CEAM008102

Operation & Maintenance Manual

KOMATSU®

WA500-3LK

WHEEL LOADER

SERIAL NUMBERS WA500-3LK A71001 and up

ENGINE 6D140E-3

April 2016

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TABLE OF CONTENTS

INTRODUCTION

FOREWORD 0-2
SAFETY INFORMATION 0-3
APPROVED AND NON-APPROVED USES 0-4
Approved Functions 0-4
Non-Approved Functions 0-4
VISIBILITY STANDARD 0-5
Visibility in Immediate Area 0-5
12-M Radius Visibility 0-5
PRODUCT IDENTIFICATION 0-6
Directions of Machine 0-6
Machine Serial Number 0-7
Engine Serial Number, EPA Regulations 0-7
Service Meter Location 0-8
SERIAL NUMBERS AND DEALER INFORMATION 0-9
Model: WA500-3LK 0-9
TABLE OF CONTENTS 0-11

SAFETY

SAFETY AND WARNING DECALS 1-2
Location of the Safety Decals 1-2
Safety Labels 1-3
Additional Safety Decals 1-8
GENERAL SAFETY RULES AND PRECAUTIONS 1-10
General Safety Rules 1-10
Unauthorized Modifications 1-10
General Safety at Job Site 1-11
Working on Loose Ground 1-11
Safety Features 1-11
Personal Protective Equipment 1-12
Fire and Explosion Prevention 1-12
Fire Caused by Fuel or Oil 1-12
Fire Caused by Accumulation of Flammable Material 1-13
Fire Coming from Electrical Wiring 1-13
Fire Coming from Hydraulic Line 1-13
Windshield Washer Fluid 1-13
Action if Fire Occurs 1-13
Fire Extinguisher and First Aid Kit 1-14
Mounting and Dismounting 1-15
Inside Operator's Compartment 1-16
Precautions When Standing Up from Operator's Seat 1-16
Precautions When Using ROPS 1-17
Emergency Escape from Operator's Cab 1-17
Leaving Operator's Compartment 1-18
Asbestos Hazard Alert 1-19

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Crush or Pinch-Point Dangers 1-19
Precautions for Ventilation Exhaust Gas 1-19
PRECAUTIONS BEFORE STARTING OPERATIONS 1-20
Pre-Operational Checks 1-20
Ensure Good Visibility 1-20
Confirmation of Marks 1-20
Precaution for Warning Tag 1-21
Checks Before Starting Engine, Adjustments 1-22
Precautions When Starting 1-23
Work Site Hazards 1-23
Avoiding Dangerous Situations 1-24
Working Clearances 1-25
Working Near High Voltage Cables 1-26
RULES FOR ROAD TRAVEL 1-27
Traveling in Reverse 1-27
Working on Loose or Unstable Ground 1-28
Operating on Snow or Frozen Surfaces 1-28
Travel on Slopes 1-29
Parking the Machine 1-31
PRECAUTIONS DURING MAINTENANCE OPERATIONS 1-32
Warning Tags 1-32
Equipment Storage 1-32
Working Under the Machine 1-33
Using Drop Lamps 1-33
Keeping the Machine Clean 1-33
Running the Machine During Maintenance 1-34
Rules for Refueling the Machine 1-35
Cooling System Precautions 1-35
Battery Precautions 1-35
Battery Hazard Prevention 1-36
Using Jumper Cables 1-37
Starting the Machine 1-37
High-Pressure Hoses 1-38
Safe Handling of High-Pressure Hoses 1-38
Precautions for High-Pressure Fuel 1-38
High-Temperature Areas 1-39
Disposal of Waste Materials 1-39
Inflating Tires 1-40
Accumulator 1-40
Critical Parts 1-40
High Voltage 1-41
Maintenance of Air Conditioner 1-41

OPERATION

GENERAL VIEW 2-2
General View of Machine 2-2
Controls and Gauges 2-3
Main Monitor 2-4

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Maintenance Monitor 2-5
EXPLANATION OF COMPONENTS 2-6
Machine Monitor System 2-6
Warning Display 2-8
Central Check Lamp (CHECK) 2-9
Central Caution Lamp (CAUTION) 2-9
Engine Water Level Caution Pilot Lamp 2-10
Engine Oil Level Caution Pilot Lamp 2-10
Brake Oil Pressure Caution Pilot Lamp 2-11
Engine Oil Pressure Caution Pilot Lamp 2-11
Battery Charge Caution Pilot Lamp 2-11
Air Cleaner Clogging Caution Pilot Lamp 2-12
Emergency Steering Pilot Lamp (if equipped) 2-12
Front Axle Oil Temperature Warning Lamp (if equipped) 2-12
Meter Display Portion 2-13
Parking Brake Pilot Lamp 2-14
Engine Preheating Pilot Lamp 2-14
Front Working Lamp Pilot Lamp 2-14
Rear Working Lamp Pilot Lamp 2-14
Transmission Cutoff Pilot Lamp 2-15
Turn Signal Pilot Lamp 2-15
High Beam Pilot Lamp 2-15
Transmission Auto-Shift/Manual Selector Pilot Lamp 2-15
Fuel Gauge 2-16
Engine Water Temperature Gauge 2-16
Torque Converter Oil Temperature Gauge 2-16
Service Meter 2-17
Speedometer 2-17
Transmission Shift Indicator 2-17
Switches 2-18
Starting Switch 2-19
Transmission Cutoff Switch 2-19
Front Working Lamp Switch 2-20
Rear Working Lamp Switch 2-20
Transmission Auto-Shift/Manual Selector Switch 2-20
Lamp Switch 2-21
Turn Signal Lever 2-21
Dimmer Switch 2-21
Horn Button 2-21
Hazard Lamp Switch 2-22
Kickdown Switch 2-22
Front Wiper Switch 2-22
Rear Wiper Switch 2-23
Cigarette Lighter (if equipped) 2-23
Room Lamp Switch 2-23
Parking Brake Switch 2-24
Power Window Switch 2-24
Hold Switch 2-25
Control Levers, Pedals 2-26

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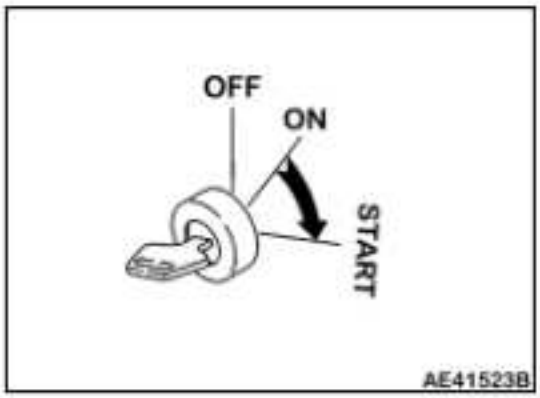
2. After the preheating pilot lamp (2) goes out, release the accelerator pedal; then turn the key in starting switch (1) to the START position. The engine starts.

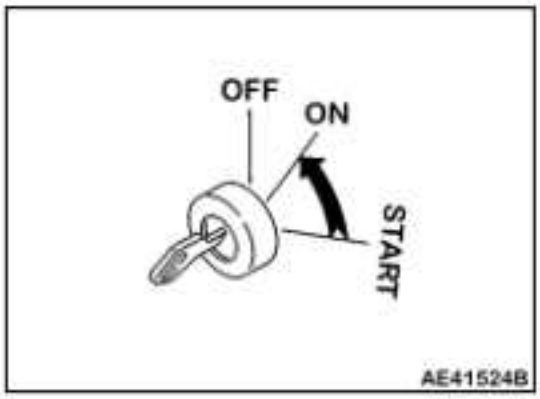
3. After the engine starts, release the key in starting switch (1). The key automatically returns to the ON position.

4. Immediately after starting the engine, run the engine at idling. Do not depress the accelerator pedal or operate the work equipment during this time.

   Guideline for idling time:

   - Cold temperature: 15 seconds or more
   - When first starting the engine after changing engine oil and replacing engine oil filter: 20 seconds





Remark

Immediately after the engine is started, the turbo-protect function is actuated. Even if the accelerator pedal is depressed, the engine speed will not rise above 1,000 rpm.

Cooling Water Temperature	Turbo-Protect Time
Above 10°C (50°F)	0 second
0°C to 10°C (32°F to 50°F)	0 to 6 seconds
-10°C to 10°C (14°F to 32°F)	6 to 12 seconds
-20°C to -10°C (-4°F to 14°F)	12 to 16 seconds
-30°C to -20°C (-22°F to -4°F)	16 to 20 seconds
Below -30°C (-22°F)	20 seconds

★ If the accelerator pedal is kept depressed, the engine speed will suddenly rise after the turbo-protect time. To prevent this, release the accelerator pedal.

★ The turbocharger rotates at extremely high speed. Immediately after the engine is started, the pressure of the lubricating oil has not risen sufficiently. If the engine speed is suddenly raised, it may lead to damage or seizure of the turbocharger bearing. The turbo-protect function acts to prevent this problem. This function uses an electronic control to prevent the engine speed from rising above a certain speed for the first few seconds after the engine starts.

★ To improve the ease of starting in cold weather, the low idling speed becomes slightly higher for the time given in the following table and the engine sound is different. In addition, it functions to make the accelerator gradual during this time.

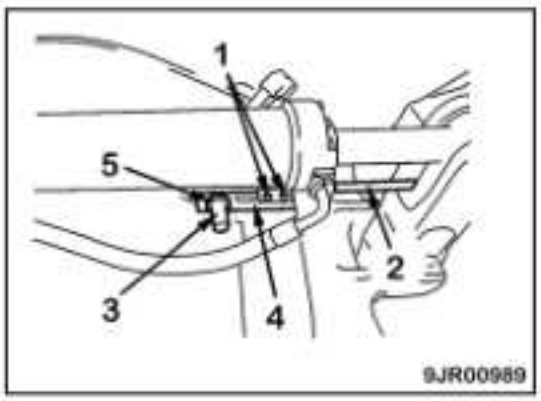
Cooling Water Temperature	Injection Characteristics Change Time
Above 20°C (68°F)	0 second
20°C to 0°C (68°F to 32°F)	0 to 6 seconds
0°C to -20°C (32°F to -4°F)	6 to 12 seconds
-20°C to -30°C (-4°F to -22°F)	12 to 15 seconds

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Adjusting Bucket Positioner

1. Lower the bucket to the ground; set to the desired digging angle.
2. Return the bucket control lever to the HOLD position; lock the work equipment control lever; and stop the engine.
3. Loosen two bolts (1) and adjust mounting bracket (4) of the proximity switch so that the rear tip of angle (2) is in line with the center of the sensing surface of the proximity switch (3).
   - Tighten the bolts to hold the bracket in position.
4. Loosen two nuts (5) and adjust to make a clearance of 3 to 5 mm (0.118 to 0.197 in) between bar (2) and the sensing surface of proximity switch (3).
   - Tighten the nuts to hold in position.

   Tightening torque:. . . . . .(17.2 ±2.5 N•m (12.69 ±1.84 lbf ft)

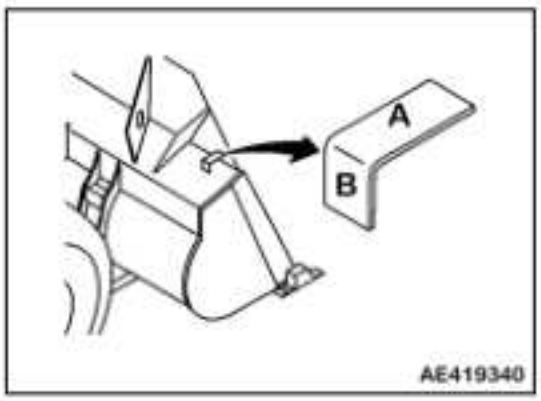


5. After adjusting, start the engine and raise the lift arm.
6. Operate the bucket control lever to the DUMP position, then operate it to the TILT BACK position and check that the lever is automatically returned to the HOLD position when the bucket reaches the desired digging angle.

Bucket Level Indicator

Level indicators (A) and (B) are located at the rear of the bucket. They check the bucket angle during operation.

- A: Parallel with cutting edge
- B: 90° to cutting edge



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Every 100 Hours Service

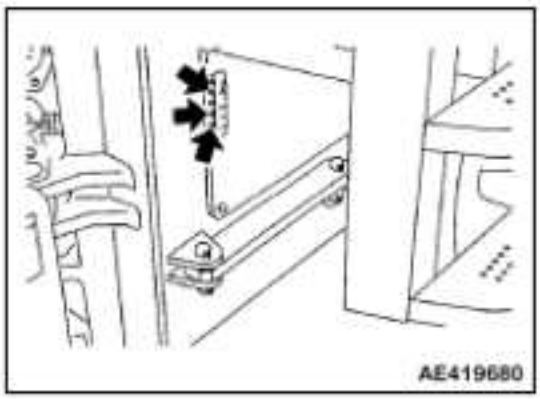
★ Maintenance for every 50 hours service should be performed at the same time.

Lubricate Rear Axle Pivot Pin

Remark

There are three lubrication points.

1. Using a grease pump, pump grease in through the grease fittings marked by the arrows.
2. After greasing, wipe off any grease that was pushed out.



Clean Element in Air Conditioner Fresh Air Filter

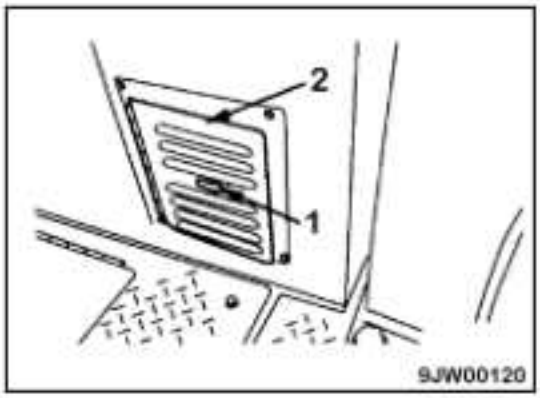
⚠ WARNING

If compressed air is used, there is danger that dirt may fly and cause personal injury. Always wear safety glasses, dust mask, and other protective equipment.

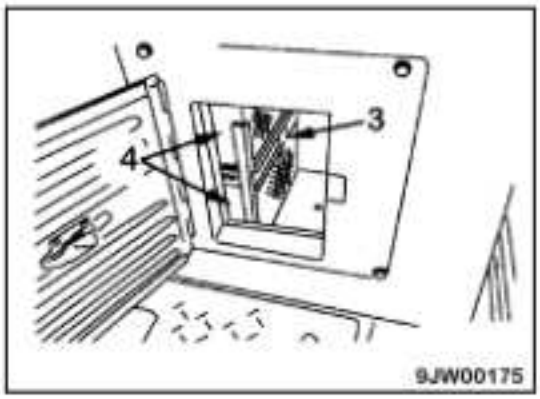
★ If the air conditioner has been used, the air filter should be cleaned.

★ Stop the air conditioner before cleaning the element.

1. Stop the engine.
2. Loosen bolt (1) and remove cover (2).



3. Loosen screw (3).
4. Remove element (4) and clean it.
5. Direct dry compressed air (less than 0.69 MPa (7 kg/cm²) [100 psi] to the element from inside along its folds, and then direct it from outside along its folds and again from inside.
6. Install the element so that the arrow at the top of the element faces the inside of the cab.



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