PART NO. TOLBF50-EN-00

HITACHI

Reliable solutions

Technical Manual

Operational Principle

ZX190W-6

Wheeled Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOLBF50-EN
Technical Manual (Troubleshooting)	: Vol. No.TTLBF50-EN
Workshop Manual	: Vol. No.WLBF50-EN
Engine Manual	: Vol. No.ETDC150-EN, EWDC150-EN

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CYLINDER (Mono Boom)		Boom	Arm	Bucket
	Rod Diameter	85 mm	90 mm	75 mm
	Cylinder Bore	120 mm	125 mm	105 mm
	Stroke	1050 mm	1371 mm	1060 mm
	Fully Retracted Length	1695 mm	1901 mm	1565 mm
	Plating Thickness	30 µm	30 µm	30 µm

CYLINDER (2-piece Boom)		Boom	Arm	Bucket	Positioning
	Rod Diameter	85 mm	90 mm	75 mm	105 mm
	Cylinder Bore	120 mm	125 mm	105 mm	170 mm
	Stroke	980 mm	1371 mm	1060 mm	670 mm
	Fully Retracted Length	1680 mm	1901 mm	1565 mm	1250 mm
	Plating Thickness	30 µm	30 µm	30 µm	30 µm

CYLINDER (Option)		Blade	Outrigger
	Rod Diameter	70 mm	70 mm
	Cylinder Bore	120 mm	120 mm
	Stroke	195 mm	381 mm
	Fully Retracted Length	636 mm	854 mm
	Plating Thickness	30 µm	30 µm

Hose Rupture Valve	Relief Set-Pressure	$40.5^{+1.0}_{0}$ MPa at 0.5±0.1 L/min

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Radiator Coolant Temperature Pump Torque Decrease Control

Purpose:
The radiator coolant temperature pump torque decrease control reduces the pump delivery flow rate and the pump driving torque so that engine stall is prevented when the coolant temperature is high (100°C or more). It also reduces the pump delivery flow rate and the pump driving torque so that engine stall is prevented when the coolant temperature is low (less than 50 °C).

Operation:

1. When the coolant temperature is high or low, the ECM (20) sends the coolant temperature sensor (21) signal to MC1 (12) by CAN communication (19).
2. MC1 (12) activates the torque control solenoid valve (28).
3. The torque control solenoid valve (28) delivers pilot pressure oil to the regulator and reduces the pump delivery flow rate.
4. Therefore, the engine overheating is prevented when the coolant temperature increases, or the engine stall is prevented when the coolant temperature decreases.

NOTE: The radiator coolant temperature pump torque decrease control can be set to enabled or disabled by MPDr. (16). Even if it is set to disabled, the radiator coolant temperature pump torque decrease control becomes enabled when coolant temperature is low. (Radiator Coolant Temperature Pump Torque Decrease Control Selection)

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AUXILIARY FLOW COMBINER HARNESS

⚠ 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.

Applicable Machine

Attach to vol. No.	Model
TTLAB50-EN-00	ZX140W-6
TTLAC50-EN-00	ZX145W-6
TTLBE50-EN-00	ZX170W-6
TTLBF50-EN-00	ZX190W-6

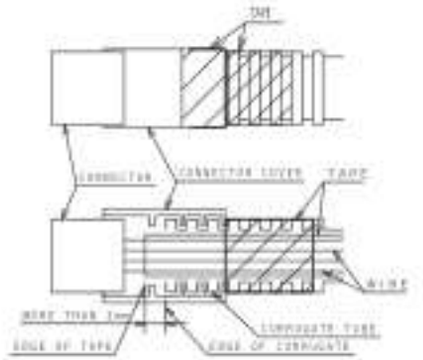
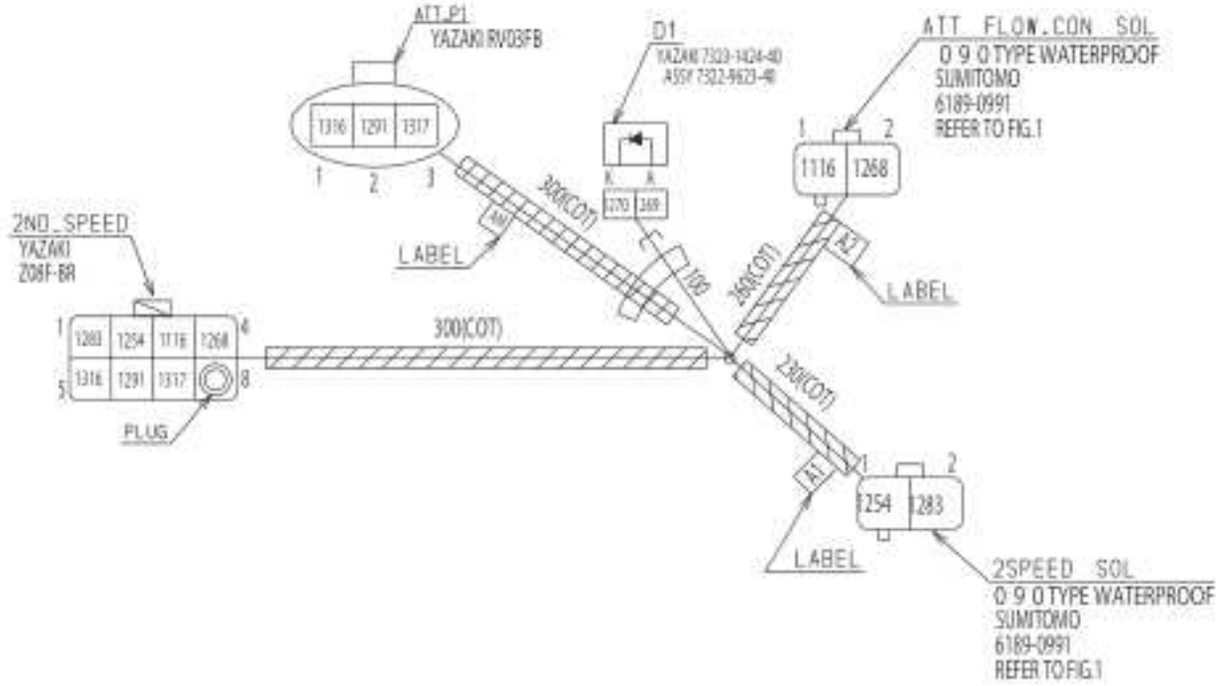


FIG.1 DETAIL OF CONNECTOR WITH REAR COVER

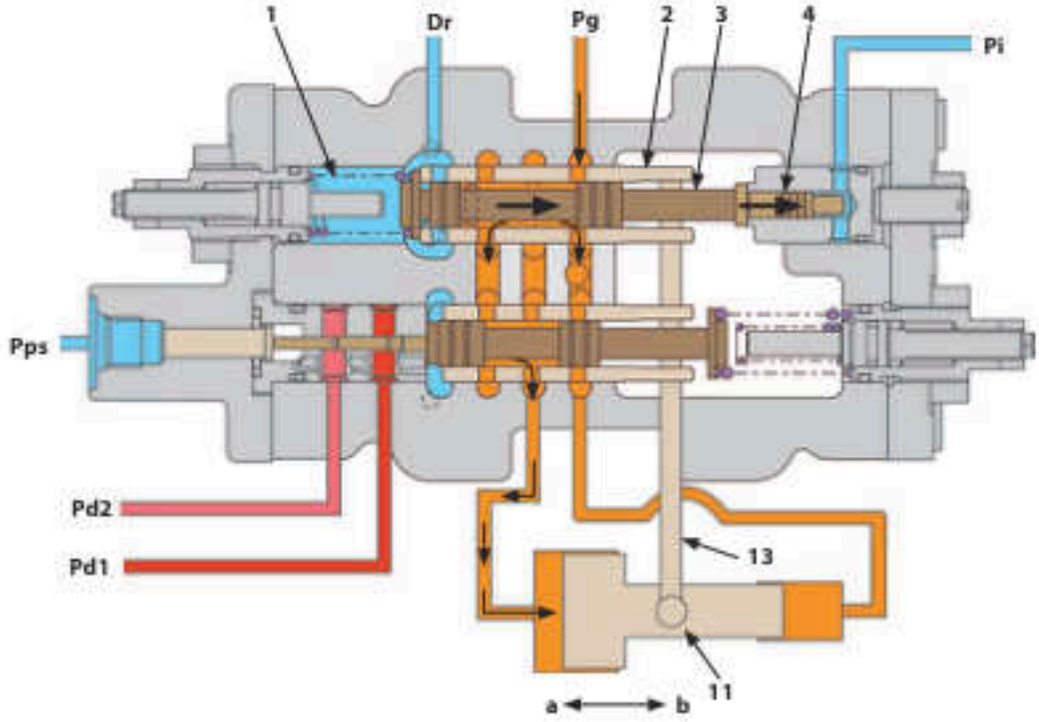
NO.	SIZE	COLOR	CIRCUIT FROM	CIRCUIT TO	COMMENT
1116	0.5	R	2ND_SPEED_3	ATT FLOW CON SOL-1	AVS
1254	0.5	PG	2ND_SPEED_2	2SPEED SOL-1	AVS
1268	0.5	YG	2ND_SPEED_4	ATT FLOW CON SOL-2	AVS
1269	0.5	LB	D1-A	(1254)	AVS
1270	0.5	L	D1-K	(1283)	AVS
1283	0.5	WY	2ND_SPEED_1	2SPEED SOL-2	AVS
1291	0.5	Sb	2ND_SPEED_6	ATT_PI_2	AVSS
1316	0.5	BY	2ND_SPEED_5	ATT_PI_1	AVSS
1317	0.5	BY	2ND_SPEED_7	ATT_PI_3	AVSS



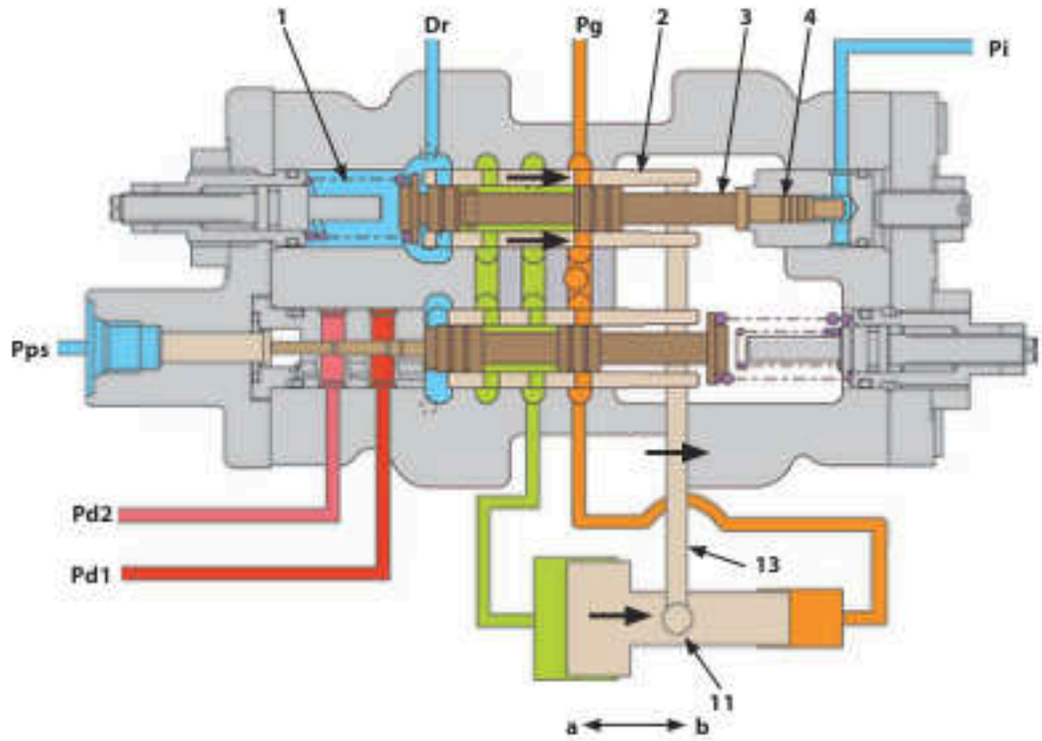
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NOTE: The figure shows the pump 2 regulator.



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

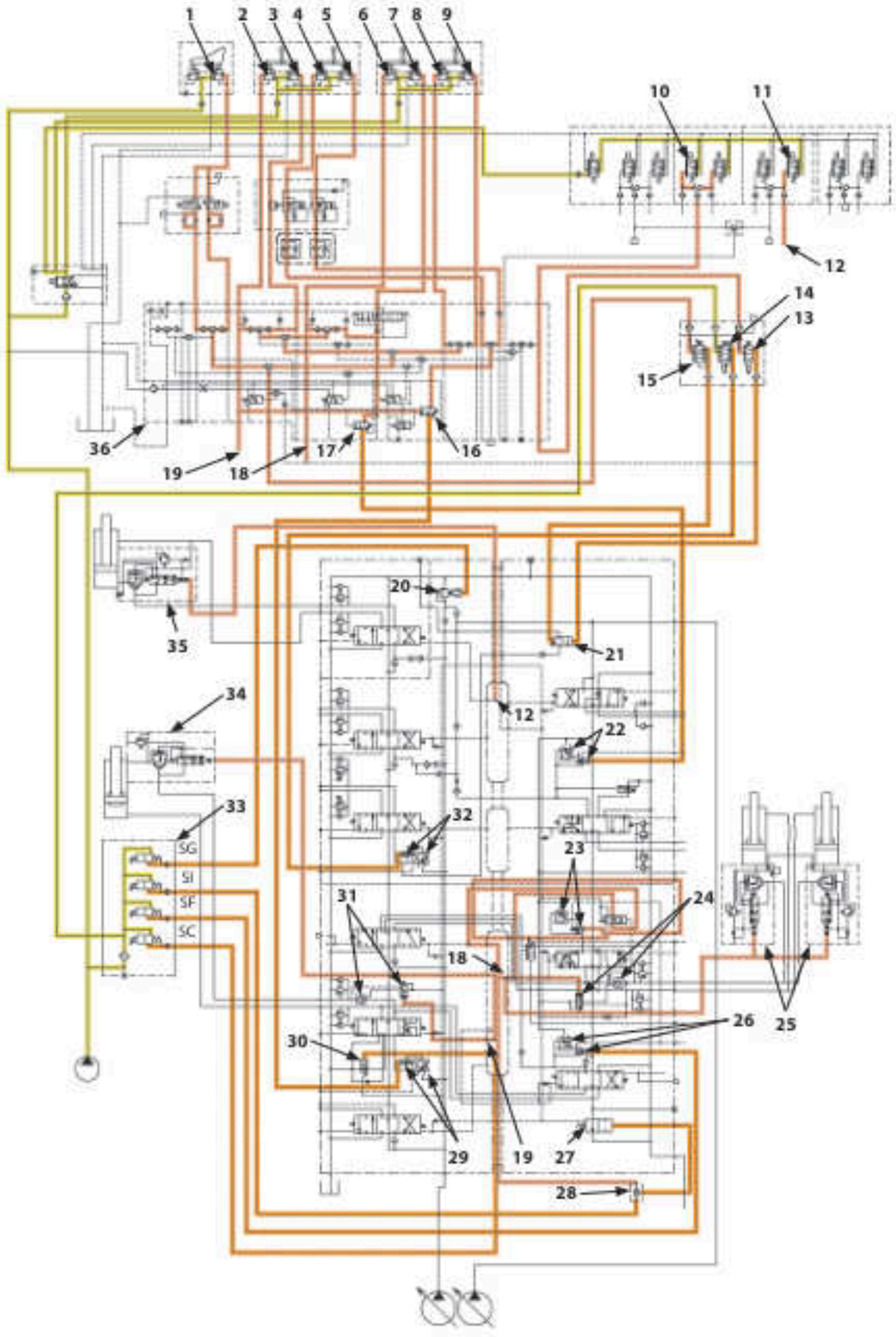
1- Spring
2- Sleeve A

3- Spool A
4- Piston

11- Servo Piston

13- Link

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TLBE-02-04-004

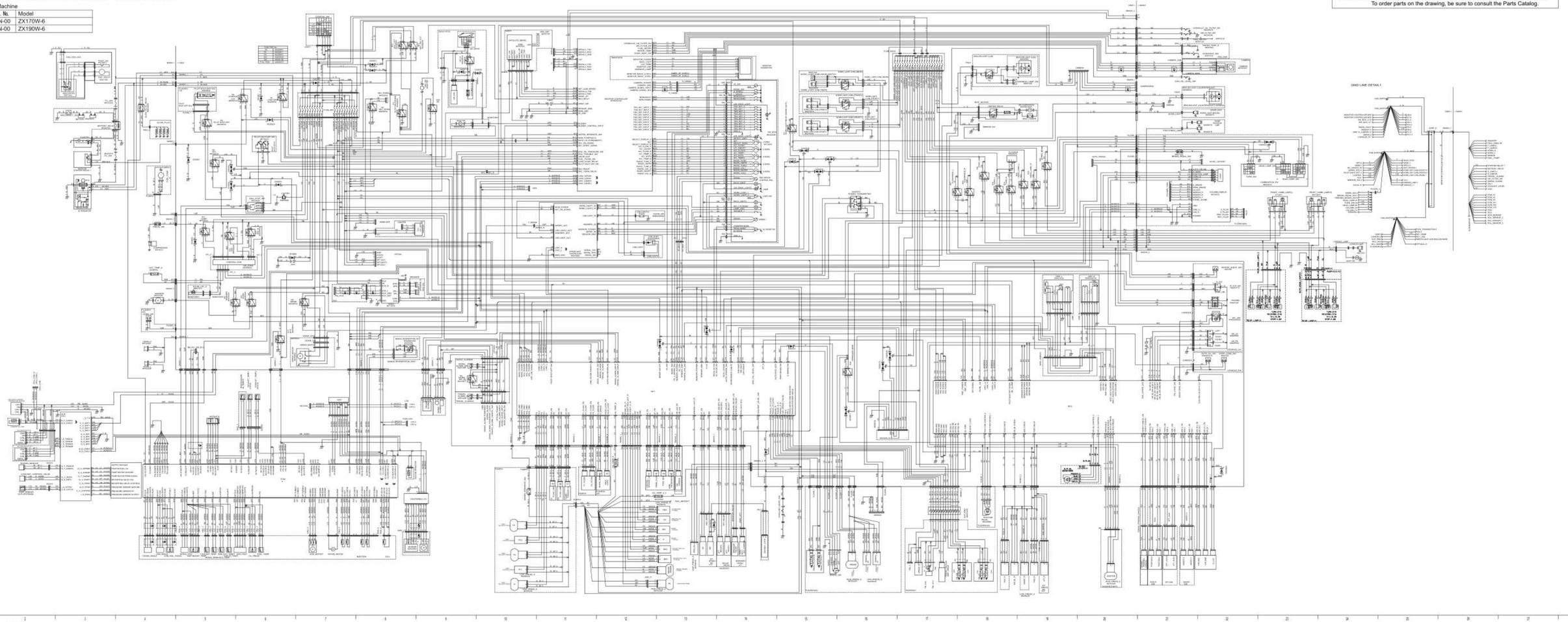
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ELECTRICAL CIRCUIT DIAGRAM

Applicable Machine

Attach to vol. No.	Model
TTLBE50-EN-00	ZX170W-6
TTLBF50-EN-00	ZX190W-6

▲CAUTION: Parts numbers on the drawing are provided only for reference purpose.
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