

Shop Manual

DL420-5 Wheel Loader

Serial Number **10001 and Up**

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Table of Contents

1 Safety	1 Wheel Loader Safety
2 Specifications	1 Specifications
3 General Maintenance	1 General Maintenance Instructions 2 Standard Torques
4 Engine	1 Engine
5 Drivetrain	1 Transmission and Torque Converter (4WG) 2 Transmission and Torque Converter (5WG) (Option) 3 Front Axle 4 Rear Axle 5 Driveshaft
6 Steering	1 Power Steering System 2 Steering Unit 3 Steering Pump 4 Flow Amplifier 5 Jerk Softener and Accumulator
7 Brake	1 Service Brake 2 Brake and Pilot Supply Valve 3 Charging Block 4 Parking Brake 5 Brake Pedal Valve 6 Accumulator 7 Brake Filter

8 Cooling System	1 Cooling System
	2 Fan and Brake Pump
	3 Fan Motor
	4 Fan Control Valve
	5 Radiator Assembly
9 Hydraulic System	1 Main Pump
	2 Main Control Valve
	3 Pilot System
	4 Hydraulic System
	5 Hydraulic System Troubleshooting
10 Frame	1 Articulation Center
	2 Cabin
	3 Counterweight
	4 Oil Tank
	5 Fuel Tank
	6 Cylinders
11 Electrical System	1 Electrical System
	2 Air Conditioner
12 Options	1 Emergency Steering
	2 Load Isolation System
	3 3rd Control Valve
	4 Auto Grease System
13 Schematic	1 Hydraulic Schematic/Electrical Schematic

Wheel Loader Safety

Edition 1

Table of Contents

Wheel Loader Safety

Safety Instructions	1-1-5
Safety Messages	1-1-5
General	1-1-7
Operation	1-1-18
Maintenance	1-1-33
Transportation	1-1-48
Environment and Circumstances.....	1-1-50

SAFETY INSTRUCTIONS



WARNING

AVOID DEATH OR SERIOUS INJURY

Instructions are necessary before operating or servicing machine. Read and understand the Operation & 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.

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.

NOTE: *The word "NOTE" identifies information for effective use.*

1. Turn battery disconnect switch to "ON" position.
2. Close battery compartment door.

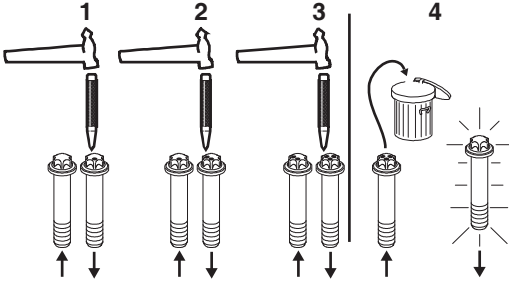
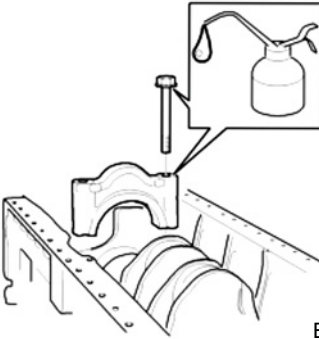
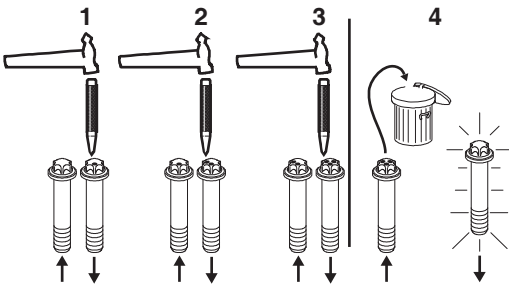
Engine

Edition 1

IMPORTANT

Tightening torques for threaded joints in engines.

If the tightening torque is not available in the table for each engine, refer to the special and normal tightening torques tables.

Engine Assembly	
Cylinder Block	
<ul style="list-style-type: none"> Piston cooling nozzle: 23 Nm 	
Main Bearing Cap	
<p>NOTE: <i>The screws can only be reused 3 times. Mark the screws each time before installing.</i></p> <ul style="list-style-type: none"> Torx screw (M19): 110 Nm + 90° Hexagon screw (M19): 110 Nm + 90° 	 <p style="text-align: right;">EX1301810</p>  <p style="text-align: right;">EX1301811</p>
Connecting Rod Cap	
<p>NOTE: <i>The screws can only be reused 3 times. Mark the screws each time before fitting.</i></p>	 <p style="text-align: right;">EX1301810</p>

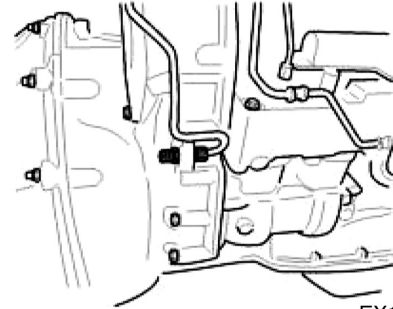
- Torx screw: 50 Nm + 90°
- Check torque: 170 Nm



EX1302070

Flywheel Housing

- Lead-in union: 40 Nm ±6

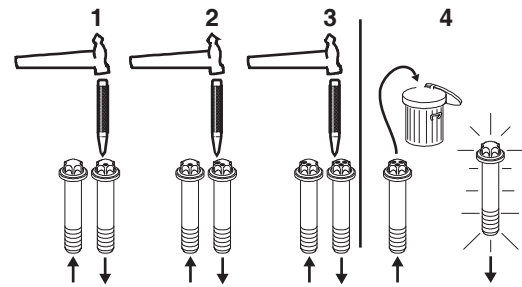


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Cylinder Head and Valve Package

Cylinder Head

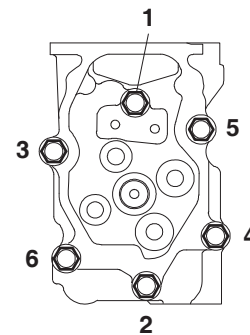
NOTE: *The screws can only be reused 3 times. Mark the screws each time before fitting.*



EX1301810

Cylinder head bolt, tightened in four stages

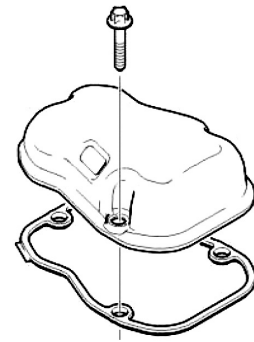
- First stage: 60 Nm
- Second stage: 150 Nm
- Third stage: 250 Nm
- Fourth stage: 90°



FG020253

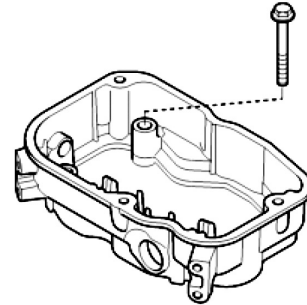
Rocker Cover

- Rocker cover, upper: 18 Nm



EX1301815

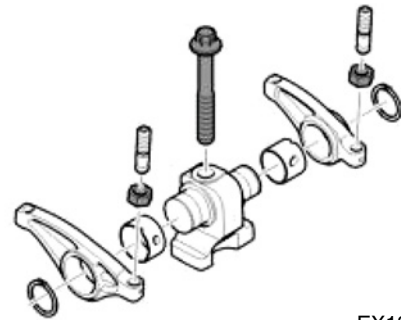
- Rocker cover, lower: 18 Nm



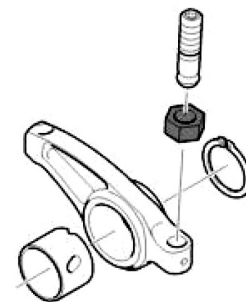
EX1301816

Valve Mechanism

- Adjusting screw nut on rocker arm: 35 Nm

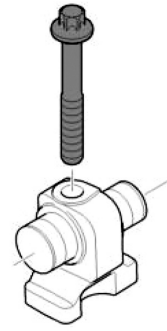


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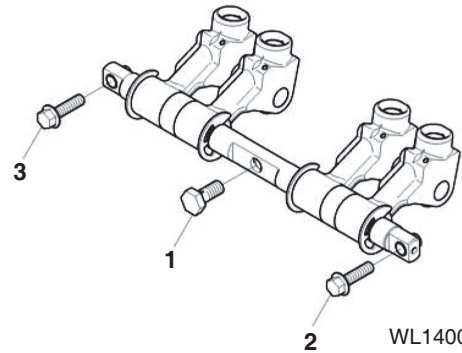
EX1301823

- Screw for rocker arm shaft bearing retainer:
90 Nm + 60°



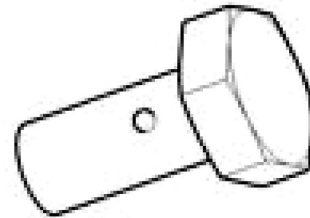
EX1301824

Roller Tappet Shaft



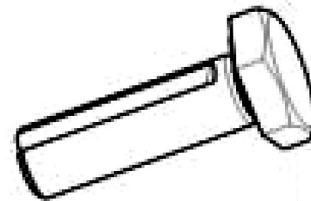
WL1400012

- Banjo screw for roller tappet shaft (engines produced earlier): 33 Nm



EX1301827

- Slotted screw for roller tappet shaft (engines produced later): 40 Nm

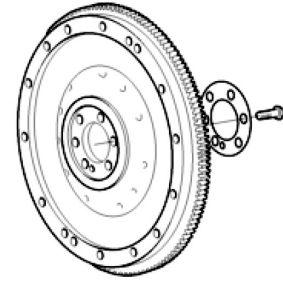


EX1301828

Crank Mechanism

Flywheel

- M18 flange screw: 180 Nm + 120°



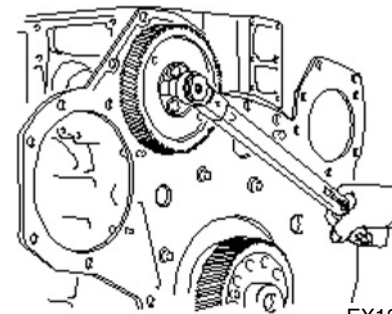
EX1301829

Torsion Damper

- Torsion damper hub: 90 Nm + 30°

Timing Gear

- Intermediate gear: 50 Nm + 60°
- Camshaft gear: 20 Nm + 40°

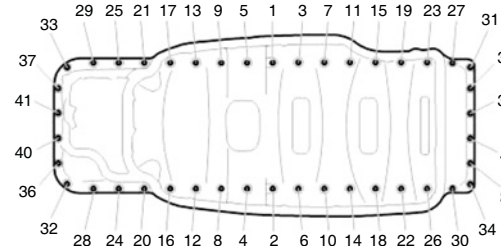


EX1301830

Lubrication System

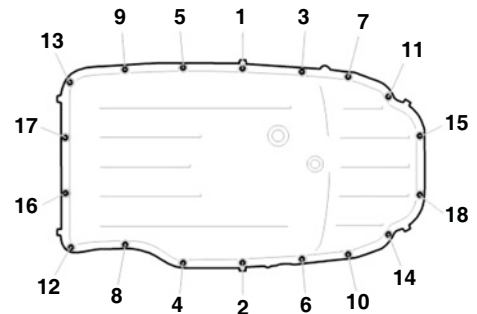
Ladder Frame

- Ladder frame to cylinder block, 8.8 screw: 26 Nm
- Ladder frame to cylinder block, 10.9 screw: 32 Nm
- Ladder frame against cylinder block, 8.8 screw with spacer: 26 Nm



EX1301831

Oil Sump



EX1301832

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