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Operations Manual
For Commercial Use Only



CK14/1 UPRIGHT VACUUM & CK14/1 BSE UPRIGHT VACUUM
MODEL NO: 98147/98145



Long -Term Buyer Protection Limited Warranty

Tornado Industries, LLC. warrants to the end user/ customer that the Tornado product(s) will be free from defects in material and workmanship for the duration(s) described below. This limited warranty DOES NOT cover machines and/or components subject to normal wear and tear, damage that occurs in shipping, failures resulting from modification, accident, unsuitable operating environment, misuse, abuse, **neglect, or improper maintenance**. For full details, contact your Authorized Tornado Distributor, Service Center, or the Tornado Technical Service Department. Tornado sales and service representatives are not authorized to waive or alter the terms of this warranty, or to increase the obligations of Tornado under the warranty.

10 Years*

Plastic water tanks and Rotationally-molded bodies

2 Years*

Parts on all Tornado cleaning equipment

1 Year*

Labor on all Tornado cleaning equipment

1 Year*

Warranty on batteries, one year prorated

All battery warranties are handled directly by the battery manufacturer, on a one year prorated basis

Terms subject to change without notice

1. All Windshear™ Blowers, Storm, TV2SS, Side and Dowlndraft, Insulation Blowers, CV 30, CV 38, CK14/1 PRO, CK 14/1 BSE, CK14/2 PRO, SWM 31/9, CK LW13/1, CK LW 13/1 ROAM, CV 38/48 Dual, PV6, PV10, PV6 ROAM, Wall Mount Vacuum and all chargers are warranted for 1 (one) year for both parts and labor.
2. All non-wear item parts purchased after warranty expiration are warranted for 90 days.
3. Warranty starts from either: The date of sale to the consumer, or 6 months after the dealer purchased the unit from Tornado (at Tornado's discretion), whichever comes first.
4. The EB 30 is warranted for a period of 90 days for both parts and labor.
5. Propane-powered equipment engines are limited to the engine manufacturer's warranty.
6. Ride-on Scrubbers are warranted for 24 months parts, and 6 months labor, or 1,000 hours, whichever occurs first.

Note: Tornado, The Latest Dirt, Floorkeeper, Carpet-keeper, Carpetrinser, Carpetrinser/Dryer, Headmaster, Taskforce, PAC-VAC, T-Lite, Glazer, Windshear, Max-Vac and Trot-Mop are trademarks of Tornado Industries

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Over 90 Years of Cleaning Innovation

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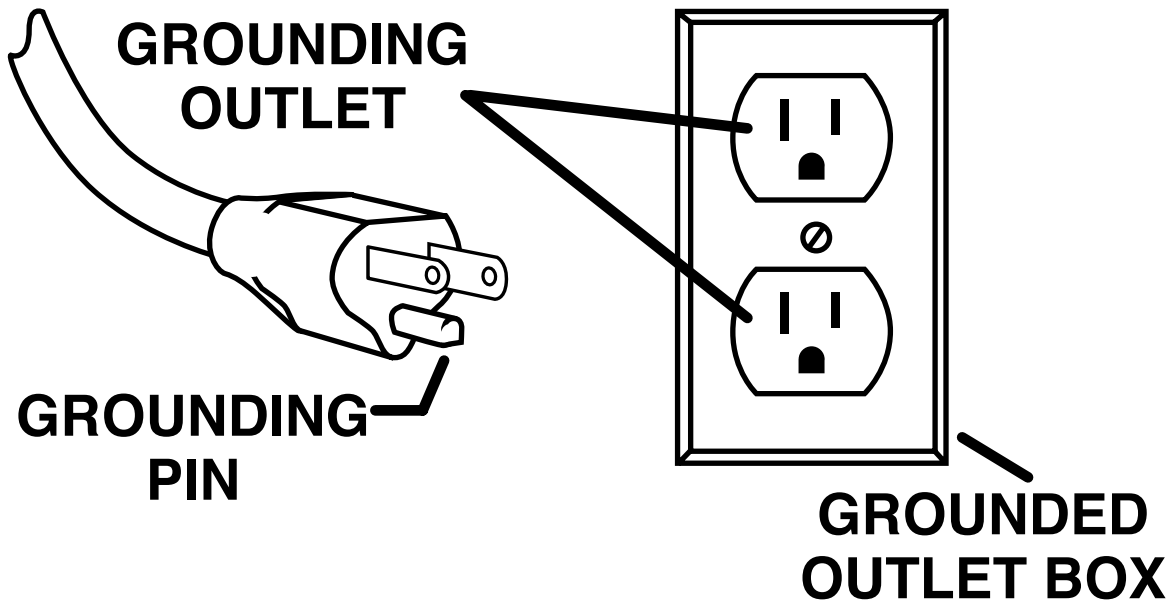
NOTES

GROUNDING INSTRUCTIONS

This appliance must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk electric shock. This machine is equipped with a cord having an equipment -grounding conductor and grounding plug. The plug must be inserted into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service person if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the appliance - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This appliance is for use on a nominal 120-volt circuit, and has a grounding plug that looks like the plug illustrated in sketch A.

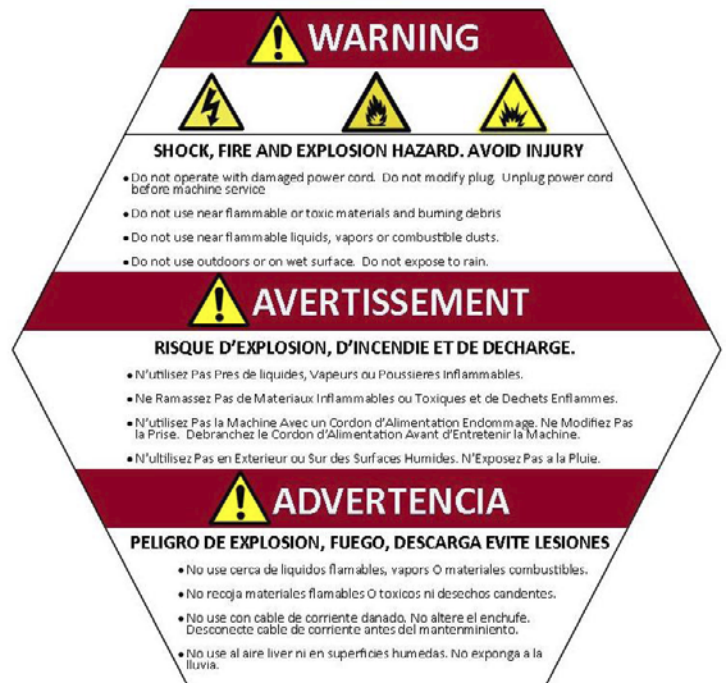


A

The safety label appears on the machine in the location indicated. Replace label if it is missing or becomes damaged or illegible.



Fig. 2



Your new Tornado unit is a high quality, precision-made product. All parts used in the manufacturing of this unit have passed rigid quality control standards prior to assembly. Please safeguard the original receipt / invoice. If you experience any problems with your unit during the warranty period, the original receipt / invoice will act as proof of purchase. Contact Tornado for any warranty inquiries.

IMPORTANT SAFETY INSTRUCTIONS

READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE USING THIS UNIT

Read and understand this owner's manual and all labels on the unit before operating. Safety is a combination of common sense, staying alert and knowing how your unit works. Use this unit only as described in this manual. Use only manufacturer's recommended attachments. To reduce the risk of personal injury or damage to your unit use only Tornado recommended accessories.

This machine is intended for commercial use only. It is designed exclusively to pick up dirt, dry debris and dust in an indoor environment and is not constructed for any other use. The pick up of any type of fluid or dangerous / toxic materials is prohibited. Use only recommended accessories.

READ ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE.

When using an electrical appliance, basic precautions should always be followed, including the following:



WARNING! To reduce the risk of fire, electric shock, or injury:

1. Do not leave appliance unattended when plugged in. Unplug from outlet when not in use and before servicing.



2. **WARNING: ELECTRIC SHOCK COULD OCCUR IF USED OUTDOORS OR ON WET SURFACES.**

3. Do not allow to be used as a toy. Close attention is necessary when used by or near children.

4. Use only as described in this manual. Use only manufacturer's recommended attachments.

5. Do not use with damaged cord or plug. If appliance is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.

6. Do not pull or carry by cord, use cord as handle, close a door on cord, or pull cord around sharp edges or corners. Do not run appliance over cord. Keep cord away from heated surfaces.

7. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.

8. Do not handle plug or appliance with wet hands.

9. Turn off all controls before unplugging.

10. Do not put any object into openings. Do not use with any opening blocked, keep free of dust, lint, hair, and anything that may reduce air flow.

11. Keep hair, loose clothing, fingers and all parts of body away from openings and moving parts.

12. Do not pick up anything that is burning or smoking, such as cigarettes, matches or hot ashes.

13. Do not use without vacuum bag and / or filters in place.

14. Use extra care when cleaning stairs.

15. Do not use to pick up flammable or combustible liquids such as gasoline or use in areas where they may be present.

16. Do not attempt to service the unit while appliance is plugged in.

17. For grounded models, connect to a properly grounded outlet only. See Grounding Instructions.

18. This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the machine by a person responsible for their safety.

19. Keep children and unauthorized persons away from the machine when in use.

SAVE THESE INSTRUCTIONS.



Fig. 3

Genuine Tornado Vacuum Bags	
Cleanbreeze (10 per package)	90141
Paper (10 per package)	90147
Genuine Tornado Vacuum Belt (1 per package)	33561
Genuine Tornado Vacuum Filters	
Exhaust Filter (1 per package)	90145
HEPA (1 per package)	90144

How to Attach the Handle to the Vacuum Cleaner

The vacuum cleaner and the handle are packed separately.

1. After first removing the handle screw, insert handle into the hole on top of the vacuum cleaner. (Fig. 4)
2. Line up the small hole on the handle with the small hole on the vacuum cleaner and insert the screw. Make sure the screw is secured tightly.

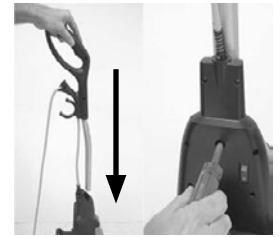


Fig. 4

On / Off Switch

1. To turn the vacuum on, push the switch located the rear of the unit to the (I) position. (Fig. 5)
2. To turn the vacuum off, push the switch located on the rear of the unit to the (O) position.



Fig. 5

Always operate the vacuum cleaner with a vacuum bag installed.

How to Change the Vacuum Bag

1. Unplug the vacuum cleaner. Remove the bag compartment cover and remove the used bag from the bag holder (Fig. 6).
2. Attach the new vacuum bag onto the bag holder (Fig. 7).
3. Pull the bottom corners of the new vacuum bag (Fig. 8).
4. Reinsert the tab on the end of the bag compartment cover into the groove on the bag compartment housing. Press it into place and fasten the bag compartment tightly (Fig. 9).



Fig. 6



Fig. 7



Fig. 8



Fig. 9

The Edge Cleaning Feature provides improved cleaning of carpets near walls and stationary furniture. For maximum edge cleaning, use the right side of the vacuum near walls or stationary furniture.



Fig. 10
7

The handle on this vacuum cleaner can be set to one of three positions – upright, working or low.

How to Adjust the Handle

1. To release the handle, step on the left rear corner of the vacuum cleaner (Fig. 11).
2. Upright position – for when cleaning tools are being used or for storage (Fig. 12). Handle locks in this position.
3. Working position – for normal cleaning (Fig. 13).
4. Low position – for cleaning under furniture (Fig. 14).



Fig. 11



Fig. 12



Fig. 13



Fig. 14

Your Tornado vacuum cleaner is equipped with an exhaust filter and a HEPA filter. These filters capture fine dust particles and protect the motor from dirt. It is important to replace the HEPA filter approximately every six months.

To Change or Clean the Exhaust Filter

1. Unplug the vacuum cleaner. Remove the bag compartment cover and the bag.
2. Remove the exhaust filter and shake or brush off the dirt (Fig. 15) then replace filter.
3. Replace the bag and bag compartment cover.



Fig. 15

To Change the HEPA Filter

1. Unplug the vacuum cleaner. Remove the bag compartment cover.
2. Remove the HEPA filter from the front of the bag compartment. (Fig. 16)
3. Insert a new filter and replace the bag compartment cover.

Note: HEPA filters cannot be washed and used again.



Fig. 16

Your Tornado upright vacuum cleaner is designed with a Self-Adjusting Brush Head. No manual adjustments are required. The height of the brush head is instantly adjusted to carpet pile height. This self-adjusting feature allows the brush head to float evenly over all carpet pile surfaces.

On-Board Tool Cleaning (CK14/1 PRO ONLY)

This vacuum is equipped with on-board cleaning tools including a metal telescopic wand, stretch hose, dusting brush and crevice tool.

1. To use the cleaning tools, lift the hose handle straight up from the vacuum.
2. Extend the wand by pushing the button forward and pulling the smaller wand out of the larger wand
3. Attach any of the on-board tools to the end of the wand or if you do not need the wand, any tool can be connected directly onto the hose handle.



Fig. 17



CAUTION: Unplug the vacuum cleaner before performing any of these steps.

How to Remove the Bottom Plate

1. Place the vacuum cleaner in the low position (see page 7). Turn the vacuum over.
2. Slide the clips toward each other (Fig. 18).
3. Remove the bottom plate.

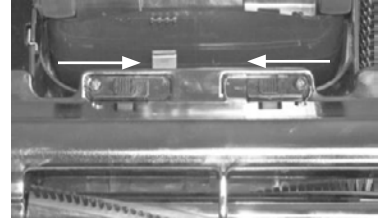


Fig. 18

How to Replace the Belt

1. Turn the unit over and remove the bottom plate as described in the above section.
 2. Lift the belt cover and turn toward the outside (Fig. 19 & 20).
 3. Remove the agitator by pulling it straight out.
 4. Remove the belt from the agitator and motor pulley.
 5. Loop a new belt over the motor pulley and over the end of the agitator.
 6. Stretch the belt over the agitator while inserting it back into the brush head housing.
 7. Turn the belt cover back over the motor pulley. Make sure cover releases down into the brush head.
 8. Replace the bottom plate by hooking the front end of the plate into the two ribs on the front end of the brush head housing. (Fig. 21) Press the bottom plate into place by sliding the clips away from each other.
- NOTE: To ensure maximum cleaning efficiency, check the belt regularly to ensure it is in good condition. Replace the belt if it is stretched, cracked or if excessive slipping is occurring.



Fig. 19

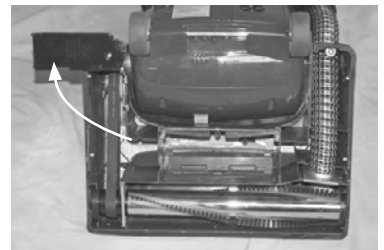


Fig. 20

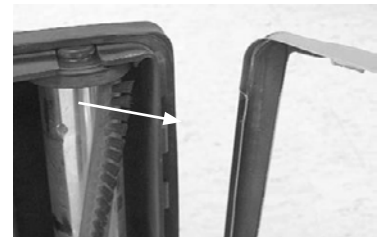


Fig. 21



CAUTION: Unplug the vacuum cleaner before performing any of these steps.

How to Clean the Brush Head Hose (CK14/1 PRO)

1. Remove the wand from the wand / hose holder as shown on page 8.
2. Squeeze the tabs on both sides of the quick clean-out port and pull away from the vacuum (Fig. 22).
3. Check above and below the port opening for obstructions.
4. Remove any obstructions.
5. Replace the quick clean-out port by squeezing both tabs and pushing it back into the wand / hose holder.

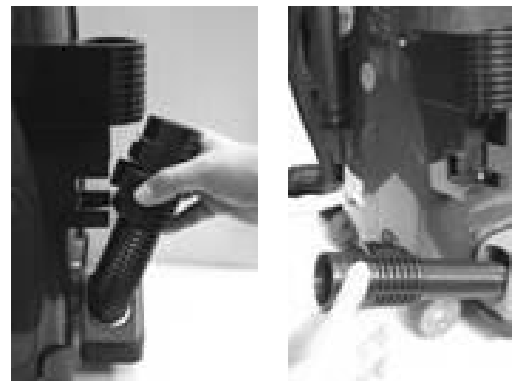


Fig. 22

How to Clean the Brush Head Hose (CK14/1 BSE)

The nozzle hose, located on the back of the vacuum cleaner, carries the dirt from the nozzle to the filter bag. The hose also functions as the attachment cleaning hose. If the hose should become clogged:

1. Pull out and turn the lid of the cleaning attachment opening.
Remove the clog or blockage (Fig. 23).
2. If the above step is not enough, remove hose cuff from the nozzle inlet (Fig. 24). Turn the unit over and unscrew and remove the bottom plate (see "How To Remove Bottom Plate."). Check nozzle inlet tube for obstructions. Clear tube and reinstall the bottom plate.



Fig. 23



Fig. 24



CAUTION: Unplug the vacuum cleaner before performing any of these steps.

Thermal Fuse Protection

Your Tornado vacuum cleaner comes equipped with a Manual Reset Thermal Fuse Protector. This thermal protector is designed to protect your vacuum cleaner from overheating due to a cutoff in airflow (i.e. clogged hose, operating the vacuum without a bag). Should this situation occur, the thermal fuse protector will safely shut off your vacuum to avoid and potential damage.

To reset the thermal fuse

1. Unplug the vacuum cleaner.
2. Check for problem (over-filled bag, clog in hose, clogged filters, etc.).
3. Correct problem.
4. Locate 'tripped' fuse the small red button located on the bottom of the back side of the main body roughly one inch to the right of the left wheel. (Fig. 25).
5. Using a pointed object, push the reset button.
6. Plug vacuum cleaner in and begin using.

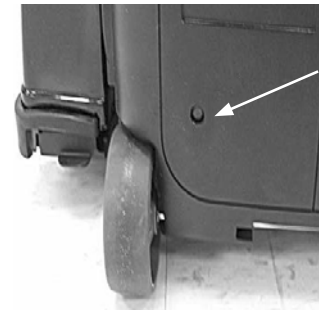


Fig. 25

For Best Performance

- Keep machine and all accessories clean and in good operating condition.
- Change vacuum bags and filters as recommend to maintain optimum cleaning efficiency.
- Always use genuine bags, filters and parts, as use of other products may result in poor cleaning or filtration performance. Tornado filtration products are designed for maximum performance.
- Have machine checked periodically by the retailer where you purchased your Tornado vacuum.
- Store machine carefully in dry area.
- For optimum cleaning performance and safety, follow your owner's manual.

Model	CK-14/1 PRO	CK-14/1 BSE
Voltage / Frequency	120 V / 60 Hz	120 V / 60 Hz
Vacuum motor rating	1200 W / 10A	1200 W / 10A
Bag capacity – dry	3.8 qt / 3.6 L	3.8 qt / 3.6 L
Airflow	120 cfm / 3.4 m3/h	120 cfm / 3.4 m3/h
Vacuum – water lift at sealed orifice	65 in / 1650 mm	65 in / 1650 mm
Filtration	99.97% @0.3 micron	99.97% @0.3 micron
Brush width	12 in / 305 mm	12 in / 305 mm
Cable length	50 ft / 15 m	50 ft / 15 m
Weight (including cord)	20.6 lb / 9.36 kg	20 lb/9.07 kg
Noise level	69.9 dB(A)	69.9 dB(A)
Construction class	I	I
Protection	IP20	IP20



TORNADO[®]

Warranty Registration Form

Please Print Clearly

Company/Institution	
Contact Name	Title
Address	City/State/Zip Code
Phone	Fax
Date of Purchase	Email
Selling Dealer: (Required) _____	

See white metal plate or sticker on unit for this information.

MACHINE TYPE/MODEL NUMBER:	MACHINE SERIAL NUMBER:
1.	1.
2.	2.
3.	3.
4.	4.

Facility Description (please circle all that apply)			
1. School	6. Manufacturing	11. Airport	16. Other Govt.
2. Retail Store	7. College/University	12. Warehouse	17. Auto Service
3. Restaurant	8. Hospital	13. Apartment/Condo	18. Non-Profit
4. Office Building	9. Nursing Home	14. Supermarket	19. Other (specify)
5. Contract Cleaning	10. Religious Institution	15. U.S. Govt	

<p>How did you first learn about Tornado cleaning and maintenance equipment?</p> <ul style="list-style-type: none"> <input type="radio"/> Contacted by local dealer <input type="radio"/> Previous experience with Tornado products <input type="radio"/> Reputation/Recommendation <input type="radio"/> Advertising <input type="radio"/> Direct mail <input type="radio"/> Website: _____ <input type="radio"/> Blog: _____ <input type="radio"/> Other 	<p>You can complete this form online at www.tornadovac.com/services/warranty-registration-form.aspx</p> <p>This form may also be returned to :</p> <p>Tornado Industries 3101 Wichita Court Fort Worth, TX 76140 Fax: 817-551-0719</p>
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Damage or defect arising from abuse, neglect or other misuse is excluded from this warranty. Other items may or may not apply based on your specific machine. If any defect occurs, and service is attempted by non-Authorized Tornado Service Centers, the warranty will be void.