



## Backhoe Loader

[Section 1 - General Information](#)

[Section 2 - Care and Safety](#)

[Section 3 - Maintenance](#)

[Section A - Attachments](#)

[Section B - Body and Framework](#)

[Section C - Electrics](#)

[Section E - Hydraulics](#)

[Section F - Transmission](#)

[Section G - Brakes](#)

[Section H - Steering](#)

[Section K - Engine](#)

[Section M - Electronic Network](#)



Publication No.  
9813/0250-01







## General Information

Service Manual - Backhoe Loader

[Section 1 - General Information](#)

[Section 2 - Care and Safety](#)

[Section 3 - Maintenance](#)

[Section A - Attachments](#)

[Section B - Body and Framework](#)

[Section C - Electrics](#)

[Section E - Hydraulics](#)

[Section F - Transmission](#)

[Section G - Brakes](#)

[Section H - Steering](#)

[Section K - Engine](#)

[Section M - Electronic Network](#)



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## Section 1 - General Information

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**Notes:**

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# Section 1 - General Information

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<b>Contents</b>	<b>Page No.</b>
<b>Use</b>	
Introduction .....	1-1-1
Scope .....	1-1-2
Personnel .....	1-1-2
Newest Data .....	1-1-2
Machine Applications .....	1-1-2
Format .....	1-1-3
Left and Right Sides .....	1-1-4
Left Side, Right Side .....	1-1-4
Hydraulic Schematic Codes .....	1-1-5
Colour Codes .....	1-1-5
<b>Machine Identification</b>	
Introduction .....	1-2-1
Machine Identification Plate .....	1-2-2
Typical Product Identification Number (PIN) .....	1-2-2
Component Identification Plates .....	1-2-3
Typical Engine Identification Number .....	1-2-3
Transmission Identification Numbers .....	1-2-4
ROPS/FOPS Certification plate .....	1-2-6
FOPS Data Plate .....	1-2-6
<b>Torque Settings</b>	
Introduction .....	1-3-1
Zinc Plated Fasteners and Dacromet Fasteners .....	1-3-2
Introduction .....	1-3-2
Bolts and Screws .....	1-3-2
Hydraulic Connections .....	1-3-6
'O' Ring Face Seal System .....	1-3-6
'Torque Stop' Hose System .....	1-3-9
'Positional Type' Hydraulic Adaptors .....	1-3-10
Fitting Procedure .....	1-3-10
<b>Service Tools</b>	
Introduction .....	1-4-1
Numerical List .....	1-4-2
Tool Detail Reference .....	1-4-5
Rivet Nuts .....	1-4-25
Fitting Procedure .....	1-4-26
Slide Hammer Kit .....	1-4-27
Fitting Procedure .....	1-4-27
Metric Test Points .....	1-4-28
Introduction .....	1-4-28
Parts Information .....	1-4-28
<b>Service Consumables</b>	
Introduction .....	1-5-1
Sealing and Retaining Compounds .....	1-5-2
<b>Fuel</b>	
Introduction .....	1-6-1



<b>Contents</b>	<b>Page No.</b>
Acceptable and Unacceptable Fuels .....	1-6-2
Additives .....	1-6-4
Service Requirements for use of B20 Biodiesel .....	1-6-4
Warranty .....	1-6-4
Fuel Types .....	1-6-5
Usage and Effects of Fuels .....	1-6-6
Sulphur Content .....	1-6-7
Effects of Fuel Contaminates .....	1-6-8
<b>Stall Speed Combinations</b>	
Introduction .....	1-7-1
Specifications .....	1-7-2



# Section 1 - General Information

## Contents

---

Contents

Page No.



# Section 1 - General Information

## Contents

---

Contents

Page No.



# Use

## Introduction

This topic contains information about the structure of the manual and how to use the manual.

⇒ [Scope \(□ 1-1-2\)](#)

⇒ [Personnel \(□ 1-1-2\)](#)

⇒ [Newest Data \(□ 1-1-2\)](#)

⇒ [Machine Applications \(□ 1-1-2\)](#)

⇒ [Format \(□ 1-1-3\)](#)

⇒ [Left and Right Sides \(□ 1-1-4\)](#)

⇒ [Hydraulic Schematic Codes \(□ 1-1-5\)](#)

⇒ [Colour Codes \(□ 1-1-5\)](#)



## Scope

### Personnel

This publication is designed for the benefit of JCB Distributor Service Engineers who are receiving, or have received, training by JCB Technical Training Department.

These personnel should have a sound knowledge of workshop practice, safety procedures, and general techniques associated with the maintenance and repair of hydraulic earthmoving equipment. Finally, please remember above all else SAFETY MUST COME FIRST!

### Newest Data

From time to time new machines, systems or devices require the manual to be re-issued. Make sure you have the newest issue.

Always check the on-line JCB data system for relevant technical information.

### Machine Applications

This manual contains information relevant to the following machines:

3CX, 4CX Serial Numbers from 2000000 Onwards.

### Machine Variants

There are different machine variants within the same model name. This happens because of market requirements, or when the machine specification changes after a period of time. Where applicable information is given to help identify which machine variant is applicable for the given specifications and procedures.



## Format

The manual is compiled in sections, the first three are numbered and contain information as follows:

- 1 **General Information** - The section includes general information such as torque settings and service tools.
- 2 **Care & Safety** - includes warnings, cautions and general procedures related to aspects of workshop procedures contained in the manual.
- 3 **Routine Maintenance** - includes service schedules and recommended lubricants for all the machine.

The remaining sections are alphabetically coded and deal with dismantling, overhaul etc. of specific components, for example:

**A Attachments**

**B Body and Framework...etc.**

The sections contain topics. Each topic is a self contained set of data about a machine SYSTEM or Device.

Each topic contains data such as specifications, descriptions, fault finding and test procedures. Device topics also contain removal, replacement, dismantle and assemble procedures.

Some topics contain **procedures and specifications for different variants**. This happens because of market requirements, or when the machine specification changes after a period of time.

Each topic also contains a **Related Topics** table. This table lists all the topics that contain related data. For example a hydraulic SYSTEM contains devices such as valves and pumps. These devices have their own topics and they are listed in the SYSTEM related topics table.

### Left and Right Sides

#### Left Side, Right Side

P2-1002

In this manual, 'left' **A** and 'right' **B** mean your left and right when you are seated correctly in the machine.

This is so whether you are facing the loader (front) or the backhoe (rear).

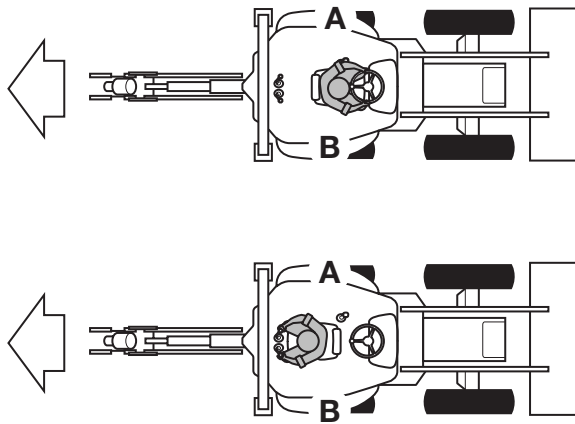









Fig 1.

C003690

## Hydraulic Schematic Codes

### Colour Codes

The following colour coding, used on illustrations to denote various conditions of oil pressure and flow, is standardised throughout JCB Service Publications.

	<b>Red</b>	<b>Full Pressure:</b> Pressure generated from operation of a service. Depending on application this may be anything between neutral circuit pressure and LSRV operating pressure.
	<b>Pink</b>	<b>Pressure:</b> Pressure that is above neutral circuit pressure but lower than that denoted by Red.
	<b>Orange</b>	<b>Pilot:</b> Oil pressure used in controlling a device (Pilot).
	<b>Blue</b>	<b>Neural:</b> Neutral circuit pressure.
	<b>Green</b>	<b>Exhaust:</b>
	<b>Light Green</b>	<b>Cavitation:</b> Oil subjected to a partial vacuum due to a drop in pressure (cavitation).
	<b>Yellow</b>	<b>Lock Up:</b> Oil trapped within a chamber or line, preventing movement of components (lock up).



# Section 1-1 - General Information

## Use

Hydraulic Schematic Codes

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# Machine Identification

## Introduction

This topic contains information about machine identification. On the machine and on the machine devices there are identification data plates.

⇒ [Machine Identification Plate \(□ 1-2-2\)](#)

⇒ [Typical Product Identification Number \(PIN\) \(□ 1-2-2\)](#)

⇒ [Component Identification Plates \(□ 1-2-3\)](#)

⇒ [Typical Engine Identification Number \(□ 1-2-3\)](#)

⇒ [Transmission Identification Numbers \(□ 1-2-4\)](#)

⇒ [ROPS/FOPS Certification plate \(□ 1-2-6\)](#)

⇒ [FOPS Data Plate \(□ 1-2-6\)](#)



# Section 1-2 - General Information Machine Identification

Machine Identification Plate

## Machine Identification Plate

The machine has an identification plate mounted on the loader tower. The serial numbers of the machine and its major units are stamped on the plate.

The serial number of each major unit is also stamped on the unit itself. If a major unit is replaced by a new one, the serial number on the identification plate will be wrong. Either stamp the new number of the unit on the identification plate, or simply stamp out the old number. This will prevent the wrong unit number being quoted when replacement parts are ordered.

The machine and engine serial numbers can help identify exactly the type of equipment you have.

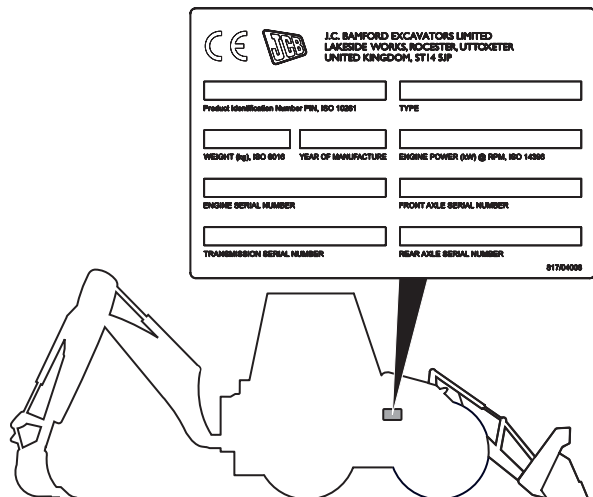
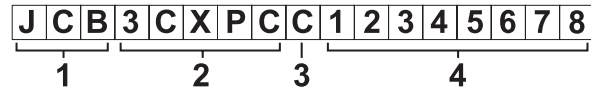


Fig 1. U.K and R.O.W

T025210-3

## Typical Product Identification Number (PIN)

P2-1006



T016220-8

Fig 2.

- 1 World Manufacturer Identification (3 Digits)
- 2 Machine Model (5 Digits)
- 3 Check Letter (1 Digit)

The Check Letter is used to verify the authenticity of a machine's PIN.

- 4 Machine Serial Number (8 Digits)

Each machine has a unique serial number.



## Component Identification Plates

### Typical Engine Identification Number

T1-005\_3

Engine data labels **A** are located on the cylinder block at position **C** and rocker cover **D** (if fitted). → [Fig 3.](#) (1-2-3). The data label contains important engine information and includes the engine identification number **E**.

A typical engine identification number is explained as follows:

**SA 320/40001 U 00001 04**  
**1 2 3 4 5**

#### 1 Engine Type

S = 4.4 litre series.

JCB Dieselmax (Tier 2)

A = Naturally aspirated

B = Turbocharged

C = Turbocharged and intercooled

JCB Dieselmax (Tier 3)

D = Turbocharged

E = Electronic common rail fuel injection

F = Turbocharged and after-cooled

#### 2 Engine part number

#### 3 Country of manufacture

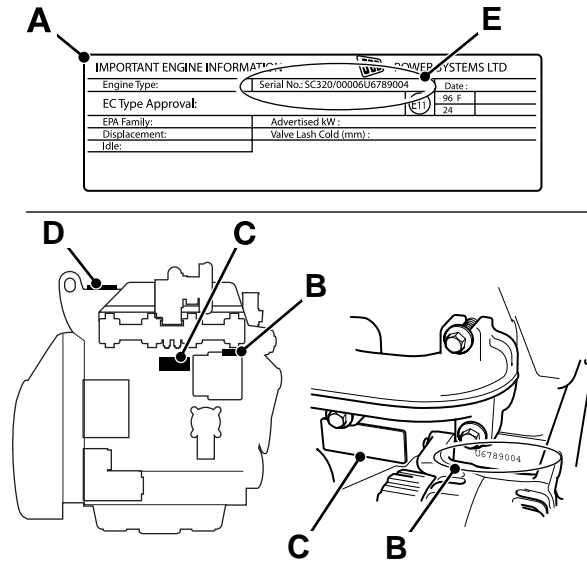
U = United Kingdom

#### 4 Engine Serial Number

#### 5 Year of Manufacture

The last three parts of the engine identification number are stamped on the cylinder block at position **B**.

**U 00001 04**



**Fig 3. Engine**

C007820-C2

**Thank you very much  
for your reading.**

**Please click here and go  
back to the website.**

**Then, you can  
download the complete  
manual instantly.**

**No waiting.**



## Section 1-2 - General Information Machine Identification

Component Identification Plates

### Transmission Identification Numbers

#### Axles

The axles have a serial number stamped on a data plate as shown.

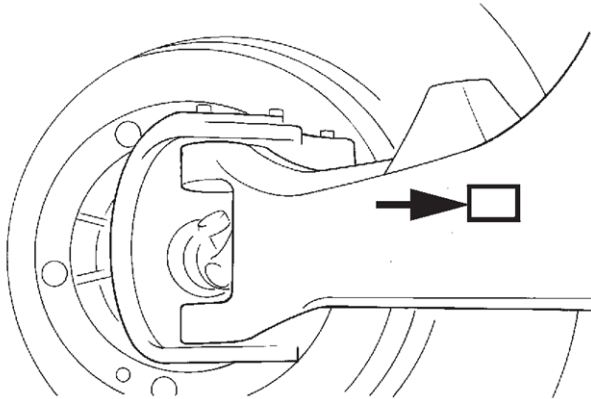


Fig 4. Front Axle (2WS machine)

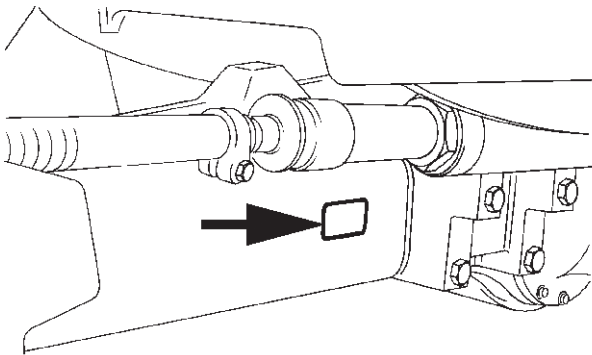


Fig 5. Front Axle (4WS machine)

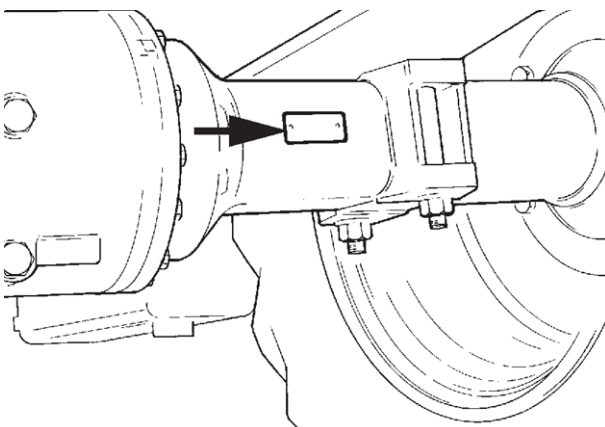


Fig 6. Rear Axle (2WS machine)

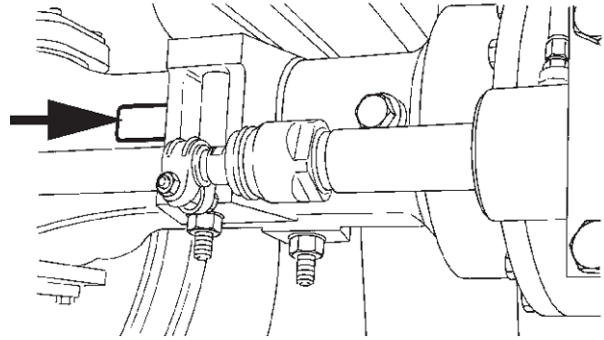
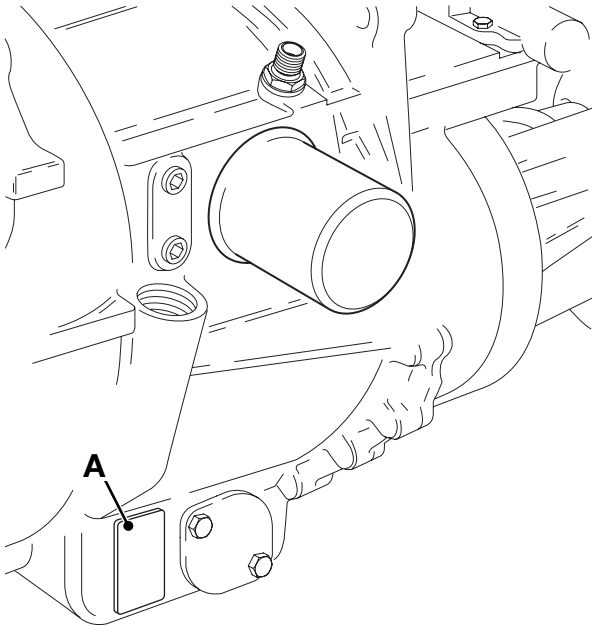


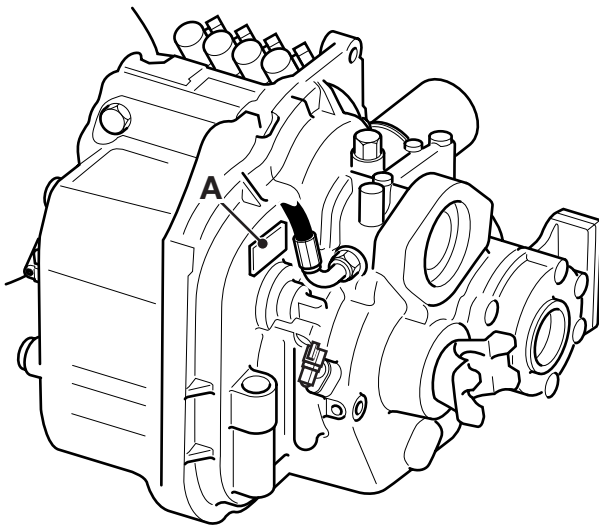
Fig 7. Rear Axle (4WS machine)

#### Gearbox

The gearbox has a serial number stamped on a data plate as shown.



**Fig 8. Synchro Shuttle Transmission**



**Fig 9. Powershift Transmission**