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

JCB VIBROMAX VM115 - TIER II

ENGLISH - 9821/1450 - ISSUE 1 - JANUARY 11

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Safety Notices

Important Information

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 (If Equipped)

Note: *The cab (If Equipped)layout illustration is of a typical machine, for variations see the relevant page in this handbook.*

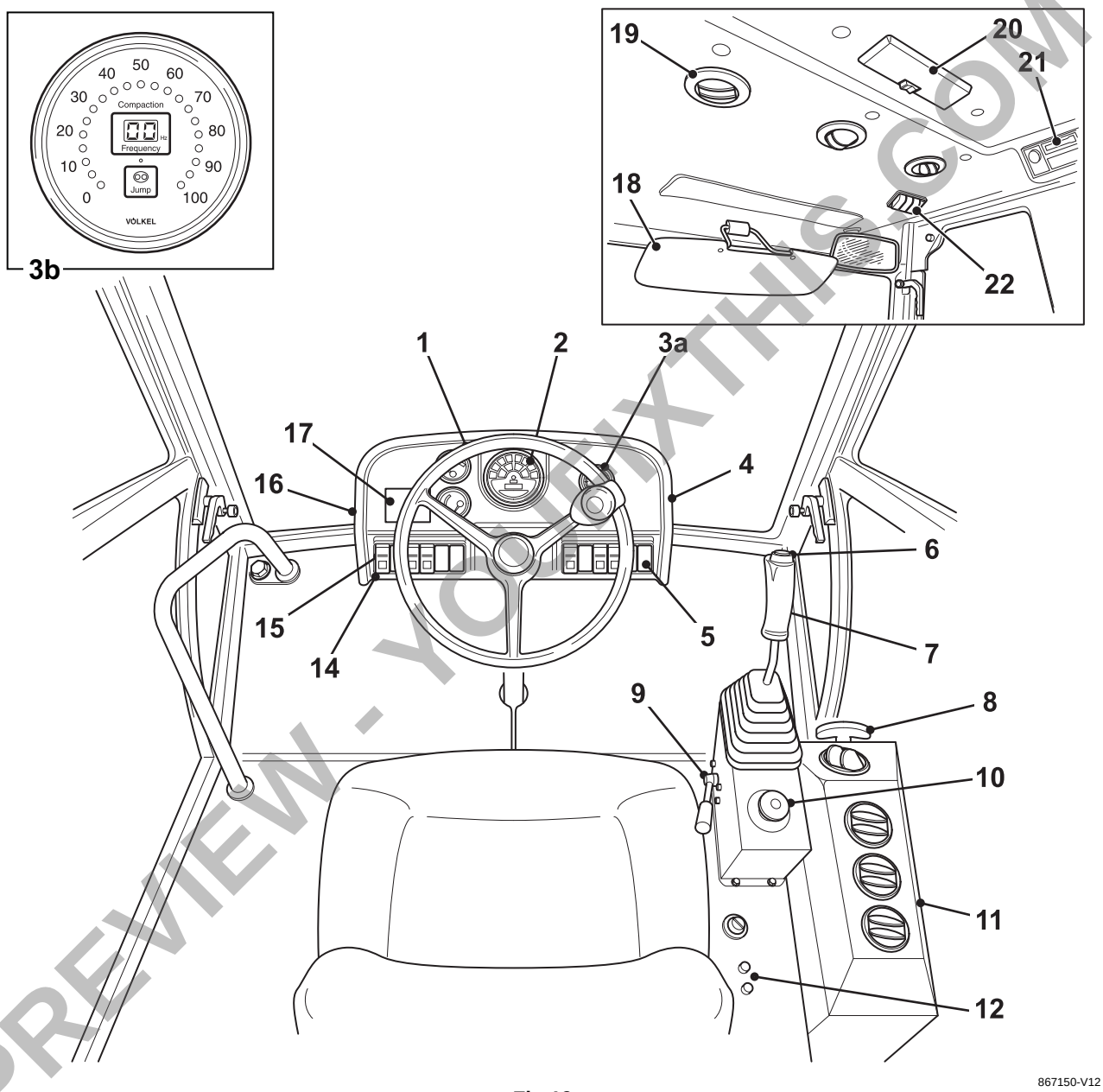
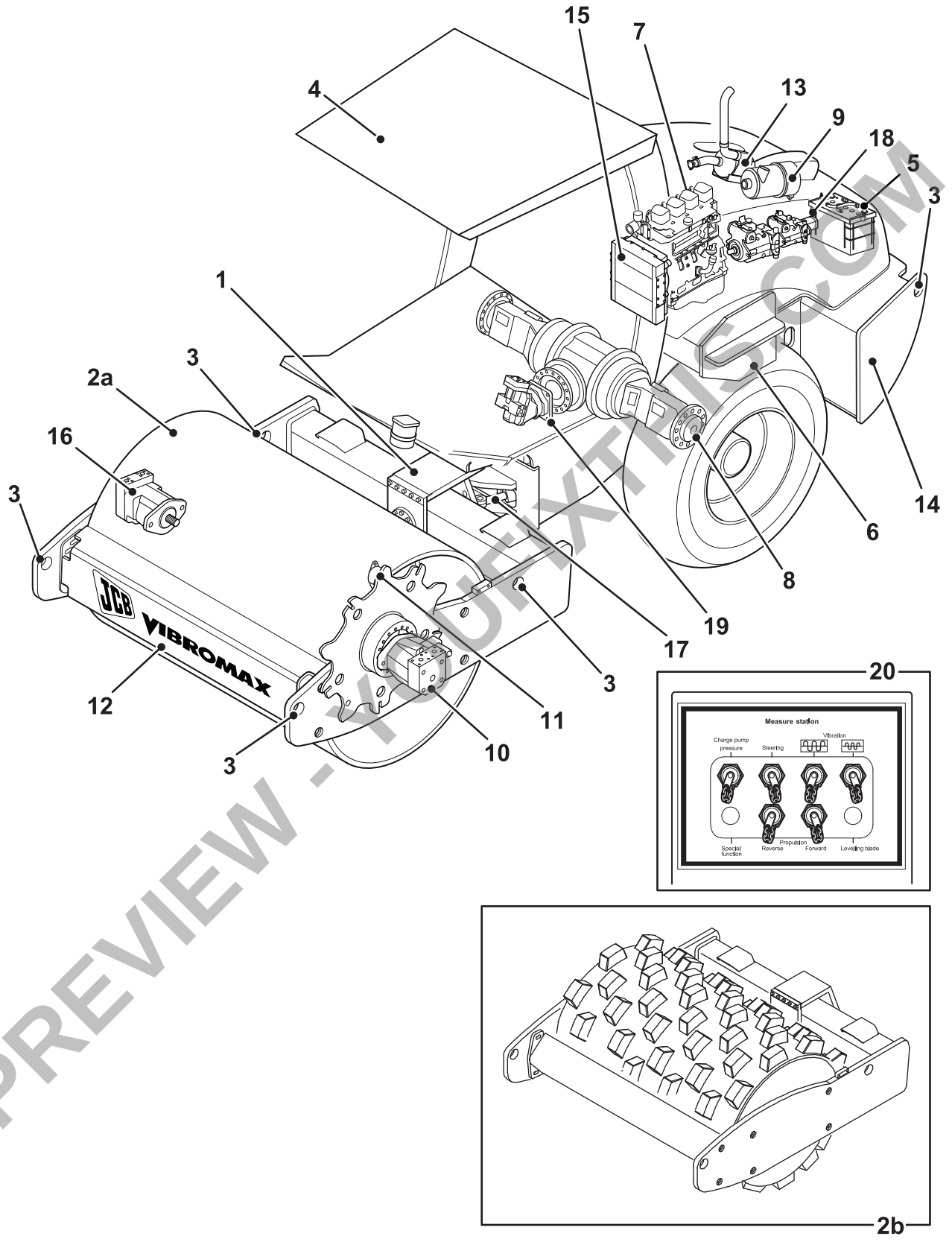


Fig 19.

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844210-V4

Fig 2.

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Storage of the Machine

Introduction

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.

Important: *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 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

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.

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 cessary.

6 Examine all fluid levels. Top up if necessary.

Put the Machine into Storage

1 Park the machine on level, solid ground.

Park the machine in a position where the machine is easy to tow (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

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 Start the engine.

4 Operate the hydraulic controls.

Make sure that the hydraulic functions operate correctly.

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Fluids, Lubricants and Capacities

Table 2. VM115 (JCB 444 Engine)

ITEM	CAPACITY Litres (Gal)	FLUID/LUBRICANT	INTERNATIONAL SPECIFICATION
Fuel Tank	300 (79.3)	Diesel Oil	⇨ *Fuel (83)*
Engine (Oil)	15 (3.3)		SAE 15W/40, ACEA E2, A2 API CF4/SG
Engine (Coolant)	14 (3.7)	JCB High Performance (HP) Antifreeze/ JCB HD Flushing fluid ⇨ *Coolant Mixtures (82)*.	ASTM D3306-74
Rear Axle - Dana	15 (3.3)(1)	JCB Gear Oil LS Plus	API-GL5
Hubs	1,75 (0.4)		
Rear Axle - JCB	22 (4.8)(1)	JCB Gear Oil LS Plus	API-GL5
Hubs	2.5 (0.6)		
Hydraulic Tank(2)	60 (13.2)	- Normal JCB Hydraulic fluid HP 46 - Tropics JCB Hydraulic fluid 68	HLP 46 DIN 51524 HLP 68 DIN 51524
Vibration System	3.5 (0.8)		CLP 150 DIN 51517
Drum Drive Gear Box	1.3 (0.3)	JCB V-Tronic	CLP 220 DIN 51517

(1) Inclusive of hubs

(2) This is nominal tank capacity. The total hydraulic system capacity depends on the equipment being used. Fill with all cylinders closed. Watch level sight glass when filling.

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5 Prepare the machine for storage.

Take the Machine Out of Storage

1 Examine the coolant condition. Replace If necessary.

2 Examine all fluid levels. Top up if necessary.

3 Clean the machine to remove unwanted material and corrosives.Remove the grease or petroleum jelly from the ram piston rods.

4 Install a charged battery.

5 Start the engine.

6 Operate the hydraulic controls.

Make sure that the hydraulic functions operate correctly.

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Fuel

T3-089

Use good quality diesel fuel to get the correct power and performance from your engine.

Recommended Fuel Specification

- EN590 Diesel Fuel Types - Auto/Co/C1/C2/C3/C4.
- BS2869 Class A2.
- ASTM D975-91 Class 2-2DA, US DF1, US DF2, US DFA.
- JIS K2204 (1992) Grades 1, 2, 3, and Special Grade 3.

Note: *Where low sulphur/low aromatic fuels are used it is important that lubricity additives are used. The additives listed below are advertised as being suitable for bringing the lubricity levels of kerosene/low sulphur fuels up to those of diesel fuels. They have not been tested or approved by the engine manufacturer. They should be added by your fuel supplier who should understand the concentration level necessary.*

1 Elf 2S 1750. Dosage 1000-1500 ppm (0.1 - 0.15%), specifically for Indian Superior Kerosene (SKO) but may be applicable to other fuels.

2 Lubrizol 539N. Dosage (on Swedish low sulphur fuel) 250 ppm.

3 Paradyne 7505 (from Infineum). Dosage 500 ppm (0.05%).

⚠ CAUTION

Consult your fuel supplier or JCB distributor about the suitability of any fuel you are unsure of.

GEN-9-2

Acceptable Fuel Specification

⚠ CAUTION

The fuel specification below is acceptable, however this fuel may reduce the life of the fuel injection equipment. The use of this fuel may also affect the engine performance.

GEN-9-3

- ASTM D975-91 Class 1-1DA.
- JP7, MIL T38219 XF63.
- NATO F63.

Sulphur Content

⚠ CAUTION

A combination of water and sulphur will have a corrosive chemical effect on fuel injection equipment. It is essential that water is eradicated from the fuel system when high sulphur fuels are used.

ENG-3-2

High sulphur content can cause engine wear. (High sulphur fuel is not normally found in North America, Europe or Australia.) If you have to use high sulphur fuel you must change the engine oil more frequently.

Table 3.

Percentage of sulphur in the fuel (%)	Oil Change Interval
Less than 0.5	Normal
0.5 to 1.0	0.75 of normal
More than 1.0	0.50 of normal

Aviation Kerosene Fuels

Note: *Aviation kerosene fuels are not approved and their use may cause damage to components. Warranty will not be allowed on any component where damage is found to have been caused by the use of aviation kerosene.*

Low Temperature Fuels

Special winter fuels may be available for engine operation at temperatures below 0°C (32°F). These fuels have a lower viscosity. They also limit wax formation in the fuel at low temperatures. (Wax forming in the fuel can stop the fuel flowing through the filter.)

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Water Ballasting

CAUTION

If the tires are water ballasted; ensure valves are at the uppermost position when checking tire pressures.

5-3-2-6_2

WARNING

Installing and removing a wheel with tyre ballast requires special equipment and training. Have the job done by your JCB Dealer or a tyre specialist.

5-3-2-8_2

WARNING

Tyre Ballast

Installing tyre ballast requires special equipment and training. Have the job done by your JCB Dealer or a tyre specialist machine.

Non-approved tyre ballast can cause damage to the machine's drive train and structures. It will also affect manufacturer's warranty.

For advice consult your JCB Distributor.

5-3-2-7_4

The VM115 soil compactor is fitted with water ballasted tyres. If water ballasting is required, please contact a qualified/authorised water filling station. The water filling station must use the correct quantity and mixture of water and $CaCl_2$.

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Transporting the Machine

⚠ WARNING

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 ***Static Dimensions*** (SPECIFICATIONS section) for the dimensions 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 Static Dimensions in SPECIFICATION section for the minimum ground clearance of your machine.

2-2-7-5_1

1 Place blocks at the front and rear of the trailer wheels.

2 Move the machine onto the trailer.

a Make sure the ramps are correctly in place and secure.

Important: *Ensure that the ramp can support the weight of the machine.*

b Carefully drive the machine onto the trailer.

c Stop and park the machine. ⇒ ***Stopping and Parking the Machine (51)***.

d Check that the overall height of the load is within regulations. Adjust if necessary.

e Secure the articulation lock in the Transport position. ⇒ ***Articulation Lock (65)***.

f Secure the cab.

g Cover the exhaust stack.

3 Put blocks at the front and rear of the machine. Using the lifting points, anchor the machine to the trailer with chains. The lifting points are shown on the illustration. ⇒ ***Fig 47. (64)***.

4 Measure the maximum height of the machine from the ground. Make sure the truck driver knows the clearance height before he drives away.

5 Set the air pressure in the machine's tyres to 26 psi (1.8 bar). This ensures greater stability of the machine when it is being secured to the transport vehicle.

Important: *After transporting the machine, inflate the tyres to the correct pressure.* ⇒ ***Tyre Sizes and Pressures (139)***.

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