

## 527-58

[Section 1 - General Information](#)

[Section 2 - Care and Safety](#)

[Section 3 - Routine Maintenance](#)

[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 Data Systems](#)



Publication No.  
**9813/0200-6**



Copyright © 2004 JCB SERVICE. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying or otherwise, without prior permission from JCB SERVICE.

Issued by JCB Technical Publications, JCB Aftermarket Training, Woodseat, Rocester, Staffordshire, ST14 5BW, England. Tel +44 1889 591300 Fax +44 1889 591400

World Class  
Customer Support

## General Information

[Section 1 - General Information](#)

[Section 2 - Care and Safety](#)

[Section 3 - Routine Maintenance](#)

[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 Data Systems](#)



Publication No.  
**9813/0200-6**



Copyright © 2004 JCB SERVICE. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any other means, electronic, mechanical, photocopying or otherwise, without prior permission from JCB SERVICE.

<b>Contents</b>	<b>Page No.</b>
<b>Applications</b>	
Introduction .....	1-1
Tier 4 Final Machines .....	1-2
Section 1 - Applications .....	1-4
<b>Use</b>	
Introduction .....	1-6
Scope .....	1-7
Personnel .....	1-7
Applications .....	1-7
Newest Data .....	1-7
Format .....	1-8
Left and Right Sides .....	1-9
Hydraulic Schematic Codes .....	1-10
Colour Codes .....	1-10
<b>Machine Identification</b>	
Introduction .....	1-12
Related Topics .....	1-13
Machine Identification Plate .....	1-14
Typical Product Identification Number (PIN) .....	1-15
Component Identification Plates .....	1-17
Typical Engine Identification Number .....	1-17
Transmission Identification Numbers .....	1-18
ROPS/FOPS and OECD Certification Plates .....	1-20
<b>Torque Settings</b>	
Introduction .....	1-22
Zinc Plated Fasteners and Dacromet Fasteners .....	1-23
Introduction .....	1-23
Bolts and Screws .....	1-23
Hydraulic Connections .....	1-27
'O' Ring Face Seal System .....	1-27
'Torque Stop' Hose System .....	1-30
'Positional Type' Hydraulic Adaptors .....	1-31
Fitting Procedure .....	1-31
<b>Service Tools</b>	
Introduction .....	1-32
Numerical List .....	1-33
Tool Detail Reference .....	1-36
Rivet Nuts .....	1-60
Fitting Procedure .....	1-61
Slide Hammer Kit .....	1-62
Fitting Procedure .....	1-62
<b>Service Consumables</b>	
Introduction .....	1-64
Sealing and Retaining Compounds .....	1-65
<b>Fuel</b>	
Introduction .....	1-66
Related Topics .....	1-67

<b>Contents</b>	<b>Page No.</b>
Acceptable and Unacceptable Fuels .....	1-68
Additives .....	1-69
Service Requirements for use of B20 Biodiesel .....	1-69
Warranty .....	1-69
Fuel Types .....	1-70
Usage and Effects of Fuels .....	1-71
Sulphur Content .....	1-72
Effects of Fuel Contaminates .....	1-73
<b>Fuel</b>	
Introduction .....	1-74
Related Topics .....	1-75
Acceptable and Unacceptable Fuels .....	1-76
<b>Fuel</b>	
Introduction .....	1-78
Related Topics .....	1-79
Acceptable and Unacceptable Fuels .....	1-80

## Section 1 - Applications

**Important:** The machine model names are NOT referred to in the topics. You must refer to the applications table for the applicable machine models. Table entries shaded grey indicate a topic not included in this issue of the manual.

**Note:** For full details of machine identification refer to **Section 1 - Machine Identification**.

			Machine models
Topic Ref	Title	Variant	527-58
1-1	Use	ALL	●
1-2	Applications	ALL	●
1-3	Machine Identification	ALL	●
1-4	Fuel (1-08-01)	Machines with SD/SF Engines	●
1-5	Fuel (1-08-02)	Machines with SL/SH Engines	●
1-6	Torque Settings	ALL	●
1-7	Service Tools	ALL	●
1-8	Service Consumables	ALL	●

# Use

## Introduction

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

⇒ [Scope \(□ 1-7\)](#)

⇒ [Personnel \(□ 1-7\)](#)

⇒ [Applications \(□ 1-7\)](#)

⇒ [Newest Data \(□ 1-7\)](#)

⇒ [Format \(□ 1-8\)](#)

⇒ [Left and Right Sides \(□ 1-9\)](#)

⇒ [Hydraulic Schematic Codes \(□ 1-10\)](#)

⇒ [Colour Codes \(□ 1-10\)](#)

### Component Identification Plates

#### Typical Engine Identification Number

Engine data labels **A** are located on the cylinder block at position **C** and rocker cover **D** (if fitted). The data label contains important engine information and includes the engine identification number **E**.

A typical engine identification number is explained as follows:

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

**1 Engine Type**

SD = turbocharged

SE = electronic common rail fuel injection, turbocharged and intercooled.

SF = turbocharged and intercooled.

SH = 4.4 litre electronic common rail fuel injection with Variable Geometry Turbocharger (81kW, 93kW)

SL = 4.4 litre electronic common rail fuel injection with Fixed Geometry Turbocharger (55kW)

DH = 4.8 litre electronic common rail fuel injection with Variable Geometry Turbocharger (108kW)

**2 Engine part number**

**3 Country of manufacture**

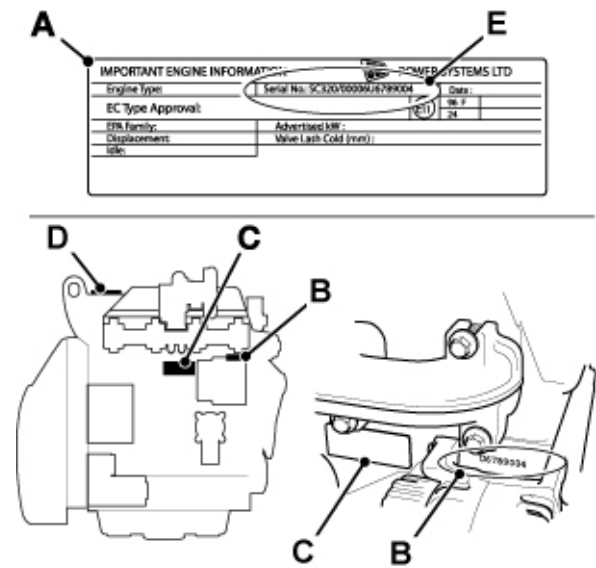
U = United Kingdom

**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**



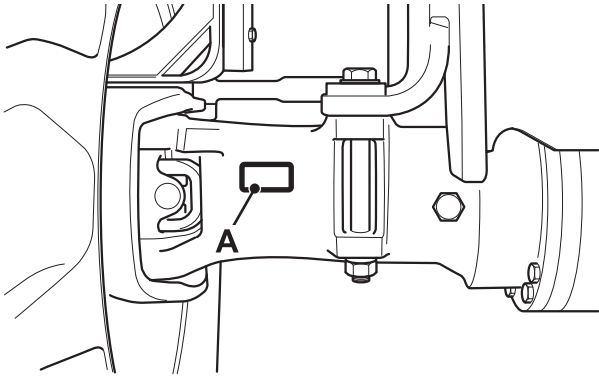
**Fig 2. Engine**

C007280-C5.jpg

### Transmission Identification Numbers

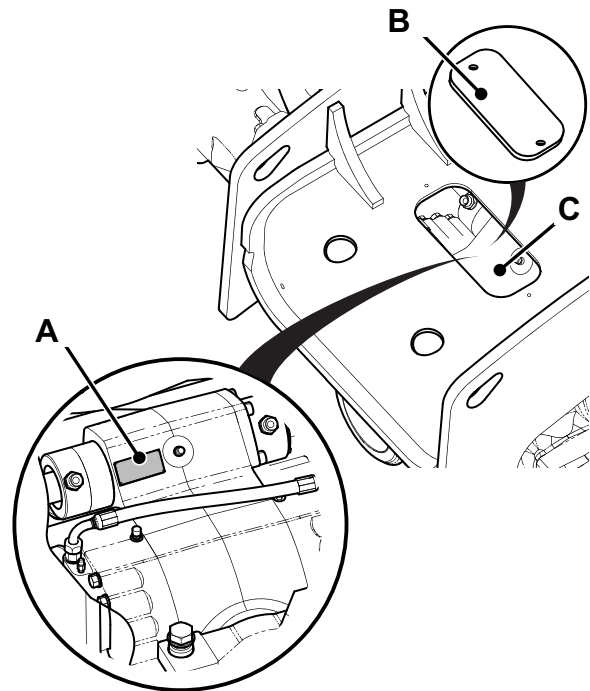
#### Axles (Excluding 550-80 Machines)

The transmission components have a serial number stamped on a data plate **A** as shown.



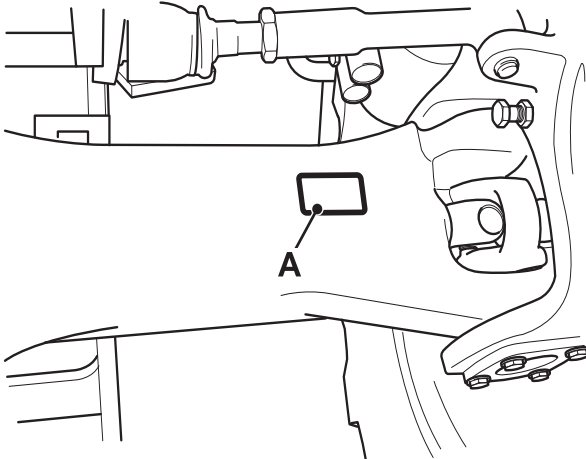
**Fig 3. Front Axle**

A710840-C1



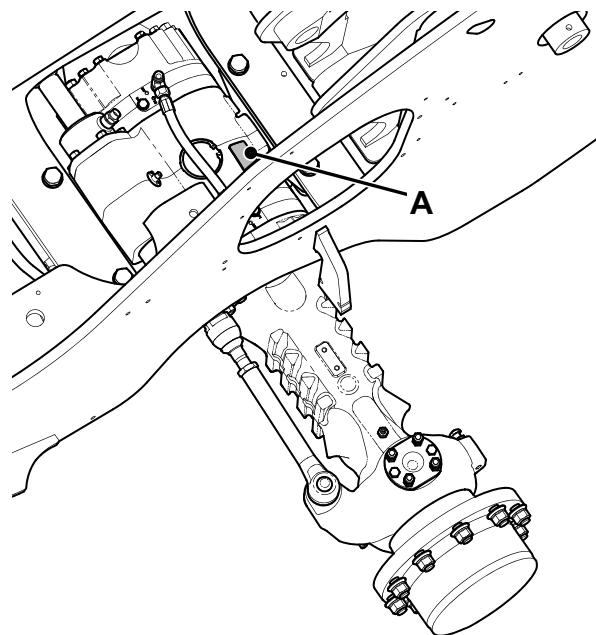
**Fig 5. Front Axle**

C107510



**Fig 4. Rear Axle**

A710830-C1



**Fig 6. Rear Axle**

C107520

#### Axles (550-80 Machines)

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

To view to the front axle data plate remove the cover **B** and the plate will be visible through hole **C**.



### HydroStatic Transmission Components

#### Transmission Pump

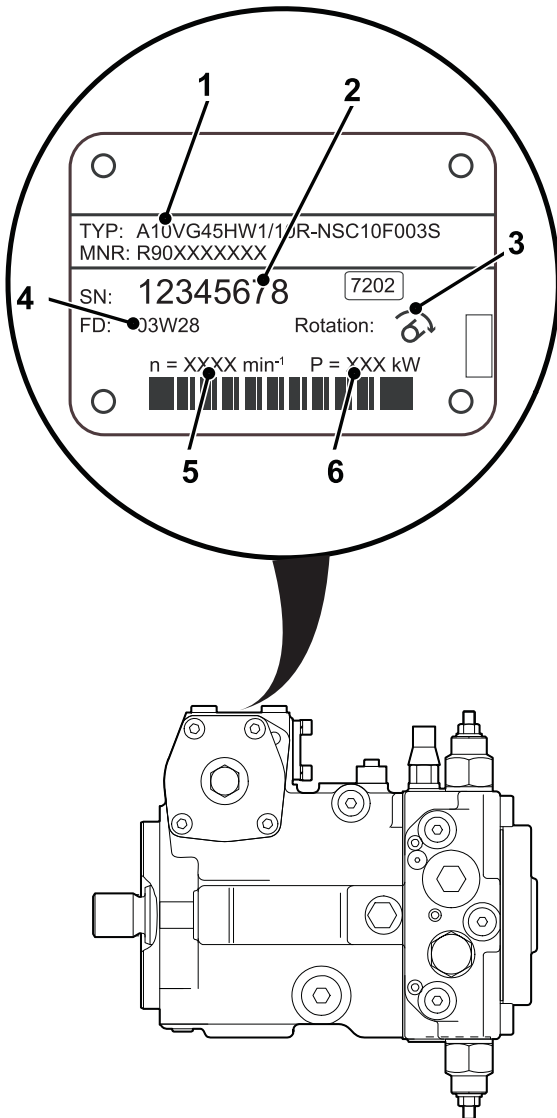


Fig 7.

C094930

1 Ordering Code

Code	Machine
AA4VG56	20 and 34 kph
AA10VG63	25 kph
AA4VG71	40 kph

2 Pump Serial Number (8 Digits)

Each motor has a unique serial number.

3 Direction of rotation - looking at the shaft.

4 Date of manufacture.

5 Speed.

6 Power.

#### Transmission Motor

1 Motor Serial Number (6 Digits)

Each motor has a unique serial number.

2 Type

3 Date of manufacture.

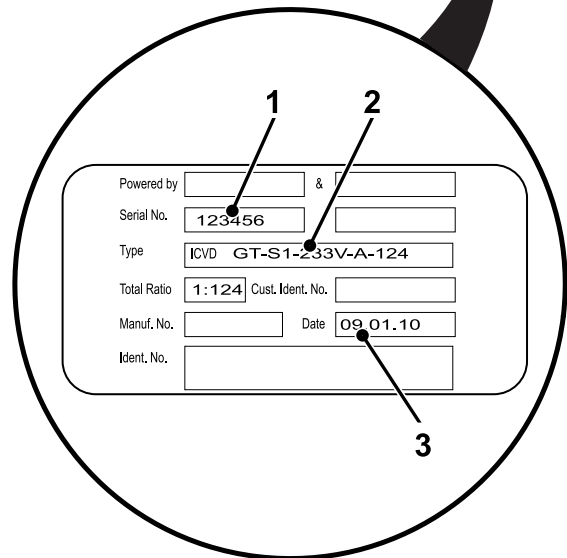
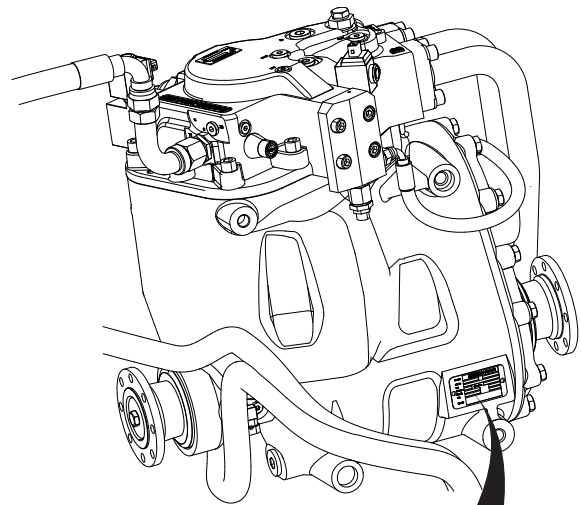


Fig 8.

C094920

### ROPS/FOPS and OECD Certification Plates

Machines built to ROPS/FOPS standards have an identification label **A** fitted to the inside of the cab.  
Machines built to ROPS/FOPS and OECD standards have identification label **B** fitted to the inside of the cab.

#### Definition of terms:

- ROPS Roll Over Protection Structure
- FOPS Falling Objects Protection Structure
- OECD Organisation for Economic Co-operation and Development.

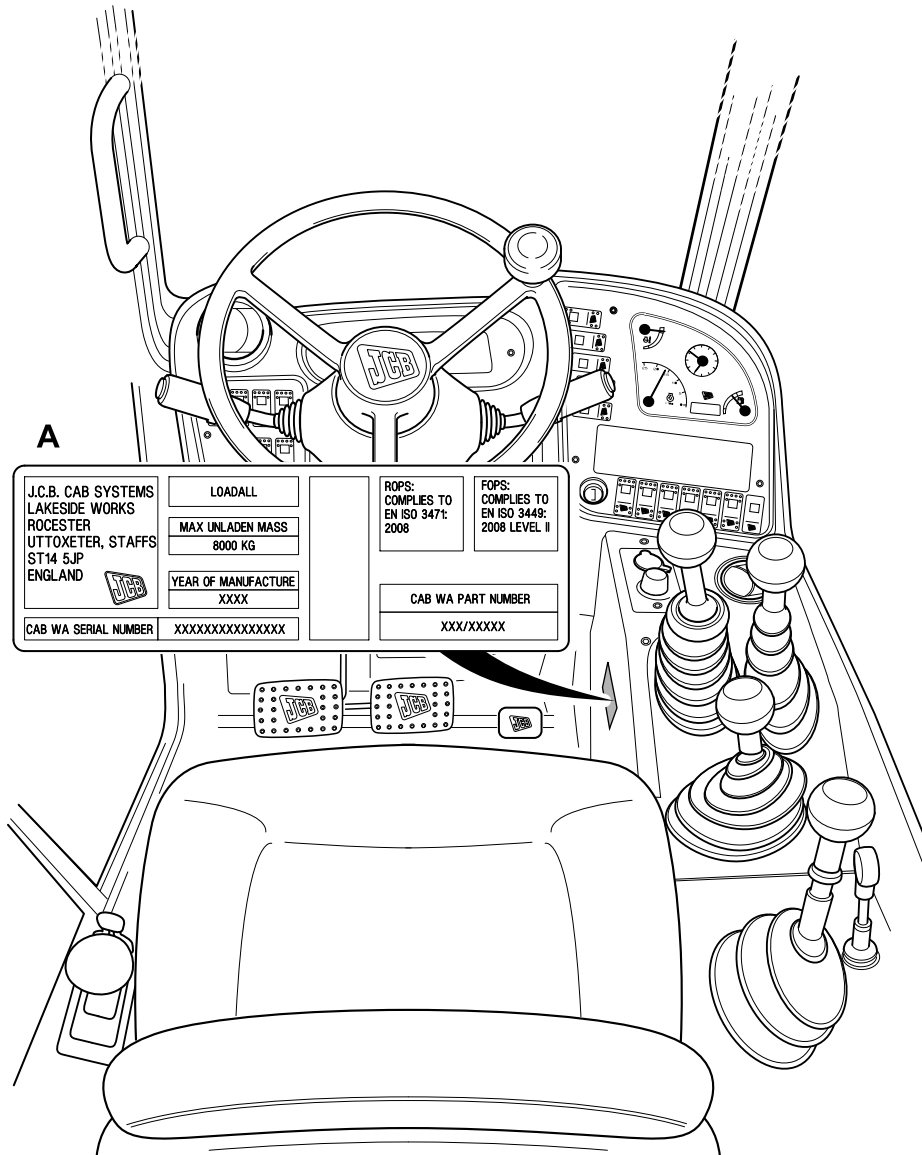
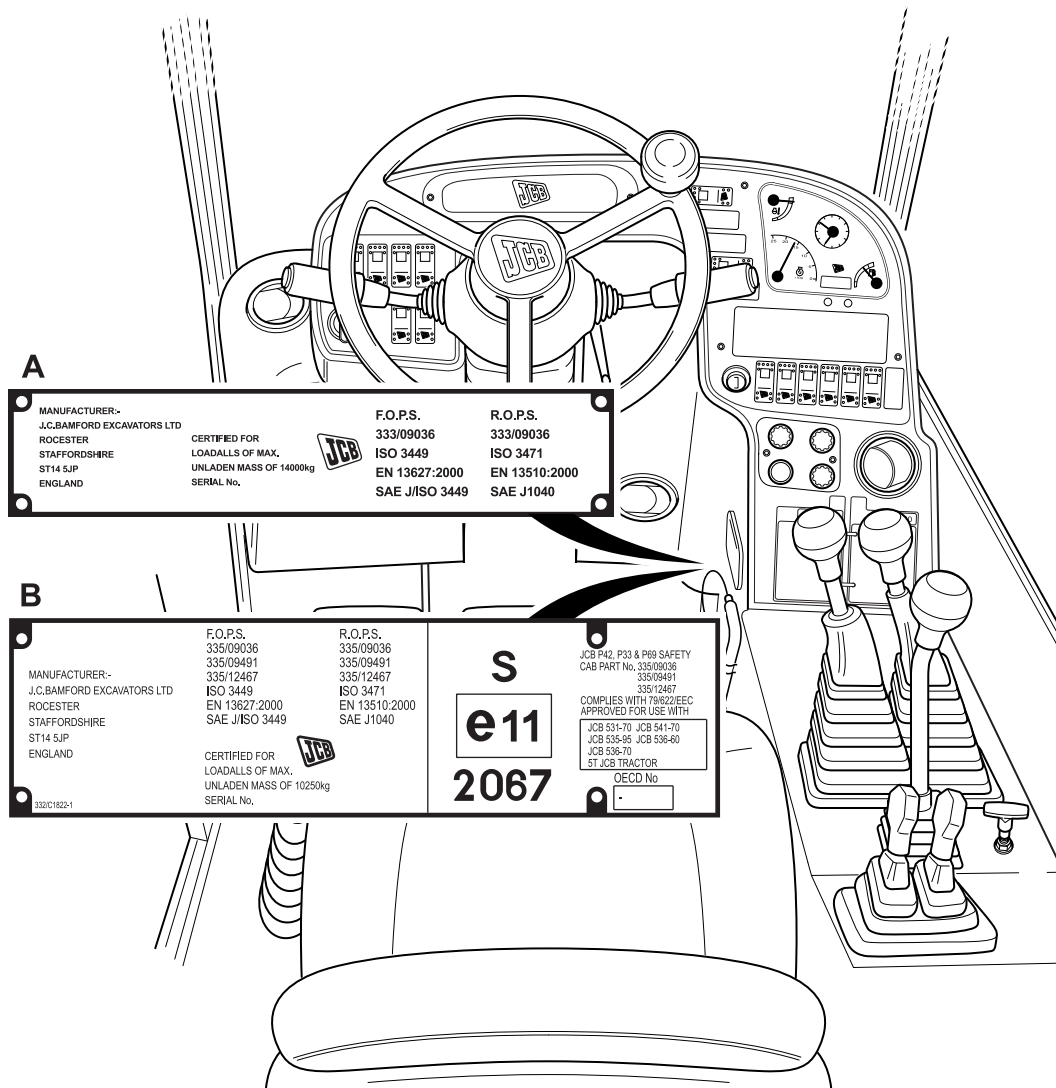


Fig 9. 526-56 and 527-58 machines

T016800-3-C1



**Fig 10. Other Machines**

445911-5

---

# Torque Settings

## Introduction

This topic contains information about torques. Torque values are given for types and sizes of bolts and hydraulic connectors and adaptors.

Where a torque is given as a single figure it may be varied by plus or minus 3%. Torque figures are given for fasteners with different surface treatments. Make sure you use the correct torque figures.

Where torques are given in topics within the other sections always use these values.

[⇒ \*Zinc Plated Fasteners and Dacromet Fasteners\* \(1-23\)](#)

[⇒ \*Hydraulic Connections\* \(1-27\)](#)

[⇒ \*'Positional Type' Hydraulic Adaptors\* \(1-31\)](#)

[⇒ \*Fitting Procedure\* \(1-31\)](#)

### Zinc Plated Fasteners and Dacromet Fasteners

T11-002

#### Introduction

Some external fasteners on JCB machines are manufactured 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. → [Table 1. Fastener Types \(1-23\)](#).

**Table 1. Fastener Types**

Fastener Type	Colour	Part No. Suffix
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 fastener.

**Note:** A Dacromet bolt should not be used in conjunction with a Zinc or Yellow plated nut, as this could change the torque characteristics of the torque setting further. For the same reason, a Dacromet nut should not be used with a Zinc or 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 in areas where rust could occur. Dacromet bolts are only used for external applications. They are not used in applications such as gearbox or engine joint seams or internal applications.

#### Bolts and Screws

Use the following torque setting tables only where no torque setting is specified in the text.

**Note:** Dacromet fasteners are lubricated as part of the plating process, do not lubricate.

Torque settings are given for the following conditions:

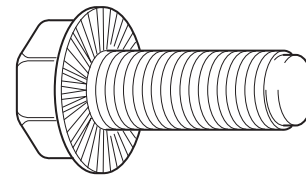
##### Condition 1

- Un-lubricated fasteners
- Zinc fasteners
- Yellow plated fasteners

##### Condition 2

- Zinc flake (Dacromet) fasteners
- Lubricated zinc and yellow plated fasteners
- Where there is a natural lubrication. For example, cast iron components

#### Verbus Ripp Bolts



**Fig 1.**

Torque settings for these bolts are determined by the application. Refer to the relevant procedure for the required settings.



## Section 1 - 3 Torque Settings

Zinc Plated Fasteners and Dacromet Fasteners

**Table 2. Torque Settings - UNF Grade 'S' Fasteners**

Bolt Size		Hexagon (A/F)	Condition 1			Condition 2		
in.	mm	in.	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
1/4	6.3	7/16	11.2	1.1	8.3	10.0	1.0	7.4
5/16	7.9	1/2	22.3	2.3	16.4	20.0	2.0	14.7
3/8	9.5	9/16	40.0	4.1	29.5	36.0	3.7	26.5
7/16	11.1	5/8	64.0	6.5	47.2	57.0	5.8	42.0
1/2	12.7	3/4	98.0	10.0	72.3	88.0	9.0	64.9
9/16	14.3	13/16	140.0	14.3	103.2	126.0	12.8	92.9
5/8	15.9	15/16	196.0	20.0	144.6	177.0	18.0	130.5
3/4	19.0	1 1/8	343.0	35.0	253.0	309.0	31.5	227.9
7/8	22.2	1 15/16	547.0	55.8	403.4	492.0	50.2	362.9
1	25.4	1 1/2	814.0	83.0	600.4	732.0	74.6	539.9
1 1/8	31.7	1 7/8	1181.0	120.4	871.1	1063.0	108.4	784.0
1 1/4	38.1	2 1/4	1646.0	167.8	1214.0	1481.0	151.0	1092.3

**Table 3. Torque Settings - Metric Grade 8.8 Fasteners**

Bolt Size		Hexagon (A/F)	Condition 1			Condition 2		
ISO Metric Thread	mm	mm	Nm	kgf m	lbf ft	Nm	kgf m	lbf ft
M5	5	8	5.8	0.6	4.3	5.2	0.5	3.8
M6	6	10	9.9	1.0	7.3	9.0	0.9	6.6
M8	8	13	24.0	2.4	17.7	22.0	2.2	16.2
M10	10	17	47.0	4.8	34.7	43.0	4.4	31.7
M12	12	19	83.0	8.5	61.2	74.0	7.5	54.6
M16	16	24	205.0	20.9	151.2	184.0	18.8	135.7
M20	20	30	400.0	40.8	295.0	360.0	36.7	265.5
M24	24	36	690.0	70.4	508.9	621.0	63.3	458.0
M30	30	46	1372.0	139.9	1011.9	1235.0	125.9	910.9
M36	36	55	2399.0	244.6	1769.4	2159.0	220.0	1592.4

**Buy Now**



Our support email:

[ebooklibonline@outlook.com](mailto:ebooklibonline@outlook.com)