

FRONT AXLE AND FRONT SUSPENSION

SECTION FA

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PRECAUTIONS AND PREPARATION

Precautions and Preparation

Caution (Front Axle)

Observe following cautions while disassembling the drive shaft.

- Do not disassemble the connecting sections towards wheel.
- Operate in a clean location.
- Clean the components before disassembling.
- Keep the operation location clean to prevent dirtying the components or inlet of foreign particles.
- Install the disassembled components in correct order. Cover the components when stopping the operation.
- Use a paper towel for cleaning. The cloth towel can cause problems due to waste threads. Do not use it.
- Clean the disassembled components (except for the rubber components) with white kerosene and wipe the oil using the compressed air or paper towel.

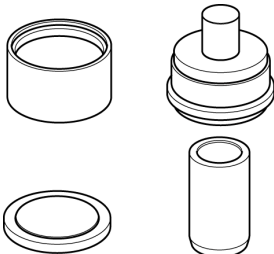
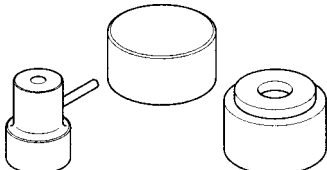
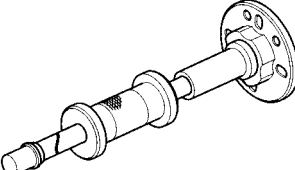
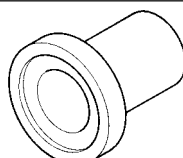
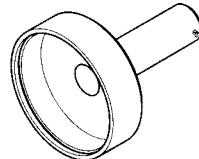

Caution (Front Suspension)

- Bushes should be installed completely while vehicle empty and on the ground. Wipe out all oil that can deteriorate the durability of bushes.
- An empty vehicle means it has all the necessary fluids that allow being ready for driving such as full tank of fuel, coolant and all lubricants. However, jack and other service tools are excluded.
- Always inspect the wheel alignment after suspension system service.
- The lock nut cannot be reused. Replace it with new when installing. Oil is applied on it when new, but install as it is.

PRECAUTIONS AND PREPARATION

Preparation

Special Service Tools

Item	Description	
Wheel hub support KV40104710 KV40106200 KV40105310 Bearing remover & hub installer KV38100200 ST35300000		Assembling wheel hub Disassembling/assembling wheel hub bearing
ABS sensor rotor drift set KV38100500 KV40101840 Rear ABS sensor rotor drift KV10105501	 ZZA0939D_D1	Assembling front and rear ABS sensor rotor
Wheel hub puller KV40104100 ST36230000	 ZZA09425D_D1	Disassembling wheel hub
Wheel hub bearing drift ST35271000	 ZZA09330D_D1	Assembling wheel hub bearing
Splash guard drift KV40106200 ST30022000 KV40105220	 ZZA09420D_D1	Assembling splash guard
Wheel hub lock wrench KV40104000		Disassembling/assembling wheel hub lock nut

FRONT AXLE

Front Wheel Hub and Knuckle

On-Vehicle Service

Inspect for any excessive free play, damage and wear in the front axle.

- Check the free play by moving the front wheel (left and right).
- Inspect if any foreign particles such as nail is stuck in the component.
- Tighten all nuts and bolts in the axle to the specified torque.

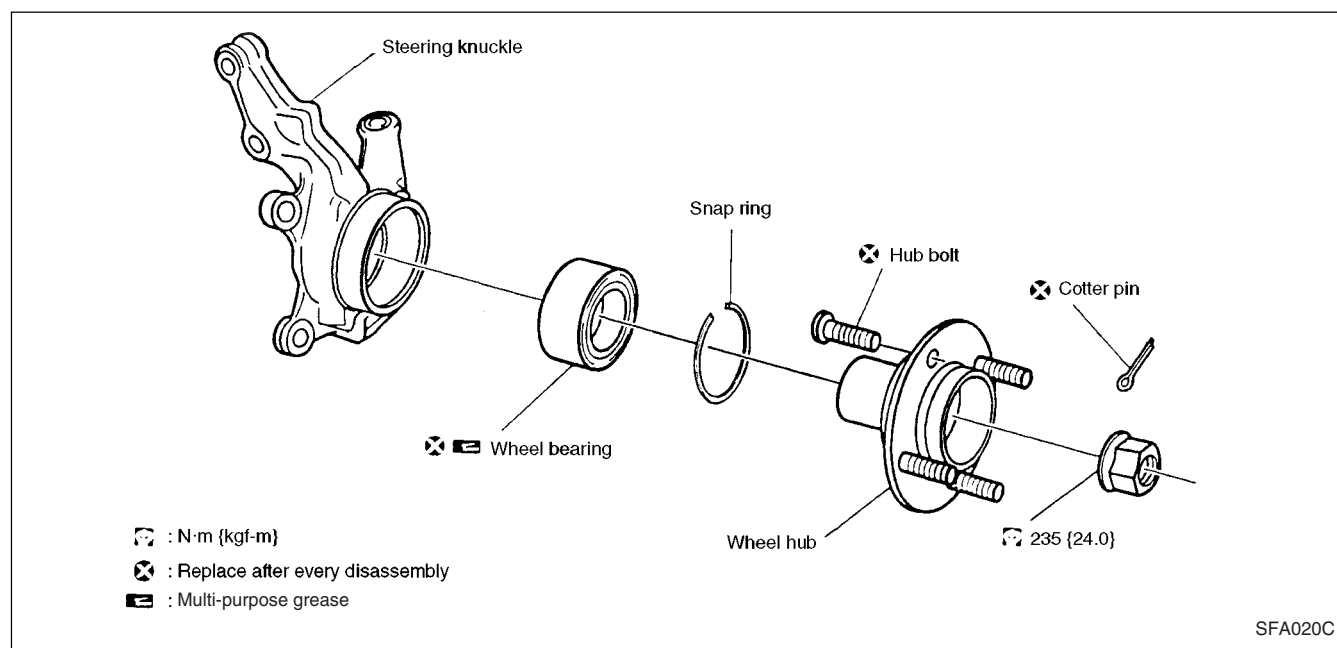
FRONT WHEEL BEARING

Inspect the following while vehicle lifted up.

- Inspect for any rattles in the front wheel bearing by moving the wheel hub in the axial direction.

Axial direction endplay: 0.05 mm

Removal • Installation



REMOVAL

1. Remove the tires and remove the lock plate on the brake line.
2. Remove the brake caliper from the steering knuckle and hang to a safe place.

CAUTION:

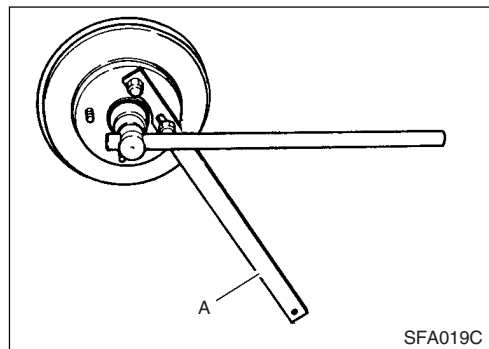
- Do not depress the brake pedal while brake caliper is removed.
3. Remove the ABS wheel speed sensor and wires from the steering knuckle.

CAUTION:

- Do not pull the ABS wheel speed sensor harness.
4. Remove the cotter pin and remove the lock nut from the drive shaft using a special tool (A: KV40104000).
 5. Remove the disc rotor from the wheel hub.
 6. Remove the cotter pin and remove the tie rod from the steering knuckle using a pitman arm puller (commercial tool).

CAUTION:

- When using the pitman arm puller (commercial tool), always insert the nut.
7. Remove the steering knuckle.



FRONT AXLE

8. Remove the drive shaft from the steering knuckle.
9. Remove the cotter pin and remove the transverse link from the steering knuckle using the pitman arm puller (commercial tool).

CAUTION:

- When using the pitman arm puller (commercial tool), always insert the nut.

INSTALLATION

Install in the reverse order of removal by referring the components diagram for tightening torque.

Disassembly • Assembly

DISASSEMBLY

1. Install the strut and mounting section of the steering knuckle to the vise and remove the wheel hub from the steering knuckle using the wheel hub puller (A: KV40104100, ST36230000).

CAUTION:

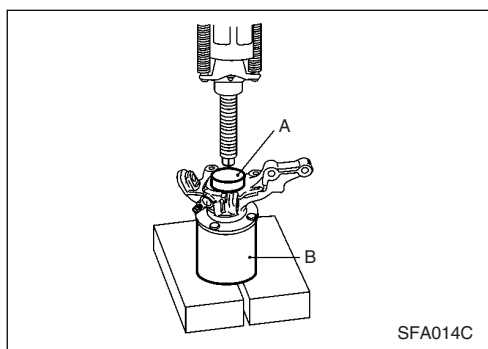
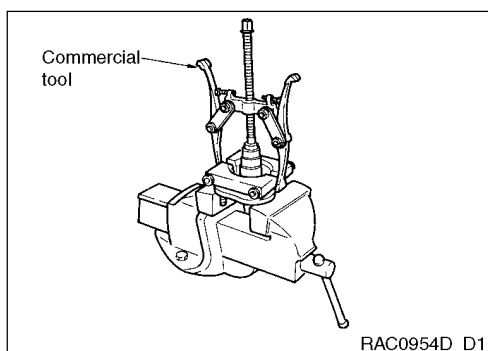
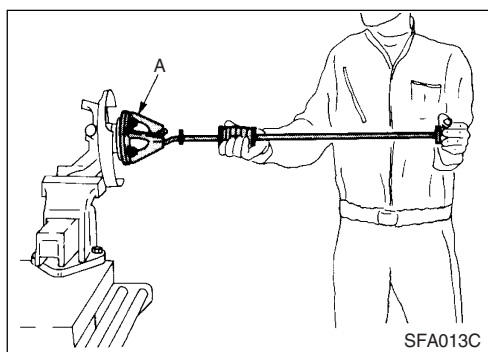
- During installing on the vise, be careful not to damage the steering knuckle mounting surface by using the aluminum panel.

2. Remove the outer wheel bearing inner race from the wheel hub using a press.
3. Remove the snap ring using a minus (-) screwdriver.

CAUTION:

- Be careful not to damage the steering knuckle.

4. Remove the wheel bearing by applying pressure using drift (A: KV38100200, ST35300000), (B: KV40104710, KV40106200, KV40105310).



Inspection after Disassembly

WHEEL HUB

- Inspect the wheel bearing for any damages caused by heat and rust or cracks (check using dye penetrant testing) and replace if defective.

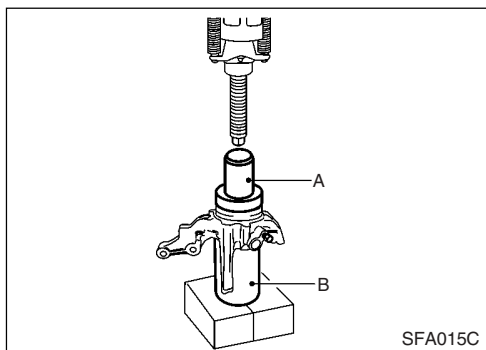
STEERING KNUCKLE

- Inspect the steering knuckle for any deformation, cracks or damages and replace if defective.

FRONT AXLE

SNAP RING

- Inspect the snap ring for any wear and damages and replace if defective.



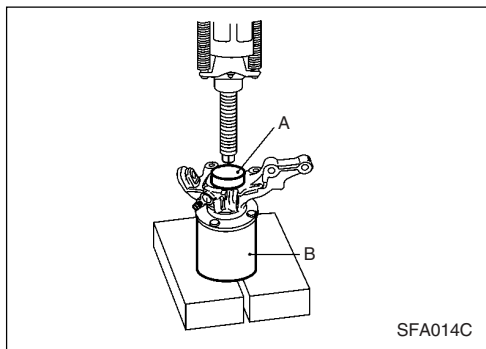
ASSEMBLY

1. Install the splash guard to the steering knuckle using drift (A: KV40106200, ST30022000, KV40105220), (B: KV40104710, KV40106200, KV40105310).

CAUTION:

- The wheel bearing is not reusable. Do not reuse.

2. Install the snap ring to the steering knuckle.



3. Press in the wheel hub using a drift (A: ST35271000), (B: KV40104710, KV40106200, KV40105310).
4. By applying 49030 N (5000 kg) of force as shown in the illustration, smoothly rotate 10 times in reverse direction.
5. Place a spring balance at the illustrated location and measure the turning torque while rotating 10 ± 2 RPM.

Turning torque: Less than 1.21 KN•m (123 kgf-m)

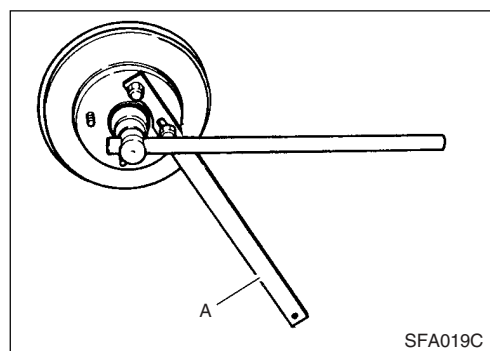
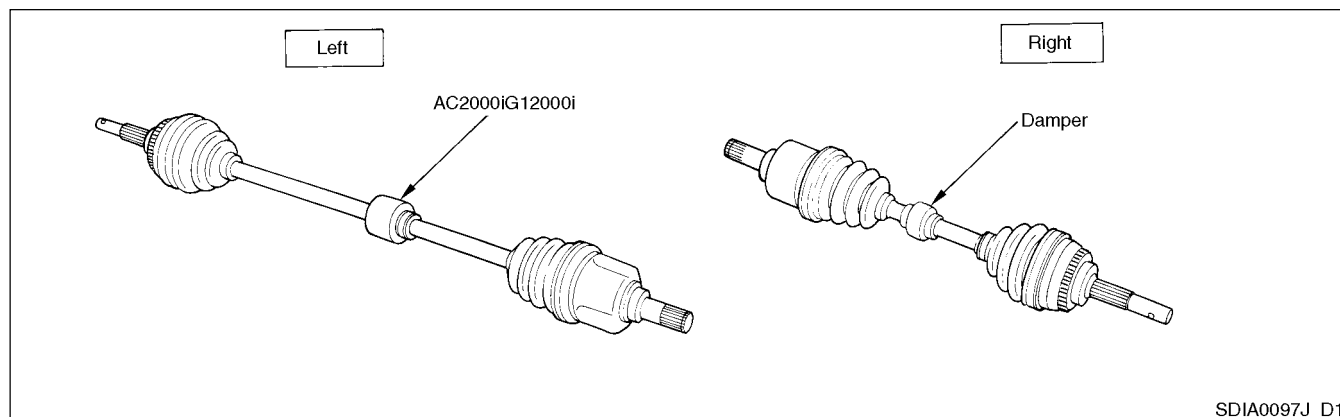
Measured value by spring balance:

Less than 8.13 N (0.83 kg)

FRONT DRIVE SHAFT

Front Drive Shaft

Removal • Installation



REMOVAL

1. Remove the cotter pin and remove the lock nut and washer using a special tool (A: KV40104000).
2. Remove the ABS wheel speed sensor from the steering knuckle.
3. Remove the tie rod from the steering knuckle using a pitman arm puller (commercial tool).
4. Remove the lock plate and disconnect the brake hose.
5. Remove the steering knuckle and mounting bolts.

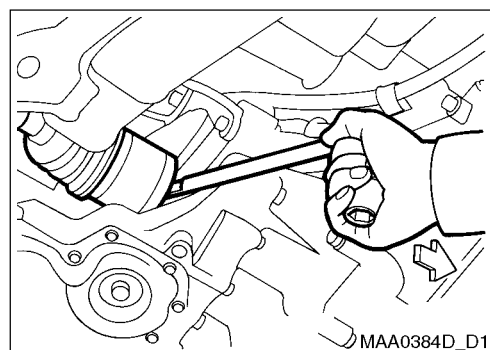
CAUTION:

- Do not apply more than 22° on the drive shaft connection. Securely hold the steering knuckle to prevent the slide joint from over stretching.

6. Remove the drive shaft from the steering knuckle using a puller (commercial tool).

CAUTION:

- Do not apply excessive angle (more than 22°) on the drive shaft connection while removing the drive shaft. And do not stretch the slide joint excessively.
- Do not carry the drive shaft by holding the middle section connected to the axle.
- Do not hang the drive shaft inserted in the transaxle without supporting the middle of the shaft or wheel joint.

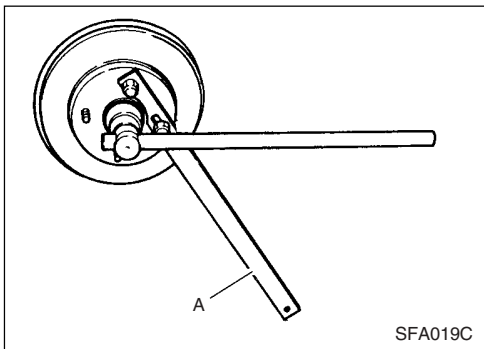
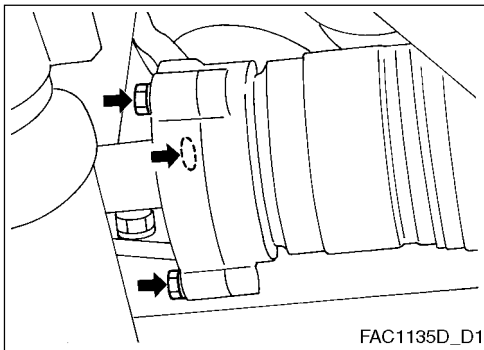
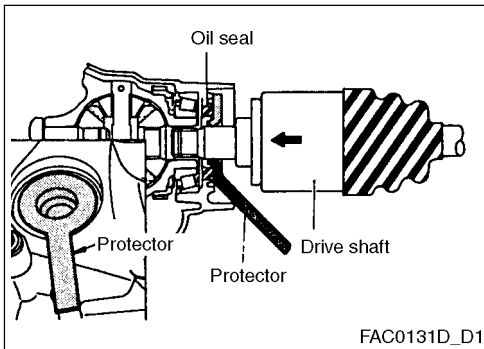
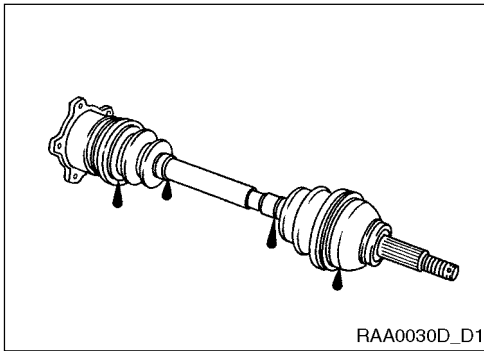


7. Remove the drive shaft from the transaxle using a wheel wrench as shown in the illustration.

CAUTION:

- Perform the above operation for the left side drive shaft after removing the center main bar on the engine.
- When removing the drive shaft from the vehicle, be careful not to interfere with the brake hose and ABS wheel speed sensor harness.
- Check if the circular clip is attached to the end section of the drive shaft when removed.

FRONT DRIVE SHAFT



Engine model	Circular clip attached drive shaft	
	Right	Left
QG15DE	O	O

Inspection after Removal

- Inspect for smooth movement and noise presence by moving the connecting sections left & right, up & down and axial direction.
 - Inspect the boot for any cracks, damages or grease leakage.
1. To prevent from damaging the differential side oil seal, install the protector (commercial tool) to the oil seal. Insert the drive shaft and push in the slide joint in the drive shaft, then securely install it by hammering.

CAUTION:

- Check if the circular clip is securely engaged.

2. Insert the drive shaft to the steering knuckle and install the washer, then insert the lock nuts.
3. Install the steering knuckle.
4. Hold the brake hose with a lock plate.
5. Install the tie rod to the steering knuckle.
6. Install the ABS wheel speed sensor.

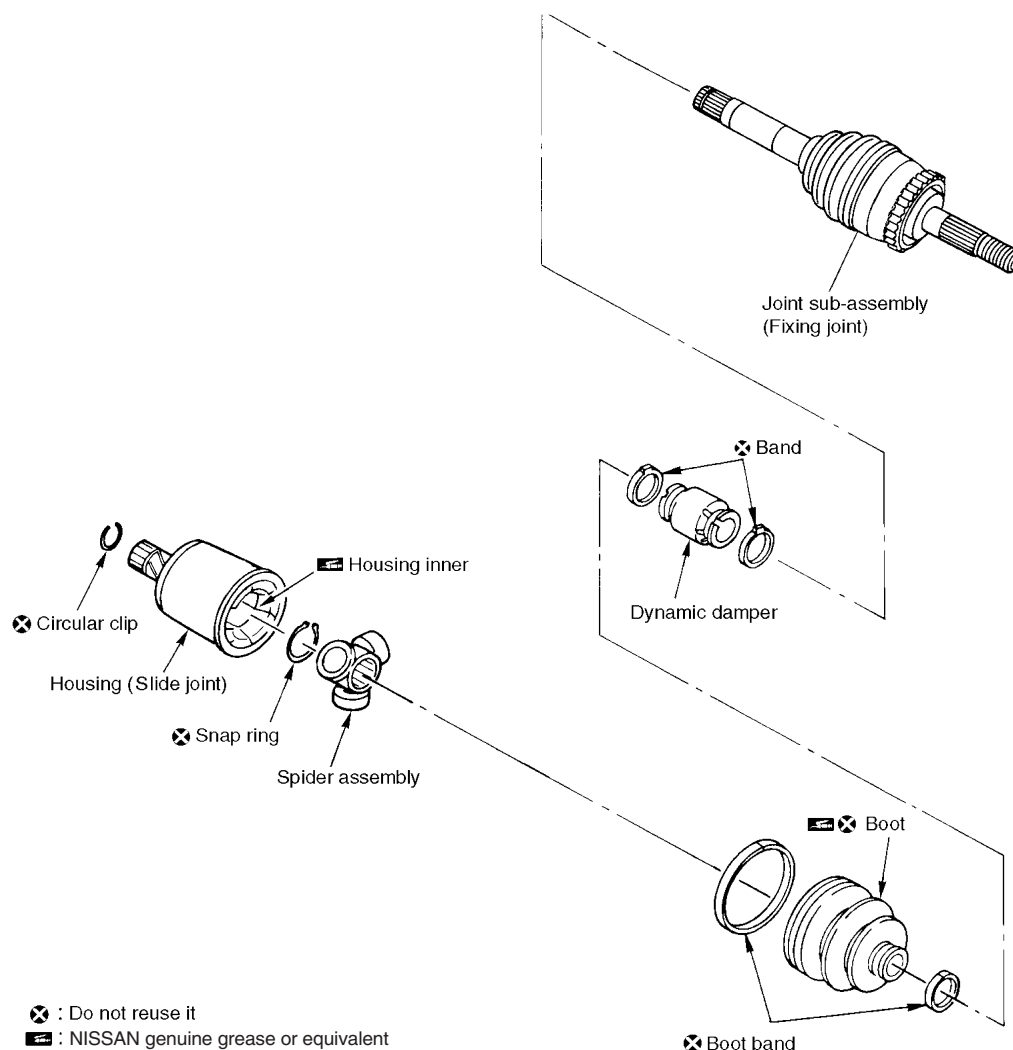
7. Tighten the hub lock nut to the specified torque.
Tool A: KV40104000
8. Install the cotter pin.

CAUTION:

- The cotter pin is not reusable. Do not reuse.

FRONT DRIVE SHAFT

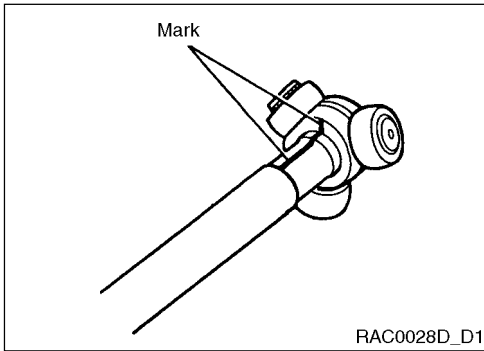
Disassembly • Assembly



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FRONT DRIVE SHAFT



TRANSAXLE SIDE (AC2000i, GI2000i)

1. Remove the boot band.
2. Secure the shaft to the vise.

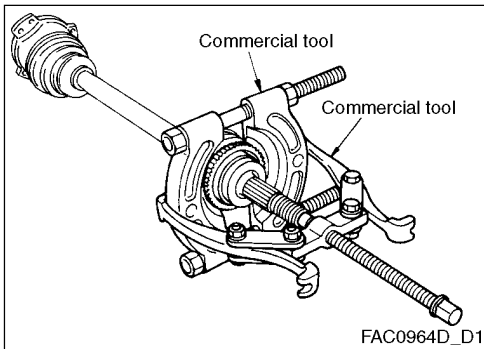
CAUTION:

- Use the copper plate or aluminum plate to securing on the vise.

3. Put a mark on the shaft and spider assembly.

CAUTION:

- Use paint for marking not to damage the surface.



4. Remove the snap ring and remove the spider assembly from the shaft.
5. Remove the boot from the shaft.
6. Remove the dynamic damper from the shaft.

WHEEL SIDE

- Remove the sensor rotor from the drive shaft using a bearing presser (commercial tool) and puller (commercial tool) as shown in the illustration.

CAUTION:

- Do not disassemble any other components except for the sensor rotor.

Inspection after Disassembly

SHAFT

- Replace the shaft if it has vibration, cracks or damages.

BOOT AND BOOT BAND

- Replace the boot if cracked.

CAUTION:

- Replace the drive shaft assembly for the wheel side.

- Always replace with new boot band when removed.

CAUTION:

- Replace the drive shaft assembly for the wheel side.

JOINT SUB-ASSEMBLY (FIXING JOINT)

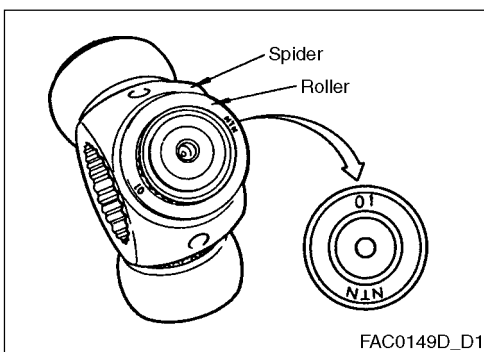
CAUTION:

- This is not a disassembling component. Do not disassemble.

JOINT ASSEMBLY (TRANSAXLE SIDE)

T-type and S-type slide joint

- Replace the housing and spider assembly if the roller contacting surface in the housing or roller surface of the spider have worn or damages.
- If the spider roller has rattle noises in circular motion or has stiff rotation, replace the spider assembly.
- When the joint assembly components are defective, replace the joint assembly.
- Replace the spider assembly as a set when replacing the housing.
- When replacing the spider assembly, select an identical component from below table by referring the seal on the roller as shown in the illustration.



FRONT DRIVE SHAFT

Seal No.	Type
00	T70C
01	
02	
03	

JOINT ASSEMBLY (WHEEL SIDE)

CAUTION:

- This is not a disassembling component. Do not disassemble.

TRANSAXLE SIDE

1. Cover the splined section of the drive shaft with tape to prevent the boot from damaging. Then install the boot band and boot to the shaft.

CAUTION:

- The boot band and boot cannot be reused. Do not reuse.

2. Remove the tape on the splined section of the shaft.

3. Install the spider assembly to the drive shaft by aligning marks so that the internal spline of the spider assembly on the external spline of the drive shaft.

4. Secure the spider assembly on the snap ring.

CAUTION:

- The snap ring cannot be reused. Do not reuse.

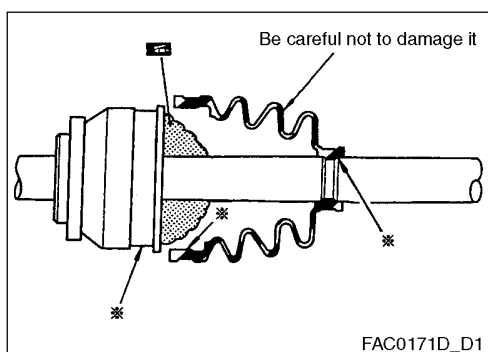
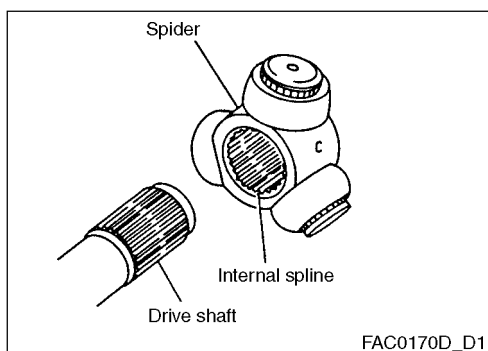
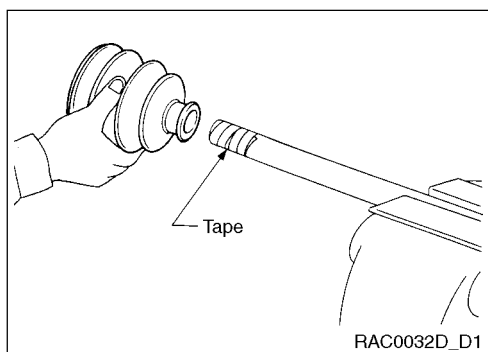
5. Apply NISSAN genuine grease or equivalent on the spider assembly and other main moving parts.

6. Install the slide joint housing to the spider assembly and fill the remaining grease to the below specifications.

Grease capacity

GI2000i type: 115 ± 5 g

T79C type: 160 ± 5 g

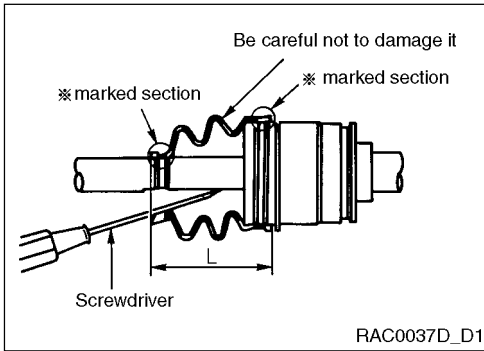


7. Securely install the boot on the grooved section (at the ※ marked section).

CAUTION:

- Remove all grease on the boot installation surface (at the ※ marked section). Or the boot may come off.

FRONT DRIVE SHAFT



8. Check if the boot length (L) is the value below and prevent from boot deformation by releasing the air inside the boot by inserting a minus (-) screwdriver.

Boot mounting length

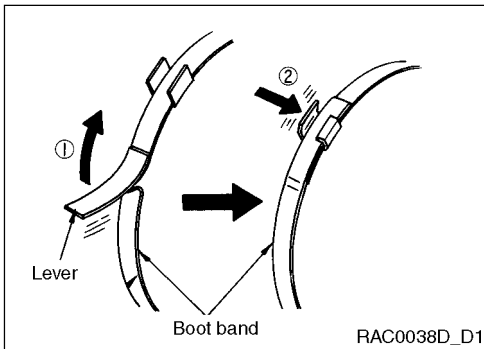
GI2000i type: 96.5 ± 1 mm

T79C type: 160 ± 1 mm

CAUTION:

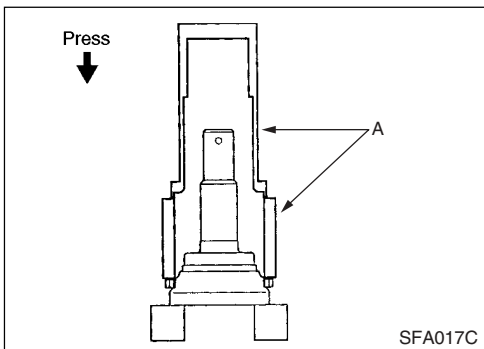
- If the boot mounting length is out of the standard value, it may be damaged.
- Be careful to not touch the boot with the screwdriver sharp end.

9. Secure the boot's external side and internal side with new boot band as shown in the illustration.



CAUTION:

- The boot must not come off while housing is rotating. If comes off, the boot band should be re-assembled.

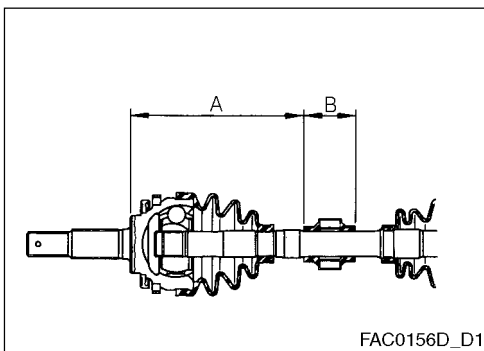


WHEEL SIDE

1. Push the sensor rotor into the joint sub-assembly using a drift (A: KV38100500, KV40101840).

CAUTION:

- The sensor rotor cannot be reused. Do not reuse.
- The joint assembly is not a disassembling component. Do not disassemble.



DYNAMIC DAMPER

- If disassemble the dynamic damper, secure it with bands away from the fixing joint to be the below value.

CAUTION:

- The dynamic damper band cannot be reused. Do not re-use.

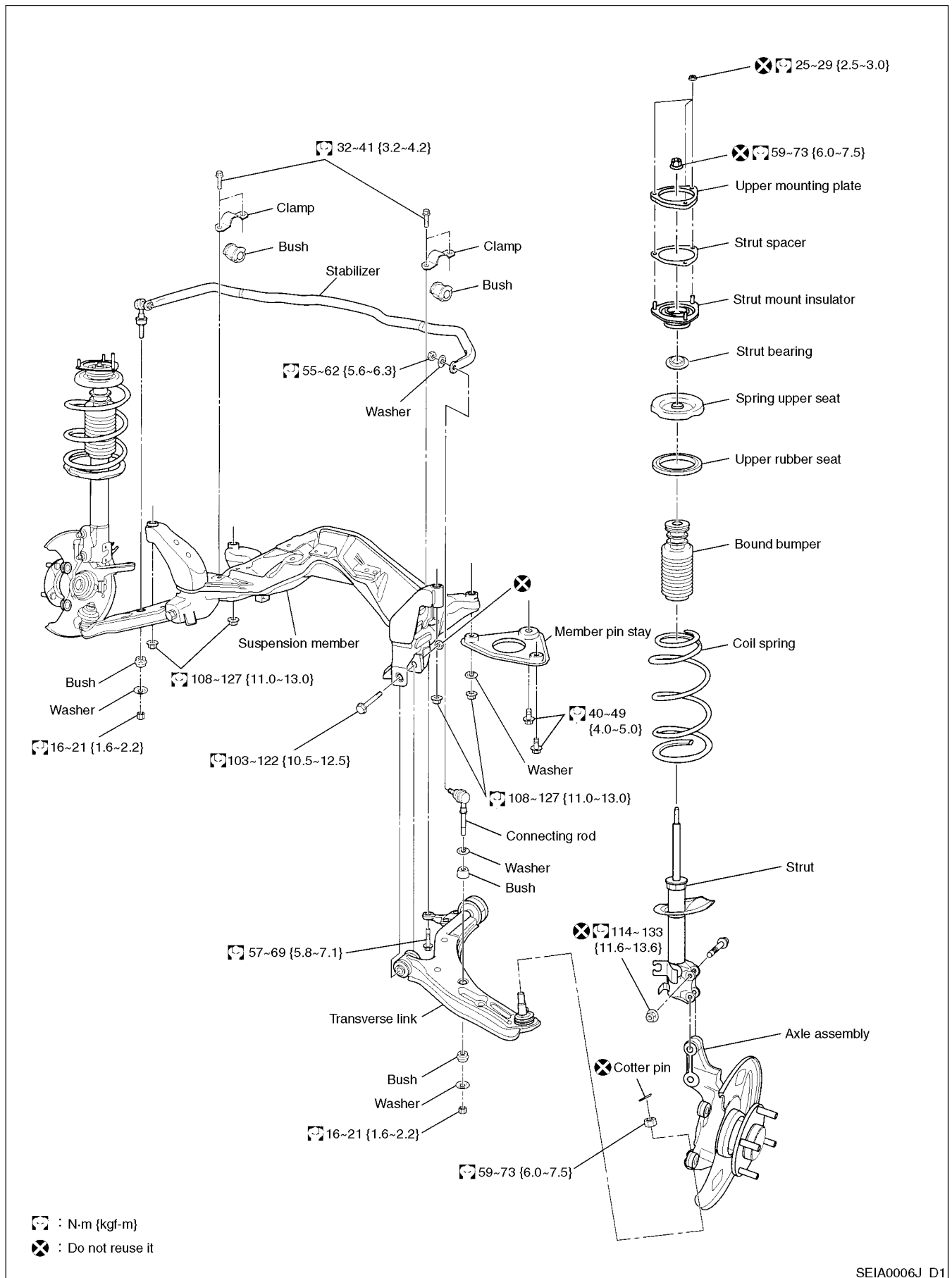
INSTALLATION VALUE

Engine model	Drive shaft type	Drive type	Specifications	Value A (mm)	Value B (mm)
QG15DE	AC2000i, GI2000i	Front wheel drive	Right side	437 ± 5	70
			Left side (A/T)	180 ± 5	

FRONT SUSPENSION

Front Suspension Assembly

Components Diagram



SEIA0006J_D1

FRONT SUSPENSION

On-Vehicle Inspection and Service

INSPECT FOR ANY LOOSENESS, ABNORMAL NOISES AND DAMAGES AT THE MOUNTING AND CONNECTING SECTIONS

Inspect the following items while vehicle lifted-up.

- Inspect each component for any looseness, abnormal noises and damages at the mounting and connecting sections.
- Inspect the lower ball joint endplay.
 1. Install the dial gage to the vehicle and install the dial gage end to the brake caliper.
 2. Do not press the brake pedal while the front wheels are straight ahead.
 3. Measure the axial direction end play between the transverse link and steering knuckle using a iron rod.

Axial direction endplay: 0 mm

CAUTION:

- **Be careful not to damage the ball joint boot.**
4. If the axial direction endplay exceeds the standard value, remove the transverse link and inspect the lower ball joint.

Wheel Alignment

GENERAL

- Perform the wheel alignment while vehicle is empty. An empty vehicle means it has all the necessary fluids that allow being ready for driving such as full tank of fuel, coolant and all lubricants but except for jack and service tools.

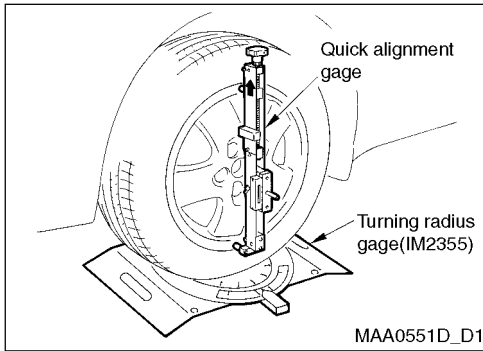
Inspection before Service

1. Inspect the tire inflation pressure and wear.
2. Inspect the rod wheel for any vibration.
3. Inspect the axial direction endplay of the wheel bearing.
4. Inspect the axial direction endplay of the suspension lower ball joint.
5. Inspect the strut operation.
6. Inspect the axle and suspension mountings for any looseness and deformation.
7. Inspect the links and arms for any damages, cracks or deformation.
8. Inspect if the vehicle exterior is normal.

Camber, Caster, King Pin Angle Inspection

- The camber, caster and king pin angle cannot be adjusted.
- The front alignment inspection can be done with quick alignment gage quickly and accurately.
- Refer to the user's manual for detailed instructions of quick alignment gage.
- Keep the vehicle leveled by placing the front wheels on the turning radius gage and the rear wheels on the support with the same height with the turning radius gage before installation.

FRONT SUSPENSION



WHEN USING QUICK ALIGNMENT GAGE

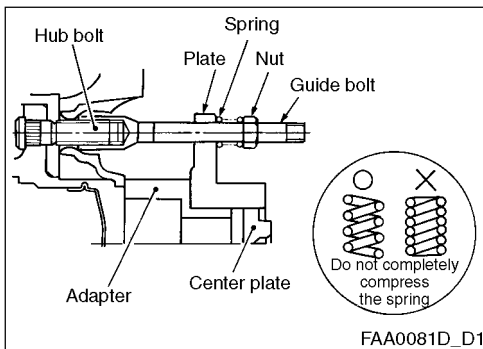
- The quick alignment gage cannot measure the king pin angle.
- Install the quick alignment gage assembly so that the arrow sticker faces upwards and perpendicular with the floor as in the illustration before measurement.

Camber: $-0^{\circ}15' \pm 45'$

Caster: $-1^{\circ}30' \pm 45'$

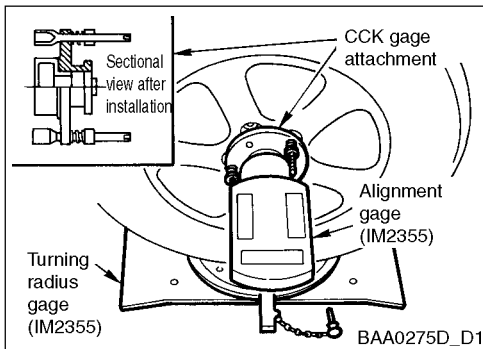
CAUTION:

- For caster values, multiply 2.865 to the value measured by quick alignment gage.



When Using CCK Gage

1. Remove the full wheel cover or center cap and wheel nut (2 EA) and install the guide bolt to the hub bolt as shown in the illustration.
2. Push the adaptor until it becomes in contact with the plate.
3. Push the center plate into the plate.
4. Push the plate onto the guide bolt and tighten the guide bolt nut evenly after inserting the spring. The spring must not be fully compressed.
5. Perform the measurement after aligning the bent section of the center plate with bent section of the alignment gage.



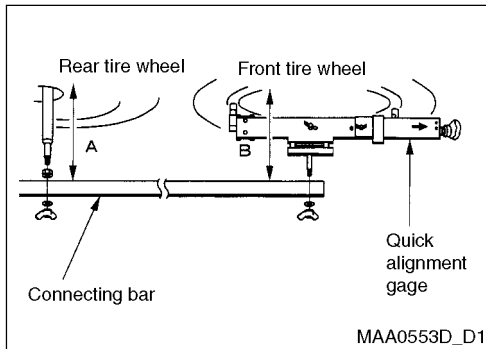
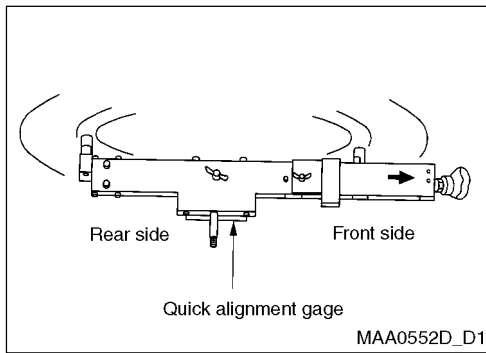
Camber: $-0^{\circ}15' \pm 45'$

Caster: $-1^{\circ}30' \pm 45'$

King pin angle: $-14^{\circ}30' \pm 45'$

- If the camber, caster and king pin angle is out of the standard value, inspect the front suspension components for any wear or damages and replace if defective.

FRONT SUSPENSION



Tow-In Inspection

1. Place the quick alignment gage assembly on a flat board and adjust the tow angle measurement meter to 0° using device block.
2. Install the quick alignment gage onto the wheel to be measured so that the arrow sticker faces towards vehicle front.
3. Remove one wheel nut from rear wheel which is nearest to the center line and install the hub bolt adaptor.
4. Install the connecting bar to the vehicle.

CAUTION:

- **Adjust the distance A and B by considering tread so that the connecting bar and the vehicle become parallel.**
5. Remove the quick alignment gage assembly from the vehicle and place on the flat board. Then convert the measured value to regular value using the conversion formula.
$$\text{Sin [Measured value (decimal method)] tire outer diameter (mm)} = \text{Tow-in (mm)}$$

NOTE:

- **The measured value means the sum of the measured value of left and right wheels.**

Example

When measured value is 0° 30' (0.5°) and tire outer diameter is 600 mm

$$\text{Sin } 0.5 \times 600 = 5.2 \text{ mm}$$

$$\text{Tow-in: In } 3 \text{ mm} - \text{In } 1 \text{ mm}$$

6. If the tow-in value is out of the standard value, adjust the tow-in value to the standard value by releasing the tie rod lock nut and adjusting the length.

CAUTION:

- **When adjusting the tie rod, adjust the left and right tie rods equally.**
- **Always secure the tie rod with a wrench when tightening the lock nut.**

Side Slip Inspection

- Inspect if the side slip value is within the specified value using the side slip tester.
- The side slip value may be different even for the same alignment due to the wear of the tire pattern.

Side slip (Reference value): In 5 mm - Out 5 mm

CAUTION:

- **Always inspect the wheel alignment before inspecting the side slip.**
- **Check if the tow-in value is within the standard value even when the side slip value is within the standard value.**

Steering Angle Inspection

1. Locate the front wheels straight ahead position and place the front wheels on the turning radius gage by moving the vehicle.
2. Measure the steering angle by rotating the steering wheel all the way to the left and then to right.

COIL SPRING AND SHOCK ABSORBER

Coil Spring and Shock Absorber

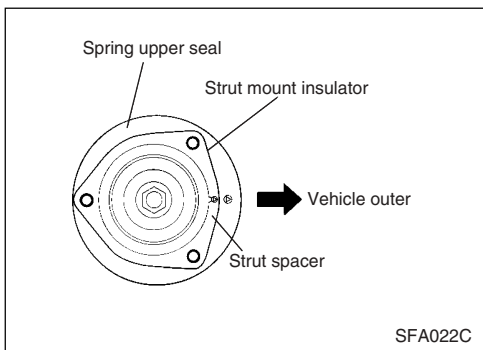
Removal • Installation

REMOVAL

1. Remove the tires. Remove the brake calipers and store to a safe place. GI

CAUTION:

- Do not depress the brake pedal while brake calipers are removed. EM
2. Remove the ABS wheel speed sensor wires from the strut. LC
 3. Remove the brake hose lock plate. EC
 4. Remove the bolts and nuts from strut and steering knuckle.
 5. Remove the strut upper mounting nut and remove the upper mounting plate and strut from the vehicle.



INSTALLATION

- Refer to “Components Diagram” (FA-13) in “Front Suspension Assembly” for tightening torque and install in the reverse order of removal. FE
- Install the strut to the vehicle after checking that the arrow in the strut mount insulator and spring upper seat and the divided ends of the strut spacer faces the direction shown in the illustration. RS
- Install the upper mounting plate so that its divided ends face the vehicle outer. AC

Disassembly • Assembly

DISASSEMBLY

1. Install the strut attachment (commercial tool) to the strut and secure on the vise. AV

CAUTION:

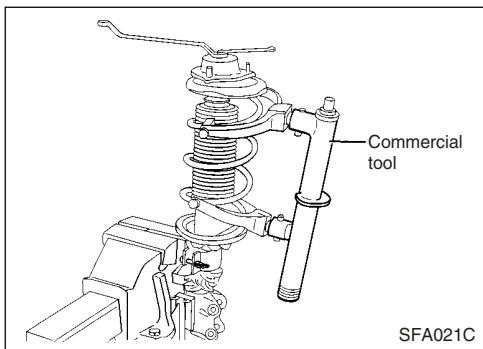
- Cover the lock strut with oil cloth during strut attachment (commercial tool) installation to prevent from damaging. WH
2. Loosen the piston rod lock nut gradually. CL

CAUTION:

- Do not release the piston rod lock nut completely. If so, the coil spring will bounce out and cause injury. MT
3. Compress the coil spring using a spring compressor (commercial tool). AT

CAUTION:

- Check if the spring compressor (commercial tool) is securely installed on the coil spring and then perform the coil spring compression. FA
4. After finishing the step 3, check if the coil spring is fully released between the upper seat and lower seat and remove the piston rod lock nut. RA
 5. Remove the small components of the strut.
 - Remove the strut spacer, strut mount insulator, strut bearing, spring upper seat and upper rubber seat and then remove the coil spring from the strut. BR
 6. Remove the bound bumper from the spring upper seat. ST
 7. Slowly release the spring compressor (commercial tool) and remove the coil spring. BT

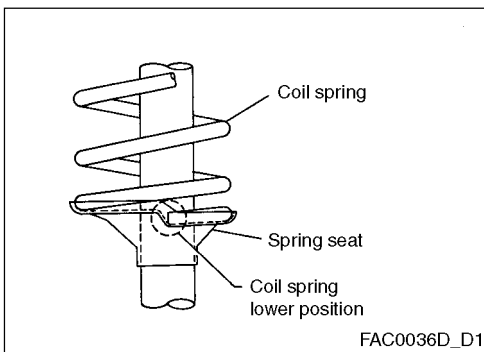


COIL SPRING AND SHOCK ABSORBER

Inspection after Disassembly

STRUT INSPECTION

- Inspect the strut for any deformation, cracks or damages and replace if defective.
- Inspect the piston rod for any damages, uneven wear and refraction and replace if defective.
- Inspect the welded sections and sealing sections for any oil leakages and replace if defective.



Insulator and Rubber Inspection

Inspect the strut mount insulator for any cracks and the rubber components for wear and replace if defective.

Coil Spring Inspection

Inspect for any cracks, wear and damages and replace if defective.

ASSEMBLY

1. Compress the coil spring using the spring compressor (commercial tool) and install it to the strut.

CAUTION:

- Face the coil spring tube side downwards and adjust the lower section on the strut spring seat as shown in the illustration.
- Check if the spring compressor (commercial tool) is securely installed on the coil spring and then compress the coil spring.

2. Install the bound bumper to the spring upper seat.

CAUTION:

- Securely install the bound bumper to the spring upper seat.
- Use soap water for installation. Do not use any oils.

3. Install the small components of the strut.

- Install the upper rubber seat, spring upper seat, strut bearing, strut mount insulator and strut spacer and hang the piston rod lock nut.

CAUTION:

- The piston rod lock nuts cannot be reused. Do not reuse.

4. Check if the arrow in the strut mount insulator and spring upper seat and the divided ends of the strut spacer are installed at the location shown in the illustration.

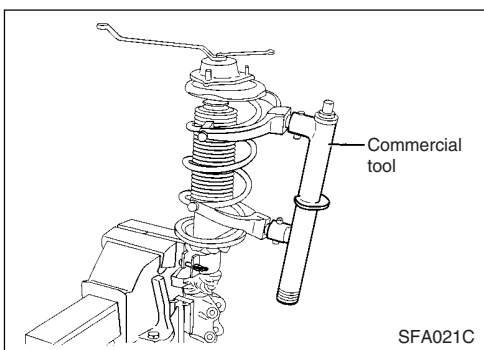
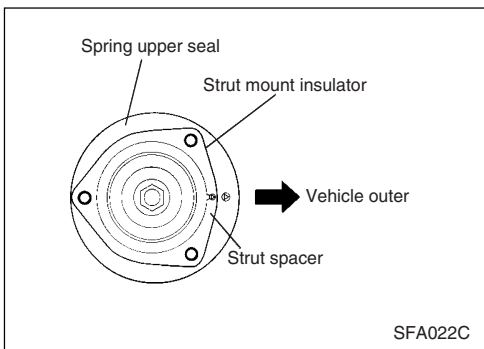
5. Check if the coil spring is securely installed to the upper rubber seat and release the spring compressor (commercial tool) slowly.

CAUTION:

- Install the upper rubber seat so that it does not come off from the spring upper seat and coil spring.

6. Tighten the piston rod lock nut to the specified torque.

7. Remove the strut attachment (commercial tool) from the strut.



TRANSVERSE LINK

Transverse Link

Removal • Installation

REMOVAL

1. Remove the steering knuckle from the transverse link. Refer to “Removal” (FA-4) in “Front Wheel Hub and Knuckle”. **GI**
2. Remove the mounting nuts, washer and bushings from below the stabilizer connecting rod. **EM**
3. Loosen the transverse link mounting bolt slightly. **LC**
4. Remove the compression rod bracket mounting bolt. **EC**
5. Remove the transverse link mounting bolt and nut and remove the transverse link from the suspension member. **FE**

Inspection after Removal

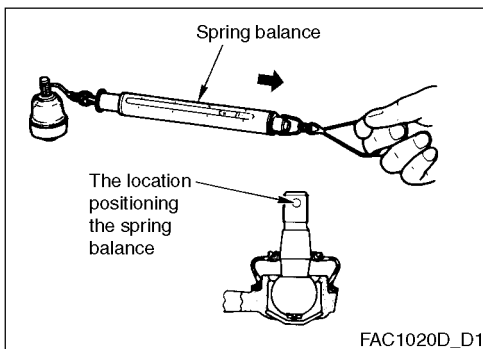
EXTERIOR INSPECTION

Inspect the transverse link and bushing for any deformation, cracks and damages and replace the transverse link assembly if defective. **RS**

BALL JOINT INSPECTION

CAUTION:

- Move the ball joint over 10 times with hand to make it flexible before measurement. **AC**

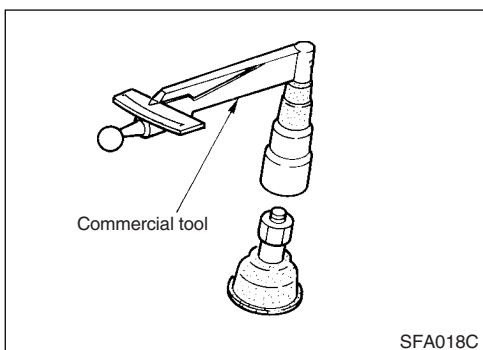


Swing Force Inspection

- Hang the spring balance to the cotter pin hole on the ball stud and inspect if the value measured when the ball stud starts to move falls within the standard value. **MT**

Measured value by spring balance: 0.85 - 8.63 kg **AT**

- If the value is out from the standard value range, replace the transverse link. **FA**



Turning Torque Inspection

- Install the mounting nut to the ball stud and measure if the turning torque is within the standard value by using the free-load gage (commercial tool). **RA**

Turning torque: 0.49 - 4.9 N•m (0.05 - 0.50 kgf-m) **BR**

- If the value is out of the standard value, replace the transverse link. **ST**

AXIAL DIRECTION ENDPLAY INSPECTION

- Put the end of the ball joint to the axial direction and inspect for any abnormal noises. **BT**

Axial direction endplay: 0 mm

- If the value is out of the standard value, replace the transverse link.

TRANSVERSE LINK

Installation

- Refer to “Components Diagram” (FA-13) in “Front Suspension Assembly” for tightening torque and install in the reverse order of removal.
- When installing the transverse link to the suspension member, check if the stopper rubber is inserted at the rear of the bushing collar in the vehicle front bushing.
- Perform in empty vehicle condition on the ground when tightening the transverse link mounting bolt to the specified torque.
- Inspect the wheel alignment after installation. Refer to “Wheel Alignment” (FA-14) in “Front Suspension Assembly”.

STABILIZER

Stabilizer

Removal • Installation

REMOVAL

1. Remove the stabilizer connecting rod upper mounting bolt.
2. Remove the stabilizer clamp mounting bolts.
3. Remove the steering gear from the vehicle. Refer to "Removal" (ST-11) in "Steering System".
4. Remove the stabilizer from the vehicle.

Inspection after Removal

Inspect the stabilizer, connecting rod, bushing and clamp for any deformation, cracks or damages and replace if defective.

INSTALLATION

- Refer to "Components Diagram" (FA-13) in "Front Suspension Assembly" for tightening torque and install in the reverse order of removal.

GI

EM

LC

EC

FE

RS

AC

AV

EL

WH

CL

MT

AT

FA

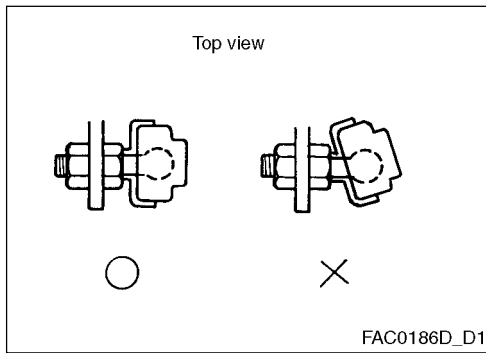
RA

BR

ST

BT

STABILIZER



- The stabilizer uses a pillow ball type connecting rod. Thus, when determining the ball joint location, install it so that the case of the pillow ball head section becomes parallel with the stabilizer.

FRONT SUSPENSION MEMBER

Front Suspension Member

Removal • Installation

REMOVAL

1. Remove the steering knuckle from the vehicle. Refer to "Removal" (FA-4) in "Front Wheel Hub and Knuckle". **GI**
2. Remove the front exhaust pipe from the vehicle. **EM**
3. Remove the steering compression tube bracket from the suspension member.
4. Remove the high and low pressure tubes from the steering gear.
5. Remove the pinch bolt under the lower joint of the steering gear and put the alignment mark on the lower joint and steering gear. **LC**
6. Install the transmission jack to the engine. **EC**
7. Remove the center member from the vehicle.
8. Remove the transverse link from the suspension member. Refer to "Removal" (FA-19) in "Transverse Link". **FE**
9. Remove the body side mounting bolts from the member pin stay.
10. Install the transmission jack at the suspension member and remove the suspension member mounting nuts. **RS**
11. Lower the transmission jack slowly and remove the suspension member from the vehicle. **AC**

INSTALLATION

- Refer to "Components Diagram" (FA-13) in "Front Suspension Assembly" for tightening torque and install in the reverse order of removal. **AV**
- After completing the service, perform the final tightening to all sections, inspect the wheel alignment and bleed air from the steering gear fluid pipes. Refer to "Power Steering Fluid Air Bleeding" (ST-4) in "Steering System". **EL**

WH

CL

MT

AT

FA

RA

BR

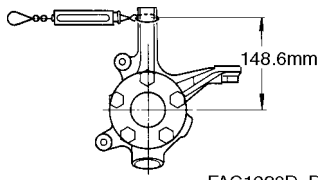
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BT

SERVICE DATA

Service Data

Wheel Bearing

Drive type	Front wheel drive
Turning torque KN•m (kgf-m)	Less than 1.21 (Less than 123)
Measured value by spring balance N (kg)	Less than 8.13 (Less than 0.83)
Spring balance position	 FAC1230D_D1
Axial direction endplay (mm)	0.05

Drive Shaft

AC2000i, GI2000i

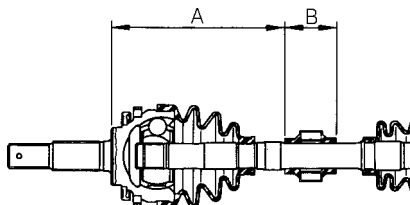
Joint type		T79C
Grease capacity		115 ± 5 g
Boot length		96.5 ± 1 mm
Spider assembly in final drive side	Seal No.	Type
	00	T70C
	01	
	02	
	03	

Z90T79C

Joint type	Final drive side	T70C
Grease capacity		160 ± 5 g
Boot length		102.5 ± 1 mm

Dynamic Damper

Type	Drive type	Specification	Value A (mm)	Value B (mm)
AC2000i, GI2000i	Front wheel drive	Right	437 ± 5	70
		Left (A/T)	180 ± 5	
Z90T79C		Right	425 ± 5	64
		Left	180 ± 5	70



FAC0156D_D1

Tightening Torque

Wheel hub lock nut	235 N•m (24.0 kgf-m)
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SERVICE DATA

Service Data

Wheel Alignment (When Curb Weight)

Drive type	Front wheel drive	
Engine model	QG16DE	GI
Camber	-0° 20' ± 45'	
Caster	1° 25' ± 45'	
King pin angle	14° 40' ± 45'	EM
Tow-in (mm)	In 1 - In 3	
Side slip (Reference only) (mm)	In 5 - Out 5	LC

Ball Joint

Turning torque (N•m (kgf-m))	0.50 - 0.49 (0.05 - 0.05)	EC
Measured value by spring balance (N (kg)) (At the cotter pin hole)	8.40 - 81.9 (0.85 - 8.36)	FE
Main movement torque (N•m (kgf-m))	0.50 - 4.90 (0.05 - 0.50)	
Axial direction endplay (mm)	0	RS

Tightening Torque

Unit: N•m (kgf-m)

Transverse link - Suspension member	103 - 122 (10.5 - 12.5)	AC
Steering knuckle - Transverse link	59 - 73 (6.0 - 7.5)	AV
Stabilizer connecting rod - Transverse link	16 - 21 (1.6 - 2.2)	
Strut - Body	25 - 29 (2.5 - 3.0)	EL
Piston rod lock nut	59 - 73 (6.0 - 7.5)	
Strut - Steering knuckle	114 - 133 (11.6 - 13.6)	WH
Suspension member - Compression rod bracket	57 - 69 (5.8 - 7.1)	
Suspension member - Stabilizer clamp	32 - 41 (3.2 - 4.2)	CL

MT

AT

FA

RA

BR

ST

BT

