OPERATOR'S MANUAL



LOADALLS - SIDE ENGINE (TIER 2/3)

9831/6800-3 APRIL 2017
ENGLISH

This manual should always stay with the machine

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Contents **Page No.**

Safety Notices
Important Information 1
The Operator Manual 1
Safety Warnings 1

Introduction
About This Manual 3
Machine Model and Serial Number 3
Using this Manual 3
Left Side, Right Side 3
Cab/Canopy 3
Cross References 3
Machine Description 4
The JCB Loadall 4
Intended Use 4
Component Location 4
Safety Check List 6
Safety - Yours and Others 6
General Safety 6
Operating Safety 8
Maintenance Safety 12
Safety Labels 17
Introduction 17
Safety Label Identification 18
Identifying Your Machine 21
Machine Identification Plate 21
Component Identification Plates 23
Machine Security 28
Introduction 28
JCB Plantguard 28
Construction Equipment Security And Registration Scheme (CESAR) . 28

Operation
Introduction 29
Before Entering the Cab 30
Entering and Leaving the Cab 31
Emergency Exit 32
Doors and Windows 34
Opening and Closing the Door 34
Opening and Closing the Upper Door Section 34
Opening and Closing the Rear Window 35
Visibility Aids 36
Mirrors and Adjustment 36
Seat Controls 40
Introduction 40
Operator Present Switch 40
Seat Options 40
Suspension Seat (KAB 100 Series - Mechanical) 41
Suspension Seat (KAB 100 Series - Air) 42
Suspension Seat (KAB 800 Series - Air) 43
Suspension Seat (Grammer - Air) 44
Seat Belt 46
Inertia Reel Seat Belt 46
Static Seat Belt 47

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Safety Notices

Important Information

T1-042

The Operator Manual

⚠ WARNING

You and others can be killed or seriously injured if you operate or maintain the machine without first studying the Operator Manual. You must understand and follow the instructions in the Operator Manual. If you do not understand anything, ask your employer or JCB dealer to explain it.

INT-1-4-2

Do not operate the machine without an Operator Manual, or if there is anything on the machine you do not understand.

Treat the Operator Manual as part of the machine. Keep it clean and in good condition. Replace the Operator Manual immediately if it is lost, damaged or becomes unreadable.

Safety Warnings



This safety alert system identifies important safety messages in this manual. When you see this symbol, be alert, your safety is involved, carefully read the message that follows, and inform other operators.

In this publication and on the machine, there are safety notices. Each notice starts with a signal word. The signal word meanings are given below.

⚠ DANGER

Denotes an extreme hazard exists. If proper precautions are not taken, it is highly probable that the operator (or others) could be killed or seriously injured.

INT-1-2-1

⚠ WARNING

Denotes a hazard exists. If proper precautions are not taken, the operator (or others) could be killed or seriously injured.

INT-1-2-2

⚠ CAUTION

Denotes a reminder of safety practices. Failure to follow these safety practices could result in injury to the operator (or others) and possible damage to the machine.

INT-1-2-3

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Introduction

About This Manual

Machine Model and Serial Number

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

- 531-70 from SN 1186000
- 533-105 from SN 1186000
- 535-95 from SN 1186000
- 535-125 HiViz from SN 1186000
- 535-140 HiViz from SN 1186000
- 540-140 HiViz from SN 1186000
- 536-60 from SN 1186000
- 536-70 from SN 1186000
- 540-140 from SN 1186000
- 540-170 from SN 1186000
- 540-200 from SN 1186000
- 541-70 from SN 1186000
- 550-80 from SN 1186000

Note: *This manual only applies to the above machines when they are fitted with the JCB Dieselmax Engine (SD, SE and SF Builds only).*

Using this Manual

T1-044

This manual is arranged to give you a good understanding of the machine and its safe operation. It also contains maintenance information and specification data. Read this manual from front to back before using the machine for the first time. Particular attention must be given to all the safety aspects of operating and maintaining the machine.

If there is anything you are not sure about, ask your JCB distributor or employer. Do not guess, you or others could be killed or seriously injured.

General warnings in this chapter are repeated throughout the book, as well as specific warnings. Read all the safety statements regularly, so you do not forget them. Remember that the best operators are the safest operators.

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

This manual contains original instructions, verified by the manufacturer (or their authorised representative).

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.

All optional equipment included in this manual may not be available in all territories.

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.

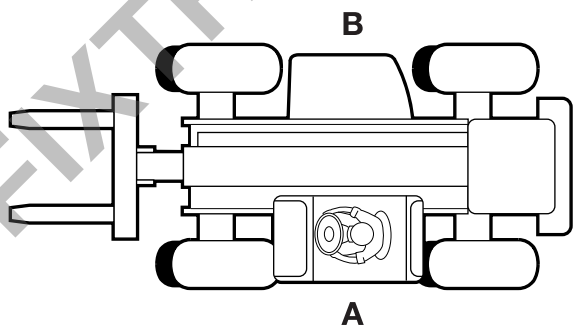


Fig 1.

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 preceeded by the 'go to' symbol. The number of the page upon which the subject begins, is indicated within the brackets. For example: ***⇨ Cross References (3)***.

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Machine Description

The JCB Loadall

P5-1001-2

Self propelled, seated operator, wheeled machine for operation on unimproved natural terrain and disturbed terrain. A main structural support is designed to carry an extending boom with a carriage mounted on the front to which forks or an approved attachment can be fitted.

When used normally the machine lifts and places loads by extending/retracting, raising/lowering the boom.

Intended Use

The machine is intended to be used under normal conditions for the applications described in this manual. If the machine is used for other purposes or in dangerous environments, for example in a flammable atmosphere or in areas with dust containing asbestos, special safety regulations must be followed and the machine must be equipped for use in these environments.

Component Location

Note: *The illustration(s) show a typical machine model; your machine may look different from the model shown.*

1 Boom
2 Carriage
3 ROPS/FOPS Cab
4 Auxiliary Circuit Quick Release Couplings (QRC)
5 Engine Cover
6 Hydraulic Tank
7 Fuel Tank
8 Battery
9 Hydraulic Tow Hitch (Option)
10 Mechanical Tow Hitch (Option)
11 Isolator Key

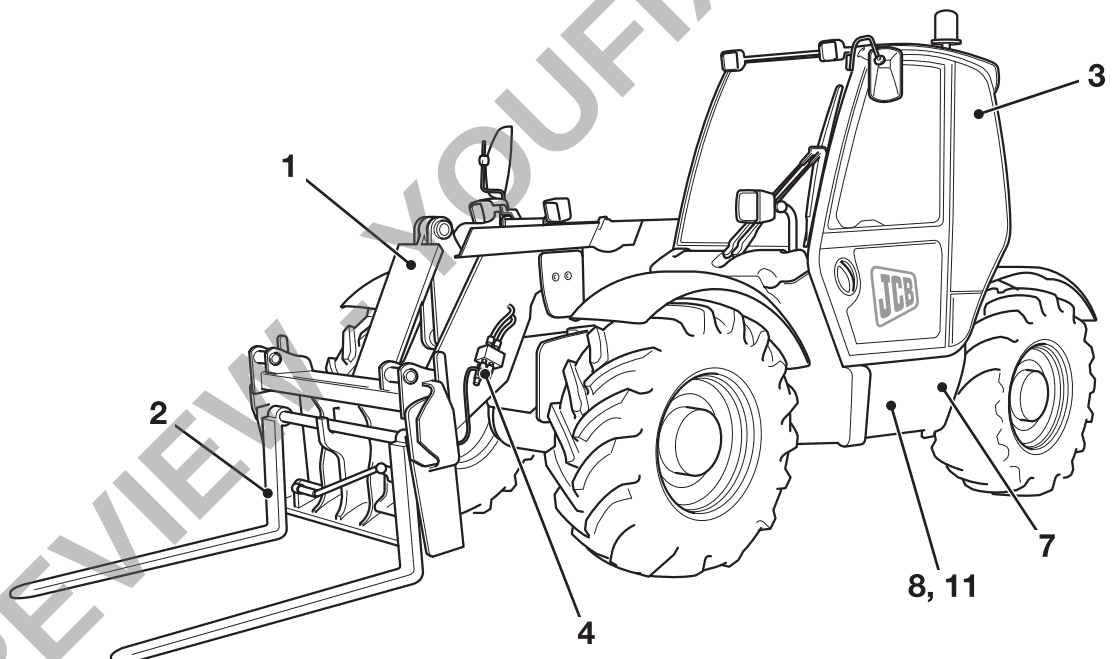


Fig 2.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

LLMI - Diagnostic Fault Codes

P5-2082

⚠ WARNING

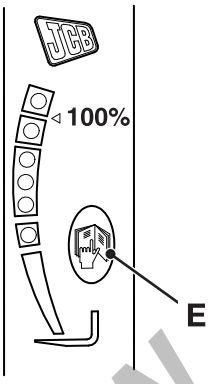
If the unit is faulty, contact your JCB Distributor. Do not try to repair it yourself.

5-2-4-19

If the system detects a fault, the audible alarm will sound and a combination of LEDs illuminate to indicate a fault code for approximately 10 seconds.

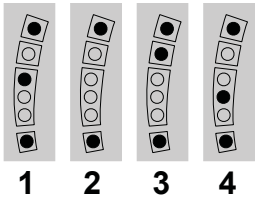
The audible alarm and the fault code display cancel after 10 seconds and all LEDs on the display will flash continuously as long as the fault remains. Press and release display button **E** to show the fault code for a further 10 seconds.

If a fault code is displayed, switch the starter key off and on again. If the fault clears, the display will return to normal. Do not use the machine if the fault does not clear. Stop and park the machine as soon as safety permits. Switch OFF the engine. Contact your JCB distributor.



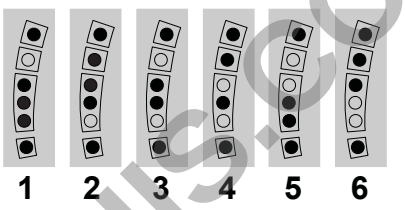
C093810-C2

Fig 108.



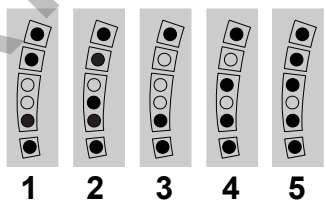
C093940-C1

Fig 109. Calibration Faults



C093940-C2

Fig 110. LLMI Unit Faults



C093940-C3

Fig 111. LLMI External Faults

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Battery

T3-061

⚠ WARNING

Batteries give off an explosive gas. Do not smoke when handling or working on the battery. Keep the battery away from sparks and flames.

Battery electrolyte contains sulphuric acid. It can burn you if it touches your skin or eyes. Wear personal protective equipment (PPE). Handle the battery carefully to prevent spillage. Keep metallic items (watches, rings, zips etc) away from the battery terminals. Such items could short the terminals and burn you.

Set all switches to OFF before disconnecting and connecting the battery. When disconnecting the battery, take off the earth (-) lead first.

Re-charge the battery away from the machine, in a well ventilated area. Switch the charging circuit off before connecting or disconnecting the battery. When you have installed the battery in the machine, wait five minutes before connecting it up.

When reconnecting, fit the positive (+) lead first.

5-3-4-12_2

⚠ CAUTION

Do not disconnect the battery while the engine is running, otherwise the electrical circuits may be damaged.

INT-3-1-14

⚠ WARNING

Electrical Circuits

Understand the electrical circuit before connecting or disconnecting an electrical component. A wrong connection can cause injury and/or damage.

INT-3-1-4

⚠ DANGER

Electrolyte

Battery electrolyte is toxic and corrosive. Do not breathe the gases given off by the battery. Keep the electrolyte away from your clothes, skin, mouth and eyes. Wear personal protective equipment (PPE).

INT-3-2-1_4

⚠ CAUTION

Damaged or spent batteries and any residue from fires or spillage should be put in a closed acid proof receptacle and must be disposed of in accordance with local environmental waste regulations.

INT-3-1-12

⚠ WARNING

Battery Gases

Batteries give off explosive gases. Keep flames and sparks away from the battery. Do not smoke close to the battery. Make sure there is good ventilation in closed areas where batteries are being used or charged. Do not check the battery charge by shorting the terminals with metal; use an approved battery tester.

INT-3-1-8_2

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Storage of the Machine

Introduction

T2-074

If you will not use the machine for an extended period, you must store the machine correctly. If you prepare the machine carefully and apply on-going care you can prevent deterioration and damage to the machine while it is in storage.

Note: *JCB Dealers must check stock monthly.*

Storage Area

The machine can be stored in a temperature range of:

-40°C to 54°C (-40°F to 129°F).

When possible, you must keep the machine in a dry building or shelter.

If only an outdoor storage area is available, look for a storage area with good drainage.

If the machine is to be out of use for an extended period, careful preparation and on-going care will minimise the possibility of deterioration and damage while in storage.

Prepare the Machine for Storage

T2-076

1 Clean the machine to remove all unwanted material and corrosive products.

Dry the machine to remove solvents and moisture.

2 Apply grease to the moving parts. Refer to ***Greasing the Machine***.

3 Examine the machine for worn or damaged parts. Replace if necessary.

4 Fill the fuel tank to prevent a build up of condensation in the tank.

5 Examine the coolant condition. Replace if necessary.

6 Examine all fluid levels. Top up if necessary.

Put the Machine into Storage

T2-077

1 Park the machine on level, solid ground.

Park the machine in a position where the machine is easy to get access (in case the machine does not start at the end of the storage period).

Place suitable timbers under the machine to eliminate direct contact with the ground.

2 Retract all rams and lower the attachments to the ground.

3 Vent the hydraulic system.

4 Remove the starter key.

5 Apply a thin layer of grease or petroleum jelly to all exposed ram piston rods.

6 Remove the battery. Charge the battery.

Keep the battery in warm, dry conditions. Charge the battery periodically.

7 If you keep the machine outdoors, cover the machine with tarpaulins or plastic sheets.

During Storage

T2-078

Operate the machine functions each week to prevent a build up of rust in the engine and hydraulic circuits, and to minimise deterioration of the hydraulic seals.

1 Clean the machine to remove all unwanted material and corrosives.

Remove the grease or petroleum jelly from the ram piston rods.

2 Install a charged battery.

3 Examine all fluid levels. Top up if necessary.

4 Start the engine.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Operation		10	50	100(1)	500	1000	2000	8000
REGISTRATION/CERTIFICATION								
SWL Stickers (UK) and Flip Chart	- Renew as Required	☐	☐	☐	☐	☐	☐	☐

(1) First 100 Hours Service only, to be completed by your JCB Distributor.
(2) If operating under arduous conditions, do an engine oil flush (use the normal recommended engine oil) every 250 hours. Change the engine oil and filter every 250 hours.
(3) The oil service interval will be affected if there is a high sulphur content in the fuel. Refer to Fuel System for more information.
(4) When the engine is operated with 20% biodiesel change the engine oil and filter every 250 hours. Refer to Fuel System for more information.
(5) More frequently if operating in dusty working environments.
(6) If the engine is difficult to start or the engine has poor performance, fit new filters.
(7) Jobs which should only be done by a specialist.
(8) After a major transmission repair, the new oil should be run to operating temperature and changed again to remove any contamination which entered during the repair. Change the oil and filter after a further 100 hours if the oil was heavily contaminated because of, or from the failure (e.g. water contamination).
(9) After a hub repair, the new oil should be run to operating temperature and changed again to remove any contamination which entered during the repair. Change the oil after a further 100 hours to remove any bedding-in wear. This is particularly important if new brake plates have been fitted.
(10) The axles and driveshafts are factory greased with a high performance grease, if during service a standard grease is used, then the interval must be reduced to every 50 hours, contact your JCB Distributor for advice.
(11) Agri, Agri Plus, Agri Super and Agri Xtra models only.
(12) Agri Xtra models only.
(13) Agri, Agri Plus, Agri Super models and 540-170 only.
(14) Not applicable to 550-80 machines.
(15) Not applicable to 540-200 machines.
(16) If operating under arduous conditions, check the boom wear pads every 250 hours.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Fork Mounted Hook

P5-4005

The Fork Mounted Hook allows the Loadall to carry slung loads with safety. It incorporates a swivel hook with a spring-loaded safety catch. This attachment is supplied with test certificates for its fabrication and its hook. Its Safe Working Load is stamped on a plate mounted on the attachment. See ***Working With The Machine*** (OPERATION Section).

Safety

P5-4001

Obey all the safety instructions given in the main part of this book, plus the ones given in this section. Use this attachment only if it carries up to date test certificates.

Installing

1 Space the forks, equally on either side of the machine centreline, so that the mounting sockets **A** can be slid onto them. Fully tighten the fork clamping screws to prevent movement.

2 Install the attachment.

⚠ WARNING

The attachment is heavy. Take care when lifting and handling it.

Use suitable lifting equipment. Make sure the lifting equipment is in good condition. Make sure the lifting equipment complies with all pertinent regulations.

Wear gloves and safety shoes.

4-4-1-5_1

a Remove lynch pin **B** and locking bar **C**.

b Slide the attachment over the forks so that the rear of the attachment butts against the heels of the forks.

c Refit locking bar **C** and secure with lynch pin **B**.

d Ensure both mounting brackets are installed securely.

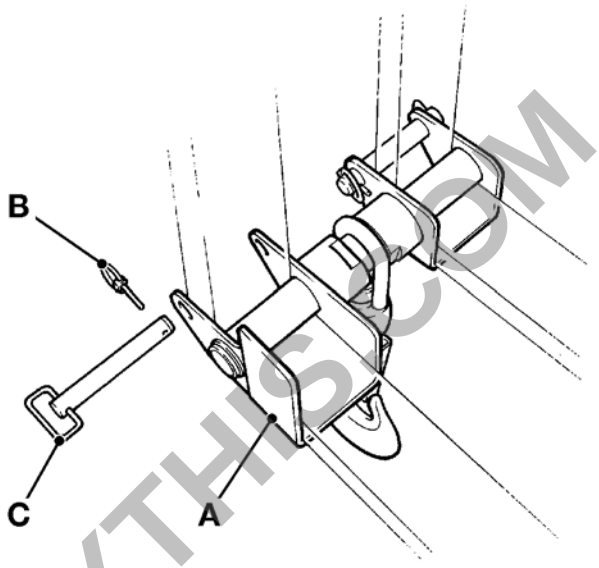


Fig 365.

Removing

1 Lower the attachment so that it just clears the ground. Engage the park brake and stop the engine.

2 Remove the attachment.

⚠ WARNING

The attachment is heavy. Take care when lifting and handling it.

Use suitable lifting equipment. Make sure the lifting equipment is in good condition. Make sure the lifting equipment complies with all pertinent regulations.

Wear gloves and safety shoes.

4-4-1-5_1

a Remove lynch pin **B** and locking bar **C**.

b Carefully slide the attachment off the forks.

c Refit locking bar **C** and secure with lynch pin **B**. Store the attachment carefully to prevent damage and corrosion.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

How to Make the Machine Safe (Boom Lifted)

⚠ WARNING

You could be killed or injured if the boom drops while you are working under it. Fit the boom maintenance strut as instructed before doing any maintenance work with the boom raised.

Keep people away from the machine while you fit or remove the boom maintenance strut.

5-3-1-2_2

⚠ CAUTION

You will have to climb onto the machine to fit or remove the strut. Take care, especially if the machine is wet. Remove mud and oil before climbing onto the machine. Do not use the exhaust as a handhold. It can burn you.

5-3-1-4_1

Note: *If you lift the boom to get access for maintenance, you must install the maintenance strut on the boom.*

Installing the Maintenance Strut

Before fitting the maintenance strut remove any load on the forks and empty buckets or attachments.

1 Park the machine on level, solid ground.

If necessary, refer to ***Stopping and Parking the Machine*** in the Operator Manual.

2 Fully retract the boom (unless it needs to be extended for maintenance). Raise the boom just far enough to install the strut.

3 Stop the engine and remove the starter key.

For 550-80 machines DO NOT remove the starter key. Stop the engine, then turn the starter switch to position 1. ⇒ *Starter Switch (65)*.

4 Remove the strut **A** from its stowage position.

The stowage position for the boom safety strut can vary with machine. ⇒ *Table 15. (202)*.

Table 15.

Model	Stowage Position
531-70, 533-105, 535-95, 536-60, 536-70, 541-70, 550-80	⇒ *Fig 185. (203)*
540-140, 540-170	⇒ *Fig 186. (203)*
535-125 HiViz, 535-140 HiViz, 540-140 HiViz	⇒ *Fig 187. (203)*
540-200	⇒ *Fig 189. (203)*

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Operation

Introduction

T2-006_2

The aim of this part of the manual is to guide the operator step-by-step through the task of learning how to operate the machine efficiently and safely. Read the ***Operation*** section through from beginning to end.

Before you start the machine, you must know how the machine operates. Use your manual to identify each control lever, switch, gauge, button and pedal. Do not guess. If there is anything you do not understand, ask your JCB distributor.

The operator must always be aware of events happening in or around the machine. Safety must always be the most important factor when you operate the machine.

When you understand the operating controls, gauges and switches, practice using them. Drive the machine in an open space, clear of people. Get to know the 'feel' of the machine and its driving controls.

Finally, do not rush the job of learning, make sure you fully understand everything in the ***Operation*** section. Take your time and work efficiently and safely.

Remember

BE CAREFUL
BE ALERT
BE SAFE

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

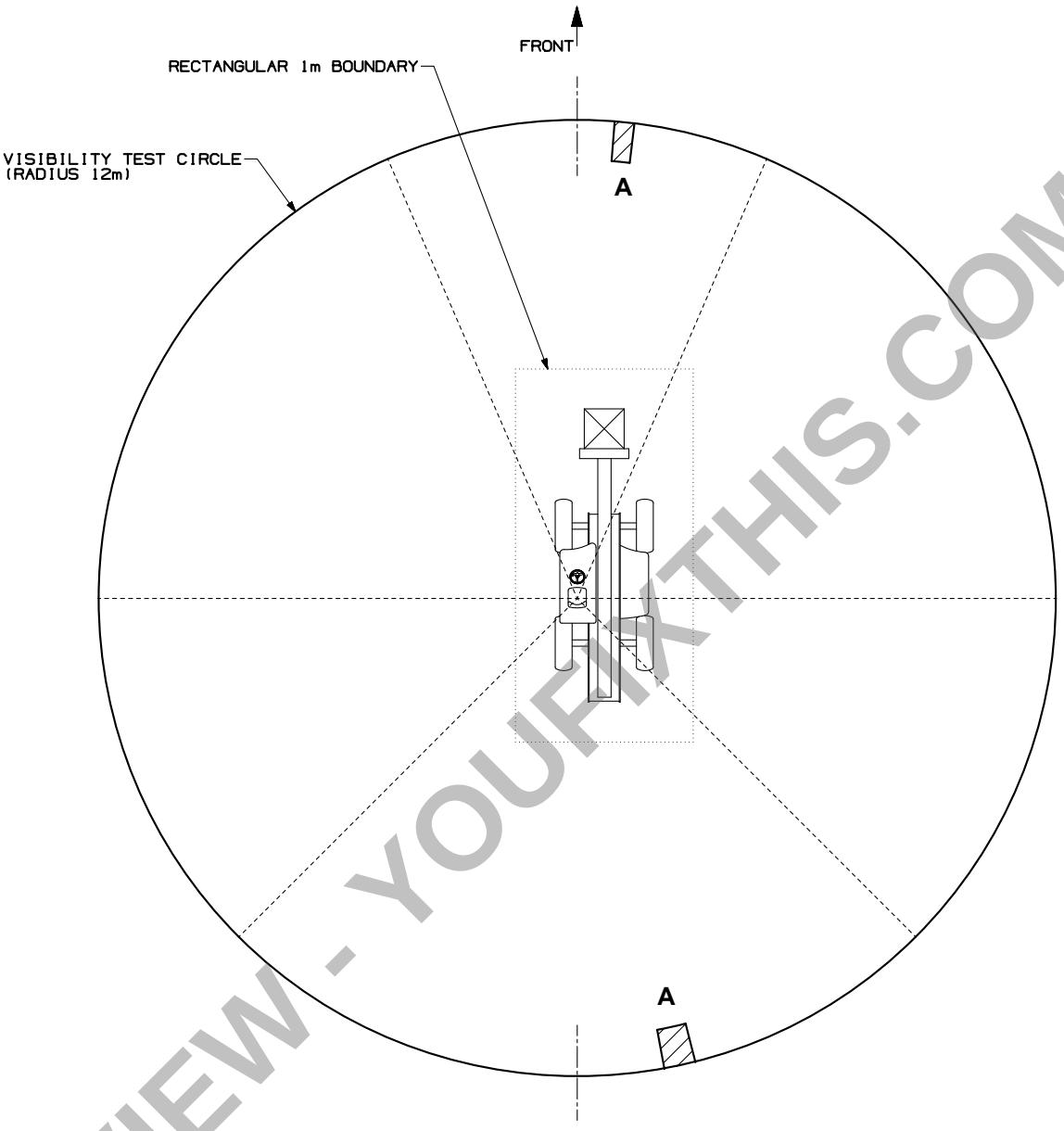


Fig 21. Visibility Masking in Suspended Load Condition - 540-200

Table 3. Identification Key

A	Masking at 12m radius measured at ground level.
B	Masking at 12m radius measured at 0.75m above ground level.
C	Masking at 1m boundary measured between ground level and 1.5m above ground level.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Wheel Nuts

Checking the Wheel Nut Torques

T3-014_3

⚠ WARNING

If, for whatever reason, a wheel stud is renewed, all the studs for that wheel must be changed as a set, since the remaining studs may have been damaged.

2-3-2-8

On new machines, and whenever a wheel has been removed, check the wheel nut torques every two hours until they stay correct.

Every day, before starting work, check that the wheel nuts are tight.

Tighten the wheel nuts (in a diagonal sequence) to the torque value shown.

Table 51.

	Front	Rear
	Nm (lbf ft)	**Nm (lbf ft)**
550-80 Machines	650 (480)	650 (480)
Other Machines	680 (500)	680 (500)

Wheel Nut Torque Indicators (if fitted)

If wheel nut torque indicators **A** are fitted, check each day that they have not moved.

Tighten wheel nuts to specified torque before fitting the torque indicators as shown. ⇨ ***Checking the Wheel Nut Torques (🗋 335)***. Note the torque indicators orientation in relationship to wheel's direction of travel **X**.

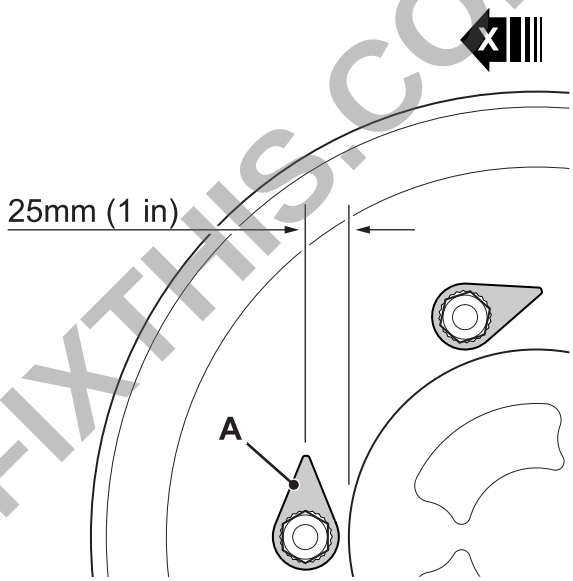


Fig 343.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

tow hitch is correctly aligned with the trailer towing eye.

The helper should not approach the trailer or machine until the machine has been stopped, with the park brake engaged and the engine switched off.

c In certain conditions you may have to drive forward when closing the hitch to prevent the pickup hitch overriding the trailer towing hitch.

7 Operate **Y**/**Z** to raise the hitch. The locking lever **B** will automatically spring back to the engaged position when the hitch is raised.

8 Once the trailer has been engaged, with locking lever **B** secured in position, the machine operator must not start the engine until the helper is clear of the machine and trailer.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Notes:

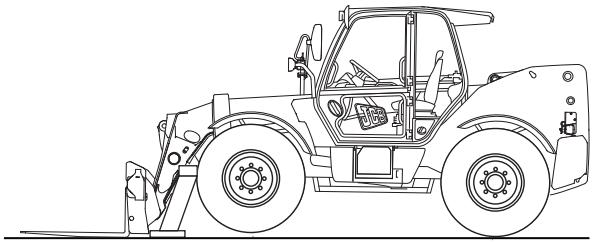
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Immobiliser (if fitted)

There are two different JCB immobiliser systems, one uses a keypad and the other a unique key system.

Note: *If your machine has an immobiliser system installed, then your JCB dealer should enable the system as part of the standard Machine Installation. If you prefer that the system is not enabled, then you must tell your JCB Dealer. Your JCB Dealer can enable the system at a later date. Machines with immobilisers installed should always be parked as the instructions in Stopping and Parking the Machine i.e. Boom and attachment lowered to the ground and, where fitted, stabilisers should also be lowered to the ground.*



T065060

Fig 125.

Keypad Immobiliser System

T2-028_6

To Disarm the Immobiliser to Allow the Machine to be Used

Before attempting to disarm the immobiliser check that the machine is ready to start and that you have your four digit PIN number available.

The green LED will illuminate every time that a keypad button is fully depressed. Do not operate buttons with sharp objects, they may damage and disable the keypad.

If you make an error entering your code and you realise this before pressing the ENT button, then pressing the MD button cancels inputs and allows you to re-commence.

However if the PIN number is incorrectly entered five times the Immobiliser will lock for 15 minutes. In this event it is recommended that you contact the machine owner for confirmation of the PIN number.

The PIN code will have to be entered every time that the ignition is switched off for longer than two minutes.

To Disarm the Immobiliser

1 Insert the starter key and turn the key to position 1.

2 Enter your four digit PIN number using the keypad and then press the ENT button



T023290-2

Fig 126.

The LED ***A*** will illuminate for 3 seconds if the PIN is correct and the machine can be started.

3 If an incorrect PIN is entered the unit will lock. The LED will flash twice rapidly, pause and then flash twice again and will continue this pattern until the starter key is turned off. In this event return to step **1** to try again.

Note: *After five failed attempts the system will lock.*

To Arm the Immobiliser

1 Stop the engine and remove the starter key.

The immobiliser arms automatically after 2 minutes. The red LED **A** flashes for 60 seconds then goes OFF.

Note: *If you restart the engine within 2 minutes, the system disarms automatically.*

To Add a New or Additional PIN Code

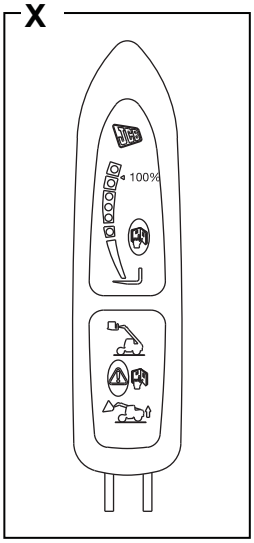
Before attempting to add a new or additional code check that the machine is ready to start and that you have your six digit master code and your new 4 digit PIN number available.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

540-170 with LC4

This specification is only applicable to LC4 machines with the display shown at **X**. To aid identification, refer to the illustration for cab features.



C094300-C15

Fig 262.

1	10A	11	20A
2	10A	12	15A
3	AUX 3A	13	3A
4	20A	14	15A
5	30A	15	20A
6	10A	16	20A
7	3A	17	5A
8	7.5A	18	15A
9	10A	19	10A
10	R 10A	20	R 10A
21	3A	31	30A
22	10A	32	25A
23	5A	33	25A
24	10A	34	A/C 25A
25	10A	35	25A
26	10A	36	15A
27	25A	37	3A
28	7.5A	38	20A
29	10A	39	10A
30	20A	40	3A

817-h5882-2-sheet1F

Fig 263.

Note: *All the fuses are shown (including optional equipment fuses). Your machine may not be equipped with all the fuses shown.*

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 18 of 418 pages

The full manual includes:

- All 418 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

Jcb JCB Dieselmax (SD, SE, SF Builds) Operator Manual

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual