PART NO. T1NG-E-00

HITACHI

Technical Manual

ZX
40U-3 class
40U-3 · 40U-3F

50U-3 class
50U-3 · 50U-3F

Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual	: Vol. No.T1NG-E
Workshop Manual	: Vol. No.W1NG-E

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ENGINE

Manufacturer	YANMER
Model	EDM-4TNV88
Type	Diesel, 4-Cycle, Water-cooled, Inline, Direct Injection
Cyl. No.-Bore×Stroke	4 - 88 mm×90 mm (3.47 in×9.63 in)
Piston Displacement	2189 cm^3 (133.5 in^3)
Rated Output	28.4 kW / 2400 min^{-1} (38.6 PS / 2400 rpm)
Compression Ratio	19
Dry Weight	170 kg (375 lb)
Firing Order	1-3-4-2
Rotation Direction	Clockwise (View from fan side)
Dimensions Length×Width×Height	704×534×677 mm (27.7×21.0×26.7 in)

COOLING SYSTEM

Cooling Fan	Dia. 430 mm, 7 Blades, Draw-In Type
Fan Pulley Ratio	
(ZX40U-3/50U-3)	Engine rpm×0.958
(ZX40U-3F/50U-3F)	Engine rpm×1.091
Thermostat (Atmospheric Pressure)	Cracking temp. 71 °C (160 °F)
	Full open temp. 85 °C (185 °F)
Water Pump	Centrifugal Belt Driven Type

LUBRICATION SYSTEM

Lubrication Pump Type	Trochoid Pump
Oil Filter	Full-Flow Paper Element Type

STARTING SYSYTEM

Motor	Magnetic Pinion Shift Type
	(Starter Relay is Separately Placement)
Voltage / Output	12 V / 2.3 kW

PREHEAT SYSMTEM

Preheating Method	
(ZX40U-3/50U-3)	Position Type Glow Plug
(ZX40U-3F/50U-3F)	Position Type Air Heater

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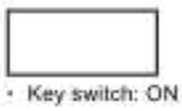
TROUBLESHOOTING B PROCEDURE (DIAGNOSIS OF MACHINE BY SYMPTOM)

This procedure is used when operating the diagnosis by the symptom.

- How to Read the Troubleshooting Flow Charts



After checking or measuring item (1), select either YES (OK) or NO (NOT OK) and proceed to item (2) or (3) next.



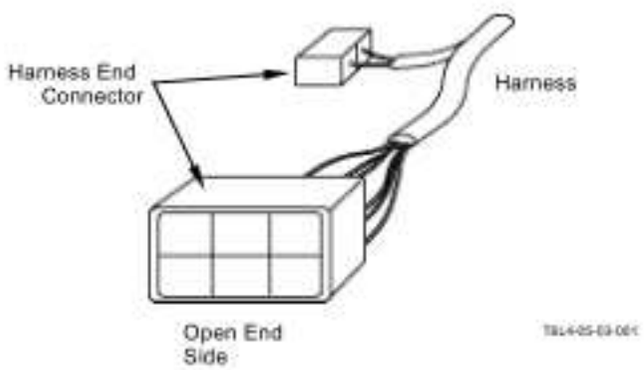
• Key switch: ON

As shown to the left, measuring methods or items to be referred to are indicated in the spaces under the box. Take care to measure or check correctly. Incorrect measuring or checking methods may result in making troubleshooting impossible, and may damage components.



The thick-line box indicates the causes. Scanning through thick-line boxes, possible causes can be focused.

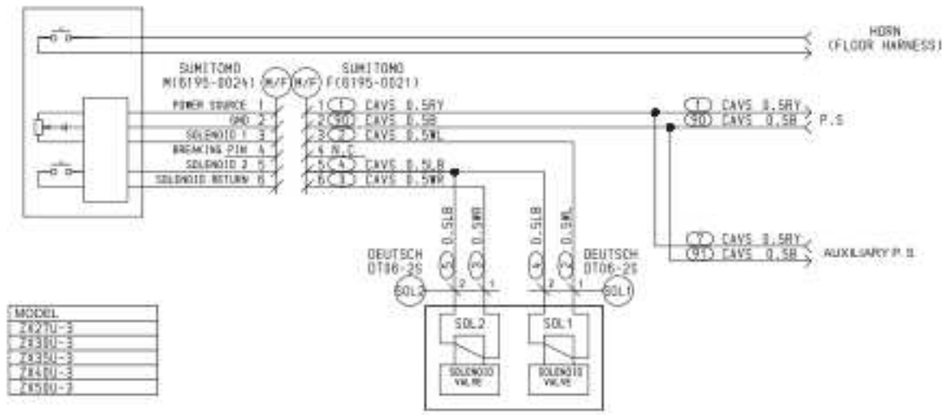
NOTE: The connector drawings show the harness end connectors seen from the open end side.



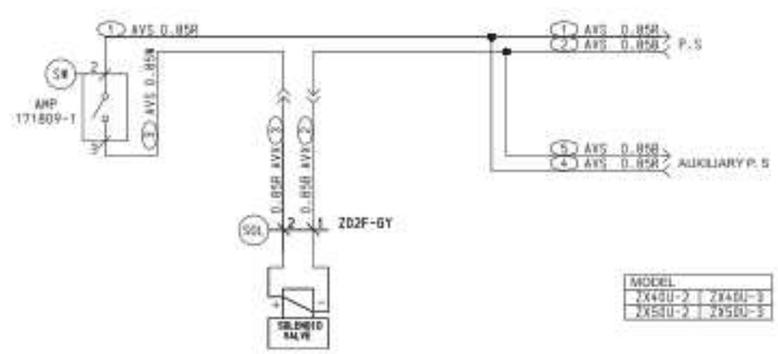
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ZX27U-3 CLASS/30U-3 CLASS/35U-3 CLASS/40U-3 CLASS/50U-3 CLASS
ELECTRICAL CIRCUIT DIAGRAM (Optional)

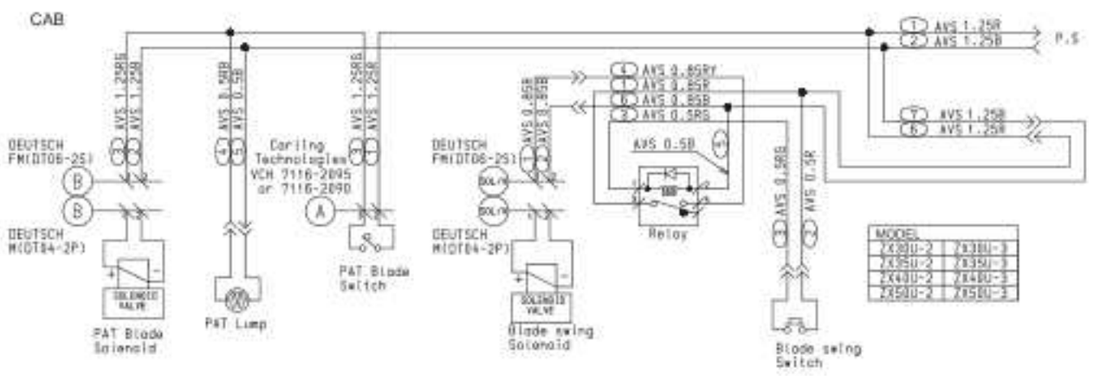
MULTIFUNCTION LEVER



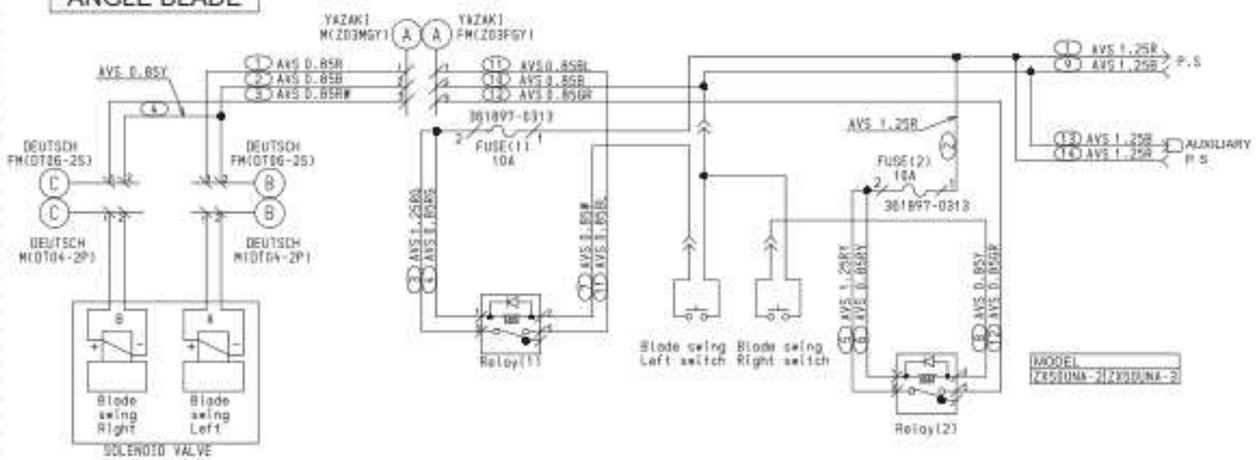
ASSIST PIPING



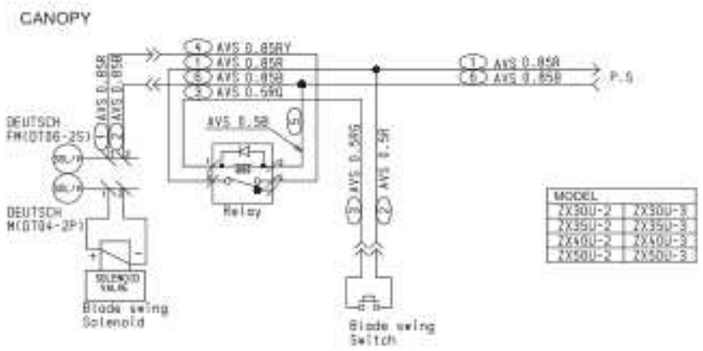
PAT BLADE



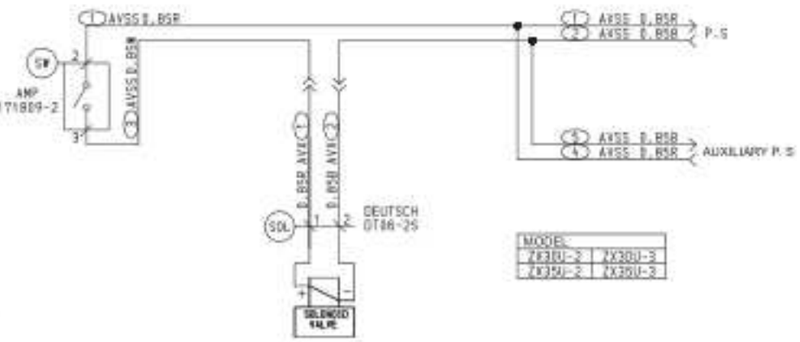
ANGLE BLADE



CANOPY



FLOW RATE SELECTION PIPING

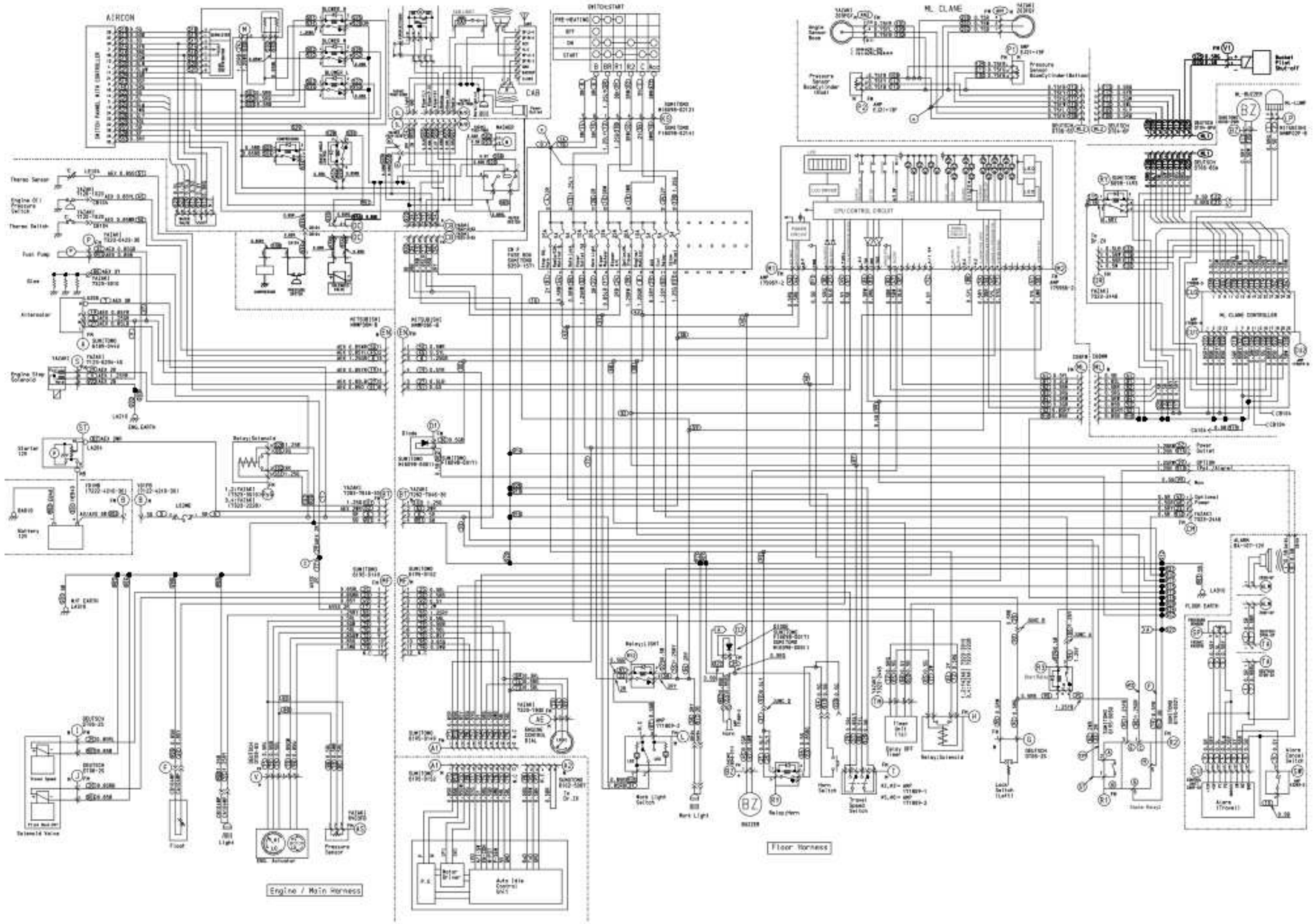


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ZX40U-3/50U-3 ELECTRICAL CIRCUIT DIAGRAM (Standard)

ML specification is only available Japanese domestic market.



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