Dear JCB Customer

Even if you have operated this type of equipment before, it is very important that your new machines operations and functions are explained to you by a JCB Dealer Representative following delivery of your new machine.

Following the installation you will know how to gain maximum productivity and performance from your new product.

Please contact your local JCB dealer if the Installation Form has not yet been completed with you.

Your Local JCB Dealer is:

# OPERATOR MANUAL

**THIS MANUAL SHOULD ALWAYS STAY WITH THE MACHINE**

RTFL - 926, 930, 940

ENGLISH - 9811/0860 - ISSUE 6 - SEPT 09

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# 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, carefuly 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

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# 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

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# Cab Layout

***Note:*** *The cab layout illustration is of a typical machine, for variations see the relevant page in this manual.*

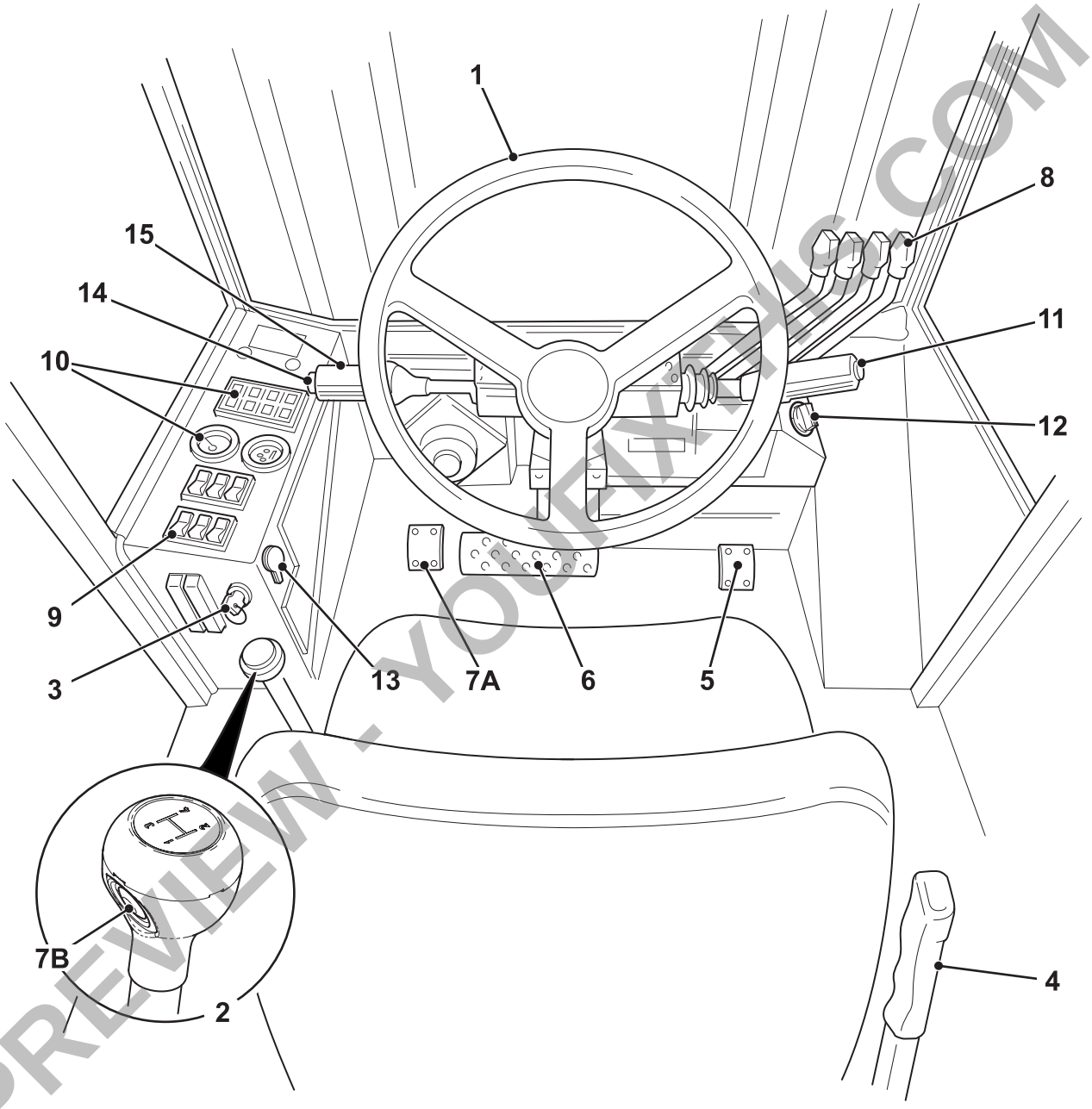



**Fig 9.**

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# Operating Environment

## Introduction

T2-044

The machine can operate in a temperature range of:

-20°C to 46°C (-4°F to 115°F).

## Operating in Low Temperatures

T3-069

In low temperature situations, take the following precautions. They will make for easier starting and prevent possible damage to your machine.

**1** Use the correct viscosity engine lubricating oil.

**2** If available use a low temperature diesel fuel.

**3** Use the correct coolant mixture.

**4** Keep the battery at full charge.

**5** Fill the fuel tank at the end of each work period. This will help to prevent condensation forming on the tank walls.

**6** Protect the machine when not in use. Park the machine inside a building or cover it with a tarpaulin.

**7** Install a cold weather starting aid. In very low temperatures, -18°C (0°F) and below, additional starting aids may be needed. Examples are fuel, oil and coolant heaters. Ask your JCB distributor for advice.

***Important:*** *Do not connect two batteries in series to give 24 volts for starting. This could burn out the induction manifold heater and starter motor.*

**8** Remove snow from the engine compartment before starting otherwise snow could get into the air filter.

## Operating in High Temperatures

T3-070

In high temperature situations, take the following precautions to prevent possible damage to the machine.

**1** Use the correct viscosity engine lubricating oil.

**2** Use the correct coolant mixture.

**3** Check the coolant system regularly, keep the coolant at the correct level. Make sure there are no leaks.

**4** Keep the radiator/oil cooler clean, regularly remove dirt and debris from the radiator/oil cooler and the engine.

**5** Check the fan belt regularly.

**6** Check the air vents. Make sure that the air vents to and from the engine compartment are not blocked.

**7** Check the engine pre-cleaner regularly (if fitted).

**8** Check the battery electrolyte level.

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## Pre-start Cold Checks, Service Points and Fluid Levels

| | Operation | 10 | 50 | (1)100 | 500 | 1000 | 2000 | 6000 |
|---|---|---|---|---|---|---|---|---|
| **ENGINE** | | | | | | | | |
| Coolant Quality and Level | - Check | ☐ | ☐ | ☐ | ☐ | ☐ | | |
| Cooling System | - Drain and Refill | | | | | | ☐ | ☐ |
| Oil level | - Check | ☐ | ☐ | | | | | |
| Oil and Filter(2)(3) | - Change | | | | ☐ | ☐ | ☐ | ☐ |
| Air Cleaner Dust Valve(4) | - Change | | | | ☐ | ☐ | ☐ | ☐ |
| Air Cleaner Outer Element(4) | - Change | | | | ☐ | ☐ | ☐ | ☐ |
| Air Cleaner Inner Element(4) | - Change | | | | | | ☐ | ☐ |
| Pre-Cleaner (if fitted) | - Check | | | ☐ | | | | |
| Water Separator and Engine Fuel Filter | - Drain | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| Water Separator Fuel Filter(5) | - Change | | | | ☐ | ☐ | ☐ | ☐ |
| Engine Fuel Filter | - Change | | | | | ☐ | ☐ | ☐ |
| Front End Accessory Drive (FEAD) Belt Condition | - Check | | | | ☐ | ☐ | ☐ | ☐ |
| Front End Accessory Drive (FEAD) Belt | - Change | | | | | | | ☐ |
| Engine Mounting Bolts for Tightness | - Check | | | ☐ | ☐ | ☐ | ☐ | ☐ |
| All Hoses - Condition | - Check | | | ☐ | ☐ | ☐ | ☐ | ☐ |
| Radiator(4) | - Clean | | | | ☐ | ☐ | ☐ | ☐ |
| Breather Gauze | - Clean | | | | | | ☐ | ☐ |
| Valve Clearances(6) | - Check and Adjust | | | | | | ☐ | ☐ |
| Oil Filler and Dipstick Seals(6) | - Check and Adjust | | | | | | ☐ | ☐ |
| Rocker Cover and Injector Seals(6) | - Change | | | | | | ☐ | ☐ |
| Injectors(6) | - Change | | | | | | | ☐ |
| Injector(s) Leak Off Rail(6) | - Change | | | | | | | ☐ |
| High Pressure Fuel Lines(6) | - Inspect | | | | | | | ☐ |
| **TRANSMISSION, AXLES AND STEERING** | | | | | | | | |
| Transmission Oil Level | - Check | ☐ | ☐ | ☐ | ☐ | | | |
| Transmission Oil(7) | - Change | | | | | ☐ | ☐ | ☐ |
| Transmission Filter | - Change | | | ☐ | ☐ | ☐ | ☐ | ☐ |
| Transmission Strainer | - Clean | | | | | ☐ | ☐ | ☐ |
| Front Axle Oil Level | - Check | | | ☐ | ☐ | | | |
| Front Axle Oil | - Change | | | | | ☐ | ☐ | ☐ |
| Rear Axle Differential Oil Level (4WD) | - Check | | | ☐ | ☐ | | | |
| Rear Axle Differential Oil (4WD) | - Change | | | | | ☐ | ☐ | ☐ |
| Rear Axle Hub Oil Level (4WD) | - Check | | | ☐ | ☐ | | | |
| Rear Axle Hub Oil (4WD) | - Change | | | | | ☐ | ☐ | ☐ |

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### Mast Tilt Rams and Pivots

6 grease points.

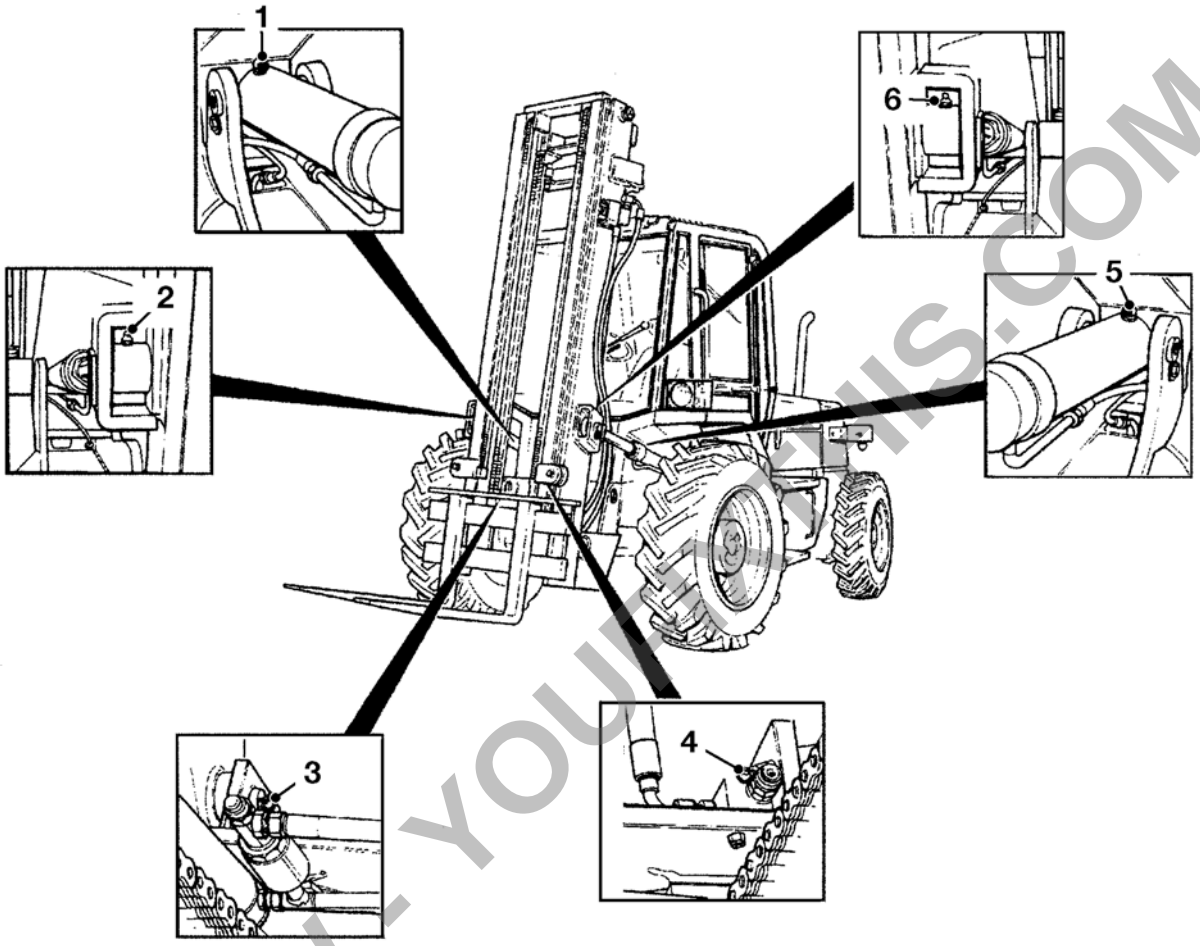



**Fig 12.**

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# Prepare the Machine for Maintenance

## Introduction

**⚠ WARNING**

**Maintenance must be done only by suitably qualified and competent persons.**

**Before doing any maintenance make sure the machine is safe, it should be correctly parked on level ground.**

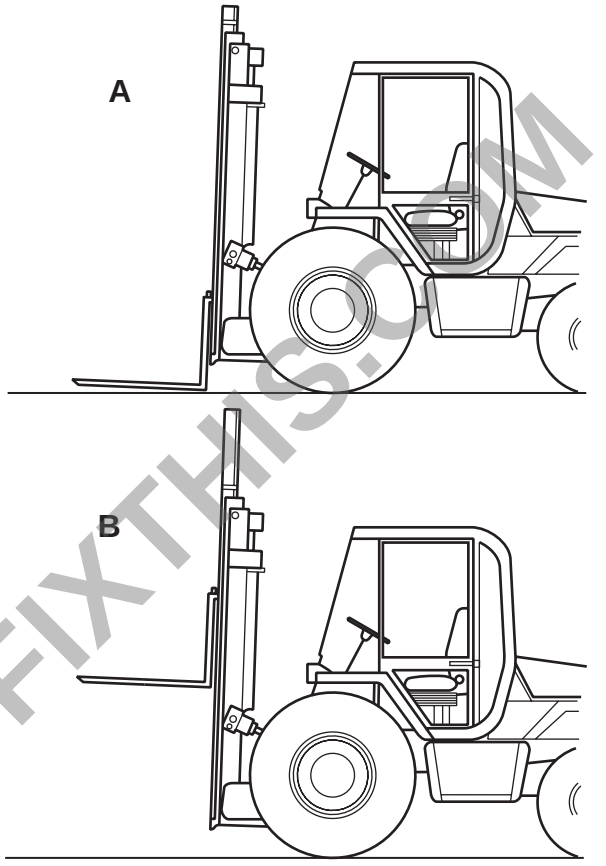
**To prevent anyone starting the engine, remove the starter key. Disconnect the battery when you are not using electrical power. If you do not take these precautions you could be killed or injured.**

8-3-1-1

Make the machine safe before you start a maintenance procedure.

You can complete most of the maintenance procedures with the mast lowered (Position **A**). Unless a maintenance procedure instructs you differently, you must lower the mast. Refer to ***How to Make the Machine Safe (Mast Lowered)***.

If you lift the mast to get access for maintenance (Position **B**), you must install the mast chains on the mast. Refer to ***How to Make the Machine Safe (Mast Lifted)***.




T047230

**Fig 1.**

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# Brakes

## Park Brake

### Introduction

T3-071

**WARNING**

**Do not use a machine with a faulty park brake.**

3-2-3-10_2

**WARNING**

**Non approved modifications to drive ratios, machine weight or wheel and tyre sizes may adversely affect the performance of the park brake.**

3-2-3-11

Make sure that you obey all health and safety precautions before you test or adjust the park brake.

If you have any queries concerning the park brake test or adjustment procedures, consult your local JCB distributor.

### Testing the Park Brake

T3-087

**WARNING**

**Before testing the park brake make sure the area around the machine is clear of people.**

2-2-4-5



A339340

– The park brake must be fully engaged when the lever is vertical.
– The park brake warning light must come on when the park brake is engaged and forward or reverse is selected (starter switch at **I**).

**1** Enter the machine. Fasten your seat belt (if fitted) and park the machine on a level dry surface.

**2** Fully apply park brake.

**3** Start the engine and raise the attachments to the appropriate travel position.

**4** Select fourth gear.

**5** Push down hard on foot brake pedal.

**6** Select forward drive. The park brake warning light must illuminate.

**WARNING**

**If the machine starts to move during the following test, immediately apply the foot brake and reduce the engine speed.**

2-2-5-1

**7** Test the park brake as follows:

**a** Move the park brake lever fractionally forward until the park brake warning light is just extinguished.

**b** Slowly release the foot brake pedal.

**c** If the machine has not moved, use the accelerator to gradually increase the engine speed to approximately 1500 RPM. The machine should not move.

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## Checking the Wheel Nut Torques

T3-014_2

### ⚠ 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 6.**

| Front | | Rear | |
|---|---|---|---|
| **Nm** | **lbf ft** | **Nm** | **lbf ft** |
| 680 | 500 | 680 | 500 |

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# Transmission

## Gearbox

### Checking the Transmission Oil Level

1 Make the machine safe with the mast lowered. Refer to **Prepare the Machine for Maintenance**.

2 Open the engine cover. Refer to **Access Panels, Engine Cover**.

3 Start and run the engine slowly for a period not exceeding five minutes. This allows the oil to fill filter, pump, torque converter, oil cooler and hoses.

4 Switch OFF the engine and remove the starter key, wait one minute.

5 Check that the oil level is between the end of the dipstick and maximum mark on the dipstick **A**.

6 Add oil as necessary. Fill through the dipstick tube to maximum dipstick level. Use only the recommended oil.

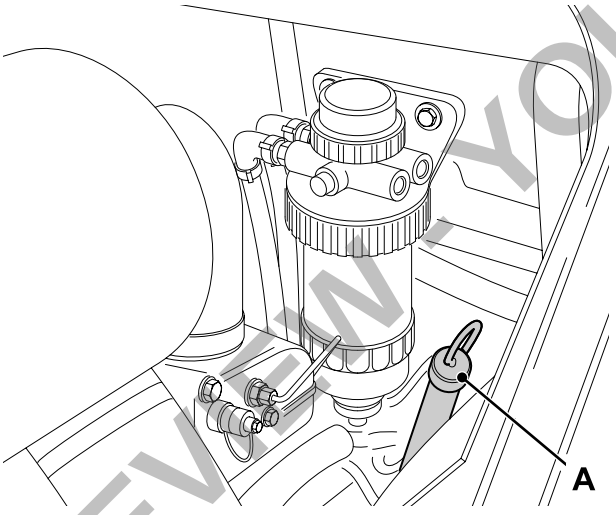



**Fig 51.**

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