DAIHATSU

TERIOS

J100

TO INDEX

FRONT AXLE & SUSPENSION

WHEEL ALIGNMENT ..... FS– 2
PREPARATION ..... **FS– 2**
FRONT AXLE AND SUSPENSION .... FS– 4
COMPONENTS ..... **FS– 4**
FRONT AXLE ..... FS– 5
REMOVAL ..... **FS– 5**
DISASSEMBLY ..... **FS– 7**
INSPECTION ..... **FS– 8**
ASSEMBLY ..... **FS– 9**
INSTALLATION **FS–10**
FRONT STABILIZER BAR FS–12
REMOVAL **FS–12**
DISASSEMBLY **FS–12**
INSPECTION **FS–12**
ASSEMBLY **FS–13**
INSTALLATION **FS–13**
SHOCK ABSORBER AND SPRING FS–14
REMOVAL **FS–14**
DISASSEMBLY **FS–14**
INSPECTION **FS–15**
ASSEMBLY **FS–15**
INSTALLATION **FS–16**
SUSPENSION LOWER ARM FS–17
REMOVAL **FS–17**
INSPECTION **FS–17**
REPLACEMENT OF SUSPENSION LOWER ARM BUSH **FS–18**
REPLACEMENT OF SUSPENSION LOWER ARM BALL JOINT DUST COVER **FS–18**
INSTALLATION **FS–19**
DRIVE SHAFT FS–20
COMPONENTS **FS–20**
REMOVAL **FS–20**
DISASSEMBLY **FS–21**
INSPECTION **FS–22**
ASSEMBLY **FS–23**
REPLACEMENT OF TRANSFER OIL SEAL **FS–25**
INSTALLATION **FS–25**
TIGHTENING TORQUE FS–26

FS

JFS00001-00000

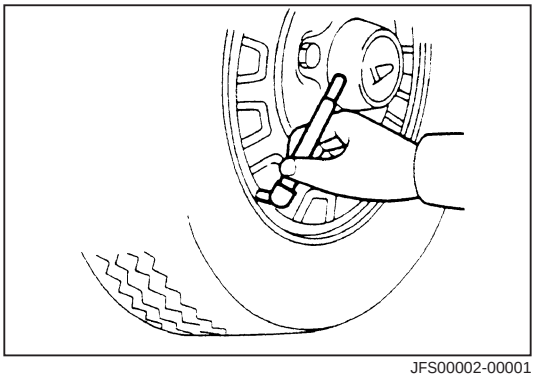
NO. 9710-JE

WHEEL ALIGNMENT

PREPARATION

Prior checks

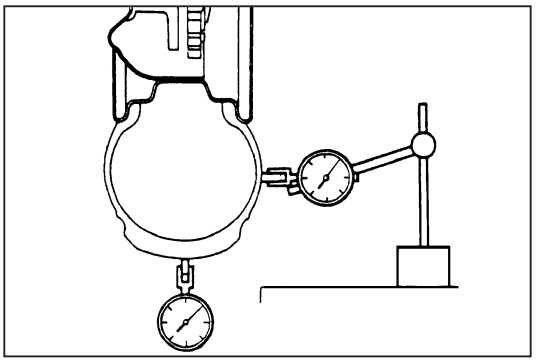
1. Inspect the wear of tires.
2. Inspect the air pressure of the tires.
   NOTE:
   - Perform the check on a level floor.
   - Make sure that the same maker's tires having the same size are mounted.
   - Keep the vehicle in an unloaded state. "Unloaded state" denotes a condition where the fuel tank is full, a spare tire is mounted, standard tools and a jack are mounted at correct storage locations.
     Tire Size: 205/70R15 95S
     Pressure: 180 kPa (1.8 kgf/cm^2)



JFS00002-00001

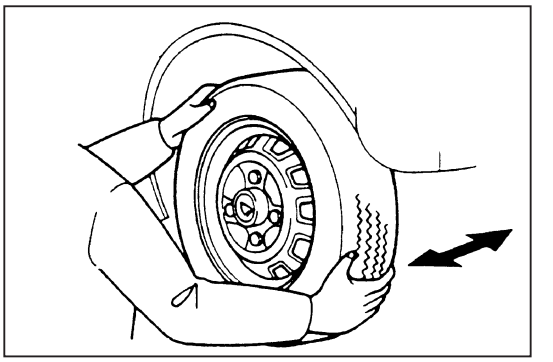
3. Inspect the runout of tires.
   Maximum Limit: 2 mm in a right-and-left direction
   1.4 mm in an up-and-down direction

   NOTE:
   - The measurement should be conducted within five minutes after the vehicle has been run for at least 30 minutes at a speed of 60 to 80 km/h.



JFS00003-00002

4. Ensure that the no looseness are exists on the bolts and nuts on the related parts of the front axle and steering linkage.
5. Check of related sections of the front axle and steering linkage for excessive play
   (1) Jack up the vehicle and support it with safety stands. (Refer to GI section.)
   (2) Ensure that no excessive play are exists on the connecting sections of the each front axle and steering linkage by rocking the tire alternately in-and-out or push and pull while holding the upper and lower parts of the tire.



JFS00004-00003

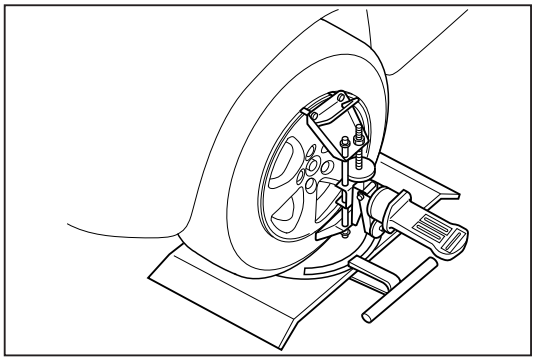
Camber, Caster and Kingpin angle

Specified Value

Camber	0°30′ ± 45′
Caster	2°35′ ± 1°
Kingpin angle	13°45′ ± 1°

NOTE:

- No adjustment can be made for the camber, caster and kingpin angle. Therefore, if the camber, caster or kingpin angle fails to meet the specified value, check that no damage or deformation exists on the frame or correct the frame, as required.



JFS00005-00004

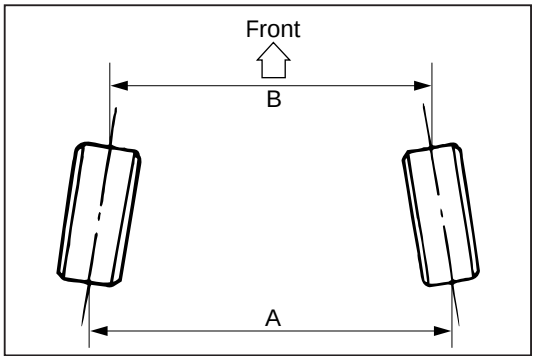
Toe-in, Turning radius

Specified Value:

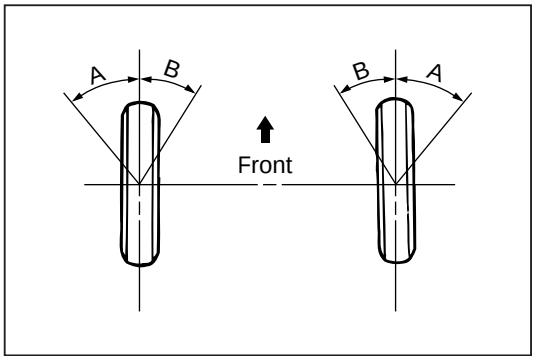
Toe-in		0 ± 1.5 mm
Turning Radius	In	38°28′ $^{+1°20′}_{-2°40′}$
	Out	33°24′ $^{+1°30′}_{-2°30′}$

NOTE:

- If the toe-in or turning radius fails to meet the specified value, perform the adjustment, following the procedure given below, so that both the toe-in and turning radius may conform to the specified values.



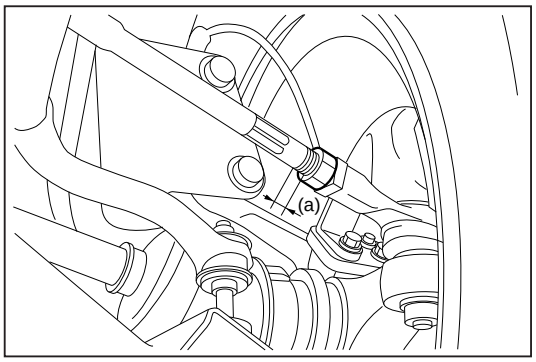
JFS00006-00005



JFS00000-00006

Adjustment of Toe-in and Turning radius

1. Loosen the lock nuts of the tie-rod ends.
2. Perform the toe-in and turning radius adjustment by turning the tie-rod ends.
   CAUTION:
   - When adjusting the toe-in, the tie-rods at the right and left sides should be turned by the same amount.
   - Make the length (a) indicated in the illustration equal between the right and left sides. If the length differs between the right and left sides, a difference occurs in the wheel turning angle between the right and left sides.

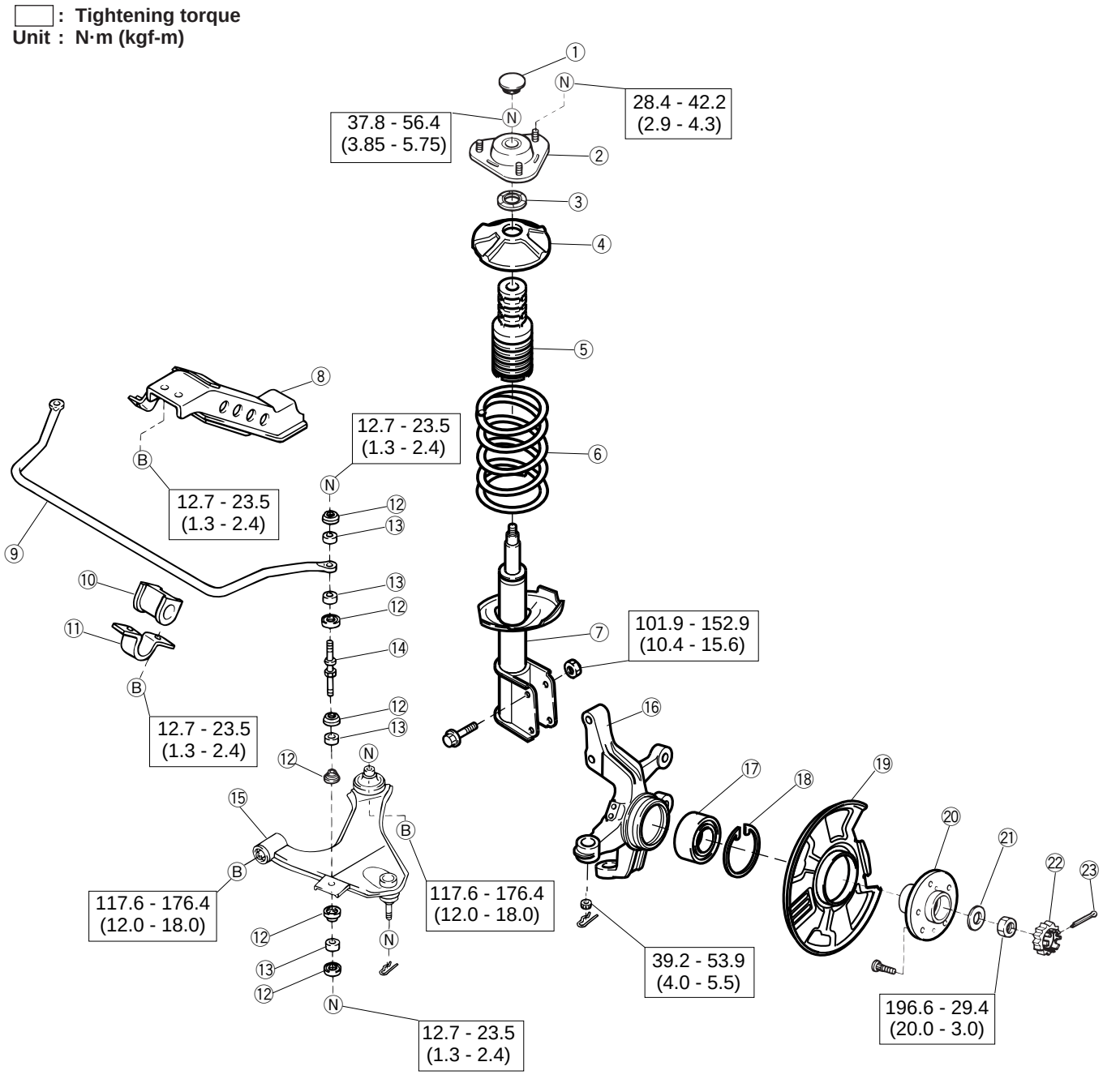


JFS00007-00007

3. Tighten the lock nut.
   Tightening Torque: 59.8 - 89.2 N·m (6.1 - 9.1 kgf-m)

FRONT AXLE AND SUSPENSION

COMPONENTS

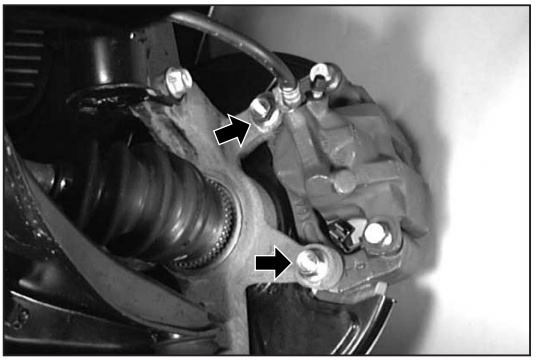


① Bearing dust cover
② Front suspension support
③ Bearing
④ Front spring upper seat
⑤ Front spring bumper
⑥ Front spring
⑦ Front shock absorber
⑧ Front stabilizer bracket sub-assembly
⑨ Front stabilizer bar
⑩ Stabilizer bush
⑪ Stabilizer bracket
⑫ Washer
⑬ Bush
⑭ Stabilizer link rod
⑮ Suspension lower arm
⑯ Steering knuckle
⑰ Bearing
⑱ Snap ring
⑲ Disc brake dust cover
⑳ Front axle hub
㉑ Washer
㉒ Front wheel adjusting lock cap
㉒ Cotter pin

FRONT AXLE

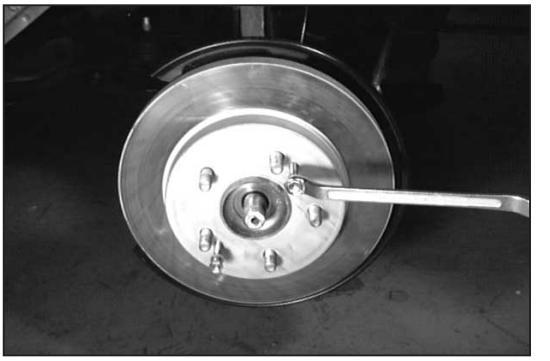
REMOVAL

1. Jack up the vehicle and support it with safety stands. (Refer to the GI section.)
2. Remove the front wheels.
3. Remove the attaching bolts of the disc brake assembly.
4. Suspend the disc brake assembly with suitable string.



JFS00009-00009

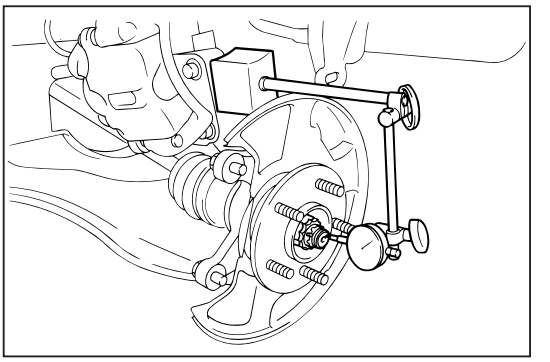
5. Remove the brake disc.
   NOTE:
   - Remove the brake disc by screw-in the two bolts (M8 1.25) evenly to the bolt holes provided on the brake disc, if any difficulty is encountered.



JFS00010-00010

6. Inspection of wheel bearing
   (1) Ensure that no excessive looseness exists between the drive shaft and axle hub.
   (2) Ensure that the free play with in the specified value, using the dial gauge as shown.
   Axial Free Play: Not more than 0.05 mm

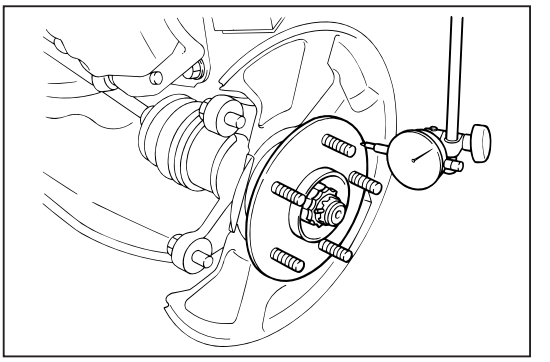
   If the free play is exceeds the allowable limit, replace the wheel bearing.



JFS00011-00011

7. Inspection of axle hub
   Ensure that the axle hub runout is with in specified value, using dial gauge.
   Runout Limit: Not more than 0.05 mm

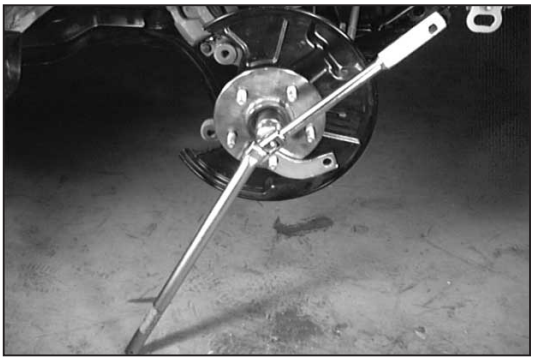
   If the runout exceeds the allowable limit, replace the axle hub.
   NOTE:
   - Measure the runout at a point of the axle hub outer edge.



JFS00012-00012

8. Removal of front axle hub
   (1) Remove the cotter pin, then remove the front wheel adjusting lock cap.
   (2) Remove the nut while preventing the front hub from turning, using the following SST.
   SST: 09511-87202-000

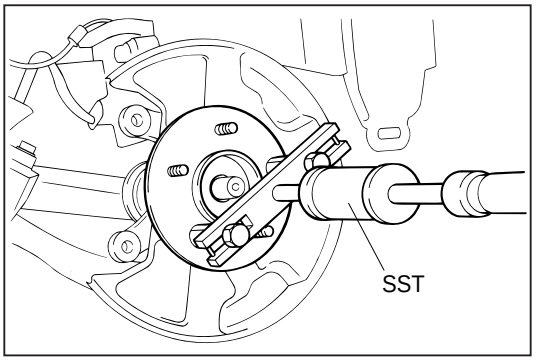
   CAUTION:
   - Prevent the hub bolt from damage by installing the suitable hub nut or the like, when using the SST.



JFS00013-00013

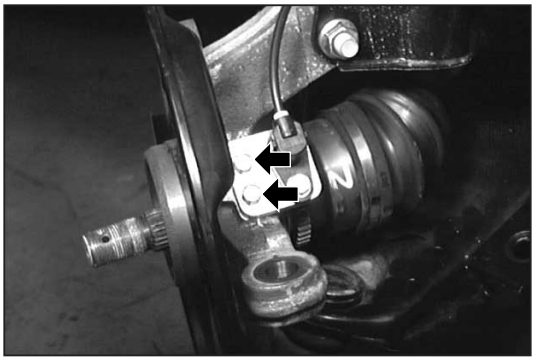
(3) Pull out the front axle hub sub-assembly with inner bearing race, using the following SST.
SST: 09520-00031-000

CAUTION:
- Never reuse the removed bearing.



JFS00014-00014

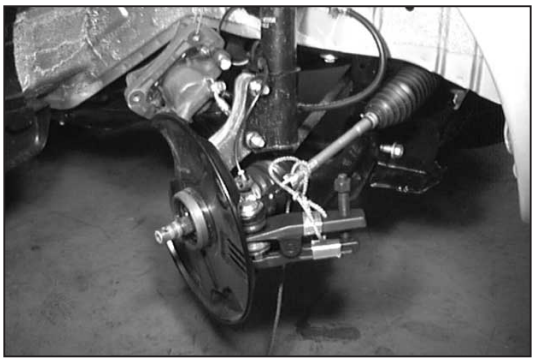
9. Remove the sensor mounting bracket with the skid control sensor from the steering knuckle by removing the attaching bolts.
(Only for vehicles equipped with ABS.)


JFS00015-00015

10. Removal of steering knuckle
(1) Disconnection of tie-rod end from steering knuckle
① Remove the clip.
② Loosen the castle nut until the upper end of the castle nut becomes flash with the end of the threaded section of the lower ball joint.
③ Disconnect the tie-rod end from the steering knuckle, using the following SST.
SST: 09611-87701-000

④ Disconnect the tie-rod end from the steering knuckle by removing the castle nut.

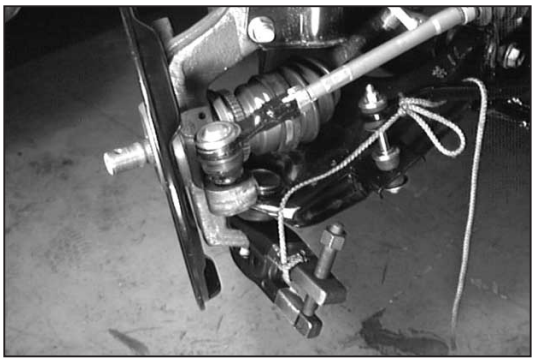
CAUTION:
- Never make damage on the threaded section of ball joint during the disconnection using the SST.


JFS00016-00016

(2) Disconnection of suspension lower arm from steering knuckle
① Remove the clip.
② Loosen the castle nut until the upper end of the castle nut becomes flash with the end of the threaded section of the lower ball joint.
③ Disconnect the suspension lower arm from the steering knuckle, using the following SST.
SST: 09611-87701-000

④ Disconnect the suspension lower arm from the steering knuckle by removing the castle nut.

CAUTION:
- Never make damage on the threaded section of ball joint during the disconnection using the SST.


JFS00017-00017

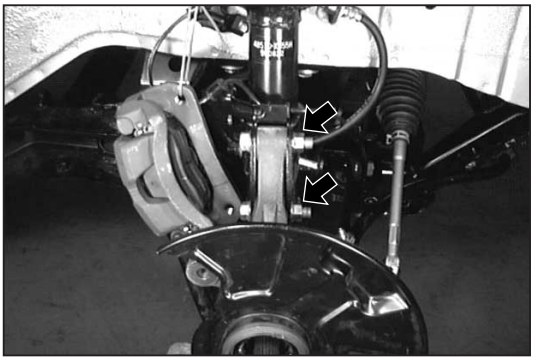
(3) Disconnection of shock absorber from steering knuckle

① Remove the attaching nuts of the steering knuckle to shock absorber.

NOTE:

- Never reuse the removed bolt and nut.

② Disconnect the front shock absorber from the steering knuckle.



JFS00018-00018

DISASSEMBLY

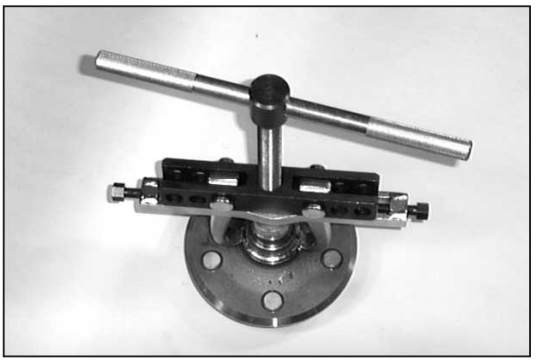
Front axle hub

1. Wrench out the bearing dust cover from the front axle hub, using screwdriver or the like.

JFS00019-00019

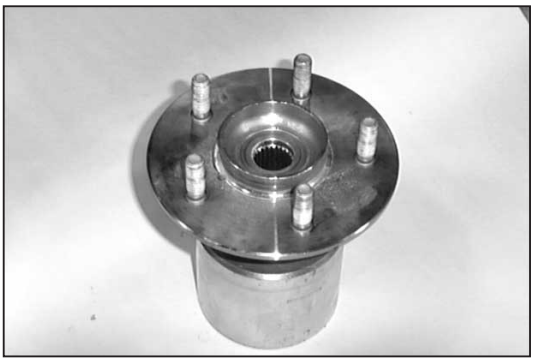
2. Remove the inner bearing race (outer side) from the front axle hub, using the following SST.
   SST: 09950-20017-000

   CAUTION:
   - Never reuse the removed bearing.



JFS00020-00020

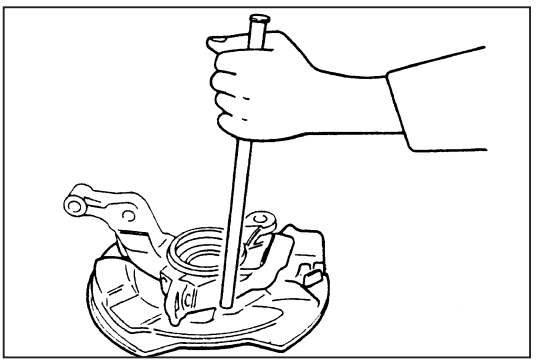
3. Drive out the hub bolts from the front axle hub, using a plastic hammer or the like.



JFS00021-00021

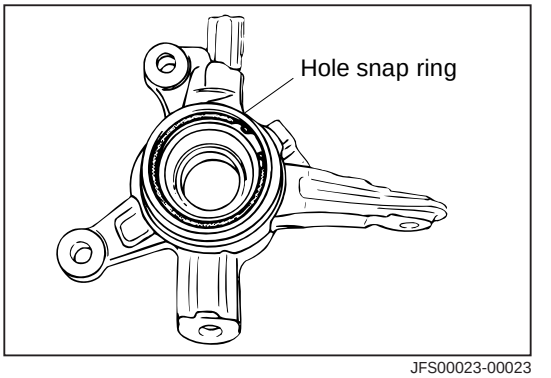
Steering knuckle

1. Remove the disc brake dust cover, using a suitable brass bar or the like in combination with suitable hammer.
   NOTE:
   - Never remove the disc brake dust cover unless its replacement is required.



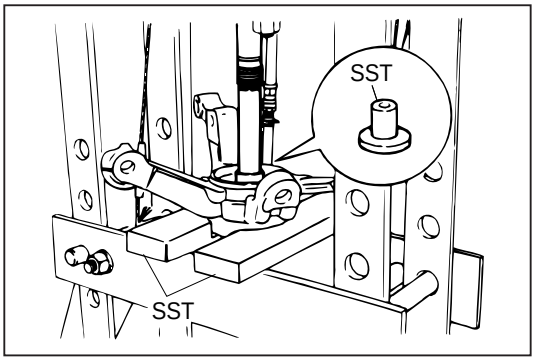
JFS00022-00022

2. Removal of front axle bearing.
   (1) Detach the hole snap ring, using snap ring pliers.



JFS00023-00023

   (2) Remove the bearing from the steering knuckle, using a following SST in combination with the hydraulic press.
   SSTs: 09544-10010-000
   09252-10010-000 (Use the 09550-10012-000 that is a part of the set.) 09506-87302-000



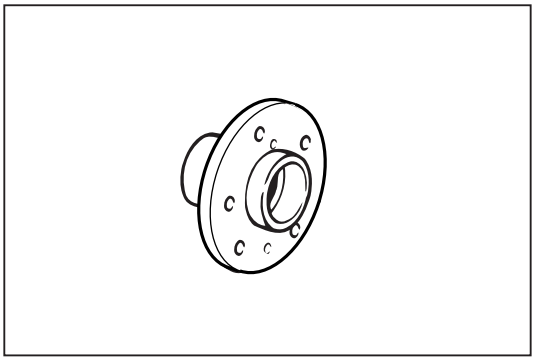
JFS00024-00024

   CAUTION:
   • Never reuse the removed bearing.

INSPECTION

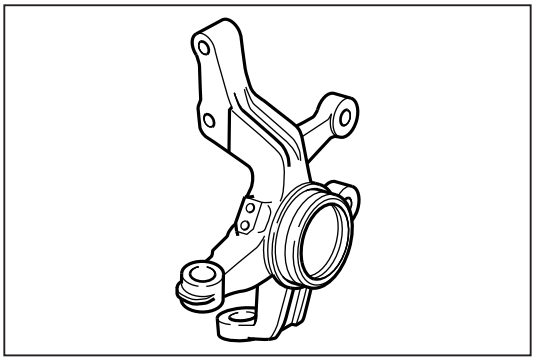
Front axle hub

Visually check front axle hub for crack, deformation or excessive wear.
Ensure that no damage is exits on the serration section of the front axle hub.
If any damage is exists replace the front axle hub with new one.


JFS00025-00025

Steering knuckle

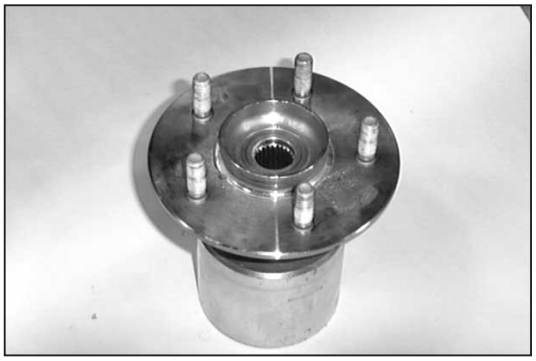
Visually check steering knuckle for crack, deformation or any other damages.
Ensure that no damage exists on the bearing attaching section.
If any damage is exists replace the steering knuckle with new one.


JFS00026-00026

ASSEMBLY

Front axle hub

Install the hub bolt to the front axle hub by tapping it with suitable hammer.

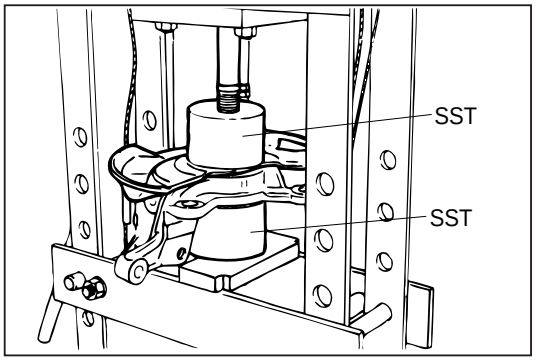


JFS00027-00027

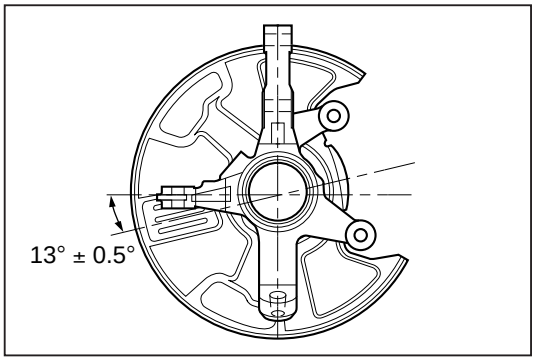
Steering knuckle

1. Installation of disc brake dust cover
   Press the disc brake dust cover until it comes in contact with the steering knuckle, using the following SSTs in combination with the hydraulic press.
   SSTs: 09506-87302-000
   09718-87702-000

   CAUTION:
   - Ensure that the disc brake dust cover is press-fitted to the steering knuckle positively by ensuring the dust cover properly contacts with the steering knuckle.
   - Be sure to assemble the brake dust cover to steering knuckle in such position, as indicated in the figure.



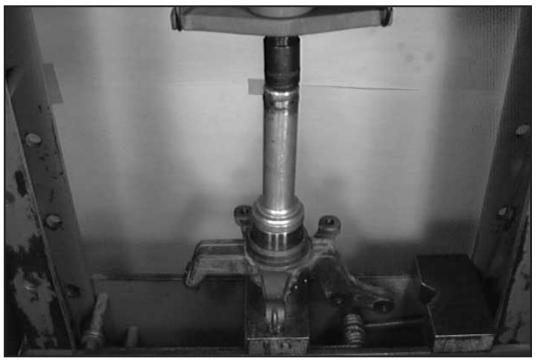
JFS00028-00028



JFS00029-00029

2. Installation of front axle bearing
   (1) Press a new bearing into the steering knuckle, using the following SSTs in combination with hydraulic press.
   SSTs: 09310-87302-000
   09506-87302-000

   (2) Install a new hole snap ring, using snap ring pliers.
   CAUTION:
   - Never reuse the used snap ring.

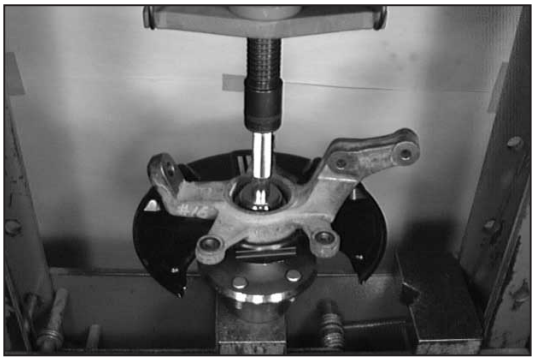


JFS00030-00030

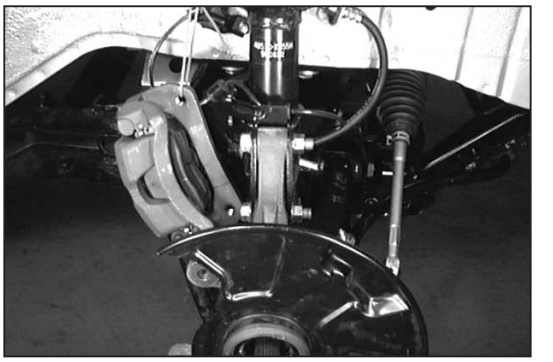
INSTALLATION

1. Press the front axle hub into the steering knuckle sub-assembly using the following SST in combination with hydraulic press.
   SST: 09559-10010-000, 09252-10010-000 (Use the 09550-10012-000 that is a part of the set.)

   NOTE:
   • Press in the steering knuckle into the axle hub after the axle hub placed on the SST 09506-87302-000.


JFS00031-00031

2. Install the steering knuckle after insert the drive shaft to the steering knuckle as follows.
   (1) Connection of shock absorber to steering knuckle
      ① Connect the steering knuckle on the shock absorber lower bracket.
      ② Install the new bolts and nuts, then tighten the bolts and nuts to specified tightening torque.
   Tightening Torque: 101.9 - 152.9 N·m (10.4 - 15.6 kgf-m)


JFS00032-00032

   CAUTION:
   • Be sure to tighten the attaching nuts when tightening.

   (2) Connection of tie-rod end to steering knuckle
      ① Connect the tie-rod end to the steering knuckle with the castle nut. Then, tighten the castle nut to specified tightening torque.
   Tightening Torque: 39.2 - 53.9 N·m (4.0 - 5.5 kgf-m)


JFS00033-00033

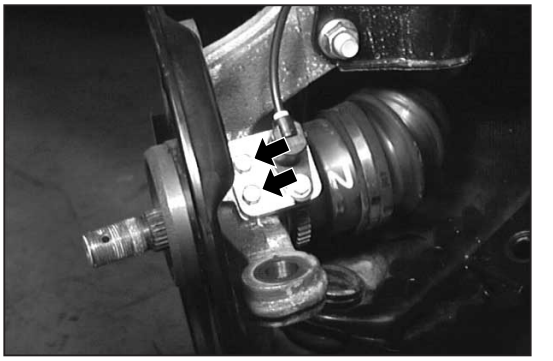
      ② Install the clip to the castle nut.
   CAUTION:
   • Never adhere a grease or oil, etc. to the taper section of the lower ball joint.
   • Never make any damage on the dust cover of the ball joint.

   (3) Connection of suspension lower arm to steering knuckle
      ① Connect the suspension lower arm to the steering knuckle with the castle nut. Then, tighten the castle nut to specified tightening torque.
   Tightening Torque: 44.1 - 58.8 N·m (4.5 - 6.0 kgf-m)


JFS00034-00034

      ② Install the clip to the castle nut.
   CAUTION:
   • Never adhere a grease or oil, etc. to the taper section of the lower ball joint.
   • Never made any damage on the dust cover of the ball joint.

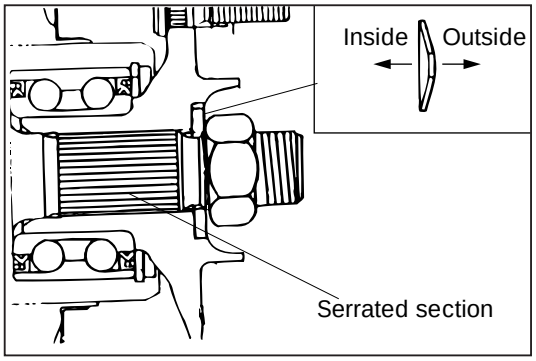
3. Install the sensor mounting bracket with the skid control sensor to the steering knuckle.
   Tightening Torque: 6.9 - 9.8 N·m (0.7 - 1.0 kgf-m)


JFS00035-00035

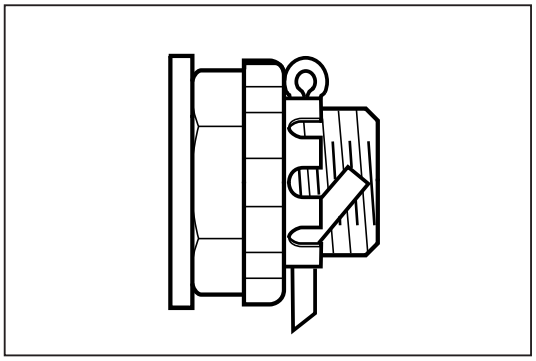
4. Tightening of drive shaft end nut
   (1) Install the conical washer to the drive shaft.
   (2) Install the nut and tighten the nut to specified tightening torque while prevent the front axle hub from turning, using the following SST.
   SST: 09511-87202-200
   Tightening Torque: 196.6 ± 29.4 N·m
   (20.0 ± 3.0 kgf-m)

   CAUTION:
   - Be sure to install the conical washer in the correct direction.

   (3) Install the front wheel adjusting lock cap to the nut.
   (4) Install a new cotter pin.
   CAUTION:
   - Bend the legs of the cotter pin, as indicated in the figure.
   - When bending the cotter pin, make sure that the cotter pin is not protruding from the head of the bolt.

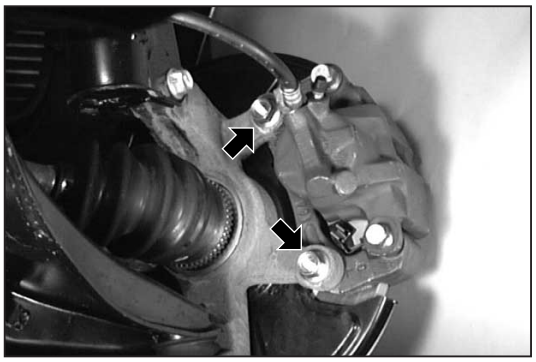


JFS00036-00036


JFS00037-00037

5. Install the brake disc to the front axle hub.
6. Install the disc brake assembly to the steering knuckle.
   Tightening Torque: 90.2 - 135.3 N·m
   (9.2 - 13.8 kgf-m)

7. Install the wheel with hub nuts and tighten the hub nut fully by hand.
8. Jack down the vehicle.
9. Tighten the hub nut to specified tightening torque.
   Tightening Torque: 88.2 - 117.6 N·m
   (9.0 - 12.0 kgf-m)


JFS00038-00038

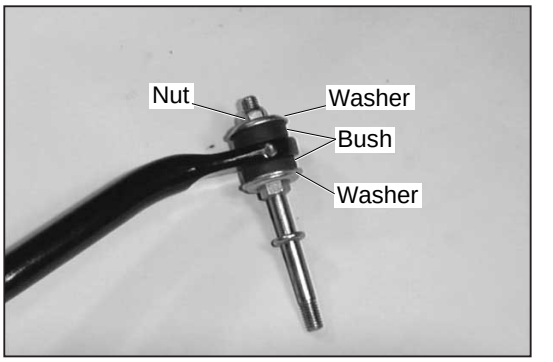
FRONT STABILIZER BAR

REMOVAL


JFS00039-00039

1. Jack up the vehicle and support it with safety stands. (Refer to the GI section.)
2. Remove the stabilizer bar end lower nut.
   CAUTION:
   - Never reuse the removed nut.
3. Remove the bush and washer.
4. Remove the stabilizer bracket from the stabilizer bracket sub-assembly.
5. Remove the stabilizer bar.

DISASSEMBLY



JFS00040-00040

1. Remove the stabilizer bar end upper nut.
   CAUTION:
   - Never reuse the removed nut.
2. Remove the bush, washer and stabilizer link rod from the stabilizer bar.

INSPECTION

Bush

Ensure that no damage such as crack, wear, deterioration, aging and/or so forth.

Stabilizer bar

Visually inspect that no damage or wear is exists on the stabilizer bracket.

Stabilizer bracket

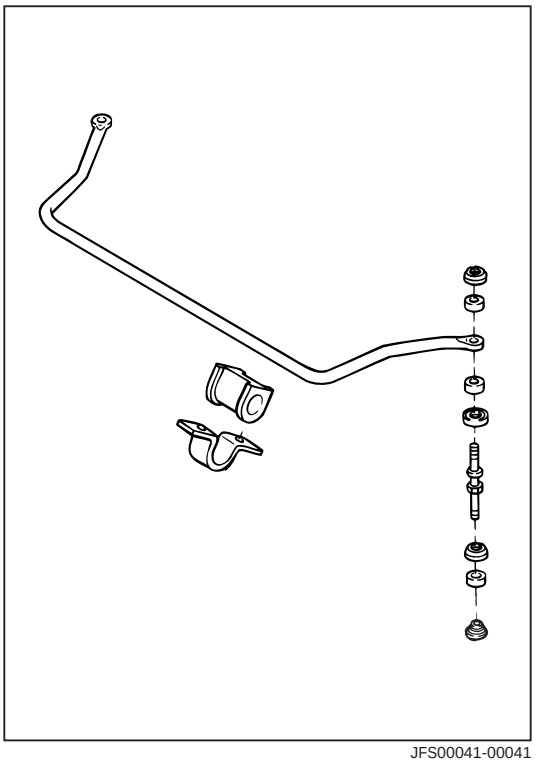
Visually inspect that no damage or wear is exists on the stabilizer bracket.

Stabilizer bush

Ensure that no damage such as crack, wear, deterioration, aging and/or so forth.

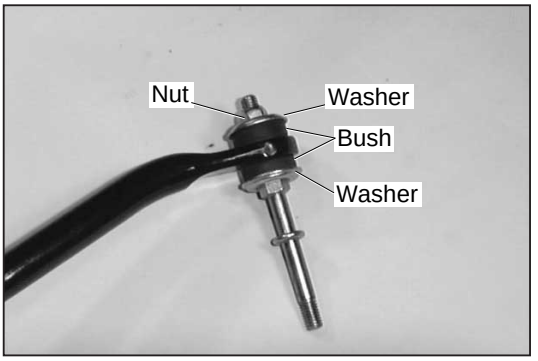
Stabilizer link rod

Ensure that the no wear, bent, damage on threaded section.
If any damage is exists replace the damaged part as required.


JFS00041-00041

ASSEMBLY

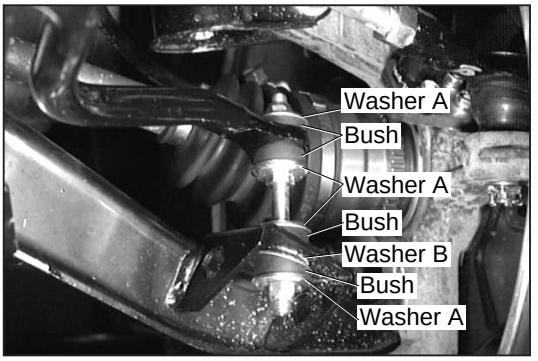
1. Install the washer and bush to the stabilizer link rod.
2. Install the stabilizer link rod to the stabilizer bar.
3. Install the bush and washer to the stabilizer link rod. Then, tighten the stabilizer bar end upper nut.
   CAUTION:
   - Be sure to assemble the bush and washer as shown in the right figure.



JFS00042-00042

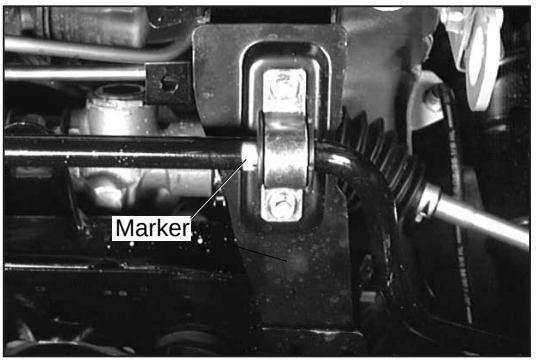
INSTALLATION

1. Install the stabilizer link rod, washer and bush to the suspension lower arm with the attaching nuts as shown in the right figure. Then, tighten the stabilizer bar end lower nut temporary.
   CAUTION:
   - Be sure to insert the protrusion section on the washer B to the hole provided on the stabilizer bracket on the suspension lower arm.



JFS00043-00043

2. Attach the bushes to the stabilizer bar.
   CAUTION:
   - Be sure to attach the bushes to the stabilizer bar in such manner that the bushes should be attached on the mark provided on the stabilizer bar during installation.

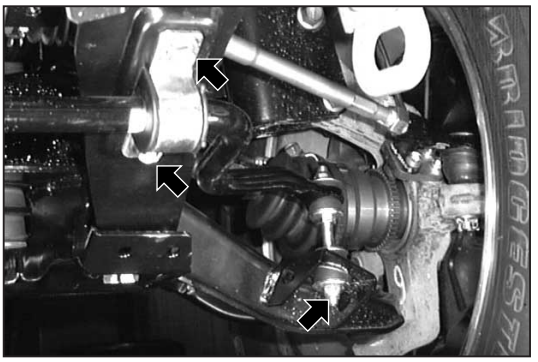


JFS00044-00044

3. Install the stabilizer bar to the stabilizer bracket sub-assembly by installing the stabilizer bracket with the attaching bolts. Then, tighten the attaching bolts to specified tightening torque.
   Tightening Torque: 12.7 - 23.5 N·m (1.3 - 2.4 kgf-m)

4. Tighten the stabilizer bar end lower nut.
   Tightening Torque: 12.7 - 23.5 N·m (1.3 - 2.4 kgf-m)

5. Jack down the vehicle.

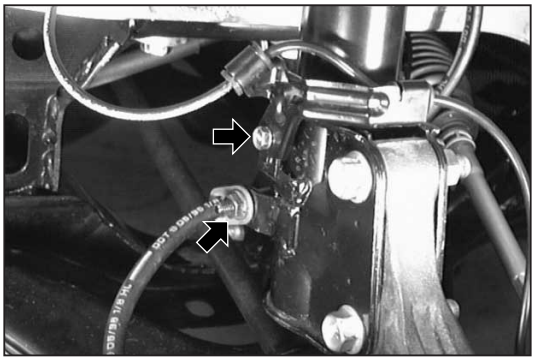

JFS00045-00045

SHOCK ABSORBER AND SPRING

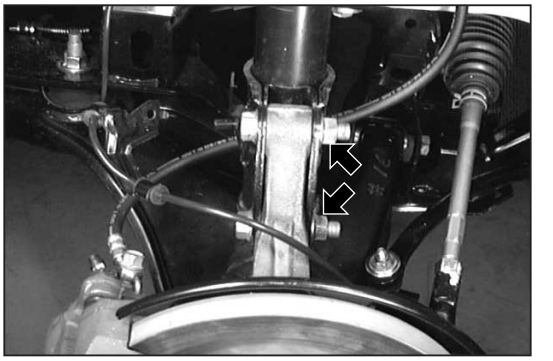
REMOVAL

1. Jack up the vehicle and support it with safety stands. (Refer to the GI section.)

2. Remove the front wheels.
3. Remove the brake hose bracket from the shock absorber lower bracket by removing its attaching nut.

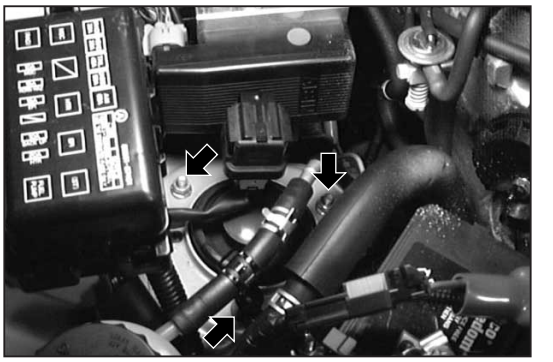

JFS00046-00046

4. Remove the skid control sensor harness bracket from the shock absorber lower bracket by removing its attaching bolt.
   (Only for vehicles equipped with ABS.)
5. Remove the attaching nuts of the shock absorber lower bracket which is connected to the steering knuckle.
   CAUTION:
   - Never reuse the removed nut.


JFS00047-00047

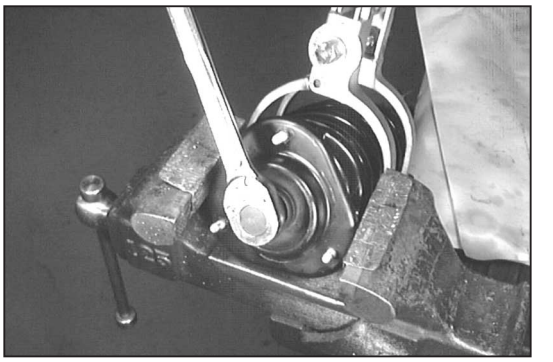
6. Remove the attaching nuts of the suspension support at the front fender apron.
   CAUTION:
   - Never reuse the removed nut.

7. Remove the attaching nuts and bolts of the shock absorber lower bracket which is connected to the steering knuckle.
   NOTE:
   - Never reuse the removed nuts.
   - Be sure to prevent the drive shaft boot from the damage, using the suitable piece of cloth or the like.


JFS00048-00048

DISASSEMBLY

1. Compress the coil spring, using the following SST.
   SST: 09727-87701-000 or
   09727-30020-000


JFS00049-00049

2. Secure the front shock absorber in a vice.
3. Remove the bearing dust cover.
4. Remove the nut.
   CAUTION:
   - Never remove the nut by applying impacts to it, using an impact wrench or the like.
   - Never reuse the removed nut.

5. Remove the front suspension support.
6. Remove the bush and front spring upper seat.
7. Remove the coil spring and spring bumper.

INSPECTION

CAUTION:

- Replace the parts with new one, if any damage or malfunction is found in following inspections.

Suspension support

Visually check that deformation, rust, crack nor other damage are not exists and also check that no damage is exists on the threaded portion of the stud bolts.

Spring upper seat

Ensure that the spring upper seat is free from crack, rupture, deformation aging, wear and other damage.

Bumper

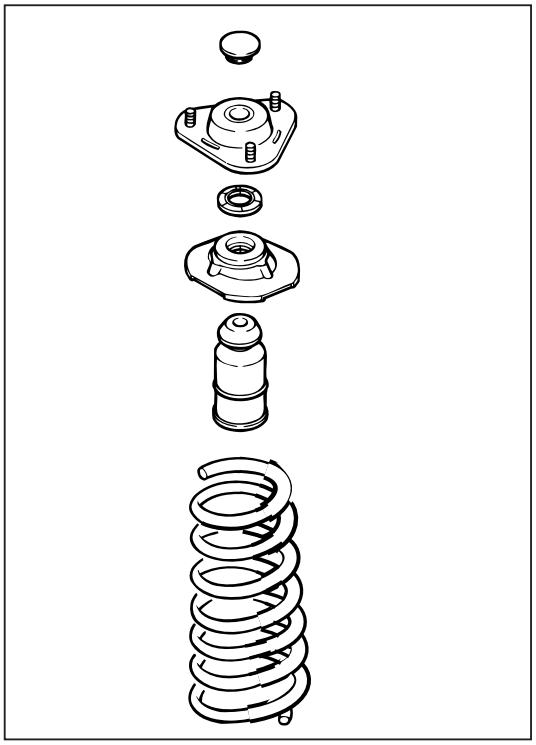
Ensure that the bumper is free from crack, rupture, deformation aging, wear and other damage.

Bearing

Ensure that the bearing is turns freely without any pulling.

Coil spring

Ensure that the coil spring is free from deformation, deterioration, crack or other damage.



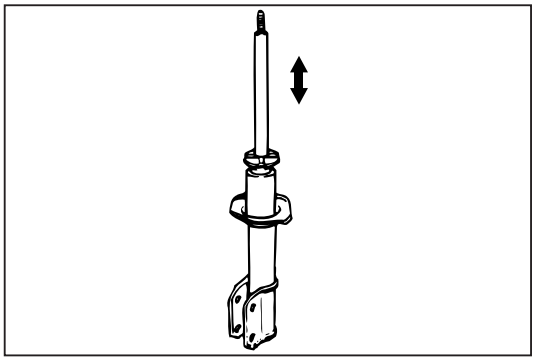
JFS00050-00050

Shock absorber

Ensure that the shock absorber piston operates smoothly without any rattling, shock or abnormal resistance or noise by pulling and pushing the piston rod.

WARNING:

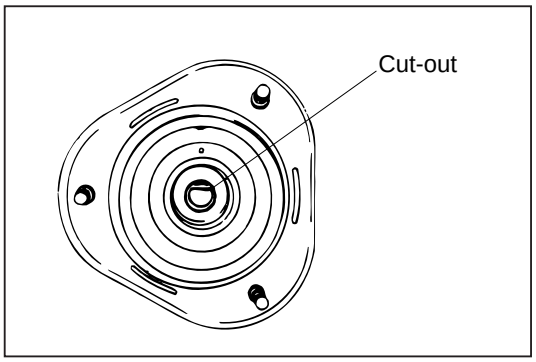
- Release the gas completely before discarding the shock absorber.



JFS00051-00051

ASSEMBLY

1. Insert the spring bumper to the piston rod.
2. Compress the coil spring, using the following SST.
   SST: 09727-87701-000 or
   09727-30020-000

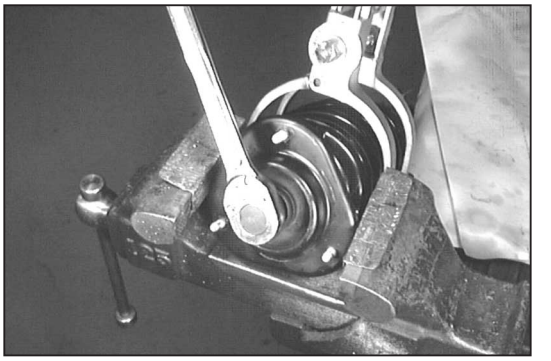


JFS00052-00052

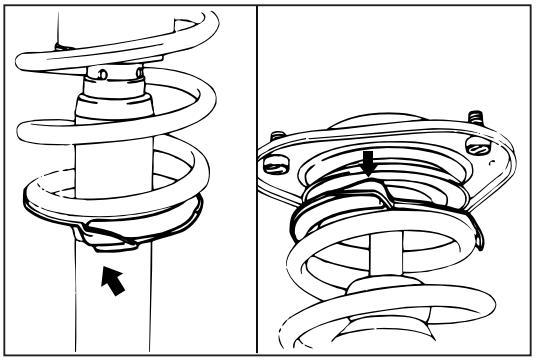
3. Install the coil spring which is compressed with SSTs to the shock absorber.
4. Install the front spring upper seat to the shock absorber piston rod.
5. Install the bearing to the shock absorber piston rod.
6. Install the front suspension support.
   CAUTION:
   - Be sure to align the cut-out section of the front suspension support with the protrusion section of piston rod during the assembly.

7. Temporarily attach the new piston end nut.
8. Hold the front suspension support in a vice.
   CAUTION:
   - Never apply the excessive force to the suspension support.

9. Tightening the piston end nut to specified tightening torque.
   Tightening Torque: 37.8 - 56.4 N·m (3.85 - 5.75 kgf-cm)

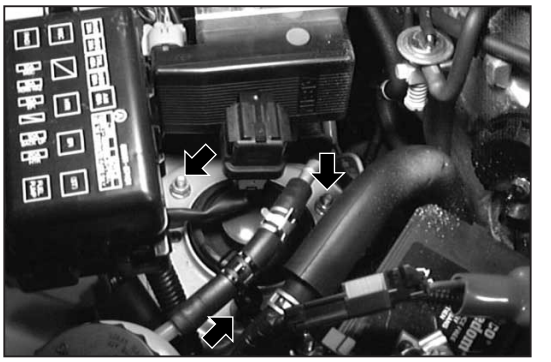

JFS00053-00053

10. Install the bearing dust cover.
11. Remove the SSTs which is compress the coil spring while aligning coil spring end with the recessed section provided on the each of the upper and lower seats.

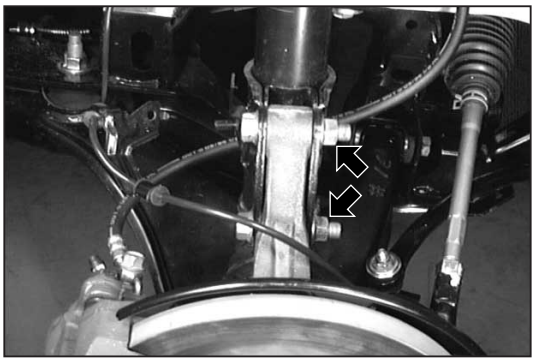

JFS00054-00054

INSTALLATION

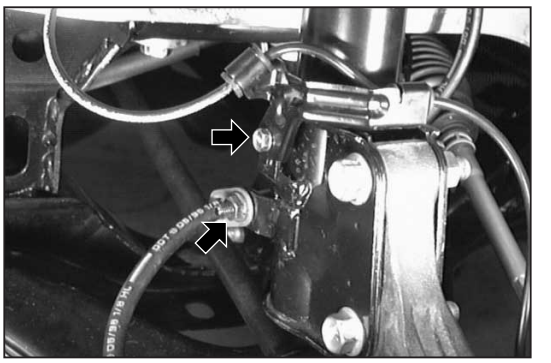
1. Install the suspension support to the fender apron with the new attaching nuts.
2. Tighten the suspension support attaching nuts to specified tightening torque.
   Tightening Torque: 28.4 - 42.2 N·m (2.9 - 4.3 kgf-cm)


JFS00055-00055

3. Connect the shock absorber to the steering knuckle. (Refer to the FS–10.)


JFS00056-00056

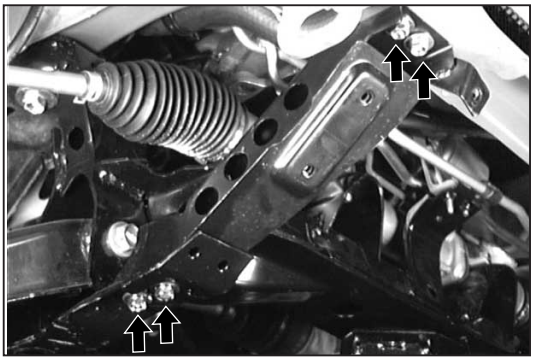
4. Install the skid control sensor harness bracket to the shock absorber lower bracket.
   (Only for vehicles equipped with ABS.)
5. Install the brake hose bracket to the shock absorber with the attaching bolt.
6. Install the wheel with hub nuts and tighten them fully by hand.
7. Jack down the vehicle.
8. Tighten the hub nut to specified tightening torque. (Refer to the FS–11.)
9. Perform the inspection of the front wheel alignment. (Refer to the “WHEEL ALIGNMENT” section.)


JFS00057-00057

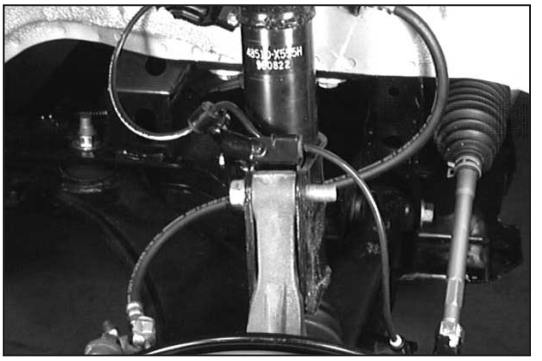
SUSPENSION LOWER ARM

REMOVAL

1. Jack up the vehicle and support it with safety stands. (Refer to the GI section.)
2. Remove the front wheels.
3. Remove the front stabilizer bar. (Refer to the “STABILIZER” section.)
4. Remove the stabilizer bracket sub-assembly from the suspension member.



JFS00058-00058



JFS00059-00059

5. Remove the skid control sensor from the sensor mounting bracket. (Only for vehicles equipped with ABS.)
6. Disconnection of suspension lower arm
   (1) Disconnect the suspension lower arm from the steering knuckle. (Refer to the FS–6.)
   (2) Loosen the attaching nuts of the shock absorber to the suspension lower arm.
   (3) Remove the lower side attaching bolt and nut of shock absorber.

   CAUTION:
   - Never reuse the removed bolts and nuts.

   (4) Remove the attaching bolts and nuts of the suspension lower arm to suspension member.

   CAUTION:
   - Never reuse the removed bolts.

   (5) Remove the suspension lower arm from the suspension member.

INSPECTION

Suspension lower arm

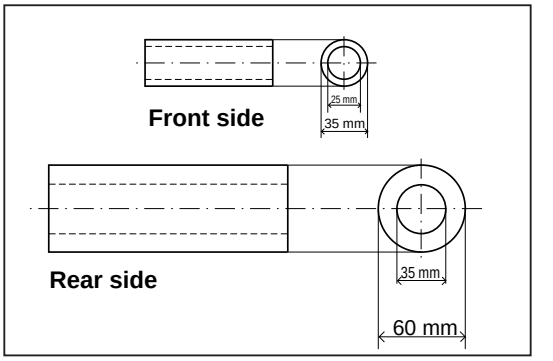
1. Ensure that the ball joint dust cover is free from rupture, crack, aging, deformation and other damages.
2. Ensure that the ball joint is operates smoothly without any rattle.
3. Visually inspect that no damage or wear exists on the suspension lower arm.
   If any damage is exists replace the damaged part with new one.

JFS00060-00060

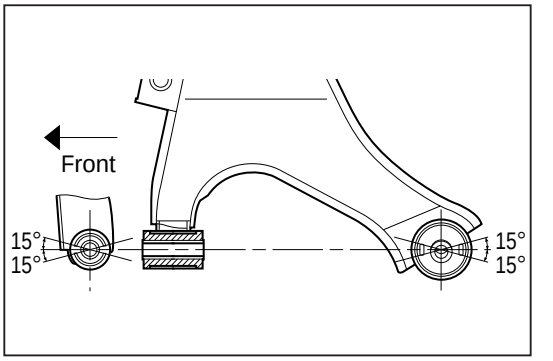
REPLACEMENT OF SUSPENSION LOWER ARM BUSH

1. Remove the bush, using a suitable tool in combination with a hydraulic press.
   NOTE:
   - Use a suitable tool, such as a tool indicated in the figure.

2. Apply the Samper® 115 to a new bush (Only for the front side bush.). Then, press-fit the bush in the suspension lower arm, using a suitable tool in combination with a hydraulic press.
   CAUTION:
   - Never apply the pressure to the inner sleeve of the bush.
   - Be sure to install the front side bush in such positions that the both flange section of the bush properly positioned as shown.
   - Be sure to install the rear bush to suspension lower arm in such positions that the holes provided on the bush align with the position as shown.
   - Be sure to install the rear side bush outer sleeve to suspension lower arm in such positions that the edge of the rear side bush outer sleeve be comes flash with the attaching hole edge of the suspension lower arm.



JFS00061-00061



JFS00062-00062

REPLACEMENT OF SUSPENSION LOWER ARM BALL JOINT DUST COVER

1. Remove the dust cover, using a screwdriver or the like.
   NOTE:
   - Never remove the dust cover, unless its replacement is required due to the damage or deterioration.


JFS00063-00063

2. Pack the specified amount of multi purpose grease to inside of the dust cover.
   Amount of Multi Purpose Grease: 4 ± 0.5 cc

3. Install the new dust cover to suspension lower arm by using following SST in combination with a hydraulic press.
   SST: 09618-87301-000

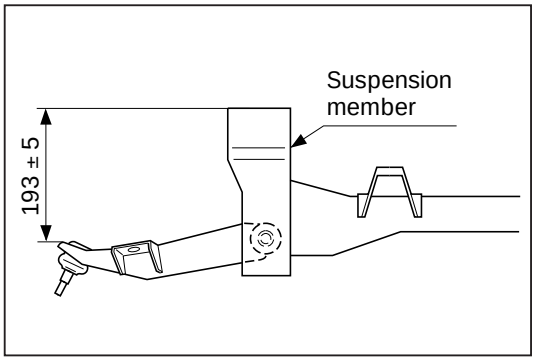

JFS00064-00064

INSTALLATION

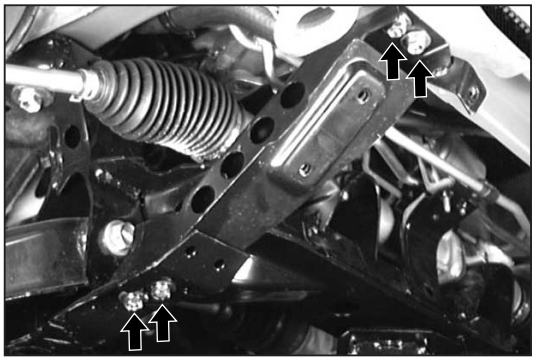
1. Install the suspension lower arm to the suspension member with the attaching bolts and nut.
2. Tighten the attaching bolts and nut to specified tightening torque.
   Tightening Torque: 117.6 - 176.4 N·m
   (12.0 - 18.0 kgf-m)

   CAUTION:
   - Be sure to tighten the bolts and nut while locating the suspension lower arm in position as show.

3. Connect the shock absorber to the steering knuckle. (Refer to the FS–10.)
4. Connect the suspension lower arm and steering knuckle. (Refer to the FS–10.)
5. Install the skid control sensor to the sensor mounting bracket. (Only for vehicles equipped with ABS.)
6. Install the stabilizer bracket sub-assembly to the suspension member. (Refer to the “STABILIZER” section.)
7. Install the stabilizer. (Refer to the “STABILIZER” section.)
8. Install the wheel with hub nuts and tighten the hub nut fully by hand.
9. Jack down the vehicle.
10. Tighten the hub nut to specified tightening torque. (Refer to the FS–11.)
11. Perform the inspection of the front wheel alignment. (Refer to the “WHEEL ALIGNMENT” section.)



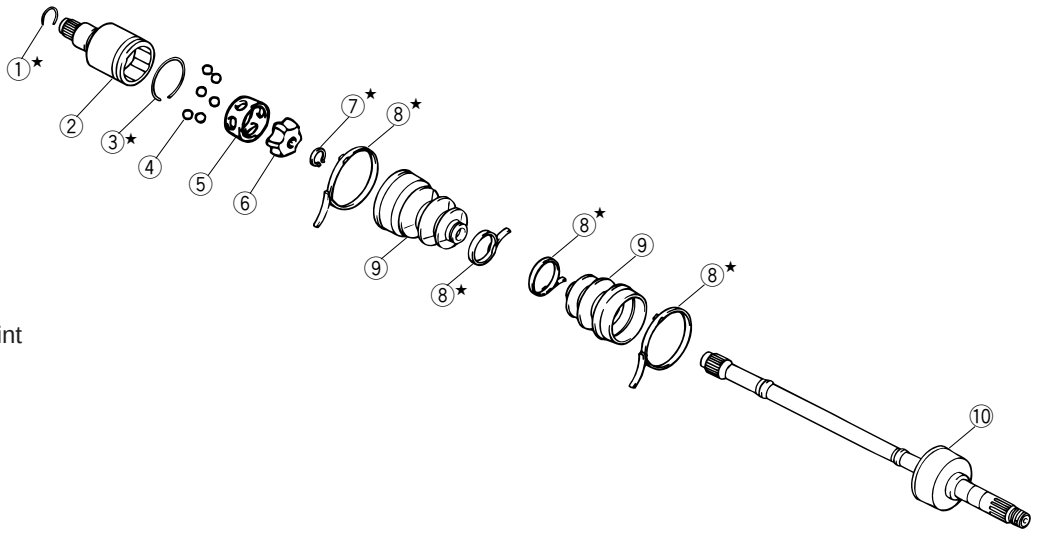
JFS00065-00065



JFS00066-00066

DRIVE SHAFT

COMPONENTS



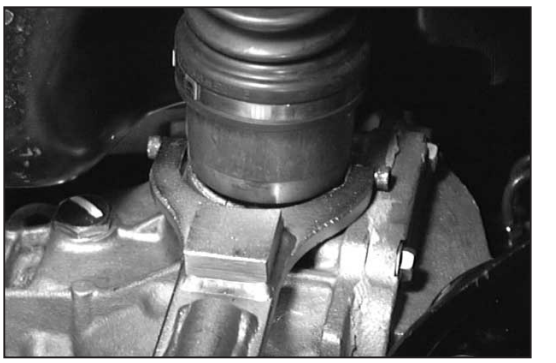
① Snap ring
② Inboard joint
③ Snap ring
④
⑤
⑥
⑦ Snap ring
⑧ Boot band
⑨ Boot
⑩ Outboard joint

JFS00067-00067

REMOVAL

JFS00068-00068

1. Jack up the vehicle and support it with safety stands. (Refer of the GI section.)
2. Remove the front wheels.
3. Drain the transmission oil. (Refer to the MA section.)
4. Remove the disc brake assembly. (Refer to the FS–5.)
5. Remove the brake disc. (Refer to the FS–5.)
6. Remove the skid control sensor from the sensor mounting bracket. (Only for the vehicles equipped with ABS.)
7. Remove the cotter pin.
8. Remove the adjusting lock cap.
9. Remove the drive shaft end nut and washer. (Refer to the FS–5.)
10. Disconnect the tie-rod end from the steering knuckle. (Refer to the FS–6.)
11. Disconnect the suspension lower arm from the steering knuckle. (Refer to the FS–6.)
12. Disconnect the shock absorber from the steering knuckle. (Refer to the FS–7.)
13. Remove the steering knuckle with the front axle hub from the drive shaft.



JFS00069-00069

14. Disconnect the drive shaft from the transfer, using the following SST.
    SST: 09648-87201-000

DISASSEMBLY

Inboard joint side

1. Pry up the boot band clip with a screwdriver.
   NOTE:
   - Be very careful not to damage the boot.


JFS00070-00070

2. Remove the snap ring, using a screwdriver or the like.


JFS00071-00071

3. Remove the front axle inboard joint sub-assembly from shaft.
4. Remove the balls.

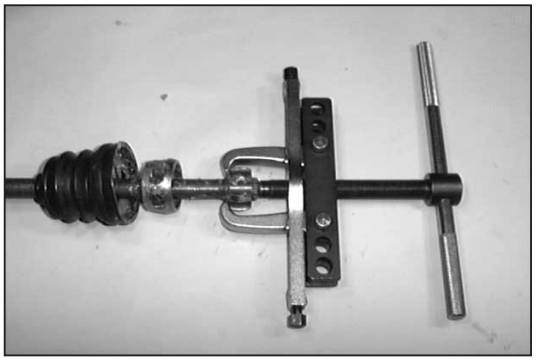

JFS00072-00072

5. Remove the snap ring, using snap ring pliers.

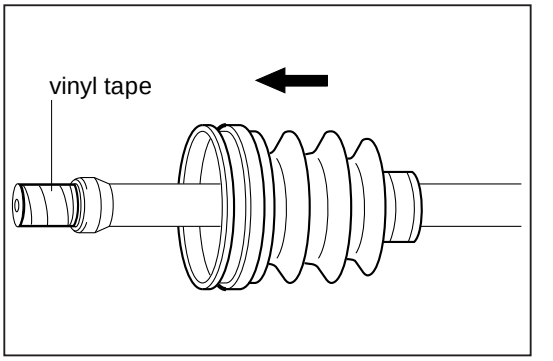

JFS00073-00073

6. Remove the inner race, using the following SST.
   SST: 09950-20017-000

7. Remove the cage from the shaft.


JFS00074-00074

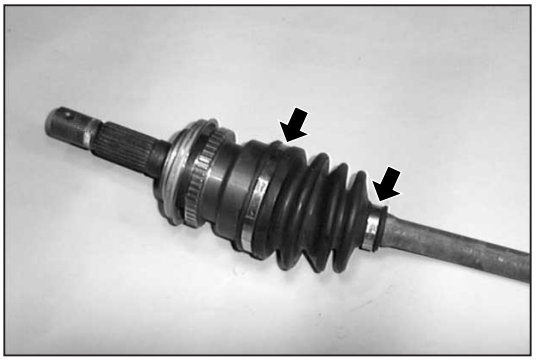
8. Wind vinyl tape to the splined section of the shaft so that the boot may not be damaged during the removal.
9. Remove the boot.



JFS00075-00075

Outboard joint side

1. Pry up the boot band clip with a screwdriver.
2. Remove the boot.
   NOTE:
   - Outboard joint is non-disassembling parts.
   - Be very careful not to damage the boot.


JFS00076-00076

INSPECTION

Ball sub-assembly

Visually check that no damage such as crack excessive wear or any other damage.

Shaft and outboard joint

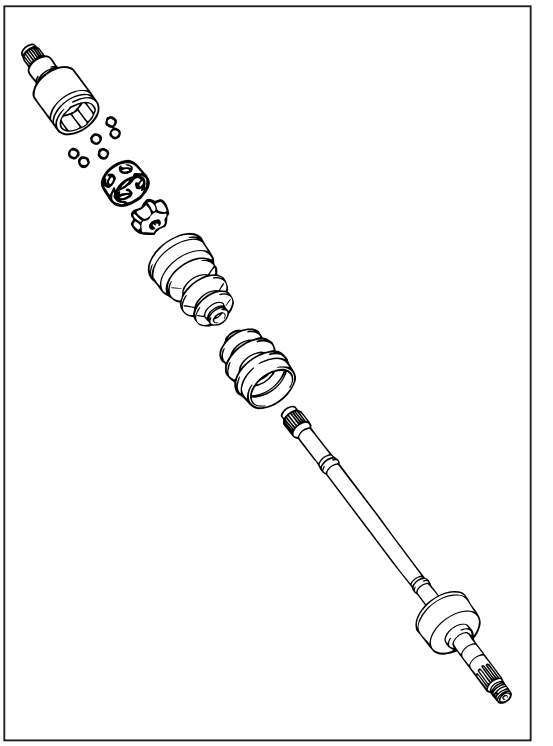
Ensure that the outboard joint operates smoothly with out any rattle or pulling.

Inboard joint

Visually check that no damage such as crack excessive wear or any other damage.

Boot

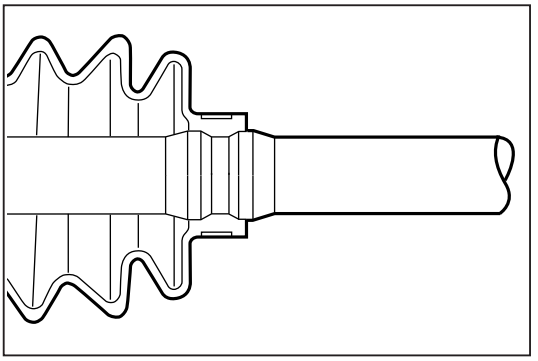
Ensure that the boot is free from damage such as crack, deterioration, aging or any other damage.
If any damage is exists replace the damaged part with new one.


JFS00077-00077

ASSEMBLY

Outboard joint side

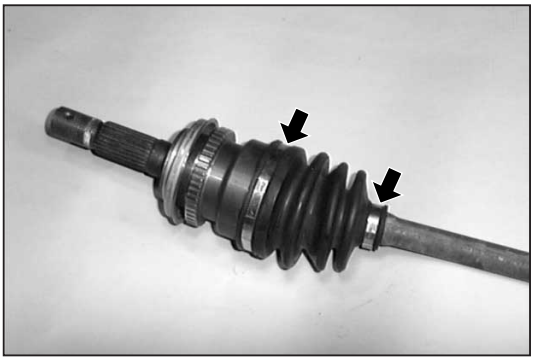
1. Wind vinyl tape to the spline section of the inboard joint shaft, so that the boot may not be damaged during the installation.
2. Install the boot to outboard joint in position as shown.
3. Install the new boot band (smaller diameter side) on the outboard joint.



JFS00078-00078

4. Pack the specified amount of specified grease into outboard joint.
   Specified Amount of Grease: 65 ± 10 g

   CAUTION:
   - The grease for outboard joint should be use specified grease only which is supplied with the spare parts.



JFS00079-00079

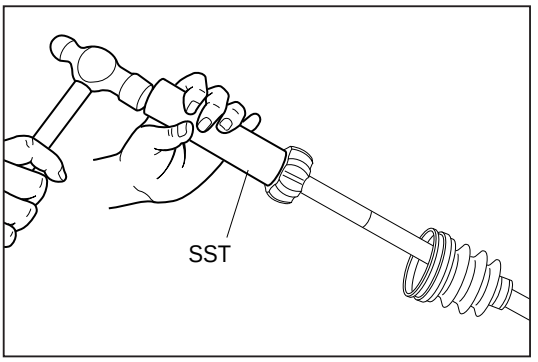
5. Install and tie-up the new boot band (Larger diameter side) in place.

Inboard joint side

1. Temporarily install the boot and boot band (smaller diameter side).
2. Remove the vinyl tape that was wound around the splined portion.
3. Install the cage to the shaft.
   NOTE:
   - The cage should be inserted in the direction indicated in the figure.

JFS00080-00080

4. Install the inner race, using the following SST.
   SST: 09309-87201-000



JFS00081-00081

5. Install the new snap ring to the shaft, using a snap ring pliers.
   CAUTION:
   - Ensure that the snap ring installed in the groove properly after installation.

JFS00082-00082

6. Assemble the inner race and cage, and install the ball. While holding the ball to prevent it from dropping, assemble the inboard shaft subassembly.

JFS00083-00083

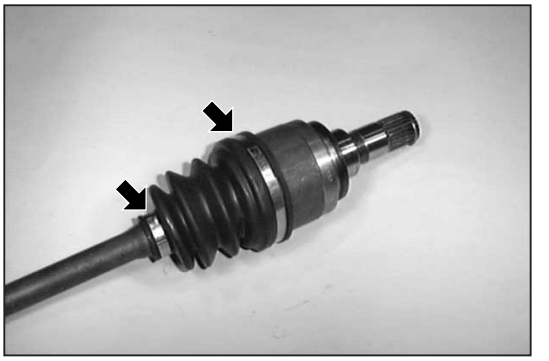
7. Install the snap ring to the inboard joint.
   CAUTION:
   - Ensure that the snap ring installed in the groove properly after installation.

JFS00084-00084

8. Tie-up the smaller side boot band.
   CAUTION:
   - Place the boot in position as shown. (Refer to the FS–23.)

9. Pack the specified amount of grease into inboard joint.
   Specified Amount of Grease: 75 ± 10 g

   CAUTION:
   - The grease for inboard joint should be use specified grease only which is supplied with the spare parts.



JFS00085-00085

10. Install and tie-up the new band (Larger diameter side) in place.

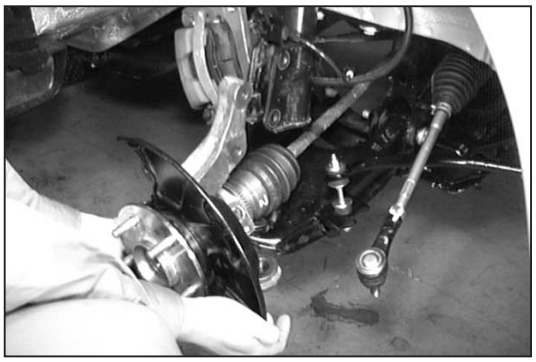
REPLACEMENT OF TRANSFER OIL SEAL

Replace the oil seal, as required. (For the replacement procedure, refer to the TR section.)

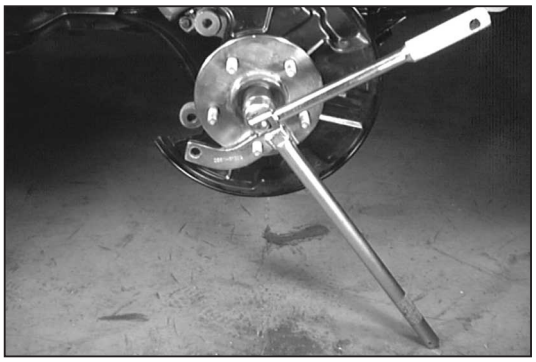
JFS00086-00000

INSTALLATION

1. Apply chassis grease to the whole serrated section of the front drive shaft at the outboard joint side.
2. Connect the inboard joint section of the front drive shaft into the transfer.
   NOTE:
   - Apply lithium soap base multi purpose grease to the lip section of the oil seal.
   - Never made scratch on the oil seal during the installation of the drive shaft.



JFS00087-00086



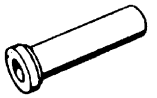
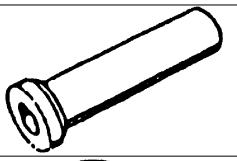
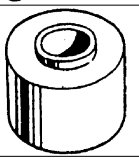
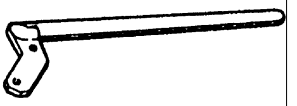
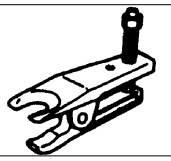
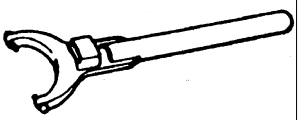
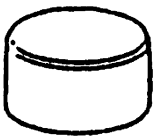
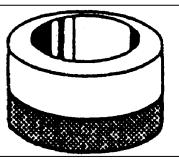
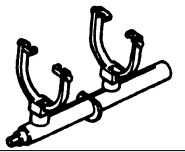
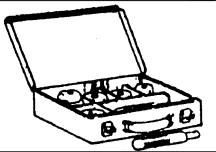
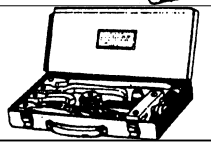
JFS00088-00087

3. Install the steering knuckle with front axle hub to the drive shaft.
4. Connect the steering knuckle to the shock absorber with attaching bolts and nuts. (Refer to the FS–10.)
5. Connect the suspension lower arm to the steering knuckle. (Refer to the FS–10.)
6. Connect the tie-rod end to the steering knuckle. (Refer to the FS–10.)
7. Install the drive shaft end washer and nut. (Refer to the FS–11.)
8. Install the adjusting lock cap.
9. Install the new cotter pin. (Refer to the FS–11.)
10. Install the skid control sensor to the sensor mounting bracket. (Only for vehicles equipped with ABS.)
11. Install the brake disc to the steering knuckle.
12. Install the disc brake assembly to the steering knuckle. (Refer to the FS–11.)
13. Fill the specified transmission oil to the transfer. (Refer to the TR section.)
14. Install the wheel with hub nuts and tighten the hub nut fully by hand.
15. Jack down the vehicle.
16. Tighten the hub nut to specified tightening torque. (Refer to the FS–11.)
17. Perform the inspection of the front wheel alignment. (Refer to the “WHEEL ALIGNMENT” section.)

TIGHTENING TORQUE

Components	N·m	kgf-m	
Wheel hub nut	88.2 - 117.6	9.0 - 12.0	
Steering knuckle × Suspension lower arm	44.1 - 58.8	4.5 - 6.0	
Suspension lower arm × Member	117.6 - 176.4	12.0 - 18.0	
Stabilizer link × Suspension lower arm	12.7 - 23.5	1.3 - 2.4	
Shock absorber × Steering knuckle	101.9 - 152.9	10.4 - 15.6	
Stabilizer bracket × Stabilizer bracket sub-assembly	12.7 - 23.5	1.3 - 2.4	
Shock absorber piston end nut	37.8 - 56.4	3.85 - 5.75	
Suspension support × Front fender apron	28.4 - 42.2	2.9 - 4.3	
Stabilizer bracket sub-assembly × Frame	12.7 - 23.5	1.3 - 2.4	
Drive shaft × Front axle hub	196.6 ± 29.4	20.0 ± 3.0	
Tie-rod end lock nut	59.8 - 89.2	6.1 - 9.1	
Tie-rod end × Steering knuckle	39.2 - 53.9	4.0 - 5.5	
Steering knuckle × Speed sensor bracket	6.9 - 9.8	0.7 - 1.0	
Speed sensor bracket × Speed sensor	6.9 - 9.8	0.7 - 1.0	
Steering knuckle × Disc brake assembly	90.2 - 135.3	9.2 - 13.8	

JFS00089-00000

Shape	Part number	Part name	Remarks
	09309-87201-000	Replacer	
	09310-87302-000	Replacer	
	09506-87302-000	Replacer	
	09511-87202-00	Stopper, brake drum	
	09520-00031-000	Puller, axle shaft	
	09611-87701-000	Puller, tie-rod end	
	09648-87201-000	Replacer, drive shaft	
	09718-87702-000	Replacer, front disc	
	09722-87702-000	Attachment, camber	
	09727-87701-000	Compressor, spring	
	09950-10012-000	Tool set, replacer	
	09950-20017-000	Puller, universal	

JFS00000-00088

TO INDEX TO NEXT SECTION