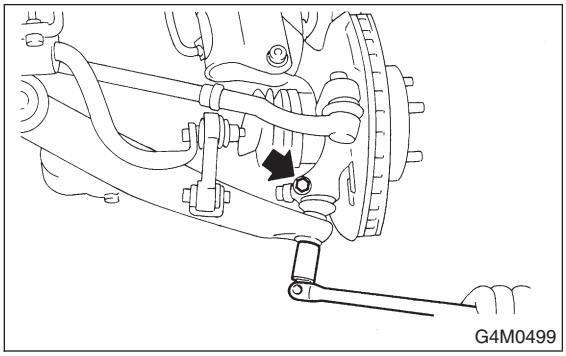
4. Front Ball Joint S202114

A: REMOVAL S202114A18

1) Remove the wheels.
2) Pull out the cotter pin from the ball stud, remove the castle nut, and extract the ball stud from the transverse link.
3) Remove the bolt securing the ball joint to the housing.



4) Extract the ball joint from the housing.

B: INSTALLATION S202114A11

1) Install ball joint onto housing.

Tightening torque (Bolt):
49 N·m (5.0 kgf-m, 36 ft-lb)

CAUTION:
Do not apply grease to tapered portion of ball stud.

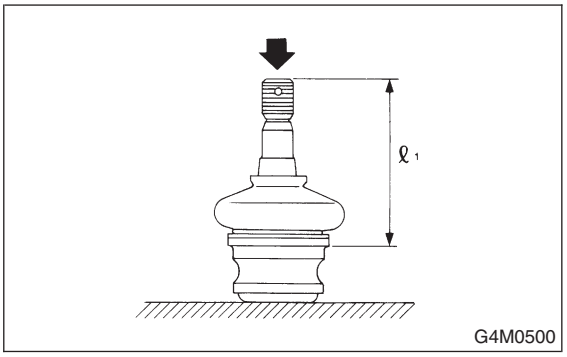
2) Connect ball joint to transverse link.

Tightening torque (Castle nut):
39 N·m (4.0 kgf-m, 29 ft-lb)

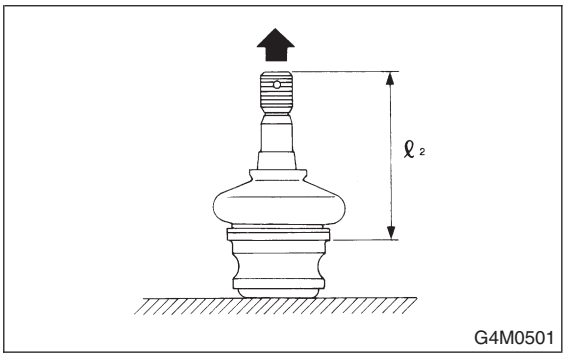
3) Retighten castle nut further within 60° until a slot in castle nut is aligned with the hole in ball stud end, then insert new cotter pin and bend it around castle nut.
4) Install front wheels.

C: INSPECTION S202114A10

1) Measure play of ball joint by the following procedures. Replace with a new one when the play exceeds the specified value.
(1) With 686 N (70 kgf, 154 lb) loaded in the direction shown in the figure, measure dimension ℓ_1.



(2) With 686 N (70 kgf, 154 lb) loaded in the opposite direction shown in the figure, measure dimension ℓ_2.



(3) Calculate plays from the following formula.
$S = \ell_2 - \ell_1$
(4) When plays is larger than the following value, replace with a new one.

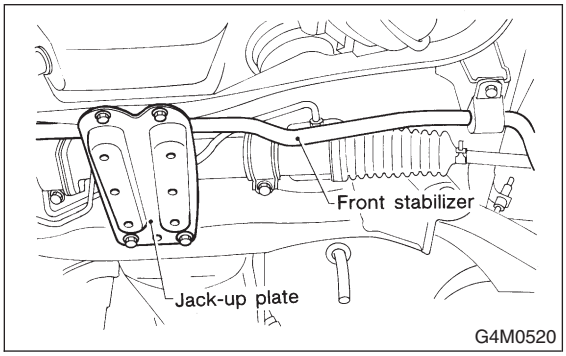
FRONT BALL JOINT
Specified play for replacement: S
Less than 0.3 mm (0.012 in)

2) When play is smaller than the specified value, visually inspect the dust cover.
3) The ball joint and cover that have been removed must be checked for wear, damage or cracks, and any defective part must be replaced.
4) If the dust cover is damaged, replace with the new ball joint.

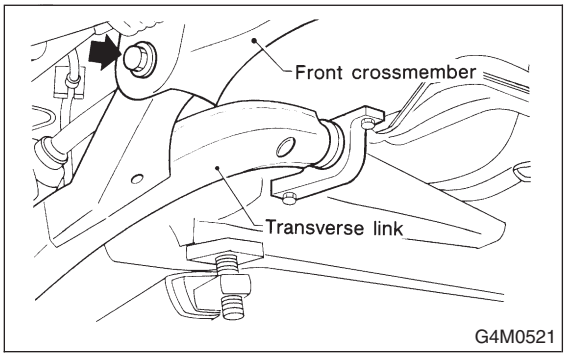
7. Front Crossmember S202108

A: REMOVAL S202108A18

1) Disconnect ground cable from battery.
2) Loosen front wheel nuts.
3) Jack-up vehicle, support it with safety stands (rigid racks), and remove front tires and wheels.
4) Remove both stabilizer and jack-up plate.



5) Disconnect tie-rod end from housing.
6) Remove front exhaust pipe.
7) Remove front transverse link from front crossmember and body.



8) Remove nuts attaching engine mount cushion rubber to crossmember.
9) Remove self-locking nuts connecting steering U/J and pinion shaft.
10) Lift engine by approx. 10 mm (0.39 in) by using chain block.
11) Support crossmember with a jack, remove nuts securing crossmember to body and lower crossmember gradually along with steering gearbox.

CAUTION:
When removing crossmember downward, be careful that tie-rod end does not interfere with DOJ boot.

B: INSTALLATION S202108A11

1) Install in the reverse order of removal.

CAUTION:
Always tighten rubber bushing location when wheels are in full contact with the ground and vehicle is curb weight.

Tightening torque:
Transverse link bushing to crossmember:
98 N·m (10.0 kgf-m, 72 ft-lb)
Stabilizer to bush:
25 N·m (2.5 kgf-m, 18.1 ft-lb)
Tie-rod end to housing:
27.0 N·m (2.75 kgf-m, 19.9 ft-lb)
Front cushion rubber to crossmember:
83 N·m (8.5 kgf-m, 61 ft-lb)
Universal joint to pinion shaft:
24 N·m (2.4 kgf-m, 17.4 ft-lb)
Crossmember to body:
98 N·m (10.0 kgf-m, 72 ft-lb)

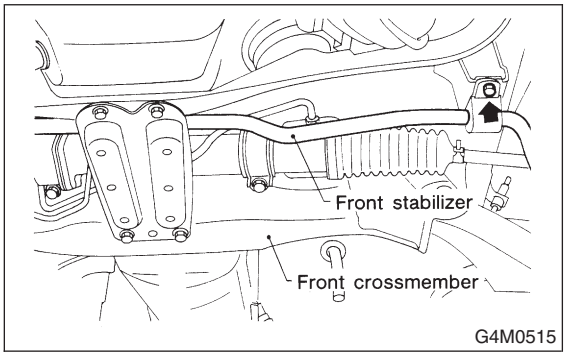
2) Purge air from power steering system.

NOTE:
Check wheel alignment and adjust if necessary.

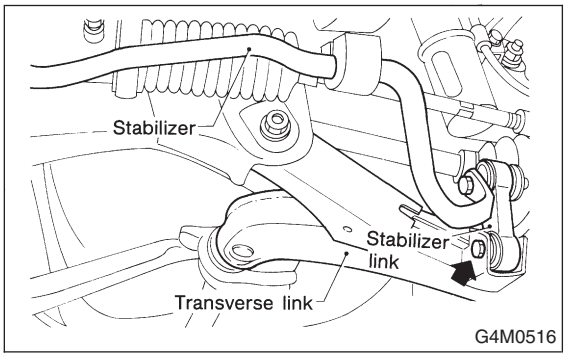
6. Front Stabilizer S202119

A: REMOVAL S202119A18

1) Jack-up the front part of the vehicle, support it with safety stands (rigid racks).
2) Remove bolts which secure stabilizer to crossmember.



3) Remove bolts which secure stabilizer link to front transverse link.

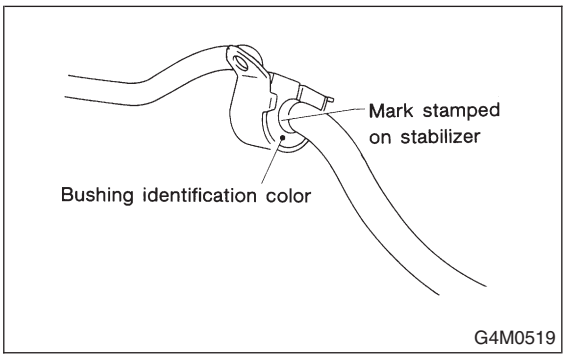


4) Remove jack-up plate from lower part of crossmember.

B: INSTALLATION S202119A11

1) Install in the reverse order of removal.

NOTE:
● Install bushing (on front crossmember side) while aligning it with paint mark on stabilizer.
● Ensure that bushing and stabilizer have the same identification colors when installing.



2) Always tighten rubber bushing location when wheels are in full contact with the ground and vehicle is curb weight.

Tightening torque:
Jack-up plate to crossmember:
18 N·m (1.8 kgf-m, 13.0 ft-lb)
Stabilizer link to front transverse link:
29 N·m (3.0 kgf-m, 21.7 ft-lb)
Stabilizer to crossmember:
25 N·m (2.5 kgf-m, 18.1 ft-lb)

C: INSPECTION S202119A10

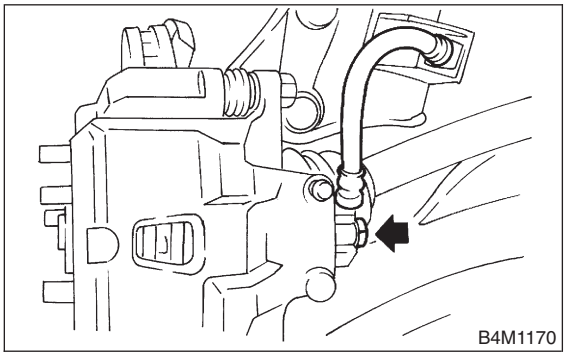
1) Check bushing for cracks, fatigue or damage.
2) Check stabilizer links for deformities, cracks, or damage, and bushing for protrusions from the hole of stabilizer link.

5. Front Strut S202115

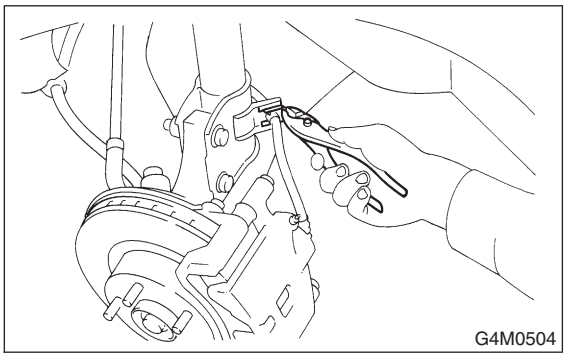
A: REMOVAL S202115A18

1) Remove wheel.
2) Depress brake pedal and hold it down using a wooden block etc.
3) Remove union bolts from caliper.

CAUTION:
Use brake hose cap to prevent brake fluid from escaping.


B4M1170

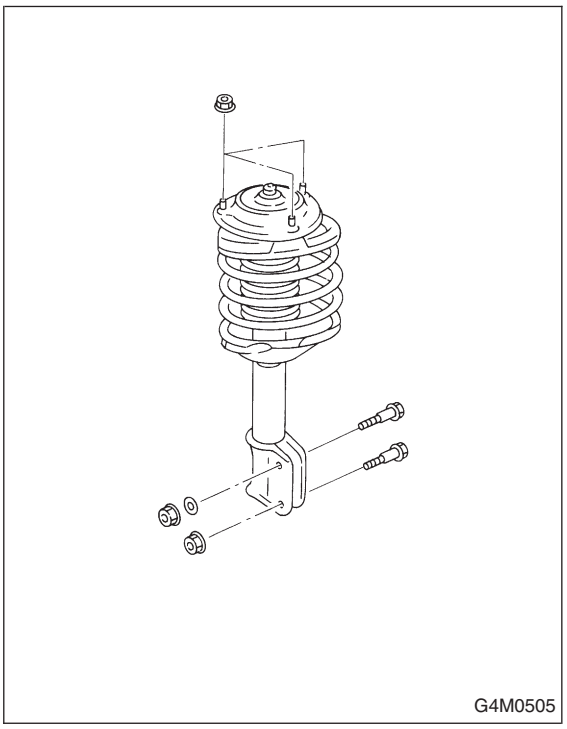
4) Remove brake hose clamp and disconnect brake hose from strut. Attach brake hose to body using gum tape.


G4M0504

5) Scribe an alignment mark on the camber adjusting bolt which secures strut to housing.
6) Remove bolt securing the ABS sensor harness on models equipped with ABS.
7) Remove two bolts securing housing to strut.

CAUTION:
While holding head of adjusting bolt, loosen self-locking nut.

8) Remove the three nuts securing strut mount to body.


G4M0505

B: INSTALLATION S202115A11

1) Install upper strut mount at upper side of strut to body and tighten with nuts.

Tightening torque:
20 N·m (2.0 kgf-m, 14.5 ft-lb)

2) Install ABS sensor harness to strut. (ABS equipped models)

Tightening torque:
32 N·m (3.3 kgf-m, 24 ft-lb)

3) Position aligning mark on camber adjustment bolt with aligning mark on lower side of strut.

CAUTION:
• While holding head of adjusting bolt, tighten self-locking nut.
• Be sure to use new self-locking nut.

Tightening torque:
152 N·m (15.5 kgf-m, 112 ft-lb)

4) Install brake hose at lower side of strut with clamp.
5) Install brake hose to brake caliper.

Tightening torque:
18 N·m (1.8 kgf-m, 13.0 ft-lb)

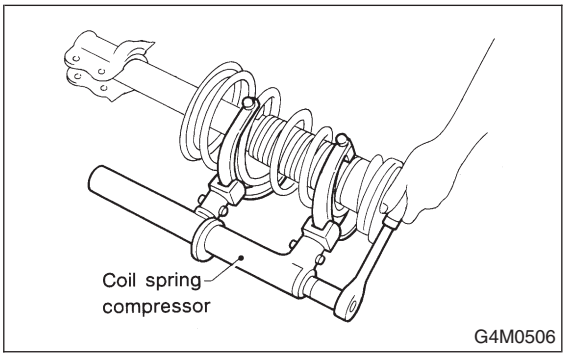
CAUTION:
Be sure to bleed air from brake system.

6) Install wheels.

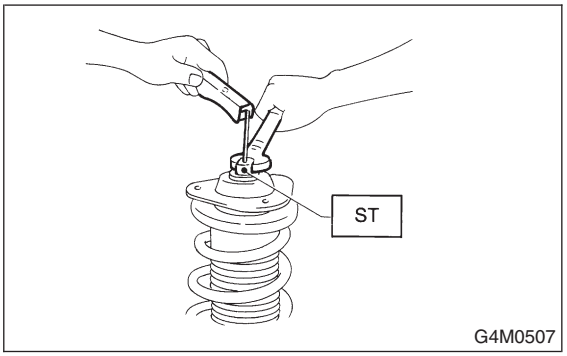
NOTE:
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY S202115A06

1) Using a coil spring compressor, compress coil spring.



2) Using ST, remove self-locking nut.
ST 927760000 STRUT MOUNT SOCKET



3) Remove strut mount, upper spring seat and rubber seat from strut.
4) Gradually decreasing compression force, and remove coil spring.
5) Remove dust cover and helper spring.

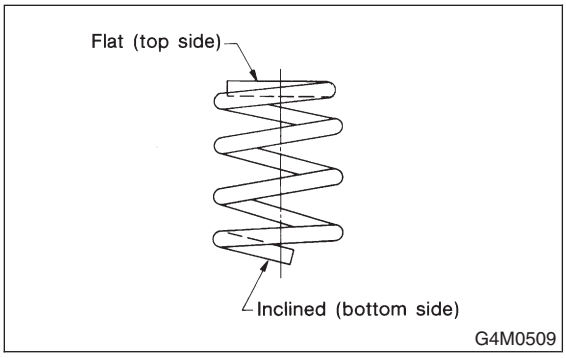
D: ASSEMBLY S202115A02

1) Before installing coil spring, strut mount, etc., on the strut, check for the presence of air in the dampening force generating mechanism of the strut since air prevents proper dampening force from being produced.
2) Checking for the presence of air
   (1) Place the strut vertically with the piston rod facing up.
   (2) Move the piston rod to the center of its entire stroke.
   (3) While holding the piston rod end with fingertips, move the rod up and down.
   (4) If the piston rod moves at least 10 mm (0.39 in) in step (3), purge air from the strut.
3) Air purging procedure
   (1) Place the strut vertically with the piston rod facing up.
   (2) Fully extend the piston rod.
   (3) With the piston rod fully extended, place the piston rod side down. The strut must stand vertically.
   (4) Fully contract the piston rod.
   (5) Repeat the former four steps, 3 or 4 times.

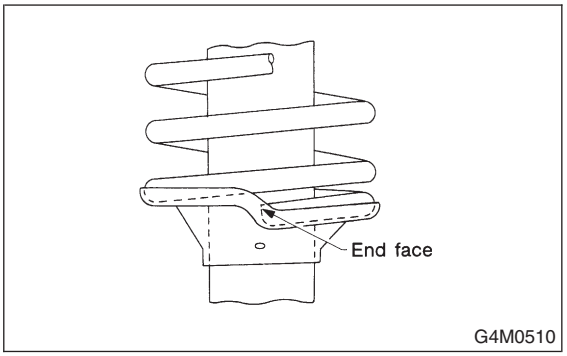
NOTE:
After completely purging air from the strut, be sure to place the strut with the piston rod facing up. If it is laid down, check for entry of air in the strut as outlined under “Cheking for the presence of air”.

4) Using a coil spring compressor, compress the coil spring.

NOTE:
Make sure that the vertical installing direction of coil spring is as shown in figure.

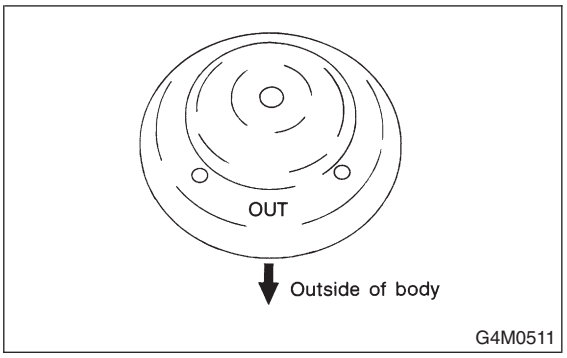


5) Set the coil spring correctly so that its end face fits well into the spring seat as shown.
6) Install helper and dust cover to the piston rod.



7) Pull the piston rod fully upward, and install rubber seat and spring seat.

NOTE:
Ensure that upper spring seat is positioned with “OUT” mark facing outward.



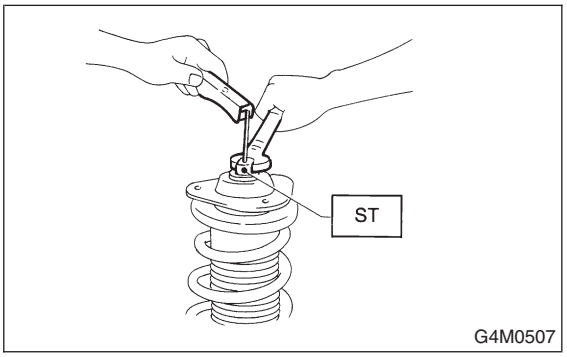
8) Install strut mount to the piston rod, and tighten the self-locking nut temporarily.

CAUTION:
Be sure to use a new self-locking nut.

9) Using hexagon wrench to prevent strut rod from turning, tighten self-locking nut with ST.

Tightening torque:
54 N·m (5.5 kgf-m, 39.8 ft-lb)

ST 927760000 STRUT MOUNT SOCKET



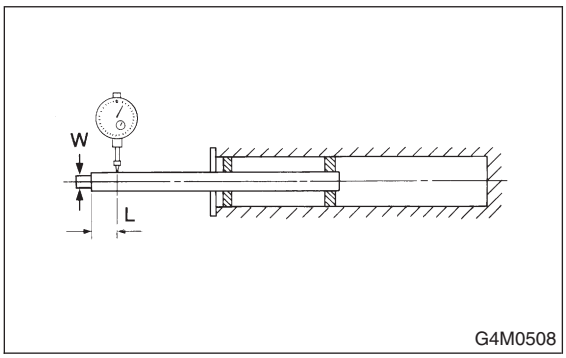
10) Loosen the coil spring carefully.

E: INSPECTION S202115A10

Check the disassembled parts for cracks, damage and wear, and replace with new parts if defective.

1. DAMPER STRUT S202115A1001

1) Check for oil leakage.
2) Move the piston rod up and down to check its operates smoothly without any binding.
3) Play of piston rod
● Measure the play as follows:
Fix outer shell and fully extend the rod. Set a dial gauge at the end of the rod: L [10 mm (0.39 in)], then apply a force of: W [±20 N (±2 kgf, ±4 lb)] to threaded portion. With the force of ±20 N (±2 kgf, ±4 lb) applied, read both dial gauge readings, P_1 and P_2.



G4M0508

The free play is determined by the following equation:

Limit of play:
Less than 0.8 mm (0.031 in)

If the play is greater, replace the strut.

2. STRUT MOUNT S202115A1002

Check rubber part for creep, cracks and deterioration, and replace it with new one if defective.

3. DUST COVER S202115A1003

If any cracks or damage are found, replace it with a new one.

4. COIL SPRING S202115A1004

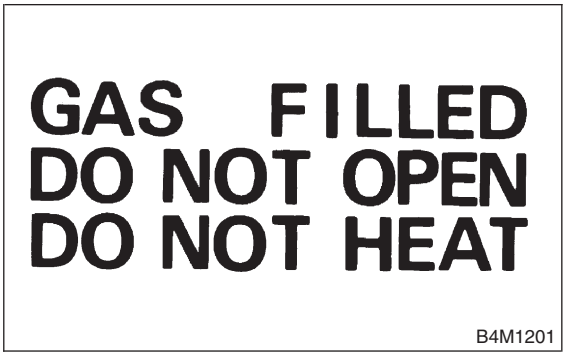
One having permanent strain should be replaced with a new one. When vehicle posture is uneven, although there are no considerable reasons like tire puncture, uneven loading, etc., check coil spring for its free length, cracks, etc., referring to specifications, and replace it with a new one if defective.

5. HELPER S202115A1005

Replace it with new one if cracked or damaged.

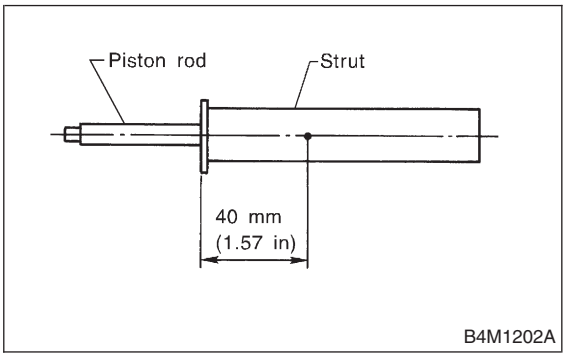
F: DISPOSAL S202115A07

CAUTION:
● On struts which have "GAS FILLED" marked on outer housing under spring seat, completely discharge gas before disposing, following the methods below.
● Do not disassemble strut damper or place into a fire.
● Drill holes before disposing of gas filled struts.
● Before handling gas filled struts, be sure to wear goggles to protect eyes from gas, oil and/or filings.



B4M1201

1) Place gas filled strut on a flat and level surface with piston rod fully extended.
2) Using a 2 to 3 mm (0.08 to 0.12 in) dia. drill, make holes in areas shown in the figure.

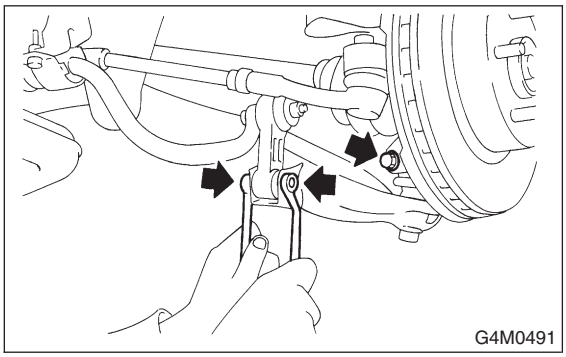


B4M1202A

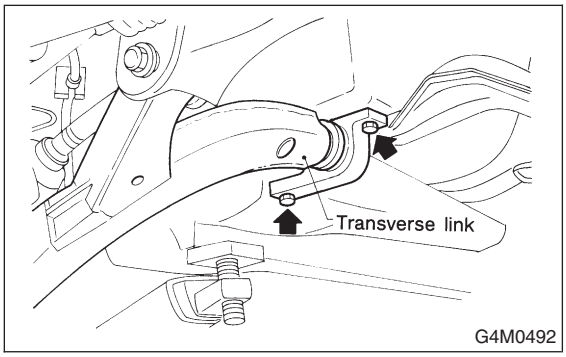
3. Front Transverse Link S202113

A: REMOVAL S202113A18

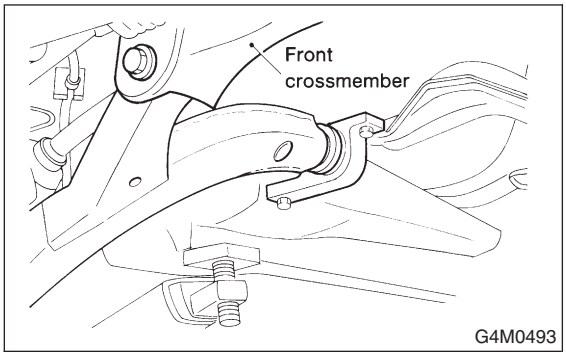
1) Disconnect stabilizer link from transverse link.
2) Remove bolt securing ball joint of transverse link to housing.



3) Remove nuts (do not remove bolts.) securing transverse link to crossmember.
4) Remove two bolts securing bushing bracket of transverse link to vehicle body at rear bushing location.



5) Extract ball joint from housing.
6) Remove bolts securing transverse link to crossmember and extract transverse link from crossmember.



B: INSTALLATION S202113A11

1) Temporarily tighten the two bolts used to secure rear bushing of the transverse link to body.

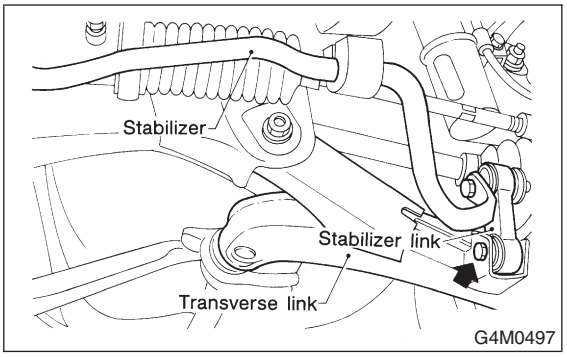
NOTE:
These bolts should be tightened to such an extent that they can still move back and forth in the oblong shaped hole in the bracket (which holds the bushing).

2) Install bolts used to connect transverse link to crossmember and temporarily tighten with nuts.

CAUTION:
Discard loosened self-locking nut and replace with a new one.

3) Insert ball joint into housing.
4) Connect stabilizer link to transverse link, and temporarily tighten bolts.

CAUTION:
Discard loosened self-locking nut and replace with a new one.



5) Tighten the following points in the order shown afterward when wheels are in full contact with the ground and vehicle is curb weight.
(1) Transverse link and stabilizer

Tightening torque:
29 N·m (3.0 kgf-m, 21.7 ft-lb)

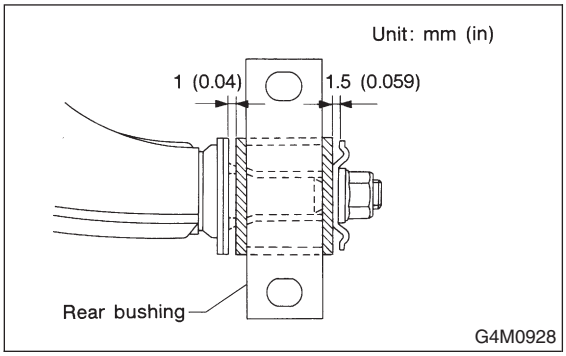
(2) Transverse link and crossmember

Tightening torque:
98 N·m (10.0 kgf-m, 72 ft-lb)

(3) Transverse link rear bushing and body

Tightening torque:
245 N·m (25 kgf-m, 181 ft-lb)

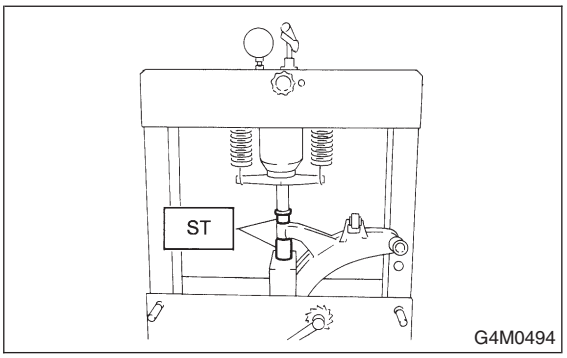
NOTE:
● Move rear bushing back and forth until transverse link- to-rear bushing clearance is established (as indicated in figure.) before tightening.
● Check wheel alignment and adjust if necessary.



C: DISASSEMBLY S202113A06

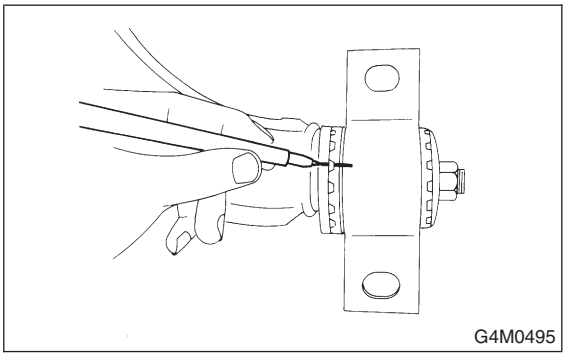
1. FRONT BUSHING S202113A0601

Using ST, press front bushing out of place.
ST 927680000 INSTALLER & REMOVER SET



2. REAR BUSHING S202113A0602

1) Scribe an aligning mark on transverse link and rear bushing.



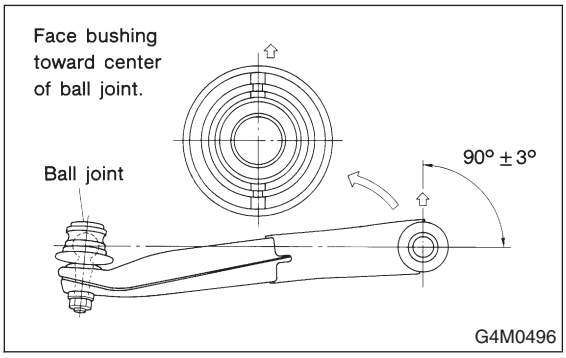
2) Loosen nut and remove rear bushing.

D: ASSEMBLY S202113A02

1. FRONT BUSHING S202113A0201

To reassemble, reverse disassembly procedures.

CAUTION:
Install front bushing in correct direction, as shown in figure.



2. REAR BUSHING S202113A0202

1) Install rear bushing to transverse link and align aligning marks scribed on the two.
2) Tighten self-locking nut.

CAUTION:
• Discard loosened self-locking nut and replace with a new one.
• While holding rear bushing so as not to change position of aligning marks, tighten self-locking nut.

Tightening torque:
186 N·m (19.0 kgf-m, 137 ft-lb)

E: INSPECTION S202113A10

1) Check transverse link for wear, damage and cracks, and correct or replace if defective.
2) Check bushings for cracks, fatigue or damage.
3) Check rear bushing for oil leaks.

1. General Description S202001

A: SPECIFICATIONS S202001E49

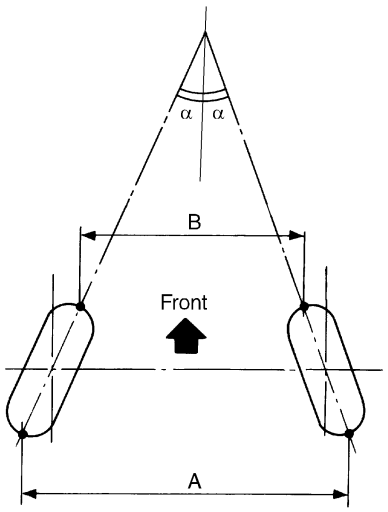
1. STABILIZER S202001E4901

Model		Bar dia.
COUPE		19 mm (0.75 in)
SEDAN	2200 cc	18 mm (0.71 in)
	2500 cc	19 mm (0.75 in)
WAGON		19 mm (0.75 in)
OUTBACK		19 mm (0.75 in)

2. WHEEL ALIGNMENT S202001E4902

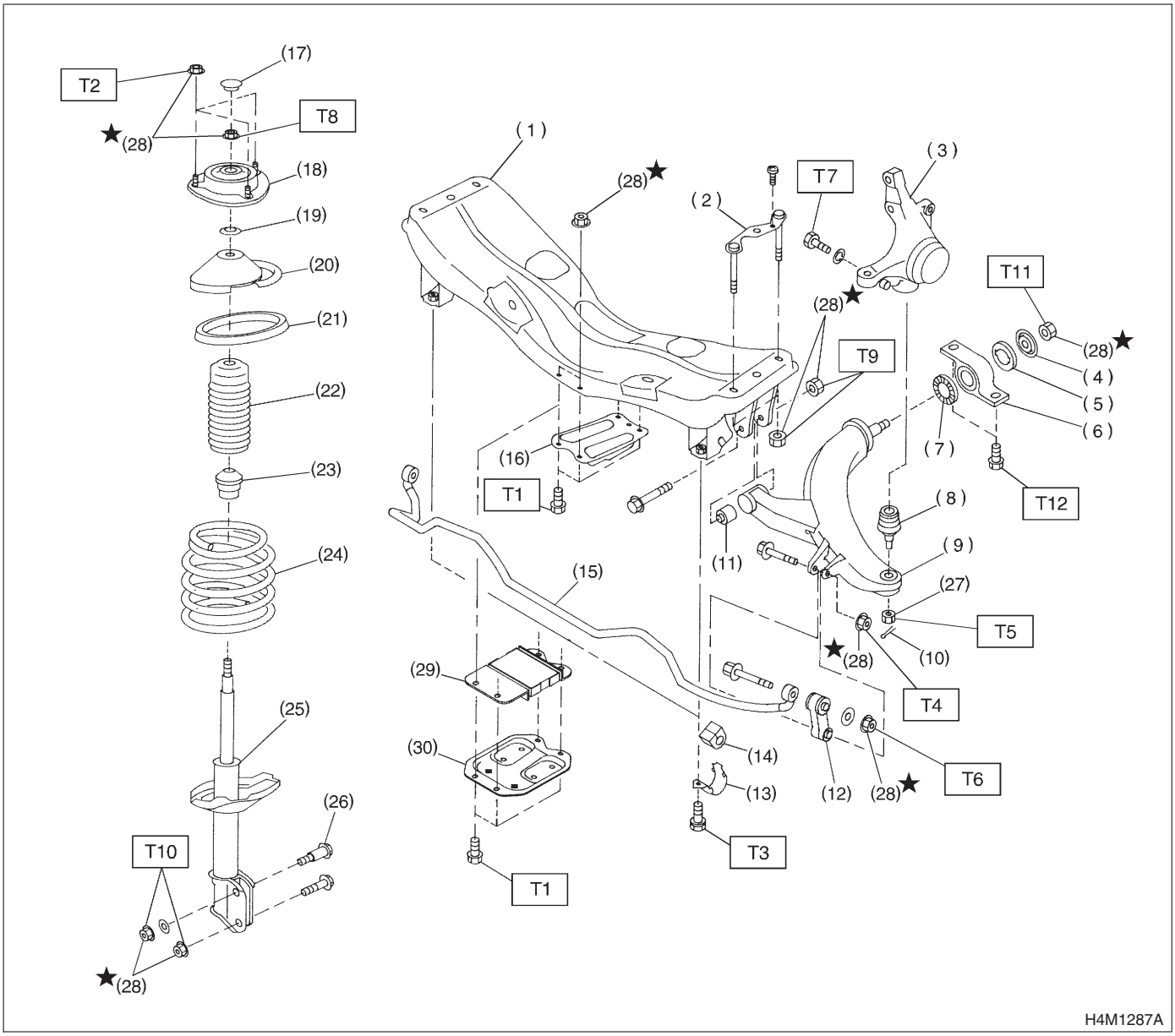
	2200 cc			2500 cc	
	Sedan, Coupe	Wagon	OUTBACK	Coupe	Sedan
Camber (tolerance: ±0°30′)	0°	0°	0°	–0°25′	–0°25′
Caster (common difference: ±1°)	3°	3°	3°	3°05′	3°05′
Toe-in	0±3 mm (0±0.12 in) Each toe-in angle: –0°09′ [when toe-in is –3 mm (–0.12 in)] Each toe-out angle: 0°09′ [when toe-out is 3 mm (0.12 in)]				
Kingpin angle	14°	14°	14°	14°	14°
Wheel arch height [tolerance: $^{+12}/_{-24}$ mm ($^{+0.47}/_{-0.94}$ in)]	391 mm (15.39 in)	391 mm (15.39 in)	394 mm (15.51 in)	371 mm (14.61 in)	371 mm (14.61 in)

NOTE:
- Front and rear toe-ins and front camber can be adjusted. If toe-in or camber tolerance exceeds specifications, adjust toe-in and camber to the specification.
- The other items indicated in the specification table cannot be adjusted. If the other items exceeds specifications, check suspension parts and connections for deformities; and replace with new ones as required.



A — B = Positive .... Toe-in
Negative .... Toe-out
α = Each toe-in angle
B4M2250A

B: COMPONENT S202001A05



(1) Crossmember
(2) Bolt ASSY
(3) Housing
(4) Washer
(5) Stop rubber (Rear)
(6) Rear bushing
(7) Stop rubber (Front)
(8) Ball joint
(9) Transverse link
(10) Cotter pin
(11) Front bushing
(12) Stabilizer link
(13) Clamp
(14) Bushing
(15) Stabilizer
(16) Jack-up plate (Except 2500 cc MT model)
(17) Dust seal
(18) Strut mount
(19) Spacer
(20) Upper spring seat
(21) Rubber seat
(22) Dust cover
(23) Helper
(24) Coil spring
(25) Damper strut
(26) Adjusting bolt
(27) Castle nut
(28) Self-locking nut
(29) Dynamic damper (2500 cc MT model)
(30) Jack-up plate (2500 cc MT model)

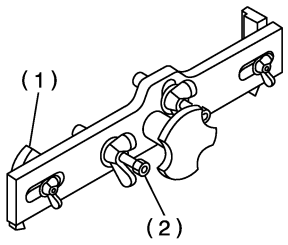
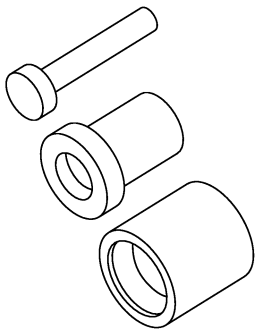
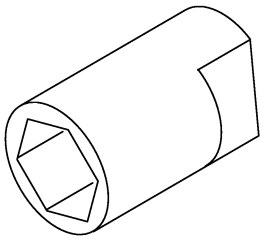
Tightening torque: N·m (kgf-m, ft-lb)
T1: 18 (1.8, 13.0)
T2: 20 (2.0, 14.5)
T3: 25 (2.5, 18.1)
T4: 29 (3.0, 21.7)
T5: 39 (4, 29)
T6: 44 (4.5, 32.5)
T7: 49 (5.0, 36)
T8: 54 (5.5, 39.8)
T9: 98 (10.0, 72)
T10: 152 (15.5, 112)
T11: 186 (19.0, 137)
T12: 245 (25.0, 181)

C: CAUTION S202001A03

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Use SUBARU genuine grease etc. or the equivalent. Do not mix grease etc. with that of another grade or from other manufacturers.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Apply grease onto sliding or revolution surfaces before installation.
- Before installing O-rings or snap rings, apply sufficient amount of grease to avoid damage and deformation.
- Before securing a part on a vice, place cushioning material such as wood blocks, aluminum plate, or shop cloth between the part and the vice.

D: PREPARATION TOOL S202001A17

1. SPECIAL TOOL S202001A1703

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 B4M2378A	927380002	ADAPTER	Used as an adapter for camber & caster gauge when measuring camber and caster. (1) 28199AC000 PLATE (2) 28199AC010 BOLT
 B4M2385	927680000	INSTALLER & REMOVER	Used for replacing transverse link bushing.
 B4M2384	927760000	STRUT MOUNT SOCKET	Used for disassembling and assembling strut mount.

2. GENERAL TOOL S202001A1704

TOOL NAME	REMARKS
Alignment Gauge	Used for wheel alignment measurement.
Turning Radius Gauge	Used for wheel alignment measurement.
Toe-in Gauge	Used for toe-in measurement.
Dial Gauge	Used for damper strut measurement.

8. General Diagnostics Table S202121

A: INSPECTION S202121A10

1. IMPROPER VEHICLE POSTURE OR IMPROPER WHEEL ARCH HEIGHT S202121A1001

Possible causes	Countermeasures
(1) Permanent distortion or breakage of coil spring	Replace.
(2) Unsmooth operation of damper strut	Replace.
(3) Installation of wrong strut	Replace with proper parts.
(4) Installation of wrong coil spring	Replace with proper parts.

2. POOR RIDE COMFORT S202121A1002

1) Large rebound shock
2) Rocking of vehicle continues too long after running over bump and/or hump.
3) Large shock in bumping

Possible causes	Countermeasures
(1) Breakage of coil spring	Replace.
(2) Overinflation pressure of tire	Adjust.
(3) Improper wheel arch height	Adjust or replace coil springs with new ones.
(4) Fault in operation of damper strut	Replace.
(5) Damage or deformation of strut mount	Replace.
(6) Unsuitability of maximum and/or minimum length of damper strut	Replace with proper parts.
(7) Deformation or loss of bushing	Replace.
(8) Deformation or damage of helper in strut assembly	Replace.

3. NOISE S202121A1003

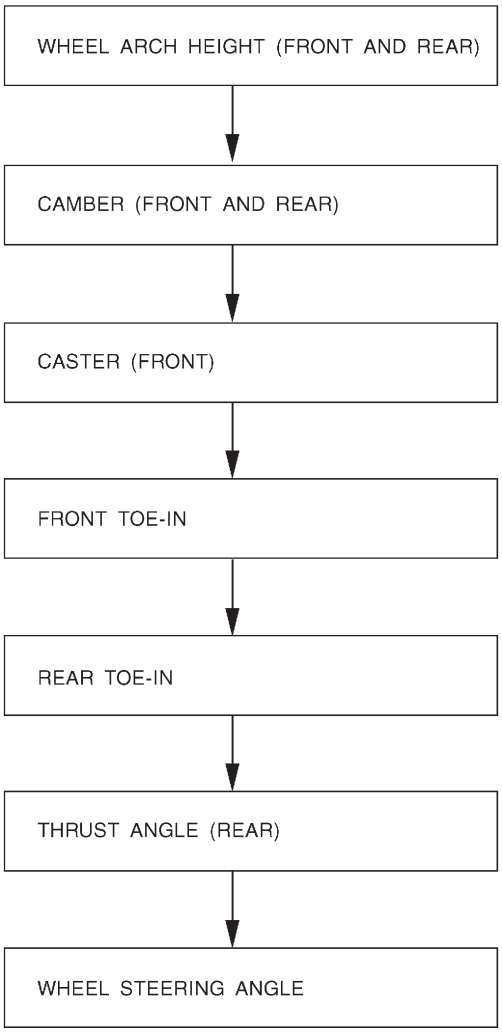
Possible causes	Countermeasures
(1) Wear or damage of damper strut component parts	Replace.
(2) Loosening of suspension link installing bolt	Retighten to the specified torque.
(3) Deformation or loss of bushing	Replace.
(4) Unsuitability of maximum and/or minimum length of damper strut	Replace with proper parts.
(5) Breakage of coil spring	Replace.
(6) Wear or damage of ball joint	Replace.

MEMO:

2. Wheel Alignment S202116

A: INSPECTION S202116A10

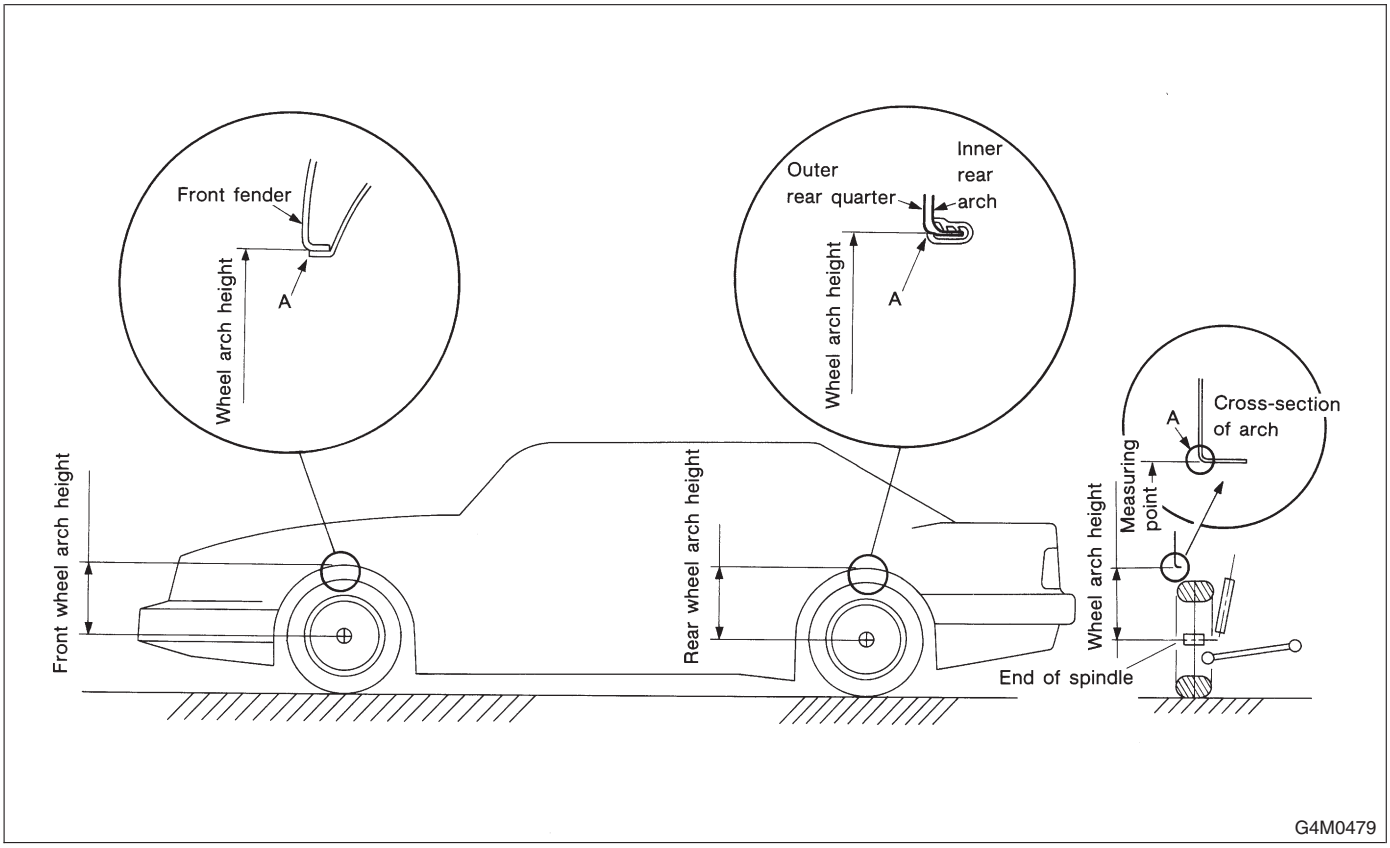
Check, adjust and/or measure wheel alignment in accordance with procedures indicated in figure.



B4M1088A

1. WHEEL ARCH HEIGHT (FRONT AND REAR) S202116A1001

1) Adjust tire pressure to specifications.
2) Set vehicle under “curb weight” conditions. (Empty luggage compartment, install spare tire, jack, service tools, and top up fuel tank.)
3) Set steering wheel in a wheel-forward position.
4) Suspend thread from wheel arch (point “A” in figure) to determine a point directly above center of spindle.
5) Measure distance between measuring point “A” and center of spindle.

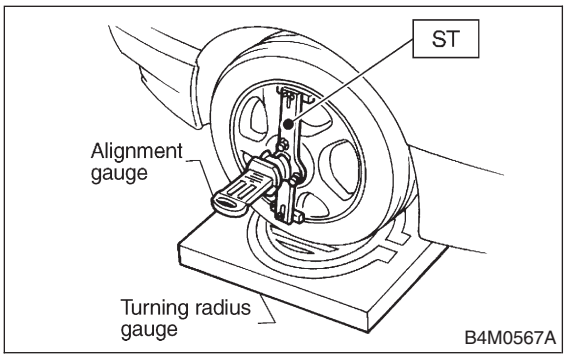


Vehicles		Specified wheel arch height
2200 cc	Coupe, Sedan	391^{+12}_{-24} mm ($15.39^{+0.47}_{-0.94}$ in)
	Wagon	391^{+12}_{-24} mm ($15.39^{+0.47}_{-0.94}$ in)
	OUTBACK	394^{+12}_{-24} mm ($15.51^{+0.47}_{-0.94}$ in)
2500 cc	Coupe	371^{+12}_{-24} mm ($14.61^{+0.47}_{-0.94}$ in)
	Sedan	371^{+12}_{-24} mm ($14.61^{+0.47}_{-0.94}$ in)

2. CAMBER S202116A1002

• Inspection

1) Place front wheel on turning radius gauge. Make sure ground contacting surfaces of front and rear wheels are set at the same height.
2) Set ST into the center of the wheel, and then install the wheel alignment gauge.
ST 927380000 ADAPTER



NOTE:
Refer to the "SPECIFICATIONS" for the camber values. <Ref. to FS-2 SPECIFICATIONS, General Description.>

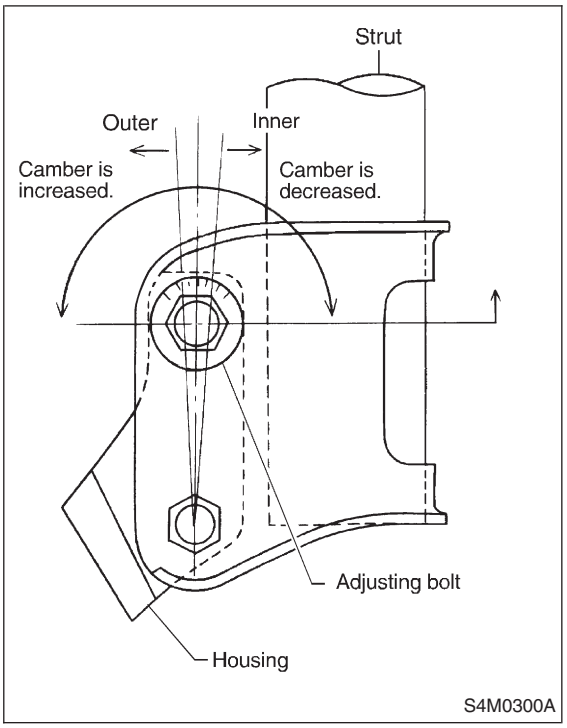
• Front camber adjustment

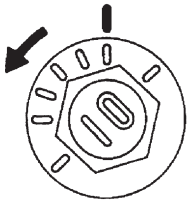
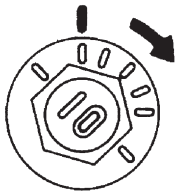
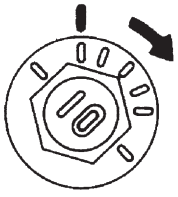
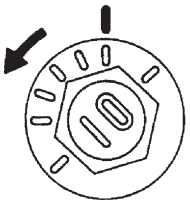
1) Loosen two self-locking nuts located at lower front portion of strut.

CAUTION:
• When adjusting bolt needs to be loosened or tightened, hold its head with a wrench and turn self-locking nut.
• Discard loosened self-locking nut and replace with a new one.

2) Turn camber adjusting bolt so that camber is set at the specification.

NOTE:
Moving the adjusting bolt by one scale graduation changes camber by approximately 0°10′.



	Left side	Right side
Camber is increased.	 Rotate counter-clockwise. B4M0190	 Rotate clockwise. B4M0350
Camber is decreased.	 Rotate clockwise. B4M0350	 Rotate counter-clockwise. B4M0190

3) Tighten the two self-locking nuts.

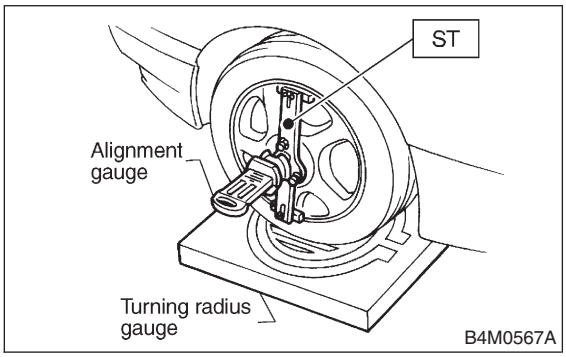
Tightening torque:
152 N·m (15.5 kgf-m, 112 ft-lb)

3. CASTER S202116A1003

● Inspection

1) Place front wheel on turning radius gauge. Make sure ground contacting surfaces of front and rear wheels are set at the same height.
2) Set ST into the center of the wheel, and then install the wheel alignment gauge.
ST 927380000 ADAPTER

NOTE:
Refer to the "SPECIFICATIONS" for the caster value. <Ref. to FS-2 SPECIFICATIONS, General Description.>



4. FRONT WHEEL TOE-IN S202116A1004

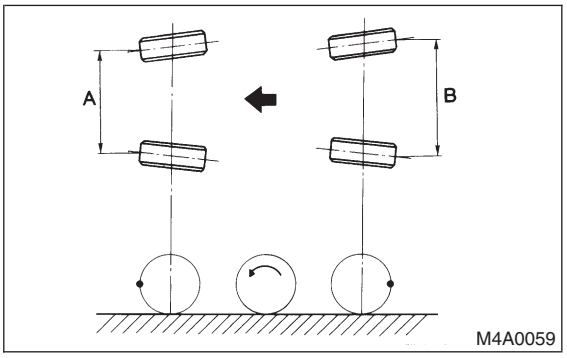
● Inspection

1) Using a toe gauge, measure front wheel toe-in.

Toe-in: 0±3 mm (0±0.12 in)

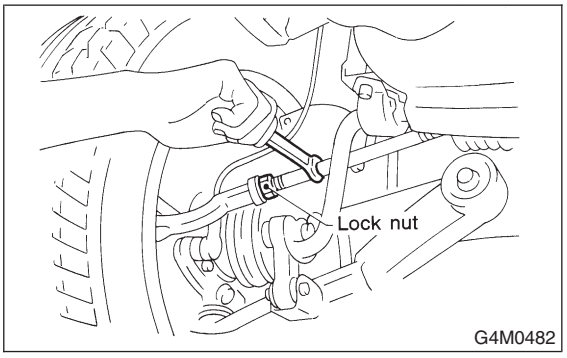
2) Mark rear sides of left and right tires at height corresponding to center of spindles and measure distance "B" between marks.
3) Move vehicle forward so that marks line up with front sides at height corresponding to center of spindles.
4) Measure distance "A" between left and right marks. Toe-in can then be obtained by the following equation:

B – A = Toe-in



● Adjustment

1) Loosen the left and right side steering tie-rods lock nuts.
2) Turn the left and right tie rods equal amounts until the toe-in is at the specification.
Both the left and right tie-rods are right-hand threaded. To increase toe-in, turn both tie-rods clockwise equal amounts (as viewed from the inside of the vehicle).
3) Tighten tie-rod lock nut.



Tightening torque:
83 N·m (8.5 kgf-m, 61.5 ft-lb)

CAUTION:
Correct tie-rod boot, if it is twisted.

NOTE:
Check the left and right wheel steering angle is within specifications.

5. STEERING ANGLE S202116A1005

● Inspection

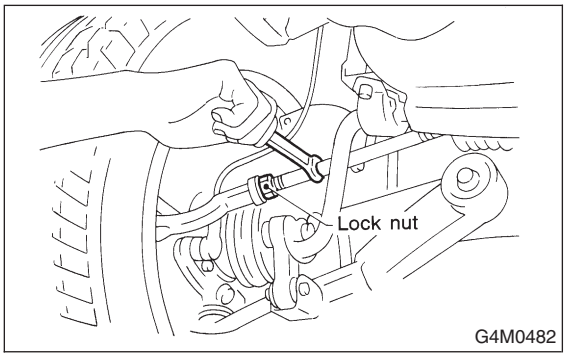
1) Place vehicle on a turning radius gauge.
2) While depressing brake pedal, turn steering wheel fully to the left and right. With steering wheel held at each fully turned position, measure both the inner and outer wheel steering angle.

Steering angle:
Inner wheel 37.4°±1.5°
Outer wheel 32.5°±1.5°

● Adjustment

Turn tie-rod to adjust steering angle of both inner and outer wheels.

CAUTION:
- **Check toe-in.**
- **Correct boot if it is twisted.**



1. General Description S201001

A: SPECIFICATIONS S201001E49

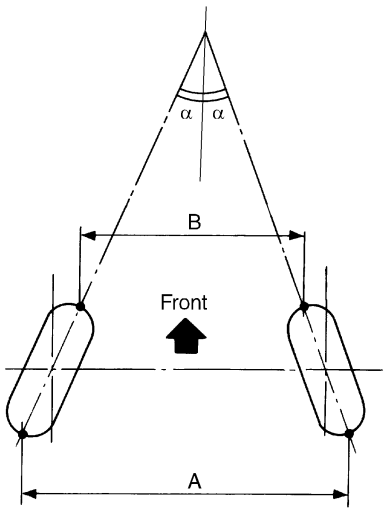
1. STABILIZER S201001E4901

Model		Bar dia.
COUPE		13 mm (0.51 in)
SEDAN	2200 cc	13 mm (0.51 in)
	2500 cc	
WAGON		13 mm (0.51 in)
OUTBACK		13 mm (0.51 in)

2. WHEEL ALIGNMENT S201001E4902

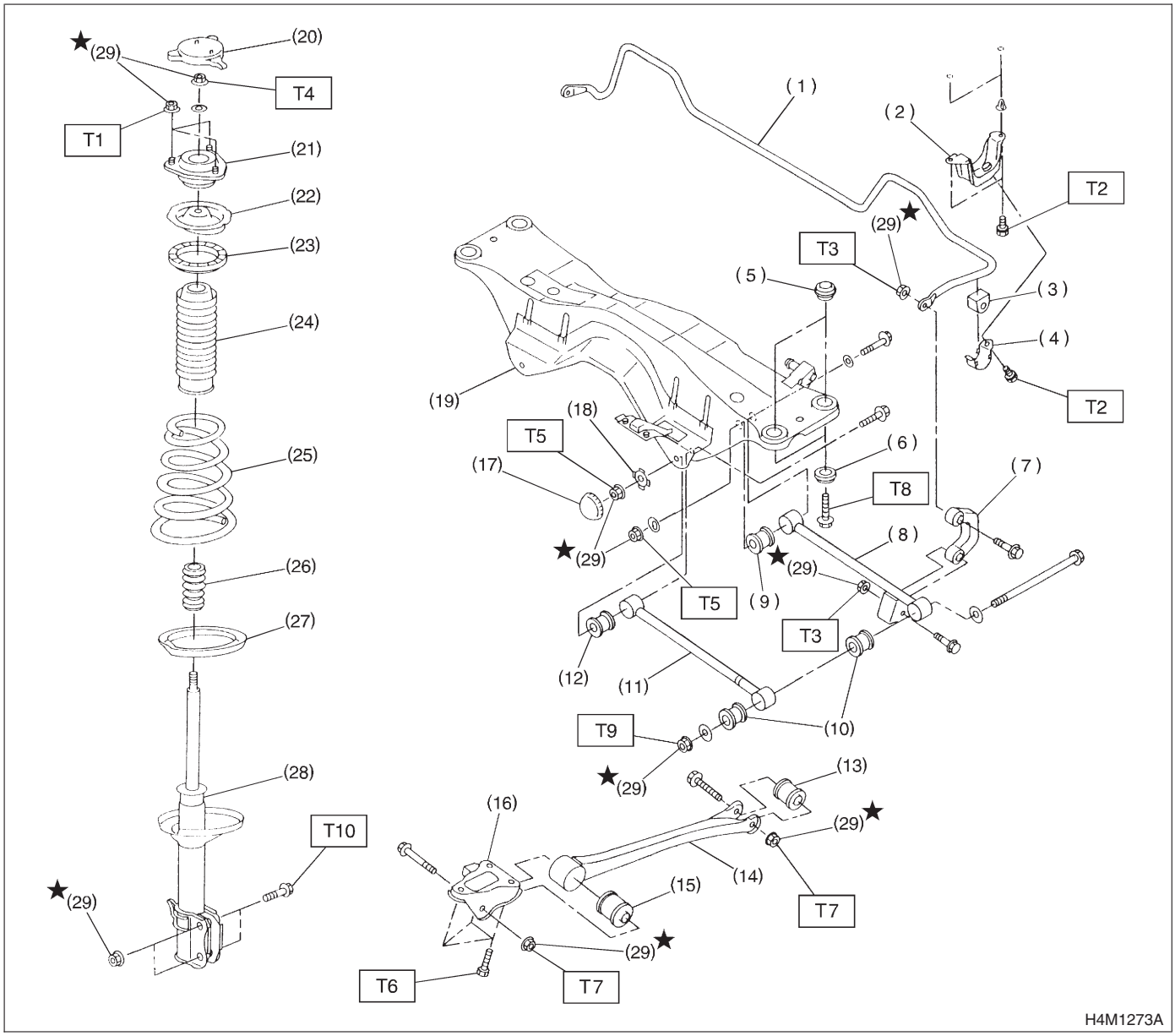
	2200 cc			2500 cc	
	Sedan, Coupe	Wagon	OUTBACK	Coupe	Sedan
Camber (tolerance: ±0°45′)	–0°55′	–0°55′	–0°55′	–1°10′	–1°10′
Toe-in	0±3 mm (0±0.12 in) Each toe-in angle: 0°±18′				
Wheel arch height [tolerance: $^{+12}/_{-24}$ mm ($^{+0.47}/_{-0.94}$ in)]	379 mm (14.92 in)	379 mm (14.92 in)	386 mm (15.20 in)	363 mm (14.29 in)	363 mm (14.29 in)
Thrust angle (tolerance: 0°±20′)	0°	0°	0°	0°	0°

NOTE:
- Front and rear toe-ins and front camber can be adjusted. If toe-in or camber tolerance exceeds specifications, adjust toe-in and camber to the specification.
- The other items indicated in the specification table cannot be adjusted. If the other items exceeds specifications, check suspension parts and connections for deformities; and replace with new ones as required.



A — B = Positive .... Toe-in
Negative .... Toe-out
α = Each toe-in angle
B4M2250A

B: COMPONENT S201001A05



(1) Stabilizer
(2) Stabilizer bracket
(3) Stabilizer bushing
(4) Clamp
(5) Floating bushing
(6) Stopper
(7) Stabilizer link
(8) Rear lateral link
(9) Bushing (C)
(10) Bushing (A)
(11) Front lateral link
(12) Bushing (B)
(13) Trailing link rear bushing
(14) Trailing link
(15) Trailing link front bushing
(16) Trailing link bracket
(17) Cap
(18) Washer
(19) Crossmember
(20) Cap
(21) Strut mount
(22) Spring seat
(23) Rubber seat upper
(24) Dust cover
(25) Coil spring
(26) Helper
(27) Rubber seat lower
(28) Damper strut
(29) Self-locking nut

Tightening torque: N·m (kgf-m, ft-lb)
T1: 20 (2.0, 14.5)
T2: 25 (2.5, 18.1)
T3: 44 (4.5, 32.5)
T4: 59 (6.0, 43)
T5: 98 (10.0, 72)
T6: 98 (10.0, 72)
T7: 113 (11.5, 83)
T8: 127 (13.0, 94)
T9: 137 (14.0, 101)
T10: 196 (20.0, 145)

C: CAUTION S201001A03

- Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
- Remove contamination including dirt and corrosion before removal, installation or disassembly.
- Keep the disassembled parts in order and protect them from dust or dirt.
- Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
- Use SUBARU genuine grease etc. or the equivalent. Do not mix grease etc. with that of another grade or from other manufacturers.
- Be sure to tighten fasteners including bolts and nuts to the specified torque.
- Place shop jacks or safety stands at the specified points.
- Apply grease onto sliding or revolution surfaces before installation.
- Before installing O-rings or snap rings, apply sufficient amount of grease to avoid damage and deformation.
- Before securing a part on a vice, place cushioning material such as wood blocks, aluminum plate, or shop cloth between the part and the vice.
- Before disposing shock absorbers, be sure to bleed gas completely. Also, do not throw away in fire.

D: PREPARATION TOOL S201001A17

1. SPECIAL TOOL S201001A1703

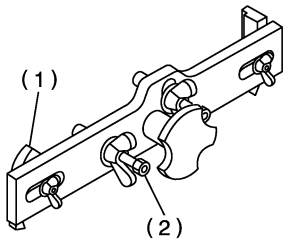
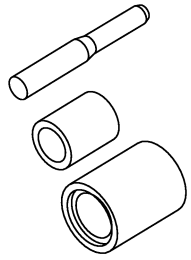
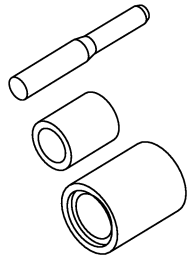
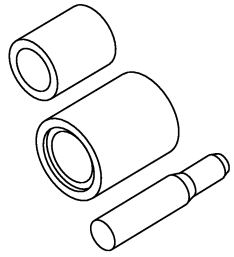
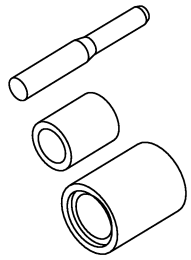
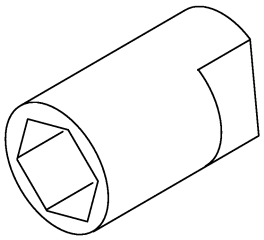
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 B4M2378A	927380002	ADAPTER	Used as an adapter for camber & caster gauge when measuring camber and caster. (1) 28199AC000 PLATE (2) 28199AC010 BOLT
 H5M0979	927690000	INSTALLER & REMOVER	Used for replacing lateral link bushing (12 dia.).
 H5M0979	927700000	INSTALLER & REMOVER	Used for replacing lateral link bushing (14 dia.).
 H5M0980	927720000	INSTALLER & REMOVER	Used for replacing trailing link bushing.

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 H5M0979	927730000	INSTALLER & REMOVER	Used for replacing rear housing bushing.
 B4M2384	927760000	STRUT MOUNT SOCKET	Used for disassembling and assembling strut mount.

2. GENERAL TOOL *S201001A1704*

TOOL NAME	REMARKS
Alignment Gauge	Used for wheel alignment measurement.
Turning Radius Gauge	Used for wheel alignment measurement.
Toe-in Gauge	Used for toe-in measurement.
Transmission Jack	Used for suspension assembly/disassembly.
Bearing Puller	Used for removing bushings.

8. General Diagnostics Table

S201121

A: INSPECTION S201121A10

1. IMPROPER VEHICLE POSTURE OR IMPROPER WHEEL ARCH HEIGHT S201121A1001

Possible causes	Countermeasures
(1) Permanent distortion or breakage of coil spring	Replace.
(2) Unsmooth operation of damper strut	Replace.
(3) Installation of wrong strut	Replace with proper parts.
(4) Installation of wrong coil spring	Replace with proper parts.

2. POOR RIDE COMFORT S201121A1002

1) Large rebound shock
2) Rocking of vehicle continues too long after running over bump and/or hump.
3) Large shock in bumping

Possible causes	Countermeasures
(1) Breakage of coil spring	Replace.
(2) Overinflation pressure of tire	Adjust.
(3) Improper wheel arch height	Adjust or replace coil springs with new ones.
(4) Fault in operation of damper strut	Replace.
(5) Damage or deformation of strut mount	Replace.
(6) Unsuitability of maximum and/or minimum length of damper strut	Replace with proper parts.
(7) Deformation or loss of bushing	Replace.
(8) Deformation or damage of helper in strut assembly	Replace.

3. NOISE S201121A1003

Possible causes	Countermeasures
(1) Wear or damage of damper strut component parts	Replace.
(2) Loosening of suspension link installing bolt	Retighten to the specified torque.
(3) Deformation or loss of bushing	Replace.
(4) Unsuitability of maximum and/or minimum length of damper strut	Replace with proper parts.
(5) Breakage of coil spring	Replace.
(6) Wear or damage of ball joint	Replace.

5. Lateral link S201576

A: REMOVAL S201576A18

1) Loosen wheel nuts. Jack-up vehicle and remove wheel.
2) Remove stabilizers.
3) Remove ABS sensor harness from trailing link. (Models equipped with ABS)
4) Remove bolts which secure lateral link assembly to rear housing.

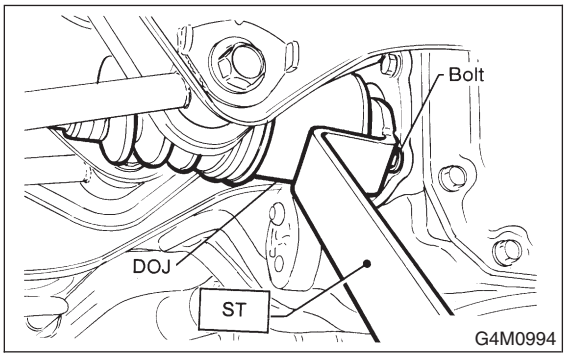
CAUTION:
Discard old self-locking nut. Replace with a new one.

5) Remove bolts which secure trailing link assembly to rear housing.

CAUTION:
Discard old self-locking nut. Replace with a new one.

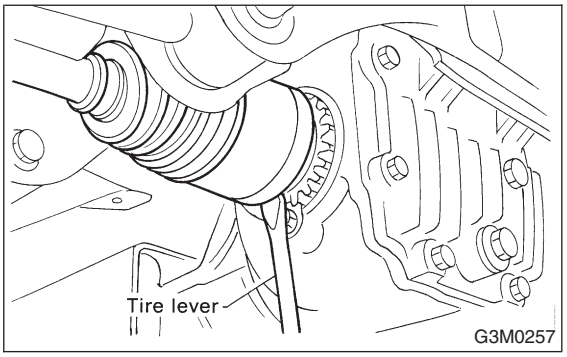
6) Remove DOJ from rear differential using ST. (Except 2200 cc AT vehicles)
ST 28099PA100 DRIVE SHAFT REMOVER

CAUTION:
• Do not remove circlip attached to inside of differential.
• Be careful not to damage side bearing retainer. Always use bolt as shown in figure, as supporting point for ST during removal.

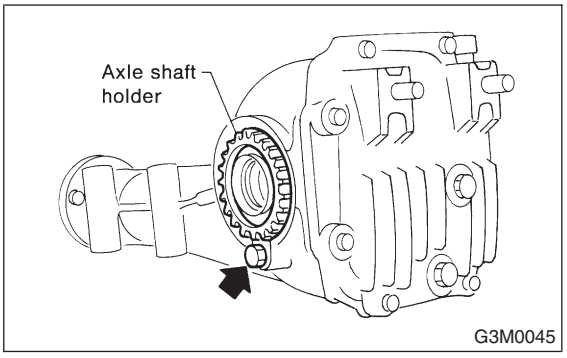


7) Remove DOJ from rear differential using tire lever. (2200 cc AT vehicles)

NOTE:
The side spline shaft circlip comes out together with the shaft.



CAUTION:
When removing the DOJ from the rear differential, fit tire lever to the bolt as shown in figure so as not to damage the axle shaft holder.



8) Scribe an alignment mark on rear lateral link adjusting bolt and crossmember.
9) Remove outer lateral link bolt securing lateral link to housing.
10) Remove bolts securing front and rear lateral links to crossmember, detach lateral links.

CAUTION:
To loosen adjusting bolt, always loosen nut while holding the head of adjusting bolt.

B: INSTALLATION S201576A11

Install in the reverse order of removal. Observe the following instructions.
● Installation of DOJ to differential: <Ref. to DS-36 INSTALLATION, Rear Drive Shaft.>

CAUTION:
● Do not allow DOJ splines to damage side oil seal.
● Always tighten rubber bushing location when wheels are in full contact with the ground and vehicle is curb weight.
● Tighten nut when installing adjusting bolt.
● Replace self-locking nut and DOJ circlip with new ones.

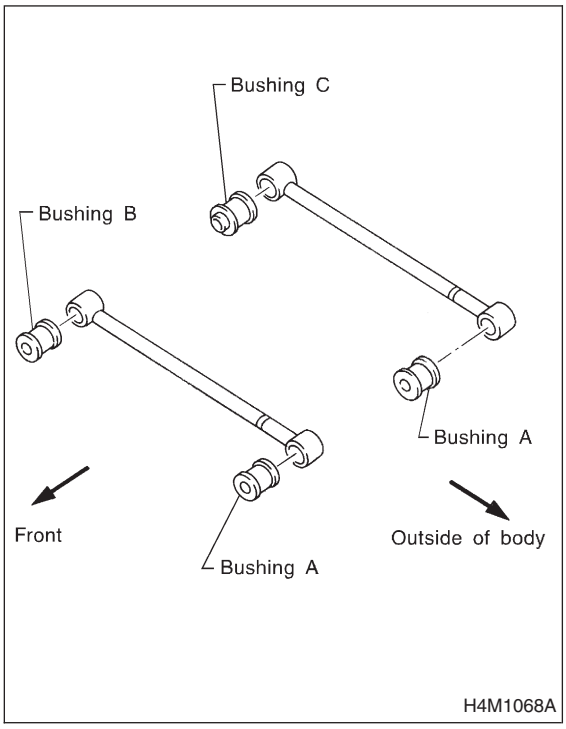
NOTE:
Check wheel alignment and adjust if necessary.

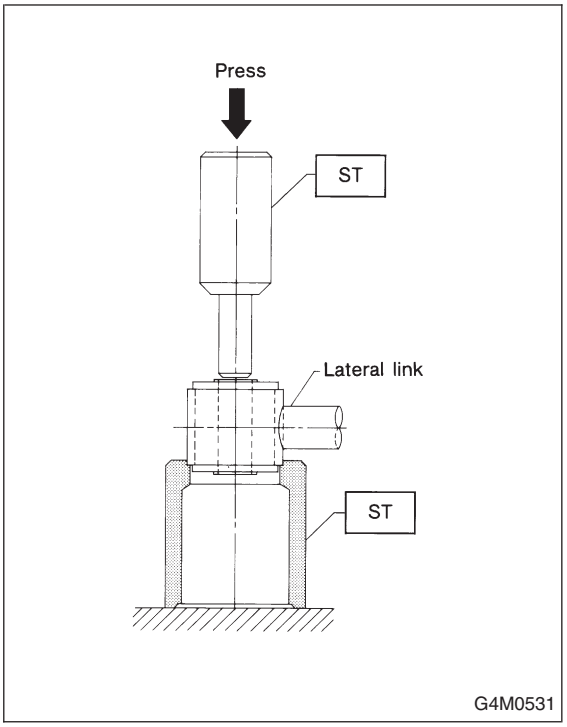
C: DISASSEMBLY S201576A06

Using ST, press bushing out of place.

NOTE:
● Using the following figure as a guide, verify the type of bushings.
● Select ST according to the type of bushings used.

Bushing	INSTALLER & REMOVER SET
Bushing A	927700000
Bushing B	927690000
Bushing C	927700000





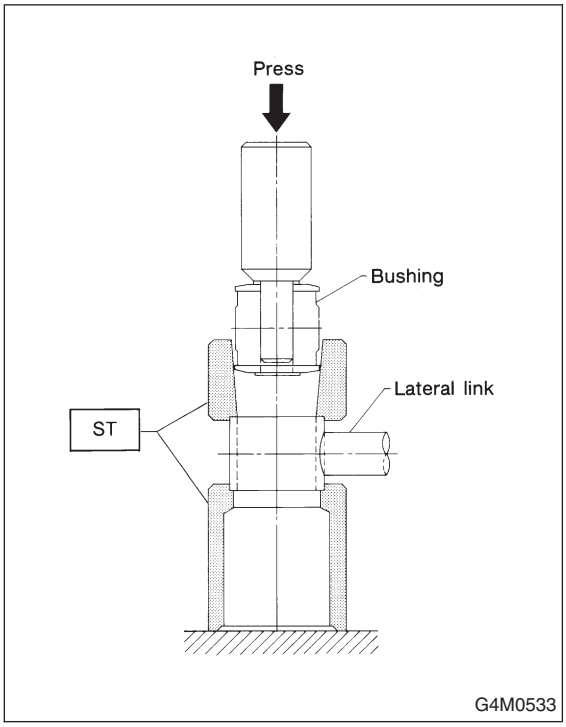
D: ASSEMBLY S201576A02

1) Using ST, press bushing into place.

CAUTION:
Select ST according to the type of bushings used.

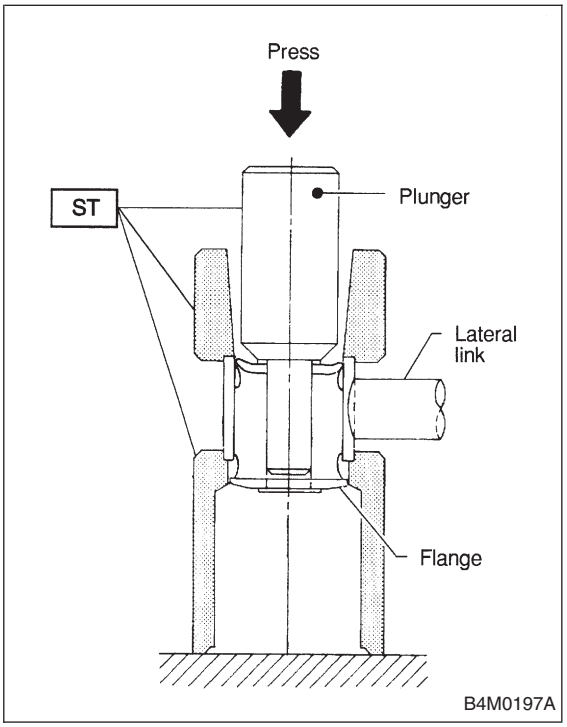
NOTE:
● Use the same ST as that used during disassembly.
● If it is difficult to press bushing into trailing link, apply water-diluted TIRE LUBE to the inner surface of ST as a lubricant.

Specified lubricant:
TIRE LUBE : water = 1 : 3



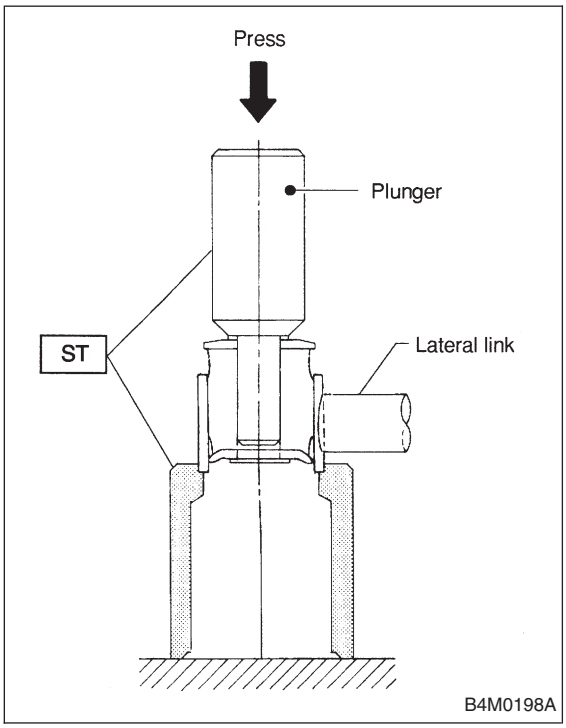
2) Press ST plunger until bushing flange protrudes beyond lateral link.

NOTE:
Use the same ST as that used during disassembly.



3) Turn lateral link upside down. Press ST plunger in the opposite direction that outlined in the former procedure until bushing is correctly positioned in trailing link.

NOTE:
Use the same ST as that used during disassembly.



E: INSPECTION S201576A10

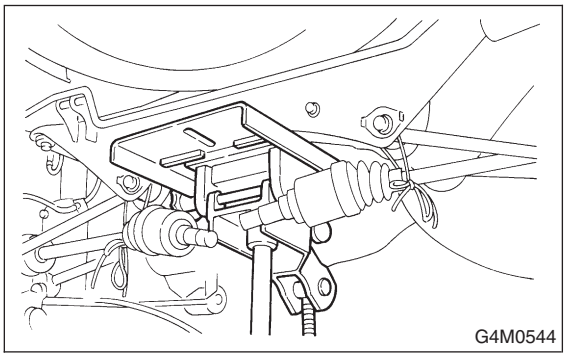
Visually check lateral links for damage or bends.

7. Rear Crossmember S201133

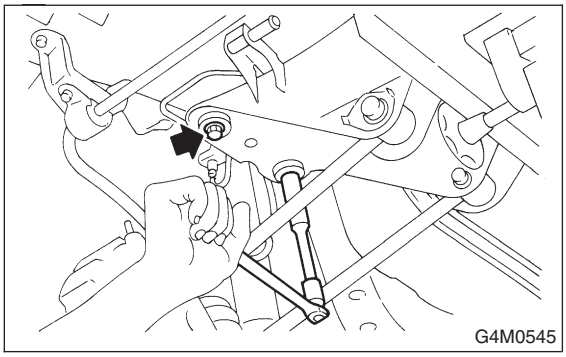
A: REMOVAL S201133A18

CAUTION:
Do not subject ABS sensor harness to excessive tension (if equipped).

1) Separate front exhaust pipe and rear exhaust pipe.
2) Remove rear exhaust pipe and muffler.
3) Remove rear differential assembly. <Ref. to DI-23 REMOVAL, Rear Differential for T-type.> or <Ref. to DI-38 REMOVAL, Rear Differential for VA-type.>
4) Place transmission jack under rear crossmember.


G4M0544

5) Remove bolts securing crossmember to vehicle body, and remove crossmember.


G4M0545

6) Scribe an alignment mark on rear lateral link cam bolt and crossmember.
7) Remove front and rear lateral links by loosening nuts.

B: INSTALLATION S201133A11

1) Install in reverse order of removal.
2) Install rear differential assembly. <Ref. to DI-25 INSTALLATION, Rear Differential for T-type.> or <Ref. to DI-40 INSTALLATION, Rear Differential for VA-type.>
3) Always tighten rubber bushing location when wheels are in full contact with the ground and vehicle is curb weight.

NOTE:
Check wheel alignment and adjust if necessary.

C: INSPECTION S201133A10

Check removed parts for wear, damage and cracks, and correct or replace if defective.

3. Rear Stabilizer S201118

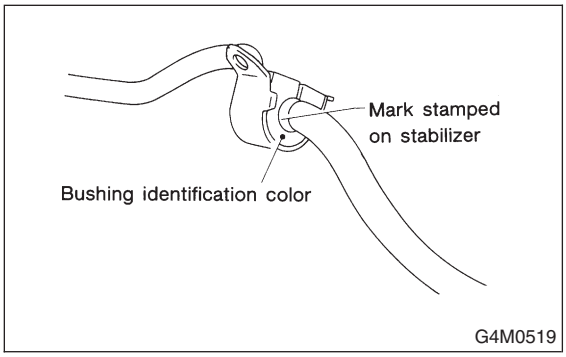
A: REMOVAL S201118A18

1) Jack-up the rear part of the vehicle, support it with safety stands (rigid racks).
2) Remove bolts which secure stabilizer link to rear lateral link.
3) Remove bolts which secure stabilizer to stabilizer bracket.

B: INSTALLATION S201118A11

1) Install in the reverse order of removal.

NOTE:
● Install bushing while aligning it with paint mark on stabilizer.
● Ensure that bushing and stabilizer have the same identification colors when installing.



2) Always tighten rubber bushing location when wheels are in full contact with the ground and vehicle is curb weight.

Tightening torque:
Stabilizer link to rear lateral link:
44 N·m (4.5 kgf-m, 32.5 ft-lb)
Stabilizer to stabilizer bracket:
25 N·m (2.5 kgf-m, 18.1 ft-lb)

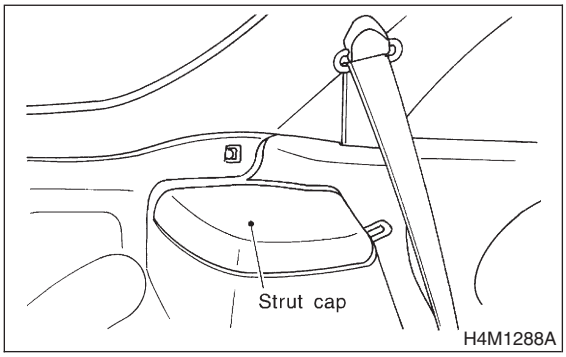
C: INSPECTION S201118A10

1) Check bushing for cracks, fatigue or damage.
2) Check stabilizer links for deformities, cracks, or damage, and bushing for protrusions from the hole of stabilizer link.

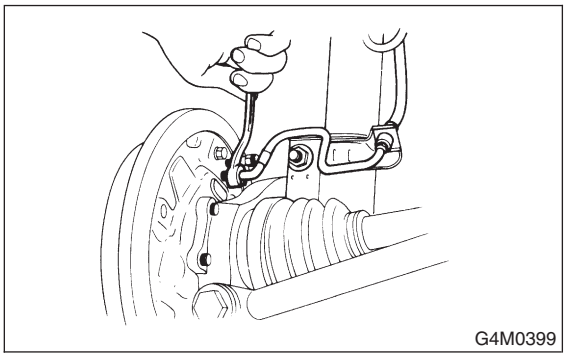
6. Rear Strut S201132

A: REMOVAL S201132A18

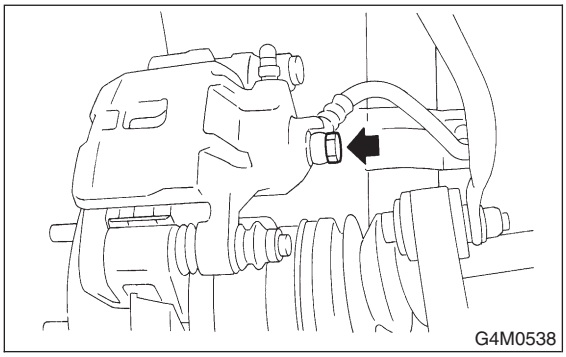
1) Depress brake pedal and secure it in that position using a wooden block, etc.
2) Remove rear seat cushion and backrest. (Sedan model)
3) Remove strut cap of quarter trim. (Wagon model)



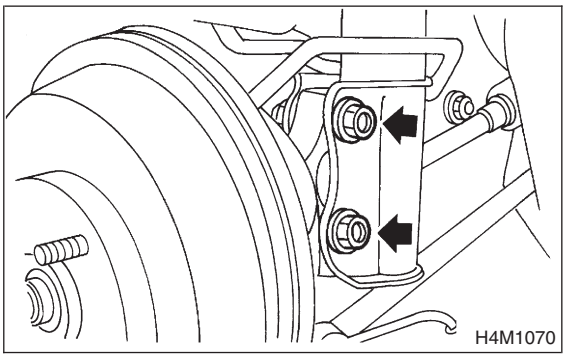
4) Remove strut mount cap. (Only Wagon model)
5) Loosen rear wheel nuts.
6) Jack-up vehicle, support it with safety stands (rigid racks) and remove rear wheels.
7) Remove brake hose clip.
8) Models equipped with rear drum brakes:
Disconnect brake hose from brake pipe from strut, and disconnect brake pipe from drum brake.



9) Models equipped with rear disc brakes:
Remove union bolt from brake caliper.



10) Remove bolts which secure rear strut to housing.



11) Remove nuts securing strut mount to body.

B: INSTALLATION S201132A11

1) Tighten self-locking nut used to secure strut mount to car body.

CAUTION:
Discard loosened self-locking nut, and replace with a new one.

Tightening torque:
20 N·m (2.0 kgf-m, 14.5 ft-lb)

2) Tighten bolts which secure rear strut to housing.

Tightening torque:
196 N·m (20.0 kgf-m, 145 ft-lb)

CAUTION:
Discard loosened self-locking nut, and replace with a new one.

3) Models with rear disc brakes:
Tighten brake hose union bolt on brake caliper.

Tightening torque:
18 N·m (1.8 kgf-m, 13.0 ft-lb)

Models with rear drum brakes:
Connect brake hose to brake pipe.

Tightening torque:
15 N·m (1.5 kgf-m, 10.8 ft-lb)

4) Insert brake hose clip between brake hose and lower side of strut.

CAUTION:
- **Check that hose clip is positioned properly.**
- **Check brake hose for twisting, or excessive tension.**
- **(Model equipped with ABS)**

Do not subject ABS sensor harness to excessive tension.

5) Be sure to bleed air from brake system.
6) Lower vehicle and tighten wheel nut.

Tightening torque:
88 N·m (9 kgf-m, 65 ft-lb)

7) Install strut mount cap.
8) (Sedan model)
Install rear seat backrest and rear seat cushion.
(Wagon model)
Install strut cap to rear quarter trim.

NOTE:
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY S201132A06

For disassembly of rear strut, refer to procedures outlined under front strut as a guide. <Ref. to FS-16 DISASSEMBLY, Front Strut.>

D: ASSEMBLY S201132A02

Refer to Front Strut as a guide for assembly procedures. <Ref. to FS-17 ASSEMBLY, Front Strut.>

E: INSPECTION S201132A10

Refer to Front Strut as a guide for inspection procedures. <Ref. to FS-18 INSPECTION, Front Strut.>

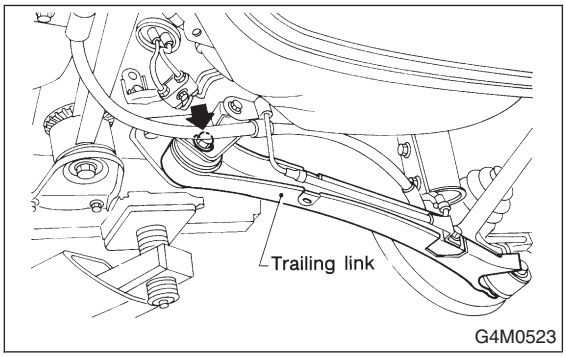
F: DISPOSAL S201132A07

Refer to Front Strut as a guide for disposal procedures. <Ref. to FS-18 DISPOSAL, Front Strut.>

4. Rear Trailing Link S201107

A: REMOVAL S201107A18

1) Loosen rear wheel nuts.
2) Jack-up vehicle, support it with safety stands (rigid racks) and remove rear wheels.
3) Remove both rear parking brake clamp and ABS sensor harness. (only vehicle equipped with ABS)
4) Remove bolt which secure trailing link to trailing link bracket.



5) Remove bolt which secure trailing link to rear housing.

B: INSTALLATION S201107A11

Install in the reverse order of removal.

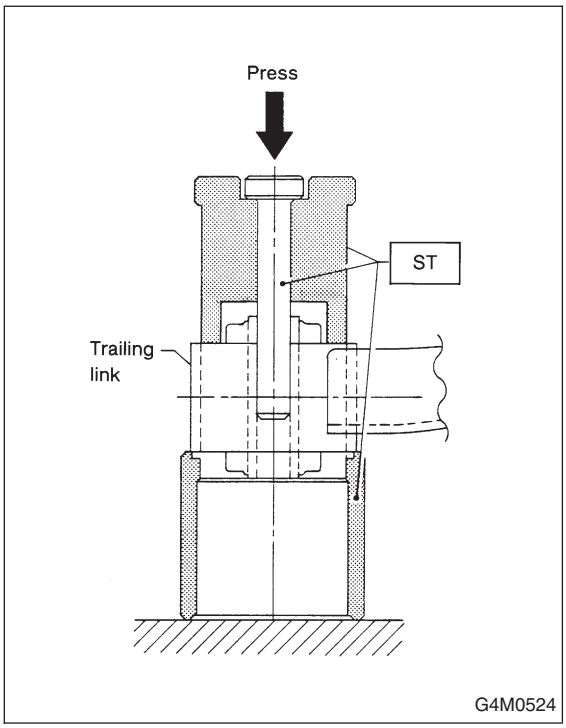
CAUTION:
Always tighten rubber bushing location when wheels are in full contact with the ground and vehicle is at curb weight condition.

NOTE:
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY S201107A06

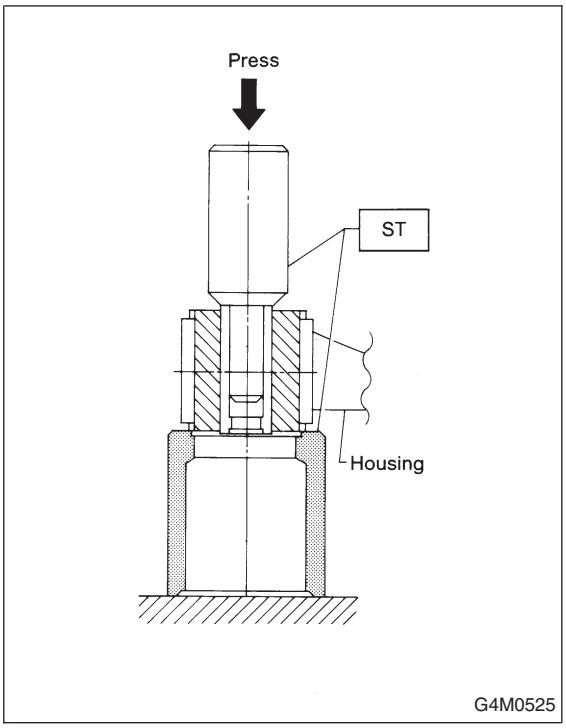
1. FRONT BUSHING S201107A0601

Using ST, press front bushing out of place.
ST 927720000 INSTALLER & REMOVER SET



2. REAR BUSHING S201107A0602

1) Remove housing. <Ref. to DS-22 REMOVAL, Rear Axle.>
2) Using ST, press rear bushing out of place.
ST 927730000 INSTALLER & REMOVER SET



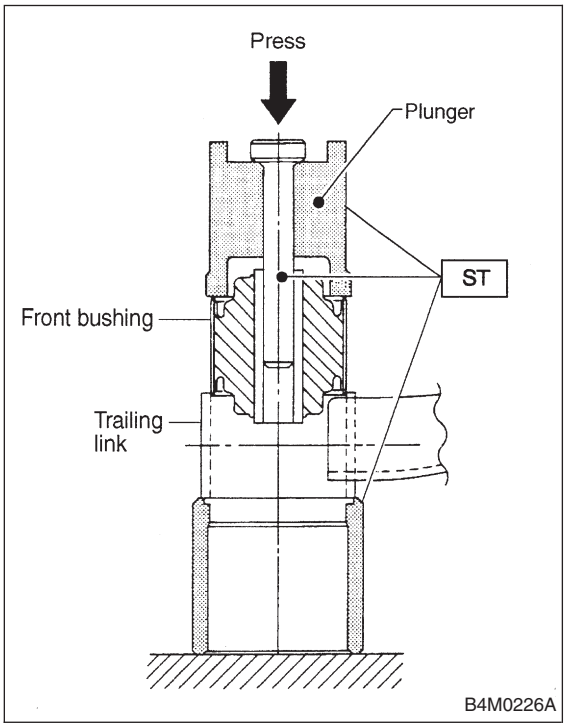
D: ASSEMBLY S201107A02

Assemble in the reverse order of disassembly.

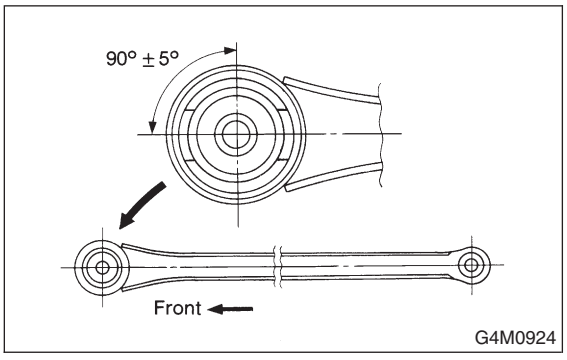
1. FRONT BUSHING S201107A0201

Using ST, press bushing into trailing link.
ST 927720000 INSTALLER & REMOVER SET

CAUTION:
When installing bushing, turn ST plunger upside down and press it until the plunger end surface contacts the trailing link end surface.



CAUTION:
Install front bushing in the proper direction, as shown in figure.

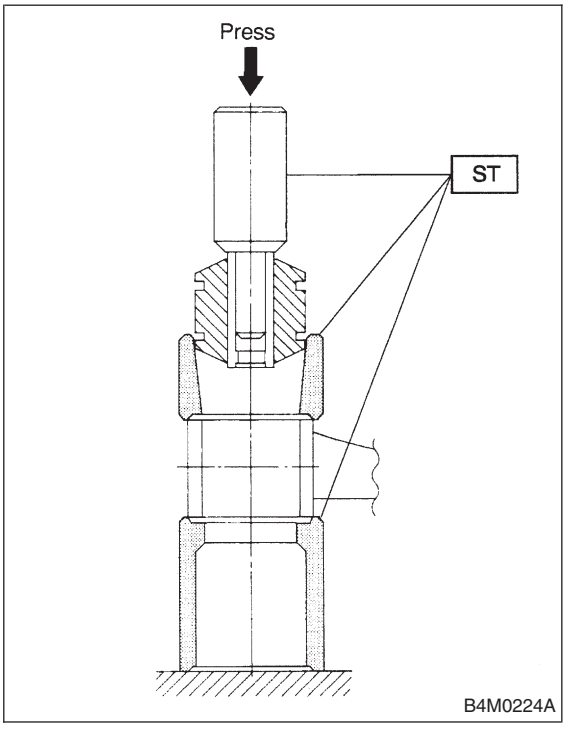


2. REAR BUSHING S201107A0202

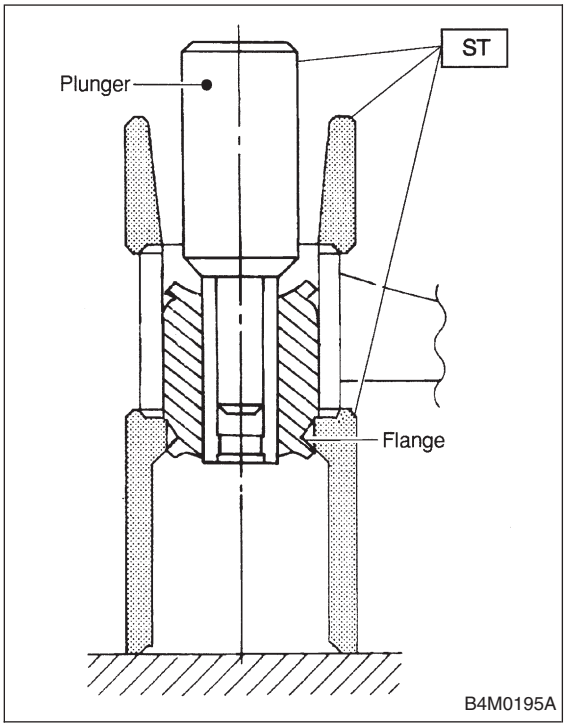
1) Using ST, press bushing into trailing link.
ST 927730000 INSTALLER & REMOVER SET

NOTE:
If it is difficult to press bushing into trailing link, apply water-diluted TIRE LUBE to the inner surface of ST as a lubricant.

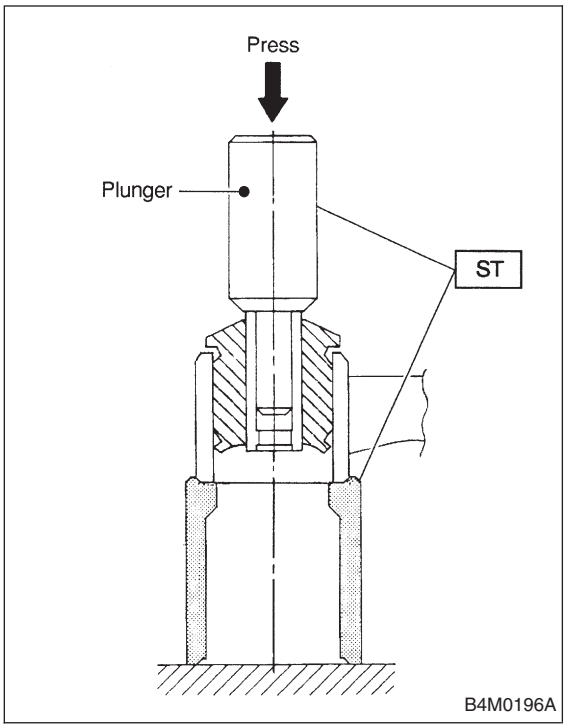
Specified lubricant:
TIRE LUBE : water = 1 : 3



2) Press ST plunger until bushing flange protrudes beyond trailing link.
ST 927730000 INSTALLER & REMOVER SET



3) Turn trailing link upside down. Press ST plunger in the direction opposite that outlined in the former procedure until bushing is correctly positioned in trailing link.
ST 927730000 INSTALLER & REMOVER SET



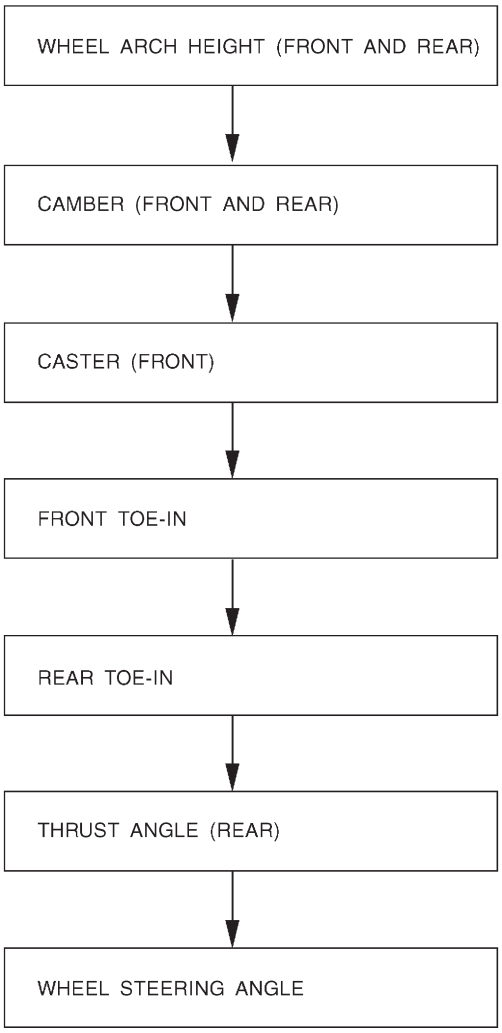
E: INSPECTION S201107A10

Check trailing links for bends, corrosion or damage.

2. Wheel Alignment S201116

A: INSPECTION S201116A10

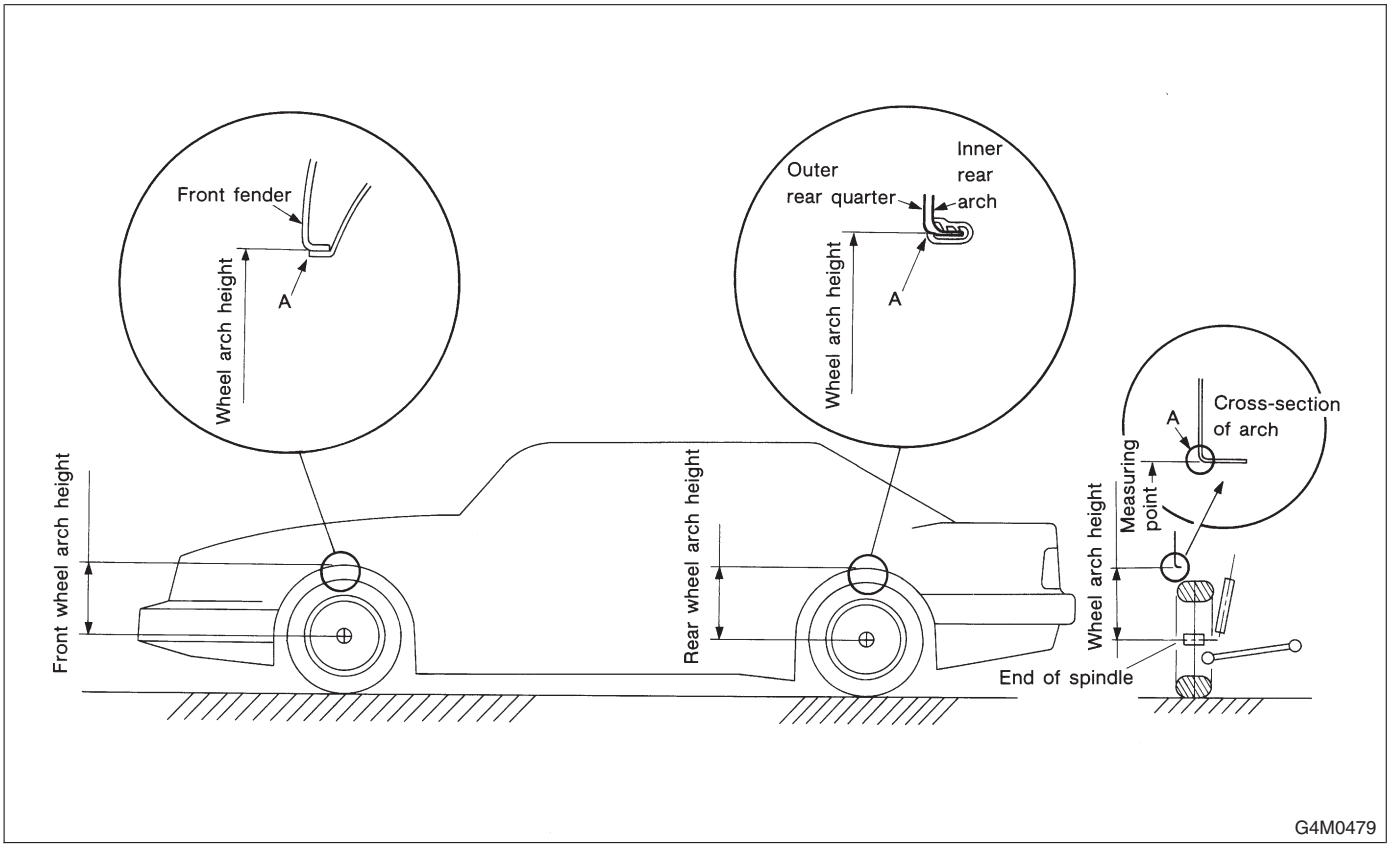
Check, adjust and/or measure wheel alignment in accordance with procedures indicated in figure.



B4M1088A

1. WHEEL ARCH HEIGHT S201116A1001

1) Adjust tire pressure to specifications.
2) Set vehicle under “curb weight” conditions. (Empty luggage compartment, install spare tire, jack, service tools, and top up fuel tank.)
3) Set steering wheel in a wheel-forward position.
4) Suspend thread from wheel arch (point “A” in figure) to determine a point directly above center of spindle.
5) Measure distance between measuring point “A” and center of spindle.

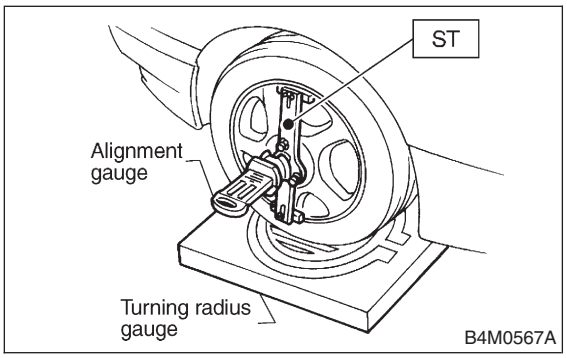


Vehicles		Specified wheel arch height
2200 cc	Coupe, Sedan	$379^{+12}/_{-24}$ mm ($14.92^{+0.47}/_{-0.94}$ in)
	Wagon	$379^{+12}/_{-24}$ mm ($14.92^{+0.47}/_{-0.94}$ in)
	OUTBACK	$386^{+12}/_{-24}$ mm ($15.20^{+0.47}/_{-0.94}$ in)
2500 cc	Coupe	$363^{+12}/_{-24}$ mm ($14.29^{+0.47}/_{-0.94}$ in)
	Sedan	$363^{+12}/_{-24}$ mm ($14.29^{+0.47}/_{-0.94}$ in)

2. CAMBER S201116A1002

● Inspection

1) Place front wheel on turning radius gauge. Make sure ground contacting surfaces of front and rear wheels are set at the same height.
2) Set ST into the center of the wheel, and then install the wheel alignment gauge.
ST 927380000 ADAPTER



NOTE:
Refer to the “SPECIFICATIONS” for the camber values. <Ref. to RS-2 SPECIFICATIONS, General Description.>

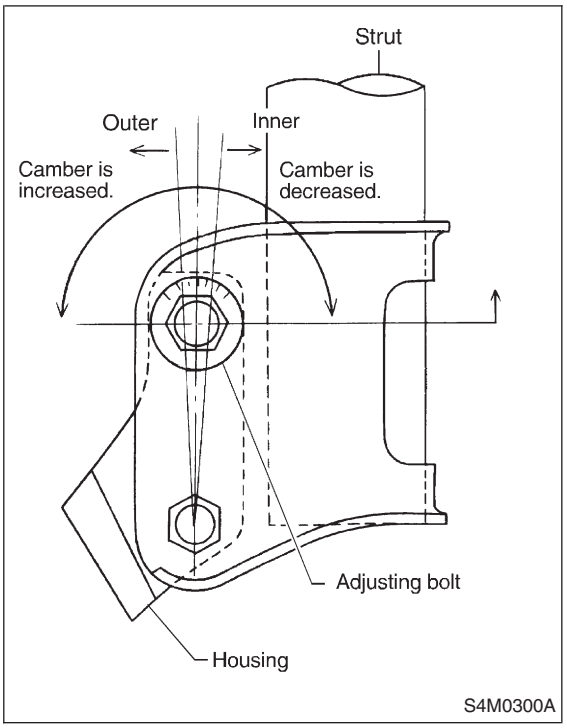
● Front camber adjustment

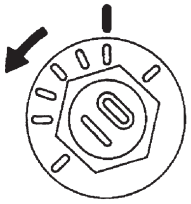
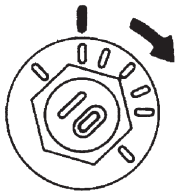
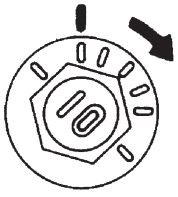
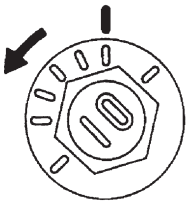
1) Loosen two self-locking nuts located at lower front portion of strut.

CAUTION:
● When adjusting bolt needs to be loosened or tightened, hold its head with a wrench and turn self-locking nut.
● Discard loosened self-locking nut and replace with a new one.

2) Turn camber adjusting bolt so that camber is set at the specification.

NOTE:
Moving the adjusting bolt by one scale graduation changes camber by approximately 0°10′.



	Left side	Right side
Camber is increased.	 Rotate counter-clockwise. B4M0190	 Rotate clockwise. B4M0350
Camber is decreased.	 Rotate clockwise. B4M0350	 Rotate counter-clockwise. B4M0190

3) Tighten the two self-locking nuts.

Tightening torque:
152 N·m (15.5 kgf-m, 112 ft-lb)

3. WHEEL TOE-IN S201116A1003

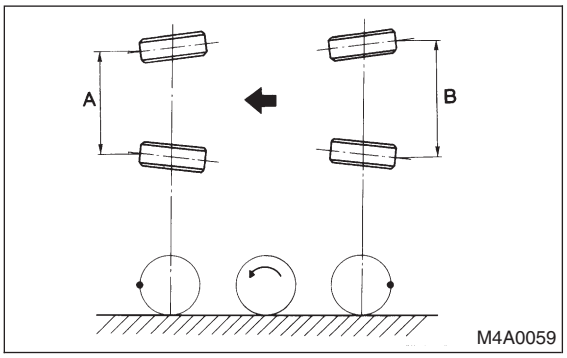
• Inspection

1) Using a toe-in gauge, measure rear wheel toe-in.

Toe-in: 0±3 mm (0±0.12 in)

2) Mark rear sides of left and right tires at height corresponding to center of spindles and measure distance “B” between marks.
3) Move vehicle forward so that marks line up with front sides at height corresponding to center of spindles.
4) Measure distance “A” between left and right marks. Toe-in can then be obtained by the following equation:

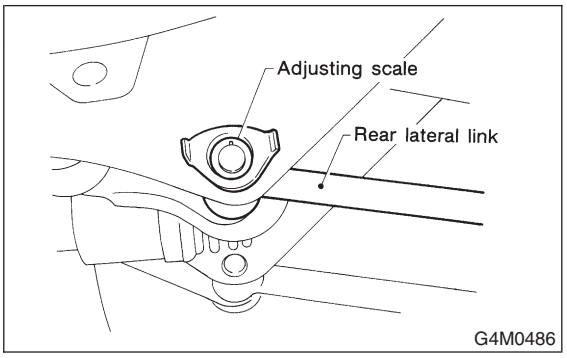
B – A = Toe-in



• Adjustment

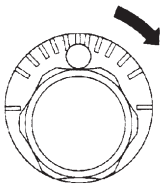
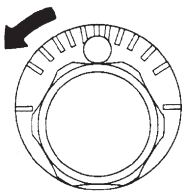
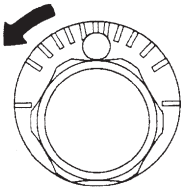
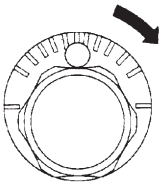
1) Loosen self-locking nut on inner side of rear lateral link.

CAUTION:
• When loosening or tightening adjusting bolt, hold bolt head and turn self-locking nut.
• Discard loosened self-locking nut and replace with a new one.



2) Turn adjusting bolt head until toe-in is at the specification.

NOTE:
When left and right wheels are adjusted for toe-in at the same time, the movement of one scale graduation changes toe-in by approximately 3 mm (0.12 in).

	Left side	Right side
Toe-in is increased.	 B4M0192 Rotate clockwise.	 B4M0352 Rotate counter-clockwise.
Toe-in is decreased.	 B4M0352 Rotate counter-clockwise.	 B4M0192 Rotate clockwise.

3) Tighten self-locking nut.

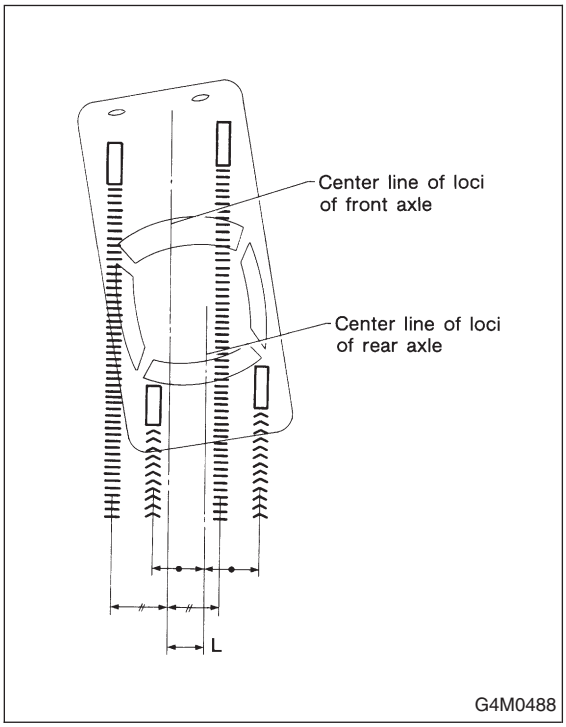
Tightening torque:
98 N·m (10 kgf-m, 72 ft-lb)

4. THRUST ANGLE S201116A1004

• Inspection

1) Position vehicle on a level surface.
2) Move vehicle 3 to 4 meters directly forward.
3) Determine locus of both front and rear axles.
4) Measure distance “L” between center line of loci of the axles.

Thrust angle:
Less than 20′ when “L” is equal to or less than 15 mm (0.59 in).

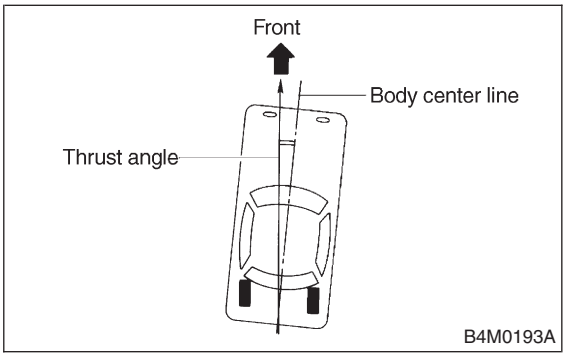


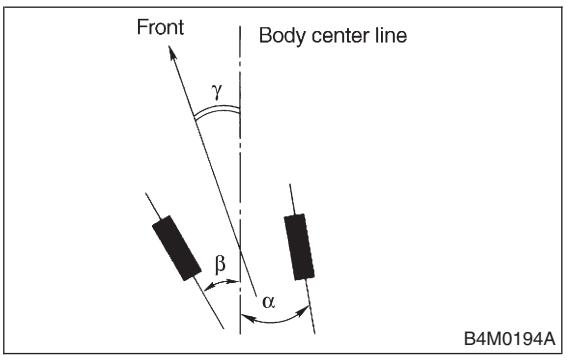
• Adjustment

1) Make thrust angle adjustments by turning toe-in adjusting bolts of rear suspension equally in the same direction.
2) When one rear wheel is adjusted in a toe-in direction, adjust the other rear wheel equally in toe-out direction, in order to make thrust angle adjustment.
3) When left and right adjusting bolts are turned incrementally by one graduation in the same direction, the thrust angle of the AWD model will change approximately 10′ [“L” is almost equal to 7.5 mm (0.295 in)].

Thrust angle:
0°±20′

NOTE:
Thrust angle refers to a mean value of left and right rear wheel toe angles in relation to vehicle body center line. Vehicle is driven straight in the thrust angle direction while swinging in the oblique direction depending on the degree of the mean thrust angle.





Thrust angle: r
r = (α – β) / 2

α: Right rear wheel toe angle
β: Left rear wheel toe angle

NOTE:
Here, use only positive toe-in values from each wheel to substitute for α and β in the equation.

4. Aluminum Wheel S204130

A: REMOVAL S204130A18

Refer to Steel Wheel for removal procedure of aluminum wheels. <Ref. to WT-5 REMOVAL, Steel Wheel.>

B: INSTALLATION A204130A11

Refer to Steel Wheel for installation procedure of aluminum wheels. <Ref. to WT-5 INSTALLATION, Steel Wheel.>

C: INSPECTION S204130A10

Refer to Steel Wheel for inspection procedure of aluminum wheels. <Ref. to WT-5 INSPECTION, Steel Wheel.>

Rim runout:

Axial runout limit	Radial runout limit
1.0 mm (0.039 in)	

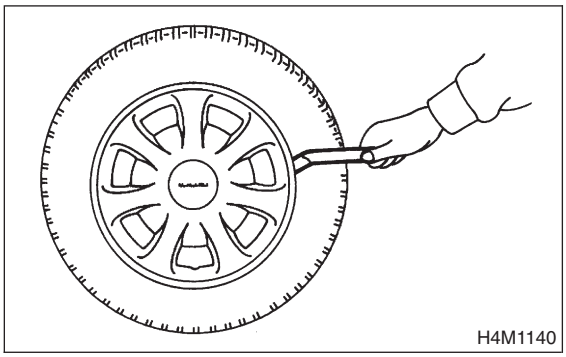
D: CAUTION S204130A03

Aluminum wheels are easily scratched. To maintain their appearance and safety, do the following:
- Do not damage aluminum wheels during removal, disassembly, installation, wheel balancing, etc. After removing aluminum wheels, place them on a rubber mat, etc.
- While vehicle is being driven, be careful not to ride over sharp obstacles or allow aluminum wheels to contact the shoulder of the road.
- When installing tire chain, be sure to install it properly not to have a slack; otherwise it may hit wheel while driving.
- When washing aluminum wheel, use neutral synthetic detergent and water. Avoid using the cleanser including abrasive, hard brushes or an automatic car washer.

7. Full Wheel Cap S204128

A: REMOVAL S204128A18

Pry off the full wheel cap with a wheel cap remover inserted between openings in the cap.



B: INSTALLATION S204128A11

Align the valve hole in the wheel cap with the valve on the wheel and secure the wheel cap by tapping four points by hand.

C: INSPECTION S204128A10

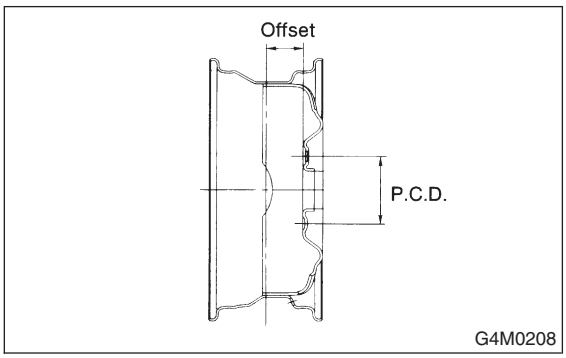
1) Check wheels for missing wheel caps.
2) Check pawls of wheel caps for damage or bend.
3) Check wheel caps for cracks.

MEMO:

1. General Description S204001

A: SPECIFICATIONS S204001E49

1. SERVICE DATA S204001E4901



Model		Front and Rear				Spare		
		Tire size	Rim size	Rim offset	P.C.D.	Tire size	Rim size	Rim offset
2200 cc	COUPE SEDAN WAGON	P195/60R15 87H	15 × 6JJ	55 mm (2.17 in)	100 mm (3.94 in) dia.	T135/70D16	16 × 4T	50 mm (1.97 in)
	OUTBACK	P205/60R15 90S P205/60R15 90H						
2500 cc	COUPE SEDAN	P205/55R16 87V	16 × 7JJ	53 mm (2.09 in)	100 mm (3.94 in) dia.			

NOTE: “T-type” tire for temporary use is supplied as a spare tire.

Tire size	Tire inflation pressure	
	Light load	Full load
P195/60R15 87H P205/60R15 90S P205/60R15 90H P205/55R16 87V	Ft: 220 kPa (2.2 kg/cm^2, 32 psi) Rr: 200 kPa (2.0 kg/cm^2, 29 psi)	
T135/70D16	412 kPa (4.2 kg/cm^2, 60 psi)	

2. ADJUSTING PARTS S204001E4902

Wheel balancing	Standard	Service limit
Dynamic unbalance	Less than 5 g (0.18 oz)	

Balance weight part number (For steel wheel)	Weight
723141290	5 g (0.18 oz)
723141300	10 g (0.35 oz)
723141310	15 g (0.53 oz)
723141320	20 g (0.71 oz)
723141330	25 g (0.88 oz)
723141340	30 g (1.06 oz)
723141350	35 g (1.23 oz)
723141360	40 g (1.41 oz)
723141370	45 g (1.59 oz)
723141380	50 g (1.76 oz)
723141580	55 g (1.94 oz)
723141590	60 g (2.12 oz)

Balance weight part number (For aluminum wheel)	Weight
23141GA462	5 g (0.18 oz)
23141GA472	10 g (0.35 oz)
23141GA482	15 g (0.53 oz)
23141GA492	20 g (0.71 oz)
23141GA502	25 g (0.88 oz)
23141GA512	30 g (1.06 oz)
23141GA522	35 g (1.23 oz)
23141GA532	40 g (1.41 oz)
23141GA542	45 g (1.59 oz)
23141GA552	50 g (1.76 oz)
—	55 g (1.94 oz)
23141GA572	60 g (2.12 oz)

3. Steel Wheel S204131

A: REMOVAL S204131A18

1) Apply parking brake, and position select lever to “P” or “LOW”.
2) Set shop jacks or a lift to the specified point, and support the vehicle with its wheels slightly contacting the floor.
3) Loosen wheel nuts.
4) Raise the vehicle until its wheels take off the ground using a jack or a lift.
5) Remove wheel nuts and wheels.

NOTE:
● While removing wheels, prevent hub bolts from damage.
● Place wheels with their outer sides facing upward to prevent wheels from damage.

B: INSTALLATION S204131A11

1) Attach the wheel to the hub by aligning the wheel bolt hole with the hub bolt.
2) Temporarily attach the wheel nuts to the hub bolts. (In the case of aluminum wheel, use SUBARU genuine wheel nut for aluminum wheel.)
3) Manually tighten the nuts making sure the wheel hub hole is aligned correctly to the guide portion of hub.
4) Tighten the wheel nuts in a diagonal selection to the specified torque. Use a wheel nut wrench.

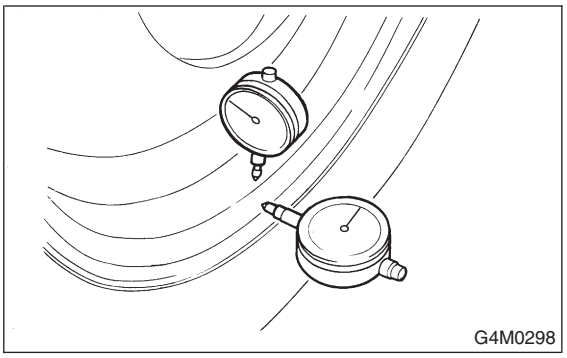
Wheel nut tightening torque:
88 N·m (9 kgf-m, 65 ft-lb)

CAUTION:
● Tighten the wheel nuts in two or three steps by gradually increasing the torque and working diagonally, until the specified torque is reached. For drum brake models, excess tightening of wheel nuts may cause wheels to “judder”.
● Do not depress the wrench with a foot; Always use both hands when tightening.
● Make sure the bolt, nut and the nut seating surface of the wheel are free from oils.

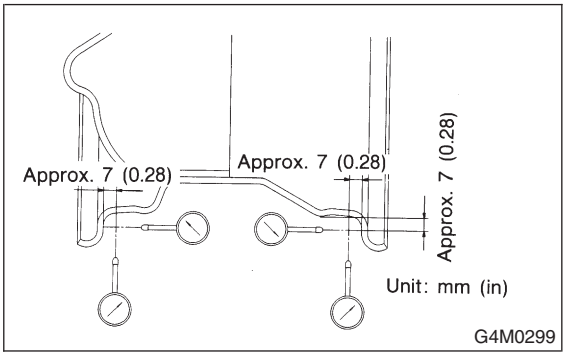
5) If a wheel is removed for replacement or for repair of a puncture, retighten the wheel nuts to the specified torque after running 1,000 km (600 miles).

C: INSPECTION S204131A10

1) Deformation or damage on the rim can cause air leakage. Check the rim flange for deformation, crack, or damage, and repair or replace as necessary.
2) Jack-up vehicle until wheels clear the floor.
3) Slowly rotate wheel to check rim “runout” using a dial gauge.



Axial runout limit	Radial runout limit
1.5 mm (0.059 in)	



4) If rim runout exceeds specifications, remove tire from rim and check runout while attaching dial gauge to positions shown in figure.
5) If measured runout still exceeds specifications, replace the wheel.

6. "T-type" Tire S204129

A: NOTE S204129A15

"T-type" tire for temporary use is prepared as a spare tire.

CAUTION:
• Do not use a tire chain with the "T-type" tire. Because of the smaller tire size, a tire chain will not fit properly and will result in damage to the vehicle and the tire.
• Do not drive at a speed greater than 80 km/h (50 MPH).
• Drive as slowly as possible and avoid passing over bumps.

B: REPLACEMENT S204129A20

Refer to Removal and Installation of Steel Wheel for removal/installation of "T-type" tires. <Ref. to WT-5 REMOVAL, Steel Wheel.> and <Ref. to WT-5 INSTALLATION, Steel Wheel.>

CAUTION:
Replace with a conventional tire as soon as possible since the "T-type" tire is only for temporary use.

C: INSPECTION S204129A10

1) Check tire inflation pressure.

Specification:
412 kPa (4.2 kg/cm, 60 psi)

2) Take stones, glass, nails, etc. out of the tread groove.
3) Check tires for deformation, cracks, partial wear, or wear.

CAUTION:
Replace the tire with a new one.

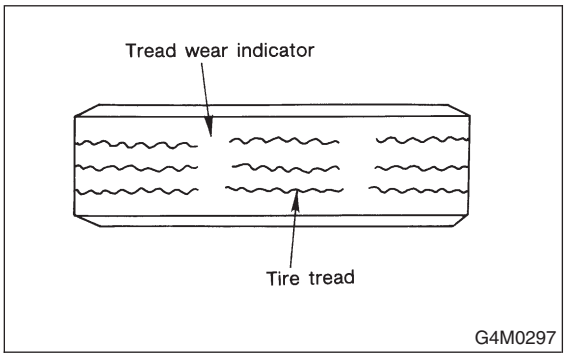
2. Tire S204125

A: INSPECTION S204125A10

1) Take stone, glass, nail etc. off the tread groove.
2) Replace tire:

CAUTION:
• When replacing a tire, make sure to use only the same size, construction and load range as originally installed.
• Avoid mixing radial, belted bias or bias tires on the vehicle.

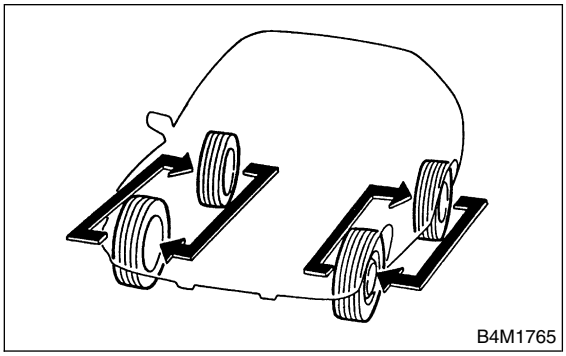
(1) when large crack on side wall, damage or crack on tread is found.
(2) when the “tread wear indicator” appears as a solid band across the tread.



1. TIRE ROTATION S204125A1001

If tires are maintained at the same positions for a long period of time, uneven wear results. Therefore, they should be periodically rotated. This lengthens service life of tires.

CAUTION:
When rotating tires, replace unevenly worn or damaged tires with new ones.



5. Wheel Balancing S204127

A: REPLACEMENT S204127A20

1) Remove balance weights.
2) Using dynamic balancing, measure wheel balance.
3) Select a weight close to the value measured by dynamic balancing.

Balance weight part number (For steel wheel)	Weight
28101AA001	5 g (0.18 oz)
28101AA011	10 g (0.35 oz)
28101AA021	15 g (0.53 oz)
28101AA031	20 g (0.71 oz)
28101AA041	25 g (0.88 oz)
28101AA051	30 g (1.06 oz)
28101AA061	35 g (1.23 oz)
28101AA071	40 g (1.41 oz)
28101AA081	45 g (1.59 oz)
28101AA091	50 g (1.76 oz)
—	55 g (1.94 oz)
28101AA111	60 g (2.12 oz)

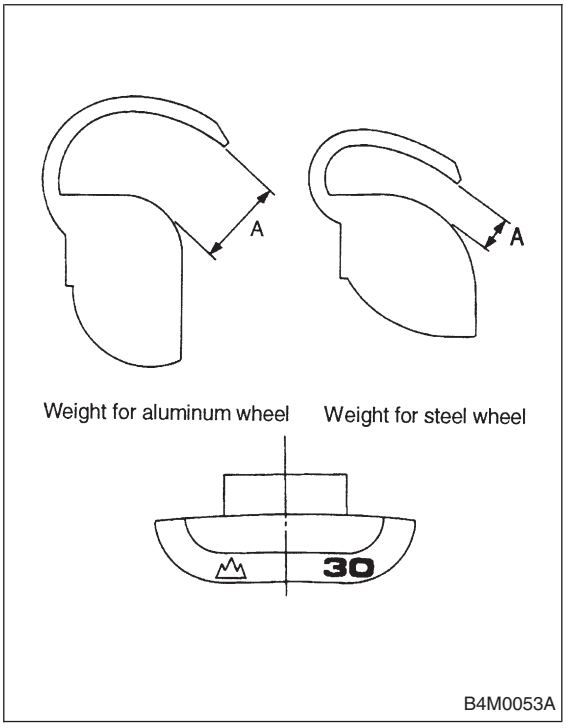
Balance weight part number (For aluminum wheel)	Weight
23141GA462	5 g (0.18 oz)
23141GA472	10 g (0.35 oz)
23141GA482	15 g (0.53 oz)
23141GA492	20 g (0.71 oz)
23141GA502	25 g (0.88 oz)
23141GA512	30 g (1.06 oz)
23141GA522	35 g (1.23 oz)
23141GA532	40 g (1.41 oz)
23141GA542	45 g (1.59 oz)
23141GA552	50 g (1.76 oz)
—	55 g (1.94 oz)
23141GA572	60 g (2.12 oz)

4) Install the selected weight to the point designated by dynamic balancing.
5) Using dynamic balancing, measure wheel balance again. Check that wheel balance is correctly adjusted.

B: INSPECTION S204127A10

1) Proper wheel balance may be lost if the tire is repaired or if it wears. Check the tire for dynamic balance, and repair as necessary.
2) To check for dynamic balance, use a dynamic balancer. Drive in the balance weight on both the top and rear sides of the rim.
3) Some types of balancer can cause damage to the wheel. Use an appropriate balancer when adjusting the wheel balance.
4) Use genuine balance weights.

CAUTION:
• 55 g (1.94 oz) weight used with aluminum wheel is not available.
• Balance weights are available for use with any of 14- to 16-inch wheels.



Service limit: A
Weight for steel wheel;
2.16 mm (0.085 in)
Weight for aluminum wheel;
4.5 mm (0.177 in)