PART NO. TADB-EN-01

HITACHI

Reliable solutions

Technical Manual

ZX
33U-5A
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual	: Vol. No.TADB-EN
Workshop Manual	: Vol. No.WADB-EN
Engine Manual	: Vol. No.ETADB-EN, EWADB-EN

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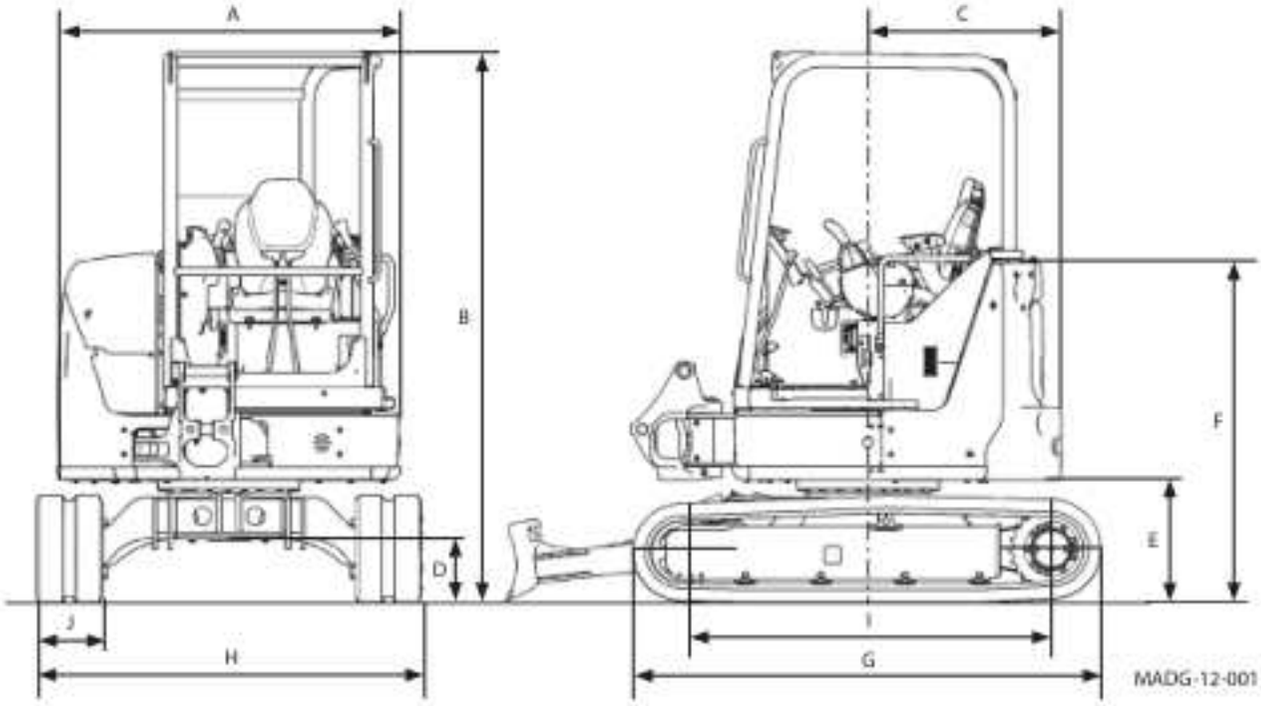
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Std. Specification

ZX33U-5A



Model		ZX33U-5A	
Specification		Canopy	Cab
Type of Front-End Attachment	-	Boom Swing Type, 1.52 m (5 ft) Arm	
Bucket Capacity (Heaped)	m^3 (yd^3)	0.08 (0.11)	
Operating Weight	kg (lb)	3330 (7340)	3510 (7740)
Base Machine Weight	kg (lb)	2520 (5560)	2700 (5950)
Engine	kW/min^{-1} (PS/rpm)	YANMAR EDM-3TNV88 21.2/2400 (28.8/2400)	
A: Overall Width	mm (ft-in)	1550 (5' 1")	
B: Overall Height	mm (ft-in)	2480 (8' 2")	
C: Rear End Swing Radius	mm (ft-in)	875 (2' 10")	
D: Minimum Ground Clearance	mm (ft-in)	280 (11")	
E: Counterweight Clearance	mm (ft-in)	550 (1' 10")	
F: Engine Cover Height	mm (ft-in)	1530 (5')	
G: Undercarriage Length	mm (ft-in)	2110 (6' 11")	
H: Undercarriage Width	mm (ft-in)	1550 (5' 1")	
I: Sprocket Center to Idler Center	mm (ft-in)	1660 (5' 5")	
J: Track Shoe Width	mm (ft-in)	300 (1')	
Ground Pressure	kPa (kgf/cm^2, psi)	30 (0.30, 4.4)	32 (0.32, 4.6)
Swing Speed	min^{-1} (rpm)	9.1 (9.1)	
Travel Speed (fast/slow)	km/h (mph)	4.3/2.8 (2.7/1.7)	
Gradeability		30° (tan θ = 0.58)	

NOTE:

- *The dimensions do not include the height of the shoe lug. The dimensions of the machine equipped with rubber crawlers are shown.*
- *The specifications include additional counterweight and extra attachment lines.*

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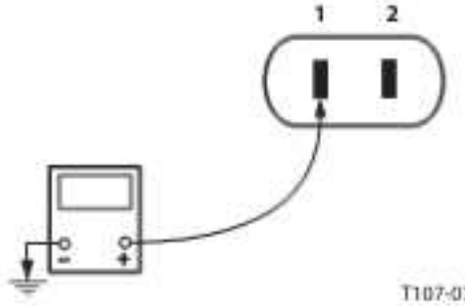
5-Volt Circuit

• Voltage between terminal #1 and the body
Disconnect the connector with the key switch OFF. Measure voltage between terminal #1 on the body harness end connector and the body (ground).

- Key Switch: ON
- Black (negative) probe terminal of circuit tester: To ground to the body
- Red (Positive) probe terminal of circuit tester: To terminal #1

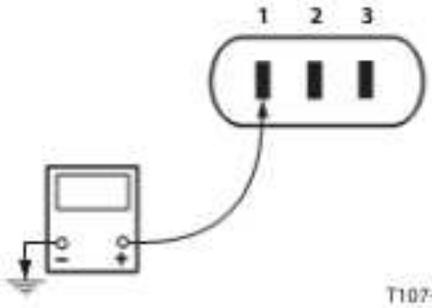
Evaluation: If the measuring voltage is within 5 ± 0.5 volts, the circuit up to terminal #1 is normal.

Two Polarities



T107-07-05-006

Three Polarities



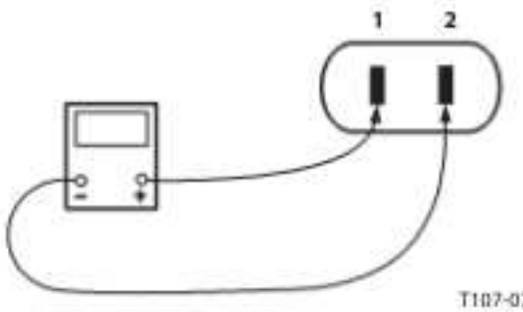
T107-07-05-007

• Voltage between terminal #1 and the ground terminal
Turn OFF the key switch, and disconnect the sensor connector. Measure the voltage between terminal #1 (5 V power supply) on the body harness end connector and the ground terminal (terminal #2 for two-polarities or terminal #3 for three-polarities connector) under the following conditions.

- Key Switch: ON
- Black (negative) probe terminal of circuit tester: To ground terminal (Terminal #2 or #3)
- Red (Positive) probe terminal of circuit tester: To terminal #1

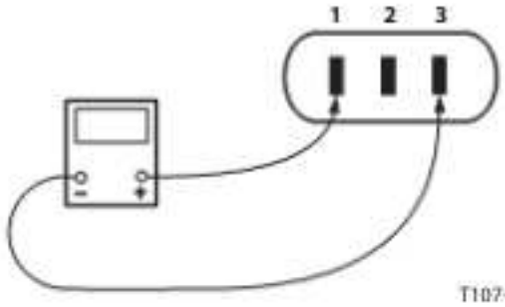
Evaluation: If the measuring voltage is within 5 ± 0.5 volts, the circuit up to terminal #1 or the ground terminal (terminal #2 or #3) is normal.

Two Polarities



T107-07-05-008

Three Polarities



T107-07-05-009

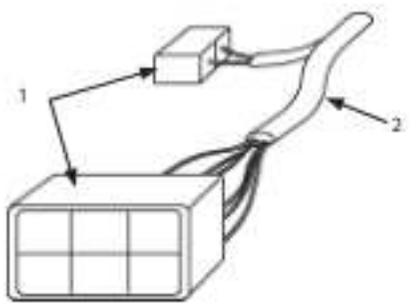
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Troubleshooting B (Machine Diagnosis by Using Troubleshooting Symptom) Procedure

Refer to troubleshooting B procedures for diagnosis by using trouble symptom when no fault codes are displayed.

- Diagnosis Procedure
  - The diagnosis procedures for the displayed fault codes are explained in this group.
  - Perform diagnosis by using the service menu of monitor first.
  - In case any fault code has not been displayed by diagnosis, perform inspection according to the procedures when diagnosing.
  - When the fault code is displayed, refer to the troubleshooting A group and diagnose.

NOTE: Harness end connector viewed from the open end side by the all connectors image shown in this section.

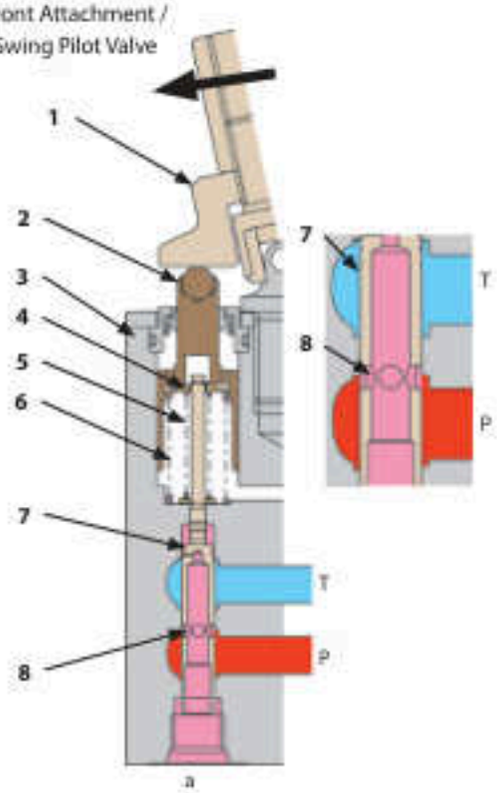


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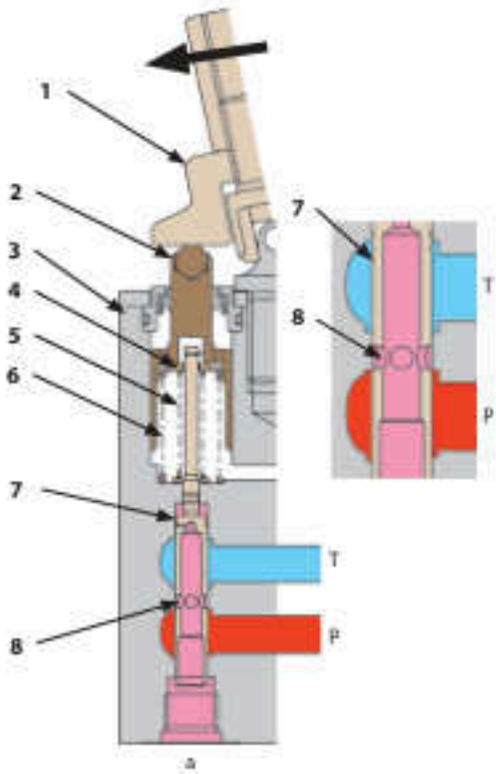
1- Harness End Connector 2- Harness

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Front Attachment / Swing Pilot Valve

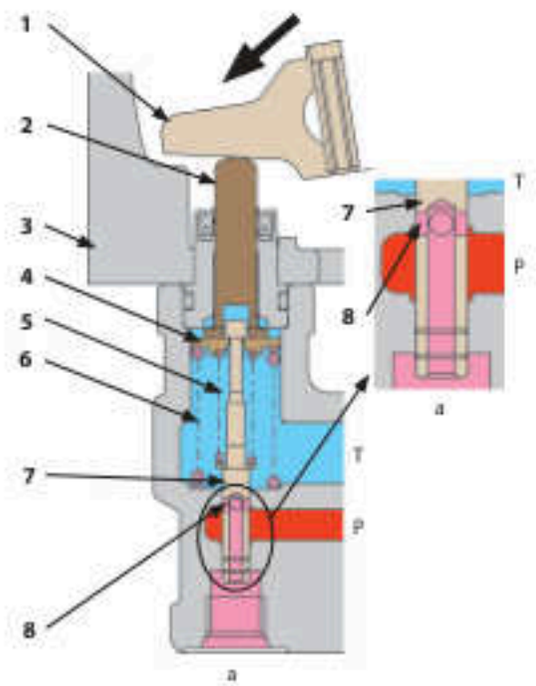


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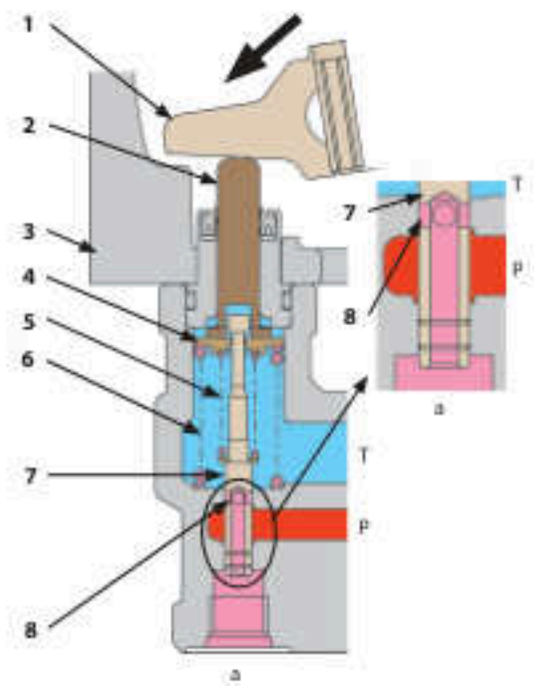


TPPP-03-04-008

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

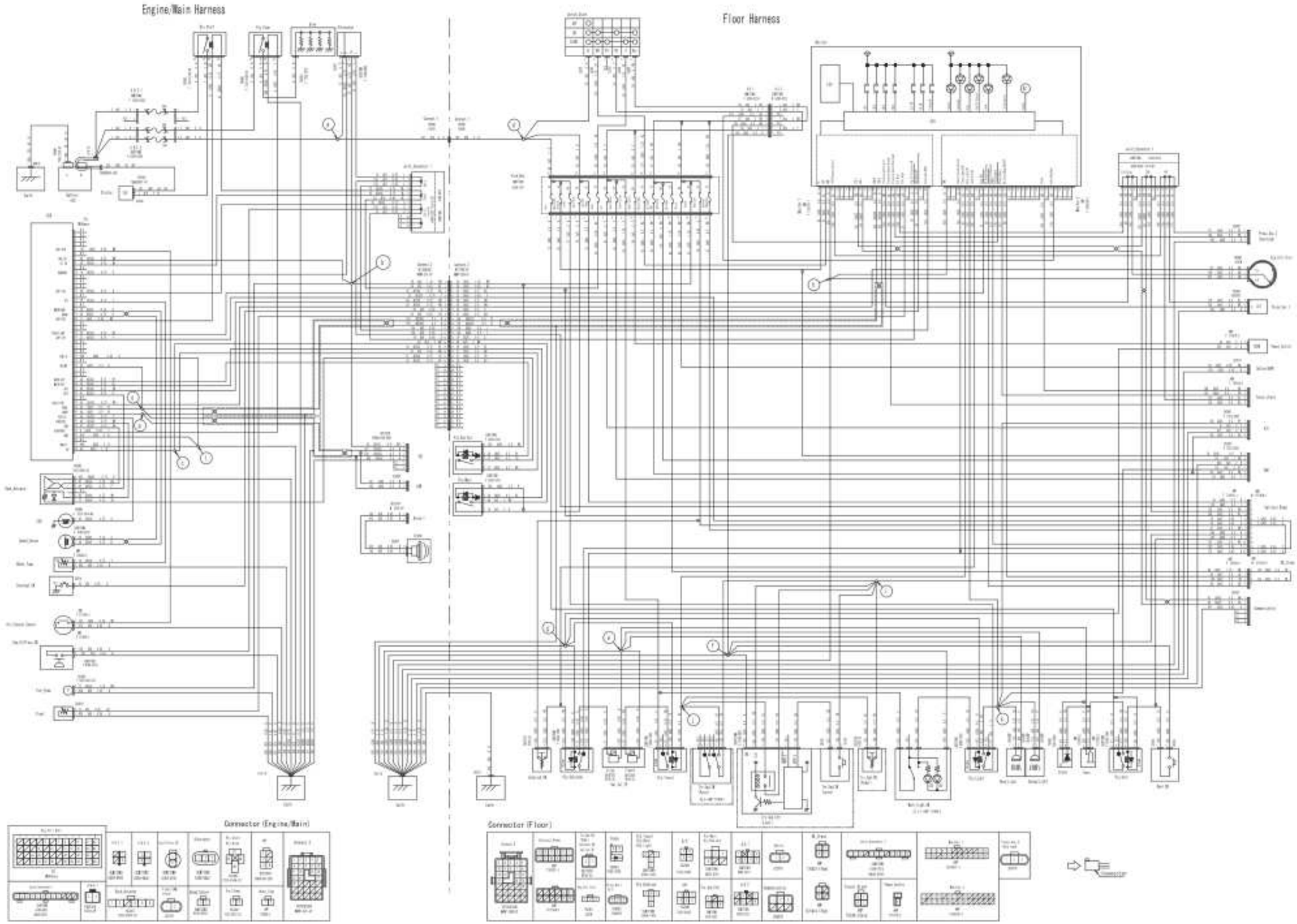
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ELECTRICAL CIRCUIT DIAGRAM (STANDARD)

Applicable Machine

Attach to vol. No.	Model
TADB-EN-01	ZX33U-5A
TADC-EN-01	ZX38U-5A

⚠ 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.



TADB-EN-01(20180618)

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