PART NO.

HITACHI

Workshop Manual

EX

EX1200-5

Hydraulic Excavator

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

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SECTION 1
GENERAL INFORMATION



CONTENTS

Group 1 Precautions for Disassembling and Assembling

Precautions for Disassembling and Assembling..... W1-1-1
Maintenance Standard Terminology..... W1-1-7

Group 2 Tightening Torque

Tightening Torque Specification..... W1-2-1
Torque Chart..... W1-2-3
Piping Joint..... W1-2-6
Periodic Replacement of Parts..... W1-2-10

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SECTION 2
UPPERSTRUCTURE



CONTENTS

Group 1 Cab

Remove and Install Cab W2-1-1
Dimensions of the Cab Glass W2-1-15

Group 2 Counterweight

Remove and Install Counterweight W2-2-1

Group 3 Pump Device

Remove and Install Pump Device W2-3-1
Disassemble Pump Transmission W2-3-4
Assemble Pump Transmission W2-3-6
Disassemble Main Pump W2-3-8
Assemble Main Pump W2-3-12
Maintenance Standard W2-3-14
Disassemble Regulator(Main Pump) . W2-3-16
Assemble Regulator(Main Pump) W2-3-20
Disassemble Pump of
Oil Cooler Fan Motor W2-3-26
Assemble Pump of
Oil Cooler Fan Motor W2-3-30
Maintenance Standard W2-3-32
Disassemble Regulator(Pump for
Driving Oil Cooler Fan Motor) W2-3-34
Assemble Regulator(Pump for
Driving Oil Cooler Fan Motor) W2-3-38
Configuration of Pilot Pump W2-3-44
Configuration of Pump for
Lubricating Pump Transmission W2-3-46

Group 4 Control Valve

Remove and Install Control Valve W2-4-1
Disassemble Main Control Valve 1
(5-Spool Section) W2-4-6
Assemble Main Control Valve 1
(5-Spool Section) W2-4-10
Disassemble Main Control Valve 2
(5-Spool Section) W2-4-16
Assemble Main Control Valve 2
(5-Spool Section) W2-4-18
Disassemble Main Control Valve 1
(4-Spool Section) W2-4-20
Assemble Main Control Valve 1
(4-Spool Section) W2-4-28
Disassemble Main Control Valve 2
(4-Spool Section) W2-4-34
Assemble Main Control Valve 2
(4-Spool Section) W2-4-36
Disassemble Manifold W2-4-38
Assemble Manifold W2-4-40
Disassemble Swing Control Valve 1 ... W2-4-42
Assemble Swing Control Valve 1 ..... W2-4-48
Disassemble Swing Control Valve 2 ... W2-4-52
Assemble Swing Control Valve 2 ..... W2-4-54

Group 5 Swing Device

Remove and Install Swing Device W2-5-1
Disassemble Swing Reduction Gear W2-5-6
Assemble Swing Reduction Gear W2-5-12
Disassemble Swing Motor W2-5-16
Assemble Swing Motor W2-5-20
Disassemble and Assemble Swing
Parking Brake Releasing Valve W2-5-24
Maintenance Standard W2-5-26

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SECTION 3
UNDERCARRIAGE



CONTENTS

Group 1 Swing Bearing
Remove and Install Swing Bearing W3-1-1
Disassemble Swing Bearing W3-1-4
Assemble Swing Bearing W3-1-6

Group 2 Travel Device
Remove and Install Travel Device W3-2-1
Disassemble Travel Reducer W3-2-4
Assemble Travel Reducer W3-2-10
Disassemble Travel Motor W3-2-18
Assemble Travel Motor W3-2-22
Disassemble Travel Brake Valve W3-2-26
Assemble Travel Brake Valve W3-2-30
Maintenance Standard W3-2-32

Group 3 Center Joint
Remove and Install Center Joint W3-3-1
Disassemble Center Joint W3-3-4
Assemble Center Joint W3-3-6
Maintenance Standard W3-3-10

Group 4 Track Adjuster
Remove and Install Track Adjuster W3-4-1
Disassemble Track Adjuster W3-4-2
Assemble Track Adjuster W3-4-8

Group 5 Front Idler
Remove and Install Front Idler W3-5-1
Disassemble Front Idler W3-5-2
Assemble Front Idler W3-5-6
Maintenance Standard W3-5-8

Group 6 Upper and Lower Roller
Remove and Install Upper Roller W3-6-1
Remove and Install Lower Roller W3-6-3
Disassemble Upper Roller W3-6-6
Assemble Upper Roller W3-6-8
Disassemble Lower Roller W3-6-10
Assemble Lower Roller W3-6-12
Maintenance Standard W3-6-14

Group 7 Track
Remove and Install Tracks W3-7-1
Maintenance Standard W3-7-7

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2. Connect hoses (30 to 35).
   - : 19 mm
   - : 29.5 N·m (3 kgf·m, 21.5 lbf·ft)

IMPORTANT: If the harness is arranged to the inside of spring pin (7), it may make contact with the moving part of the pilot valve which may damage it. Be sure to arrange the harness to the outside of spring pin (7).

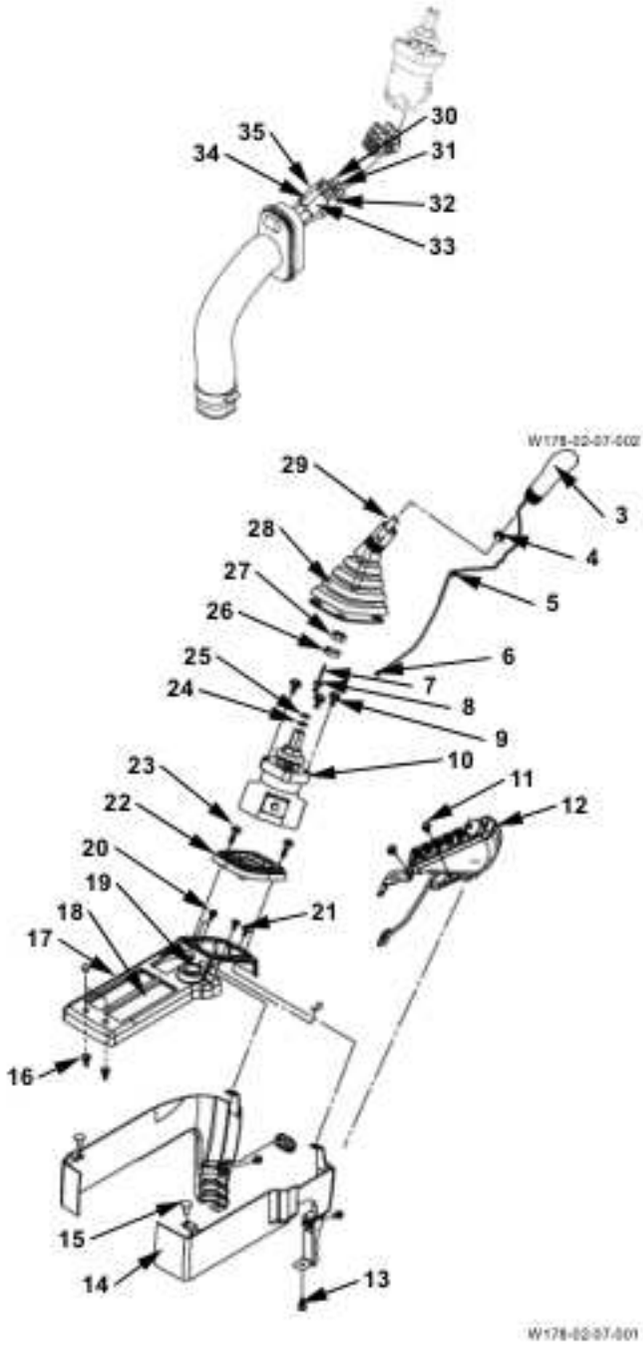
3. Temporarily tighten nut (27) to lever (29), then install washers (24), (25). Install lever (29) onto valve (10) with nut (27). Install boot (28).
   Temporarily tighten nut (4) to lever (29), then install grip (3) with nut (4).
   Pass the harness of grip (3) through the upper hole of boot (28), then connect it to lever (29), via clips (5) and (26). Arrange the harness to the outside of spring pin (7) over bolt (8) head. Connect connector (6).
   - : 22 mm
   - : 26 N·m (2.0 kgf·m, 14.5 lbf·ft)
   - : 19 mm
   - : 26 N·m (2.0 kgf·m, 14.5 lbf·ft)

4. Install switch box (12) with bolt (11), then connect the connector.
   - : 13 mm
   - : 10 N·m (1.0 kgf·m, 7.2 lbf·ft)

5. Connect each harness of key switch (19) and air controller (18).

6. Install cover (14) with bolts (21), (15) and (13). Install cover (17) with bolts (20 and 16).

7. Install cover (22) with bolt (23).



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CAUTION: 2-Stage carrier (28) assembly weight: 95 kg (210 lb)

11. Install eyebolts (M12, Pitch 1.75) into the two sling holes in the 2-stage carrier (28) assembly. Hoist the assembly to remove it from 3-stage carrier (1).

CAUTION: 3-Stage carrier (2) weight: 30 kg (70 lb)

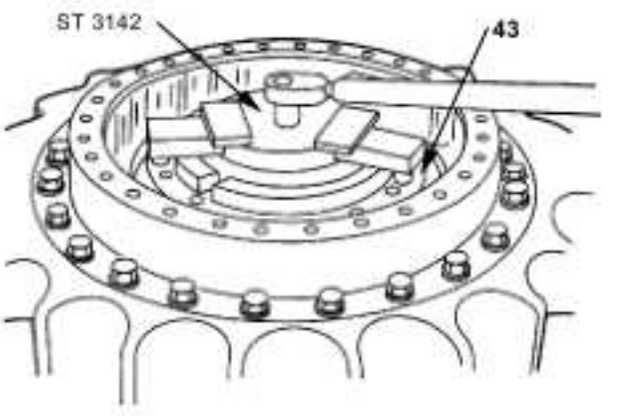
12. Attach a nylon sling to the gear part of 3-stage sun gear (2) (2 places). Hoist the gear to remove it from 3-stage carrier (1).

CAUTION: 3-Stage carrier (1) assembly weight: 210 kg (460 lb)

13. Install eyebolts (M12, Pitch 1.75) into the two sling holes in the 3-stage carrier (1) assembly. Hoist the assembly to remove it.

14. Remove bolts (41) (2 used) to remove lock plate (42) from bearing nut (43).
    : 22 mm

15. Install jig (ST 3142) to bearing nut (43). Loosen and remove bearing nut (43) from housing (36).



W111-03-02-018

CAUTION: Drum (46) + sprocket (45) + the others weight: 560 kg (1230 lb)

16. Install eyebolts (M22, Pitch 2.5) into the holes for socket bolts (19) of drum (46). Hoist drum (46) to remove it from housing (36). At this moment, the drum section is connected with the outer race of roller bearing (38) and roller bearing (44).

17. Remove floating seal (48) from housing (36) and support (37) respectively.

18. Remove the inner race of roller bearing (44) from drum (46).

19. Remove dummy plugs (52) (2 used) from sprocket (45). Remove bolts (40) (30 used) from sprocket (45).

CAUTION: Sprocket (45) weight: 210 kg (460 lb)

20. Screw puller bolts (M27, Pitch 3, L 70 mm) into the two pulling holes in sprocket (45) and make sprocket (45) separate from drum (46) slowly.

NOTE: Apply adhesive on the interface of sprocket and drum.
: 41 mm

21. Install eyebolts (M27, Pitch 3) into the two sling holes in sprocket (45). Hoist sprocket (45) to remove it from drum (46).
    : 41 mm

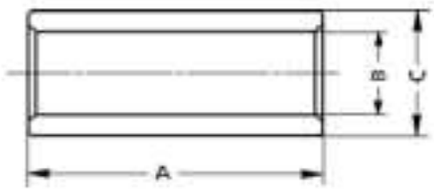
CAUTION: Drum (46)+the others weight: 290 kg (640 lb)

22. Hoist drum (46) to reverse it.

23. Remove socket bolts (47) (18 used) to remove support (37) from drum (46).
    : 10 mm

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Bushing



W105-03-07-023

Unit: mm (in)

	Standard	Allowable Limit	Remedy
A	222.1 (8.74)	-	Replace
B	59.15 (2.33)	[60.2 (2.37)]	
C	90 (3.54)	85 (3.35)	

Pin



W105-03-07-020

Unit: mm (in)

	Standard	Allowable Limit	Remedy
A	319.5 (12.58)	-	Peplace
B	58.15 (2.29)	[55.2 (2.17)]	

NOTE: Values in [ ] are just for reference.

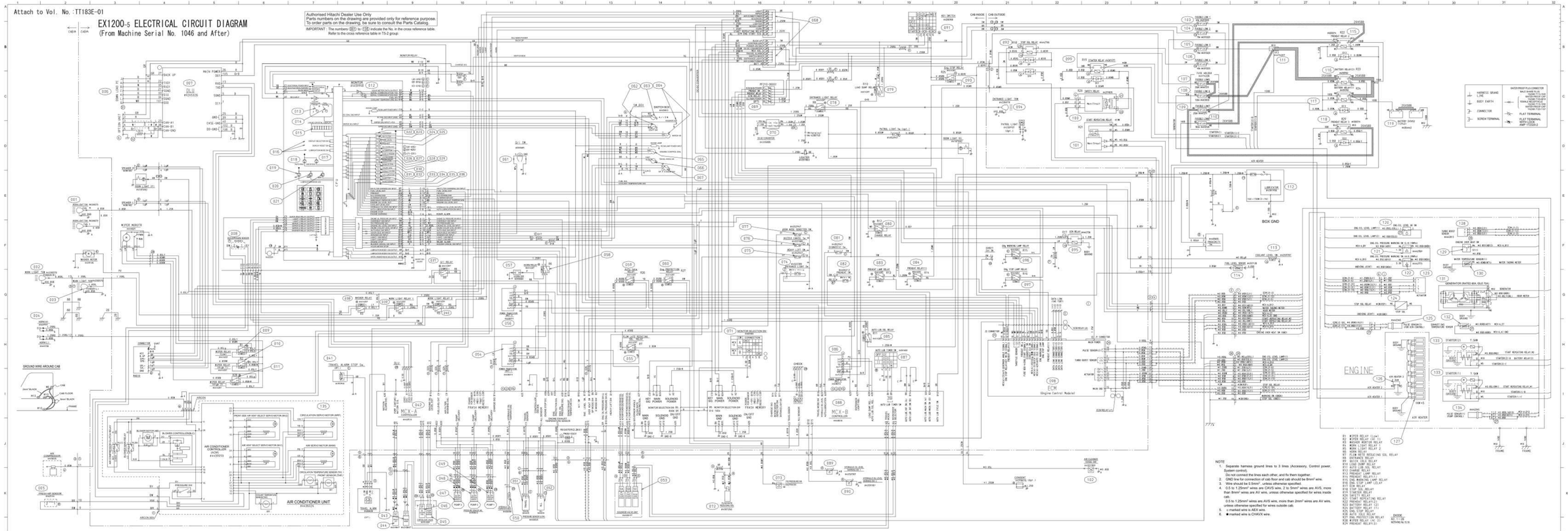
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EX1200-5 ELECTRICAL CIRCUIT DIAGRAM

(From Machine Serial No. 1046 and After)

Authorised Hitachi Dealer Use Only
Parts numbers on the drawing are provided only for reference purpose.
To order parts on the drawing, be sure to consult the Parts Catalog.
IMPORTANT : The numbers (①) to (⑮) indicate the No. in the cross reference table.
Refer to the cross reference table in TS-2 group.



NOTE
1. Separate harness ground lines to 3 lines (Accessory, Control power, System control).
   Do not connect the lines each other, and fix them together.
2. GND line for connection of cab floor and cab should be 8mm² wire.
3. Wire should be 0.5mm² , unless otherwise specified.
4. 0.5 to 1.25mm² wires are CAVS wire, 2 to 5mm² wires are AVS, more than 8mm² wires are AV wire, unless otherwise specified for wires inside cab.
   0.5 to 1.25mm² wires are AVS wire, more than 2mm² wires are AV wire, unless otherwise specified for wires outside cab.
5. ○ marked wire is AEX wire.
6. ■ marked wire is CHAVX wire.

B1 : WIPER RELAY (LOW)
B2 : WIPER RELAY (HI !)
B3 : WASHER MOTOR RELAY
B4 : WIPER RELAY (INT)
B5 : WORK LIGHT RELAY 2
B6 : HORN RELAY
B7 : ENGINE STOP SOLENOID(S) SOL RELAY
B8 : ENTRANCE RELAY
B9 : QUICK IDLE RELAY
B10 : ENGINE STOP RELAY
B11 : AUTO LUB (AS) RELAY
B12 : CHARGE RELAY
B13 : ENGINE STOP RELAY
B14 : PREHEAT RELAY(T)
B15 : ENG WARNING LAMP RELAY
B16 : ENG WARNING LAMP (S) RY
B17 : ECM RELAY
B18 : STOP SOL RELAY
B19 : ECM MAIN RELAY
B20 : SAFETY RELAY
B21 : START REPEATING RELAY
B22 : BATTERY RELAY (1)
B23 : BATTERY RELAY (2)
B24 : BATTERY RELAY (T)
B25 : AUTO LUB (M) RELAY
B26 : AUTO IDLE RELAY
B27 : ENG PROTECTION RELAY
B28 : WIPER RELAY (HI !)
B29 : PREHEAT RELAY(S)

DIODE
D1 : 1S1588
NOTHING IN 10,19

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