Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Suspension

HONDA

Navigation Tools: Click on the "Table of Contents" below, or use the Bookmarks to the left.

Suspension

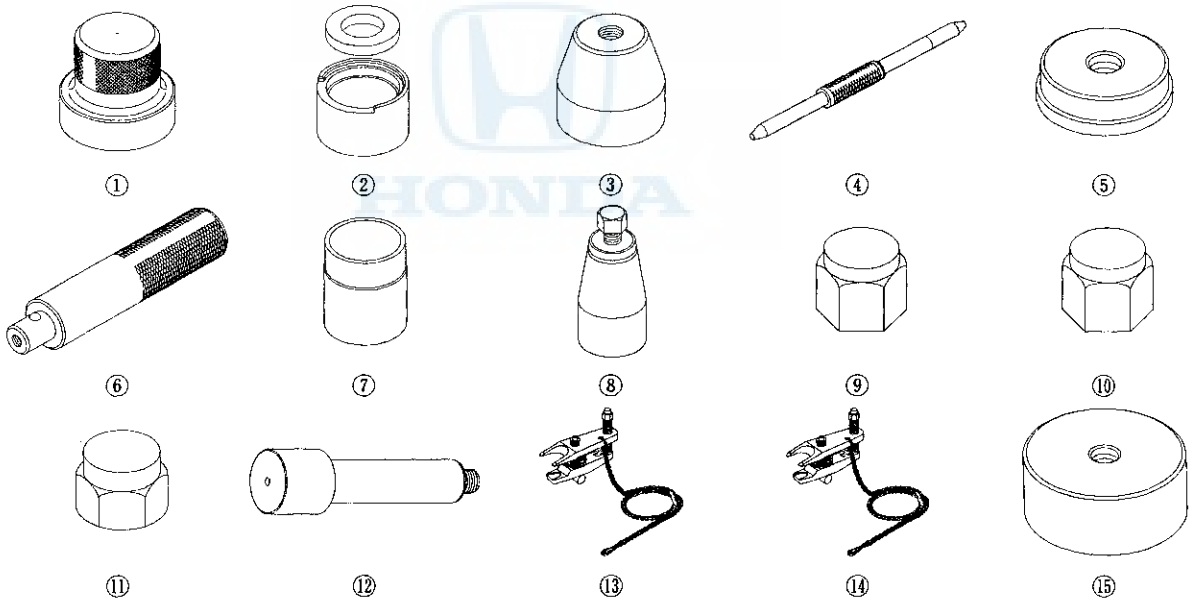
Front and Rear Suspension

Front Suspension

Rear Suspension

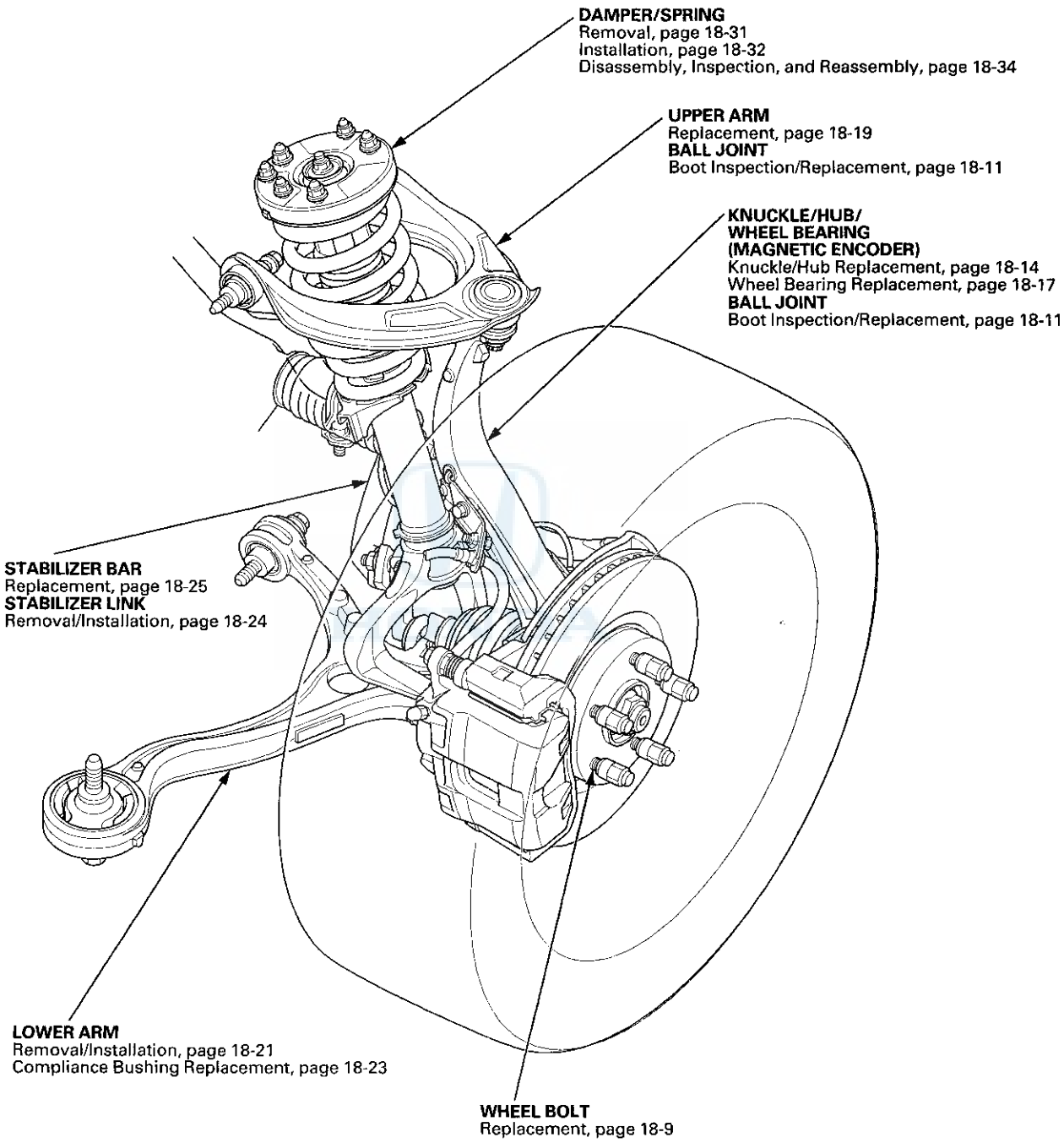
Special Tools

Ref.No.	Tool Number	Description	Qty
①	070AF-TA0A100	Bushing Driver	1
②	070AF-TA0A220	Bushing Receiver Set	1
③	070AG-SJA0300	Clip Guide, 45 mm	1
④	070AG-SJAA10S	Subframe Alignment Pin	1
⑤	07746-0010600	Attachment, 72 x 75 mm	1
⑥	07749-0010000	Driver Handle, 15 x 135L	1
⑦	07965-SD90100	Support Base	1
⑧	07974-SA50700	Clip Guide, 41 mm	1
⑨	07AAE-SJAA100	Ball Joint Thread Protector, 14 mm	1
⑩	07AAF-SDAA100	Ball Joint Thread Protector, 12 mm	1
⑪	07AAF-SECA120	Ball Joint Thread Protector, 10 mm	1
⑫	07GAF-SD4A100	Hub Dis/Assy Tool	1
⑬	07MAC-SL0A102	Ball Joint Remover, 32 mm	1
⑭	07MAC-SL0A202	Ball Joint Remover, 28 mm	1
⑮	07ZAD-PNA0100	Oil Seal Driver Attachment, 96 mm	1



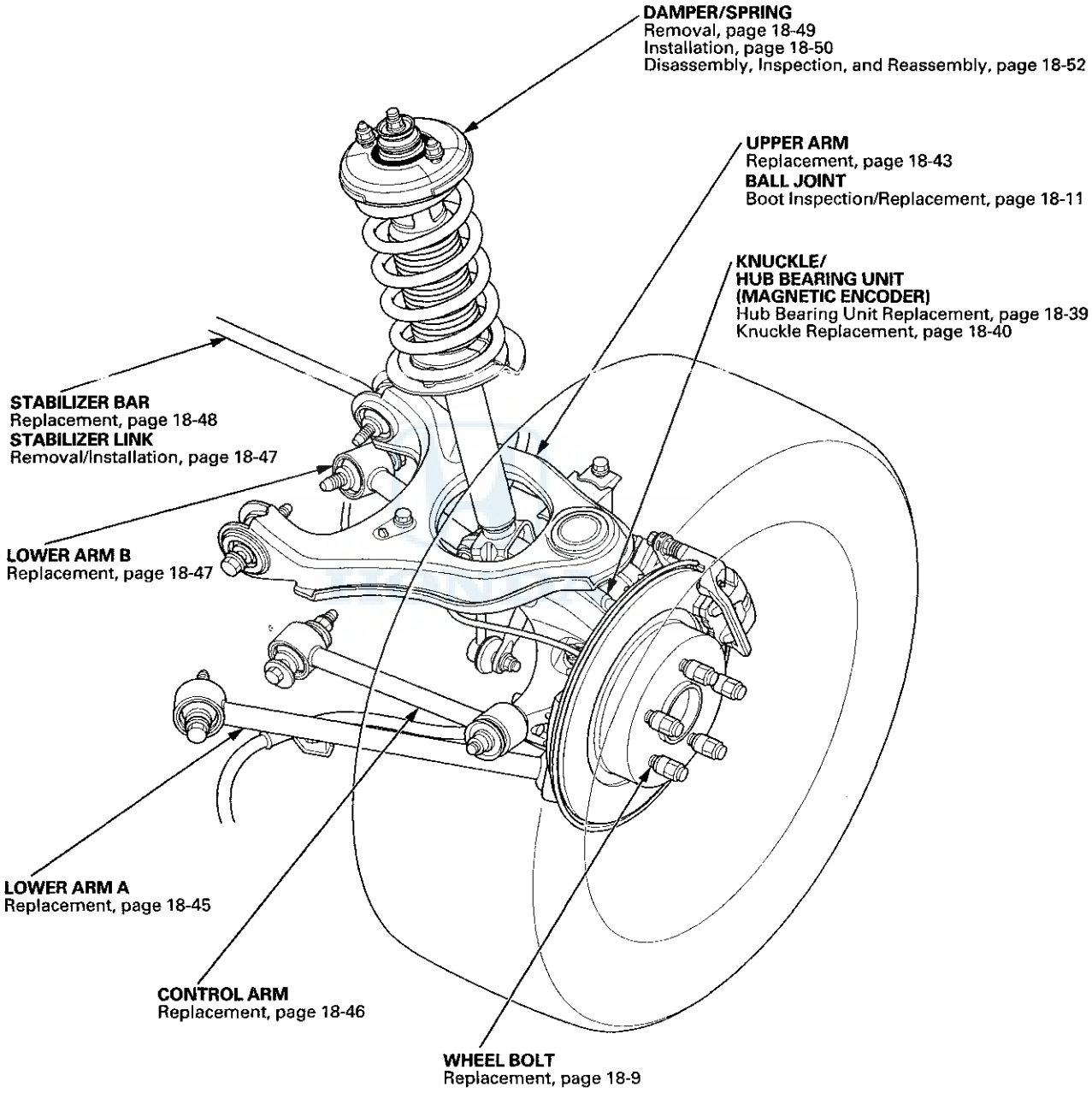
Component Location Index

Front Suspension



Component Location Index (cont'd)

Rear Suspension



Wheel Alignment

The suspension can be adjusted for front and rear toe.

Pre-Alignment Checks

For proper inspection and adjustment of the wheel alignment, do these checks:

1. Release the parking brake to avoid an incorrect measurement.
2. Make sure the suspension is not modified.
3. Make sure the fuel tank is full, and that the spare tire, the jack, and the tools are in place on the vehicle.
4. Check the tire size and tire pressure.

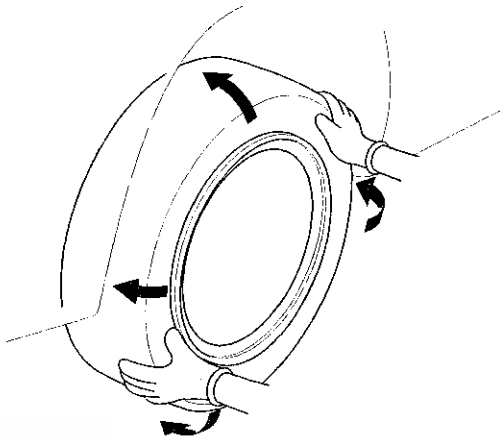
   Tire size (4-door):
   LX, LX-P, LX PZEV, and LX-P PZEV models:
   Front/Rear: P215/60R16 94H
   EX, EX-L, EX PZEV, and EX-L PZEV models:
   Front/Rear: P225/50R17 93V

   Tire size (2-door):
   Front/Rear: P225/50R17 93V

   Tire pressure (4-door) (at cold):
   LX, LX-P, LX PZEV, and LX-P PZEV models:
   Front/Rear: 210 kPa (2.1 kgf/cm², 30 psi)
   EX, EX-L, EX PZEV, and EX-L PZEV models:
   Front/Rear: 220 kPa (2.2 kgf/cm², 32 psi)

   Tire pressure (2-door) (at cold):
   Front/Rear: 220 kPa (2.2 kgf/cm², 32 psi)

5. Check the runout of the wheels and tires (see page 18-8).
6. Check the suspension ball joints (Raise and support the vehicle (see page 1-13). Hold a tire with your hands, and move it up and down and right and left to check for movement).



7. Before doing alignment inspections, be sure to remove all extra weight from the vehicle, and no one should be inside the vehicle (driver or passengers).
8. Lower the vehicle to ground. Bounce the vehicle up and down several times to stabilize the suspension.
9. Check that the steering column is set at the center tilt and telescopic position.

Caster Inspection

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Check the caster angle.

   Caster angle:
   4-door: 3 ° 48 ′ $^{+0\,°\,25\,′}_{-1\,°\,05\,′}$
   2-door: 3 ° 47 ′ $^{+0\,°\,25\,′}_{-1\,°\,05\,′}$
   (Maximum difference between the right and left side: 0 ° 45 ′)

   - If the measurement is within specifications, measure the camber angle.
   - If the measurement is not within specifications, check for bent or damaged suspension components.

(cont'd)

Wheel Alignment (cont'd)

Camber Inspection

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Check the camber angle.

Camber angle:
Front: 0 ° 00 '$^{+30}_{-45}$'
Rear: −1 °00 '$^{+30}_{-45}$'
(Maximum difference between the right and left side: 0 ° 30 ')

- If the measurement is within specifications, measure the toe-in.
- If the measurement is not within specifications, check for bent or damaged suspension components.

Front Toe Inspection/Adjustment

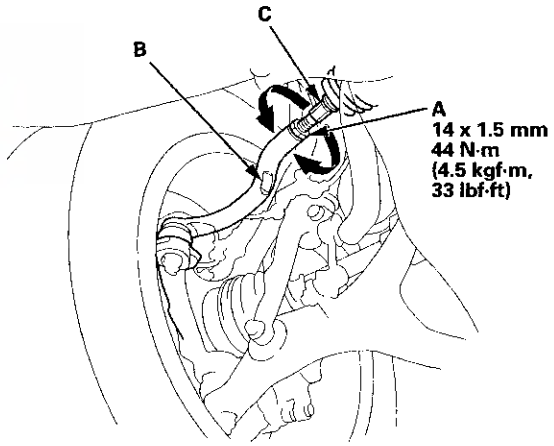
Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Set the steering column to the middle tilt and telescopic positions. Center the steering wheel spokes, and install a steering wheel holder tool.
2. Check the toe with the wheels pointed straight ahead.

Front toe-in: 0±2 mm (0±0.08 in)

- If adjustment is required, go to step 3.
- If no adjustment is required, go to rear toe inspection/adjustment.

3. Loosen the tie-rod locknuts (A) while holding the flat surface sections (B) of the tie-rod end with a wrench, and turn both tie-rods (C) until the front toe is within specifications.



4. After adjusting, tighten the tie-rod locknuts to the specified torque. Reposition the rack-end boot if it is twisted or displaced.
5. Go to rear toe inspection/adjustment.

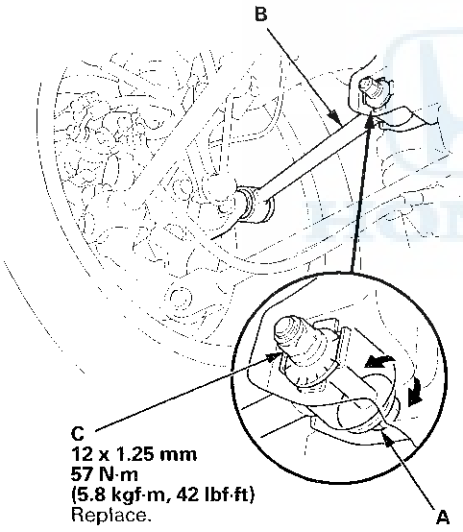
Rear Toe Inspection/Adjustment

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Release the parking brake to avoid an incorrect measurement.
2. Check the toe.

   Rear toe-in: 2±2 mm (0.08±0.08 in)

   - If adjustment is required, go to step 3.
   - If no adjustment is required, go to turning angle inspection.
3. Hold the adjusting bolt (A) on the rear control arm (B), and loosen the self-locking nut (C).



4. Replace the self-locking nut with a new one, and lightly tighten it.

   NOTE: Always use a new self-locking nut whenever it has been tightened to the specified torque.
5. Adjust the rear toe by turning the adjusting bolt until the toe is correct.
6. Tighten the self-locking nut while holding the adjusting bolt to the specified torque.

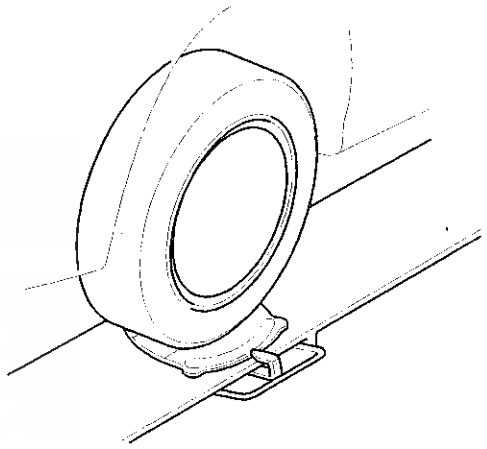
Turning Angle Inspection

Use commercially available computerized four wheel alignment equipment to measure wheel alignment (caster, camber, toe, and turning angle). Follow the equipment manufacturer's instructions.

1. Turn the wheel right and left while applying the brake, and measure the turning angle of both wheels.

   Turning angle:

Inward:	**39° 00′ ±2°**
Outward (reference):	**31° 50′**

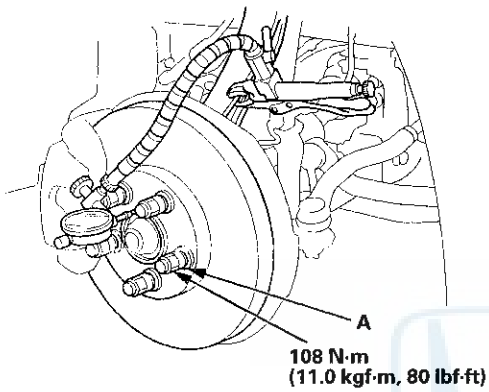


2. If the measurement is not within the specifications, even up both sides of the tie-rod threaded section length while adjusting the front toe. If it is correct, but the turning angle is not within the specifications, check for bent or damaged suspension components.

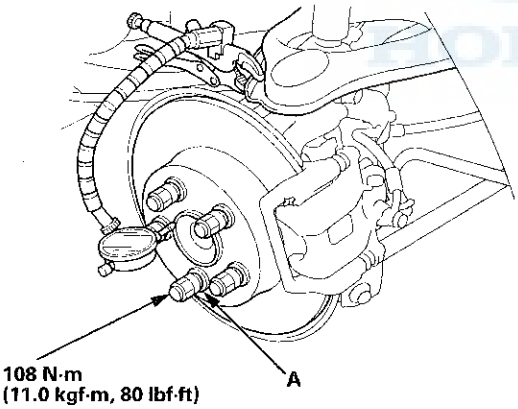
Wheel Bearing End Play Inspection

1. Raise and support the vehicle (see page 1-13).
2. Remove the wheels.
3. Install suitable flat washers (A) and the wheel nuts. Tighten the nuts to the specified torque to hold the brake disc securely against the hub.

Front



Rear



4. Attach the dial gauge. Place the dial gauge against the hub flange.
5. Measure the bearing end play while moving the brake disc inward and outward.

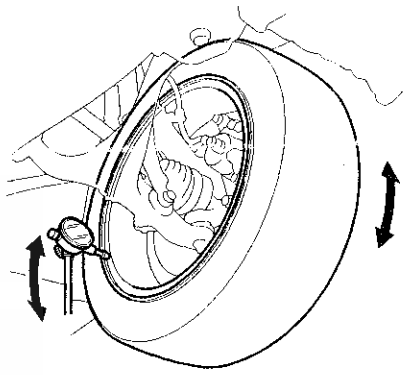
Wheel bearing end play:
Front/Rear: 0—0.05 mm (0—0.002 in)

6. If the bearing end play measurement is more than the standard, replace the wheel bearing or the hub bearing unit.

Wheel Runout Inspection

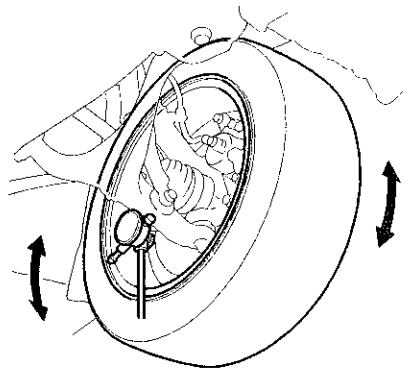
1. Raise and support the vehicle (see page 1-13).
2. Check for a bent or deformed wheel.
3. Set up the dial gauge as shown, and measure the axial runout by turning the wheel.

Front and rear wheel axial runout:
Standard:
Steel wheel: 0—1.0 mm (0—0.04 in)
Aluminum wheel: 0—0.7 mm (0—0.03 in)
Service limit: 2.0 mm (0.08 in)



4. Reset the dial gauge to the position shown, and measure the radial runout.

Front and rear wheel radial runout:
Standard:
Steel wheel: 0—1.0 mm (0—0.04 in)
Aluminum wheel: 0—0.7 mm (0—0.03 in)
Service limit: 1.5 mm (0.06 in)



5. If the wheel runout is not within the specification, check the wheel bearing end play (see page 18-8), and make sure the mating surfaces on the brake disc and the inside of the wheel are clean.
6. If the bearing end play is within the specification but the wheel runout is more than the service limit, replace the wheel.

Wheel Bolt Replacement

Special Tools Required
Ball Joint Remover, 28 mm 07MAC-SL0A202

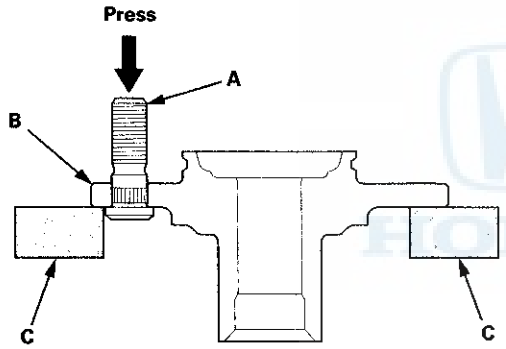
NOTICE

- Do not use a hammer or impact tools (pneumatic or electric) to remove and install the wheel bolts.
- Be careful not to damage the threads of the wheel bolts.

Front

1. Remove the front hub (see page 18-14).
2. Separate the wheel bolt (A) from the hub (B) using a hydraulic press. Support the hub with hydraulic press attachments (C) or equivalent tools.

   NOTE: Before installing the new wheel bolt, clean the mating surfaces on the bolt and the hub.



3. Insert the new wheel bolt into the hub while aligning the splined surfaces on the hub hole with the wheel bolt.

   NOTE:
   - Degrease the area around the wheel bolt.
   - Make sure the wheel bolt is installed vertically in relation to the hub disc surface.

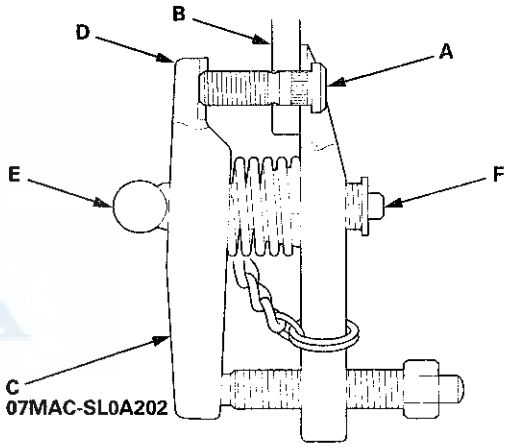
4. Install the wheel bolt using a hydraulic press until the wheel bolt shoulder is fully seated.
5. Install the front hub (see page 18-14).

   NOTE: If you cannot tighten the wheel nut to the specified torque when installing the wheel, replace the front hub as an assembly.

Rear

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear brake disc (see page 19-34).
3. Separate the wheel bolt (A) from the hub (B) using the ball joint remover (C), and keep the jaw (D) of ball joint remover vertical against the wheel bolt (see page 18-10).

   NOTE:
   - If the angle of the remover against the wheel bolt is not square, readjust the ball joint remover by turning the head (E) of the adjusting bolt (F).
   - Before installing the new wheel bolt, clean the mating surfaces on the bolt and the hub.

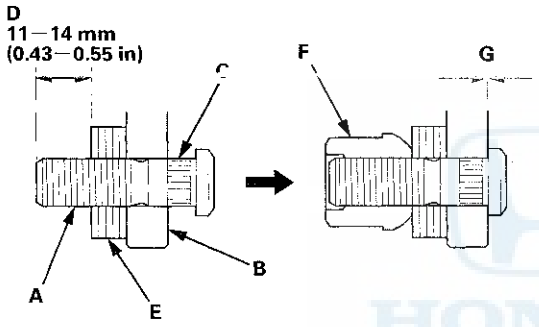


(cont'd)

Wheel Bolt Replacement (cont'd)

4. Insert the new wheel bolt (A) into the hub (B) while aligning the splined surfaces (C) on the hub hole with the wheel bolt. Adjust the measurement (D) with the washers (P/N 94101-12800 or equivalent) (E), then install a nut (P/N 90304-SC2-000 or equivalent) (F) hand-tight.

   NOTE:
   - Degrease the area around the wheel bolt and the threaded section of the nut.
   - Make sure the wheel bolt is installed vertically in relation to the hub disc surface.
   - Do not install the nut and the washers that have been used as tools on a vehicle.



5. Tighten the nut until the wheel bolt is drawn fully into the hub. Do not exceed the maximum torque limit. Make sure there is no gap (G) between the bolt and the hub.

   Limited torque:
   108 N·m (11.0 kgf·m, 80 lbf·ft) max.

6. Install the rear brake disc (see page 19-34).

   NOTE:
   - If you cannot tighten the wheel nut to the specified torque when installing the wheel, replace the rear hub bearing unit as an assembly.
   - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

Ball Joint Removal

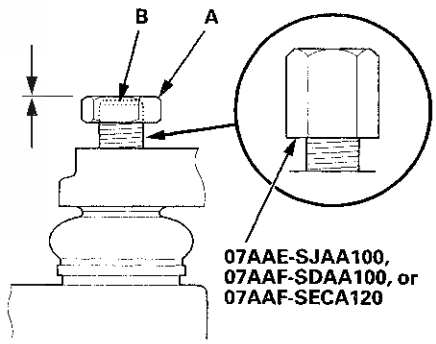
Special Tools Required
- Ball Joint Thread Protector, 14 mm 07AAE-SJAA100
- Ball Joint Thread Protector, 12 mm 07AAF-SDAA100
- Ball Joint Thread Protector, 10 mm 07AAF-SECA120
- Ball Joint Remover, 32 mm 07MAC-SL0A102
- Ball Joint Remover, 28 mm 07MAC-SL0A202

NOTICE

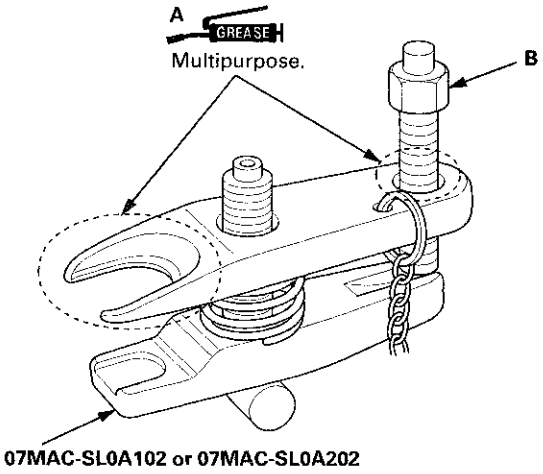
Always use a ball joint remover to disconnect a ball joint. Do not strike the housing or any other part of the ball joint connection to disconnect it.

1. Install a hex nut (A) or the ball joint thread protector onto the threads of the ball joint (B).

   NOTE: Using a hex nut, make sure the nut is flush with the ball joint pin end to prevent damage to the threaded end of the ball joint pin.

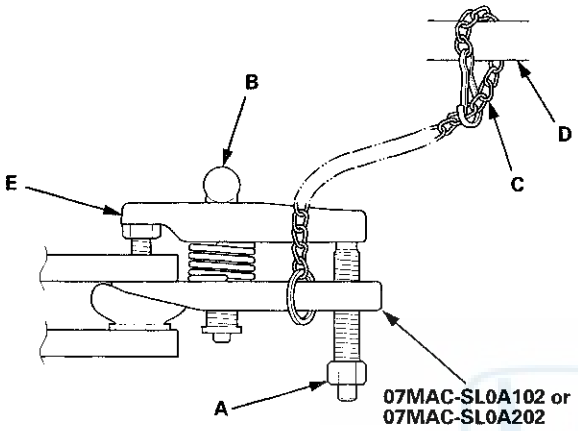


2. Apply grease to the ball joint remover on the areas shown (A). This will ease the installation of the tool, and prevent damage to the pressure bolt (B) threads.



3. Loosen the pressure bolt (A), and install the ball joint remover as shown. Insert the jaws carefully, making sure not to damage the ball joint boot. Adjust the jaw spacing by turning the adjusting bolt (B).

   NOTE: Fasten the safety chain (C) securely to a suspension arm or the subframe (D). Do not fasten it to a brake line or wire harness.



4. After adjusting the adjusting bolt, make sure the head of the adjusting bolt is in the position shown to allow the jaw (E) to pivot.

5. With a wrench, tighten the pressure bolt until the ball joint pin pops loose from the ball joint connecting hole. If necessary, apply penetrating type lubricant to loosen the ball joint pin.

   NOTE: Do not use pneumatic or electric tools on the pressure bolt.

6. Remove the ball joint remover, then remove the nut or the ball joint thread protector from the end of the ball joint pin, and pull the ball joint out of the ball joint connecting hole. Inspect the ball joint boot, and replace it if damaged.

Ball Joint Boot Inspection/Replacement

Special Tools Required
- Clip Guide, 45 mm 070AG-SJA0300
- Clip Guide, 41 mm 07974-SA50700

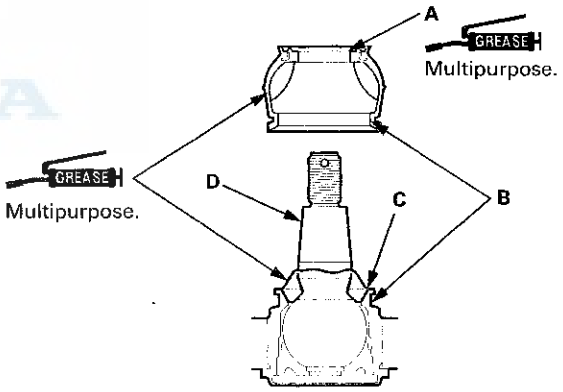
1. Check the ball joint boot for weakness, damage, cracks, and grease leaks.

   NOTE:
   - If the ball joint boot is damaged with grease leaks, replace the appropriate part as an assembly.
   - If the ball joint boot is soft and cracked without grease leaks, go to step 2. Replace the appropriate ball joint boot.

2. Disconnect the appropriate ball joint connection, and remove the component including the ball joint:
   - The front knuckle (see page 18-14)
   - The front upper arm (see page 18-19)
   - The rear upper arm (see page 18-43)

3. Remove the boot clip and the boot.

4. Pack the interior and lip (A) of a new boot with grease. Keep the grease off of the boot-to-housing mating surfaces (B).



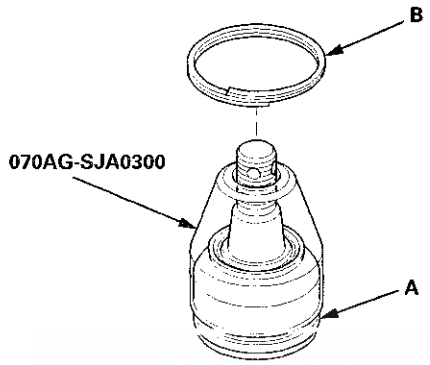
5. Pack fresh grease into the base (C). Do not let dirt or other foreign materials get into the boot.

6. Install the boot on the ball joint, then squeeze it gently to force out any air, then wipe the grease off the tapered portion of the ball joint pin (D).

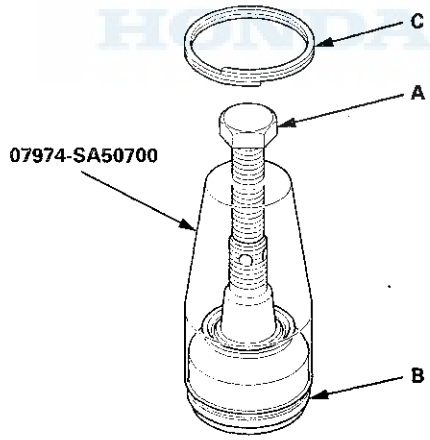
(cont'd)

Ball Joint Boot Inspection/Replacement (cont'd)

7. The front knuckle ball joint or the rear upper arm ball joint: Adjust the depth by turning the clip guide until its base is just above the groove around (A) the bottom of the boot. Then slide the clip (B) over the clip guide and into position on the boot.



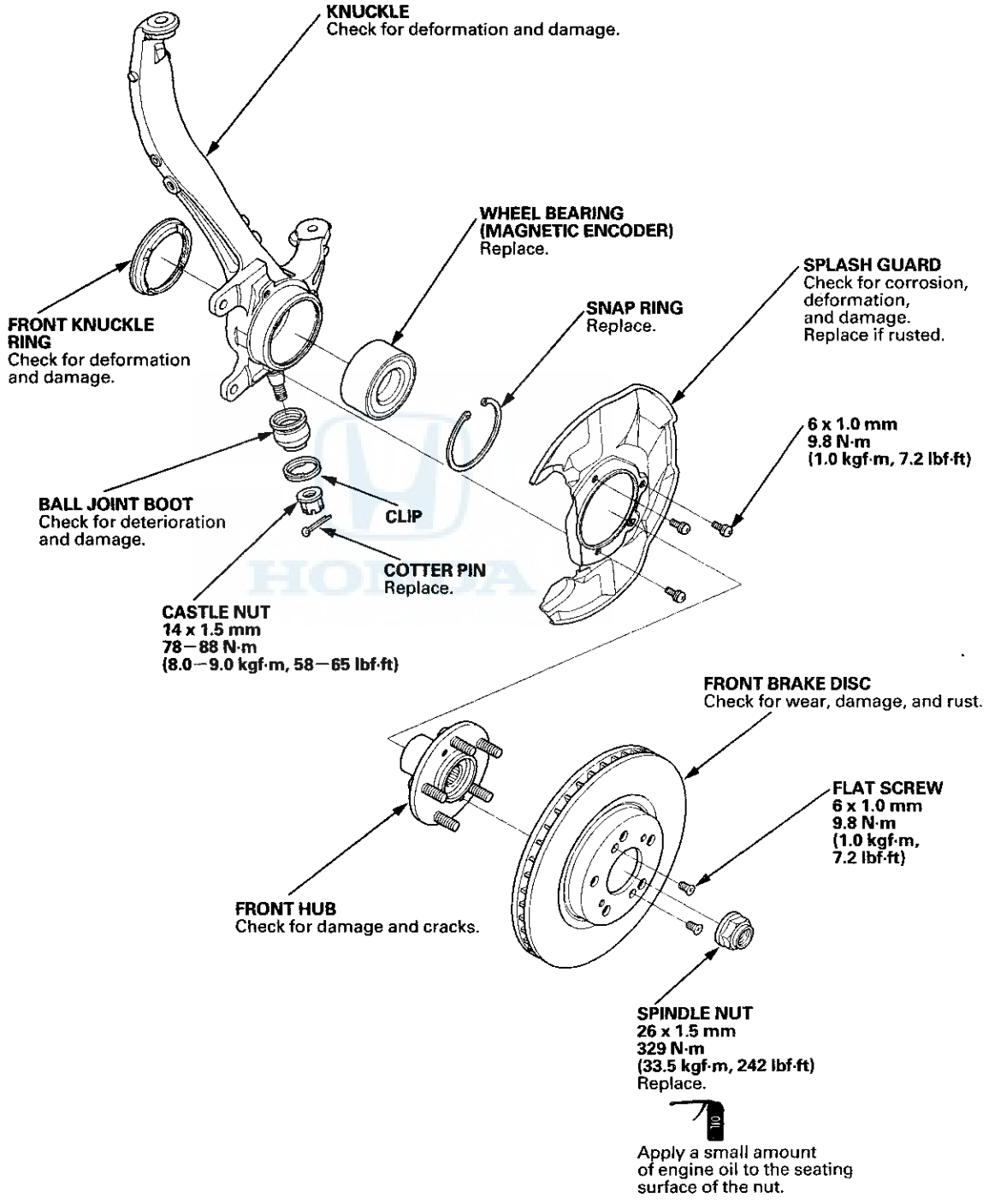
8. The front upper arm ball joint: Adjust the clip guide with the adjusting bolt (A) until its base is just above the groove around (B) the bottom of the boot. Then slide the clip (C) over the clip guide and into position on the boot.



9. After installing a boot, wipe any grease off the exposed portion of the ball joint pin.
10. Install all of the removed parts.

Knuckle/Hub/Wheel Bearing Replacement

Exploded View



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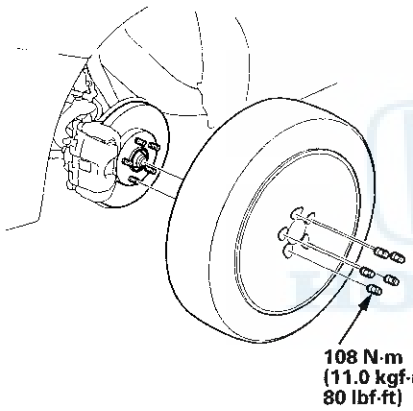
Knuckle/Hub/Wheel Bearing Replacement (cont'd)

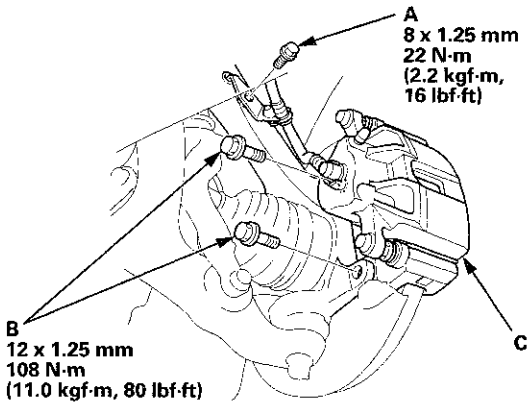
Special Tools Required
- Ball Joint Thread Protector, 14 mm 07AAE-SJAA100
- Ball Joint Thread Protector, 12 mm 07AAF-SDAA100
- Ball Joint Thread Protector, 10 mm 07AAF-SECA120
- Ball Joint Remover, 28 mm 07MAC-SL0A202
- Hub Dis/Assy Tool 07GAF-SD4A100
- Attachment, 72 x 75 mm 07746-0010600
- Driver Handle, 15 x 135L 07749-0010000
- Oil Seal Driver Attachment, 96 mm 07ZAD-PNA0100
- Support Base 07965-SD90100

Knuckle/Hub Replacement

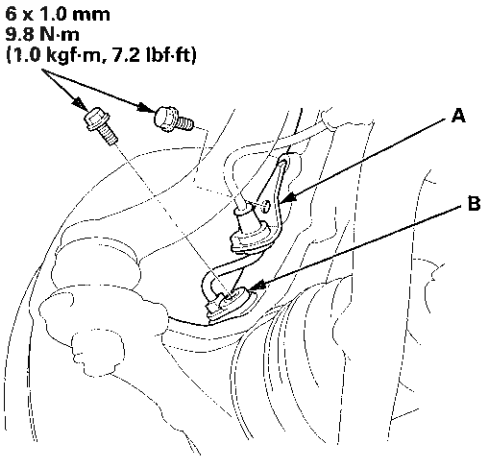
1. Raise and support the vehicle (see page 1-13).
2. Remove the wheel nuts and the front wheel.



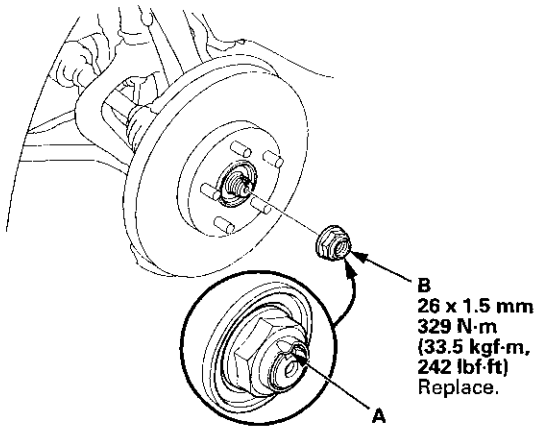
3. Remove the brake hose bracket mounting bolt (A).



4. Remove the brake caliper bracket mounting bolts (B), then remove the caliper assembly (C) from the knuckle. To prevent damage to the caliper assembly or the brake hose, use a short piece of wire to hang the caliper assembly from the undercarriage. Do not twist the brake hose excessively.
5. Remove the wheel speed sensor harness bracket (A) and the wheel speed sensor (B) from the knuckle. Do not disconnect the wheel speed sensor connector.



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

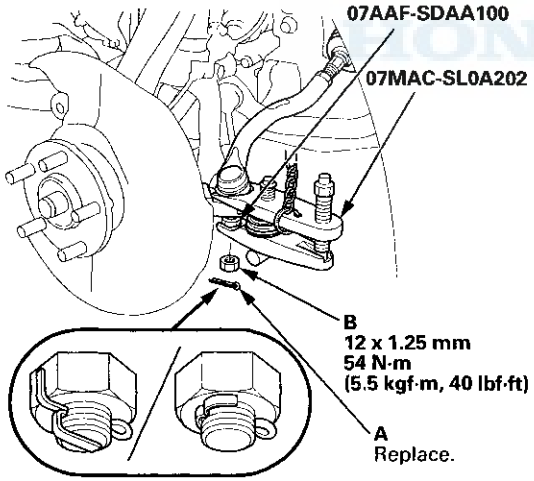


7. Remove the front brake disc (see page 19-21).

8. Check the front hub for damage and cracks.

9. Remove the cotter pin (A) from the tie-rod end ball joint, then remove the nut (B).

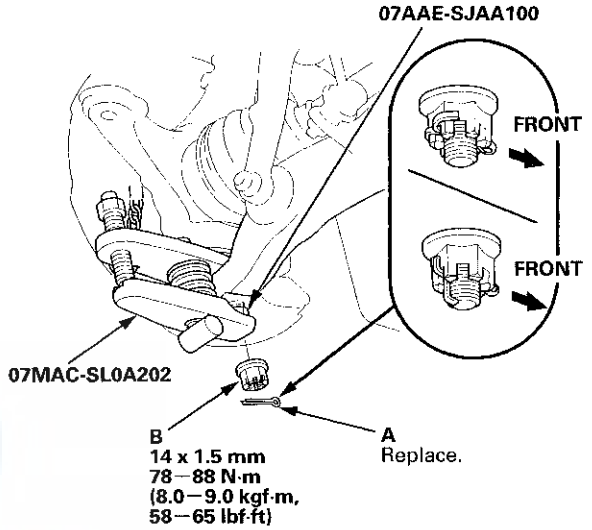
   NOTE: During installation, install the new cotter pin after tightening the nut, and bend its end as shown.



10. Disconnect the tie-rod end ball joint from the knuckle using the ball joint thread protector and the ball joint remover (see page 18-10).

11. Remove the cotter pin (A) from the knuckle ball joint, then remove the castle nut (B).

    NOTE: During installation, insert the new cotter pin into the ball joint pin hole from the front to the rear of the vehicle, and bend its end as shown. Check the ball joint pin hole direction before connecting the ball joint.



12. Disconnect the knuckle ball joint from the lower arm using the ball joint thread protector and the ball joint remover (see page 18-10).

    NOTE:

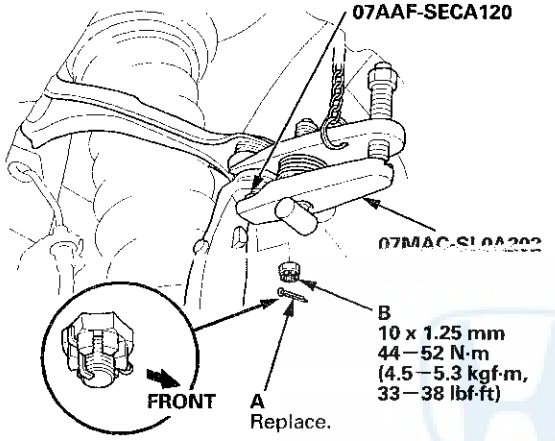
    - Be careful not to damage the ball joint boot when installing the remover.
    - Do not force or hammer on the lower arm, or pry between the lower arm and the knuckle. You could damage the ball joint.

(cont'd)

Knuckle/Hub/Wheel Bearing Replacement (cont'd)

13. Remove the cotter pin (A) from the upper arm ball joint, then remove the castle nut (B).

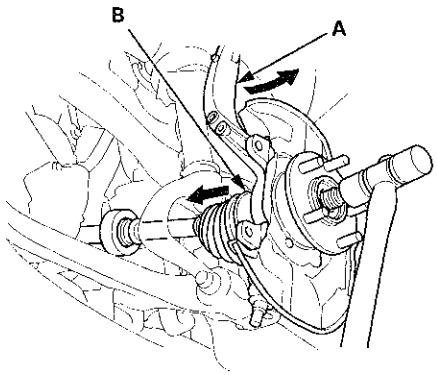
    NOTE: During installation, insert the new cotter pin into the ball joint pin hole from the front to the rear of the vehicle, and bend its end as shown. Check the ball joint pin hole direction before connecting the ball joint.



14. Disconnect the upper arm ball joint from the knuckle using the ball joint thread protector and the ball joint remover (see page 18-10).

15. Pull the knuckle (A) outward, and separate the outboard joint (B) from the front hub a plastic hammer outward, then remove the knuckle/hub.

    NOTE:
    - Do not pull the driveshaft end outward. The driveshaft inboard joint may come apart.
    - During installation, apply grease to the mating surfaces of the wheel bearing and the driveshaft outboard joint (see step 1 on page 16-19).

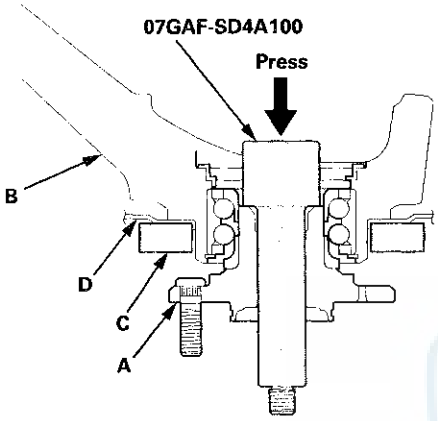


16. Install the knuckle/hub in the reverse order of removal, and note these items:
    - First install all of the components, and lightly tighten the bolts and the nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque. Do not place the jack against the ball joint pin of the knuckle.
    - Be careful not to damage the ball joint boot when connecting the knuckle.
    - Before connecting the ball joint, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, and the threaded section and the mating surfaces of the castle nut.
    - Torque the castle nut 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 castle nut by loosening it.
    - Use a new spindle nut on 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.
    - Before installing the brake disc, clean the mating surfaces of the front hub and the inside of the brake disc.
    - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

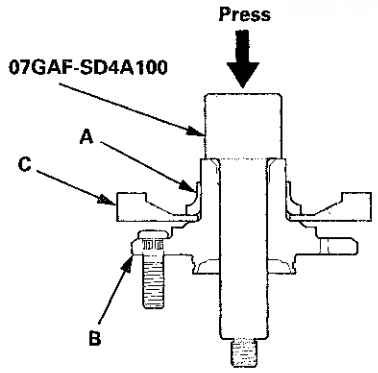
17. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Wheel Bearing Replacement

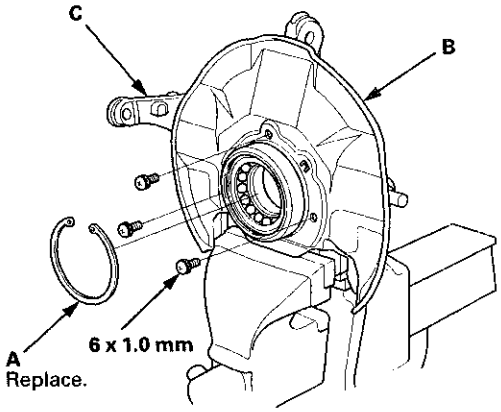
1. Remove the knuckle/hub.
2. Separate the hub (A) from the knuckle (B) using the hub dis/assy tool and a hydraulic press. Hold the knuckle with the attachment (C) of the hydraulic press or equivalent tool. Be careful not to damage or deform the splash guard (D). Hold onto the hub to keep it from falling when pressed clear.



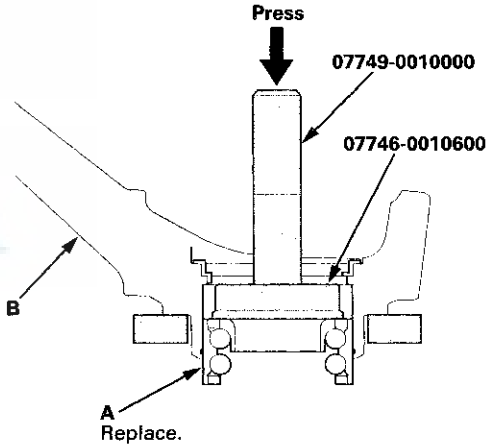
3. Press the wheel bearing inner race (A) off of the hub (B) using the hub dis/assy tool, a commercially available bearing separator (C), and a press.



4. Remove the snap ring (A) and the splash guard (B) from the knuckle (C).



5. Press the wheel bearing (A) out of the knuckle (B) using the attachment, the driver handle, and a press.



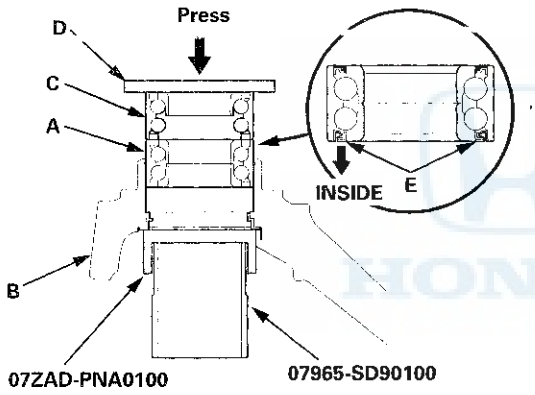
6. Wash the knuckle and the hub thoroughly in high flash point solvent before reassembly.

(cont'd)

Knuckle/Hub/Wheel Bearing Replacement (cont'd)

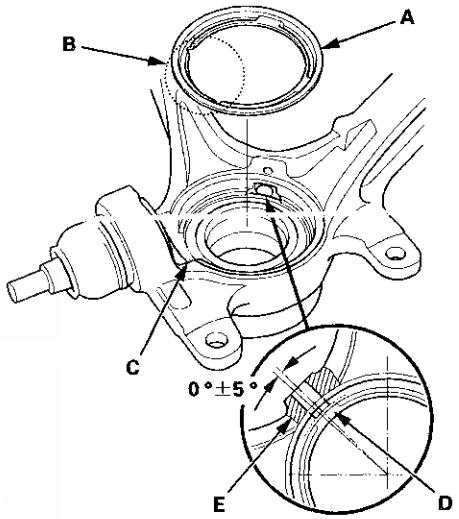
7. Press a new wheel bearing (A) into the knuckle (B) using the old bearing (C), a steel plate (D), the attachment, the support base, and a press.

   NOTE:
   - Install the wheel bearing with the wheel speed sensor magnetic encoder (E) (brown color), toward the inside of the knuckle.
   - Remove any oil, grease, dust, metal debris, and other foreign material from the magnetic encoder surface.
   - Keep any magnetic tools away from the magnetic encoder surface.
   - Be careful not to damage the magnetic encoder surface when you insert the wheel bearing.

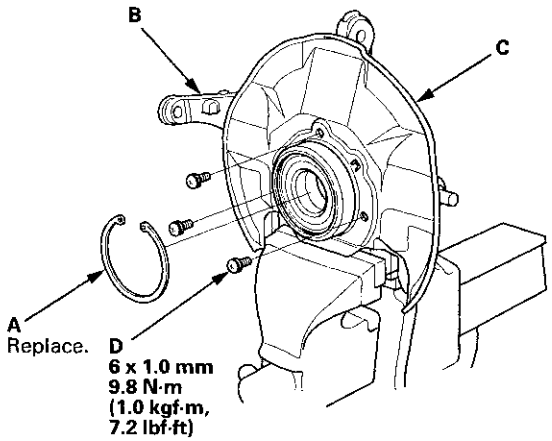


8. Check the front knuckle ring (A) for damage or deformation, and replace it if necessary.

   NOTE: When installing the new front knuckle ring, position the knuckle ring notch portion (B) toward cut out (C) near the ball joint in the knuckle, and align the center of the knuckle ring ledge portion (D) with the center of the wheel speed sensor hole (E) on the knuckle as shown.

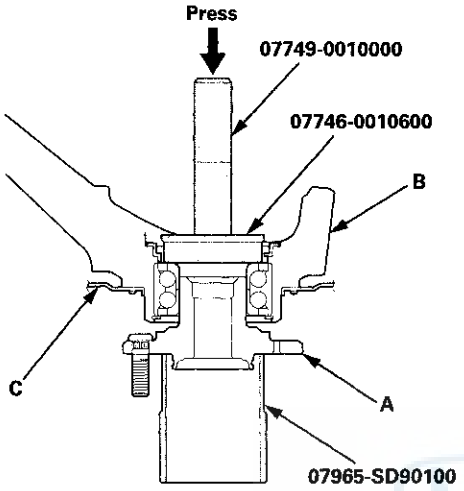


9. Install the new snap ring (A) securely in the knuckle (B).



10. Install the splash guard (C), and tighten the screws (D) to the specified torque.

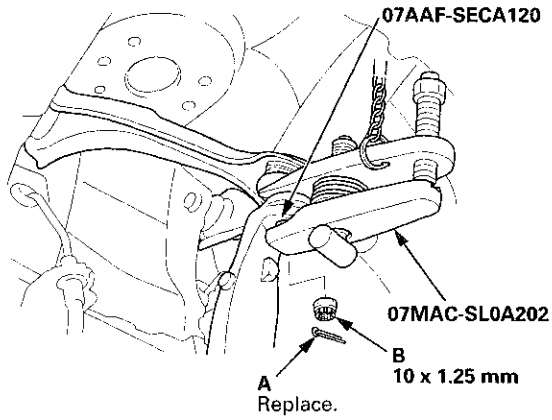
11. Install the hub (A) onto the knuckle (B) using the attachment, the driver handle, the support base, and a hydraulic press. Be careful not to damage the splash guard (C).



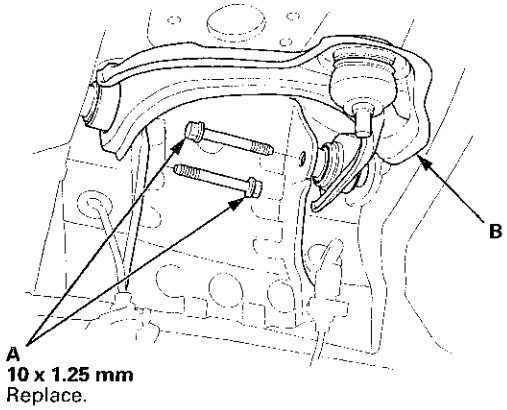
12. Install the knuckle/hub.

Special Tools Required
- Ball Joint Thread Protector, 10 mm 07AAF-SECA120
- Ball Joint Remover, 28 mm 07MAC-SL0A202

1. Raise and support the vehicle (see page 1-13).
2. Remove the front wheel.
3. Remove the front damper/spring (see page 18-31).
4. Remove the cotter pin (A) from the upper arm ball joint, then remove the castle nut (B).



5. Disconnect the upper arm ball joint from the knuckle using the ball joint thread protector and the ball joint remover (see page 18-10).
6. Remove the upper arm mounting bolts (A), then remove the upper arm (B).

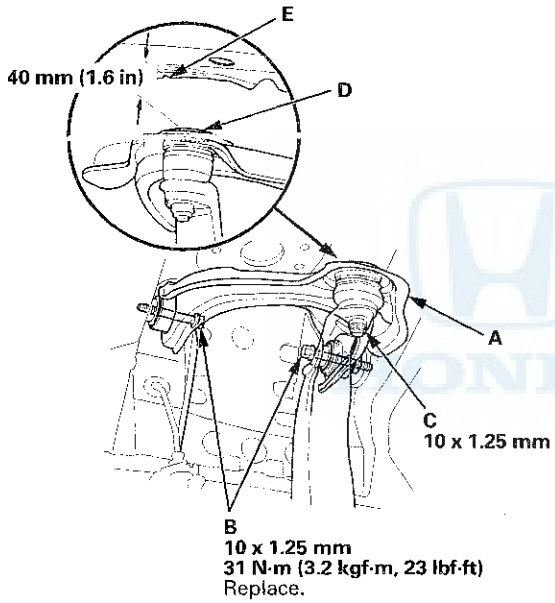


(cont'd)

Upper Arm Replacement (cont'd)

7. Install the upper arm (A), and lightly tighten the new upper arm mounting bolts (B), then connect the knuckle, and lightly tighten the castle nut (C).

   NOTE:
   - Be careful not to damage the ball joint boot when connecting the knuckle.
   - Before connecting the ball joint, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, and the threaded section and the mating surfaces of the castle nut.



8. Place a floor jack under the lower arm, and raise the suspension until the clearance between the top (D) of the upper arm ball joint and the backside of the fender cut out point (E) is 40 mm (1.6 in), then tighten the upper arm mounting bolts to the specified torque.

   NOTE: To measure the specified clearance, temporarily remove the front inner fender (see page 20-290).

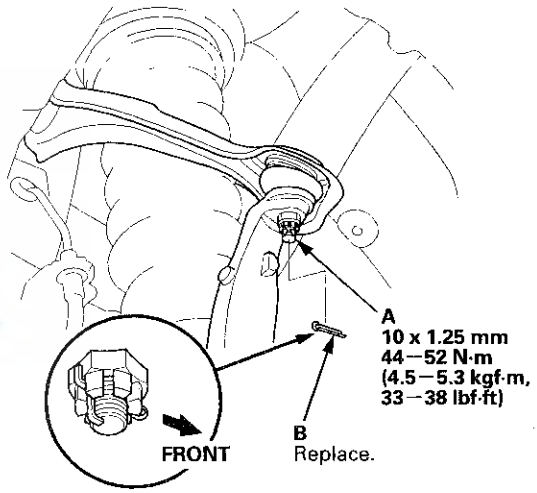
9. Lower the floor jack.

10. Install the front damper/spring (see page 18-32).

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

12. Tighten the castle nut (A) on the upper arm ball joint to the specified torque.

    NOTE:
    - Torque the castle nut 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 castle nut by loosening it.
    - Insert the new cotter pin (B) into the ball joint pin hole from the front to the rear of the vehicle, and bend its end as shown. Check the ball joint pin hole direction before connecting the ball joint.



13. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the front wheel.

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

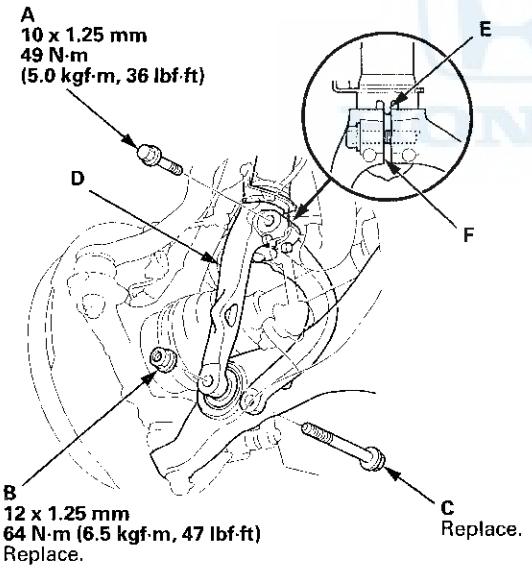
Lower Arm Removal/Installation

Special Tools Required
- Ball Joint Thread Protector, 14 mm 07AAE-SJAA100
- Ball Joint Remover, 28 mm 07MAC-SL0A202
- Bushing Driver 070AF-TA0A100
- Bushing Receiver Set 070AF-TA0A220

Removal/Installation

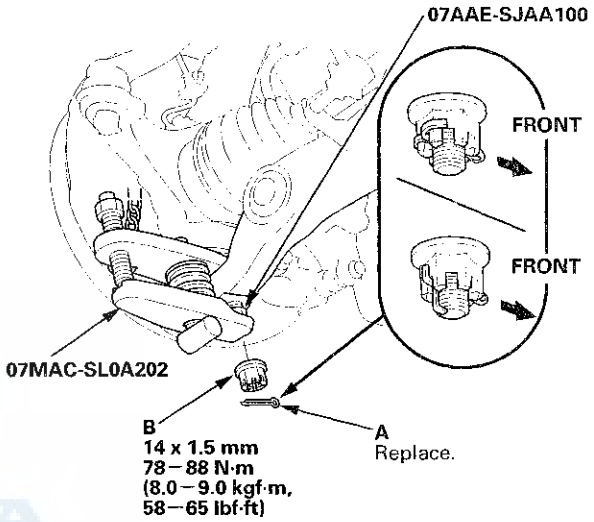
1. Raise and support the vehicle (see page 1-13).
2. Remove the front wheel.
3. Remove the damper pinch bolt (A) and the damper fork mounting nut (B) while holding the mounting bolt (C), then remove the damper fork (D) from the damper and the lower arm.

   NOTE:
   - During installation, insert the aligning tab (E) on the damper unit into the slot (F) of the damper fork.
   - Use the new damper fork mounting bolt and the new mounting nut, and torque the nut while holding the bolt during reassembly.



4. Disconnect the stabilizer link from the lower arm (see page 18-24).
5. Remove the cotter pin (A) from the knuckle ball joint, then remove the castle nut (B).

   NOTE: During installation, insert the new cotter pin into the ball joint pin hole from the front to the rear of the vehicle, and bend its end as shown. Check the ball joint pin hole direction before connecting the ball joint.



6. Disconnect the knuckle ball joint from the lower arm using the ball joint thread protector and the ball joint remover (see page 18-10).

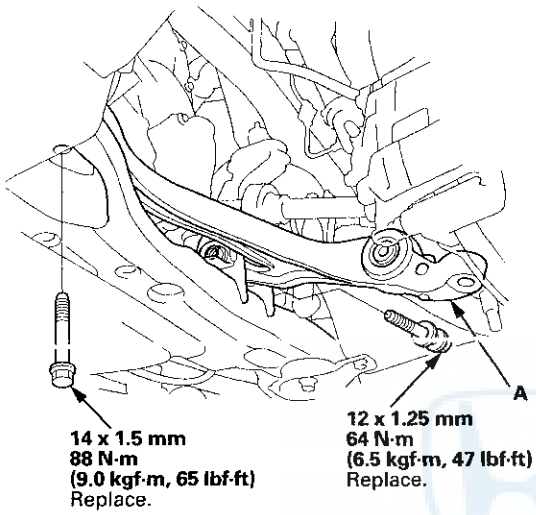
   NOTE:
   - Be careful not to damage the ball joint boot when installing the remover.
   - Do not force or hammer on the lower arm, or pry between the lower arm and the knuckle. You could damage the ball joint.

(cont'd)

Lower Arm Removal/Installation (cont'd)

7. Remove the lower arm mounting bolts, and remove the lower arm (A).

   NOTE: Use new lower arm mounting bolts during reassembly.



8. Install the lower arm in the reverse order of removal, and note these items:
   - First install all of the components, and lightly tighten the bolts and the nuts, then raise the suspension to load it with the vehicle's weight before fully tightening it to the specified torque. Do not place the jack against the ball joint pin of the knuckle.
   - Be careful not to damage the ball joint boot when connecting the knuckle.
   - Before connecting the ball joint, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, and the threaded section and the mating surfaces of the castle nut.
   - Torque the castle nut 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 castle nut by loosening it.
   - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.
9. Check the wheel alignment, and adjust it if necessary (see page 18-5).

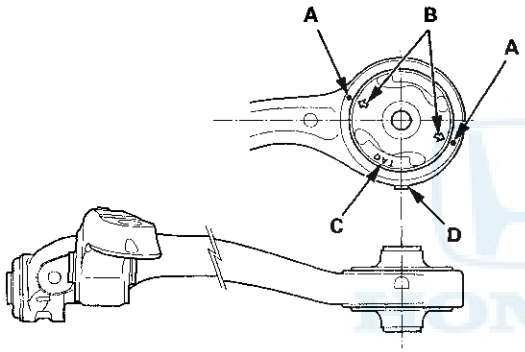
Compliance Bushing Replacement

1. Remove the lower arm.
2. Mark alignment marks (A) on the bottom of the lower arm next to the aligning marks (B) on the compliance bushing.

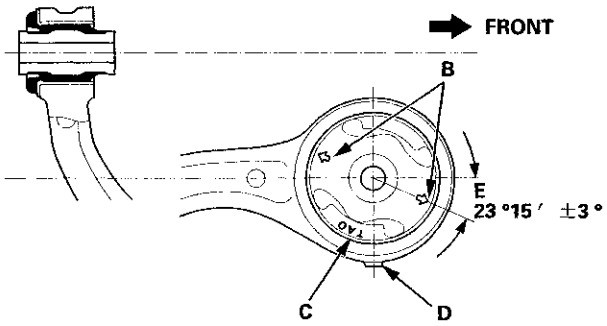
   NOTE: The compliance bushing has a specific installation position. Turn the lower arm so that its bottom side is up. Position the bushing identifying mark (C) face up and near the tab (D) on the lower arm. Then align the bushing aligning marks on the bushing and the lower arm.

   If the alignment marks are gone, align the angle (E) between the lower arm and the bushing as shown.

Aligning the marking position

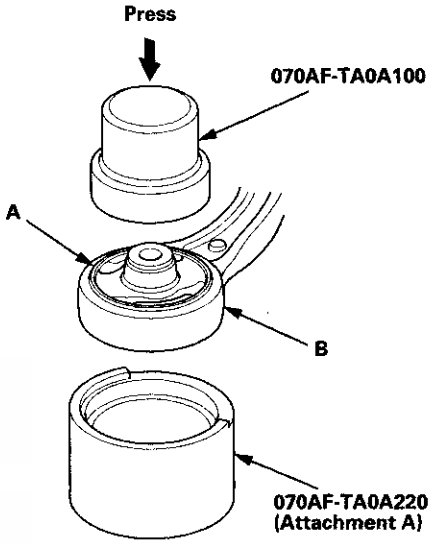


Aligning the angle (reference)



3. Press out the compliance bushing (A) with the bushing driver, the bushing receiver set (attachment A), and a hydraulic press, and remove the bushing from the lower arm (B).

   NOTE: Be careful not to damage the inside of the bushing hole on the lower arm.



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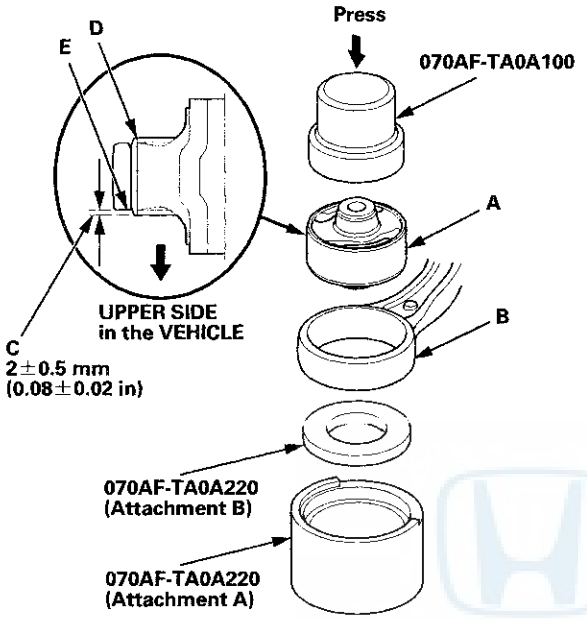
Lower Arm Removal/Installation (cont'd)

4. Clean the mating surfaces of the new compliance bushing (A) and the lower arm (B).



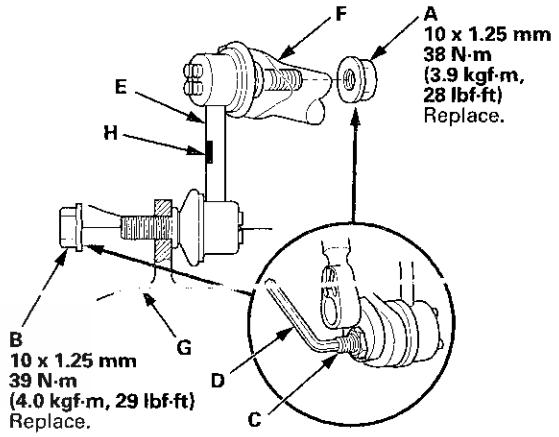
5. Make sure of the compliance bushing installation direction, align the bushing aligning marks with the lower arm, then press in the bushing into the lower arm using the bushing driver, the bushing receiver set (attachments A and B), and a hydraulic press.

   NOTE:
   - Press in the bushing from the bottom side of the lower arm.
   - After installation, check the protrusion (C) of the bushing outer sleeve (D) through the lower arm bushing hole (E).

6. Install the lower arm.

Stabilizer Link Removal/Installation

1. Raise and support the vehicle (see page 1-13).
2. Remove the front wheel.
3. Remove the self-locking nut (A) and the flange nut (B) while holding the respective joint pin (C) with a hex wrench (D), then remove the stabilizer link (E).



4. Install the stabilizer link on the stabilizer bar (F) and the lower arm (G) with the joint pins set at the center of their range of movement.

   NOTE: The stabilizer link has a paint mark (H). The left stabilizer link is marked with yellow paint, and the right stabilizer link is marked with white paint.

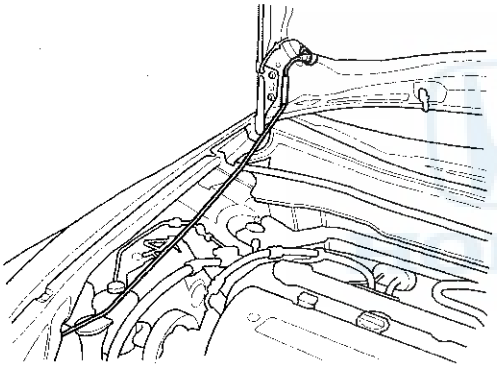
5. Install the new self-locking nut and the new flange nut, and tighten them to the specified torque while holding the respective joint pin with a hex wrench.
6. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the front wheel.
7. Test-drive the vehicle.
8. After 5 minutes of driving, tighten the self-locking nut again to the specified torque.

Stabilizer Bar Replacement

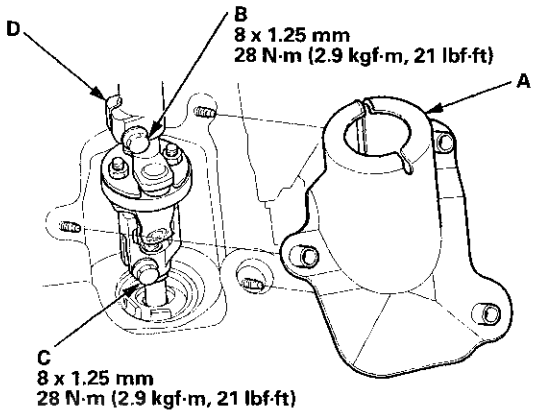
Special Tools Required
- Engine Hanger Adapter VSB02C000015*
- Engine Support Hanger, A and Reds AAR-T1256*
- Subframe Adapter VSB02C000016*
- Subframe Alignment Pin 070AG-SJAA10S

*: Available through the Honda Tool and Equipment Program, 888-424-6857.

1. Note these items during replacement:
   - Be sure to remove the steering wheel before disconnecting the steering joint. Damage to the cable reel can occur.
   - Lower the front subframe from the body, and replace the front stabilizer bar through the gap created by lowering the front subframe.
2. Remove the hood support rod, then use it as shown to prop the hood in the wide-open position.

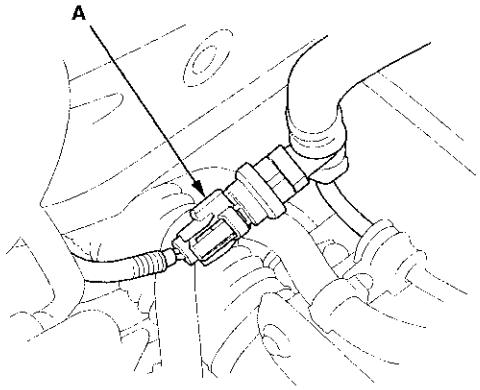


3. Remove the front grille cover:
   - 4-door (see page 20-274)
   - 2-door (see page 20-274)
4. Do the battery terminal disconnection procedure (see page 22-91).
5. Raise and support the vehicle (see page 1-13).
6. Remove the front wheels.
7. Remove the driver's airbag and the steering wheel (see page 17-6).
8. Remove the steering joint cover (A).



9. Loosen the steering joint upper bolt (B), and remove the steering joint lower bolt (C). Disconnect the steering joint by sliding the steering joint into the column shaft (D). Tighten the steering joint upper bolt to hold the column shaft.

   NOTE:
   - Do not disconnect the steering joint from the column shaft.
   - If the center guide is in place and has not moved, leave it in place.
   - If the center guide has moved or been removed, discard it.
10. Disconnect the power steering pressure (PSP) switch connector (A).



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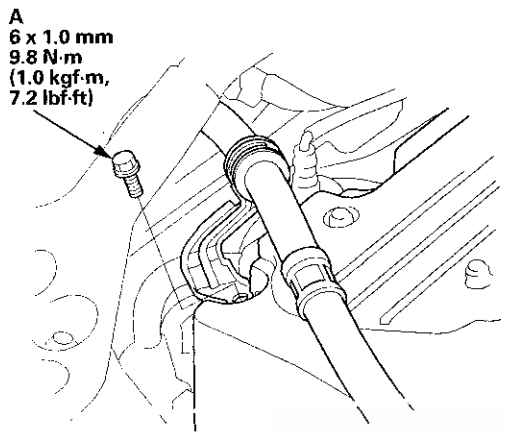
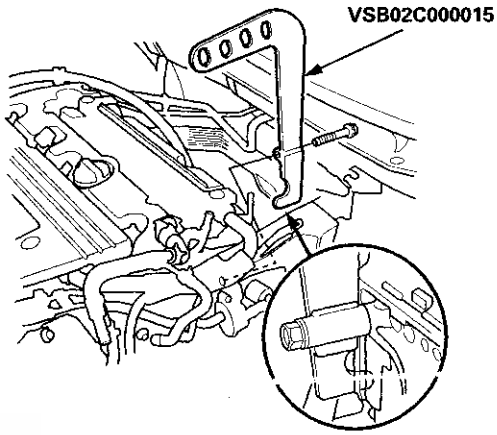
Stabilizer Bar Replacement (cont'd)

11. Remove the power steering pump outlet hose mounting bolt (A).



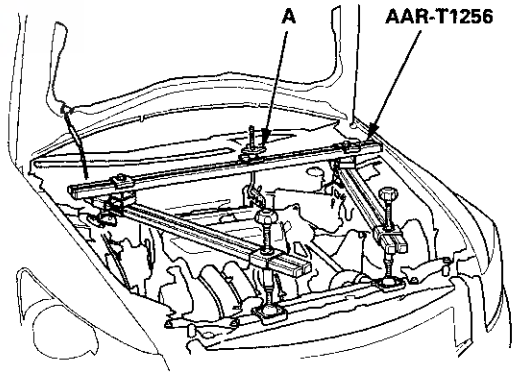
12. Remove the front strut brace (if equipped) (see page 20-306).

13. Attach the engine hanger adapter (VSB02C000015) to the threaded hole in the cylinder head.



14. Install the engine support hanger (AAR-T1256), then attach the hook to the slotted hole in the engine hanger adapter. Tighten the wing nut (A) by hand to lift and support the engine/transmission.

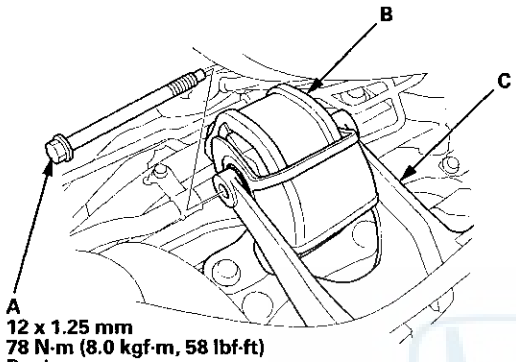
NOTE: Be careful when working around the windshield.



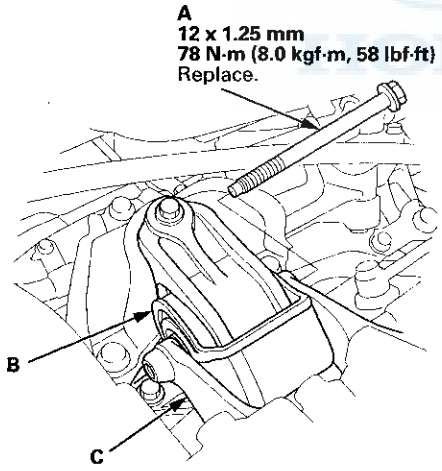
15. Remove the engine mount bolt (A) from the rear engine mount (B) and the rear engine mount bracket (C).

NOTE: Use a new engine mount bolt during reassembly.

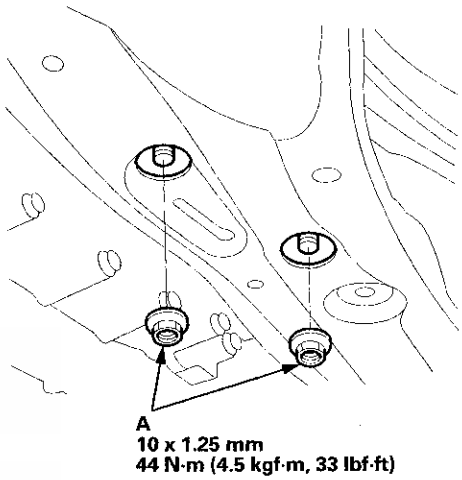
M/T



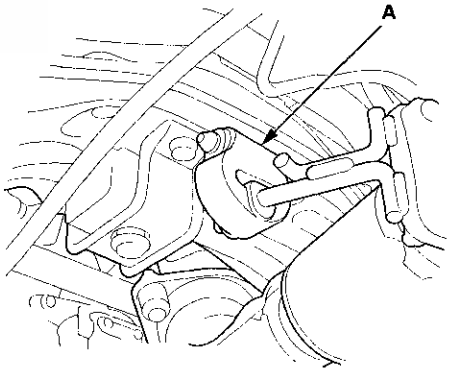
A/T



16. Raise the vehicle on the lift to full height.
17. Remove the front splash shield (see page 20-291).
18. Remove the nuts (A) securing of the lower transmission mount.



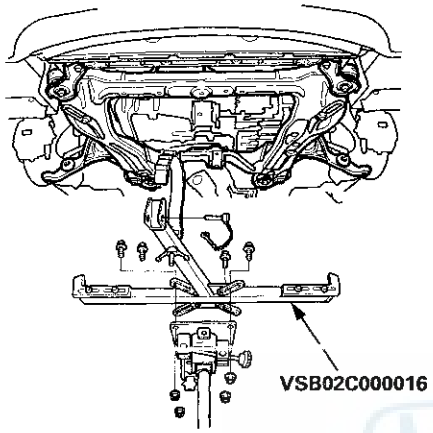
19. Remove the exhaust pipe A hanger (A) from the front subframe.



(cont'd)

Stabilizer Bar Replacement (cont'd)

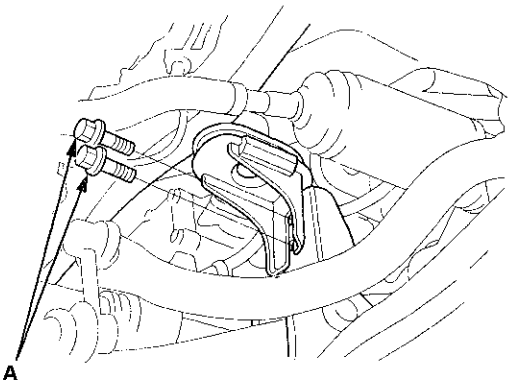
20. Attach the subframe adapter (VSB02C000016) to the subframe, hang the belt of the subframe adapter over the front of the subframe, then secure the belt with its stop.



21. Raise the jack, line up the slots in the front subframe adapter arms with the bolt holes on the jack base, then securely attach them with four bolts.

22. Remove the front subframe mounting bolts (A) on both sides of the middle mount.

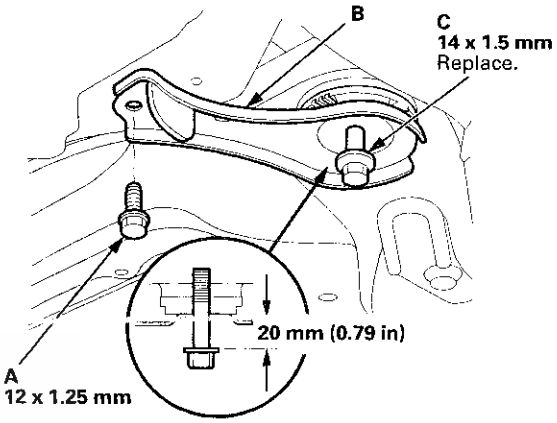
    NOTE: Use new mounting bolts during reassembly.



A
10 x 1.25 mm
49 N·m (5.0 kgf·m, 36 lbf·ft)
Replace.

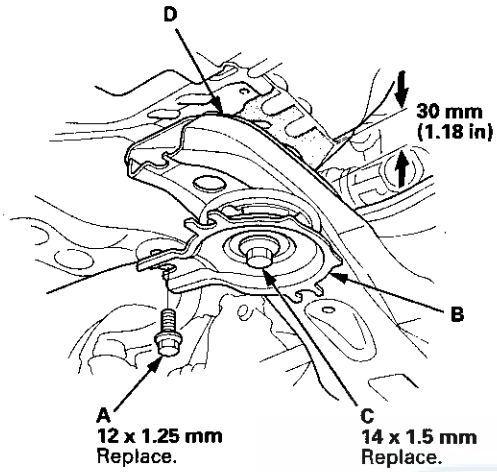
23. Disconnect both sides of the stabilizer link from the stabilizer bar (see page 18-24).

24. Remove the flange bolts (A) on both sides of the front subframe front stiffener (B).



25. Loosen the front side of the subframe mounting bolts (C) to obtain a 20 mm (0.79 in) distance between the bolt seat and the mounting surface. Do not loosen the mounting bolts more than necessary.

26. Remove the flange bolts (A) on both sides of the front subframe rear stiffener (B).



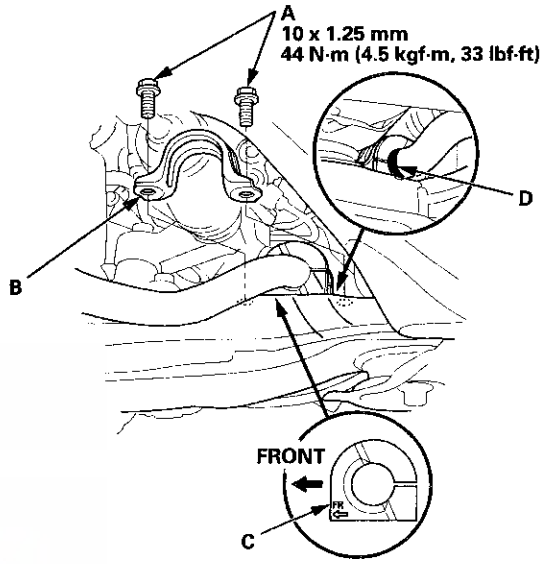
27. Loosen the rear side of the subframe mounting bolts (C) to obtain a 30 mm (1.18 in) distance between the bolt seat and the mounting surface. Do not loosen the mounting bolts more than necessary.

28. Lower the transmission jack with the front subframe adapter slowly until the front subframe (D) has dropped about 30 mm (1.18 in).

    NOTE: Do not lower the front subframe beyond the loosened subframe mounting bolts clearance.

29. Remove the flange bolts (A) and the bushing holders (B), then remove the bushings (C).

    NOTE: During installation, align the paint marks (D) on the stabilizer bar with the side of the bushings.



30. Move the stabilizer bar toward the passenger's side, and remove the stabilizer bar.

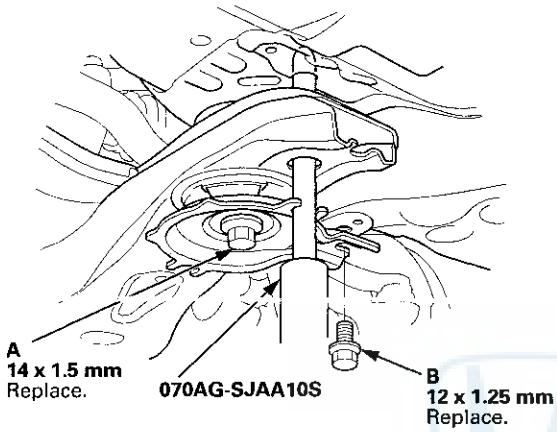
31. Install the stabilizer bar.

    NOTE:
    - Note the right and left direction of the stabilizer bar.
    - Note the direction of installation for the bushings.

(cont'd)

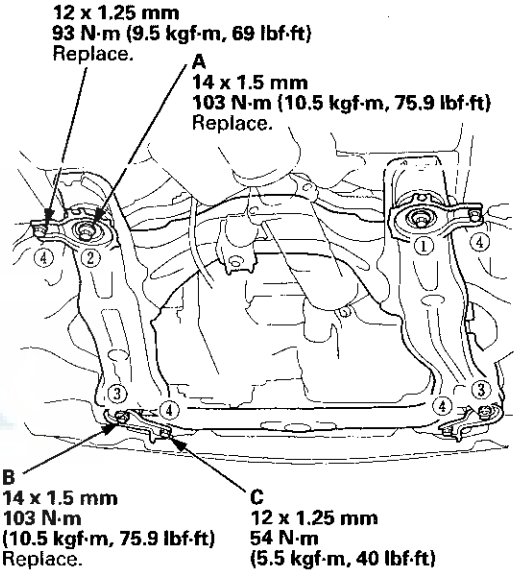
Stabilizer Bar Replacement (cont'd)

32. Align the front subframe using the subframe alignment pin. Vertically install the subframe alignment pin, and align the right-rear corner of the front subframe and vehicle frame holes, then loosely tighten the new subframe mounting bolt (A) until the front subframe contacts the body frame.



33. Loosely tighten the left-rear subframe mounting bolt using the same procedure as the right-rear with the subframe alignment pin.
34. Loosely install the new 12 mm flange bolts (B) to the subframe rear stiffener.
35. Torque the subframe mounting bolts to the specified torque starting with the right-rear bolt. Use the subframe alignment pin when tightening the rear side bolts (A).

    NOTE:
    - Torque the bolts in the sequence shown.
    - Before tightening the new front side subframe mounting bolts (B), raise the jack and loosely install the 12 mm flange bolts (C) to align the subframe front stiffener.



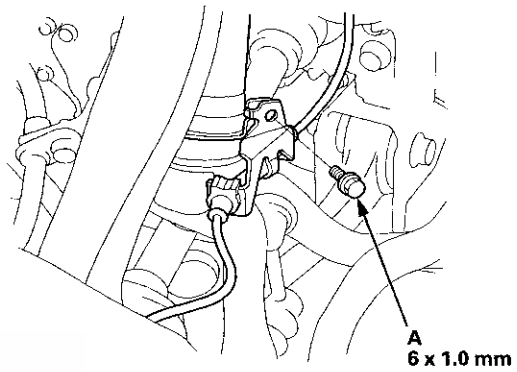
36. Check all of the front subframe mounting bolts, and retighten if necessary.

37. Install all of the removed parts in the reverse order of removal, and note these items:
    - Refer to stabilizer link removal/installation to connect the stabilizer bar to the links (see page 18-24).
    - If the center guide is in place, use it to determine the steering joint installation angle.
    - If the center guide is gone, check the steering joint installation angle (see step 3 on page 17-12).
    - Check the steering wheel installation (see page 17-9).
    - When connecting the rear engine mount to the rear engine mount bracket, first lightly tighten the mounting bolt, then remove the engine support hanger, and tighten it to the specified torque.
    - Before installing the wheel, clean the mating surfaces of the brake disc and inside of the wheel.
38. Do the battery terminal reconnection procedure (see page 22-91), then turn the ignition switch to ON (II) and check that the SRS indicator should come on for about 6 seconds and then go off.
39. Check the wheel alignment, and adjust it if necessary (see page 18-5).

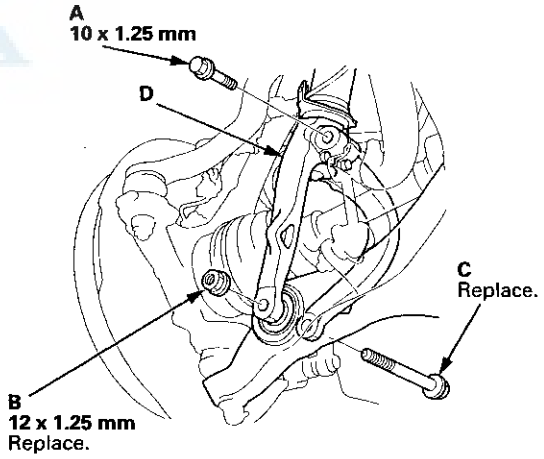
Damper/Spring Removal and Installation

Removal

1. Raise and support the vehicle (see page 1-13).
2. Remove the front wheel.
3. Remove the wheel speed sensor harness bracket mounting bolt (A).



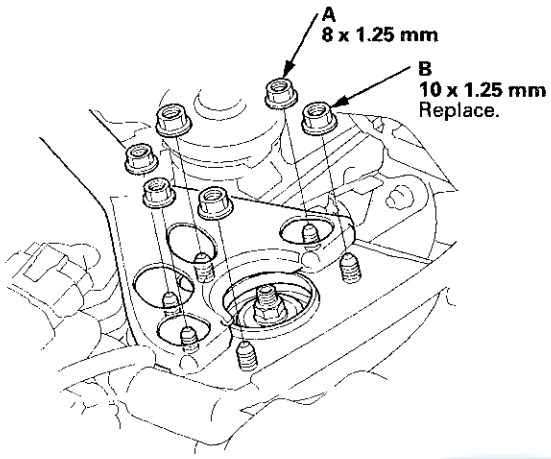
4. Remove the damper pinch bolt (A) and the damper fork mounting nut (B) while holding the mounting bolt (C), then remove the damper fork (D) from the damper and the lower arm.



(cont'd)

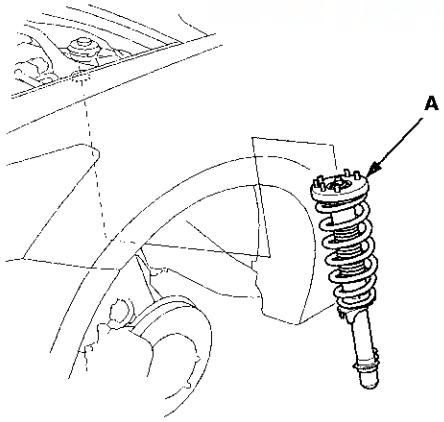
Damper/Spring Removal and Installation (cont'd)

5. Remove the front strut brace mounting nuts (A) (if equipped).



6. Remove the damper mounting nuts (B) from the top of the damper. Do not let the damper/spring drop down under its own weight.
7. Remove the damper/spring (A).

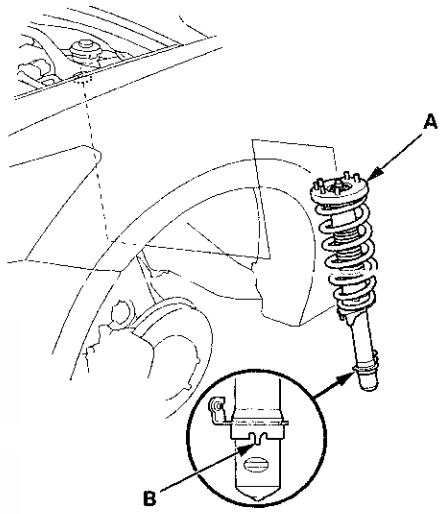
   NOTE: Be careful not to damage the body.



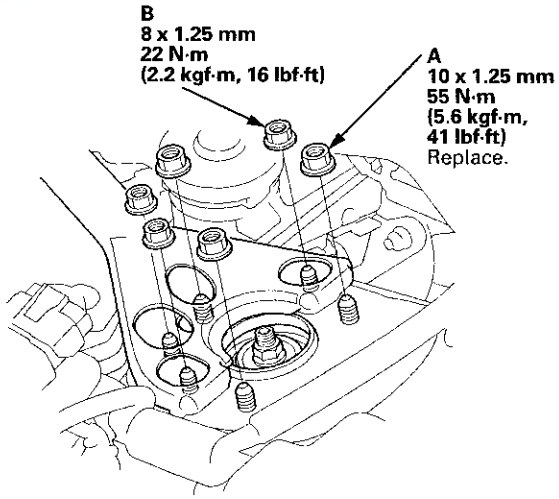
Installation

1. Position the damper/spring (A) in the body with the aligning tab (B) facing inside.

   NOTE: Be careful not to damage the body.

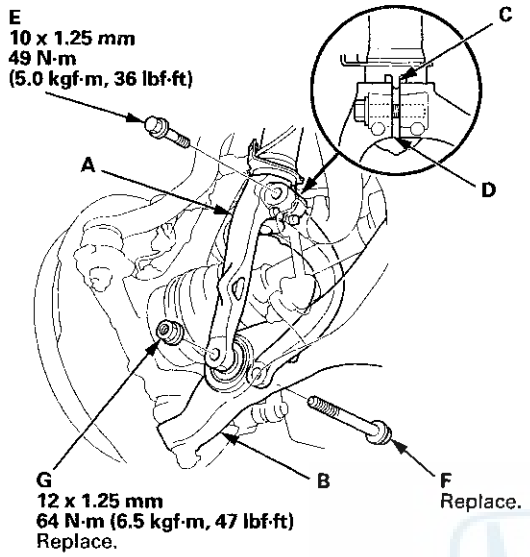


2. Loosely install the new damper mounting nuts (A) to the top of the damper.

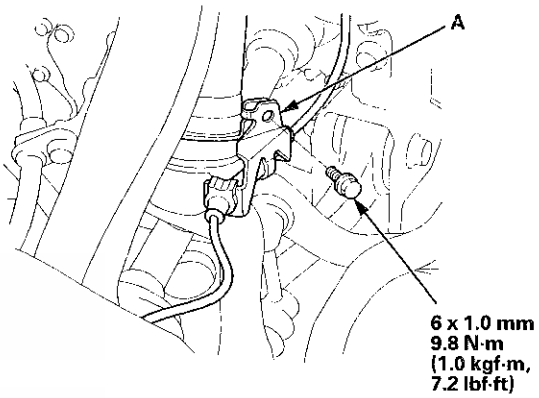


3. Loosely install the front strut brace mounting nuts (B) (if equipped).

4. Install the damper fork (A) over the driveshaft and onto the lower arm (B). Install the aligning tab (C) on the damper unit into the slot (D) of the damper fork.



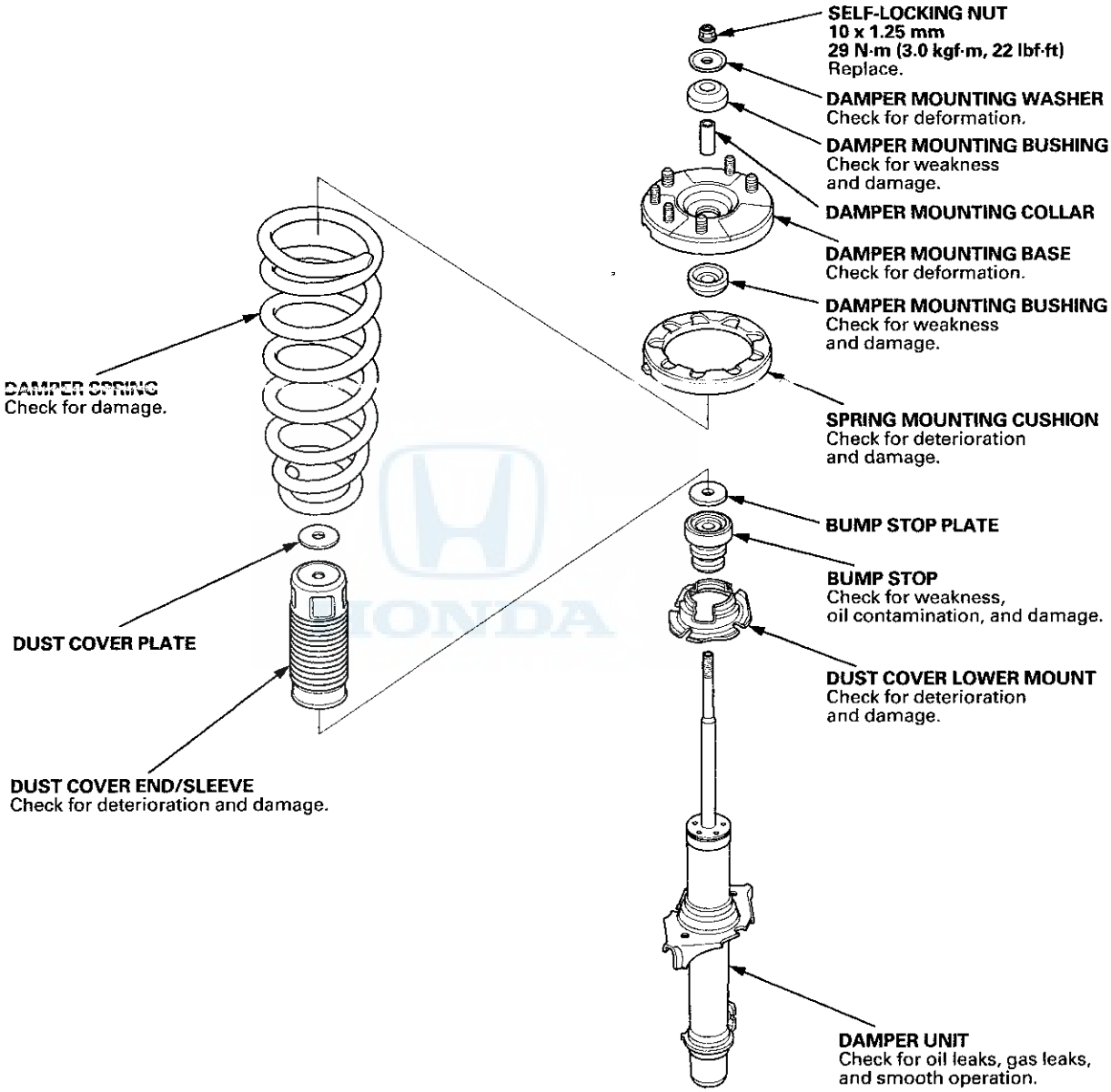
5. Loosely install the damper pinch bolt (E) into the damper fork.
6. Connect the damper fork and the lower arm with the new damper fork mounting bolt (F), then lightly tighten the new mounting nut (G).
7. Place a floor jack under the lower arm, and raise the suspension to load it with the vehicle's weight.
8. Tighten the damper pinch bolt and the damper fork mounting nut while holding the mounting bolt to the specified torque.
9. Tighten the damper mounting nuts and front strut brace mounting nuts (if equipped) on top of the damper to the specified torque values.
10. Install the wheel speed sensor harness bracket (A).



11. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the front wheel.
12. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Damper/Spring Disassembly, Inspection, and Reassembly

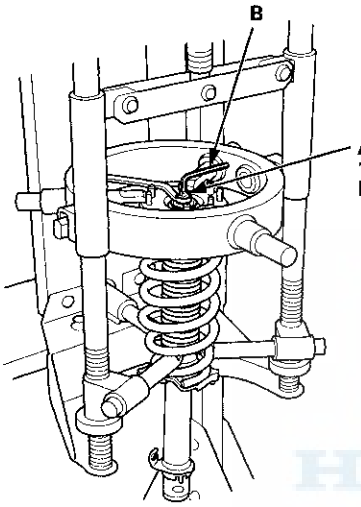
Exploded View



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

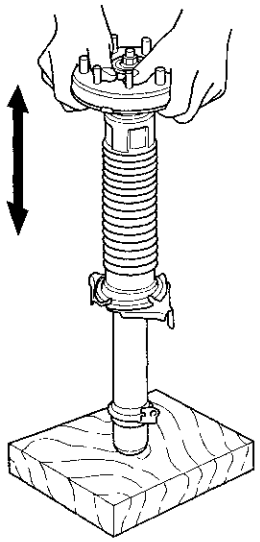
1. Compress the damper spring, then remove the self-locking nut (A) while holding the damper shaft with a hex wrench (B). Do not compress the damper spring more than necessary to remove the self-locking nut.



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



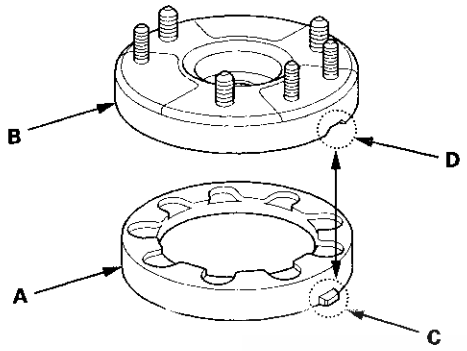
3. Check for oil leaks, abnormal noises, and binding during these tests.

(cont'd)

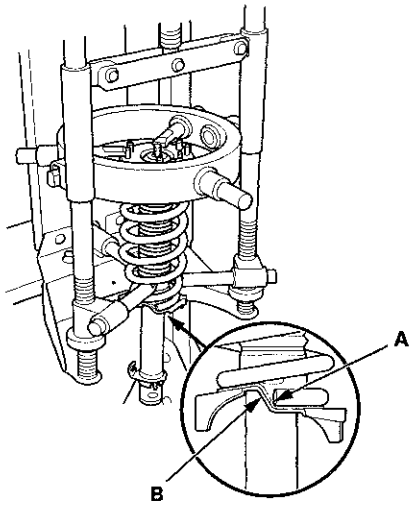
Damper/Spring Disassembly, Inspection, and Reassembly (cont'd)

Reassembly

1. Install the spring mounting cushion (A) on the damper mounting base (B) by aligning the tab (C) and notch (D).

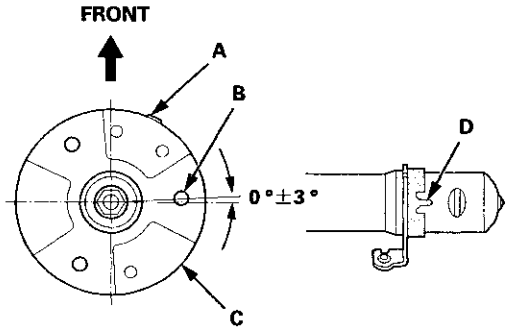


2. Install all the parts except the damper mounting washer and the self-locking nut onto the damper unit by referring to the Exploded View.
3. Compress the damper spring using a strut spring compressor. Do not compress the spring excessively.
4. Align the lower end (A) of the damper spring with the stepped part (B) of the dust cover lower mount and the lower spring seat on the damper unit.

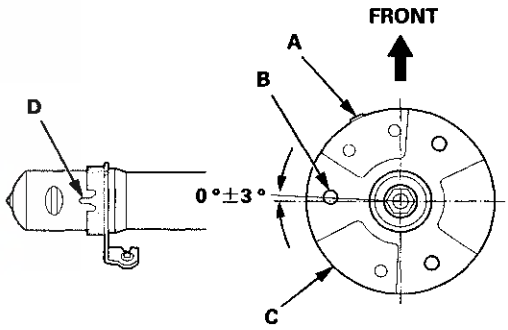


5. Position the tab (A) on the spring mounting cushion facing forward but toward the inside of the vehicle.

Left

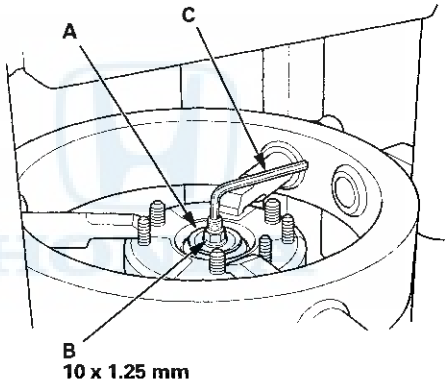


Right



6. Align the angle of the stud (B) on the damper mounting base (C) with the aligning tab (D) on the bottom of the damper unit as shown.

7. Install the damper mounting washer (A) and the new self-locking nut (B).

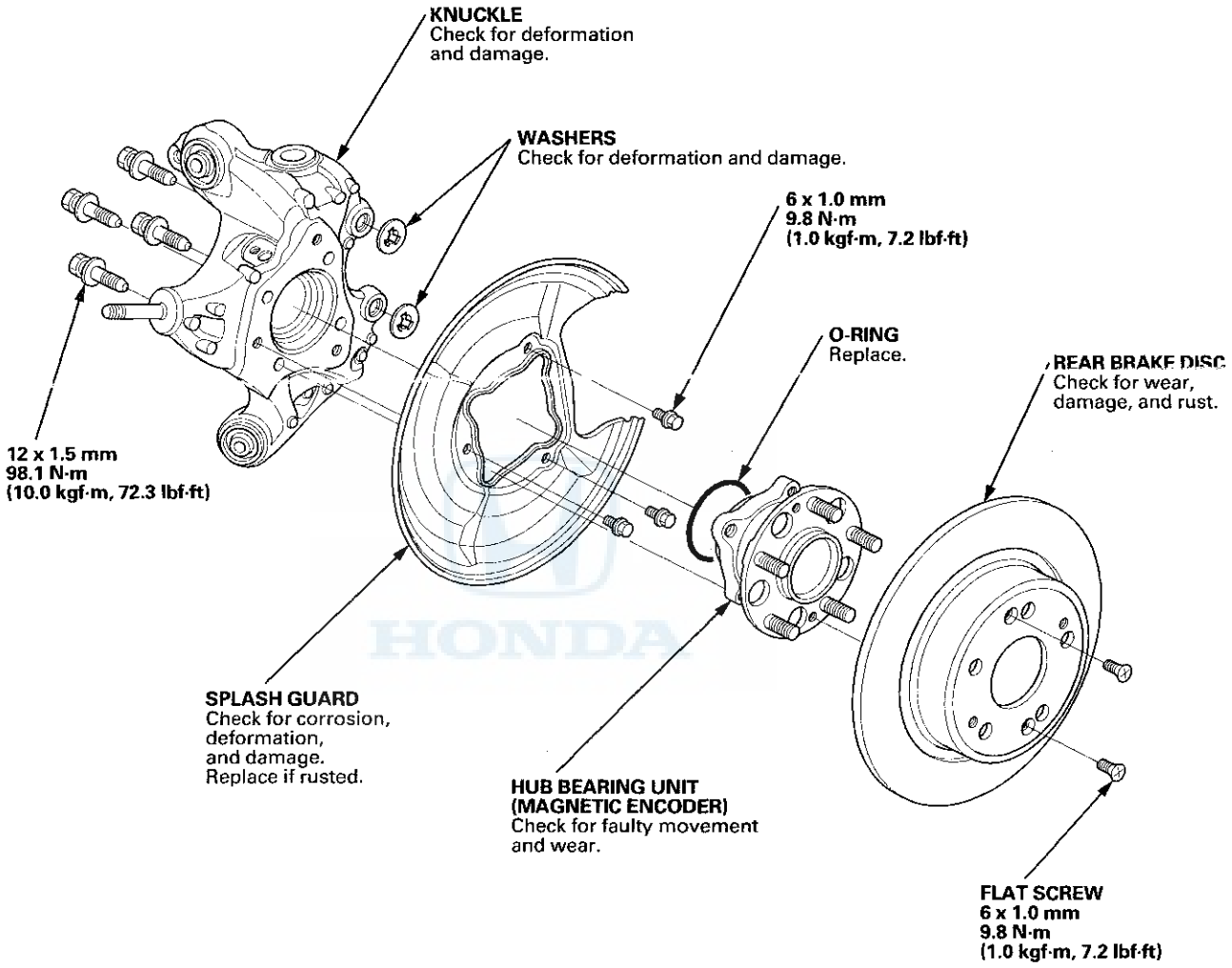


10 x 1.25 mm
29 N·m (3.0 kgf·m, 22 lbf·ft)
Replace.

8. Hold the damper shaft with a hex wench (C), and tighten the self-locking nut to the specified torque.
9. Remove the damper/spring from the strut spring compressor.

Knuckle/Hub Bearing Unit Replacement

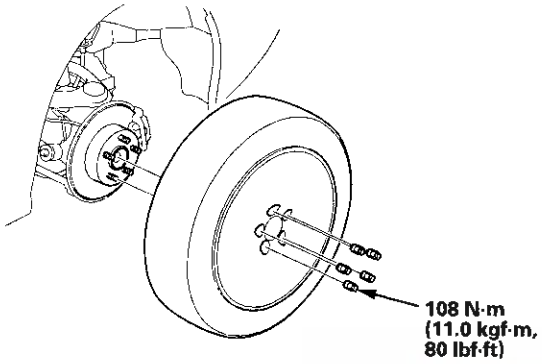
Exploded View



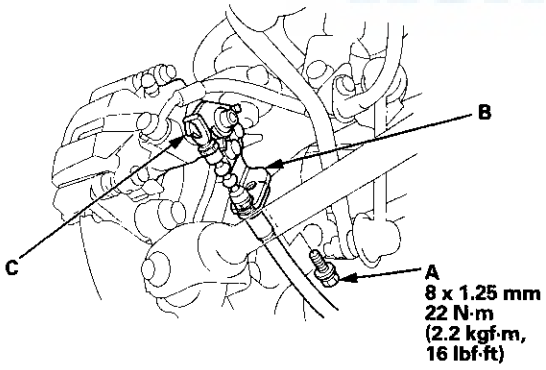
Special Tools Required
- Ball Joint Thread Protector, 14 mm 07AAE-SJAA100
- Ball Joint Remover, 32 mm 07MAC-SL0A102

Hub Bearing Unit Replacement

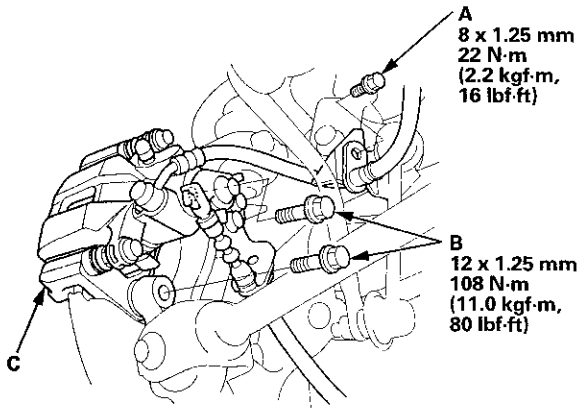
1. Raise and support the vehicle (see page 1-13).
2. Remove the wheel nuts, and the rear wheel.



3. Release the parking brake lever fully.
4. Loosen the parking brake cable adjusting nut (see page 19-8).
5. Remove the flange bolt (A) from the arm (B). Then disconnect the parking brake cable from the lever (C).

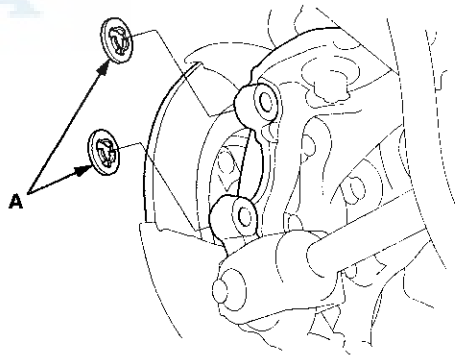


6. Remove the brake hose mounting bolt (A).



7. Remove the brake caliper bracket mounting bolts (B), then remove the caliper assembly (C) from the knuckle. To prevent damage to the caliper assembly or the brake hose, use a short piece of wire to hang the caliper assembly from the undercarriage. Do not twist the brake hose excessively.
8. Remove the two washers (A).

   NOTE: During installation, make sure the washers are installed between the brake caliper bracket and the knuckle.

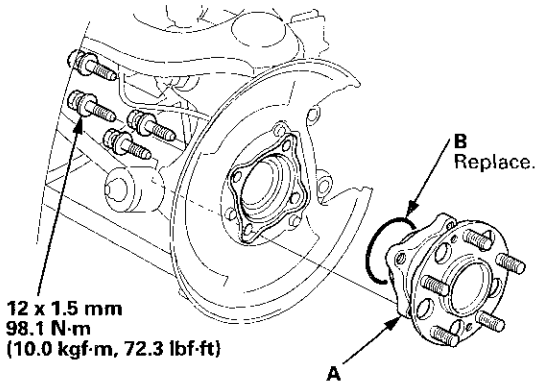


9. Remove the rear brake disc (see page 19-34).

(cont'd)

Knuckle/Hub Bearing Unit Replacement (cont'd)

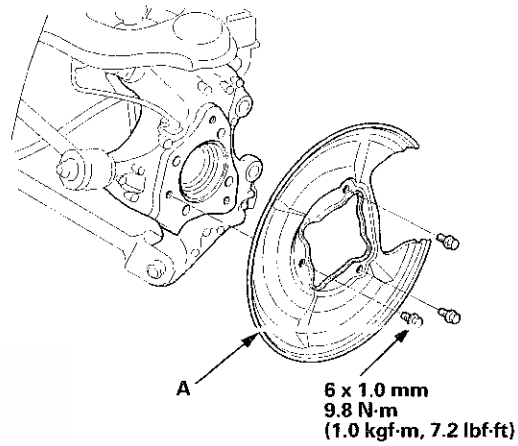
10. Remove the hub bearing unit (A) and the O-ring (B).



11. Check the hub bearing unit for damage and cracks.
12. Install the hub bearing unit in the reverse order of removal, and note these items:
    - Use a new O-ring on reassembly.
    - After installing the brake caliper, make sure the clearance between lower arm B and the parking brake cable is more than 5 mm (0.2 in).
    - Before installing the brake disc, clean the mating surfaces of the hub bearing unit and the brake disc.
    - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.
13. Check the wheel alignment, and adjust it if necessary (see page 18-5).

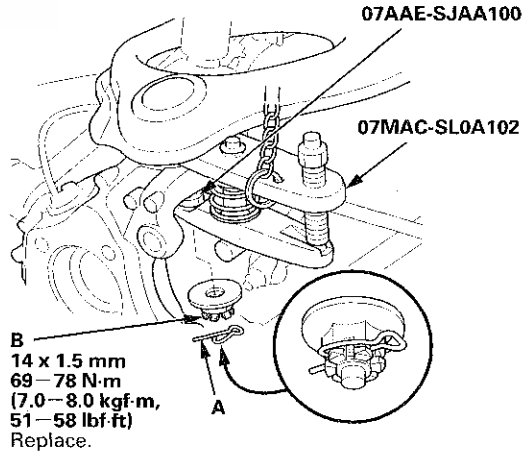
Knuckle Replacement

1. Remove the hub bearing unit.
2. Remove the splash guard (A).



3. Remove the lock pin (A) from the upper arm ball joint, then remove the castle nut (B).

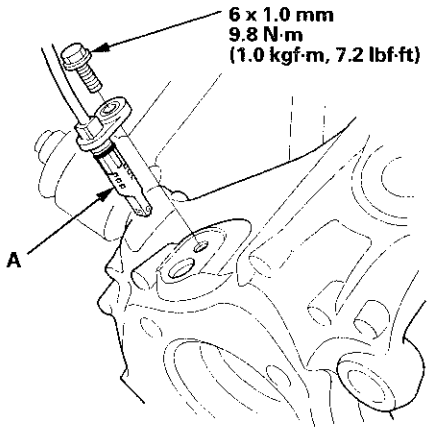
   NOTE: During installation, install the lock pin as shown after tightening the new castle nut.



4. Disconnect the upper arm ball joint from the knuckle using the ball joint thread protector and the ball joint remover (see page 18-10).

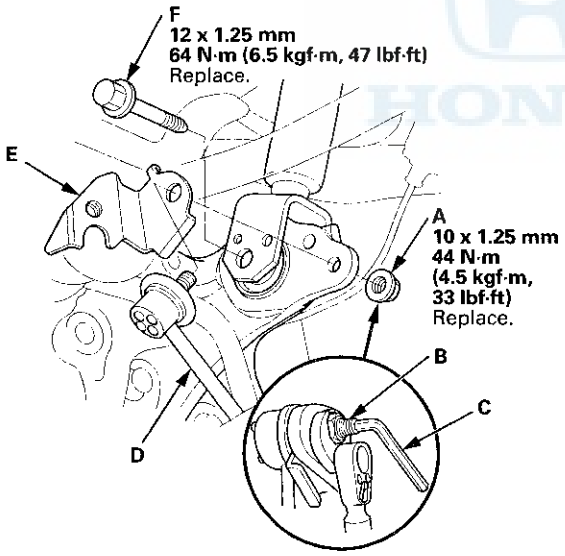
   NOTE:
   - Be careful not to damage the ball joint boot when installing the remover.
   - During installation, to connect the ball joint, raise the suspension with a jack (see step 9 on page 18-44).

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



6. Remove the flange nut (A) while holding the joint pin (B) with a hex wrench (C), then disconnect the stabilizer link (D) from the knuckle, and remove the brake hose bracket (E).

NOTE: Use the new flange nut during reassembly.

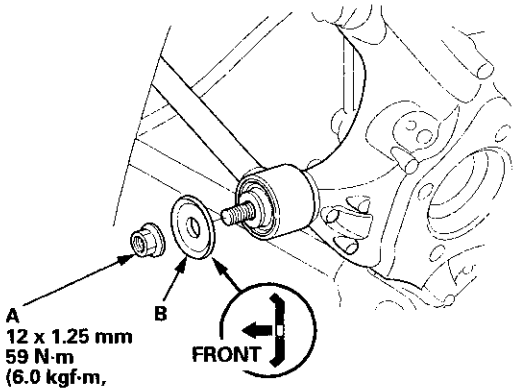


7. Remove the damper lower mounting bolt (F).

NOTE: Use the new mounting bolt during reassembly.

8. Remove the control arm mounting self-locking nut (A) and the washer (B).

NOTE: Use a new self-locking nut during reassembly.

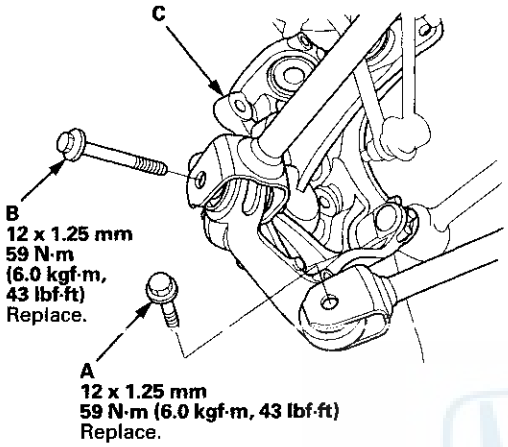


(cont'd)

Knuckle/Hub Bearing Unit Replacement (cont'd)

9. Remove the lower arm mounting bolt (A), and the lower arm B mounting bolt (B), then remove the knuckle (C).

   NOTE: Use new mounting bolts during reassembly.

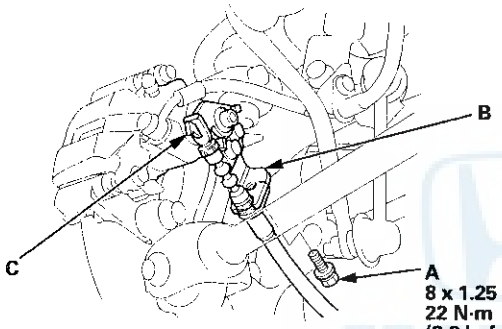


10. Install the knuckle in the reverse order of removal, and note these items:
    - First install all of the components, and lightly tighten the bolts and the nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque.
    - Be careful not to damage the ball joint boot when connecting the knuckle.
    - Before connecting the ball joint, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, and the threaded section and the mating surfaces of the castle nut.
    - Torque the castle nut 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 castle nut by loosening it.
    - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
11. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Upper Arm Replacement

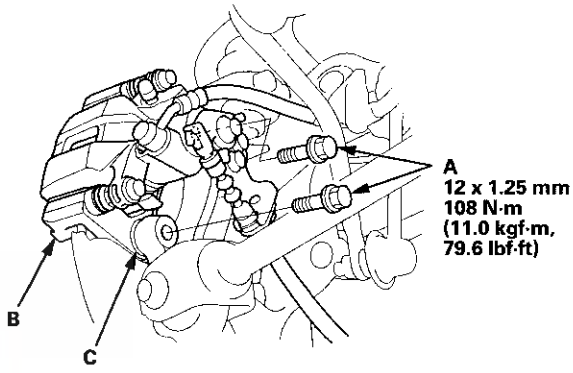
Special Tools Required
- Ball Joint Thread Protector, 14 mm 07AAE-SJAA100
- Ball Joint Remover, 32 mm 07MAC-SL0A102

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheel.
3. Remove the rear damper/spring (see page 18-49).
4. Release the parking brake lever fully.
5. Loosen the parking brake cable adjusting nut (see page 19-8).
6. Remove the flange bolt (A) from the arm (B). Then disconnect the parking brake cable from the lever (C).



7. Remove the brake caliper bracket mounting bolts (A), then remove the caliper assembly (B) from the knuckle. To prevent damage to the caliper assembly or the brake hose, use a short piece of wire to hang the caliper assembly from the undercarriage. Do not twist the brake hose excessively.

   NOTE: Make sure the washers (C) position on reassembly, if they are removed (see step 8 on page 18-39).

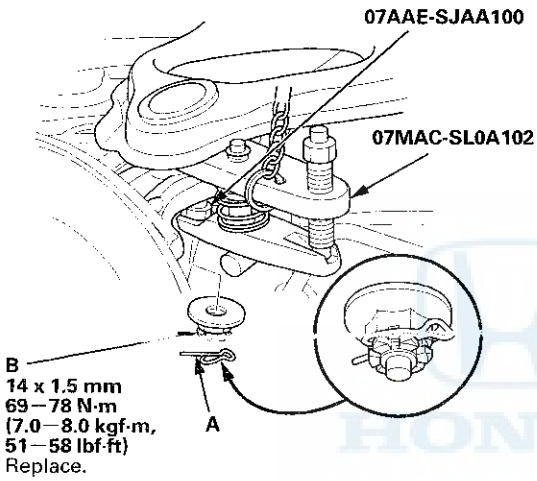


(cont'd)

Upper Arm Replacement (cont'd)

8. Remove the lock pin (A) from the upper arm ball joint, then remove the castle nut (B).

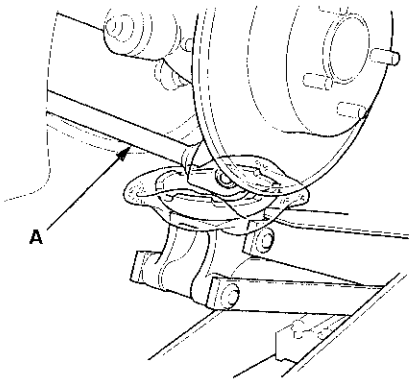
   NOTE: During installation, install the lock pin as shown after tightening the new castle nut.



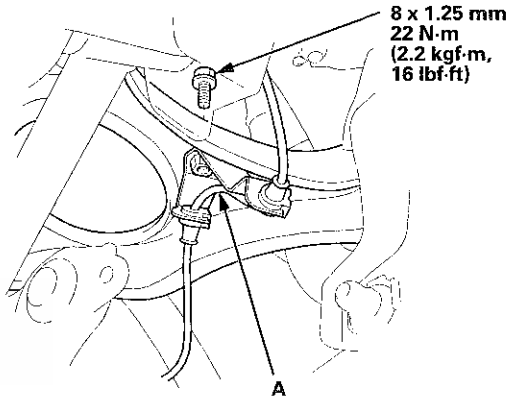
9. Disconnect the upper arm ball joint from the knuckle using the ball joint thread protector and the ball joint remover (see page 18-10).

   NOTE:

   - Be careful not to damage the ball joint boot when installing the remover.
   - During installation, to connect the ball joint, position a floor jack under the connecting point of the knuckle and lower arm A, and raise the suspension with the jack.

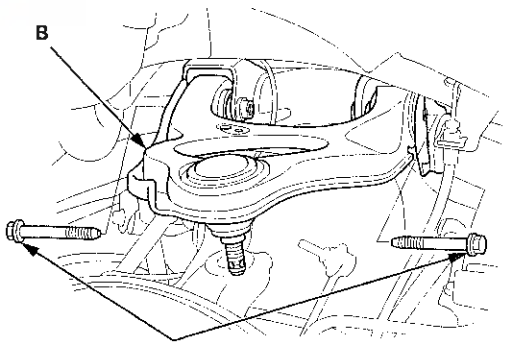


10. Remove the wheel speed sensor harness bracket (A).



11. Remove the upper arm mounting bolts (A), then remove the upper arm (B).

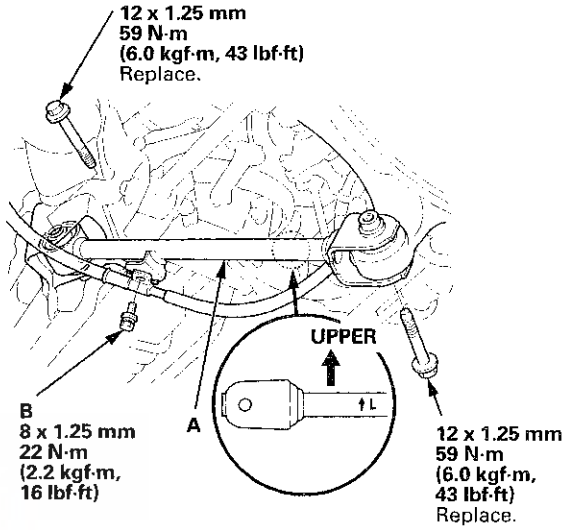
    NOTE: Use new mounting bolts during reassembly.



12. Install the upper arm in the reverse order of removal, and note these items;
    - First install all of the components, and lightly tighten the bolts and the nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque.
    - Be careful not to damage the ball joint boot when connecting the knuckle.
    - Before connecting the ball joint, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, and the threaded section and the mating surfaces of the castle nut.
    - Torque the castle nut 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 castle nut by loosening it.
    - After installing the brake caliper, make sure the clearance between lower arm B and the parking brake cable is more than 5 mm (0.2 in).
    - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
13. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Lower Arm A Replacement

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheel.
3. Remove the parking brake cable mounting bolt (B).



4. Remove the lower arm A mounting bolts, then remove lower arm A.

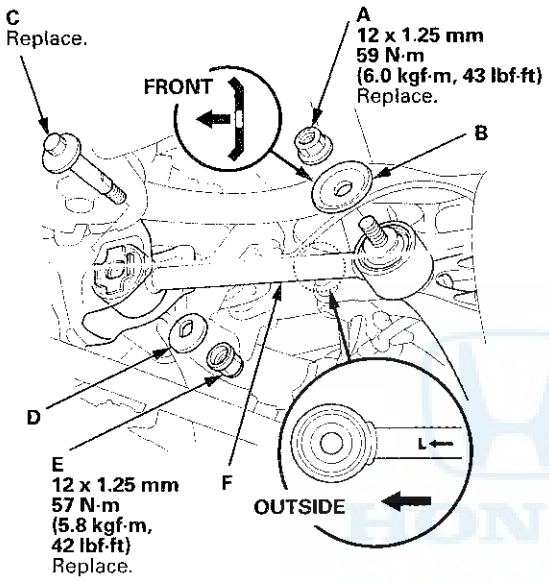
   NOTE: Use new mounting bolts during reassembly.

5. Install lower arm A in the reverse order of removal, and note these items:
    - First install all of the components, and lightly tighten the bolts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque.
    - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
6. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Control Arm Replacement

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheel.
3. Remove the control arm mounting self-locking nut (A) and the washer (B) from the knuckle side.

   NOTE: Use a new self-locking nut during reassembly.



4. Mark the cam positions of the adjusting bolt (C) and the adjusting cam plate (D) with the frame.
5. Remove the self-locking nut (E) while holding the adjusting bolt, then remove the adjusting cam plate, the adjusting bolt, and the control arm (F).

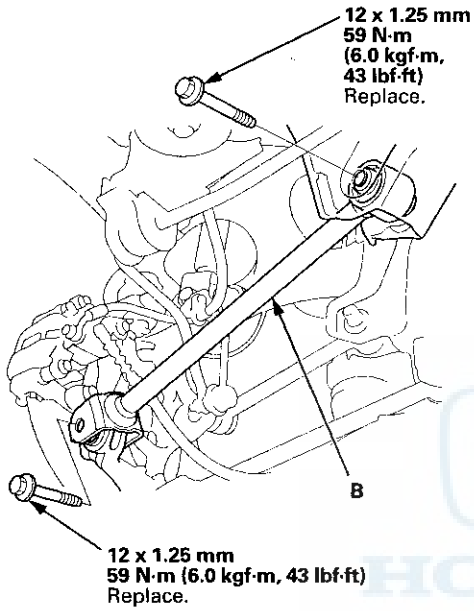
   NOTE: Use a new adjusting bolt and a new self-locking nut during reassembly.

6. Install the control arm in the reverse order of removal, and note these items:
   - First install all of the components, and lightly tighten the bolts and the nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque.
   - Position the extended surfaces of the cam on the adjusting bolt and the adjusting cam plate facing down.
   - Align the cam positions of the adjusting bolt and the adjusting cam plate with the marked positions on the frame when tightening the self-locking nut.
   - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
7. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Lower Arm B Replacement

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheel.
3. Remove the lower arm B mounting bolts, then remove lower arm B.

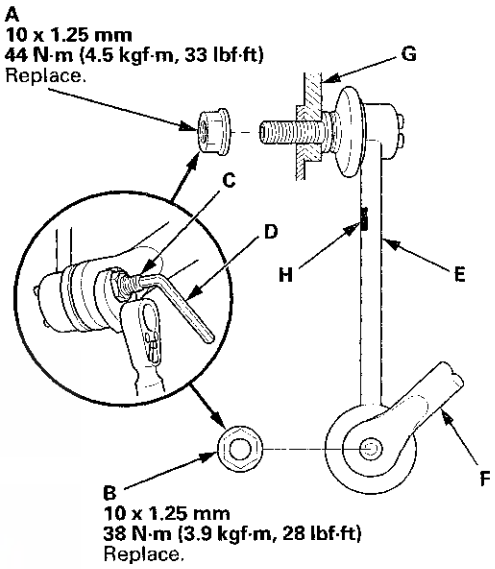
   NOTE: Use new mounting bolts during reassembly.



4. Install lower arm B in the reverse order of removal, and note these items:
   - First install all of the components, and lightly tighten the bolts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque.
   - Make sure the clearance between lower arm B and the parking brake cable is more than 5 mm (0.2 in).
   - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
5. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Stabilizer Link Removal/Installation

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheel.
3. Remove the flange nut (A) and the self-locking nut (B) while holding the respective joint pin (C) with a hex wrench (D), then remove the stabilizer link (E).



4. Install the stabilizer link on the stabilizer bar (F) and the knuckle adding in the brake hose bracket (G) with the joint pins set at the center of their range of movement.

   NOTE:
   - The stabilizer link has a paint mark (H). The paint mark indicates the difference between the left and right stabilizer links.
   - Install the end of the stabilizer link with the paint mark in the upper position.

(cont'd)

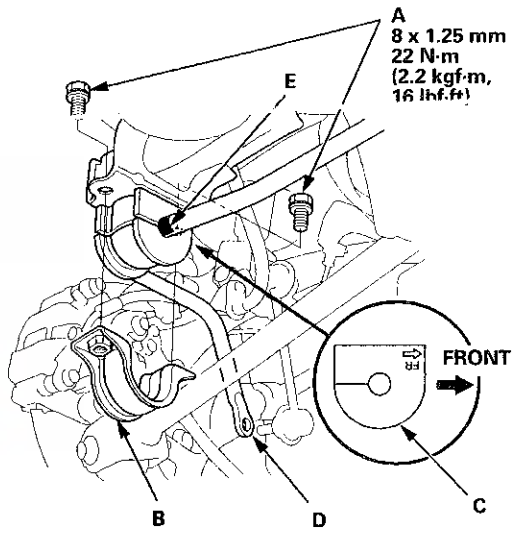
Stabilizer Link Removal/Installation (cont'd)

5. Install the flange nut and the new self-locking nut, and tighten them to the specified torque while holding the respective joint pin with a hex wrench.
6. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the rear wheel.
7. Test-drive the vehicle.
8. After 5 minutes of driving, tighten the self-locking nut again to the specified torque.

Stabilizer Bar Replacement

1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheels.
3. Disconnect both stabilizer links from the stabilizer bar (see page 18-47).
4. Remove the flange bolts (A) and the bushing holders (B), then remove the bushings (C) and the stabilizer bar (D).

   NOTE: During installation, align the paint marks (E) on the stabilizer bar with the side of the bushings.



5. Install the stabilizer bar in the reverse order of removal, and note these items:
   - Note the right and left direction of the stabilizer bar.
   - Note the direction of installation for the bushing.
   - Refer to the stabilizer link removal/installation to connect the stabilizer bar to the links (see page 18-47).
   - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

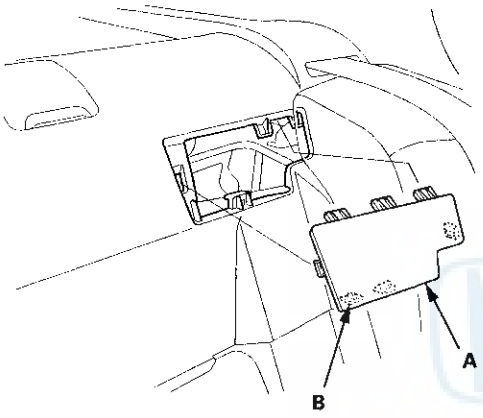
Damper/Spring Removal and Installation

Removal

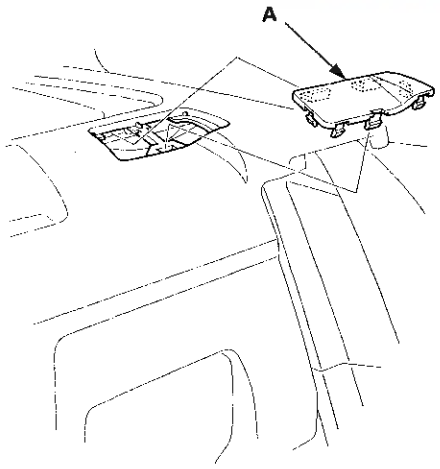
1. Raise and support the vehicle (see page 1-13).
2. Remove the rear wheel.
3. Fold down the rear seat-back, then remove the lid (A).

   NOTE: For 4-door, lift up the tab (B) inside underneath the lid first using a flat-tipped screwdriver, then release the hooks.

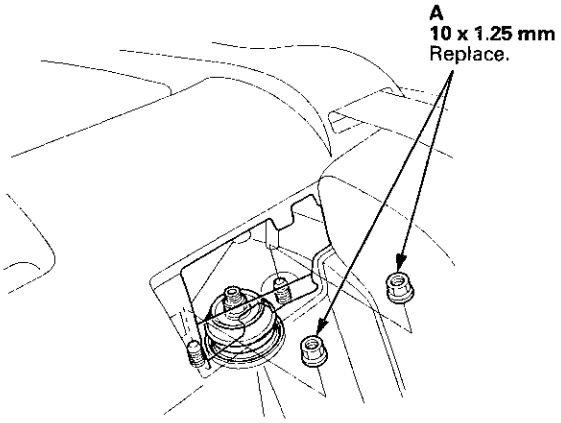
4-door



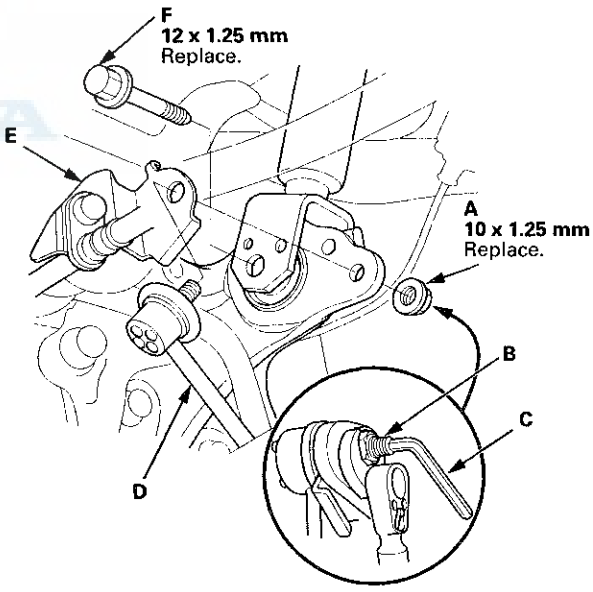
2-door



4. Remove the damper mounting nuts (A) from the top of the damper.



5. Remove the flange nut (A) while holding the joint pin (B) with a hex wrench (C), then disconnect the stabilizer link (D) from the knuckle, and remove the brake hose bracket (E).



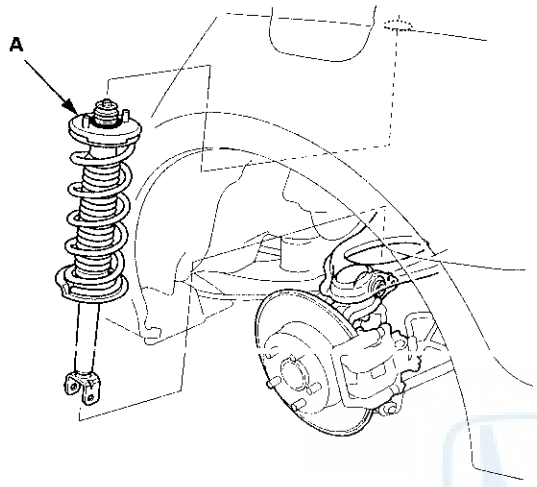
6. Remove the damper lower mounting bolt (F).

(cont'd)

Damper/Spring Removal and Installation (cont'd)

7. Remove the damper/spring (A) by lowering the rear suspension.

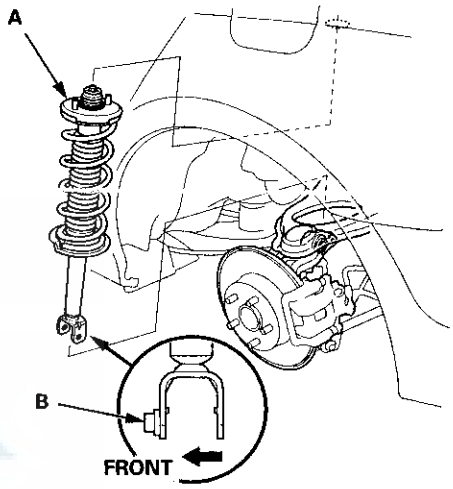
   NOTE: Be careful not to damage the body.



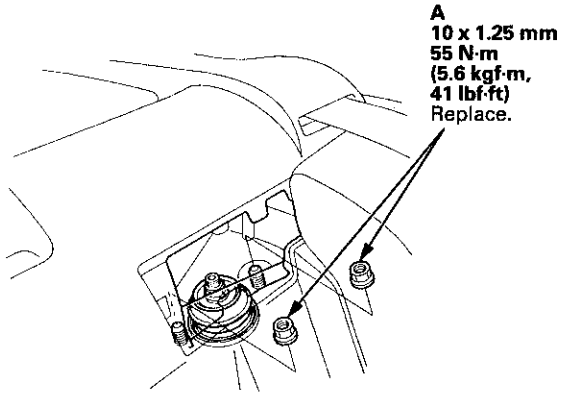
Installation

1. Lower the rear suspension, and position the damper/spring (A) in the body with the welded nut (B) on the bottom of the damper facing forward.

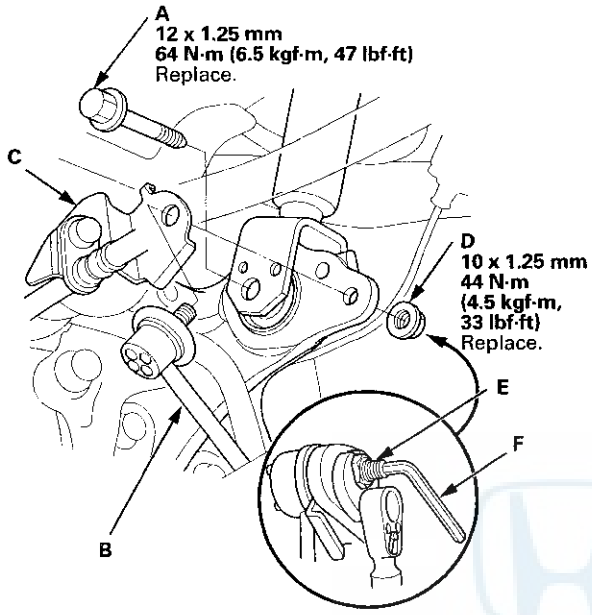
   NOTE:
   - Be careful not to damage the body.
   - Make sure the damper is installed in the correct direction.



2. Loosely install the new damper mounting nuts (A) to the top of the damper.

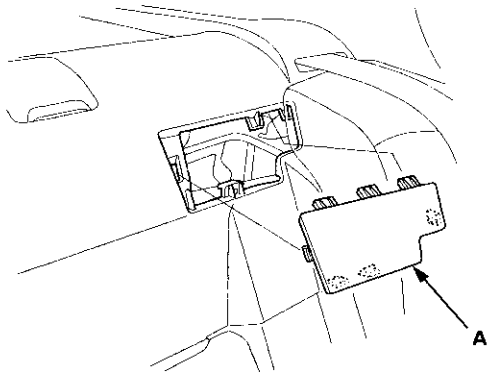


3. Loosely install the new damper lower mounting bolt (A) on the bottom of the damper. Connect the stabilizer link (B) to the brake hose bracket (C) to the knuckle, and loosely install the new flange nut (D).

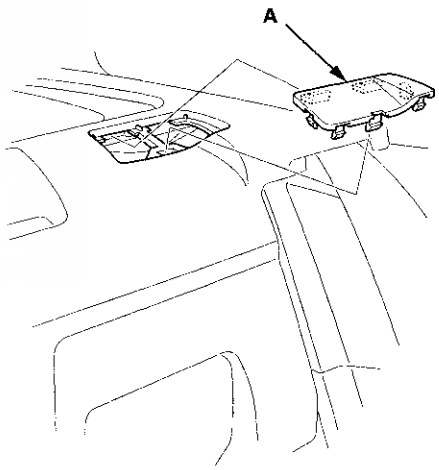


4. Place a floor jack under the connecting point of the knuckle and lower arm A, and raise the suspension to load with the vehicle's weight.
5. Tighten the damper lower mounting bolt and the flange nut while holding the joint pin (E) with the hex wrench (F) to the specified torque.
6. Tighten the damper mounting nuts on top of the damper to the specified torque.
7. Install the lid (A), and set the rear seat-back to the original position.

4-door



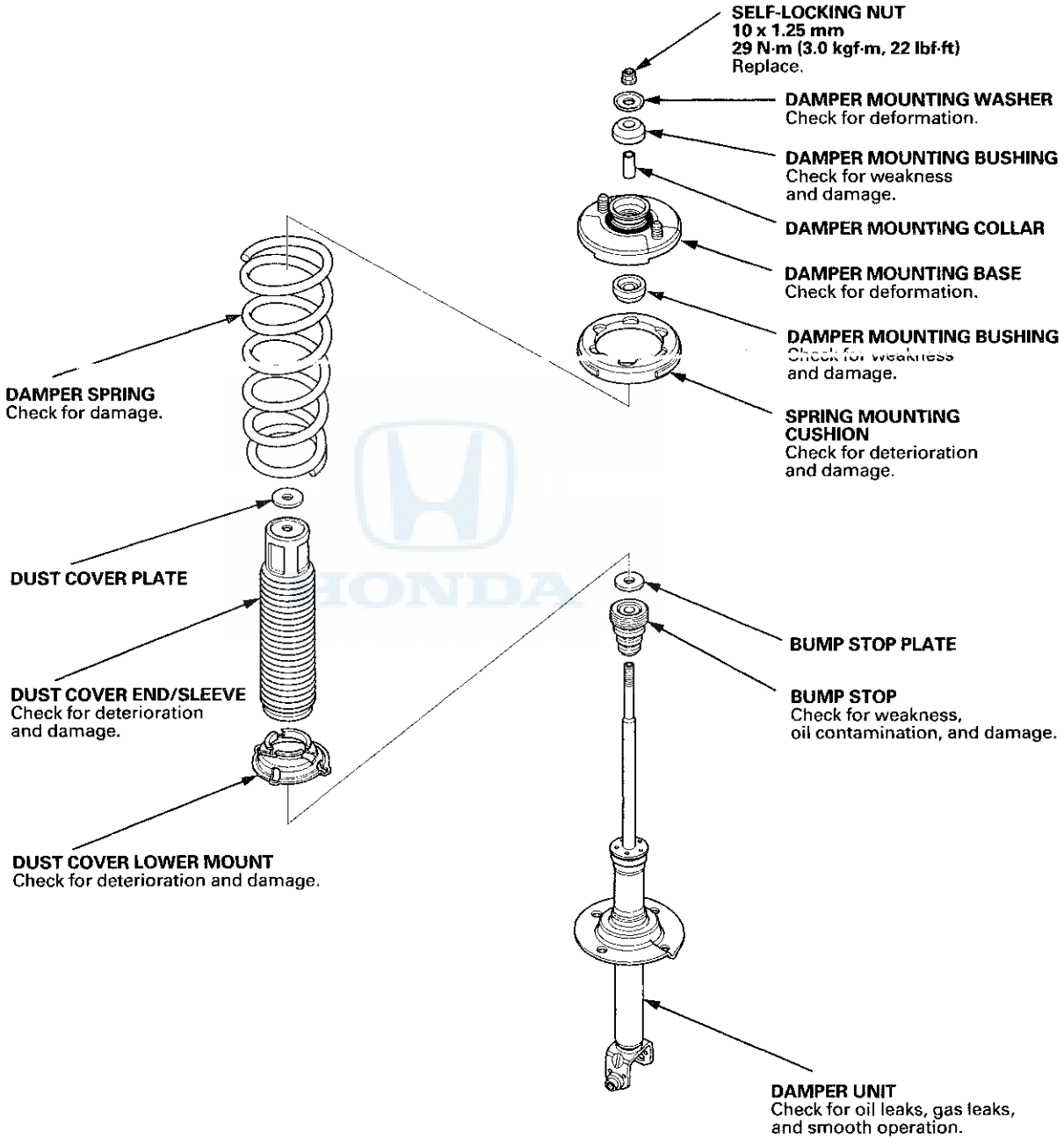
2-door



8. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the rear wheel.
9. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Damper/Spring Disassembly, Inspection, and Reassembly

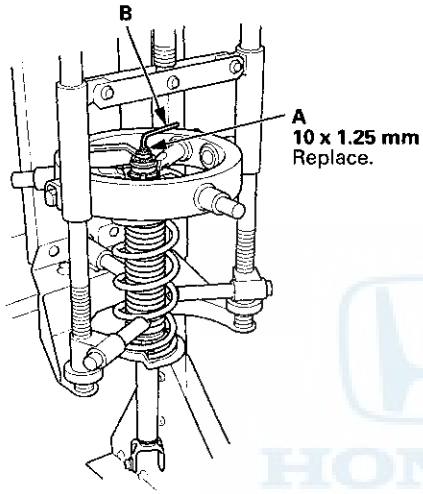
Exploded View



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

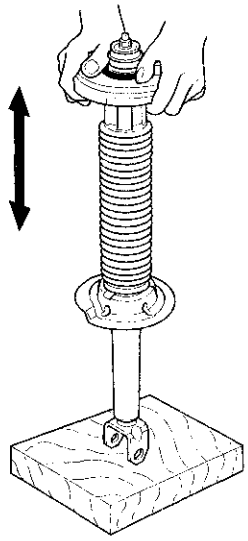
1. Compress the damper spring, then remove the self-locking nut (A) while holding the damper shaft with a hex wrench (B). Do not compress the damper spring more than necessary to remove the self-locking nut.



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

Inspection

1. Reassemble all 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.



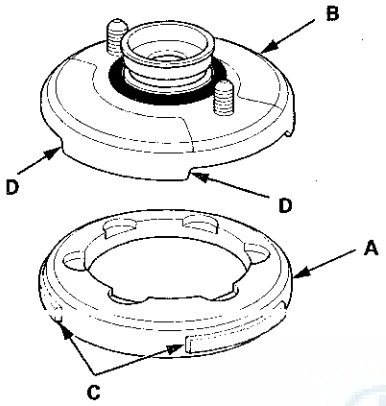
3. Check for oil leaks, abnormal noises, and binding during these tests.

(cont'd)

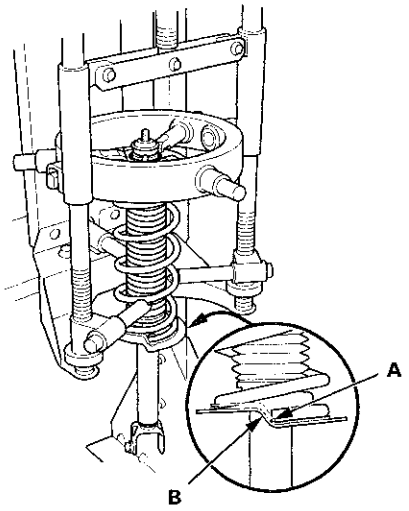
Damper/Spring Disassembly, Inspection, and Reassembly (cont'd)

Reassembly

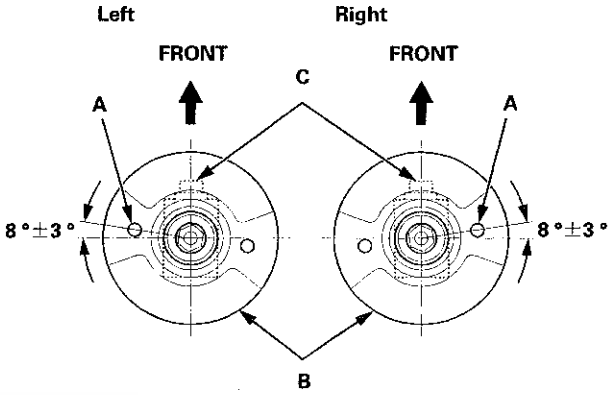
1. Install the spring mounting cushion (A) on the damper mounting base (B) by aligning the tabs (C) and notches (D).



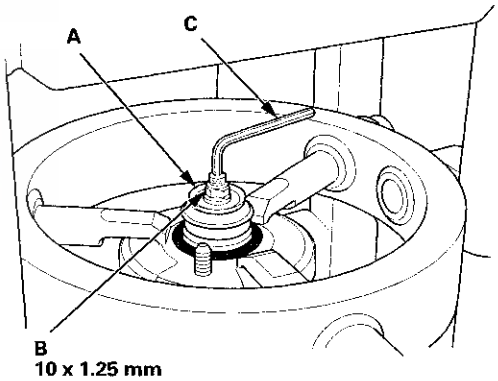
2. Install all the parts except the damper mounting washer and the self-locking nut onto the damper unit by referring to the Exploded View.
3. Compress the damper spring using a strut spring compressor. Do not compress the spring excessively.
4. Align the lower end (A) of the damper spring with the stepped part (B) of the dust cover lower mount and the lower spring seat on the damper unit.



5. Align the angle of the stud (A) on the damper mounting base (B) with the welded nut (C) on the bottom of the damper unit as shown.



6. Install the damper mounting washer (A), and loosely install the new self-locking nut (B).



10 x 1.25 mm
29 N·m(3.0 kgf·m, 22 lbf·ft)
Replace.

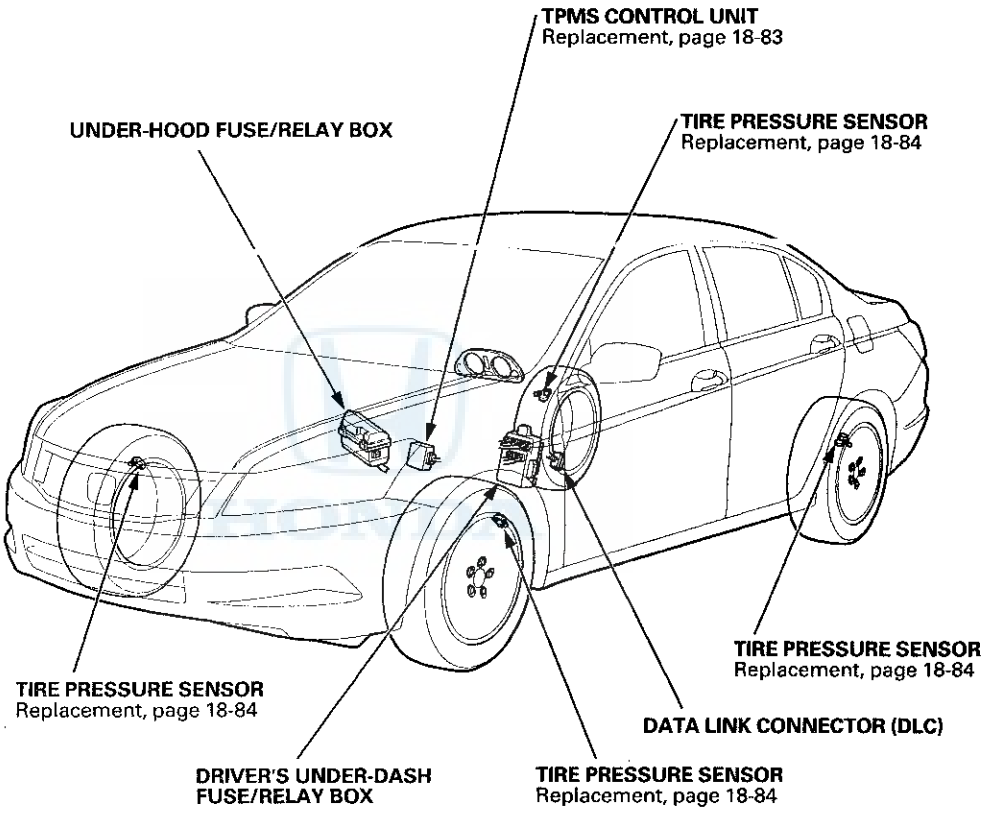
7. Hold the damper shaft with a hex wrench (C), and tighten the self-locking nut to the specified torque.
8. Remove the damper/spring from the strut spring compressor.

Navigation Tools: Click on the “Table of Contents” below, or use the Bookmarks to the left.

Suspension

TPMS

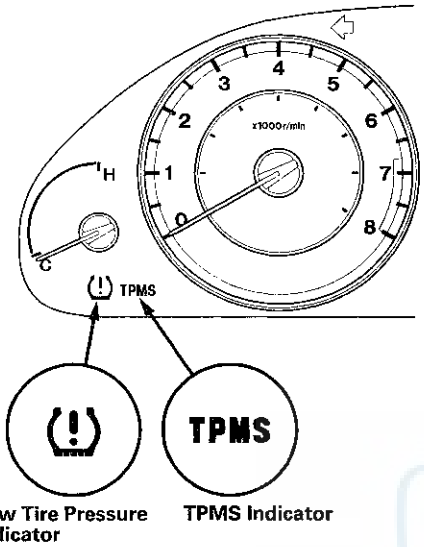
Component Location Index



General Troubleshooting Information

System Indicator

The TPMS (tire pressure monitoring system) has the low tire pressure indicator and the TPMS indicator.



The Low Tire Pressure Indicator

- If the system detects low pressure in any of the four tires, the low tire pressure indicator comes on.
- When the indicator comes on, inflate the tires and test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute, and the low tire pressure indicator will go off.
- If the TPMS control unit detects a problem in the system during an indication of low tire pressure, it turns off the low tire pressure indicator, stores the DTC (s), and turns on the TPMS indicator.

The TPMS Indicator

- If a problem is detected in the system, the TPMS indicator comes on.
- If low tire pressure and a problem in the system are detected, only the TPMS indicator comes on.

If the system is OK, the TPMS indicator and the low tire pressure indicator should come on when you turn the ignition switch to ON (II), and then go off 2 seconds later. If they don't, there is a problem with the system.

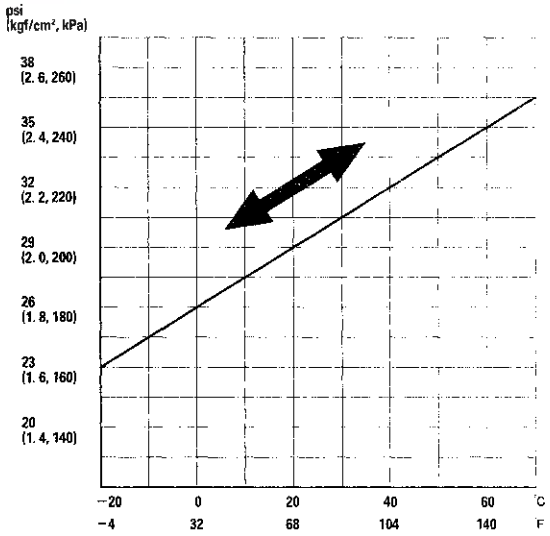
DTC 11, 13, 15, 17

If the system detects low pressure in any of the four tires, the low tire pressure indicator comes on, and the TPMS control unit sets one or more of these codes: DTC 11, 13, 15, 17. When the tire pressure returns to normal, and the TPMS control unit receives the normal pressure signal from the tire pressure sensor, the TPMS control unit turns off the indicator. However TPMS control unit still retains the DTC(s).

NOTE: It is necessary to test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute so that the tire pressure sensor transmits the signal.

Tire Pressure Changing by Temperature

Tire pressures increase slightly as the temperature in the tires rises during driving. Pressures can also increase or decrease slightly with changes in outside air temperature. A temperature change of about 18 °F (10 °C) changes tire pressure by about 10 kPa (0.1 kgf/cm², 1.5 psi). If the temperature drops, tire pressure could decrease enough to turn on the low tire pressure indicator, but later, the tire temperature could increase enough to turn the indicator off. To resolve a complaint of such intermittent indications, confirm and clear the stored DTC(s) and check the tire pressures. Then explain to the customer how temperature changes can affect the system.



(cont'd)

General Troubleshooting Information (cont'd)

Problems That Are Not System Faults

- Tire Sealant
  Fluid sealant used to repair a punctured tire can damage the tire pressure sensor mounted on each wheel. It can prevent the system from detecting the correct tire pressure, which sets a DTC 11, 13, 15, or 17 even though the system is normal.
- Cold Weather
  When the weather is extremely cold, about −40 °F (−40 °C) or colder, the output of the lithium battery in each tire pressure sensor may drop far enough that the TPMS control unit sets a DTC for low battery voltage (31, 33, 35, or 37) even though the system is normal.
- Non-TPMS type Wheels (Including Spare Tire)
  Vehicles equipped with TPMS must use wheels made for the system. Every TPMS type wheel has an exclusive mark; do not use any other type of wheel (see page 18-66).
  When a flat tire is replaced with the spare tire, the TPMS indicator comes on (DTC 32, 34, 36, or 38) because the system is no longer receiving the signal from the flat tire's transmitter.
  This is not a problem with the spare tire.

How a Diagnostic Trouble Code (DTC) is Set

- When the system detects a problem, the TPMS control unit sets a code, but shifts to fail-safe mode, and does not alert the driver to low tire pressures.
- If the TPMS control unit loses power, or fails, the TPMS indicator comes on, but no DTC are set.
- The memory can hold all the DTCs that could possibly be set. However, when the same DTCs are detected more than once, the most recent one overwrites the previous one, so only the latest DTC of each type is stored.
- DTCs are indicated in ascending order, not in the order they occurred.
- Set DTCs are stored in the EEPROM (nonvolatile memory), they cannot be cleared by disconnecting the battery. To clear a DTC, connect the HDS (Honda Diagnostic System) to the data link connector (DLC), and follow the screen prompts.

How to Troubleshoot DTCs

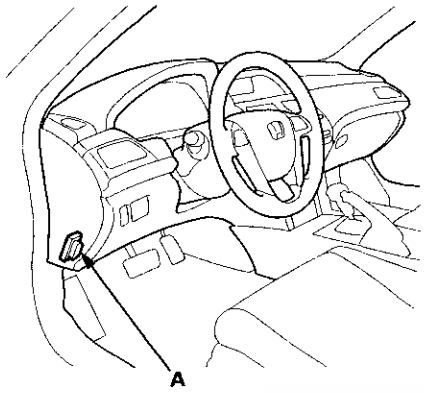
DTC troubleshooting procedures assume the cause of the problem is still present and the TPMS indicator is still on. Do not use a troubleshooting procedure unless the system has set the DTC listed for it.

NOTE: For DTCs 11, 13, 15, and 17 (tire low pressure), the TPMS indicator comes on only if the DTCs are caused by a system problem rather than low tire pressure.

1. Ask the customer to describe the conditions when the indicator came on, and try to reproduce the same conditions for troubleshooting. Find out if the customer checked and/or adjusted tire pressures since the indicator came on.
2. If an indicator does not come on during the test-drive, check for loose terminals, poor contact due to damaged terminals, etc. before you start troubleshooting.
3. After troubleshooting, repair and clear the DTCs, and test-drive the vehicle. Make sure no indicators come on.
4. Check for DTCs from other control units that are connected via the F-CAN. If there are DTCs that are related to the F-CAN, the most likely cause was that the ignition switch was turned to ON (II) with the TPMS control unit connector disconnected. Clear the DTCs. Check for PGM-FI and TPMS codes, and troubleshoot those first.

How to Retrieve DTCs

1. With the ignition switch in LOCK (0), connect the HDS (Honda Diagnostic System) to the data link connector (DLC) (A) located under the driver's side of the dashboard.

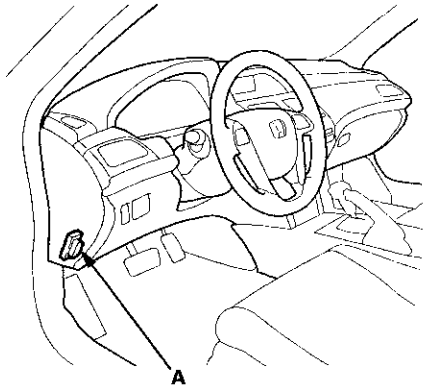


2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it does not, troubleshoot the DLC circuit (see page 11-181).
4. Follow the prompts on the HDS to display the DTC(s) on the screen. After determining the DTC, refer to the DTC troubleshooting.

   NOTE: See the HDS Help menu for specific instructions.
5. Turn the ignition switch to LOCK (0).

How to Clear DTCs

1. With the ignition switch in LOCK (0), connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it does not, troubleshoot the DLC circuit (see page 11-181).
4. Clear the DTC(s) by following the screen prompts on the HDS.

   NOTE: See the HDS Help menu for specific instructions.
5. Turn the ignition switch to LOCK (0).

Memorizing the Tire Pressure Sensor ID

Special Tools Required
TPMS Trigger Tool ATEQ VT55*
*Available through the Honda Tool and Equipment Program 888-424-6857

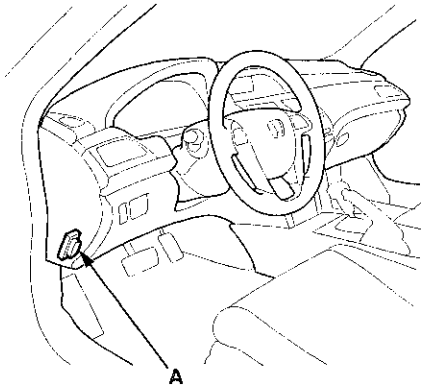
All four tire pressure sensor IDs must be memorized to the TPMS control unit whenever you do any of these actions:

- Replace the TPMS control unit.
- Replace the tire pressure sensor.
- Substitute a known-good wheel with tire pressure sensor.

NOTE:

- The TPMS tool is necessary to do this procedure.
- Let the vehicle sit for at least 5 minutes to allow the tire pressure sensors to switch to sleep mode.
- To ensure the TPMS control unit memorizes the correct ID, the vehicle with the new tire pressure sensor must be at least 10 ft (3 m) away from other vehicles that have tire pressure sensors.
- When doing a tire rotation, memorizing the sensors in not needed.

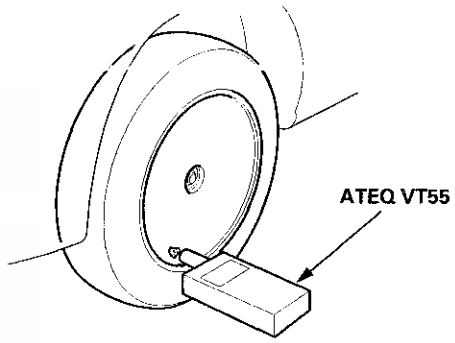
1. With the ignition switch in LOCK (0), connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it does not, troubleshoot the DLC circuit (see page 11-181).
4. Select Sensor ID Learning from the Mode Menu on the HDS.
5. Follow HDS screen prompts to turn on the TPMS tool.
6. Hold the TPMS tool near the valve stem of one wheel, and memorize the tire pressure sensor ID by following the screen prompts on the HDS.

   NOTE:

   - See the HDS Help menu for specific instructions.
   - If you turn the ignition switch to LOCK (0) before memorizing all four sensor IDs, the memorizing ID is canceled.
   - If more than one sensor ID is displayed on the HDS, verify that the vehicle has not been driven for 5 minutes, and there are no other vehicles or tire pressure sensors within 10 ft (3 m).



7. Repeat step 6 for each wheel until all four sensor IDs are memorized. When all four IDs are memorized, the low tire pressure indicator blinks.
8. Turn the ignition switch to LOCK (0).
9. Disconnect the HDS from the DLC.
10. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
11. Make sure the low tire pressure indicator does not blink.
12. Make sure the tires are inflated to the specified tire pressure listed on the doorjamb sticker.
13. Turn the ignition switch to LOCK (0).

Tire Pressure Sensor Location

Special Tools Required

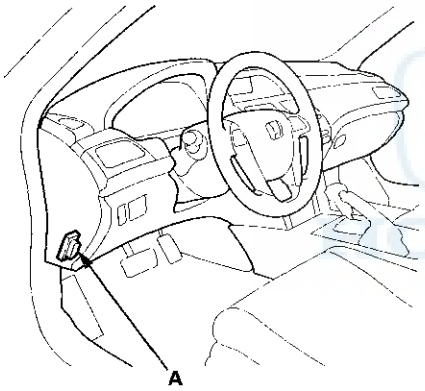
TPMS Trigger Tool ATEQ VT55*

*Available through the Honda Tool and Equipment Program 888-424-6857

NOTE:

- The TPMS tool is necessary to do this procedure.
- Let the vehicle sit for at least 5 minutes to allow the tire pressure sensors to switch to sleep mode.
- This procedure locates where the tire pressure sensors 1, 2, 3, 4 are mounted, when activated by the TPMS tool.
- Position the vehicle at least 10 ft (3 m) away from other vehicles that have tire pressure sensors.

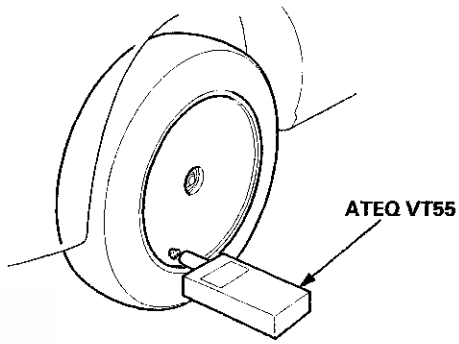
1. With the ignition switch in LOCK (0), connect the HDS to the data link connector (DLC) (A) located under the driver's side of the dashboard.



2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it does not, troubleshoot the DLC circuit (see page 11-181).
4. Using the HDS, bring up the TPMS data list, scroll down to the bottom, and locate the four tire pressure sensors ID numbers. These are the ID numbers assigned to each tire location.
5. Follow HDS screen prompts under sensor ID learn, to turn on the TPMS tool.
6. Hold the TPMS tool near the valve stem of one wheel, and activate the tire pressure sensor.

   NOTE:

   - See the HDS Help menu under sensor ID learn for specific instructions.
   - If the tire pressure sensor still does not respond, then check for DTC 32, 34, 36, and 38 with the HDS.



7. The TPMS tool will display the sensor data including the sensor ID number.
8. Locate the tire pressure sensor ID numbers on the TPMS data list, and match it to the sensor number. Note the sensor location.
9. Turn the ignition switch to LOCK (0).

DTC Troubleshooting Index

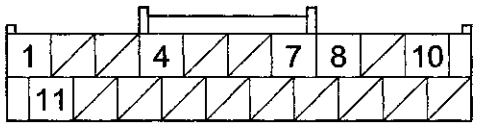
DTC	Detection Item	Troubleshooting
11	Tire 1 Low Air Pressure	DTC Troubleshooting (see page 18-70)
13	Tire 2 Low Air Pressure	DTC Troubleshooting (see page 18-70)
15	Tire 3 Low Air Pressure	DTC Troubleshooting (see page 18-70)
17	Tire 4 Low Air Pressure	DTC Troubleshooting (see page 18-70)
21	Tire 1 Pressure Sensor Abnormally High Temperature	DTC Troubleshooting (see page 18-71)
22	Tire 2 Pressure Sensor Abnormally High Temperature	DTC Troubleshooting (see page 18-71)
23	Tire 3 Pressure Sensor Abnormally High Temperature	DTC Troubleshooting (see page 18-71)
24	Tire 4 Pressure Sensor Abnormally High Temperature	DTC Troubleshooting (see page 18-71)
31	Tire 1 Pressure Sensor Low Battery Voltage	DTC Troubleshooting (see page 18-72)
32	Tire 1 Pressure Sensor Signal Failure	DTC Troubleshooting (see page 18-73)
33	Tire 2 Pressure Sensor Low Battery Voltage	DTC Troubleshooting (see page 18-72)
34	Tire 2 Pressure Sensor Signal Failure	DTC Troubleshooting (see page 18-73)
35	Tire 3 Pressure Sensor Low Battery Voltage	DTC Troubleshooting (see page 18-72)
36	Tire 3 Pressure Sensor Signal Failure	DTC Troubleshooting (see page 18-73)
37	Tire 4 Pressure Sensor Low Battery Voltage	DTC Troubleshooting (see page 18-72)
38	Tire 4 Pressure Sensor Signal Failure	DTC Troubleshooting (see page 18-73)
41	Abnormal Signal Reception Error	DTC Troubleshooting (see page 18-74)
51	Tire 1 Pressure Sensor Registration Error	DTC Troubleshooting (see page 18-74)
53	Tire 2 Pressure Sensor Registration Error	DTC Troubleshooting (see page 18-74)
55	Tire 3 Pressure Sensor Registration Error	DTC Troubleshooting (see page 18-74)
57	Tire 4 Pressure Sensor Registration Error	DTC Troubleshooting (see page 18-74)
81	TPMS Control Unit Failure	DTC Troubleshooting (see page 18-75)
83	No VSP Signal	DTC Troubleshooting (see page 18-76)
85	F-CAN Communication Failure	DTC Troubleshooting (see page 18-76)
91	Tire 1 Pressure Sensor Internal Error	DTC Troubleshooting (see page 18-77)
93	Tire 2 Pressure Sensor Internal Error	DTC Troubleshooting (see page 18-77)
95	Tire 3 Pressure Sensor Internal Error	DTC Troubleshooting (see page 18-77)
97	Tire 4 Pressure Sensor Internal Error	DTC Troubleshooting (see page 18-77)

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
HDS does not communicate with the TPMS control unit or the vehicle	Troubleshoot the DLC circuit (see page 11-181)	Faulty data link cable
Low tire pressure indicator does not come on, and no DTCs are stored	Symptom Troubleshooting (see page 18-78)	
Low tire pressure indicator does not go off, and no DTCs are stored	Symptom Troubleshooting (see page 18-79)	
TPMS indicator does not come on, and no DTCs are stored	Symptom Troubleshooting (see page 18-80)	
TPMS indicator does not go off, and no DTCs are stored	Symptom Troubleshooting (see page 18-80)	

System Description

TPMS Control Unit Inputs and Outputs for 20P Connector



Wire side of female terminals

Terminal number	Wire color	Terminal sign	Description	Signal
1	WHT	CAN H (F-CAN communication signal high)	F-CAN communication circuit	With ignition switch ON (II): pulses
4	BLK	GND (Ground)	Ground for the TPMS control unit	Less than 0.1 V at all times
7	LT BLU	K-LINE (Data link connector)	Communications with the HDS	——
8	BRN	IG1 (Ignition switch 1)	Power source for activating the system	With ignition switch ON (II): battery voltage (about 12 V)
				With ignition switch in LOCK (0): less than 0.1 V
10	WHT	+B (Battery positive)	Power source for the TPMS control unit	Battery voltage (about 12 V) at all times
11	RED	CAN L (F-CAN communication signal low)	F-CAN communication circuit	With ignition switch ON (II): pulses

System Structure

Once the vehicle speed exceeds 28 mph (45 km/h), the TPMS control unit monitors all four tire pressure sensors and the system function. If it detects low pressure in a tire, it alerts the driver by turning on the low tire pressure indicator. If it detects a problem in the system, it turns on the TPMS indicator.

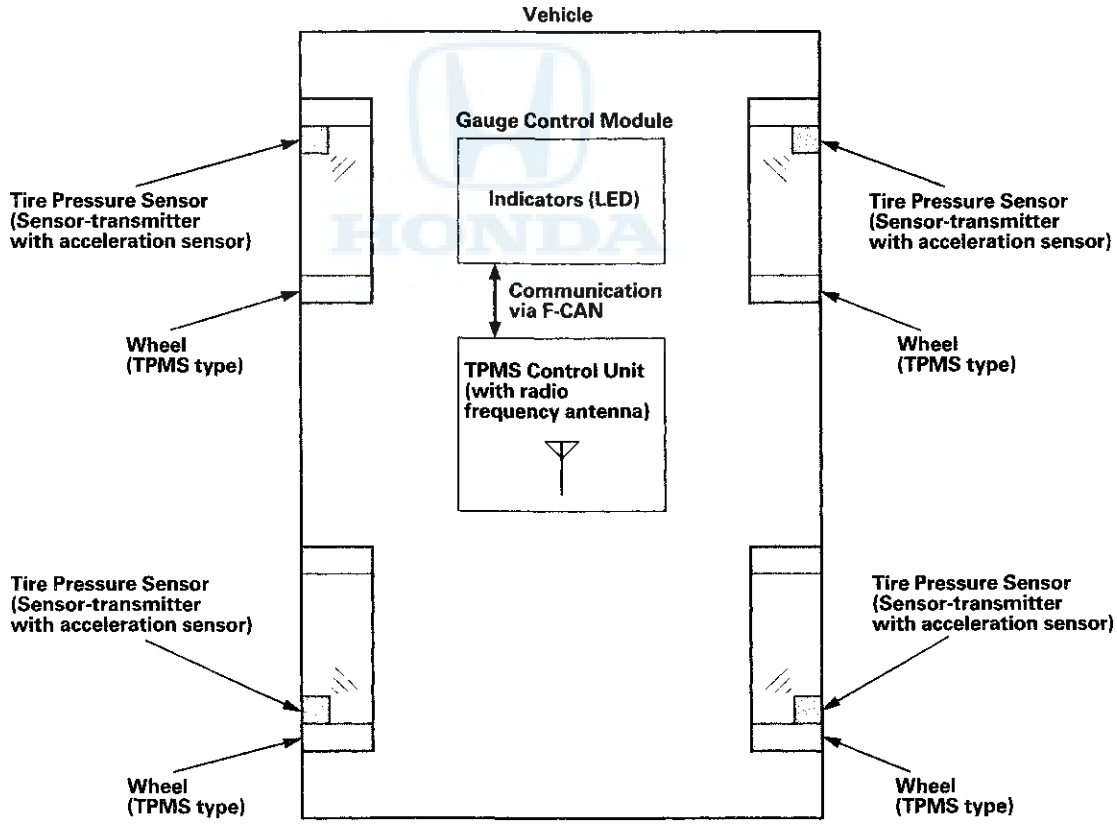
TPMS control unit

Mounted over the accelerator pedal module, the TPMS control unit receives wireless tire pressure sensor ID signals every time the vehicle speeds exceeds 28 mph (45 km/h). It also receives wireless signals from the transmitters for tire pressure and the sensor condition, and it continuously monitors and controls the system. The TPMS control unit cannot directly determine the position (location) of a tire pressure sensor(s) on the vehicle since it is a wireless system. Tire pressure sensor locations will change during scheduled vehicle maintenance (tire rotation).

NOTE: To determine the actual location of each tire pressure sensor on the vehicle, do the tire pressure sensor location procedure (see page 18-61). Once the tire pressure sensor locations are identified, write the sensor ID on the side wall of the tire with a tire crayon to eliminate confusion.

Indicators

Two indicators are in the gauge control module: The low tire pressure indicator comes on when any tire pressure is low, and the TPMS indicator that comes on only if there's a problem with the system.
The low tire pressure indicator alerts the driver that a tire(s) pressure is low, but does not specify the tire(s) location.



(cont'd)

System Description (cont'd)

Tire pressure sensor

Each sensor is an integrated unit made up of the tire valve stem, a tire pressure sensor, and a transmitter. The unit is attached to the inside of the wheel, around the valve stem. The sensor transmits the internal tire information to the TPMS control unit once every 60 seconds when the vehicle speed exceeds 28 mph (45 km/h). When the TPMS control unit receives a tire pressure signal that is less than: 168 kPa (1.7 kgf/cm², 24 psi) with 16 inch wheels, 175 kPa (1.8 kgf/cm², 25 psi) with 17 inch wheels, the TPMS control unit then turns on the low tire pressure indicator. When that tire's pressure is increased to more than: 190 kPa (1.9 kgf/cm², 28 psi) with 16 inch wheels, 200 kPa (2.0 kgf/cm², 29 psi) with 17 inch wheels, and the vehicle is driven above 28 mph (45 km/h) the transmitter sends the tire pressure signal to the TPMS control unit, and then the TPMS control unit turns the indicator off.

NOTE: Do not mix the tire pressure sensors or TPMS type wheels with other TPMS types. Be sure to use the correct type sensors and wheels for this system.

Sensor are active:

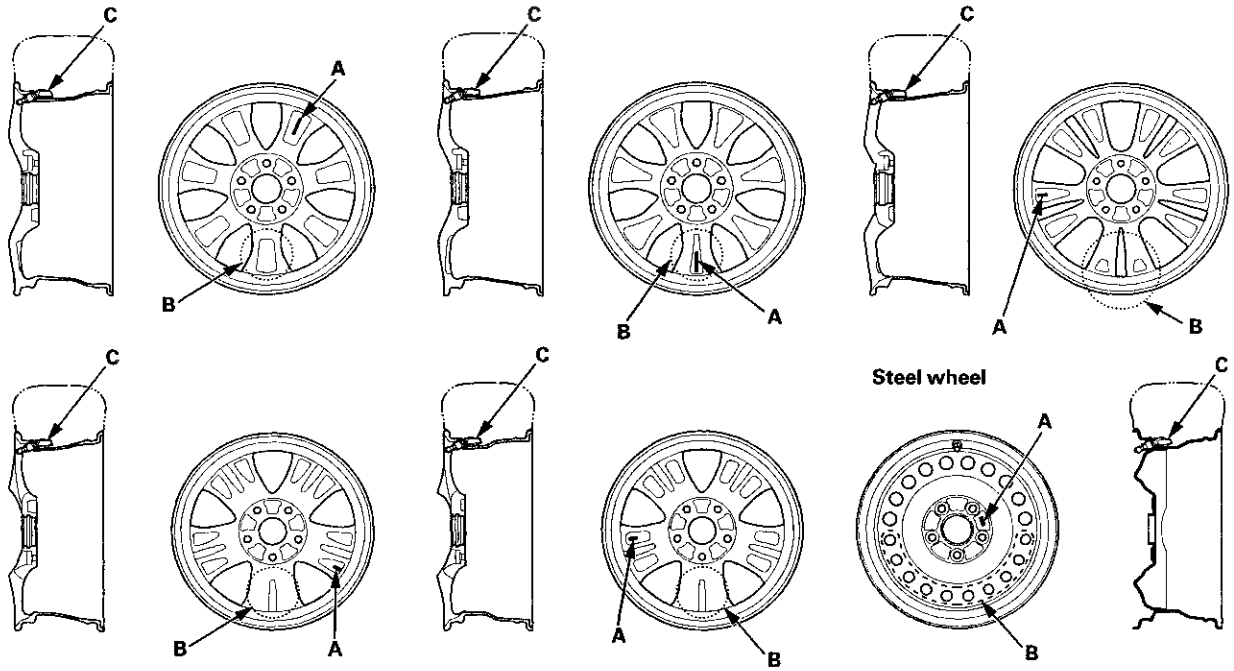
- When the wheel rotates over 28 mph (45 km/h) the sensor detects the momentum, and switches the sensor to the normal function mode.
- The LF (low frequency) signal of the TPMS tool makes the sensor active even though the vehicle is stopped. The tire pressure sensor goes into sleep mode when the acceleration sensor detects the wheel is stationary for 5 minutes or more.

Wheels

The TPMS will not work unless TPMS type wheels are installed on the vehicle. There are six different types of wheels used.

- Aluminum wheel type: The original equipment wheels have a "TPMS", "TA0", or "TE0" mark (A) on them. The wheels also have counterweights (B) incorporated on the opposite side of the tire pressure sensor (C), to counterbalance the weight of the sensor.
- Steel wheel type: The original equipment wheels have a "TPMS" mark (A) on them, and a counterweight (B) balances the weight of the tire pressure sensor (C) by a size difference in the wheel disc holes.

Aluminum wheels

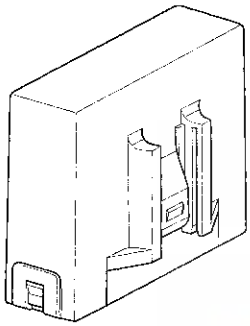


System Communication

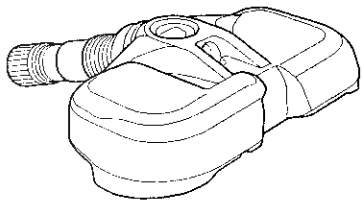
- When the vehicle is traveling more than 28 mph (45 km/h), an RF (radio frequency) band wave signal is transmitted from each tire pressure sensor to the TPMS control unit.
- When the wheels rotate, the tire pressure sensors momentum is detected, switching them from sleep mode to normal function (awake) mode. After the vehicle is stationary for 5 minutes, the sensors switch from normal function mode back to sleep mode to extend their battery life.
- Each tire pressure sensor has its own ID to prevent jamming by similar systems on other vehicles. After memorizing all the sensor IDs, the TPMS control unit recognizes only those specific signals.
- An ID cannot be memorized automatically. The TPMS control unit knows which ID belongs to each tire pressure sensor. This recurring ID confirmation prevents any confusion in the system as a result of normal tire rotation.

NOTE: Be careful not to bend the brackets on the TPMS control unit. Misalignment of the TPMS control unit could interfere with sending and receiving signals.

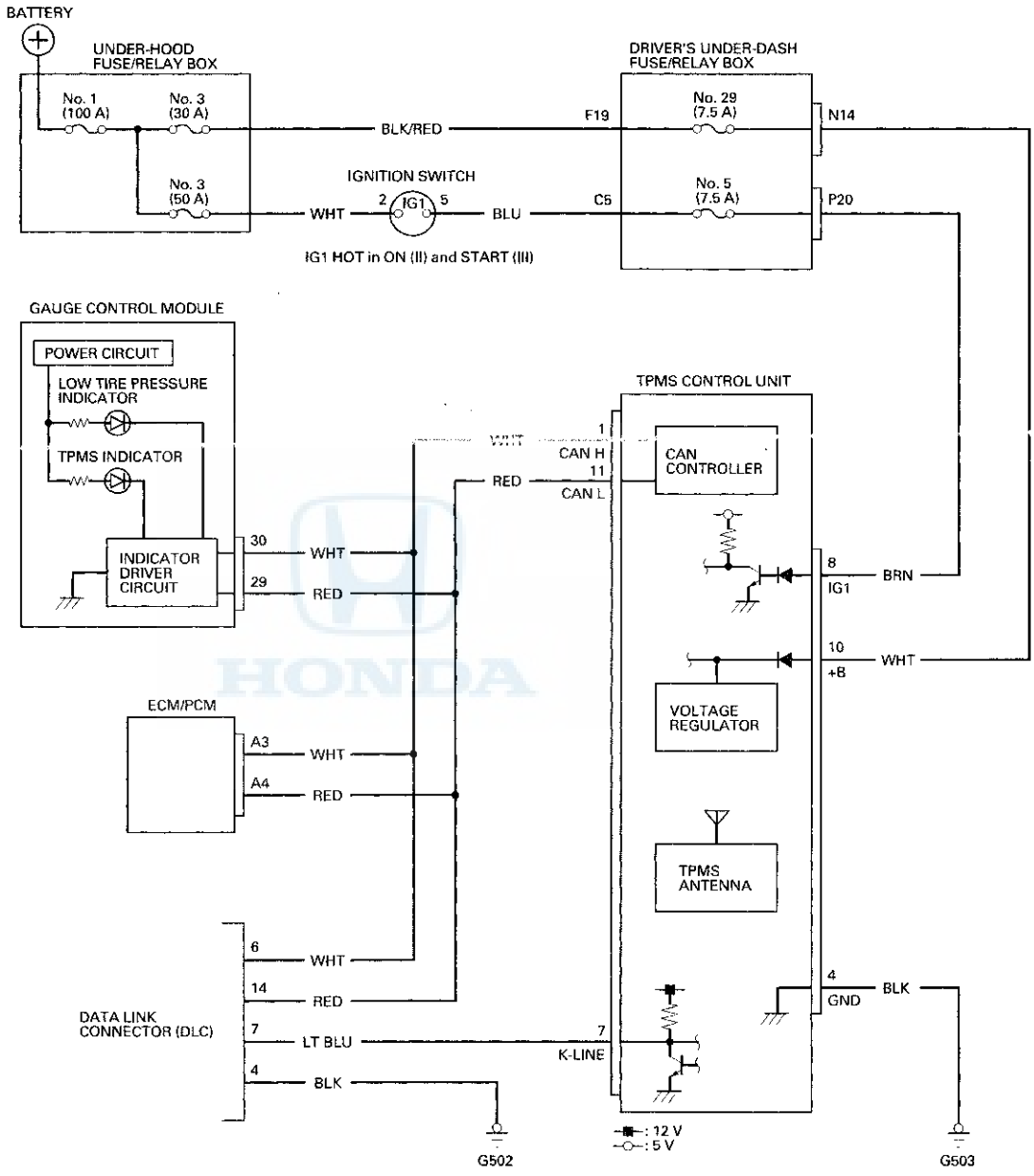
TPMS Control Unit
(With an internal Radio Frequency Antenna)



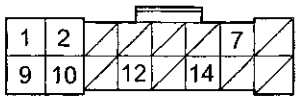
Tire Pressure Sensor
(Sensor-transmitter with acceleration sensor)



Circuit Diagram

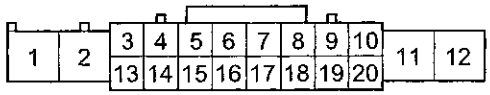


DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR N (16P)



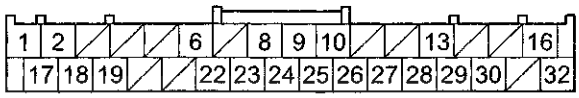
Wire side of female terminals

DRIVER'S UNDER-DASH FUSE/RELAY BOX CONNECTOR P (20P)



Wire side of female terminals

GAUGE CONTROL MODULE 32P CONNECTOR

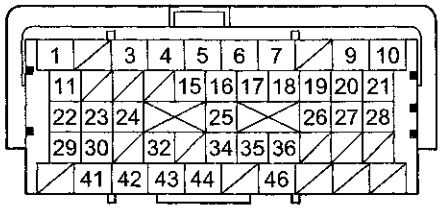


Wire side of female terminals

TPMS CONTROL UNIT 20P CONNECTOR

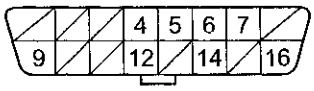
Wire side of female terminals

ECM/PCM CONNECTOR A (49P)



Terminal side of female terminals

DATA LINK CONNECTOR (DLC)



Terminal side of female terminals

DTC Troubleshooting

DTC 11, 13, 15, 17: Tire Low Air Pressure

NOTE: If low tire pressure is detected, the TPMS control unit sets one or more of these DTCs, and turns on the low tire pressure indicator. If the low tire pressure indicator comes on because of a low tire pressure, and the customer corrects it before bringing the vehicle in, the DTCs will be stored, but the indicator turns off.

1. Turn the ignition switch to LOCK (0).
2. Make sure the tires are inflated to the specified tire pressure listed on the doorjamb sticker.
3. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

   Does the low tire pressure indicator go off?

   YES–The system is OK at this time. Check for and repair the cause of air loss.■

   NO–Go to step 4.
4. Check for DTCs with the HDS.
5. Note the tire pressure sensor(s) number by the indicated DTC.

DTC	Tire Pressure Sensor Number
11	No. 1
13	No. 2
15	No. 3
17	No. 4

6. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).
7. Check the TIRE 1, TIRE 2, TIRE 3, or TIRE 4 AIR PRESSURE in the TPMS DATA LIST with the HDS, and compare it with the actual measured tire pressure.

   Is the indicated tire pressure on the HDS within 40 kPa (0.4 kgf/cm², 6 psi) of the actual tire pressure?

   YES–Go to step 8.

   NO–Replace the appropriate tire pressure sensor (see page 18-84).■
8. Clear the DTC with the HDS.
9. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
10. Check for DTCs with the HDS.

    Is DTC 11, 13, 15, or 17 indicated?

    YES–Replace the TPMS control unit (see page 18-83).■

    NO–If any other DTCs are indicated, troubleshoot the appropriate DTC. If no DTCs are indicated, the system is OK at this time.■

DTC 21, 22, 23, 24: Tire Pressure Sensor Abnormally High Temperature

1. Turn the ignition switch to LOCK (0).
2. Make sure the tires have cooled down.

   NOTE: An abnormal rise in the internal temperature of the tires can be caused by:
   - Excessive braking
   - Failure to release the parking brake (rear tires only)
   - Leaving the vehicle running while parked (front tires only)
   - Improper assembly of a wheel and tire
3. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

   Does the TPMS indicator go off?

   YES–The system is OK at this time. Clear the DTC with the HDS.■

   NO–Go to step 4.
4. Check for DTCs with the HDS.
5. Note the tire pressure sensor(s) number by the indicated DTC.

DTC	Tire Pressure Sensor Number
21	No. 1
22	No. 2
23	No. 3
24	No. 4

6. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).
7. Check the TIRE 1, TIRE 2, TIRE 3, or TIRE 4 AIR TEMPERATURE in the TPMS DATA LIST with the HDS.

   Is 176 °F (80 °C) or more indicated?

   YES–Replace the appropriate tire pressure sensor (see page 18-84).■

   NO–Go to step 8.
8. Clear the DTC with the HDS.
9. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
10. Check for DTCs with the HDS.

    Is DTC 21, 22, 23, or 24 indicated?

    YES–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

    NO–If any other DTCs are indicated, troubleshoot the appropriate DTC. If no DTC are indicated, the system is OK at this time.■

DTC Troubleshooting (cont'd)

DTC 31, 33, 35, 37: Tire Pressure Sensor Low Battery Voltage

NOTE: This problem occurs when the temperature around the sensor is −40 °F (−40 °C) or less. Note that the diagnosis must be made in a place where ambient temperature is −40 °F (−40 °C) or more.

1. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

   Does the TPMS indicator go off?

   YES–The system is OK at this time. Clear the DTC with the HDS.■

   NO–Go to step 2.

2. Check for DTCs with the HDS.

3. Note the tire pressure sensor(s) number by the indicated DTC.

DTC	Tire Pressure Sensor Number
31	No. 1
33	No. 2
35	No. 3
37	No. 4

4. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).

   Did each tire pressure sensor respond to the TPMS tool?

   YES–Go to step 5.

   NO–Check that the tire pressure sensor is properly mounted. If necessary, replace the appropriate tire pressure sensor (see page 18-84).■

5. Check the TIRE 1, TIRE 2, TIRE 3, or TIRE 4 PRESSURE SENSOR BATTERY STATUS in the TPMS DATA LIST with the HDS.

   Is LOW indicated?

   YES–Replace the appropriate tire pressure sensor (see page 18-84).■

   NO–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

DTC 32, 34, 36, 38: Tire Pressure Sensor Signal Failure

NOTE: Inspect for an aftermarket electrical device(s) (such as an inverter, battery charger, CB radio, etc) interfering with the RF signal from the sensors when driving the vehicle.

1. Turn the ignition switch to LOCK (0).
2. Make sure all four wheels are TPMS type wheels with the mounted tire pressure sensor.

   Are TPMS type wheels with a tire pressure sensor mounted on the vehicle?

   YES–Go to step 3.

   NO–Install a TPMS type wheel, and memorize the pressure sensor ID with the HDS (see page 18-60).■
3. Turn the ignition switch to ON (II).
4. Check for DTCs with the HDS.
5. Note the tire pressure sensor(s) number by the indicated DTC.

DTC	Tire Pressure Sensor Number
32	No. 1
34	No. 2
36	No. 3
38	No. 4

6. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).

   Did each tire pressure sensor respond to the TPMS tool?

   YES–Go to step 7.

   NO–Check for an aftermarket electrical device interfering with the RF signals from the sensors. If there are no electrical devices causing interference, replace the appropriate tire pressure sensor (see page 18-84).■
7. Turn the ignition switch to LOCK (0), and wait 5 minutes or more.
8. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
9. Check if the value of the AIR PRESSURE and AIR TEMPERATURE of the affected sensor changes from DEFAULT to the correct tire pressure on the TPMS DATA LIST with the HDS.

   Does the value of the AIR PRESSURE and AIR TEMPERATURE change from DEFAULT to the correct tire pressure?

   YES–The system is OK at this time. Clear the DTC with the HDS.■

   NO–Replace the appropriate tire pressure sensor (see page 18-84).■

DTC Troubleshooting (cont'd)

DTC 41: Abnormal Signal Reception Error

NOTE:

- Inspect for an aftermarket electrical device(s) (such as an inverter, battery charger, CB radio, etc) interfering with the RF signal from the sensors when driving the vehicle.
- If DTC 32, 34, 36, or 38 is also set, troubleshoot those DTCs first.

1. Turn the ignition switch to LOCK (0).
2. Make sure all four wheels are TPMS type wheels with mounted tire pressure sensors.

   Are TPMS type wheels with tire pressure sensors mounted on the vehicle?

   YES–Go to step 3.

   NO–Install a TPMS type wheel, and memorize the pressure sensor ID with the HDS (see page 18-60).■
3. Memorize the tire pressure sensor IDs with the HDS (see page 18-60).

   Did each tire pressure sensor respond to the TPMS tool?

   YES–The system is OK at this time, clear the DTC with the HDS.■

   NO–Replace the TPMS control unit (see page 18-83).■

DTC 51, 53, 55, 57: Tire Pressure Sensor Registration Error

NOTE:

- The following DTCs will only set during initialization with the HDS.
- Inspect for an aftermarket electrical device(s) (such as an inverter, battery charger, CB radio, etc) interfering with the RF signal from the sensors when driving the vehicle.

1. Turn the ignition switch to LOCK (0).
2. Make sure all four wheels are TPMS type wheels with mounted tire pressure sensors.

   Are TPMS type wheels with a tire pressure sensor mounted on the vehicle?

   YES–Go to step 3.

   NO–Install a TPMS type wheel, and memorize the pressure sensor ID with the HDS (see page 18-60).■
3. Turn the ignition switch to ON (II).
4. Check for DTCs with the HDS.
5. Note the tire pressure sensor(s) number by the indicated DTC.

DTC	Tire Pressure Sensor Number
51	No. 1
53	No. 2
55	No. 3
57	No. 4

6. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).

   Did each tire pressure sensor respond to the TPMS tool?

   YES–Go to step 7.

   NO–Check for an aftermarket electrical device interfering with the RF signals from the sensors. If there are no electrical devices causing interference, replace the appropriate tire pressure sensor (see page 18-84).■

7. Turn the ignition switch to LOCK (0), and wait 5 minutes or more.

8. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.

9. Check for DTCs with the HDS.

   Is DTC 51, 53, 55, or 57 indicated?

   YES–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

   NO–The system is OK at this time. Clear the DTC with the HDS.■

DTC 81: TPMS Control Unit Failure

NOTE: Low battery voltage can cause this DTC. Make sure the battery is fully charged and in good condition (see page 22-90).

1. Turn the ignition switch to ON (II).

2. Clear the DTC with the HDS.

3. Turn the ignition switch to LOCK (0), then turn the ignition switch to ON (II) again.

4. Check for DTCs with the HDS.

   Is DTC 81 indicated?

   YES–Replace the TPMS control unit (see page 18-83).■

   NO–The system is OK at this time. Check for loose terminals and poor connections at the TPMS control unit and G503.■

DTC Troubleshooting (cont'd)

DTC 83: No VSP Signal

NOTE: If DTC 85 stored at the same time as DTC 83, troubleshoot DTC 85 first, then recheck for DTC 83.

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Test-drive the vehicle at 7 mph (10 km/h) or more.
4. Check the speedometer.

   Does the speedometer register speed?

   YES–Go to step 5.

   NO–Update the ECM/PCM if it does not have the latest software (see page 11-203), or substitute a known-good ECM/PCM (see page 11-7), then go to step 1 and recheck. If the ECM/PCM was updated and DTCs are not indicated, troubleshooting is complete. If the ECM/PCM was substituted and DTCs are not indicated, replace the original ECM/PCM (see page 11-204).■
5. Check the VEHICLE SPEED in the TPMS DATA LIST with the HDS.

   Is the vehicle speed indicated?

   YES–The system is OK at this time.■

   NO–Substitute a known-good TPMS control unit (see page 18-83), and recheck.■

DTC 85: F-CAN Communication Failure

NOTE: Check for fuel and emissions systems DTCs with the HDS, and troubleshoot the ECM/PCM and F-CAN communication errors first (see page 11-3).

1. Turn the ignition switch to ON (II).
2. Clear the DTC with the HDS.
3. Turn the ignition switch to LOCK (0), then turn the ignition switch to ON (II) again.
4. Wait about 5 seconds.
5. Check for DTCs with the HDS.

   Is DTC 85 indicated?

   YES–Go to step 6.

   NO–The system is OK at this time. Check for loose terminals and poor connections at the TPMS control unit.■
6. Test-drive the vehicle.

   Does the speedometer work?

   YES–Go to step 10.

   NO–Go to step 7.
7. Turn the ignition switch to LOCK (0).
8. Disconnect the TPMS control unit 20P connector.
9. Test-drive the vehicle.

   Does the speedometer work?

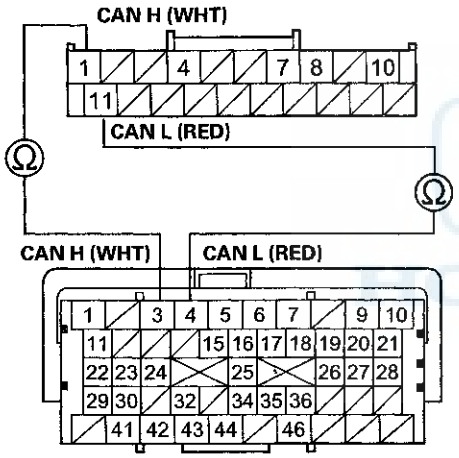
   YES–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

   NO–Turn the ignition switch to LOCK (0), and reconnect all connectors, then check and troubleshoot the fuel and emissions systems (see page 11-3).■

10. Turn the ignition switch to LOCK (0).
11. Short the SCS line with the HDS.
12. Disconnect ECM/PCM connector A (49P).
13. Disconnect the TPMS control unit 20P connector.
14. Check for continuity between the TPMS control unit 20P connector terminals and the ECM/PCM connector A (49P) terminals according to the table.

Terminal Name	TPMS Control Unit 20P Connector Terminal	ECM/PCM Connector A (49P) Terminal
CAN L	No. 11	No. 4
CAN H	No. 1	No. 3

TPMS CONTROL UNIT 20P CONNECTOR
Wire side of female terminals



ECM/PCM CONNECTOR A (49P)
Terminal side of female terminals

Is there continuity?

YES–Check for loose terminals and poor connections at the TPMS control unit and G503. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

NO–Repair an open in the wire between the TPMS control unit and the ECM/PCM.■

DTC 91, 93, 95, 97: Tire Pressure Sensor Internal Error

1. Turn the ignition switch to ON (II).
2. Check for DTCs with the HDS.
3. Note the tire pressure sensor(s) number by the indicated DTC.

DTC	Tire Pressure Sensor Number
91	No. 1
93	No. 2
95	No. 3
97	No. 4

4. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).

   Did each tire pressure sensor respond to the TPMS tool?

   YES–Go to step 5.

   NO–Check that the tire pressure sensor is properly mounted. If necessary, replace the appropriate tire pressure sensor (see page 18-84).■
5. Clear the DTC with the HDS.
6. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
7. Check for DTCs with the HDS.

   Is DTC 91, 93, 95, or 97 indicated?

   YES–Replace the appropriate tire pressure sensor (see page 18-84) and recheck. If DTCs are still present, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

   NO–If any other DTCs are indicated, troubleshoot the appropriate DTC. If no DTCs are indicated, the system is OK at this time.■

Symptom Troubleshooting

Low tire pressure indicator does not come on, and no DTCs are stored

NOTE: Check for gauge DTCs with the HDS (see page 22-3). If gauge DTCs are stored, troubleshoot those DTCs first.

1. Turn the ignition switch to ON (II).
2. Check the low tire pressure indicator for several seconds when the ignition switch is turned ON (II).

   Did the indicator come on, and then go off?

   YES–Go to step 3.

   NO–Do the troubleshooting for the gauge control module (see page 22-332). If necessary, substitute a known-good gauge control module (see page 22-351), and recheck.■
3. Test-drive the vehicle at 28 mph (45 km/h) or more for at least 1 minute.
4. Stop the vehicle, and lower the pressure in each tire until the low tire pressure indicator comes on (see table).

   NOTE:
   - Reinflate the tire before continuing to the next tire.
   - After noting whether the low tire pressure indicator came on, make sure it goes off when you reinflate the tire before proceeding to the next tire.
   - If 5 minutes has passed since finishing the last test-drive, reactivate the appropriate tire pressure sensor using the TPMS tool (see page 18-61).

Model	Specified Tire Pressure Lower Limit
16 inch wheels	168 kPa (1.7 kgf/cm², 24 psi)
17 inch wheels	175 kPa (1.8 kgf/cm², 25 psi)

   Does the indicator come on when the pressure drops below the specified tire pressure lower limit?

   YES–The system is OK at this time.■

   NO–Go to step 5.
5. Do the tire pressure sensor location procedure to determine the affected tire location and relate it to the tire pressure sensor number (see page 18-61).

   Did each tire pressure sensor respond to the TPMS tool?

   YES–Go to step 6.

   NO–Check that the tire pressure sensor is properly mounted. If necessary, replace the appropriate tire pressure sensor (see page 18-84).■
6. Check the TIRE 1, TIRE 2, TIRE 3, or TIRE 4 AIR PRESSURE in the TPMS DATA LIST with the HDS, and compare with the actual measured tire pressure.

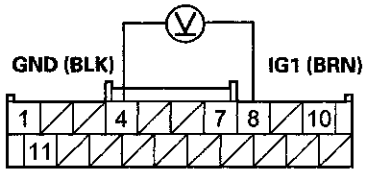
   Is the indicated tire pressure on the HDS within 40 kPa (0.4 kgf/cm², 6 psi) of the actual tire pressure?

   YES–Go to step 7.

   NO–Replace the appropriate tire pressure sensor (see page 18-84).■
7. Turn the ignition switch to LOCK (0).

8. Disconnect the TPMS control unit 20P connector.
9. Measure the voltage between TPMS control unit 20P connector terminals No. 4 and No. 8.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES–Repair a short to power in the wire between the TPMS control unit and the No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box.■

NO–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

Low tire pressure indicator does not go off, and no DTCs are stored

1. Turn the ignition switch to LOCK (0).
2. Disconnect the TPMS control unit 20P connector.
3. Turn the ignition switch to ON (II).
4. Check the low tire pressure indicator for several seconds when the ignition switch is turned ON (II).

Did the indicator come on, and then go off?

YES–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

NO–Do the troubleshooting for the gauge control module (see page 22-332). If necessary, substitute a known-good gauge control module (see page 22-351), and recheck.■

Symptom Troubleshooting (cont'd)

TPMS indicator does not come on, and no DTCs are stored

1. Turn the ignition switch to LOCK (0).
2. Disconnect the TPMS control unit 20P connector.
3. Turn the ignition switch to ON (II).
4. Check the TPMS indicator for several seconds when the ignition switch is turned ON (II).

   Did the indicator come on?

   YES–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

   NO–Do the troubleshooting for the gauge control module (see page 22-332). If necessary, substitute a known-good gauge control module (see page 22-351), and recheck.■

TPMS indicator does not go off, and no DTCs are stored

NOTE:

- Check for gauge DTCs with the HDS (see page 22-3). If multiple DTCs are present, including U0029, troubleshoot those DTCs first. If only DTC U0029 is present, continue with the following troubleshooting.
- If the TPMS control unit was replaced, the TPMS indicator will be on until all four sensor ID codes are learned.

1. Turn the ignition switch to ON (II).
2. Check the TPMS indicator for several seconds when the ignition switch is turned to ON (II).

   Did the indicator come on and then go off?

   YES–The system is OK at this time.■

   NO–Go to step 3.

3. Turn the ignition switch to LOCK (0).
4. Check the No. 29 (7.5 A) fuse in the driver's under-dash fuse/relay box.

   Is the fuse blown?

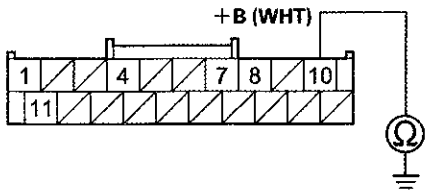
   YES–Go to step 5.

   NO–Reinstall the checked fuse, then go to step 7.

5. Disconnect the TPMS control unit 20P connector.

6. With the No. 29 (7.5 A) fuse removed, check for continuity between body ground and TPMS control unit 20P connector terminal No. 10.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there continuity?

YES–Repair a short to body ground in the wire between the No. 29 (7.5 A) fuse in the driver's under-dash fuse/relay box and the TPMS control unit.■

NO–Install a new No. 29 (7.5 A) fuse in the driver's under-dash fuse/relay box, then go to step 10.

7. Check the No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box.

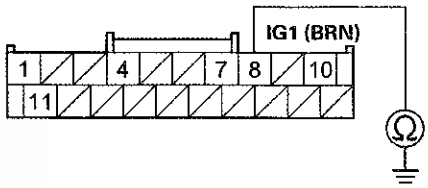
Is the fuse blown?

YES–Go to step 8.

NO–Reinstall the fuse, then go to step 13.

8. Disconnect the TPMS control unit 20P connector.
9. With the No. 5 (7.5 A) fuse removed, check for continuity between body ground and TPMS control unit 20P connector terminal No. 8.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there continuity?

YES–Repair a short to body ground in the wire between the No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box and the TPMS control unit.■

NO–Install a new No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box, then go to step 10.

(cont'd)

Symptom Troubleshooting (cont'd)

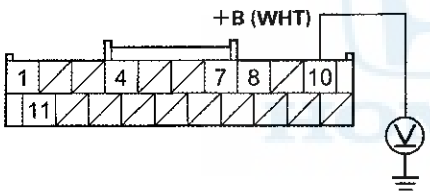
10. Reconnect the TPMS control unit 20P connector.
11. Turn the ignition switch to ON (II).
12. Check the TPMS indicator for several seconds when the ignition switch is turned ON (II).

    Did the indicator come on, and then go off?

    YES–Troubleshooting is complete.■

    NO–Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■
13. Disconnect the TPMS control unit 20P connector.
14. Measure the voltage between body ground and TPMS control unit 20P connector terminal No. 10.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

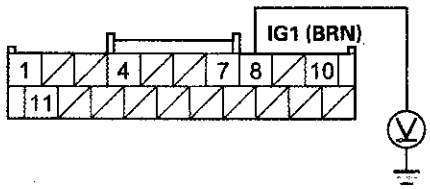
Is there battery voltage?

YES–Go to step 15.

NO–Repair an open in the wire between the TPMS control unit and the No. 29 (7.5 A) fuse in the driver's under-dash fuse/relay box.■

15. Turn the ignition switch to ON (II).
16. Measure the voltage between body ground and TPMS control unit 20P connector terminal No. 8.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there battery voltage?

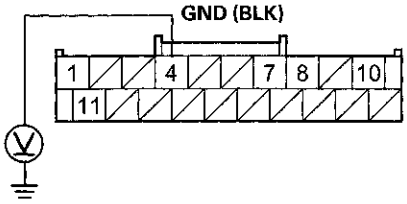
YES–Go to step 17.

NO–Repair an open in the wire between the TPMS control unit and the No. 5 (7.5 A) fuse in the driver's under-dash fuse/relay box.■

TPMS Control Unit Replacement

17. Turn the ignition switch to LOCK (0).
18. Reconnect the TPMS control unit 20P connector.
19. Turn the ignition switch to ON (II).
20. Measure the voltage between body ground and TPMS control unit 20P connector terminal No. 4.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there 0.1 V or more?

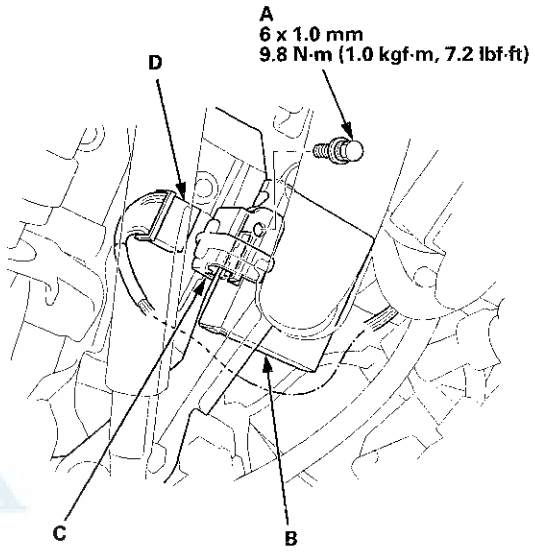
YES–Repair an open or high resistance in the wire between the TPMS control unit and body ground (G503).■

NO–Do the troubleshooting for the gauge control module (see page 22-332). If the gauge control module is OK, check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-83), and recheck.■

NOTE: Make sure the TPMS control unit mounting bracket is not bent or twisted as this may affect its communication with the tire pressure sensors.

1. Turn the ignition switch to LOCK (0).
2. Remove the flange bolt (A), then remove the TPMS control unit (B) with the bracket (C).

   NOTE: The TPMS control unit is located over the accelerator pedal module.



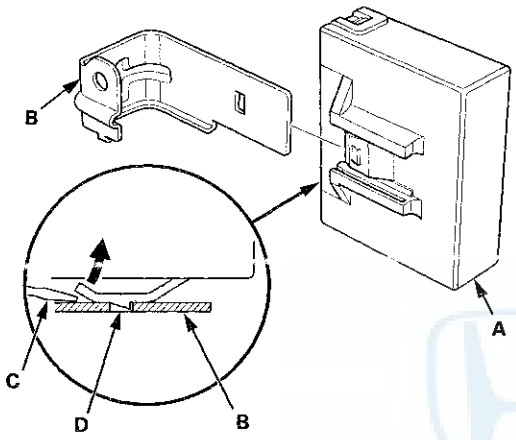
3. Disconnect the TPMS control unit connector (D).

(cont'd)

TPMS Control Unit Replacement (cont'd)

4. Remove the TPMS control unit (A) from the bracket (B).

   NOTE: To disconnect the TPMS control unit from its bracket, insert a small flat-tipped screwdriver (C) between the TPMS control unit and the bracket to release the hook (D), then slide out the TPMS control unit.



5. Install the TPMS control unit in the reverse order of removal.

   NOTE: Make sure the TPMS control unit is properly installed. You will hear a click when the TPMS control unit is securely mounted on the bracket.

6. Connect the HDS, and memorize the tire pressure sensor IDs using the TPMS tool (see page 18-60).

Tire Pressure Sensor Replacement

Removal

NOTICE

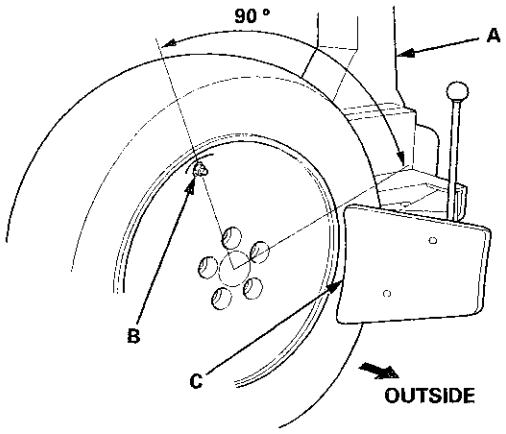
Each tire pressure sensor contains a lithium anode battery that is not removable. The complete tire pressure sensor should be disposed of according to local battery disposal guidelines or requirements. An improperly disposed of battery can be harmful to the environment.

1. Raise and support the vehicle (see page 1-13).
2. Remove the wheel with the faulty sensor.
3. Remove the tire valve stem cap and the valve stem core to deflate the tire.
4. Remove any balance weights, and then break the bead loose from the wheel with a commercially available tire changer (A).

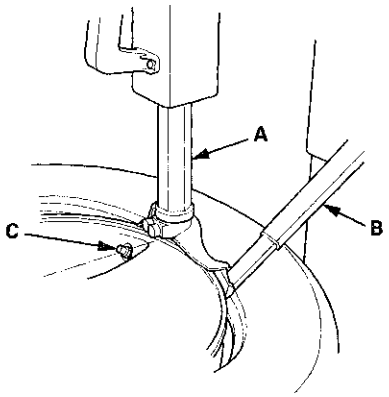
NOTICE

Note these items to avoid damaging the tire pressure sensor:

- Do the outside of the wheel first.
- Position the wheel as shown so the valve stem (B) is 90 degrees from the bead breaker (C) as shown.
- Do not position the bead breaker of the tire changer too close to the rim.

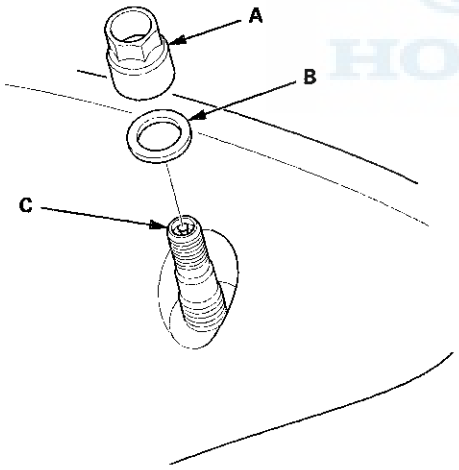


5. Position the wheel so that the tire machine (A) and the tire iron (B) are next to the valve stem (C), and will move away from it when the machine starts. Then remove the tire from the wheel.



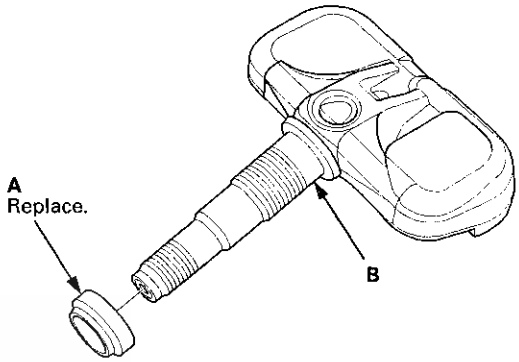
6. Remove the valve stem nut (A) and the washer (B), then remove the tire pressure sensor with the valve stem (C) from the wheel.

   NOTE: Check the nut and the washer; if they have deterioration or damage, replace them with new ones during reassembly.



7. Remove and discard the valve stem grommet (A) from the tire pressure sensor (B).

   NOTE:
   - The valve stem grommet might stay in the wheel; make sure you remove it.
   - Always use a new valve stem grommet whenever the tire pressure sensor has been removed from the wheel, or when replacing the tire.



(cont'd)

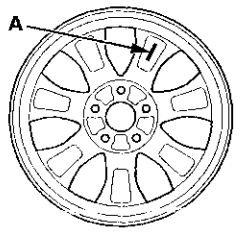
Tire Pressure Sensor Replacement (cont'd)

Installation

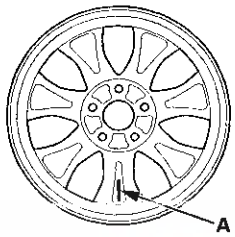
NOTE:

- Use only wheels that have a "TPMS", "TA0", or "TE0" stamp (A) on the inside of the aluminum wheels, and the outside of the steel wheels.
- The vehicle may be equipped with one of the six types of wheels.

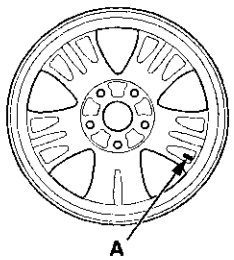
Type 1 (aluminum wheel)



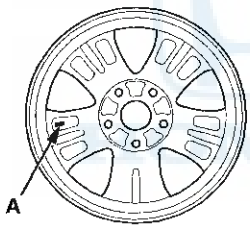
Type 2 (aluminum wheel)



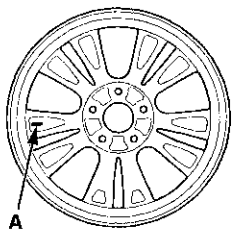
Type 3 (aluminum wheel)



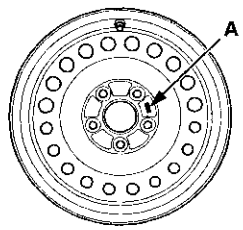
Type 4 (aluminum wheel)



Type 5 (aluminum wheel)

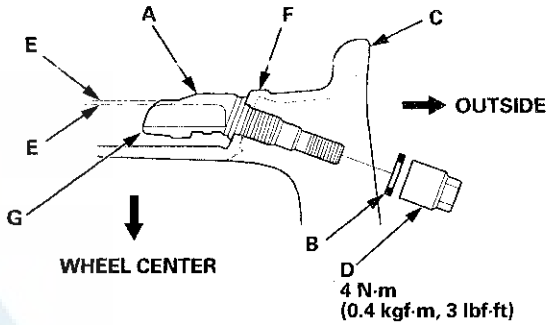


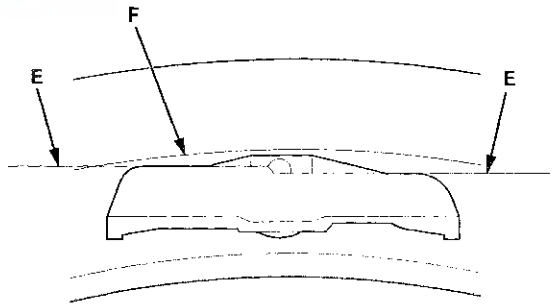
Type 6 (steel wheel)



1. Before installing the tire pressure sensor, clean the mating surfaces on the sensor and the wheel.
2. Install the tire pressure sensor (A) and the washer (B) to the wheel (C), and tighten the valve stem nut (D) finger tight. Make sure the pressure sensor is resting on the wheel.

   NOTE: Install the tire pressure sensor so that the sensor housing surface (E) should not exceed the protrusion (F) of the wheel to prevent the sensor housing from being caught on the bead of the tire when assembling the tire. Be sure to always mount the tire pressure sensor with the feet (G) in the downward position toward the wheel.



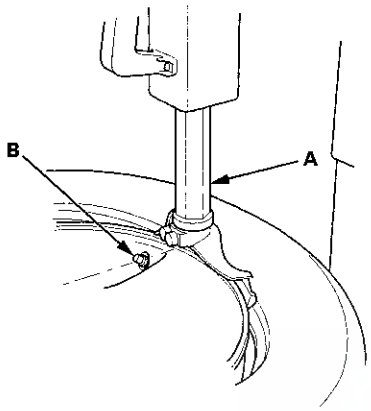


3. Tighten the valve stem nut to the specified torque while holding the tire pressure sensor.

   NOTE:

   - Do not use air or electric impact tools to tighten a valve stem nut.
   - Do not twist the tire pressure sensor to adjust its position with the wheel, as this will damage or deform the valve stem grommet.

4. Lube the tire bead sparingly with a paste-type tire mounting lubricant, and position the wheel so that the tire machine (A) is next to the valve stem (B) and will move away from it when the machine starts. Then install the tire onto the wheel.



5. With a dry air source, inflate the tire to 300 kPa (3.1 kgf/cm², 44 psi) to seat the tire bead to the rim, then adjust the tire pressure (see page 18-5), and install the valve stem cap.

   NOTE: Make sure the tire bead is seated on both sides of the rim evenly.

6. Check and adjust the wheel balance, then install the wheels on the vehicle.

7. Lower the vehicle. Torque the wheel nuts to specifications (see step 2 on page 18-14).

8. Connect the HDS, and memorize the pressure sensor IDs using the TPMS tool (see page 18-60).

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) (If brakes maintenance is required)

The Accord SRS includes a driver's airbag in the steering wheel hub, a passenger's airbag in the dashboard above the glove box, seat belt tensioners in the front seat belt retractors, side curtain airbags in the sides of the roof, and side airbags in the front seat-backs. Information necessary to safely service the SRS is included in this Service Manual. Items marked with an asterisk (*) on the contents page include or are located near SRS components. Servicing, disassembling, or replacing these items requires special precautions and tools, and should be done by an authorized Honda dealer.

- To avoid rendering the SRS inoperative, which could lead to personal injury or death in the event of a severe frontal or side collision, all SRS service work should be done by an authorized Honda dealer.
- Improper service procedures, including incorrect removal and installation of the SRS, could lead to personal injury caused by unintentional deployment of the airbags, side airbags, and/or side curtain airbags.
- Do not bump or impact the SRS unit, front impact sensors, side impact sensors, or rear safing sensor, especially when the ignition switch is in ON (II), or for at least 3 minutes after the ignition switch is turned to LOCK (0); otherwise, the system may fail in a collision, or the airbags may deploy.
- SRS electrical connectors are identified by yellow color coding. Related components are located in the steering column, center console, dashboard, dashboard lower cover, in the dashboard above the glove box, in the front seats, in the roof side, and around the floor. Do not use electrical test equipment on these circuits.