SUPPLEMENT FOR 6 CYLINDER ENGINE MODEL

This service manual has been prepared to provide SUBARU service personnel with the necessary information and data for the correct maintenance and repair of SUBARU vehicles.
This manual includes the procedures for maintenance, disassembling, reassembling, inspection and adjustment of components and diagnostics for guidance of experienced mechanics.
Please peruse and utilize this manual fully to ensure complete repair work for satisfying our customers by keeping their vehicle in optimum condition. When replacement of parts during repair work is needed, be sure to use SUBARU genuine parts.

All information, illustration and specifications contained in this manual are based on the latest product information available at the time of publication approval.

FUJI HEAVY INDUSTRIES LTD.

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IDENTIFICATION ID
RECOMMENDED MATERIALS RM
PRE-DELIVERY INSPECTION PI
PERIODICAL MAINTENANCE PM

G2281GE

SUPPLEMENT FOR 6 CYLINDER ENGINE MODEL

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IGNITION	IG(H6)
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REAR SUSPENSION	RS
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REAR SUSPENSION

RS

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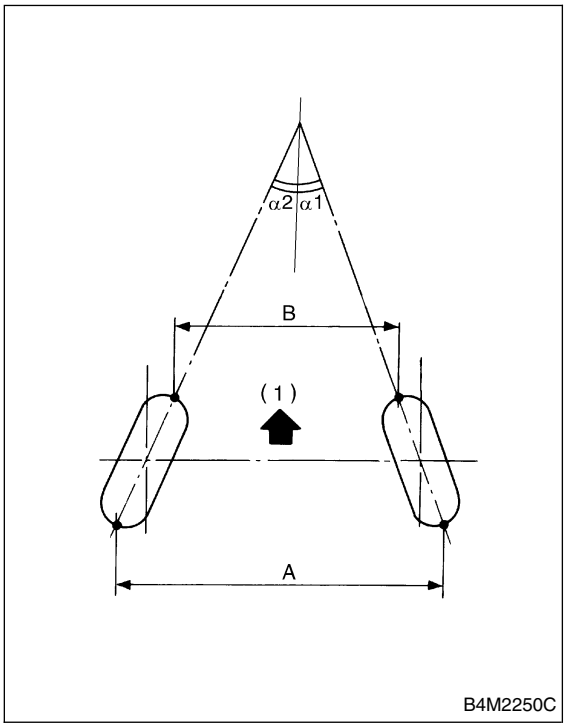
1. General Description S201001

A: SPECIFICATIONS S201001E49

Item		Sedan	Wagon	OUTBACK
Camber (tolerance: ±0°45′)		−0°30′	−0°20′	−0°10′
Toe-in		0±3 mm (0±0.12 in) Each toe-in angle: ±0°15′		
Wheel arch height [tolerance: $^{+12}/_{-24}$ mm ($^{+0.47}/_{-0.94}$ in)]		371 mm (14.61 in)	381 mm (15.00 in)	421 mm (16.57 in)
Thrust angle		0°±30′		
Diameter of stabilizer	2.0 L Wagon model	15 mm (0.59 in)		
	Except 2.0 L Wagon model	14 mm (0.55 in)		

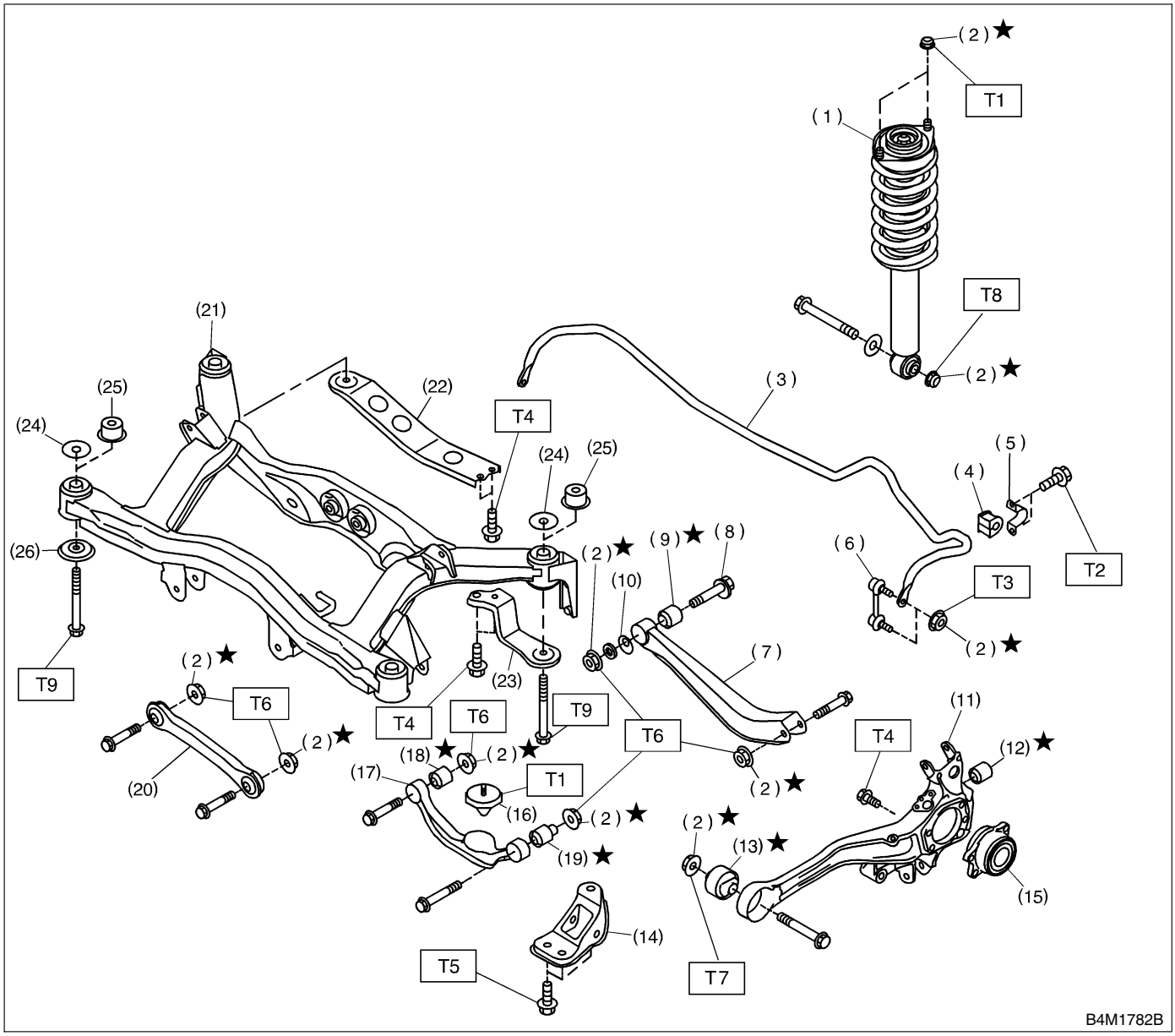
NOTE:
- Front and rear toe-ins and front camber can be adjusted. If toe-in or camber tolerance exceeds specifications, adjust toe-in and camber to the middle value of specification.
- The other items indicated in the specification table cannot be adjusted. If the other items exceeds specifications, check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



(1) Front
A − B = Positive: Toe-in, Negative: Toe-out
α1, α2: Each toe-in angle

B: COMPONENT S201001A05

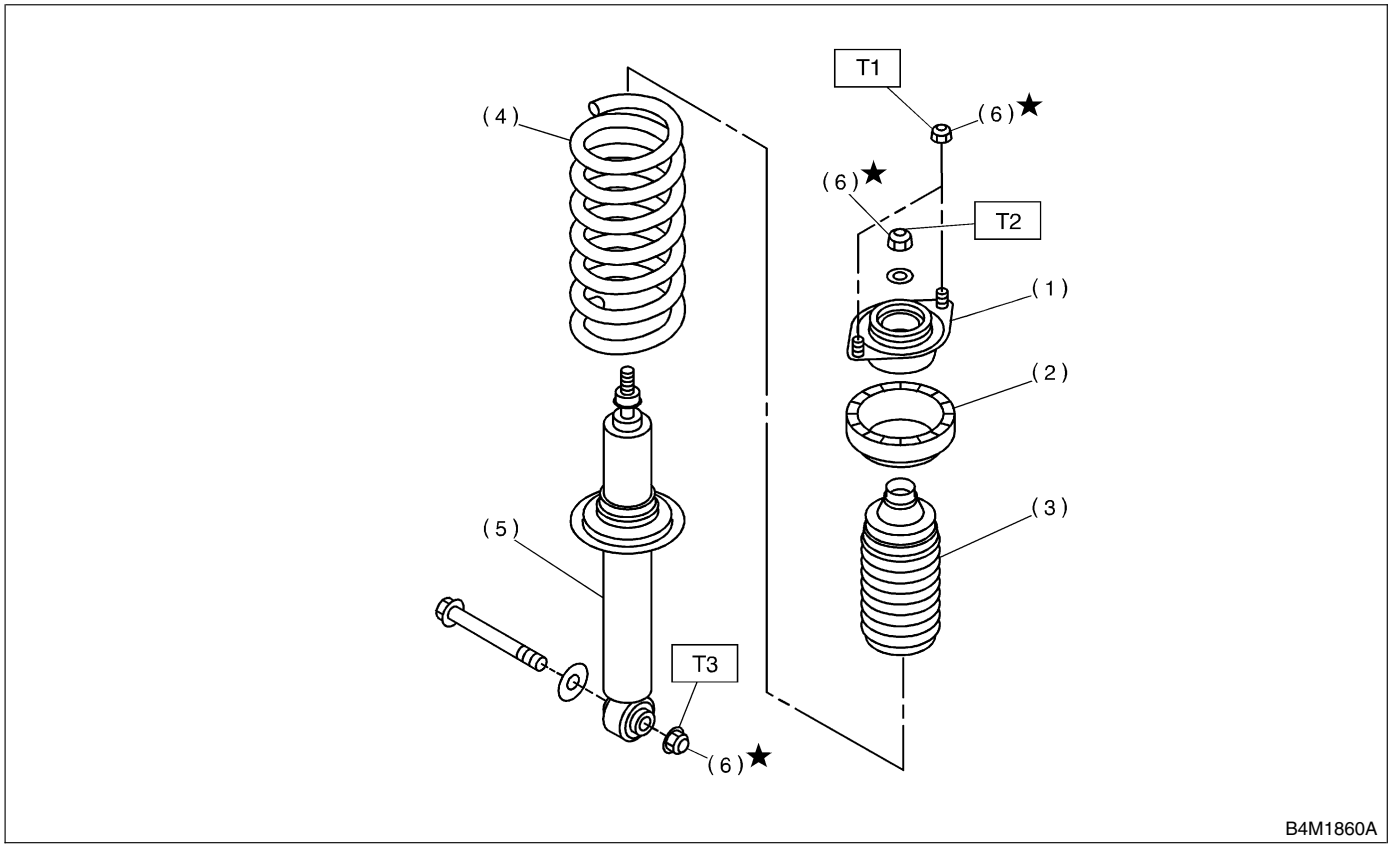
1. REAR SUSPENSION S201001A0501



(1) Shock absorber
(2) Self-locking nut
(3) Stabilizer
(4) Stabilizer bushing
(5) Clamp
(6) Stabilizer link
(7) Link rear
(8) Adjusting bolt
(9) Link rear bushing
(10) Adjusting washer
(11) Rear arm
(12) Rear arm rear bushing
(13) Rear arm front bushing
(14) Rear arm bracket
(15) Hub bearing unit
(16) Helper
(17) Link upper
(18) Link upper bushing (Inside)
(19) Link upper bushing (Outside)
(20) Link front
(21) Rear sub frame
(22) Support sub frame (RH)
(23) Support sub frame (LH)
(24) Stopper upper (Except OUTBACK model)
(25) Stopper upper (OUTBACK MODEL)
(26) Stopper lower

Tightening torque: N·m (kgf-m, ft-lb)
T1: 30 (3.1, 22.4)
T2: 40 (4.1, 30)
T3: 44 (4.5, 32.5)
T4: 65 (6.6, 48)
T5: 110 (11.2, 81)
T6: 120 (12.2, 88)
T7: 150 (15.3, 111)
T8: 160 (16.3, 118)
T9: 175 (17.8, 129)

2. SHOCK ABSORBER S201001A0502



(1) Mount
(2) Rubber seat upper
(3) Dust cover
(4) Coil spring
(5) Shock absorber
(6) Self-locking nut

Tightening torque: N·m (kgf-m, ft-lb)
T1: 30 (3.1, 22.4)
T2: 35 (3.6, 26)
T3: 160 (16.3, 118)

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 vise, place cushioning material such as wood blocks, aluminum plate, or shop cloth between the part and the vise.
- Before disposing shock absorbers, be sure to bleed gas completely. Also, do not throw away in fire.

D: PREPARATION TOOL S201001A17

1. SPECIAL TOOLS S201001A1701

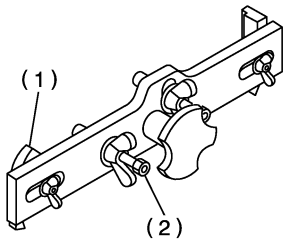
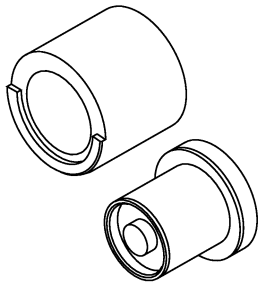
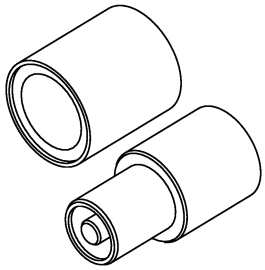
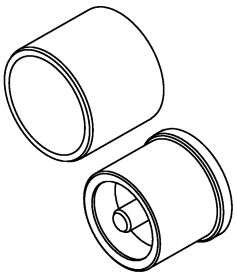
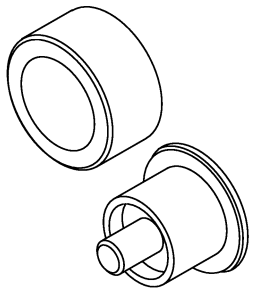
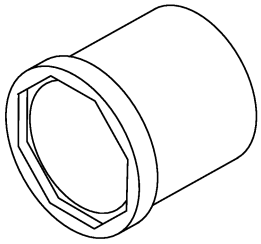
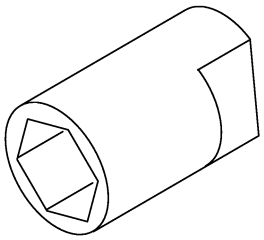
ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 B4M2378A	927380002	ADAPTER	Used as an adapter for camber & caster gauge when measuring camber and caster. (1) 28199AC000 PLATE (2) 28199AC010 BOLT
 B4M2379	20099AE000	INSTALLER & REMOVER	Used for replacing link rear bushing.
 B4M2380	20099AE010	INSTALLER & REMOVER	Used for replacing link upper bushing.
 B4M2381	20099AE020	INSTALLER & REMOVER	Used for replacing rear arm front bushing.

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 B4M2382	20099AE040	INSTALLER & REMOVER	Used for replacing rear arm rear bushing.
 B4M2383	20099AE030	HELPER SOCKET WRENCH	Used for replacing helper.
 B4M2384	927760000	STRUT MOUNT SOCKET	Used for disassembling and assembling strut and shock mount.

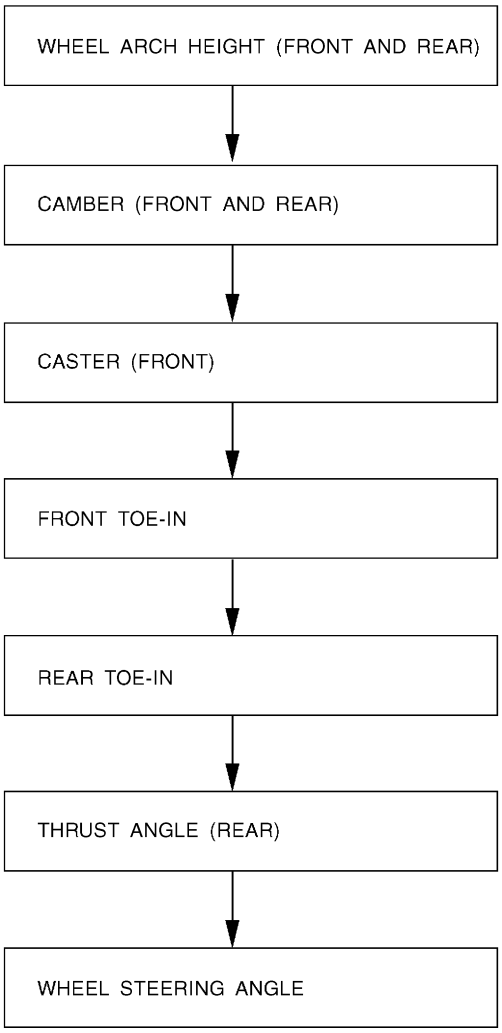
2. GENERAL PURPOSE TOOLS *S201001A1702*

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.

2. Wheel Alignment S201116

A: INSPECTION S201116A10

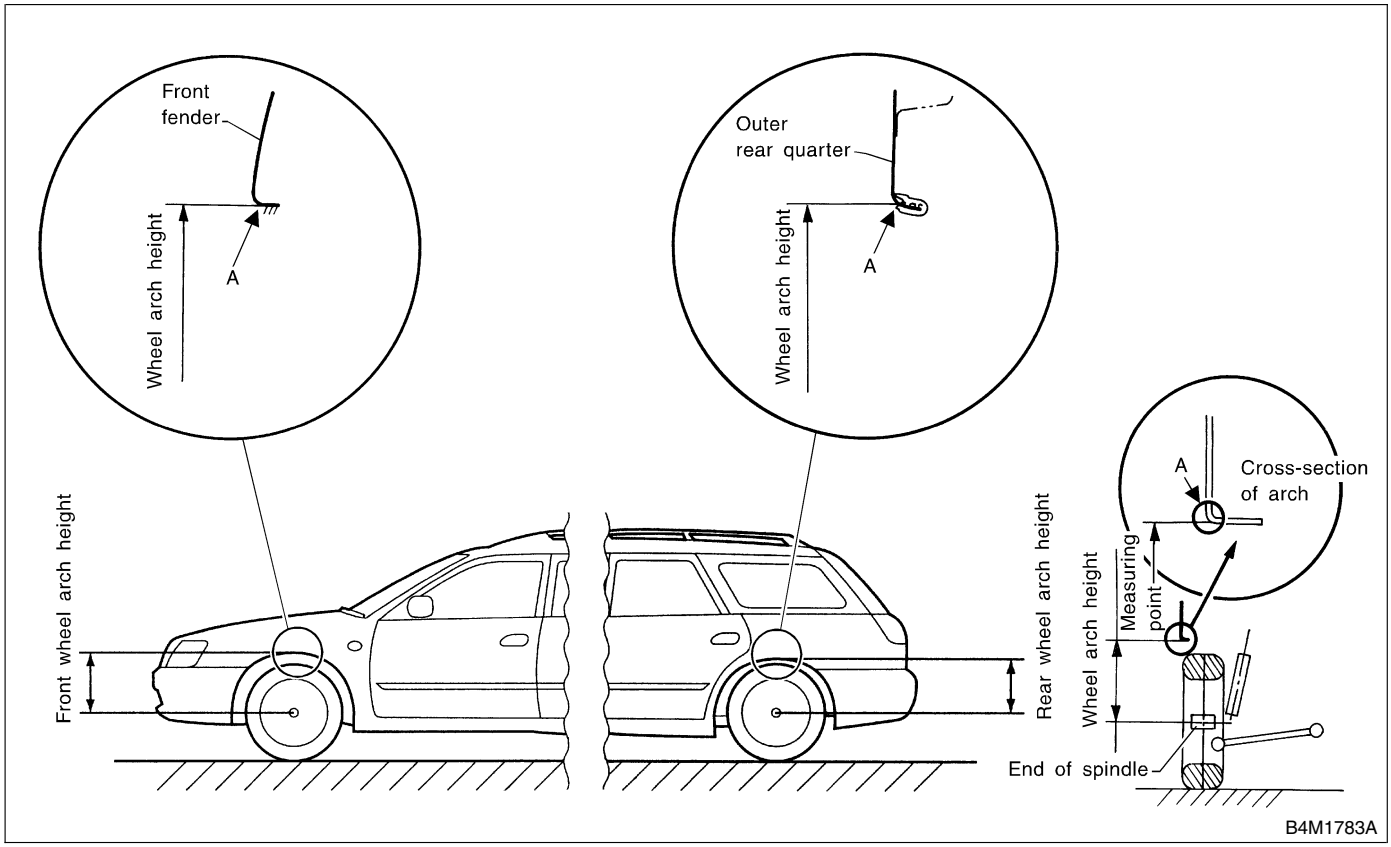
Check, adjust and/or measure wheel alignment in accordance with procedures indicated in figure:



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 below) to determine a point directly above center of spindle.
5) Measure distance between measuring point “A” and center of spindle.

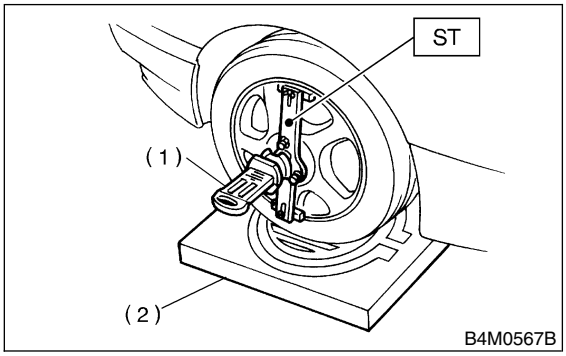


Model	Specified wheel arch height
Sedan	$371^{+12}/_{-24}$ mm ($14.61^{+0.47}/_{-0.94}$ in)
Wagon	$381^{+12}/_{-24}$ mm ($15.00^{+0.47}/_{-0.94}$ in)
OUTBACK	$421^{+12}/_{-24}$ mm ($16.57^{+0.47}/_{-0.94}$ in)

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 927380002 ADAPTER



(1) Alignment gauge
(2) Turning radius gauge

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

● Front Camber Adjustment

Refer to “FS” section for front camber adjustment.
<Ref. to FS-6 INSPECTION, Wheel Alignment.>

3. WHEEL TOE-IN S201116A1003

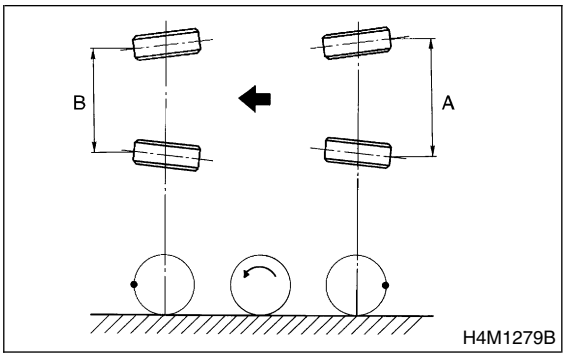
● Inspection

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

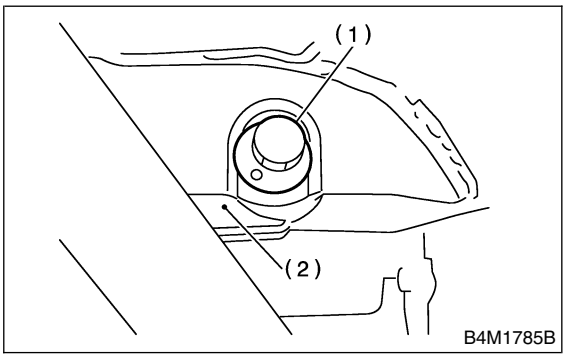
A – B = Toe-in



● Adjustment

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

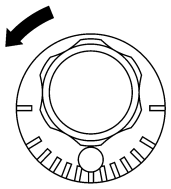
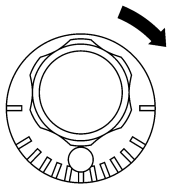
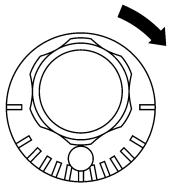
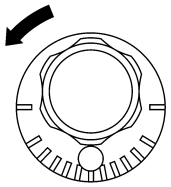
CAUTION:
● When loosening or tightening adjusting bolt, hold bolt head and turn self-locking nut.
● Discard loosened self-locking nut and replace with a new one.



(1) Adjusting bolt
(2) Link rear

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.	 Rotate clockwise. B4M1786	 Rotate counterclockwise. B4M1787
Toe-in is decreased.	 Rotate counterclockwise. B4M1787	 Rotate clockwise. B4M1786

3) Tighten self-locking nut.

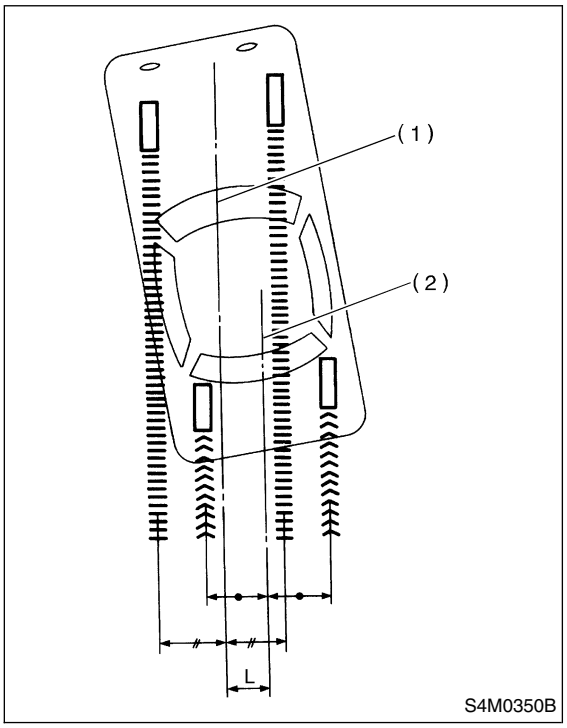
Tightening torque:
120 N·m (12.2 kgf-m, 88 ft-lb)

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 30′ when “L” is equal to or less than 23 mm (0.91 in).

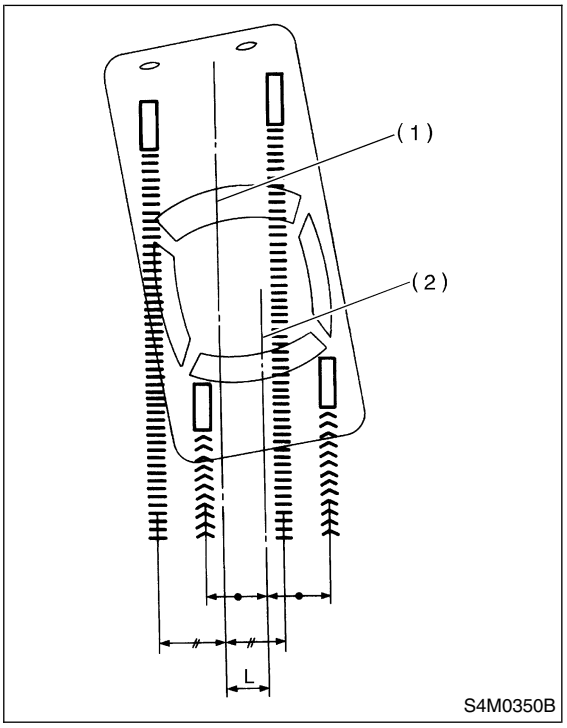


(1) Center line of loci (front axle)
(2) Center line of loci (rear axle)

● Adjustment

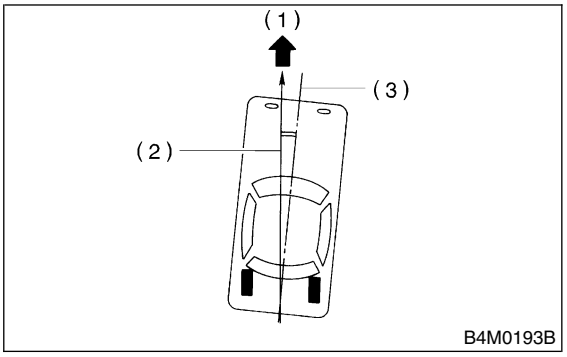
1) Make thrust angle adjustments by turning toe-in adjusting bolts of rear suspension equally in the same direction.
2) When one rear wheel is adjusted in a toe-in direction, adjust the other rear wheel equally in toe-out direction, in order to make thrust angle adjustment.
3) When left and right adjusting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

Thrust angle:
0°±30′



(1) Center line of loci (front axle)
(2) Center line of loci (rear axle)

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.

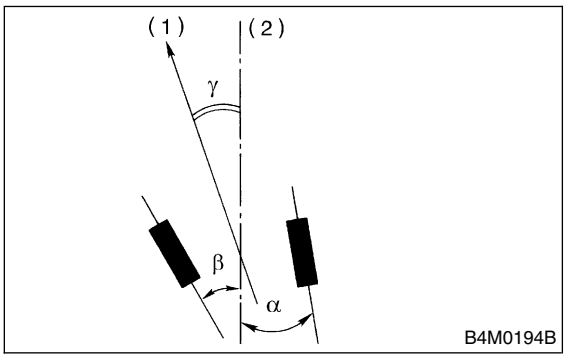


(1) Front
(2) Thrust angle
(3) Body center line

Thrust angle: r = (α – β)/2

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

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

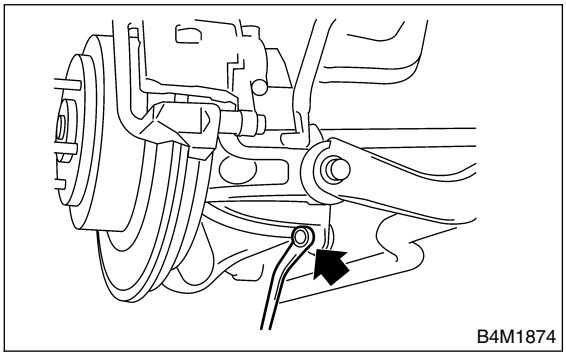


(1) Front
(2) Body center line

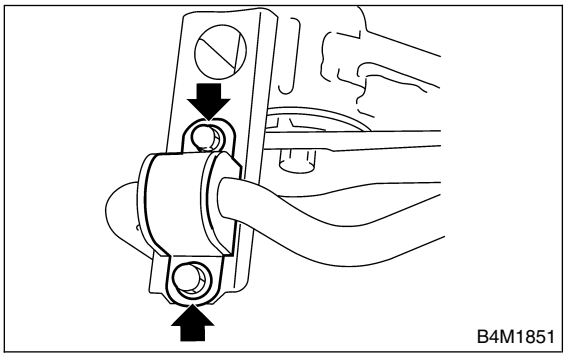
3. Rear Stabilizer S201118

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 arm.



3) Remove bolts which secure stabilizer to sub frame.



B: INSTALLATION S201118A11

Install in the reverse order of removal.

Tightening torque:
Stabilizer link to rear arm
44 N·m (4.5 kgf-m, 32.5 ft-lb)
Clamp to sub frame
40 N·m (4.1 kgf-m, 30 ft-lb)

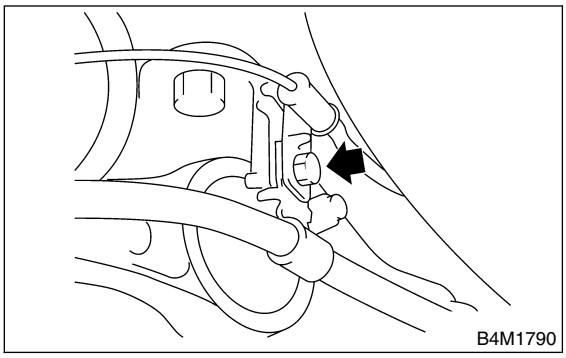
C: INSPECTION S201118A10

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.

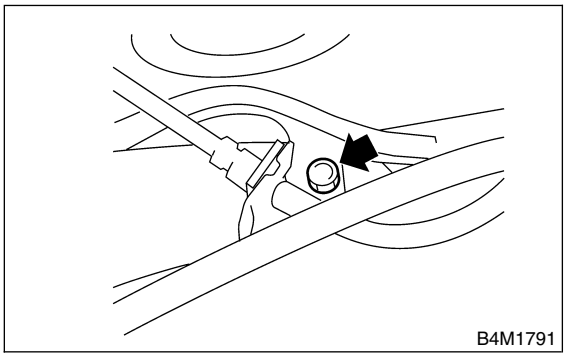
4. Rear Arm S201105

A: REMOVAL S201105A18

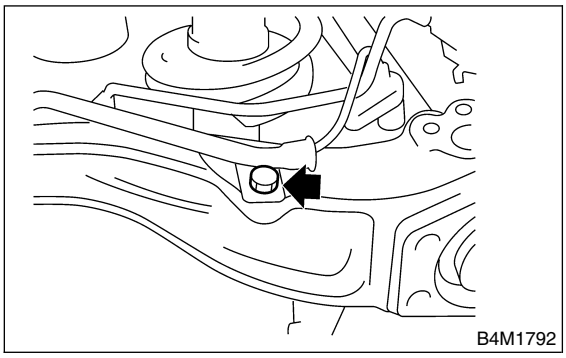
1) Lift-up the vehicle and remove rear wheel.
2) Remove bearing unit.
<Ref. to DS-22 REMOVAL, Hub Unit Bearing.>
3) Remove bolt securing parking brake cable clamp to rear arm.


B4M1790

4) Remove bolt securing brake hose to rear arm.


B4M1791

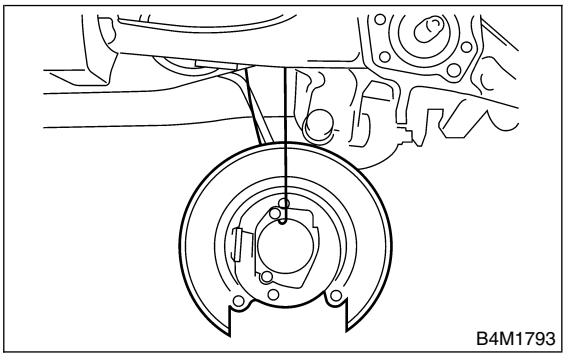
5) Remove bolt securing ABS sensor to rear arm.


B4M1792

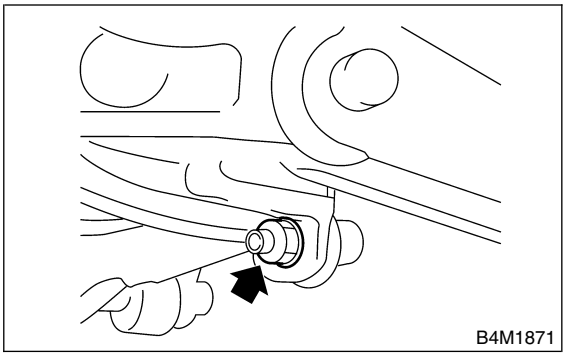
6) Using a flare nut wrench, disconnect brake pipe from wheel cylinder. (Drum brake model only)

CAUTION:
Cover open end of wheel cylinder and pipe to prevent entry of foreign particles.

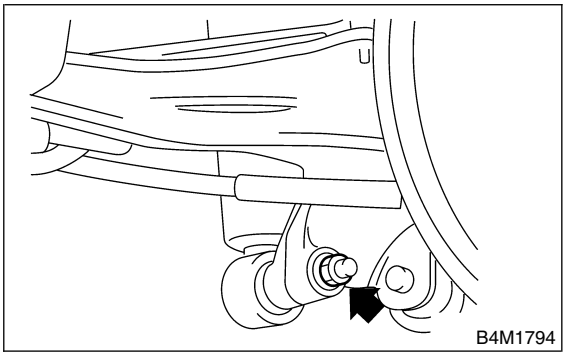
7) Suspend the back plate from sub frame.


B4M1793

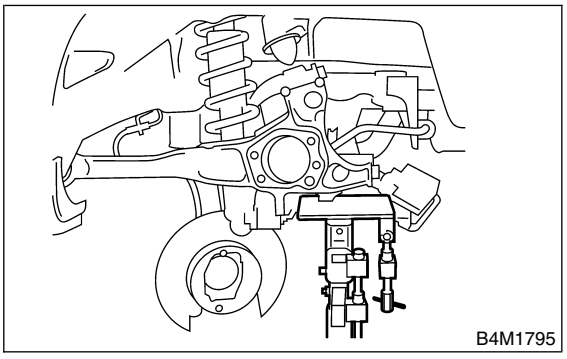
8) Remove nut securing stabilizer link to rear arm.


B4M1871

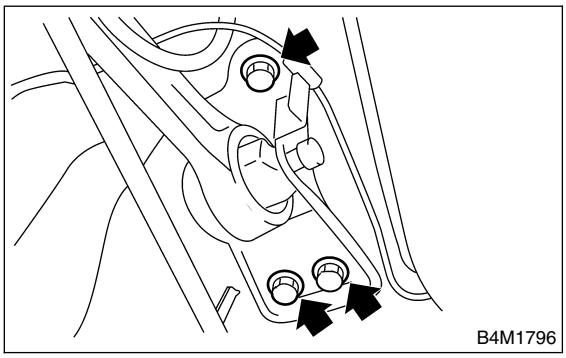
9) Remove bolt securing shock absorber to rear arm.


B4M1794

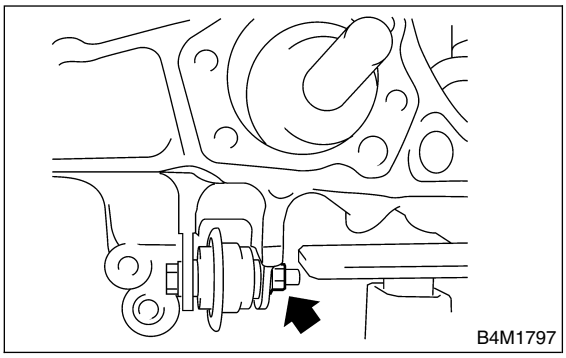
10) Use transmission jack to support rear arm horizontally.


B4M1795

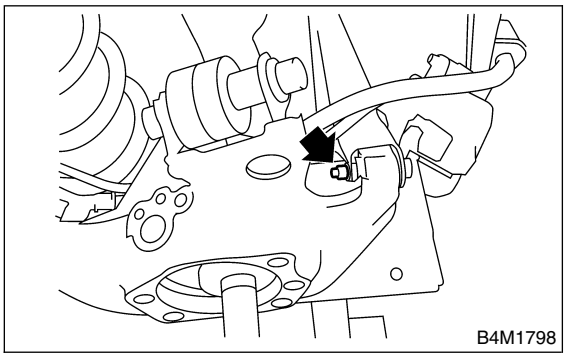
11) Remove bolt securing rear arm to body.



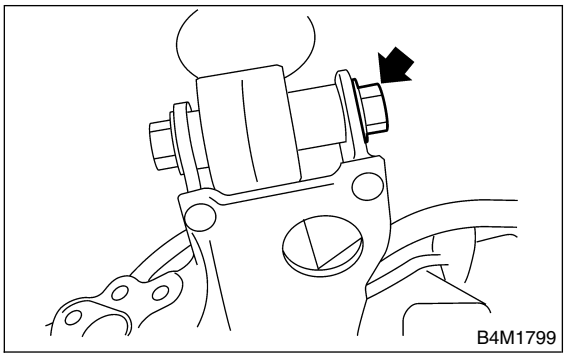
12) Loosen nut securing front rink to rear arm.



13) Loosen nut securing rear link to rear arm.



14) Loosen nut securing upper link to rear arm.

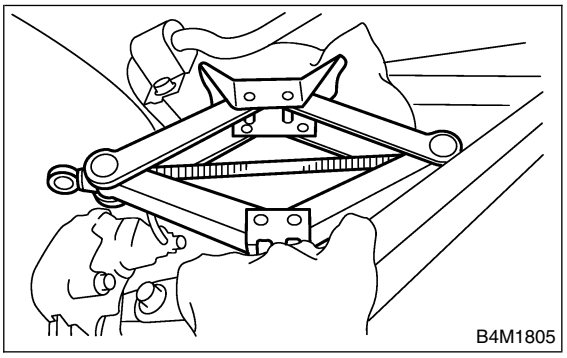


15) Remove bolts securing rear arm to links and remove rear arm.

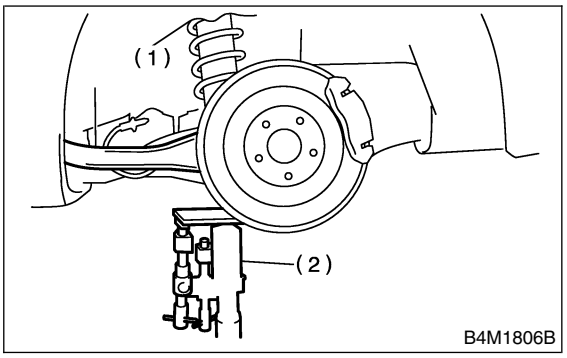
B: INSTALLATION S201105A11

1) Use a transmission jack to support the rear arm.
2) Install rear arm and temporarily tighten bolts securing rear arm to links.
3) Install bearing unit.
<Ref. to DS-24 INSTALLATION, Hub Unit Bearing.>
4) Install bolt securing ABS sensor to rear arm.
5) Install bolt securing brake hose to rear arm.
6) Install bolt securing parking brake cable clamp to rear arm.
7) Place jack (furnished with vehicle) upside down and position it between link rear and sub frame. Adjust jack position so rear shock absorber is aligned with rear arm at their corresponding holes. Install lower shock absorber bolts.

CAUTION:
Put a cloth between jack and its mating area to protect link rear and sub frame from scratches.



8) Using transmission jack, support rear arm horizontally and tighten nuts and bolts securing rear arm, link front, link rear, link upper and shock absorber.



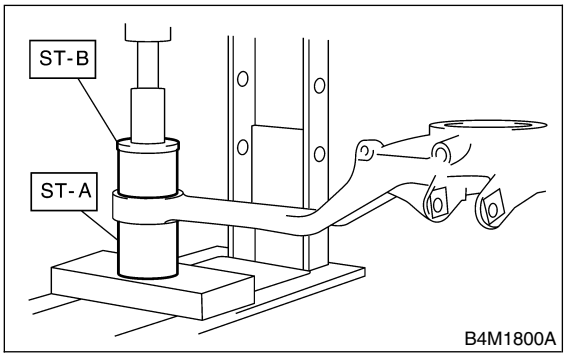
(1) Rear arm
(2) Transmission jack

NOTE:
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY S201105A06

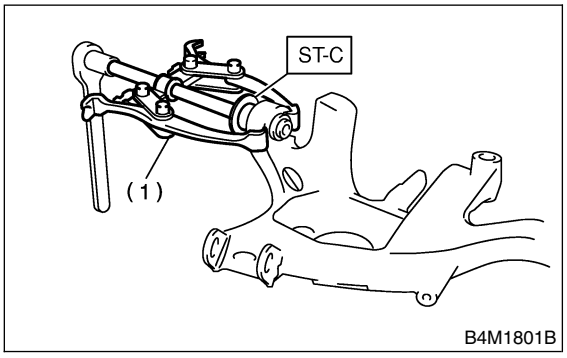
1. FRONT BUSHING S201105A0601

1) Using ST-A, B, press front bushing out of place.
ST-A, B 20099AE020 INSTALLER & REMOVER SET
(1) Set ST-A in position with larger inside diameter side facing up.
(2) Set rear arm with protruded bushing side facing down.
(3) Place ST-B on upper side of bushing, then press bushing out of position.



2. REAR BUSHING S201105A0602

Using ST-C and bearing puller, press rear bushing out of place.
ST-C 20099AE040 INSTALLER & REMOVER SET



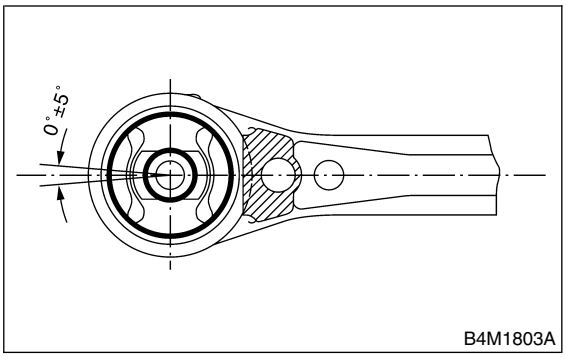
(1) Bearing puller

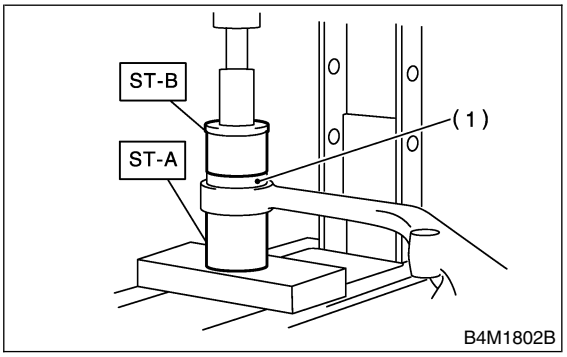
D: ASSEMBLY S201105A02

1. FRONT BUSHING S201105A0201

1) Using ST-A, B, press bushing into trailing link.
ST-A, B 20099AE020 INSTALLER & REMOVER SET
(1) Set ST-A in position with smaller inside diameter side facing up.
(2) Set rear arm in position with outer side of vehicle body facing down.
(3) Place bushing on upper side of rear arm.
(4) Place ST-B on upper side of bushing, then press bushing into position.

CAUTION:
- **Install bushing with painted side facing up.**
- **Install front bushing in the proper direction, as shown in figure.**





(1) Bushing

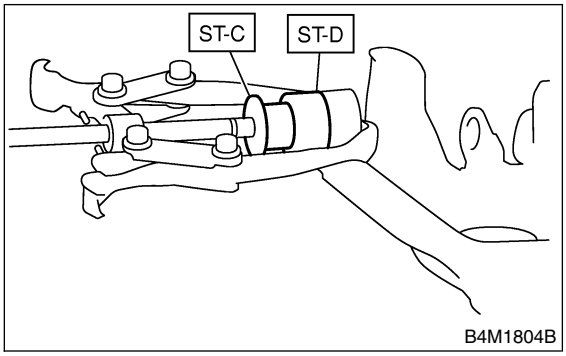
2. REAR BUSHING S201105A0202

1) Using ST-C, D and bearing puller, press bushing into trailing link.

ST-C, D 20099AE040 INSTALLER & REMOVER SET

(1) Insert bushing into bore in ST-D.

(2) Set ST-C, ST-D and bearing puller in position, as shown in the figure, and press bushing into position.



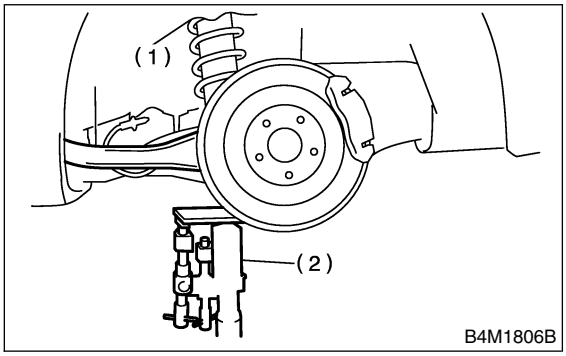
E: INSPECTION S201105A10

Check trailing links for bends, corrosion or damage.

5. Link Upper S201103

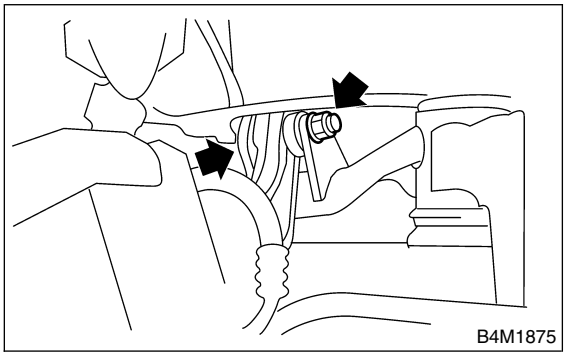
A: REMOVAL S201103A18

1) Loosen wheel nuts. Lift-up vehicle and remove wheel.
2) Use transmission jack to support rear arm horizontally.

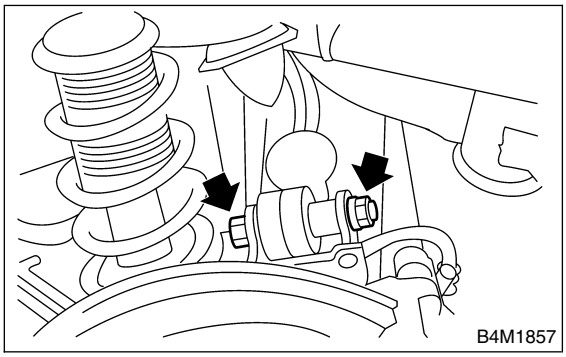


(1) Rear arm
(2) Transmission jack

3) Remove bolt securing link upper to sub frame.



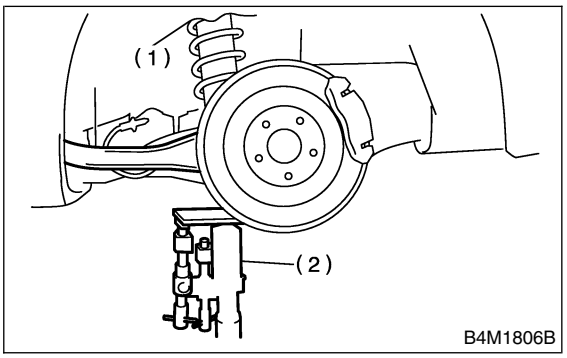
4) Remove bolts which secure link upper to rear arm and detach link upper.



B: INSTALLATION S201103A11

Install in the reverse order of removal, observing the following instructions.

CAUTION:
• Using transmission jack, support rear arm horizontally, install link upper and tighten nuts to specified torque.



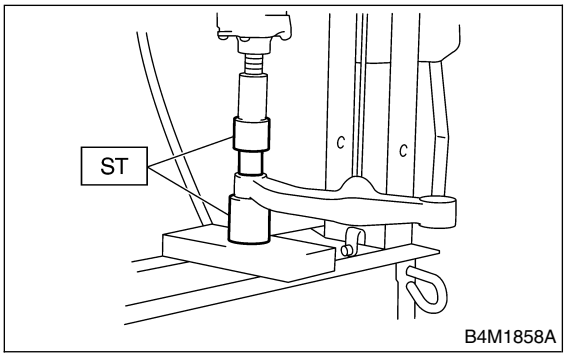
(1) Rear arm
(2) Transmission jack

- **Tighten nut when installing adjusting bolt.**
- **Replace self-locking nut.**

NOTE:
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY S201103A06

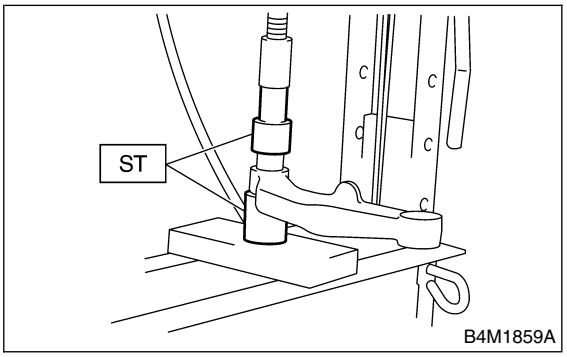
Using ST, press bushing out of place.
ST 20099AE010 INSTALLER & REMOVER



D: ASSEMBLY S201103A02

1) Using ST, press bushing into place.
ST 20099AE010 INSTALLER & REMOVER

CAUTION:
Outer bushing has a "directional" design. Be sure to install bushing with longer inner housing side facing vehicle rear.



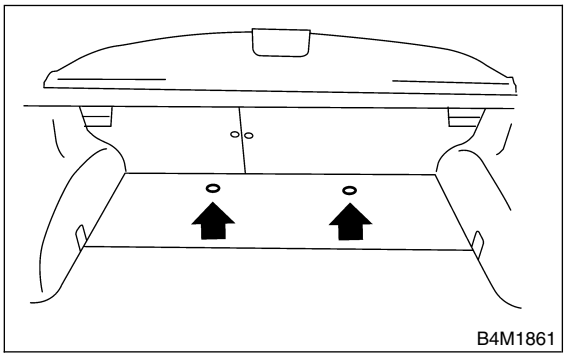
E: INSPECTION S201103A10

Visually check link upper for damage or bends.

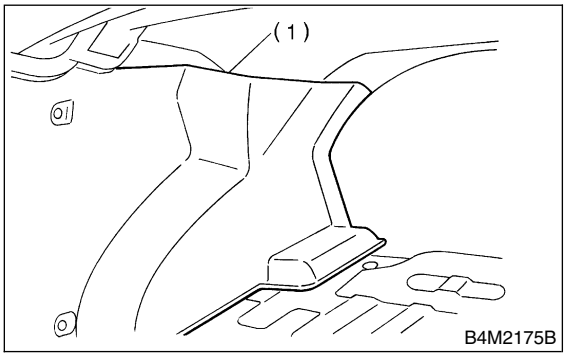
6. Rear Shock Absorber S201104

A: REMOVAL S201104A18

1) Lift-up vehicle and remove rear wheels.
2) Remove clip and detach floor mat. (Wagon model)

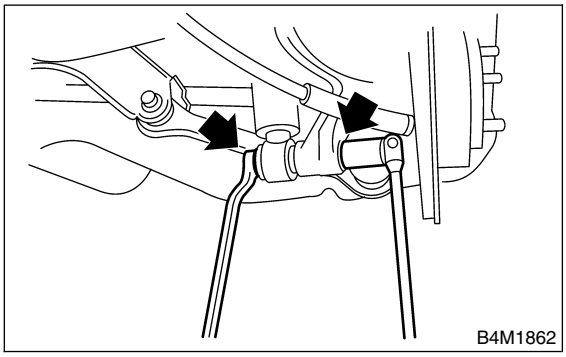


3) Detach trunk mat. (Sedan model)
4) Roll up the trunk side trim. (Sedan model)



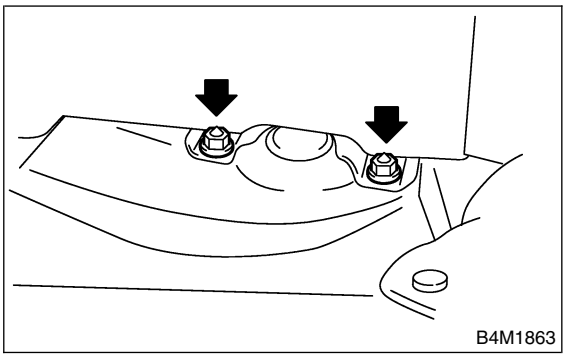
(1) Trunk side trim

5) Remove bolt securing shock absorber to rear arm.

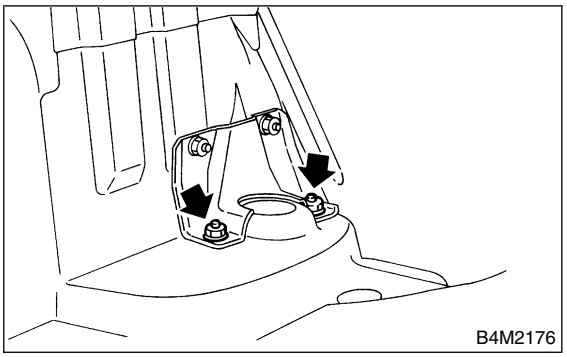


6) Use a jack to support the shock absorber.
7) Remove nuts securing shock absorber mount to body.

- **Wagon**



- **Sedan**



8) Remove shock absorber.

B: INSTALLATION S201104A11

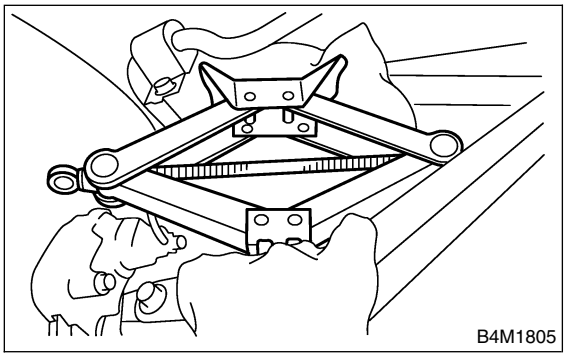
1) Use a jack to support the shock absorber.
2) Tighten self-locking nut used to secure shock absorber to vehicle body.

CAUTION:
Use a new self-locking nut.

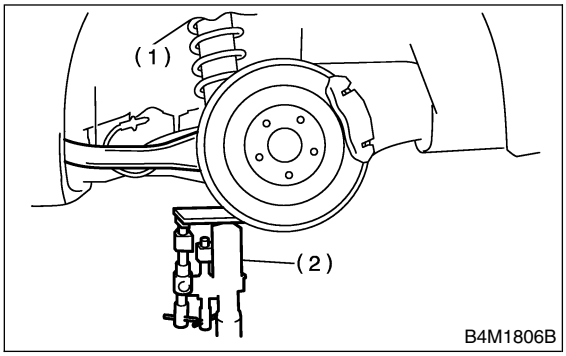
Tightening torque:
30 N·m (3.1 kgf-m, 22 ft-lb)

3) Place jack (furnished with vehicle) upside down and position it between link rear and sub frame. Adjust jack position so rear shock absorber is aligned with rear arm at their corresponding holes. Install lower shock absorber bolts.

CAUTION:
Put a cloth between jack and its mating area to protect link rear and sub frame from scratches.



4) Using transmission jack, support rear arm horizontally and tighten shock absorber nuts and bolts to specified torque.



(1) Rear arm
(2) Transmission jack

Tightening torque:
160 N·m (16.3 kgf-m, 118 ft-lb)

CAUTION:
Use a new self-locking nut.

5) Install floor mat. (Wagon model)
6) Set trunk side trim. (Sedan model)
7) Install trunk mat. (Sedan model)

NOTE:
Check wheel alignment and adjust if necessary.

C: DISASSEMBLY S201104A06

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

D: ASSEMBLY S201104A02

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

E: INSPECTION S201104A10

1) Refer to Front Strut as a guide for inspection procedures. <Ref. to FS-18 INSPECTION, Front Strut.>
2) If vehicle is equipped with self-leveling suspension, check the following.

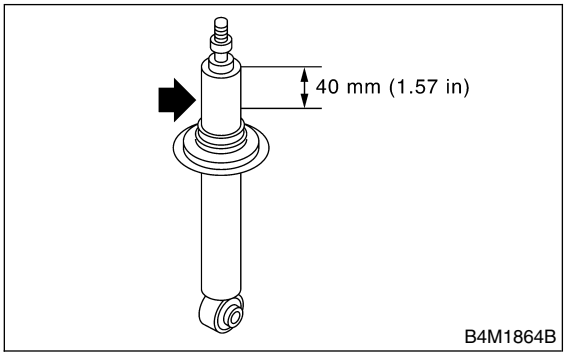
No.	Step	Check	Yes	No
1	**CHECK WHEEL ARCH HEIGHT.** 1) Remove all cargo from the vehicle. 2) Fill gasoline tank completely. 3) Drive vehicle (only the driver aboard) for at least 1 km (0.6 mile). 4) Measure the rear wheel arch height. This is value “A” in the equation. <Ref. to RS-9, WHEEL ARCH HEIGHT, INSPECTION, Wheel Alignment.> 5) Put 4 people in the vehicle. NOTE: The total weight of the 4 people should be approximately 300 kg (662 lb). 6) Drive the vehicle for at least 5 km (3 miles). 7) Stop the vehicle. With the 4 people in the vehicle, measure the rear wheel arch height. This value is “B” in the equation.	Is B between 411 mm (16.18 in) and 391 mm (15.39 in)?	Go to step **2**.	Replace shock absorber.
2	**CHECK WHEEL ARCH HEIGHT.** 1) Let the 4 people get off of the vehicle. 2) Drive the vehicle (only the driver aboard) for at least 1 km (0.6 mile). 3) Measure the rear wheel arch height. This is value “C” in the equation. 4) A – C = D	Is D less than ±10 mm (±0.39 in)?	Go to step **3**.	Replace shock absorber.
3	**CHECK WHEEL ARCH HEIGHT.**	Is C between 433 mm (17.05 in) and 397 mm (15.63 in)?	Correct.	Replace coil spring.

F: DISPOSAL S201104A07

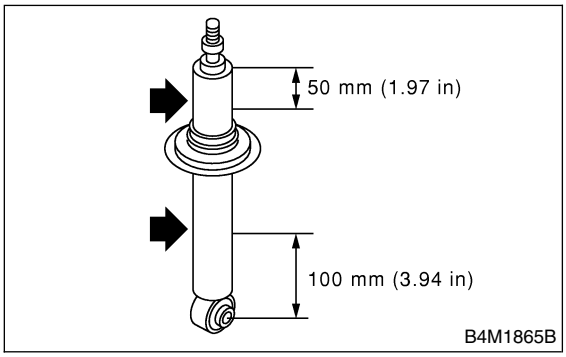
CAUTION:
• Completely discharge the gas from the shock absorber before disposal. Follow the disposal procedure outlined below.
• Do not disassemble shock absorber or place into a fire.
• Drill holes before disposing of shock absorber.
• Before handling shock absorber, be sure to wear goggles to protect eyes from gas, oil and/or filings.

1) Place shock absorber 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, drill 30 mm (1.18 in) deep holes in areas shown in the figure.

Without self-leveling suspension



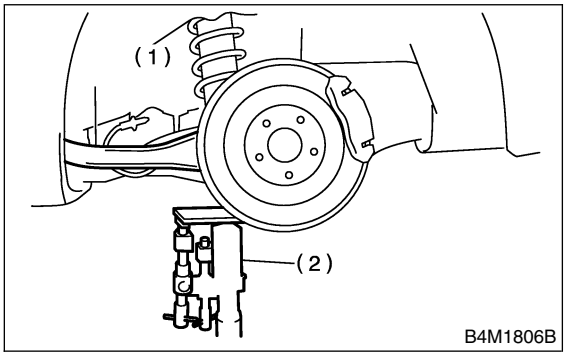
With self-leveling suspension



7. Link Front S201106

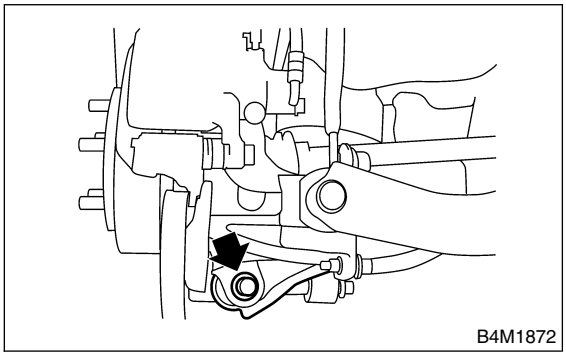
A: REMOVAL S201106A18

1) Loosen wheel nuts. Lift-up vehicle and remove wheel.
2) Use transmission jack to support rear arm horizontally.

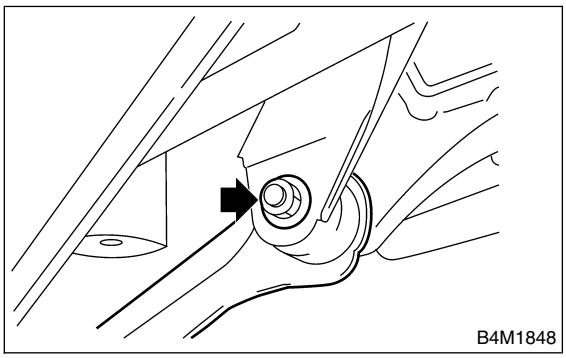


(1) Rear arm
(2) Transmission jack

3) Remove bolt securing link front to sub frame.



4) Remove bolts which secure link front to rear arm and detach link front.

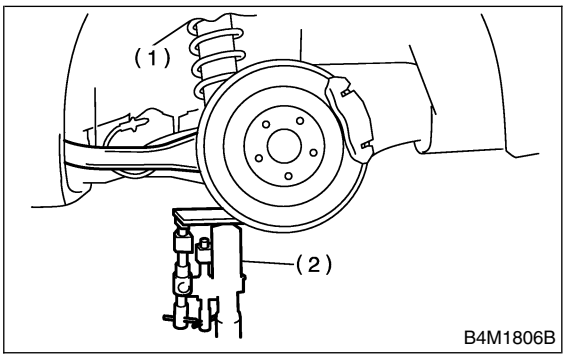


NOTE:
Link front bushing cannot be replaced alone. Always replace link front and bushing as a single unit.

B: INSTALLATION S201106A11

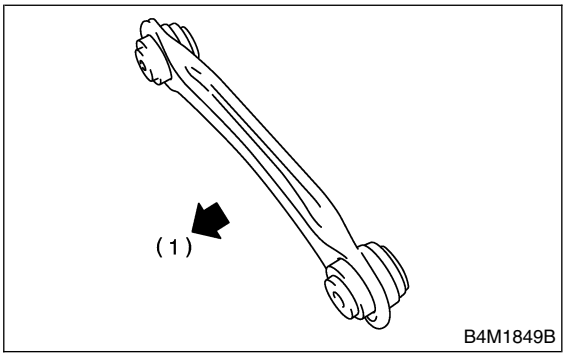
Install in the reverse order of removal, observing the following instructions.

CAUTION:
• Using transmission jack, support rear arm horizontally, install link front and tighten nuts to specified torque.



(1) Rear arm
(2) Transmission jack

• Install link front with protruded side facing front.



(1) Front

• Replace self-locking nut.

NOTE:
Check wheel alignment and adjust if necessary.

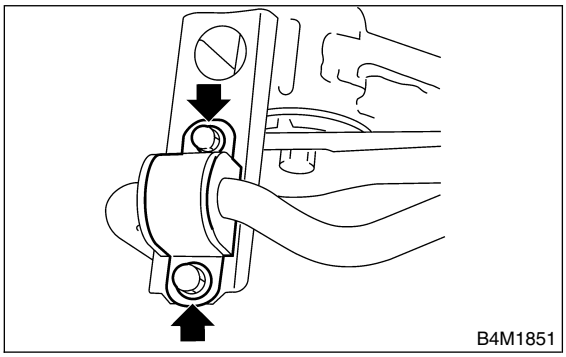
C: INSPECTION S201106A10

Visually check link front for damage or bends.

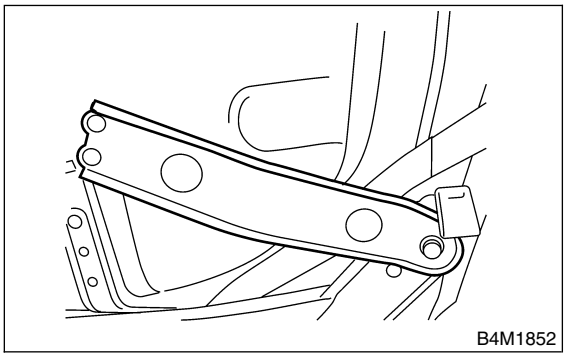
8. Link Rear S201102

A: REMOVAL S201102A18

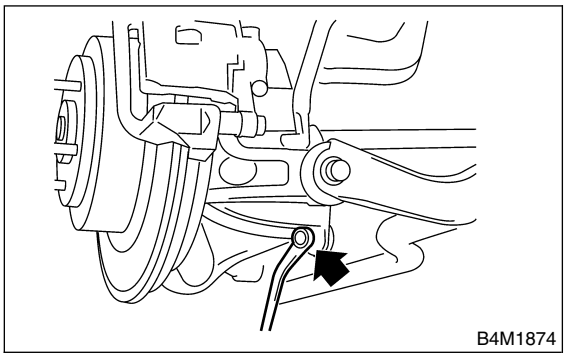
1) Loosen wheel nuts. Lift-up vehicle and remove wheel.
2) Remove bolt securing stabilizer clamps to sub frame.


B4M1851

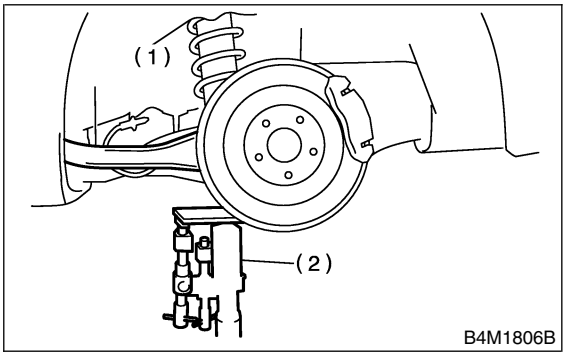
3) Remove support sub frame RH. (When removing RH side link rear.)


B4M1852

4) Remove stabilizer link.


B4M1874

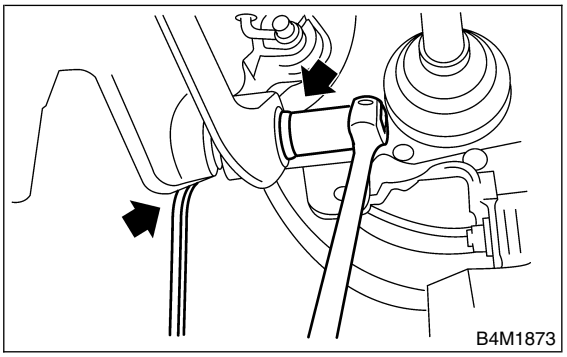
5) Use transmission jack to support rear arm horizontally.



B4M1806B

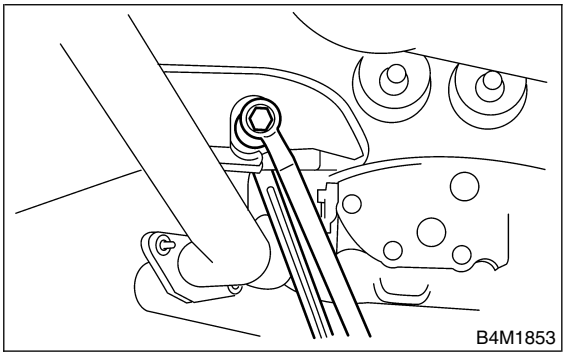
(1) Rear arm
(2) Transmission jack

6) Remove bolt securing link rear to rear arm.


B4M1873

7) Scribe an alignment mark on link rear adjusting bolt and sub frame.
8) Remove bolts securing link rear to sub frame, detach link rear.

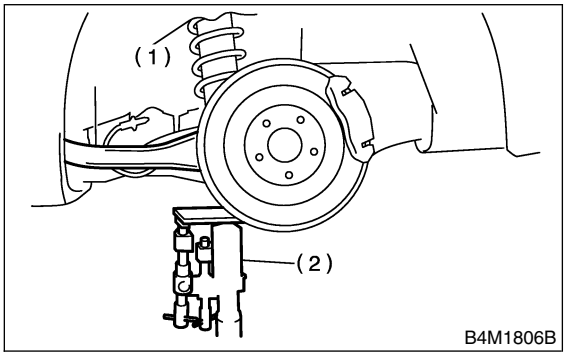
CAUTION:
To loosen adjusting bolt, always loosen nut while holding the head of adjusting bolt.


B4M1853

B: INSTALLATION S201102A11

Install in the reverse order of removal, observing the following instructions.

CAUTION:
• Using transmission jack, support rear arm horizontally, install link rear and tighten nuts to specified torque.



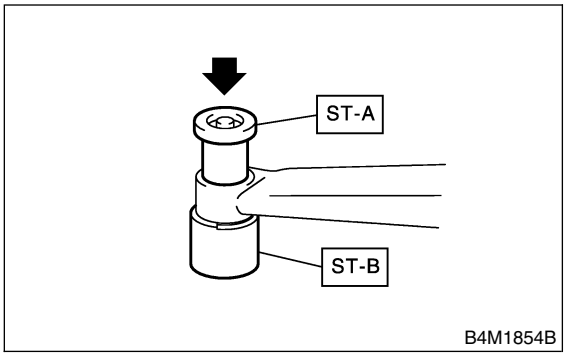
(1) Rear arm
(2) Transmission jack

- **Tighten nut when installing adjusting bolt.**
- **Replace self-locking nut.**

NOTE:
Check wheel alignment and adjust if necessary.

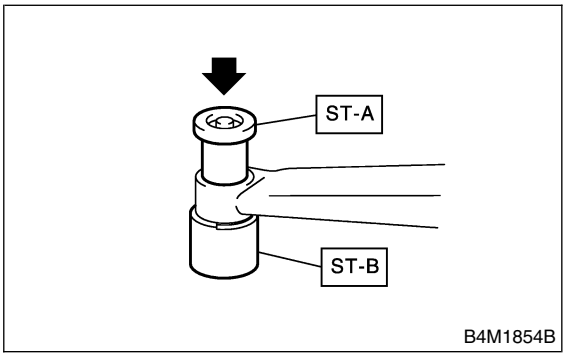
C: DISASSEMBLY S201102A06

Using ST-A, B, press bushing out of place.
ST-A, B 20099AE000 INSTALLER & REMOVER



D: ASSEMBLY S201102A02

Using ST, press bushing into place.
ST-A, B 20099AE000 INSTALLER & REMOVER



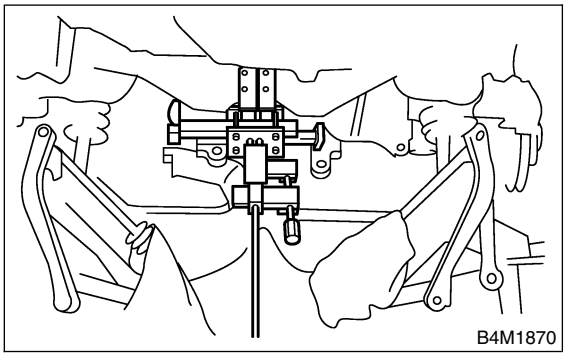
E: INSPECTION S201102A10

Visually check link rear for damage or bends.

9. Rear Sub Frame S201111

A: REMOVAL S201111A18

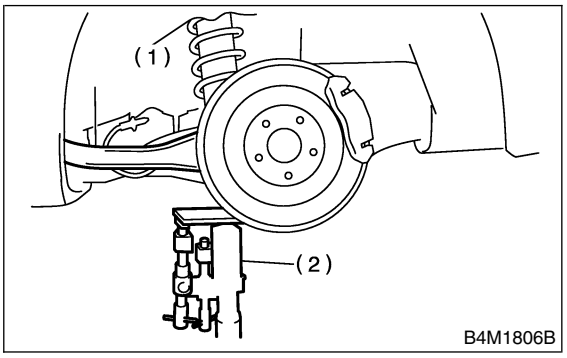
1) Separate front exhaust pipe and rear exhaust pipe.
2) Remove rear exhaust pipe and muffler.
3) Remove rear differential.
With T-type
<Ref. to DI-23 REMOVAL, Rear Differential for T-type.>
With VA-type
<Ref. to DI-41 REMOVAL, Rear Differential for VA-type.>
4) Disconnect link front from sub frame.
<Ref. to RS-25 REMOVAL, Link Front.>
5) Disconnect link rear from sub frame.
<Ref. to RS-26 REMOVAL, Link Rear.>
6) Disconnect link upper from sub frame.
<Ref. to RS-19 REMOVAL, Link Upper.>
7) Place transmission jack under sub frame.



8) After removing bolts, remove sub frame and support sub frame from vehicle body.

B: INSTALLATION S201111A11

1) Install in reverse order of removal.
2) For installation and tightening torque of rear differential.
With T-type
<Ref. to DI-25 INSTALLATION, Rear Differential for T-type.>
With VA-type
<Ref. to DI-43 INSTALLATION, Rear Differential for VA-type.>
3) Using transmission jack, support rear arm horizontally and tighten nuts and bolts securing rear arm, link front, link rear, link upper and shock absorber.



(1) Rear arm
(2) Transmission jack

NOTE:
Check wheel alignment and adjust if necessary.

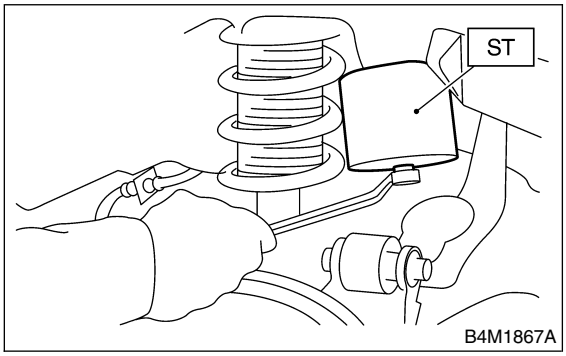
C: INSPECTION S201111A10

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

10. Helper S201539

A: REMOVAL S201539A18

1) Jack-up the rear part of the vehicle, support it with safety stands (rigid racks).
2) Using ST, remove helper.
ST 20099AE030 HELPER



B: INSTALLATION S201539A11

Install in the reverse order of removal.

Tightening torque:
30 N·m (3.1 kgf-m, 22 ft-lb)

C: INSPECTION S201539A10

Check helper for cracks, fatigue or damage.

11. General Diagnostic Table S201257

A: INSPECTION S201257A10

1. IMPROPER VEHICLE POSTURE OR IMPROPER WHEEL ARCH HEIGHT S201257A1001

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

2. POOR RIDE COMFORT S201257A1002

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 and/or shock absorber	Replace.
(5) Damage or deformation of strut mount and/or shock absorber mount	Replace.
(6) Unsuitability of maximum and/or minimum length of damper strut and/or shock absorber	Replace with proper parts.
(7) Deformation or loss of bushing	Replace.
(8) Deformation or damage of helper in strut assembly and/or shock absorber	Replace.
(9) Oil leakage of damper strut and/or shock absorber	Replace.

3. NOISE S201257A1003

Possible causes	Countermeasures
(1) Wear or damage of damper strut and/or shock absorber 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 and/or shock absorber	Replace with proper parts.
(5) Breakage of coil spring	Replace.
(6) Wear or damage of ball joint	Replace.
(7) Deformation of stabilizer clamp	Replace.