:0000000011069662

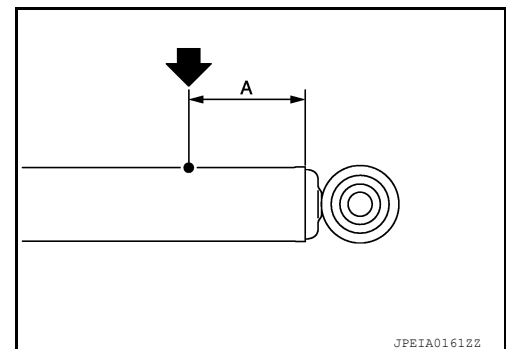
1. Set shock absorber horizontally with the piston rod fully extended.
2. Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown to release gas gradually.

CAUTION:

- Wear eye protection (safety glasses).
- Wear gloves.
- Be careful with metal chips or oil blown out by the compressed gas.

NOTE:

- Drill vertically in this direction (↙) directly to the outer tube avoiding brackets.
- The gas is clear, colorless, odorless, and harmless.



(A) : 20 – 30 mm (0.79 – 1.18 in)

3. Position the drilled hole downward and drain oil by moving the piston rod several times.

CAUTION:

Dispose of drained oil according to the law and local regulations.

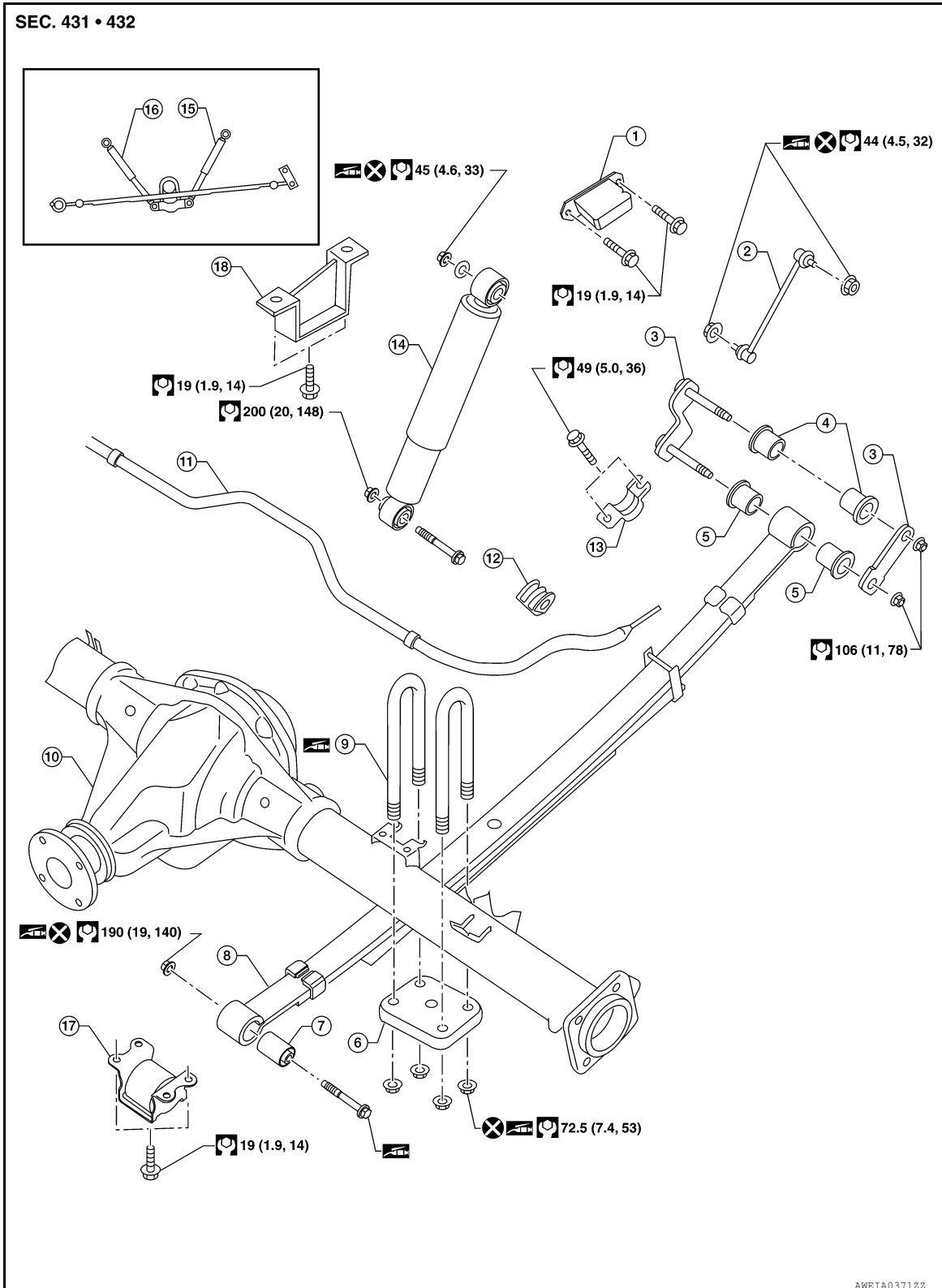
LEAF SPRING

< UNIT REMOVAL AND INSTALLATION >

LEAF SPRING

Removal and Installation

INFOID:000000011069663



LEAF SPRING

< UNIT REMOVAL AND INSTALLATION >

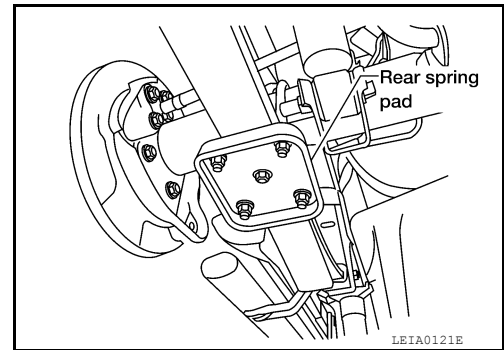
- | | | |
|--------------------------|--------------------|-----------------------------------|
| 10. Rear final drive | 11. Stabilizer bar | 12. Bushing |
| 13. Stabilizer bar clamp | 14. Shock absorber | 15. Shock absorber (LH) |
| 16. Shock absorber (RH) | 17. Dynamic damper | 18. Torque arrester (If equipped) |

CAUTION:

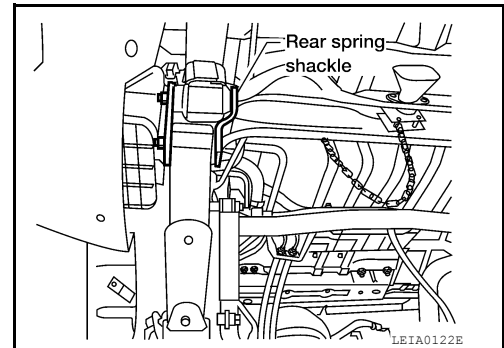
When installing the components with rubber bushings, the final tightening of the nuts and bolts must be done with the vehicle in an unladen condition (the fuel, engine coolant, and engine oil full; the spare tire, jack, hand tools and mats in their designated positions) with the tires on the ground.

REMOVAL

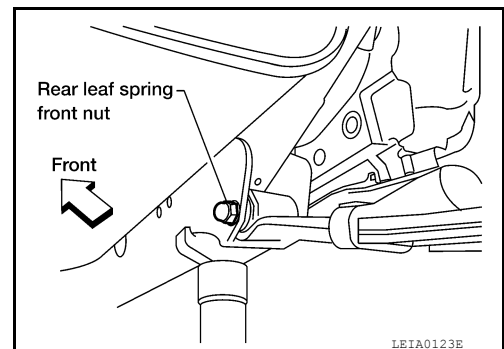
1. Remove the spare tire.
2. For the RH side, remove the tailpipe. Refer to [EX-5. "Removal and Installation"](#).
3. Support the rear final drive assembly with a suitable jack to relieve the tension from the rear leaf spring.
 - The axle weight should be supported, but there should be no compression in the rear leaf spring.
4. Remove the four rear spring clip U-bolt nuts using power tool, then remove the rear spring pad.



5. Remove the rear spring shackle and bushings using power tool.



6. Remove the rear leaf spring front nut and bolt using power tool.
7. Remove the rear leaf spring.



INSPECTION AFTER REMOVAL

- Check the rear leaf spring for any cracks or damage. Replace the rear leaf spring if necessary.
- Check the rear spring shackle, rear spring clip U-bolts, bumper, and rear spring pad for excessive wear, cracks, straightness, and damage. Replace any components if necessary.
- Check all bushings for deformation and cracks. Replace any bushings if necessary.

INSTALLATION

1. Apply soapsuds to all of the rubber bushings.

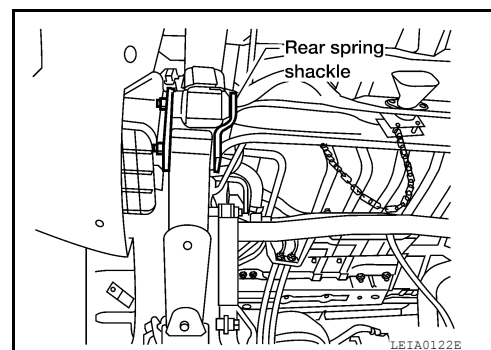
LEAF SPRING

< UNIT REMOVAL AND INSTALLATION >

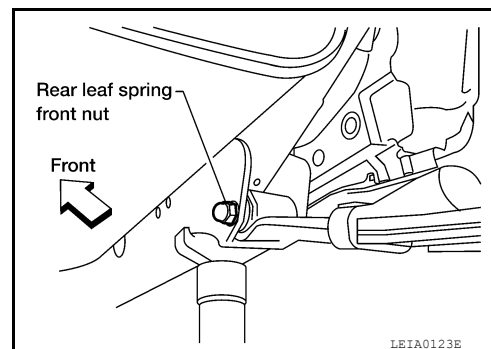
2. Install the rear spring shackle and rear leaf spring front nut and bolt. Finger-tighten the nuts.

CAUTION:

Do not reuse rear leaf spring front nut.



- Apply multi-purpose grease to the rear leaf spring front nut and bolt.

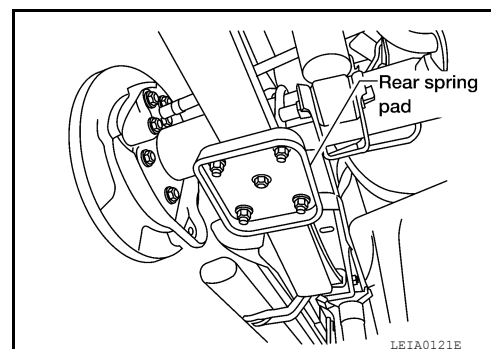


3. Install the rear spring clip U-bolts on top of the axle case.
4. Install the rear spring pad, and nuts under the rear spring.

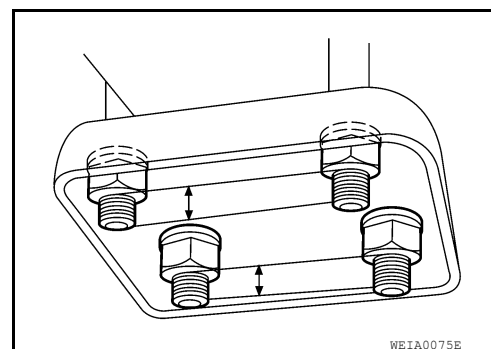
CAUTION:

Do not reuse rear spring clip U-bolt nuts.

- Apply multi-purpose grease to the rear spring clip U-bolts and nuts.



5. Tighten the rear spring clip U-bolt nuts diagonally and evenly to specification.
 - Tighten the rear spring clip U-bolt nuts so the lengths of all the exposed rear spring clip U-bolt threads under spring pad are equal in length within a tolerance of 3 mm (0.12 in), as shown.



6. Remove the jack supporting the rear final drive assembly and bounce the rear of the vehicle to stabilize the suspension.
7. For the RH side, install the tailpipe. Refer to [EX-5, "Removal and Installation"](#).
8. Install the spare tire.
9. Tighten the rear spring shackle nuts, rear leaf spring front nut, and shock absorber upper and lower nuts to specification.

LEAF SPRING

< UNIT REMOVAL AND INSTALLATION >

- When installing the components with rubber bushings, the final nut tightening must be carried out under unladen* conditions with the tires on level ground.
* (Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.)

A

B

C

D

RSU

F

G

H

I

J

K

L

M

N

O

P

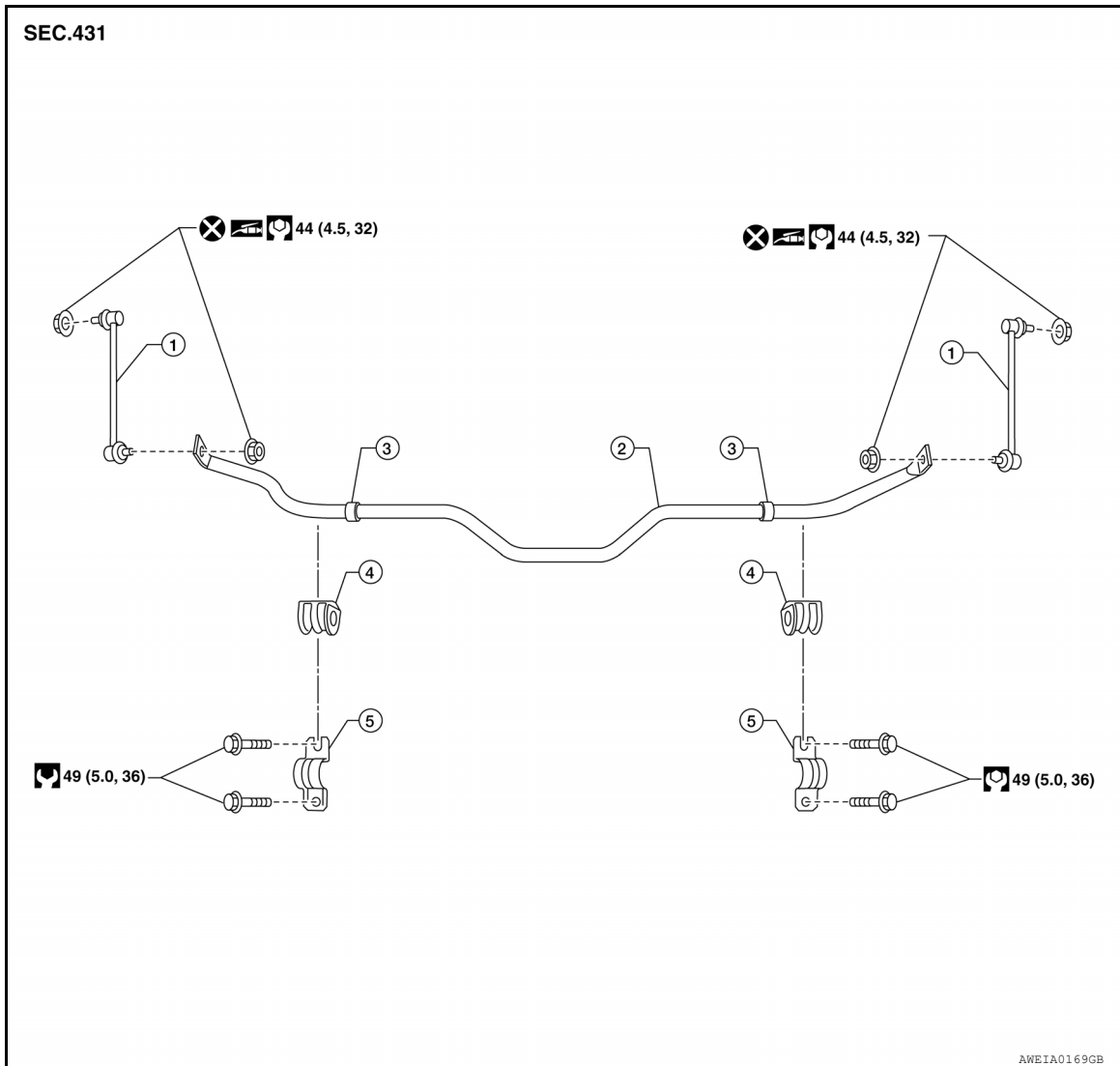
STABILIZER BAR

< UNIT REMOVAL AND INSTALLATION >

STABILIZER BAR

Removal and Installation

INFOID:0000000011069664



- | | | |
|-------------------|-------------------------|--|
| 1. Connecting rod | 2. Stabilizer bar | 3. Crimp ring (part of stabilizer bar) |
| 4. Bushing | 5. Stabilizer bar clamp | |

REMOVAL

1. Disconnect the stabilizer bar ends from the connecting rods using power tool.
2. Remove the stabilizer bar clamps using power tool, and remove the bushings.
3. Remove the stabilizer bar.

INSTALLATION

Installation is in the reverse order of removal.

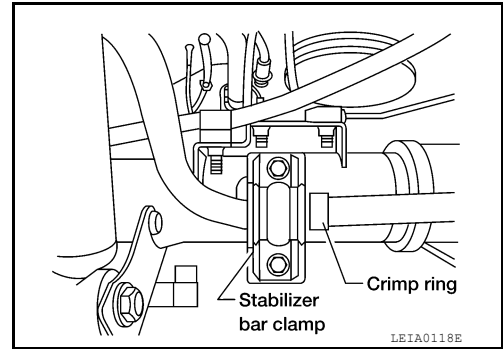
CAUTION:

Do not reuse connecting rod nuts.

STABILIZER BAR

< UNIT REMOVAL AND INSTALLATION >

- Install the stabilizer bar clamp and bushing so they are positioned outside of the crimp ring on the stabilizer bar.



A

B

C

D

RSU

F

G

H

I

J

K

L

M

N

O

P

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specification (Rear)

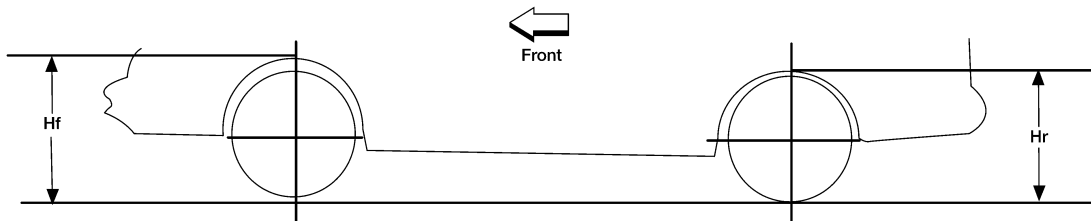
INFOID:0000000011069665

Suspension type	Rigid axle with semi-elliptic leaf springs
Shock absorber type	Double-acting hydraulic

Wheelarch Height (Unladen*¹)

INFOID:0000000011069665

Unit: mm (in)



LEIA0085E

Engine type	VQ40DE			
Drive type	2WD	4WD		
Tire size	P265/70R16	P265/70R16	P265/75R16	P265/65R17
Front wheelarch height (Hf)	839 (33.03)	858 (33.78)	870 (34.25)	859 (33.82)
Rear wheelarch height (Hr)	872 (34.33)	892 (35.12)	904 (35.59)	892 (35.12)

*1: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.