SERVICE MANUAL

E265C - E305C

Crawler Excavators

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NEW HOLLAND CONSTRUCTION

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GENERAL INFORMATION



CONTENTS

Group 1 - Specifications

Machine main components T1-1-1
Hydraulic components E265C T1-1-5
Hydraulic components E305C T1-1-8
Performance E265C T1-1-11
Engine specifications E265C T1-1-11
Engine characteristic curve E265C T1-1-12
Performance E305C T1-1-13
Engine specifications E305C T1-1-13
Engine characteristic curve E305C T1-1-14
Digging data E265C T1-1-15
Digging data E305C T1-1-16
Dimensions and weights E265C T1-1-17
Dimensions and weights E305C T1-1-18
Buckets application as a function of the arm E265C T1-1-19
Buckets application as a function of the arm E305C T1-1-20
Fluids and lubricants E265C T1-1-21
Fluids and lubricants E305C T1-1-22

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SYSTEM



CONTENTS

Group 1 - Mechatro Control System

1 Preface T2-1-1
2 Summary of Mechatro control system T2-1-2
2.1 Mechatro control system in general T2-1-2
2.2 Unload valve control T2-1-4
2.3 Positive control & P-Q control... T2-1-6
2.4 Boom up conflux control T2-1-8
2.5 Arm in recirculation & conflux control T2-1-10
2.6 Arm-in anti-cavitation control T2-1-12
2.7 Arm-out conflux control T2-1-13
2.8 Bucket digging (dump) conflux control T2-1-14
2.9 Bucket digging anti-cavitation control T2-1-16
2.10 Swing priority control T2-1-18
2.11 Travel straight control T2-1-20
2.12 Pressure release control..... T2-1-22
2.13 N&B switch control (option) T2-1-24
2.14 Option conflux control (option).. T2-1-25
3 Mechatro controller T2-1-27
3.1 Summary of multi display T2-1-27
3.2 Self diagnosis display T2-1-37
3.3 Service diagnosis display function T2-1-39
3.4 Trouble history diagnosis..... T2-1-49
3.5 Set procedure of maintenance schedule T2-1-50
3.6 Adjusting procedure of display . T2-1-52
3.7 Mechatro control equipment T2-1-64

Group 2 - Hydraulic circuits

1 Summary T2-2-1
2 Hydraulic circuits and components E265C T2-2-2
Hydraulic circuits and components E305C T2-2-4
3 Proportional hand control N&B hydraulic circuit (optional) T2-2-6
4 Holding valve for boom & arm (optional) T2-2-8
5 Proportional hand control Extra hydraulic circuit with pressure unload (optional)..... T2-2-10
6 Boom lowering hydraulic circuit (optional) T2-2-12
7 Color coding standard for hydraulic circuits T2-2-14
8 Neutral circuit T2-2-14
9 Travel circuit T2-2-16
10 Bucket circuit T2-2-18
11 Boom circuit T2-2-20
12 Swing circuit T2-2-24
13 Arm circuit T2-2-26
14 Combined circuit T2-2-32
15 Pressure draining (releasing) circuit . T2-2-36

Group 3 - Electrical system

Electrical system main components..... T2-3-1
Electrical system (Overall system)..... T2-3-1
Electrical system diagram T2-3-14
Electrical system diagram (No. 1)..... T2-3-14
Electrical system diagram (No. 2)..... T2-3-16
Electrical system diagram (No. 3)..... T2-3-18
Electrical system diagram (No. 4)..... T2-3-20
Electrical system diagram (No. 5)..... T2-3-22
Wiring harness T2-3-24
Cluster gauge wiring harness assembly..... T2-3-25
Platform wiring harness assembly T2-3-27
Upper frame wiring harness assembly . T2-3-31

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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
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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3. PROPORTIONAL HAND CONTROL N&B HYDRAULIC CIRCUIT (OPTIONAL)

PROPORTIONAL HAND CONTROL N&B HYDRAULIC CIRCUIT READING KEY

Item	Component name
50	Selector valve
51	Stop valve
52	Pilot valve
53	Shuttle valve
54	Overload relief valve

The hydraulic circuit for Proportional Hand Control N&B is used to add to standard circuit.

Selection condition and proportional valve command when any of nibbler single & conflux flow or breaker in service.

	SELECTION		Command signal of solenoid proportional valve (W:O, W/O: -)				
	Conflux/single flow changeover switch	Electromagnetic command signal of selector valve (**50**) (W:O, W/O: -)	P1 Pump	P2 Pump	Travel Straight	P1 Unload	P2 Unload
Conflux flow of nibbler	Conflux "ON"	-	O	O	O	O	O
Single flow of nibbler	Conflux "OFF"	-	-	O	-	-	O
Breaker	Conflux "OFF"	O	-	O	-	-	O

When using nibbler, according to specification of nibbler installed.

Adjust overload relief valve (54) of optional port to customize specification ordinary set pressure.

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2. CLASSIFICATION OF FAILURE AND TROUBLESHOOTING

Classify failures into the following 3 types and carry out the troubleshooting.

No.	Classes of failure	Troubleshooting
A	When error code after self-diagnosis is displayed on gauge cluster	Carry out troubleshooting according to the error code.
B	When no failure is detected currently but error code after self diagnosis is remained in trouble history	When it is hard to recreate the failure situation, cancel the data in the history and reproduce the failed situation or suppose the cause according to the troubleshooting by error code, and then repair it.
C	When error code after self diagnosis is not displayed or is not remained in the history	• Carry out troubleshooting according to instructions in Chapter T5-2 "TROUBLESHOOTING BY TROUBLE". • Carry out troubleshooting according to instructions in Chapter T5-3 "TROUBLE DIAGNOSIS MODE".

3. THE BLOWN FUSE OF MECHATRO CONTROLLER

If the fuse of mechatro controller has blown, the following display appears on the gauge cluster.

(1) The blown fuse of mechatro controller

a. Blown fuse 5A of mechatro controller :
"DATA COMMUNICATION ERROR" is displayed on the gauge cluster in the condition where the controller program is not executed.

b. Blown fuse 20A of mechatro controller
The controller functions normally but the power supply applied when the controller drives the solenoid, etc. stops.
Many error codes are displayed on the gauge cluster.
D013, D023, D033, D063,
E013, E023, F021

4. TROUBLESHOOTING BY ERROR CODE

When error code was displayed on the gauge cluster with the aid of self-diagnosis display function, carry out the troubleshooting referring to applicable page in the contents of error codes.

Error Code	Trouble	Described page
A025	Pump propo. valve adjustment (B adjustment) is not adjusted yet or is failed.	T5-1-5
A035	Unload valve adjustment (C adjustment) is not adjusted yet or is failed.	T5-1-6
A215	Written data of ROM adjustment data is incorrect.	T5-1-6
A225	Writing of ROM adjustment data is incorrect.	T5-1-7
A235	Written data of ROM hour meter data is incorrect.	T5-1-7
A245	Writing of ROM hour meter data is incorrect.	T5-1-8
A255	Writing of proportional valve adjustment data is incorrect.	T5-1-8
B012	Incorrect output of boom up pressure sensor	T5-1-9
B013	Disconnection of boom up pressure sensor	T5-1-9
B014	Short-circuit of boom up pressure sensor	T5-1-10
B022	Incorrect output of boom down pressure sensor	T5-1-10
B023	Disconnection of boom down pressure sensor	T5-1-11

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Installation of counterweight

NOTE: *approx. weight of counterweight: 6200 kg (13671 lbs).*

1. Attach lifting tools (**2**) to eye-bolts (**3**) of counterweight.

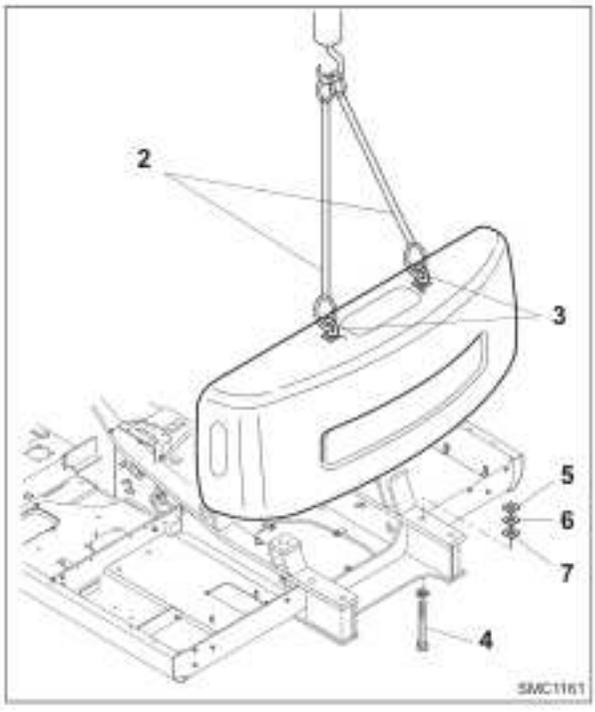
2. Install shim (**5**), (**6**), (**7**) onto the frame as it was.

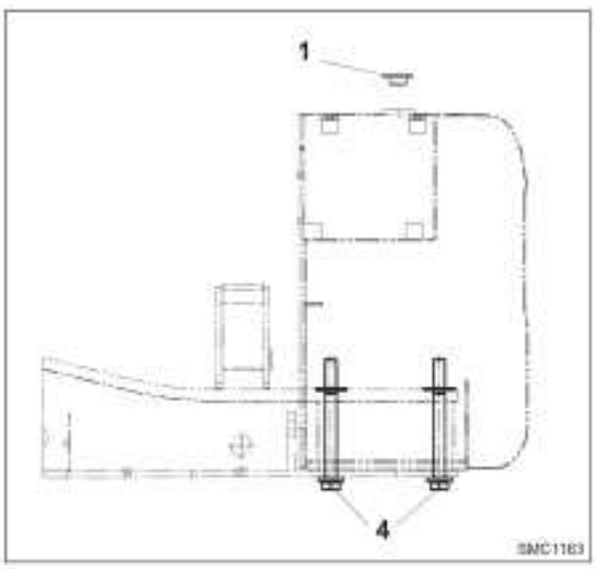
3. Lift counterweight and install it onto the frame.

4. Install bolts (**4**) and washers to counterweight and tighten temporarily.
   : 50 mm

5. Remove wire rope.
   Tighten the bolts (4) with a power wrench and torque wrench.
   : 50 mm
   : 2250 ± 225 Nm (1665 ± 166 lbf·ft)

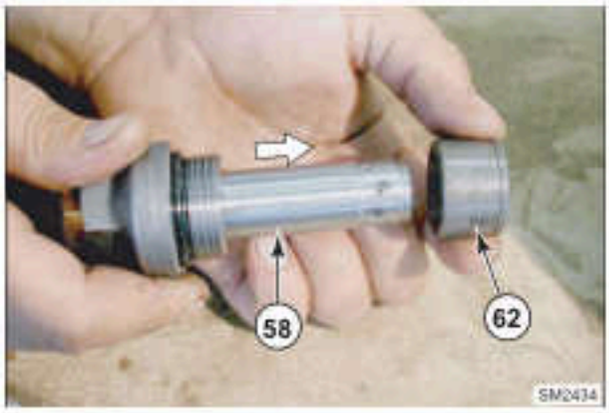
6. Remove eye-bolts (**3**) and install plugs (**1**) onto the counterweight.



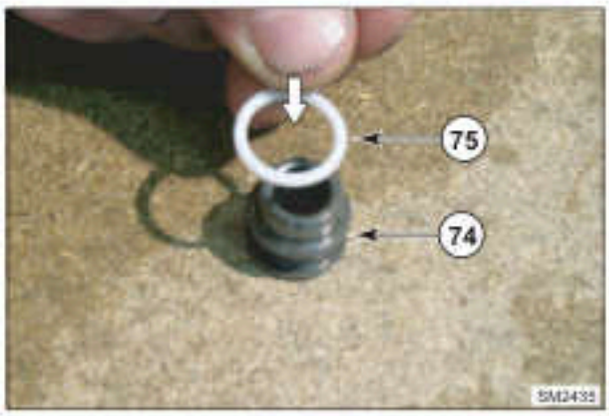


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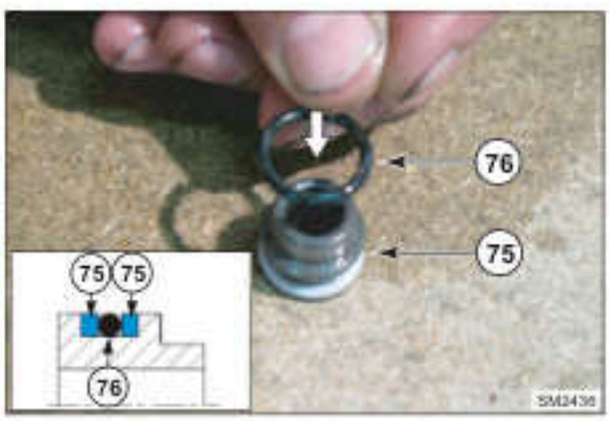
49. Insert the free piston (**62**) in the relief valve (**58**) checking that the groove side is turned toward the inside of the motor.



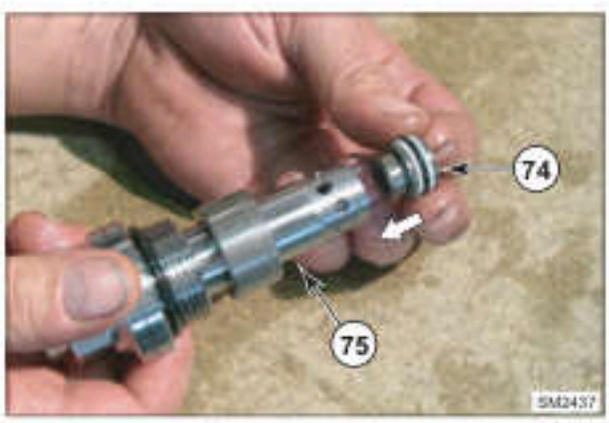
50. Assemble the 1st backup ring (**75**) into its seat in the poppet (**74**).



51. Assemble the O-ring seal (**76**) and the 2nd backup ring (**75**) into its seat in the poppet (**74**).



52. Insert the poppet (**74**) into its seat in the relief valve (**75**).



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DISASSEMBLY

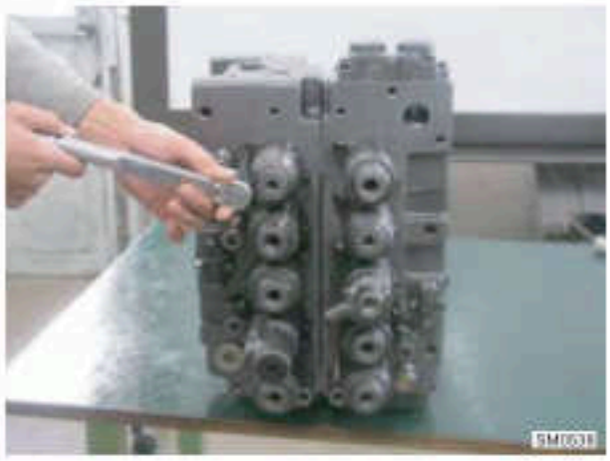
Place the control valve on a work bench so as to locate back pressure check valve upwards.



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

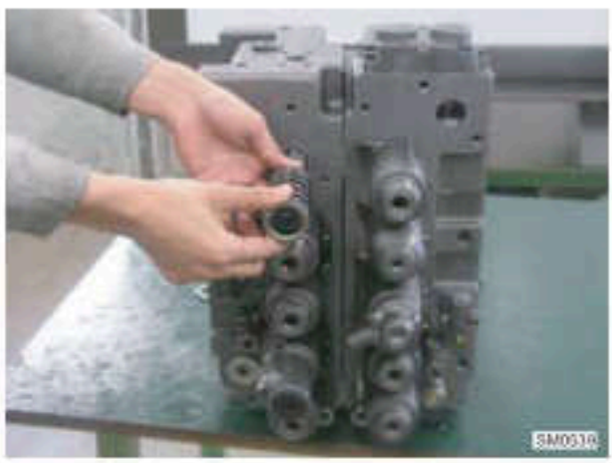
1. Disassembling P1 unload spool

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**).*

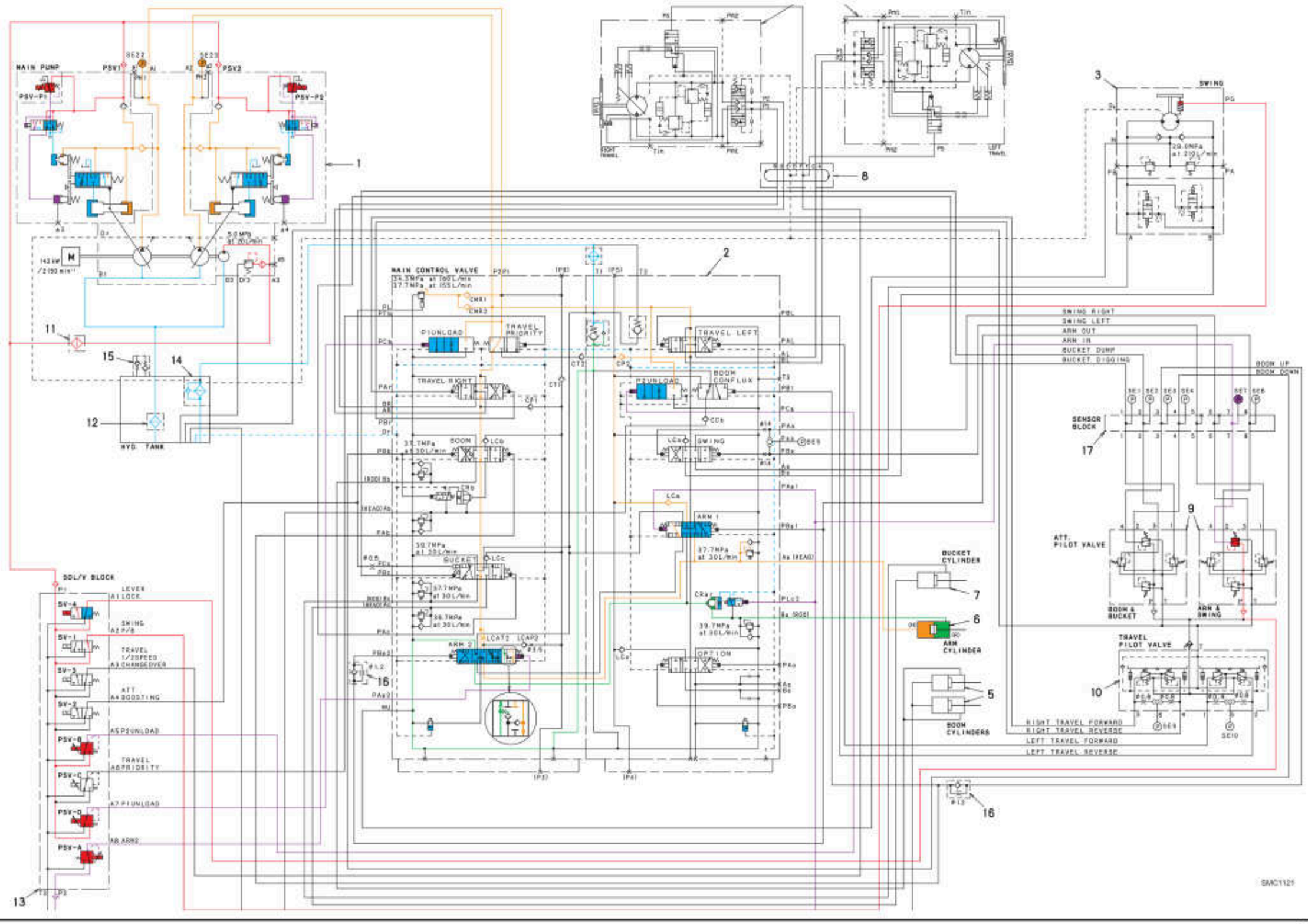


1.3 Fix the P1 unload spool assy with vise via a protective plate (aluminum plate, etc.) and remove bolt (**333**). Then separate spring seat (**331**), springs (**327**), (**329**) and stopper (**336**) from P1 unload spool (**309**).



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ARM CIRCUIT: Arm in (Heavy load) operation, Arm confluence & recirculation cut function



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