

Driveshafts

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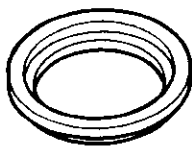
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Special Tools

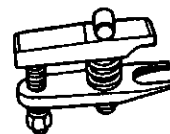
Ref. No.	Tool Number	Description	Qty	Remark
①	07JAF - SH20400	Support Base Attachment	1	
②	07LAD - PW50601	Inner Race Driver	1	
③	07MAC - SL00200	Ball Joint Remover, 28 mm	1	
④	07746 - 0010300	Driver Attachment, 42 x 47 mm	1	
⑤	07746 - 0010400	Driver Attachment, 52 x 55 mm	1	
⑥	07746 - 0030400	Driver Attachment, 35 mm I.D.	1	
⑦	07749 - 0010000	Handle Driver	1	
⑧	07965 - SD90100	Support Base	1	
⑨	07XAC - 0010100	Threaded Adapter, 22 x 1.5 mm	1	



①



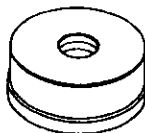
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③



④



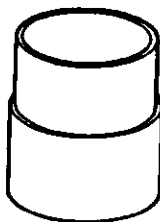
⑤



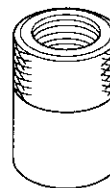
⑥



⑦



⑧



⑨



Inspection

Driveshaft Boot

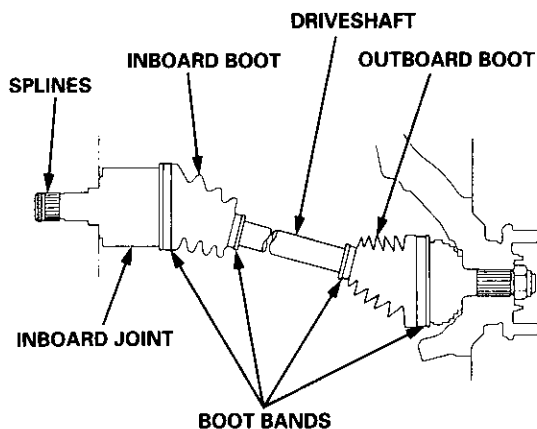
Check the boots on the driveshaft for cracks, damage, leaking grease and loose boot bands. If any damage is found, replace the boot and boot bands.

Loose Splines

Turn the driveshaft by hand and make sure the splines and joint are not excessively loose. If any damage is found, replace the inboard joint.

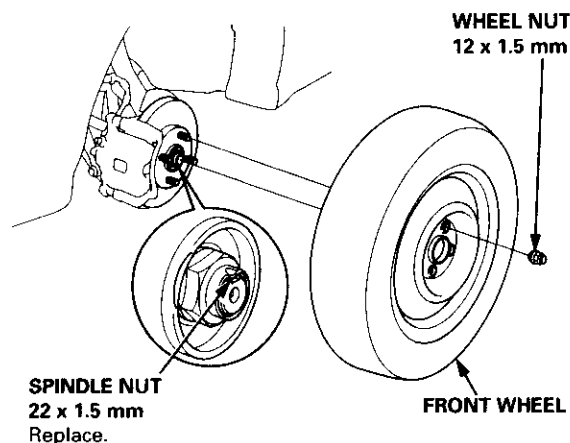
Twisted or Cracked

Make sure the driveshaft is not twisted or cracked. Replace it if necessary.

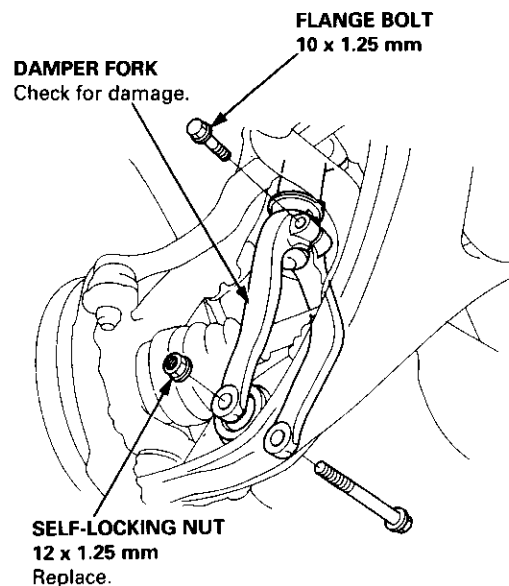


Removal

1. Loosen the wheel nuts slightly.
2. Raise the front of the vehicle, and support it with safety stands in the proper locations (see section 1).
3. Remove the wheel nuts and front wheels.



4. Drain the transmission fluid (see section 13 or 14).
5. Raise the locking tab on the spindle nut, then remove the nut.
6. Remove the self-locking nut and flange bolts.



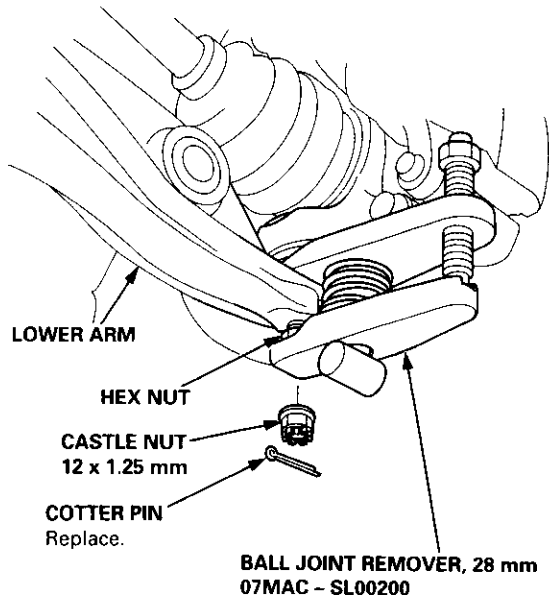
7. Remove the damper fork.

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Driveshafts

Removal (cont'd)

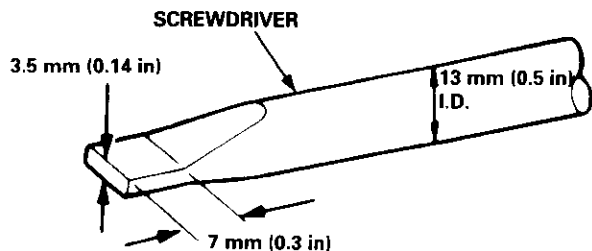
8. Remove the cotter pin from the lower arm ball joint castle nut, and remove the nut.



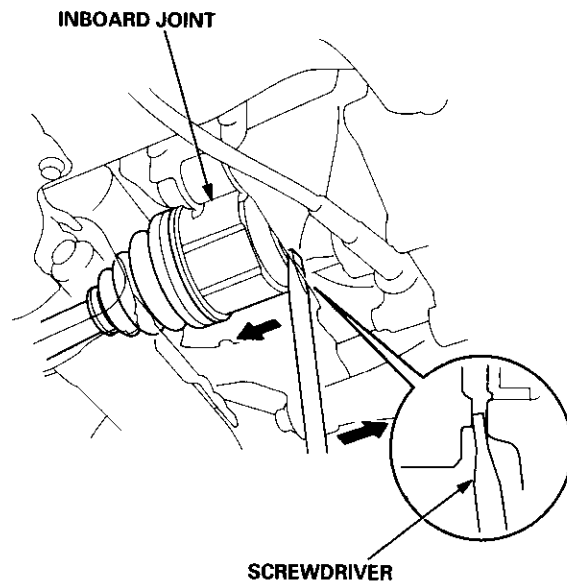
9. Install a 12 mm hex nut on the ball joint. Be sure that the hex nut is flush with the ball joint pin end, or the threaded section of the ball joint pin might be damaged by the special tool.
10. Use the special tool as shown in section 18, to separate the ball joint and lower arm. Be careful not to damage the ball joint boot.

NOTE: If necessary, apply penetrating type lubricant to loosen the ball joint.

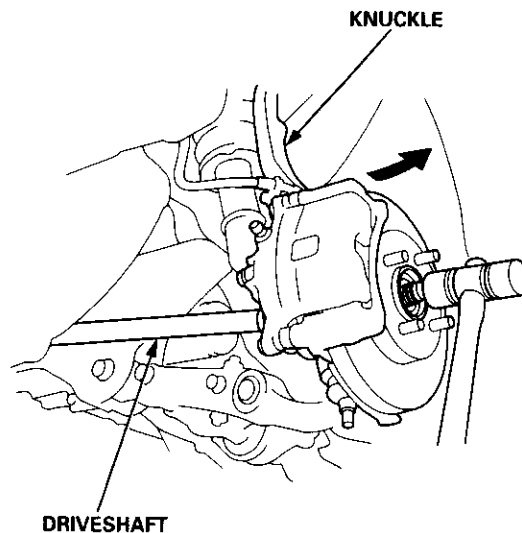
11. Pry the driveshaft assembly with a screwdriver, as shown, to force the set ring at the driveshaft end past the groove.



12. Pull the inboard joint, and remove the driveshaft from the differential case as an assembly. Do not pull on the driveshaft; the inboard joint may come apart. Use care when prying out the assembly, and pull it straight to avoid damaging the differential oil seal.



13. Pull the knuckle outward, and remove the driveshaft outboard joint from the front wheel hub using a plastic hammer.



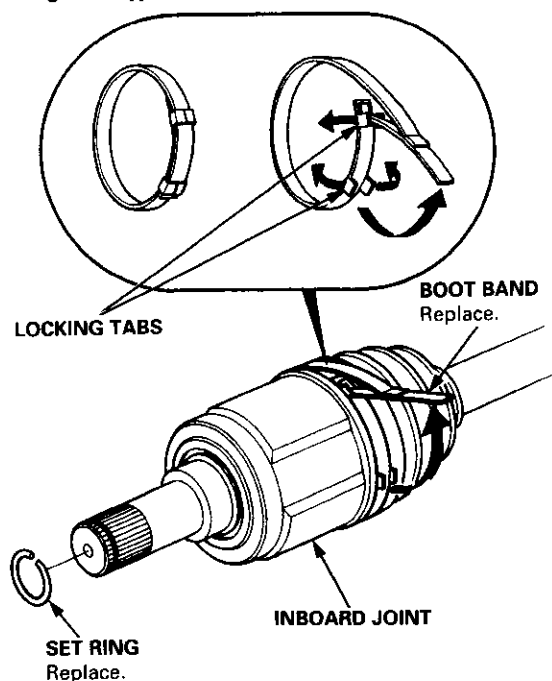


Disassembly

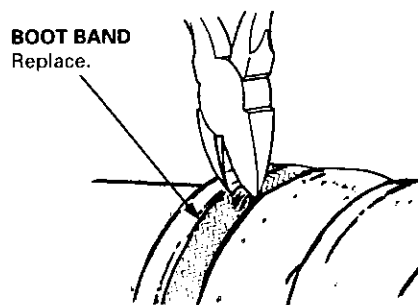
Inboard Joint Side:

1. Carefully clamp the driveshaft in a vise with soft jaws, then remove the set ring from the inboard joint.
2. Remove the boot bands. Take care not to damage the boot.
 - If the boot band is a locking tab type, pry up the locking tabs with a screwdriver, and raise the end of the band.
 - If the boot band is a welded type, cut the boot band.
 - If the boot band is a crimping type, pry up the end of the band with a screwdriver.
 - If the boot band is a double loop type, lift up the band bend.

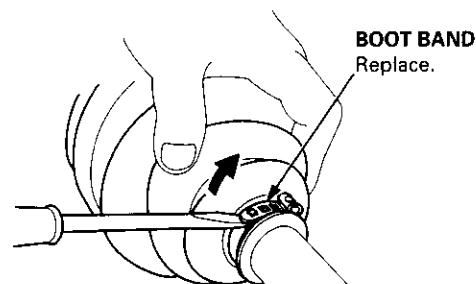
Locking Tab Type



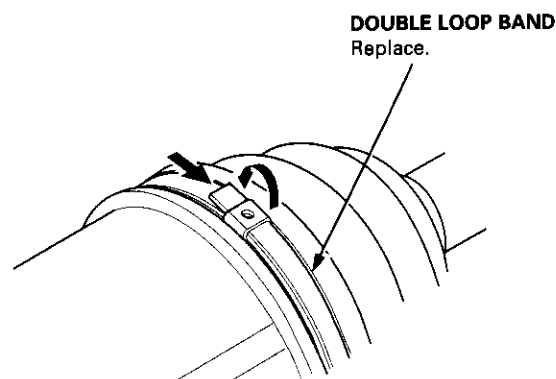
Welded Type



Crimping Type



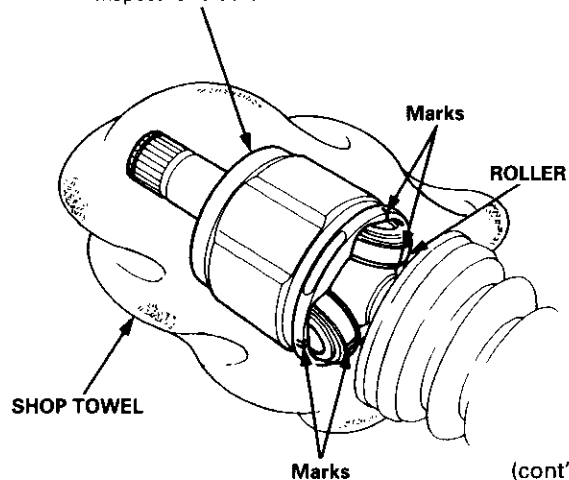
Double Loop Type



3. Mark each roller and inboard joint to identify the locations of rollers and grooves in the inboard joint. Then remove the inboard joint on the shop towel. Be careful not to drop the rollers when separating them from the inboard joint.

INBOARD JOINT

Check splines for wear or damage.
Check inside bore for wear.
Inspect for cracks.

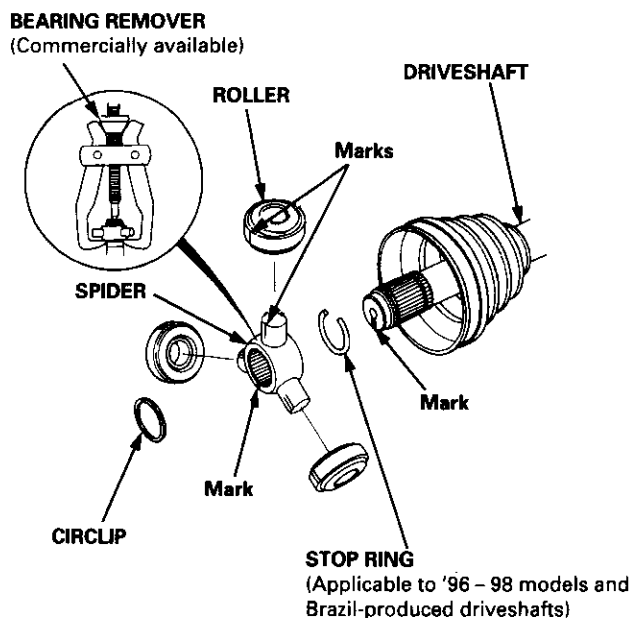


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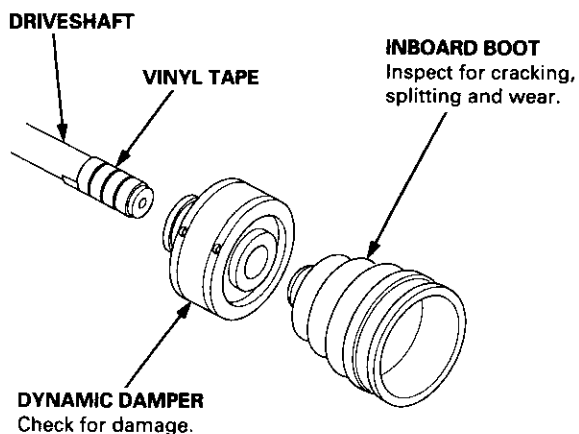
Driveshafts

Disassembly (cont'd)

4. Mark the rollers and spider to identify the locations of the rollers on the spider, then remove the rollers.



5. Remove the circlip.
6. Mark the spider and driveshaft to identify the position of the spider on the shaft.
7. Remove the spider using a bearing remover.
8. Remove the stop ring (Applicable to '96 - 98 models and Brazil-produced driveshafts).
9. Wrap the splines on the driveshaft with vinyl tape to prevent damage to the boot and dynamic damper.



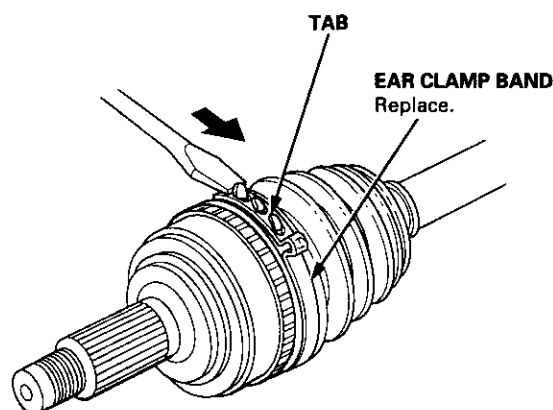
10. Remove the inboard boot, and if necessary, the dynamic damper.

Outboard Joint Side:

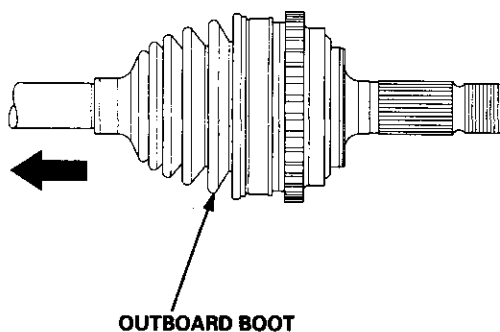
1. Lift up the three tabs with a screwdriver, then remove the boot bands. Take care not to damage the boot.

NOTE:

- If the boot band is a double loop type, lift up the band bend.
- If the boot band is a welded type, cut the boot band.
- If the boot band is a locking tabs type, pry up the tabs with a screwdriver and lift up the end of the band.

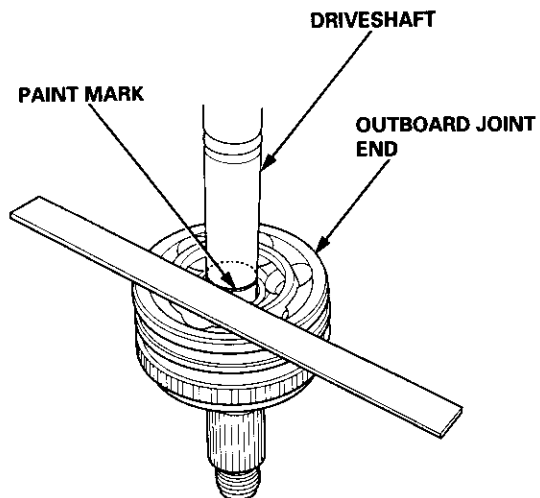


2. Slide the outboard boot to the inboard joint side.

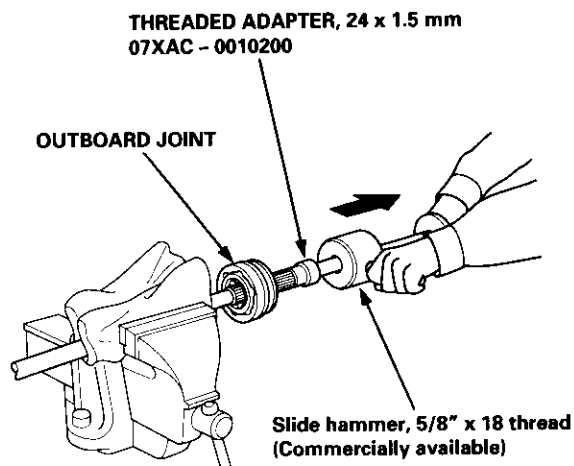




3. Wipe off the grease to expose the driveshaft and the outboard joint inner race.
4. Mark the driveshaft at the same position of the outboard joint end with paint.

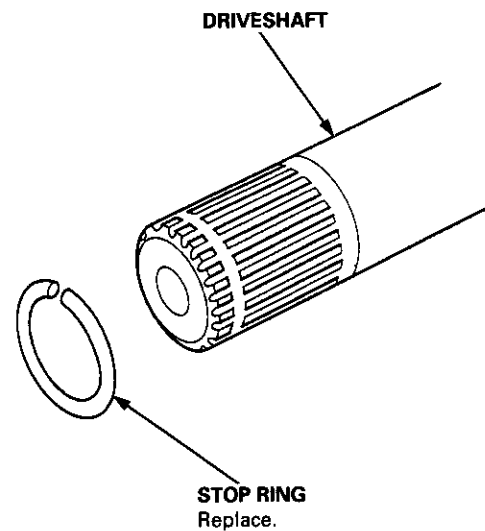


5. Carefully clamp the driveshaft in a vise.



6. Remove the outboard joint using a special tool as shown.

7. Remove the driveshaft from the vise.
8. Remove the stop ring from the driveshaft.




Driveshafts

Reassembly

U.S. and Canada-Produced Driveshafts

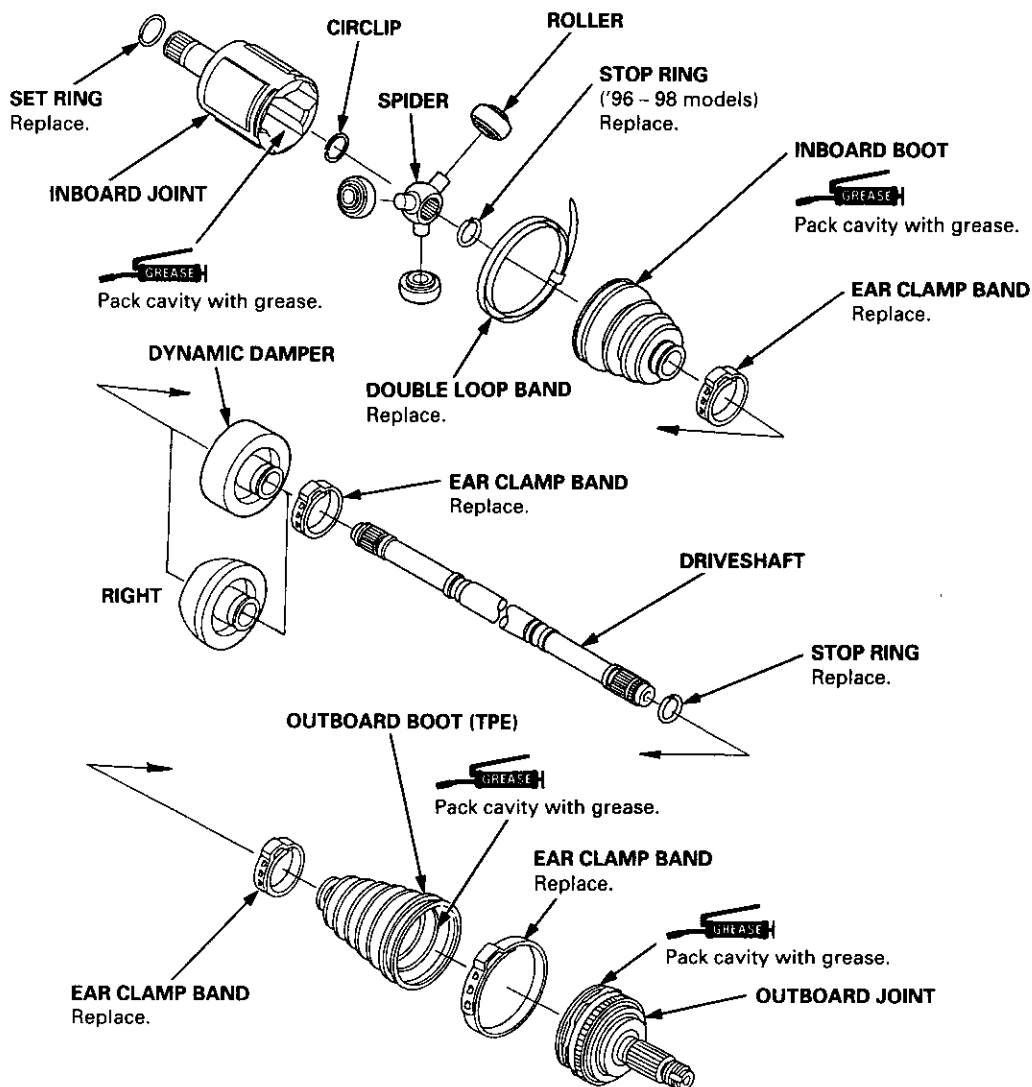
Note these items during reassembly:

- Clean the disassembled parts with solvent, and dry them thoroughly with compressed air. Do not wash the rubber parts with solvent.
-  : Thoroughly pack the inboard joint and both joint boots with the joint grease included in the new driveshaft set.

Grease quantity:

Inboard Joint	115 – 135 g (4.0 – 4.8 oz)
Outboard Joint	115 – 135 g (4.0 – 4.8 oz)


- The '98 Canada model and all '99 – 00 models uses a TPE (Thermoplastic Polyester Elastomer) outboard joint boot. Use the ear clamp type boot band in the outboard joint boot set.





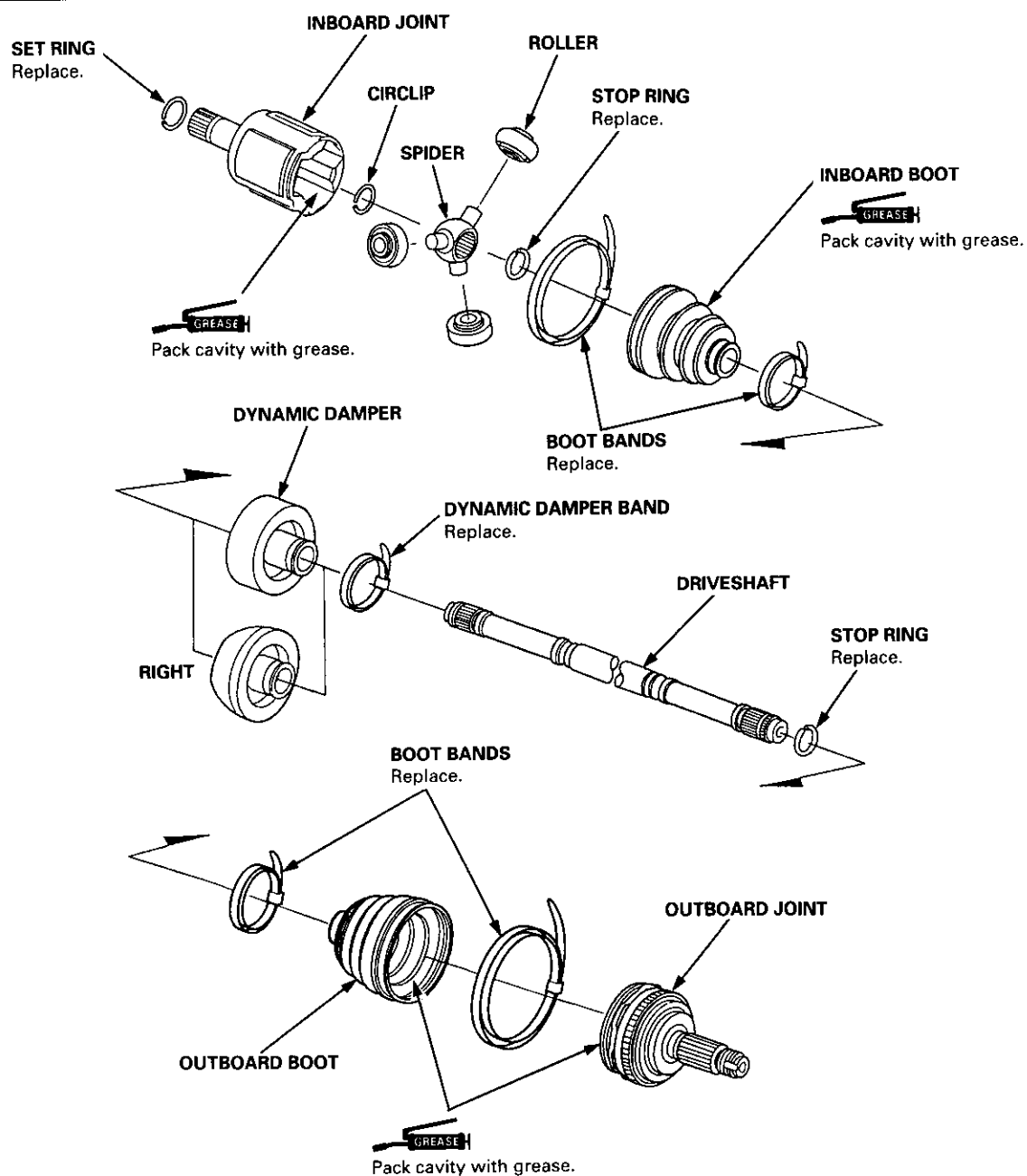
Brazil-Produced Driveshafts

Note these items during reassembly:

- Clean the disassembled parts with solvent, and dry them thoroughly with compressed air. Do not wash the rubber parts with solvent.
-  : Thoroughly pack the inboard joint and both joint boots with the joint grease included in the new driveshaft set.

Grease quantity:

Inboard Joint	115 – 135 g (4.0 – 4.8 oz)
Outboard Joint	115 – 135 g (4.0 – 4.8 oz)




(cont'd)

Driveshafts

Reassembly (cont'd)

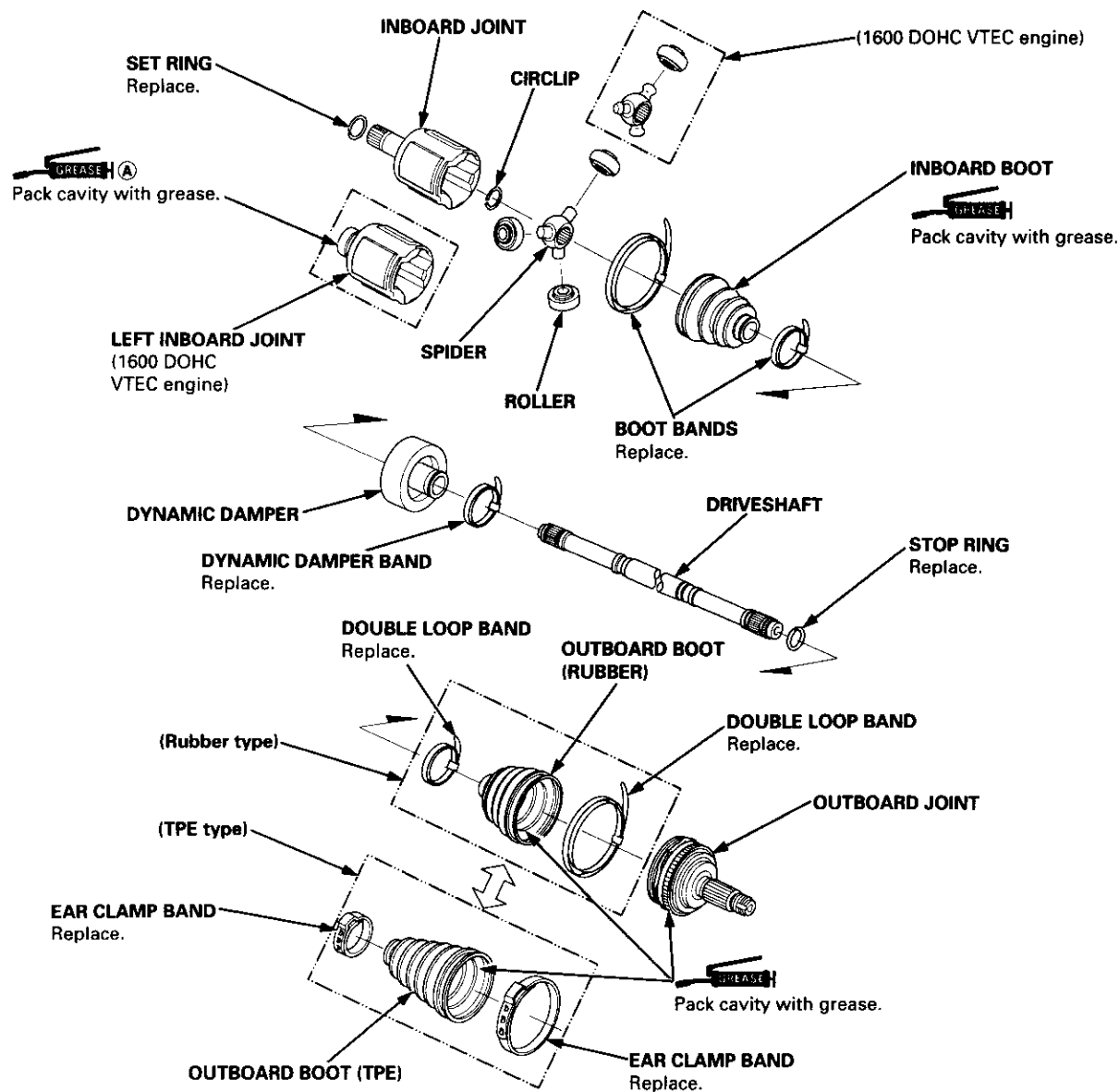
Japan-Produced Driveshafts

Note these items during reassembly:

- Clean the disassembled parts with solvent, and dry them thoroughly with compressed air. Do not wash the rubber parts with solvent.
-  : Thoroughly pack the inboard joint and both joint boots with the joint grease included in the new driveshaft set.

Grease quantity:

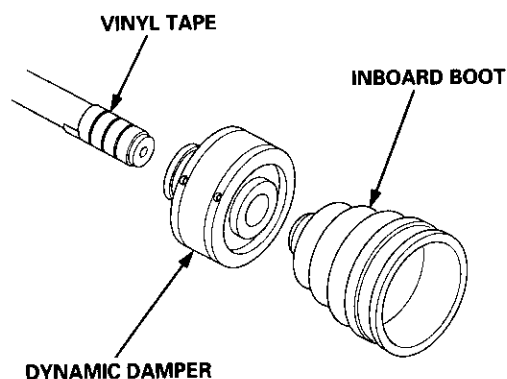
Inboard Joint	1600 DOHC VTEC engine	130 – 140 g (4.6 – 4.9 oz)	
	Except 1600 DOHC VTEC engine	110 – 120 g (3.9 – 4.2 oz)	
	Splines (A)	0.5 – 1.0 g (0.018 – 0.035 oz)	
Outboard Joint	1600 DOHC VTEC engine	Rubber boot: 90 – 100 g (3.2 – 3.5 oz)	TPE boot: 105 – 115 g (3.7 – 4.1 oz)
	Except 1600 DOHC VTEC engine	Rubber boot: 70 – 80 g (2.5 – 2.8 oz)	TPE boot: 95 – 105 g (3.4 – 3.7 oz)



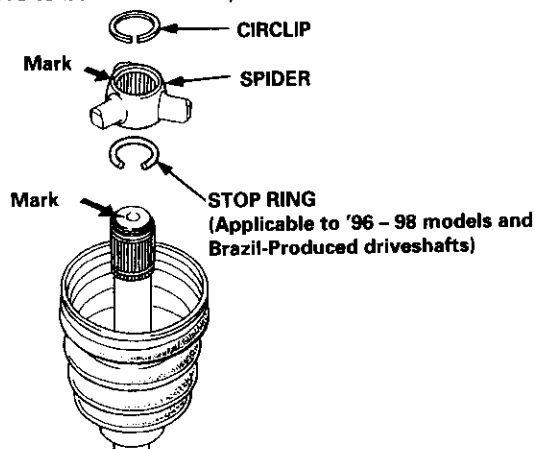


Inboard Joint Side:

1. Wrap the splines with vinyl tape to prevent damage to the boots and dynamic damper.

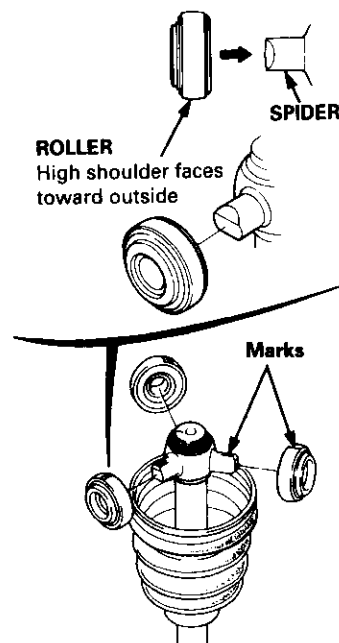


2. Install the dynamic damper and inboard boot to the driveshaft, then remove the vinyl tape. Take care not to damage the boots.
3. Install the stop ring into the driveshaft groove (Applicable to '96 - 98 models and Brazil - Produced driveshafts). Always rotate the stop ring in its groove to be sure it is fully seated.



4. Install the spider on the driveshaft by aligning the marks on the spider and the end of the driveshaft.
5. Fit the circlip into the driveshaft groove. Always rotate the circlip in its groove to be sure it is fully seated.

6. Fit the rollers onto the spider with their high shoulders facing outward, and note these items:
 - Reinstall the rollers in their original positions on the spider by aligning the marks.
 - Hold the driveshaft pointed up to prevent the rollers from falling off.



7. Pack the inboard joint with the joint grease included in the new driveshaft set.

Grease quantity:

Japan-Produced:

1600 DOHC VTEC engine:

130 - 140 g (4.6 - 4.9 oz)

Except 1600 DOHC VTEC engine:

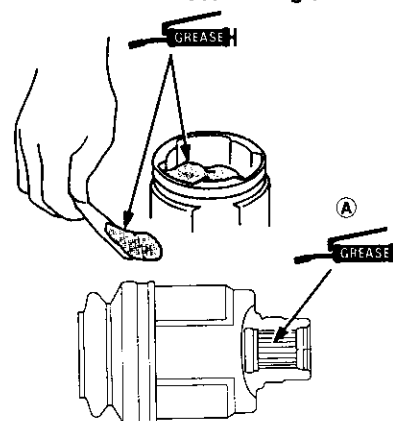
110 - 120 g (3.9 - 4.2 oz)

Left inboard joint splines (A):

0.5 - 1.0 g (0.018 - 0.035 oz)

U.S., Canada, and Brazil-Produced:

115 - 135 g (4.0 - 4.8 oz)

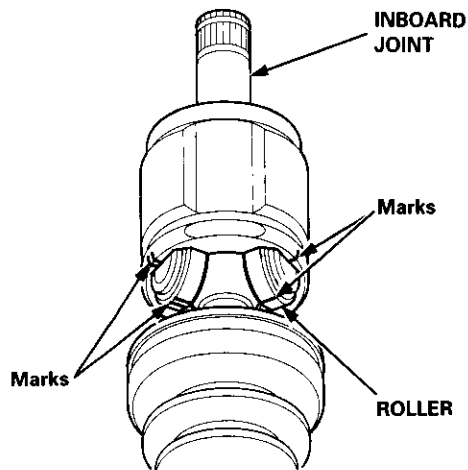


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Driveshafts

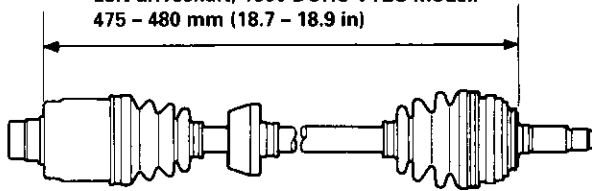
Reassembly (cont'd)

8. Fit the inboard joint onto the driveshaft, and note these items:
- Reinstall the inboard joint onto the driveshaft by aligning the marks on the inboard joint with the marks on the rollers.
 - Hold the driveshaft so that the inboard joint points up to prevent it from falling off.

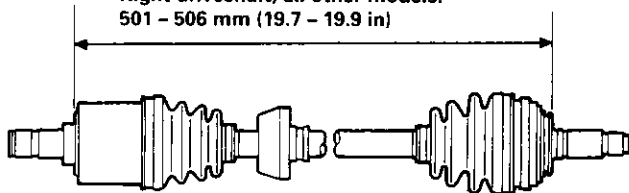


9. Adjust the length of the driveshafts to the figure below, then adjust the boots to halfway between full compression and full extension. The ends of the boots seat in the groove of the driveshaft and joint.

Left driveshaft, 1600 DOHC VTEC model:
475 - 480 mm (18.7 - 18.9 in)



Right driveshaft, 1600 DOHC VTEC model:
475 - 480 mm (18.7 - 18.9 in)
Left driveshaft, all other models:
774 - 779 mm (30.5 - 30.7 in)
Right driveshaft, all other models:
501 - 506 mm (19.7 - 19.9 in)



10. If necessary position the dynamic damper as shown below.
- Install a new dynamic damper band, and bend down both sets of locking tabs.
 - Lightly tap on the doubled-over portion of the band to reduce its height.

Left:

1600 DOHC VTEC model: 26 ± 2 mm (1.0 ± 0.1 in)

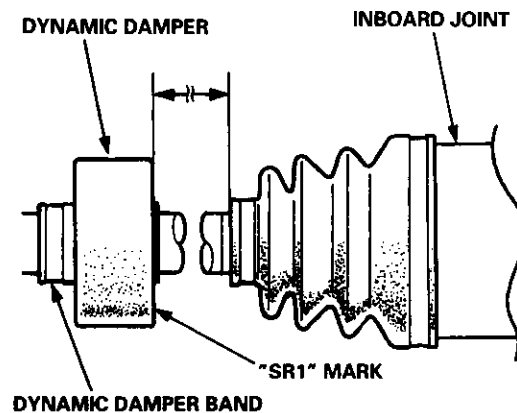
All other models: 94 ± 2 mm (3.7 ± 0.1 in)

With "SR1" mark: 75 ± 2 mm (2.9 ± 0.1 in)

Right:

1600 DOHC VTEC models: 26 ± 2 mm (1.0 ± 0.1 in)

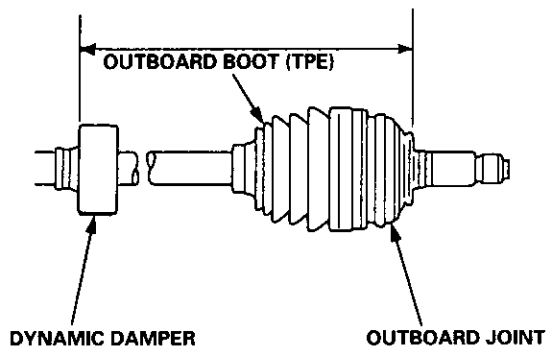
All other models: 55 ± 2 mm (2.2 ± 0.1 in)



U.S. and Canada-Produced (TPE BOOT)

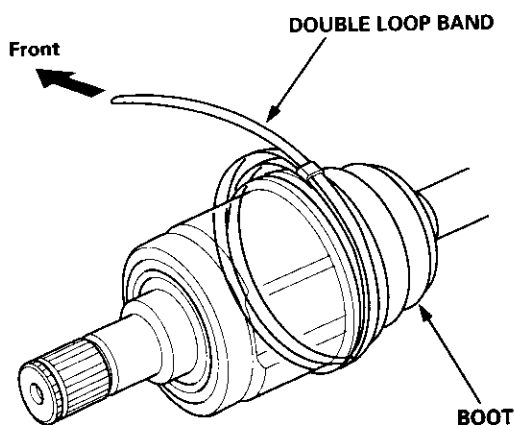
Left: 536 ± 2 mm (21.1 ± 0.1 in)

Right: 283 ± 2 mm (10.4 ± 0.1 in)

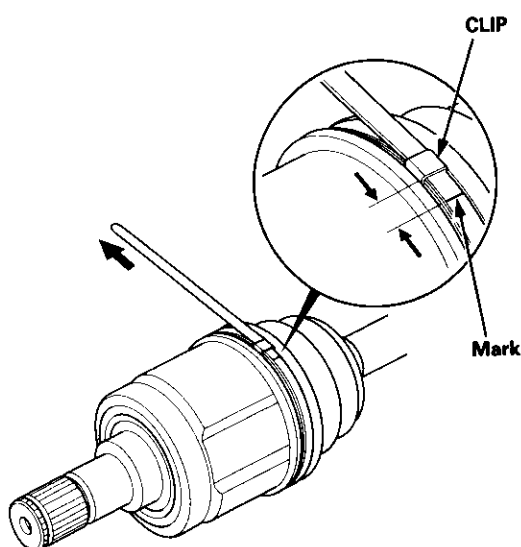




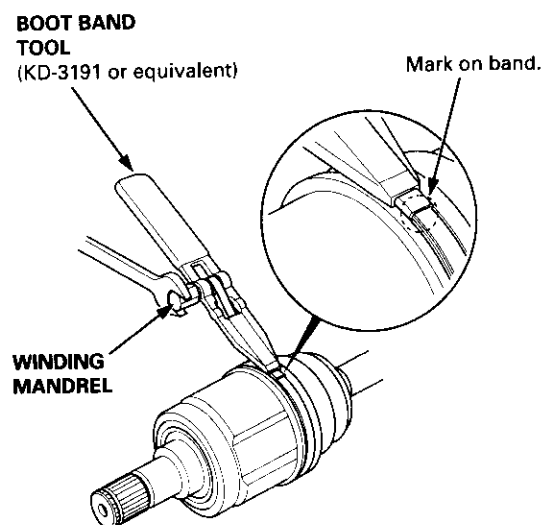
11. Set the double loop band onto the boot and dynamic damper with the band end toward the front of the vehicle.



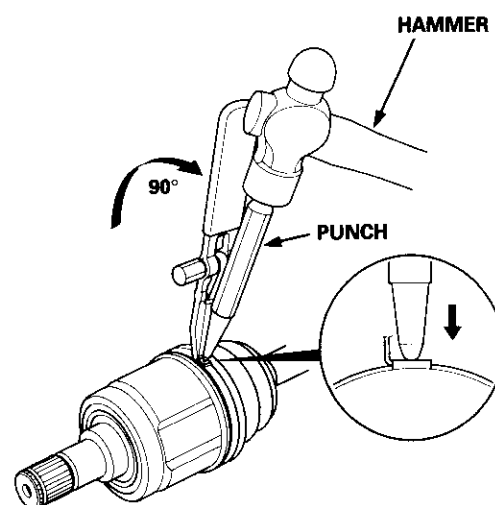
12. Pull up the slack in the band by hand.
13. Mark a position on the band 10 – 14 mm (0.4 – 0.6 in) from the clip.



14. Thread the free end of the band through the nose section of the boot band tool and into the slot on the winding mandrel.
15. Place a wrench on the winding mandrel of the boot band tool, and tighten the band until the mark you made on the band meets the edge of the clip.



16. Lift up the boot band tool to bend the free end of the band 90 degrees, then center-punch the clip.

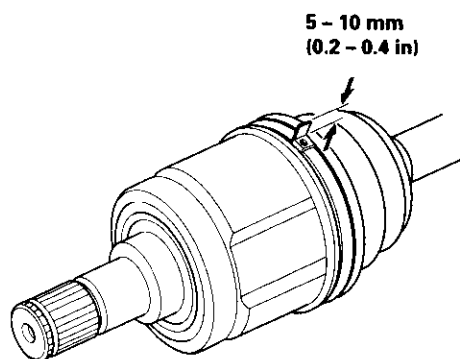


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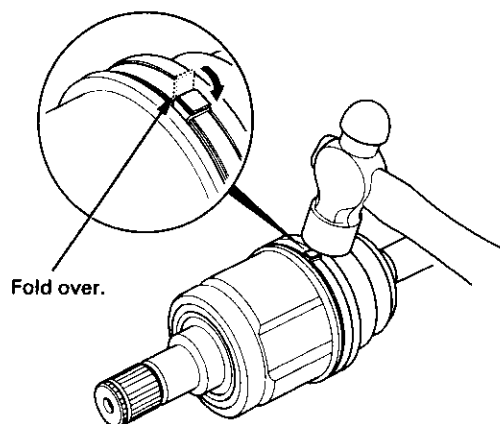
Driveshafts

Reassembly (cont'd)

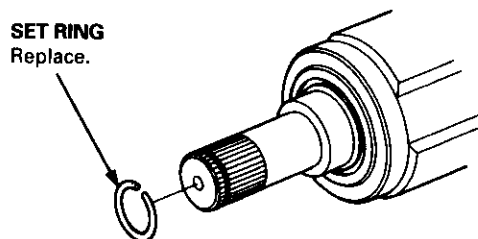
17. Unwind the boot band tool, and cut off the excess 5 – 10 mm (0.2 – 0.4 in) from the clip.



18. Secure the end of the boot band by tapping it down with a hammer.



19. Install the new set ring.



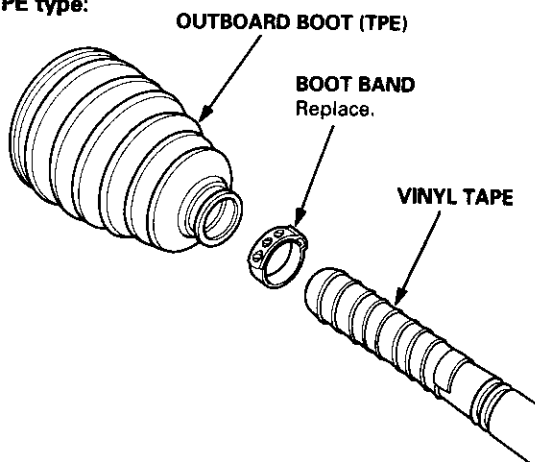
Note these items after reassembly:

- Make sure the band and clip does not interfere with anything and the band does not move.
- Remove any grease remaining on the surrounding surfaces.

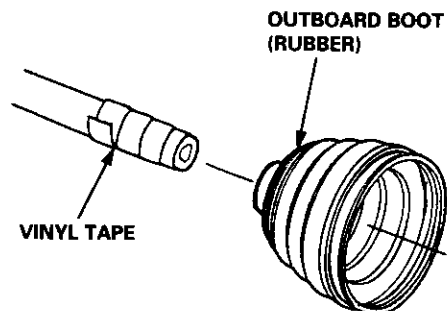
Outboard Joint Side:

1. Wrap the splines with vinyl tape to prevent damage to the boot.

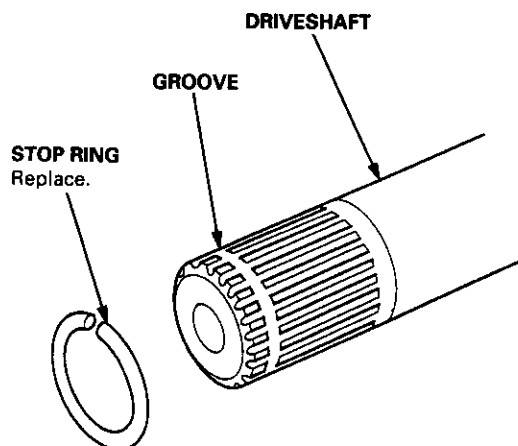
TPE type:



Rubber type:

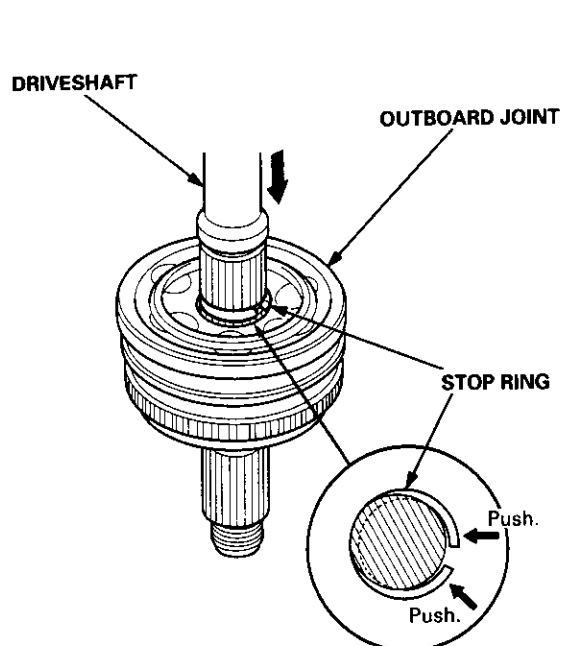


2. Install the boot band and outboard boot, then remove the vinyl tape. Take care not to damage the boot.
3. Install the stop ring into the driveshaft groove.

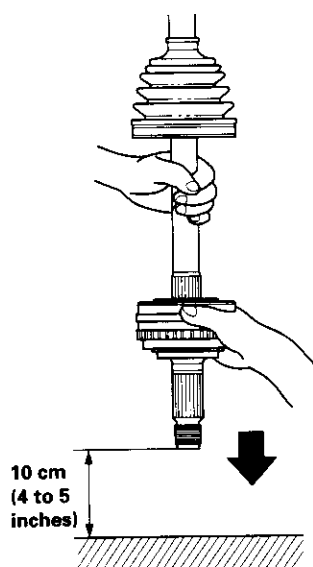




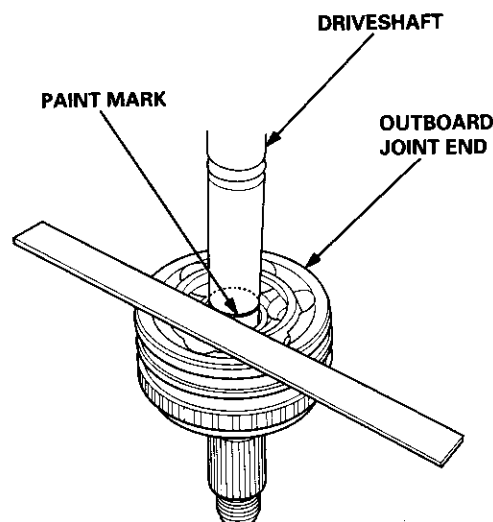
4. Insert the driveshaft into the outboard joint until the stop ring is close on the joint.



5. To completely seat the outboard joint, pick up the driveshaft and joint, and drop them from about 10 cm (4 to 5 inches) onto a hard surface. Do not use a hammer as excessive force may damage the driveshaft.



6. Check the alignment of the paint mark with the outboard joint end.



7. Pack the outboard joint with the joint grease included in the new joint boot set.

Grease quantity

U.S., Canada, and Brazil-Produced:

115 – 135 g (4.0 – 4.8 oz)

Japan-Produced:

1600 DOHC VTEC engine:

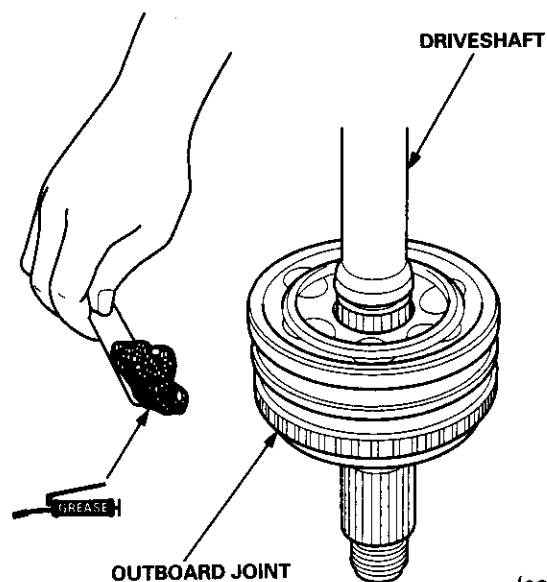
Rubber boot: 90 – 100 g (3.2 – 3.5 oz)

TPE boot: 105 – 115 g (3.7 – 4.1 oz)

Except 1600 DOHC VTEC engine:

Rubber boot: 70 – 80 g (2.5 – 2.8 oz)

TPE boot: 95 – 105 g (3.4 – 3.7 oz)

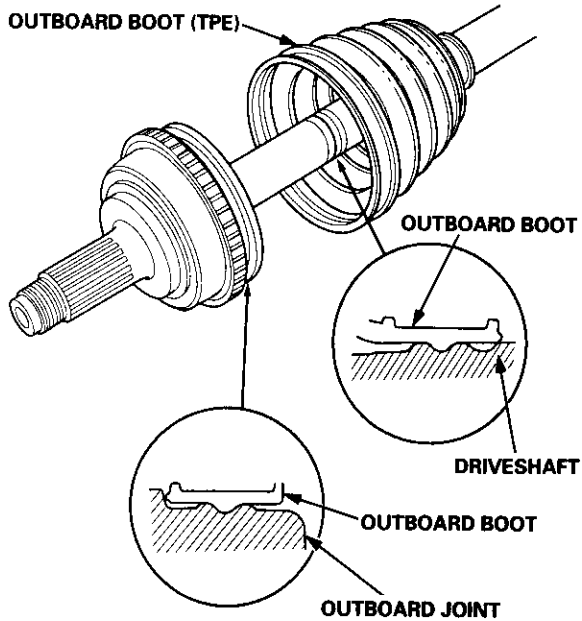


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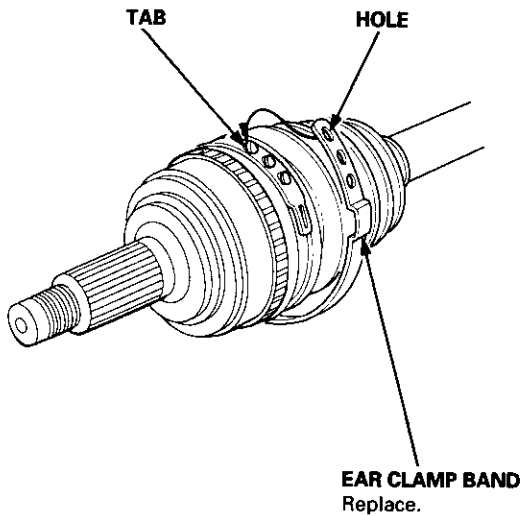
Driveshafts

Reassembly (cont'd)

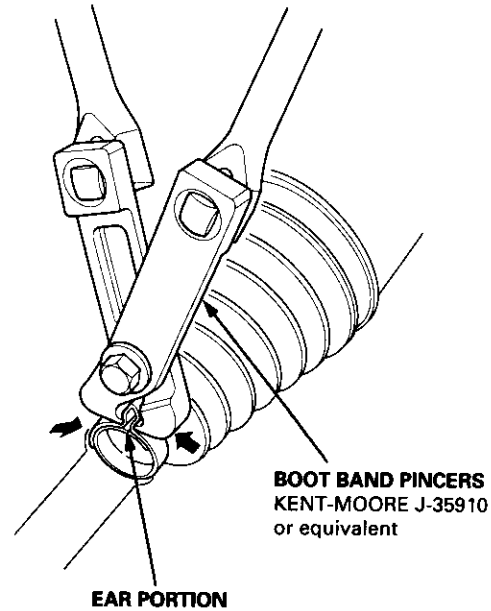
8. Install the outboard boot and the boot bands.
 - If the boot is the rubber type, go to step 13.
 - If the boot is the TPE type, go to step 9.
9. Fit the boot ends onto the driveshaft and outboard joint.



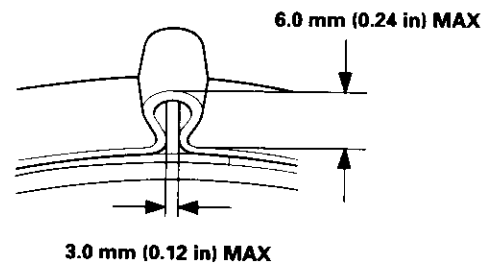
10. Set the ear clamp band by threading the tab into the holes of the band.



11. Close the ear portion of the band with a commercially available boot band pincers.

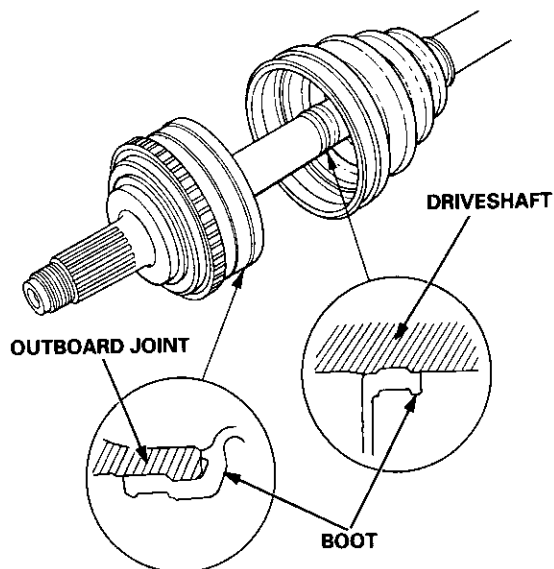


12. Check the clearance between the closed ear portion of the band. If the clearance is not within the standard, close the ear portion of the band further.

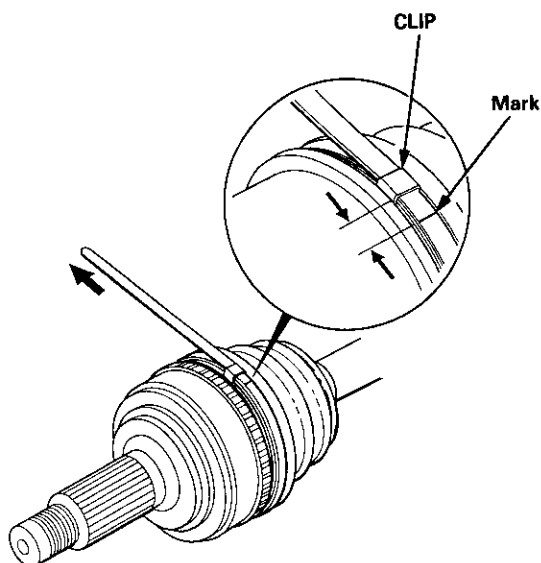




13. Fit the boot ends onto the driveshaft and the outboard joint

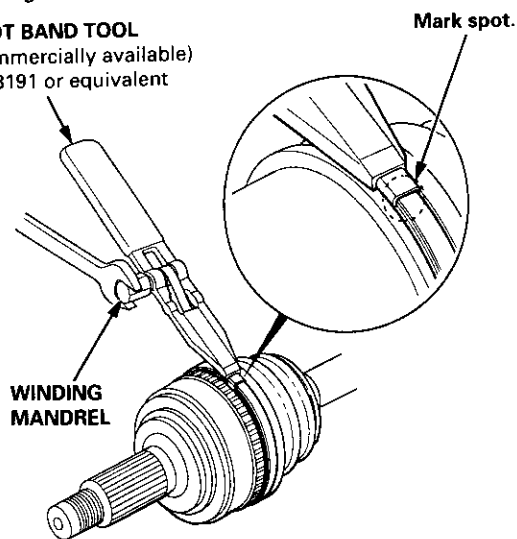


14. Fit the double loop boot bands onto the boot ends.
15. Pull up the slack in the band by hand.
16. Mark a position on the band 10 – 14 mm (0.4 – 0.6 in.) from the clip.

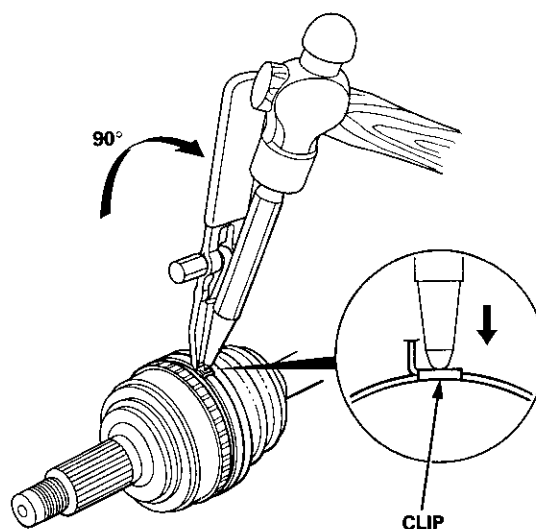


17. Thread the free end of the band through the nose section of a commercially available boot band tool KD-3191 or equivalent and into the slot on the winding mandrel.

BOOT BAND TOOL
(Commercially available)
KD-3191 or equivalent



18. Place a wrench on the winding mandrel of the boot band tool, and tighten the band until the marked spot on the band meets the edge of the clip.
19. Lift up the boot band tool to bend the free end of the band 90° to the clip. Center punch the clip, then fold over the remaining tail onto the clip.

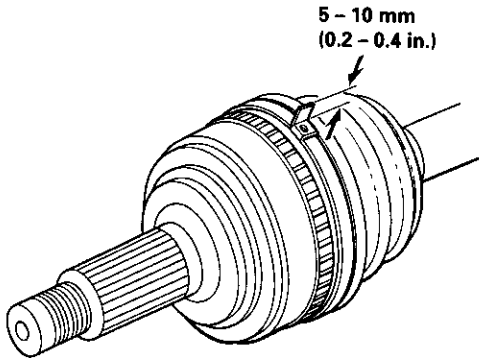


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Driveshafts

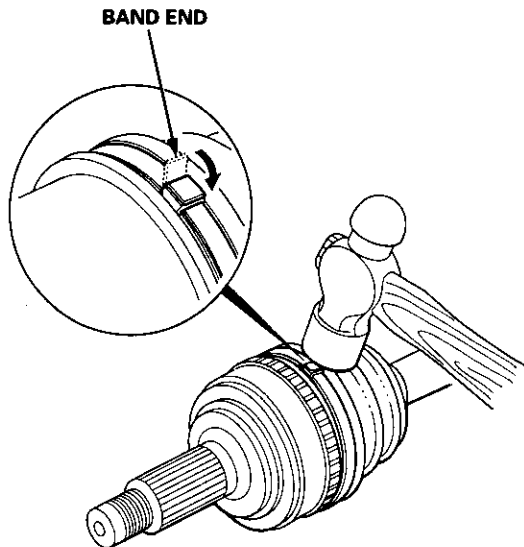
Reassembly (cont'd)

20. Unwind the boot band tool, and cut off the excess free end of the band to leave a 5 – 10 mm (0.2 – 0.4 in.) tail protruding from the clip.



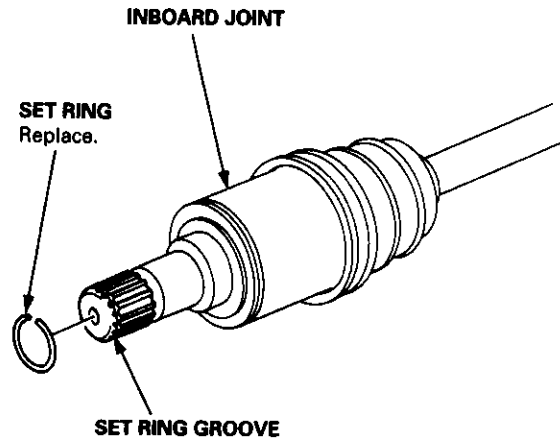
21. Bend the band by tapping it down with a hammer.

NOTE: Make sure the band and the clip does not interfere with anything, and the band does not move. Remove any grease remaining in the surrounding surfaces.

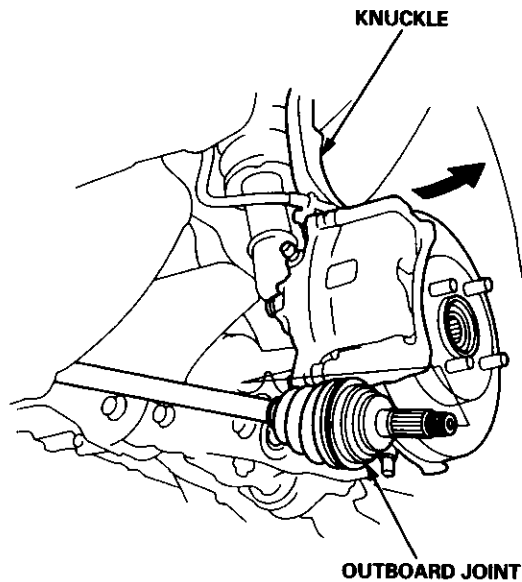


Installation

1. Install the new set ring onto the driveshaft groove. Always use a new set ring whenever the driveshaft is being installed.



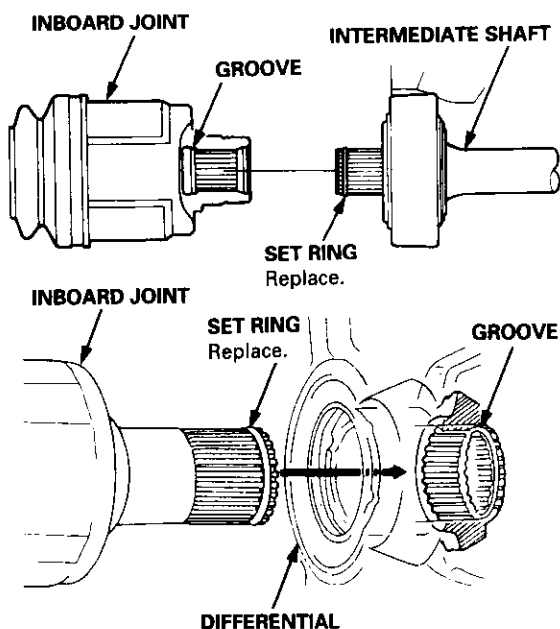
2. Install the outboard joint into the knuckle.





3. Insert the inboard end of the driveshaft into the differential or intermediate shaft until the set ring locks in the groove.

NOTE: Clean the areas where the driveshaft contact the transmission (differential) thoroughly with solvent or carburetor cleaner, and dry with compressed air.

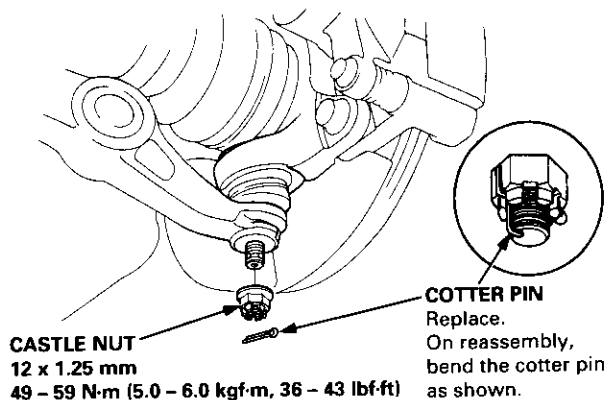


4. Install the knuckle on the lower arm, then tighten the castle nut and install a new cotter pin.

NOTE: Wipe off the grease before tightening the nut at the ball joint.

CAUTION:

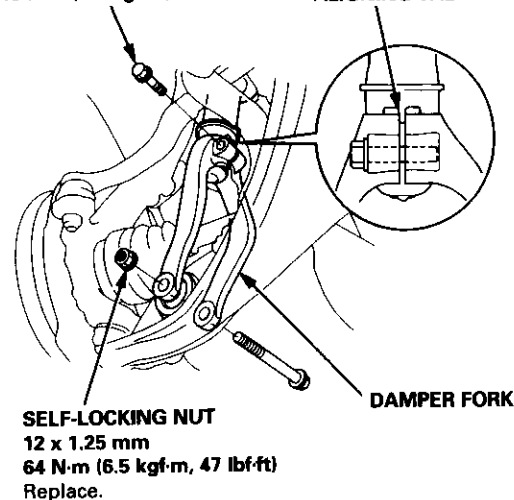
- Be careful not to damage the ball joint boot.
- Torque the castle nut to the lower torque specification, then tighten it only far enough to align the slot with the pin hole. Do not align the nut by loosening.



5. Install the damper fork over the driveshaft and onto the lower arm. Install the damper in the damper fork so the aligning tab is aligned with the slot in the damper fork.

FLANGE BOLT
10 x 1.25 mm
43 N·m (4.4 kgf·m, 32 lbf·ft)

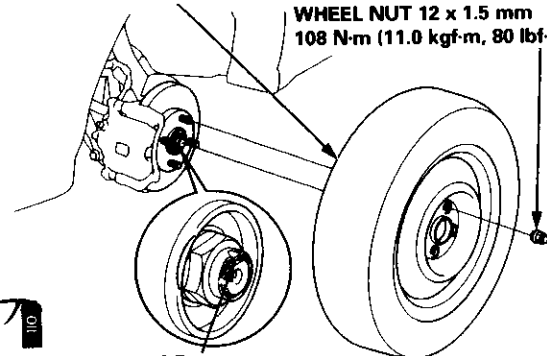
ALIGNING TAB



6. Loosely install the flange bolts and the new self-locking nut.
7. Apply oil to the seating surface of the new spindle nut.

FRONT WHEEL

WHEEL NUT 12 x 1.5 mm
108 N·m (11.0 kgf·m, 80 lbf·ft)



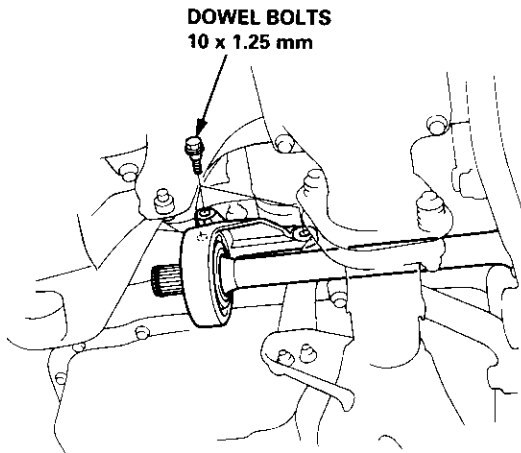
NOTE: After tightening, use a drift to stake the spindle nut shoulder against the driveshaft.

8. Install a new spindle nut, then tighten the nut.
9. Clean the mating surfaces of the brake disc and the wheel, then install the front wheel with the wheel nuts.
10. Tighten the flange bolts and the new self-locking nut with the vehicle's weight on the damper.
11. Refill the transmission with recommended fluid (see section 13 or 14).
12. Check the front wheel alignment and adjust if necessary (see section 18).

Intermediate Shaft

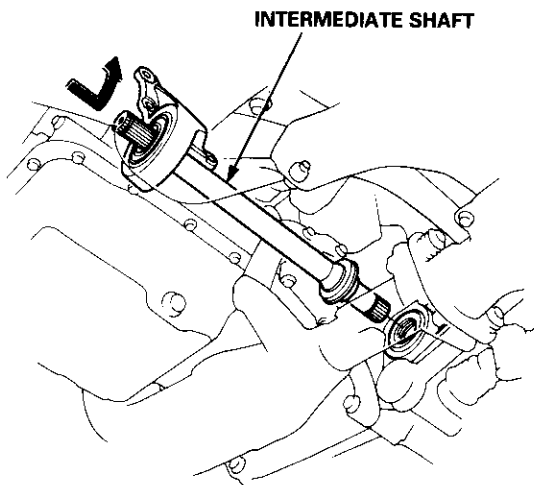
Removal

1. Drain the transmission oil or fluid (see section 13 or 14).
2. Remove the left driveshaft (see page 16-3).
3. Remove the three dowel bolts.



4. Remove the intermediate shaft from the differential.

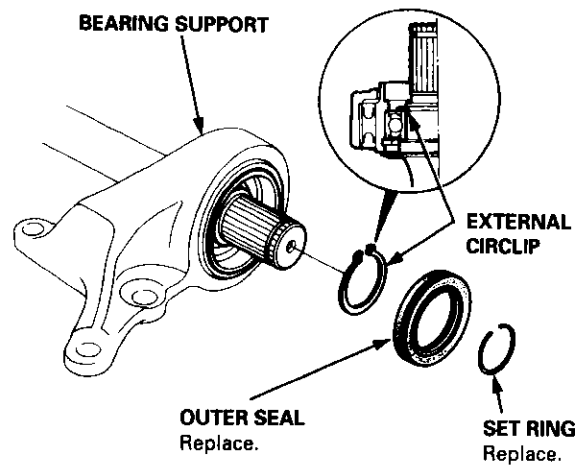
CAUTION: Hold the intermediate shaft horizontal until it is clear of the differential to prevent damage to the differential oil seal.



Disassembly

NOTE: Be careful not to damage the metal rings on the intermediate shaft during disassembly.

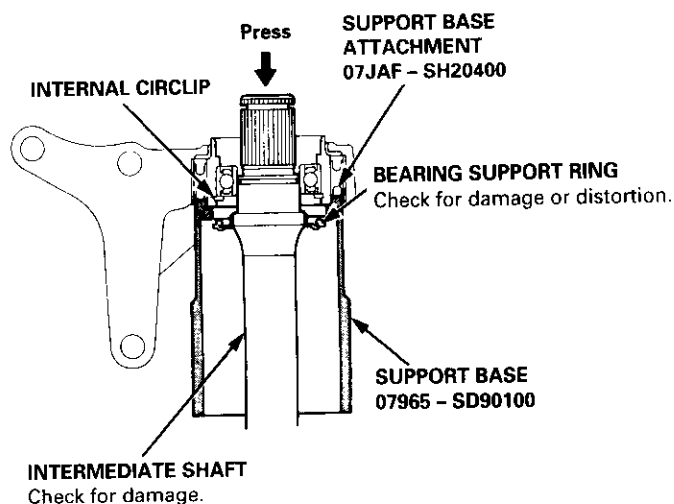
1. Remove the set ring.
2. Remove the intermediate shaft outer seal from the bearing support.
3. Remove the external circlip.



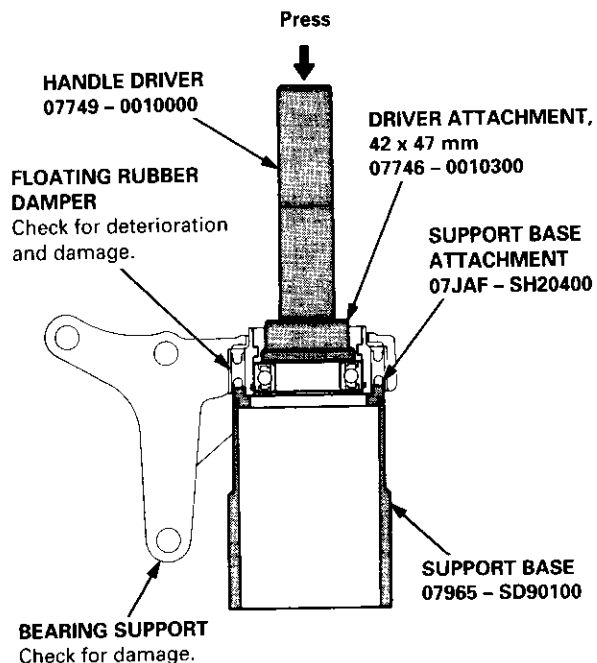


Disassembly

4. Press the intermediate shaft out of the shaft bearing using the special tools and a press as shown.
5. Remove the internal circlip.



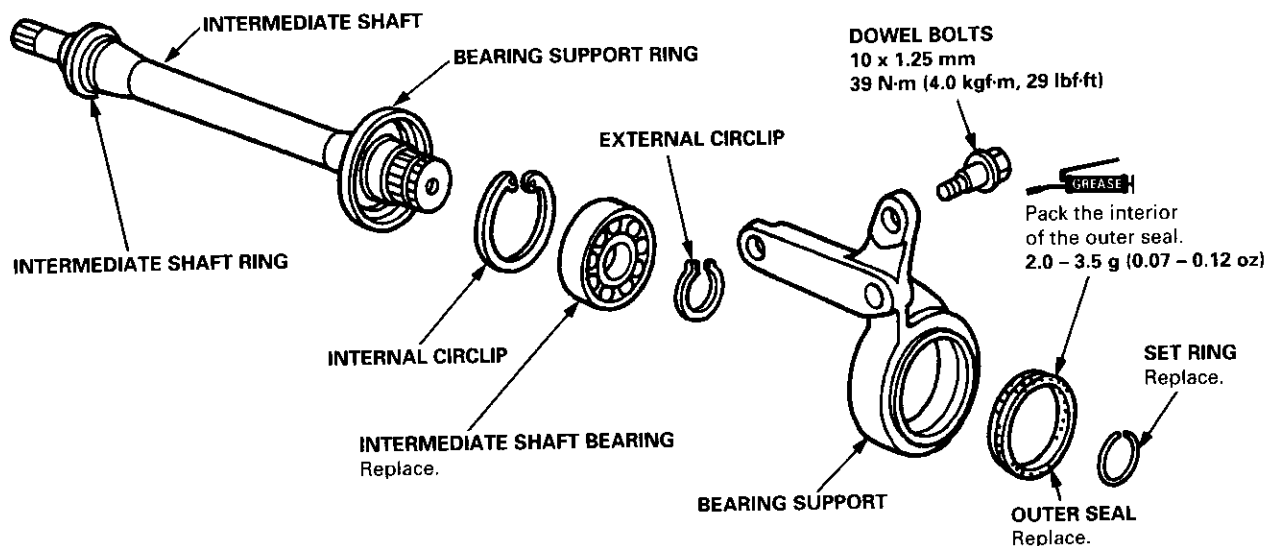
6. Press the intermediate shaft bearing out of the bearing support using the special tools and a press as shown.



Reassembly

NOTE:

- Clean the disassembled parts with solvent, and dry them thoroughly with compressed air. Do not wash the rubber parts with solvent.
- Be careful not to damage the metal rings on the intermediate shaft during reassembly.

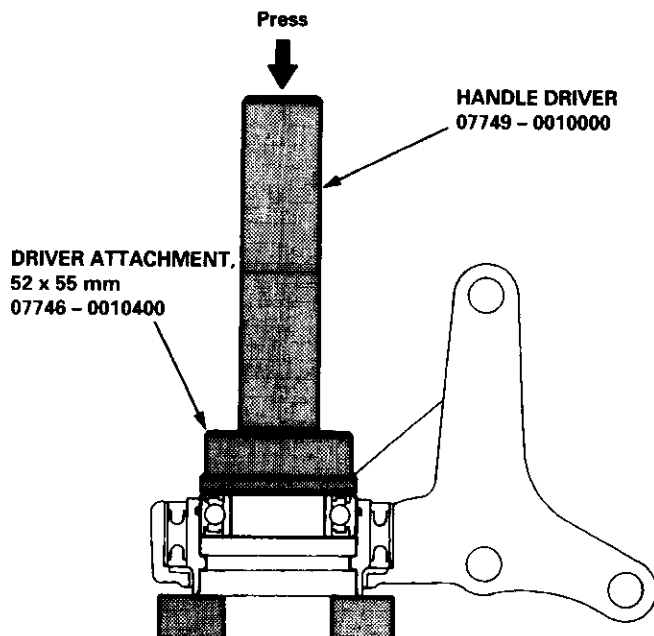


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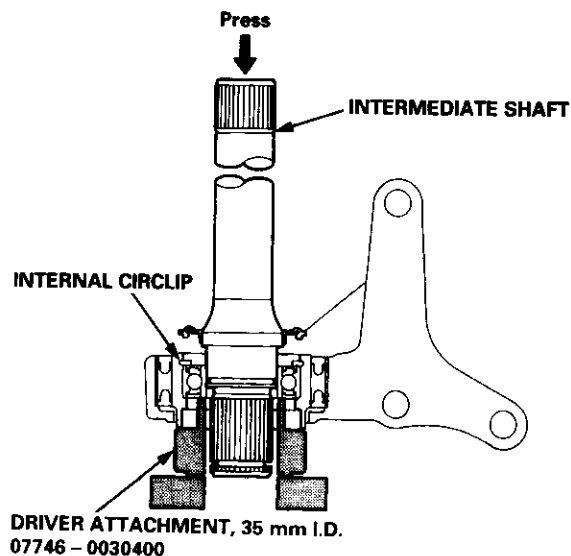
Intermediate Shaft

Reassembly (cont'd)

1. Press the intermediate shaft bearing into the bearing support using the special tools and a press as shown.

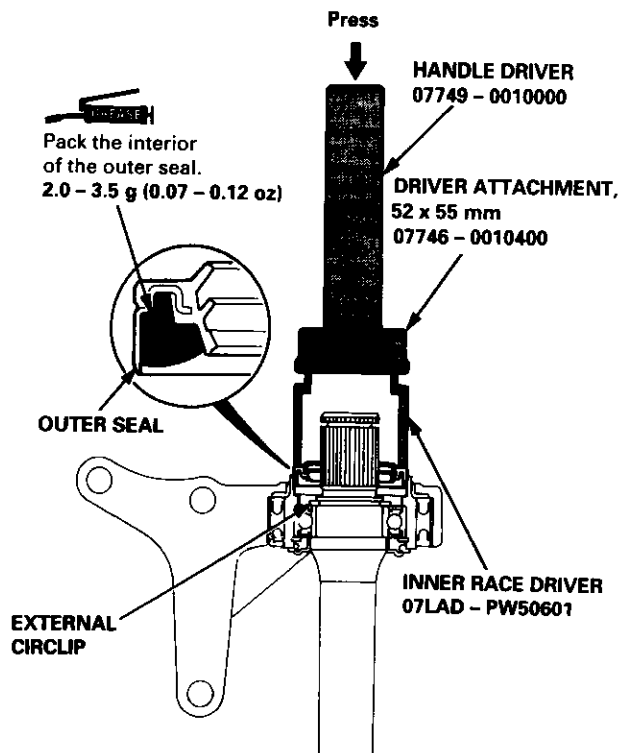


2. Seat the internal circlip in the groove of the bearing support.
3. Press the intermediate shaft into the shaft bearing using the special tools and a press.



4. Seat the external circlip in the groove of the intermediate shaft.
5. Install the outer seal into the bearing support using the special tools as shown.

NOTE: Install the seal flush with the bearing support.



6. Install the new set ring in the intermediate shaft groove.

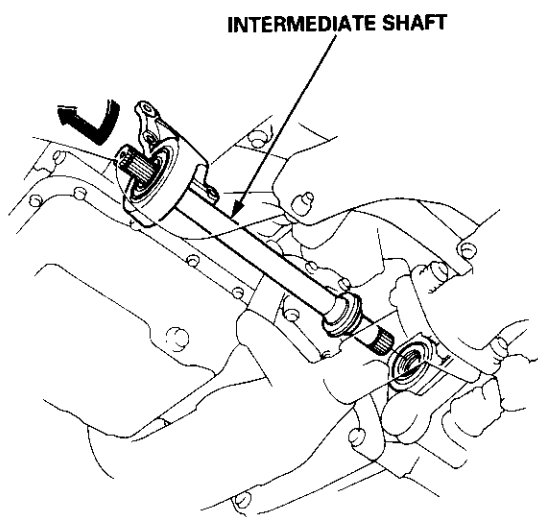


Installation

1. Insert the intermediate shaft assembly into the differential.

CAUTION: Hold the intermediate shaft horizontal to prevent damage to the differential oil seal.

NOTE: Clean the areas where the intermediate shaft contacts the transmission (differential) thoroughly with solvent or carburetor cleaner, and dry with compressed air.



2. Install the three dowel bolts, then tighten them.

DOWEL BOLTS
10 x 1.25 mm
39 N·m (4.0 kgf-m, 29 lbf-ft)

