CX75SR, CX80
CRAWLER EXCAVATOR

Service Manual

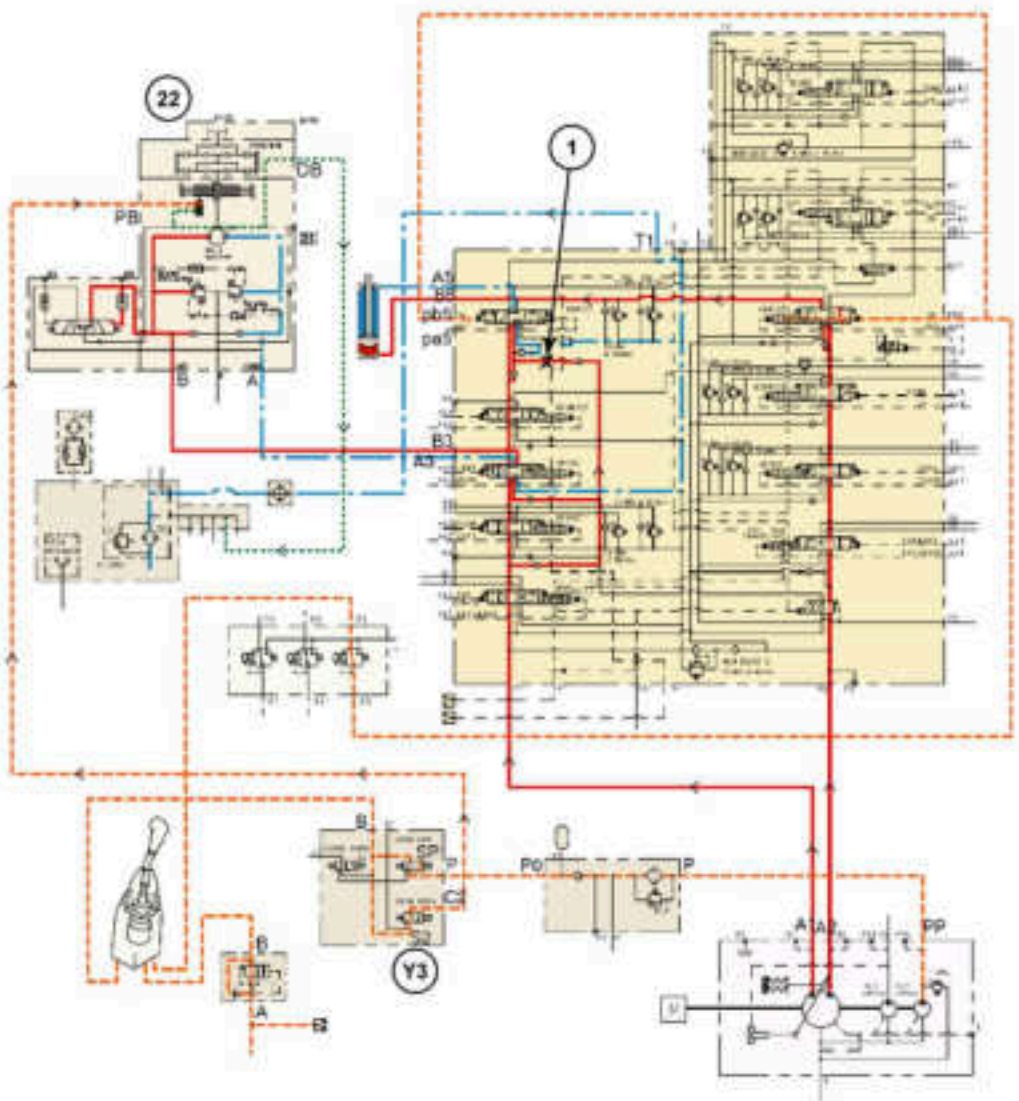
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CASE

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(Y3) Swing brake solenoid valve (green band)

Starter switch	Functions	Swing pilot pressure switch	Upper pilot pressure switch	Swing brake solenoid valve	Swing motor
Open	none	Open	Open	De-activated	Braked
Closed	none	Open	Open	Energised	Braked
	Attachment	Open	Closed	Activated	Braked
	Swing	Closed	Closed	De-activated	Brake is released
	Attachment + Swing	Closed	Closed	De-activated	Brake is released
	Stop Attachment	Open	Open	Energised after **5 secondes**	Braked



2

Swing priority circuit - Dynamic description

Swing priority calibrated port **(1)** enables maximum torque to be applied to the swing motor **(22)** with high swing pressure even if the dipper is used at the same time. The swing flow is therefore in parallel with the dipper via the swing priority calibrated port **(1)**. This has the effect of improving the speed of the dipper.
When the swing and dipper retraction or boom raising functions are operated simultaneously, the swing pressure is maintained.

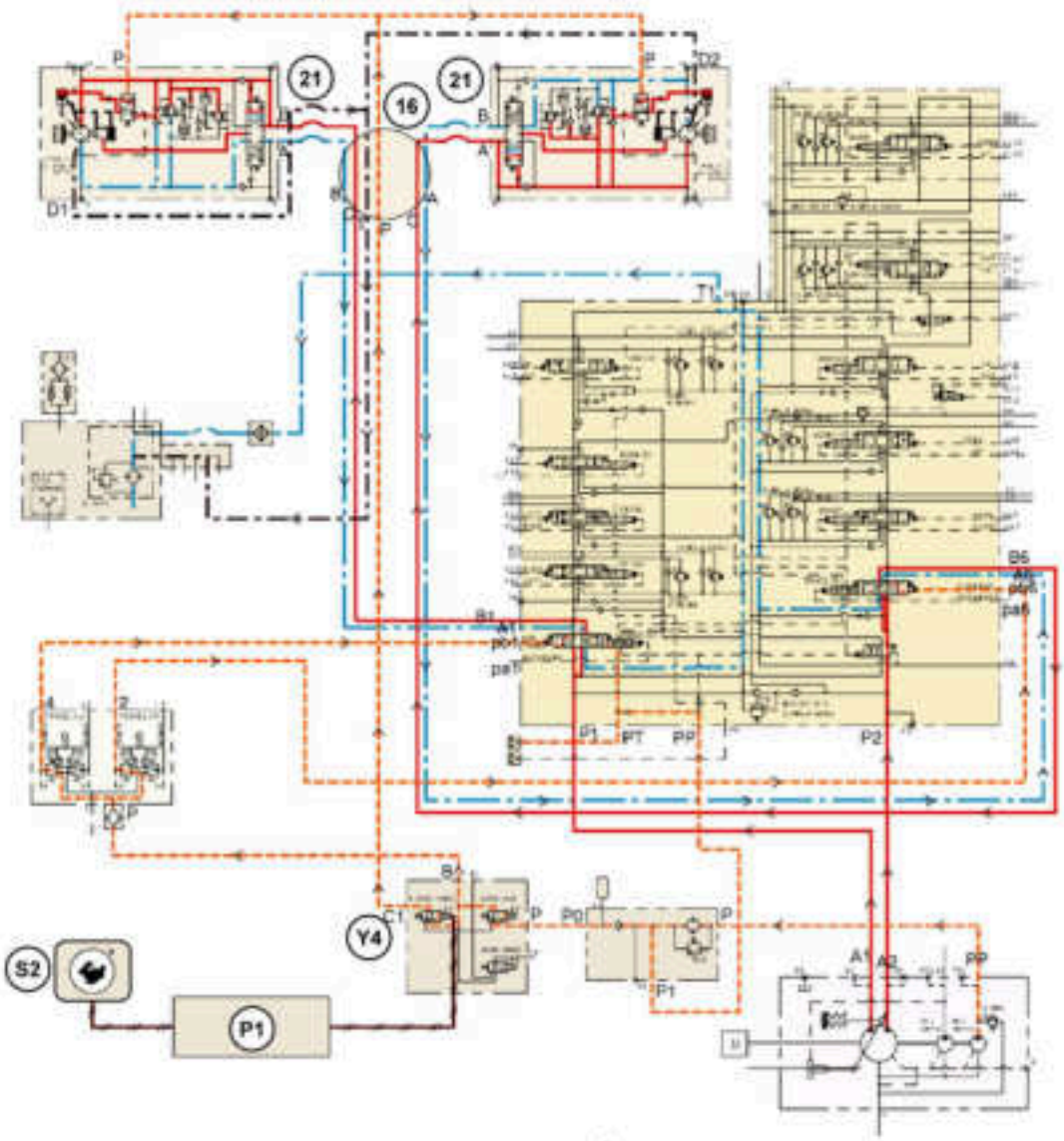
(1) Swing priority calibrated port

(22) Swing motor

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TRAVELLING Travel - Hydraulic schema (F.10.F - C.20.A.20)

CX75SR, CX80



High speed travel circuit - Dynamic Description

The travel motors **(21)** receive two flows.
At high speed, the travel motors are set to low displacement.
The travel motors have an internal circuit which enables them to change from low to high displacement when the supply pressure exceeds a certain value.
Pump outlet **(A1)** enters at port **(P1)** on the control valve while pump **(A2)** enters at **(P2)**. One flow goes directly to the LH travel valve spool and the other to the RH travel slide valve spool.
The 2nd gear solenoid valve (brown band) **(Y4)** must be energised to change to high gear. The 2nd gear travel **42 bar** pilot pressure from the 2nd gear travel solenoid valve **(Y4)**, passes through the hydraulic swivel **(16)** and goes to control the displacement change valve spools of the travel motors **(21)**.

(16) Hydraulic swivel

(21) Travel motor

(C1) 2nd gear travel pilot

(Pa1/A1) LH forward travel

(Pb1/B1) LH reverse travel

(Pa6/A6) RH forward travel

(Pb6/B6) RH reverse travel

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CX80 EXCAVATOR HYDRAULIC / ELECTRIC SCHEMATIC

ITEM	DESCRIPTION	PRESSURE SETTING
A =	MAIN RELIEF (STANDARD)	32.4 MPa / 324 bar / 4694 psi
B =	BOOM RAISING PORT SECONDARY RELIEF	31.0 MPa / 310 bar / 4527 psi
B1 =	RELIEF ON BOOM HBCV	31.4 MPa / 314 bar / 5554 psi
C =	BOOM LOWERING PORT SECONDARY RELIEF	31.0 MPa / 310 bar / 4527 psi
D =	DIPPER OUT PORT SECONDARY RELIEF	31.0 MPa / 319 bar / 4527 psi
D1 =	RELIEF ON DIPPER HBCV	31.4 MPa / 314 bar / 4554 psi
E =	DIPPER IN PORT SECONDARY RELIEF	31.0 MPa / 310 bar / 4527 psi
F =	BUCKET OPEN PORT SECONDARY RELIEF	31.0 MPa / 310 bar / 4527 psi
G =	BUCKET CLOSE PORT SECONDARY RELIEF	31.0 MPa / 319 bar / 4527 psi
H =	PILOT PRESSURE RELIEF	4.0 MPa / 40 bar / 600 psi
I =	RIGHT-HAND SWING PORT SECONDARY RELIEF	32.0 MPa / 320 bar / 3278 psi
J =	LEFT-HAND SWING PORT SECONDARY RELIEF	32.0 MPa / 320 bar / 3278 psi
K1/K2 =	TRAVEL REVERSE PORT SECONDARY RELIEF	29.4 MPa / 294 bar / 4264 psi
L1/L2 =	TRAVEL FORWARD PORT SECONDARY RELIEF	34.5 MPa / 344 bar / 4264 psi
O =	OFFSET BACKHOE SECONDARY RELIEF VALVE, RIGHT-HAND	25.5 MPa / 255 bar / 3698 psi
O1 =	BOOM RH SWING SECONDARY RELIEF VALVE	32.0 MPa / 320 bar / 4629 psi
P =	OFFSET BACKHOE SECONDARY RELIEF VALVE, LEFT-HAND	25.5 MPa / 255 bar / 3698 psi
P1 =	BOOM LH SWING SECONDARY RELIEF VALVE	31.0 MPa / 319 bar / 4629 psi
S =	DOZER BLADE + OFFSET BACKHOE, MAIN RELIEF	32.0 MPa / 320 bar / 3278 psi
T =	DOZER BLADE LOWERING SECONDARY RELIEF	25.5 MPa / 255 bar / 3698 psi
U =	DOZER BLADE RAISING SECONDARY RELIEF	25.5 MPa / 255 bar / 3698 psi
V1 =	SECONDARY RELIEF ON DOZER BLADE SAFETY VALVE	28.4 MPa / 284 bar / 4116 psi
W1/W2 =	CRUSHER OPTION SECONDARY RELIEF VALVE	31.0 MPa / 319 bar / 4627 psi
Y =	ACCUMULATOR PRECHARGE	1.0 MPa / 10 bar / 319 psi

ITEM	DESCRIPTION
1.	HYDRAULIC RESERVOIR
2.	BREATHER
4.	BYPASS VALVE
5.	SCREEN FILTER
6.	RETURN FILTER
10.	MAIN HYDRAULIC PUMP
15.	MAIN CONTROL VALVE
16.	HYDRAULIC SWIVEL
21.	TRAVEL MOTOR
22.	SWING MOTOR
23.	TRAVEL MOTOR BRAKE
27.	DIPPER CYLINDER
28.	BUCKET CYLINDER
29.	BOOM SAFETY VALVE
30.	DIPPER SAFETY VALVE
32.	BOOM LOAD HOLDING VALVE
38.	DOZER BLADE POINT RELIEF (OPTIONAL)
41.	FILTER (ULTRA-CLEAN)
42.	OIL COOLER
43.	RETURN MANIFOLD
44.	OIL COOLER BYPASS VALVE
51.	ACCUMULATOR
53.	BOOM & BUCKET CONTROL LEVER
54.	SWING & DIPPER CONTROL LEVER
55.	TRAVEL CONTROL PEDAL
57.	BOOM & DIPPER CONTROL SHOCK ABSORBER
60.	PILOT SYSTEM MANIFOLD
72.	CONTROL PEDAL (OPTIONAL)
75.	FLOW RE-INJECTION BLOCK (OPTIONAL)
76.	3-WAY SELECTOR (OPTIONAL)
78.	RETURN FILTER (OPTIONAL)
79.	CONTROL SHUTTLE BLOCK (OPTIONAL)
81.	SWING SHUTTLE BLOCK
82.	PILOT CIRCUIT FILTER
83.	SHUT-OFF VALVE, (OPTIONAL)
84.	HAND/FOOT CONTROL PILOT FILTER
85.	PILOT FILTER BYPASS VALVE
93.	PILOT CIRCUIT SUPPLY MANIFOLD
94.	PILOT CIRCUIT RETURN MANIFOLD
95.	BOOM/DIPPER PILOT CIRCUIT MANIFOLD
96.	SWING PILOT CIRCUIT CUSHION VALVE
97.	HYDRAULIC BREAKER FOOT CONTROL
99.	DOZER BLADE HAND CONTROL
100.	DOZER BLADE CYLINDER
101.	OFFSET BACKHOE CYLINDER
102.	3 SELECTIONALVE BLOCK
103.	BOOM CYLINDER
104.	BOOM PILOT CIRCUIT CUSHION VALVE
114.	BOOM FOOT SPECTION CONTROL PEDAL
115.	BOOM FOOT POSITIONING PILOT SHOCK ABSORBER
116.	BOOM FOOT STEERING CYLINDER
B22.	SWING PILOT PRESSURE SWITCH
B26.	UPPER PILOT PRESSURE SWITCH (YELLOW BAND)
B27.	TRAVEL PILOT PRESSURE SWITCH
B32.	BOOM POSITIONING PILOT PRESSURE SWITCH
B45.	OVERLOAD INDICATOR PRESSURE SWITCH
M9.	PRESSURE TEST POINT (x9)
Y2.	PILOT PRESSURE SOLENOID VALVE (BLUE BAND)
Y3.	SWING BRAKE SOLENOID VALVE (PINK BAND)
Y8.	2 STAGE TRAVEL SOLENOID VALVE (RED BAND)
Y9.	CRUSH BREAKER OPTION TWO FLOW SOLENOID VALVE
Y23.	OPTION 2 SOLENOID VALVE
Y24.	OPTION 3 SOLENOID VALVE

LEGEND

- P1 PUMP
- P2 PUMP
- PILOT SYSTEM PUMP
- RETURN TO RESERVOIR
- LEAK-OFF RETURN
- SUPPLY CIRCUIT
- PILOT SYSTEM CIRCUIT
- COMPONENT BOUNDARY
- HOSE
- PIPING CONNECTION
- PIPING CROSS-OVER
- 41 COMPONENT ITEM NO..
- COMPONENT NUMBER
- 9 / 01 CONNECTION ITEM NO.
- ★ OPTIONAL ITEM NO.

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HYDRAULIC SCHEMATIC
Number 9-93040

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