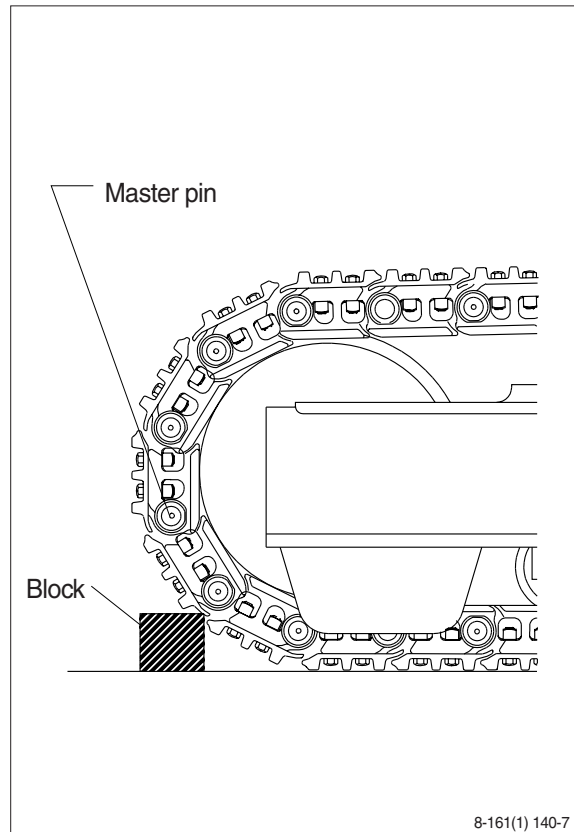


GROUP 10 UNDERCARRIAGE

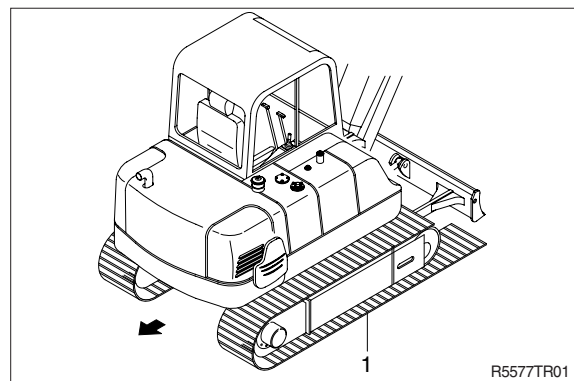
1. TRACK LINK

1) REMOVAL

- (1) Move track link until master pin is over front idler in the position put wooden block as shown.
- (2) Loosen tension of the track link.
 - ※ If track tension is not relieved when the grease valve is loosened, move the machine backwards and forwards.
- (3) Push out master pin by using a suitable tool.

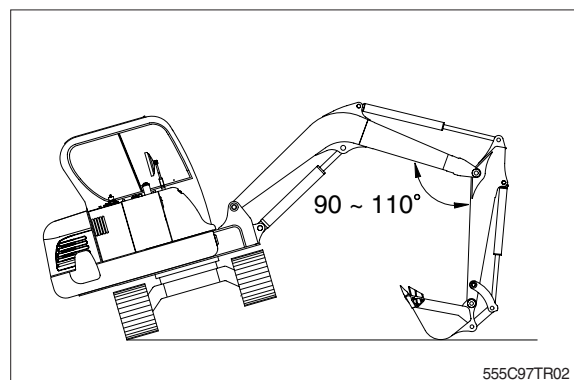


- (4) Move the machine slowly in reverse, and lay out track link assembly (1).
 - ※ Jack up the machine and put wooden block under the machine.
 - ※ Don't get close to the sprocket side as the track shoe plate may fall down on your feet.



2) INSTALL

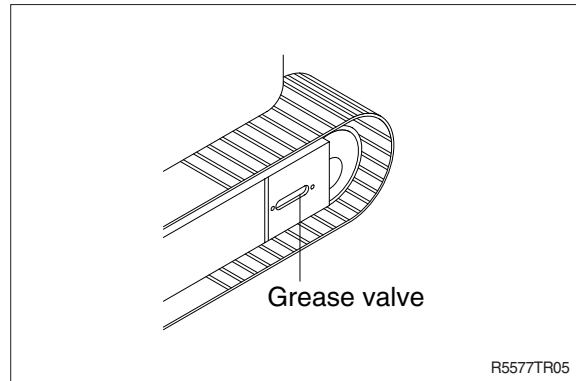
- (1) Carry out installation in the reverse order to removal.
 - ※ Adjust the tension of the track link.



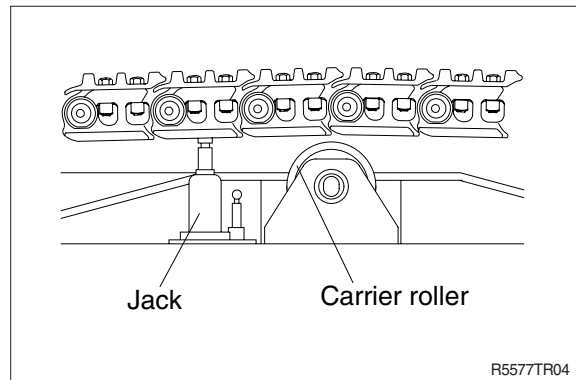
2. CARRIER ROLLER

1) REMOVAL

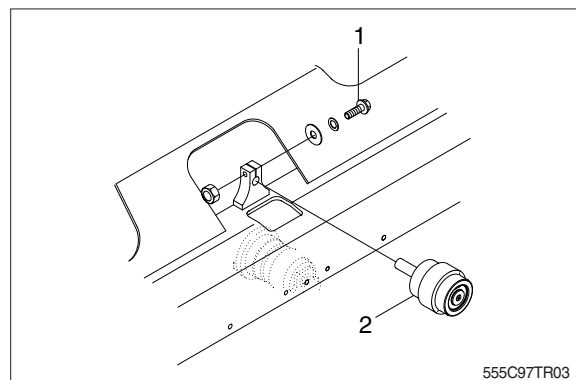
- (1) Loosen tension of the track link.



- (2) Jack up the track link height enough to permit carrier roller removal.



- (3) Remove bolt (1) at both side.
- (4) Remove carrier roller (2).
 - Weight : 10 kg (20 lb)



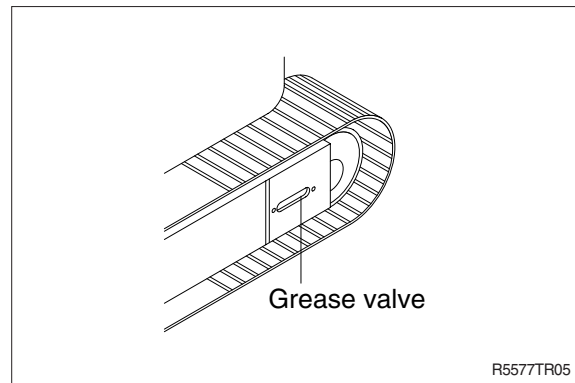
2) INSTALL

- (1) Carry out installation in the reverse order to removal.

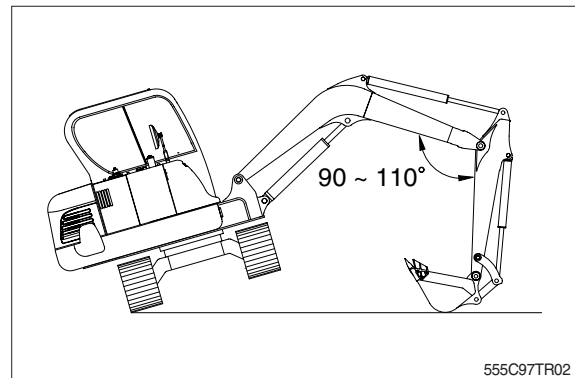
3. TRACK ROLLER

1) REMOVAL

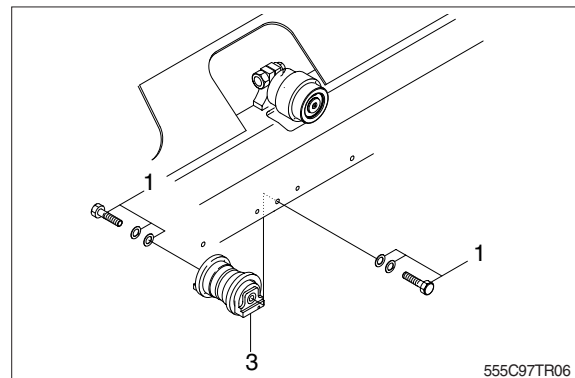
- (1) Loosen tension of the track link.



- (2) Using the work equipment, push up track frame on side which is to be removed.
※ After jack up the machine, set a block under the unit.



- (3) Remove the mounting bolt (1) and draw out the track roller (3).
· Weight : 10 kg (20 lb)



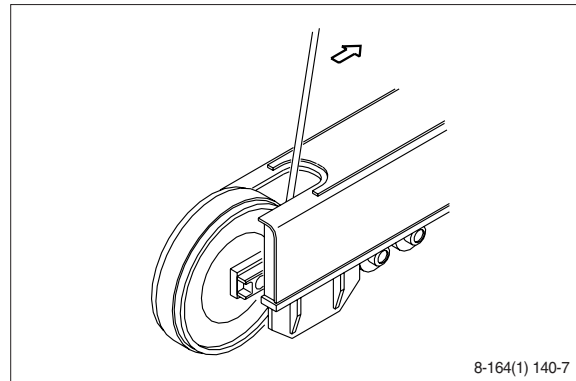
2) INSTALL

- (1) Carry out installation in the reverse order to removal.

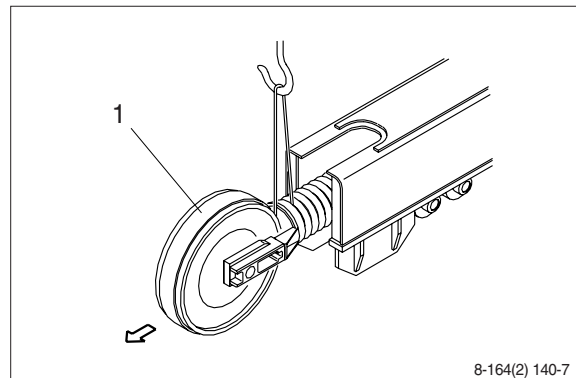
4. IDLER AND RECOIL SPRING

1) REMOVAL

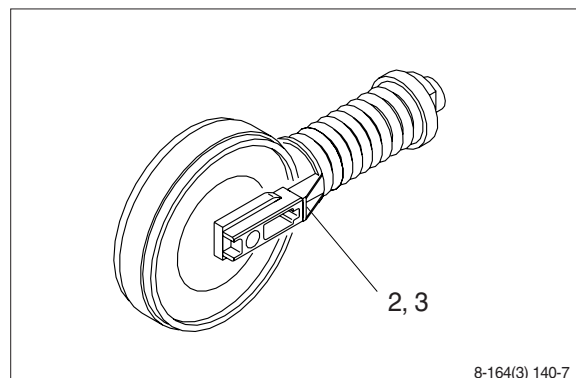
- (1) Remove the track link.
For detail, see removal of track link.



- (2) Sling the recoil spring (1) and pull out idler and recoil spring assembly from track frame, using a pry.
 - Weight : 100 kg (220 lb)

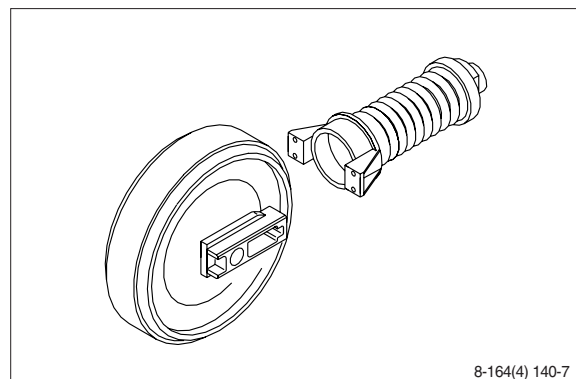


- (3) Remove the bolts (2), washers (3) and separate idler from recoil spring.



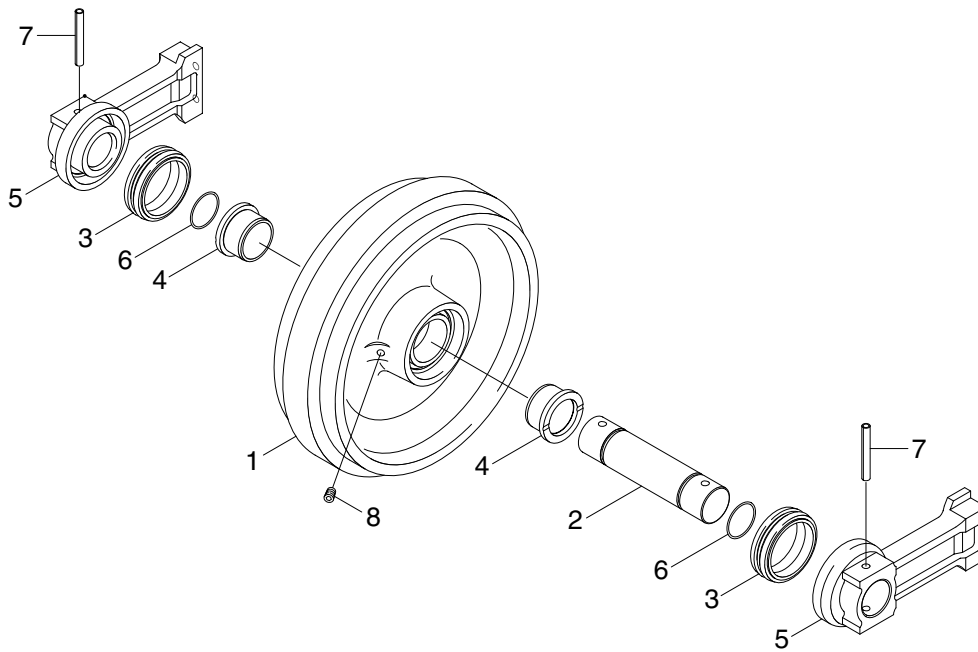
2) INSTALL

- (1) Carry out installation in the reverse order to removal.
 - ※ Make sure that the boss on the end face of the recoil cylinder rod is in the hole of the track frame.



3) DISASSEMBLY AND ASSEMBLY OF IDLER

(1) Structure

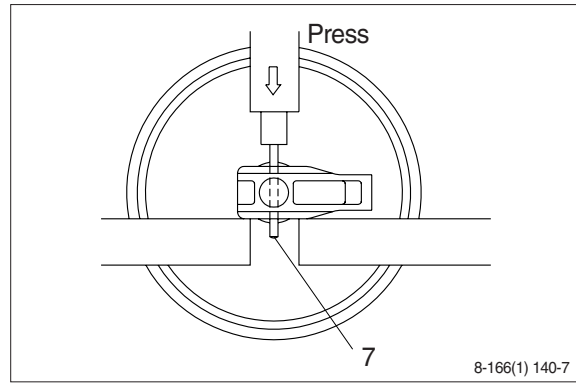


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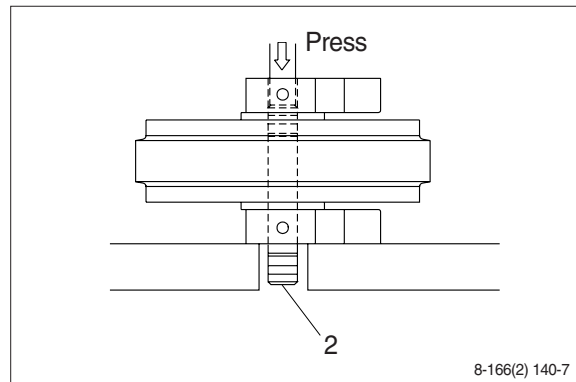
- | | | | | | |
|---|---------------|---|---------|---|------------|
| 1 | Shell | 4 | Bushing | 7 | Spring pin |
| 2 | Shaft | 5 | Bracket | 8 | Plug |
| 3 | Seal assembly | 6 | O-ring | | |

(2) Disassembly

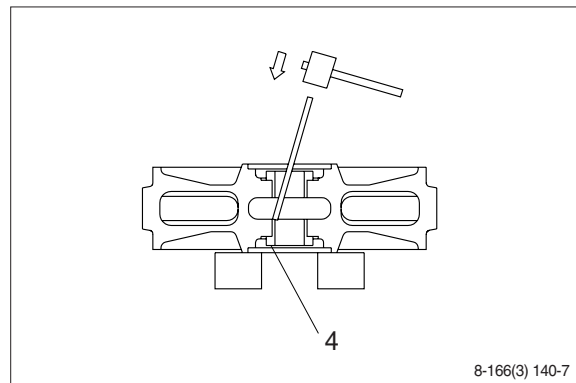
- ① Remove plug and drain oil.
- ② Draw out the spring pin (7), using a press.



- ③ Pull out the shaft (2) with a press.
- ④ Remove seal (3) from idler (1) and bracket (5).
- ⑤ Remove O-ring (6) from shaft.



- ⑥ Remove the bushing (4) from idler, using a special tool.
- ※ Only remove bushing if replacement is necessary.

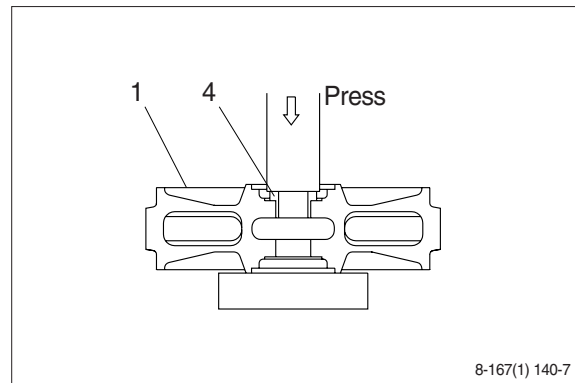


(3) Assembly

- ※ Before assembly, clean the parts.
- ※ Coat the sliding surfaces of all parts with oil.

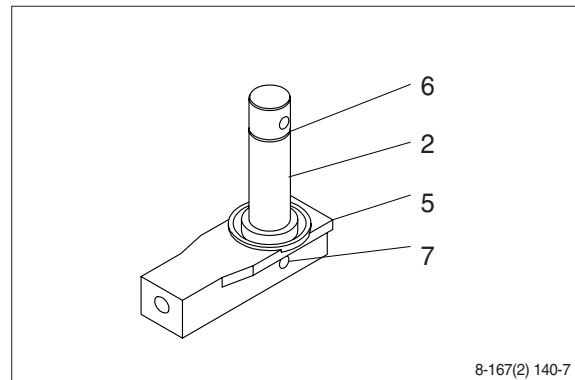
- ① Cool up bushing (4) fully by some dry ice and press it into shell (1).

Do not press it at the normal temperature, or not knock in with a hammer even after the cooling.

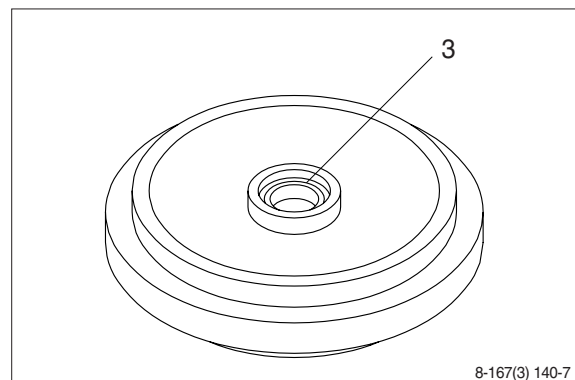


- ② Coat O-ring (6) with grease thinly, and install it to shaft (2).

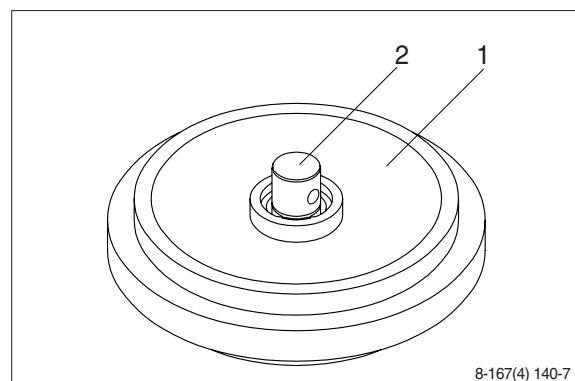
- ③ Insert shaft (2) into bracket (5) and drive in the spring pin (7).



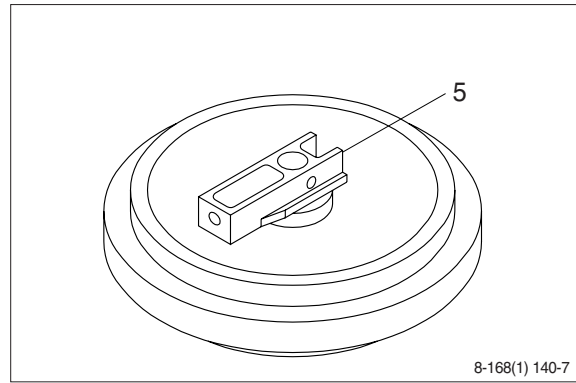
- ④ Install seal (3) to shell (1) and bracket (5).



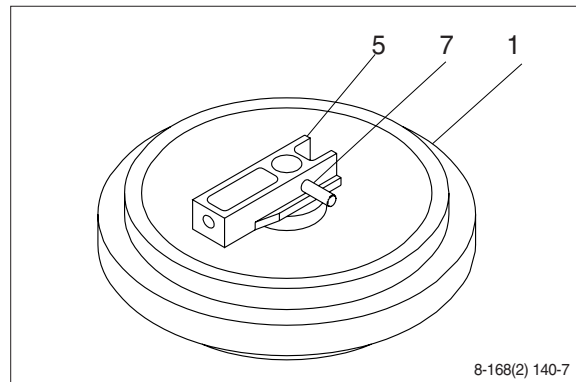
- ⑤ Install shaft (2) to shell (1).



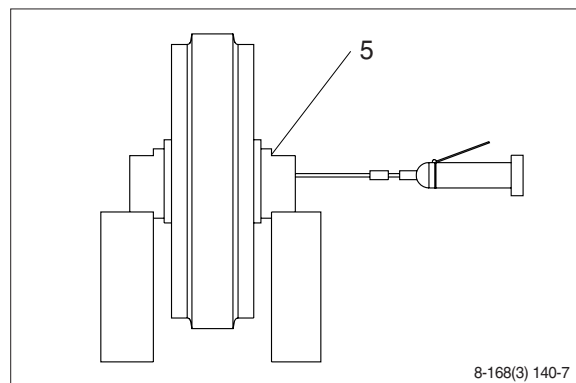
- ⑥ Install bracket (5) attached with seal (3).



- ⑦ Knock in the spring pin (7) with a hammer.

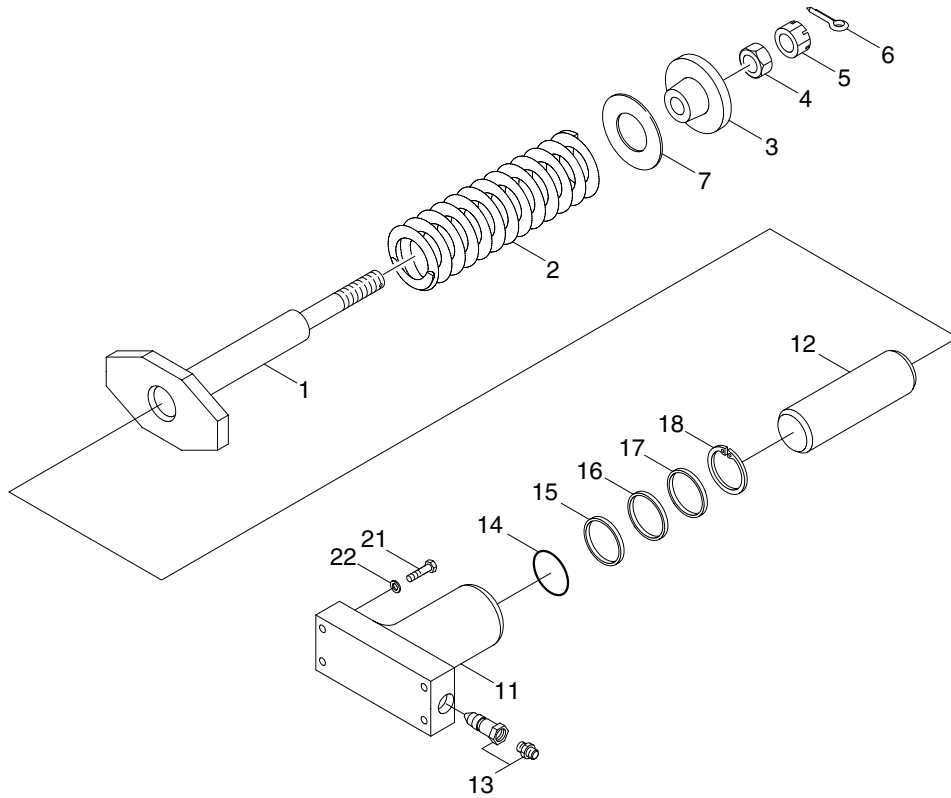


- ⑧ Lay bracket (5) on its side.
Supply engine oil to the specified level,
and tighten plug.



4) DISASSEMBLY AND ASSEMBLY OF RECOIL SPRING

(1) Structure

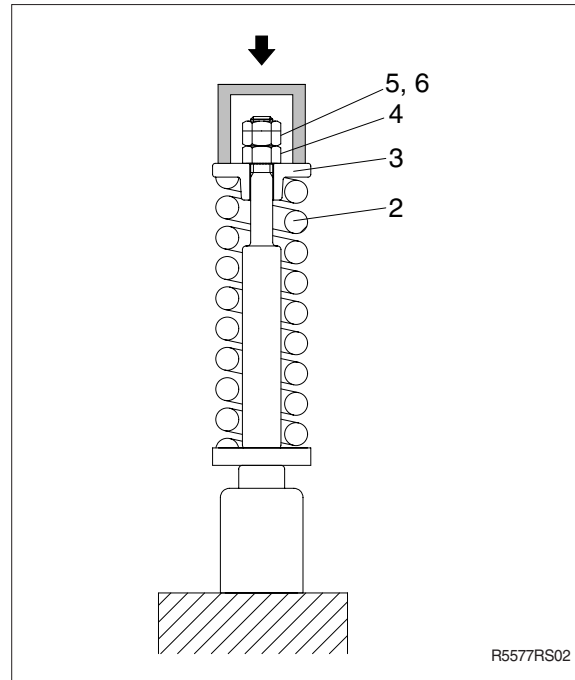


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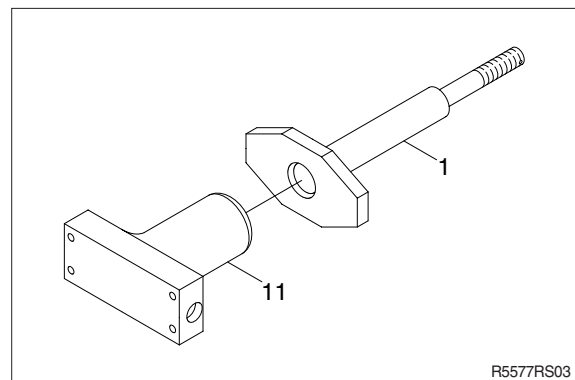
- | | | | | | |
|---|-----------------|----|--------------|----|----------------|
| 1 | Rod | 7 | Spacer | 16 | Dust-seal |
| 2 | Spring | 11 | Bracket | 17 | Spacer |
| 3 | Lock washer | 12 | Piston | 18 | Retaining ring |
| 4 | Hex-nut | 13 | Grease valve | 21 | Bolt |
| 5 | Slotted hex-nut | 14 | O-ring | 22 | Washer |
| 6 | Split pin | 15 | Back-up ring | | |

(2) Disassembly

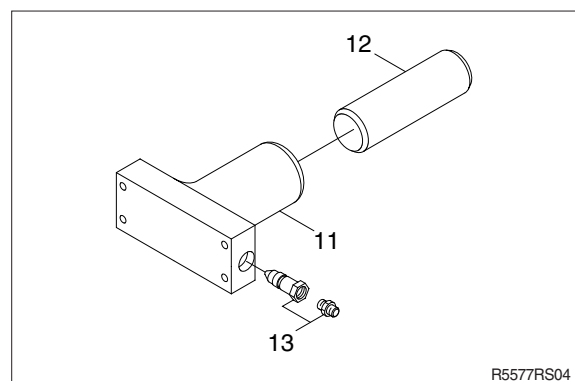
- ① Apply pressure on spring (3) with a press.
The spring is under a large installed load.
※ This is dangerous, so be sure to set properly.
 - Spring set load : 3900 kg (8600 lb)
- ② Remove split pin (6) and nut (5).
- ③ Remove lock nut (4).
Take enough notice so that the press which pushes down the spring, should not be slipped out in its operation.
- ④ Lighten the press load slowly and remove lock washer (3) and spring (2).



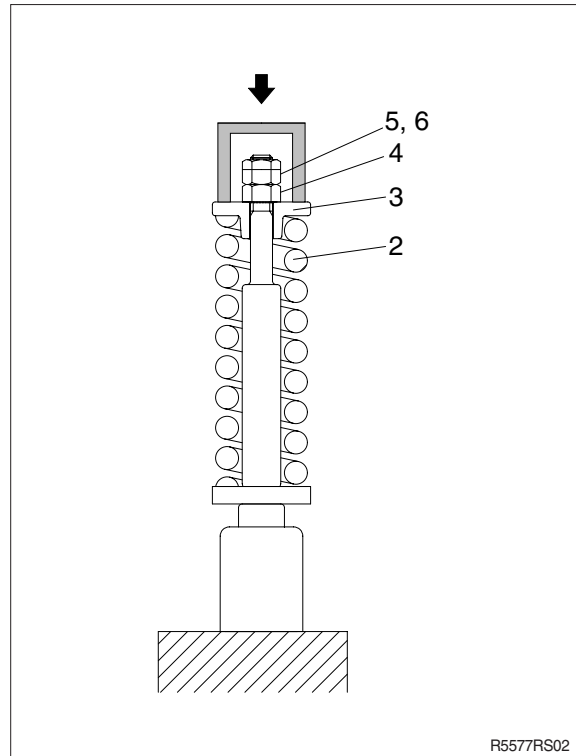
- ⑤ Remove rod (1) from bracket (11).



- ⑥ Remove grease valve (13) from bracket (11).
- ⑦ Remove piston (12) from bracket (11).



- ⑤ Install spring (3) and bracket (4) to body (1).
- ⑥ Apply pressure to spring (3) with a press and tighten nut (4).
 - ※ Apply sealant before assembling.
 - ※ During the operation, pay attention specially to prevent the press from slipping out.
 - Tightening torque : $30 \pm 3 \text{ kgf} \cdot \text{m}$
($217 \pm 21 \text{ lbf} \cdot \text{ft}$)
- ⑦ Tighten nut (5) and insert split pin (6).



- ⑧ Lighten the press load and confirm the set length of spring (2).

