

2004 Honda Element DX

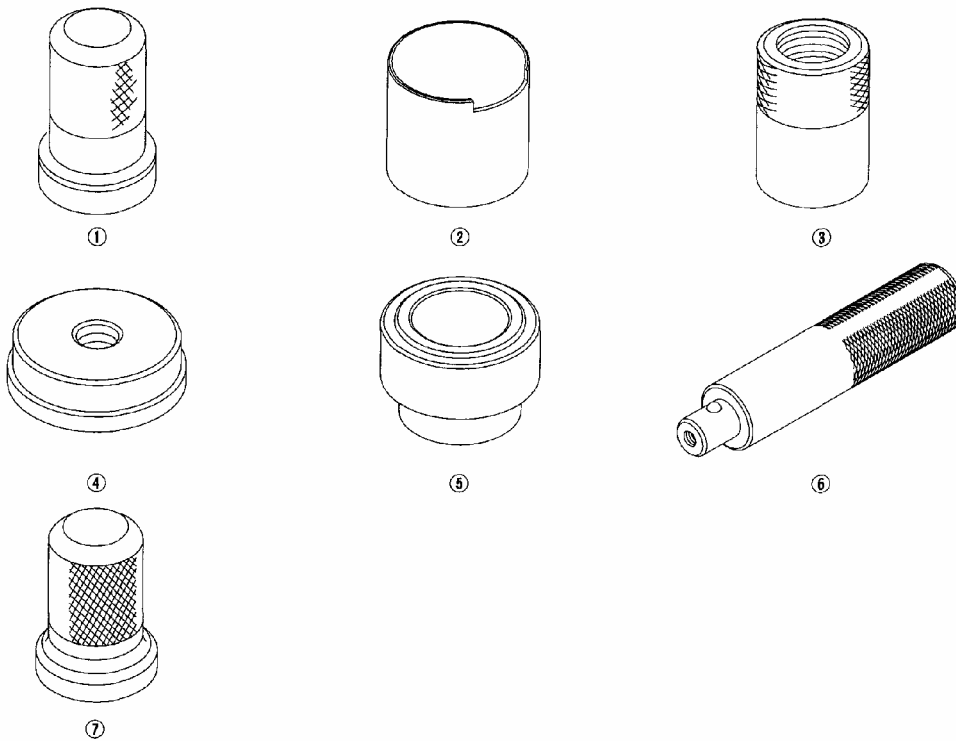
2003-06 DRIVELINE/AXLE Driveline/Axle - Element

2003-06 DRIVELINE/AXLE

Driveline/Axle - Element

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07GAD-PH70201	Oil Seal Driver	1
②	07NAF-SR30101	Half Shaft Base	1
③	07XAC-001020A	Threaded Adapter, 24 x 1.5 mm	1
④	07746-0010400	Attachment, 52 x 55 mm	1
⑤	07746-0030400	Attachment, 35 mm I.D.	1
⑥	07749-0010000	Driver	1
⑦	07947-SB00100	Oil Seal Driver	1



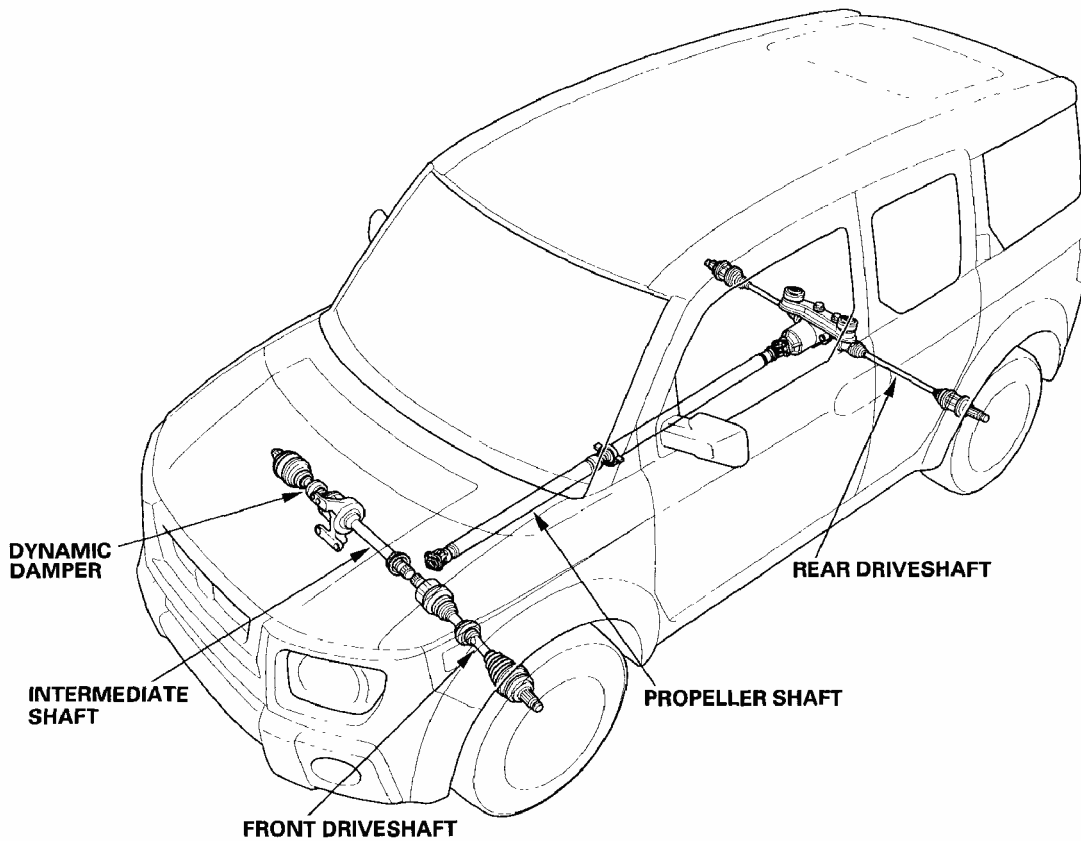
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Fig. 1: Identifying Driveline/Axle Special Tools
Courtesy of AMERICAN HONDA MOTOR CO., INC.

COMPONENT LOCATION INDEX

2004 Honda Element DX

2003-06 DRIVELINE/AXLE Driveline/Axle - Element

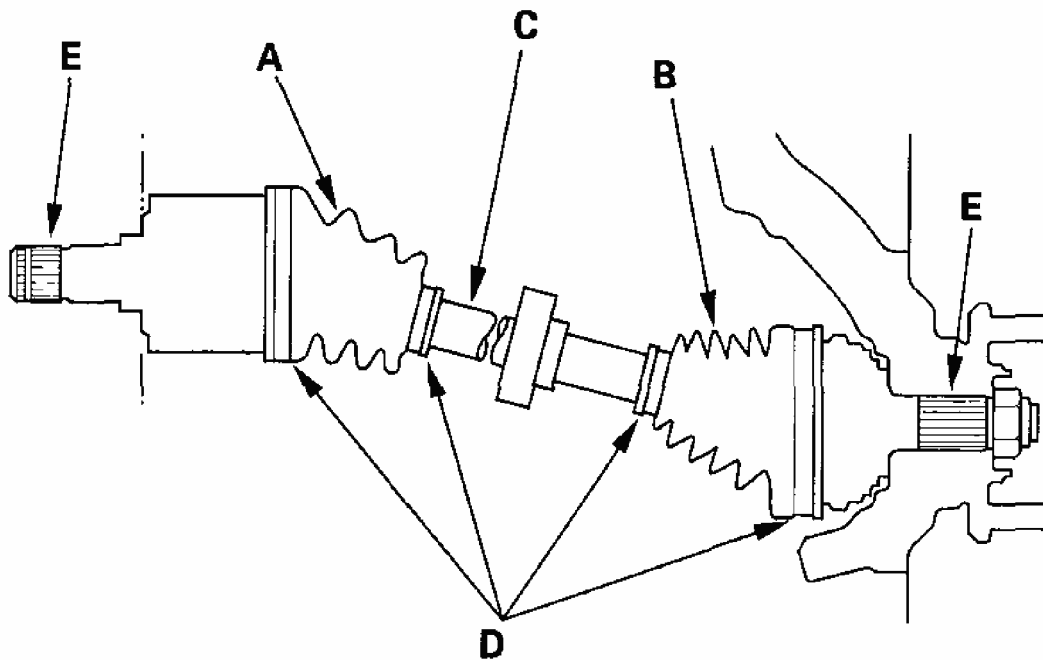


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Fig. 2: Identifying Driveline/Axle Components
Courtesy of AMERICAN HONDA MOTOR CO., INC.

DRIVESHAFT INSPECTION

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 boot bands.



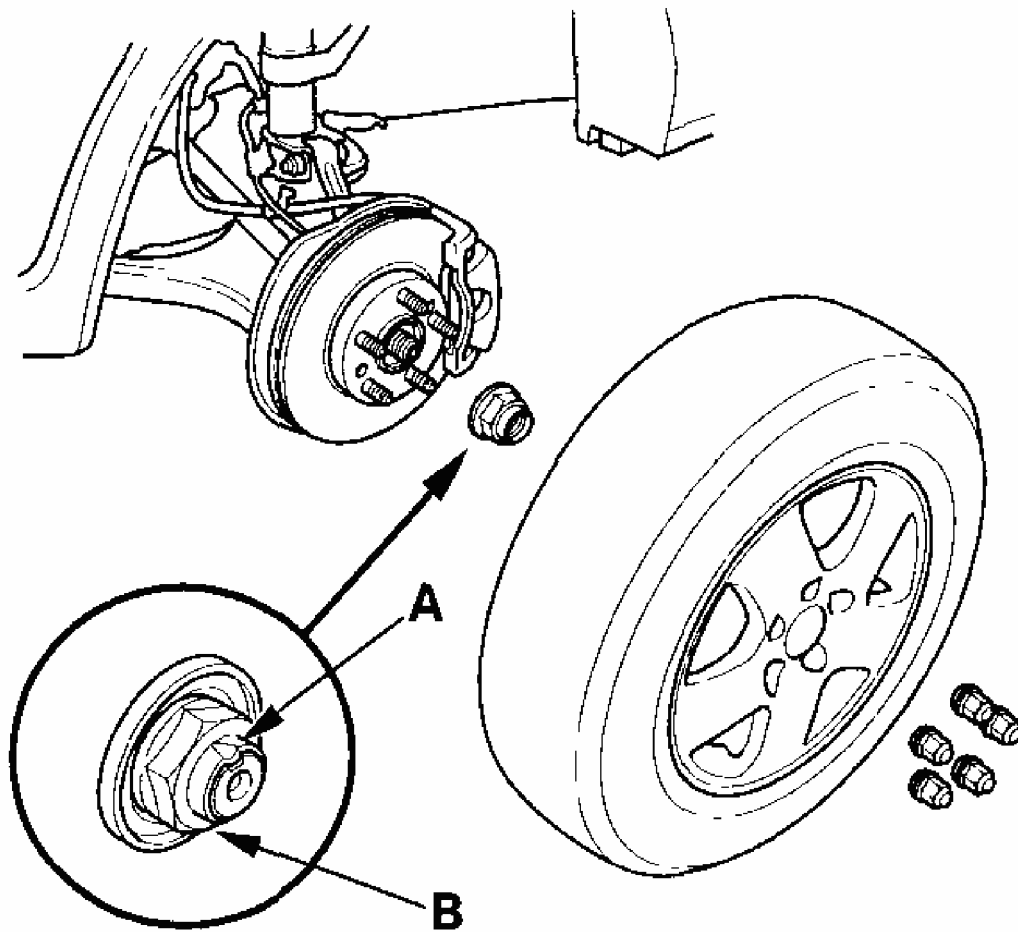
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Fig. 3: Identifying Driveshaft Components For Inspection
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Turn the driveshaft by hand, and make sure the splines (E) and joint are not excessively loose.
3. Make sure the driveshaft is not twisted, bent, or cracked; if it is, replace it.

FRONT DRIVESHAFT REMOVAL

1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see **SAFETY STANDS**).
2. Remove the wheel nuts and front wheels.



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Fig. 4: Removing Wheel Nuts And Front Wheels
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Lift up the locking tab (A) on the spindle nut (B), then remove the nut.
4. Drain the transmission fluid. Reinstall the drain plug using a new washer:
 - Manual transmission (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**)
 - Automatic transmission (see **ATF REPLACEMENT**)
5. Hold the stabilizer ball joint pin (A) with a hex wrench (B), and remove the flange nut (C). Separate the front stabilizer link (D) from the lower arm.

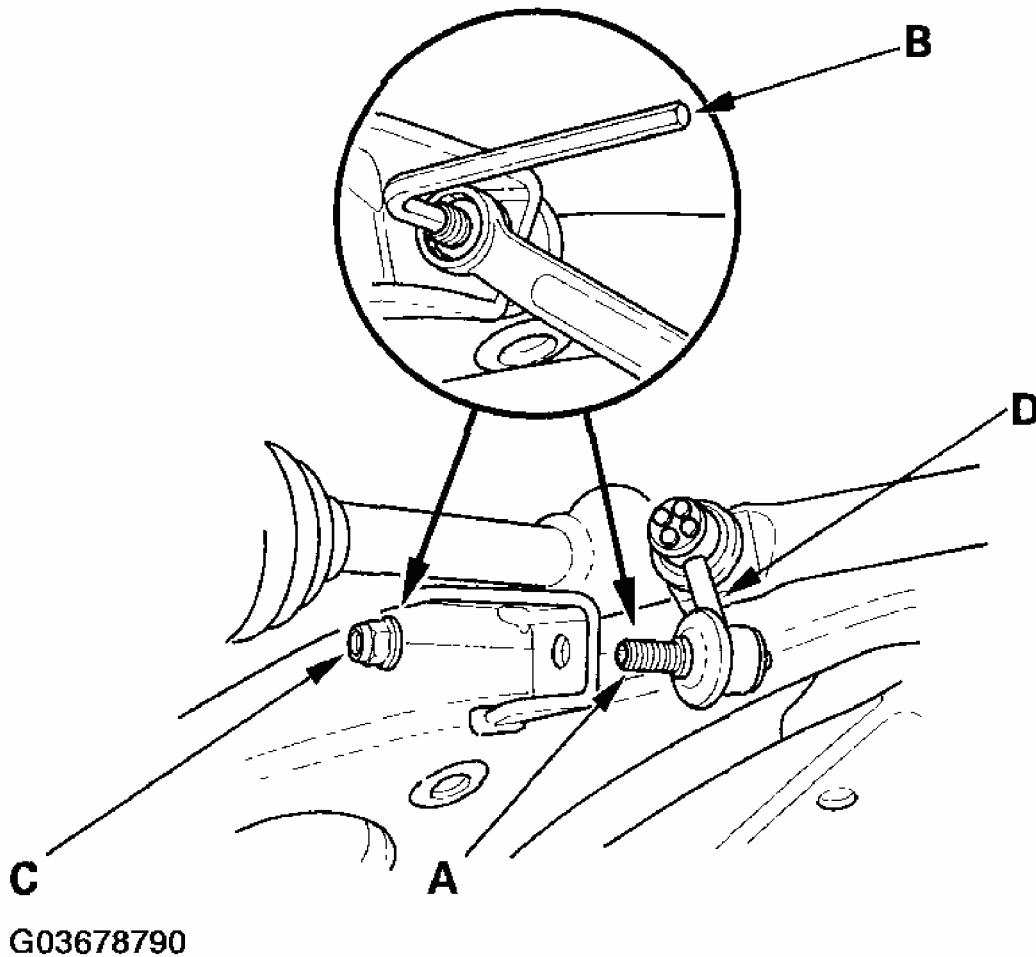


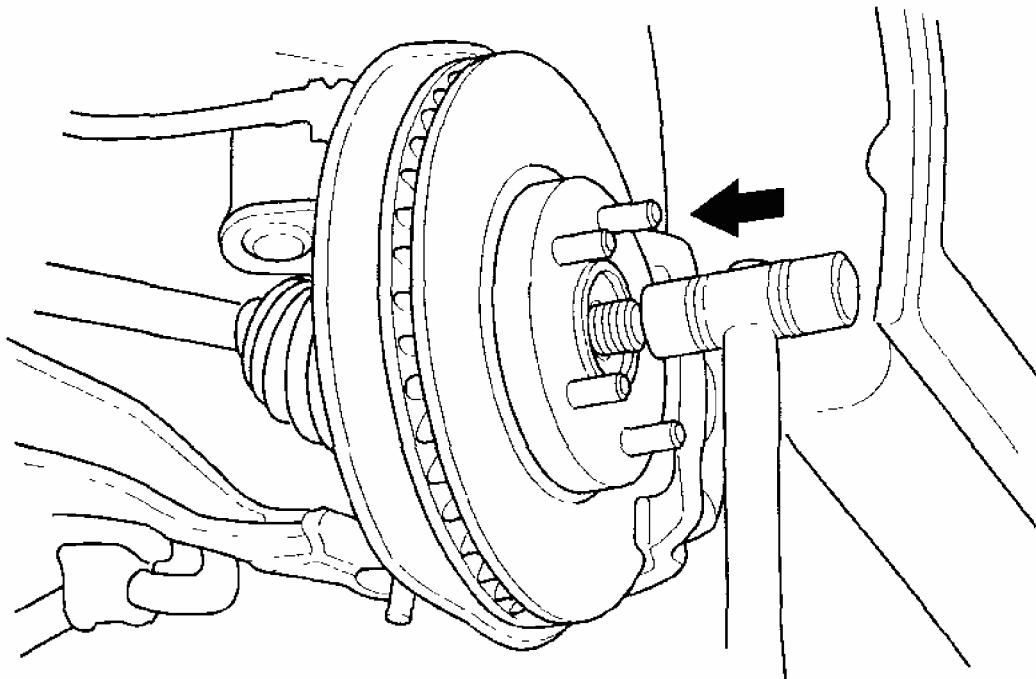
Fig. 5: Holding Stabilizer Ball Joint Pin Using Hex Wrench Removing Flange Nut
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the lock pin from the lower arm ball joint castle nut, and remove the nut, then separate the ball joint from the lower arm with the ball joint thread protector and remover (see step 10 on KNUCKLE AND HUB REPLACEMENT).

NOTE:

- To avoid damaging the ball joint, install the ball joint thread protector onto the threads of the ball joint.
- Be careful not to damage the ball joint boot when installing the remover.

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



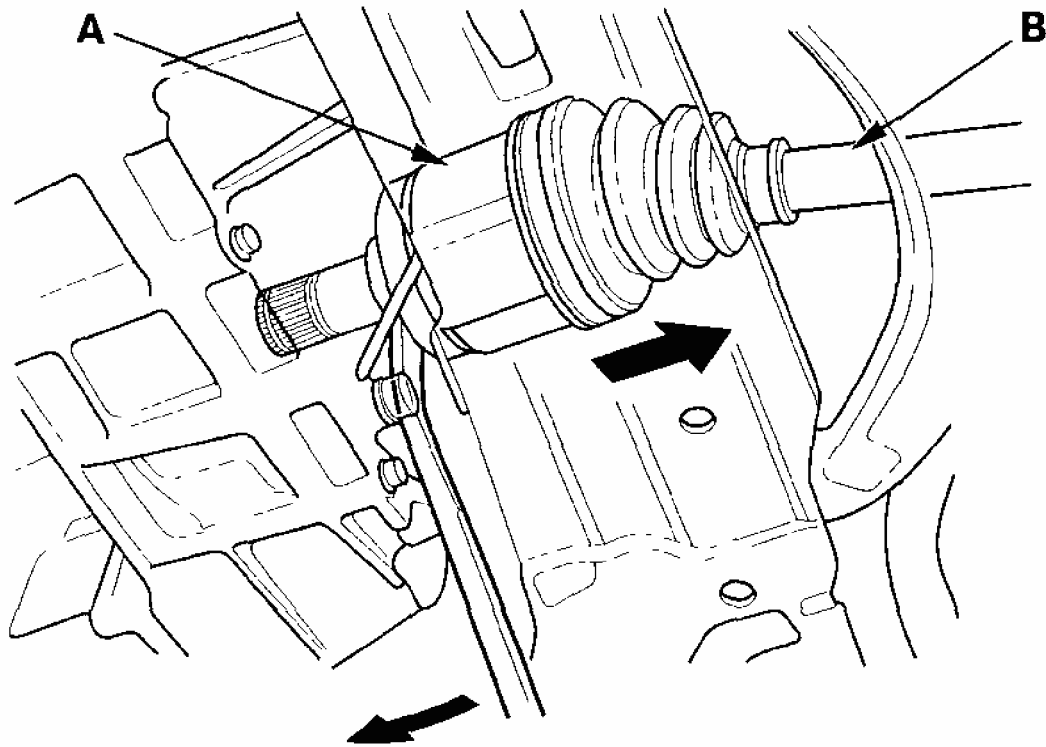
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Fig. 6: Removing Driveshaft Outboard Joint From Front Wheel Hub Using Plastic Hammer

Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Left driveshaft: Pry the inboard joint (A) from the transmission housing with a prybar. Remove the driveshaft as an assembly.

NOTE: Do not pull on the driveshaft (B) or the inboard joint may come apart. Pull the driveshaft straight out to avoid damaging the oil seal.

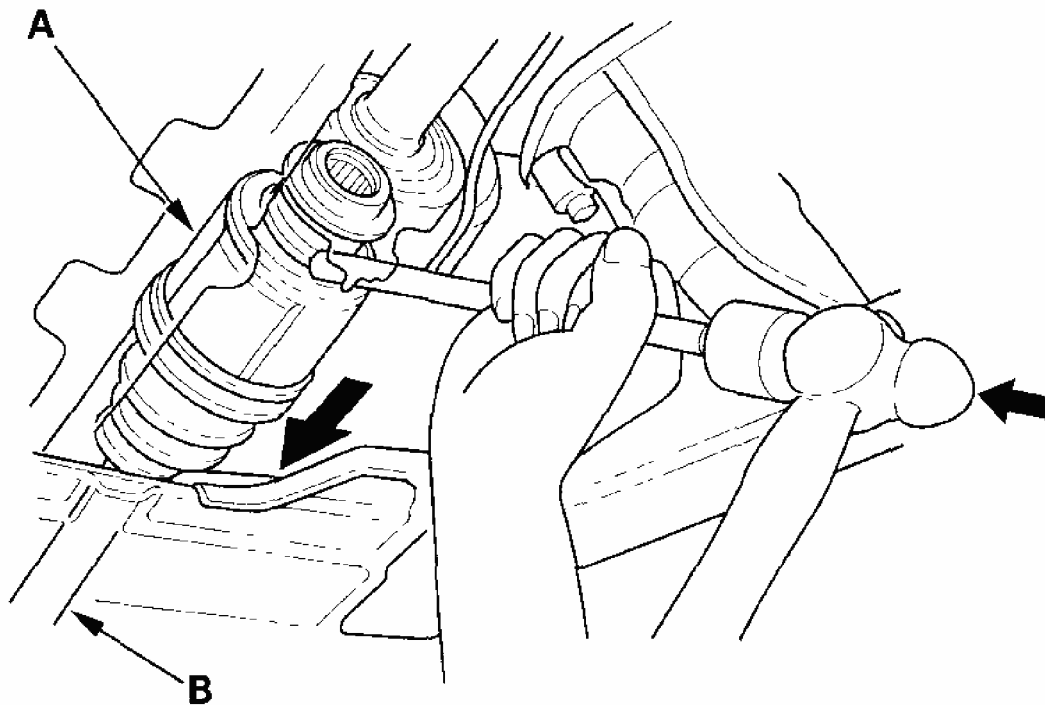


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Fig. 7: Prying Inboard Joint From Transmission Housing Using Prybar
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Right driveshaft: Drive the inboard joint (A) off of the intermediate shaft with a drift and hammer. Remove the driveshaft as an assembly.

NOTE: Do not pull on the driveshaft (B) or the inboard joint may come apart. Pull the driveshaft straight out to avoid damaging the oil seal.



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Fig. 8: Driving Inboard Joint Off Of Intermediate Shaft Using Drift And Hammer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

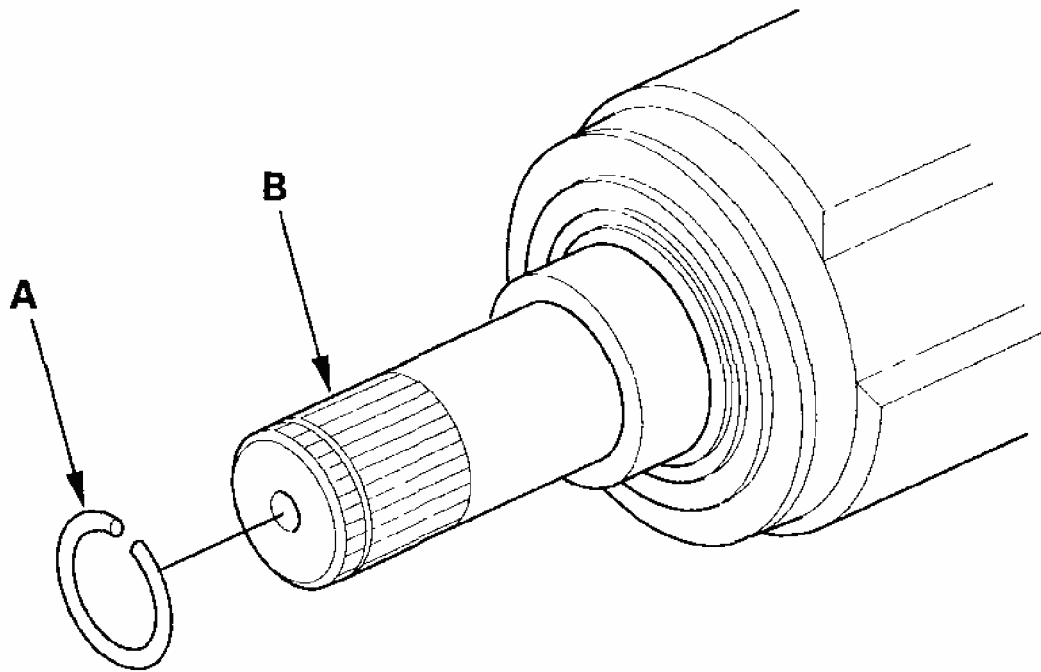
FRONT DRIVESHAFT DISASSEMBLY

Special Tools Required

- Threaded adapter, 24 x 1.5 mm 07XAC-001020A
- Slide hammer, 5/8"-18 UNF, commercially available
- Boot band pincers Kent-Moore J-35910 or equivalent, commercially available

INBOARD JOINT SIDE

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

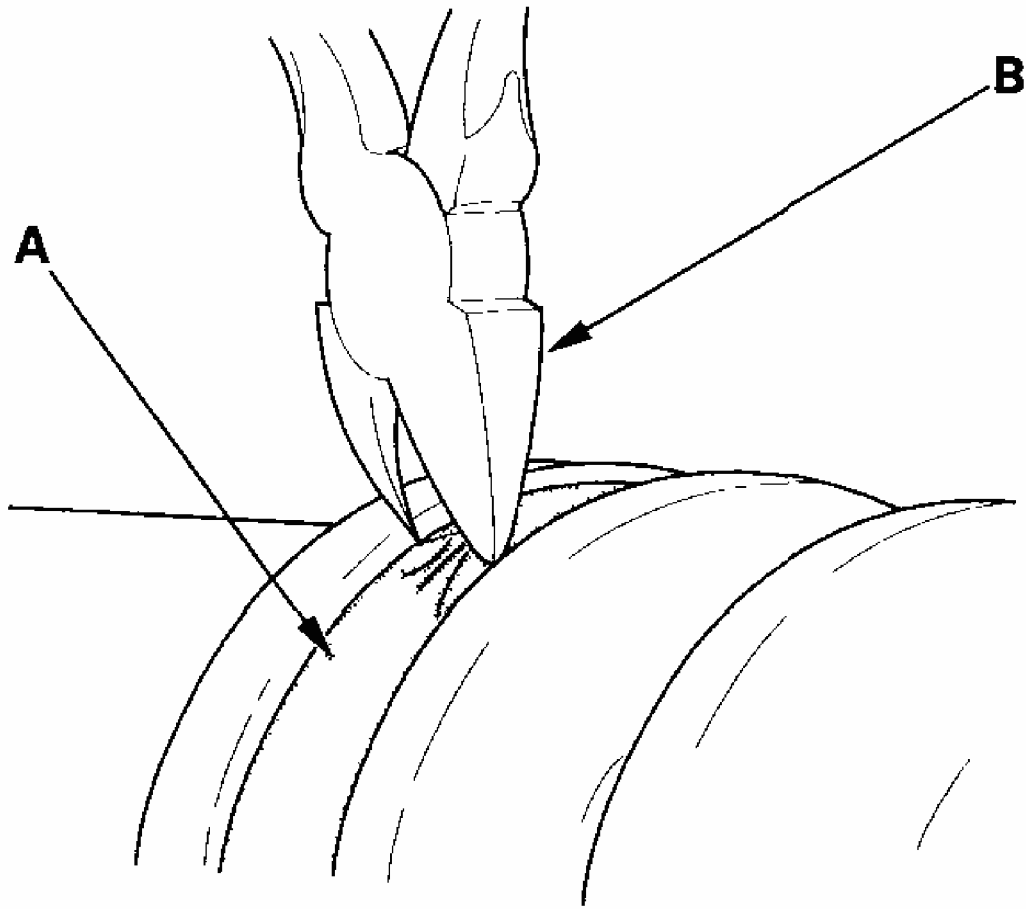


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Fig. 9: Removing Set Ring From Inboard Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the boot bands. Be careful not to damage the boot and dynamic damper.
 - If the boot band is a welded type (A), cut the boot band (B).
 - If the boot band is a double loop type (C), lift up the band end (D), and push it into the clip (E).
 - If the boot band is a low profile type (F), pinch the boot band using commercially available boot band pincers (G).

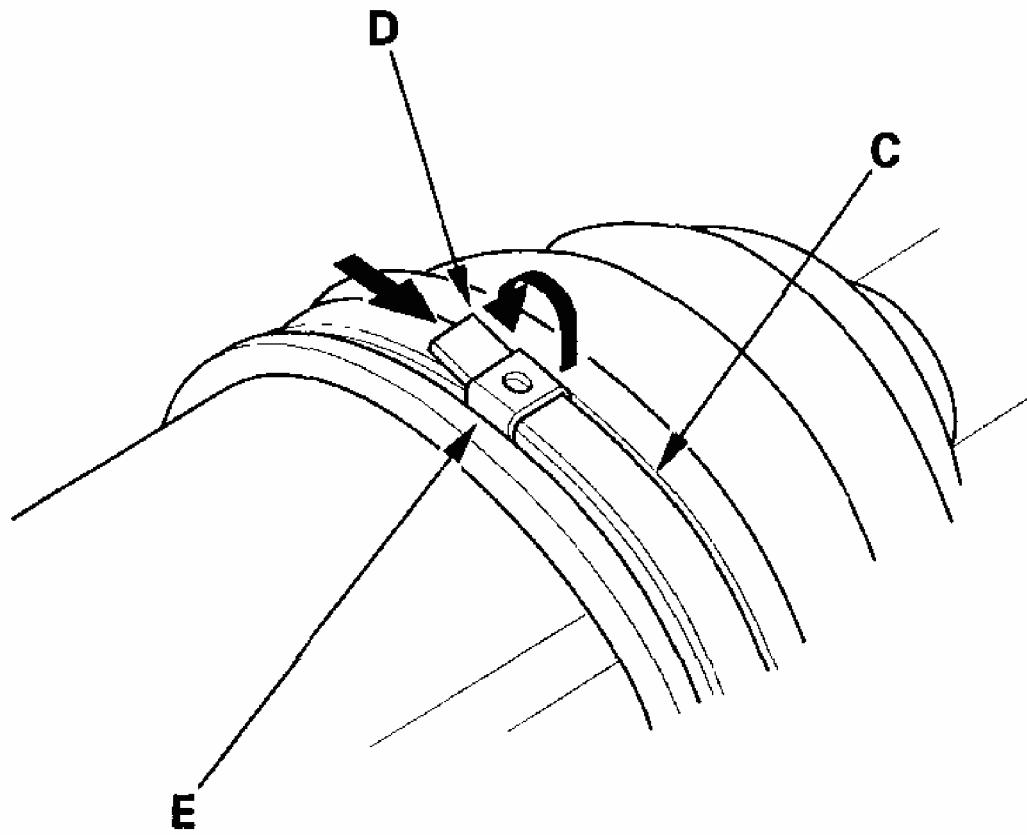
Welded type



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Fig. 10: Removing Boot Bands (Welded Type)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

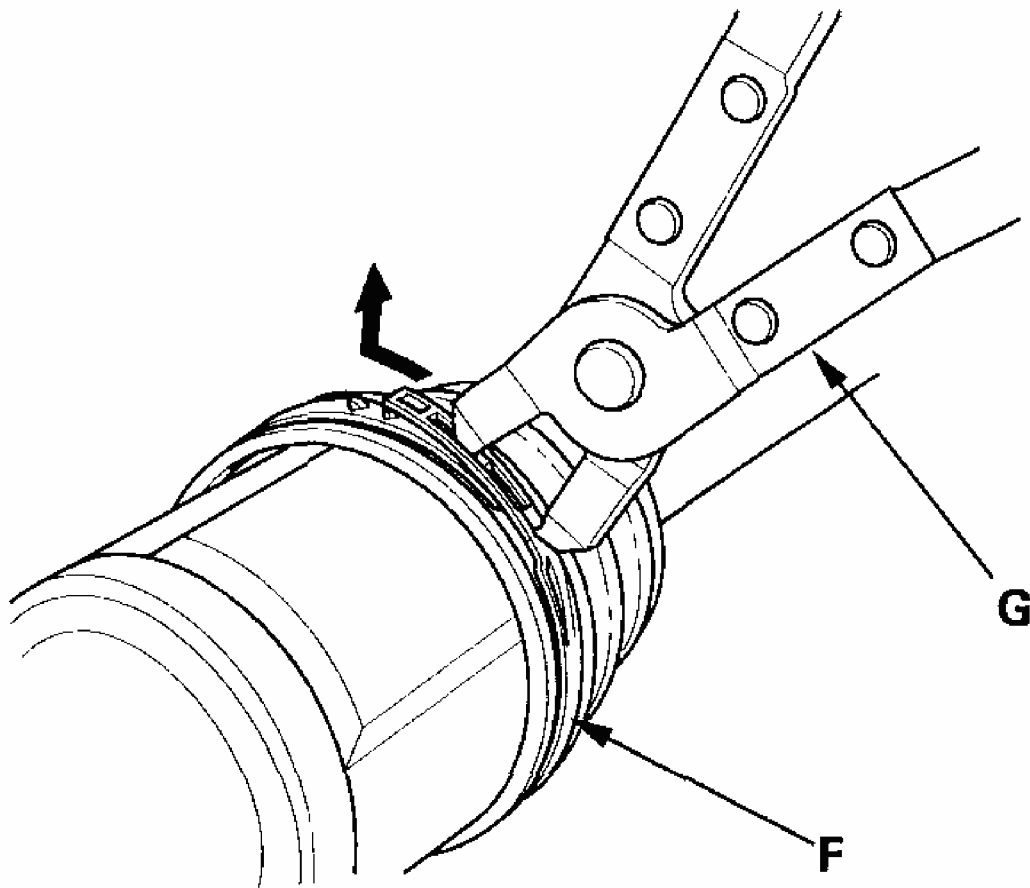
Double loop type



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Fig. 11: Removing Boot Bands (Double Loop Type)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

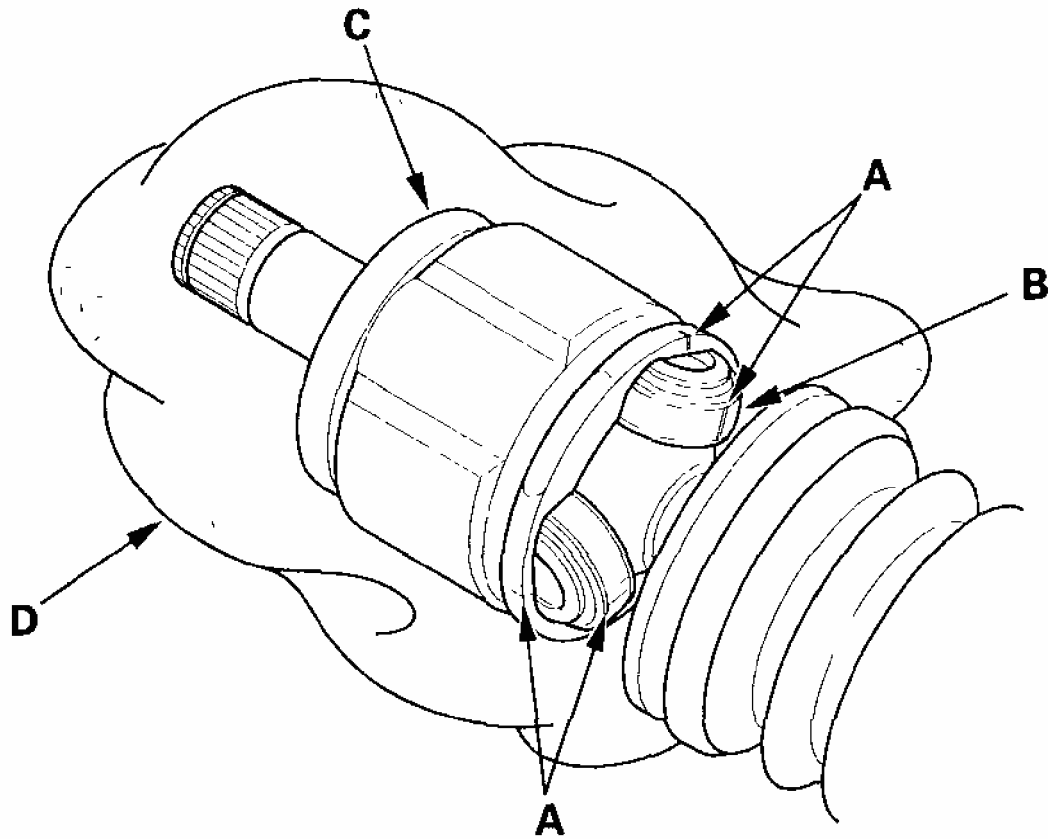
Low profile type



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Fig. 12: Removing Boot Bands (Low Profile Type)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

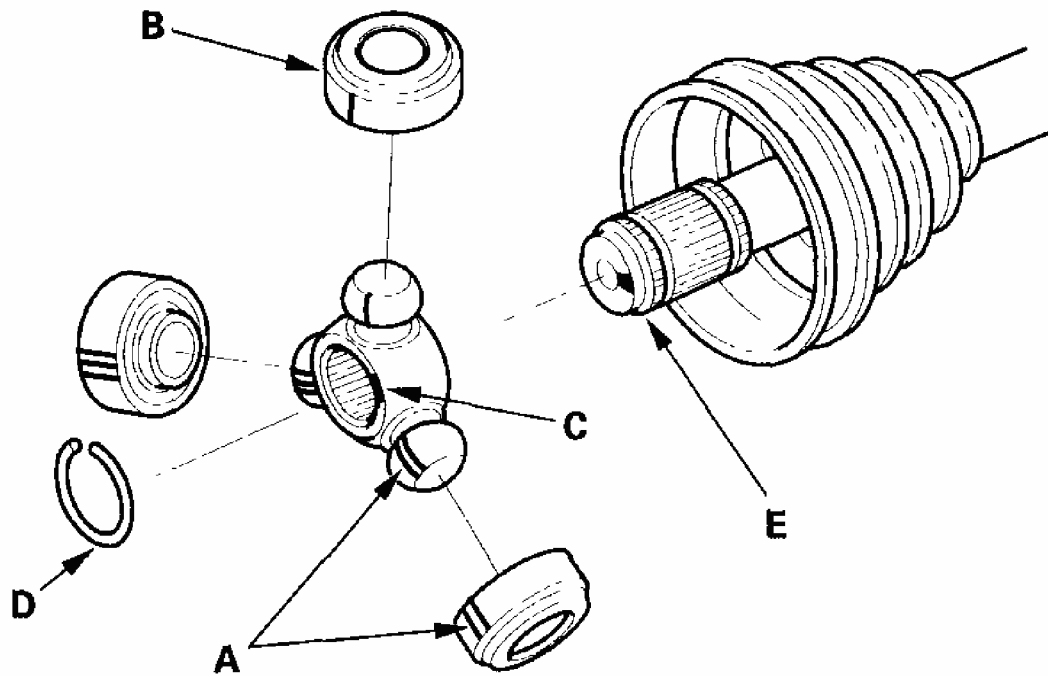
3. Make a mark (A) on each roller (B) and inboard joint (C) to identify the locations of rollers and grooves in the inboard joint. Then remove the inboard joint on the shop towel (D). Be careful not to drop the rollers when separating them from the inboard joint.



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Fig. 13: Identifying Mark On Each Roller And Inboard Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

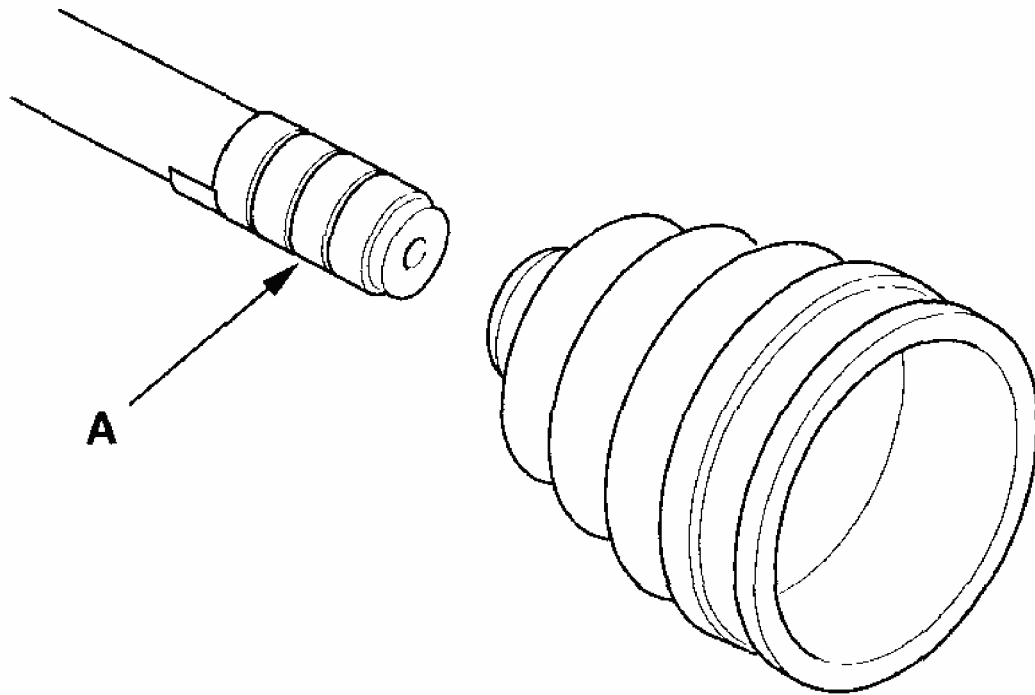
4. Make a mark (A) on the rollers (B) and spider (C) to identify the locations of the rollers on the spider, then remove the rollers.



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Fig. 14: Removing Rollers And Spider
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the circlip (D).
6. Mark the spider and driveshaft (E) to identify the position of the spider on the shaft.
7. Remove the spider.
8. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damage to the boot.



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Fig. 15: Wrapping Splines On Driveshaft Using Vinyl Tape
Courtesy of AMERICAN HONDA MOTOR CO., INC.

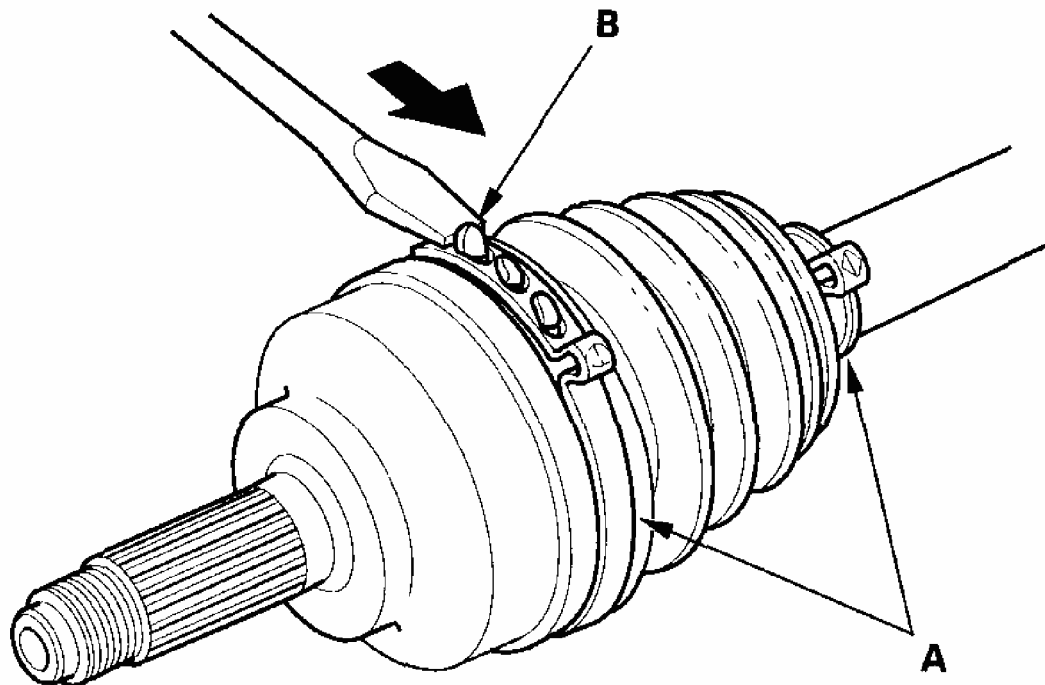
9. Remove the inboard boot. Be careful not to damage the boot.
10. Remove the vinyl tape.

OUTBOARD JOINT SIDE

1. Remove the boot bands. Be careful not to damage the boot and dynamic damper.

If the boot band is an ear clamp type (A), lift up the three tabs (B) with a screwdriver.

Ear clamp type

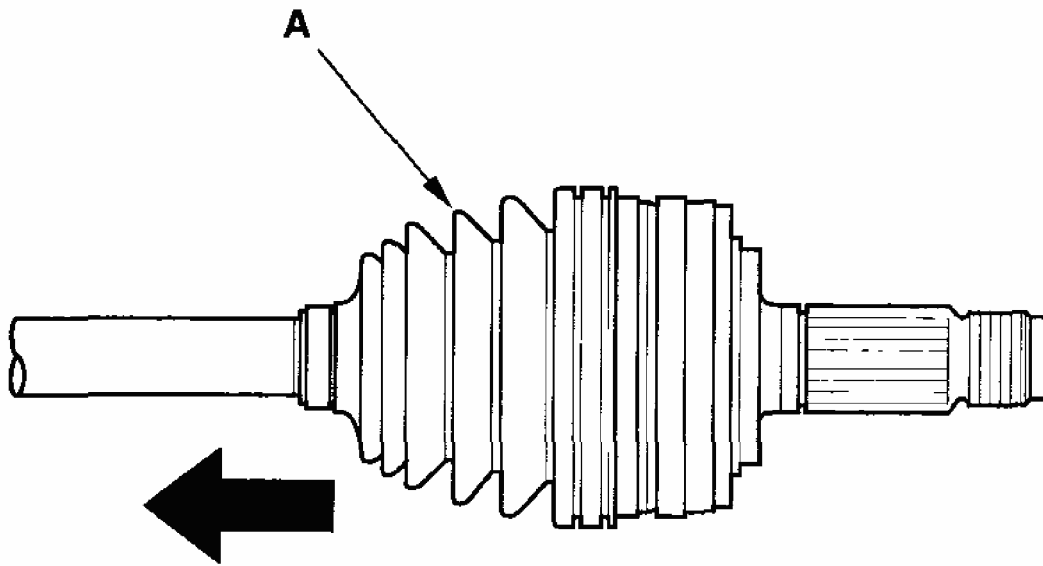


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Fig. 16: Removing Boot Bands

Courtesy of AMERICAN HONDA MOTOR CO., INC.

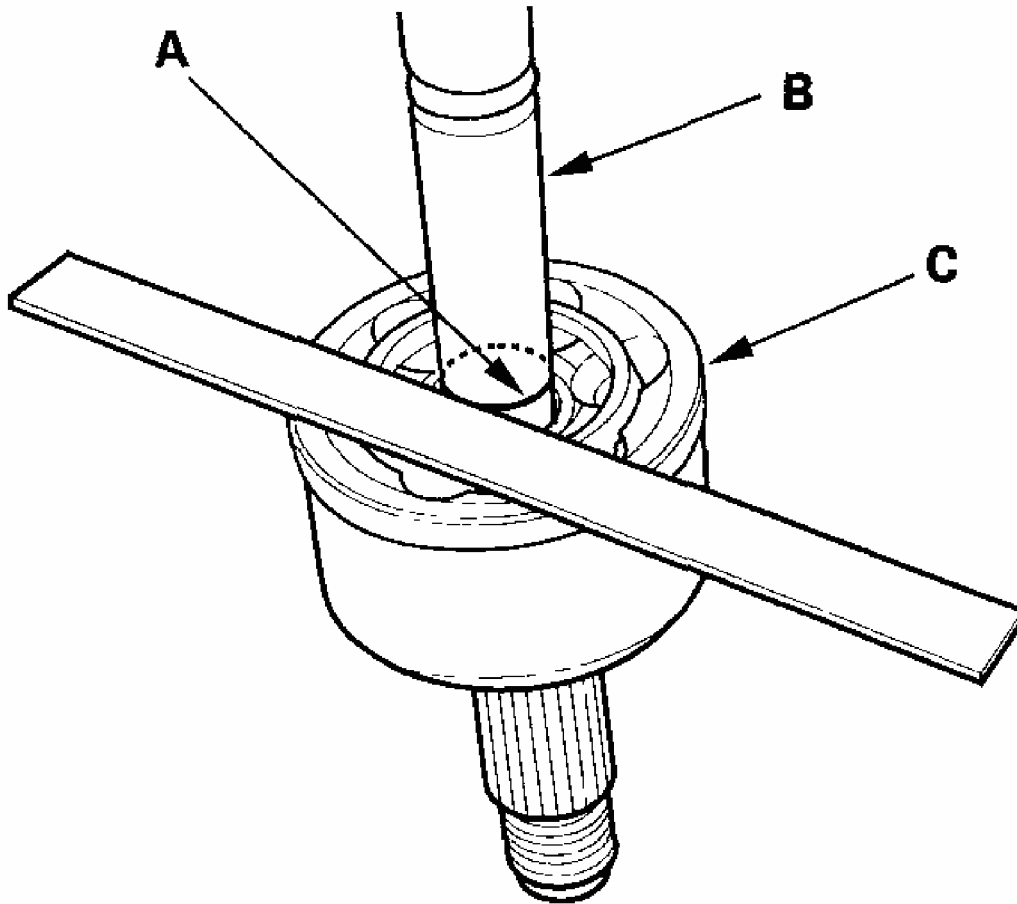
2. Slide the outboard boot (A) partially to the inboard joint side. Be careful not to damage the boot.



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Fig. 17: Sliding Outboard Boot Partially To Inboard Joint Side
Courtesy of AMERICAN HONDA MOTOR CO., INC.

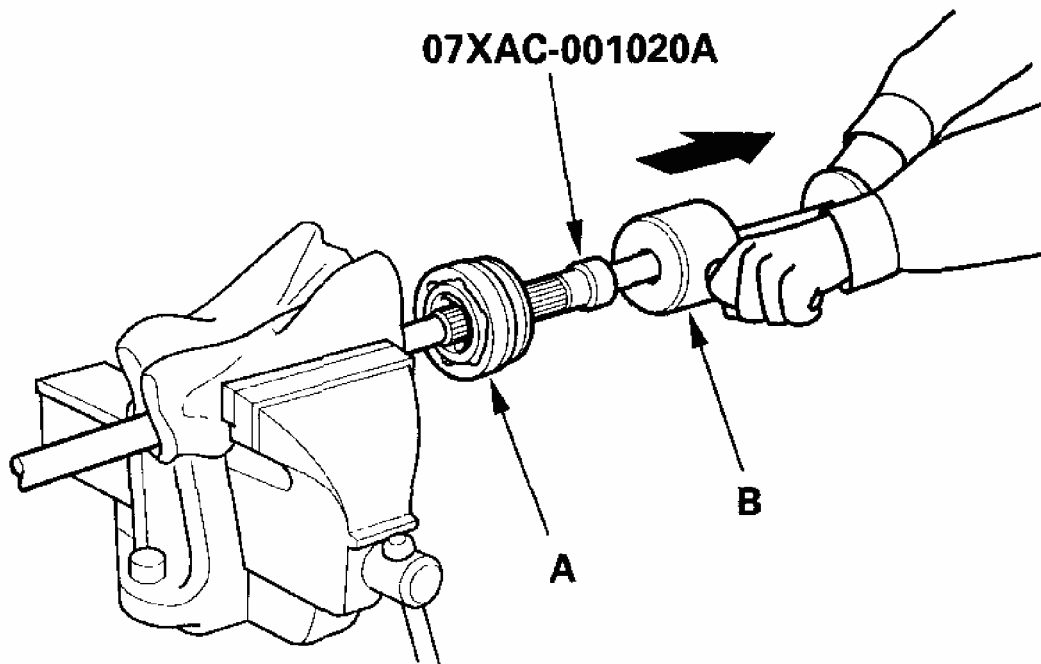
3. Wipe off the grease to expose the driveshaft and the outboard joint inner race.
4. Make a mark (A) on the driveshaft (B) at the same position of the outboard joint end (C).



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Fig. 18: Identifying Mark On Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Carefully clamp the driveshaft in a vise.
6. Remove the outboard joint (A) using the special tool and a commercially available 5/8"-18 UNF slide hammer (B).



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Fig. 19: Removing Outboard Joint Using Special Tool
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

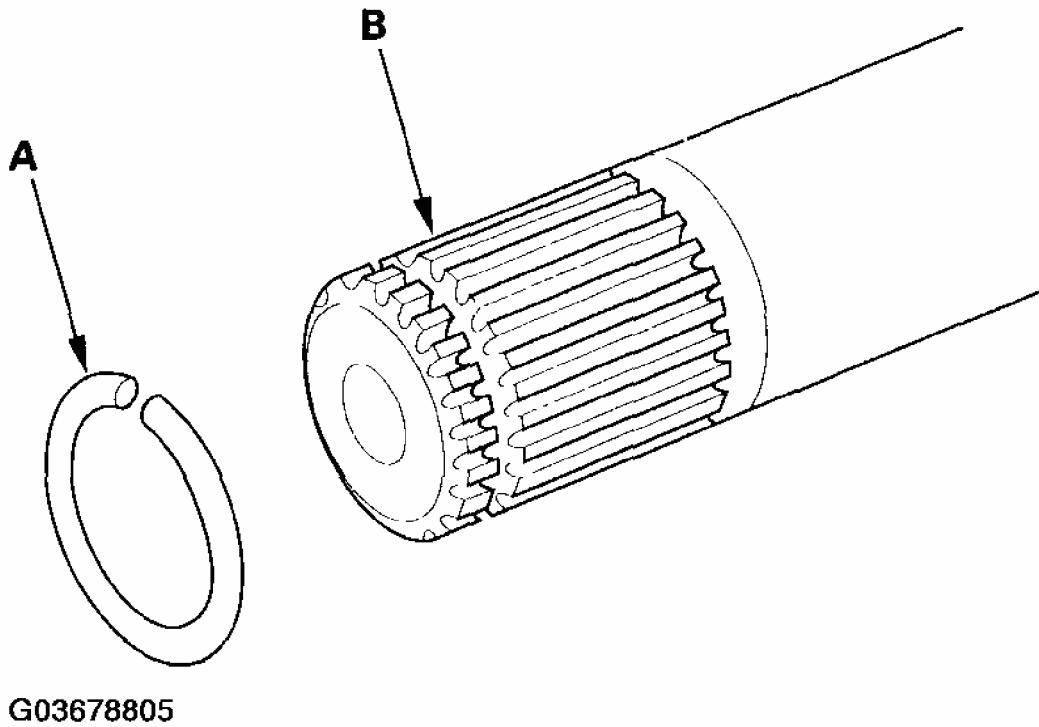
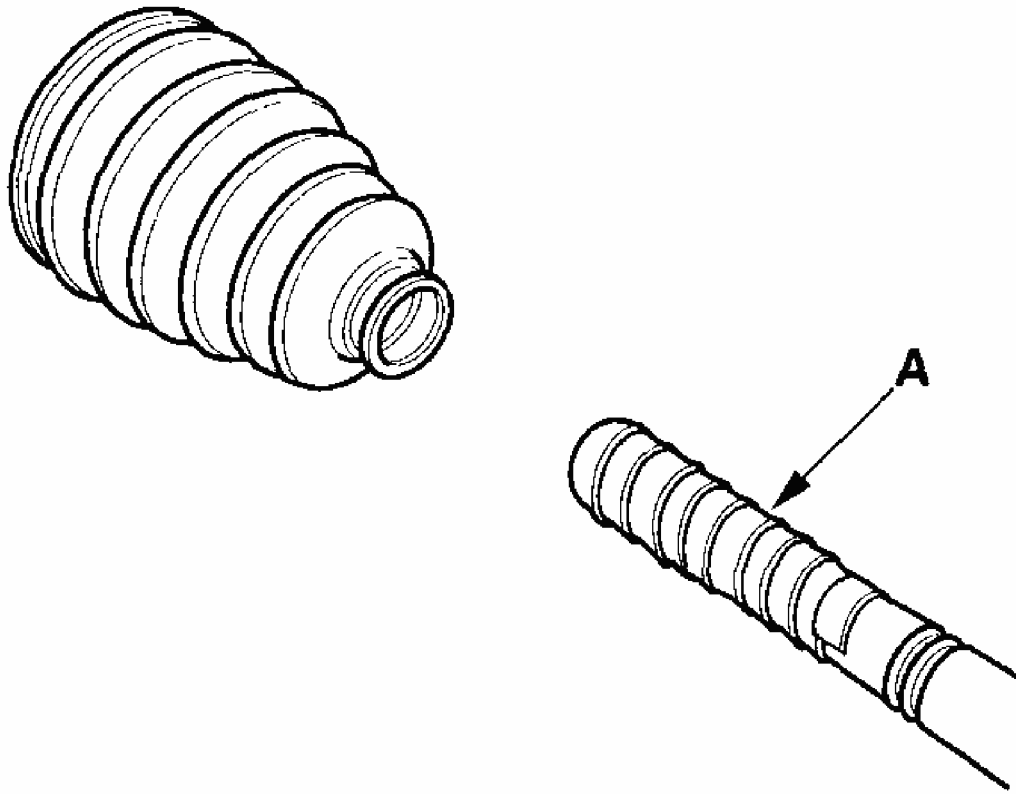


Fig. 20: Removing Stop Ring From Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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



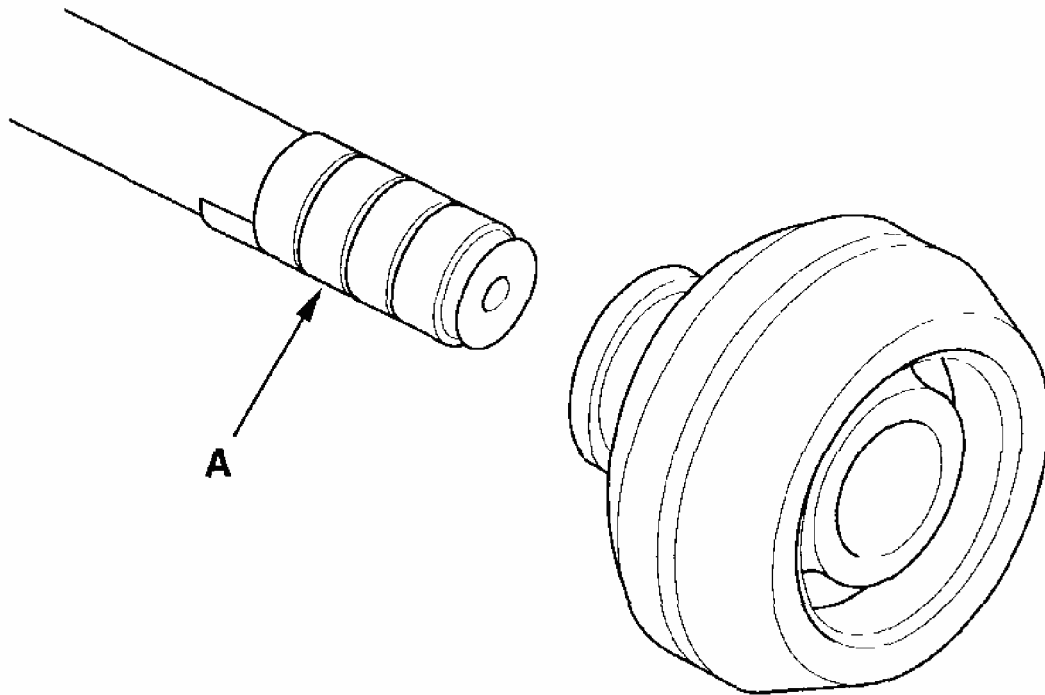
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Fig. 21: Identifying Vinyl Tape On Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

DYNAMIC DAMPER REPLACEMENT

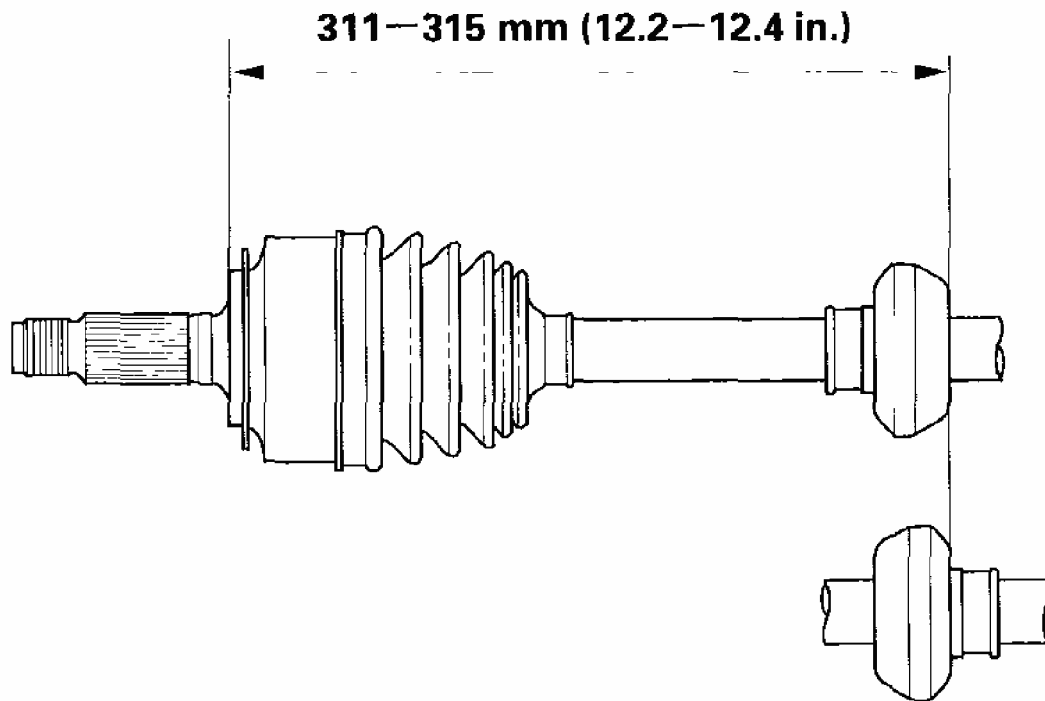
1. Remove the inboard joint (see **FRONT DRIVESHAFT DISASSEMBLY**).
2. Remove the dynamic damper bands. Be careful not to damage the dynamic damper (see **FRONT DRIVESHAFT DISASSEMBLY**).
 - If the band is a welded type, cut the band.
 - If the band is a double loop type, lift up the band end, and push it into the clip.
 - If the band is a low profile type, pinch the band using commercially available boot band pincers.
3. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damage to the dynamic damper.



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Fig. 22: Wrapping Splines On Driveshaft With Vinyl Tape
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Remove the dynamic damper. Be careful not to damage the dynamic damper.
5. Adjust the position of the new dynamic damper to these measurements. (The dynamic damper can be installed in either direction.)



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Fig. 23: Identifying New Dynamic Damper Measurements
Courtesy of AMERICAN HONDA MOTOR CO., INC.

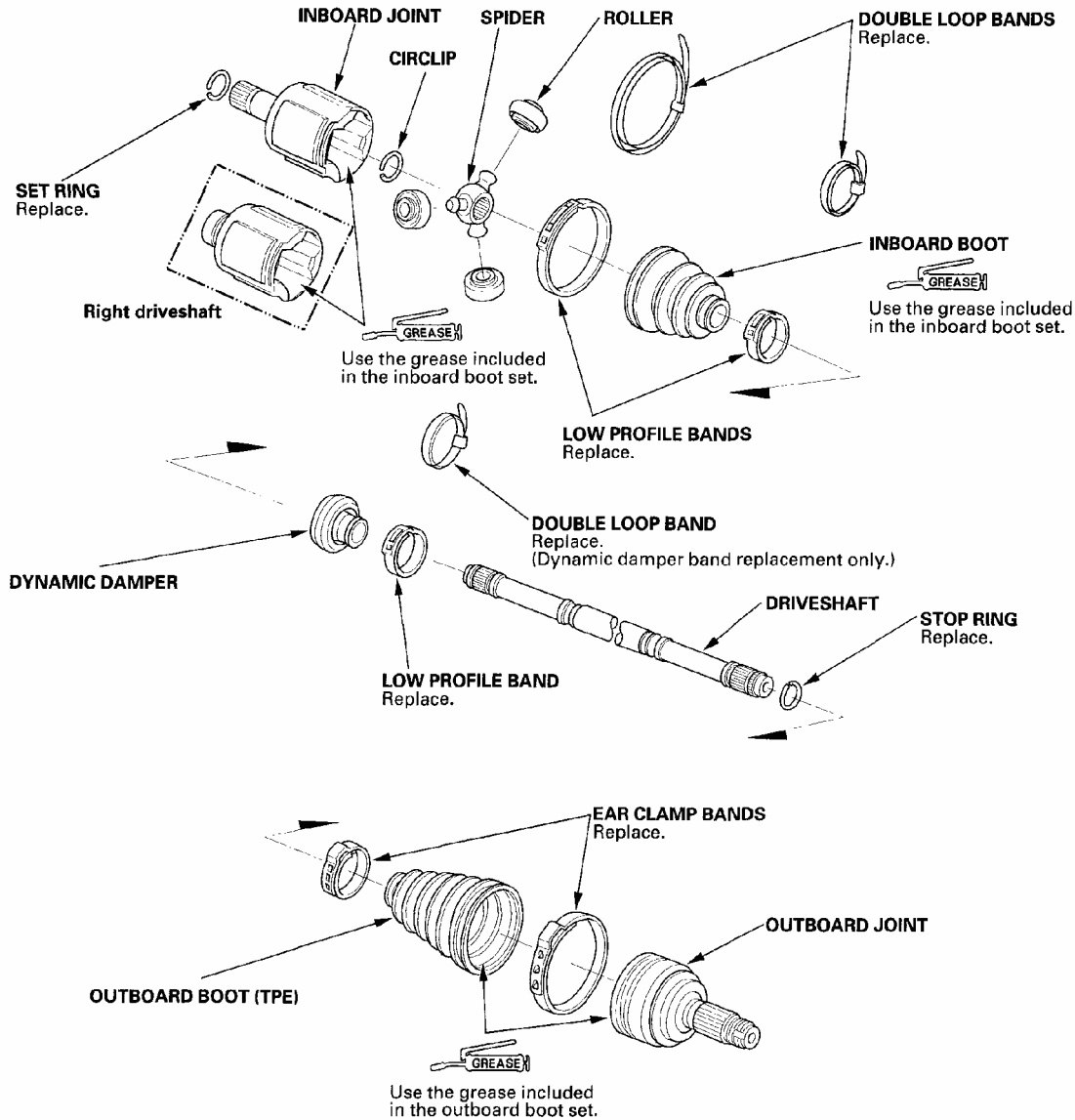
6. Install the dynamic damper band (see step 9).
7. Install the inboard joint (see **INBOARD JOINT SIDE**).

FRONT DRIVESHAFT REASSEMBLY

EXPLODED VIEW

2004 Honda Element DX

2003-06 DRIVELINE/AXLE Driveline/Axle - Element



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Fig. 24: Exploded View Of Front Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

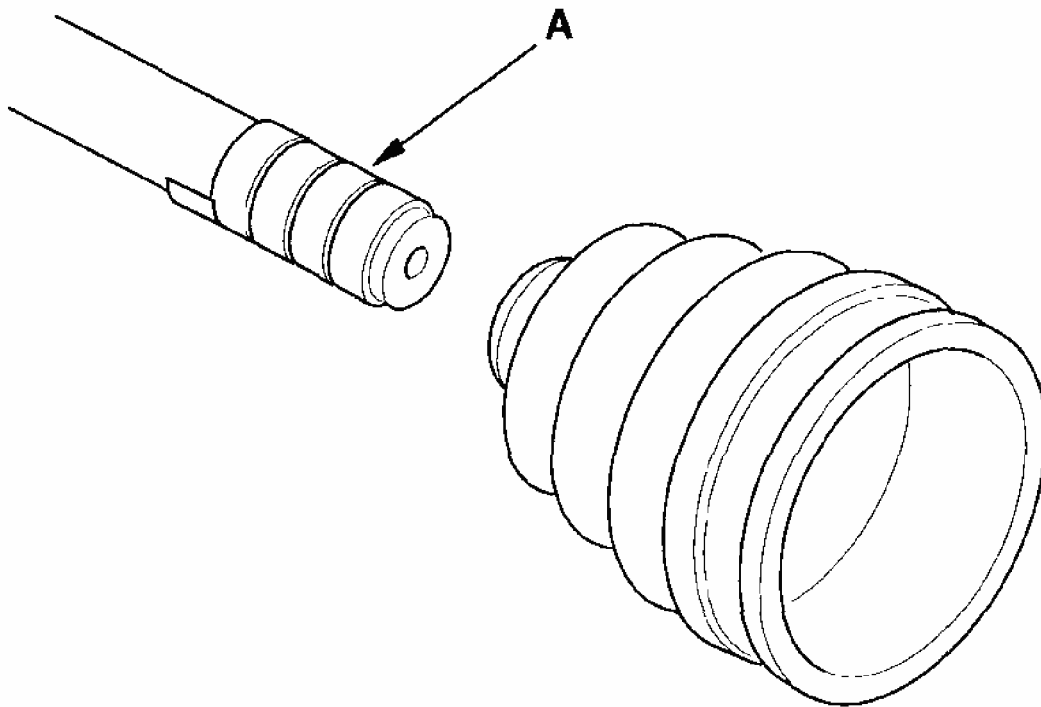
Special Tools Required

- Boot band tool, KD-3191 or equivalent, commercially available
- Boot band pincers, Kent-Moore J-35910 or equivalent, commercially available

NOTE: Refer to the **EXPLODED VIEW** as needed during this procedure.

INBOARD JOINT SIDE

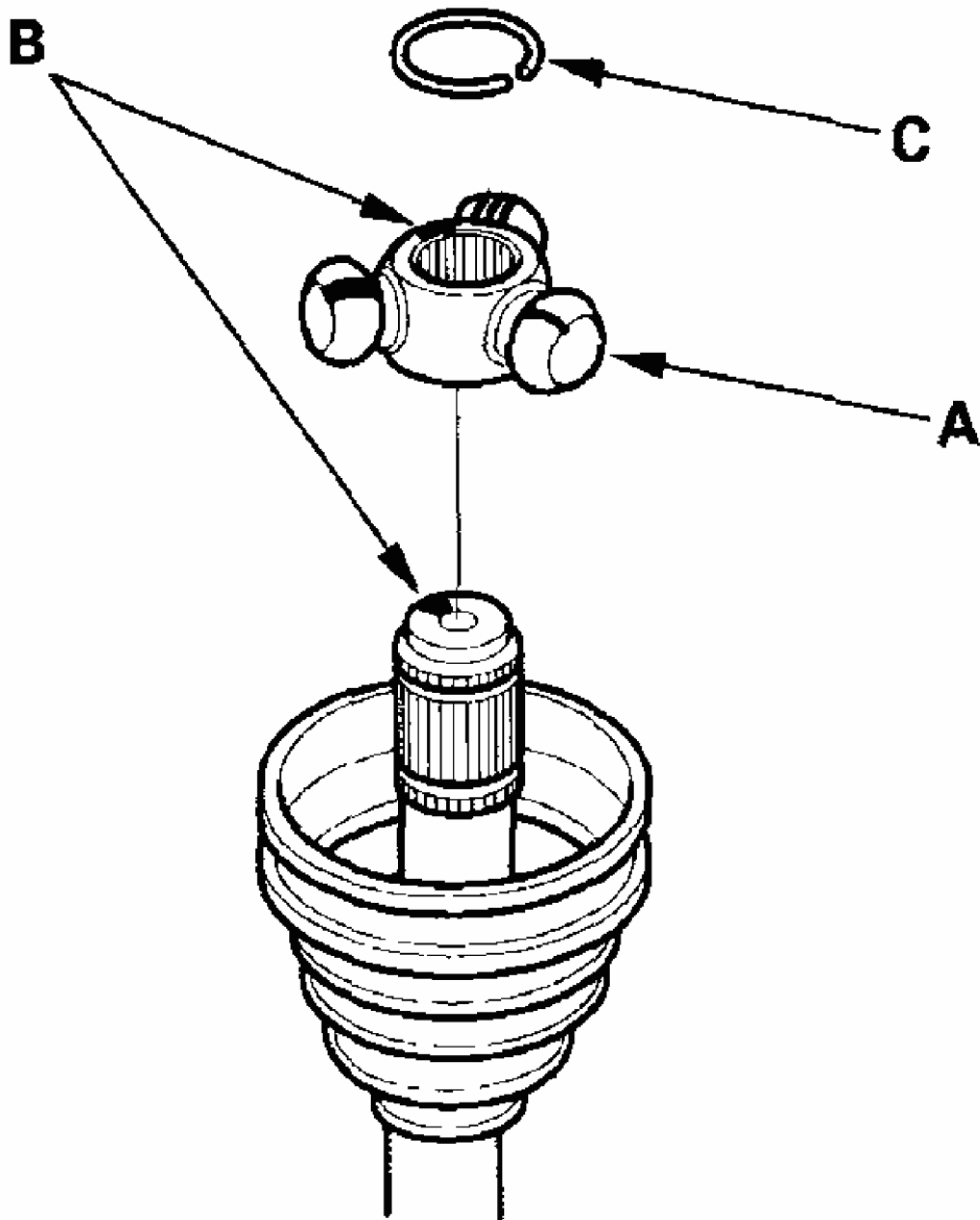
1. Wrap the splines with vinyl tape (A) to prevent damage to the inboard boot.



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Fig. 25: Wrapping Splines With Vinyl Tape
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the inboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the inboard boot.
3. Install the spider (A) onto the driveshaft by aligning the marks (B) on the spider, and the end of the driveshaft.

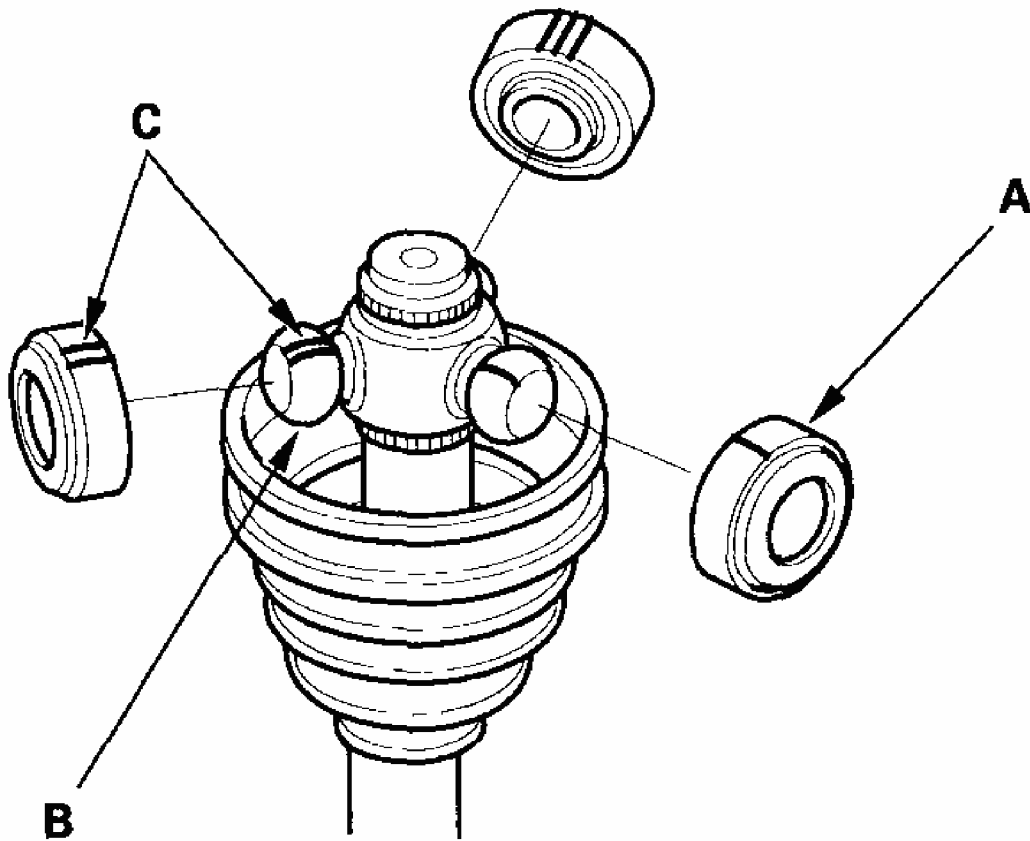


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Fig. 26: Installing Inboard Boot Onto Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the circlip (C) into the driveshaft groove. Rotate the circlip in its groove to make sure it is fully seated.

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



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Fig. 27: Fitting Rollers Onto Spider

Courtesy of AMERICAN HONDA MOTOR CO., INC.

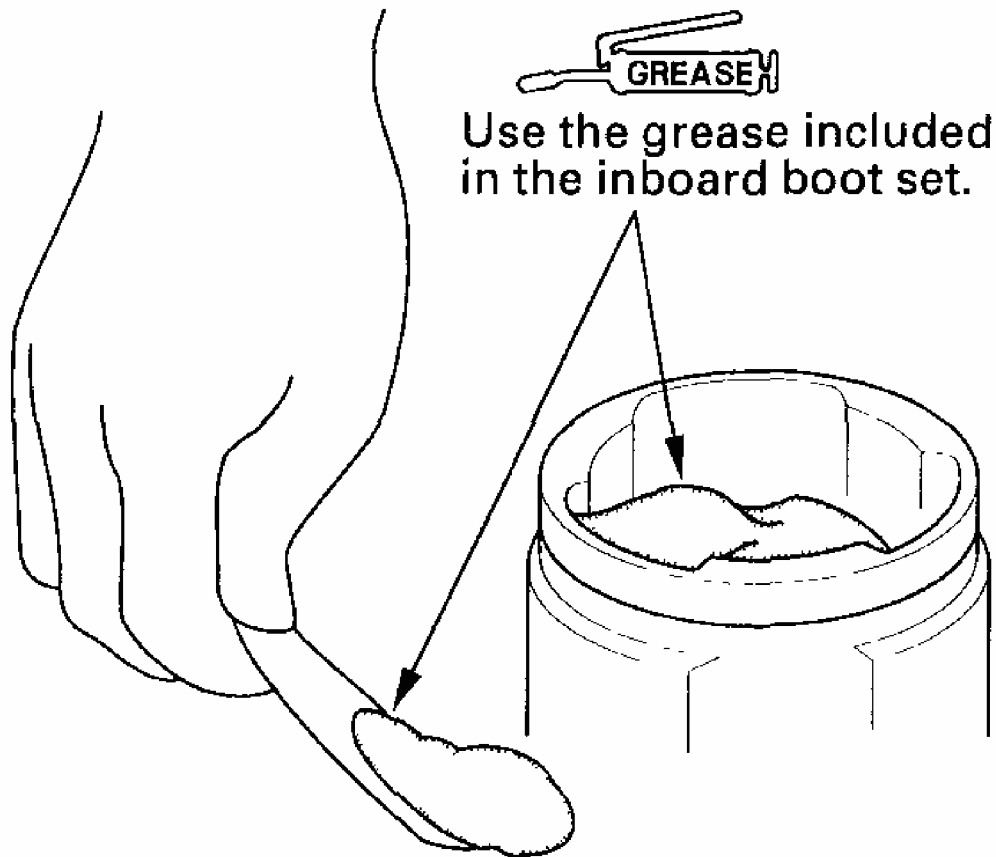
6. Pack the inboard joint with the joint grease included in the new driveshaft set.

Grease quantity

Inboard joint: 150-160 g (5.3-5.6 oz.)

Grease quantity

Inboard joint: 150–160 g (5.3–5.6 oz)

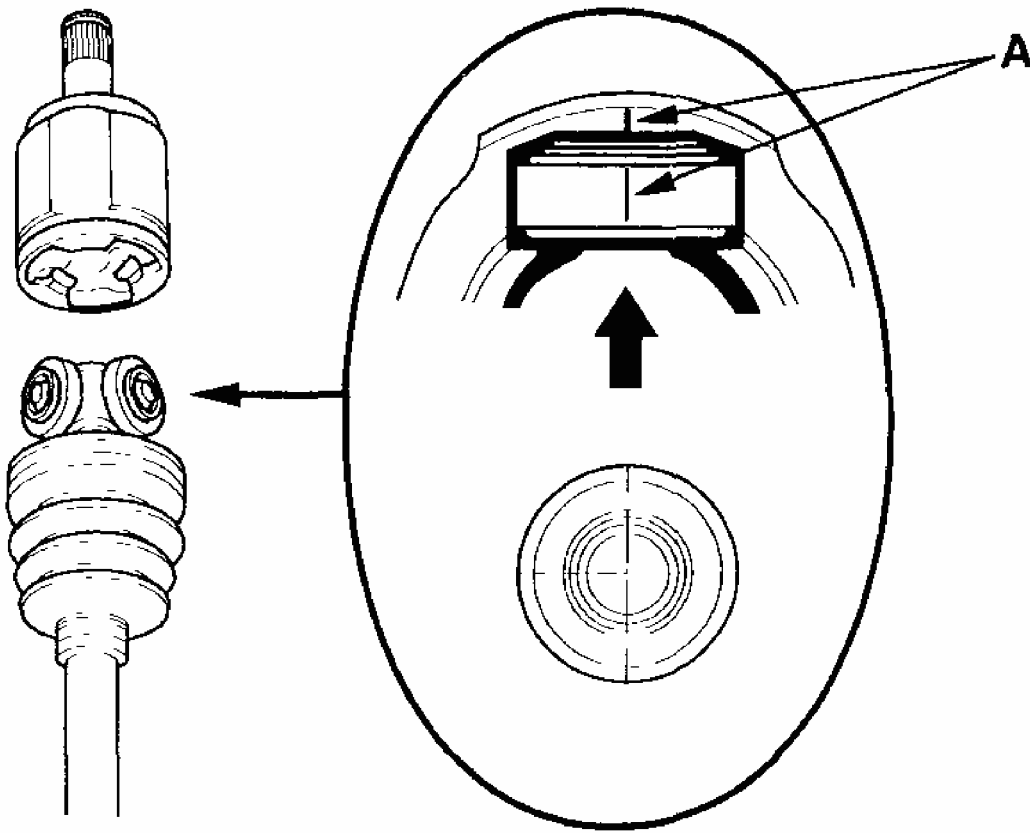


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Fig. 28: Packing Inboard Joint With Joint Grease

Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Fit the inboard joint onto the driveshaft, and note these items:
 - Reinstall the inboard joint onto the driveshaft by aligning the marks (A) on the inboard joint and the rollers.
 - Hold the driveshaft so the inboard joint is pointing up to prevent it from falling off.



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Fig. 29: Reinstalling Inboard Joint Onto Driveshaft By Aligning Marks On Inboard Joint And Rollers

Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Adjust the inboard joint so the rollers are in the middle of the joint, then check the driveshaft length measurement to these measurements.

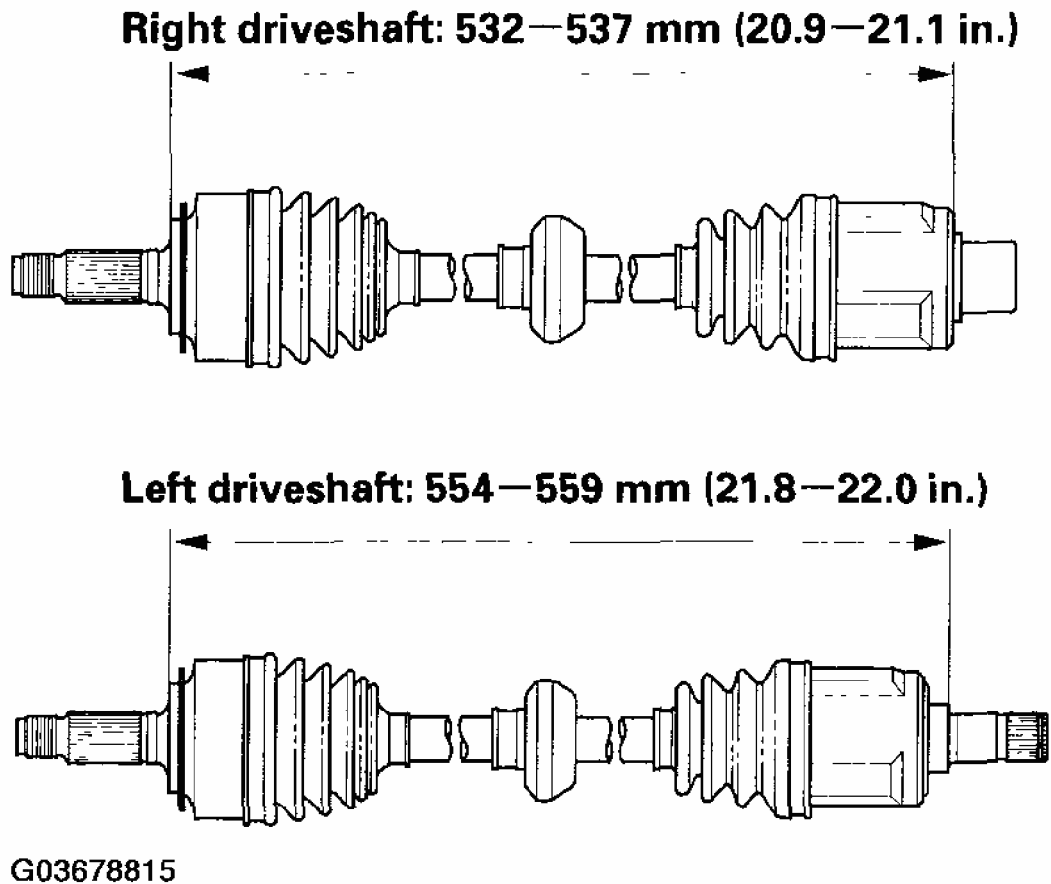
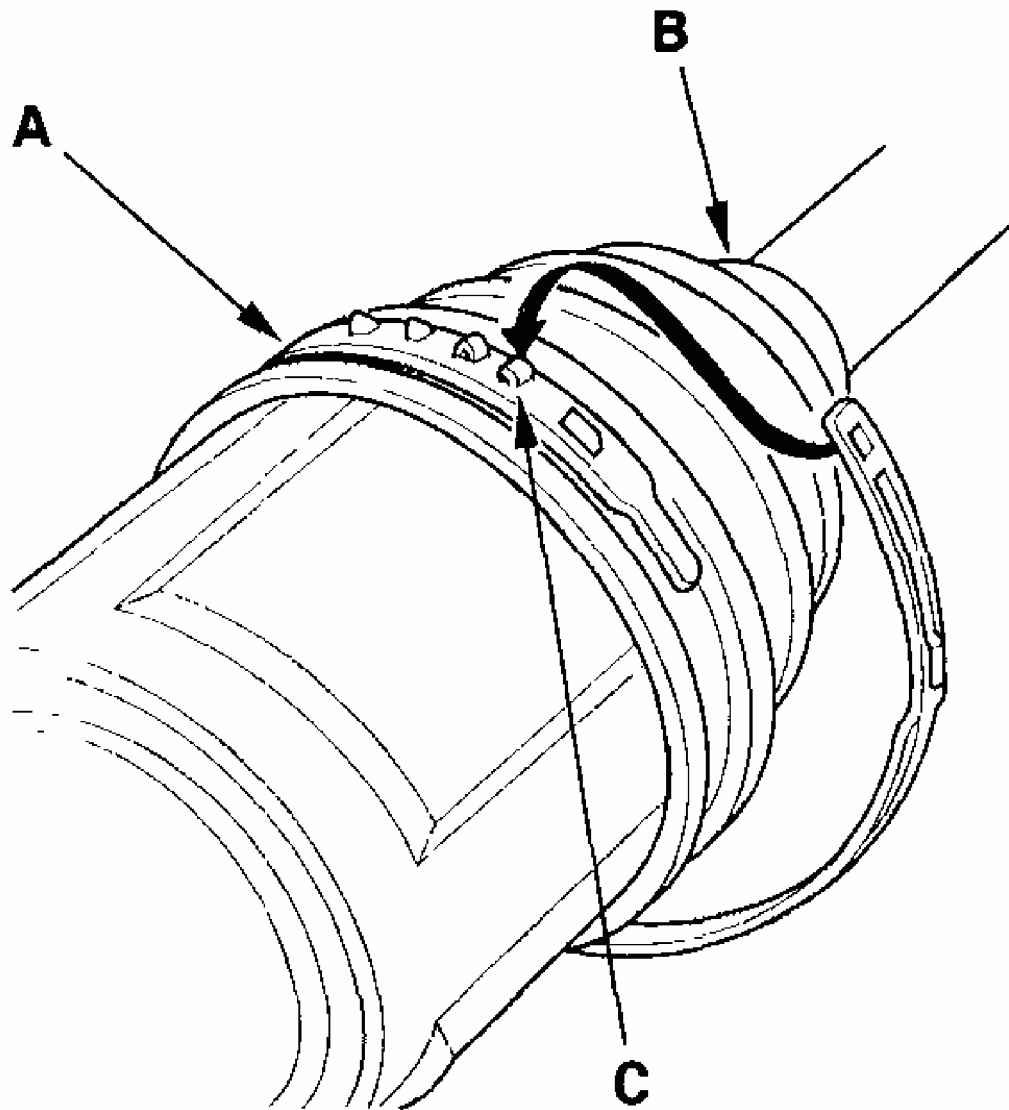


Fig. 30: Identifying Driveshaft Length Measurement
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Install the boot bands.
 - For the double loop type, go to step 13.

(Boot band replacement only)

 - For the low profile type, go to step 10.
10. Install the new low profile band (A) onto the boot (B), then hook the tab (C) of the band.

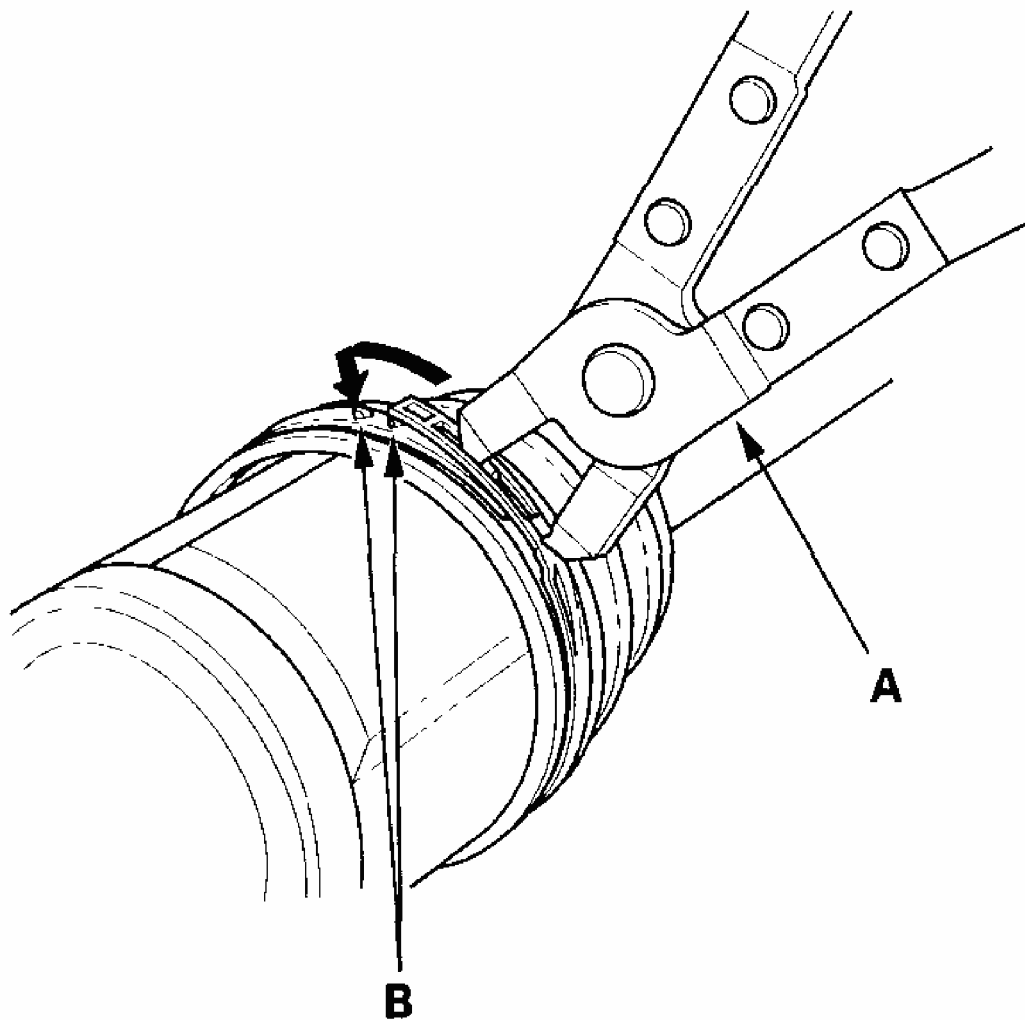


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Fig. 31: Hooking Tab Of Band

Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. Close the hook portion of the band with a commercially available boot band pincers (A), then hook the tabs (B) of the band.

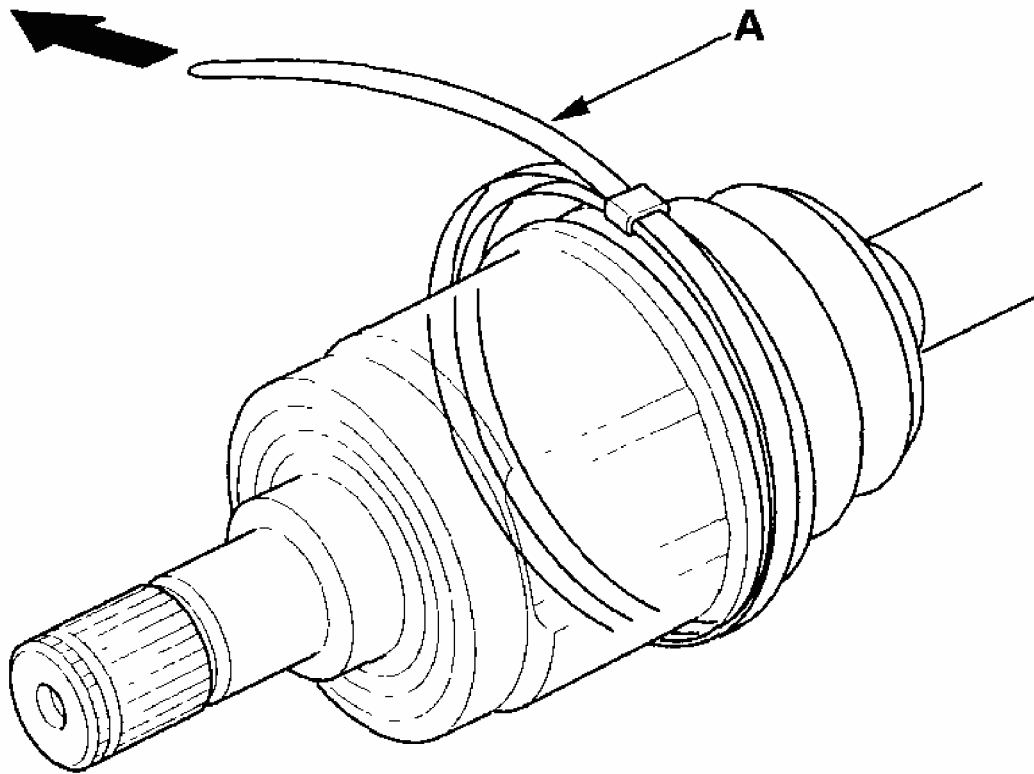


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Fig. 32: Closing Hook Portion Of Band Using Commercially Available Boot Band Pincers

Courtesy of AMERICAN HONDA MOTOR CO., INC.

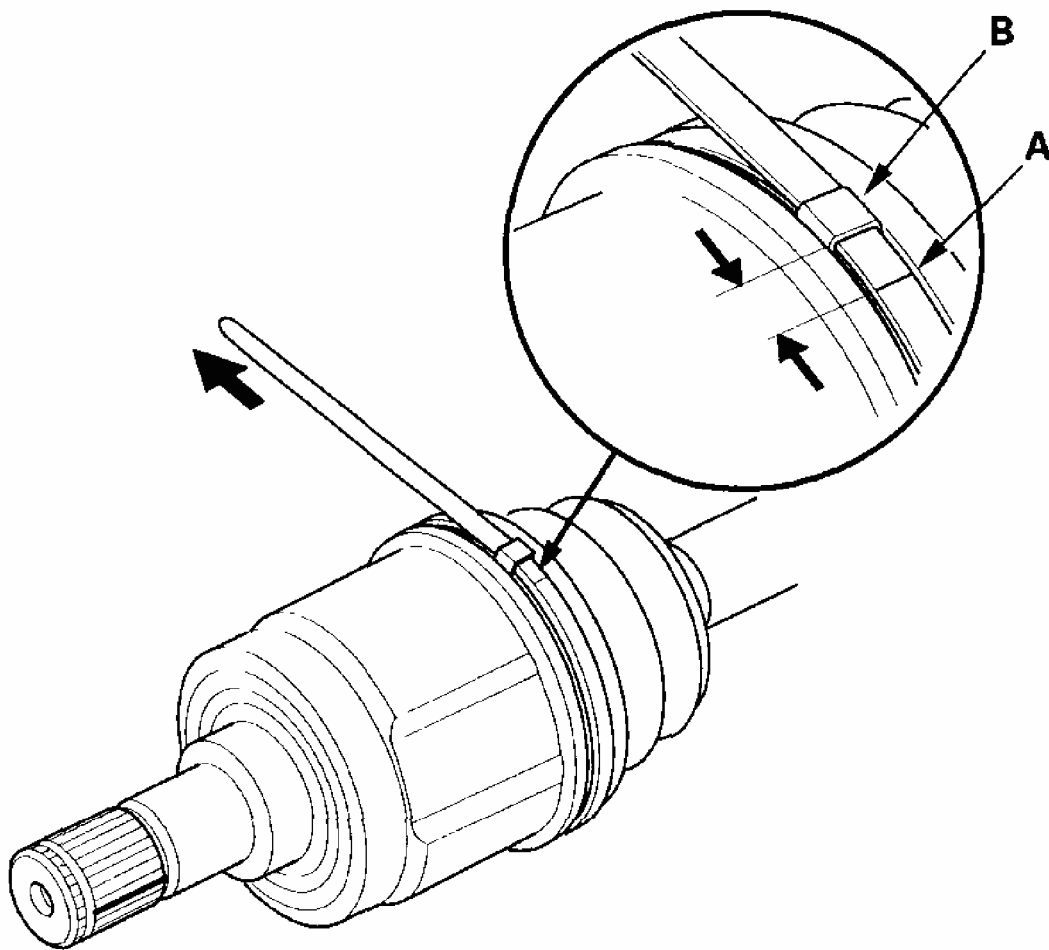
12. Install the boot band on the other end of the boot, and repeat steps 10 through 11, then go to step 22 .
13. Fit the boot ends onto the driveshaft and the inboard joint, then install the new double loop band (A) onto the boot.



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Fig. 33: Installing New Double Loop Band Onto Boot
Courtesy of AMERICAN HONDA MOTOR CO., INC.

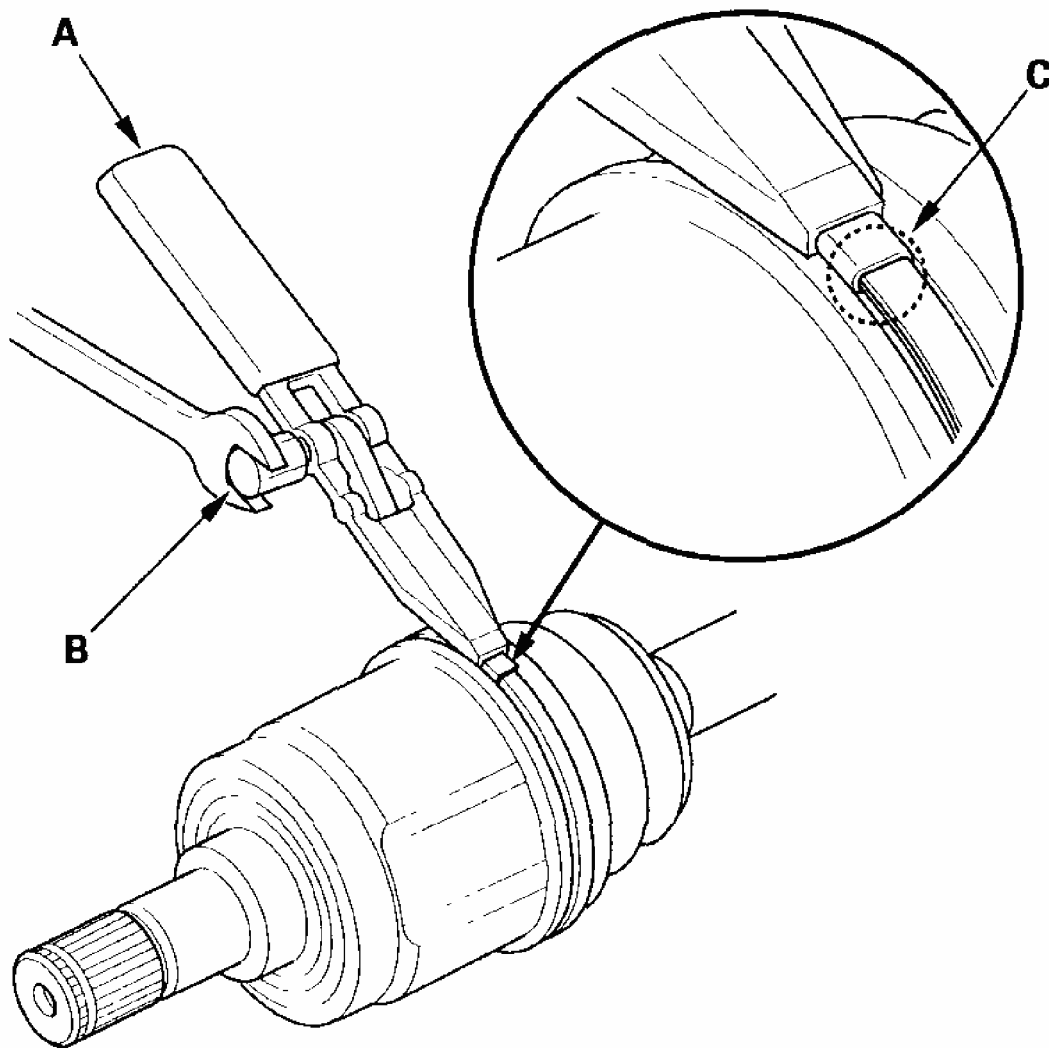
14. Pull up the slack in the band by hand.
15. Mark a position (A) on the band 10-14 mm (0.4-0.6 in.) from the clip (B).



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Fig. 34: Identifying Marking Position On Band From Clip
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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



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Fig. 35: Threading Free End Of Band Through Nose Section Of Commercially Available Boot Band Tool

Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Using a wrench on the winding mandrel of the boot band tool, and tighten the band until the marked spot (C) on the band meets the edge of the clip.
18. 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.

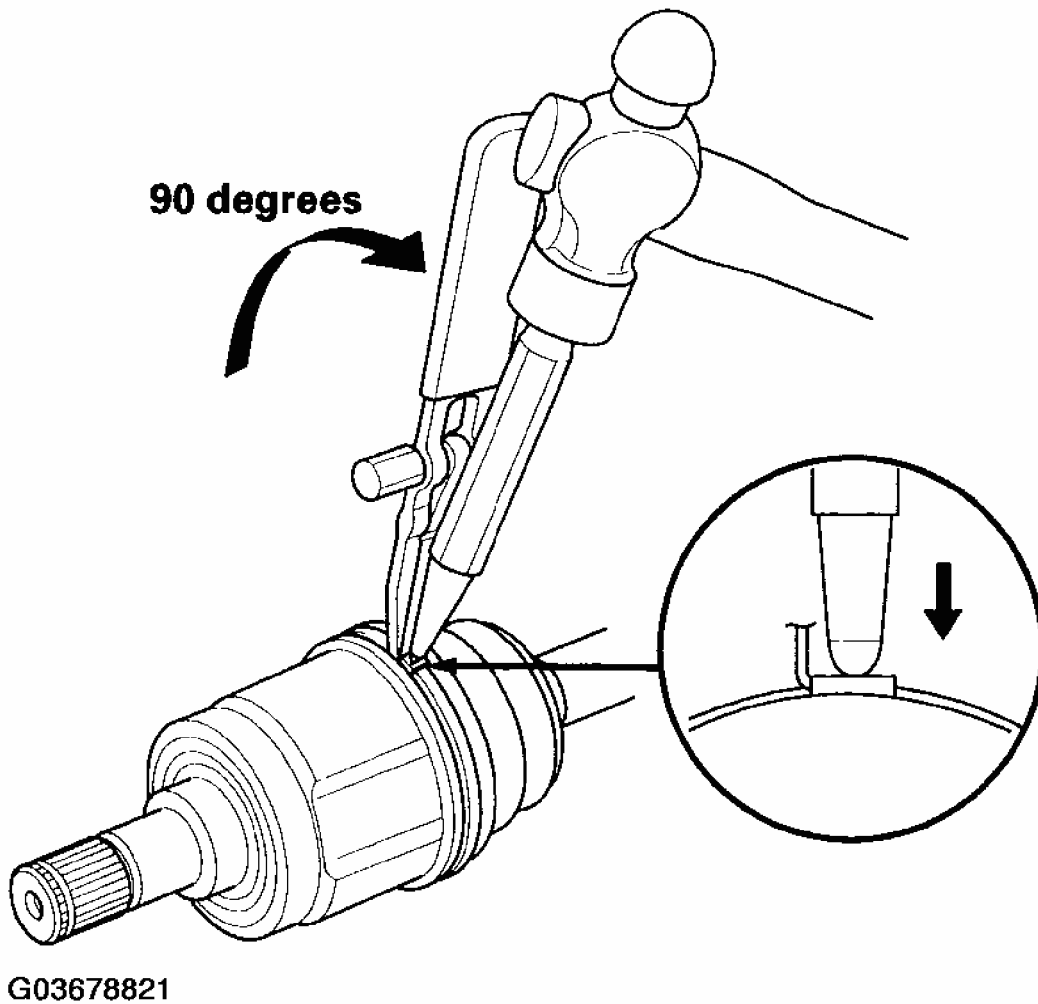
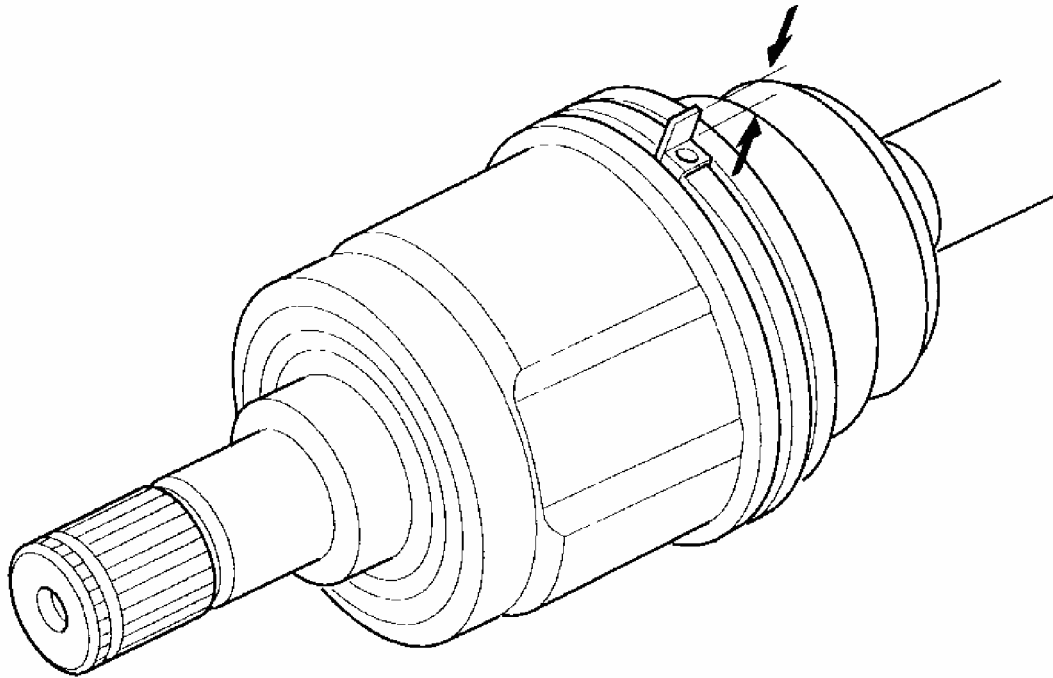


Fig. 36: Center-Punching Clip
Courtesy of AMERICAN HONDA MOTOR CO., INC.

19. 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.



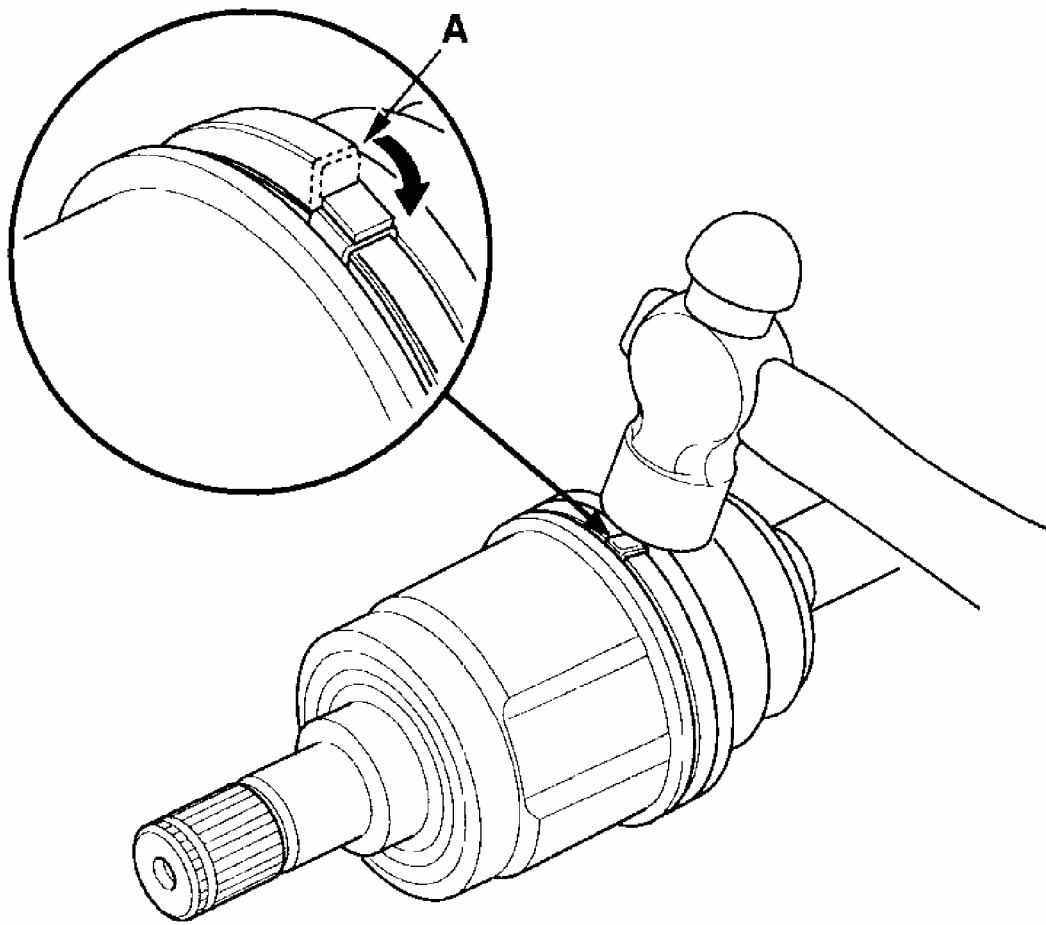
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Fig. 37: Identifying Excess Free End Of Band
Courtesy of AMERICAN HONDA MOTOR CO., INC.

20. Bend the band end (A) by tapping it down with a hammer.

NOTE:

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



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Fig. 38: Bending Band End By Tapping It Down Using Hammer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

21. Repeat steps 13 through 20 for the band on the other end of the boot, then go to step 22 .
22. Install the new set ring (A) (left driveshaft).

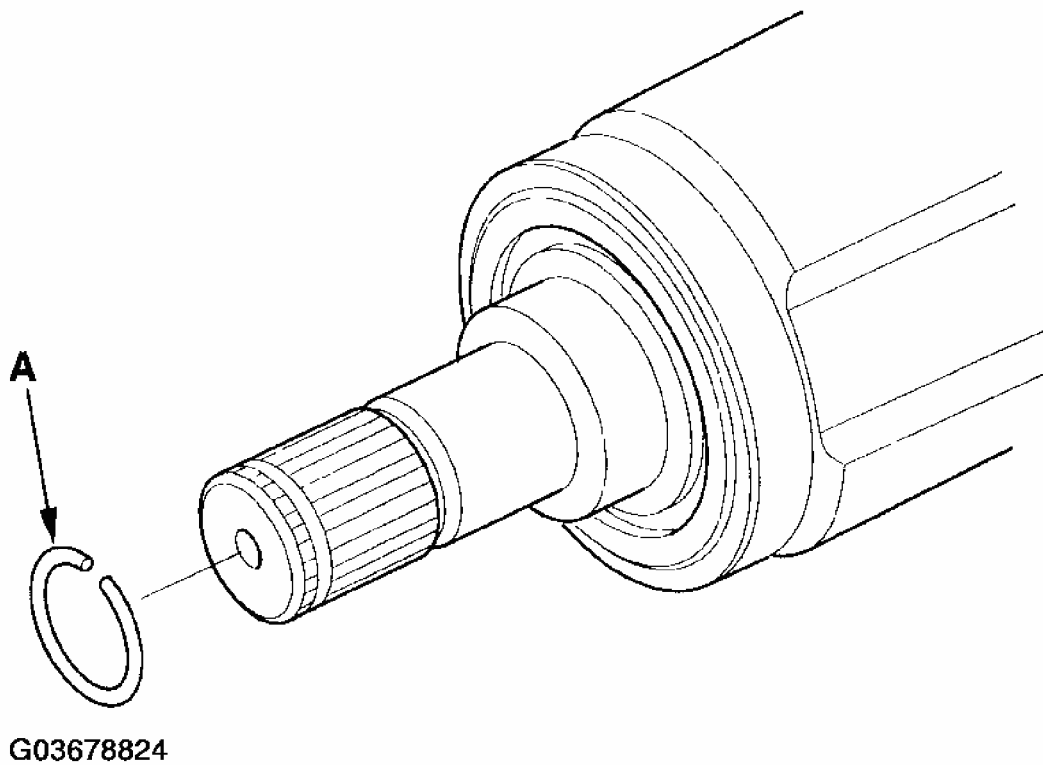
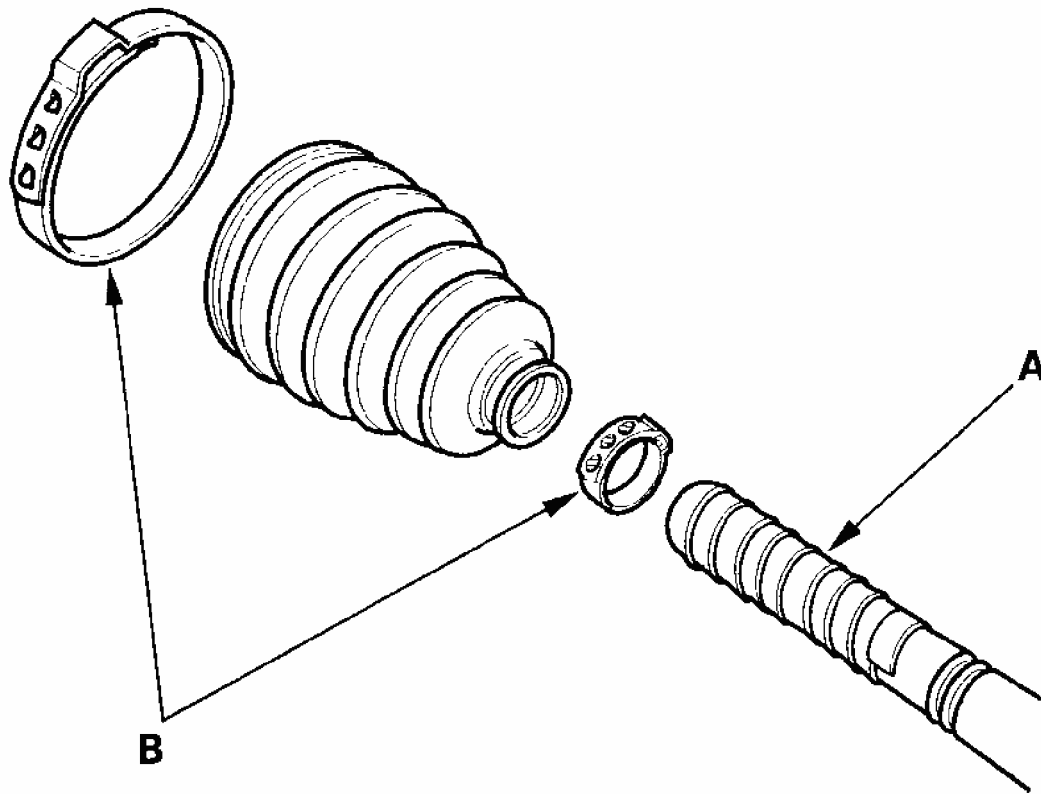


Fig. 39: Installing New Set Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

OUTBOARD JOINT SIDE

1. Wrap the splines with vinyl tape (A) to prevent damage to the outboard boot.



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Fig. 40: Installing New Ear Clamp Bands And Outboard Boot
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the new ear clamp bands (B) and outboard boot, then remove the vinyl tape. Be careful not to damage the outboard boot.
3. Install the new stop ring (A) in the driveshaft groove (B).

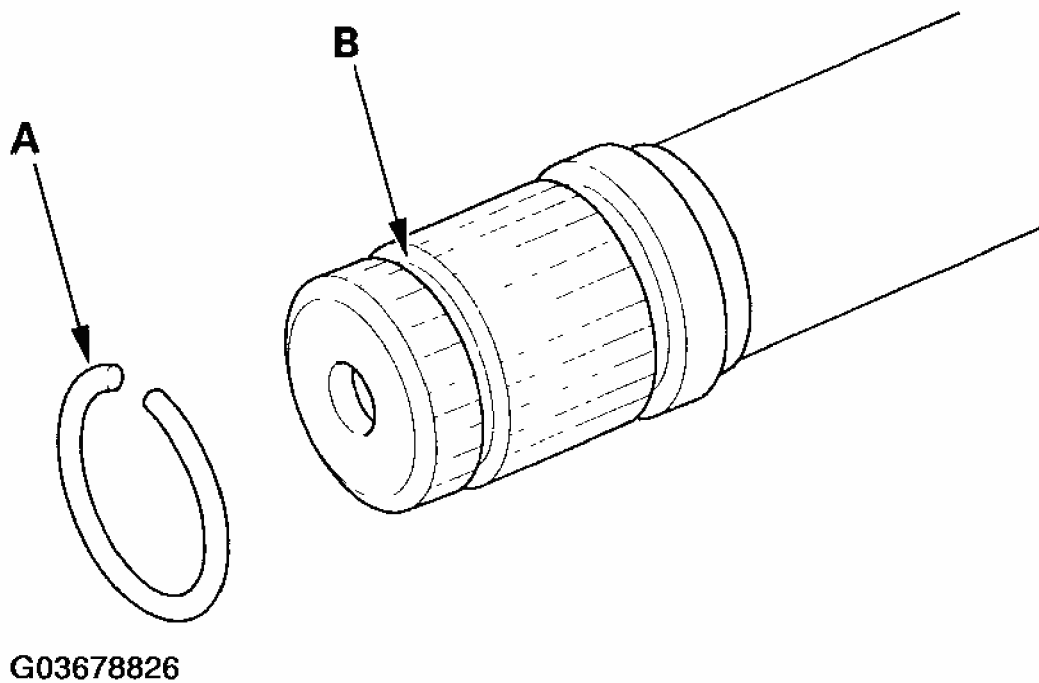
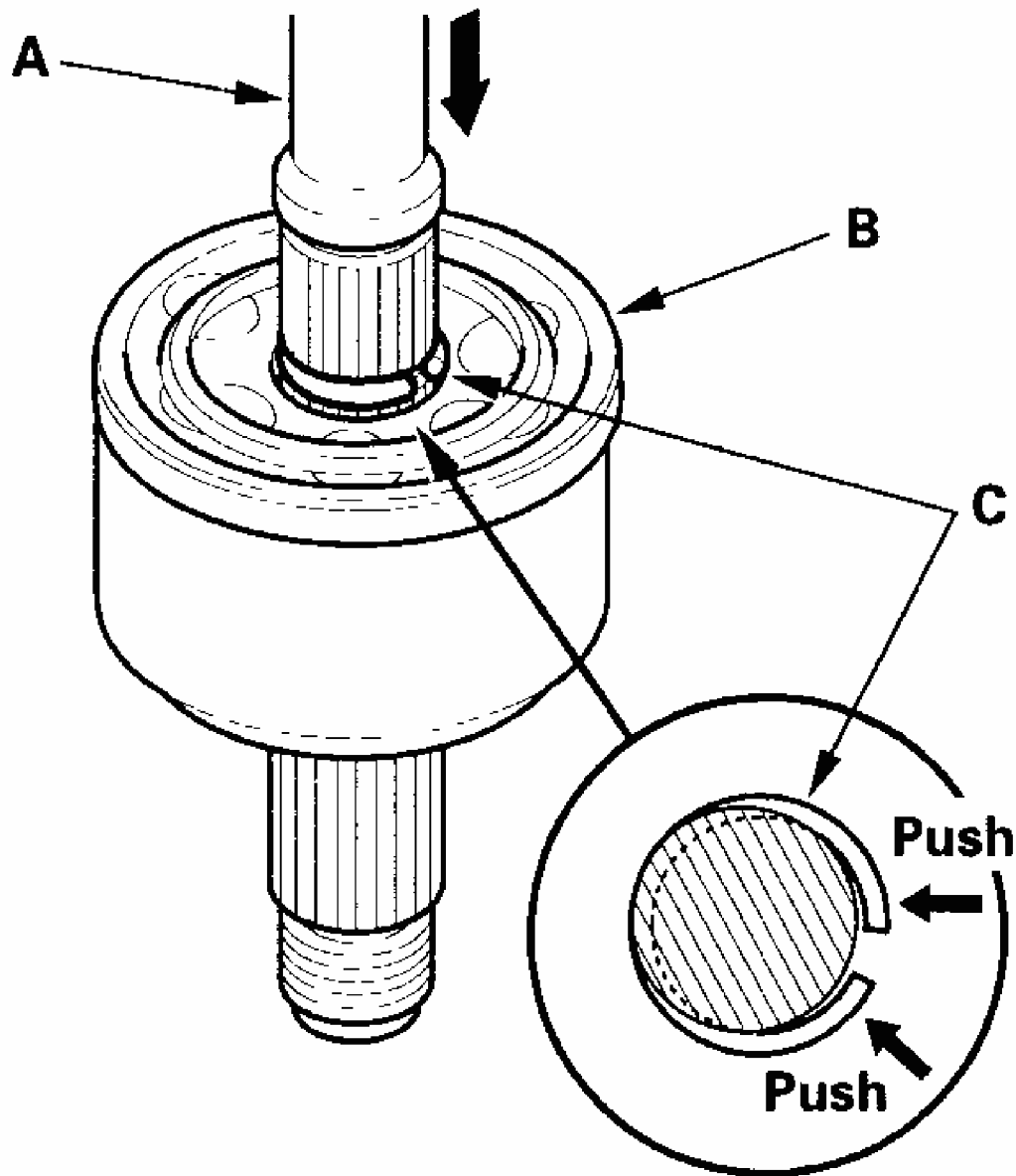


Fig. 41: Installing New Stop Ring In Driveshaft Groove
Courtesy of AMERICAN HONDA MOTOR CO., INC.

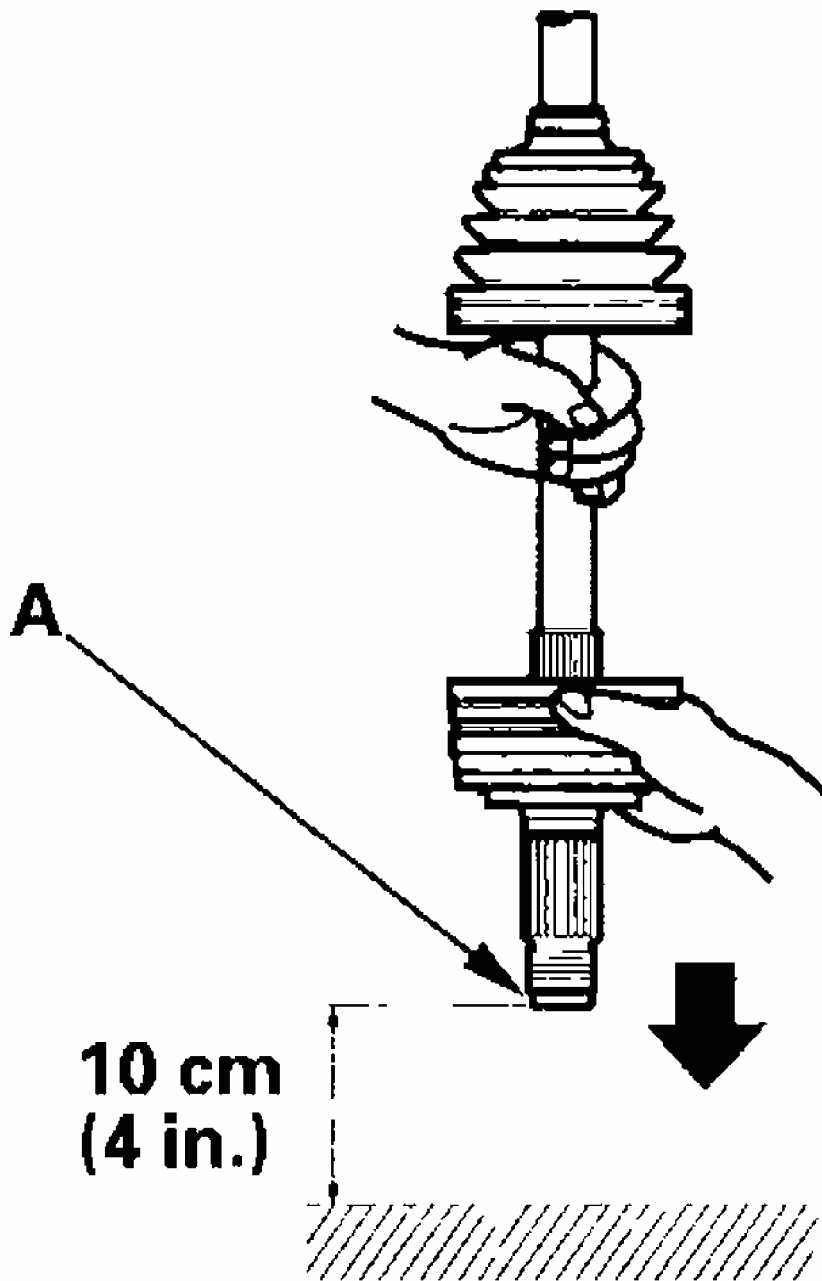
4. Pack about half of the grease included in the new joint boot set into the driveshaft hole in the outboard joint. Insert the driveshaft (A) into the outboard joint (B) until the stop ring (C) is closed to the joint.



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Fig. 42: Inserting Driveshaft Into Outboard Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

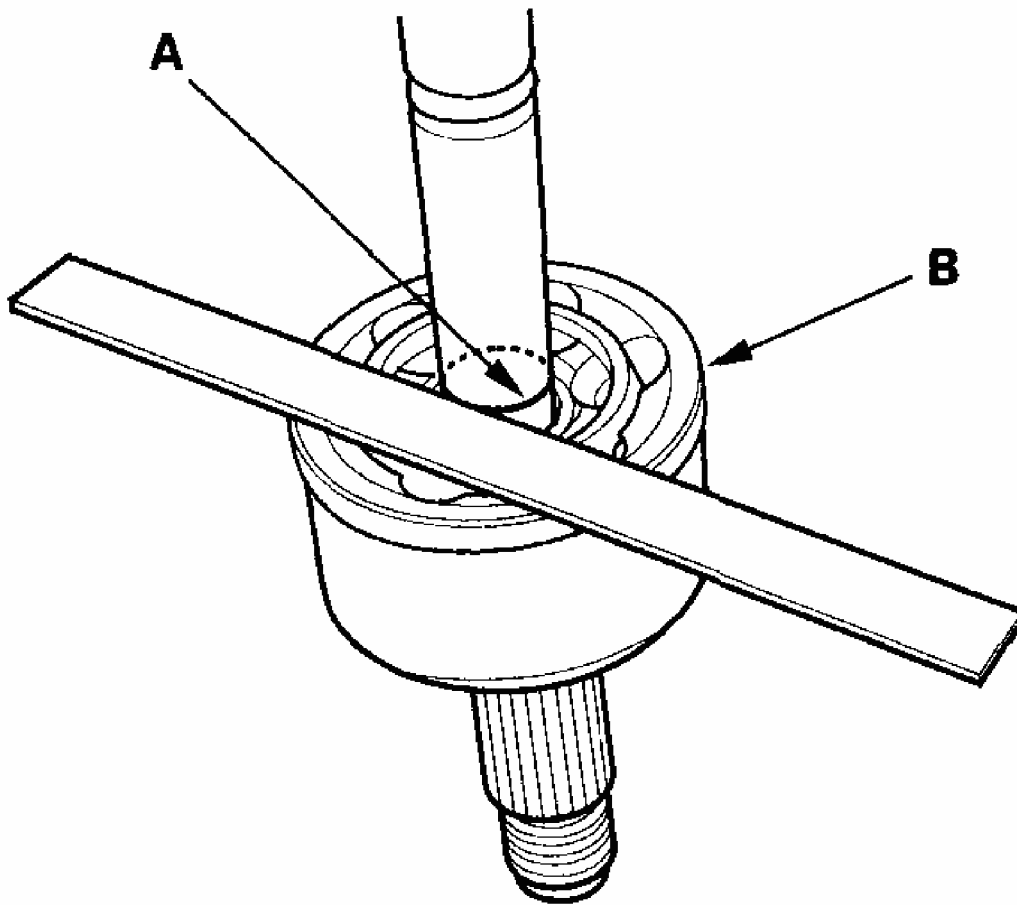


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Fig. 43: Seating Outboard Joint

Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Check the alignment of the paint mark (A) with the outboard joint end (B).



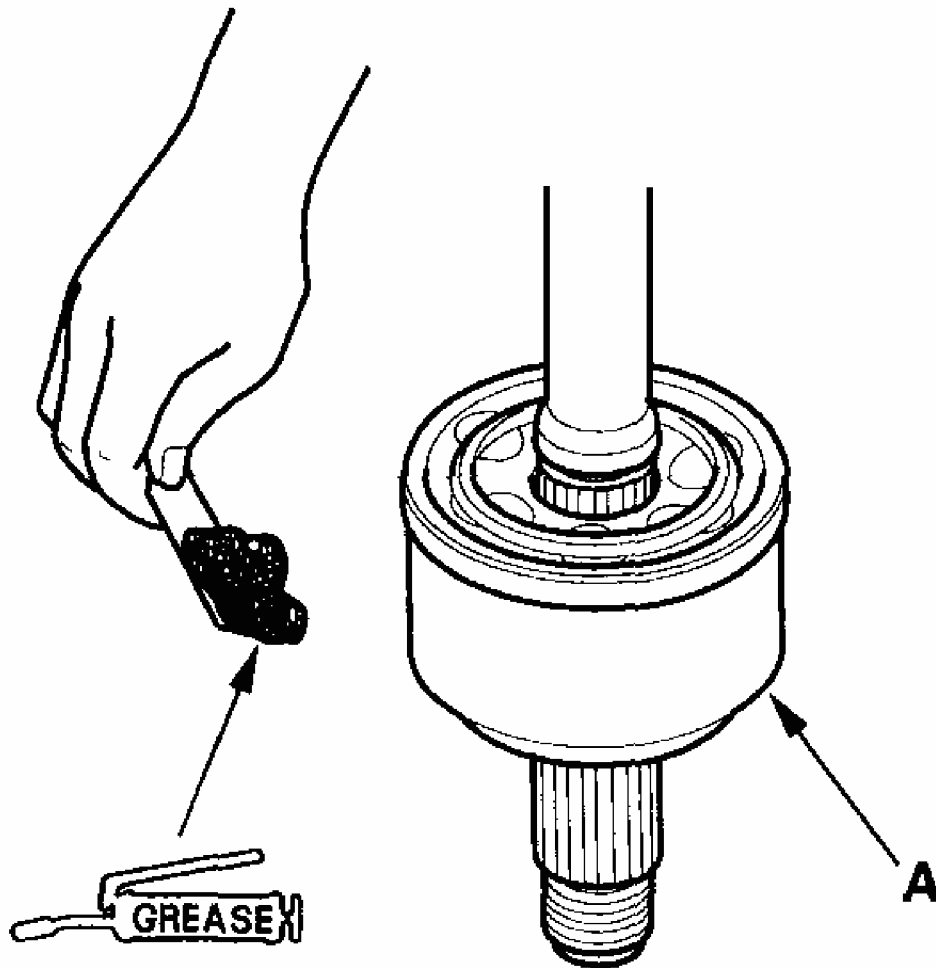
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Fig. 44: Checking Alignment Of Paint Mark With Outboard Joint End
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

Grease quantity

Outboard joint: 140-150 g (4.9-5.3 oz.)



**Use the grease included
in the outboard boot set.**

G03678830

Fig. 45: Packing Outboard Joint With Grease
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Adjust the length of the driveshaft to these measurements, then adjust the boots to halfway between full compression and full extension. Make sure the ends of the boots seat in the groove of the driveshaft and joint.

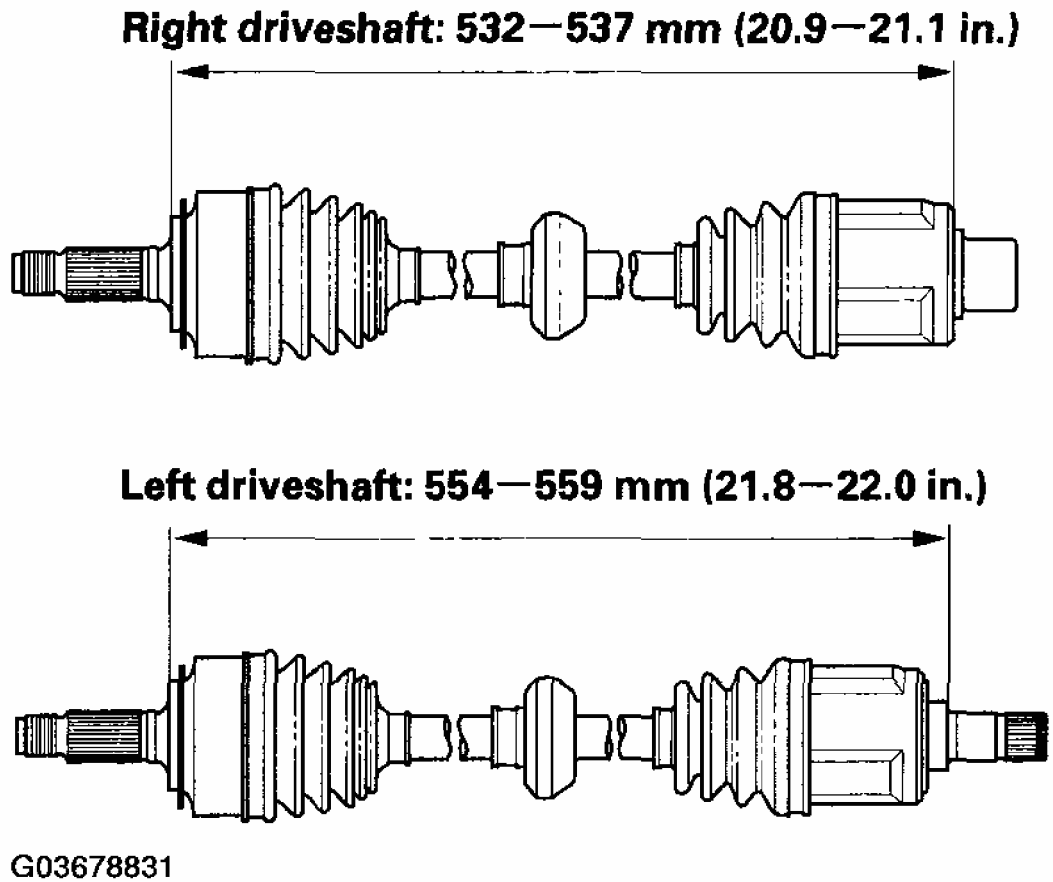
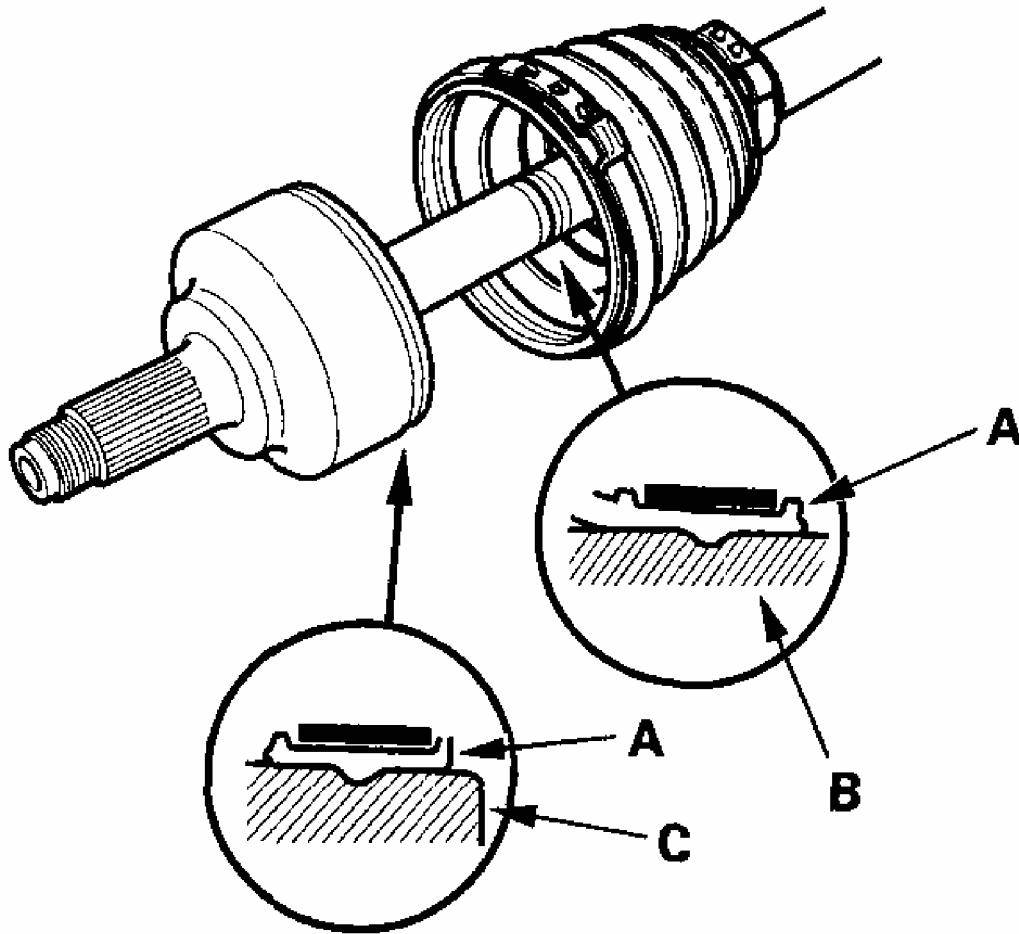


Fig. 46: Identifying Length Of Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

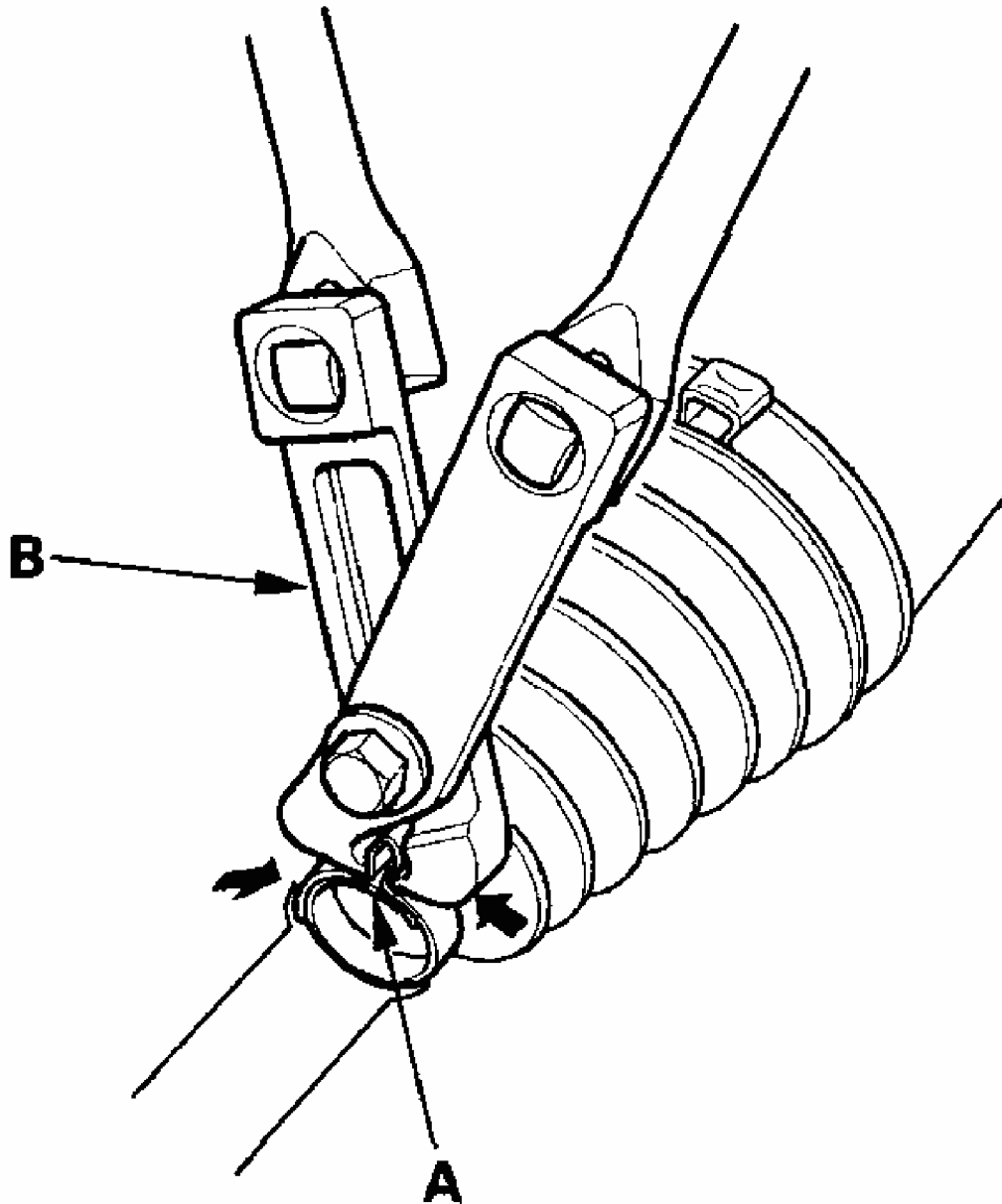
9. Fit the boot (A) ends onto the driveshaft (B) and outboard joint (C).



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Fig. 47: Fitting Boot Ends Onto Driveshaft And Outboard Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

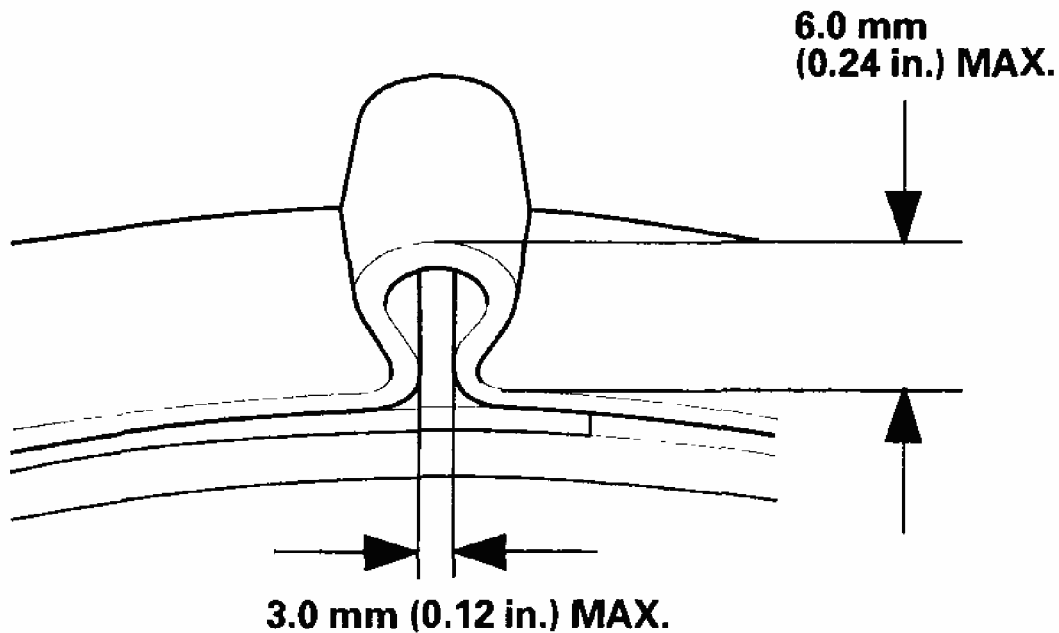
10. Close the ear portion (A) of the band with commercially available boot band pincers Kent-Moore J-35910 or equivalent (B).



G03678833

Fig. 48: Closing Ear Portion Of Band Using Commercially Available Boot Band Pincers Kent-Moore J-35910
Courtesy of AMERICAN HONDA MOTOR CO., INC.

11. 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.



G03678834

Fig. 49: Identifying Clearance Between Closed Ear Portion Of Band
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Repeat steps 10 and 11 for the band on the other end of the boot.

FRONT DRIVESHAFT INSTALLATION

1. Install a new set ring (A) in the set ring groove of the driveshaft (left driveshaft) (B).

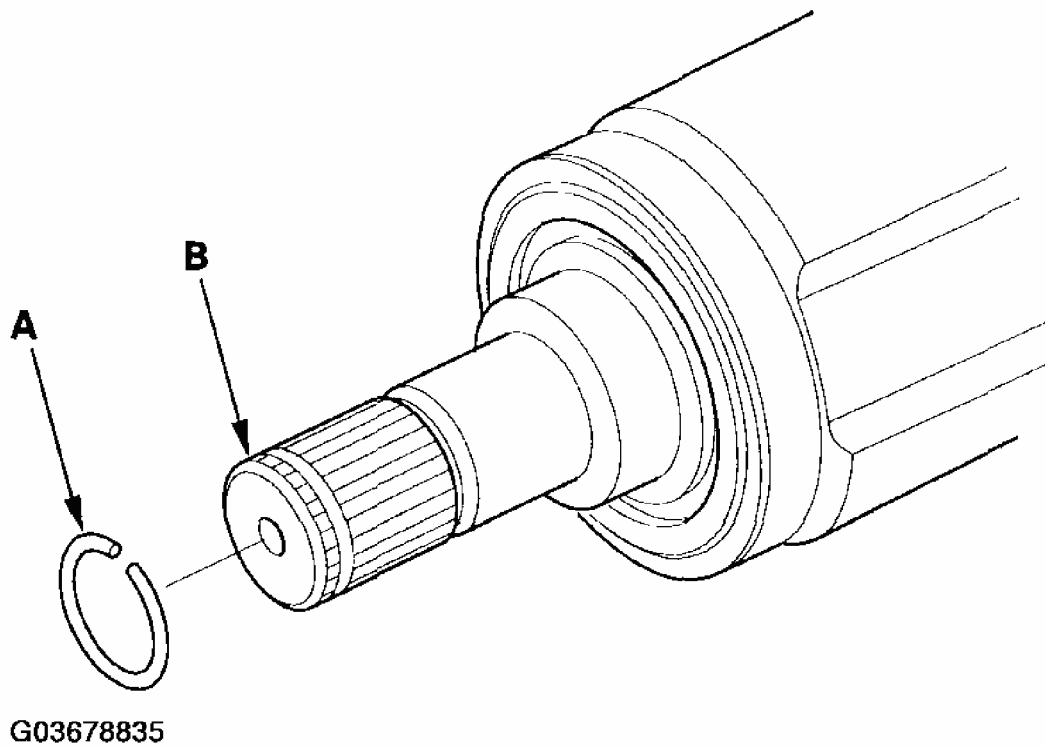
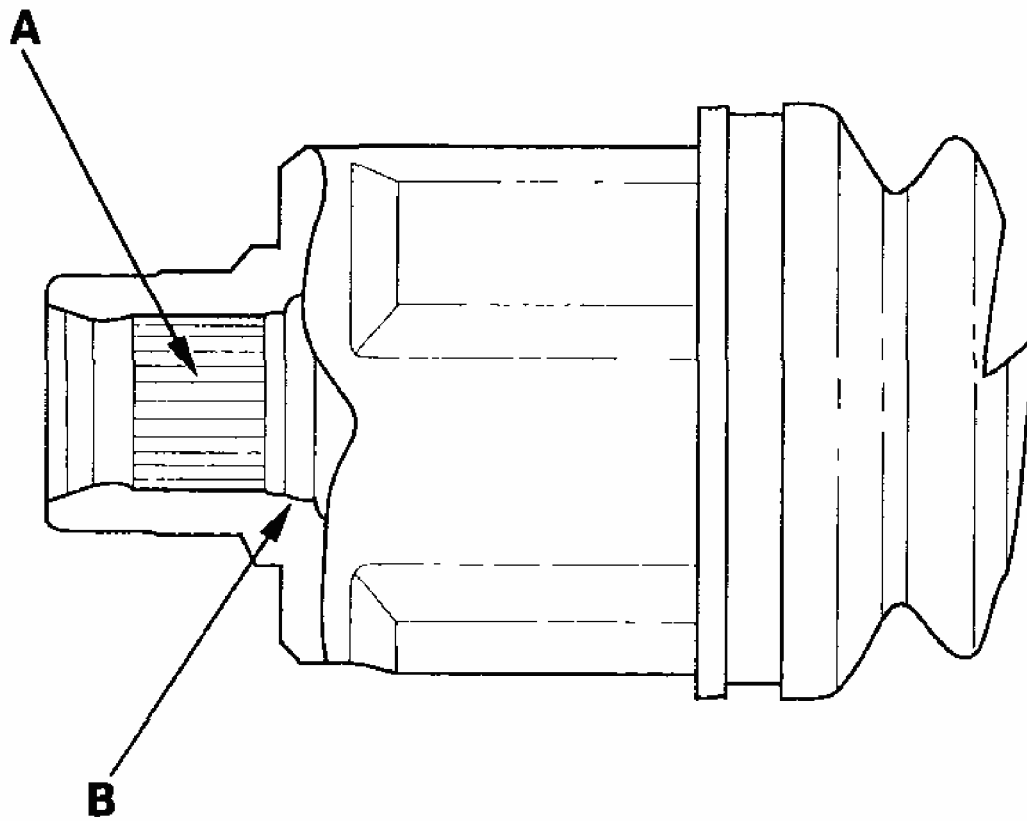


Fig. 50: Installing New Set Ring In Set Ring Groove Of Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

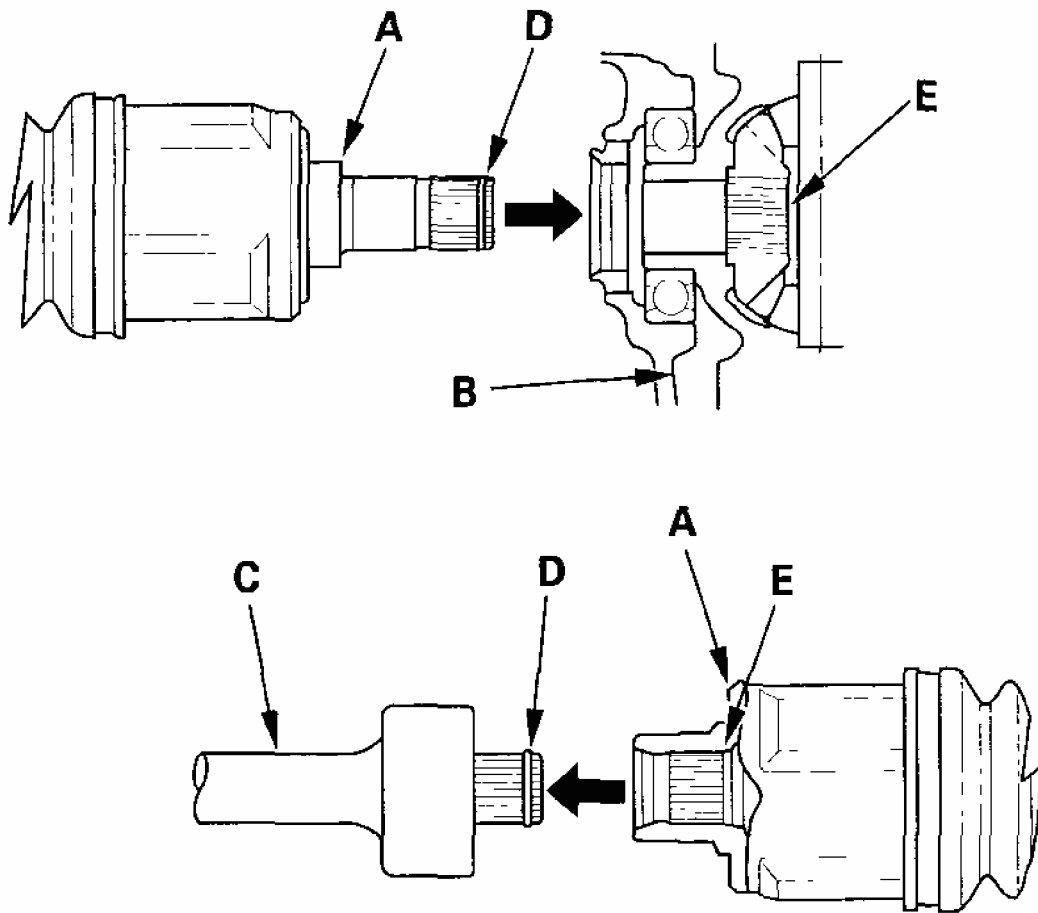
2. Apply 0.5- 1.0 g (0.02-0.04 oz.) of grease to the whole splined surface (A) of the right driveshaft. After applying grease, remove the grease from the splined grooves at intervals of 2-3 splines and from the set ring groove (B) so that air can bleed from the intermediate shaft.



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Fig. 51: Identifying Splined Surface And Ring Groove
Courtesy of AMERICAN HONDA MOTOR CO., INC.

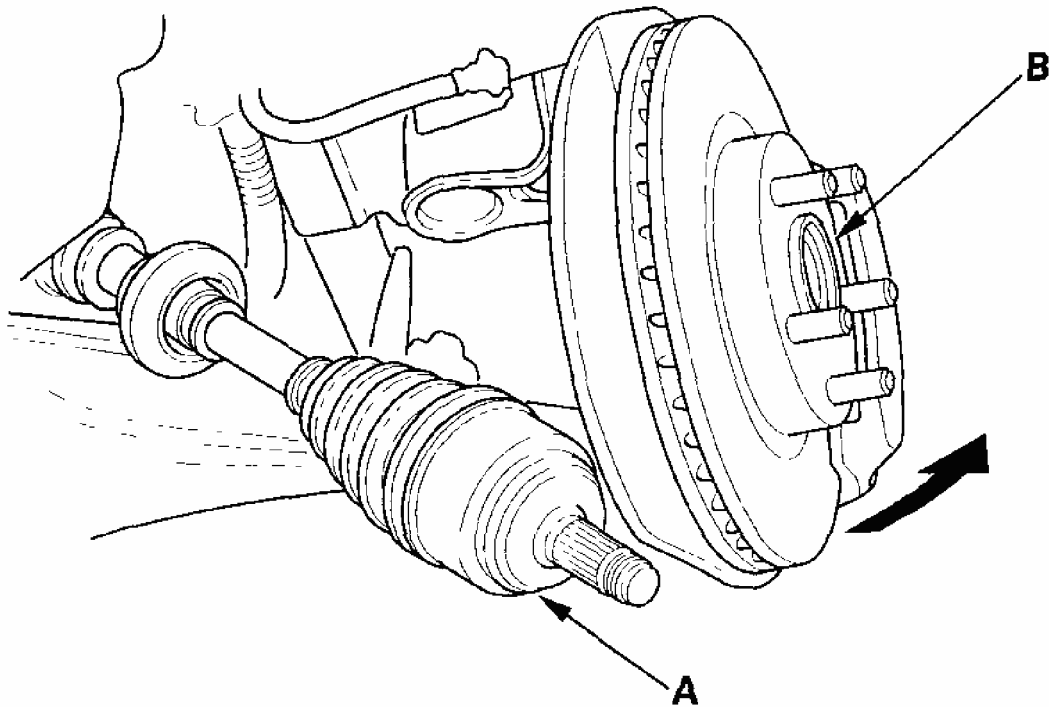
3. Clean the areas where the driveshaft contacts the differential thoroughly with solvent or brake cleaner, and dry with compressed air. Do not wash the rubber parts with solvent. Insert the inboard end (A) of the driveshaft into the differential (B) or intermediate shaft (C) until the new set ring (D) locks in the groove (E).



G03678837

Fig. 52: Inserting Inboard End Of Driveshaft Into Differential
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the outboard joint (A) into the front hub (B).

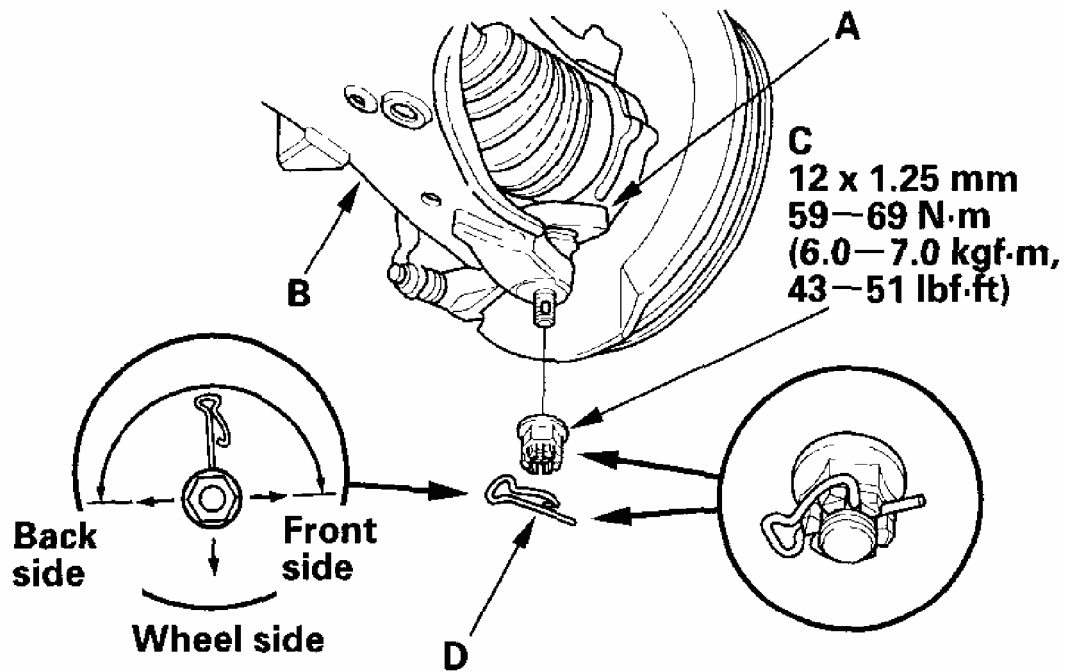


G03678838

Fig. 53: Installing Outboard Joint Into Front Hub
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Clean off any grease contamination from the ball joint threads, then install the knuckle (A) onto the lower arm (B). Wipe off the grease before tightening the nut at the ball joint. Torque the new castle nut (C) to the lower torque specification, then tighten it only far enough to align the slot with the ball joint pin hole. Do not align the nut by loosening it.

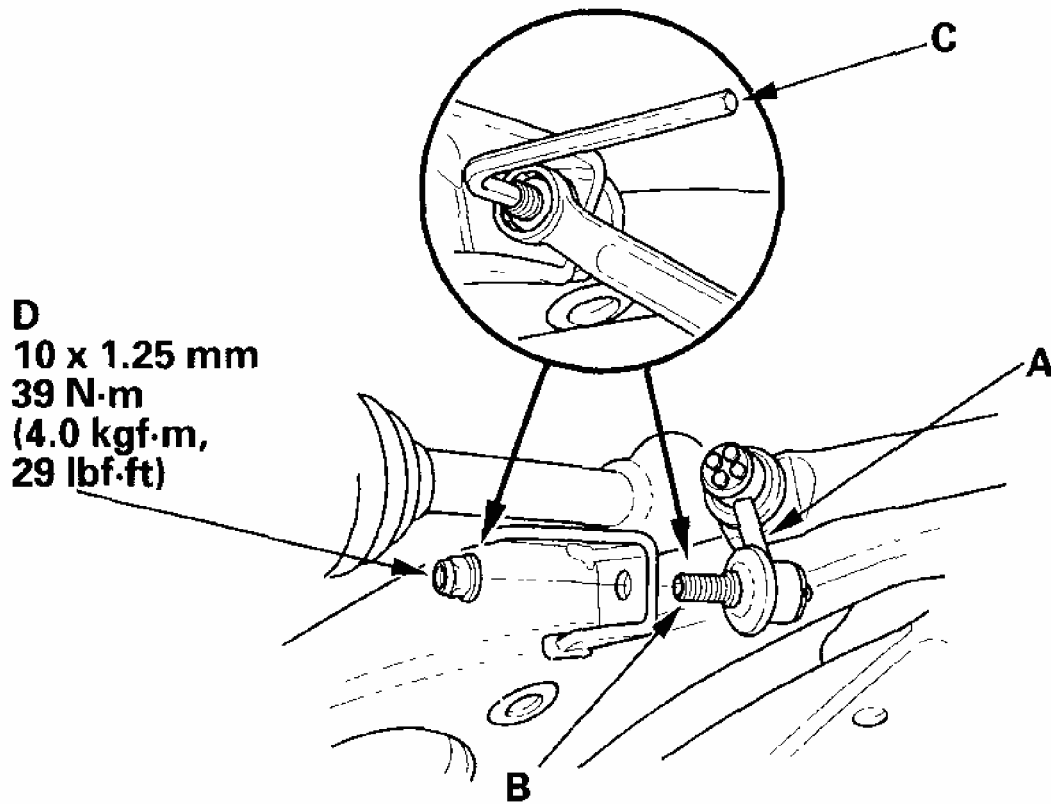
NOTE: Make sure the ball joint boot is not damaged or cracked.



G03678839

Fig. 54: Installing Knuckle Onto Lower Arm And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Install the new lock pin (D) into the ball joint pin hole as shown.
7. Connect the front stabilizer link (A) to the lower arm. Hold the stabilizer link ball joint pin (B) with a hex wrench (C), and tighten the new flange nut (D).



G03678840

Fig. 55: Holding Stabilizer Link Ball Joint Pin With Hex Wrench And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Install a new spindle nut (A), then tighten the nut. After tightening, use a drift to stake the spindle nut shoulder (B) against the driveshaft.

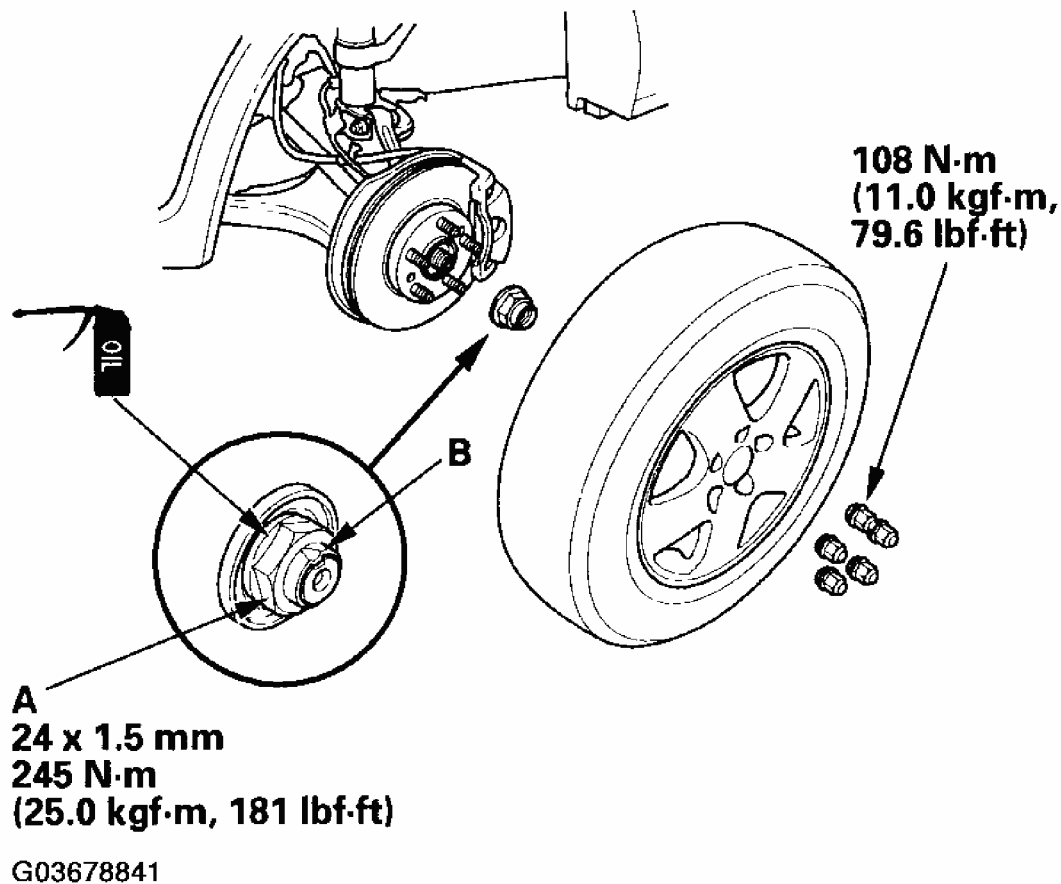


Fig. 56: Installing New Spindle Nut And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Clean the mating surfaces of the brake disc and the front wheel, then install the front wheel with the wheel nuts.
10. Turn the front wheel by hand, and make sure there is no interference between the driveshaft and surrounding parts.
11. Refill the transmission with the recommended transmission fluid:
 - Manual transmission (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**)
 - Automatic transmission (see **ATF REPLACEMENT**)
12. Check the front wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT**).

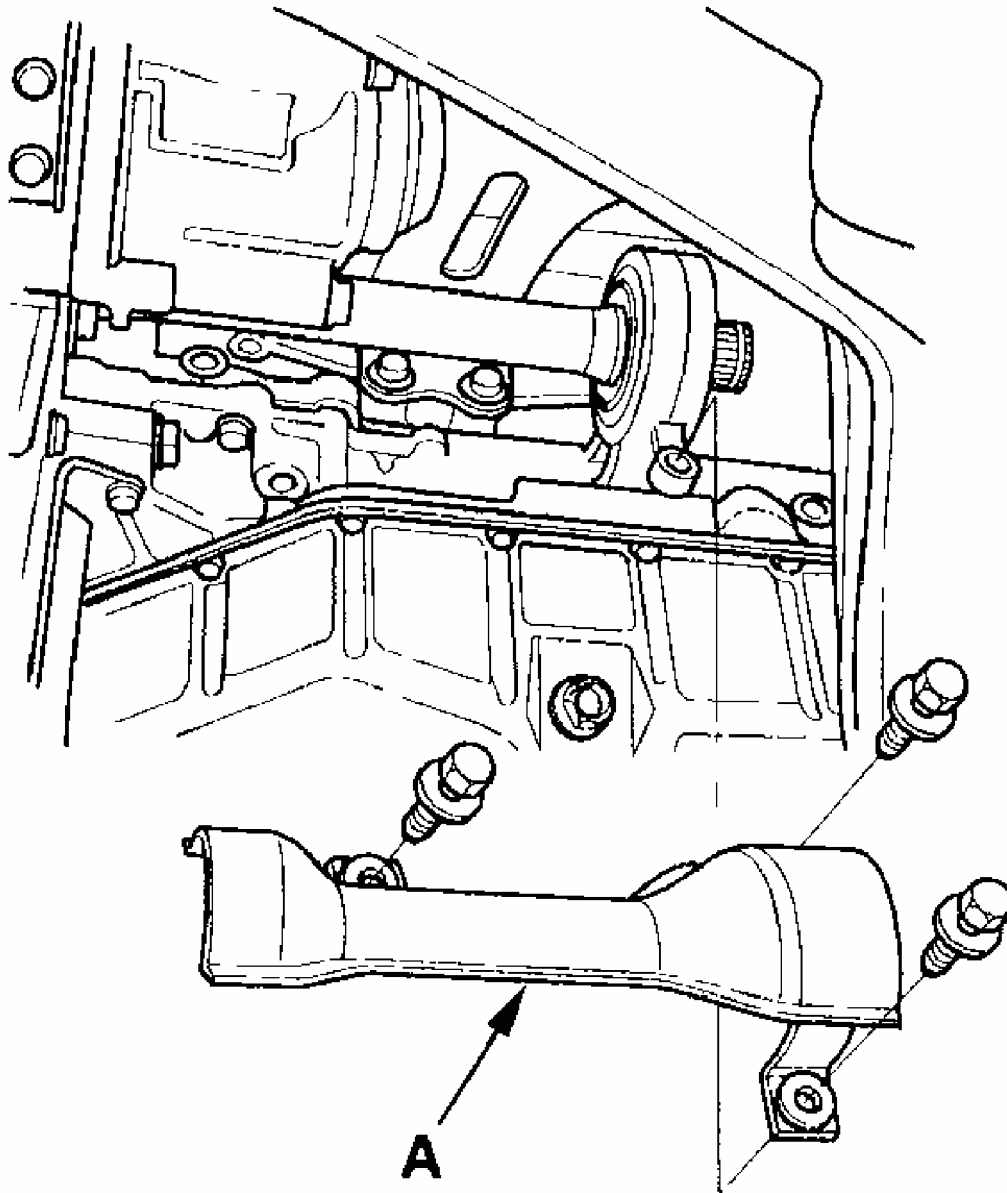
INTERMEDIATE SHAFT REMOVAL

1. Drain the transmission fluid. Reinstall the drain plug using a new washer:

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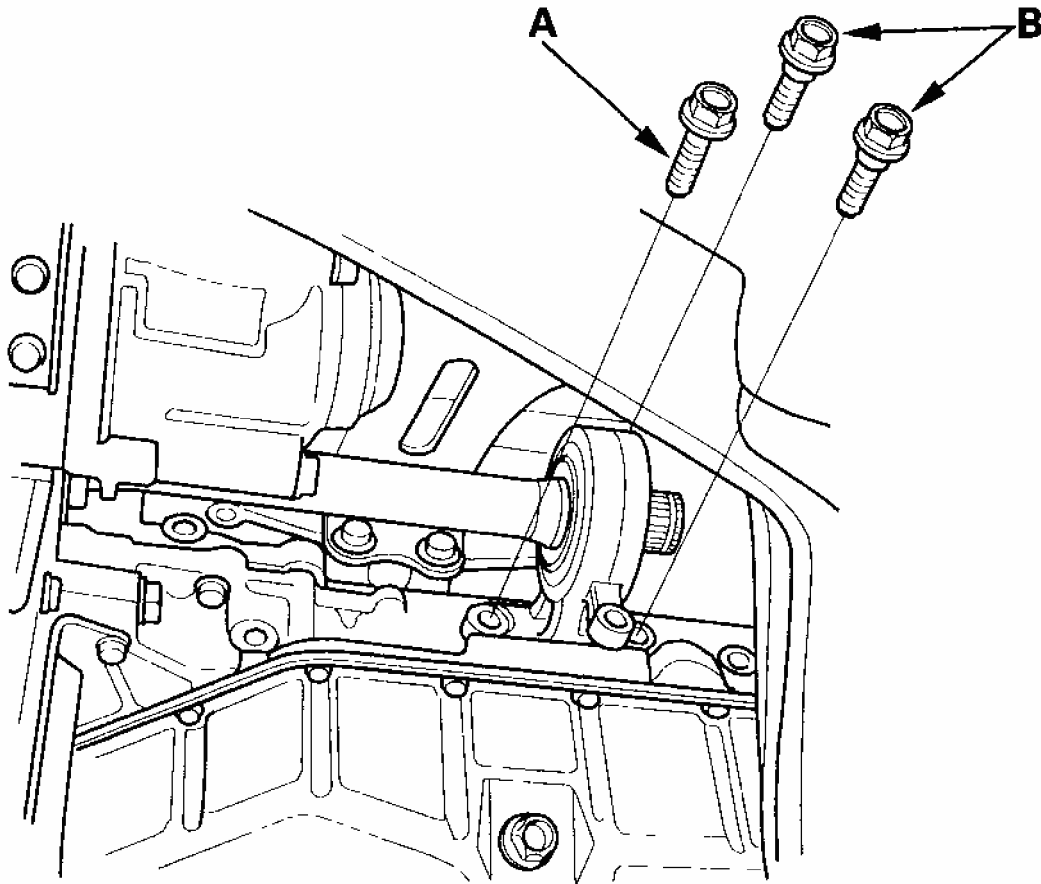
- Manual transmission (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**)
 - Automatic transmission (see **ATF REPLACEMENT**)
2. Remove the right driveshaft (see **DRIVESHAFT INSPECTION**).
 3. Remove the heat cover (A).



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Fig. 57: Removing Heat Cover
Courtesy of AMERICAN HONDA MOTOR CO., INC.

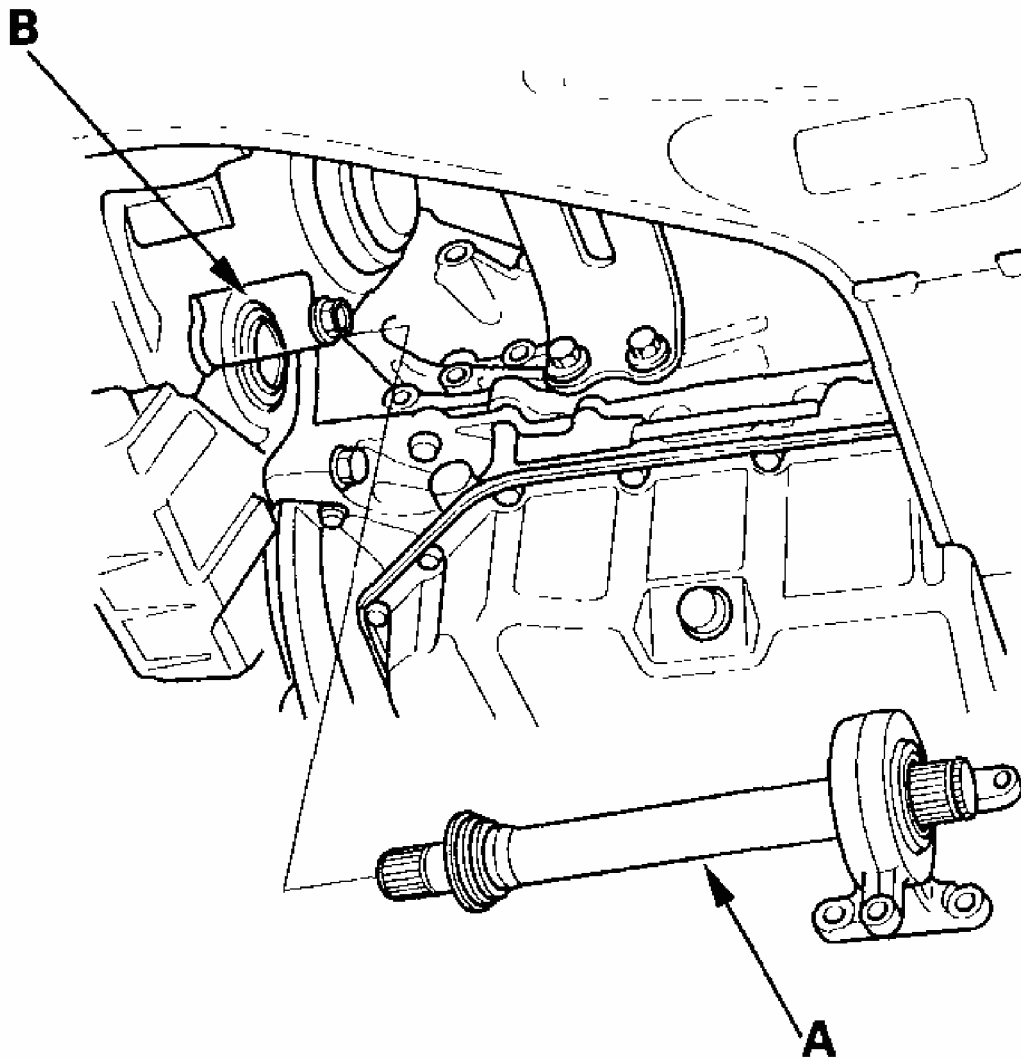
4. Remove the flange bolt (A) and two dowel bolts (B).



G03678843

Fig. 58: Removing Flange And Two Dowel Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the intermediate shaft (A) from the differential. Hold the intermediate shaft horizontally until it is clear of the differential to prevent damage to the differential oil seal (B).



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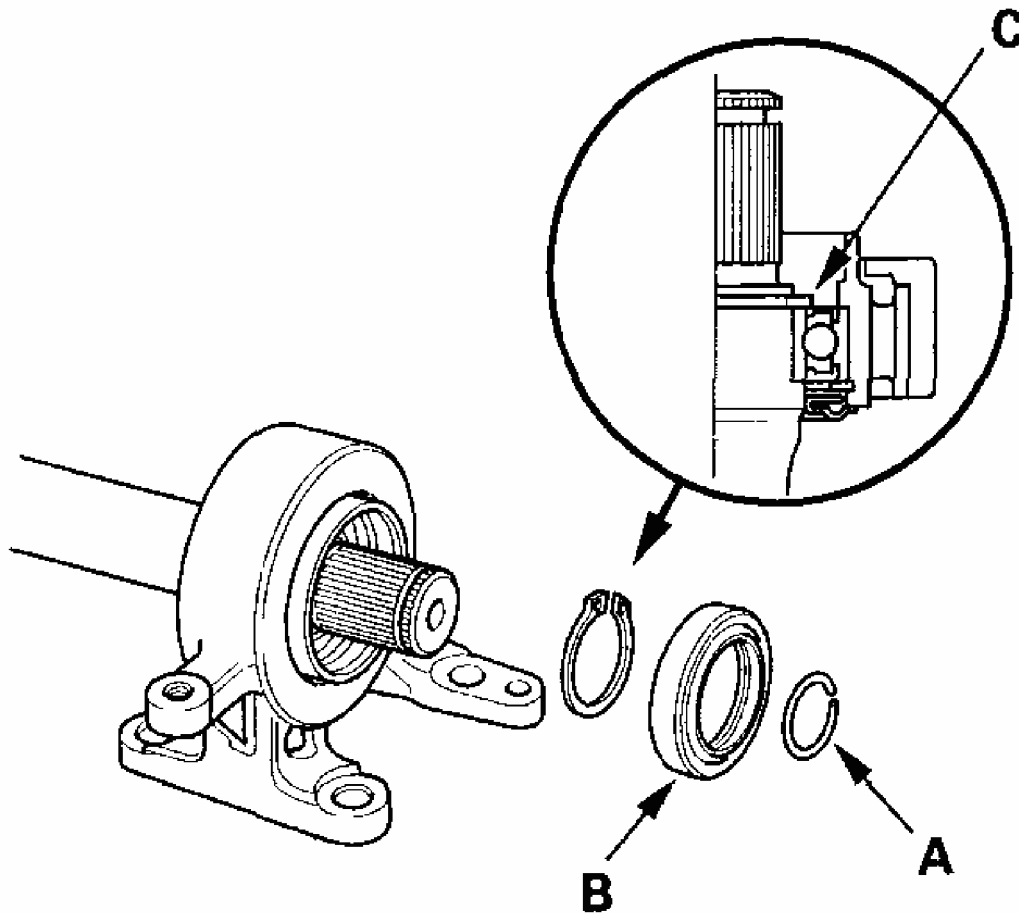
Fig. 59: Removing Intermediate Shaft From Differential
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INTERMEDIATE SHAFT DISASSEMBLY

Special Tools Required

- Oil seal driver 07947-SB00100
- Half shaft base 07NAF-SR30101

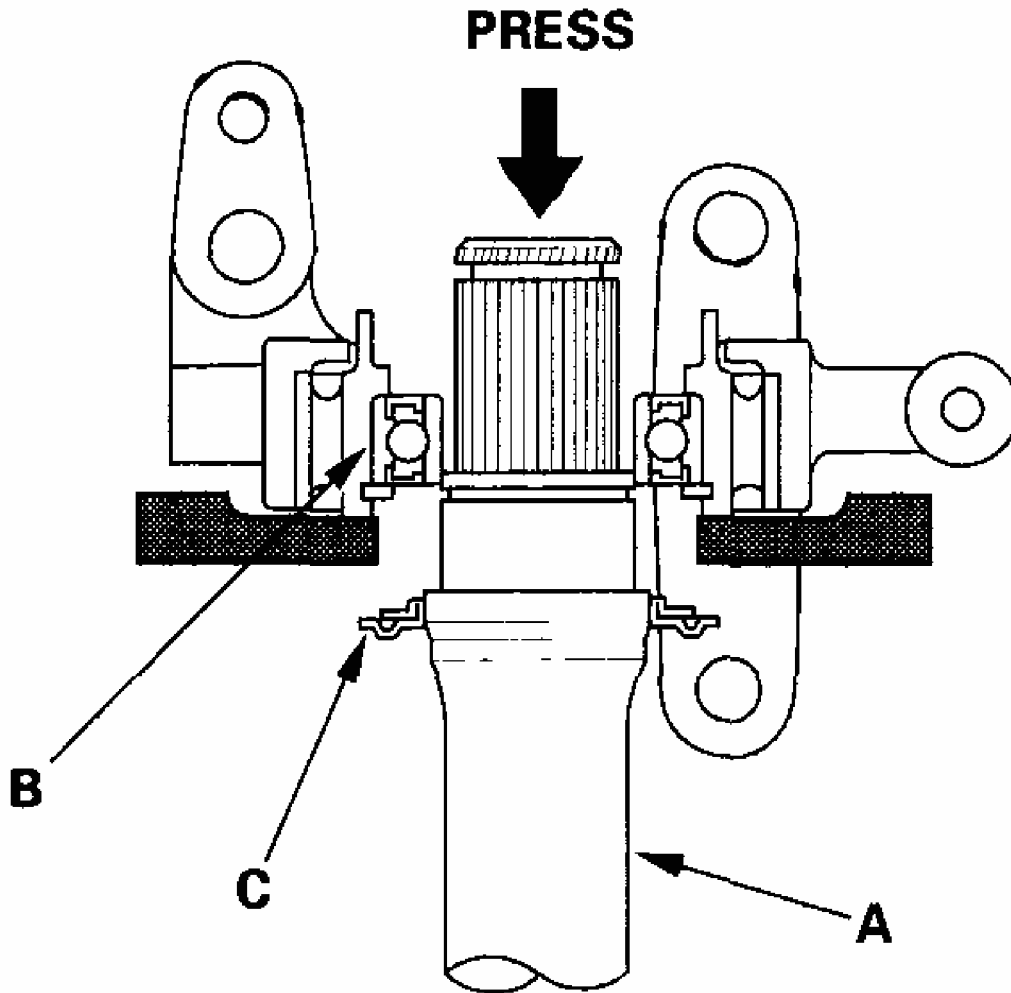
1. Remove the set ring (A), outer seal (B), and external snap ring (C).



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Fig. 60: Removing Set Ring, Outer Seal And External Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Press the intermediate shaft (A) out of the intermediate shaft bearing (B) using a press. Be careful not to damage the metal rings (C) on the intermediate shaft during disassembly.

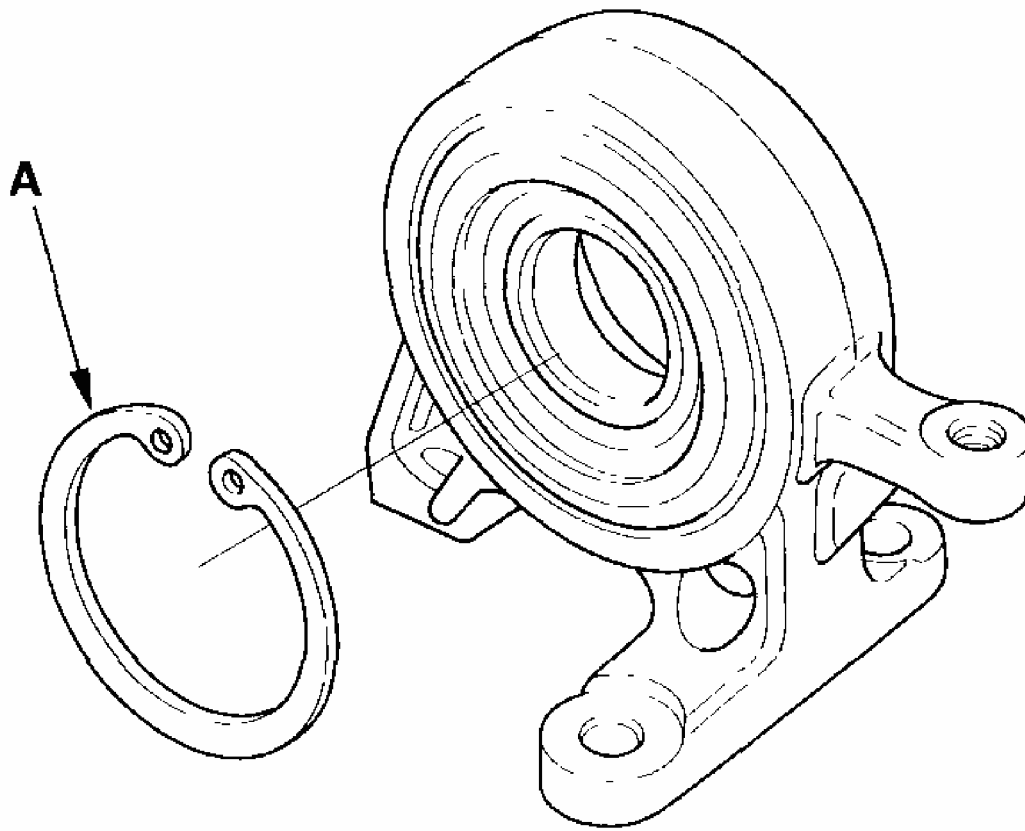


G03678846

Fig. 61: Pressing Intermediate Shaft Out Of Intermediate Shaft Bearing Using Press

Courtesy of AMERICAN HONDA MOTOR CO., INC.

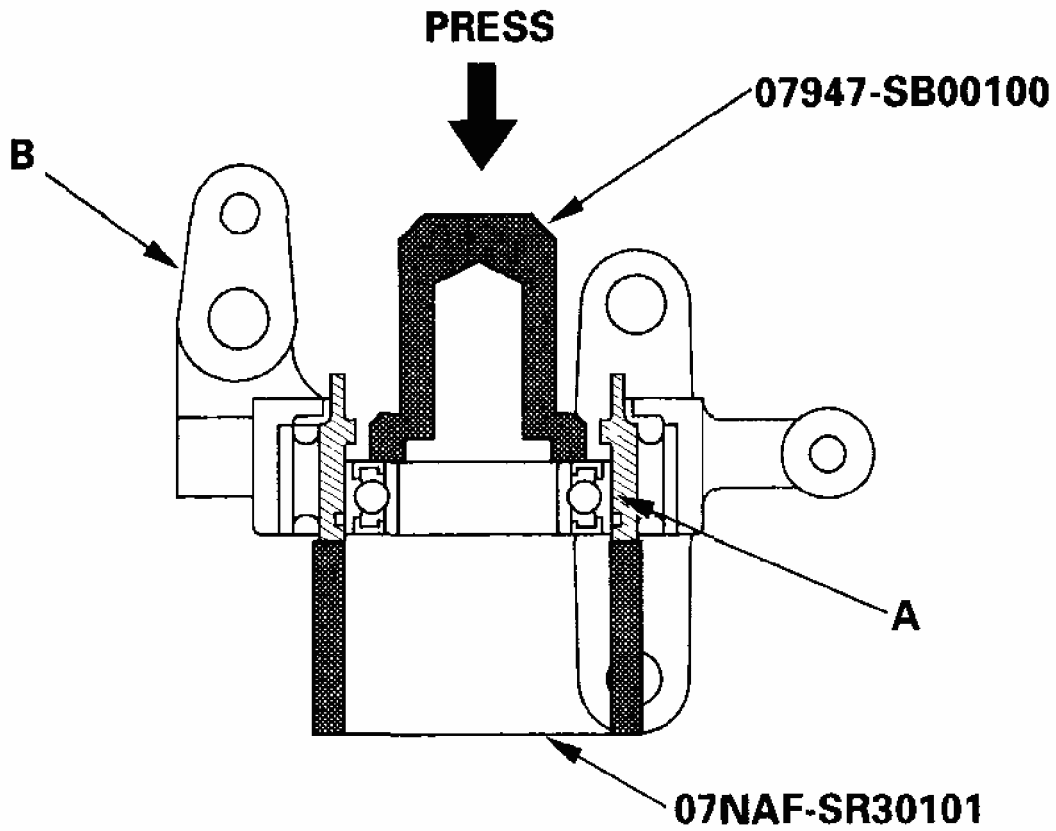
3. Remove the internal snap ring (A).



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Fig. 62: Removing Internal Snap Ring
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Press the intermediate shaft bearing (A) out of the bearing support (B) using the special tools and a press.



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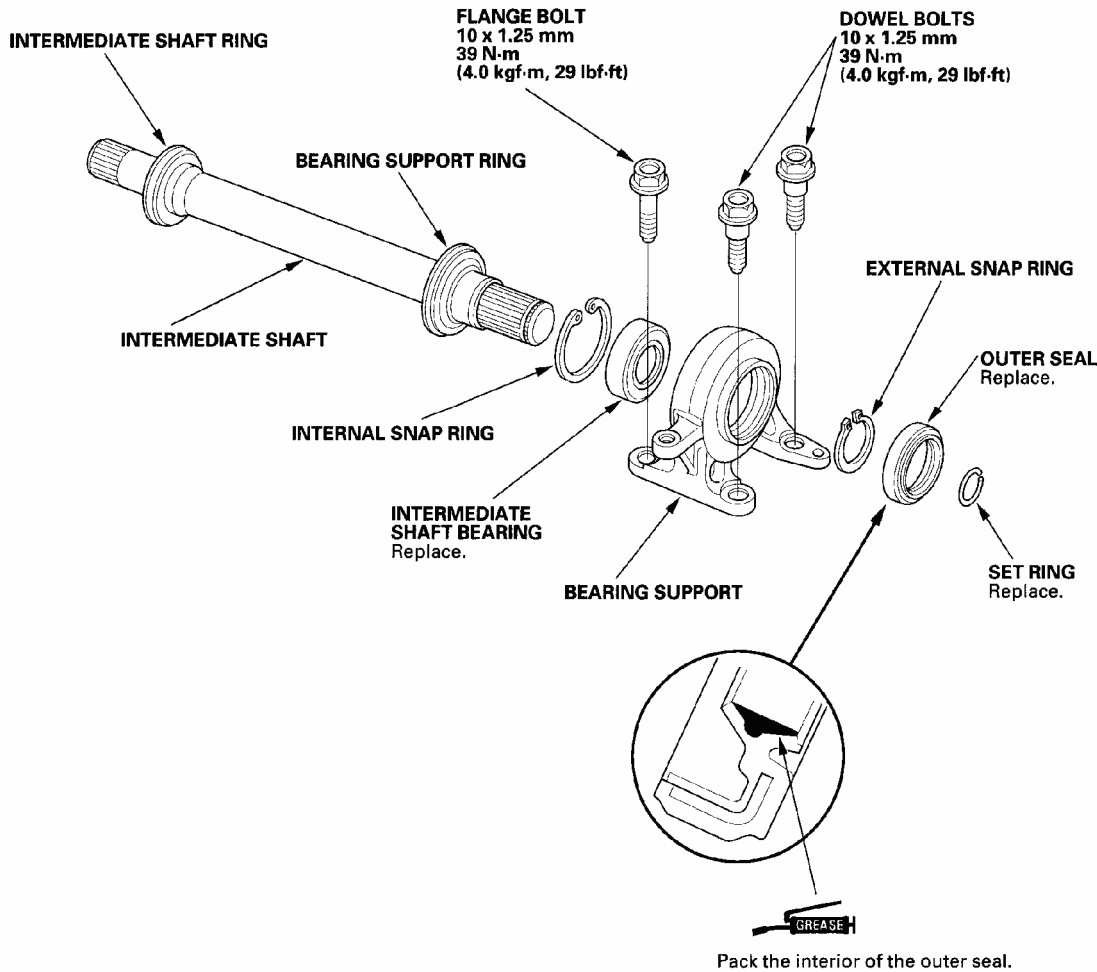
Fig. 63: Pressing Intermediate Shaft Bearing Using Special Tools And Press
Courtesy of AMERICAN HONDA MOTOR CO., INC.

INTERMEDIATE SHAFT REASSEMBLY

EXPLODED VIEW

2004 Honda Element DX

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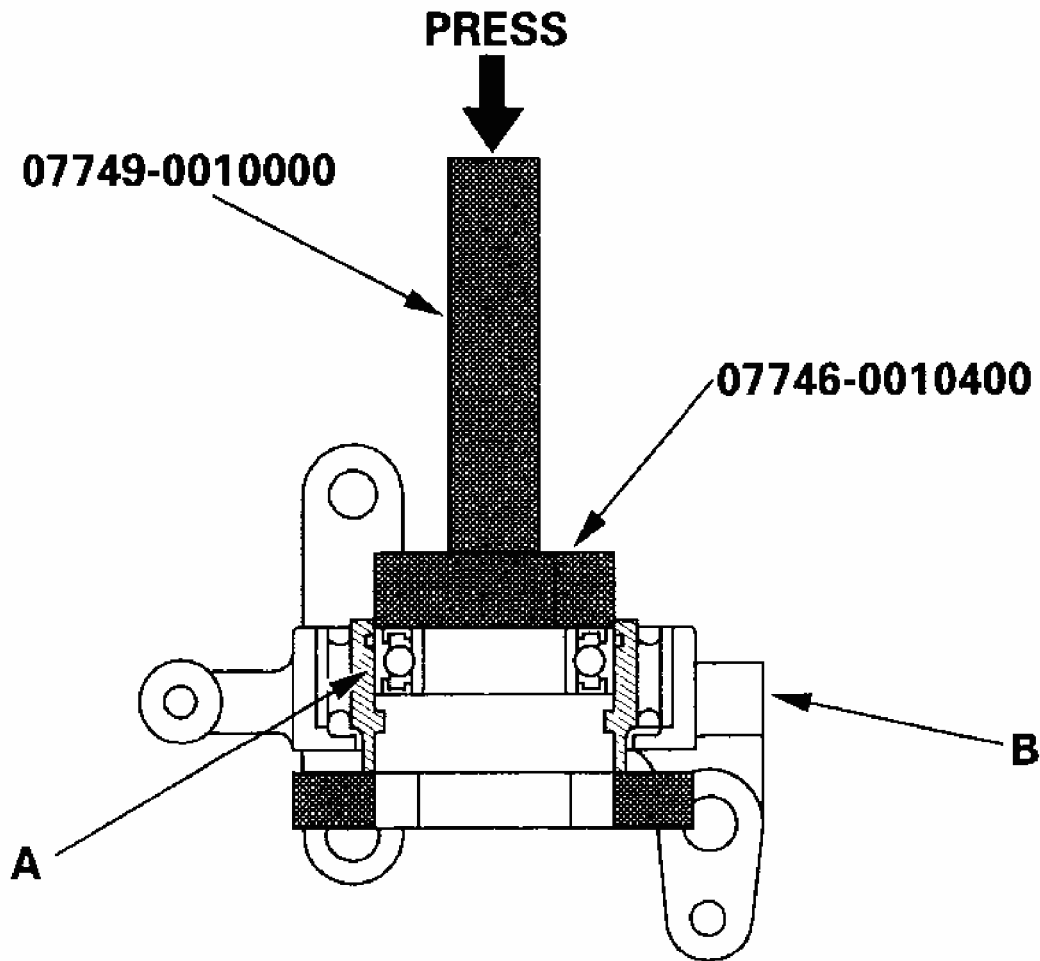
Fig. 64: Exploded View Of Intermediate Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

Special Tools Required

- Oil seal driver 07GAD-PH70201
- Attachment, 52 x 55 mm 07746-0010400
- Attachment, 35 mm I.D. 07746-0030400
- Driver 07749-0010000

NOTE: Refer to the **EXPLODED VIEW** as needed during this procedure.

1. Clean the disassembled parts with solvent, and dry them with compressed air. Do not wash the rubber parts with solvent.
2. Press the intermediate shaft bearing (A) into the bearing support (B) using the special tools and a press.

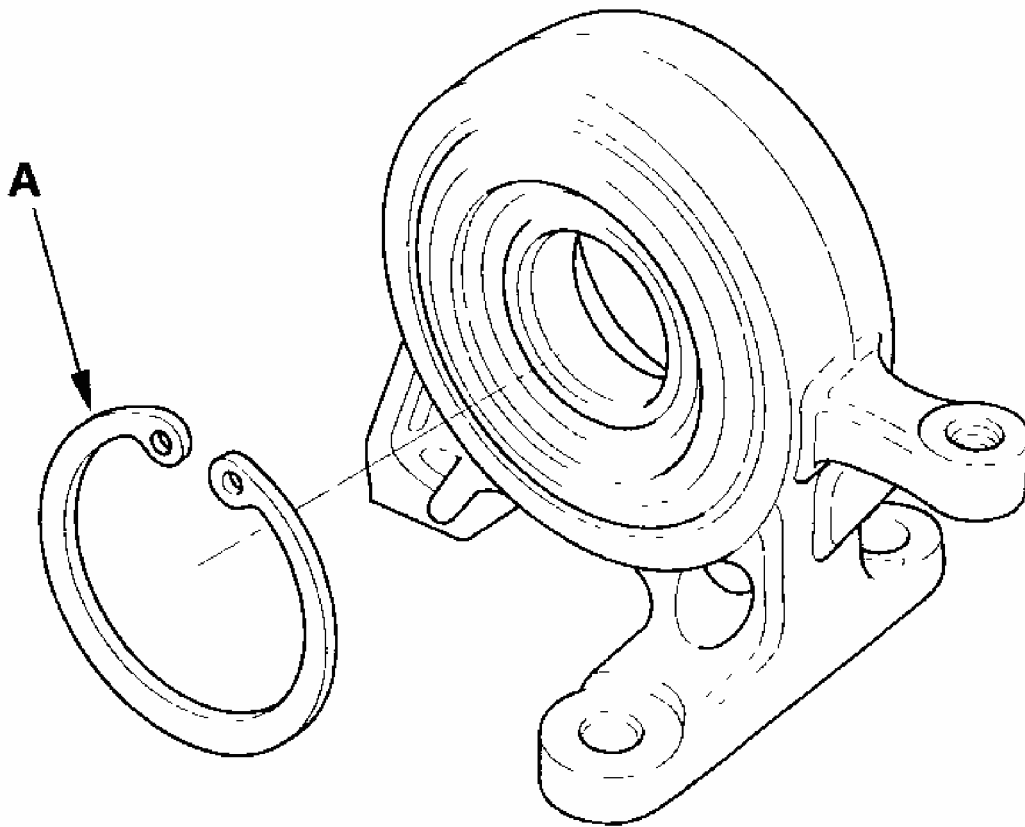


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Fig. 65: Pressing Intermediate Shaft Bearing Into Bearing Support Using Special Tools And Press

Courtesy of AMERICAN HONDA MOTOR CO., INC.

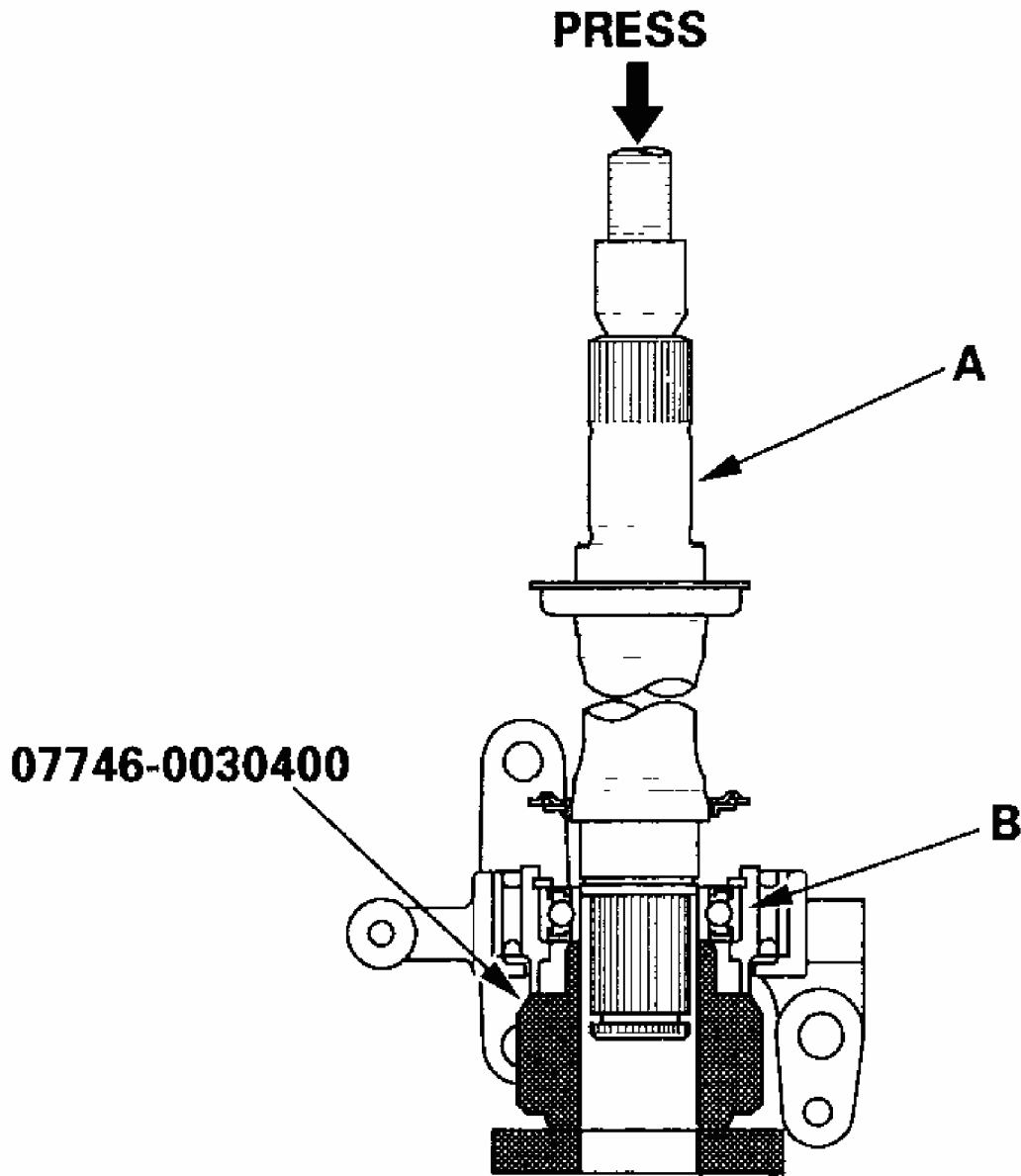
3. Install, then seat the internal snap ring (A) into the groove of the bearing support.



G03678851

Fig. 66: Installing Internal Snap Ring Into Groove Of Bearing Support
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Press the intermediate shaft (A) into the shaft bearing (B) using the special tool and a press.

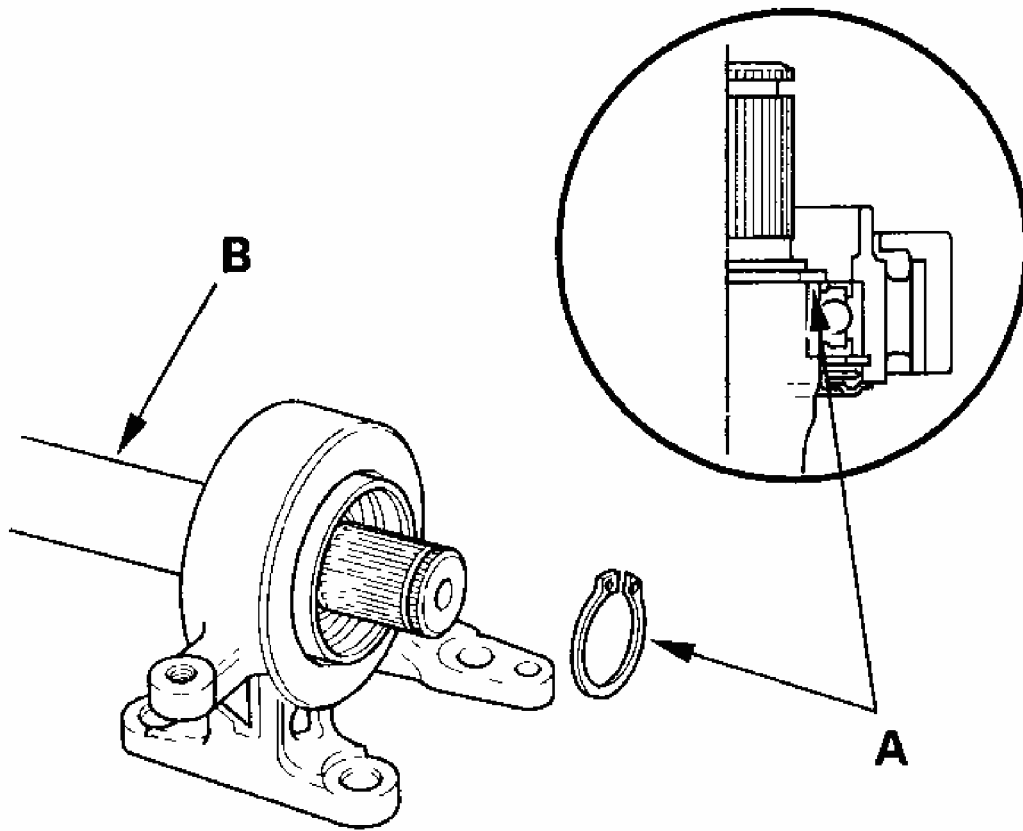


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Fig. 67: Pressing Intermediate Shaft Into Shaft Bearing Using Special Tool And Press

Courtesy of AMERICAN HONDA MOTOR CO., INC.

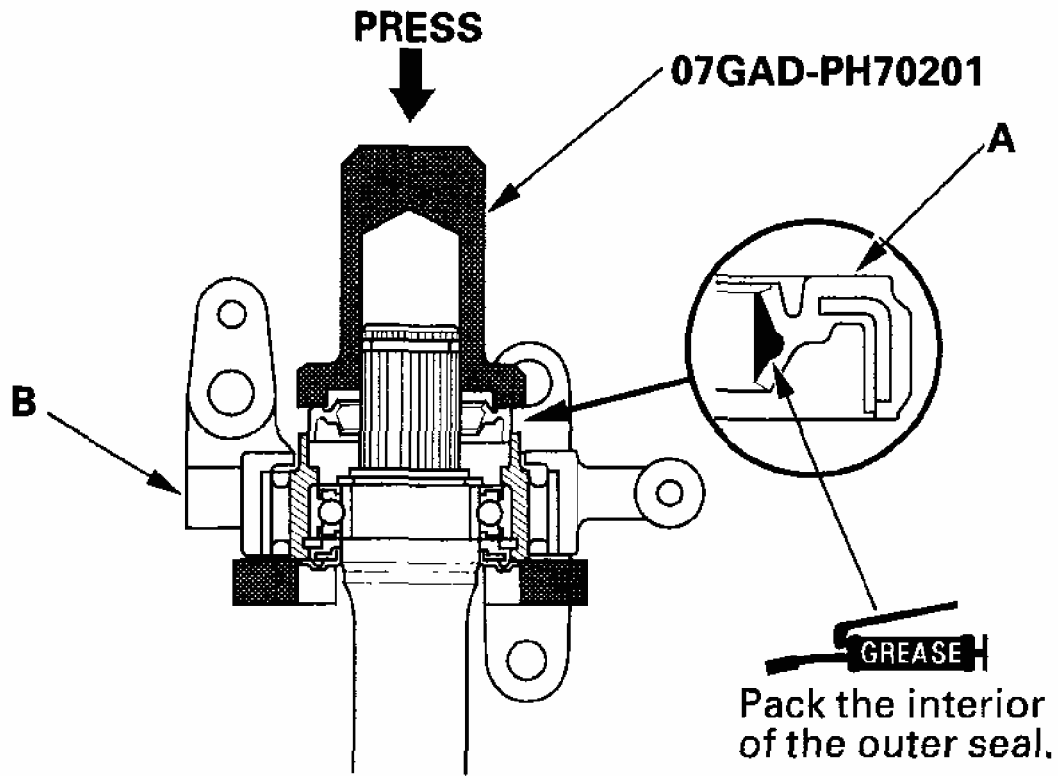
5. Install, then seat the external snap ring (A) into the groove of the intermediate shaft (B).



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Fig. 68: Installing External Snap Ring Into Groove Of Intermediate Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

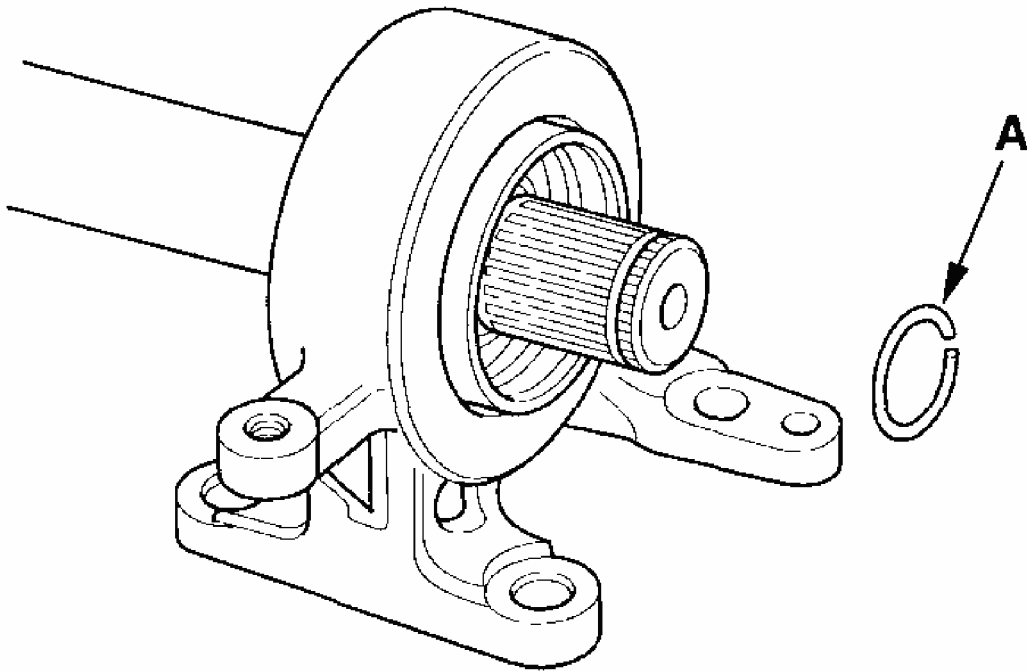
6. Install the outer seal (A) into the bearing support (B) using the special tool and a press.



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Fig. 69: Installing Outer Seal Into Bearing Support Using Special Tool And Press
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install the set ring (A).



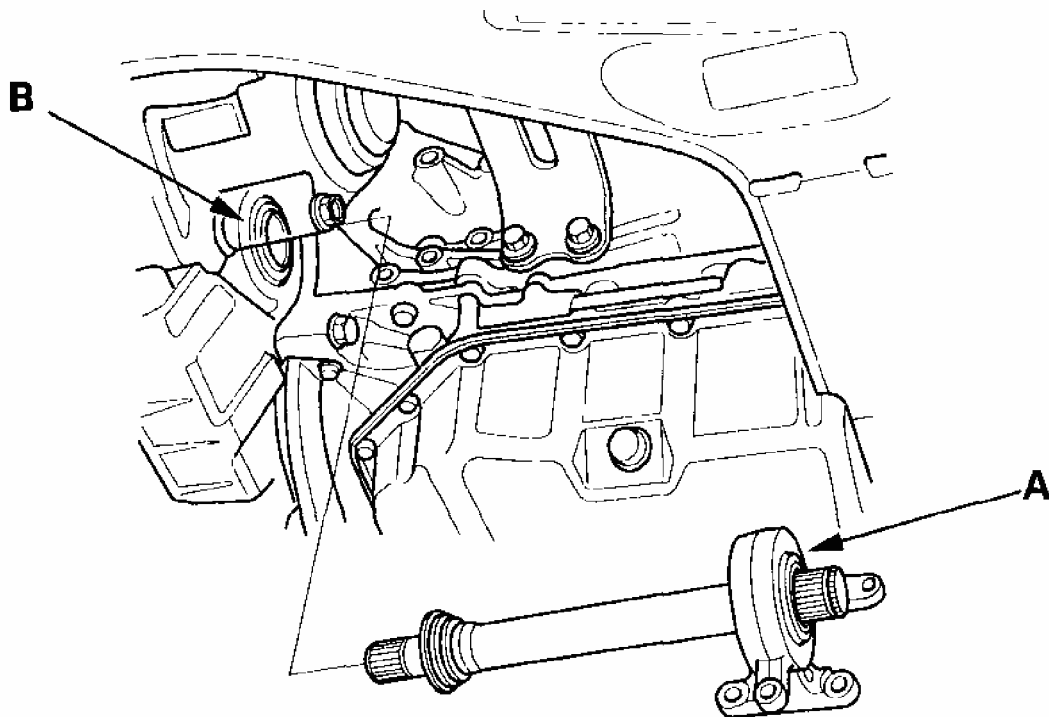
G03678855

Fig. 70: Installing Set Ring

Courtesy of AMERICAN HONDA MOTOR CO., INC.

INTERMEDIATE SHAFT INSTALLATION

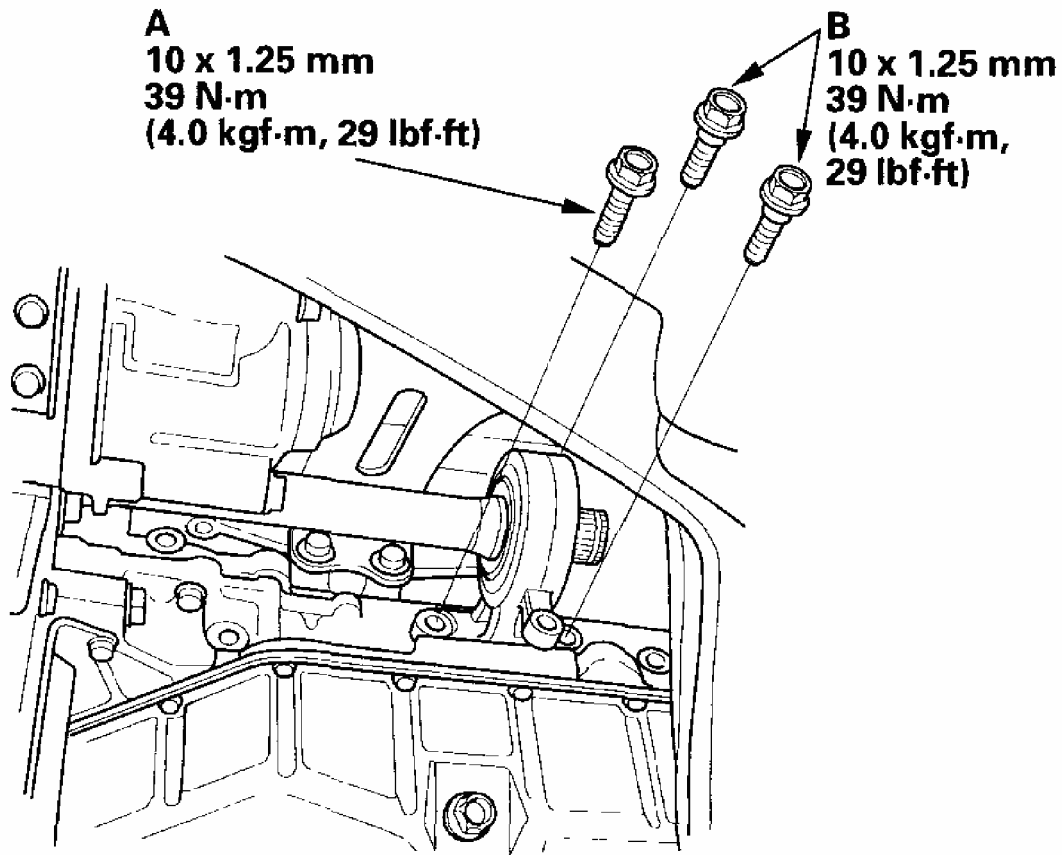
1. Use solvent or brake cleaner to thoroughly clean the areas where the intermediate shaft (A) contacts the transmission (differential), and dry with compressed air. Do not wash the rubber parts with solvent. Insert the intermediate shaft assembly into the differential. Hold the intermediate shaft horizontally to prevent damage to the differential oil seal (B).



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Fig. 71: Inserting Intermediate Shaft Assembly Into Differential
Courtesy of AMERICAN HONDA MOTOR CO., INC.

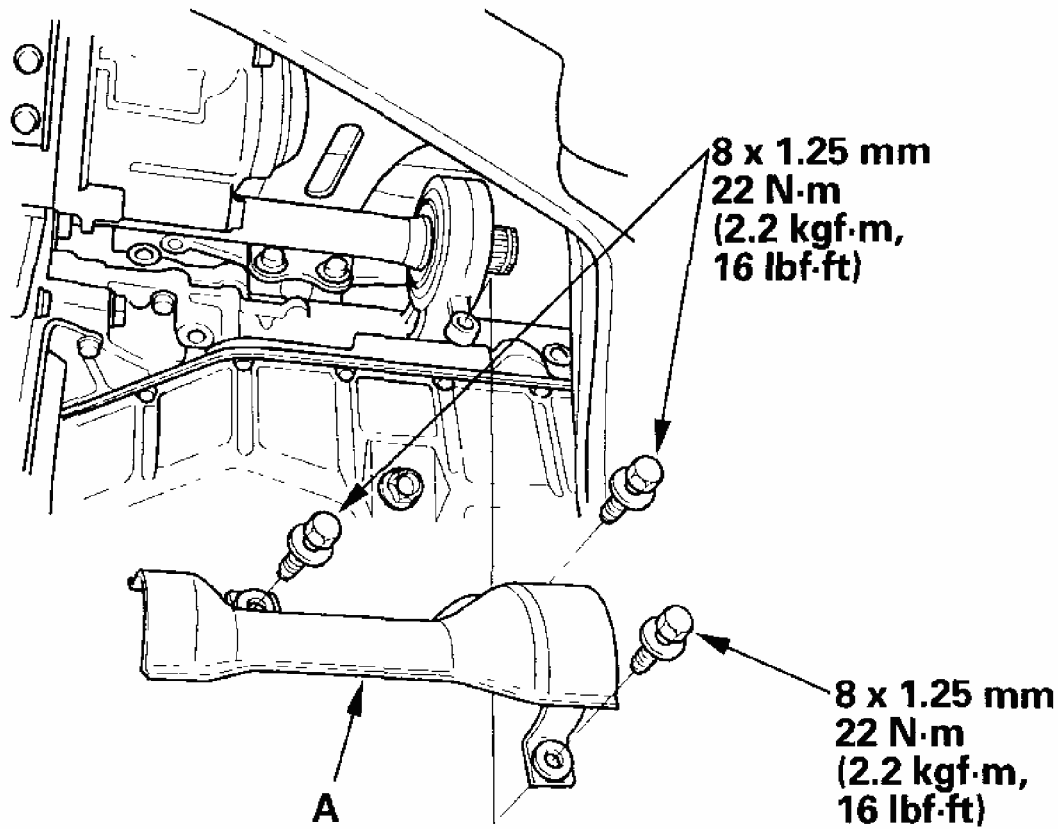
2. Install the flange bolt (A) and two dowel bolts (B).



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Fig. 72: Installing Flange And Two Dowel Bolts With Specified Torques
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the heat cover (A), and tighten the three bolts.



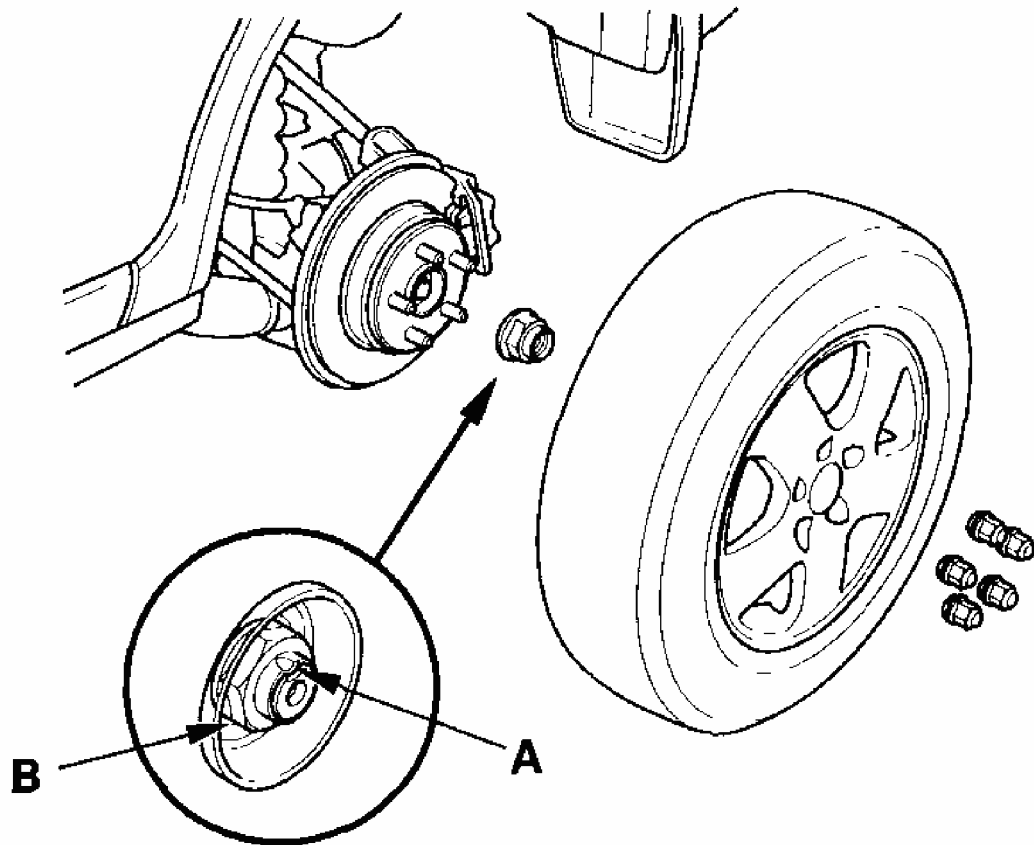
G03678858

Fig. 73: Installing Heat Cover And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the right driveshaft (see **FRONT DRIVESHAFT INSTALLATION**).
5. Refill the transmission fluid:
 - Manual transmission (see **TRANSMISSION FLUID INSPECTION AND REPLACEMENT**)
 - Automatic transmission (see **ATF REPLACEMENT**)

REAR DRIVESHAFT REMOVAL

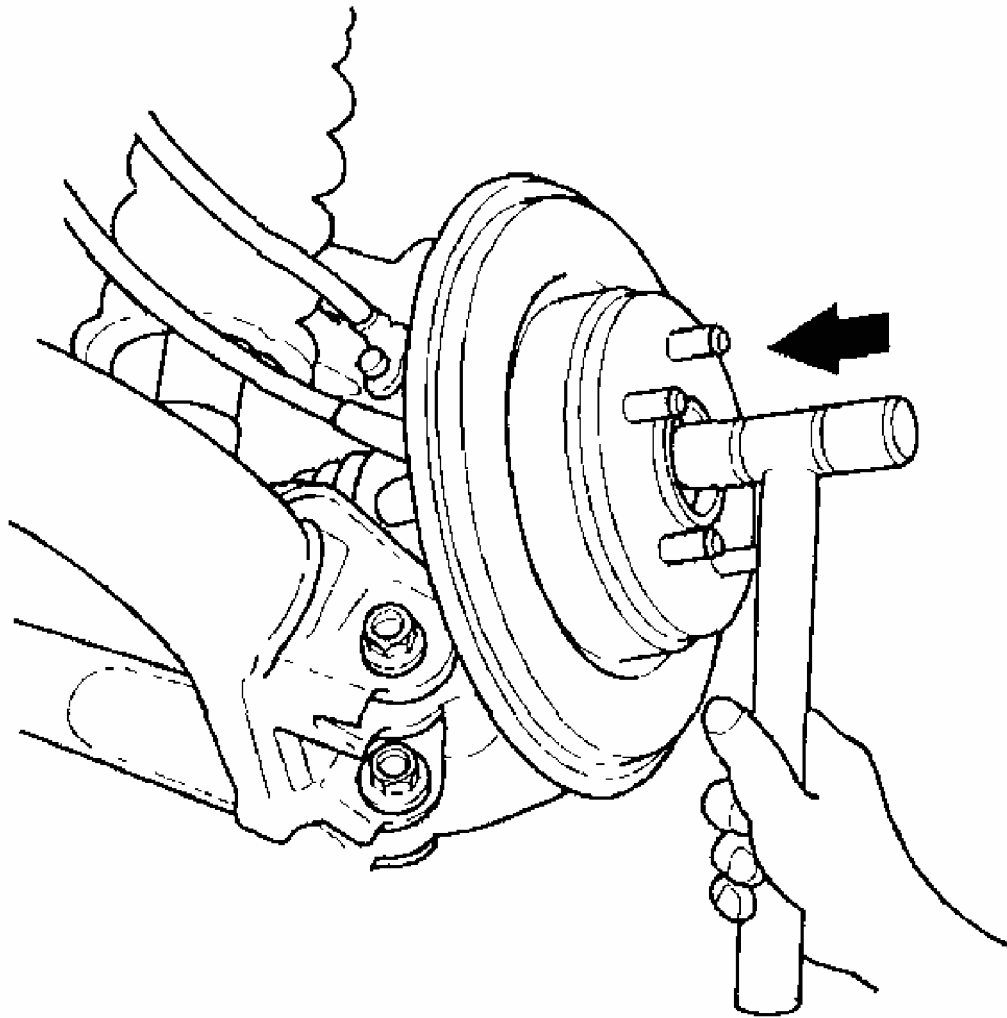
1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **SAFETY STANDS**).
2. Remove the wheel nuts and rear wheels.



G03678859

Fig. 74: Removing Wheel Nuts And Rear Wheels
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Lift up the locking tab (A) on the spindle nut (B), then remove the nut.
4. Drain the differential fluid (see **DIFFERENTIAL FLUID INSPECTION AND REPLACEMENT** .
5. Remove the rear driveshaft from the rear differential assembly (see step 9 on **DIFFERENTIAL HOUSING ASSEMBLY REMOVAL AND INS**).
6. Remove the rear driveshaft outboard joint from the trailing arm and rear wheel hub using a plastic hammer or a puller if necessary.



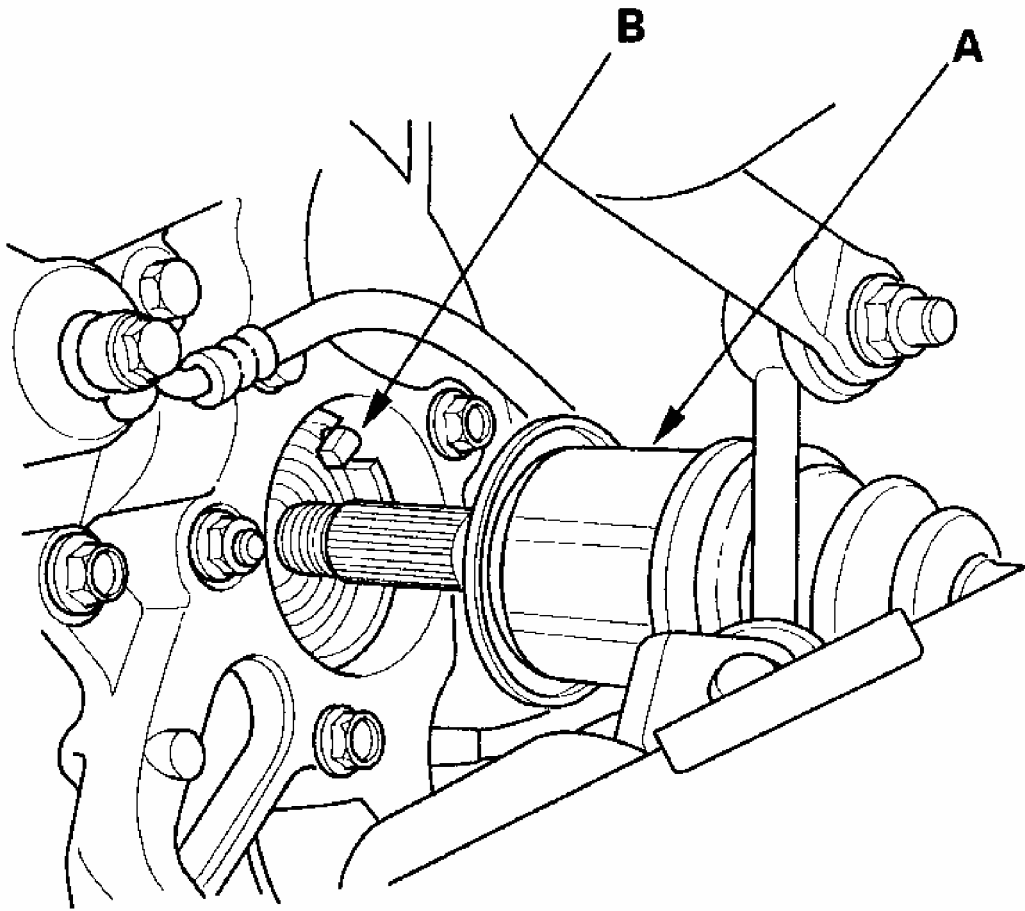
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Fig. 75: Removing Rear Wheel Hub Using Plastic Hammer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Remove the rear driveshaft (A).

NOTE:

- Be careful not to damage the ABS wheel sensor (B).
- Pull on the outer joint. Do not pull on the driveshaft because the joint may come apart.



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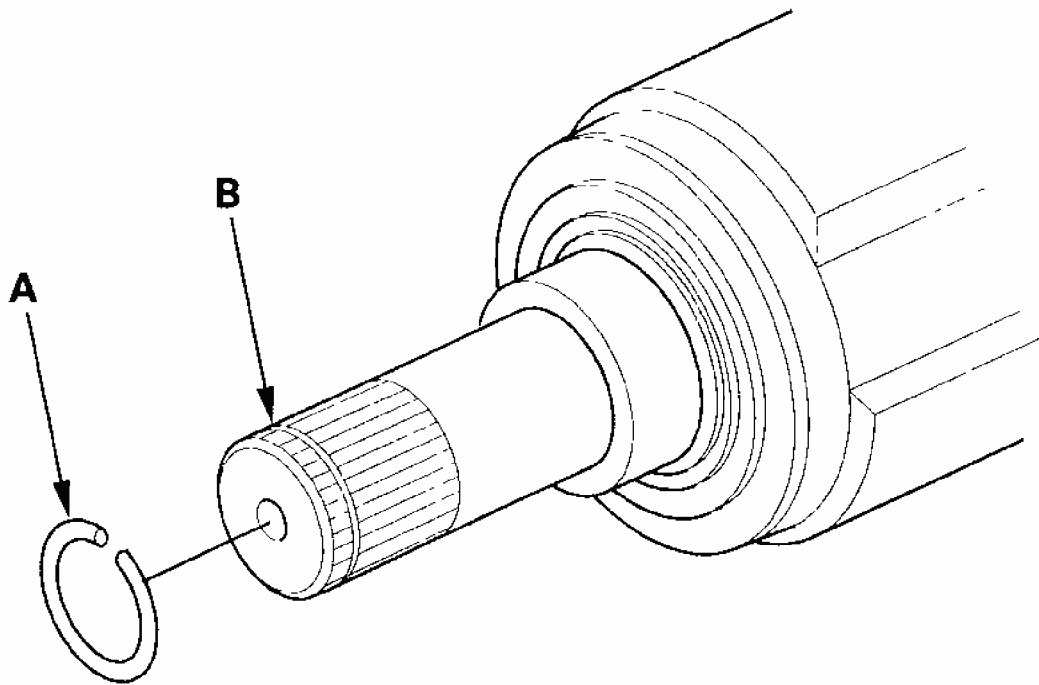
Fig. 76: Identifying Rear Driveshaft And ABS Wheel Sensor
Courtesy of AMERICAN HONDA MOTOR CO., INC.

REAR DRIVESHAFT DISASSEMBLY

NOTE:

- Due to the amount of work required to replace one damaged boot, it is best to replace both boots at the same time.
- These instructions are for the inboard joint. The same procedure applies to the outboard joint.

1. Remove the set ring (A) from the inboard joint (B).

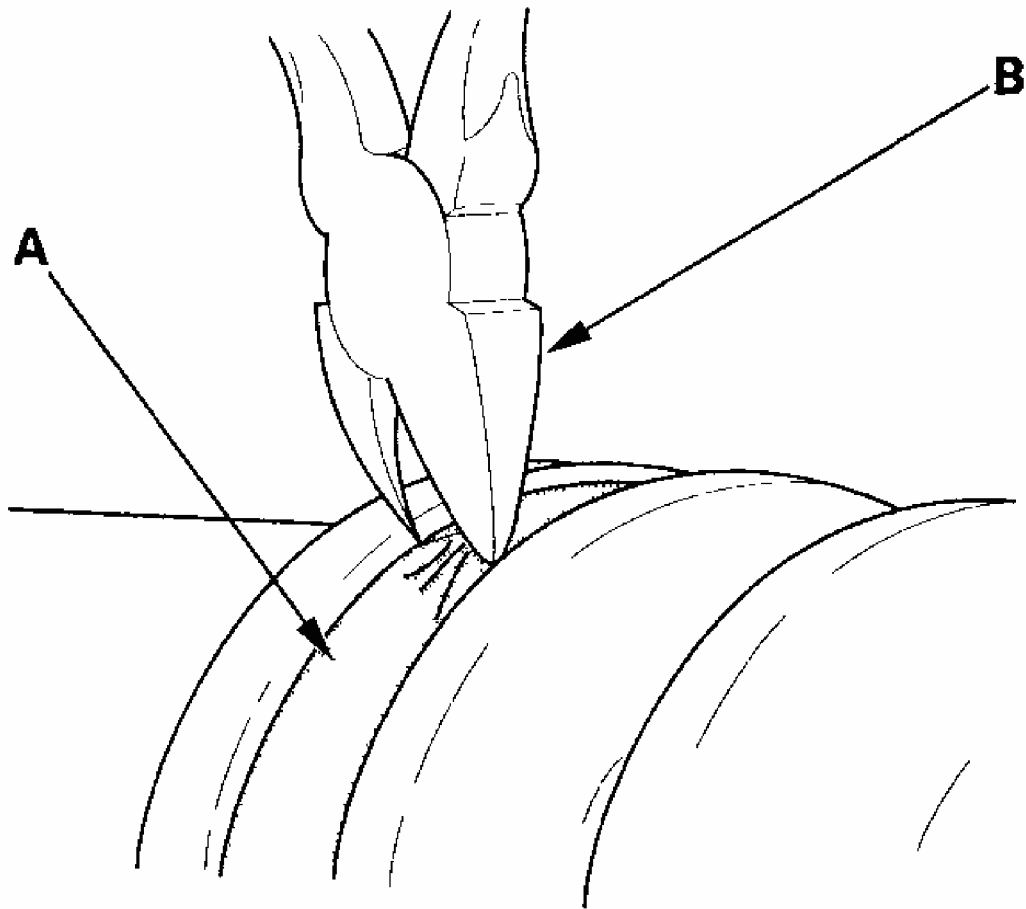


G03678862

Fig. 77: Removing Set Ring From Inboard Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Remove the boot bands. Be careful not to damage the boot.
 - If the boot band is a welded type (A), cut the boot band (B).
 - If the boot band is a double loop type (C), lift up the band end (D), and push it into the clip (E).
 - If the boot band is a low profile type (F), pinch the boot band using commercially available boot band pincers (G).

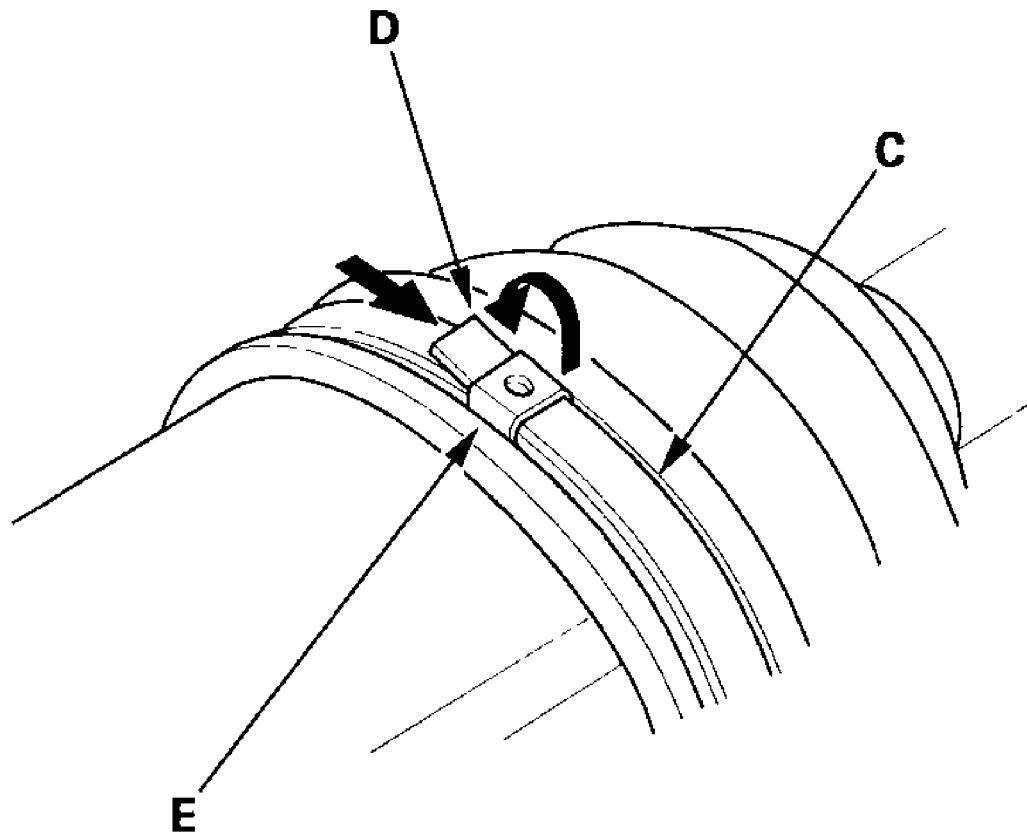
Welded type



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Fig. 78: Removing Boot Bands (Welded Type)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

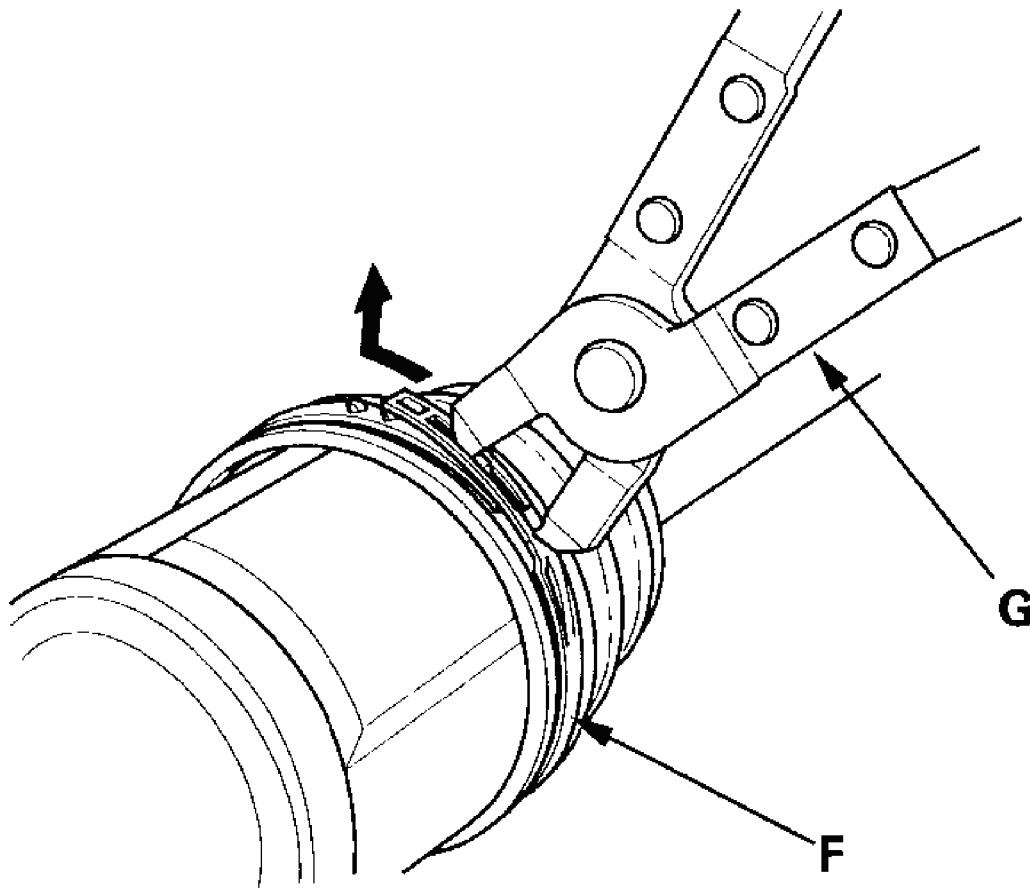
Double loop type



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Fig. 79: Removing Boot Bands (Double Loop Type)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

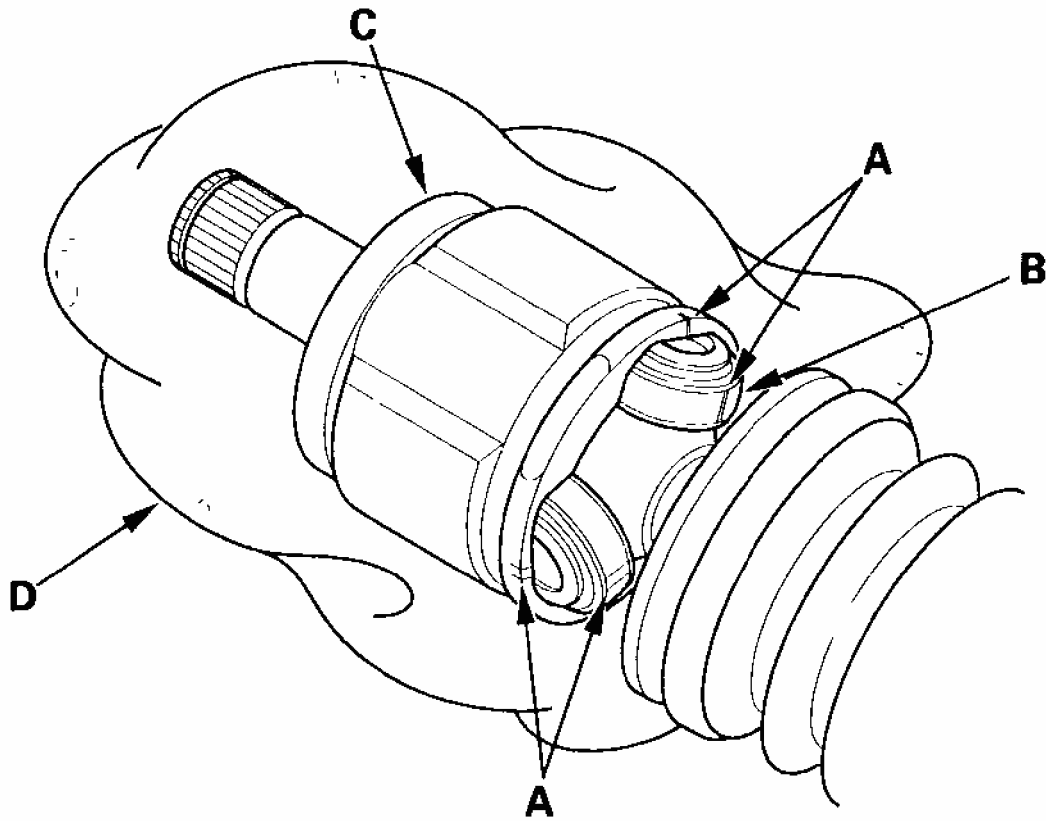
Low profile type



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Fig. 80: Removing Boot Bands (Low Profile Type)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

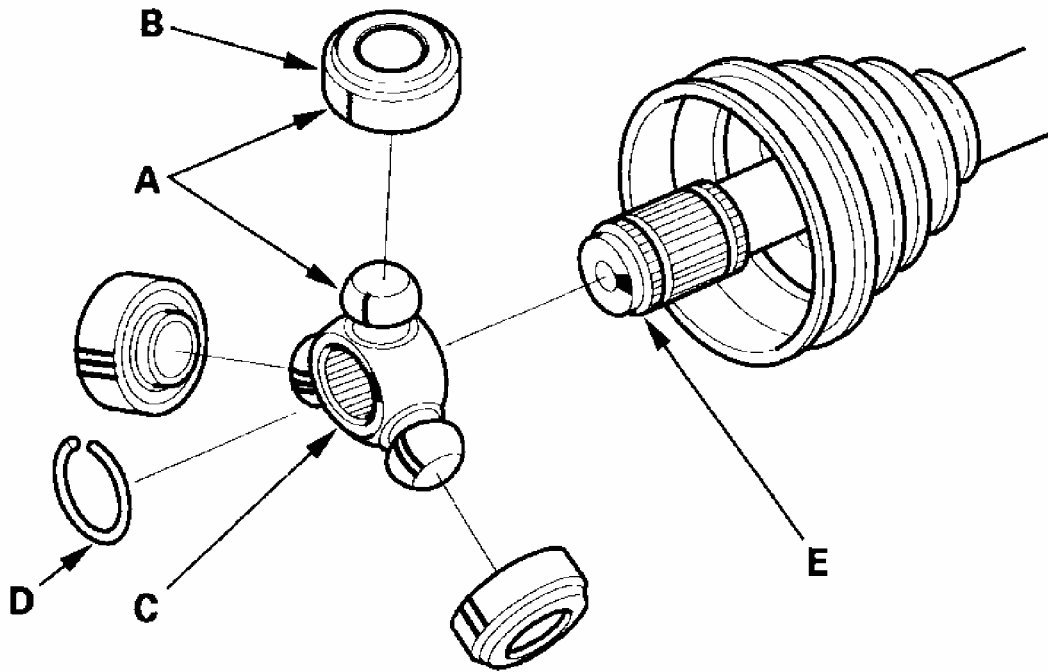
3. Make a mark (A) on each roller (B) and inboard joint (C) to identify the locations of rollers and grooves in the inboard joint. Then remove the inboard joint on the shop towel (D). Be careful not to drop the rollers when separating them from the inboard joint.



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Fig. 81: Identifying Mark On Each Roller And Inboard Joint
Courtesy of AMERICAN HONDA MOTOR CO., INC.

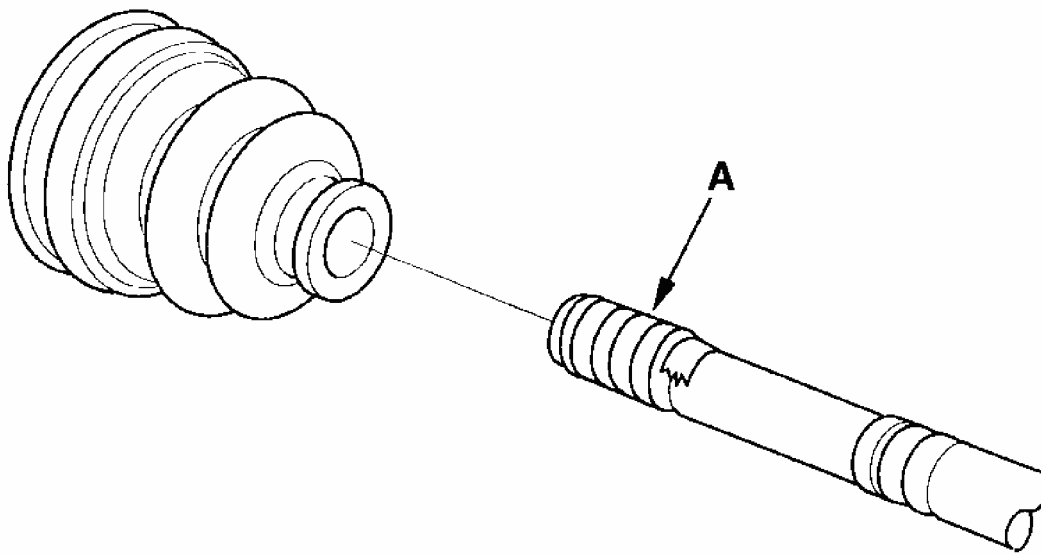
4. Make a mark (A) on the rollers (B) and spider (C) to identify the locations of the rollers on the spider, then remove the rollers.



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Fig. 82: Removing Rollers And Spider
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the circlip (D).
6. Make a mark the spider and driveshaft (E) to identify the position of the spider on the shaft.
7. Remove the spider.
8. Wrap the splines on the driveshaft with vinyl tape (A) to prevent damage to the boot.



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Fig. 83: Identifying Vinyl Tape On Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

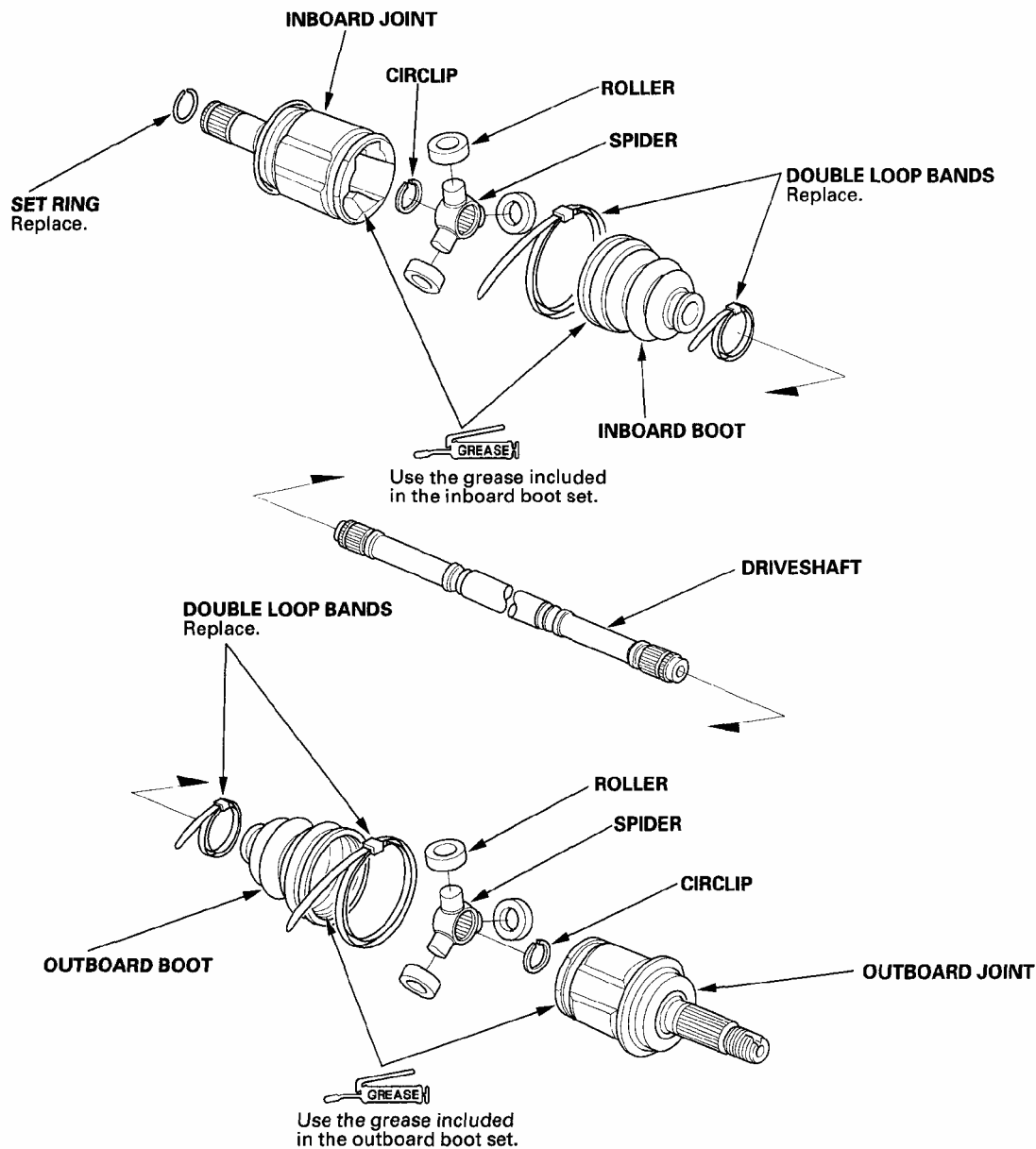
9. Remove the inboard boot. Be careful not to damage the boot.
10. Remove the vinyl tape.

REAR DRIVESHAFT REASSEMBLY

EXPLODED VIEW

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Fig. 84: Exploded View Of Rear Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

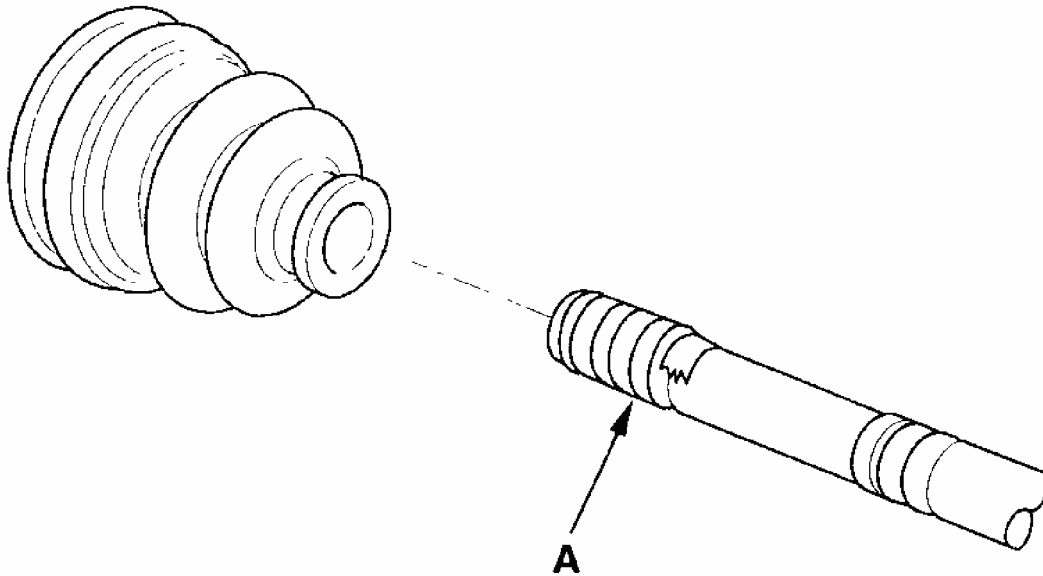
Special Tools Required

- Boot band tool, KD-3191 or equivalent, commercially available

NOTE:

- Refer to the **EXPLODED VIEW** as needed during this procedure.
- These instructions are for the inboard joint. The same procedure applies to the outboard joint.

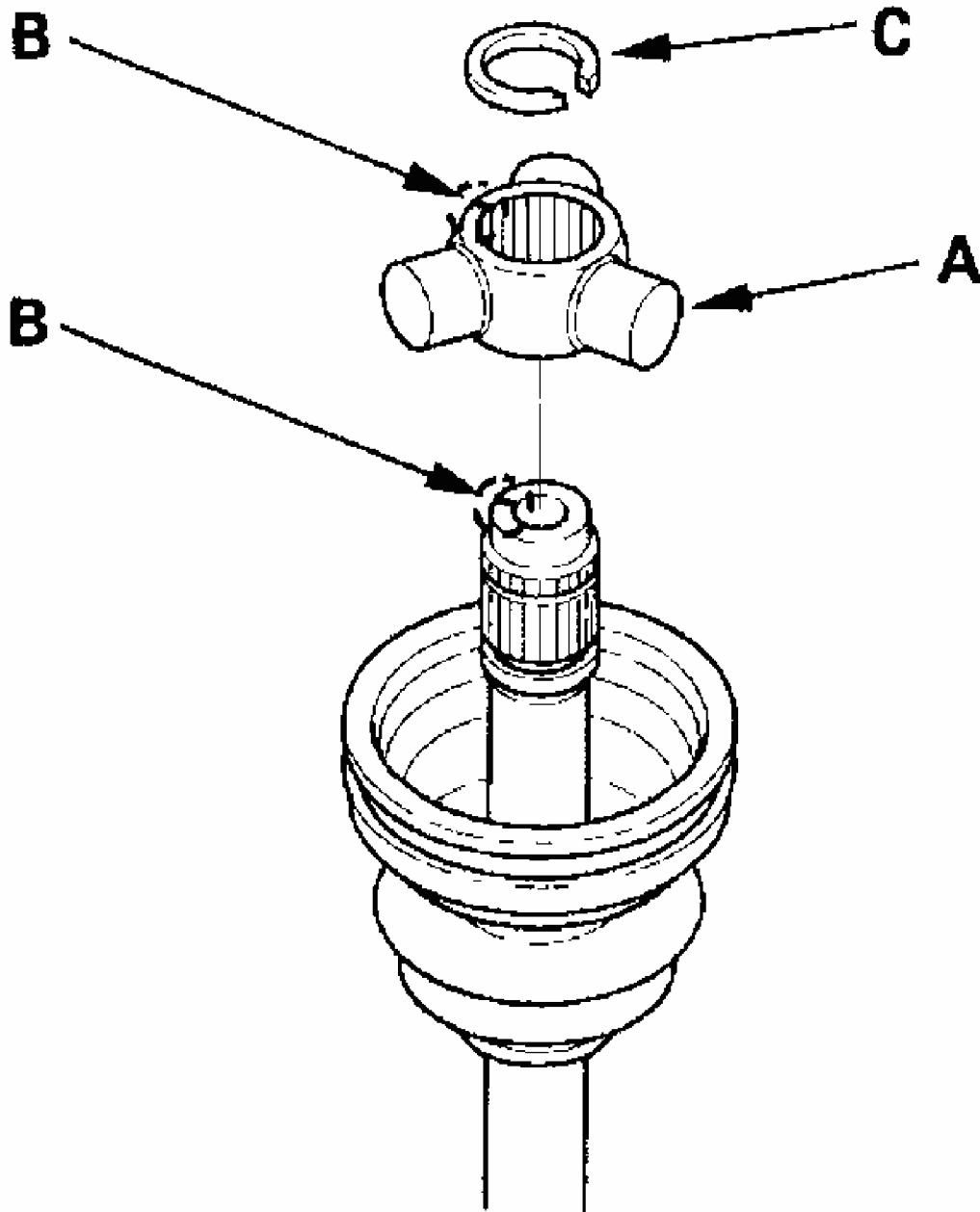
1. Wrap the splines with vinyl tape (A) to prevent damage to the inboard boot.



G03678870

Fig. 85: Identifying Vinyl Tape On Drive Shaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the inboard boot onto the driveshaft, then remove the vinyl tape. Be careful not to damage the inboard boot.
3. Install the spider (A) onto the driveshaft by aligning the marks (B) on the spider and the end of the driveshaft.



G03678871

Fig. 86: Installing Spider Onto Driveshaft
Courtesy of AMERICAN HONDA MOTOR CO., INC.

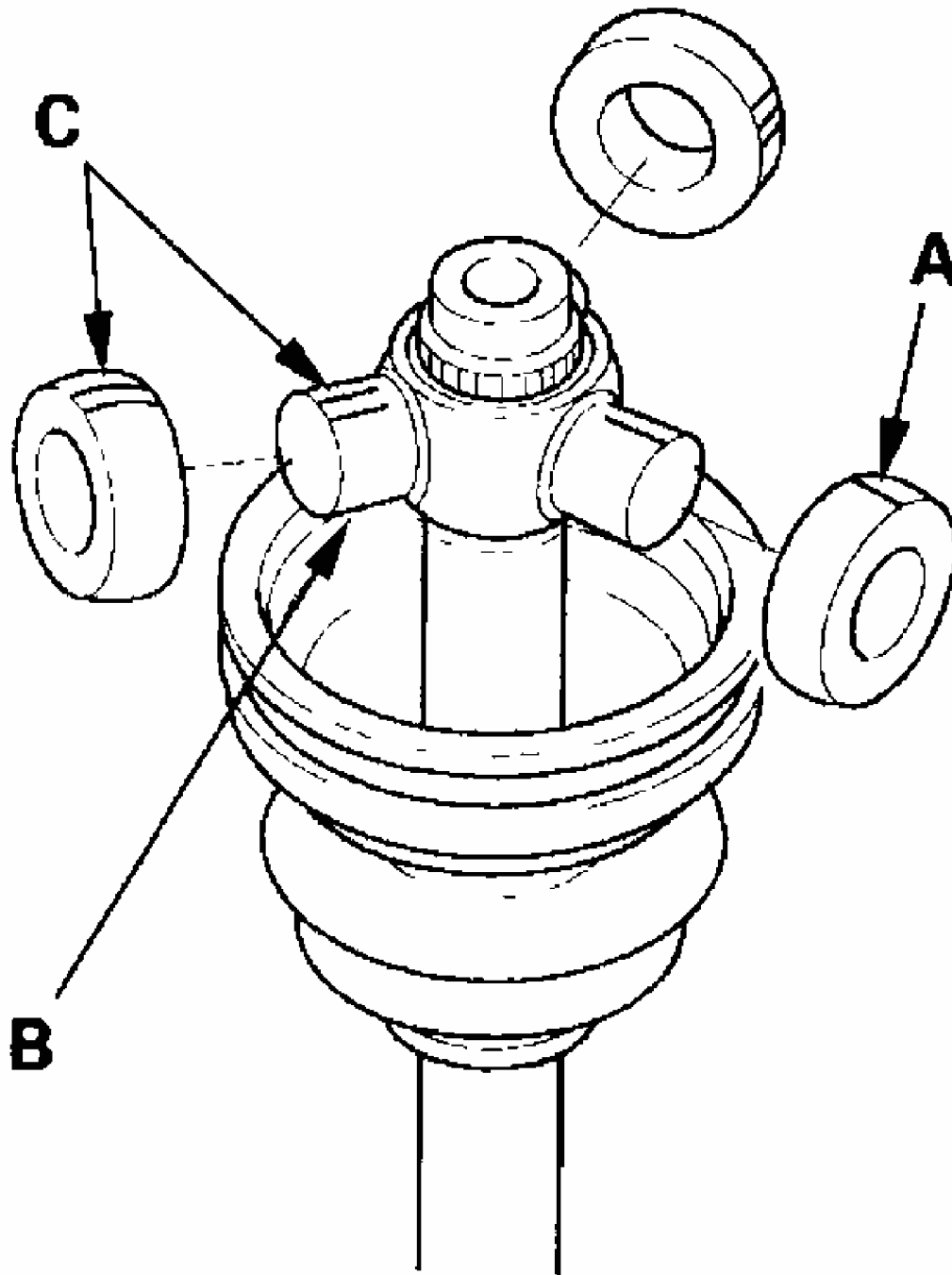
4. Install the circlip (C) into the driveshaft groove. Rotate the circlip in its groove to make sure it is fully seated.
5. Fit the rollers (A) onto the spider (B) with their high shoulders facing outward, and

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note these items:

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



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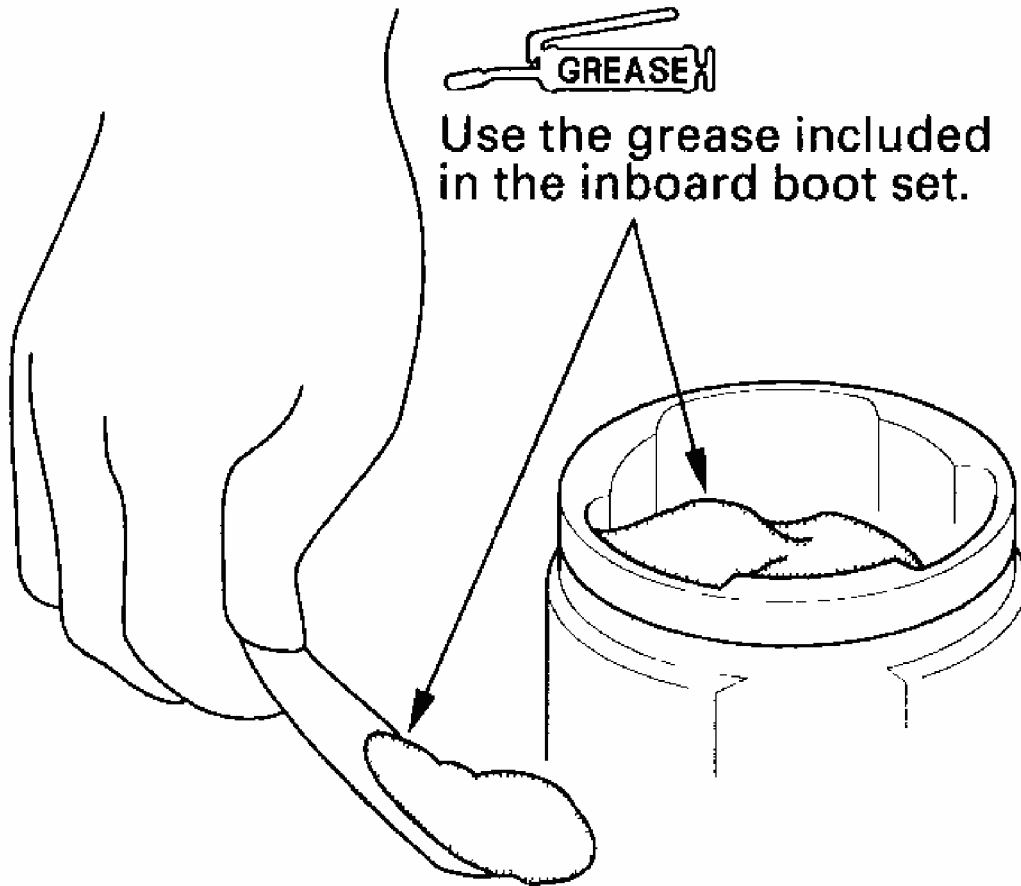
Fig. 87: Reinstalling Rollers

Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

Grease quantity

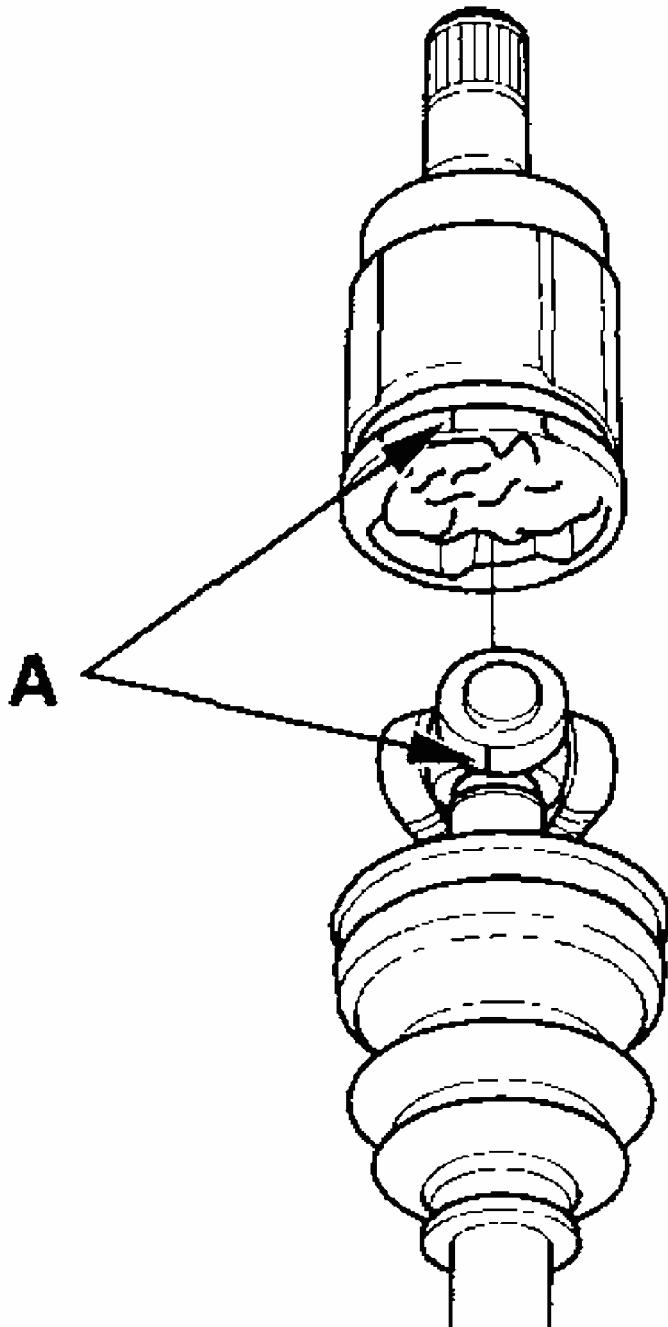
Inboard joint: 80-90 g (2.8-3.2 oz.)



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Fig. 88: Packing Inboard Joint With Joint Grease
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Fit the inboard joint onto the driveshaft, and note these items:
 - Reinstall the inboard joint onto the driveshaft by aligning the marks (A) on the inboard joint and the rollers.
 - Hold the driveshaft so the inboard joint is pointing up to prevent it from falling off.



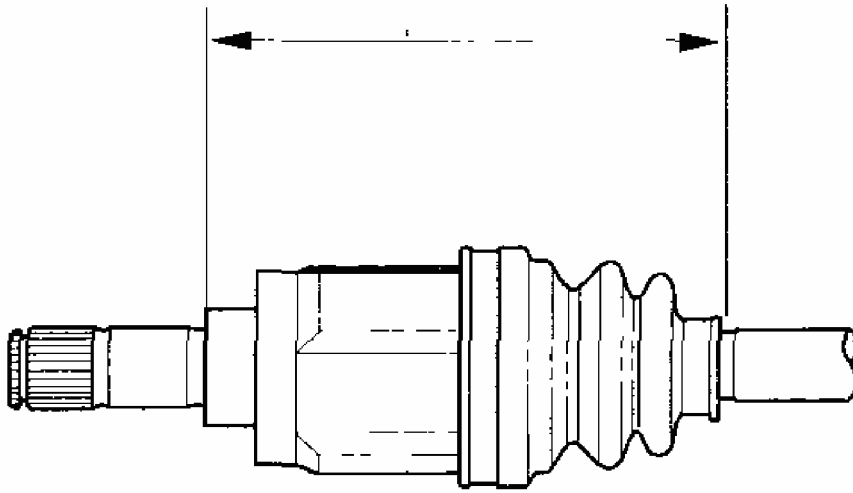
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Fig. 89: Reinstalling Inboard Joint

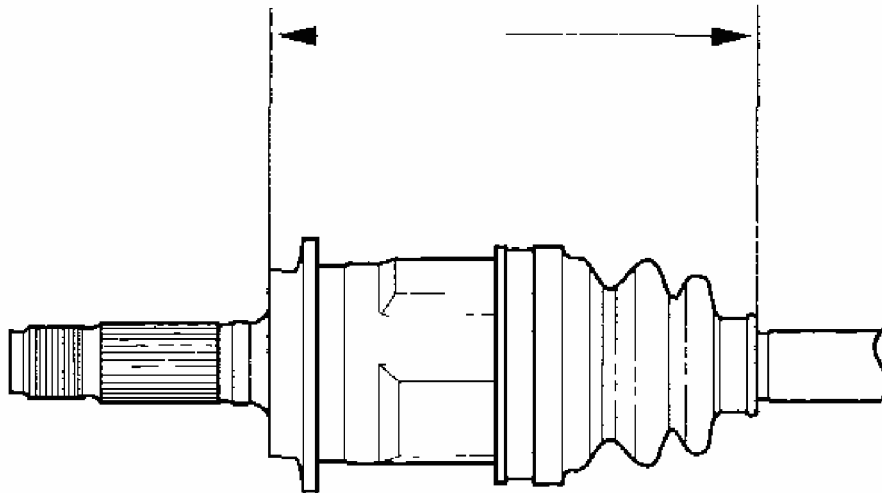
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Adjust the length of the driveshafts to these measurements, then adjust the boots to halfway between full compression and full extension. Make sure the ends of the boots seat in the grooves of the driveshaft and joint.

Inboard boot: 153—157 mm (6.02—6.18 in.)



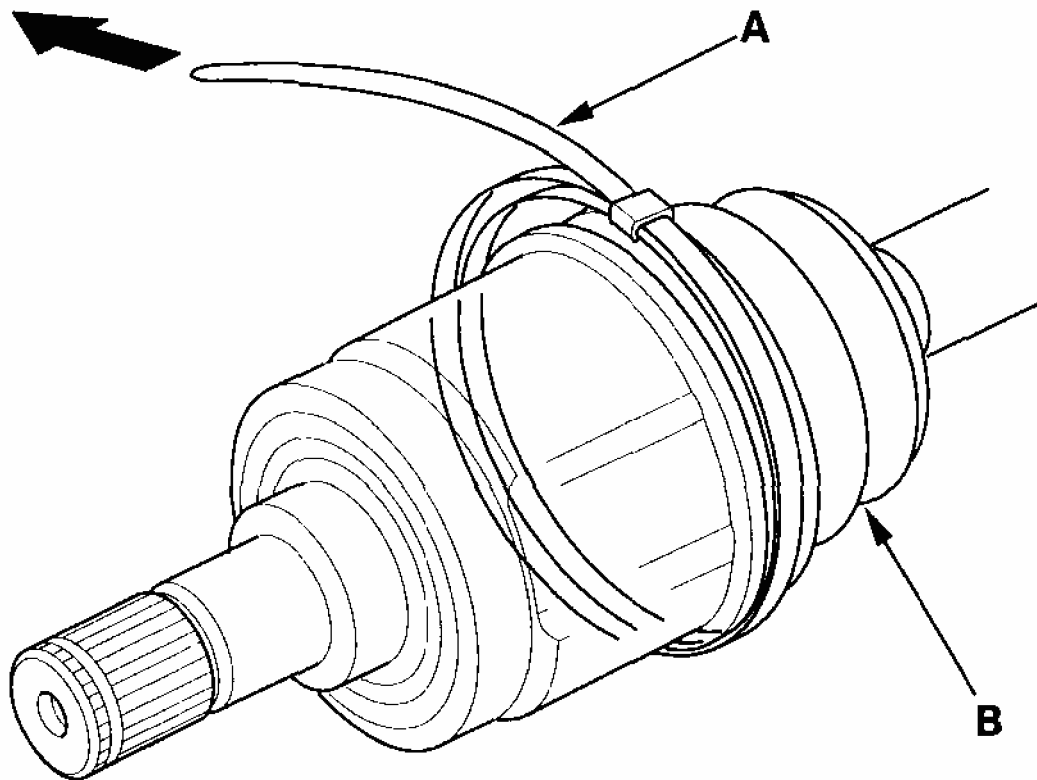
Outboard boot: 143—147 mm (5.63—5.79 in.)



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Fig. 90: Identifying Driveshafts Measurements
Courtesy of AMERICAN HONDA MOTOR CO., INC.

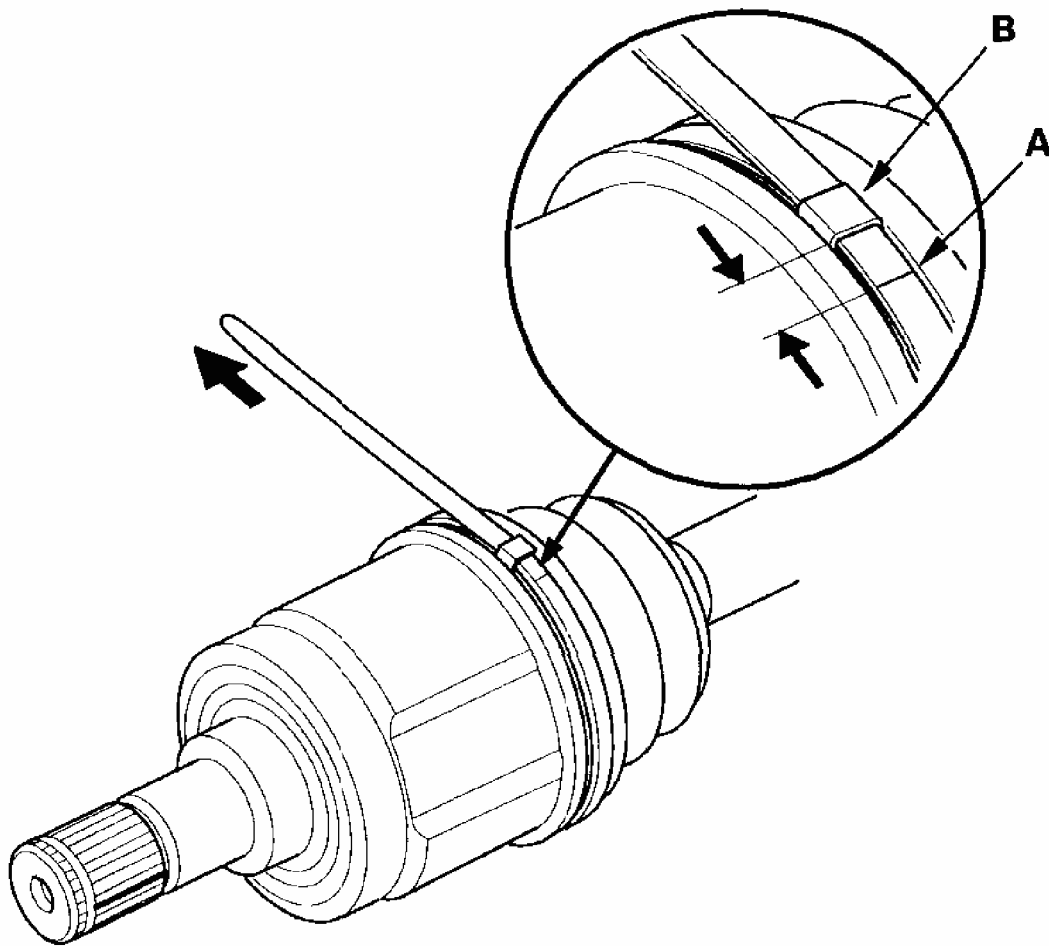
9. Install the boot ends onto the driveshaft and the inboard joint, then install the new double loop band (A) onto the boot.



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Fig. 91: Installing New Double Loop Band Onto Boot
Courtesy of AMERICAN HONDA MOTOR CO., INC.

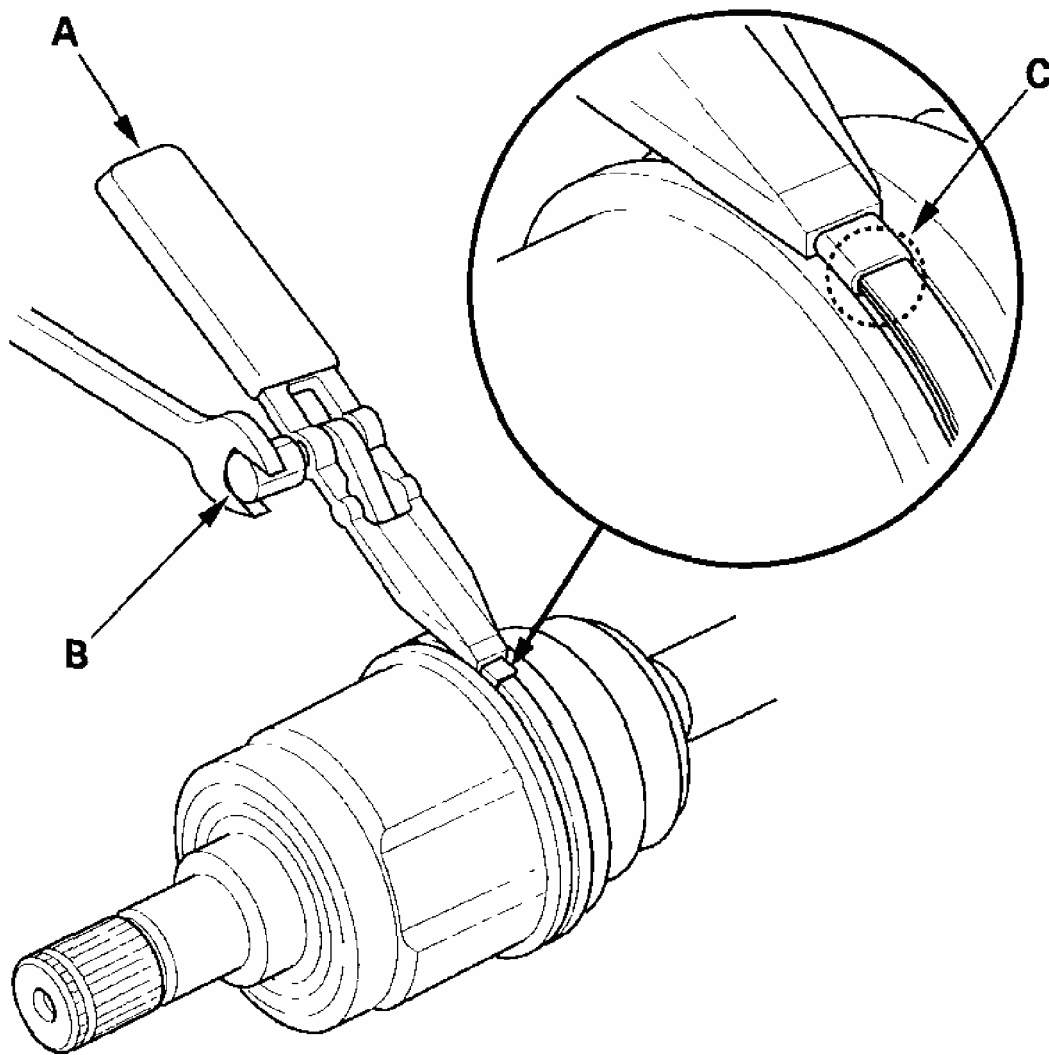
10. Pull up the slack in the band by hand.
11. Mark position (A) on the band 10-14 mm (0.4-0.6 in.) from the clip (B).



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Fig. 92: Identifying Mark Position On Band From Clip
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. 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).



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Fig. 93: Threading Free End Of Band Through Nose Section Of Commercially Available Boot Band Tool KD-3191

Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Using a wrench on the winding mandrel of the boot band tool, tighten the band until the marked spot (C) on the band meets the edge of the clip.
14. 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.

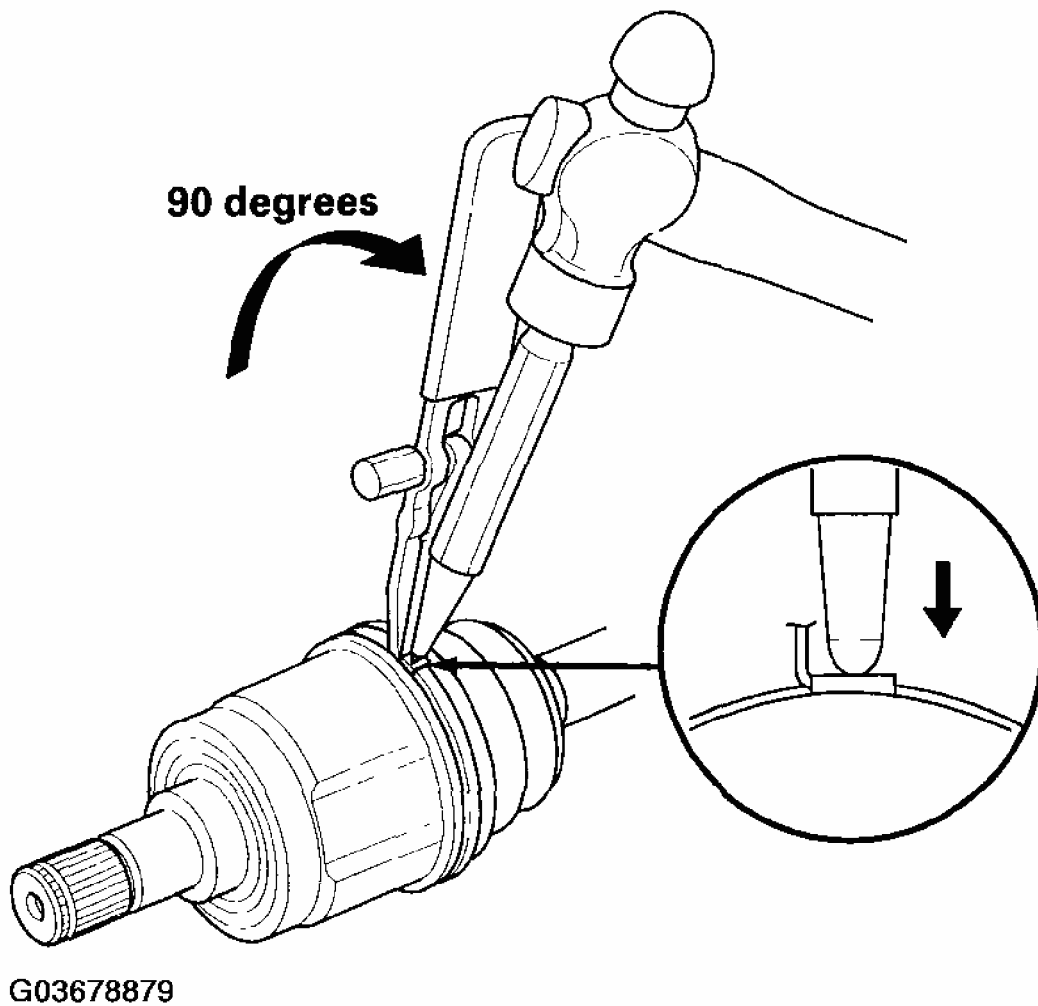
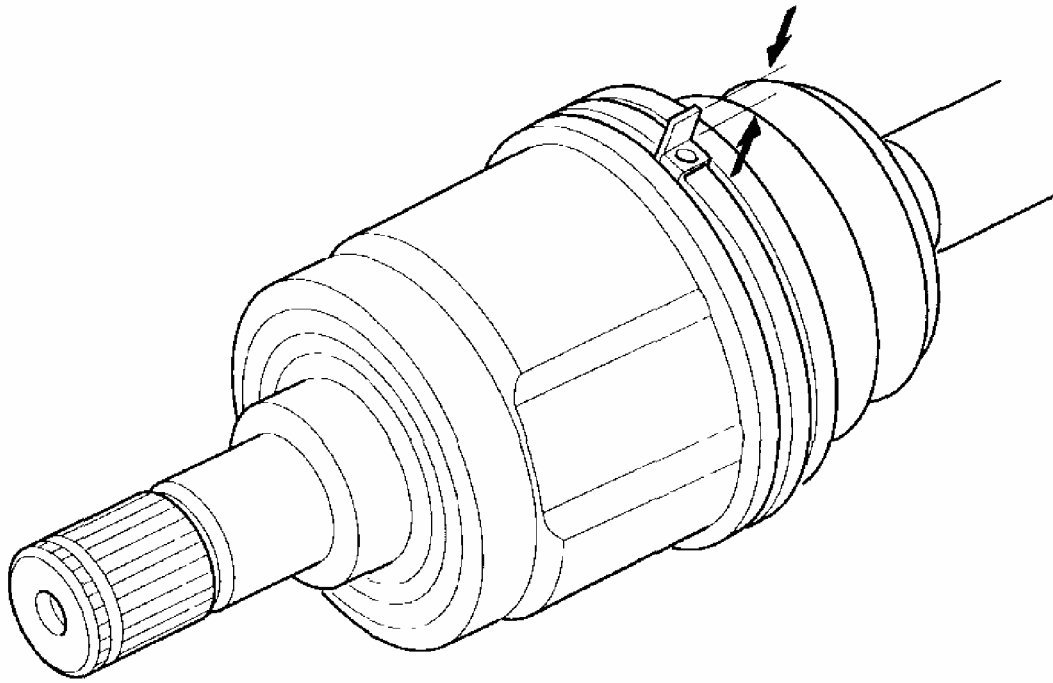


Fig. 94: Center-Punching The Clip
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. 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.



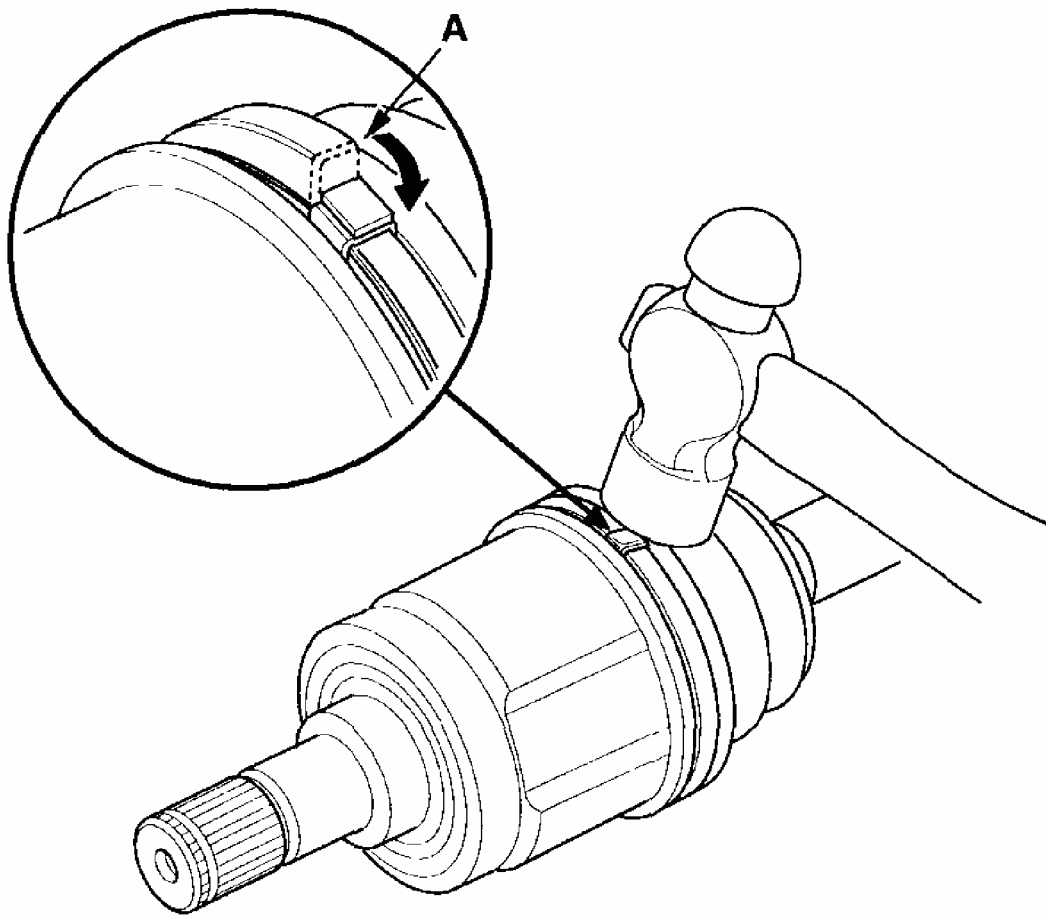
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Fig. 95: Identifying Excess Free End Of Band
Courtesy of AMERICAN HONDA MOTOR CO., INC.

16. Bend the band end (A) by tapping it down with a hammer.

NOTE:

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



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Fig. 96: Bending Band End By Tapping It Down Using Hammer
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Install the boot band on the other end of the boot, and repeat steps 9 through 16.
18. Install the new set ring (A).

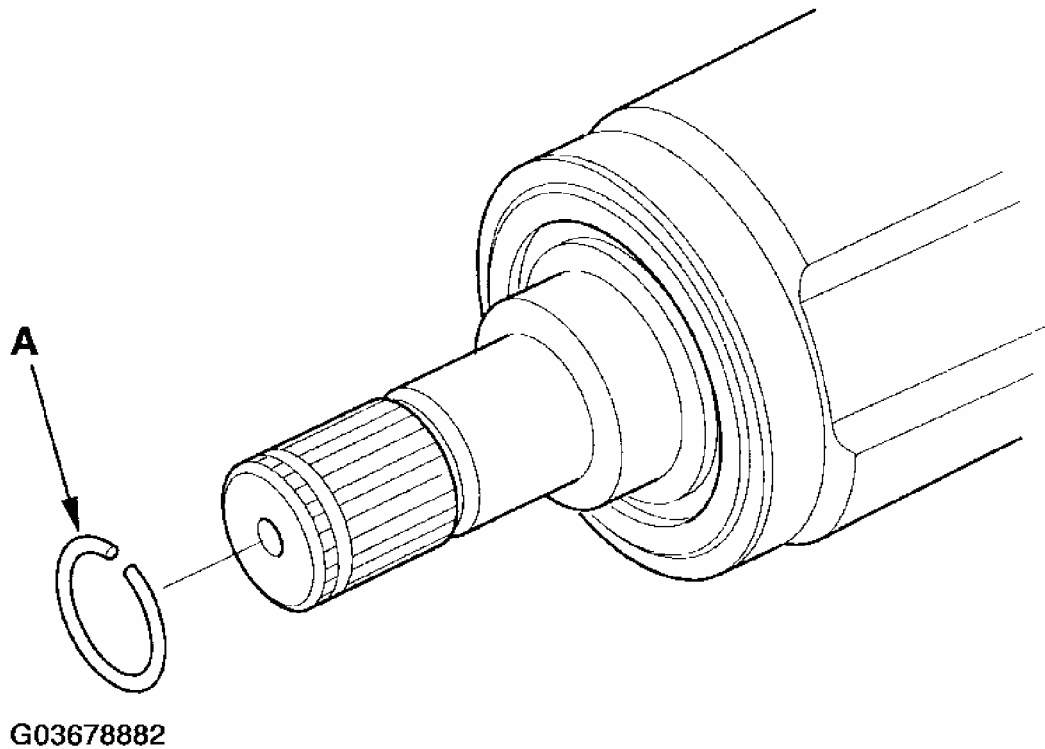


Fig. 97: Installing New Set Ring

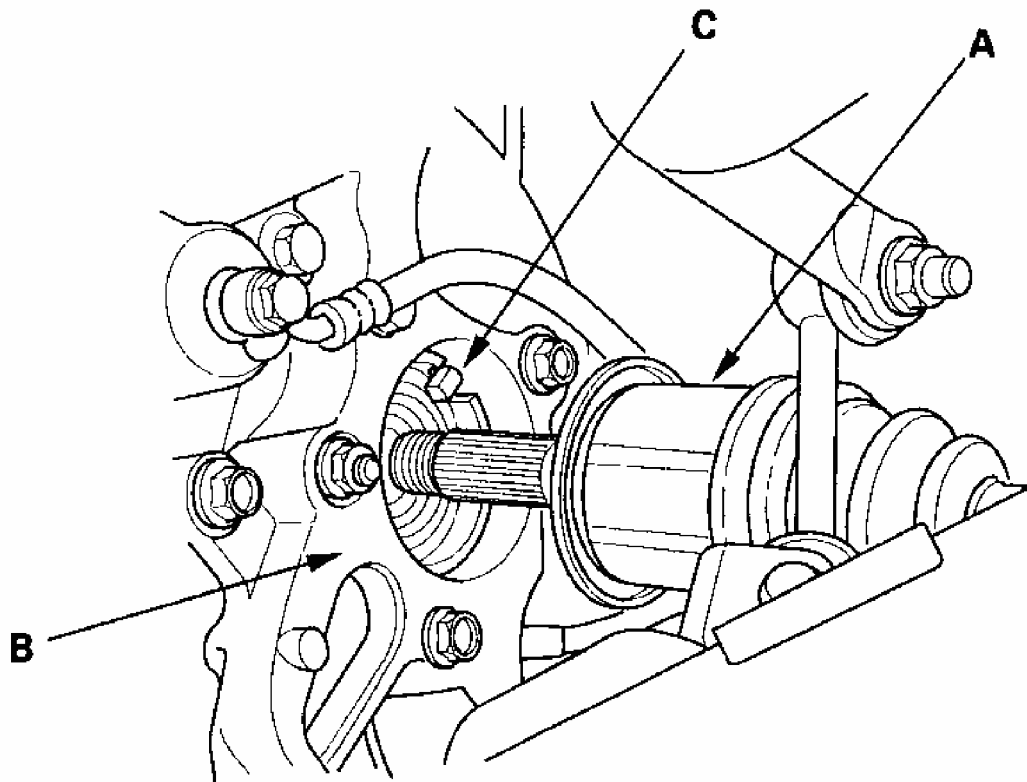
Courtesy of AMERICAN HONDA MOTOR CO., INC.

REAR DRIVESHAFT INSTALLATION

NOTE: Before starting installation, make sure the mating surfaces of the joint and the splined section are free from dirt or dust.

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

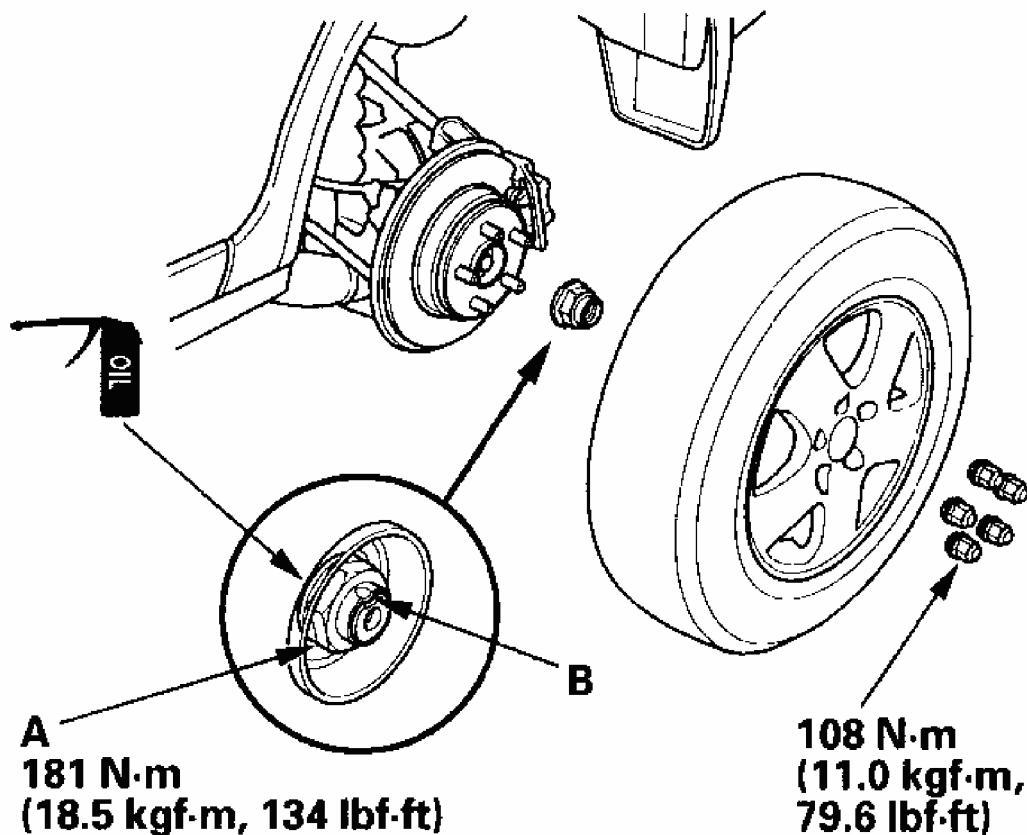
NOTE: Be careful not to damage the ABS wheel sensor (C).



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Fig. 98: Installing Outboard Joint Into Rear Hub
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the rear driveshafts into the rear differential assembly (see step 3 on **DIFFERENTIAL INSTALLATION**).
3. Apply a small amount of engine oil to the seating surface of the new spindle nut (A).



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Fig. 99: Installing New Spindle Nut And Torque Specifications
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

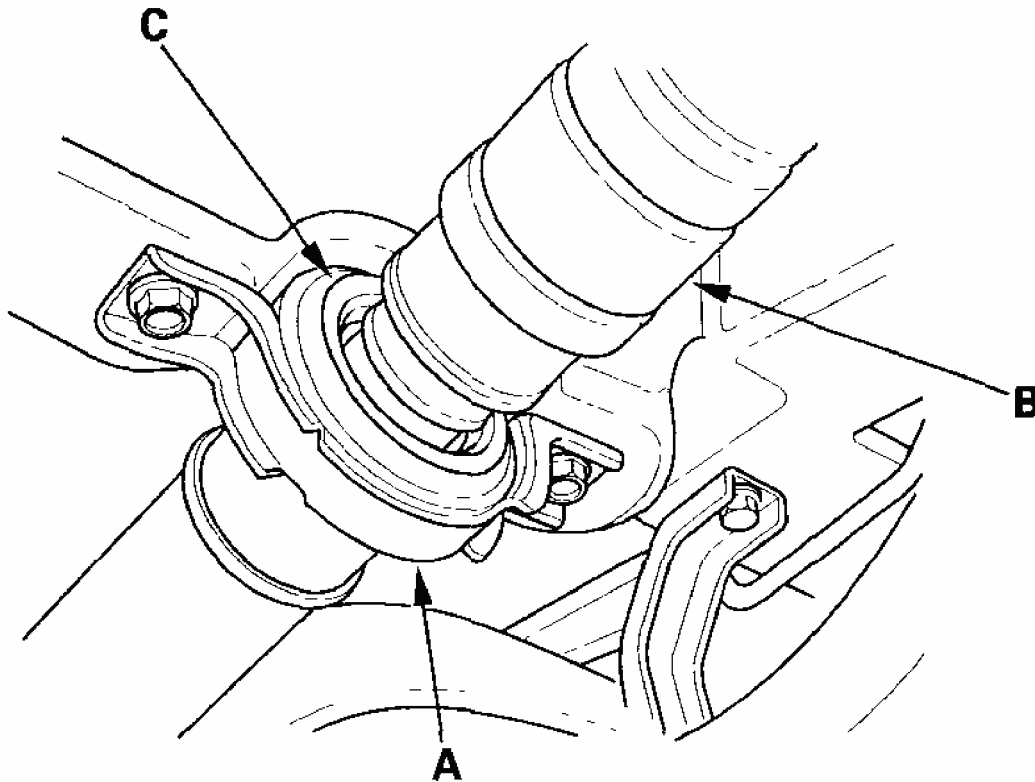
4. Install a new spindle nut, then tighten the nut. After tightening, use a drift to stake the spindle nut shoulder (B) against the driveshaft.
5. Clean the mating surfaces of the brake disc and the rear wheel, then install the rear wheel with the wheel nuts.
6. Turn the rear wheel by hand, and make sure there is no interference between the driveshaft and surrounding parts.
7. Refill the differential fluid (see **DIFFERENTIAL FLUID INSPECTION AND REPLACEMENT**).

PROPELLER SHAFT INSPECTION

UNIVERSAL JOINT AND BOOTS

1. Shift the transmission to neutral.

2. Raise the vehicle off the ground, and support it with safety stands in the proper locations (see **SAFETY STANDS**).
3. Check the center support bearing (A) for excessive play or rattle. If the center support has excessive play or rattle, replace the propeller shaft assembly (B).



G03678885

Fig. 100: Identifying Center Support Bearing, Propeller Shaft Assembly And Universal Joint Boots

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Check the universal joint boots (C) for damage and deterioration. If the boots are damaged or deteriorated, replace the propeller shaft assembly.
5. Check the universal joints for excessive play or rattle. If the universal joints have excessive play or rattle, replace the propeller shaft assembly.

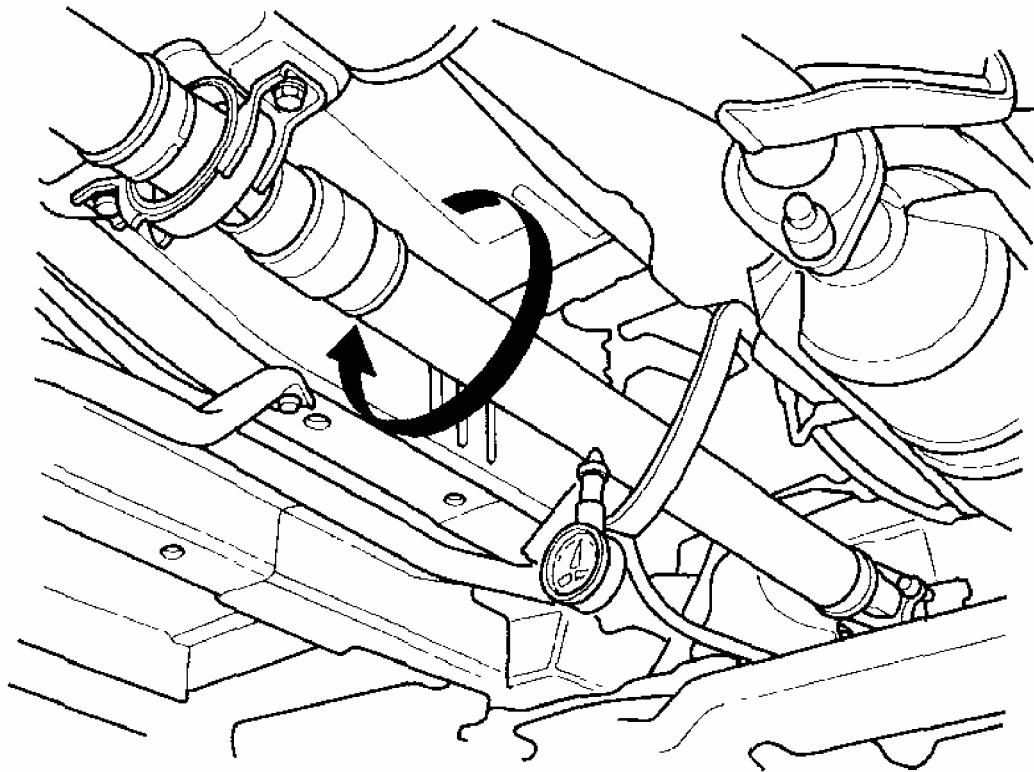
PROPELLER SHAFT RUNOUT

6. Install a dial indicator with its needle on the center of the No. 1 or No. 2 propeller shaft.
7. 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.)

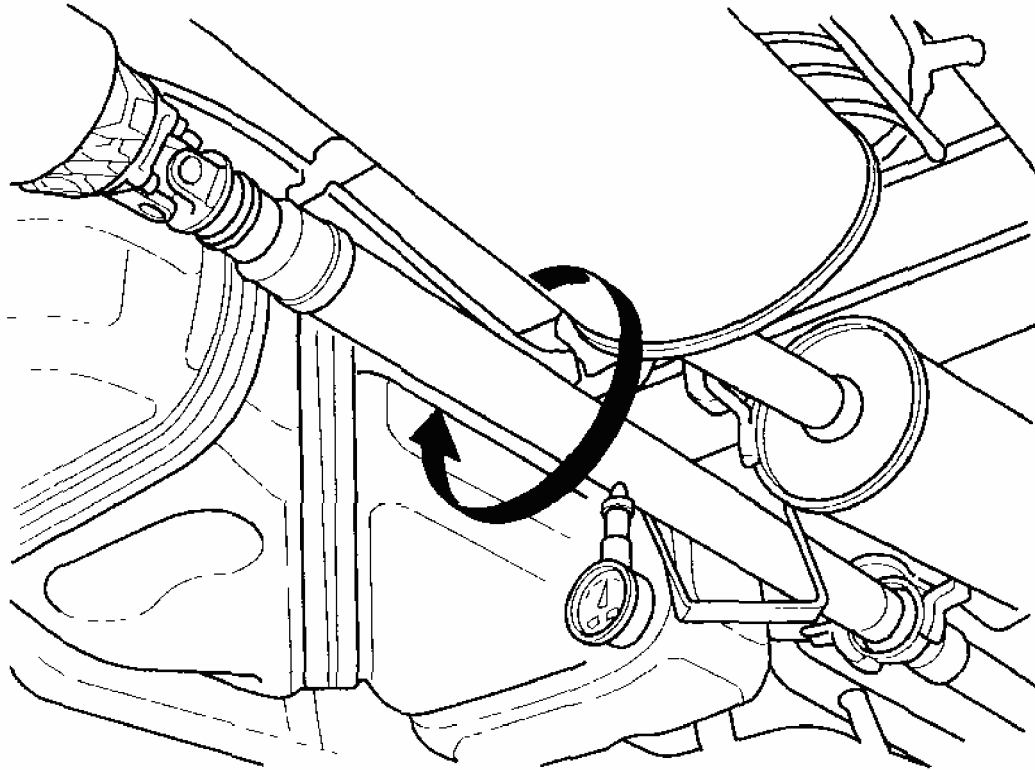


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Fig. 101: Measuring Propeller Shaft Runout (1 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

No. 2 Propeller Shaft Runout

Service Limit: 1.5 mm (0.06 in.)



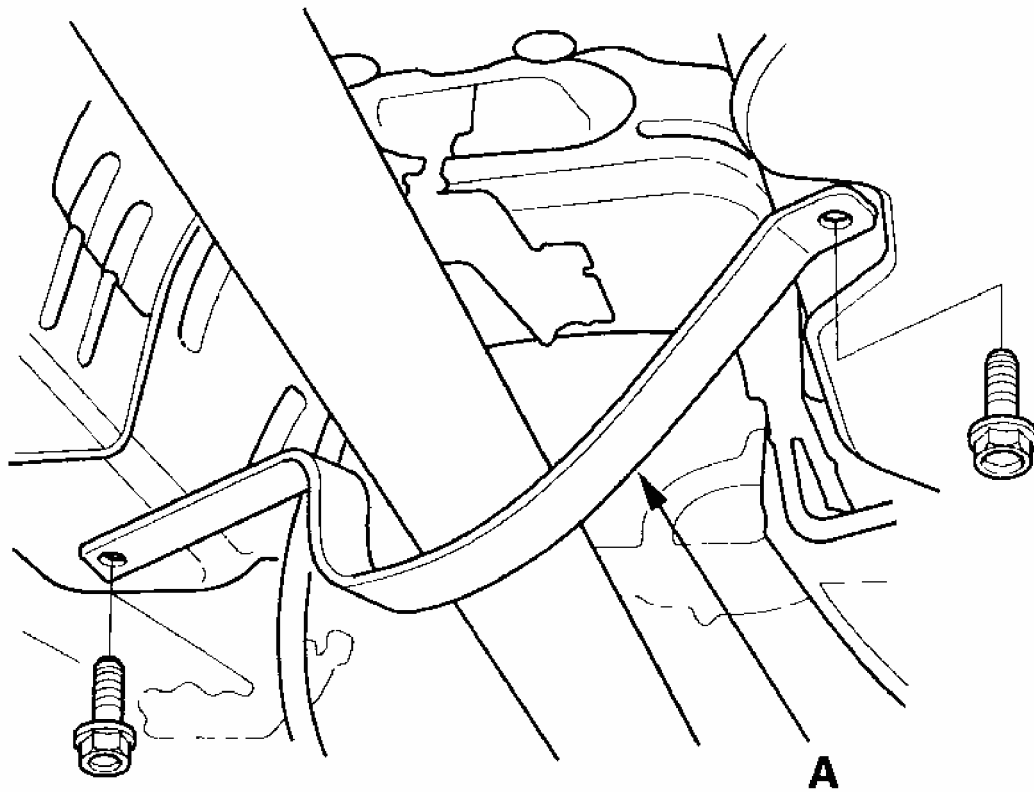
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Fig. 102: Measuring Propeller Shaft Runout (2 Of 2)
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

PROPELLER SHAFT REMOVAL

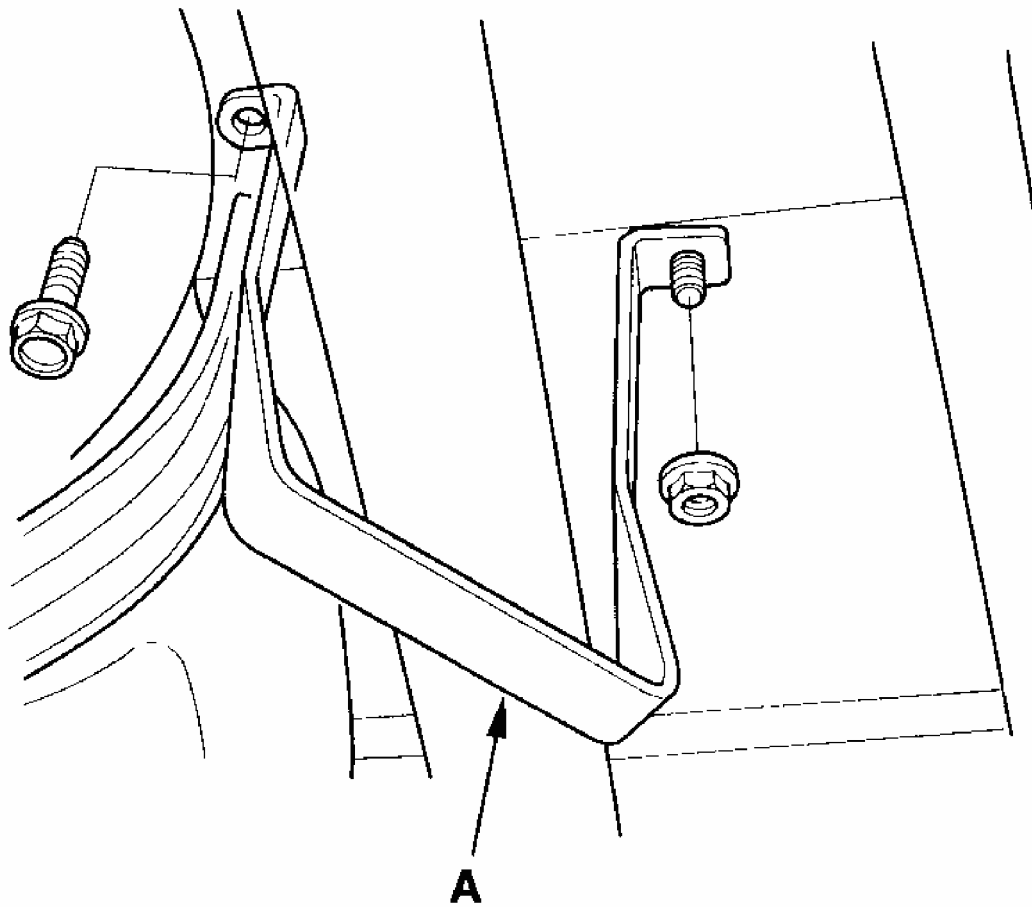
1. Raise the vehicle off the ground, and support it with safety stands in the proper locations (see **SAFETY STANDS**).
2. Remove the No. 1 propeller shaft protector (A).



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Fig. 103: Removing No. 1 Propeller Shaft Protector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

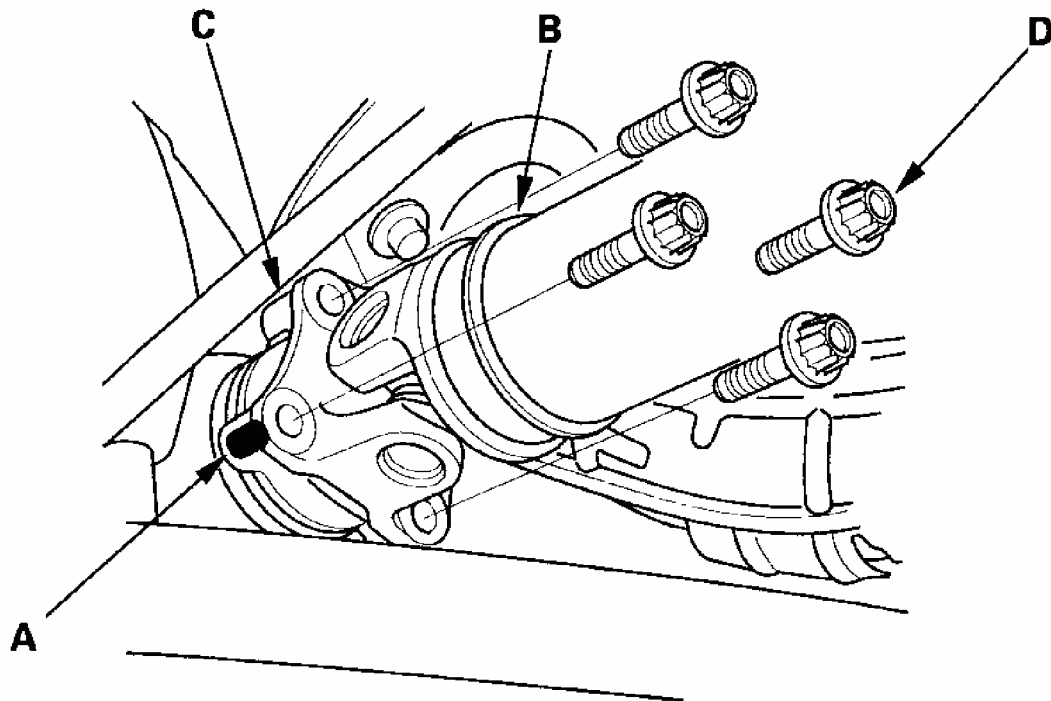
3. Remove the No. 2 propeller shaft protector (A).



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Fig. 104: Removing No. 2 Propeller Shaft Protector
Courtesy of AMERICAN HONDA MOTOR CO., INC.

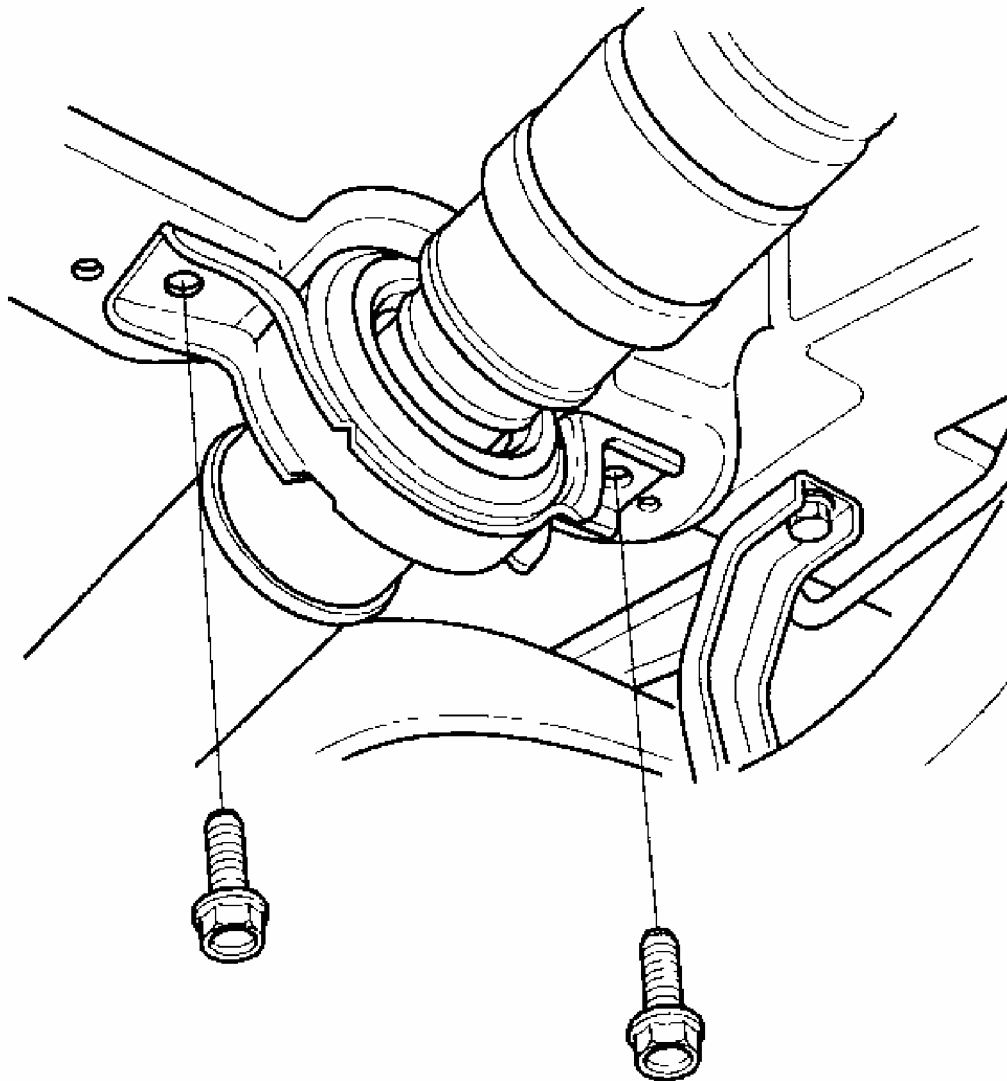
4. Make a reference mark (A) across the propeller shaft (B) and transfer companion flanges (C).



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Fig. 105: Removing Propeller Shaft Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

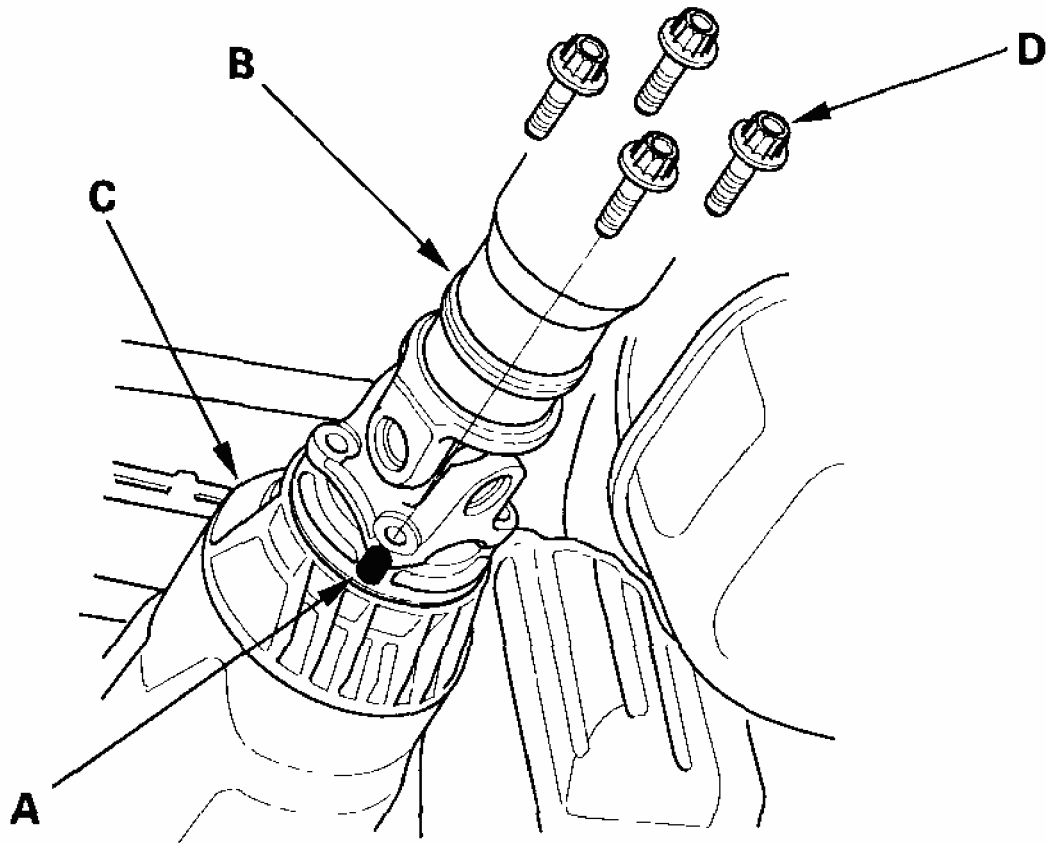
5. Remove and discard the propeller shaft mounting bolts (D), then separate the propeller shaft from the transfer assembly.
6. Remove the center support bearing mounting bolts.



G03678891

Fig. 106: Removing Center Support Bearing Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Make a reference mark (A) across the propeller shaft (B) and rear differential companion flange (C).



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Fig. 107: Removing Propeller Shaft Mounting Bolts
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove and discard the propeller shaft mounting bolts (D). Separate the propeller shaft from the rear differential, then remove the propeller shaft.

PROPELLER SHAFT INSTALLATION

1. Install the propeller shaft (A) onto the rear differential (B) by aligning the reference mark (C), then install new propeller shaft mounting bolts.

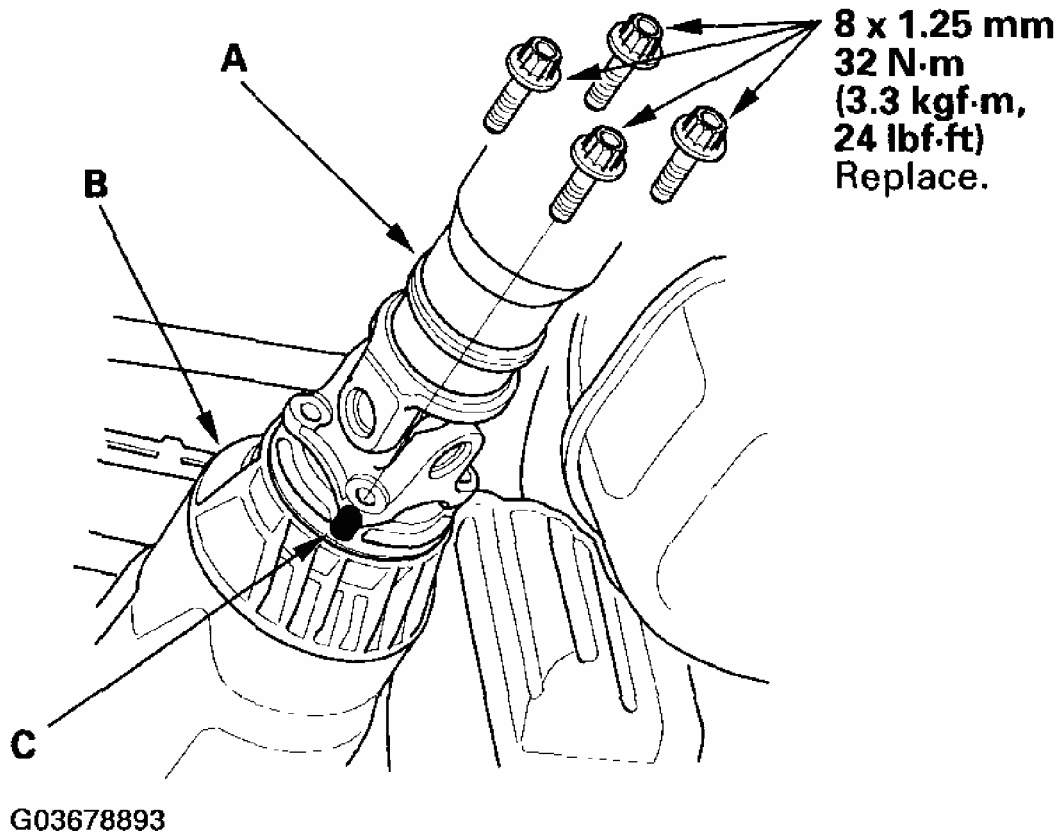
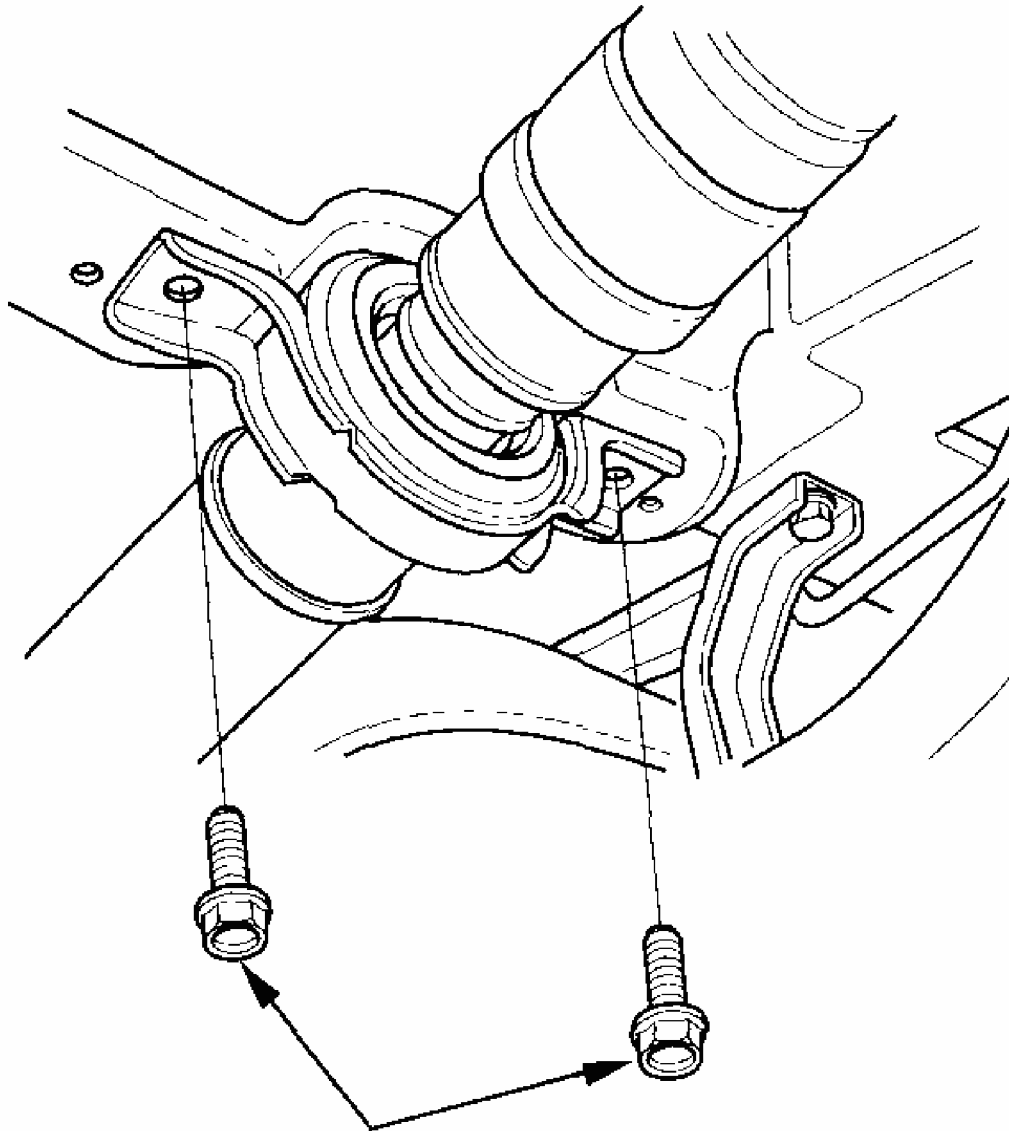


Fig. 108: Installing New Propeller Shaft Mounting Bolts And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Install the center support bearing mounting bolts. Make sure you use new bolts.



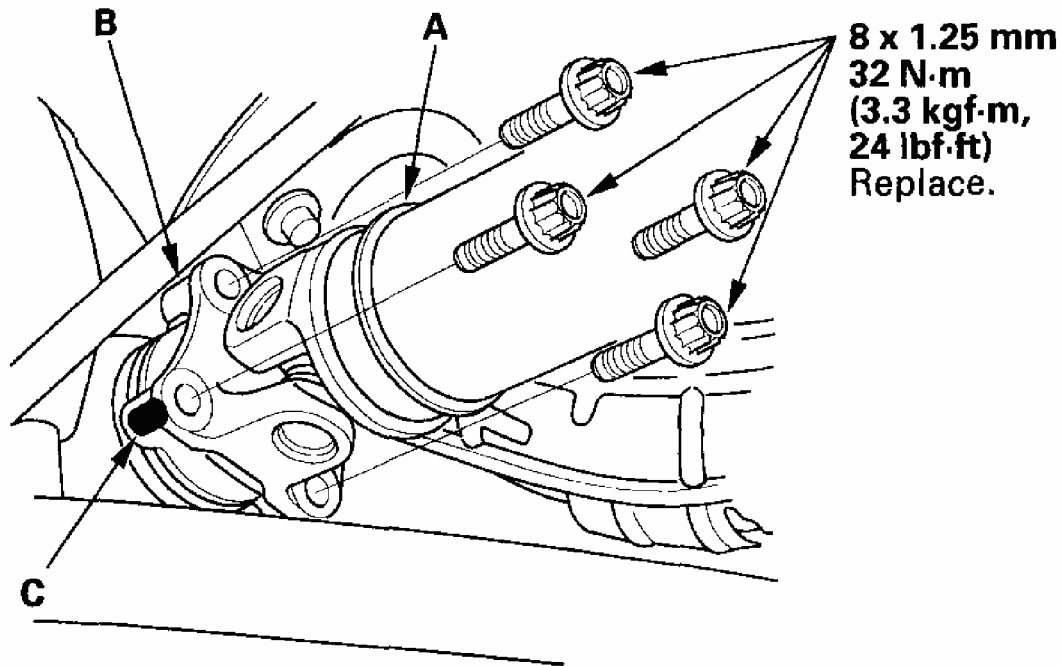
**10 x 1.25 mm
39 N·m (4.0 kgf·m, 29 lbf·ft)**

G03678894

Fig. 109: Installing Center Support Bearing Mounting Bolts And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Install the propeller shaft (A) onto the transfer assembly (B) by aligning the reference mark (C), then install new propeller shaft mounting bolts.

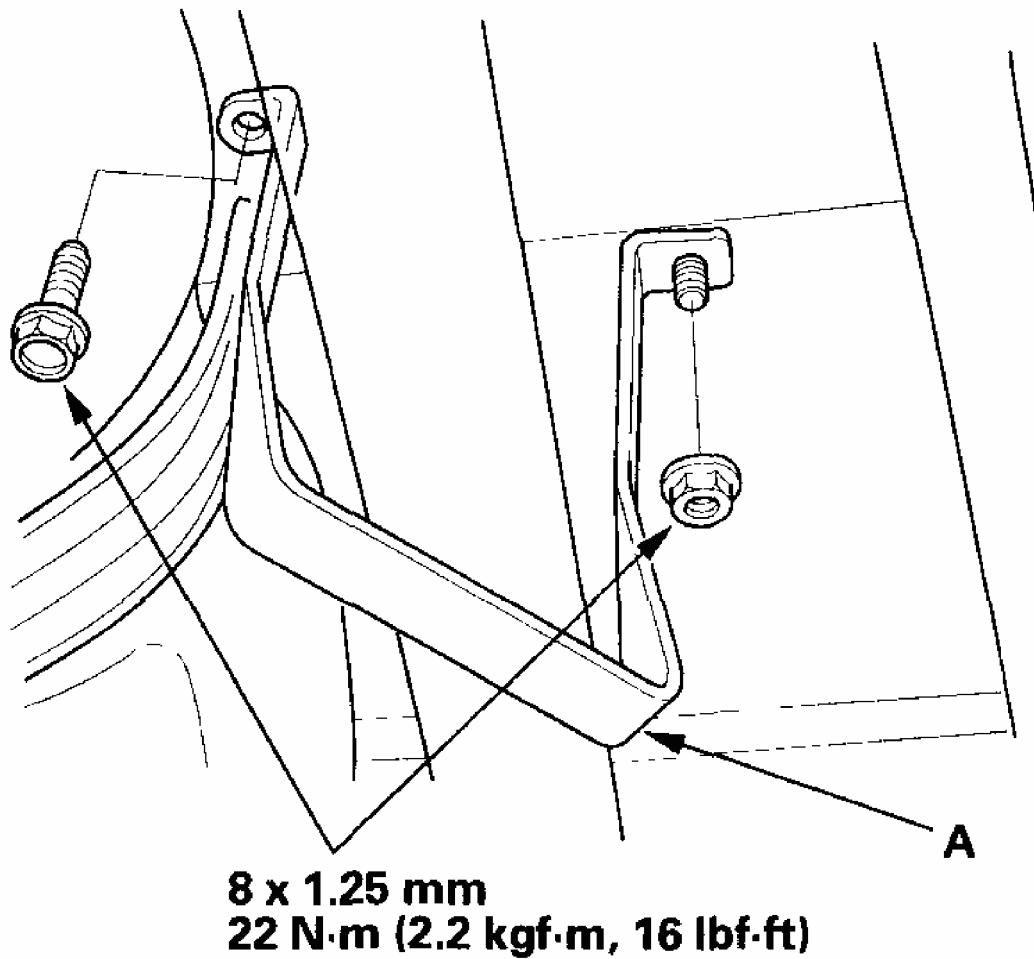


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Fig. 110: Installing New Propeller Shaft Mounting Bolts And Torque Specifications

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the No. 2 propeller shaft protector (A).



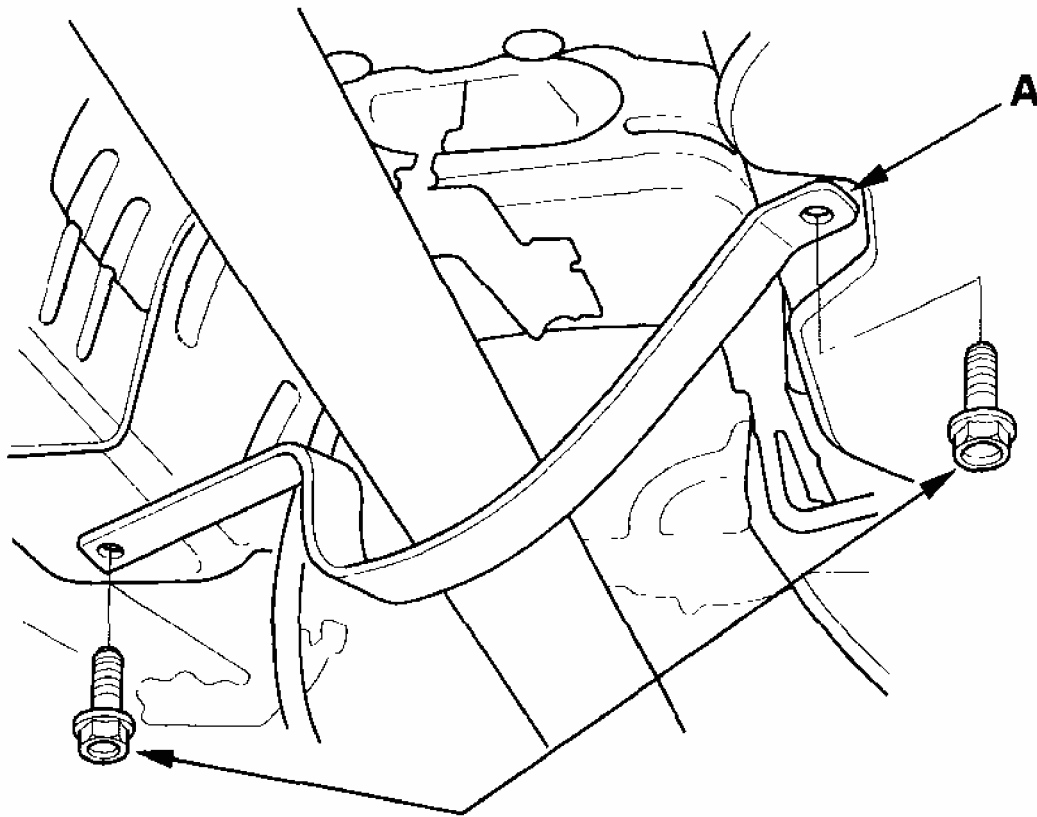
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Fig. 111: Installing No. 2 Propeller Shaft Protector And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the No. 1 propeller shaft protector (A).

2004 Honda Element DX

2003-06 DRIVELINE/AXLE Driveline/Axle - Element



8 x 1.25 mm
22 N·m (2.2 kgf·m, 16 lbf·ft)

G03678897

Fig. 112: Installing No. 1 Propeller Shaft Protector And Torque Specifications
Courtesy of AMERICAN HONDA MOTOR CO., INC.