

SECTION **RSU**
REAR SUSPENSION

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RSU

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PRECAUTIONS

PRECAUTIONS

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Precautions

EES001KR

- 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.

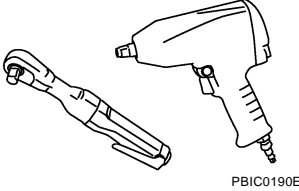
PREPARATION

PREPARATION

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Commercial Service Tools

EES001KS

Tool name	Description
Power tool  PBIC0190E	Removing nuts and bolts

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NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

NOISE VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

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NVH Troubleshooting Chart

EES001KT

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	x	
	Shake	x	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	
	Shudder	x	x	x						x	x	x	x	x	x	
	Poor quality ride or handling	x	x	x	x	x	x			x	x	x				
																RSU-5 RSU-7 RSU-5 RSU-5 RSU-10 RSU-5 PR-3, "NVH Troubleshooting Chart" RFD-8 (C200), RFD-42 (M226 without LD), RFD-76 (M226 with LD) RAX-5 (C200), RAX-17 (M226) WT-3, "NVH Troubleshooting Chart" WT-3, "NVH Troubleshooting Chart" BR-5, "NVH Troubleshooting Chart" PS-5, "NVH Troubleshooting Chart"

x: Applicable

REAR SUSPENSION ASSEMBLY

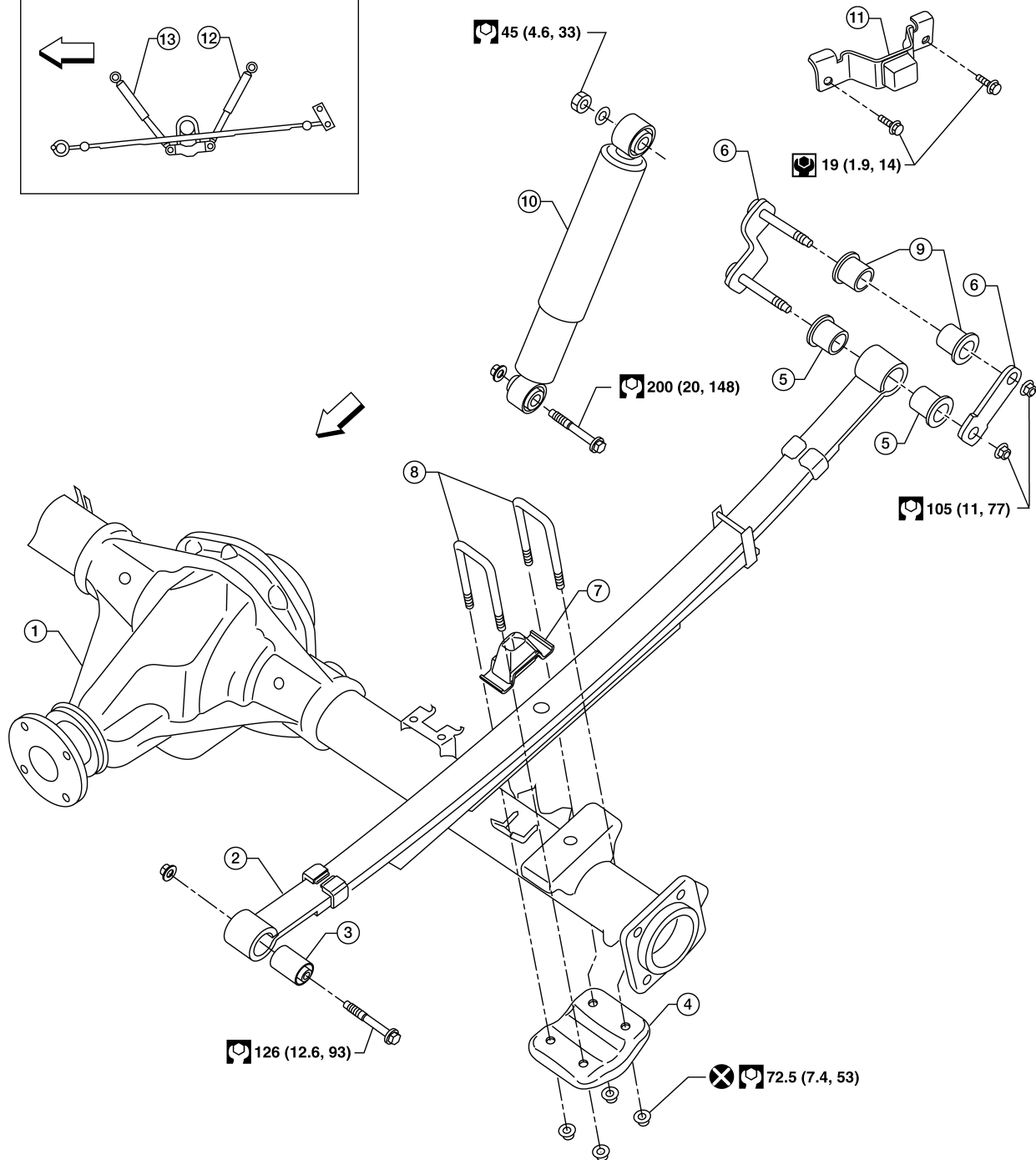
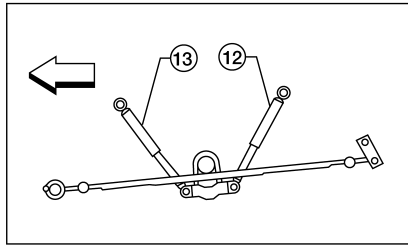
REAR SUSPENSION ASSEMBLY

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Components

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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 |

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REAR SUSPENSION ASSEMBLY

10. Shock absorber

11. Bumper

12. Shock absorber (left side)

13. Shock absorber (right side)

⇐ Front

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.

On-Vehicle Inspection and Service

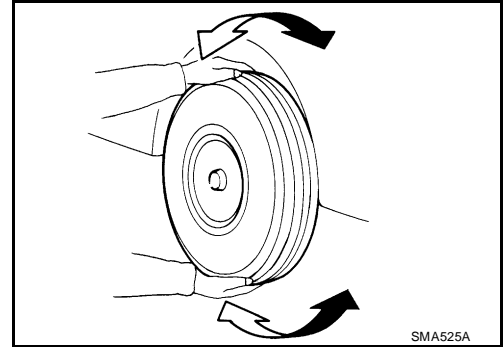
EES001KV

- 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.



SHOCK ABSORBER

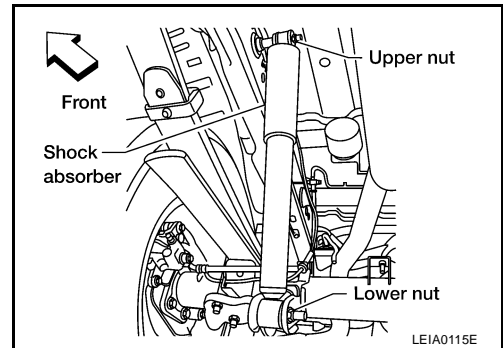
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SHOCK ABSORBER

Removal and Installation

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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-5, "Components"](#) .

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LEAF SPRING

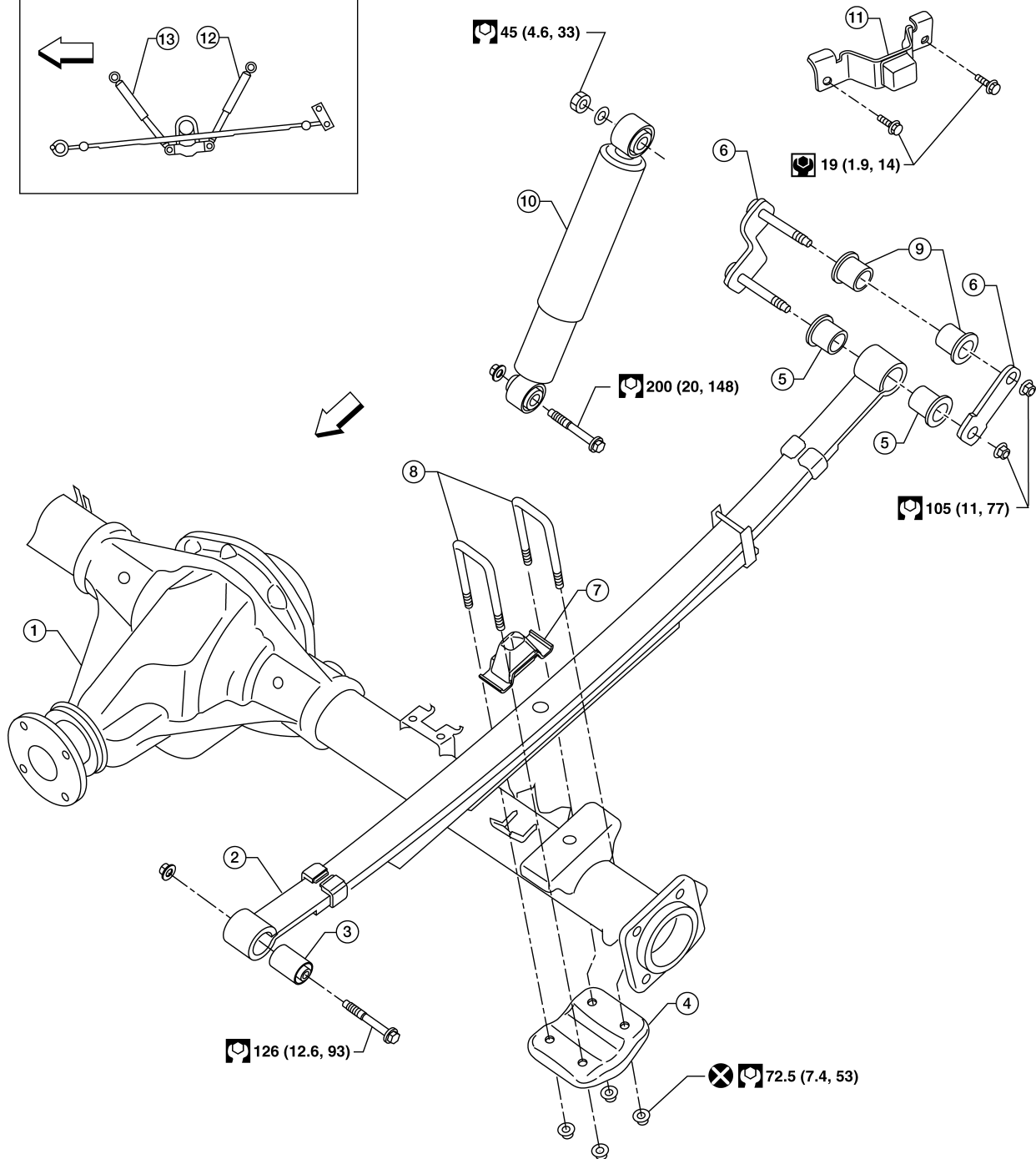
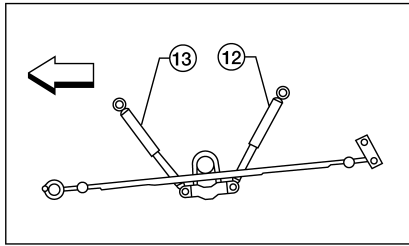
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LEAF SPRING

Removal and Installation

SEC. 431



- 1. Rear final drive
- 4. Rear spring pad
- 7. Bumper

- 2. Rear leaf spring
- 5. Rear spring bushing (rear)
- 8. Rear spring clip U-bolts

- 3. Rear spring bushing (front)
- 6. Rear spring shackle
- 9. Rear spring shackle bushing

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LEAF SPRING

10. Shock absorber

11. Bumper

12. Shock absorber (left side)

13. Shock absorber (right side)

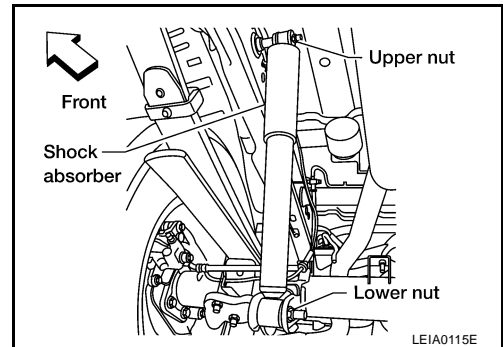
⇐ Front

CAUTION:

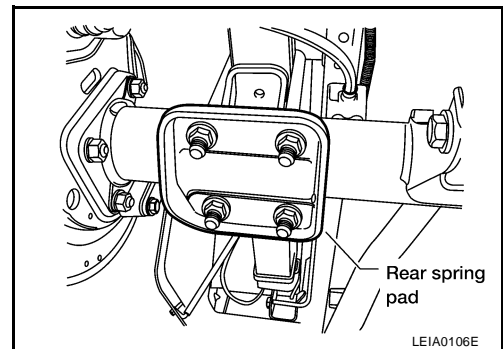
When installing the components with rubber bushings, the final tightening of the nuts and bolts must be done with the vehicle in an unladen condition (the fuel, engine coolant, and engine oil full; the spare tire, jack, hand tools and mats in their designated positions) with the tires on the ground.

REMOVAL

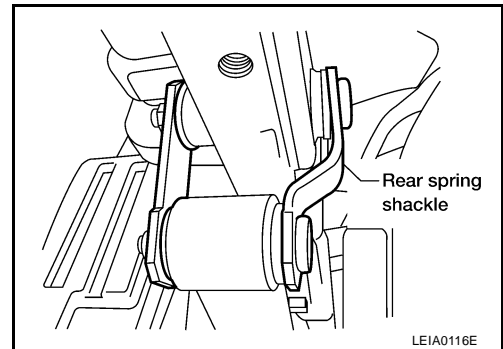
1. Support the rear final drive assembly with a suitable jack to relieve the tension from the rear leaf spring.
 - The axle weight should be supported, but there should be no compression in the rear leaf spring.
2. Remove the shock absorber lower nut and bolt using power tool.



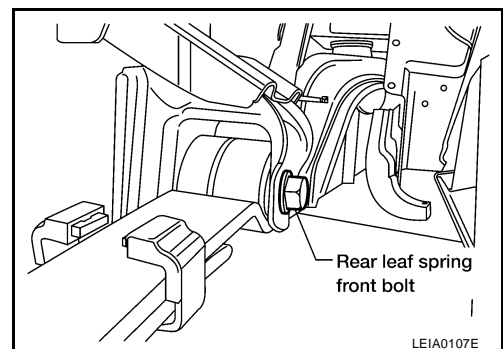
3. Remove the four rear spring clip U-bolt nuts using power tool, then remove the rear spring pad.



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



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



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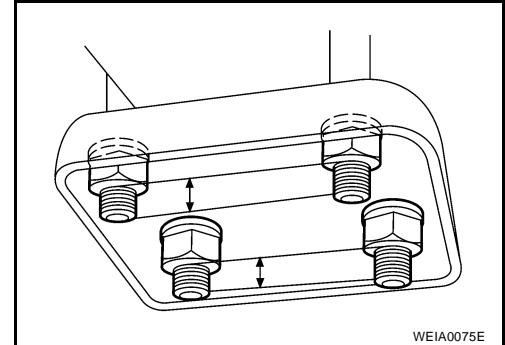
LEAF SPRING

INSPECTION AFTER REMOVAL

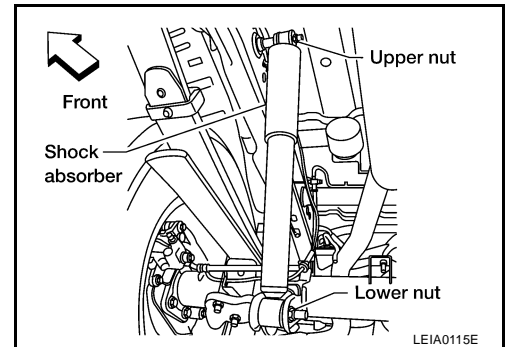
- Check the rear leaf spring for any cracks or damage. Replace the rear leaf spring if necessary.
- Check the rear spring shackle, rear spring clip U-bolts, bumper, and rear spring pad for excessive wear, cracks, straightness, and damage. Replace any components if necessary.
- Check all bushings for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

INSTALLATION

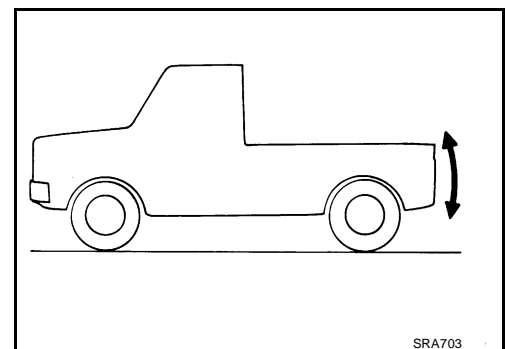
1. Apply soapsuds to all of the rubber bushings.
2. Install the rear spring shackle and rear leaf spring front nut and bolt. Finger-tighten the nuts.
3. Install the rear spring clip U-bolts and bumper on top of the rear leaf spring.
4. Install the rear spring pad, and nuts under the axle case.
5. Tighten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



7. Remove the jack supporting the rear final drive assembly and bounce the rear of the vehicle to stabilize the suspension.



8. 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.)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

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General Specifications (Rear)

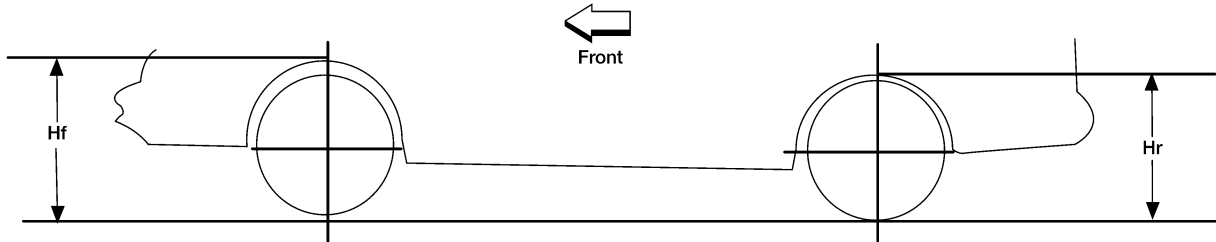
EES001KY

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

Wheelarch Height (Unladen*1) King Cab

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Unit: mm (in)



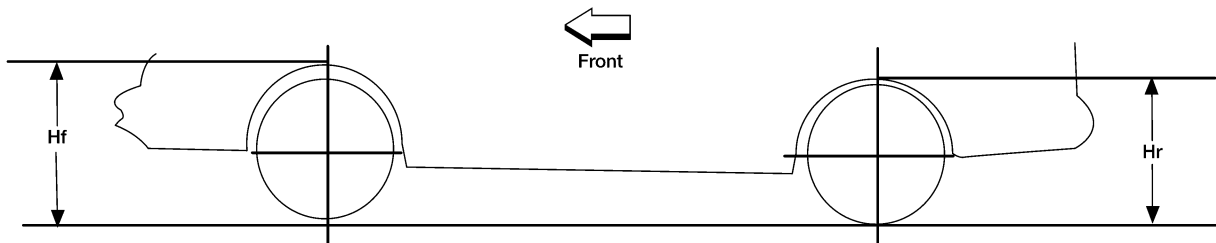
LEIA0085E

Engine type	QR25DE		VQ40DE				
	2WD		2WD			4WD	
Applied model	XE	SE	OR	LE	SE	OR	LE
Tire size	235/75R15	265/70R16	265/75R16	265/65R17	265/70R16	265/75R16	265/65R17
Front wheelarch height (Hf)	866 (34.09)	868 (34.17)	880 (34.65)	869 (34.21)	880 (34.65)	892 (35.12)	881 (34.68)
Rear wheelarch height (Hr)	886 (34.88)	894 (35.20)	905 (35.63)	895 (35.24)	903 (35.55)	915 (36.02)	904 (35.59)

*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					
	2WD			4WD		
Applied model	SE	OR	LE	SE	OR	LE
Tire size	265/70R16	265/75R16	265/65R17	265/70R16	265/75R16	265/65R17
Front wheelarch height (Hf)	868 (34.17)	880 (34.65)	869 (34.21)	880 (34.65)	892 (35.12)	881 (34.68)
Rear wheelarch height (Hr)	891 (35.08)	903 (35.55)	892 (35.12)	901 (35.47)	913 (35.94)	902 (35.51)

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

SERVICE DATA AND SPECIFICATIONS (SDS)
