PART NO. TOKCA-E-00

HITACHI

Technical Manual
Operational Principle

EX
5600-6
Hydraulic Excavator

Service Manual consists of the following separate Part No.

Technical Manual (Operational Principle)	: Vol. No.TOKCA-E
Technical Manual (Troubleshooting)	: Vol. No.TTKCA-E
Workshop Manual	: Vol. No.WKCA-E

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GENERAL

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EHC VALVE

For Electric Lever Control (Pilot Panel (L) (Upper Side))

Application	SA: Right Swing Control	SB: Left Swing Control
	SC: Bucket Close Control (LD) Auxiliary (BH)	SD: Right Travel Reverse Control
	SE: Right Travel Forward Control	SF: Left Travel Reverse Control
	SH: Bucket Open Control (LD) Auxiliary (BH)	SI: Left Travel Forward Control

For Electric Lever Control (Pilot Panel (L) (Lower Side))

Application	SA: Arm Retract Control (LD) Arm Roll-Out Control (BH)	SB: Boom Raise Control
	SC: Arm Extend Control (LD) Arm Roll-In Control (BH)	SD: Auxiliary
	SE: Auxiliary	SF: Bucket Tilt-Out Control (LD) Bucket Roll-Out Control (BH)
	SH: Boom Lowering Control	SI: Bucket Tilt-In Control (LD) Bucket Roll-In Control (BH)

Pump and Oil Cooler Fan Motor Control (Pilot Panel (L))

Application	SA: Main Pump Displacement Angle Control (For Main Pump 2, 4, 5 and 6)	SB: Power Decrease Control
	SC: Auxiliary	SD: Auxiliary
	SE: Power Increase Control	SF: Main Pump Displacement Angle Control (For Main Pump 3)
	SH: Driving Oil Cooler Fan Pump Displacement Angle Control	SI: Main Pump Displacement Angle Control (For Main Pump 1)

Pump and Oil Cooler Fan Motor Control (Pilot Panel (R))

Application	SA: Main Pump Displacement Angle Control (For Main Pump 8, 10, 11 and 12)	SB: Main Pump Displacement Angle Control (For Main Pump 9)
	SC: Auxiliary	SD: Auxiliary
	SE: Power Increase Control	SF: Power Decrease Control
	SH: Main Pump Displacement Angle Control (For Main Pump 7)	SI: Driving Oil Cooler Fan Pump Displacement Angle Control

NOTE: LD: Loading Shovel
BH: Backhoe

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OUTLINE

The electrical circuit is broadly divided into the main circuit, the monitor circuit, and the control circuit.

- Main Circuit
  Operates the main motor and the accessory related circuits.

- Control Circuit (Refer to SYSTEM/Control System.)
  Functions to control the machine.
  (Refer to the SYSTEM section.)

- Monitor Circuit
  Displays the machine operating conditions.
  (Refer to the electrical circuit diagrams.)

The functions and construction of the main circuits below are explained here.

- Main Circuit

  - Electrical Power Circuit: It supplies electric power to all electrical systems on the machine.

  - Accessory Circuit: It is operated when the key switch is in the ACC position.

  - Engine Start Circuit: It operates the starter and starts the engine.

  - Charging Circuit: It charges the batteries and supplies current generated by the alternator in order to operate all the electrical components.

  - Engine Stop Circuit: Stop circuit by using the emergency switch, the limit switch, and the engine stop switch.

  - Surge Voltage Prevention Circuit: It protects the electrical equipment from surge voltage developed when the engine stops.

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