CEAM003301

Operation & Maintenance Manual

KOMATSU®

PC300LC-6
PC300HD-6

HYDRAULIC EXCAVATOR

SERIAL NUMBERS PC300LC-6 A83001 and up
PC300HD-6 A83001 and up

ENGINE 6D114E-1

April 2016

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

5. TABLE OF CONTENTS

1. FORWARD 0-2
2. SAFETY INFORMATION 0-3
3. INTRODUCTION 0-4
   - 3.1 INTENDED USE 0-4
   - 3.2 FEATURES 0-4
   - 3.3 BREAKING IN THE MACHINE 0-4
4. PLATE LOCATIONS AND TABLE TO ENTER P.I.N AND DISTRIBUTOR 0-5
   - 4.1 P.I.N. PLATE LOCATION 0-5
   - 4.2 ENGINE SERIAL NUMBER PLATE 0-5
   - 4.3 TABLE TO ENTER NUMBERS AND DISTRIBUTOR 0-5
5. TABLE OF CONTENTS 0-6
6. GENERAL PRECAUTIONS 1-2
7. PRECAUTIONS DURING OPERATION 1-10
   - 7.1 BEFORE STARTING ENGINE 1-10
   - 7.2 OPERATING MACHINE 1-12
   - 7.3 TRANSPORTATION 1-18
   - 7.4 BATTERY 1-20
   - 7.5 TOWING 1-22
   - 7.6 BUCKET WITH HOOK 1-23
8. PRECAUTIONS FOR MAINTENANCE 1-24
   - 8.1 BEFORE CARRYING OUT MAINTENANCE 1-24
   - 8.2 DURING MAINTENANCE 1-28
9. POSITION FOR ATTACHING SAFETY LABELS 1-34
10. GENERAL VIEW 2-2
    - 10.1 GENERAL VIEW OF MACHINE 2-2
    - 10.2 GENERAL VIEW OF OPERATORS COMPARTMENT 2-3
    - 10.3 GENERAL VIEW OF MONITOR PANEL 2-4
11. EXPLANATION OF COMPONENTS 2-5
    - 11.1 MACHINE MONITOR 2-5
    - 11.2 SWITCHES 2-15
    - 11.3 CONTROL LEVERS AND PEDALS 2-19
    - 11.4 SEAT BELT 2-23
    - 11.5 ROOF VENT 2-24
    - 11.6 FRONT WINDOW 2-25
    - 11.7 DOOR LOCK 2-28
    - 11.8 CAP, COVER WITH LOCK 2-28
    - 11.9 HOT AND COOL BOX 2-29
    - 11.10 STORAGE BOX 2-29
    - 11.11 ASHTRAY 2-29
    - 11.12 AIR CONDITIONER 2-30
    - 11.13 CAB HEATER 2-33
    - 11.14 PREPARATION FOR CAB HEATER 2-34
    - 11.15 AM/FM RADIO 2-35
    - 11.16 ELECTRIC POWER TAKE OUT ADAPTER 2-39
    - 11.17 FUSE 2-40
    - 11.18 FUSIBLE LINK 2-41

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

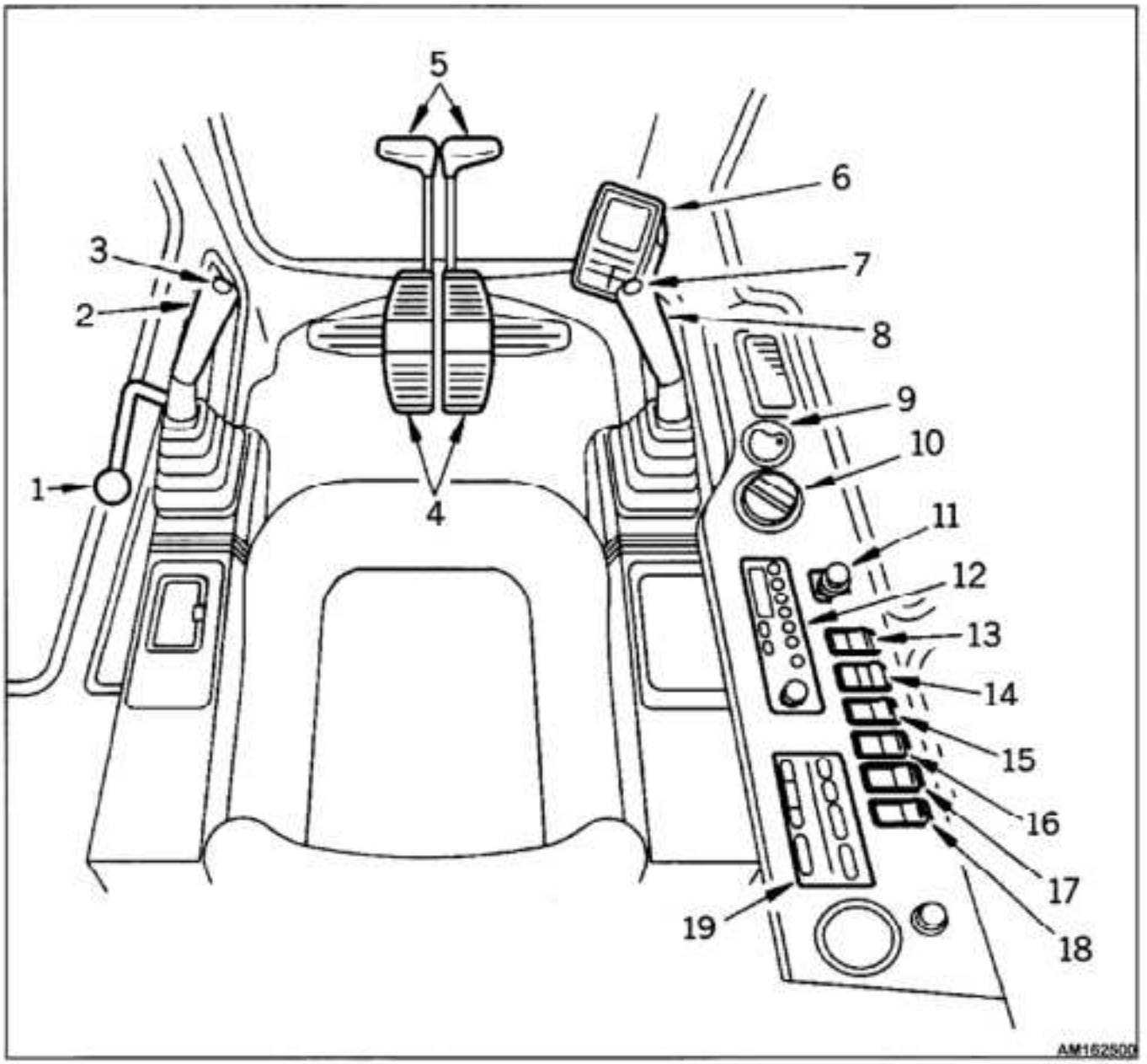
11.19 CONTROLLERS 2-41
11.20 TOOL BOX 2-41
11.21 GREASE GUN HOLDER 2-41
11.22 HANDLING ACCUMULATOR 2-42
12. OPERATION 2-43
12.1 CHECK BEFORE STARTING ENGINE 2-43
12.2 STARTING ENGINE 2-54
12.3 OPERATIONS AND CHECKS AFTER ENGINE STARTS 2-57
12.4 MOVING MACHINE 2-63
12.5 STEERING MACHINE 2-67
12.6 STOPPING MACHINE 2-69
12.7 SWINGING 2-70
12.8 OPERATION OF WORK EQUIPMENT 2-71
12.9 HANDLING ACTIVE MODE 2-72
12.10 HANDLING WORKING MODE 2-72
12.11 PROHIBITED OPERATIONS 2-74
12.12 PRECAUTIONS FOR OPERATION 2-76
12.13 PRECAUTIONS WHEN TRAVELING ON HILLS 2-77
12.14 HOW TO ESCAPE FROM MUD 2-79
12.15 WORK POSSIBLE WITH HYDRAULIC EXCAVATOR 2-79
12.16 REPLACE OR INVERT BUCKET 2-81
12.17 PARKING MACHINE 2-83
12.18 CHECK AFTER FINISHING WORK 2-84
12.19 STOPPING ENGINE 2-85
12.20 CHECK AFTER STOPPING ENGINE 2-85
12.21 LOCKING 2-86
13. TRANSPORTATION 2-87
13.1 TRANSPORTATION PROCEDURE 2-87
13.2 LOADING, UNLOADING OF TRAILERS 2-87
13.3 TRACK FRAME GAUGE - PC300HD-6 2-93
13.4 PRECAUTIONS FOR TRANSPORTATION 2-94
14. COLD WEATHER OPERATION 2-95
14.1 PRECAUTIONS FOR LOW TEMPERATURE 2-95
14.2 PRECAUTIONS AFTER WORK COMPLETION 2-97
14.3 AFTER COLD WEATHER 2-97
15. LONG TERM STORAGE 2-98
15.1 BEFORE STORAGE 2-98
15.2 DURING STORAGE 2-98
15.3 AFTER STORAGE 2-99
15.4 STARTING MACHINE AFTER LONG TERM STORAGE 2-99
16. TROUBLESHOOTING 2-100
16.1 PHENOMENA THAT ARE NOT FAILURES 2-100
16.2 METHOD OF TOWING MACHINE 2-100
16.3 METHOD FOR LIGHT WEIGHT TOWING 2-100
16.4 PRECAUTION ON PARTICULAR JOB SITES 2-100
16.5 IF BATTERY IS DISCHARGED 2-101
16.6 OTHER TROUBLE 2-104
17. GUIDES TO MAINTENANCE 3-2

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

18. OUTLINES OF SERVICE 3-4
18.1 OUTLINE OF OIL, FUEL, COOLANT 3-4
18.2 OUTLINE OF ELECTRICAL SYSTEM 3-6
18.3 OUTLINE OF HYDRAULIC SYSTEM 3-6
18.4 OUTLINE OF FUEL SYSTEM 3-7
19. WEAR PARTS LIST 3-8
20. FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE 3-9
20.1 PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS 3-9
20.2 ENGINE OIL SPECIFICATIONS 3-10
20.3 DAMPER CASE, SWING MACHINERY CASE, TRACK FRONT IDLERS, TRACK ROLLERS, TOP CARRIER ROLLERS AND HYDRAULIC SYSTEM OIL SPECIFICATIONS 3-11
20.4 FINAL DRIVE OIL SPECIFICATIONS 3-11
20.5 DIESEL FUEL SPECIFICATIONS 3-11
20.6 COOLANT SPECIFICATIONS 3-12
21. STANDARD TIGHTENING TORQUES FOR BOLTS AND NUTS 3-18
21.1 INTRODUCTION OF NECESSARY TOOLS 3-18
21.2 TORQUE LIST 3-19
22. PERIODIC REPLACEMENT OF SAFETY CRITICAL PARTS 3-20
23. MAINTENANCE SCHEDULE CHART 3-21
23.1 SCHEDULED MAINTENANCE CHART 3-21
23.2 MAINTENANCE INTERVAL WHEN USING HYDRAULIC BREAKER 3-23
24. SERVICE PROCEDURE 3-24
24.1 INITIAL 250 HOURS SERVICE 3-24
24.2 WHEN REQUIRED 3-25
24.3 CHECK BEFORE STARTING 3-45
24.4 EVERY 50 HOURS SERVICE 3-49
24.5 EVERY 100 HOURS SERVICE 3-51
24.6 EVERY 250 HOURS SERVICE 3-54
24.7 EVERY 500 HOURS SERVICE 3-58
24.8 EVERY 1000 HOURS SERVICE 3-66
24.9 EVERY 2000 HOURS SERVICE 3-69
24.10 EVERY 4000 HOURS SERVICE 3-75
24.11 EVERY 5000 HOURS SERVICE 3-76
25. MACHINE SPECIFICATIONS 4-2
25.1 GENERAL 4-2
25.2 MACHINE SPECIFICATIONS 4-4
25.3 WORKING RANGE 4-6
25.4 LIFTING CAPACITY 4-8
26. GENERAL PRECAUTIONS 5-2
26.1 PRECAUTIONS RELATED TO SAFETY 5-2
26.2 PRECAUTIONS WHEN INSTALLING ATTACHMENTS 5-3
27. BUCKET WITH HOOK 5-4
27.1 CHECKING FOR DAMAGE 5-4
27.2 PROHIBITED OPERATIONS 5-4
27.3 PRECAUTIONS DURING OPERATIONS 5-4
28. MACHINES READY FOR ATTACHMENT 5-5
28.1 GENERAL LOCATIONS 5-5
28.2 HYDRAULIC CIRCUIT 5-7

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual |... Order the manual at mid-west-tech.com >

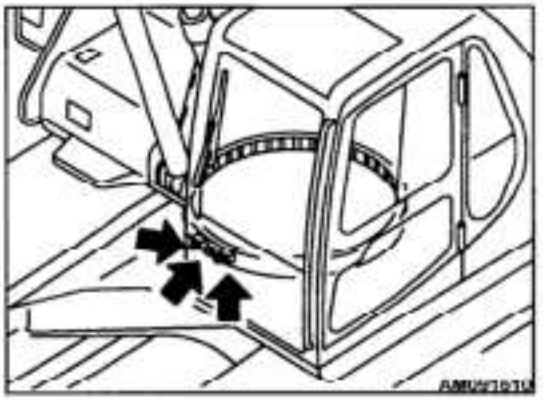
10.2 GENERAL VIEW OF OPERATORS COMPARTMENT



1. Safety Lock Lever
2. Left Work Lever
3. Knob Switch
4. Travel Pedal
5. Travel Lever
6. Machine Monitor
7. Horn Switch
8. Right Work Lever
9. Starting Switch
10. Fuel Switch
11. Lighter
12. Radio
13. Swing Lock Switch
14. Wiper Switch
15. Extra Light Switch
16. Buzzer Stop Switch
17. Heater Fan Switch
18. Machine Push Up Switch
19. A/C Controls

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

24.6.3 LUBRICATE SWING CIRCLE (3 POINTS)



1. Lower the work equipment to the ground.
2. Using a grease gun, pump in grease through the grease fittings shown by arrows.
3. After greasing, wipe off all the old grease that was pushed out.

24.6.4 CHECK BELT TENSION, ADJUST

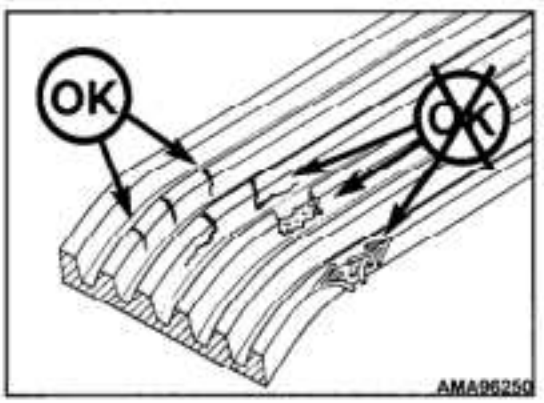
Before working on the engine or electrical system, disconnect the negative (ground) battery cable. Tag the cable and controls to warn against starting. Replace badly worn, greasy or severely cracked belts immediately. These conditions prevent proper belt function.

Prior to installing new belts, make sure all pulley grooves are clean and not worn. If a pulley is damaged or if the grooves are worn, it should be replaced.

All pulley support bearings, shafts and brackets must be in working order.

When replacing belts and pulleys, pulley alignment must be checked with belts tensioned and brackets securely clamped. A misalignment that can be detected by the naked eye is detrimental to belt performance.

During belt installation, do not force the belts into the pulley grooves by prying with a screwdriver or pry bar. This will damage the belt side cords which will cause the belts to turn and result in complete destruction of the belts in operation.



Belts on new machines and replacement belts lose their tension as they seat into the pulley grooves. Check the tension of new belts at 20 hour intervals until tension is stabilized and thereafter, every 250 hours. If the tension falls below the required minimum, the belt slips, and damages the belts and pulley grooves.

REMARK

When operating in abrasive conditions, check tension every 100 hours.

Visually inspect the belts for intersecting cracks. Transverse (across the belt width) cracks are acceptable. Longitudinal (direction of belt length) cracks that intersect with transverse cracks are not acceptable. Replace the belt if it is frayed or has pieces of material missing.

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual... Order the manual at mid-west-tech.com >

PC300LC-6	Arm☞	2200 mm	2550 mm	3190 mm	4020 mm		
A	Max dig height	9580 mm	9965 mm	10210 mm	10550 mm		
B	Max dump height	6595 mm	6895 mm	7110 mm	7490 mm		
C	Max dig depth	6355 mm	6705 mm	7380 mm	8180 mm		
D	Max vertical wall dig depth	5120 mm	5880 mm	6480 mm	7280 mm		
E	Max dig depth for 8' level	6130 mm	6520 mm	7180 mm	8045 mm		
F	Max. dig reach	11055 mm	11435 mm	11640 mm	12020 mm		
G	Max dig reach ground level	9950 mm	10355 mm	11100 mm	11900 mm		
H	Min swing radius	4390 mm	4400 mm	4310 mm	4320 mm		
Bucket dig force at power max		19100 kg	19100 kg	19100 kg	19100 kg		
Arm crowd force at power max		19300 kg	16900 kg	14300 kg	12200 kg		

PC300HD-6	Arm☞	2200 mm	2550 mm	3190 mm	3190 mm HD	4020 mm	
A	Max dig height	9690 mm	10080 mm	10450 mm	10220 mm	10660 mm	
B	Max dump height	6710 mm	7010 mm	7350 mm	7160 mm	8080 mm	
C	Max dig depth	6260 mm	6610 mm	7140 mm	7250 mm	8080 mm	
D	Max vertical wall dig depth	4960 mm	5720 mm	6240 mm	6630 mm	7110 mm	
E	Max dig depth for 8' level	5900 mm	6290 mm	6940 mm	7810 mm	6940 mm	
F	Max. dig reach	10150 mm	10550 mm	11100 mm	11080 mm	11900 mm	
G	Max dig reach ground level	9920 mm	10320 mm	10890 mm	10870 mm	11700 mm	
H	Min swing radius	4390 mm	4400 mm	4310 mm	4360 mm	4210 mm	
Bucket dig force at power max		19100 kg	19100 kg	19100 kg	19100 kg	19100 kg	
Arm crowd force at power max		19300 kg	16900 kg	14300 kg	15705 kg	12200 kg	

MidWestTech | Komatsu PC300LC-6 Hydraulic Excavator Operation & Maintenance Manual... Order the manual at mid-west-tech.com >