

Suspension

Front and Rear Suspension

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TPMS (Tire Pressure Monitoring System)

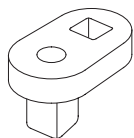
('08-09 Models)	18-47
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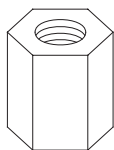
Front and Rear Suspension

Special Tools

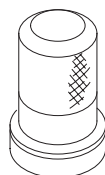
Ref. No.	Tool Number	Description	Qty
①	07AAA-SVAA100	Strut Nut Adapter	1
②	07AAF-SDAA100	Ball Joint Thread Protector, 12 mm	1
③	07AAF-SVAA100	Bushing Driver	1
④	07AAF-SVAA200	Receiver Set	1
⑤	07GAD-SD40101	Attachment, 78 x 90 mm	1
⑥	07GAF-SD40100	Hub Dis/Assembly Tool, 42 mm	1
⑦	07GAF-SE00100	Hub Dis/Assembly Tool, 40 mm	1
⑧	07GAF-SE00200	Attachment, 40 mm	1
⑨	07MAC-SL0A102	Ball Joint Remover, 32 mm	1
⑩	07MAC-SL0A202	Ball Joint Remover, 28 mm	1
⑪	071AF-S3VA000	Ball Joint Thread Protector, 14 mm	1
⑫	07746-0010500	Attachment, 62 x 68 mm	1
⑬	07749-0010000	Driver Handle	1
⑭	07965-SD90100	Support Base	1



①



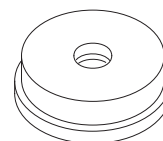
②



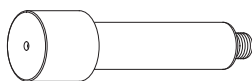
③



④



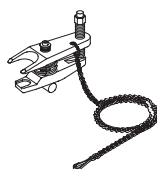
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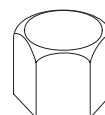
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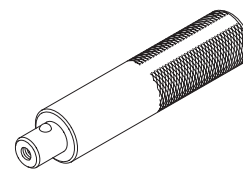
⑧



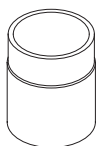
⑨, ⑩



⑪



⑬

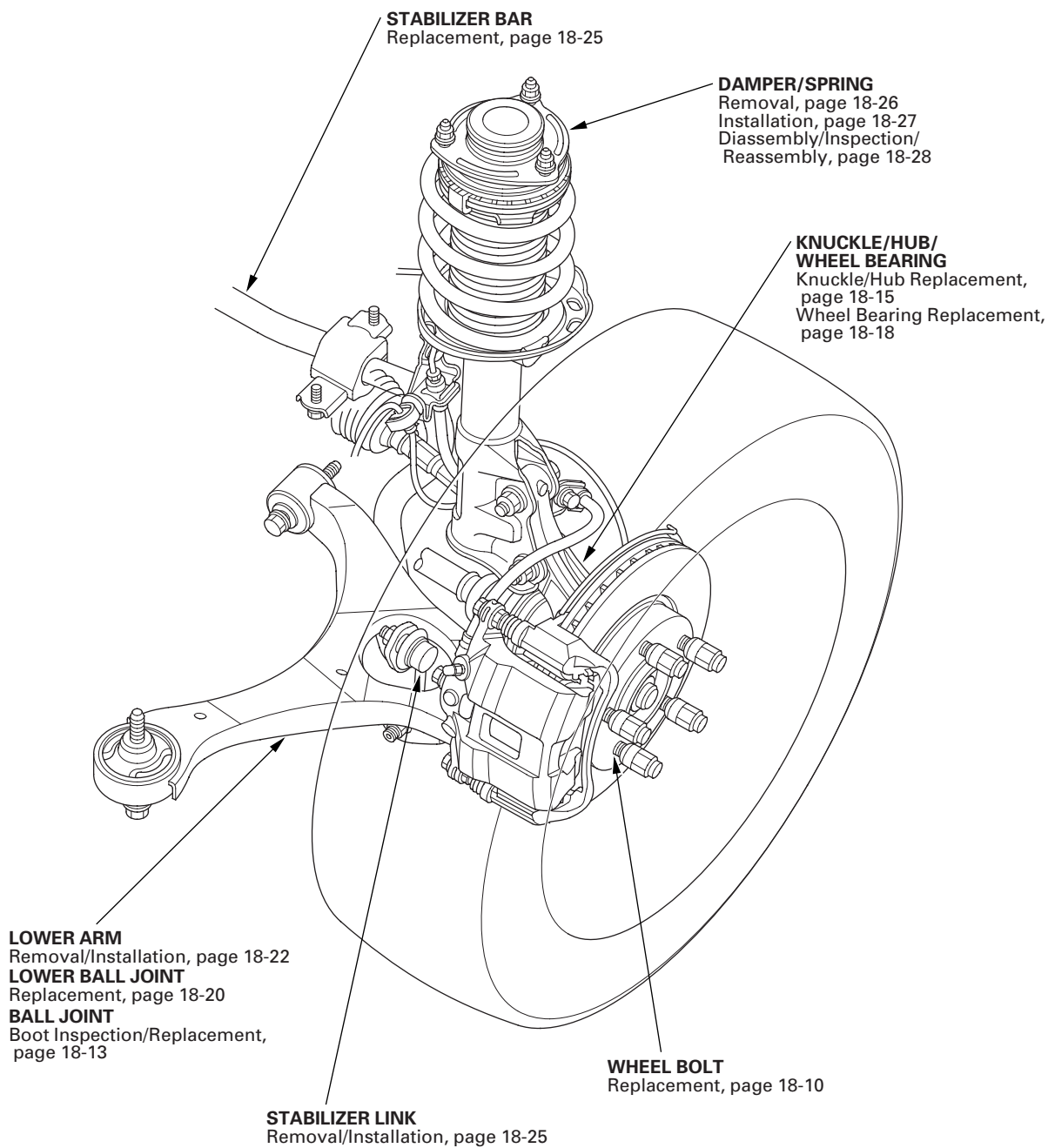


⑭



Component Location Index

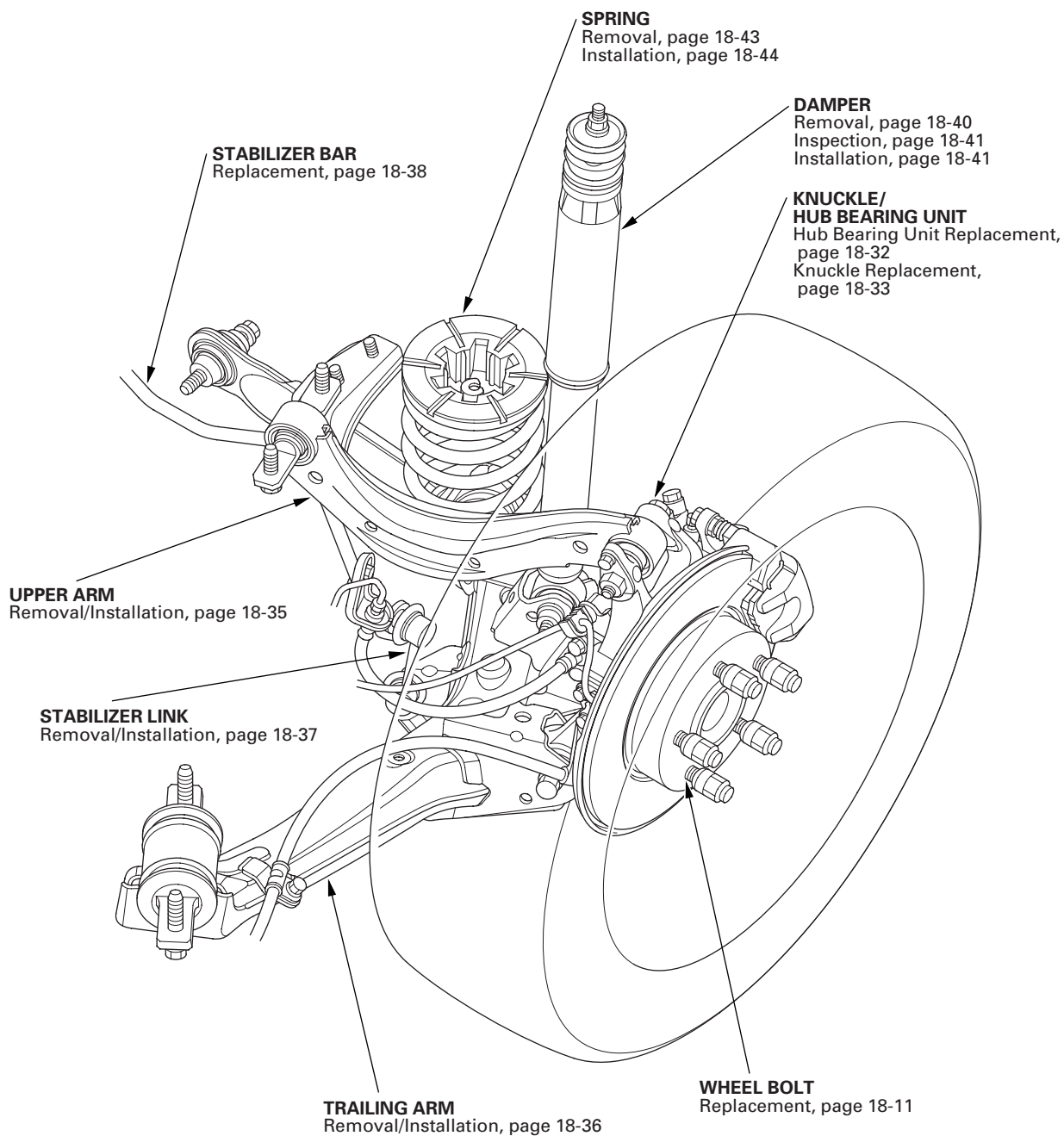
Front Suspension



Front and Rear Suspension

Component Location Index (cont'd)

Rear Suspension





Wheel Alignment

The suspension can be adjusted for front camber, front toe, and rear toe. However, each of these adjustments are related to each other. For example, when you adjust camber, the toe will change. Therefore, you must adjust the front wheel alignment whenever you adjust camber or 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 ('06-08 models):

Except Type S model:

Front/Rear: P205/55R16 89H

Type S model:

Front/Rear: P215/45R17 87V

Tire size ('09 model):

Front/Rear: P215/45R17 87V

Tire Pressure ('06-08 models) (at cold):

Except Type S model:

Front/Rear: 220 kPa (2.2 kgf/cm², 32 psi)

Type S model:

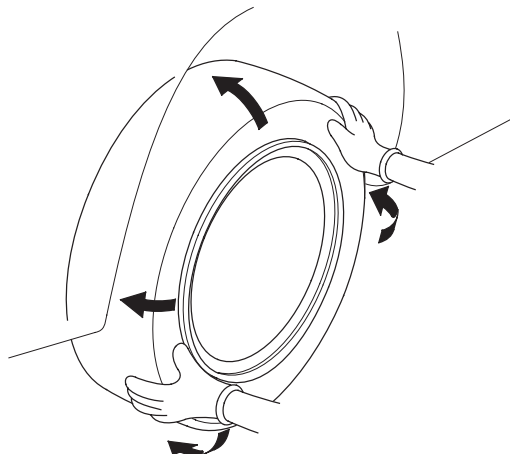
Front/Rear: 230 kPa (2.3 kgf/cm², 33 psi)

Tire Pressure ('09 model) (at cold):

Front/Rear: 230 kPa (2.3 kgf/cm², 33 psi)

5. Check the runout of the wheels and tires (see page 18-9).

6. Check the suspension ball joints (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. 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: 7°00' ±1°

- 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)

Front and Rear Suspension

Wheel Alignment (cont'd)

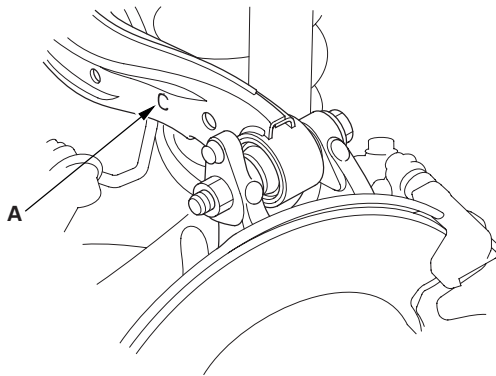
Camber Inspection

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.

NOTE:

- There are two types of rear upper arms. Those that are marked with "C" (A), and those with no marks. Be sure to use the correct alignment specifications.
- If the measurement is within specification, measure the toe-in.
- If the measurement for the front camber is outside the specification, go to front camber adjustment.
- If the measurement for the rear camber is outside the specification, check for bent or damaged suspension components.



Camber angle:

Front: $0^{\circ}00' \pm 30'$

(Maximum difference between the front right and left side: $0^{\circ}35'$)

Rear (without "C" marks on the upper arm):

$-1^{\circ}30' +1^{\circ}05' -0^{\circ}45'$

Rear (with "C" marks on the upper arm):

$-0^{\circ}45' +1^{\circ}05' -0^{\circ}45'$

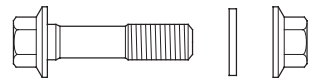
Front Camber Adjustment

The front camber can be adjusted by exchanging one or both of the damper pinch bolts with a smaller diameter adjusting bolt. The difference between the adjusting bolt diameter and the pinch bolt hole diameter allows for a small range of adjustment.

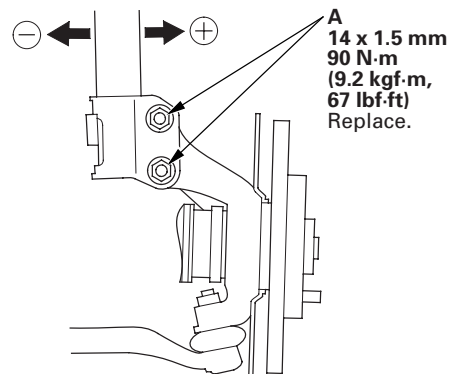
Damper pinch bolt



Adjusting bolt set: P/N 04512-SNA-305



1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the front wheels.
3. Loosen the damper pinch bolts (A), and adjust the camber angle by moving the bottom of the damper within the range of the damper pinch bolt free play.



4. Tighten the damper pinch bolts to the specified torque.
5. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the front wheels.
6. Lower the vehicle to the ground, and bounce the front of the vehicle up and down several times to stabilize the suspension.



7. Measure the camber angle.

- If the measurement is within specification, measure the toe.
- If the measurement is not within specification, go to step 8.

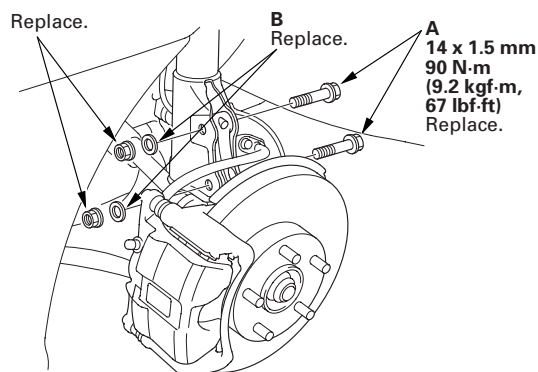
8. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).

9. Remove the front wheels.

10. Replace the damper pinch bolts with the adjusting bolts (A), and adjust the camber angle.

NOTE:

- Install the washers (B) included adjusting bolt set between the front damper and self-locking nut.
- The camber angle can be adjusted up to $\pm 25^\circ$ (center of tolerance) by replacing one damper pinch bolt with the adjusting bolt.
- The camber angle can be adjusted up to 50° by replacing both damper pinch bolts with the adjusting bolts.



11. Tighten the adjusting bolts to the specified torque value.

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

13. Lower the vehicle to the ground, and bounce the front of the vehicle up and down several times to stabilize the suspension.

14. Measure the camber angle. If the camber angle is not within specification, repeat steps 8 through 13 to readjust the camber angle. If the camber measurement is correct, measure toe-in, and adjust it if necessary.

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.

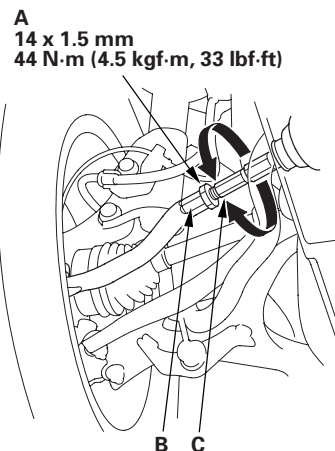
1. Set the steering column to the middle tilt and center telescopic positions. Center the steering wheel spokes, and install a steering wheel holder tool.

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 value. Reposition the rack-end boot if it is twisted or displaced.

5. Go to rear toe inspection/adjustment.

(cont'd)

Front and Rear Suspension

Wheel Alignment (cont'd)

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.

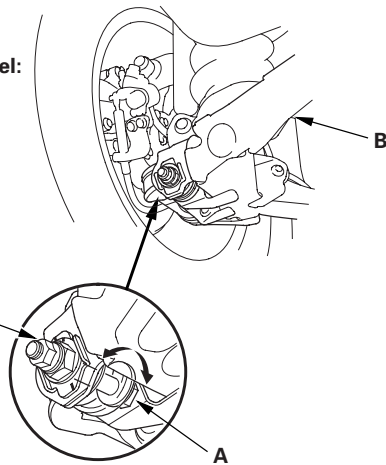
1. Release the parking brake to avoid an incorrect measurement.
2. Check the toe.

Rear toe-in: 2^{+2}_{-1} mm ($0.08^{+0.08}_{-0.04}$ 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 trailing arm (B), and loosen the self-locking nut (C).

C
Except Type S model:
12 x 1.25 mm
69 N·m
(7.0 kgf·m, 51 lbf·ft)
Replace.
Type S model:
12 x 1.25 mm
74 N·m
(7.5 kgf·m, 54 lbf·ft)
Replace.



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.
- Reassemble the adjusting bolt and the adjusting cam plate with the eccentric facing up.

5. Adjust the rear toe by turning the adjusting bolt until the toe is correct.
6. Tighten the self-locking nut to the specified torque value while holding the adjusting bolt.

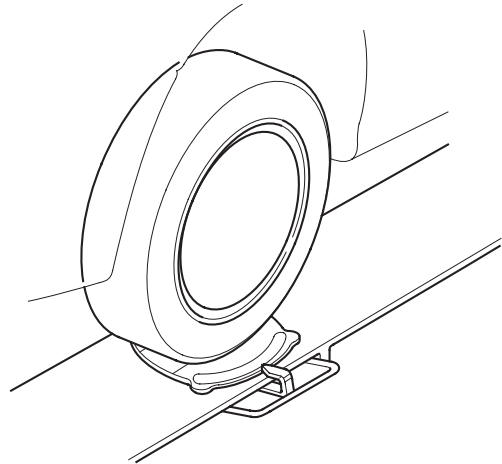
Turning Angle Inspection

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 wheel: $38^{\circ}46' \pm 2^{\circ}$
Outward wheel (reference): $31^{\circ}14'$



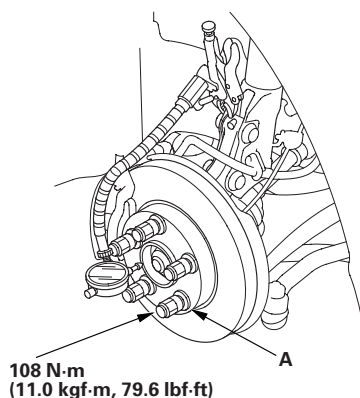
2. If the measurement is not within the specifications, even up both sides of the tie-rod threaded section length while adjusting the front toe. If it is correct, but the turning angle is not within the specifications, check for bent or damaged suspension components.



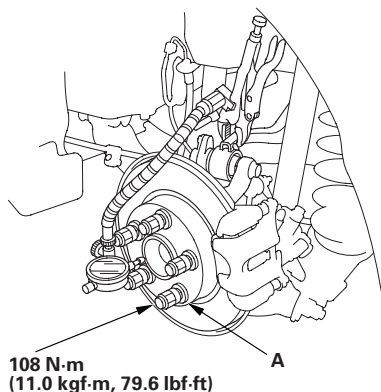
Wheel Bearing End Play Inspection

1. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-11).
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.

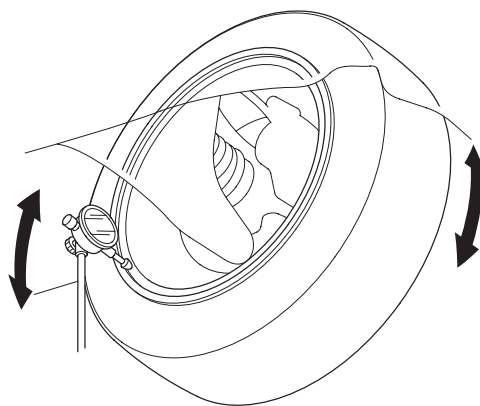
Wheel Runout Inspection

1. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Check for bent or deformed wheels.
3. Set up the dial gauge as shown, and measure the axial runout by turning the wheel.

Front and rear wheel axial runout:

Standard: 0—0.7 mm (0—0.03 in.)

Service limit: 2.0 mm (0.08 in.)



(cont'd)

Front and Rear Suspension

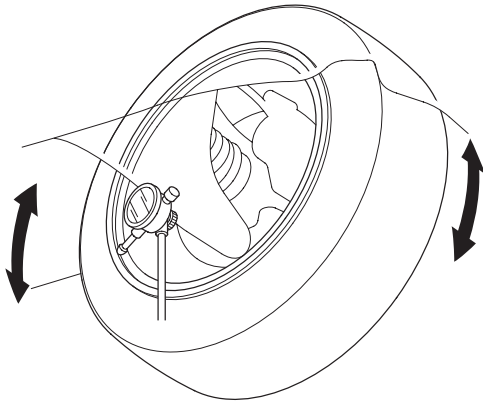
Wheel Runout Inspection (cont'd)

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

Front and rear wheel radial runout:

Standard: 0—0.7 mm (0—0.03 in.)

Service limit: 1.5 mm (0.06 in.)



- If the wheel runout is not within the specification, check the wheel bearing end play (see page 18-9), and make sure the mating surfaces on the brake disc and the inside of the wheel are clean.
- 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

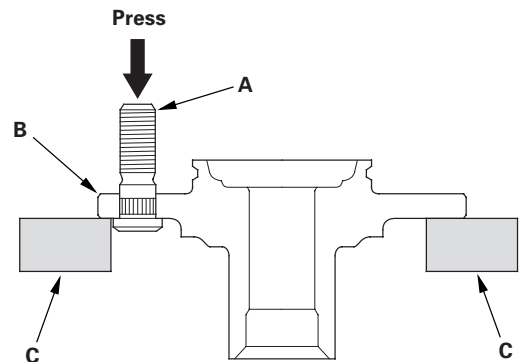
NOTICE

- 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

- Remove the front hub (see page 18-15).
- 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.



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

NOTE:

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

- Install the wheel bolt using a hydraulic press until the wheel bolt shoulder is fully seated.
- Install the front hub (see page 18-15).

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

Front and Rear Suspension

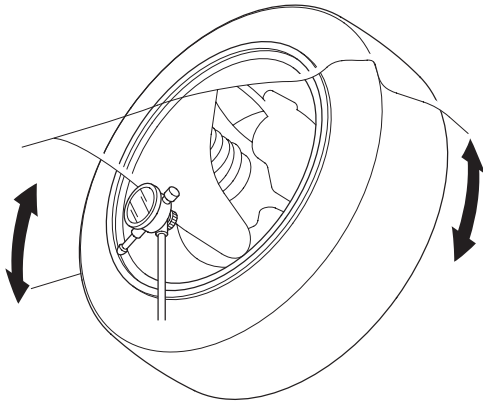
Wheel Runout Inspection (cont'd)

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

Front and rear wheel radial runout:

Standard: 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 18-9), 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

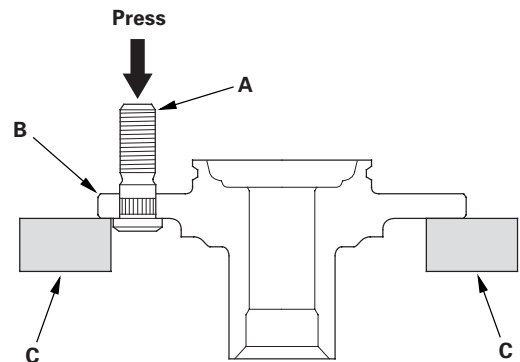
NOTICE

- 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 18-15).
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 all 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 18-15).

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

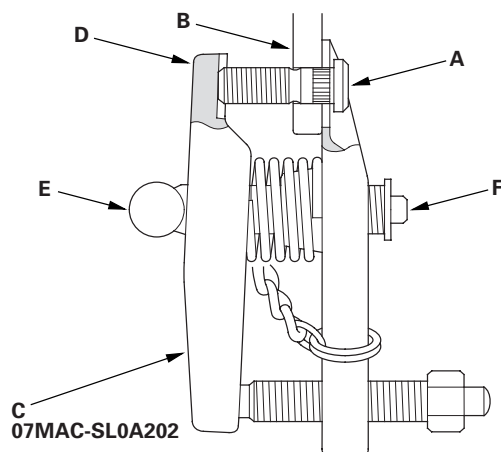


Rear

1. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-11).
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 18-12).

NOTE:

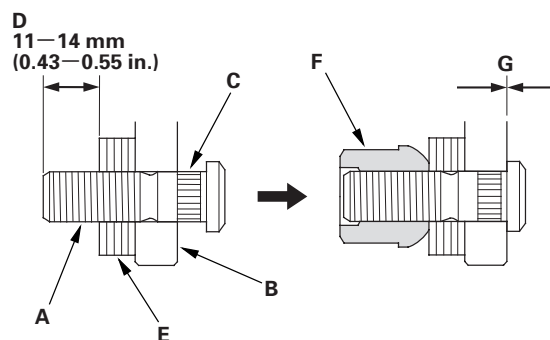
- If the angle of the remover against the wheel bolt is not square, readjust the ball joint remover by turning the head (E) of the adjusting bolt (F).
- Before installing the new wheel bolt, clean the mating surfaces on the bolt and the hub.



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 washers (P/N 94101-12800 or equivalent) (E), then install a nut (P/N 90304-SC2-000 or equivalent) (F) hand-tight.

NOTE:

- Degrease all 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 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, 79.6 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 value 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.

Front and Rear Suspension

Ball Joint Removal

Special Tools Required

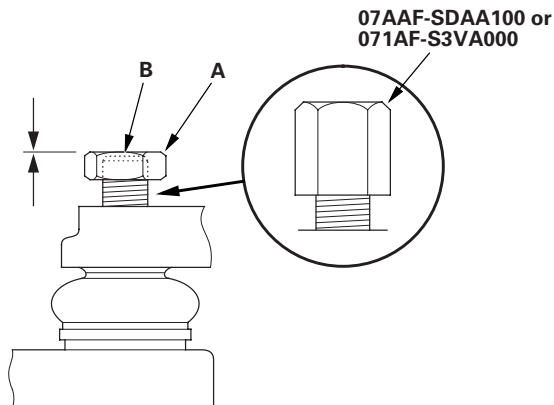
- Ball joint thread protector, 12 mm 07AAF-SDAA100
- Ball joint thread protector, 14 mm 071AF-S3VA000
- Ball joint remover, 32 mm 07MAC-SL0A102
- Ball joint remover, 28 mm 07MAC-SL0A202

NOTICE

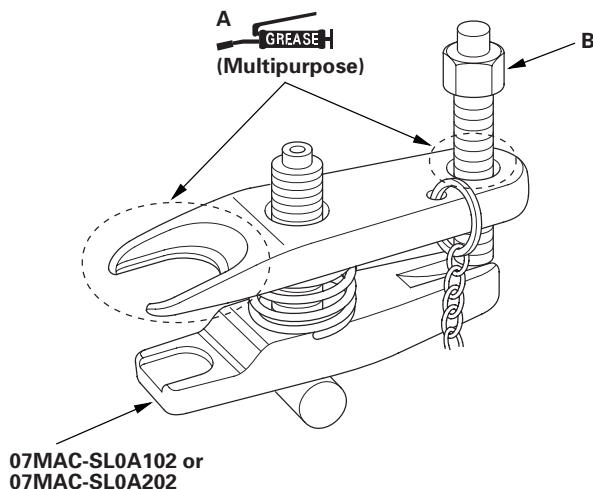
Always use a ball joint remover to disconnect a ball joint. Do not strike the housing or any other part of the ball joint connection to disconnect it.

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.

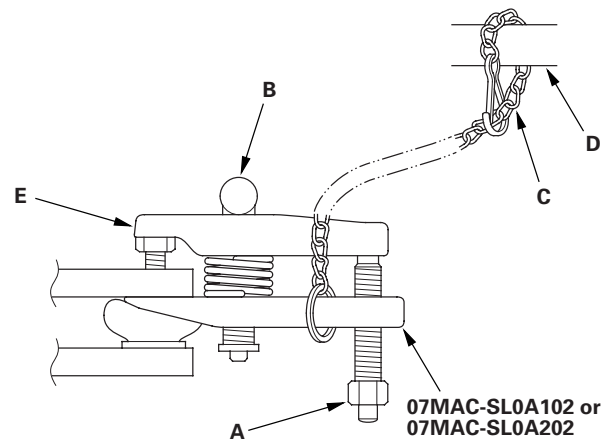


2. Apply grease to the ball joint remover on the areas shown (A). This will ease the installation of the tool, and prevent damage to the pressure bolt (B) threads.



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 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

Attachment, 40 mm 07GAF-SE00200

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

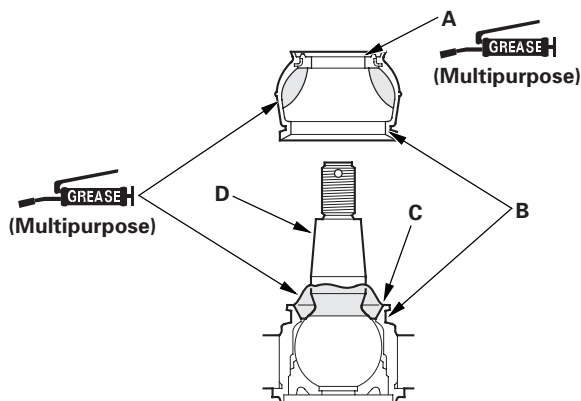
NOTE:

- 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 lower ball joint (see page 18-20).

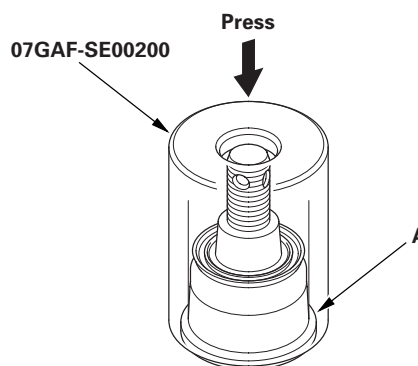
3. Remove the boot.

4. Pack the interior and lip (A) of a new boot with grease. Keep the grease off of the boot-to-lower ball joint 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).

7. Press the boot with the attachment until the bottom seats on the lower ball joint housing (A) all the way around.

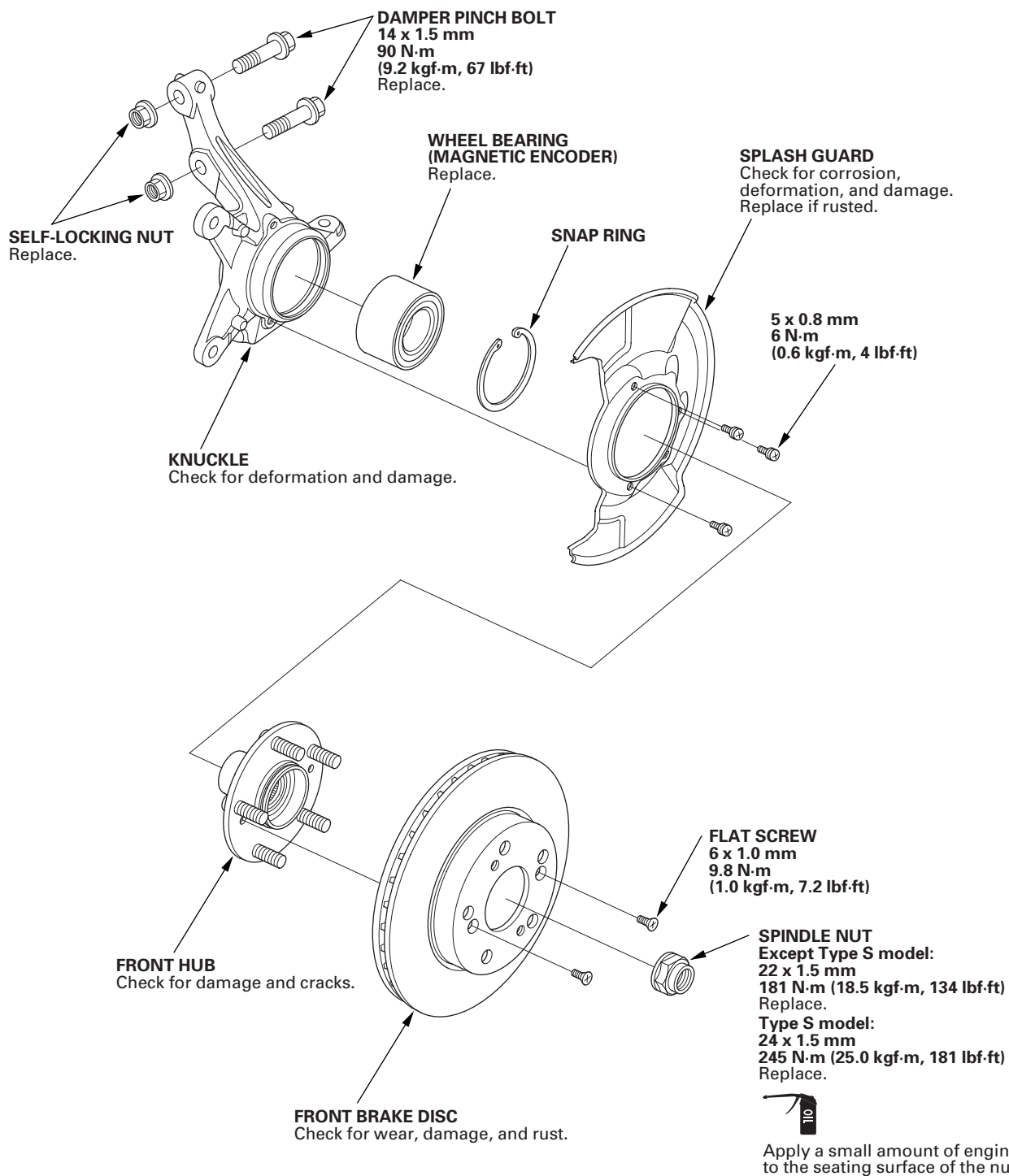


8. After installing a boot, wipe any grease off the exposed portion of the ball joint pin.
9. Install all of the removed parts.

Front Suspension

Knuckle/Hub/Wheel Bearing Replacement

Exploded View



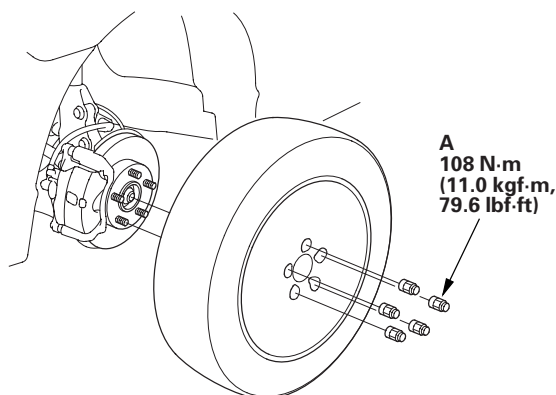


Special Tools Required

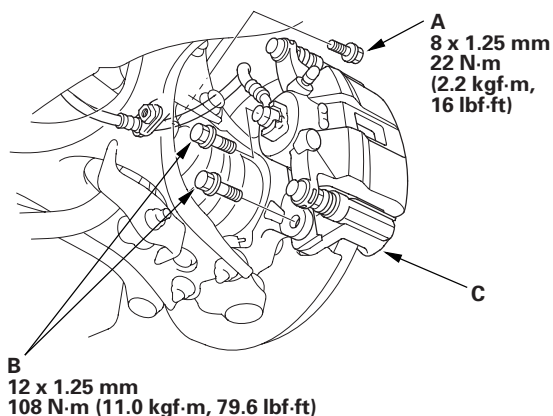
- Ball joint thread protector, 12 mm 07AAF-SDAA100
- Ball joint remover, 28 mm 07MAC-SLOA202
- Ball joint thread protector, 14 mm 071AF-S3VA000
- Ball joint remover, 32 mm 07MAC-SLOA102
- Hub dis/assembly tool, 40 mm 07GAF-SE00100
- Hub dis/assembly tool, 42 mm 07GAF-SD40100
- Driver handle 07749-0010000
- Attachment, 62 x 68 mm 07746-0010500
- Attachment, 70 x 90 mm 07GAD-SD40101
- Support base 07965-SD90100

Knuckle/Hub Replacement

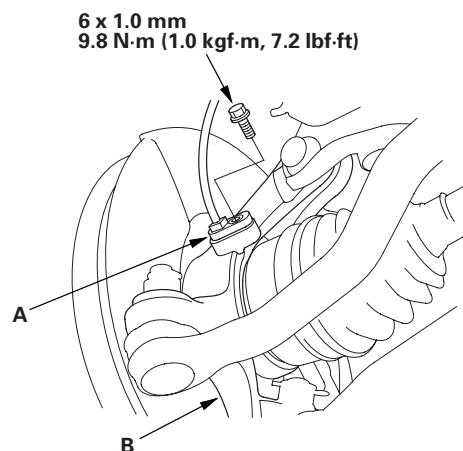
1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the wheel nuts (A) and front wheel.



3. Remove the brake hose mounting bolt (A) from the damper.



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

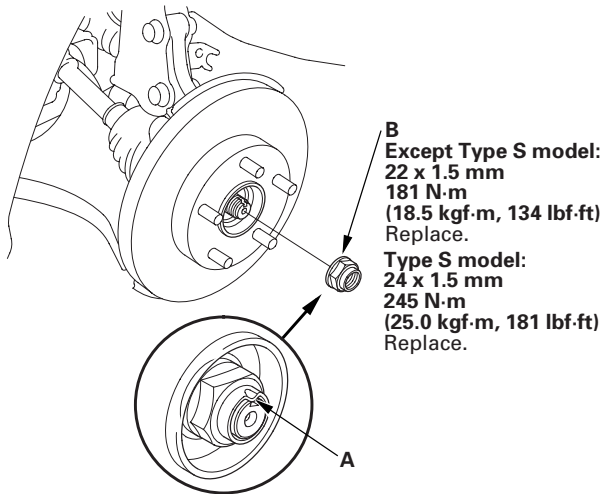


(cont'd)

Front Suspension

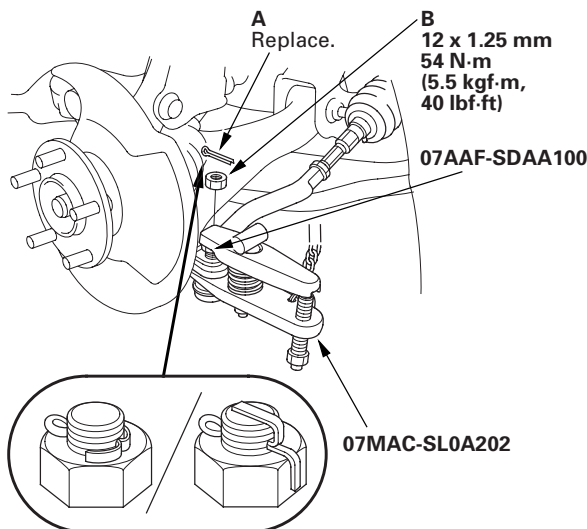
Knuckle/Hub/Wheel Bearing Replacement (cont'd)

6. Raise the stake (A), then remove the spindle nut (B).



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).

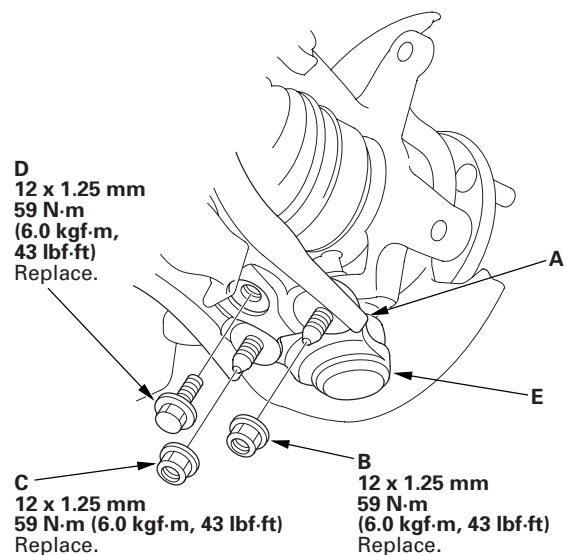
NOTE: During installation, install a new cotter pin after tightening the nut, and bend its end as shown.



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

11. Remove the flange bolt and the self-locking nuts from the lower arm (A).

NOTE: During installation, install the new flange bolt and the new self-locking nuts. After lightly tightening all three fasteners, tighten them to the specified torque in the following order; the nut on the front (B), the nut on the rear (C), then the bolt (D).

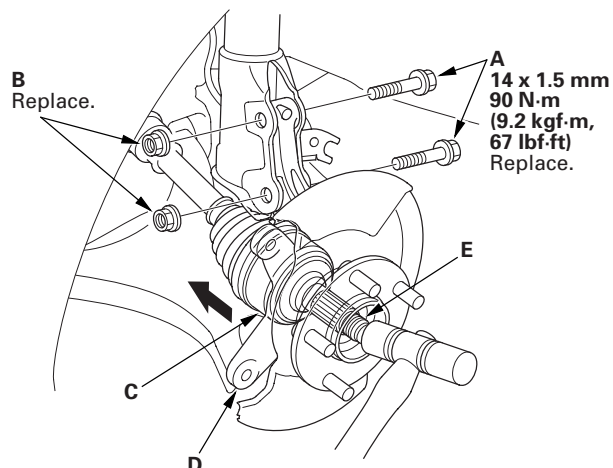


12. Disconnect the lower ball joint (E) from the lower arm.



13. Remove the damper pinch bolts (A) and the self-locking nuts (B) from the damper.

NOTE: Use new damper pinch bolts and new self-locking nuts during reassembly.



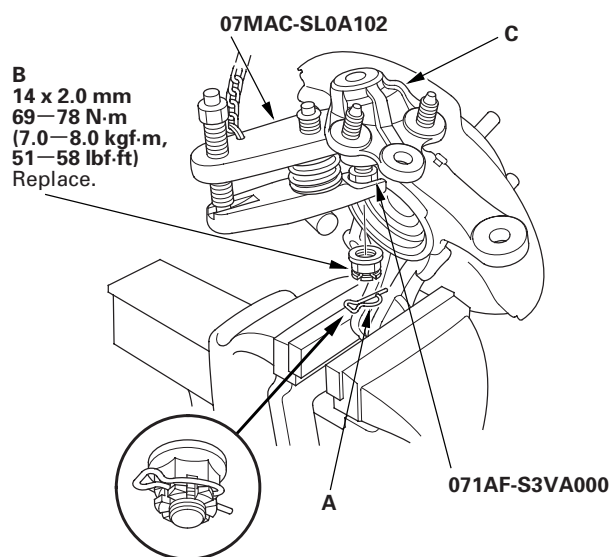
14. Remove the driveshaft outboard joint (C) from the knuckle (D) by tapping the driveshaft end (E) with a soft face hammer while drawing the hub outward, then remove the knuckle.

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 16-20).

15. Remove the lock pin (A) from the lower ball joint, then remove the castle nut (B).

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



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

(cont'd)

Front Suspension

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

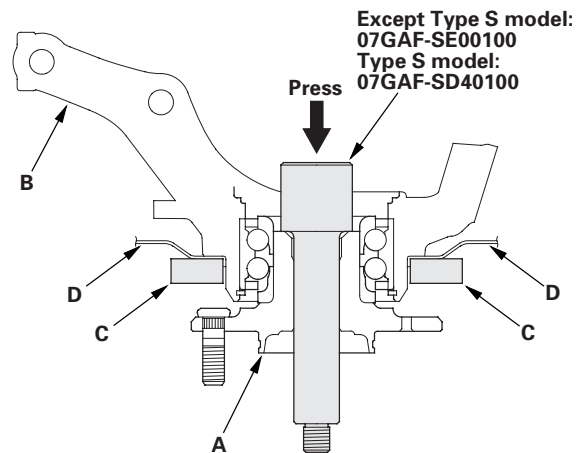
17. Install the knuckle/hub in the reverse order of removal, and note these items:

- 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 values.
- Be careful not to damage the ball joint boot when connecting the knuckle.
- Before connecting the lower ball joint to the knuckle, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, 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 during reassembly.
- Before installing the spindle nut, apply a small amount of engine oil to the seating surface of the nut. After tightening, use a drift to stake the spindle nut shoulder against the driveshaft.
- 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.

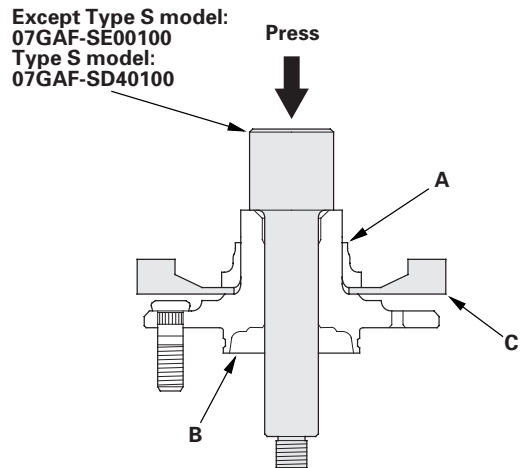
18. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Wheel Bearing Replacement

1. Separate the hub (A) from the knuckle (B) using the hub dis/assembly 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.

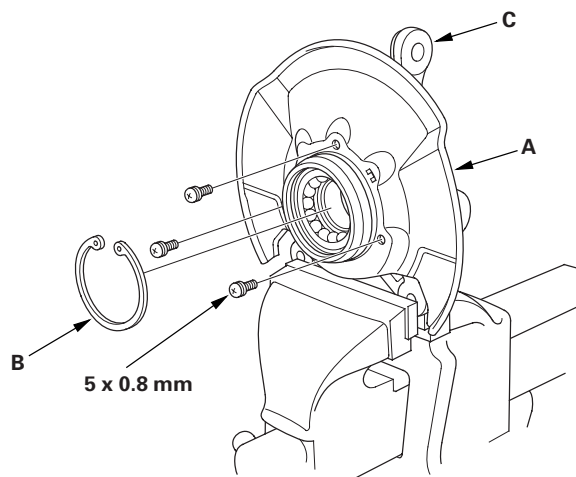


2. Press the wheel bearing inner race (A) off of the hub (B) using the hub dis/assembly tool, a commercially available bearing separator (C), and a press.

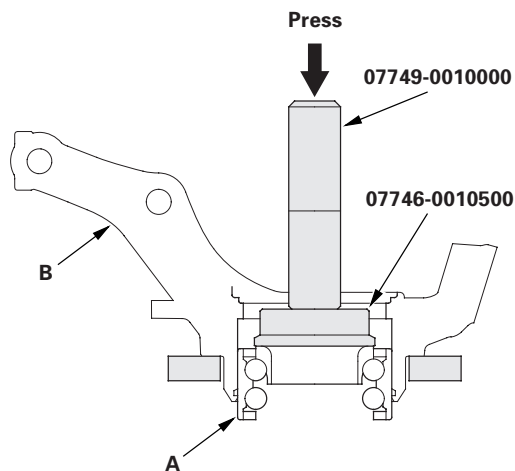




3. Remove the splash guard (A) and the snap ring (B) from the knuckle (C).



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

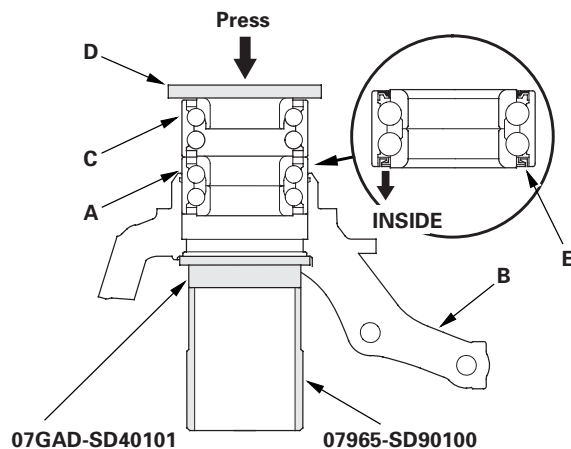


5. Wash the knuckle and the hub thoroughly in high flash point solvent before reassembly.

6. 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 encoder surface.
- Keep all magnetic tools away from the encoder surface.
- Be careful not to damage the encoder surface when you insert the wheel bearing.

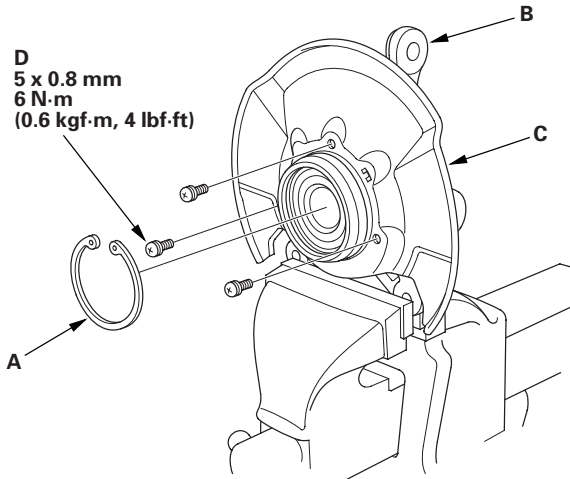


(cont'd)

Front Suspension

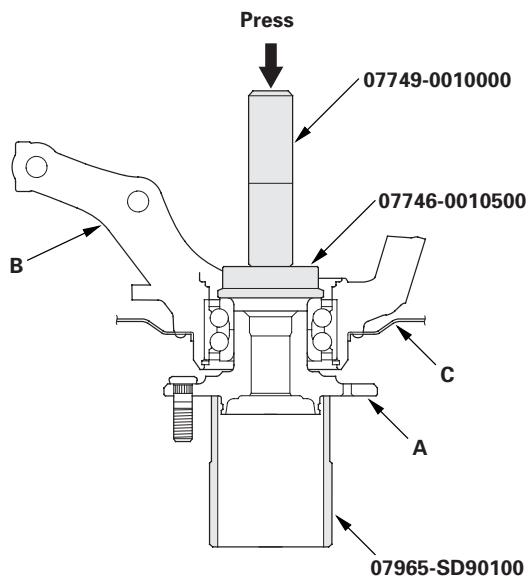
Knuckle/Hub/Wheel Bearing Replacement (cont'd)

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



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

9. 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).



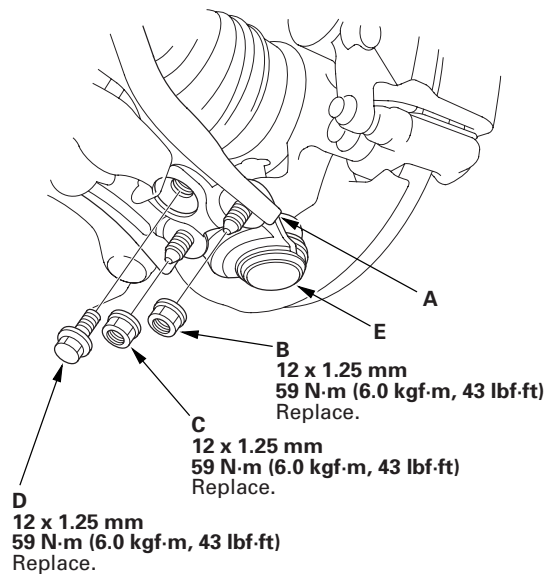
Lower Ball Joint Replacement

Special Tools Required

- Ball joint remover, 32 mm 07MAC-SL0A102
- Ball joint thread protector, 14 mm 071AF-S3VA000

1. Remove the front wheel.
2. Remove the flange bolt and the self-locking nuts from the lower arm (A).

NOTE: During installation, install the new flange bolt and the new self-locking nuts. After lightly tightening all three fasteners, tighten them to the specified torque in the following order; the nut on the front (B), the nut on the rear (C), then the bolt (D).

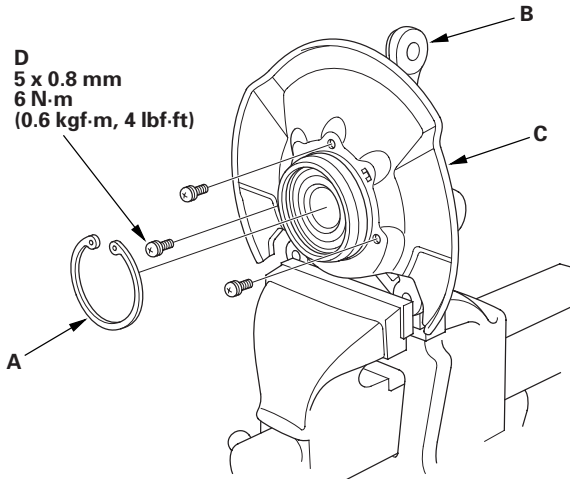


3. Disconnect the lower ball joint (E) from the lower arm.

Front Suspension

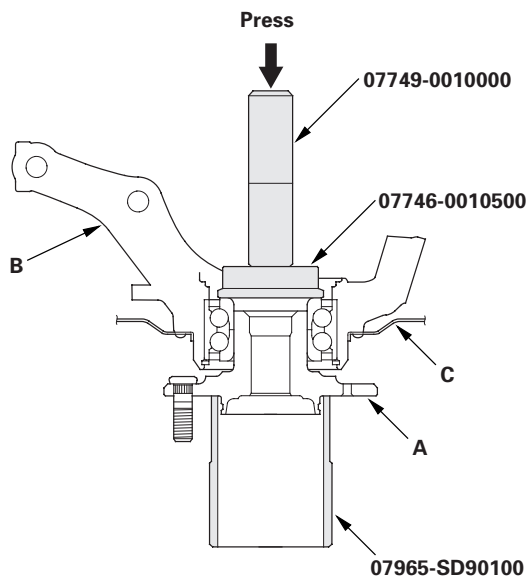
Knuckle/Hub/Wheel Bearing Replacement (cont'd)

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



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

9. 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).



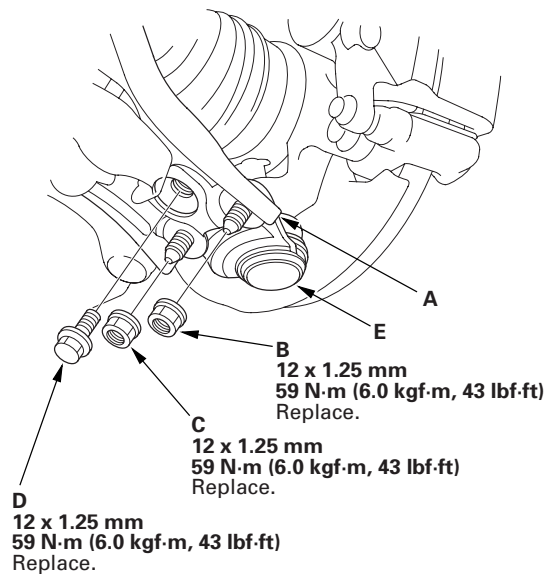
Lower Ball Joint Replacement

Special Tools Required

- Ball joint remover, 32 mm 07MAC-SL0A102
- Ball joint thread protector, 14 mm 071AF-S3VA000

1. Remove the front wheel.
2. Remove the flange bolt and the self-locking nuts from the lower arm (A).

NOTE: During installation, install the new flange bolt and the new self-locking nuts. After lightly tightening all three fasteners, tighten them to the specified torque in the following order; the nut on the front (B), the nut on the rear (C), then the bolt (D).



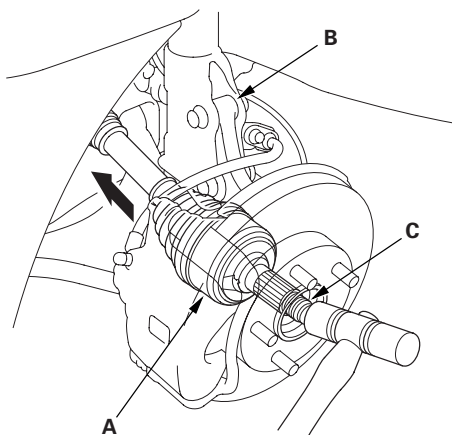
3. Disconnect the lower ball joint (E) from the lower arm.



4. Remove the spindle nut (see step 6 on page 18-16), and remove the outboard joint (A) from the knuckle (B) by tapping the driveshaft end (C) with a soft face hammer while pulling the hub outward.

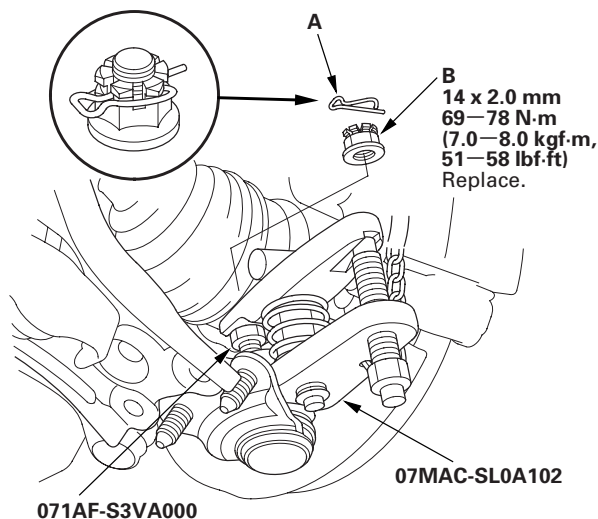
NOTE:

- 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 16-20).



5. Remove the lock pin (A) from the lower ball joint, then remove the castle nut (B).

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



6. Disconnect the lower ball joint from the knuckle using the ball joint thread protector and the ball joint remover (see page 18-12), then remove the lower ball joint.

(cont'd)

Front Suspension

Lower Ball Joint Replacement (cont'd)

7. Install the lower ball joint 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 values.
 - Be careful not to damage the ball joint boot when connecting the knuckle.
 - Before connecting the lower ball joint to the knuckle, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, 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 during reassembly.
 - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.
8. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Lower Arm Removal/Installation

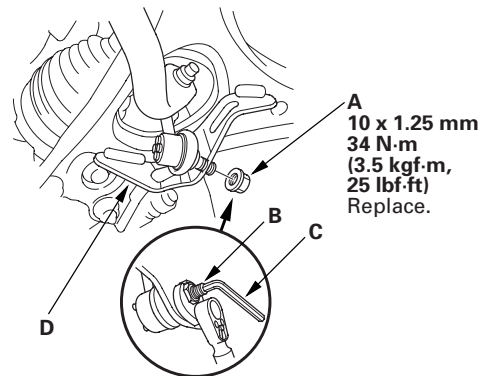
Special Tools Required

- Bushing driver 07AAF-SVAA100
- Receiver set 07AAF-SVAA200

Removal/Installation

1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the front wheels.
3. Remove the flange nut (A) while holding the joint pin (B) with a hex wrench (C), then disconnect both sides of the stabilizer link from the lower arm (D).

NOTE: Use the new flange nut during reassembly.



4. Turn the stabilizer bar backward to gain easier access to the front side of the lower arm mounting bolt.

Front Suspension

Lower Ball Joint Replacement (cont'd)

7. Install the lower ball joint 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 values.
 - Be careful not to damage the ball joint boot when connecting the knuckle.
 - Before connecting the lower ball joint to the knuckle, degrease the threaded section and the tapered portion of the ball joint pin, the ball joint connecting hole, 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 during reassembly.
 - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.
8. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Lower Arm Removal/Installation

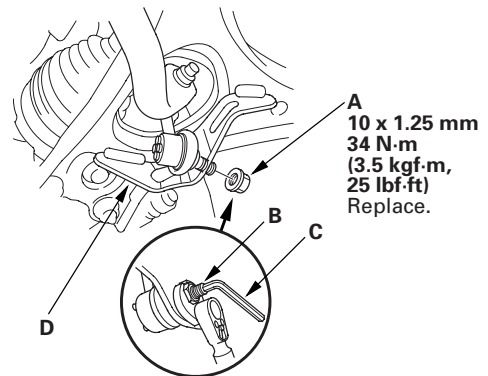
Special Tools Required

- Bushing driver 07AAF-SVAA100
- Receiver set 07AAF-SVAA200

Removal/Installation

1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the front wheels.
3. Remove the flange nut (A) while holding the joint pin (B) with a hex wrench (C), then disconnect both sides of the stabilizer link from the lower arm (D).

NOTE: Use the new flange nut during reassembly.

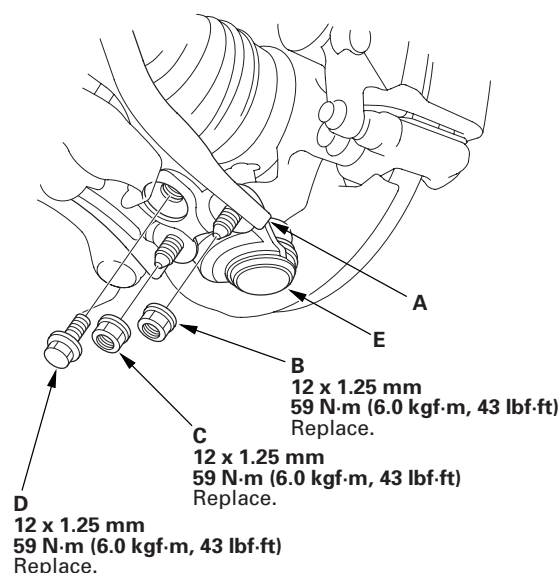


4. Turn the stabilizer bar backward to gain easier access to the front side of the lower arm mounting bolt.



5. Remove the flange bolt and the self-locking nuts from the lower arm (A).

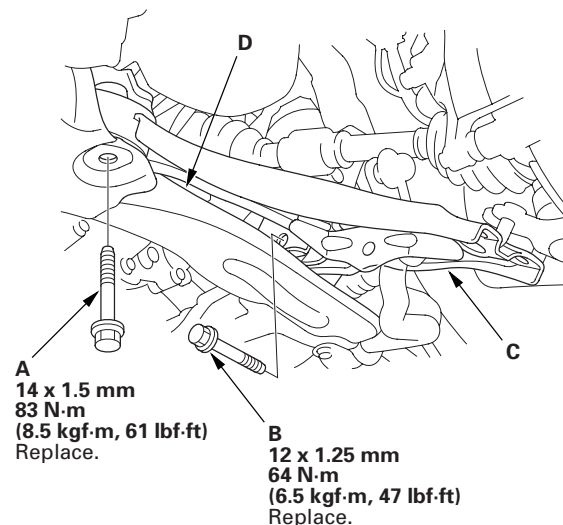
NOTE: During installation, install the new flange bolt and the new self-locking nuts. After lightly tightening all three fasteners, tighten them to the specified torque in the following order, the nut on the front (B), the nut on the rear (C), then the bolt (D).



6. Disconnect the lower ball joint (E) from the lower arm.

7. Remove the front side of the lower arm mounting bolt (A).

NOTE: Use the new mounting bolt during reassembly.



8. Remove the rear side of the lower arm mounting bolt (B), then remove the lower arm (C) from the front suspension subframe (D).

NOTE: Use the new mounting bolt during reassembly.

9. 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 to the specified torque values.
- Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

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

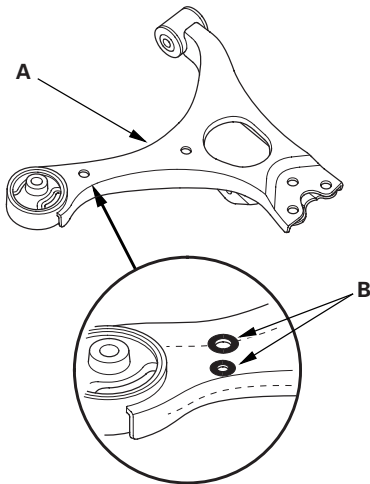
(cont'd)

Front Suspension

Lower Arm Removal/Installation (cont'd)

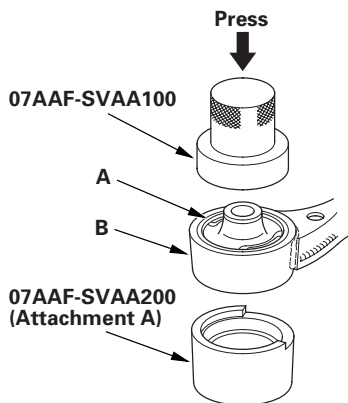
Bushing Replacement

NOTE: Replace the lower arm (A) as an assembly if the lower arm has the paint mark (B) around the hole near the front bushing. The paint mark can also be seen around a hole on the bottom side of the lower arm in the same area. Paint marks indicate a oversize bushing has been installed.



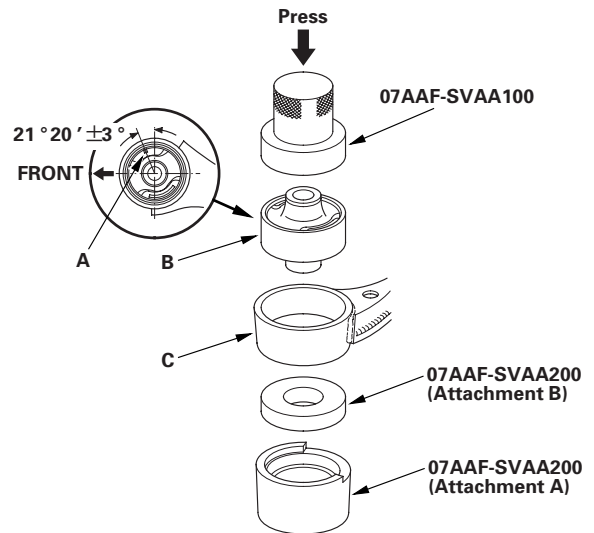
1. Press out the bushing (A) with the bushing driver, receiver set (attachment A), and a hydraulic press, and remove the bushing from the lower arm (B).

NOTE: Be careful not to damage the inside of the bushing hole when pressing on the bushing.



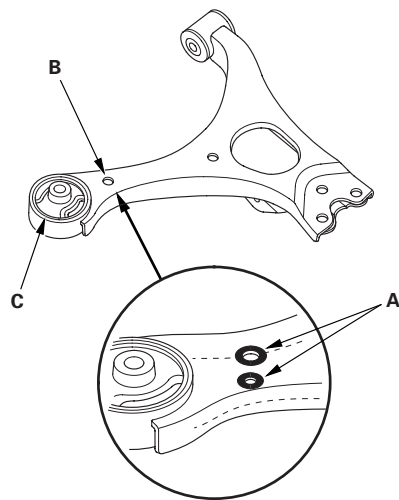
2. Clean the mating surfaces of the new bushing and the lower arm.

3. Position the tab (A) of the bushing (B) with the lower arm (C) as shown.



4. Using a hydraulic press, bushing driver, and receiver set (attachments A and B), press in the bushing into the lower arm.
5. Using a yellow oil-based paint marker, paint a mark (A) around the hole (B) near the front bushing (C). Also paint a mark around the hole on the bottom side of the lower arm in the same area.

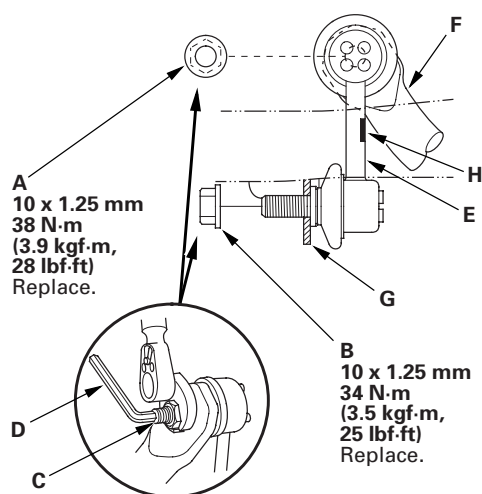
NOTE: These marks are used to identify a lower arm that has had the bushing replaced. Do not replace the bushing in a lower arm with there paint marks; you must replace the lower arm.





Stabilizer Link Removal/Installation

1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
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 the movement.

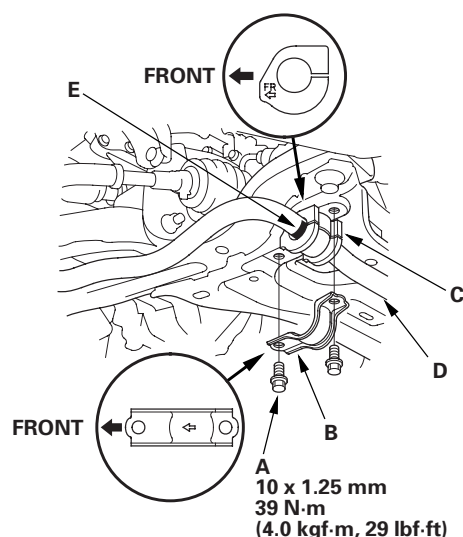
NOTE: The stabilizer link has a paint mark (H). Align the paint mark on the stabilizer link facing rearward.

5. Install the new self-locking nut and the new flange nut, and tighten them to the specified torque values 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, torque the self-locking nut again to the specified torque value.

Stabilizer Bar Replacement

1. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the front wheels.
3. Disconnect both stabilizer links from the stabilizer bar (see page 18-25).
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 sides of the bushings.



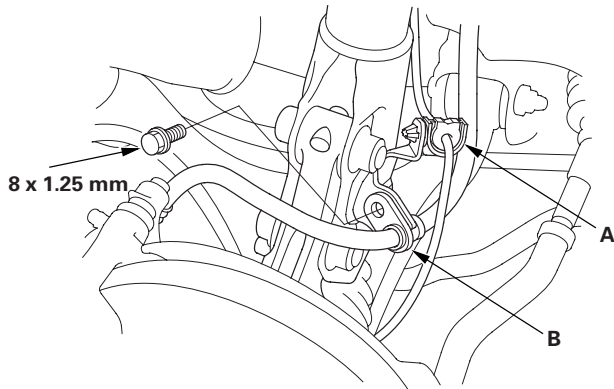
5. Install the stabilizer bar in the reverse order of removal, and note these items:
 - Note the right and left direction of the stabilizer bar.
 - Note the direction of installation for the bushings and the bushing holders.
 - Refer to stabilizer link removal/installation to connect the stabilizer bar to the links (see page 18-25).
 - Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.
6. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Front Suspension

Damper/Spring Removal and Installation

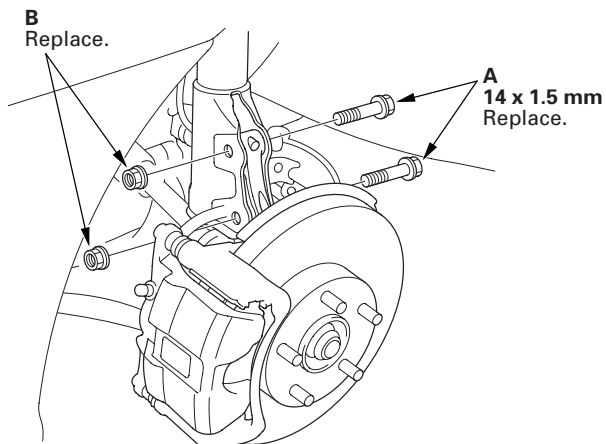
Removal

1. Turn the ignition switch to ON (II), then turn on the windshield wipers. Turn the ignition switch to LOCK (0) when the wipers are near the A-pillars.
2. Raise the front of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
3. Remove the front wheel.
4. Remove the wheel speed sensor harness clip (A) and the brake hose bracket (B) from the damper. Do not disconnect the wheel speed sensor connector.

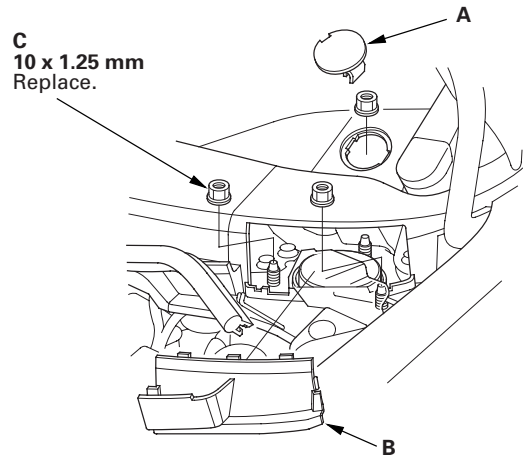


5. Remove the damper pinch bolts (A) and the self-locking nuts (B) from the damper.

NOTE: Do not allow the knuckle to rotate too far outward. This may allow the driveshaft inboard joint come apart.



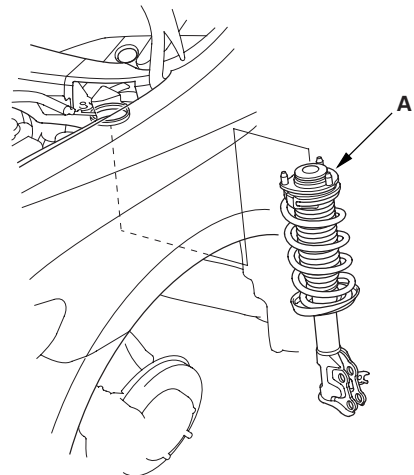
6. Remove the service cap (A) and the lid (B).



7. Remove the three flange nuts (C) from top of the damper.
8. Remove the damper/spring (A).

NOTE:

- The left and right damper springs are different. Mark the springs L and R before you continue.
- Be careful not to damage the body.

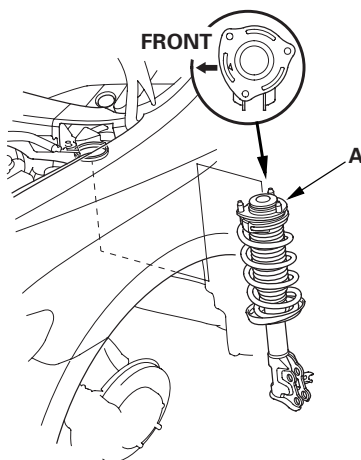




Installation

1. Install the damper/spring (A) onto the frame. Note the direction of the damper mounting base as shown.

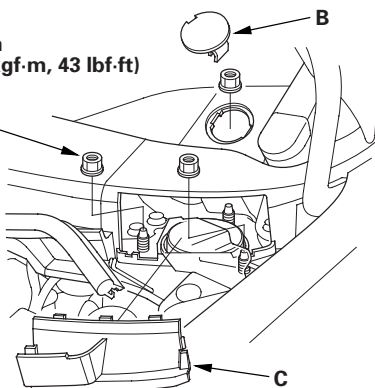
NOTE: Be careful not to damage the body.



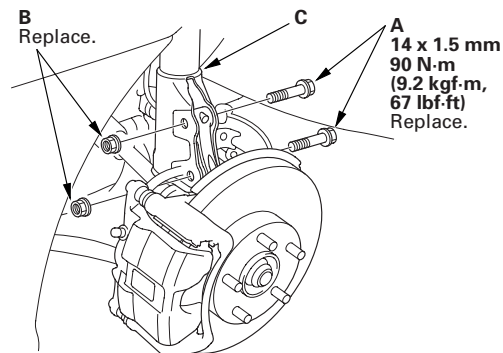
2. Loosely install the new flange nuts (A).

NOTE: Install the service cap (B) and the lid (C) after tightening the flange nuts to the specified torque value.

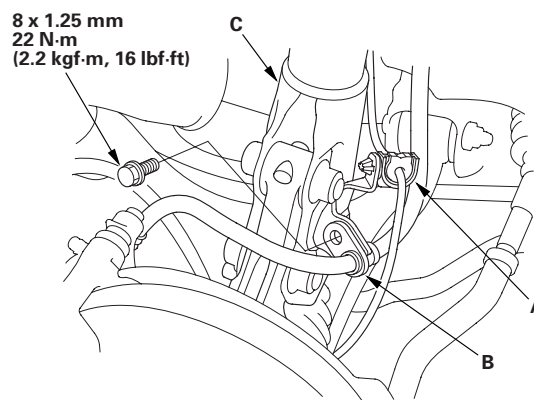
A
 '06-08 models except Type S model:
 10 x 1.25 mm
 44 N·m (4.5 kgf·m, 33 lbf·ft)
 Replace.
 '06-08 models type S model:
 10 x 1.25 mm
 59 N·m (6.0 kgf·m, 43 lbf·ft)
 Replace.
 '09 model:
 10 x 1.25 mm
 59 N·m (6.0 kgf·m, 43 lbf·ft)
 Replace.



3. Loosely install the new damper pinch bolts (A) and the new self-locking nuts (B) to the damper (C).



4. Raise the front suspension with a floor jack to load the suspension with the vehicle's weight.
5. Tighten the flange nuts on top of the damper to the specified torque value.
6. Tighten the damper pinch bolts to the specified torque value.
7. Install the wheel speed sensor harness clip (A) and the brake hose bracket (B) to the damper (C).

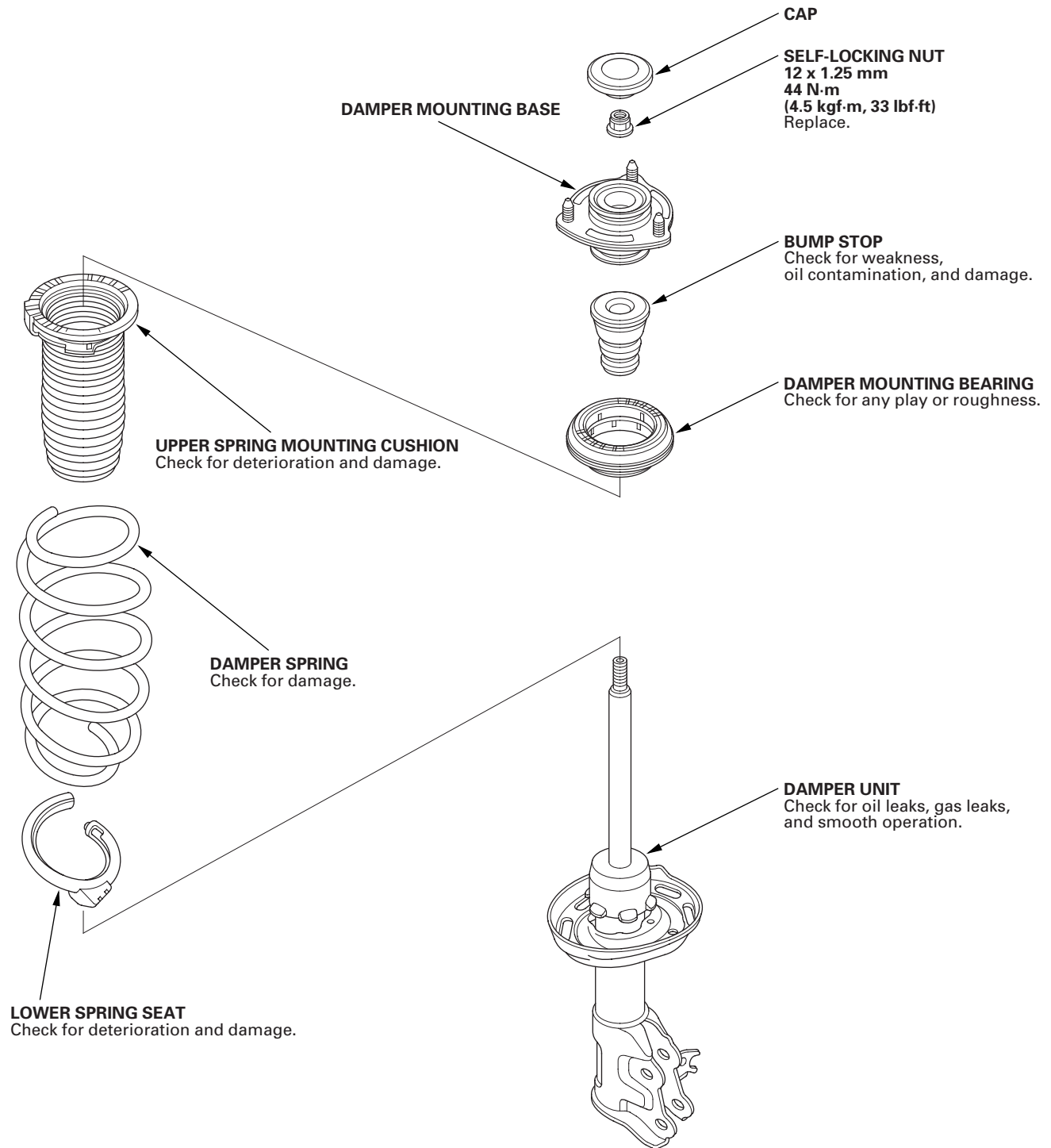


8. Install the service cap and the lid.
9. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the front wheel.
10. Check the wheel alignment, and adjust it if necessary (see page 18-5).
11. Turn the ignition switch to ON (II), then turn the windshield wipers to the default positions, and turn the ignition switch to LOCK (0).

Front Suspension

Damper/Spring Disassembly, Inspection, and Reassembly

Exploded View





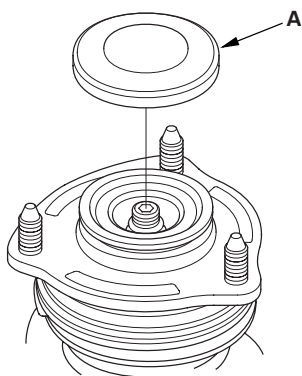
Special Tools Required

Strut nut adapter 07AAA-SVAA100

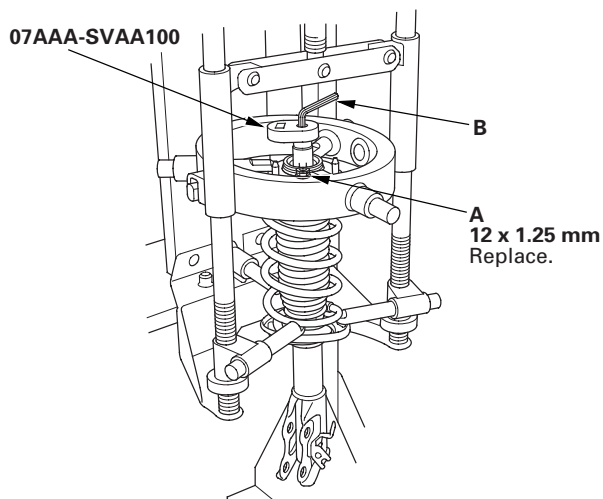
NOTE: When compressing the damper spring, use a commercially available strut spring compressor (Branick MST-580A or Model 7200, or equivalent) according to the manufacturer's instructions.

Disassembly

1. Remove the cap (A) from the top of the damper.



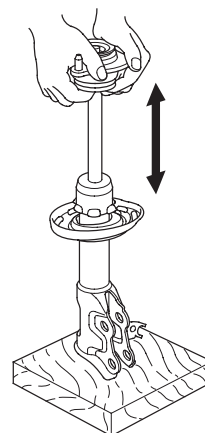
2. Compress the damper spring, then remove the self-locking nut (A) using the strut nut adapter, a ratchet or breaker bar while holding the damper shaft with a hex wrench (B). Do not compress the spring more than necessary to remove the nut.



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

Inspection

1. Reassemble the damper mounting base and the self-locking nut.
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, or binding during these tests.

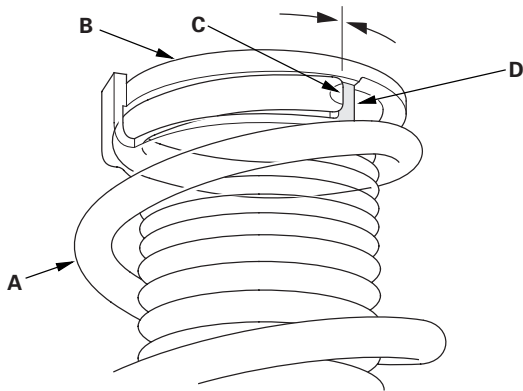
(cont'd)

Front Suspension

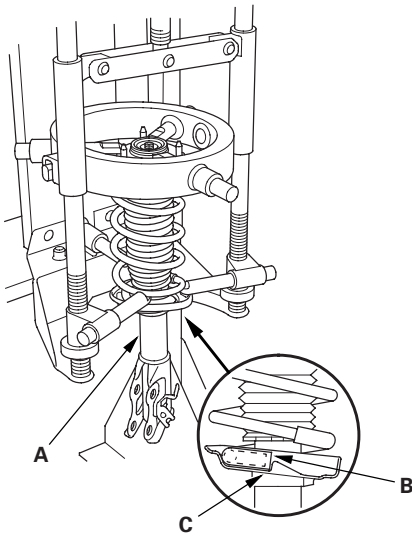
Damper/Spring Disassembly, Inspection, and Reassembly (cont'd)

Reassembly

1. Install the damper spring (A) on the upper spring mounting cushion (B) by aligning the upper end (C) of the damper spring with the ledge portion (D) of the upper spring mounting cushion.

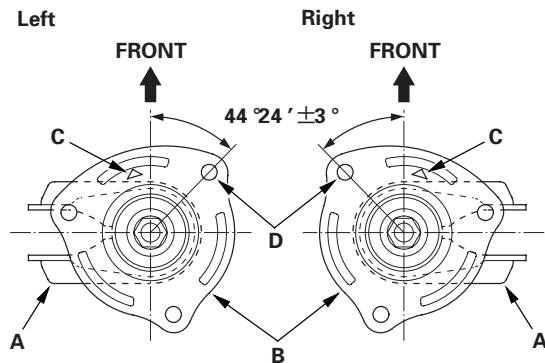


2. Compress the damper spring.
3. Install all the parts except the self-locking nut and the cap onto the damper unit (A) by referring to the Exploded View.

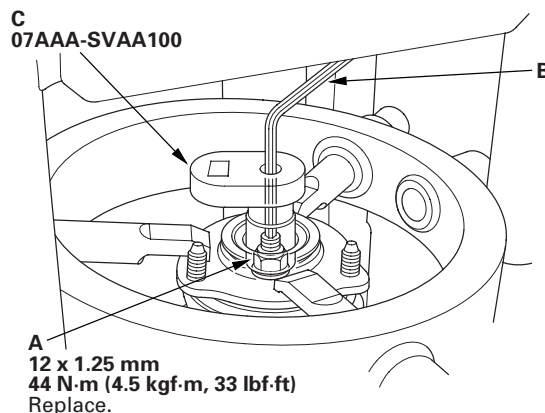


4. Align the bottom of the spring (B) and the stepped part of the lower spring seat (C) on the damper unit.

5. Align the damper bracket (A) and the damper mounting base (B) so that the "△" stamp (C) points toward the front.



6. Align the angle of the stud bolt (D) on the damper bracket as shown.
7. Install the new self-locking nut (A).



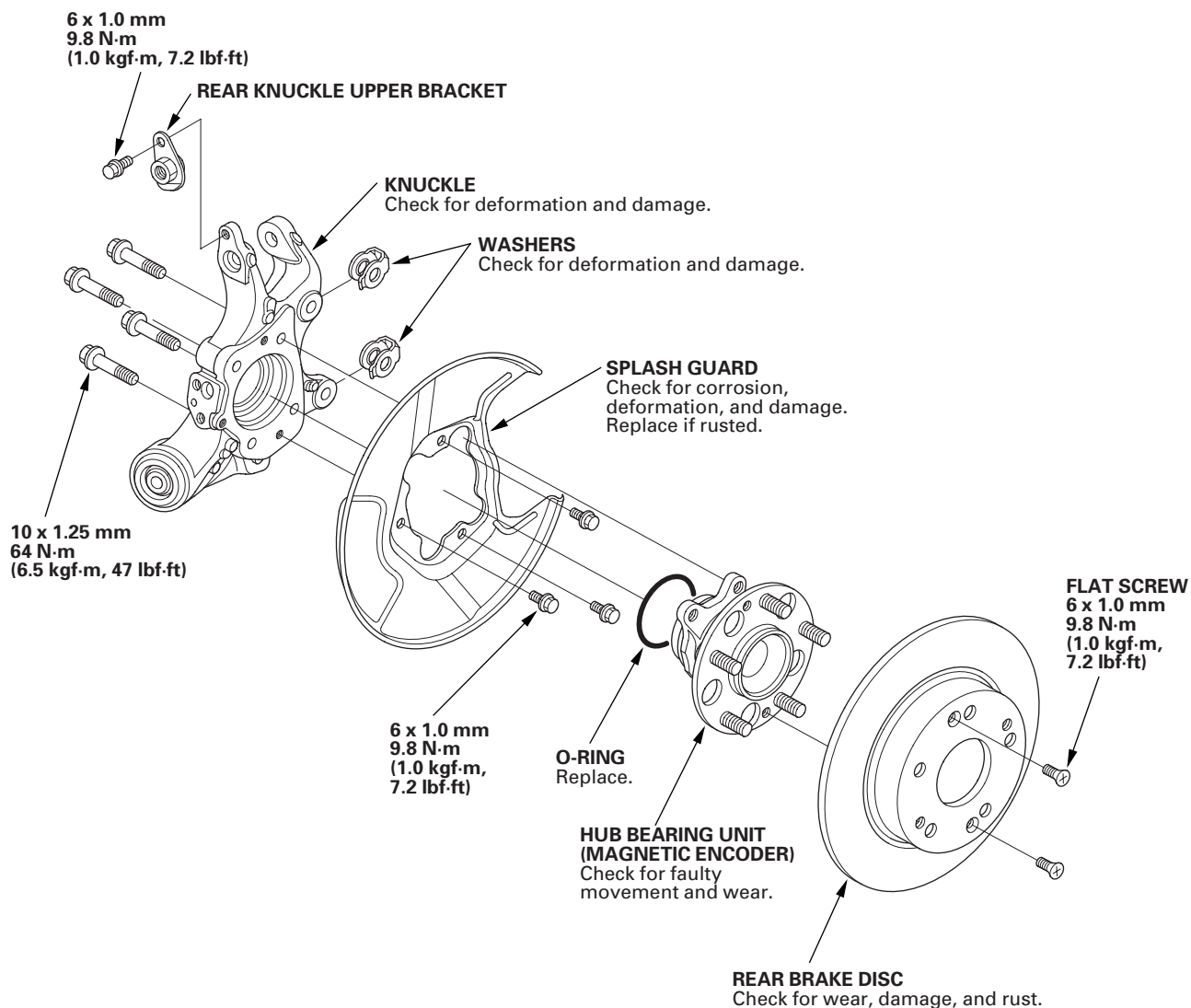
8. Hold the damper shaft using a hex wrench (B), and tighten the self-locking nut using the strut nut adapter (C) and a torque wrench to the specified torque value.
9. Remove the damper/spring from the strut spring compressor.
10. Install the cap.

Rear Suspension



Knuckle/Hub Bearing Unit Replacement

Exploded View



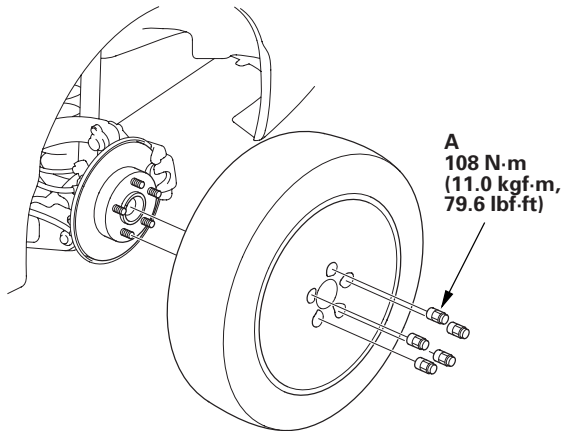
(cont'd)

Rear Suspension

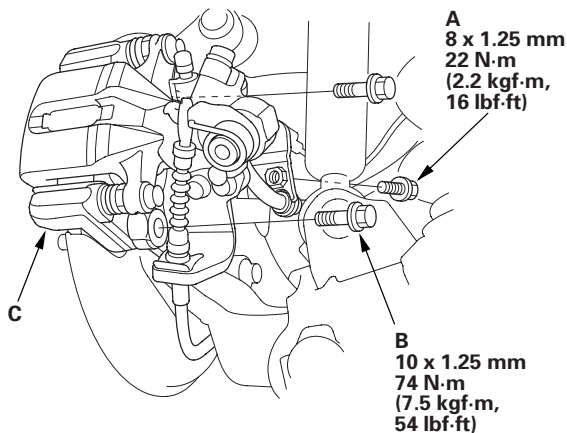
Knuckle/Hub Bearing Unit Replacement (cont'd)

Hub Bearing Unit Replacement

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the wheel nuts (A) and the rear wheel.



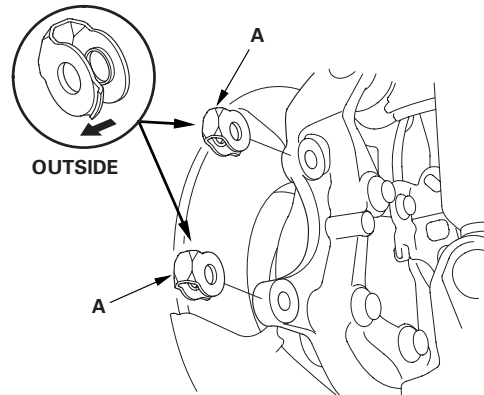
3. Remove the brake hose mounting bolt (A) from the bracket.



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.

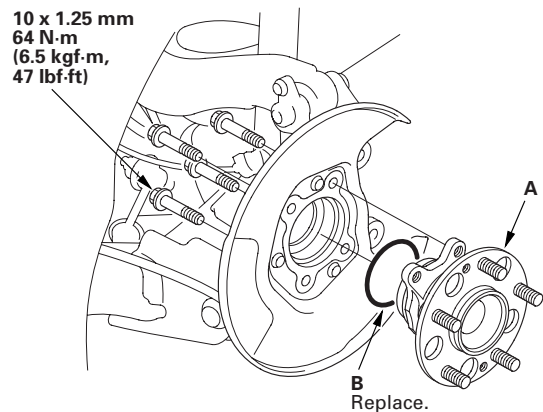
5. Remove the two washers (A).

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



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

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



8. Check the hub bearing unit for damage and cracks.

9. Install the hub bearing unit in the reverse order of removal, and note these items:

- Use a new O-ring during reassembly.
- Before installing the brake disc, Clean the mating surfaces of the hub bearing unit 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.

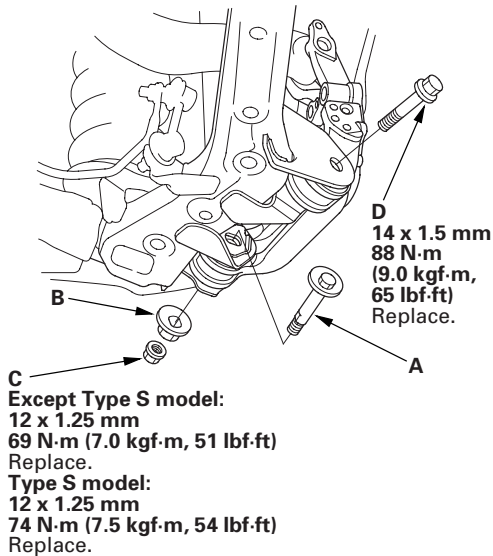
10. Check the wheel alignment, and adjust it if necessary (see page 18-5).

Rear Suspension

Knuckle/Hub Bearing Unit Replacement (cont'd)

8. Mark the cam positions of the adjusting bolt (A) and the adjusting cam plate (B) with the frame, then remove the self-locking nut (C), the adjusting cam plate, and the adjusting bolt. Discard the self-locking nut.

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



9. Remove the flange bolt (D), and remove the knuckle.

NOTE: Use the new flange bolt during reassembly.

10. Install the knuckle in the reverse order of removal, and note these items:

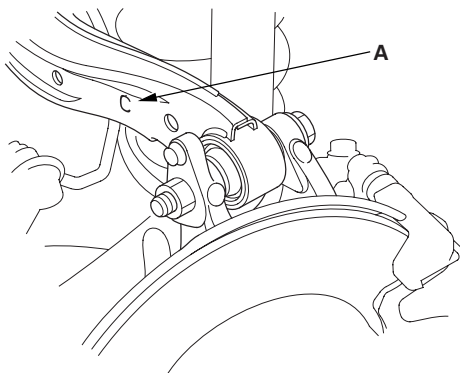
- First install all of the components, and lightly tighten the bolts and the nuts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
- Align the cam positions of the adjusting bolt and the adjusting cam plate with the marked positions when tightening the self-locking nut.
- Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

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

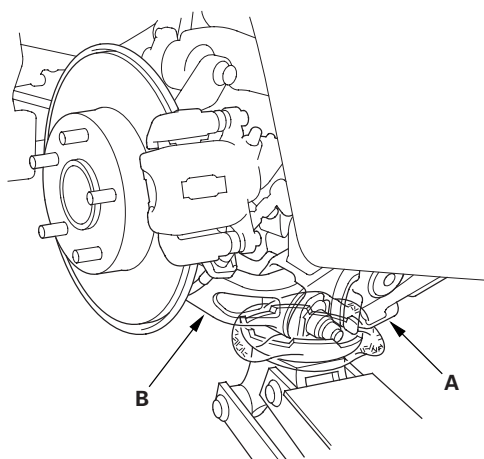


Upper Arm Removal/Installation

NOTE: There are two types of rear upper arms. Those that are marked with "C" (A), and those with no marks. Be sure to use the correct alignment specifications.

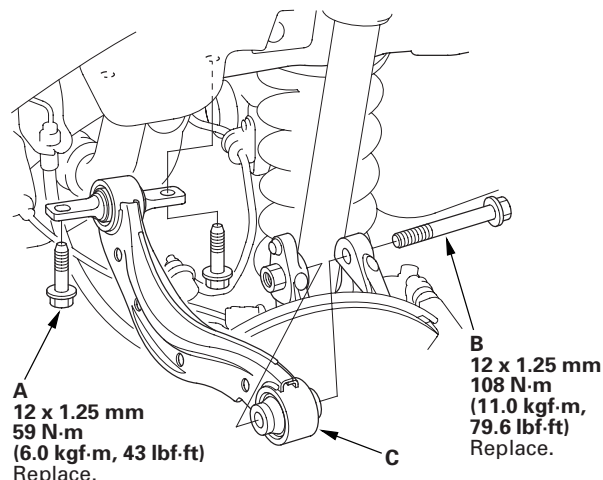


1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear wheel.
3. Position a floor jack at the connecting point of the trailing arm (A) and the knuckle (B). Raise the floor jack until the suspension begins to compress.



4. Remove the flange bolts (A) from the vehicle.

NOTE: Use new flange bolts during reassembly.



5. Remove the flange bolt (B) from the knuckle, and remove the upper arm (C).

NOTE: Use the new flange bolt during reassembly.

6. Install the upper arm in the reverse order of removal, and note these items:

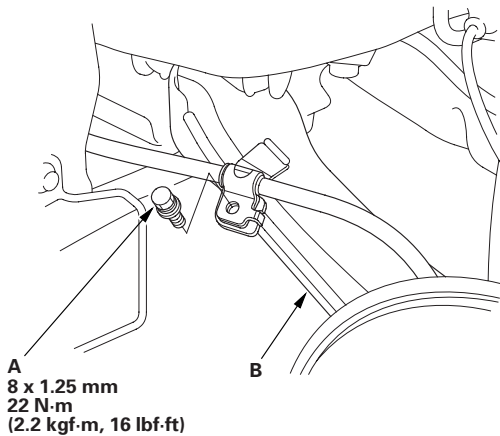
- First install all of the components, and lightly tighten the bolts, then raise the suspension to load it with the vehicle's weight before fully tightening to the specified torque values.
- Before installing the wheel, clean the mating surfaces of the brake disc and the inside of the wheel.

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

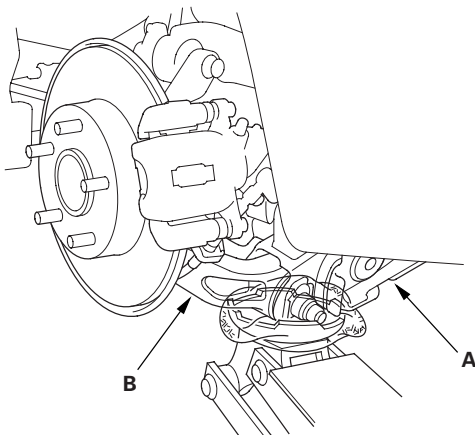
Rear Suspension

Trailing Arm Removal/Installation

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear wheel.
3. Remove the rear floor under cover (see page 20-174).
4. Remove the parking brake cable mounting bolt (A) from the trailing arm (B).



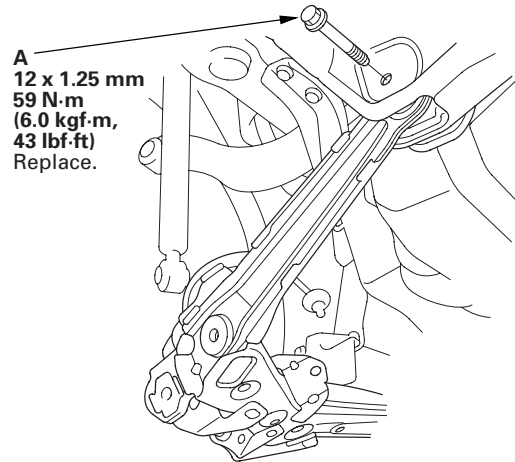
5. Position a floor jack at the connecting point of the trailing arm (A) and the knuckle (B). Raise the floor jack until the suspension begins to compress.



6. Remove the knuckle with the hub bearing unit (see page 18-33).
7. Disconnect the stabilizer link from the trailing arm (see page 18-37).
8. Remove the rear spring (see page 18-43).

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

NOTE: Use the new mounting bolt during reassembly.



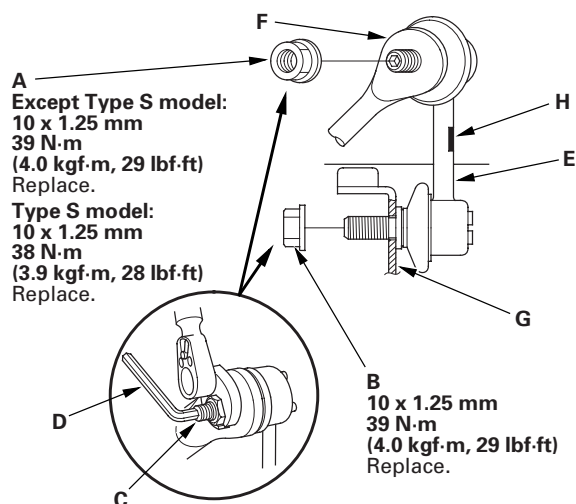
10. Lower the jack, and remove the trailing arm.



Stabilizer Link Removal/Installation

11. Install the trailing arm 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 values.
 - Check the brake hose for interference and twisting.
 - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
12. Check the wheel alignment, and adjust it if necessary (see page 18-5).

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear 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 trailing arm (G) with the joint pins set at the center of their range of the movement.

NOTE: The stabilizer link has a paint mark (H). Align the paint mark on the stabilizer link facing rearward.

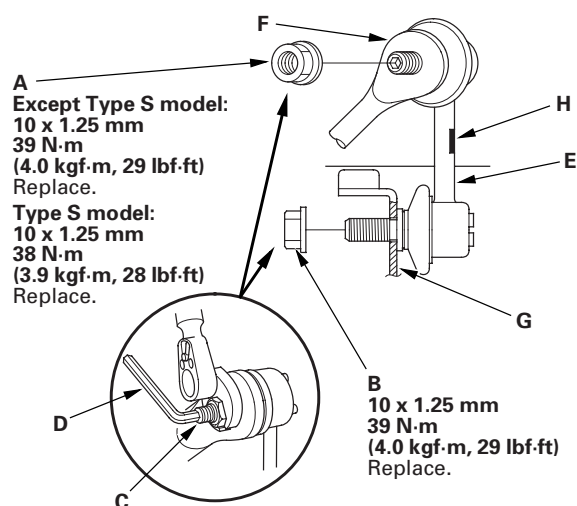
5. Install the new self-locking nut and the new flange nut, and tighten them to the specified torque values while holding the respective joint pin with a hex wrench.
6. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the rear wheel.
7. Test-drive the vehicle.
8.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



Stabilizer Link Removal/Installation

11. Install the trailing arm 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 values.
 - Check the brake hose for interference and twisting.
 - Before installing the wheel, clean the mating surfaces on the brake disc and the inside of the wheel.
12. Check the wheel alignment, and adjust it if necessary (see page 18-5).

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear 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 trailing arm (G) with the joint pins set at the center of their range of the movement.

NOTE: The stabilizer link has a paint mark (H). Align the paint mark on the stabilizer link facing rearward.

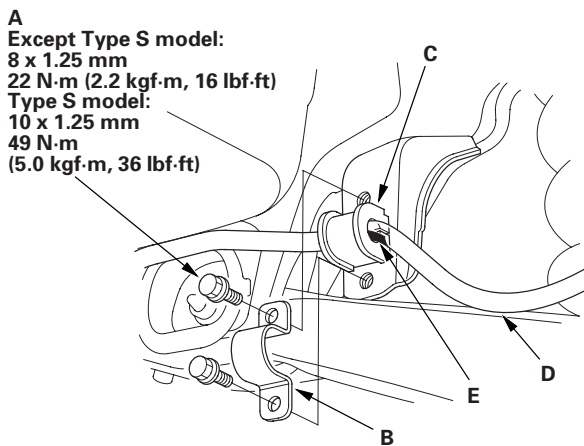
5. Install the new self-locking nut and the new flange nut, and tighten them to the specified torque values while holding the respective joint pin with a hex wrench.
6. Clean the mating surfaces of the brake disc and the inside of the wheel, then install the rear wheel.
7. Test-drive the vehicle.
8.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

Rear Suspension

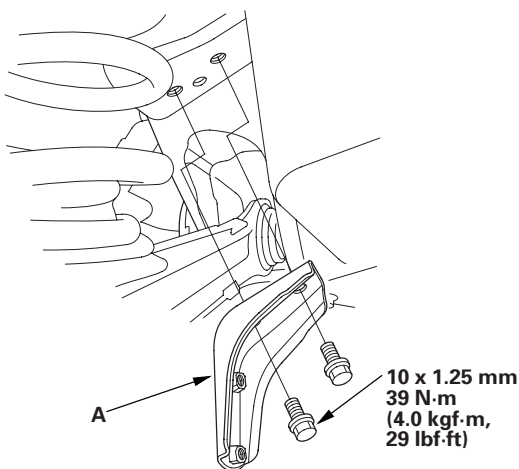
Stabilizer Bar Replacement

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear wheels.
3. Disconnect both stabilizer links from the stabilizer bar (see page 18-37).
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 sides of the bushings.



5. Replace the stabilizer bar bracket (A) if necessary.

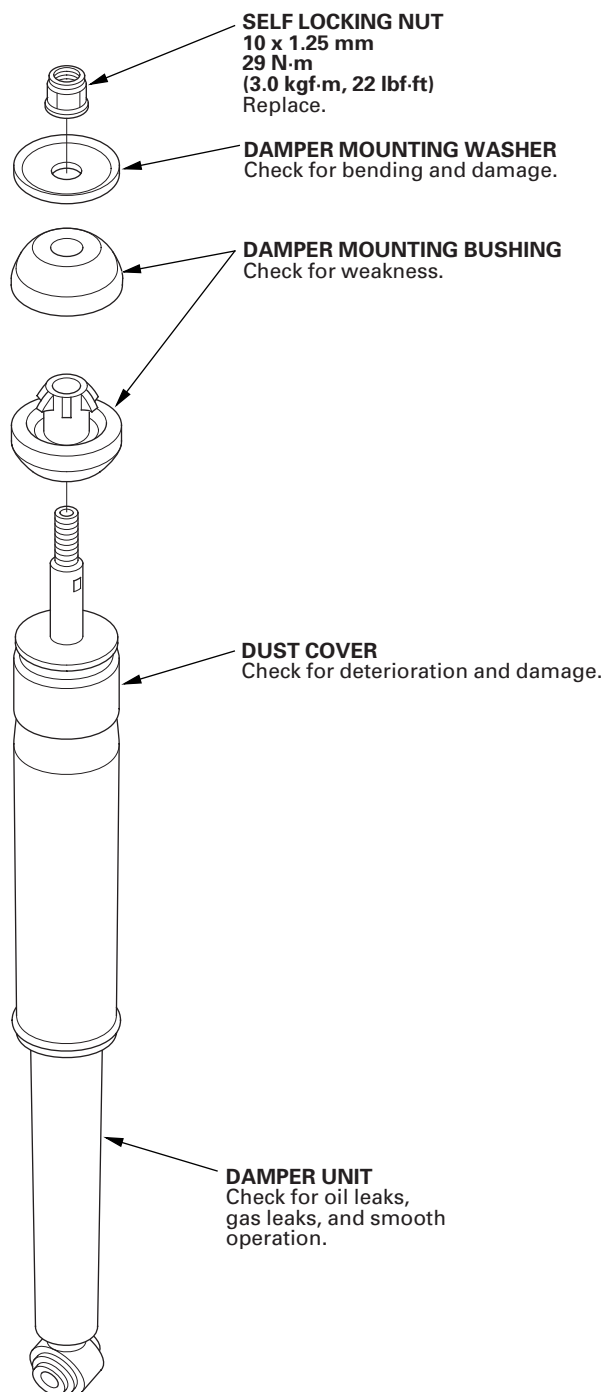


6. Install the stabilizer bar in the reverse order of removal, and note these items:
 - Note the right and left direction of the stabilizer bar.
 - Refer to stabilizer link removal/installation to connect the stabilizer bar to the links (see page 18-37).
 - Before installing the wheel, clean the mating surfaces of the brake disc and inside of the wheel.
7. Check the wheel alignment, and adjust it if necessary (see page 18-5).



Damper Replacement

Exploded View



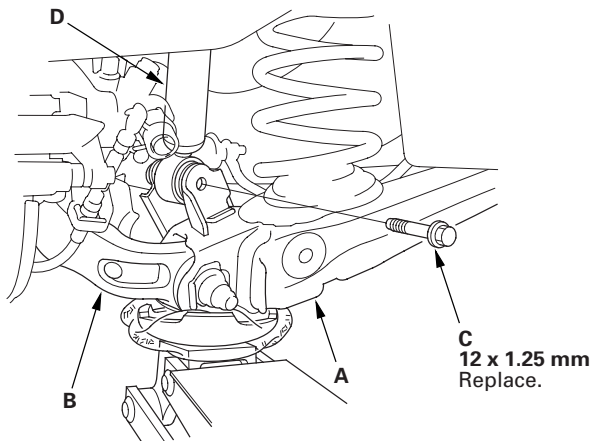
(cont'd)

Rear Suspension

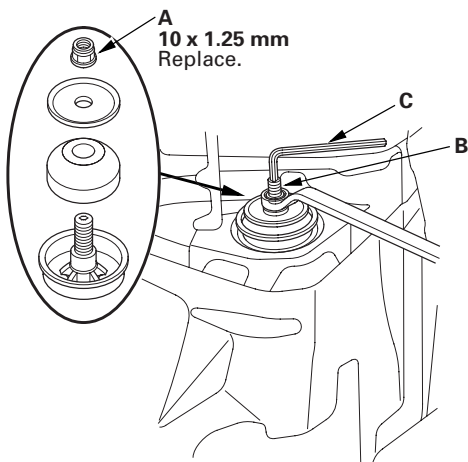
Damper Replacement (cont'd)

Removal

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear wheel.
3. Position a floor jack at the connecting point of the trailing arm (A) and the knuckle (B). Raise the floor jack until the suspension begins to compress.

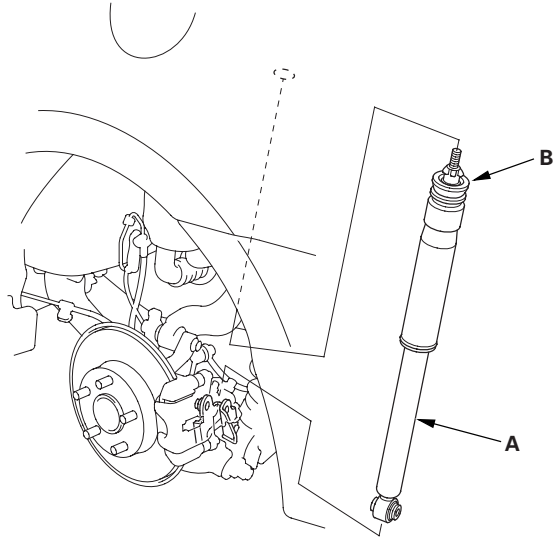


4. Remove the flange bolt (C) that connects the trailing arm and the damper (D).
5. Remove the trunk side trim panel (see page 20-80).
6. Remove the self-locking nut (A) while holding the damper shaft (B) with a hex wrench (C).



7. Compress the damper unit (A) by hand, and remove it from the vehicle.

NOTE: Be careful not to damage the body.

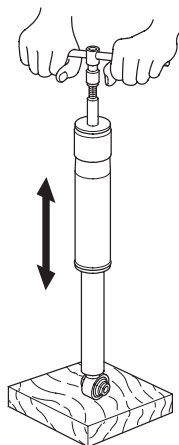


8. Remove the damper mounting bushing (B).



Inspection

1. Push on the damper as shown.

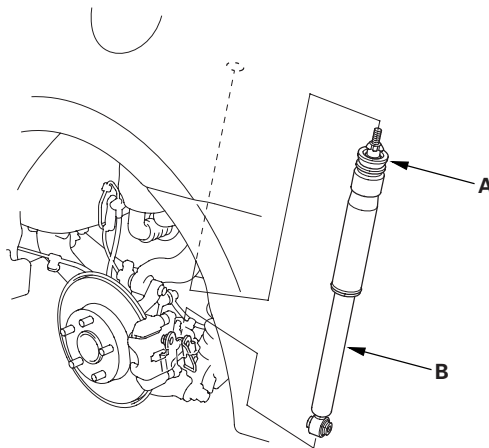


2. Compress the damper assembly by hand, and check for smooth operation through a full stroke, both compression and extension. The damper should extend smoothly and constantly when compression is released. If it does not, the gas is leaking and the damper should be replaced.
3. Check for oil leaks, abnormal noises, or binding during these tests.

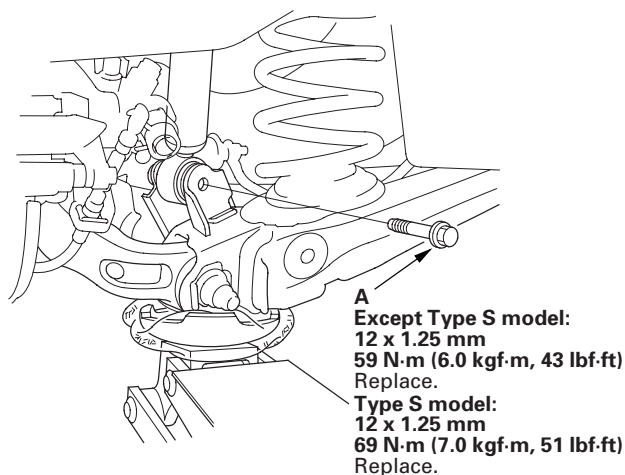
Installation

1. Install the damper mounting bushing (A) onto the damper unit. Position the damper assembly (B) between the body and trailing arm.

NOTE: Be careful not to damage the body.



2. Position a floor jack under the trailing arm to support the suspension, then install the new damper mounting bolt (A).



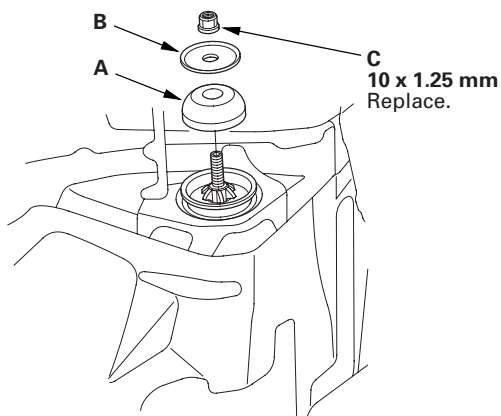
3. Loosely tighten the damper mounting bolt.
4. Raise the rear suspension with the jack until the vehicle just lifts off the safety stands, then tighten the damper mounting bolt to the specified torque value.

(cont'd)

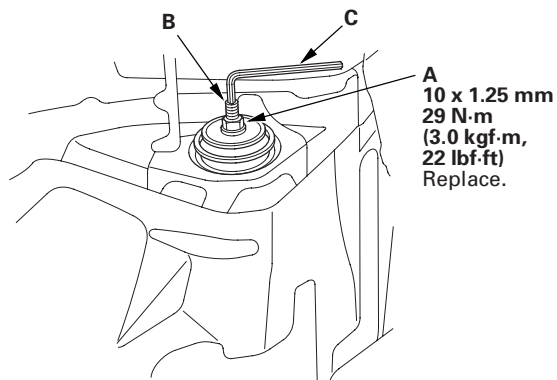
Rear Suspension

Damper Replacement (cont'd)

5. Install the damper mounting bushing (A), the damper mounting washer (B), and the new self-locking nut (C) on the damper shaft.



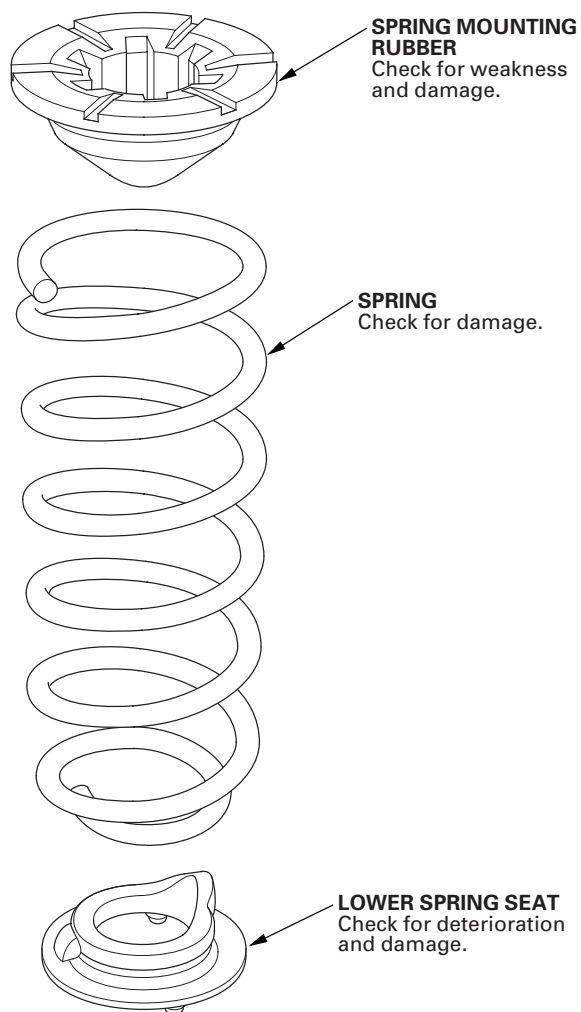
6. Tighten the self-locking nut (A) to the specified torque value while holding the damper shaft (B) with a hex wrench (C).



7. Install the trunk side trim panel (see page 20-80).
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).

Spring Replacement

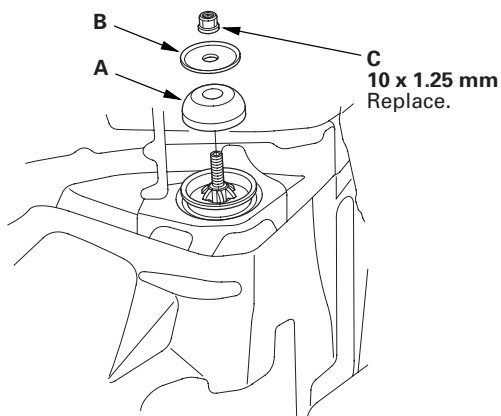
Exploded View



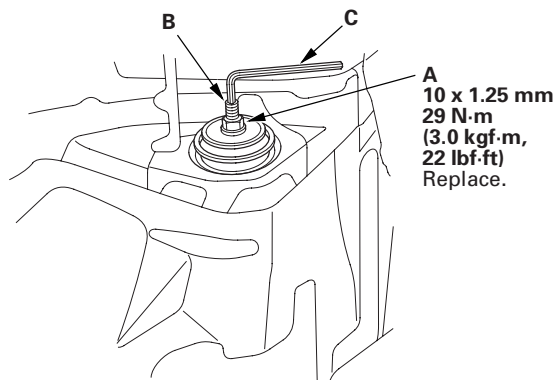
Rear Suspension

Damper Replacement (cont'd)

5. Install the damper mounting bushing (A), the damper mounting washer (B), and the new self-locking nut (C) on the damper shaft.



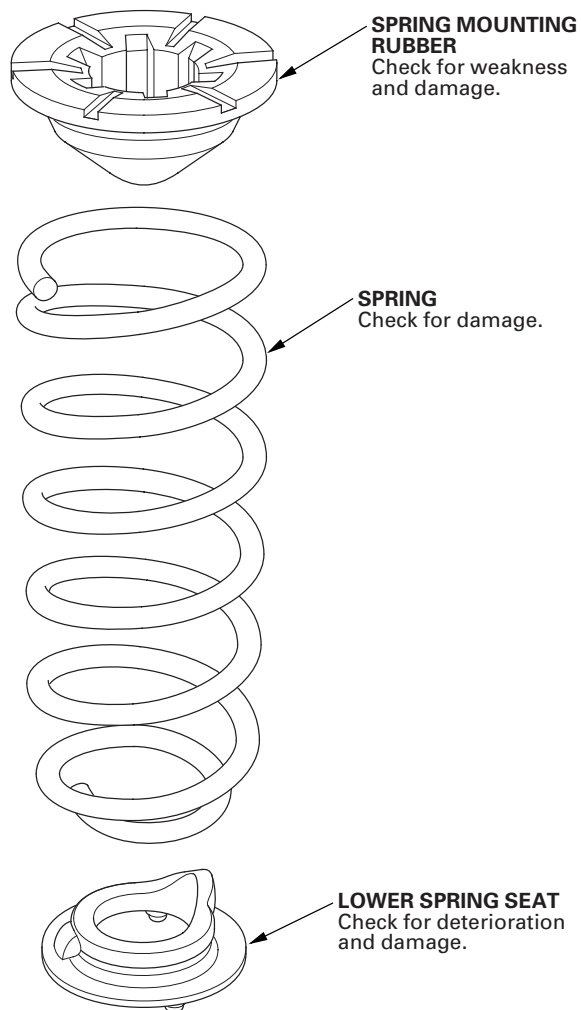
6. Tighten the self-locking nut (A) to the specified torque value while holding the damper shaft (B) with a hex wrench (C).



7. Install the trunk side trim panel (see page 20-80).
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).

Spring Replacement

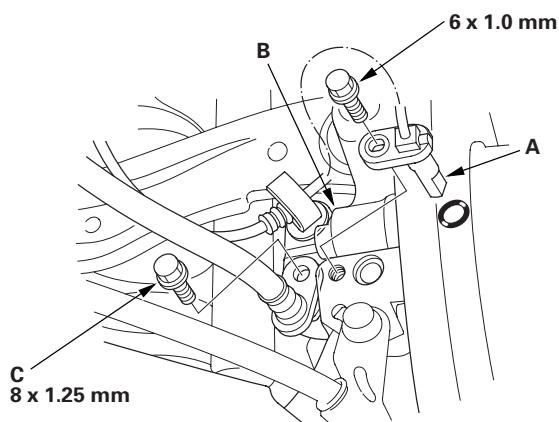
Exploded View



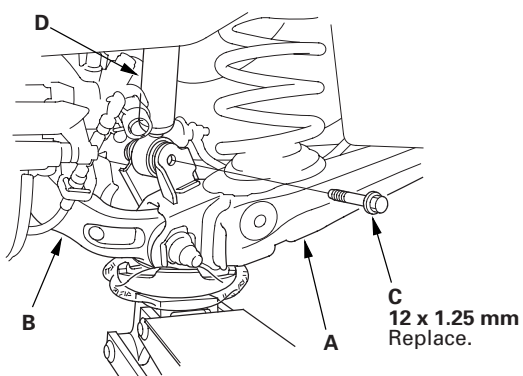


Removal

1. Raise the rear of the vehicle, and support it with safety stands in the proper locations (see page 1-11).
2. Remove the rear wheel.
3. Remove the wheel speed sensor (A) from the knuckle (B). Do not disconnect the wheel speed sensor connector.

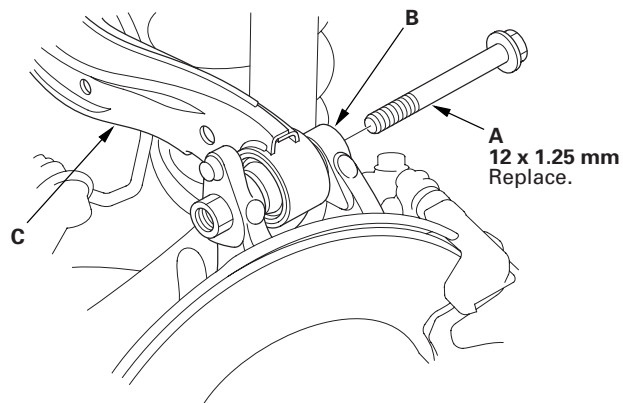


4. Remove the brake hose mounting bolt (C) from the bracket.
5. Position a floor jack at the connecting point of the trailing arm (A) and the knuckle (B). Raise the floor jack until the suspension begins to compress.

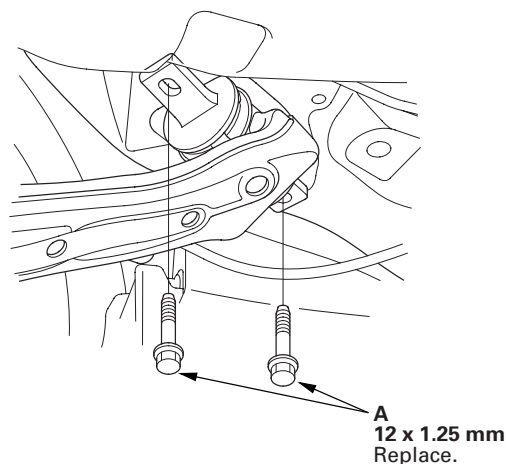


6. Remove the flange bolt (C) that connects the trailing arm and the damper (D).
7. Disconnect the stabilizer link from the trailing arm (see page 18-37).

8. Remove the flange bolt (A) that connects the knuckle (B) and the upper arm (C).



9. Remove the trailing arm front mounting bolts (A).



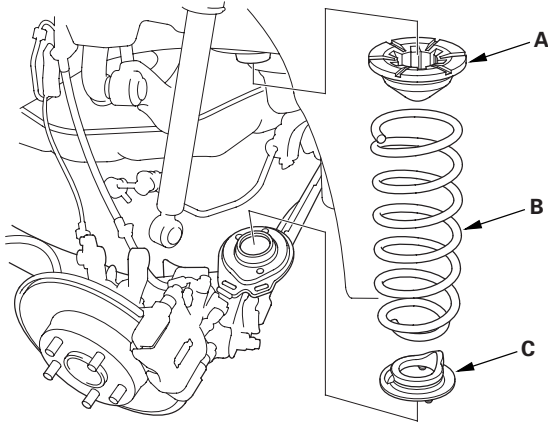
(cont'd)

Rear Suspension

Spring Replacement (cont'd)

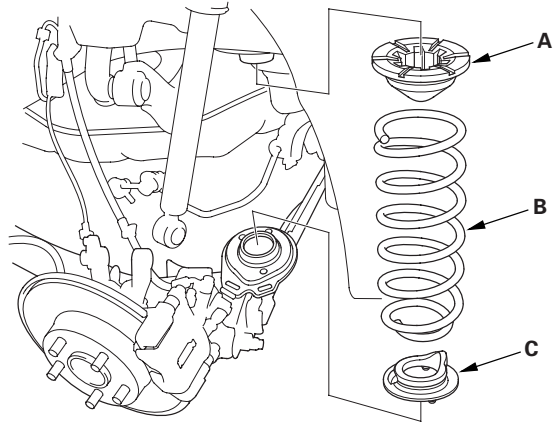
10. Lower the floor jack gradually.
11. Remove the spring mounting rubber (A), the spring (B) and the lower spring seat (C).

NOTE: If the clip is installed inside the spring mounting rubber, discard it.

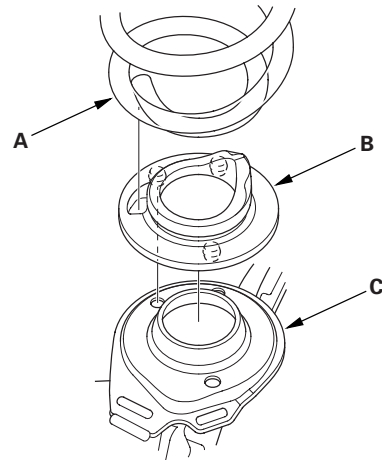


Installation

1. Install the spring mounting rubber (A), the spring (B) and the lower spring seat (C).

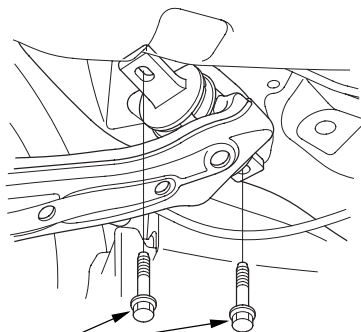


2. Align the bottom of the spring (A) and the lower spring seat (B) with the trailing arm (C) as shown.



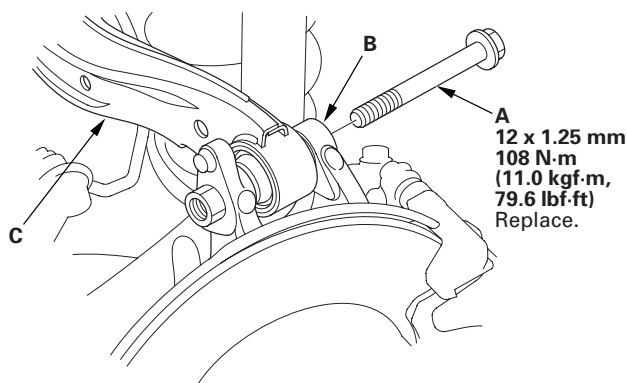


3. Loosely install new trailing arm front mounting bolts (A).



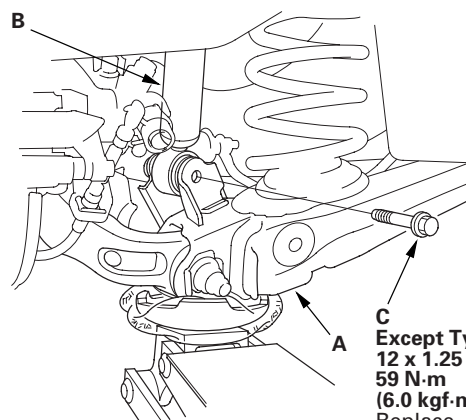
A
'06 model:
12 x 1.25 mm
108 N·m (11.0 kgf·m, 79.6 lbf·ft)
Replace.
'07-08 except Type S models:
12 x 1.25 mm
110 N·m (11.2 kgf·m, 81.0 lbf·ft)
Replace.
'07-08 Type S models:
12 x 1.25 mm
115 N·m (11.7 kgf·m, 84.6 lbf·ft)
Replace.
'09 model:
12 x 1.25 mm
115 N·m (11.7 kgf·m, 84.6 lbf·ft)
Replace.

4. Loosely install the new flange bolt (A) that connects the knuckle (B) and the upper arm (C).



A
12 x 1.25 mm
108 N·m
(11.0 kgf·m,
79.6 lbf·ft)
Replace.

5. Slowly raise the jack until you can align the bolt hole with the holes in the trailing arm (A) and the damper (B), and install the new flange bolt (C).



C
Except Type S model:
12 x 1.25 mm
59 N·m
(6.0 kgf·m, 43 lbf·ft)
Replace.
Type S model:
12 x 1.25 mm
69 N·m
(7.0 kgf·m, 51 lbf·ft)
Replace.

6. Install the stabilizer link on the trailing arm (see page 18-37).
7. Raise the rear suspension with a floor jack to load the vehicle weight.
8. Tighten all mounting hardware to the specified torque values.

(cont'd)

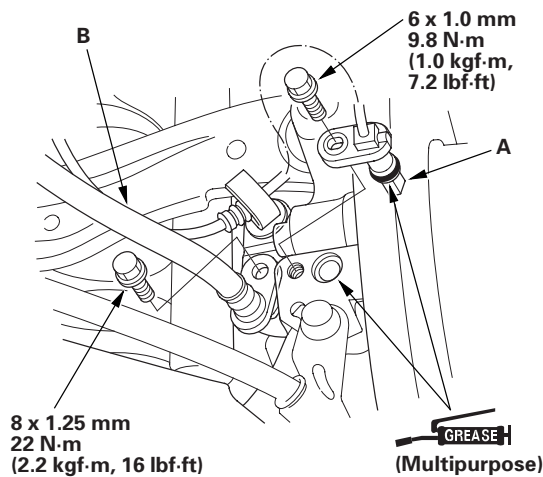
Rear Suspension

Spring Replacement (cont'd)

9. Install the wheel speed sensor (A), and the brake hose (B).

NOTE:

- Apply multipurpose grease to the mating surfaces on the knuckle and the O-ring during reassembly.
- To prevent O-ring damage, the wheel speed sensor must be installed with the guide pin tool (see step 5 on page 19-175).



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

Suspension

Front and Rear Suspension 18-2

Front Suspension 18-14

Rear Suspension 18-31

TPMS (Tire Pressure Monitoring System) ('08-09 Models)

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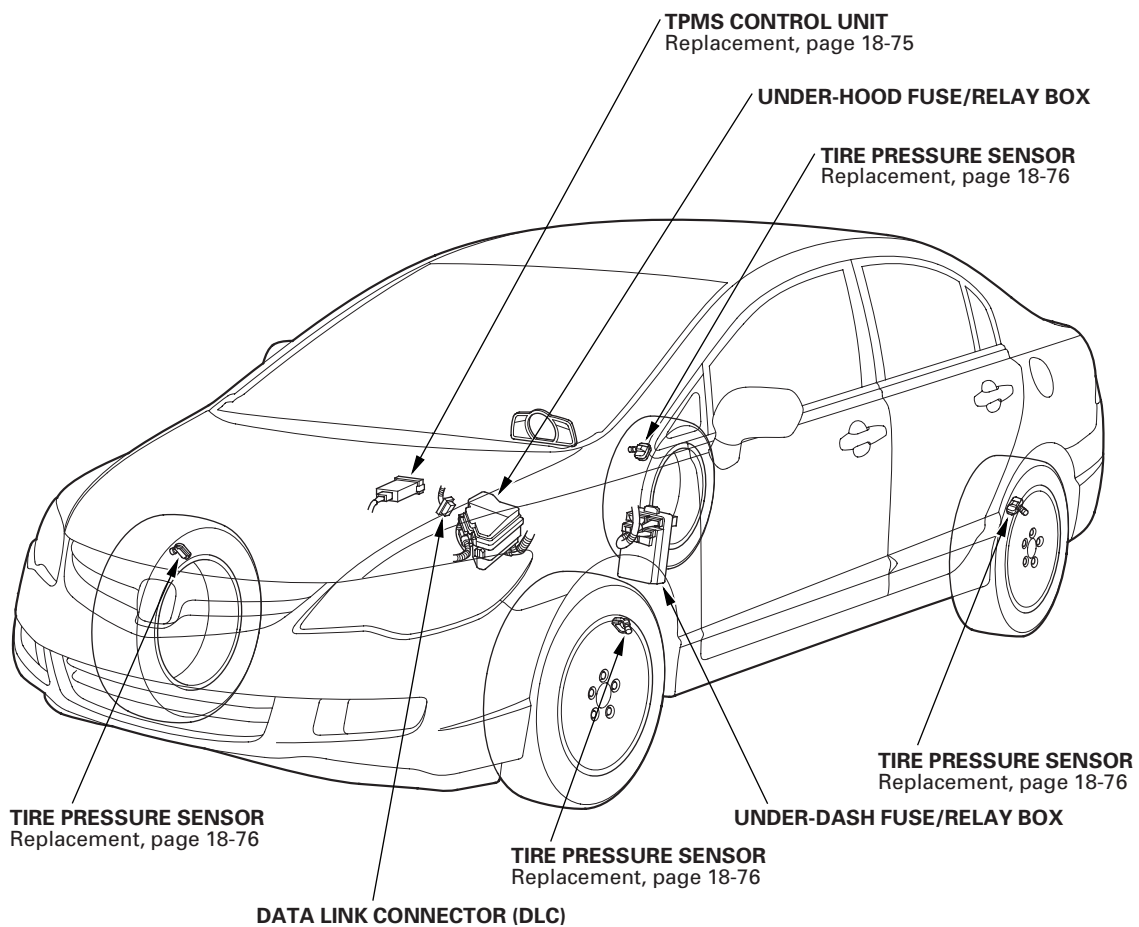
TPMS Control Unit Replacement 18-75

Tire Pressure Sensor Replacement 18-76



TPMS

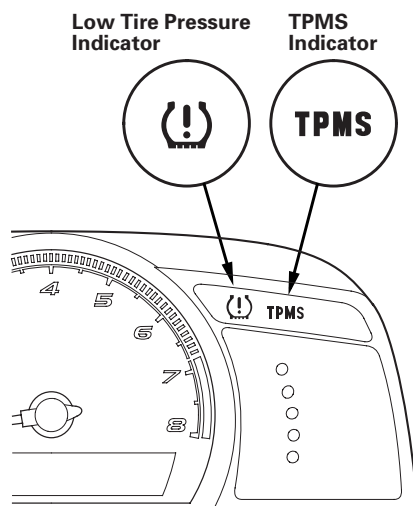
Component Location Index



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 this happens, inflate the air and test-drive the vehicle at 45 km/h (28 mph) or more for at least 1 minute, and the low tire pressure indicator will go off.
- If the 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 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 control unit turns off the indicator. However TPMS control unit still retains the DTC(s).

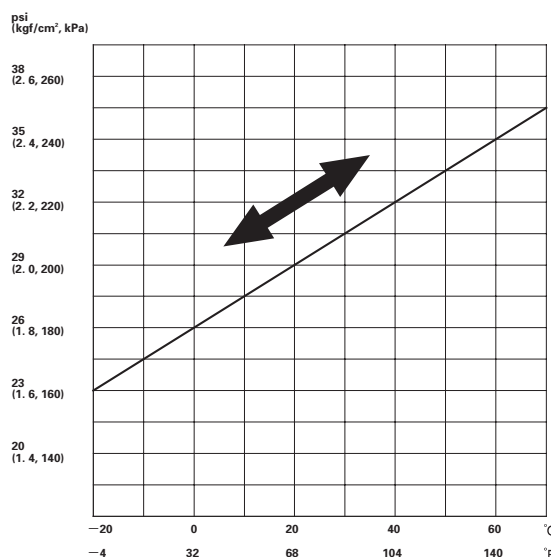
NOTE: It is necessary to test-drive the vehicle at 45 km/h (28 mph) or more for at least 1 minute so that tire pressure sensor transmits the signal.

Tire Pressure Changing by Temperature

The 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 10 °C (18 °F) changes tire pressure by about 10 kPa (0.1 kgf/cm², 1.5 psi). If the temperature drops, tire pressure could decrease just 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 client 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°C (-40°F) or colder, the output of the lithium battery in each tire pressure sensor may drop far enough that the control unit sets a DTC for low battery voltage (31, 33, 35, or 37) even though the system is normal.
- **Non-TPMS Wheels (Including Spare Tire)**
Vehicles equipped with TPMS must use wheels made for the system. Every TPMS wheel has an exclusive mark; do not use any other type of wheel.
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 DTCs are set.
- The memory can hold all the DTCs that could possibly be set. However, when the same DTC is 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), and 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

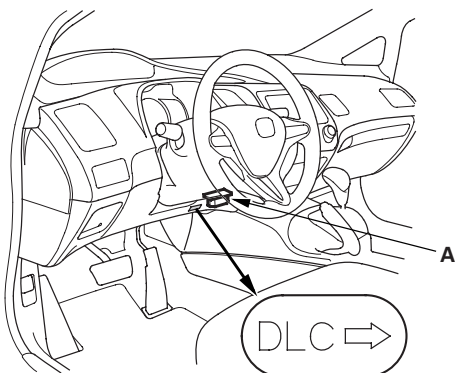
DTC troubleshooting procedures assume the cause of the problem is still present and the TPMS indicator is still on. Do not use a troubleshooting procedure unless the system has set the DTC listed for it.

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 client to describe the conditions when the indicator came on, and try to reproduce the same conditions for troubleshooting. Find out if the client 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.



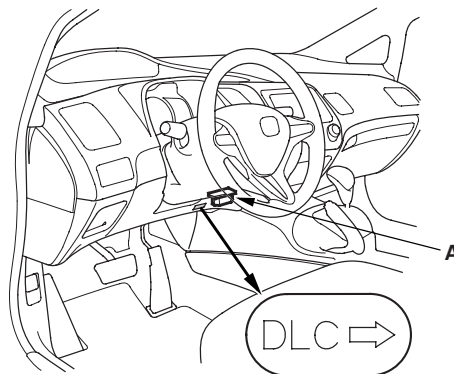
2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-204).
4. Follow the prompts on the HDS to display the DTC(s) on the screen. After determining the DTC, refer to the DTC troubleshooting.

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 doesn't, troubleshoot the DLC circuit (see page 11-204).
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

Bartech Wheelrite Tech300 TPMS tool J-48714
Available through Honda Canada Inc. Technical Tools
Department; Fax # 866-398-8665/
e-mail: ch_technicaltools@ch.honda.com

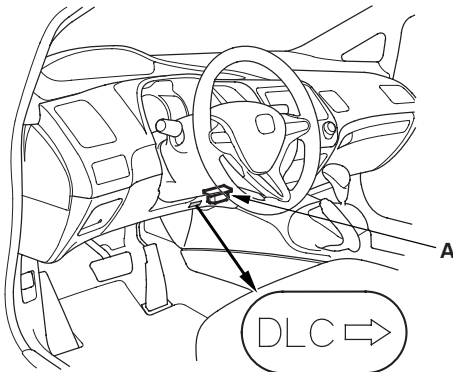
All four tire pressure sensor IDs must be memorized to the TPMS control unit whenever you do any of these actions:

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

NOTE:

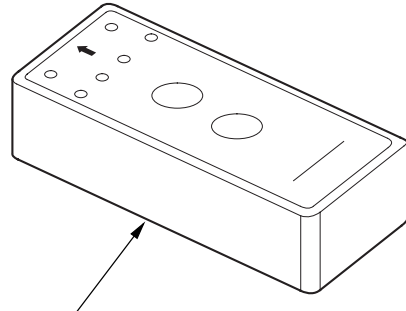
- To ensure the control unit memorizes the correct ID, the vehicle with the new sensor must be at least 3 m (10 ft) away from other vehicles that have tire pressure sensors.
- When doing a tire rotation, memorizing the sensors is not needed.

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 doesn't, troubleshoot the DLC circuit (see page 11-204).
4. Select Sensor ID Learning from the mode menu on the HDS.

5. Turn on the TPMS tool by pressing the green select button. Press the green select button until the proper light sequence is illuminated as per the tool user's manual.

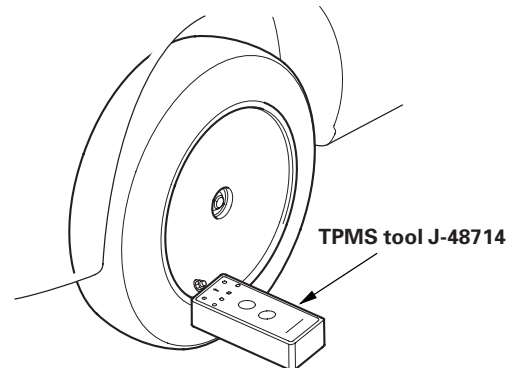


TPMS tool J-48714

6. Hold the TPMS tool near one wheel, memorize the tire pressure sensor ID by following the screen prompts on the HDS.

NOTE:

- If you turn the ignition switch to LOCK (0) before memorizing all four sensor IDs, the memorizing ID is canceled.
- See the HDS Help menu for specific instructions.



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.

Tire Pressure Sensor Location

8. Turn the ignition switch to LOCK (0).
9. Disconnect the HDS from the DLC.
10. Test-drive the vehicle at 45 km/h (28 mph) 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).

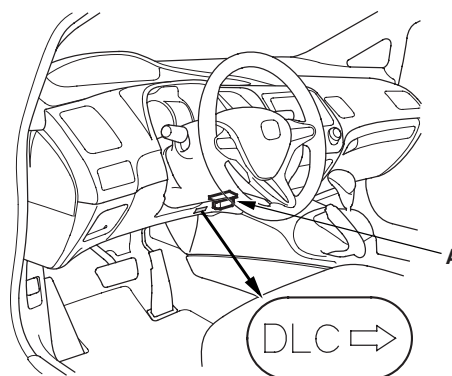
Special Tools Required

Bartech Wheelrite Tech300 TPMS tool J-48714
Available through Honda Canada Inc. Technical Tools
Department; Fax # 866-398-8665/
e-mail: ch_technicaltools@ch.honda.com

NOTE:

- This procedure locates where the tire pressure sensors 1, 2, 3, 4 are mounted, when activated by the TPMS sensor initializer tool.
- Position the vehicle at least 3 m (10 ft) 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 doesn't, troubleshoot the DLC circuit (see page 11-204).
4. Select Function Test from the mode menu, then select Sensor Position Check on the HDS.

(cont'd)

Tire Pressure Sensor Location

8. Turn the ignition switch to LOCK (0).
9. Disconnect the HDS from the DLC.
10. Test-drive the vehicle at 45 km/h (28 mph) 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).

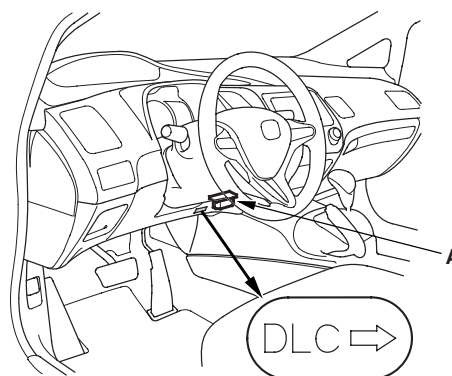
Special Tools Required

Bartech Wheelrite Tech300 TPMS tool J-48714
Available through Honda Canada Inc. Technical Tools
Department; Fax # 866-398-8665/
e-mail: ch_technicaltools@ch.honda.com

NOTE:

- This procedure locates where the tire pressure sensors 1, 2, 3, 4 are mounted, when activated by the TPMS sensor initializer tool.
- Position the vehicle at least 3 m (10 ft) 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.

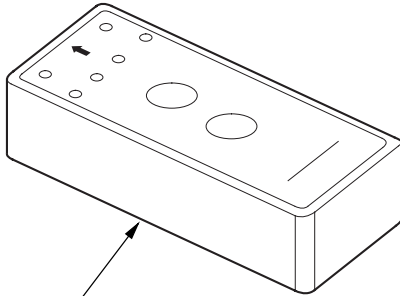


2. Turn the ignition switch to ON (II).
3. Make sure the HDS communicates with the vehicle and the TPMS control unit. If it doesn't, troubleshoot the DLC circuit (see page 11-204).
4. Select Function Test from the mode menu, then select Sensor Position Check on the HDS.

(cont'd)

Tire Pressure Sensor Location (cont'd)

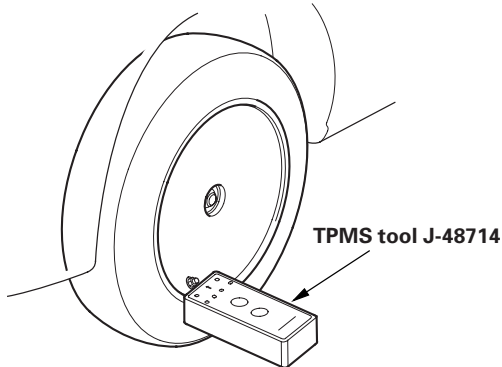
5. Turn on the TPMS tool by pressing the green select button. Press the green select button until the proper light sequence is illuminated as per the tool user's manual.



TPMS tool J-48714

6. Follow the prompts on the HDS to activate the tire pressure sensors using the TPMS tool.

NOTE: See the HDS Help menu for specific instructions.



7. Check the HDS screen, and note the active sensor reception order of tire pressure sensor 1, 2, 3, 4.

NOTE:

- If the sensor does not respond to the TPMS tool, make sure the tool was turned on properly. Refer to the HDS.
- If the tool start mode is OK, then rotate the tire 1/4 turn and retry.
- If the sensor still does not respond after one full rotation of the tire, then check for DTC 32, 34, 36, and 38 with the HDS.

8. Turn the ignition switch to LOCK (0).

DTC Troubleshooting Index

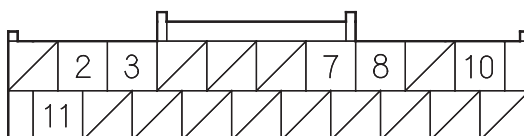
DTC	Detection Item	Troubleshooting
11	Tire 1 Low Air Pressure	(see page 18-63)
13	Tire 2 Low Air Pressure	(see page 18-63)
15	Tire 3 Low Air Pressure	(see page 18-63)
17	Tire 4 Low Air Pressure	(see page 18-63)
21	Tire 1 Pressure Sensor Abnormally High Temperature	(see page 18-64)
22	Tire 2 Pressure Sensor Abnormally High Temperature	(see page 18-64)
23	Tire 3 Pressure Sensor Abnormally High Temperature	(see page 18-64)
24	Tire 4 Pressure Sensor Abnormally High Temperature	(see page 18-64)
31	Tire 1 Pressure Sensor Low Battery Voltage	(see page 18-65)
32	Tire 1 Pressure Sensor Transmission Failure	(see page 18-66)
33	Tire 2 Pressure Sensor Low Battery Voltage	(see page 18-65)
34	Tire 2 Pressure Sensor Transmission Failure	(see page 18-66)
35	Tire 3 Pressure Sensor Low Battery Voltage	(see page 18-65)
36	Tire 3 Pressure Sensor Transmission Failure	(see page 18-66)
37	Tire 4 Pressure Sensor Low Battery Voltage	(see page 18-65)
38	Tire 4 Pressure Sensor Transmission Failure	(see page 18-66)
41	Abnormal Signal Reception Error	(see page 18-67)
51	Tire 1 Pressure Sensor Registration Error	(see page 18-67)
53	Tire 2 Pressure Sensor Registration Error	(see page 18-67)
55	Tire 3 Pressure Sensor Registration Error	(see page 18-67)
57	Tire 4 Pressure Sensor Registration Error	(see page 18-67)
81	TPMS Control Unit Failure	(see page 18-68)
83	No VSP Signal	(see page 18-69)
85	F-CAN Communication Failure	(see page 18-69)
91	Tire 1 Pressure Sensor Internal Error	(see page 18-70)
93	Tire 2 Pressure Sensor Internal Error	(see page 18-70)
95	Tire 3 Pressure Sensor Internal Error	(see page 18-70)
97	Tire 4 Pressure Sensor Internal Error	(see page 18-70)

Symptom Troubleshooting Index

Symptom	Diagnostic procedure	Also check for
HDS does not communicate with the TPMS control unit or the vehicle	Troubleshooting the DLC circuit (see page 11-204)	
Low tire pressure indicator does not come on, and no DTCs are stored	Symptom Troubleshooting (see page 18-71)	
Low tire pressure indicator does not go off, and no DTCs are stored	Symptom Troubleshooting (see page 18-72)	
TPMS indicator does not come on, and no DTCs are stored	Symptom Troubleshooting (see page 18-73)	
TPMS indicator does not go off, and no DTCs are stored	Symptom Troubleshooting (see page 18-73)	

System Description

TPMS Control Unit Inputs and Outputs for 20P Connector



Wire side of female terminals

NOTE: Standard battery voltage is about 12 V.

Terminal number	Wire color	Terminal sign	Description	Signal
2	WHT	CAN H (F-CAN communication signal high)	F-CAN communication circuit	Ignition switch ON (II): pulses
3	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	Ignition switch ON (II): battery voltage Ignition switch in LOCK (0): less than 0.1 V
10	BLU	+B (Battery positive)	Power source for the TPMS control unit	Battery voltage at all times
11	RED	CAN L (F-CAN communication signal low)	F-CAN communication circuit	Ignition switch ON (II): pulses

(cont'd)

System Description (cont'd)

System Structure

Once the vehicle speed exceeds 45 km/h (28 mph), 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.

Control unit

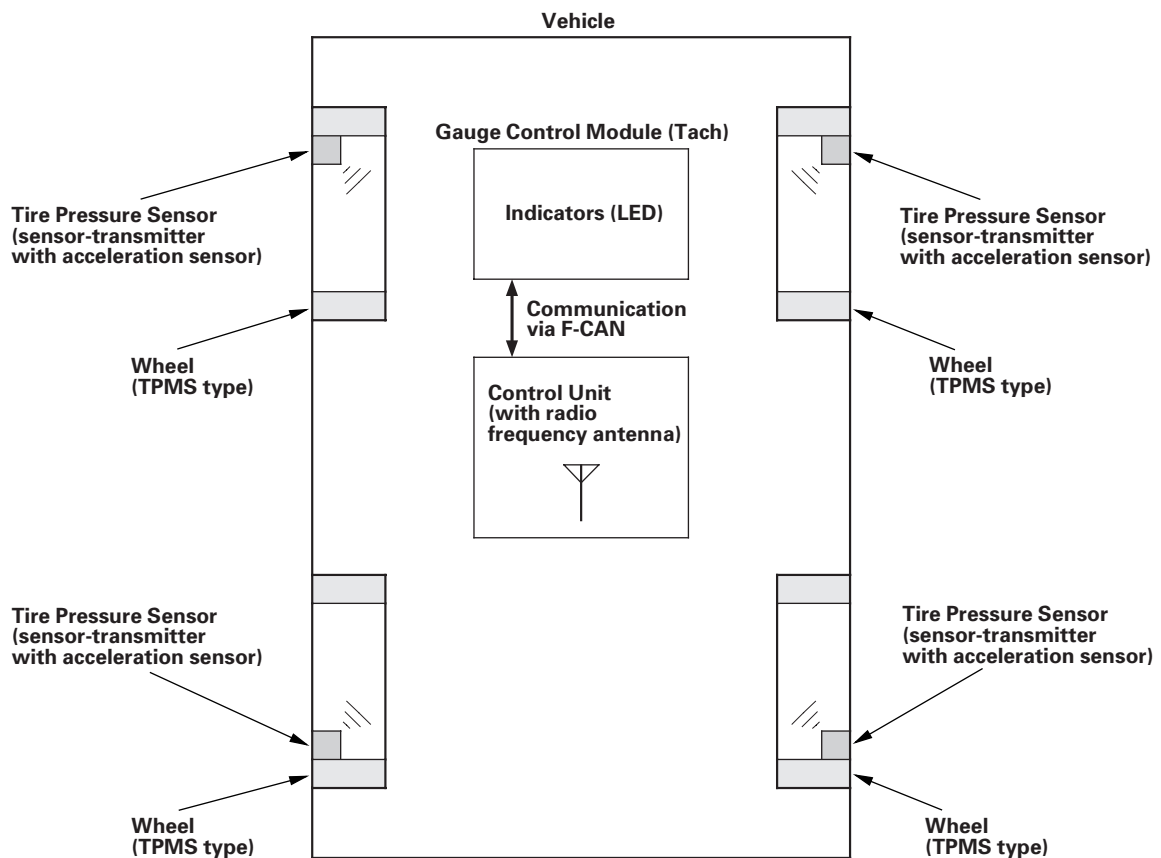
Mounted inside of the dash, the TPMS control unit receives wireless pressure sensor ID signals every time the vehicle speeds exceeds 45 km/h (28 mph). It also receives wireless signals from the transmitters for tire pressure and the sensor condition, and it continuously monitors and controls the system. 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. TPMS sensor locations will change during scheduled vehicle maintenance (tire rotation).

NOTE: To determine the actual location of each TPMS wheel sensor on the vehicle, do the tire pressure sensor location procedure (see page 18-53). 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 (tach): 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.



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 control unit once every 60 seconds when the vehicle speed exceeds 45 km/h (28 mph). When the TPMS control unit receives a tire pressure signal that is less than 175 kPa (1.8 kgf/cm², 25 psi) with 16 inch wheels, or 183 kPa (1.9 kgf/cm², 27 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 200 kPa (2.0 kgf/cm², 29 psi) with 16 inch wheels, or 210 kPa (2.1 kgf/cm², 30 psi) with 17 inch wheels, and the vehicle is driven above 45 km/h (28 mph) the transmitter sends the tire pressure signal to the control unit, and then the control unit turns the indicator off.

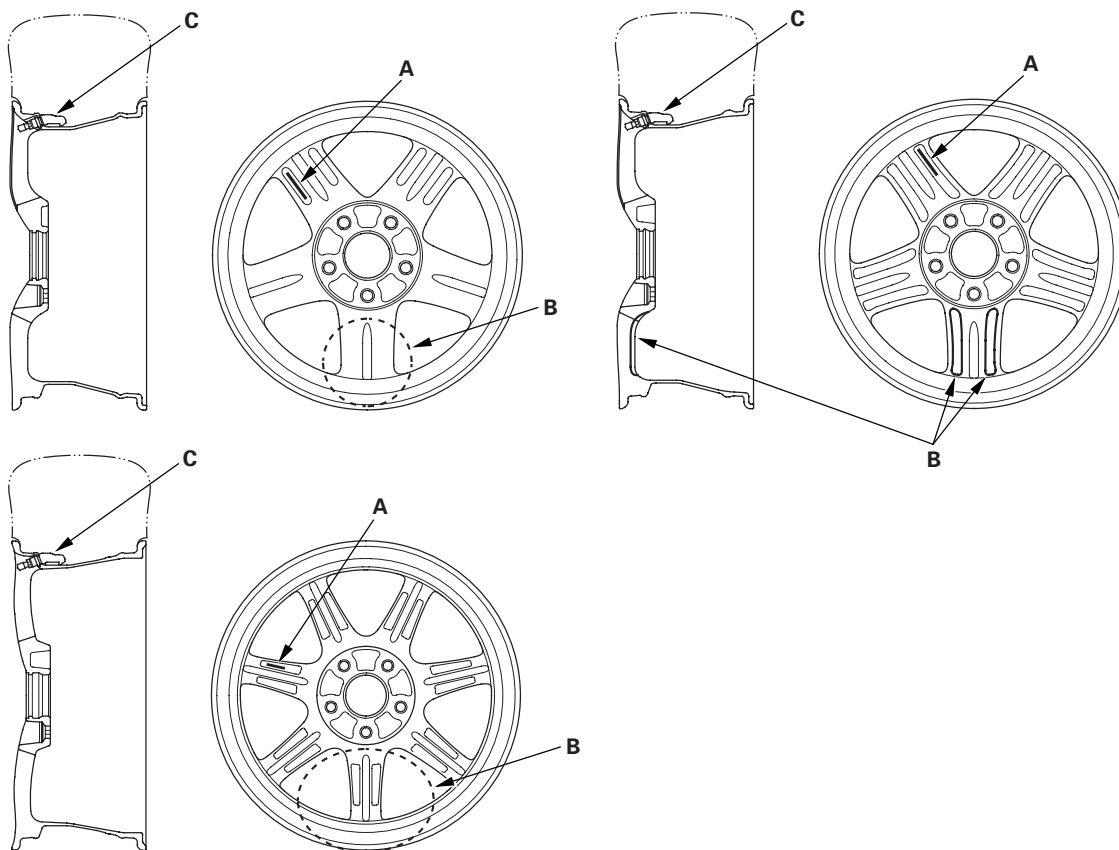
NOTE: Do not mix the TPMS tire pressure sensors or wheels with other TPMS types. Be sure to use the correct type sensors and wheels for this system.

Sensors are active:

- When the wheel rotates over 45 km/h (28 mph), the sensor detects the momentum, 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 continuously.

Wheels

The TPMS will not work unless TPMS type wheels are installed on the vehicle. There are three different types of wheels used. The original equipment wheels have a "TPMS" mark (A) on them and are counterweighted (B) the opposite of the tire pressure sensor (C), and counterbalance the weight of the sensor.



(cont'd)

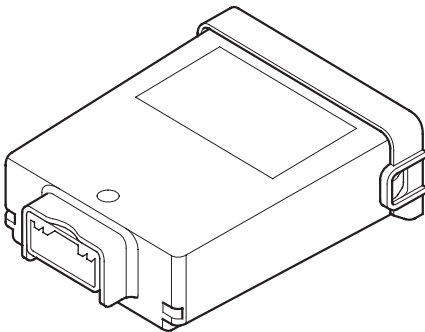
System Description (cont'd)

System Communication

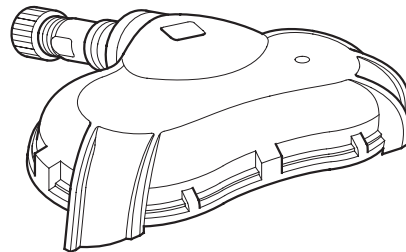
- When the vehicle is traveling more than 45 km/h (28 mph), an RF (radio frequency) band wave signal is transmitted from each tire pressure sensor to the control unit.
- When the wheels rotate, and the tire pressure sensors momentum is detected, switching them from sleep mode to normal function (awake) 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 control unit recognizes only those specific signals.
- An ID cannot be memorized automatically. The 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 control unit could interfere with sending and receiving signals.

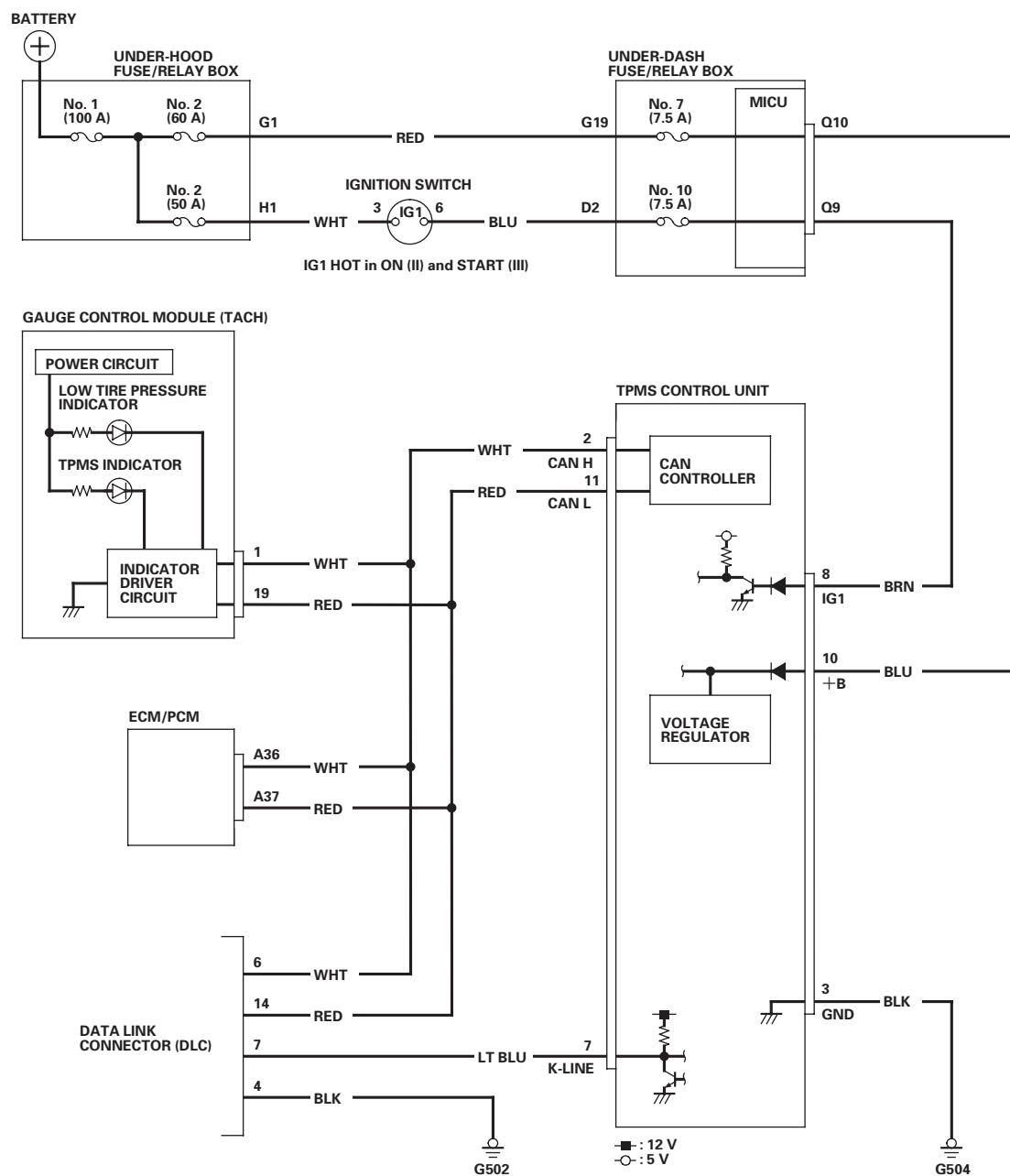
Control Unit
(With Radio Frequency Antenna)



Tire Pressure Sensor
(Sensor-transmitter with acceleration sensor)



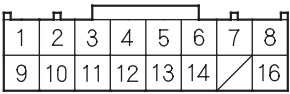
Circuit Diagram



(cont'd)

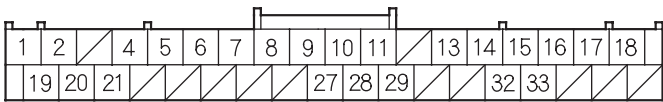
Circuit Diagram (cont'd)

UNDER-DASH FUSE/RELAY BOX CONNECTOR Q (16P)



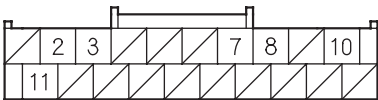
Wire side of female terminals

GAUGE CONTROL MODULE (TACH) 36P CONNECTOR



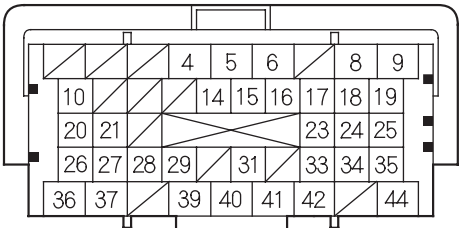
Wire side of female terminals

TPMS CONTROL UNIT 20P CONNECTOR



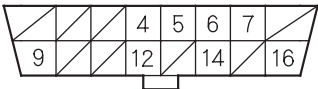
Wire side of female terminals

ECM/PCM CONNECTOR A (44P)



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 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 client 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 45 km/h (28 mph) 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 18-53).
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 18-76). ■

8. Clear the DTC with the HDS.
9. Test-drive the vehicle at 45 km/h (28 mph) 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 18-75). ■

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

DTC Troubleshooting (cont'd)

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 45 km/h (28 mph) 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 18-53).

7. Check the TIRE 1, TIRE 2, TIRE 3, or TIRE 4 AIR TEMPERATURE in the TPMS DATA LIST with the HDS.

Is 80 °C (176 °F) or more indicated?

YES—Replace the appropriate tire pressure sensor (see page 18-76). ■

NO—Go to step 8.

8. Clear the DTC with the HDS.
9. Test-drive the vehicle at 45 km/h (28 mph) 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 18-75), 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 31, 33, 35, 37: Tire Pressure Sensor Low Battery Voltage

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

1. Test-drive the vehicle at 45 km/h (28 mph) 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 18-53).

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 18-76). ■

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

Is LOW indicated?

YES—Replace the appropriate tire pressure sensor (see page 18-76). ■

NO—Check for loose terminals and poor connections at the TPMS control unit. If necessary, substitute a known-good TPMS control unit (see page 18-75), and recheck. ■

DTC Troubleshooting (cont'd)

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

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

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

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

YES—Go to step 3.

NO—Install the TPMS wheel, and then memorize the pressure sensor ID with the HDS (see page 18-52). ■

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 18-53).

Did each tire pressure sensor respond to the TPMS tool?

YES—Go to step 7.

NO—Check for an aftermarket electrical device(s) interfering with the RF signals from the sensors. If there are no electrical devices causing interference, replace the appropriate tire pressure sensor (see page 18-76). ■

7. Turn the ignition switch to LOCK (0), and wait 5 minutes or more.
8. Test-drive the vehicle at 45 km/h (28 mph) or more for at least 1 minute.
9. Check the TIRE 1, TIRE 2, TIRE 3, or TIRE 4 PRESSURE SENSOR TRANSMITTER STATUS in the TPMS DATA LIST with the HDS.

Is NORMAL indicated for all four tires within one full turn of each tire?

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

NO—Replace the appropriate tire pressure sensor (see page 18-76). ■

DTC 41: Abnormal Signal Reception Error

NOTE:

- Inspect for an aftermarket electrical device(s) (such as an inverter, battery charger, 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 wheels with the mounted tire pressure sensors.

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

YES—Go to step 3.

NO—Install the TPMS wheel, and then memorize the pressure sensor ID with the HDS (see page 18-52). ■

3. Memorize the tire pressure sensor ID with the HDS (see page 18-52).

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 18-75). ■

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

NOTE:

- These DTCs will only set during initialization with the HDS.
- Inspect for an aftermarket electrical device(s) (such as an inverter, battery charger, 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 wheels with the mounted tire pressure sensors.

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

YES—Go to step 3.

NO—Install the TPMS wheel, and then memorize the pressure sensor ID with the HDS (see page 18-52). ■

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

(cont'd)

DTC Troubleshooting (cont'd)

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 18-53).

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 18-76). ■

7. Turn the ignition switch to LOCK (0), and wait 5 minutes or more.
8. Test-drive the vehicle at 45 km/h (28 mph) 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 18-75), 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 22-67).

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 18-75). ■

NO—The system is OK at this time. ■

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 10 km/h (7 mph) 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 11-227), 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 11-228). ■

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 18-75), and recheck. ■

DTC 85: F-CAN Communication Failure

NOTE: Check for fuel and emission 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. ■

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 18-75), and recheck. ■

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

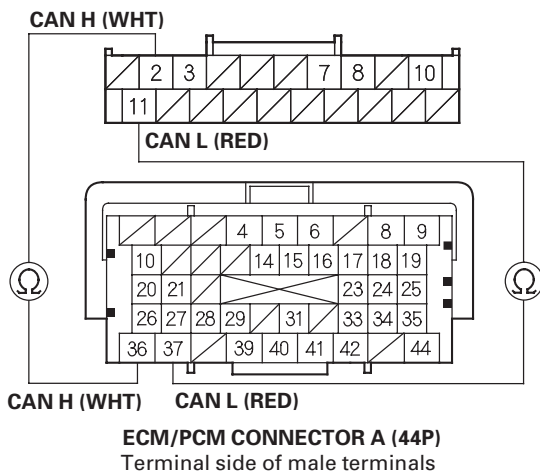
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DTC Troubleshooting (cont'd)

10. Turn the ignition switch to LOCK (0).
11. Short the SCS line with the HDS.
12. Disconnect ECM/PCM connector A (44P).
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 (44P) terminals according to the table.

Terminal Name	TPMS Control Unit 20P Connector Terminal	ECM/PCM Connector A (44P) Terminal
CAN L	No. 11	No. 37
CAN H	No. 2	No. 36

TPMS CONTROL UNIT 20P CONNECTOR
Wire side of female terminals



Is there continuity?

YES—Check for loose terminals and poor connections at the TPMS control unit and G504. If necessary, substitute a known-good TPMS control unit (see page 18-75), and recheck. ■

NO—Repair 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 18-53).

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 18-76). ■

5. Clear the DTC with the HDS.
6. Test-drive the vehicle at 45 km/h (28 mph) 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 18-76) and recheck. If DTCs are still present, substitute a known-good TPMS control unit (see page 18-75), 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 22-241). If necessary, substitute a known-good gauge control module (see page 22-277), and recheck. ■

3. Test-drive the vehicle at 45 km/h (28 mph) 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 sensor initializer tool (see page 18-53).

Model	Specified Tire Pressure Lower Limit
16 inch wheels	175 kPa (1.8 kgf/cm ² , 25 psi)
17 inch wheels	183 kPa (1.9 kgf/cm ² , 27 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 18-53).

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 18-76). ■

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 18-76). ■

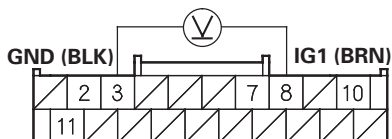
7. Turn the ignition switch to LOCK (0).

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Symptom Troubleshooting (cont'd)

8. Disconnect the TPMS control unit 20P connector.
9. Measure the voltage between TPMS control unit 20P connector terminals No. 3 and No. 8.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there battery voltage?

YES—Repair short to power in the wire between the TPMS control unit and the No. 10 (7.5 A) fuse in the 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 18-75), 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 18-75), and recheck. ■

NO—Do the troubleshooting for the gauge control module (see page 22-241). If necessary, substitute a known-good gauge control module (tach) (see page 22-277), and recheck. ■

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 18-75), and recheck. ■

NO—Do the troubleshooting for the gauge control module (see page 22-241). If necessary, substitute a known-good gauge control module (tach) (see page 22-277), and recheck. ■

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

NOTE: Check for gauge DTCs with the HDS (see page 22-6). If gauge DTCs are stored, troubleshoot those DTCs first.

1. Turn the ignition switch to ON (II).
2. 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—The system is OK at this time. ■

NO—Go to step 3.

3. Turn the ignition switch to LOCK (0).
4. Check the No. 7 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse blown?

YES—Replace the No. 7 (7.5 A) fuse, and recheck. If the fuse blows again, check for a short to body ground in the wire between the TPMS control unit and the No. 7 (7.5 A) fuse in the under-dash fuse/relay box. ■

NO—Reinstall the checked fuse, then go to step 5.

5. Check the No. 10 (7.5 A) fuse in the under-dash fuse/relay box.

Is the fuse blown?

YES—Replace the No. 10 (7.5 A) fuse, and recheck. If the fuse blows again, check for a short to body ground in the wire between the TPMS control unit and the No. 10 (7.5 A) fuse in the under-dash fuse/relay box. ■

NO—Reinstall the checked fuse, then go to step 6.

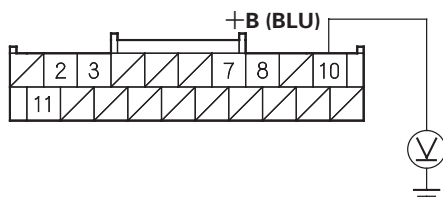
6. Disconnect the TPMS control unit 20P connector.

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Symptom Troubleshooting (cont'd)

7. 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

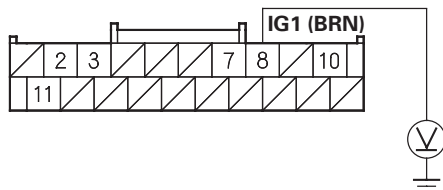
Is there battery voltage?

YES—Go to step 8.

NO—Repair open in the wire between the TPMS control unit and the No. 7 (7.5 A) fuse in the under-dash fuse/relay box. ■

8. Turn the ignition switch to ON (II).
9. 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

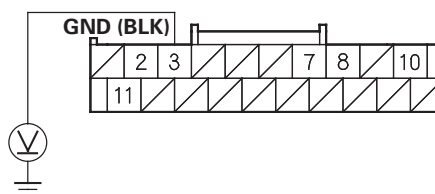
Is there battery voltage?

YES—Go to step 10.

NO—Repair open in the wire between the TPMS control unit and the No. 10 (7.5 A) fuse in the under-dash fuse/relay box. ■

10. Turn the ignition switch to LOCK (0).
11. Reconnect the TPMS control unit 20P connector.
12. Turn the ignition switch to ON (II).
13. Measure the voltage between body ground and TPMS control unit 20P connector terminal No. 3.

TPMS CONTROL UNIT 20P CONNECTOR



Wire side of female terminals

Is there 0.1 V or more?

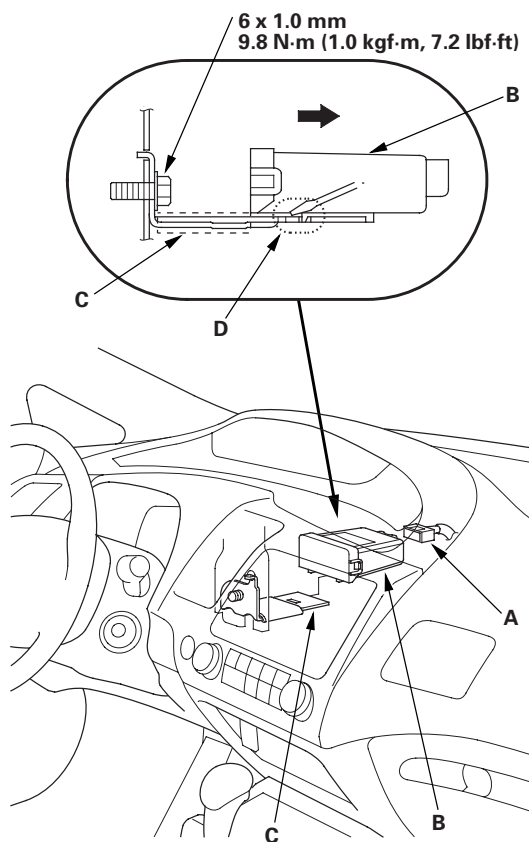
YES—Repair open or high resistance in the wire between the TPMS control unit and body ground (G504). ■

NO—Do the troubleshooting for the gauge control module (see page 22-241). If the gauge control module (tach) 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 18-75), and recheck. ■

TPMS Control Unit Replacement

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 driver's dashboard undercover (see page 20-103).
3. Disconnect the TPMS control unit connector (A).



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

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

5. Replace the bracket if necessary.

6. Install the new 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.

7. Connect the HDS, and memorize the tire pressure sensor IDs using the TPMS sensor initializer tool (see page 18-52).

Tire Pressure Sensor Replacement

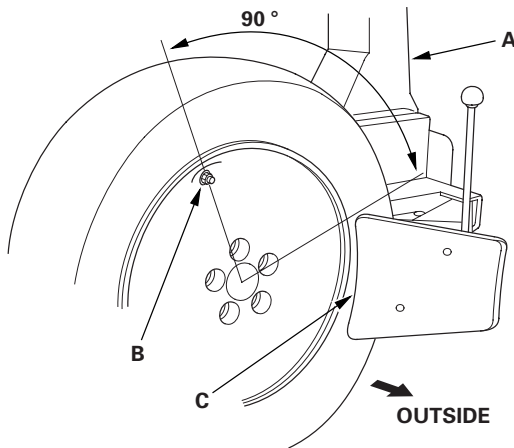
Removal

1. Raise the vehicle, and support it with safety stands in the proper locations (see page 1-11).
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).

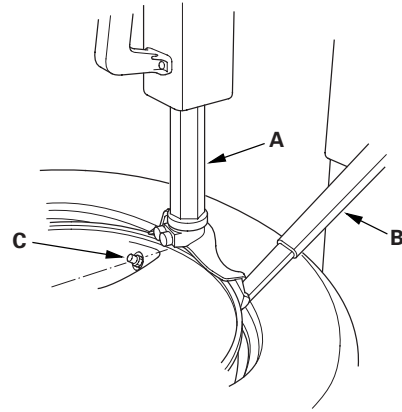
NOTICE

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.

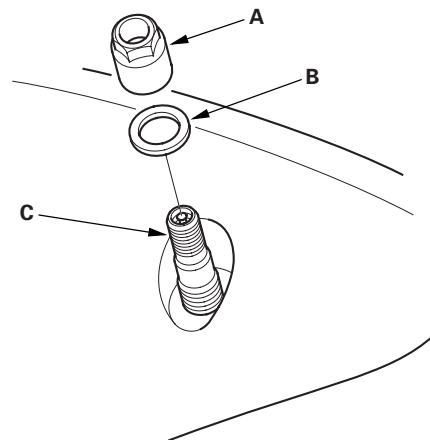


5. Position the wheel so the tire machine (A) and tire iron (B) are next to the valve stem (C), and will move away from it when the machine starts. Then remove the tire from the wheel.



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.

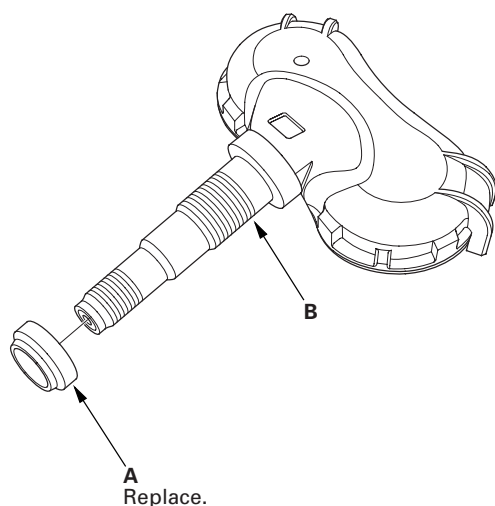
NOTE: Check the nut and the washer, If they have deterioration or damage, replace them with new ones during reassembly.



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

NOTE:

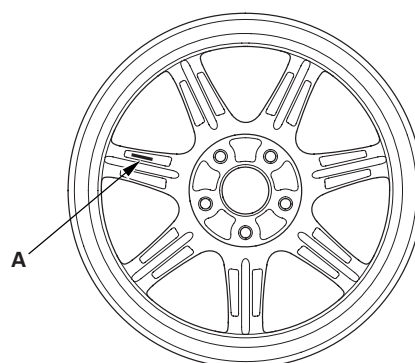
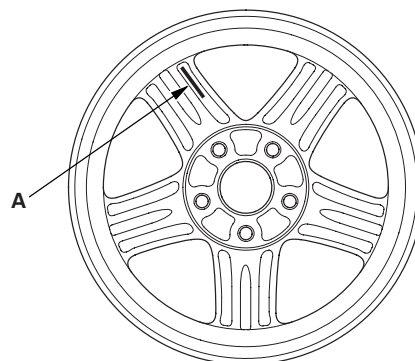
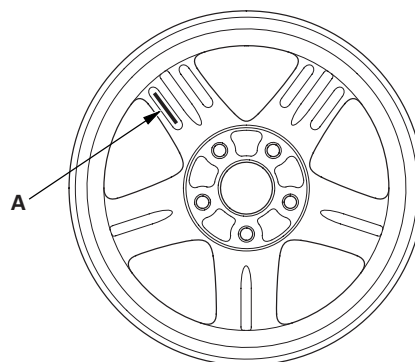
- The valve stem grommet might stay in the wheel; make sure you remove it.
- Always use a new valve stem grommet whenever the tire pressure sensor has been removed from the wheel or when replacing the tire.



Installation

NOTE:

- Use only wheels that have a "TPMS" stamp (A) on them.
- The vehicle may be equipped with one of the three types of wheels.

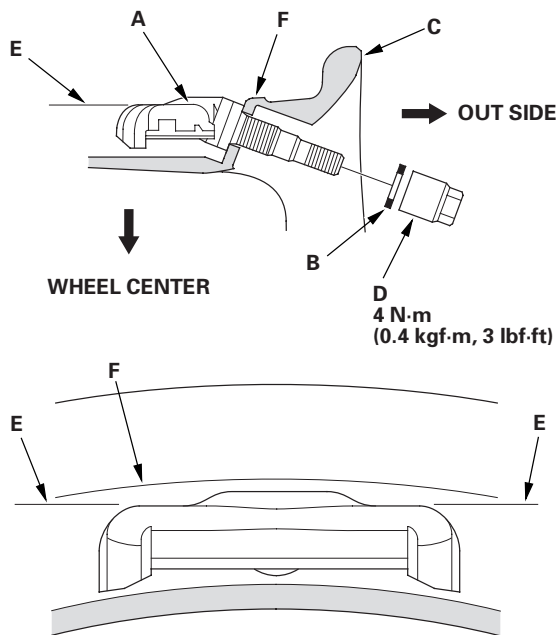


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Tire Pressure Sensor Replacement (cont'd)

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 sensor housing surface (E) should not exceed protrusion (F) of wheel to prevent the sensor housing from being caught on the bead of the tire when assembling the tire.

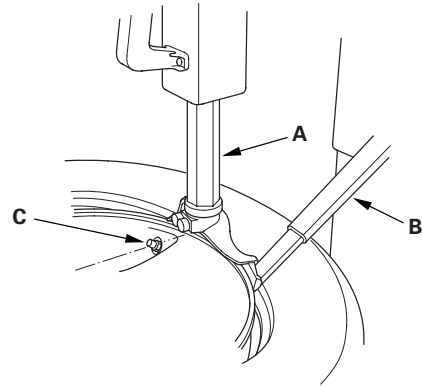


3. Tighten the valve stem nut to the specified torque while holding the tire pressure sensor.

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 the tire machine (A) and tire iron (B) are next to the valve stem (C) 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), then install the valve stem cap.

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

6. Check and adjust the wheel balance, then install the wheels on the vehicle.
7. Remove the jack stands, and lower the vehicle. Torque the wheel nuts to specification.
8. Connect the HDS, and memorize the tire pressure sensor IDs using the TPMS sensor initializer tool (see page 18-52).