PART NO. TOLAB50-EN-00

HITACHI

Reliable solutions

Technical Manual

Operational Principle

ZX

140W-6

Wheeled Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOLAB50-EN
Technical Manual (Troubleshooting)	: Vol. No.TTLAB50-EN
Workshop Manual	: Vol. No.WLAB50-EN
Engine Manual	: Vol. No.ETLAB50-EN, EWLAB50-EN

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Engine Accessories

RADIATOR ASSEMBLY	Type	Tandem Type

	Radiator	Oil Cooler	Intercooler
Air-Tight Test Pressure	100 kPa	1500 kPa	250 kPa
Cap Opening Pressure	50 kPa	-	-

BATTERY	Type	115E41L
	Voltage	12 V
	Capacity	93 Ah (20-Hour Rate)
	CCA	E41, 610A

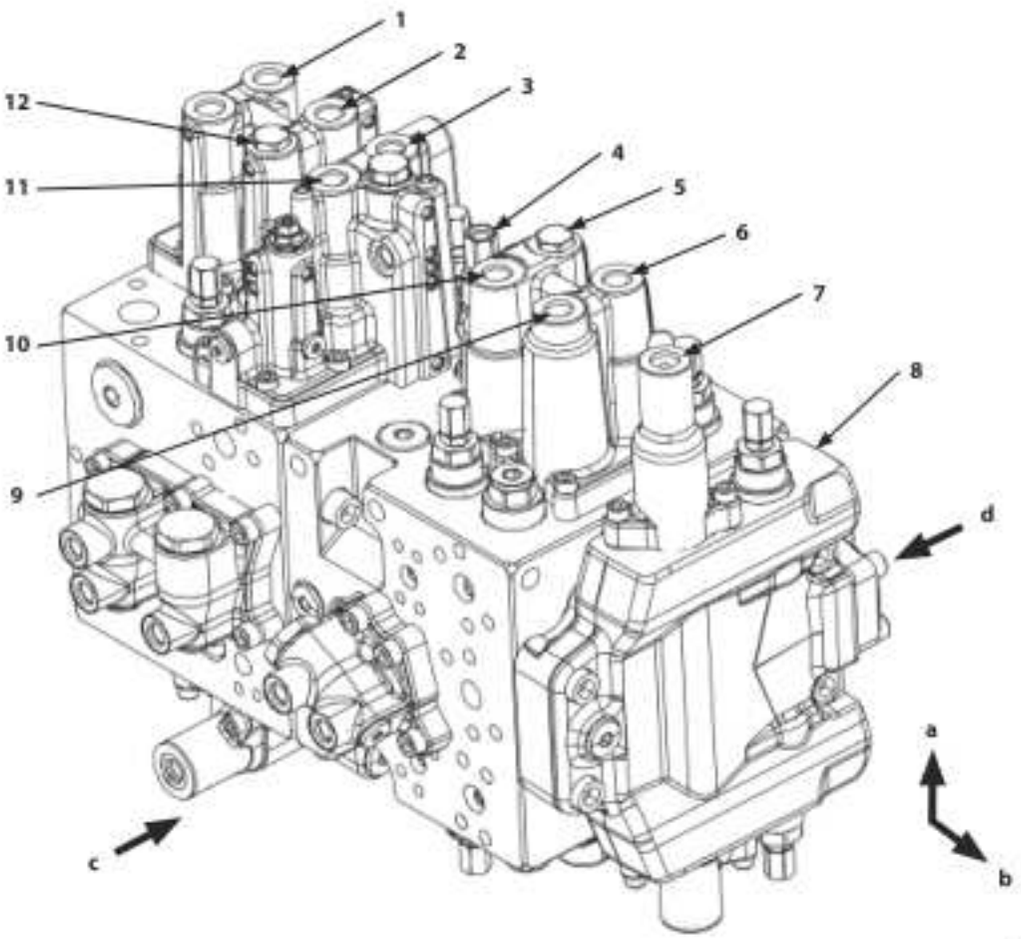
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Outline

The control valve controls the oil pressure, flow rate, and flow direction in the hydraulic circuit.
The control valve consists of the main relief valve, overload relief valve, anti-drift valve, flow rate control valve, regenerative valve, boom lower meter-in cut valve, auxiliary flow combiner valve, bypass shut-out valve, and spools. The spools are operated by the pilot pressure.

As for the spool, in the 4-spool side block, travel (9), bucket (10), boom 1 (11), and arm 2 (12) are arranged in that order as viewed from the machine front. In the 5-spool side block, blade/outrigger (6), auxiliary (5), boom 2 (3), arm 1 (2), and swing (1) are arranged in that order as viewed from the machine front.
In addition, positioning/auxiliary 2 block (8) is added for the machine with the 2-piece boom or optional parts attached.

Control Valve



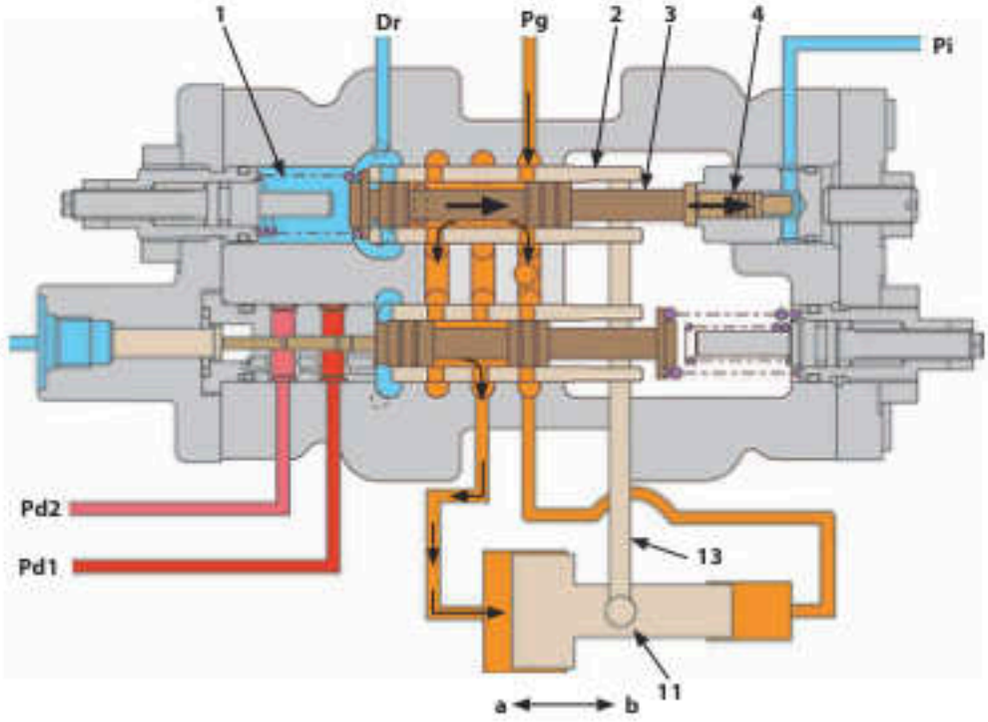
TLAA-03-03-001

a- Machine Top
b- Machine Front
c- 4-Spool Side
d- 5-Spool Side

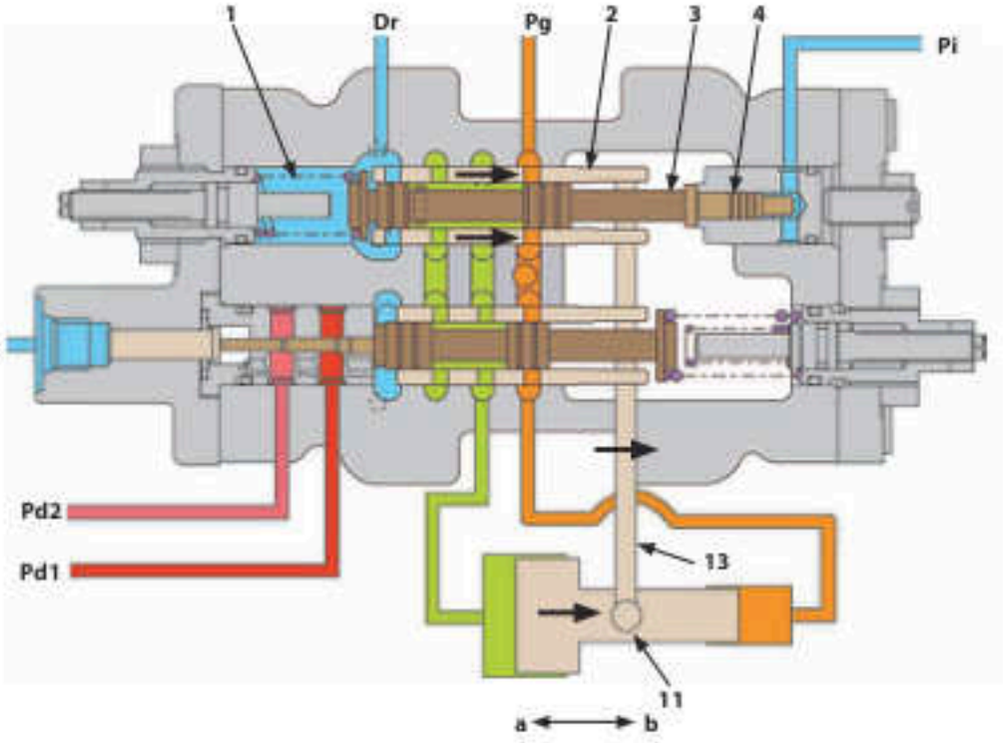
1- Swing
2- Arm 1
3- Boom 2
4- Main Relief Valve
5- Auxiliary
6- Blade/Outrigger
7- Positioning/Auxiliary 2
8- Positioning/Auxiliary 2 Block
9- Travel
10- Bucket
11- Boom 1
12- Arm 2

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NOTE: The figure shows the pump 2 regulator.



TPPP-03-01-018



TPPP-03-01-019

Pd1- Pump 1 Delivery Pressure
Pd2- Pump 2 Delivery Pressure

Dr- Returning to Hydraulic Oil Tank
Pi- Pump Control Pressure

Pps- Torque Control Pressure
Pg- Primary Pilot Pressure (From Pilot Pump)

a- Displacement Angle Increase
b- Displacement Angle Decrease

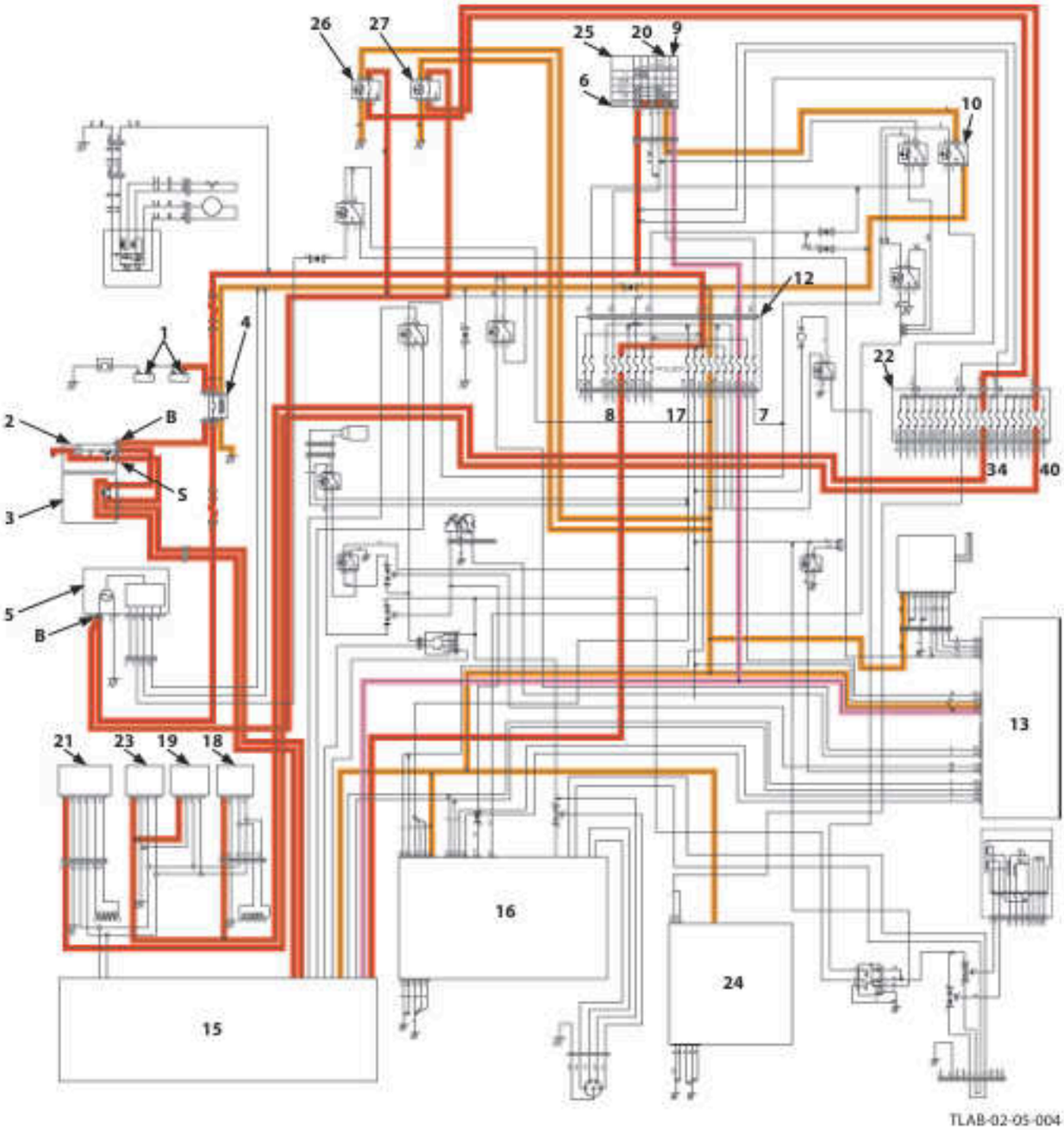
1- Spring
2- Sleeve A

3- Spool A
4- Piston

11- Servo Piston

13- Link

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TLAB-02-05-004

1- Battery
2- Starter
3- Starter Relay 1
4- Battery Relay
5- Alternator
6- START Position
9- Terminal ST
10- Key Switch ON Cut Relay
12- Fuse Box 1
13- Monitor Controller
15- ECM
16- MC1
18- DEF Sensor Unit
19- Upstream NOx Sensor
20- Terminal M
21- EGR Controller
22- Fuse Box 2
23- Downstream NOx sensor
24- MC2
25- Key Switch
26- EGR Key Switch ON Relay
27- SCR Key Switch ON Relay

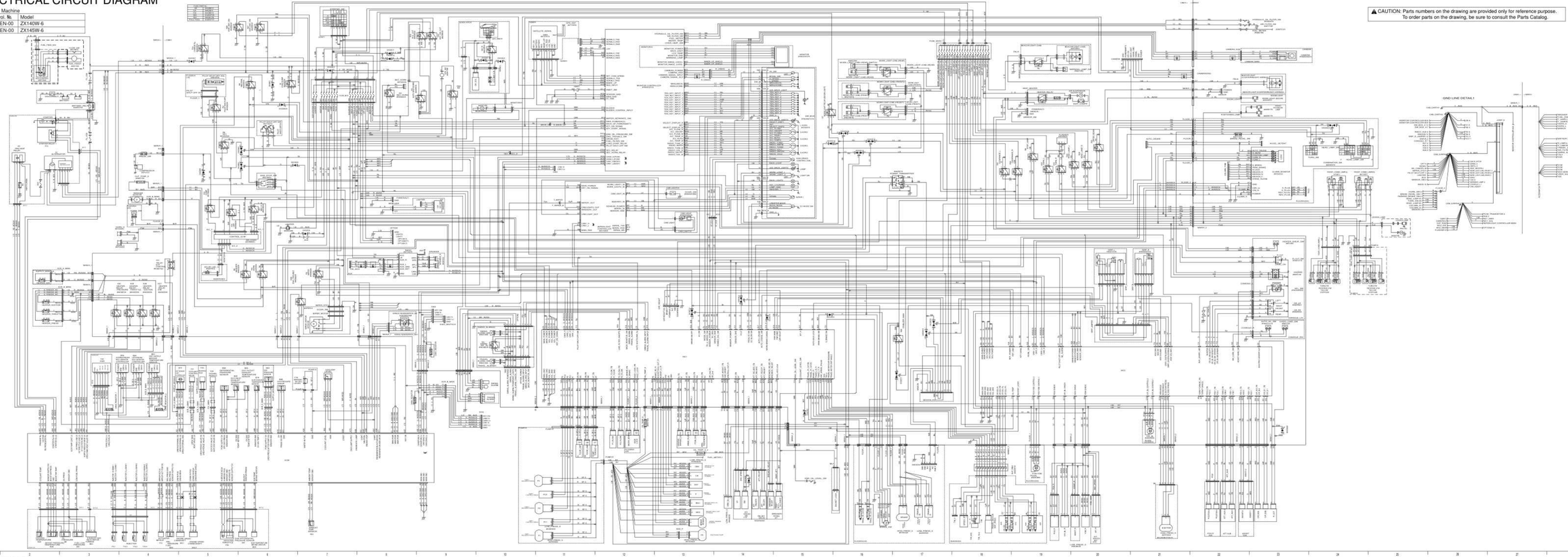
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ELECTRICAL CIRCUIT DIAGRAM

Applicable Machine

Attach to vol. No.	Model
TTLAB50-EN-00	ZX140W-6
TTLAC50-EN-00	ZX145W-6

⚠ CAUTION: Parts numbers on the drawing are provided only for reference purpose.
To order parts on the drawing, be sure to consult the Parts Catalog.



TTLAB50-EN-00(20170131)

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