

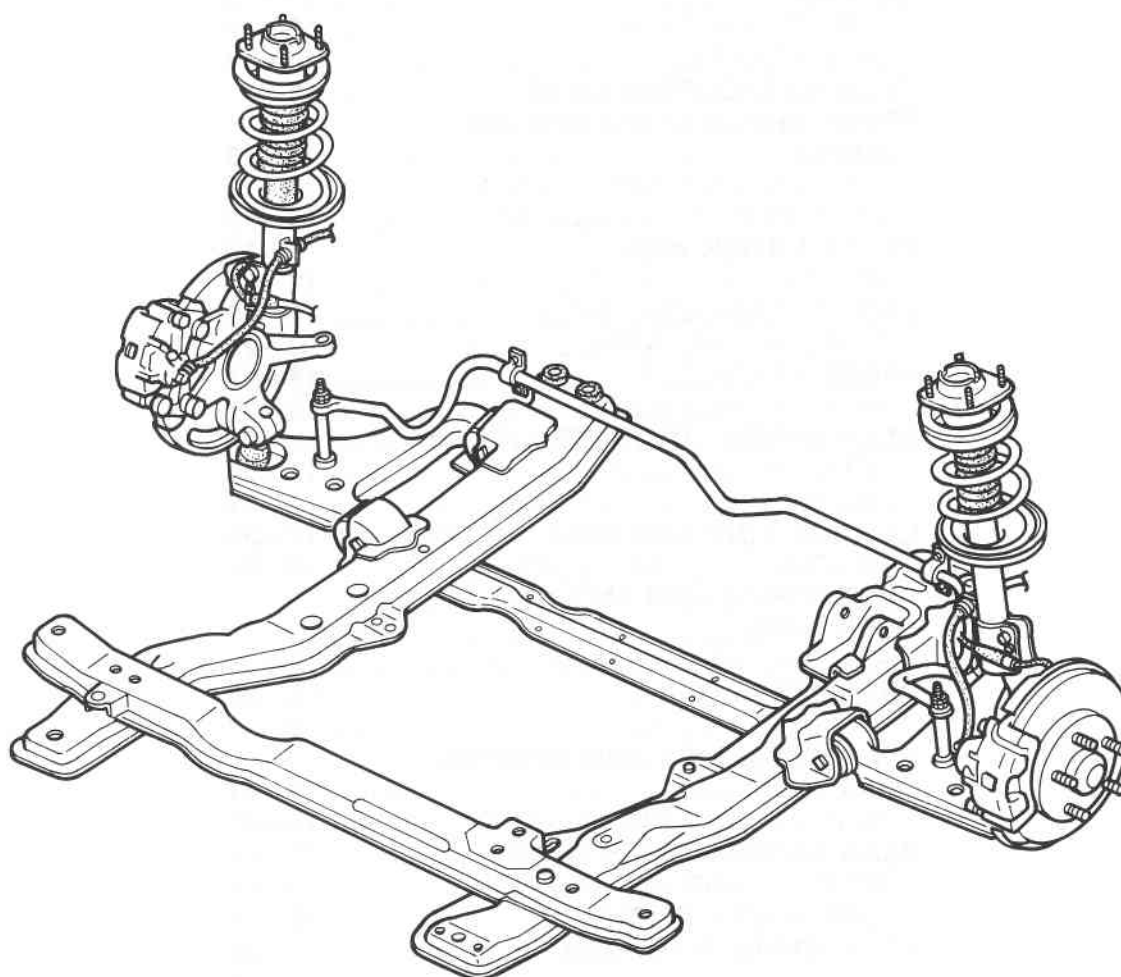
SUSPENSION

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13 OUTLINE

OUTLINE

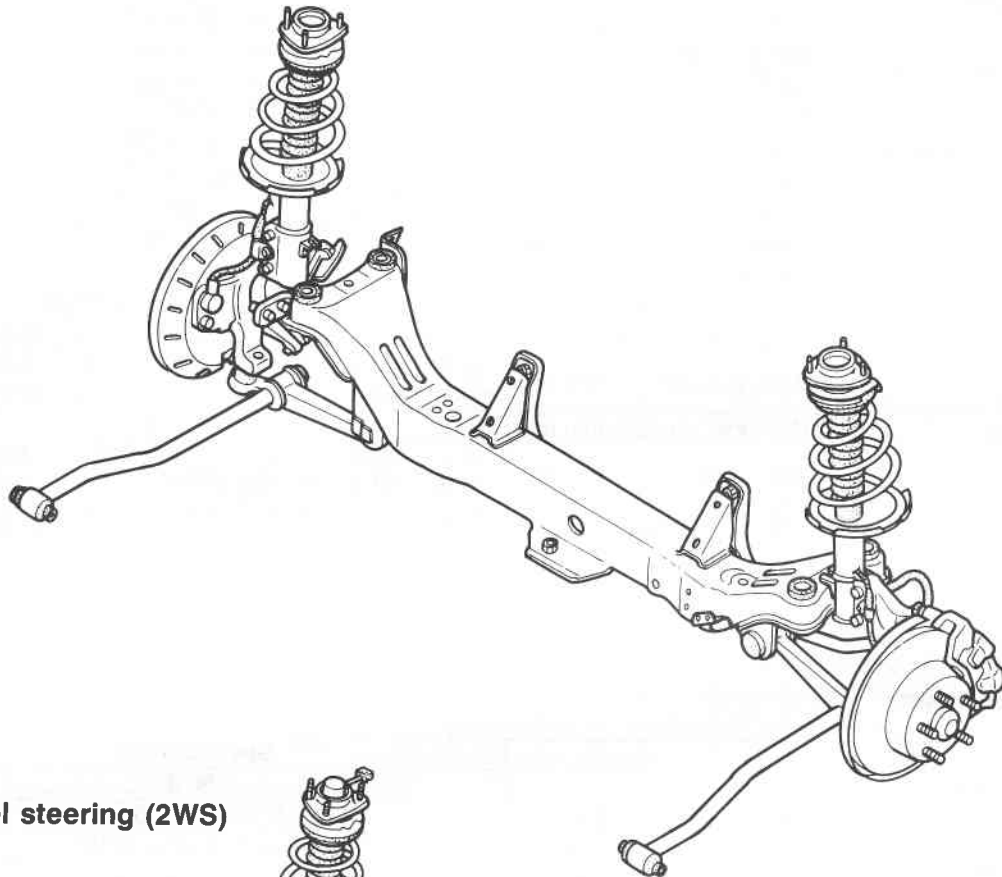
STRUCTURAL VIEW Front Suspension



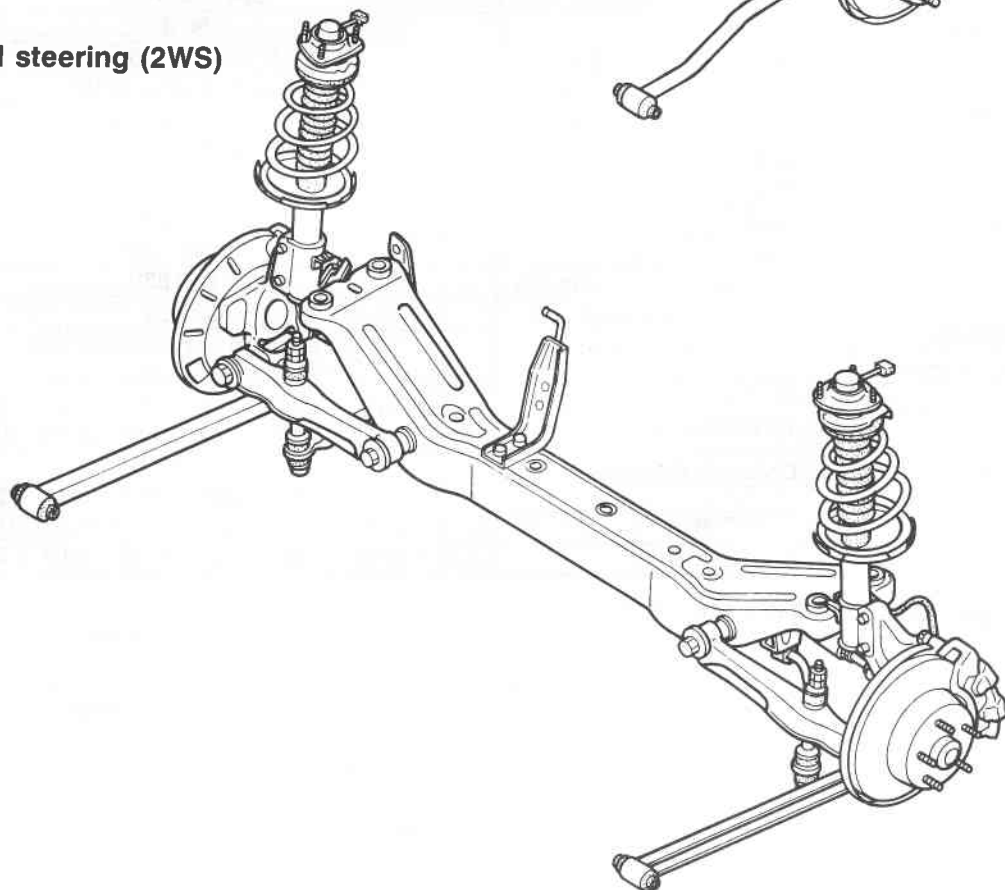
86U13X-002

Rear Suspension

4-wheel steering (4WS)



2-wheel steering (2WS)



13 OUTLINE

SPECIFICATIONS Front Suspension

Item		Specifications							
Suspension type		Strut							
Front wheel alignment	Toe-in mm (in)	0 ± 3 (0 ± 0.12)							
	Camber angle	0°17' ± 45'							
	Caster angle	1°13' ± 45'							
	King pin angle	12°47'							
Maximum front steering angle	Inner	36°00' ± 2°							
	Outer	31°00' ± 2°							
Stabilizer	Type	Torsion bar							
	Diameter mm (in)	20.0 (0.79)							
Shock absorbers	Standard suspension	Oil type							
	Auto adjust suspension	Low-pressure gas sealed type							
*Coil springs	Identification color	Green	Light green	Pink	Brown	Purple	Gray	Orange	
	Wire diameter mm (in)	12.6 (0.49)	12.8 (0.50)	12.9 (0.51)	13.1 (0.52)	13.3 (0.53)	13.6 (0.54)	12.5 (0.49)	
	Coil inner diameter mm (in)	147.5 (5.8)							
	Free length mm (in)	353 (13.9)	362 (14.3)	370 (14.6)	372 (14.6)	365 (14.4)	350 (13.8)	344 (13.5)	
	Coil number	5.09	5.31	5.42	5.53	5.46	5.34	4.99	

* Refer to pages 13—5, 6, 7 spring applications.

Rear Suspension

Item			Specifications								
Suspension type			Strut								
Rear wheel alignment	Toe-in mm (in)	2WS	0 ± 3 (0 ± 0.12)								
		4WS	3 ± 3 (0.12 ± 0.12)								
	Camber angle	2WS	-0°30' ± 45'								
		4WS	0°00' ± 45'								
Maximum rear steering angle (4WS)	Inner		5°00' ± 45'								
	Outer		5°00' ± 45'								
Stabilizer	Type		Torsion bar								
	Diameter mm (in)		16 (0.63)								
Shock absorbers	Standard suspension		Oil type								
	Auto adjust suspension		Low-pressure gas sealed type								
*Coil springs	Identification color		Orange	White	Yellow	Brown	Blue	Green	Red	Pink	
	Wire diameter mm (in)		11.6 (0.45)	11.7 (0.46)	11.8 (0.46)	11.9 (0.47)	12.1 (0.48)	12.2 (0.48)	12.4 (0.49)	12.6 (0.50)	
	Coil inner diameter mm (in)		127.5 (5.0)								
	Free length mm (in)		297 (11.7)	306 (12.0)	314 (12.4)	323 (12.7)	327 (12.9)	332 (13.1)	336 (13.2)	340 (13.4)	
	Coil number		5.44	5.58	5.72	5.87	6.03	6.04	6.21	6.36	

*Refer to pages 13—8, 9, 10 spring applications.

76G13X-002

Front Coil Springs

Model	Market	Engine	Trans- xle	Sun- roof	AAS	ABS	Identification color						
							Green	Light green	Pink	Brown	Purple	Gray	Orange
Sedan	ECE	F8	M4	—	—	—	○						
			M5	—	—	—	○						
			4HAT	—	—	—				○			
		FE	M5	—	—	—		○					
				○	—	—		○					
				—	○	—	○						
				○	○	—	○						
			4HAT	—	—	—					○		
				—	○	—			○				
				—	—	—				○			
				○	—	—					○		
				—	—	—				○			
				○	○	—			○				
		FE (DOHC)	M5	—	—	—				○			
				—	○	—		○					
				—	○	○		○					
				—	—	○				○			
				○	—	—				○			
				○	○	—			○				
				○	○	○			○				
				○	—	○				○			
		FE (Fuel Injection)	M5	—	—	—	○						
				—	○	—							○
			EC-AT	○	—	—			○				
		RF-N RF-CX	M5	○	○	—		○					
				—	—	—				○			
	Left Hand Drive	F8	M5	—	—	—	○				○		
				—	○	—	○						
		4HAT	—	—	—	—				○			
	Middle East	RF-N	M5	—	—	—				○			
		FE	M5	—	—	—	○						
				—	○	—		○					
	Right Hand Drive	4HAT	M5	—	—	—			○				
				—	○	—				○			
		F6	3AT	—	—	—		○					
			M5	—	—	—	○						
		FE	M5	—	—	—	○						
				—	○	—		○					
				—	—	—			○				
			4HAT	—	—	—				○			
		FE (DOHC)	M5	—	—	—		○					
				—	○	○		○					
		RF-N	M5	—	—	—				○			
		F8	M5	—	—	—	○						
				—	—	—				○			

76G13X-003

○.....Available
—.....Not available

M4, M5..... Manual transaxle
EC-AT..... Electronically controlled automatic transaxle
4HAT..... Hydraulic controlled automatic transaxle
4WS..... 4-Wheel steering
AAS..... Auto adjusting suspension
ABS..... Anti-lock brake system
3AT..... Automatic transaxle

13 OUTLINE

Model	Market	Engine	Trans- xle	Sun- roof	AAS	ABS	Identification color						
							Green	Light green	Pink	Brown	Purple	Gray	Orange
Hatchback	ECE	F8	M4	—	—	—	○						
			M5	—	—	—		○					
			4HAT	—	—	—				○			
		FE	M5	—	—	—		○					
				○	—	—		○					
			4HAT	—	—	—				○			
		FE (DOHC)	M5	○	—	—					○		
				—	—	—				○			
				—	○	—			○				
				—	○	○			○				
				—	—	○				○			
				○	—	—				○			
				○	○	—			○				
				○	○	○			○				
				○	—	○				○			
				—	—	○						○ (4WS)	
				○	—	○						○ (4WS)	
	Left Hand Drive	F8	M5	—	—	—		○					
			4HAT	—	—	—				○			
		FE	M5	—	—	—	○						
				—	○	—		○					
Middle East	FE	M5	4HAT	—	—	—	○						
				—	○	—		○					
			4HAT	—	—	—			○				
				—	○	—				○			
	Right Hand Drive	F8	M5	—	—	—	○						
			4HAT	—	—	—	○						
		FE	M5	—	—	—	○						
				—	○	—		○					
			4HAT	—	—	—			○				
				—	○	—				○			
	FE (DOHC)	M5		—	—	—			○				
				—	○	—				○			
				—	○	—							
				—	○	○			○				

76G13X-004

Model	Market	Engine	Transaxle	Sun-roof	AAS	ABS	Identification color						
							Green	Light green	Pink	Brown	Purple	Gray	Orange
Coupe/MX-6	ECE	FE	M5	—	—	—		○					
				○	—	—			○				
		4HAT		—	—	—					○		
				○	—	—					○		
		FE (DOHC)	M5	—	—	—				○			
				—	○	—			○				
				—	○	○			○				
				—	—	○				○			
				○	—	—				○			
				○	○	—			○				
				○	○	○			○				
				○	—	○				○			
	Left Hand Drive	FE	M5	—	—	—	○						
				—	○	—		○					
	Middle East	F8	M5	—	—	—		○					
				—	○	—			○				
	Right Hand Drive	FE	M5	—	—	—		○					
				—	○	—	○						
		4HAT		—	—	—			○				
				—	○	—					○		
		FE (DOHC)	M5	—	—	—			○				
				—	○	—				○			
				—	○	○			○				

76G13X-005

13 OUTLINE

Rear Coil Springs

Model	Market	Engine	Transa- xle	Sun- roof	AAS	ABS	Identification color										
							Orange	White	Yellow	Brown	Blue	Green	Red	Pink			
Sedan	ECE	F8	M4	—	—	—				R		L					
			M5	—	—	—					R		L				
			4HAT	—	—	—					R		L				
		FE	M5	—	—	—					R		L				
				○	—	—					R		L				
				—	○	—				R		L					
				○	○	—				R		L					
			4HAT	—	—	—					R		L				
				—	○	—			R		L						
				—	—	—					R		L				
				○	—	—					R		L				
				○	○	—				R		L					
				○	○	○				R		L					
				○	—	○						R		L			
		FE (DOHC)	M5	—	—	—					R		L				
				—	○	—				R		L					
				—	○	○				R		L					
				—	—	○					R		L		L		
				○	—	—						R					
				○	○	—				R		L					
				○	○	○				R		L					
				○	—	○						R		L			
		FE (Fuel Injection)	M5	—	—	—						R		L		L	
				—	○	—					R		L				
			EC-AT	○	—	—						R		L		L	
			○	○	—				R		L						
		RF-N	M5	—	—	—					R	R	L	L			
		RF-CX		—	—	—						R		L			
	Left Hand Drive	F8	M5	—	—	—					R		L				
				—	○	—					R		L				
			4HAT	—	—	—						R		L			
		RF-N	M5	—	—	—				R		L					
	Middle East	FE	M5	—	—	—			R		L						
				—	○	—					R		L				
			4HAT	—	—	—			R		L						
				—	○	—					R		L				
	Right Hand Drive	F6	3AT	—	—	—					L		R				
			M5	—	—	—					L		R				
		FE	M5	—	—	—			L		R						
				—	○	—				L		R					
			4HAT	—	—	—			L		R						
				—	○	—				L		R		R			
		FE (DOHC)	M5	—	—	—				L		R					
				—	○	○					L		R				
		RF-N	M5	—	—	—				L		R					
		F8	M5	—	—	—					L			R			
			4HAT	—	—	—						L			R		

76G13X-006

○..... Available
—..... Not available

R..... Right side
L..... Left side

M4, M5 Manual transaxle 3AT Automatic transaxle
EC-AT... Electronically controlled automatic transaxle
4HAT.... Hydrallic controlled automatic transaxle
4WS..... 4-wheel steering
AAS..... Auto adjusting suspension
ABS..... Anti-lock brake system

Model	Market	Engine	Transaxle	Sun-roof	AAS	ABS	Identification color							
							Orange	White	Yellow	Brown	Blue	Green	Red	Pink
Hatchback	ECE	F8	M4	—	—	—				R		L		
			M5	—	—	—					R		L	
			4HAT	—	—	—					R		L	
		FE	M5	—	—	—					R		L	
				○	—	—						R		L
			4HAT	—	—	—					R		L	
			FE (DOHC)	○	—	—					R		L	
				—	—	—					R		L	
				—	○	—				R		L		
				—	○	○				R		L		
				—	—	○					R		L	
				○	—	—						R		L
				○	○	—				R		L		
				○	○	○				R		L		
				○	—	○						R		L
				—	—	○						R (4WS)		L (4WS)
				○	—	○						R (4WS)		L (4WS)
	Left Hand Drive	F8	M5	—	—	—					R		L	
			4HAT	—	—	—					R		L	
		FE	M5	—	—	—			R		L			
	Middle East	FE	M5	—	—	—					R		L	
				—	○	—					R		L	
			4HAT	—	—	—			R		L			
				—	○	—					R		L	
	Right Hand Drive	F8	M5	—	—	—					L		R	
			4HAT	—	—	—					L		R	
		FE	M5	—	—	—			L		R			
				—	○	—					L		R	
			4HAT	—	—	—			L		R			
				—	○	—					L		R	
		FE (DOHC)	M5	—	—	—				L		R		
				—	○	—					L		R	
				—	○	○				L		R		

76G13X-007

13 OUTLINE

Model	Market	Engine	Transa- xle	Sun- roof	AAS	ABS	Identification color							
							Orange	White	Yellow	Brown	Blue	Green	Red	Pink
Coupe/MX-6	ECE	FE	M5	—	—	—			R		L			
				○	—	—			R		L			
			4HAT	—	—	—			R		L			
				○	—	—			R		L			
		FE (DOHC)	M5	—	—	—			R		L			
				—	○	—		R		L				
				—	○	○		R		L				
				—	—	○			R		L			
				○	—	—			R		L			
				○	○	—		R		L				
				○	○	○		R		L				
				○	—	○			R		L			
				—	—	—			R		L			
				—	○	—	R		L		L			
				—	—	—			R		L			
	Middle East	FE	M5	○	—	—		R		L				
				—	○	—			R		L			
		F8	M5	—	—	—			R		L			
				—	—	—			R		L			
		FE	M5	—	—	—			R		L			
				—	○	—			R		L			
				—	—	—	L		R					
				—	○	—			L		R			
				—	—	—	L		R					
				—	○	—			L		R			
	Right Hand Drive	F8	M5	—	—	—			L		R			
				—	—	—			L		R			
		FE	M5	—	—	—			L		R			
				—	○	—			L		R			
		4HAT	M5	—	—	—			L		R			
				—	○	—			L		R			
	FE (DOHC)	M5	M5	—	—	—		L		R				
				—	○	—			L		R			
				—	○	○		L		R				
				—	○	○		L		R				

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TROUBLESHOOTING GUIDE

Problem	Possible Cause	Remedy	Page
Body "rolls"	Weak stabilizer	Replace	13—23, 27
	Worn or deteriorated stabilizer or suspension arm bushing	Replace	13—39, 41
	Shock absorber malfunction	Replace	13—13, 29
Poor riding comfort	Weak coil spring	Replace	13—15, 32
	Shock absorber malfunction	Replace	13—13, 29
Body tilt	Worn coil spring	Replace	13—15, 32
	Worn stabilizer or suspension bushing	Replace	13—23, 27, 39, 41
Abnormal noise from suspension system	Poor lubrication or wear of lower arm ball joint	Replace	13—18, 36
	looseness of peripheral connections	Tighten	
	Shock absorber malfunction	Replace	13—13, 29
	Worn or deteriorated stabilizer or suspension arm bushing	Replace	13—23, 27, 39, 41
	Worn or damaged front strut bearing	Replace	13—15
"Heavy" steering wheel operation	Lower arm ball joint stuck	Replace	13—18, 36
	Ball joints stuck or damaged	Replace	13—18, 36
	Ball joints insufficiently lubricated; foreign material; abnormal wear	Lubricate or replace	13—18, 36
	Improperly adjusted wheel alignment (toe-in)	Adjust	13—50, 52
	Worn or damaged steering gear bushing	Refer to section 10	—
	Improperly adjusted pinion pre-load	Refer to section 10	—
	Damaged steering gear	Refer to section 10	—
	Insufficient grease on steering gear	Refer to section 10	—
	Malfunction of steering shaft universal joint	Refer to section 10	—
	Low tire pressure	Refer to section 12	—
	Abnormal tire wear	Refer to section 12	—
Steering wheel pulls to one side	Weak coil spring	Replace	13—15, 32
	Lower arm or stabilizer bushing worn or damaged	Replace	13—20, 38
	Damaged knuckle arm	Refer to section 9	—
	Lower arm damaged or loose	Replace or tighten	13—18
	Improperly adjusted wheel alignment (toe-in)	Adjust	13—50, 52
	Damaged steering linkage	Refer to section 10	—
	Damaged wheel bearing	Refer to section 9	—
	Uneven tire pressure	Refer to section 12	—
	Abnormal tire wear	Refer to section 12	—
Steering wheel vibrates	Brakes dragging	Refer to section 11	—
	Suspension arm or stabilizer bushing worn or deteriorated	Replace	13—23, 27, 39, 41
	Worn lower arm ball joint	Replace	13—18, 36
	Shock absorber malfunction or looseness	Replace or tighten	13—13, 29
	Improperly adjusted wheel alignment (toe-in)	Adjust	13—50, 52
	Damaged linkage	Refer to section 10	—
	Improperly adjusted pinion preload	Refer to section 10	—
	Worn steering gear bushing	Refer to section 10	—
	Loose steering shaft universal joint	Refer to section 10	—
	Damaged wheel bearing	Refer to section 9	—
	Abnormal tire wear	Refer to section 12	—
	Abnormal tire wear	Refer to section 12	—
	Damaged or unbalanced wheel	Refer to section 12	—

76G13X-009

13 TROUBLESHOOTING GUIDE

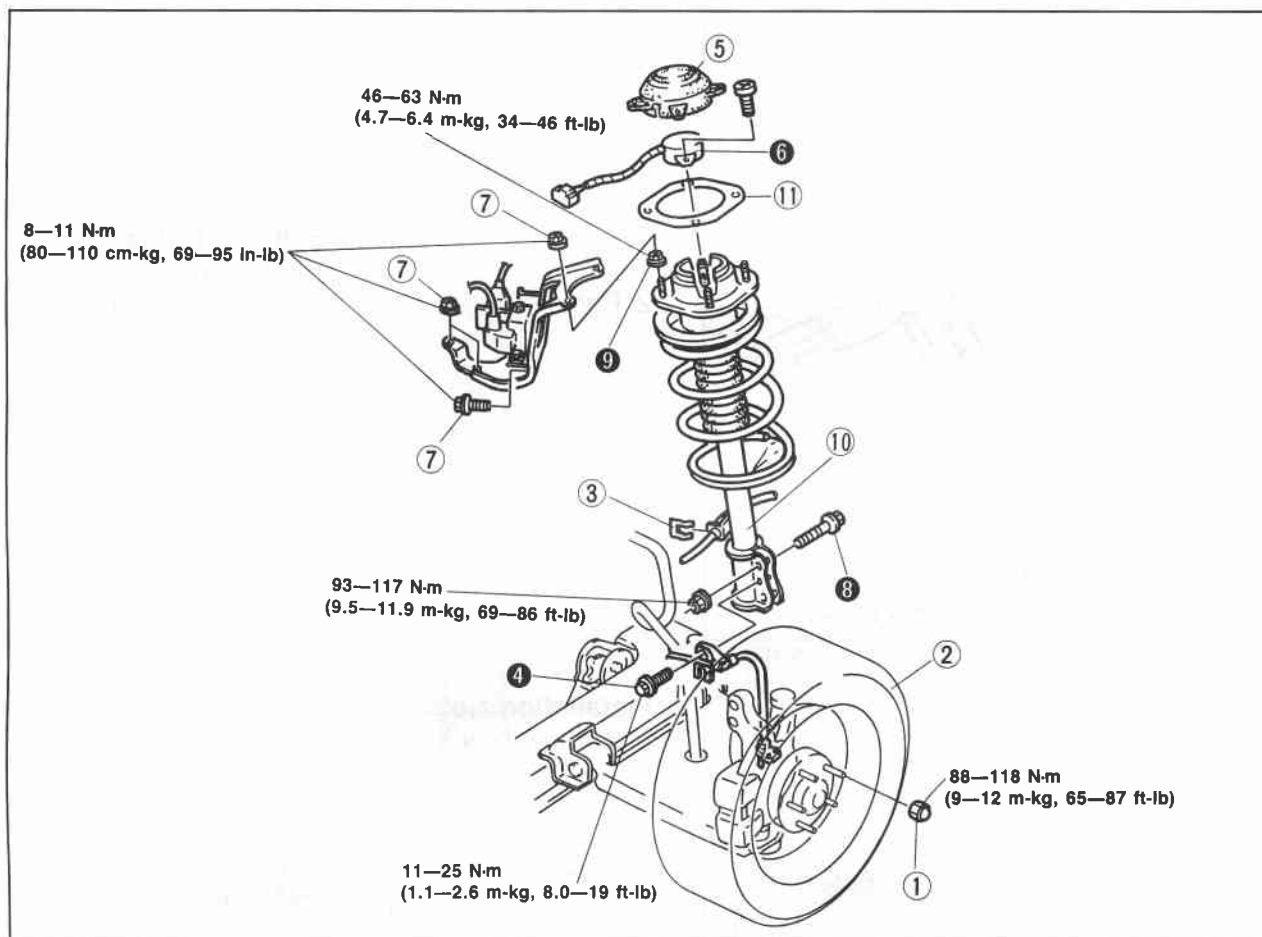
Problem	Possible Cause	Remedy	Page
Excessive steering wheel play	Worn or damaged lower arm bushing	Replace	13—20, 38
	Improperly adjusted pinion preload	Refer to section 10	—
	Worn rack and pinion	Refer to section 10	—
	Loose steering shaft universal joint	Refer to section 10	—
General instability	Weak coil springs	Replace	13—15, 32
	Shock absorber malfunction	Replace	13—13, 29
	Worn or damaged lower arm or stabilizer bushing	Replace	13—20, 38
	Improperly adjusted wheel alignment	Adjust	13—50, 52
	Improperly adjusted pinion preload	Refer to section 10	—
	Loose steering shaft universal joint	Refer to section 10	—
	Incorrect tire pressure	Refer to section 12	—
	Damaged or unbalanced wheel	Refer to section 12	—
	Malfunction of wheel bearing	Refer to section 9	—

76G13X-009

FRONT SHOCK ABSORBER AND SPRING

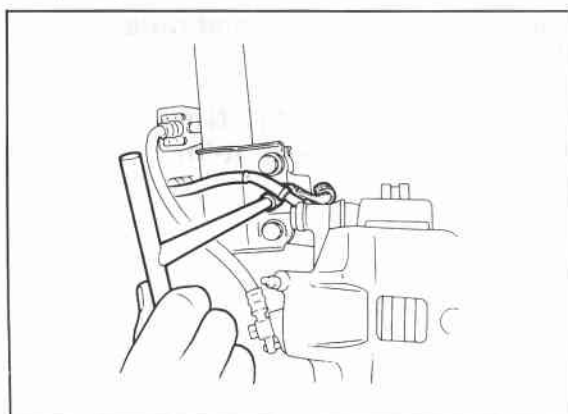
REMOVAL AND INSTALLATION

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Install in the reverse order of removal, referring to the installation note for specially marked parts.
4. Tighten all nuts and bolts to the specified torque, referring to the figure.



76G13X-012

- | | | |
|-----------------------------------|-------------------------------------------|-----------------------------|
| 1. Lug nut | 5. Rubber cap | 8. Bolt and nut |
| 2. Wheel and tire | 6. Actuator (AAS) | 9. Nut |
| 3. Clip | 7. Nuts and bolts (Ignition coil bracket) | 10. Shock absorber assembly |
| 4. Harness and bracket bolt (ABS) | | 11. Seat |

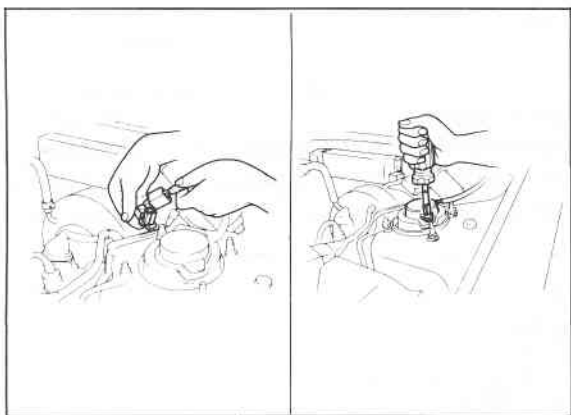


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Removal Note ABS Harness bracket

Remove the ABS harness and bracket.

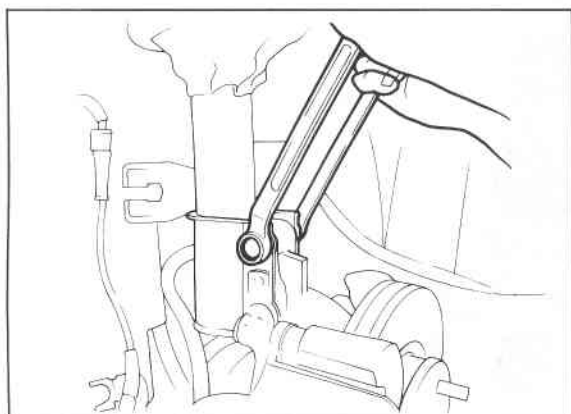
13 FRONT SHOCK ABSORBER AND SPRING



86U13X-011

AAS actuator

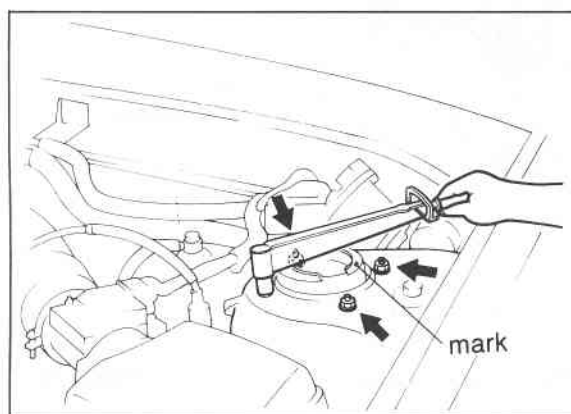
1. Disconnect the AAS actuator connector.
2. Remove the AAS actuator.



76G13X-013

Shock absorber clinch bolts and nuts

1. Remove the shock absorber clinch bolts and nuts.
2. Remove the shock absorber upper mounting nuts.



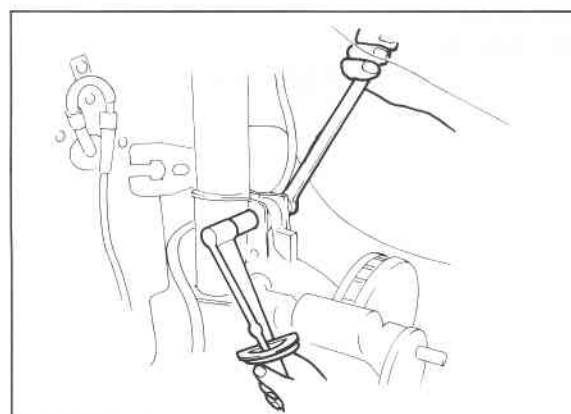
86U13X-013

Installation Note

Mounting block

Install the mounting block to the suspension tower with the white mark facing the front-inside direction.

Tightening torque: 46—63 N·m
(4.7—6.4 m·kg, 34—46 ft·lb)



86U13X-014

Shock absorber clinch bolts and nuts

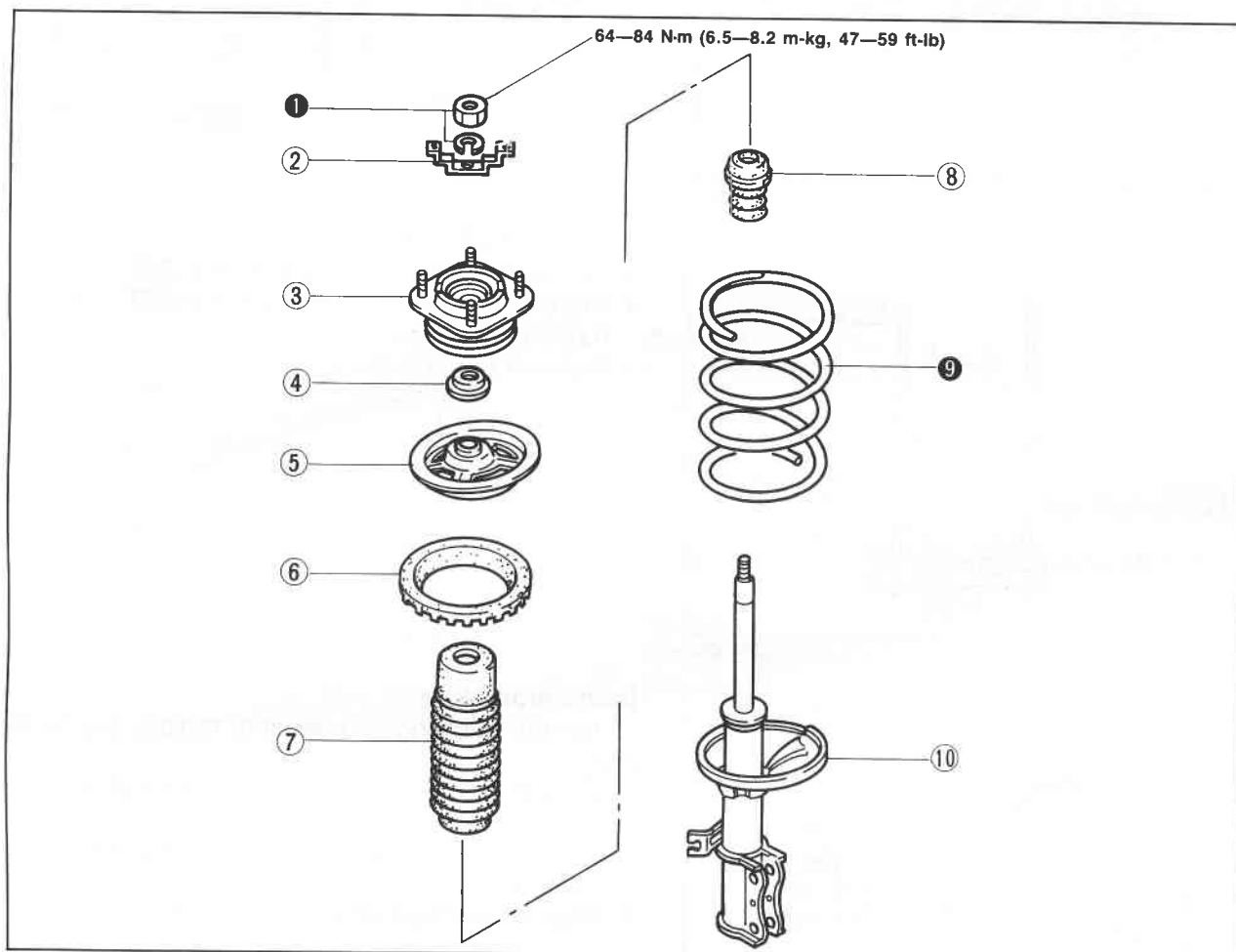
Install the clinch bolts and nuts.

Tightening torque: 93—117 N·m
(9.5—11.9 m·kg, 69—86 ft·lb)

FRONT SHOCK ABSORBER AND SPRING 13

DISASSEMBLY AND ASSEMBLY

1. Disassemble in the sequence shown in the figure, referring to the disassembly note for specially marked parts.
2. Inspect all components and parts, referring to inspection note.
3. Assemble in the reverse order of disassembly, referring to the assembly note for specially marked parts.
4. Tighten all nuts and bolts to the specified torque, referring to the figure.



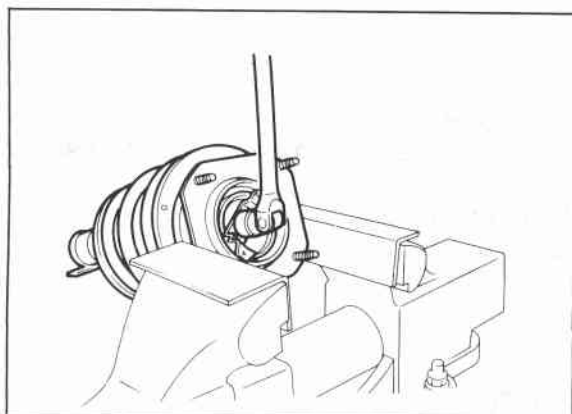
76G13X-014

1. Nut
2. Actuator bracket
3. Mounting block
4. Bearing

5. Spring upper seat
6. Spring seat
7. Dust boot
8. Bound stopper

9. Coil spring
10. Shock absorber

13 FRONT SHOCK ABSORBER AND SPRING



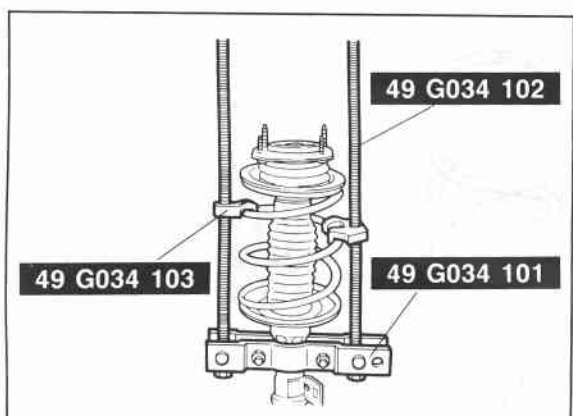
76G13X-015

Disassembly Note

1. Loosen the piston rod upper nut several turns, but do not remove.

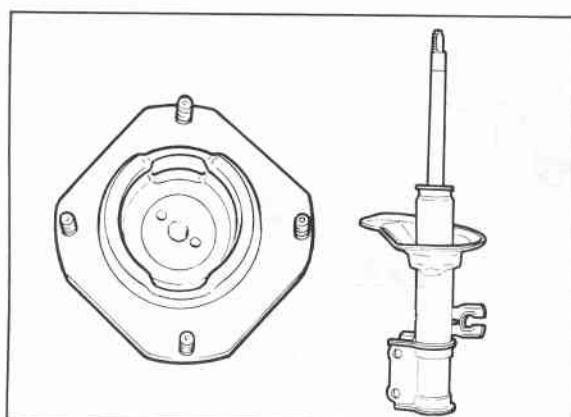
Caution

- a) Do not remove the nut.
- b) Use copper or aluminum plates in the jaws of a vice.



86U13X-018

2. Set the **SST** in a vise.
3. Secure the shock absorber in the **SST**.
4. Compress the coil spring with the **SST**, then remove the upper nut.
5. Remove the coil spring.

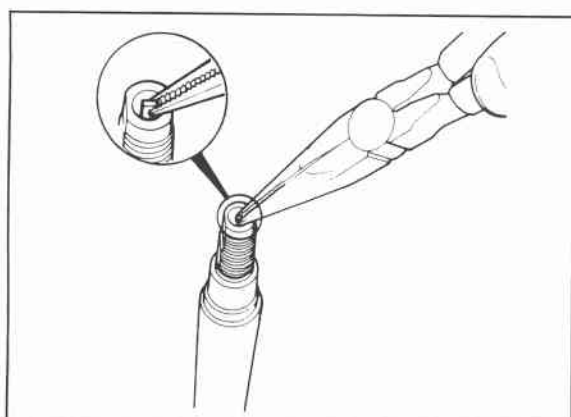


76G13X-016

Inspection Note

Check the following and repair or replace any faulty parts.

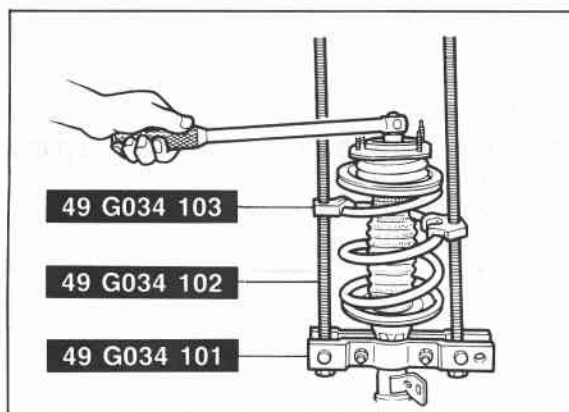
1. Oil leakage or abnormal noise from shock absorbers
2. Deterioration or damage of mounting block and bearing
3. Wear or damage of bound stopper



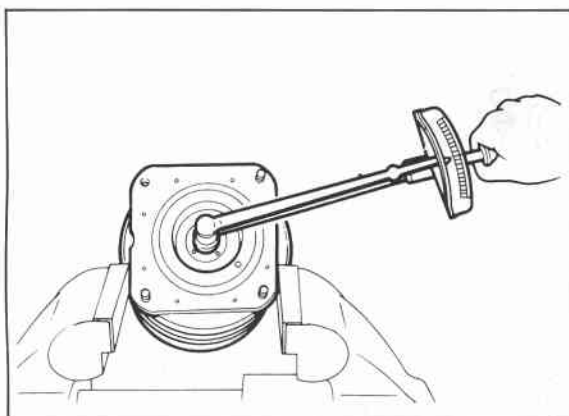
86U13X-020

4. Smooth rotation of control rod (AAS)

FRONT SHOCK ABSORBER AND SPRING 13



86U13X-021



Assembly Note

1. Set the **SST** in a vise
2. Secure the shock absorber in the **SST**.
3. Install the bound stopper and dust boot to the shock absorber.
4. Install the compressed coil spring (compressed with **SST**).
5. Install the rubber seat, spring upper seat, bearing and mounting block.

6. Remove the **SST**.
7. Secure the mounting block in a vise.

Caution

Use copper or aluminum plates in the jaws of a vice.

8. Tighten the piston rod upper nut.

Tightening torque:

64—84 N·m (6.5—8.2 m·kg, 47—59 ft·lb)

Caution

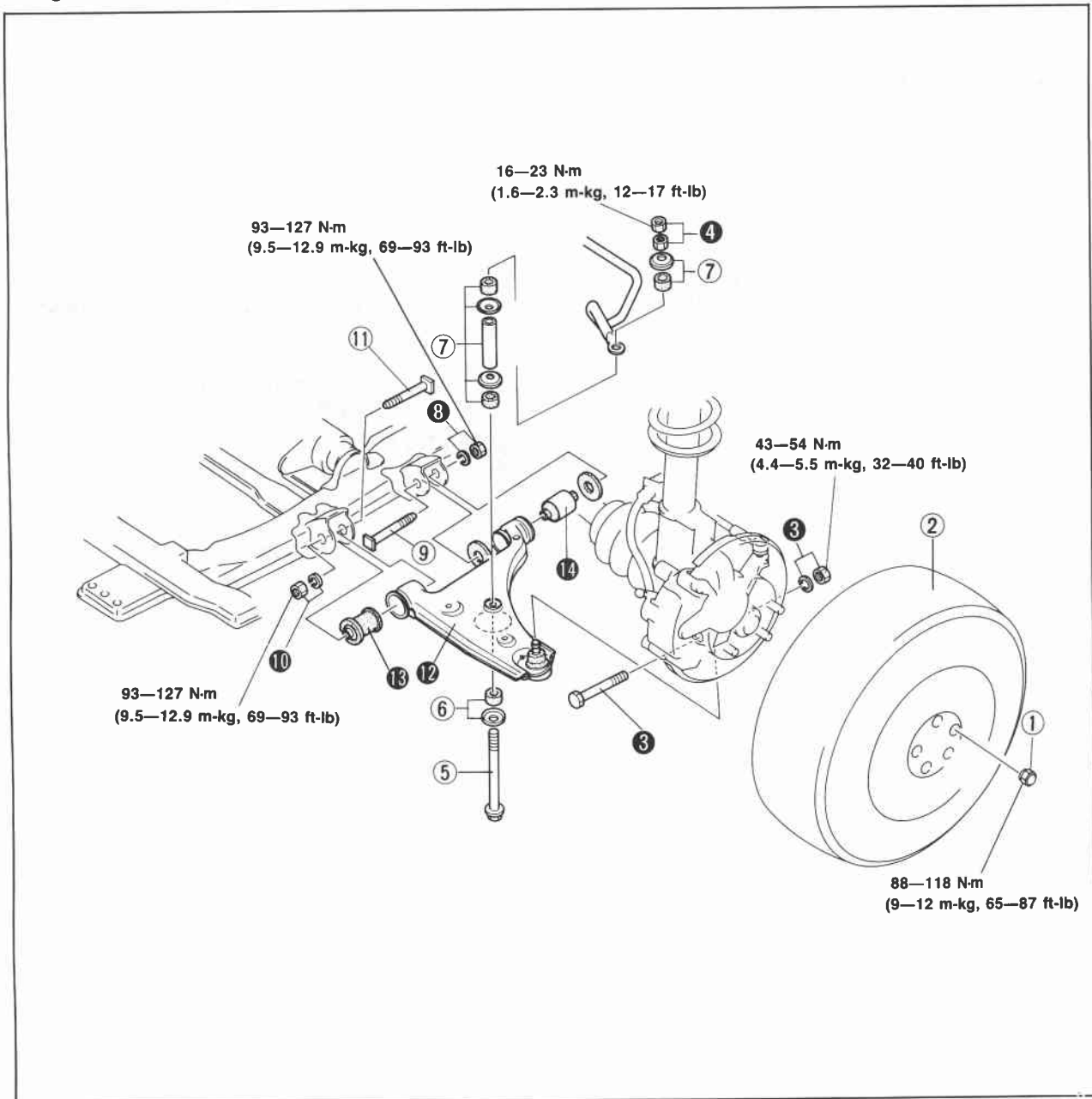
Check that the spring is well seated in the upper seats.

13 FRONT LOWER ARM

FRONT LOWER ARM

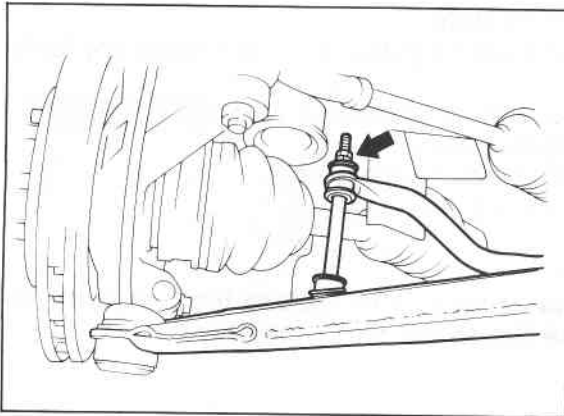
REMOVAL AND INSTALLATION

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Inspect all components and parts, referring to inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to the figure.

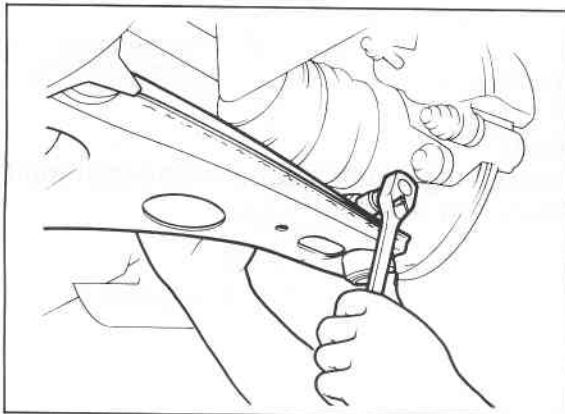


76G13X-018

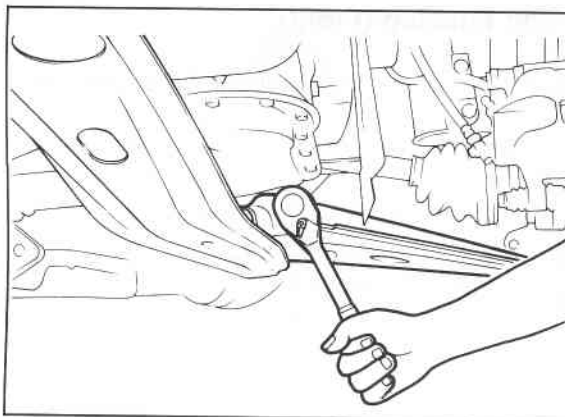
- | | | |
|-------------------|---------------------------------|---------------------|
| 1. Lug nut | 6. Retainer and bushing | 10. Nut |
| 2. Wheel and tire | 7. Retainer, bushing and spacer | 11. Bolt |
| 3. Bolt and nut | 8. Nut | 12. Front lower arm |
| 4. Nuts | 9. Bolt | 13. Front bushing |
| 5. Bolt | | 14. Rear bushing |



86U13X-024



86U13X-025



86U13X-026

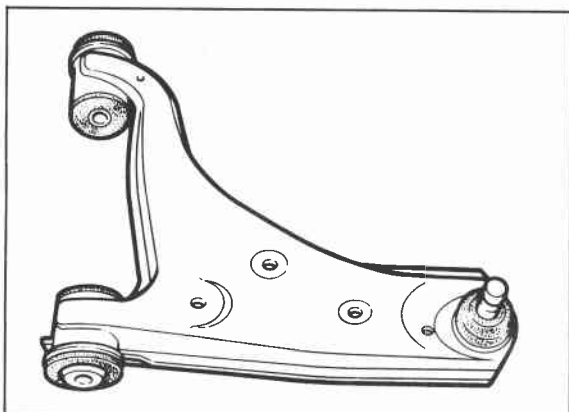
Removal Note

1. Remove the stabilizer bar control link.

2. Remove the lower arm ball joint.

3. Remove the lower arm spindle from the lower arm.

13 FRONT LOWER ARM



86U13X-027

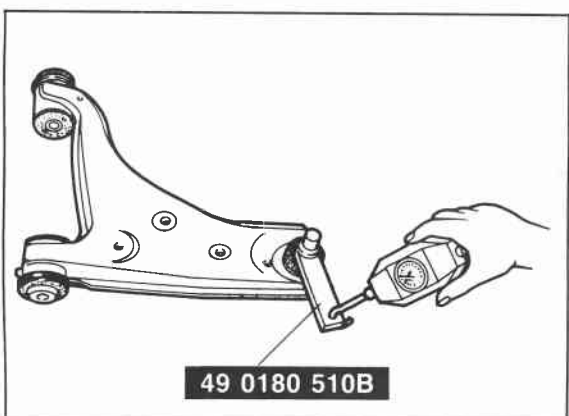
Inspection Note

Check the following and repair or replace any faulty parts.

1. Lower arm for damage or cracks
2. Preload of ball joint
3. Bushings for deterioration or wear
4. Dust boot for damage

Note

If it is necessary to replace the ball joint, replace the lower arm assembly.



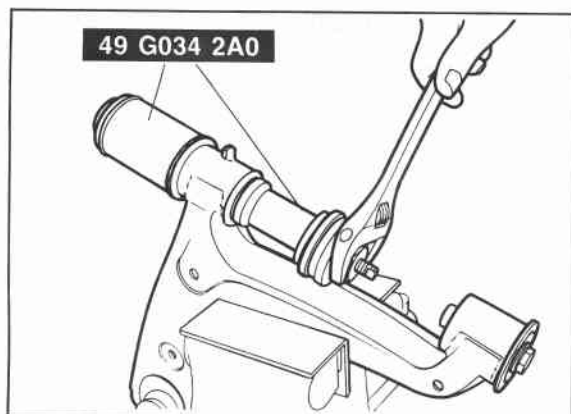
86U13X-028

Ball joint preload

Attach the **SST** to the ball stud, and measure the preload with a pull scale.

Caution

Measure the preload after shaking ball joint the stud 3 or 4 times.

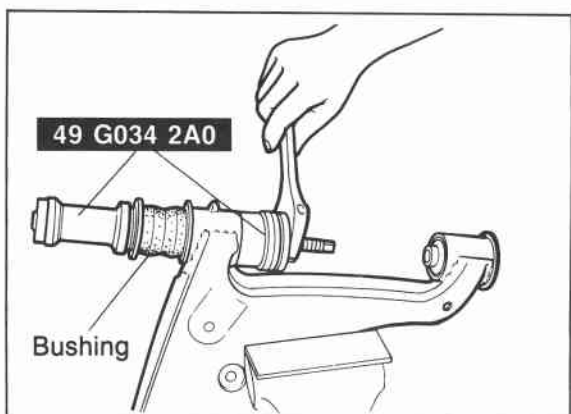


86U13X-029

Lower arm bushing (Front)

Removal

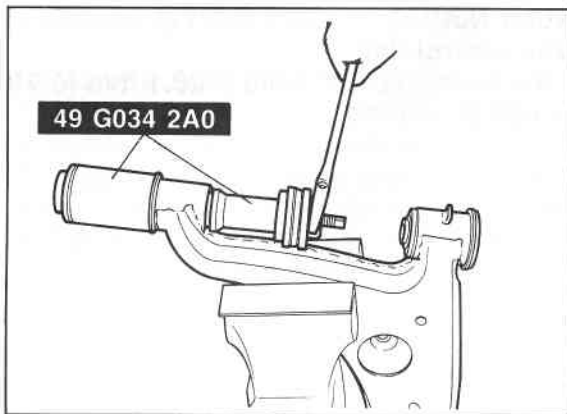
1. Cut away the projecting rubber of the lower arm bushing.
2. Set the **SST** on the lower arm and remove the bushing.



86U13X-030

Installation

Apply soapy water to the new bushing, then pull it into the lower arm with the **SST**.

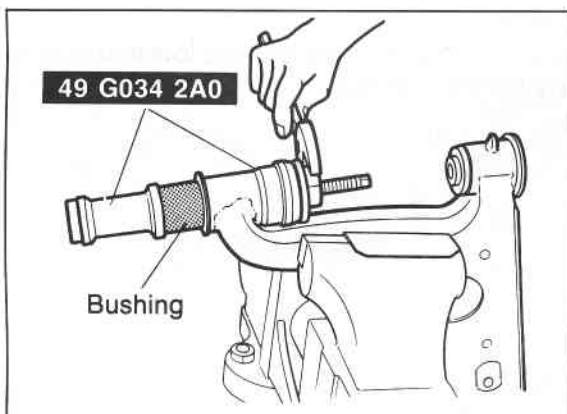


86U13X-031

Lower arm bushing (Rear)

Removal

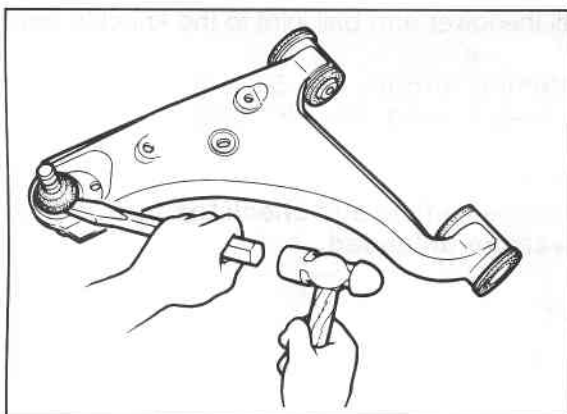
Set the **SST** on the lower arm and remove the bushing.



86U13X-032

Installation

Install the new bushing, and then pull it into the lower arm with the **SST**.



86U13X-033

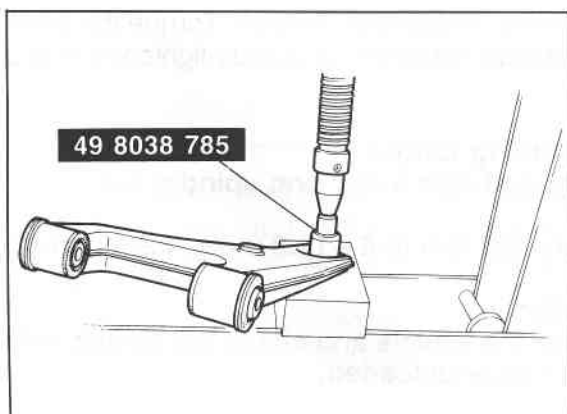
Ball joint dust boot

Removal

Remove the dust boot with a chisel.

Caution

Do not damage the ball joint.

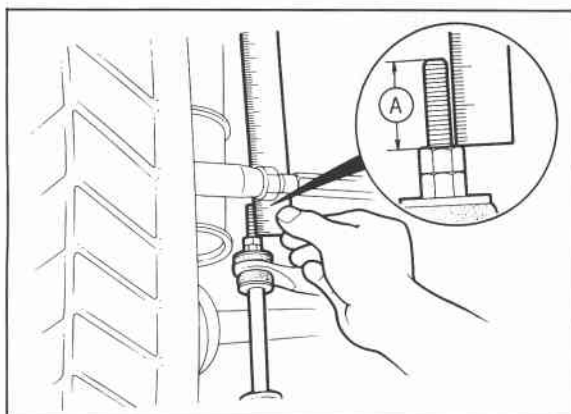


86U13X-034

Installation

1. Liberally coat the inside of the new dust boot with grease.
2. Install the dust boot onto the ball joint with the **SST**.

13 FRONT LOWER ARM

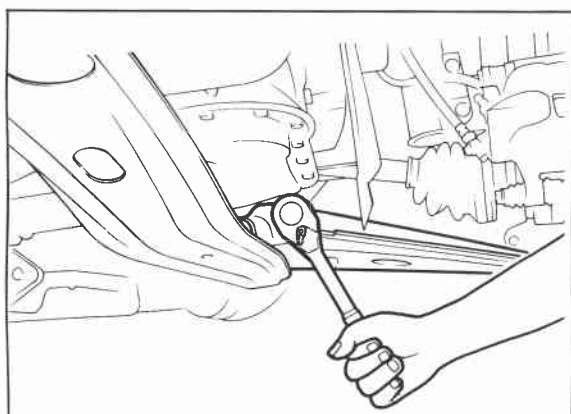


76G13X-019

Installation Note

Stabilizer control link

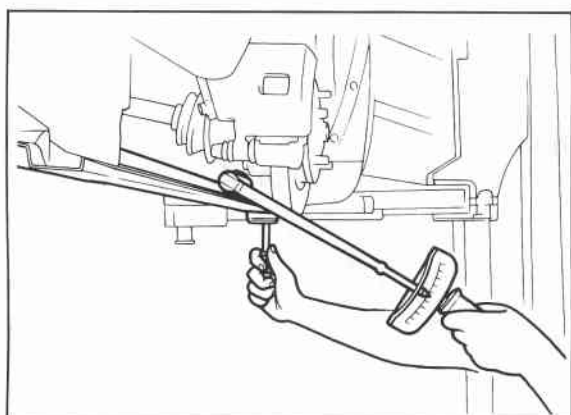
Tighten the link nut so that there is **20.1 mm (0.79 in)** of thread (A) exposed.



86U13X-036

Lower arm

1. Install the lower arm spindle to the lower arm, and loosely tighten the nut.



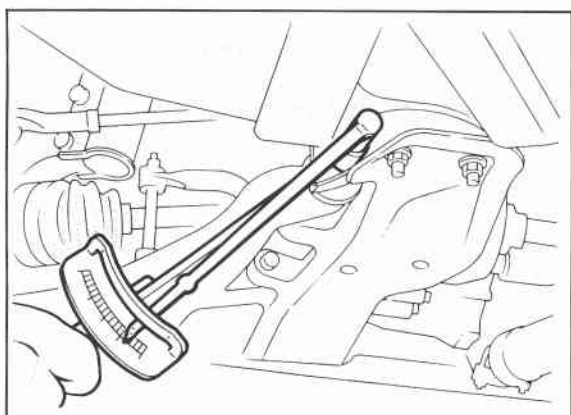
86U13X-037

2. Install the lower arm ball joint to the knuckle arm.

**Tightening torque: 43—54 N·m
(4.4—5.5 m·kg, 32—40 ft·lb)**

Caution

Lower the vehicle and check the torque with the vehicle unloaded.



86U13X-038

3. Lower the vehicle from the jack. Torque the lower arm spindle nut which was loosely tightened in step (1).

**Tightening torque:
Front and rear lower arm spindle nut**

93—127 N·m (9.5—12.9 m·kg, 69—93 ft·lb)

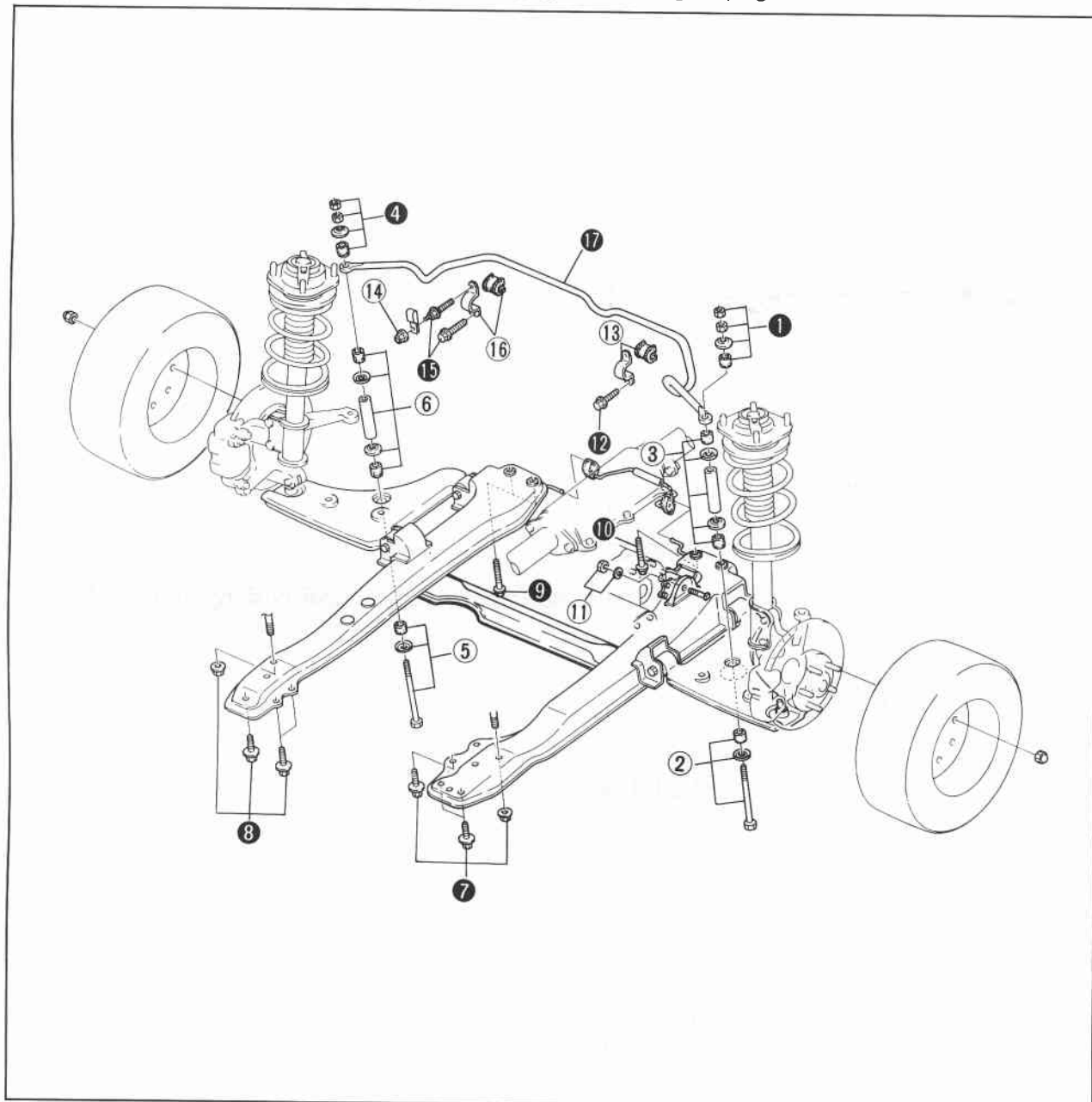
Caution

Lower the vehicle and check the torque with the vehicle unloaded.

FRONT STABILIZER (4WS)

REMOVAL AND INSTALLATION

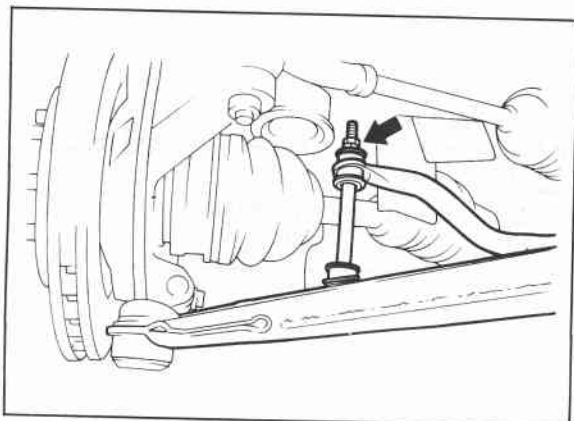
1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Inspect all components and parts, referring to the inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to page 13—26.



76G13X-020

- | | | |
|----------------------------------|----------------------------------|-------------------------|
| 1. Nut, retainer, and bushing | 6. Bushing, retainer, and spacer | 11. Bolt |
| 2. Bolt, retainer, and bushing | 7. Bolt and nut | 12. Bolt |
| 3. Bushing, retainer, and spacer | 8. Bolt and nut | 13. Bushing and bracket |
| 4. Nut, retainer, and bushing | 9. Bolt | 14. Nut |
| 5. Bolt, retainer, and bushing | 10. Bolt | 15. Bolt |
| | | 16. Bushing and bracket |
| | | 17. Stabilizer |

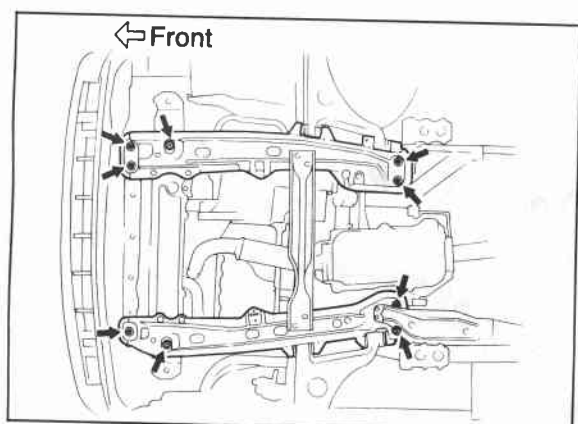
13 FRONT STABILIZER (4WS)



86U13X-040

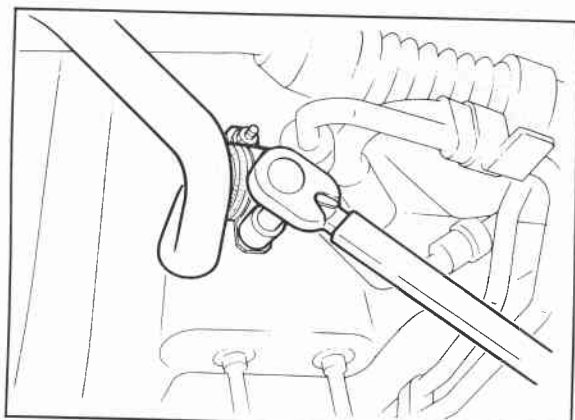
Removal Note

1. Remove the wheel and tire.
2. Remove the stabilizer bar control link.



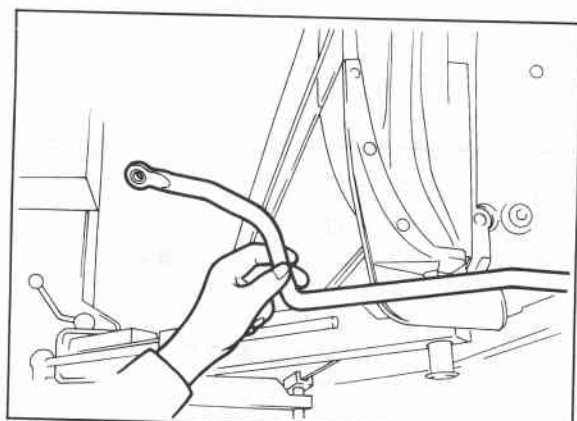
86U13X-041

3. Remove the bolts indicated by the arrows.



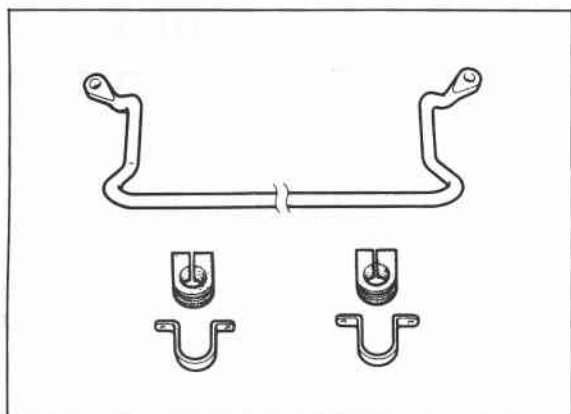
86U13X-042

4. Remove the stabilizer bushing and bracket.

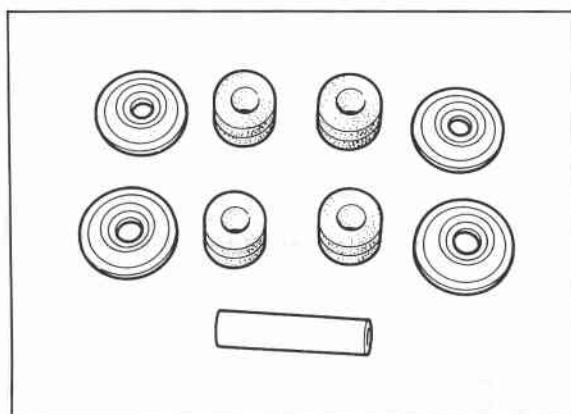


86U13X-043

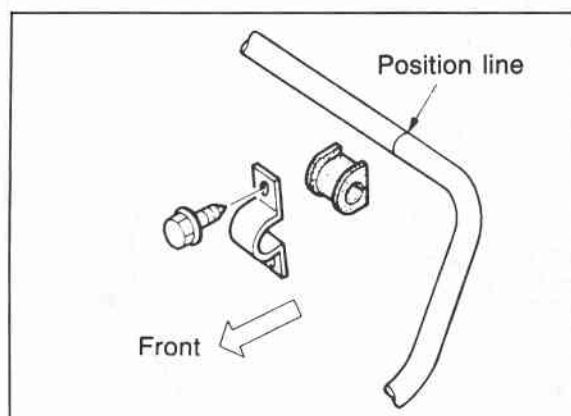
5. Remove the stabilizer.



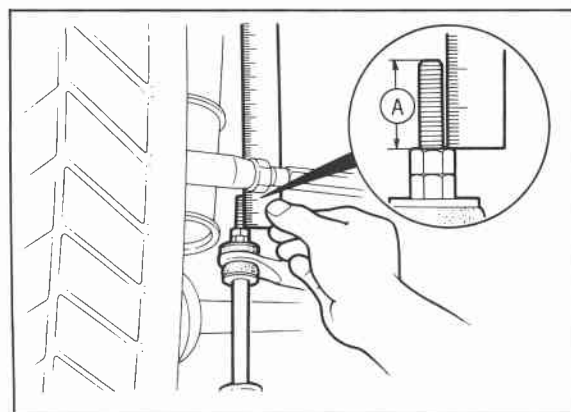
86U13X-044



69G13X-029



86U13X-045



86U13X-046

Inspection Note

Check the following and repair or replace any faulty parts.

1. Stabilizer for bending or damage
2. Stabilizer bushings for deterioration or wear

3. Retainers and spacers for bending or damage
4. Bushings for deterioration or wear
5. Bolts for bending or damage

Installation Note

Stabilizer bushing and control link

Align the bushing with the installation position line on the stabilizer, mount it so that the notch faces the rear of the chassis.

Caution

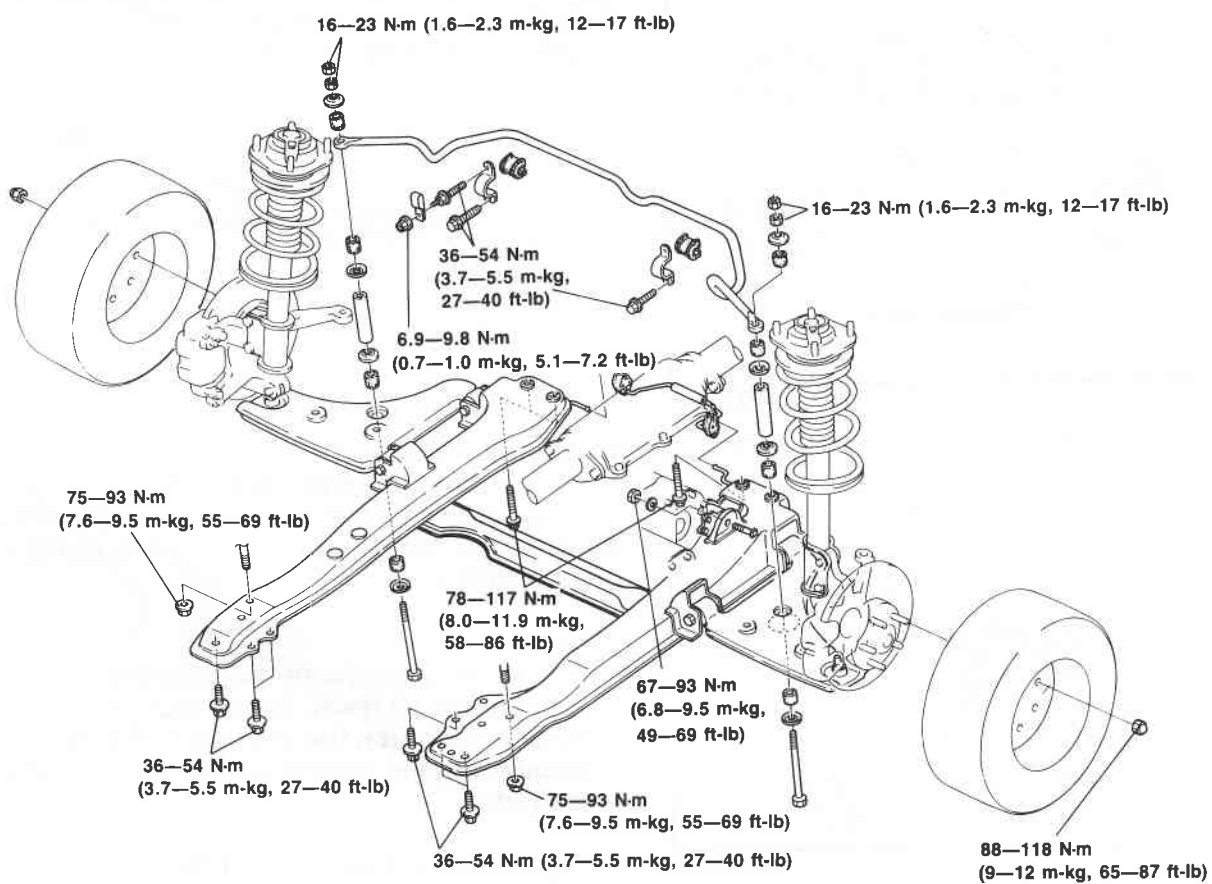
Mount the brackets of the stabilizer first and loosely tighten them. After mounting the control links, tighten the bracket to the specified torque with the vehicle on the ground and unloaded.

**Tightening torque: 36—54 N·m
(3.7—5.5 m·kg, 27—40 ft·lb)**

Tighten the link nut so that there is **20.1mm (0.79 in)** of thread (A) exposed beyond it.

13 FRONT STABILIZER (4WS)

Tightening torques

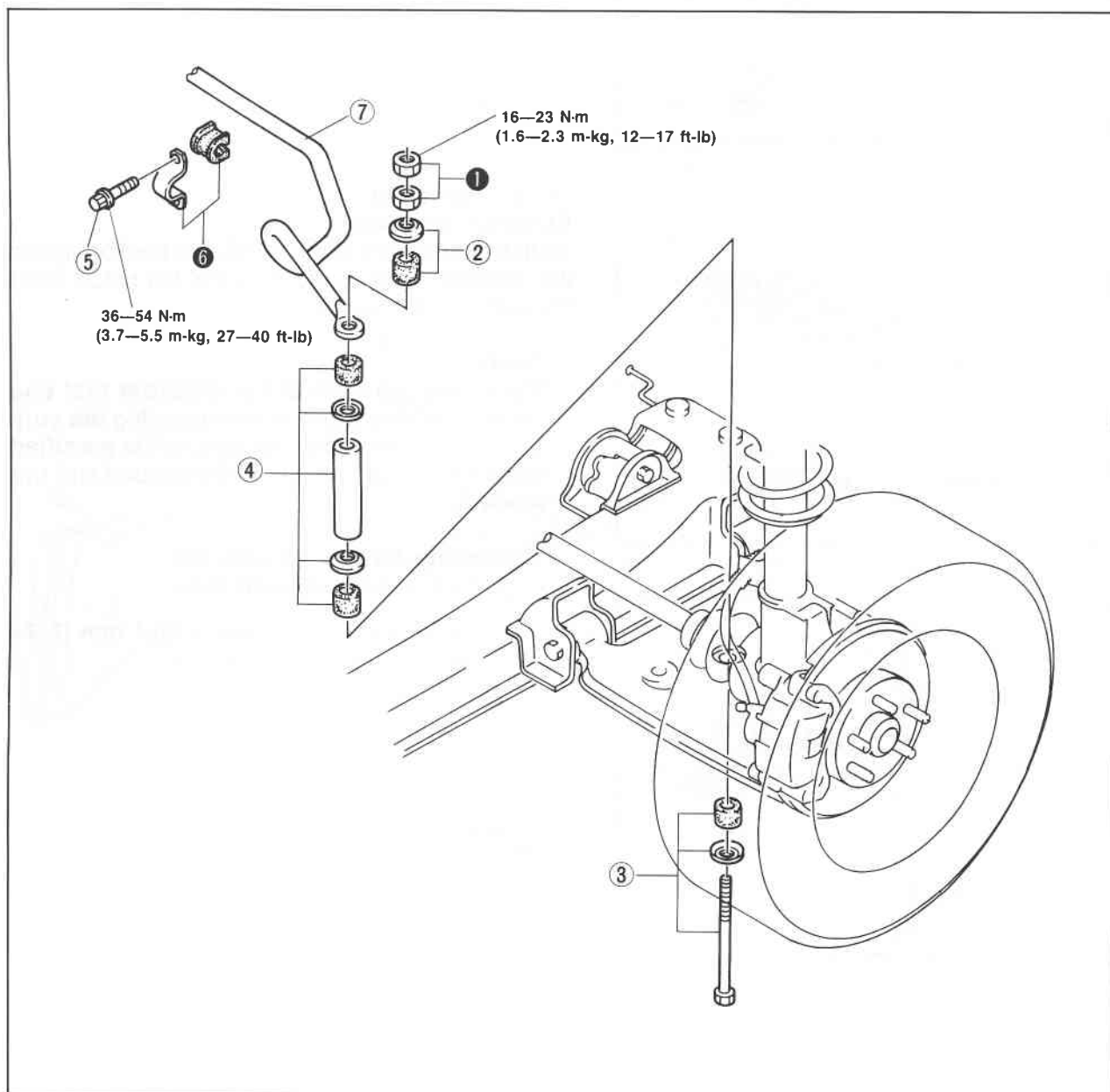


76G13X-034

FRONT STABILIZER

REMOVAL AND INSTALLATION

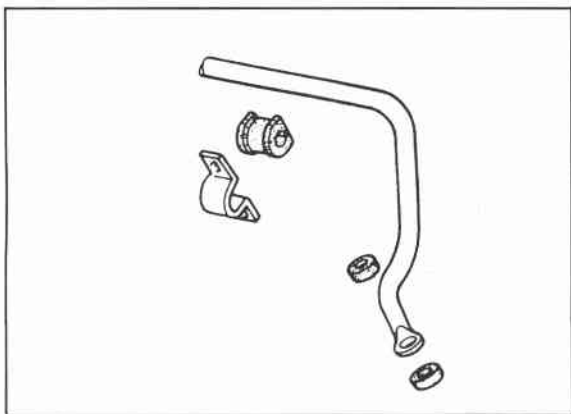
1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure.
3. Inspect all components and parts, referring to the inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to the figure.



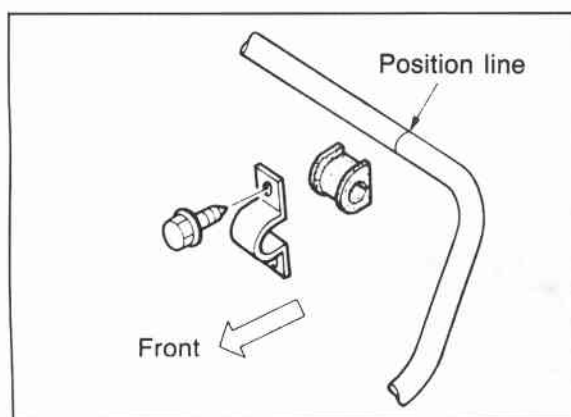
76G13X-021

- | | | |
|--------------------------------|----------------------------------|------------------------|
| 1. Nuts | 4. Bushing, retainer, and spacer | 6. Bushing and bracket |
| 2. Retainer and bushing | 5. Bolt | 7. Stabilizer |
| 3. Bolt, retainer, and bushing | | |

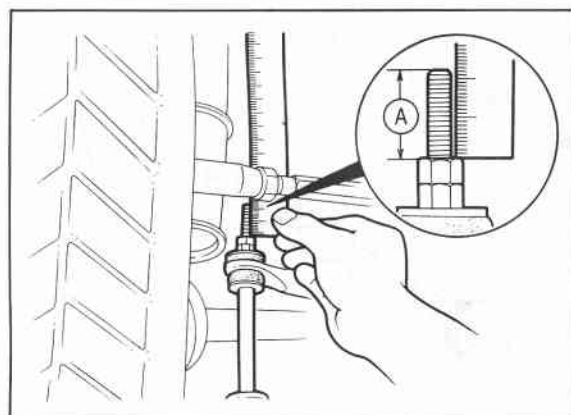
13 FRONT STABILIZER



86U13X-049



86U13X-050



86U13X-051

Inspection Note

Check the following and repair or replace any faulty parts.

1. Stabilizer for bending or damage
2. Stabilizer bushings for deterioration or wear.
3. Retainers and spacers for bending or damage.
4. Mounting bushings for deterioration or wear.
5. Bolts for bending or damage.

Installation Note

Stabilizer bushing

Align the bushing with the installation position line on the stabilizer, and mount it so that the notch faces the rear of the chassis.

Caution

Mount the brackets of the stabilizer first and loosely tighten them. After mounting the control links, tighten the brackets to the specified torque with the vehicle on the ground and unloaded.

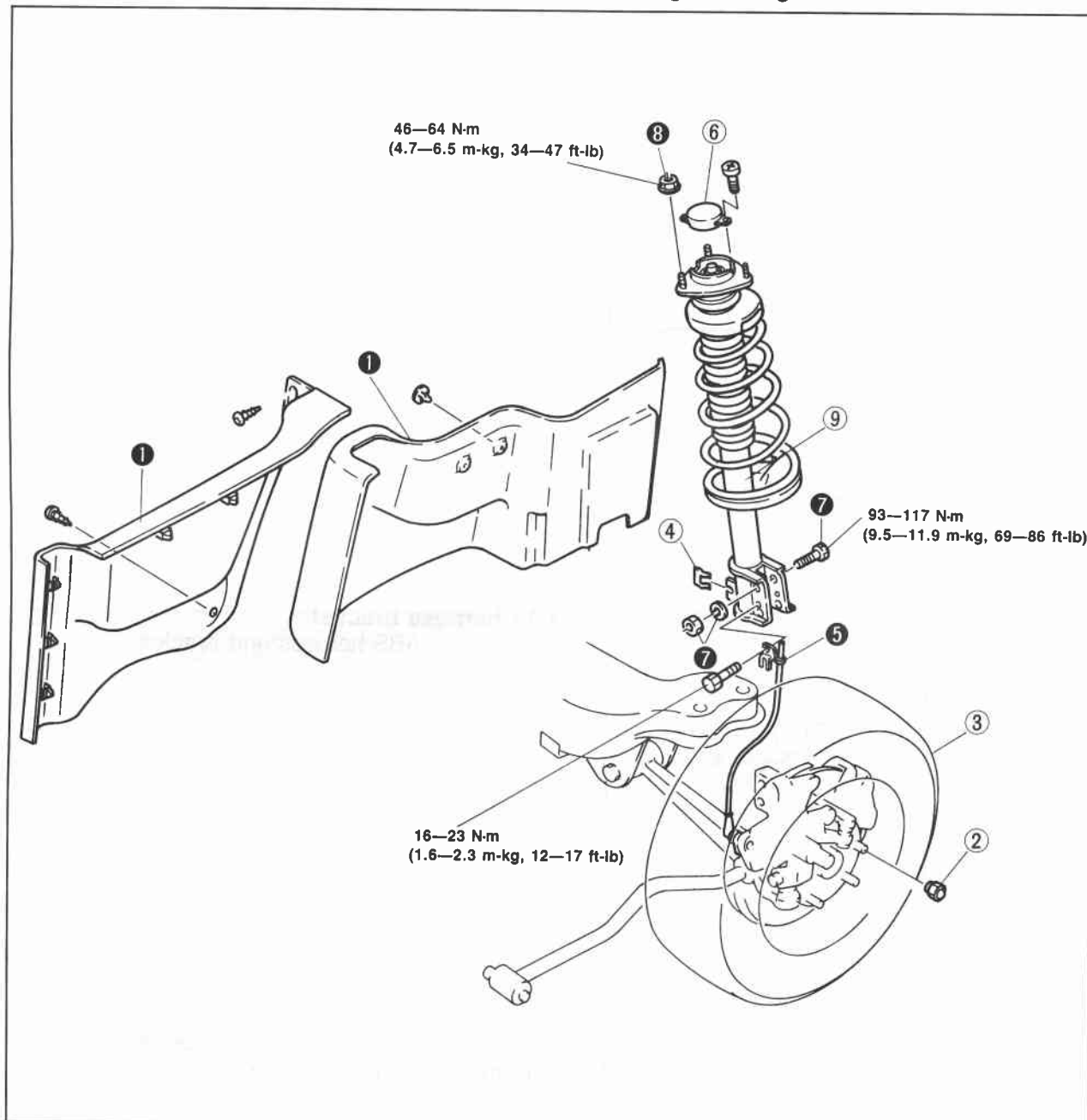
**Tightening torque: 36—54 N·m
(3.7—5.5 m·kg, 27—40 ft·lb)**

Tighten the link nut so that there is **20.1 mm (0.79 in)** of thread (A) exposed beyond it.

REAR SHOCK ABSORBER AND SPRING

REMOVAL AND INSTALLATION

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Install in the reverse order of removal, referring to the installation note for specially marked parts.
4. Tighten all nuts and bolts to the specified torque, referring to the figure.



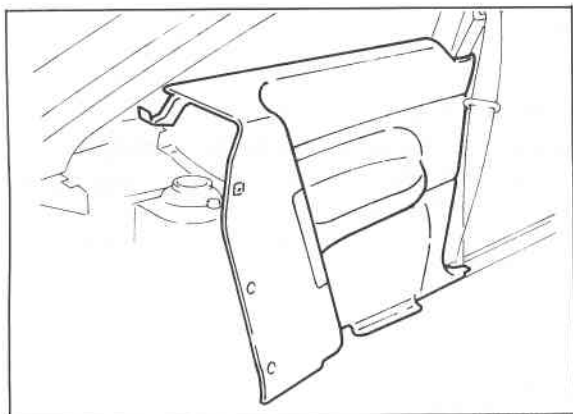
76G13X-010

1. Trim
2. Lug nut
3. Wheel and tire

4. Clip
5. Harness and bracket (ABS)
6. Actuator (AAS)

7. Bolt and nut
8. Nut
9. Shock absorber assembly

13 REAR SHOCK ABSORBER AND SPRING

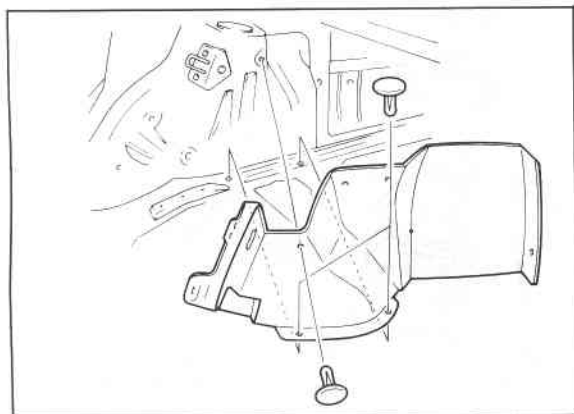


76G13X-011

Removal Note

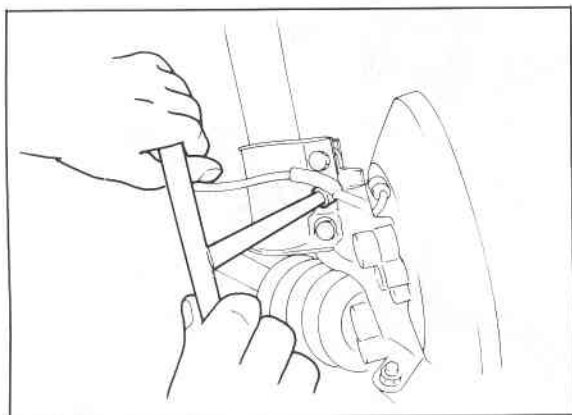
Trim

1. Remove the quarter trim.



86U13X-054

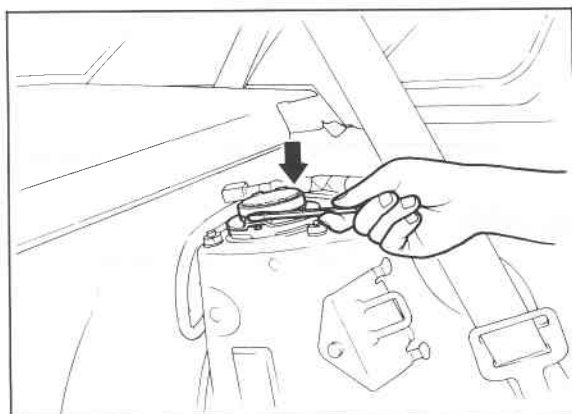
2. Remove the trim.



86U13X-055

ABS harness bracket

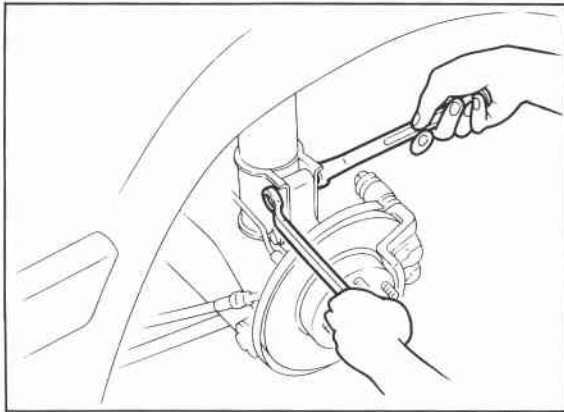
Remove the ABS harness and bracket.



86U13X-056

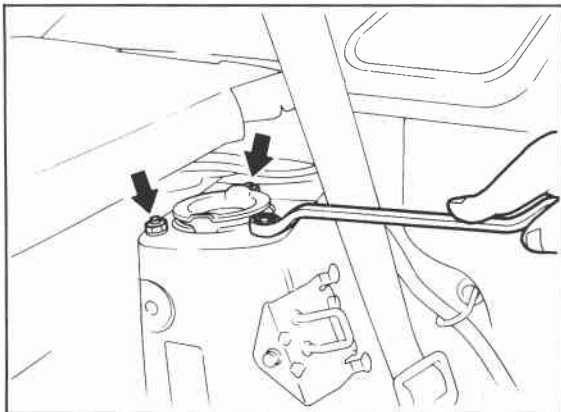
AAS actuator

1. Disconnect the AAS actuator connector.
2. Remove the AAS actuator.



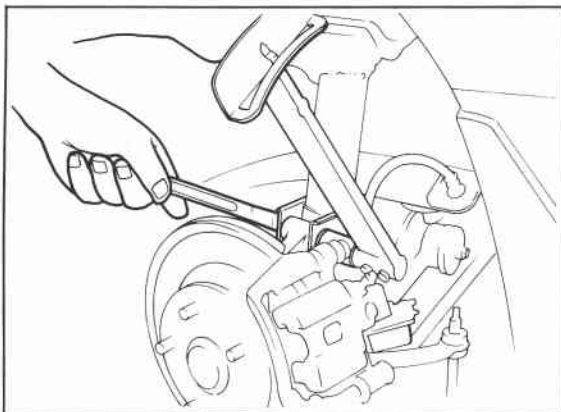
86U13X-057

Shock absorber clinch bolts and nuts
Remove the clinch bolts.



86U13X-058

Shock absorber upper nuts
Remove the upper mounting shock absorber nuts.



86U13X-059

Installation Note
Shock absorber

Tighten the shock absorber mounting bolts and nuts.

Tightening torque:

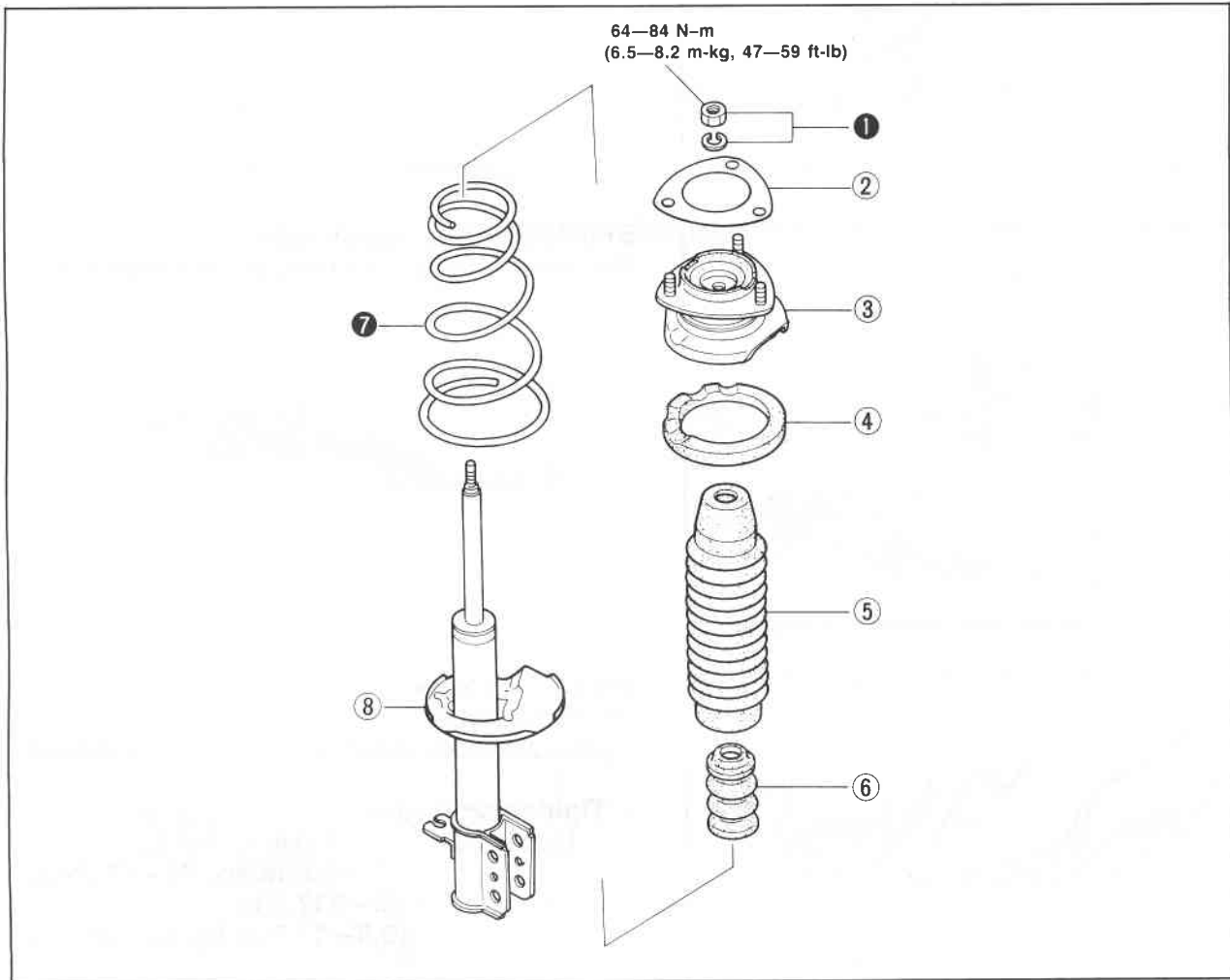
Upper nuts 46—64 N·m
(4.7—6.5 m·kg, 34—47 ft·lb)

Clinch bolts 93—117 N·m
(9.5—11.9 m·kg, 69—86 ft·lb)

13 REAR SHOCK ABSORBER AND SPRING

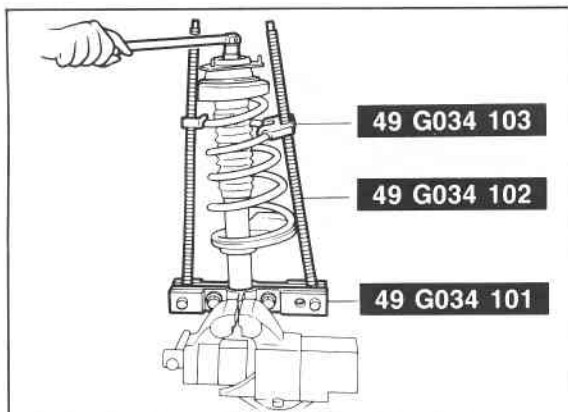
DISASSEMBLY AND ASSEMBLY

1. Disassemble in the sequence shown in the figure the referring to the disassembly note for specially marked parts.
2. Inspect all components and parts, referring to inspection note.
3. Assemble in the reverse order of disassembly, referring to the assembly note for specially marked parts.
4. Tighten all nuts and bolts to the specified torque, referring to the figure.



76G13X-022

- | | | |
|-------------------|------------------|-------------------|
| 1. Nut | 4. Spring seat | 7. Coil spring |
| 2. Seat | 5. Dust boot | 8. Shock absorber |
| 3. Mounting block | 6. Bound stopper | |



86U13X-061

Disassembly Note

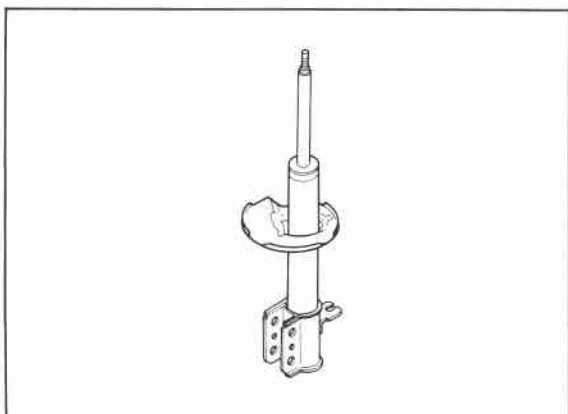
1. Loosen the piston rod upper nut several turns, but do not remove.

Caution

- a) Do not remove the nut.
- b) Use copper or aluminum plates in the jaws of the vise.

2. Set the **SST** in a vise.
3. Secure the shock absorber in the **SST**.
4. Compress the coil spring with the **SST**, then remove the nut.
5. Remove the coil spring.

REAR SHOCK ABSORBER AND SPRING 13

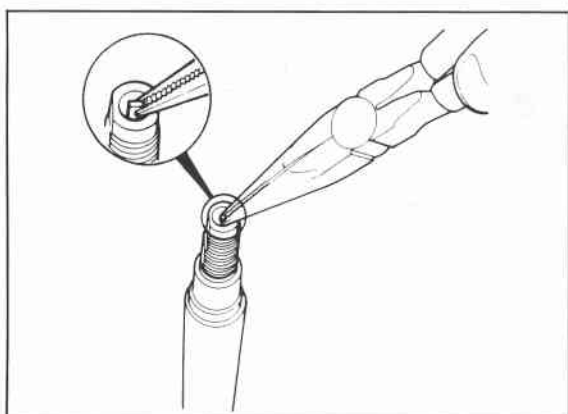


86U13X-062

Inspection Note

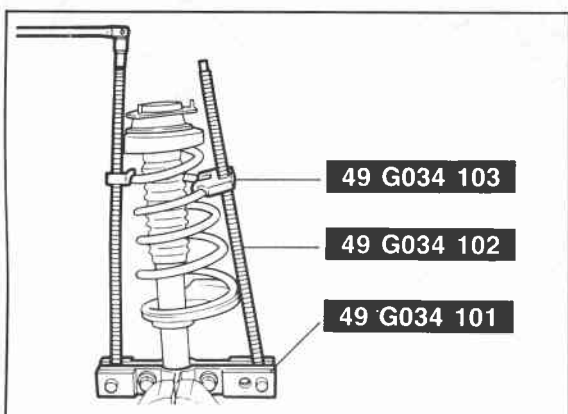
Check the following and repair or replace any faulty parts.

1. Oil leakage or noise from shock absorbers
2. Deterioration or damage of mounting block
3. Wear or damage of bound stopper



86U13X-063

4. Rotation of the control rod (AAS).



86U13X-064

Assembly Note

1. Set the **SST** in a vise
2. Secure the shock absorber in the **SST**.
3. Install the bound stopper and dust boot onto the shock absorber.
4. Install the compressed coil spring (compressed with **SST**).
5. Install the spring seat and mounting block.

6. Remove the **SST**.
7. Secure the mounting blocks in the vise.

Caution

Use copper or aluminum plate in the jaws of a vice.

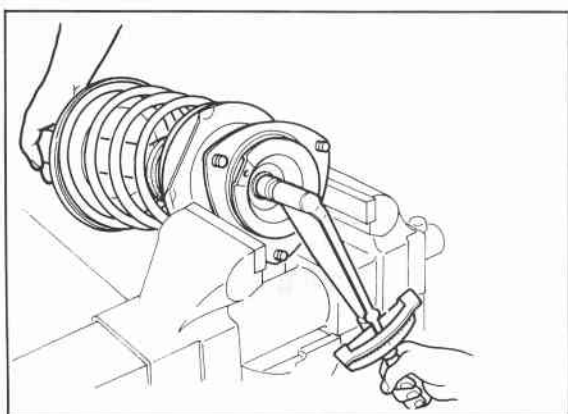
8. Tighten the piston rod upper nut.

Tightening torque:

64—84 N·m (6.5—8.2 m·kg, 47—59 ft·lb)

Caution

Check that the spring is well seated in the upper seats.



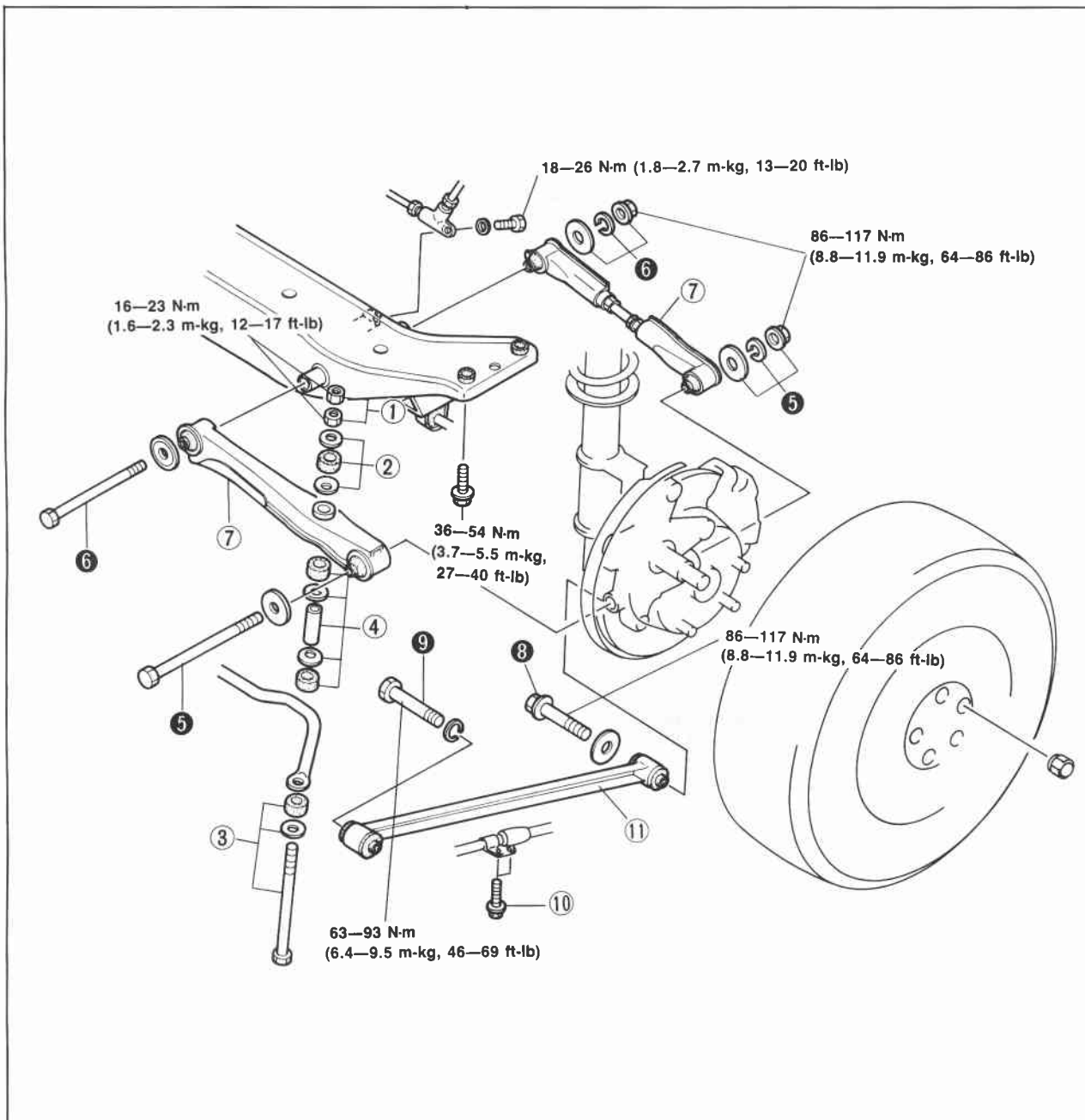
76G13X-023

13 LATERAL LINK AND TRAILING LINK

LATERAL LINK AND TRAILING LINK

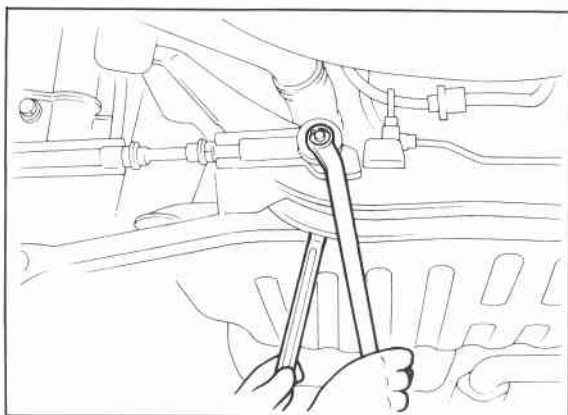
REMOVAL AND INSTALLATION

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Inspect all components and parts, referring to inspection the note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to the figure.



76G13X-024

- | | | |
|----------------------------------|-----------------|-------------------|
| 1. Nut | 5. Bolt and nut | 9. Bolt |
| 2. Bushing and retainer | 6. Bolt and nut | 10. Bolts |
| 3. Retainer, bushing, and bolt | 7. Lateral link | 11. Trailing link |
| 4. Retainer, bushing, and spacer | 8. Bolt | |

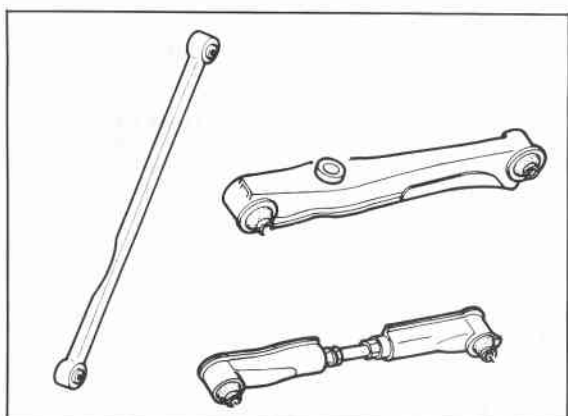


86U13X-066

Removal Note

Lateral links

1. Loosen the crossmember mounting bolts and allow it to drop down for clearance.
2. Remove the lateral links.



86U13X-067

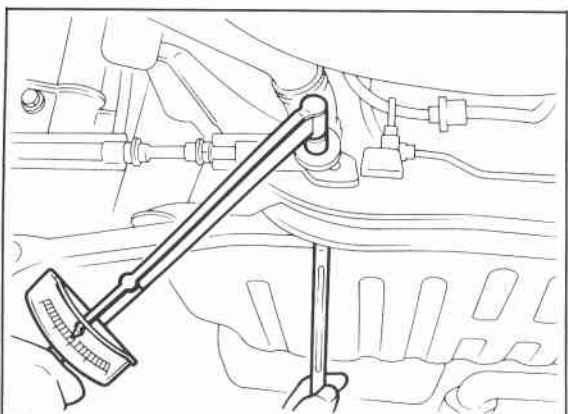
Inspection Note

Check the following and repair or replace any faulty parts.

1. Deformed or cracked lateral link and trailing link
2. Damaged or worn bushings

Note

If it is necessary to replace the bushing, replace the lateral link or trailing link assembly.



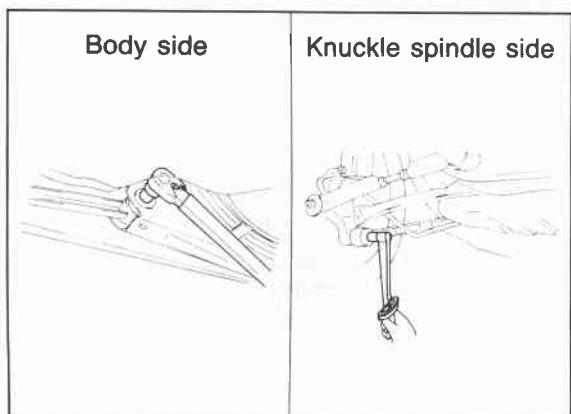
86U13X-068

Installation Note

Lateral links

Loosely tighten the mounting bolts of each link, and lower the vehicle from the safety stands. Adjust the toe-in, and then tighten the bolts with the vehicle unloaded.

**Tightening torque: 86—117 N·m
(8.8—11.9 m·kg, 64—86 ft·lb)**



86U13X-069

Trailing link

1. Loosely tighten the mounting bolt and nut.
2. Lower the vehicle from the safety stands.
3. Tighten the bolt and nut with the vehicle unloaded.

Tightening torque:

Body side 63—93 N·m

(6.4—9.5 m·kg, 46—69 ft·lb)

Knuckle spindle side 86—117 N·m

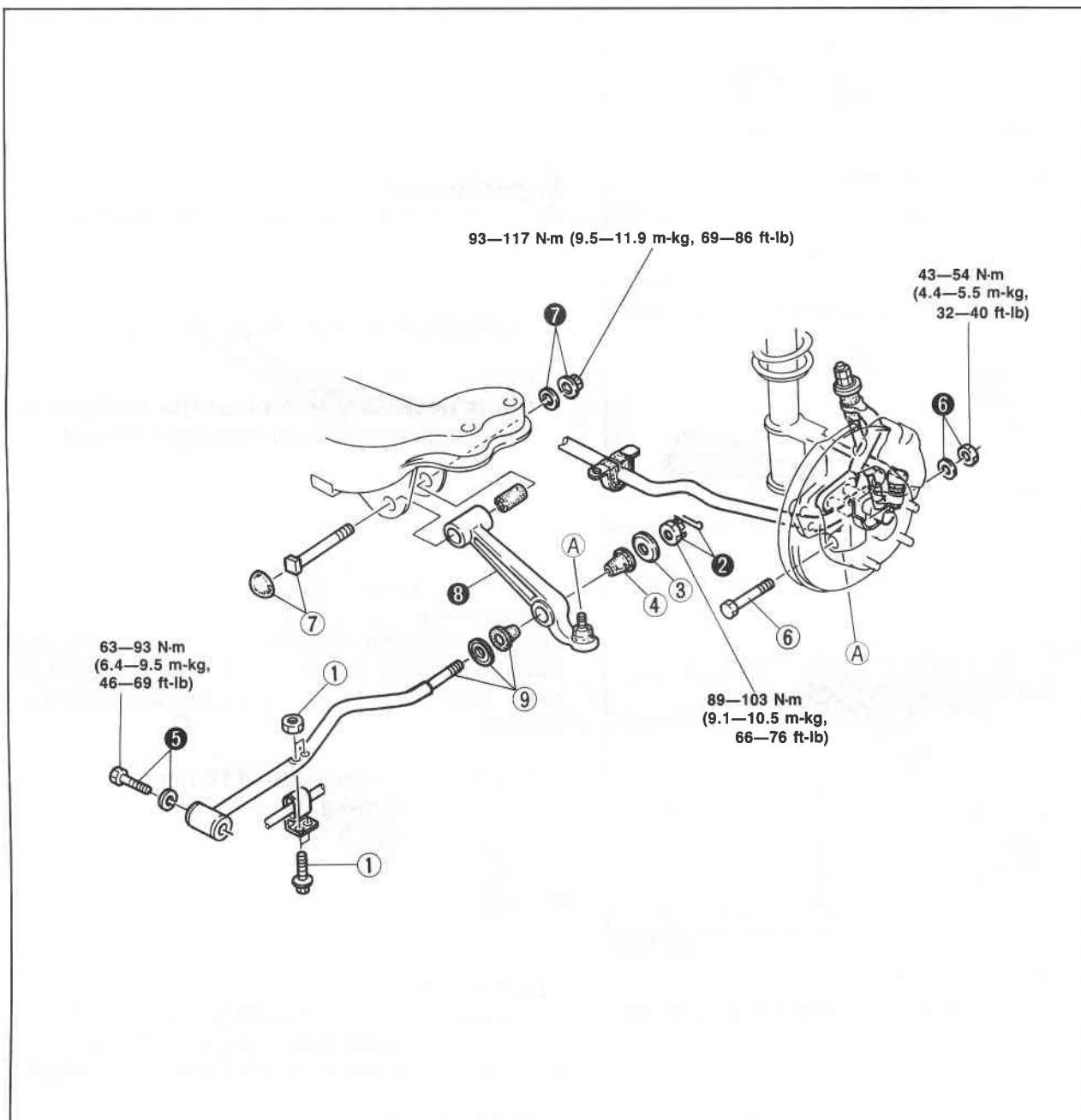
(8.8—11.9 m·kg, 64—86 ft·lb)

13 REAR LOWER ARM AND TRAILING LINK (4WS)

REAR LOWER ARM AND TRAILING LINK (4WS)

REMOVAL AND INSTALLATION

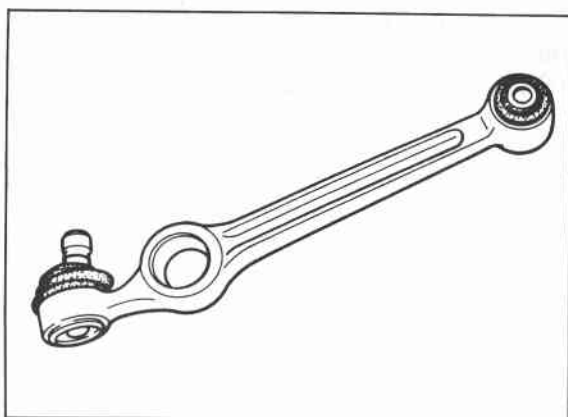
1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure.
3. Inspect all components and parts, referring to the inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to the figure.



1. Bolt and nut
2. Cotter pin and nut
3. Retainer
4. Bushing

5. Bolt
6. Bolt and nut
7. Bolt and nut
8. Lower arm

9. Trailing link, retainer, and bushing
10. Bushing



86U13X-071

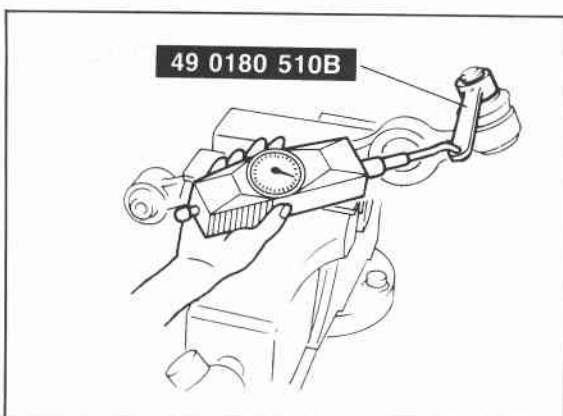
Inspection Note

Check the following and repair or replace any faulty parts.

1. Deformation or cracks in lower arm and trailing link
2. Deformation or wear of bushing
3. Rotation torque of ball joint

Note

If it is necessary to replace the ball joint, replace the lower arm assembly.

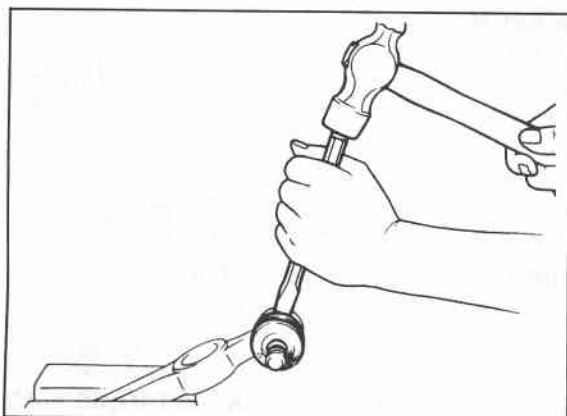


86U13X-072

Measurement of ball joint rotation torque

Connect the **SST** to the ball stud, then measure by using a pull scale.

Rotation torque: 1.8—3.1 N·m
 (18—31 cm·kg, 15.6—26.9 in·lb)
pull scale reading: 18—30 N
 (1.8—3.1 kg, 3.9—6.8 lb)



86U13X-073

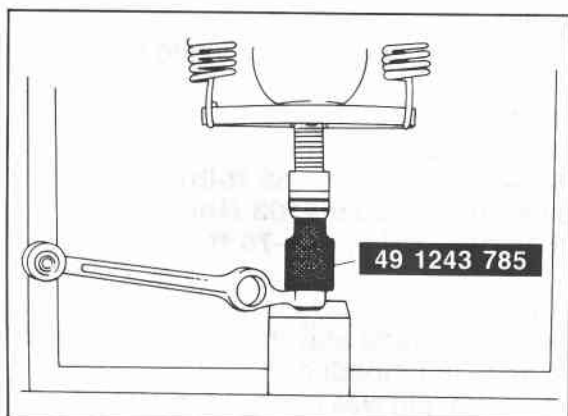
Dust boot

Removal

Use a chisel to remove the dust boot.

Caution

Do not damage the ball joint.

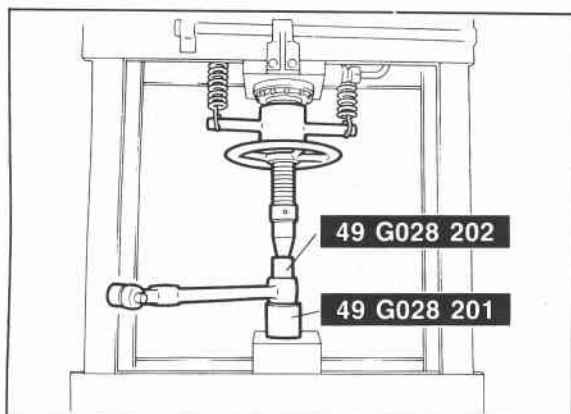


76G13X-026

Installation

Apply lithium grease to the inside of the new dust boot, then install it with the **SST**.

13 REAR LOWER ARM AND TRAILING LINK (4WS)

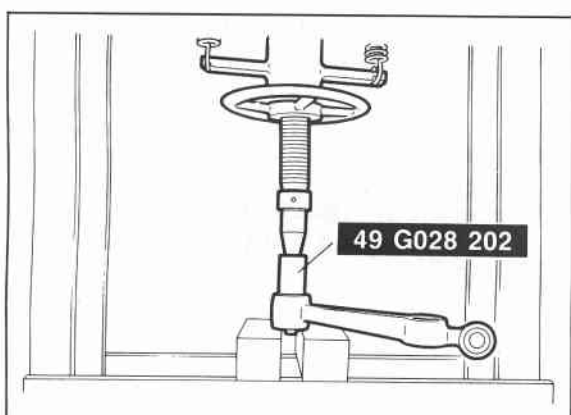


86U13X-075

Lower arm bushing

Removal

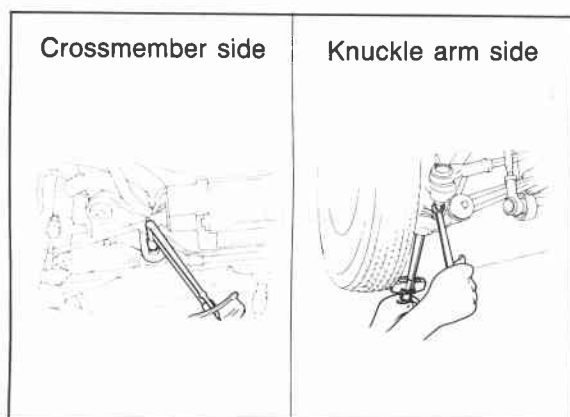
Use the **SST** as shown in the figure, and remove the bushing.



86U13X-076

Installation

Apply soapy water to the bushing and press it into the lower arm with the **SST**.



86U13X-077

Installation Note

Lower arm

Tighten the lower arm to the crossmember and knuckle arm.

Tightening torque:

Crossmember side 93—117 N·m
(9.5—11.9 m·kg, 69—86 ft·lb)

Knuckle arm side 43—54 N·m
(4.4—5.5 m·kg, 32—40 ft·lb)

Caution

Lower the vehicle and check the torque with the vehicle unloaded.

Trailing link

Tighten the trailing link to the body and lower arm.

Tightening torque:

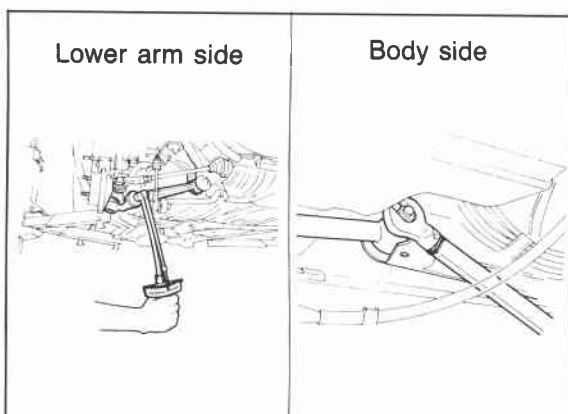
Body side 63—93 N·m
(6.4—9.5 m·kg, 46—69 ft·lb)

Lower arm side 89—103 N·m
(9.1—10.5 m·kg, 66—76 ft·lb)

Caution

a) Lower the vehicle and check the torque with the vehicle unloaded.

b) If the cotter pin was removed, replace it with a new one.

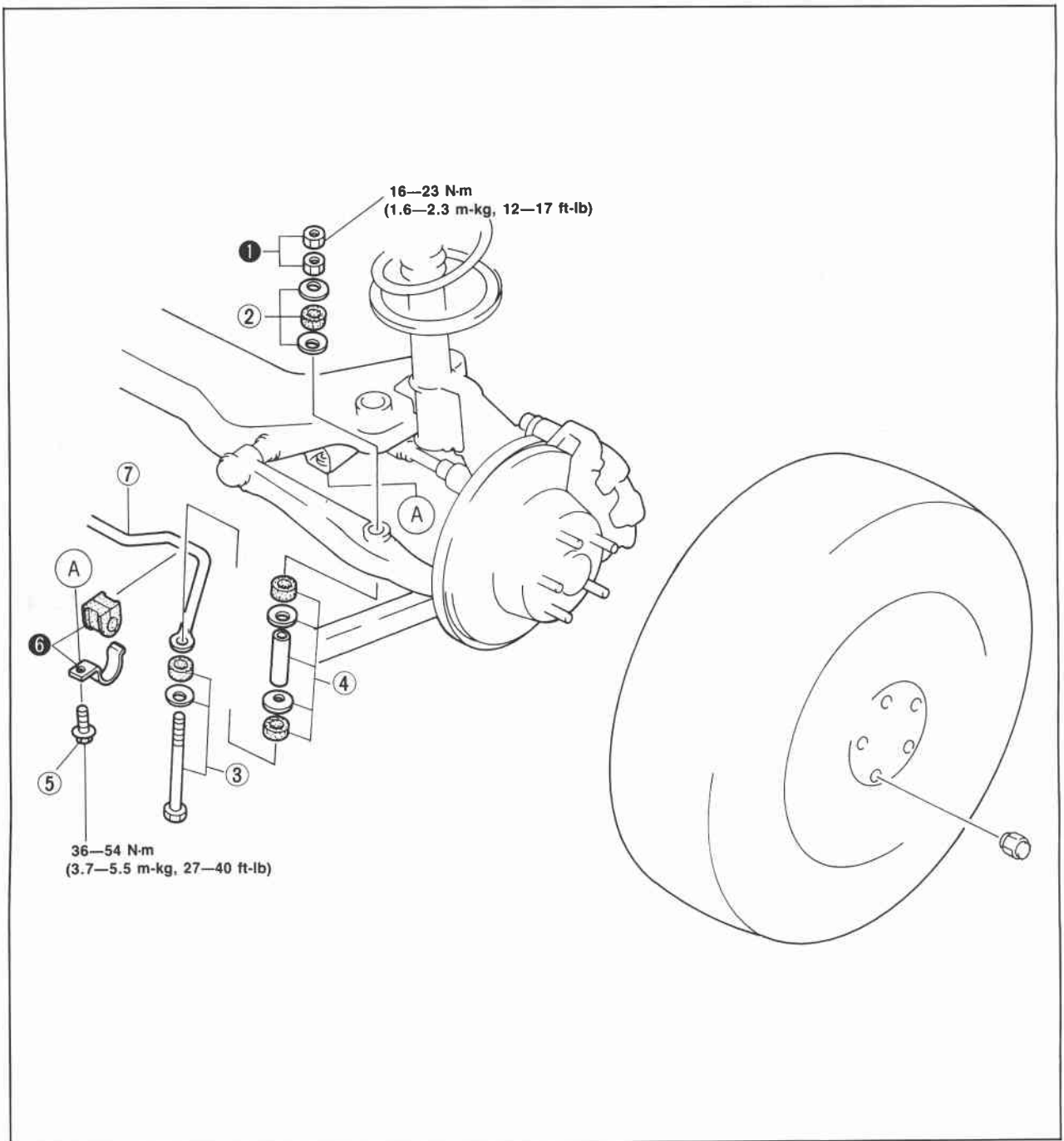


86U13X-078

REAR STABILIZER

REMOVAL AND INSTALLATION

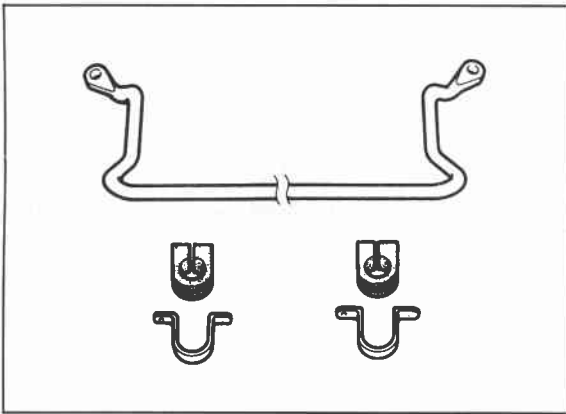
1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure.
3. Inspect all components and parts, referring to the inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to the figure.



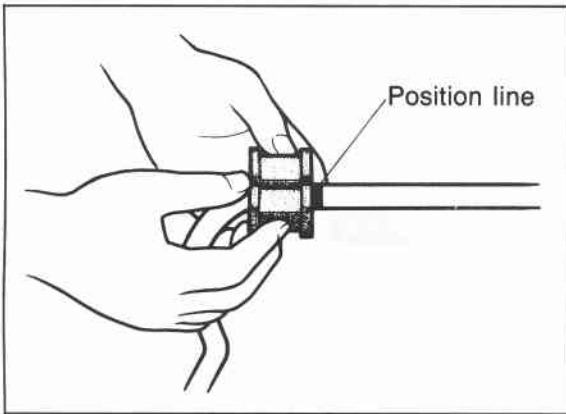
76G13X-027

- | | | |
|--------------------------------|----------------------------------|------------------------|
| 1. Nuts | 4. Retainer, bushing, and spacer | 6. Bushing and bracket |
| 2. Bushing and retainer | | 7. Stabilizer |
| 3. Retainer, bushing, and bolt | 5. Bolt | |

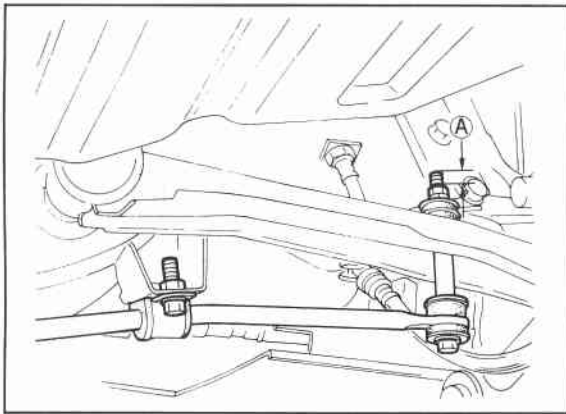
13 REAR STABILIZER



86U13X-080



86U13X-081



86U13X-082

Inspection Note

Check the following and replace or repair any faulty parts.

1. Stabilizer for bending or damage
2. Stabilizer bushings for deterioration or wear
3. Retainers and spacers for bending or damage
4. Mounting bushings for deterioration or wear
5. Bolts for bending or damage

Installation Note

Stabilizer bushing and bracket

1. Install the bushing on the stabilizer.
2. Align the bushing with the stabilizer installation Position line.
3. Install the stabilizer bracket and loosely tighten the bolts.
4. Install the link to the upper link, and tighten the nut and bolt.
5. Install the retainers, rubber bushings and nuts.
6. Lower the vehicle, then tighten the bolts with the vehicle unloaded.

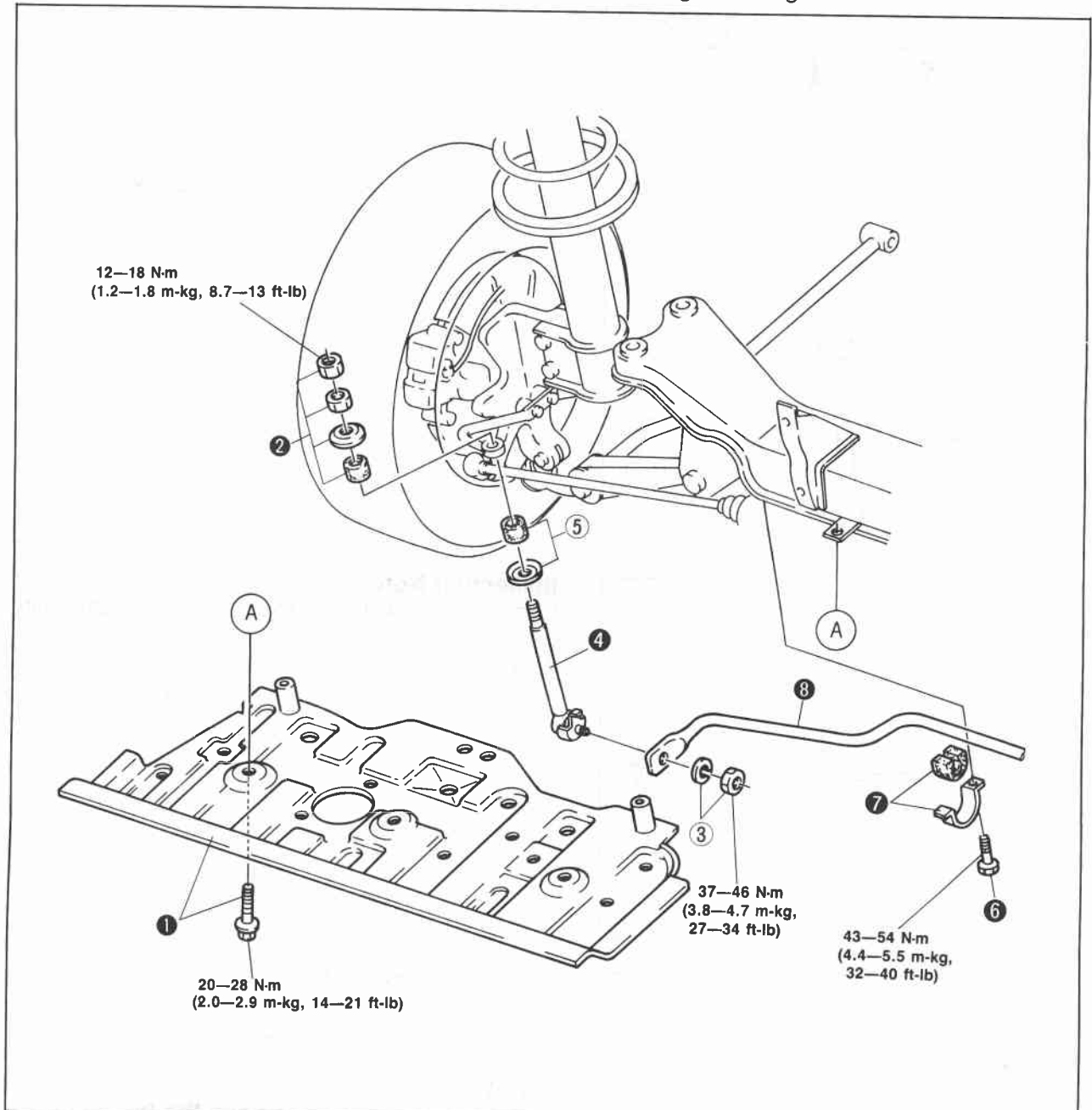
**Tightening torque: 36—54 N·m
(3.7—5.5 m·kg, 27—40 ft·lb)**

7. Tighten the link nut so that there is **10.4 mm (0.41 in)** of thread (A) exposed.

REAR STABILIZER AND CONTROL LINK (4WS)

REMOVAL AND INSTALLATION

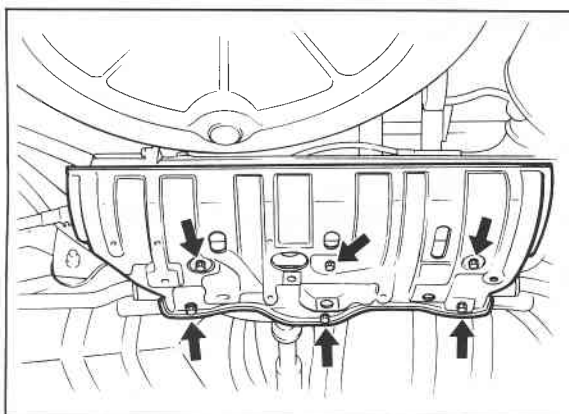
1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Inspect all components and parts, referring to inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torques, referring to the figure.



76G13X-028

- | | | |
|----------------------------------|--------------------------|------------------------|
| 1. Rear steering cover and bolts | 3. Nut | 6. Bolt |
| 2. Nut; bushing, and retainer | 4. Control link assembly | 7. Bushing and bracket |
| | 5. Bushing and retainer | 8. Rear stabilizer |

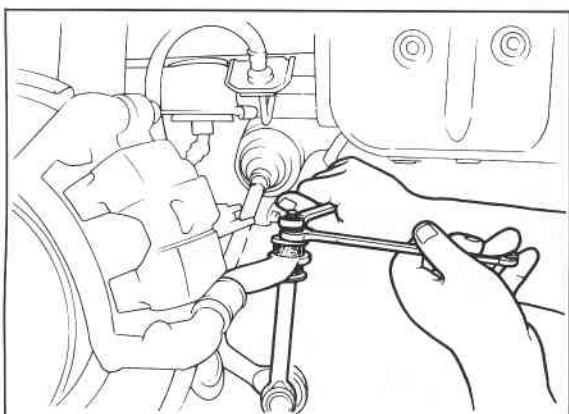
13 REAR STABILIZER AND CONTROL LINK (4WS)



86U13X-084

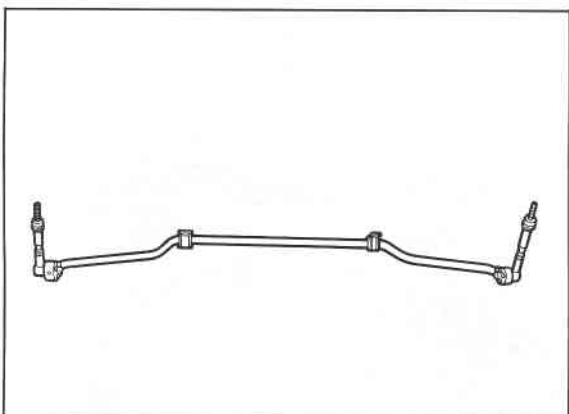
Removal Note

1. Remove the rear steering cover bolts.



86U13X-085

2. Remove the stabilizer bar control link.

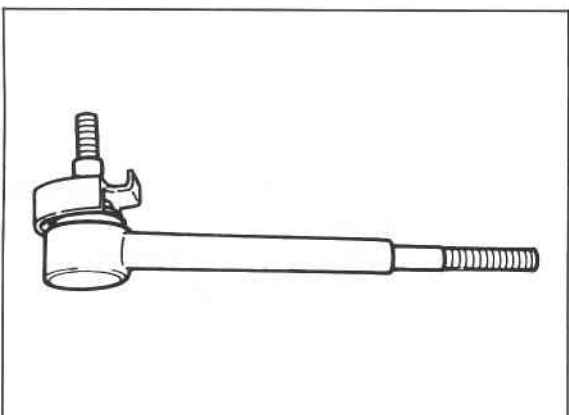


86U13X-086

Inspection Note

Check the following and repair or replace any faulty parts.

1. Worn or deteriorated rubber bushing
2. Bent, deteriorated, or damaged stabilizer

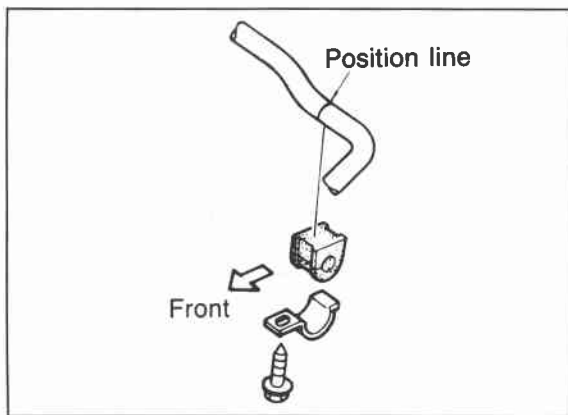


86U13X-087

3. Damaged control link
4. Damaged control link dust boot
5. Worn or deteriorated bushing

Note

If it is necessary to replace the ball joint, replace the control link assembly.



76G13X-029

Stabilizer bushing installation

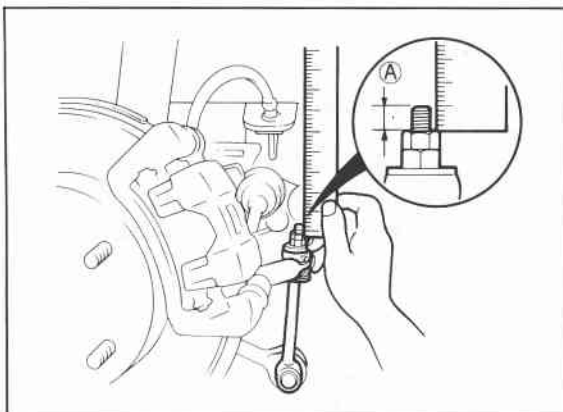
Align the bushing with the stabilizer installation position line, and attach it so that the seam faces the front of the vehicle.

Caution

Mount the brackets of the stabilizer first and loosely tighten them. After mounting the control links, tighten the brackets to the specified torque with the vehicle on the ground and unloaded.

**Tightening torque: 43—54 N·m
(4.4—5.5 m·kg, 32—40 ft·lb)**

Tighten the link nut so that there is **13 mm (0.51 in)** of thread (A) exposed.



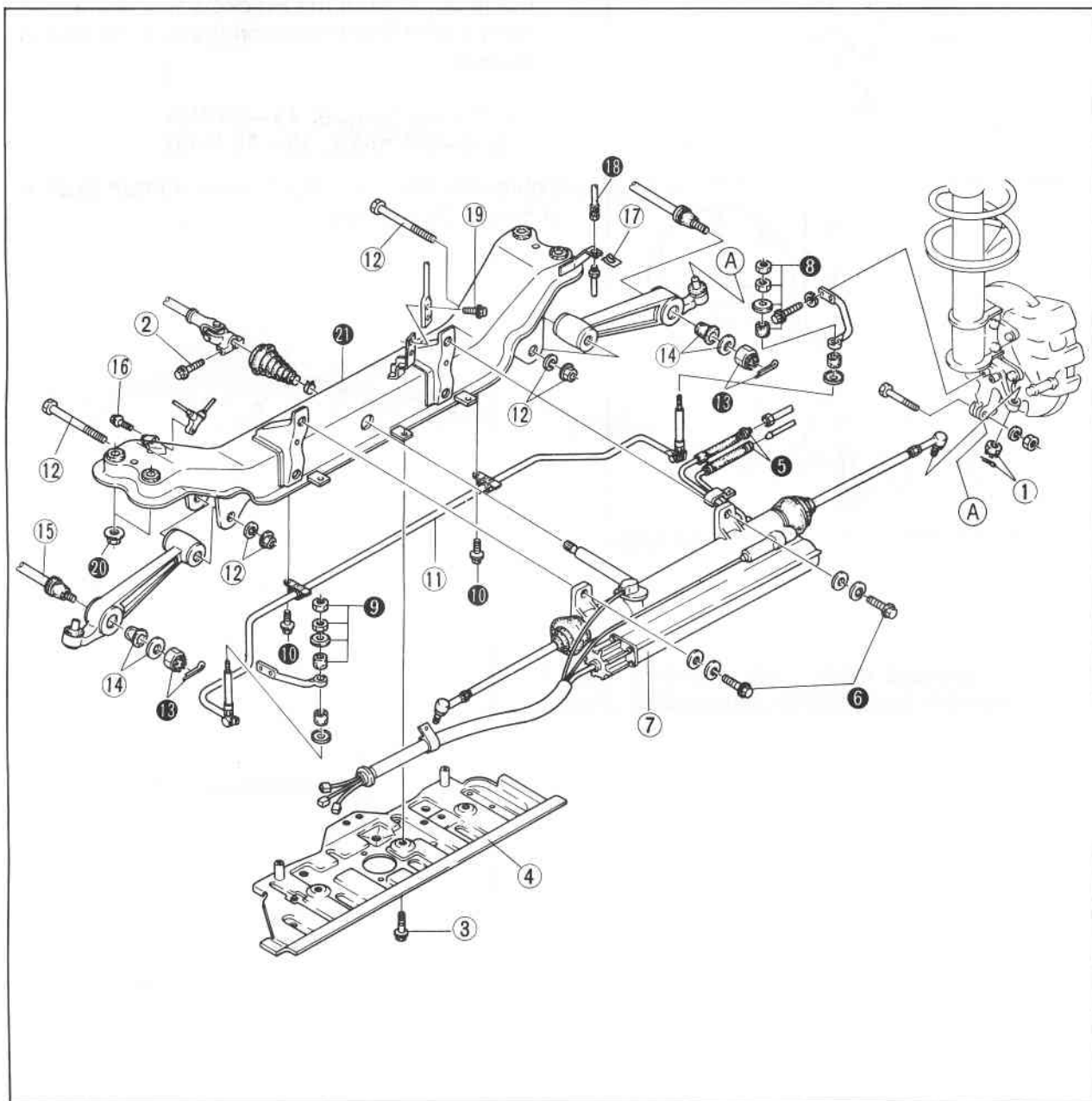
86U13X-089

13 REAR CROSSMEMBER (4WS)

REAR CROSSMEMBER (4WS)

REMOVAL AND INSTALLATION

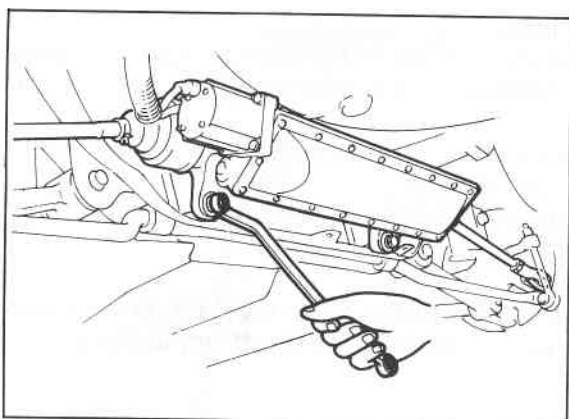
1. Jack up the front of the vehicle and support it with safety stands.
2. Remove in the sequence shown in the figure, referring to the removal note for specially marked parts.
3. Inspect all components and parts, referring to inspection note.
4. Install in the reverse order of removal, referring to the installation note for specially marked parts.
5. Tighten all nuts and bolts to the specified torque, referring to page 13—49.



76G13X-030

- | | | |
|---------------------------|-------------------------------|-------------------|
| 1. Cotter pin and nut | 8. Nut, retainer, and bushing | 15. Trailing link |
| 2. Bolt | 9. Nut, retainer, and bushing | 16. Bolt |
| 3. Bolt | 10. Bolts | 17. Clip |
| 4. Cover | 11. Stabilizer | 18. Brake pipe |
| 5. Oil hose and pipe | 12. Nuts and bolts | 19. Bolt |
| 6. Bolts | 13. Cotter pin and nut | 20. Nut |
| 7. Rear steering assembly | 14. Bushing and retainer | 21. Crossmember |

REAR CROSSMEMBER (4WS) 13

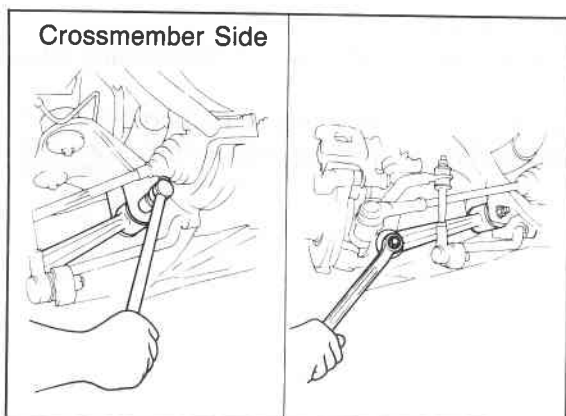


86U13X-091

Removal Note

Rear steering control system

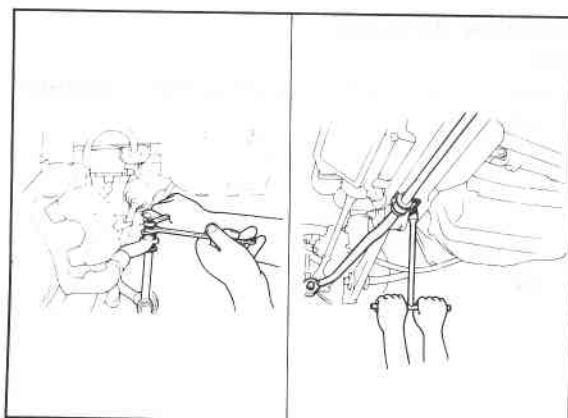
Remove the rear steering. (Refer to Section 10)



86U13X-092

Lower arm and trailing link

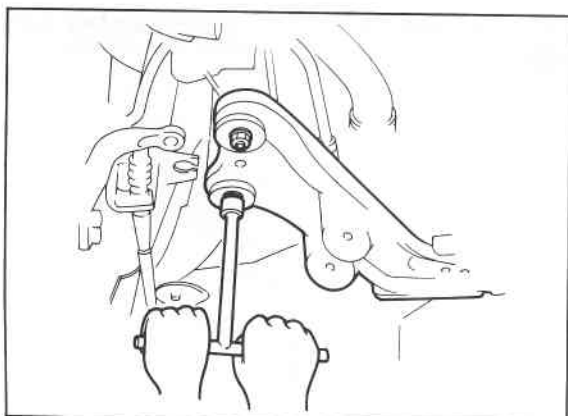
1. Remove the lower arm from the crossmember.
2. Remove the trailing link from the lower arm and body.



86U13X-093

Stabilizer and control link

Remove the stabilizer bar control link.

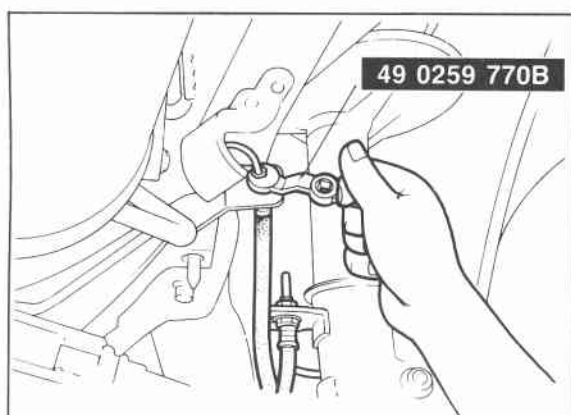


86U13X-094

Crossmember

Remove the crossmember from the body.

13 REAR CROSSMEMBER (4WS)



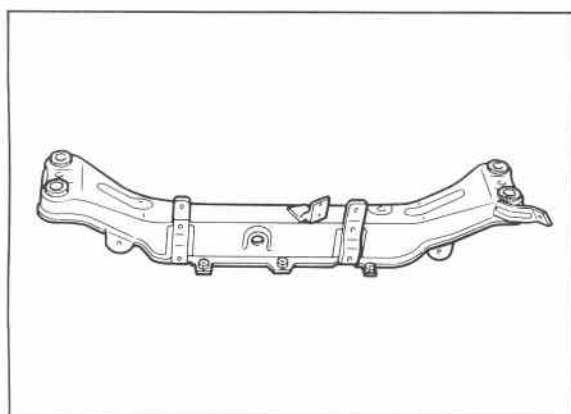
86U13X-095

Brake lines

1. When disconnecting the flexible hose and brake line, remove the clip after first loosening the flare nut.
2. When connecting the flexible hose, do not tighten too tight or twist.
3. Air bleed the brake system. (Refer to Section 11)

Caution

Do not allow brake fluid to get on painted surfaces. If it does, wipe it off immediately.

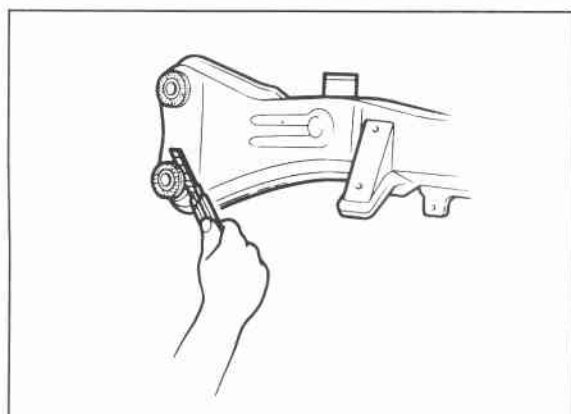


86U13X-096

Inspection Note

Check the following and repair or replace any faulty parts.

1. Crossmember for bending or damage
2. Crossmember mounts for deterioration or wear

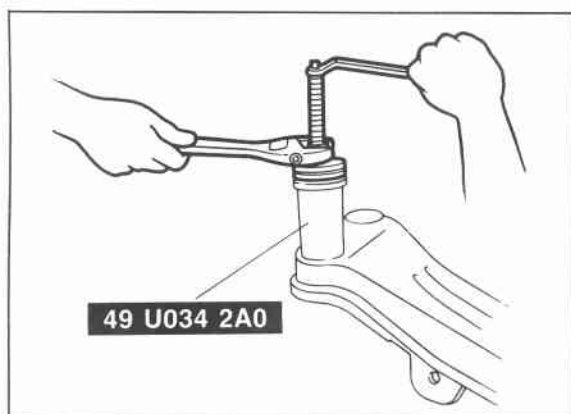


86U13X-097

Crossmember bushing

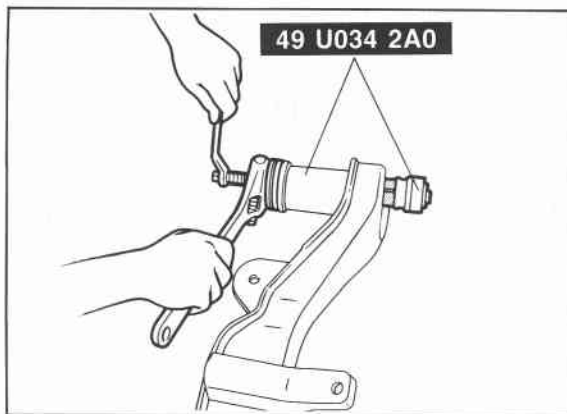
Removal

1. Cut away the projecting rubber of the crossmember bushing.



86U13X-098

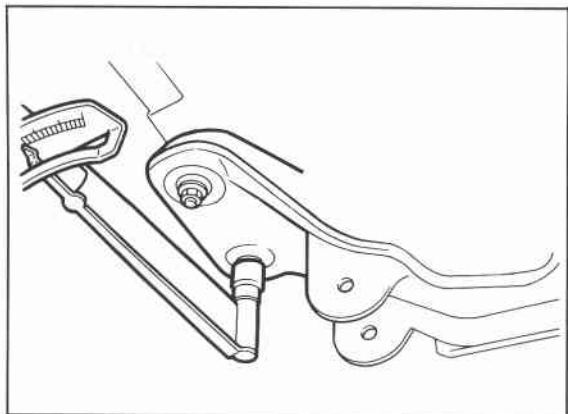
2. Remove the bushing from the crossmember with the **SST**.



86U13X-099

Installation

Apply soapy water to the bushing, then press it into the crossmember with the **SST**.



86U13X-100

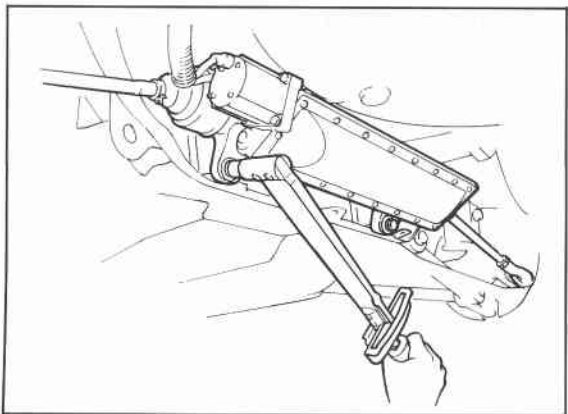
Installation Note

1. Mount the crossmember to the body, and loosely tighten the nuts.

Caution

Lower the vehicle then tighten the nuts to the specified torque with the vehicle unloaded.

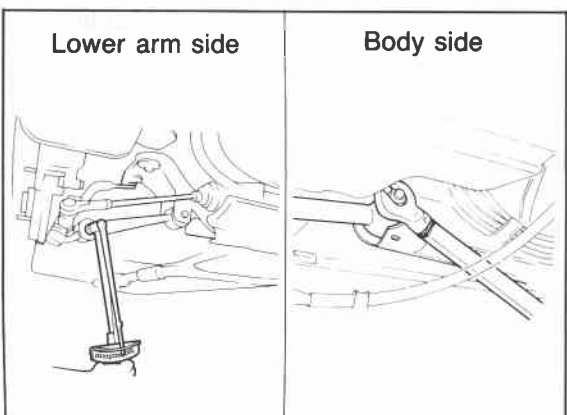
**Tightening torque: 93—117 N·m
(9.5—11.9 m·kg, 69—86 ft·lb)**



86U13X-101

2. Mount the rear steering to the crossmember, and tighten the bolts. (Refer to Section 10)

**Tightening torque: 31—46 N·m
(3.2—4.7 m·kg, 24—34 ft·lb)**



86U13X-102

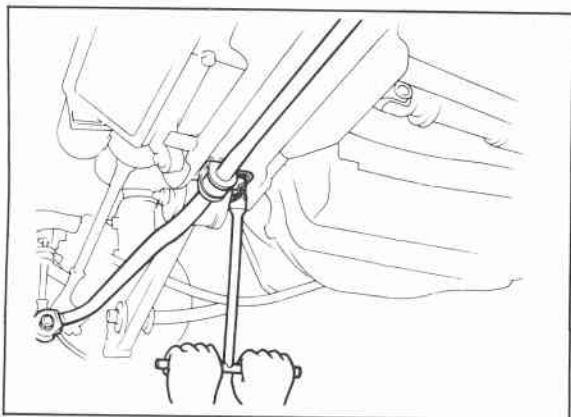
3. Install the lower arm to the crossmember.
4. Install the trailing link to the lower arm and body.

Caution

Lower the vehicle then tighten the bolts to the specified torque with the vehicle unloaded.

Tightening torque:
**Lower arm side 89—103 N·m
(9.1—10.5 m·kg, 66—76 ft·lb)**
**Body side 63—93 N·m
(6.4—9.5 m·kg, 46—69 ft·lb)**

13 REAR CROSSMEMBER (4WS)



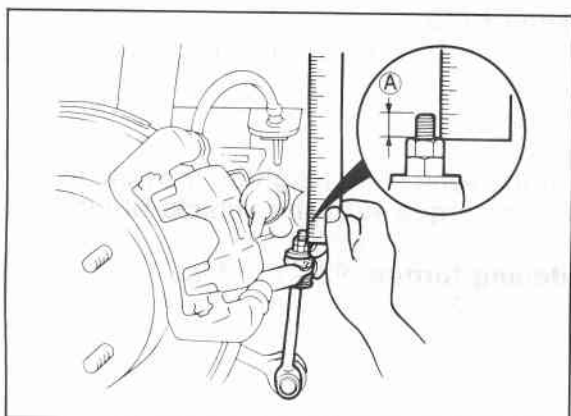
86U13X-103

5. Install the stabilizer bushings and brackets.

**Tightening torque: 43—54 N·m
(4.4—5.5 m·kg, 32—40 ft·lb)**

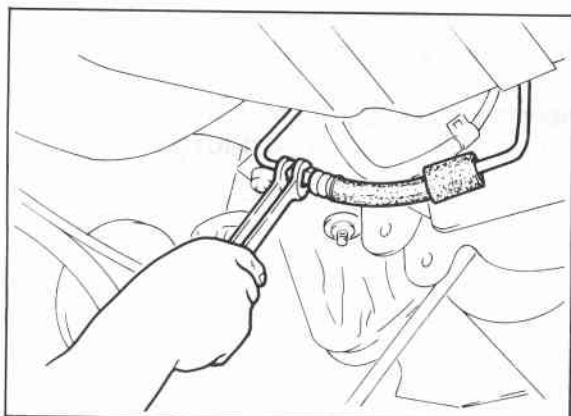
Caution

Lower the vehicle and check the torque with the vehicle unloaded.



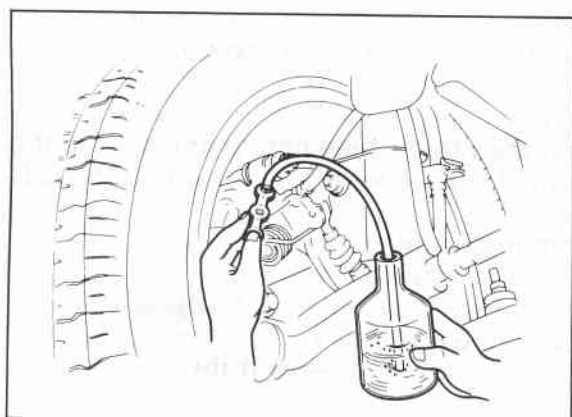
86U13X-104

6. Install the stabilizer control link.
Tighten the link nuts so that there is **13 mm (0.51 in)** of thread (A) exposed.



86U13X-105

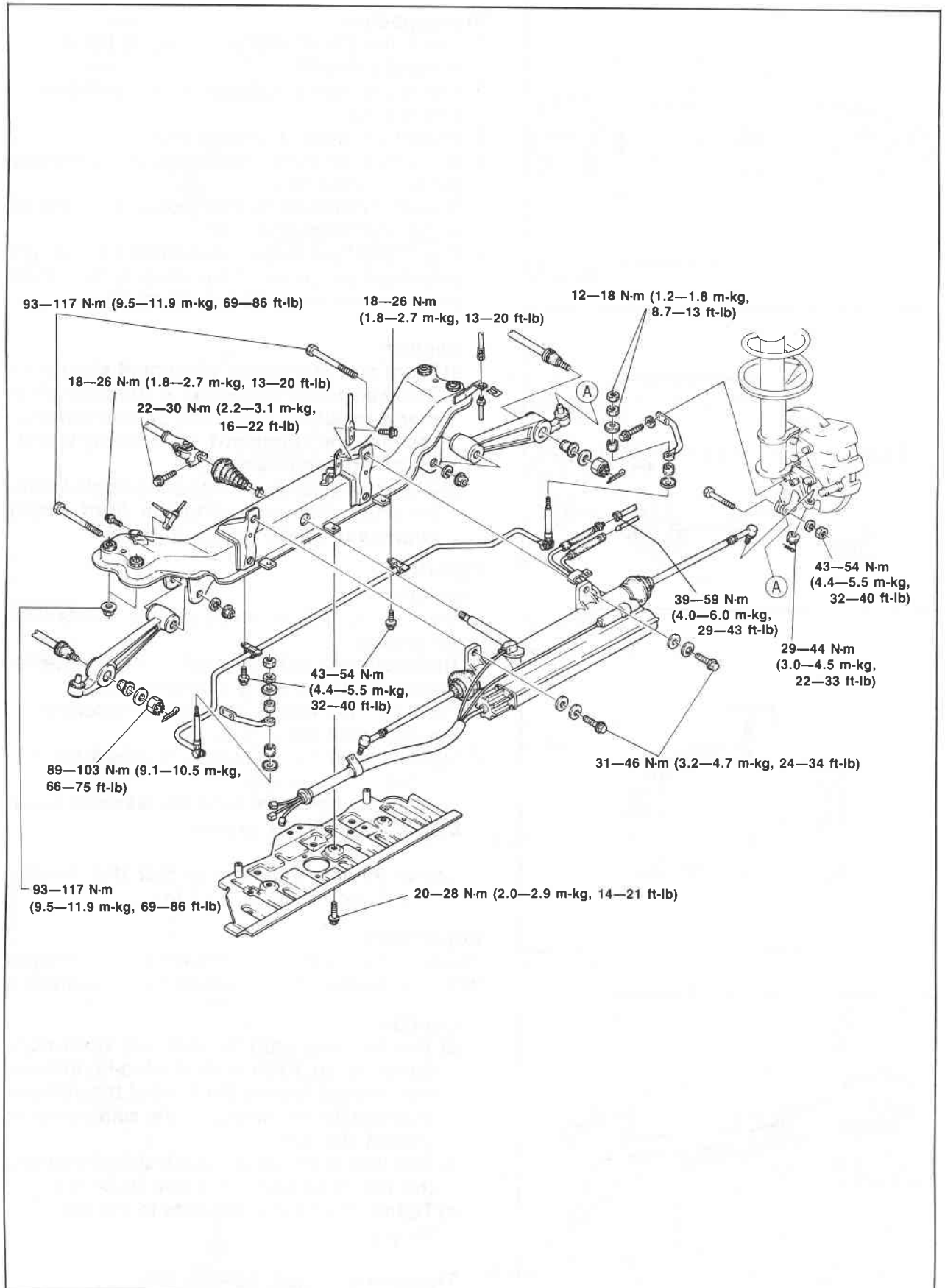
7. Install the rear steering pipe and hose.



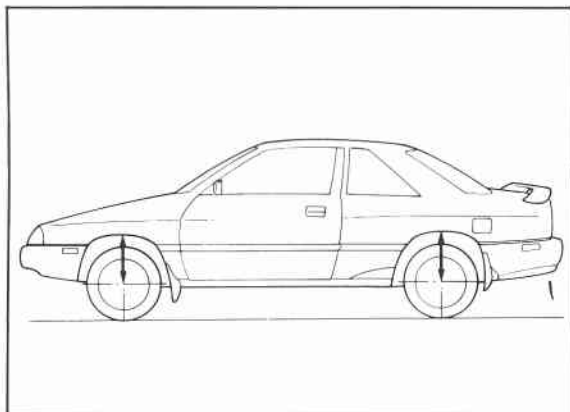
86U13X-106

8. Air bleed the brake system. (Refer to Section 11)

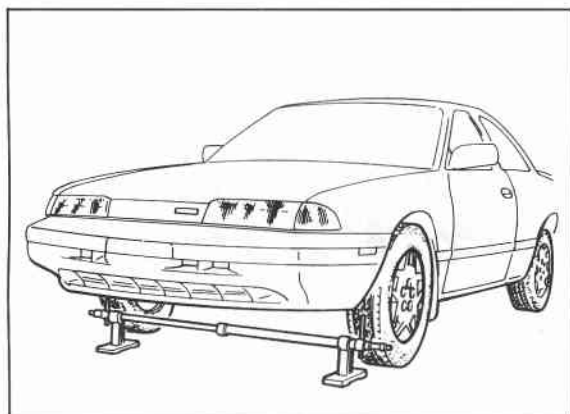
Tightening torques



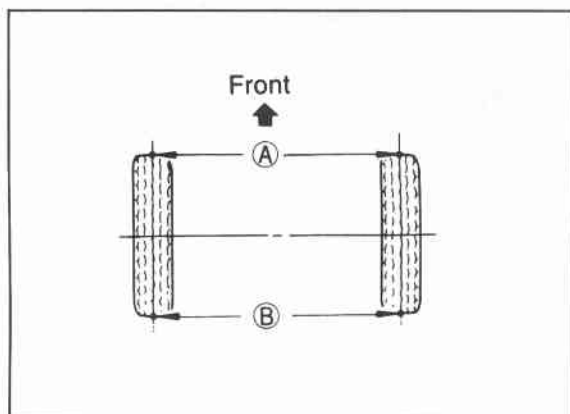
13 FRONT WHEEL ALIGNMENT



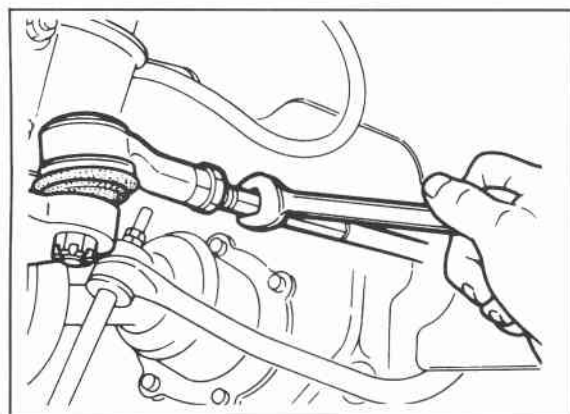
86U13X-108



86U13X-109



69G10X-031



86U13X-110

FRONT WHEEL ALIGNMENT

Pre-inspection

1. Check the tire inflation and bring to the recommended pressure.
2. Inspect the front wheel bearing play and correct, if necessary.
3. Inspect the wheel and tire runout.
4. Inspect the ball joints and steering linkage for any excessive looseness.
5. The vehicle must be on level ground and have no luggage or passenger load.
6. The difference in height between the left and right sides from the center of the wheel to the fender brim must be within **10 mm (0.39 in)**.

Caution

- a) **Front and rear wheel alignment should be checked simultaneously. If adjustment is made to either the front or rear wheels, recheck the alignment, particularly toe-in, on all other wheels.**
- b) **Check and adjust the steering angle transfer shaft after adjusting the front wheel alignment. (Refer to Section 10)**

TOE-IN

Inspection

1. Raise the front of the vehicle until the wheels clear the ground.
2. Turn the wheels by hand, mark a line in the center of each tire tread using a scribing block.
3. Place the front wheels in the straight-ahead position and lower the vehicle.
4. Measure the distance between the lines at the front and rear of the wheels.

Both measurements must be taken at equal distances from the ground.

Toe-in (distance greater at rear than front):
 $3 \pm 3 \text{ mm } (0.12 \pm 0.12 \text{ in})$

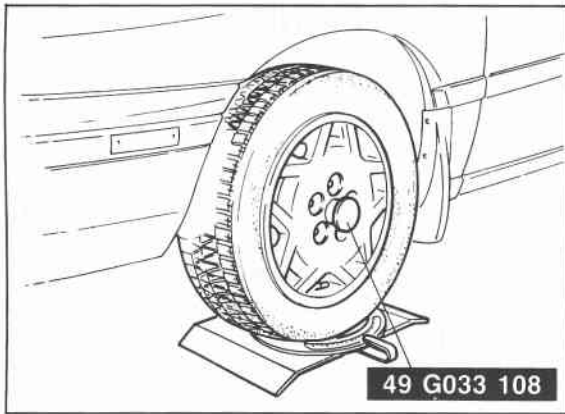
Adjustment

To adjust the toe-in, loosen the left and right tie-rod lock nuts, then turn the tie-rods by the same amount.

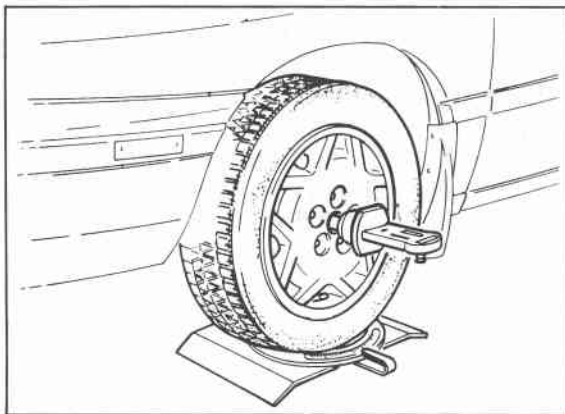
Caution

- a) **The left and right tie-rods are both right threaded, so, to increase the toe-in, turn the right tie-rod toward the front of the vehicle, and turn the left tie-rod by the same amount toward the rear.**
- b) **One turn of the tie-rod (both sides) changes the toe-in by about 7.2 mm (0.28 in).**
- c) **Tighten the tie-rod locknuts to the specified torque.**

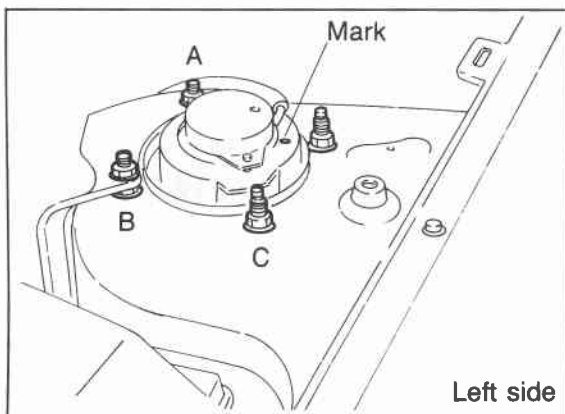
Tightening torque: 69—98 N·m
(7—10 m·kg, 51—72 ft·lb)



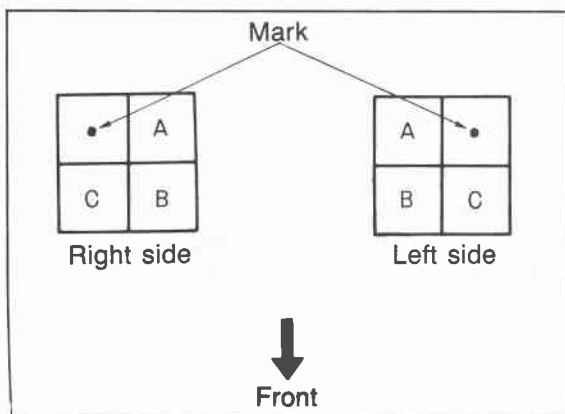
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76G13X-032

CAMBER AND CASTER

Inspection

The camber and caster is measured by placing the front wheels on a turning-radius gauge in accordance with the manufacturer's instructions.

Proceed in the following order:

1. Jack up the vehicle and remove the wheel caps and nuts. Then attach the **SST** to the wheel hub as shown in the figure.

2. Attach the caster/camber gauge to the adapter and measure the camber and caster.

Camber angle: $0^{\circ}17' \pm 45'$

Caster angle: $1^{\circ}13' \pm 45'$

Left/right difference:

Camber: 30' max.

Caster: 40' max.

Adjustment

1. Jack up the front of the vehicle and support it with safety stands.
2. Remove the mounting block nuts.
3. Push the mounting block downward, and turn it to the desired position.
4. Retighten the nuts to the specified torque.

**Tightening torque: 46—63 N·m
(4.7—6.4 m·kg, 34—46 ft·lb)**

Mark	Difference from standard position	
	Camber angle	Caster angle
A	27'	0°
B	27'	+28'
C	0°	+28'

Steering Angle (turning angle to left and right)

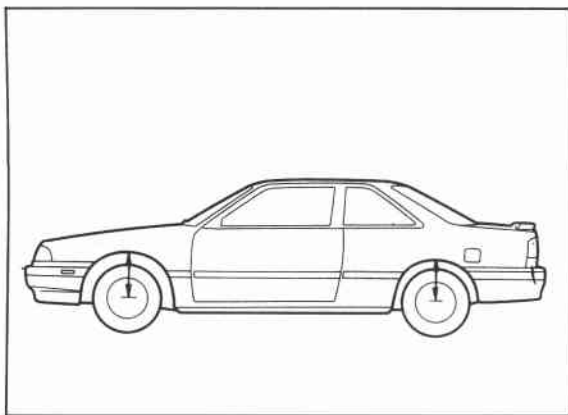
Inspection

The steering angle is measured by placing the front wheels on a turning-radius gauge.

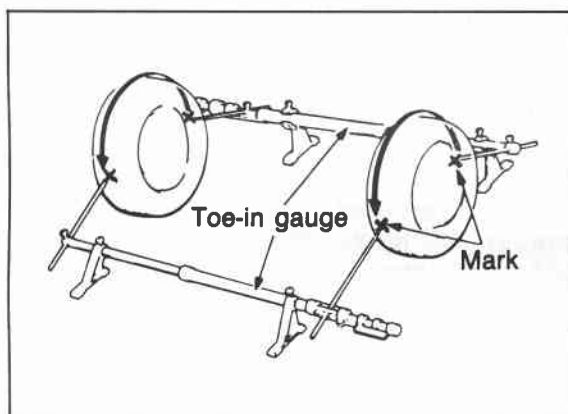
Inward $36^{\circ}00' \pm 2^{\circ}$

Outward $31^{\circ}00' \pm 2^{\circ}$

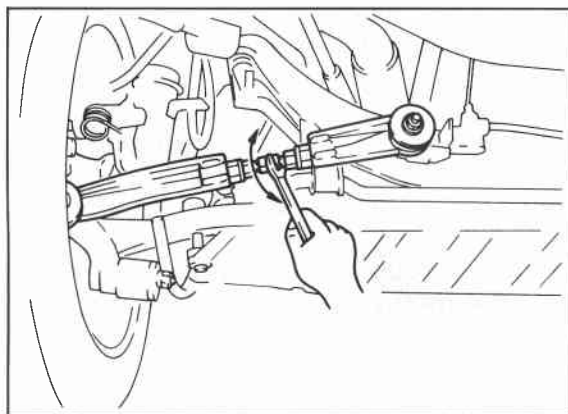
13 REAR WHEEL ALIGNMENT



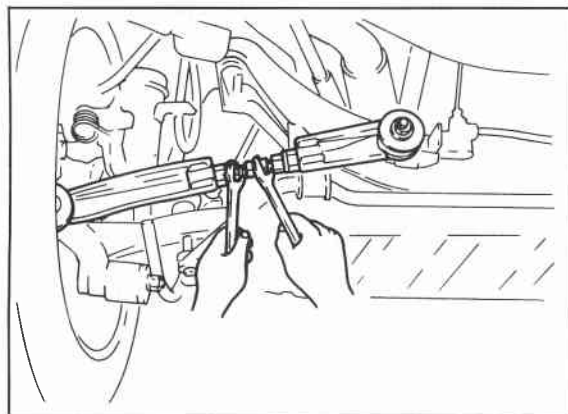
76G13X-033



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86U13X-117



86U13X-118

REAR WHEEL ALIGNMENT

PRE-INSPECTION

1. Check the tire inflation and bring to the recommended pressure.
2. Inspect the wheel and tire runout.
3. The vehicle must be on level ground and have no luggage or passenger load.
4. Check that the suspension is correctly adjusted.
5. The difference in height between the left and right sides from the center of the wheel to the fender rim should be within **10 mm (0.39 in)**.

Caution

a) Front and rear wheel alignments should be checked simultaneously. If adjustment is made to either the front or rear wheels, recheck the alignment, particularly toe-in, on all other wheels.

b) Check and adjust the steering angle transfer shaft after adjusting the rear wheel alignment. (Refer to Section 10.)

TOE-IN

Inspection

1. Raise the rear of the vehicle until the wheels clear the ground.
2. Turn the wheels by hand, mark a line in the center of each tire tread using a scribing block.
3. Lower the vehicle.
4. Measure the distance between the marked lines at the front and rear of the wheels.

Toe-in

0 ± 3 mm (0 ± 0.12 in) 2WS

3 ± 3 mm (0.12 ± 0.12 in) 4WS

Adjustment (2WS)

1. Loosen the adjusting rod lock nuts, then adjust the toe-in.
2. To increase the toe-in, turn the adjusting rods as follows:
Right rod — Turn counterclockwise
Left rod — Turn clockwise
To decrease the toe-in, turn the adjusting rods as follows:
Right rod — Turn clockwise
Left rod — Turn counterclockwise

Caution

a) Both the left and right rods must be adjusted by the same amount.

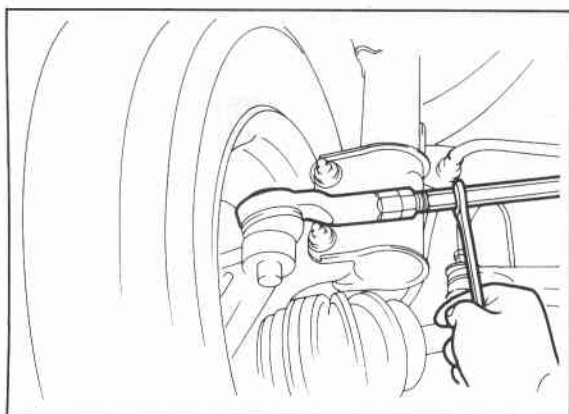
b) One turn of the adjusting rod (both sides) changes the toe-in by about 11.6 mm (0.46 in).

3. Tighten the adjusting rod lock nuts to the specified torque.

Tightening torque:

55—80 N·m (5.6—8.2 m·kg, 41—59 ft·lb)

REAR WHEEL ALIGNMENT 13



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Adjustment (4WS)

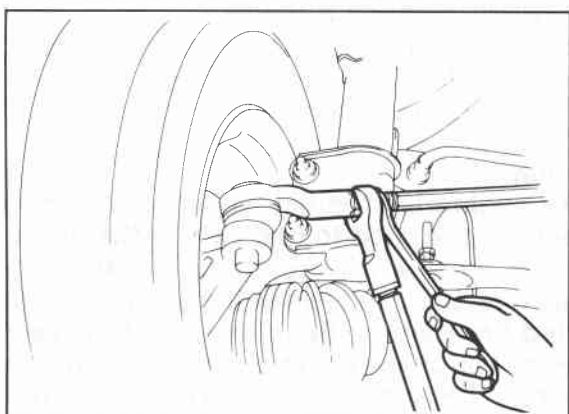
To adjust the toe-in, loosen the left and right tie-rod locknuts, and turn the tie-rods by the same amount.

Caution

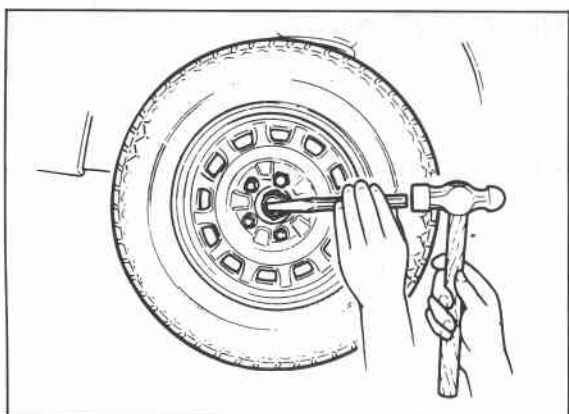
- a) The left and right tie-rods are both right threaded, so, to increase the toe-in, turn the right tie-rod toward the front of the vehicle, and turn the left tie-rod by the same amount toward the rear.
- b) One turn of the tie-rod (both sides) changes the toe-in by about 7.8 mm (0.31 in).
- c) Adjust the toe-in after adjusting the steering angle.

Tighten the tie-rod locknuts to the specified torque.

**Tightening torque: 69—98 N·m
(7—10 m·kg, 51—72 ft·lb)**



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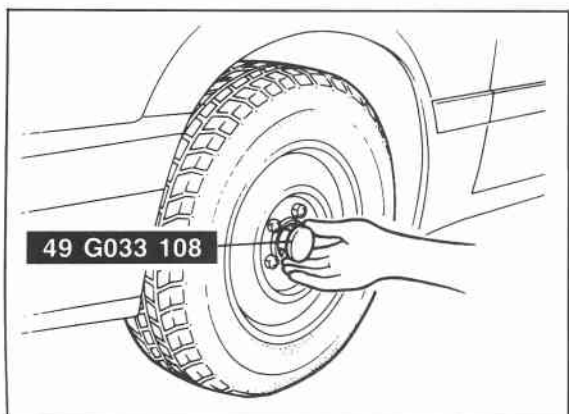


86U13X-121

CAMBER

Preparation

- 1. Remove the center caps from the wheels.
- 2. Uncrimp the locknut and remove it.

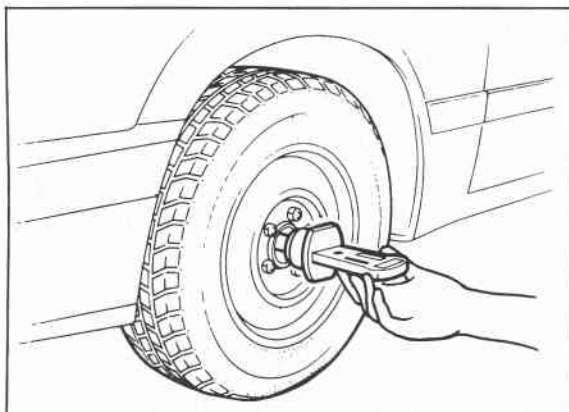


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Inspection

- 1. Install the **SST** to the driveshaft.

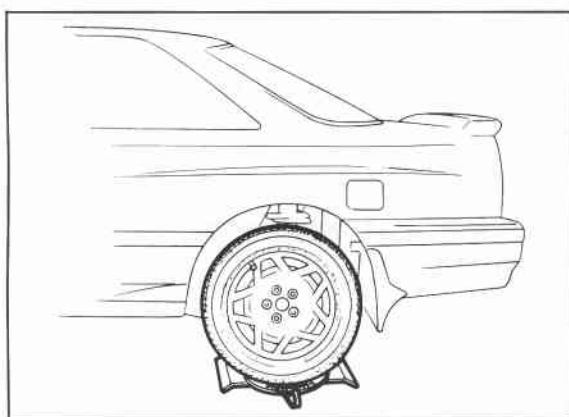
13 REAR WHEEL ALIGNMENT



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2. Measure the camber angle with the caster/camber gauge.

Camber: $-0^{\circ}30' \pm 45'$ (2WS)
 $0^{\circ}00' \pm 45'$ (4WS)



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REAR TURNING ANGLE (4WS)

1. Place the rear wheels on a turning radius gauge.
2. Jack up the front of the vehicle.
3. Start the engine and let it idle.

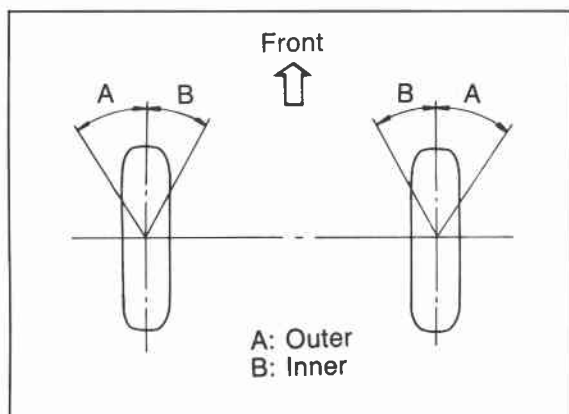
Caution

If the engine is stopped while the steering wheel is left turned to one side or the other, the rear wheels will return to the straight-ahead direction, and, when the engine is later started once again, the direction of the rear wheels will change. Be sure, therefore, to check to be sure that the wheels are not touching, or close to, anyone's hands or feet, or any other object, when the engine is stopped or started.

4. Turn the steering wheel fully left and right, and measure the rear turning angle.

Rear turning angle Inner $5^{\circ}00' \pm 45'$
Outer $5^{\circ}00' \pm 45'$

5. If not within specification, adjust the rear turning angle. (Refer to Section 10)



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