



WES-3652

**WES-3652 RIDE-ON FLOOR SCRUBBER
OWNER'S MANUAL**



TABLE OF CONTENTS

THE DELIVERY OF THE MACHINE	1
INTRODUCTORY COMMENT	1
TECHNICAL DESCRIPTION	1
PERSONAL PROTECTION	2
KEY FEATURES	2
IMPORTANT INSTRUCTIONS	2
MACHINE PREPARATION	2
DAILY MAINTENANCE	2
HANDLING OF THE PACKED MACHINE.....	2
PACKAGE CONTENTS.....	2
MACHINE SET-UP/OPERATION PRIOR TO ACH USE.....	3
SOLUTION TANK.....	3
SQUEEGEE RUBBER BLADE INSTALLATION.....	3
BATTERY TYPE	3
ENERGY SUPPLIES.....	3
BATTERY CONNECTION.....	3
RECHARGING THE BATTERY	3
OPERATING MACHINE	3
WHEN FINISHED.....	4
ADDITIONAL WARNINGS.....	4
DAILY MAINTENANCE	4
SQUEEGEE RUBBER BLADE ATTACHMENT	4
WEEKLY MAINTENANCE	4
COMMON PROBLEMS AND SOLUTIONS	5
CHOICE AND USE OF BRUSHES	5
GENERAL SAFETY RULES	6
COMMON FAULTS & TROUBLESHOOTING	7-10
WARRANTY	11
CONTACT US	11



DELIVERY OF MACHINE

Upon receiving the machine, an immediate check must be performed to ensure all materials mentioned in the shipping documents have been received. If damage has occurred during shipping, inform the shipping agent immediately to verify the amount and nature of the damages suffered and contact our service department at 1-877-743-9732. It is only by prompt action of this type that compensation for damage may be successfully claimed.

INTRODUCTORY COMMENT

This is a sweeping and scrubbing machine which uses the mechanical abrasive action of a rotary brush and the chemical action of a solution water and detergent. The WE-3652 picks up loose dirt during its forward movement, while removing dirt and detergent.

We would impress upon you that any machine will function efficiently and operate successfully, only if used correctly and maintained in fully efficient working order. Please read this manual carefully and re-read it whenever difficulties arise in the course of machine use. Our service department is at your disposal for all such advice and servicing as may prove necessary.

TECHNICAL DESCRIPTION

TECHNICAL DATA	U/M	GBZ-350B
Voltage:	36V/225	AH
Run Time Per Charge:	Approx. 8 hrs.	
Cleaning Path:	35.50 in.	(90 cm)
Squeegee Width:	43.30 in.	(110 cm)
Cleaning Speed	(max): 64,430	sq f/hr
Solution Tank:	48 gal.	(180 L)
Recovery Tank:	52 gal.	(195 L)
Brush Motor:	0.75 hp	(560 W)
Vacuum Motor:	0.75 hp	(560 W)
Drive Motor:	1.48 hp	(1,100 W)
Squeegee Lifting Motor:		
Lifting Motor:	0.13 hp	(100 W)
Machine Dimensions:	67 in.	(170 CM)
	59 in.	(150 CM)
	37.40 in.	(95 CM)
Weight with batteries:	1296 lbs.	(588 KG)



PERSONAL PROTECTION

It's always recommended to wear the appropriate Personal Protective Equipment (PPE) for the task at hand and follow your employer's safety policy. Commonly known PPE such as safety glasses, gloves, earplugs, respirators, ect . . . are recommended as needed. For further information on OSHA requirements, visit <https://www.osha.gov/Publications/osha3151.pdf>

KEY FEATURES:

- (CFS) Central Flow System solution distribution from brush
- (CWS) Constant Weight System ensures maximum scrubbing results
- Exclusive squeegee system assures high performance at low cost
- High quality/high performance vacuum motor
- Great maneuverability due to optimum weight distribution
- Squeegee blade can be used on 4 sides before replacement
- Easy access to internal components
- Designed to ensure minimum noise levels
- Battery level indicator
- On board charger and external battery charger plug
- (AFS) Anti Foam System and shut off sensor protect vacuum
- Squeegee assembly and blade replacement without tools

IMPORTANT INSTRUCTIONS:

PLEASE READ THE INSTRUCTIONS CAREFULLY PRIOR TO USING THIS PRODUCT

WARNING- TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK, AND/OR INJURY/DAMAGE TO PERSONS OR PROPERTY:

- DO NOT operate the machine unless trained and authorized
- Flammable materials can cause explosions or fire. DO NOT use flammable materials in tank or as cleaning agent in machine
- Flammable materials or reactive metals can cause explosions or fire. DO NOT use to clean up flammable or combustible spills
- This machine is intended for commercial use. It is constructed for use in an indoor environment and is not intended for any other use
- Extreme caution and supervision is necessary when used near children or unqualified personnel
- Conditions of use: room temperature between 0 degrees Celsius and 40 degrees Celsius with relative humidity between 30% and 95%
- DO NOT place objects on the unit or allow objects to obstruct the inlet or outlet openings. Do not operate in close proximity to walls, curtains, etc..
- DO NOT use acid solutions, which may damage the machine or harm the operator
- Always turn off and unplug the battery prior to assembling, performing routine maintenance, or when not in use
- DO NOT attempt to fix the machine by yourself. All repairs must be made by authorized personnel
- DO NOT modify the machine
- Avoid moving parts. Do not wear loose fitting clothing while using/servicing the machine
- DO NOT place any flammable material into the solution tank. This can cause explosions or fire. Only use approved cleaning chemicals
- Empty the solution tank and recovery tank before storing the machine
- This machine shall be stored indoors only

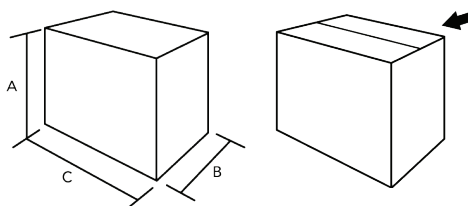
MACHINE PREPARATION

HANDLING OF THE PACKED MACHINE

The Warrior Scrubber WE-3652 is packaged and shipped within carton boxes.

No more than four packages should be stacked on each other. Packing dimensions are as following:

- A: 105"
- B: 165"
- C: 180"
- Weight: 338 lbs.



PACKAGE CONTENTS

1. Machine
2. Battery Charger
3. Pad Drivers
4. Brushes
5. Squeegee Assembly

MACHINE SET- UP/OPERATION PRIOR TO EACH USE:

1. Check that squeegee assembly is properly installed
2. Check that pad driver is properly installed
3. The working surface is sufficient to support the weight of the machine
4. Always close recovery tank cover fully before use

SOLUTION TANK

1. Before each use, open the lid and fill in the correct amount of water and cleaning detergent
2. To obtain good results, make sure to use the appropriate cleaning detergent
3. Using strong detergent may weaken the life of the machine
4. Use low foam detergent or anti-foaming agent to avoid damage to the water motor

SQUEEGEE RUBBER BLADE INSTALLATION:

Squeegee Installation process is as follows:

1. Attach suction hose
2. Loosen the 2 most inward knobs
3. Slide onto assembly
4. Tighten the 2 most inward knobs

BATTERY TYPE**ENERGY SUPPLIES:**

1. Lead batteries for traction use and tubular plates and electrolyte free.
2. Battery hermetically sealed for traction recombination of gas with gel technology.

The maximum dimensions of every battery should be: length 10.82", width 3.54", height 7.87".

The maximum weight of every battery should be 26.4 #.

In order to achieve a tension of 24v, the batteries must be connected with a serial connection.

The connection process should be carried out by specialists who are trained by our service department.

ATTENTION: Using exclusively sealed batteries to avoid acid spillage is recommended

THE BATTERY CONNECTION:

Connect battery connector to machine connector

ATTENTION! THE INSTALLATION PROCESS SHOULD BE CARRIED OUT BY A SPECIALIST. A WRONG OR DEFECTIVE CONNECTION CAN CAUSE SERIOUS DAMAGE TO PERSONS AND MACHINE.

RECHARGING THE BATTERY

1. Carry out a battery charge cycle before using the machine.
2. Make sure that the battery charger is suitable to the installed battery, both in capacity and in type.

Warning! Never charge a GEL battery with an unsuitable battery charger.

Strictly follow the instructions provided by the battery and battery charger manufacturer.

To avoid permanent damage to the battery, the battery should never be totally discharged. Batteries should be recharged within a few minutes after the battery discharge signal start to flash.

OPERATING MACHINE:

1. Make sure the emergency stop button is pulled out
2. Turn the key to the ON position
3. Adjust the dial into the 2nd position to enable the vacuum and scrubber pads
4. Adjust the dial into the 3rd position to enable the scrubber pads only
5. Adjust the dial into the 4th position to enable the vacuum only
6. Adjust water flow by adjusting water flow lever, indicated by the water symbol
7. To make the machine move forward, push the forward button indicated by an arrow, and apply pressure on the gas pedal
8. To make the machine move backward, push the reverse button indicated by an arrow, and apply pressure on the gas pedal
9. Adjust the speed of the machine by applying various pressure on the gas pedal...more pressure for speed increase, less pressure for speed decrease

WHEN FINISHED:

- Turn off water flow by adjusting the water flow lever, indicated by the water symbol
- Adjust the dial to the OFF position
- Turn the key to the OFF position

ADDITIONAL WARNINGS:

- DO NOT operate machine unless this manual is thoroughly read and understood
- DO NOT use fingers to wipe or remove debris from the brushes, as injury may occur
- DO NOT fill the solution tank before emptying the recovery tank
- Battery acid is highly caustic, always wear protective gloves and eye protection. DO NOT tilt battery, otherwise acid may flow out of vent openings
- Before performing any maintenance on the machine, be sure that the power is turned off, or the batteries are disconnected

DAILY MAINTENANCE:

- Wipe the whole machine with clean/damp cloth
- Empty the solution tank by opening solution drain plug
- Drain and rinse out recovery tank with clean water
- Clean the vacuum filter by removing the vacuum intake cap
- Remove the pad driver/brush and squeegee assembly and clean with clean water
- Check the battery charge, timely charging

SQUEEGEE RUBBER BLADE ATTACHMENT

- Remove the squeegee assembly from the unit (refer to squeegee assembly installation)
- Loosen the lock clamp to remove the metal restraining strap
- Replace with new blade, making sure the grooves line up with the pins keeping the blade in position
- Reassemble using the lock clamp to hold in place

WEEKLY MAINTENANCE**CLEANING SQUEEGEE HOSE:**

Weekly or whenever suction is insufficient, it is necessary to clean the squeegee hose.

Follow these procedures:

1. Remove pipe from squeegee sleeve.
2. Take out other end from recovery tank.
3. Wash inside of pipe using a jet of water

ATTENTION! DO NOT WASH THE PIPE THAT CONNECTS THE VACUUM MOTOR AND RECOVERY TANK!

COMMON PROBLEMS AND SOLUTIONS**INSUFFICIENT WATER ON THE BRUSHES:**

1. Ensure there is water in the solution tank
2. Ensure the solenoid valve switch is turned on, and check the water flow control valve is in the open position.
3. Ensure the quick fitting connection is properly engaged.

THE MACHINE DOES NOT CLEAN WELL:

1. Check brush wear and replace if necessary. Brushes must be replaced when bristles are about 15mm high.

THE SQUEEGEE DOES NOT DRY THE FLOOR PERFECTLY:

1. Ensure squeegee rubbers are clean
2. Check the connection between suction pipe and recovery tank.
3. Remove and clean whole suction unit.

EXCESS FOAM:

1. Ensure low-foam detergent is used. If necessary, add little anti-foam liquid to recovery tank.
2. More foam is generated when floor is clean. In this case, use a more diluted detergent.

PROBLEM	CAUSE	SOLUTION
Ineffective water reclamation	Old rubber adhesive	Replace rubber
Suction head inadequate drying	Tube is obstructed/ Adjustment of brush is not suitable/ Suction head blocked	Clean pipes/ Adjust brush
Machine wash result is not satisfactory	Old brush/Not enough brush pressure	Replace brush/Increase brush pressure
Machine will not start	Uncharged battery/Micro switch set incorrectly/Emergency stop button is engaged	Charge battery/Reset micro switch/ Release emergency stop button
The machine stops suddenly	Battery terminal relaxation/ Emergency stop button has been engaged	Connect battery/ Release emergency stop button
Machine is not moving forward	Gas pedal failure/ Control component failures	Check the connection/ Check the control section
Vacuum cleaner motor shuts down/ fails to start	Tank float switch is disconnected from the vacuum motor	Turn off vacuum cleaner motors, empty water tank, and reconnect
Machine has water leakage	Liquid valve open/ Damage to piping or seals	Close water valve/ Replacement of pipes or seals
The system can not reduce the increase in brush	Fuse fault/ Starter cannot accept the electrical current/ Starter motor damage/ Circuit board problem	Fuse Replacement/ Check electrical connection/ Starter motor replacement/ Circuit board replacement

CHOICE AND USE OF BRUSHES

Polypropylene Brush (PPL) - Used on all floor types and offers good resistance to wear and to hot water (not over 50 degrees C). PPL is non- hygroscopic, preserving its character even when working on wet floors.

Nylon Brush- Used on all floor types and offers excellent resistance to wear and to hot water (not over 50 degrees C). Nylon is hygroscopic and tends, over a period of time, to lose its character when working on wet floors.

Pad Holder- Used for cleaning polished surfaces

Center Lock Pad Holder in addition to anchor stubs, also have a plastic snap-in centre lock system. This permits perfect centering of the abrasive disk and ensures it is kept anchored without detaching. This type of pad holder is best for machines with multiple brushes.



6. GENERAL SAFETY RULES

Please carefully follow the listed below rules in order to avoid harm to the operator and damage to the machine:

1. Read labels on the machine carefully. Never cover for any reason and immediately replace them if they are damaged.
2. The machine is to be used only by authorized and trained persons.
3. Be aware of other people, particularly children, while operating the machine.
4. The machine is not suitable for cleaning carpets.
5. Never mix different types of detergent: this could generate noxious gases.
6. Never load the machine into a container with liquids in it.
7. Never put the machine in lateral and invert placement.
8. Machine storage temperature must be between -25 and +55 degrees C.
9. Operating conditions: room temperature between 0 and +40 degrees C with respective humidity between 30 and 95.
10. Never use the machine in an explosive environment.
11. Never use the machine to transport goods.
12. Never use acid solutions, which could damage to the machine.
13. Avoid running the brushes with the machine stopped: it could damage the floor.
14. Never use flammable liquids.
15. The machine is not suitable for cleaning hazardous dust.
16. Use a powder fire extinguisher in case of fire, do not use water.
17. Do not hit against shelving or scaffolding when there is danger of falling objects.
18. Do not exceed over the limit gradient stated on the machine plate, to avoid conditions of instability.
19. Never run the machine on uneven floor or in an area with excessive dust.
20. Provide "wet floor" signs while operating on a high trafficked area.
21. Whenever the machine has operating troubles, refer to maintenance procedures.
22. When replacing machine parts, always reorder spare parts from The Concrete Protector, authorized agent, or dealer.
23. Use only original brushes indicated in the chapter "CHOICE AND USE OF BRUSHES".
24. Always cut off the electric power to the machine whenever maintenance is performed.
25. Restore all electrical connections after any maintenance operation.
26. Never remove guards that require tools for removal.
27. Never wash the machine with corrosive substances.
28. Maintain the machine after 200 operating hours.
29. Do not fill with detergent solution more than 30 min. prior to using the machine
30. Before using the machine, make sure that all the covers and caps are positioned as shown in this manual.
31. Deal with the consumption materials according to the local laws.



5.5 COMMON FAULTS & TROUBLESHOOTING

ERRORS	ACTION TO BE TAKEN
<ul style="list-style-type: none"> • Power capacity is too small • Voltage drop due to wiring resistance • Large capacity motor connected to the same power system has been started • Defective electromagnetic contractor 	<ul style="list-style-type: none"> • Check the source voltage and wiring • Check the power capacity and power system
<ul style="list-style-type: none"> • Extremely rapid accel • Short-circuit or ground-fault at the inverter output side • Motor of a capacity greater than the inverter rating has been started • High-speed motor and pulse motor has been started 	<ul style="list-style-type: none"> • Extend the accel. time • Check the load wiring
<ul style="list-style-type: none"> • Motor dielectric strength is insufficient • Load wiring is not proper 	<ul style="list-style-type: none"> • Check the motor wiring impedance and the load wiring.
<ul style="list-style-type: none"> • Insufficient deceleration time • High input voltage compared to motor rated voltage 	<ul style="list-style-type: none"> • Extend the accel. time • Use a braking resistor
<ul style="list-style-type: none"> • Defective cooling fan • Ambient temperature rise • Clogged filter 	<ul style="list-style-type: none"> • Check for the fan, filter and the ambient temperature
<ul style="list-style-type: none"> • Overload, low speed operation or extended accel. time • Improper V-f characteristic setting 	<ul style="list-style-type: none"> • Measure the temperature rise of the motor. • Decrease the output load • Set proper V/f characteristic
<ul style="list-style-type: none"> • Improper rated current (Cn-09) setting 	<ul style="list-style-type: none"> • Set proper V/f characteristic • Set proper rated current (Cn-09) • If inverter is reset repetitively before fault removed, the inverter may be damaged
<ul style="list-style-type: none"> • Machine errors or overload 	<ul style="list-style-type: none"> • Check the use of the machine • Set a higher production level (Cn-32)
<ul style="list-style-type: none"> • Fault input of external signal ③ ⑤ ⑥ ⑦ and ⑧ 	<ul style="list-style-type: none"> • Identify the fault signal using Un-11
<ul style="list-style-type: none"> • Disturbance of external noise • Excessive impact or vibration 	<ul style="list-style-type: none"> • Reset NVRAM by running Sn-03 • Replace the control board if the fault can't be cleared
<ul style="list-style-type: none"> • Improper setting of ASR parameter or over-speed protective level 	<ul style="list-style-type: none"> • Check the parameters of ASR and the protection level
<ul style="list-style-type: none"> • The PG wiring is not properly connected or open-circuit 	<ul style="list-style-type: none"> • Check the PG wiring
<ul style="list-style-type: none"> • Improper setting of ASR parameter or speed deviation level 	<ul style="list-style-type: none"> • Check parameters of ASR and speed deviation level
<ul style="list-style-type: none"> • External noise • Excessive vibration or impact communication wire • Not properly contacted 	<ul style="list-style-type: none"> • Check the parameter setting, including Sn-01, Sn-02 • Check if the communication wire is properly contacted • Restart, if fault remains, please contact your representative

5.5 COMMON FAULTS & TROUBLESHOOTING

LCD DISPLAY	ERRORS	FAULT CONTACT OUTPUT
(blinking) Alarm DC Volt Low	The main circuit DC voltage becomes lower than the lower under-voltage level before motor starts	No Operation
(blinking) Alarm Over Current	The main circuit DC voltage becomes higher than the lower under-voltage level before the motor starts	No Operation
(blinking) Alarm Ground Fault	The thermal protection contract is input to the external terminal	No Operation
(blinking) Alarm Overheat	Over torque is detected while the output current is larger than the equal to the setting of Cn-26. However, the Sn-12 has been set such that the inverter continues to run and disregard the over-torque warning	No Operation
(blinking) Alarm Over Torque	The temperature of the cooling fan reaches the detection level	No Operation
—	Stall prevention operates while acceleration Stall prevention operates while running Stall prevention operates while deceleration	No Operation
(blinking) Alarm Ext. Fault	Forward and reverse rotation commands are simultaneously detected for a period of time exceeding 500ms. (The inverter is stopped according to the stop method preset by Sn-04)	No Operation
(blinking) Alarm RS-485 Interrupt	MODBUS Communication fault occurs. The inverter remains operating.	No Operation
Comm. Fault	Transmission fault of digital operator	No Operation
(blinking) Alarm BB	External BB signal (terminal ③ is input) The inverter steps and the motors stops without breaking	No Operation
Alarm Input Error	Improper inverter capacity (Sn-01) setting Improper setting of multi-function input signal (Sn-25, 26, 27 and 28) Improper setting of V/F characteristic (Cn-02-08) Improper setting of Cn-18, Ca-19	No Operation
(blinking) Alarm Over Speed	Excessive speed (operation remains)	No Operation
(blinking) Alarm PG Open	PG Open circuit (operation remains)	No Operation
Alarm Sp. Deviat Over	Excessive speed deviation (operation remains)	No Operation
Load Fail	Error during upload and download (operation remains)	No Operation
EEPROM Fault	Operator EEPROM error	No Operation
Upload Error	Data incorrect during communication from the operator to the inverter	No Operation
Download Error	Data incorrect during communication from the operator to the inverter	No Operation
Alarm Auto Turn Error	Motor parameter auto-tuning error	No Operation

5.5 COMMON FAULTS & TROUBLESHOOTING

ERRORS	ACTION TO BE TAKEN
<ul style="list-style-type: none"> • Input voltage drop 	<ul style="list-style-type: none"> • Measure the main circuit DC voltage, if the voltage is lower allowance level, regulate the input voltage
<ul style="list-style-type: none"> • Input voltage rise 	<ul style="list-style-type: none"> • Measure the main circuit DC voltage, if the voltage is higher than allowance level, regulate the input voltage
<ul style="list-style-type: none"> • Overload • Cooling fan fault. Ambient temperature rises • Clogged filter 	<ul style="list-style-type: none"> • Check for the fan, filter and the ambient temperature
<ul style="list-style-type: none"> • Machine error or overload 	<ul style="list-style-type: none"> • Check for the use of the machine
<ul style="list-style-type: none"> • Insufficient Accel/Decel. time • Overload • Excessive load impact occurs while operating 	<ul style="list-style-type: none"> • Set a higher protection level (Cn-32)
<ul style="list-style-type: none"> • Operation sequence error • 3-wire/2-wire selection error 	<ul style="list-style-type: none"> • Increase Accel/Decel time • Check the load
<ul style="list-style-type: none"> • External noise • Excessive vibration or impact on communication wire • Not properly contacted 	<ul style="list-style-type: none"> • Check the circuit of system • Check the setting of system parameters Sn-25, 26, 27, & 28
<ul style="list-style-type: none"> • Comm. between digital operator and inverter has not been established after system starts for 5 seconds • Communication is established after system starts, but transmission fault occurs for 2 seconds 	<ul style="list-style-type: none"> • Check the parameter setting, including Sn-01, Sa-02 • Check if the comm. wire is not properly attached • Restart, if fault remains, please contact us
<ul style="list-style-type: none"> • External BB signal is input 	<ul style="list-style-type: none"> • Re-plug the connector of the digital operators • Replace the control board • After external BB signal is removed, execute the speed search of the inverter
<ul style="list-style-type: none"> • Inverter KVA setting error 	<ul style="list-style-type: none"> • Set proper KVA value. Be aware of the difference of 220V and 440V
<ul style="list-style-type: none"> • The value of Fa-25-Sa-28 is not in ascending order (Ex: Sa-25=03, Sa28=02, those are improper settings) • Set speed search command of 21 and 22 simultaneously 	<ul style="list-style-type: none"> • Set these values by order (the value of Sn-25 must be smaller than those of Sn-26, 27, 28) • Command 21 and 22 can not be set on two multi-function input contacts simultaneously
<ul style="list-style-type: none"> • The values of Ca-02-Cs-08 do not satisfy $F_{max} > , FA > , FB > , F_{min} >$ 	<ul style="list-style-type: none"> • Change the settings
<ul style="list-style-type: none"> • Upper limit and lower limit setting is incorrect 	<ul style="list-style-type: none"> • Change the settings
<ul style="list-style-type: none"> • Improper ASR parameter setting or over-torque protection level 	<ul style="list-style-type: none"> • Check the ASR parameter and over-torque protection level
<ul style="list-style-type: none"> • The circuit of PG is not properly connected or open-circuit 	<ul style="list-style-type: none"> • Check the wiring of PG
<ul style="list-style-type: none"> • Improper ASR parameter setting or over-torque protection level 	<ul style="list-style-type: none"> • Check the ASR parameter and over-torque protection level
<ul style="list-style-type: none"> • Bad communication during operator and inverter • The connector is not properly connected 	<ul style="list-style-type: none"> • Check if the connector is not properly connected
<ul style="list-style-type: none"> • Operator EEPROM error 	<ul style="list-style-type: none"> • Disable load function of operator • Replace the operator
<ul style="list-style-type: none"> • Incorrect inverter data format • Communication noise 	<ul style="list-style-type: none"> • Download the data to the operator again • Check if the connector is not properly connected
<ul style="list-style-type: none"> • Communication noise 	<ul style="list-style-type: none"> • Check if the connector is not properly connected
<ul style="list-style-type: none"> • Inverter capacity and motor rating are not properly matched • The wiring between inverter and motor is disconnected • Motor load unbalance 	<ul style="list-style-type: none"> • Connect the inverter/motor capacity ratio, wiring cable and motor head

5.5 COMMON FAULTS & TROUBLESHOOTING

LCD DISPLAY	ERRORS	FAULT CONTACT OUTPUT
Fault DC Volt Low	The main circuit DC voltage becomes lower than the low voltage detection level (Cn-34)	Operation
Fault Over Current	The inverter output current becomes approx. 200% and above the inverter rated current	Operation
Fault Ground Fault	A ground fault occurs at the inverter output side and the ground-fault current exceeds approx. 50% of the inverter rated current	Operation
Fault Over Voltage	The main circuit DC voltage becomes excessive because of regeneration energy caused by motor decelerating	Operation
Fault Overheat	The temperature of the cooling fan reaches the detection level	Operation
Fault Motor Overload	Motor overload is detected by the electronic thermal relay (motor protection)	Operation
Fault Inverter Overload	The electronic thermal sensor detects inverter overload while the output current exceeds 112% of rated value (inverter protection)	Operation
Fault Over Torque	Over torque is detected while the output current is larger than or equal to the setting of CN-26. (machine prevention)	Operation
Fault Ext. Fault 3	External fault signal ③	Operation
Fault Ext. Fault 5	External fault signal ⑤	Operation
Fault Ext. Fault 6	External fault signal ⑥	Operation
Fault Ext. Fault 7	External fault signal ⑦	Operation
Fault Ext. Fault 8	External fault signal ⑧	Operation
Fault Inverter EEPROM	EEPROM fault EEPROM (BCC, no) is bad	Operation
Fault Inverter A/D	A/D Converter (inside the CPU) fault	Operation
Fault PG over Sp.	Excessive PG speed fault	Operation
Fault PG Open	PG is open-circuit	Operation
Fault Sp Deviat Over	Excessive speed deviation	Operation
Fault RS-485 Interrupt	MODBUS communication fault occurs. The inverter remains operating.	Operation

7. WARRANTY

Warrior Equipment warrants, from the time of delivery and receipt by the original customer, new and unused equipment sold by Warrior Equipment or Warrior Equipment distributors. Goods shall be free from defect in workmanship and materials. Motor, Gearbox Gears, and VFD Inverter are covered for a period of 1 year or 300 hours, whichever comes first. If the product does not function satisfactorily during this period, Warrior Equipment will return the product to full working order for normal use which the product is intended for, with no charge for labor or spare parts, according to the following conditions:

1. The warranty only applies to persons that have legal right to the equipment during the warranty period.
2. The manufacturer's undertaking is limited to the repair of defective parts or the replacement of these according to the manufacturer's assessment. Costs and risks for transport as well as dismantling and reinstallation of the product / products and other direct or indirect costs, associated with the repair in question, are not covered by this warranty.
3. Periodic inspections, adjustments, maintenance work and changes are not covered by the warranty.
4. Warrior Equipment is not liable for any damages to grinding discs or other similar equipment.
5. The warranty only applies to material and design deficiencies and does not apply in the following cases:
 - Damage caused through accidents, carelessness, changes, use of spare parts or grinding tools that are not original components, or incorrect use and installation.
 - Damage caused by lightning, water, fire, vandalism, incorrect mains voltage, incorrect ventilation or other causes that lie outside of the manufacturer's control.
 - Unclaimed Damage caused during shipping. All shipments are insured by the shipper until the receiver signs freight company's release paper. Be sure to inspect before signing. If damaged mark clearly on paper and call us immediately.
6. Warrior Equipment reserves the right to modify the design or make improvements without obligation to change previously manufactured products.
7. All warranty repairs must be carried out by Warrior Equipment or by a Warrior Equipment accredited repair workshop. Costs for repairs, carried out by an unauthorized workshop, will not be reimbursed by Warrior Equipment. If such repairs damage this product these are not cover by the warranty agreement.
8. Warrior Equipment will not be liable for shipping / transportation cost for repairs.
9. See Warrior Care for extended warranty coverage.

8. CONTACT US

Warrior Equipment, a division of Incredible Products, LLC • 1101 Lincoln Ave., Wapakoneta, Ohio 45895 • Office Contact # 1-877-743-9732