

TORNADO INDUSTRIES, LLC
333 CHARLES COURT
WEST CHICAGO, IL 60185
(630)-818-1300 FAX (630)-818-1301
WWW.TORNADOVAC.COM



Operations & Maintenance Manual
For Commercial Use Only



13 GALLON Extractor MODEL NO. 98260



Long Term Buyer Protection Limited Warranty

Tornado Industries, LLC. (Tornado) 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 by you. 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. Except all Windshears™ Blowers, Storm, TV 2, Side and Downdraft, Insulation Blowers, CV 30, CV 38, CK14/1 PRO, CK 14/2 PRO, SWM 31/9, CK LW13/1, CV 38/48 Dual, PV6, PV10, 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 the date of sale to the consumer or, at Tornado's discretion, 6 months after the dealer purchased the unit from Tornado, whichever comes first.
4. The EB 30 is warranted for a period of 90 days for both parts and labor.
5. The warranty on engines used on propane powered equipment is limited to motor manufacturer's warranty.
6. Ride-on Scrubbers are warranted for 24 months, parts, 6 months labor or 1,000 hours, whichever occurs first.

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

Website: www.tornadovac.com
Phone 1-800-VACUUMS
Fax (630) 818-1301
Address 333 Charles Court Suite 109
West Chicago, IL 60185



SAFETY INSTRUCTIONS & WARNINGS

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. To reduce the risk of personal injury or damage to your unit use only the recommended accessories

For Commercial use,

SAVE THIS MANUAL FOR FUTURE REFERENCE

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

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY:

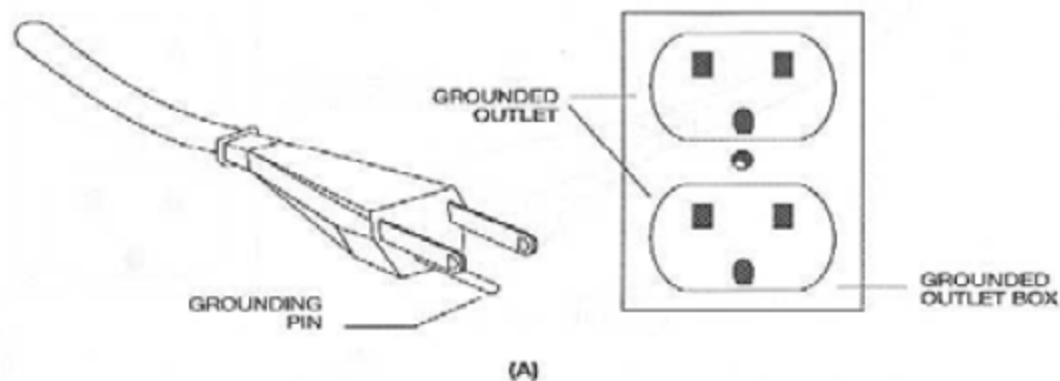
- Do not run the unit unattended
- Do not use this unit near flammable liquids, gases, or explosive vapors like gasoline or other fuels, lighter fluids, cleaners, oil-based paints, natural gas, hydrogen, or explosive dusts like coal dust, magnesium dust, grain dust, or gun powder. Sparks inside the motor can ignite flammable vapors or dust.
- Keep the cord away from heated surfaces.
- Do not expose to rain. Store indoors.
- Do not unplug by pulling on cord. To unplug, grasp the plug
- Do not use with damaged cord, plug, or other parts.
- If the unit is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
- Do not pull or carry by the cord, use the cord as a handle, close a door on a cord, or pull cord around sharp edges or corners.
- Do not run the unit over the cord.
- Do not handle the plug or the unit with wet hands.
- To reduce the risk of health hazards from vapors or dusts, do not vacuum toxic materials.
- Do not store near hazardous materials.
- Do not use the unit with a torn filter or without the filter installed.
- Do not allow it be used as a toy. Close attention is necessary when used by or near children.
- To reduce the risk of injury from accidental starting, unplug power cord before changing or cleaning filter.
- Do not leave the unit unattended when plugged in. Unplug from wall outlet when not in use and before servicing.
- Turn off the unit before unplugging.
- Do not put any object into ventilation openings. Do not operate with any ventilation openings blocked; keep free of dust, lint, hair or anything that may reduce air flow.
- Keep hair, loose clothing, fingers and all parts of the body way from openings and moving parts.
- To reduce the risk of falls, use extra care when using the unit on stairs.
- Do not pick up hot ashes, coals, toxic, flammable or other hazardous materials.
- If the machine tips over during use, shut it off immediately and set it upright and wait for the motor to stop completely.

Warning: Turn unit off immediately if foam or liquid come from machine exhaust. Empty & clean out recovery (dirty) tank and use defoamer to correct the problem.

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 of electric shock. This appliance 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 attachment plug that looks like the plug illustrated in sketch (A). Make sure that the appliance is connected to an outlet having the same configuration as the plug. No adaptor should be used with this appliance.



EXTENSION CORDS

When using an extension cord with your unit, refer to the following table to determine the required A.W.G. wire size. Before using the cleaner make sure the power cord and extension cord are in good working condition. Make repairs or replacements before using the vacuum cleaner. Only use extension cords that are rated for outdoor use.

Length of Extension Cord				
	25 Feet	50 Feet	100 Feet	150 Feet
110V-120V	7.5 Meter	15.25 Meter	30.5 Meter	45.7 Meter
Amps	A.W.G. Wire Size			
0-6	18	16	16	14
7-10	18	16	14	12
11-12	16	16	14	12
13-16	14	12	Not recommended	

PRE-OPERATION INSTRUCTIONS

FIG. 1B



FIG. 1A

NOTE - FOR COLOR FASTNESS: Before using carpet cleaning chemicals, test on an inconspicuous part of the carpet for color fastness. Place the solution on a small piece of clean white cloth or tissue. Rub the carpet area vigorously with the cleaning chemical. Excessive amounts of dye showing on the material would indicate that the colors are not colorfast, and should not be wet cleaned.

- 1) Prepare room for cleaning, moving furniture as need to provide a clear working area. Cover bottoms of furniture legs where possible. (Aluminum foil or foam blocks are ideal for this purpose.) Pin up curtains and drapes.
- 2) Gather cleaning supplies: a clean, suitable sized bucket, carpet cleaning solution, de-foamer solution, and pretreat solutions for heavily soiled traffic areas.
- 3) Measure carpet cleaning solution, per manufacturers recommended ratio, into the TUB (or bucket) and fill with hot water up to $\frac{1}{2}$ of standard TUB. **WARNING: DO NOT** exceed water temperature of 150° (65° C).
- 4) Place solution hose into tub making sure it is resting on bottom of tub.
- 5) With switches turned off connect the solution hose and the vacuum hose to the machine and to the wand. **WARNING: Do not attempt to connect solution hose to machine with pump switch turned on.**

OPERATION OF SELF-CONTAINED CARPET CLEANER

- 1) Plug the power cord into an outlet. **WARNING:** This machine must be properly grounded. See Grounding Instructions on page 2 for additional information.
- 2) With the solution line attached to the wand and the machine, turn on the pump to the "on" position. See FIG 1B for a diagram on the operation switches. Press the lever on the wand and spray until there is no air coming out with the water. This takes approximately 2-3 minutes.
- 3) With the pump still on, press the VACUUM switch "on".
- 4) To clean the carpet, squeeze and hold the TRIGGER on the wand to apply the cleaning solution,
- 5) For optimum cleaning results it is suggested to use a V stroke pattern. Start with an area approximately 4' x 4'. On the back stroke pull the trigger on the wand for the solution to spray. Let up on the trigger about 4 inches before the end of the stroke for maximum water recovery. Push the wand forward at a slight angle until next stroke is slightly overlapping previous stroke. Go over area just cleaned with vacuum only stroke before moving to the next area. After a few passes, check the RECOVERY TANK to verify that no foam is present. Add extra de-foamer if necessary.
- 6) Empty the RECOVERY TANK when it is approximately 3/4 full by pulling up on the handle on the DUMP VALVE.
- 7) When finished, shut off all switches. Before disconnecting solution hose relieve the water pressure from the wand by holding the lever on the wand.

Warning: Turn unit off immediately if foam or liquid come from machine exhaust. Empty & clean out recovery (dirty) tank and use de-foamer to correct the problem.

GENERAL INSTRUCTIONS

STORAGE

WHEN CLEANING IS FINISHED and recovery tank emptied:

- 1) Remove the power plug from the outlet
- 2) Disconnect the SOLUTION HOSE on the back of the machine by pushing in on the ring of the solution fitting.
- 2) Flush RECOVERY tank with clean water to remove any remaining debris and then empty into toilet by lifting up on the dump valve.
- 3) When the RECOVERY tank is clean and emptied store the machine leaving the RECOVERY TANK open when storing.
- 9) Coil power cord neatly after each use and store on machine with solution inlet hose Fig. 2.
- 10) Coil vacuum hose assembly and place in mesh storage bag. Hang on machine for storage and/or transportation. Fig. 3.



FIG. 2



FIG. 3

ROUTINE MAINTENANCE INSTRUCTIONS

- 1) Remove any lint from the ball float screen (Fig. 4) in the recovery tank (it can be removed if necessary) and any debris from the solution tank inlet filter (Fig. 5). A damaged filter should be replaced, otherwise blockages and/or damage to the pump head and spray jet can occur.
- 2) Check the spray jet on the wand for blockage and a uniform spray pattern. Remove jet and blow through to clean. Do not use a pin or other sharp objects as this may cause damage to the jet.
- 3) Check and remove any debris or lint build-up from the wand vacuum inlet.
- 4) Always wash out the tank with clean water after use.
- 5) Wipe down the machine with a damp cloth. Do not hose off or power spray machine.
- 6) Inspect solution hose and vacuum hose for cracks or damage. Do not use hose if damaged.
- 7) Inspect electrical cord end on the machine for damage.



FIG. 4



FIG. 5

CAUTION: THIS UNIT MUST BE PROTECTED FROM FREEZING. Damage from freezing could cause machine to malfunction.

TECHNICAL SPECIFICATIONS

Model	Extractor
Catalog Number	98260
Dimensions (L x W x H)	23"X19"X41"
Weight	65lbs
Recovery Tank	13 GA
Cord Type	14/3 Yellow
Cord Length	20'
Tank Construction	Roto-mold
Solution Hose Length	50'
Waterlift	117
PSI	220
Sound Level	67dBa
Vacuum Motor	673 Peak Airwatt

TROUBLESHOOTING

LOSS OF VACUUM SUCTION

CAUSE:

- 1) Vacuum head blocked.
- 2) Hose blocked.
- 3) Recovery tank not sealed properly.

SOLUTION:

- 1) Visually inspect and clear blockage.
- 2) Visually inspect and clear blockage.
- 3) Check tank for damage or adjust for proper fit.

SPRAY JET NOT FUNCTIONING PROPERLY

CAUSE:

- 1) Jet blocked
- 2) Solution filter blocked.

SOLUTION:

- 1) Visually inspect and clean according to operating instructions.
- 2) Visually inspect and clean according to operating instructions.

MOTORS NOT RUNNING

CAUSE:

- 1) Power not reaching main switch.
- 2) Defective power cord.
- 3) Faulty switches or wiring.

SOLUTION:

- 1) Check power supply. Check fuses/circuit breaker. Contact service center.
- 2) Contact manufacturer or service center.
- 3) Contact manufacturer or service center.

Warranty Registration Form

Please provide additional information on
Tornado equipment: (Check choices below)

- | | |
|---|---|
| <input type="checkbox"/> Automatic Scrubbers | <input type="checkbox"/> Sweepers |
| <input type="checkbox"/> Propane Floor Machines | <input type="checkbox"/> Rotary Floor Machine |
| <input type="checkbox"/> High Speed Burnishers | <input type="checkbox"/> Carpet Vacuums |
| <input type="checkbox"/> Carpet Extractors & Spotters | <input type="checkbox"/> Wet/Dry Vacs |
| <input type="checkbox"/> Steam Cleaners | <input type="checkbox"/> Jumbo Vacs |
| <input type="checkbox"/> Ride-On Equipment | <input type="checkbox"/> Pressure Washers |

See complete product info at www.tornadovac.com

Selling Dealer: (Required) _____

Please Print Clearly

Company/Institution	
Contact Name	Title
Address	City/State/Zip Code
Phone	Fax
Date of Purchase	Email

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	9. Hospital	17. U.S. Govt.
2. Retail Store	10. Nursing Home	18. Other Govt.
3. Restaurant	11. Religious Institution	19. Auto Service
4. Office Building	12. Airport	20. Airport
5. Contract Cleaning	13. Warehouse	21. Non-Profit
6. Light Manufacturing	14. Apartment/Condo	22. Other (specify)
7. Heavy Manufacturing	15. Warehouse	
8. College/University	16. Supermarket	

How did you first learn about Tornado cleaning and maintenance equipment?	In square feet (meters)	
	Total Hard Floor Area	Total Carpeted Area Square feet (square meters)
<ul style="list-style-type: none"> <input type="checkbox"/> Contacted by local dealer <input type="checkbox"/> Previous experience with Tornado products <input type="checkbox"/> Reputation/ Recommendation <input type="checkbox"/> Advertising <input type="checkbox"/> Direct mail <input type="checkbox"/> Internet <input type="checkbox"/> Other 	<ul style="list-style-type: none"> <input type="checkbox"/> 0-10,000 (0-930) <input type="checkbox"/> 10-50,000 (930-4,650) <input type="checkbox"/> 50-250,000 (4,650-23,250) <input type="checkbox"/> Over 250,000 (over 23,260) 	<ul style="list-style-type: none"> <input type="checkbox"/> 0-10,000 (0-930) <input type="checkbox"/> 10-50,000 (930-4,650) <input type="checkbox"/> 50-250,000 (4,650-23,250) <input type="checkbox"/> Over 250,000 (over 23,260)

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, the warranty is voided if service is attempted by non-Authorized Tornado Service Centers.

Return to:
Tornado Industries
333 Charles Ct. Unit 109
West Chicago, IL 60185
Fax: (630)818-1301

