CX55B
Tier 4
Crawler Excavator
from PIN PS02-00101 and above

SERVICE MANUAL

Part number 84559069
English
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CASE CONSTRUCTION

HYDRAULIC EXCAVATOR

SHOP MANUAL model CX55B

INDEX

CASE

Book Code No.**S5PS0002E01**

CASE-NA

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CX55BMSR

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NOTE:

This Manual is prepared as technical material in which the information necessary for the maintenance and repairing services of our hydraulic excavators are collected, and is categorized into 7 Chapters, Specification, Maintenance, System, Disassembly, Troubleshooting, Engine, and Installation Procedures for Optional Attachment.

- The Chapter "Specification" describes the specifications for entire machine and material, which are instructive for replacement and repairing of attachments.
- The Chapter "Maintenance" describes the material, which is helpful for maintenance service and adjustments for entire machine.
- The Chapter "System" describes the operating system like hydraulic system, electric system, components, and so on.
- The Chapter "Disassembly" describes the removal and installing of an assembly mounted on the upper structure and undercarriage, and the assembling and disassembling of the associated hydraulic equipment.
- The Chapter "Troubleshooting" describes how to find the equipment fault.
- The Chapter "Engine" describes the engine, making use of the "Maintenance Manual" provided by the suppliers.
- The Chapter "Installation Procedures for Optional Attachment" describes the supplements added on request as required.

This Manual may be properly revised due to the improvement of products, modification of specifications, etc. And there are cases where the system on actual machine and a part of the contents of this manual may differ due to the variations of specification by countries. For the section in which the description is hardly understood, contact our distributor.

A number is assigned to every part handled in this Manual on account of the description, but the parts cannot be supplied as service parts. Therefore, the order must be placed with respective formal number with due confirmation on the Parts Manual for the applicable machine.

1. OUTLINE

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Book Code No. **S5PA0105E01**

Issue	Date of Issue	Applicable Machines	Remarks
First Edition	September, 2010	CX55B: PS02-00101~	↑ (CASE-NA)

1.1 GENERAL PRECAUTIONS FOR REPAIRS

1.1.1 PREPARATION BEFORE DISASSEMBLING

(1) Understanding operating procedure
Read OPERATOR'S MANUAL carefully to understand the operating procedure.

(2) Cleaning machines
Remove soil, mud, and dust from the machine before the machine enters the service shop to prevent loss of work efficiency, damage of parts, and difficulty in rust prevention and dust protection while reassembling.

(3) Inspecting machines
Identify the parts to be disassembled before starting work, determine the disassembling procedure and the workshop situations etc., and request procurement of necessary parts in advance.

(4) Recording
Record the following items for communication and prevention of recurring malfunctions.

1. Inspection date and place.
2. Model name, applicable machine number, and hour meter read.
3. Trouble condition, place and cause.
4. Visible oil leakage, water leakage and damage.
5. Clogging of filters, oil level, oil quality, oil contamination and loosening of connections.
6. Result of consideration if any problem exists based on the operation rate per month calculated from the hour meter indication after the last inspection date.

(5) Arrangement and cleaning in service shop
1. Tools required for repair work.
2. Prepare space to place the disassembled parts.
3. Prepare oil containers for draining oil etc.

1.1.2 SAFETY IN DISASSEMBLING AND ASSEMBLING

(1) Wear appropriate clothes with long sleeves, safety shoes, safety helmet and protective glasses.
(2) Suspend warning tag "DO NOT OPERATE" from the doorknob or the operating lever, and have a preliminary meeting before starting work.
(3) Stop the engine before starting inspection and maintenance to prevent personal injury.
(4) Identify the location of a first-aid kit and a fire extinguisher, and also where to make contact in an emergency.
(5) Choose a hard, level and safe place, and place the attachment on the ground securely.
(6) Use a hoist or crane to remove heavy parts (20 kg [45 lbs] or more) from the machine.
(7) Use proper tools, and replace or repair defective tools.
(8) Support the machine and attachment with supports or blocks if the work is performed with any section of the machine raised off the ground.

1.1.3 DISASSEMBLING AND ASSEMBLING HYDRAULIC EQUIPMENT

(1) Removing Hydraulic Equipment

1. Before disconnecting pipes, release the hydraulic pressure of the system, or open the return side cover and take out the filter.
2. Carefully drain oil from the removed pipes into containers without spilling on the floor.
3. Apply plugs or caps on the pipe and fitting ends to avoid oil spillage and dust intrusion.
4. Clean off the external surface of the equipment before disassembling, and drain hydraulic and gear oil before placing it on the workbench.

(2) Disassembling Hydraulic Equipment

1. Do not disassemble, reassemble or modify the hydraulic equipment without the permission of the manufacturer. The manufacturer is not responsible for the performance and function of the machine components after modification.
2. When disassembling and reassembling for unavoidable reason, refer the work to qualified personnel who have the specific knowledge or completed the parts service training.
3. Provide matching marks to facilitate reassembling work.
4. Before starting the work, read the manual for the disassembling procedure, if it is provided, and decide whether the work can be performed by yourself.
5. Always use the special jigs and tools if they are specified.
6. If it is hard to remove a part according to the procedure, do not try it by force, investigate the cause.
7. Place the removed parts in order and attach tags for easier reassembling.
8. Note the location and quantity of parts when disassembling.

(3) Inspecting Parts

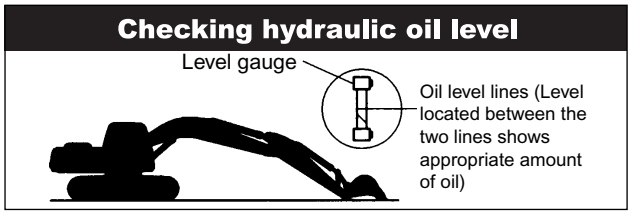
1. Ensure the disassembled parts are free from seizure, interference and uneven contact.
2. Measure and record the wear condition of parts and clearance.
3. If the problem is found in a part, repair or replace it with a new one.

(4) Reassembling Hydraulic Equipment

1. Turn ON the ventilation fan or open windows to maintain good ventilation begore cleaning parts.
2. Perform rough and finish cleaning before assembling.
3. Remove washing oil by with pressurized air and apply clean hydraulic or gear oil for assembling.
4. Always replace the removed O-rings, backup rings and oil seals with new ones by applying grease in advance.
5. Remove dirt and moisture from and perform degreasing on the surfaces where liquid gaskets are applied.
6. Remove rust preventive agent from the new parts before use.
7. Fit bearings, bushings, and oil seals using special jigs.
8. Assemble the parts utilizing matching marks.
9. Ensure all the parts are completely assembled after the work.

(5) Installing Hydraulic Equipment

1. Ensure hydraulic oil and lubricant are properly supplied.
2. Perform air bleeding when:
   a. Hydraulic oil is changed.
   b. Parts of suction side piping is replaced.
   c. Hydraulic pumps are installed.
   d. Slewing motor is installed.
   e. Travel motor is installed.
   f. Hydraulic cylinder is installed.
3. Perform air bleeding of the hydraulic pump and slewing motor after loosening the upper drain plug, starting the engine and running the engine at low idle.
   Complete the air bleeding when seeping of hydraulic oil is recognized, and then tightly plug.
4. Perform air bleeding of the travel motor and the hydraulic cylinders by running the engine for more than 5 minutes at low speed without load.
5. Perform air bleeding of the pilot line by performing a series of digging, slewing and travel.
6. Check hydraulic oil level after placing the attachment to the oil check position, and replenish oil if necessary.



WARNING

Operation of the hydraulic equipment without filling hydraulic oil or lubricant or without performing air bleeding will result in damage to the equipment.

WARNING

Do not allow the hydraulic cylinder to bottom out on the stroke end just after the maintenance.