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VIBRATORY PLATE

DPU 2440F WGB

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0007877 101

Operator´s Manual

Type	Item no.
DPU 2440F WGB	**0007877 ...**

Foreword

For your own safety and protection from bodily injuries, carefully read, understand and follow the safety instructions in this manual.

Please operate and maintain your Wacker machine in accordance with the instructions in this manual. Your Wacker machine will reward your attention by giving trouble-free operation and a high degree of availability.

Defective machine parts are to be replaced as soon as possible.

SAFETY INSTRUCTIONS FOR THE USE OF VIBRATORY PLATES WITH COMBUSTION ENGINES

General instructions

1. Vibratory plates may only be operated by persons who

   * are at least 18 years of age
   * are physically and mentally fit for this job
   * have been instructed in guiding vibratory plates and proved their ability for the job to the employer
   * may be expected to carry out the job they are charged with carefully.

   The persons must be assigned the job of guiding vibratory plates by the employer.

2. Vibratory plates may only be used for compaction jobs. Both the manufacturer's operating instructions and these safety instructions have to be observed.

3. The persons charged with the operation of vibratory plates have to be made familiar with the necessary safety measures relating to the machine. In case of extraordinary uses the employer shall give the necessary additional instructions.

4. It is possible that this vibratory plate exceeds the admissible sound level of 89 dB (A). According to the rules for the prevention of accidents regarding emission of noise, the employees have to wear ear protection if the sound level reaches 89 dB (A) or more.

Operation

1. When starting a diesel engine with a starter crank make sure you have assumed a proper position with respect to the engine and that your hands are placed properly on the crank.

   ☛ **ATTENTION!** Only use the original engine manufacturer's safety starting crank.

   To avoid a possible return kick, turn safety starting crank through with full force until the engine starts running.
2. The functioning of operating levers or elements is not to be influenced or rendered ineffective.
3. During operation the operator may not leave the control elements.
4. The operator has to stop the engine of the vibratory plate before going on breaks. The machine has to be placed such that it cannot turn over.
5. Stop engine before filling fuel tank. When refilling fuel tank, do not allow fuel to come into contact with the hot parts of the engine or spill onto the ground.
6. Do not smoke or handle open fire near this machine.
7. The tank lid must fit tightly. Shut off fuel cock, if available when stopping the engine. For long distance transports of machine operated by fuel or fuel - mixtures, the fuel tank has to be drained completely.

   ☛ **ATTENTION!** Leaky fuel tanks may cause explosions and must therefore be replaced immediately.
8. Do not operate the machine in areas where explosions may occur.
9. Make sure that sufficient fresh air is available when operating vibratory plates with combustion engines in enclosed areas, tunnels, adits and deep trenches.
10. During operation keep your hands, feet and clothes away from the moving parts of the vibraton plate. Wear safety shoes, and eye protection glasses in case of trench operation where falling sand stones maybe ejected.
11. When working near the edges of breaks, pits, slopes, trenches and platforms, vibratory plates are to be operated such that there is no danger of their turning over or dropping in.

12. Make sure the soil or subsoil to be compacted has a high enough load carrying capacity.
13. Use appropriate protective clothing while working or while carrying out maintenance work.
14. When traveling backwards the operator has to guide the vibration plate laterally by its guide handle so that he will not be squeezed between the handle and a possible obstacle. Special care is required when work ing on uneven ground or when compacting coarse material. Make sure of a firm stand when operating the machine under such conditons.
15. Vibratory plates are to be guided such that hand injuries caused by solid objects are avoided.
16. Vibratory plates have to be guided such that their stability is guaranteed.
17. Machines with integrated transport trolley may not be parked or stored on the trolley. This device has only been designed to transport the machine.

Safety checks

1. Vibratory plates may only be operated with all safety devices installed.
2. Before starting operation, the operator has to check that all control and safety devices function properly.
3. Immediately notify your supervisor or superintendent if you have determined defects in the safety devices or other defects which could endanger the safe operation of the machine or which could endanger the environment.
4. In case of defects jeopardizing the operational safety of the vibration plate, the machine has to be stopped immediately.
5. Process materials and operating fuels must be stowed away in receptacles or containers marked according to the respective manufacturers specifications.

Maintenance

1. Only use original spare parts. Modifications to this machine, including the adjustment of the maximum engine speed set by the manufacturer, are subject to the express approval of Wacker. In case of non-observance all liabilities shall be refused.
2. All drive units have to be switched off before carrying out maintenance jobs. Deviations from this are only allowed if the maintenance or jobs require a running engine.
3. When working on vibratory plates equipped with electric starter, disconnect battery before carrying out maintenance or repair jobs on the electric parts of the machine.
4. Remove pressure from hydraulic lines before working on them. Caution: take care when removing hydraulic lines, for the oil may be very hot (up. over 80^{0} C). Precautions are to be taken to prevent oil from splashing into the operator's eyes.
5. As soon as maintenance and repair jobs have been completed all safety devices have to be reinstalled properly.
6. Do not hose down the machine with water after each use to avoid possible malfunctions. Do not use high pressure washers nor chemical products.

Transport

1. During transport, loading and unloading of vibration plates by means of lifting devices, appropriate slinging means or hooks have to be used on the lifting points provided for this purpose on the vibratory plate.
2. The load-carrying capacity of the loading ramps has to be sufficient and the ramps have to be secure such that they cannot turn over. Make sure that no one be endangered by machines turning over by slipping or by moving machine parts.
3. When being transported on vehicles, precautions have to be taken that vibration plates do not slip or turn over.

Maintenance checks

According to the conditions and frequency of use, vibratory plates have to be checked for safe operation at least once a year by skilled technicians, such as those found at Wacker-service depots and have to be repaired if necessary.
Please also observe the corresponding rules and regulations valid in your country.

		DPU 2440F WGB
Item no.		0007877 ...
Lowest working height	mm:	750
Size of base plate (width x length)	mm:	400 x 700
Operating weight	kg:	144
Power transmission		From drive engine via centrifugal clutch and V-belts direct to exciter
Exciter		
Vibrations	min^{-1}(Hz):	approx. 5400 (90)
Multigrade oil		SAE 10 W 40
Drive motor		Air-cooled single-cylinder 4 stroke diesel engine
Piston displacement	cm^3:	242
Engine speed	min^{-1}:	2850
Oil		SAE 10 W 40
Fuel		Diesel
Fuel consumption	l/h:	1,0
Tank capacity	l:	4

The required sound specifications, called-for by the EC-Machine Regulations per Appendix 1, Paragraph 1.7.4.f, are

- sound pressure level at the operator's location L_{pA} = 92 dB(A)

The sound values were determined according to ISO 3744 for the sound power level (L_{wA})and, alternately, ISO 6081 for the sound pressure level (L_{pA}) at the operator's location.

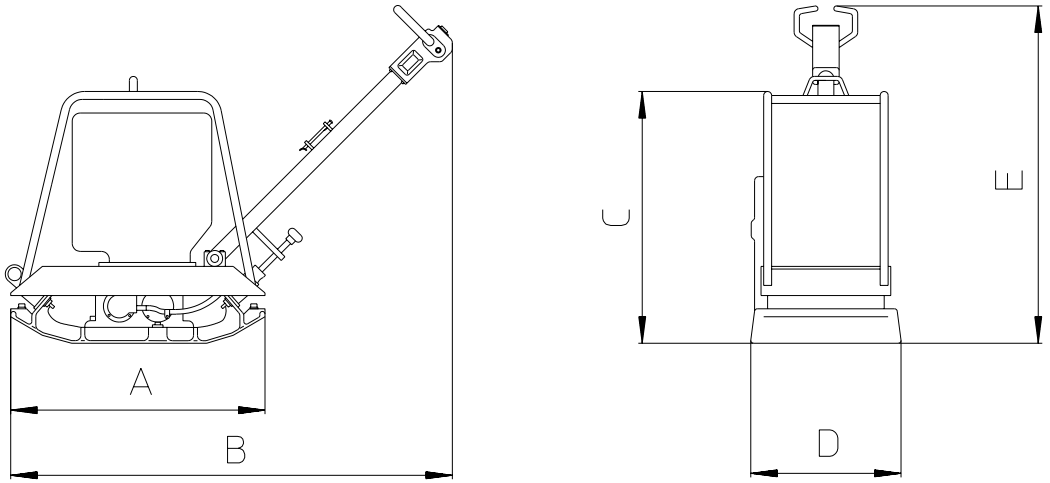
The weighted effective acceleration value, determined according to ISO 8662, Part 1, is 8,8 m/s^2.

The sound and vibration measurements were carried out and obtained with the machine working on crushed gravel at nominal engine speed.

Field of application

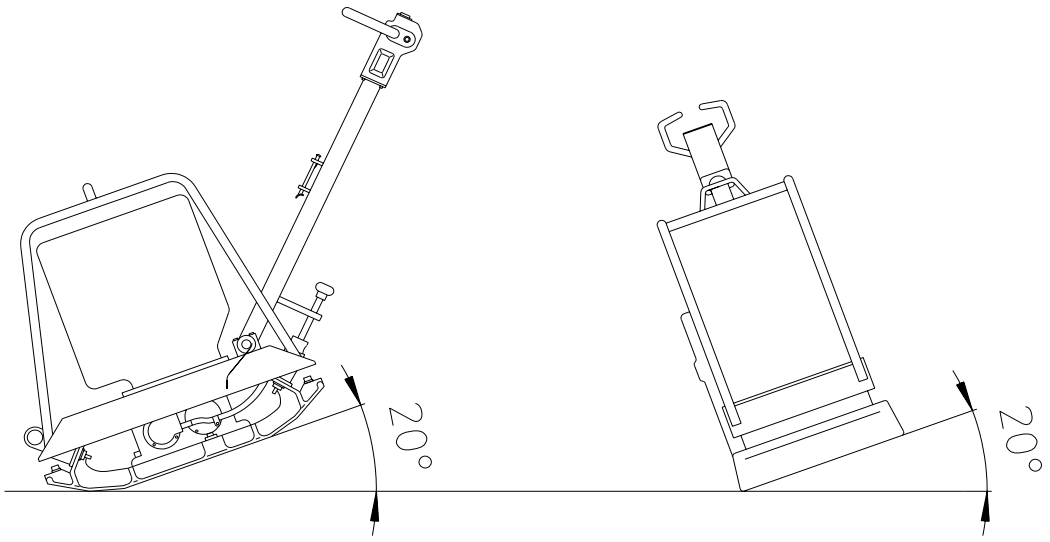
Due to its reduced width of only 400 mm and its stepless adjustability, this vibrator is particularly suited for all kinds of soil compaction in confined areas, such as in cable trenches 40 cm wide or more, compaction of marginal strips, repairs on blacktop surfacings as well as for all compaction jobs when applying large - scale machinery would be inappropriate.

Dimensions



	DPU 2440F
A	**700**
B	**1600**
C	**690**
D	**400**
E	**880**

Max. admissible inclination



Maintenance schedule

Check all external screw connections for tight fit approx. 8 hours after first operation.		
Parts	**Maintenance jobs**	**Maintenance interv.**
Air filter Engine Exciter	Oil bath air filter - Check oil pan for oil level and dirt. Clean or top up if necessary. Dry-type air filter - see visual maintenance display, clean or replace filter cartridge if necessary. Check oil level, top up if necessary. Check crank and crank carrier for correct fastening. Check for tightness.	daily
Engine	First oil change.	after 25 hours
Other parts	Grease moveable locking device, and spindle for pole height adjustment.	weekly
Tow-bar head V-belt Other parts	Check oil level, top up if necessary. Check V-belt tension - retension, if need be. Check fastening screws of protective frame and central suspension for tight fit.	monthly
Engine Exciter	Further oil changes. Checking coolings fins for dirt-clean dry if necessary. Tighten all accessible screw connections. Oil change.	after 150 hours
Valve clearance Injection nozzle	Check, set to 0,1 mm when motor is cold. Function check 200 bars.	after 300 hours

Service instructions

1. Adjusting the V-belt tension

   (First and most important adjustment after the first 5 to 20 hours of operation).
   Remove belt guard. Remove nuts situated on the motor V-belt pulley, remove V-belt pulley half. Remove necessary number of spaces (the removal of one spacer is usually sufficient). Install the removed spacers on the outside of the V-belt pulley. (If one washer is removed, install it on the outer half of the pulley, of two, one on the outer and one on the inner V-belt pulley halft, etc.). This V-belt alignment is maintained. Install spring washers in a way such that the large diameter comes to lie on the motor V-belt pulley. Loosen nuts and under continual rotation of the motor V-belt pulley tighten nuts alternately.

2. Lubricating the exciter

   On delivery of the machine, the exciter is filled with oil. Change oil after every 250 hours of operation, use approx. 0,75 liter SAE 10 W 40 oil. For this purpose place vibration plate on level ground. Remove drain plug (red). Correct oil level: Oil should reach the lower flange of the threaded hole.

Hydraulic control

When checking the oil level in the motor and exciter, also check oil level in the centre pole head and top up if necessary (Top up to mark when centre pole is in vertical position). If there is too much oil in the centre pole head the reverse motion is hard to engage. If the quantity of oil is insufficient the advance speed is reduced. We use hydraulic oil Fuchs Renolin MR 520 suitable also for low temperatures in the hydraulic systems as standard.

Mounting instruction

1. Exciter

   When disassembling exciter components, always remove eccentric weights first. When assembling, the eccentric weights have to be installed last of all. When installing exciter shafts mind marking of toothed gears. Assembly of exciter shaft is correct when all eccentric weights point down while piston is at half stroke. During assembly of eccentric weights on exciter shaft, keep shafts blocked to avoid pinching of fingers. Tighten all screws with the prescribed torque, mind qualities of screws (see screw head).

2. Hydraulic control

   Bleed hydraulic system after having topped up with oil, then check oil level again (total quantity required approx. 1,3 liters).

3. Bleeding

   Place handle into vertical position. Slightly pull back control lever and let it go again. Open bleeding screw on control housing at exciter until no air bubbles appear in oil. Tighten bleeding screw again.

4. Centre pole head

   ☞ **ATTENTION!** When disassembling the centre pole head, please mind that the piston is installed under spring tension. When assembling, locate toothed rod in toothed gear in a way such that the handle is set a 90^{o} to the centre pole head when piston is fully extended.

5. Test-run equipment for approx. 5 min. to bleed air from system.

Starting operating

Check oil level, top up if necessary. Only use high graded brand oil SAE 10 W 40. Fill with oil to upper mark of the level indicator (1 l).

1. Diesel fuel

Do not use petrol or petrol mixture, also no tractor fuel, but only pure diesel oil. Close fuel tank immediately. The highest degree of cleannes is also essential here in order to avoid troubles with the injection unit and premature clogging of the fuel filter. Do not open the supply system or the fuel pump, not even for bleeding. The fuel pump bleeds itself automatically; thus if the fuel tank is inadvertently run dry; the tank should simply be refilled and in order to avoid penetration of dirt no loosening dirt no loosening of screws should be taken on at any part of the fuel system.

2. Dry - type air filter

If the motor starts fuming and the motor power drops simultaneously, then the filter is clogged. Pull out cartridge, clean it by tapping lightly to make the dust fall out of the paper element.

With this type of filter the uncleaned air is inside the filter catridge, therefore, make sure that dust particles are not deposited on the outside, because from there, they could be sucked in by the motor which would lead to motor damage.

For this reason we recommend replacing the entire cartrige rather than running the risk of incurring damage.

☞ **ATTENTION!** Clean filter housing, do not use compressed - air. Clean filter housing with a clean cloth. Make sure that dust from the inside of the housing is not wiped into the opening of the cylinder.

3. Starting the motor

- Set hand control to full load position.
- Pull down excess starting fuel button.
- Switch on automatic decompression with starter crank.
- Put starter crank over safety cam into gear and start motor.

4. Stopping the motor

- Never switch off motor at full load.
- Reduce speed to idle and allow to run for a short time.
- Put lever at “STOP” and hold it there until motor stops.

Maintenance

- First oil change after 25 hours of operation. Further oil changes every 150 hours.
- Fuel filter does not require any care provided that it is sufficient clear.
- Check valve clearance from time to time.

EC - CONFORMITY-CERTIFICATE

Wacker Construction Equipment AG , Preußenstraße 41, 80809 München

hereby certify that the construction equipment specified hereunder:

1. Category: **Vibratory plate**

2. Type: **DPU 2440F WGB**

3. Equipment item number: **0007877 ...**

4. absolute installed power: **3,5 kW**

has been evaluated in conformity with Directive 2000/14/EC:

Conformity assessment procedure	At the following notified body	Measured sound power level	Guaranteed sound power level
Annex VIII	**VDE Prüf- und Zertifizierungsinstitut Zertifizierungsstelle Merianstraße 28 63069 Offenbach/Main**	**107 dB(A)**	**108 dB(A)**

and has been manufactured in accordance with the following directives:

2000/14/EG
98/37/EG
EN 500-1
EN 500-4

Dr. Sick
Board of Directors

File certificate carefully

VDE Prüf- und Zertifizierungsinstitut

VDE VERBAND DER ELEKTROTECHNIK
ELEKTRONIK INFORMATIONSTECHNIK e.V.

CERTIFICATE

Registration Number 6236/QM/06.97

This is to certify that the company

WACKER

Wacker Construction Equipment AG
Wacker-Werke GmbH & Co. KG

with the locations

Head Office Munich
Preussenstr. 41
80809 München

Production plant Reichertshofen
Karlsfeld logistics centre
Sales regions with all branches all over Germany

has implemented and maintains a
Quality System for the following scope

Machine manufacture
Construction machines

This Q System complies with the requirements of

DIN EN ISO 9001:2000

This Certificate is valid until 05.06.2006

VDE Testing and Certification Institute
Certification

D-63069 Offenbach/Main, Merianstraße 28
Date 02.06.2003

The VDE Testing and Certification Institute is accredited by DARAccreditation Bodies according to DIN EN 45012 and notified in the EU under ID. No. 0366.

Deutscher Akkreditierungs Rat
DAR
TGA-ZM-009/92-00