KOBELCO

SERVICE MANUAL

HYDRAULIC EXCAVATOR

SK150LC IV

Applicable: SK150LC IV YMU1001~

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10. SIMULTANEOUS OPERATION

The following are explained in this section :

1) Travel straight circuit at travel/boom raising action
2) Travel/ATT boost pressure circuit
3) Difference between composite operation and independent operation at travel/ boom raising action
4) Swing priority circuit at swing/arm digging
5) Difference between composite operation and independent operation at swing/ arm digging action

10.1 TRAVEL STRAIGHT CIRCUIT AT TRAVEL/BOOM RAISING ACTION

Objective ; At travel action, the circuit enables the machine to travel straight even during attachment operation.

Principle ; Travel and attachment motions may by operated by separate pumps.

Function ; <Pilot circuit>

The primary pilot pressure which enters port PS of C/V enters the side bypass circuit (63), passes through the travel spool, is shut off by the boom spool. As the shut off bypass circuit pressure rises, the travel straight spool (305) and the bypass cut spool (306A) are changed over. Secondary pressure for boom raising operation enters port PB1 of C/V and changes over the boom conflux spool (307).

<Main circuit>

If the travel straight spool is changed over, the oil pressure flowing from pump P1 into the main circuit (51) is shut off, but enters the parallel circuit (53) to perform the boom raising action. The oil pressure from pump P2 enters both of the RH and LH main circuits (51, 54) and is fed to the travel motor.

10.2 TRAVEL / ATT BOOST PRESSURE CIRCUIT

Objective ; The travel motor moves to the last at composite operation combined with travel action.

Principle ; The attachment relief pressure is higher than the travel relief pressure.

Function ; Attachment relief : 300kgf/cm² (4270psi), travel : 350kgf/cm²(4980psi)

10.3 DIFFERENCE BETWEEN COMPOSITE OPERATION AND INDEPENDENT OPERATION AT TRAVEL / BOOM RAISING ACTION

Travel	Independent	Simultaneous
Pilot circuit	• Travel spool control • Auto accel pressure PSW.b ON • Travel buzzer pressure PSW.c ON	← ← ← • Travel straight spool (305) changed over • Bypass cut spool (306A) changed over
Main circuit	• P1 pump drives RH motor. • P2 pump drives LH motor.	• P1 pump drives RH and LH motor.

Fig.14 Simultaneous operation circuit, Travel (forward 1-speed) straight at boom raising

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