

USER MANUAL

VW 1350 HB – The Manual Operated VMS-Trailer



EBO
VAN
WEEL

TRAFFIC SYSTEMS





FOREWORD

Thank you very much for buying an EBO van Weel B.V. product.

This user manual is an important document so please be aware that this user manual must remain with the machine!

The purpose of this user manual is to inform the owners, the users, the lessors and the renters about the precautions and essential operating procedures that all are needed for a safe and proper operation of the machine.

Due to the fact that the products of EBO van Weel B.V. are constantly being improved, EBO van Weel B.V. reserves the right to make changes to specifications without notice. Please contact EBO van Weel B.V. for actual information of the products.

Considering the safety, reliability, warranty and the value of the machine, always use original spare parts of EBO van Weel B.V.

Please contact us for:

- accident reporting;
- safety publications;
- updating the data on the current owner;
- questions concerning the safety of the products;
- information on standards and regulations;
- questions relating to special applications of the product;
- questions regarding changes to the product.

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REVISION LOG

Type of expenditure	Version Number	Date
Initial release	V1.0	06-01-2016
Revision	V1.1	24-10-2017



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1 SAFETY SIGNALS



Danger Sign (Beware!)



User Instructions



Corrosive Substances



Extendible Support on Shoe



Voltage Supply



Explosion Hazard



Pinch Hazard



2 GENERAL SPECIFICATIONS

2.1 DESCRIPTION OF THE MACHINE

This machine is a portable object that will be used by road incidents, roadworks and diversions. The work areas of this machine are highways, state roads and inner city urban areas.

2.2 TECHNICAL SPECIFICATIONS

Technical specifications VW 1350 HB	
Underframe	
Axle	WAP – WAG 135B 1.350KG
Overrun	WAP 24 / 35.1 – 2.000KG
Brakes	Drum Brakes
Tires	195/50 R13
Electrical system	
Voltage	24 Volt
Batteries	4 x (standard semi-traction)
Battery capacity	230 Ah (standard)
Battery charger	230 Volt / 40 Amp.
Solar panels	2 x (standard)
Maximum power solar panel	200 Watt per piece

Driving lights	
Lighting	12 Volt (standard)
Connector	13-pin connector (standard)
Hydraulic system	
Upper-frame	Hydraulic executed
Emergency service	By-pass on hydro unit
Hydro unit	800 Watt
Hydraulic oil	Tellus 15
Upper-frame	
Reflection	Class 2 red / white
Under plate	Signface J37 (standard)
Display	
Display	80*80 mm Swarco Futurit
Voltage	24 Volt
Maximum power	240 Watt
Other components	
Extendible supports	4 x, manual
Nose wheel	Manual
Storage unit Andreas stripes	3 x (2000*225*30 mm)
Storage support plates	4 x (400*400*40 mm)

Chart 1



2.2.1 DIMENSIONS AND WEIGHT

Dimensions & weight VW 1350 HB

Dimensions	
Length	3.100 mm
Width	1.710 mm
Height in transport position	2.800 mm
Height in operating position	4.000 mm
Weight	
Empty weight	1.100 kg
Maximum weight	1.300 kg
Weight at registration	1.300 kg
Ball weight	Ca. 100 kg

Chart 2

2.2.2 LOCATION OF THE SERIAL NUMBER

Each EBO van Weel B.V. machine has its own identification sticker. This sticker is mounted on the front of the chassis. Also the serial number is stamped on the front of the chassis.

On the identification sticker, the following information is reported:
(Please see the example in figure 1)

Merk:	EBO van Weel	Max.gew.totaal:	1300kg
Type:	VW 1350 HB	Max. aslast 1:	1300kg
Bouwjaar:	2015	Max. aslast 2:	
		Max. aslast 3:	
		Max. aslast 4:	
		Max. kop.druk:	100kg
Goedk.nr.:	WeeA		
Chassisnr.:	*XL900002015081000*		
CE	EBO van Weel B.V. T +31 (0)10 501 5866 www.ebovanweel.com	Achterdijk 49 3161 EB Rhooon The Netherlands	 EBO VAN WEEL SINCE 1963

Figure 1

2.2.3 TIRES

The machine is equipped with two tires 195/50 R13. If required, a spare wheel is included. The inflation pressure of the tires is 5 bar. Upon inspection, be aware of the tyre profile and the condition of the tyre.

2.2.4 LUBRICATION POINTS

This machine has various lubrication points which are mounted on rotating parts. These important points should be lubricated every six months. Please use the right type of fat, the machine is equipped with Shell Retinax EP2 automotive fat. For more lubrication instructions, please check the 'VW 1350 HB – Service Manual'.

2.2.5 BATTERIES

The machine comes standard with four batteries: type semi-traction. These batteries should be checked every six months on battery water.



It is important to check the battery water level. When the water is below level, please complement this with distilled or demineralized water.

Please note: when other batteries are installed, please check with EBO van Weel B.V. to perform good maintenance. This is very important because the batteries are connected with a programmable battery charger.

2.2.6 SOLAR PANELS

The machine is standard equipped with two solar panels of 200 watts each. These solar panels are mounted on each valve of the front and rear compartment. If the machine is equipped with four solar panels, the extra two solar panels are mounted in a frame on the upper side of the display. All solar panels are connected to a solar battery charger.

Note: keep the solar panels clean for the highest possible efficiency.



3 SAFETY MEASURES

3.1 BEFORE OPERATION

This chapter describes all the safety measures which are important to be taken for a proper and safe use of the machine. Based on the content of this manual, a daily routine has to be planned for the correct use of this machine.

Besides that, on the information of this manual and service manual, a maintenance programme must be prepared by an authorized person. This should allow you to ensure that the machine can be operated safely.

The owner/user/operator/lessor/lessee of the machine should not use this machine until this manual has been read, the training is completed and the operator is capable to use the machine.

This machine cannot be used in dangerously explosive area zones according to IEC EN 60079-10.

3.2 TRAINING OF STAFF

3.2.1 TRAINING OF THE USER

Please make sure that the user has been given a thorough explanation by an authorised person. If not, please contact EBO van Weel B.V. for a training and instructions.

3.2.2

Before using the machine, read the points below very carefully:

- Make sure you have read and understand this manual before using the machine;
- Don't use this machine until you have had an explanation/training of the machine by an authorized person;
- Please read all warning messages/icons like: (DANGER, CAUTION and WARNING) and instructions on the machine and in this manual, please make sure you understand and obey it;
- All users should be familiar with the emergency switches and controls in emergencies as described in the manual;
- Make sure that you are familiar with the regulations of your employer, local regulations and governmental regulations that are related to the use of the machine.



3.3 INSTALLATION AND INSPECTION OF THE MACHINE

3.3.1 BEFORE USING THE MACHINE

Before using the EBO van Weel B.V. machine, please check the following points:

1. **tire/ tire pressure:** before the machine will be transported, it is required to check the tire pressure. You can find the correct tire pressure on the mudguard of the machine.
2. **lighting:** please check the lighting in operation before you will transport the machine.
3. **batteries:** check the power of the batteries before using the machine. A sufficient battery voltage is 24,6 volt or higher.
4. **functions:** check the hydraulic functions and the operation of the display before use.
5. **visual inspection:** note any defects, leaks or defective parts on the machine. Where necessary, inform EBO van Weel B.V. if you have any doubts about the machine.

6. **solar panels:** keep the solar panels clean for the highest possible efficiency.

3.3.2 CLEANING THE MACHINE

Winter:

Remove ice and snow before operation in winter. Check the hinges holding the upper panel and the adjustment drive for proper movability.

We recommend cleaning by hand using commercial automobile care products. Do not use steam or high-pressure equipment.

3.4 CONTROLS

This chapter explains where the controls of the machine are located to operate the machine in a proper manner.

3.4.1 CONTROLS

Front compartment

In order to make the machine ready for use, please switch the main power button to “ON”. This button is also the cut-off switch if the user is in an unsafe situation. The switch is mounted on the main casing, see figure 2.

The battery charger is positioned on the left side of the front compartment, see figure 3.

For selecting an animation which will be projected on the display, a page selector (optional) is required. The selector is attached on the left side of the main cabinet. The operation is explained in section 4.2.3.



Figure 2



Figure 3

Rear compartment

In the rear compartment is a storage area where the stamp plates, andreas stripes and the spare wheel can be stored. See figure 4.



Upper-frame

The two buttons “Up” and “DOWN” of the display is mounted in the bottom of the upper-frame. The switches are accessible by opening the door of the upper-frame, see figure 5.



Figuur 5

The upper part can also rotate 360° degrees. After the upper-frame is rotated in the correct position, it has to be locked with two red locking pins which are secured in the bottom of the upper-frame.

Extendible support legs

The extendible support legs are manually operated and can be moved with a caravan pendulum “up and down”. The caravan pendulum can be stored in one of the compartments.



3.4.2 STATUS MESSAGES THROUGH TRAFFIC FLEET

Besides the animation selection of the display, offers Traffic Fleet also a service to send status messages and alerts to the user. Chart 3 shows the status notifications, urgencies and the action is displayed.

For more information check: 'Traffic Fleet – Operational manual'.

Status notifications via Traffic Fleet		
Error code	Urgency	Action
Battery voltage criticism	Critical	Unplug machine power
Periodic maintenance required	Warning	check 'VW 1350 HB – Service manual'
SBC communication error → display	Critical	Contact EBO van Weel
To many pixel errors detected	Critical	Contact EBO van Weel
Internal communication error LED modules	Critical	Contact EBO van Weel
SBC communication error → other print	Critical	Contact EBO van Weel
SBC temperature too high	Critical	Contact EBO van Weel
Received incorrect parameters	Critical	Contact EBO van Weel

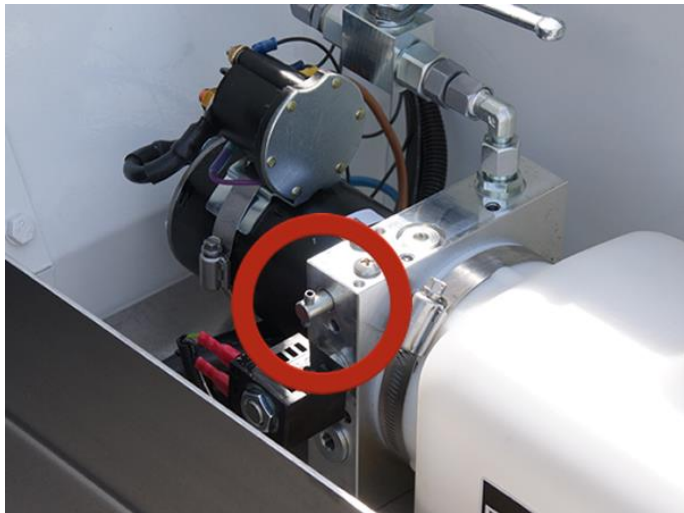
Internal error in memory	Critical	Contact EBO van Weel
ContentID error	Critical	Contact EBO van Weel
Intern conflict SBC	Critical	Contact EBO van Weel
Sequence error	Critical	Contact EBO van Weel
Received incorrect data	Critical	Contact EBO van Weel
Internal error display	Critical	Contact EBO van Weel
Web address not allowed	Critical	Contact EBO van Weel

Chart 3



3.4.3 EMERGENCY OPERATION

To return the display in its transport mode in the event of a fault, it's possible to use a bypass on the hydraulic unit in the rear compartment, as shown in Figure 6. The bypass should be turned on so the oil automatically flows back into the reservoir. After that, the display will go 'DOWN' in its transport mode.



Figuur 6

3.5 TOWING, LIFTING, TRANSPORTING

3.5.1 ON/ UNHITCHING THE MACHINE

After every coupling operation, check whether the trailer tongue is firmly fitted on the towing vehicle's tow ball. If the coupling is not properly performed, the trailer might detach itself from the towing vehicle

and can cause an accident. On/ unhitching the machine works as follows:

1. Disconnect the machine from the handbrake;
2. Connect the coupling;
3. Connect the breakaway cable on the towing vehicle;
4. Connect the 13-pin connector with the socket of the towing vehicle;
5. Now, the machine is successfully coupled.

For uncoupling, please use the same steps above vice versa.

3.5.2 LIFTING MACHINE

By means of the sleeves in the chassis, it is possible to lift the machine with a forklift truck. Take the full advantage of the length of the spoons to hold the 'arm' as small as possible.

- BELANGRIJK -



The forklift truck must be able to lift at least 2.000 kg.

3.5.3 LIFTING MACHINE

The machine can be lifted through 4 extendible stamps.

- IMPORTANT -



Allow a sufficient length of the lifting straps.



4 MACHINE COMMISSIONING

PROCEDURE

This chapter explains how to use the machine in a proper way.

4.1 OPERATION CHARACTERISTICS AND LIMITATIONS OF THE MACHINE

4.1.1 CAPACITIES



- It is not allowed to use the machine with a wind power above 8 Bft.
- Don't exceed the 90 km per hour while driving.
- Always place the upper-frame in the transport mode while driving as shown in Figure 7 and 8.



Figure 7

- Do not drive with the machine when the upper-frame is not in its transport position.
- When the batteries are fully loaded (100%), it's possible to use the machine for 5 days non-stop. In the spring and summer it is possible to use the machine for a longer period. It depends on the weather conditions and the animation which is selected.

4.1.2 STORAGE COMPARTMENTS

There is a storage space in the machine for the following components:

- 4x Stamp plates (400*400*40 mm)
- 3x Andreas stripes (2000*225*30 mm)
- 1x Spare wheel (195/50 R13)

4.2 PHYSICAL MACHINE CONTROLS

In order to get the machine in its operating position, the following steps need to be taken:

1. Disconnect the machine from the towing vehicle and use the nose wheel of the machine. Please use the handbrake of the machine.
2. Please use the extendible stamps.



CAUTION! Do not park this machine on a ramp with a gradient of 10% or more. When you park the machine on a soft surface, please use the extendible stamps for a better stability of the machine.

3. Please use the lid on the top frame. Figure 9 explains how to rotate the upper-frame. Please make sure that the upper-frame is in the requested position and lock the upper-frame with the two red locking pins. By rotating the upper-frame, it's possible to check if the upper frame is properly locked.



4. Turn the main switch to "ON" in the main box in the front compartment (Figure 2), the display is now in stand-by mode.

5. The "UP" and "DOWN" controller is mounted on the underside of the of upper-frame. See Figure 5. Please press the "ON" button until the display cannot pushed higher. The display will automatically turn on with the selected animation.
6. For another programming of the display, check section 4.3;
7. When the machine must turn back in the transport mode (Figure 8), press the button "DOWN" until the display stops turning down. The display automatically turns off when the machine is in its transport mode.

- IMPORTANT -



Make sure that the turning mechanism is locked with the red locking pins.

- IMPORTANT -



Do not forget to lock the compartment doors to prevent vandalism.



4.3 APPLY AN ANIMATION

Animations can be selected and programmed. There are two ways:

- Selecting online animations in the application Traffic Fleet, see section 4.3.1;
- Selecting local animations with the page-selector, see section 4.3.2.

4.3.1 TRAFFIC FLEET

You can manage the machines by the Traffic Fleet application. Please check the Traffic Fleet – User manual for more information about Traffic Fleet.

4.3.2 PAGE SELECTOR

Besides Traffic Fleet, the user is able to use the local animation programmer that uses the machine's memory. The animations can be modified with the available animations in the machine's memory.

The page selector, shown in Figure 10, has different buttons with different functions. The following points will show you how this page selector works:

1. Please hold the "ON" and "OFF" buttons for four seconds. A double 0 is now visible on the screen. If not, and if the selector will turn off, there are no animations stored in the memory.
2. Each animation has its own number in Traffic Fleet. By pushing the numbers +1 until +10, it's possible to choose the requested

animation. If you have found the requested animation, please push "ENTER" to save this animation.

3. Repeat step 2 for any other choice.
4. The page selector automatically turns off when the display returns in its transport mode.



Figure 10

- IMPORTANT -



The "bright yellow" and "blue buttons" have no functions. Use of these buttons does not lead to damages or risks.



4.4 CHARGING

The charger is a component that requires no or low maintenance. Please install this charger in a clean, dry area. Please be aware that the “cooling” vents of the charger are not blocked. If the charger doesn’t work anymore, please check if the switch-plug is working. If the charger is still broken, please contact EBO van Weel B.V. for more information.

4.4.1 CHARGER

The machine is equipped with the following charger:

Type battery charger	Indicator
Xenteq – TBC 600	Green LED = Loaded Orange LED = Charging Red LED = Boost

Chart 4

The batteries should be charged in a proper way, please find the right steps below:

1. Check the fluid level before charging the batteries. This type of battery is not maintenance free. If necessary, add extra fluid until the required level is reached. (see section 6.2.3. maintenance)
2. Connect the charger through a charging cable to the mains.

3. The three LED’s indicate the different charging modes. The rightmost LED will light up green soon as the charger cradle is properly connected to the power supply and the remote control is properly putted into the charger cradle.
4. When the charger indicator LED doesn’t light up, the following points may be affective:
 - One or more batteries are defect;
 - Fuse is melted;
 - Charger is defect;
 - Plug is not connected properly



5 MAINTENANCE (OWNER)

5.1 MAINTENANCE

Each machine is equipped with a service manual and a spare parts list. Care and maintenance are essential for preserving proper functionality, particularly in the winter months when environmental factors increase the rate of wear. Repairs and service checks should only be performed at the manufacturer's service stations. Always use original spare parts.

5.2 WARRANTY

The machine has a warranty of one year from the date of delivery. Periodic maintenance is important for proper function of the unit. Maintenance in compliance with EBO van Weel B.V. parts prevents needless damages and preserves the value of your investment. Conversions or changes to the machine are only allowed following written approval by the manufacturer. To preserve functionality and safety, only original components from EBO van Weel B.V. must be used when the need for spare parts arises. A use of other parts will annul liability for the related consequences.

Warranty claims can only be accepted if the customer used the original spare parts delivered by EBO van Weel B.V. During the validity period of the warranty nothing should be replaced by non-original parts. Violation will result in a cancellation of the warranty. Replacing or adding electrical components that are not genuine, could result in the annulment of the EMC inspection.

5.3 STORAGE

Park the vehicle and place the machine on the parking brake and make sure that the upper-frame is in the transport mode. Please connect the machine to the battery charger (if possible). Turn the power switch "OFF".



6 FAULTS

6.1 FIRST-LINE SUPPORT

In case of a fault, please use the service manual to detect less complex faults.

- IMPORTANT -



In case of a failure, please detect the fault before contacting EBO van Weel. The urgency can be determined. If the urgency is critical, it is not allowed to use the machine until the problem is solved.

- IMPORTANT -



Contact EBO van Weel if you frequently receive the same faults.

6.2 EBO VAN WEEL SUPPORT

If you are unable to solve the problems with help of the service manual, please contact EBO van Weel support. This may be desirable to solve the complex problems of the machine. This could be done on location if possible. Faults can be reported by calling +31 (0)10 501 5866 from Monday until Friday (7:30 / 18:00).