PART NO.

HITACHI

Technical Manual

EX3500-3

Hydraulic Excavator

Service Manual consists of the following separate Part No.
Technical Manual (Troubleshooting)
Workshop Manual

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SECTION 2
SYSTEM



—CONTENTS—

Group 1 Control System
Outline T2-1-1
Engine Control T2-1-2
Pump Control T2-1-4

Group 2 Hydraulic Circuit
Main Circuit T2-2-1
Pilot Circuit T2-2-4
Others T2-2-5
Single Operation Circuits T2-2-6
Combined Operation Circuit T2-2-21

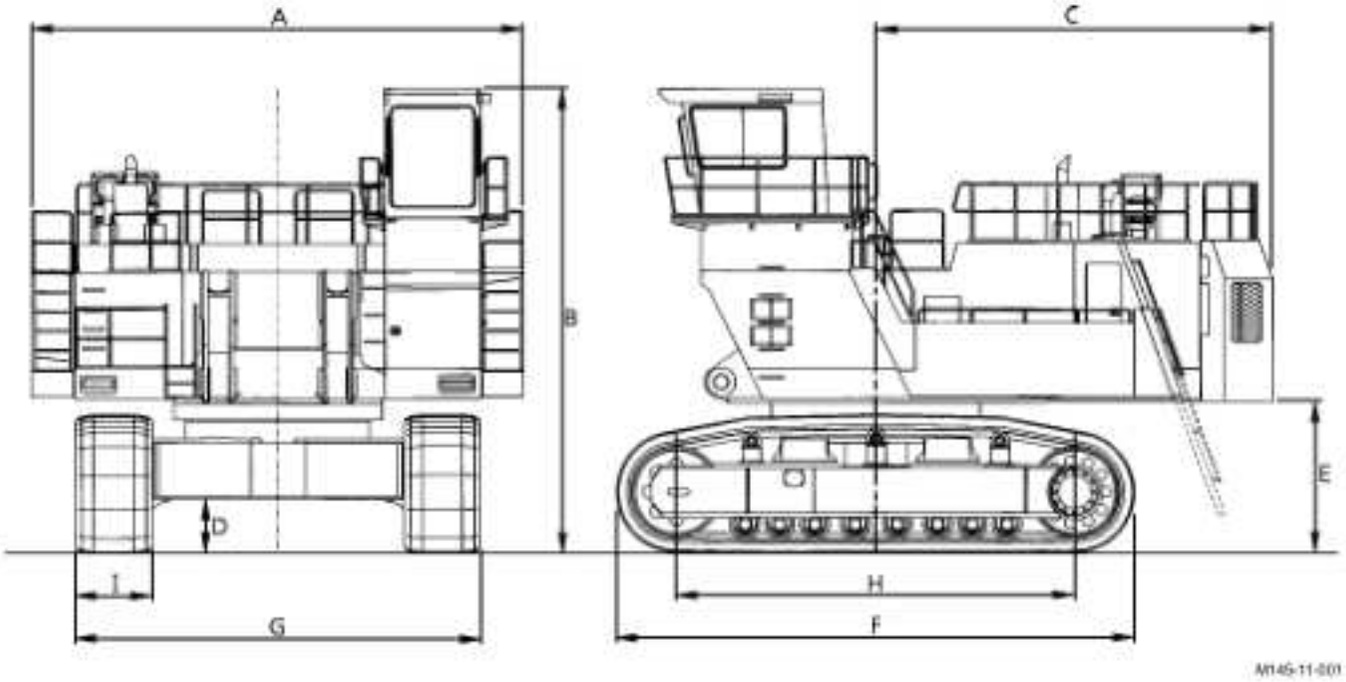
Group 3 Electrical System
Outline T2-3-1
Electrical Power Supply Circuit T2-3-2
Engine Start Circuit T2-3-3
Accessory Circuit T2-3-8
Charging Circuit T2-3-9
Electrical Source Retaining Circuit T2-3-10

Group 4 Pueumatic System
Outline T2-4-1
Operation T2-4-2

Group 5 Other Systems
Dust Ejector System T2-5-1
Air Conditioning System T2-5-2
Fast Filling System T2-5-4
Auto-Lubrication System T2-5-7

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BASE MACHINE DIMENSIONS



Model Designation		EX3500-3	
Front Attachment Type	–	Loading Shovel	Backhoe
Standard Bucket Capacity (Heaped)	m^3 (yd^3)	18 (24)	17 (22)
Operating Weight	kg (lb)	331000 (729700)	
Engine	–	KT38C925 609 kW/1800 min^{-1} (828 PS/1800 rpm)	
A : Overall Width	mm (ft in)	8340 (27′ 4″)	
B : Cab Height	mm (ft in)	7750 (25′ 5″)	
C : Rear End Swing Radius	mm (ft in)	6780 (22′ 3″)	
D : Minimum Ground Clearance	mm (ft in)	900 (2′ 11″)	
E : Counterweight Clearance	mm (ft in)	2525 (8′ 3″)	
F : Undercarriage Length	mm (ft in)	8700 (28′ 7″)	
G : Undercarriage Width	mm (ft in)	6770 (22′ 3″)	
H : Sprocket Center to Idler Center	mm (ft in)	6660 (21′ 10″)	
I : Track Shoe Width	mm (ft in)	1270 (4′ 2″)	
Ground Pressure	kPa (kgf/cm^2, psi)	171 (1.74, 24.7)	
Swing Speed	min^{-1} (rpm)	3.6 (3.6)	
Travel Speed (Fast/Slow)	km/h (mph)	2.4/1.8 (1.5/1.13)	
Gradeability	Degree	30	

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TROUBLESHOOTING B PROCEDURE

In this section, troubleshooting starts with a description of the machine malfunction. Use the troubleshooting B procedure when no fault codes are shown on engine control unit indicator, yet the machine is experiencing trouble.

On the next page, machine malfunctions and their possible causes are shown on charts. Refer to the charts to find the flow chart applicable for your problem.

- **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).



· Key switch: ON

Special instructions or reference item are indicated in the spaces under the box. Incorrect measuring or checking methods will render troubleshooting impossible, and may damage components as well.



Causes are stated in a thick-line box. Scanning through thick-lined boxes, possible causes can be seen without going through the flow chart.

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Manual No. : KM-145E
Vol. No. : TC145E-00

Technical Manual
(Circuit Diagram)

EX3500-3
Excavator

CONTENTS

ELECTRICAL CIRCUIT DIAGRAMS

ELECTRICAL CIRCUIT DIAGRAM 1 (Serial Number 301 to 319)
ELECTRICAL CIRCUIT DIAGRAM 1 (Serial Number 320 and up)
ELECTRICAL CIRCUIT DIAGRAM 2 (Serial Number 301 to 319)
ELECTRICAL CIRCUIT DIAGRAM 2 (Serial Number 320 and up)
ELECTRICAL CIRCUIT DIAGRAM 3 (Serial Number 301 to 311)
ELECTRICAL CIRCUIT DIAGRAM 3 (Serial Number 312 and up)
CONNECTORS (Serial Number 301 to 319)
CONNECTORS (Serial Number 320 and up)

HYDRAULIC CIRCUIT DIAGRAMS

MAIN CIRCUIT DIAGRAM (LOADING SHOVEL) (Serial Number 301 to 319)
MAIN CIRCUIT DIAGRAM (LOADING SHOVEL) (Serial Number 320 to 323)
MAIN CIRCUIT DIAGRAM (LOADING SHOVEL) (Serial Number 324 and up)
MAIN CIRCUIT DIAGRAM (BACKHOE) (Serial Number 301 to 319)
MAIN CIRCUIT DIAGRAM (BACKHOE) (Serial Number 320 to 323)
MAIN CIRCUIT DIAGRAM (BACKHOE) (Serial Number 324 and up)
PILOT CIRCUIT DIAGRAM (LOADING SHOVEL) (Serial Number 301 to 319)
PILOT CIRCUIT DIAGRAM (LOADING SHOVEL) (Serial Number 320 and up)
PILOT CIRCUIT DIAGRAM (BACKHOE) (Serial Number 301 to 319)
PILOT CIRCUIT DIAGRAM (BACKHOE) (Serial Number 320 and up)

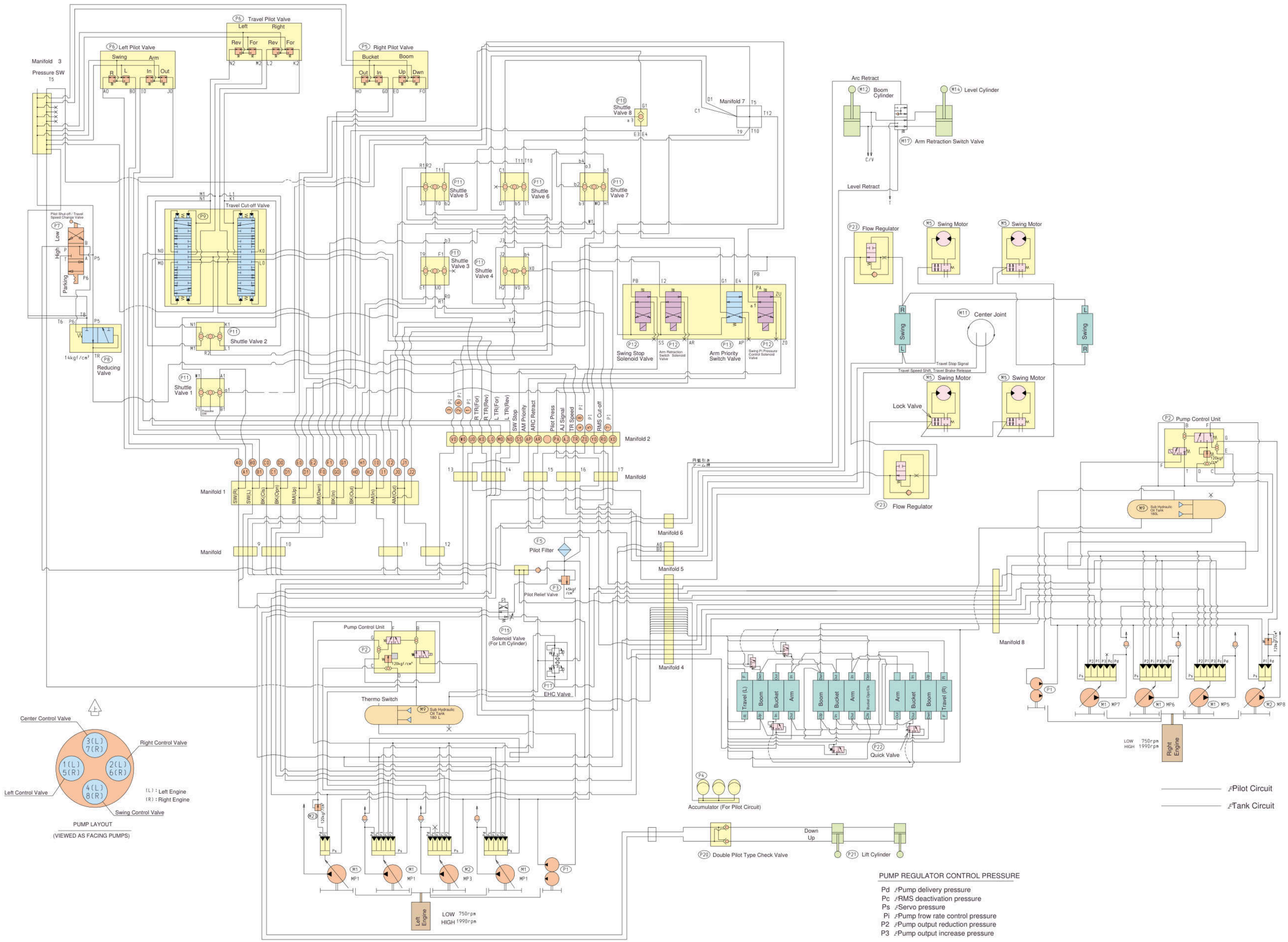
Service Manual (Manual No. KM-145E) consists of the following four separate volumes;

Technical Manual (Operational Principle)	: Vol. No. TO145E
Technical Manual (Troubleshooting)	: Vol. No. TT145E
Technical Manual (Circuit Diagram)	: Vol. No. TC145E
Workshop Manual	: Vol. No. W145E

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EX3500 -3 PILOT HYDRAULIC CIRCUIT DIAGRAM (BACKHOE)



PUMP REGULATOR CONTROL PRESSURE

Pd	Pump delivery pressure
Pc	RMS deactivation pressure
Ps	Servo pressure
Pi	Pump frow rate control pressure
P2	Pump output reduction pressure
P3	Pump output increase pressure

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