

# 2007 Honda Element EX

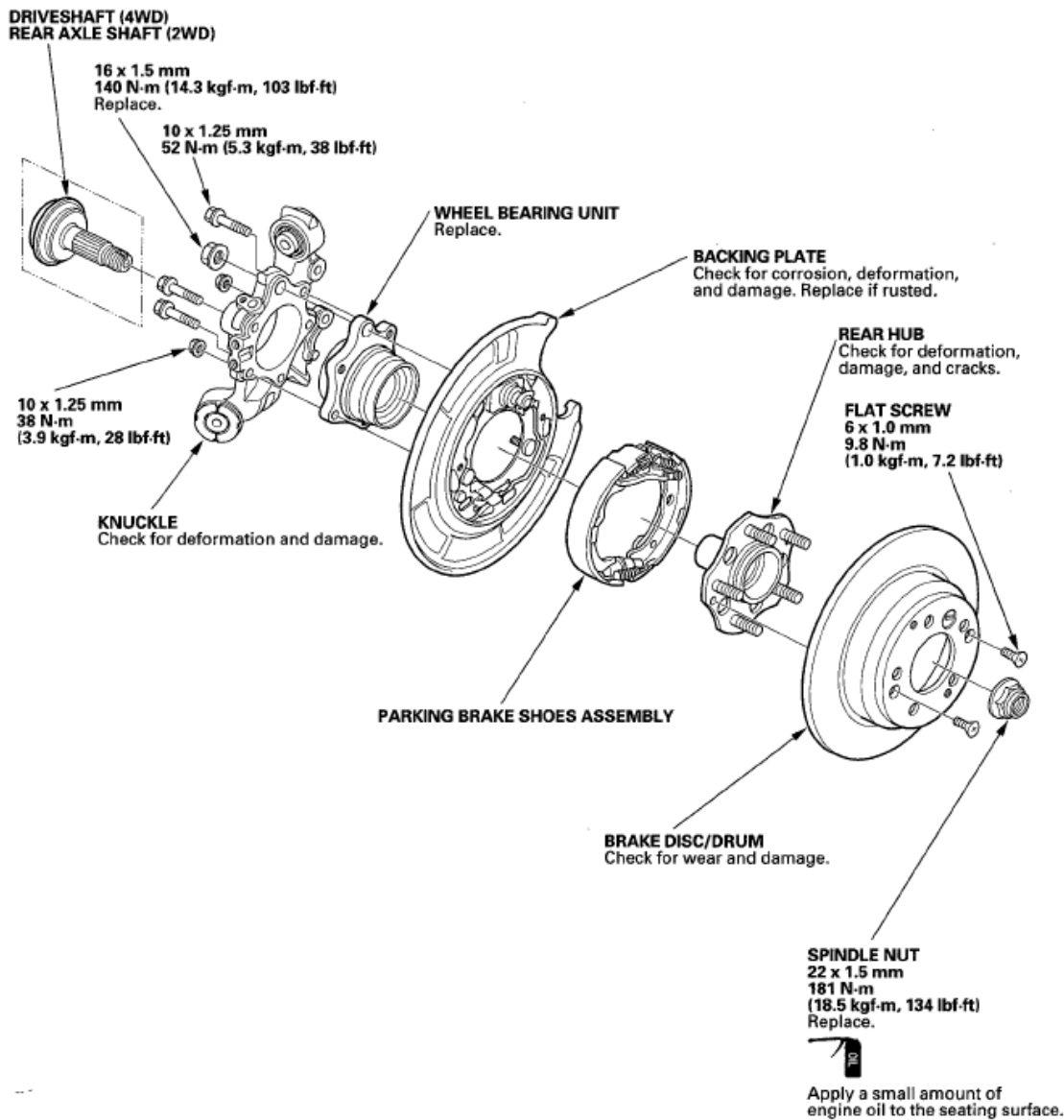
2007-08 SUSPENSION Rear Suspension - Element

## 2007-08 SUSPENSION

### Rear Suspension - Element

## KNUCKLE/HUB/WHEEL BEARING REPLACEMENT

### EXPLODED VIEW



**Fig. 1: Exploded View Of Knuckle/Hub/Wheel Bearing With Torque Specifications**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

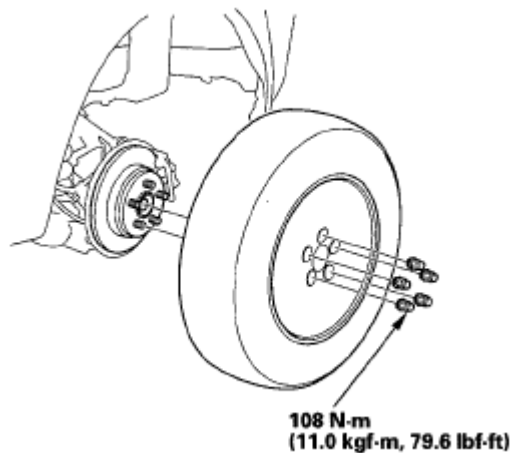
### Special Tools Required

- Attachment, 62 x 68 mm 07746-0010500
- Driver 07749-0010000
- Hub dis/assembly tool 07965-SA70100
- Support base 07965-SD90100

**NOTE:** The illustrations show except SC model.

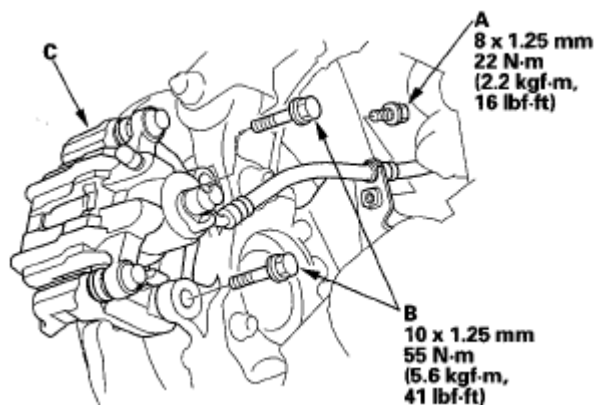
## KNUCKLE/HUB REPLACEMENT

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS** ).
2. Remove the wheel nuts and rear wheel.



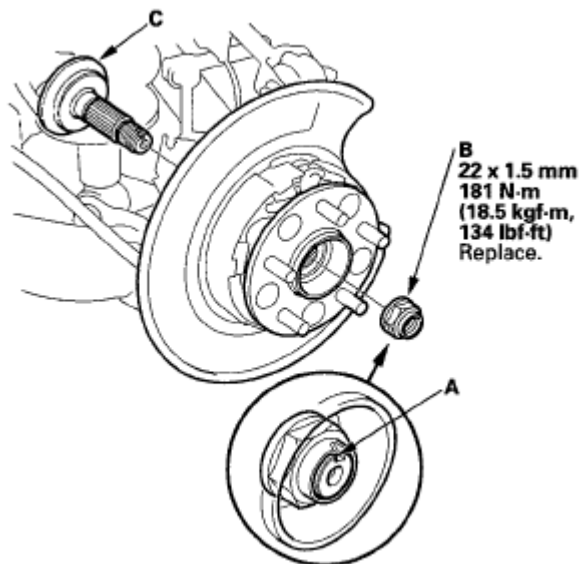
**Fig. 2: Identifying Rear Wheel And Wheel Nuts With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Release the parking brake lever.
4. Remove the brake hose mounting bolt (A).



**Fig. 3: Identifying Brake Hose Mounting Bolt With Torque Specifications**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the brake caliper bracket mounting bolts (B), then hang the caliper assembly (C) from the knuckle. To prevent damage to the caliper or brake hose, use a short piece of wire to hang the caliper assembly from the undercarriage. Do not twist the brake hose excessively.
6. Release the parking brake, and remove the brake disc/drum from the rear hub (see **REAR BRAKE DISC REPLACEMENT** ).
7. Raise the stake (A) of the spindle nut (B), then remove and discard the nut. Remove the rear axle shaft (C) from vehicles with 2WD.



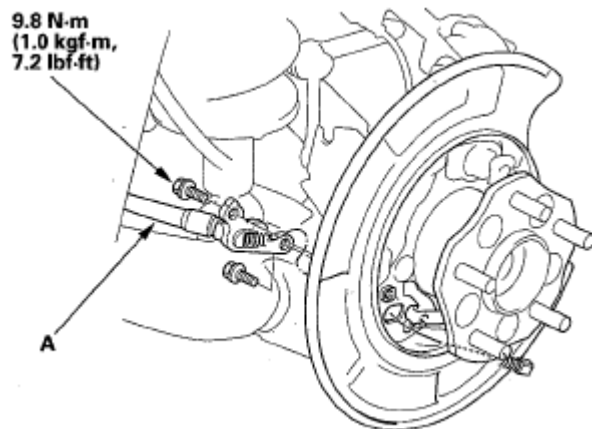
**Fig. 4: Identifying Spindle Nut With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Check the rear hub for damage and cracks.
9. Remove the parking brake shoes (see **PARKING BRAKE SHOE REPLACEMENT** ).
10. Remove the parking brake cable (A) from the backing plate.

**NOTE:** The parking brake cable must not be bent or distorted. This will lead to stiff operation and premature cable failure.

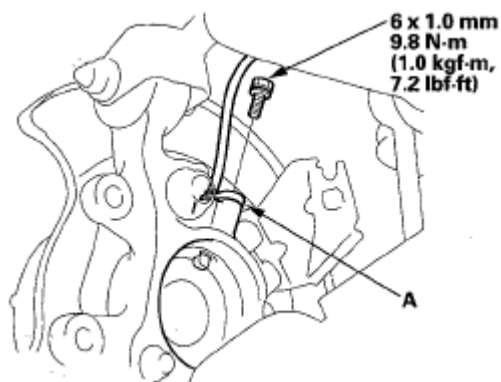
## 2007 Honda Element EX

2007-08 SUSPENSION Rear Suspension - Element



**Fig. 5: Identifying Parking Brake Cable With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

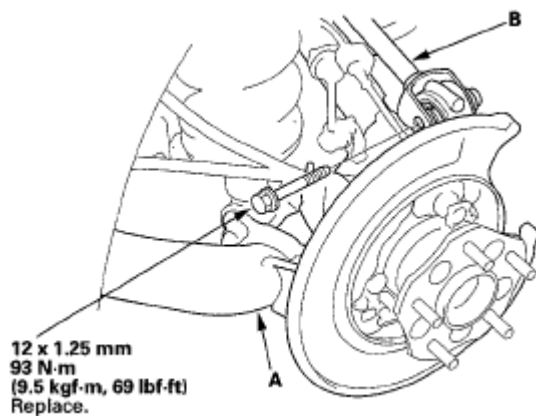
11. Remove the wheel sensor (A) from the knuckle. Do not disconnect the wheel sensor connector.



**Fig. 6: Identifying Wheel Sensor With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

12. Place a floor jack under the trailing arm (A) to support it.

**NOTE:** Do not place the jack against the plate section of the trailing arm. Be careful not to damage any suspension components.



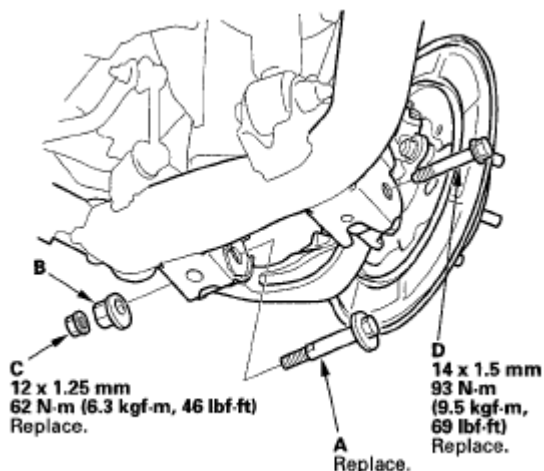
**Fig. 7: Identifying Trailing Arm With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

13. Remove the flange bolt, and disconnect the upper arm (B) from the knuckle.

**NOTE:** Use a new flange bolt during reassembly.

14. Mark the cam positions of the adjusting bolt (A) and adjusting cam (B), then remove the self-locking nut (C), adjusting cam, and adjusting bolt.

**NOTE:** Use a new self-locking nut and a new adjusting bolt during reassembly.



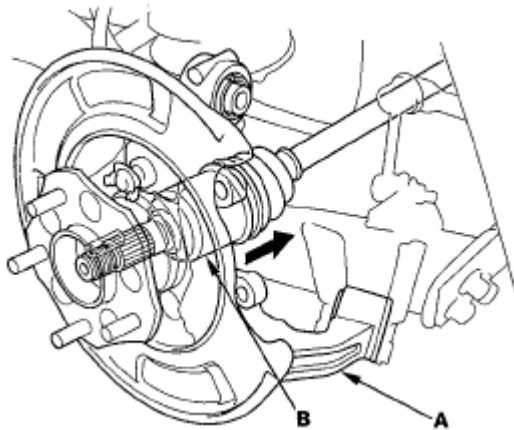
**Fig. 8: Identifying Adjusting Bolt, Adjusting Cam, Self-Locking Nut, Adjusting Bolt And Flange Bolt With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

15. Remove the flange bolt (D).

**NOTE:** Use a new flange bolt during reassembly.

16. Remove the knuckle (A) while pushing in the driveshaft and holding the driveshaft outboard joint (B) (4WD only).

**NOTE:** Do not pull the driveshaft end outward. The driveshaft inboard joint may come apart (4WD only).

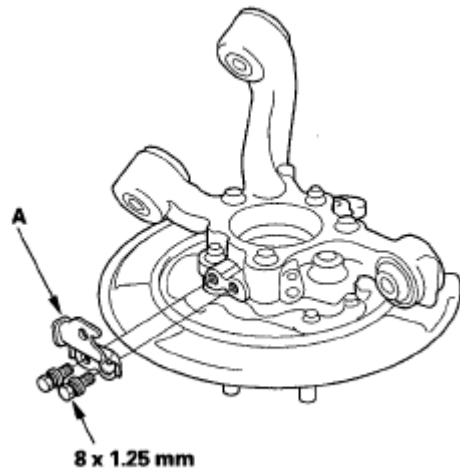


**Fig. 9: Pushing Driveshaft And Holding Driveshaft Outboard Joints**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

17. Install the knuckle/hub in the reverse order of removal, and note these items:
  - First install all the components, and lightly tighten the bolts and nuts, then place a floor jack under the trailing arm, and raise the suspension to load it with the vehicle's weight before fully tightening the bolts and nuts to the specified torque values.
  - Align the cam positions of the adjusting bolt and the adjusting cam with the marked positions when tightening.
  - Use a new spindle nut during reassembly.
  - Before installing the spindle nut, apply a small amount of engine oil to the seating surface of the nut. After tightening, use a drift to stake the spindle nut shoulder against the driveshaft (4WD) or rear axle shaft (2WD).
  - Before installing the brake disc/drum, clean the mating surfaces of the rear hub and the inside of the brake disc/drum.
  - Before installing the wheel, clean the mating surfaces of the brake disc/drum and the inside of the wheel.
  - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT** ).

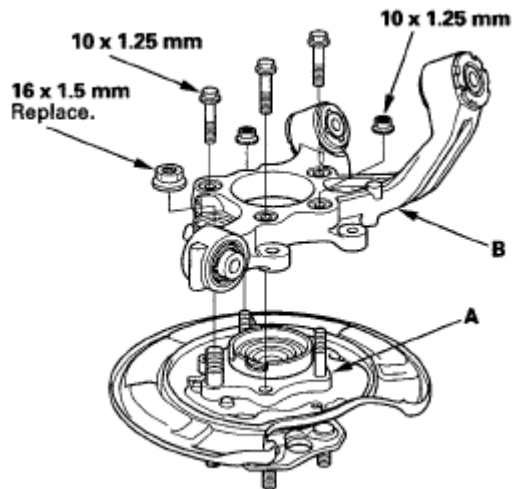
## WHEEL BEARING UNIT REPLACEMENT

1. Remove the brake hose mounting bracket (A).



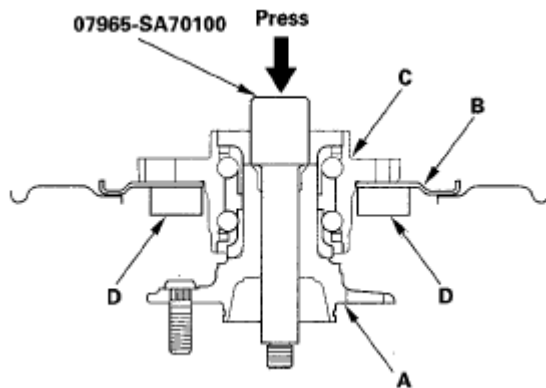
**Fig. 10: Identifying Brake Hose Mounting Bracket**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Separate the wheel bearing unit (A) from the knuckle (B).



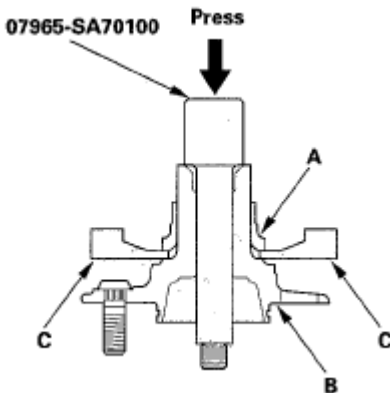
**Fig. 11: Identifying Wheel Bearing Unit And Knuckle**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Separate the hub (A) and backing plate (B) from wheel bearing unit (C) using the hub dis/assembly tool and a hydraulic press. Hold the wheel bearing unit with a press attachment (D) or equivalent tool. Be careful not to deform the backing plate. Hold onto the hub to keep it from falling when pressed clear.



**Fig. 12: Separating Hub And Backing Plate From Wheel Bearing Unit Using Hydraulic Press**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Press the wheel bearing inner race (A) out of the hub (B) using the hub dis/assembly tool, a commercially available bearing separator (C), and a press.



**Fig. 13: Pressing Wheel Bearing Inner Race Out Of Hub Using Hub Dis/Assembly Tool**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Wash the knuckle and hub thoroughly in a high flash point solvent before reassembly.
6. Install the hub (A) and backing plate (B) on the new wheel bearing unit (C) using the driver, the attachment, the support base and a hydraulic press. Be careful not to deform the backing plate.

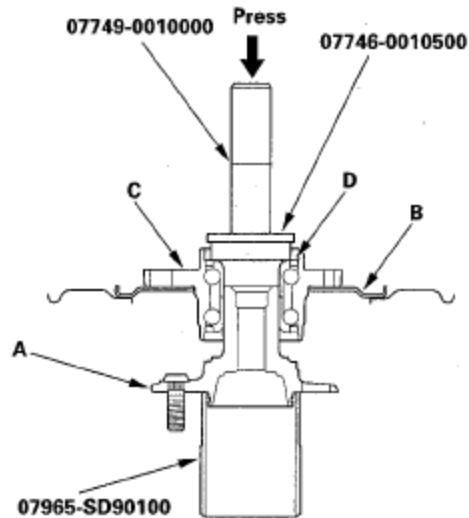
**NOTE:**

- Remove any oil, grease, dust, metal debris, and other foreign material from the encoder surface (D).
- Keep magnetic tools away from the encoder surface.
- Be careful not to damage the encoder surface.



## 2007 Honda Element EX

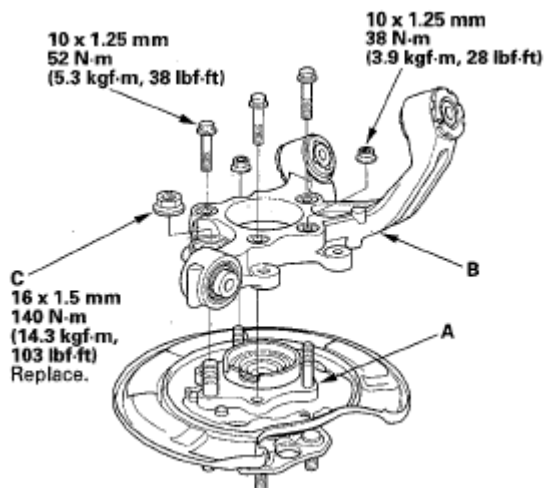
2007-08 SUSPENSION Rear Suspension - Element



**Fig. 14: Identifying Hub And Backing Plate On New Wheel Bearing Unit Using Hydraulic Press**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

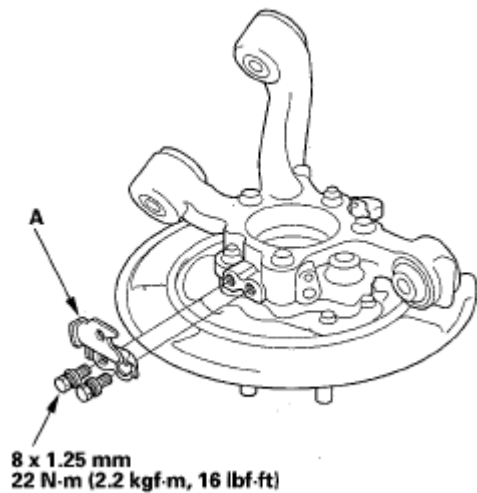
7. Install the wheel bearing unit (A) to the knuckle (B).

**NOTE:** Use a new 16 mm flange nut (C).



**Fig. 15: Identifying Wheel Bearing Unit, Knuckle And Flange Nut With Torque Specifications**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

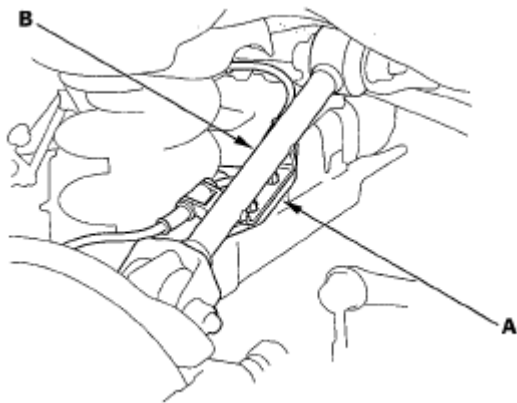
8. Install the brake hose mounting bracket (A).



**Fig. 16: Identifying Brake Hose Mounting Bracket With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

## UPPER ARM REPLACEMENT

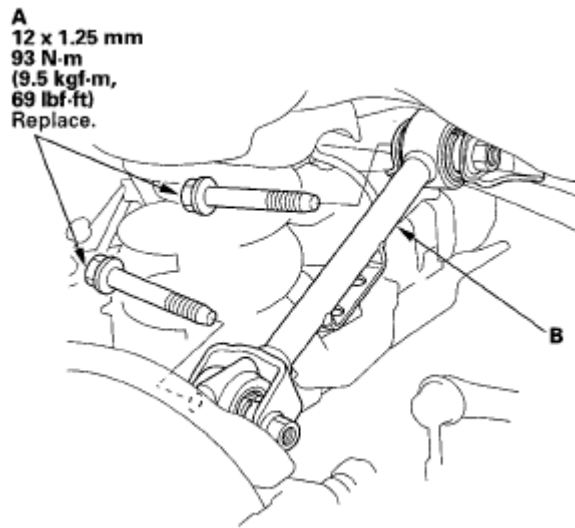
1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS** ).
2. Remove the rear wheel.
3. Place a floor jack under the trailing arm, and support the suspension.
4. Remove the wheel sensor harness bracket (A) from the upper arm (B).



**Fig. 17: Identifying Wheel Sensor Harness Bracket And Upper Arm**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the flange bolts (A), and remove the upper arm (B).

**NOTE:** Use new flange bolts during reassembly.



**Fig. 18: Identifying Flange Bolts And Upper Arm With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

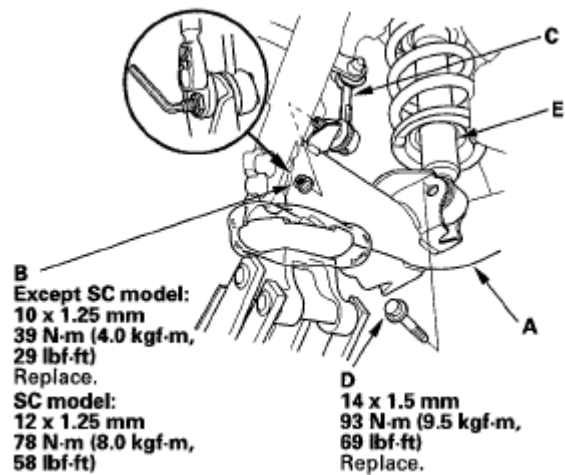
6. Install the upper arm in the reverse order of removal, and note these items:
  - First install all the components, and lightly tighten the bolts and nuts, then place a jack under the trailing arm, and raise the suspension to load it with the vehicle's weight before fully tightening the bolts and nuts to the specified torque values.
  - Before installing the wheel, clean the mating surfaces of the brake disc/drum and the inside of the wheel.
  - Check the wheel alignment, and adjust it if necessary (see **WHEEL ALIGNMENT** ).

## **TRAILING ARM REPLACEMENT**

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS** ).
2. Remove the rear wheel.
3. Remove the knuckle (see **KNUCKLE/HUB REPLACEMENT** ).
4. Place the floor jack under the trailing arm (A) to support it.

## 2007 Honda Element EX

2007-08 SUSPENSION Rear Suspension - Element



**Fig. 19: Identifying Trailing Arm, Flange Nut, Stabilizer Link, Flange Bolt And Damper With Torque Specification**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Remove the flange nut (B), and disconnect the stabilizer link (C) from the trailing arm.

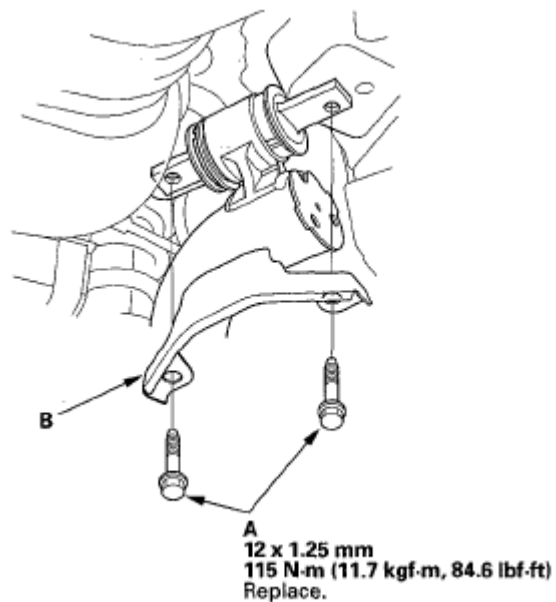
**NOTE:**        **Except SC model: Use a new flange nut during reassembly.**

6. Remove the flange bolt (D), and disconnect the damper (E) from the trailing arm.

**NOTE:**        **Use a new flange bolt during reassembly.**

7. Remove the trailing arm front mounting bolts (A), and remove the trailing arm bushing guard (B) (only left side).

**NOTE:**        **Use new mounting bolts during reassembly.**



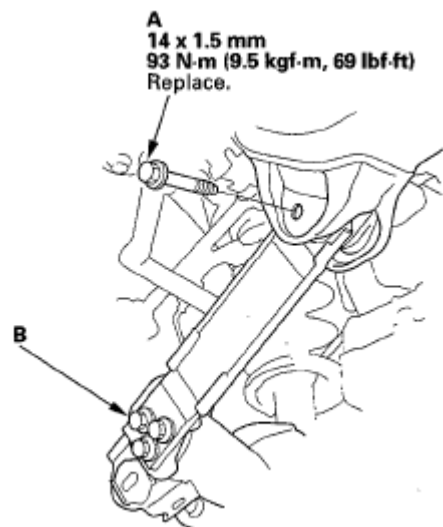
**Fig. 20: Identifying Trailing Arm Front Mounting Bolts And Trailing Arm Bushing Guard With Torque Specification**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

8. Remove the trailing arm rear mounting bolt (A).

**NOTE:** Do not loosen the special bolts (B) on the trailing arm.

**NOTE:** Use a new mounting bolt during reassembly.



**Fig. 21: Identifying Trailing Arm Rear Mounting Bolt With Torque Specification**

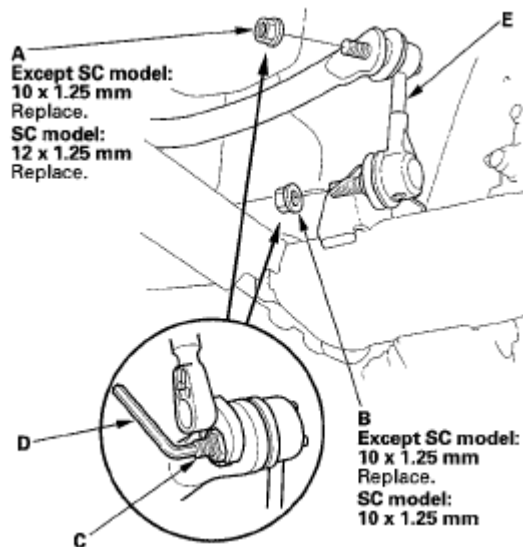
Courtesy of AMERICAN HONDA MOTOR CO., INC.

9. Lower the jack, and remove the trailing arm.
10. Install the trailing arm in the reverse order of removal, and note these items:
  - First install all the components, and lightly tighten the bolts and nuts, then place a jack under the trailing arm, and raise the suspension to load it with the vehicle's weight before fully tightening the bolts and nuts to the specified torque values.
  - Install the trailing arm bushing guard correctly on the left side.
  - Before installing the wheel, clean the mating surfaces of the brake disc/drum and the inside of the wheel.
  - Check the wheel alignment, and adjust it if necessary (see WHEEL ALIGNMENT ).

## STABILIZER LINK REMOVAL/INSTALLATION

**NOTE:** The illustrations show except SC model.

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see LIFT AND SUPPORT POINTS ).
2. Remove the rear wheel.
3. Remove the self-locking nut (A) and flange nut (B) while holding the respective joint pin (C) with a hex wrench (D), and remove the stabilizer link (E).



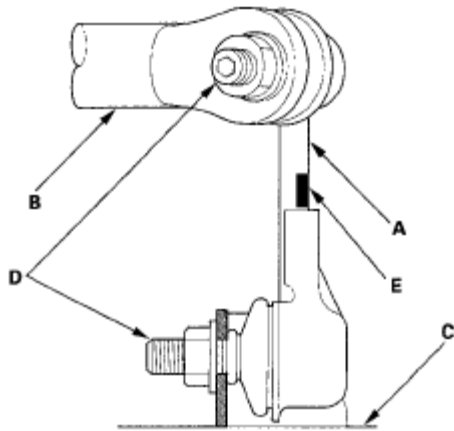
**Fig. 22: Identifying Self-Locking Nut, Flange Nut, Respective Joint Pin , Hex Wrench And Stabilizer Link**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the stabilizer link (A) on the stabilizer bar (B) and trailing arm (C) with the joint pins (D) set at the center of their range of movement.

**NOTE:** The left stabilizer has a yellow paint mark (E), while the right stabilizer link

has a white paint mark.

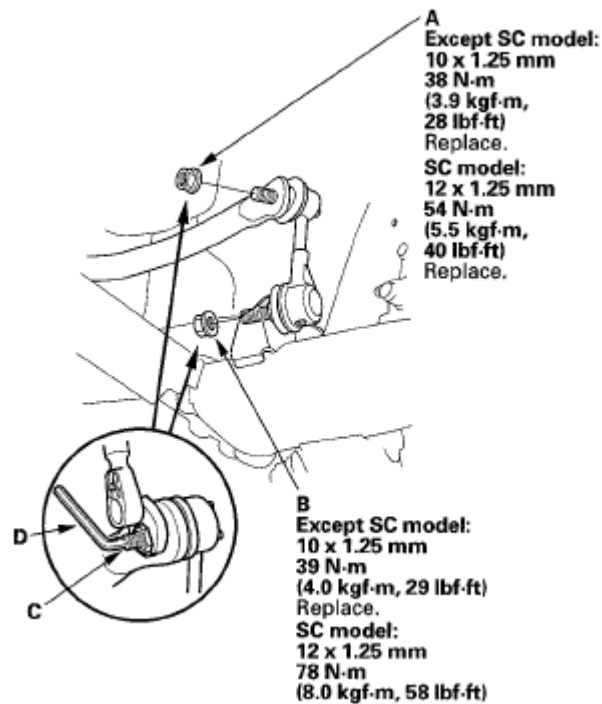


**Fig. 23: Identifying Stabilizer Link, Stabilizer Bar, Trailing Arm And Joint Pins**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install a new self-locking nut and flange nut, and lightly tighten them.

**NOTE:        Except SC model: Use a new flange nut during reassembly.**

6. Place a jack under the trailing arm at the knuckle-side end, and raise the suspension to load it with the vehicle's weight.
7. Tighten the self-locking nut (A) and flange nut (B) to the specified torque values while holding the respective joint pin (C) with a hex wrench (D).



**Fig. 24: Tightening Self-Locking Nut And Flange Nut With Torque Specifications**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

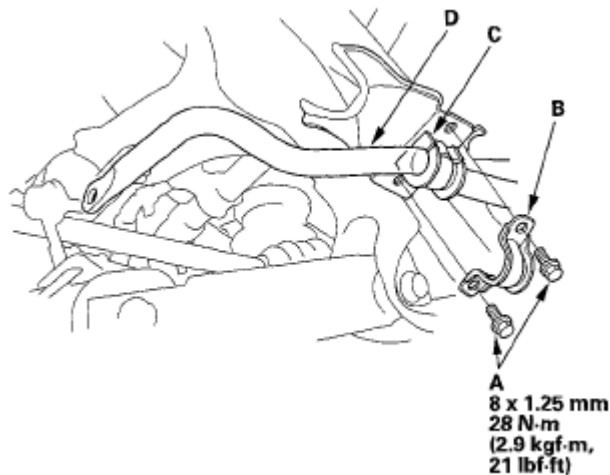
8. Clean the mating surfaces of the brake disc/drum and the inside of the wheel, then install the rear wheel, and test-drive the vehicle.
9. After 5 minutes of driving, torque the self-locking nut torque value again.

## STABILIZER BAR REPLACEMENT

**NOTE:** The illustrations show except SC model.

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS** ).
2. Remove the rear wheels.
3. Disconnect the stabilizer links from the stabilizer bar on the right and left sides (see **STABILIZER LINK REMOVAL/INSTALLATION** ).
4. Remove the flange bolts (A) and the bushing holders (B), then remove the bushings (C) and the stabilizer bar (D).

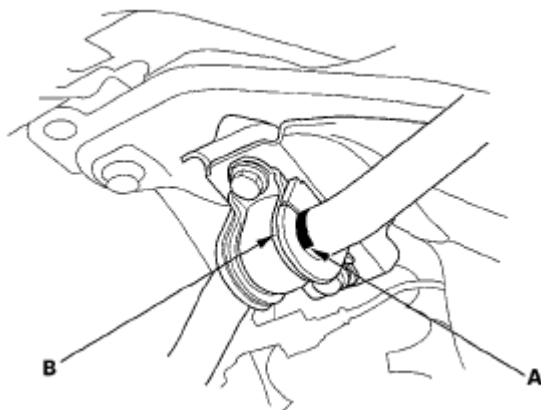




**Fig. 25: Identifying Flange Bolts, Bushing Holders, Bushings And Stabilizer Bar With Torque Specification**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Install the stabilizer bar in the reverse order of removal, and note these items:
  - Make sure the right and left ends of the stabilizer bar are installed on their respective sides of the vehicle.
  - Align the ends of the paint marks (A) on the stabilizer bar with the bushings (B).
  - Note the direction of the bushing.
  - Refer to stabilizer link removal/installation to connect the stabilizer bar to the links (see **STABILIZER LINK REMOVAL/INSTALLATION** ).
  - Before installing the wheel, clean the mating surfaces of the brake disc/drum and the inside of the wheel.



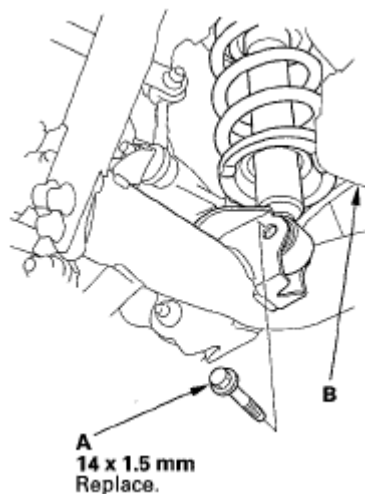
**Fig. 26: Identifying Paint Marks On Stabilizer Bar With Bushings**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

## DAMPER/SPRING REMOVAL AND INSTALLATION

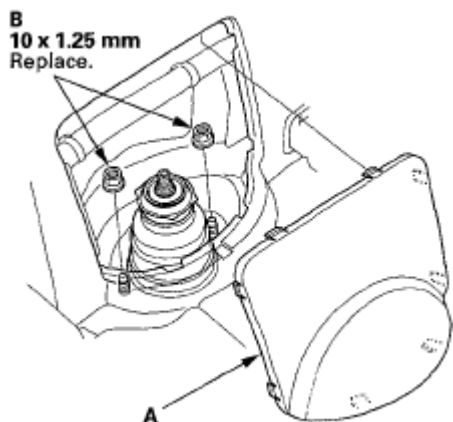
**REMOVAL**

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see **LIFT AND SUPPORT POINTS** ).
2. Remove the rear wheel.
3. Remove the flange bolt (A) from the bottom of the damper.



**Fig. 27: Identifying Flange Bolt And EVAP Canister Mounting**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

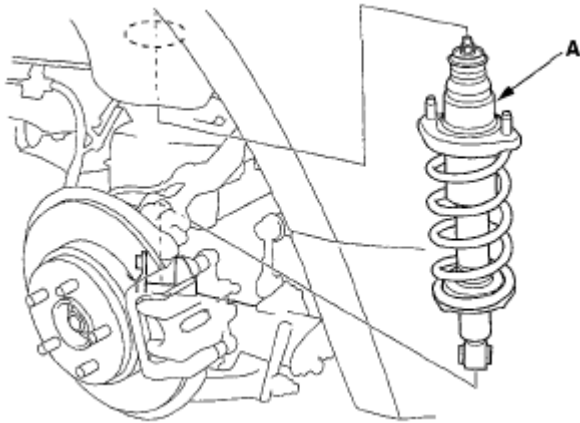
4. Remove the canister mounting bolts, and loosen the EVAP canister (B) mounting (only left side) (see **EVAP CANISTER REPLACEMENT** ).
5. Remove the lid (A) from the rear side trim panel.



**Fig. 28: Identifying Rear Side Trim Panel Lid And Flange Nuts**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

6. Remove the flange nuts (B) from the top of the damper in the cargo area.

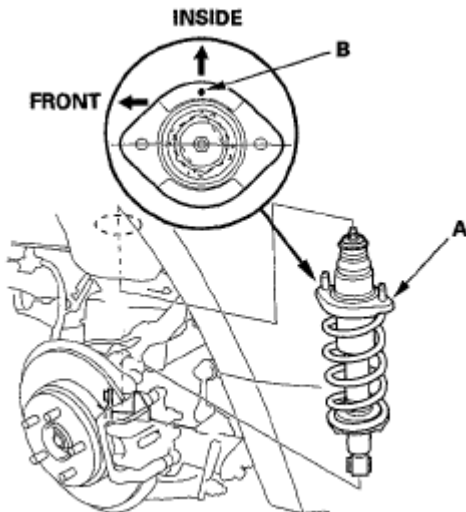
7. Remove the damper assembly (A) from the body.



**Fig. 29: Identifying Damper Assembly**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

## INSTALLATION

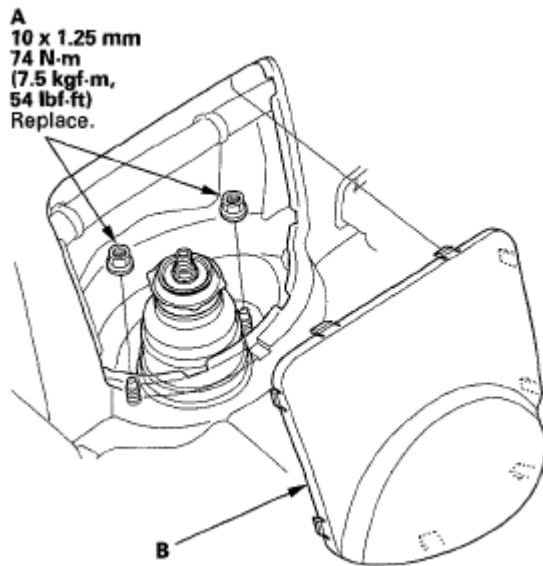
1. Position the damper (A) assembly in the body. Note the direction of the damper mounting base so the indent mark (B) on it is toward the inside of the vehicle.



**Fig. 30: Identifying Damper Assembly**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Loosely install new flange nuts (A) onto the top of the damper.

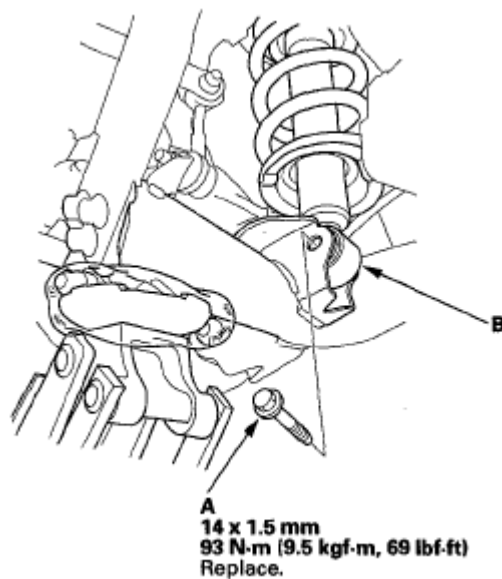
**NOTE:** Install the lid (B) into place securely after tightening the flange nuts to the specified torque value.



**A**  
 10 x 1.25 mm  
 74 N·m  
 (7.5 kgf·m,  
 54 lbf·ft)  
 Replace.

**Fig. 31: Identifying Flange Nuts And Lid With Torque Specification**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

- Loosely install a new flange bolt (A) on the bottom of the damper (B).



**A**  
 14 x 1.5 mm  
 93 N·m (9.5 kgf·m, 69 lbf·ft)  
 Replace.

**Fig. 32: Identifying Damper With Flange Bolt With Torque Specification**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

- Place a jack under the trailing arm, and raise the suspension to load it with the vehicle's weight.
- Tighten the nuts and bolt to the specified torque values.
- Install the lid to the rear side trim panel.
- Install the EVAP canister mounting bolts (only left side) (see **EVAP CANISTER REPLACEMENT** ).

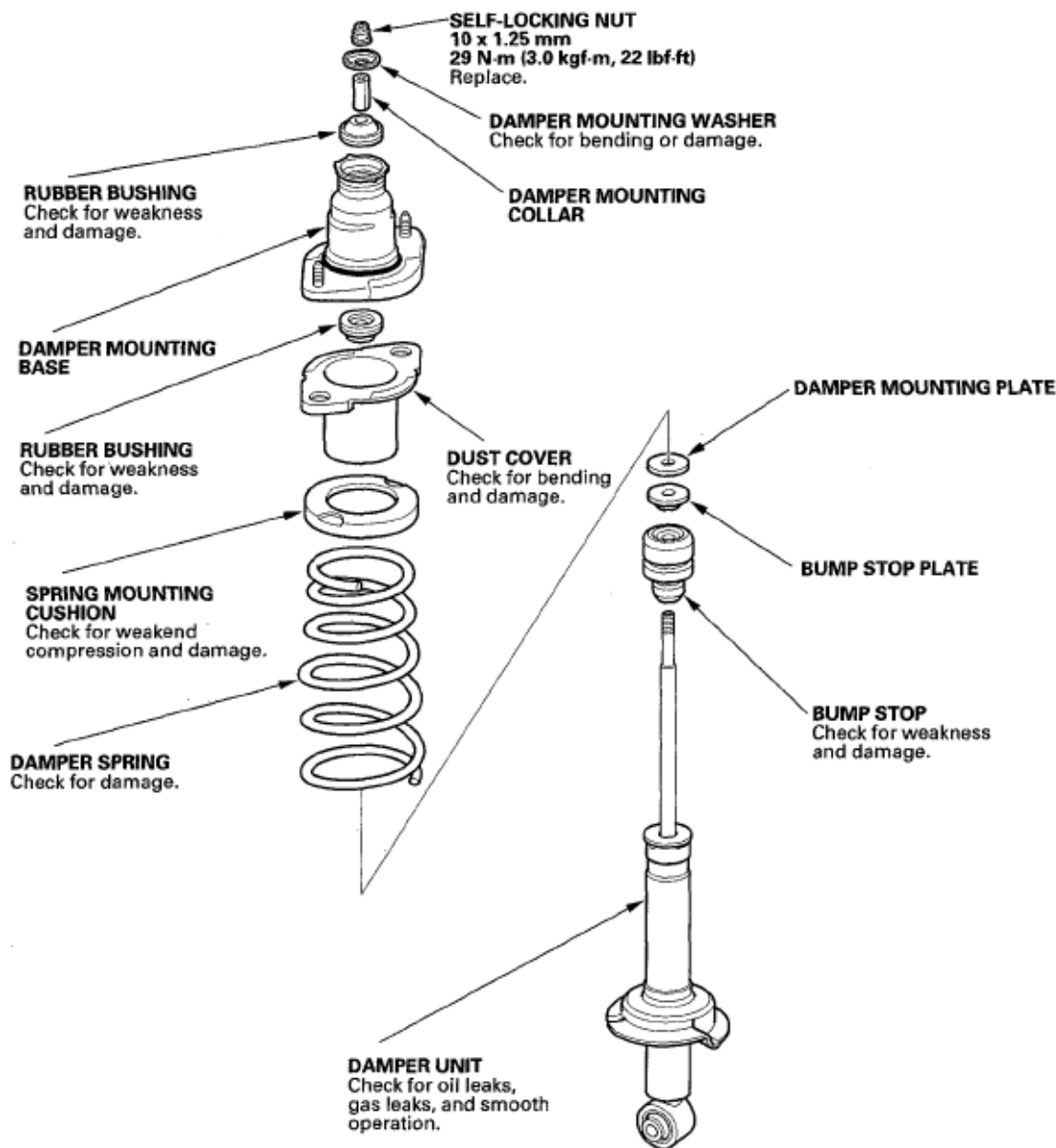
## 2007 Honda Element EX

2007-08 SUSPENSION Rear Suspension - Element

- Clean the mating surfaces of the brake disc/drum and the inside of the wheel, then install the rear wheel.
- Check the wheel alignment, and adjust it if necessary (see WHEEL ALIGNMENT ).

### DAMPER/SPRING DISASSEMBLY, INSPECTION, AND REASSEMBLY

#### EXPLODED VIEW



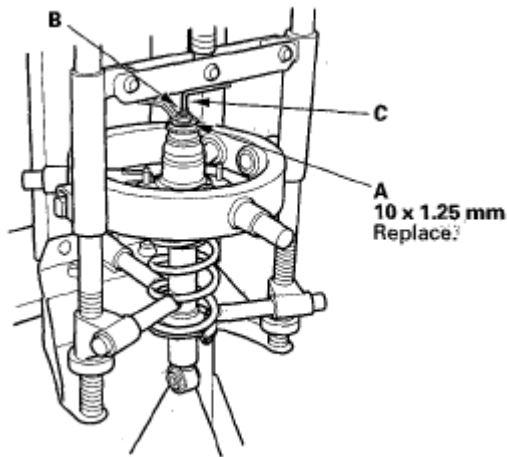
**Fig. 33: Exploded View Of Damper/Spring With Torque Specification**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

**NOTE:** When compressing the damper spring, use a commercially available strut spring compressor (Branick MST-580A or Model 7200 or equivalent) according

to the manufacturer's instructions.

## DISASSEMBLY

1. Compress the damper spring, then remove the self-locking nut (A) while holding the damper shaft (B) with a hex wrench (C). Do not compress the spring more than necessary to remove the nut.

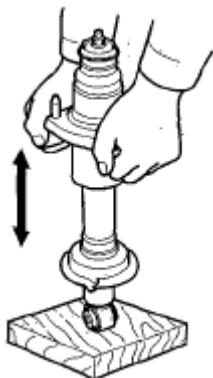


**Fig. 34: Removing Self-Locking Nut With Hex Wrench**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

2. Release the pressure from the strut spring compressor, then disassemble the damper as shown in **Exploded View**.

## INSPECTION

1. Reassemble all the parts, except for the damper spring.
2. Compress the damper assembly by hand, and check for smooth operation through a full stroke, both compression and extension. The damper; should extend smoothly and constantly when compression is released. If it does not, the gas is leaking and the damper should be replaced.



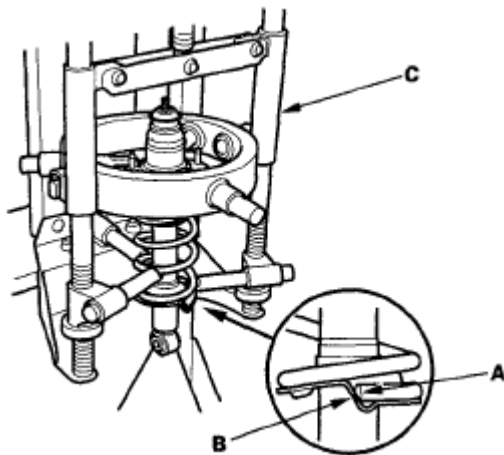
**Fig. 35: Compressing Damper Assembly By Hand**

Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Check for oil leaks, abnormal noises, or binding during these tests.

### REASSEMBLY

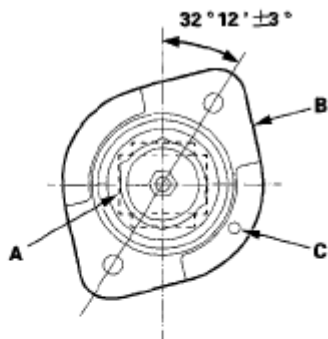
1. Compress the damper spring with the strut spring compressor.
2. Install all the parts except the damper mounting washer and self-locking nut onto the damper unit by referring to the **EXPLODED VIEW**. Align the bottom of the spring (A) and the stepped part of the lower spring seat (B), and align the damper mounting base as shown.



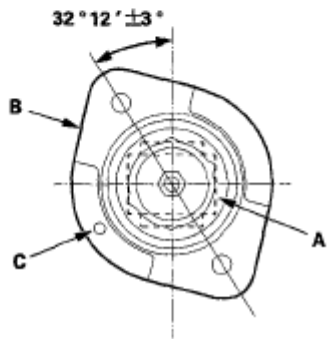
**Fig. 36: Aligning Bottom Of Spring And Stepped Part Of Lower Spring Seat**  
Courtesy of AMERICAN HONDA MOTOR CO., INC.

3. Align the bottom (A) of the damper and the damper mounting base (B) as shown so that the indent mark (C) on it is toward the inside of the vehicle.

Left side

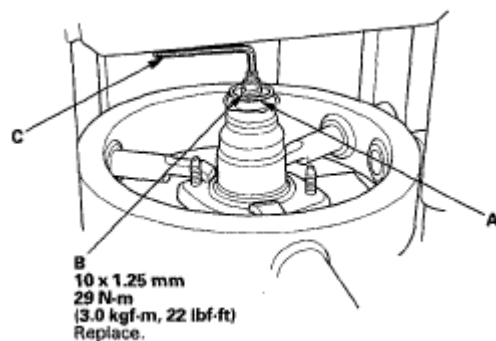


Right side



**Fig. 37: Aligning Bottom Of Damper And Damper Mounting Base With Indent Mark**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

4. Install the damper mounting washer (A) and a new 10 mm self-locking nut (B).



**Fig. 38: Identifying Damper Mounting Washer With Self-Locking Nut With Torque Specification**  
 Courtesy of AMERICAN HONDA MOTOR CO., INC.

5. Hold the damper shaft with a hex wrench (C), and tighten the 10 mm self-locking nut to the specified torque value.
6. Remove the damper assembly from the strut spring compressor.