

SECTION

RSU

REAR SUSPENSION

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# PRECAUTIONS

## PRECAUTIONS

PFP:00001

### Cautions

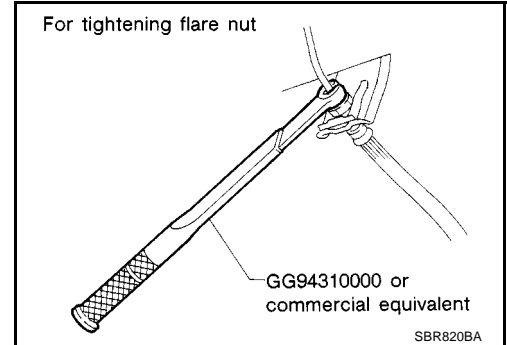
EES0002L

- Final tightening of bushings must be carried out under unladen condition with tires on the ground. Oil will shorten life of bushings. Be sure to wipe off any spilled oil.
- "Unladen condition" means that fuel, coolant and lubricant are full and ready for drive. However, spare tire, jack, and hand tools should be unloaded.
- After installing the removed suspension parts, always check wheel alignment and adjust if necessary.
- Replace the caulking nut with a new one. Install a new nut without wiping the oil off before tightening.

### Precautions for Brake System

EES0002M

- Use flare nut wrench when removing or installing brake tubes.
- Always tighten brake lines to specified torque when installing.



# PREPARATION

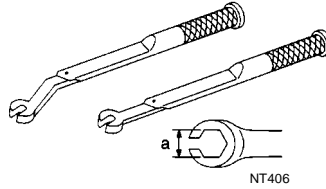
## PREPARATION

PFP:00002

### Special Service Tools

EES002G9

Tool number Tool name	Description
GG94310000 Flare nut torque wrench a: 10 mm (0.39 in)	Removing and installing brake lines



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# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

## NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

### NVH Troubleshooting Chart

EES0002N

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

Reference page			Refer to <a href="#">RSU-5, "Components"</a>	Refer to <a href="#">RSU-7, "SHOCK ABSORBER"</a>	—	—	—	Refer to <a href="#">RSU-5, "Components"</a>	Refer to <a href="#">RSU-6, "Wheel Alignment"</a>	NVH in FAX and FSU sections.	NVH in WT section.	NVH in WT section.	NVH in FAX section.	NVH in BR section.	NVH in PS section.
Possible cause and SUSPECTED PARTS			Improper installation, looseness	Shock absorber deformation, damage or deflection	Bushing or mounting deterioration	Parts interference	Spring fatigue	Suspension looseness	Incorrect wheel alignment	FRONT AXLE AND FRONT SUSPENSION	TIRES	ROAD WHEEL	DRIVE SHAFT	BRAKES	STEERING
Symptom	REAR SUSPENSION	Noise	x	x	x	x	x	x		x	x	x	x	x	x
		Shake	x	x	x	x		x		x	x	x	x	x	x
		Vibration	x	x	x	x	x			x	x		x		x
		Shimmy	x	x	x	x			x	x	x	x		x	x
		Judder	x	x	x					x	x	x		x	x
		Poor quality ride or handling	x	x	x	x	x		x	x	x	x			

x: Applicable

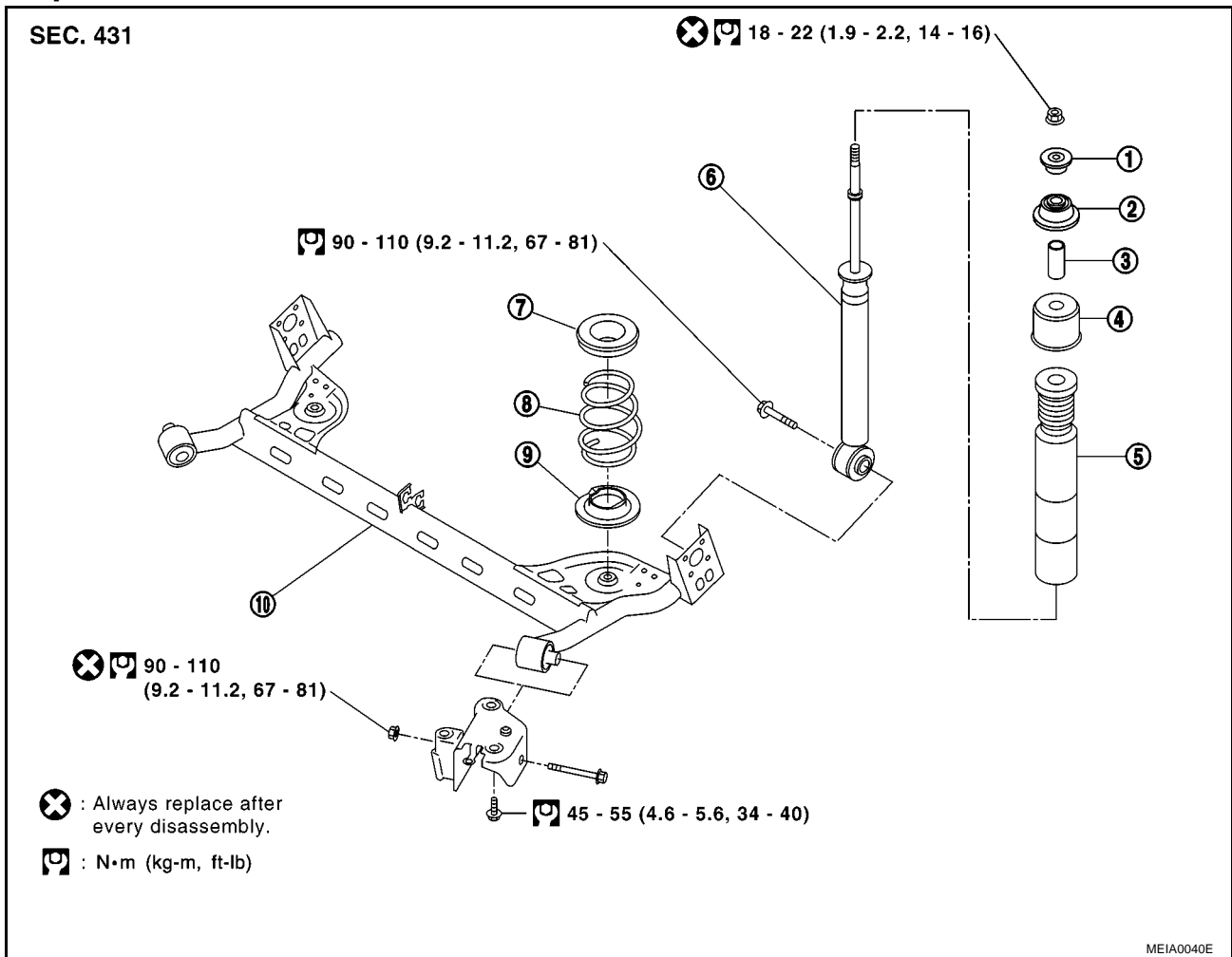
# REAR SUSPENSION ASSEMBLY

## REAR SUSPENSION ASSEMBLY

PFP:55020

### Components

EES00020



- |                            |                 |                            |
|----------------------------|-----------------|----------------------------|
| 1. Bushing                 | 2. Bushing      | 3. Distance tube           |
| 4. Bound bumper cover      | 5. Bound bumper | 6. Shock absorber          |
| 7. Rear spring rubber seat | 8. Coil spring  | 9. Rear spring rubber seat |
| 10. Rear suspension beam   |                 |                            |

### On-Vehicle Inspection and Service

EES0002P

Check axle and suspension parts for excessive play, wear, and damage.

- Move rear wheels (RH/LH) to check for unusual free play.
- Retighten all nuts and bolts to the specified torque.
- Check shock absorber for oil leakage and damage.

# REAR SUSPENSION ASSEMBLY

## Wheel Alignment DESCRIPTION

EES000ZQ

- Measure wheel alignment under unladen conditions. "Unladen conditions" means that fuel, coolant, and lubricant are full. However, spare tire, jack, and hand tools should be unloaded.

## PRELIMINARY INSPECTION

1. Check the tires for improper air pressure and wear.
2. Check road wheels for runout.
3. Check wheel bearing axial end play.
4. Check shock absorber operation.
5. Check each mounting point of axle and suspension for looseness and deformation.
6. Check each link and arm for cracks, deformation, and other damage.
7. Check the vehicle posture.

## CAMBER

Camber is preset at factory and cannot be adjusted.

**Camber :  $-1^{\circ}56'$  -  $-0^{\circ}26'$  ( $-1.94^{\circ}$  -  $-0.44^{\circ}$ )**

- If the camber is not within specification, inspect and replace any damaged or worn rear suspension parts.

## TOE-IN

Toe-in is preset at factory and cannot be adjusted. Measure toe-in using following procedure. If out of specification, inspect and replace any damaged or worn rear suspension parts.

### WARNING:

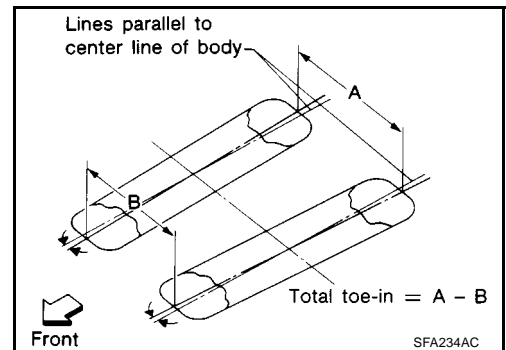
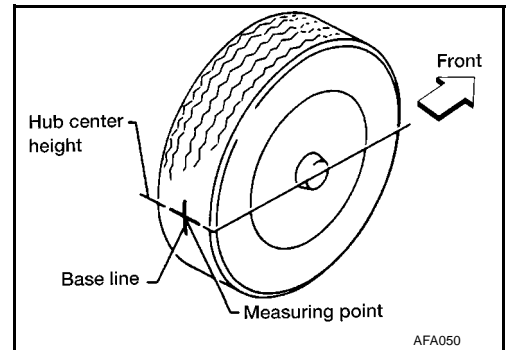
- **Always perform following procedure on a flat surface.**
  - **Make sure that no person is in front of the vehicle before pushing it.**
1. Bounce rear of vehicle up and down to stabilize the posture.
  2. Push the vehicle straight ahead about 5 m (16 ft.).
  3. Put a mark on base line of tread (rear side) of both tires at the same height as hub center. This mark is a measuring points.

4. Measure distance "A" (rear side).
5. Push the vehicle slowly ahead to rotate the wheels 180 degrees (1/2 turn).

If the wheels have rotated more than 180 degrees (1/2 turn), try the above procedure again from the beginning. Never push vehicle backward.

6. Measure distance "B" (front tires).

**Total toe-in: In 0 - 8 mm (0 - 0.31 in)**



# SHOCK ABSORBER

## SHOCK ABSORBER

PFP:56210

### Removal and Installation

EES0002R

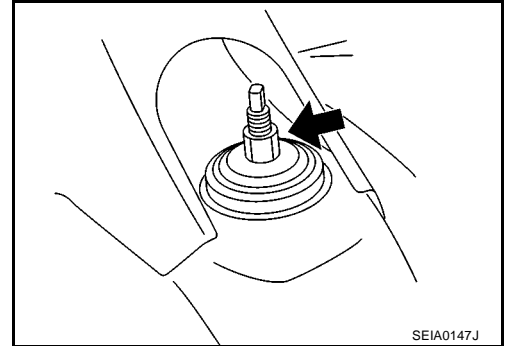
#### REMOVAL

1. Raise vehicle and remove tire.
2. Using a screwdriver, remove luggage side lower finisher.

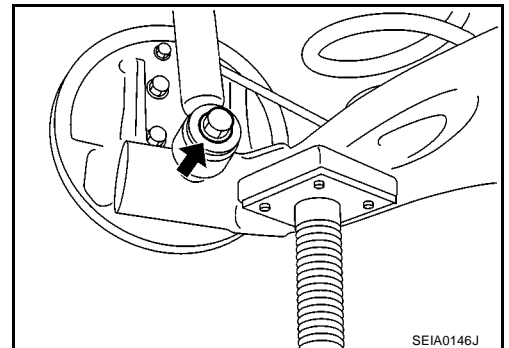
#### **CAUTION:**

**Wrap the tip of a screwdriver with cloth to avoid damaging components.**

3. Remove upper nuts of the shock absorber and remove washer, bushing on the upper side of shock absorber.



4. Set a jack under trailing arm of rear suspension beam and support it. Remove lower bolts of the shock absorber.
5. Remove shock absorber from the vehicle.



#### INSPECTION AFTER REMOVAL

##### Shock Absorber

- Check shock absorber for deformation, cracks, and other damage. Replace if any non-standard conditions are found.
- Check piston rod for damage, uneven wear, and distortion, and replace shock absorber if necessary.
- Check welded and sealed areas for oil leakage, and replace if necessary.

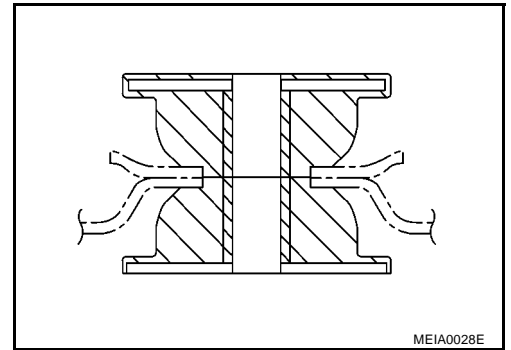
##### Bound Bumper and Bushing

- Check bound bumper and bushing for cracks and damage. Replace if necessary.

# SHOCK ABSORBER

## INSTALLATION

- Refer to [RSU-5, "Components"](#) for tightening torque. Install in the reverse order of removal.
- When installing body side bushing, install the projection to the vehicle side hole securely.





# COIL SPRING

## COIL SPRING

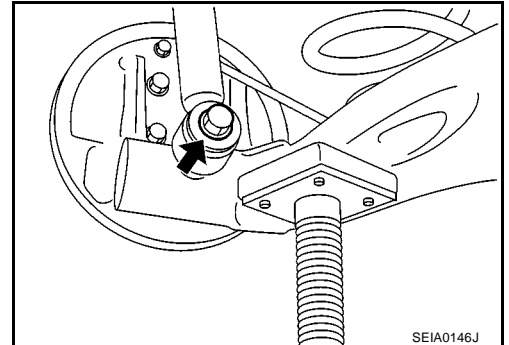
PFP:55020

### Removal and Installation

EES0002S

#### REMOVAL

1. Raise vehicle and remove tire.
2. Set a jack under trailing arm of rear suspension beam and support it. Remove lower side of the shock absorber. (left/right)
3. Remove jack. Remove coil spring and spring rubber seat.

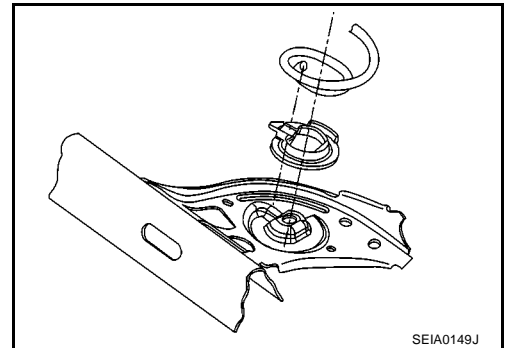


#### INSPECTION AFTER REMOVAL

- Check coil spring and spring rubber seat for deformation, cracks, and damage, and replace if necessary.

#### INSTALLATION

- Refer to [RSU-5, "Components"](#) for tightening torque. Tighten in the reverse order of removal.
- When installing spring, be sure to securely install the spring end position aligned to flush of spring rubber seat as shown in the figure.



# UNDERFLOOR SUPPORT

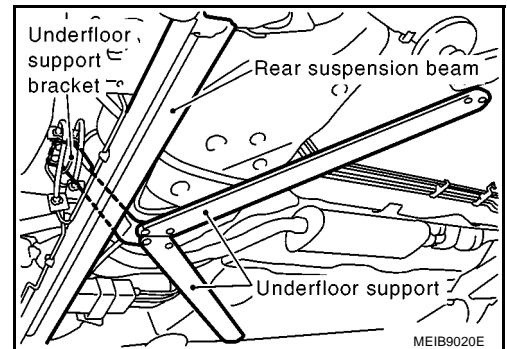
## UNDERFLOOR SUPPORT

PFP:55020

### Removal and Installation

EES002L9

1. Raise vehicle.
2. Remove underfloor support.
3. Remove underfloor support bracket.



### INSTALLATION

Install in the reverse order of removal.

# REAR SUSPENSION BEAM

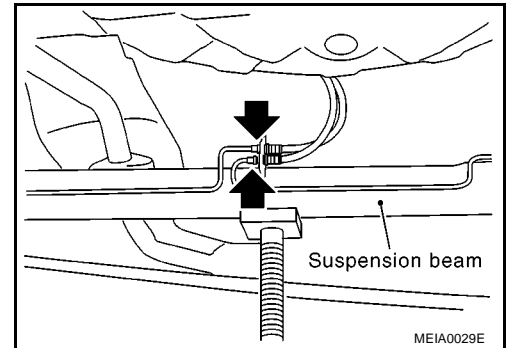
## REAR SUSPENSION BEAM

PPF:55501

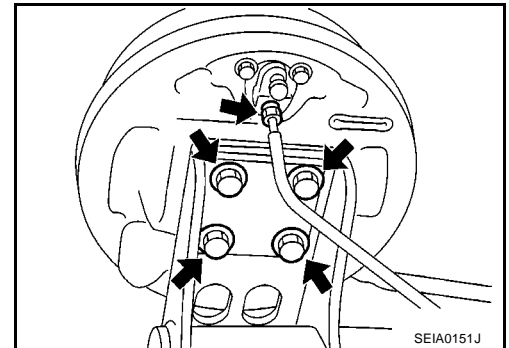
### Removal and Installation

#### REMOVAL

1. Raise vehicle, remove tire and replace parking lever.
2. Drain brake fluid. Refer to [BR-9, "BRAKE FLUID"](#).
3. Loosen self-locking nut, and separate parking brake rear cable from rear brake and rear suspension beam. Refer to [PB-3, "PARKING BRAKE SYSTEM"](#).
4. Remove ABS wheel sensor. Refer to [BRC-45, "WHEEL SENSORS"](#).
5. Separate rear brake hose from brake piping. Refer to [BR-11, "BRAKE PIPING AND HOSE"](#).
6. Remove shock absorber lower side (left/right), coil spring (left/right). Refer to [RSU-7, "SHOCK ABSORBER"](#), [RSU-9, "COIL SPRING"](#).
7. Remove underfloor support (C+C). Refer to [RSU-10, "UNDERFLOOR SUPPORT"](#).
8. Set a jack under suspension beam, and remove mounting bolts of suspension arm bracket and rear suspension beam.
9. Remove suspension beam.
10. Remove brake piping from rear suspension member beam. Refer to [BR-11, "BRAKE PIPING AND HOSE"](#).



11. Remove spindle bolts and rear axle assembly.
12. Remove rear suspension arm bracket nuts and bolts. Remove rear suspension arm bracket from vehicle.

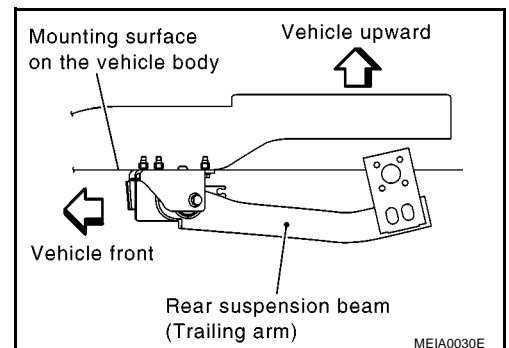


#### INSPECTION AFTER REMOVAL

- Check suspension beam and bushing for deformation, cracks, and damage. Replace if necessary.

#### INSTALLATION

- Refer to [RSU-5, "Components"](#) for tightening torque. Tighten in the reverse order of removal.
- Refer to [BR-11, "BRAKE PIPING AND HOSE"](#) for installation of brake piping and brake hose and for tightening torque.
- Refer to [PB-3, "PARKING BRAKE SYSTEM"](#) for installation of parking brake and for tightening torque.
- Refer to [RSU-10, "UNDERFLOOR SUPPORT"](#) for installation of underfloor support (C+C).
- Tighten rear suspension arm bracket under unladen condition.
- Refer to [BRC-45, "WHEEL SENSORS"](#) for installation of ABS wheel sensor and for tightening torque.
- Refill with new brake fluid and bleed air. Refer to [BR-9, "BRAKE FLUID"](#).



# WEIGHT BALANCER

## WEIGHT BALANCER

PFP:74890

### Removal and Installation

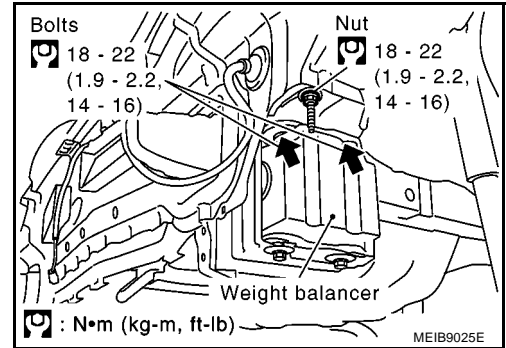
EES002LA

#### REMOVAL

Loosen nut and bolts, and remove weight balancer.

#### **CAUTION:**

Care should be taken when removing weight balancer, as it is very heavy.



#### INSTALLATION

Install in the reverse order of removal.

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

#### Wheel Alignment

EES0002U

Camber	-1°56' - -0°26' (-1.94° - -0.44°)
Toe-in	In 0 - 8 mm (0 - 0.31 in)

#### Tightening Torque

EES0002V

Unit: N·m (kg·m)

Shock absorber piston rod lock nut	18 - 22 (1.9 - 2.2, 14 - 16)
Rear suspension beam to rear suspension arm bracket	90 - 110 (9.2 - 11.2, 67 - 81)
Shock absorber to rear suspension beam	90 - 110 (9.2 - 11.2, 67 - 81)
Rear suspension arm bracket to body	45 - 55 (4.6 - 5.6, 34 - 40)

RSU

## SERVICE DATA AND SPECIFICATIONS (SDS)

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