

FRONT AXLE & FRONT SUSPENSION

SECTION **FA**

CONTENTS

FRONT AXLE AND FRONT SUSPENSION	FA- 2
FRONT AXLE — Wheel Hub	FA- 3
FRONT SUSPENSION	FA- 6
FRONT SUSPENSION — Spring and Strut Assembly	FA- 7
FRONT SUSPENSION — Tension Rod and Stabilizer Bar	FA-11
FRONT SUSPENSION — Transverse Link	FA-12
FRONT SUSPENSION — Suspension Crossmember	FA-14
ADJUSTABLE SHOCK ABSORBER (Including wiring diagram)	FA-15
SERVICE DATA AND SPECIFICATIONS (S.D.S.)	FA-24
SPECIAL SERVICE TOOLS	FA-26

FA

When you read wiring diagrams:

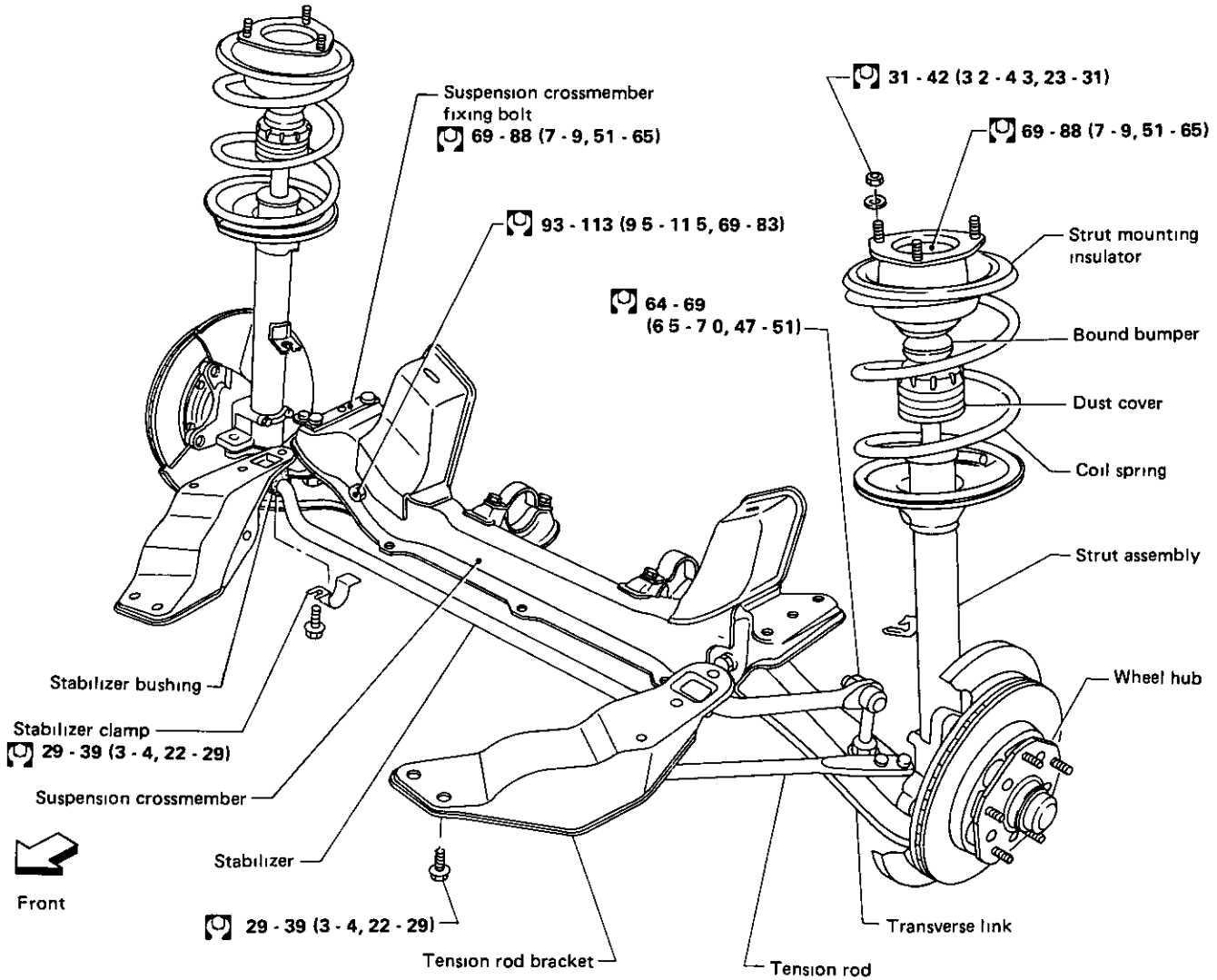
- Read GI section, "HOW TO READ WIRING DIAGRAMS".
- See EL section, "POWER SUPPLY ROUTING" for power distribution circuit.

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 adjustment
1 - 3 mm (0.04 - 0.12 in)
6' - 17' (Total toe-in)

Refer to section MA for Checking Wheel Alignment



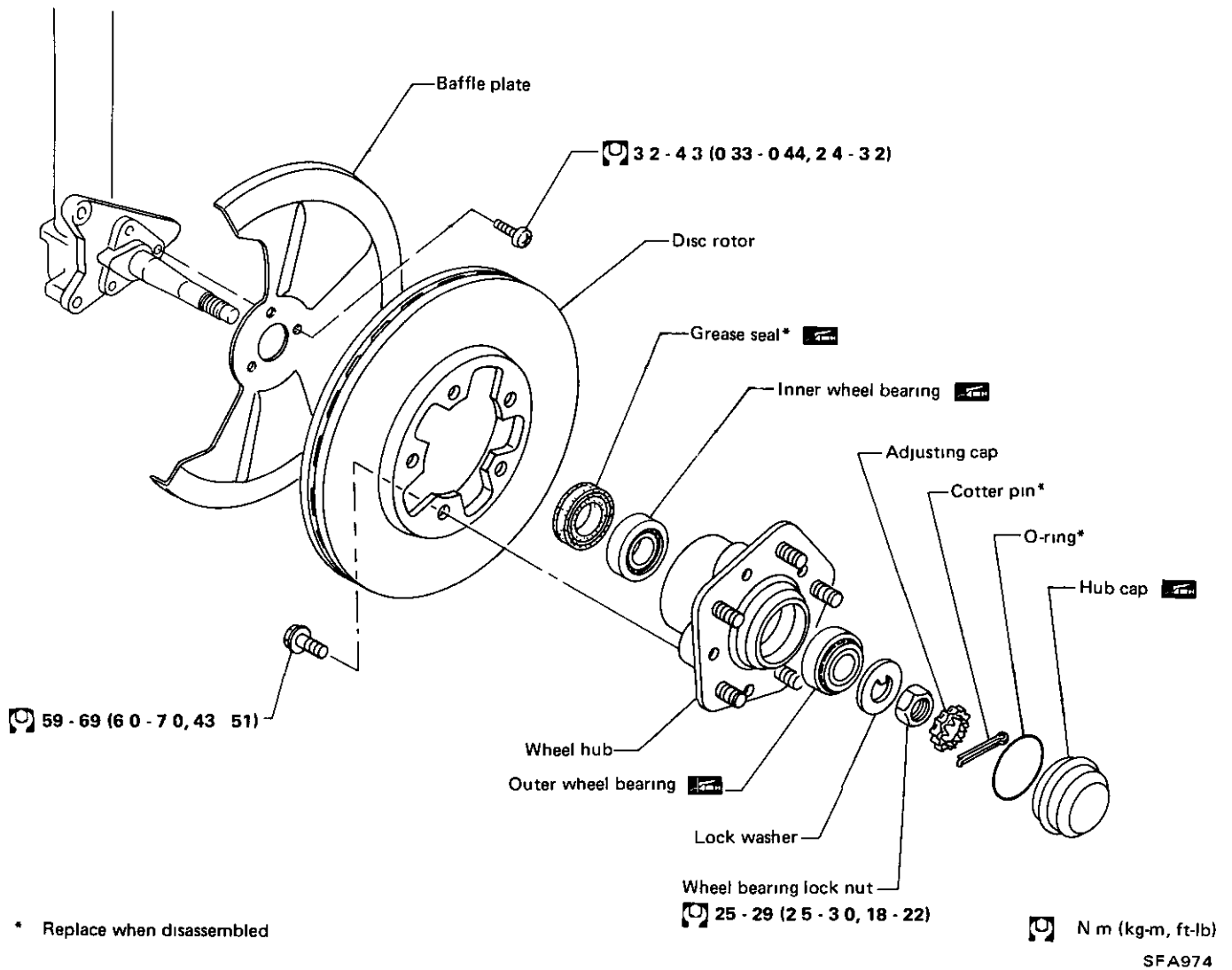
Wheel bearing

- 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 - 3.91 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)

SFA236A

FRONT AXLE — Wheel Hub

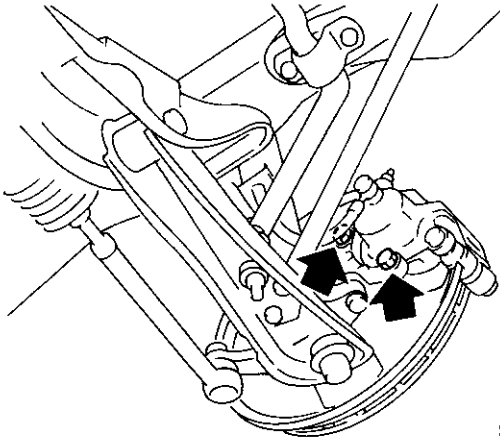


FRONT AXLE — Wheel Hub

Removal

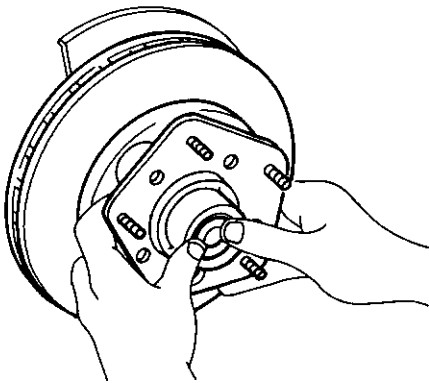
- 1 Remove brake caliper assembly

Brake hose does not need to be disconnected from brake caliper assembly.



SFA567

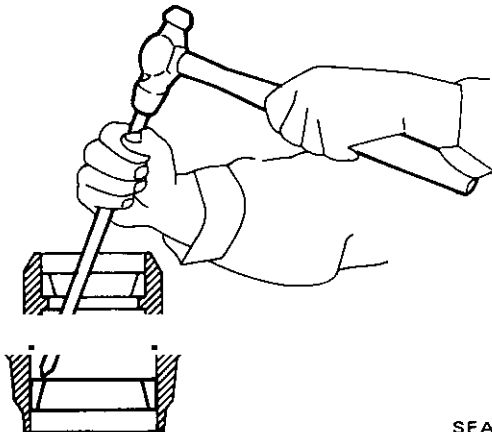
2. Remove wheel hub with disc brake rotor and wheel bearing from spindle



SFA975

Be careful not to drop outer bearing.

3. If replacement of outer race is necessary, drive it out from hub with a brass drift and mallet



SFA580

Inspection

WHEEL BEARING

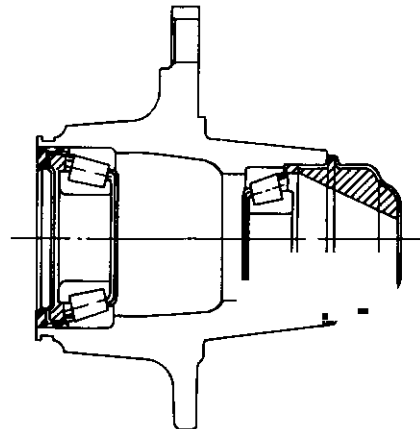
Make sure wheel bearing rolls freely and is free from noise, crack, pitting or wear

WHEEL HUB

Check wheel hub for cracks by using a magnetic exploration or dyeing test, and replace if cracked

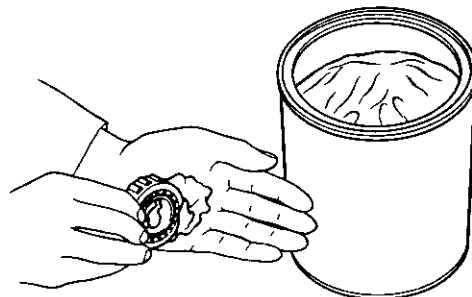
Installation

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



SFA966

- Coat each bearing cone with recommended multi-purpose grease



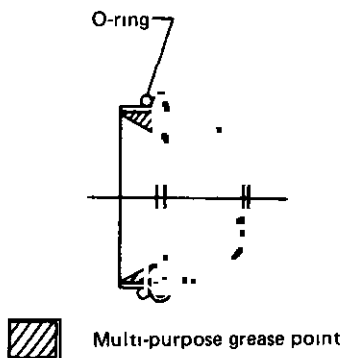
FA781

FRONT AXLE — Wheel Hub

Preload Adjustment

After wheel bearing has been replaced or front axle has been reassembled, adjust wheel bearing preload.

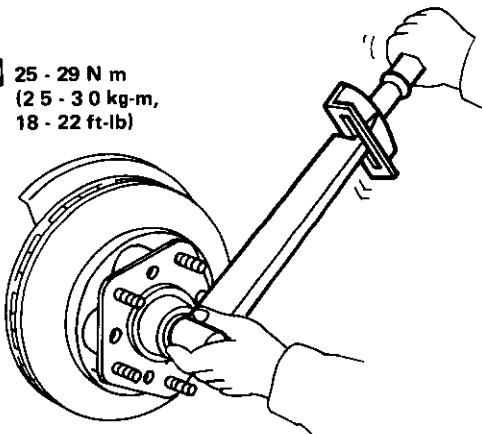
- 1 Thoroughly clean all parts to prevent dirt entry before adjustment
- 2 Apply recommended multi-purpose grease sparingly to the following parts
 - Threaded portion of spindle
 - Contact surface between lock washer and outer wheel bearing
 - Hub cap and O-ring
 - Grease seal lip.



SMA203A

3. Tighten wheel bearing lock nut.

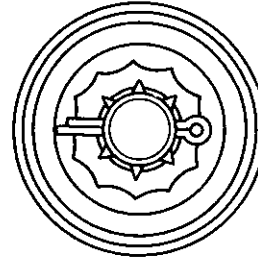
 25 - 29 N m
(2.5 - 3.0 kg-m,
18 - 22 ft-lb)



SFA976

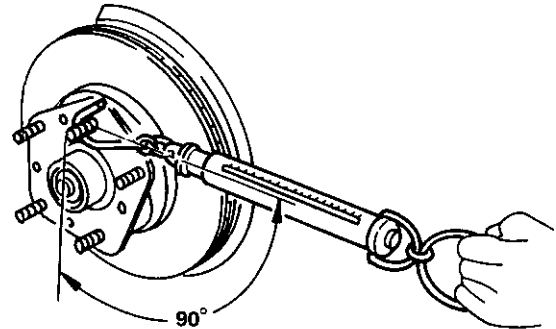
- 4 Turn wheel hub several times in both directions to seat wheel bearing correctly
5. Again tighten wheel bearing nut.
- 6 Turn back wheel bearing lock nut within 60°

7. Install adjusting cap and new cotter pin



SFA967

- 8 Measure wheel bearing preload and axial play.

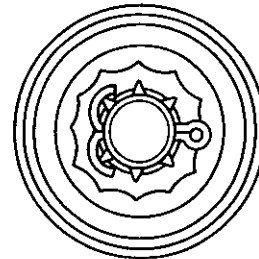


Axial play 0 mm (0 in)
When bearing preload
(As measured at wheel hub bolt)
With new parts
6.86 - 14.61 N (0.70 - 1.49 kg, 1.54 - 3.29 lb)
With used parts
1.67 - 7.75 N (0.17 - 0.79 kg, 0.37 - 1.74 lb)

SFA977

Repeat above procedures until correct starting torque is obtained

9. Spread cotter pin

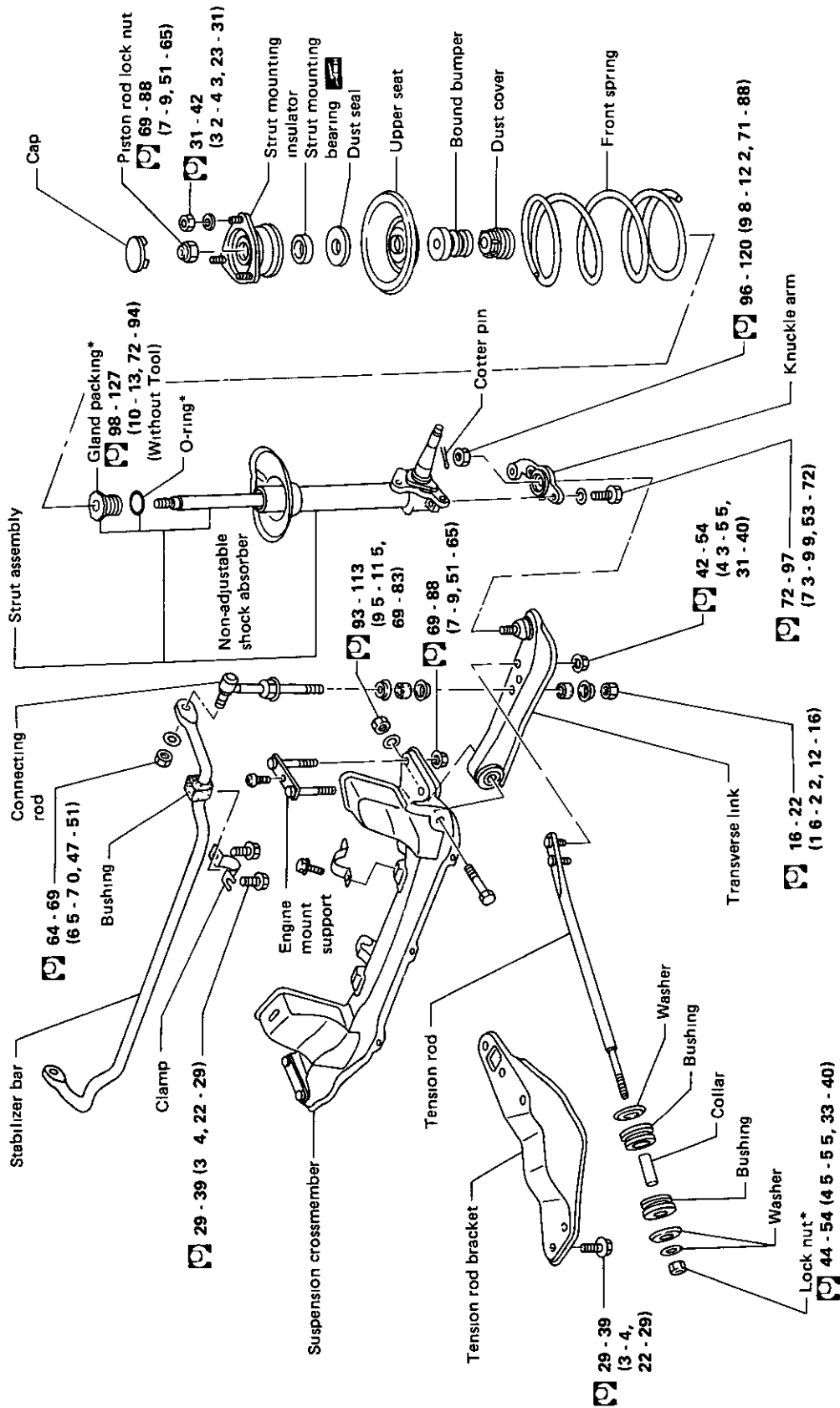


SFA968

- 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
Final tightening requires to be carried out with tires on ground
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, or soapy water
* Replace when disassembled



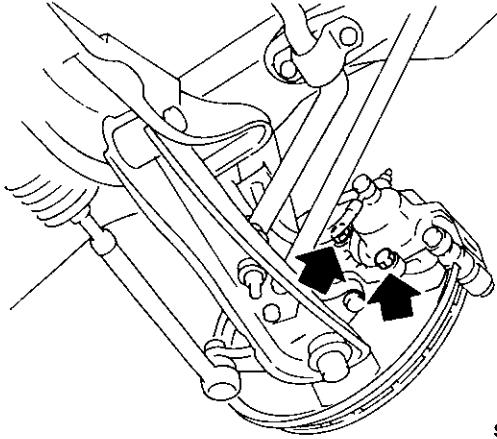
N m (kg-m, ft-lb)

SFA237A

FRONT SUSPENSION — Spring and Strut Assembly

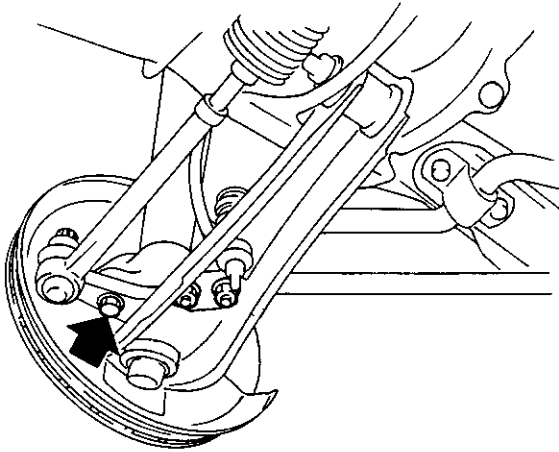
Removal and Installation

- Remove brake caliper assembly without disconnecting brake line



SFA567

- Remove knuckle arm fixing bolts



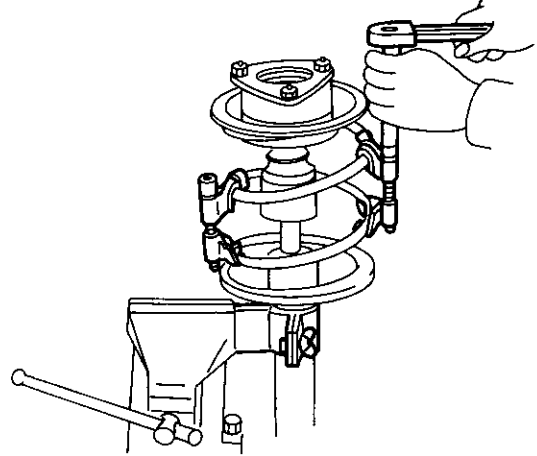
SFA978

Make sure brake hose is secure

Disassembly

Avoid dirt and dust getting inside strut.

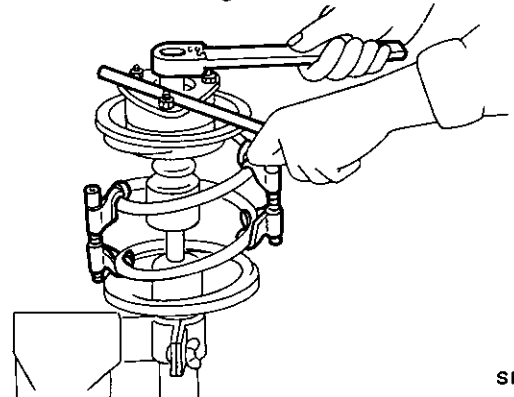
- Compress spring to permit turning of strut mounting insulator by hand



SFA571

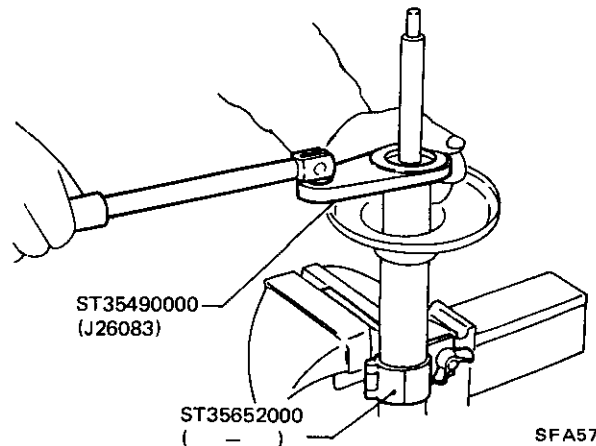
- Remove piston rod lock nut

Be careful not to damage bolts.



SFA572

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



SFA573

- Slowly withdraw piston rod and cylinder

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-cartridge

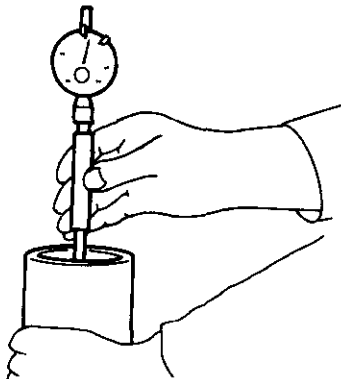
INNER CYLINDER AND OUTER CASING

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

Inner diameter:

Inner cylinder

32.0 - 32.1 mm (1.260 - 1.264 in)

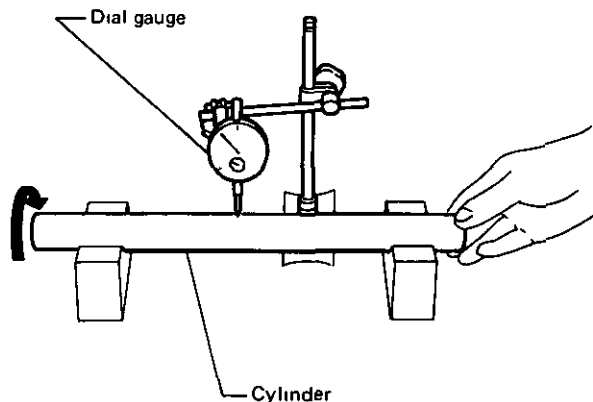


SFA136

Maximum runout.

Inner cylinder

Less than 0.2 mm (0.008 in)



SFA137

PISTON ROD

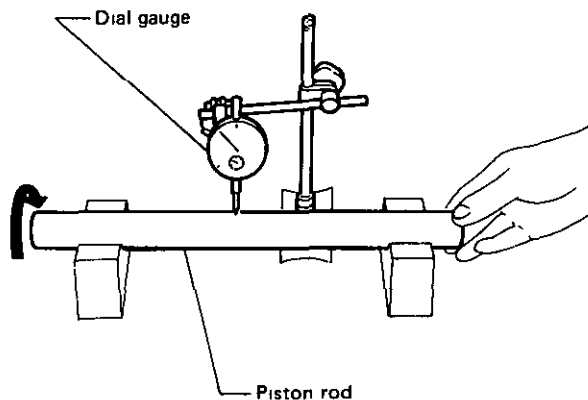
- Inspect piston rod for cracks, deformation or other damage. Replace shock absorber kit-cartridge, if necessary.
- Inspect threads for cracks or other damage. Replace shock absorber kit-cartridge, if necessary.

Rod diameter:

Refer to S.D.S.

Maximum runout:

0.2 mm (0.008 in)



SFA137

STRUT MOUNTING INSULATOR

Replace if cemented rubber-to-metal portion are melted or cracked. Rubber parts also need to be replaced, 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 all parts away from dust.

[When shock absorber kit-cartridge is not used]

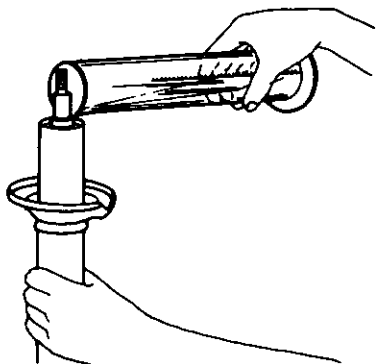
(1) Add oil

Use "NISSAN GENUINE STRUT FLUID" or equivalent.

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

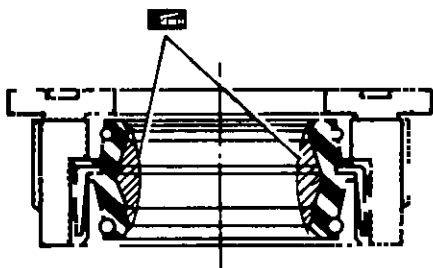
Capacity:

270 ml (9.1 US fl oz, 9.5 Imp fl oz)



FA065

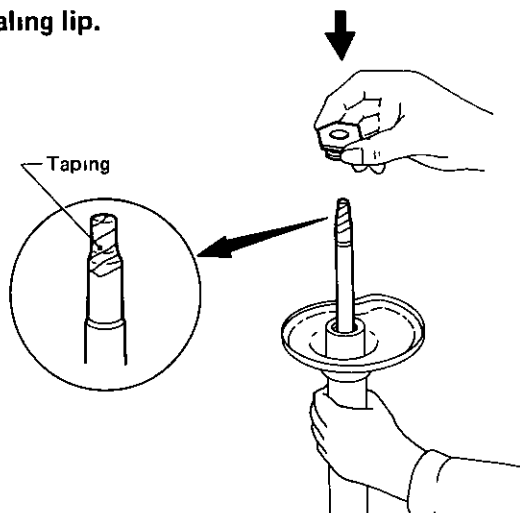
(2) Lubricate sealing lip of gland packing



SFA141

(3) Install gland packing.

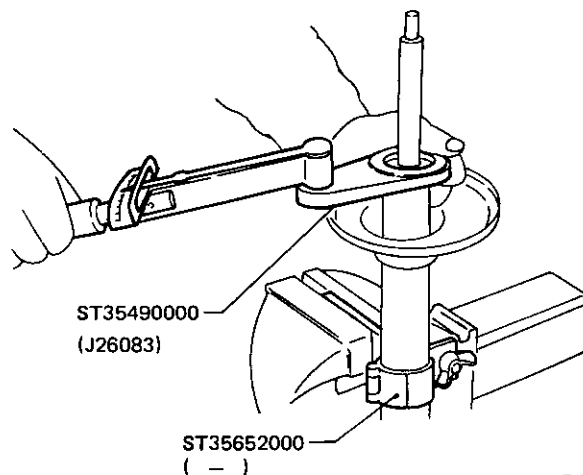
Cover piston rod with tape so as not to damage sealing lip.



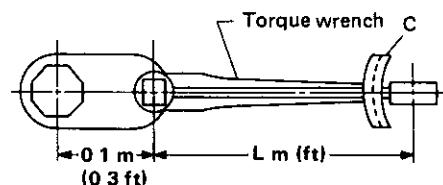
SFA574

• Tighten gland packing with Tool.

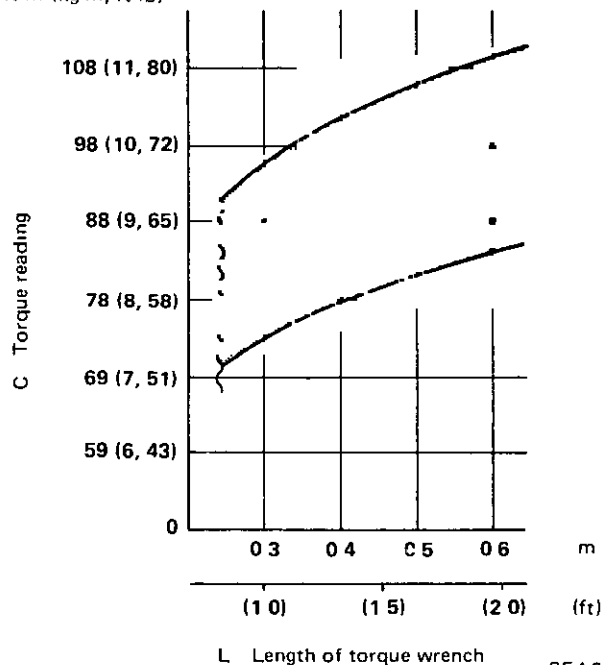
Be careful not to damage piston rod.



SFA591



N m (kg m, ft-lb)

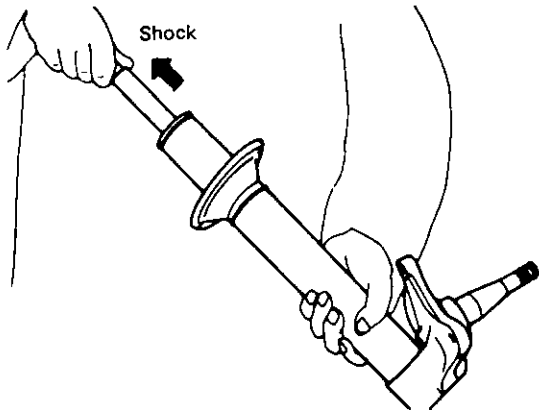


SFA672

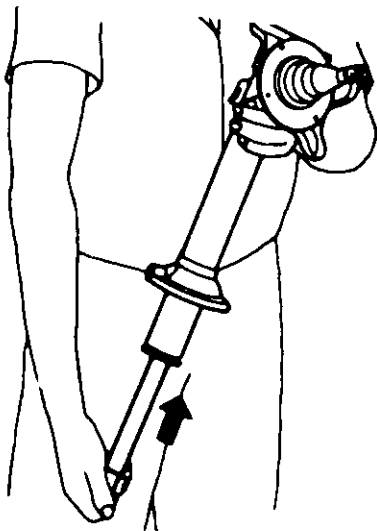
FRONT SUSPENSION — Spring and Strut Assembly

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

[When absorber kit-cartridge is not used.]

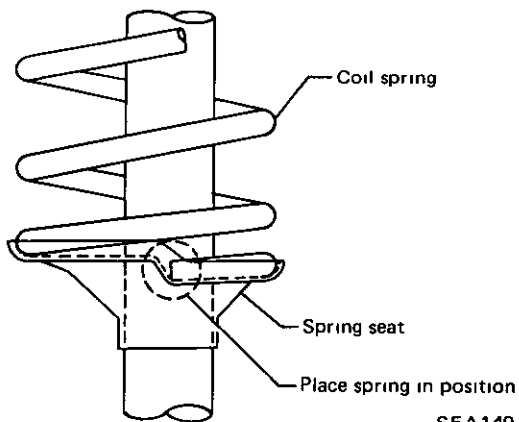


FA279



FA280

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



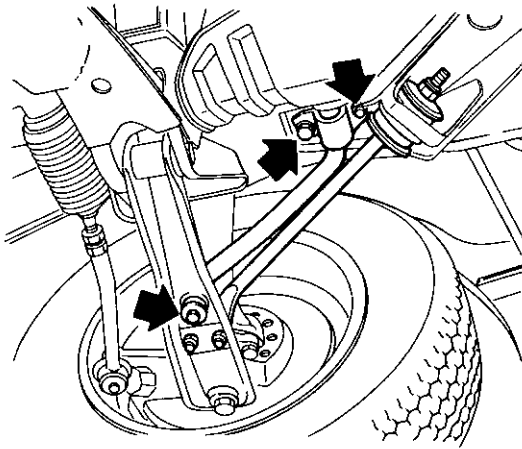
SFA149

FRONT SUSPENSION — Tension Rod and Stabilizer Bar

Removal and Installation

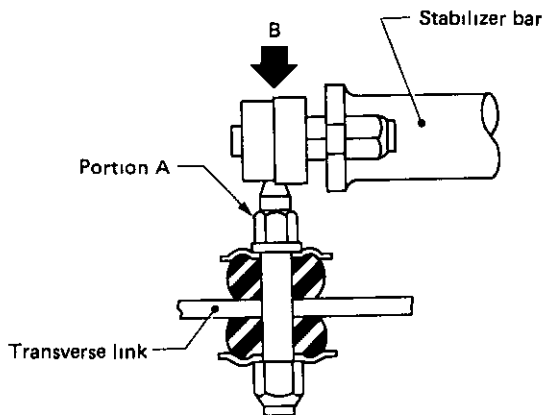
[STABILIZER BAR]

- Remove stabilizer bar



SFA238A

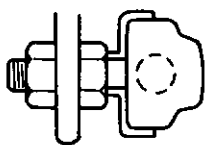
- When removing and installing stabilizer bar, fix portion A



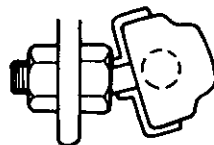
SFA239A

- Install stabilizer bar and ball joint socket properly placed.

View from B



O K

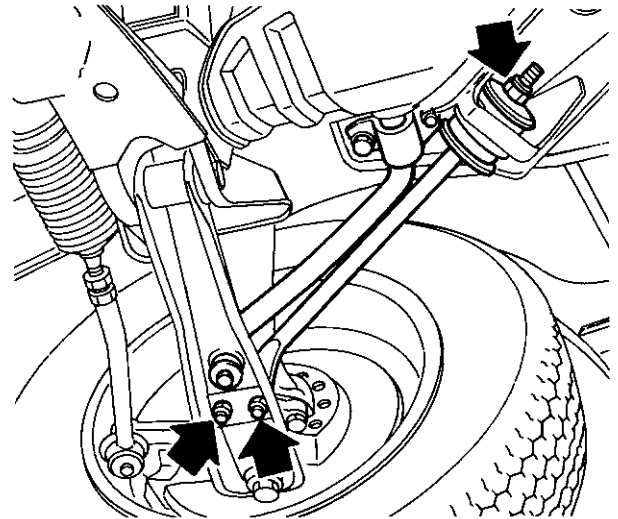


N G

SFA002A

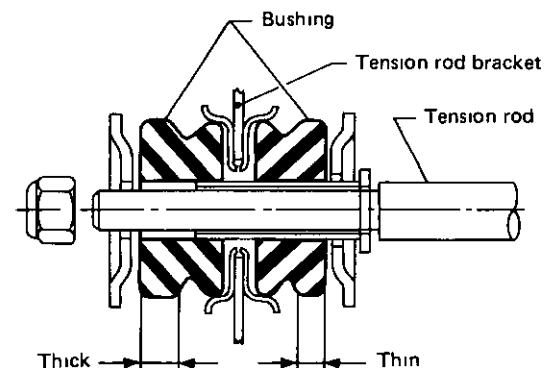
[TENSION ROD]

- Remove tension rod



SFA242A

- Install tension rod as shown below.



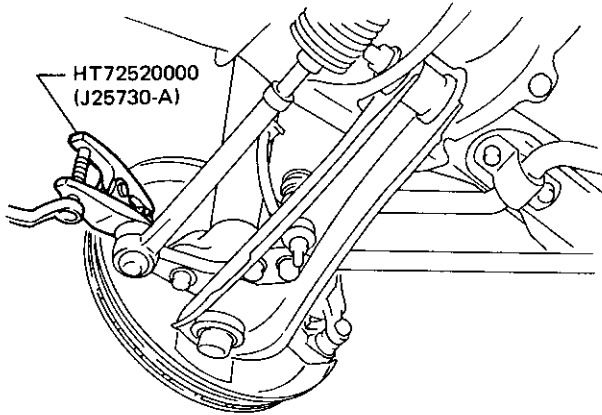
SFA969

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

FRONT SUSPENSION — Transverse Link

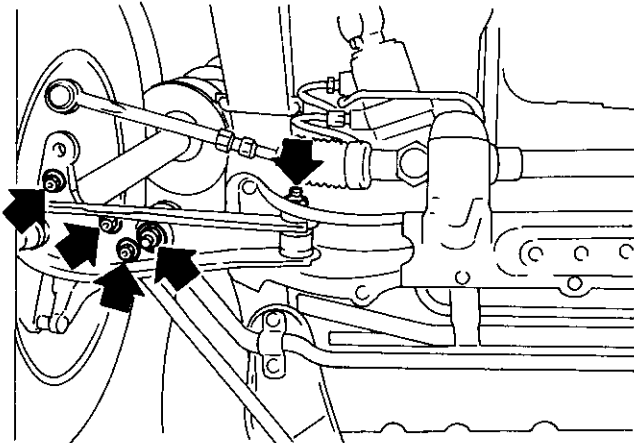
Removal and Installation

- Separate knuckle arm from tie-rod with Tool



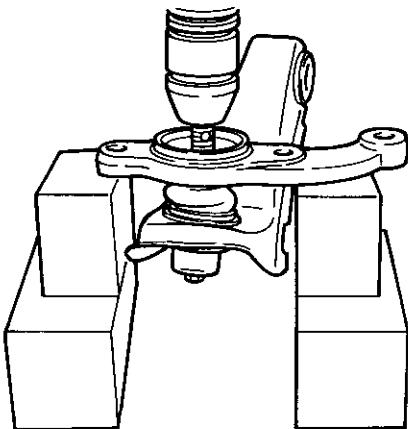
SFA575

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



SFA576

- Separate ball joint from knuckle arm with press



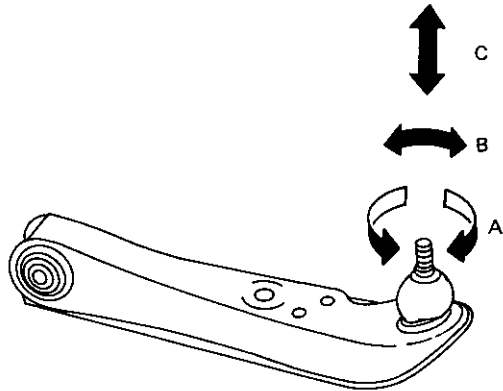
SFA577

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

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

10 N·m (10 kg-cm, 8.7 in-lb) or more

Turning torque "B":

New parts

1.5 - 4.9 N·m

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

Used parts

10 N·m (10 kg-cm, 8.7 in-lb) or more

Axial play "C":

0.1 - 0.9 mm (0.004 - 0.035 in)

- Check condition of dust cover. Replace if necessary.
- Check rubber bushing for cracks, deformation or other damage, bush assembly if necessary.
- Check transverse link for cracks, deformation or other damage, replace transverse link if necessary.
- 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

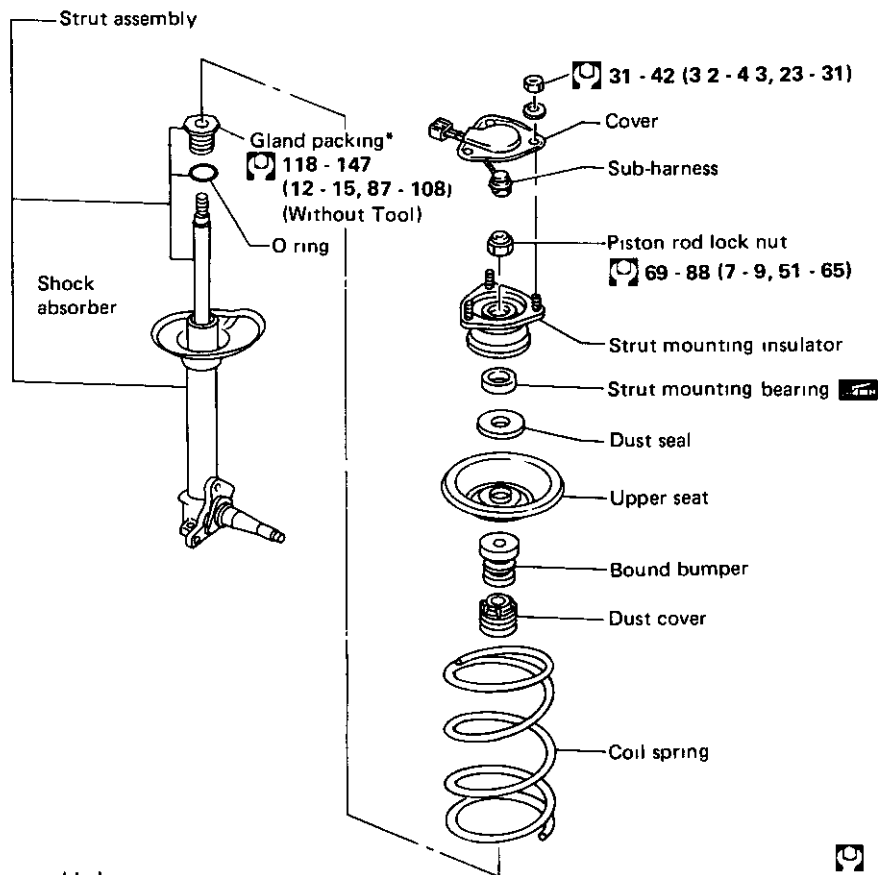
Precaution

Support engine to remove load from engine mounting.

Inspection

Check suspension crossmember for deformation or cracking
Replace if necessary

ADJUSTABLE SHOCK ABSORBER



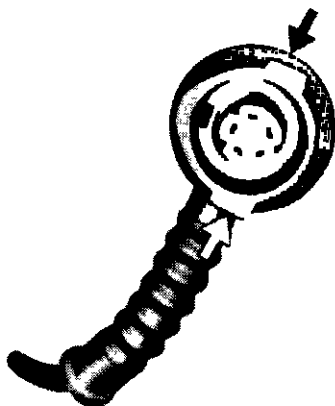
SFA979

Removal and Installation

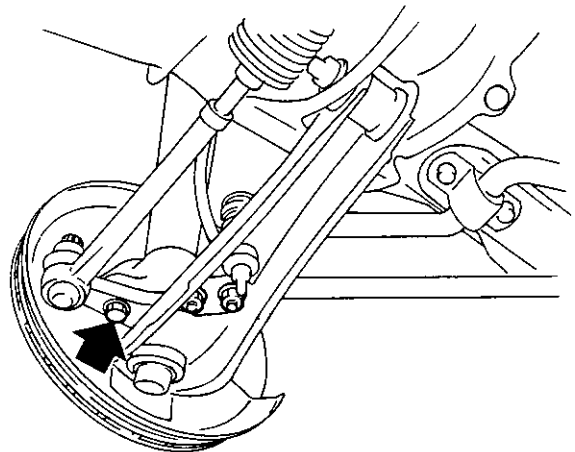
CAUTION

Keep water and dust away from connector.

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



- Remove strut and knuckle arm fixing bolts



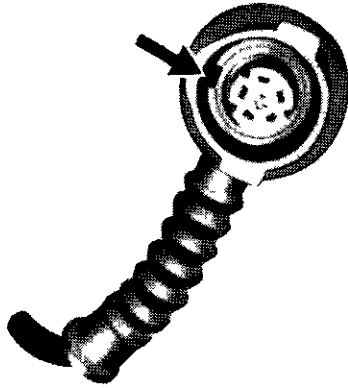
SFA978

Make sure that brake hose is secure

ADJUSTABLE SHOCK ABSORBER

Removal and Installation (Cont'd)

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



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

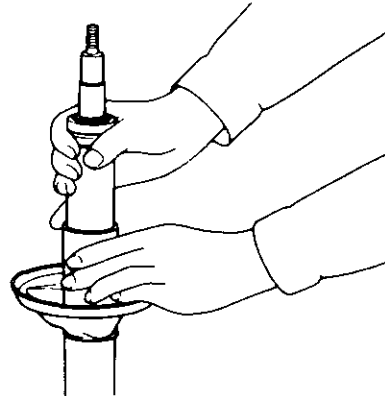
Refer to Front Suspension (Spring and Strut Assembly)

Assembly

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

CAUTION:

Do not drop the shock absorber.



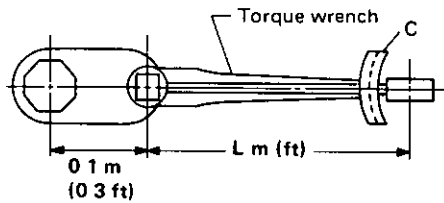
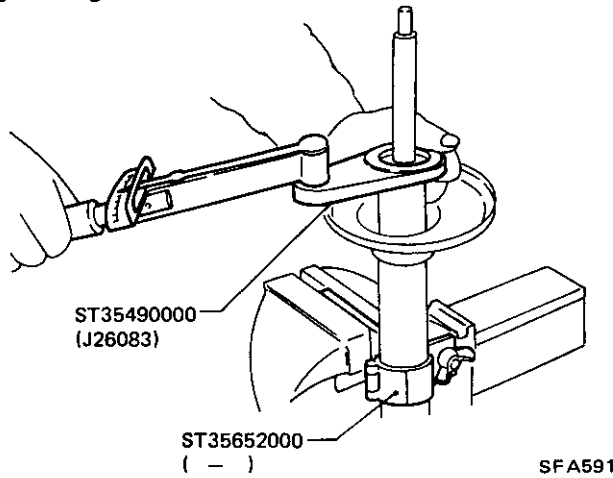
SFA165

- 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

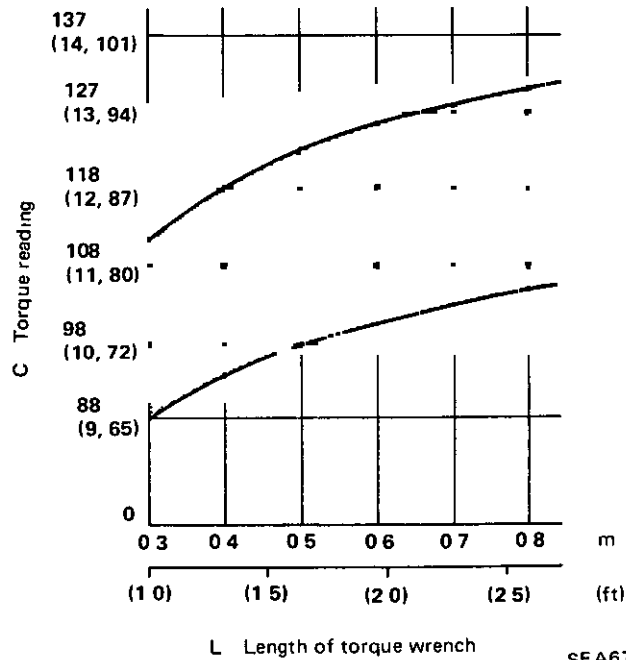
ADJUSTABLE SHOCK ABSORBER

Assembly (Cont'd)

Be careful not to damage piston rod when tightening.



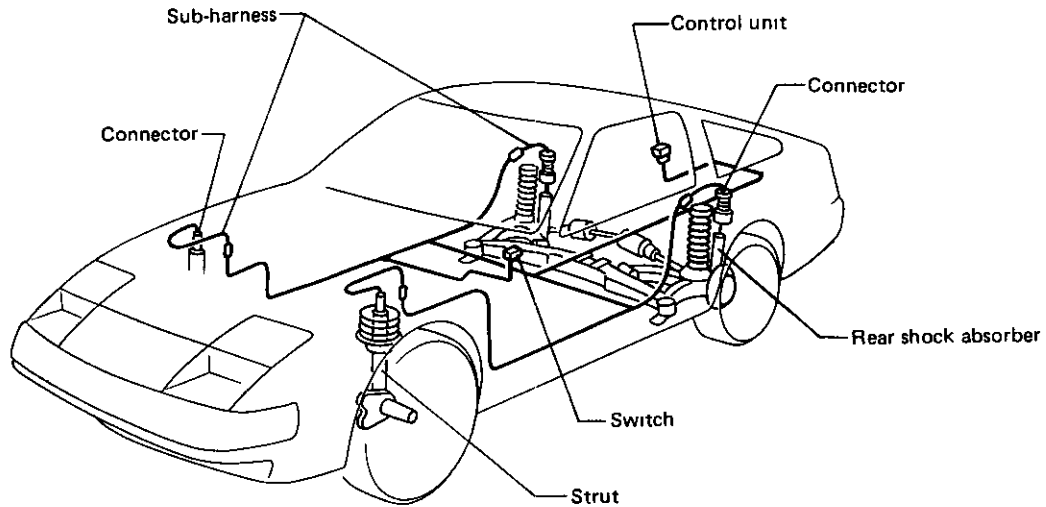
N m (kg m, ft lb)



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

ADJUSTABLE SHOCK ABSORBER

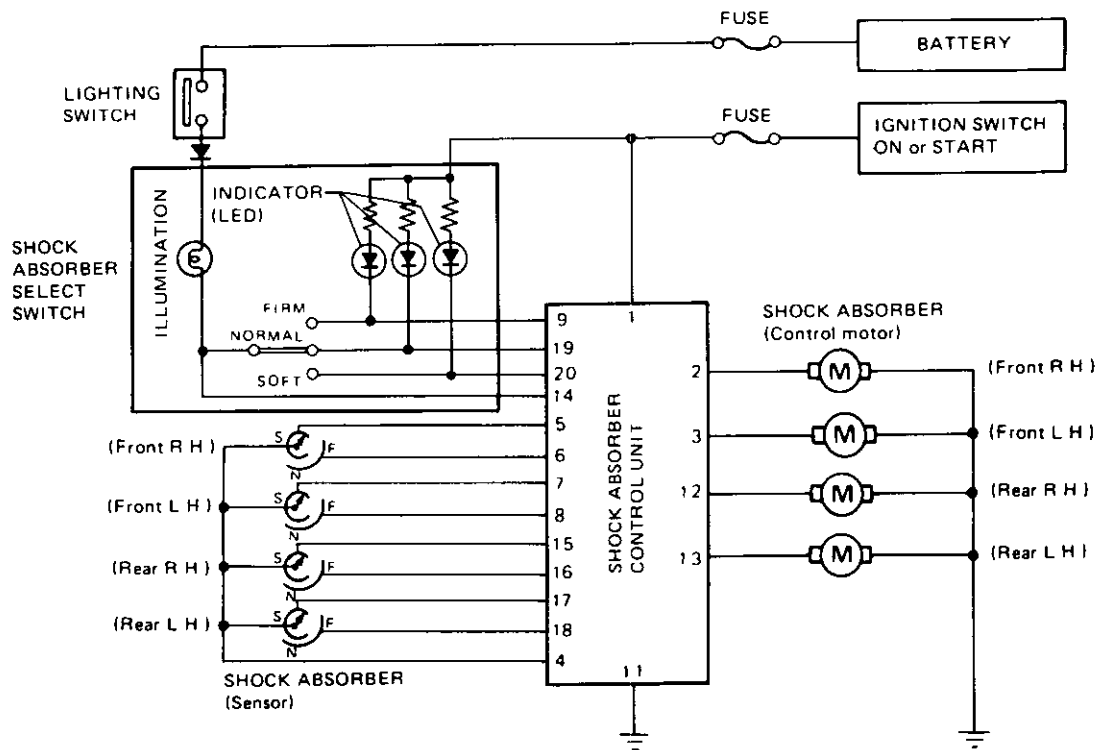
Harness Description



SFA590

Electrical Circuit

SCHEMATIC

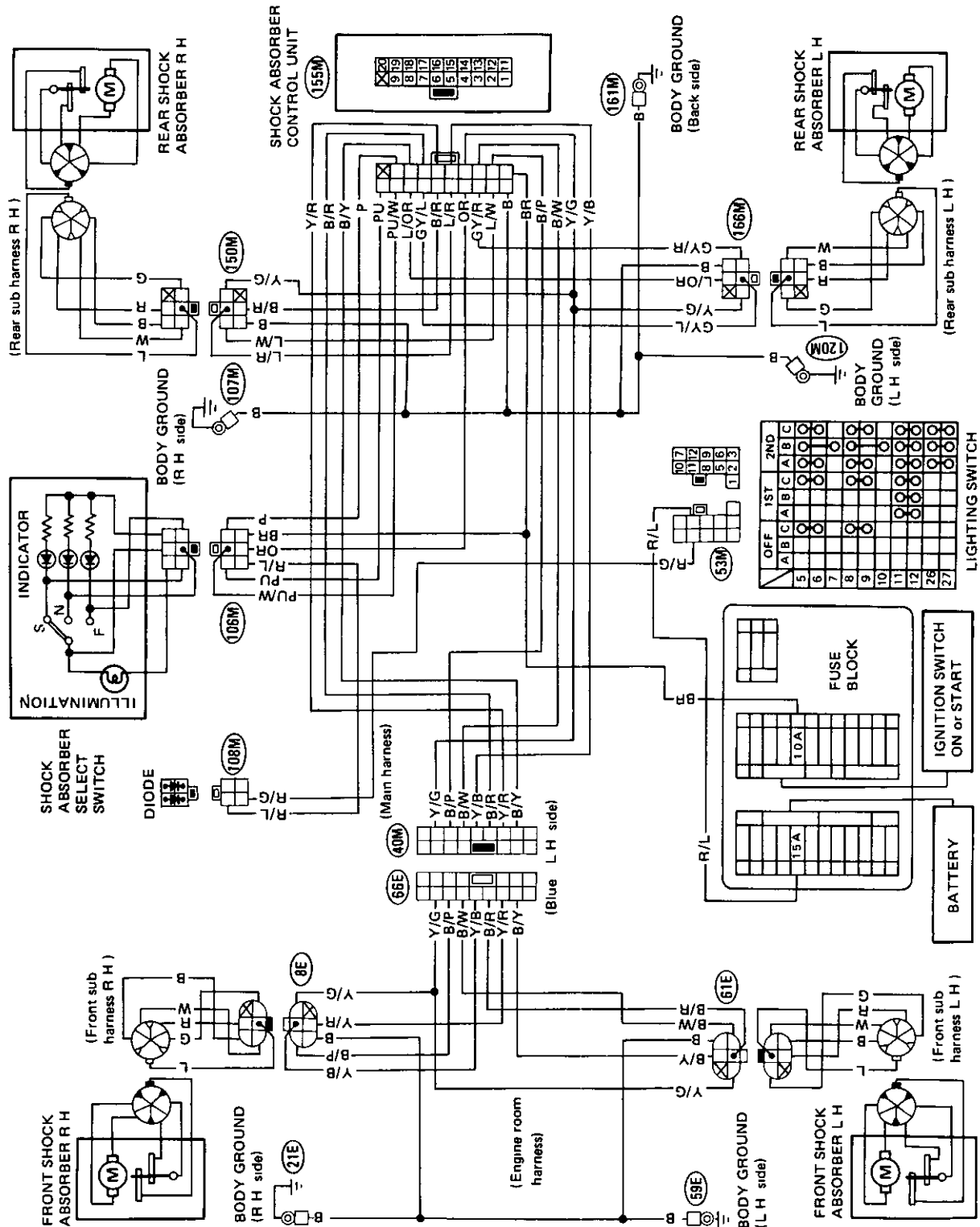


SFA195A

ADJUSTABLE SHOCK ABSORBER

Electrical Circuit (Cont'd)

WIRING DIAGRAM



SFA235A

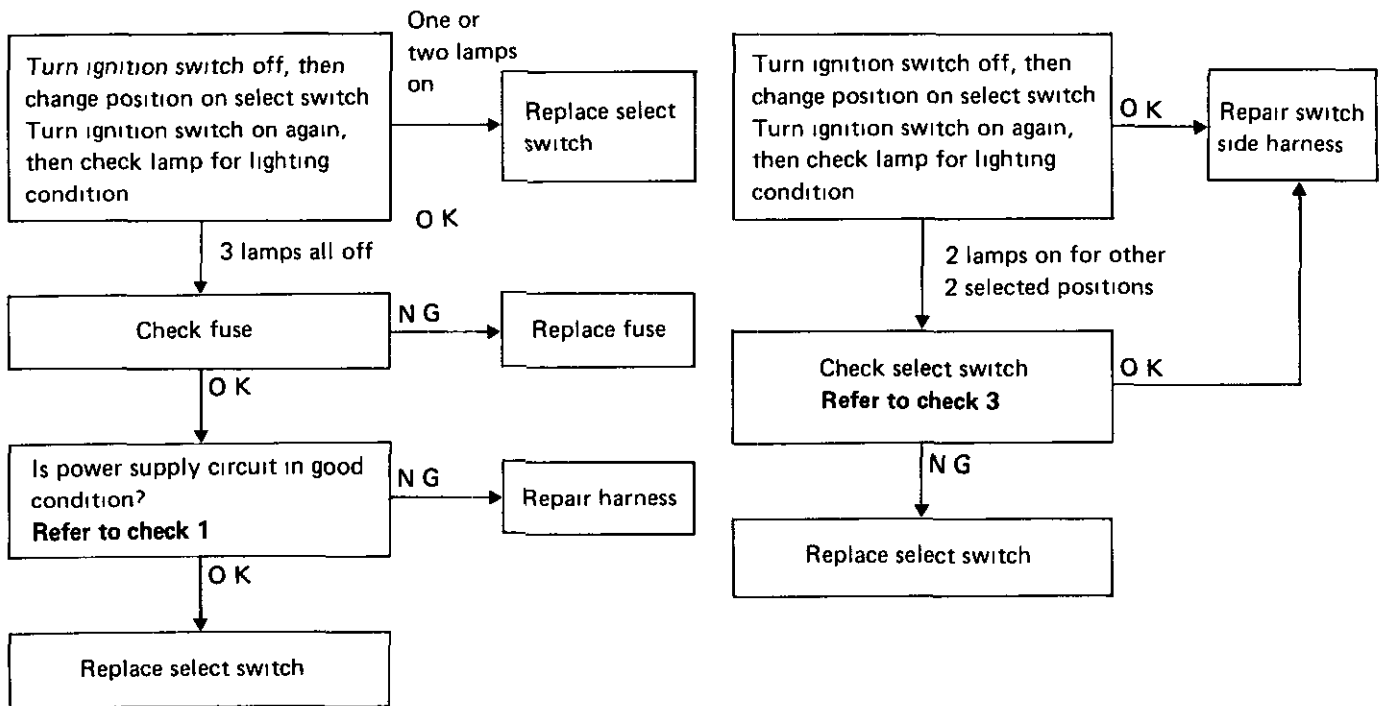
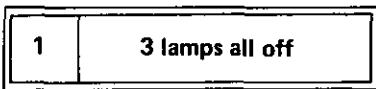
ADJUSTABLE SHOCK ABSORBER

Trouble-shooting

- The shock absorber control unit has a self-check function to determine whether the control unit itself is working or not
- A malfunction is displayed by the lamp (L E D) which is located on select switch

No	Phenomenon on switch	Possible cause	
1	3 lamps all off	● Lamp (L E D) burnt out ● Harness wire broken	● Fuse blown ● Select switch out of order
2	2 lamps on	● Select switch out of order ● Switch side harness shorted	
3	3 lamps all on	● Select switch out of order ● Switch side harness shorted	● Control unit out of order
4	One lamp on and 2 lamps on and off	● Shock absorber damage ● Open circuit in main harness	● Open circuit in sub-harness ● Control unit out of order

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



ADJUSTABLE SHOCK ABSORBER

Trouble-shooting (Cont'd)

3 3 lamps all on

Turn ignition switch off, then change the position on the select switch. Turn the ignition switch on again, then check the lamp for lighting condition

NG

Check select switch
Refer to check 3

OK

NG

One lamp on and two lamps off for other 2 selected positions

Check control unit
Refer to check 2

Replace select switch

4 One lamp on and 2 lamps on and off

Turn ignition switch off, then check each harness connector for connecting condition. Turn the ignition switch on again, then check the lamp for lighting condition

OK → END

NG

Check input signal of control unit
Refer to check 2

- Check continuity of sensor using sub-harness connector
Turn select switch to S position with ignition key off. Turn ignition switch on and then turn it off in 2 or 3 seconds.
Motors might not turn to S position if ignition key is turned off in less than 2 seconds, and motors will turn to N position if ignition key is turned on for more than 6 seconds

NG

Remove the sub harness
Then check its continuity

OK

NG

Replace shock absorber

Replace sub-harness

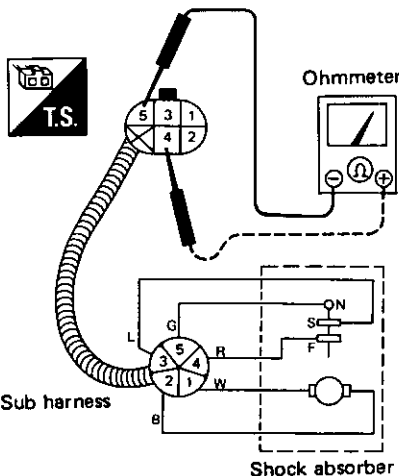
Replace control unit

OK

NG

Damaged control unit

Repeat the above procedure setting select switch to N or F position



Position	Continuity	No continuity
S	3 - 5	4 - 5
F	4 - 5	3 - 5
N	3 - 5 4 - 5	

SFA085A

ADJUSTABLE SHOCK ABSORBER

Terminal check

Behind the space
saver tire

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



Control unit



Voltmeter
or ohmmeter

SFA240A

CHECK 1: POWER SUPPLY CIRCUIT CHECK

- 1 Connect ohmmeter from harness side
- 2 Check continuity between terminal ⑪ and body ground

Ohmmeter terminal		Continuity
(+)	(-)	
⑪	Body ground	Yes

- 3 Connect voltmeter from harness side
- 4 Measure voltage across terminal ① and ⑪

Voltmeter		Voltage	Condition
(+)	(-)		
①	⑪	Approx 12 V	Ignition switch position "ON"

CHECK 2: CONTROL UNIT CHECK

- 1 Connect voltmeter from harness side.
- 2 Turn ignition switch to "ON"
- 3 Measure voltage across each terminal

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



Control unit



Voltmeter

SFA240A

Sensor check

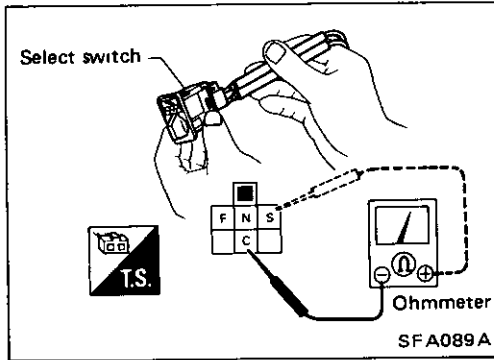
"SOFT"						"FIRM"						"NORMAL"						
Voltage	Terminal		Remarks	Voltage	Terminal		Remarks	Voltage	Terminal		Remarks	Voltage	Terminal					
	(+)	(-)			(+)	(-)			(+)	(-)			(+)	(-)				
0V	④	⑪	GND	Approx 7V	⑥	⑪	FR, R H	0V	④	⑪	GND	Approx 7V	⑤	⑪	FR, R H	0V	④	⑪
	⑤		FR, R H		⑥		FR, R H		⑦		FR, L H							
	⑦		FR, L H		⑩		RR, R H		⑧		FR, L H		⑩		RR, R H			
	⑮		RR, R H		⑫		RR, L H		⑯		RR, R H		⑫		RR, L H			
	⑰		RR, L H						⑱		RR, L H						⑬	

Select switch check

"SOFT"				"FIRM"				"NORMAL"			
Voltage	Terminal		Voltage	Terminal	Voltage	Terminal		Voltage	Terminal		Voltage
	(+)	(-)				(+)	(-)		(+)	(-)	
0 V	⑮	⑪	Approx 11V	⑨	0 V	⑨	⑪	Approx 11V	⑯	⑪	0 V
				⑱					⑱	⑪	

ADJUSTABLE SHOCK ABSORBER

Terminal Check (Cont'd)



CHECK 3: SELECT SWITCH CHECK

- 1 Disconnect select switch connector, then connect an ohmmeter to switch
- 2 Check for continuity between terminals at each switch position.

Terminal Switch position	C	S	N	F
"S" (Soft)	○	○		
"N" (Normal)	○		○	
"F" (Firm)	○			○

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

General Specifications

Item	Engine Vehicle model Grade	VG30ET			VG30E		
		2 seater		2+2 seater	2 seater		2+2 seater
		GL GL-L			SF GL GL-L	GL	GL-L
Suspension		Strut with coil spring					
Coil spring							
Wire diameter	mm (in)	14 8 (0 583)			13 8 (0 543)		13 9 (0 547)
Coil diameter	mm (in)	170 (6 69)					
Free length	mm (in)	268 5 (10 57)			312 5 (12 30)		318 5 (12 54)
Spring constant	N/mm (kg/mm, lb/in)	34 3 (3 5, 196)			23 8 (2 43, 136 1)		
Identification color		Yellow x 1, Orange x 1			Blue x 1, White x 1		Blue x 1, Orange x 1
Strut							
Type		Gas-filled double acting hydraulic			Double acting hydraulic		
		Adjustable			Non-adjustable		
Inner cylinder							
Inner diameter	mm (in)	35 0 - 35 1 (1 378 - 1 382)			32 0 - 32 1 (1 260 - 1 264)		
Maximum runout	mm (in)	Less than 0 2 (0 008)			Less than 0 2 (0 008)		
Piston rod							
Rod diameter	mm (in)	25 (0 98)			22 (0 87)		
Maximum runout	mm (in)	Less than 0 1 (0 004)			Less than 0 1 (0 004)		
Stroke							
Maximum/Minimum	mm (in)	189 8 - 193 8/39 5 (7 47 - 7 63/1 555)					
Damping force [at 0 2 m (1 0 ft)/sec]		Firm	Normal	Soft			
Expansion	N (kg, lb)	1,579 - 2,148 (161 - 219, 355 - 483)	1,579 - 2,148 (161 - 219, 355 - 483)	1,324 - 1,775 (135 - 181, 298 - 399)	834 - 1,128 (85 - 115, 187 - 254)		
Compression	N (kg, lb)	834 - 1,128 (85 - 115, 187 - 254)	834 - 1,128 (85 - 115, 187 - 254)	657 - 912 (67 - 93, 148 - 205)	363 - 520 (37 - 53, 82 - 117)		
Stabilizer bar diameter	mm (in)	24 (0 94)			22 (0 87)		
Tension rod diameter	mm (in)	18 (0 71)					

SERVICE DATA AND SPECIFICATIONS (S.D.S.)

Inspection and Adjustment

WHEEL ALIGNMENT (Unladen*1)

Camber	degree	-35' to 55'
Caster	degree	5° 50' - 7° 20'
Toe-in	mm (in)	1 - 3 (0.04 - 0.12)
	degree*2	6' - 17'
Kingpin inclination	degree	12° 55' - 14° 25'
Front wheel turning angle		
Toe-out-turn		
Inside/Outside	degree	22° 30' / 20°
Full turn		
Inside/Outside	degree	35° - 39° / 27° - 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)

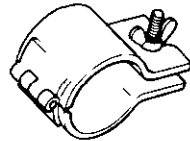
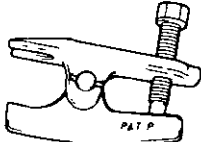
LOWER BALL JOINT

Stud end play	mm (in)	0.1 - 0.9 (0.004 - 0.035)
Turning torque	N m (kg-cm, in-lb)	
New part		1.5 - 4.9 (15 - 50, 13 - 43)
Used part		1.0 (10, 8.7) or more

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	59 - 69	6.0 - 7.0	43 - 51
Wheel nut	98 - 118	10 - 12	72 - 87
Knuckle arm and knuckle spindle (Strut assembly)			
Knuckle arm to side rod	54 - 98	5.5 - 10.0	40 - 72
Knuckle arm to knuckle spindle	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
Tie 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 - 54	4.3 - 5.5	31 - 40
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
Stabilizer bar to connecting rod	64 - 69	6.5 - 7.0	47 - 51
Suspension member			
Suspension member to body	69 - 88	7 - 9	51 - 65

SPECIAL SERVICE TOOLS

Tool number (Kent-Moore No)	Tool name
ST35490000 (J26083)	Gland packing wrench 
ST35652000 (-)	Clamp 
HT72520000 (J25730-A)	Ball joint remover 

NISSAN FACTORY SERVICE MANUAL CDROM END-USER LICENSE AGREEMENT

NOTICE TO USER: THIS IS A CONTRACT. BY PURCHASING AND USING THE SERVICE MANUAL ON CDROM, YOU ACCEPT ALL THE TERMS AND CONDITIONS OF THIS AGREEMENT.

This End User License Agreement accompanies the Service Manual on CDROM product and related explanatory materials. Please read this Agreement carefully. By purchasing and using the Service Manual on CDROM, you are implying that you have carefully read, agree with, and will adhere to the conditions set forth in this agreement. If you do not wish to accept the terms of this End User Agreement please do not use the Service Manual on CDROM. You will not be permitted to use the Service Manual on CDROM without consenting to this end user agreement.

Upon your acceptance of this Agreement, Courtesy Nissan grants to you a nonexclusive license to use the Service Manual on CDROM, provided that you agree to the following:

USE OF SOFTWARE

You may install the contents of the CD on a hard disk or other storage device for personal use only. Each Service Manual on CDROM comes with a single user license. Under no circumstances should the contents of the Service Manual CDROM be placed on a server for purposes of distributing or allowing access to the material over a network.

COPYRIGHT AND TRADEMARK RIGHTS

The Service Manual CDROM is owned by Courtesy Nissan and its structure and organization, all graphics and coding are considered intellectual property of Courtesy Nissan. The Service Manual on CDROM is also protected by United States Copyright Law and International Treaty provisions. This Agreement does not grant you any intellectual property or resale rights to the Service Manual CDROM.

RESTRICTIONS

You agree not to modify, adapt, translate, reverse engineer, decompile or disassemble the PDF file on the Service Manual CDROM. The Service Manual on CDROM is licensed and distributed by Courtesy Nissan for single user utilization of its contents only. Licensed users will be permitted to use the contents of the Service Manual CDROM for multimedia presentation to an audience from a single machine using a large display or projection device but the Service Manual CDROM may not otherwise be distributed, sold to or made accessible to multiple users.

NO WARRANTY

The software is being delivered to you AS IS and Courtesy Nissan makes no warranty as to its use or performance. COURTESY NISSAN DOES NOT AND CANNOT WARRANT THE PERFORMANCE OR RESULTS YOU MAY OBTAIN BY USING THE SERVICE MANUAL CDROM OR DOCUMENTATION, NOR MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, AS TO NONINFRINGEMENT OF THIRD-PARTY RIGHTS, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT WILL COURTESY NISSAN BE LIABLE TO YOU FOR ANY CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES FOR ANY REASON.

Courtesy Nissan
1777 North Central Expressway
Richardson, TX 75080
(800)527-1909

GOVERNING LAW AND GENERAL PROVISIONS

This Agreement will be governed by the laws of the State of Texas, USA, excluding the application of its conflicts of law rules. This Agreement will not be governed by the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded. If any part of this Agreement is found void and unenforceable, it will not affect the validity of the balance of the Agreement, which shall remain valid and enforceable according to its terms. You agree that the Service Manual on CDROM will not be shipped, transferred or exported into any country or used in any manner prohibited by the United States Export Administration act or any other export laws, restrictions or regulations. This Agreement shall automatically terminate upon failure by you to comply with its terms. This Agreement may only be modified in writing signed by and authorized officer for Courtesy Nissan.

Courtesy Nissan
1777 North Central Expressway
Richardson, TX 75080
USA

YOUR ACCEPTANCE OF THE FOREGOING AGREEMENT IS IMPLIED UPON PURCHASING AND USING THE SERVICE MANUAL CDROM.