

Shop Manual

DX420LC-3 Excavator

Serial Number 10001 and Up

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Table of Contents

Safety

Track Excavator Maintenance Safety	SP002322
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Specifications

Specification for DX420LC-3	SP002670
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General Maintenance

General Maintenance Instructions	SP002454
Standard Torques	SP002404

Upper Structure

Cabin	SP002324
Counterweight.....	SP002697
Fuel Tank.....	SP002699
Fuel Transfer Pump (Option)	SP002560
Swing Bearing.....	SP002329

Lower Structure and Chassis

Track Assembly	SP002561
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Engine and Drivetrain

Engine.....	SP002654
Engine Coolant Heater (Option)	SP002328
Drive Coupling (Main Pump).....	SP002562

Hydraulics

Hydraulic System Troubleshooting, Testing and Adjustment	SP002655
Accumulator.....	SP002455
Center Joint (Swivel).....	SP002545

Cylinders.....	SP002769
Swing Device.....	SP002653
Travel Device.....	SP002609
Main Pump.....	SP002567
Gear Pump	SP002568
Fan Motor for Oil Cooler	SP002576
Fan Motor for Radiator.....	SP002577
Fan Pump	SP002553
Main Control Valve	SP002656
Remote Control Valve (Work Lever / Joystick)	SP002578
Travel Control Valve (with Damper).....	SP002381
Solenoid Valve Assembly	SP002406
Breaker EPPR Valve (Option)	SP002458
Hydraulic Schematic.....	SP002671

Electrical System

Electrical System	SP002571
Electrical Schematic	SP002572

Attachments

Boom and Arm.....	SP002669
Bucket.....	SP002421

Track Excavator Maintenance Safety

Edition 4

SAFETY INSTRUCTIONS



WARNING

AVOID DEATH OR SERIOUS INJURY

Instructions are necessary before operating or servicing machine. Read and understand the Operation and Maintenance Manual and signs (decals) on machine. Follow warnings and instructions in the manuals when making repairs, adjustments or servicing. Check for correct function after adjustments repairs or service. Untrained operators and failure to follow instructions can cause death or serious injury.

APPLICABLE MODELS

The contents of this section apply to the following models and serial number ranges.

MODEL	SERIAL NUMBER RANGE
DX140LC-3	1001 and Up, 50001 and Up
DX180LC-3	1001 and Up, 50001 and Up
DX225LC-3	1001 and Up, 50001 and Up
DX255LC-3	1001 and Up, 50001 and Up
DX300LC-3	1001 and Up, 50001 and Up
DX340LC-3	1001 and Up, 10001 and Up
DX350LC-3	1001 and Up, 10001 and Up
DX380LC-3	10001 and Up
DX420LC-3	10001 and Up

SAFETY MESSAGES

Safety messages and safety decals included in this manual and on the machine provide instructions how to operate, service and maintain the machine. Safety messages and safety decals indicate potential hazards and describe safety precautions required to avoid hazards. Operator and maintenance personnel should read and understand these safety messages and decals before beginning operation or maintenance.

SAFETY ALERT SYMBOL

Be Prepared - Get to Know All Operating and Safety Instructions.

This is a Safety Alert Symbol. Wherever it appears in this manual or on safety decals on the machine, you must be alert to the potential for personal injury or accidents.

Always observe safety precautions and follow recommended procedures.

Signal Words

The signal words "DANGER", "WARNING", "CAUTION" are used throughout safety messages and safety decals in this manual or on the machine. They indicate an existence of, and the relative seriousness of, a hazard. All three indicate that a safety risk is involved. Observe the precautions indicated whenever a Safety Alert Symbol is present, no matter which signal word appears next to it.

DANGER

DANGER - This signal word is used on safety messages and safety labels and indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING - This signal word is used on safety messages and safety labels and indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

CAUTION - This signal word is used on safety messages and safety labels and indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

Other Signal Words

In addition to safety signal words, the following signal words are used to indicate proper and effective use of machine.

IMPORTANT

This signal word identifies procedures which must be followed to avoid damage to machine.

The word "NOTE" identifies information for effective use.

SAFETY DECALS

Location of safety labels (decals) can vary from unit to unit.

Refer to appropriate Operation and Maintenance Manual, and parts manual for your unit.

Always replace damaged or faded decals.

Engine and Drivetrain

SAFETY INSTRUCTIONS



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MODEL	SERIAL NUMBER RANGE
DX420LC-3	10001 and Up

INTRODUCTION

Safety Information

Repair Work Safety Information

1. Use an engine stand when removing the engine from the equipment. Be sure not to place the engine directly on the ground or allow the oil pan to come into contact with the ground or a hard surface.
2. When performing a procedure with two or more people, make sure to ensure each other's safety.
3. When repairing the electrical system, make sure to disconnect the cable from the negative (-) battery terminal before working. Keep arcs, sparks and cigarettes away when removing the battery cover.
4. Do not leave the engine running for an extended period of time or perform painting in a poorly ventilated working environment.
5. Make sure to use only the special tools if the procedure requires them for the work. Performing the procedure using other tools can cause damage to parts or personal injury.
6. Inspect the tools, instruments, and special tools regularly, and prepare them before working. Do not use damaged or worn out tools such as a wrench that has lost its edges, a hammer with frayed edges, or a chipped chisel.
7. When performing work using a device such as a grinder, crane or welder, make sure to pay sufficient attention to the handling precautions. Wear work clothes and safety equipment in the other operations as required.
8. Be sure to check that there are no fuel leaks when performing maintenance on the fuel systems.
9. When handling flammable materials, be careful to not let them catch fire. Also make sure to wipe away any oil that sticks to rubber parts, as it can cause deterioration.

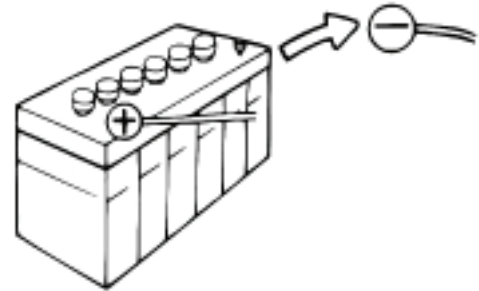


Figure 1

FG023344



Figure 2

FG023345

Replacement Parts and Part Number Safety Information

1. Whenever disassembly is performed, make sure to replace the packing, oil seals, O-rings, crimping locknuts, bending lock plate, and split pins, etc., with new ones.
2. Since the part numbers indicated in this manual may differ from the supply system and are subject to change, make sure to check the supply system and part numbers in the parts catalog.

SERVICE INFORMATION GUIDE

Contents Included in Service Information

1. Removal
Includes the removal procedure for repairing parts and devices, etc.
2. Installation
Includes the installation procedure for repairing parts and devices, etc.
3. Disassembly
Includes the disassembly procedure for performing an overhaul of a unit or assembly part, etc.
4. Assembly
Includes the assembly procedure for performing an overhaul of a unit or assembly part, etc.
5. Inspection
Includes the inspection items for the parts that particularly require inspection to ensure continued performance of parts and devices. The standard values, set values, and limits for use of parts are included if they have these specifications set.
6. Cleaning
Includes the cleaning procedure for parts and devices, etc.
7. Preparation
Includes the preparatory procedure necessary before removing parts and devices, etc.
8. Adjustment
Includes the adjustment procedure when parts have to be adjusted to set values or standard values when performing assembly or installation.
9. Measurement
Includes the measurement procedure to judge if parts are installed correctly, etc.
10. Drain
Includes the draining procedure of oil, etc.
11. Refill
Includes the refilling procedure of oil, etc.

12. Air Removal
Includes the air removal procedure when air removal is necessary after replacing oil, etc. Writing Includes the writing procedure necessary after replacing the ECM or supply pump.
13. Precaution
Includes the maintenance precautions specific to each item.
14. Disconnection
Includes the disconnection procedures of wiring, piping, etc.
15. Connection
Includes the connection procedures for wiring, piping, etc.
16. Setting
Includes the setting procedure necessary after replacing the ECM, etc.
17. Replacement
Includes the replacement procedure for parts and oils, etc.
18. Prioritized DTC
Includes DTCs that need to be diagnosed and resolved before the relevant DTC when multiple DTCs are detected.
19. Diagnosis
Includes the diagnosis procedure for troubleshooting symptoms. DTCs are listed in the descending order of priority.
20. Confirmation of Problem Resolution
Includes procedures to clear the DTC and any necessary confirmation steps using numeric values, etc.
21. Functional Description
Includes detailed functional description related to functional inspection.
22. Symptom Description
Includes detailed symptom descriptions related to diagnosis by symptom.
23. DTC Description
Includes circuit description related to DTCs.
24. Setting Conditions
Includes the preconditions and judgment conditions required for the ECU to detect a DTC.
25. Action Upon Setting
Includes information related to control actions taken by the ECU when DTCs are set.
26. Items Related to ETM
Items related to the ETM are included in "Using the Wiring Diagram".

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