SECTION PR
PROPELLER SHAFT

CONTENTS

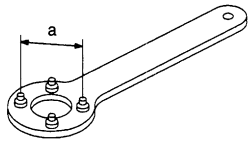
PREPARATION

PFP:00002

Special Service Tools

EDS000C5

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool name Tool number (Kent-Moore No.)		Description
Drive pinion flange wrench KV38104700 (J34311)	 S-NT355	Removing and installing propeller shaft lock nut

NOISE, VIBRATION AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EDS000A3

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

Reference page			—	Refer to PR-4	—	—	—	Refer to PR-4	—	NVH in RFD section	NVH in FAX, RAX, FSU, and RSU section	NVH in to WT section	NVH in WT section	NVH in RAX section	NVH in BR section	NVH in PS section
Possible cause and SUSPECTED PARTS			Uneven rotation torque	Center bearing improper installation	Excessive center bearing axial end play	Center bearing mounting (insulator) cracks, damage or deterioration	Excessive joint angle	Rotation imbalance	Excessive runout	DIFFERENTIAL	AXLE AND SUSPENSION	TIRES	ROAD WHEEL	DRIVE SHAFT	BRAKES	STEERING
Symptom	PROPELLER SHAFT	Noise	×	×	×	×	×	×	×	×	×	×	×	×	×	×
		Shake		×			×				×	×	×	×	×	×
		Vibration	×	×	×	×	×	×	×		×	×		×		×

×: Applicable

REAR PROPELLER SHAFT

PFP:37000

On-Vehicle Service

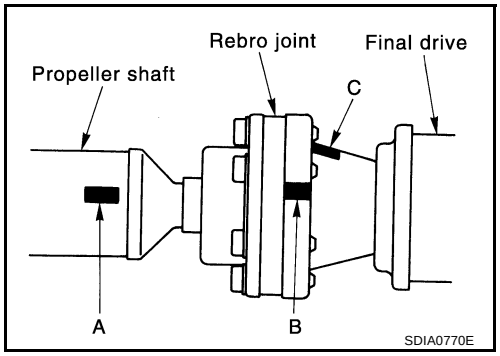
EDS00286

PROPELLER SHAFT VIBRATION

If vibration is present at high speed, check mounting between propeller shaft and companion flange.

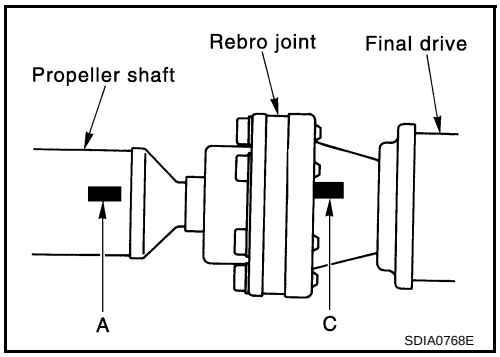
Production before December 2001

Make sure alignment marks A and B are located as close to each other as possible.



In production since December 2001

Make sure alignment marks A and C are located as close to each other as possible.
If not, change mounting as indicated in “Installation”.

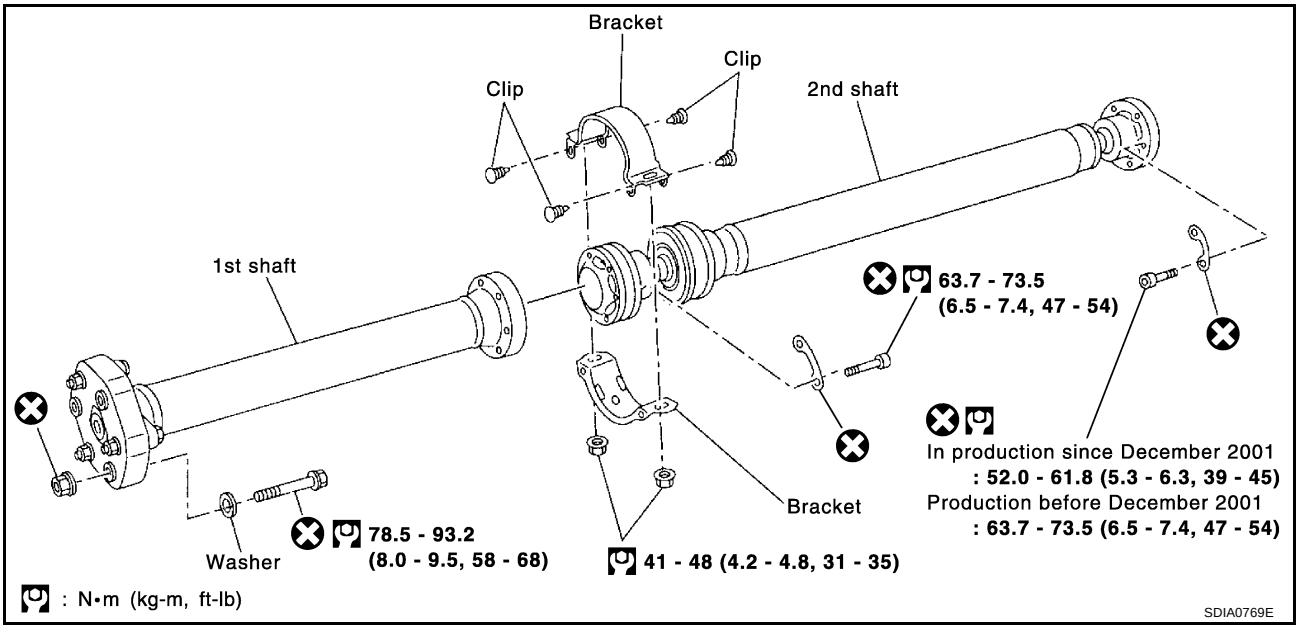


APPEARANCE CHECKING

- Inspect propeller shaft tube surface for dents or cracks. If damaged, replace propeller shaft assembly.
- If center bearing is noisy or damaged, replace propeller shaft assembly.

Removal and Installation

EDS0007O



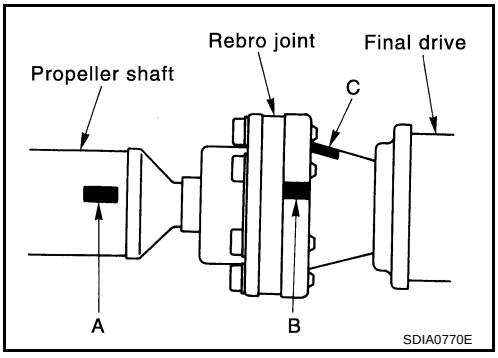
REMOVAL

1. Move A/T select lever to N range position.
2. Remove exhaust tube.
3. Remove floor reinforcement.
4. Remove propeller shaft.

INSTALLATION

Production before December 2001

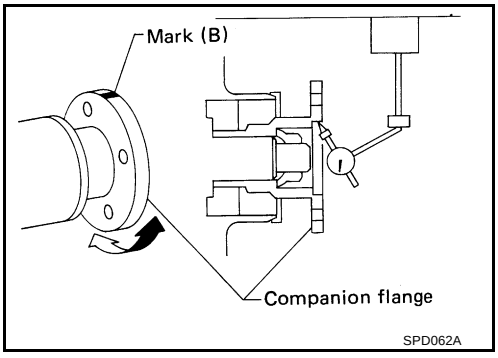
If companion flange has been removed, put new alignment marks B and C on it. Then, reassemble using the following procedure. (Perform step 4 when final drive and propeller shaft are separated from each other. Also perform step 4 when either of these parts is replaced with a new one.)



1. Erase original marks B and C from companion flange with suitable solvent.
2. Put mark B on flange perimeter.

a. Measure companion flange vertical runout.

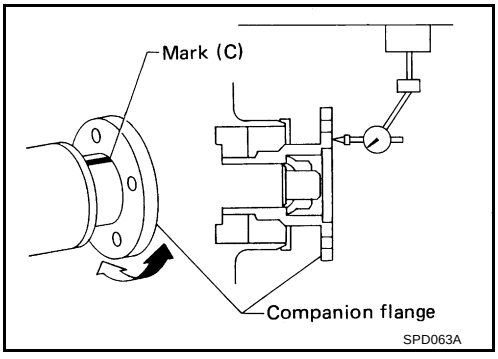
b. Determine the position where maximum runout is read on dial gauge. Put mark (shown by B in figure at left) on flange perimeter corresponding to maximum runout position.



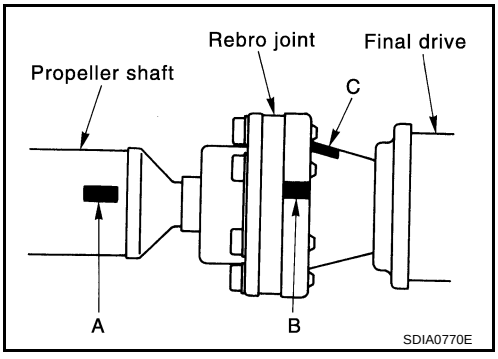
3. Put mark Con flange perimeter.

a. Measure companion flange surface runout.

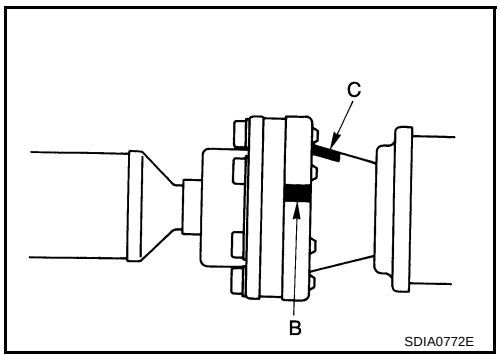
b. Determine the position where maximum runout is read on dial gauge. Put mark (shown by C in figure at left) on flange perimeter corresponding to maximum runout position.



4. Position companion flange and propeller shaft using alignment marks A and B. Set the marks A and B as close to each other as possible. Temporarily attach bolts and nuts.

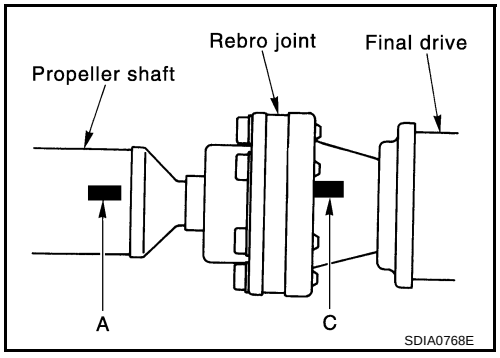


5. Press down propeller shaft with alignment mark C facing upward. Then tighten the lower nut to specified torque.
6. Tighten remaining nuts to specified torque.



In production since December 2001

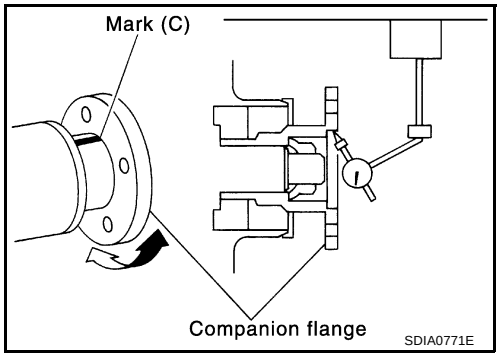
If companion flange has been removed, put new alignment marks C on it. Then, reassemble using the following procedure. (Perform step 2 when final drive and propeller shaft are separated from each other. Also perform step 2 when either of these parts is replaced with a new one.)



1. Erase original marks C from companion flange with suitable solvent.
2. Put mark C on flange perimeter.

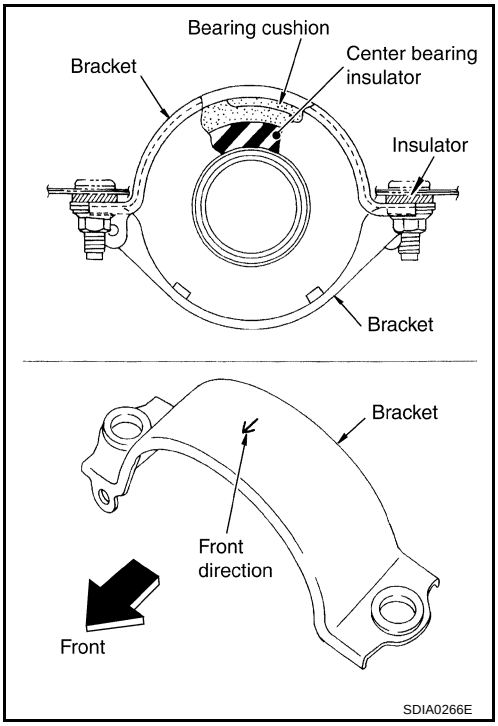
a. Measure companion flange vertical runout.
b. Determine the position where maximum runout is read on dial gauge. Put mark (shown by C in figure at left) on flange perimeter corresponding to maximum runout position.

3. Tighten remaining nuts to specified torque.



Center Bearing Bracket Installation

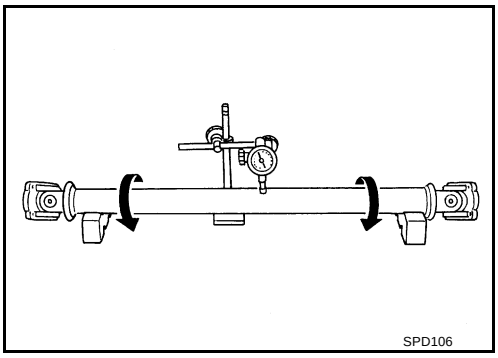
- Position the bearing cushion overlap as illustrated.



INSPECTION

- Inspect propeller shaft runout. If runout exceeds specifications, replace propeller shaft assembly.

  Runout limit: 0.6 mm (0.024 in)



SERVICE DATA

PFP:00030

Journal Axial Play

EDS0007Q

Model		3F-R-2VL
Journal axial play	mm(in)	0 (0)

Propeller Shaft Runout Limit

EDS0007R

Model		3F-R-2VL3
Propeller shaft runout limit	mm(in)	0.6 (0.024)