

Transaxle

Driveline/Axle

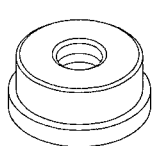
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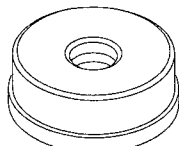
Driveline/Axle

Special Tools

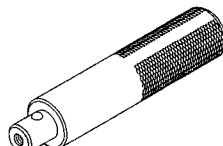
Ref.No.	Tool Number	Description	Qty
①	07746-0010300	Bearing Driver Attachment, 42 x 47 mm	1
②	07746-0010400	Attachment, 52 x 55 mm	1
③	07749-0010000	Driver Handle, 15 x 135L	1
④	07947-4630100	Fork Seal Driver, 39.2 x 49.5 x 15 mm	1
⑤	07965-SD90100	Support Base	1
⑥	07AAD-S3VA000	Driveshaft Remover	1
⑦	07AAE-SJAA100	Ball Joint Thread Protector, 14 mm	1
⑧	07LAD-PW50601	Attachment, 40 x 50 mm	1
⑨	07LAF-SM40300	Support Base Attachment	1
⑩	07MAC-SL0A202	Ball Joint Remover, 28 mm	1
⑪	07TMD-MAC0100	Fork Seal Driver, 46.2 mm	1
⑫	07XAC-001020A	Threaded Adapter, 24 x 1.5 mm	1
⑬	07XAC-001030A	Threaded Adapter, 26 x 1.5 mm	1



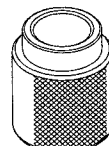
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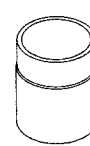
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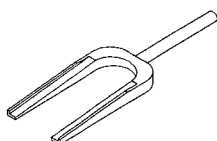
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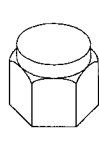
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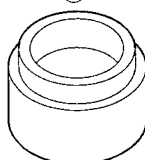
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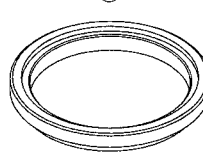
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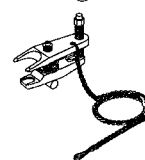
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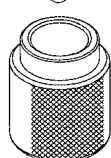
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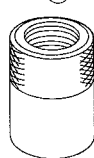
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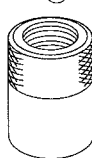
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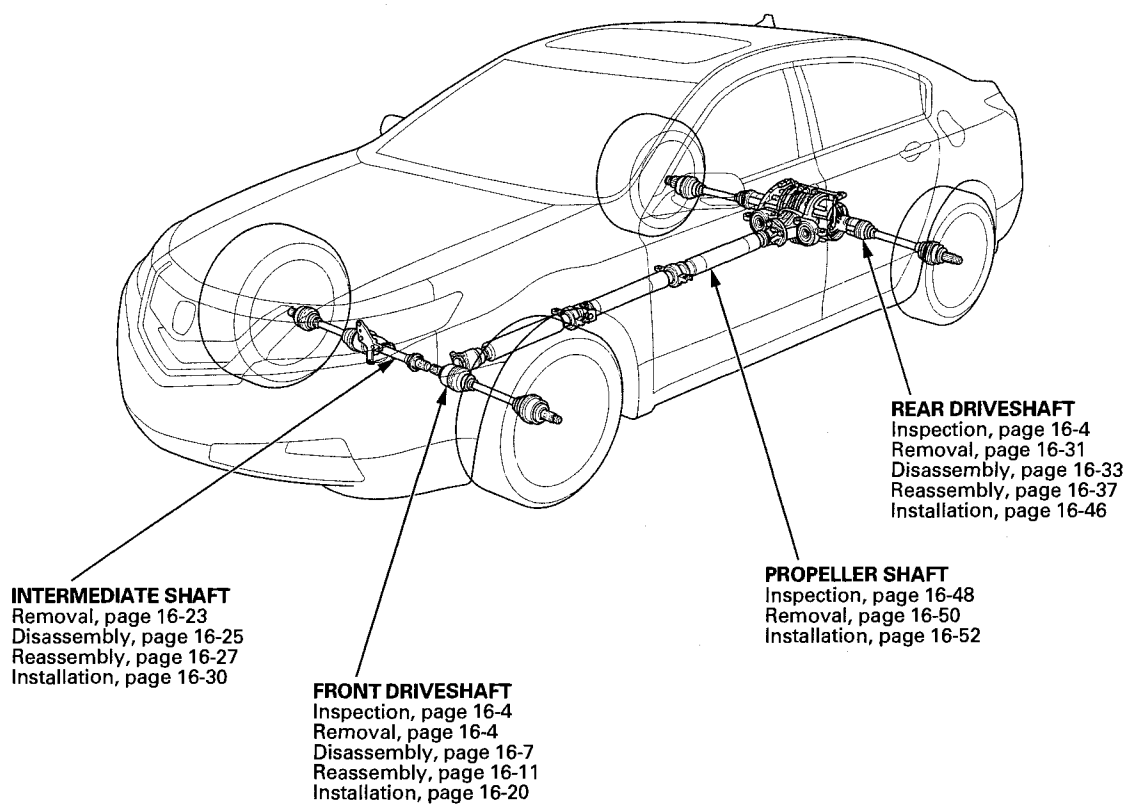
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Component Location Index

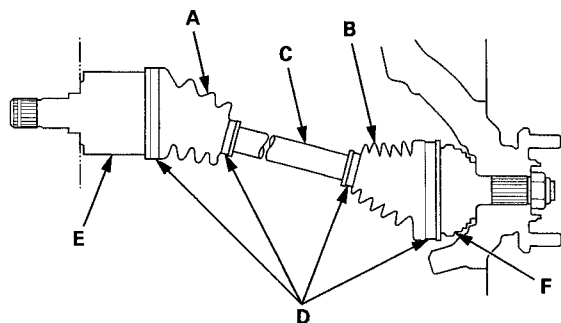


Driveline/Axle

Driveshaft Inspection

NOTE: For SH-AWD model: Make sure to use silicone-type (gray) boots on the right front driveshaft inboard joint.

1. Check the inboard boot (A) and the outboard boot (B) on the driveshaft (C) for cracks, damage, leaking grease, and loose boot bands (D). If any damage is found, replace the boot and the boot bands.



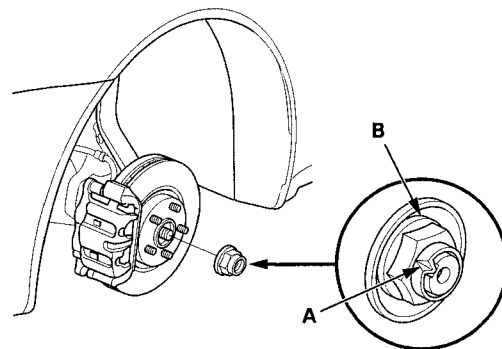
2. Check the driveshaft for cracks and damage. If any damage is found, replace the driveshaft.
3. Check the inboard joint (E) and the outboard joint (F) for cracks and damage. If any damage is found, replace the inboard joint or the outboard joint as an assembly.
4. Hold the inboard joint and turn the front wheel by hand, then make sure the joint is not excessively loose. If necessary, replace the inboard joint or the outboard joint as an assembly.

Front Driveshaft Removal

Special Tools Required

- Ball Joint Thread Protector, 14 mm 07AAE-SJAA100
- Ball Joint Remover, 28 mm 07MAC-SL0A202

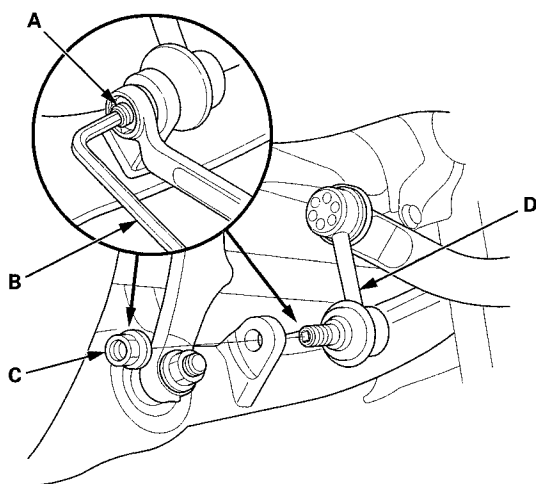
1. Raise and support the vehicle (see page 1-10).
2. Remove the front wheels.
3. Pry up the stake (A) on the spindle nut (B), then remove the nut.



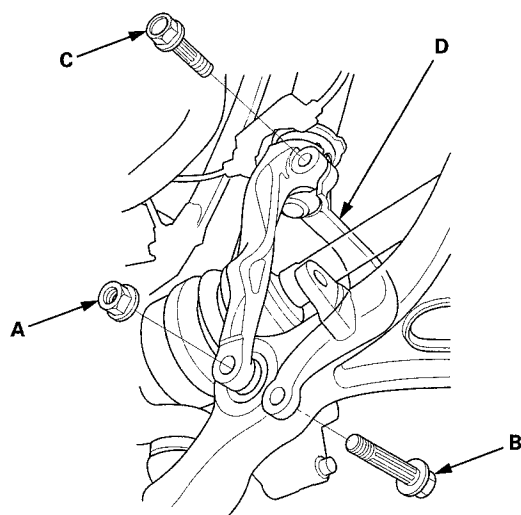
4. Drain the transmission fluid, then reinstall the drain plug with a new sealing washer:
 - Manual transmission (see page 13-14)
 - Automatic transmission (see page 14-203)



5. Hold the stabilizer joint pin (A) using a hex wrench (B), and remove the flange nut (C). Separate the front stabilizer link (D) from the lower arm.



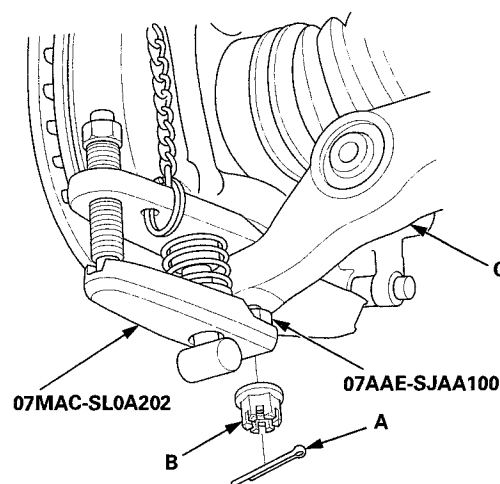
6. Remove the damper fork mounting nut (A), the damper fork mounting bolt (B), and the damper pinch bolt (C), then remove the damper fork (D).



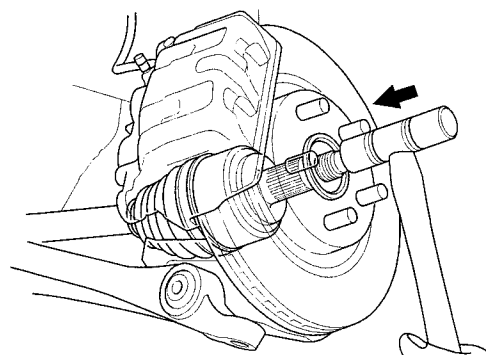
7. Remove the cotter pin (A) from the knuckle ball joint, then remove the castle nut (B). Separate the ball joint from the lower arm (C) using the ball joint remover (see page 18-12).

NOTE:

- Be careful not to damage the ball joint boot when installing the remover.
- Do not force or hammer on the lower arm, or pry between the lower arm and the knuckle. You could damage the ball joint.



8. Pull the knuckle outward, and separate the outboard joint from the front hub using a soft face hammer.



9. Remove exhaust pipe A.

- Without SH-AWD (see page 9-9)
- With SH-AWD (see page 9-10)

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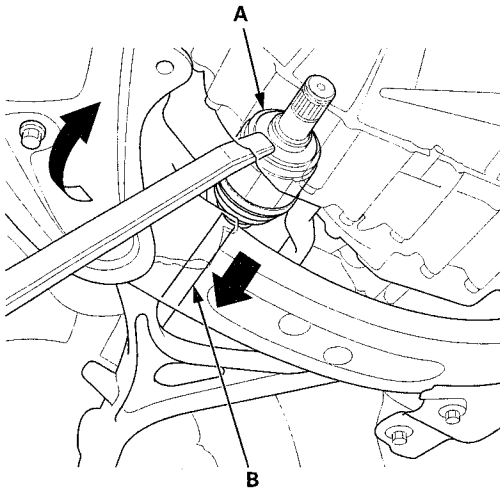
Driveline/Axle

Front Driveshaft Removal (cont'd)

10. Left driveshaft: Pry the inboard joint (A) from the differential using a prybar. Remove the driveshaft (B) as an assembly.

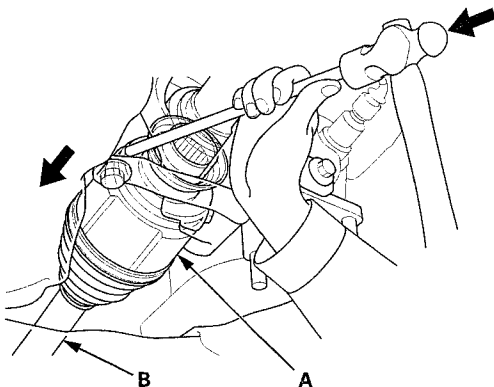
NOTE:

- Do not pull on the driveshaft, or the inboard joint may come apart. Pull the inboard joint straight out to avoid damaging the oil seal.
- Be careful not to damage the oil seal or the end of the inboard joint using the prybar.

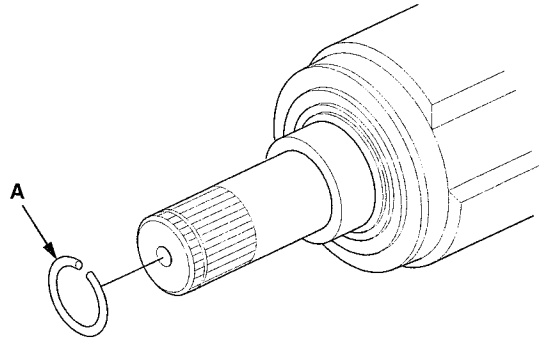


11. Right driveshaft: Drive the inboard joint (A) off of the intermediate shaft using a drift punch and a hammer. Remove the driveshaft (B) as an assembly.

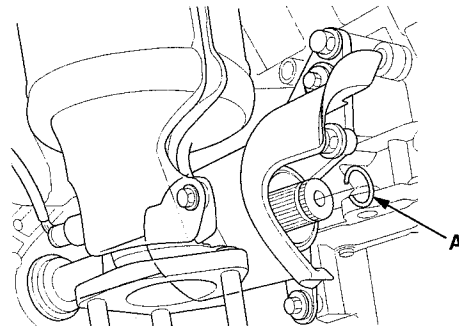
NOTE: Do not pull on the driveshaft, or the inboard joint may come apart.



12. Remove the set ring (A) from the left driveshaft inboard joint.



13. Remove the set ring (A) from the intermediate shaft.





Front Driveshaft Disassembly

Special Tools Required

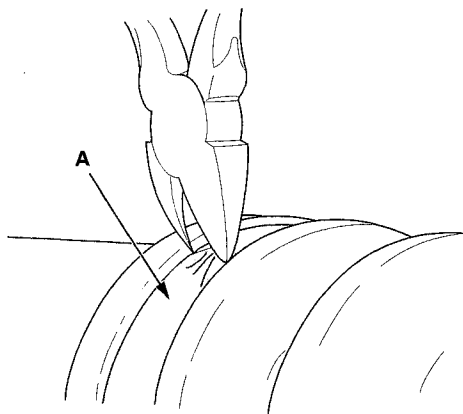
- Threaded Adapter, 26 x 1.5 mm 07XAC-001030A
- Slide Hammer 5/8"-18 UNF, commercially available
- Bearing Puller, commercially available
- Boot Band Pliers, commercially available

Inboard Joint Side

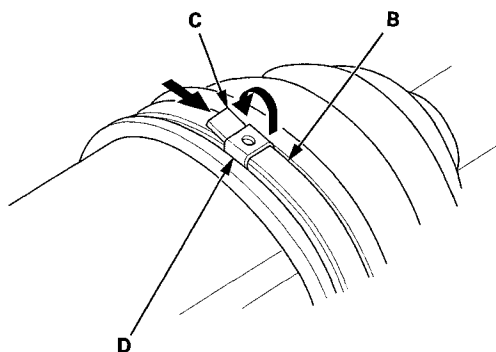
1. Remove the boot bands. Be careful not to damage the boot.

- If the boot band is a welded type (A), cut the boot band.
- If the boot band is a double loop type (B), lift up the band end (C), then push it into the clip (D).
- If the boot band is a low profile type (E), pinch the boot band using commercially available boot band pliers (F).

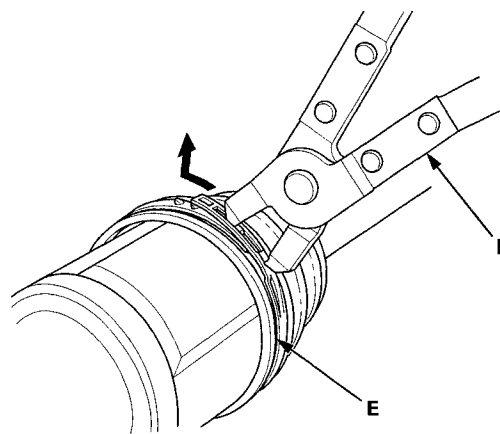
Welded type



Double loop type

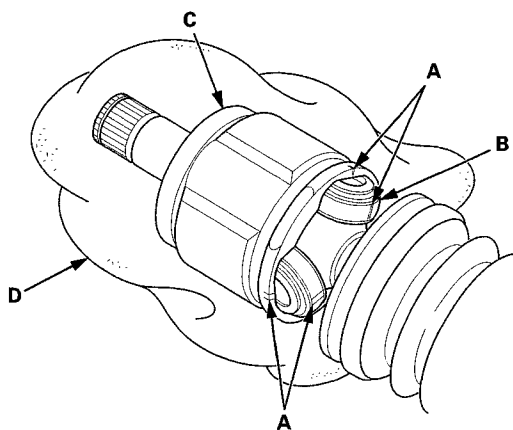


Low profile type



2. Make marks (A) on each roller (B) and the inboard joint (C) to identify the locations of the rollers to the grooves in the inboard joint.

NOTE: Do not engrave or scribe any marks on the rolling surface.



3. Remove the inboard joint on a clean shop towel (D). Be careful not to drop the rollers when separating them from the inboard joint.

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Driveline/Axle

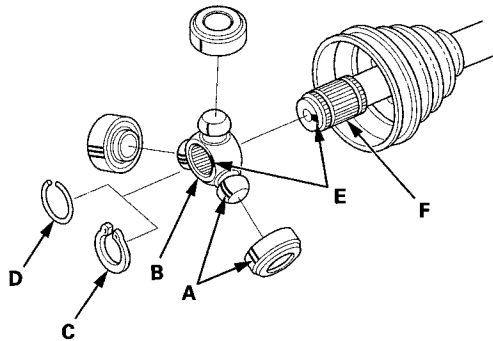
Front Driveshaft Disassembly (cont'd)

4. Remove the spider.

- For the except SH-AWD model right side with M/T, go to step 5.
- For the SH-AWD model right side with M/T, go to step 9.

5. Make marks (A) on the spider (B) that match the marks on the rollers, then remove the rollers.

NOTE: Do not engrave or scribe any marks on the rolling surface.



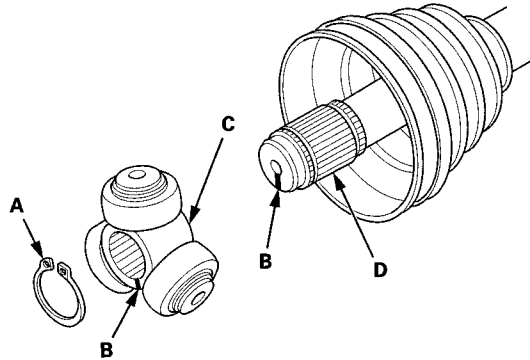
6. M/T model: Remove the snap ring (C).
A/T model: Remove the circlip (D).

7. Make marks (E) on the spider and the driveshaft (F) to identify the position of the spider on the shaft.

8. Remove the spider, then go to step 12.

NOTE: If necessary, use a commercially available bearing puller while being careful not to damage the spider.

9. Remove the snap ring (A).

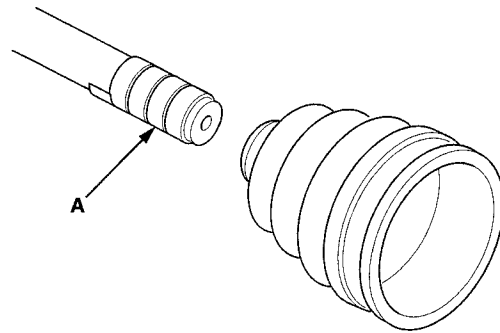


10. Make marks (B) on the spider (C) and the driveshaft (D) to identify the position of the spider on the shaft.

11. Remove the spider.

NOTE: If necessary, use a commercially available bearing puller while being careful not to damage the spider.

12. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the boot.



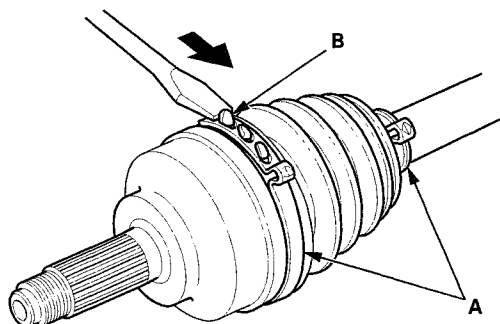
13. Remove the inboard boot. Be careful not to damage the boot.

14. Remove the vinyl tape.

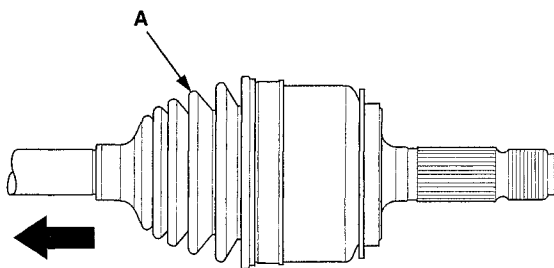


Outboard Joint Side

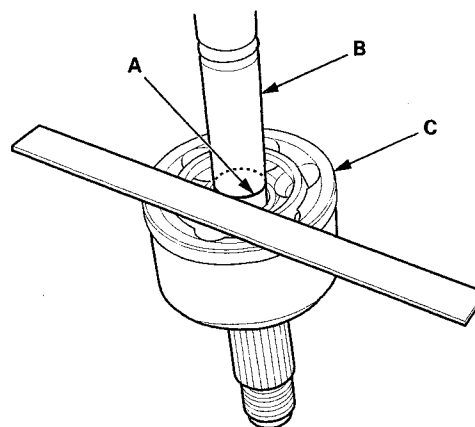
1. Remove the boot bands (A). Lift up the three tabs (B) using a screwdriver, then release the band. Be careful not to damage the boot.



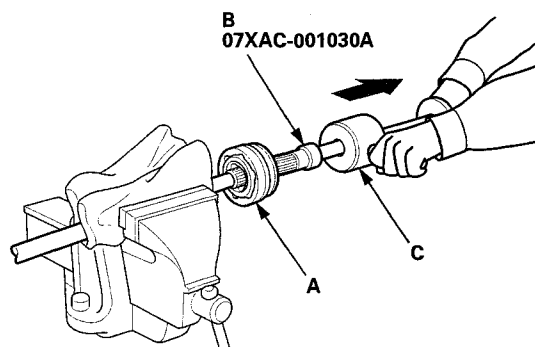
2. Slide the outboard boot (A) partially toward the inboard joint side. Be careful not to damage the boot.



3. Wipe off the grease to expose the driveshaft and the outboard joint inner race.
4. Make a mark (A) on the driveshaft (B) at the same level as the outboard joint end (C).



5. Securely clamp the driveshaft in a bench vise with a shop towel wrapped around the driveshaft.
6. Remove the outboard joint (A) using the 26 x 1.5 mm threaded adapter (B) and a commercially available 5/8" x 18 UNF slide hammer (C).



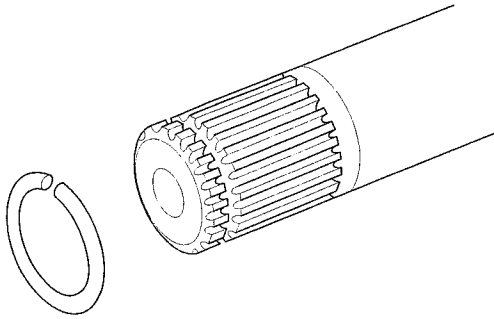
7. Remove the driveshaft from the bench vise.

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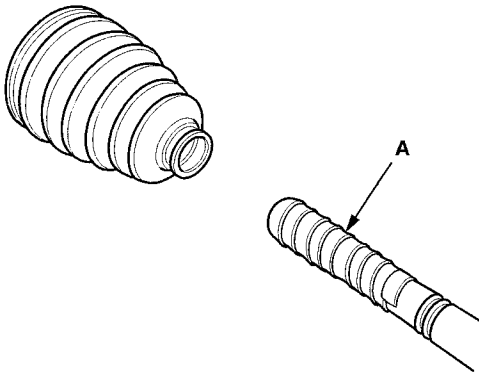
Driveline/Axle

Front Driveshaft Disassembly (cont'd)

8. Remove the stop ring from the driveshaft.



9. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the boot.



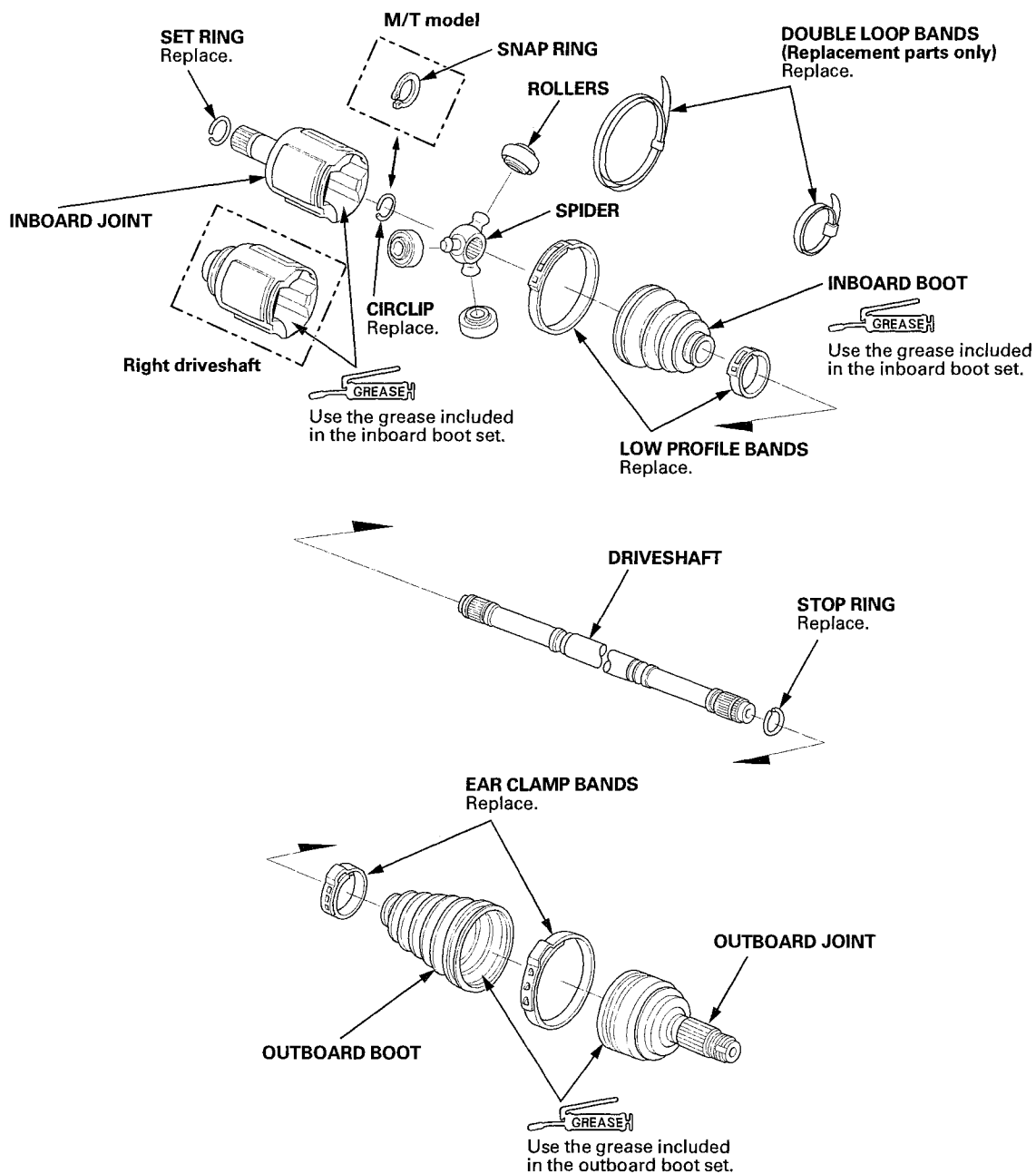
10. Remove the outboard boot. Be careful not to damage the boot.

11. Remove the vinyl tape.



Front Driveshaft Reassembly

Exploded View (Except SH-AWD model right side)

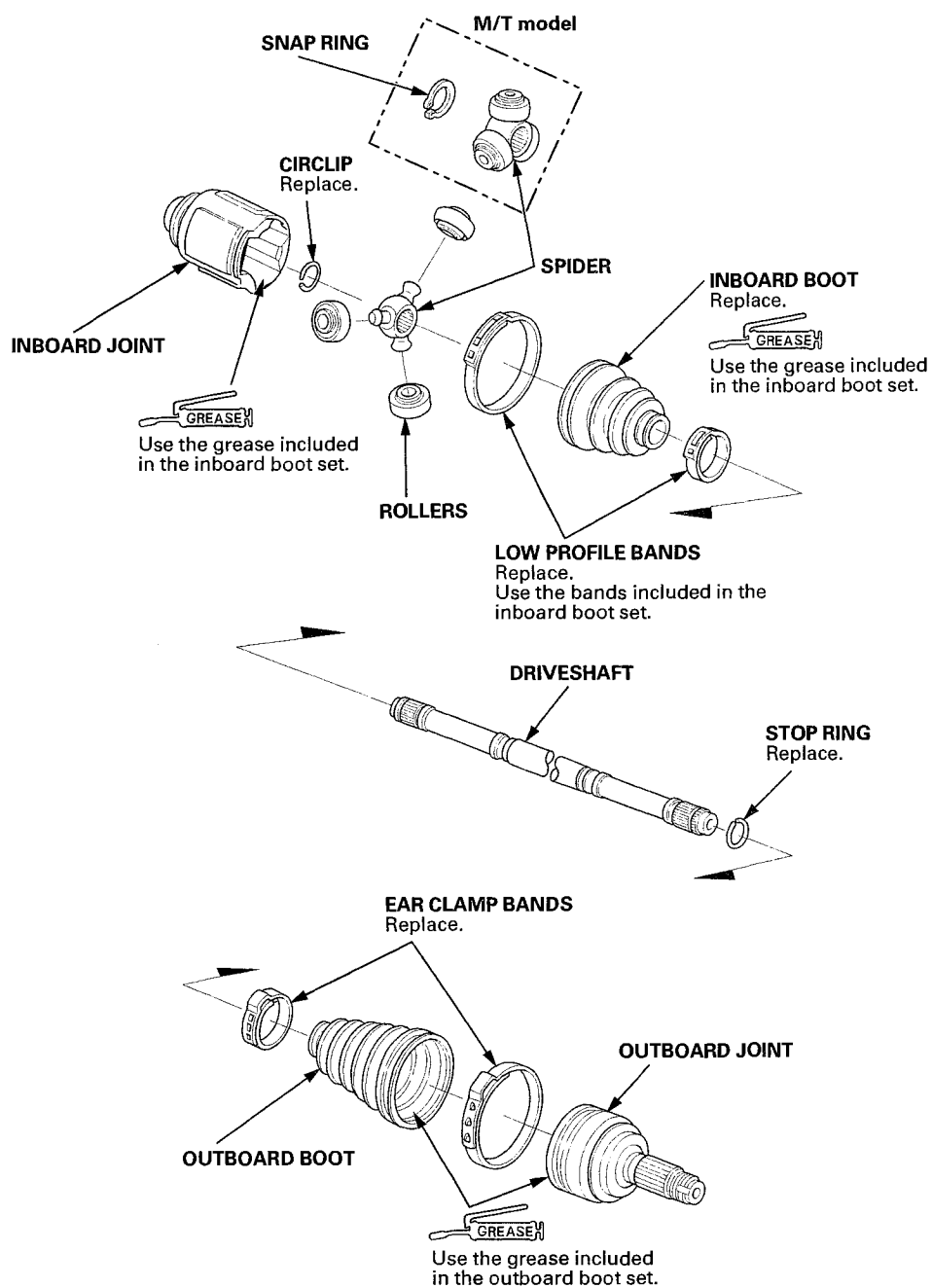


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Driveline/Axle

Front Driveshaft Reassembly (cont'd)

Exploded View (SH-AWD model right side)





Special Tools Required

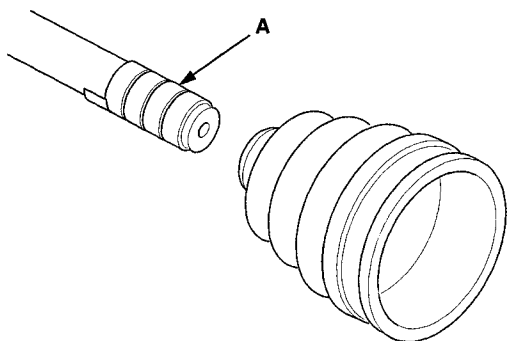
- Boot Band Tool KD-3191 or equivalent, commercially available
- Seal Clamp Tool Kent-Moore J-35910 or equivalent, commercially available
- Boot Band Pliers, commercially available

NOTE:

- Refer to the Exploded View, as needed, during this procedure.
- For SH-AWD model: Make sure to use silicone-type (gray) boots on the right front driveshaft inboard joint.
 - Do not reuse the removed right front driveshaft inboard joint boot.
 - Make sure to use the boot bands and the grease included in the inboard boot set or the inboard joint set.

Inboard Joint Side

1. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the inboard boot.



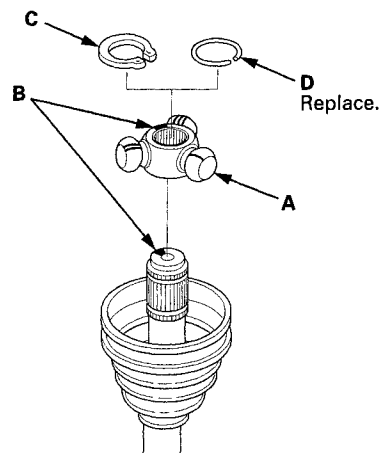
2. Install the inboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the inboard boot.

NOTE: Do not reuse the removed right front driveshaft inboard boot for the SH-AWD model.

3. Install the spider.

- For the except SH-AWD model right side with M/T, go to step 4.
- For the SH-AWD model right side with M/T, go to step 7.

4. Install the spider (A) onto the driveshaft by aligning the marks (B) you made on the spider and the end of the driveshaft.



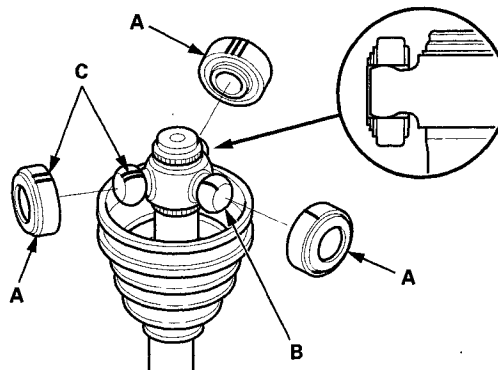
5. M/T model:
Install the snap ring (C) into the driveshaft groove.
A/T model:
Install a new circlip (D) into the driveshaft groove.

NOTE: Always rotate the circlip in its groove to make sure it is fully seated.

6. Fit the rollers (A) onto the spider (B) as shown, then go to step 9.

NOTE:

- Reinstall the rollers in their original positions on the spider by aligning the marks (C) you made.
- Hold the driveshaft pointed up to prevent the rollers from falling off.

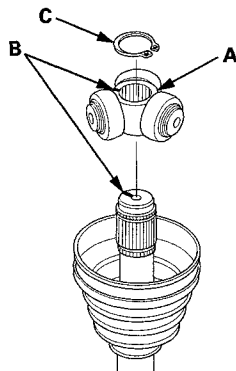


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Driveline/Axle

Front Driveshaft Reassembly (cont'd)

7. Install the spider (A) onto the driveshaft by aligning the marks (B) you made on the spider and the end of the driveshaft.



8. Install the snap ring (C).
9. Pack the inboard joint with the joint grease included in the new inboard boot set.

Grease quantity

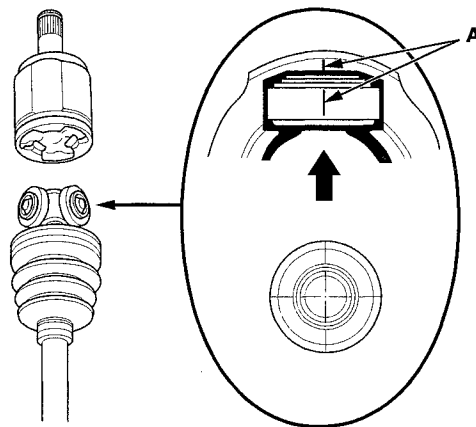
Inboard joint:

Model	Driveshaft	Quantity
M/T	Left	215–235 g (7.6–8.3 oz)
	Right	190–210 g (6.7–7.4 oz)
A/T (Without SH-AWD)	Left	110–160 g
	Right	3.9–5.6 oz
A/T (With SH-AWD)	Left	110–120 g
	Right	3.9–4.2 oz

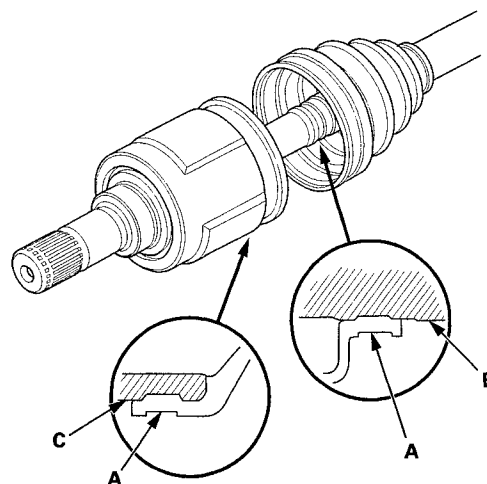


10. Fit the inboard joint onto the driveshaft, and note these items:

- Reinstall the inboard joint onto the driveshaft by aligning the marks (A) you made on the inboard joint and the rollers.
- Hold the driveshaft so the inboard joint is pointing up to prevent it from falling off.



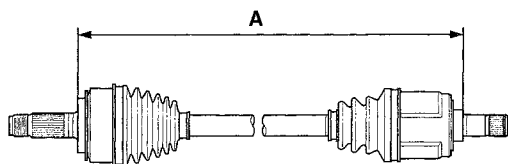
11. Fit the boot ends (A) onto the driveshaft (B) and the inboard joint (C).



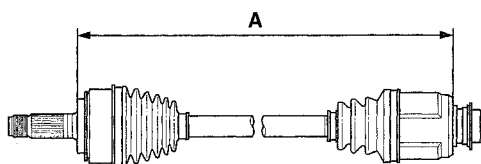


12. Adjust the length (A) of the driveshafts to the figure as shown, then adjust the boots to halfway between full compression and full extension. Bleed excess air from the boots by inserting a flat-tipped screwdriver between the boot and the joint.

Left driveshaft



Right driveshaft



Model	Driveshaft	Specified length (A)
M/T	Left	569.5—574.5 mm (22.42—22.62 in)
	Right	527.0—532.0 mm (20.75—20.94 in)
A/T	Left	574.0—579.0 mm (22.60—22.80 in)
	Right	532.0—537.0 mm (20.94—21.14 in)

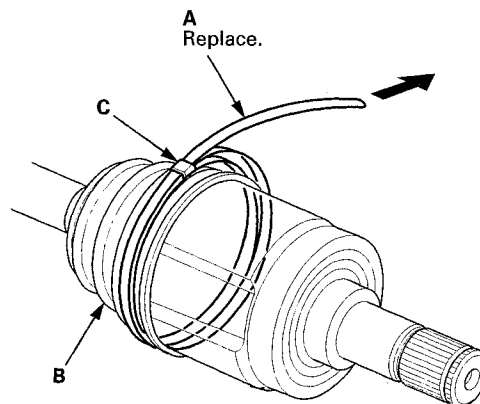
13. Install new boot bands.

NOTE: SH-AWD model right side is only the low profile type.

- For the double loop type, go to step 14.
- For the low profile type, go to step 23.

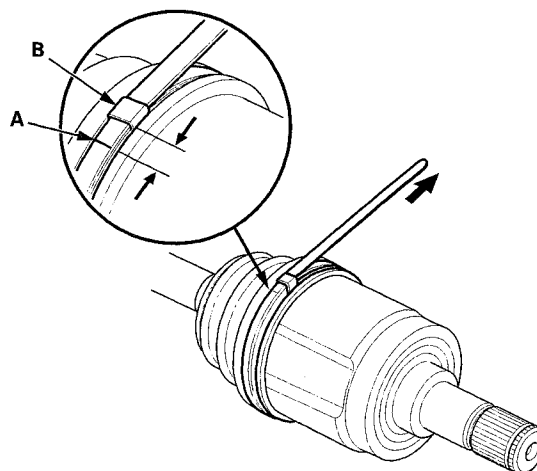
14. Fit the boot ends onto the driveshaft and the inboard joint, then install a new double loop band (A) onto the boot (B).

NOTE: Pass the end of the double loop band through the clip (C) twice in the direction of the forward rotation of the driveshaft.



15. Pull up the slack in the band by hand.

16. Mark a line (A) on the band 10—14 mm (0.4—0.6 in) from the clip (B).

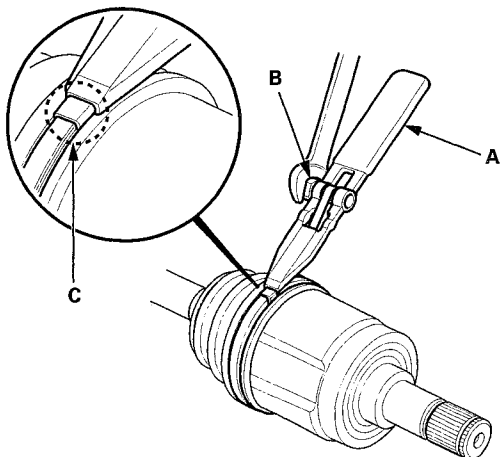


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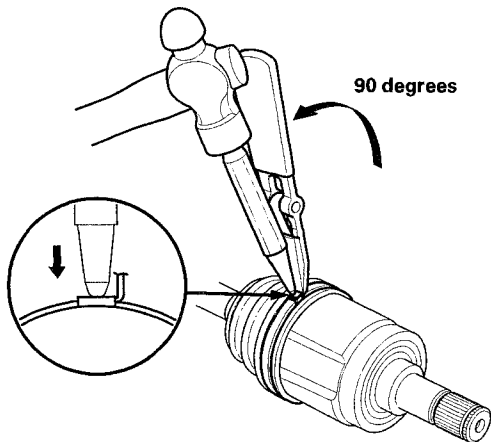
Driveline/Axle

Front Driveshaft Reassembly (cont'd)

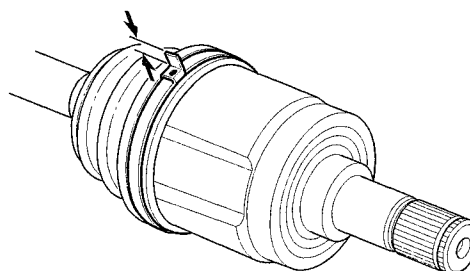
17. Thread the free end of the band through the nose section of the commercially available boot band tool (KD-3191 or equivalent) (A), and into the slot on the winding mandrel (B).



18. Using a wrench on the winding mandrel of the boot band tool, tighten the band until the marked line (C) 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 degrees to the clip. Center-punch the clip, then fold over the remaining tail onto the clip.



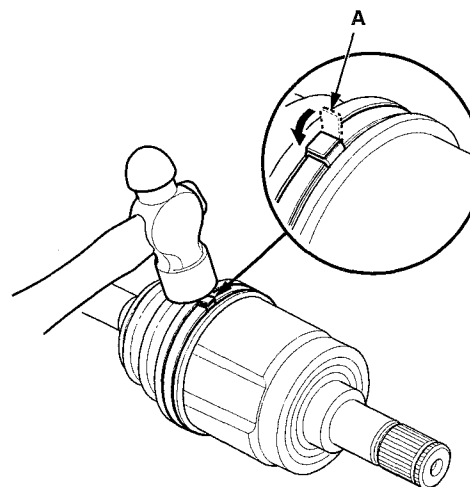
20. Unwind the boot band tool, and cut off the excess free end of the band to leave a 5–10 mm (0.2–0.4 in) tail protruding from the clip.



21. Bend the band end (A) by tapping it down using a hammer.

NOTE:

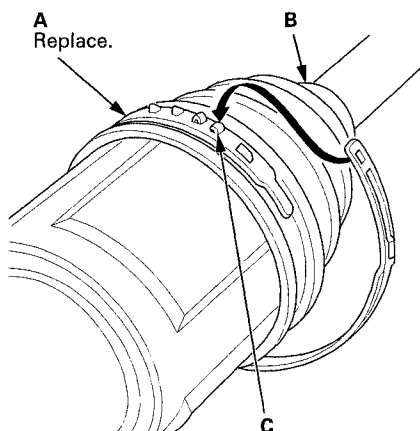
- Make sure the band and the clip do not interfere with anything on the vehicle, and the band does not move.
- Clean any grease remaining on the surrounding surfaces.



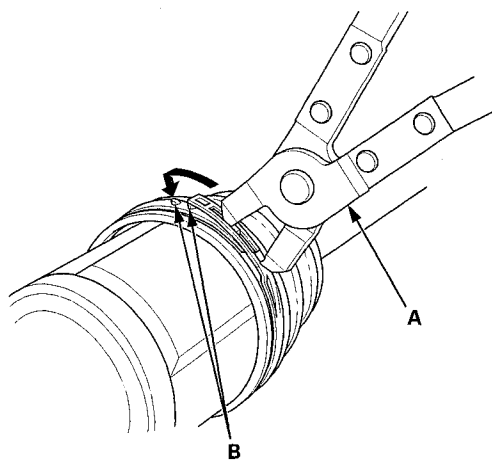
22. Repeat steps 14 through 21 for the band on the other end of the boot.



23. Install a new low profile band (A) onto the boot (B), then hook the tab (C) of the band.



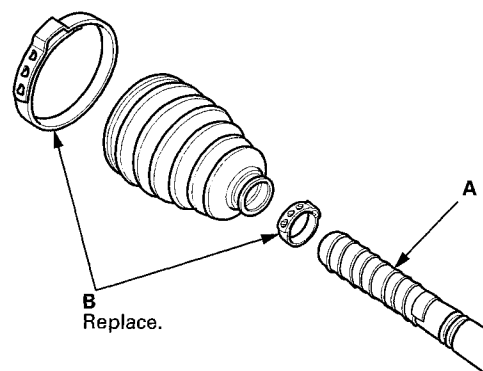
24. Close the hook portion of the band using commercially available boot band pliers (A), then hook the tabs (B) of the band.



25. Install the boot band on the other end of the boot, and repeat steps 23 and 24.

Outboard Joint Side

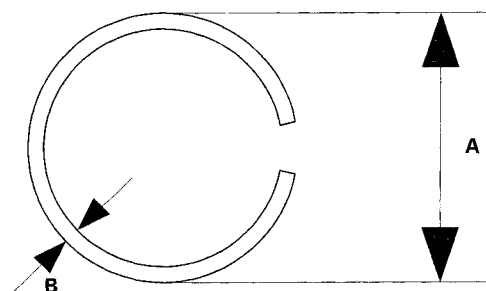
1. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the outboard boot.



2. Install new ear clamp bands (B) and the outboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the outboard boot.
3. Make sure to check the size of a new stop ring.

NOTICE

To avoid driveshaft and vehicle damage, make sure you install a new stop ring.



Stop ring specifications

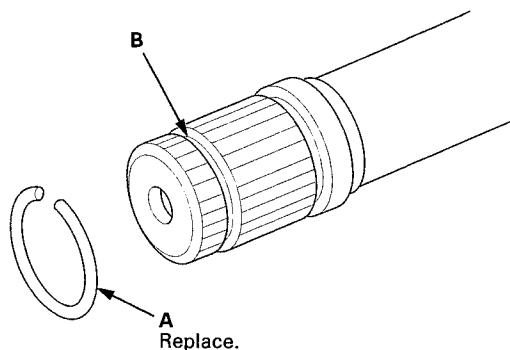
Model	Overall diameter (A)	Wire diameter (B)
M/T	31.2 mm (1.23 in)	2.0 mm (0.08 in)
A/T	29.2 mm (1.15 in)	

(cont'd)

Driveline/Axle

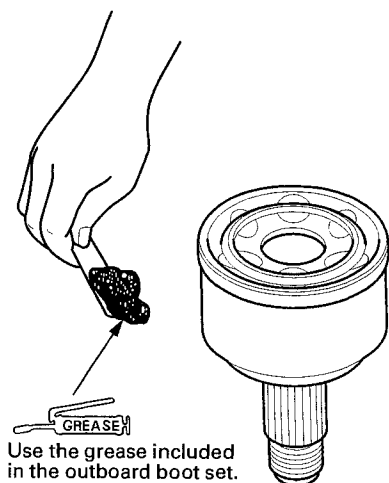
Front Driveshaft Reassembly (cont'd)

4. Install the stop ring (A) into the driveshaft groove (B).

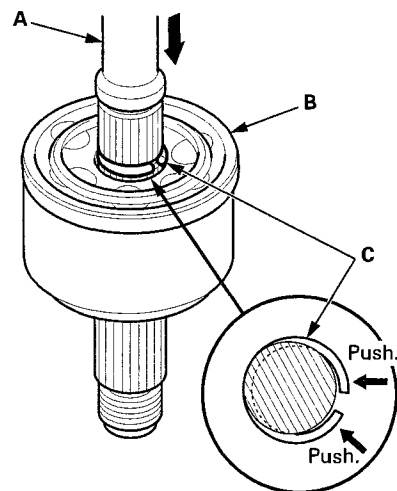


5. Pack about 35 g (1.2 oz) of grease included in the new outboard boot set into the driveshaft hole in the outboard joint.

NOTE: If you are installing a new outboard joint, the grease is already installed.

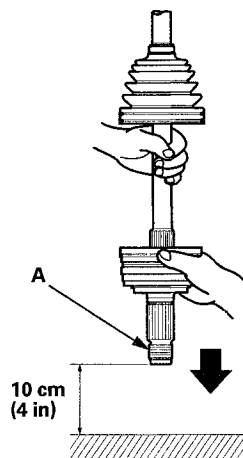


6. Insert the driveshaft (A) into the outboard joint (B) until the stop ring (C) is close to the joint.



7. To completely seat the outboard joint, pick up the driveshaft and the joint, and tap or hit the assembly onto a hard surface from a height of about 10 cm (4 in).

NOTE: Do not use a hammer, as excessive force may damage the driveshaft. Be careful not to damage the threaded section (A) of the outboard joint.

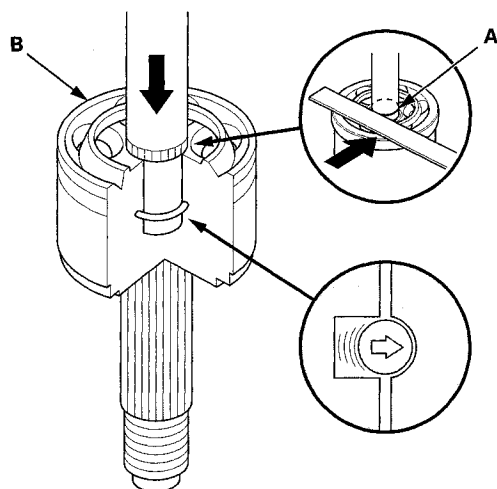




8. Check the alignment of the paint mark (A) you made with the outboard joint end (B).

NOTICE

To avoid driveshaft and vehicle damage, the shaft must be all the way into the outboard joint to ensure the stop ring is properly seated.

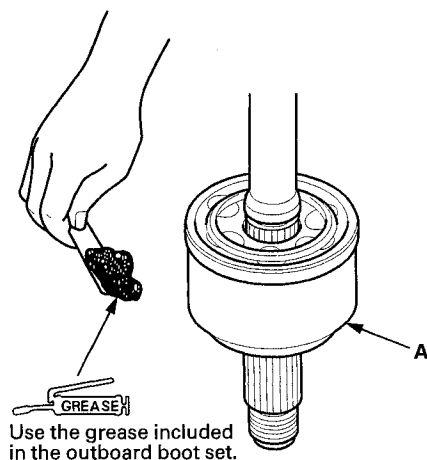


9. Pack the outboard joint (A) with the remaining joint grease included in the outboard boot set.

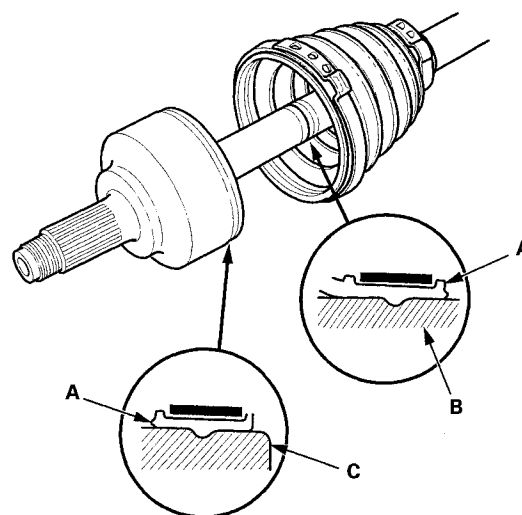
Total grease quantity

Outboard joint:

Model	Quantity
M/T	110–130 g (3.9–4.6 oz)
A/T	140–150 g (4.9–5.3 oz)

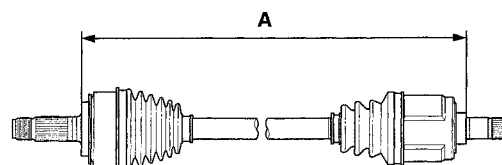


10. Fit the boot ends (A) onto the driveshaft (B) and the outboard joint (C). Bleed any excess air from the boot by inserting a flat-tipped screwdriver between the boot and the joint.

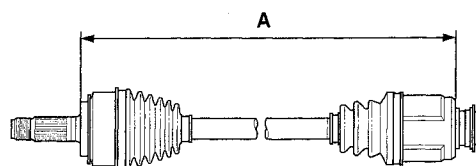


11. Inspect the length (A) of the driveshafts to the figure as shown, then adjust the boots to halfway between full compression and full extension.

Left driveshaft



Right driveshaft



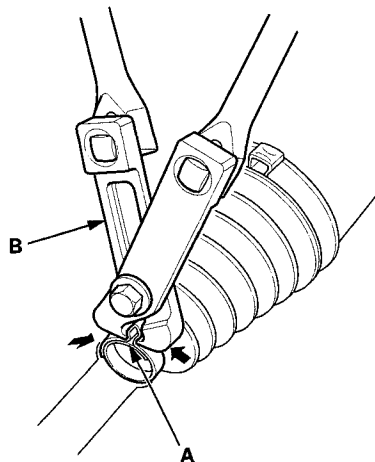
Model	Driveshaft	Specified length (A)
M/T	Left	569.5–574.5 mm (22.42–22.62 in)
	Right	527.0–532.0 mm (20.75–20.94 in)
A/T	Left	574.0–579.0 mm (22.60–22.80 in)
	Right	532.0–537.0 mm (20.94–21.14 in)

(cont'd)

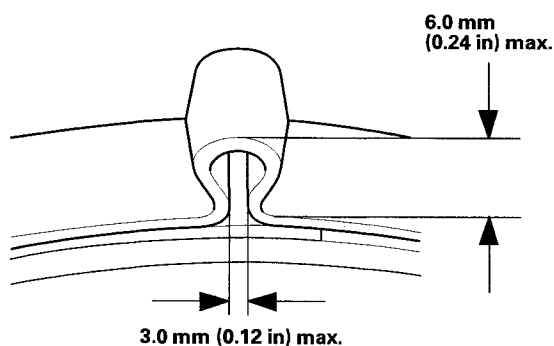
Driveline/Axle

Front Driveshaft Reassembly (cont'd)

12. Close the ear portion (A) of the band using a commercially available seal clamp tool (Kent-Moore J-35910 or equivalent) (B).



13. 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 tighter.



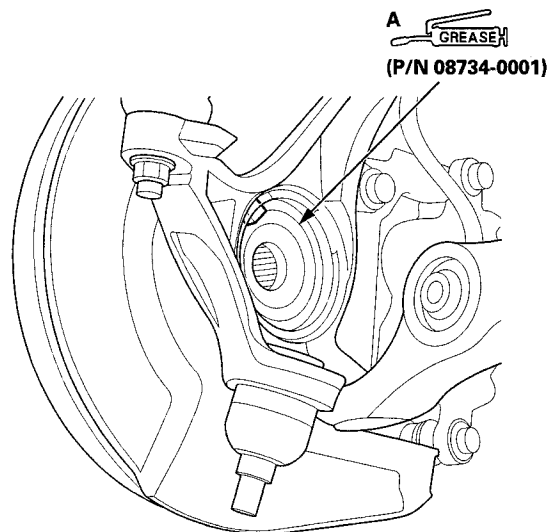
14. Repeat steps 12 and 13 for the band on the other end of the boot.

Front Driveshaft Installation

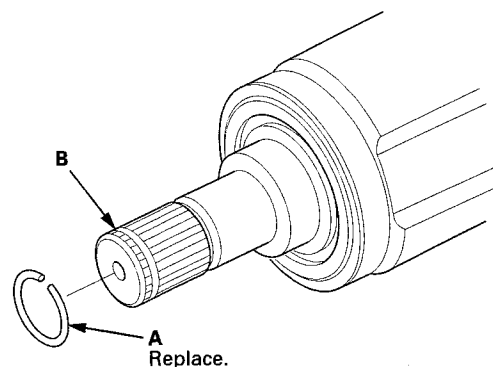
NOTE: Before starting installation, make sure the mating surfaces of the joint and the splined section are clean.

1. Apply about 5 g (0.18 oz) of moly 60 paste (P/N 08734-0001) to the contact area (A) of the outboard joint and the front wheel bearing.

NOTE: The paste helps prevent noise and vibration.

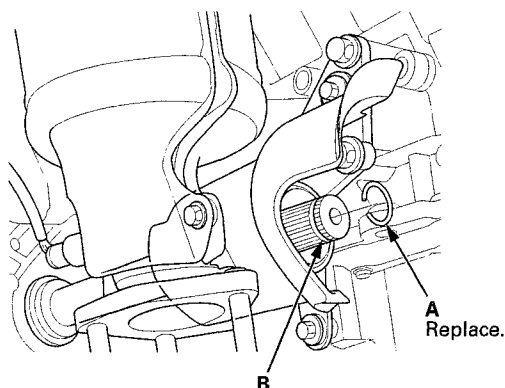


2. Install a new set ring (A) into the set ring groove (B) of the left driveshaft inboard joint.

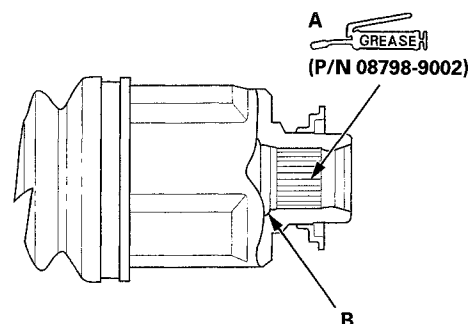




3. Install a new set ring (A) into the set ring groove (B) of the intermediate shaft.



4. Apply specified quantity of super high temp urea grease (P/N 08798-9002) to the whole splined surface (A) of the right driveshaft. After applying grease, remove the grease from the splined grooves at intervals of 2—3 splines and from the set ring groove (B) so that air can bleed from the intermediate shaft.



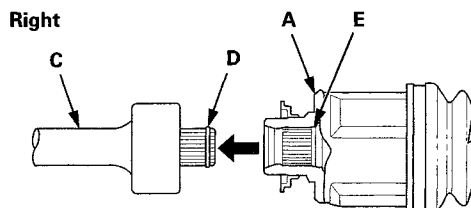
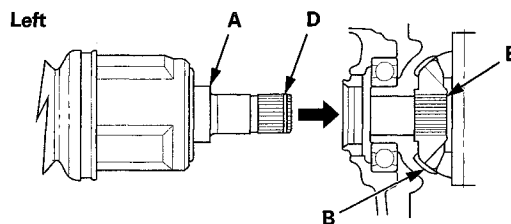
Model	Grease quantity
M/T	2.0—3.0 g (0.07—0.11 oz)
A/T	0.5—1.0 g (0.02—0.04 oz)

5. Clean the areas where the driveshaft contacts the differential thoroughly with solvent, and dry them with compressed air.

NOTE: Do not wash the rubber parts with solvent.

6. Insert the inboard end (A) of the driveshaft into the differential (B) or the intermediate shaft (C) until the set ring (D) locks in the groove (E).

NOTE: Insert the driveshaft horizontally to prevent damaging the oil seal.

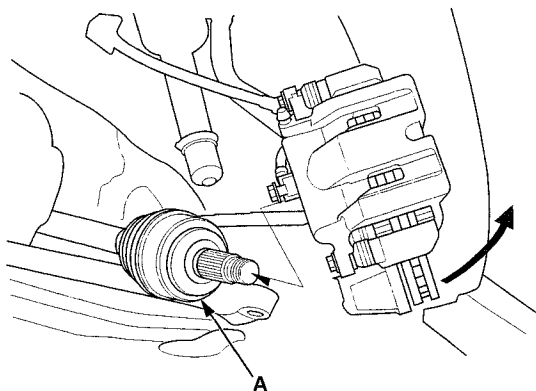


(cont'd)

Driveline/Axle

Front Driveshaft Installation (cont'd)

7. Install the outboard joint (A) into the front hub on the knuckle.



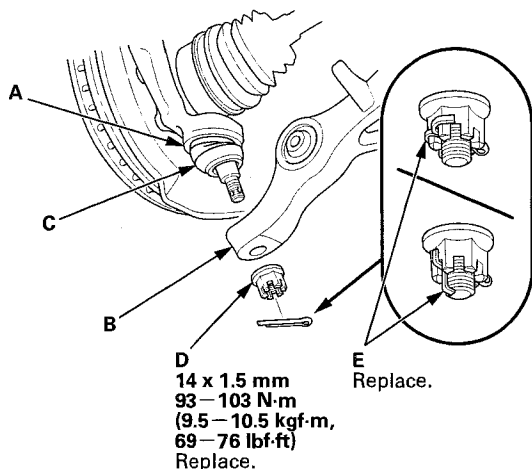
8. Install exhaust pipe A.

- Without SH-AWD (see page 9-9)
- With SH-AWD (see page 9-10)

9. Wipe off any grease contamination from the ball joint tapered section and threads, then install the knuckle (A) onto the lower arm (B). Be careful not to damage the ball joint boot (C). Wipe off the grease before tightening the nut at the ball joint. Torque the castle nut (D) to the lower torque specification, then tighten it only far enough to align the slot with the ball joint pin hole.

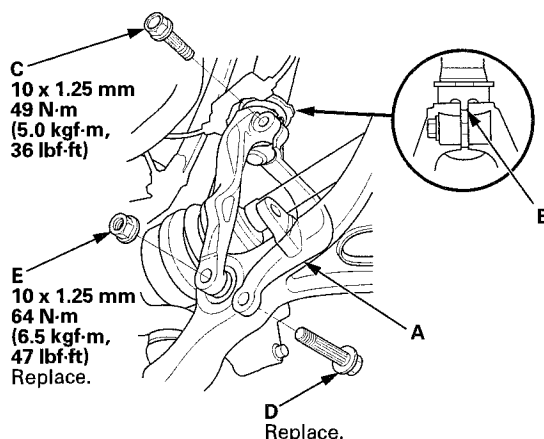
NOTE:

- Make sure the ball joint boot is not damaged or cracked.
- Do not align the nut by loosening it.



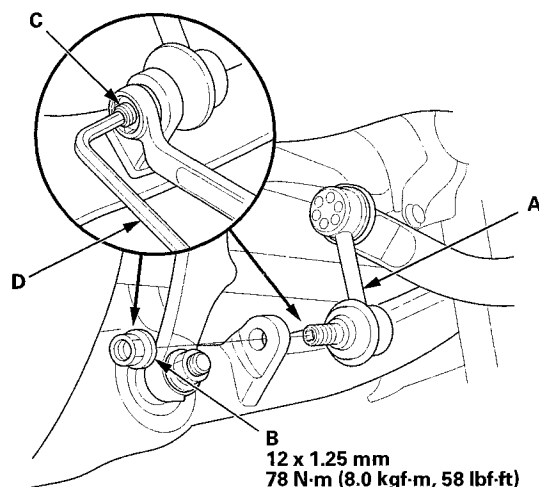
10. Install a new cotter pin (E) into the ball joint pin hole, and bend the cotter pin as shown.

11. Install the damper fork (A) over the driveshaft and onto the lower arm. Install the damper in the damper fork so the aligning tab (B) is aligned with the slot in the damper fork. Loosely install the damper pinch bolt (C).



12. Loosely install a new flange bolt (D) and a new damper fork mounting nut (E).

13. Connect the front stabilizer link (A) to the lower arm, and loosely install the flange nut (B). Hold the stabilizer link ball joint pin (C) using a hex wrench (D), and tighten the flange nut.



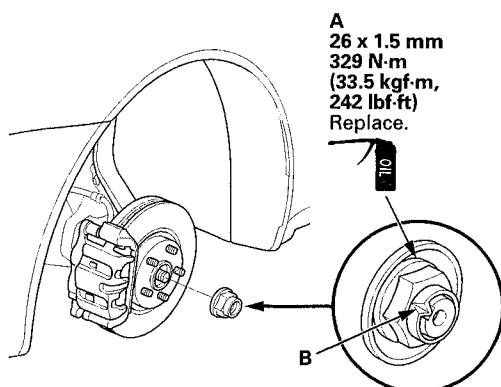


Intermediate Shaft Removal

14. Place a floor jack under the lower arm, and raise the suspension to load it with the vehicle's weight.

NOTE: Do not put the floor jack under the ball joint.

15. Tighten the damper pinch bolt and the damper fork mounting nut while holding the flange bolt to the specified torque values, then remove the floor jack.
16. Apply a small amount of engine oil to the seating surface of a new spindle nut (A).



17. Install the spindle nut, then tighten it. After tightening, use a drift to stake the spindle nut shoulder (B) against the driveshaft.
18. Clean the mating surfaces of the brake disc and the wheel, then install the front wheels.
19. Turn the front wheel by hand, and make sure there is no interference between the driveshaft and the surrounding parts.
20. Lower the vehicle .
21. Refill the transmission with recommended transmission fluid:
- Manual transmission (see page 13-14)
 - Automatic transmission (see page 14-203)
22. Check the wheel alignment, and adjust it if necessary (see page 18-5).
23. Test-drive the vehicle.

1. Drain the transmission fluid, then reinstall the drain plug with a new sealing washer:

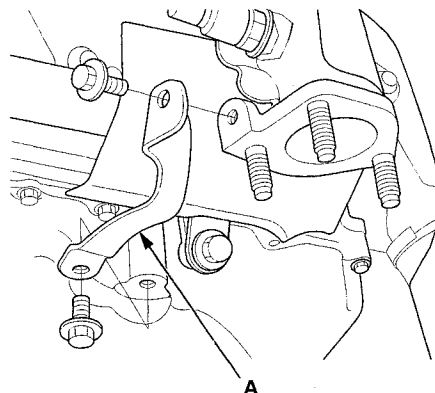
- Manual transmission (see page 13-14)
- Automatic transmission (see page 14-203)

2. Remove exhaust pipe A:

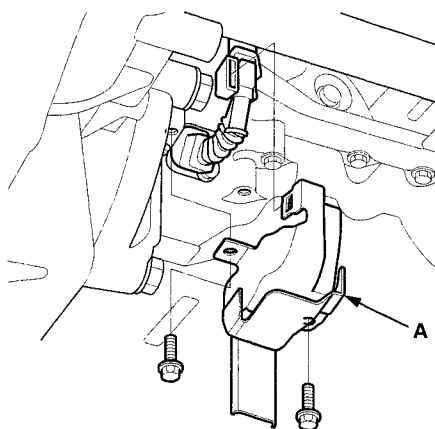
- Without SH-AWD (see page 9-9)
- With SH-AWD (see page 9-10)

3. Remove the right front driveshaft (see page 16-4).

4. Remove the rear warm up three way catalytic converter (WU-TWC) bracket (A).



5. Remove the crankshaft position (CKP) sensor cover (A).

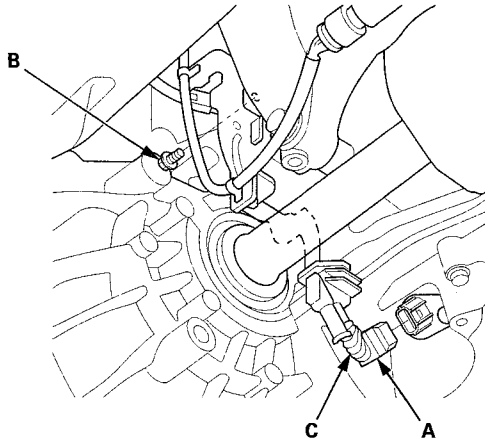


(cont'd)

Driveline/Axle

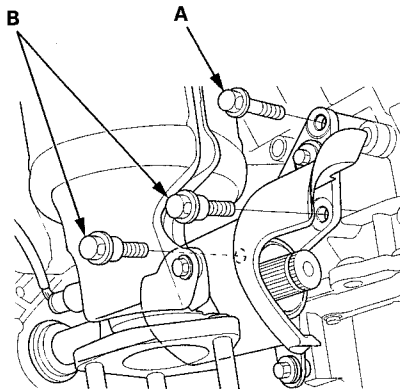
Intermediate Shaft Removal (cont'd)

6. Disconnect the CKP sensor connector (A), and remove the sensor harness clamp bracket bolt (B).

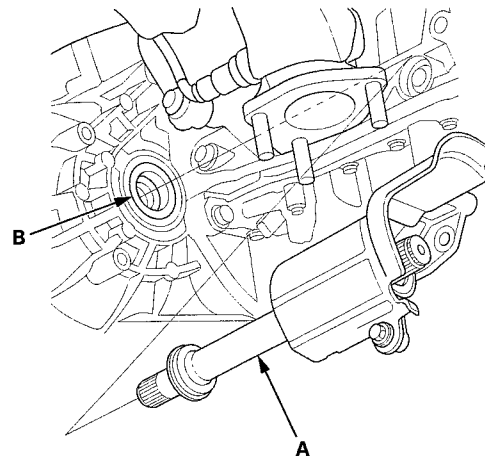


7. Swing the sensor harness (C) out of the way to prevent damaging it.

8. Remove the flange bolt (A) and the two dowel bolts (B).



9. Remove the intermediate shaft (A) from the differential. Hold the intermediate shaft horizontal until it is clear of the differential to prevent damaging the oil seal (B).



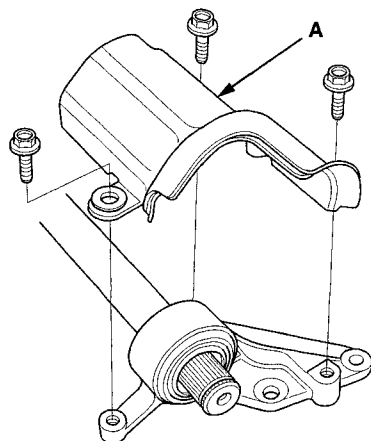


Intermediate Shaft Disassembly

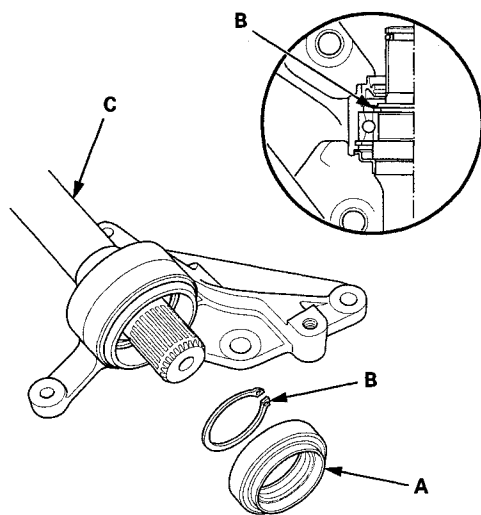
Special Tools Required

- Support Base Attachment 07LAF-SM40300
- Support Base 07965-SD90100
- Bearing Driver Attachment, 42 x 47 mm 07746-0010300
- Driver Handle, 15 x 135L 07749-0010000

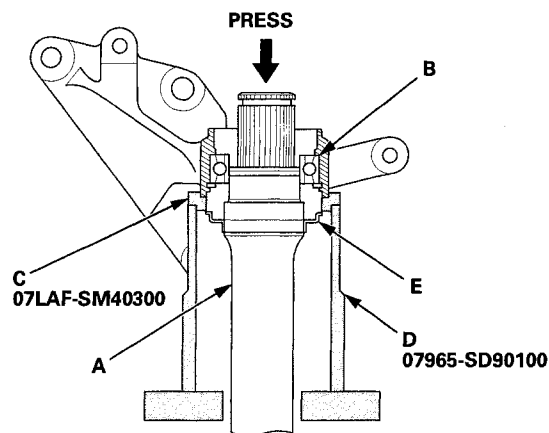
1. Remove the heat shield (A).



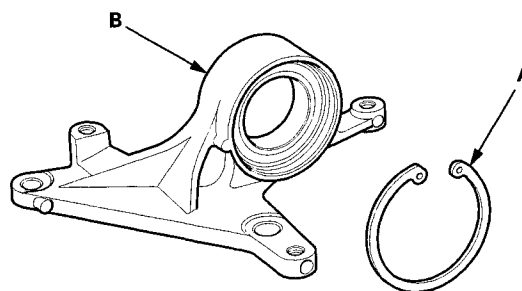
2. Remove the outer seal (A) and the external snap ring (B) from the intermediate shaft (C).



3. Press the intermediate shaft (A) out of the intermediate shaft bearing (B) using the support base attachment (C), the support base (D), and a press. Be careful not to damage the bearing support ring (E) on the intermediate shaft during disassembly.



4. Remove the internal snap ring (A) from the bearing support (B).

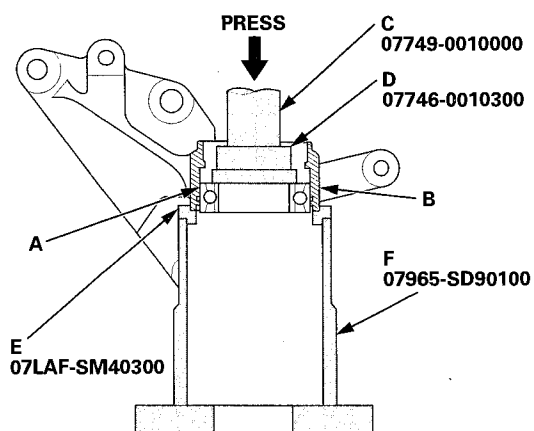


(cont'd)

Driveline/Axle

Intermediate Shaft Disassembly (cont'd)

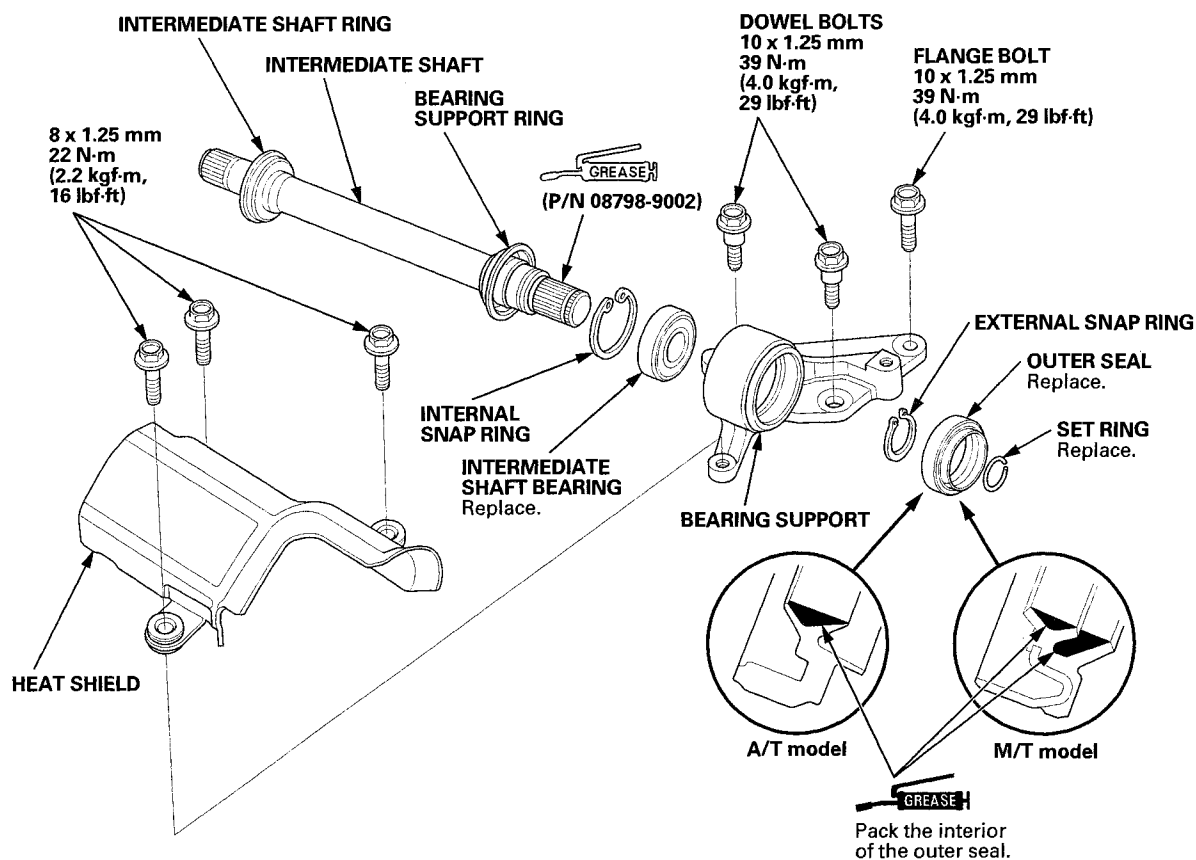
5. Press the intermediate shaft bearing (A) out of the bearing support (B) using the 15 x 135L driver handle (C), the 42 x 47 mm bearing driver attachment (D), the support base attachment (E), the support base (F), and a press.





Intermediate Shaft Reassembly

Exploded View



(cont'd)

Driveline/Axle

Intermediate Shaft Reassembly (cont'd)

Special Tools Required

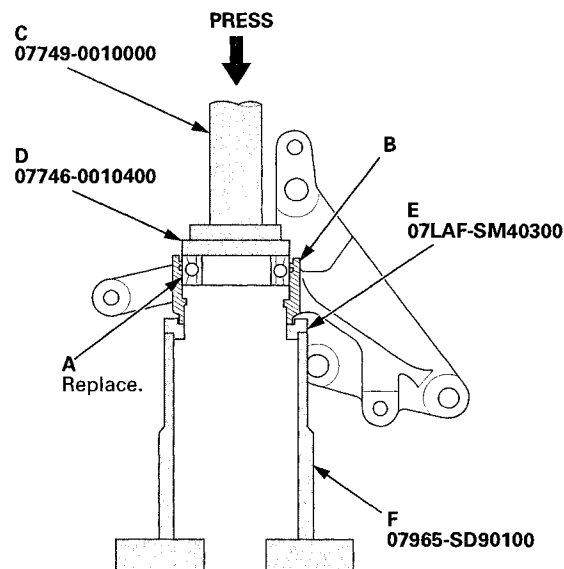
- Attachment, 40 x 50 mm 07LAD-PW50601
- Support Base Attachment 07LAF-SM40300
- Fork Seal Driver, 46.2 mm 07TMD-MAC0100
- Support Base 07965-SD90100
- Attachment, 52 x 55 mm 07746-0010400
- Driver Handle, 15 x 135L 07749-0010000
- Fork Seal Driver, 39.2 x 49.5 x 15 mm 07947-4630100

NOTE: Refer to the Exploded View, as needed, during this procedure.

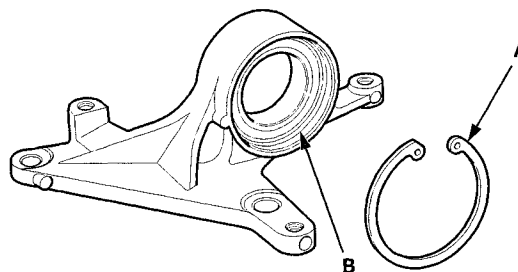
1. Clean the disassembled parts with solvent, and dry them with compressed air.

NOTE: Do not wash the rubber parts with solvent.

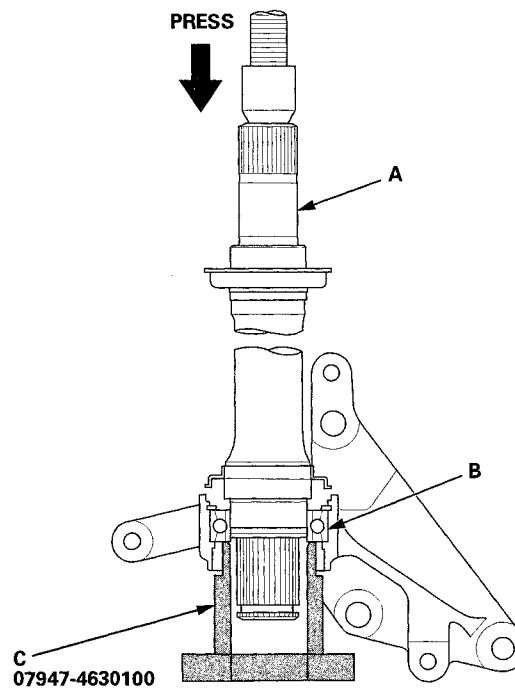
2. Press a new intermediate shaft bearing (A) into the bearing support (B) using the 15 x 135L driver handle (C), the 52 x 55 mm attachment (D), the support base attachment (E), the support base (F), and a press.



3. Install the internal snap ring (A) into the groove (B) of the bearing support.

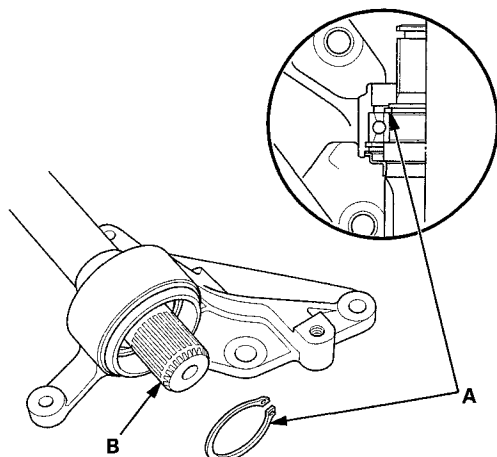


4. Press the intermediate shaft (A) into the shaft bearing (B) using the 39.2 x 49.5 x 15 mm fork seal driver (C) and a press.





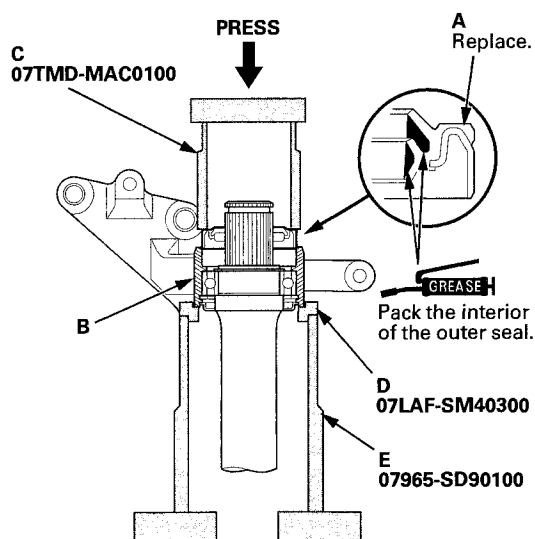
5. Install the external snap ring (A) into the groove of the intermediate shaft (B).



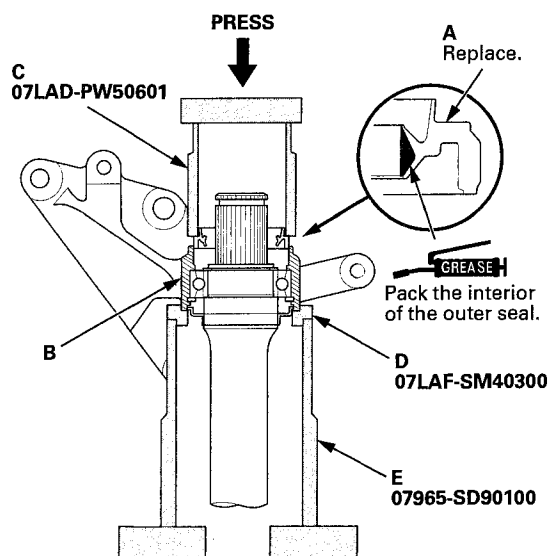
6. Install the outer seal.

- M/T model, go to step 7.
- A/T model, go to step 8.

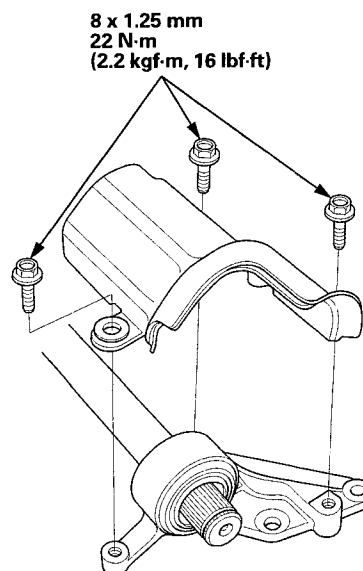
7. Install the new outer seal (A) into the bearing support (B) using the 46.2 mm fork seal driver (C), the support base attachment (D), the support base (E), and a press. Press in the seal flush with the surface of the bearing support. Then go to step 9.



8. Install a new outer seal (A) into the bearing support (B) using the 40 x 50 mm attachment (C), the support base attachment (D), the support base (E), and a press. Press in the seal flush with the surface of the bearing support.



9. Install the heat shield.



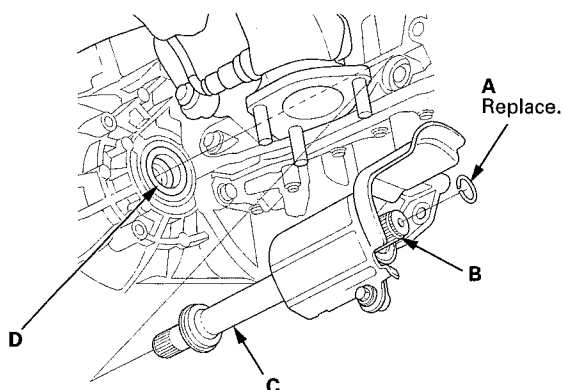
Driveline/Axle

Intermediate Shaft Installation

1. Clean the areas where the intermediate shaft contacts the differential thoroughly with solvent, and dry them with compressed air.

NOTE: Do not wash the rubber parts with solvent.

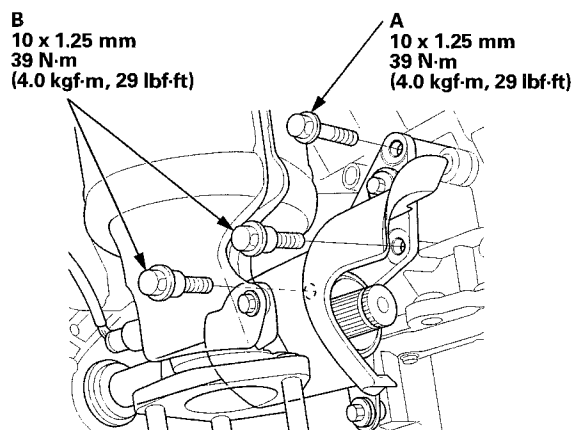
2. Install a new set ring (A) into the set ring groove (B) of the intermediate shaft (C).



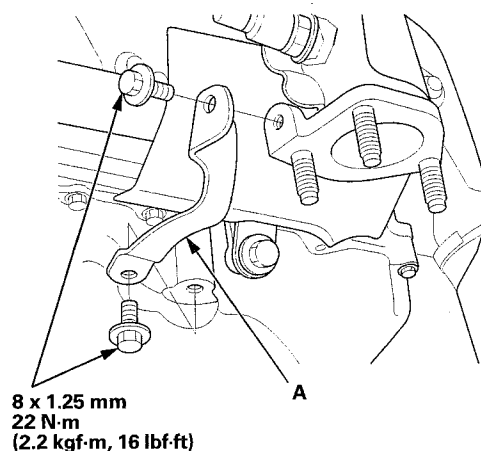
3. Insert the intermediate shaft into the differential correctly.

NOTE: Insert the intermediate shaft carefully to prevent damaging the oil seal (D).

4. Install the flange bolt (A) and the two dowel bolts (B).

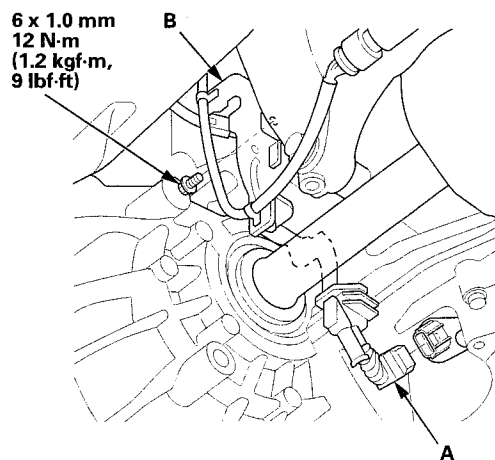


5. Install the rear WU-TWC bracket (A).



6. Install the right front driveshaft (see page 16-20).

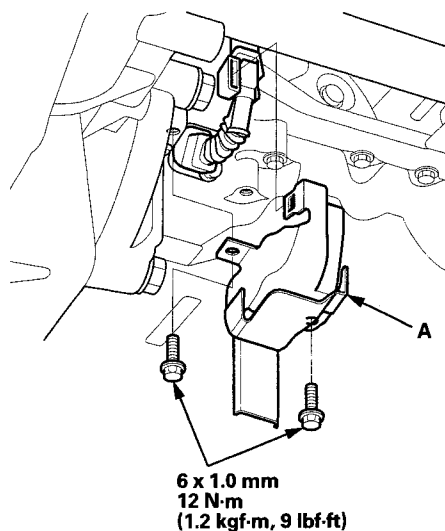
7. Connect the CKP sensor connector (A), and install the sensor harness clamp bracket (B).





Rear Driveshaft Removal

8. Install the CKP sensor cover (A).



9. Install exhaust pipe A.

- Without SH-AWD (see page 9-9)
- With SH-AWD (see page 9-10)

10. Refill the transmission with the recommended transmission fluid:

- Manual transmission (see page 13-14)
- Automatic transmission (see page 14-203)

11. Check the wheel alignment, and adjust it if necessary (see page 18-5).

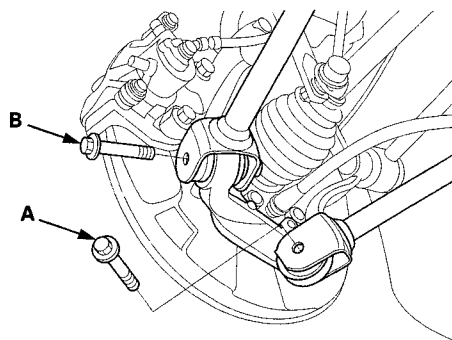
12. Test-drive the vehicle.

Special Tools Required

Driveshaft Remover 07AAD-S3VA000

NOTE: Be careful not to damage the brake hose, sensor, and harness.

1. Raise and support the vehicle (see page 1-10).
2. Remove the rear wheels.
3. Remove exhaust pipe B and the muffler (see page 9-10).
4. Remove the lower arm A mounting bolt (A) and the lower arm B mounting bolt (B).

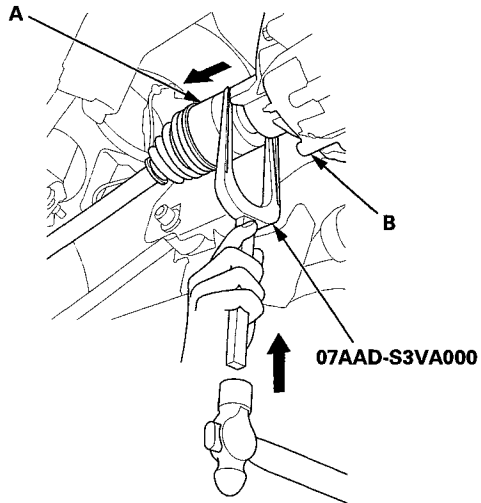


(cont'd)

Driveline/Axle

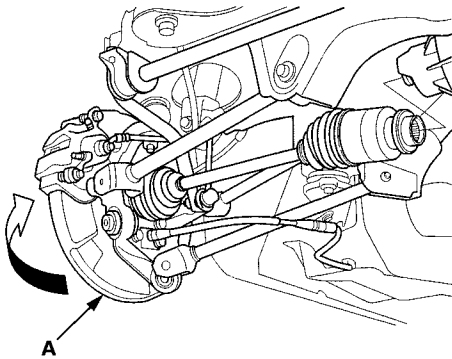
Rear Driveshaft Removal (cont'd)

5. Use a hammer to wedge the driveshaft remover between the inboard joint (A) and the rear differential (B).

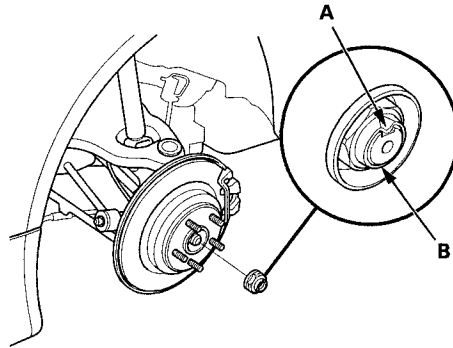


6. Pull the knuckle outward, and separate the inboard joint from the rear differential.

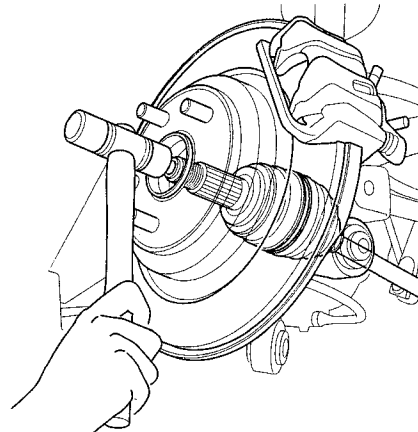
NOTE: Be careful not to damage the splash guard (A).



7. Pry up the stake (A) on the spindle nut (B), then remove the nut.



8. While holding the driveshaft by hand, separate the driveshaft outboard joint from the rear hub using a soft face hammer.

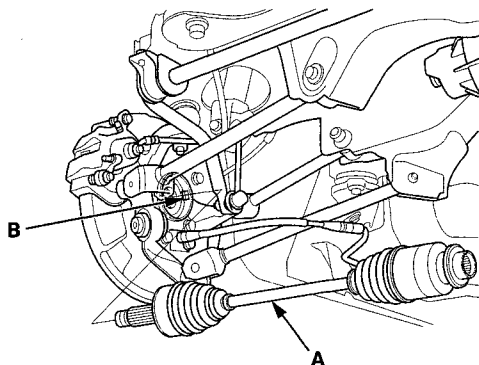




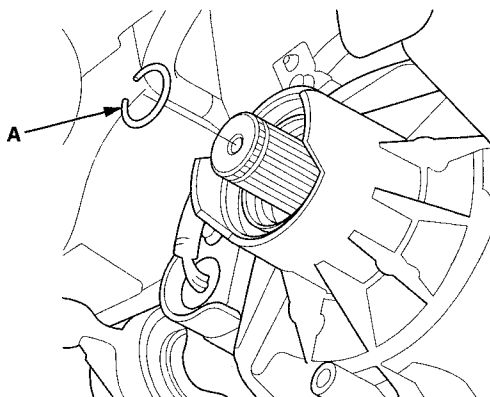
Rear Driveshaft Disassembly

9. Remove the rear driveshaft (A).

NOTE: Be careful not to damage the wheel speed sensor (B).



10. Remove the set ring (A) from the rear differential.



Special Tools Required

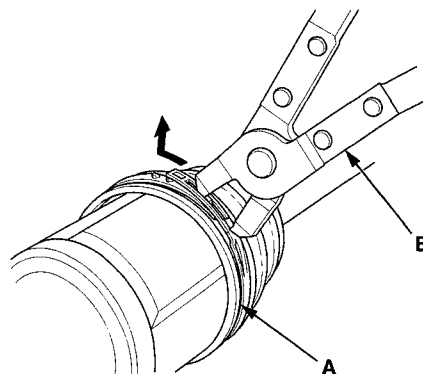
- Threaded Adapter, 24 x 1.5 mm 07XAC-001020A
- Slide Hammer 5/8"-18 UNF, commercially available
- Boot Band Pliers, commercially available
- Bearing Puller, commercially available

Inboard Joint Side

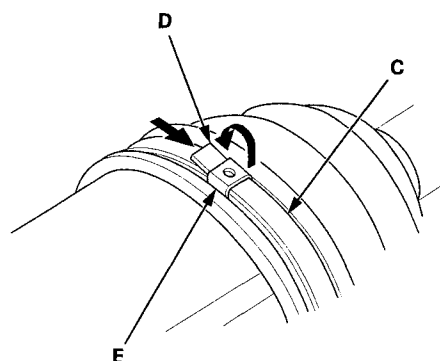
1. Remove the boot bands. Be careful not to damage the boot.

- If the boot band is a low profile type (A), pinch the boot band using commercially available boot band pliers (B).
- If the boot band is a double loop type (C), lift up the band end (D), then push it into the clip (E).

Low profile type



Double loop type

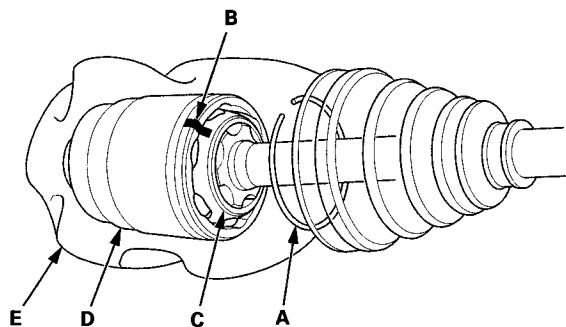


(cont'd)

Driveline/Axle

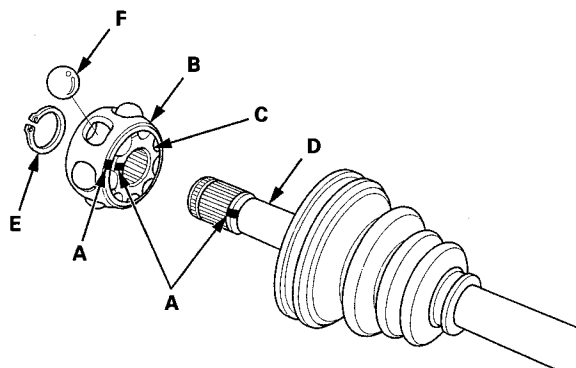
Rear Driveshaft Disassembly (cont'd)

2. Remove the circlip (A).



3. Make marks (B) on the bearing retainer (C) and the inboard joint (D) to identify the locations of the bearing retainer to the grooves in the inboard joint. Then remove the inboard joint on a clean shop towel (E). Be careful not to drop the steel balls when separating them from the inboard joint.

4. Make marks (A) on the bearing retainer (B), the bearing race (C), and the driveshaft (D) to identify the position of the bearing retainer and the bearing race on the shaft.

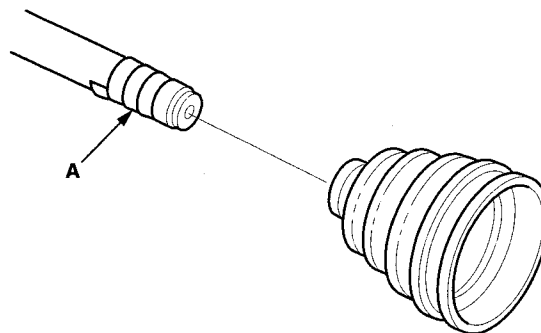


5. Remove the snap ring (E).

6. Remove the bearing race and the steel balls (F).

NOTE: If necessary, use a commercially available bearing puller.

7. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the boot.



8. Remove the inboard boot. Be careful not to damage the boot.

9. Remove the vinyl tape.

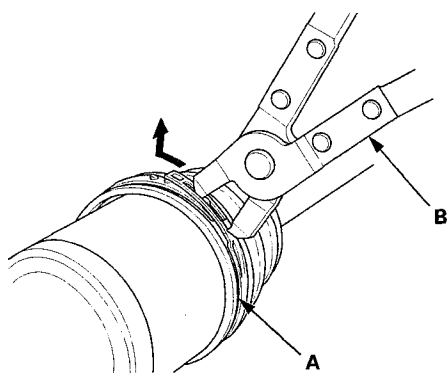


Outboard Joint Side

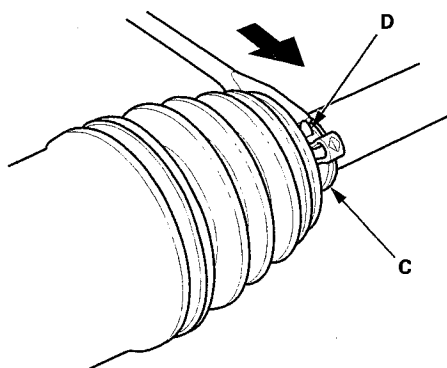
1. Remove the boot bands. Be careful not to damage the boot.

- If the boot band is a low profile type (A), pinch the boot band using commercially available boot band pliers (B).
- If the boot band is an ear clamp type (C), lift up the three tabs (D) using a screwdriver.

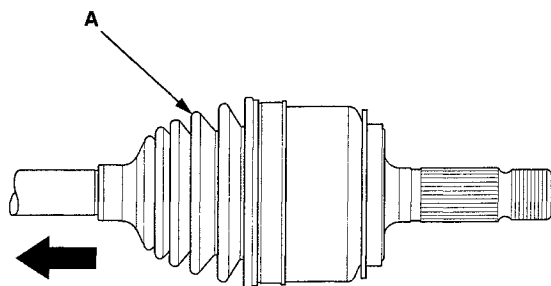
Low profile type



Ear clamp type

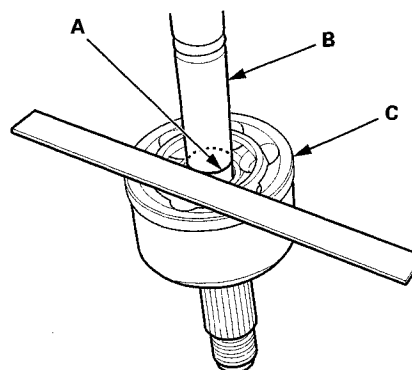


2. Slide the outboard boot (A) partially toward the inboard joint side. Be careful not to damage the boot.



3. Wipe off the grease to expose the driveshaft and the outboard joint inner race.

4. Make a mark (A) on the driveshaft (B) at the same level as the outboard joint end (C).

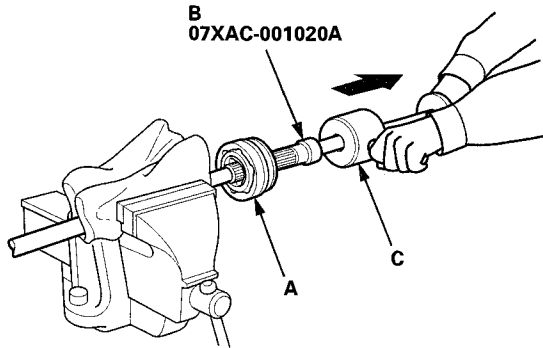


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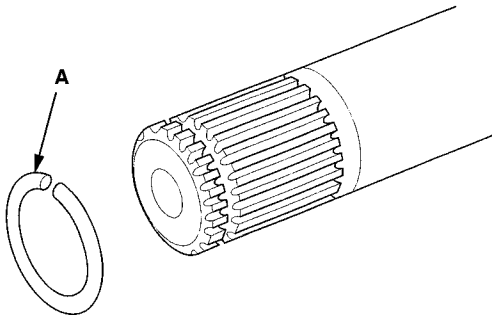
Driveline/Axle

Rear Driveshaft Disassembly (cont'd)

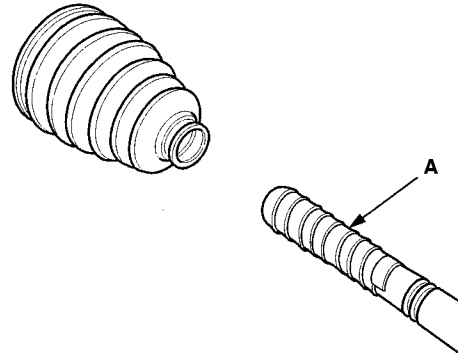
5. Securely clamp the driveshaft in a bench vise with a shop towel wrapped around the driveshaft.
6. Remove the outboard joint (A) using the 24 x 1.5 mm threaded adapter (B) and a commercially available 5/8" x 18 UNF slide hammer (C).



7. Remove the driveshaft from the bench vise.
8. Remove the stop ring (A) from the driveshaft.



9. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the boot.

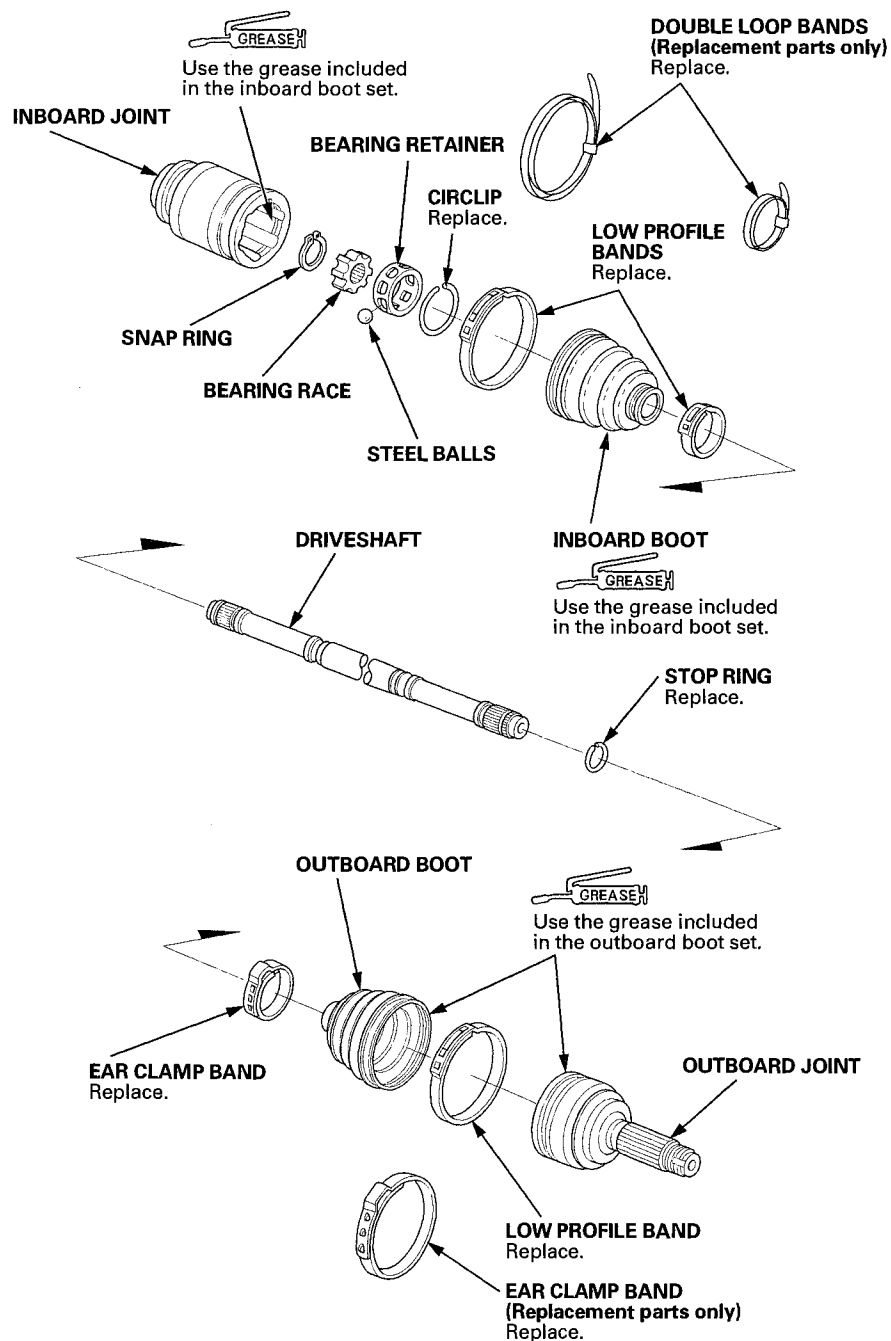


10. Remove the outboard boot. Be careful not to damage the boot.
11. Remove the vinyl tape.



Rear Driveshaft Reassembly

Exploded View



(cont'd)

Driveline/Axle

Rear Driveshaft Reassembly (cont'd)

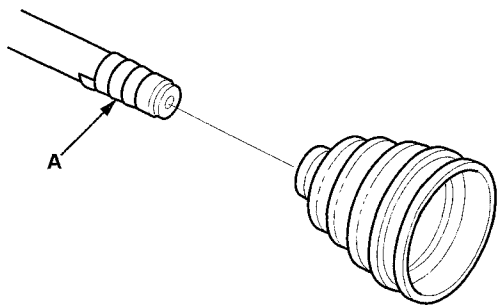
Special Tools Required

- Boot Band Tool KD-3191 or equivalent, commercially available
- Seal Clamp Tool Kent-Moore J-35910 or equivalent, commercially available
- Boot Band Pliers, commercially available

NOTE: Refer to the Exploded View, as needed, during this procedure.

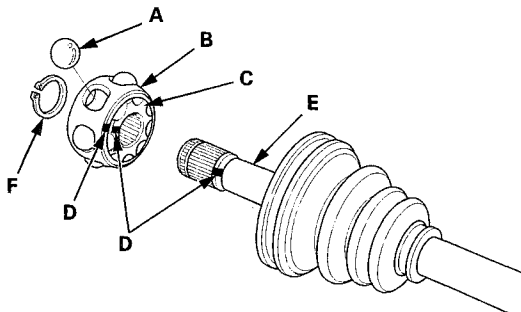
Inboard Joint Side

1. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the inboard boot.



2. Install the inboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the inboard boot.

3. Assemble the steel balls (A), the bearing retainer (B), and the bearing race (C) by aligning the marks (D) you made on the bearing retainer and the bearing race.



4. Install the bearing onto the driveshaft (E) by aligning the marks you made on the bearing and the driveshaft. Be careful not to drop the steel balls when installing the bearing onto the driveshaft.
5. Install the snap ring (F).
6. Pack the inboard joint with the joint grease included in the new inboard boot set.

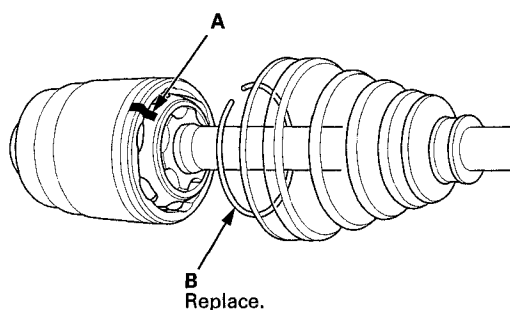
Grease quantity

Inboard joint: 85–105 g (3.0–3.7 oz)



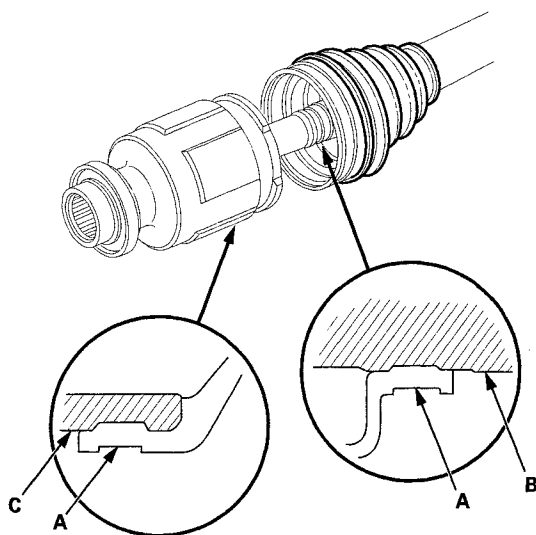


7. Install the inboard joint onto the driveshaft by aligning the marks (A) you made on the inboard joint and the bearing retainer.



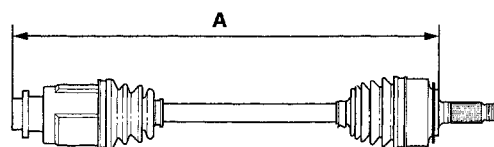
8. Install a new circlip (B) into the inboard joint groove.

9. Fit the boot ends (A) onto the driveshaft (B) and the inboard joint (C).



10. Adjust the length (A) of the driveshafts to the figure as shown, then adjust the boots to halfway between full compression and full extension. Bleed excess air from the boots by inserting a flat-tipped screwdriver between the boot and the joint.

Left and Right driveshaft: 567.1–572.1 mm (22.33–22.52 in)

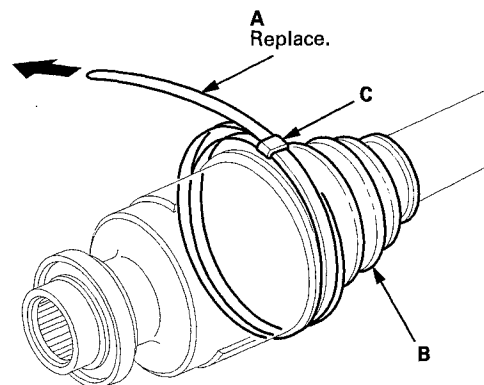


11. Install new boot bands.

- For the double loop type, go to step 12.
- For the low profile type, go to step 21.

12. Fit the boot ends onto the driveshaft and the inboard joint, then install a new double loop band (A) onto the boot (B).

NOTE: Pass the end of the double loop band through the clip (C) twice in the direction of the forward rotation of the driveshaft.



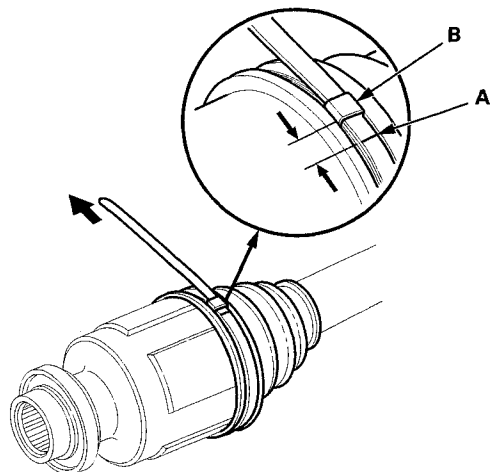
13. Pull up the slack in the band by hand.

(cont'd)

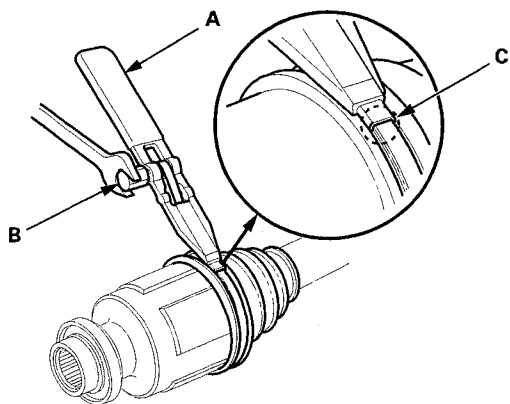
Driveline/Axle

Rear Driveshaft Reassembly (cont'd)

14. Mark a line (A) on the band 10–14 mm (0.4–0.6 in) from the clip (B).

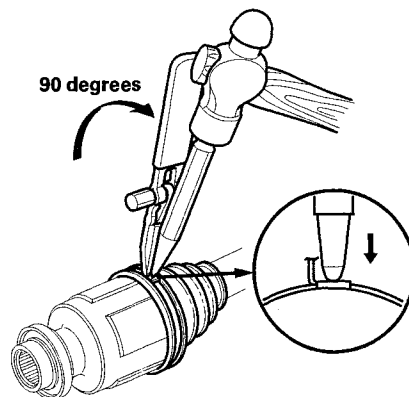


15. Thread the free end of the band through the nose section of the commercially available boot band tool (KD-3191 or equivalent) (A), and into the slot on the winding mandrel (B).

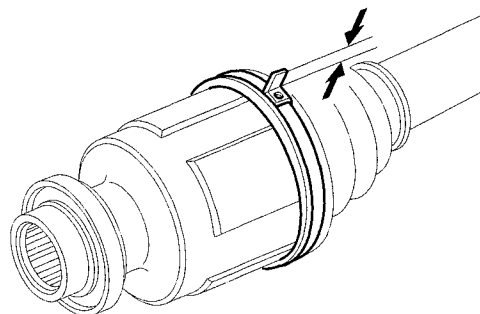


16. Using a wrench on the winding mandrel of the boot band tool, tighten the band until the marked line (C) on the band meets the edge of the clip.

17. Lift up the boot band tool to bend the free end of the band 90 degrees to the clip. Center-punch the clip, then fold over the remaining tail onto the clip.



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

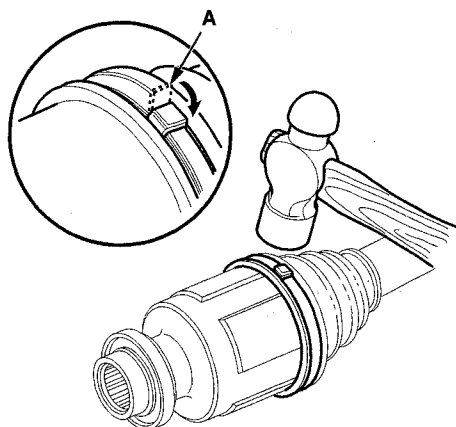




19. Bend the band end (A) by tapping it down using a hammer.

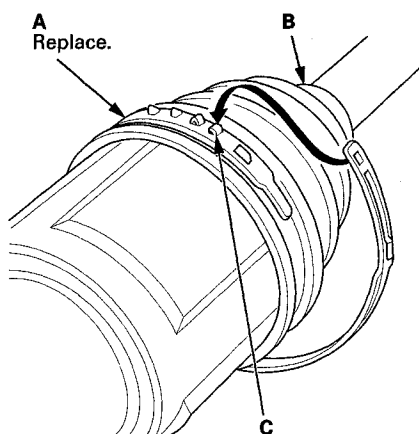
NOTE:

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

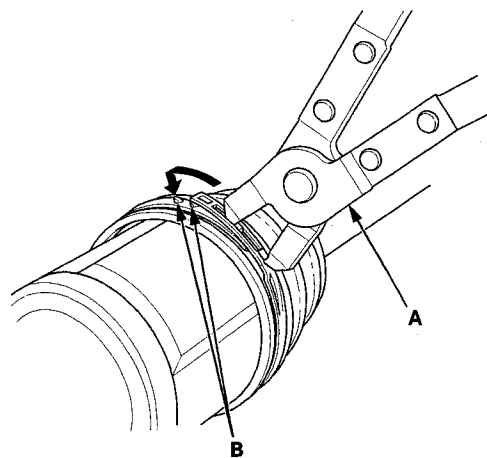


20. Repeat steps 12 through 19 for the band on the other end of the boot.

21. Install a new low profile band (A) onto the boot (B), then hook the tab (C) of the band.



22. Close the hook portion of the band using commercially available boot band pliers (A), then hook the tabs (B) of the band.



23. Install the boot band on the other end of the boot, and repeat steps 21 and 22.

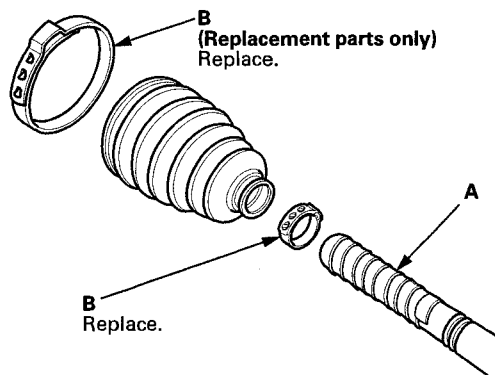
(cont'd)

Driveline/Axle

Rear Driveshaft Reassembly (cont'd)

Outboard Joint Side

1. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damaging the outboard boot.



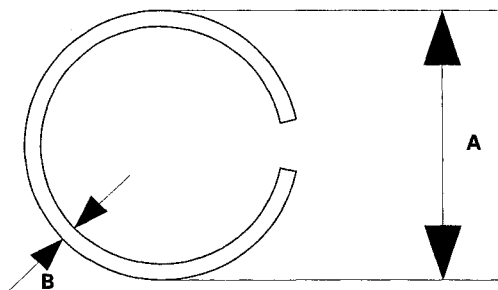
2. Install a new ear clamp bands (B) and the outboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the outboard boot.
3. Make sure to check the size of a new stop ring.

NOTICE

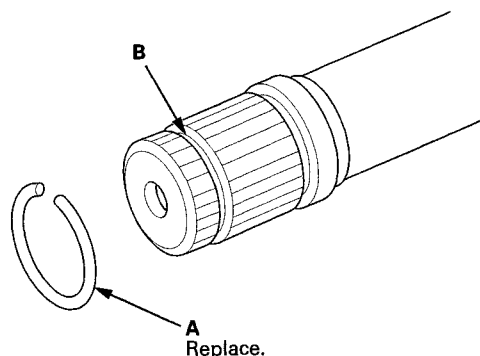
To avoid driveshaft and vehicle damage, make sure you install a new stop ring.

Stop ring specifications

Overall diameter (A): 28.0 mm (1.10 in)
Wire diameter (B): 1.8 mm (0.07 in)

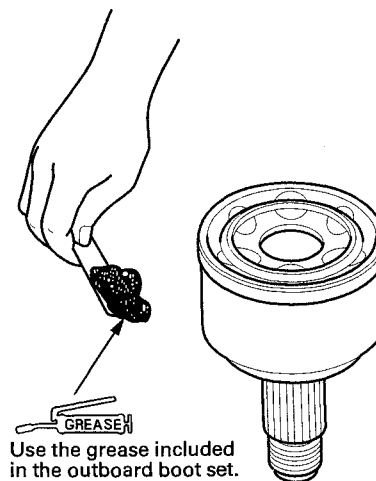


4. Install the stop ring (A) into the driveshaft groove (B).



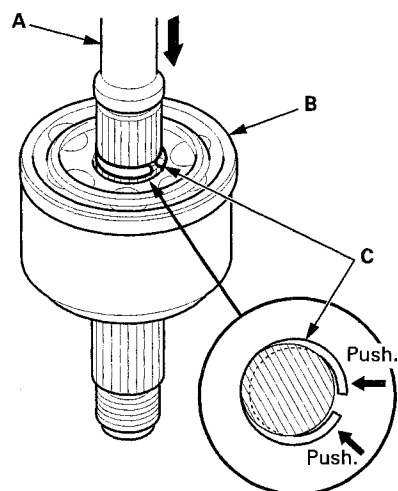
5. Pack about 35 g (1.2 oz) of grease included in the new outboard boot set into the driveshaft hole in the outboard joint.

NOTE: If you are installing a new outboard joint, the grease is already installed.



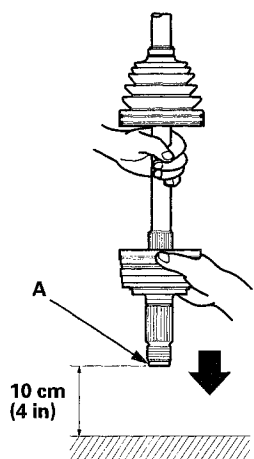


6. Insert the driveshaft (A) into the outboard joint (B) until the stop ring (C) is close to the joint.



7. To completely seat the outboard joint, pick up the driveshaft and the joint, and tap or hit the assembly onto a hard surface from a height of about 10 cm (4 in).

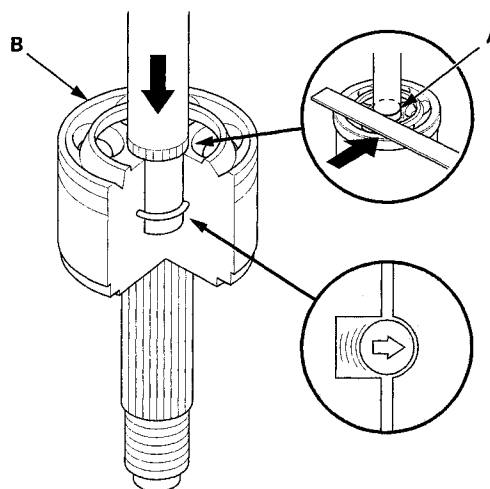
NOTE: Do not use a hammer, as excessive force may damage the driveshaft. Be careful not to damage the threaded section (A) of the outboard joint.



8. Check the alignment of the paint mark (A) you made with the outboard joint end (B).

NOTICE

To avoid driveshaft and vehicle damage, the shaft must be all the way into the outboard joint to ensure the stop ring is properly seated.



(cont'd)

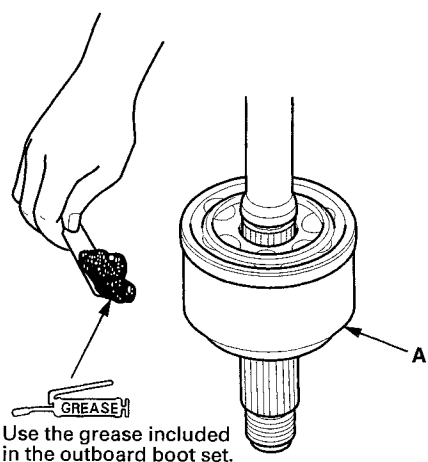
Driveline/Axle

Rear Driveshaft Reassembly (cont'd)

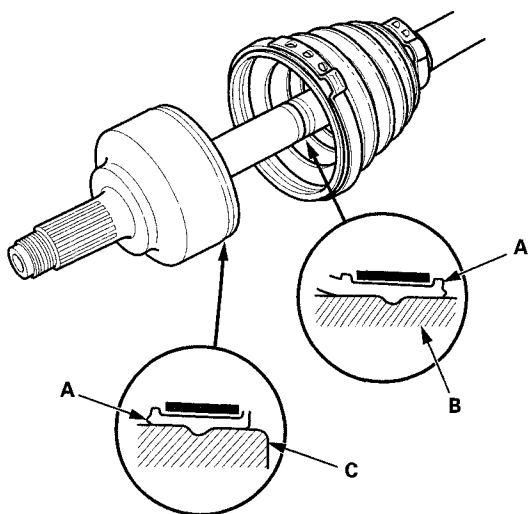
9. Pack the outboard joint (A) with the remaining joint grease included in the new outboard boot set.

Total grease quantity

Outboard joint: 80–100 g (2.8–3.5 oz)

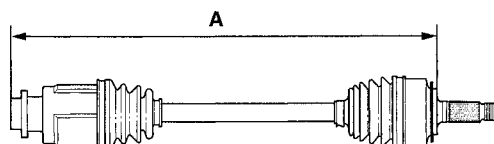


10. Fit the boot ends (A) onto the driveshaft (B) and the outboard joint (C). Bleed any excess air from the boots by inserting a flat-tipped screwdriver between the boot and the joint.



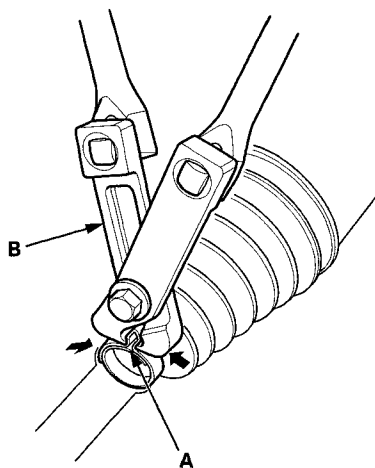
11. Inspect the length (A) of the driveshafts to the figure as shown, then adjust the boots to halfway between full compression and full extension.

Left and Right driveshaft: 567.1–572.1 mm (22.33–22.52 in)

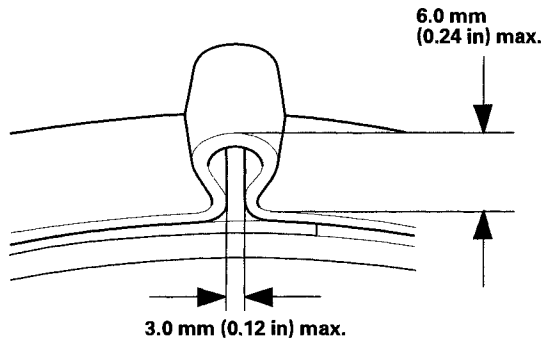




12. Close the ear portion (A) of the band using a commercially available seal clamp tool (Kent-Moore J-35910 or equivalent) (B).

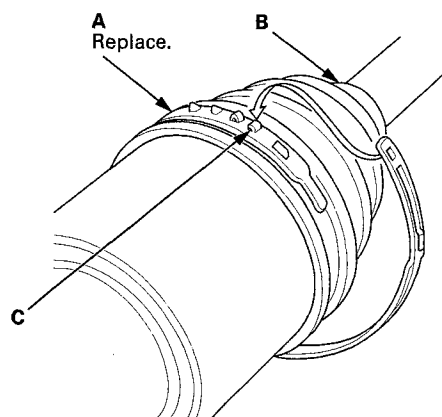


13. Check the clearance between the closed ear portion of the band. If the clearance is not within the standard, close the ear portion of the band tighter.

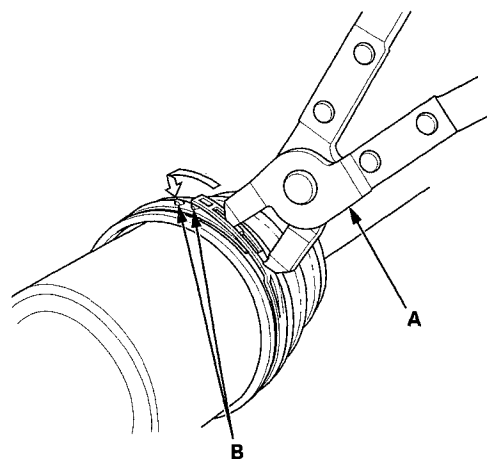


14. Repeat steps 12 and 13 for the band on the other end of the boot with replacement parts only.

15. Install a new low profile band (A) onto the boot (B), then hook the tab (C) of the band.



16. Close the hook portion of the band using commercially available boot band pliers (A), then hook the tabs (B) of the band.

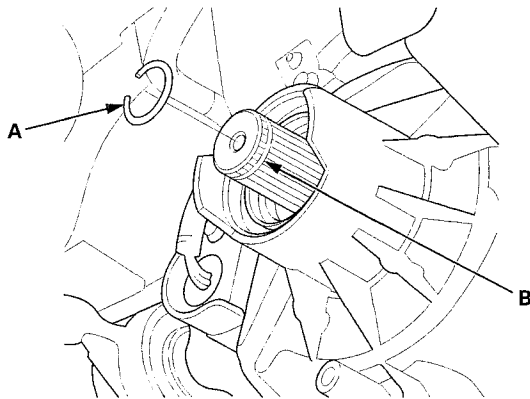


Driveline/Axle

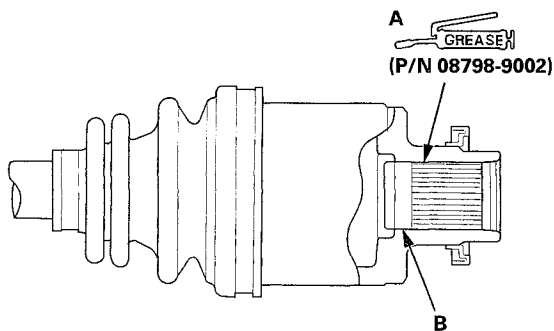
Rear Driveshaft Installation

NOTE: Before starting installation, make sure the mating surfaces of the joint and the splined section are clean.

1. Install a new set ring (A) into the set ring groove (B) of the rear differential.

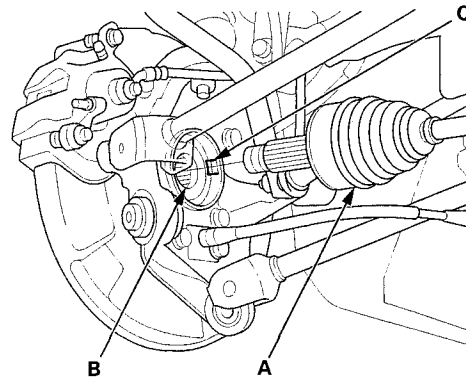


2. Apply 1.5—2.0 g (0.05—0.07 oz) of super high temp urea grease (P/N 08798-9002) to the whole splined surface (A). After applying grease, remove the grease from the splined grooves at intervals of 2—3 splines and from the set ring groove (B) so that air can bleed from the differential.



3. Install the outboard joint (A) into the rear hub (B).

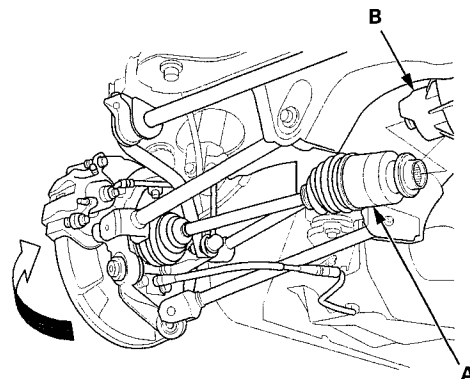
NOTE: Be careful not to damage the wheel speed sensor (C).



4. Clean the areas where the driveshaft contacts the differential thoroughly with solvent, and dry them with compressed air.

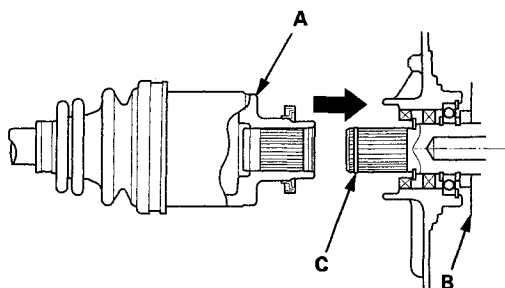
NOTE: Do not wash the rubber parts with solvent.

5. Pull the knuckle outward, and insert the inboard joint (A) into the differential (B).

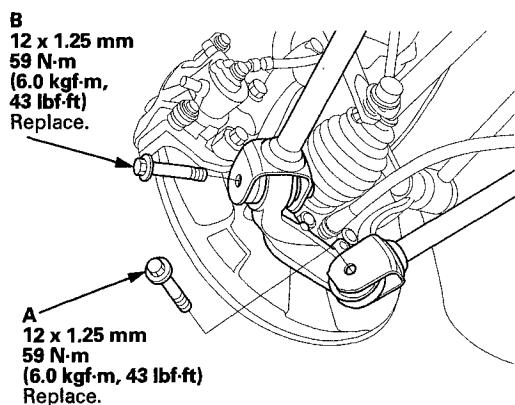




6. Make sure the inboard joint (A) is installed all the way into the rear differential (B) and to ensure the stop ring (C) is properly seated.

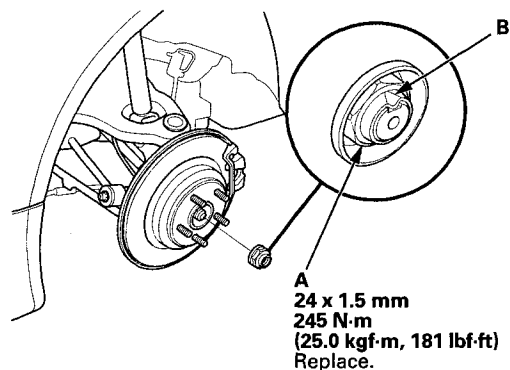


7. Loosely install a new lower arm A mounting bolt (A), and a new lower arm B mounting bolt (B).



8. Place a floor jack under the knuckle, and raise the suspension to load it with the vehicle's weight.
9. Tighten the lower arm A mounting bolt and the lower arm B mounting bolt to the specified torque, then remove the floor jack.

10. Apply a small amount of engine oil to the seating surface of a new spindle nut (A).



11. Install the spindle nut, then torque it. After tightening, use a drift to stake the spindle nut shoulder (B) against the driveshaft.
12. Clean the mating surfaces of the brake disc and the wheel, then install the rear wheels.
13. Turn the rear wheel by hand, and make sure there is no interference between the driveshaft and the surrounding parts.
14. Install exhaust pipe B and the muffler (see page 9-10).
15. Lower the vehicle .
16. Check the wheel alignment, and adjust it if necessary (see page 18-5).
17. Test-drive the vehicle.

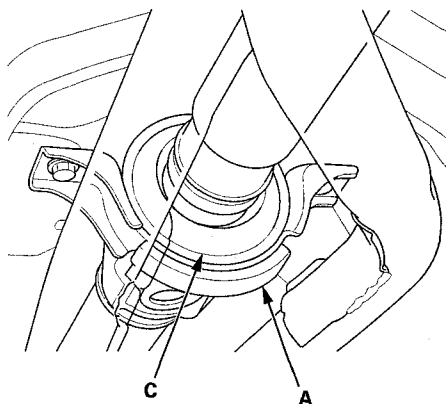
Driveline/Axle

Propeller Shaft Inspection

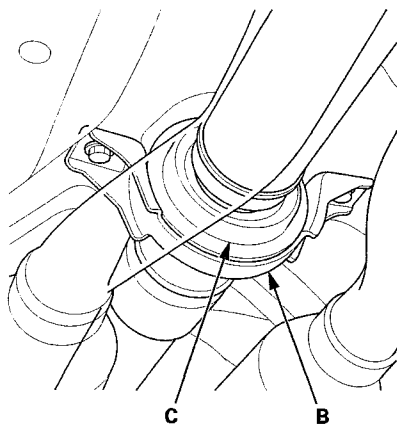
Universal Joint and Boots

1. Raise and support the vehicle (see page 1-10).
2. Shift the transmission to neutral (M/T model) or N (A/T model).
3. Check the No. 1 center support bearing (A) and the No. 2 center support bearing (B) for excessive play or noise. If the center support has excessive play or noise, replace the propeller shaft assembly.

Front side



Rear side



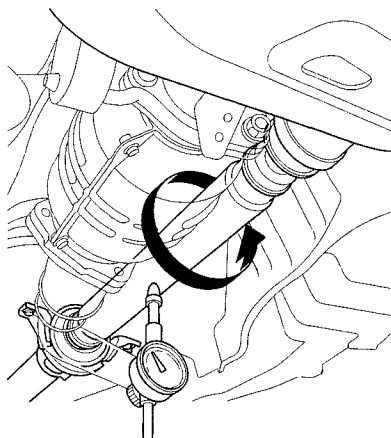
4. Check the rubber portions (C) of the center support bearings for damage and deterioration. If the rubber portions are damaged or deteriorated, replace the propeller shaft assembly.
5. Check the universal joints for excessive play or noise. If the universal joints have excessive play or noise, replace the propeller shaft assembly.



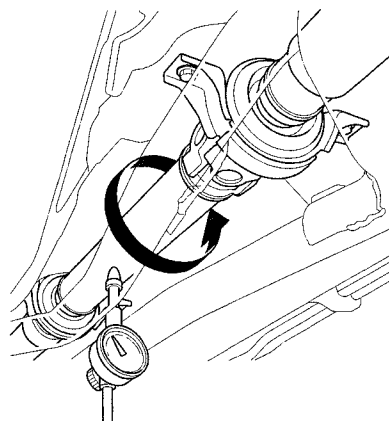
Propeller Shaft Runout

1. Raise and support the vehicle (see page 1-10).
2. Shift the transmission to neutral (M/T model) or N (A/T model).
3. Install a dial indicator with its needle on the middle of the No. 1, No. 2, or No. 3 propeller shaft.
4. Turn the other propeller shaft slowly and check the runout. Repeat this procedure for the other propeller shaft.

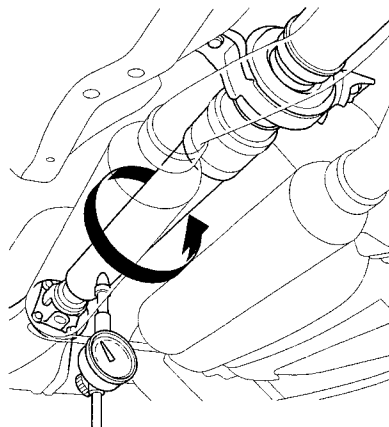
No. 1 Propeller Shaft Runout
Service Limit: 1.5 mm (0.06 in)



No. 2 Propeller Shaft Runout
Service Limit: 1.5 mm (0.06 in)



No. 3 Propeller Shaft Runout
Service Limit: 1.5 mm (0.06 in)

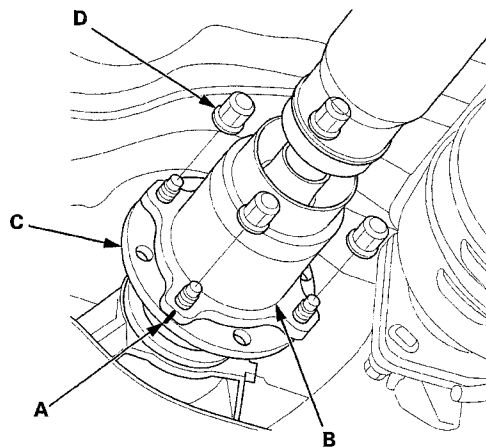


5. If the runout on either propeller shaft exceeds the service limit, replace the propeller shaft assembly.

Driveline/Axle

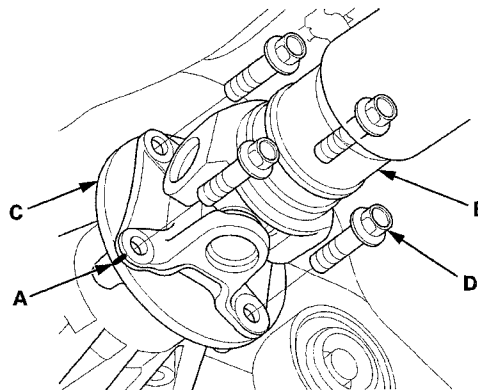
Propeller Shaft Removal

1. Raise and support the vehicle (see page 1-10).
2. Remove exhaust pipe B and the muffler (see page 9-10).
3. Place a transmission jack under the No. 2 propeller shaft.
4. Make reference marks (A) across the No. 1 propeller shaft (B) and the transfer companion flange (C).



5. Remove the flange nuts (D).

6. Make reference marks (A) across the No. 3 propeller shaft (B) and the rear differential companion flange (C).

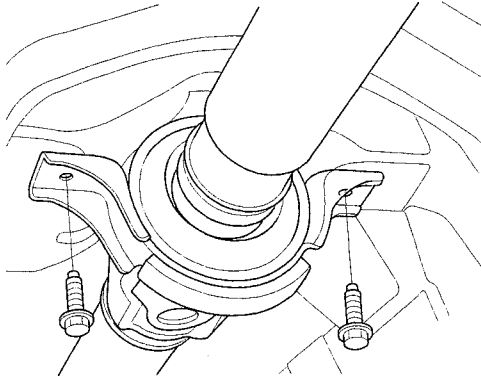


7. Remove the flange bolts (D).

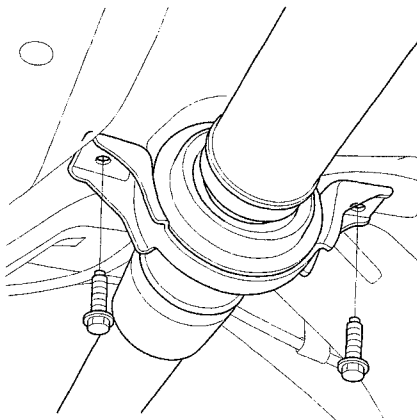


8. Remove the No. 1 and the No. 2 center support bearings mounting bolts.

No.1 Support Bearing

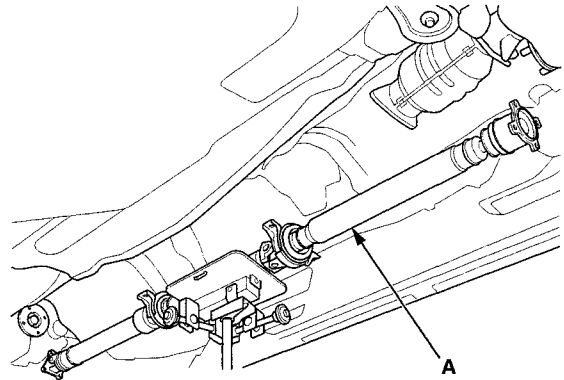


No.2 Support Bearing



9. Move the propeller shaft (A) toward the rear differential, then lower the propeller shaft assembly on the jack.

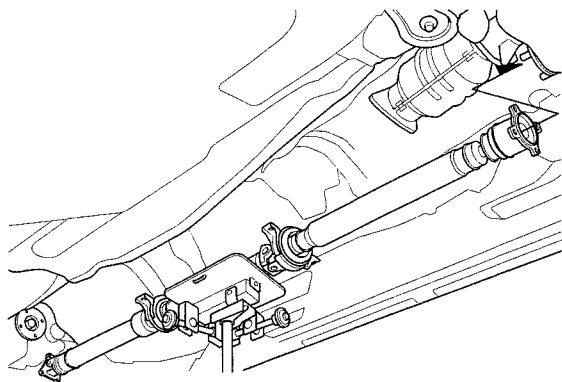
NOTE: Secure the shaft to the transmission jack with a tie down to prevent it from rolling off.



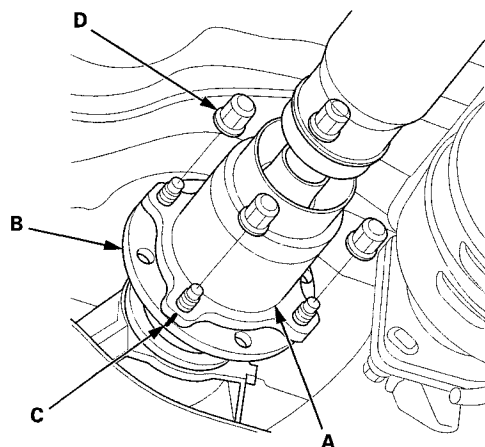
Driveline/Axle

Propeller Shaft Installation

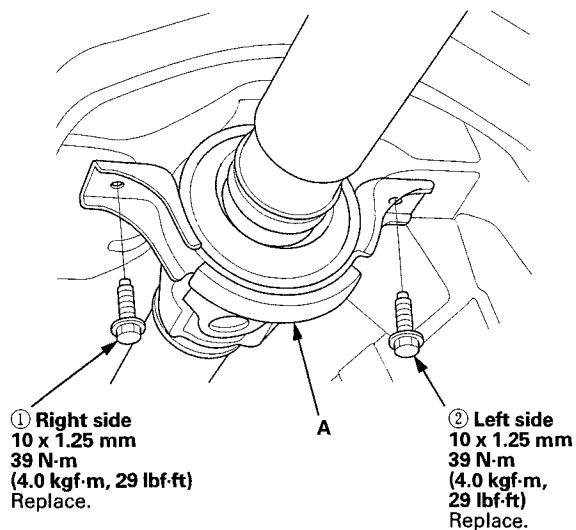
1. Place the No. 2 propeller shaft on a transmission jack, then raise it to the mounting level.



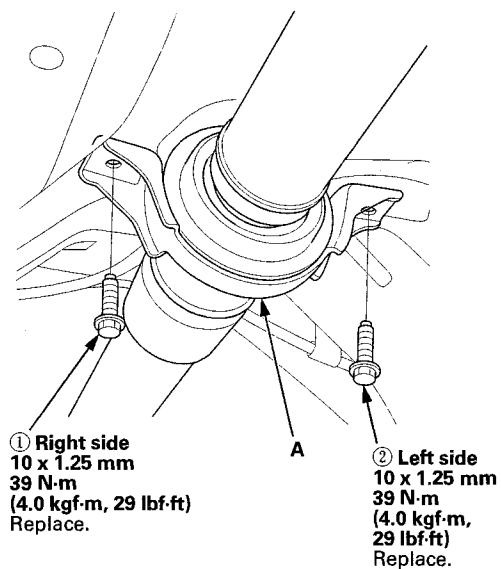
2. Set the No. 1 propeller shaft (A) to the transfer companion flange (B) by aligning the reference marks (C) you made during the removal procedure. Then install the flange nuts (D) finger tight.



3. Install the No. 1 support bearing (A) with new bolts in the numbered sequence shown.



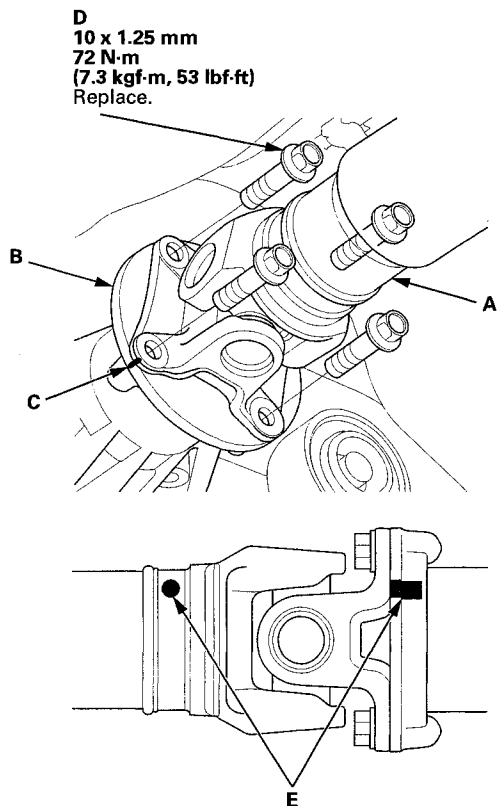
4. Install the No. 2 support bearing (A) with new bolts in the numbered sequence shown.





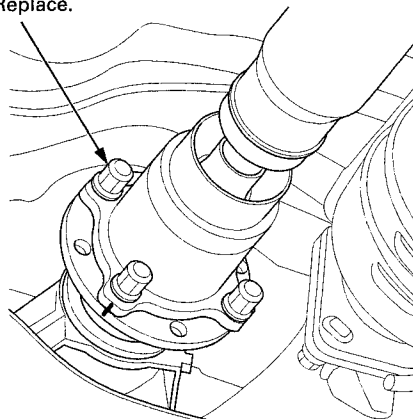
5. Set the No. 3 propeller shaft (A) to the rear differential companion flange (B) by aligning the reference marks (C) you made during the removal procedure. Then install the new flange bolts (D) to the specified torque.

NOTE: When replacing the propeller shaft or the rear differential, align the factory reference marks (E).



6. Tighten the No. 1 propeller shaft mounting nuts to the specified torque.

10 x 1.25 mm
72 N·m
(7.3 kgf-m, 53 lbf-ft)
Replace.



7. Install exhaust pipe B and the muffler (see page 9-10).

8. If you installed a new propeller shaft, test-drive the vehicle at 55 mph (88 km/h), and check for noise or vibration. If there is a noise or vibration, rotate the propeller shaft 180 degrees from its current alignment with the rear differential companion flange, then recheck.