SERVICE MANUAL

E385C

Crawler Excavators Tier IV

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NEW HOLLAND CONSTRUCTION

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2. Service diagnosis display screen (Example)
The service diagnosis display screen list is shown below. The conditions for display are H mode, engine low speed and lever to neutral position.)

1) Service diagnosis "**Mode No.1**"

No.	Displays	Contents	No.	Displays	Contents
1	NO.1 MAIN CONT. P/N LB22E00026F1 PROGRAM VERSION 1-VER 00.05 2-VER 00.00 SERVICE DIAG 1 CLUSTER GAUGE P/N YN59S00028F1 PROGRAM VERSION 02.00	 P/No. indication Program version indication MERIT controller program version Service diagnosis mode P/NO. indication Program Version indication	4	NO.4 RELAY K-1 AIS RELAY 2 OFF K-2 SAFETY RLY OFF K-3 ENG STOP OFF KEY SWITCH OFF START SWITCH OFF CHARGE LIVE K-4 LOCK LEVER OFF SWITCH OFF	 Indicated value Indicated value Indicated value Key switch Starter switch Alternator Indicated value Switch
2	NO.2 ENG G-3 SPEED SET 2200 MEAS1 2201 MEAS2 2201 G-5 ENG PRS. LIVE WATER TEMP 100°C OFF MODE H ATT MODE BUCKET H-1 ACCEL VOLT 4.2V POS. 100% ECU OUTPUT 0.5V	 No load setting rpm Actual rpm 1 Actual rpm 2 (Engine controller) Engine oil pressure Coolant temperature sensor Work mode Attachment mode Potentiometer voltage Voltage % indication Accel output voltage to engine controller	5	NO.5 PRESS.SENSOR S-1 BOOM RAISE 3.5V 2.6M S-2 BOOM LOWER 3.5V 2.6M S-3 ARM OUT 3.5V 2.6M S-4 ARM IN 3.5V 2.6M S-5 BUCKET DIG 3.5V 2.6M S-6 BUCKET DUMP 3.5V 2.6M S-7 SWING 3.5V 2.6M S-8 TRAVEL(R) 3.5V 2.6M S-10 TRAVEL(L) 3.5V 2.6M S-16 P1 OPT. 3.5V 2.6M S-17 P2 OPT. 3.5V 2.6M	 Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value Sensor voltage / Pressure converted value
3	NO.3 SOL.VALVE F-1 POWER BOOST COMP. OFF MEAS. OFF SWITCH OFF F-2 SWING-BRAKE COMP. OFF MEAS. OFF RELEASE SW OFF F-3 1/2-TRAVEL COMP. OFF MEAS. OFF SWITCH OFF	 Set value in computer Measured value Switch Set value in computer Measured value Switch Set value in computer Measured value Switch			

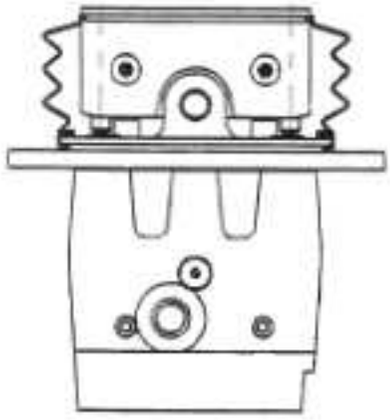
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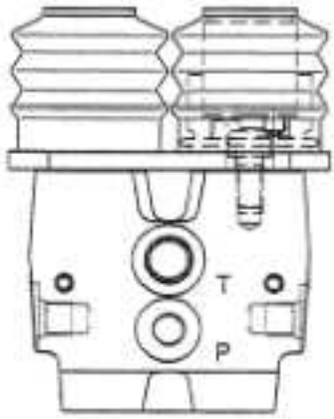
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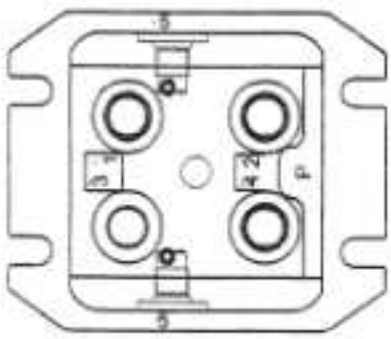
PILOT VALVE (TRAVEL)

OUTLINE

Outside view





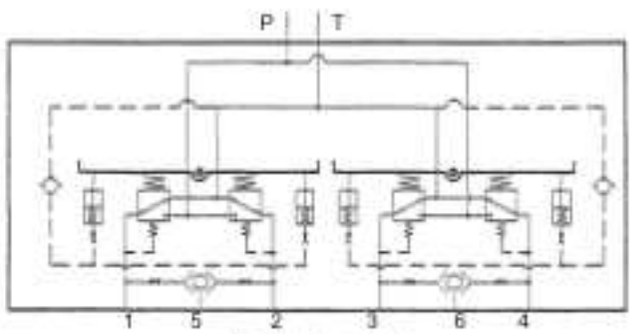


Port size	Tightening torque N·m (lbf·ft)	Port name	Function
PF3/8	30 (22)	1	LH travel forward port
		2	LH travel reverse port
		3	RH travel forward port
		4	RH travel reverse port
		T	Tank port
PF1/4	16.7 (12.3)	5	LH travel pressure sensor port
		6	RH travel pressure sensor port
		P	Pilot primary pressure port

SM00596

Specifications

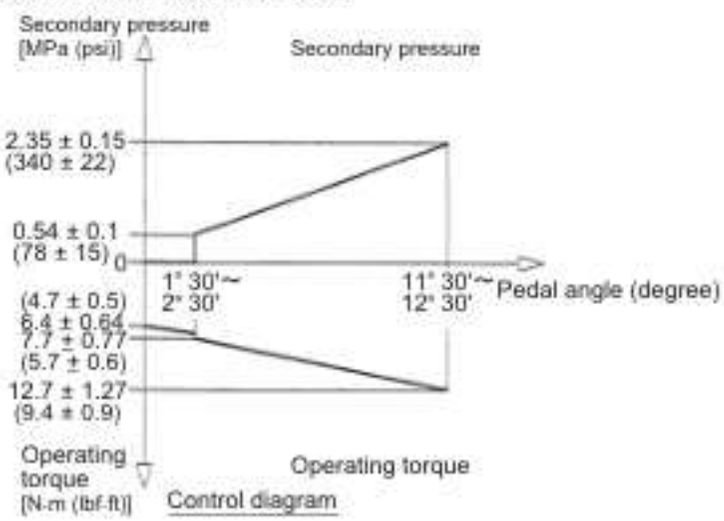
Type	6TH6NRZ
Primary pressure	4.9MPa (711psi)
Secondary pressure	0.54~2.35MPa (78~341 psi)
Rated flow	25 L/min (6.6 gal/min)
Weight	Approx. 8kg (18 lbs)



Hydraulic symbol

SM0597

Performance characteristics



Control diagram

SM0598

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No.	Particolari	Q.tà
1	Heater core gen asm	1
2	Case intake	1
3	Liner filter	1
4	Packing intake	1
5	Liner intake MAL	1
6	Lever intake	1
7	Damper intake assy	1
8	Incar sensor	1
9	Duct joint asm	1
10	Case heater r	1
11	Case heater l	1
12	Case drain	1
13	Clip ps harness	1
14	Cover link	1
15	Filter rec asm	1
16	Packing duct outlet A	2
17	Packing duct outlet B	1
18	Cooling hose	1

No.	Particolari	Q.tà
19	Blower motor asm	1
20	Moter actuator	3
21	Harness asm	1
22	Lever vent	1
23	Lever face	1
24	Lever foot	1
25	Lever def	1
26	Joint vent	1
27	Joint foot	1
28	Joint def	1
29	Rod common	2
30	Lever mode MAL	1
31	Lever am main	1
32	Lever am sub	1
33	Link mode	1
34	Main rod	1
35	Damper mode assy A	3
36	Damper mode assy B	2

No.	Particolari	Q.tà
37	Damper air mix assy	1
38	Relay	2
39	Fan driver	1
40	Evaporator asm	1
41	Expansion valve	1
42	Evaporator sensor	1
43	Socket bolt M5x40	2
44	Harness holder	1
45	Thermistor holder	1
46	Tapping screw M5x14	3
47	Tapping screw M4x16	36
48	Bush	4
49	Rod holder	2
50	Tapping screw M4x16	1
51	Insulation	2

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Table 96

Error code	**I213**		
Trouble	Reception of CAN2 communication is abnormal. (Time-out)		
Judging condition	Reception from gauge cluster can not receive correctly.		
Symptom	Switch operation of gauge cluster can not be done.		
Control in the event of failure	Normal control		
Returned in normal condition	Normal control		
Service diagnosis checking screen	Screen No.		
	Screen No.		
	Screen No.		
Checking object			Checking contents and remedy
1	-Wiring between gauge cluster and controller CN-601F CN-106F		Check wiring for possible failure according to the wiring checking procedure and repair it if necessary.
2	-Mechatro controller		Check that the error is corrected after replacement of controller.

Table 97

Error code	I221		
Trouble	Transmission of CAN2 communication is abnormal. (Busoff)		
Judging condition	Transmission from mechatro controller can not receive correctly.		
Symptom	It has been affected little.		
Control in the event of failure	Normal control		
Returned in normal condition	Normal control		
Service diagnosis checking screen	Screen No.		
	Screen No.		
	Screen No.		
Checking object			Checking contents and remedy
1	-Wiring between ECU and controller CN-601F CN-106F		Check wiring for possible failure according to the wiring checking procedure and repair it if necessary. (There is a possibility of false disconnection.)
2	-Mechatro controller		Check that the error is corrected after replacement of controller.

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DISASSEMBLY

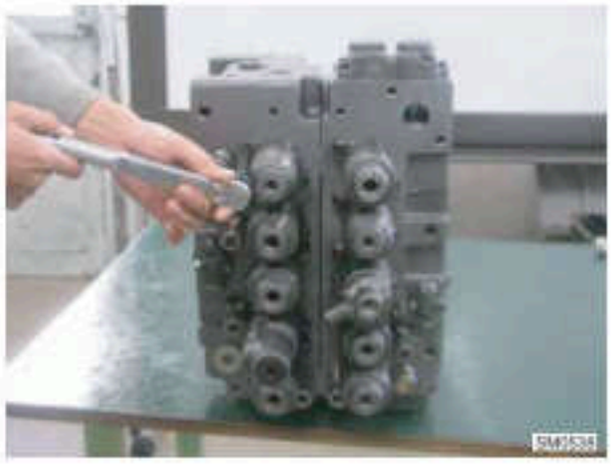
Place the control valve on a work bench so as to locate back pressure check valve upwards.



ATTENTION: *disassemble the valve in a clean place, and be careful not to damage flange surfaces or plate mounting surfaces.*

1. Disassembling P1 unload spool

1.1 Loosen the socket bolts (**273**) and remove the spring cover (**202**) and the O-ring (**261**) for P1 unload spool.



1.2 Draw out, from casing B (**102**), as a assy of P1 unload spool (**309**), spring seat (**331**), springs (**327**), (**329**), stopper (**336**) and bolt (**333**).

ATTENTION: *when drawing out the spool assy, use care so as not to score casing B (**102**).*

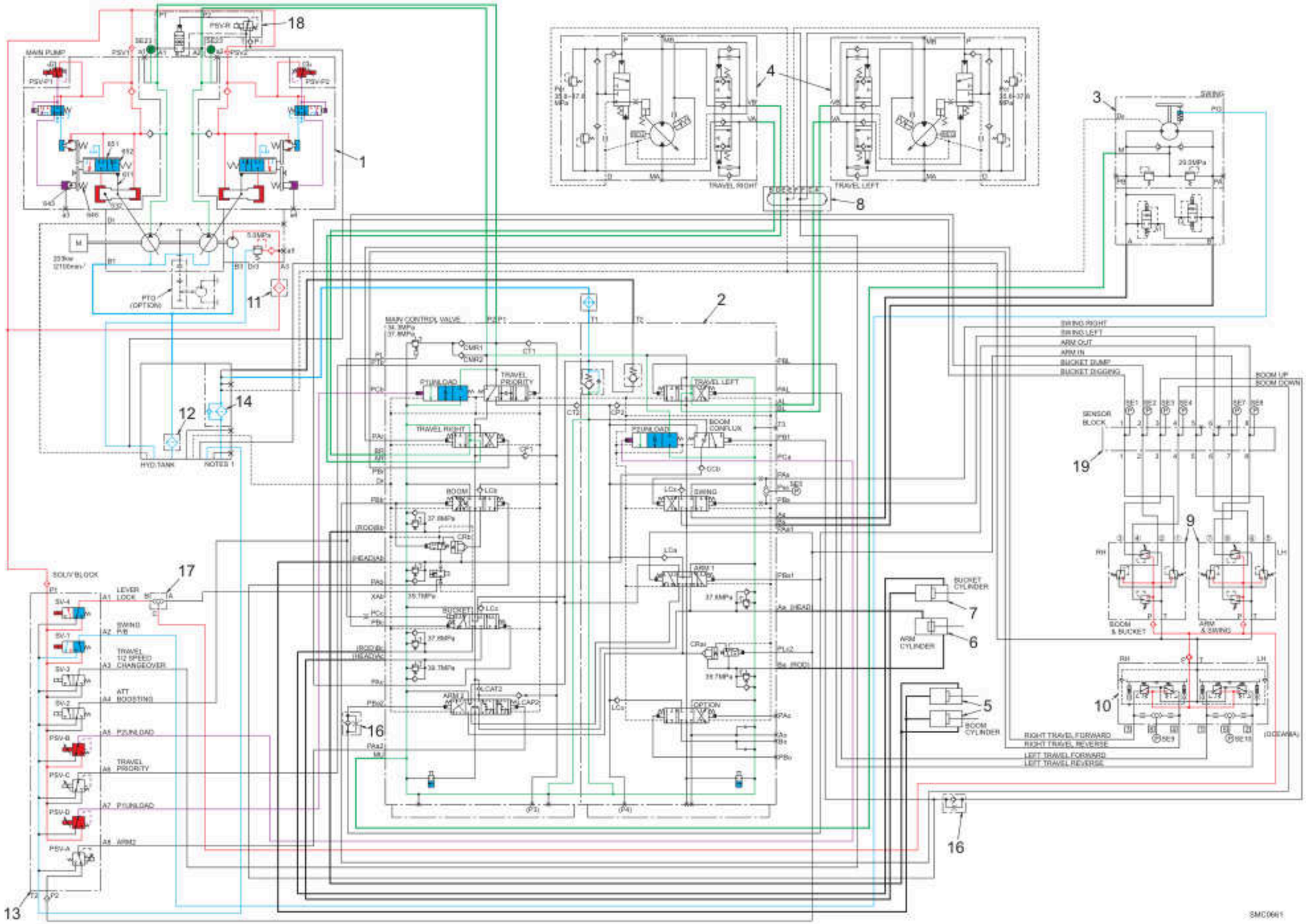


1.3 Fix the P1 unload spool assy with vise via a protective plate (aluminum plate, etc.) and remove bolt (**333**). Then separate spring seat (**331**), springs (**327**), (**329**) and stopper (**336**) from P1 unload spool (**309**).



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NEUTRAL CIRCUIT: Positive control function at safety lock lever down (unloked position)



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