PART NO. TODEA-EN-01

HITACHI

Reliable solutions

Technical Manual
Operational Principle

ZX
70-5G
70LC-5G
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TODEA-E
Technical Manual (Troubleshooting)	: Vol. No.TTDEA-E
Workshop Manual	: Vol. No.WDEA-E
Engine Manual	: Vol. No.ETADB-EN, EWADB-EN

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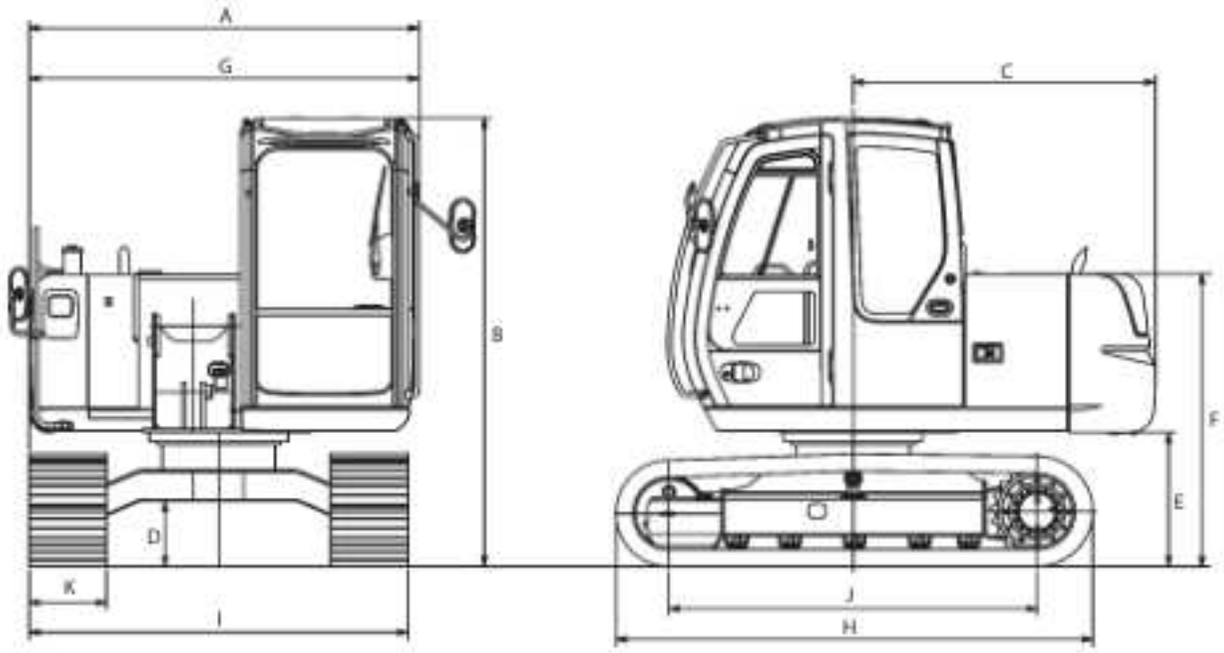
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Specifications

ZX70-5G, 70LC-5G



M1CD-12-001

Model	ZX70-5G	ZX70LC-5G
Type of Front-End Attachment	1.62 m Arm	
Bucket Capacity (Heaped)	PCSA 0.28 m^3, CECE 0.24 m^3	PCSA 0.33 m^3, CECE 0.29 m^3
Operating Weight	6640 kg	6700 kg
Basic Machine Weight	5250 kg	5310 kg
Engine	YANMAR 4TNV98-AVHBW 42.4 kW/2100 min^{-1} (57.6 PS/2100 rpm)	
A: Overall Width (Excluding back mirrors)	2260 mm	2320 mm
B: Cab Height	2600 mm	
C: Rear End Swing Radius	1750 mm	
D: Minimum Ground Clearance	*360 mm	
E: Counterweight Clearance	*760 mm	
F: Engine Cover Height	*1710 mm	
G: Overall Width of Upperstructure	2260 mm	
H: Undercarriage Length	2765 mm	2920 mm
I: Undercarriage Width	2200 mm	2320 mm
J: Sprocket Center to Idler Center	2140 mm	2290 mm
K: Track Shoe Width	450 mm (Grouser shoe)	
Ground Pressure	31 kPa (0.31 kgf/cm^2)	29 kPa (0.30 kgf/cm^2)
Swing Speed	10.7 min^{-1} (rpm)	
Travel Speed (fast/slow)	5.0/3.4 km/h	
Gradeability	35° (tan θ = 0.70)	

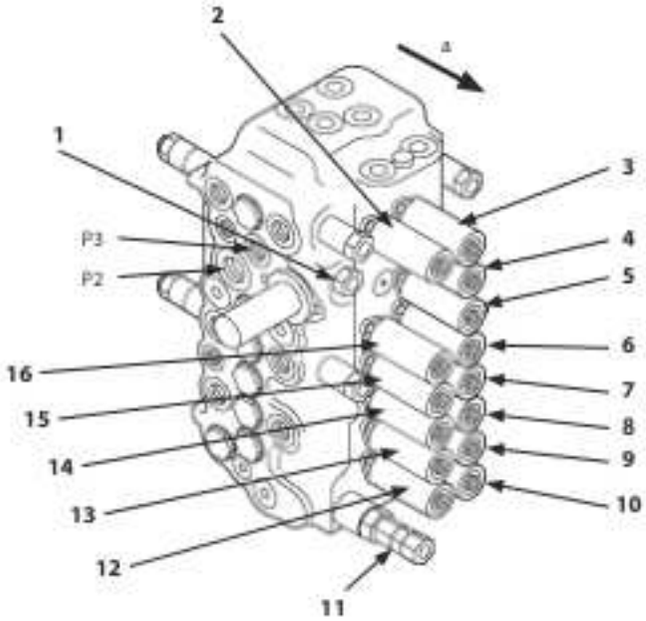
*NOTE: * The dimensions do not include the height of the shoe lug.*

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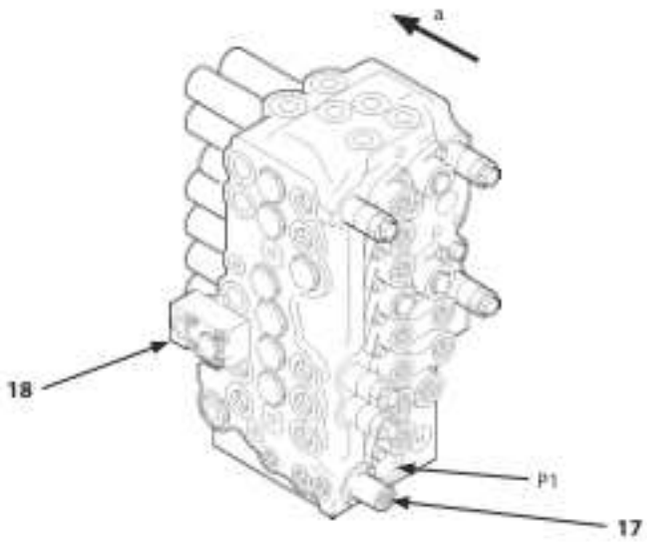
Outline

The control valve controls the pressure, flow rate, and flow direction in the hydraulic circuit.
The main components are main relief valves (1, 11), overload relief valves, flow combiner valve (12), boom anti-drift valve (18), and spools.
The spools are operated by pilot oil pressure.

Viewed from the machine upper side, the spools at 8-spool side are arranged as follows: blade (OP) (3), swing (4), arm 2 (7), boom 1 (8), bucket (9), and travel (left) (10). Viewed from the machine upper side, the spools at 5-spool side are arranged as follows: auxiliary 2 (2), auxiliary 1 (16), arm 1 (15), boom 2 (14), and travel (right) (13).



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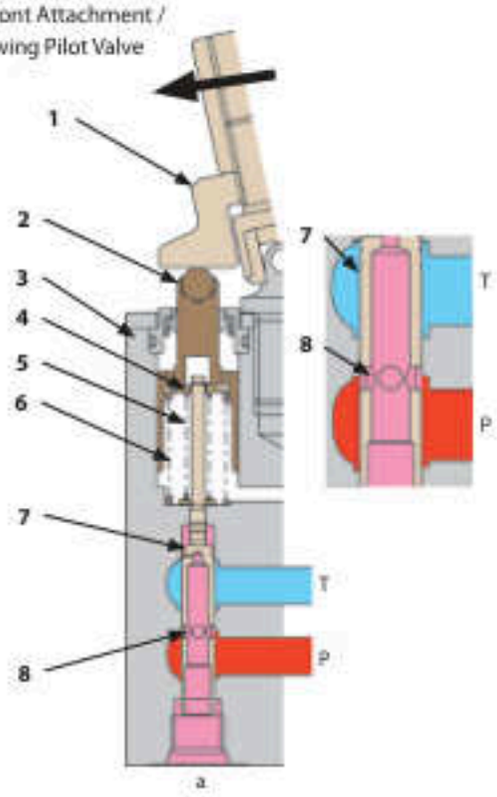
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a- Machine Front
P1- Port P1
P2- Port P2
P3- Port P3

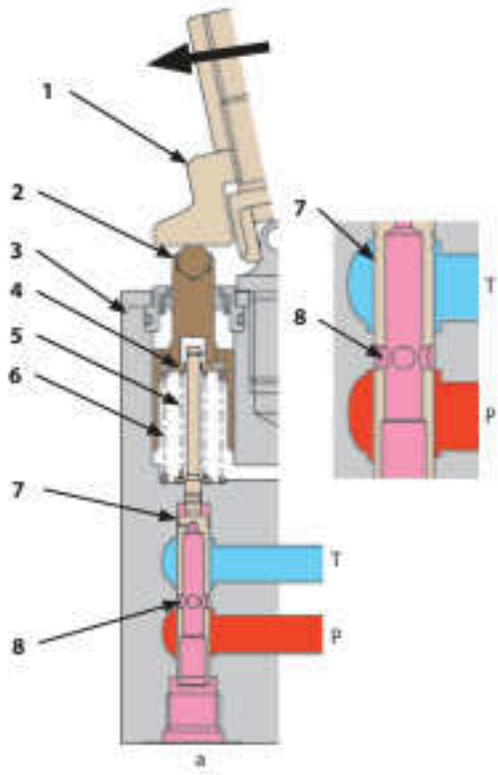
1- Main Relief Valve (Main Pump 3)
2- Auxiliary 2
3- Blade (OP)
4- Swing
5- Arm Roll-In Flow Combiner Selector Valve
6- Not Used
7- Arm 2
8- Boom 1
9- Bucket
10- Travel (Left)
11- Main Relief Valve (Main Pumps 1, 2)
12- Flow Combiner Valve
13- Travel (Right)
14- Boom 2
15- Arm 1
16- Auxiliary 1
17- Swing Parking Brake Selection Valve
18- Boom Anti-Drift Valve

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Front Attachment / Swing Pilot Valve

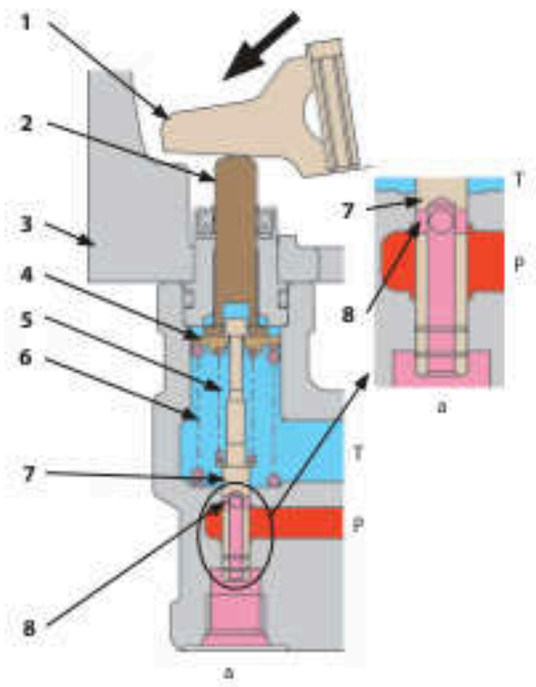


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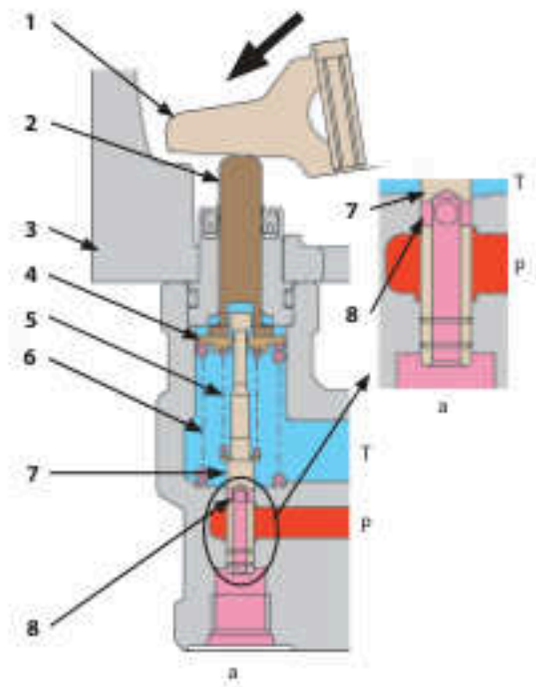


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Travel Pilot Valve



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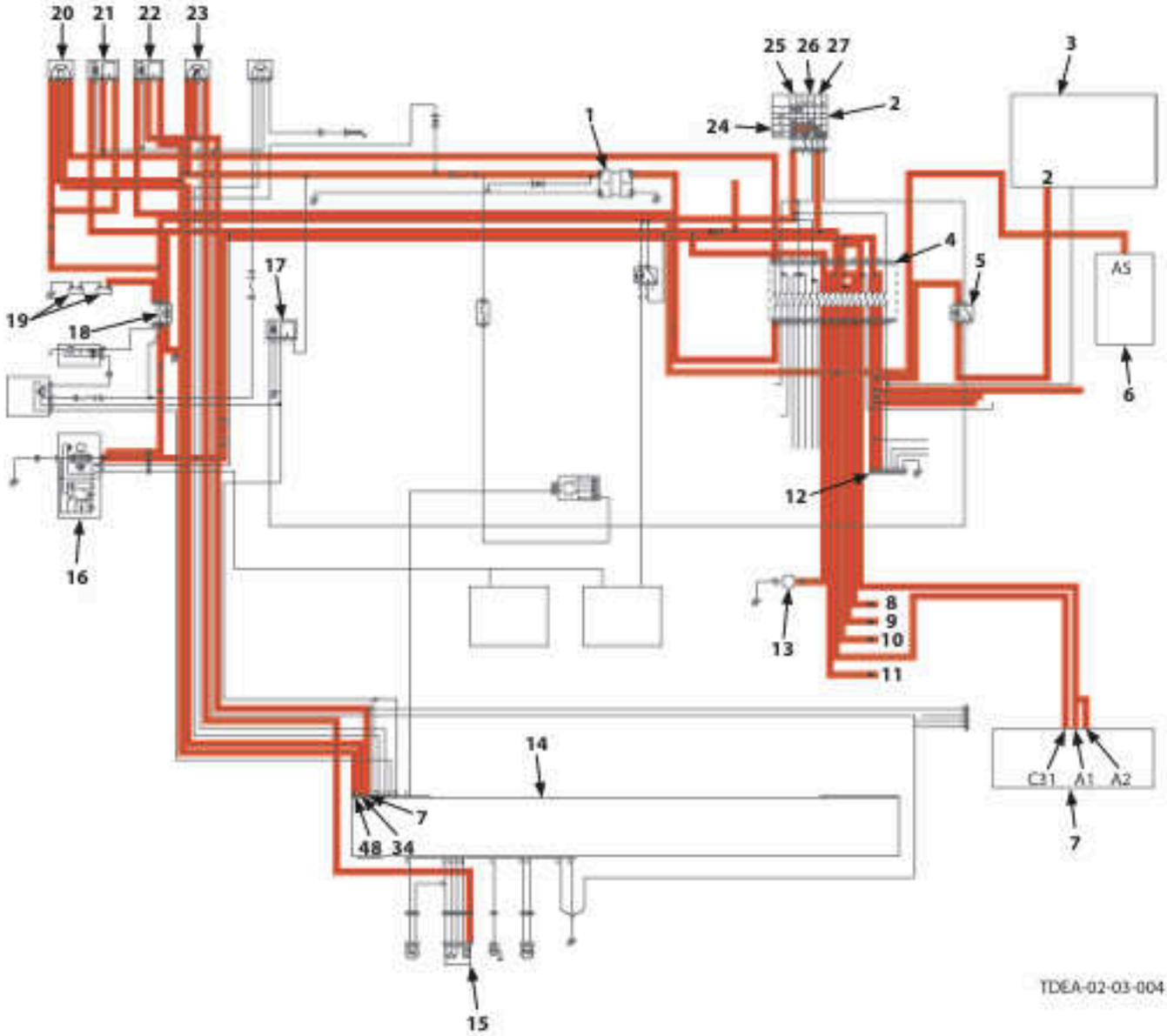


TPPP-03-04-013

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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1- DC/DC Converter
2- Key Switch
3- GSM
4- Fuse Box
5- Start Relay
6- ICX Controller
7- MC
8- Compressor
9- Light
10- Wiper
11- Air Conditioner
12- Option
13- Fuel Pump
14- E-ECU
15- Rack Actuator
16- Alternator
17- Starter Relay 2
18- Battery Relay
19- Battery
20- Main Relay 1
21- Main Relay 2
22- IGN Relay
23- Actuator Relay
24- ON Position
25- Terminal B
26- Terminal ACC
27- Terminal M

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