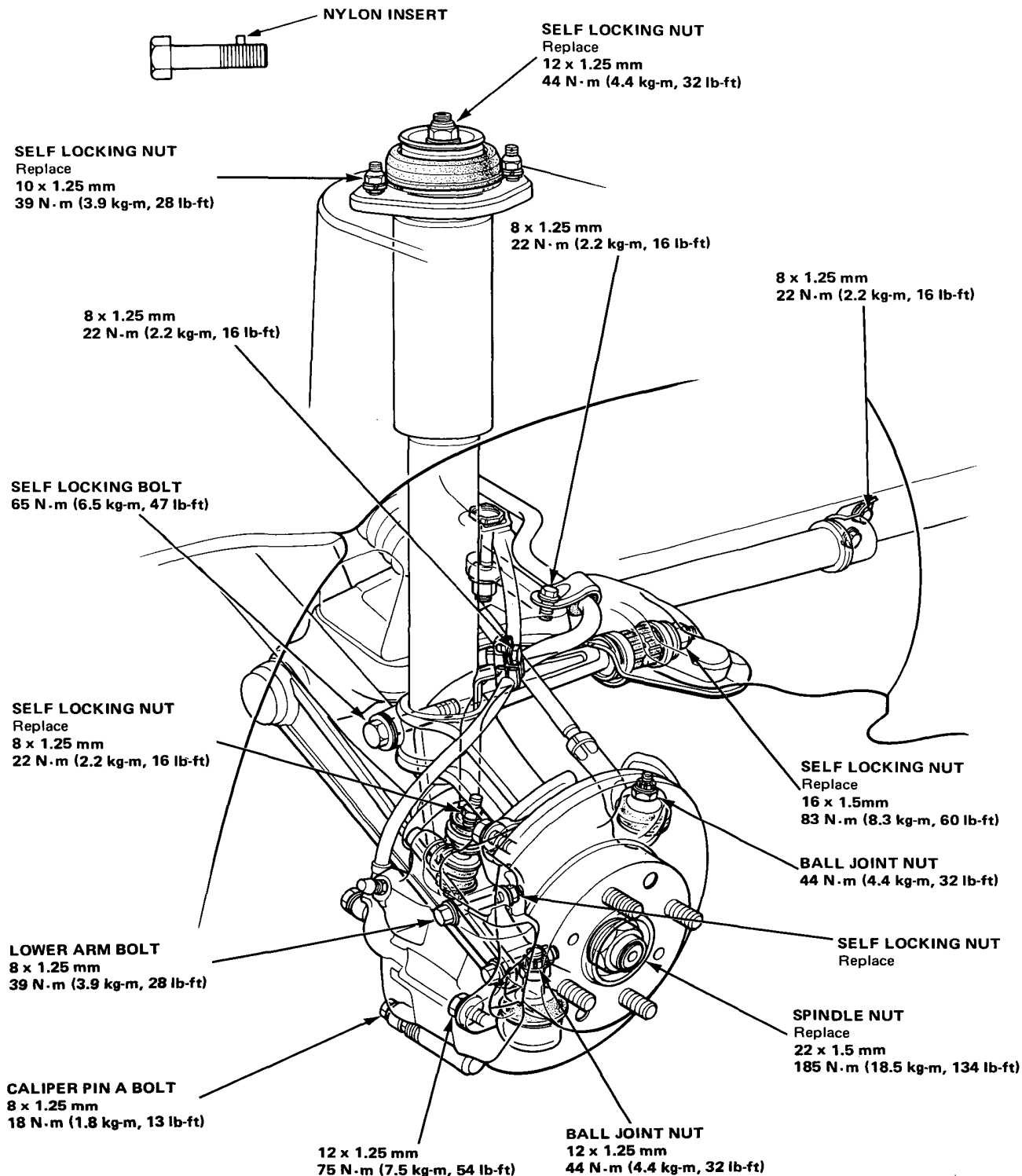


# Front Suspension



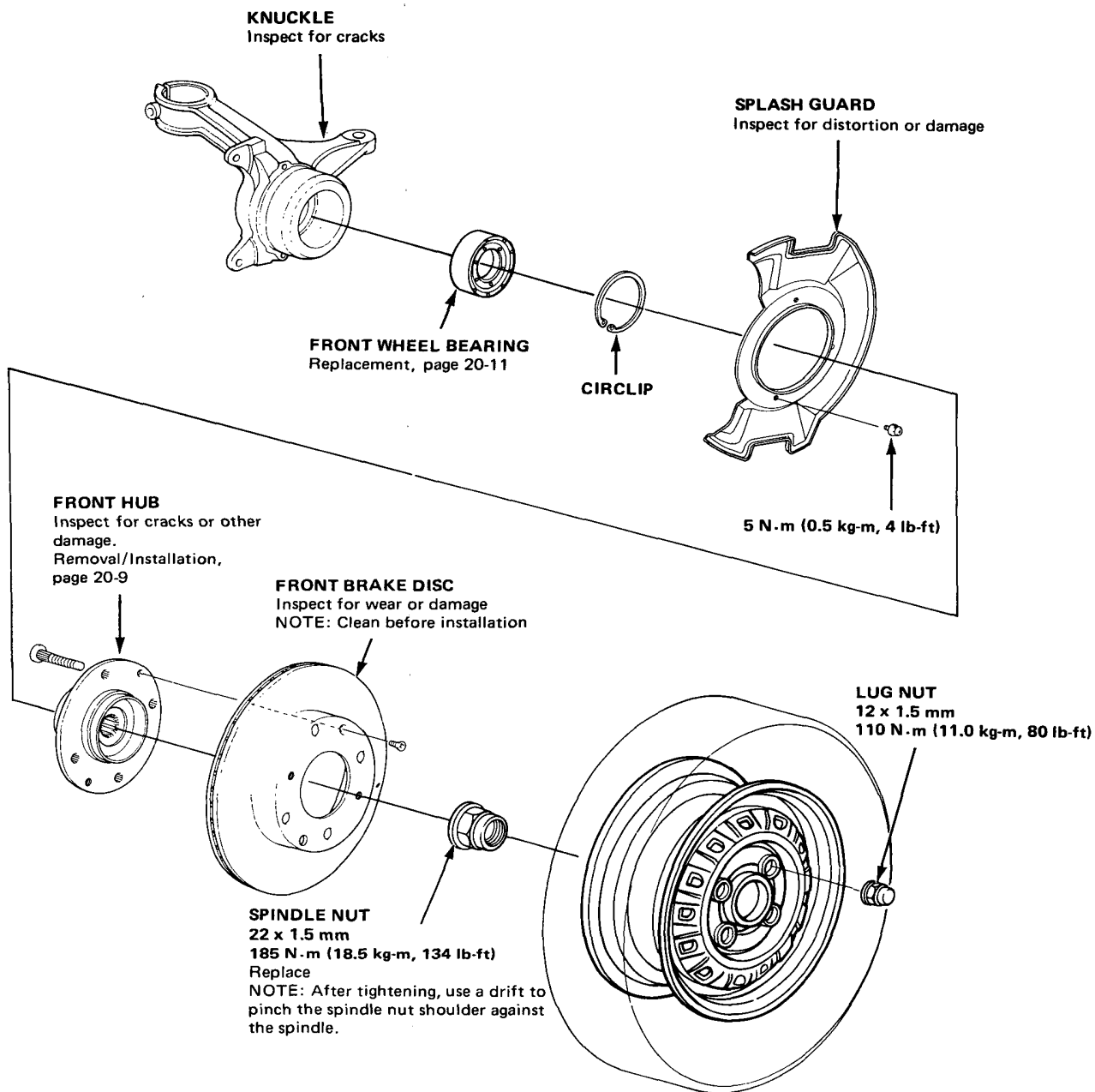
## Index

NOTE: Replace the self-locking bolts if you can easily thread a nut past their nylon locking inserts.



# Knuckle/Hub

## Index





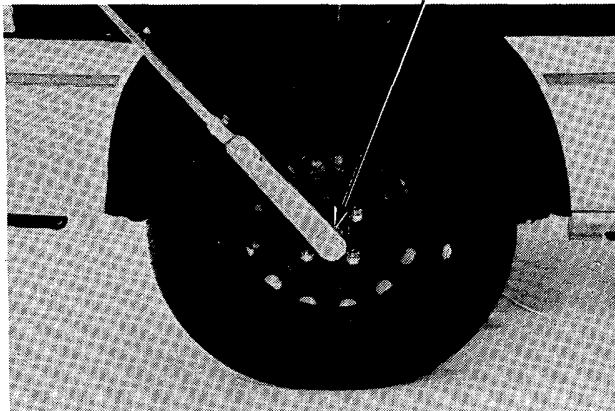
## Replacement

1. Pry the spindle nut lock tab away from the spindle, then loosen the nut using a 32 mm socket.

### SPINDLE NUT

Replace

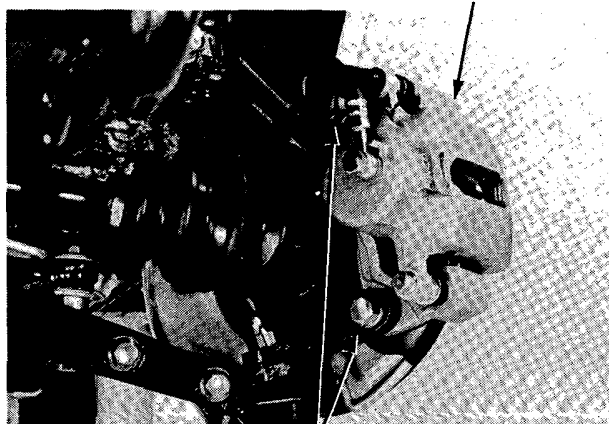
185 N·m (18.5 kg-m, 133 lb-ft)



2. Loosen the lug nuts slightly.
3. Raise the front of car and support with safety stands in the proper locations.
4. Remove the lug nuts, wheel, and spindle nut.
5. Remove the caliper mounting bolts and hang the cliper assembly to one side.

**CAUTION:** To prevent accidental damage to the caliper assembly or brake hose, use a short piece of wire to hang the caliper assembly from the under-carriage.

### CALIPER ASSY

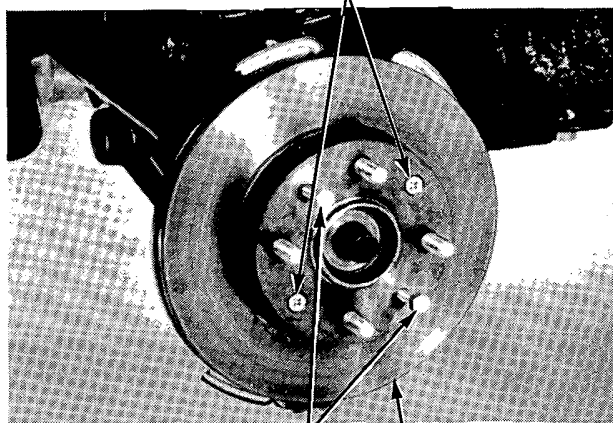


78 N·m (7.8 kg-m, 56 lb-ft)

6. Remove the 6 mm brake disc retaining screws.
7. Screw two 8 x 1.25 x 12 mm bolts into the disc to push it away from the hub.

**NOTE:** Turn each bolt two turns at a time to prevent cocking disc excessively.

### DISC RETAINING SCREWS 6 mm

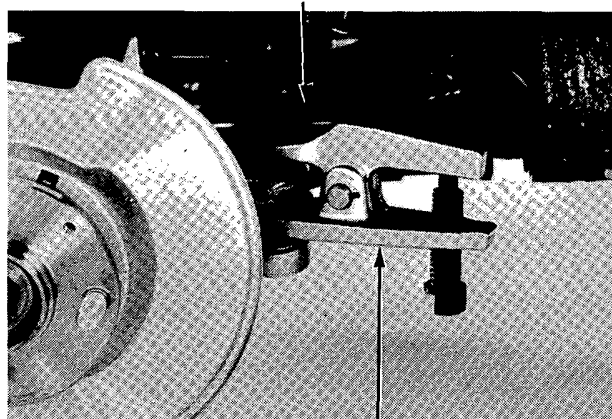


BOLTS FOR DISC REMOVAL  
8 x 1.25 mm

BRAKE DISC

8. Remove the cotter pin from the tie-rod castle nut then remove the nut.
9. Break loose the tie-rod ball joint using Ball Joint Remover, then lift the tie-rod out of the knuckle.

### TIE-ROD



BALL JOINT REMOVER  
07941-6920001

44 N·m (4.4 kg-m, 32 lb-ft)

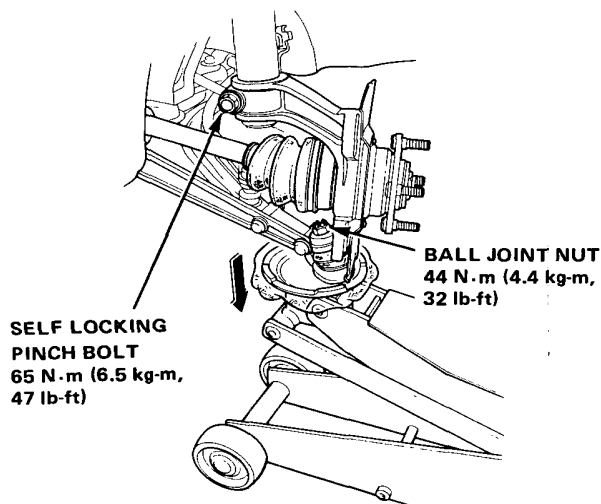
# Knuckle/Hub

## Replacement (cont'd)

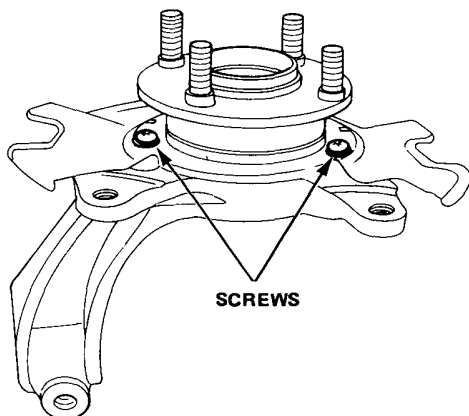
10. Use a floor jack to support the lower control arm, then remove the ball joint cotter pin and nut.

**CAUTION:** Make sure the floor jack is positioned securely under the lower control arm, at the ball joint. Otherwise, torsion bar tension on the lower control arm may cause the arm to "jump" suddenly away from the steering knuckle as the ball joint is being removed.

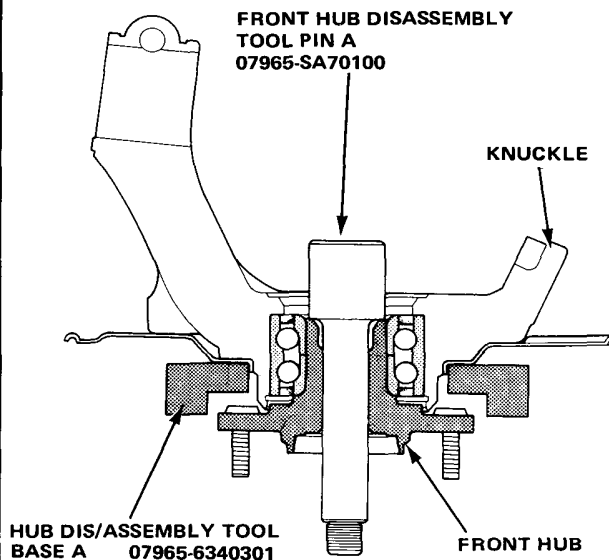
11. Pry the ball joint out of the steering knuckle. If necessary use the ball joint remover.



12. Remove the self locking pinch bolt, then use a brass or lead hammer to tap the knuckle down until it clears the damper.
13. Pull the driveshaft out of the knuckle, then remove the hub/knuckle assembly.
14. Remove the two screws holding the splash guard on the steering knuckle.



15. Remove the hub from the knuckle with a hydraulic press and the special tools shown below.



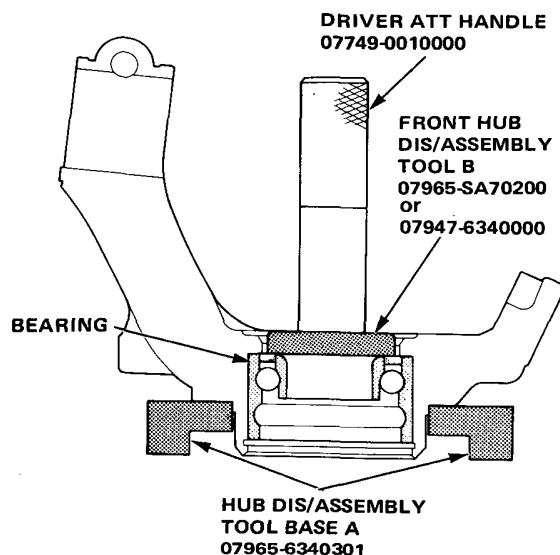
### CAUTION:

- Make sure the knuckle is securely mounted on the base.
- Take care not to distort the splash guard.



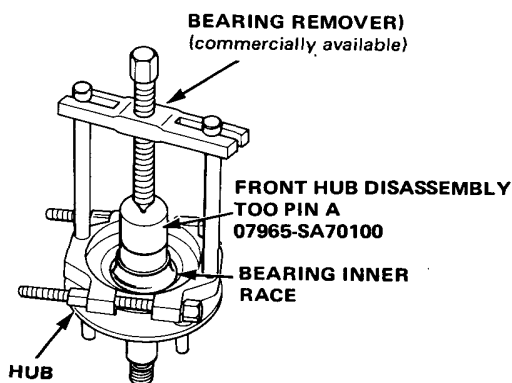
## Bearing Removal

1. Remove the circlip.
2. Remove the bearing from the steering knuckle with the hydraulic press and special tools shown below.



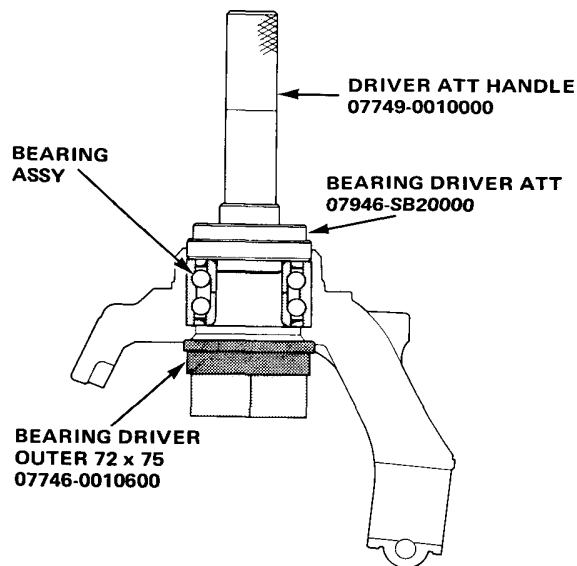
3. Remove the outboard bearing inner race from the hub with the special tool and a bearing remover.

NOTE: Wash the knuckle and hub thoroughly before re-assembly.

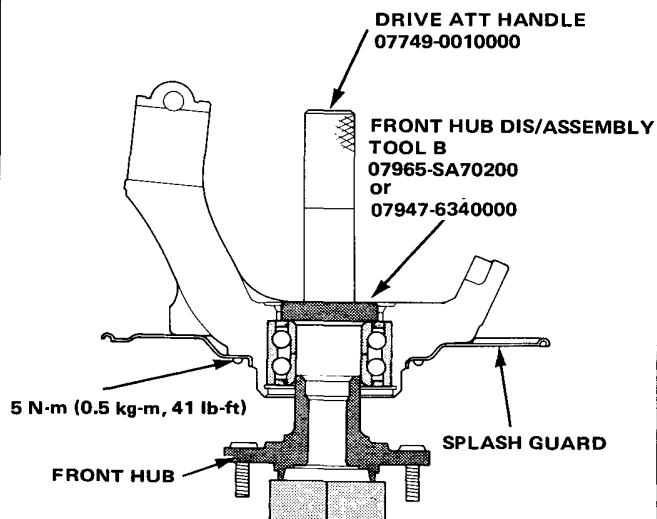


## Knuckle/hub Reassembly

1. Push the bearing assy into the knuckle with a hydraulic press and the special tools shown below.



2. Install the circlip.
3. Install the splash board.
4. Push the front hub into the knuckle with a hydraulic press and the special tools shown below.

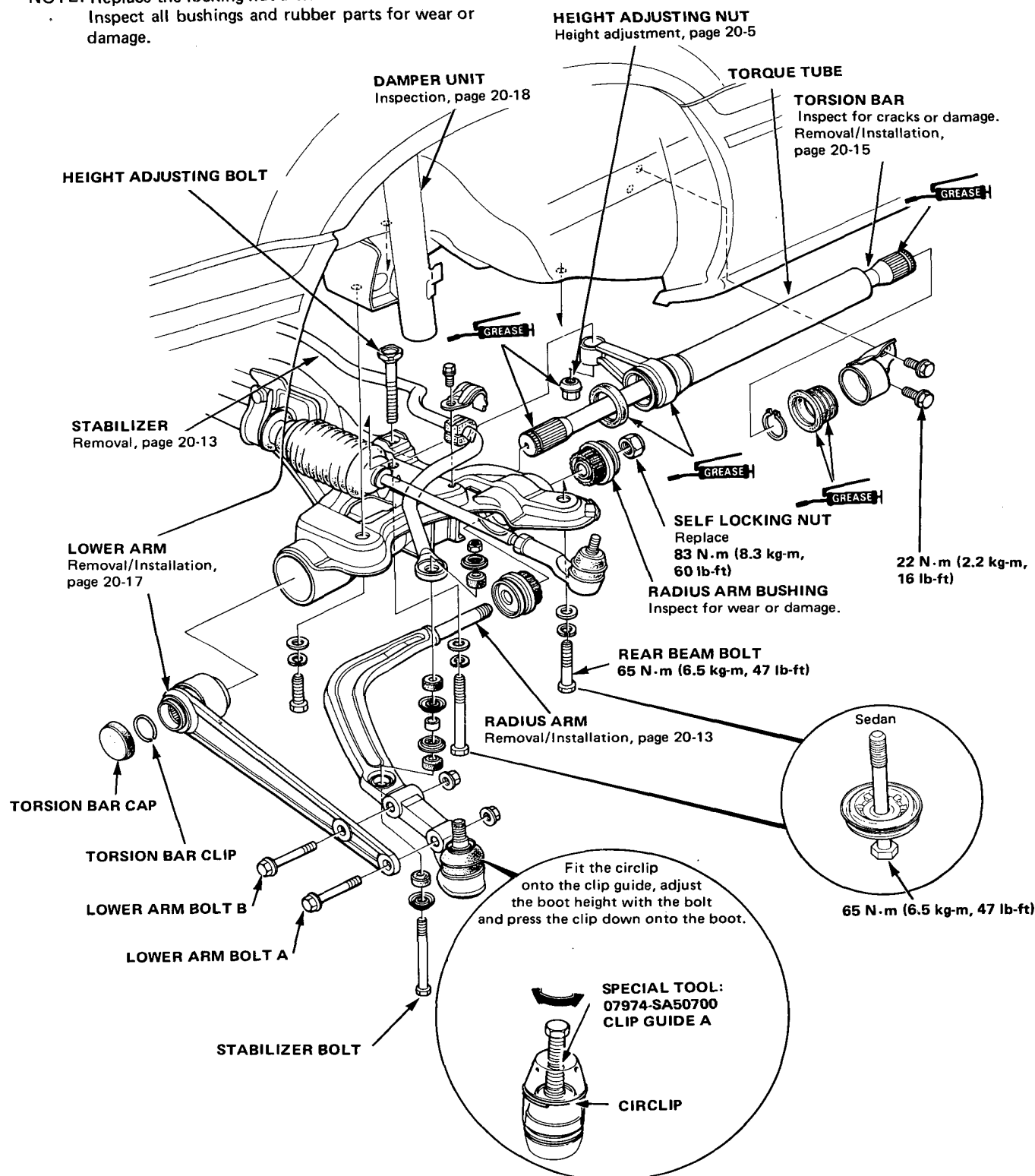


# Lower Arm/Radius Arm/Stabilizer/Torsion Bar

## Index

NOTE: Replace the locking nut after removal.

Inspect all bushings and rubber parts for wear or damage.



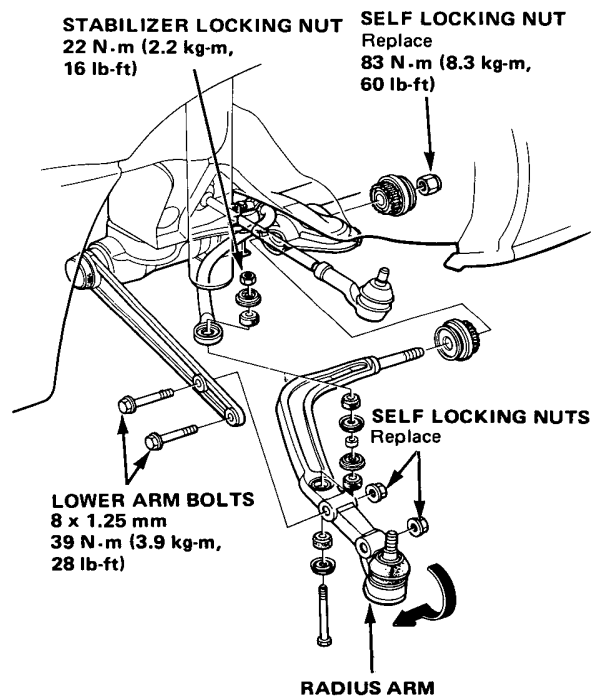
# Radius Arm

## Removal/Installation

1. Raise the front of the car off the ground and support it with safety stands (see page 1-7 for the proper location of the safety stands).
2. Remove the front wheels.
3. Remove the radius arm ball joint from the knuckle. (Page 20-10)

**CAUTION:** Make sure the floor jack is positioned securely under the lower control arm at the ball joint. Otherwise, torsion bar tension on the lower control arm may cause the arm to "jump" suddenly away from the steering knuckle as the ball joint is being removed.

4. Remove the radius arm self locking nuts.



5. Remove the stabilizer locking nut and separate the radius arm from the stabilizer spring.
6. Remove the lower arm bolts.
7. Remove the radius arm by pulling it down and then forward.
8. Installation is the reverse order of removal.

**CAUTION:** Tighten all bushings and rubber dampered parts only after the car is back on the ground.

# Stabilizer

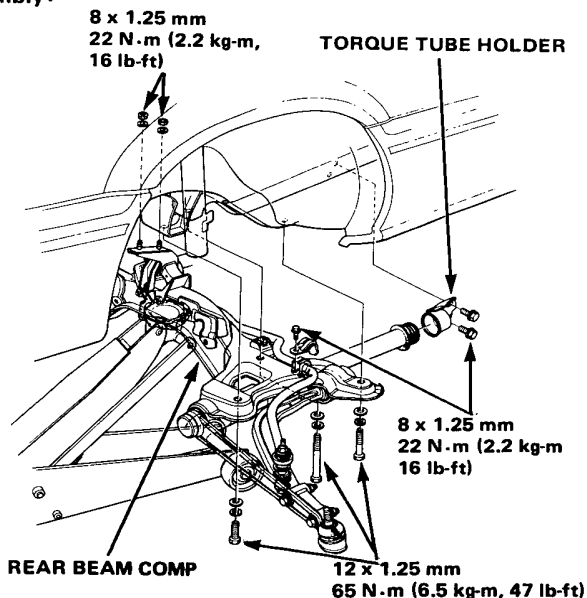
## Removal

1. Raise the front of the car off the ground and support it with safety stands (see page 1-7 for the proper location of the safety stands).
2. Remove the front wheels.
3. Support the weight of the engine with a chain hoist or similar device.
4. Remove the steering gearbox. (Page 18-4)
5. Separate the radius arm ball joint from the knuckle. (Page 20-10)

**CAUTION:** Make sure the floor jack is positioned securely under the lower control arm at the ball joint. Otherwise, torsion bar tension on the lower control arm may cause the arm to "jump" suddenly away from the steering knuckle as the ball joint is being removed.

6. Remove the torque tube holder.
7. Remove exhaust pipes A and B. (Page 9-4)
8. Manual Transmission:  
Disconnect the shift rod and extension from the transmission. (Page 5-9, 5-10)  
Automatic Transmission:  
Remove the shift cable guide from the floor and pull the shift cable down by hand.
9. Remove the engine mount bracket nuts.
10. Pry off the rear beam by placing a jack at the center and removing the six 12 mm bolts.

**CAUTION:** Take care not to drop the rear beam assembly.



11. Remove the stabilizer bracket and bolt, and then remove the stabilizer spring.
12. Remove the rear mounting bracket.

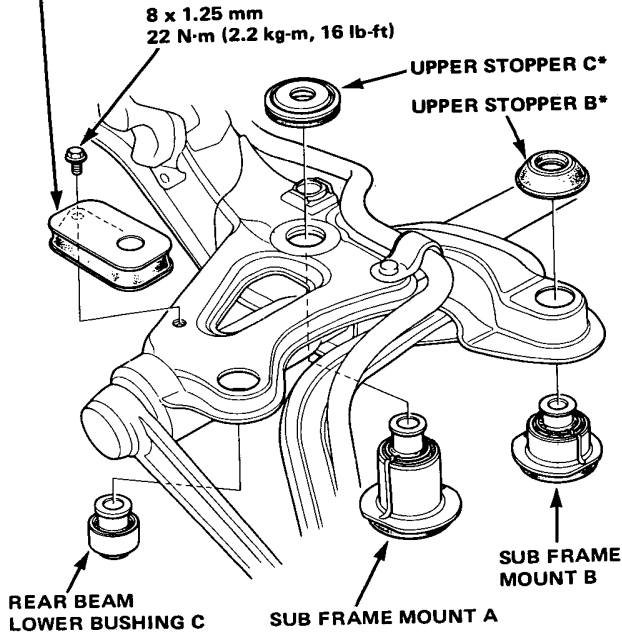
# Sub Frame Mount/Lower Bushing(4D)

## Installation

Whenever the rear beam is replaced, the rear beam lower bushing C and sub frame mounts A and B must be replaced.

### SUB FRAME\* MOUNT

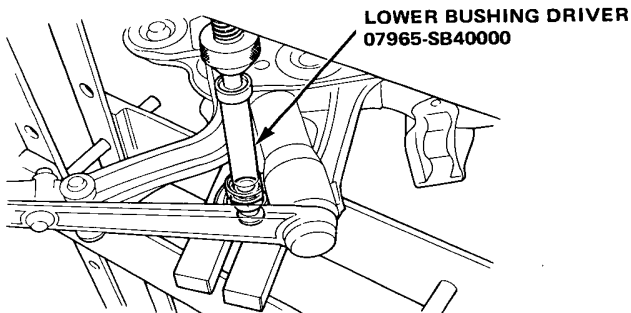
\* reuse, unless damaged



### • Lower bushing C

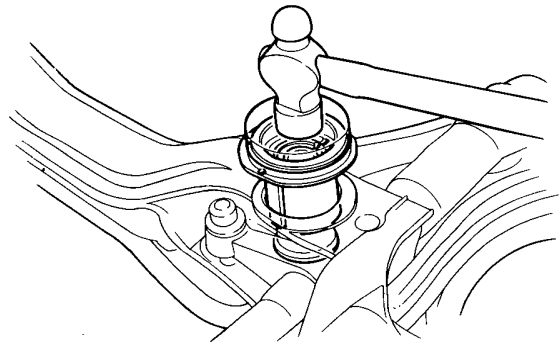
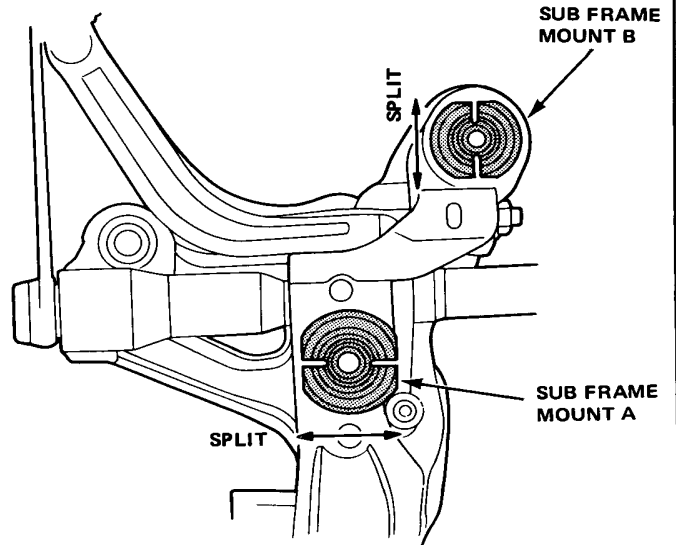
Press a new bushing into the replacement rear beam until the outer edge is flush with the end of the rear beam.

Press-fit load:  
500–1,000 kg (1,102–2,205 lb)



### • Sub frame mounts A and B

Drive new mounts into place in the rear beam with the splits in the mounts positioned as shown.



NOTE: Be sure to use a suitable pad when driving the new mounts into the rear beam as shown.

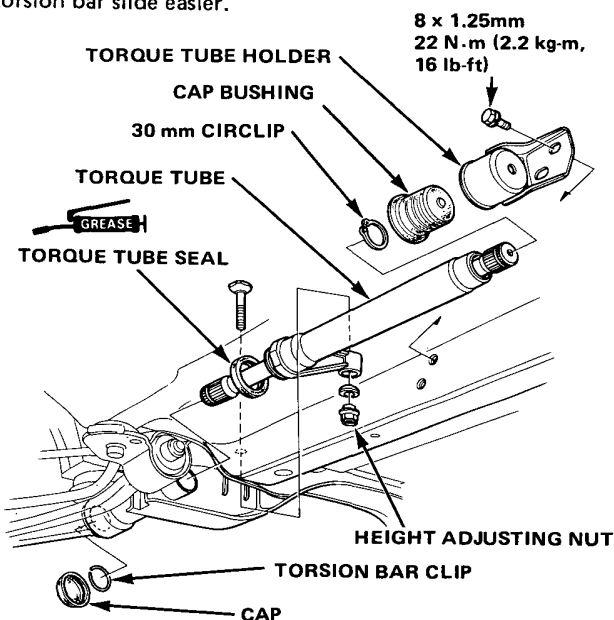


# Torsion Bar Assembly

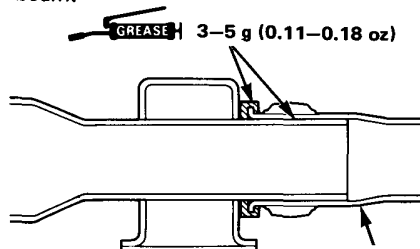
## Removal/Installation

1. Jack up the front of the car and support it with safety stands (see page 1-7 for the proper location of safety stands)
2. Remove the height adjusting nut.
3. Remove the torque tube holder.
4. Remove the 30 mm circlip.
5. Remove the torsion bar cap and then remove the torsion bar clip by tapping the torsion bar out of the torque tube.

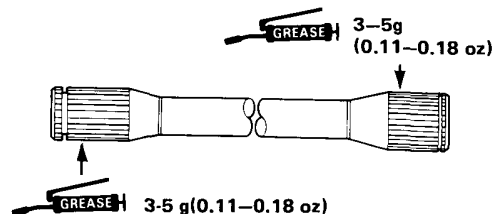
NOTE: Move the lower arm up and down to make the torsion bar slide easier.



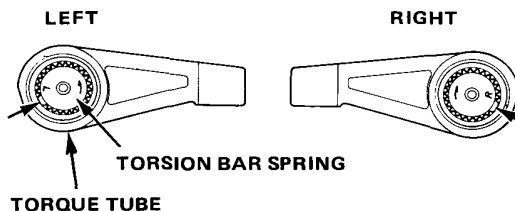
6. Tap the torsion bar backward, out of the torque tube.
7. Remove the torque tube.
8. Inspect the torsion bar for cracks or damage.
9. Install a new torque tube seal onto the torque tube.
10. Coat the torque tube seal and the torque tube sliding surface with grease, then install them on the rear beam.



11. Grease the spline at each end of the torsion.

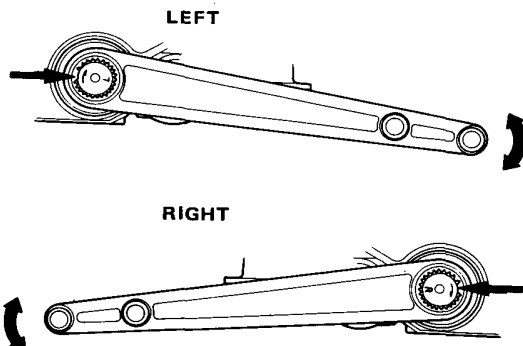


12. Insert the torsion bar into the torque tube from the back.
13. Align the projection or punch mark on the torque tube splines with the cutout or paint mark in the torsion bar splines and insert the torsion bar approximately 10 mm (0.394 in).



NOTE:

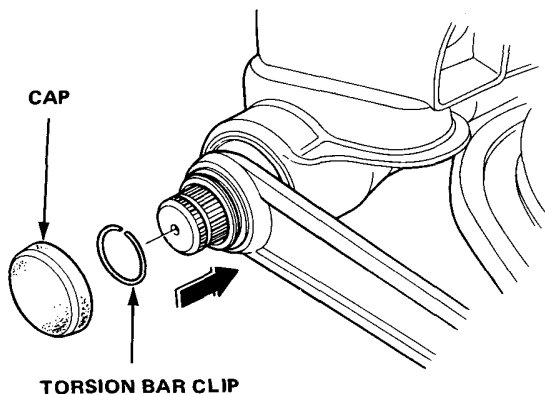
- Move the lower arm up and down for easier installation.
- There are two types of torsion bars and torque tube; torque tubes with and without raised lugs and torsion bars with and without lug reliefs. The torque tube with the raised lug will not fit over a torsion bar without a lug relief. But all other combinations of torque tube and torsion bar will fit together and work properly.



# Torsion Bar Assembly

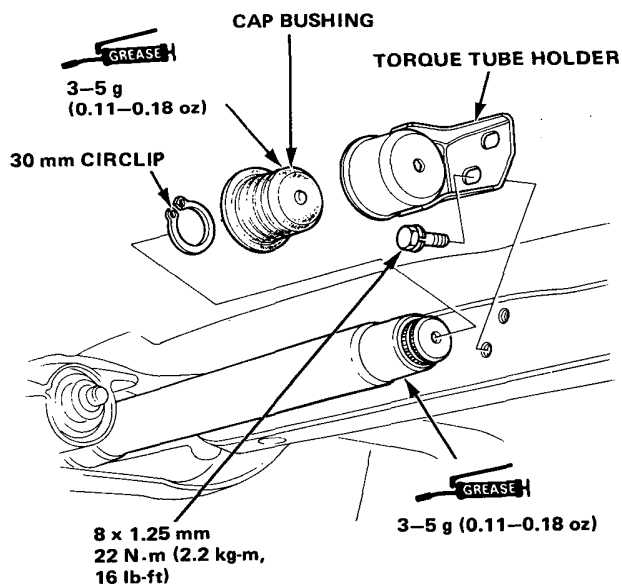
## Removal/Installation (cont'd)

14. Install the clip on the torsion bar, and the cap over it.



15. Install the 30 mm circlip and the torque tube cap.

**NOTE:** Push the torsion bar forward so that there is no clearance between the 30 mm circlip and the torque tube.



18. Tighten the height adjusting nut temporarily.

**NOTE:** Coat the height adjusting nut and the torque tube sliding surface with grease.

19. Set the car on the ground and adjust the torsion bar spring height. (Page 20-5)

16. Coat the cap bushing with grease and install it on the torque tube.
17. Install the torque tube holder.

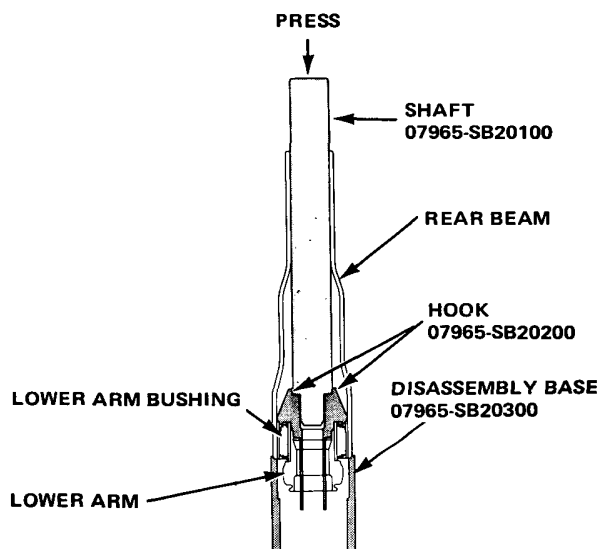
# Lower Arm



## Replacement

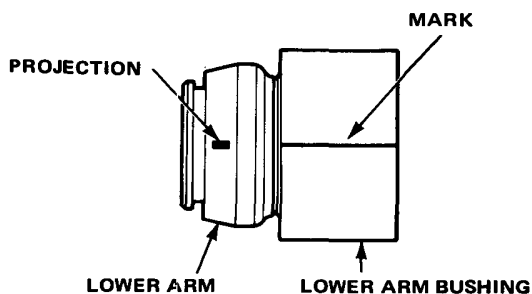
**NOTE:** Lower arm replacement should be done with the rear beam removed from the frame.

1. Remove the lower arm with a hydraulic press and the special tools.
- 1) Set the special tool B in the lower arm bushing outer pipe as shown.
- 2) Insert special tool A into the rear beam to set special tool B.
- 3) Place special tool C under the rear beam and remove the lower arm by pressing tool A.

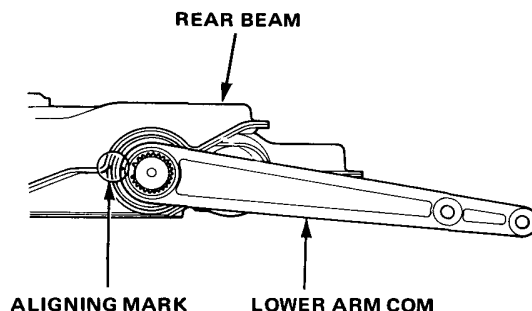


### LOWER ARM COMP DIS/ASSEMBLY TOOL SET 07965-SB20000

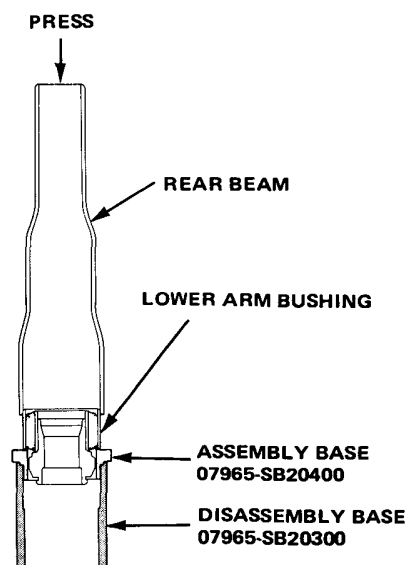
2. Mark the lower arm bushing so that the lower arm can be aligned easily with the rear beam.



3. Align the index mark on the rear beam with the mark on the bushing and then install the rear beam by tapping it with a soft hammer.



4. Install the lower arm with a hydraulic press and the special tools.
- 1) Place special tool D on special tool C. Align special tool D with the lower arm bushing outer pipe.

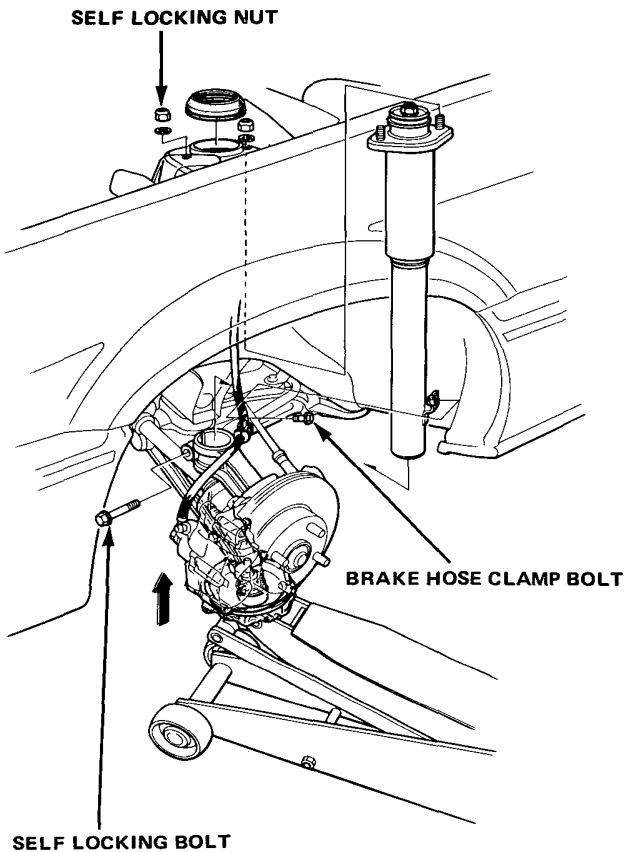


- 2) Insert the rear beam so that the lower arm bushing outer pipe aligns with the rear beam pipe, then press the rear beam.

# Front Damper

## Removal

1. Jack up the front of a car and remove the front wheels.
2. Remove the brake hose clamp bolt.
3. Use a floor jack to support the lower control arm.



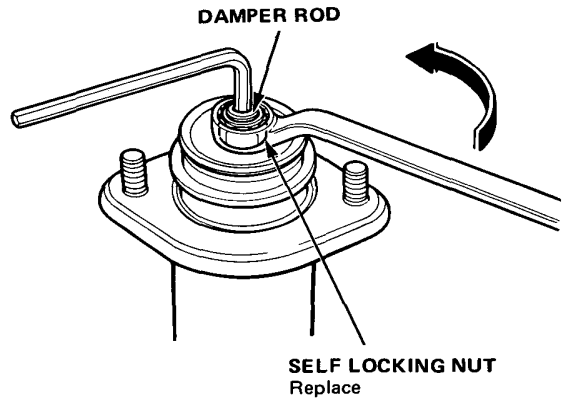
4. Remove the self locking bolt, then lower the jack gradually and remove it from the knuckle.

**CAUTION:** Make sure the floor jack is positioned securely under the lower control arm at the ball joint. Otherwise, torsion bar tension on the control arm may cause the knuckle to "jump" suddenly away from the front shock absorber as the pinch bolt is being removed.

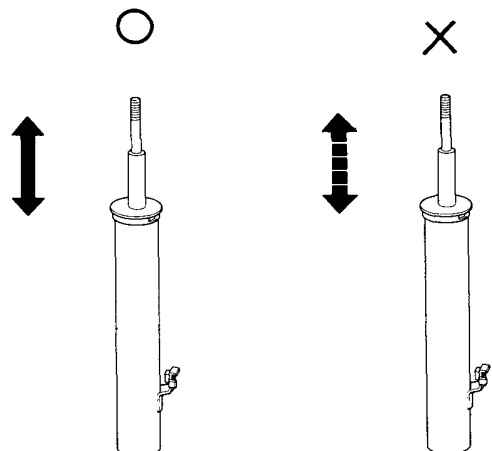
5. Remove the self locking nut and then remove the damper from the frame by compressing the shock absorber spring.

## Disassembly/Inspection

1. Remove the self locking nut while holding the damper rod.



2. Disassemble the damper assembly.
3. Slowly move the damper piston rod a full stroke and check for smooth operation.
4. Jerk the piston rod back and forth 5–10 mm (2–4 in.) to check for smooth operation.
5. Inspect for an oil leak cracks in the piston rod.
6. Listen for abnormal noises.

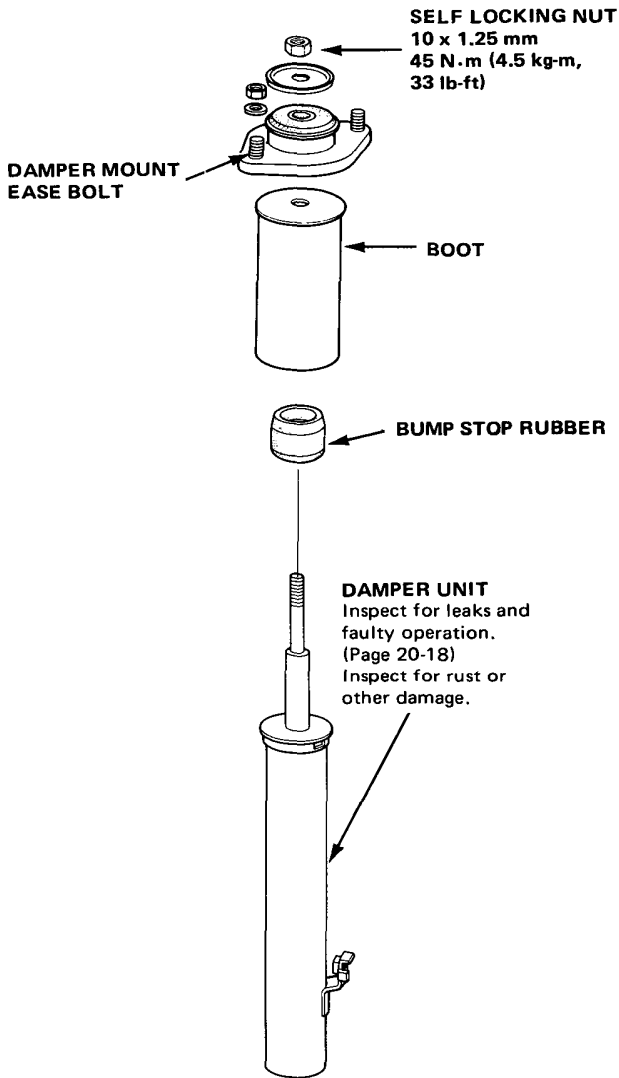


**NOTE:** The damper cannot be disassembled. If it does not operate smoothly, or if it makes any abnormal noises during operation, replace it.

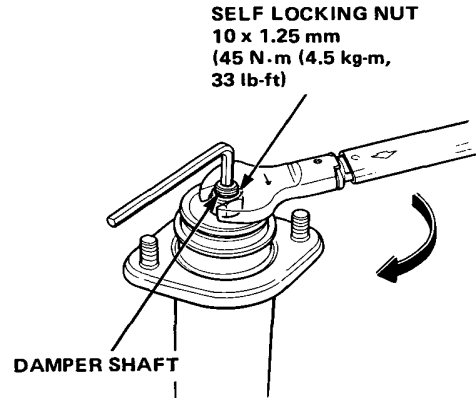


## Assembly/Installation

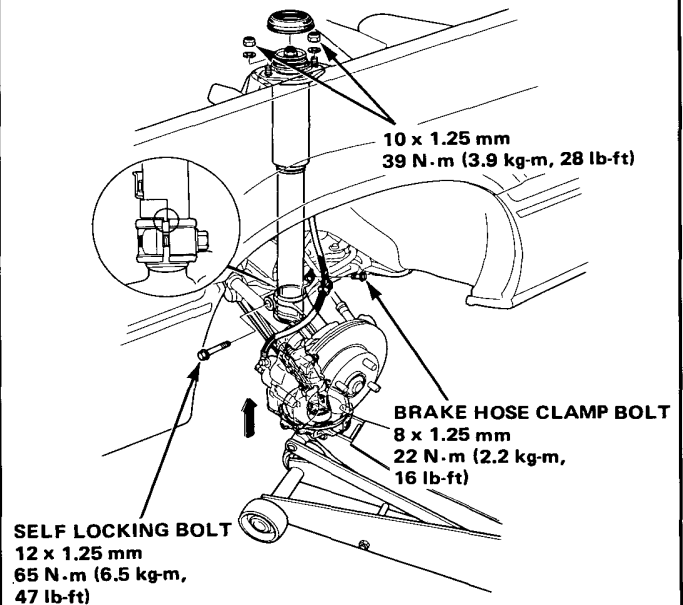
NOTE: Use a new self locking nut for reassembly



1. Install the damper assembly.



2. Install the self locking nut and tighten it while holding the damper shaft.
3. Compress the damper assembly and fit it into the frame.
4. Extend the damper, align the projection on the damper with the slot in the steering knuckle, then fit the damper into the knuckle and tighten the self locking bolt.



5. Install and tighten the brake hose clamp bolt.