UEAM000106

Operation & Maintenance Manual

PW150ES-6K

HYDRAULIC EXCAVATOR

SERIAL NUMBER
PW150ES-6K - K35001 and up

WARNING

Unsafe use of this machine may cause serious injury or death. Operators and maintenance personnel must read this manual before operating or maintaining this machine. This manual should be kept near the machine for reference and periodically reviewed by all personnel who will come into contact with it.

NOTICE

Komatsu has Operation & Maintenance Manuals written in some other languages. If a foreign language manual is necessary, contact your local distributor for availability.

KOMATSU®

MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance Manu... Order the manual at mid-west-tech.com >

CONTENTS

FOREWORD 3

FOREWORD 4

SAFETY INFORMATION 6

- SAFETY MESSAGES 6
- NOISE 7
- VIBRATION 7
- EMERGENCY STEERING 8

INTRODUCTION 9

- INTENDED USE 9
- FEATURES 9
- BREAKING IN YOUR NEW MACHINE 9

LOCATIONS OF PLATES, TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 11

- MACHINE SERIAL NO. PLATE POSITION 11
- ENGINE SERIAL NO. PLATE POSITION 11
- TABLE TO ENTER SERIAL NO. AND DISTRIBUTOR 11
- MACHINE SERIAL PLATES 12

SAFETY 19

GENERAL PRECAUTIONS 20

PRECAUTION DURING OPERATION 26

- BEFORE STARTING ENGINE 26
- OPERATING MACHINE 27
- TRANSPORTATION 32
- BATTERY 33
- TOWING 34
- BUCKET WITH HOOK OR BUCKET LINK 35

PRECAUTIONS FOR MAINTENANCE 39

- BEFORE CARRYING OUT MAINTENANCE 39
- DURING MAINTENANCE 42

POSITION FOR ATTACHING SAFETY LABELS 45

- POSITION FOR ATTACHING SAFETY LABELS 45

OVERLOAD CAUTION 60

OPERATION 61

MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance... Order the manual at mid-west-tech.com >

GENERAL VIEW **62**
GENERAL VIEW OF MACHINE 62
GENERAL VIEW OF CONTROLS AND GAUGES 63

EXPLANATION OF COMPONENTS **65**
MACHINE MONITOR 65
SWITCHES 76
CONTROL LEVERS, PEDALS 86
DOOR LOCK 93
CAP, COVER WITH LOCK 94
FUSE 95
LUGGAGE TRAY 96
ASHTRAY 96
CUP HOLDER 96
HEATER 97
AIR CONDITIONER 99
FUSIBLE LINK 102
CONTROLLERS 102
TOOL BOX 102
REFUELLING PUMP 102
CAB RADIO (OPTION) 103
WARNING LAMPS 104
HANDLING THE ACCUMULATOR 105

OPERATION **106**
CHECK BEFORE STARTING ENGINE 106
STARTING ENGINE 115
MOVING MACHINE OFF 123
STEERING 126
STOPPING 127
SWINGING (Slewing the upper carriage) 128
OPERATION OF WORK EQUIPMENT 129
WORKING MODE SELECTION 130
PROHIBITIONS FOR OPERATION 132
PRECAUTIONS FOR OPERATION 133
PRECAUTIONS WHEN TRAVELING UP OR DOWN HILLS 134
HOW TO ESCAPE FROM MUD 135
WORK POSSIBLE USING HYDRAULIC EXCAVATOR 136
REPLACEMENT AND INVERSION OF BUCKET 137
PARKING MACHINE 140
CHECK AFTER FINISHING WORK 141
STOPPING ENGINE 141
CHECK AFTER STOPPING ENGINE 142
LOCKING 142
OVERLOAD WARNING DEVICE 142
HANDLING THE WHEELS 143

MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance... Order the manual at mid-west-tech.com >

TRANSPORTATION **148**
LOADING, UNLOADING WORK 148
PRECAUTIONS FOR LOADING 150
PRECAUTIONS FOR TRANSPORTATION 152
TRAVELLING POSTURE 153

COLD WEATHER OPERATION **154**
PRECAUTIONS FOR LOW TEMPERATURE 154
PRECAUTIONS AFTER COMPLETION OF WORK 155
AFTER COLD WEATHER 156

LONG-TERM STORAGE **157**
BEFORE STORAGE 157
DURING STORAGE 157
AFTER STORAGE 158
STARTING MACHINE AFTER LONG-TERM STORAGE 158

TROUBLESHOOTING **159**
PHENOMENA THAT ARE NOT FAILURES 159
METHOD OF TOWING MACHINE 160
PRECAUTIONS ON PARTICULAR JOBSITES 160
IF BATTERY IS DISCHARGED 161
OTHER TROUBLE 163

MAINTENANCE 167

GUIDES TO MAINTENANCE **168**

OUTLINES OF SERVICE **171**
OUTLINE OF OIL, FUEL, COOLANT 171
OUTLINE OF ELECTRIC SYSTEM 174
OUTLINE OF HYDRAULIC SYSTEM 174

WEAR PARTS LIST **176**

USE FUEL, COOLANT AND LUBRICANTS ACCORDING TO AMBIENT TEMPERATURE **177**
PROPER SELECTION OF FUEL, COOLANT AND LUBRICANTS 177

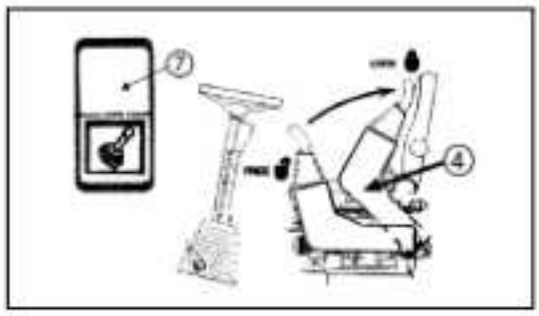
STANDARD TIGHTENING TORQUES FOR BOLTS AND NUTS **181**
INTRODUCTION OF NECESSARY TOOLS 181
TORQUE LIST 181

PERIODIC REPLACEMENT OF SAFETY CRITICAL PARTS **183**
SAFETY CRITICAL PARTS 184

MAINTENANCE SCHEDULE CHART **185**
MAINTENANCE WHEN USING HYDRAULIC BREAKER 190
USE OF BIO-DEGRADEABLE OIL 190

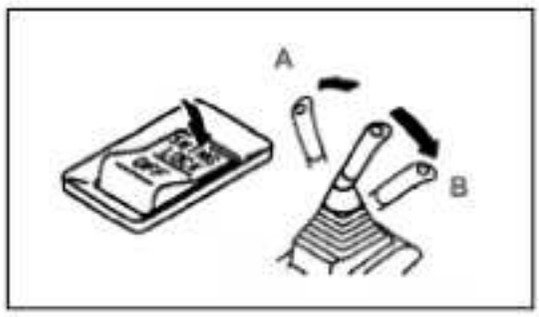
MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance... Order the manual at mid-west-tech.com >

4. Lower the control lever pad (4) to the FREE position, put PPC lock switch (7) to on position and raise the bucket from the ground.



5. Operate boom and bucket control lever (5) and arm control lever (6) slowly to operate the boom cylinder, bucket cylinder, and arm cylinder to the end of their stroke.

A	Left swing
B	Right swing

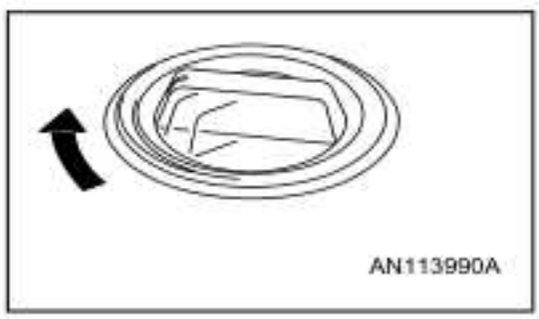


6. Operate the boom and arm slowly at the same time, and repeat this for 30 seconds.
   Next, repeat the same operation with the bucket and swing for 30 seconds. Operate both fully in turn for 5 minutes.

NOTICE

When pulling in the work equipment, be careful not to let it hit the chassis or ground.

7. Turn fuel control dial (1) to the full speed (MAX) position and carry out the operation is Step 6 for 3 -5 minutes.



8. Repeat the following operation 3 - 5 times and operate slowly.

- Boom operation RAISE ↔ LOWER
- Arm operation IN↔ OUT
- Bucket operation CURL↔ DUMP
- Swing operation LEFT↔ RIGHT
- Travel (Lo) operation FORWARD↔ REVERSE

MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance... Order the manual at mid-west-tech.com >

STANDARD TIGHTENING TORQUES FOR BOLTS AND NUTS

INTRODUCTION OF NECESSARY TOOLS

The following tools are needed when carrying out maintenance.
(These tools are provided in tool box)

No.	Name of tool	Part No.	Remarks
1	Wrench set	09002-01417 09002-01922 09002-02427 09002-03032	Applicable width across flats (S_1-S_2) 14mm - 17mm 19mm - 22mm 24mm - 27mm 30mm - 32mm
2	Screwdriver	09033-00190	Crosshead/flat head interchangeable type
3	Socket wrench set	09020-10286	Applicable width across flats set 10 mm, 13 mm, 14 mm, 17 mm, 19 mm, 22 mm, 24 mm, 27 mm, 30 mm, 32 mm. Extension, Handle, Joint, Ratchet handle bar
4	Wrench	09002-03641	Applicable width across flats 36 mm - 41 mm
5	Hexagon wrench	09007-01040 09700-00836	Applicable width across flats Applicable width across flats
6	Filter wrench	09019-10080	For fuel filter cartridge
7	Filter wrench	0919-10093	For engine oil filter cartridge
7	Grease pump	07952-70002	For greasing work
9	Grease cartridge	07950-90403	(Lithium base grease: 400 g)
10	Engine sump drain hose	20E-01-K2290	For draining sump

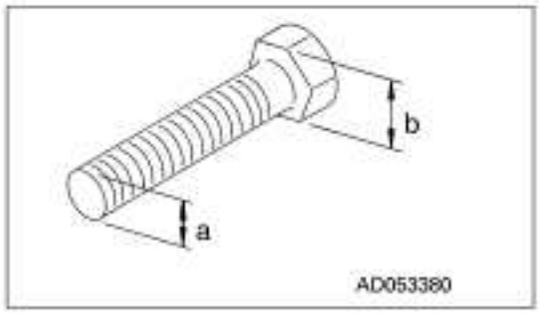
If any of the above tools are broken, please order them from your Komatsu distributor.

TORQUE LIST

Unless otherwise specified, tighten the metric bolts and nuts to the torque shown in the table.

The tightening torque is determined by the width across the flats (B) of the nut and bolt.

If it is necessary to replace any nut or bolt, always use a Komatsu genuine part of the same size as the part that was replaced.



MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance... Order the manual at mid-west-tech.com >

EVERY 2000 HOURS SERVICE

Maintenance for every 100, 250, 500 and 1000 hours should be carried out at the same time.

CLEAN HYDRAULIC TANK STRAINER

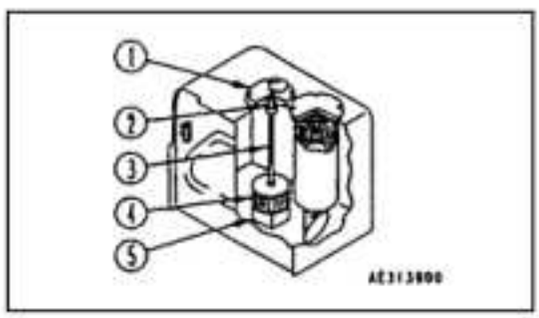
⚠ WARNING

The oil is at high temperature immediately after the machine has been operated. Wait for the oil to cool down before changine the oil. When removing the oil filler cap, turn it slowly to release the internal pressure, then remove it carefully.

Prepare the following

- Container to catch drained oil: min. 117 l capacity
- Refill, capacity: 117 l
- Prepare a handle for the socket wrench set.

1. Loosen 4 bolts, then remove cover (1).
   When doing this, the cover may fly out under the force of spring (2), so push the cover down when removing the bolts.
2. Pull up the top of rod (3), and remove spring and strainer (4).
3. Remove the dirt stuck to strainer (4), then wash it in clean diesel oil or flushing oil. If strainer (4) is damaged, replace it with a new one.
4. Refit strainer (4) by inserting it into tank projecting part (5).
5. Install cover (1) with bolts.



CLEAN, CHECK TURBOCHARGER

Contact your Komatsu distributor for cleaning or inspection.

CHECK ALTERNATOR, STARTING MOTOR

The brush may be worn, or the bearing may have run out of grease, so contact your Komatsu distributor for inspection or repair. If the engine is started frequently, carry out inspection every 1000 hours.

MidWestTech | Komatsu PW150ES-6K Hydraulic Excavator Operation & Maintenance... Order the manual at mid-west-tech.com >