

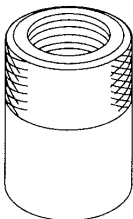
2006 Honda Insight			
2000-06 DRIVELINE/AXLE Driveline/Axle - Insight			

2000-06 DRIVELINE/AXLE

Driveline/Axle - Insight

SPECIAL TOOLS

Ref. No.	Tool Number	Description	Qty
①	07XAC-001010A	Threaded Adapter, 22 x 1.5 mm	1

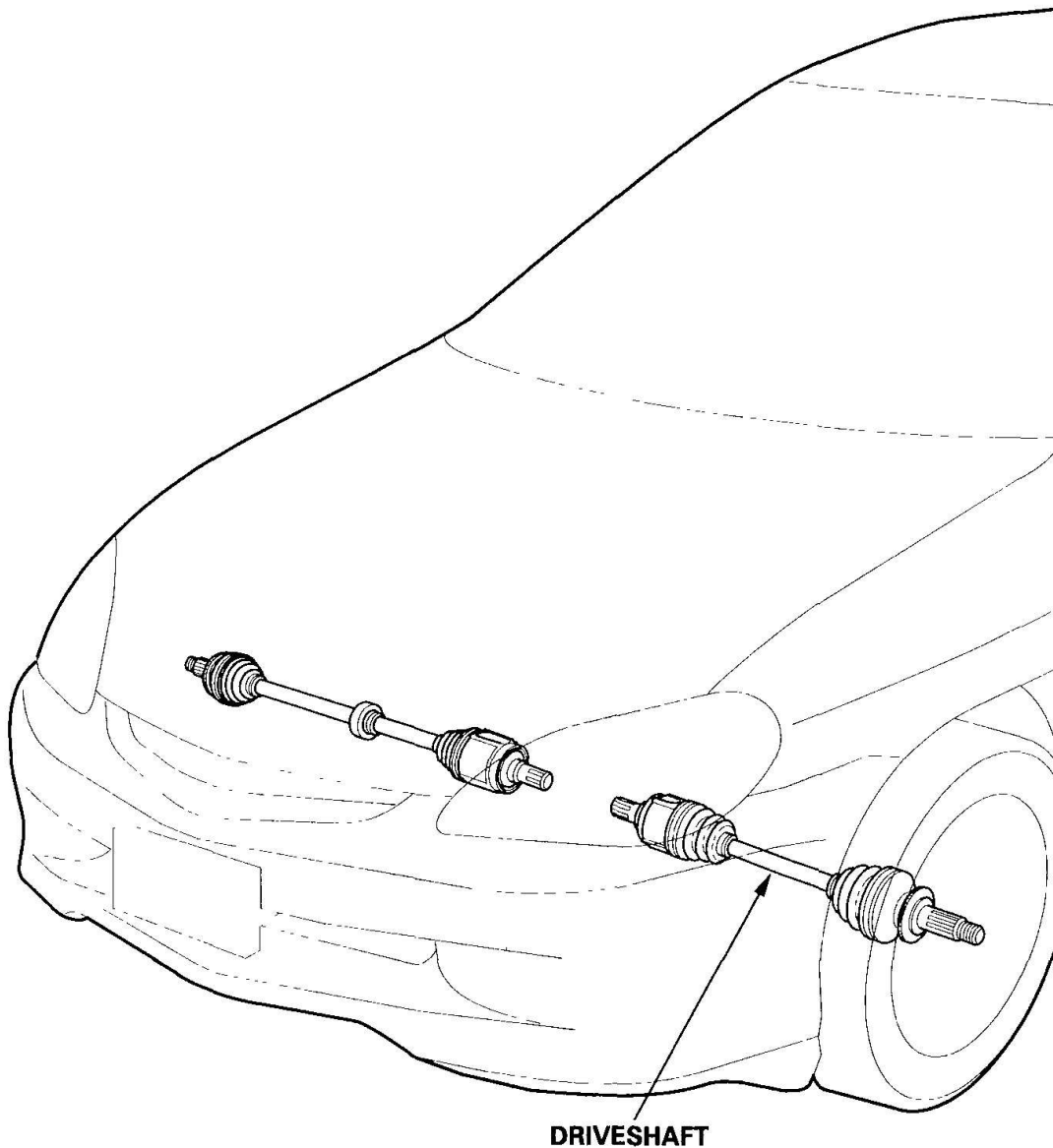


①

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

COMPONENT LOCATION INDEX

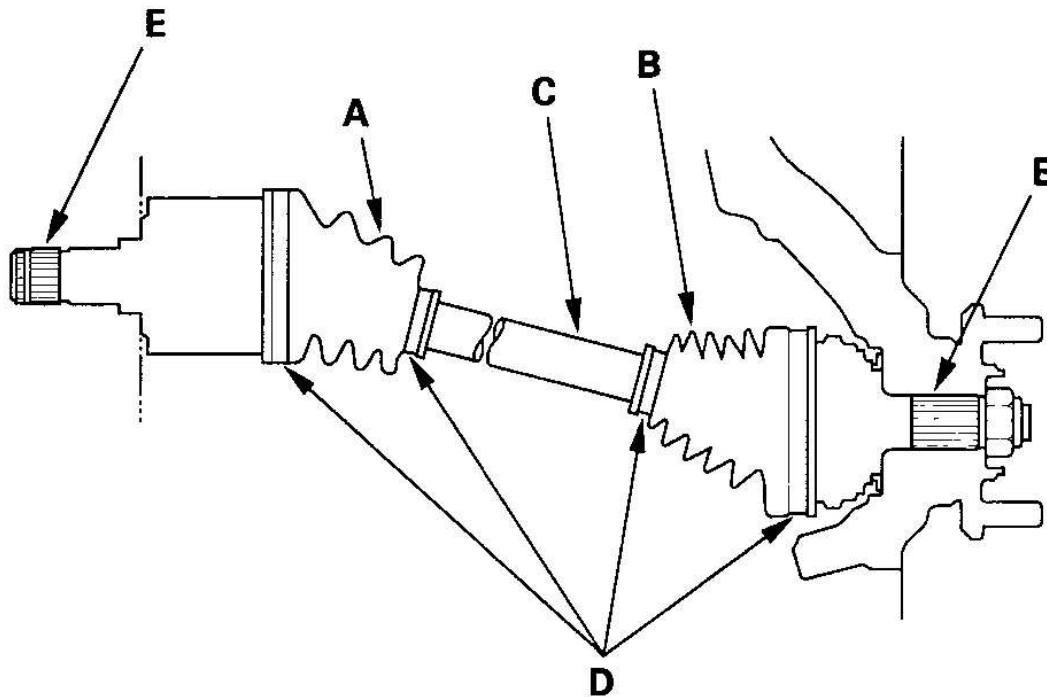


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**Fig. 2: Locating Driveline/Axle**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

## **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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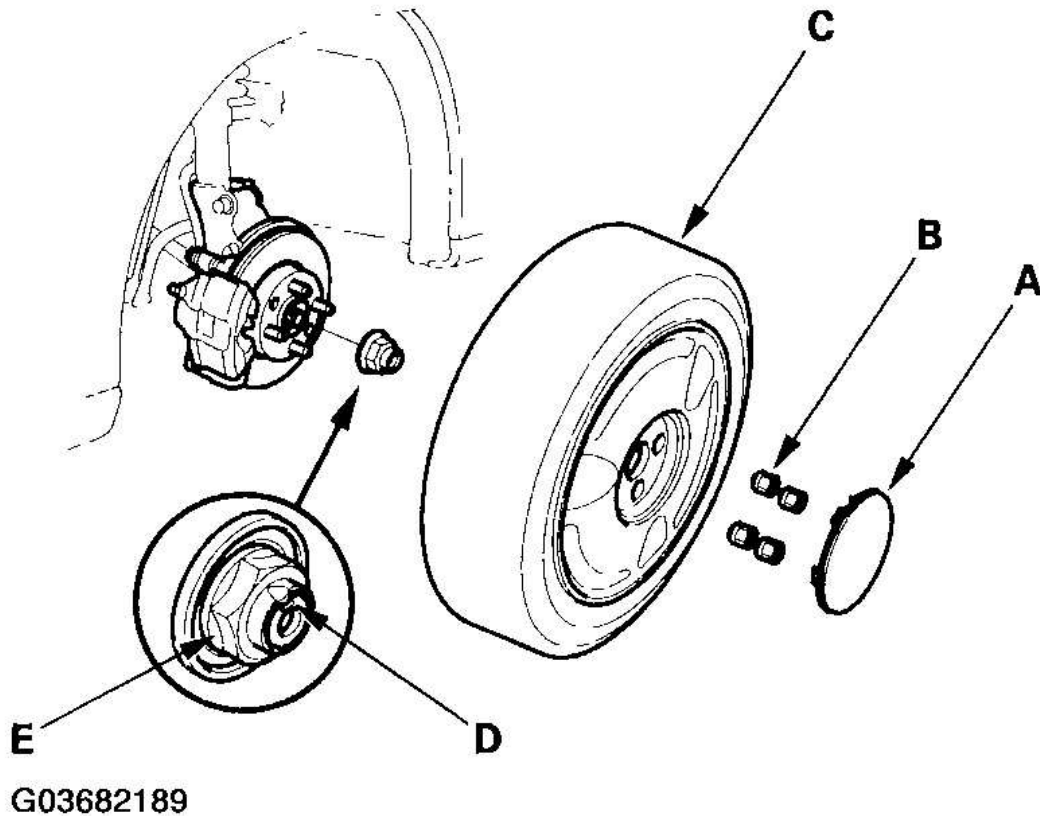
**Fig. 3: Checking Inboard Boot And Outboard Boot On Driveshaft For Damage**

**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.

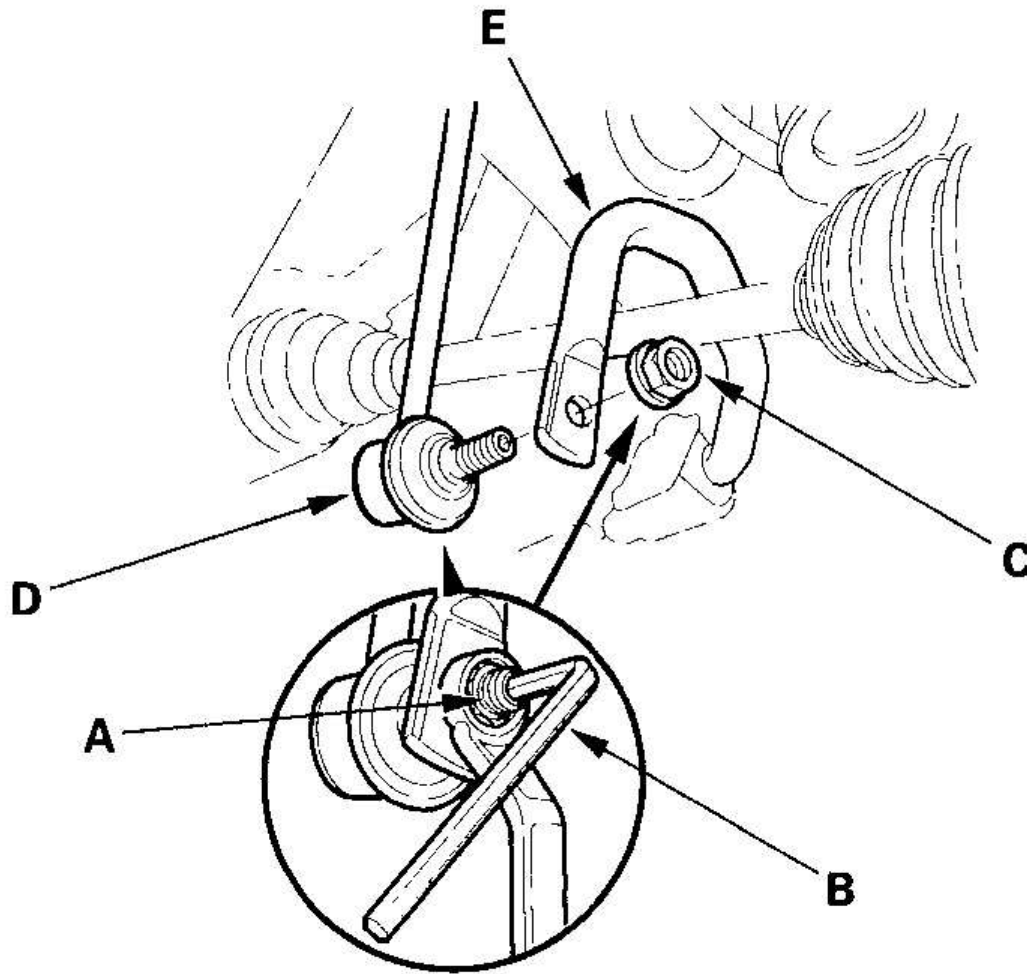
## **DRIVESHAFT REMOVAL**

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



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

3. Lift up the locking tab (D) on the spindle nut (E), then remove the nut.
4. Drain the transmission fluid. Reinstall the drain plug using a new washer:
  - Manual transmission (see **GEARSHIFT MECHANISM REPLACEMENT** )
  - CVT (see **CVT FLUID 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) and front stabilizer (E).

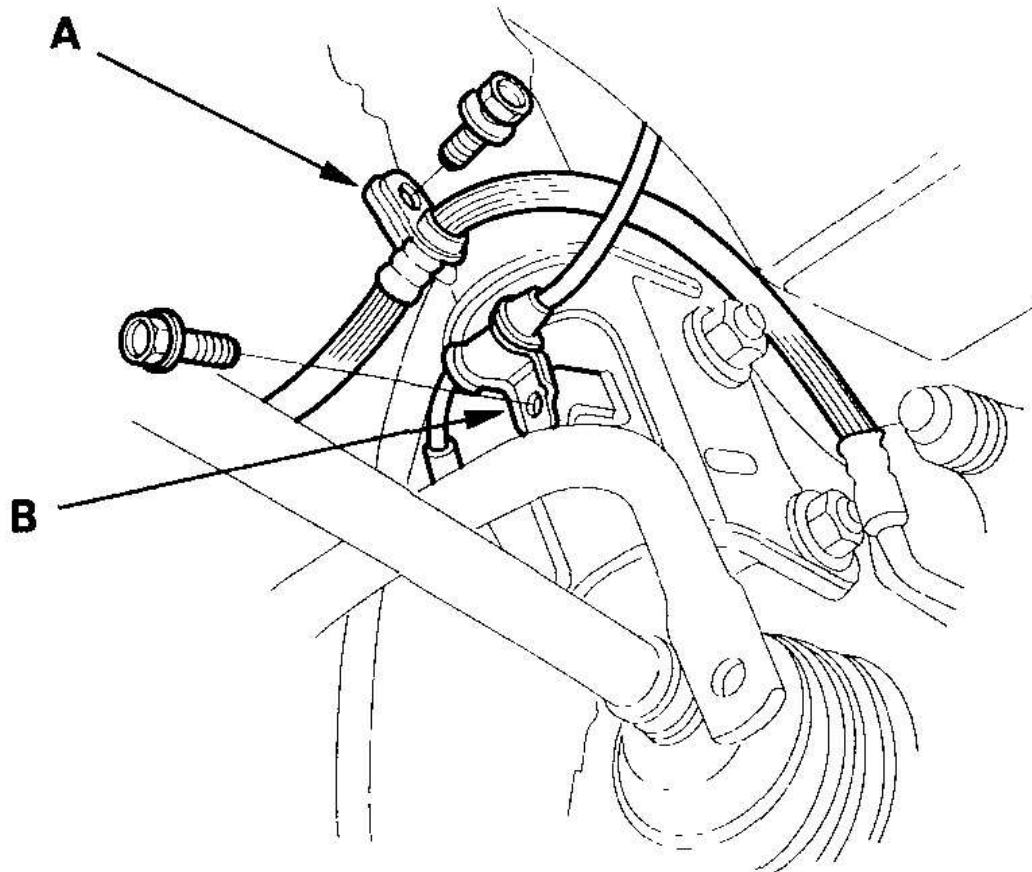


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**Fig. 5: Holding Stabilizer Ball Joint Pin With A Hex Wrench And Remove Flange Nut**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

6. Remove the brake hose clamp (A) and ABS wheel sensor harness clamp (B).



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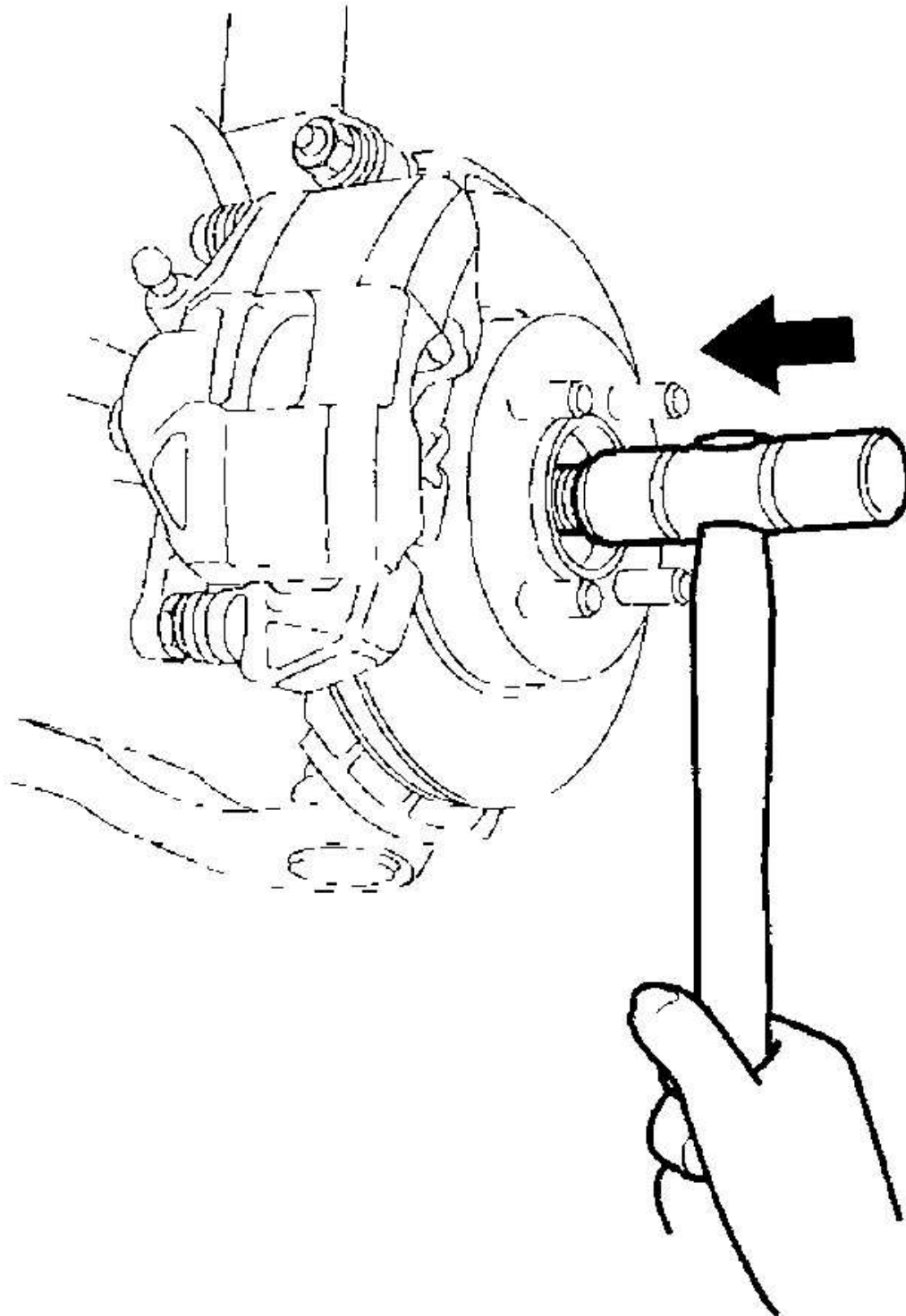
**Fig. 6: Removing Brake Hose Clamp And ABS Wheel Sensor Harness Clamp**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

7. Turn the front of the knuckle outward. Tap the driveshaft inward with a plastic hammer to allow space to install the ball joint thread protector and remover on the lower arm ball joint.

## 2006 Honda Insight

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**Fig. 7: Removing Lower Arm Ball Joint**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

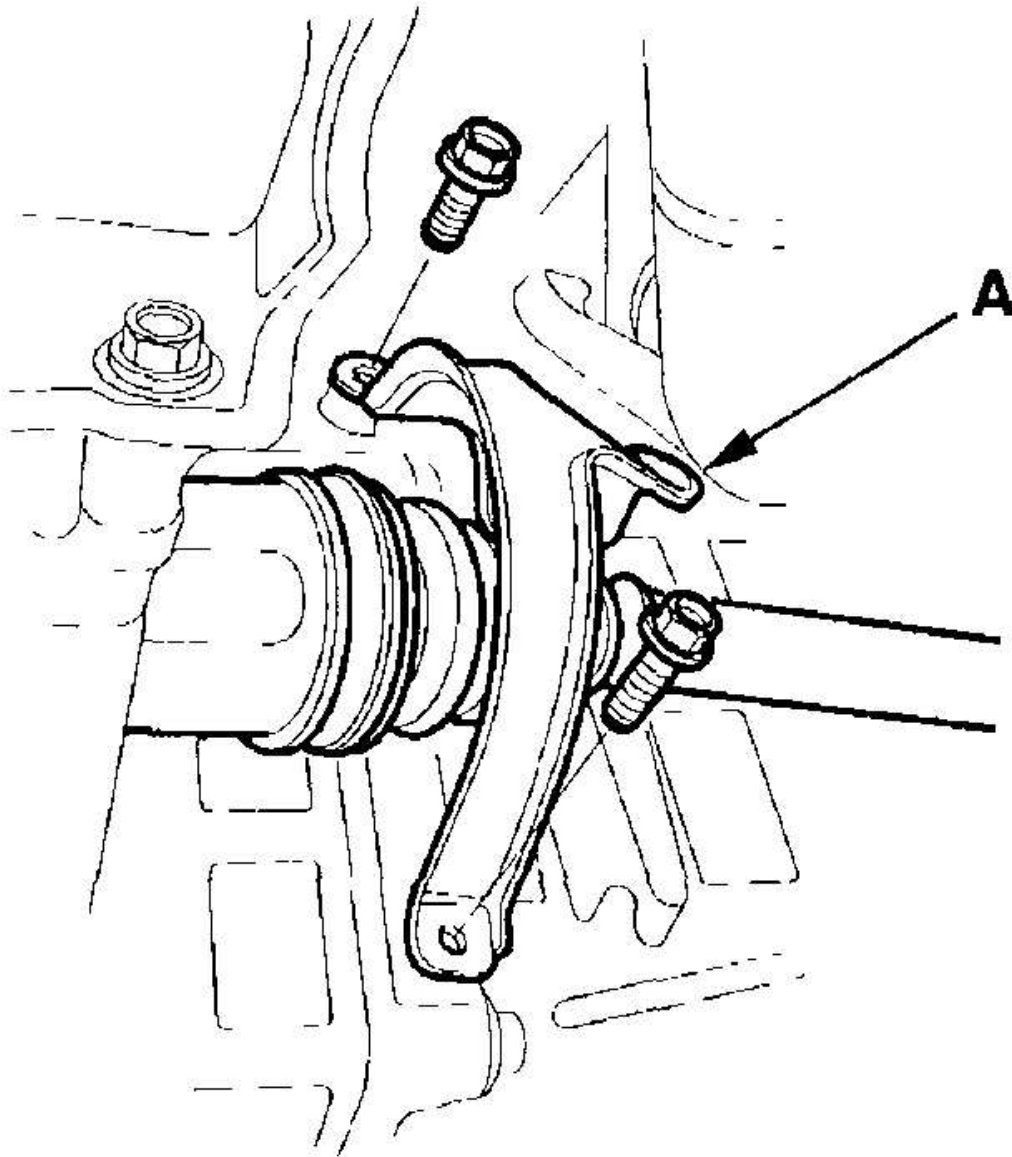
8. Remove the cotter pin from the lower arm ball joint castle nut, and remove the nut, then separate the ball joint from the knuckle with the ball joint thread protector and remover (see step 10 on **FRONT SUSPENSION** ).

**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.**

9. Remove the inboard boot heat shield (A).



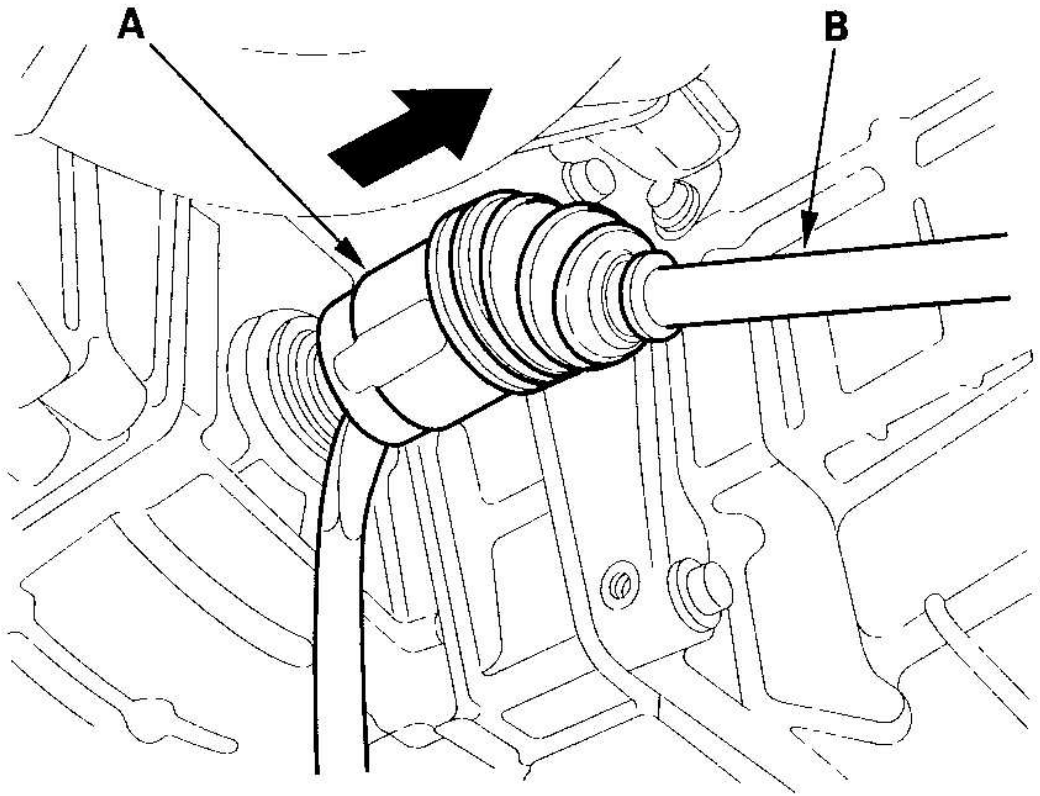


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**Fig. 8: Removing Inboard Boot Heat Shield**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

10. Pry the inboard joint (A) from the transmission housing with a prybar. Remove the driveshaft as an assembly. Do not pull on the driveshaft (B), because the

inboard joint may come apart. Pull the driveshaft straight out to avoid damaging the oil seal.



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**Fig. 9: Prying Inboard Joint From Transmission Housing With A Prybar**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

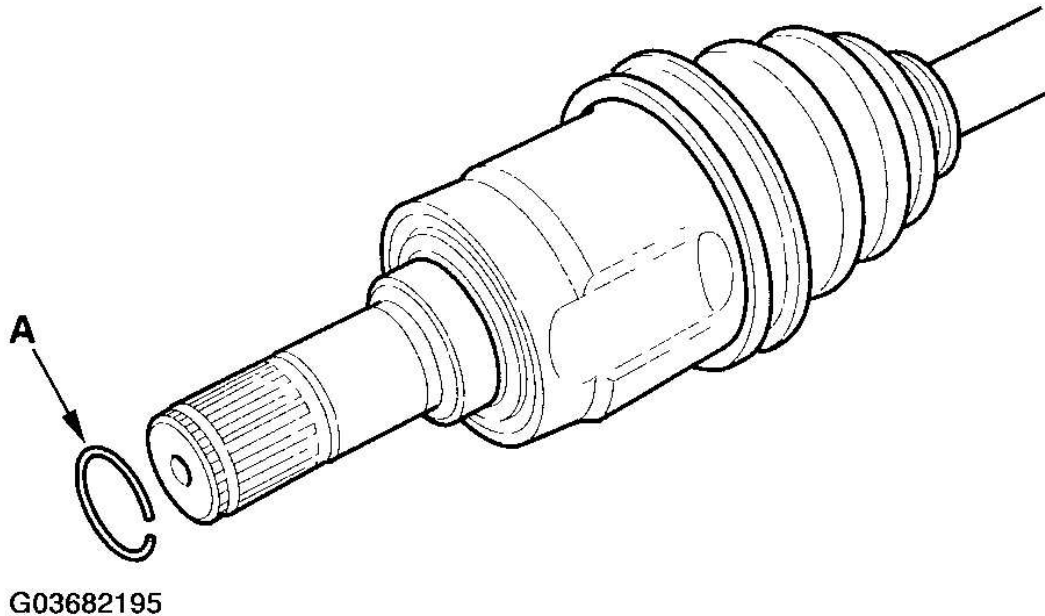
## **DRIVESHAFT DISASSEMBLY**

### **Special Tools Required**

- Threaded adapter, 22 x 1.5 mm 07XAC-001010A
- Slide hammer, 5/8"-18 UNF, commercially available
- Boot band pincers, Kent-Moore J-35910 or equivalent, commercially available

### **INBOARD JOINT SIDE**

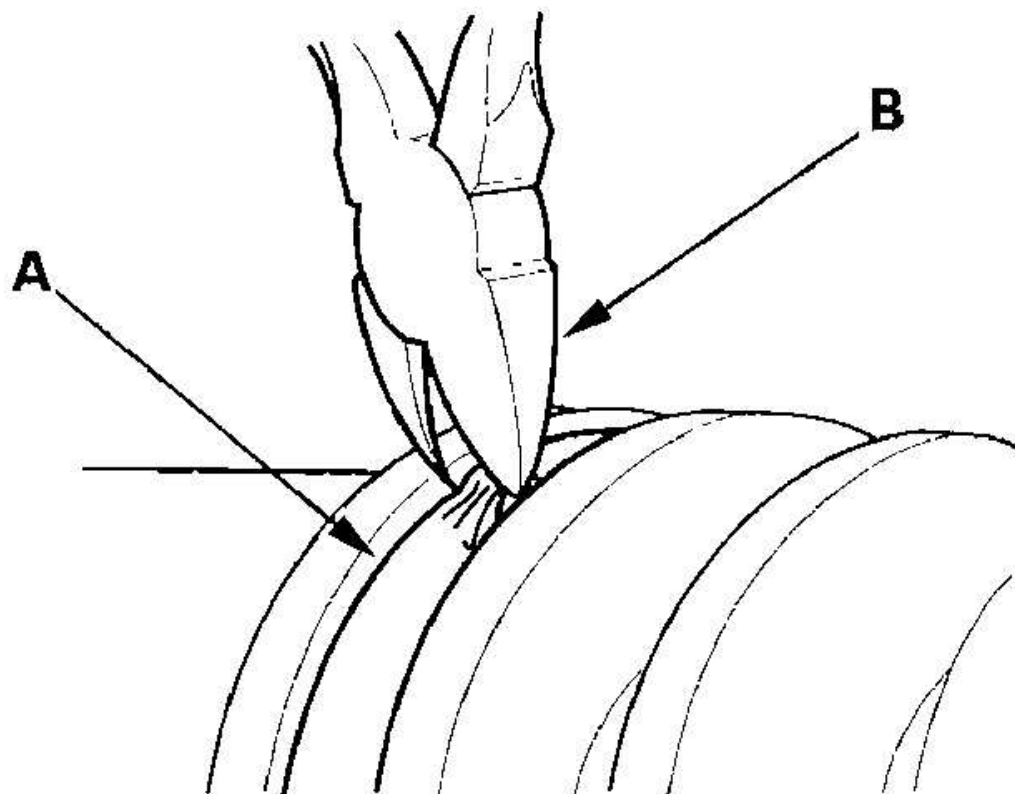
1. Remove the set ring (A) from the inboard joint.



**Fig. 10: 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 (for right driveshaft).
  - 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), then push it into the clip (E).
  - If the boot band is a low profile type (F), pinch the boot band using a commercially available boot band pincers (G).

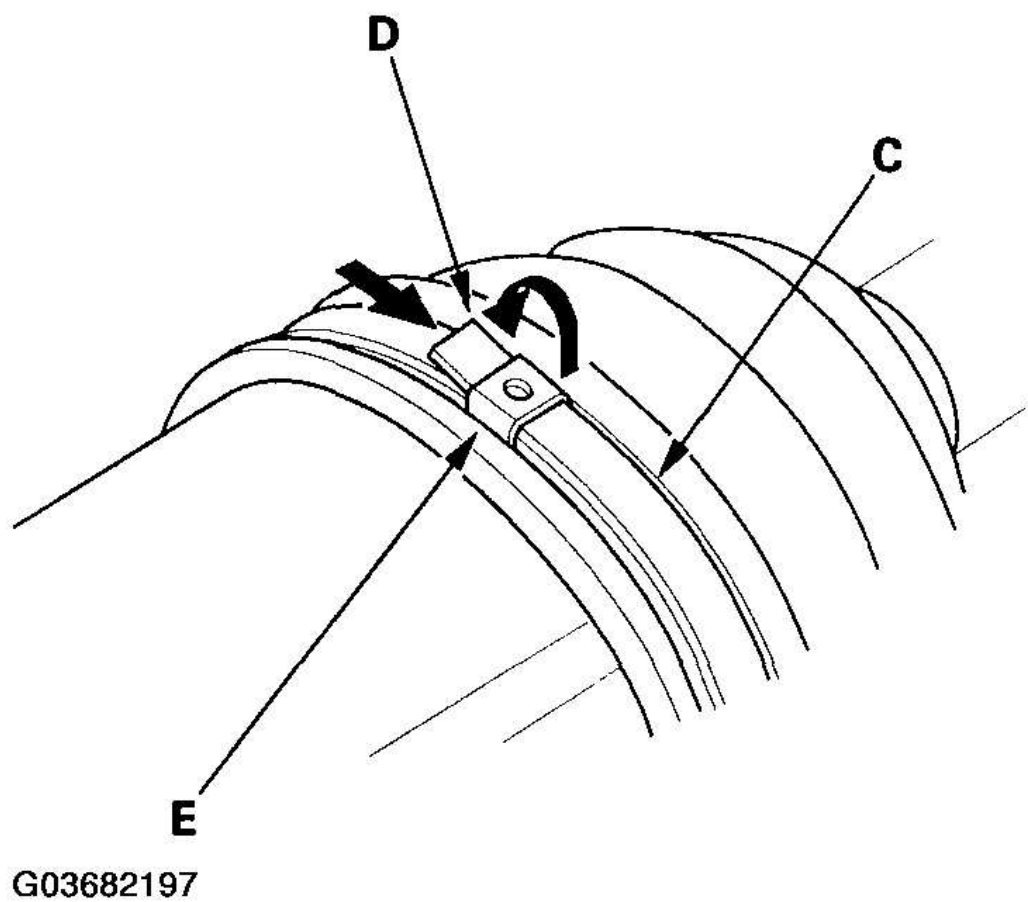
### **Welded type**



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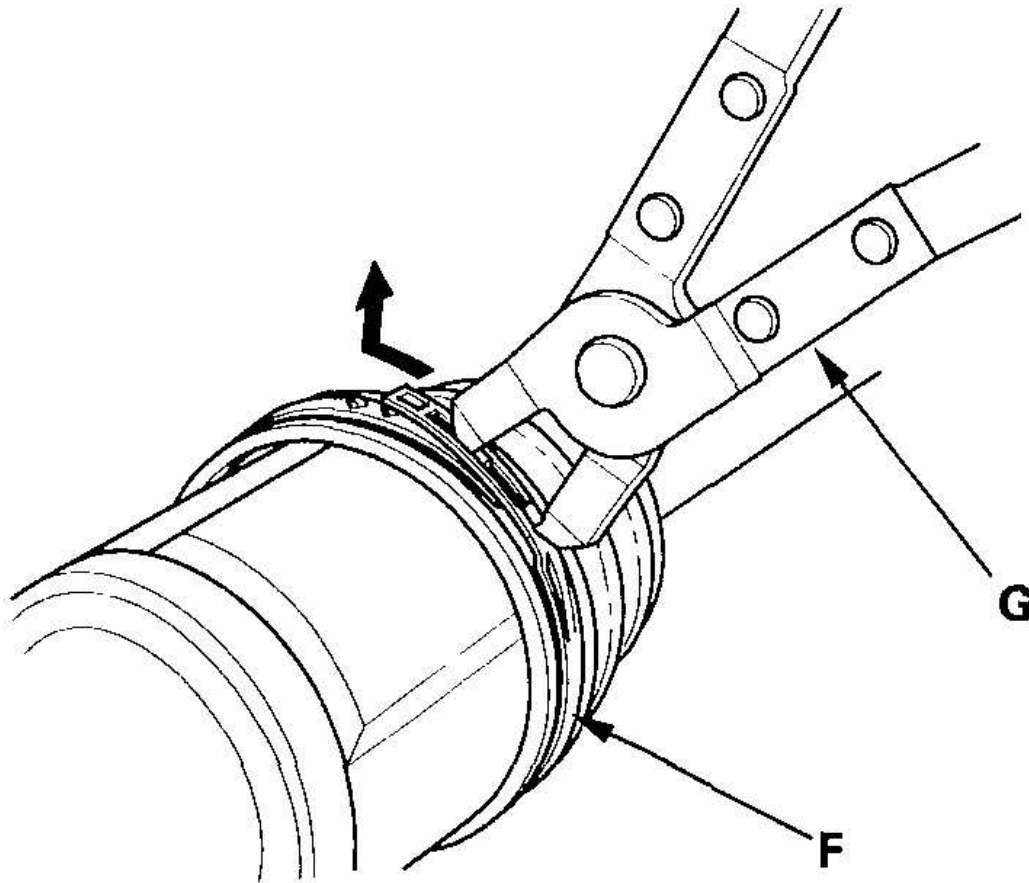
**Fig. 11: Identifying Welded Type Boot**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

**Double loop type**



**Fig. 12: Identifying Double Loop Type Boot**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

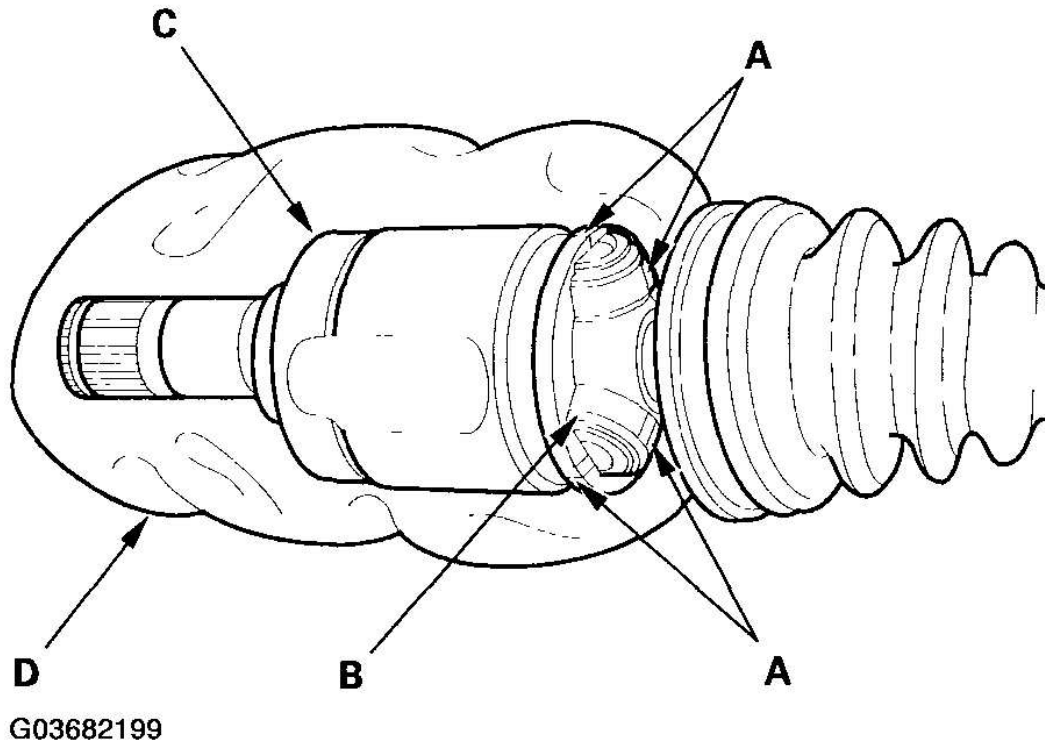
**Low profile type**



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**Fig. 13: Identifying Low Profile Type Boot**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

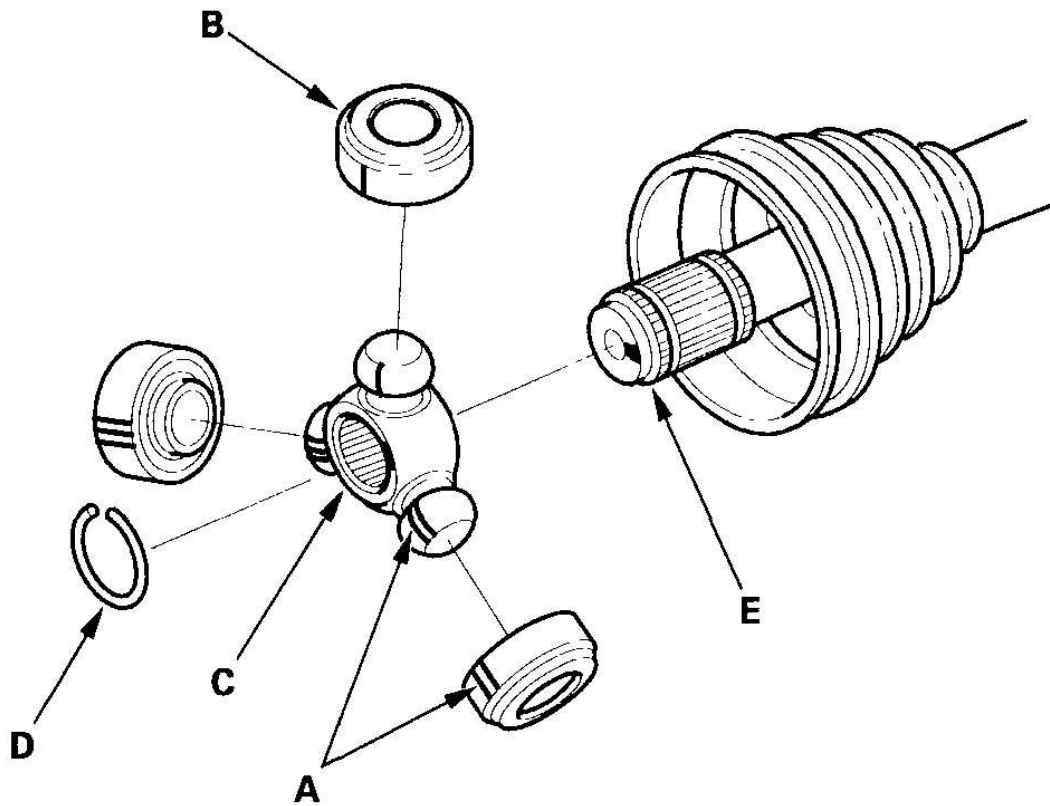
3. Make a mark (A) on each roller (B) and inboard joint (C) to identify the locations of rollers and grooves in the inboard joint. Then remove the inboard joint on the shop towel (D). Be careful not to drop the rollers when separating them from the inboard joint.



**Fig. 14: Identifying Rollers Separating From 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.





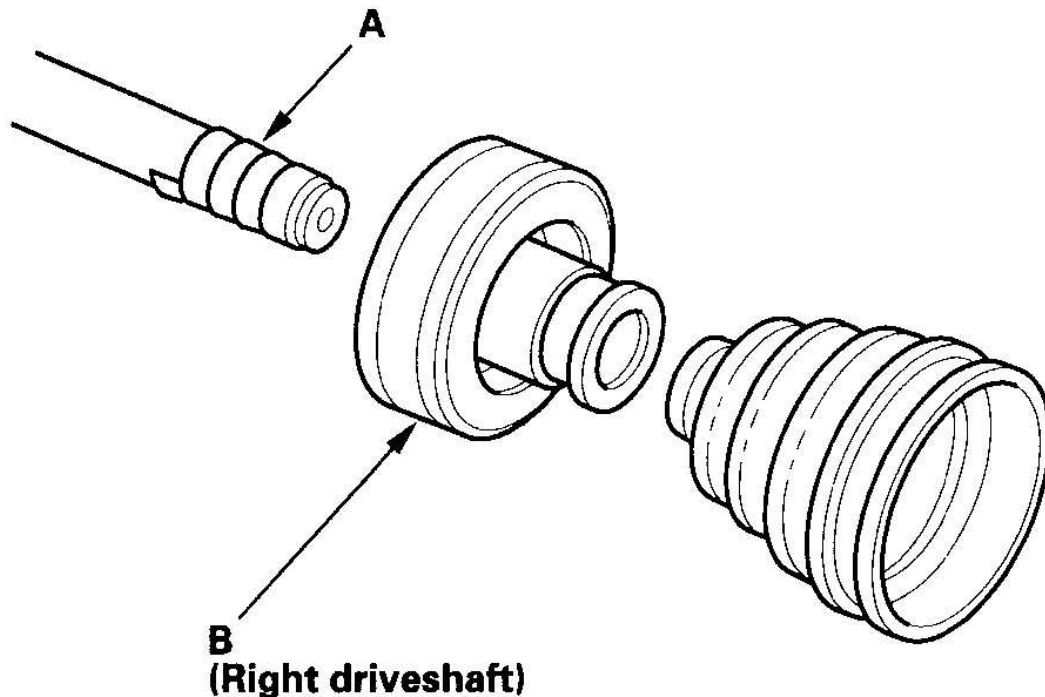
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**Fig. 15: Removing Rollers**

**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 and dynamic damper (B) (for right driveshaft).





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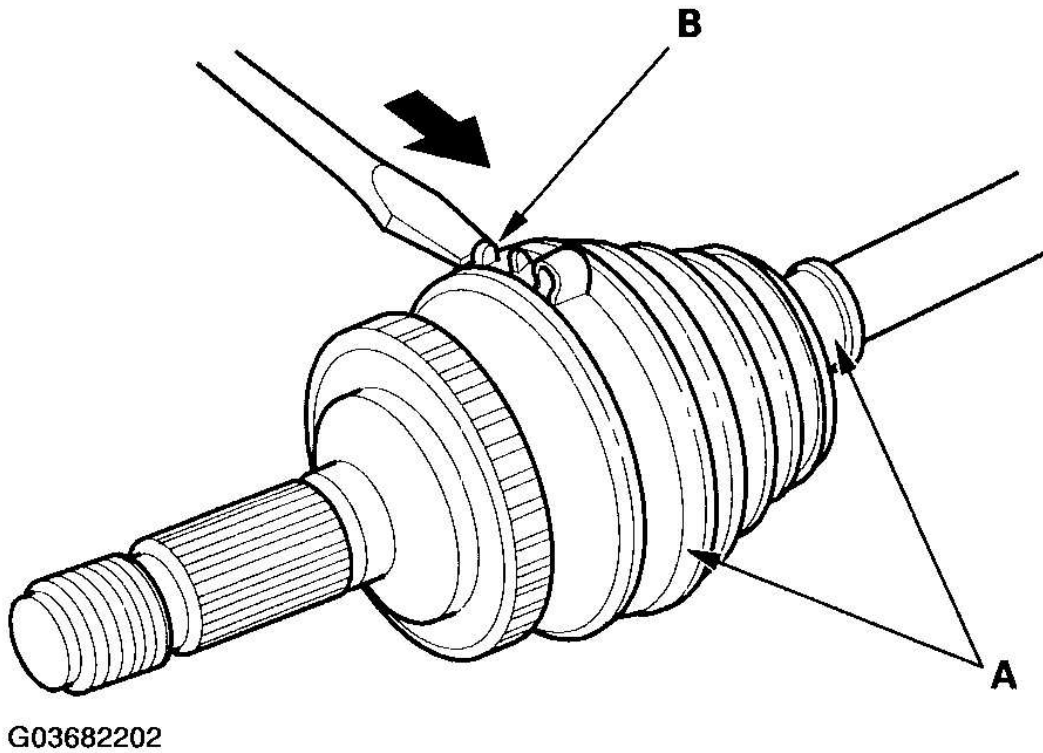
**Fig. 16: Wrapping Splines On Driveshaft With Vinyl Tape To Prevent Damage To Boot And Dynamic Damper**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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

#### **OUTBOARD JOINT SIDE**

1. Remove the boot bands (A). Be careful not to damage the boot and dynamic damper, lift up the three tabs (B) with a screwdriver.

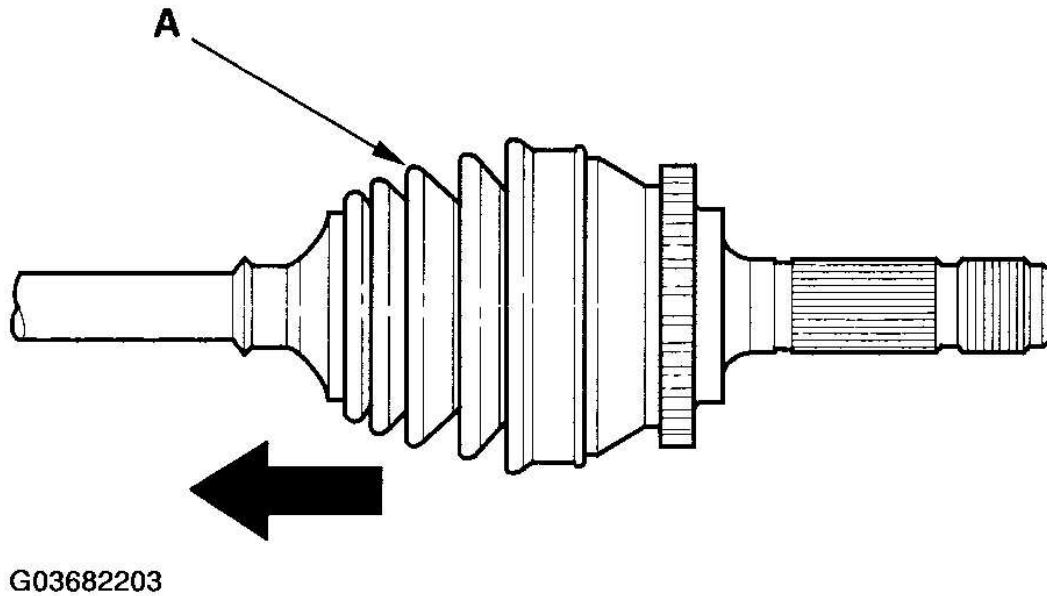
#### **Ear clamp type**



**Fig. 17: Removing Boot Bands**

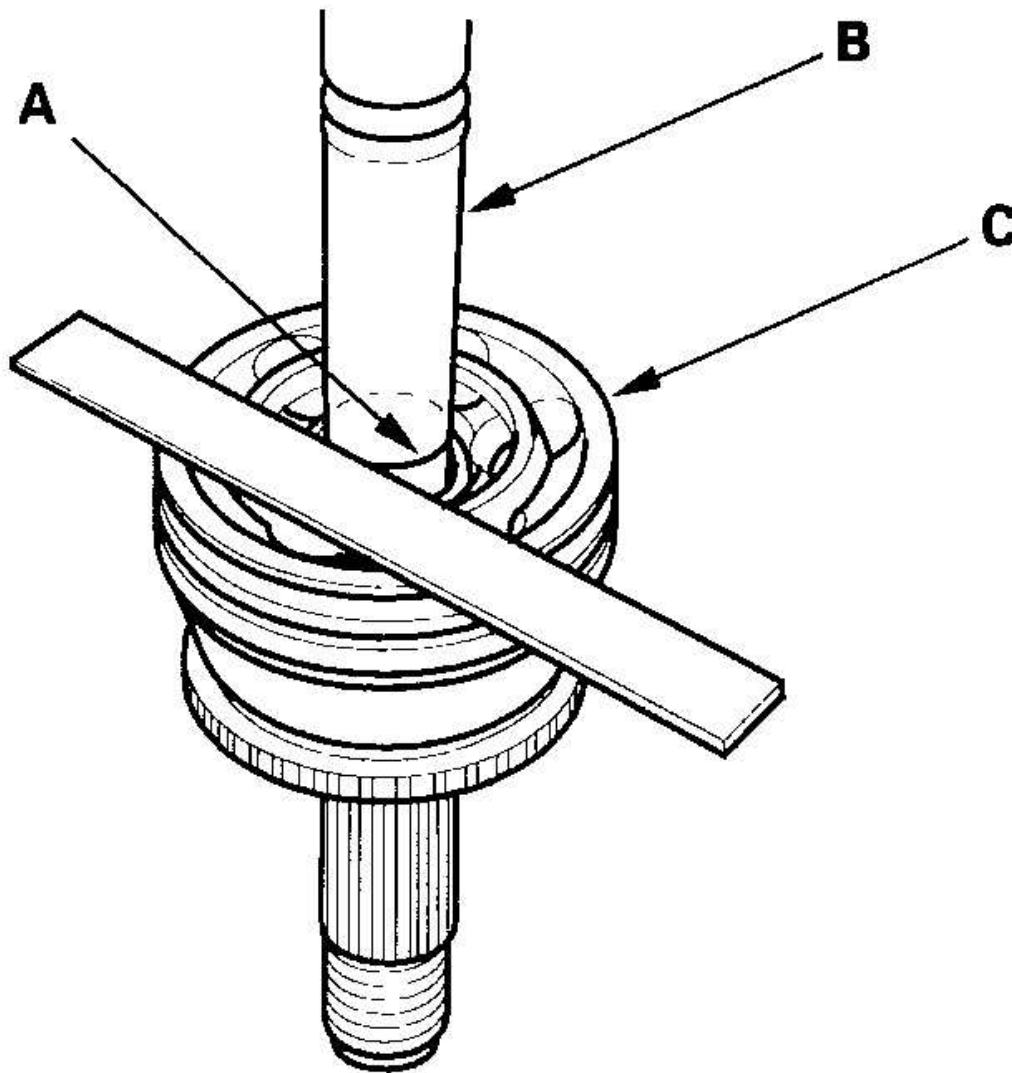
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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



**Fig. 18: Sliding Outboard Boot Partially To the 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).

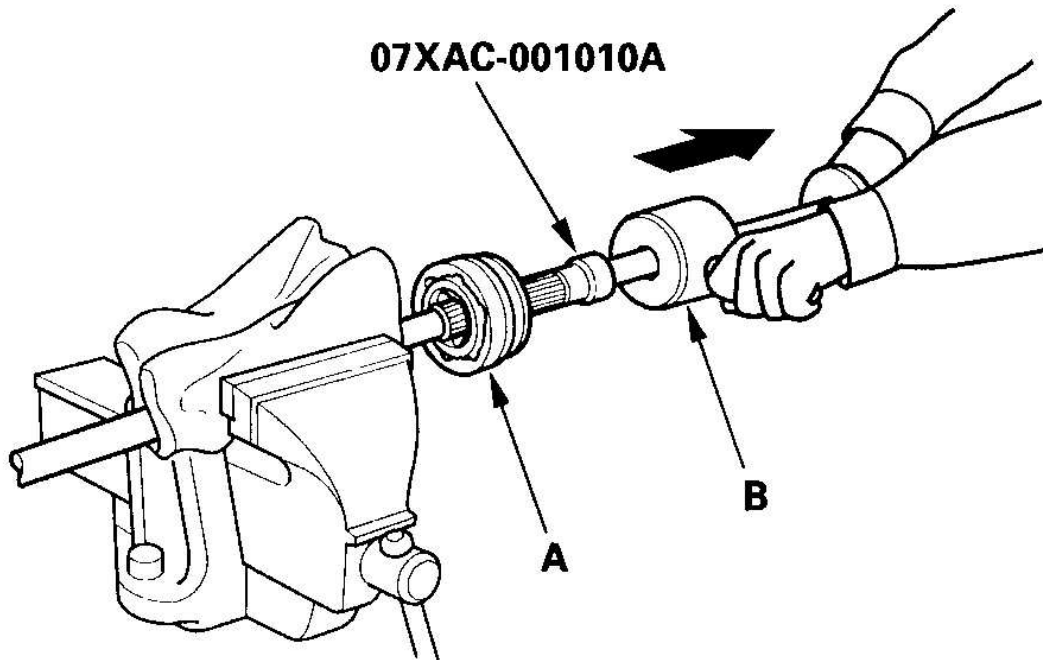


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**Fig. 19: Wiping Grease Off To Expose Driveshaft And Outboard Joint Inner Race**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

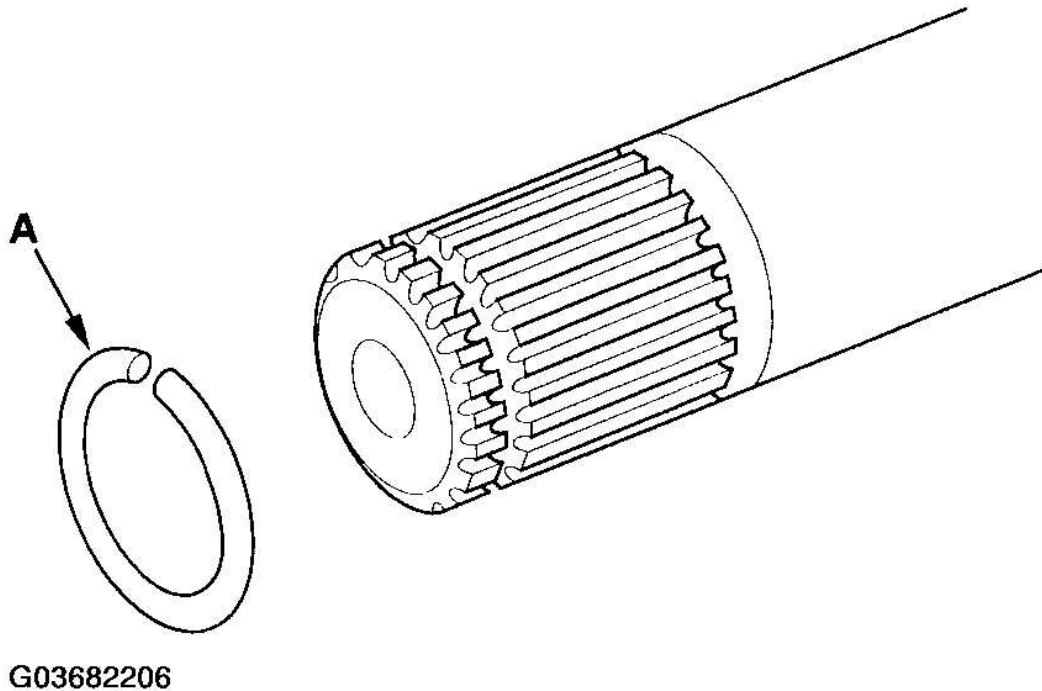
5. Carefully clamp the driveshaft in a vise.



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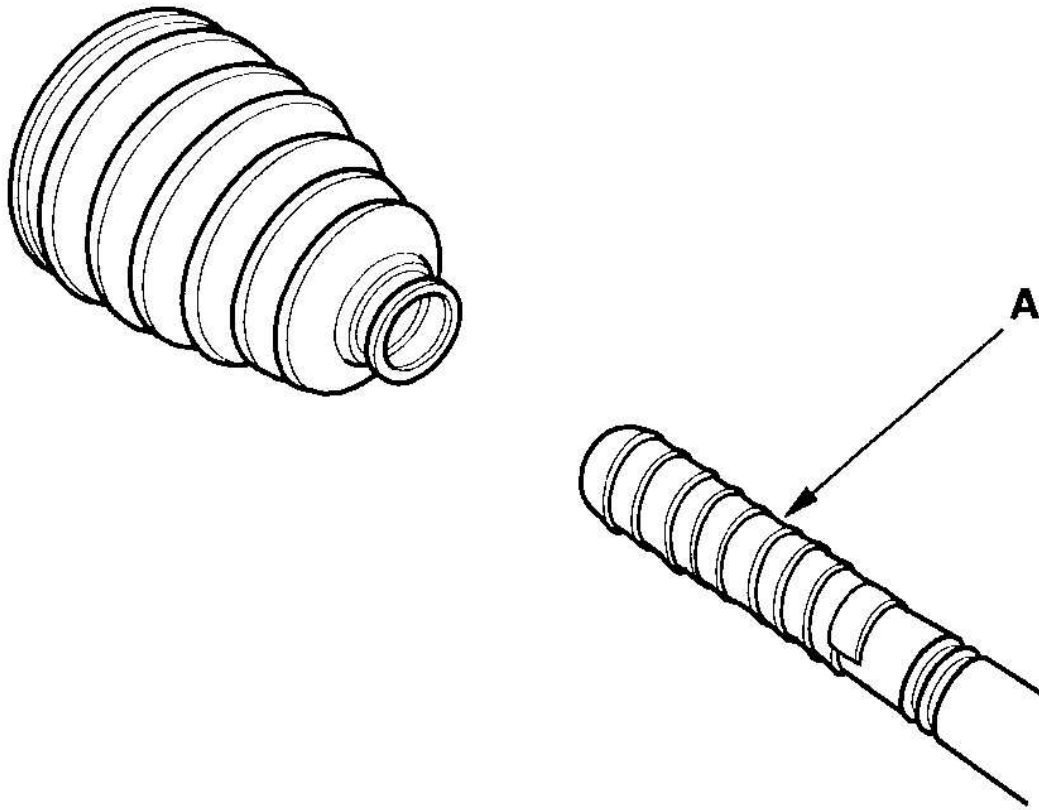
**Fig. 20: Identifying Clamp Driveshaft In A Vise**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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



**Fig. 21: 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. 22: Wrapping Splines On Driveshaft With Vinyl Tape To Prevent Damage To Boot**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

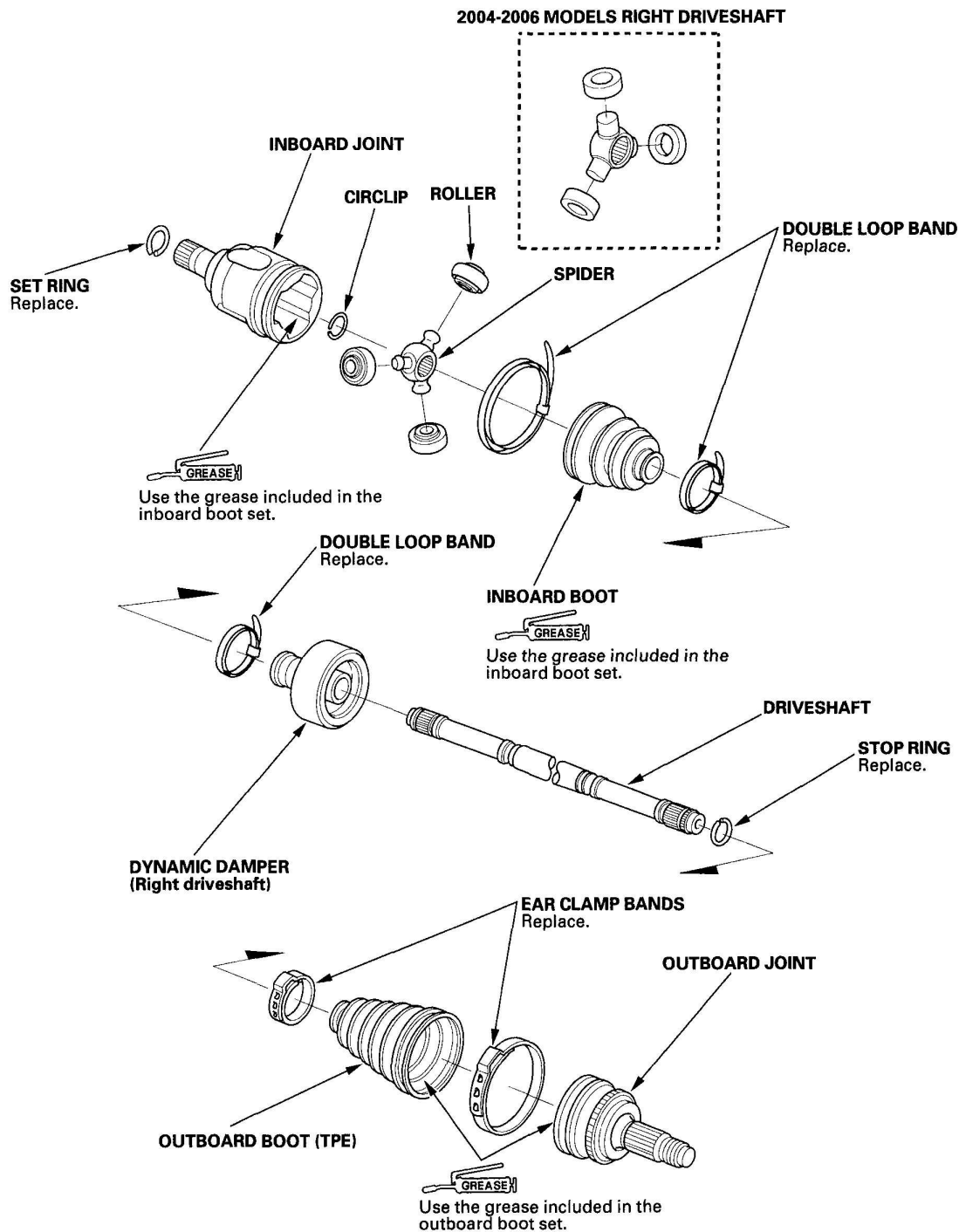
10. Remove the outboard boot. Be careful not to damage the boot.
11. Remove the vinyl tape.

## **DRIVESHAFT REASSEMBLY**

### **EXPLODED VIEW**

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2000-06 DRIVELINE/AXLE Driveline/Axle - Insight



G03682208

**Fig. 23: Exploded View Of Driveshaft**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

**Special Tools Required**

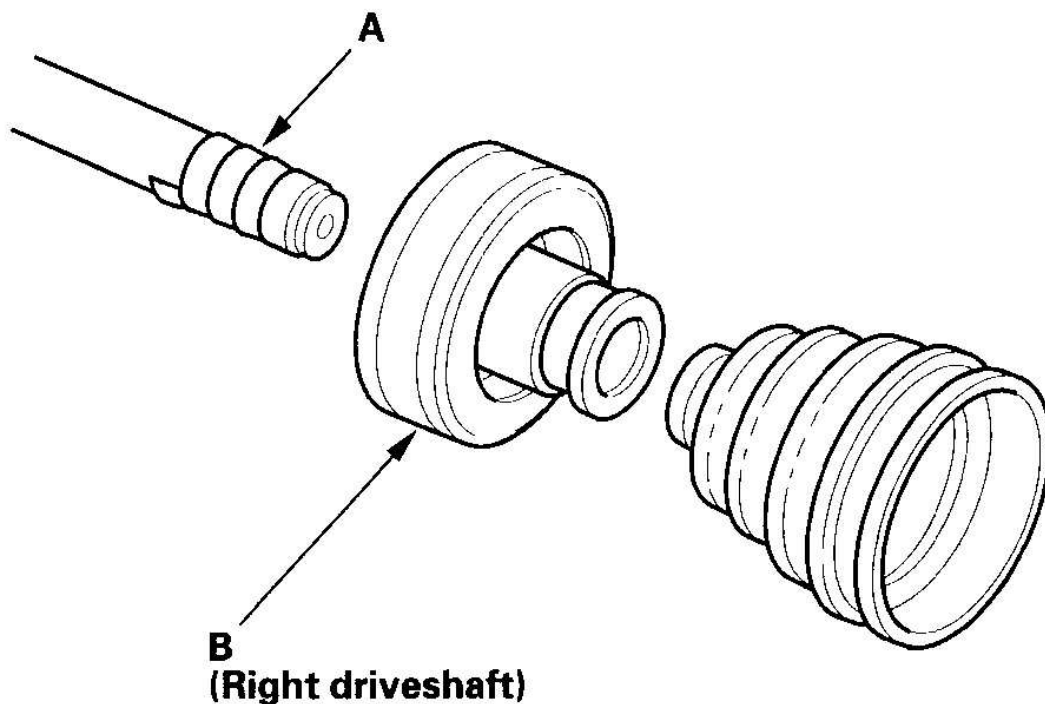


- Boot band tool, KD-3191 or equivalent, commercially available
- Boot band pincers, Kent-Moore J-35910 or equivalent, commercially available

**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 and dynamic damper (B) (for right driveshaft).



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**Fig. 24: Wrapping Splines With Vinyl Tape To Prevent Damage**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

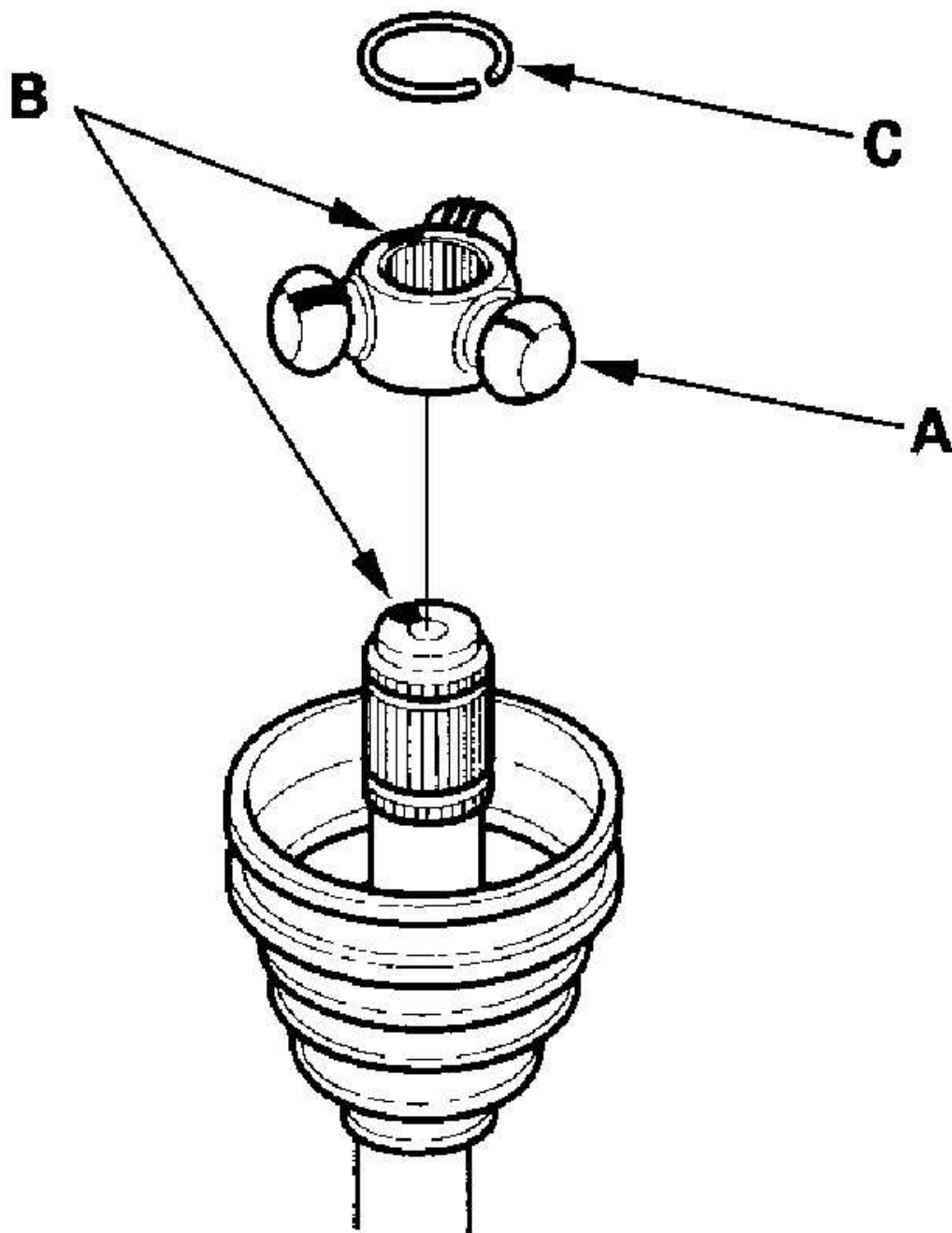
2. Install the dynamic damper and inboard boot to the driveshaft, then remove the vinyl tape. Be careful not to damage the inboard boot and dynamic damper.

<b>2006 Honda Insight</b>
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3. Install the spider (A) onto the driveshaft by aligning the marks (B) on the spider and the end of the driveshaft.

**2000-2003 models left and right driveshafts**

**2004-2006 models left driveshaft**



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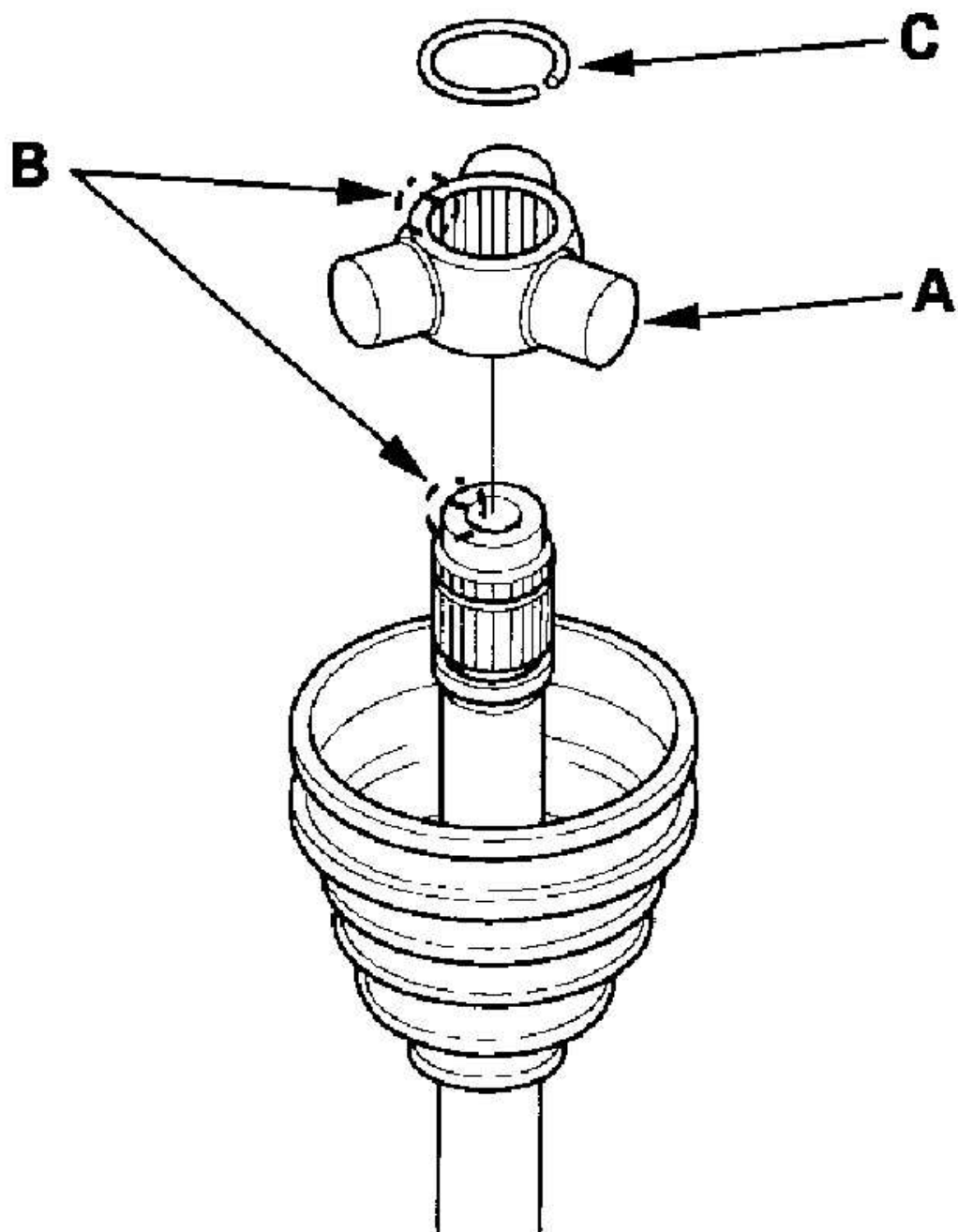
**Fig. 25: Installing Spider Onto Driveshaft Aligning Marks On Spider And**

<b>2006 Honda Insight</b>
2000-06 DRIVELINE/AXLE Driveline/Axle - Insight

**End Of Driveshaft**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

**2004-2006 models right driveshaft**



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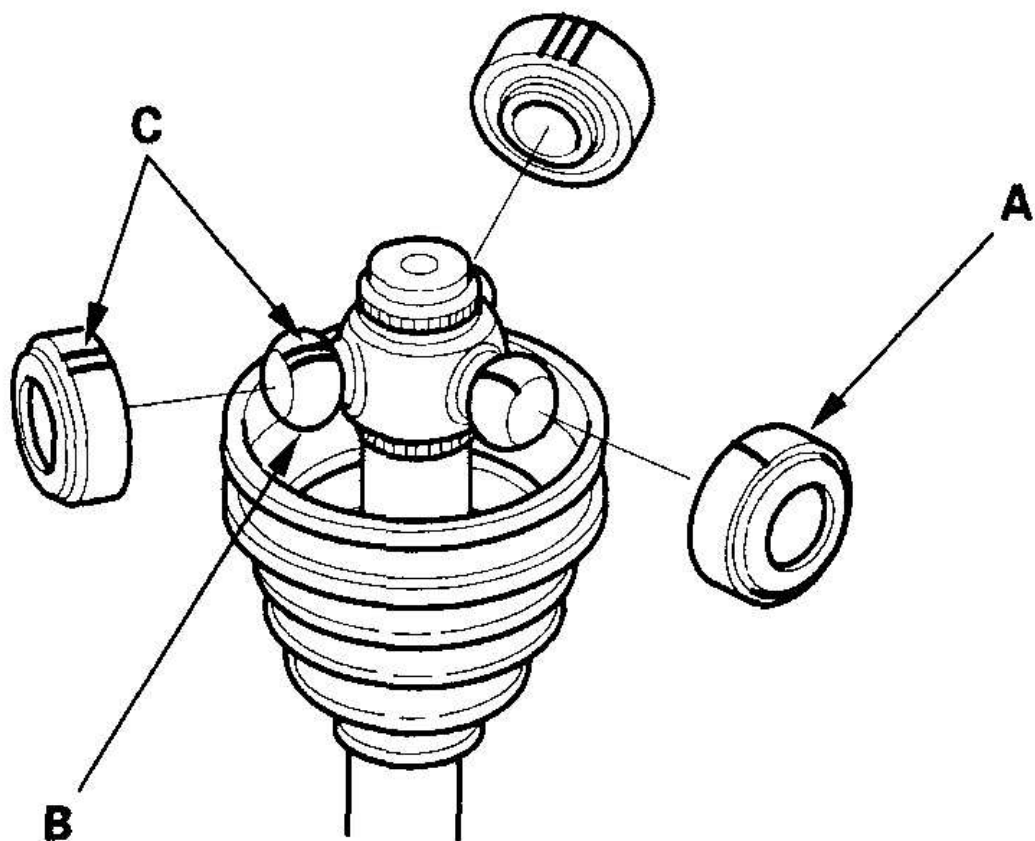
**Fig. 26: Identifying Models Right Driveshaft**

**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.

**2000-2003 models**

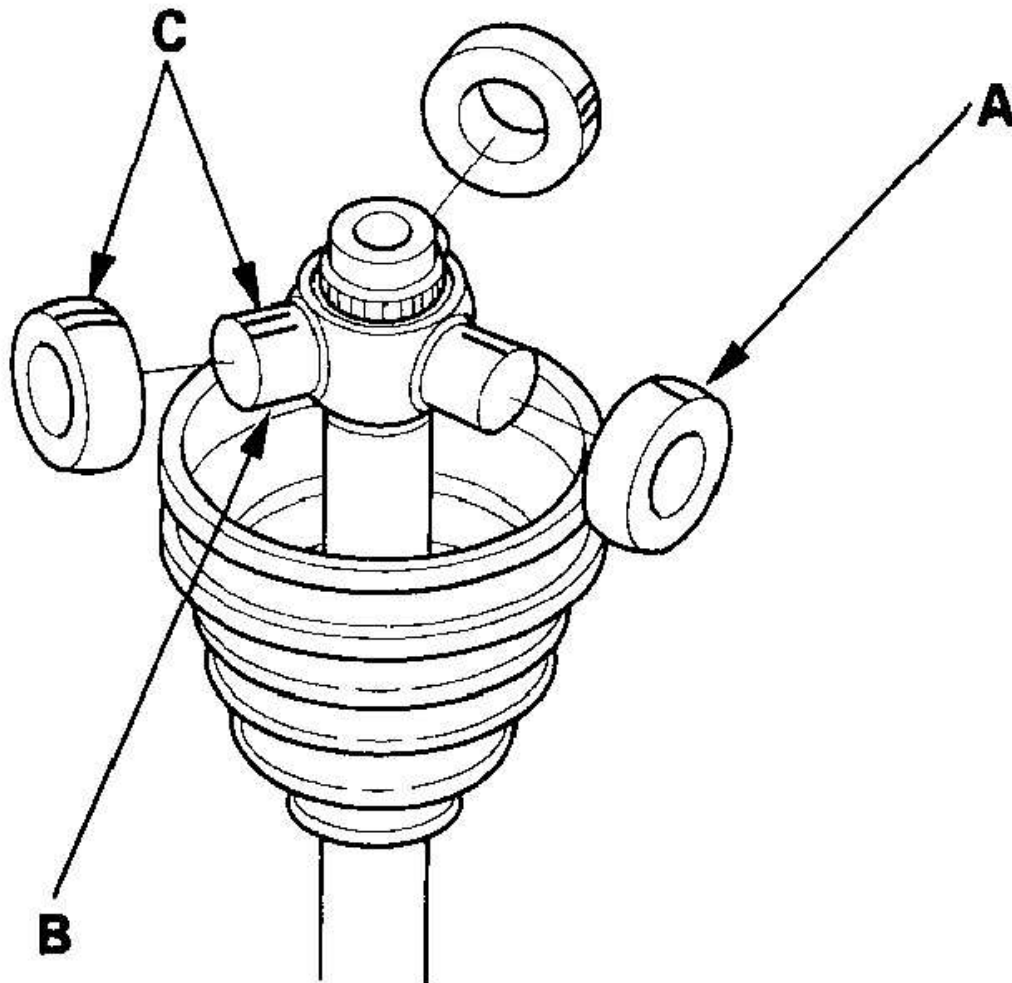
**2004-2006 models left driveshaft**



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**Fig. 27: Holding Driveshaft Pointed Up Prevent Rollers From Falling Off**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

**2004-2006 models right driveshaft**



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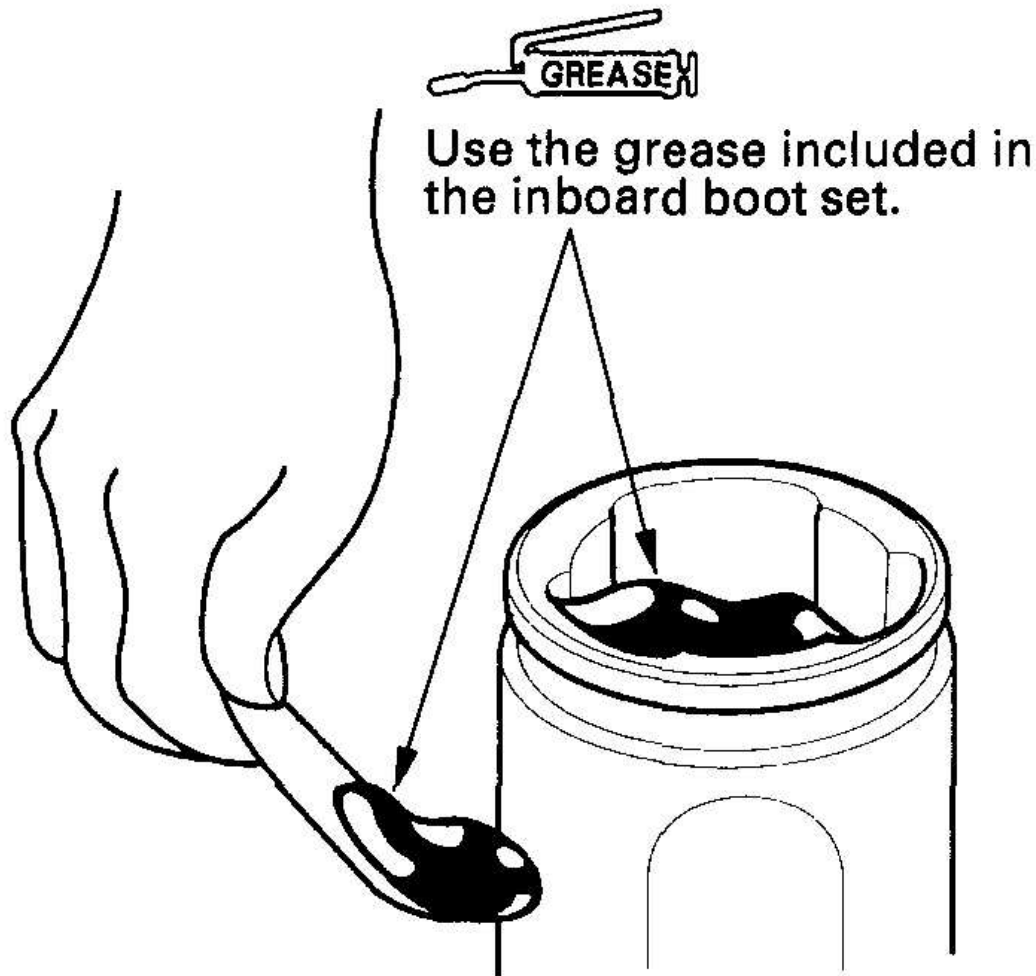
**Fig. 28: Identifying Models Right Driveshaft**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

**Grease quantity**

**Inboard joint: 70-80 g (2.5-2.8 oz)**

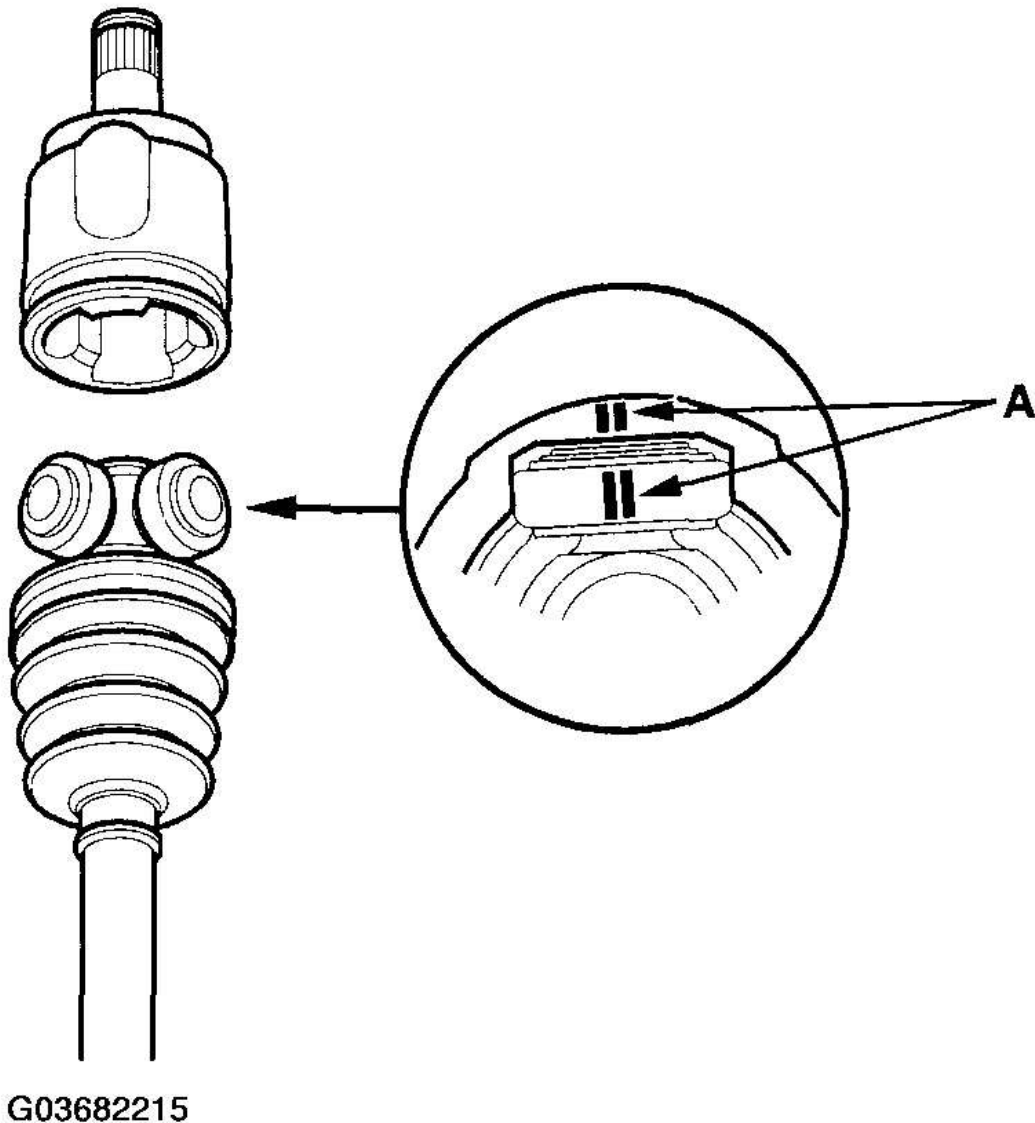




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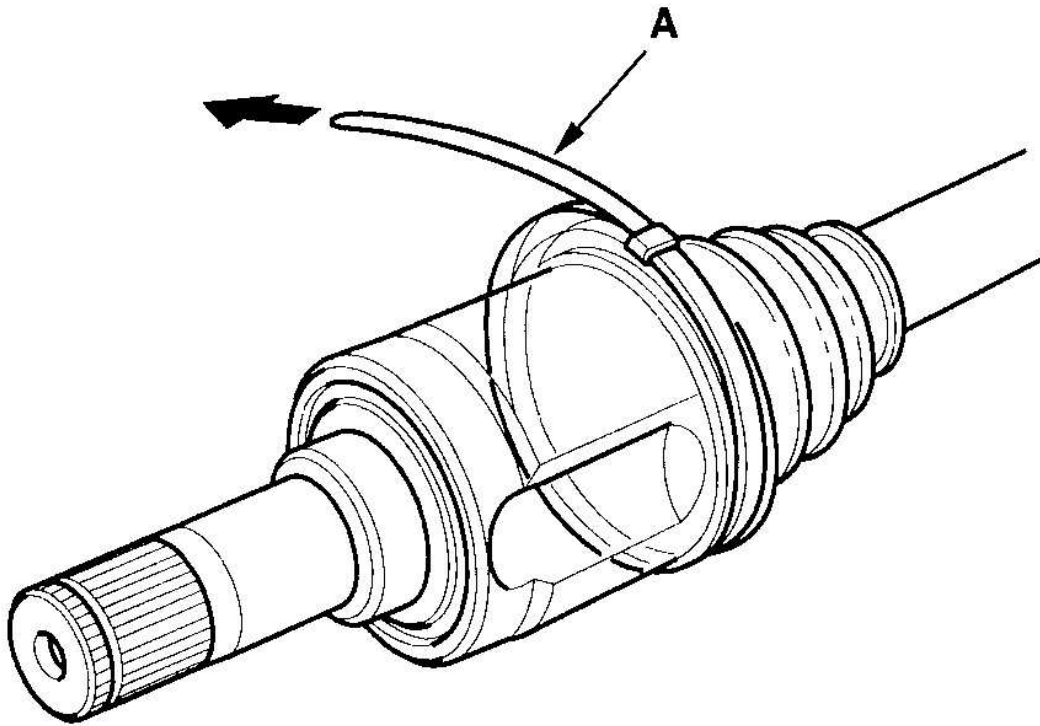
**Fig. 29: Packing Inboard Joint With Joint Grease**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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.



**Fig. 30: Aligning Marks On Inboard Joint And Rollers**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

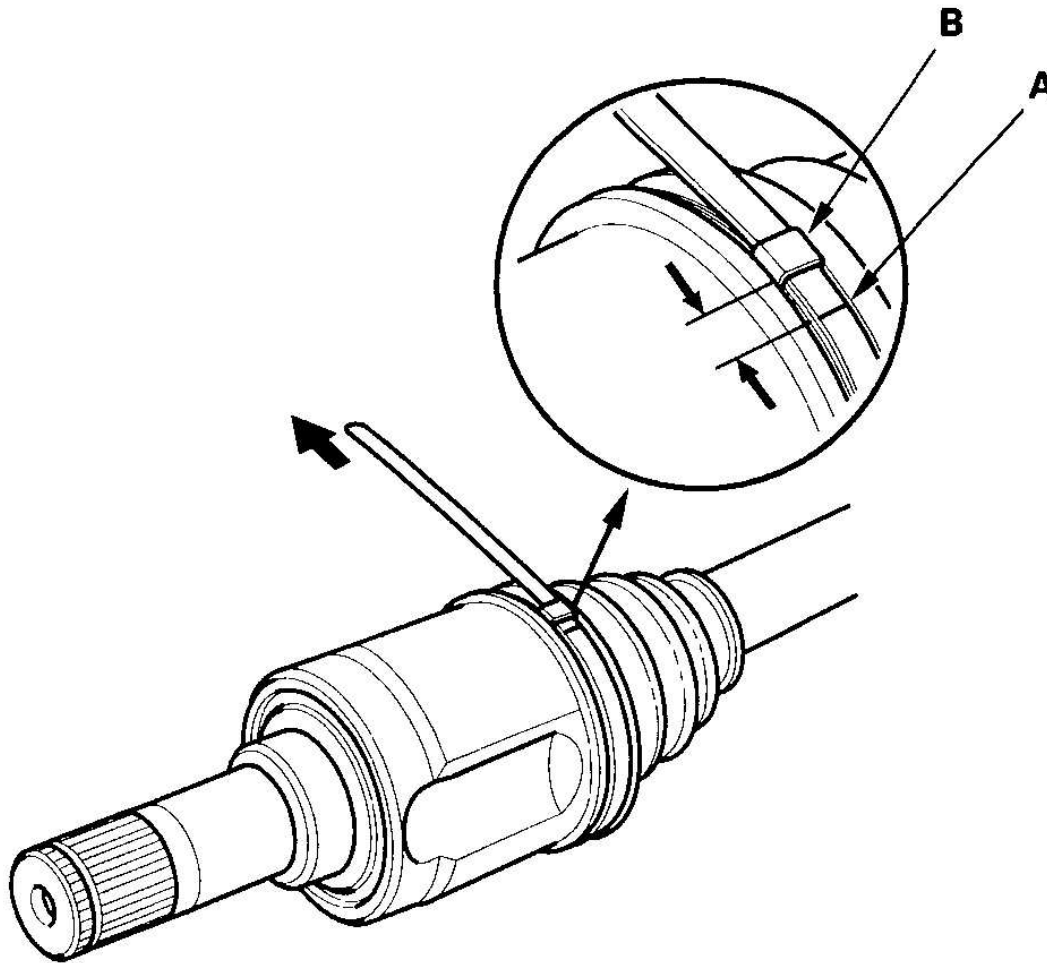
8. Adjust the inboard joint until the rollers are in the middle of the joint.
9. Fit the boot ends onto the driveshaft and the inboard joint, then install the new double loop band (A) onto the boot.



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**Fig. 31: Installing New Double Loop Band Onto Boot**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

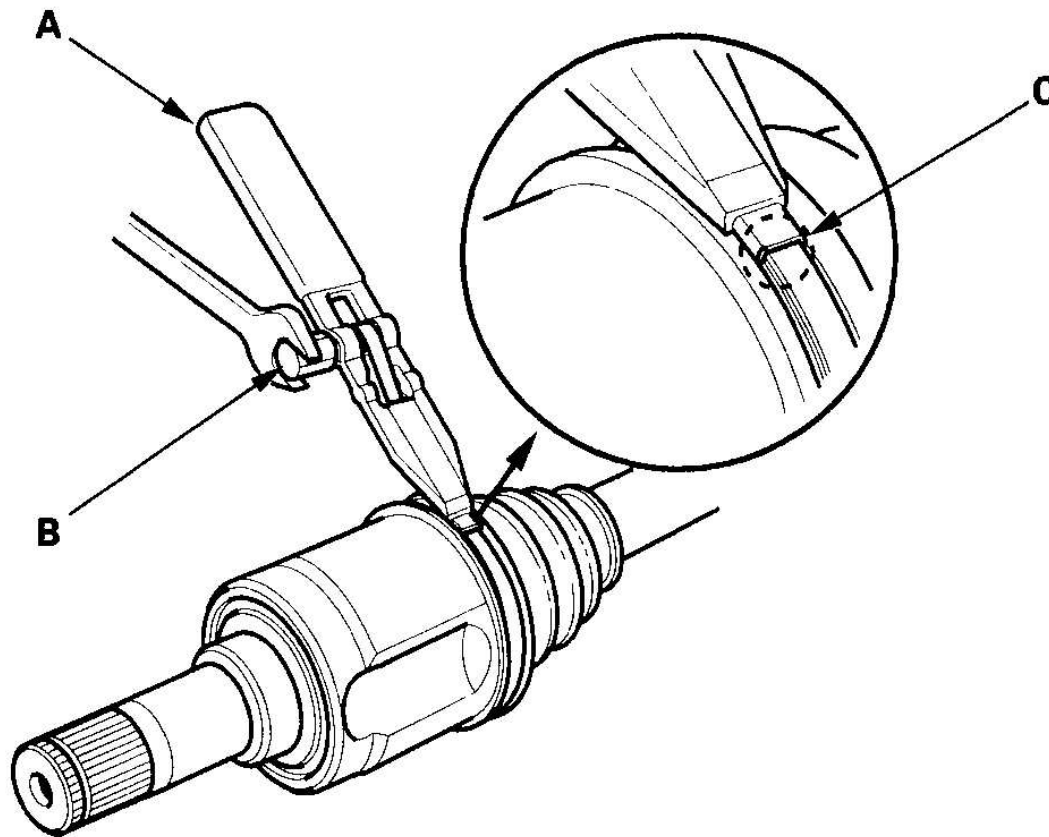
10. Pull up the slack in the band by hand.
11. Mark a position (A) on the band 10-14 mm (0.4-0.6 in.) from the clip (B).



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**Fig. 32: Pulling Up Slack In Band By Hand**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

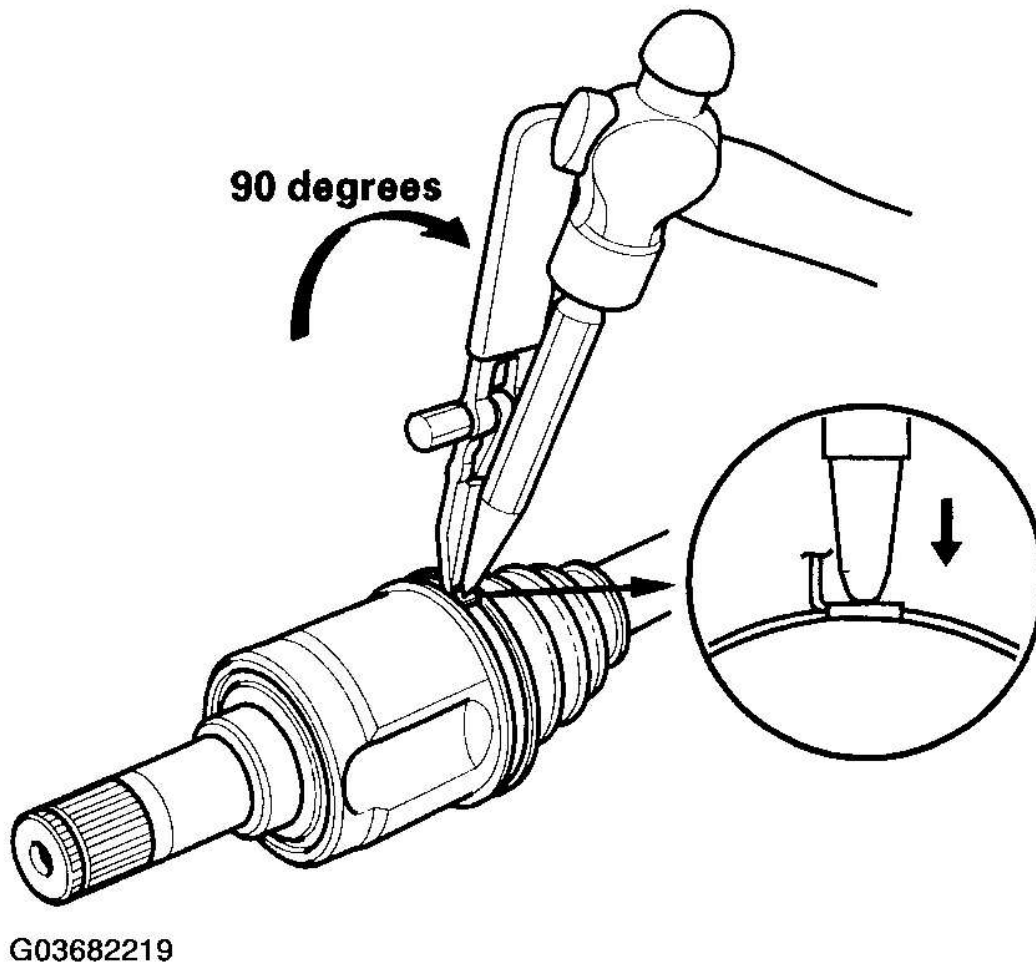
12. Thread the free end of the band through the nose section of the commercially available boot band tool KD-3191 or equivalent (A), and into the slot on the winding mandrel (B).



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**Fig. 33: Threading Free End Of Band Through Nose**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

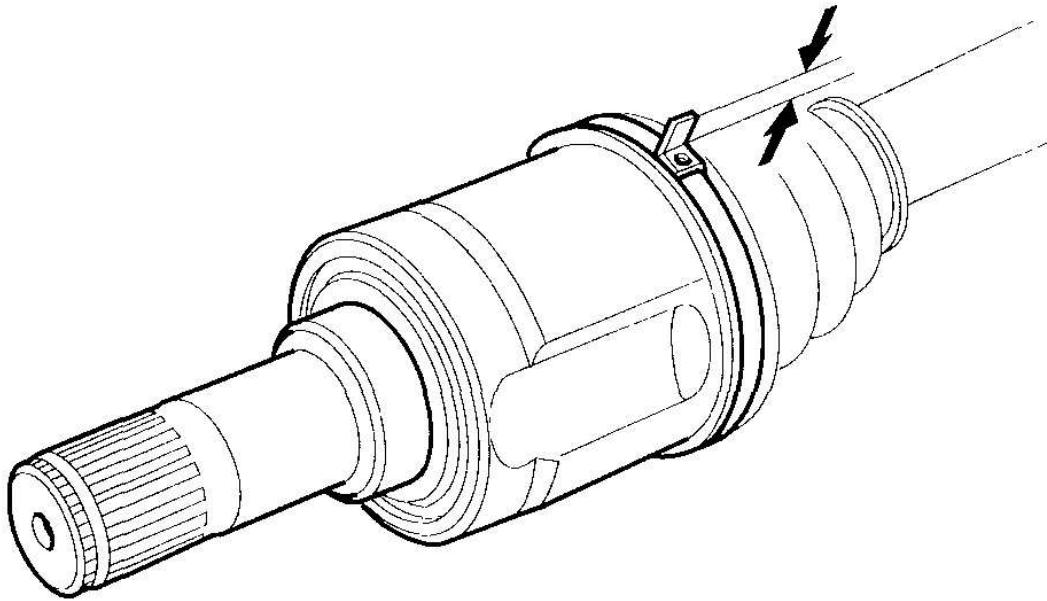
13. Using a wrench on the winding mandrel of the boot band tool, tighten the band until the marked spot (C) on the band meets the edge of the clip.
14. Lift up the boot band tool to bend the free end of the band 90 degrees to the clip. Center-punch the clip, then fold over the remaining tail onto the clip.



**Fig. 34: Lifting Up Boot Band Tool To Bend Free End Of Band Degrees To 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 a 5-10 mm (0.2-0.4 in.) tail protruding from the clip.



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**Fig. 35: Unwinding Boot Band Tool And Cut Off Excess Free End Of Band**

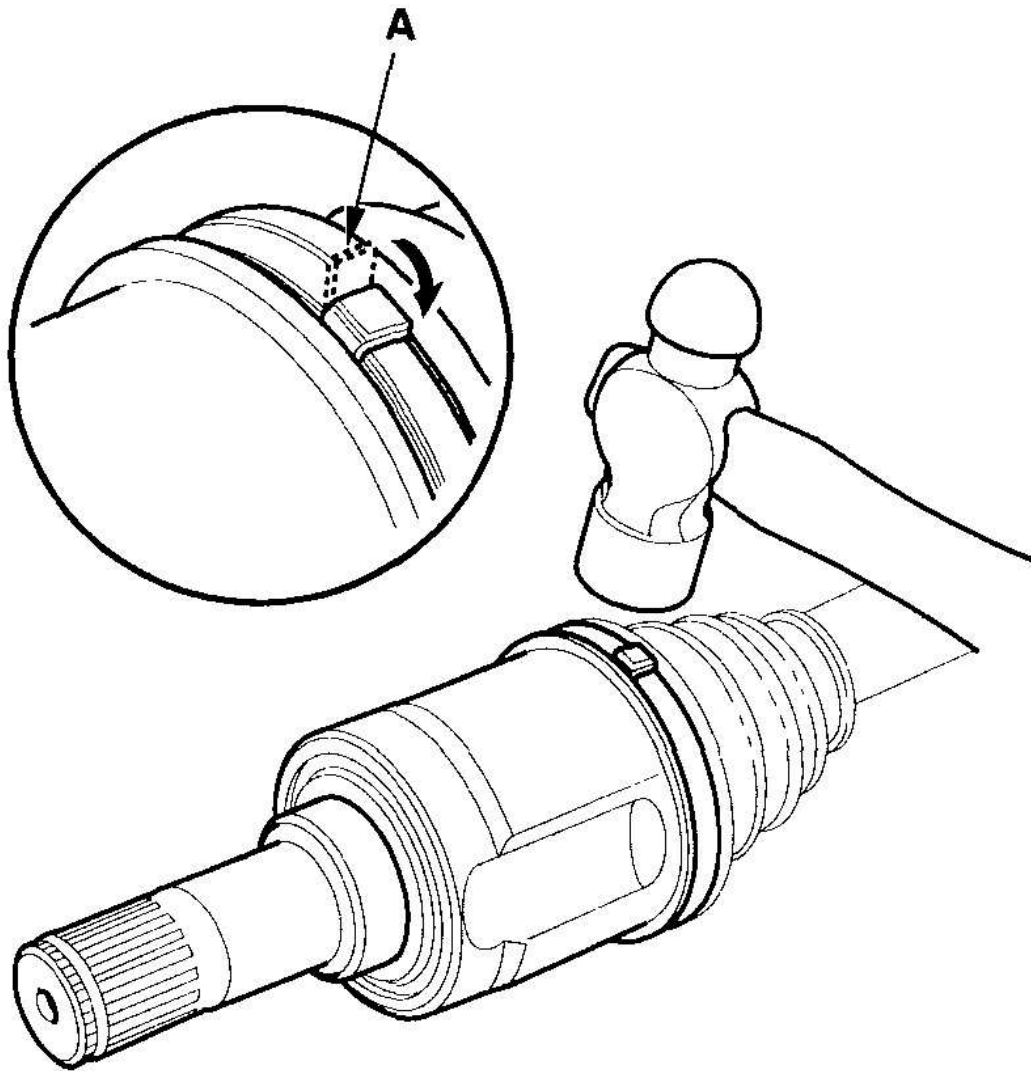
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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 on the vehicle and the band does not move.**
- **Remove any grease remaining on the surrounding surfaces.**



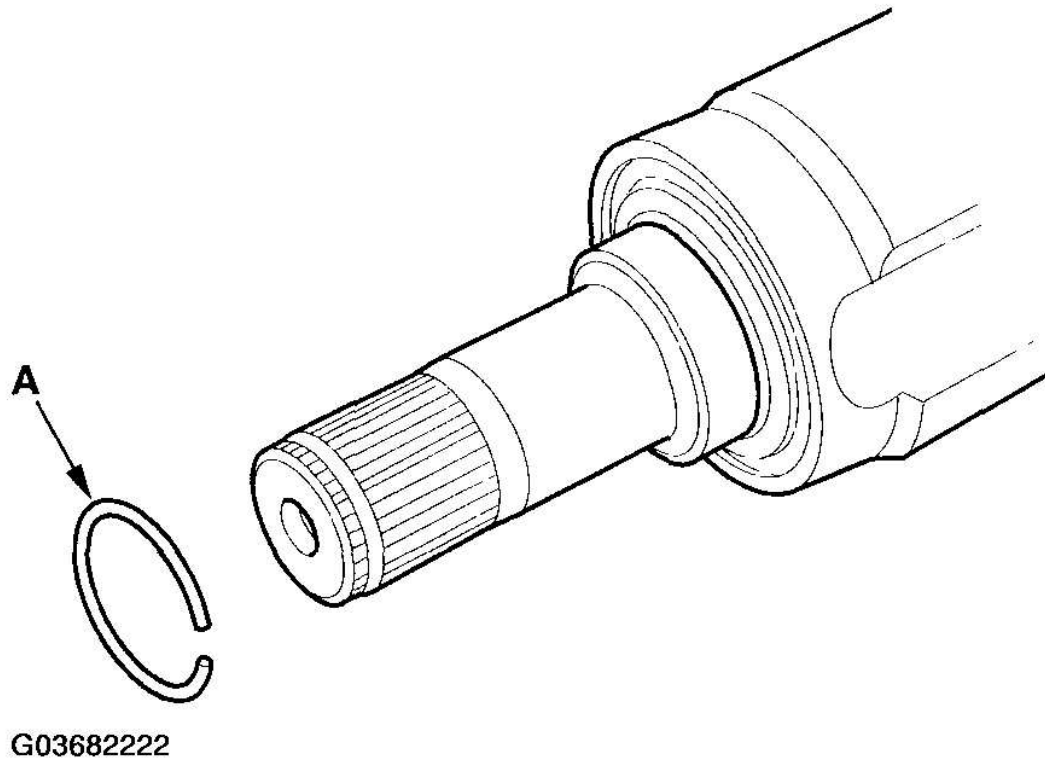


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**Fig. 36: Removing Grease Remaining On Surrounding Surfaces**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

17. Repeat steps 9 through 16 for the band on the other end of the boot, then go to step 18.
18. Install the new set ring (A).

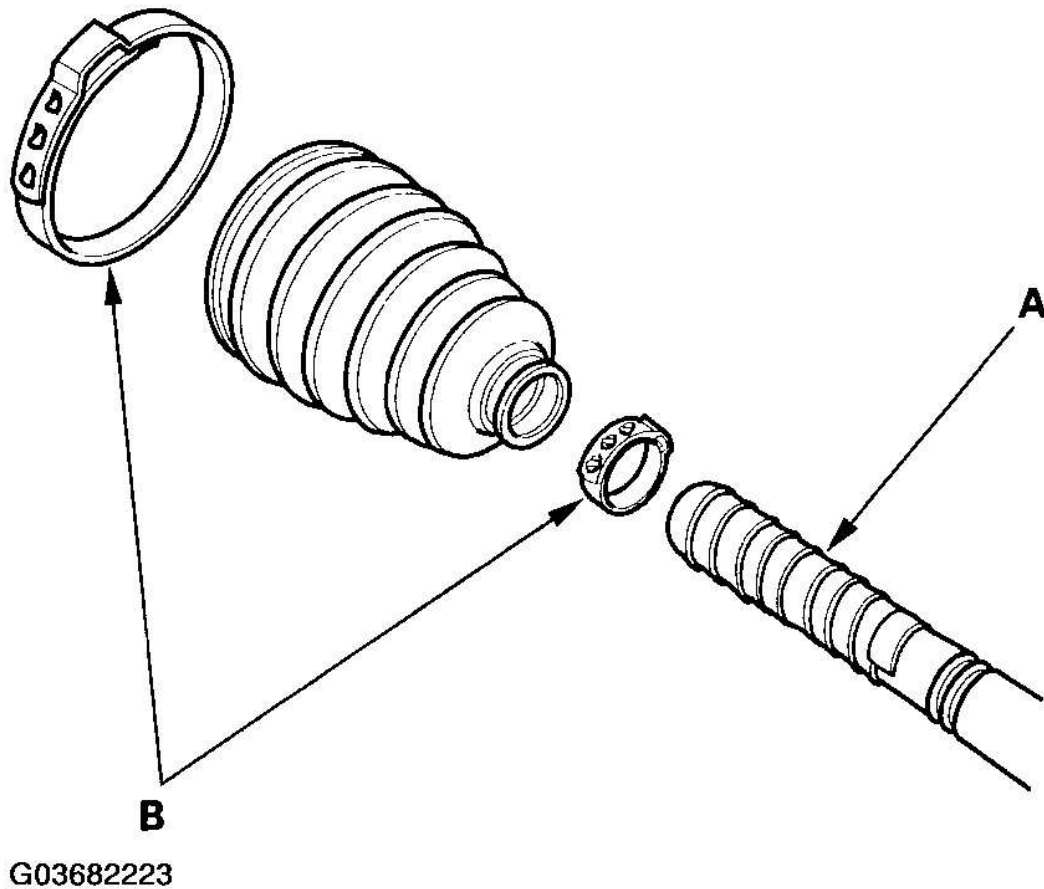




**Fig. 37: Installing New Set Ring**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

**OUTBOARD JOINT SIDE**

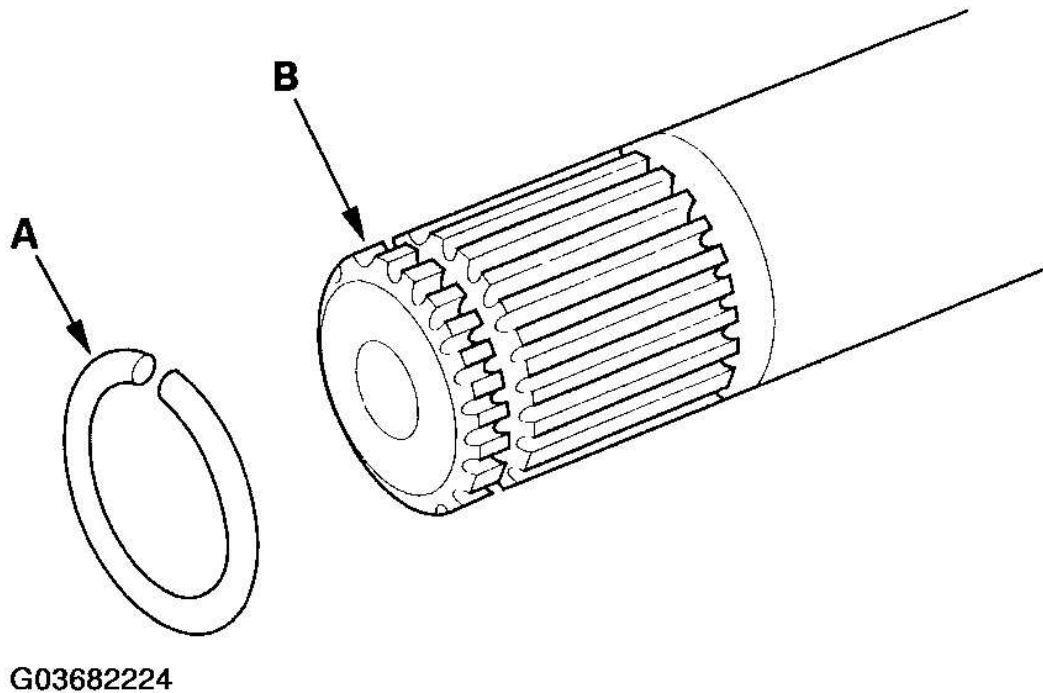
1. Wrap the splines with vinyl tape (A) to prevent damage to the outboard boot.



**Fig. 38: Wrapping Splines With Vinyl Tape To Prevent Damage To Outboard Boot**

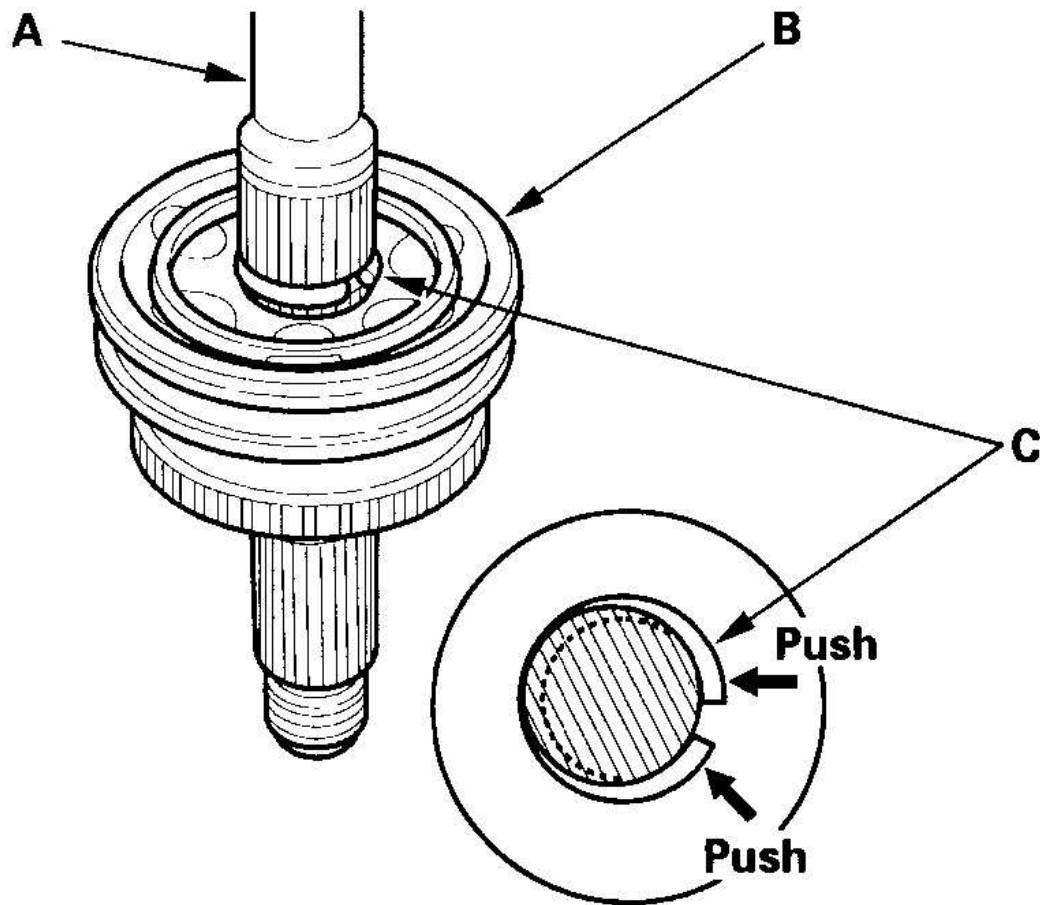
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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) into the driveshaft groove (B).



**Fig. 39: Installing New Stop Ring Into Driveshaft Groove**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

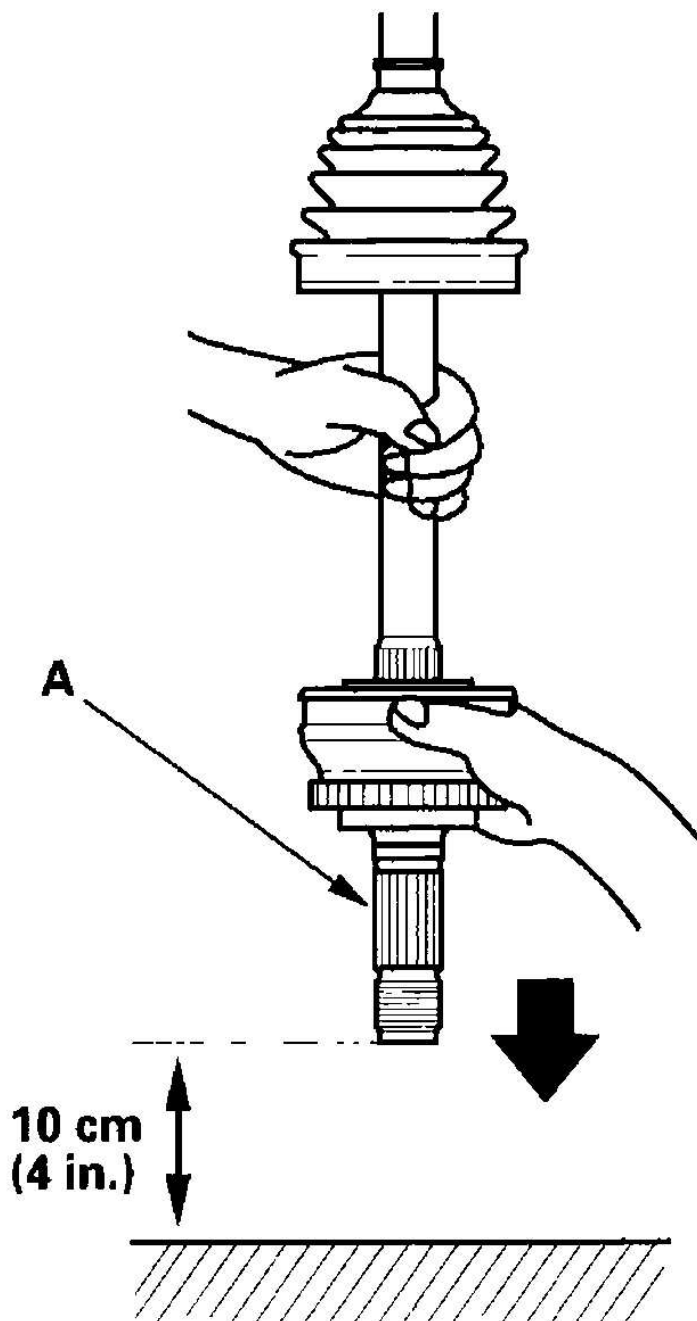
4. Pack about half of the grease included in the new joint boot set into the driveshaft hole in the outboard joint. Insert the driveshaft (A) into the outboard joint (B) until the stop ring (C) is closed to the joint.



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**Fig. 40: Identifying Bearing Grease Area****Courtesy of AMERICAN HONDA MOTOR CO., INC.**

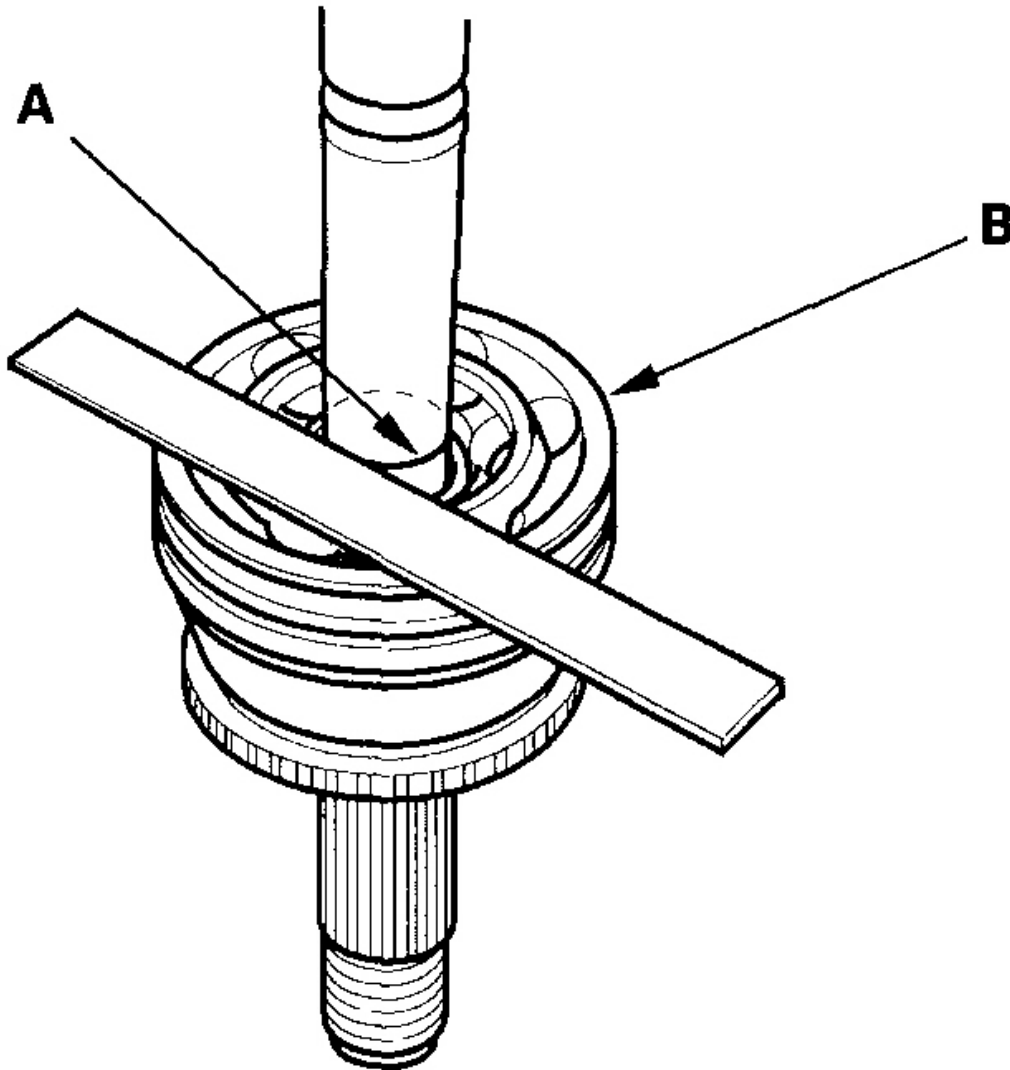
5. To completely seat the outboard joint, pick up the driveshaft and joint, and tap or hit them against a hard surface from a height of about 10 cm (4 in.). Do not use a hammer as excessive force may damage the driveshaft. Be careful not to damage the threaded section (A) of the outboard joint.



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**Fig. 41: Identifying Threaded Section Of 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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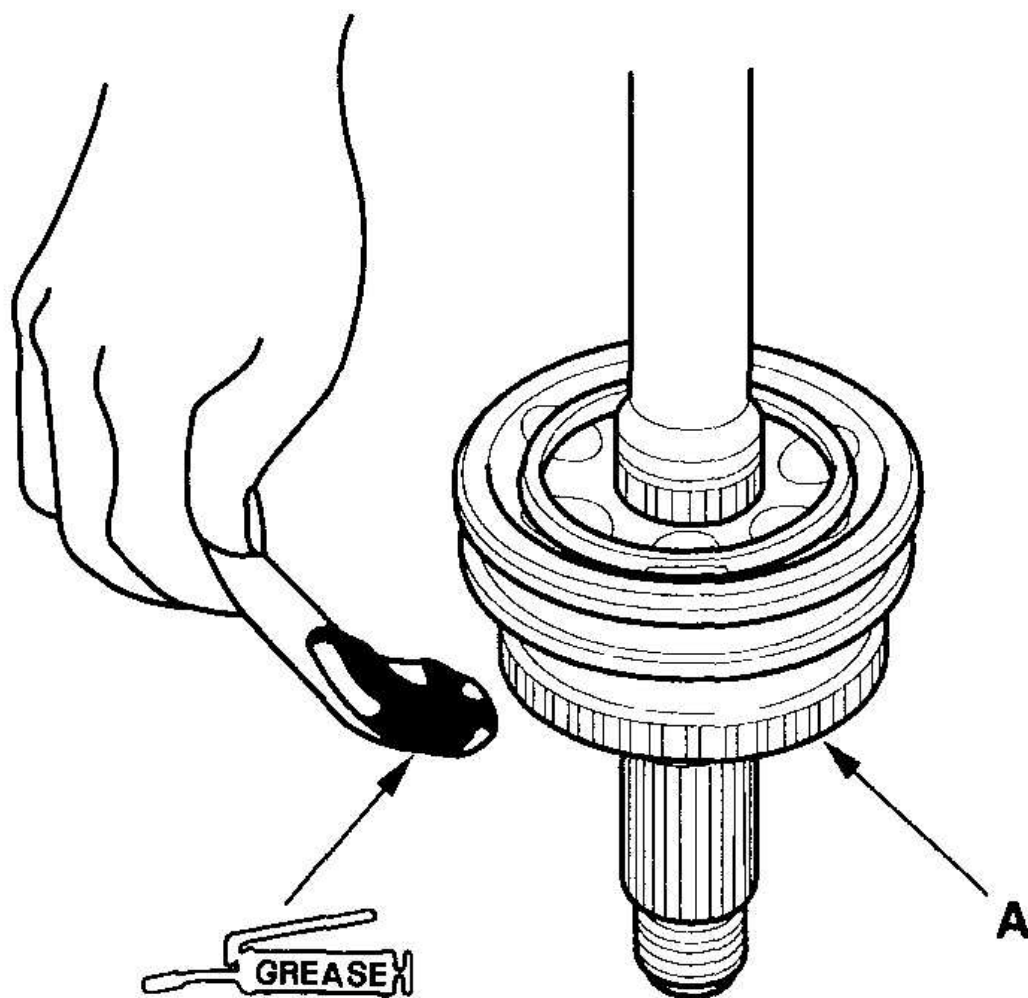
**Fig. 42: Checking Alignment Of Paint Mark With Outboard Joint End**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

joint boot set.

### Grease quantity

**Outboard joint: 60-70 g (2.4-2.5 oz)**



Use the grease included in  
the outboard boot set.

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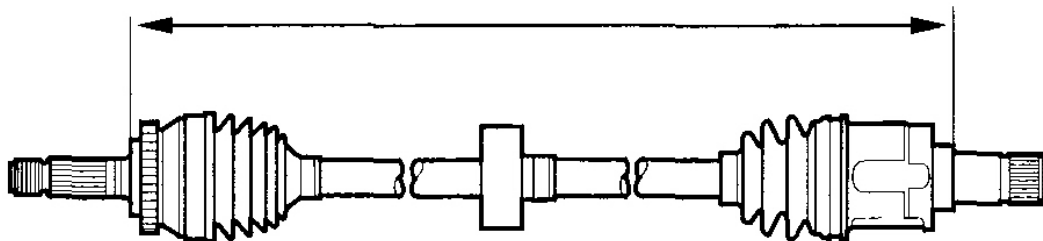
**Fig. 43: Identifying Greasing Area**

**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 groove of the driveshaft and joint.

**Left driveshaft: 481-486 mm (18.9-19.1 in.)**

**Right driveshaft: 761 -766 mm (30.0-30.2 in.)**



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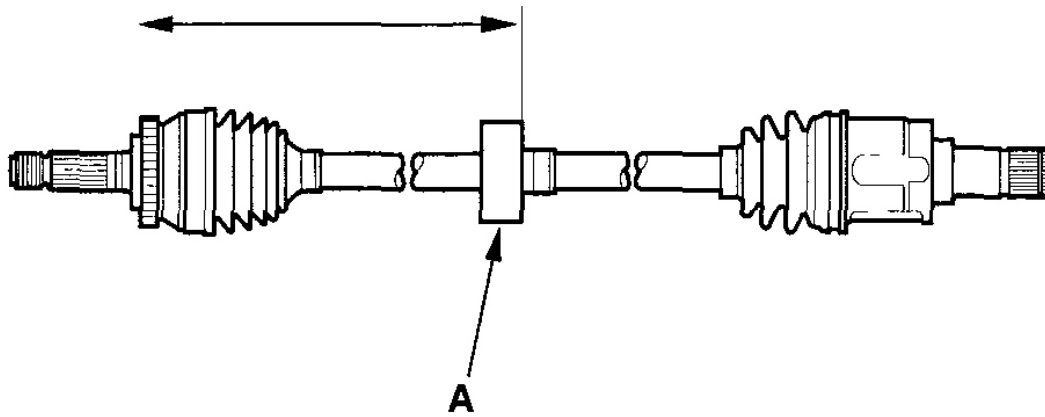
**Fig. 44: Adjusting Length Of Driveshafts**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

9. Position the dynamic damper (A) as shown (for right driveshaft).

**Standard: 415.5-419.5 mm (16.4-16.5 in.)**

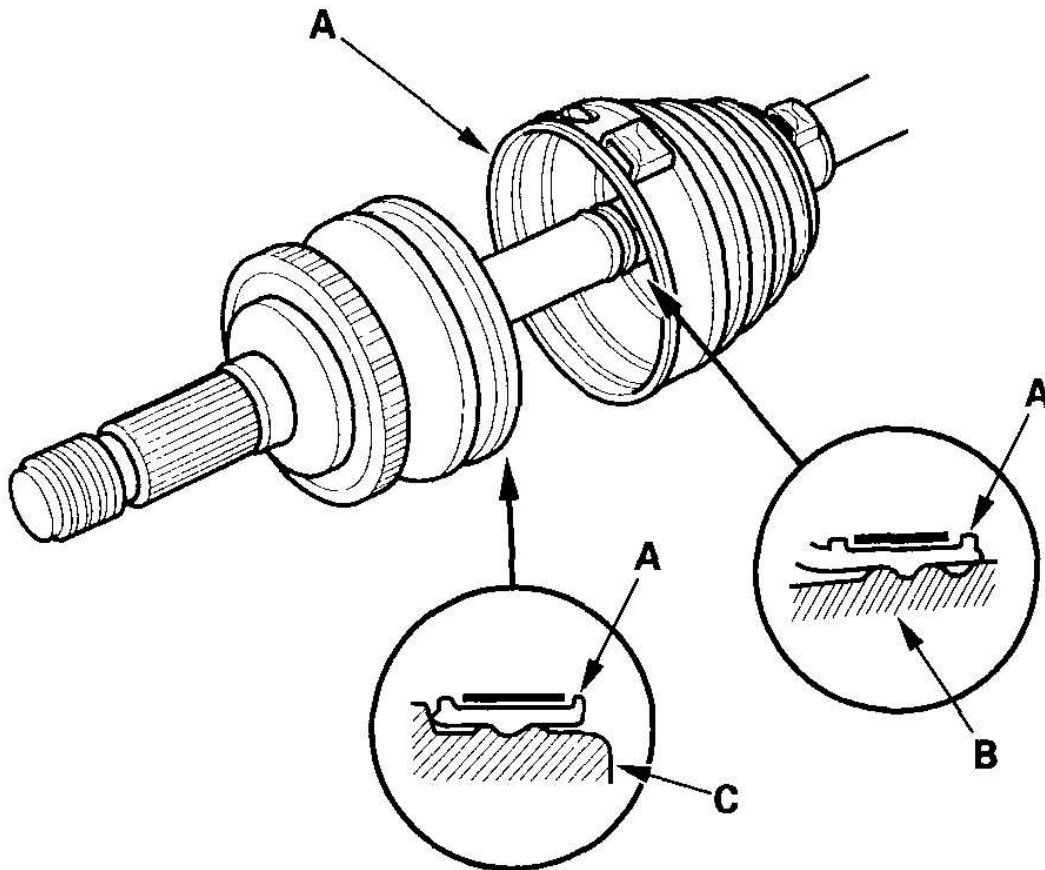




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**Fig. 45: Positioning Dynamic Damper (For Right Driveshaft)**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

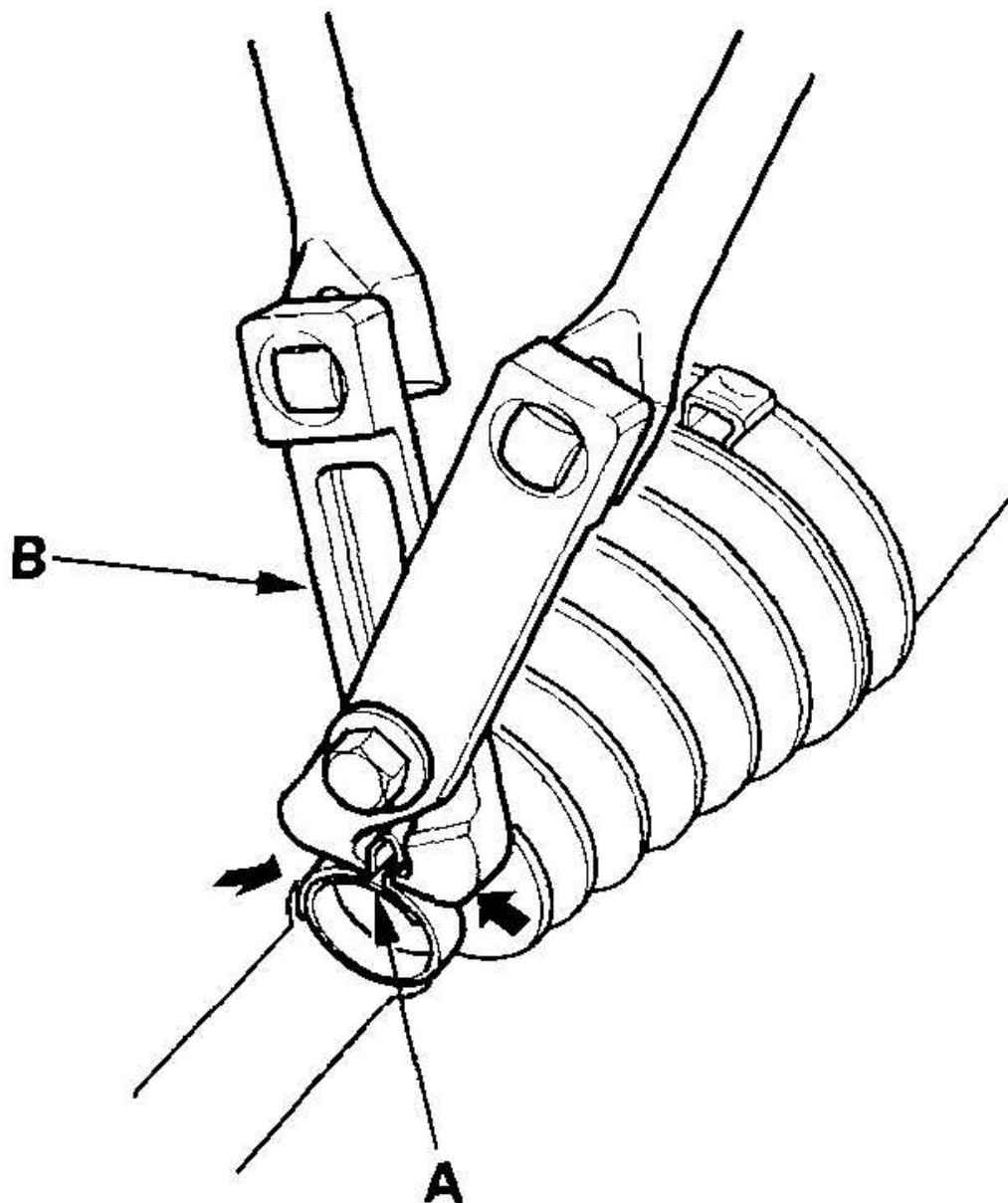
10. Fit the boot (A) ends onto the driveshaft (B) and outboard joint (C).



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**Fig. 46: Fitting Boot Ends Onto Driveshaft And Outboard Joint**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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

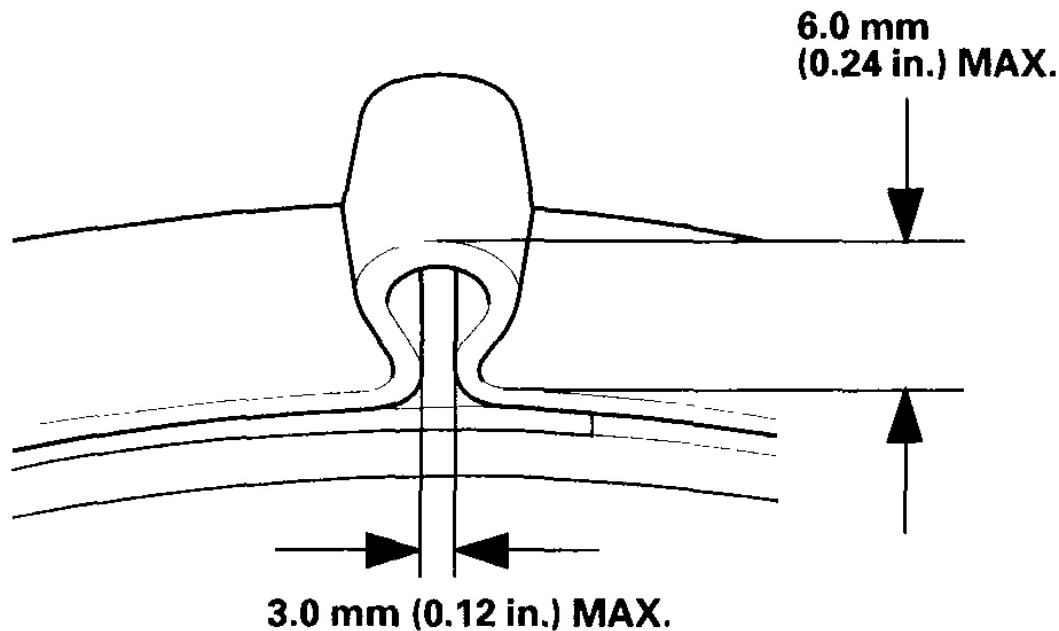


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**Fig. 47: Closing Ear Portion Of New Band With Commercially Boot Band Pincers**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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



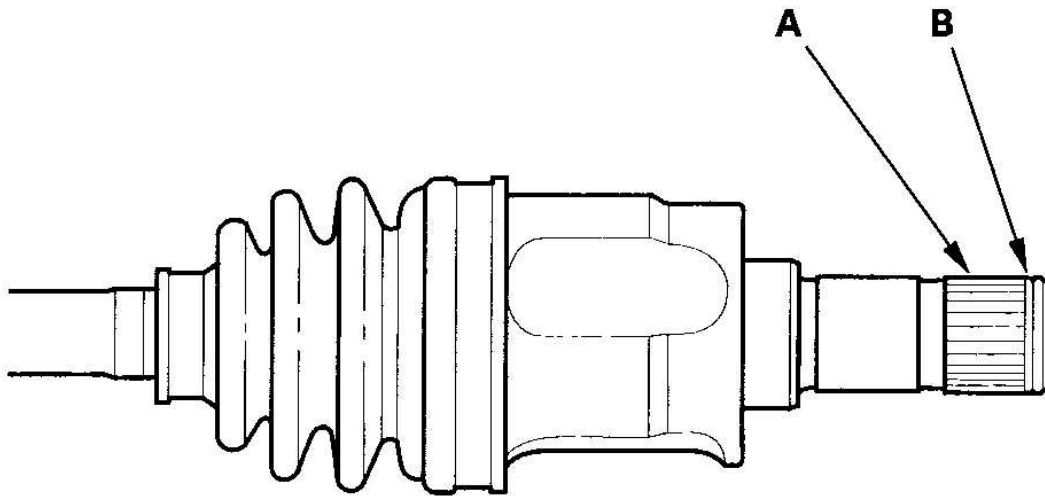
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**Fig. 48: Checking Clearance Between Closed Ear Portion Of Band**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

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

## DRIVESHAFT INSTALLATION

1. Apply 0.3- 1.0 g (0.01 -0.04 oz) of specified grease to the whole splined surface (A) of the 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 differential.

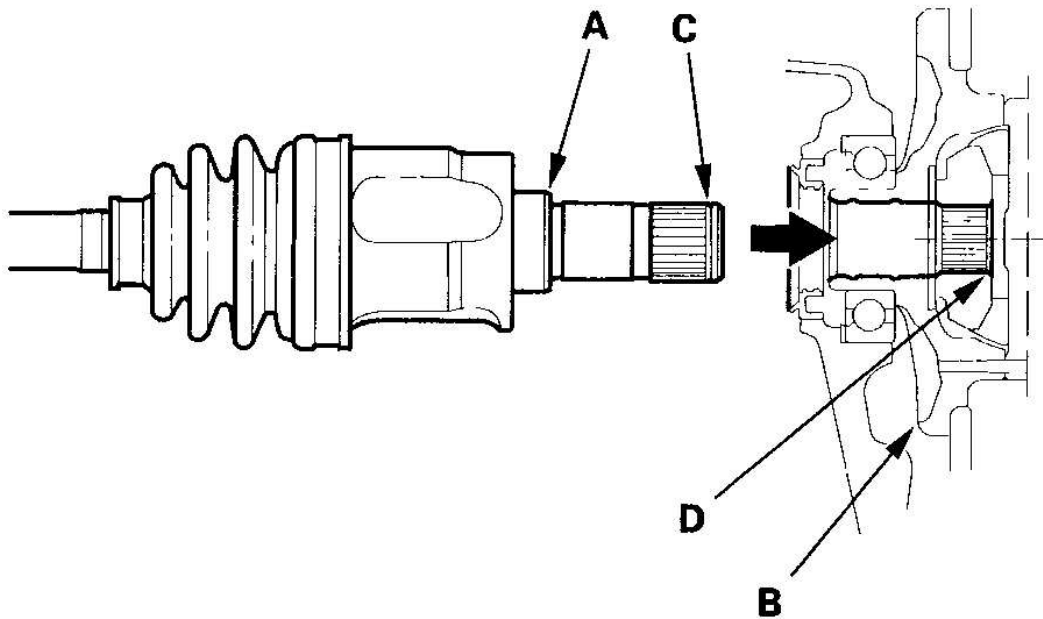


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**Fig. 49: Installing Driveshaft**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

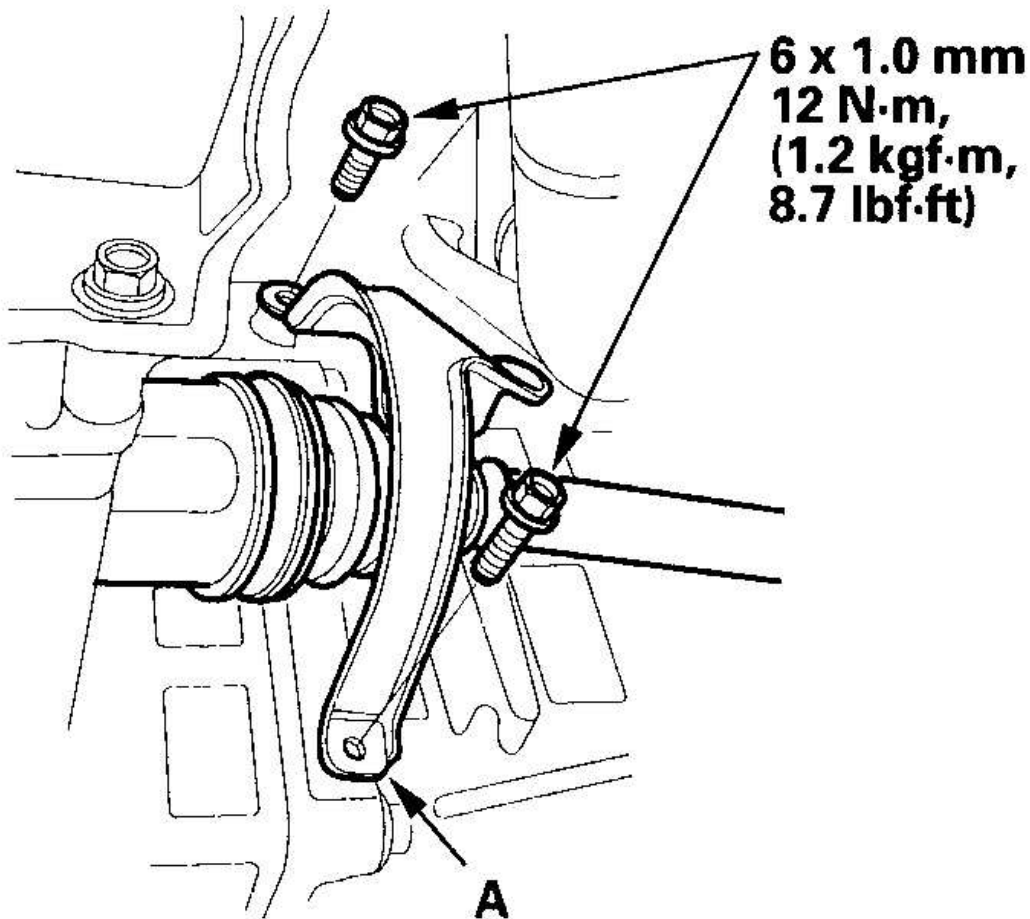
2. Install a new set ring onto the set ring groove of the driveshaft.
3. Clean the areas where the driveshaft contacts the differential thoroughly with solvent or brake cleaner, and dry with compressed air. Do not wash the rubber parts with solvent. Insert the inboard end (A) of the driveshaft into the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



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

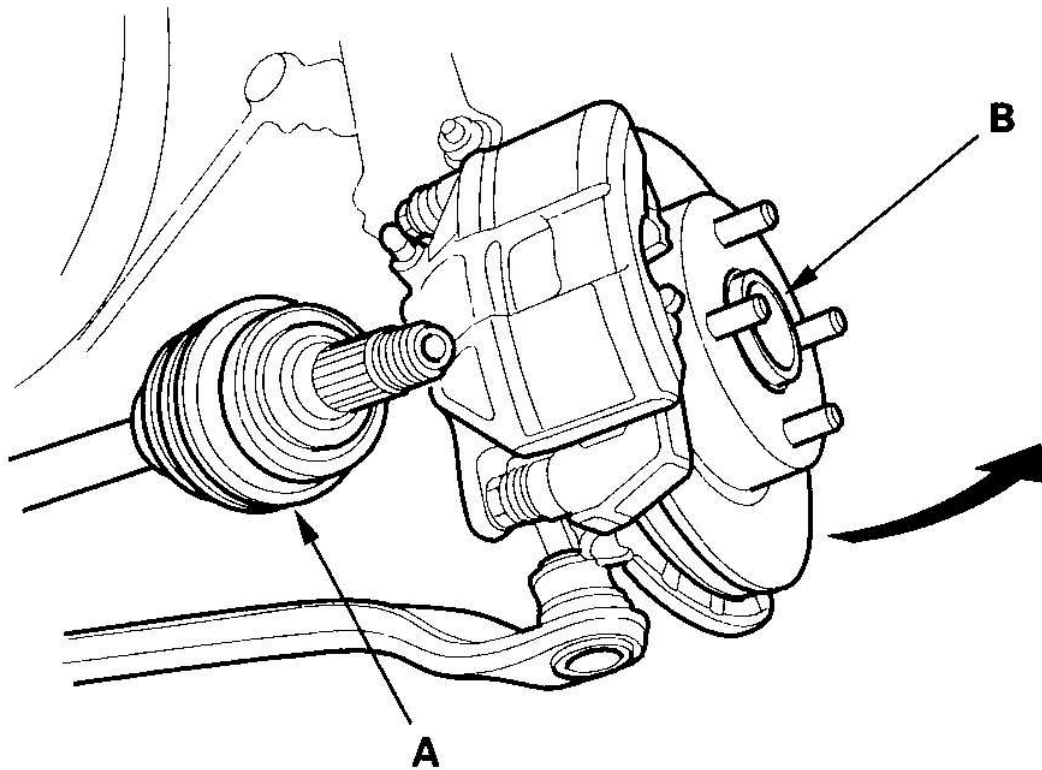
4. Install the inboard boot heat shield (A).



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**Fig. 51: Installing Inboard Boot Heat Shield And Torque Specifications**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

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



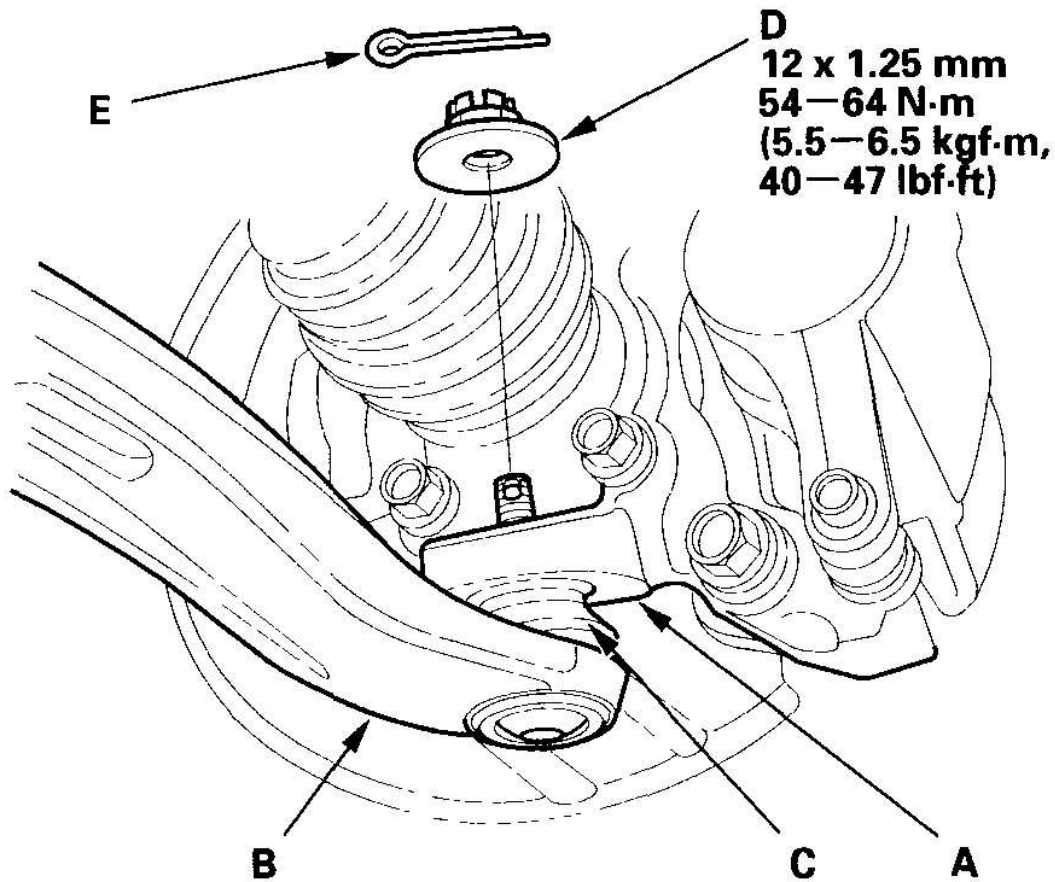
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**Fig. 52: Installing Outboard Joint Into Front Hub**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

6. 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. Do not align the nut by loosening it.

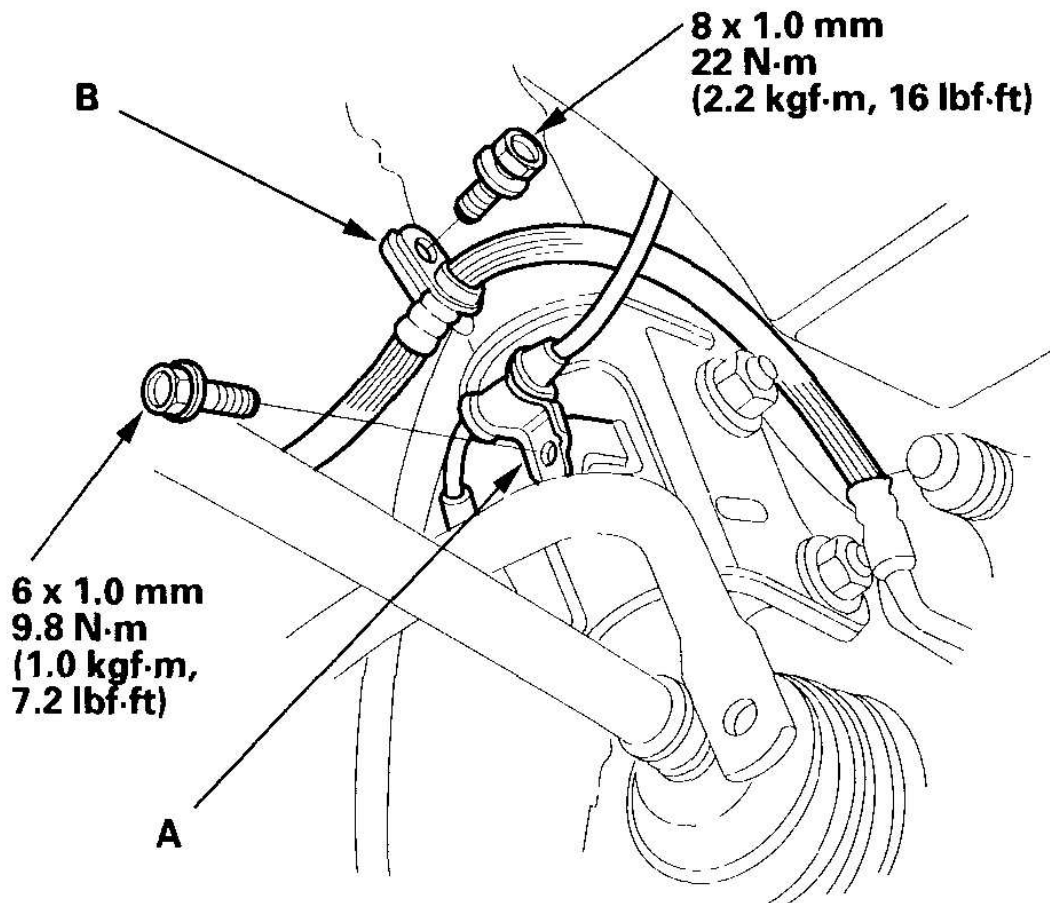
**NOTE:**     **Make sure the ball joint boot is not damaged or cracked.**





**Fig. 53: Installing Knuckle Onto Lower Arm**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

7. Install the new cotter pin (E) into the ball joint pin hole.
8. Install the ABS wheel sensor harness clamp (A) and brake hose clamp (B).

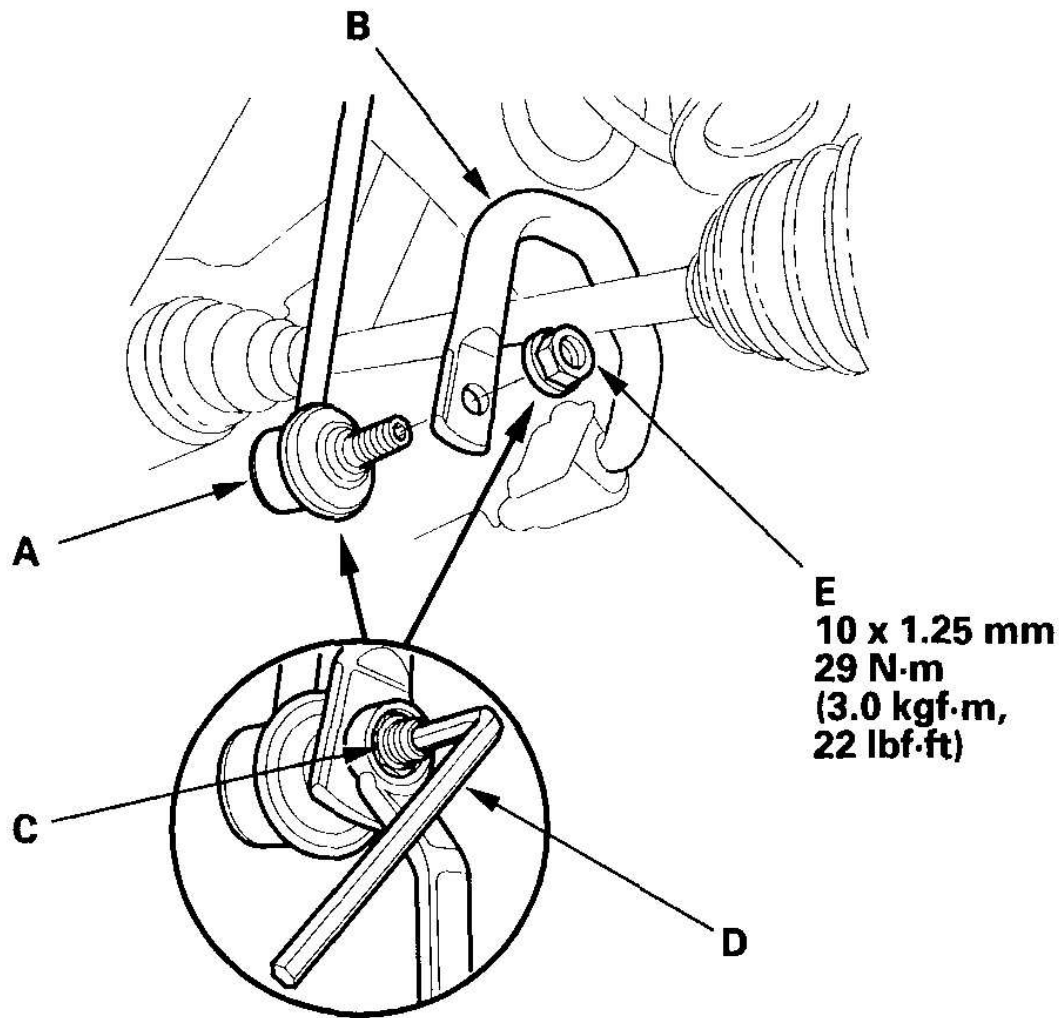


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**Fig. 54: Installing ABS Wheel Sensor Harness Clamp And Brake Hose Clamp With Specified Torques**

**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

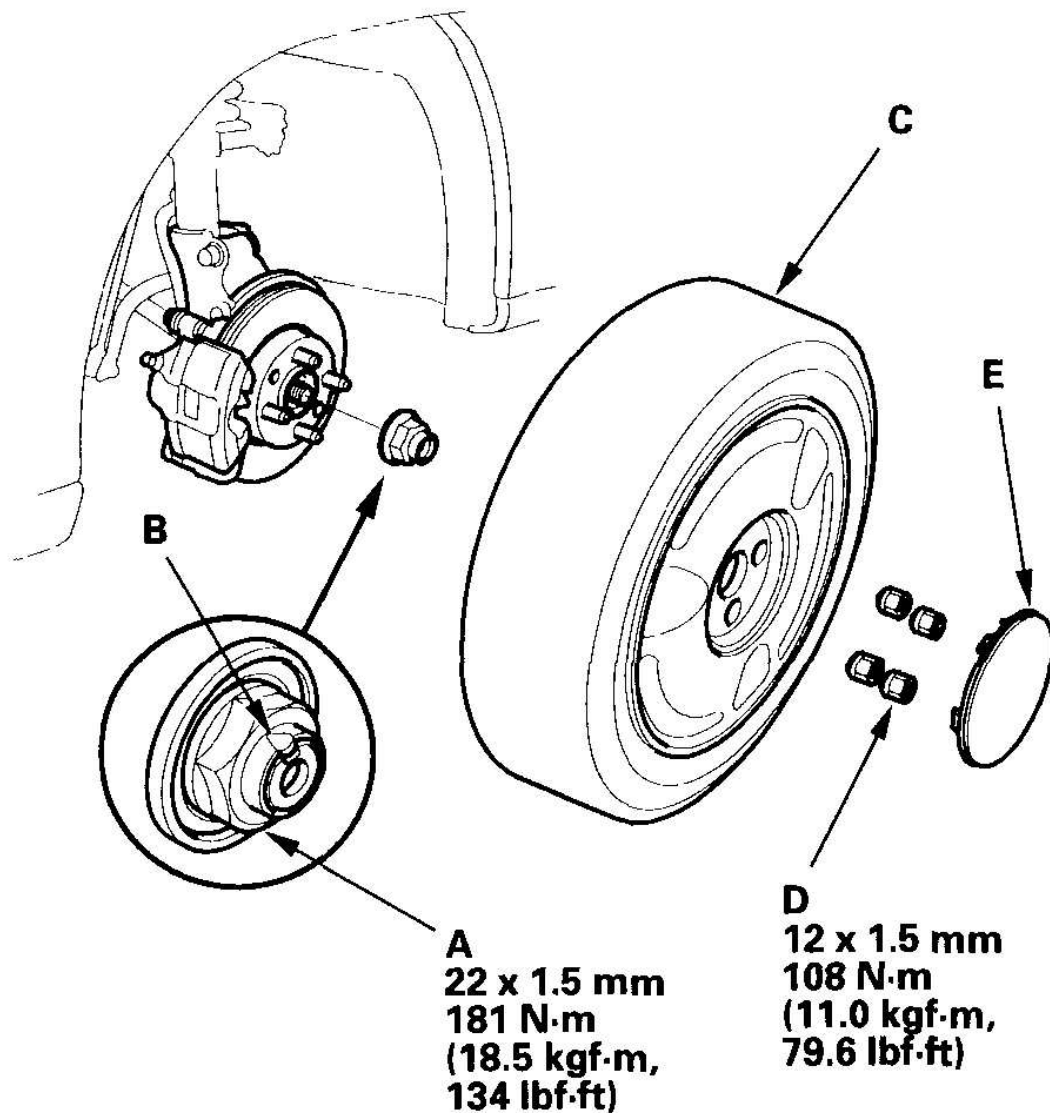
9. Connect the front stabilizer link (A) and front stabilizer (B). Hold the stabilizer link ball joint pin (C) with a hex wrench (D), and tighten the new flange nut (E).



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**Fig. 55: Connecting Front Stabilizer Link And Front Stabilizer With Specified Torques**  
**Courtesy of AMERICAN HONDA MOTOR CO., INC.**

10. 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.



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

11. Clean the mating surfaces of the brake disc and the front wheel (C), then install the front wheel with the wheel nuts (D). Install the center cap (E).
12. Turn the front wheel by hand, and make sure there is no interference between the driveshaft and surrounding parts.

13. Refill the transmission with recommended transmission fluid:
  - Manual transmission (see **GEARSHIFT MECHANISM REPLACEMENT** )
  - CVT (see **CVT FLUID REPLACEMENT** )
14. Check the front wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT** ).