

# SERVICING

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(1)

7

(1)

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# TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Excessive Steering Wheel Play	<ul style="list-style-type: none"> <li>● Backlash between sector gear shaft and ball nut too large</li> <li>● Steering linkage worn</li> <li>● Sector gear shaft worn</li> </ul>	Adjust  Replace Replace	7-S13 — 7-S9
Tractor Pulls to Right or Left	<ul style="list-style-type: none"> <li>● Tire pressure uneven</li> <li>● Steering wheel play too small</li> <li>● Improper toe-in adjustment</li> </ul>	Adjust Adjust Adjust	G-36 7-S13 6-S3
Front Wheels Vibration	<ul style="list-style-type: none"> <li>● Steering linkage worn</li> <li>● Improper toe-in adjustment</li> </ul>	Replace Adjust	— 6-S3
Hard Steering	<ul style="list-style-type: none"> <li>● Transmission fluid improper or insufficient</li> <li>● Oil leak from pipe joint</li> <li>● Hydraulic pump malfunctioning</li> <li>● Relief valve malfunctioning</li> <li>● Seals in the steering gear box damaged</li> <li>● Backlash between sector gear shaft and ball nut too small</li> <li>● Air in the hydraulic pipes</li> <li>● Low operating pressure</li> </ul>	Change Retighten Replace Replace  Replace Adjust  Air vent Refer to next item	G-8 — 8-S6 7-S8  — 7-S13  — —
Low Operating Pressure	<ul style="list-style-type: none"> <li>● Hydraulic pump malfunctioning</li> <li>● Improper relief valve adjustment</li> <li>● Control valve malfunctioning</li> <li>● Seals in the steering gear box damaged</li> <li>● Ball nut malfunctioning</li> <li>● Oil leak from pipe or pipe broken</li> </ul>	Replace Adjust Replace  Replace Replace ball nut assembly Replace	8-S6 7-S4, S8 7-S8  — 7-S11 —
Steering Wheel Does Not Return to Neutral Position	<ul style="list-style-type: none"> <li>● Control valve malfunctioning</li> <li>● Valve Spool and valve housing jammed</li> <li>● Valve housing oil seal damaged</li> <li>● Centering spring weaken or broken</li> </ul>	Replace  Repair or Replace  Replace Replace	7-S8  7-S8  — 7-S8
Steering Force Fluctuates	<ul style="list-style-type: none"> <li>● Insufficient oil</li> <li>● Insufficient bleeding</li> <li>● Control valve malfunctioning</li> </ul>	Replenish Bleed Replace	G-8 — 7-S8
Noise	<ul style="list-style-type: none"> <li>● Insufficient oil</li> <li>● Air sucked in pump from suction circuit</li> <li>● Pipe deformed</li> </ul>	Replenish Repair Replace	G-8 — —

## SERVICING SPECIFICATIONS

Item		Factory Specification	Allowable Limit
Steering Wheel	Play	5.0 to 30.0 mm 0.2 to 1.2 in.	—
	Operation Force Condition: • Engine Speed Approx. 2600 rpm	Less than 49 N 5.0 kgf. 11 lbs.	—
Relief Valve	Setting Pressure Condition: • Engine Speed: Approx. 2600 rpm • Oil Temperature: 45 to 55°C 113 to 131°F	11.28 to 11.77 MPa 115 to 120 kgf/cm <sup>2</sup> 1636 to 1707 psi	—
Steering Gear Box to Ball Nut	Clearance	0.035 to 0.079 mm 0.00138 to 0.00311 in.	0.15 mm 0.0059 in.
Gear Box Bore	I.D.	56.005 to 56.030 mm 2.20492 to 2.20591 in.	—
Ball Nut	O.D.	55.951 to 55.970 mm 2.20280 to 2.20354 in.	—
Bull Nut Assembly	Axial Play	0 to 0.12 mm 0 to 0.0047 in.	0.100 mm 0.00394 in.
Valve Housing to Spool	Clearance	0.005 to 0.015 mm 0.00020 to 0.00059 in.	0.025 mm 0.00098 in.
Spool	O.D.	24.995 to 25.000 mm 0.98406 to 0.98425 in.	—
Valve housing	I.D.	25.005 to 25.010 mm 0.98445 to 0.98465 in.	—
Valve housing to Piston	Clearance	0.005 to 0.030 mm 0.00020 to 0.00118 in.	0.06 mm 0.0024 in.
Piston	O.D.	9.990 to 10.005 mm 0.39331 to 0.39390 in.	—
Valve housing	I.D.	10.010 to 10.020 mm 0.39409 to 0.39449 in.	—
Sector Gear Shaft to Side Cover	Clearance	0.005 to 0.034 mm 0.00020 to 0.00206 in.	0.1 mm 0.0039 in.
Sector Gear Shaft	O.D.	27.987 to 28.000 mm 1.10185 to 1.10236 in.	
Side Cover Side	I.D.	28.005 to 28.021 mm 1.10256 to 1.10319 in.	

**(Continued)**

Item		Factory Specification	Allowable Limit
Sector Gear Shaft to Steering Gear Box	Clearance	0.040 to 0.074 mm 0.00158 to 0.00291 in.	0.20 mm 0.0078 in.
Sector Gear Shaft	O.D.	27.987 to 28.000 mm 1.10185 to 1.10236 in.	—
Steering Gear Box	I.D.	28.040 to 28.061 mm 1.10394 to 1.10476 in.	—
Sector Gear Shaft to Ball Nut	Backlash Deflection measured at piston arm end	Less than 0.30 mm 0.0118 in.	—
Worm Shaft	Turning Torque	Less than 0.78 N·m 0.08 kgf·m 0.58 ft-lbs.	—

**TIGHTENING TORQUES**

Tightening torques of screws and nuts on the table below are especially specified.  
(For general use screws and nuts: See page G-8)

Item	N·m	kgf·m	ft-lbs
Drag link end slotted nut	17.7 to 34.3	1.8 to 3.5	13.0 to 25.3
Tie rod lock nut	29.4 to 34.3	3.0 to 3.5	21.7 to 25.3
Pitman arm mounting nut	147.1 to 176.5	15.0 to 18.0	108.5 to 130.2
Power steering assembly mounting screw	77.5 to 90.2	7.9 to 9.2	57.1 to 66.5
Power steering delivery and return pipe end flare nut	29.4 to 39.2	3.0 to 4.0	21.7 to 28.9
Steering wheel mounting nut	29.4 to 49.0	3.0 to 5.0	21.7 to 36.2
Top cover mounting nut	24.5 to 28.5	2.5 to 2.9	18.1 to 21.0
Side cover mounting screw	23.5 to 27.5	2.4 to 2.8	17.4 to 20.3

# CHECKING, DISASSEMBLING AND SERVICING

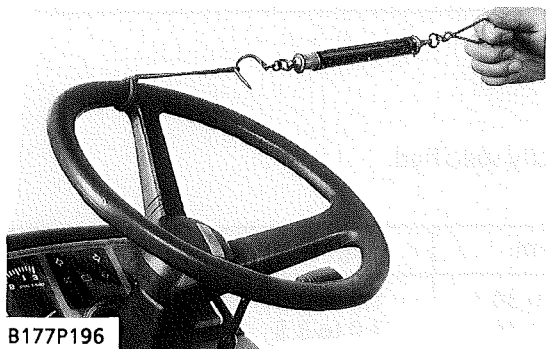
## CHECKING

### ■ IMPORTANT

- Use only the transmission fluid (See page S.G-3), in no case use mixture of oils of different brands.
- Do not disassemble the hydraulic pump and power steering needlessly.
- After installing or reassembling the power steering hydraulic components, be sure to bleed air.

### (Bleeding)

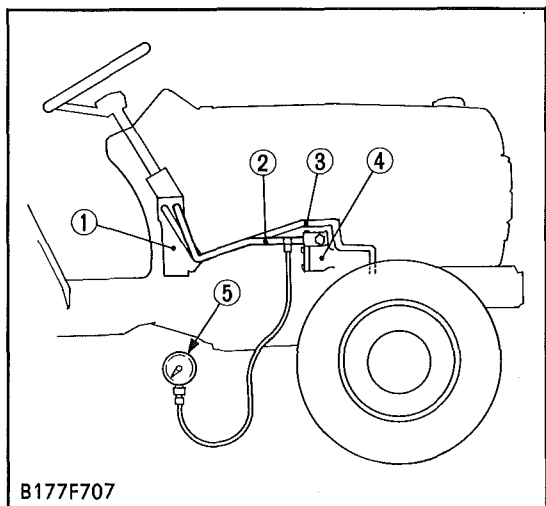
- Start the engine, then turn the steering wheel slowly in both directions all the way alternately several times, and stop the engine.



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### Condition

- Engine speed ..... Approx. 2600 rpm
- Oil temperature.... 45 to 55 °C  
113 to 131 °F
- Tractor by itself  
(without any implement and weight)



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- (1) Power Steering Valve  
(2) Delivery Pipe  
(3) Return Pipe  
(4) Hydraulic Pump  
(5) Pressure Gauge

### Steering Wheel Play

1. Refer to the backlash between sector gear shaft and ball nut on page 7-S13.

Power steering wheel play	Reference value	5.0 to 30.0 mm 0.2 to 1.2 in.
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### Steering Wheel Operating Force

1. Park the tractor on flat concrete place.
2. Start the engine. After warming up, set the engine speed at approx. 2600 rpm.
3. Set a spring balance to the steering wheel to measure the operating force.
4. If the measurement exceeds the factory specification, check the suction line, delivery line, and the performance of hydraulic pump.  
And then, check the power steering assembly.

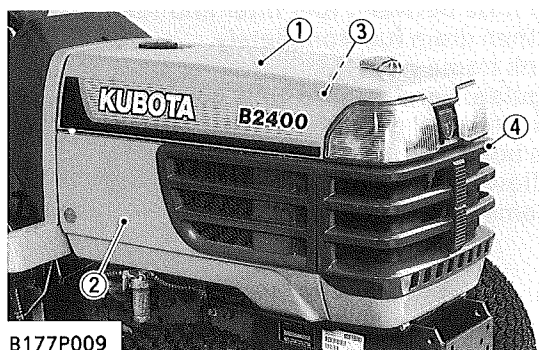
Steering wheel operating force	Factory spec.	Less than 49 N 5.0 kgf 11 lbs
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### Relief Valve Setting Pressure

1. Remove the panel board, bonnet rear cover and right side cover to remove the power steering delivery pipe (2).
2. Remove the power steering delivery pipe (2).
3. Install the pressure gauge (5) to another power steering delivery pipe (2), and connect it to the original position.
4. Start the engine. After warming up, set the engine speed at approx. 2600 rpm.
5. Fully turn the steering wheel to the left or right end to read the relief pressure. After reading, stop the engine.
6. If the pressure is not factory specification, check the pump delivery line and adjust the relief valve setting pressure (Refer to 7-S8).

Power steering relief valve setting pressure	Factory spec.	11.28 to 11.77 MPa 115 to 120 kgf/cm <sup>2</sup> 1636 to 1707 psi
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## [1] SEPARATING POWER STEERING BODY



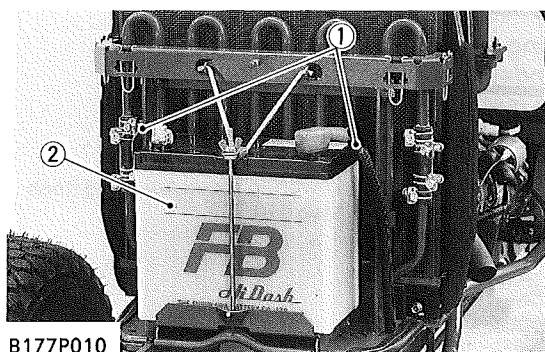
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### Hood and Side Cover

1. Open the hood (1) from the front and remove the spring lock pin and remove hood with hood rod for keeping it open.
2. Remove the front grille (4).
3. Remove the right and left side cover (2), (3).

(1) Hood  
(2) Side Cover RH

(3) Side Cover LH  
(4) Front Grille



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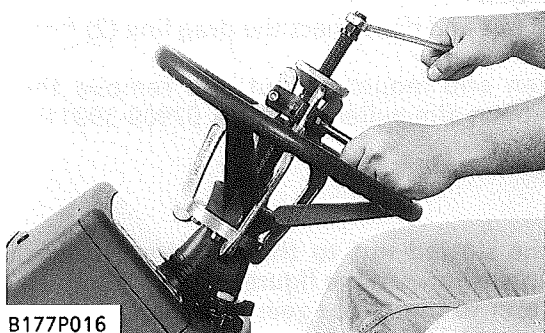
### Battery

1. Disconnect the battery cords (1) and dismount the battery (2).

#### ■ NOTE

- When disconnecting the battery cords, disconnect the grounding cord first. When connecting, connect the positive cord first.

(1) Battery Cord  
(2) Battery



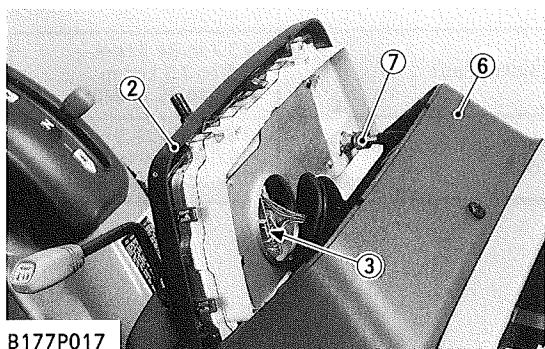
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### Steering Wheel

1. Remove the steering wheel cap.
2. Remove the steering wheel mounting nut and remove the steering wheel with a steering wheel puller. (Code No : 07916-51090)

#### (When reassembling)

Tightening torque	Steering wheel mounting nut	29.4 to 49.0 N·m 3.0 to 5.0 kgf·m 21.7 to 36.2 ft·lbs
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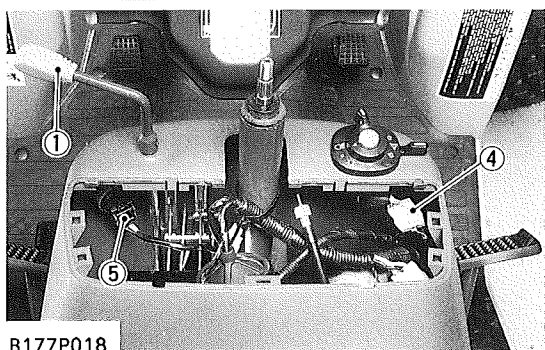
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### Meter Panel and Panel Under Cover

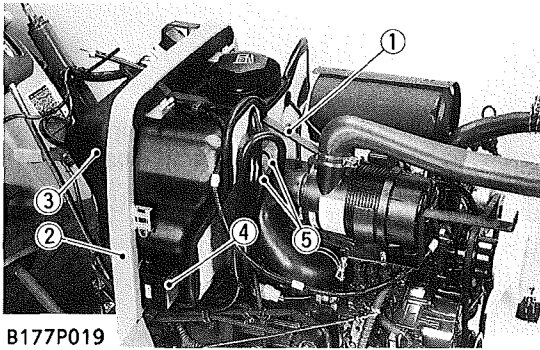
1. Remove the meter panel (2) and disconnect the meter panel connector (3) and hour-meter cable (7) from the meter panel. Then remove the meter panel.
2. Tap out the spring pin and remove the hand accelerator lever (1).
3. Disconnect the combination switch connector (4) and main switch connector (5).
4. Remove the panel under cover (6).

(1) Hand Accelerator Lever  
(2) Meter Panel  
(3) Meter Panel Connector  
(4) Combination Switch Connector

(5) Main Switch Connector  
(6) Panel Under Cover  
(7) Hour-meter Cable



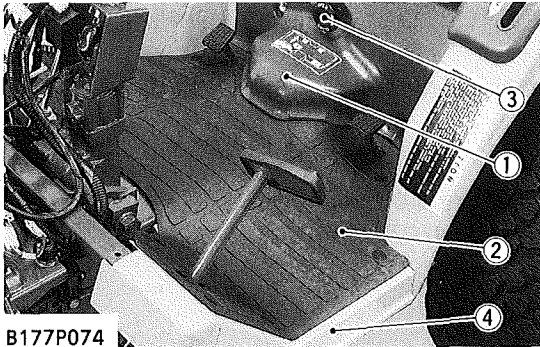
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### Fuel Tank

1. Disconnect the fuel hose between fuel filter and fuel tank at the fuel filter side, then drain fuel completely.
2. Remove the fuel tank frame stay (1).
3. Disconnect the regulator and hazard unit connectors, and remove the lead wire for fuel gauge.
4. Disconnect the fuse box (4).
5. Dismount the overflow hoses (5) of fuel line.
6. Remove the tank flame (2) with fuel tank (3).

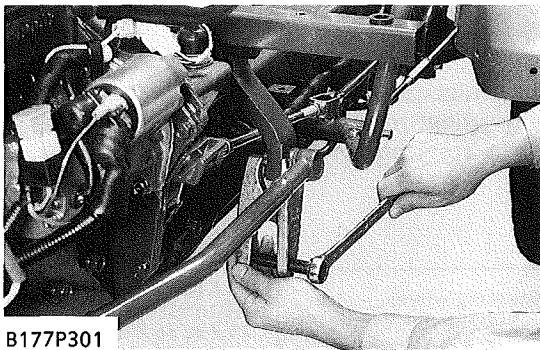
- (1) Fuel Tank Frame Stay  
(2) Fuel Tank Frame  
(3) Fuel Tank  
(4) Fuse Box  
(5) Overflow Hose



### Step

1. Remove the lowering speed adjusting knob (3).
2. Remove the seat under cover (1).
3. Remove the rubber mat (2).
4. Remove the clutch spring and left hand step (4).

- (1) Seat Under Cover  
(2) Rubber Mat  
(3) Lowering Speed Adjusting Knob  
(4) Step (LH)



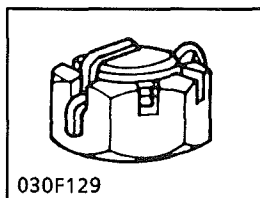
### Drag Link and Pitman Arm

1. Remove the slotted nut and disconnect the drag link (2) from the pitman arm (1).
2. Remove the pitman arm mounting nut and remove the pitman arm with pitman arm puller (Code No. 07909-39011).

(When reassembling)

### ■ IMPORTANT

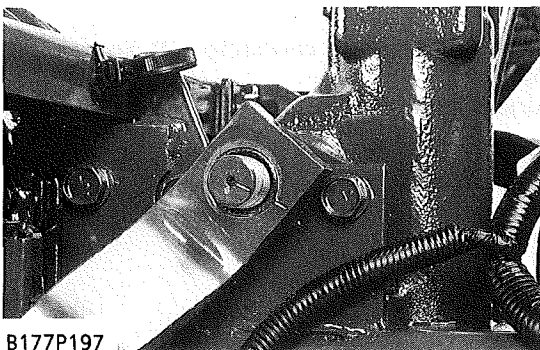
- After tightening the slotted nut to the specified torque, install the cotter pin as shown in the figure.
- Install the pitman arm to the sector gear shaft so that their marks align.



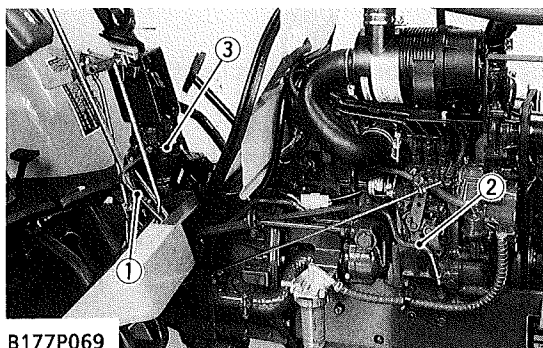
Tightening torque	Slotted nut	17.7 to 34.3 N·m 1.8 to 3.5 kgf·m 13.0 to 25.3 ft-lbs
	Pitman arm mounting nut	147.1 to 176.5 N·m 15.0 to 18.0 kgf·m 108.5 to 130.2 ft-lbs

(1) Pitman Arm

(2) Drag Link







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- (1) Power Steering Delivery Pipe  
 (2) Power Steering Return Pipe  
 (3) Power Steering Assembly

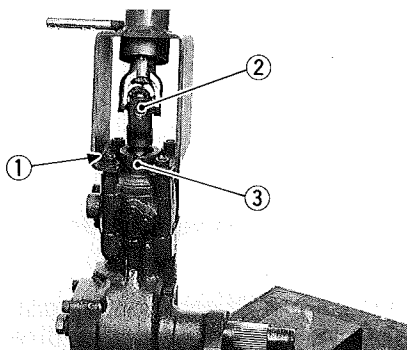
### Power Steering Assembly

1. Remove the power steering delivery pipe (1) and return pipe (2).
2. Disconnect the speed set rod (HST type) and parking brake rod.
3. Remove the power steering assembly (3) from the center frame.

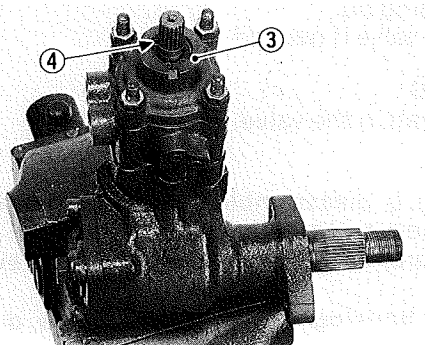
### (When reassembling)

Tightening torque	Flare nut (PS delivery, return pipe)	29.4 to 39.2 N·m 3.0 to 4.0 kgf·m 21.7 to 28.9 ft-lbs
	Power steering assembly mounting screw	77.5 to 90.1 N·m 7.9 to 9.2 kgf·m 57.2 to 66.5 ft-lbs

## [2] POWER STEERING BODY DISASSEMBLING AND ASSEMBLING



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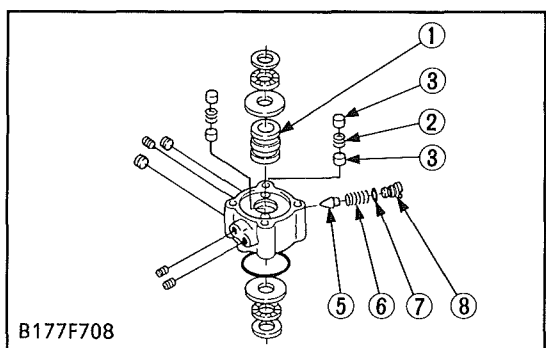
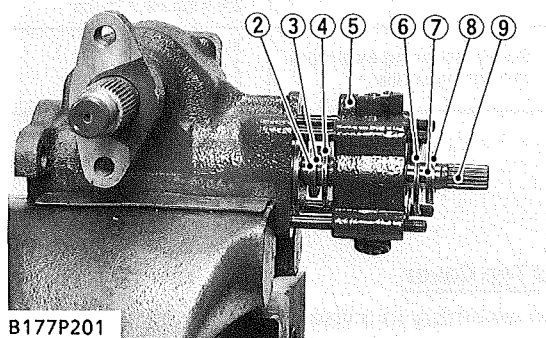
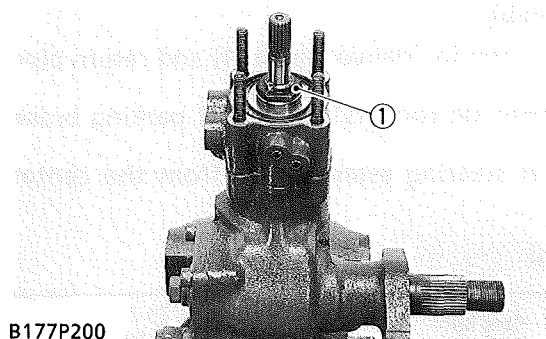
### Steering Column and Top Cover

1. Secure the steering assembly in a vise.
2. Turn the steering shaft several times to drain oil.
3. Loosen the steering column mounting nut (1), and remove the steering column with steering shaft and universal joint (2).
4. Remove the external snap ring (4) and nut which secure the top cover (3), and remove the top cover (3).

### (When reassembling)

Tightening torque	Steering column mounting nut	23.5 to 27.5 N·m 2.4 to 2.8 kgf·m 17.4 to 20.3 ft-lbs
	Top cover mounting nut	23.5 to 27.5 N·m 2.4 to 2.8 kgf·m 17.4 to 20.3 ft-lbs

- (1) Steering Column Mounting Nut      (3) Top Cover  
 (2) Universal Joint      (4) External Snap Ring



- |                      |                         |
|----------------------|-------------------------|
| (1) Spool            | (5) Relief Valve Poppet |
| (2) Centering Spring | (6) Relief Spring       |
| (3) Reaction Pistons | (7) O-ring              |
| (4) Valve Housing    | (8) Adjusting Screw     |

### Valve Assembly

1. Install the four top cover mounting nuts to the stud bolt temporarily by hand.
2. Remove the stake of nut (1), then remove it.
3. Remove the valve assembly. Set the worm shaft horizontally to remove each part easily.

### (When reassembling)

#### ■ IMPORTANT

- Lightly tighten the nut (1) by hand, and while holding the worm shaft (9), tighten with a wrench. After tightening, loosen the nut approx. 0.17 rad. (10°), and stake the nut (1) with a pin punch.

- |                           |                           |
|---------------------------|---------------------------|
| (1) Nut                   | (6) Thrust Race           |
| (2) Thrust Race           | (7) Thrust Needle Bearing |
| (3) Thrust Needle Bearing | (8) Thrust Race           |
| (4) Thrust Race           | (9) Worm Shaft            |
| (5) Valve Housing         |                           |

### Disassembling Valve Housing

#### ■ IMPORTANT

- Do not disassemble the relief valve needlessly, since it has been factory-adjusted.

1. Remove the centering springs (2) and reaction pistons (3).
2. Remove the spool (1) and remember the direction of it against valve housing (4).
3. Remove the relief valve if needed.

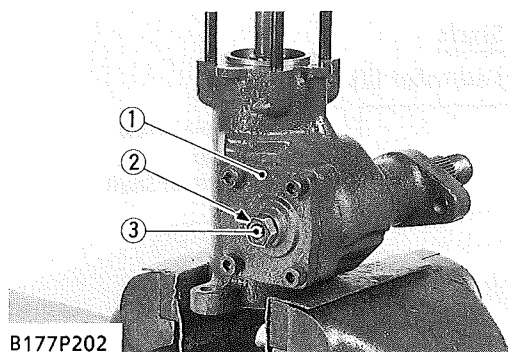
### (When reassembling)

- Apply grease to seals in the valve.

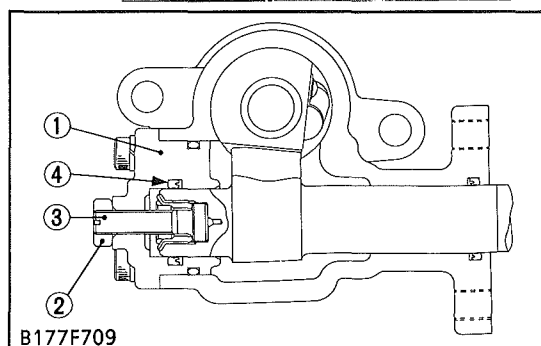
#### ■ IMPORTANT

- If the relief valve is disassembled, replace the adjusting screw with new one, and after reassembly, be sure to adjust the setting pressure, then stake the adjusting screw with a punch.
- When the valve housing (4) or spool (1) are damaged, replace them as a unit.

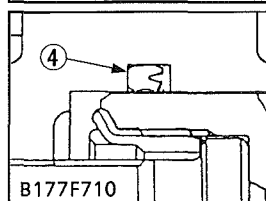
Power steering relief valve setting pressure	Factory spec.	11.28 to 11.77 MPa 115 to 120 kgf/cm <sup>2</sup> 1636 to 1707 psi
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(1) Side Cover  
(2) Lock Nut

(3) Adjusting Screw  
(4) U-Seal

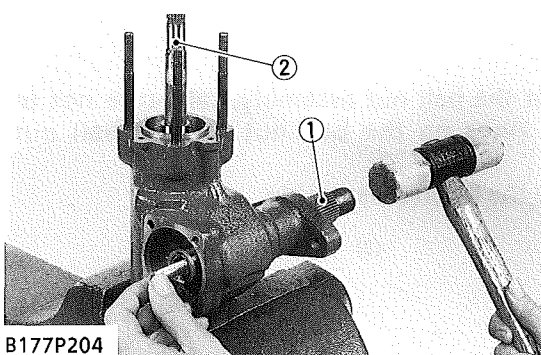
### Side Cover

1. Remove the lock nut (2) on the adjusting screw.
2. Remove the side cover mounting screws.
3. Turn the adjusting screw (3) clockwise to remove the side cover (1).

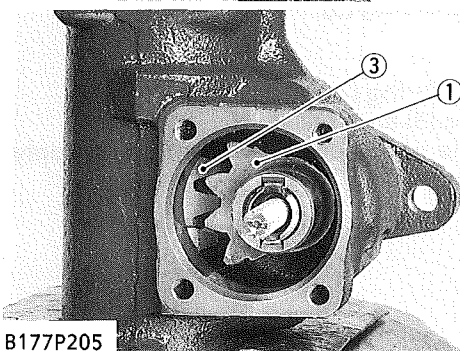
### (When reassembling)

- Apply grease to the O-ring.
- Apply grease to the ring groove, before mounting the U-seal on it.
- Direct the lip of U-seal inward, as shown in the figure.
- Replace the lock nut with a new one, and after adjusting the backlash between sector gear and ball nut, be sure to stake the adjusting screw and lock nut with a punch.

Tightening torque	Lock nut	48.1 to 55.9 N·m 4.9 to 5.7 kgf·m 35.4 to 41.2 ft-lbs
	Side cover mounting screw	37.3 to 56.9 N·m 3.8 to 5.8 kgf·m 27.5 to 42.0 ft-lbs



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### Sector Gear Shaft

1. Tap out the sector gear shaft (1) toward the side cover while holding another end to avoid dropping.

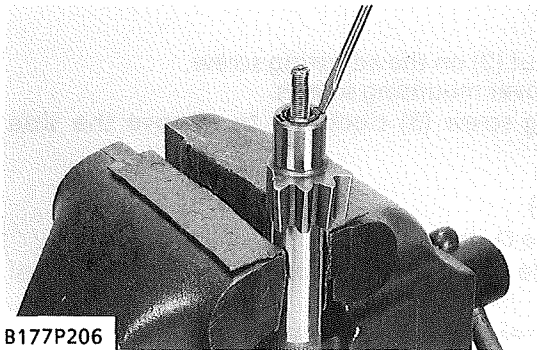
### (When reassembling)

- Turn the worm shaft (2) so that the ball nut (3) is centered in its travel.  
Then, install the sector gear shaft (1) so that the center of its teeth engages the center of the teeth of the ball nut (3).

### ■ NOTE

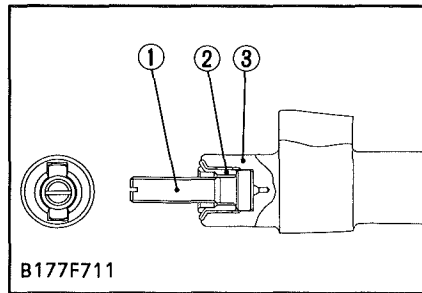
- When setting the sector gear shaft (1), take care not to damage the oil seal and U-seal in the gear box.

- (1) Sector Gear Shaft  
(2) Worm Shaft  
(3) Ball Nut



### Adjuster of Sector Gear Shaft

1. Remove the stake and adjuster (2).



- (1) Adjusting Screw  
(2) Adjuster  
(3) Sector Gear Shaft

### (When reassembling)

- Apply grease to the head of adjuster.

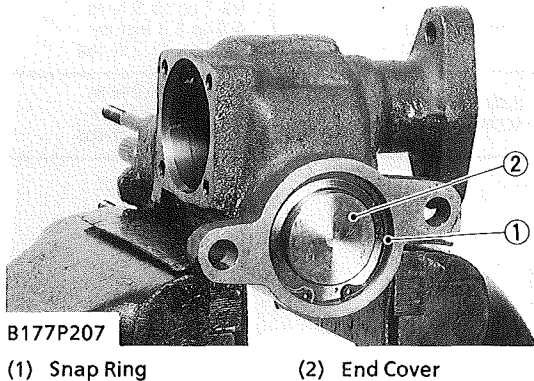
### Snap Ring

1. Remove the snap ring (1) which retains the end cover (2).

### (When reassembling)

#### ■ NOTE

- Direct the blunt edge side of the snap ring (1) to the end cover (2).

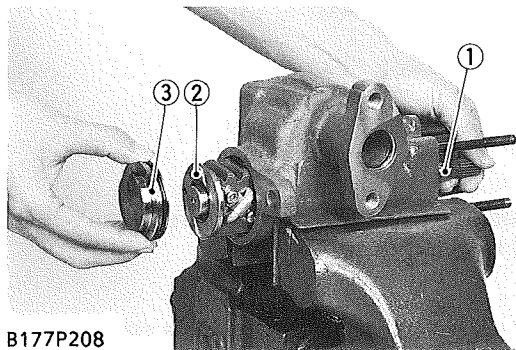


### End Cover and Ball Nut Assembly

1. Tap out the worm shaft (1) toward the end cover (3) to remove it.
2. Remove the ball nut (2) and worm shaft (1) (ball nut assembly) as a unit.

#### ■ NOTE

- When drawing out the ball nut assembly, take care not to damage the seal rings on the ball nut (2) and ball nut surface.
- Never disassemble the ball nut assembly.



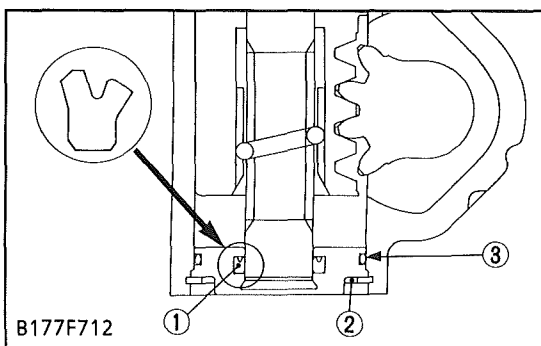
- (1) Worm Shaft (3) End Cover  
(2) Ball Nut

### Seal Rings on End Cover

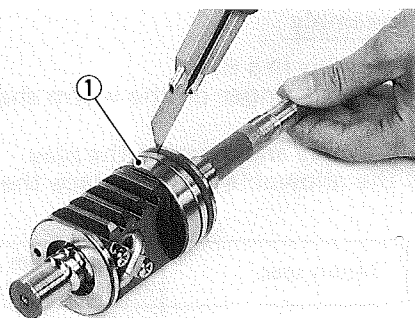
1. Remove the U-seal (1) and O-ring (3).

### (When reassembling)

- Replace the U-seal (1) and O-ring (3) with new ones.
- Apply grease to the O-ring (3) and U-seal (1).
- Before setting them inside of the end cover and on it, apply grease to the ring grooves.



- (1) U-seal (3) O-ring  
(2) Snap Ring



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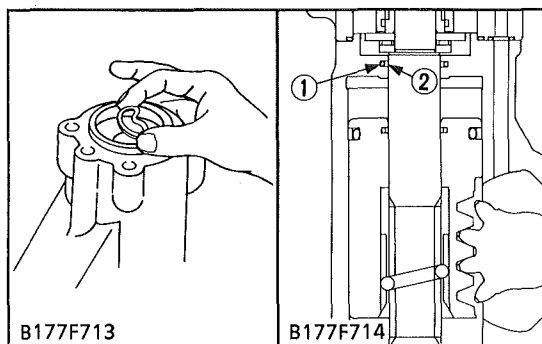
### Seal Ring on Ball Nut

1. Cut the seal ring with a knife and remove it.
2. Remove the O-ring inside the teflon ring.

#### (When reassembling)

- Apply grease to the ring groove.
- Replace the seal rings with new ones.
- Stretch the teflon ring by hand, install it on the ball nut, and press it so that it is restored to its original form.

(1) Ball Nut



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B177F714

### Seal Rings on Gear Box

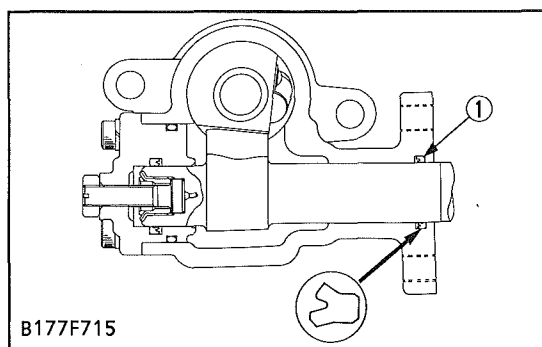
1. Remove the seal ring (1).
2. Remove the seal ring (2).

#### (When reassembling)

- Apply grease to the ring groove.
- Replace the seal rings (1) (2) with new ones.
- Change the shape of the seal ring (1) to the heart figure by fingers, install it on the gear box and press it so that it is restored to its original form.

(1) Seal Ring

(2) Seal Ring



B177F715

### U-Seal on Gear Box

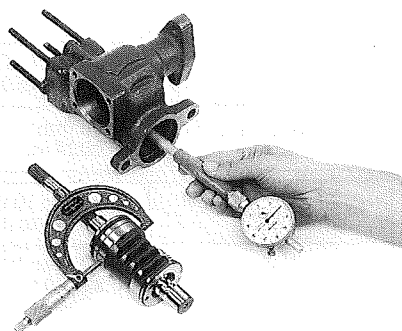
1. Remove the U-seal (1) with a sharp tool.

#### (When reassembling)

- Replace the U-seal (1) with new ones.
- Direct the lip of the U-seal (1) inward.
- After applying grease to the ring groove and to seals, set them.

(1) U-Seal

## SERVICING

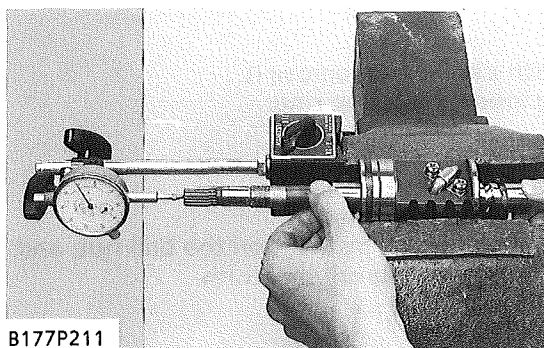


B177P210

### Clearance between Steering Gear Box and Ball Nut

1. Measure the steering gear box cylinder I.D. with a cylinder gauge.
2. Measure the ball nut O.D. with an outside micrometer, and calculate this clearance.
3. If the clearance exceeds the allowable limit, replace the steering gear box or ball nut assembly.

Clearance between steering gear box and ball nut	Factory spec.	0.035 to 0.079 mm 0.001 to 0.00311 in.
	Allowable limit	0.15 mm 0.0059 in.
Gear box bore I.D.	Factory spec.	56.005 to 56.030 mm 2.2049 to 2.20591 in.
Ball nut O.D.	Factory spec.	55.951 to 55.970 mm 2.20280 to 2.20354 in.

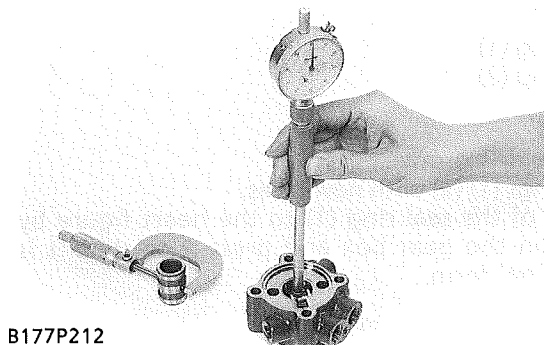


B177P211

### Axial Play of Ball Nut Assembly

1. Secure the ball nut assembly in a vise.
2. Set a dial indicator with its finger on the worm shaft of the ball nut assembly.
3. Move the worm shaft axially and measure the play.
4. If the play exceeds the allowable limit, replace the ball nut assembly.

Axial play of ball nut assembly	Factory spec.	0 to 0.12 mm 0 to 0.0047 in.
	Allowable limit	0.100 mm 0.00394 in.



B177P212

### Clearance between Valve Housing and Spool

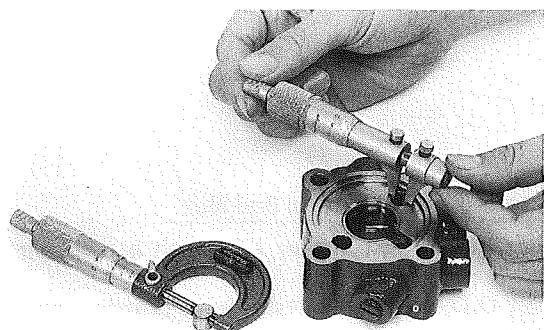
1. Measure the valve housing I.D. with a cylinder gauge and the spool O.D. with an outside micrometer, and calculate this clearance.
2. If the clearance exceeds the allowable limit, replace the spool and valve housing as a unit.

#### ■ IMPORTANT

- Check to see if the spool slides smoothly in the valve housing.

Clearance between valve housing and spool	Factory spec.	0.005 to 0.015 mm 0.00020 to 0.00059 in.
	Allowable limit	0.025 mm 0.00098 in.

Spool O.D.	Factory spec.	24.995 to 25.000 mm 0.98406 to 0.98425 in.
Valve housing I.D.	Factory spec.	25.005 to 25.010 mm 0.98445 to 0.98465 in.



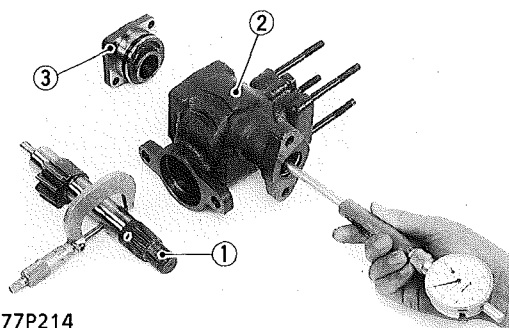
B177P213

### Clearance between Valve Housing and Piston

1. Measure the piston O.D. with an outside micrometer and valve housing I.D. with an inside micrometer, and calculate this clearance.
2. If the clearance exceeds the allowable limit, replace the defective parts.

Clearance between valve housing and piston	Factory spec.	0.005 to 0.030 mm 0.00020 to 0.00118 in.
	Allowable limit	0.06 mm 0.0024 in.

Piston O.D.	Factory spec.	9.990 to 10.005 mm 0.39331 to 0.39390 in.
Valve housing I.D.	Factory spec.	10.010 to 10.020 mm 0.39409 to 0.39449 in.



B177P214

- (1) Section Gear Shaft  
(2) Steering Gear Box  
(3) Side Cover

### Clearance between Sector Gear Shaft and Side Cover

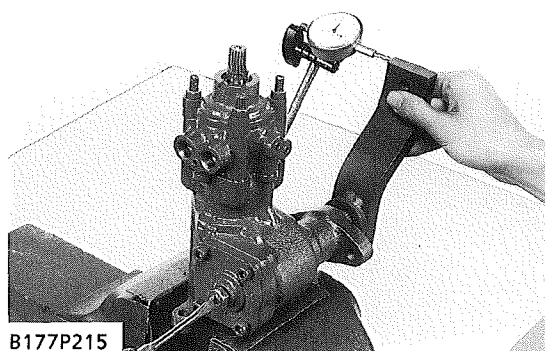
1. Measure the sector gear shaft O.D. with an outside micrometer and side cover I.D. with a cylinder gauge, and calculate the clearance.
2. If the clearance exceeds the allowable limit, replace the defective parts.

Clearance between side cover and sector gear shaft	Factory spec.	0.005 to 0.034 mm 0.00020 to 0.00206 in.
	Allowable limit	0.1 mm 0.0039 in.
Sector gear shaft O.D.	Factory spec.	27.987 to 28.000 mm 1.10185 to 1.10236 in.
Side cover I.D.	Factory spec.	28.005 to 28.021 mm 1.10256 to 1.10319 in.

### Clearance between Sector Gear Shaft and Steering Gear Box

1. Measure the sector gear shaft O.D. with an outside micrometer and steering gear box I.D. with a cylinder gauge, and calculate the clearance.
2. If the clearance exceeds the allowable limit, replace the defective parts.

Clearance between sector gear shaft and steering gear box	Factory spec.	0.040 to 0.074 mm 0.00158 to 0.00291 in.
	Allowable limit	0.20 mm 0.0078 in.
Sector gear shaft O.D.	Factory spec.	27.987 to 28.000 mm 1.10185 to 1.10236 in.
Steering gear box I.D.	Factory spec.	28.040 to 28.061 mm 1.10394 to 1.10476 in.

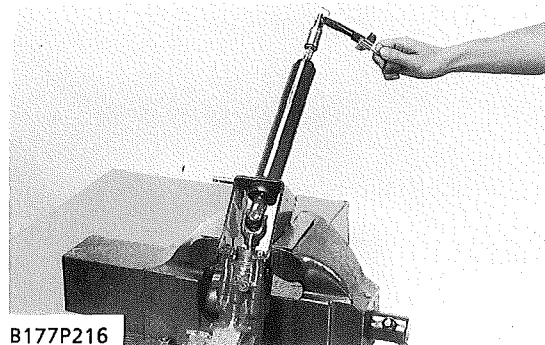


B177P215

### Backlash between Sector Gear Shaft and Ball Nut

1. Attach the pitman arm having no play.
2. Set a dial indicator with its finger on the pitman arm.
3. Move the pitman arm lightly, and measure the deflection.
4. If the measurement is not within the factory specification, adjust the backlash with the adjusting screw.

Backlash between sector gear shaft and ball nut	Factory spec.	Less than 0.30 mm 0.0118 in.
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B177P216

### Turning Torque of Worm Shaft

1. Set the torque wrench on the worm shaft and measure the torque required to initial turning.
2. If the measurement is not within the factory specification, disassemble the steering gear box.

Turning torque of worm shaft	Factory spec.	0.78 N·m Less than 0.08 kgf·m 0.58 ft·lbs
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