GROUP 2 TESTING AND ADJUSTING HYDRAULIC PRESSURE

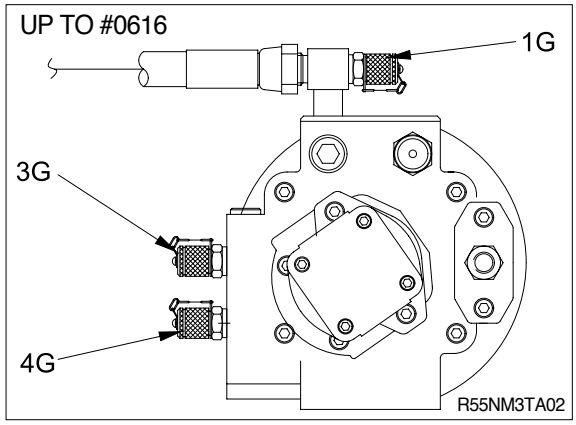
1. WORK EQUIPMENT, SWING AND TRAVEL CIRCUIT

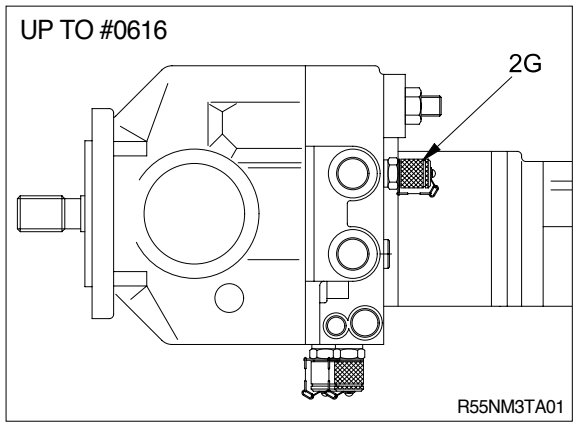
1) MEASURING

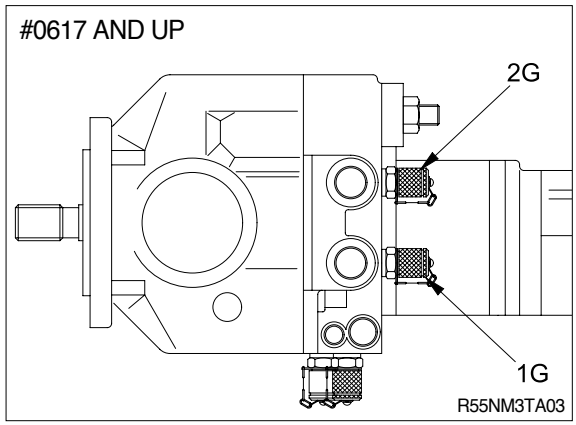
★ Oil temperature when measuring : 45-55 ℃

⚠ Lower the work equipment to the ground and stop the engine. Operate the control levers several times to release the remaining pressure in the hydraulic piping. Then loosen the oil filler cap slowly to release the pressure inside the hydraulic tank. Set the safety lock lever to the lock position.

(1) Remove pressure pick-up plug (1G), (2G), (3G) or (4G) from the circuit to be measured, then install oil pressure gauge.







(2) Start the engine and measure the main relief pressure with the engine at high idling. (See Table 1)

• Condition of actuator to be measured.

① For the work equipment, set each cylinder to the end of its stroke.

② For travel, fit block(1) under the track shoe grouser, or fit block(2) between the sprocket and frame to lock the track shoe. Measure one side at a time.

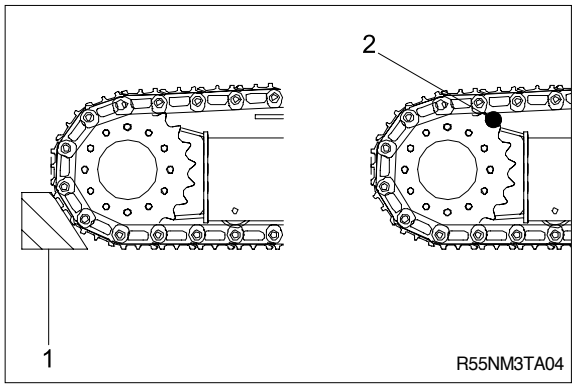


Table 1

Plug	Pump	Actuator controlled
1G	Main pump A1	Boom cylinder Service Arm cylinder Left travel motor
2G	Main pump A2	Bucket cylinder Boom cylinder Arm cylinder Right travel motor
3G	Main pump A3	Boom cylinder Swing motor
4G	Main pump A3	Pilot

★ Measure all the actuator at single pump relief.

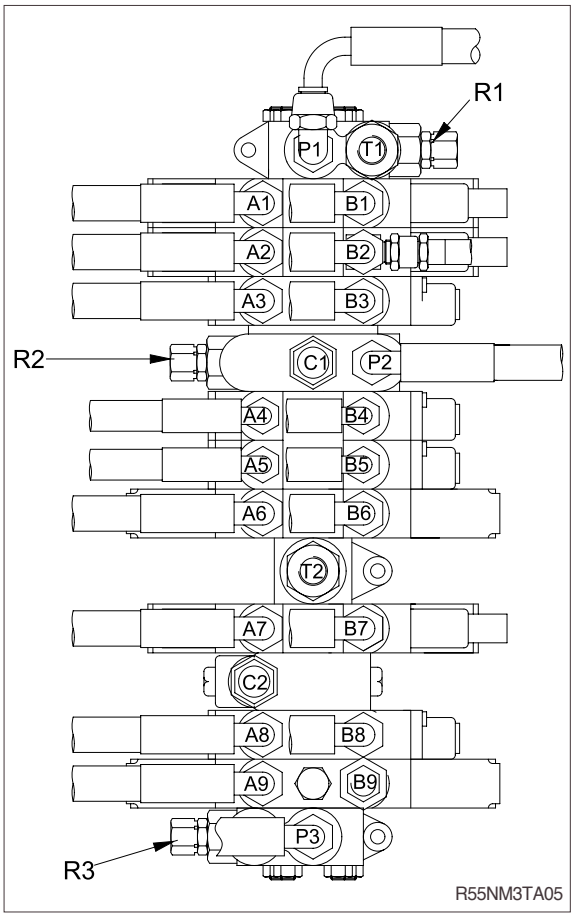
★ The set pressure of the safety valve for the swing motor is lower than the set pressure of the main relief valve, so when the swing is relieved, it becomes the set pressure of the safety valve.

2) ADJUSTING

(1) Adjust work equipment and travel circuit with the main relief valve.

Main relief valve

- R1 : For boom, bucket, right travel
- R2 : For blade, boom swing, arm
- R3 : For service, left travel



(2) Adjusting relief valve

① Remove cap(3), then loosen lockout(1) and turn adjustment screw(2) to adjust.

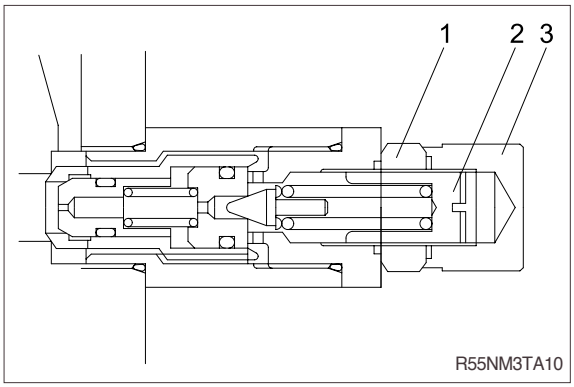
② Adjust with the adjustment screw as follows.

- To INCREASE pressure, turn CLOCKWISE
- To DECREASE pressure, turn COUNTERCLOCKWISE

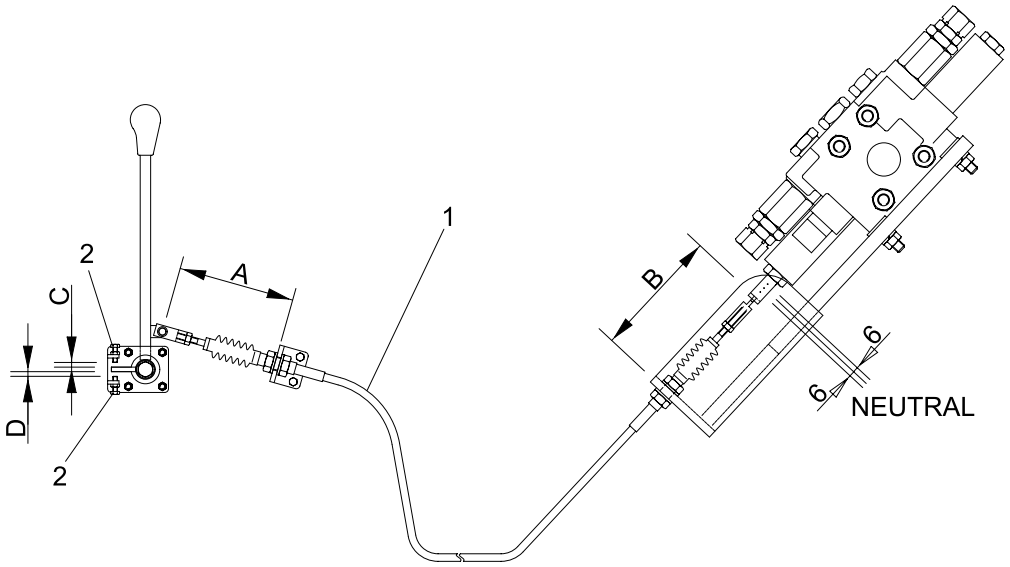
③ Amount of adjustment for one turn of adjustment screw : 106 kg/cm^2

Lockout : 2 $\pm$ 0.5 kg · m

④ After adjusting, repeat the procedure in step 1 to check again.



2. ADJUSTING BLADE CONTROL LEVER (up to #0580)



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1) Install cable (1).
2) Adjust cable mounts A and B to the standard dimension.
   ●Standard dimensions :

(mm)

A	154.5
B	168.5

3) Adjust stopper bolt (2) to standard dimension D.
   ●Standard dimensions :

(mm)

C,D	6.8

4) Operate the blade control lever end check the travel of the control valve spool.
   ●Travel of spool : 6 ㎜ (both RAISE and LOWER)

3. BLEEDING AIR

1) BLEEDING AIR FROM CYLINDERS

When installing hydraulic cylinders or hydraulic piping after they have been removed, bleed the air from the hydraulic cylinder as follows.

(1) Start the engine and run it at low idling for approx 5 min.

(2) Run engine at low idling, and raise and lower boom 4-5 times in succession.

※ Stop the piston rod approx 100㎜ before the end of the stroke. Do not relieve the circuit.

(3) Run the engine at full throttle and repeat step 2).
After this, run the engine at low idling and operate the piston rod to the end of its stroke to relieve the circuit.

(4) Carry out the procedure in steps 2) and 3) for both the arm and bucket cylinders.

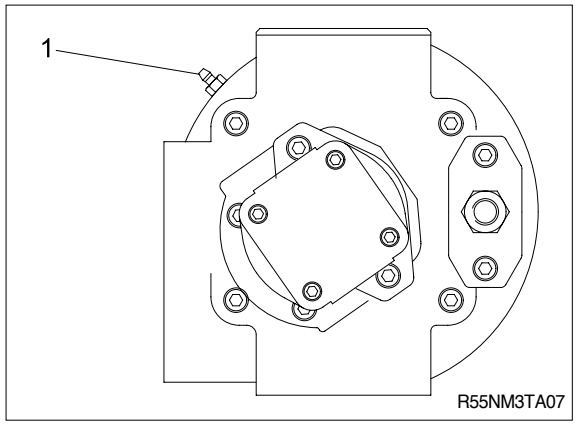
2) BLEEDING AIR FROM MAIN PISTON PUMP

If the oil in the hydraulic tank has been changed, or the main pump has been replaced, or the pump suction piping has been removed and installed again, bleed the air after completion of the operation.

(1) Loosen air bleed plug (1), and check that oil oozes out from the plug.

(2) When oil oozes out, tighten plug (1).
Plug : 1.75±0.25 kgm

※ Precautions when starting the engine
When starting the engine after carrying out the above operating, run at low idling for 10 minutes.



4. RELEASING REMAINING FROM HYDRAULIC CIRCUIT

⚠ There is no accumulator installed, so the remaining pressure in the piping between the control valve and hydraulic cylinder or swing motor cannot be released by operating the control levers. When the above piping is removed, be careful of the following points.

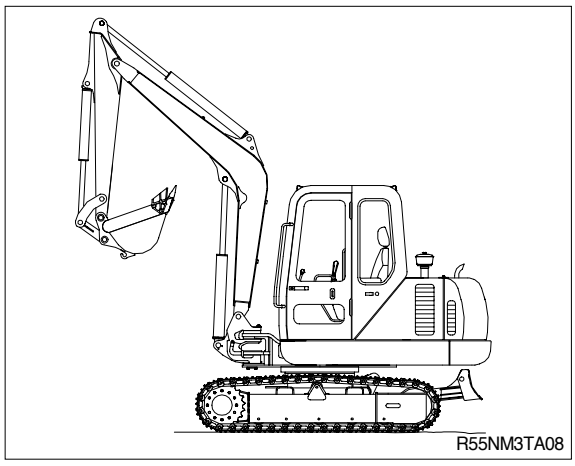
1) Run the engine at low idling, operate the hydraulic cylinders as far as possible so that the pressure is not relieved at the end of the stroke, lower the work equipment to the ground, and stop the engine.

2) When removing the piping, loosen the piping sleeve nut gradually to release the pressure remaining in the piping slowly, the remove the piping after the oil stops spurting out.

PRESSURIZING HYDRAULIC TANK

When hydraulic equipment or hydraulic piping has been removed, carry out the following operation after installing to pressurize the hydraulic tank.

1) Extend all the cylinders fully and remove the oil filler cap from the hydraulic tank. Then install the cap again and pressurize the inside of the tank.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