

SECTION **RSU**  
REAR SUSPENSION

A  
B  
C  
D

RSU

CONTENTS

<b>PRECAUTIONS</b> .....	<b>2</b>	<b>LEAF SPRING</b> .....	<b>7</b>	<b>F</b>
Precautions .....	2	Removal and Installation .....	7	
<b>NOISE, VIBRATION AND HARSHNESS (NVH)</b>		REMOVAL .....	8	
<b>TROUBLESHOOTING</b> .....	<b>3</b>	INSPECTION AFTER REMOVAL .....	9	<b>G</b>
NVH Troubleshooting Chart .....	3	INSTALLATION .....	9	
<b>REAR SUSPENSION ASSEMBLY</b> .....	<b>4</b>	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	<b>11</b>	
Components .....	4	General Specifications (Rear) .....	11	<b>H</b>
On-Vehicle Inspection and Service .....	5	Wheelarch Height (Unladen* <sup>1</sup> ) .....	11	
<b>SHOCK ABSORBER</b> .....	<b>6</b>			
Removal and Installation .....	6			<b>I</b>
REMOVAL .....	6			
INSPECTION AFTER REMOVAL .....	6			<b>J</b>
INSTALLATION .....	6			

K  
L  
M

# PRECAUTIONS

---

## PRECAUTIONS

PFP:00001

### Precautions

EES002JD

- 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. Oil will shorten the life of rubber bushings, so wipe off any spilled oil immediately.
- Lock nuts are not reusable. Always use new lock nuts for installation. New lock nuts are pre-oiled, do not apply any additional lubrication.

# NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

## NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PF5:54000

### NVH Troubleshooting Chart

EES002JF

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

Reference page		<a href="#">RSU-4</a> <a href="#">RSU-6</a> <a href="#">RSU-4</a> <a href="#">RSU-4</a> <a href="#">RSU-9</a> <a href="#">RSU-4</a> <a href="#">PR-2, "NVH Troubleshooting Chart"</a> <a href="#">RFD-7 (with LSD), RFD-39 (with LD)</a> <a href="#">RAX-5, "NVH Troubleshooting Chart"</a> <a href="#">WT-2, "NVH Troubleshooting Chart"</a> <a href="#">WT-2, "NVH Troubleshooting Chart"</a> <a href="#">BR-5, "NVH Troubleshooting Chart"</a> <a href="#">PS-5, "NVH Troubleshooting Chart"</a>													
Possible cause and SUSPECTED PARTS		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
	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

A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M

RSU

# REAR SUSPENSION ASSEMBLY

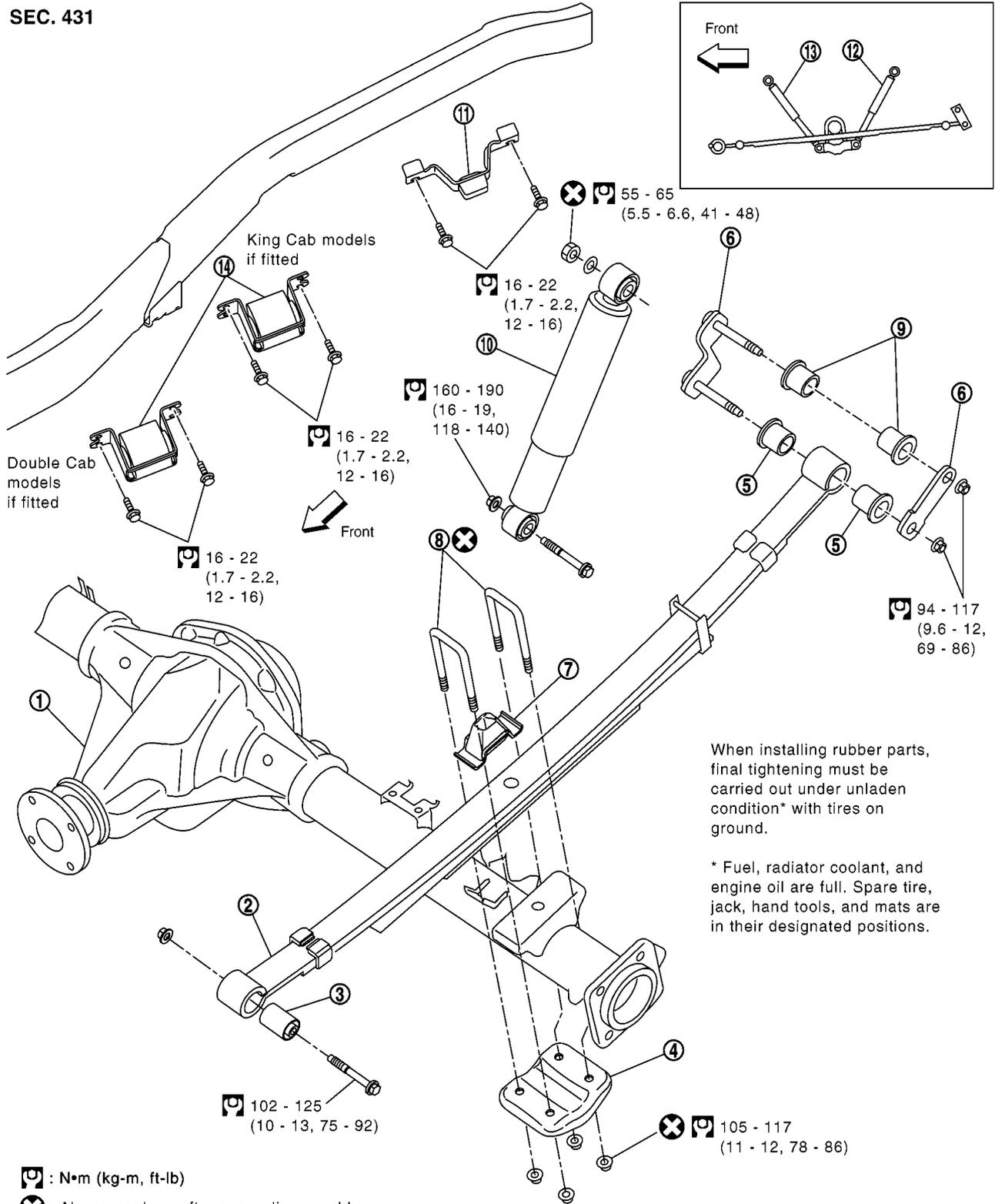
PFP:55020

EES002JG

## REAR SUSPENSION ASSEMBLY

### Components

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 |

MEIB9017E

# REAR SUSPENSION ASSEMBLY

- 10. Shock absorber
- 13. Shock absorber (right side)

- 11. Bumper
- 14. Damper

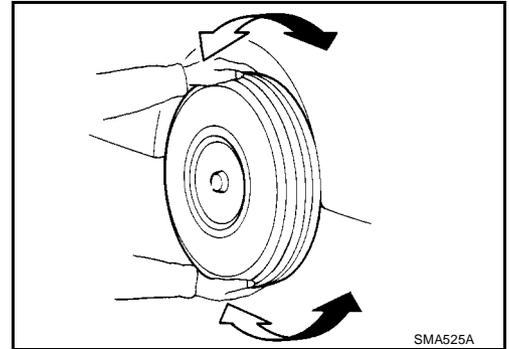
- 12. Shock absorber (left side)

## 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

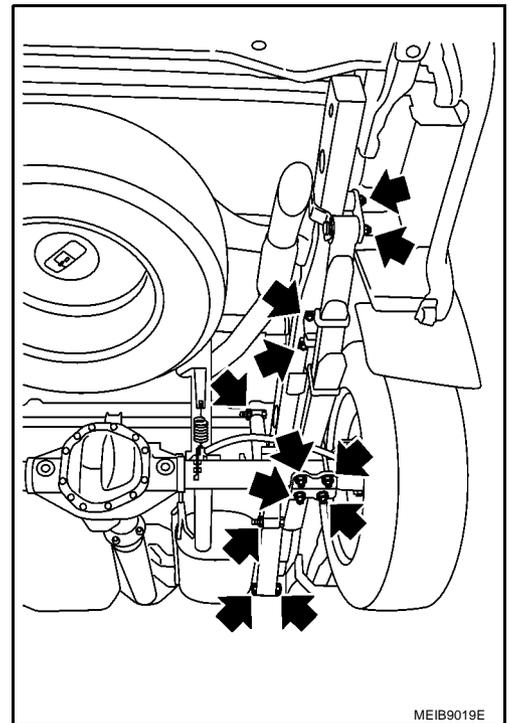
- Check the rear suspension parts for any excessive play, cracks, wear, and other damage.
- Shake each rear wheel to check for any excessive play as shown.



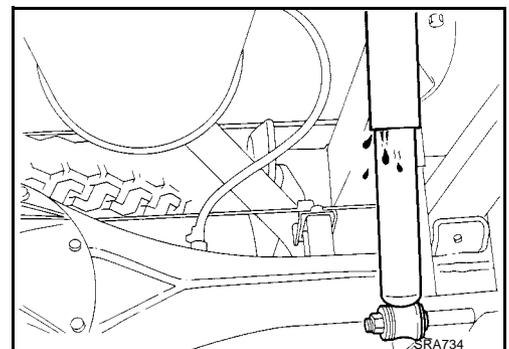
- Tighten all of the nuts and bolts to the specified torque.

## 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.



A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L  
M

RSU

# SHOCK ABSORBER

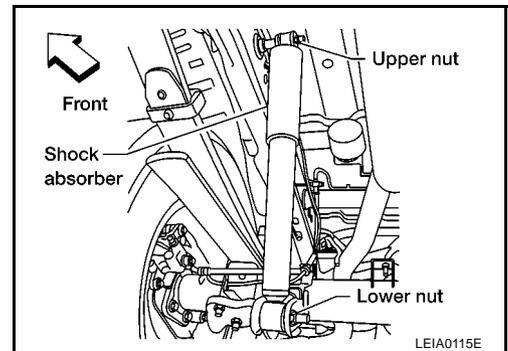
## SHOCK ABSORBER

PFP:56210

### Removal and Installation REMOVAL

EES002JI

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



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.
- Check the shock absorber for smooth operation through a full stroke, both compression and extension.
- If rubber bushings are cracked or deformed, replace rubber bushings.

### INSTALLATION

Installation is in the reverse order of removal.

**Shock absorber upper and lower nuts** : Refer to [RSU-4, "Components"](#) .

# LEAF SPRING

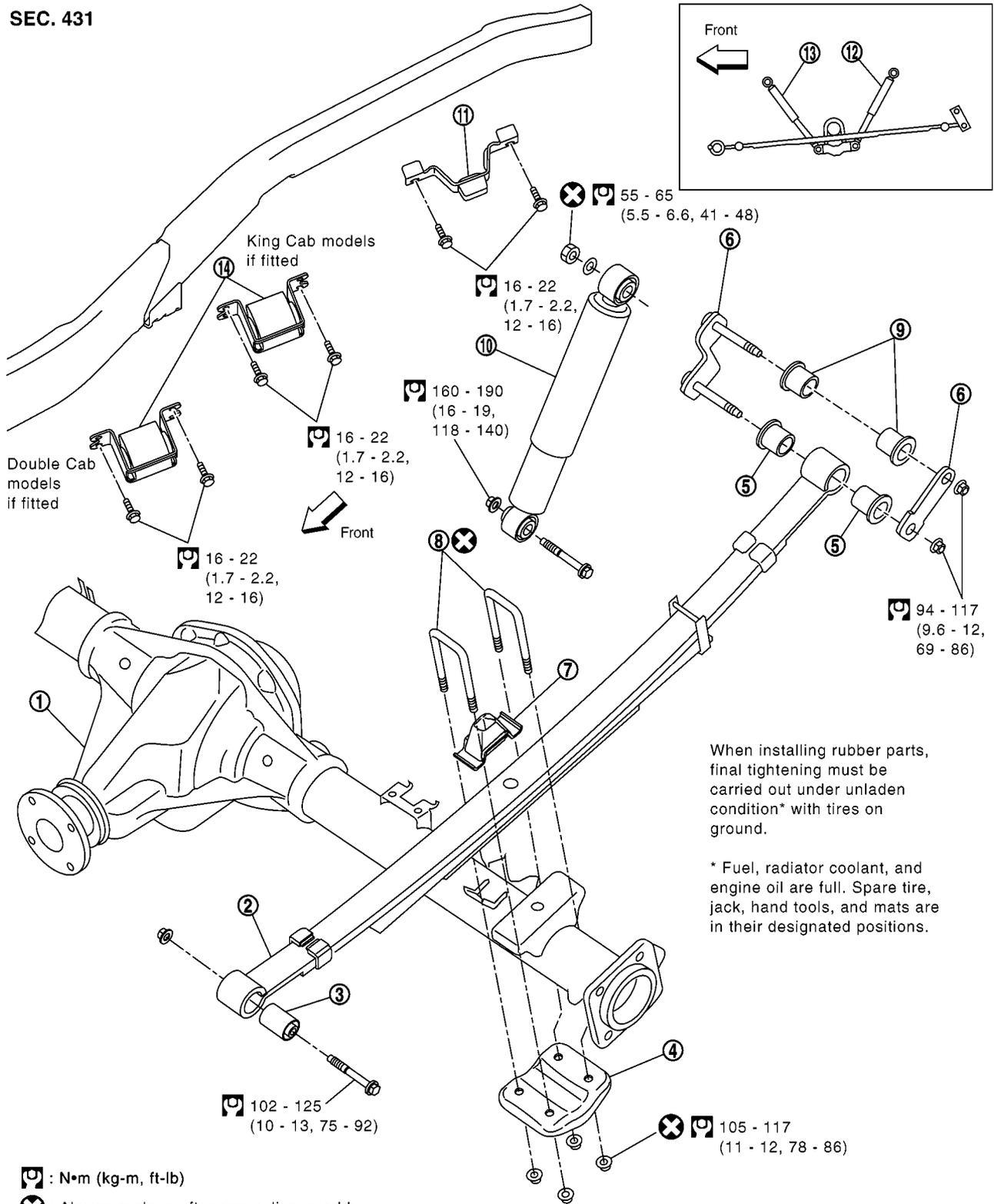
## LEAF SPRING

### Removal and Installation

PPF:55020

EES002JU

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 |

A  
B  
C  
D  
RSU  
F  
G  
H  
I  
J  
K  
L  
M

# LEAF SPRING

- 10. Shock absorber
- 13. Shock absorber (right side)

- 11. Bumper
- 14. Damper

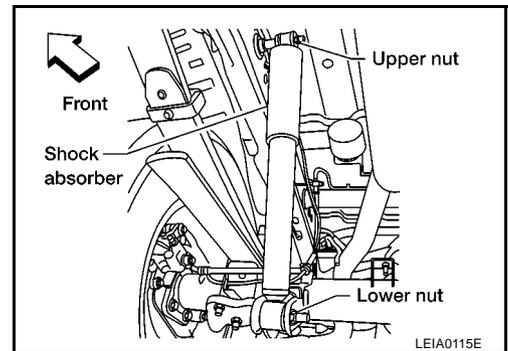
- 12. Shock absorber (left side)

## CAUTION:

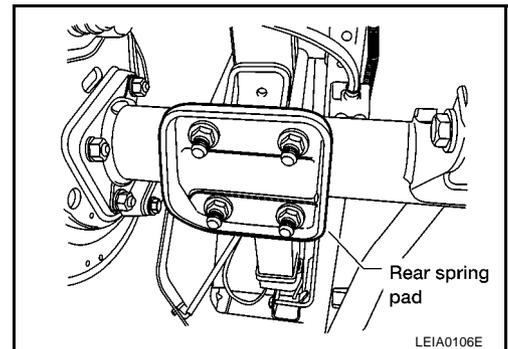
When installing the components with rubber bushings, the final tightening of the nuts and bolts must be done with the vehicle in an unladen condition (the fuel, engine coolant, and engine oil full; the spare tire, jack, hand tools and mats in their designated positions) with the tires on the ground.

## REMOVAL

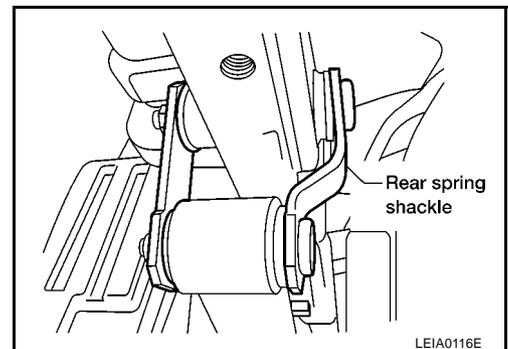
1. Support the rear final drive assembly with a suitable jack to relieve the tension from the rear leaf spring.
  - The axle weight should be supported, but there should be no compression in the rear leaf spring.
2. Remove the shock absorber lower nut and bolt.



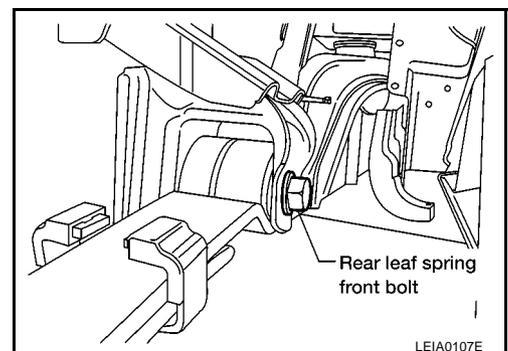
3. Remove the four rear spring clip U-bolt nuts, then remove the rear spring pad.



4. Remove the rear spring shackle and bushings.



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



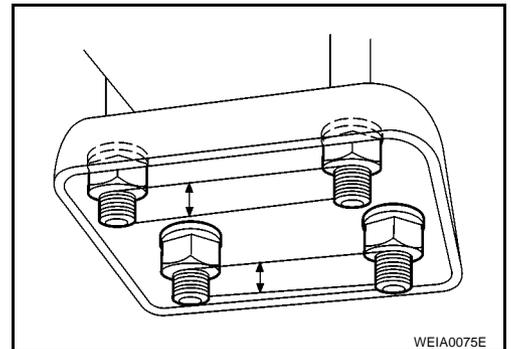
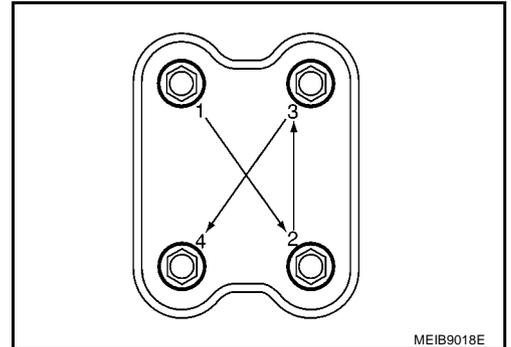
# LEAF SPRING

## INSPECTION AFTER REMOVAL

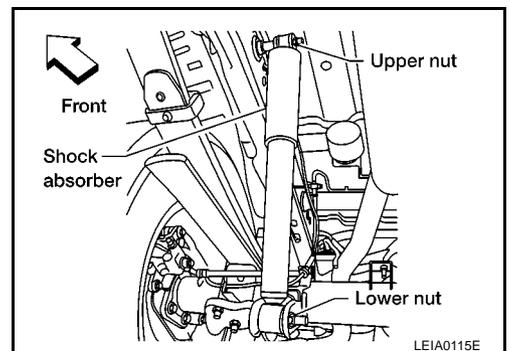
- Check the rear leaf spring for any cracks or damage. Replace the rear leaf spring if necessary.
- Check the rear spring shackle, rear spring clip U-bolts, bumper, and rear spring pad for excessive wear, cracks, straightness, and damage. Replace any components if necessary.
- Check all bushings for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

## INSTALLATION

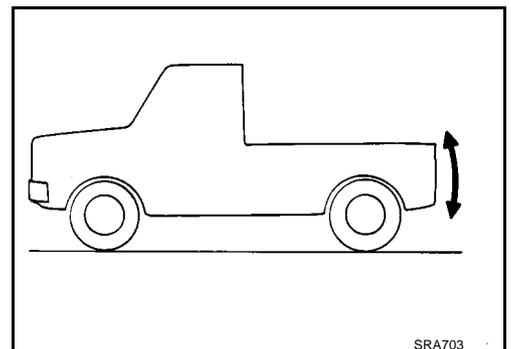
1. Apply soapsuds to all of the rubber bushings.
2. Install the rear spring shackle and rear leaf spring front nut and bolt. Finger-tighten the nuts.
3. Install the rear spring clip U-bolts and bumper on top of the rear leaf spring.
4. Install the rear spring pad, and nuts under the axle case.
5. Tighten diagonally and in few steps the rear spring clip U-bolt nuts, until 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).  
Tighten nuts to specification. Refer to [RSU-4, "Components"](#).



6. Install the shock absorber, and finger-tighten the nuts.

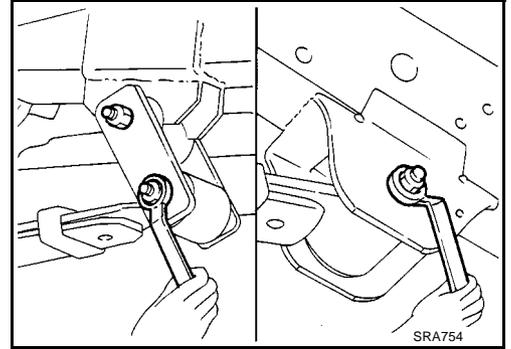


7. Remove the jack supporting the rear final drive assembly and bounce the rear of the vehicle to stabilize the suspension.



## LEAF SPRING

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)

PPF:00030

### General Specifications (Rear)

EES002JK

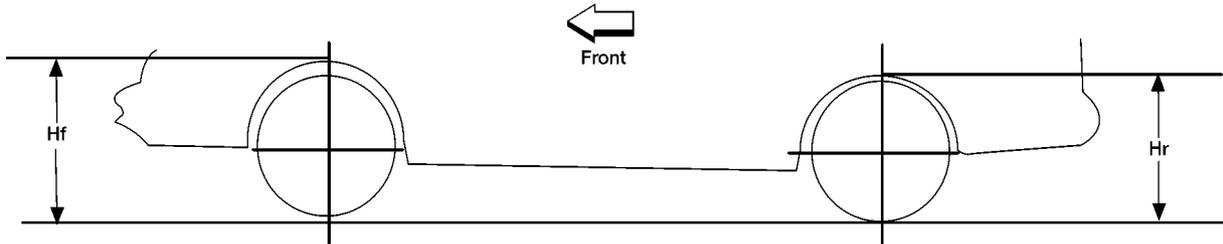
Suspension type	Rigid axle with semi-elliptic leaf springs
Shock absorber type	Double-acting hydraulic

### Wheelarch Height (Unladen\*1)

EES002JL

King Cab

Unit: mm (in)



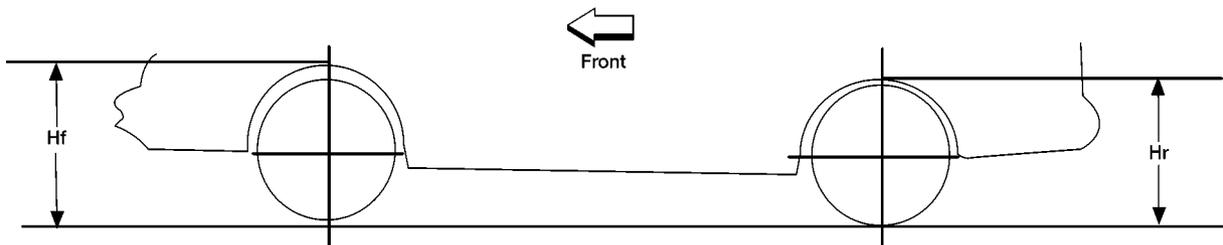
LEIA0085E

Engine type	YD25				
Drive type	2WD		4WD		
Applied model	XE		XE	XE, SE	SE
Tire size	235/70R16	255/70R16	235/70R16	255/70R16	255/65R17
Front wheelarch height (Hf)	833 - 863 (32.80 - 33.98)	845 - 875 (33.27 - 34.45)	846 - 876 (33.31 - 34.49)	858 - 888 (33.78 - 34.96)	861 - 891 (33.90 - 35.08)
Rear wheelarch height (Hr)	874 - 904 (34.41 - 35.59)	877 - 907 (34.53 - 35.71)	878 - 908 (34.57 - 35.75)	891 - 921 (35.08 - 36.26)	893 - 923 (35.16 - 36.34)

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

### Double Cab

Unit: mm (in)



LEIA0085E

Engine type	YD25				
Drive type	2WD		4WD		
Applied model	SE		XE	XE, SE	SE
Tire size	235/70R16	255/70R16	235/70R16	255/70R16	255/65R17
Front wheelarch height (Hf)	832 - 862 (32.76 - 33.94)	844 - 874 (33.23 - 34.41)	846 - 876 (33.31 - 34.49)	857 - 887 (33.74 - 34.92)	860 - 890 (33.86 - 35.04)
Rear wheelarch height (Hr)	872 - 902 (34.33 - 35.51)	885 - 915 (34.84 - 36.02)	877 - 907 (34.53 - 35.71)	889 - 919 (35.00 - 36.18)	891 - 921 (35.08 - 36.26)

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

# SERVICE DATA AND SPECIFICATIONS (SDS)

---