

SECTION **FSU**  
FRONT SUSPENSION

A  
B  
C  
D

FSU

CONTENTS

<b>PRECAUTIONS</b> .....	<b>2</b>	Inspection .....	14	F
Precautions .....	2	Installation and Adjustment .....	15	
<b>PREPARATION</b> .....	<b>3</b>	<b>STABILIZER BAR</b> .....	<b>17</b>	G
Special Service Tools .....	3	Removal .....	17	
Commercial Service Tools .....	3	Inspection .....	17	
<b>NOISE, VIBRATION, AND HARSHNESS (NVH)</b>		Installation .....	17	
<b>TROUBLESHOOTING</b> .....	<b>4</b>	<b>UPPER LINK</b> .....	<b>18</b>	H
NVH Troubleshooting Chart .....	4	Removal .....	18	
<b>FRONT SUSPENSION ASSEMBLY</b> .....	<b>5</b>	Installation .....	18	
Components .....	5	Disassembly .....	19	I
2WD MODEL .....	5	Inspection .....	19	
4WD MODEL .....	6	Assembly .....	19	
<b>ON-VEHICLE SERVICE</b> .....	<b>7</b>	<b>LOWER LINK</b> .....	<b>20</b>	J
Component .....	7	Removal and Installation .....	20	
Front Suspension Parts .....	8	Inspection .....	20	
Front Wheel Alignment .....	8	LOWER LINK AND LOWER LINK SPINDLE .....	20	
PRELIMINARY INSPECTION .....	8	LOWER LINK BUSHING .....	20	K
CAMBER, CASTER AND KINGPIN INCLINA- TION .....	9	<b>UPPER BALL JOINT AND LOWER BALL JOINT</b> ...	<b>21</b>	
ADJUSTMENT .....	10	Removal and Installation .....	21	L
TOE-IN .....	11	Inspection .....	21	
FRONT WHEEL TURNING ANGLE .....	12	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	<b>22</b>	
<b>SHOCK ABSORBER</b> .....	<b>13</b>	General Specifications (Front) .....	22	
Removal and Installation .....	13	Wheel Runout Average .....	22	M
Inspection .....	13	Upper Ball Joint .....	22	
<b>TORSION BAR SPRING</b> .....	<b>14</b>	Lower Ball Joint .....	22	
Removal .....	14	Wheel Alignment (Unladen*1) .....	23	
		2WD MODEL .....	23	
		4WD MODEL .....	24	

# PRECAUTIONS

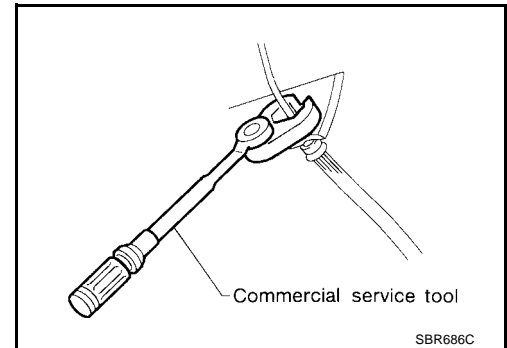
## PRECAUTIONS

PFP:00001

### Precautions

EES000H2

- 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 and installing brake tubes.
- After installing removed suspension parts, check wheel alignment and adjust if necessary.
- Always torque brake lines when installing.



# PREPARATION

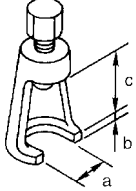
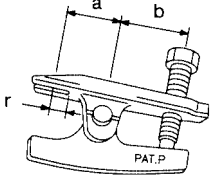
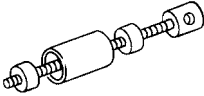
## PREPARATION

PFP:00002

### Special Service Tools

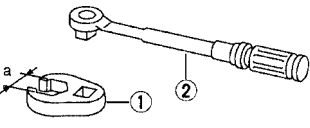
EES000H3

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name	Description
ST29020001 (J24319-01) Gear arm puller	 Removing ball joint for knuckle spindle <b>a: 34 mm (1.34 in)</b> <b>b: 6.5 mm (0.256 in)</b> <b>c: 61.5 mm (2.421 in)</b>
HT72520000 (J25730-B) Ball joint remover	 Removing tie-rod outer end <b>a: 33 mm (1.30 in)</b> <b>b: 50 mm (1.97 in)</b> <b>r: 11.5 mm (0.453 in)</b>
KV40106800 ( — ) Lower link bushing puller	 Removing and installing lower link bushing

### Commercial Service Tools

EES000H4

Tool name	Description
1 Flare nut crowfoot 2 Torque wrench	 Removing and installing each brake piping <b>a: 10 mm (0.39 in)</b>

# NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

## NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

### NVH Troubleshooting Chart

EES000H5

Use the chart below to help you find the cause of the symptom. Repair or replace parts as necessary.

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	Stabilizer bar fatigue	Out-of-round	Imbalance	Incorrect air pressure	Uneven tire wear	Deformation or damage	Non-uniformity	Incorrect tire size	PROPELLER SHAFT	DIFFERENTIAL	DRIVE SHAFT	AXLE	SUSPENSION	TIRES	ROAD WHEEL	BRAKES	STEERING
SUSPENSION	Noise	x	x	x	x	x	x									x	x								
	Shake	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
	Judder	x	x	x																x			x	x	x
	Poor quality ride or handling	x	x	x	x	x		x	x											x			x		
TIRES	Noise	x							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	x	
	Vibration										x				x	x			x	x	x			x	
	Shimmy	x							x	x	x	x	x	x					x	x	x		x	x	
	Judder	x							x	x	x	x	x		x				x	x	x		x	x	
	Poor quality ride or handling	x							x	x	x	x	x		x					x	x		x		
ROAD WHEEL	Noise	x							x	x			x		x	x		x	x	x	x	x		x	
	Shake	x							x	x			x		x	x			x	x	x	x		x	
	Shimmy, Judder	x							x	x			x						x	x	x	x		x	
	Poor quality ride or handling	x							x	x			x						x	x	x	x			

x: Applicable

# FRONT SUSPENSION ASSEMBLY

## FRONT SUSPENSION ASSEMBLY

PFP:54010

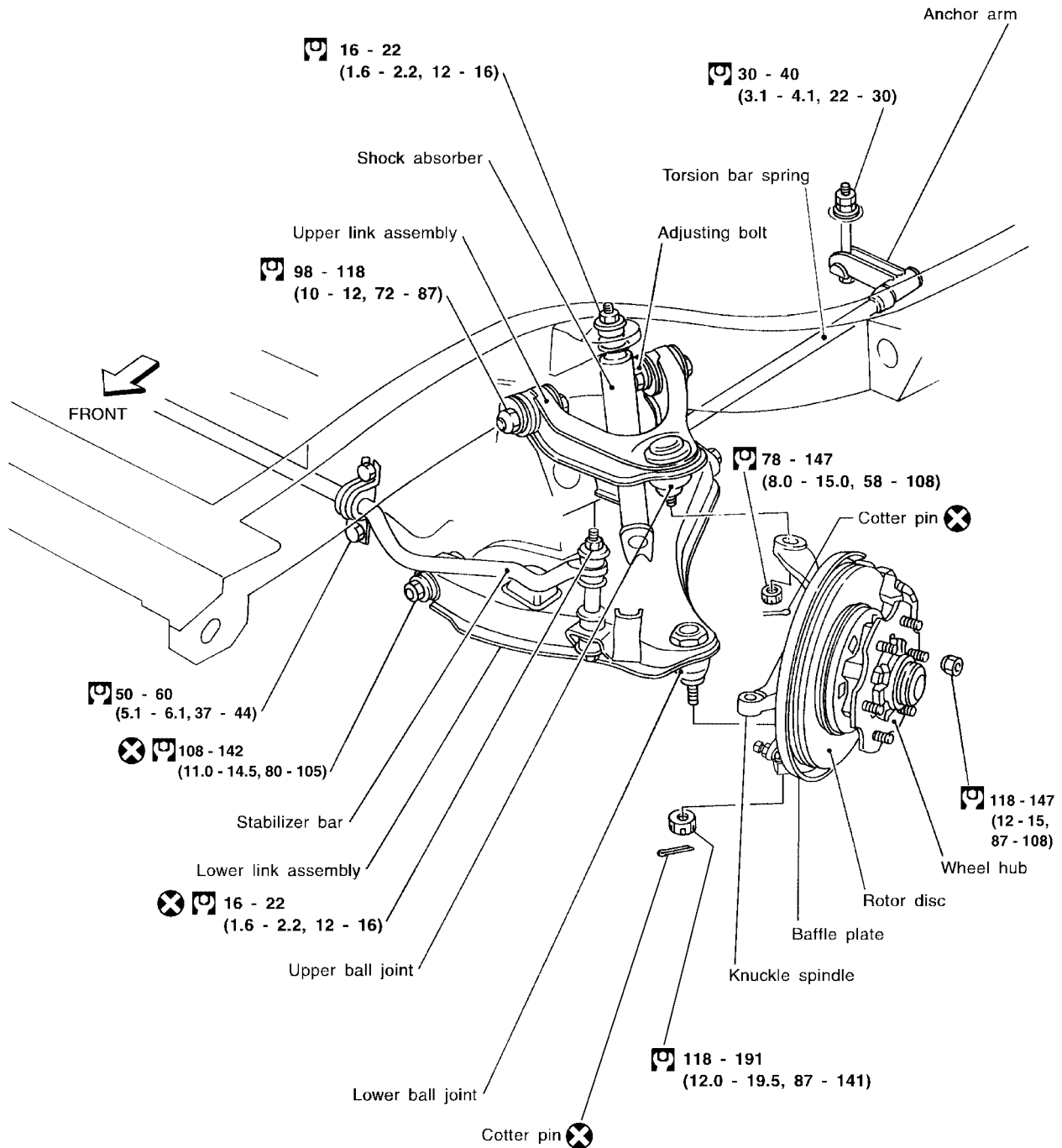
### Components 2WD MODEL

EES000H6

#### SEC. 391•400•401

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.



: N•m (kg-m, ft-lb)

WSU013

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

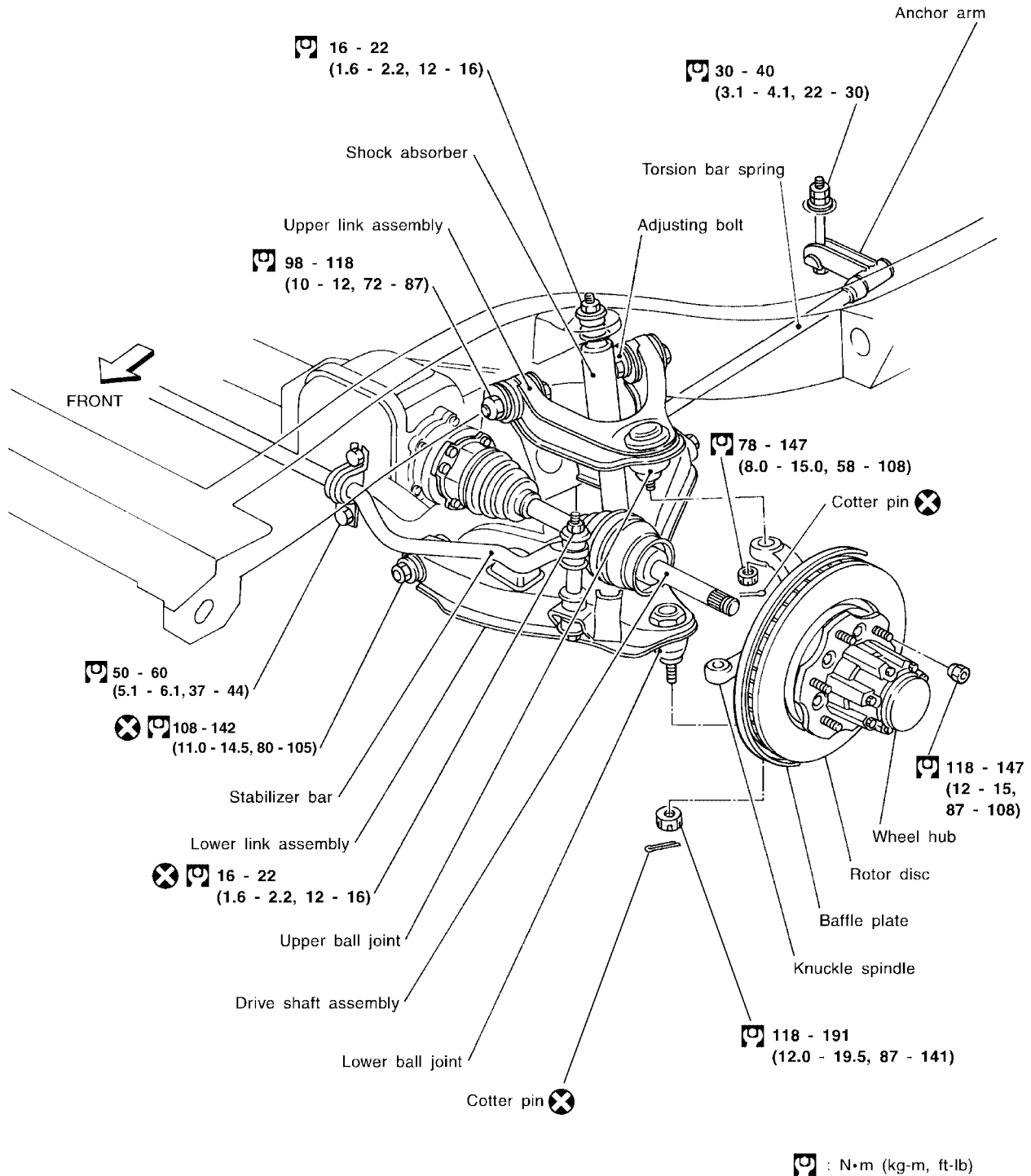
# FRONT SUSPENSION ASSEMBLY

## 4WD MODEL

### SEC. 391•400•401

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.



WSU014



# ON-VEHICLE SERVICE

EES000H7

## Front Suspension Parts

Check front suspension parts for excessive play, cracks, wear and other damage.

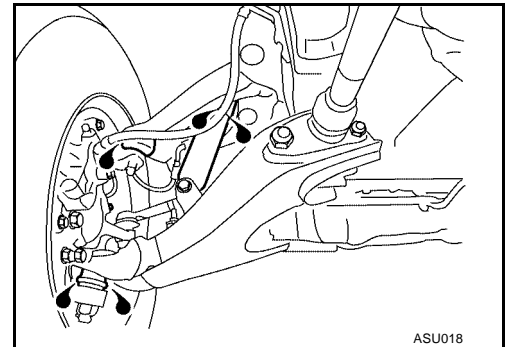
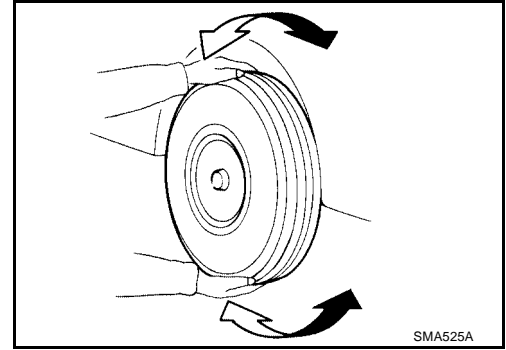
- Shake each front wheel to check for excessive play. If looseness is noted, adjust wheel bearing end play, then check ball joint end play.

Refer to [FSU-21, "Inspection"](#) .

- Make sure that the cotter pin is inserted.
- Retighten all nuts and bolts to the specified torque.

 : [FSU-7, "Component"](#) .

- Check shock absorber for oil leakage and other damage.
- Check suspension ball joint for grease leakage and ball joint dust cover for cracks and other damage.



## Front Wheel Alignment

EES000H8

Before checking front wheel alignment, make a preliminary inspection (Unladen\*).

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

### PRELIMINARY INSPECTION

1. Check tires for wear and proper inflation.
2. Check wheels for deformation, cracks and other damage. If deformed, remove wheel and check wheel runout.
  1. Remove tire from aluminum wheel and mount wheel on a tire balance machine.
  2. Set dial indicator as shown in the illustration.

Wheel runout (Dial indicator value) : Refer to [FSU-22, "Wheel Runout Average"](#) .

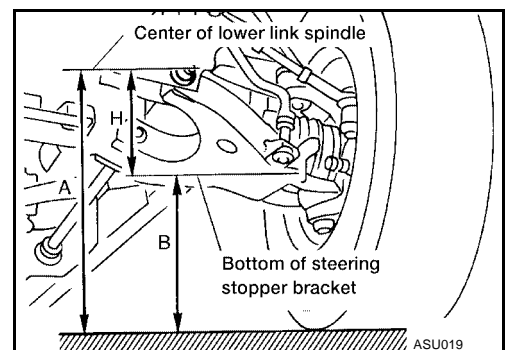
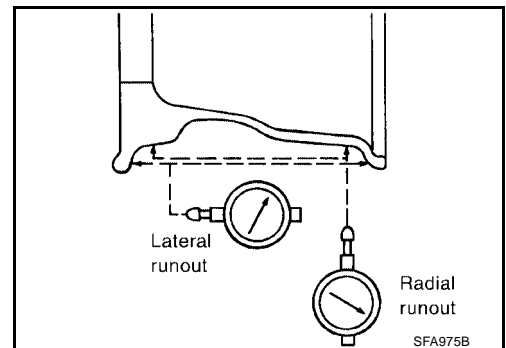
3. Check front wheel bearings for looseness.
4. Check front suspension for looseness.
5. Check steering linkage for looseness.
6. Check that front shock absorbers work properly by using the standard bounce test.
7. Check vehicle posture (Unladen):  $H = A - B$  mm (in)

Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .

- a. Exercise the front suspension by bouncing the front of the vehicle 4 or 5 times to ensure that the vehicle is in a neutral height attitude.
- b. Measure wheel alignment.

Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .

- c. If wheel alignment is not as specified, adjust vehicle posture.





# ON-VEHICLE SERVICE

Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .

d. Adjust wheel alignment.

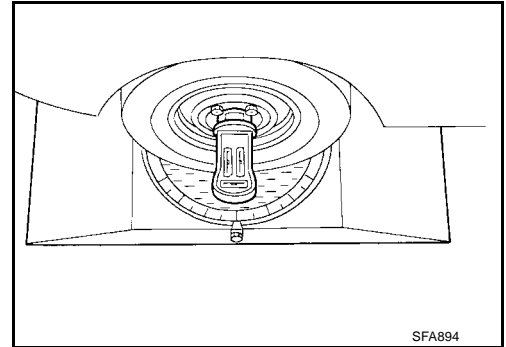
Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .

## CAMBER, CASTER AND KINGPIN INCLINATION

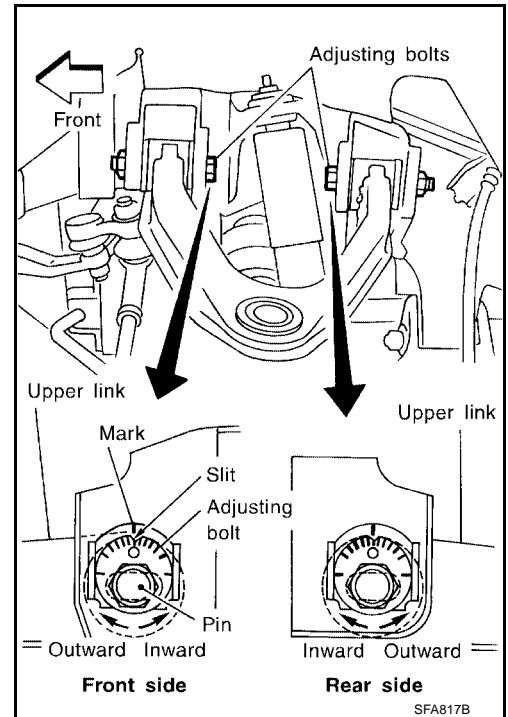
Before checking camber, caster or kingpin inclination, move vehicle up and down on turning radius gauge to minimize friction. Ensure that the vehicle is in correct posture.

- Measure camber, caster and kingpin inclination of both right and left wheels with a suitable alignment gauge and adjust in accordance with the following procedures.

**Camber, Caster and Kingpin inclination** : Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .



- In the following two cases, temporarily tighten the adjusting bolts while aligning the matching marks with the slits as shown in the figure at the right and measure the camber, caster and kingpin inclination:
  - When replacing the upper link or other suspension parts with new ones
  - When matching marks were not painted on adjusting bolts before suspension disassembly procedures
- If matching marks were already painted during suspension disassembly, align the matching marks with the slits, then temporarily tighten the adjusting bolts. Measure the camber, caster and kingpin inclination.



# ON-VEHICLE SERVICE

## ADJUSTMENT

1. Both camber and caster angles are adjusted by adjusting bolts.
  - If the kingpin inclination is outside specifications, check the front suspension parts for wear or damage. Replace faulty parts with new ones.
2. From the measured value, read the coordinate (or graduation) at the intersecting point in the graph.
  - a. If the coordinate (or graduation) at the intersecting point is positive, move the pin outward by turning the corresponding adjusting bolt by the indicated graduation.
  - b. If the coordinate (or graduation) at the intersecting point is negative, move the pin inward by turning the corresponding adjusting bolt by the indicated graduation.
3. Re-measure to ensure that the camber and caster are within specified tolerances.

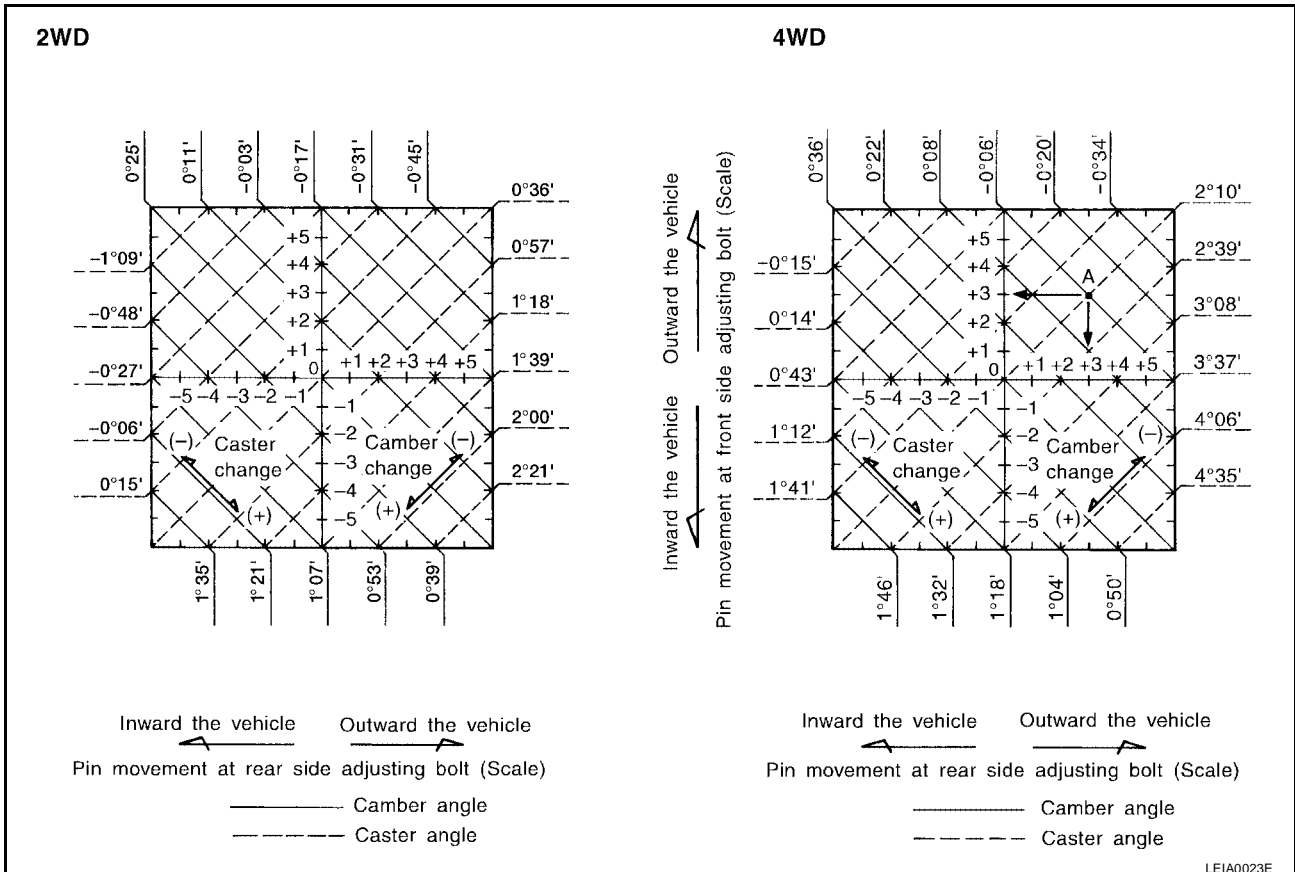
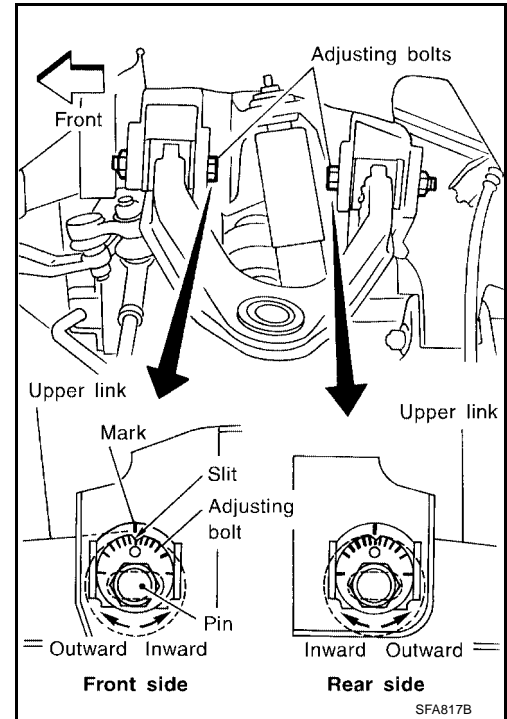
[Example]

- a. Measured values corresponding with the two values indicated below: (See chart for 4WD model.)

**Camber angle** :  $-0^{\circ}06'$  ( $-0.10^{\circ}$ )

**Caster angle** :  $2^{\circ}10'$  ( $2.17^{\circ}$ )

- b. Apply the above two values to the graph and determine point "A".
- c. The coordinate (or graduation) indicates that both the front and rear adjusting bolts must be turned outward by 3 graduations. Turn the adjusting bolts by the amount corresponding with the 3 graduations.



LEIA0023E

# ON-VEHICLE SERVICE

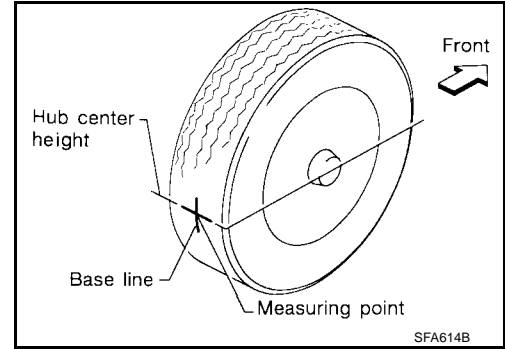
## TOE-IN

Measure toe-in using the following procedure.

### WARNING:

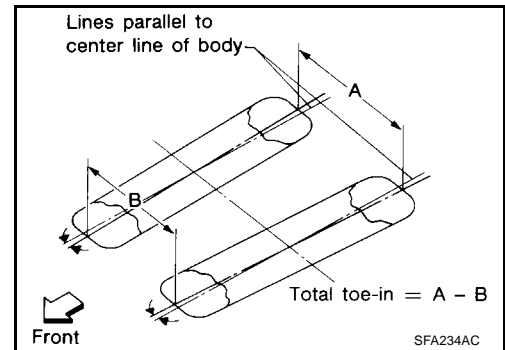
- Always perform the following procedure on a flat surface.
- Make sure that no one is in front of the vehicle before pushing it.

1. Push the vehicle straight ahead about 5 m (16 ft).
2. Bounce front of vehicle up and down to stabilize the posture.
3. Put a mark on base line of the tread (rear side) of both tires at the same height of hub center. This mark is a measuring point.

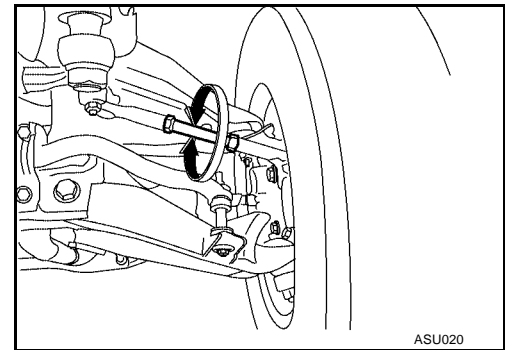


4. Measure distance "A" (rear side).
5. Push the vehicle slowly ahead to rotate the wheels 180 degrees (1/2 turn).
  - If the wheels have rotated more than 180 degrees (1/2 turn), try the above procedure again from the beginning. Never push vehicle backward.
6. Measure distance "B" (front side).

**Total toe-in** : Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .



7. Adjust toe-in by varying the length of both steering tie-rods.
  - a. Loosen lock nuts.



Adjust toe-in by turning both the left and right tie-rod tubes equal amounts.

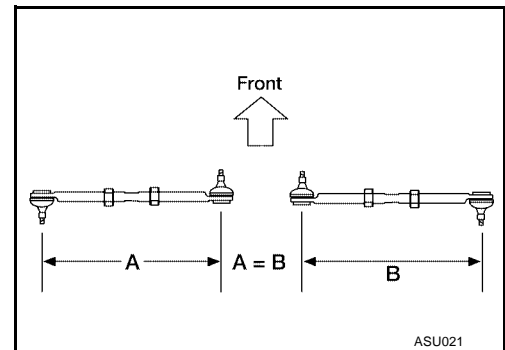
**Make sure that the tie-rod bars are screwed into the tie-rod tube more than 35 mm (1.38 in).**

**Make sure that the tie-rods are the same length before aligning the front end.**

**Standard length (A = B) : 297.6 mm (11.72 in)**

- c. Tighten clamp bolts or lock nuts.

Refer to [PS-20, "Components"](#) .



# ON-VEHICLE SERVICE

## FRONT WHEEL TURNING ANGLE

1. Set wheels in straight-ahead position. Then move vehicle forward until front wheels rest properly on turning radius gauge.
2. Rotate steering wheel all the way right and left; measure turning angle.
  - On power steering models, turn steering wheel to full lock and apply force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine at idle.
  - **Do not hold the steering wheel at full lock for more than 15 seconds.**

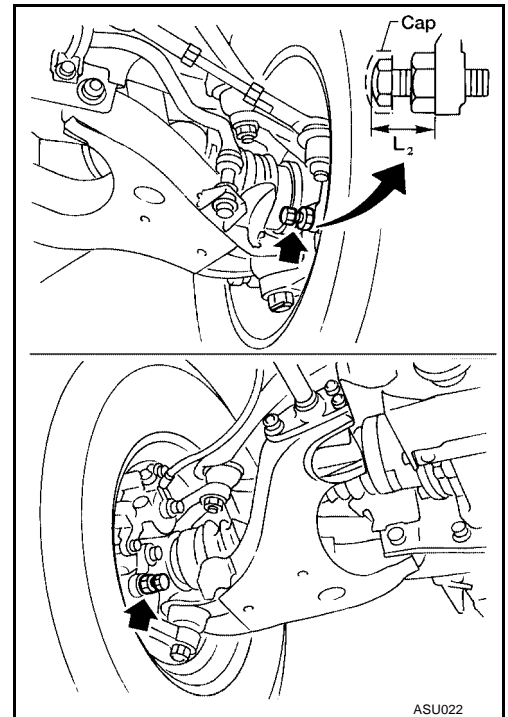
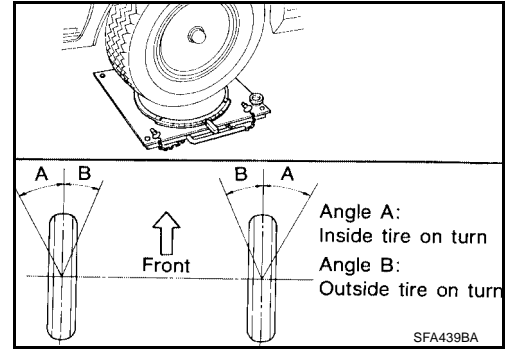
Wheel turning angle (Full turn) : Refer to [FSU-23, "2WD MODEL"](#), or [FSU-24, "4WD MODEL"](#).

3. Adjust stopper bolt if necessary.

Standard length "L<sub>2</sub>"

Except P265/70R15 tire : 26.5 mm (1.043 in)  
(Length before cap is mounted)

P265/70R15 tire : 30.0 mm (1.2 in)  
(Length before cap is mounted)



# SHOCK ABSORBER

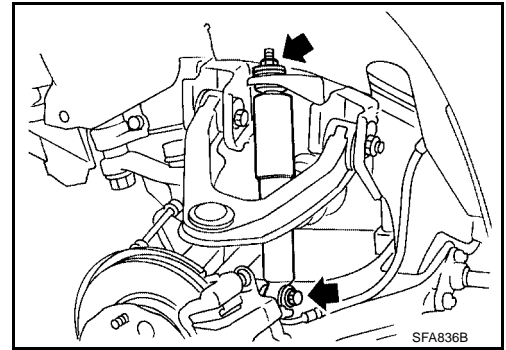
PFP:56210

## SHOCK ABSORBER

### Removal and Installation

1. Support lower link with jack.
2. Remove bolt and nut that hold shock absorber.
3. Tighten upper nut and lower bolt to specification.

Refer to [FSU-7, "Component"](#) .



EES000HB

### Inspection

Except for nonmetallic parts, clean all parts with suitable solvent and dry with compressed air. Use compressed air to blow dirt and dust off nonmetallic parts.

- Check for oil leakage and cracks. Replace if necessary.
- Check piston rod for cracks, deformation and other damage. Replace if necessary.
- Check rubber parts for wear, cracks, damage and deformation. Replace if necessary.

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

# TORSION BAR SPRING

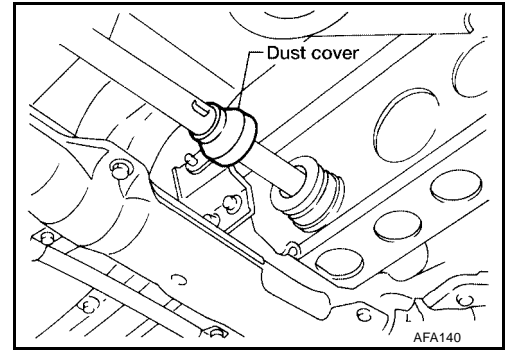
PFP:54010

## TORSION BAR SPRING

EES000HC

### Removal

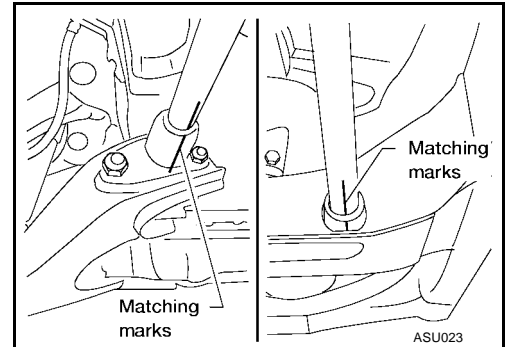
1. Move dust cover.



2. Paint matching marks on the torsion bar spring and the corresponding arm.

**NOTE:**

Always use paint to place the matching mark; do not scribe the affected part.

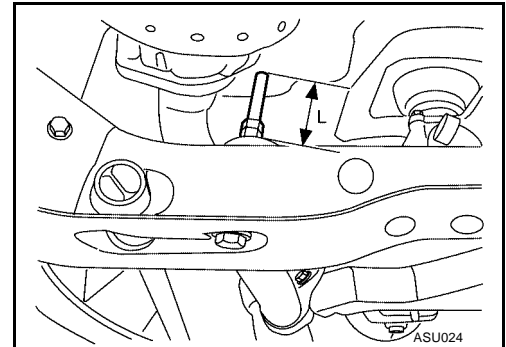


3. Measure anchor bolt protrusion "L" and remove the lock nut and adjusting nut.

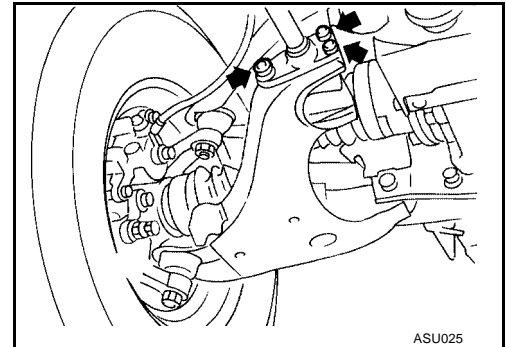
**WARNING:**

Before removing the nuts, ensure that twisting force is eliminated from the torsion bar springs.

Standard length "L" : 68 mm (2.68 in)



4. Remove torsion bar spring.
  - Remove torque arm fixing nuts, then withdraw torsion bar spring forward with torque arm.



### Inspection

EES000HD

- Check torsion bar spring for wear, twist, bend and other damage.
- Check serrations of each part for cracks, wear, twist and other damage.
- Check dust cover for cracks.

# TORSION BAR SPRING

EES000HE

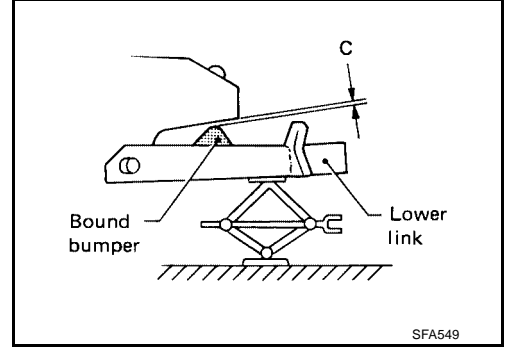
## Installation and Adjustment

Adjustment of anchor arm adjusting nut is in tightening direction only.

Do not adjust by loosening anchor arm adjusting nut.

1. Coat multi-purpose grease on the serration of torsion bar spring.
2. Place lower link in the position where bound bumper clearance "C" is 0.

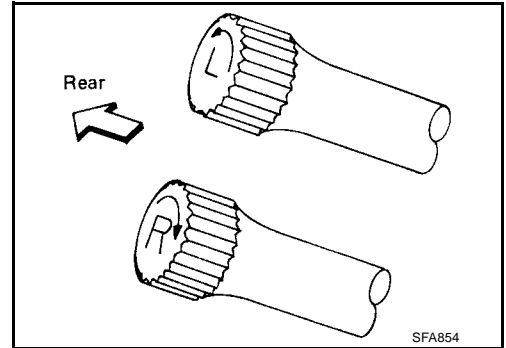
Clearance "C" : 0 mm (0 in)



3. Install torsion bar spring with torque arm.

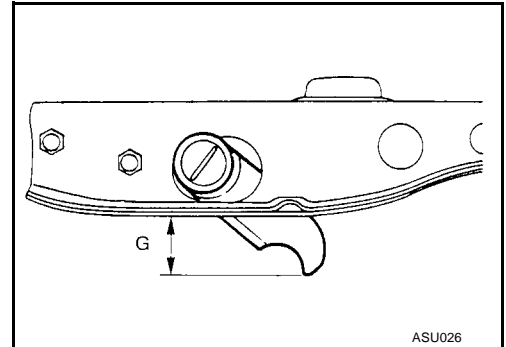
**NOTE:**

Be sure to install right and left torsion bar springs correctly.



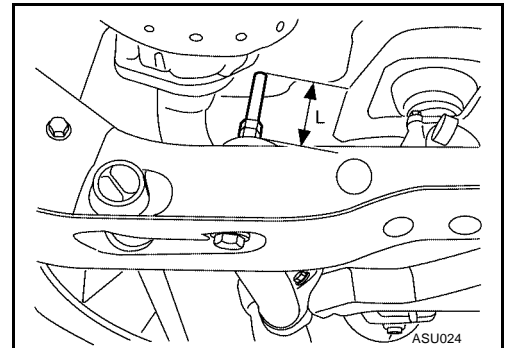
4. While aligning the anchor arm with the matching mark, install the anchor arm to the torsion bar spring.  
If a new torsion bar spring or anchor arm is installed, adjust anchor arm length to the dimension indicated in the figure at the right.

Standard length "G" : 25 - 39 mm (0.98 - 1.54 in)



5. Tighten the adjusting nut so the torsion bar length corresponds with dimension "L" previously measured during torsion bar removal. Tighten the lock nut to specifications.  
If a new torsion bar spring or anchor arm is installed, tighten the adjusting nut to the dimension indicated in the figure at the right, then tighten the lock nut to specifications.

Standard length "L" : 68 mm (2.68 in)



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

# TORSION BAR SPRING

6. Bounce vehicle with tires on ground (Unladen) to eliminate friction of suspension.
7. Measure vehicle posture "H".
- a. Exercise the front suspension by bouncing the front of the vehicle 4 or 5 times to ensure that the vehicle is in a neutral height attitude.
- b. Measure vehicle posture, dimension "H".

Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .

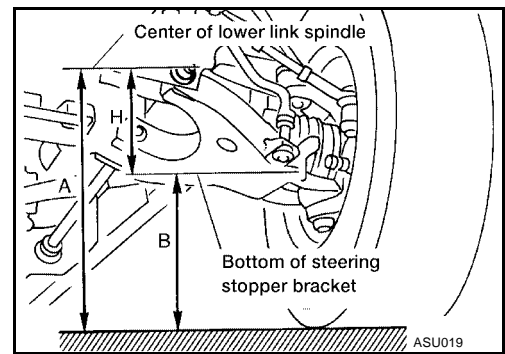
$$H = A - B \text{ mm (in) "Unladen"}$$

8. If height of the vehicle is not within allowable limit, adjust vehicle posture.

Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .

9. Check wheel alignment if necessary.

Refer to [FSU-23, "2WD MODEL"](#) , or [FSU-24, "4WD MODEL"](#) .





# STABILIZER BAR

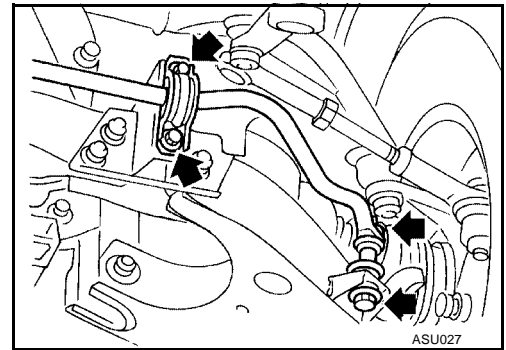
## STABILIZER BAR

PFP:54611

### Removal

EES000HF

Remove stabilizer bar connecting bolts and clamp bolts.



EES000HG

### Inspection

- Check stabilizer bar for twist and deformation. Replace if necessary.
- Check rubber bushing for cracks, wear and deterioration. Replace if necessary.

### Installation

Install in the reverse order of removal.

Refer to [FSU-7, "Component"](#) .

A

B

C

D

FSU

F

EES000HH

G

H

I

J

K

L

M

# UPPER LINK

PFP:54524

## UPPER LINK

EES000HI

### Removal

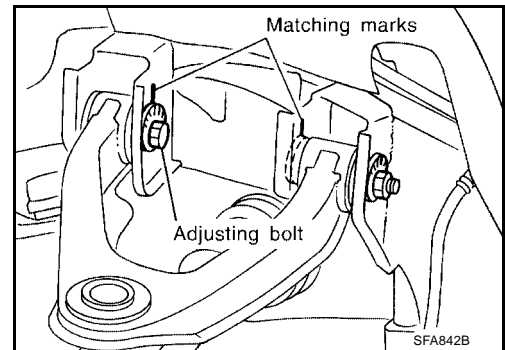
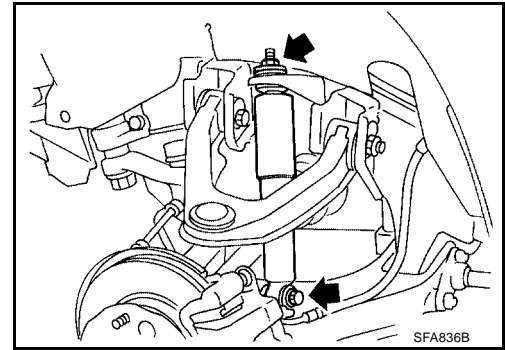
1. Remove shock absorber.

Refer to [FSU-13, "Removal and Installation"](#) .

2. Separate upper ball joint stud from knuckle spindle.  
**Support lower link with jack.**

Refer to [FAX-17, "Removal"](#) .

3. Put matching marks on adjusting bolts and remove adjusting bolts.



### Installation

EES000HJ

1. While aligning the adjusting bolts with the matching marks, install the upper link.  
If a new upper link or any other suspension part is installed, align the matching mark with the slit as indicated in the figure at the right, then install the upper link.

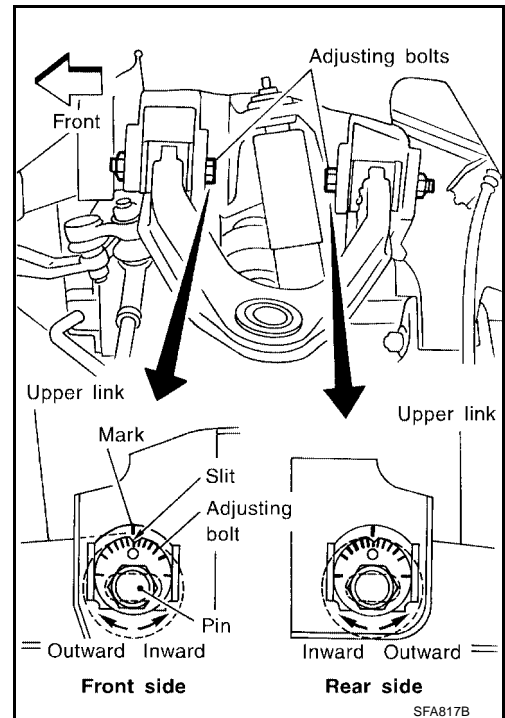
Refer to [FSU-8, "Front Wheel Alignment"](#) .

2. Install shock absorber.
3. Tighten adjusting bolts under unladen condition (fuel, radiator coolant, and engine oil full; spare tire, jack, hand tools, and mats in designated positions) with tires on ground.

Refer to [FSU-7, "Component"](#) .

4. After installing, check wheel alignment. Adjust if necessary.

Refer to [FSU-8, "Front Wheel Alignment"](#) .

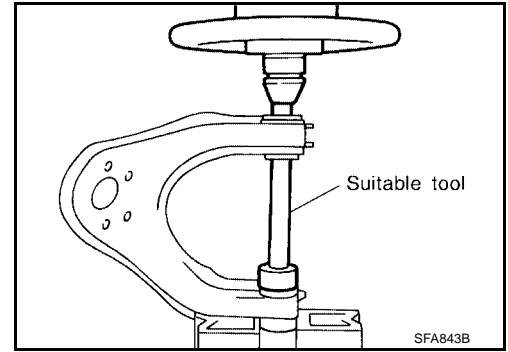


# UPPER LINK

## Disassembly

Press out upper link bushings.

EES000HK



A  
B  
C  
D

## Inspection

- Check adjusting bolts and rubber bushings for damage. Replace if necessary.
- Check upper link for deformation and cracks. Replace if necessary.

EES000HL

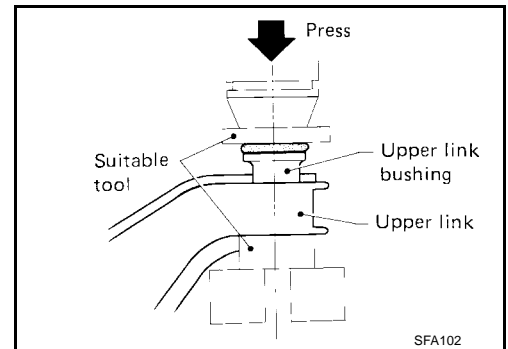
FSU

## Assembly

1. Apply soapsuds to rubber bushing.
2. Press upper link bushing.  
**Press bushing so that the flange of bushing securely contacts the end surface of the upper link collar.**

EES000HM

F



G  
H  
I  
J  
K  
L  
M

# LOWER LINK

PF5:55020

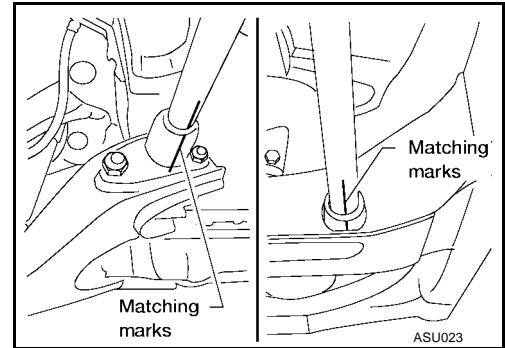
## LOWER LINK

### Removal and Installation

EES000HN

1. Remove torsion bar spring.

Refer to [FSU-14, "Removal"](#) .



Make matching marks and measure dimension "L" when loosening adjusting nut until there is no tension on torsion bar spring.

Standard length "L" : 68 mm (2.68 in)

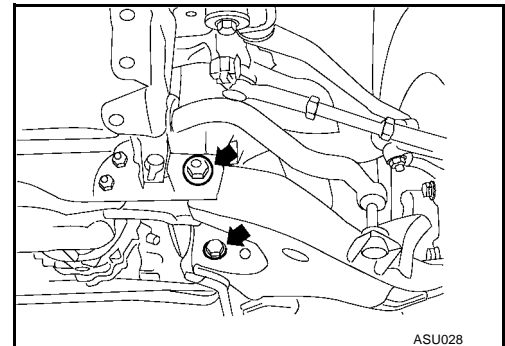
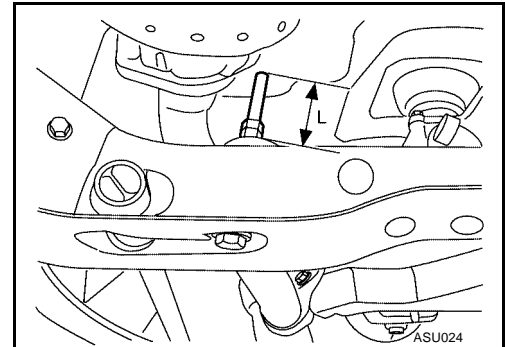
2. Remove shock absorber lower fixing bolt.
3. Remove stabilizer bar connecting bolt.
4. Separate drive shaft from front final drive (4WD model).

Refer to [FAX-20, "Removal"](#) .

5. Separate lower link ball joint from knuckle spindle.

Refer to [FAX-17, "Removal"](#) .

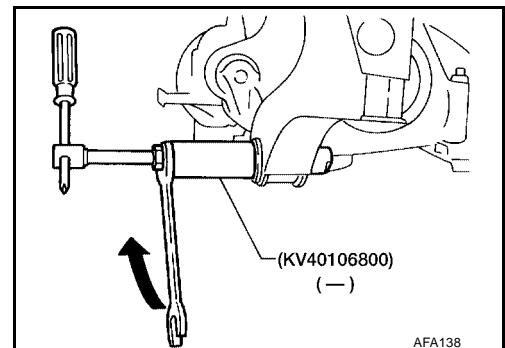
6. Remove front lower link fixing bolts.



7. Remove bushing of lower link spindle from frame with Tool.
8. After installing lower link, adjust wheel alignment and vehicle height.

Refer to [FSU-7, "Component"](#) .

Refer to [FSU-8, "Front Wheel Alignment"](#) .



## Inspection

### LOWER LINK AND LOWER LINK SPINDLE

Check for deformation and cracks. Replace if necessary.

### LOWER LINK BUSHING

Check for distortion and damage. Replace if necessary.

EES000HO

# UPPER BALL JOINT AND LOWER BALL JOINT

## UPPER BALL JOINT AND LOWER BALL JOINT

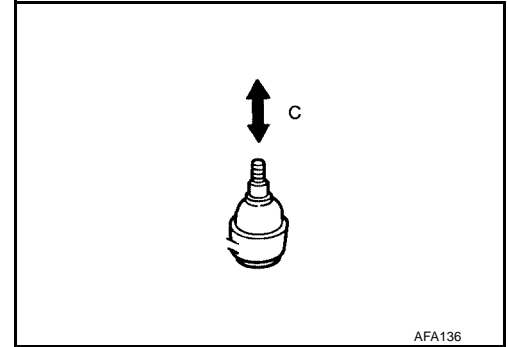
PF0:40110

### Removal and Installation

EES000HP

Separate knuckle spindle from upper and lower links.

Refer to [FAX-17, "Removal"](#) .



AFA136

EES000HQ

### Inspection

- Check joints for play. If ball is worn and play in axial direction is excessive or joint is hard to swing, replace as an upper link or lower link.

**Axial end play "C":**

**Upper link : 0 mm (0 in)**

**Lower link : 0.2 mm (0.008 in) or less**

- Check dust cover for damage.  
Replace dust cover and dust cover clamp if necessary.

A

B

C

D

FSU

F

G

H

I

J

K

L

M

# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

### General Specifications (Front)

EES000HR

Suspension type	Independent double wishbone torsion bar spring
Shock absorber type	Double-acting hydraulic
Stabilizer	Standard equipment

### Wheel Runout Average

EES000HS

Wheel type	Steel		Aluminum
	Inside	Outside	
Radial runout limit mm (in)	0.8 (0.031) or less	0.4 (0.016) or less	0.3 (0.012)
Lateral runout limit mm (in)	1.0 (0.039) or less	0.9 (0.035) or less	0.3 (0.012)

### Upper Ball Joint

EES000HT

Axial end play "C" mm (in)	0 (0)
----------------------------	-------

### Lower Ball Joint

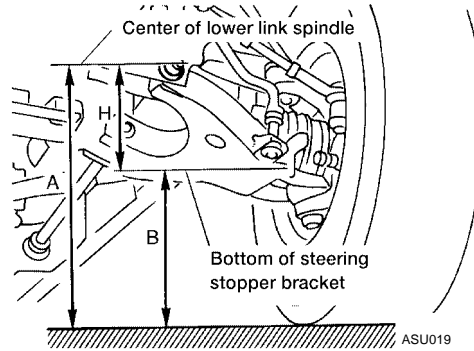
EES000HU

Axial end play "C" mm (in)	0.2 (0.008) or less
----------------------------	---------------------

# SERVICE DATA AND SPECIFICATIONS (SDS)

## Wheel Alignment (Unladen\*1) 2WD MODEL

EES000HV



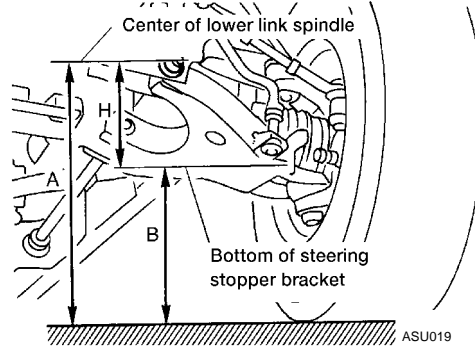
Camber Degree minute (Decimal degree)	Minimum	0°03' (0.05°)				
	Nominal	0°33' (0.55°)				
	Maximum	1°03' (1.05°)				
	Left and right difference	45' (0.75°) or less				
Caster Degree minute (Decimal degree)	Minimum	2°04' (2.07°)				
	Nominal	2°34' (2.57°)				
	Maximum	3°04' (3.07°)				
	Left and right difference	45' (0.75°) or less				
Kingpin inclination Degree minute (Decimal degree)	Minimum	10°23' (10.38°)				
	Nominal	10°53' (10.88°)				
	Maximum	11°23' (11.38°)				
Total toe-in	Distance (A - B) mm (in)	Radial tire	Minimum	3 (0.12)		
			Nominal	4 (0.16)		
			Maximum	5 (0.20)		
	Angle (left plus right) Degree minute (Decimal degree)	Radial tire	Minimum	15' (0.25°)		
			Nominal	20' (0.33°)		
			Maximum	25' (0.42°)		
Wheel turning angle	Full turn*2	Inside Degree minute (Decimal degree)	Except P265/70R15		P265/70R15	
			Minimum	32°48' (32.80°)	30°48' (30.80°)	
			Nominal	34°48' (34.80°)	32°48' (32.80°)	
		Maximum	34°48' (34.80°)	32°48' (32.80°)		
		Outside Degree minute (Decimal degree)	Minimum	31°00' (31.00°)	28°42' (28.70°)	
			Nominal	33°00' (33.00°)	30°42' (30.70°)	
Maximum	33°00' (33.00°)		30°42' (30.70°)			
Vehicle posture	Lower arm pivot height (H)	mm (in)	37.7 - 41.7 (1.484 - 1.642)			

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

\*2: On power steering models, wheel turning force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine idle.

# SERVICE DATA AND SPECIFICATIONS (SDS)

## 4WD MODEL



Camber Degree minute (Decimal degree)		Minimum	0°06' (0.10°)		
		Nominal	0°36' (0.60°)		
		Maximum	1°06' (1.10°)		
		Left and right difference	45' (0.75°) or less		
Caster Degree minute (Decimal degree)		Minimum	1°40' (1.67°)		
		Nominal	2°10' (2.17°)		
		Maximum	2°40' (2.67°)		
		Left and right difference	45' (0.75°) or less		
Kingpin inclination Degree minute (Decimal degree)		Minimum	10°18' (10.30°)		
		Nominal	10°48' (10.80°)		
		Maximum	11°18' (11.30°)		
Total toe-in	Distance (A – B) mm (in)	Radial tire	Minimum	3 (0.12)	
			Nominal	4 (0.16)	
			Maximum	5 (0.20)	
	Angle (left plus right) Degree minute (Decimal degree)	Radial tire	Minimum	15' (0.25°)	
			Nominal	20' (0.33°)	
			Maximum	25' (0.42°)	
Wheel turning angle	Full turn*2	Inside Degree minute (Decimal degree)		Except P265/70R15	P265/70R15
			Minimum	33°06' (33.10°)	31°00' (31.00°)
			Nominal	35°06' (35.10°)	33°00' (33.00°)
		Outside Degree minute (Decimal degree)	Maximum	35°06' (35.10°)	33°00' (33.00°)
			Minimum	31°12' (31.20°)	29°00' (29.00°)
			Nominal	33°12' (33.20°)	31°00' (31.00°)
	Maximum	33°12' (33.20°)	31°00' (31.00°)		
Vehicle posture	Lower arm pivot height (H) mm (in)		45.5 - 49.5 (1.791 - 1.949)		

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

\*2: On power steering models, wheel turning force (at circumference of steering wheel) of 98 to 147 N (10 to 15 kg, 22 to 33 lb) with engine idle.