

FRONT AXLE & FRONT SUSPENSION

SECTION **FA**

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FA



Front

Stabilizer

Suspension crossmember

Stabilizer clamp

Stabilizer bushing

Tension rod bracket

Tension rod

Transverse link

Wheel hub

Dust cover

Bound bumper

Coil spring

Coil spring

Coil spring

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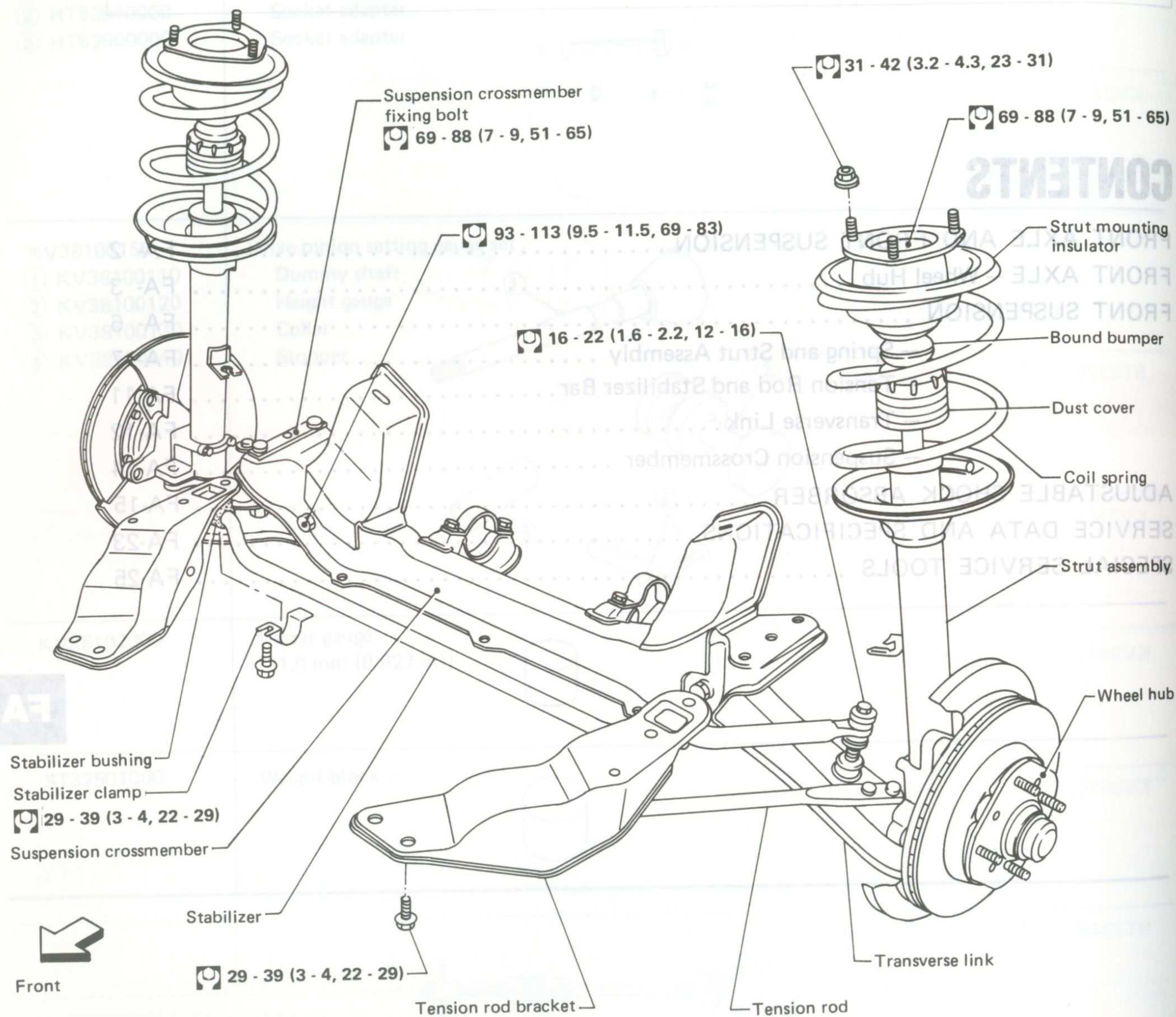
Coil spring

FRONT AXLE AND FRONT SUSPENSION

Wheel alignment

- Camber, caster and kingpin inclination are preset at factory and cannot be adjusted.
- The vehicle requires only toe-in adjustments.
1 - 3 mm (0.04 - 0.12 in)
6' - 17' (Total toe-in)

Refer to section MA for Checking Wheel Alignment.



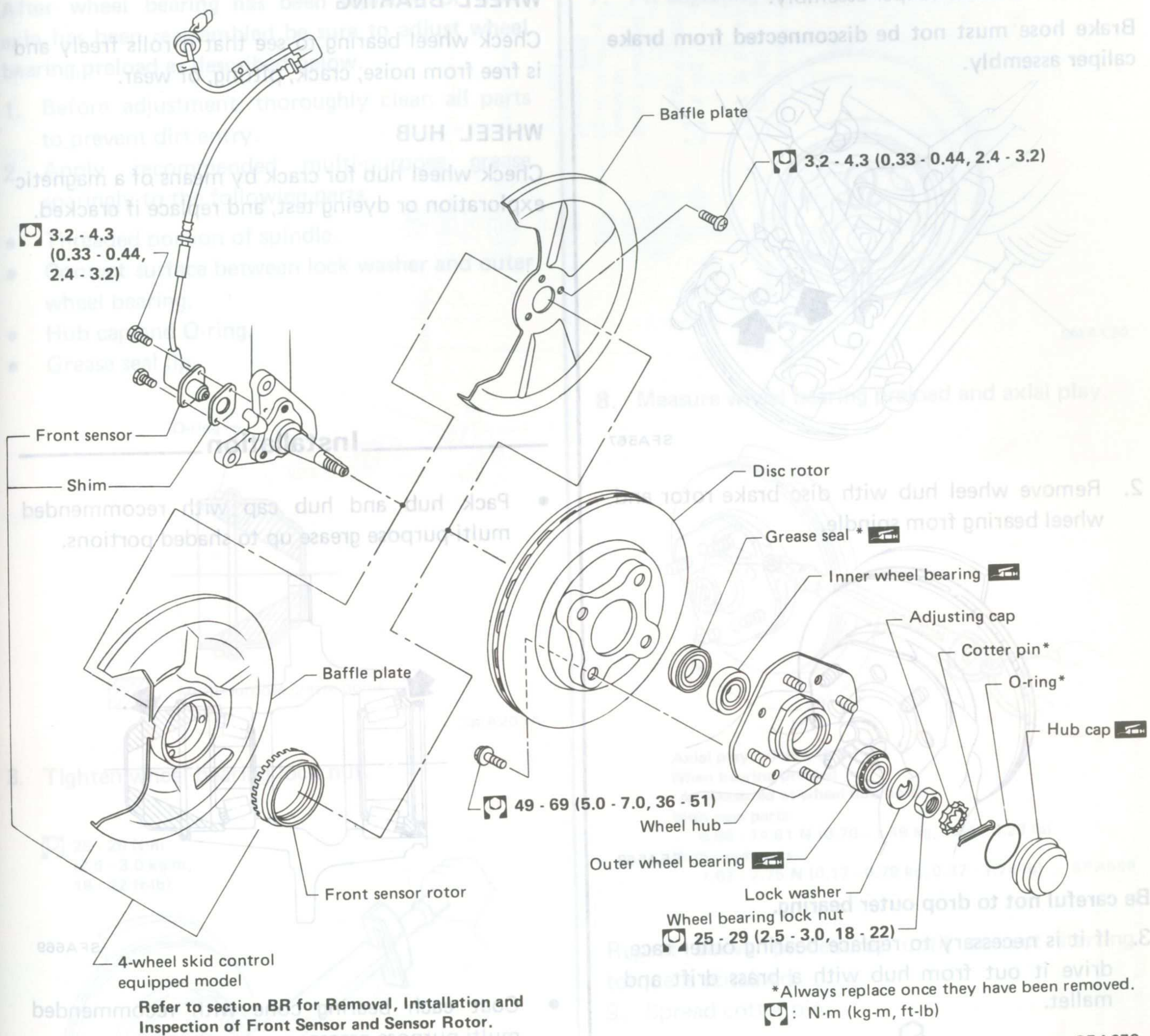
Wheel bearing

- Do not overtighten wheel bearing nut, as this can cause wheel bearing seizure.
- Axial play: 0 mm (0 in)
- Tightening torque 25 - 29 N·m (2.5 - 3.0 kg-m, 18 - 22 ft-lb)
- Return angle 60°
- Rotation starting torque
with new grease seal 0.39 - 0.83 N·m (4.0 - 8.5 kg-cm, 3.5 - 7.4 in-lb)
with used grease seal 0.10 - 0.44 N·m (1.0 - 4.5 kg-cm, 0.87 - 3.9 in-lb)
As measured at wheel hub bolt
with new grease seal 6.86 - 14.61 N (0.70 - 1.49 kg, 1.54 - 3.29 lb)
with used grease seal 1.67 - 7.75 N (0.17 - 0.79 kg, 0.37 - 1.74 lb)
- When measuring starting torque, do not include "dragging" resistance with brake pads.

□ : N·m (kg-m, ft-lb)

SFA564

FRONT AXLE — Wheel Hub



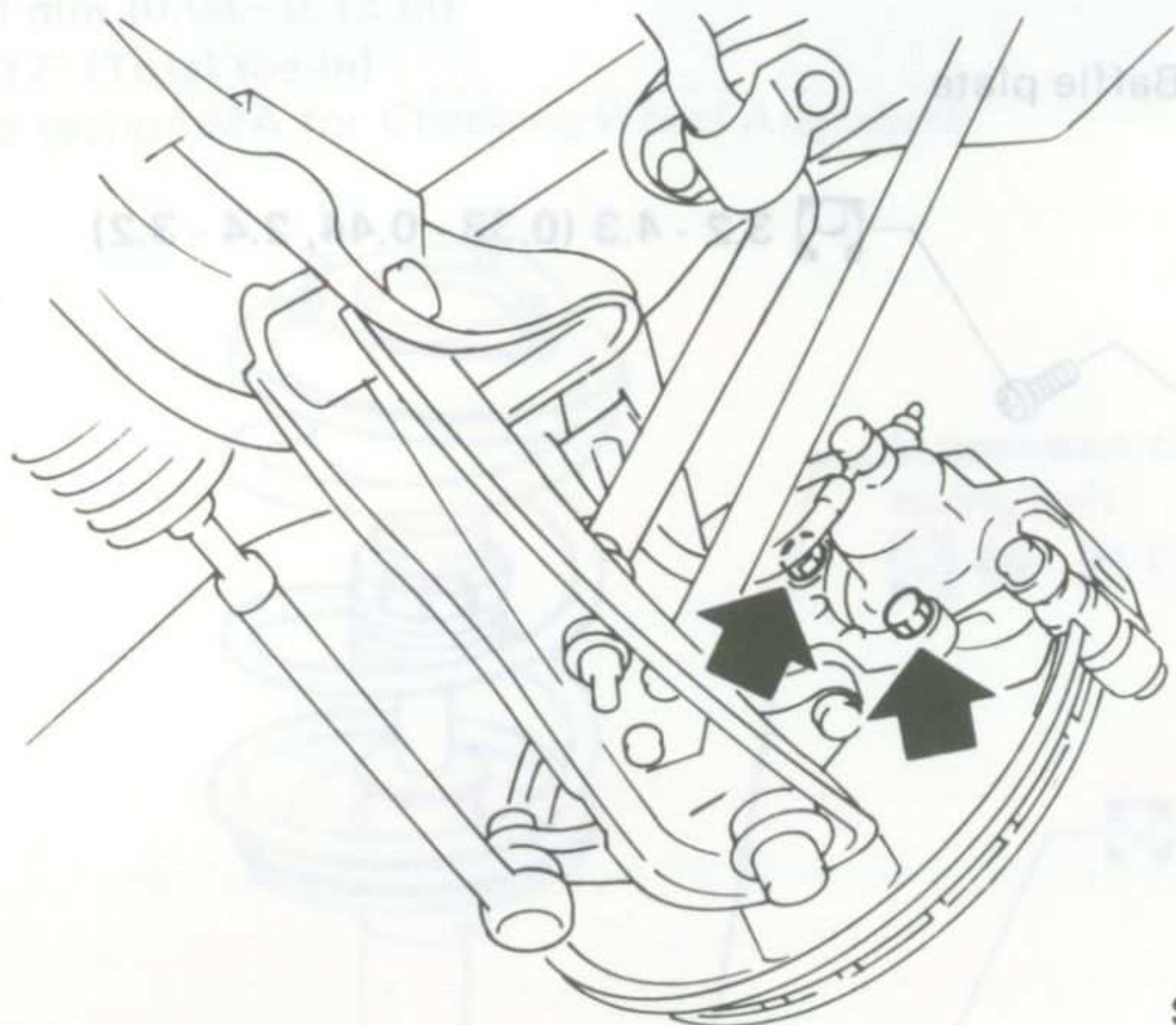
SFA670

FRONT AXLE — Wheel Hub

Removal

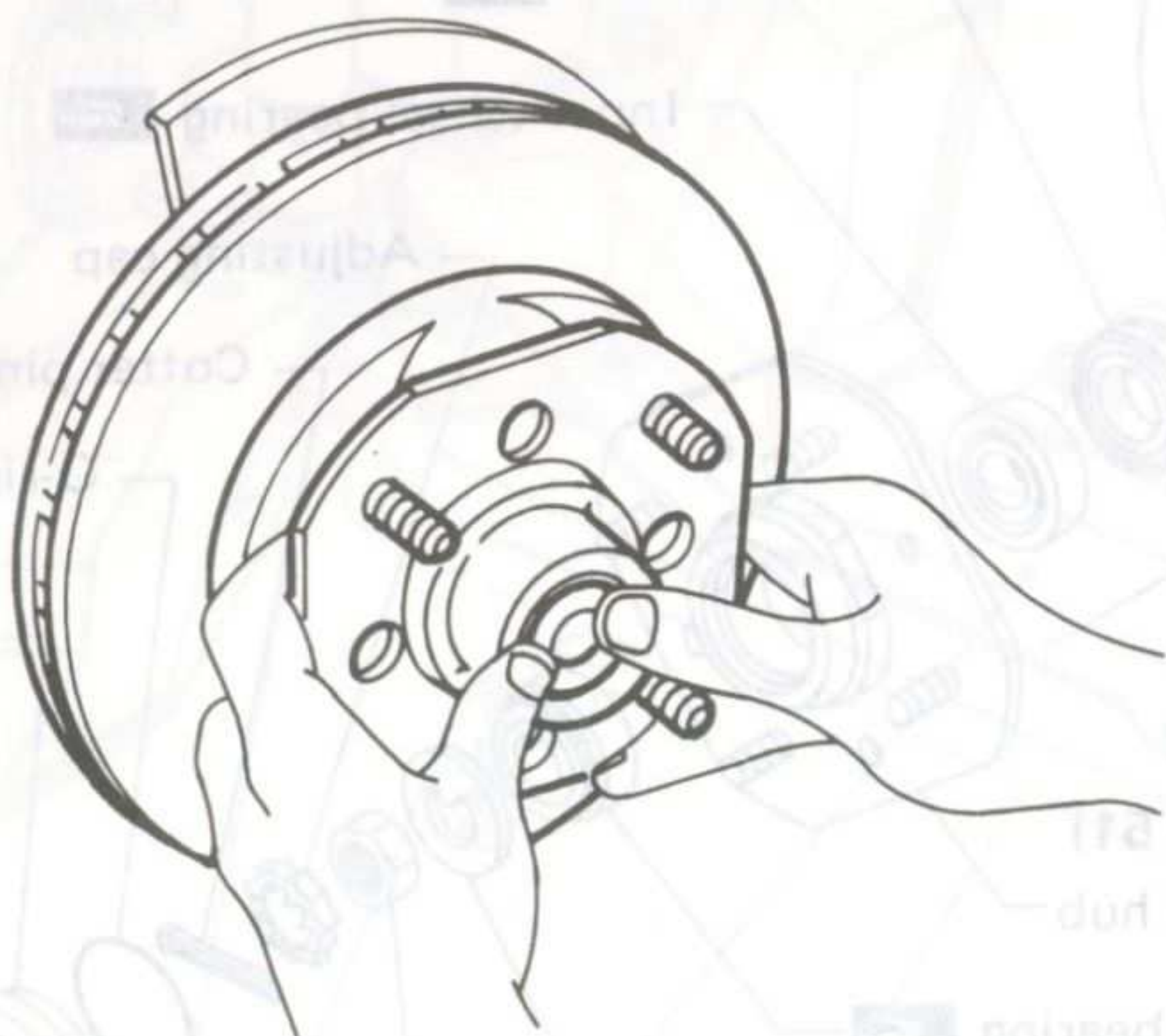
1. Remove brake caliper assembly.

Brake hose must not be disconnected from brake caliper assembly.



SFA567

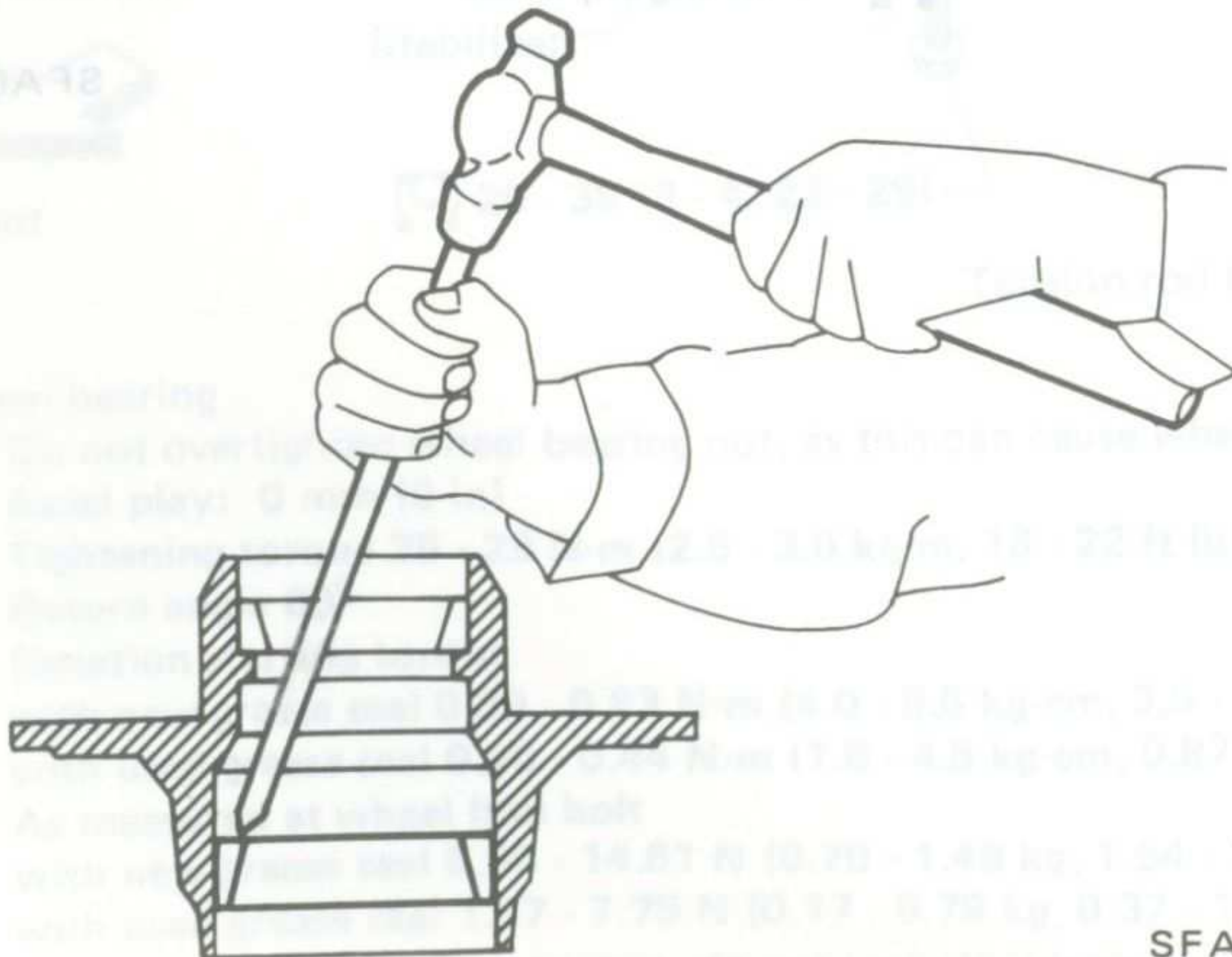
2. Remove wheel hub with disc brake rotor and wheel bearing from spindle.



SFA568

Be careful not to drop outer bearing.

3. If it is necessary to replace bearing outer race, drive it out from hub with a brass drift and mallet.



SFA580

Inspection

WHEEL BEARING

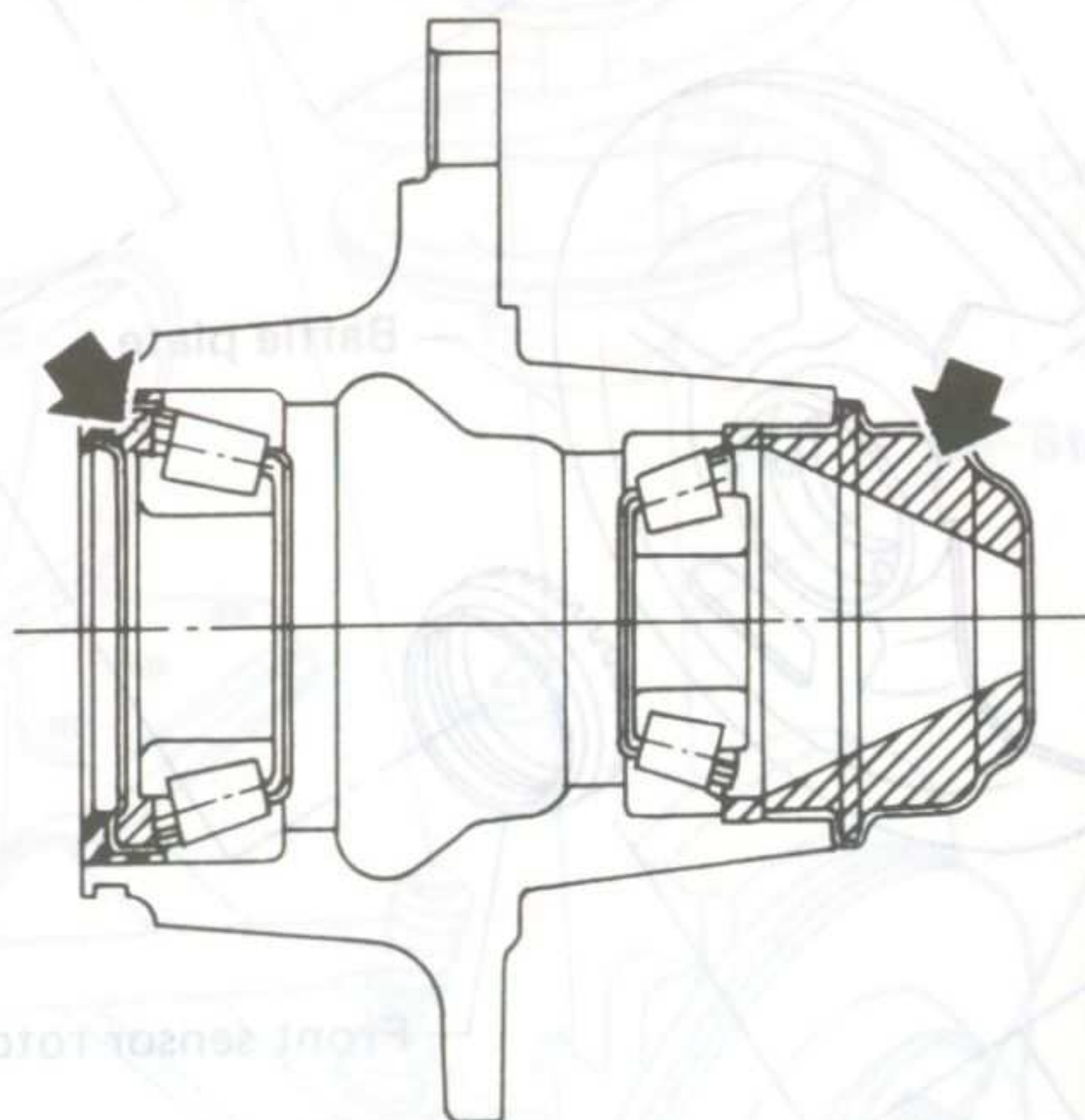
Check wheel bearing to see that it rolls freely and is free from noise, crack, pitting, or wear.

WHEEL HUB

Check wheel hub for crack by means of a magnetic exploration or dyeing test, and replace if cracked.

Installation

- Pack hub and hub cap with recommended multi-purpose grease up to shaded portions.



SFA669

- Coat each bearing cone with recommended multi-purpose grease.



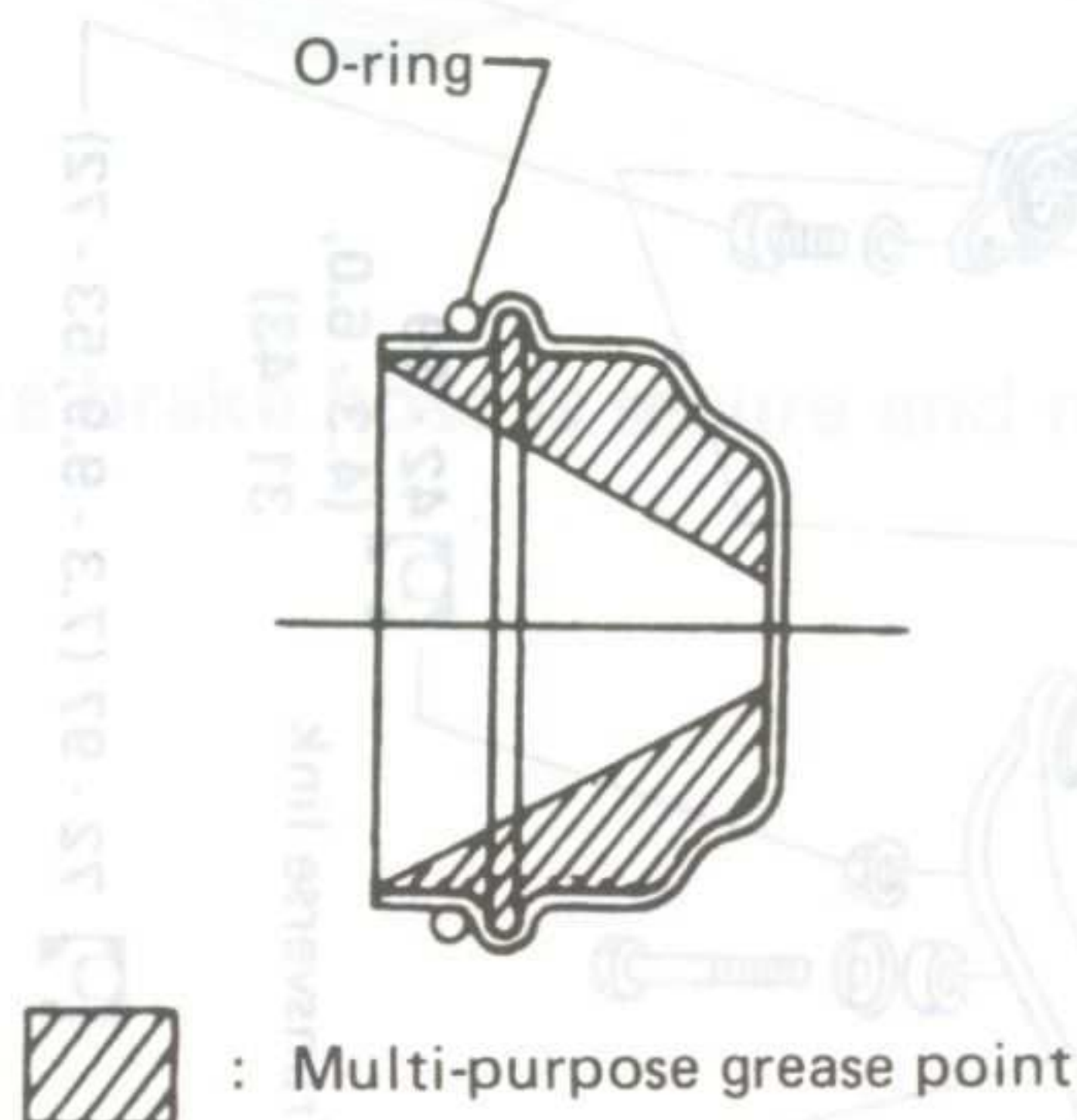
FA781

FRONT AXLE — Wheel Hub

Preload Adjustment

After wheel bearing has been replaced or front axle has been reassembled be sure to adjust wheel bearing preload as described below.

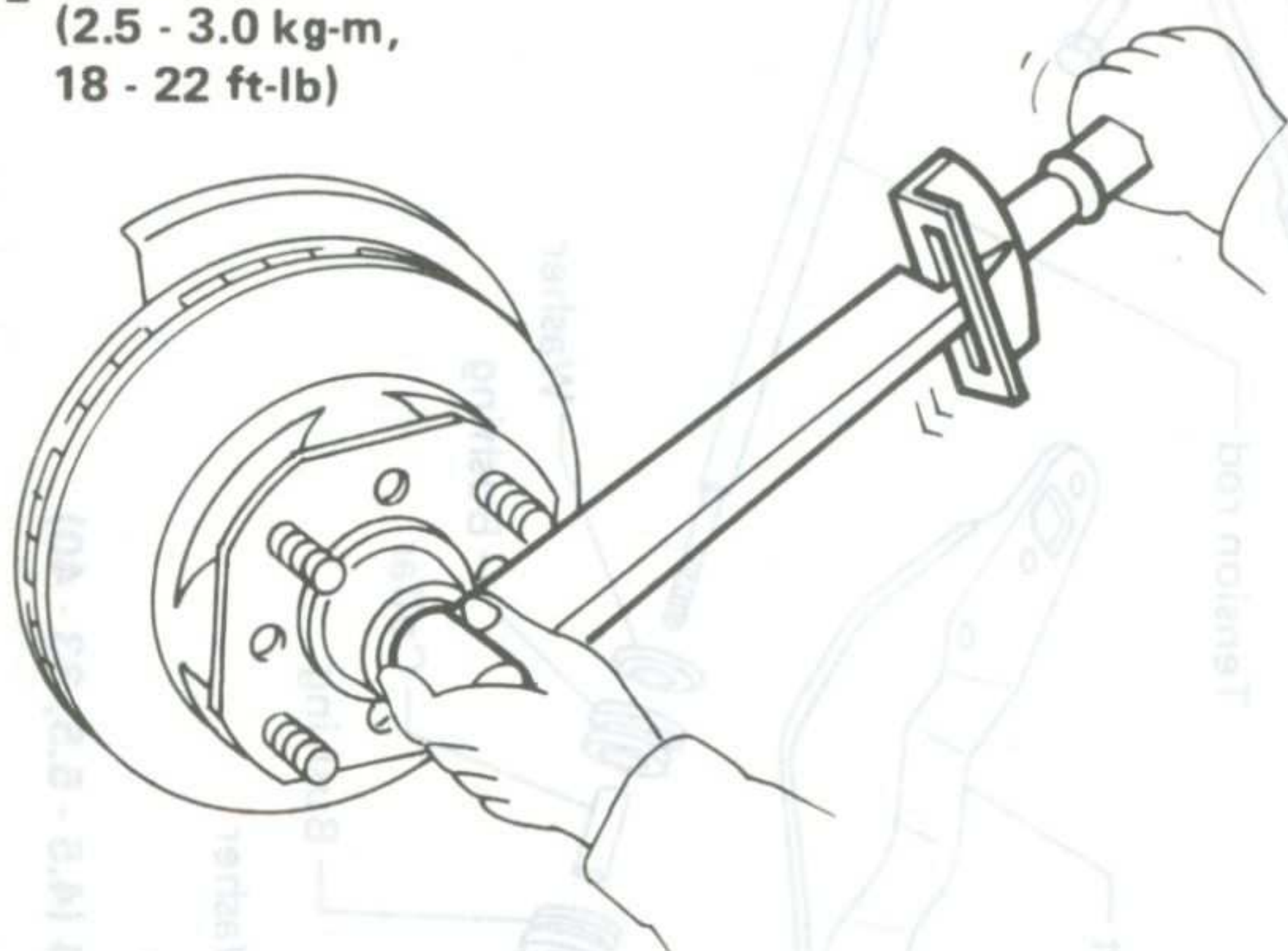
1. Before adjustment, thoroughly clean all parts to prevent dirt entry.
2. Apply recommended multi-purpose grease sparingly to the following parts.
 - Threaded portion of spindle.
 - Contact surface between lock washer and outer wheel bearing.
 - Hub cap and O-ring.
 - Grease seal lip.



SMA203A

3. Tighten wheel bearing lock nut.

25 - 29 N·m
(2.5 - 3.0 kg·m,
18 - 22 ft·lb)



SFA587

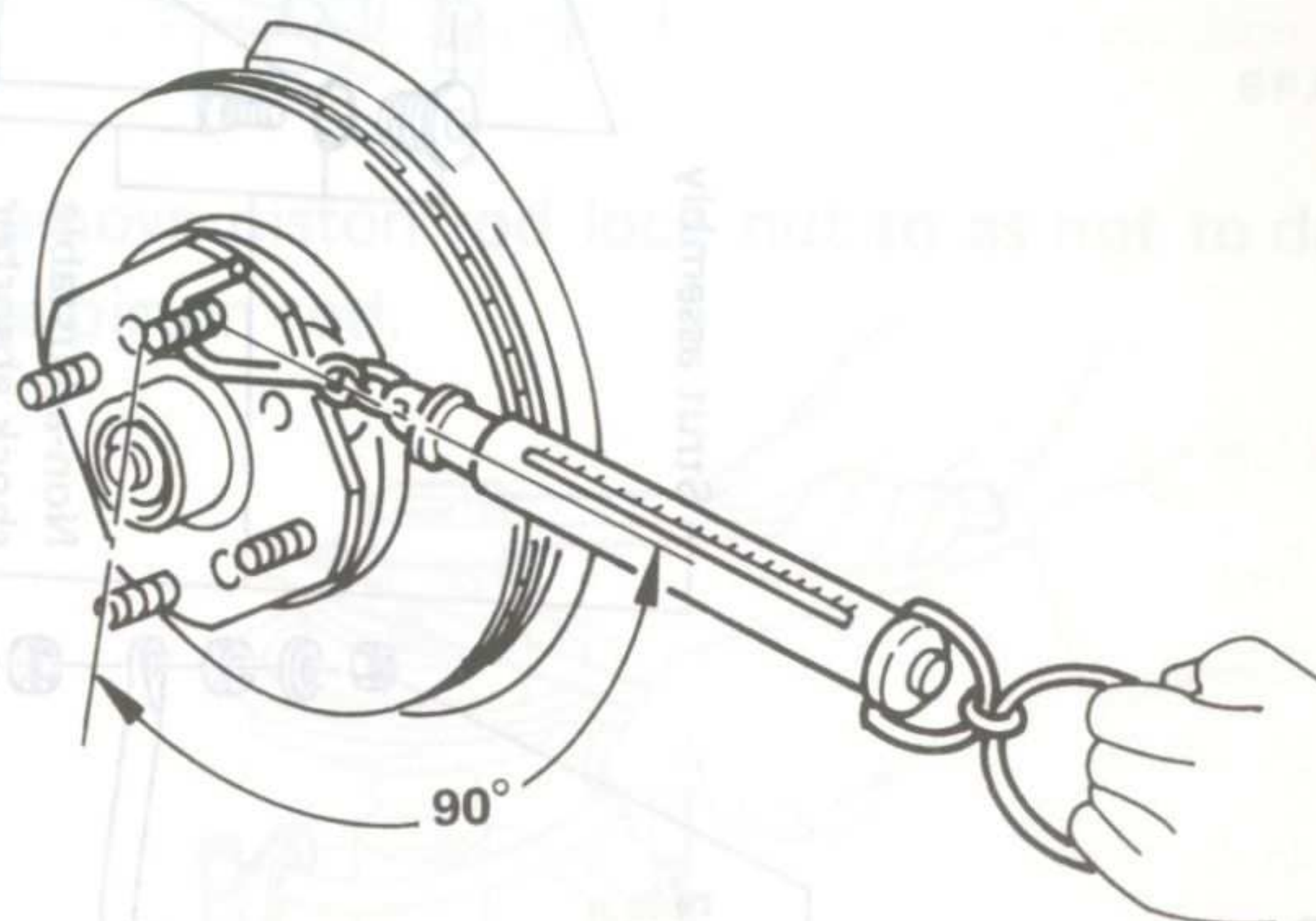
4. Turn wheel hub several times in both directions to seat wheel bearing correctly.
5. Again tighten wheel bearing nut.
6. Turn back wheel bearing lock nut within 60°.

7. Fit adjusting cap and new cotter pin.



SMA120

8. Measure wheel bearing preload and axial play.



Axial play: 0 mm (0 in)
When bearing preload
(As measured at wheel hub bolt):
With new parts
6.86 - 14.61 N (0.70 - 1.49 kg, 1.54 - 3.29 lb)
With used parts
1.67 - 7.75 N (0.17 - 0.79 kg, 0.37 - 1.74 lb)

SFA588

Repeat above procedures until correct starting torque is obtained.

9. Spread cotter pin.



SRA417

10. Install hub cap with new O-ring.

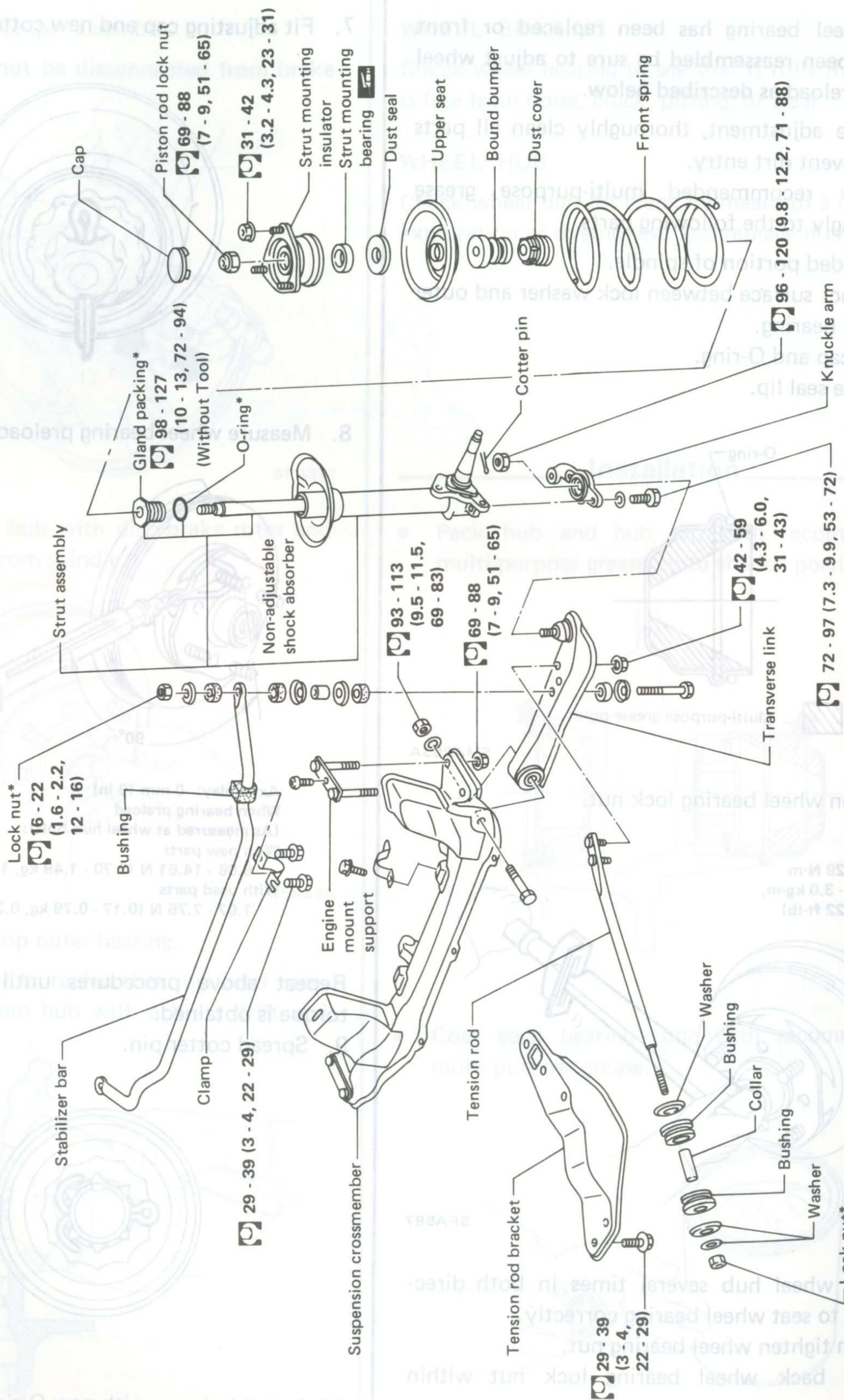
FRONT SUSPENSION

When removing each suspension part, check wheel alignment and adjust if necessary. Refer to section MA for front axle and front suspension.

When installing a bushing, do not allow it to project beyond the surface area of the washer.

Do not allow the bushings and washers to come in contact with grease, oil, soapy water, etc.

*: Always replace whenever disassembled.



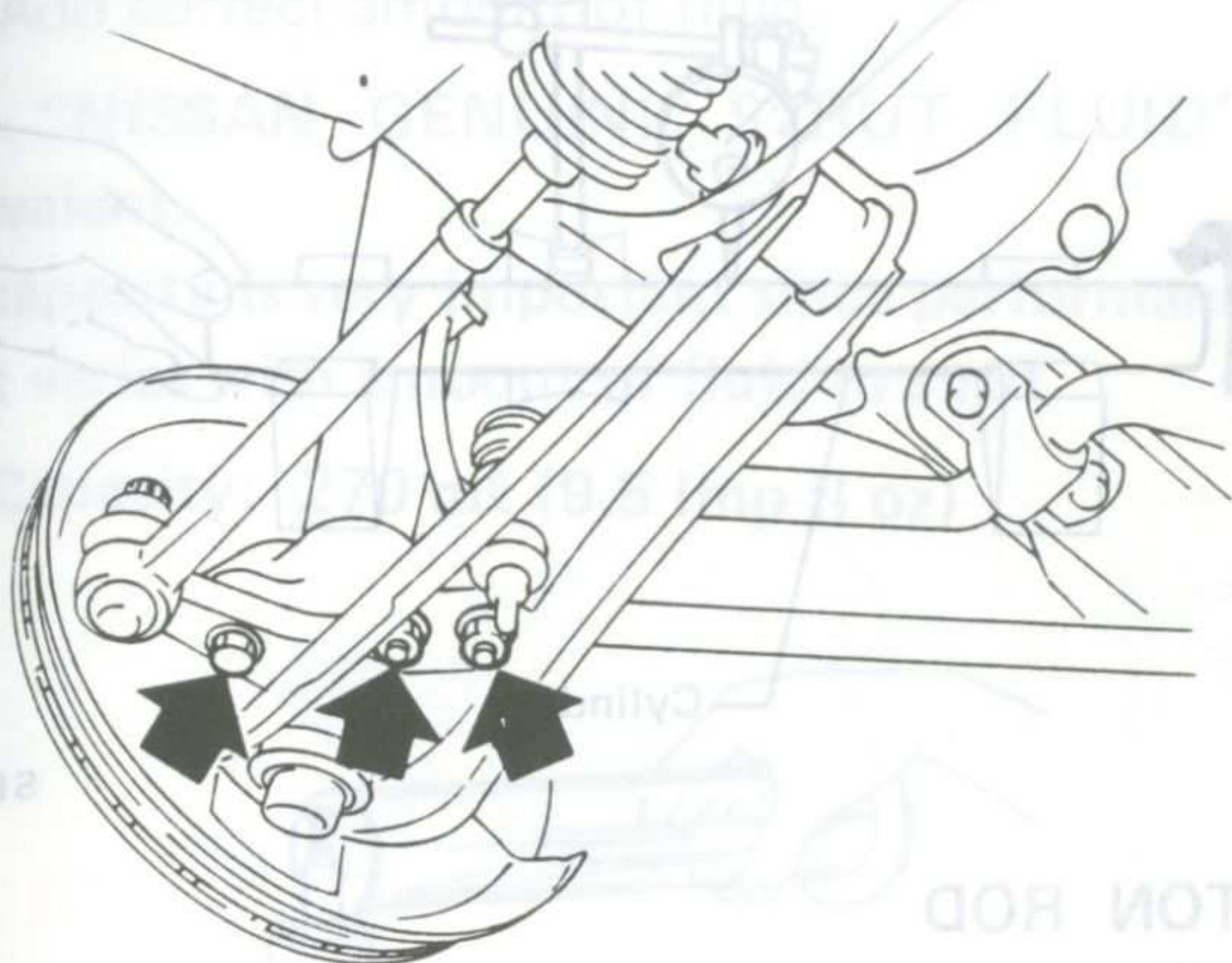
□ : N·m (kg-m, ft-lb)

SFA569

FRONT SUSPENSION — Spring and Strut Assembly

Removal and Installation

- Remove tension rod nuts and knuckle arm fixing bolts.



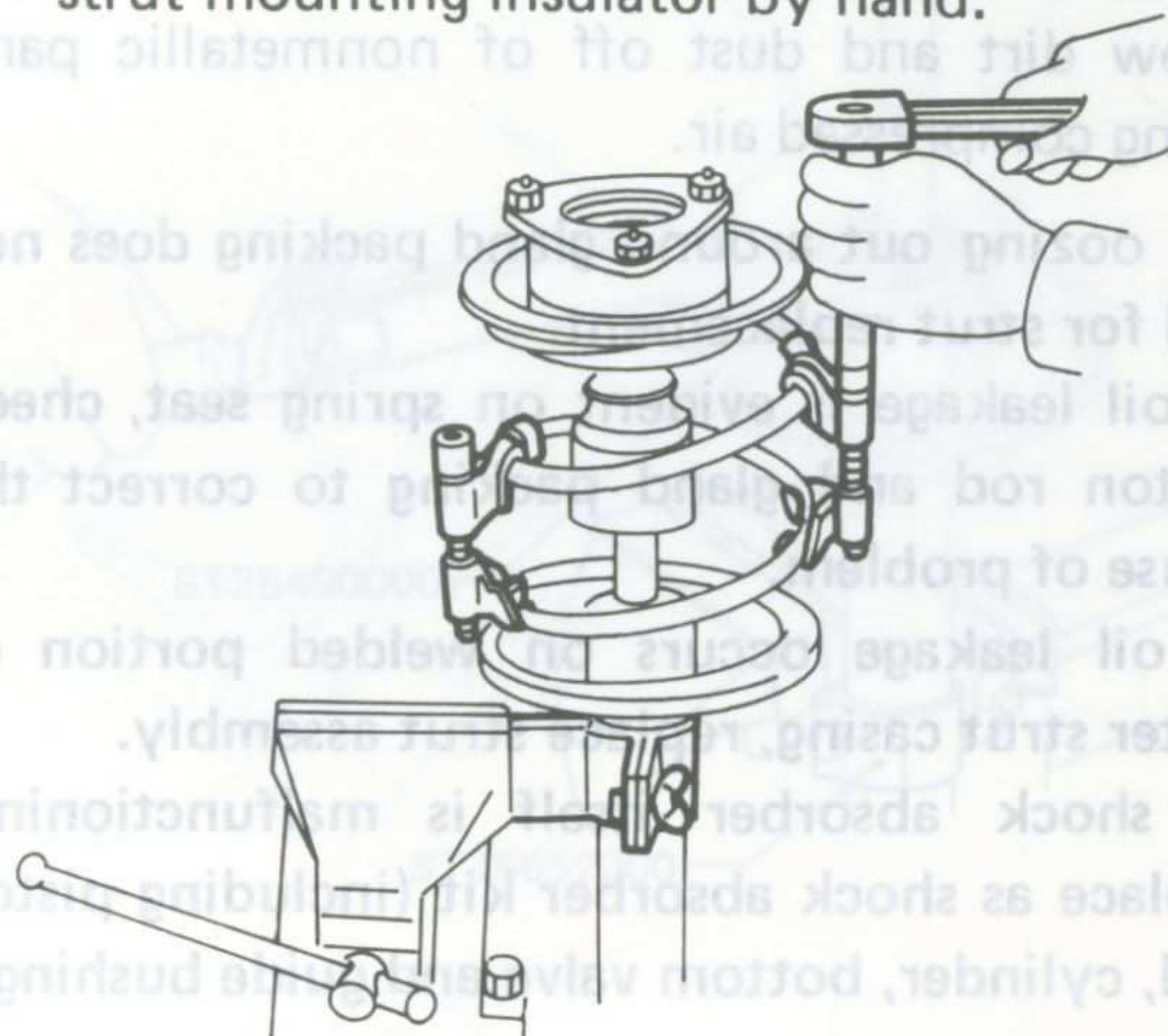
SFA570

Make sure brake hose is secure and not twisted.

Disassembly

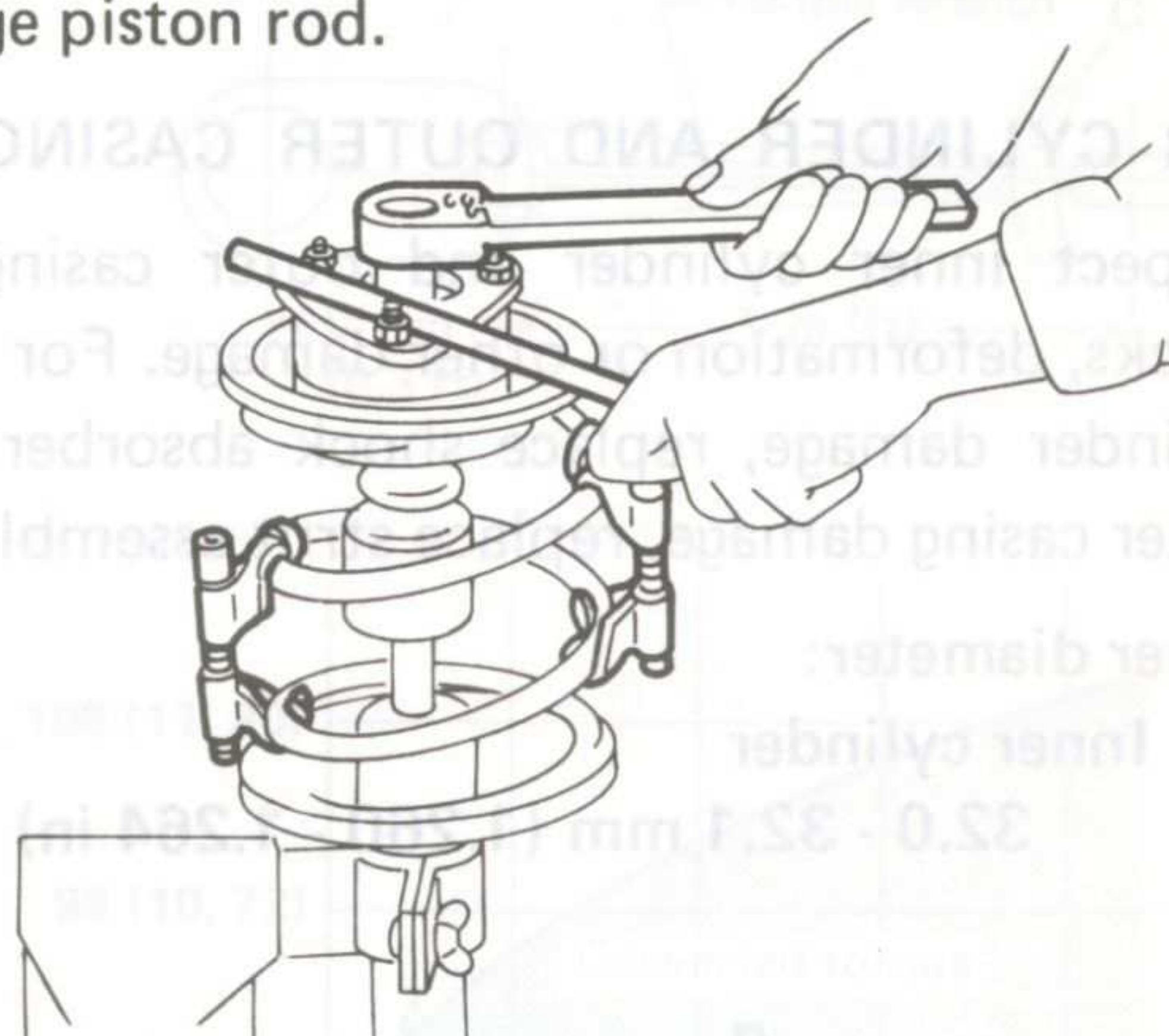
Avoid dirt and dust getting inside strut.

- Compress spring so as to permit turning of strut mounting insulator by hand.



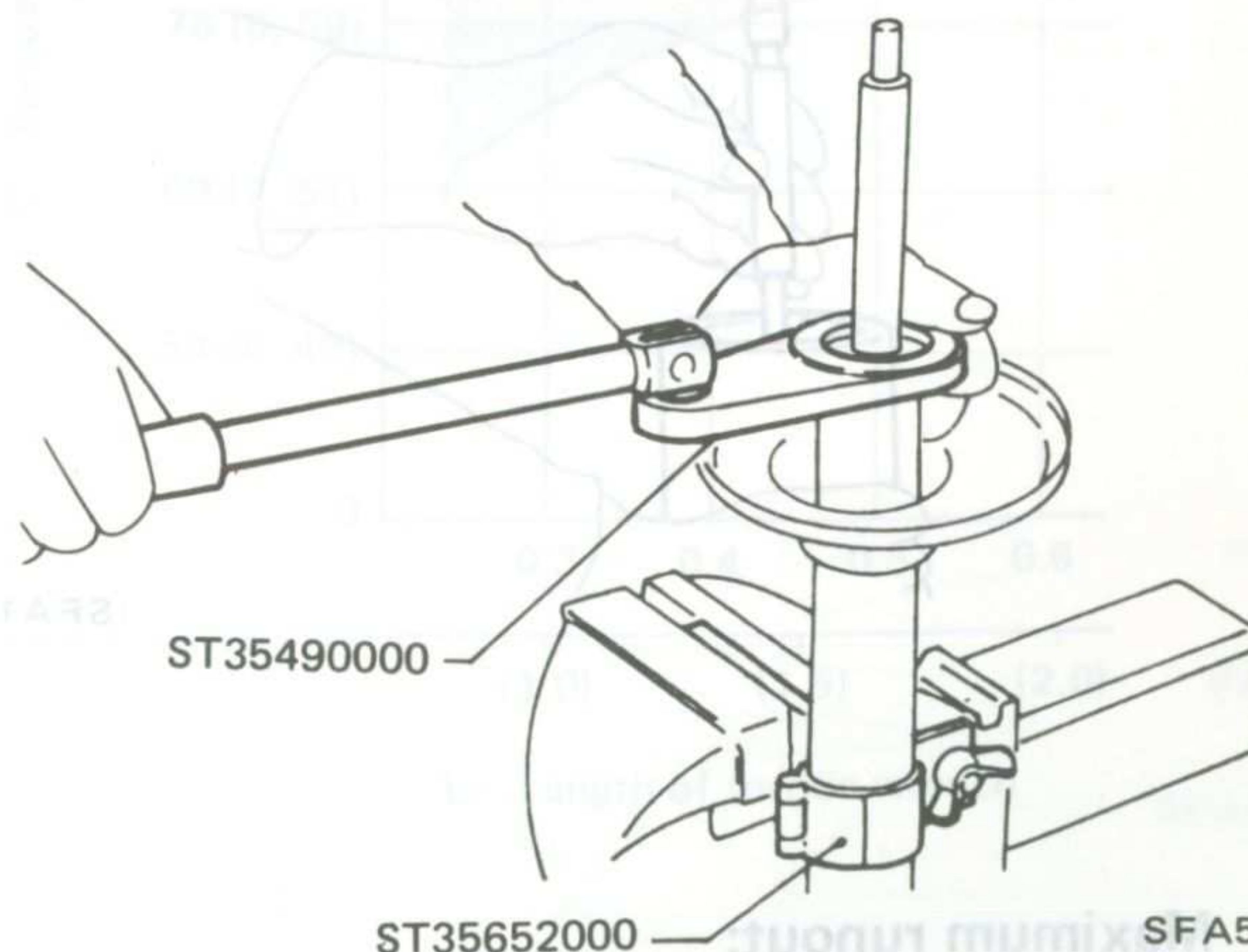
SFA571

- Remove piston rod lock nut so as not to damage piston rod.



SFA572

- Remove gland packing with Tool. Retract piston rod by pushing it down until it bottoms.



SFA573

- Slowly withdraw piston rod from cylinder together with piston guide.

FRONT SUSPENSION — Spring and Strut Assembly

Inspection

- Wash all parts, except for nonmetallic parts, clean with suitable solvent and dry with compressed air.
- Blow dirt and dust off of nonmetallic parts using compressed air.
- a. Oil oozing out around gland packing does not call for strut replacement.
If oil leakage is evident on spring seat, check piston rod and gland packing to correct the cause of problem.
If oil leakage occurs on welded portion of outer strut casing, replace strut assembly.
- b. If shock absorber itself is malfunctioning, replace as shock absorber kit (including piston rod, cylinder, bottom valve and guide bushing).

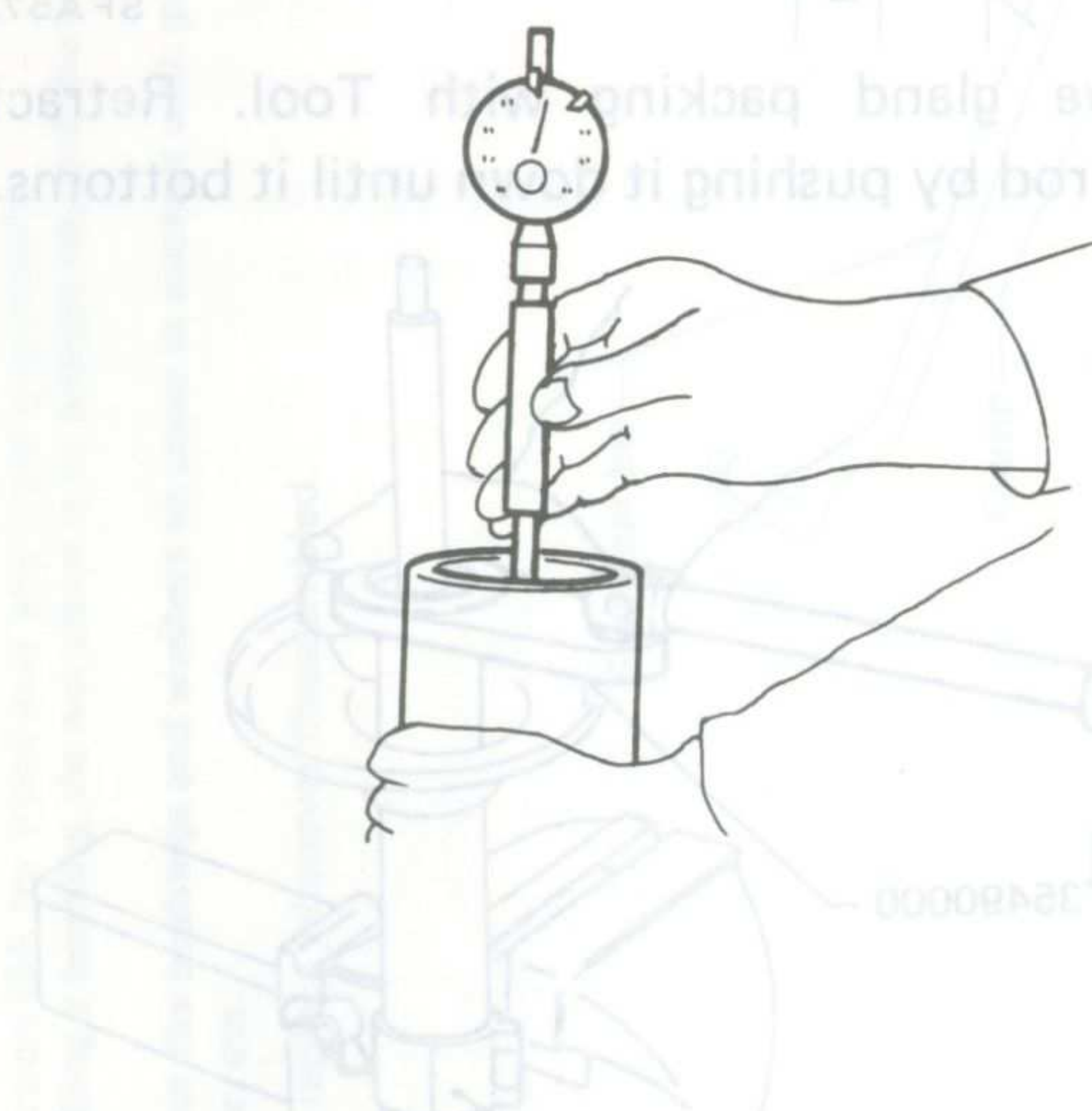
INNER CYLINDER AND OUTER CASING

- Inspect inner cylinder and outer casing for cracks, deformation or other damage. For inner cylinder damage, replace shock absorber. For outer casing damage, replace strut assembly.

Inner diameter:

Inner cylinder

32.0 - 32.1 mm (1.260 - 1.264 in)

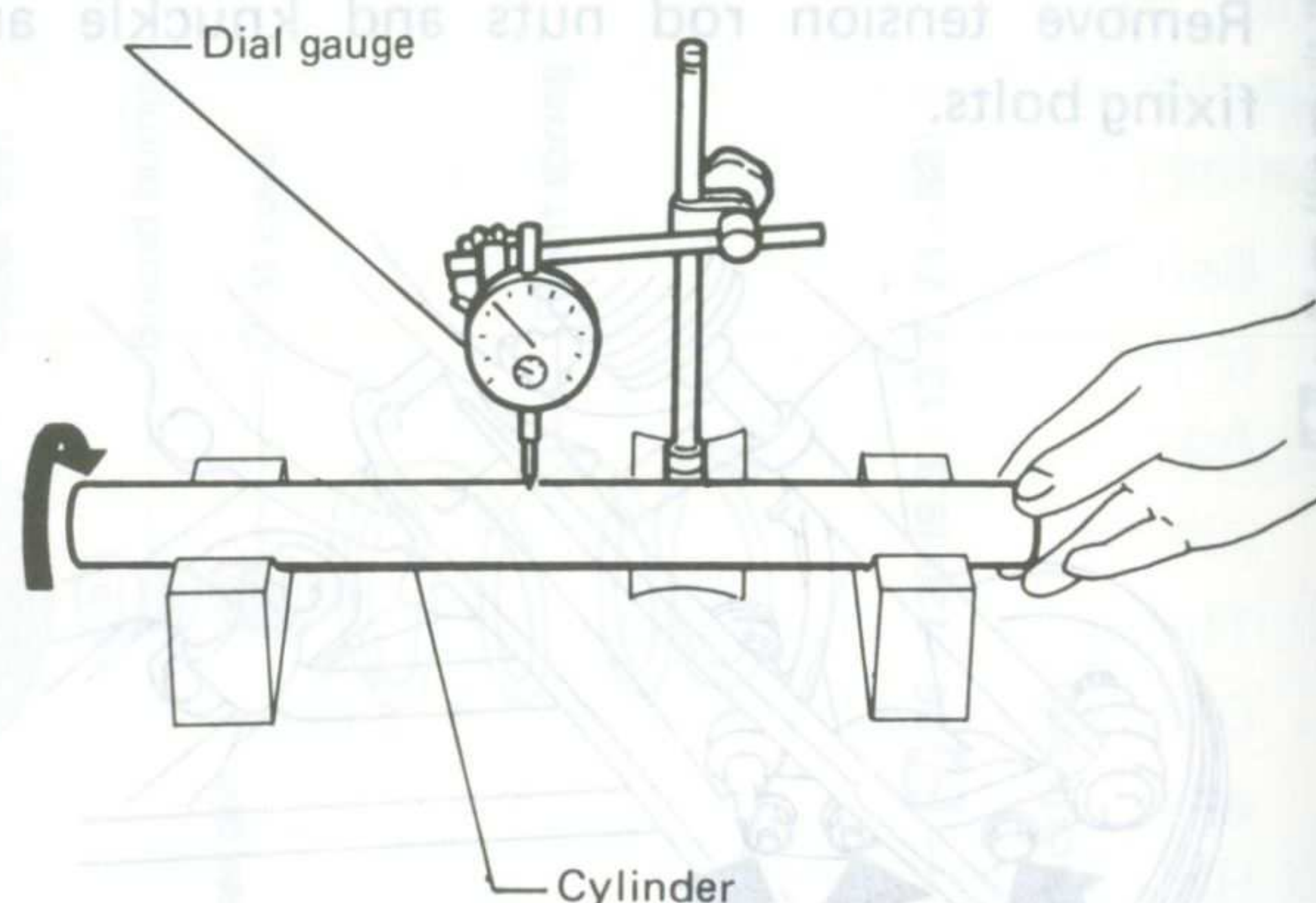


SFA136

Maximum runout:

Inner cylinder

Less than 0.2 mm (0.008 in)



SFA137

PISTON ROD

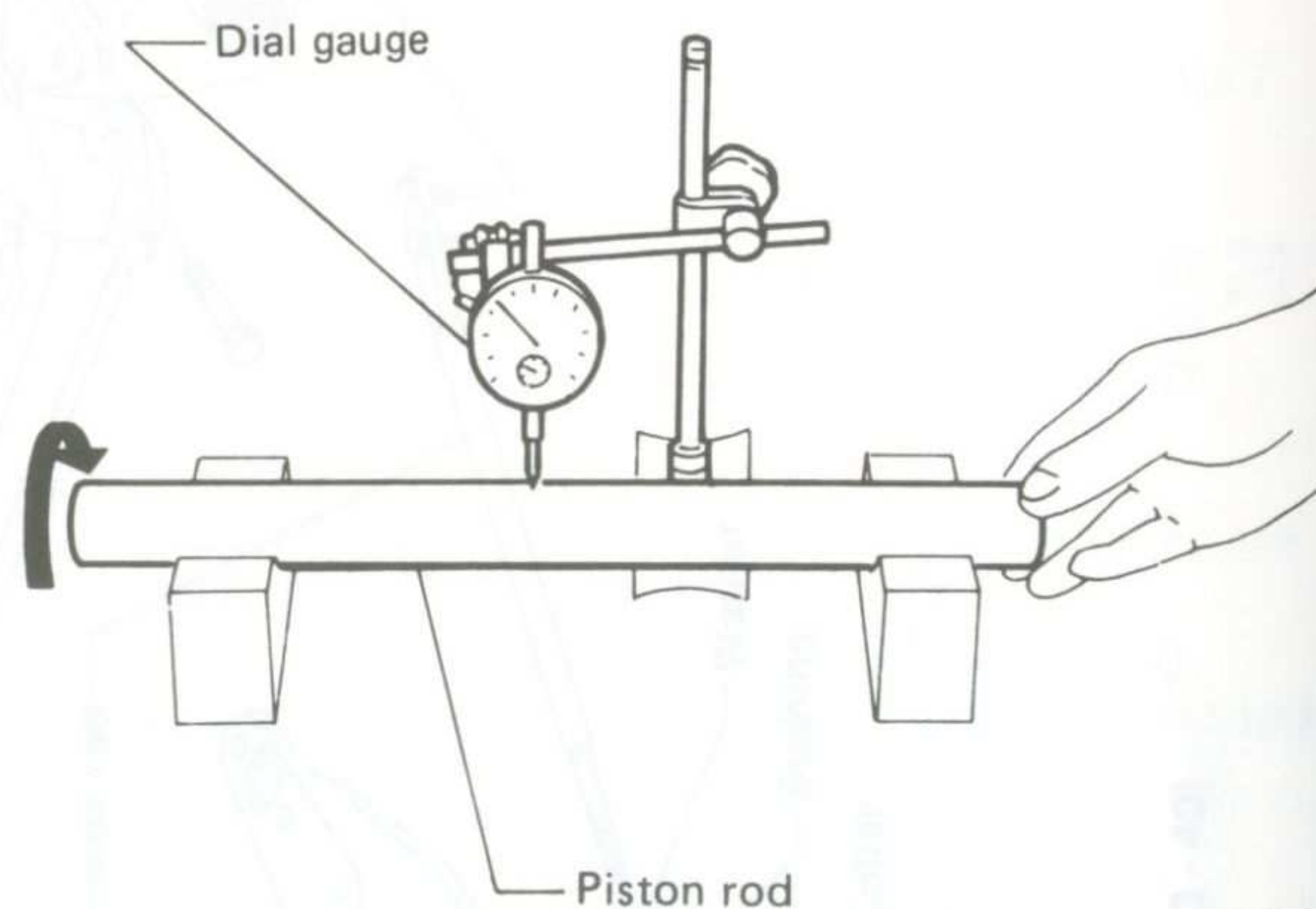
- Inspect piston rod for cracks, deformation or other damage. Replace shock absorber, if necessary.
- Inspect threads for cracks or other damage. Replace shock absorber, if necessary.

Rod diameter:

21.78 - 21.94 mm (0.8575 - 0.8638 in)

Maximum runout:

Less than 0.1 mm (0.004 in)



SFA137

STRUT MOUNTING INSULATOR

Replace if cemented rubber-to-metal portion are melted or cracked. Rubber parts need replacement, if deteriorated.

STRUT MOUNTING BEARING

Replace if inspection reveals abnormal noise or excessive rattle in axial direction.

FRONT SUSPENSION — Spring and Strut Assembly

Assembly

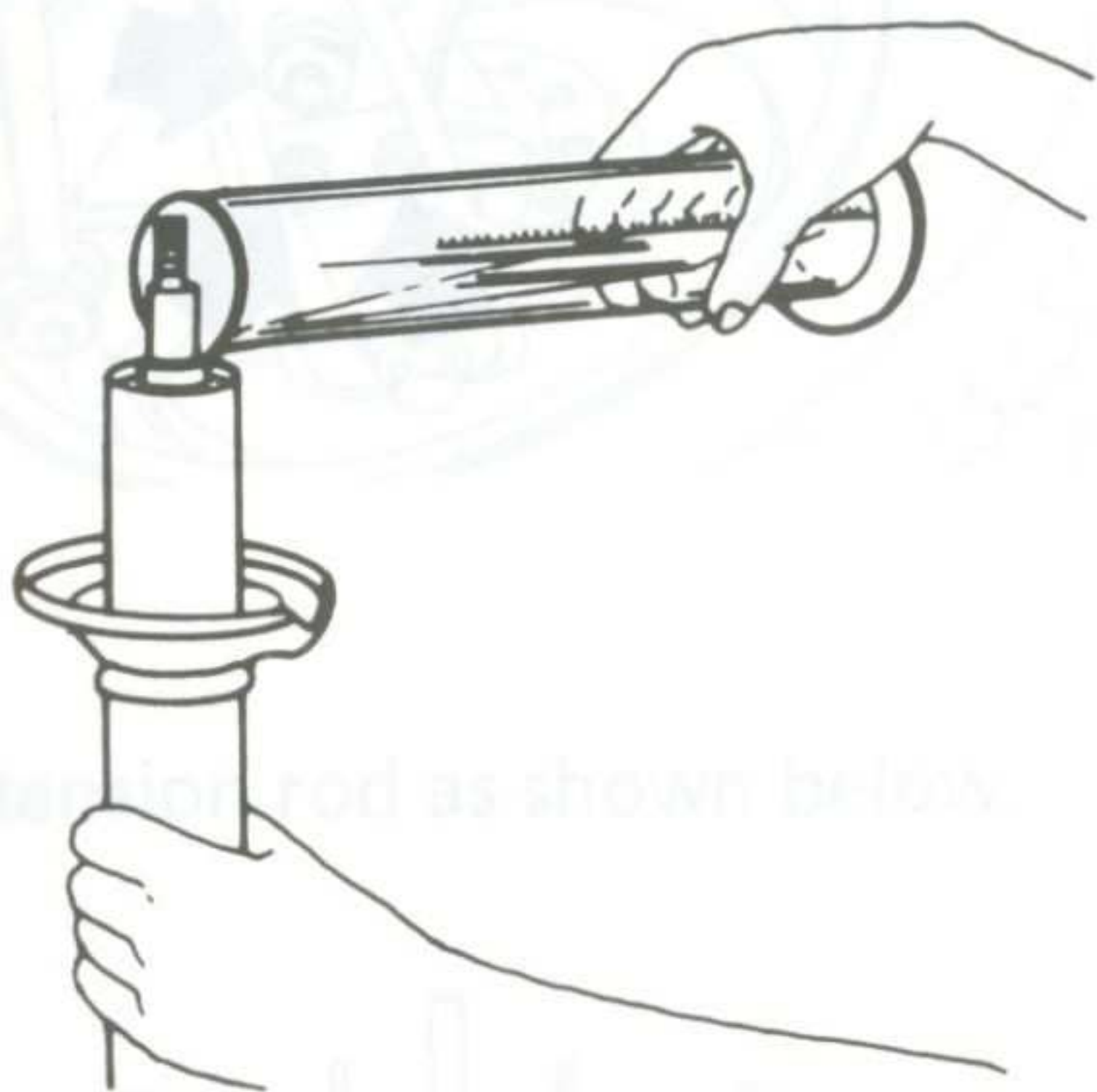
Before assembly, keep away from dust to prevent entry of dust.

- Add correct amount of fluid.

Use "NISSAN GENUINE STRUT FLUID" or equivalent.

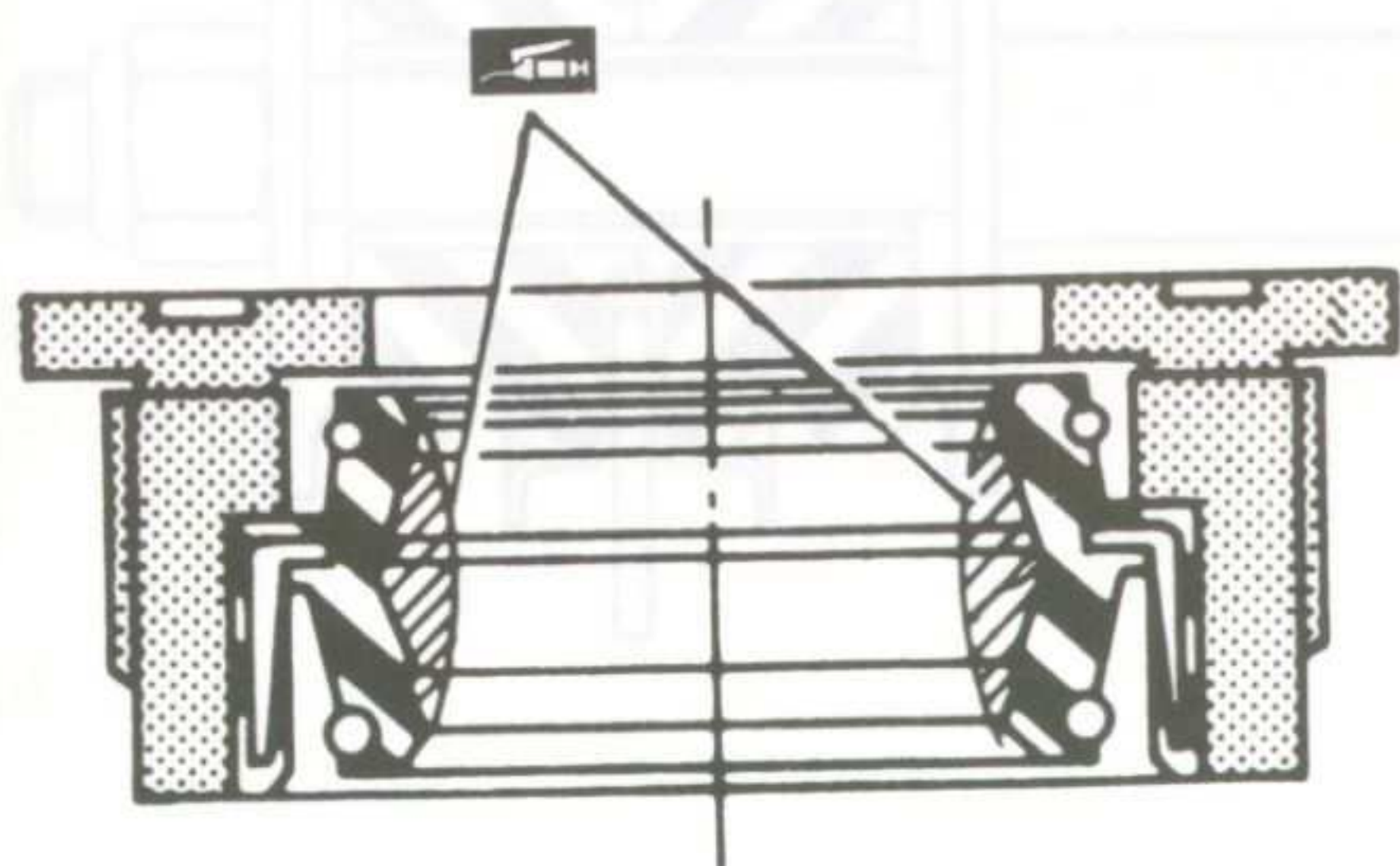
Oil capacity is very important since performance of strut varies with amount of fluid in strut.

Capacity: 270 ml (9.5 Imp fl oz)



FA065

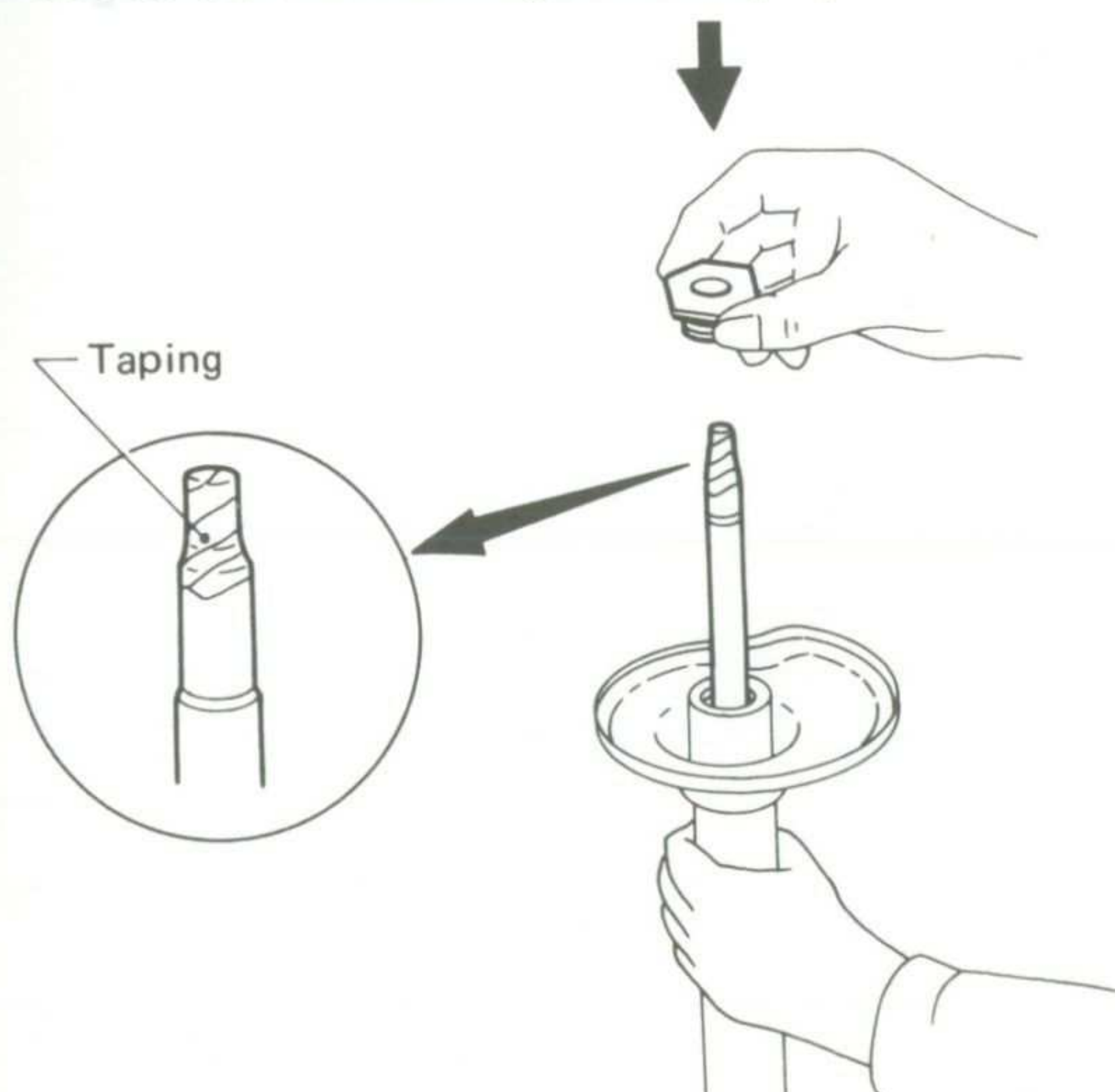
- Lubricate sealing lip of gland packing.



SFA141

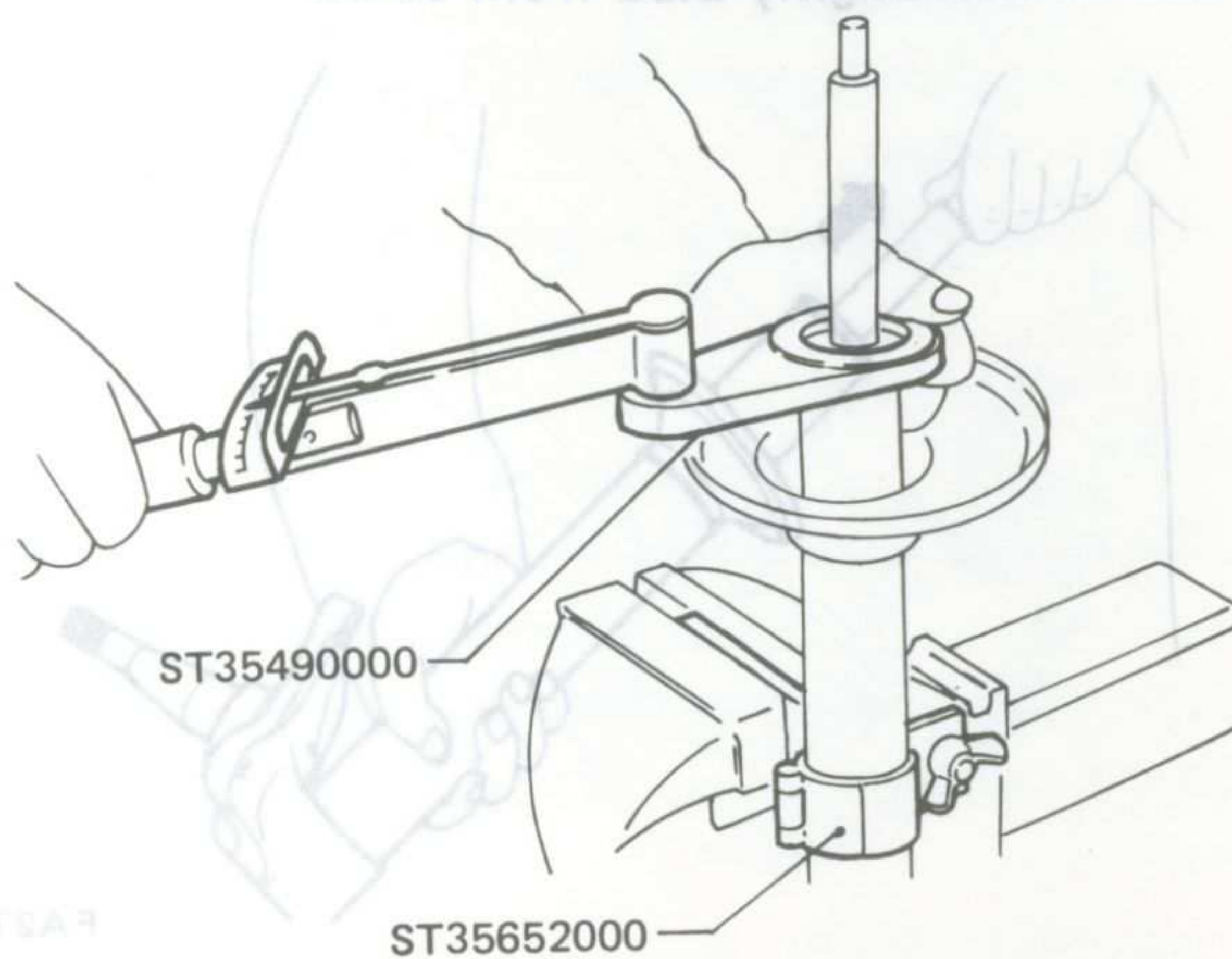
- Install gland packing.

Be careful not to damage sealing lip.

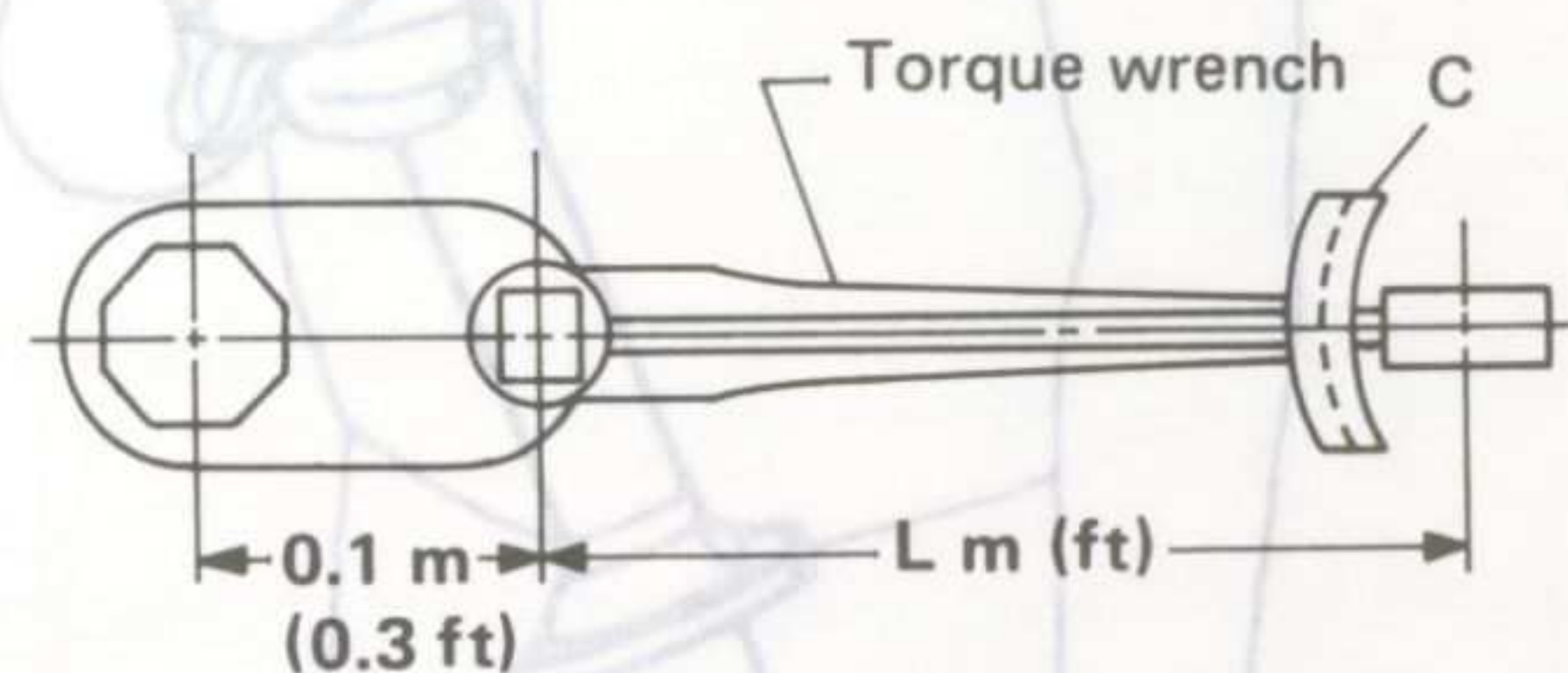


SFA574

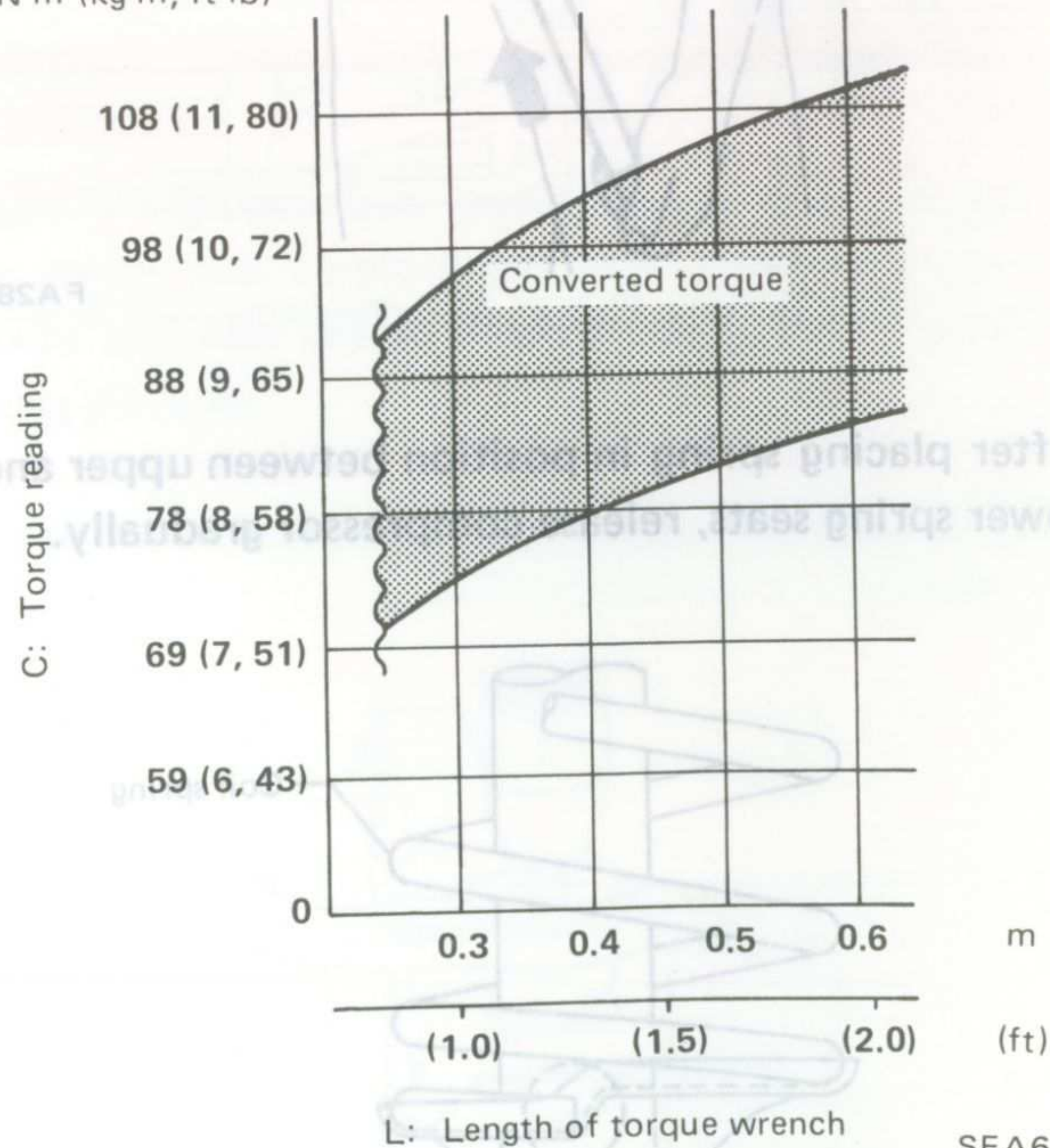
- Tighten gland packing.



SFA591



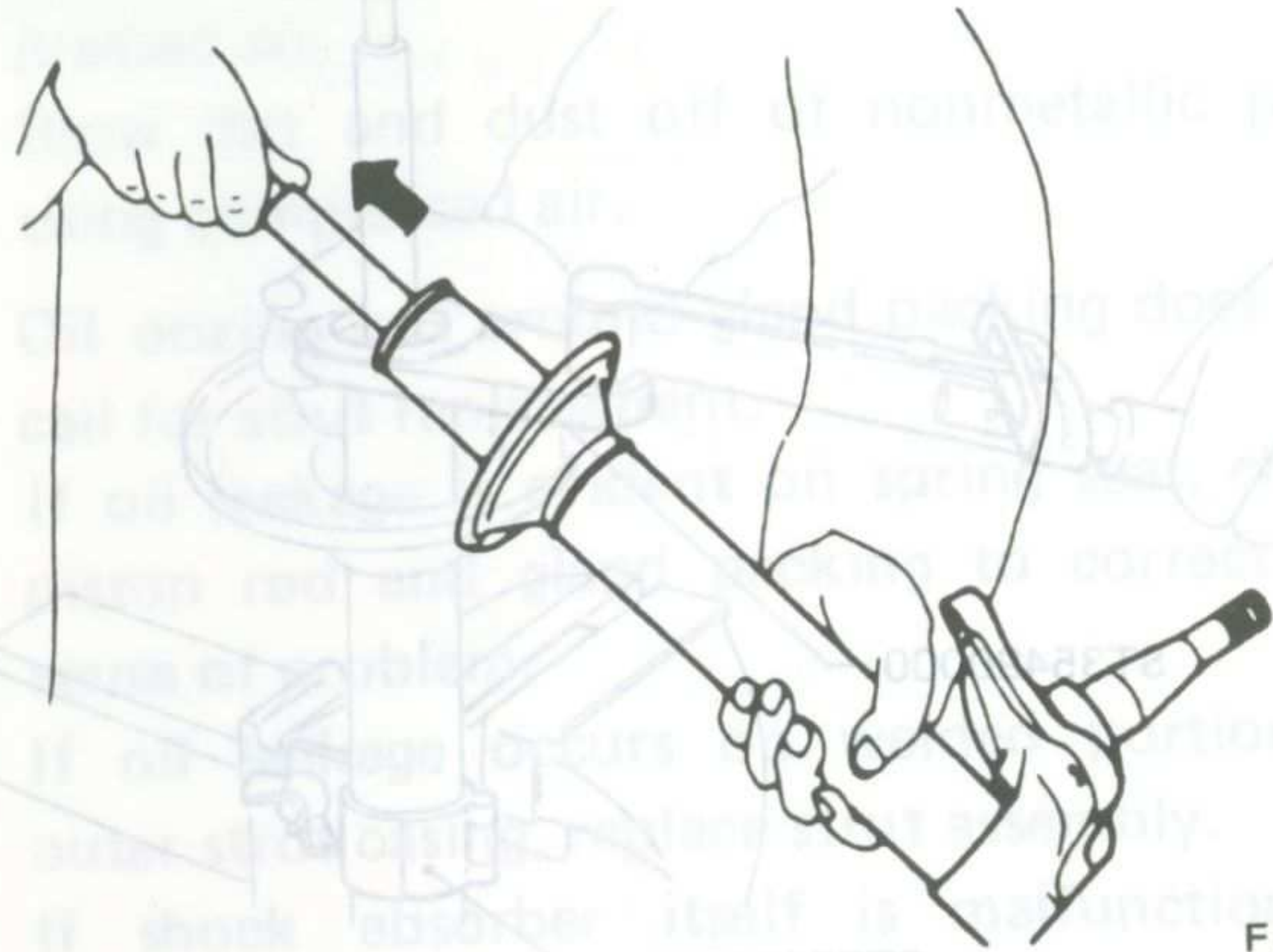
N·m (kg-m, ft-lb)



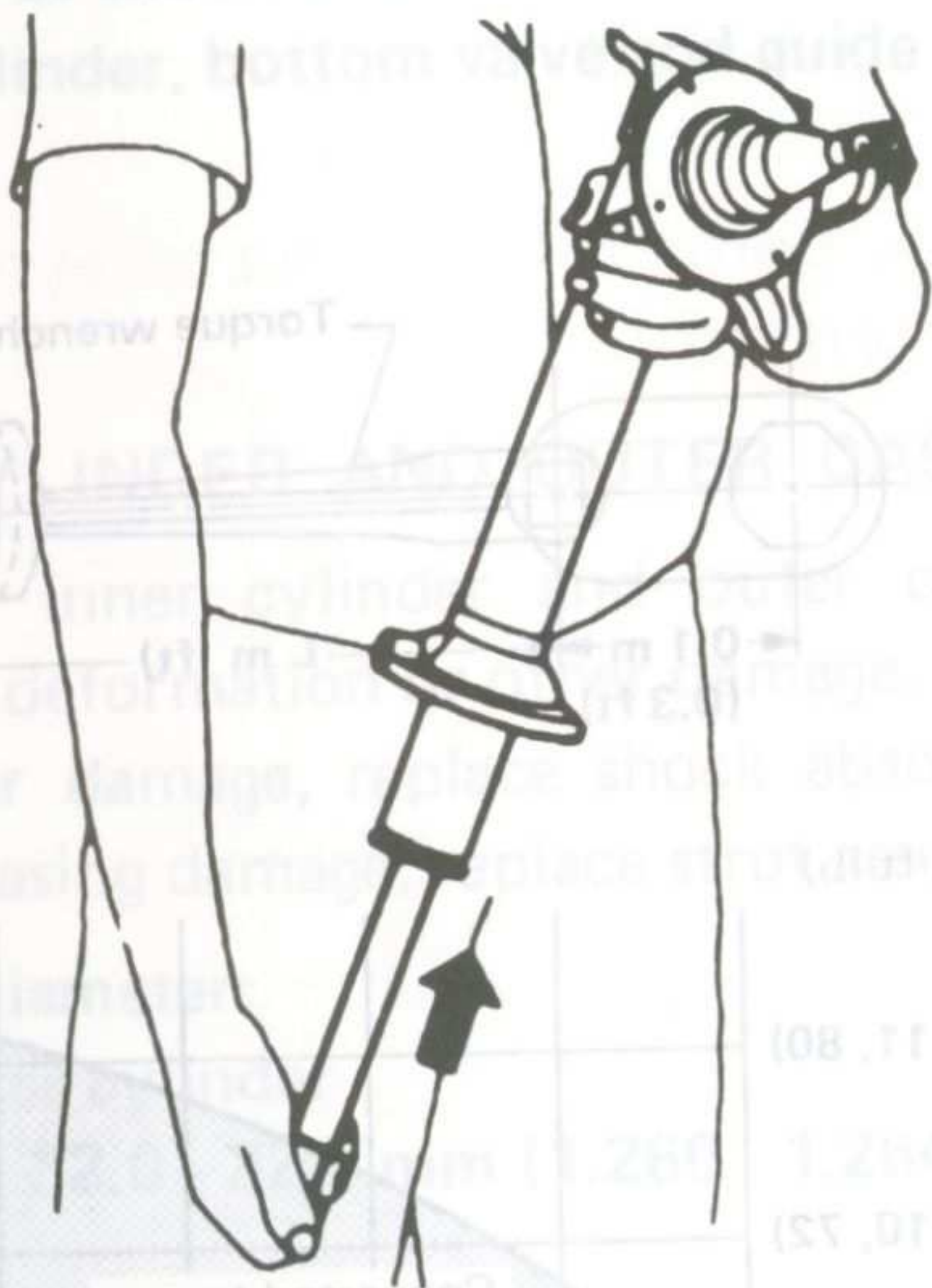
SFA672

FRONT SUSPENSION — Spring and Strut Assembly

Repeat following procedures several times so that air will be thoroughly bled from strut.

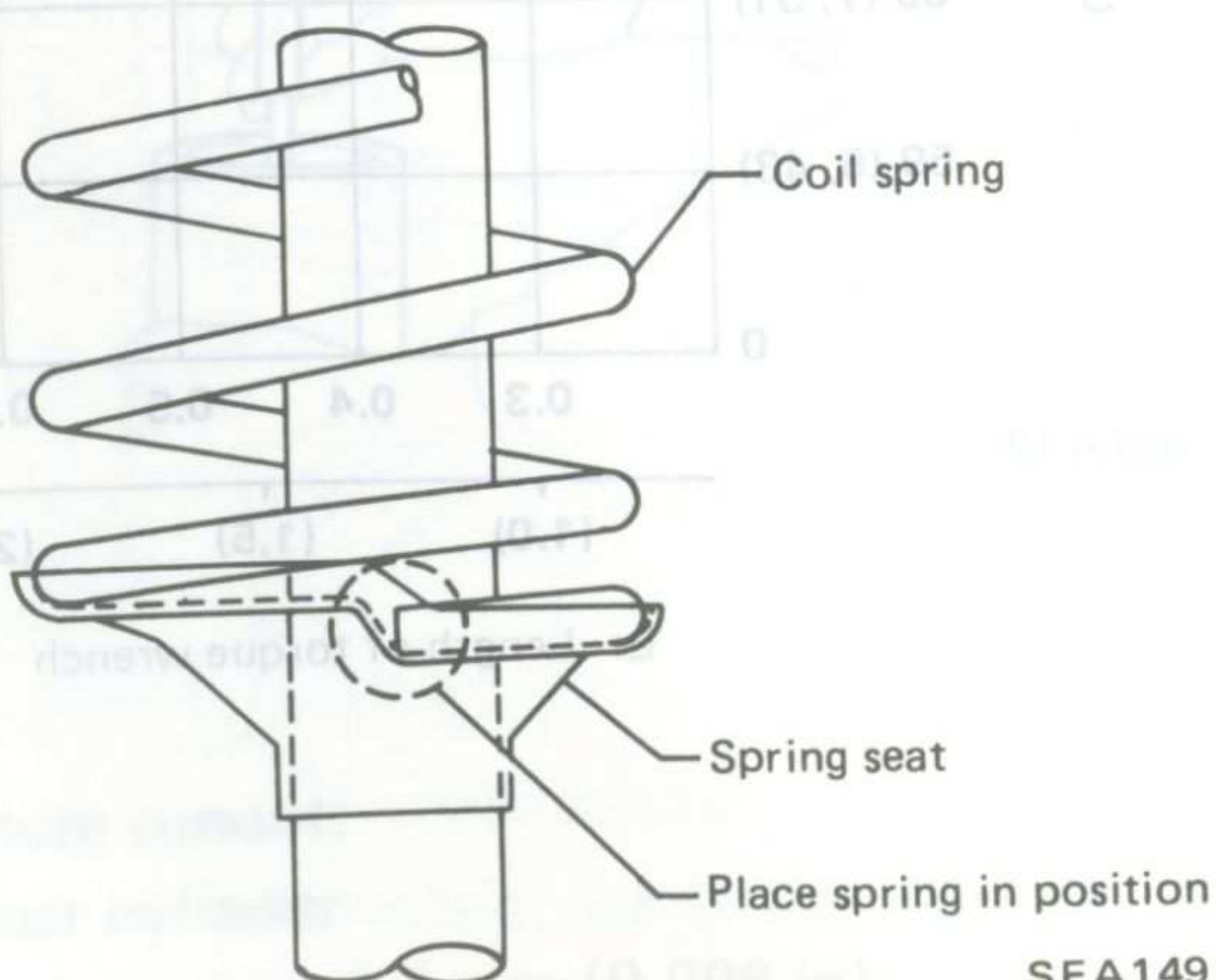


FA279



FA280

After placing spring in position between upper and lower spring seats, release compressor gradually.

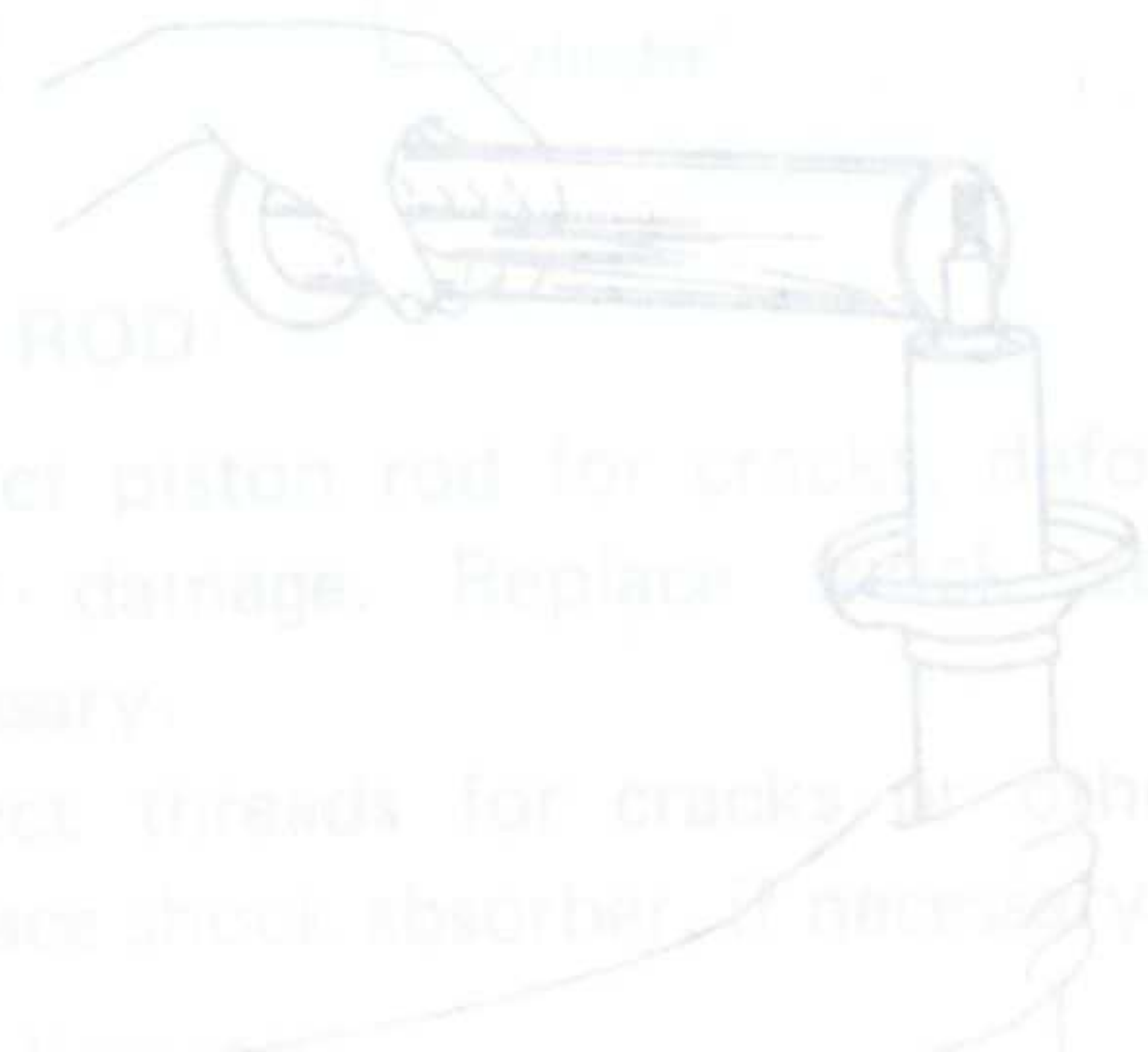


SFA149

Before assembly, keep away from dust to prevent entry of dust.

- Add correct amount of fluid.
- Use "NISSAN GENUINE STRUT FLUID" or equivalent.
- Oil capacity is very important since performance of strut varies with amount of fluid in strut.

Capacity: 270 ml (9.5 imp fl oz)



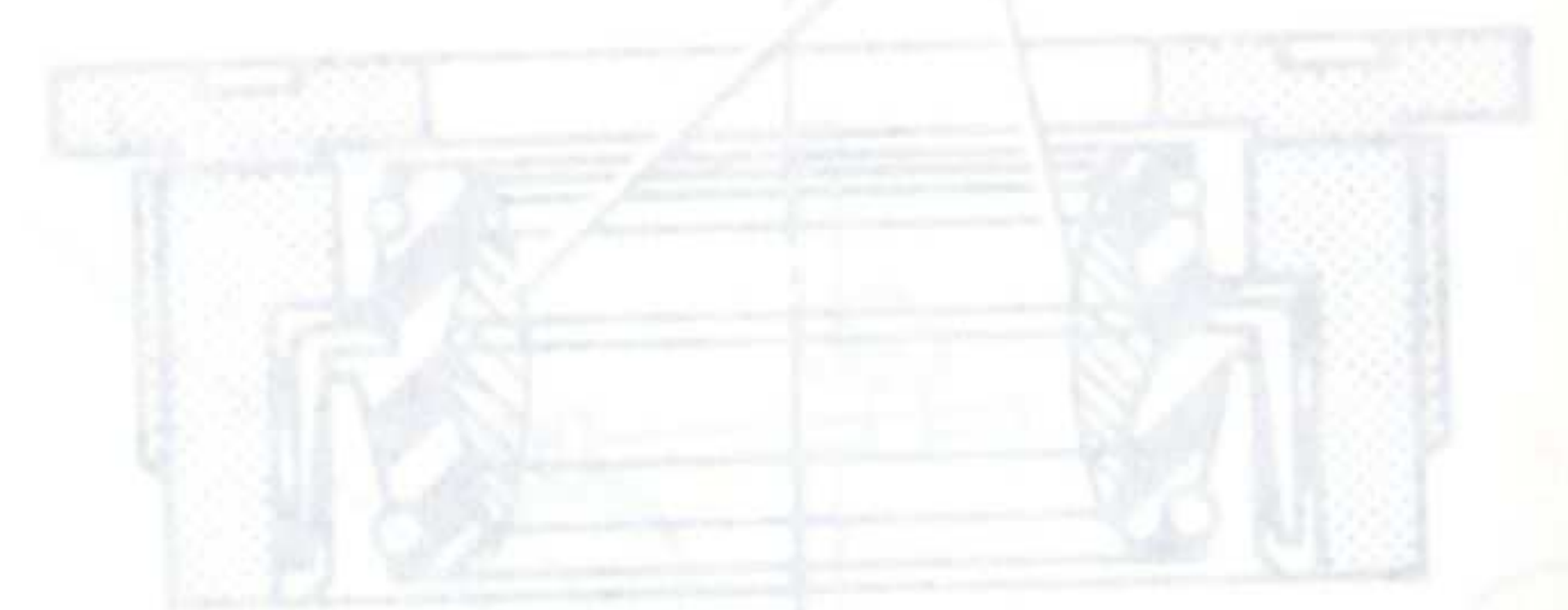
SFA137

PISTON ROD

- Inspect piston rod for cracks, deformation or other damage. Replace if necessary.
- Inspect threads for cracks or other damage. Replace if necessary.

- Lubricate sealing lip of gland packing.

Maximum amount:
Less than 0.1 mm (0.004 in)



SFA147

- Install gland packing.
- Be careful not to damage sealing lip.



SFA137

STRUT MOUNTING INSULATOR

- Replace if cracked, rubber part is cracked or deformed.

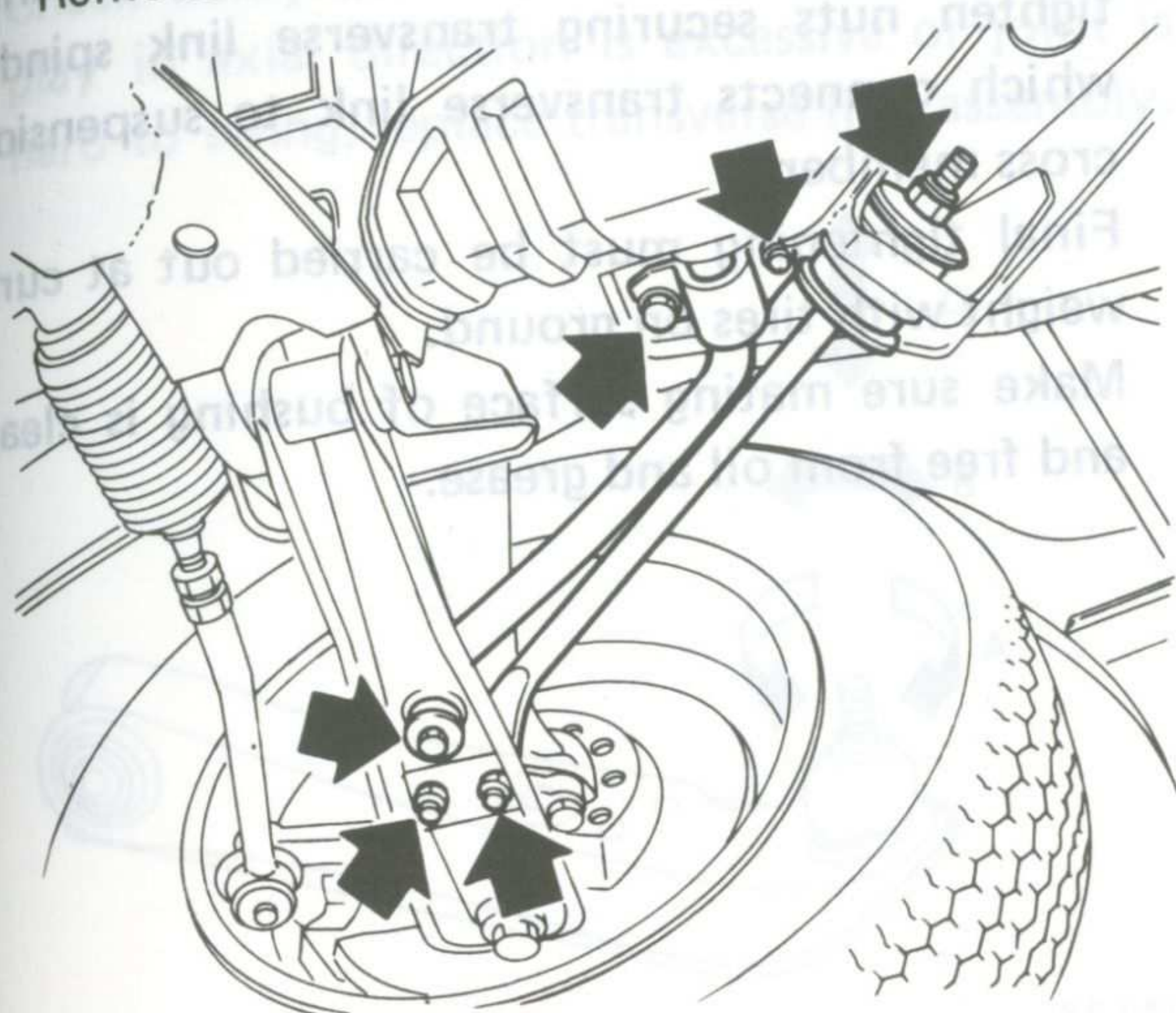
STRUT MOUNTING BEARING

- Replace if cracked, rubber part is cracked or deformed.

FRONT SUSPENSION — Tension Rod and Stabilizer Bar

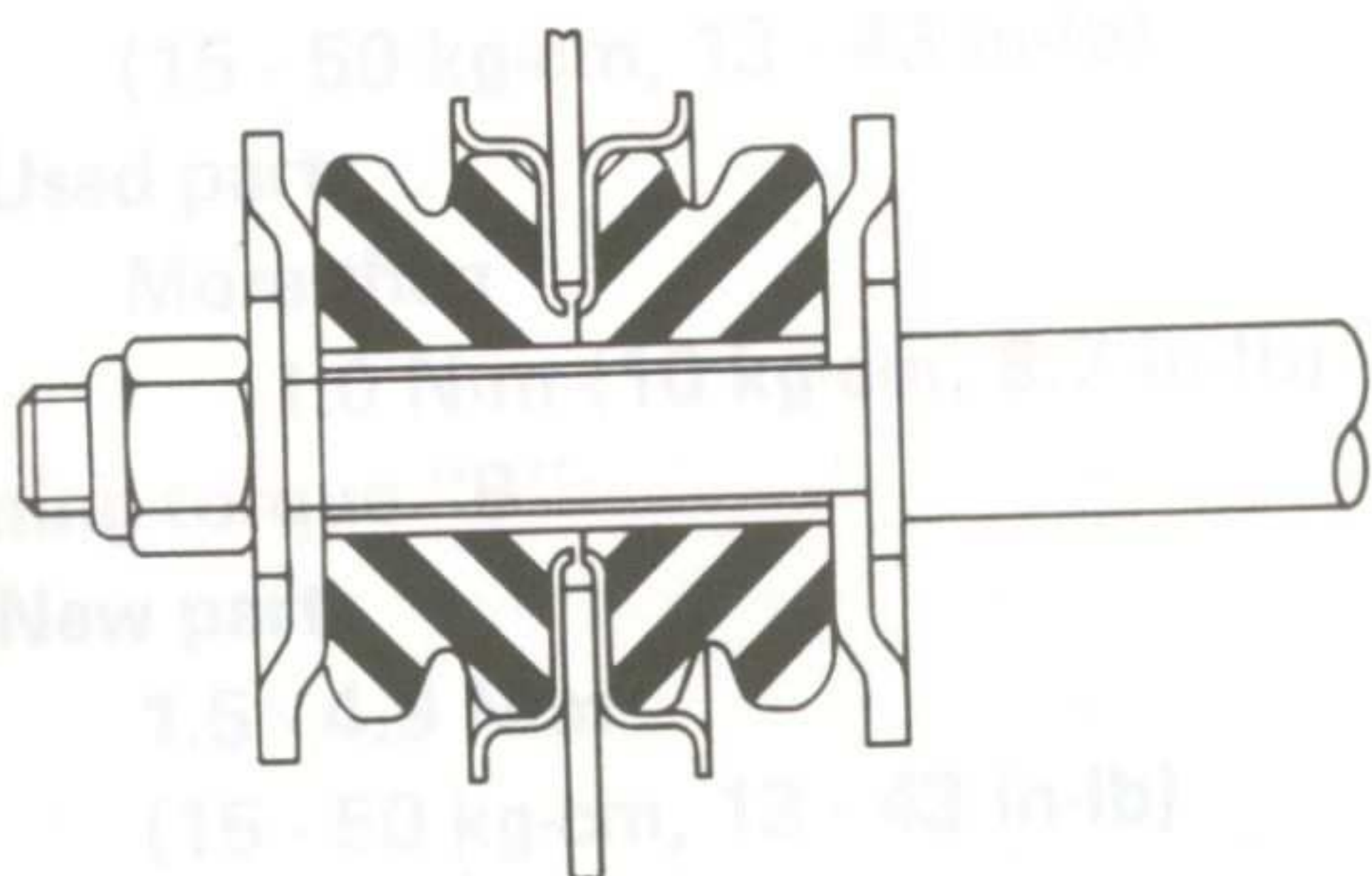
Removal and Installation

- Remove tension rod and stabilizer bar.



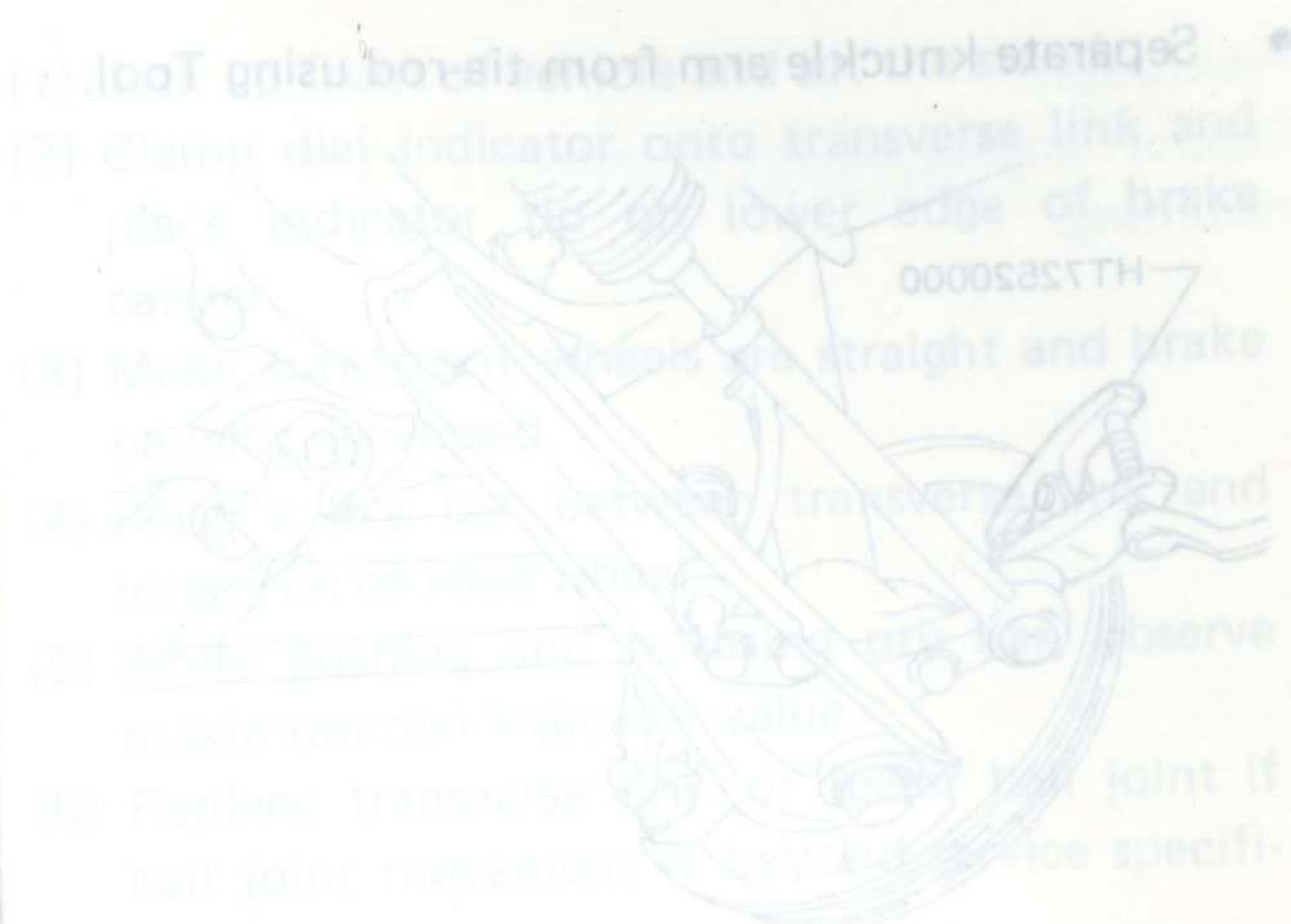
SFA287

- Install tension rod as shown below.

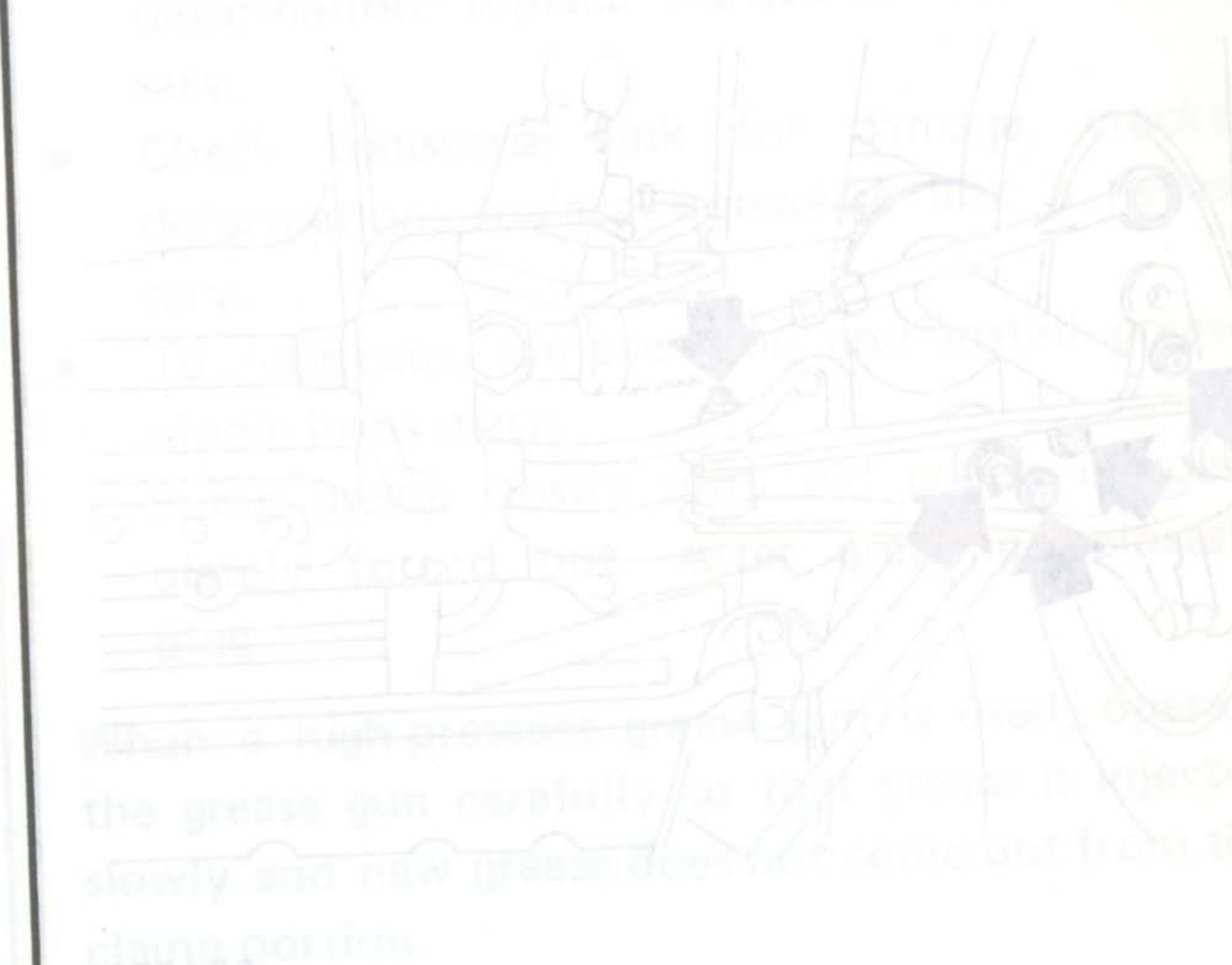


SFA289

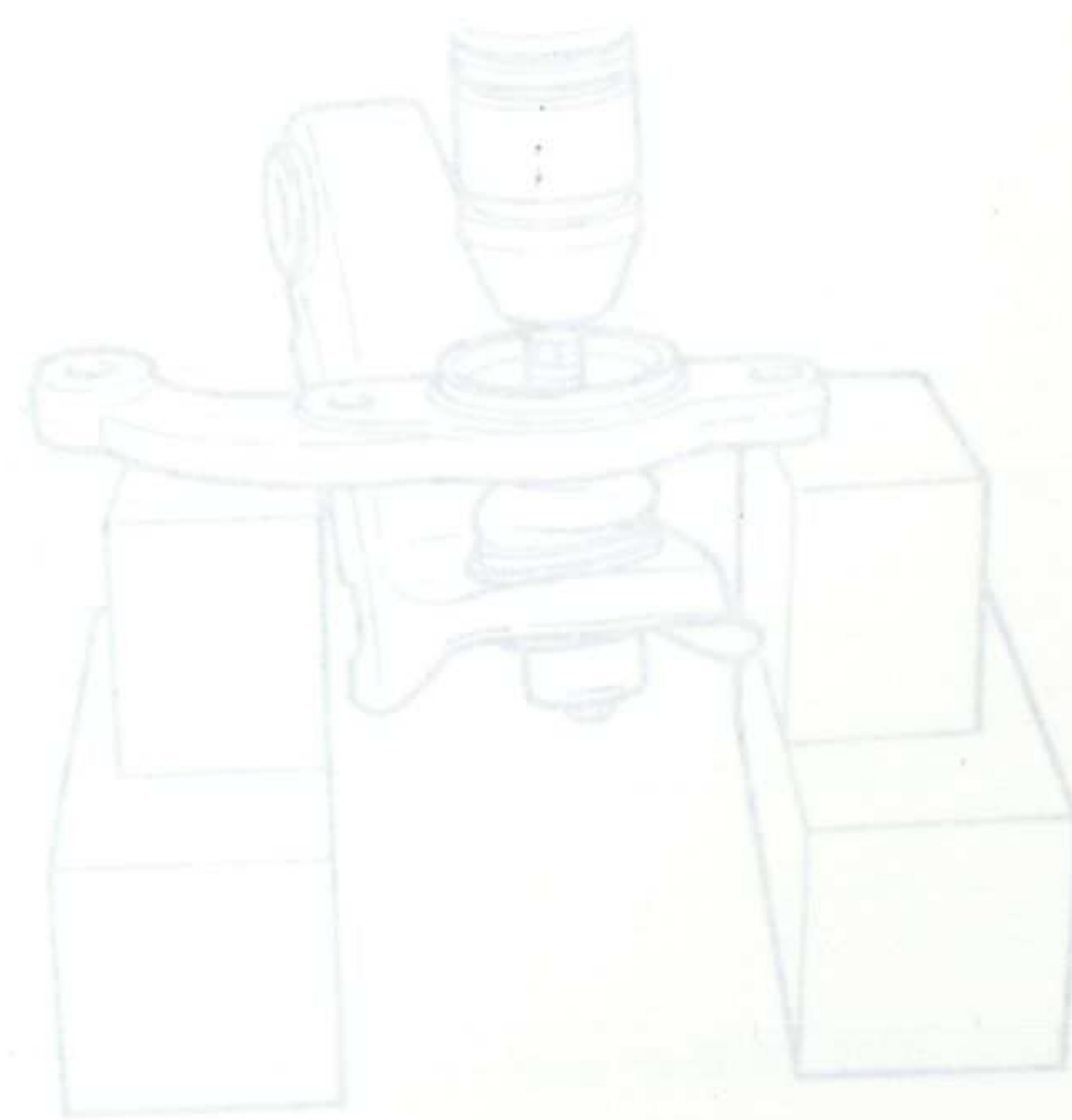
- Final tightening must be carried out at curb weight with tires on ground.



- Separate knuckle arm from tie rod using Tool (1).



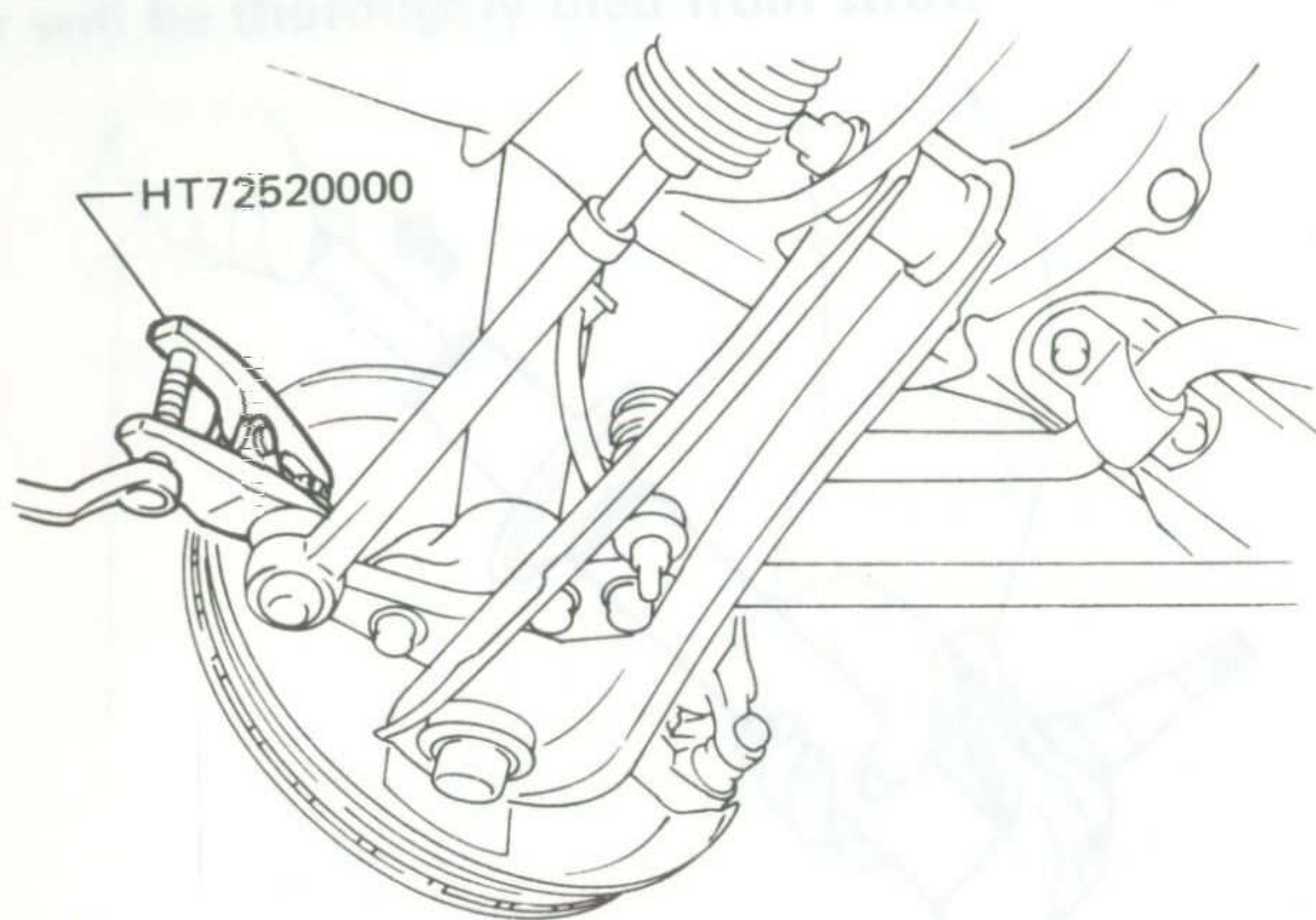
- Separate knuckle arm from tie rod using Tool (1).



FRONT SUSPENSION — Transverse Link

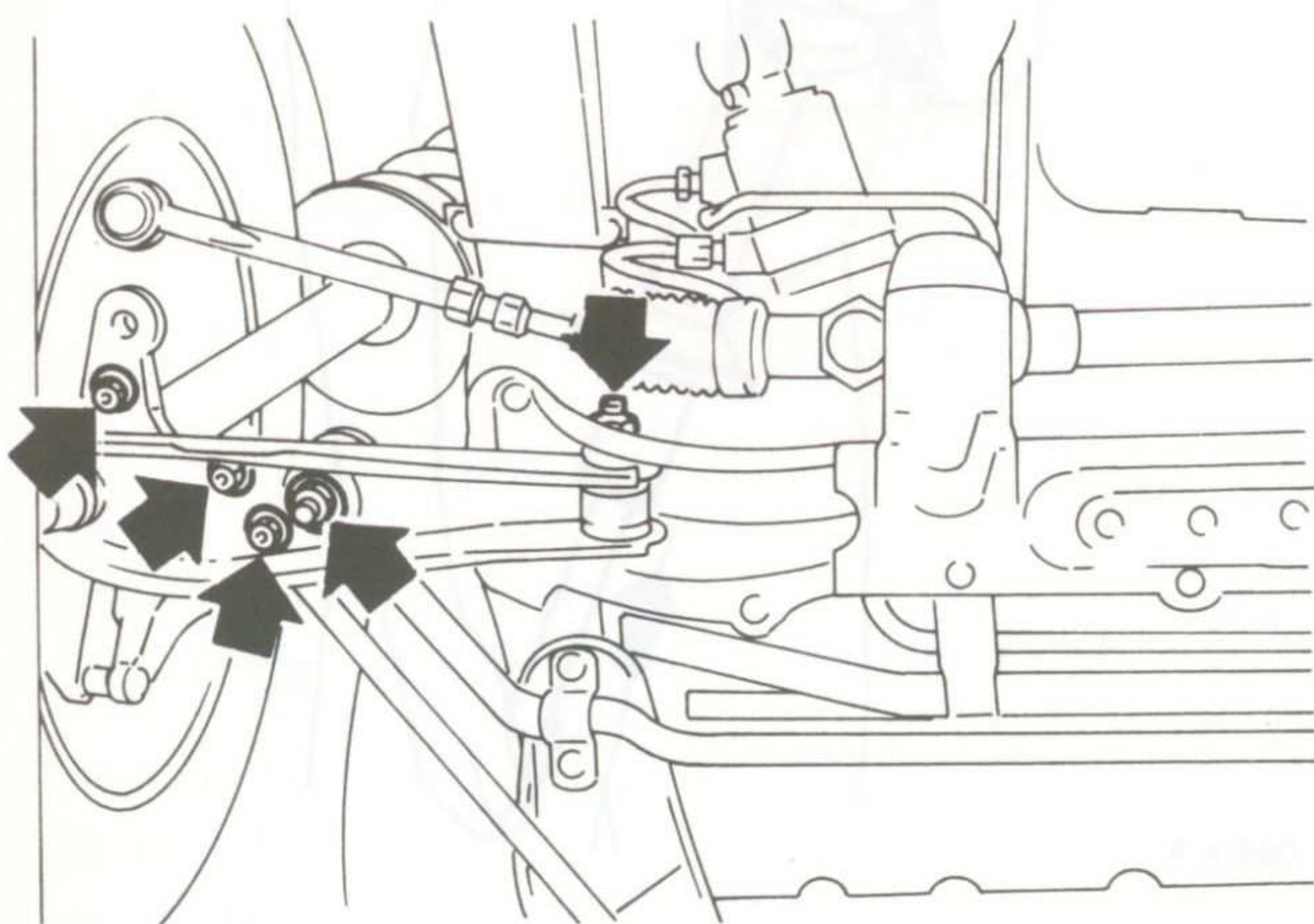
Removal and Installation

- Separate knuckle arm from tie-rod using Tool.



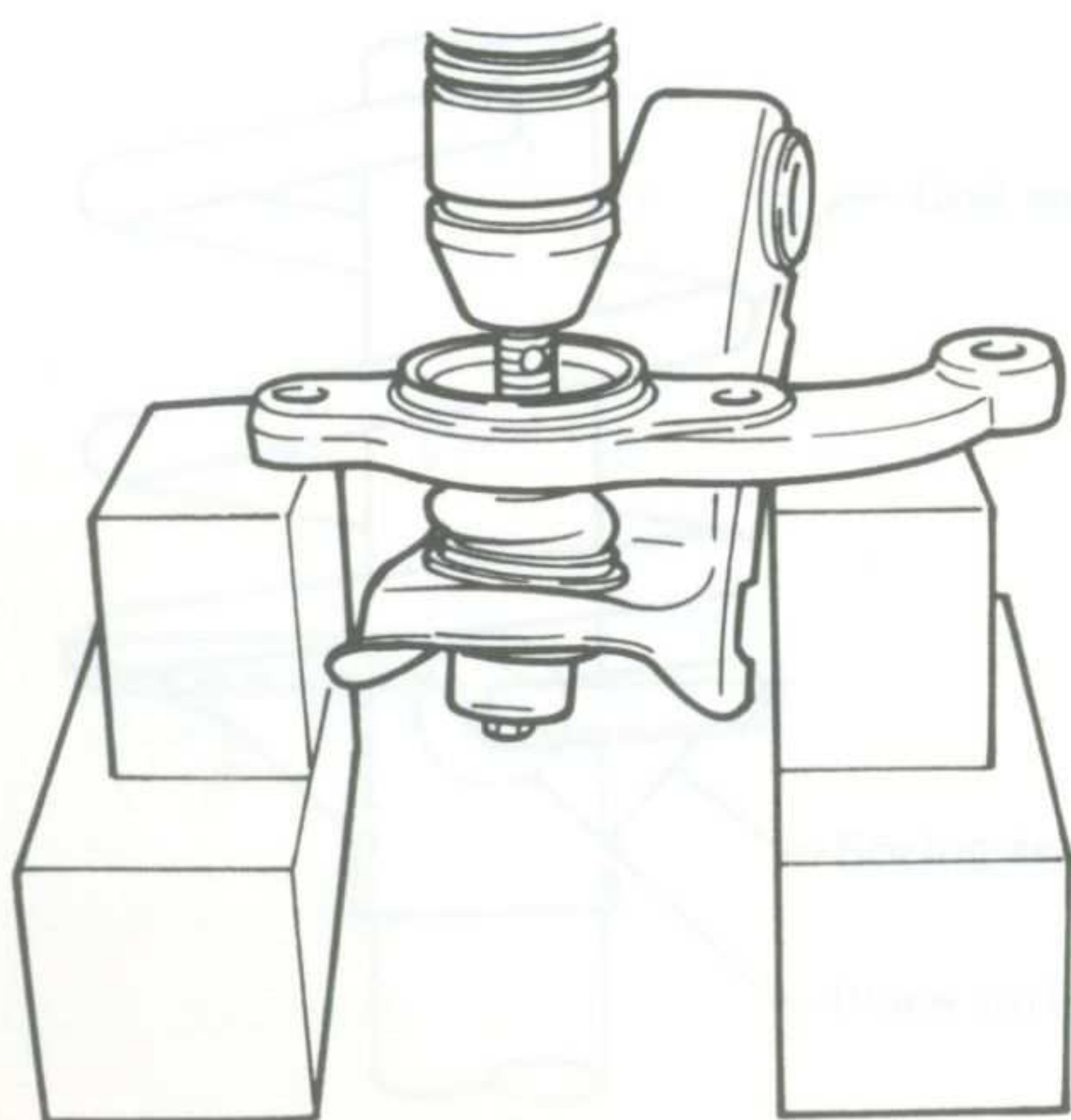
SFA575

- Separate knuckle arm from strut. Then remove stabilizer, tension rod and transverse link.



SFA576

- Separate ball joint from knuckle arm using press.

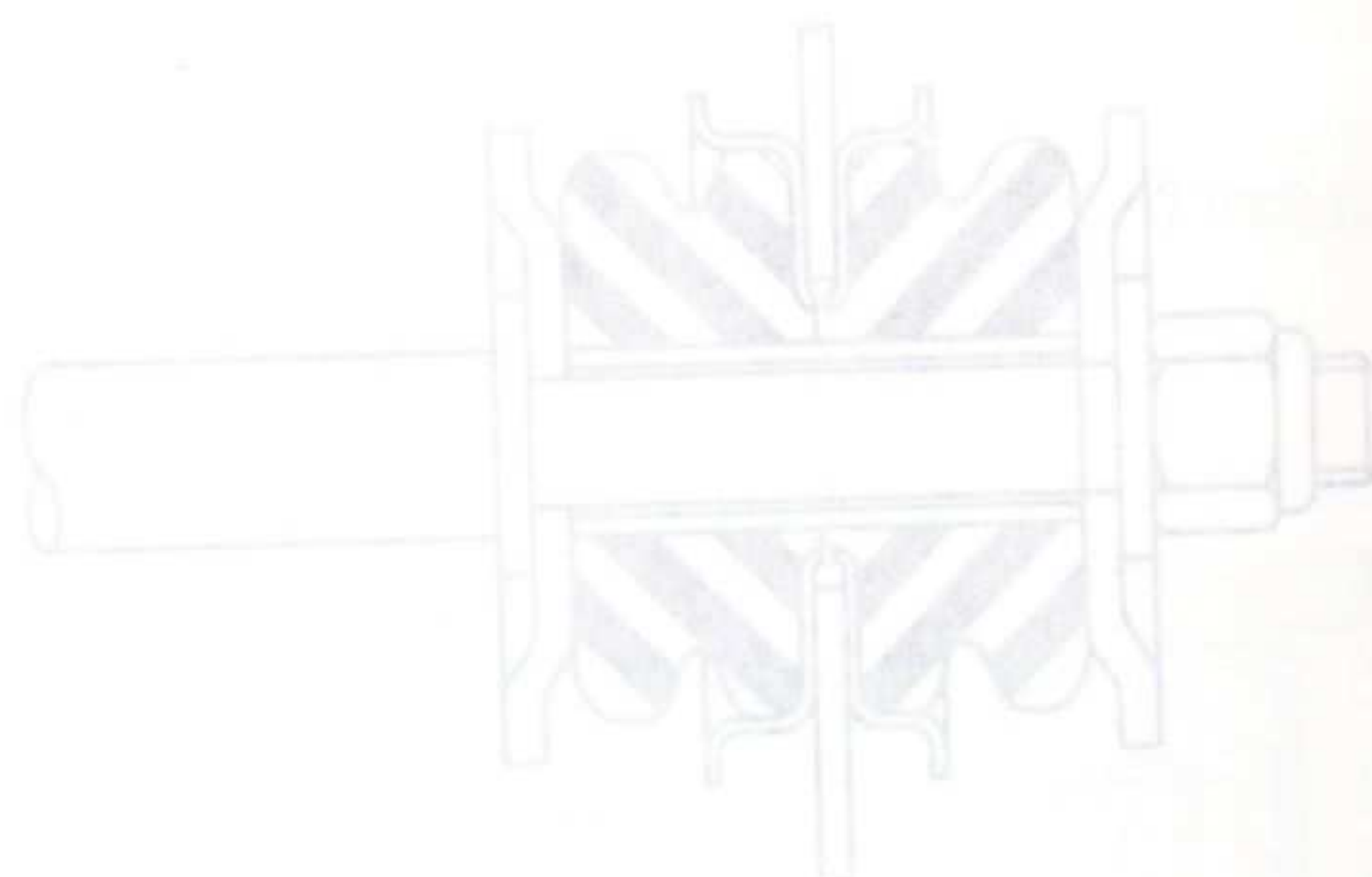


SFA577

- To install transverse link, first temporarily tighten nuts securing transverse link spindle which connects transverse link to suspension cross member.
- Final tightening must be carried out at curb weight with tires on ground.
- Make sure mating surface of bushing is clean and free from oil and grease.



SFA578



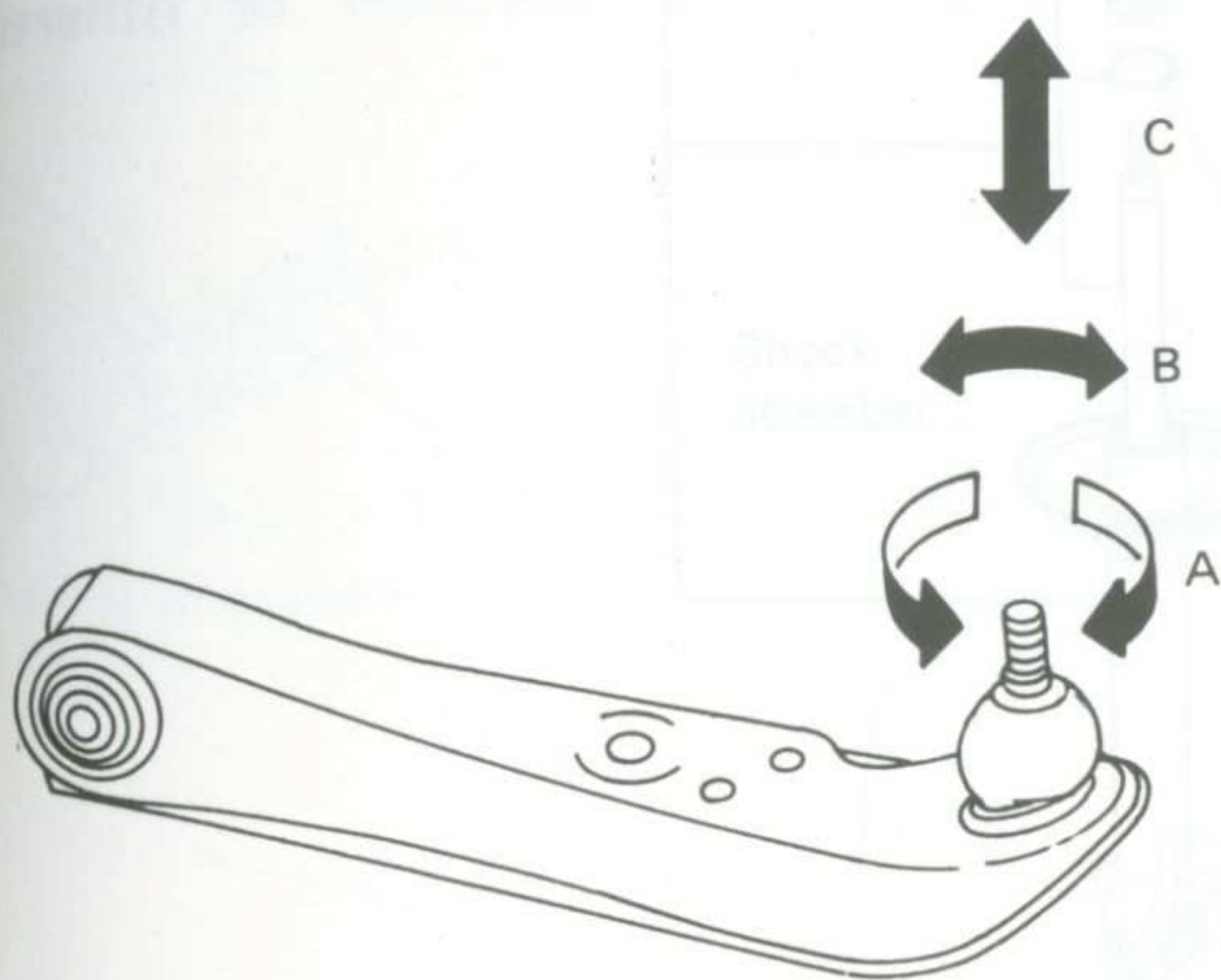
SFA579

- Final tightening must be carried out at curb weight with tires on ground.

FRONT SUSPENSION — Transverse Link

Inspection

- Check ball joint for play. If ball stud is worn, play in axial direction is excessive or joint is hard to swing, replace transverse link assembly.



SFA581

Turning torque "A":

New parts

1.5 - 4.9 N·m

(15 - 50 kg-cm, 13 - 43 in-lb)

Used parts

More than

1.0 N·m (10 kg-cm, 8.7 in-lb)

Turning torque "B":

New parts

1.5 - 4.9 N·m

(15 - 50 kg-cm, 13 - 43 in-lb)

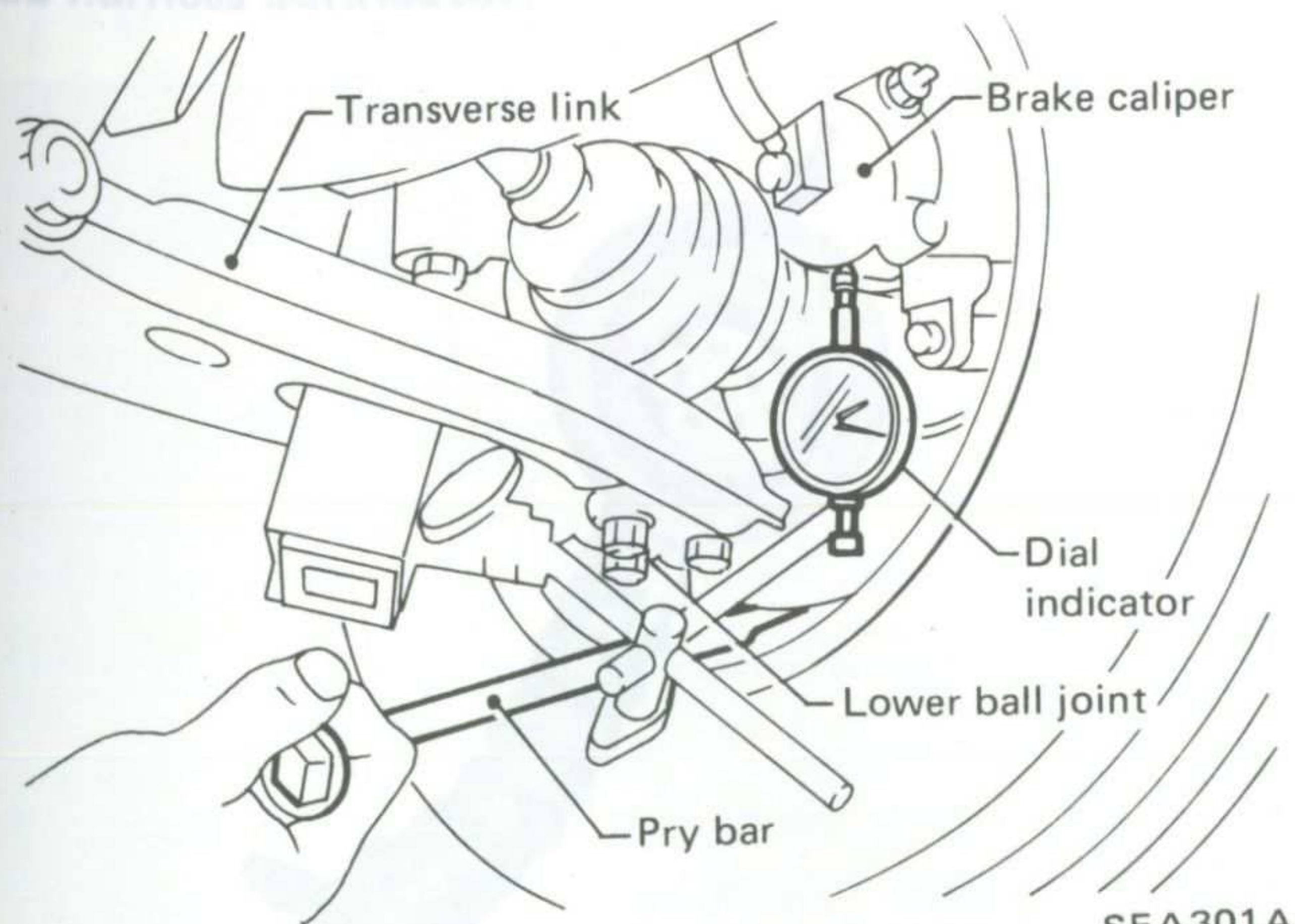
Used parts

More than

1.0 N·m (10 kg-cm, 8.7 in-lb)

Vertical end play "C":

2.5 mm (0.098 in) or less



SFA301A

- (1) Jack up front of vehicle and set the stands.
 - (2) Clamp dial indicator onto transverse link and place indicator tip on lower edge of brake caliper.
 - (3) Make sure front wheels are straight and brake pedal is depressed.
 - (4) Place a pry bar between transverse link and inner rim of road wheel.
 - (5) While pushing and releasing pry bar, observe maximum dial indicator value.
 - (6) Replace transverse link or lower ball joint if ball joint movement is beyond service specifications.
- Check condition of dust cover. Replace if necessary.
 - Check rubber bushing for damage, cracks and deformation; replace transverse link if necessary.
 - Check transverse link for damage, cracks, deformation; replace transverse link if necessary.
 - To lubricate, remove plug and install grease nipple in its place.
Pump grease slowly until old grease is completely forced out. After greasing, reinstall plug.

When a high-pressure grease gun is used, operate the grease gun carefully so that grease is injected slowly and new grease does not come out from the clamp portion.

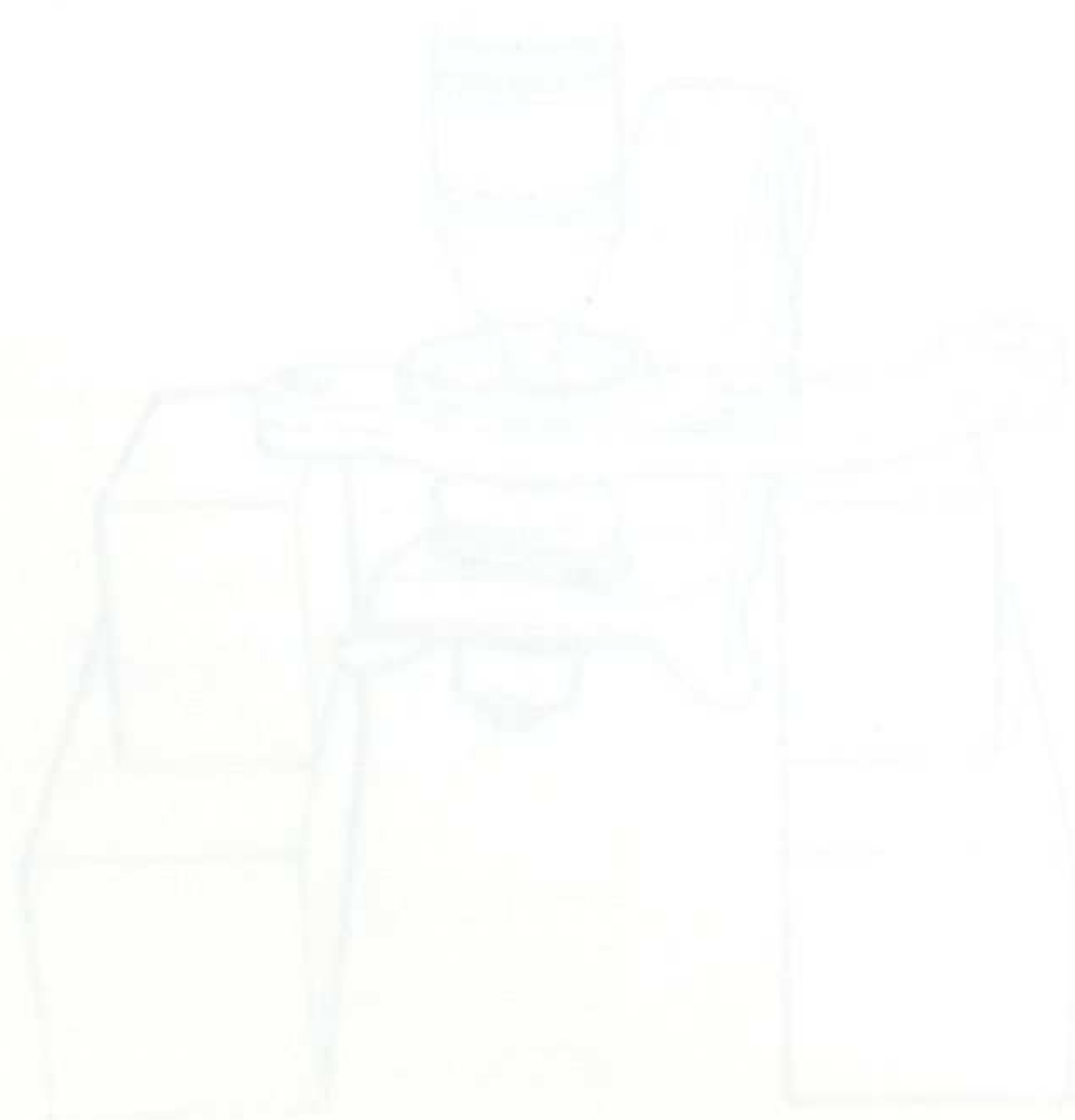
FRONT SUSPENSION — Suspension Crossmember

Removal and Installation

Precaution

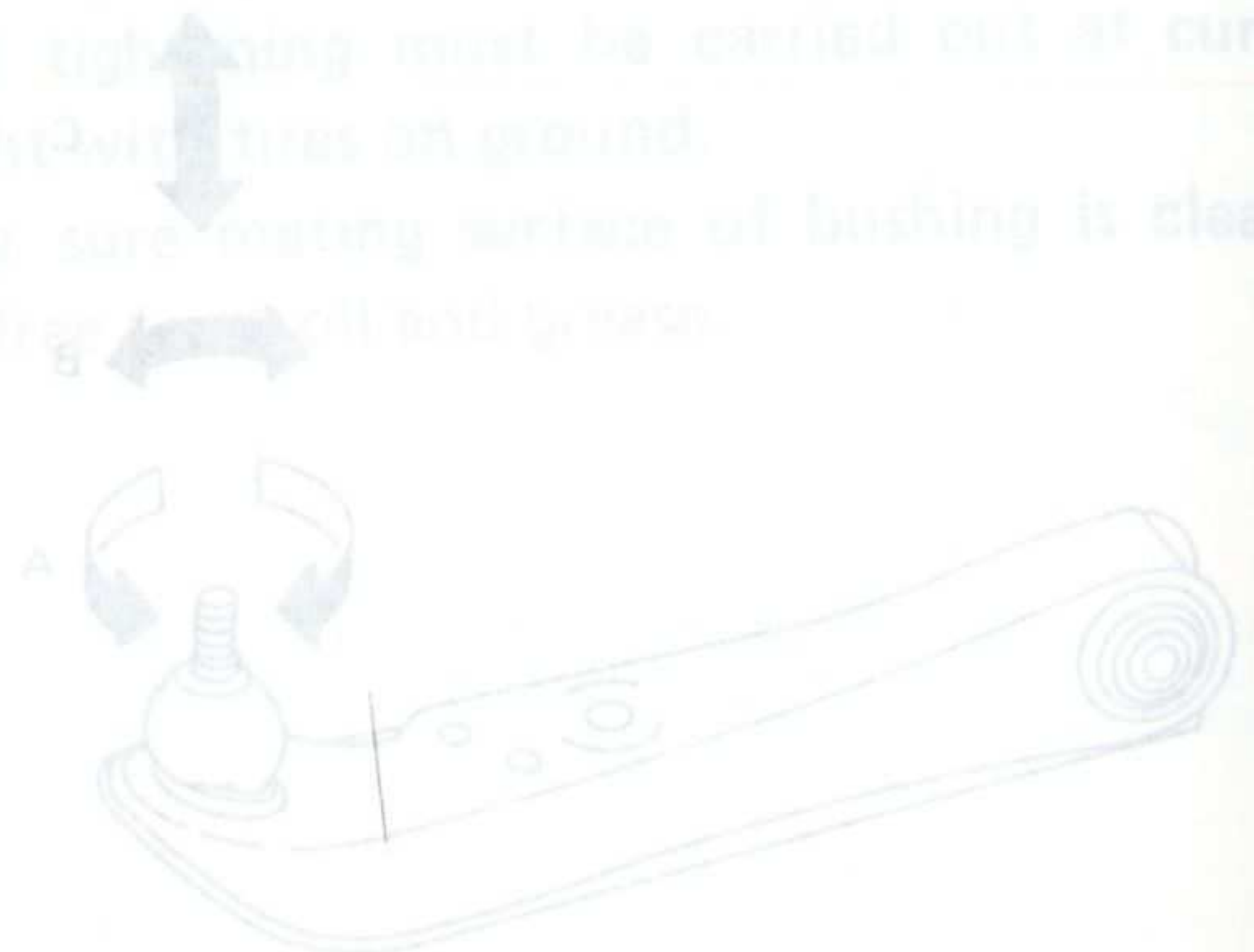
Support engine weight to remove load from engine mounting.

- (1) Jack up front of vehicle and set the steering wheel straight.
 - (2) Place a pry bar between transverse link and inner rim of road wheel.
 - (3) Make sure front wheels are straight and brake pedal is depressed.
 - (4) Place a pry bar between transverse link and inner rim of road wheel.
 - (5) While pushing and releasing pry bar, observe maximum dial indicator value.
 - (6) Replace transverse link or lower ball joint if ball joint movement is beyond service specifications.
 - Check condition of dust cover. Replace if necessary.
 - Check rubber bushing for damage, cracks and deformation; replace transverse link if necessary.
 - Check transverse link for damage, cracks, deformation; replace transverse link if necessary.
 - To lubricate, remove plug and install grease nipple in its place.
 - Pump grease slowly until old grease is completely forced out. After greasing, reinstall plug.
- When a high-pressure grease gun is used, operate the grease gun carefully so that grease is injected slowly and new grease does not come out from the clamp portion.

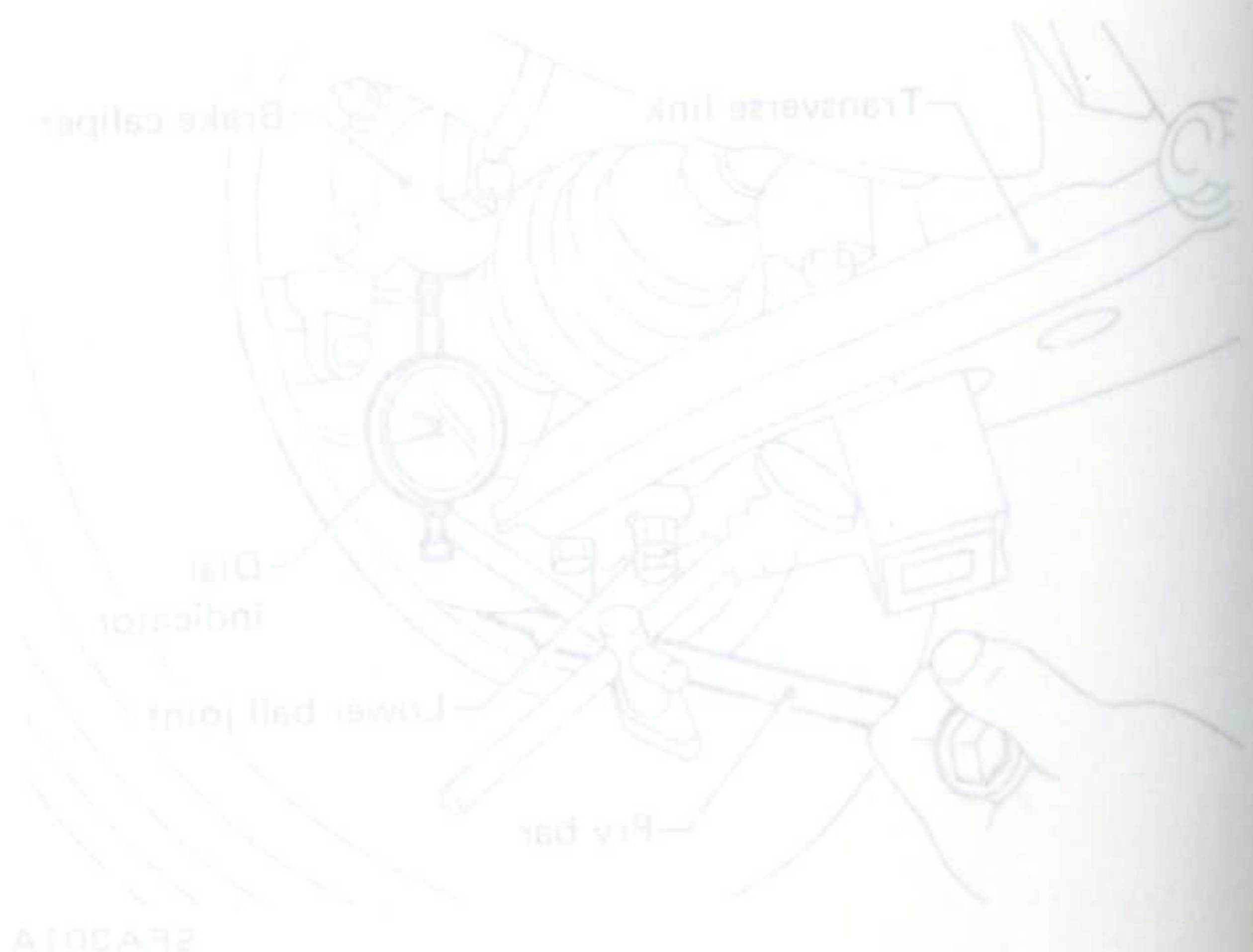


Inspection

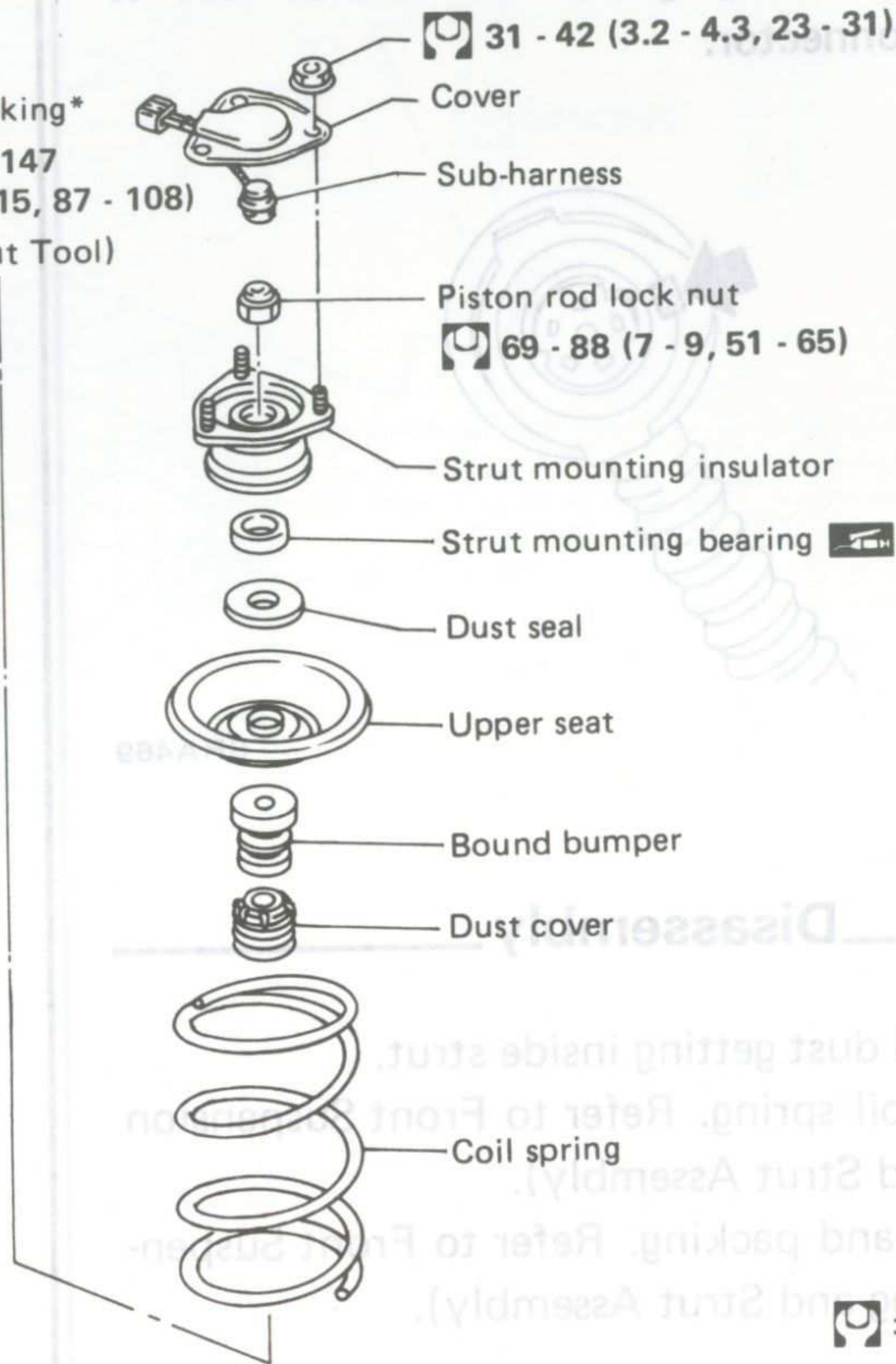
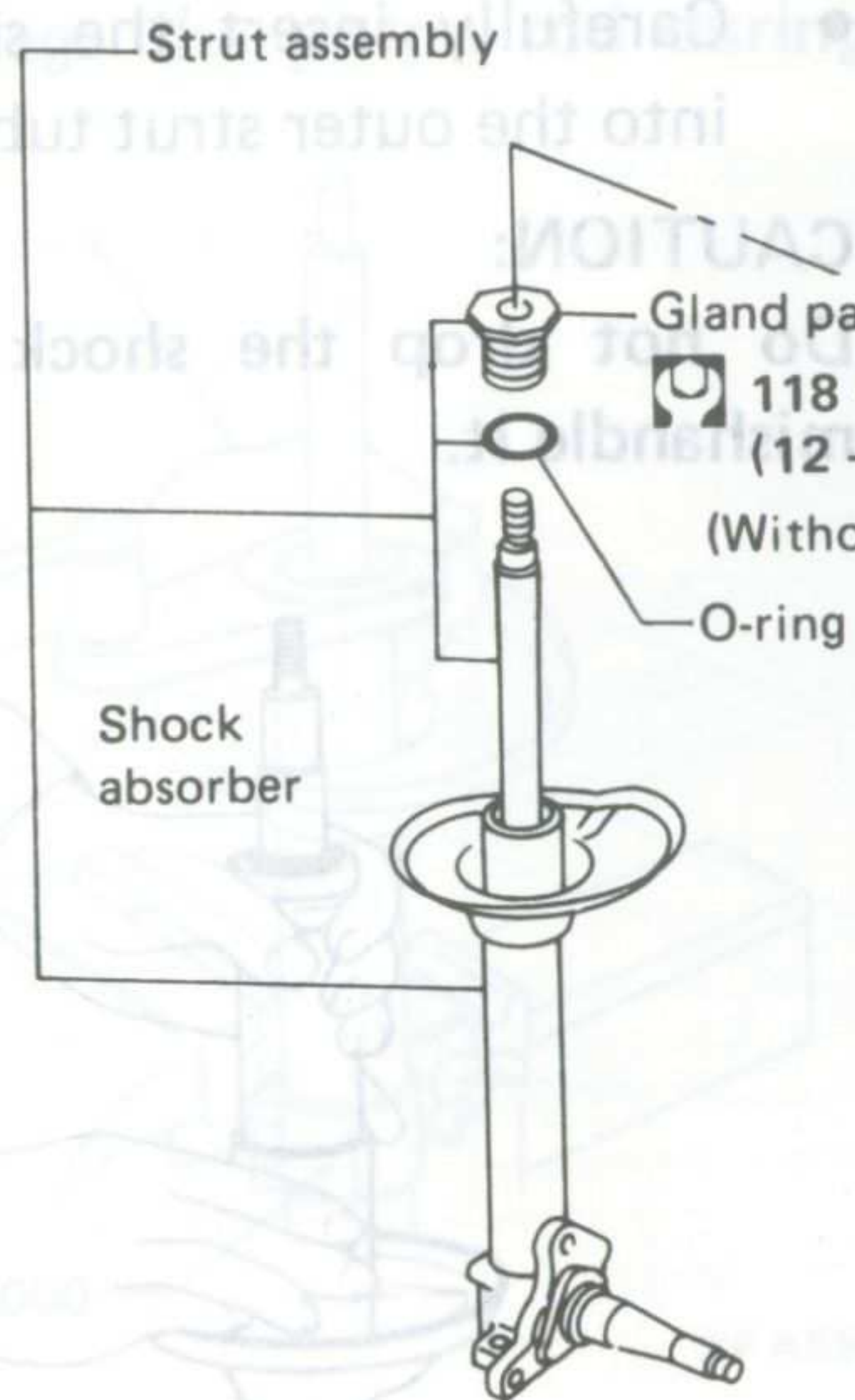
Check suspension crossmember for deformation or cracking:
Replace if necessary.



- Turning torque "A":
New parts
1.5 - 4.9 N·m
(15 - 50 kg-cm, 13 - 43 in-lb)
Used parts
More than
1.0 N·m (10 kg-cm, 8.7 in-lb)
- Turning torque "B":
New parts
1.5 - 4.9 N·m
(15 - 50 kg-cm, 13 - 43 in-lb)
Used parts
More than
1.0 N·m (10 kg-cm, 8.7 in-lb)
- Vertical end play "C":
2.5 mm (0.098 in) or less



ADJUSTABLE SHOCK ABSORBER



: N·m (kg·m, ft·lb)

SFA589

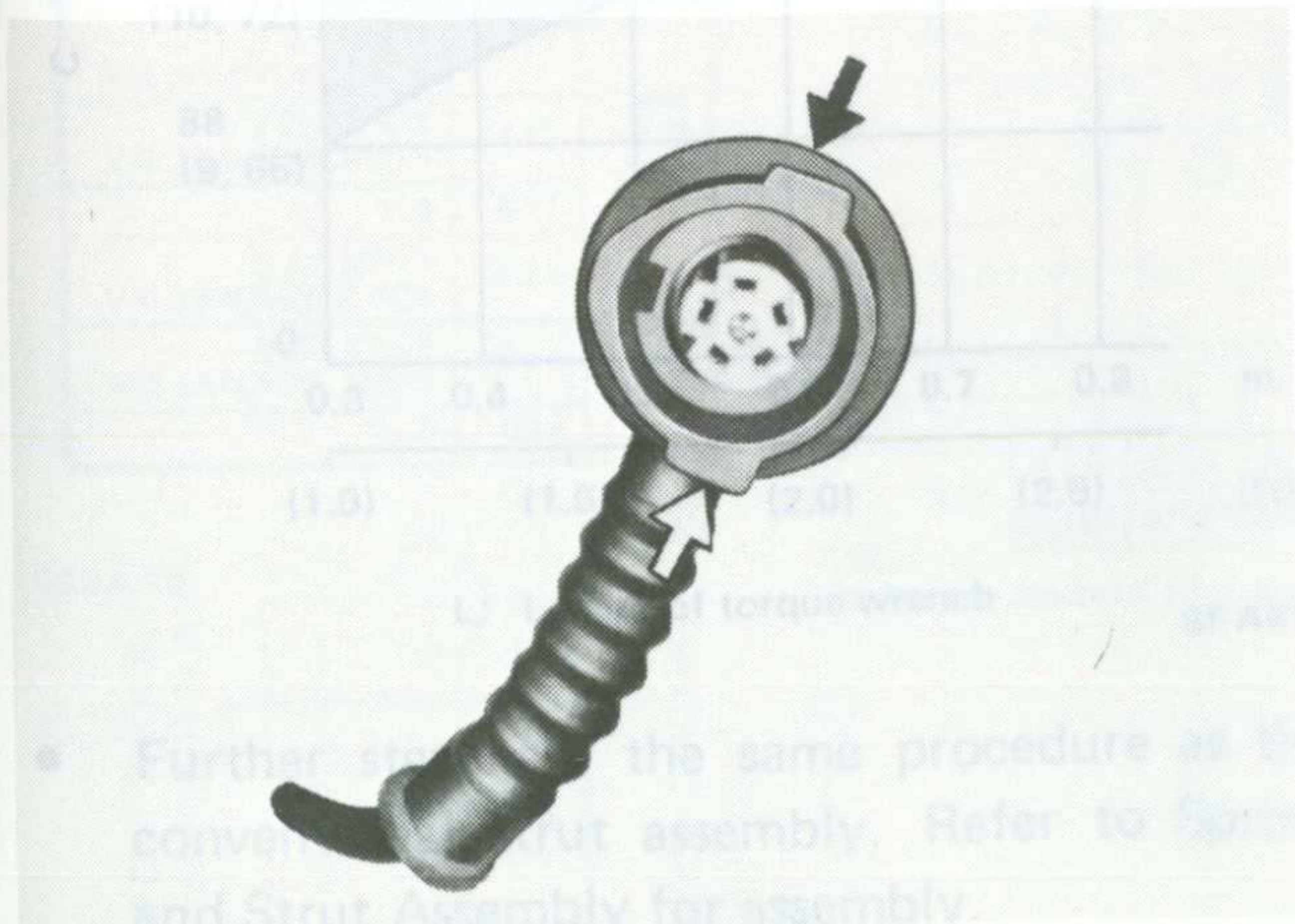
* Always replace once disassembled.

Removal and Installation

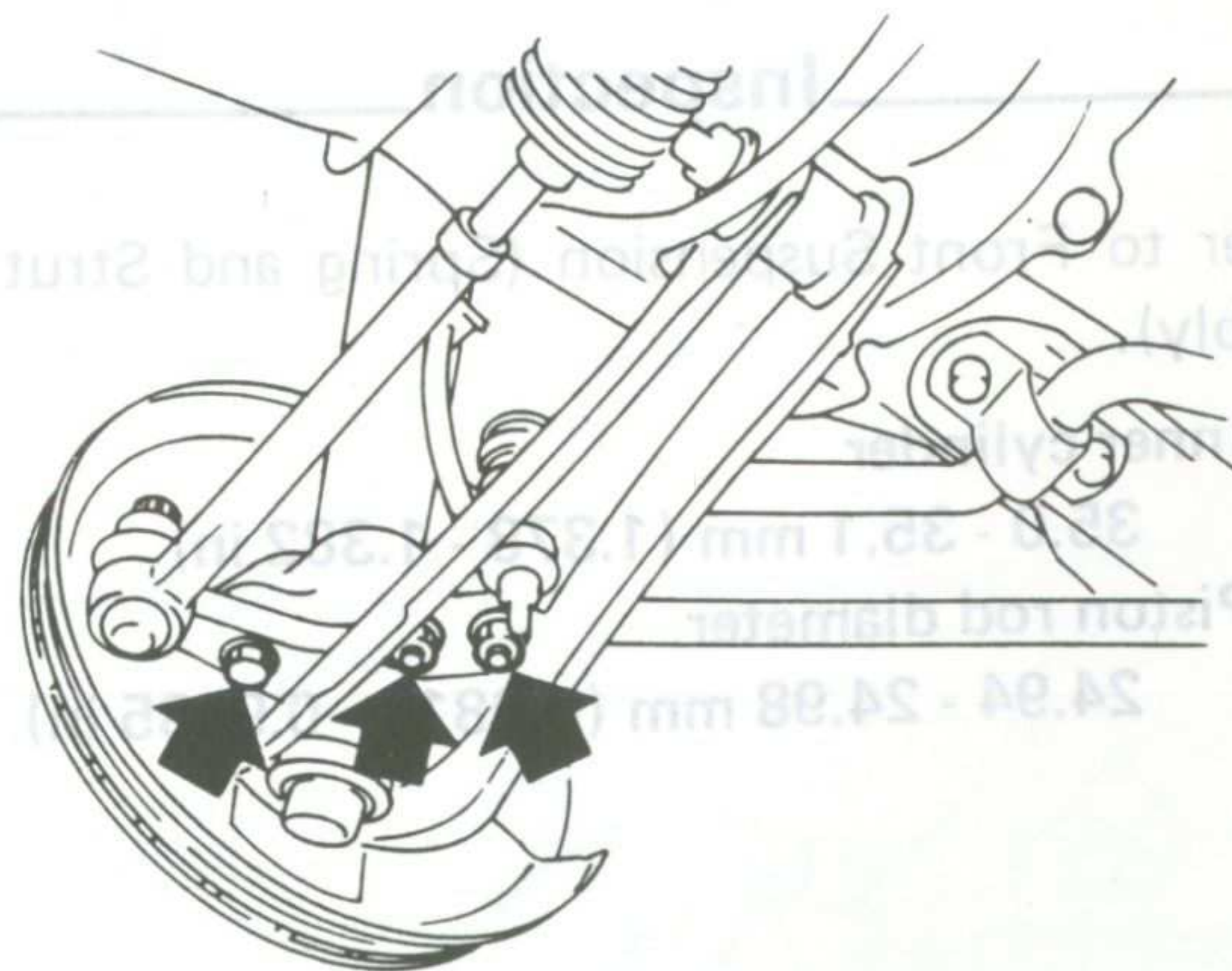
CAUTION:

Keep water and dust away from connector.

Disconnect connector gripping on both sides of sub-harness connector.



- Remove tension rod nuts and knuckle arm fixing bolts.



SFA570

Make sure brake hose is secure and not twisted.

ADJUSTABLE SHOCK ABSORBER

Removal and Installation(Cont'd)

- Connect sub-harness to connector within piston rod using guide. Be careful not to damage connector.



SRA469

Disassembly

Avoid dirt and dust getting inside strut.

- Remove coil spring. Refer to Front Suspension (Spring and Strut Assembly).
- Remove gland packing. Refer to Front Suspension (Spring and Strut Assembly).

Inspection

Refer to Front Suspension (Spring and Strut Assembly).

Inner cylinder

35.0 - 35.1 mm (1.378 - 1.382 in)

Piston rod diameter

24.94 - 24.98 mm (0.9819 - 0.9835 in)

Assembly

- Carefully insert the shock absorber cartridge into the outer strut tube.

CAUTION:

Do not drop the shock absorber or otherwise mishandle it.



SFA165

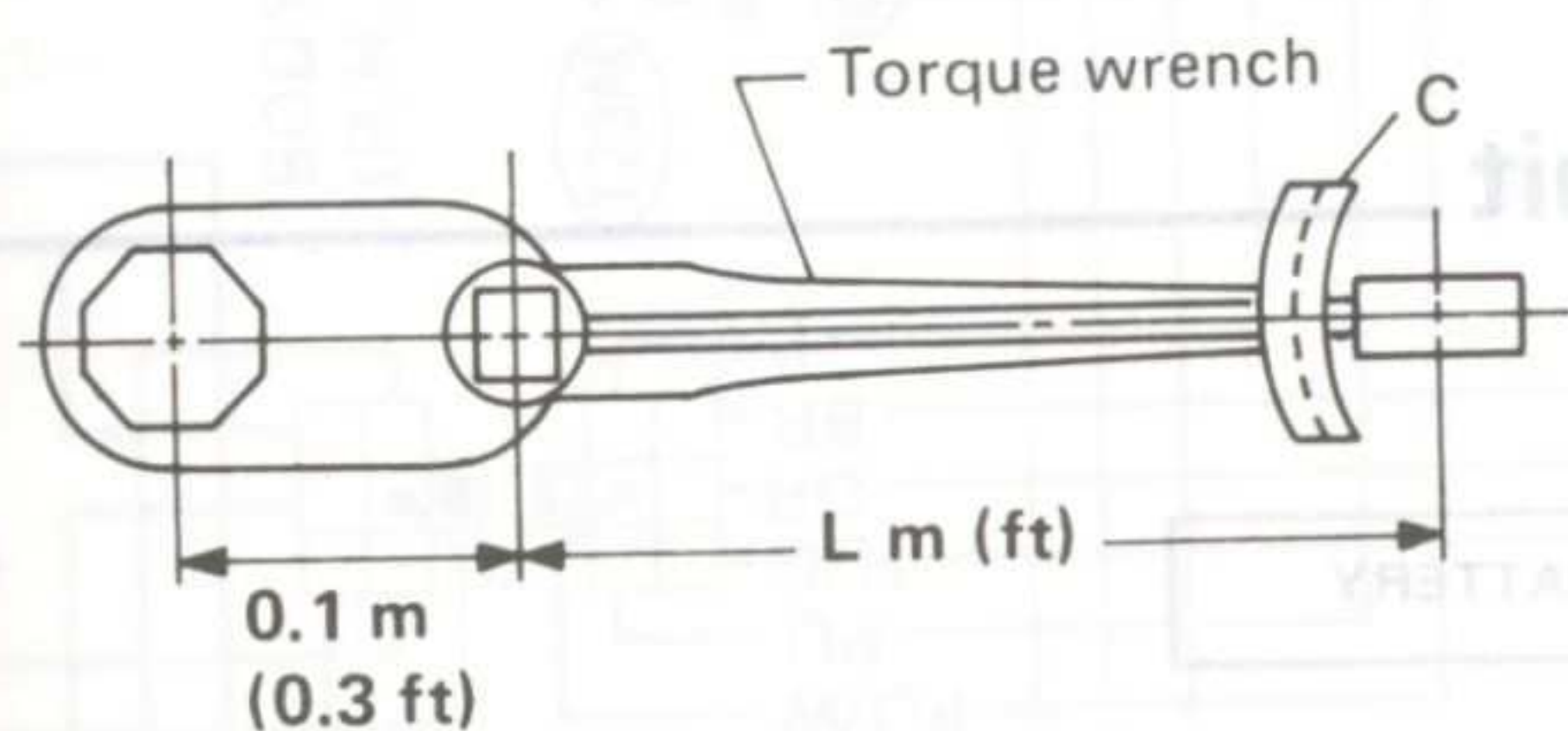
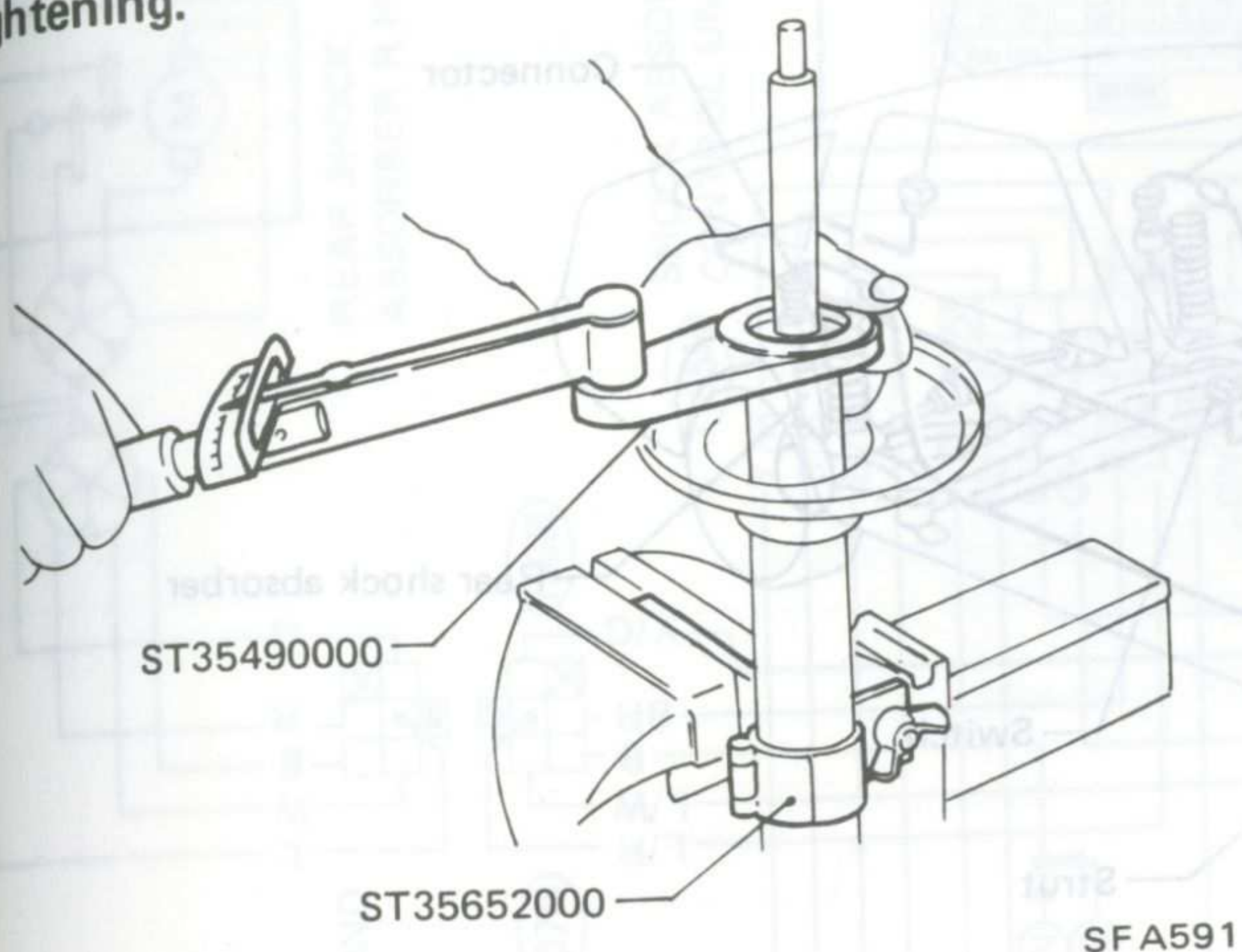
- After the shock absorber has been inserted into the outer tube, gently shake the strut assembly right and left so that the shock absorber is centered.
- Install gland packing and tighten the gland packing with the Gland Packing Wrench and a torque wrench.

Refer to Spring and Strut Assembly for assembly.

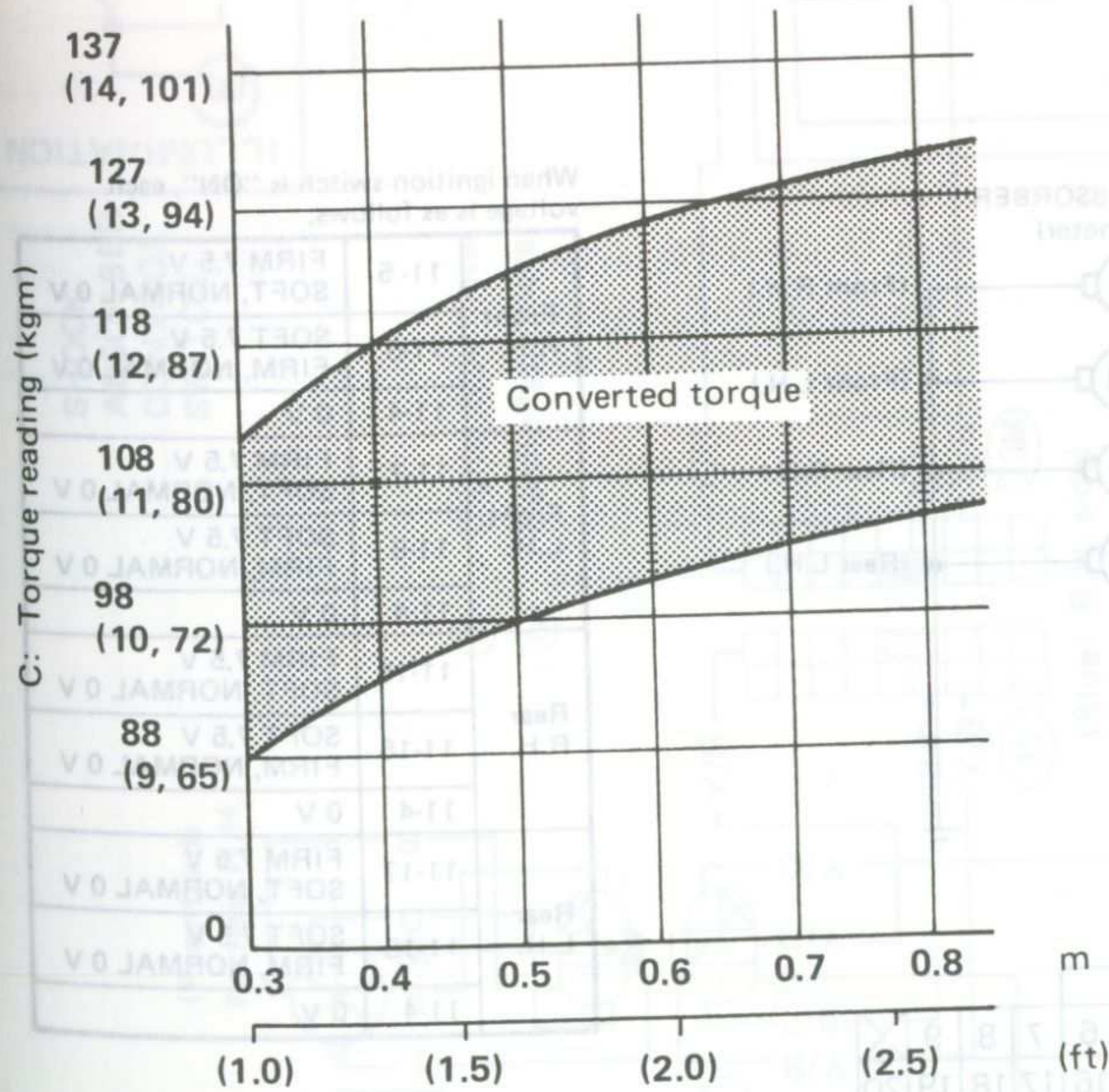
ADJUSTABLE SHOCK ABSORBER

Assembly (Cont'd)

Be careful not to damage the piston rod during tightening.



N·m (kg·m, ft·lb)



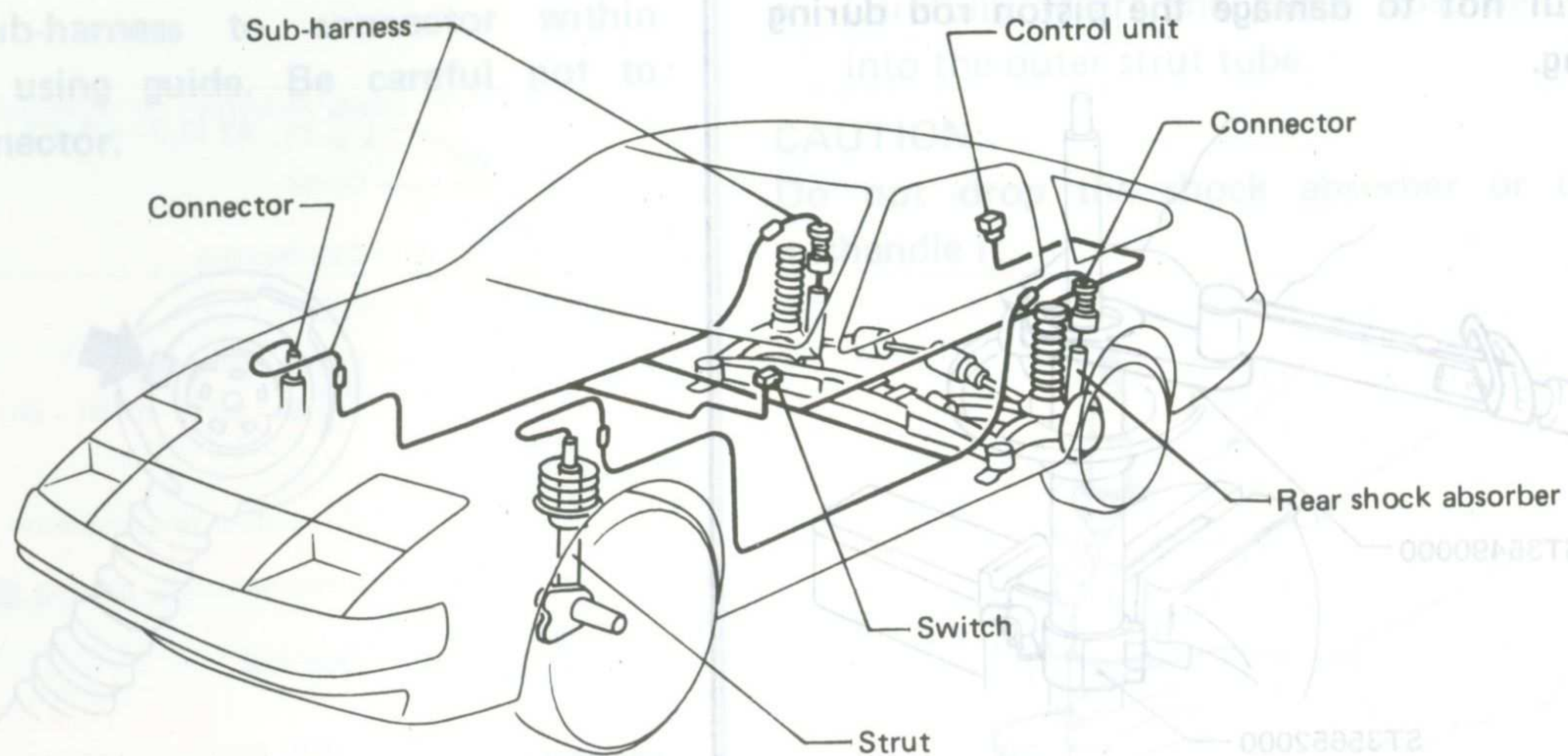
L: Length of torque wrench

SFA671

- Further steps are the same procedure as the conventional strut assembly. Refer to Spring and Strut Assembly for assembly.

ADJUSTABLE SHOCK ABSORBER

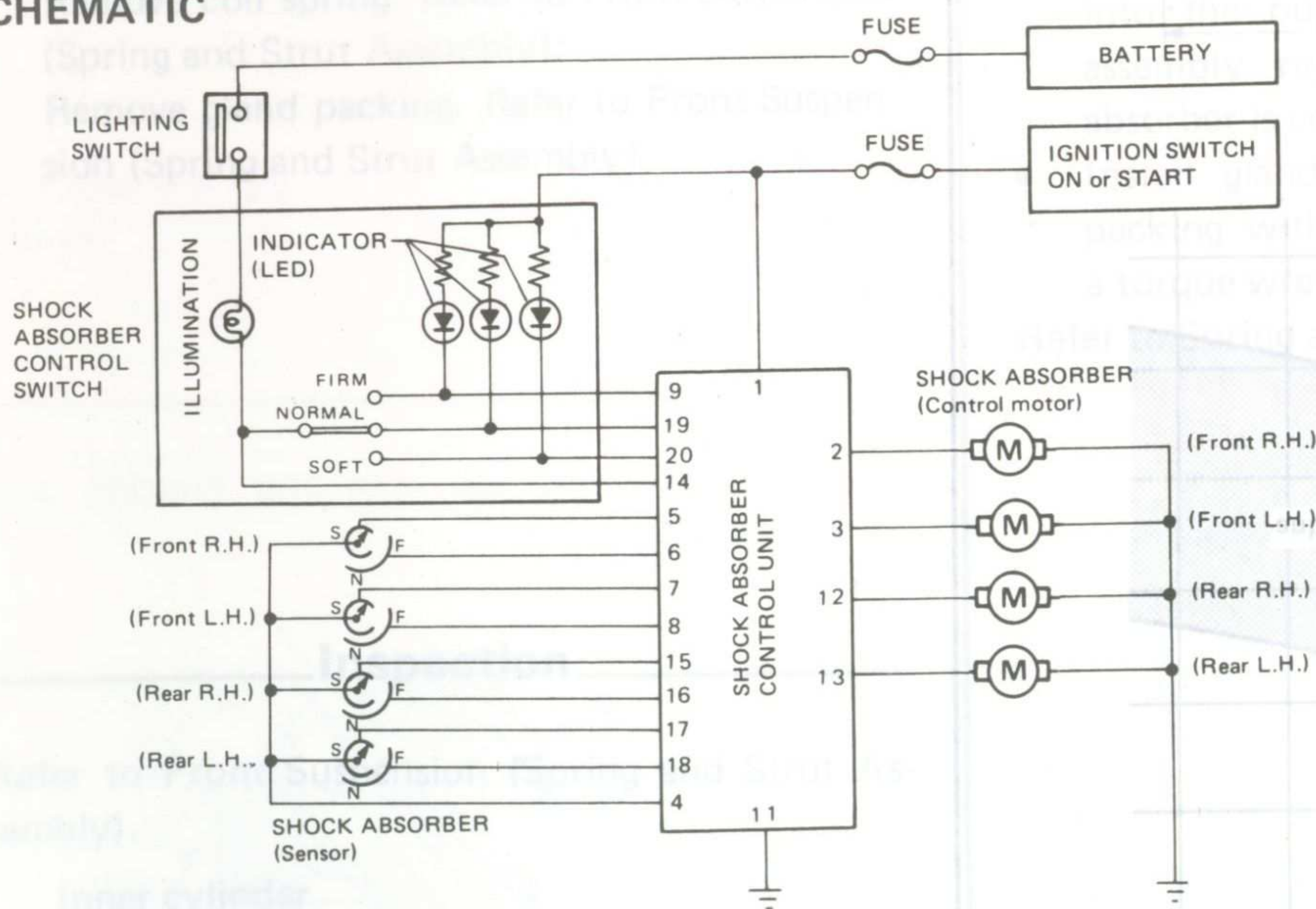
Harness Description



SFA590

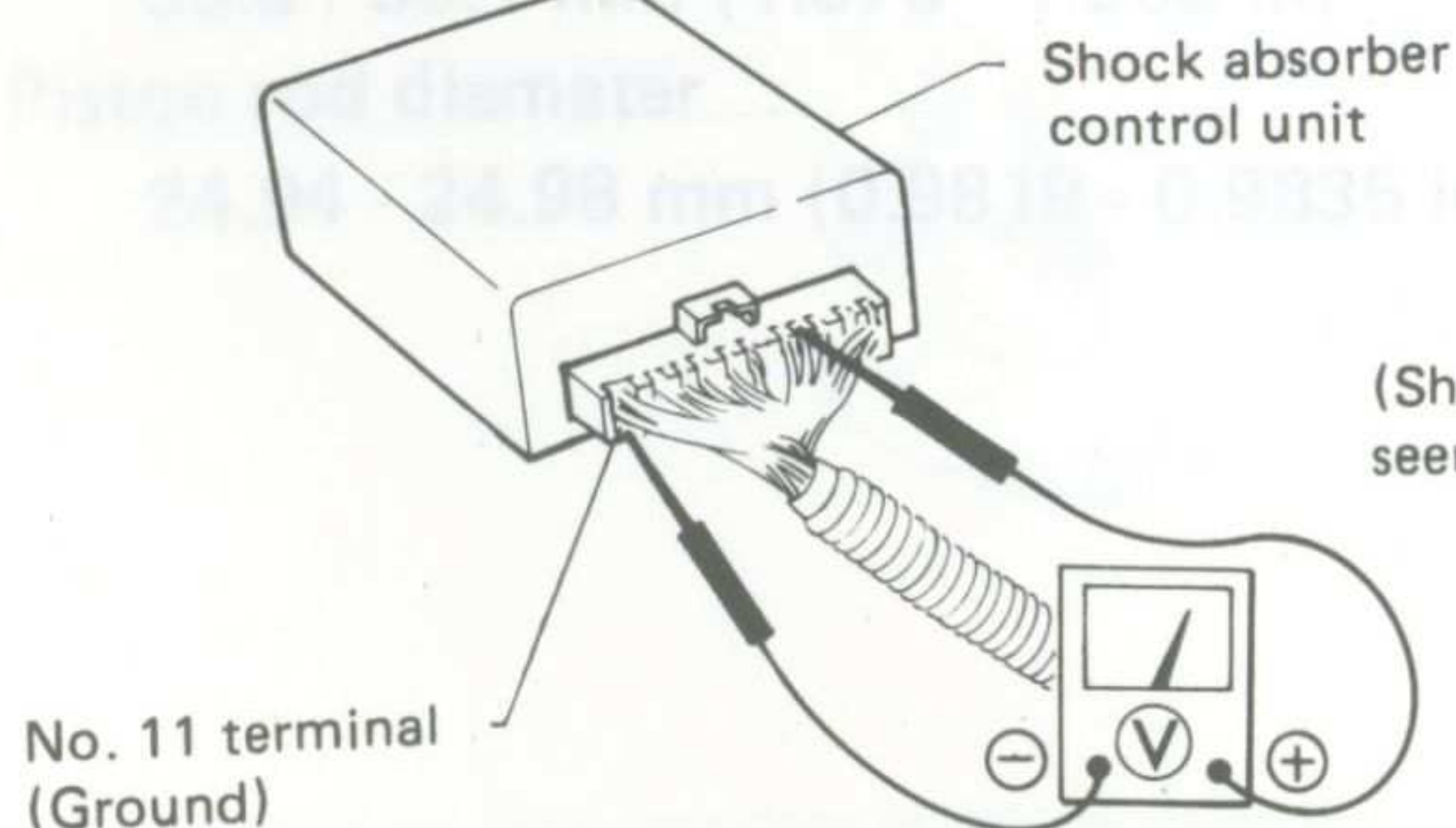
Electrical Circuit

SCHEMATIC



When ignition switch is "ON", each voltage is as follows.

Front R.H.	11-5	FIRM 7.5 V SOFT, NORMAL 0 V
	11-6	SOFT 7.5 V FIRM, NORMAL 0 V
	11-4	0 V
Front L.H.	11-7	FIRM 7.5 V SOFT, NORMAL 0 V
	11-8	SOFT 7.5 V FIRM, NORMAL 0 V
	11-4	0 V
Rear R.H.	11-15	FIRM 7.5 V SOFT, NORMAL 0 V
	11-16	SOFT 7.5 V FIRM, NORMAL 0 V
	11-4	0 V
Rear L.H.	11-17	FIRM 7.5 V SOFT, NORMAL 0 V
	11-18	SOFT 7.5 V FIRM, NORMAL 0 V
	11-4	0 V



(Shock absorber control unit harness connector as seen from front)

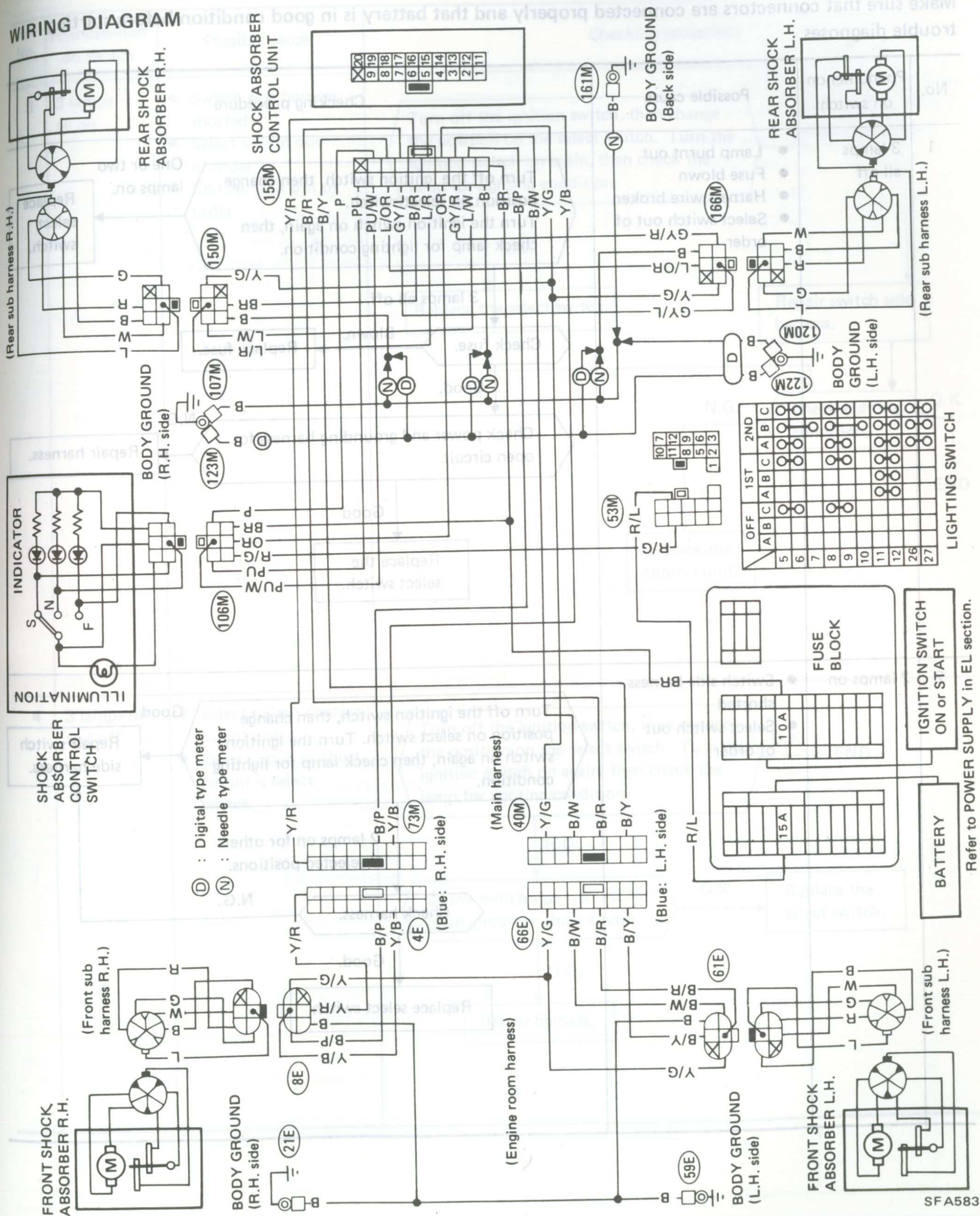
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

SFA582

ADJUSTABLE SHOCK ABSORBER

Electrical Circuit (Cont'd)

WIRING DIAGRAM



Refer to POWER SUPPLY in EL section.

SFA583

ADJUSTABLE SHOCK ABSORBER

Trouble Diagnoses

Make sure that connectors are connected properly and that battery is in good condition before starting trouble diagnoses.

No.	Phenomenon on switch	Possible cause	Checking procedure
1	3 lamps all off	- Lamp burnt out - Fuse blown - Harness wire broken - Select switch out of order	Turn off the ignition switch, then change position on select switch. Turn the ignition switch on again, then check lamp for lighting condition. One or two lamps on. → Replace select switch. 3 lamps all off. → Check fuse. Blown. → Replace fuse. Good. → Check power and grounding harness for open circuit. N.G. → Repair harness. Good → Replace the select switch.
2	2 lamps on	- Switch side harness shorted - Select switch out of order	Turn off the ignition switch, then change position on select switch. Turn the ignition switch on again, then check lamp for lighting condition. Good → Repair switch side harness. 2 lamps on for other 2 selected positions. → Check harness. N.G. → Repair switch side harness. Good. → Replace select switch.

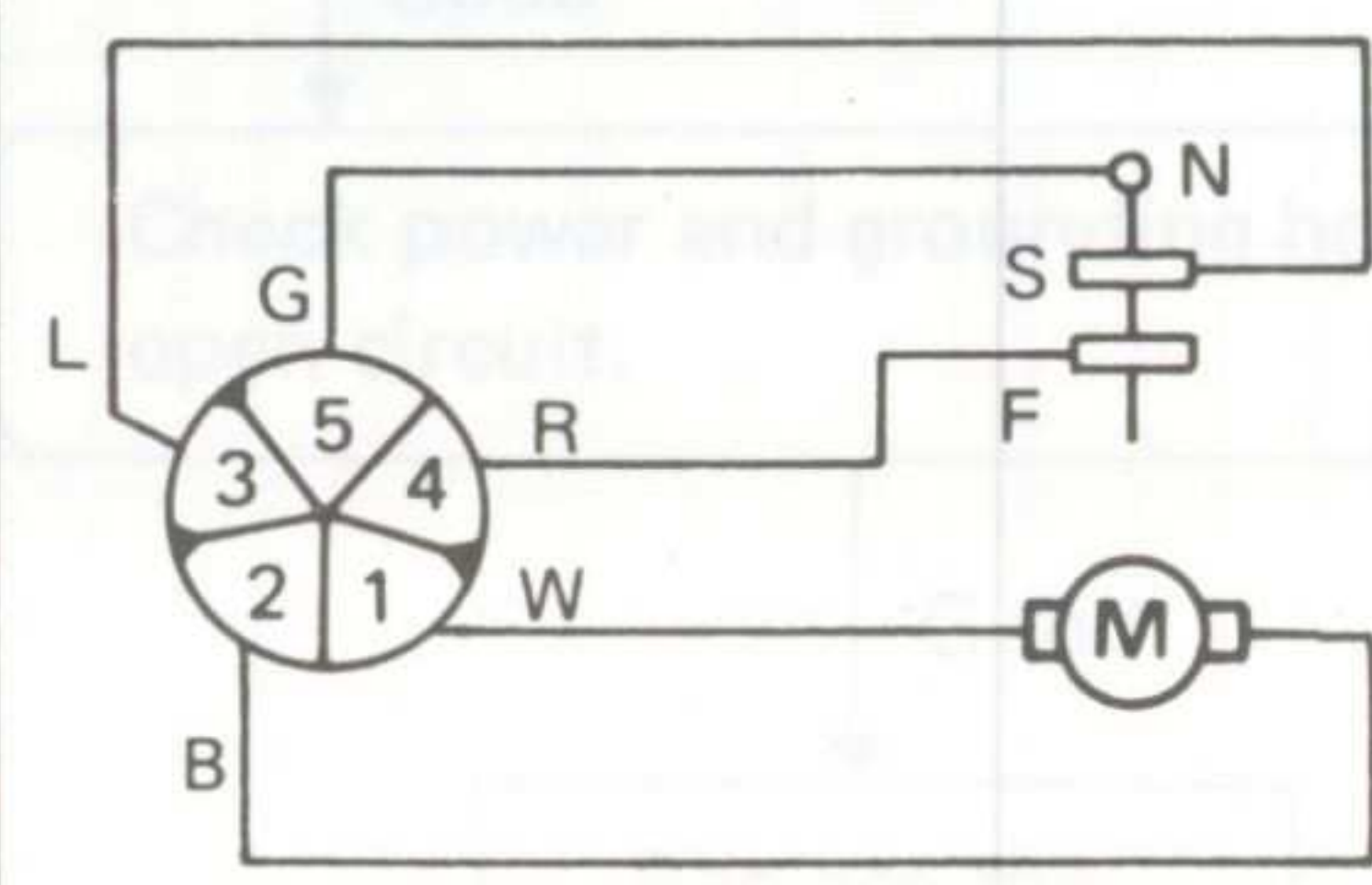
ADJUSTABLE SHOCK ABSORBER

Trouble Diagnoses (Cont'd)

No.	Phenomenon on switch	Possible cause	Checking procedure
3	3 lamps all on	- Switch side harness shorted - Select switch out of order - Control unit out of order	One lamp on and two lamps off for other 2 selected positions. Turn off the ignition switch, then change the position on the select switch. Turn the ignition switch on again, then check the lamp for lighting condition. N.G. Replace the select switch. Repair switch side harness. Check lighting condition. N.G. Replace the control unit. O.K. END
4	3 lamps on and off	- Select switch contact out of order - Open circuit or short circuit is select switch	Turn off the ignition switch, then change the position on the select switch. Turn the ignition switch on again, then check the lamp for lighting condition. O.K. END N.G. Check switch side harness for open circuit or short circuit. O.K. Replace the select switch. N.G. Repair harness.

ADJUSTABLE SHOCK ABSORBER

Trouble Diagnoses (Cont'd)

No.	Phenomenon on switch	Possible cause	Checking procedure								
5	One lamp on and 2 lamps on and off	- Shock absorber damage - Open circuit in sub-harness - Control unit damage - Open circuit in main harness	Turn the select switch to the S position with the ignition key off. Turn the ignition switch on and then turn it off <u>in 2 or 3 seconds</u>. The motors might not turn to the S position if the ignition key is turned off in less than 2 seconds, and the motors will turn to the N position if the ignition key is turned on for more than 6 seconds. Check continuity of the sensor using the sub-harness connector.  <table><thead><tr><th>Position</th><th>Continuity</th></tr></thead><tbody><tr><td>S</td><td>3 - 5</td></tr><tr><td>F</td><td>4 - 5</td></tr><tr><td>N</td><td>3 - 5 4 - 5</td></tr></tbody></table> N.G. (0 continuity) Remove the sub-harness. Then check its continuity. N.G. → Replace the sub-harness. O.K. → Replace the shock absorber. Check continuity of the control unit using SCHEMATIC. N.G. → Replace the control unit. O.K. → Check continuity of the main harness and the body harness using WIRING DIAGRAM. N.G. → Repair the main harness or the body harness. O.K. → Repeat the above procedure setting the select switch to the N or F position.	Position	Continuity	S	3 - 5	F	4 - 5	N	3 - 5 4 - 5
Position	Continuity										
S	3 - 5										
F	4 - 5										
N	3 - 5 4 - 5										

SERVICE DATA AND SPECIFICATIONS

General Specifications

Item	Destination	Europe					Aus- tralia	Except Europe and Australia								
	Engine	VG30E	Option		VG30ET	VG30E	VG30E	VG30ET								
	Model	2+2				2+2	2+2	2 seater	Option		2+2	Option				
Suspension		Strut with coil spring														
Coil spring																
Wire diameter mm (in)		13.8 (0.543)	13.5 (0.531)		13.8 (0.543)		13.5 (0.531)		14.0 (0.551)		13.8 (0.543)					
Coil diameter mm (in)		170 (6.69)														
Free length mm (in)		294.5 (11.59)	287 (11.30)		306 (12.05)		294.5 (11.59)		287 (11.30)		302.5 (11.91) 294.5 (11.59)					
Spring constant N/mm (kg/mm, lb/in)		25.5 (2.60, 145.6)			23.8 (2.43, 136.1)		25.5 (2.60, 145.6)									
Identification color		Orange x 1 Orange x 1	Blue x 1 Blue x 1		White x 1 White x 1		Orange x 1 Orange x 1		Blue x 1 Blue x 1		Pink x 1 Orange x 1	Orange x 1 Orange x 1				
Strut																
Type		Double acting hydraulic	Gas-filled double acting hydraulic			Double acting hydraulic		Gas-filled double acting hydraulic		Double acting hydraulic	Gas-filled double acting hydraulic					
		Non- adjustable	Adjustable			Non-adjustable		Adjustable		Non- adjustable	Adjustable					
Inner cylinder																
Inner diameter mm (in)		32.0 - 32.1 (1.260 - 1.264)	35.0 - 35.1 (1.378 - 1.382)			32.0 - 32.1 (1.260 - 1.264)		35.0 - 35.1 (1.378 - 1.382)		32.0 - 32.1 (1.260 - 1.264)	35.0 - 35.1 (1.378 - 1.382)					
Maximum runout mm (in)		Less than 0.2 (0.008)														
Piston rod																
Rod diameter mm (in)		21.78 - 21.94 (0.8618 - 0.8638)	24.94 - 24.98 (0.9819 - 0.9835)			21.78 - 21.94 (0.8575 - 0.8638)		24.94 - 24.98 (0.9819 - 0.9835)		21.78 - 21.94 (0.8575 - 0.8638)	24.94 - 24.98 (0.9819 - 0.9835)					
Maximum runout mm (in)		Less than 0.1 (0.004)														
Stroke																
Maximum/ Minimum mm (in)		191.8 (7.551)/31.8 (1.252)														
Damping force [at 0.3 m (1.0 ft)/sec.]																
Expansion N (kg, lb)		1,226 (125, 276)	F	N	S	F	N	S	1,226 (125, 276)	F	N	S	1,226 (125, 276)	F	N	S
			1,510 (154, 340)	1,226 (125, 276)	530 (54, 119)	1,353 (138, 304)	1,245 (127, 280)	1,059 (108, 238)		1,510 (154, 340)	1,226 (125, 276)	530 (54, 119)		1,510 (154, 340)	1,226 (125, 276)	530 (54, 119)
Compression N (kg, lb)		637 (65, 143)	785 (80, 176)	637 (65, 143)	255 (26, 57)	686 (70, 154)	637 (65, 143)	588 (60, 132)	637 (65, 143)	785 (80, 176)	637 (65, 143)	255 (26, 57)	637 (65, 143)	785 (80, 176)	637 (65, 143)	255 (26, 57)
Stabilizer bar diameter mm (in)		23 (0.91)			24 (0.94)			23 (0.91)		25 (0.98)		23 (0.91)		25 (0.98)		
Tension rod diameter mm (in)		18 (0.71)														

SERVICE DATA AND SPECIFICATIONS

Inspection and Adjustment

WHEEL ALIGNMENT (Unladen*1)

Camber	degree	-35' to 55'
Caster	degree	5° 50' to 7° 20'
Toe-in	mm (in)	1 to 3 (0.04 to 0.12)
	degree*2	6' to 17'
Kingpin inclination	degree	12° 15' to 13° 45'
Front wheel turning angle		
Toe-out-turn		
Inside/Outside	degree	22° 30' / 20°
Full turn		
Inside/Outside	degree	35° to 39° / 27° to 31°

*1: Tankful of fuel, radiator coolant and engine oil full.
Spare tire, jack, hand tools, mats in designed position

*2: Total toe-in

WHEEL BEARING

Wheel bearing axial play	mm (in)	0 (0)
Wheel bearing lock nut		
Tightening torque	N·m (kg-m, ft-lb)	25 - 29 (2.5 - 3.0, 18 - 22)
Return angle	degree	60°
Wheel bearing starting torque	N·m (kg-cm, in-lb)	
With new grease seal		0.39 - 0.83 (4.0 - 8.5, 3.5 - 7.4)
With used grease seal		0.10 - 0.44 (1.0 - 4.5, 0.87 - 3.91)
At wheel hub bolt	N (kg, lb)	
With new grease seal		6.86 - 14.61 (0.70 - 1.49, 1.54 - 3.29)
With used grease seal		1.67 - 7.75 (0.17 - 0.79, 0.37 - 1.74)

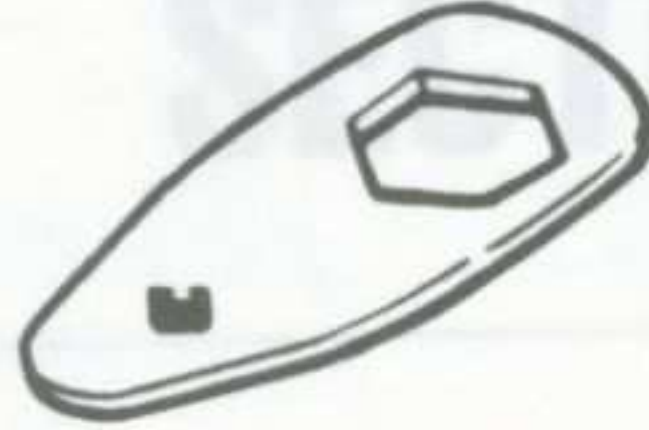
LOWER BALL JOINT

Turning torque "A" and "B"	N·m (kg-cm, in-lb)	
New part		1.5 - 4.9 (15 - 50, 13 - 43)
Used part		More than 1.0 (10, 8.7)
Vertical end play "C"	mm (in)	2.5 (0.098) or less

Tightening Torque

Item	N·m	kg-m	ft-lb
Wheel hub			
Wheel bearing lock nut	25 - 29	2.5 - 3.0	18 - 22
Wheel hub to disc rotor	49 - 69	5.0 - 7.0	36 - 51
Wheel nut	98 - 118	10 - 12	72 - 87
Knuckle arm and knuckle spindle			
Knuckle arm to side rod	54 - 98	5.5 - 10.0	40 - 72
Knuckle arm to knuckle spindle (strut assembly)	72 - 97	7.3 - 9.9	53 - 72
Torque member fixing bolt	72 - 97	7.3 - 9.9	53 - 72
Knuckle spindle to baffle plate	3.2 - 4.3	0.33 - 0.44	2.4 - 3.2
Side rod lock nut	78 - 98	8 - 10	58 - 72
Ball joint			
Lower ball joint to knuckle arm	96 - 120	9.8 - 12.2	71 - 88
Strut assembly			
Strut mounting insulator fixing bolt	31 - 42	3.2 - 4.3	23 - 31
Piston rod lock nut	69 - 88	7 - 9	51 - 65
Gland packing			
Adjustable	118 - 147	12 - 15	87 - 108
Non-adjustable	98 - 127	10 - 13	72 - 94
Transverse link			
Transverse link to suspension member	93 - 113	9.5 - 11.5	69 - 83
Tension rod			
Tension rod to tension rod bracket	44 - 54	4.5 - 5.5	33 - 40
Tension rod bracket to body	29 - 39	3 - 4	22 - 29
Tension rod to transverse link	42 - 59	4.3 - 6.0	31 - 43
Stabilizer bar			
Stabilizer bar clamp to body (tension rod bracket)	29 - 39	3 - 4	22 - 29
Stabilizer bar to transverse link	16 - 22	1.6 - 2.2	12 - 16
Suspension member			
Suspension member to body	69 - 88	7 - 9	51 - 65

SPECIAL SERVICE TOOLS

Tool number	Tool name	
ST35490000	Gland packing wrench	
ST35652000	Clamp	
HT72520000	Ball joint remover	