⚠ WARNING

Study This Handbook Before Starting The Machine

You must understand and follow the instructions in this handbook. You must observe all relevant laws and regulations. If you are unsure about anything, ask your JCB distributor or employer. **Do not guess**, you or others could be killed or seriously injured.

INT-1-1-1

⚠ CAUTION

Do not fit an attachment to this machine which is not JCB approved. Consult your JCB distributor before fitting any non approved attachment.

8-4-1-6

In this handbook and on the machine there are safety notices. Each notice starts with a signal word. The meanings of the signal words 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

MACHINE SECURITY

Vandalism and theft of unattended machines is an ever increasing problem and JCB is doing everything possible to help combat this.

JCB PLANTGUARD is a comprehensive package available to help you safeguard your machine. It includes such devices as vandal proof covers, window etching, immobiliser, concealed serial number, battery isolator, Tracker security system and much more.

Remember that the fitting of any one of these security devices will help to minimise not only the damage or loss of your machine but also subsequent lost productivity. It could also result in reduced insurance premiums.

Your JCB Distributor or Dealer will be pleased to provide information on any of these sensible precautions. ACT NOW!

INT-1-2-4

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6 MONTHLY CHECKS - EVERY 500 HOURS (Continued)

Changing the Air Filter Outer Element

⚠ CAUTION

The outer element must be renewed immediately if the warning light on the instrument panel illuminates.
2-3-3-1

Note: Do not attempt to wash or clean the elements - they must only be renewed.

Note: Do not run the engine with the dust valve **J** removed.

Note: Change the outer element more frequently if operating in dusty conditions. A new inner element must be fitted at least every third time the outer element is changed. As a reminder, mark the inner element with a felt tipped pen each time the outer element is changed.

See 2 Yearly Checks - **Changing the Air Filter Inner Element**.

1 Stop the engine.

2 Clean the Pre-Cleaner (if fitted). See Daily Checks - **Cleaning the Pre-Cleaner** .

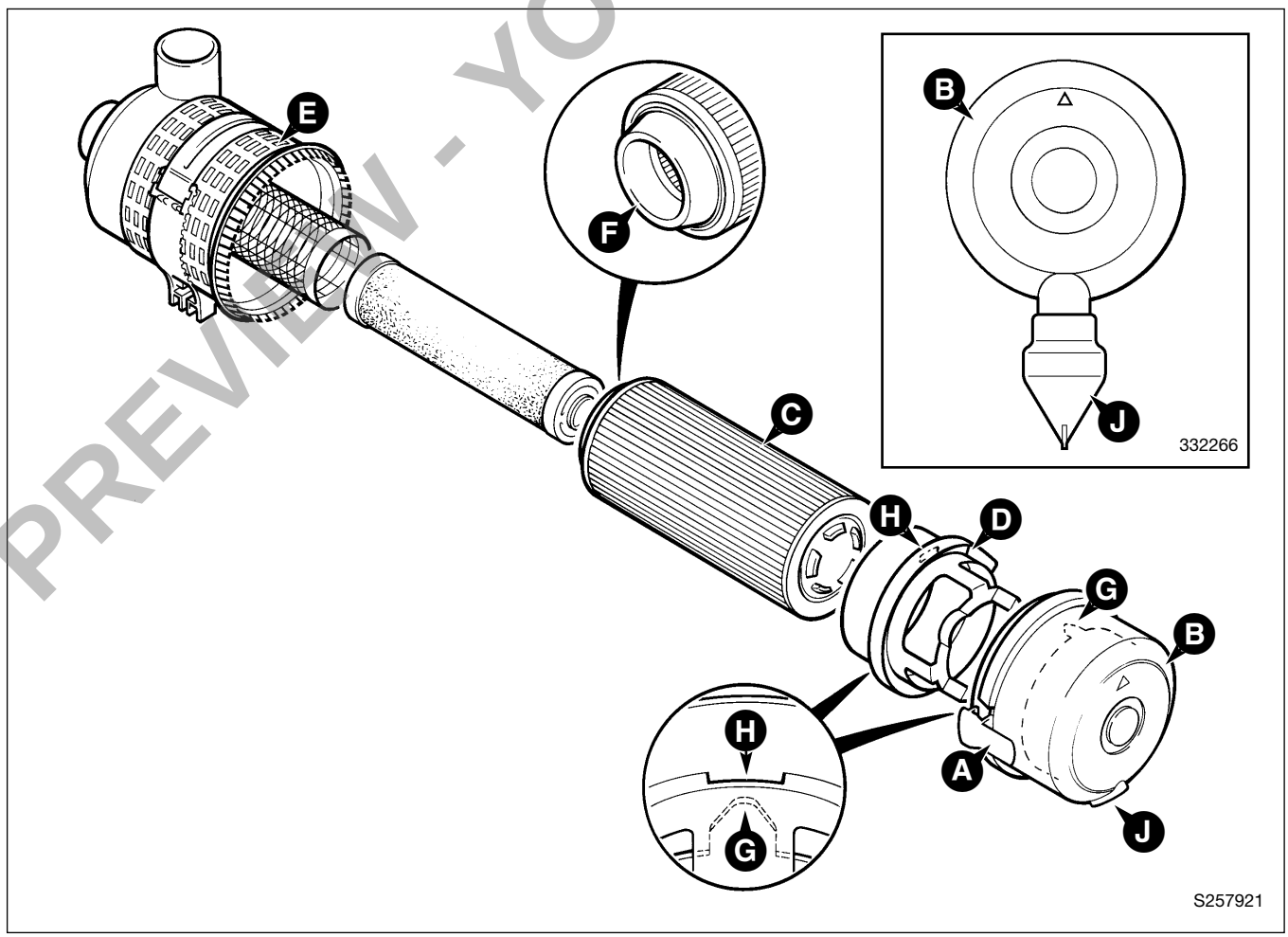
3 Press clips **A** and lift off cover **B**. Remove outer element **C**. Take care not to tap or knock the element.

4 Remove pulsation ring **D**. Clean the inside of cover **B** and canister **E**.

5 Insert a new element into the canister, check seal **F** is fully seated. Fit the pulsation ring **D**, make sure tongue **G** fits into slot **H**. Fit cover **B** with dust valve **J** at the bottom. Push the cover firmly into position and make sure it is secured by clips **A**.

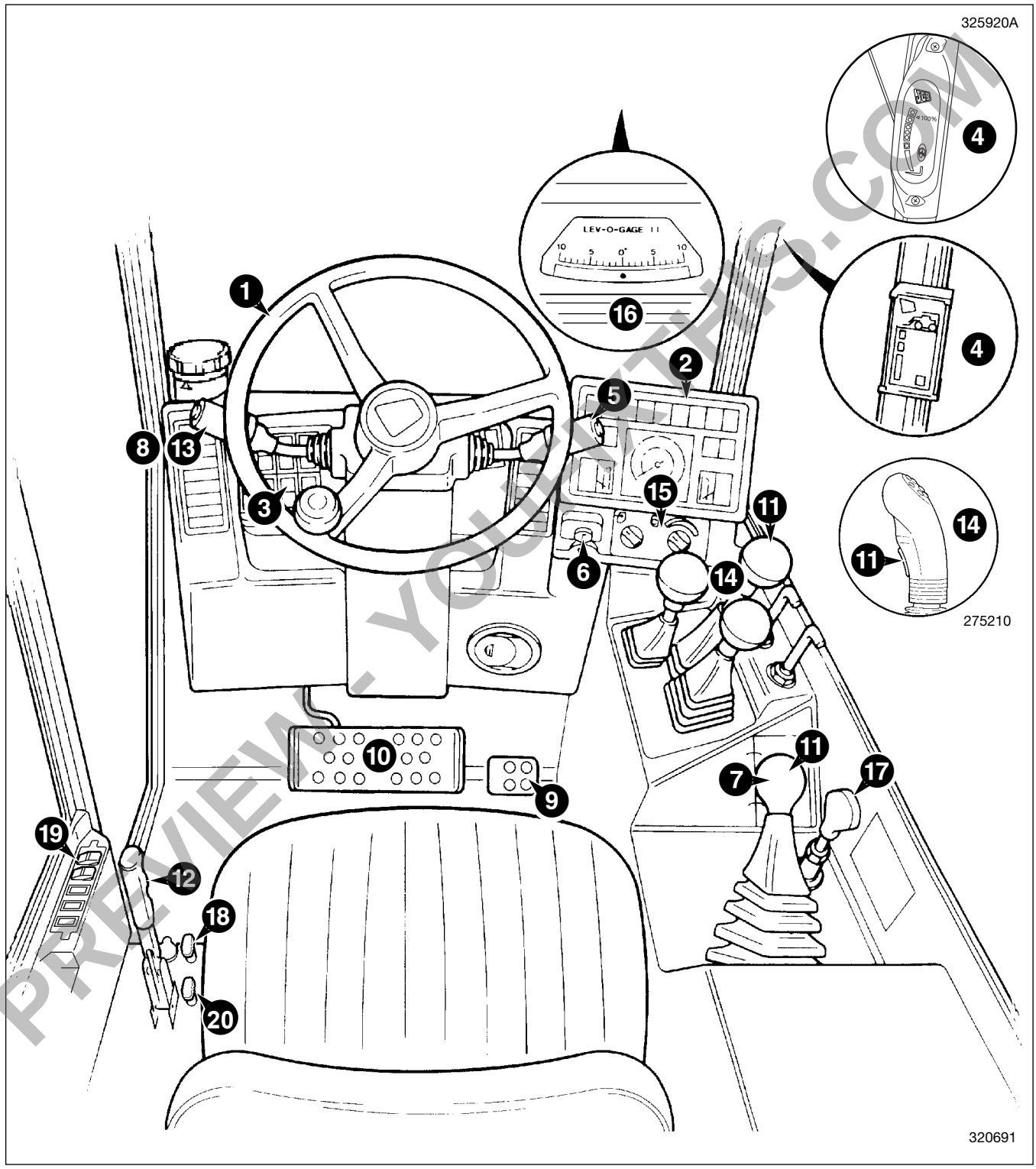
6 Make sure that the wire is connected to the **Air Filter Blocked** switch.

7 Check all hoses for condition and tightness.



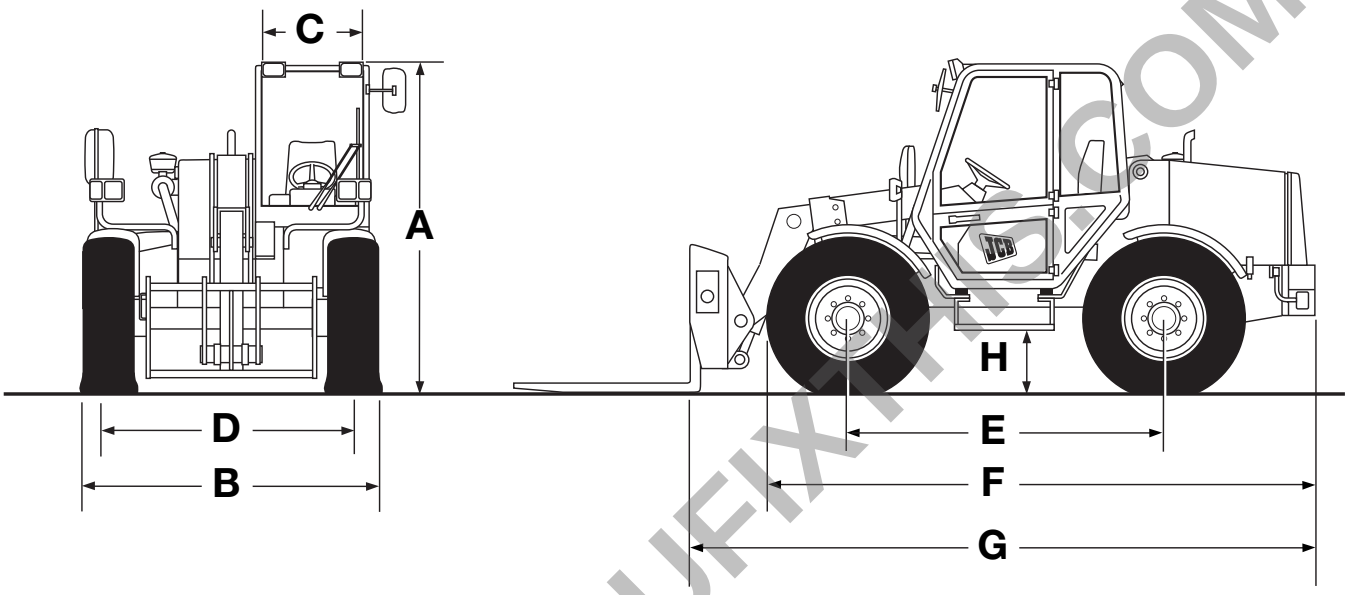
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CAB LAYOUT AND CONTROLS



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STATIC DIMENSIONS
528-70 & 528S



	DESCRIPTION	DIMENSION 528-70	DIMENSION 528S
A	Overall height	8 ft 11 in (2.46 m)	8 ft 11 in (2.46 m)
B	Overall width	7 ft 6 in (2.29 m)	7ft 7 in (2.31 m)
C	Inside width of cab	2 ft 11 in (0.88 m)	2 ft 11 in (0.88 m)
D	Front track	6 ft 2 in (1.88 m)	6 ft 2 in (1.88 m)
E	Wheelbase	8 ft 10 in (2.70 m)	8 ft 10 in (2.70 m)
F	Overall length to front tyres	14 ft 7 in (4.45 m)	14 ft 7 in (4.45 m)
G	Overall length to front of Q-Fit carriage	16 ft 11 in (5.15 m)	16 ft 11 in (5.15 m)
H	Ground clearance	1 ft 7 in (0.48 m)	1 ft 7 in (0.48 m)
	Weight (unladen)	13800 lb (6260 kg)	14575 lb (6610 kg)
	Turn radius over tyres (4WS)	11 ft 9 in (3.58 m)	TBA

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SERVICE SCHEDULES (continued)

Pre-start Cold Checks Service Points and Fluid Levels	Operation	Daily 10 Hr	Weekly 50 Hr	First 100 Hr	6 Monthly 500 Hr	Yearly 1000 Hr	2 Yearly 2000 Hr
ENGINE							
Oil Level and Condition	Check	•	•	•	•	•	•
Oil and Filter	(1) Change			•	•	•	•
Air Filter Pre-cleaner	Blow out/Clean	•	•	•	•	•	•
Air Filter Dust Valve	Clean			•	•	•	•
Air Filter Outer Element	Blow out/Clean		•	•	•	•	•
Air Filter Outer Element	Change				•	•	•
Air Filter Inner Element	Change						•
Fuel System For Leaks and Contamination	Check	•	•	•	•	•	•
Fuel Filter	Drain		•	•	•	•	•
Fuel Filter	Change			•	•	•	•
Coolant Level and Antifreeze Strength	Check	•	•	•	•	•	•
Coolant	Change						•
Fuel Sedimenter	Drain and clean		•	•	•	•	•
Fan Belt Tension/Condition	Check			•	•	•	•
Valve Clearances	*Check and Adjust					•	
Engine Mount Security	Check			•	•	•	•
Radiator	Clean				•	•	•
TRANSMISSION AND AXLES							
Transmission Oil Level	Check	•	•	•	•		
Transmission Oil	(2) Change					•	•
Transmission Oil Filter	Change			•	•	•	•
Axle(s) Oil Level	Check		•	•			
Axle(s) Oil	Change				•	•	•
Hub Oil Level	Check		•				
Hub Oil	(3) Change			•	•	•	•
Drive Shafts and Universal Joints	Security/Grease			•	•	•	•
Axle Pivots and Linkages	Grease		•	•	•	•	•
Axle Breather(s)	Check			•	•	•	•
Tyre Pressures/Condition	Check	•	•	•	•	•	•
Hub Wheel Bearings	Check			•	•	•	•
Transmission Strainer	Clean					•	•
Wheel Nut Security	Check	•	•	•	•	•	•
Wheel Alignment	Check	•	•		•	•	•
Trunnion Bearings	*Check/Adjust			•	•	•	•
Steering Stops (if fitted)	Security			•	•	•	•
Transmission Mount Security	Check			•			
Axle Mount Security	Check			•			

(1) In arduous conditions (eg. refuse re-handling, waste paper reclamation etc.) change the oil and filter after every **250 Hours** or three months (whichever comes first).

(2) 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 (eg. water contamination).

(3) After a hub repair, the new oil should be run to temperature and changed again to remove any contamination which entered during the repair. Change the oil again after a further 100 hours to remove any bedding-in wear. This is particularly important if new brake plates have been fitted.

Note: Jobs which should be done by a specialist are shown by *.
First 100 hrs service only to be completed by JCB Distributor

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DAILY CHECKS - EVERY 10 HOURS (Continued)

Tyres And Wheels

⚠ WARNING

Over-inflated or overheated tyres can explode. Do not cut or weld the rims. Get a tyre/wheel specialist to do any repair work.
5-3-2-4

Tyre Inflation

These instructions are for adding air to a tyre which is already inflated. If the tyre has lost all its air pressure, call in a qualified tyre mechanic. The tyre mechanic should use a tyre inflation cage and the correct equipment to do the job.

1 Before you add air to the tyre, make sure it is correctly fitted on the machine or installed in a tyre inflation cage.

2 Use only an air supply system which includes a pressure regulator. Set the regulator no higher than 1.38 bar (20 lbf/in^2) above the recommended tyre pressure. See the chart at the end of MAINTENANCE section for recommended tyres and pressures for your machine. The tyre pressures are also given on the Flip Chart mounted on the instrument panel.

Use an air hose fitted with a self-locking air chuck and remote shut-off valve.

3 Make sure that the air hose is correctly connected to the tyre valve. Clear other people from the area. Stand behind the tread of the tyre while adding the air.

Inflate the tyre to the recommended pressure. Do not over-inflate.

Checking Roadwheel Tightness

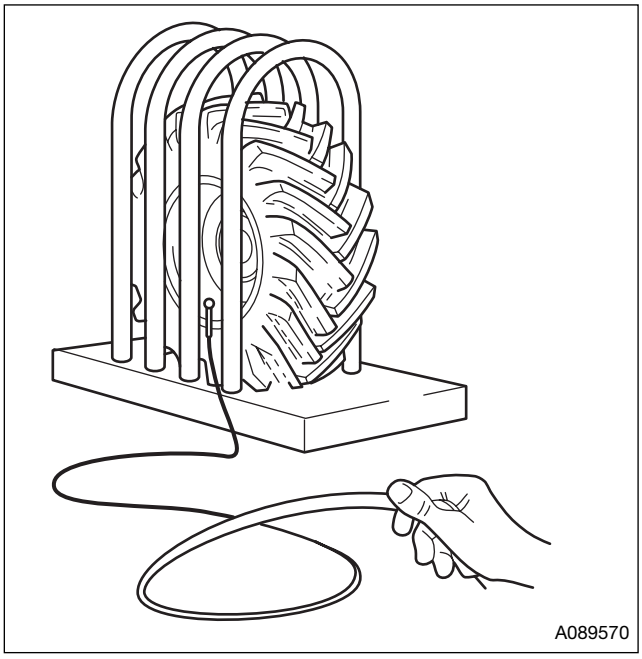
On new machines, and whenever a wheel has been removed, check the wheel nut torques every two hours until they stay correct.

Every day, before starting work, check that the wheel nuts are tight. The correct torques are shown in the table below.

	Front		Rear	
	Nm	lbf ft	Nm	lbf ft
528	680	500	680	500

⚠ WARNING

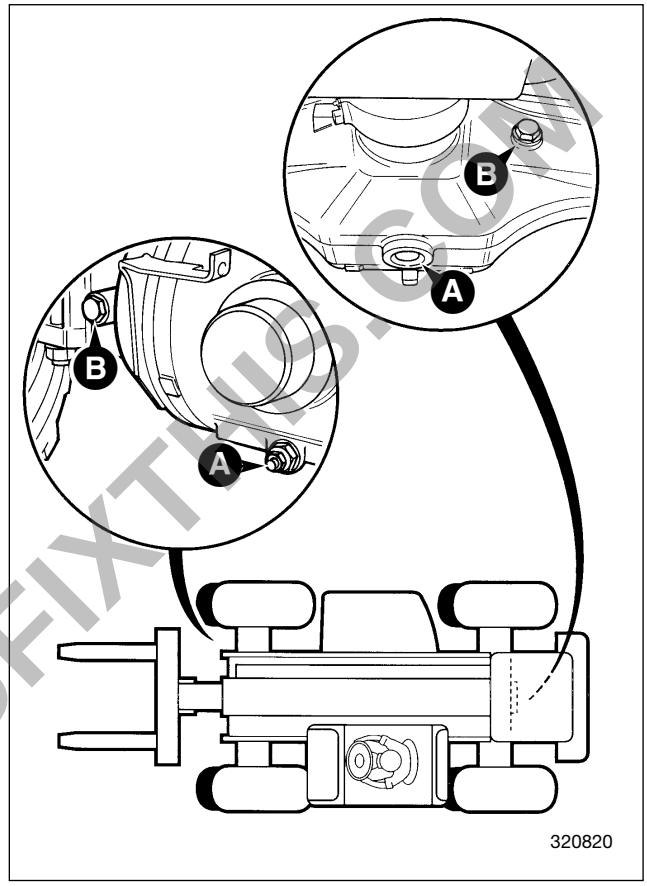
If, for whatever reason, a wheel stud is renewed, all the studs for that wheel must be changed as a set, since the remaining studs may have been damaged.
2-3-2-8



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6 MONTHLY CHECKS - EVERY 500 HOURS (Continued)

Changing the Axle Oil



1 Park the Machine on Level Ground. Engage the parking brake. Lower the attachments to the ground. Stop the engine. Remove the starter key. Disconnect the battery.

2 Drain the Oil:

- **a** Place a container of suitable size beneath plug **A**. See the chart at the end of this section for capacity.
- **b** Remove plug **A** and its washer. Allow the oil to drain out. Wipe the plug clean.
- **c** Fit plug **A** and its washer.

⚠ CAUTION

Oil will gush from the hole when the drain plug is removed. Keep to one side when you remove the plug.

2-3-4-2

3 Fill with recommended oil through fill/level hole **B**. See the chart at the end of this section. Clean the plug before refitting it.

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WORKING WITH THE MACHINE (continued)

Handling Palleted Loads

⚠ CAUTION

Load and unload on firm, level ground. Always be alert for possible hazards. Take special care when turning or reversing.
5-2-4-7

⚠ WARNING

Make sure you know the weight of the load before lifting or placing it.

Do not exceed the Safe Working Load of your machine. Do not angle or extend the boom outside the limits shown on the Load Charts in the cab. See **Using the Load Charts and Boom Indicators** (in OPERATION section).
5-2-4-8

Loading

1 Space the forks as wide as possible to suit the load. Tighten the fork clamping screws **A**.

2 Put the forks in the horizontal position. Fully retract the boom.

3 Approach the load on centre, with all wheels straight. Stop the machine, leaving enough room to manoeuvre the boom. Engage the parking brake. Put the transmission in neutral.

Note: If the load is on a high platform you may have to raise the boom to allow you to get the machine close enough to the load.

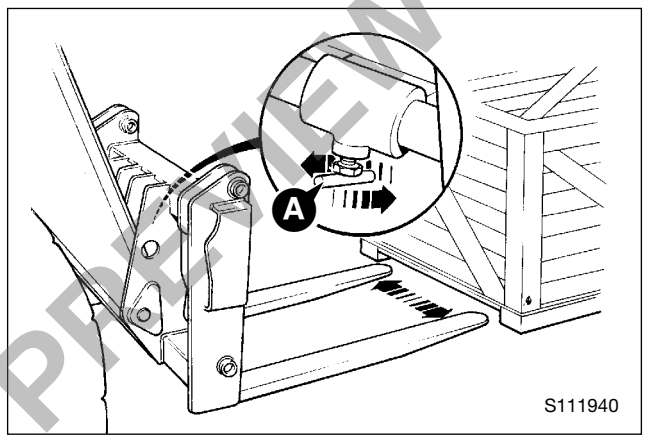
4 Extend the boom, or drive the machine, to insert the forks under the load. Stop when the carriage just touches the load. Check the boom extension/angle, make sure they are in limits.

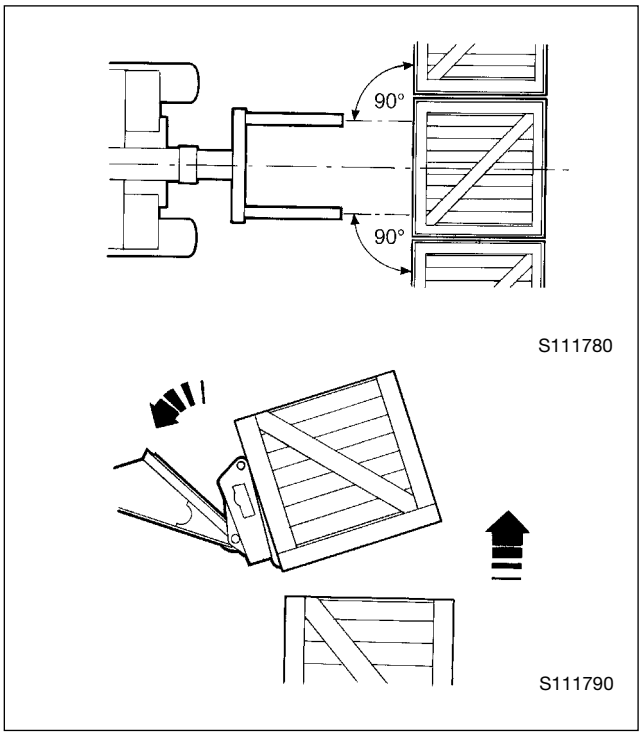
⚠ WARNING

If the machine starts to feel unstable when you begin lifting the load, lower the load immediately.
5-2-4-9

5 Raise the load slightly. Tilt the carriage back. Retract the boom fully and lower it into the travel position.

6 Carefully drive the machine to the unloading point.





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REGISTRATION INFORMATION (Do not remove this portion from the Handbook)

Issue 3 February 2000
English

P.I.N/Machine Serial Number ☐☐☐☐☐☐☐☐

V.I.N. S L P ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Vehicle Registration Number ☐☐☐☐☐☐☐

Registration Date .....

JCB Model .....

Eng. Ser. No. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Dealer .....

Installing Engineer .....

Signature .....

DEALERS COPY

Do NOT send back to JCB SERVICE

Dealer .....

JCB Model .....

P.I.N/Machine Serial Number ☐☐☐☐☐☐☐☐

V.I.N. S L P ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Vehicle Registration Number ☐☐☐☐☐☐☐☐

Engine Serial Number ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Customer's Name .....

Address .....

.....

.....**Postcode** .....

Registration Date .....

Installing Engineer .....

P.D.I. Date .....

Owner's Plant Reference No. .....

ALPHA • DOT SECURITY SYSTEM - YES/NO

✓ **Please send details of:**

"JCB Assetcare Machinery Protection Plan" ☐

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A COPY OF THE REGISTRATION DETAILS TO BE SENT DIRECT TO:-

THE EQUIPMENT REGISTER LTD. (T.E.R.),
BATH & WEST BUILDINGS
LOWER BRISTOL ROAD
BATH
BA2 3EG

Tel: 01225 464599 (24 Hour) Fax: 01225 317698

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TOWING A MACHINE

Do not tow a machine unless there is no alternative. Remember that more damage might be caused to the machine by towing it. If at all possible repair the machine where it stands.

⚠ CAUTION

Towing a machine too far or too fast can damage the transmission. Do not tow the machine further than one mile. Use a trailer for greater distances. When towing do not travel faster than 25 km/h (15 mph).

Use a rigid drawbar. If you must use towing chains, then use two towing vehicles. One towing vehicle should be coupled to the front of the disabled machine. The other towing vehicle should be coupled to the rear of the disabled machine, to provide braking power.

The towing vehicle(s) must have enough pulling and braking power to move and stop the machine.
2-2-7-3

Preparation for Towing

1 Set the gear lever to neutral.

2 Prepare the machine for travel. See **Preparing For Road Travel** (OPERATION section).

If the engine cannot be run, the boom may have to be hoisted into the transport position and secured. The procedure for doing this will depend on the machine's condition and its hydraulic circuits.

For this reason you should contact your JCB distributor for help and advice before attempting this work.

3 Attach the drawbar to the front lifting eyes.

The machine is now ready for towing. If you will be steering the Loadall, make sure you understand what the towing driver will be doing. Obey his instructions and all relevant regulations.

Remember that the steering will be heavier if the engine is not running.

TRANSPORTING THE MACHINE

The safe transit of the load is the responsibility of the transport contractor and driver. Any machine, attachments or parts that may move during transit must be adequately secured.
5-2-5-9

Note: Before transporting the machine make sure you will be obeying the rules and laws of all the areas that the machine will be carried through.

Make sure that the transporting vehicle is suitable. See SPECIFICATION section for the dimensions and weight of your machine.

⚠ WARNING

Before moving the machine onto the trailer, make sure that the trailer and ramp are free from oil, grease and ice. Remove oil, grease and ice from the machine tyres. Make sure the machine will not foul on the ramp angle. See SPECIFICATION **section for the minimum ground clearance for your machine.**
2-2-7-5

1 Chock the Transporter Wheels. Place chocks at the front and rear of the trailer wheels.

Note: Before moving the machine on the trailer, make sure that the machine will not foul on the ramp/trailer angle. See SPECIFICATION section for your machine's ground clearance.

2 Move the Machine Onto the Trailer:

- **a** Make sure the ramps are correctly in place and secure.
- **b** Set the boom as in **Preparing For Road Travel** (OPERATION section).
- **c** Carefully drive the machine onto the trailer.
- **d** When the machine is safely in position, engage the parking brake and set the drive to neutral.
- **e** Lower the carriage onto the trailer.
- **f** Check that the overall height of the load is within regulations. Adjust if necessary.
- **g** Switch off the engine.
- **h** Secure the cab.
- **i** Cover the exhaust stack.

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SERVICE REQUIREMENTS

Introduction

Your machine has been designed and built to give maximum performance, economy and ease of use under a wide variety of operating conditions. Prior to delivery, your machine was inspected both at the Factory and by your Distributor to ensure that it reaches you in optimum condition. To maintain this condition and ensure trouble free operation it is important that the routine services, as specified in this Handbook, are carried out by an approved JCB Distributor at the recommended intervals.

Maintenance

This section of the Handbook gives full details of the service requirements necessary to maintain your JCB machine at peak efficiency.

To further protect your machine's performance it is essential your JCB Distributor carries out an initial service and inspection when the machine is one month old or when it has completed 100 hours of operation (whichever occurs first). You should notify your Distributor in advance to allow the necessary arrangements to be made.

JCB regularly updates its Distributors advising them of any product developments, changes in specifications and procedures. Therefore only a JCB Distributor is fully able to maintain and service your machine.

At the rear of this Handbook is a Service Record Sheet which will enable you to plan your service requirements and keep a service history record. This record sheet should be dated, signed and stamped by your Distributor each time your machine is serviced.

Remember, if your machine has been correctly maintained, not only will it give you improved reliability but its resale value will be greatly enhanced.

Owner/Operator Support

JCB together with your Distributor wants you to be completely satisfied with your new JCB machine. If you do encounter a problem however, you should contact your Distributor's Service Department which is there to help you!

You will have been given the names of the relevant service contacts at your Distributor when the machine was installed.

To get the most from your Distributor please help the staff to satisfy you by:

1 Giving your name, address and telephone number.

2 Quoting your machine model and serial number.

3 Date of purchase and hours of work.

4 Nature of the problem.

Remember, only your JCB Distributor has access to the vast resources available at JCB to help support you. In addition, your Distributor is able to offer a variety of programmes covering Warranty, Fixed Price Servicing, Safety Inspections, including weight tests, covering both legal and insurance requirements:

Service/Maintenance Agreements

To help plan and spread the costs of maintaining your machine, we strongly recommend you take advantage of the many Service and Maintenance Agreements your Distributor can offer. These can be tailor made to meet your operating conditions, work schedule etc.

Please consult your JCB Distributor for details.

SERVICE SCHEDULES

A badly maintained machine is a danger to the operator and the people working around him. Make sure that the regular maintenance and lubrication jobs listed in the service schedules are done to keep the machine in a safe and efficient working condition.

Apart from the daily jobs, the schedules are based on machine running hours. Keep a regular check on the hourmeter readings to correctly gauge service intervals. Do not use a machine which is due for a service. Make sure any defects found during the regular maintenance checks are rectified immediately.

⚠ WARNING

Maintenance must be done by suitably qualified personnel. If it is necessary to work with the boom raised, then the boom safety strut must be installed. See **Boom Safety Strut** (MAINTENANCE section).
5-3-1-1

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SERVICE RECORD SHEET

REGISTRATION INFORMATION

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