NOTE:
- If an intact airbag assembly has been removed from a scrapped car or has been found defective or damaged during transit, storage or service, it should be deployed (see section 23).
- Before removing the gearbox, remove the ignition key to keep the steering shaft from turning.
- After installing the gearbox, check the wheel alignment and adjust if necessary.

CAUTION:
- All SRS electrical wiring harnesses are covered with yellow outer insulation.
- When disconnecting the SRS wire harness, install the short connector on the airbag, then disconnect the wire harness (see page 23-297).
- Replace the entire affected SRS harness assembly if there is an open circuit or damage to the wiring.

STEERING WHEEL
Steering wheel positioning, see Suspension/Alignment Disassembly/Reassembly, page 17-47

SRS AIRBAG ASSEMBLY
Removal, page 17-46
Installation, page 17-48

STEERING COLUMN
Removal, page 17-51
Inspection, page 17-54
Installation, page 17-55

IGNITION SWITCH
Steering Lock Replacement and Switch Test, see Electrical Section

POWER STEERING OIL PRESSURE SWITCH
Troubleshooting, see section 11

STEERING GEARBOX
Rack Guide Adjustment, page 17-43
Removal, page 17-72
Index, page 17-75
Overhaul, page 17-76
Installation, page 17-89

VALVE BODY UNIT
Overhaul, page 17-67

RESERVOIR
Fluid Replacement, page 17-43

PUMP
Pump Belt Adjustment, page 17-42
Fluid Replacement, page 17-43
Pump Pressure Check, page 17-44
Pump Replacement, page 17-59
Control Valve Inspection and Replacement, page 17-60
Disassembly, page 17-62
Reassembly, page 17-65
System Description

Fluid Flow Diagram

The reservoir supplies power steering fluid to the pump; the pump pressurizes the fluid to about 8000 kPa (1200 psil), and delivers it through a high pressure hose to the control unit on the gearbox. The control valve (in the control unit) controls the direction of the turn by shifting fluid to the left or right side of the piston on the rack (in the power cylinder). The cut-off valve, also in the control unit, controls the amount of assist by regulating the stroke of the control valve.

Fluid returning from the power cylinder flows back through the control valve and out to the reservoir through the cooler.
System Description

Steering Pump

Construction

The pump is a vane-type incorporating a flow control valve (with an integrated relief valve) and is driven by a V-belt from the crank pulley. The pump features 10 vanes. Each vane performs two intake/discharge operations for every rotation of the rotor. This means that the hydraulic fluid pressure pulse becomes extremely small during discharge.

Operation

The belt-driven pulley rotates the rotor through the drive shaft. As the rotor rotates, the hydraulic pressure is applied to the vane chamber of the rotor and the vanes will rotate while being pushed onto the inner circumference of the cam ring. The inner circumference of the cam ring has an extended portion with respect to the center of the shaft, so the rollers move downward in the axial direction as the carrier rotates. As a result of this roller movement, the internal volume of the vane chamber will change, resulting in fluid intake and discharge.

START OF FLUID INTAKE

The vanes are pushed onto the inner circumference of the cam ring.

FLUID INTAKE

The volume of the vane chamber increases so that fluid is sucked in.

FLUID MOVEMENT

The sucked-in fluid moves toward the discharge port.

FLUID DISCHARGE

As the vanes return to their original position on the inner side, the volume of the vane chamber decreases so the fluid is discharged from the discharge port.

17-32
Flow Control

Fluid from the pump runs through a metering orifice to the control unit. This creates a pressure difference between the pump and control unit sides of the orifice. When pressure in the pump side is higher than the force of the spring holding the flow control valve closed, it pushes the valve down (open), and excess fluid returns to the pump inlet. The combined effect of the metering orifice and the flow control valve provides a relatively constant flow of fluid to the control unit.

Pressure Relief

As pressure on the control unit side builds up it pushes the relief valve ball (inside the flow control valve) up against its spring, and excess fluid returns to the pump inlet. As the pressure under the flow control valve drops, the relief valve ball is closed by its spring, and the flow control valve is forced down again, allowing excess fluid from the pump side to return to the inlet. This flow control valve-relief valve cylinder keeps pump output pressure between 7845–8826 kPa (80–90 kg-cm², 1138–1280 psi).

Fluid Reservoir/Filter

A one piece reservoir and filter is attached to the fender apron on the left side of the engine compartment. The fluid and the filter/reservoir should be replaced if the system is opened for repairs, or if the fluid gets water or dirt in it.

CAUTION: Use only Honda Power Steering Fluid-V. The use of other fluid such as A.T.F., or other manufacturer’s power steering fluid will cause damage to the system.

Reservoir Capacity ....... 0.4 liter (0.4 U.S. qt.)
System Capacity .......... 1.11 liter (1.17 U.S. qt.)
System Description

Control Valve

Mounted on the upper side of the gearbox is a control valve that is moved horizontally by a pin on the pinion holder to shift fluid pressure to the right or left side of the Power Cylinder when the steering wheel is turned. It has thrust pins at both ends, and two inter-connected reaction chambers, one on each side. Each reaction chamber contains a pair of spring loaded plungers that rise against right and left thrust pins. The valve body fluid passages are controlled by the control valve.
In the power steering unit, the method used to direct a single source of fluid pressure in either of two directions (for left or right turns) involves the pinion gear transferring a "massage" of direction to the fluid 4-way valve. The pinion is mounted slightly off-center in a pair of bearings, which are in turn mounted in a Pinion Holder cylinder that rotates, centered in its own outer bearings. At the top of the Pinion Holder is a pin, which fits in a slot in the 4-way valve. As the pinion is turned (to turn left or right), because it is off-center, it also moves slightly along the rack. This movement is transferred to the holder. The pin in the holder then moves the 4-way valve, to direct fluid pressure to either side of the rack in the Power Cylinder.

The back edges of the pinion holder (facing away from the rack) hit the stops cast into both sides of the gear housing to avoid pushing the control valve too far in either direction. The front edge of the pinion holder cuts off assist at full lock as described on the next page.
System Description

Full-Lock Unloader System

The 4-way valve shifts the direction of fluid flow when the steering wheel is turned right or left. However, when the wheel is turned to the right or left lock at parking speed, the edge of the pinion holder rides up on the end of the rack, moving the pin in the opposite direction which pulls the 4-way valve back to neutral. This keeps pump pressure from building up (which could cause idle speed to drop), and improves steering feel by increasing resistance at left and right lock.

Control in "assist" position

Control valve moves back to "neutral" position

17-36
Troubleshooting

General Troubleshooting

Check the following before you begin:

- Has the suspension been modified in a way that would affect steering?
- Are tire sizes and air pressure correct?
- Is the steering wheel original equipment or equivalent?
- Is the power steering pump belt properly adjusted?
- Is steering fluid reservoir filled to proper level?
- Is the engine idle speed correct and steady?

Hard Steering

Little or no assist in both directions with car parked.

Check for bubbles in power steering fluid.

If there are bubbles, check the reservoir input side hose and pump front seal for air leaks. Repair as necessary.

If assist improves, check the pump flow control valve for internal leaking, and clean or replace as necessary (page 17-60). If the valve is OK, replace the steering pump.

If assist does not improve, check fluid pressure, using power steering gauge with shut-off valve closed (page 17-44).

Fluid pressure below 7845 kPa (80 kg/cm², 1138 psi).

Check the pump flow control valve for internal leaking, and clean or replace as necessary (page 17-80). If the valve is OK, replace the pump.

Steering effort above. Check the cut-off valve for sticking or a clogged orifice; clean or replace the valve as necessary (page 17-67). If the cut-off valve is OK, check the pinion for free movement. If seized or binding overhaul the steering gearbox.

Assist in one direction only, little or no assist in the other.

Leaking from cylinder end seal into tie-rod boot.

If the cylinder end seal leak, remove the gearbox and overhaul.

If no abnormality is found, remove the control valve unit and check the pinion for free movement. If OK, check the control valve for free movement (page 17-71). Repair as necessary.

(cont’d)
Troubleshooting

General Troubleshooting (cont’d)

- Belt slipping on pulley.
  - Adjust belt tension. Replace belt, if necessary (page 17-42).

- Cut-off valve sticking or leaking.
  - Check cut-off valve; clean or replace the cut-off valve or control unit.

- Idle speed low or erratic.
  - If the engine stalls when wheel is turned while car is stopped or moving at low speed, adjust idle speed (see Fuel Section).

Uneven or rough steering.

- Air in reserve tank, or check power steering fluid level.
  - Check power steering fluid level. If level is excessively low, check for leaks in the system. Add fluid to the specified level.
    - If fluid level is OK, check O-rings and seals on both ends of the pump inlet hose, and the oil pump housing mating surfaces for suction leaks. Replace parts as necessary.

- Improperly adjusted rack guide.
  - Adjust rack guide (page 17-43).
    - If the rack guide adjustment is OK, check the pinion bearings for wear or damage. Replace them as necessary.
Shock or vibration when wheel is turned to full lock.

- Pump belt slipping on pulley (pump stops momentarily).
  - Adjust belt tension (page 17-42) or replace belt.

- Set the power steering pressure gauge. Close the shut-off valve fully and measure the pump pressure (see page 17-44).
  - Check if pump pressure is within the range 7845—8826 kPa (80—90 kg/cm², 1138—1280 psi) and the gauge needle travel is ±490 kPa (±5 kg/cm², ±70 psi) or less. Check the flow control valve if the needle travel exceeds ±490 kPa (±5 kg/cm², ±70 psi) (see page 17-60). If the flow control valve is normal, replace the pump as an assembly.

Steering kicks back during wide turns.

- Pump belt slipping.
  - Adjust belt tension (page 17-42) or replace belt.

- Sticking cut-off valve or control valve.
  - Replace cut-off valve or control valve.

- Rack guide adjusted too loose.
  - Adjust rack guide (page 17-43).

Tire pressure too low.

- Inflate to correct pressure.

Wheel will not return smoothly.

- Improper front wheel alignment.
  - Readjust front wheel alignment or replace parts as necessary.

- Improperly adjusted rack guide.
  - Adjust rack guide (page 17-43).
# Troubleshooting

## Noise and Vibration

**NOTE:** Pump noise in first 2—3 minutes after starting in cold weather (−20°C, −4°F or colder) is normal.

### Humming
- Humming due to pulsation of fluid is normal, particularly when wheel is turned with car stopped.
- If equipped with Automatic transmission, the hum could be torque converter or pump noise.
- Confirm by temporarily removing pump belt.
- High pressure line touching the frame.
- Reposition the line.
- Belt slipping.
- Tighten or replace belt.

### Squeaking
- Pinion shaft seal not lubricated.
- Grease it.
- Horn contact not lubricated, or under too much pressure.
- Grease the contact, or bend it to reduce the pressure.
- Burrs on the pinion gear.
- Replace the pinion gear.

**NOTE:** A single ‘‘clunk’’ may be a normal amount of linkage clearance. To distinguish this type of clunk, turn the wheel back and forth with the engine OFF.

### Rattle or chattering
- Loose pump pulley.
- Tighten or replace pulley. If shaft is loose, replace the pump.
- Loose steering shaft connector, tie-rod, or ball joint.
- Check and tighten, or replace parts as necessary.
- Column shaft wobbling.
- Replace column assembly.

### Hissing
- Lines or hoses from the control unit touching each other.
- Reposition lines so they don’t touch.
- Noise from control valve.
- Replace the control unit.

### Pump gear noise
- **NOTE:** Pump noise up to 2—3 minutes after starting in cold weather (−20°C, −4°F or colder) is normal. Compare pump noise at operating temperature to another car.
- If pump noise is abnormally loud, check the pump ball bearing and other parts (page 17-62).
- Check fluid level. If low, fill reservoir to proper level, and check for leaks.
- Tighten or replace as necessary.
- Check for crushed suction hose or a loose hose clamp allowing air into the system.
- Tighten or replace as necessary.

**Cavitation caused by air bubbles in fluid.**

---

17-40
## Fluid Leaks

<table>
<thead>
<tr>
<th>Location</th>
<th>Issue Description</th>
<th>Action(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steering gearbox</td>
<td>Leaking from cylinder end seal into tie-rod boots.</td>
<td>Reassemble.</td>
</tr>
<tr>
<td></td>
<td>Leaking from right side.</td>
<td>Reassemble.</td>
</tr>
<tr>
<td></td>
<td>Leaking from left side.</td>
<td>Remove control valve and inspect the 11 mm O-ring and the port housing bore for pits, burrs or scratches (page 17-69). Repair as necessary.</td>
</tr>
<tr>
<td></td>
<td>Reseal gearbox and inspect the rack sealing surface between the steering rack piston and the right end (page 17-76).</td>
<td>If no abnormality is found, replace the O-ring, reseal the gearbox and inspect the steering rack sealing surface for burrs or scratches between the steering rack gear teeth and the piston. Inspect the seal retainer bore in the gearbox housing for proper chamfer and sharp edges (page 17-76).</td>
</tr>
<tr>
<td></td>
<td><strong>NOTE:</strong> When fluid leaks from one side of the rack the balance tube transfers the fluid to the other side, giving the appearance that both sides are leaking. To troubleshoot, remove both boots, clean the rack and locate the leak.</td>
<td><strong>Tighten attaching bolts or replace valve body or port housing.</strong></td>
</tr>
<tr>
<td></td>
<td>Leaking from control unit mating surfaces.</td>
<td><strong>Tighten attaching bolts or replace valve body or port housing.</strong></td>
</tr>
<tr>
<td></td>
<td>Leaking from either side of valve body.</td>
<td>Replace all control unit seals and O-rings.</td>
</tr>
<tr>
<td></td>
<td>Leaking from drilled passage plug (steel ball).</td>
<td>Replace control valve body.</td>
</tr>
<tr>
<td>Pump</td>
<td>Front seal leaking.</td>
<td>Replace front seal.</td>
</tr>
<tr>
<td></td>
<td>Pump housing leaks at either end.</td>
<td>Replace housing O-rings.</td>
</tr>
<tr>
<td></td>
<td><strong>If the housing still leaks, replace the pump.</strong></td>
<td><strong>Reservoir overfilled. Pull off the hose and drain to proper level.</strong></td>
</tr>
<tr>
<td>Reservoir</td>
<td>Leaking from around cap.</td>
<td>Air leak in suction side of system (reservoir, inlet hose, front pump seal).</td>
</tr>
<tr>
<td>Pump outlet line (high pressure)</td>
<td>Leaking at threaded fitting.</td>
<td>Tighten fitting. If still leaking, replace hose.</td>
</tr>
<tr>
<td></td>
<td>Leaking at swaged joint.</td>
<td>Replace hose.</td>
</tr>
<tr>
<td>Low pressure hoses</td>
<td>Leaking because of damage, deterioration, or improper assembly.</td>
<td>Replace or repair as necessary.</td>
</tr>
<tr>
<td>Pipes</td>
<td>Leaking at gearbox connection. (at flare nut).</td>
<td>Tighten connector. If still leaking, replace the pipe or control unit.</td>
</tr>
</tbody>
</table>
Maintenance

Pump Belt Adjustment

1. Apply a force of 100 N (10 kg, 22 lb) and measure the deflection between the P/S pump and the crankshaft pulleys.

   Deflection:
   Used Belt: 8.0—12.0 mm (0.31—0.47 in)
   New belt: 6.0—9.5 mm (0.24—0.37 in)

   NOTE: If there are cracks or any damage evident on the belt, replace it with a new one.

   Measure with Belt Tension Gauge:
   Attach the belt tension gauge to the belt and measure the tension of the belt.

   Tension:
   Used Belt: 350—500 N (35—50 kg, 77—110 lb)
   New Belt: 500—700 N (50—70 kg, 110—154 lb)

   NOTE:
   ● If there are cracks or any damage evident on the belt, replace it with a new one.
   ● See the instructions for the tension gauge.

2. Loosen the P/S pump mounting bolts.

3. Turn the adjusting bolt to get the proper belt tension, then retighten the bolts.

4. Start the engine and turn the steering wheel from lock-to-lock several times, then stop the engine and recheck the deflection of the belt.

   SPECIAL BOLTS
   45 N-m
   (4.5 kg-m, 33 lb-ft)

   ADJUSTING BOLT

POWER STEERING PULLEY
CRANKSHAFT PULLEY

BELT TENSION GAUGE
On-Car Checks

Rack Guide Adjustment

1. Loosen the rack guide screw locknut with the special tool.

2. Tighten, loosen and retighten the rack guide screw two times to 4 N·m (0.4 kg·m, 2.9 lb·ft), then back it off 20° ± 5°.

3. Tighten the locknut to about 25 N·m (2.5 kg·m, 18 lb·ft) while preventing the guide screw from turning.

4. Check for tight or loose steering through the complete turning travel.

5. Recheck steering assist (page 17-45).

Fluid Replacement

Check the reservoir at regular intervals, and add fluid as necessary.

CAUTION: Use only GENUINE HONDA Power Steering Fluid-V. Using other fluids such as ATF or other manufacturer’s power steering fluid will damage the system.

Fluid Replacement
SYSTEM CAPACITY: 1.1 liter (1.17 U.S. qt.)
RESERVOIR CAPACITY: 0.4 liter (0.4 U.S. qt.)

1. Raise the reservoir and disconnect the hose that goes to the oil cooler.

2. Connect a hose of suitable diameter to the disconnected hose that goes to the oil cooler and put the hose end in a suitable container.

CAUTION: Take care not to spill the fluid on the body and parts. Wipe off the spilled fluid at once.

3. Start the engine, let it run at idle, and turn the steering wheel from lock-to-lock several times. When fluid stops running out of the hose, shut off the engine. Discard the fluid.

4. Refit the return hose on the reservoir.

5. Fill the reservoir to the upper level mark.

6. Start the engine and run it at fast idle, then turn the steering from lock-to-lock several times to bleed air from the system.

7. Recheck the fluid level and add some if necessary.

CAUTION: Do not fill the reservoir beyond the upper level mark.
On-Car Checks

Pump Pressure Check

Check the fluid pressure as follows to determine whether the trouble is in the pump or gearbox.

NOTE: First check the power steering fluid level and pump belt tension.

CAUTION: Disconnect the high pressure hose with care so as not to spill the power steering fluid on the frame and other parts.

1. Disconnect the outlet hose from the pump outlet fitting, and install the pump joint adaptor on the pump outlet.

2. Connect the hose joint adaptor to the power steering pressure gauge, then connect the outlet hose to the adaptor.

3. Install the power steering pressure gauge to the pump joint adaptor as shown.

4. Open the shut-off valve fully.

5. Open the pressure control valve fully.

6. Start the engine and let it idle.

7. Turn the steering wheel from lock-to-lock several times to warm the fluid to operating temperature.

8. Close the shut-off valve, then close the pressure control valve gradually until the pressure gauge needle is stable. Read the pressure.

9. Immediately open the shut-off valve fully.

CAUTION: Do not keep the shut-off valve closed more than 5 seconds or the pump could be damaged by over-heating.

If the pump is in good condition, the gauge should read at least 7845—8826 kPa (80—90 kg/cm², 1138—1280 psi). A low reading means pump output is too low for full assist. Repair or replace the pump.
**Steering Wheel Rotational Play**

1. Place the front wheels in a straight ahead position and measure the distance the steering wheel can be turned without moving the front wheels.
2. If the play exceeds the service limit, check all steering components.

\[0-10 \text{ mm} (0-0.4 \text{ in})\]

**Power Assist Check with Car Parked**

1. Check the power steering fluid level and pump belt tension.
2. Start the engine, allow it to idle, and turn the steering wheel from lock-to-lock several times to warm up the fluid.
3. Attach a spring scale to the steering wheel. With the engine idling and the car on a clean, dry floor, pull the scale as shown and read it as soon as the tires begin to turn.

4. The scale should read no more than 30 N (3.0 kg, 6.6 lb) if it reads more or less, check the gearbox and pump.
Steering Wheel (With SRS)

Removal

Airbag Removal

CAUTION:
- All SRS electrical wiring harnesses are covered with yellow outer insulation.
- When disconnecting the SRS wire harness, install the short connector on the airbag, then disconnect the wire harness (see page 23-297).
- Replace the entire affected SRS harness assembly if there is an open circuit or damage to the wiring.

1. Disconnect the negative and positive cable from the battery.
2. Remove the access panel from the steering wheel lower cover, then remove the short connector.
3. Disconnect the connector between the airbag and cable reel.
4. Connect the short connector to the airbag side of the connector.
5. Remove the lid B and cruise control set/resume switch cover.
6. Remove the TORX® T30 bit bolt and 6 mm screw, then remove the airbag assembly.

(cont'd)
**Removal (cont’d)**

7. Disconnect the connectors from the horn and cruise control set/resume switches.

8. Remove the steering wheel nut.

9. Remove the steering wheel by rocking it slightly from side-to-side as you pull steadily with both hands.

---

**Disassembly/Reassembly**

**WARNING** Store a removed airbag assembly with the pad surface up. If the airbag is improperly stored face down, accidental deployment could propel the unit with enough force to cause serious injury.

**NOTE:** If an intact airbag assembly has been removed from a scrapped car or has been found defective or damaged during transit, storage or service, it should be deployed (see Section 23).

**CAUTION:**
- Carefully inspect the airbag assembly before installing. Do not install an airbag assembly that shows signs of being dropped or improperly handled, such as dents, cracks or deformation.
- Always keep the short connector on the airbag connector when the harness is disconnected.
- Do not disassemble or tamper with the airbag assembly.

---

**STEERING WHEEL NUT**
50 N·m (5.0 kg-m, 36 lb-ft)

**TORX® BOLT**
10 N·m (1.0 kg-m, 7 lb-ft)

**AIRBAG ASSEMBLY**

**SHORT CONNECTOR (RED)**

**CRUISE CONTROL SET/RESUME SWITCHES**

**6 mm SCREW**
10 N·m (1.0 kg-m, 7 lb-ft)

**LID B**

**ACCESS PANEL**
Steering Wheel (With SRS)

Installation

Airbag installation

CAUTION:
- Before installing the steering wheel, align the front wheels straight ahead.
- Be sure to install the harness wires so that they are not pinched or interfering with other car parts.
- Do not replace the original steering wheel with any other design, since it will make it impossible to properly install the airbag. (Only use genuine HONDA replacement parts)
- After reassembly, confirm that the wheels are still straight ahead and that steering wheel spoke angle is correct. If minor spoke angle adjustment is necessary, do so only by adjustment of the tie-rods, not by removing and repositioning the steering wheel.

WARNING: Confirm that the airbag assembly is securely attached to the steering wheel; otherwise, severe personal injury could result during airbag deployment.

1. Before installing the steering wheel, center the cable reel.
   Do this by first rotating the cable reel clockwise until it stops.
   Then rotate it counterclockwise (approximately two turns) until:
   - The yellow gear tooth lines up with the mark on the cover.
   - The arrow on the cable reel label points straight up.

2. Install the steering wheel.
   NOTE: Be sure the steering wheel shaft engages the cable reel and canceling sleeve.

3. Attach the cruise control set/resume 4-P connector to the steering wheel clip.

4. Connect the horn connector.
5. Install the airbag assembly with new TORX® bolts.

6. Disconnect the short connector from the airbag connector.

7. Connect the airbag 3-P connector and cable reel 3-P connector.

8. Attach the short connector on the access panel, and install the access panel on the steering lower cover.

9. Connect the battery positive terminal and then connect the negative terminal.

10. After installing the airbag assembly, confirm proper system operation:
- Turn the ignition to II: the instrument panel SRS indicator light should come on for about 6 seconds and then go off.
- Confirm operation of horn buttons.
- Confirm operation of cruise control set/resume switches.
- Turn the steering wheel counterclockwise and make sure the yellow gear tooth still lines up with the alignment mark.
Steering Wheel (Without SRS)

Removal

1. Remove the center pad.
2. Remove the steering wheel nut.
3. Remove the steering wheel by rocking it slightly from side-to-side as you pull steadily with both hands.

Installation

1. Install the steering wheel.
   NOTE: Be sure the steering wheel shaft engages the turn signal canceling sleeve.
2. Install the center pad.

Disassembly/Reassembly

50 N·m (5.0 kg·m, 36 lb·ft) Replace.
Steering Column

Removal

CAUTION:
- All SRS electrical wiring harnesses are covered with yellow outer insulation.
- When disconnecting the SRS wire harness, install the short connector on the airbag, then disconnect the wire harness (see page 23-297).
- Replace the entire affected SRS harness assembly if there is an open circuit or damage to the wiring.

1. Remove the airbag assembly and steering wheel (page 17-46).

2. Remove the lower cover.

3. Remove the driver’s knee bolster.

4. Remove the upper column and lower column covers.

5. Disconnect the SRS wire harness and cable reel wire harness at the underside of the column bracket, then remove the cable reel assembly.

(cont’d)
6. Remove the turn signal canceling sleeve and the combination switch assembly.

NOTE: After removing the combination switch assembly, place it on the floor gently so that it does not hinder you in service. Do not disconnect the harnesses from the combination switch assembly.

7. Disconnect the ignition switch connectors from the under-dash fuse box.

8. Remove the steering joint cover.

9. Remove the steering joint bolts, and move the joint toward the column.
10. Remove the steering column assembly by removing the attaching nuts and bolts.
Steering Column

Inspection

NOTE:
- Check the tilt mechanism, steering joint bearings and steering shaft for proper movement and damage. Replace as an assembly if damaged or faulty.
- The tilt steering column is shown; the conventional steering column is similar except for the tilt mechanism.

- Attach a spring scale to the knob of the tilt lever. Measure the force required to move the lever.

Preload: 70—90 N (7—9 kg, 15—20 lbs)

If the force measured is not within the specification, loosen the lock bolt, then the stopper, until the correct force can be obtained.

10 mm (0.4 in)
Installation

1. Slip the upper end of the steering joint onto the column shaft (line up the bolt hole with the flat on the shaft) and loosely install the upper bolt.

   Final torque: 22 N·m (2.2 kg-m, 16 lb-ft)

   UPPER BOLT
   Bolt must line up with flat on shaft.

2. Slip the lower end of the steering joint onto the pinion shaft (line up the bolt hole with the groove around the shaft) and loosely install the lower bolt.

   NOTE: Be sure that the lower bolt is securely in the groove in the steering gearbox pinion.

3. Install the steering column assembly with the nuts and column holder.

4. Tighten the upper and lower steering joint bolts loosely installed in step 2.

   COLUMN ASSEMBLY

5. Install the steering joint cover with the clamps and clip.

   COLUMN HOLDER

   39 N·m (3.9 kg-m, 28 lb-ft)

   16 N·m (1.6 kg-m, 12 lb-ft)

   STEERING JOINT COVER

   CLAMPS

   CLIP

(cont’d)
Steering Column

Installation (cont’d)

6. Connect the wire connectors from the ignition switch to the under-dash fuse box.

7. Install the combination switch assembly and turn signal canceling sleeve onto the steering column.

   NOTE: Be sure the wires are not caught or pinched by any parts when installing the combination switch.

8. Install the cable reel onto the steering column, then connect the SRS wire harness and cable reel wire harness.

   NOTE: Align the slot in the cable reel with the projection on the canceling sleeve.

   PROJECTIONS
   SLOTS

   CABLE REEL ASSEMBLY

   HARNESS SRS WIRE HARNESS

   CABLE REEL WIRE

9. Install the upper column cover and lower column cover.

   UPPER COLUMN COVER

   LOWER COLUMN COVER
10. Install the driver's knee bolster.

11. Install the lower cover.

12. Install the steering wheel and airbag assembly (page 17-48).
Steering Pump

Illustrated Index

CAUTION: Pump components are made of aluminum. Be careful not to damage them when servicing.

NOTE:
- Clean all of the disassembled parts thoroughly.
- Replace all O-rings and seals. Do not dip new O-rings and seals in solvent; coat O-rings with steering grease before installation, and make sure they stay in place during reassembly.
- If any part denoted with an asterisk is worn or damaged, replace the complete pump.
Replacement

1. Drain the fluid from the system (page 17-43).
2. Disconnect the inlet and outlet hoses from the pump and plug them.
3. Remove the belt by loosening the special bolts and adjusting bolt.
4. Remove the special bolts, then remove the pump.

   ![Diagram of Pump]

   SPECIAL BOLT
   45 N·m
   (4.5 kg·m, 33 lb·ft)

   ADJUSTING BOLT
   O-RING
   Replace
   PUMP

5. Loosely install a new pump on the bracket.
6. Connect the inlet and outlet hoses to the pump.
7. Install and adjust the belt (page 17-42).
8. Fill the reservoir with new fluid to the UPPER LEVEL on the reservoir.
9. Start the engine and let it run at fast idle while turning the steering wheel lock-to-lock several times to bleed air from the system.
10. Check the reservoir and add fluid if necessary.

Pulley Replacement

Hold the steering pump in a vise with soft jaws and hold the pulley with the special tool and remove the pulley nut and pulley.

NOTE: Pulley nut has left-hand threads.

![Diagram of Pulley Replacement]

UNIVERSAL HOLDER
07725−0039000

PULLEY

PULLEY NUT
65 N·m (6.5 kg·m, 47 lb·ft)

Hold the pulley with the special tool and tighten the pulley nut.
Steering Pump
Control Valve Inspection and Replacement

1. Remove the control valve cap by removing the three flange bolts.

2. Remove the control valve spring, control valve and O-rings.

3. Check for wear, burrs, and other damage to the edges of the grooves in the valve.

4. Slip the valve back in the pump and check that it moves in and out smoothly.

If OK, go on step 5, if not replace the valve:

NOTE: The original valve was selected for a precise fit in the pump housing bore, so make sure the new one has the same identification mark.

<table>
<thead>
<tr>
<th>Mark</th>
<th>Part Name</th>
<th>Outside Diameter mm (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CONTROL VALVE A</td>
<td>17.991—17.996 (0.7083—0.7085)</td>
</tr>
<tr>
<td>B</td>
<td>CONTROL VALVE B</td>
<td>17.996—18.001 (0.7085—0.7087)</td>
</tr>
</tbody>
</table>

If OK, go on step 5, if not, replace the whole pump as an assembly.

5. Attach a hose to the end of the valve as shown.
6. Submerge the valve in a container of power steering fluid or solvent, and blow in the hose. If air bubbles leak through the valve, replace or repair it as follows.

7. Clamp the bottom end of the valve in a vise with soft jaws.

8. Unscrew the seat in the top end of the valve, and remove any shims, the relief check ball, relief valve and relief valve spring.

9. Clean all the parts in solvent. Dry them off then reassemble and retest the valve.

NOTE: If necessary, relief pressure is adjusted at the factory by adding shims under the check ball seat. If you found shims in your valve, be sure you reinstall as many as you took out.

10. Install the control valve in the reverse order of removal.

- Apply steering grease (Honda P/N 08733—B070E) to new O-rings.
- Coat the control valve with power steering fluid, then install it and valve spring.
Steering Pump

Pump Disassembly

CAUTION: The pump components are made of aluminum. Be careful not to damage them when servicing.

1. Remove the pump from the engine (page 17-59).
2. Remove the pulley (page 17-59).
3. Remove the control valve (page 17-60).
4. Remove the inlet joint and O-ring.

5. Remove the pump cover and O-ring.

6. Remove the pump cam ring from the pump housing.

7. Remove the pump rotor and vanes.
8. Remove the two rollers from the side plate.

9. Remove the side plate and preload spring.

11. Remove the circlip, then remove the drive shaft assembly from the pump housing using a plastic hammer.

12. Remove the seal spacer and oil seal.

10. Remove the O-rings from the side plate.

13. Check the pump ball bearing for play; if it is good and the grease in it is clean, go on step 14.

   - If the bearing is noisy or has excessive play, replace the bearing.

17-63
Steering Pump
Pump Disassembly (cont’d)

- Remove the bearing using the special tool and press.

Press

HUB DIS/ASSEMBLY BASE
07GAF—SD40700

- Install the new bearing using the press and special tool.

Press

Install with the red shielded side facing down.

HUB DIS/ASSEMBLY BASE
07GAF—SD40700
NOTE: Hold the inner race with the tool securely.
Pump Assembly

1. Coat the lip of the new oil seal with steering grease (Honda P/N 08733-B07OE).

2. Install the new oil seal in the pump housing by hand, then install the pump seal spacer.

3. Install the pump driver shaft assembly with the special tool.

4. Install the 38 mm circlip with its tapered side facing out.

5. Coat the side plate grooves with power steering fluid, then position the 16.8 x 1.9 mm and 54 x 1.9 mm O-rings on the side plate.

6. Install the preload spring in the pump housing.

7. Set the 4.5 x 49.8 mm roller in the 4.5 mm hole in the pump housing.

8. Set the side plate over the roller and install it on the pump housing.

9. Set the 5 x 26.8 mm roller in the 5 mm hole in the side plate.

10. Assemble pump rotor to the drive shaft with the "o" mark on the rotor facing upward.

11. Set the 10 vanes in the grooves in the rotor.

NOTE: Be sure that the round end of the vanes is in contact with the sliding surface of the cam ring.

(cont'd)
Steering Pump
Pump Assembly (cont’d)

12. Set the pump cam ring over the two rollers with the "○" mark on the cam ring upward.

13. Install the 68.5 x 1.9 mm O-ring on the pump cover.

14. Align the roller set holes in the pump cover with the rollers.

15. Align the projection on the pump housing and the projection on the pump cover and tighten the four bolts.

16. Set the 13 x 1.9 mm O-ring on the inlet joint.

17. Install the inlet joint on the pump housing.

18. Install the control valve (page 17-61).

19. Install the pulley (page 17-59) and check that the pump turns smoothly by turning the pulley.
**Steering Gearbox**  
**Valve Body Unit Overhaul**

**NOTE:** If the Valve Body is damaged, it must be replaced as a set, with the Cut-off Valve and 4-Way Control Valve (shaded parts).

**CAUTION:**
- Replace the O-rings and seals with new ones.
- Do not dip the O-rings and seals in solvent.
- Apply grease in the seal grooves to keep the cap and port seals in place.
- Apply grease to the 50 x 2.4 mm and 11 mm O-rings to keep them in place in the valve ports.

- GREASE: STEERING GREASE .... Part Number 08733-B070E

---

**Diagram Description:**
- **VALVE BODY CAP**
  - CAP SEAL Replace.
  - 6 mm FLANGE BOLT 10 N·m (1.0 kg-m, 7 lb-ft)
- **CUT-OFF VALVE**
  - SPRING 11 N·m (1.1 kg-m, 8 lb-ft)
  - 11 mm O-RING Replace.
- **RETURN SPRINGS**
- **PLUNGERS**
- **ROLLERS**
- **4-WAY CONTROL VALVE**
  - 50 x 2.4 mm O-RING Replace.
  - 9.8 x 1.9 mm O-RINGS Replace.
  - 3.4 mm O-RING Replace.
  - SENSOR ORIFICE
- **DOWEL PIN**
- **PORT HOUSING**
- **VALVE BODY**  
  - PORT SEAL Replace.
- **PINION DUST SEAL** Replace.

(cont’d)
Steering Gearbox
Valve Body Unit Overhaul (cont’d)

1. Remove the steering gearbox (17-72).

2. Remove the two 8 mm flange bolts and remove the control valve body unit from the gearbox.

3. Remove the O-rings and port orifices from the gearbox.

4. Remove the two 6 mm flange bolts, then remove the cap from the valve body.

5. Remove the cap seal from the cap.

6. Remove the cut-off valve and spring from the valve body.

7. Check the cut-off valve:
   - Inspect its surface for scoring or scratches.
   - Slip it back into the valve body, and make sure it slides smoothly without drag and without side play.

NOTE: If any part of the valve body is damaged, replace the valve body unit (valve body, 4-way control valve) as an assembly.
8. Separate the valve body and port housing.

9. Remove the seal and dowel pins from the port housing.

10. Remove the pinion dust seal and O-ring from the port housing.

11. Remove the rollers from the control valve by pushing the valve out one side of the valve body, and then the other.

   NOTE: When removing the rollers, hold the plungers with your fingers to keep them from popping out.

12. Remove the plungers, return springs and 4-way control valve from the valve body.

13. Remove the 11 mm O-ring from the 4-way control valve.

14. Check the plungers.
   - Inspect their surface for scoring or scratches.
   - Slip each plunger into the valve body, and make sure it slides smoothly, without drag or side play.
     If any plunger is damaged, replace it.

   NOTE: If the valve body is damaged, replace all three parts (valve body, cut-off valve and 4-way control valve) as a set.

15. Check the 4-way control valve.
   - Inspect its surface for scoring or scratches.
   - Slip it into the valve body, and make sure it slides smoothly, without drag or side play.

   NOTE: If any part of the valve body is damaged, replace the valve body unit (valve body, cut-off valve, 4-way control valve) as an assembly.
Steering Gearbox
Valve Body Unit Overhaul (cont’d)

16. If necessary, replace the sensor orifice and O-ring using a 1.5 mm (1/16”) drill bit.

- Coat the new O-ring with the power steering fluid-V and install the sensor orifice into the valve body by tapping lightly with a rubber mallet.

Assembly:

NOTE:
- Thoroughly clean all the disassembled parts.
- Coat the plungers, cut-off valve and 4-way control valve surfaces with power steering fluid-V.

17. Coat the O-ring with grease, and install it on the 4-way control valve.

18. Install the 4-way control valve, plungers, return springs and rollers into the valve body.

19. Install the new pinion dust seal in the control valve body unit by hand.

20. Coat the O-ring and port seal with grease, and install them port housing.

21. Install the dowel pins and valve body on the port housing.

22. Install the cut-off valve spring and cut-off valve.
23. Coat the cap seal with grease and install the valve body cap.

24. Install and tighten the 6 mm flange bolts in the control valve body unit.

25. Make sure the control valve moves smoothly, and returns to neutral position.

26. Coat the 9.8 x 1.9 mm O-rings and pinion holder pin with grease, and install them together with the orifices.

27. Apply vinyl tape onto the pinion shaft and coat the vinyl tape with grease.

28. Install the valve body unit on the gear housing with the two 8 mm bolts.

29. Remove the vinyl tape.

CAUTION:
- When installing, be careful not to hit the pinion holder pin.
- Make sure the O-rings are in place and not pinched.
NOTE:
- Before removing the steering gearbox, align the front wheels straight ahead.
- Disconnect the battery negative terminal and then disconnect the positive terminal.

1. Drain the power steering fluid as described on page 17-43.

2. Remove the steering joint cover.

3. Remove the steering joint lower bolt, and move the joint toward the column.

4. Raise the front of car and support on safety stands in the proper locations.

5. Remove the front wheels.

6. Using solvent and a brush, wash any oil and dirt off the control unit, its lines, and the end of the gearbox. Blow dry with compressed air.

   (Manual transmission model only)
   - Remove the shift extension from the transmission case.

- Slide the boot back at the connecting position of the gear shift rod.
- Drive out the spring pin with a punch, then disconnect the shift rod.

17-72
7. Separate the catalytic converter by removing the self-locking nuts.

8. Remove the cotter pin from the tie-rod ball joint nut and remove the nut.

9. Install the 10 mm hex nut on the ball joint. Be sure that the 10 mm hex nut is flush with the ball joint pin end, or the threaded section of the ball joint pin might be damaged by the ball joint remover.

NOTE: Remove the ball joint using the Ball Joint Remover, 28 mm (07MAC-SL00200). Refer to page 18-11 for how to use the ball joint remover.

10. Separate the tie-rod ball joint and knuckle using the special tool.

CAUTION: Avoid damaging the ball joint boot.
Steering Gearbox

Gearbox Removal (cont’d)

11. Disconnect the three lines from the control unit.

   CAUTION: After disconnecting the hoses and pipes, plug or seal the hoses and pipes with the piece of tape or equivalent to prevent foreign materials from entering the control unit.

   To reservoir: 12 mm wrench

   To oil cooler: 17 mm wrench

   From pump: 14 mm wrench

12. Remove the left tie-rod end, then slide the rack all the way to the right.

13. Remove the steering gearbox assembly mounting bolts and pinion shaft gromet.

14. Pull the steering gearbox assembly all the way down to clear the pinion shaft from the bulkhead.

15. Move the steering gearbox assembly to the right so the left rack end clears the rear beam.

16. Hold the steering gearbox assembly and slide the rack all the way to the left, place the left rack end below the rear beam.

17. Move the steering gearbox assembly to the left and tilt the left side down to remove it from the car.
Illustrated Index

CAUTION:
- Before disassembling the gearbox, wash it off with solvent and a brush.
- Thoroughly clean all disassembled parts.
- Always replace O-rings and seals.
- Replace parts with damaged sliding surfaces.
- Do not dip seals and O-rings in solvent; coat O-rings with grease, make sure they stay in position during reassembly, and use appropriate special tools to install them where necessary.

STEERING GREASE .... Part Number 08733—B070E
Steering Geabox

Overhaul

Disassembly

1. Remove the control valve unit as described on page 17-67.

2. Carefully clamp the gearbox in a vise with soft jaws.

3. Remove the tie-rod assembly.

4. Remove the boot bands and tube clamps. Pull the dust seals away from the ends of the gearbox.

5. Hold the steering rack with a 19 mm wrench and unscrew the rack end with a wrench.

6. Push the right end of the rack back into the cylinder housing so the smooth surface that rides against the seal won't be damaged.

7. Loosen the rack screw locknut and remove the rack guide screw.

8. Remove the spring and rack guide from the gear housing.
9. Remove the steering pinion assembly by removing the circlip.

- Check the pinion upper ball bearing for play; if it is good and the grease in it is clean, go on step 10.

If the bearing is noisy or has excessive play, replace the bearing.

- Remove the 15 mm snap ring.

- Remove the ball bearing using the special tool.

- Using a press, install the upper ball bearing on the pinion.

(cont'd)
10. Remove the four bolts from the end of the cylinder housing, then slide the housing off the rack.

11. Remove the O-ring, back-up ring, steering rack bushing A and cylinder spring.

12. Remove the cylinder end seal from the cylinder housing.

   NOTE: Use your fingers or a wooden stick to avoid damaging the housing.

13. Remove the cylinder, cylinder seal retainer, cylinder cap and steering rack from the gear housing.

14. Remove the retainer washer from the gear housing.
Check the pinion holder for free movement, excessive play and rough movement; if it is good go on step 15.

If it is damaged, or if dirt has gone past the seal into the grease, replace the bearing.

- Remove the gear housing cap from the gear housing.

- Remove the circlip from the pinion holder.

- Remove the pinion holder from the gear housing.

- Check the needle roller bearings in the pinion holder and gear housing for damage; if OK, pack the needle roller bearing with grease. If the bearings are damaged, replace them as a set.

- Check the lower ball bearing for damage; if it is damage, replace the lower ball bearing.

- Remove the pinion lower ball bearing from the gear housing.

(cont’d)
Steering Gearbox
Overhaul (cont’d)

- Drive the new lower ball bearing into the gear housing using the special tools.

- Install the pinion holder in the gear housing.

- Reinstall the circlip with its tapered side facing out.

NOTE: Circlip ends must be aligned with the flat area.

- Grease the new O-ring and install it in the groove in the gear housing cap. Install the gear housing cap and tighten the bolts securely.

15. Remove the cylinder and seal retainer from the steering rack.
16. Remove the O-ring and circlip from the seal retainer, then remove the cylinder cap from the seal retainer.

17. Remove the O-rings from the cylinder cap.

18. Remove the bushing stopper ring from the seal retainer.

19. Remove the cylinder end seal.

20. Carefully pry the piston seal ring and O-ring off the rack.

21. Install a new O-ring on the rack.

**Assembly**

**NOTE:** Before reassembling any parts inspect them as described on page 17-75 and make sure they are clean. Replace worn or damaged parts.
22. Coat the piston seal ring guide with power steering fluid, and slide it onto the rack, big end first.

23. Position the new piston seal ring on the special tool, slide it down to big end of the tool, and then pull it off into the piston groove on top of the O-ring.

24. Coat the piston seal ring and inside of the special tool with power steering fluid. Carefully slide the tool onto the rack and over the piston ring, then rotate the tool as you move it up and down to seat the piston seal ring.

25. Coat new O-rings with grease and install them on the cylinder cap.

26. Slide the cylinder cap onto the seal retainer.

27. Install the circlip and O-ring on the seal retainer.
28. Grease the sliding surface of the steering rack bushing B, and install the bushing on the steering rack with the groove of the bushing facing the steering rack piston.

29. Grease the sliding surfaces of the new cylinder end seal and the special tool, then place the seal on the special tool with its grooved side facing opposite the slider.

30. Grease the steering rack, and install the special tool.

CAUTION: Make sure the rack teeth do not face the slot in the special tool.

31. Separate the cylinder end seal from the special tool, then remove the tool from the rack.

CYLINDER END SEAL SLIDER 07GAG–SD40300
Steering Gearbox

Overhaul (cont’d)

32. Fit the seal retainer on the steering rack.

33. Push the rack bushing B toward the seal retainer by hand until the cylinder end seal is seated in the retainer. Fit the seal stopper ring in the groove of the seal retainer securely. Then grease the steering rack.

34. Install the retainer washer on the gear housing.

35. Place the gear housing on the work bench and insert the seal retainer and steering rack into the gear housing.

36. Coat the inside surface of the cylinder with power steering fluid, slide it over the rack and into the gear housing; press it into the housing until it seats.
37. Install the cylinder spring over the rack, then coat the rack bushing A with power steering fluid and install it on the spring.

38. Install the special tool, or apply vinyl tape onto the steering rack and coat the special tool or vinyl tape with grease.

39. Coat the inside surface of the cylinder with power steering fluid and install the cylinder end seal with its grooved side facing out.

40. Install the O-ring and back up ring on the gear housing.

41. Carefully position the cylinder housing on the gear housing and loosely install with four bolts.

CAUTION: Be careful not to damage the end seal in the cylinder housing.

42. Remove the vinyl tape or special tool from the steering rack.

43. Tighten the cylinder housing to the gear housing.

NOTE: Before tightening the bolts, make sure the mating surfaces of the cylinder and gear housing fit properly by pushing them together; hold them together while tightening the bolts.

(cont’d)
44. Install the steering pinion in the pinion holder.

45. Install the circlip securely in the pinion holder groove.

NOTE: Install the circlip with its tapered side facing out.

46. Install the O-ring on the rack guide screw.

47. Coat the rack guide with grease.

48. Install the rack guide, spring and rack guide screw on the gear housing.

49. Tighten the rack guide screw until it compresses the spring and seats against the rack guide, then loosen it.

50. Retighten it to 4 N·m (0.4 kg-m, 2.9 lb-ft), back it off about 20° ± 8°, then install the locknut on the rack guide screw.

51. Tighten the locknut while holding the rack guide screw with the special tool.

52. Install the valve body unit (page 17-71).

53. Install the new lock washer in the groove in the steering rack.

54. Hold the steering rack with a wrench and tighten the rack end to 55 N·m (5.5 kg-m, 40 lb-ft).
55. After tightening the rack end, stake the four sections of lock washer with a commercially available drift (Roll Pin Drift, Snap-On No. PPR8) and mallet.

**COMMERCIALY AVAILABLE DRIFT**
(Roll Pin Drift, Snap-On No. PPR8)

*NOTE:* This drift has a flat, to prevent puncturing of metal washer.

56. Apply steering grease to the circumference of the rack end housing.

*NOTE:* Coat the rack end groove and inside of the boot with silicone grease.

**STEERING GREASE**
(Honda P/N 08733-8070E)

**SILICONE GREASE**
Coat the sliding surface of the rack end.

57. Install the boots on the rack end with the tube clamps.
NOTE: Install the boot band with the rack in the straight ahead position (i.e. right and left tie-rods are equal in length).

58. Install the boot band so that the locking tabs of the band (stake points) are in the range shown below. (Tabs should face up and slightly forward.)

59. Install new boot bands on the boot and bend both sets of locking tabs.

60. Lightly tap on the doubled-over portions to reduce their height.

CAUTION: Stake the band locking tabs firmly.

61. Install the band cushion and air hose band; position the band as shown and tighten it. Then install the air hose.

62. After assembling, slide the rack right and left to be certain that the boots are not deformed or twisted.

63. Install the right and left tie-rods on the right and left rack ends.
Installation

1. Slide the rack all the way to the right.

2. Pass the right side of the steering gearbox assembly above and through the right side of the rear beam.

3. Hold the steering gearbox assembly and slide the rack all the way to the right.

4. Raise the left side of the steering gearbox assembly above and through the left side of the rear beam.

5. Install the pinion shaft grommet and insert the pinion shaft up through the bulkhead.

6. Install and tighten the gearbox mounting bolts.

7. Connect the fluid lines to the control unit.

   To reservoir: 12 mm wrench 13 N·m (1.3 kg·m, 9 lb-ft)
   To oil cooler: 17 mm wrench 29 N·m (2.9 kg·m, 21 lb-ft)
   From pump: 14 mm wrench 38 N·m (3.8 kg·m, 28 lb-ft)

8. Reconnect the tie-rods to the steering knuckles, tighten the ball joint nut to the specified torque, and install new cotter pins.

   CAUTION: Torque the castle nut to the lower torque specification, then tighten it only far enough to align the slot with the pin hole. Do not align the nut by loosening.

(cont’d)
Steering Gearbox

Installation (cont’d)

9. Install the catalytic converter with the new gaskets and self-locking nuts.

- Install the shift extension on the transmission case.

34 N-m (3.4 kg-m, 25 lb-ft)

(CATALYTIC CONVERTER)

34 N-m (3.4 kg-m, 25 lb-ft)

(MANUAL TRANSMISSION MODEL ONLY)

- Connect the shift rod to the transmission and drive the spring pin with a punch, then install the pin retainer. Be sure that the projection on the pin retainer is in the hole.

- Connect the shift cable end to the shift control shaft, and install the cable bracket.

(AUTOMATIC TRANSMISSION MODEL ONLY)

SHIFT ROD

SPRING PIN

SHIFT CONTROL SHAFT

LOCK WASHER

CABLE BRACKET

PIN RETAINER

HOLE

PROJECTION
10. Reconnect the steering shaft to the gearbox.

CAUTION: Before tightening the steering joint bolts pull the steering joint to make sure that the steering joint is fully seated.

11. Install the steering joint cover with the clamps and clip.

12. Fill the system:
   - Fill the reservoir with new Honda Power Steering Fluid-V.
   - Connect the battery positive terminal and then connect the negative terminal.

13. After installation, perform the following checks.
   - Start the engine and let it run at fast idle, then turn the steering wheel from lock-to-lock several times to bleed air from the system.
   - Check the fluid again, and add more if necessary.
   - Check the gearbox for leaks.
   - Check the front toe.
   - Check the steering wheel spoke angle. Adjust by turning the right and left tie-rods, if necessary.

NOTE: Turn the right and left tie-rods equally.
Suspension

Special Tools .................................. 18-2
Component Location
  Index ........................................ 18-3
Wheel Alignment
  Caster ....................................... 18-4
  Camber ..................................... 18-4
  Front Toe Inspection/
    Adjustment ................................. 18-5
Rear Toe Inspection/
  Adjustment .................................. 18-5
Turning Angle Inspection/
  Adjustment .................................. 18-6
Wheel Measurements
  Bearing End Play ............................. 18-7
  Runout ...................................... 18-7
Front Suspension
  Torque Specifications ......................... 18-8
  Knuckle/Hub
    Illustrated Index ............................ 18-9
    Removal .................................... 18-10
    Hub Unit and Wheel Bearing
      Replacement ................................ 18-13
      Installation ................................ 18-15
  Lower Ball Joint Replacement ............... 18-17
  Ball Joint Boot Replacement ............... 18-18
Suspension Arms
  Removal/Inspection ........................... 18-19
  Installation ................................ 18-20
Upper Arm Bushing
  Replacement .................................. 18-21
Front Damper
  Removal ...................................... 18-22
  Disassembly/Inspection ....................... 18-22
  Reassembly .................................. 18-24
  Installation .................................. 18-24
Rear Suspension
  Torque Specifications ......................... 18-25
  Hub Bearing Unit
    Illustrated Index ............................ 18-26
    Removal .................................... 18-27
    Installation ................................ 18-28
  Suspension Arms
    Removal/Inspection ......................... 18-30
    Installation ................................ 18-31
  Upper Arm Bushing
    Replacement ................................ 18-32
  Compensator Arm Bushing
    Replacement ................................ 18-32
Rear Damper
  Removal ...................................... 18-33
  Disassembly/Inspection ....................... 18-34
  Reassembly .................................. 18-36
  Installation .................................. 18-36
Damper Disposal ................................. 18-37