SERVICE MANUAL

DATSUN 280Z
MODEL S30 SERIES



NISSAN

NISSAN MOTOR CO., LTD.
TOKYO, JAPAN

SECTION RA

REAR AXLE & REAR SUSPENSION

RA

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DESCRIPTION

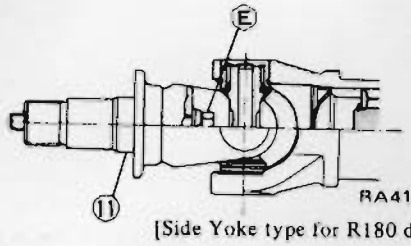
The rear suspension is a strut type independent suspension. Briefly, this means that the rear wheel is supported by the strut and transverse link, the gear carrier is aligned independently and separately from the suspension, and the gear carrier is installed directly on the body with rubber insulators. Thus, the three major rear suspension elements supporting the left wheel, right wheel, and gear carrier, are separated, and very high suspension performance is obtained.

As regards construction, the rear axle housing is brazed on the lower end of the strut which has a self-contained shock absorber, and the lower side is connected to the transverse link through rubber bushing. On the intermediate position of the strut, the body is suspended with a coil spring, the upper end is installed on the body through a rubber insulator, and the transverse link is also directly installed on the body with rubber bushings.

A horizontal leaf spring is connected to the rear end of the gear carrier, and the gear carrier is installed on the body at three positions (both ends of the leaf spring and the front end of the gear carrier) through rubber insulators.

There are two types of drive shafts. One is called Side Flange type (for M/T model with R200 differential). The other is Side Yoke type (for A/T model with R180 differential).

Driving power is transmitted to the rear axle shaft by the freely extensible drive shaft through side flanges or side yokes on both ends of the gear carrier. The rear axle shaft is supported by two ball bearings in the axle housing.



[Side Yoke type for R180 differential]

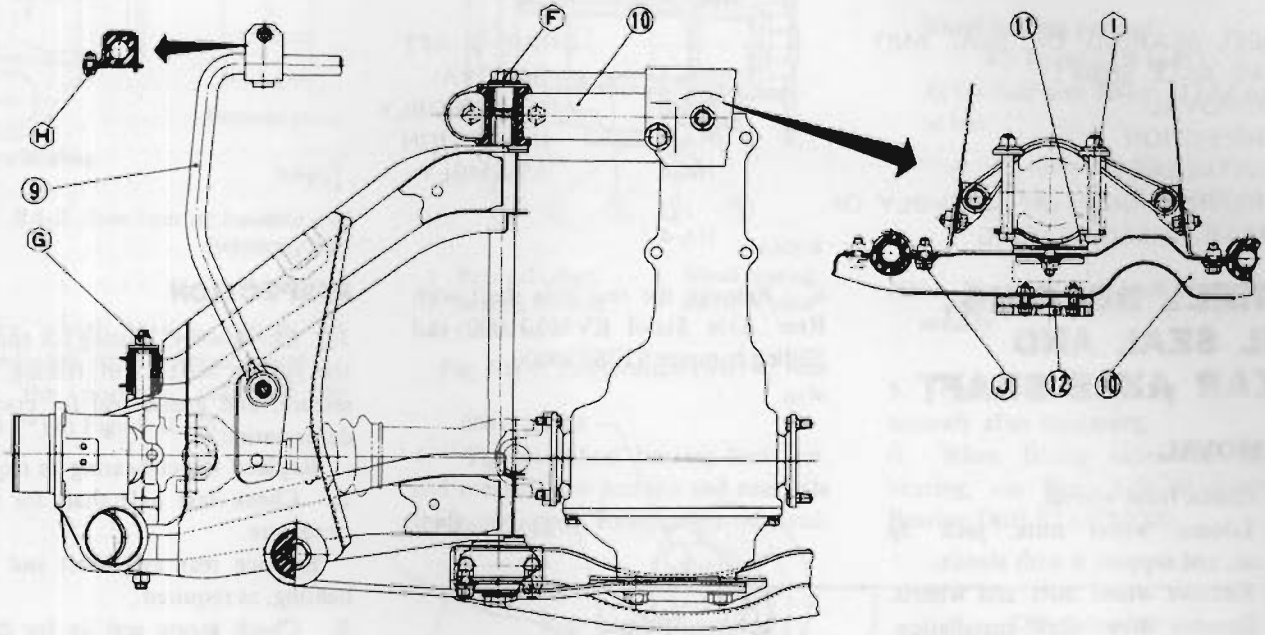
[Side Flange type for R200 differential]

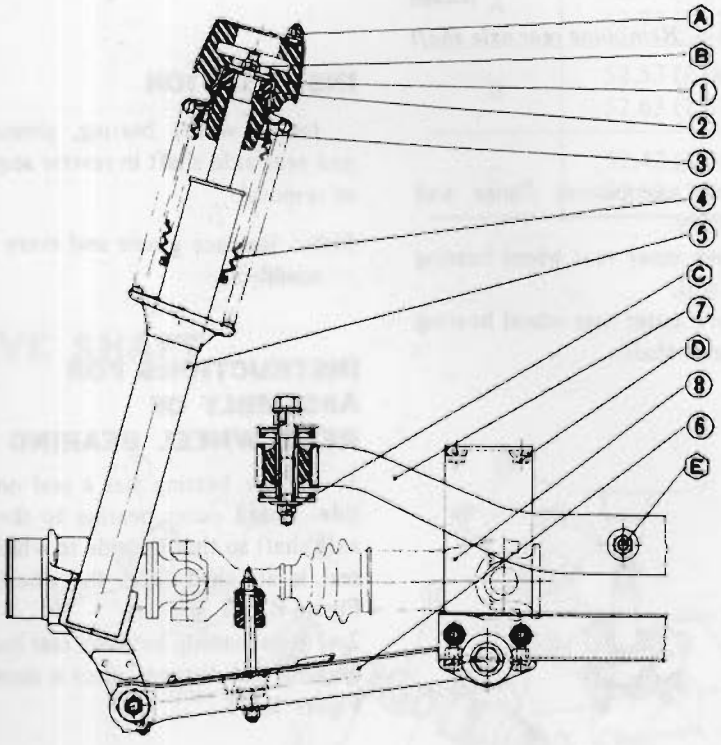
1 Drive shaft assembly
2 Companion flange
3 Grease seal
4 Brake drum
5 Rear axle shaft
6 Grease catcher
7 Bearing housing
8 Outer wheel bearing
9 Inner wheel bearing
10 Distance piece
11 Side yoke

Tightening torque (T) of bolts and nuts kg-m (ft-lb)

Ⓐ T : 4.0 to 5.3 (29 to 38)
Ⓑ T : 25 to 33 (181 to 239)
Ⓒ T : Steel wheel
8.0 to 9.0 (58 to 65)
Aluminum wheel
8.0 to 10.0 (58 to 72)
Ⓓ T : 5.0 to 6.0 (36 to 43)
Ⓔ T : 3.2 to 4.3 (23 to 31)

Fig. RA-1 Cross sectional view of rear axle





RA316

1 Rear strut mounting insulator
2 Spacer
3 Bound bumper rubber
4 Dust cover
5 Strut assembly
6 Transverse link
7 Differential case mounting member
8 Link mounting brace
9 Stabilizer bar
10 Differential case mounting front member
11 Differential case mounting front insulator
12 Damper plate

Tightening torque (T) of bolts and nuts kg-m (ft-lb)

Ⓐ T : 2.5 to 3.5 (18 to 25)
Ⓑ T : 7.5 to 9.5 (54 to 69)
Ⓒ T : 7.5 to 9.5 (54 to 69)
Ⓓ T : 4.6 to 6.1 (33 to 44)
Ⓔ R180 Diff.
T : 6.0 to 7.0 (43 to 51)
R200 Diff.
T : 7.5 to 9.5 (54 to 69)
Ⓕ T : 14 to 16 (101 to 116)
Ⓖ T : 7.5 to 9.5 (54 to 69)
Ⓗ T : 1.0 to 1.2 (7 to 9)
Ⓘ T : 6.0 to 8.0 (43 to 58)
Ⓙ T : 4.6 to 6.1 (33 to 44)

Fig. RA-2 Rear suspension system

REAR AXLE

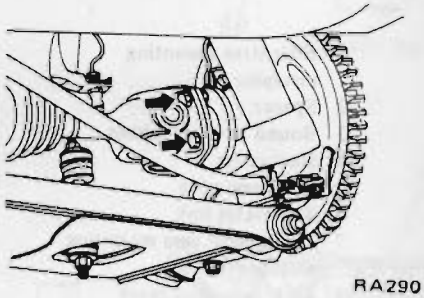
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WHEEL BEARING, OIL SEAL AND REAR AXLE SHAFT

REMOVAL

1. Chock front wheels.
2. Loosen wheel nuts, jack up the car, and support it with stands.
3. Remove wheel nuts and wheels.
4. Remove drive shaft installation bolts (wheel side).

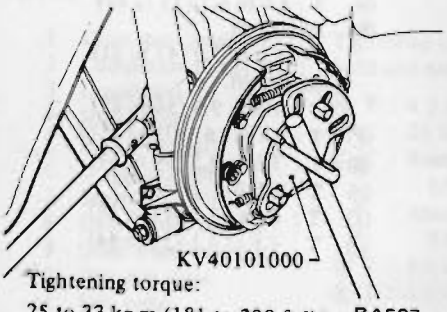


Tightening torque:
5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-3 Removing drive shaft

5. Remove rear wheel bearing lock nut.

Note: Do not release caulking when removing the rear wheel bearing lock nut.



Tightening torque:
25 to 33 kg-m (181 to 239 ft-lb)

Fig. RA-4 Removing rear wheel bearing lock nut

6. Remove the rear axle shaft with Rear Axle Stand KV40101000 and Sliding hammer ST36230000.

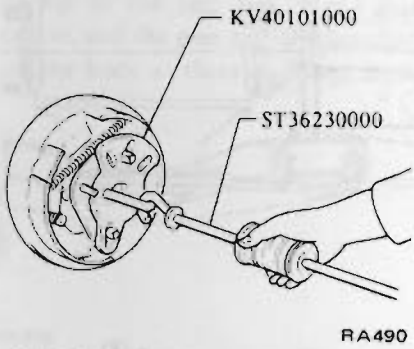


Fig. RA-5 Removing rear axle shaft

7. Remove companion flange and bearing washer.
8. Remove inner rear wheel bearing and grease seal.
9. Remove outer rear wheel bearing from rear axle shaft.

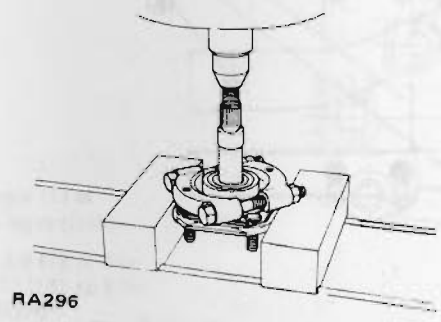


Fig. RA-6 Removing rear wheel bearing (outer side)

Note: Do not reuse bearing after removal.

INSPECTION

1. Check wheel bearing for end play, the rolling surface for flaking, wear, seizure, and grease seal for cracks or deformation.

   Replace wheel bearing as required.
2. Check rear axle shaft for cracks or seizure.

   Replace rear axle shaft and wheel bearing, as required.
3. Check grease seal lip for damage or wear.

INSTALLATION

Install wheel bearing, grease seal and rear axle shaft in reverse sequence of removal.

Note: Replace grease seal every disassembly.

INSTRUCTIONS FOR ASSEMBLY OF REAR WHEEL BEARING

1. Outer bearing has a seal on one side. Install outer bearing to the rear axle shaft so that the side to which the seal is attached faces the wheel. See Figure RA-8.
2. Relationship between rear bearing housing and distance piece is shown in Figure RA-7.

- A mark "A", "B", or "C" is stamped on housing. Select a distance piece having a mark corresponding to the mark on housing.

  When a distance piece is reused, make sure that both ends are not collapsed or deformed.

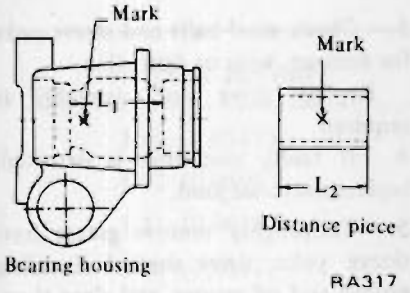
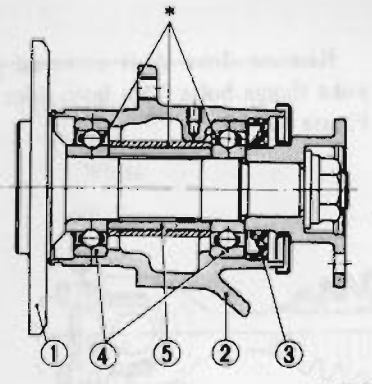


Fig. RA-7 Rear bearing housing and distance piece

3. For wheel bearing grease, use recommended multi-purpose grease.

Fill the portions indicated by asterisk (*) in Figure RA-8.



1 Rear axle shaft
2 Bearing housing
3 Grease seal
4 Wheel bearing
5 Distance piece

Fig. RA-8 Lubrication chart of rear axle

4. Tighten wheel bearing lock nut, and measure the preload and rear axle shaft end play. Readjust as required.

Tightening torque of wheel bearing lock nut:
25 to 33 kg-m
(181 to 239 ft-lb)

Wheel bearing preload:
4.5 kg-cm (3.9 in-lb)
At the hub bolt 790 gr (27.86 oz) or less

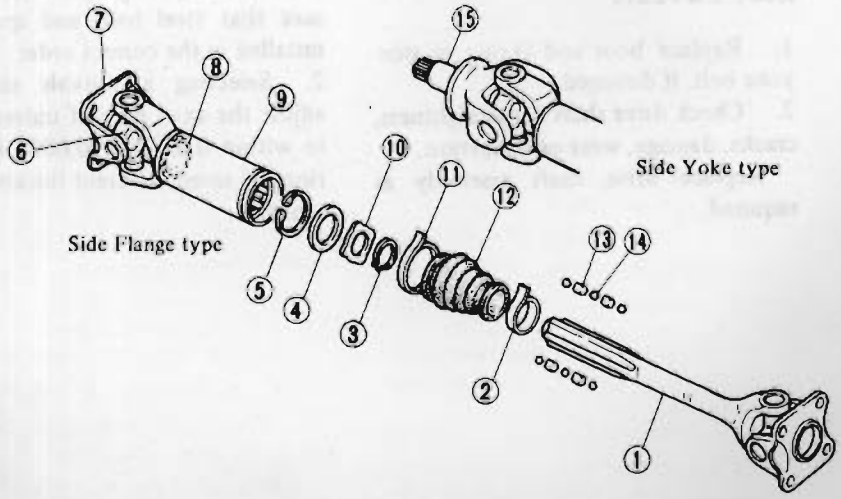
Rear axle shaft end play:
0 to 0.15 mm (0 to 0.0059 in)

Note: Use new lock nuts every disassembly.

5. Caulk wheel bearing lock nuts securely after tightening.
6. When fitting outer rear wheel bearing, use Rear Axle Shaft Outer Bearing Drift ST37780000.

Rear bearing housing		Distance piece	
Mark	Size mm (in)	Mark	Size mm (in)
A	52.63 (2.0720) to 52.73 (2.0760)	A	52.60 (2.0709) to 52.66 (2.0732)
B	52.53 (2.0681) to 52.63 (2.0720)	B	52.50 (2.0669) to 52.56 (2.0693)
C	52.43 (2.0642) to 52.53 (2.0681)	C	52.40 (2.0630) to 52.46 (2.0654)

DRIVE SHAFT



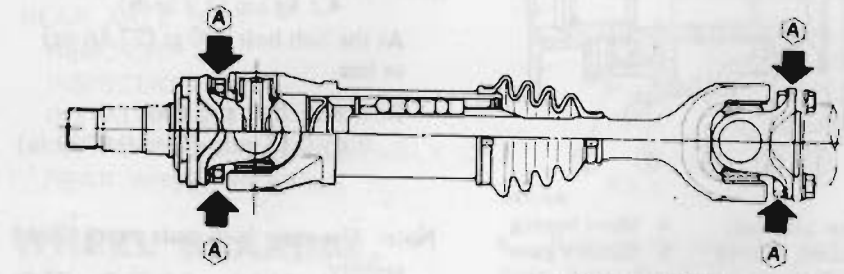
1 Drive shaft
2 Boot band
3 Snap ring
4 Sleeve yoke stopper
5 Snap ring
6 Spider journal
7 Side yoke
8 Sleeve yoke plug
9 Sleeve yoke
10 Drive shaft stopper
11 Boot band
12 Rubber boot
13 Ball spacer
14 Drive shaft ball
15 Side yoke

Fig. RA-9 Drive shaft components

REMOVAL

1. Chock front wheels.
2. Jack up rear of car and support on safety stands.
3. R200 type:

Remove drive shaft universal joint yoke flange bolts from both sides. See Figure RA-10.



RA516

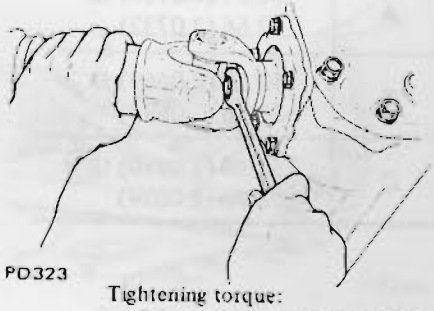
Tightening torque:
Ⓐ : 5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-10 Removing drive shaft

4. R180 type:

Disconnect drive shaft on the wheel side.

Remove side yoke fitting bolts, and extract side yokes together with drive shafts.



PD323

Tightening torque:
3.2 to 4.3 kg-m (23 to 31 ft-lb)

Fig. RA-11 Removing side yoke fitting bolt

CAUTION:
The drive shaft is easily damaged; handle it carefully.

Note: Lubricate needle bearings at specified intervals. Remove plug screw at journal and screw nipple in place when lubricating. Be sure to screw in plug screw after lubricating.

DISASSEMBLY

Drive shaft should be disassembled only when lubricating the ball spline.

Lubrication is required at specified intervals.

1. Remove boot band and remove boot from sleeve yoke.
2. Remove snap ring from sleeve yoke using suitable snap ring plier and take out sleeve yoke stopper.
3. Withdraw drive shaft carefully from sleeve yoke so as not to lose balls and spacers.

INSPECTION

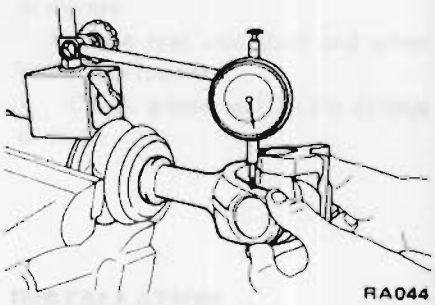
1. Replace boot and O-ring of side yoke bolt, if damaged.
2. Check drive shaft for straightness, cracks, damage, wear or distortion.

Replace drive shaft assembly as required.

3. Check steel balls and sleeve yoke for damage, wear or distortion.

Replace drive shaft assembly as required.

4. If faulty condition is detected, replace universal joint.
5. Thoroughly remove grease from sleeve yoke, drive shaft ball rolling groove and oil groove, and clean them.
6. Measure the drive shaft play as shown in Figure RA-12. If play exceeds 0.1 mm (0.004 in), replace drive shaft assembly. Be sure to measure the drive shaft play with drive shaft completely compressed.



RA044

Fig. RA-12 Measuring drive shaft play

ASSEMBLY

Assemble drive shaft in reverse sequence of disassembly noting the following:

1. Correctly align yokes, and make sure that steel balls and spacers are installed in the correct order.
2. Selecting a suitable snap ring, adjust the axial play of universal joint to within 0.02 mm (0.0008 in). Snap rings of seven different thicknesses are available.

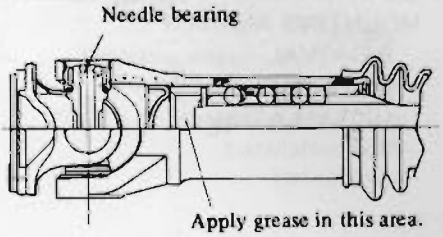
Universal joint bearing snap ring

Thickness mm (in)	Color identification
1.49 (0.0587)	White
1.52 (0.0598)	Yellow
1.55 (0.0610)	Red
1.58 (0.0622)	Green
1.61 (0.0634)	Blue
1.64 (0.0646)	Light brown
1.67 (0.0657)	Black

3. Apply an adequate amount of recommended multi-purpose grease [approximately 10 gr (0.35 oz)] to ball rolling groove and oil groove.

Moreover, apply approximately 35 gr (1.23 oz) of grease to the area shown in Figure RA-13.

Note: Drive shaft components are not available as service parts. Therefore, drive shaft must be replaced as an assembly, even if only one component is faulty.



RA517

Fig. RA-13 Cross-sectional view of drive shaft

REAR SUSPENSION

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REAR STRUT AND COIL SPRING

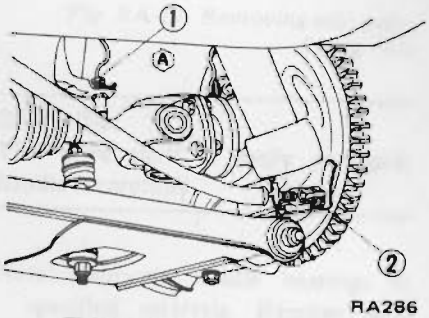
REMOVAL

1. Chock the front wheels.
2. Loosen wheel nuts, jack up car, and support body with stands.
3. Remove wheel nuts and remove wheels.
4. Disconnect brake line connector (body side) ① and side brake linkage ② .

CAUTION:

a. When disconnecting brake tube, use suitable tube wrench. Never use open-end or adjustable wrench.

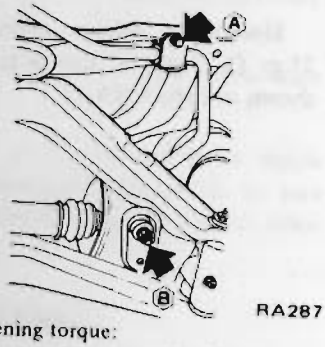
b. Cover brake hose and pipe openings to prevent entrance of dirt.



Tightening torque:
Ⓐ : 1.5 to 1.8 kg-m (11 to 13 ft-lb)

Fig. RA-14 Removing brake hose and side brake linkage

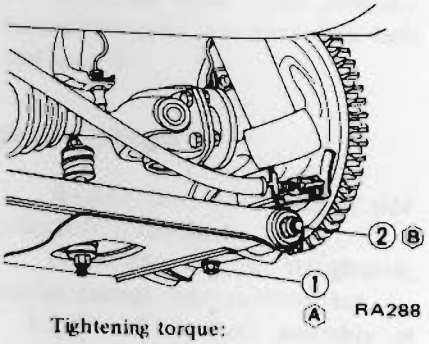
5. Remove stabilizer bar from transverse link. See Figure RA-15.



Tightening torque:
Ⓐ : 1.0 to 1.2 kg-m (7 to 9 ft-lb)
Ⓑ : 1.2 to 1.7 kg-m (9 to 12 ft-lb)

Fig. RA-15 Removing stabilizer from transverse link

6. Remove transverse link outer self-lock nuts ② and lock bolt ① of rear transverse spindle from the lower end of bearing housing.



Tightening torque:
Ⓐ : 1.0 to 1.2 kg-m (7 to 9 ft-lb)
Ⓑ : 7.5 to 9.5 kg-m (54 to 69 ft-lb)

Fig. RA-16 Removing lock bolt and self-lock nuts

7. Withdraw spindle, and separate transverse link from strut assembly. See Figure RA-17.

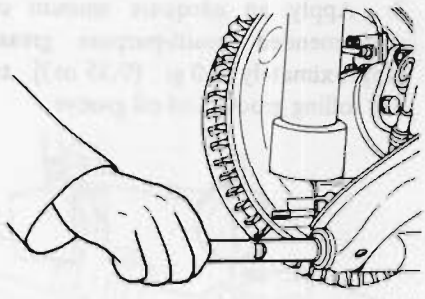
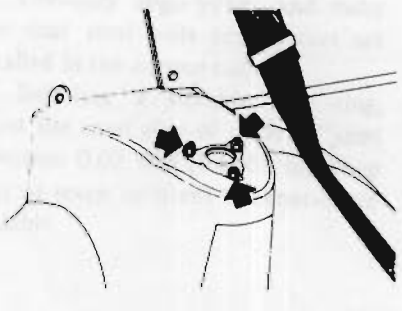


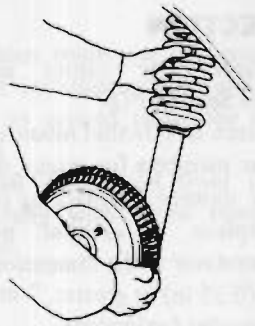
Fig. RA-17 Removing spindle

8. Disconnect drive shaft (wheel side).
9. Remove strut installation nuts (from the passenger compartment side). The strut assembly can be removed downward. See Figures RA-18 and RA-19.



Tightening torque:
2.5 to 3.5 kg-m (18 to 25 ft-lb)

Fig. RA-18 Removing strut installation nuts



RA292

Fig. RA-19 Removing strut assembly

CAUTION:
When removing strut assembly, place a jack under the lower end of strut, and remove it gradually.

10. For the removal and reinstallation of spring, disassembly of strut, inspection and adjustment, apply the instructions for front strut assembly.

Refer to Section FA.

Note:

a. **It is important that correct amount of fluid be poured into strut to assure correct damping force of shock absorber.**

Amount of oil:
400 cc (24.41 cu in)

b. **Use Nissan genuine shock absorber oil "NISSAN GENUINE STRUT OIL" or equivalent.**

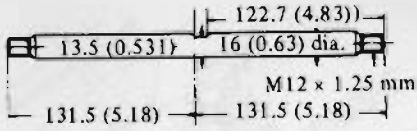
INSTALLATION

Install strut assembly in reverse sequence of removal.

CAUTION:
When installing brake tubes, use Flare Nut Torque Wrench GG94310000.

Note:

a. **Install spindle so that the shorter side (when measured from the position where the lock bolt is installed) faces the front of car. See Figure RA-20.**



Unit: mm (in) RA325

Fig. RA-20 Spindle

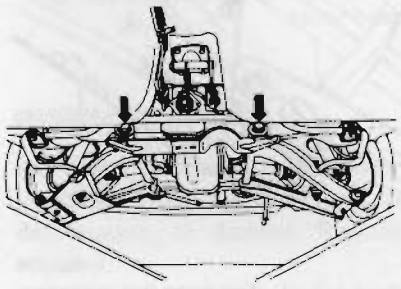
b. **After installing wheels and placing car under the standard load, tighten transverse link outer self-lock nut completely.**

CAUTION:
Correctly fit open end on spring seat.

GEAR CARRIER AND DIFFERENTIAL MOUNTING MEMBER

REMOVAL

1. Chock front wheels.
2. Jack up car, and support body with stands.
3. Remove main muffler. Refer to Section FE.
4. Separate propeller shaft from gear carrier. Refer to Section PD.
5. Loosen front side transverse link inner bolts.

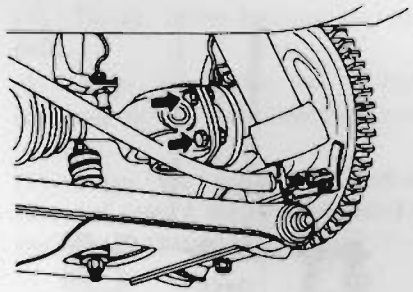


RA274

Tightening torque:
14 to 16 kg-m (101 to 116 ft-lb)

Fig. RA-21 Removing transverse link inner bolts

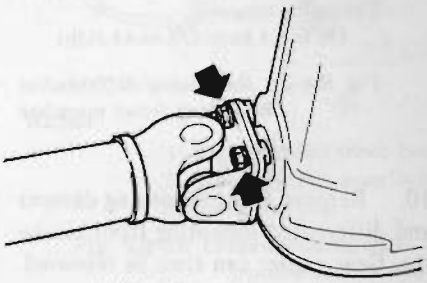
6. Remove drive shaft installation bolts (wheel side and gear carrier side), and separate drive shaft from the gear carrier. See Figures RA-11, RA-22 and RA-23.



RA290

Tightening torque:
5.0 to 6.0 kg-m (36 to 43 ft-lb)

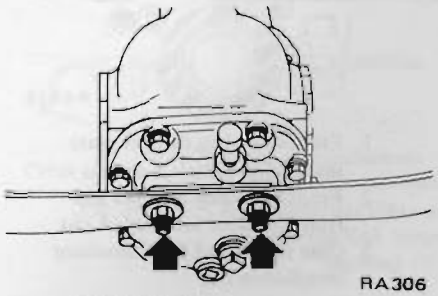
Fig. RA-22 Removing drive shaft installation bolts (wheel side)



Tightening torque: RA302
5.0 to 6.0 kg-m (36 to 43 ft-lb)

Fig. RA-23 Loosening drive shaft installation bolts (gear carrier side)

7. Place a jack beneath gear carrier and raise it.
8. Remove differential mounting rear member installation nut.

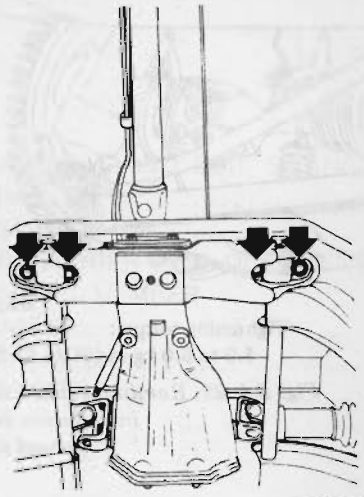


RA306

Tightening torque:
R180 Diff.
6.0 to 7.0 kg-m (43 to 51 ft-lb)
R200 Diff.
7.5 to 9.5 kg-m (54 to 69 ft-lb)

Fig. RA-24 Removing differential mounting rear member

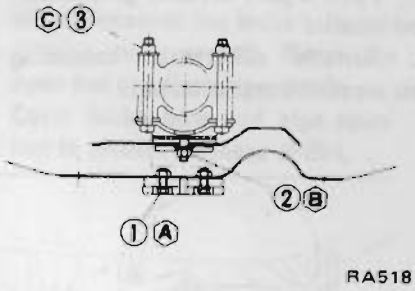
9. Remove differential mounting front member installation bolts, lower the jack slowly, and remove gear carrier and front mounting member as an assembly. See Figure RA-25.



Tightening torque:
4.6 to 6.1 kg-m (33 to 44 ft-lb)

Fig. RA-25 Removing differential mounting front member

10. Remove front mounting damper and differential mounting front insulator. Gear carrier can then be removed.



1 Front mounting damper plate installation bolt
2 Front mounting member and front insulator installation nut
3 Gear carrier and front insulator installation nut

Tightening torque:
Ⓐ : 1.6 to 2.1 kg-m (12 to 15 ft-lb)
Ⓑ : 3.2 to 4.3 kg-m (23 to 31 ft-lb)
Ⓒ : 6.0 to 8.0 kg-m (43 to 58 ft-lb)

Fig. RA-26 Removing damper plate bolts and mounting front insulator nuts

11. Loosen rear side transverse link inner bolts. See Figure RA-27.

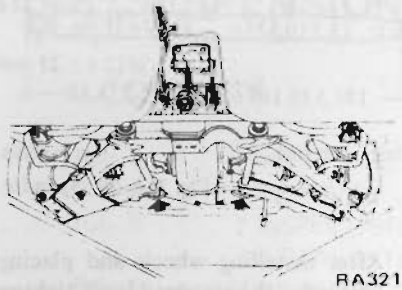
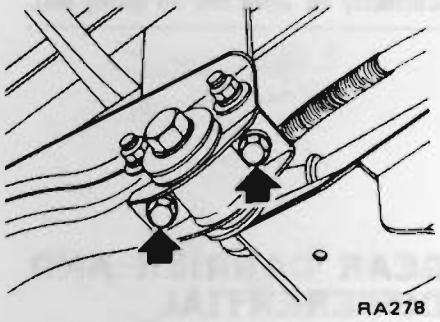


Fig. RA-27 Removing transverse link inner bolts

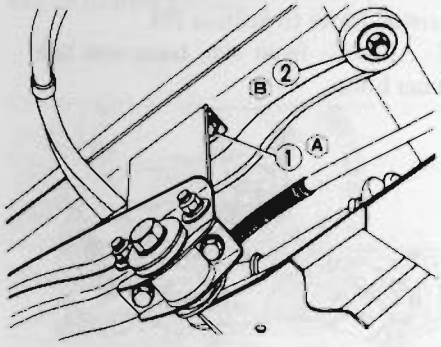
12. Remove link mounting rear bracket.



Tightening torque:
3.2 to 4.3 kg-m (23 to 31 ft-lb)

Fig. RA-28 Removing rear bracket

13. Remove transverse link mounting brace and body installation bolts ① and differential mounting rear insulator and body installation bolts ②.



1 Transverse link mounting brace installation bolt
2 Differential mounting rear insulator installation bolt

Tightening torque:
Ⓐ : 4.6 to 6.1 kg-m (33 to 44 ft-lb)
Ⓑ : 7.5 to 9.5 kg-m (54 to 69 ft-lb)

Fig. RA-29 Removing link mounting brace and differential mounting member installation bolts

INSPECTION

1. Check gear carrier assembly. Refer to Section PD.
2. Check differential mounting front and rear members for cracks, deformation or damage. Replace as required.
3. Replace differential mounting front insulator if the dimension "A" is 9 mm (0.35 in) or greater, 2 mm (0.08 in) or smaller (unloaded).

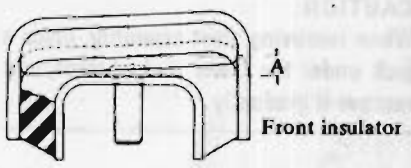


Fig. RA-30 Sectional view of differential mounting insulators

4. Replace rubber insulators of differential mounting member, if worn, using Differential Mounting Insulator Drift ST33260010 (for removal) and ST33260020 (for installation). See Figures RA-31 and RA-32.

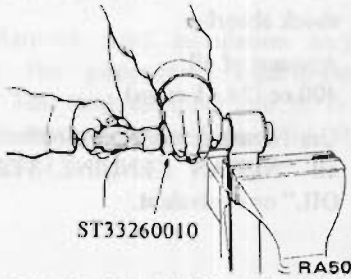


Fig. RA-31 Removing insulator from differential mounting member

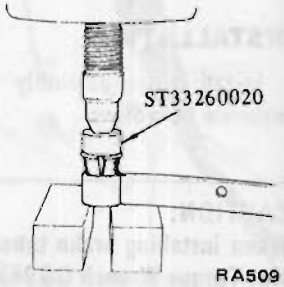


Fig. RA-32 Installing insulator to differential mounting member

INSTALLATION

Install gear carrier and differential mounting member in reverse sequence of removal.

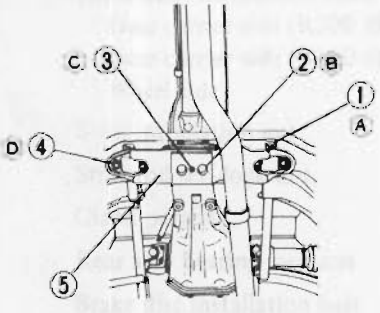
Note:

a. Tighten transverse link inner bolts after installing wheels and placing car on ground under the standard load.
b. Install differential front insulator carefully with arrow towards the front.

TRANSVERSE LINK

REMOVAL

1. Chock front wheels.
2. Loosen wheel nuts, jack up car, and support body with stands.
3. Remove wheel nuts, and remove wheels.
4. Remove stabilizer bar from transverse link.
5. Separate transverse link from the strut. (Refer to the paragraph on Strut and Coil Spring.)
6. Place a jack beneath gear carrier, and raise it.
7. Loosen transverse link inner bolts ① and damper plate installation bolts ②. See Figure RA-33.
8. Remove the differential mount front insulator installation nut ③.
9. Remove differential mounting front member installation nuts ④, and remove differential mounting front member ⑤.

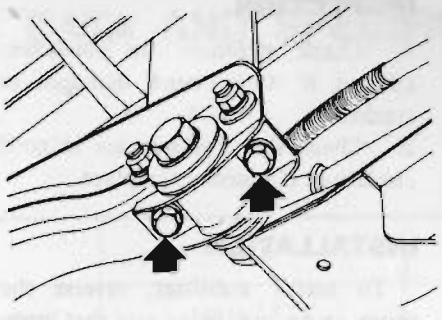


RA275

Tightening torque:
- Ⓐ : 14 to 16 kg-m (101 to 116 ft-lb)
- Ⓑ : 1.6 to 2.1 kg-m (12 to 15 ft-lb)
- Ⓒ : 3.2 to 4.3 kg-m (23 to 31 ft-lb)
- Ⓓ : 4.6 to 6.1 kg-m (33 to 44 ft-lb)

Fig. RA-33 Removing differential mounting front member

10. Remove link mounting rear bracket. Transverse link can now be removed. See Figure RA-34.



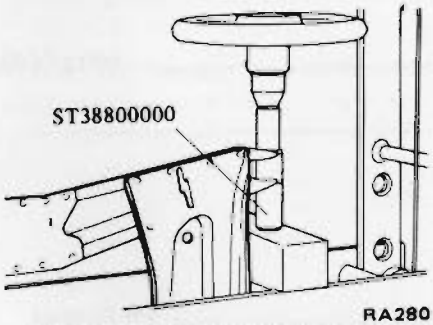
RA278

Tightening torque:
3.2 to 4.3 kg-m (23 to 31 ft-lb)

Fig. RA-34 Removing transverse link

11. Remove outer bushing from transverse link with Rear Transverse Link Bushing Replacer ST38800000.

CAUTION:
Do not tap end face of bushing directly with a hammer as deformation may result in loose bolt.



RA280

Fig. RA-35 Removing transverse link outer bushing

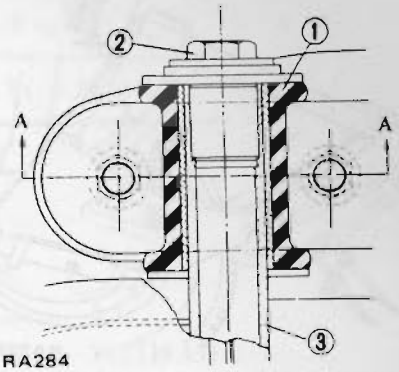
INSPECTION

1. Check transverse link differential mounting front member for cracks, deformation, or damage. Replace as required.
2. Check rubber bushing for decline, wear, or other faulty conditions and replace as required.

INSTALLATION

1. Install transverse link in reverse sequence of removal.
2. Install transverse link inner bushing by the following instructions. Figures RA-36 and RA-37.

(1) Install inner bushing to link shaft.
(2) Align projection on bushing (directed to the axis direction) horizontally.
(3) Align the center of bushing (directed toward the axis direction) to the center of bracket.

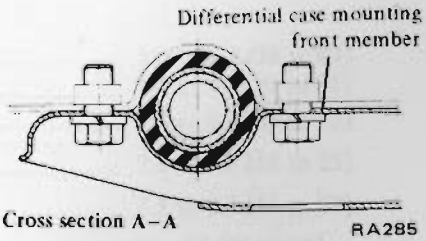


RA284

1 Transverse link inner bush
2 Transverse link inner bolt
3 Transverse link

Fig. RA-36 Cross-sectional view of transverse link inner bushing (I)

(4) First, tighten bolts supported in the vertical direction (differential mounting front member or link mounting rear bracket).



RA285

Fig. RA-37 Cross-sectional view of transverse link inner bushing (II)

(5) Temporarily tighten transverse link inner bolts.

Note:

a. Tighten transverse link inner bolts and outer self-lock nuts after installing wheels and placing car on ground under the standard load.
b. Install differential carrier front insulator carefully with arrow towards the front.

STABILIZER

REMOVAL

1. Remove main muffler. Refer to Section FE.
2. Remove stabilizer bar from side member and remove connecting rod. See Figure RA-38.

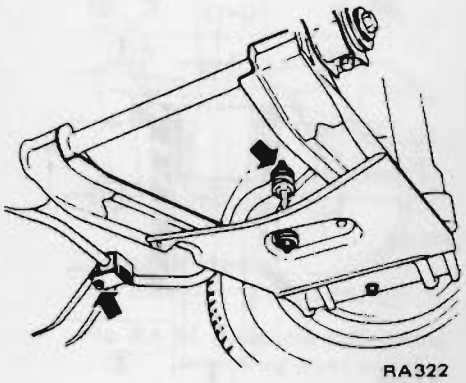


Fig. RA-38 Removing stabilizer

INSPECTION

1. Check stabilizer for condition. Discard if it is found damaged or cracked.
2. Check that bushings are in good condition. If necessary, replace.

INSTALLATION

To install stabilizer, reverse the above procedure, being sure that bushing on side member is properly seated.

Note: Make sure that the dent in rubber bushing faces towards the rear upper side. See Figure RA-39.

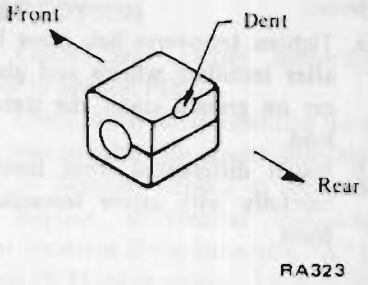


Fig. RA-39 Rubber bushing

SERVICE DATA AND SPECIFICATIONS

Wheel alignment (unladen)

		S30	GS30 (2 + 2 seater)
Camber	degree	−3′ to 1°27′	−9′ to 1°21′
Toe-in	mm (in)	−5 to 5 (−0.20 to 0.20)	−5 to 5 (−0.20 to 0.20)

Coil spring

Active turns of coil		8.5
Free length	mm (in)	392 (15.43)
Spring constant	kg/mm (lb/in)	2.28 (127.7)

Strut assembly

Damping force at piston speed
0.3 m (0.98 ft)/sec

Expansion/Compression	kg (lb)/kg (lb)	55 (121)/30 (66)

Rear axle end play	mm (in)	0 to 0.15 (0 to 0.0059)

Tightening torque

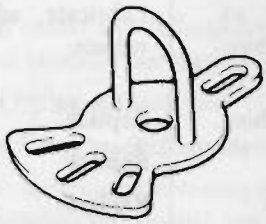
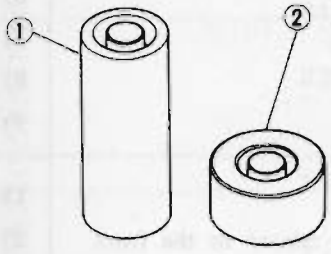
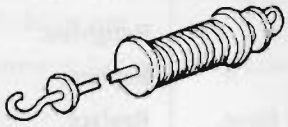
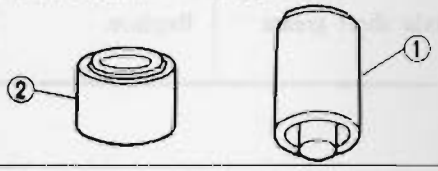
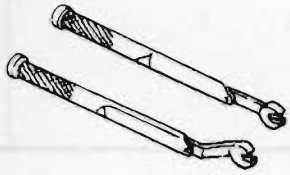
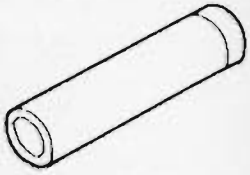
Drive shaft installation bolts		
Gear carrier side (R200 diff.)	kg-m (ft-lb)	5.0 to 6.0 (36 to 43)
Gear carrier side (R180 diff.)	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)
Wheel side	kg-m (ft-lb)	5.0 to 6.0 (36 to 43)
Strut installation nut	kg-m (ft-lb)	2.5 to 3.5 (18 to 25)
Strut rod self-lock nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Gland packing	kg-m (ft-lb)	7 to 13 (51 to 94)
Rear axle bearing lock nut	kg-m (ft-lb)	25 to 33 (181 to 239)
Brake disc installation bolt	kg-m (ft-lb)	2.7 to 3.7 (20 to 27)
Brake hose (line) clamp nut	kg-m (ft-lb)	1.5 to 1.8 (11 to 13)
Wheel nut		
Steel wheel	kg-m (ft-lb)	8.0 to 9.0 (58 to 65)
Aluminum wheel	kg-m (ft-lb)	8.0 to 10.0 (58 to 72)
Bearing housing spindle lock bolt	kg-m (ft-lb)	1.0 to 1.2 (7 to 9)
Transverse link outer self-lock nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Transverse link inner bolt	kg-m (ft-lb)	14 to 16 (101 to 106)
Rear link mounting bracket installation bolt	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)

Front differential mounting member installation bolt	kg-m (ft-lb)	4.6 to 6.1 (33 to 44)
Front differential mounting member and front differential mounting insulator installation nut	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)
Front mounting damper plate installation bolt	kg-m (ft-lb)	1.6 to 2.1 (12 to 15)
Gear carrier and differential mounting front insulator installation nut	kg-m (ft-lb)	6.0 to 8.0 (43 to 58)
Belt fitting self-lock nut	kg-m (ft-lb)	11.3 to 13.8 (82 to 100)
Belt fitting bracket installation bolt	kg-m (ft-lb)	3.2 to 4.3 (23 to 31)
Rear differential mounting member installation nut (to diff. rear cover)	kg-m (ft-lb)	R180 diff. 6.0 to 7.0 (43 to 51) R200 diff. 7.5 to 9.5 (54 to 69)
Rear differential mounting insulator installation nut	kg-m (ft-lb)	7.5 to 9.5 (54 to 69)
Transverse link mounting brace installation bolt	kg-m (ft-lb)	4.6 to 6.1 (33 to 44)
Propeller shaft and differential companion flange installation nut	kg-m (ft-lb)	3.5 to 4.5 (25 to 33)

TROUBLE DIAGNOSES AND CORRECTIONS

Condition	Probable cause	Corrective action
Noise (unusual sound) It is difficult to definitely distinguish noise, or unusual sounds, emanating from the rear axle from other noises (unusual sounds) generated by the differential carrier and propeller shaft. If an unusual sound is present, therefore, check closely to be sure that the noise is in fact coming from the rear axle.	1) Loose joint.	Retighten.
	2) Unbalanced tires.	Adjust.
	3) Insufficient lubrication, improper adjustment, worn, or damaged wheel bearing.	Lubricate, adjust, or replace.
	4) Damaged transverse link rubber bushing.	Replace.
	5) Faulty shock absorber (in strut).	Replace.
	6) Damaged differential mount insulator.	Replace.
	7) Damaged universal joint.	Replace.
	8) Worn or seized drive shaft ball spline.	Replace.
	9) Broken coil spring.	Replace.
Unstable running. This problem is also related to the front suspension. For trouble diagnosis, refer to the paragraph covering the front suspension, also.	1) Loose wheel nut(s).	Retighten.
	2) Damaged transverse link bushing.	Replace.
	3) Reduced shock absorber damping force.	Replace.
	4) Seized or damaged drive shaft ball spline.	Replace.
	5) Weakened spring.	Replace.
Oil leakage	1) Damaged drive shaft dust cover.	Disassemble, clean, and reassemble, or replace dust cover.
	2) Worn or damaged rear axle shaft grease seal.	Replace.

SPECIAL SERVICE TOOLS

Tool number & tool name	Kent-Moore No. / Reference page or Fig. No.	Tool number & tool name	Kent-Moore No. / Reference page or Fig. No.
KV40101000 Rear axle stand 	J 25604-01 Fig. RA-4 Fig. RA-5	ST33260000 Diff. mounting member insulator drift set ① ST33260010 Adapter insulator drift (1) ② ST33260020 Adapter insulator drift (2) 	J25808 Fig. RA-31 Fig. RA-32
ST36230000 Sliding hammer 	J 25840 Fig. RA-5		
ST38800000 Rear transverse link bushing replacer ① ST38800010 Drift ② ST38800020 Support ring 	J 25875 Fig. RA-35	GG94310000 Flare nut torque wrench 	— Page RA-9
ST37780000 Rear axle shaft outer bearing drift 	J 25863 Page RA-5		

Note ; As to special tools for Rear Strut, refer to FA Section.