KOBELCO

SERVICE MANUAL

HYDRAULIC EXCAVATOR

SK270LC IV

APPLICABLE: LBU0001~
APPLICABLE: LBU0201~

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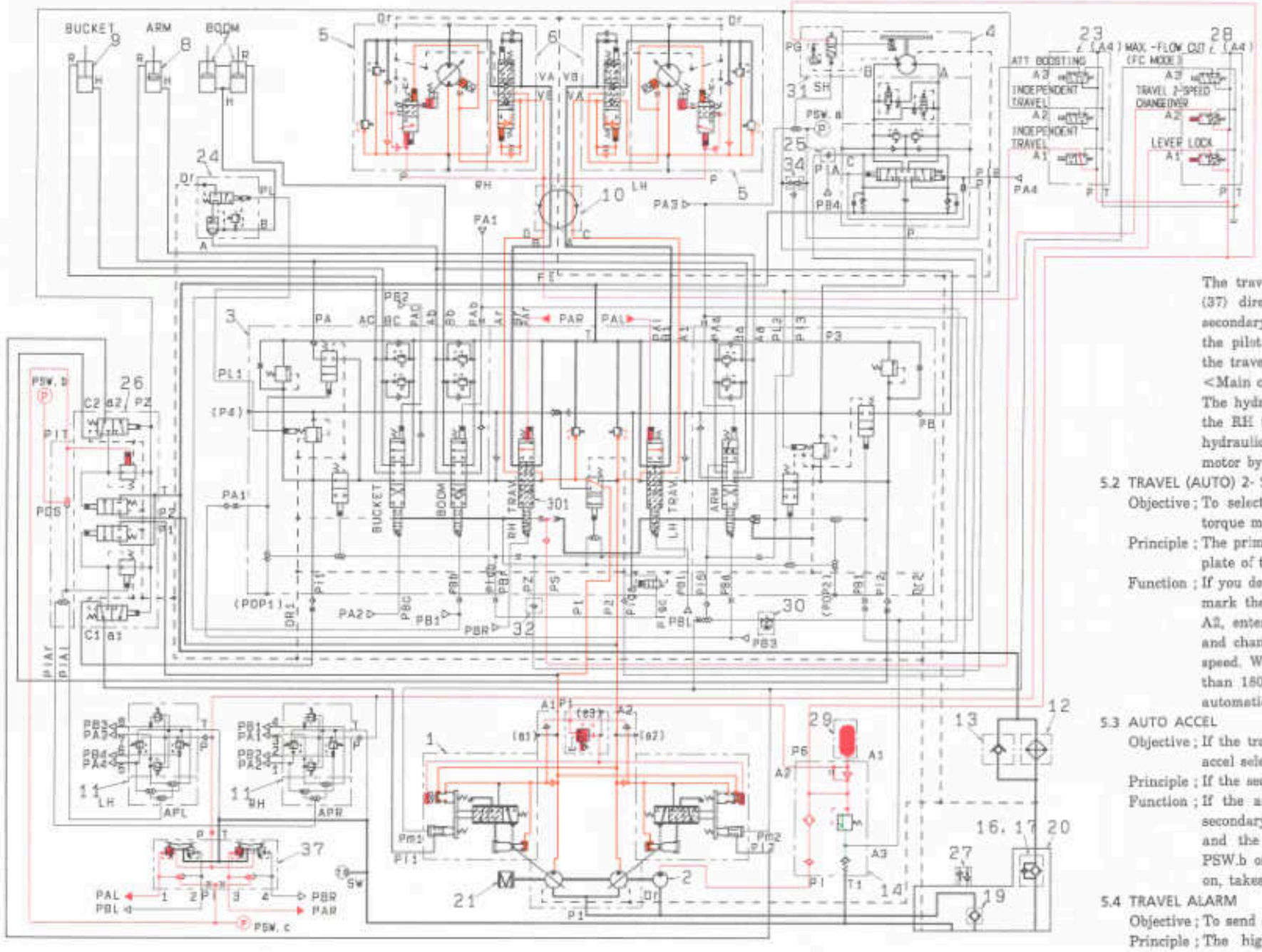


Fig.8 Travel (forward) circuit at 2-speed selected

5. TRAVEL CIRCUIT

The following are explained in this section :

1) Travel pilot circuit
2) Travel (AUTO) 2-speed selection
3) Auto accel
4) Travel alarm
5) Travel in D-mode
6) Other operations in D-mode

5.1 TRAVEL PILOT CIRCUIT

Objective ; For slow start, slow stop.

Principle ; To operate the travel spool of C/V by the secondary proportionate pilot pressure of the travel pilot valve.

Function ; <Pilot circuit>

The travel lever and the travel pedal actuate the pilot valve (37) directly. For instance, if advance action is performed, secondary proportionate pilot pressure PAL, PAR come out of the pilot valve (37), enter ports PA1, PA of C/V, and actuate the travel spool (301).

<Main circuit>

The hydraulic pressure of the No.1 pump (engine side) actuates the RH travel motor via the RH travel spool (301), while the hydraulic pressure of the No.2 pump operates the LH travel motor by way of the LH travel spool.

5.2 TRAVEL (AUTO) 2- SPEED SELECTION

Objective ; To select a low-speed high-torque mode or a high-speed low-torque mode by the switch.

Principle ; The primary pilot pressure alter the tilting angle of the swash plate of the variable displacement 2-speed motor.

Function ; If you depress the momentary switch with a rabbit and tortoise mark the solenoid the primary pilot pressure goes out of port A2, enters port PS of both the RH and LH travel motors (5) and changes over the variable displacement motors to the 2nd speed. When the inside pressure of the motor arrives at more than 180kg/cm^2 (2560 psi), the motor returns to the 1st speed automatically.

5.3 AUTO ACCEL

Objective ; If the travel and the ATT actions are performed with the auto accel select switch on, the engine takes decel action.

Principle ; If the secondary pilot pressure takes up the auto accel.

Function ; If the auto accel select switch is depressed (E/G mark), the secondary select pressure goes out of the travel pilot valve (37) and the pilot valve (11) and turns on the pressure switch PSW.b of the travel independent valve. If the pressure switch on, takes up the auto accel.

5.4 TRAVEL ALARM

Objective ; To send out warnings when traveling.

Principle ; The higher secondary travel pilot pressure turns on the pressure switch which in turn blows the travel alarm.

Function ; If the travel alarm stop switch is on, the secondary travel pilot pressure turns on the pressure switch PSW.C which in turn electrifies blows the travel alarm electrically.

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