PART NO. TODBF-EN-00

HITACHI

Reliable solutions

Technical Manual

Operational Principle

ZX

180LC-5B

180LCN-5B

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODBF-EN
Technical Manual (Troubleshooting)	: Vol. No.TTDBF-EN
Workshop Manual	: Vol. No.WDBF-EN
Engine Manual	: Vol. No.EDBE-EN

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SECTION 1

GENERAL

CONTENTS

Group 1 Specifications

Specifications T1-1-1
Working Ranges (Grouser shoe) T1-1-2

Group 2 Component Layout

Main Component T1-2-1
Electrical System (Overview) T1-2-3
Electrical System (Rear Tray) T1-2-4
Electrical System (Switch Panel) T1-2-5
Electrical System (Around Air Cleaner) T1-2-6
Electrical System (Relays) T1-2-7
Engine T1-2-8
Muffler Filter T1-2-9
Pump Device T1-2-10
Around Pump Device T1-2-11
Control Valve T1-2-12
Signal Control Valve T1-2-12
Swing Device T1-2-14
Travel Device T1-2-14
3-Spool Solenoid Valve Unit T1-2-15
2-Spool Solenoid Valve Unit (for Muffler Filter Regeneration Control) T1-2-15
Layout of Attachment Spec. Parts T1-2-16
Boom Foot Part Lower Side T1-2-17
Utility Space Partition Cover T1-2-18
Control Valve Upper Side, Lower Side T1-2-18

Group 3 Component Specifications

Engine T1-3-1
Engine Accessories T1-3-5
Hydraulic Component T1-3-6
Electrical Component T1-3-10

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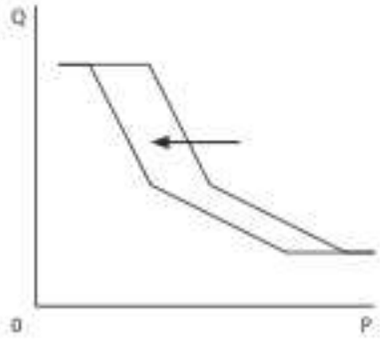
Group 3 Component Specifications

		Boom	Arm	Bucket	Positioning
CYLINDER (Mono Boom)	Rod Diameter	85 mm (3.1")	90 mm (3.5")	75 mm (3.0")	100 mm (3.9")
	Cylinder Bore	120 mm (4.7")	125 mm (4.9")	105 mm (4.1")	150 mm (5.9")
	Stroke	1123 mm (3'8")	1371 mm (4'6")	1060 mm (3'6")	1142 mm (3'9")
	Fully Retracted Length	1723 mm (5'8")	1901 mm (6'3")	1565 mm (5'2")	1763 mm (5'9")
	Plating Thickness	30 µm (1.18 µin)	30 µm (1.18 µin)	30 µm (1.18 µin)	30 µm (1.18 µin)

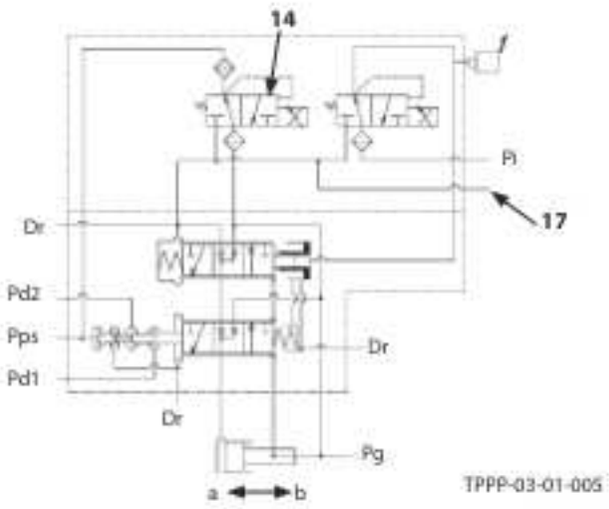
Hose Rupture Valve (Boom, Arm, Bucket)	Relief Set-Pressure	$40.5^{+3.5}_{0}$ Mpa (413^{+10}_{0} kgf/cm^2, 5873^{+145}_{0} psi) at 0.5±0.1 L/min
Hose Rupture Valve (Positioning)	Relief Set-Pressure	$38.8^{+3.5}_{0}$ Mpa (396^{+10}_{0} kgf/cm^2, 5626^{+145}_{0} psi) at 0.5±0.1 L/min

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- Control by Pilot Pressure from Torque Control Solenoid Valve (14)
  MC (main controller) sends the signals to torque control solenoid valve (14) according to the engine speed and the signals from sensors.
  Torque control solenoid valve (14) delivers torque control pilot pressure Pps to the regulator in response to the signals from MC. When receiving torque control pilot pressure Pps, the regulator reduces the pump delivery flow rate.
  (Refer to SYSTEM / Control System.)



Q- Flow Rate
P- Pressure



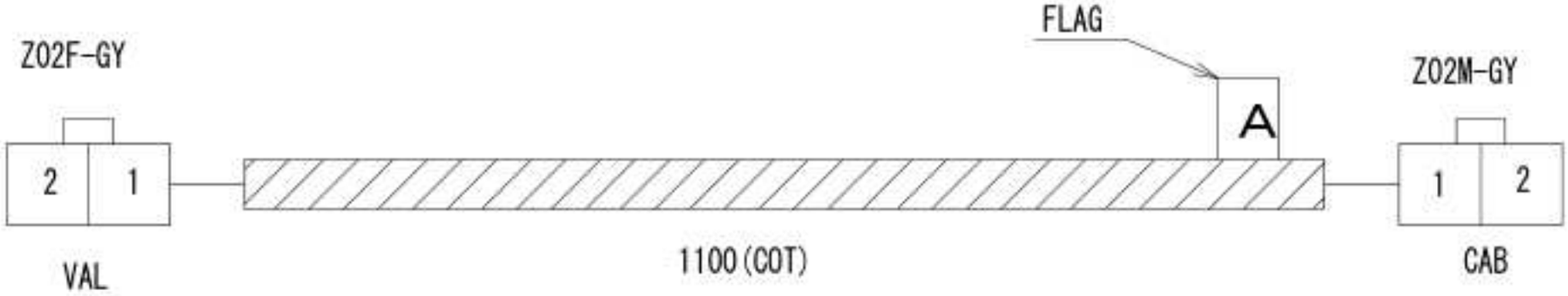
Pd1- Pump 1 Delivery Pressure
Pd2- Pump 2 Delivery Pressure
Dr- Returning to Hydraulic Oil Tank
Pi- Pump Control Pressure
Pps- Torque Control Pressure
14- Torque Control Solenoid Valve
Pg- Primary Pilot Pressure (From Pilot Pump)
a- Displacement Angle Increase
b- Displacement Angle Decrease
17- Air Bleeding Circuit

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PILOT SHUT-OFF SOLENOID VALVE HARNESS

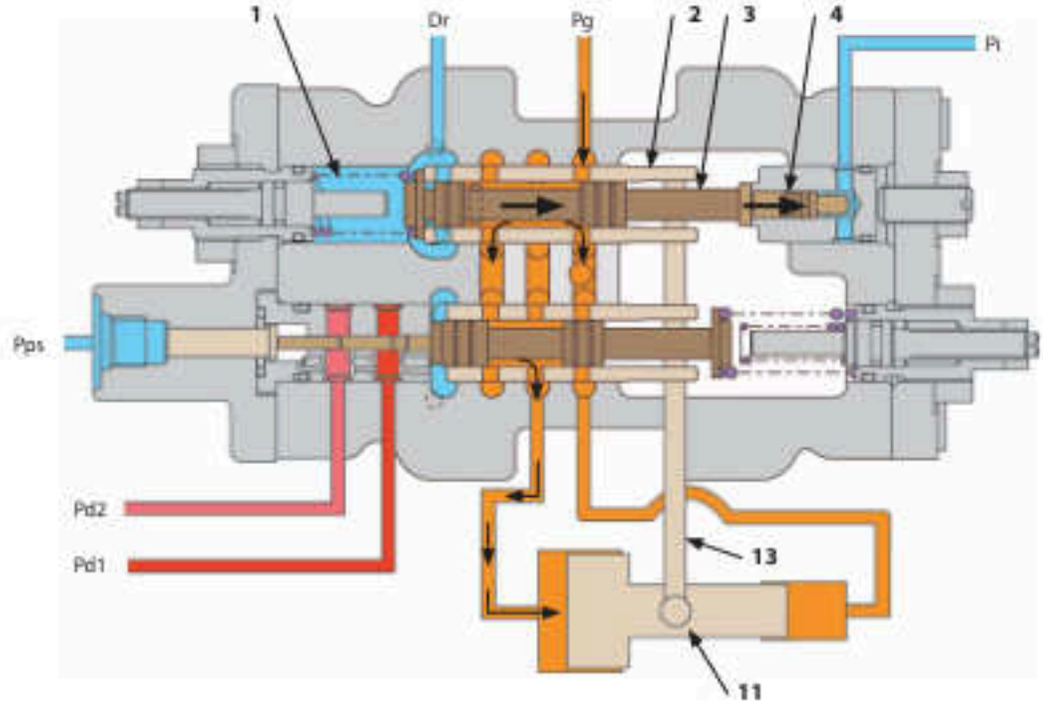
Applicable Machine

Attach to vol. No.	Model
TTDAD-EN-00	ZX130-5B/ 130LCN-5B
TTDAE-EN-00	ZX135US-5B
TTDBE-EN-00	ZX160LC-5B
TTDBF-EN-00	ZX180LC-5B/ 180LCN-5B
TTDCK-EN-00	ZX210-5B/ 210LC-5B/ 210LCN-5B/ 240N-5B
TTDCN-EN-00	ZX225USLC-5B/ 225USRLC-5B
TTDCA-EN-00	ZX250LC-5B
TTDDA-EN-00	ZX290LC-5B
TTDDD-EN-00	ZX350LC-5B

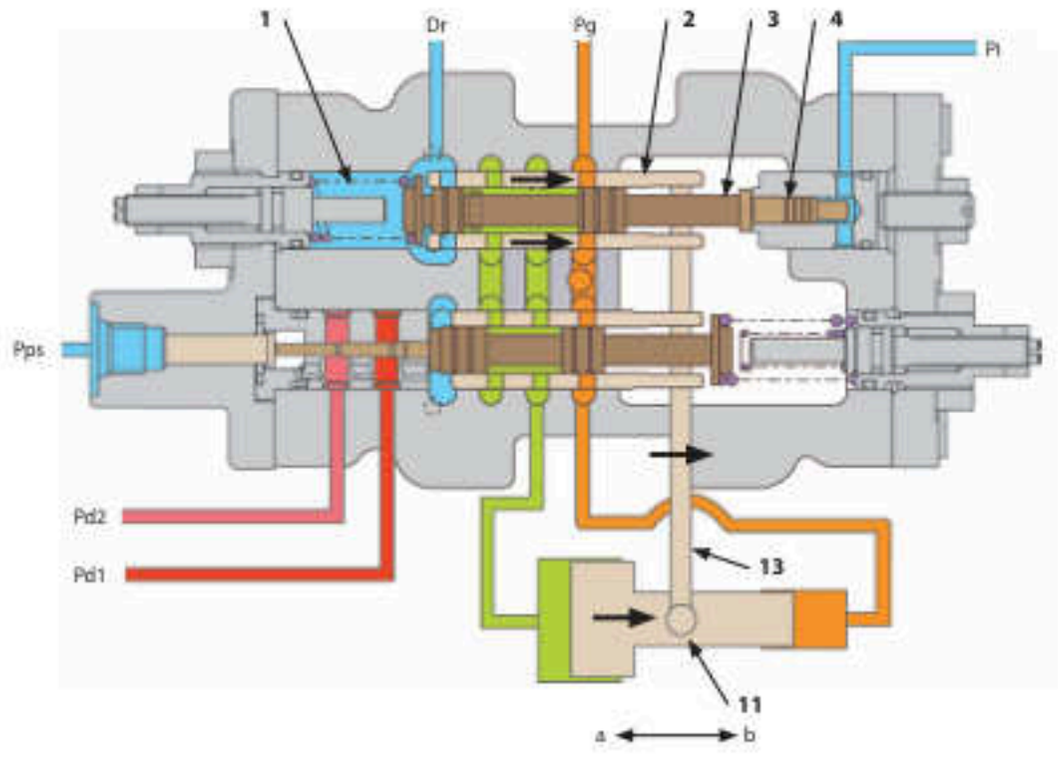


NO.	SIZE	COLOR	CIRCUIT		COMMENT
			FROM	TO	
1	0.5	PW	VAL-1	CAB-1	
2	0.5	R	VAL-2	CAB-2	

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TPPP-03-01-018



TPPP-03-01-019

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

Dr- Returning to Hydraulic Oil Tank

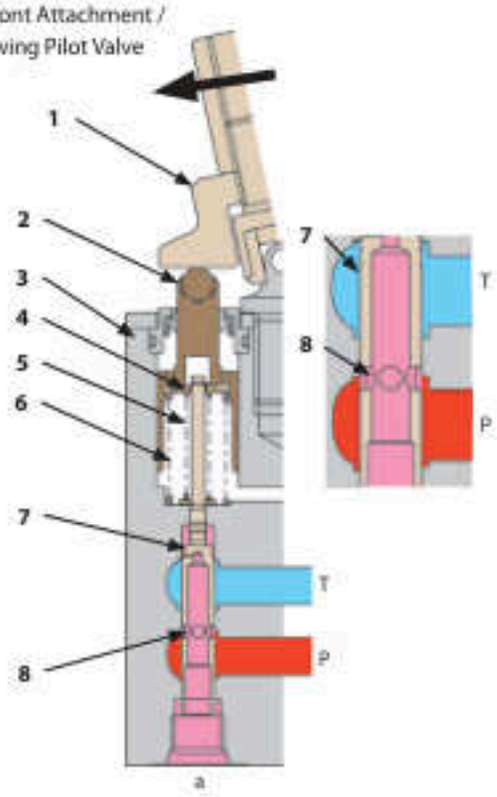
Pi- Pump Control Pressure
Pps- Torque Control Pressure

Pg- Primary Pilot Pressure (From Pilot Pump)

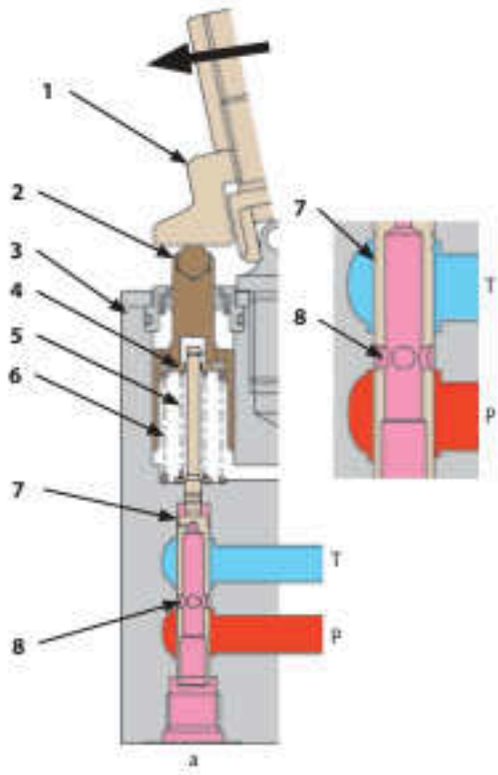
1- Spring
2- Sleeve A
3- Spool A
4- Piston
11- Servo Piston
13- Link

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Front Attachment / Swing Pilot Valve

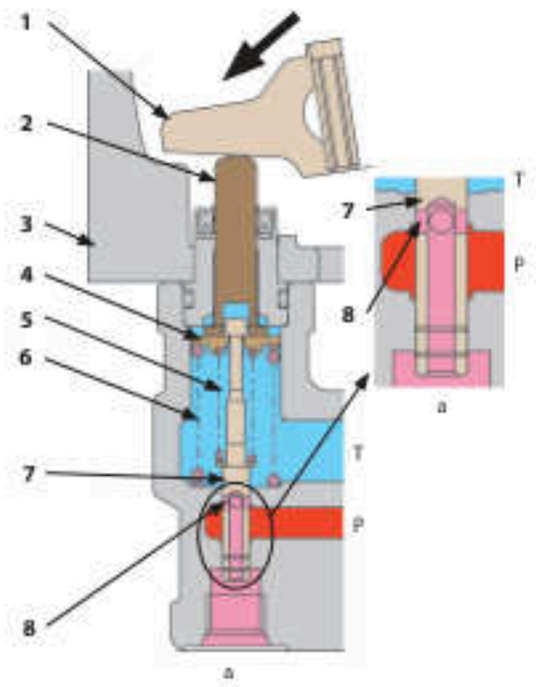


TPPP-03-04-007

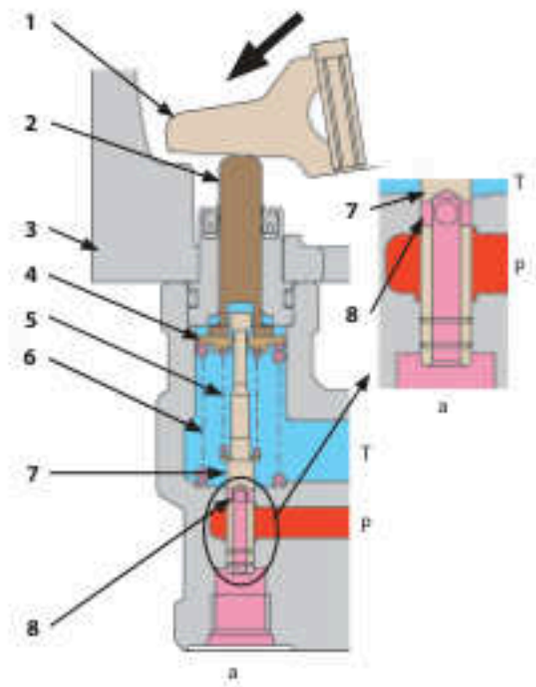


TPPP-03-04-008

Travel Pilot Valve



TPPP-03-04-012



TPPP-03-04-013

P- Port P
T- Port T
a- Output Port

1- Cam
2- Pusher
3- Casing
4- Spring Guide
5- Balance Spring
6- Return Spring
7- Spool
8- Hole

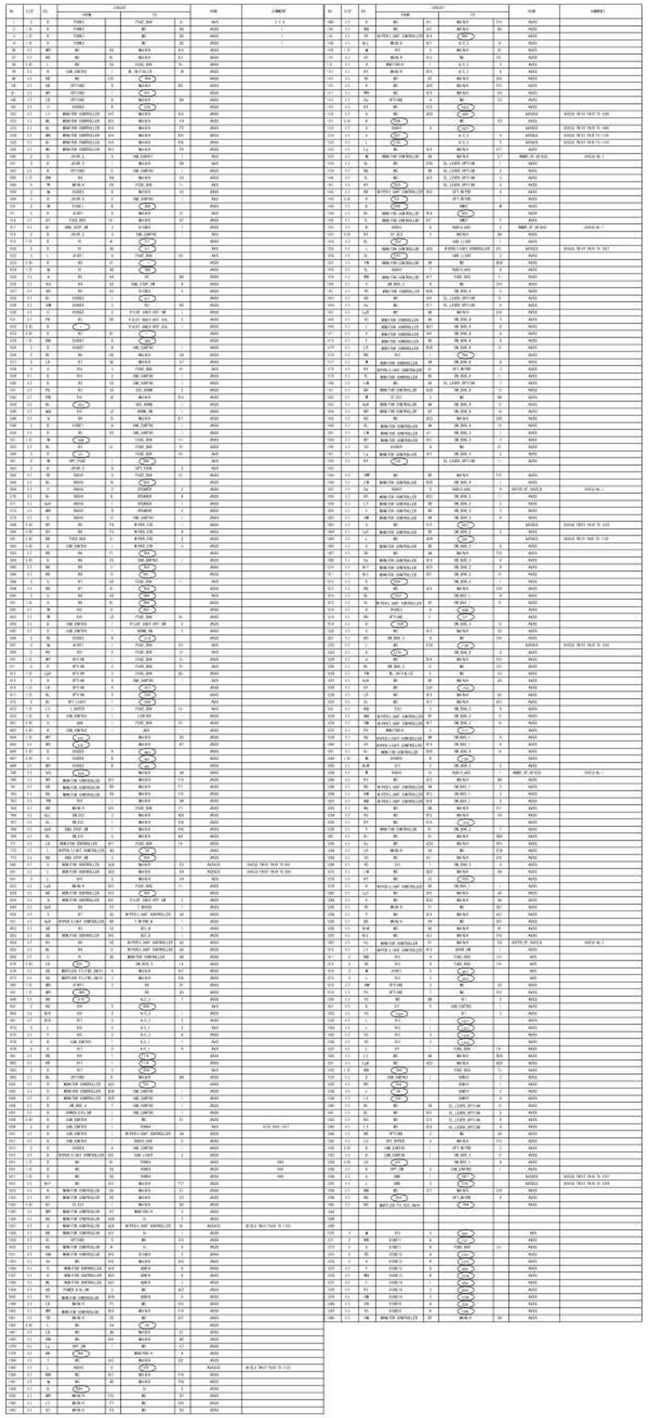
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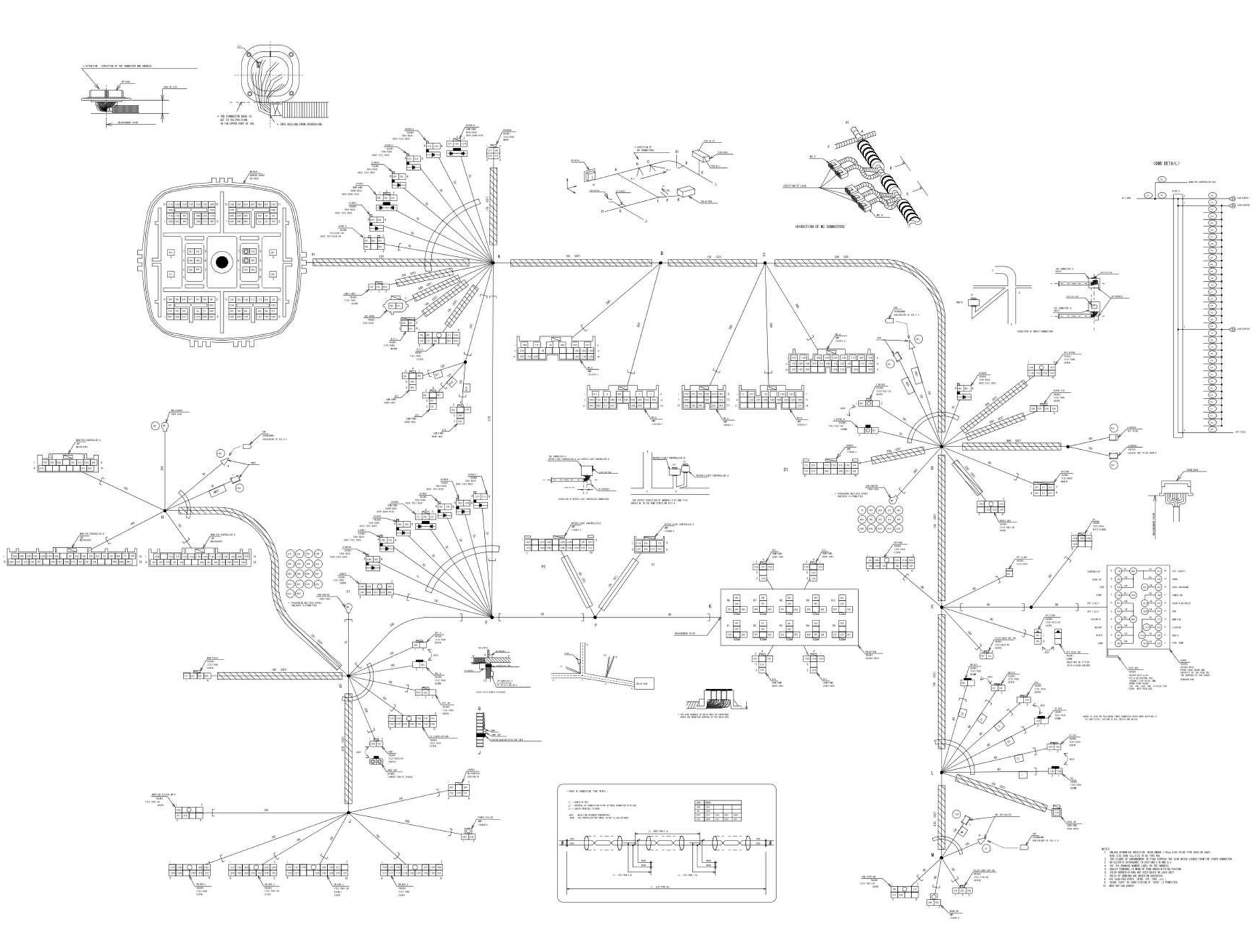
CAB HARNESS

Applicable Machine

Attach to vol. №.	Model
TTDAD-EN-00	ZX130-5B/ 130LCN-5B
TTDBE-EN-00	ZX160LC-5B
TTDBF-EN-00	ZX180LC-5B/ 180LCN-5B

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.





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