



## **OPERATOR'S MANUAL**



## **VMT160 VMT260 TANDEM ROLLER**

9811/6650-7 05/2017  
ENGLISH

This manual should always stay with the machine

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  
VMT160 VMT260 TANDEM ROLLER**

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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, 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





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# Introduction

## About This Manual

### Name and Address of the Manufacturer

JCB Vibromax GmbH Graf-Zeppelin STR 16 51147  
Cologne Germany

### Product Compliance

T1-055  
Your JCB machine was designed to comply with the laws and regulations applicable at the time of its manufacture for the market in which it was first sold. In many markets, laws and regulations exist that require the owner to maintain the machine at a level of compliance relevant to the machine when first produced. Even in the absence of defined requirements for the machine owner, JCB recommend that the machine compliance be maintained to ensure safety of the operator and exposed persons and to ensure the correct environmental performance. Your machine must not be altered in any way which could affect or invalidate any of these requirements. For advice consult your JCB dealer.

For its compliance as a new machine, your JCB and some of its components may bear approval numbers and marking's, and may have been supplied with a Declaration/Certificate of Conformity. These marking's and documents are relevant only for the country/region in which the machine was first sold to the extent that the laws and regulations required them.

Re-sales and import/export of machines across territories with different laws and regulations can cause new requirements to become relevant for which the machine was not originally designed or specified. In some cases, pre-owned machines irrespective of their age are considered new for the purposes of compliance and may be required to meet the latest requirements which could present an insurmountable barrier to their sale/use.

Despite the presence of any compliance related marking's on the machine and components, you should not assume that compliance in a new market will be possible. In many cases it is the person responsible for import of a pre-owned machine into a market that becomes responsible for compliance and who is also considered the manufacturer.

JCB may be unable to support any product compliance related enquiry for a machine which has been moved out of the legislative country/region where it was first sold, and in particular where a machine specification change or additional certification would have been required in order for the machine to be in compliance

### Machine Model and Serial Number

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

- VMT 160-90 from serial no. 01700515 to 01701469, 02802000 to 02804999 and 2416451 to 2417500
- VMT 260-100 from serial no. 01700515 to 01701469, 02802000 to 02804999 and 2416451 to 2417500
- VMT 260-120 from serial no. 01700515 to 01701469, 02802000 to 02804999 and 2416451 to 2417500

### 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.

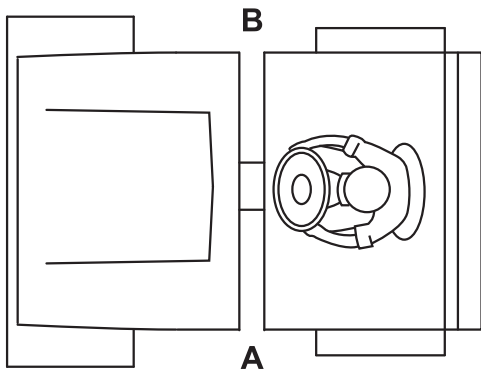
This manual contains original instructions, verified by the manufacturer (or their authorised representative).

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.



V015250-2

**Fig 1.**

## 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\*\*\* \( 2 \).](#)

## Machine Description

### The JCB Vibromax Vibratory Tandem Drum Roller

The JCB Vibromax VMT machine is a self-propelled, vibratory tandem drum rollers which is powered by a 3 cylinder, diesel engine.

The machine is designed for compacting soil types ranging from stones to silty sand, or asphalt construction materials when rolling over the subgrade in a forward or reverse direction (with or without vibration).

Four scrapers (two on each drum) are mounted on the machine and sprinkler bars are fitted to the front and rear drums. The spray nozzles and the bar end caps are removable for easy cleaning.

The hydrostatic drive system allows for infinitely variable travel speeds. The drive motors (one motor mounted on the left side of each drum) are connected in series on the VMT160 and parallel on the VMT260. The machines is always driven with all drum drive. Each motor incorporates a spring on, pressure off brake system which engages when the machine is in neutral. The drive motor hoses are protected inside steel frame plates.

A hydraulic system is also used to turn the machine front and rear vibratory shafts. Designed with an overturning weight system on the vibratory shafts, the machine has selectable front drum, rear drum or both drums vibration. The machine operates at a vibratory frequency of between 50 and 66 Hz and a nominal amplitude of 0.5 mm.

The machine has an articulated steering system giving a tight turning radius.

### Intended Use

The machine is intended only for compacting beds of earth or bituminous construction when running over the subgrade in the forward or reverse direction, with or without vibration.

These building materials include soil types ranging from stones to silty sand and having water contents ranging from 40% to 110% of the optimum water content. These figures are in accordance to the standard Proctor test DIN 18127.

Fine-grained soils or soils having higher water contents require a qualified trial compaction.

The machine is intended to be used only on a subgrade gradient up to the permissible gradient.

[⇒ Use of Machines on Gradients or Slopes \(□ 51\)](#)

[⇒ Performance Dimensions \(□ 140\)](#)

[⇒ Definition of Gradeability \(□ 51\)](#)

[⇒ Operating the Sprinklers and Scrapers \(□ 55\)](#)

[⇒ Using the Scrapers \(□ 135\)](#)

[⇒ Operating in Dusty or Sandy Areas \(□ 56\)](#)

The machine is not intended for use in any other way.

Use for which it is not intended includes, in particular:

- It is not permissible to drive on a gradient which is greater than the permissible gradient of the machine during operation.

Before driving on a gradient, it is still necessary to check, at the start of the gradient as seen in the intended driving direction, whether there is adequate frictional engagement between the wheels and the drum and the roadway, i.e. whether, on the gradient, the

machine can be driven uphill with medium acceleration and can be braked downhill.

It is not permissible to drive on a gradient if the wheels and the drum spin or if they skid during braking.

- Vibration at standstill.
- Vibrating travel on blocks, rocks, concrete or frozen soil.
- Vibrating travel in the vicinity of buildings if this could damage parts or installations; This should normally be assumed for vibrational speeds of 8 mm/s or more at the endangered parts.
- Earth-moving during forward driving with the pusher blade lowered.
- Operation in extraordinary applications (see below) without additional safety measures.
- Driving from above onto an untested gradient.
- Driving on a subgrade having a gradient greater than the permissible gradient in a direction other than the incline direction.
- Use of the roller other than from the operator's seat.

Extraordinary applications are, in particular:

- Work on a subgrade having a gradient greater than the permissible gradient.
- Work on the edges of hillsides or trenches.
- Work in regions having continuous construction site traffic.

Additional safety measures can be:

- Securing by means of ropes attached to winches or accompanying heavy construction vehicles.
- Adequate escape lanes.
- Appointment of guides.
- Testing the function of the brakes when first driving onto the gradient at the lower end of the gradient.
- Correspondingly: testing the directional stability of the longitudinal axis of the roller when switching on the vibration.

The manufacturer/supplier is not liable for damage resulting from such use. The user alone bears the risk.

It is also intended that the instruction manual is observed and that the servicing and maintenance regulations are followed.



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## Component Location

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

**Table 1.**

1	Articulation Joint
2	Smooth Drum
3	Lifting Eyes
4	Instrument Panel
5	Battery
6	Hydraulic Oil Tank
7	Engine
8	Drum Drive Motor
9	Rubber Pads
10	Scraper
11	Parking Brake
12	Water Tank
13	Fuel Tank
14	Air Filter
15	Water/Oil Cooler
16	Roll Over Protection Structure (ROPS)
17	Vibration Motor
18	Steering Ram
19	Hydraulic Pump Assembly

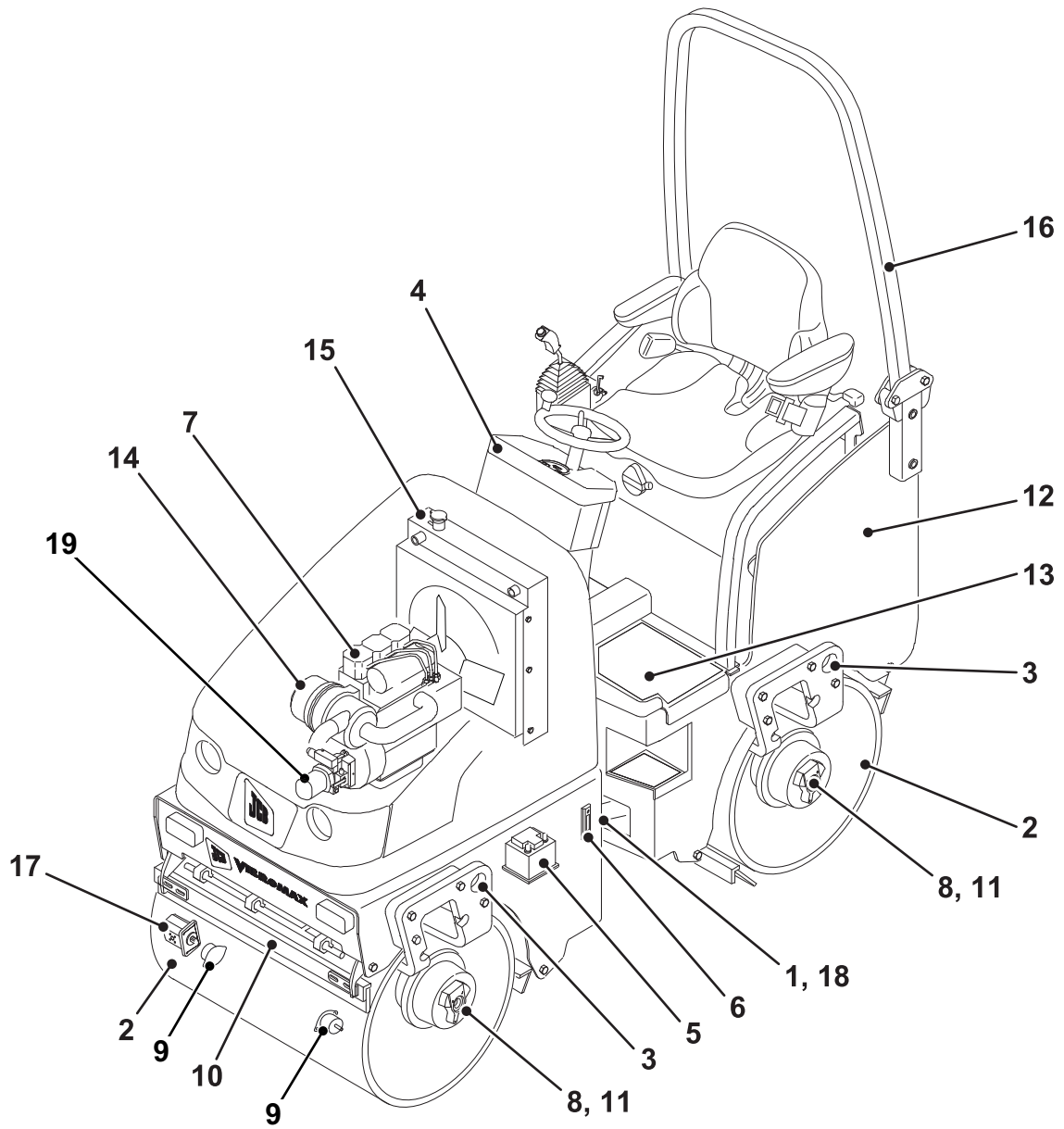


Fig 2.

V014710



## Safety Check List

### Safety - Yours and Others

INT-1-3-1\_3

All machinery can be hazardous. When a machine is correctly operated and properly maintained, it is a safe machine to work with. But when it is carelessly operated or poorly maintained it can become a danger to you (the operator) and others.

In this manual and on the machine you will find warning messages. Read and understand them. They tell you of potential hazards and how to avoid them. If you do not fully understand the warning messages, ask your employer or JCB distributor to explain them.

But safety is not just a matter of responding to the warnings. All the time you are working on or with the machine you must be thinking what hazards there might be and how to avoid them.

Do not work with the machine until you are sure that you can control it.

Do not start any job until you are sure that you and those around you will be safe.

If you are unsure of anything, about the machine or the job, ask someone who knows. Do not assume anything.

Remember

BE CAREFUL

BE ALERT

BE SAFE

### General Safety

T1-043

#### WARNING

To operate the machine safely you must know the machine and have the skill to use it. You must abide by all relevant laws, health and safety regulations that apply to the country you are operating in. The Operator Manual instructs you on the machine, its controls and its safe operation; it is not a training manual. If you are a new operator, get yourself trained in the skills of using a machine before trying to work with it. If you don't, you will not do your job well, and you will be a danger to yourself and others.

INT-1-4-1

#### WARNING

##### Care and Alertness

All the time you are working with or on the machine, take care and stay alert. Always be careful. Always be alert for hazards.

INT-1-3-5

#### WARNING

##### Clothing

You can be injured if you do not wear the proper clothing. Loose clothing can get caught in the machinery. Wear protective clothing to suit the job. Examples of protective clothing are: a hard hat, safety shoes, safety glasses, a well fitting overall, ear-protectors and industrial gloves. Keep cuffs fastened. Do not wear a necktie or scarf. Keep long hair restrained. Remove rings, watches and personal jewellery.

INT-1-3-6\_2

#### WARNING

##### Alcohol and Drugs

It is extremely dangerous to operate machinery when under the influence of alcohol or drugs. Do not consume alcoholic drinks or take drugs before or while operating the machine or attachments. Be aware of medicines which can cause drowsiness.

INT-1-3-9\_2

---

** WARNING**

---

**Feeling Unwell**

Do not attempt to operate the machine if you are feeling unwell. By doing so you could be a danger to yourself and those you work with.

8-1-2-4

---

** WARNING**

---

**Mobile Phones**

Switch off your mobile phone before entering an area with a potentially explosive atmosphere. Sparks in such an area could cause an explosion or fire resulting in death or serious injury.

Switch off and do not use your mobile phone when refuelling the machine.

INT-3-3-9

---

** WARNING**

---

**Lifting Equipment**

You can be injured if you use incorrect or faulty lifting equipment. You must identify the weight of the item to be lifted then choose lifting equipment that is strong enough and suitable for the job. Make sure that lifting equipment is in good condition and complies with all local regulations.

INT-1-3-7\_2

---

** WARNING**

---

**Raised Equipment**

Never walk or work under raised equipment unless it is supported by a mechanical device. Equipment which is supported only by a hydraulic device can drop and injure you if the hydraulic system fails or if the control is operated (even with the engine stopped).

Make sure that no-one goes near the machine while you install or remove the mechanical device.

13-2-3-7\_3

---

** WARNING**

---

**Raised Machine**

**NEVER** position yourself or any part of your body under a raised machine which is not properly supported. If the machine moves unexpectedly you could become trapped and suffer serious injury or be killed.

INT-3-3-7\_1

---

** DANGER**

---

**Lightning**

Lightning can kill you. Do not use the machine if there is lightning in your area.

5-1-1-2

---

** WARNING**

---

**Machine Modifications**

This machine is manufactured in compliance with legislative and other requirements. It should not be altered in any way which could affect or invalidate any of these requirements. For advice consult your JCB Distributor.

INT-1-3-10\_2

**Operating Safety**

---

 **WARNING**

---

**Machine Condition**

A defective machine can injure you or others. Do not operate a machine which is defective or has missing parts. Make sure the maintenance procedures in this manual are completed before using the machine.

INT-2-1-2\_2

---

 **WARNING**

---

**Machine Limits**

Operating the machine beyond its design limits can damage the machine, it can also be dangerous. Do not operate the machine outside its limits. Do not try to upgrade the machine performance with unapproved modifications.

INT-2-1-4

---

 **WARNING**

---

**Engine/Steering Failure**

If the engine or steering fails, stop the machine as quickly as possible. Do not operate the machine until the fault has been corrected.

INT-2-1-5

---

 **WARNING**

---

**Exhaust Gases**

Breathing the machine exhaust gases can harm and possibly kill you. Do not operate the machine in closed spaces without making sure there is good ventilation. If possible, fit an exhaust extension. If you begin to feel drowsy, stop the machine at once and get into fresh air.

INT-2-1-10\_2

---

 **WARNING**

---

**Work Sites**

Work sites can be hazardous. Inspect the site before working on it. You could be killed or injured if the ground gives way under your machine or if piled material collapses onto it. Check for potholes and hidden debris, logs, ironwork etc. Any of these could cause you to lose control of your machine. Check for utilities such as electric cables (overhead and underground), gas and water pipes etc. Mark the positions of the underground cables and pipes. Make sure that you have enough clearance beneath overhead cables and structures.

INT-2-2-1\_2

---

 **WARNING**

---

**Communications**

Bad communications can cause accidents. Keep people around you informed of what you will be doing. If you will be working with other people, make sure any hand signals that may be used are understood by everybody. Work sites can be noisy, do not rely on spoken commands.

INT-2-2-3

---

 **WARNING**

---

**Parking**

An incorrectly parked machine can move without an operator. Follow the instructions in the Operator Manual to park the machine correctly.

INT-2-2-4\_2

---

 **WARNING**

---

**Banks and Trenches**

Banked material and trenches can collapse. Do not work or drive too close to banks and trenches where there is danger of collapse.

INT-2-2-5

---

 **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

---

**⚠ WARNING**

---

**Safety Barriers**

Unguarded machines in public places can be dangerous. In public places, or where your visibility is reduced, place barriers around the work area to keep people away.

INT-2-2-8

---

**⚠ DANGER**

---

**Sparks**

Explosions and fire can be caused by sparks from the exhaust or the electrical system. Do not use the machine in closed areas where there is flammable material, vapour or dust.

INT-2-2-10

---

**⚠ WARNING**

---

**Hazardous Atmospheres**

This machine is designed for use in normal out door atmospheric conditions. It should not be used in an enclosed area without adequate ventilation. Do not use the machine in a potentially explosive atmosphere, i.e. combustible vapours, gas or dust, without first consulting your JCB Distributor.

INT-2-1-14

---

**⚠ CAUTION**

---

**Regulations**

Obey all laws, work site and local regulations which affect you and your machine.

INT-1-3-3

---

**⚠ WARNING**

---

**Practice**

You or others can be killed or seriously injured if you do unfamiliar operations without first practising them. Practise away from the work site on a clear area. Keep other people away. Do not perform new operations until you are sure you can do them safely.

INT-2-1-1

---

**⚠ WARNING**

---

Airborne particles of light combustible material such as straw, grass, wood shavings, etc. must not be allowed to accumulate within the engine compartment or in the propshaft guards (when fitted). Inspect these areas frequently and clean at the beginning of each work shift or more often if required. Before opening the engine cover, ensure that the top is clear of debris.

5-3-1-12\_3

---

**⚠ WARNING**

---

Keep the machine controls clean and dry. Your hands and feet could slide off slippery controls. If that happens you could lose control of the machine.

2-2-3-6

---

**⚠ WARNING**

---

**Visibility**

Accidents can be caused by working in poor visibility. Use your lights to improve visibility. Keep the road lights, windows and mirrors clean.

Do not operate the machine if you cannot see clearly.

5-1-4-7

---

**⚠ WARNING**

---

**Electrical Power Cables**

You could be electrocuted or badly burned if you get the machine or its attachments too close to electrical power cables.

You are strongly advised to make sure that the safety arrangements on site comply with the local laws and regulations concerning work near electric power lines.

Before you start using the machine, check with your electricity supplier if there are any buried power cables on the site.

There is a minimum clearance required for working beneath overhead power cables. You must obtain details from your local electricity supplier.

2-2-5-4

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