## **Service Manual**



# **JCB 354/360 TRACTOR**

Section 1 - General Information

Section 2 - Care and Safety

Section 3 - Routine Maintenance

Section A - Attachments

Section B - Body and Framework

Section C - Electrics

Section E - Hydraulics

Section F - Transmission

Section G - Brakes

Section H - Hydraulic Steering

Section K - Engine



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World Class



## **Section 1 - General Information**

Notes:		



# **Section 1 - General Information**

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# **Section 1 - General Information**

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### Introduction

#### **About This Publication**

#### **Machine Model and Serial Number**

This publication provides information for the following models in the JCB product range:

- 354 from S/N 1287000 to 1288999
- 360 from S/N 1287000 to 1288999

#### **Using the Service Manual**

T11-00

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!

#### **Units of Measurement**

T1-001 2

In this publication, the S.I. system of units is used. For example, liquid capacities are given in litres. The Imperial units follow in parentheses () eg 28 litres (6 gal).

#### Section Numbering

T11-005

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.



# Section 1 - General Information Introduction

About This Publication

#### Left Side, Right Side

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

#### **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).



# Section 1 - General Information Introduction

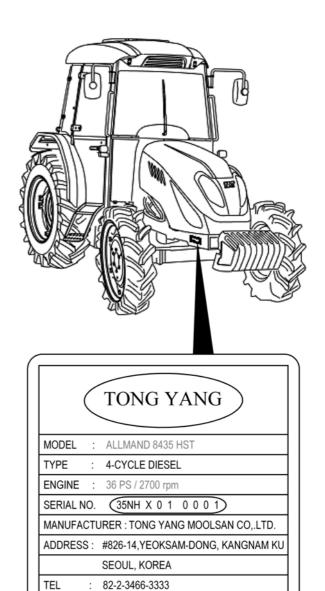
Identifying Your Machine

## **Identifying Your Machine**

#### **Machine Identification Plate**

Your machine has an identification plate mounted as shown. Information contained on this plate includes Model, Type, Engine, Vehicle Identification Number, Manufacturer and Address.

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



V012100

Fig 1.

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# Section 1 - General Information Introduction

Identifying Your Machine

#### **Typical Vehicle Identification Number (VIN)**

A typical Vehicle Identification Number is given below.

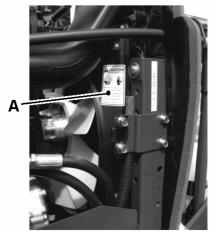
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1	2	3	4

- 1 Machine Model
- 2 Year of Manufacture
- 3 Month of Manufacture
- 4 Machine Serial Number

#### **Component Identification Plates**

#### **Typical Engine Identification Number**

The engine identification plate  ${\bf A}$  is attached to the rocker cover. The information stamped on this plate includes the engine model and serial number.



V012090

Fig 2.

#### **ROPS Certification Plate**

Your machine is built to the ROPS standard and has an identification label fitted to the cab. A typical identification label is shown below.



Fig 3.



# **Standard Torque Settings**

## **Front Axle Housing and Transmission**

#### Introduction

The following table gives the torque tightening values for the major parts of the Front Axle Housing (4WD Type) and the Transmission.

**Table 1. Standard Torque Settings** 

Major Part	Bolt and Nut Size (Hardness)	Torque Value		
		Nm	kgf/m	lbf/ft
Front Axle Housing				
Axle bracket to engine	5/8-11UNC (9T)	156.9 - 176.5	16.0 - 18.0	115.7 - 130.2
Front pivot metal	M14 (9T)	156.9 - 176.5	16.0 - 18.0	115.7 - 130.2
Rear pivot metal	M18 (7T)	196.0 - 235.2	20.0 - 24.0	144.6 - 173.5
Front axle final case	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6
Bearing cover	M14 (7T)	132.3 - 137.2	13.5 - 14.0	97.6 - 101.2
Wheel shaft cover	M8 (7T)	53.9 - 68.6	5.5 - 7.0	39.8 - 50.6
Front wheel	M18 (7T)	225.4 - 235.2	23.0 - 24.0	166.3 - 173.5
Bevel gear case	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6
Diff-metal (support)	M10 (7T)	73.5 - 87.2	7.5 - 8.9	9.4 - 13.1
Transmission				
Front transmission - engine	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6
Front transmission - spacer	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6
Space transmission - rear transmission	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6
Input metal (support)	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6
Drive pinion metal (support)	M10 (7T)	53.9 - 68.6	5.5 - 7.0	39.8 - 50.6
Drive pinion				
Diff-case metal (support)	M12	53.9 - 68.6	5.5 - 7.0	39.8 - 50.6
Diff-case ring gear	M12 (7T)	88.2 - 107.9	9.0 - 11.0	65.1 - 79.6

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## Section 1 - General Information Standard Torque Settings

Front Axle Housing and Transmission

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# **Service Consumables**

## **Sealing and Retaining Compounds**

#### Table 2.

Туре	Description	Part No.	Quantity
JCB Multi-Gasket	A medium strength sealant suitable for all sizes of gasket flanges, and for hydraulic fittings of 25-65 mm diameter.	4102/1212	50 ml
JCB High Strength Thread locker	A high strength locking fluid for use with threaded components. Gasketing for all sizes of flange where the strength of the joint is important.	4102/0551	50 ml
JCB Retainer (High Strength)	For all retaining parts which are unlikely to be dismantled.	4101/0651	50 ml
Sealer re	A medium strength locking fluid for sealing and retaining nuts, bolts, and screws up to 50 mm diameter, and for hydraulic fittings up to 25 mm diameter.	4101/0250	10 ml
		4101/0251	50 ml
JCB Thread locker and Sealer (High Strength)	A high strength locking fluid for sealing and retaining nuts, bolts, and screws up to 50 mm diameter, and	4101/0550	10 ml
	for hydraulic fittings up to 25 mm diameter.	4101/0552	200 ml
JCB Threadseal	A medium strength thread sealing compound.	4102/1951	50 ml
JCB Activator	A cleaning primer which speeds the curing rate of anaerobic products.	4104/0251	200 ml (Aerosol)
		4104/0253	1 Itr (Bottle)
JCB Cleaner/Degreaser	For degreasing components prior to use of anaerobic adhesives and sealants.	4104/1557	400 ml (Aerosol)



### Section 1 - General Information Service Consumables

Sealing and Retaining Compounds

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## **Service Tools**

## **Numerical List Section H - Steering**

The tools listed in the table are special tools required for removal and replacement of the steering valve parts.

**Note:** Tools other than those listed will be required. It is expected that such general tools will be available in any well equipped workshop or be available locally from any good tool supplier.

Part Number	Description	Tool Detail Reference
SJ150L9001-01	Holding Tool	⇒ Fig 4. ( 🖰 1-10)
SJ150L4011-01	Assembly Tool for Shaft Seal 17.5 dia.	⇒ Fig 5. ( 🖰 1-10)
SJ150L4012-01	Assembly Tool for Shaft Seal 19.2 dia.	⇒ Fig 6. ( 🖰 1-10)
SJ150L0396-01	Assembly Tool for Dust Seal Ring	⇒ Fig 7. ( 🖰 1-10)
SJ150-9000-25	Pliers for Piston in Relief Valve	⇒ Fig 8. ( 🖰 1-10)
SJ151G9000-1	Fork for fitting Cardan Shaft	⇒ Fig 9. ( 🖰 1-10)

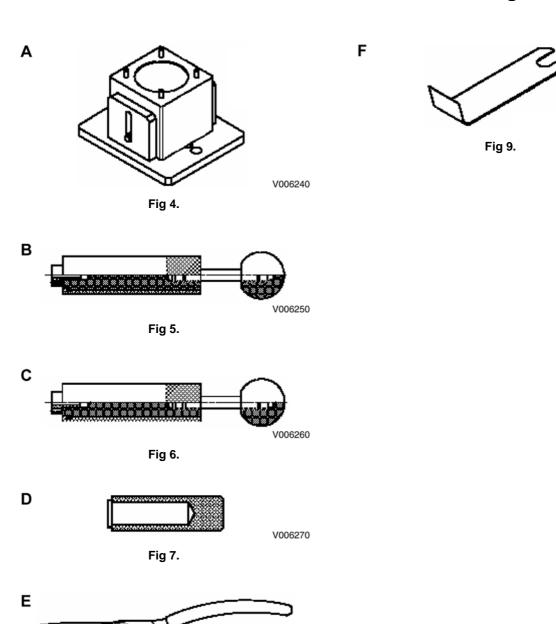
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Tool Detail Reference Section H - Steering

V006290

# **Tool Detail Reference Section H - Steering**



V006280

Fig 8.



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