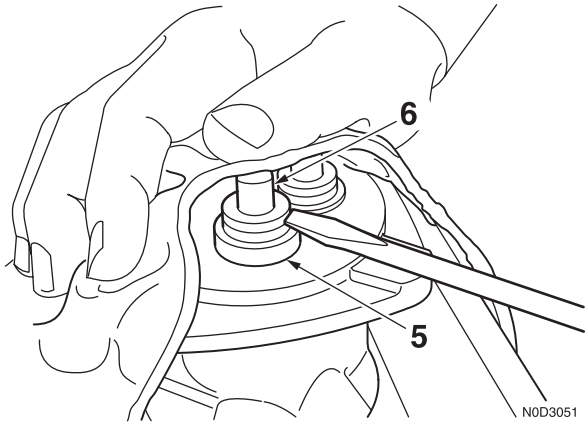
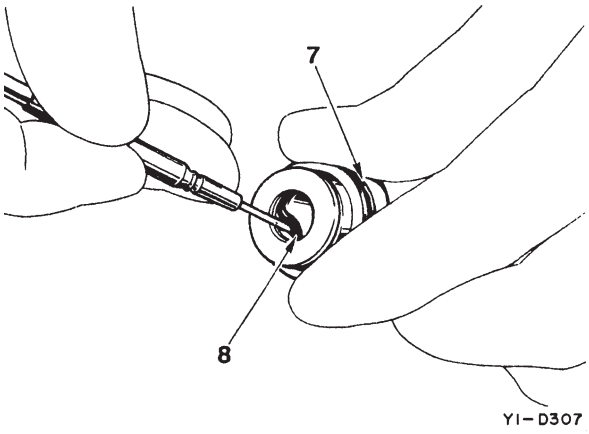
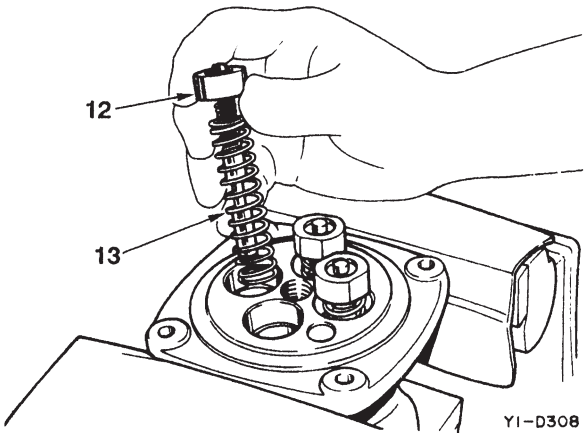
3. Take out the plug (5) then remove the push rod (6) from the plug (5).
   - If the plug is difficult to remove, use (–) screw driver to remove it.
   - Be careful not to let the plug fly out from the spring's force.



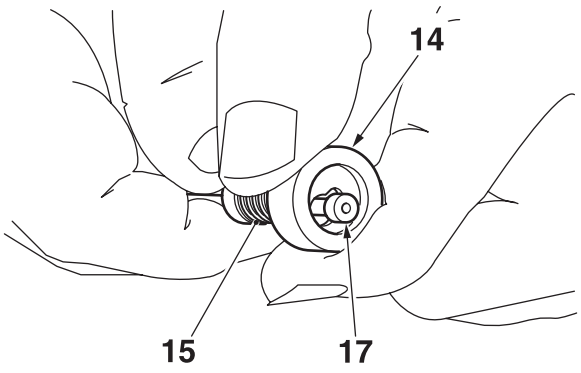
4. Remove the O-ring (7) and seal (8) from the plug.



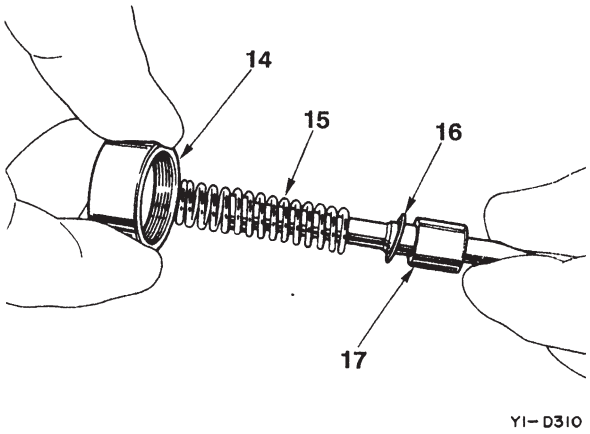
5. Remove the reducing valve (12) and spring (13).
   - Make match marks on the reducing valve and casing hole so they can be placed in the same position when they are reassembled.



6. Disassemble the reducing valve.
   a. Push in the spring sheet (14) to contract the spring (15), and move the spool (17) from the small hole to the large hole of the spring sheet (14).
      - Do not push in the spring sheet too far (at most 6 mm).

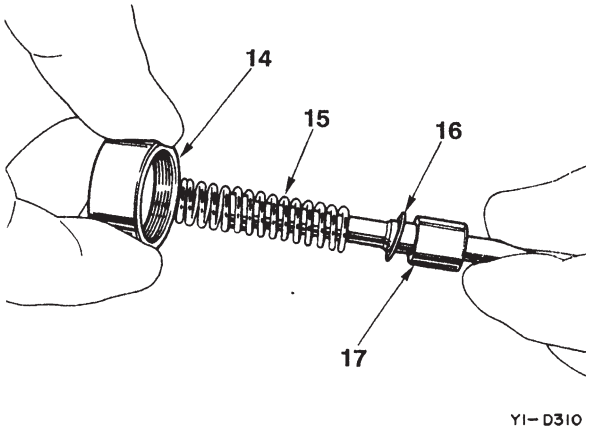


b. Remove the spring seat (14), spring (15) and washer 2 (16) from the spool (17).

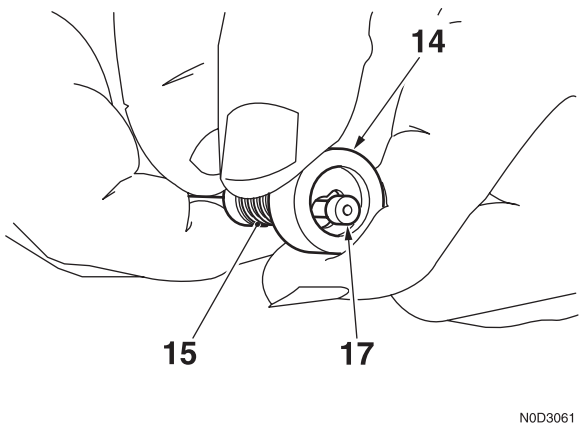


Assembly

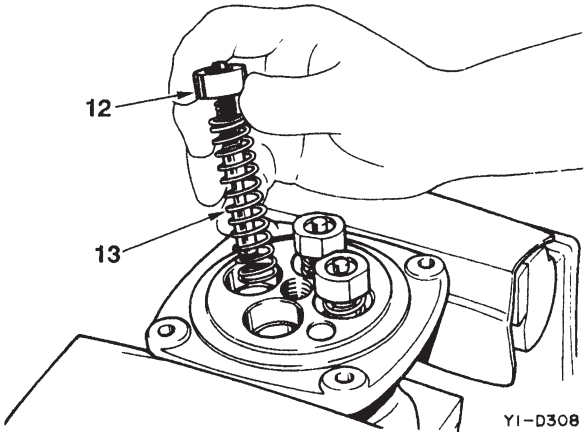
1. Assemble the reducing valve (12).
   a. Install the washer 2 (16), spring (15) and spring seat (14) on the spool (17).



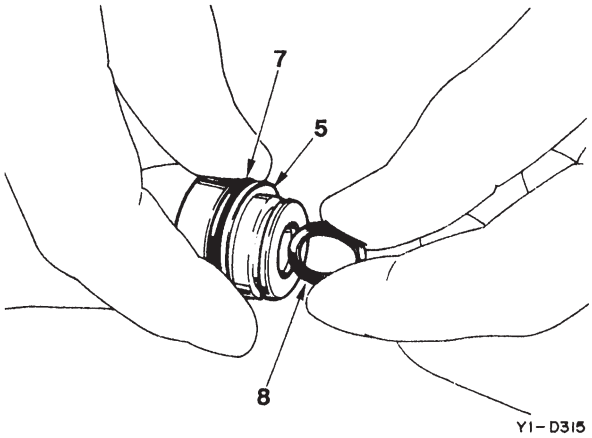
   b. Push in the spring sheet (14) to contract the spring (15), and move the spool (17) from the large hole to the small hole of the spring sheet (14).
      • Do not push in the spring sheet too far (at most 6 mm).



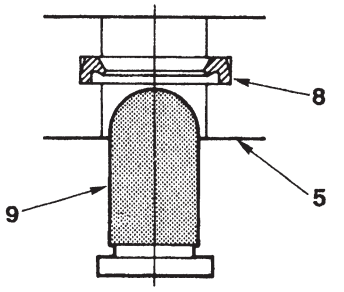
2. Install the spring (13) and reducing valve (12).
   • Install them in the positions they were in before disassembly.

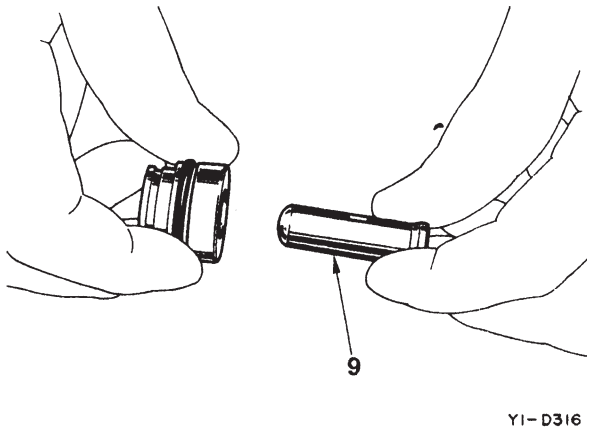


3. Install the O-ring (7) and seal (8) in the plug (5).

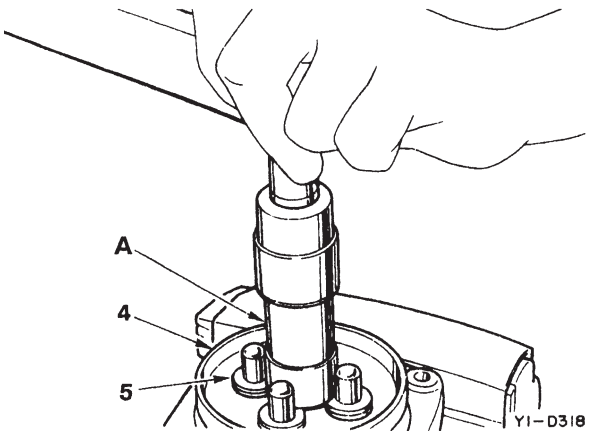


4. Install the push rod (9) in the plug (5).
   • Apply hydraulic oil to the push rod.



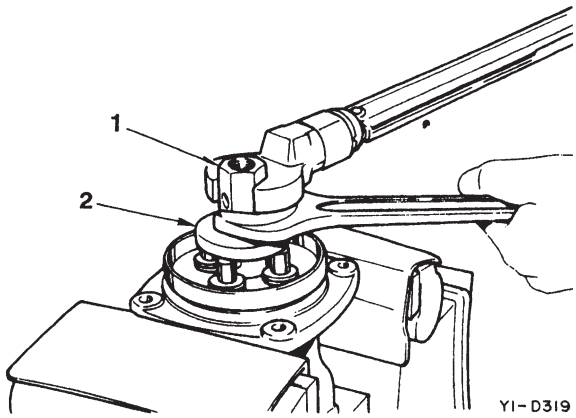


5. Install the plug (5) and plate (4), then install the joint.
   • Use installation jigs (A) and (B) to install the joint.
   ⇨ Joint: 47.1 ±2.9 N·m

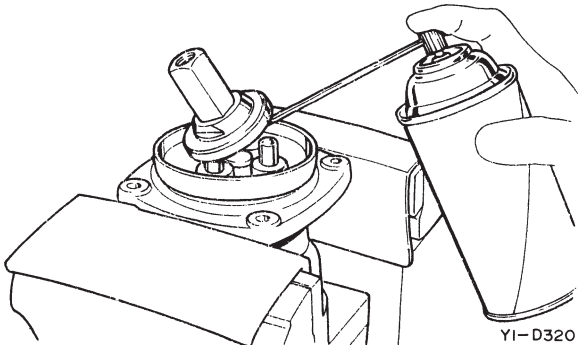


6. Install the disc (2), the adjust nut (1) and the lock nut.
   - Tighten the adjust nut to the point where all 4 push rods are uniformly making contact.
   - During tightening, the disc should not be moved.

   Adjust Nut: 68.6 ±4.9 N·m

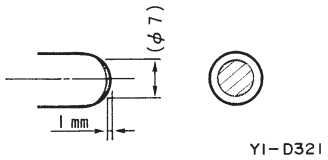


7. Apply grease to the contact surfaces of the joint rotating portion, the disc and the push rod.



INSPECTION AND ADJUSTMENT

Checking the Parts

Parts	Judgment Criteria	Treatment
O-ring	——	• Replace
Seal	——	• Replace
Spool	• Wear on sliding portions is 10 μm or greater compared to non-sliding portions • Scratches on sliding portions • Spool doesn't move smoothly	• Replace • Replace • Repair or replace
Push Rod	• Front end is worn 1 mm or more  • Scratches in the sliding portion	• Replace • Replace
Plug	• Seal is imperfect due to damage	• Repair or replace
Operating Portion	• Tightening is loose at the pin, shaft or joint of the operating portion, with looseness of 2 mm or greater • Due to wear, etc. tightening is loose at the pin, shaft or joint of the operating portion, with looseness of 2 mm or greater	• Tighten to the specified torque • Replace
Casing, Port Plate	• Scratches, rust or corrosion on the spool and sliding portion • Scratches, rust or corrosion on seal portions which come in contact with the O-ring	• Replace • Repair or replace

TROUBLESHOOTING

Symptom	Probable Causes	Remedy
Secondary pressure doesn't rise	• Primary pressure is insufficient • Spring is damaged or permanently deformed • The clearance between the spool and casing is abnormally large • There is looseness in the handle	• Keep the primary pressure • Replace the spring • Replace the spool and casing assembly • Disassemble and reassemble, or replace the handle
Secondary pressure doesn't stabilize	• Sliding parts are catching • Tank line pressure fluctuates • Air gets mixed into the piping	• Repair or replace • Remove the abnormal portions of the tank line • Operate the machine several times and bleed out the air
Secondary pressure is high	• Tank line pressure is high • Sliding parts are catching	• Remove the abnormal portions of the tank line • Repair or replace