

## VM RANGE - TIER III

Service Manual - VM RANGE - TIER III

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# Section 1 - General Information

Notes:

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# Section 1 - General Information

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# Section 1 - General Information

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# Introduction

## About this Manual

### Machine Model and Serial Number

This manual provides information for the following model(s) in the JCB machine range:

- VM 46D/PD from SN 2900500
- VM 75D/PD from SN 2900500
- VM 115D/PD from SN 1801240
- VM 115HD/HPD from SN 1801240
- VM 132D/PD from SN 1801295
- VM 146D/PD from SN 1800000
- VM 166D/PD from SN 1800000
- VM 200D/PD from SN 1801445

### Using the Service Manual

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.

The illustrations in this publication are for guidance only. Where the machines differ, the text and/or the illustration will specify.

General warnings in Section 2 are repeated throughout the manual, as well as specific warnings. Read all safety statements regularly, so you do not forget them.

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.

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.

The manufacturer's policy is one of continuous improvement. The right to change the specification of the machine without notice is reserved. No responsibility will be accepted for discrepancies which may occur between specifications of the machine and the descriptions contained in this publication.

Finally, please remember above all else safety must come first!

### Section Numbering

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 and Safety - includes warnings and cautions pertinent to aspects of workshop procedures etc.
- 3 Maintenance - includes service schedules and recommended lubricants for all the machine.

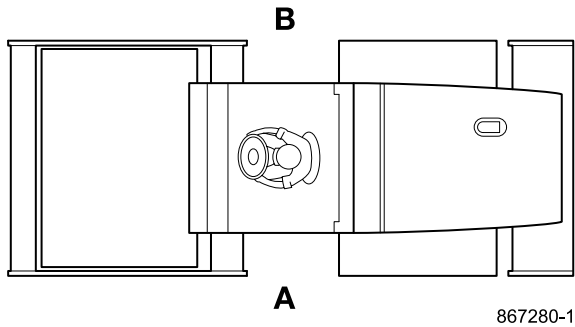
The remaining sections are alphabetically coded and deal with Dismantling, Overhaul etc. of specific components, for example:

- A Attachments
- B Body and Framework, etc.

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

### Left Side, Right Side

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



**Fig 1.**

### Cab/Canopy

T1-003\_2

This manual frequently makes references to the cab. For instance, 'do not operate the machine without a manual in the cab'. It should be noted that these statements also apply to canopy build machines.

### Cross References

T1-004\_2

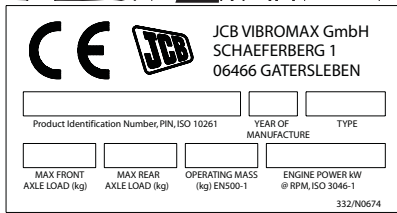
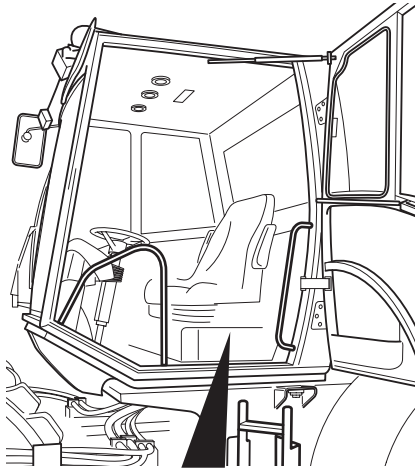
In this publication, page cross references are made by presenting the subject title printed in bold, italic and underlined. It is preceded by the 'go to' symbol. The number of the page upon which the subject begins, is indicated within the brackets. For example: [⇒ \*\*\*Cross References\*\*\* \(1-2\)](#).

### Identifying Your Machine

#### Machine Identification Plate

Your machine has an identification plate mounted as shown. → [Fig 2.](#) ([1-3](#)).

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



**Fig 2. Location of Machine Identification Plate.**

#### Typical Product Identification Number (PIN)

1	2	3	4
JCB	VM115	C	01801240

- 1 World Manufacturer Identification (JCB)
- 2 Machine Type and Model (VM115 = VM115)
- 3 Randomly Generated Check Letter
- 4 Machine Serial Number (01801240)

### Component Identification Plates

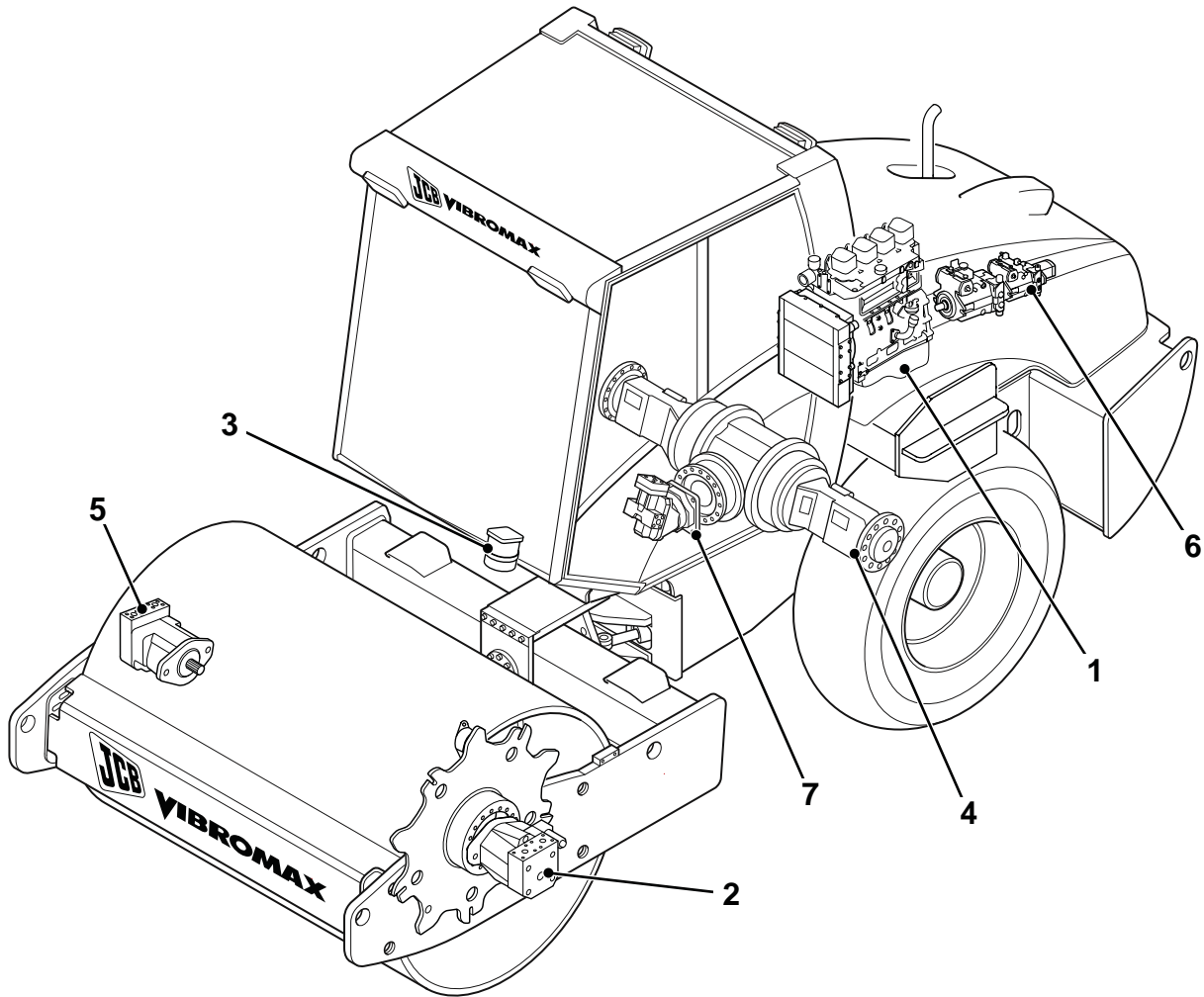


Fig 3.

844210-2

- 1 Engine serial number
- 2 Drum drive motor serial number
- 3 Steering unit serial number
- 4 Rear axle serial number
- 5 Vibration motor serial number
- 6 Hydraulic pump serial number
- 7 Axle hydraulic drive motor serial number



## JCB Dieselmex Engine Identification

### 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 4.](#) (□ 1-5). 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 Dieselmex (Tier 2)

A = Naturally aspirated

B = Turbocharged

C = Turbocharged and intercooled

JCB Dieselmex (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**

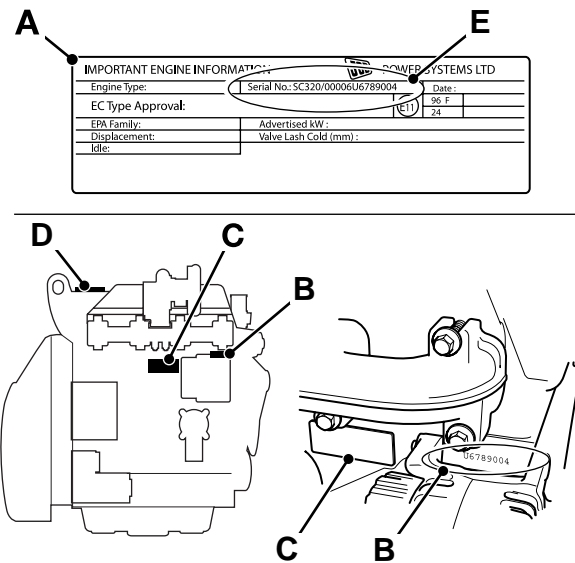


Fig 4. Engine

C007820-C2

## Cummins QSB Engine Identification

### Typical Engine Identification Number

**YB 50457 U 576887 6**  
**1 2 3 4 5 6**

#### 1 Engine Type, YB = 6 cylinder turbo

#### 2 Build Number

#### 3 Country of Origin

#### 4 Engine Sequence Number

#### 5 Year of Manufacture

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