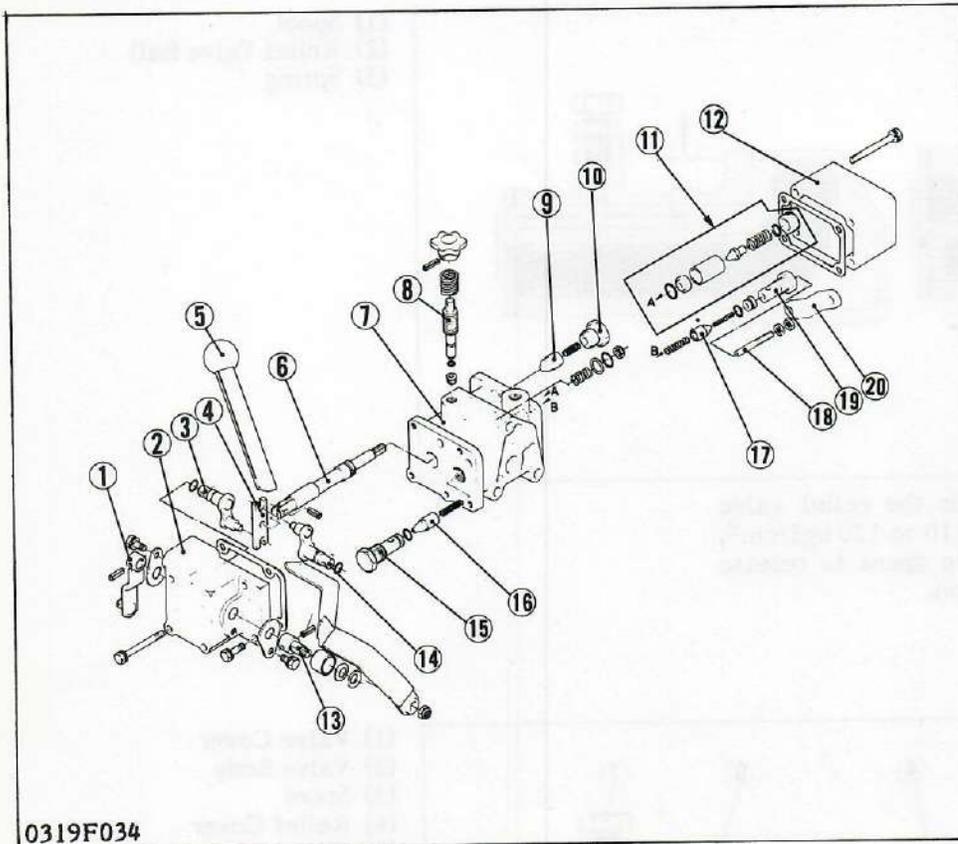


(4) Position Control Valve (B6200-B7200 4WD Type)



- (1) Feedback Arm
- (2) Valve Cover
- (3) Control Lever Shaft
- (4) Spool Drive Lever
- (5) Control Lever
- (6) Spool
- (7) Valve Body
- (8) Adjusting Screw
- (9) Unload Poppet
- (10) Unload Plug
- (11) Relief Valve Assembly
- (12) Relief Cover
- (13) Control Arm Shaft
- (14) Control Lever Shaft
- (15) Plug 1
- (16) Poppet 1
- (17) Poppet 2
- (18) Push Rod
- (19) Plug 2
- (20) Connecting Plate

0319F034

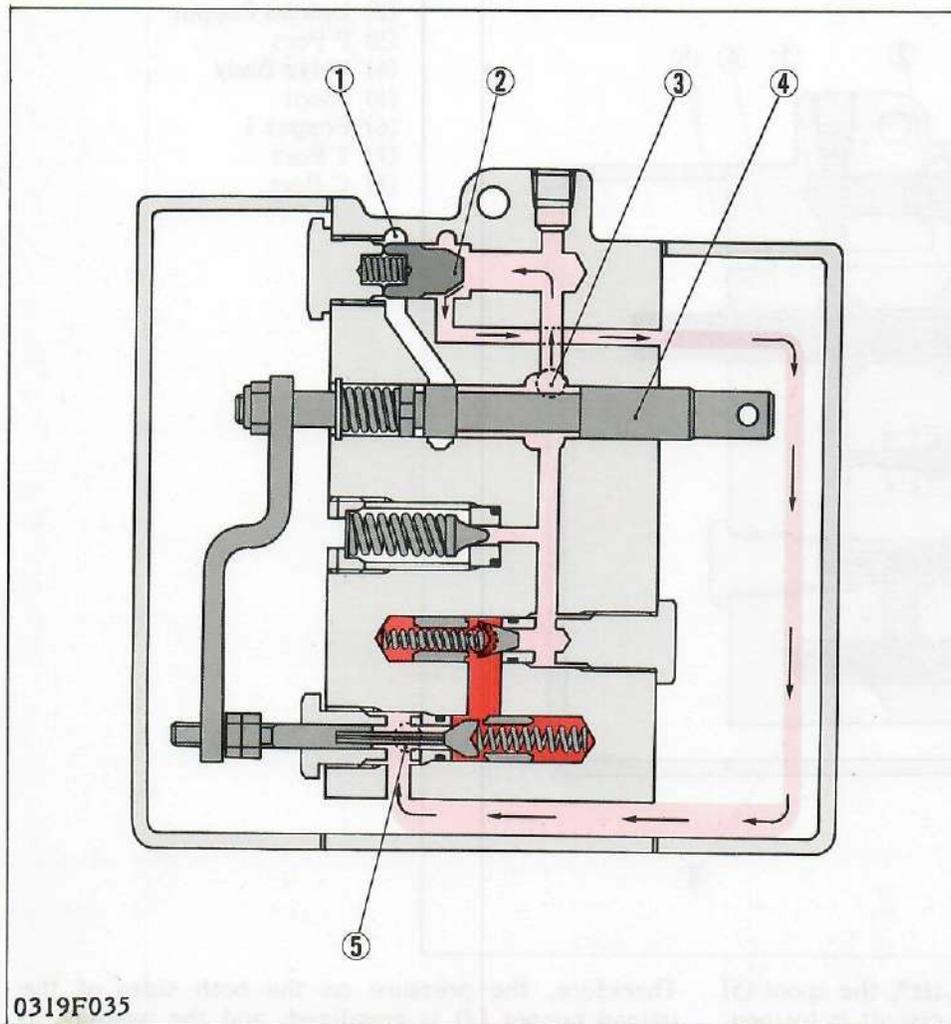
The position control valve is constructed as shown above.

Position control is a system to raise and lower the implement proportionally to the movement of the control lever, using the position control valve and feedback link mechanism.

With this system, the implement can be raised or lowered to any desired position by changing the position of the control lever and fine adjustment is also easy.

1) Oil Circuit

■ Neutral



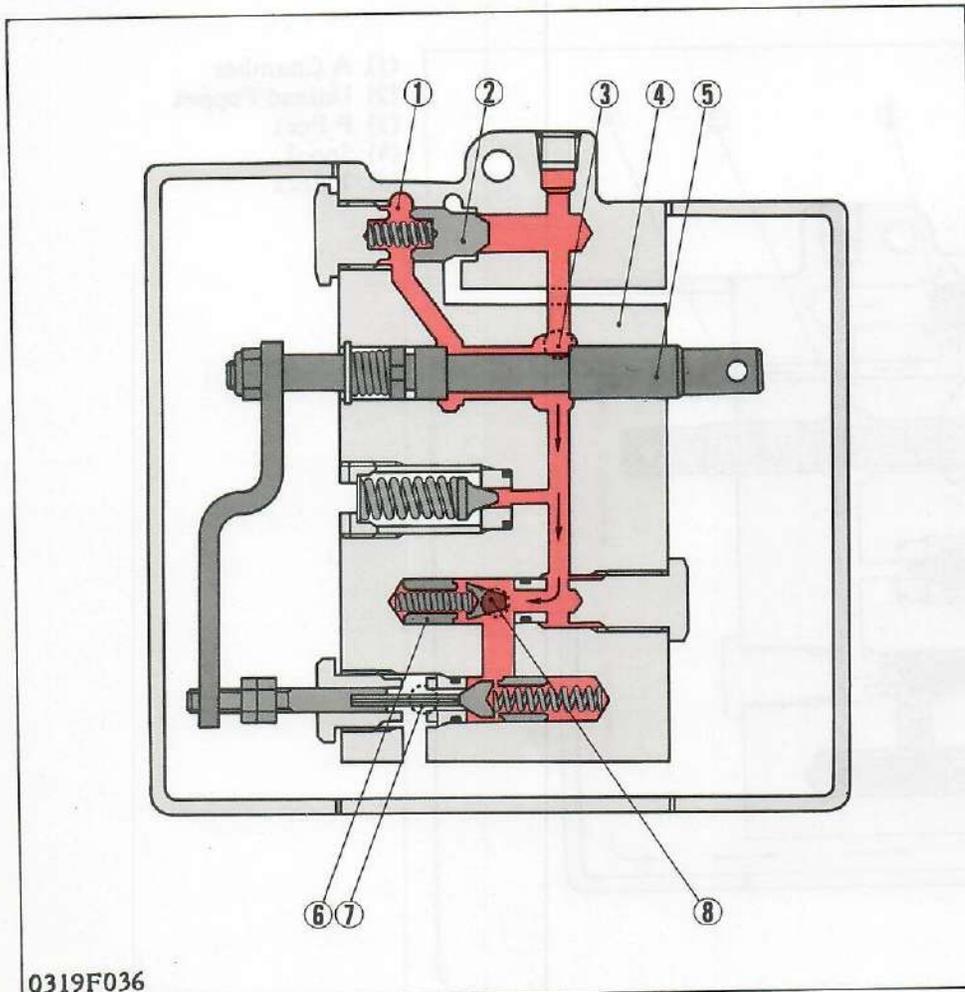
- (1) A Chamber
- (2) Unload Poppet
- (3) P Port
- (4) Spool
- (5) T Port

Pressure-fed oil from the hydraulic pump is delivered into the P port (3).

As the passage from the P port to the A chamber (1) is blocked by the spool (4), the oil pushes the unload poppet (2), and returns to the transmission case through the T port (5).

Oil in the hydraulic cylinder is prevented from flowing because the lowering circuit is closed, and the implement maintains its height.

■ Lift



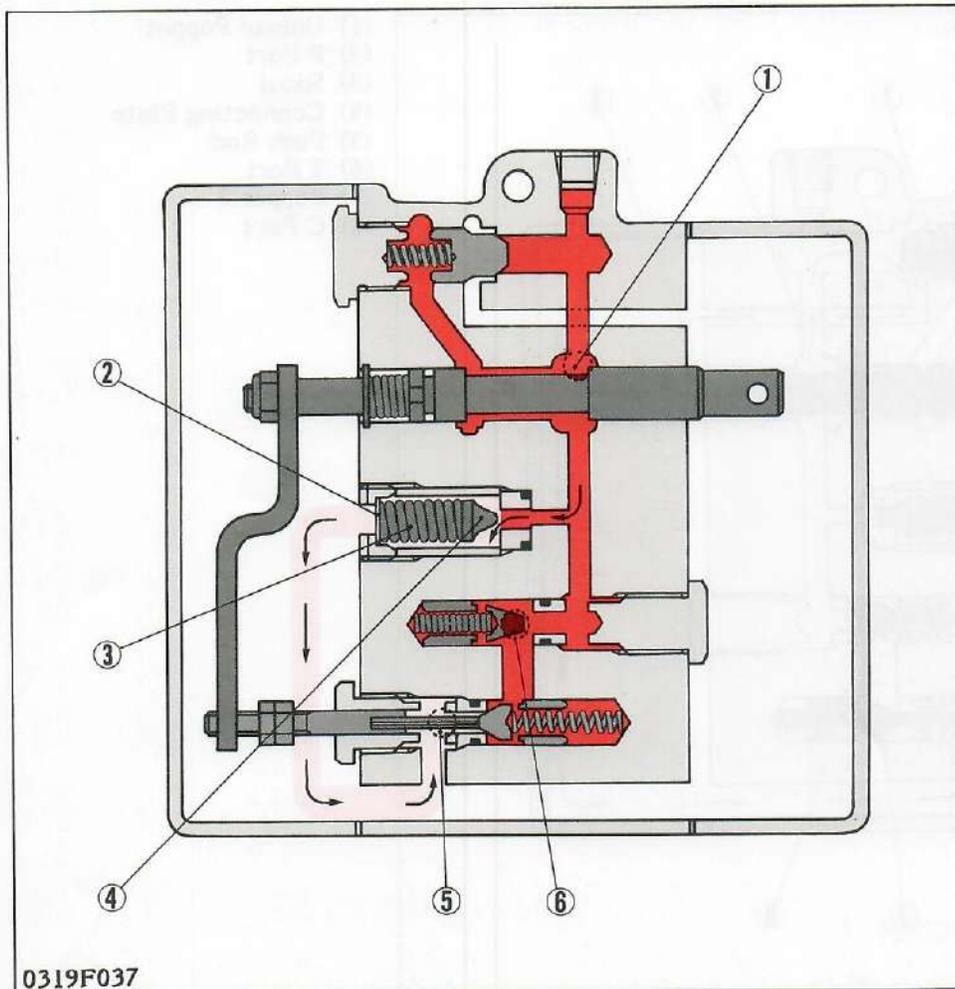
- (1) A Chamber
- (2) Unload Poppet
- (3) P Port
- (4) Valve Body
- (5) Spool
- (6) Poppet 1
- (7) T Port
- (8) C Port

0319F036

When the control lever is set to "Lift", the spool (5) moves to the left, and the raising circuit is formed. Pressure-fed oil from the hydraulic pump flows through the clearance between the spool and valve body (4), and then flows into the A chamber (1).

Therefore, the pressure on the both sides of the unload poppet (2) is equalized, and the passage to the T port (7) is closed. As a result, oil pushes poppet 1 (6), and flows into the hydraulic cylinder through the C port (8) to raise the implement.

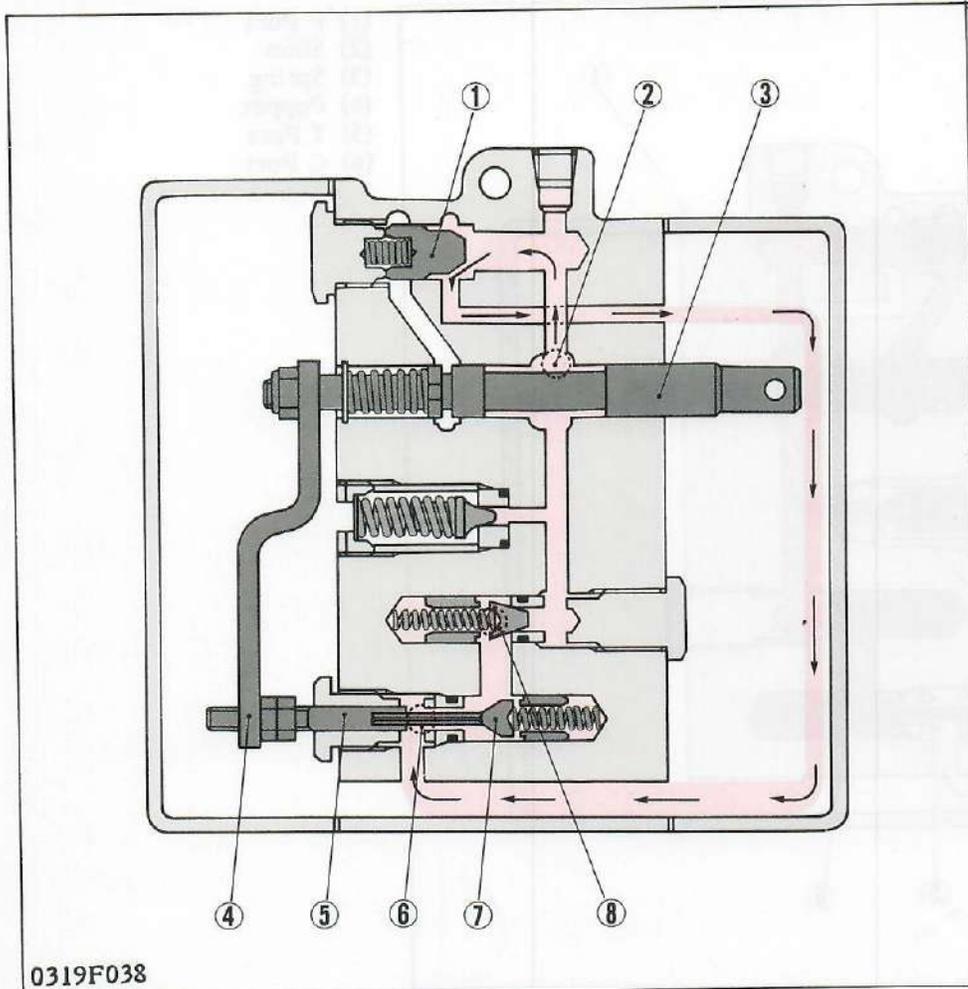
■ Overloaded



- (1) P Port
- (2) Shim
- (3) Spring
- (4) Poppet
- (5) T Port
- (6) C Port

When the oil pressure rises and reaches the setting pressure 10.8 to 11.8 MPa (110 to 120 kgf/cm², 1570 to 1710 psi), the relief valve opens and the oil flows to the transmission case through the T port (5).

■ Down



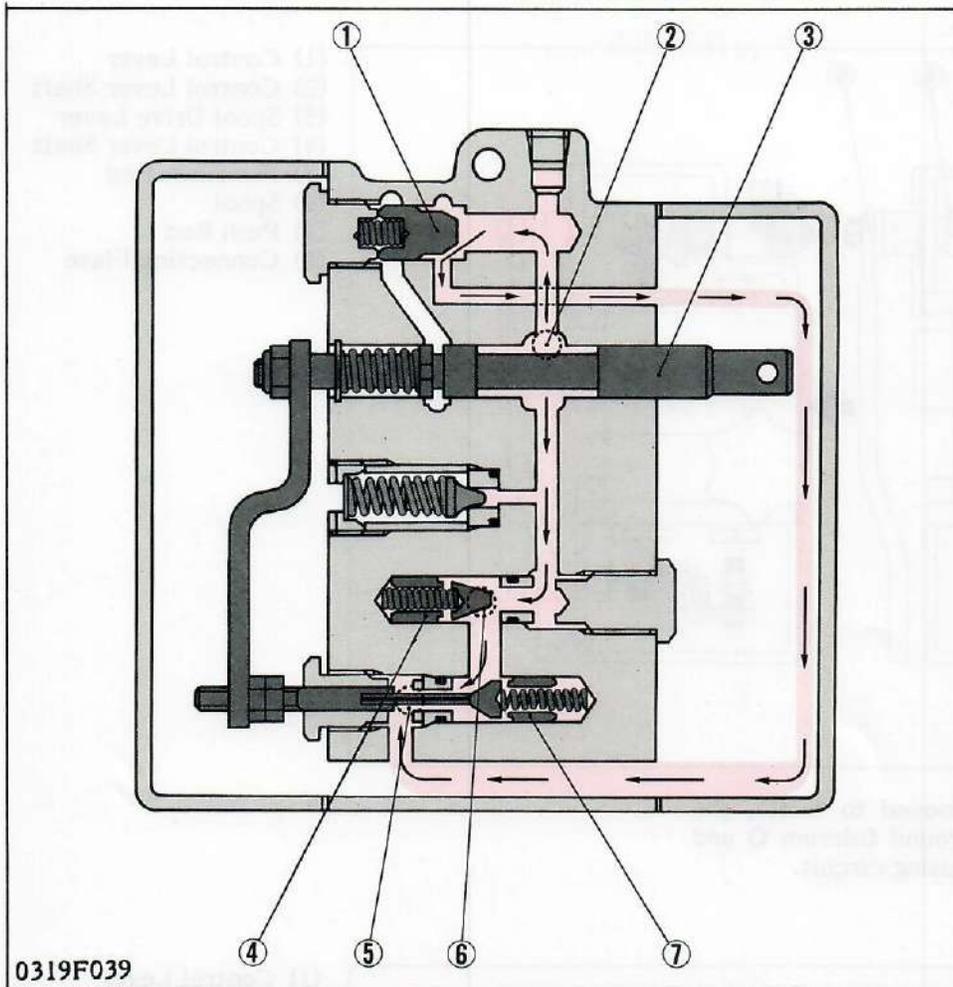
- (1) Unload Poppet
- (2) P Port
- (3) Spool
- (4) Connecting Plate
- (5) Push Rod
- (6) T Port
- (7) Poppet 2
- (8) C Port

0319F038

When the control lever is set to **"Down"**, the spool (3) moves to the right and, at the same time, the connecting plate (4) pushes poppet 2 (7) via the push rod (5) to form the lowering circuit. Oil in hydraulic cylinder is pushed out by the weight of the implement, flows through the C port (8) to the T port (6) and returns to the transmission case.

As a result, the implement lowers. Pressure-fed oil from the hydraulic pump pushes the unload poppet (1), and goes through the passage as shown above, and returns to the transmission case from the T port.

■ Floating



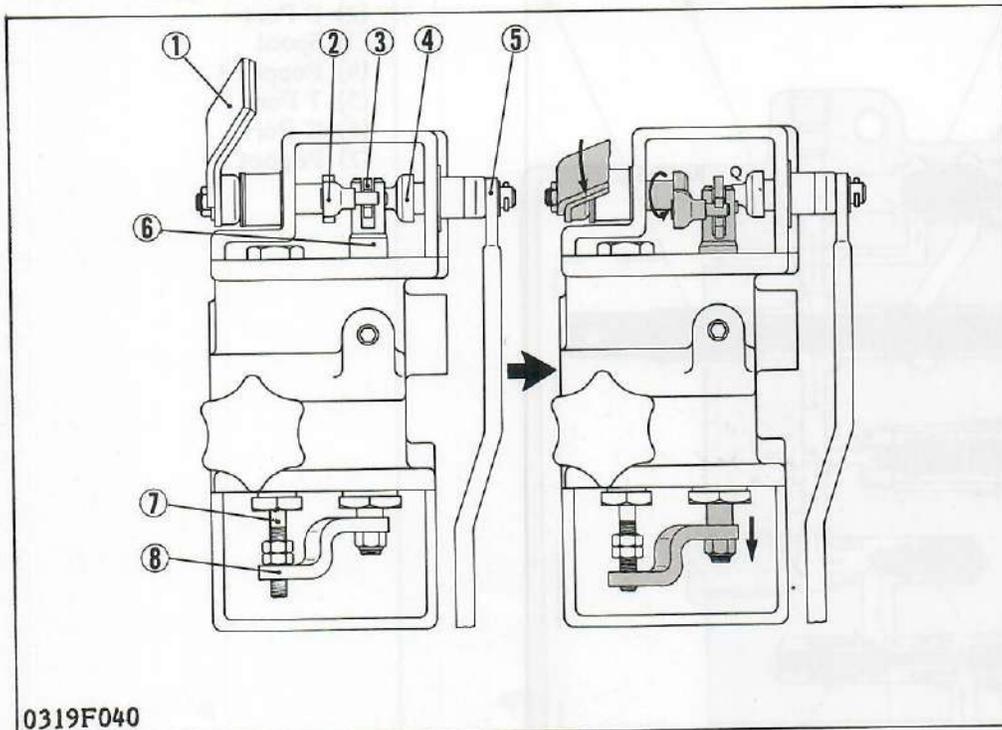
- (1) Unload Poppet
- (2) P Port
- (3) Spool
- (4) Poppet 1
- (5) T Port
- (6) C Port
- (7) Poppet 2

0319F039

When the control lever is set to its lowest position, the spool (3) is maintained at the "Down" position. When the implement is at its lowest position, the hydraulic cylinder is in no-load condition, and pressure-fed oil from the hydraulic pump pushes open both the unload poppet (1) and poppet 1 (4). Thus, oil flows freely in the valve.

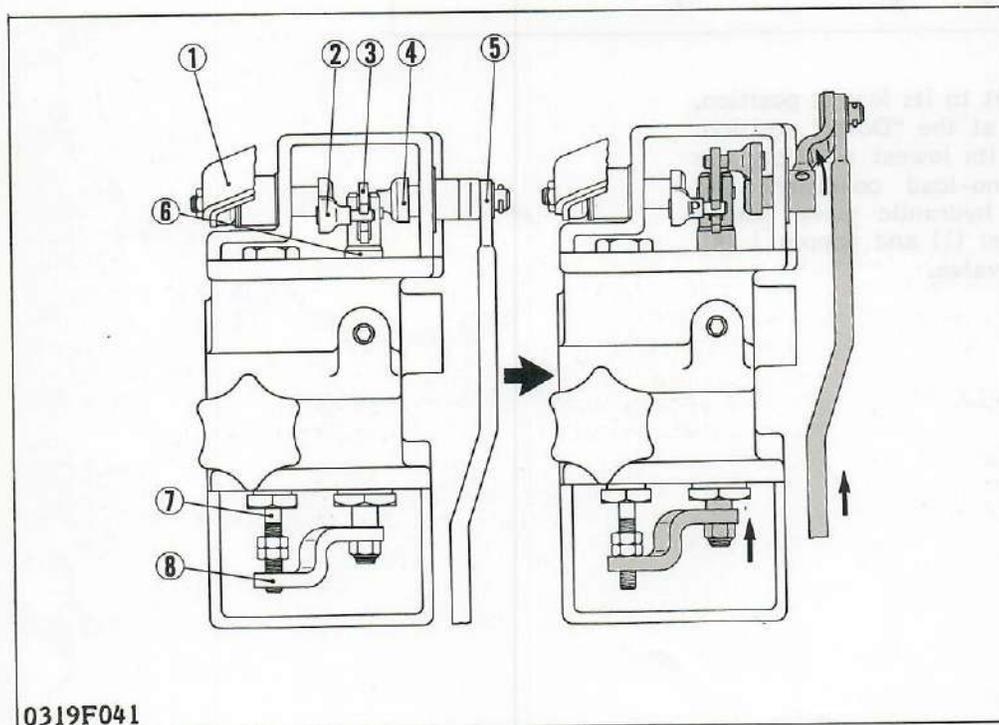
2) Linkage Mechanism

■ Lift



- (1) Control Lever
- (2) Control Lever Shaft
- (3) Spool Drive Lever
- (4) Control Lever Shaft
- (5) Feedback Rod
- (6) Spool
- (7) Push Rod
- (8) Connecting Plate

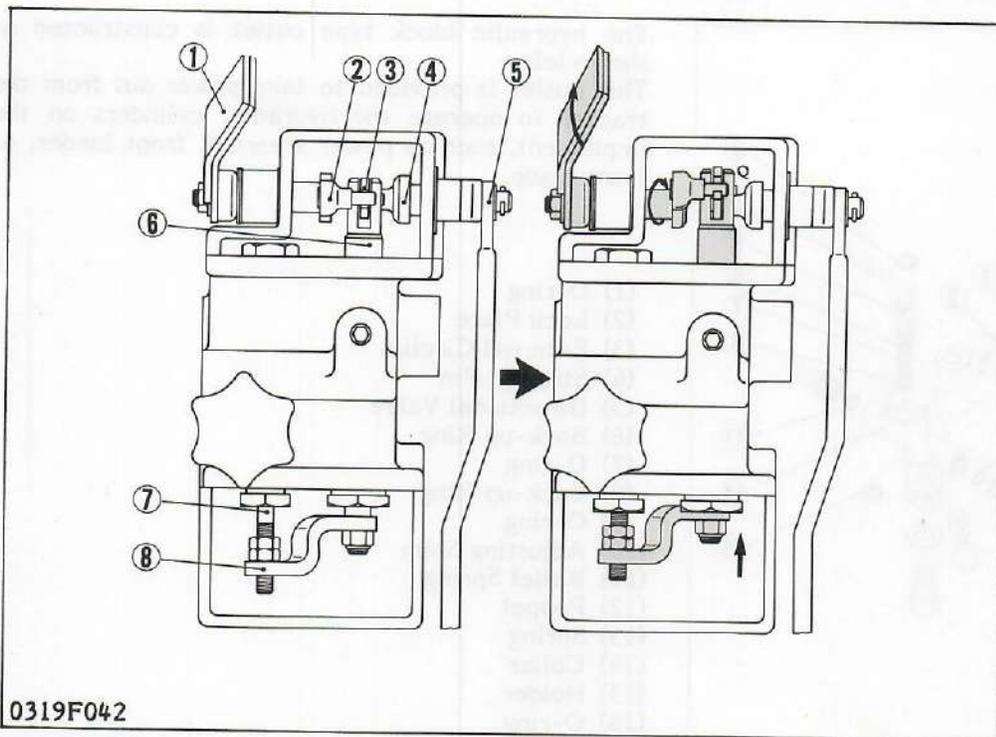
When the control lever (1) is moved to "Lift", the spool drive lever (2) rotates around fulcrum Q and pushes the spool (6) to form a raising circuit.



- (1) Control Lever
- (2) Control Lever Shaft
- (3) Spool Drive Lever
- (4) Control Lever Shaft
- (5) Feedback Rod
- (6) Spool
- (7) Push Rod
- (8) Connecting Plate

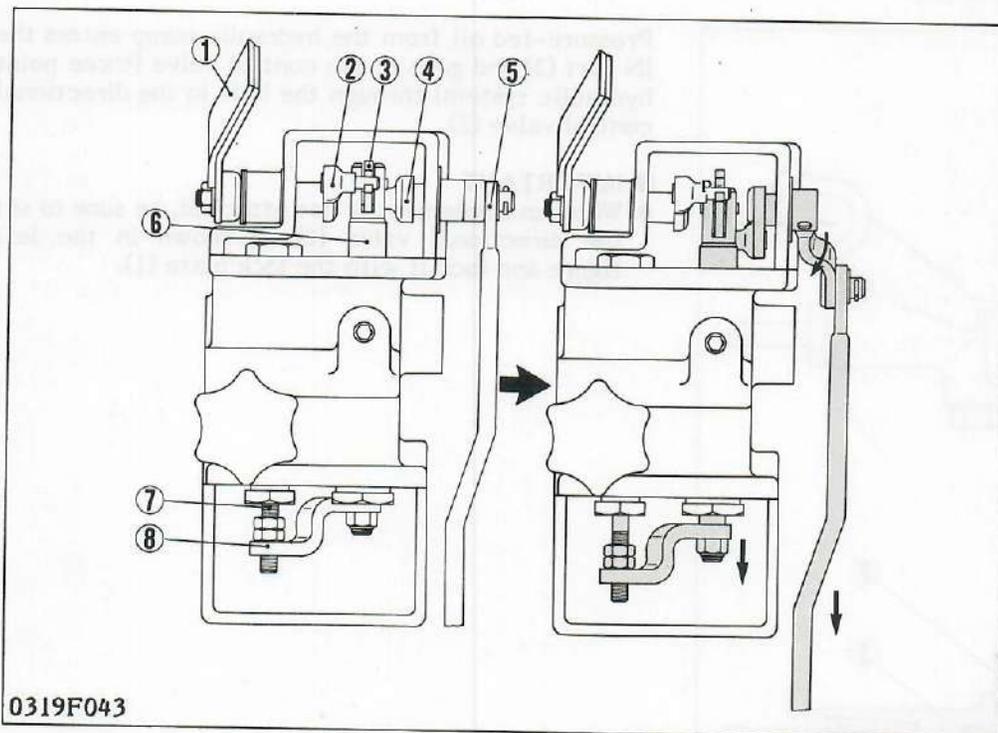
When the lift arm moves upward, the spool drive lever (3) rotates around fulcrum P and pulls the spool (6) out by actuating the feedback rod (5). The lift arm stops when the spool returns to the neutral position.

■ Down



- (1) Control Lever
- (2) Control Lever Shaft
- (3) Spool Drive Lever
- (4) Control Lever Shaft
- (5) Feedback Rod
- (6) Spool
- (7) Push Rod
- (8) Connecting Plate

When the control lever (1) is moved to "Down", the spool drive lever (3) rotates around fulcrum Q and pulls the spool (6) out to form a lowering circuit.



- (1) Control Lever
- (2) Control Lever Shaft
- (3) Spool Drive Lever
- (4) Control Lever Shaft
- (5) Feedback Rod
- (6) Spool
- (7) Push Rod
- (8) Connecting Plate

When the lift arm moves downward, the spool drive lever (3) rotates around fulcrum P and pushes the spool (6) by actuating the feedback rod (5). The lift arm stops when the spool returns to the neutral position.