

SECTION **RSU**
 REAR SUSPENSION

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RSU

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

INFOID:000000005549829

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 3 minutes before performing any service.

Precaution for Rear Suspension

INFOID:000000005275395

- When installing the rubber bushings, the final tightening must be done under unladen condition and with the tires on level ground. Oil will shorten the life of the rubber bushings, so wipe off any spilled oil immediately.
- Unladen condition means the fuel tank, engine coolant and lubricants are at the full specification. The spare tire, jack, hand tools, and mats are in their designated positions. There are no passengers in the vehicle.
- After installing suspension components, check the wheel alignment.
- Caulking nuts are not reusable. Always use new caulking nuts for installation. New caulking nuts are pre-oiled, do not apply any additional lubrication.

PREPARATION

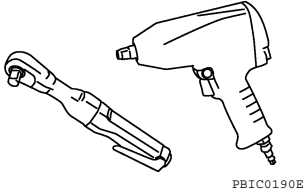
< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:000000005275396

| Tool name | Description |
|--|-------------------------|
| Power tool  PBIC0190E | Removing bolts and nuts |

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NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

NVH Troubleshooting Chart

INFOID:000000005275397

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

| Symptoms | | 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 | PROPELLER SHAFT | REAR FINAL DRIVE | AXLE | TIRES | ROAD WHEEL | BRAKES | STEERING | |
| Symptoms | Noise | x | x | x | x | x | x | x | x | x | x | x | x | x | RSU-6 |
| | Shake | x | x | x | x | | x | x | | x | | x | x | | RSU-8 |
| | Vibration | x | x | x | x | x | | x | | x | | | | | RSU-6 |
| | Shimmy | x | x | x | x | | | | | | | x | x | x | RSU-6 |
| | Shudder | x | x | x | | | | | | | | x | x | x | RSU-9 |
| | Poor quality ride or handling | x | x | x | x | x | x | | | | | x | x | x | RSU-6 |
| | | | | | | | | | | | | | | | DLN-174, "NVH Troubleshooting Chart" |
| | | | | | | | | | | | | | | | DLN-273, "NVH Troubleshooting Chart" |
| | | | | | | | | | | | | | | | RAX-5, "NVH Troubleshooting Chart" (C200), RAX-17, "NVH Troubleshooting Chart" (M226) |
| | | | | | | | | | | | | | | | WT-41, "NVH Troubleshooting Chart" |
| | | | | | | | | | | | | | | | WT-41, "NVH Troubleshooting Chart" |
| | | | | | | | | | | | | | | | BR-6, "NVH Troubleshooting Chart" |
| | | | | | | | | | | | | | | | ST-5, "NVH Troubleshooting Chart" |

x: Applicable

REAR SUSPENSION ASSEMBLY

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

REAR SUSPENSION ASSEMBLY

On-Vehicle Inspection and Service

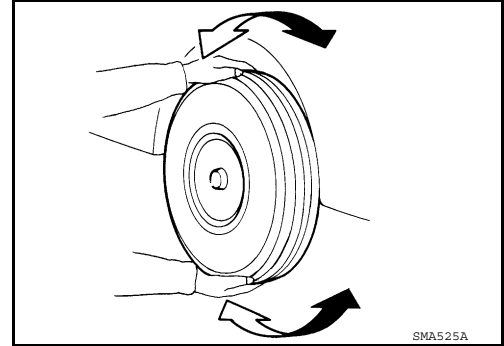
INFOID:000000005275398

- 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.



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REAR SUSPENSION ASSEMBLY

< ON-VEHICLE REPAIR >

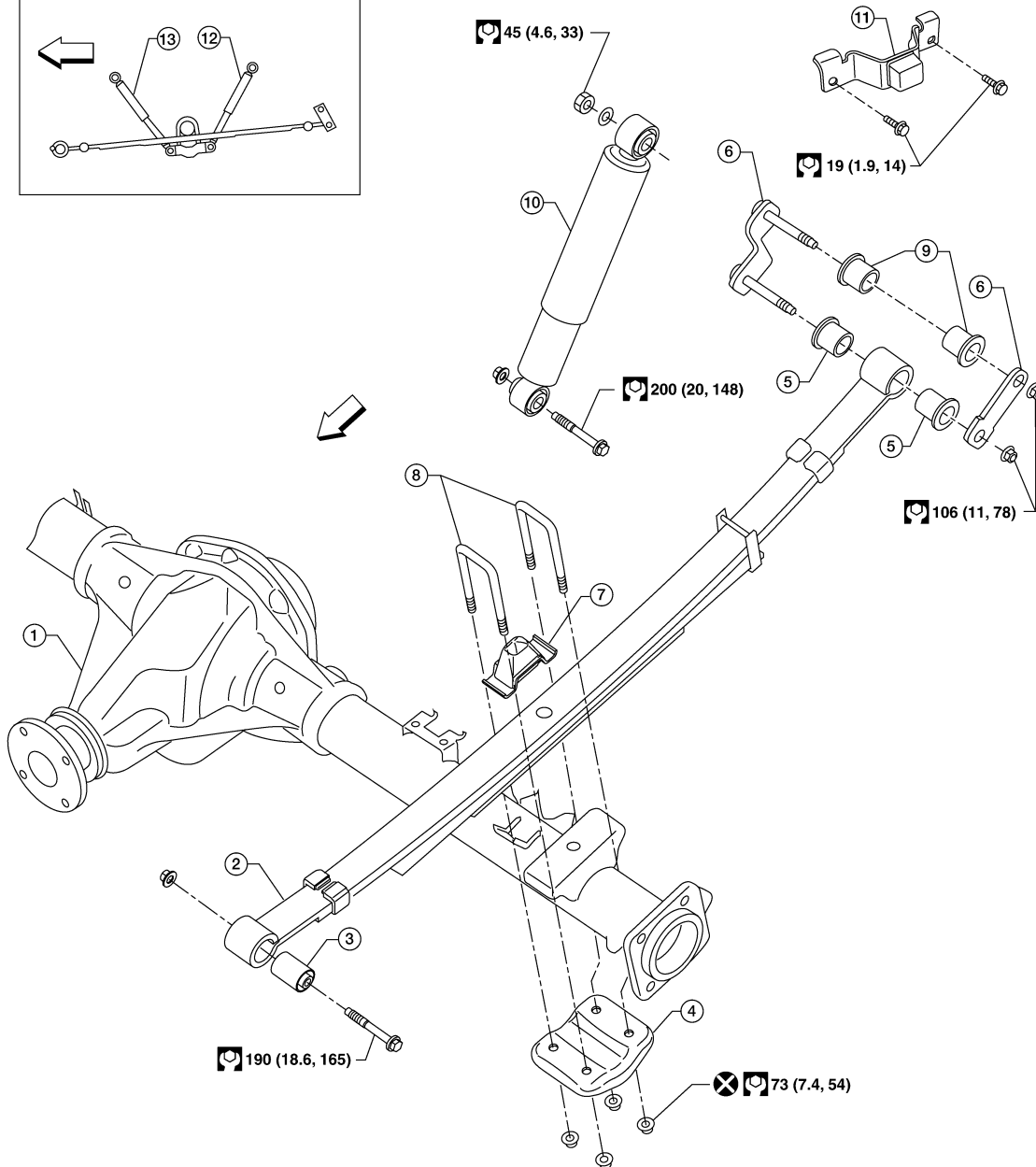
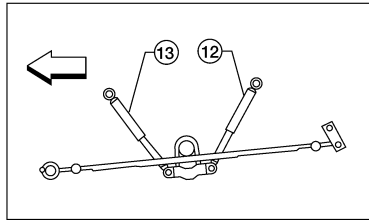
ON-VEHICLE REPAIR

REAR SUSPENSION ASSEMBLY

Component

INFOID:000000005275399

SEC. 431



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- | | | |
|---------------------------------|-------------------------------|--------------------------------|
| 1. Rear final drive | 2. Rear leaf spring | 3. Rear spring bushing (front) |
| 4. Rear spring pad | 5. Rear spring bushing (rear) | 6. Rear spring shackle |
| 7. Bumper | 8. Rear spring clip U-bolts | 9. Rear spring shackle bushing |
| 10. Shock absorber | 11. Bumper | 12. Shock absorber (left side) |
| 13. Shock absorber (right side) | ← Front | |

REAR SUSPENSION ASSEMBLY

< ON-VEHICLE REPAIR >

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.

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SHOCK ABSORBER

< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

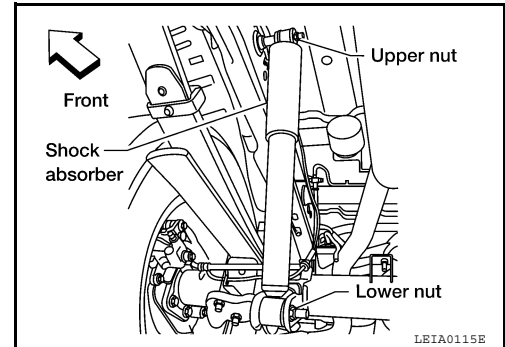
SHOCK ABSORBER

Removal and Installation

INFOID:000000005275400

REMOVAL

1. Support the rear final drive and suspension assembly using a suitable jack.
2. Remove the shock absorber upper and lower nuts and bolts using power tool.



3. 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.

Shock absorber upper and lower nuts : Refer to [RSU-6, "Component"](#).

Disposal

INFOID:000000005549828

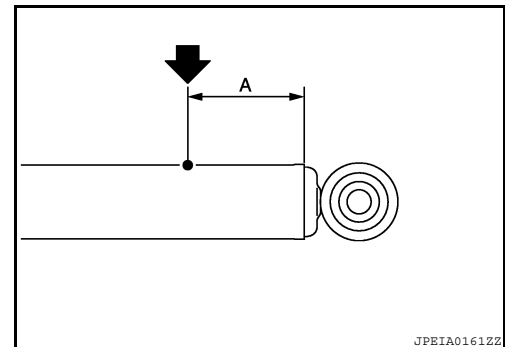
1. Set shock absorber horizontally with the piston rod fully extended.
2. Drill 2 – 3 mm (0.08 – 0.12 in) hole at the position (●) from top as shown in the figure to release gas gradually.

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

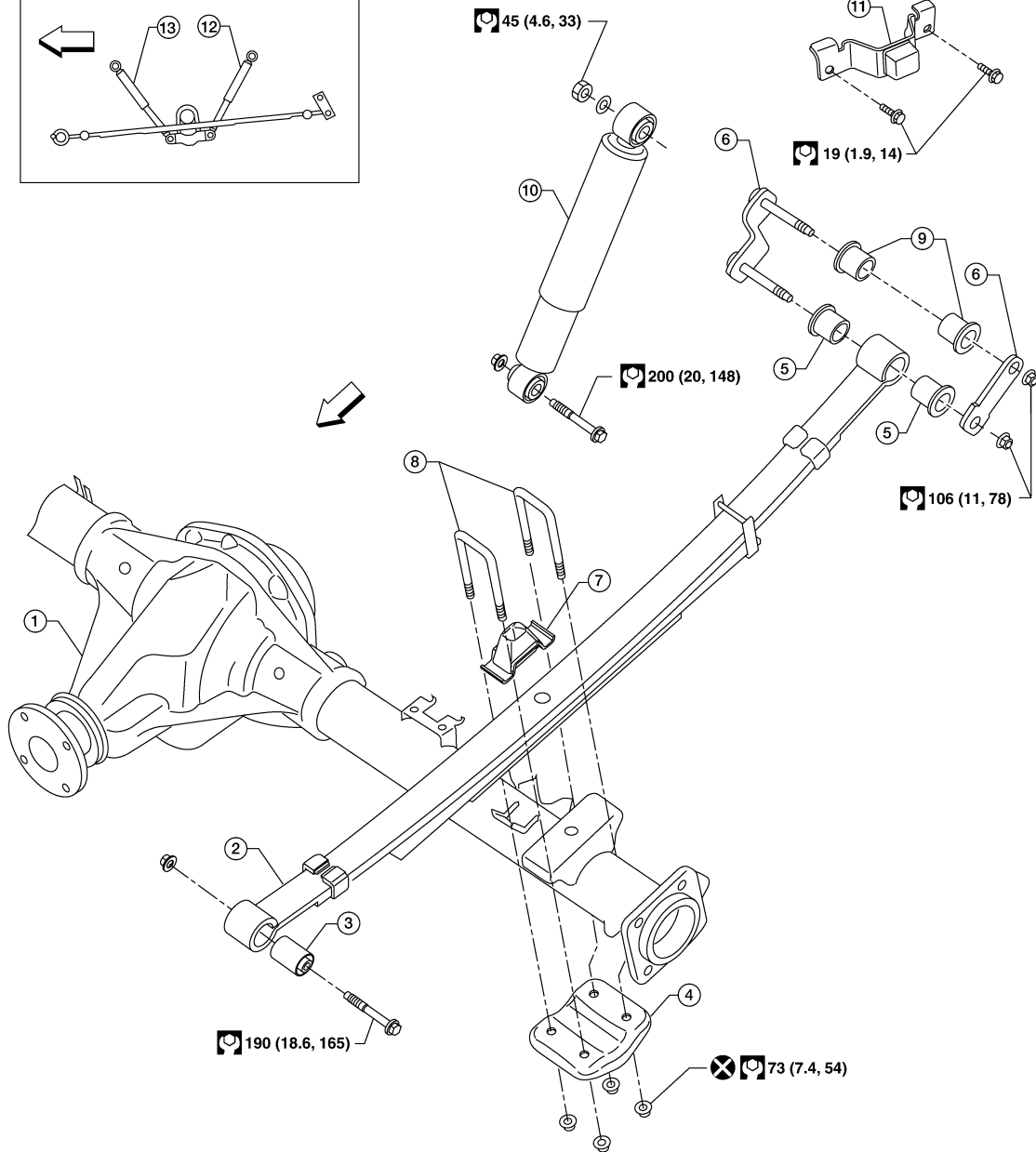
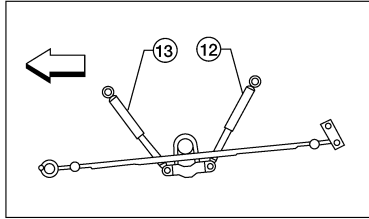
< REMOVAL AND INSTALLATION >

LEAF SPRING

Removal and Installation

INFOID:000000005275401

SEC. 431



- | | | |
|---------------------------------|-------------------------------|--------------------------------|
| 1. Rear final drive | 2. Rear leaf spring | 3. Rear spring bushing (front) |
| 4. Rear spring pad | 5. Rear spring bushing (rear) | 6. Rear spring shackle |
| 7. Bumper | 8. Rear spring clip U-bolts | 9. Rear spring shackle bushing |
| 10. Shock absorber | 11. Bumper | 12. Shock absorber (left side) |
| 13. Shock absorber (right side) | ← Front | |

CAUTION:

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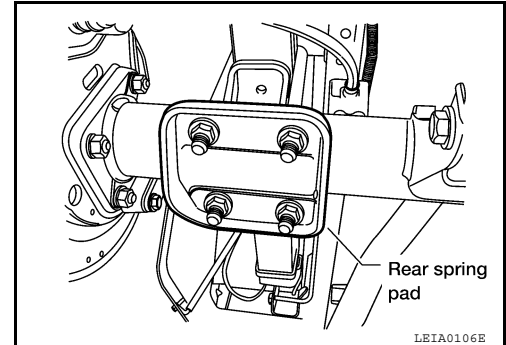
LEAF SPRING

< REMOVAL AND INSTALLATION >

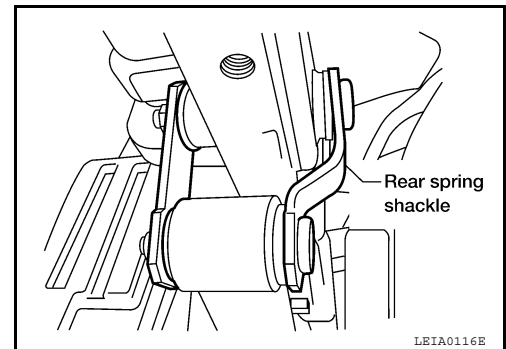
When installing the components with rubber bushings, the final tightening of the nuts and bolts must be done with the vehicle in an unladen condition (the fuel, engine coolant, and engine oil full; the spare tire, jack, hand tools and mats in their designated positions) with the tires on the ground.

REMOVAL

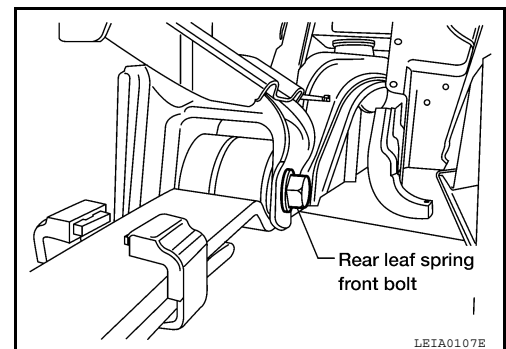
1. Support the rear final drive assembly with a suitable jack to relieve the tension from the rear leaf spring.
 - The axle weight should be supported, but there should be no compression in the rear leaf spring.
2. Remove the four rear spring clip U-bolt nuts using power tool, then remove the rear spring pad and bumper.



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



4. Remove the rear leaf spring front nut and bolt using power tool.
5. 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.

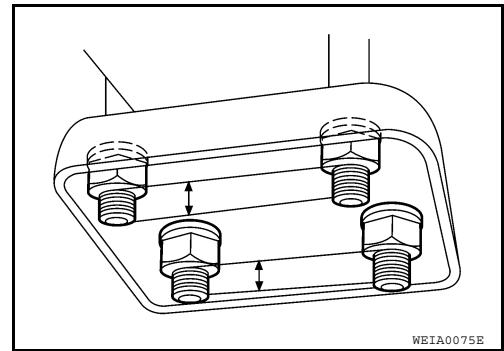
INSTALLATION

1. Apply soapsuds to all of the rubber bushings.
2. Install the rear spring shackle and rear leaf spring front nut and bolt. Finger-tighten the nuts.
3. Install the rear spring clip U-bolts and bumper on top of the rear leaf spring.
4. Install the bumper and rear spring pad, then finger-tighten nuts under the axle case.

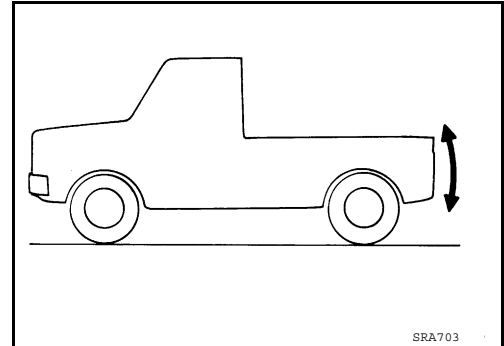
LEAF SPRING

< REMOVAL AND INSTALLATION >

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. Tighten the rear spring shackle nuts, rear leaf spring front nut, and shock absorber nuts to specification.
 - 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.)

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SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

General Specification (Rear)

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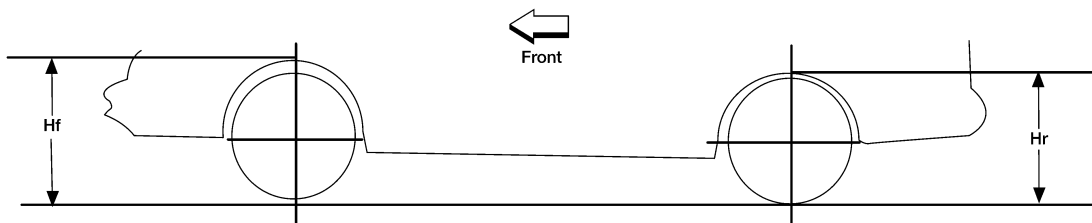
| | |
|---------------------|--|
| Suspension type | Rigid axle with semi-elliptic leaf springs |
| Shock absorber type | Double-acting hydraulic |

Wheelarch Height (Unladen*¹)

INFOID:000000005275403

King Cab

Unit: mm (in)



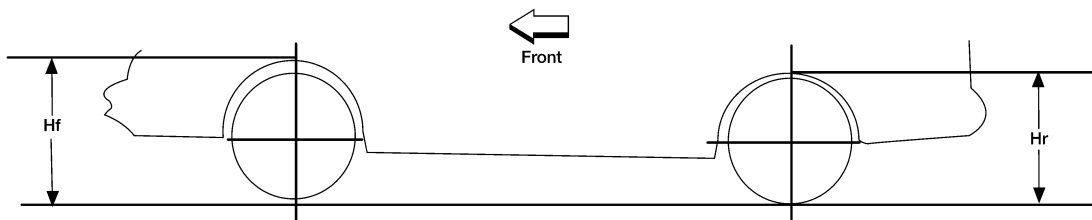
LEIA0085E

| Engine type | QR25DE | | | VQ40DE | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Drive type | 2WD | | | | 4WD | | | |
| Tire size | P235/75R15 | P265/70R16 | | P265/75R16 | P265/60R18 | P265/70R16 | P265/75R16 | P265/60R18 |
| Front wheelarch height (Hf) | 850 (33.46) | 865 (34.06) | 868 (34.17) | 880 (34.65) | 867 (34.13) | 881 (34.68) | 893 (35.16) | 881 (34.68) |
| Rear wheelarch height (Hr) | 878 (34.57) | 887 (34.92) | 895 (35.24) | 907 (35.71) | 893 (35.16) | 904 (35.59) | 917 (36.10) | 903 (35.55) |

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

Crew Cab

Unit: mm (in)



LEIA0085E

| Engine type | VQ40DE | | | | | |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Drive type | 2WD | | | 4WD | | |
| Tire size | P265/70R16 | P265/75R16 | P265/60R18 | P265/70R16 | P265/75R16 | P265/60R18 |
| Front wheelarch height (Hf) | 867 (34.13) | 879 (34.61) | 866 (34.09) | 879 (34.61) | 891 (35.08) | 879 (34.61) |
| Rear wheelarch height (Hr) | 892 (35.12) | 904 (35.59) | 892 (35.12) | 905 (35.63) | 918 (36.14) | 905 (35.63) |

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