SECTION FAX
FRONT AXLE

CONTENTS

PRECAUTIONS

PFP:00001

Cautions

BDS0006R

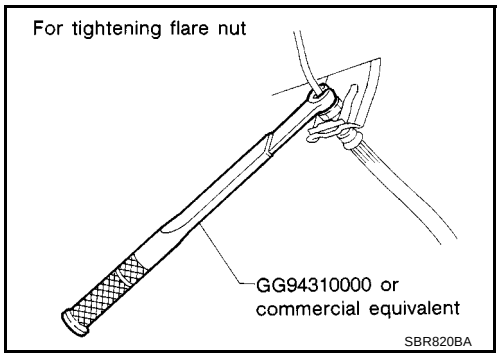
Observe the following precautions when disassembling and servicing drive shaft.

- The joint of drive shaft cannot be disassembled. Do not attempt to disassemble it.
- Perform work in a location which is as dust-free and dirt-free as possible.
- Before disassembling and servicing, clean the outside of parts.
- The disassembly and service location must be clean. Care must be taken to prevent parts from becoming dirty and to prevent the entry of foreign objects.
- Disassembled parts must be carefully reassembled in the correct order. If work is interrupted, a clean cover must be placed over parts.
- Paper shop cloths must be used. Fabric shop cloths must not be used because of the danger of lint adhering to parts.
- Disassembled parts (except for rubber parts) should be cleaned with kerosene which shall be removed by blowing with air or wiping with paper shop cloths.

Precautions for Brake System

BDS0006S

- When installing rubber parts, final tightening must be carried out under unladen condition* with tyres on ground.
  *: Fuel, radiator coolant and engine oil full. Spare tyre, jack, hand tools and mats in designated positions.
- Use flare nut wrench when removing or installing brake tubes.
- After installing removed suspension parts, check wheel alignment and adjust if necessary.
- Always tighten brake lines to the specified torque when installing.

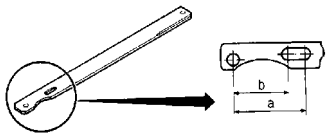
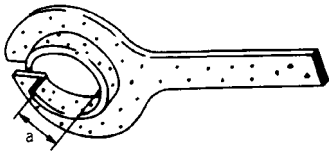
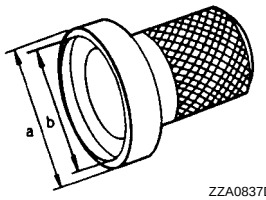
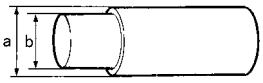
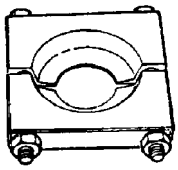
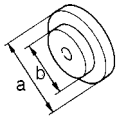
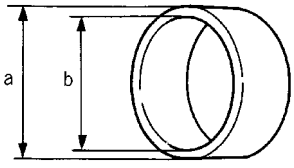


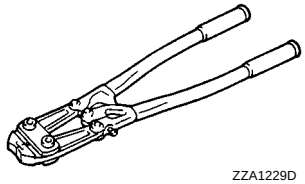
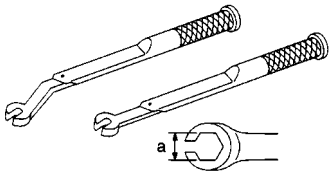
PREPARATION

PFP:00002

Special Service Tools

BDS0006T

Description	Application
Hub lock nut wrench KV40104000 a: 85 mm (3.35 in) dia. b: 65 mm (2.56 in) dia.  ZZA0802D	● Removing and installing hub lock nuts ● Removing and installing drive shaft
Protector KV38107900 a: 32 mm (1.26 in) dia.  ZZA0835D	Installing drive shaft
Drift ST35271000 a: 72 mm (2.83 in) dia. b: 63 mm (2.48 in) dia.  ZZA0837D	Installing wheel bearing
Drift ST33710000 a: 30 mm (1.18 in) dia. b: 23 mm (0.91 in) dia.  ZZA1233D	● Removing wheel hub ● Removing inner race (outside) of wheel bearing
Bearing replacer ST30031000  ZZA0700D	Removing inner race (outside) of wheel bearing
Drift ST35321000 a: 49 mm (1.93 in) dia. b: 41 mm (1.61 in) dia. ST30621000 a: 79 mm (3.11 in) dia. b: 59 mm (2.32 in) dia.  ZZA1051D	● Removing wheel bearing ● Installing wheel hub
Drift ST27863000 a: 74 mm (2.91 in) dia. b: 62 mm (2.44 in) dia.  ZZA0936D	Installing wheel bearing

Description	Application
Boot band crimping tool KV40107300  ZZA1229D	Installing boot band
Flare nut torque wrench GG94310000 a: 10 mm (0.39 in)  NT406	Removing and installing brake lines

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

BDS0006U

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

			Reference page	Improper installation, looseness	Parts interference	Wheel bearing damage	TYRES	ROAD WHEEL	STEERING
			Refer to FAX-6, "FRONT WHEEL HUB AND KNUCKLE"			Refer to FAX-6, "FRONT WHEEL HUB AND KNUCKLE"	NVH in WT section.	NVH in WT section.	NVH in PS section.
Symptom	FRONT AXLE	Noise		×	×		×	×	×
		Shake		×	×		×	×	×
		Vibration		×	×		×		×
		Shimmy		×	×		×	×	×
		Judder		×			×	×	×
		Poor quality ride or handling		×	×	×	×	×	

×: Applicable

FRONT WHEEL HUB AND KNUCKLE

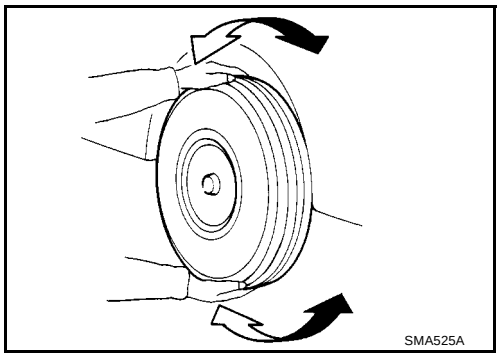
PFP:40202

On-Vehicle Inspection

BDS0006V

Inspect to check that there is no excessive play, cracking, wear, or other damage to front axle.

- Turn front wheels (left/right) and check the play.
- Check that no nails or other foreign objects are embedded.
- Retighten all axle nuts and bolts to the specified torque.



FRONT WHEEL BEARING

With the vehicle raised, inspect the following:

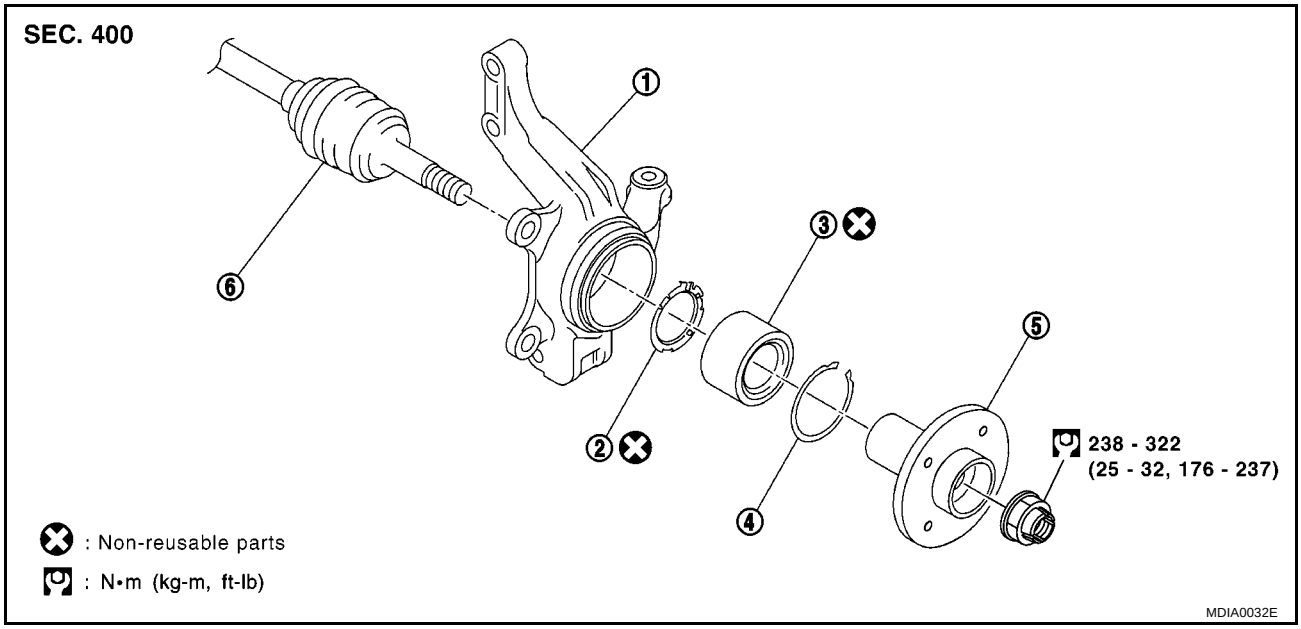
- Move wheel hub in the axial direction by hand. Check if there is no looseness of front wheel bearings.

Axial end play : 0.05 mm (0.0020 in)

- Rotate wheel hub and Make sure there is no unusual noise or other non-standard condition. If there are any non-standard conditions, replace the wheel bearing.

Removal and Installation

BDS0006W



1. Steering knuckle
2. Sensor housing
3. Wheel bearing
4. Snap rings
5. Wheel hub
6. Front drive shaft

REMOVAL

1. Lift up the vehicle and remove tyre from the vehicle.
2. Disconnect ABS wheel sensor harness connector. Refer to BRC-36, "WHEEL SENSORS" .
3. Disconnect brake hose from strut. Refer to BR-11, "BRAKE PIPING AND HOSE" .
4. Remove brake caliper from steering knuckle. Hang it in a place where it does not interfere with work. Refer to BR-23, "Removal and Installation of Brake Caliper Assembly" .

   CAUTION:
   Avoid depressing the brake pedal with the brake caliper removed.
5. Remove disc rotor from wheel hub. Refer to BR-21, "FRONT DISC BRAKE" .
6. Pull out ABS wheel sensor from steering knuckle. Refer to BRC-36, "WHEEL SENSORS" .

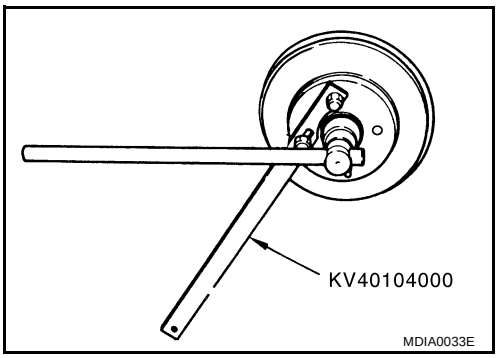
CAUTION:
Do not pull on ABS wheel sensor harness.

7. Use wheel hub lock nut wrench (SST) to remove lock nut from drive shaft.
8. Remove tie-rod from steering knuckle. If tie-rod is not easily removed, use ball joint remover (commercial service tool).

CAUTION:
To prevent damage to threads and to prevent ball joint remover (commercial service tool) from sudden coming off, temporarily tighten lock nuts.

9. Remove steering knuckle from strut.

CAUTION:
Do not place drive shaft joint at an extreme angle (22° or more). Also, hold steering knuckle tightly and do not overextend slide joint.



10. Remove drive shaft from steering knuckle.

CAUTION:
When removing drive shaft, do not place drive shaft joint at an extreme angle (22° or more). Also be careful not to overextend slide joint.

- **Do not lift drive shaft with axle attached by grasping countershaft only.**
- **Do not allow drive shaft, with transaxle inserted, to hang down without support for countershaft, wheel joints, and other parts.**

11. Remove transverse link ball joint mounting bolt and nut. Then, remove transverse link from steering knuckle.

INSTALLATION

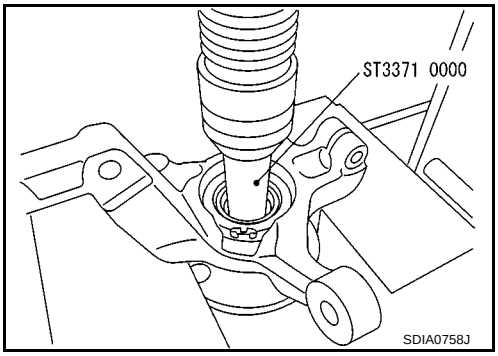
For tightening torque and other details, FAX-6, "FRONT WHEEL BEARING" , BRC-36, "WHEEL SENSORS" , FSU-5, "FRONT SUSPENSION ASSEMBLY" and tighten in the reverse order of removal.

Disassembly and Assembly

BDS0006X

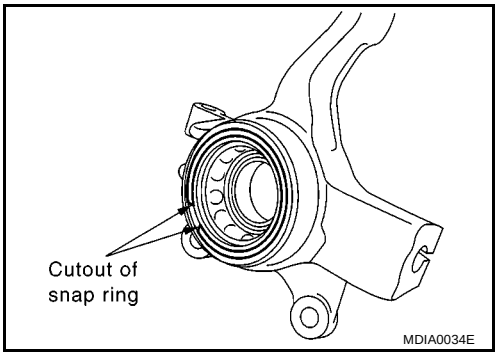
DISASSEMBLY

1. Press the wheel bearing out with a drift (SST) to remove.

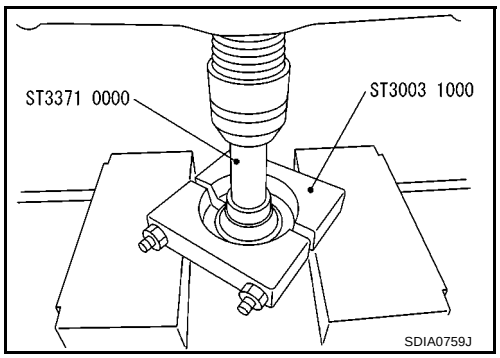


2. Insert a screwdriver into cutout of snap ring and remove it from steering knuckle.

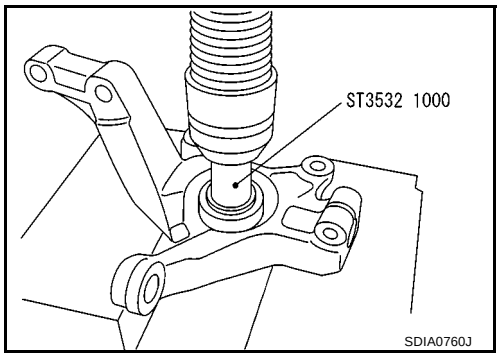
CAUTION:
Be careful not to scratch the steering knuckle.



3. Use a puller (commercial service tool), drift (SST), and bearing replacer (SST) to remove inner race of outer wheel bearing from wheel hub.



4. Press the wheel bearing and sensor housing out of the steering knuckle with a drift (SST).



INSPECTION AFTER DISASSEMBLY

Wheel Hub

- Check wheel hub for cracks (with magnetic exploration or dye testing). Replace if necessary.

Steering Knuckle

- Check steering knuckle for deformation, cracks, and other damage. Replace if any non-standard conditions are found.

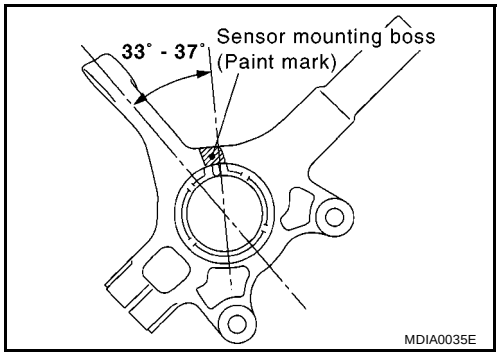
Snap Rings

- Check snap ring for wear or cracks. Replace if necessary.

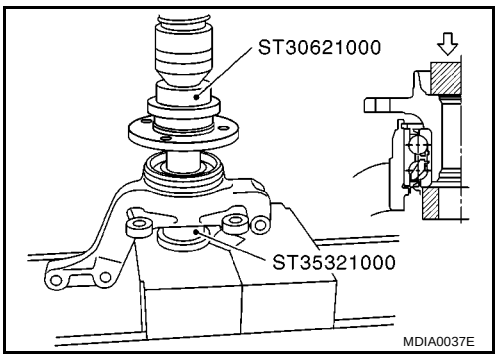
ASSEMBLY

1. Temporarily put sensor housing on steering knuckle.

   CAUTION:
   Protrusion of sensor housing ABS sensor mounting should fit in cutout of steering knuckle (as shown in figure).



2. Press-fit a wheel bearing into the steering knuckle with a drift (SST) from steering knuckle outer side.



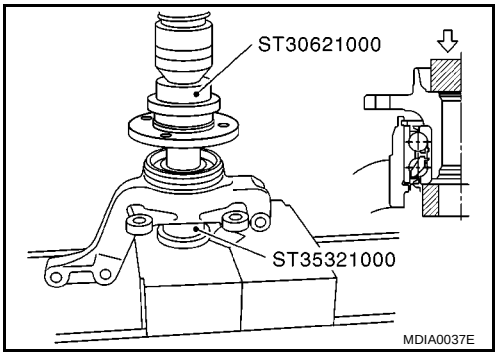
CAUTION:

- **Be sure that wheel bearing is completely press-fit until sensor housing contacts the body tightly.**
- **Be sure that protrusion of ABS sensor mounting does not roll onto steering knuckle.**
- **Be sure to mount so that sensor rotor (rubber side) side comes to steering knuckle inner side.**
- **Do not press and weigh on wheel bearing inner lace and sealing part.**

NOTE:
Final press-loading guideline [49,000 N (5,000 kg, 11,015 lb)]

3. Install snap ring onto steering knuckle.

4. Press-fit a wheel bearing into the steering knuckle with a drift (SST) from steering knuckle outer side.

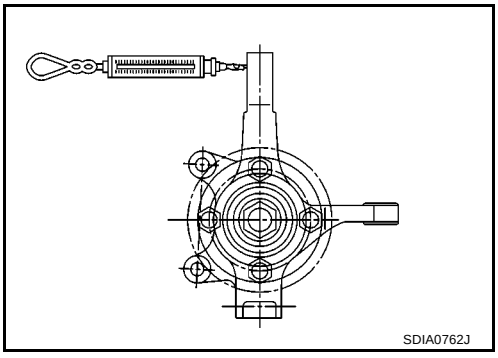


NOTE:
Final press-loading guideline [49,000 N (5,000 kg, 11,015 lb)]

CAUTION:
Drift (special tool) which touches wheel bearing inner lace shall not touch sensor housing.

INSPECTION AFTER ASSEMBLY

1. Apply a load of 34,300 to 49,000 N (3,500 to 5,000 kg, 7,710 - 11,015 lb). In this condition, rotate in forward and reverse directions 10 times each to insure a good fit.
2. Set a spring balance on strut mounting hole (upper). Measure rotating torque at an rpm of 8 - 12 rpm.



Rotating torque : 0.30 - 1.43 N·m (0.03 - 0.14 kg-m)
Spring balance measurement : 6.0 - 28.6 N (0.61 - 2.92 kg)

NOTE:
In case the above loading is not possible

- Assemble drive shaft and tighten wheel hub lock nuts to specified torque. Then rotate in forward and reverse direction 10 times each to insure a good fit.
- At a rotating speed of 8 - 12 rpm, place a spring balance on hub bolt to measure torque.

Rotating torque : 0.23 N·m (0.02 kg-m) or less
Spring balance measurement : 15.9 N (1.62 kg) or less

FRONT DRIVE SHAFT

PFP:39100

On-Vehicle Inspection and Service

BDS0006Y

DRIVE SHAFT BOOT

Replacement

CAUTION:

When noise or vibration occur from drive shaft, replace entire drive shaft assembly.

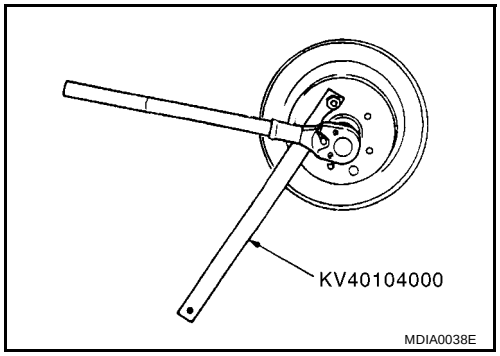
1. Lift up the vehicle and remove the wheel from the vehicle.
2. Disconnect ABS wheel sensor harness connector. BRC-36, "WHEEL SENSORS" .
3. Disconnect brake hose from strut. Refer to BR-11, "BRAKE PIPING AND HOSE" .
4. Remove the ABS wheel sensor from the steering knuckle. Refer to BRC-36, "WHEEL SENSORS" .

   CAUTION:

   Do not pull on ABS wheel sensor harness.
5. Remove brake caliper assembly from brake rotor and hand cylinder body with a wire. Refer to BR-22, "Removal and Installation of Brake Pad" .
6. Use a hub lock nut wrench (SST), remove lock nuts.
7. Remove steering knuckle and strut installation bolt.

   CAUTION:

   Do not place drive shaft joint at an extreme angle (22° or more). Also, hold steering knuckle tightly and do not over-extend slide joint.



8. Using a puller (commercial service tool), remove the drive shaft from the steering knuckle.

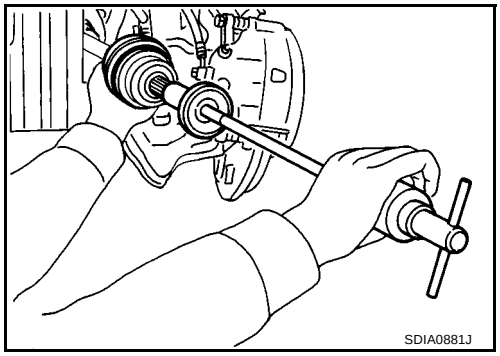
   CAUTION:

   When removing drive shaft, do not place drive shaft joint at an extreme angle (22° or more). Also be careful not to over-extend slide joint.

   - **Do not lift drive shaft with axle attached by grasping barshaft only.**
   - **Do not allow the wheel-side joint and/or barshaft to hang from the transmission without support.**
9. Remove boot bands and remove boot from the joint subassembly.
10. Screw drive shaft puller (commercial service tool) into joint subassembly screw part in depth of 30 mm (1.18in) or more. Fix drive shaft by one hand and pull out joint subassembly with sliding hammer (commercial service tool) from shaft.

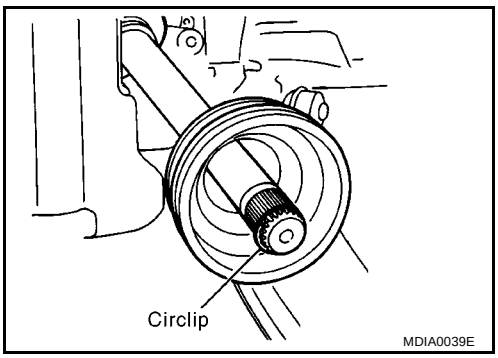
    CAUTION:

    - **For K9K engines: before separating joint subassembly put matching marks on drive shaft and joint subassembly.**
    - **Align sliding hammer and drive shaft and remove them by pulling firmly and uniformly.**
    - **When joint subassembly is not able to be pulled out, try after removing drive shaft from the vehicle.**



11. Remove boot from shaft.

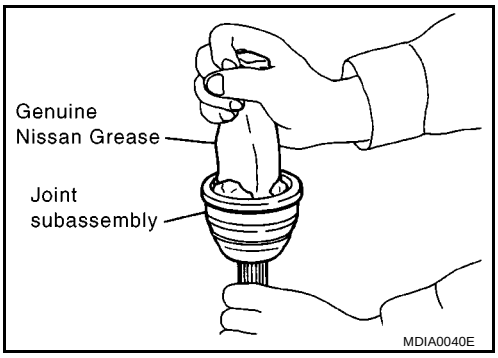
12. Remove circlip from the shaft.



13. While rotating ball cage, remove old grease on joint subassembly with paper towels.

CAUTION:
Visually check joint subassembly for compression scar, cracks, fractures. Also check the grease for contamination by road debris and metal fragments. If any non-standard condition is detected, replace entire joint subassembly.

14. Inject Genuine Nissan Grease (see parts catalog) into the joint subassembly serration hole until the grease begins to ooze from the ball groove and serration hole.
After injecting the grease, wipe off the old grease that has oozed out with towel.



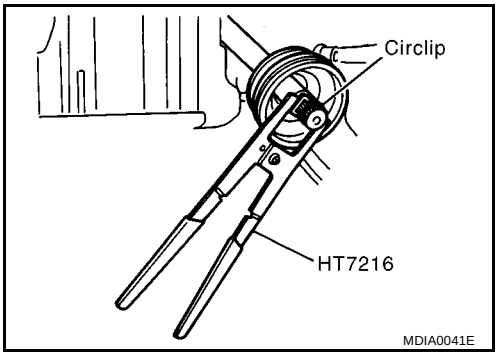
15. Cover drive shaft splines with tape so as not to damage boot during installation. Install new boot and boot bands to the shaft.

NOTE:
Install small band first.

CAUTION:
Do not reuse the boot bands and boot.

16. Remove the tape wrapped around the serration on the shaft.
17. Mount circlip on circlip groove at the shaft edge. Do not over extend the circlip. Align the shaft edge and joint subassembly center axle. Then, assemble on the circlip groove, holding circlip with screwdriver tip. Drive joint inserter (commercial service tool) is recommended as an assisting tool when mounting circlip.
For K9K engines: install joint subassembly securely, ensuring marks which were made during disassembly are properly aligned.

CAUTION:
Do not reuse the circlip.

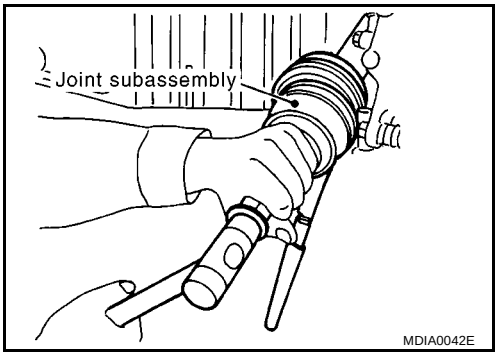


18. Press joint subassembly into shaft with plastic hammer.

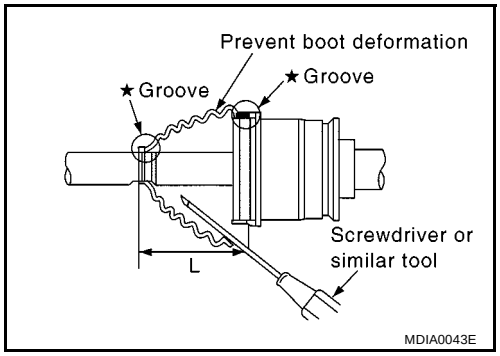
CAUTION:
Confirm that joint subassembly is correctly engaged while rotating.

19. Working from the big end of the boot, add enough Genuine Nissan Grease (refer to the part catalog) to the boot to equal the quantity mentioned below.

Grease quantity : For CR and HR16 engines: 45 - 55 g (1.59 - 1.94 oz)
For K9K engines: 40 - 50 g (1.41 - 1.76 oz)



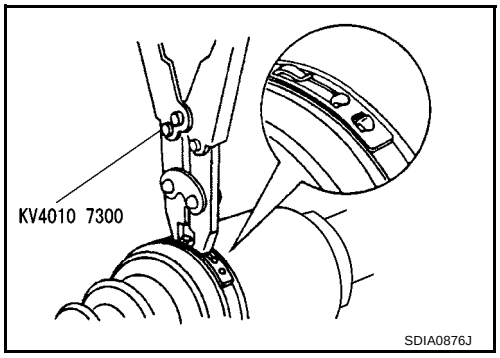
20. Remove grease from the boot and joint mating surfaces.
21. Mount boot firmly on the groove shown in the figure (with * mark) and confirm the length of the boot (L) is same as shown below. Hold the boot band at the opposite side to the clip to prevent misalignment. Fit the small boot band as shown in the figure. Insert a screwdriver or fitting tool from the large-diameter side. Bleed air out of the inside boot (to adjust pressure outside and inside of boot) to prevent deformation of boot.



Boot mounting length	**:Wheel side**	**: AC1700i: 88.0 mm (3.46 in)**
		AC2000i: 91.0 mm (3.58 in)
		AC2300i: 94.0 mm (3.70 in)
	Transaxle side	**: GI1700i: 89.4 mm (3.52 in)**
		GI2000i: 90.45 mm (3.56 in)
		GI2300i: 91.5 mm (3.60 in)

CAUTION:
- **If boot mounting length is outside the standard, it may cause breakage in the boot.**
- **Be careful not to damage the inside of the boot with the tip of a screwdriver.**

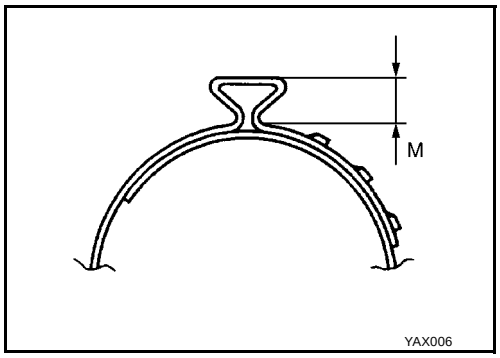
22. Hold the boot band at the opposite side to the clip to prevent misalignment. As shown in the figure, secure the big end of the boot with new boot band.



23. Confirm that the mounting position of the boot band does not deviate around the circumference of the joint. When it deviates, mount a new boot band again.

CAUTION:
When fixing boot band, fix so that the M gap on the drawing becomes as follows.

Large-diameter side	**: 5 mm (0.20 in)**
Small-diameter side	**: 5 mm (0.20 in)**

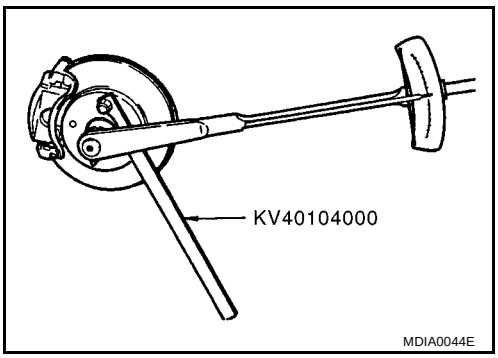


24. Confirm that the driveshaft is still engaged in the differential.
25. Insert the drive shaft to the steering knuckle, and tighten the lock nut.
26. Install bolts securing steering knuckle to the strut. For tightening torque, refer to FSU-5, "FRONT SUSPENSION ASSEMBLY" .
27. Fix the brake hose onto the strut with the lock plate.
28. Install tie-rod to steering knuckle. For tightening torque, refer to FSU-5, "FRONT SUSPENSION ASSEMBLY" .
29. Install ABS wheel sensor. Refer to BRC-36, "WHEEL SENSORS" .

30. Using a hub lock nut wrench (SST), tighten lock nut to the specified torque.

Tightening torque : 280 N·m (29 kg-m, 207 ft-lb)

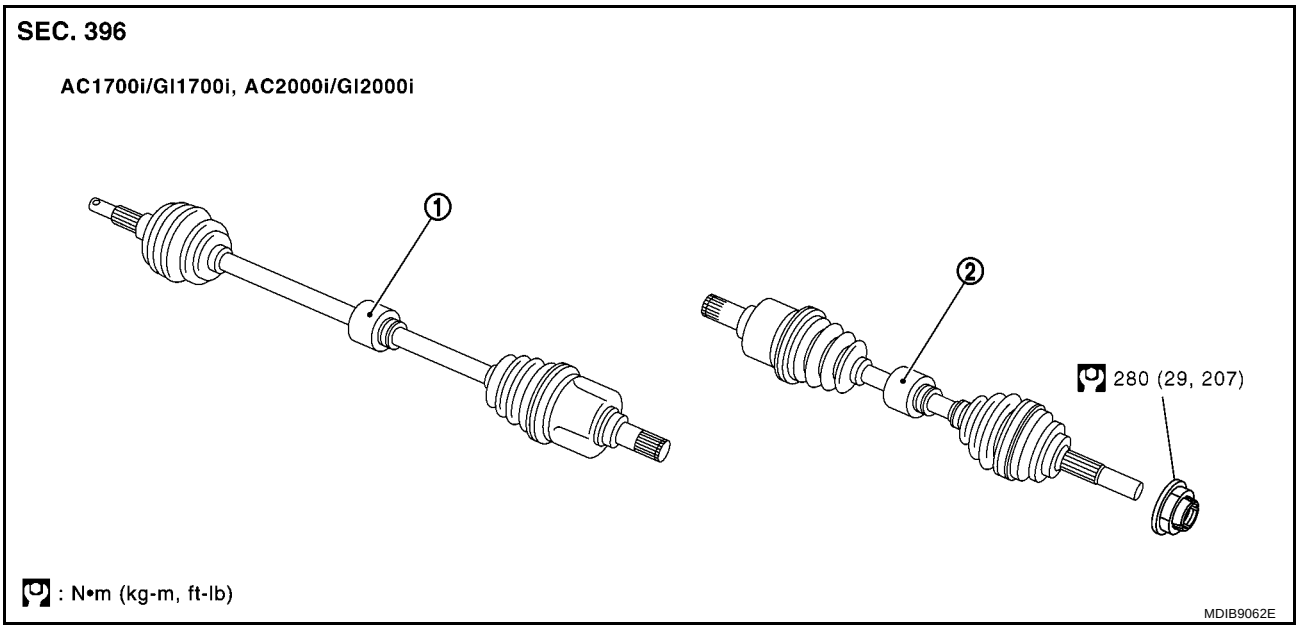
31. Mount the wheel and lower lift.



BDS0006Z

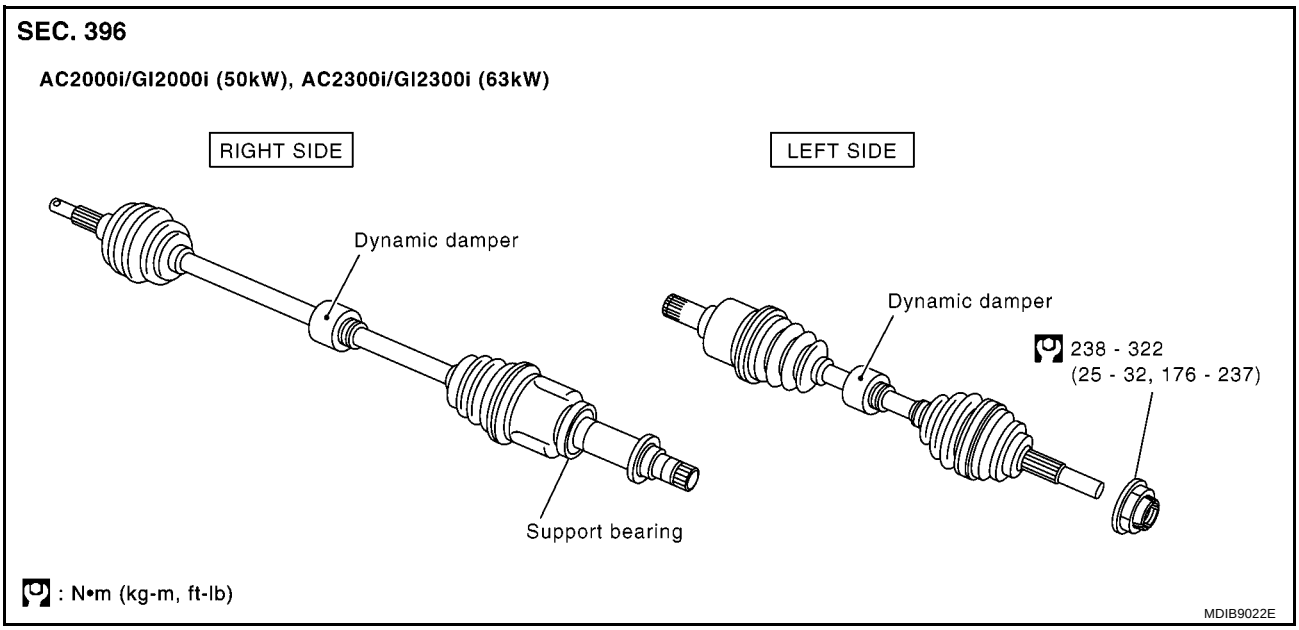
Removal and Installation

FOR CR AND HR16 ENGINES:



1. Damper (RH side) 2. Damper (LH side)

FOR K9K ENGINES:

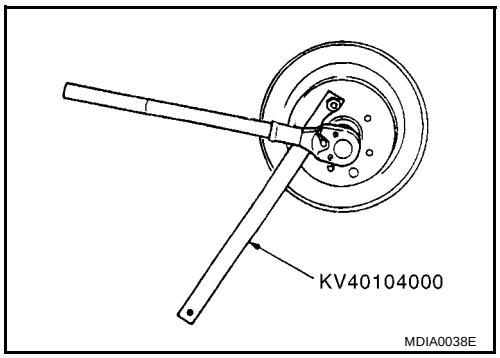


REMOVAL

1. Lift up the vehicle and remove the wheel from the vehicle.
2. Remove lock plate from strut. Disconnect brake hose from strut. Refer to BR-11, "BRAKE PIPING AND HOSE" .
3. Remove the ABS wheel sensor from the steering knuckle. Refer to BRC-36, "WHEEL SENSORS" .

   CAUTION:
   Do not pull on ABS wheel sensor harness.
4. Use a hub lock nut wrench (SST), remove lock nuts.
5. Remove tie-rod from steering knuckle. If tie-rod is not easily removed, use ball joint remover (commercial service tool).

   CAUTION:
   To prevent damage to threads and to prevent ball joint remover (commercial service tool) from sudden coming off, temporarily fix lock nuts.

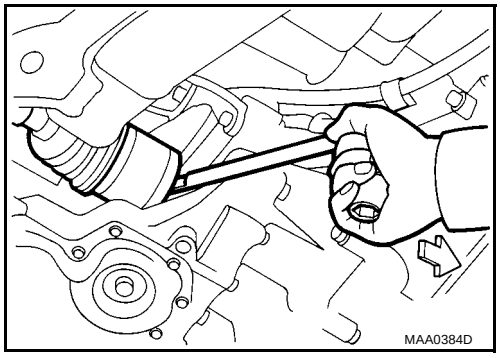


6. Remove steering knuckle and strut installation bolt.

   CAUTION:
   Do not place drive shaft joint at an extreme angle (22° or more). Also, hold steering knuckle tightly and do not over-extend slide joint.
7. Using a puller (commercial service tool), remove the drive shaft from the steering knuckle.

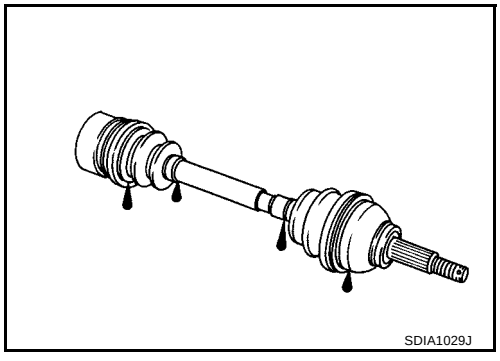
   CAUTION:
   When removing drive shaft, do not place drive shaft joint at an extreme angle (22° or more). Also be careful not to overextend slide joint.
   - **Do not lift drive shaft with axle attached by grasping barshaft only.**
   - **Do not allow the wheel-side joint and/or barshaft to hang from the transmission without support.**
8. Remove driveshaft from transaxle with a wheel wrench or equivalent, as shown in figure.

   CAUTION:
   When removing drive shaft from vehicle, be careful to avoid interfering with brake hose, ABS wheel sensor harness, and other parts. Take care not to damage the dust shield.
   - Confirm that the circlip is attached to the driveshaft.



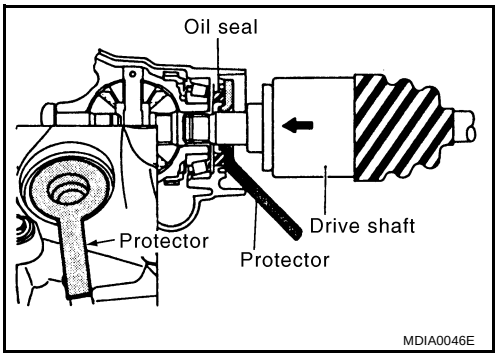
INSPECTION AFTER REMOVAL

- Move joint in up/down, left/right, and axial directions. Check for motion that is not smooth and for significant looseness. Listen for air or grease leakage from the boot.
- Check the boot for cracks, damage, and leakage of grease.
- Check the boot band for damage.



INSTALLATION

1. In order to prevent damage to differential side oil seal, first fit a protector (SST) onto oil seal before inserting drive shaft.
2. Align the driveshaft splines with the splines in the transmission.
3. Holding the barshaft and wheel-side joint, apply a shock force to drive the slide joint stem into the differential.



CAUTION:
Make sure the circlip is fully engaged.

Protector SST (special service tool) No. : KV38107900

4. For vehicles equipped with support bearing, fix drive shaft with support bearing retainer.

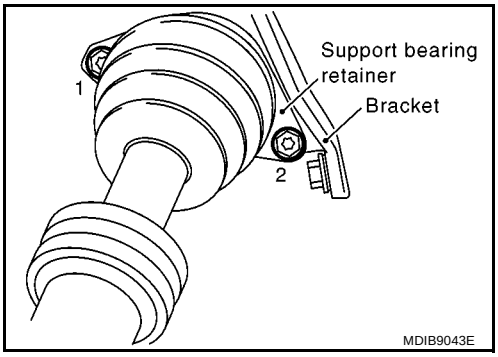
WARNING:
Before tightening the support bearing retainer bolts, ensure that the driveshaft support bearing is fully inserted into the support bracket. Also ensure that rubber o-ring is fitted between the support bearing and the support bracket.

5. Tighten support bearing retainer bolts in numerical order as shown in the figure.

Tightening torque: 21 N·m (2.1 kg-m, 15 ft-lb)

6. Retighten support bearing retainer bolts in numerical order as shown in the figure.

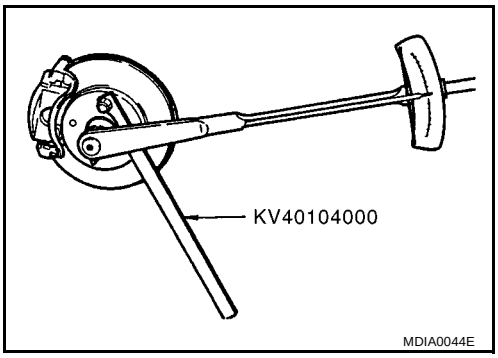
Tightening torque: 21 N·m (2.1 kg-m, 15 ft-lb)



NOTE:
The second tightening operation should be performed with a manual torque wrench.

7. Insert the drive shaft to the steering knuckle, and tighten the lock nut.
8. Install bolts securing steering knuckle to the strut. For tightening torque, refer to FSU-5, "FRONT SUSPENSION ASSEMBLY" .
9. Fix the brake hose onto the strut with the lock plate.
10. Install tie-rod to steering knuckle. For tightening torque, refer to FSU-5, "FRONT SUSPENSION ASSEMBLY" .
11. Install ABS wheel sensor. Refer to BRC-36, "WHEEL SENSORS" .
12. Using a hub lock nut wrench (SST), tighten lock nut to the specified torque.

Tightening torque : 280 N·m (29 kg·m, 207 ft-lb)



13. Mount tyre and lower lift.

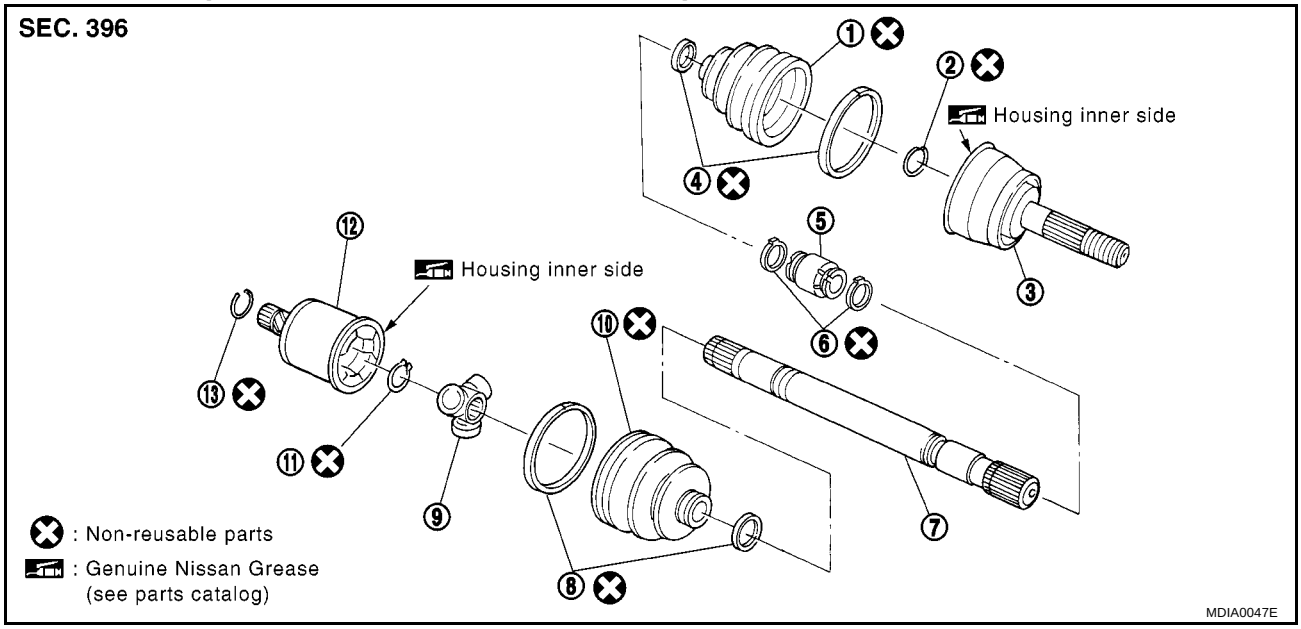
Disassembly and Assembly

BDS00070

INSPECTION BEFORE DISASSEMBLY

- Move joint in up/down, left/right, and axial directions. Check for motion that is not smooth and for significant looseness.
- Check the boot for cracks, damage, and leakage of grease.

DISASSEMBLY (CR AND HR16 ENGINE MODELS)



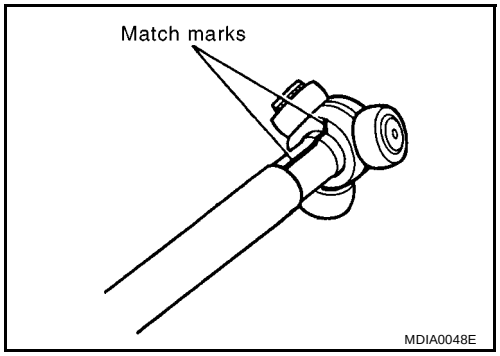
1. Boot
2. Circlip
3. Joint subassembly (fixed joint)
4. Boot band
5. Dynamic damper (right side only)
6. Band
7. Shaft
8. Boot band
9. Spider assembly
10. Boot
11. Snap rings
12. Housing (slide joint)
13. Circlip

Transaxle Side

1. Remove the boot bands.
2. Fix shaft in a vice. Remove housing.

   CAUTION:
   When securing in a vice, use aluminum plates, copper plates or something similar to protect the shaft. Do not clamp onto the damper.
3. Put mating marks onto the shaft and spider assembly.

   CAUTION:
   Use paint or similar substance for alignment marks. Do not scratch the surface.
4. Remove the snap ring, and remove the spider assembly from the shaft. Use a bar to apply the load directly to the body of the spider assembly. Do not apply load to the rollers.
5. Remove boot from shaft.

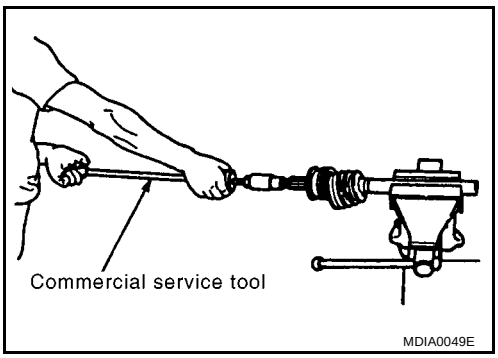


Wheel Side

1. Using a vice, secure the shaft.

   CAUTION:
   When securing in a vice, use aluminum plates, copper plates or something similar to protect the shaft. Do not clamp onto the damper.
2. Remove boot bands and remove boot from the joint subassembly.

3. Screw the drive shaft puller (commercial service tool) 30 mm (1.18 in) or more over the thread on joint subassembly, and pull the joint subassembly out of the shaft.

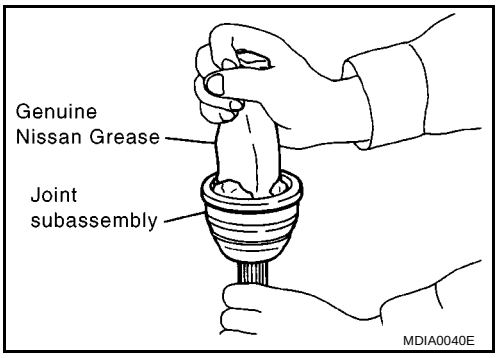


CAUTION:

- **Align sliding hammer and drive shaft and remove them by pulling firmly and uniformly.**
- **If joint subassembly cannot be removed after five or more unsuccessful attempts, replace entire drive shaft assembly.**

4. Remove boot from shaft.
5. Remove circlip from the shaft.

6. While rotating ball cage, remove old grease on joint subassembly with paper towels.



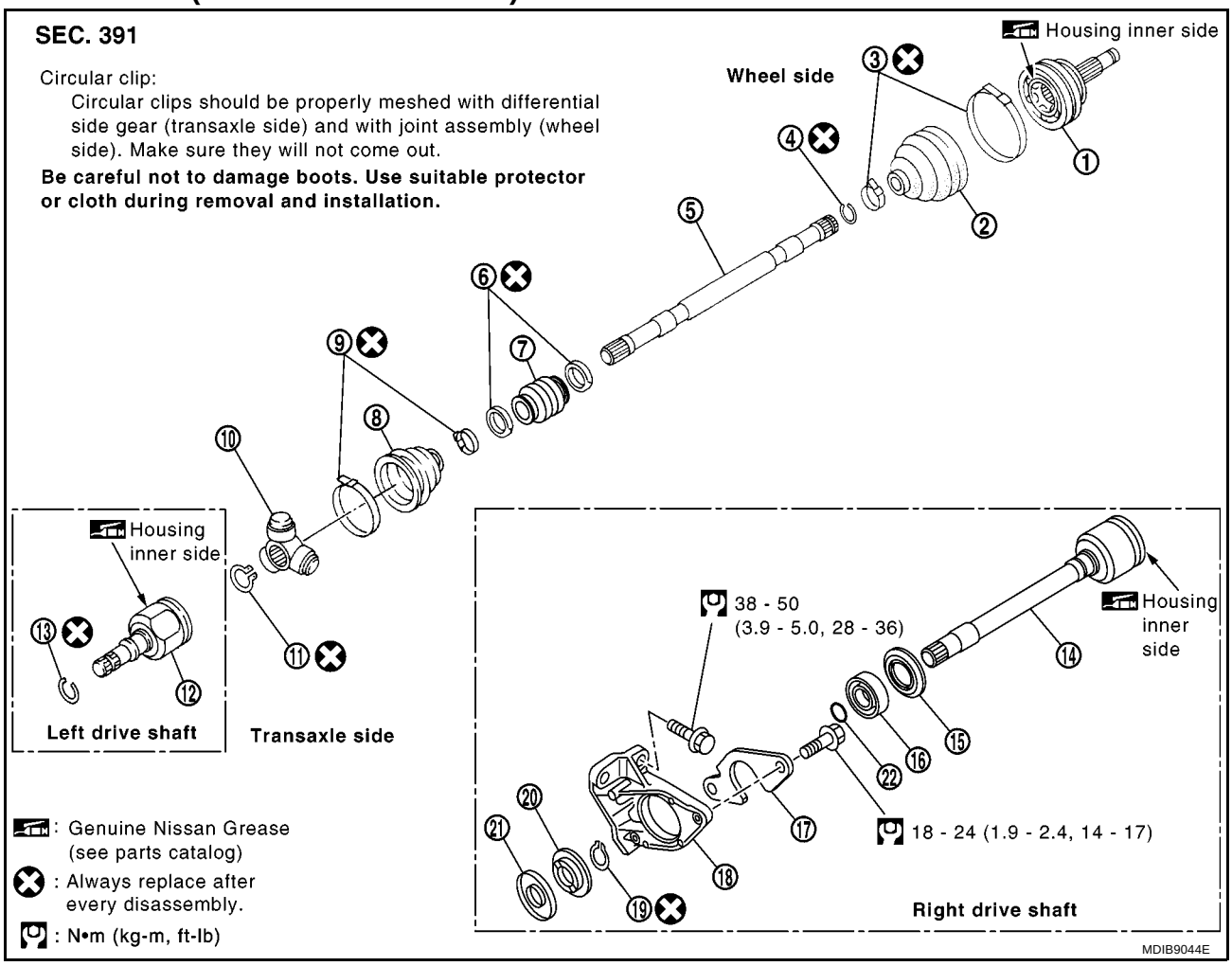
CAUTION:

Visually check joint subassembly for compression scar, cracks, fractures. Also check the grease for contamination by road debris and metal fragments. If any non-standard condition is detected, replace entire joint subassembly.

Dynamic Damper

- Make the damper's position by applying paint to the barshaft. Remove band. Then, remove dynamic damper from shaft.

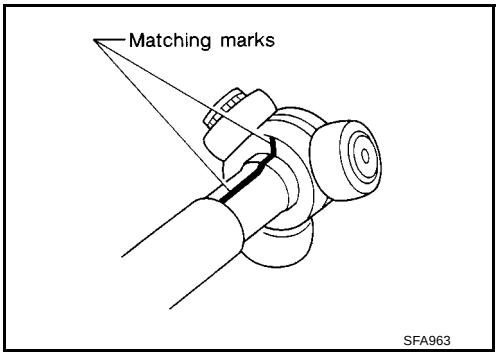
DISASSEMBLY (K9K ENGINE MODELS)



1. Joint assembly
2. Boot
3. Boot band
4. Circular clip
5. Drive shaft
6. Dynamic damper band
7. Dynamic damper
8. Boot
9. Boot band
10. Spider assembly
11. Snap ring
12. Slide joint housing
13. Circular clip
14. Slide joint housing with extension shaft
15. Dust shield
16. Support bearing
17. Support bearing retainer
18. Bracket
19. Snap ring
20. Dust shield
21. Dust shield
22. O-ring

Transaxle Side

1. Remove the boot bands.
2. Put matching marks on slide joint housing and drive shaft before separating joint assembly.
3. Put matching marks on spider assembly and drive shaft.
4. Remove slide joint housing.

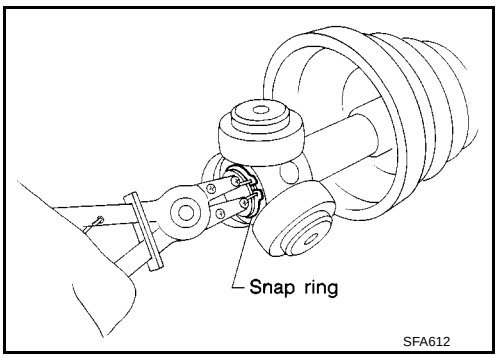


5. Pry off snap ring, then remove spider assembly.

CAUTION:
Do not disassemble spider assembly.

6. Draw out boot.

CAUTION:
Cover drive shaft serration with tape to prevent damage to the boot.



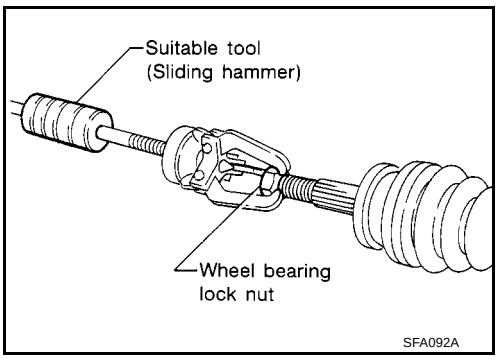
Wheel Side

CAUTION:
The joint on the wheel side cannot be disassembled.

1. Before separating joint assembly, put matching marks on drive shaft and joint assembly.
2. Separate joint assembly with a suitable tool.

CAUTION:
Be careful not to damage threads on drive shaft.

3. Remove boot bands.
4. Draw out boot.

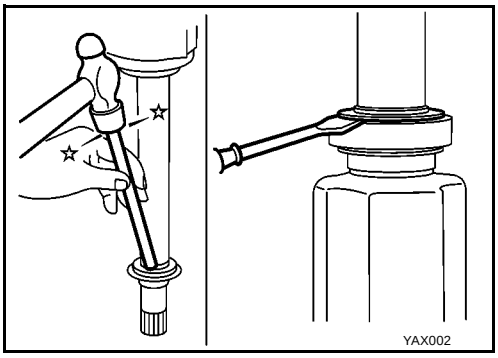


Dynamic Damper

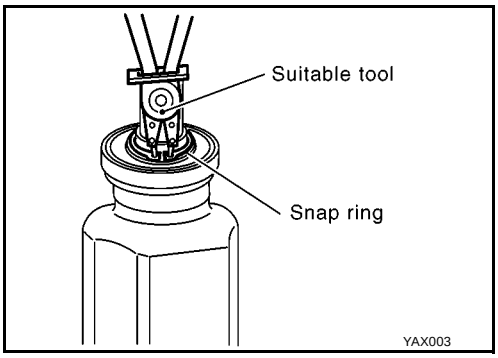
Remove bands. Then, remove dynamic damper from drive shaft.

Support Bearing

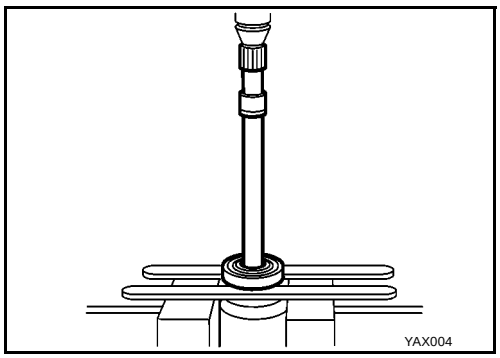
1. Remove dust shield.



2. Remove dust shield. Then, remove snap ring.



3. Press support bearing assembly off of drive shaft.
4. Remove dust shield.



INSPECTION AFTER DISASSEMBLY (CR AND HR16 ENGINE MODELS)

Shaft

- If the shaft has runout, cracks, or damage, replace the shaft.

Joint Subassembly (Fixed Joint)

- Check the joint for rough rotation and abnormal axial looseness.
- Check if there is any compression scar, cracks, or fractures.

CAUTION:
If there are any non-standard conditions of joint assembly component parts, replace the joint assembly. Also check the grease for contamination by road debris and metal fragments.

Joint Assembly (Sliding Joint)

- If there is scratching or wear of housing roller contact surface or spider roller contact surface, replace joint assembly.
- If there is circumferential looseness or rough rotation of spider roller, replace joint assembly.
- If there are any non-standard conditions of joint assembly component parts, replace the joint assembly.

Housing (Slide Joint)

- Check the ball rolling surface for damage and abnormal wear.
- Check the shaft thread for damage.
- Check the boot mount for deformation.

Dynamic Damper

- Check for cracks, wear, and damage. Replace if necessary.

INSPECTION AFTER DISASSEMBLY (K9K ENGINE MODELS)

Thoroughly clean all parts in cleaning solvent, and dry with compressed air. Check parts for evidence of deformation or other damage.

Drive Shaft

Replace drive shaft if it is twisted or cracked.

Boot

Check boot for fatigue, cracks or wear. Replace boot with new boot bands.

Joint Assembly (Transaxle side)

- Check spider assembly for needle bearing and washer damage. Replace if necessary.
- Check roller surfaces for scratches, wear or other damage. Replace if necessary.
- Check serration for deformation. Replace if necessary.
- Check slide joint housing for any damage. Replace if necessary.

Joint Assembly (Wheel side)

Replace joint assembly if it is deformed or damaged.

Support Bearing

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

Support Bearing Bracket

Check support bearing bracket for cracks with a magnetic exploration or dyeing test.

Dynamic Damper

Check dynamic damper for cracks, wear, and damage. Replace if necessary.

ASSEMBLY (CR AND HR16 ENGINE MODELS)

Wheel Side

For mounting, perform steps 13 to 22 of On-Vehicle Inspection and Service, FAX-10, "On-Vehicle Inspection and Service" .

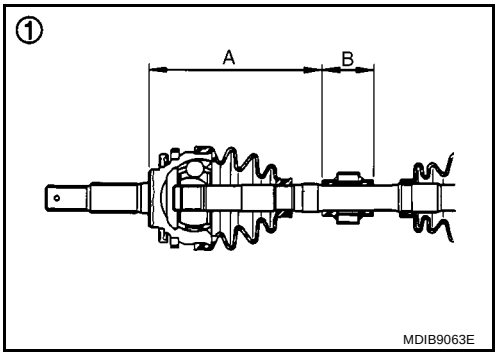
Dynamic Damper (Right Drive Shaft)

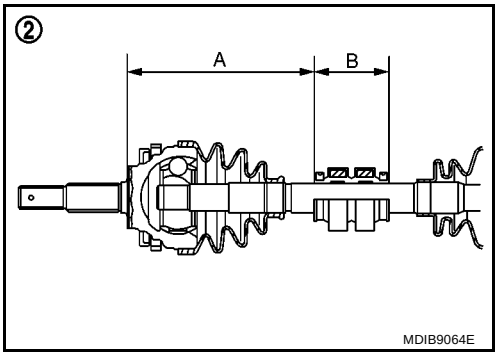
- When dynamic damper has been removed, secure with bands as shown in figure so that measurements from fixed-joint side are as listed below.

  CAUTION:
  Do not reuse dynamic damper bands.

  Dimension A : RH (1) – 434 - 440 mm (17.09 - 17.32 in)
  LH (2) – 235 - 241 mm (9.25 - 9.49 in)

  Dimension B : 70 mm (2.76 in)

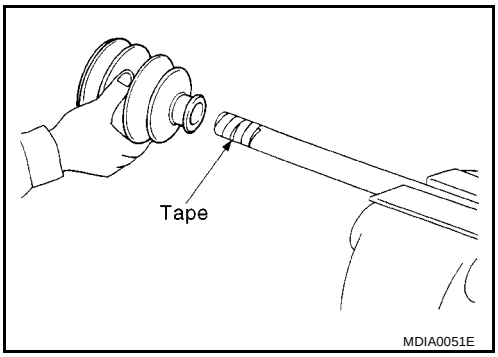




Transaxle Side

1. Cover drive shaft serration with tape so as not to damage boot during installation. Install new boot and boot bands to the shaft.

   CAUTION:
   Do not reuse the boot bands and boot.

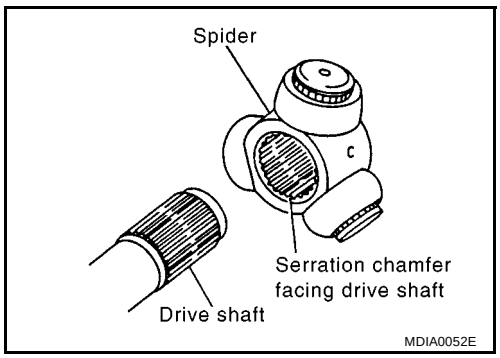


2. Remove the tape wrapped around the serration on the shaft.

3. Align mating marks painted when spider assembly was removed. Install spider assembly with serrated mounting surface facing drive shaft.
4. Secure the spider assembly with a snap ring.

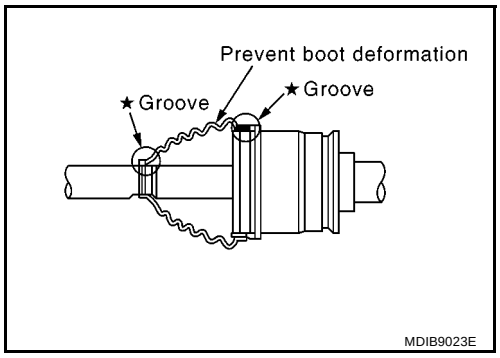
   CAUTION:
   Do not reuse the snap ring.
5. Apply all of the Genuine Nissan Grease into the joint housing.

   Grease quantity: 95 - 105 g
6. Assemble the sliding joint housing onto spider assembly.



7. Install boot securely into grooves (indicated by * marks) shown in figure.

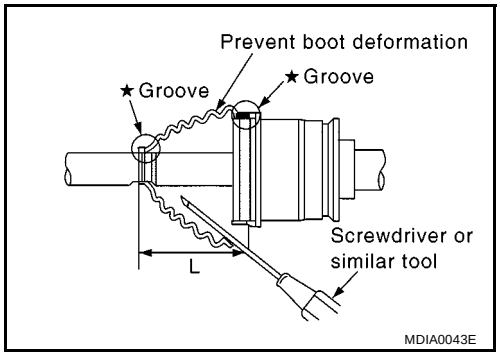
   CAUTION:
   If grease adheres to the boot mounting surface (with * mark) on the joint, the boot may come off. Remove all grease from the surface.



8. Secure big end of boot with new boot band as shown in the figure. Plunge the joint fully to envelope the spider assembly with grease. Pull the joint back to the indicated length. Insert a screwdriver or similar tool into the small-diameter side of the boot. Bleed air out of the inside boot (to adjust pressure outside and inside of boot) to prevent deformation of boot.

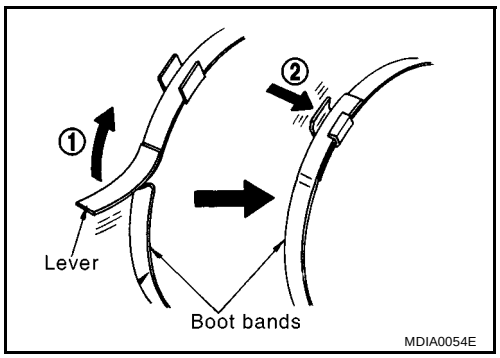
   Boot mounting length : GI1700i: 89.4 mm (3.52 in)
   GI2000i: 90.45 mm (3.56 in)

   CAUTION:
   - **If boot mounting length is outside the standard, it may cause breakage in the boot.**
   - **Be careful not to damage the inside of the boot with the tip of the screwdriver.**



9. Secure the small end of boot with new boot band as shown in figure.

   CAUTION:
   Rotate housing and check if boot installation position does not change. If position changes, reinstall boot bands.



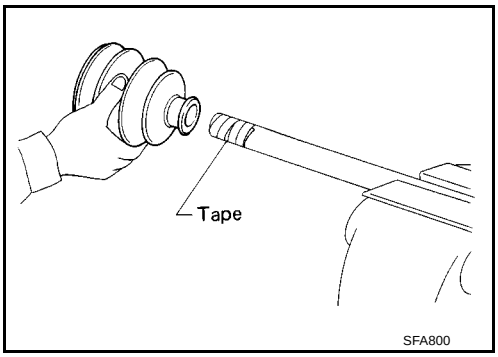
ASSEMBLY (K9K ENGINE MODELS)

- **After drive shaft has been assembled, ensure that it moves smoothly over its entire range without binding.**
- **Use NISSAN GENUINE GREASE or equivalent after every overhaul.**

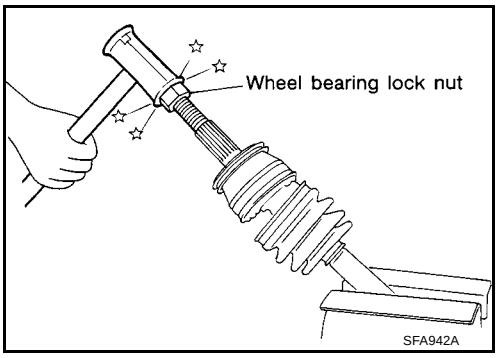
Wheel Side

1. Install boot and new small boot band on drive shaft.

   CAUTION:
   Cover drive shaft serration with tape so as not to damage boot during installation.



2. Set joint assembly onto drive shaft by lightly tapping it. Install joint assembly securely, ensuring marks which were made during disassembly are properly aligned.

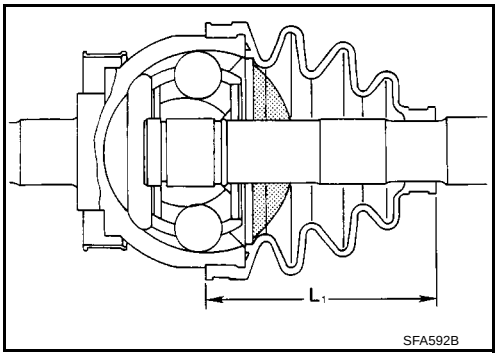


3. Pack drive shaft with specified amount of grease.

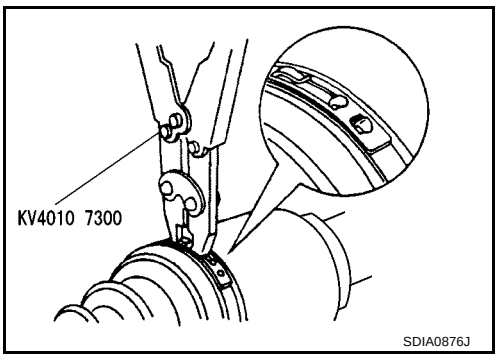
   Specified amount of grease : 40 - 50 g (1.41 - 1.76 oz)

4. Make sure that boot is properly installed on the drive shaft groove.
   Set boot so that it does not swell and deform when its length is "L_1".

   Length "L_1" : AC2000i: 91.0 mm (3.58 in)
   AC2300i: 94.0 mm (3.70 in)



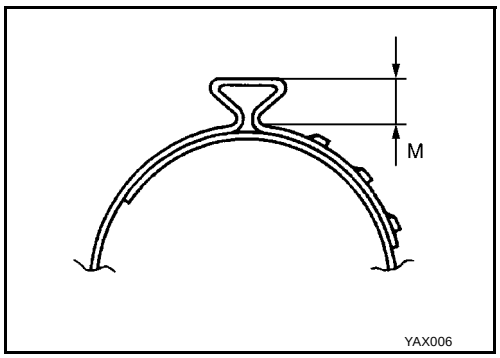
5. Secure the big and small ends of the boot with new boot bands.



6. Rotate joint part and confirm that mounting position of boot does not deviate. When it deviates, mount a new boot band again.

CAUTION:
When fixing boot band, fix so that the M gap on the drawing becomes as follows.

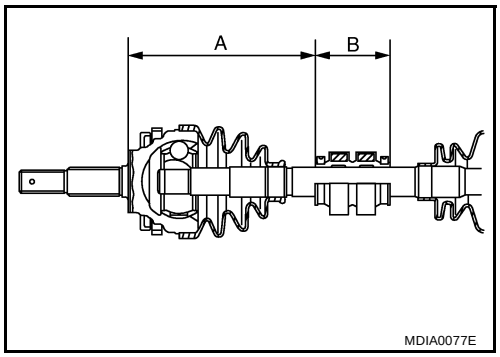
M gap
Large diameter side: 5 mm (0.20 in)
Small diameter side: 5 mm (0.20 in)



Dynamic Damper

1. Use new damper bands when installing.
2. Install dynamic damper from stationary-joint side while holding it securely.

Dimension A : 50kW: 207 - 213 mm (8.15 - 8.39 in)
63kW: 235 - 241 mm (9.25 - 9.49 in)
Dimension B : 70 mm (2.76 in)



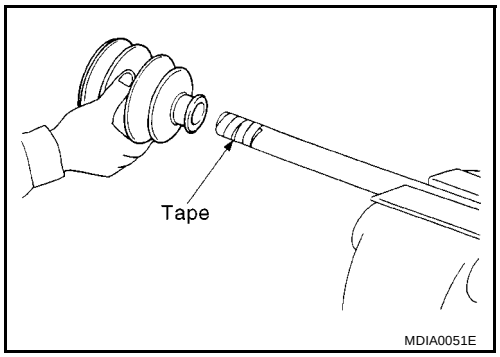
Transaxle Side

1. Install boot and new small boot band on drive shaft.

CAUTION:
Cover drive shaft serration with tape so as not to damage boot during installation.

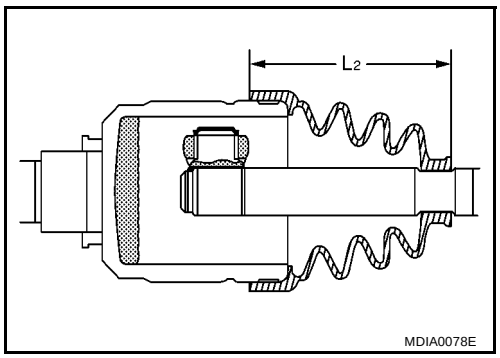
2. Install spider assembly as a unit, making sure the marks which were made during disassembly are properly aligned.
3. Install new snap ring.
4. Pack drive shaft with specified amount of grease.

Specified amount of grease : 113 - 123 g (3.98 - 4.34 oz)

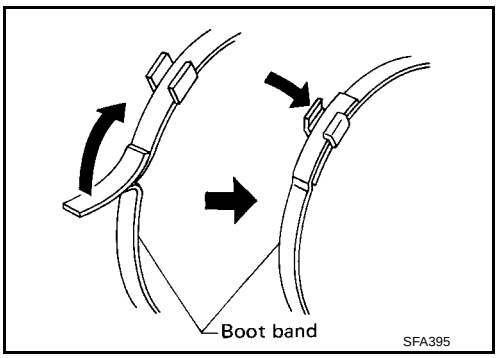


5. Install slide joint housing.
6. Make sure that boot is properly installed on the drive shaft. Set boot so that it does not swell and deform when its length is "L_2 ".

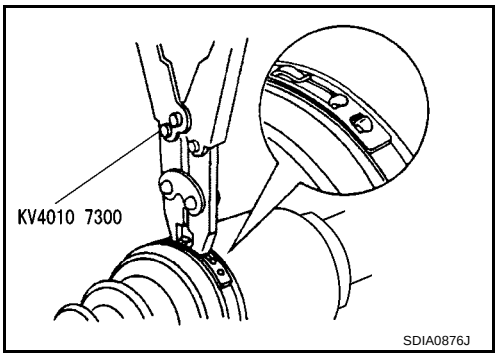
Length "L_2 " : GI2000i: 90.45 mm (3.56 in)
GI2300i: 91.5 mm (3.60 in)



7. Lock new larger boot band securely with a suitable tool.



8. Secure the smaller end of the boot with new boot band.



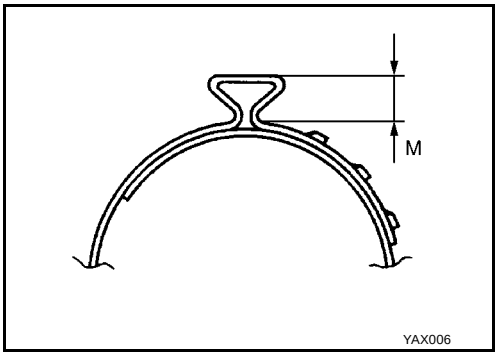
9. Rotate joint part of smaller end boot band and confirm that mounting position of boot does not deviate. When it deviates, mount a new boot band again.

CAUTION:

When fixing boot band, fix so that the M gap on the drawing becomes as follows.

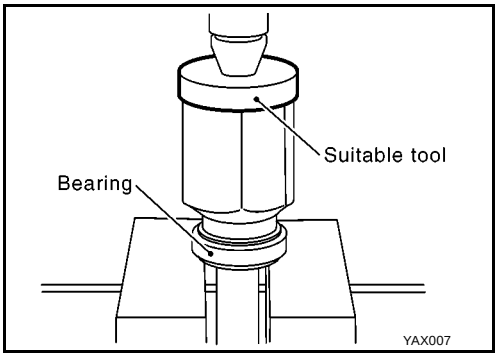
M gap

Small diameter side: 5 mm (0.20 in)

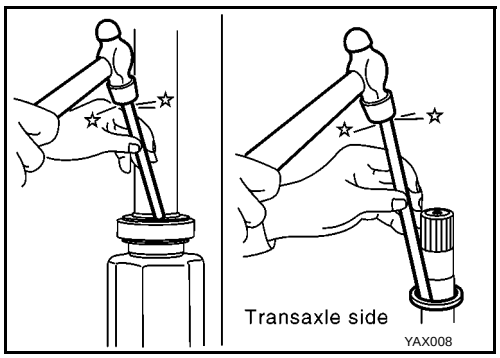


Support Bearing

- Install new dust shield on drive shaft.
- Press drive shaft into bearing.



- Install new snap ring.
- Install new dust shields.

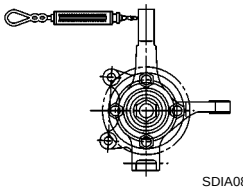


SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Wheel Bearing

BDS00071

Drive type	2WD
Axial end play	0.05 mm (0.0020 in)
Rotating torque	0.30 - 1.43 N·m (0.03 - 0.14 kg-m)
Spring balance measurement	6.0 - 28.6 N (0.61 - 2.92 kg)
Spring balance mounting position (Strut mounting hole upper side)	 SDIA0833J

Drive shaft

BDS00072

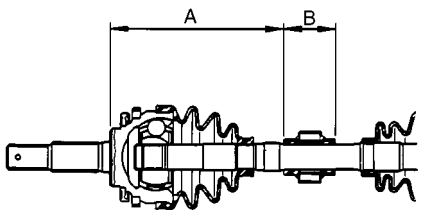
Engine		CR	HR16	K9K 50 kW	K9K 63 kW
Joint type	Wheel side	AC1700i	AC2000i	AC2000i	AC2300i
	Transaxle side	GI1700i	GI2000i	GI2000i	GI2300i
Amount of grease g (oz)	Wheel side	45 - 55 (1.59 - 1.94)	45 - 55 (1.59 - 1.94)	40 - 50 (1.41 - 1.76)	40 - 50 (1.41 - 1.76)
	Transaxle side	95 - 105 (3.35 - 3.70)	95 - 105 (3.35 - 3.70)	113 - 123 (3.99 - 4.34)	113 - 123 (3.99 - 4.34)
Boot length mm (in)	Wheel side	88 (3.46)	91 (3.58)	91 (3.58)	94 (3.70)
	Transaxle side	89.4 (3.52)	90.45 (3.56)	90.45 (3.56)	91.5 (3.60)

Dynamic Damper

BDS00073

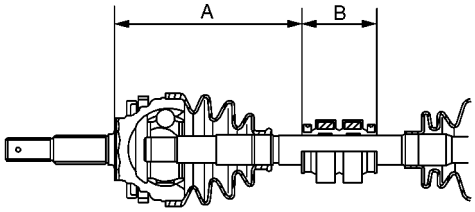
Engine	Type	Drive type	Specification	Dimension A mm (in)	Dimension B mm (in)	Illustration
CR/HR16	AC1700i/ GI1700i AC2000i/ GI2000i	2WD	RH	434 - 440 (17.09 - 17.32)	70 (2.76)	(1)
CR/HR16	AC1700i/ GI1700i AC2000i/ GI2000i	2WD	LH	235 - 241 (9.25 - 9.49)	70 (2.76)	(2)
K9K 50kW	AC2000i/ GI2000i	2WD	RH, LH	207 - 213 (8.15 - 8.39)	70 (2.76)	(1)
K9K 63kW	AC2300i/ GI2300i	2WD	RH, LH	235 - 241 (9.25 - 9.49)	70 (2.76)	(1)

①



MDIB9063E

②



MDIB9064E

Tightening Torque

BDS00074

Unit: N·m (kg-m, ft-lb)

Hub lock nut	280 N·m (29 kg-m, 207 ft-lb)