



Operations & Maintenance Manual
For Commercial Use Only



WINDSHEAR™ STORM and WINDSHEAR™ STORM DELUXE
MODEL NO: 98778/98780



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 warrant, 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

***Effective January 1, 2013. Terms subject to change without notice**

1. Except all Windshears™ Blowers, TV 2, Side and Downdraft, Insulation Blowers, CV 30, CV 38, CW 50, CW 100, CK14/1, CK 14/1-QD, CK14/1 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

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West Chicago, IL 60185

1-800-VACUUMS

80 Years of Cleaning Innovation



A Tacony Company



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NOTES



Specifications

CATALOG NO.	98778	98780
SERIES	A	A
VOLTS	115v	115v
AMPS	2.8	2.8
HP	.4	.4
CERTIFICATION		

All Specifications Subject to Change Without Notice.

All information and specifications printed in this manual are current at the time of printing. However, because of Tornado's policy of continued product improvement, we reserve the right to make changes at any time without notice.



Especificaciones

NUMERO DE CATALOGO	98778	98780
SERIE	A	A
VOLTIOS	115V	115v
AMPERIOS	2.8	2.8
HP	.4	.4
CERTIFICACION		

Todas las especificaciones están sujetas a cambio sin previo aviso.

información y especificaciones impresas en este manual y lista de piezas están al día en el momento de la impresión. Sin embargo, a causa de la política de Coverall de la mejora continua de nuestros productos, nos reservamos el derecho de hacer cambios en cualquier momento sin previo aviso.

Spécifications

CATALOGUE NO.	98778	98780
SERIE	A	A
VOLTS	115V	115v
AMPS	2.8	2.8
CV	.4	.4
HOMOLOGATION		

Toutes les spécifications sont sujettes à changement sans préavis.

Toutes les informations et spécifications imprimées dans ce manuel et sur la liste de pièces sont valables à la date de l'impression. Cependant, à cause de la politique de Coverall concernant l'amélioration continue de ses produits, nous réservons le droit de faire des changements à tous moments et sans préavis

Product Specifications	98778	98780
Model	WINDSHEAR™ STORM	WINDSHEAR™ STORM DELUXE
Catalog Number	98778	98780
Dimensions	22" x 16.5" x 11.5" 56 cm x 42 cm x 29 cm	22" x 16.5" x 11.5" 56 cm x 42 cm x 29 cm
Net Weight	17.75 lbs. / 8 kg	18 lbs. / 8.2 kg
Running Amps	2.8 max	2.8 max
Power	120V	120V
Air Velocity	3,400 FPM	3,400 FPM
Air-Flow Direction	0° / 90°	0° / 5° / 90°
Kickstand	No	Yes
Daisy Chain Capable	No	Yes
Stackable	Yes	Yes
Power Cord	20 ft. / 6m	20 ft. / 6m

**IMPORTANT SAFETY INSTRUCTIONS
FOR COMMERCIAL USE ONLY**

**WHEN USING AN ELECTRICAL APPLIANCE,
BASIC PRECAUTIONS SHOULD ALWAYS BE
FOLLOWED INCLUDING THE FOLLOWING:**

**READ ALL INSTRUCTIONS BEFORE USING
THIS MACHINE**



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

1. Do not leave machine when plugged in. Unplug from outlet when not in use and before servicing.
2. Use indoors only. Do not use outdoors, do not expose to rain.
3. Do not allow to be used as a toy. Use caution when operating 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 machine is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a Tornado Service Center.
6. Do not pull or carry by cord, use cord as a handle, close a door on cord, or pull cord around sharp edges or corners. Do not run machine 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 machine with wet hands.
9. 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.
10. Keep hair, loose clothing, fingers, and all parts of body away from openings and moving parts.
11. Turn off all controls before unplugging.
12. Use extra care when cleaning on stairs.
13. Do not use to pick up flammable or combustible liquids, such as gasoline or use in areas where they may be present.
14. Connect to a properly grounded outlet only. See Grounding Instructions.

Save These Instructions

WARNING: To reduce the risk of fire or electric shock, do not use this fan with any solid-state speed control device.

Do not use an extension cord with this fan.

Use only on GFCI protected receptacles.

Total number of fans that can daisy chain will be 4 (the unit plus 3 more).

**Instrucciones De Seguridad Importantes
Para Uso Comercial
Cuando Use Un Aparato Electrico, Se
Deben Seguir Siempre Algunas
Precauciones Basicas Como Las
Siguietes:**

**Lea Todas Las Instrucciones Antes De Usar
La Maquina.**



**ADVERTENCIA: Para reducir el riesgo
de fuego, descarga
electrica, o lesiones**

1. No deje la máquina sola cuando esté enchufada. Desenchufe del tomacorriente cuando no esté en uso y antes de dar servicio.
2. Usela únicamente en interiores. No la use en la intemperie ni la exponga a la lluvia.
3. No permita que se use como un juguete. Extreme sus precauciones cuando opere la máquina cerca de niños.
4. Usela únicamente en la forma descrita en este manual. Use sólo los accesorios recomendados por el fabricante.
5. No la use si el cable de corriente o el enchufe está dañado. Si la máquina no está trabajando en la forma en que debiera, se ha dejado caer, se ha dañado, se ha dejado a la intemperie, o se ha dejado caer en agua, llévela a un centro de servicio Tornado.
6. No la jale ni la transporte por el cable, ni use el cable como asa, cierre una puerta sobre el cable, ni enrolle el cable en curvas muy cerradas. No haga pasar la máquina por encima del cable. Mantenga el cable lejos de superficies calientes.
7. No desenchufe la máquina jalando del cable. Para desenchufarla, coja el enchufe, no el cable.
8. No maneje el enchufe ni la máquina con las manos mojadas.
9. No ponga objetos en ninguna de las aberturas. No use la máquina si alguna de las aberturas está bloqueada; manténgala libre de polvo, pelusa, pelo y cualquier cosa que pueda reducir el flujo de aire.
10. Mantenga el cabello, la ropa suelta, los dedos y todas las partes del cuerpo lejos de las aberturas y las partes móviles.
11. Apague todos los controles antes de desenchufar.
12. Extreme sus precauciones cuando limpie en escaleras.
13. No la use para recoger líquidos inflamables o combustibles como gasolina, ni lo use en áreas donde puedan estar presentes.
14. Conéctela únicamente a un enchufe adecuadamente puesto a tierra. Vea las instrucciones de puesta a tierra.

Guarde Estas Instrucciones

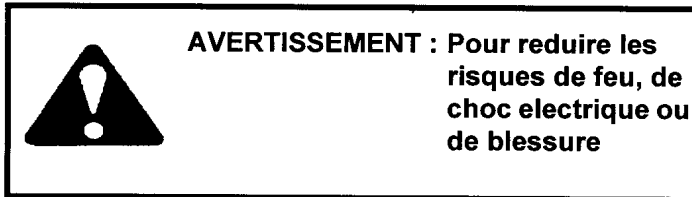
ADVERTENCIA: Para reducir el riesgo de incendio o descarga eléctrica, no utilice este ventilador con ningún dispositivo de control de velocidad de estado sólido.

No use un cable de extensión con este ventilador. Use sólo con GFCI tomas protegidas.

Número total de fans que puede encadenar será 4 (la unidad y 3 más).

**Instructions De Securite Importantes
Pour Usage Commercial Pour L'usage D'un
Appareil Electrique, Des Precautions De
Base Doivent Toujours Etre Suivies, Y
Compris Les Suivantes :**

**Lire Toutes Les Instructions Avant
D'utiliser La Machine.**



1. Ne pas abandonner la machine seule quand elle est branchée. Débrancher la prise quand elle n'est pas utilisée et avant tout service.
2. L'utiliser uniquement en intérieur. Ne pas l'utiliser en plein air, ne pas l'exposer à la pluie.
3. Ne pas permettre de l'utiliser comme un jouet. Pratiquer avec précaution quand à proximité d'enfants.
4. L'utiliser seulement en suivant les instructions de ce manuel. Utiliser uniquement des accessoires recommandés par le fabricant.
5. Ne pas l'utiliser avec une prise ou un fil de branchement endommagé. Si la machine ne fonctionne pas comme elle se doit, si elle est tombée, endommagée, laissée en plein air ou tombée dans l'eau, la retourner au Centre de service Tornado.
6. Ne pas tirer ou transporter la machine par le fil de branchement, utiliser le fil comme poignée de transport, fermer une porte sur le fil ni tirer le fil autour de coins ou d'angles aigus. Ne pas laisser la machine passer sur le fil. Garder le fil à l'écart des surfaces chaudes.
7. Ne pas débrancher en tirant sur le fil. Pour débrancher, tirer sur la prise pas sur le fil.
8. Ne pas manier la prise ou la machine avec des mains mouillées.
9. Ne pas insérer d'objets dans les ouvertures. Ne pas l'utiliser quand une ouverture est bloquée ; essuyer la poussière, les peluches, les poils et tout ce qui peut restreindre le flot d'air.
10. Garder les cheveux, les vêtements flottants, les doigts et toutes les parties du corps à l'écart des ouvertures et des pièces mobiles.
11. Arrêter toutes les commandes avant de débrancher.
12. Prendre des précautions supplémentaires pour le nettoyage des escaliers.
13. Ne pas l'utiliser pour ramasser des liquides inflammables ou combustibles, tels que de l'essence, ni l'utiliser dans des endroits où ils peuvent être présents.
14. Brancher, uniquement, sur une prise correctement mise à la terre. Voir les Instructions de mise à la terre.

Conserver Ces Instructions

AVERTISSEMENT : Pour réduire le risque d'incendie ou d'électrocution, ne pas utiliser ce ventilateur avec un dispositif de contrôle de vitesse à l'état solide.

N'utilisez pas de rallonge électrique avec ce ventilateur.

Utilisation seulement sur GFCI protégée réceptacles.

Nombre total de fans qui peuvent guirlande sera 4 (l'unité et 3 autres).

When the Machine is Delivered

1. Check the carton for signs of shipping damage.
 2. Remove the machine from the carton and look for damage.
- If the machine is damaged, notify the carrier immediately and request an inspection. Be sure to keep the carton, packing inserts, packing lists, and carrier's receipt until the inspector has verified your claim.

Before Operating Machine

Read this manual completely before attempting to operate machine. This manual has important information for the use and safe operation of the machine. Keep this manual on file and handy. The machine will provide years of satisfactory service if operated and maintained according to recommendations in the manual. If additional information is needed, please write to:

**Tornado Industries, LLC.
3101 WICHITA COURT
FORT WORTH, TX 76140**

**(800)-822-8867
FAX (817)-551-6507
www.tornadovac.com**

Cuando La Maquina Se Entrega

- 1 Revise el empaque de cartón para ver si hay señales de daños durante el transporte.
- 2 Saque la máquina del empaque de cartón y inspeccione por daños.

Si la máquina está dañada, notifique inmediatamente a la compañía de transporte y solicite una inspección. Asegúrese de conservar el empaque de cartón, los insertos de empaque, la lista de empaque y el recibo del transportista hasta que el inspector haya atendido su reclamación.

Antes De Hacer Funcionar La Maquina

Lea este manual completamente antes de intentar operar la máquina. Este manual contiene información importante para el uso y la operación seguros de la máquina. Mantenga este manual en sus archivos y a la mano. Esta máquina le proporcionará años de servicio satisfactorio si se opera y se mantiene de acuerdo a las recomendaciones que aparecen en el manual. Si requiere información adicional, por favor póngase en contacto con el distribuidor más cercano o escriba a:

**Tornado Industries, LLC.
3101 WICHITA COURT
FORT WORTH, TX 76140**

**(800)-822-8867
FAX (817)-551-6507
www.tornadovac.com**

A La Reception

- 1 Vérifier le carton pour apparances de dommages en cours de transport.
- 2 Sortir la machine du carton et la vérifier pour dommages.

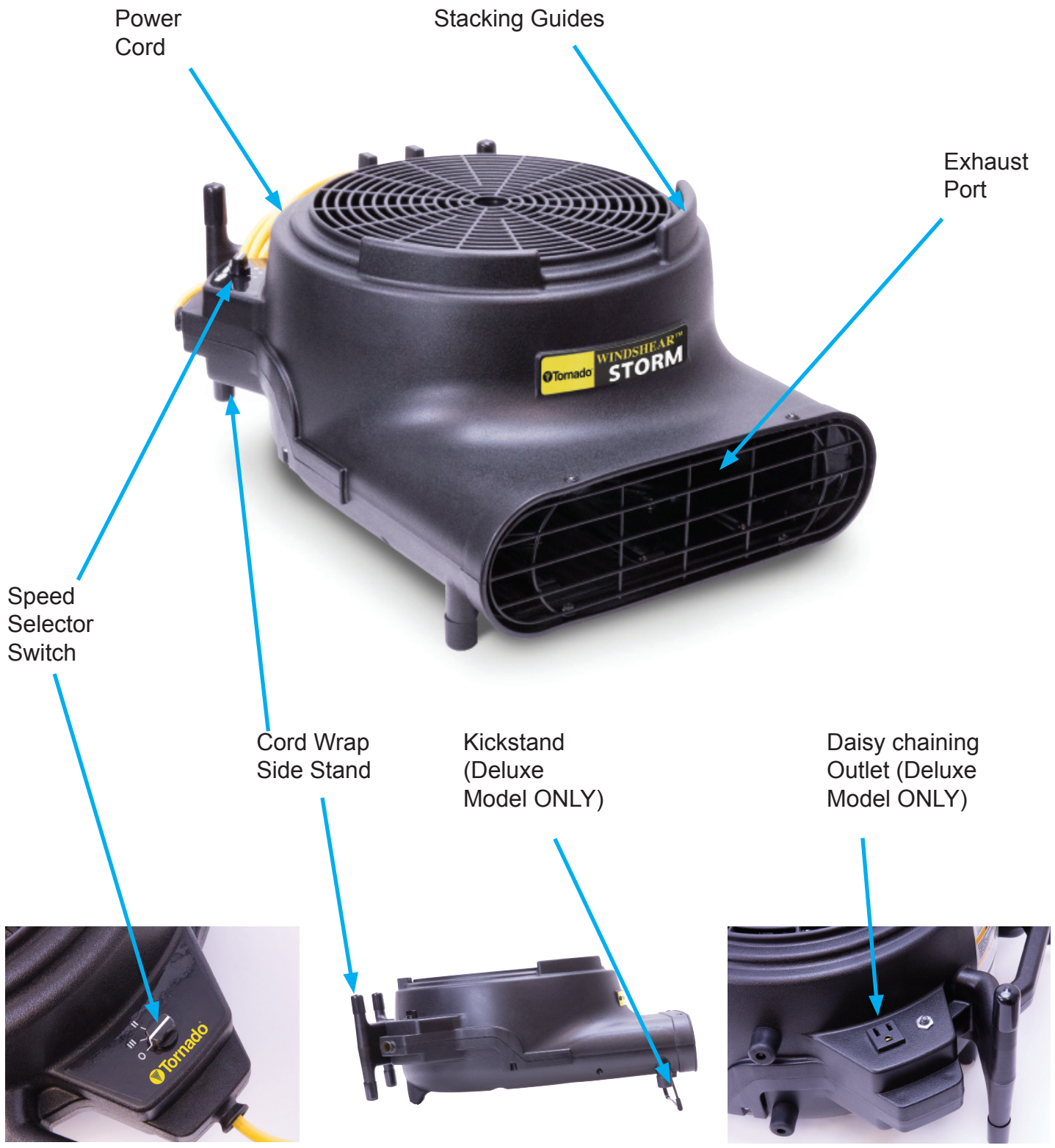
Si la machine est endommagée, faire immédiatement une réclamation auprès du transporteur et demander un inspection. S'assurer de garder le carton et tous les matériaux d'emballage, liste de colisage et bordereau de livraison jusqu'à ce que l'inspecteur ait vérifié la réclamation.

Avant Utilisation De La Machine

Lire entièrement ce manuel avant de mettre la machine en marche. Ce manuel contient des informations importantes concernant le fonctionnement et l'usage sans risque de la machine. Conserver ce manuel à portée de la main. Si utilisée et entretenue en accord avec les recommandations de ce manuel, cette machine apportera des années de service satisfaisant. Si des informations supplémentaires sont nécessaires, prendre contact avec le distributeur local ou écrire à :

Tornado Industries, LLC.
3101 WICHITA COURT
FORT WORTH, TX 76140

(800)-822-8867
FAX (817)-551-6507
www.tornadovac.com



Power Cord

Stacking Guides

Exhaust Port

Speed Selector Switch

Cord Wrap Side Stand

Kickstand (Deluxe Model ONLY)

Daisy chaining Outlet (Deluxe Model ONLY)

The Speed selector switch provides the following settings, III = High Speed, Figure 1; II = Medium Speed, Figure 2; I = Lo, Figure 3; and 0 = Off, Figure 4.



Figure 1 for High Speed



Figure 2 for Medium Speed



Figure 3 for Lo Speed



Figure 4 to turn OFF

WARNING: Exhausting too much air from a space with Open Combustion Devices (e.g. furnaces, fireplaces or water heaters) can cause those devices to back draft. This can contaminate the space with potential fatal gases.

Use this unit only as a recirculating fan. Exhausting no air from the space and thus causing no negative pressure or back drafting. OR Exhaust a very limited amount of air which does not cause back drafting. OR Direct one or more units from the fan to the room with combustion devices. This will positively pressure the room, thus preventing back drafting.

WARNING: When exhausting air from a space, always check Combustion Devices with the fan running to guarantee the back drafting prevention measures are working.

The standard orientations are, horizontal, figure 5, vertical, figure 6. The deluxe model can also operate in a sideways orientation, figure 7. Care must be taken, especially in the sideways orientation, not to block the air intake.



Figure 5 Horizontal



Figure 6 Vertical



Figure 7 Sideways

The units can be stacked during storage or transport to minimize the required space. Stacking Guide is located on the top and bottom of each unit Figures 8 and 9.



Figure 8



Figure 9

To ensure objects are not sucked against the intake guard during operation, do not place items in front of the intake guard.

Cord Storage

Your unit is equipped with a cord wrap and storage area on the back of the unit. To properly store the power cord:

- Turn off the unit
- Disconnect any units plugged into the unit
- Unplug the unit from the wall outlet
- Snugly wrap the power cord around the cord wrap/feet
- Secure the end of the power cord to itself using the latch on the plug of the power cord.



Figure 10

Warning: When daisy chaining units, each unit is controlled separately. The daisy chained units are not controlled by the master unit that is plugged into the wall outlet. Even with the master unit switch in the OFF position any daisy chained unit(s) will still have power and may be turned ON. The circuit breaker controls both the fan and the outlet. If the circuit breaker trips while units are daisy chained, remove some of the down stream units before resetting the breaker. Maximum of 3 units may be daisy chained off of 1 unit for a total of 4 units per circuit.



Figure 11



WARNING: Always unplug machine before cleaning, or making adjustments or repairs.

Note: Always store the Windshear Storm in a dry place.

After Every Use:

- Remove any lint or debris from the intake screen.
- Clean cord with a window cleaner (or similar) and wrap.

Monthly:

- Inspect all electrical connections and cord.
- If you see any noticeable build-up of debris in the motor and/or fan, remove the intake screen and fan. Vacuum clean and replace.

Mantenimiento



ADVERTENCIA: Siempre desenchufe la máquina antes de limpiar, hacer ajustes o reparaciones.

NOTA: Siempre almacene el Windshear Storm en un lugar seco.

Despues De Cada Uso

- Quite toda la pelusa o basura de la pantalla de admisión.
- Enrolle y limpie el cable de corriente con un líquido limpiador de ventanas (o semejante).

Cada Mes

- Inspeccione todas las conexiones eléctricas y los cables de corriente eléctrica.
- Si nota una acumulación apreciable de basura en el motor o en el ventilador, retire la pantalla de admisión y el ventilador. Limpie con una aspiradora y vuelva a colocar.

Entretien



AVERTISSEMENT : Toujours débrancher la machine avant de la nettoyer, de faire des réglages ou de la réparer.

NOTE : Toujours remiser le Windshear Storm dans un endroit sec.

Après Chaque Usage

- Retirer toute peluche ou débris du tamis d'aspiration.
- Enrouler et nettoyer le fil de branchement avec du liquide pour le lavage des vitres (ou similaire).

Mensuellement

- Inspecter toutes les connexions électriques et le fil de branchement.
- Si une accumulation de débris est visible dans le moteur et/ou le ventilateur, retirer le tamis d'aspiration et le ventilateur. Nettoyer à l'aspirateur et replacer les pièces retirées.

Warranty Registration Form

Please provide additional information on
Tornado equipment (Check all that apply)

<input type="checkbox"/> Automatic Scrubbers	<input type="checkbox"/> Sweepers
<input type="checkbox"/> Propose Floor Machines	<input type="checkbox"/> Rotary Floor Machines
<input type="checkbox"/> High Speed Burnishers	<input type="checkbox"/> Carpet Recovers
<input type="checkbox"/> Carpet Extractors & Spotters	<input type="checkbox"/> Walk-Behind Tars
<input type="checkbox"/> Steam Cleaners	<input type="checkbox"/> Jumbo Tars
<input type="checkbox"/> Ride-On Equipment	<input type="checkbox"/> Pressure Washers

See complete product info at www.tornadovac.com

Please Print Clearly

Selling Dealer: (Required) _____

_____ 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)
<input type="checkbox"/> Contacted by local dealer	<input type="checkbox"/> 0-30,000 (0-930)	<input type="checkbox"/> 0-30,000 (0-930)
<input type="checkbox"/> Previous experience with Tornado products	<input type="checkbox"/> 10-50,000 (930-4,680)	<input type="checkbox"/> 10-50,000 (930-4,680)
<input type="checkbox"/> Reputation/Recommendation	<input type="checkbox"/> 50-250,000 (4,680-23,250)	<input type="checkbox"/> 50-250,000 (4,680-23,250)
<input type="checkbox"/> Advertising	<input type="checkbox"/> Over 250,000 (over 23,250)	<input type="checkbox"/> Over 250,000 (over 23,250)
<input type="checkbox"/> Direct mail		
<input type="checkbox"/> Internet		
<input type="checkbox"/> Other		

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.

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X1448-TOR 3/2012

Return to:
Tornado Industries
333 Charles Ct. Unit 129
West Chicago, IL 60185
Fax: (630)818-1301

