SERVICE MANUAL

WE170B / WE190B

Wheeled Excavator

Part number 48005365
English
April 2016

NEW HOLLAND CONSTRUCTION

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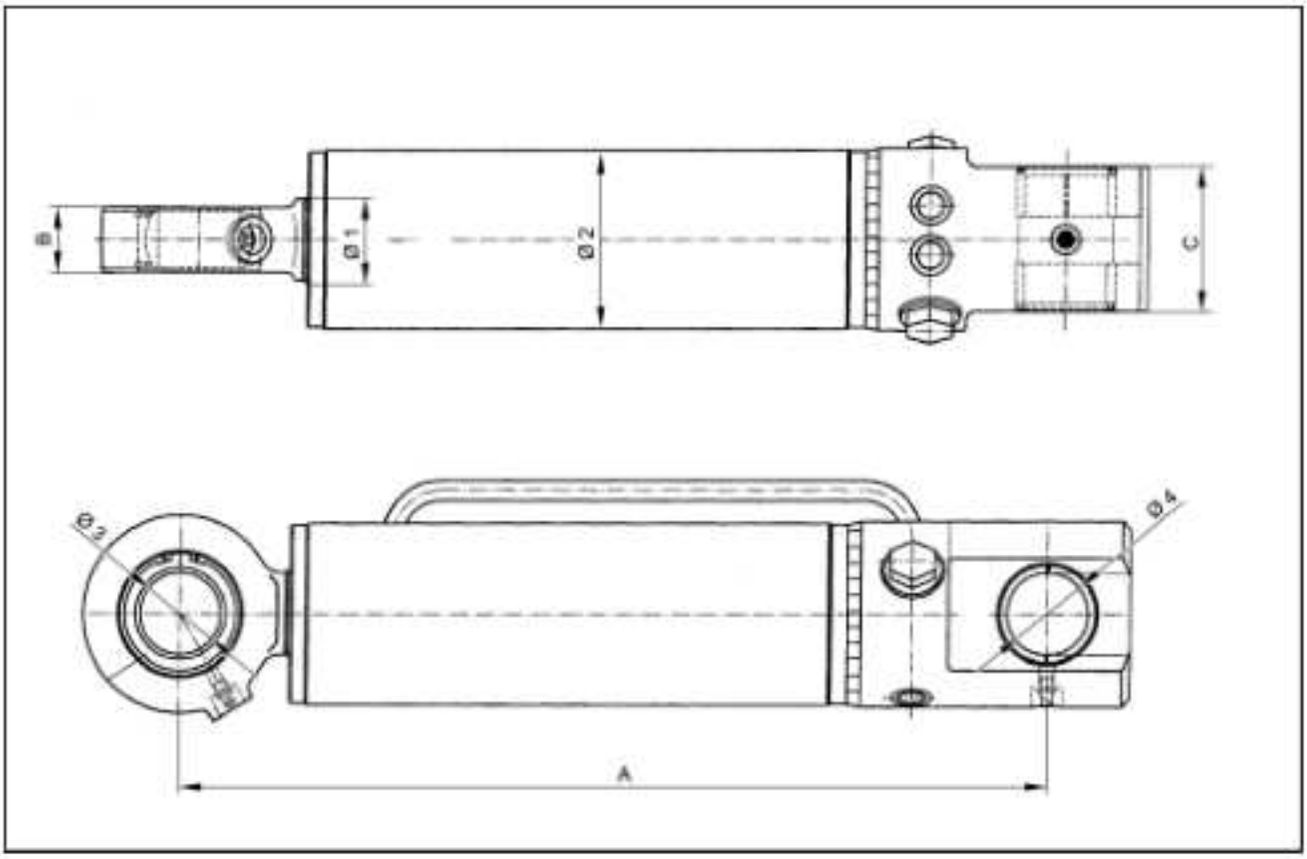
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Dozer blade cylinders - General specification



TULI12WEX2399PA 1

		WE170B	WE190B
$Ø_1$	Rod	50 mm (1.97 in)	60 mm (2.36 in)
$Ø_2$	Liner	110 mm (4.33 in)	125 mm (4.92 in)
$Ø_3$	Rod connection	50 mm (1.97 in)	50 mm (1.97 in)
$Ø_4$	Bottom connection	50 mm (1.97 in)	50 mm (1.97 in)
A	Blade cylinder completely retracted	535 mm (21.06 in)	550 mm (21.65 in)
B	Rod connection	35 mm (1.38 in)	40 mm (1.57 in)
C	Bottom connection	89 mm (3.50 in)	105 mm (4.13 in)
Stroke		220 mm (8.66 in)	250 mm (9.84 in)
Service pressure		350 bar (5075 psi)	380 bar (5510 psi)

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Troubleshooting related to diagnostic code 9834

Type of error	Error caused by	Possible cause	Remedy
Mechanical	Electrovalve Y204.a	Wrong solenoid resistance	Replace the electrovalve Y204.a
Electrical	Wiring 32E	Scrubbed wire	Replace wiring 32E
	Wiring 32F_3 or 32F_1	Scrubbed wire	Replace wiring 32F_3 or 32F_1
	UCM	UCM faulty	Replace the UCM

Diagnostic code: 9841

Light	Description	Condition
Yellow	Open load at solenoid bottom hood spool 5	Engine must be run
Note:	Check diagnostic code 9846 (simultaneous likely as 9841)	

Troubleshooting related to diagnostic code 9841

Type of error	Error caused by	Possible cause	Remedy
Mechanical	Electrovalve Y205.b	Electrovalve Y205.b	Check continuity between pins 1 and 2 of electrovalve and, if there is no continuity, replace electrovalve Y205.b
Electrical	Pin 2 of electrovalve Y205.b is not connected to ground	Wirings 32C_1 or 32C damaged	Check continuity of wiring 32C_1 or 32C (between electrovalve and ground) and, if continuity is not checked, replace the wiring
	No voltage signal on pin HSD_PWM_08 (pin 19, connector 4A) of UCM	Wiring 32A damaged	Check continuity of wiring 32A (between electrovalve and UCM) and, if continuity is not checked, replace the wiring
		UCM faulty	Replace the UCM

Diagnostic code: 9843

Light	Description	Condition
Red	Short circuit to supply of spool 5, bottom hood (dipper control)	Start key in "ON" position
Note:	When UCM detects a **24 V** short circuit, all the movements of the function are locked (eg. if short circuit is on bucket function, all the boom movements are locked)	

Troubleshooting related to diagnostic code 9843

Type of error	Error caused by	Possible cause	Remedy
Electrical	Electrovalve Y205.b	Short circuit on electrovalve Y205.b	Replace electrovalve Y205.b
	No signal voltage on pin 1 of electrovalve Y205.b	Wiring 32A damaged	Check continuity of wiring 32A between UCM and electrovalve) and, if continuity is not checked, replace the wiring
	Wirings 32C_1 or 32C	Wirings 32C_1 or 32C damaged	Check continuity between pin 2 of electrovalve Y205.b and pin 22, connector 1A of UCM and, if continuity is not checked, replace the wiring
	No voltage signal on pin HSD_PWM_08 (pin 19, connector 4A) of UCM	UCM faulty	Replace the UCM

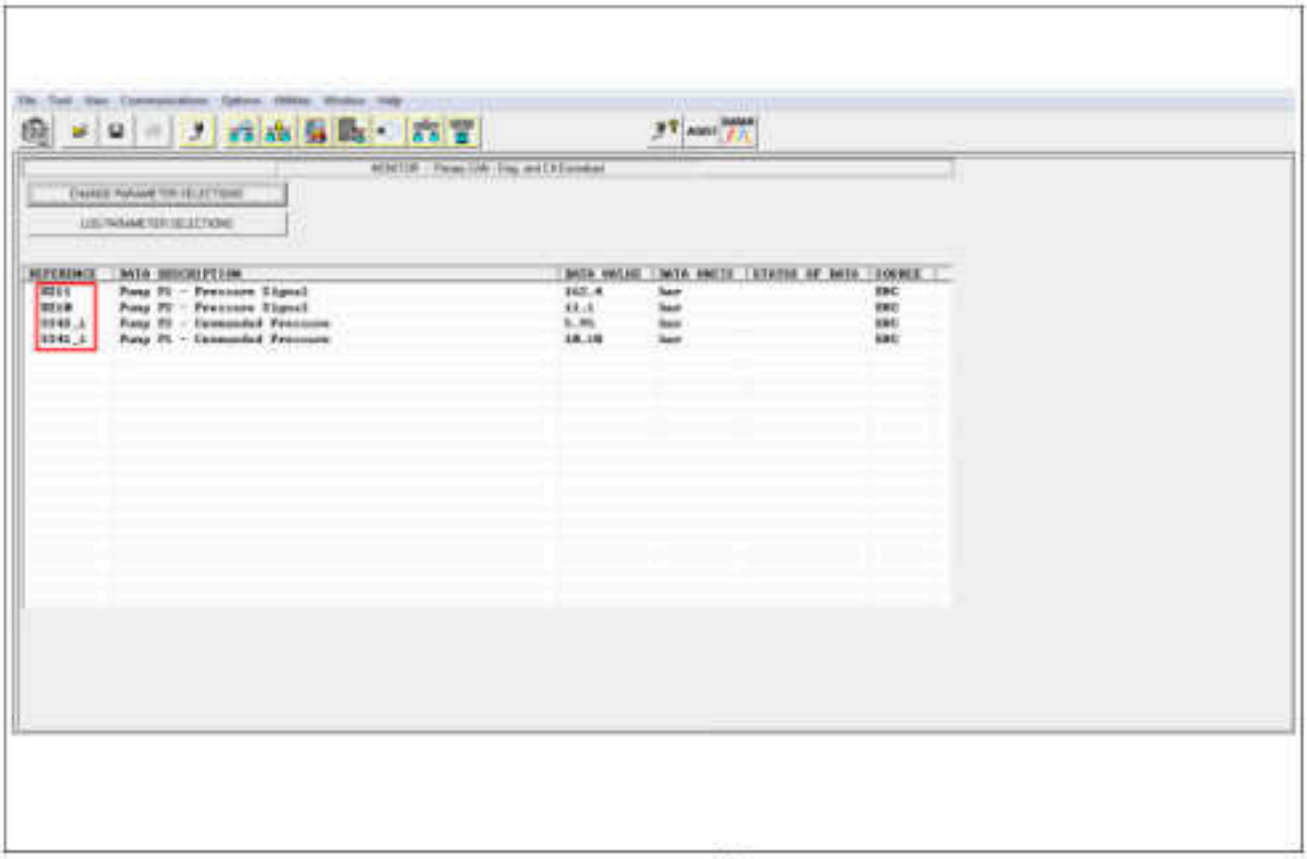
Diagnostic code: 9844

Light	Description	Condition
Red	Deviation of current at solenoid bottom hood spool 5	Key to "ON" position. Difference between commanded current and feedback current > **150 mA**
Note:	Check diagnostic code 9843	

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Code	Nomenclature	Electrical diagram reference	Harness assy.-key in figure
X103.3	Steering column assembly switch/cu5	**Harnesses and connectors - Electrical schematic sheet 14 - Steering column (55.100)**	E
H7.1	Horn	**Harnesses and connectors - Electrical schematic sheet 10 - Radio, converter 24 V/12 V, horn, operator seat socket (55.100)**	F
H7.2	Horn	**Harnesses and connectors - Electrical schematic sheet 10 - Radio, converter 24 V/12 V, horn, operator seat socket (55.100)**	F
Y209-A	Midi flow	**Harnesses and connectors - Electrical schematic sheet 27 - Low flow system, swing system (55.100)**	F
Y209-B	Midi flow	**Harnesses and connectors - Electrical schematic sheet 27 - Low flow system, swing system (55.100)**	F
Y37.1	Grab rotate	**Harnesses and connectors - Electrical schematic sheet 29 - UCM: electrovalves (55.100)**	F
Y37.2	Grab rotate	**Harnesses and connectors - Electrical schematic sheet 29 - UCM: electrovalves (55.100)**	F
XE32	Slip ring	**- Harnesses and connectors - Electrical schematic sheet 16 - Steering pressure switch, pressure sensor of parking brake, travel speed sensor, creep speed, 2nd gear (55.100)** **- Harnesses and connectors - Electrical schematic sheet 18 - 1st gear, floating axle locking, parking brake, travel motor anti-cavitation valve (55.100)** **- Harnesses and connectors - Electrical schematic sheet 22 - Stabilizer, blade (55.100)**	F
Y208-A	Low flow	**Harnesses and connectors - Electrical schematic sheet 26 - UCM: proportional electrovalves of main valve (55.100)** (Sheet 2 of 2)	F
Y208-B	Low flow	**Harnesses and connectors - Electrical schematic sheet 26 - UCM: proportional electrovalves of main valve (55.100)** (Sheet 2 of 2)	F
S291-A	Pressure switch safety swing	**Harnesses and connectors - Electrical schematic sheet 28 - UCM: electrovalves, pressure (55.100)**	G
S291-B	Pressure switch safety swing	**Harnesses and connectors - Electrical schematic sheet 28 - UCM: electrovalves, pressure (55.100)**	G
Y113	Switching-Off servo control	**Harnesses and connectors - Electrical schematic sheet 28 - UCM: electrovalves, pressure (55.100)**	G

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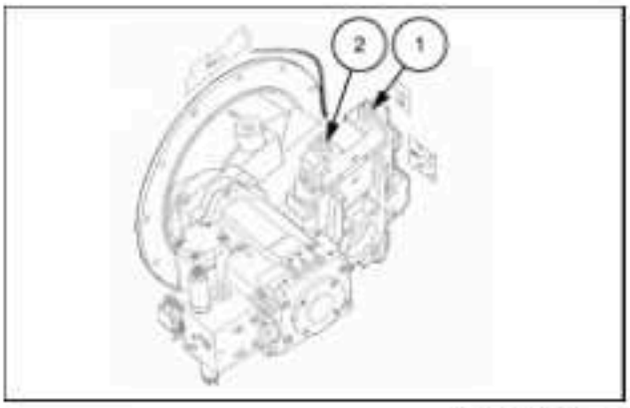
SM6.12WEX0309FA 28

- extend the boom: retract the positioning cylinder and dipper cylinder;



SM6.12WEX0310AA 29

- start the operation of boom raising. Increase right control lever angle until the pilot pressure of command pressure (Y241_1) displayed is **10 bar** (**145.0 psi**) and the value of pressure signal (B211) is between **120 bar** (**1740.0 psi**) and **200 bar** (**2900.0 psi**);
- observe the value of the first row of EST screen ("pump pressure" screen): if pump 1 pressure is less than **120 bar** (**1740.0 psi**), increase the flow acting on adjusting screw **(1)** , loosening the screw of 1/2 turn. If pump 1 pressure is greater than **200 bar** (**2900.0 psi**), reduce the flow acting on adjusting screw **(1)** , tightening the screw of 1/2 turn. If pressure is within **120 bar** (**1740.0 psi**) and **200 bar** (**2900.0 psi**), no adjusting is required.

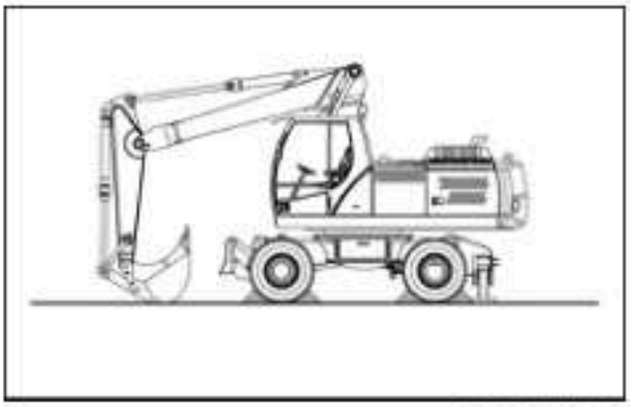


SM6.12WEX0311AB 30

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Hydraulic swing system - Remove

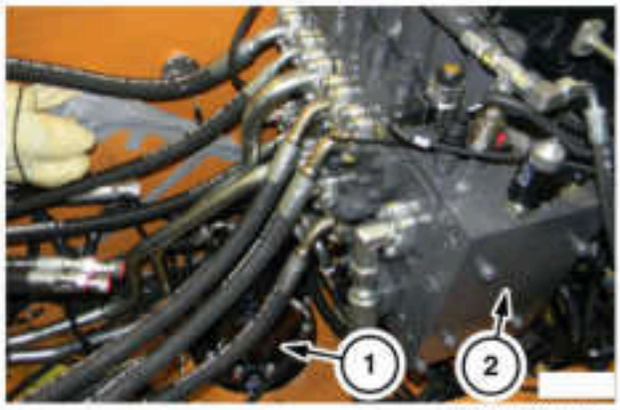
Park the machine on a level and firm surface.
Lower the attachment to the ground.
Lower the blade and the stabilizers to the ground.
Engage the parking brake.
Lock the upper structure.
Stop the engine.
Move both hydraulic control levers in all directions, to release possible residual pressure inside the hydraulic system.



T1JJ12WEX208SAA 1

In order to remove the slewing gearbox **(1)** from its seat, it is necessary to remove the main valve **(2)**.
Gain access to the main valve by climbing the relevant machine plate from the left.
Remove any residual pressure from the hydraulic tank by using the breather valve.

NOTICE: *The procedure provides for the disconnection of the hydraulic lines which can contain a certain amount of hydraulic oil. Adequately protect yourself from contact.*

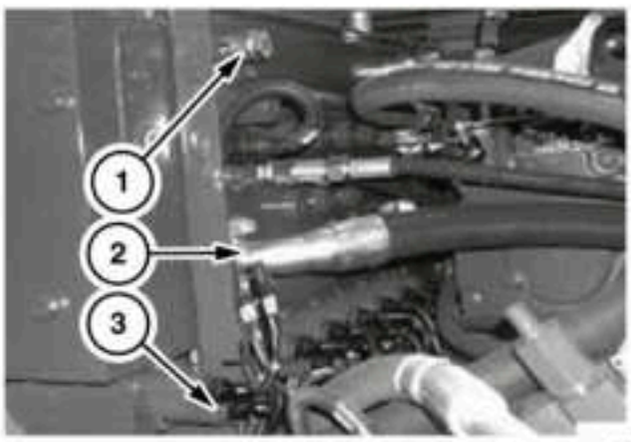


TUPH12WEX208BAB 2

Adequately mark the lines to be disconnected from the main valve for a subsequent reassembly.

Disassemble all hydraulic lines **(2)** from the main valve installed on the upper side, on the arm's side and on the engine's side. Install plugs to prevent the escape of the oil trapped inside the main valve and a possible introduction of dust and/or dirt.
Moreover, on the engine side, disconnect all electric connections **(3)** after adequately marking them for a subsequent reassembly. Sling the main valve and loosen the 3 screws **(1)** which fasten it to the supporting bracket. After checking that no lines or electric cables interfere with the assembly to be removed, lift the assembly.

NOTICE: *Slowly lift the main valve, and avoid hitting the surrounding components.*



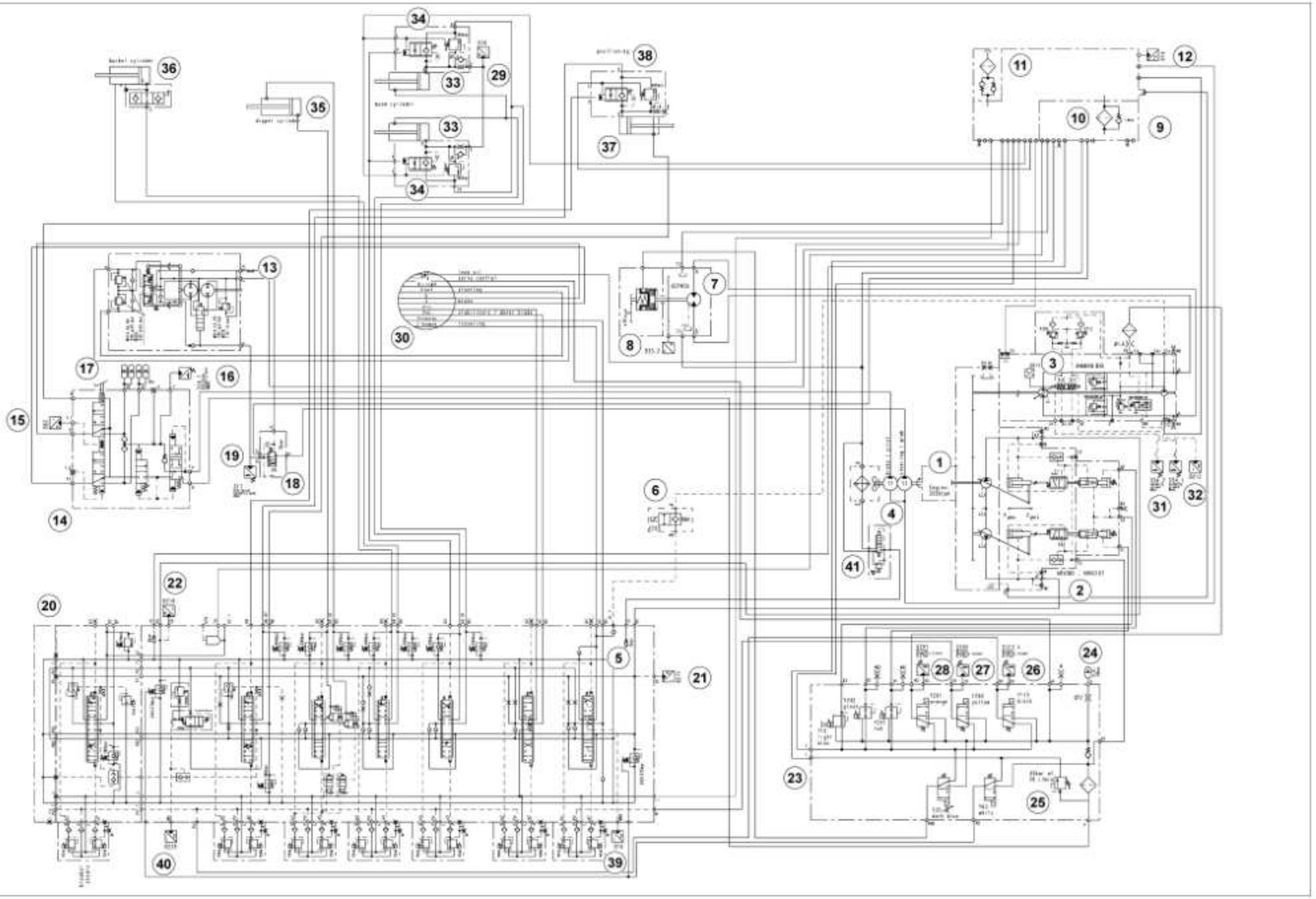
TUPH12WEX208TAB 3

Drain the hydraulic oil contained in the slewing gearbox (see the Operator's Manual).

NOTICE: *To collect the liquids to be disposed, use the containers provided for these operations and do not use unsuitable containers or containers which could mislead people to drink its content.*

Use plugs to prevent the introduction of dust or dirt into the slewing gearbox and into the disconnected lines.

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