SECTION RSU
REAR SUSPENSION

CONTENTS

PRECAUTIONS

PFP:00001

Cautions

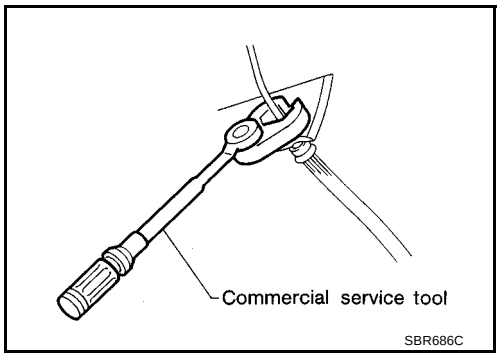
EES000ZL

- 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

EES000ZM

- When installing rubber parts, final tightening must be carried out under unladen condition* with tires on ground.
  *: Fuel, radiator coolant and engine oil full. Spare tire, jack, hand tools and mats in designated positions.
- Use flare nut wrench when removing or installing brake tubes.
- After installing removed suspension parts, check wheel alignment and adjust if necessary.
- Always torque brake lines when installing.



NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EES000ZN

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

			Reference page	Refer to RSU-4, "Components"	Refer to RSU-6, "SHOCK ABSORBER"	—	—	—	Refer to RSU-4, "Components"	Refer to RSU-5, "Wheel Alignment"	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		×	×	×	×	×	×		×	×	×	×	×	×
		Shake		×	×	×	×		×		×	×	×	×	×	×
		Vibration		×	×	×	×	×			×	×		×		×
		Shimmy		×	×	×	×			×	×	×	×		×	×
		Judder		×	×	×					×	×	×		×	×
		Poor quality ride or handling		×	×	×	×	×		×	×	×	×			

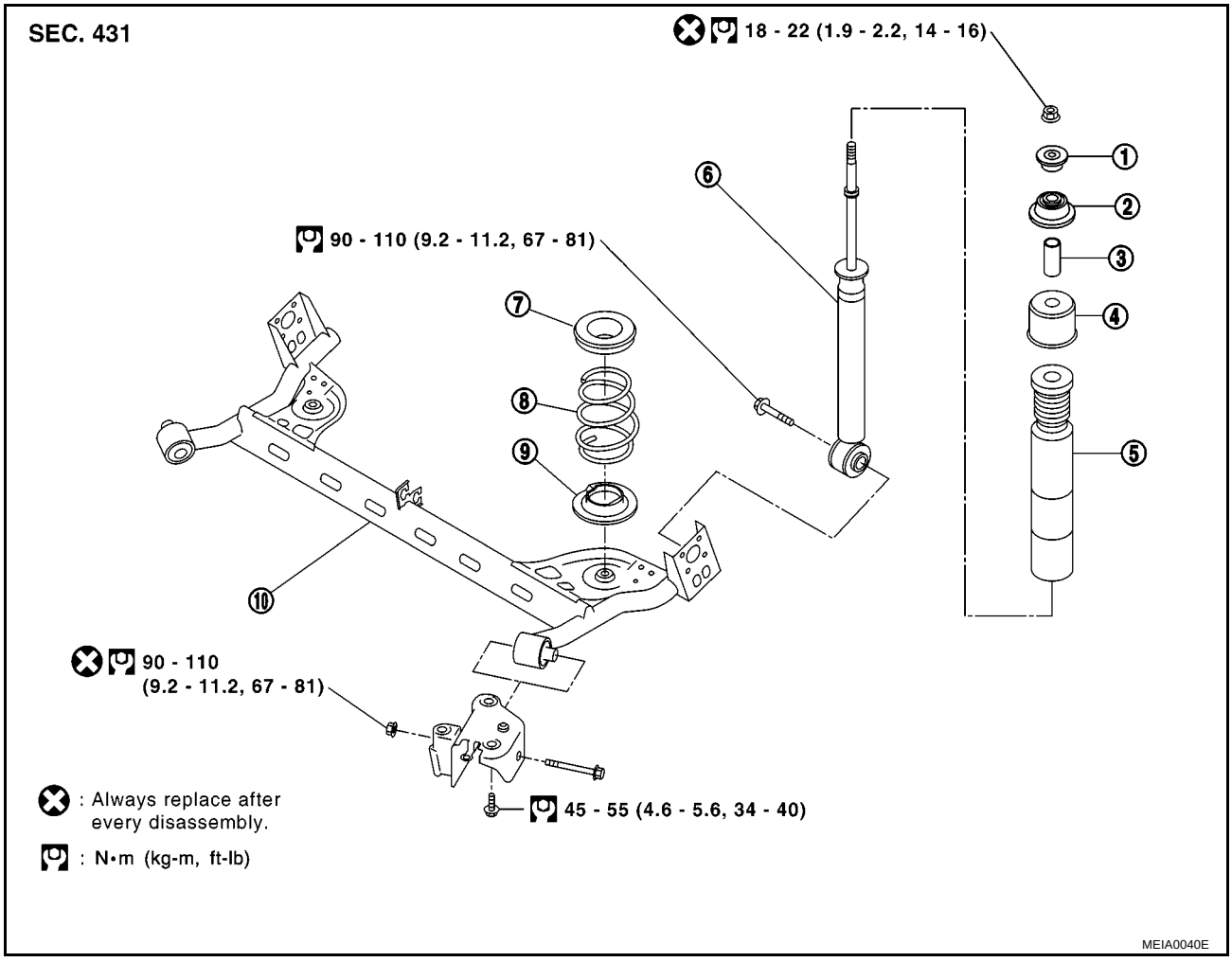
×: Applicable

REAR SUSPENSION ASSEMBLY

PFP:55020

Components

EES000ZO



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

EES000ZP

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.

Wheel Alignment

EES000ZQ

DESCRIPTION

- 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°56′- -0°26′ (-1.94°- -0.44°)

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

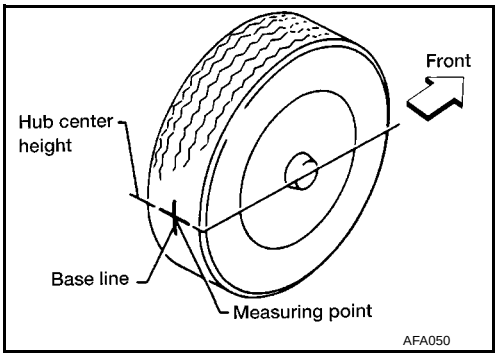
TOE-IN

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.

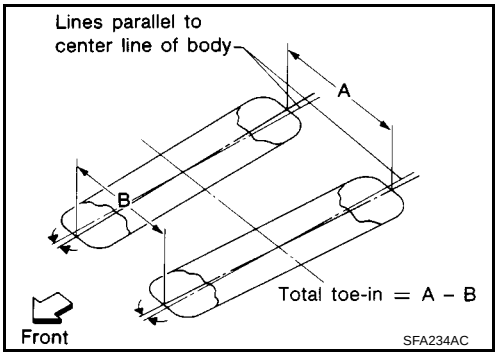


4. Measure distance “A” (rear side).
5. Push the vehicle slowly ahead to rotate the wheels 180 degrees (1/2 turn).

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

PFP:56210

Removal and Installation

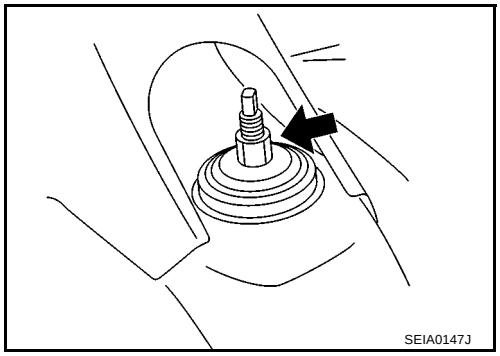
EES000ZR

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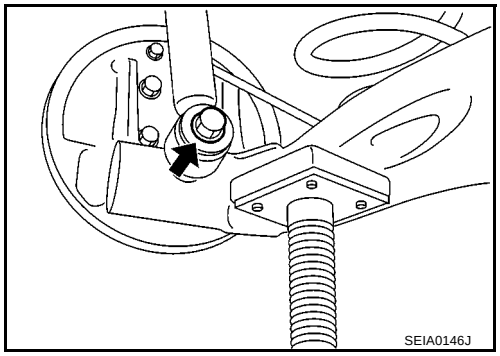
4. Set a jack under trailing arm of rear suspension beam and support it. Remove lower bolts of the shock absorber.
5. Remove shock absorber from the vehicle.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INSPECTION AFTER REMOVAL

Shock Absorber

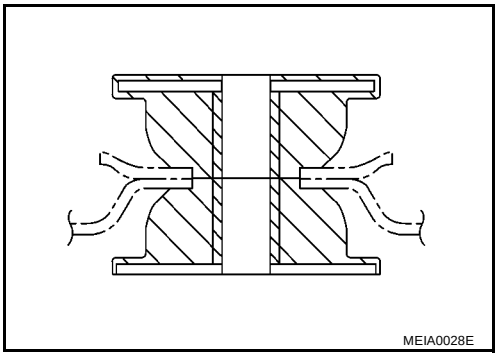
- Check shock absorber for deformation, cracks, and other damage. Replace if any non-standard conditions are found.
- Check piston rod for damage, uneven wear, and distortion, and replace shock absorber if necessary.
- Check welded and sealed areas for oil leakage, and replace if necessary.

Bound Bumper and Bushing

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

INSTALLATION

- Refer to RSU-4, "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

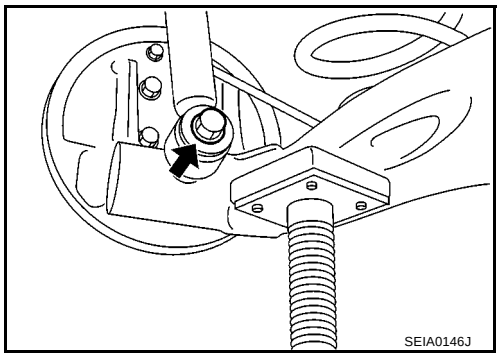
PFP:55020

Removal and Installation

EES000ZS

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.

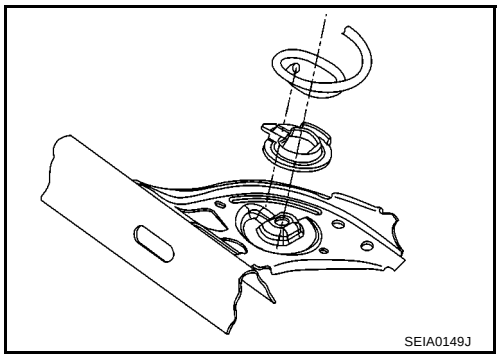


INSPECTION AFTER REMOVAL

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

INSTALLATION

- Refer to RSU-4, "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.



REAR SUSPENSION BEAM

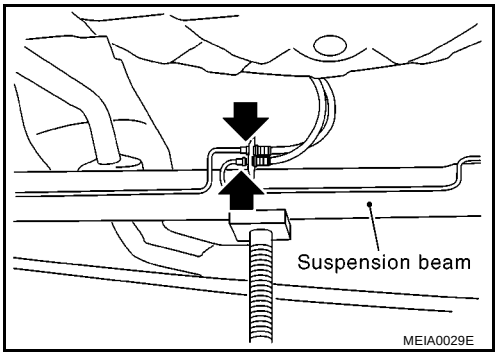
PFP:55501

Removal and Installation

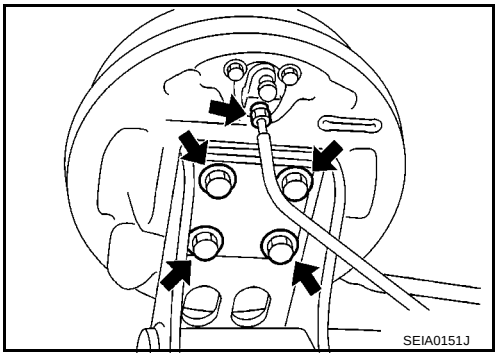
EES000ZT

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-44, "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-6, "SHOCK ABSORBER" , RSU-8, "COIL SPRING"
7. Set a jack under suspension beam, and remove mounting bolts of suspension arm bracket and rear suspension beam.
8. Remove suspension beam.
9. Remove brake piping from rear suspension member beam. Refer to BR-11, "BRAKE PIPING AND HOSE" .



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

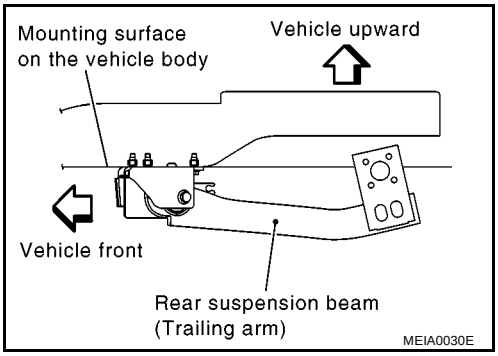


INSPECTION AFTER REMOVAL

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

INSTALLATION

- Refer to RSU-4, "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.
- Tighten rear suspension arm bracket under unladen condition.
- Refer to BRC-44, "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" .



SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Wheel Alignment

EES000ZU

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

Tightening Torque

EES000ZV

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)