OPERATOR'S MANUAL



BACKHOE LOADER
3CXG

EN - 9831/8500 ISSUE 1 - 02/2018

THIS MANUAL SHOULD ALWAYS STAY WITH THE MACHINE

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Safety

Safety - Yours and Others

All machinery can be hazardous. When a machine is correctly operated and maintained, it is a safe machine to work with. When it is carelessly operated or poorly maintained it can become a danger to you (the operator) and others.

In this manual and on the machine you will find warning messages, you must read and understand them. They inform you of potential hazards and how to avoid them. If you do not fully understand the warning messages, ask your employer or JCB dealer to explain them.

Safety is not just a matter of responding to the warnings. All the time you are working on or with the machine you must be thinking of what hazards there might be and how to avoid them.

Do not work with the machine until you are sure that you can control it.

Do not start any work until you are sure that you and those around you will be safe.

If you are not sure of anything, about the machine or the work, ask someone who knows. Do not assume anything.

Remember:

- Be careful
- Be alert
- Be safe.

Safety Warnings

In this manual there are safety notices. Each notice starts with a signal word. The signal word meanings are given below.

The signal word 'DANGER' indicates a hazardous situation which, if not avoided, will result in death or serious injury.

The signal word 'WARNING' indicates a hazardous situation which, if not avoided, could result in death or serious injury.

The signal word 'CAUTION' indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

The signal word 'Notice' indicates a hazardous situation which, if not avoided, could result in machine damage.

The safety alert system symbol (shown) also helps to identify important safety messages in this manual. When you see this symbol your safety is involved, carefully read the message that follows.

Figure 2. The safety alert system symbol

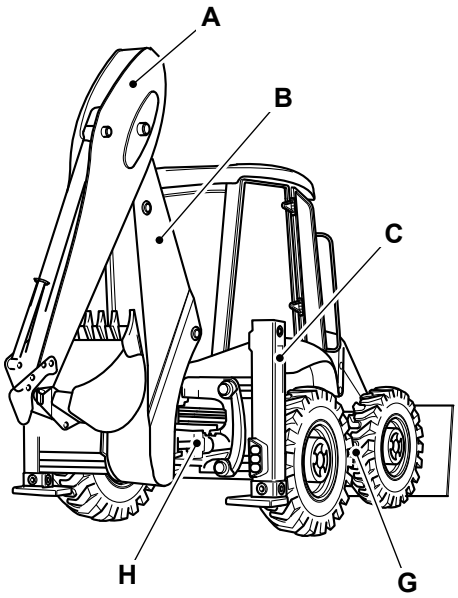


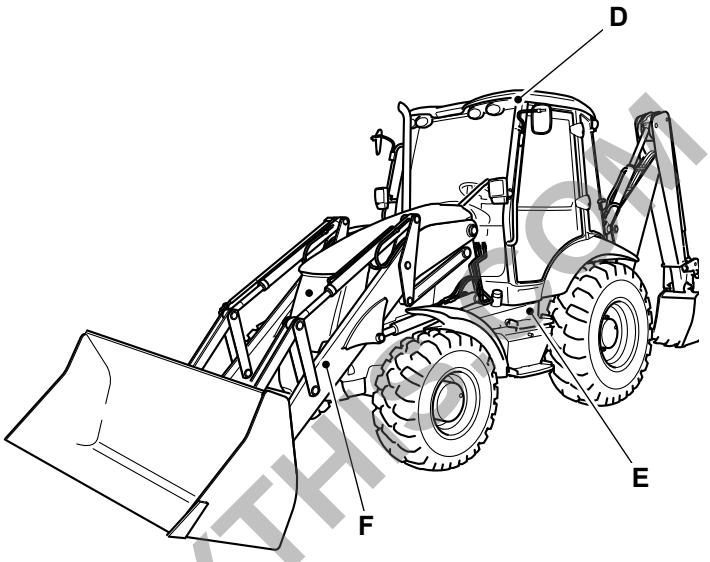
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(For: Sideshift)

Figure 3.

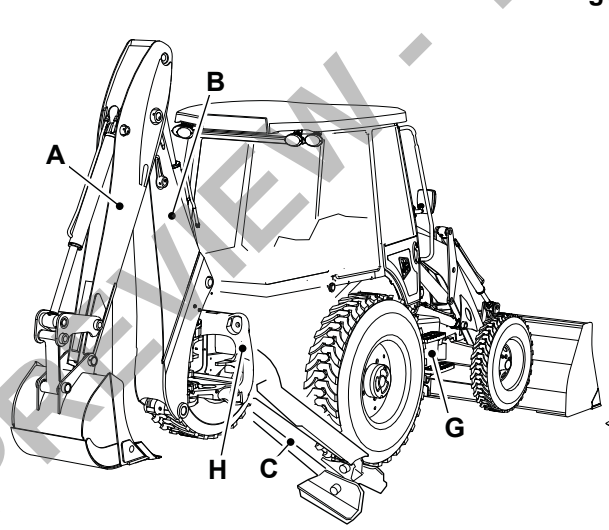


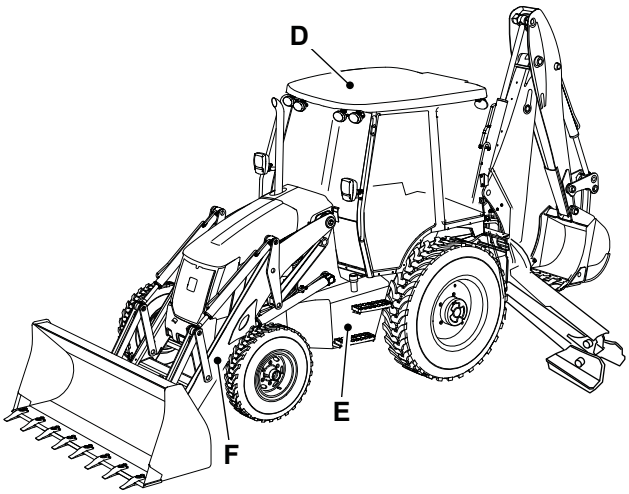


A Dipper
B Boom
C Stabilisers
D ROPS (Roll-Over Protective Structure)/FOPS (Falling Object Protective Structure) cab
E Hydraulic oil tank
F Loader arm
G Fuel tank
H Kingpost

(For: Centremount)

Figure 4.





A Dipper
B Boom
C Stabilisers
D ROPS/FOPS cab
E Hydraulic oil tank
F Loader arm
G Fuel tank
H Kingpost

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Table 6. Safety Labels

Item	Part No.	Description	Qty.
A	332/P7131	Pressure hazard. Read the Service Manual.	1
B	332/P4679	Warning. Severing of hands and fingers. Keep clear of/do not reach into rotating parts. Read the Service Manual.	2
C	817/70104	Crushing of whole body. Insert the boom support device before you complete any service or maintenance work underneath the boom.	2
D	817/70012	Run over hazard. Start the engine from the operator's seat only. Do not short across the terminals.	1
E	817/70014	Warning. Read the Operator’s Manual before you operate the machine.	1
F	817/70029	Warning. Crush hazard. Wear seat belt.	1
G	817/70021	Noise warning. Wear ear protection.	2
H	332/F5855	Warning. Pressure hazard. Read the Operator’s Manual.	2
J	817/70042	Explosion hazard. Remove sources of ignition.	1
K	817/70108	Fall from raised attachment. Do not stand or ride on the bucket or forks.	1
L	332/P7135	Crush hazard (to feet). Keep a safe distance. The attachment may roll forward when released.	2
M	817/70018	Warning. Crushing of whole body. Do not operate the controls from outside of the machine.	1
N	817/70112	Warning. Crushing of whole body. Keep a safe distance.	2
P	335/A6727	Do not sit here.	1

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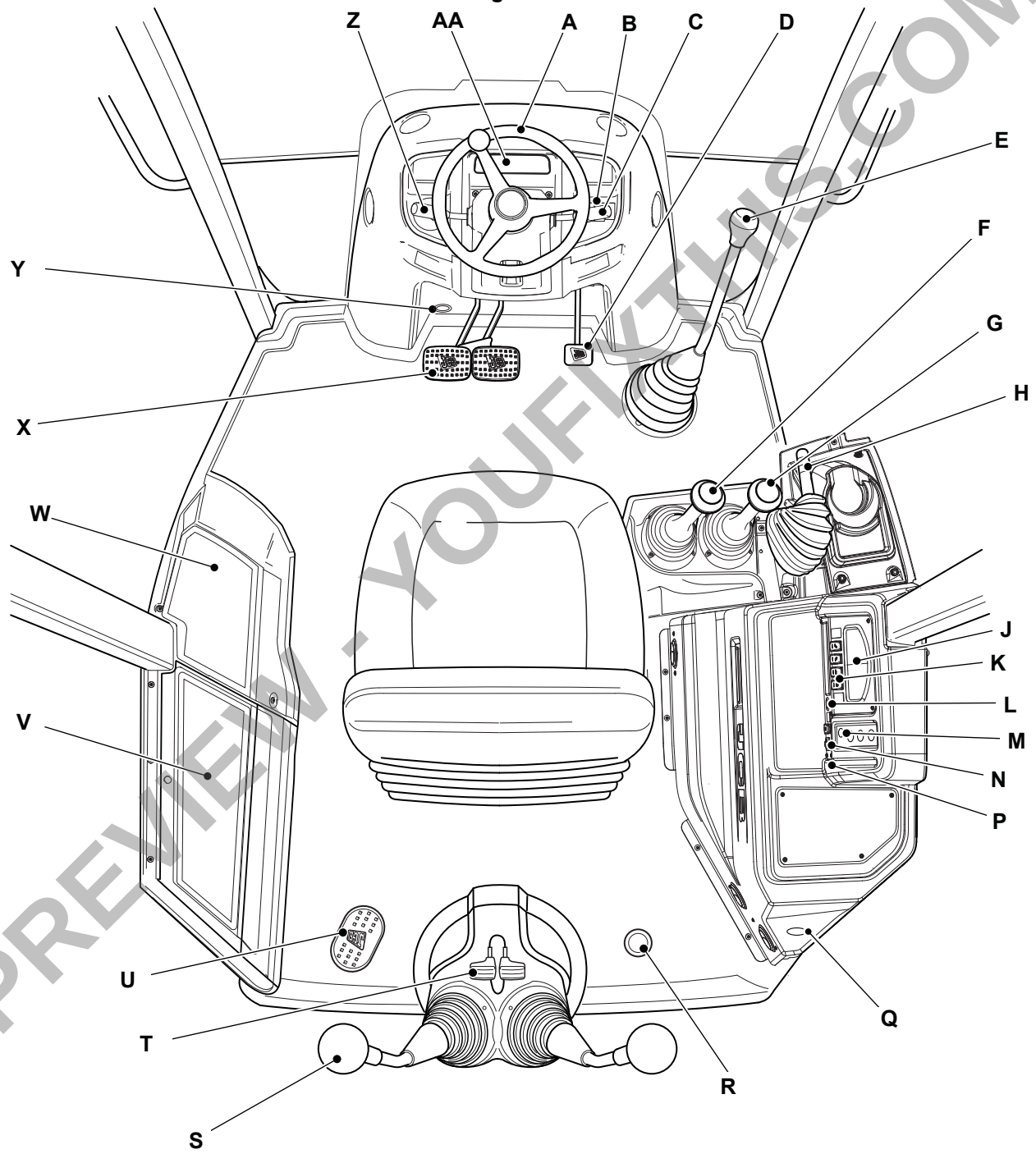
Operator Station

Component Locations

For: 3CXG RUSSIA [T2], Cab ..... Page 20
For: 3CXG RUSSIA [T2], Canopy ..... Page 22

(For: 3CXG RUSSIA [T2], Cab)

Figure 14.



A Steering wheel
B Console switches
C Multi-purpose switch
D Accelerator pedal
E Gear lever
F Loader controls
G Auxiliary circuit controls
H Park brake lever
J Instrument panel
K Console switches

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Operation
Introduction

General

The aim of this part of the manual is to guide the operator step-by-step through the task of learning how to operate the machine efficiently and safely. Read the Operation section through from beginning to end.

The operator must always be aware of events happening in or around the machine. Safety must always be the most important factor when you operate the machine.

When you understand the operating controls, gauges and switches, practice using them. Drive the machine in an open space, clear of people. Get to know the 'feel' of the machine and its driving controls.

Do not rush the job of learning, make sure you fully understand everything in the Operation section. Take your time and work efficiently and safely.

Remember:

- Be careful.
- Be alert.
- Be safe.

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Preparation

1. Make the machine safe.
   Refer to: Maintenance Positions (Page 160).
2. Stop the engine and let it cool for at least one hour. Do not try to clean any part of the engine while it is running.
3. Make sure that all of the electrical connectors are correctly coupled. If the connectors are open, attach the correct caps or seal with water proof tape.

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Pre-start Cold Checks, Service Points and Fluid Levels

Table 16.

Component	Task	10	50	100[1]	500	1000	1500	2000
Attachments								
6-in-1 Clam shovel	Lubricate	O	O	□	□	□	□	□
Excavator and loader arm quick hitch	Lubricate	O	O	□	□	□	□	□
Body and Framework								
General	Clean	O	O	□	□	□	□	□
General	Check (condition)	O	O	□	□	□	□	□
All pins and bushes	Check (condition)/Lubricate	O	O	□	□	□	□	□
Visual inspection of structure for damage including welds around ing points and excavator end main pivots	Check (condition)	O	O	□	□	□	□	□
Doors and hinges	Lubricate				□	□	□	□
All cables	Lubricate				□	□	□	□
Cab heater fresh air filter[2]	Replace				□	□	□	□
Cab air conditioning recirculation filter (if installed)[2]	Replace				□	□	□	□
Extending dipper	Lubricate		O	□	□	□	□	□
Kingpost clamp	Check (condition)			□	□	□	□	□
Door	Check (condition/operation)			□	□	□	□	□
Front mudguards - security (if installed)	Check (condition)			□	□	□	□	□
Boom lock engagement[16]	Check (condition)	O	O	□	□	□	□	□
Condition of paintwork	Check (condition)			□	□	□	□	□
Stabiliser legs (sideshift)	Check (condition)		O	□	□	□	□	□
Operator Station								
Seat, seat belt	Check (condition)			□	□	□	□	□
Operator protective structure and ROPS (Roll-Over Protective Structure)/FOPS (Falling Object Protective Structure)	Check (condition)	O	O	□	□	□	□	□
Engine								
Oil	Check (leaks)	O	O	□	□	□	□	□
Oil	Check (level)	O	O	□	□	□	□	□
Oil and oil filter[4, 5]	Replace				□	□	□	□
FEAD (Front End Accessory Drive) belt	Check (condition)				□	□	□	□
FEAD belt[14]	Replace							
Engine mounting bolts	Check (condition)			□	□	□	□	□
Hoses	Check (condition)			□	□	□	□	□

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Fluids, Lubricants and Capacities

General

⚠ **CAUTION** Waxoyl contains turpentine substitute which is flammable. Keep flames away when applying Waxoyl. Waxoyl can take a few weeks to dry completely. Keep flames away during the drying period.

Do not weld near the affected area during the drying period. Take the same precautions as for oil to keep Waxoyl off your skin. Do not breathe the fumes. Apply in a well-ventilated area.

JCB recommend that you use the JCB lubricants shown as they have been verified by JCB for use on JCB machines. However, you could use other lubricants that are equivalent to the JCB standards and quality or offer the same machine component protection.

No warranty liability will be accepted for engine failures where unacceptable fuel grades (or their equivalent) have been used at any stage.

Table 28.

Item	Capacity	Fluid/Lubricant	JCB Part Number	Container Size[1]	Specification
Fuel tank	127L	Diesel oil	-	-	
Engine (oil)[2]	Minimum 12L Maximum 15L	JCB engine oil EP 5W/40 -30°C to 46°C	4001/2705	20L	API CH-4/CG-4, CF-4,CF,SJ.ACEA, E2, B3, A3
		JCB engine oil EP 15W/40 -15°C to 46°C	4001/1805		API CH-4/SJ, ACEA E5, E3, B3, A3
Engine (coolant)[3]	20.5L Wet 21.5L Dry	JCB antifreeze HP coolant/ water	4006/1120	20L	ASTM D3306, ASTM D4985, ASTM D6210, SAE (Society of Automotive Engineers) J1034, BS6580 (1992), AFNOR NF R15-601
Syncro shuttle (2WD (Two Wheel Drive))[4]	14.4L Dry 10L Wet	JCB extreme performance EP 10W -32°C to 40°C	4000/2505	20L	
		JCB extreme performance EP SAE30 -5°C to 46°C	4000/2605	20L	
Syncro shuttle (4WD (Four Wheel Drive))[3]	15.4L Dry 11L Wet	JCB extreme performance EP 10W -32°C to 40°C	4000/2505	20L	
		SAE30 -5°C to 46°C	4000/2605	20L	
Front axle (4WD)		JCB gear oil HP90 (without LSD (Limited Slip Differential))	4000/0305	20L	
Housing 2WS (Two Wheel Steer)	13L	JCB gear oil HP plus (with LSD)	4000/2205	20L	
Hubs (x2)	2L	JCB gear oil HP90	4000/0305	20L	
Rear axle (2WS)	21L	JCB gear oil HP90 (without LSD)	4000/0305	20L	
		JCB gear oil HP plus (with LSD)	4000/2205	20L	
Housing[6]	16.5L	JCB gear oil LS plus (with LSD)	4000/3905	20L	
Hubs (x2)	1.9L	JCB gear oil HP90	4000/0305	20L	
Brake system	1L	JCB Hydraulic Fluid HP15	4002/0503	1L	
Hydraulic system (gear pump machines)[7]	130L	JCB hydraulic fluid HP46 above 38°C	4002/0805	20L	
		JCB hydraulic fluid HP32 below 38°C	4002/1025	20L	

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Torque Values

General

ROPS/FOPS

Table 32.

Mounting bolts torque	205N·m

Engine

Table 33.

Sump Drain Plug	Filter Housing Drain Plug
40–60N·m	40–60N·m

Wheels

Table 34.

Wheel nuts	680N·m

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Notes:

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