

SECTION **RSU**
 REAR SUSPENSION

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RSU

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PRECAUTIONS

PRECAUTIONS

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

EES002W9

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.

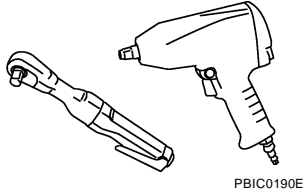
PREPARATION

PREPARATION

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Commercial Service Tools

EES002WB

Tool name	Description
Power tool 	Removing wheel nuts

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NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PF:00003

NVH Troubleshooting Chart

EES002WC

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

Symptom		Possible cause and SUSPECTED PARTS										Reference page		
		Improper installation, looseness	Shock absorber deformation, damage or deflection	Bushing or mounting deterioration	Parts interference	Spring fatigue	Suspension looseness	Incorrect wheel alignment	REAR AXLE	TIRES	ROAD WHEEL		BRAKES	STEERING
Symptom	Noise	x	x	x	x	x	x		x	x	x	x	x	RSU-7 RSU-8 RSU-8 RSU-8 RSU-9 RSU-7 RSU-5 RAX-3, "NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING" WT-4, "NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING" WT-4, "NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING" BR-5, "NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING" PS-5, "NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING"
	Shake	x	x	x	x		x		x	x	x	x	x	
	Vibration	x	x	x	x	x			x	x			x	
	Shimmy	x	x	x	x			x	x	x	x	x	x	
	Shudder	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

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On-Vehicle Inspection and Service

EES002WD

Make sure the mounting conditions (looseness, backlash) of each component and component conditions (wear, damage) are within specifications.

SHOCK ABSORBER INSPECTION

Check shock absorber for oil leakage, damage and replace it if necessary.

Wheel Alignment Inspection DESCRIPTION

EES002WE

Measure wheel alignment under unladen conditions.

NOTE:

“Unladen conditions” means that fuel, engine coolant, and lubricant are full. Spare tire, jack, hand tools and mats are in designated positions.

PRELIMINARY

Check the following:

1. Tires for improper air pressure and wear.
2. Road wheels for runout. Refer to [WT-5, "ROAD WHEEL"](#) .
3. Wheel bearing axial end play. Refer to [RAX-4, "REAR WHEEL BEARING INSPECTION"](#) .
4. Shock absorber operation.
5. Each mounting part of suspension for looseness and deformation.
6. Rear suspension beam for cracks, deformation, and other damage.
7. Vehicle height (posture).

GENERAL INFORMATION AND RECOMMENDATIONS

1. A Four-Wheel Thrust Alignment should be performed.
 - This type of alignment is recommended for any NISSAN vehicle.
 - The four-wheel “thrust” process helps ensure that the vehicle is properly aligned and the steering wheel is centered.
 - The alignment machine itself should be capable of accepting any NISSAN vehicle.
 - The alignment machine should be checked to ensure that it is level.
2. Make sure the alignment machine is properly calibrated.
 - Your alignment machine should be regularly calibrated in order to give correct information.
 - Check with the manufacturer of your specific alignment machine for their recommended Service/Calibration Schedule.

THE ALIGNMENT PROCESS

IMPORTANT: Use only the alignment specifications listed in this Service Manual. Refer to [RSU-12, "Wheel Alignment \(Unladen*\)"](#) .

1. When displaying the alignment settings, many alignment machines use “indicators”: (Green/red, plus or minus, Go/No Go). **Do NOT use these indicators.**
 - The alignment specifications programmed into your alignment machine that operate these indicators may not be correct.
 - This may result in an ERROR.
2. Some newer alignment machines are equipped with an optional “Rolling Compensation” method to “compensate” the sensors (alignment targets or head units). **Do NOT use this “Rolling Compensation” method.**
 - Use the “Jacking Compensation” method. After installing the alignment targets or head units, raise the vehicle and rotate the wheels 1/2 turn both ways.
 - See Instructions in the alignment machine you are using for more information.

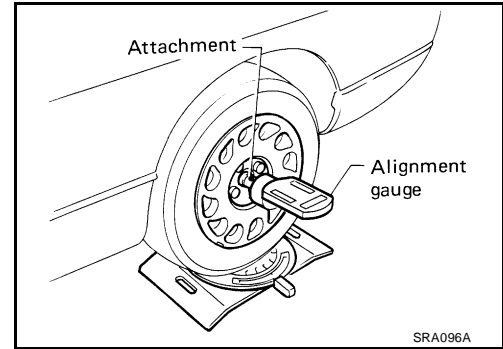
REAR SUSPENSION ASSEMBLY

CAMBER INSPECTION

- Measure camber of both right and left wheels with a suitable alignment gauge.

Camber : Refer to [RSU-12, "Wheel Alignment \(Unladen*\)"](#) .

- If it is out of the specification value, inspect and replace any damaged or worn rear suspension parts.

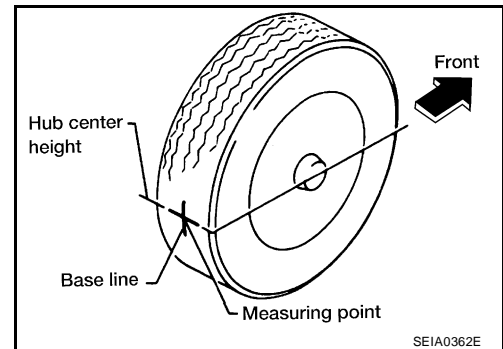


TOE-IN INSPECTION

Measure toe-in using following procedure. If it is out of the specification, inspect and replace any damaged or worn rear suspension parts.

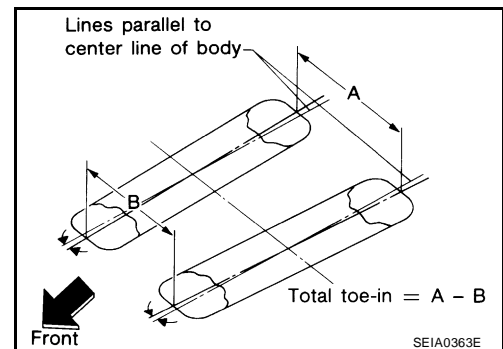
WARNING:

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



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

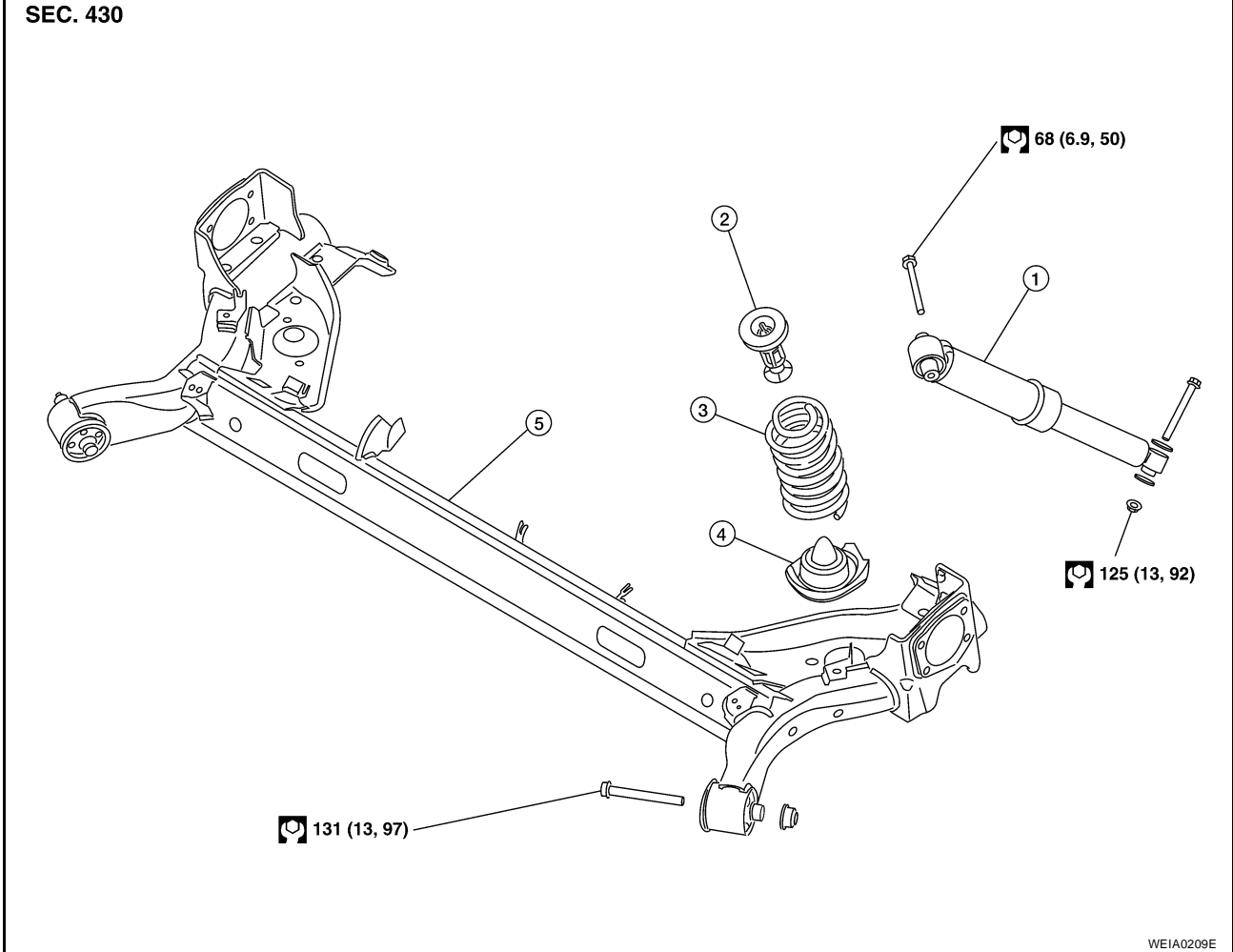
Total toe-in : Refer to [RSU-12, "Wheel Alignment \(Unladen*\)"](#) .



REAR SUSPENSION ASSEMBLY

Components

EES002WF



- 1. Shock absorber
- 2. Bound bumper
- 3. Coil spring
- 4. Rear spring lower rubber seat
- 5. Rear suspension beam

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SHOCK ABSORBER

SHOCK ABSORBER

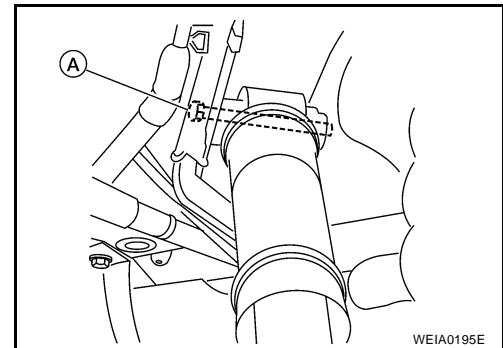
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Removal and Installation

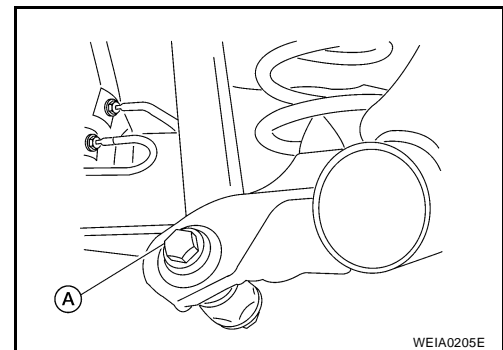
EES002WG

REMOVAL

1. Set jack under rear suspension beam.
2. Remove upper shock absorber bolt (A).



3. Remove shock absorber lower bolt (A).
4. Remove the shock absorber from vehicle.



INSPECTION AFTER REMOVAL

Shock Absorber

Check the following:

- Shock absorber for deformation, cracks or damage, and replace if necessary.
- Piston rod for damage, uneven wear or distortion, and replace if necessary.

INSTALLATION

Installation is in the reverse order of removal. For tightening specifications, refer to [RSU-7, "Components"](#).

COIL SPRING

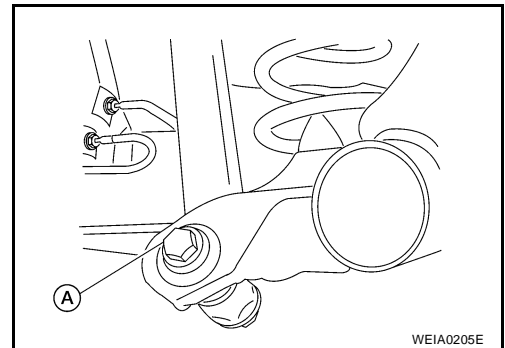
COIL SPRING

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Removal and Installation

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1. Set jack under rear suspension beam.
2. Remove both shock absorber lower bolts (A).
3. Gradually lower the jack, and then remove coil spring, bound bumper and rear spring rubber seat.



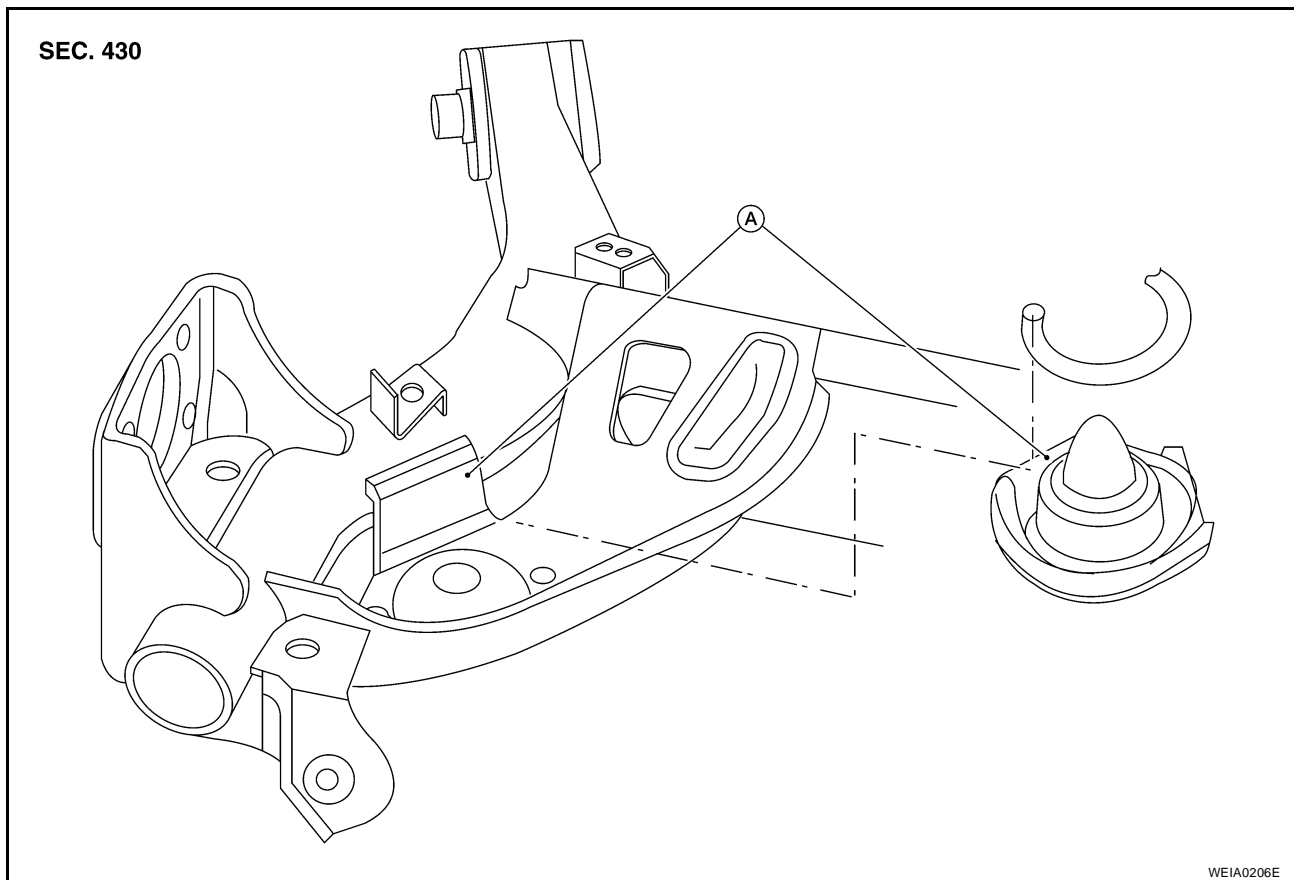
INSPECTION AFTER REMOVAL

Check coil spring and spring rubber seat for deformation, cracks, and damage, and replace it if a malfunction is detected.

INSTALLATION

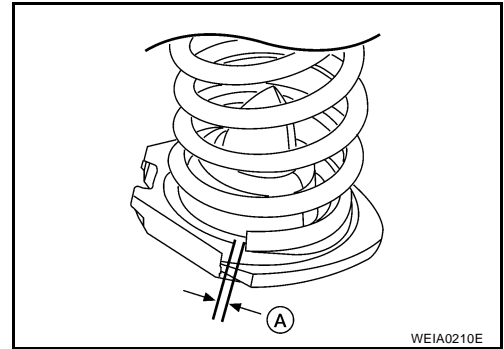
Installation is in the reverse order of removal. For tightening specifications, refer to [RSU-7, "Components"](#).

- When installing rear spring rubber seat, be sure that the flat areas (A) are aligned.



COIL SPRING

- When installing rear spring, be sure that the gap is less than 5mm.



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REAR SUSPENSION BEAM

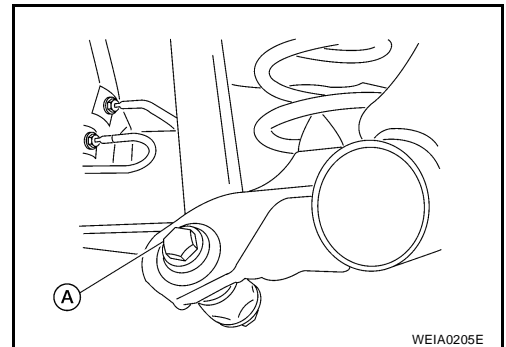
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REAR SUSPENSION BEAM

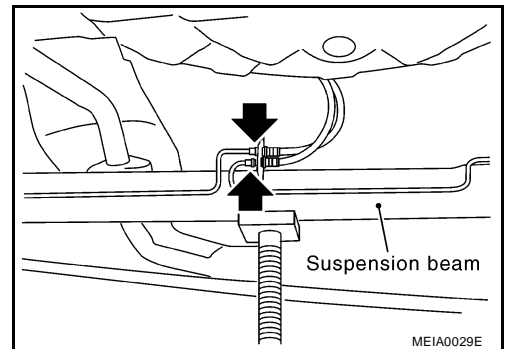
Removal and Installation REMOVAL

EES002WI

1. Remove rear tires from vehicle using power tool.
2. Remove rear drum and brake assembly. Refer to [BR-37, "Removal and Installation of Drum Brake Assembly"](#) .
3. Separate parking brake rear cable from rear drum brake and rear suspension beam. Refer to [PB-4, "PARKING BRAKE CONTROL"](#) .
4. Remove wheel sensor and wheel sensor harness from wheel hub and bearing assembly and rear suspension beam, if equipped. Refer to [BRC-31, "WHEEL SENSORS"](#) .
5. Remove rear brake tube and brake hose from the wheel cylinder. Refer to [BR-13, "Rear Brake Tube and Hose"](#) .
6. Remove wheel hub and bearing assembly and back plate. Refer to [RAX-4, "WHEEL HUB"](#) .
7. Set jack under rear suspension beam.
8. Remove both shock absorber lower bolts (A). Refer to [RSU-8, "Removal and Installation"](#) .



9. Remove coil springs (left/right). Refer to [RSU-9, "Removal and Installation"](#) .
10. Remove brake line retaining clip and disconnect the brake line from the rear suspension beam bracket.
11. Remove center exhaust pipe assembly and insulator. Refer to [EX-2, "Removal and Installation"](#) .
12. Remove rear suspension beam bolt and nut. Refer to [RSU-7, "Components"](#) .
13. Gradually lower the jack to remove rear suspension beam from vehicle.



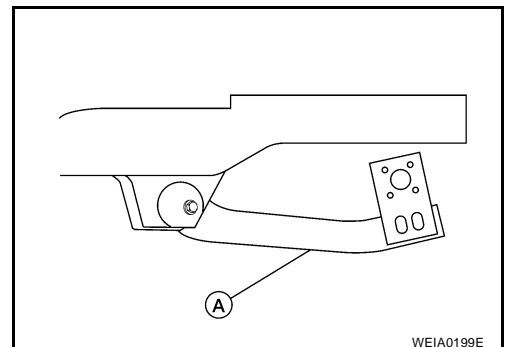
INSPECTION AFTER REMOVAL

Check components for deformation, cracks, and other damage, and replace if necessary.

INSTALLATION

Installation is in the reverse order of removal. For tightening torque, refer to [RSU-7, "Components"](#) .

- Perform final tightening of rear suspension beam (A) under unladen conditions with tires on level ground.
- Refill with new brake fluid and bleed air. Refer to [BR-10, "Bleeding Brake System"](#) .
- Check the following after finishing work.
 - Parking brake operation (stroke): Refer to [PB-4, "ADJUSTMENT"](#) .
 - Wheel sensor harness for proper connection: Refer to [BRC-31, "WHEEL SENSORS"](#)



SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

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Wheel Alignment (Unladen*)

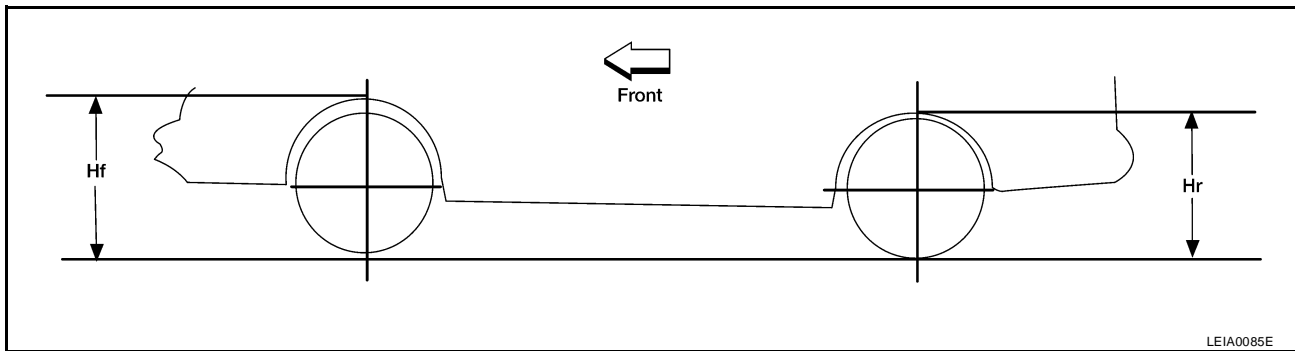
EES002WJ

Model		2.0, 2.0 S, 2.0 SL	SE-R	SPEC-V	
Camber Degree minute (Decimal degree)	Minimum	-2° 00' (-2.00°)	-2° 00' (-2.00°)	-2° 00' (-2.00°)	
	Nominal	-1° 30' (-1.50°)	-1° 30' (-1.50°)	-1° 30' (-1.50°)	
	Maximum	-1° 00' (-1.00°)	-1° 00' (-1.00°)	-1° 00' (-1.00°)	
Total toe-in	Distance (A - B)	Minimum	-3.0 mm (-0.118 in)	-2.0 mm (-0.079 in)	-1.0 mm (-0.039 in)
		Nominal	1.0 mm (0.039 in)	2.0 mm (0.079 in)	3.0 mm (0.118 in)
		Maximum	5.0 mm (0.197 in)	4.0 mm (0.157 in)	7.0 mm (0.276 in)

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

Wheelarch Height (Unladen*)

EES002WK



Engine	MR20DE		QR25DE	
Model	2.0	2.0 S, 2.0 SL	SE-R	SPEC-V
Tire Size	P205/60HR15	P205/55HR16	P225/45VR17	P225/45WR17
Front (Hf) mm (in)	691 (27.20)	694 (27.32)	690 (27.17)	679 (26.73)
Rear (Hr) mm (in)	693 (27.28)	696 (27.40)	690 (27.17)	677 (26.65)

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