



# Service Manual

## Fastrac

**3170, 3170 Plus**  
**3190, 3190 Plus**  
**3200, 3200 Plus**  
**3220, 3220 Plus**  
**3230, 3230 Plus**

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<b>General Information</b>	<b>1</b>
<b>Care &amp; Safety</b>	<b>2</b>
<b>Routine Maintenance</b>	<b>3</b>
<b>Optional Equipment</b>	<b>A</b>
<b>Body &amp; Framework</b>	<b>B</b>
<b>Electrics</b>	<b>C</b>
<b>Controls</b>	<b>D</b>
<b>Hydraulics</b>	<b>E</b>
<b>Transmission</b>	<b>F</b>
<b>Brakes</b>	<b>G</b>
<b>Steering</b>	<b>H</b>
<b>Suspension</b>	<b>S</b>
<b>Engine</b>	<b>T</b>

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## Introduction

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.

Renewal of oil seals, gaskets, etc., and any component showing obvious signs of wear or damage is expected as a matter of course. It is expected that components will be cleaned and lubricated where appropriate, and that any opened hose or pipe connections will be blanked to prevent excessive loss of hydraulic fluid and ingress of dirt. Finally, please remember above all else

### **SAFETY MUST COME FIRST!**

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

- 1 = General Information** - includes torque settings and service tools.
- 2 = Care & Safety** - includes warnings and cautions pertinent to aspects of workshop procedures etc.
- 3 = Routine Maintenance** - includes service schedules and recommended lubricants for the whole machine.

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

- A = Optional Equipment**
- B = Body & Framework ...etc**

The page numbering in each alphabetically coded section is not continuous. This allows for the insertion of new items in later issues of the manual.

Section contents, technical data, circuit descriptions, operation descriptions etc. are inserted at the beginning of each alphabetically coded section.

All sections are listed on the front cover; tabbed divider cards align directly with individual sections on the front cover for rapid reference.

Page cross references are generally made by presenting the subject title printed in bold, followed by the title of the section containing the subject. For example:

“**24** If the axle is still on the machine, fit the brake calipers (see **Brake Caliper Removal and Replacement**, Section G).”

**Note:** If only the subject title in bold is given, i.e. no section title, the cross reference is to another part of the same section.

Use the contents list at the beginning of each section to find the exact page number.

Where a torque setting is given as a single figure it may be varied by plus or minus 3%. Torque figures indicated are for dry threads, hence for lubricated threads may be reduced by one third.

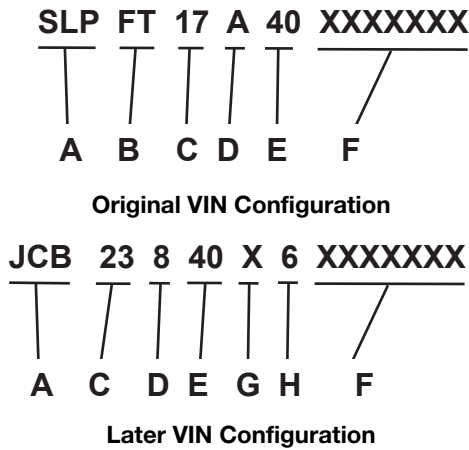
‘Left Hand’ and ‘Right Hand’ are as viewed from the rear of the machine facing forwards.

<b>Contents</b>	<b>Page No.</b>
Machine Identification Plate	1 - 1
Typical Vehicle Identification Number (VIN)	1 - 1
Unit Identification	1 - 1
Torque Settings	
Introduction - Zinc Plated Fasteners and Dacromet Fasteners	2 - 1
Zinc Plated Fasteners	2 - 2
Dacromet Fasteners	2 - 3
Sealing and Retaining Compounds	3 - 1
Service Tools Numerical List	4 - 1
* Service Tools	
Optional Equipment	5 - 0
Body and Framework	5 - 1
Electrics	6 - 1
Hydraulics	7 - 1
Transmission	8 - 1
Brakes	9 - 1
Steering	9 - 1
Suspension	9 - 2
Engine	9 - 2
Moving a Disabled Machine	
General	10 - 1
Preparation for Towing	10 - 1
Transporting the Machine	10 - 2

**Serial Number Plate**

Each machine has a serial number plate located at **X**. The 17 digit Vehicle Identification Number (VIN), and the serial numbers of the engine and transmission are stamped on the plate.

**\* Typical Vehicle Identification No. (VIN)**



**A** = Manufacturing Code

**B** = Machine Range  
FT = Fastrac

**\* C** = Engine Type

- 17 = 3190 or 3190 Plus
- 18 = 3220 or 3220 Plus
- 19 = 3170 or 3170 Plus
- 23 = 3200 or 3200 Plus
- 24 = 3230 or 3230 Plus

**\* D** = Transmission Type (Gearbox and axle combination)

- |                        |                                  |
|------------------------|----------------------------------|
| <b>3170, 3170 Plus</b> | <b>All other machines</b>        |
| A = 75 km/h            | 8 = Standard (40, 50 or 65 km/h) |
| B = 65 km/h            | 9 = High Speed (75 km/h)         |
| D = 50 km/h            |                                  |
| E = 40 km/h            |                                  |

**E** = Vehicle Max. Speed

- 40 = 40 km/h
- 50 = 50 km/h
- 65 = 65 km/h
- 75 = 75 km/h

**F** = Serial Number

**\* G** = Authenticity Code

**\* H** = year Code (e.g. 6 = 2006)

**Unit Identification**

The serial number of each major unit is also stamped on the unit itself as shown below. If a major unit is replaced by a new one, the serial number on the 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.

Engine

Gearbox Assembly (assembly of all three gearboxes)

Speed Gearbox

Front Axle

Rear Axle

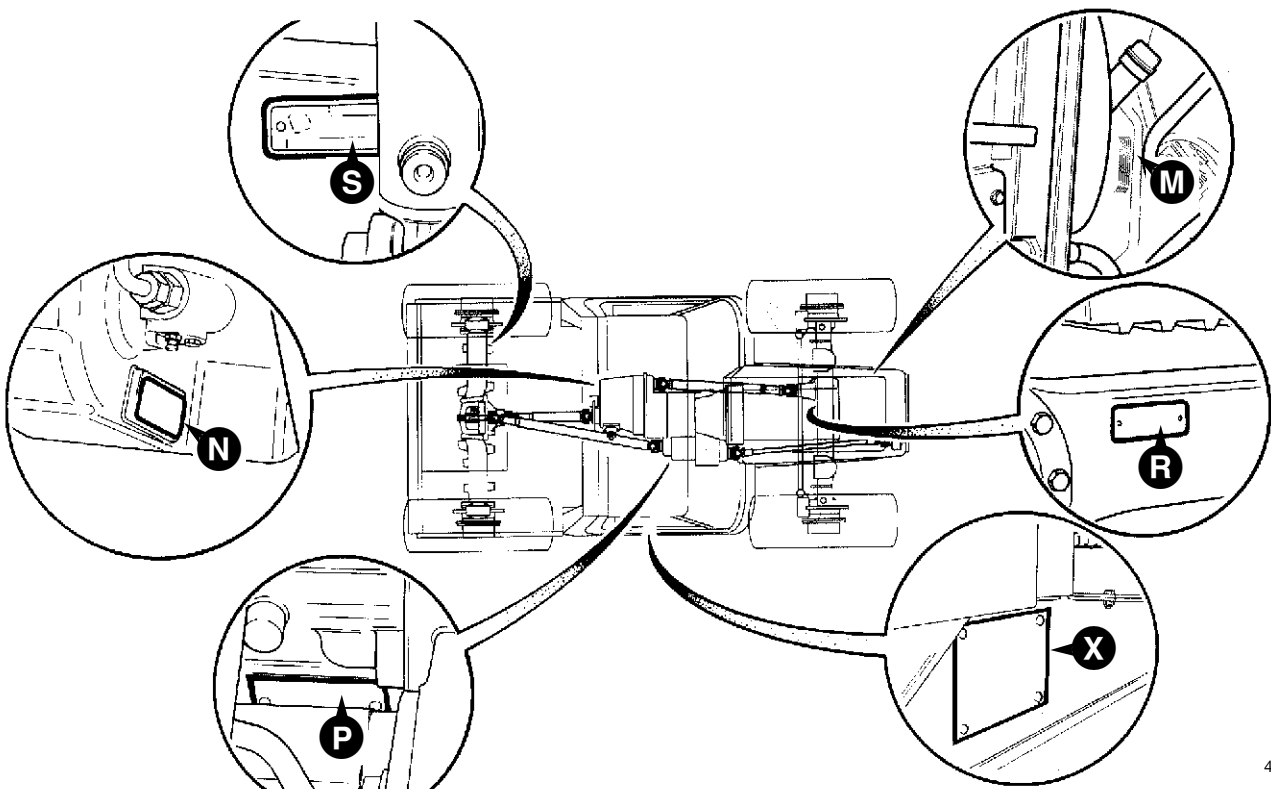
**M**

**N**

**P**

**R**

**S**



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## Introduction - Zinc Plated Fasteners and Dacromet Fasteners

Some external fasteners on Fastrac machines are assembled using an improved type of corrosion resistant finish. This type of finish is called Dacromet and replaces the original Zinc and Yellow plating used on earlier machines.

The two types of fasteners can be readily identified by colour and part number suffix as follows:

<b>Fastener Type</b>	<b>Colour</b>	<b>Part Number</b>
Zinc and Yellow	Golden finish	'Z' (e.g. 1315/3712Z)
Dacromet	Mottled silver finish	'D' (e.g. 1315/3712D)

**Note:** As the Dacromet fasteners have a lower torque setting than the Zinc and Yellow fasteners, the torque figures used must be relevant to the type of fasteners.

**Note:** A Dacromet bolt should not be used in conjunction with a Zinc and Yellow plated nut, as this could change the torque characteristics of the torque settings further. For the same reason, a Dacromet nut should not be used in conjunction with a Zinc and Yellow plated bolt.

**Note:** All bolts used on JCB machines are high tensile and must not be replaced by bolts of a lesser tensile specification.

**Note:** Dacromet bolts, due to their high corrosion resistance are used areas where rust could occur. Dacromet bolts are only used for external applications. They are not used in application such as gearbox and engine joint seams or internal applications.

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