

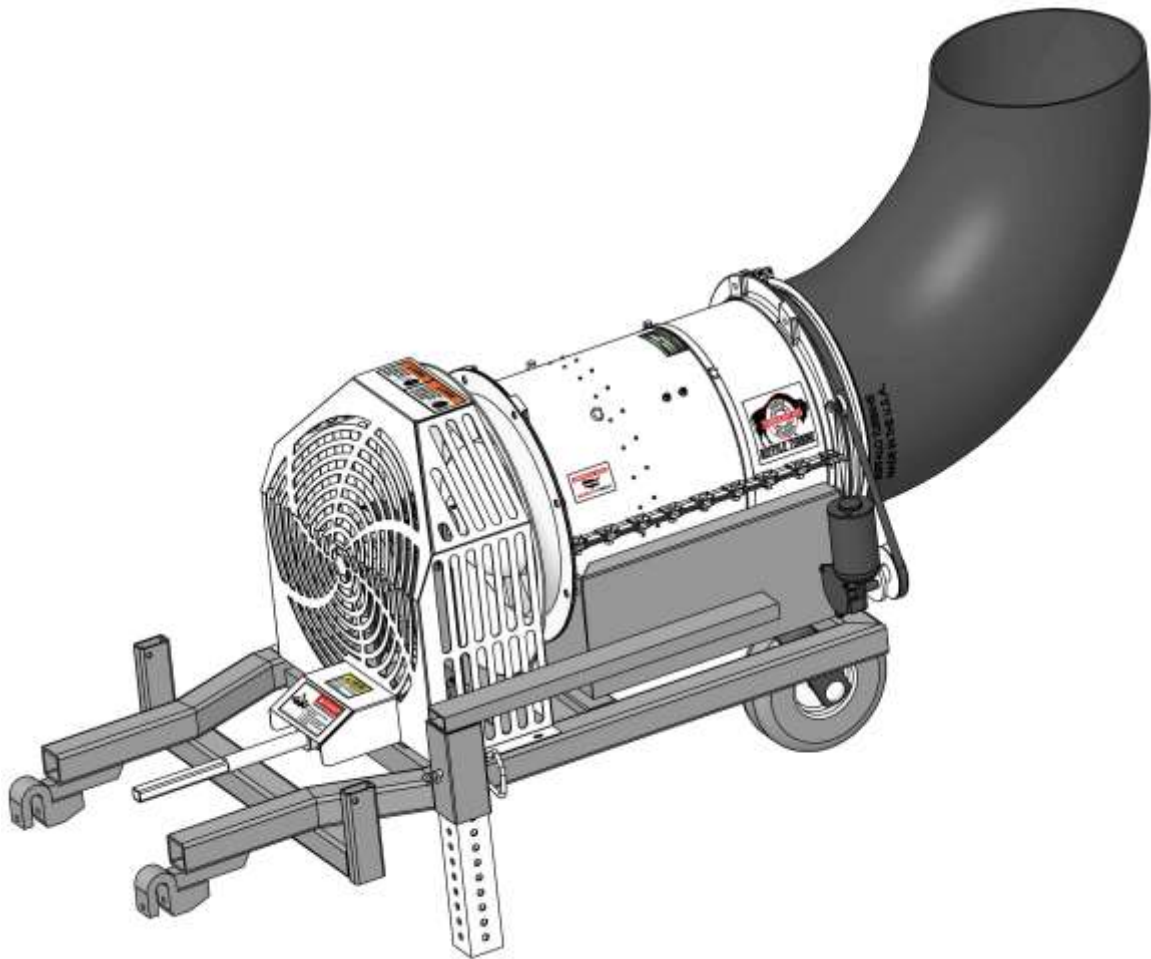
BUFFALO TURBINE

180 Zoar Valley Road
Springville, NY 14141

TEL: 716 592 2700 FAX: 716 592 2460

EMAIL: info@buffaloturbine.com

WEBSITE: www.buffaloturbine.com



BUFFALO TURBINE'S BT-G12DB ORIGINAL INSTRUCTIONS AND PARTS MANUAL

12/19 -BT MAN

TABLE OF CONTENTS

Ref. Number	Description	Page Number
1.0	Introduction	2
2.0	Safety	3
2.1	Safety Decals	4
2.2	General Safety	4
2.3	Operating Safety	4
2.4	Maintenance Safety	5
2.5	Transport Safety	5
2.6	Storage Safety	5
2.7	Sign-off Form	5
3.0	Warranty Information	6
3.1	Warranty Registration Form	7
4.0	Operations	8
4.1	To the new operator or owner	8
4.2	Break-in	8
4.3	Pre-Operation Checks	8
4.4	Attaching Blower to Tractor	9
4.5	Field Operation	9
4.6	Operating RPM	9
4.7	Storage	9
5.0	Troubleshooting	10
6.0	Machine Specification	10
7.0	Maintenance	11
7.1	Maintenance Safety	11
7.2	Fluids	11
7.3	Belt Tension	11
7.4	Service Checklist	12
	BT-G12DB Parts Reference	13
	Bill of Materials for BT-G12DB	14
	Wiring Schematic	15
	Nozzle Options	16
	Buffalo Turbine Additional Products	17

1.0 INTRODUCTION

Congratulations on your choice of a Buffalo Turbine Debris Blower. This equipment has been designed and manufactured to meet the needs of the Turf Care Industry.

Safe, efficient and trouble-free operation of your Buffalo Turbine Blower requires that you and anyone else, who will be operating or maintaining the Blower, read and understand all of the safety, operation, maintenance and troubleshooting information contained within this Operator's manual.

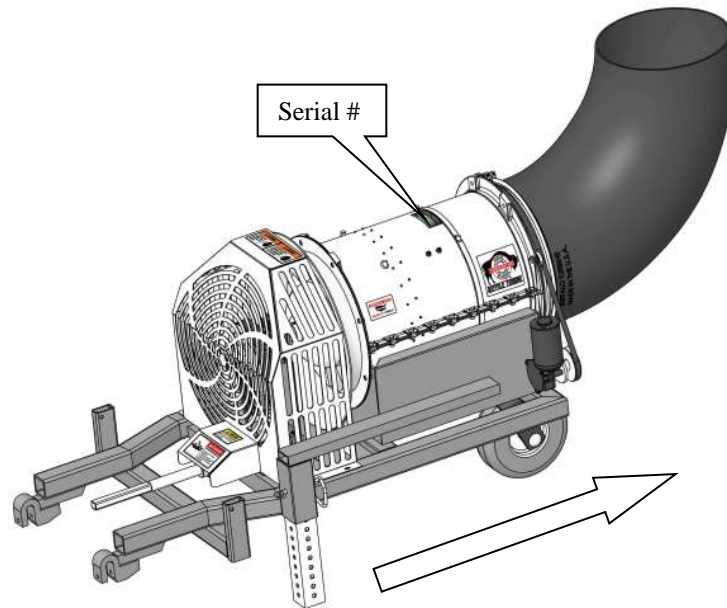
This Manual covers the BT-G12DB Turbine Blower.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Buffalo Turbine dealer or distributor if you need assistance, information, or additional copies of the manuals.

SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Debris Blower when ordering parts or requesting service or other information.

The serial number plate(s) is located where indicated in the pictures below. Please document the number in the space provided for easy reference.



OPERATOR ORIENTATION – The directions left, right, front and rear, as mentioned throughout the manual, are as seen from the driver's seat and facing in the direction of travel.

MODEL BT-G12DB TOP SURFACE OF TURBINE ASSEMBLY

Serial Number: _____

2.0 SAFETY

YOU are responsible for the **SAFE** operation and maintenance of your Buffalo Turbine Debris Blower. **YOU** must ensure that you and anyone else, who is going to operate, maintain or work around the Buffalo Turbine Blower be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety practice while operating the Blower.

Remember **YOU** are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this machine is familiar with the procedures recommended and follows safety precautions. Remember most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Blower owners must give operating instructions to operators or employees before allowing them to operate the Blower, and at least annually thereafter.
- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.
- A person who has not read and understood all operating instructions is not qualified to operate the machine. An untrained operator exposes themselves and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety which could affect the life of the equipment.
- Think **SAFETY!** Work **SAFELY!**

This Safety Alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

The Safety Alert symbol identifies important safety messages on the Buffalo Turbine Blower and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is **SAFETY** important to you?



**3 Big Reasons: Accidents Disable and Kill
Accidents Cost
Accidents Can Be Avoided**

SIGNAL WORDS: Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guidelines

1. **DANGER** –injury or death if the proper precautions are not taken.
2. **WARNING** -- A specific hazard or unsafe practice that **COULD** result in severe personal injury or death if proper precautions are not taken.
3. **CAUTION** – Unsafe practices that **COULD** result in personal injury if proper practices are not taken, or as a reminder of good safety.

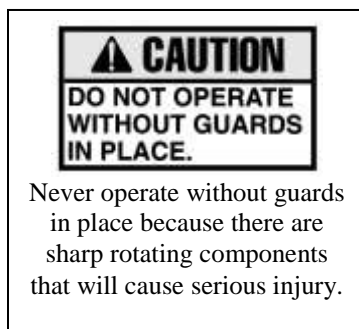
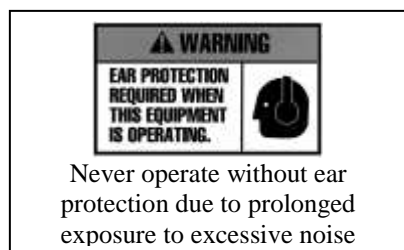
The Safety Alert symbol identifies important safety messages on the Buffalo Turbine Blower and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

2.1 SAFETY DECALS

The types of decals on the blower unit are shown below. Good safety requires that you familiarize yourself with the various Safety Decals, the type of warning and the area, or particular function related to that area that requires your **SAFETY AWARENESS.* THINK SAFETY! WORK SAFELY!**

!ATTENTION!

1. **KEEP HANDS, FEET AND CLOTHING AWAY FROM POWER DRIVEN PARTS.**
2. **STOP ENGINE AND REMOVE KEY BEFORE LEAVING OPERATOR'S POSITION.**
3. **MACHINE MUST COME TO A COMPLETE STOP BEFORE ANY MAINTENANCE, TO INCLUDE ADJUSTING, LUBRICATING OR CLEANING, IS PERFORMED.**
4. **KEEP PEOPLE AND PETS AT SAFE DISTANCE FROM MACHINE.**
5. **KEEP ALL GUARDS AND SHIELDS IN PLACE.**



REMEMBER – If safety decals have been damaged, removed, become illegible or parts replaced without decals, new decals must be applied. New decals are available from your authorized dealer.

2.2 GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, and adjusting.
2. Provide a first-aid kit for use in case of an accident. Store in a highly visible place.
3. Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.
4. Wear appropriate protective gear. This list includes but is not limited to:
 - A hard hat
 - Protective shoes with slip resistant soles
 - Protective glasses or goggles
 - Heavy gloves
 - Wet weather gear
 - Hearing protection
5. Do not operate without guards or shields properly installed.
6. Do not allow riders.
7. **Wear appropriate ear protection for prolonged exposure to excessive noise.**
8. **(All Models) Set Blower on the ground, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before dismounting to service or adjust.**
9. Clear the area of people, especially small children, before starting the unit.
10. Review all safety related items annually with all personnel who will be operating or maintaining the Blower.
11. Keep hands, feet, hair and clothing away from moving parts. Operate equipment only while seated in the operator's seat.

2.3 OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, servicing or adjusting.
2. Before servicing or repairing, **Set blower on the ground, disengage PTO, stop engine, set park brake, Turn Off Tractor Engine, remove key, and wait for all moving parts to stop.**

2.4 MAINTENANCE SAFETY

1. Read and follow ALL general, operating, maintenance and safety information in this manual.
2. Support the machine with blocks or safety stands when changing tires or working beneath it.
3. Set Blower on the ground, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before operating, servicing or adjusting.
4. Do not adjust the drive belt when it is rotating.
5. Make sure all guards are in place and properly secured when operating or maintaining the Blower.

2.5 TRANSPORT SAFETY

1. Make sure you are in compliant with all local DOT regulations regarding transporting Buffalo Turbine equipment on public roads and highways.

2.6 STORAGE SAFETY

1. Store the Blower on a firm, level surface.
2. Store away from areas of human activity. Do not permit children to play on or around the stored machine.
3. Make sure the unit is sitting, or blocked up firm and solid and will not tip or sink into a soft area.
4. Cover with a weatherproof tarpaulin and tie down securely.

2.7 SIGN-OFF FORM

- Buffalo Turbine recommends that anyone who will be operating and/or maintaining the Buffalo Turbine Blower must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.
- Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information before the season start-up.
- Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel that an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator’s Manual and have been instructed in the operation of the equipment.

SIGN-OFF FORM

DATE	EMPLOYEES SIGNATURE	EMPLOYERS SIGNATURE

Buffalo Turbine Warranty Policy

3.0 MACHINE WARRANTY INFORMATION

Buffalo Turbine warrants the DEBRIS BLOWER, to the original owner, to be free from defects in material and workmanship, under normal use and service. **All machines must have a completed registration form sent to Buffalo Turbine within 30 days of purchase for warranty to apply.** Obligation under this warranty shall extend for a period of 10 years from date of purchase and, at the option of Buffalo Turbine, replacement of any parts found, upon inspection by Buffalo Turbine, to be defective. Any parts replaced under warranty will have the remainder of the warranty from the original date of purchase.

Warranty parts during first 2 years will be shipped free of charge via standard ground shipping

If expedited shipping is required charges will be paid by the end user

Year 1: parts and labor

Year 2: parts only

Customer will be required to pay shipping charges for years 3-10

Year 3: Engine, per engine manufacturer's standard / Turbine Assembly / Frame (parts only)

Year 4-10: Turbine Assembly / Frame (parts will be prorated)

Buffalo Turbine reserves the right to incorporate improvements in material and design of its products without notice and is not obligated to make the same improvements to equipment previously manufactured.

ALL WARRANTY REPAIRS NEED PRE-APPROVAL BY A FACTORY PERSON (FROM BUFFALO TURBINE) PRIOR TO COMMENCING WITH A WARRANTY REPAIR TO INCLUDE SERIAL NUMBER AND HOURS FROM HOUR METER (IF EQUIPPED). PRE-APPROVAL WILL BE REQUIRED BY THE END USER AND DEALER/DISTRIBUTOR LEVEL.

Factory ordered Buffalo Turbine parts must be used when filing a warranty claim.

LIMITATIONS OF LIABILITY

This warranty is expressly in lieu of all other warranties expressed or implied and all other obligations or liabilities on our part of any kind or character, including liabilities for alleged representations or negligence. We neither assume nor authorize any other person to assume on our behalf, any liability in connection with the subsequent sale of the **DEBRIS BLOWER**. This warranty shall not apply to any DEBRIS BLOWER, which has been altered outside the factory in any way so as, in the judgment of Buffalo Turbine, to affect its operation or reliability, or which has been subject to misuse, neglect, or accident. This warranty does not cover parts and accessories, which are under separate guarantee from the manufacturers and service can be, obtained from their service facilities. No warranty is extended to regular service items such as lubricants, belts, paint and the like.

Original Instruction Manual

The Purchaser acknowledges having receiving training in the safe operation of the DEBRIS BLOWER and further acknowledges that Buffalo Turbine does not assume any liability resulting from the operation of the DEBRIS BLOWER in any manner other than described in the Operator's Manual supplied at the time of purchase.

WARRANTY VOID IF NOT REGISTERED (see Page 2 for warranty registration form)

DO NOT SPLIT THE TURBINE HOUSING FOR ANY REASON.

DO NOT ATTEMPT TO SERVICE OR DISASSEMBLE THE TURBINE BLOWER.

DO NOT USE THE TOP OF THE TURBINE HOUSING TO STRAP OR TIE DOWN BLOWER UNITS.

Unauthorized service work on the Turbine Blower will null and void all warranties.

If there are any questions regarding any of our products call Buffalo Turbine at 716 592 2700.

3.1 Warranty Registration Form

BUFFALO TURBINE

WARRANTY REGISTRATION FORM & INSPECTION REPORT

Any units not registered with Buffalo Turbine are not eligible for warranty claims

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery

Customer's Name _____ Dealer's Name _____

Address _____ Address _____

City, State, Zip, Country _____ City, State, Zip, Country _____

Email Address (important) _____ Email Address _____

Telephone Number _____

Blower Model _____

Circle one:

Serial Number _____

Commercial Use

Delivery Date _____

Private Use

DEALER INSPECTION REPORT

SAFETY CHECKS

_____ Tire Pressure Check -- Model KB

_____ All Decals Installed

_____ Wheel Bolts

_____ Review Operating and Safety Instructions

_____ Belt Tension

_____ Guards in Place

_____ Lubricate Machine

_____ Trailer assembly bolts properly installed and tightened

_____ Fasteners Tight

ALL 3 POINT HITCH MODELS: PTO SHAFTS MUST TELESCOPE IN EVERY POSITION

I have thoroughly instructed the buyer on the above described equipment which reviews the included Operator's Manual content, equipment care, adjustments, safe operation and applicable warranty policy.

Date _____

Dealer's Rep. Signature _____

The above equipment and Operator's Manual has been received by me and I have been thoroughly instructed as to the care, adjustments, safe operation and applicable warranty policy.

Date _____

Owner's Signature _____

PLEASE EMAIL TO BUFFALO TURBINE AT - service@buffaloturbine.com

Or fax to 716 592 2460

4.0 OPERATIONS

4.1 TO THE NEW OPERATOR OR OWNER

Buffalo Turbine Debris Blowers are designed to quickly and efficiently, blow away leaves, cuttings and other debris. The material is conveyed on a stream of high volume and velocity of air to remove it from the area of concern. When the material is removed, it gives a neat, professional look to the working area.

Many of the features incorporated into the machine are the result of suggestions made by customers like you. Read the manual carefully to learn to operate the machine safely and how to set it to provide maximum efficiency. The manual will take you step-by-step through your working day. By following the operating instructions in conjunction with a good maintenance program, your Blower will provide many years of trouble-free service.

Potential Mechanical Hazards while operating your machine:

Never operate the debris blower around others to prevent the possibility of being run over by equipment.

Never ride on your debris blower to prevent the possibility of being thrown off the machine or hurt severely.

Potential Crushing Hazards while operating your machine:

Between tractor deck and blower guard shroud

Between tractor deck and tractor arms

Between Pin at the end of the mounting arms

Between caster wheels and the ground



WARNING:

This Product can expose you to chemicals which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov.

4.2 BREAK-IN

Although there are no operational restrictions on the Blower when it is used for the first time, it is recommended that the following mechanical items be checked:

A. Operating for first ½ hour

1. Re-torque all wheel bolts, axle nuts and trailer mounting bolts and nuts.
2. Re-torque all other fasteners and hardware.
3. Check set screw (nozzle pulley) to ensure it tightened.

B. Operating for first 5 hours

1. Re-torque all hardware and fasteners.
2. Check set screw (nozzle pulley) to ensure it tightened.
3. Go to the normal servicing and maintenance schedule as defined in the Maintenance Section of the manual.

4.3 PRE-OPERATION CHECKS

Efficient and safe operation of the Buffalo Turbine Blower requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both personal safety and maintaining the good mechanical condition of the machine that this checklist is followed.

Before Operating the Blower and each time thereafter, the following areas should be checked off.

1. Make sure all guards and shields are in place, secured and functioning as designed.
2. Lubricate machine per maintenance schedule.
3. Ensure that the machine is properly attached to the (appropriate) power unit attaching arms and that the mounting pins are secured in position.
4. Ensure the PTO driveline is securely attached and can telescope easily.
5. Check that all clamp bands are secure.
6. Check the belts and pulleys for proper tension and alignment.

4.4 Attaching Blower to Tractor

1. Make sure the tractor has proper HP and is in good working order, including mounting brackets, PTO output shaft, and safety equipment.
2. Make sure there is enough room to safely drive up to the blower. Align mounting arms of the blower unit to match the tractor mounting brackets of the tractor (underside of tractor). Engage into the mounting brackets and secure pins. (See Tractor attachment installation instructions)
3. Connect PTO shaft. **NEVER attempt to maintain or attach PTO shaft while tractor is running!**
4. Check Upper and lower limits.
5. Check that the caster wheels turn and roll freely.
6. Connect the remote nozzle control to a 12 volt system only (see PG.17). White wire needs to be connected to positive terminal of battery. Black wire needs to be connected to negative terminal of battery. (wiring schematic on PG. 17)
7. To unhook the blower unit from the tractor, reverse the above procedures. Always park the Blower unit and tractor in a dry, level area.

4.5 FIELD OPERATION

1. Do not direct debris blower towards people, pets, autos, windows, etc.
 2. **Starting blower unit:** Always engage the tractor PTO control at a lower engine speed with nozzle pointed down or away.
 3. The air stream direction is changed (in either direction) by moving the rocker switch located on the hand control box. The nozzle will stop turning by releasing the rocker switch. **ALWAYS CHECK THE GROUND CLEARANCE WHEN OPERATING THE NOZZLE IN THE DOWN VERTICAL POSITION.**
 4. **Stopping blower unit:** Gradually slow the tractor RPM down to a lower speed using the throttle.
 5. Disengage PTO and allow the blower fan speed to come to a stop.
- NOTE: Make sure the control box wire harness is clear of all moving parts including the PTO shaft.

4.6 Operating RPM (All Models)

The manufacturer's tractor section normally recommends the unit be run at a RPM that will insure efficient attachment operation and hydrostatic drive functioning. The Blower can operate at a slower RPM if it can effectively move the debris. Vary ground speed with the hydrostatic transmission. Increase engine RPM to improve tractor efficiency. Moving light material, such as dry leaves, requires much less wind than wet or heavier material. Always try to blow with the wind. The Blower can be used for a wide variety of applications to move leaves, grass clippings, aeration plugs and debris. Drying wet areas has been another use with these powerful Debris Blowers.

4.7 Storage

At the end of the working season or before storing the blower unit, prepare the machine by following this procedure:

1. Select a storage area that is dry, level and free of debris.
2. Thoroughly wash the machine with a water hose to remove all debris and residue.
3. Run the machine at low RPM to dry the Blower Components.
4. Touch up all paint chips and scratches to prevent rusting.
5. Inspect for worn or failed components. Order the replacement parts and repair the blower unit when time allows. This will eliminate unnecessary down time at the start of next season.
6. Store in an enclosed building. If space is not available, cover with a waterproof tarpaulin and tie it down securely.
7. Store the machine away from areas of human activity.
8. Do not allow children to play around the stored unit.

5.0 TROUBLE SHOOTING

The Buffalo Turbine Debris Blower uses a high volume and velocity of air to move material from one place to another. The system is simple and reliable requiring minimal maintenance.

If you encounter a problem that is difficult to solve, even after reading through this trouble shooting section, please call your local dealer or distributor. **Before calling, please have this Operator's Manual and the serial number from your Blower ready.**

In the following section, we have listed causes and solutions to the problems that you may have encountered.

TURN OFF ENGINE, REMOVE KEY, AND DISCONNECT BATTERY BEFORE SERVICING BLOWER UNITS. INSTALL GUARDS BEFORE OPERATING.

PROBLEM	CAUSE	SOLUTION
No air flow	Buildup of debris inside turbine	Remove nozzle and clean debris from inside turbine
	Broken coupling (KB Series)	Replace coupling
No air flow	Blower fan not turning	See solutions above
Reduced or no air flow	Blower fan turns	Air intake or exhaust restricted Shut off engine Blower or tractor – remove restrictions Debris cannot be allowed to build up between the blower fan and stationary vanes
Machine vibrates or Unusual sounds	Bearing or coupling failure Out-of-balance	Replace bearings or coupling Have your dealer check blower for damaged blades. Wash and clean blower fan blades

6.0 Machine Specifications

Model G12DB

Length:	75" With nozzle (from end of mounting arms to end of nozzle)
Width:	26.5" With caster wheels
Height:	39.5" With caster wheels
Weight:	215 lbs
Electrical System:	12 Volt
Input Power:	PTO
Input RPM:	Up to 3000 RPM at PTO
Outlet Size:	Approximately 12.5"
Ballasting:	Refer to Tractor manual for proper ballasting procedures.
	Average Sound Level (sitting in the operators seat with debris blower running) -94 dBA
	Average Sound Level (with debris blower running at 50 feet away) - 75dBA

7.0 MAINTENANCE SECTION

7.1 Maintenance Safety

1. Set Blower on a level surface, stop engine, set park brake, remove ignition key and wait for all moving parts to stop before dismounting to service, adjust or repair.
2. Reinstall and secure all guards removed for servicing before starting to use machine again. *We recommend wearing gloves when removing or installing the guard to avoid getting cut*
3. Securely support machine with blocks or safety stands when changing tires or working beneath it.

7.2 Fluids

Pillow Block Bearings require NLGI2 grease

Grease driveline per operator manual (included with the driveline)

A Teflon or Silicone spray type lubricant on the nozzle base and slides provides for freer rotation.

7.3 Belt Tension

Efficient machine operation requires that the belt be properly tensioned. To adjust the belt tension, follow this procedure:

1. Remove guard after PTO is disengaged and tractor is shut off.
1. Loosen #1 and #2 pillow blocks (2 bolts each). Keep a slight tension on bolts.
2. Loosen lock nut (item 19). Adjust drive screws (item 18) (located at the base of the pillow blocks) equally on each pillow block to achieve proper tension. See specification below.
3. Check pulley alignments with a precision straight edge, and then tighten pillow blocks. Recheck belt tension and pulley alignment.
4. Attach safety guard, start tractor and engage PTO. Listen and visually check for any belt slippage and check for any misalignment.

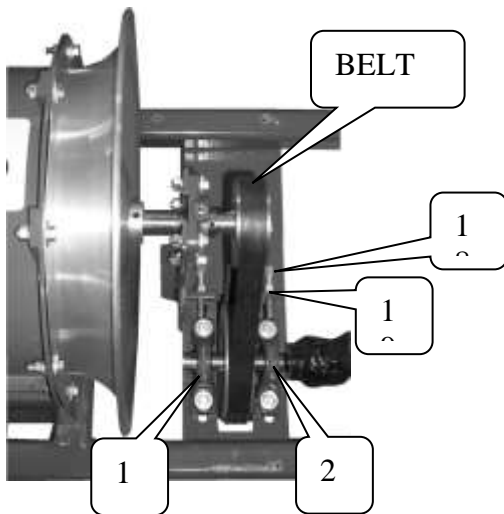
MAX. TENSION SPECS FOR BELT # 3/3VX400

JACKSHAFT TO BLOWER SHAFT
13.5 FT/LBS



↓

.12- .16
↑



Guards removed for clarity

Caution: A loose belt will cause premature wear an inhibit performance.

Pillow Block Bearings and Flange bearing require 2-3 shots of grease every 40HRS. *Make sure hands are clear of belt and pulley at all times*

7.4 SERVICE CHECKLIST

See Lubrication and Maintenance sections for details of service. Copy this page to continue record.

TURN OFF TRACTOR, REMOVE KEY & DISCONNECT WIRE HARNESS BEFORE SERVICING BLOWER UNIT

CODE: LUBRICATE-(L) / CHECK-(*) / CHANGE-(C) / REPLACE-(B) / CLEAN-(CL)

SCHEDULED MAINTENANCE HOURS _____

SERVICED BY _____

MAINTENANCE

8 hrs or daily

- (*) Remove all debris that has settled between the blower wheel fan and the stationary vanes. Helps maintain peak performance.
- (L) PTO Driveline (per operators manual included with driveline)
- (*) Check Clamp Band Bolt for tightness

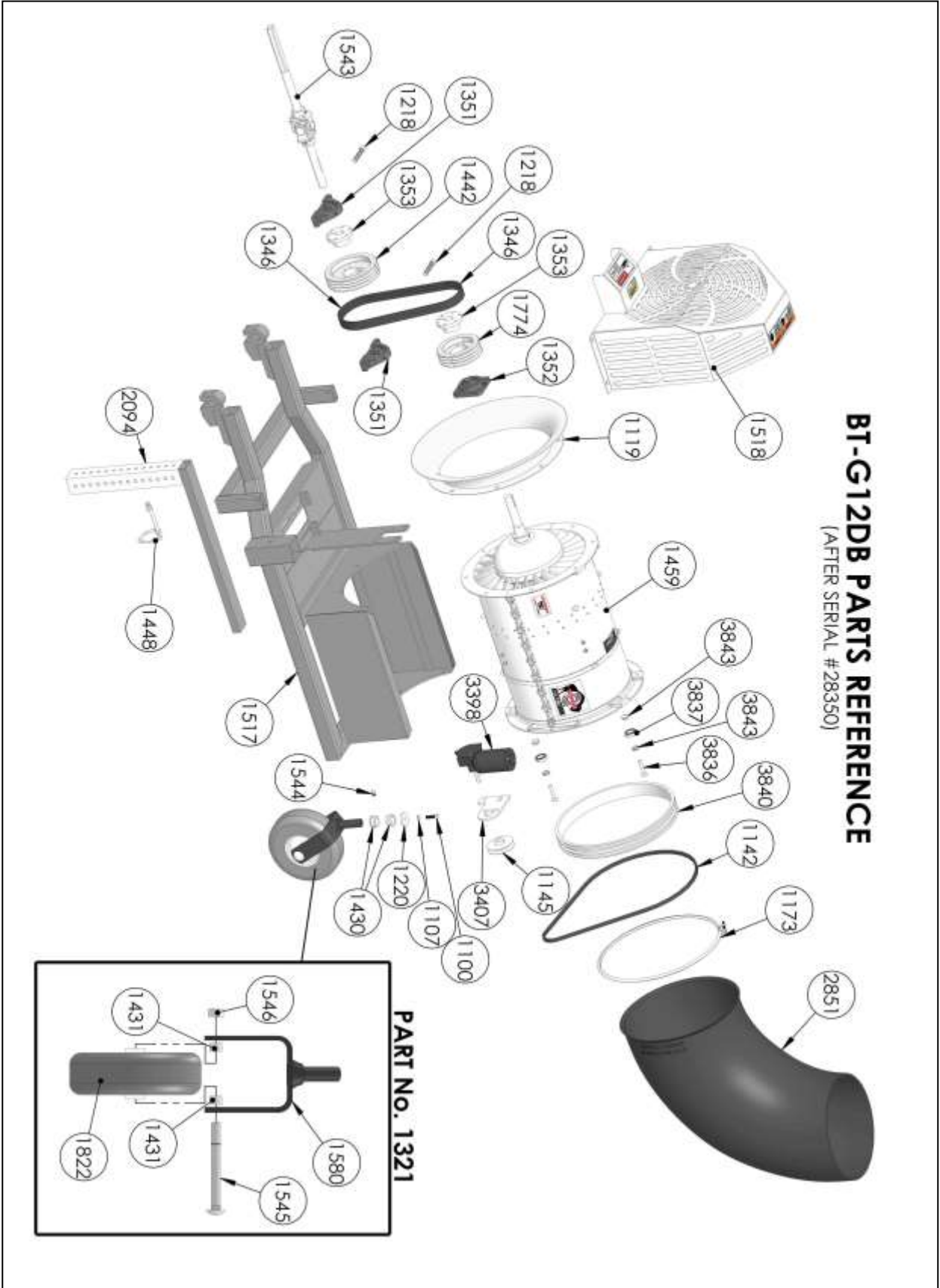
40 hours or weekly

- (*) Check condition of belts
- (L) Pillow Block and Flange Bearing (2-3 shots of grease)
- (*) Check set screw (nozzle pulley) to ensure it is tightened
- (*) Wash and Clean any dirt or grime build up that has accumulated on blower wheel fan blades. Helps to minimize vibration balance and maintain peak performance.

200hrs or annually

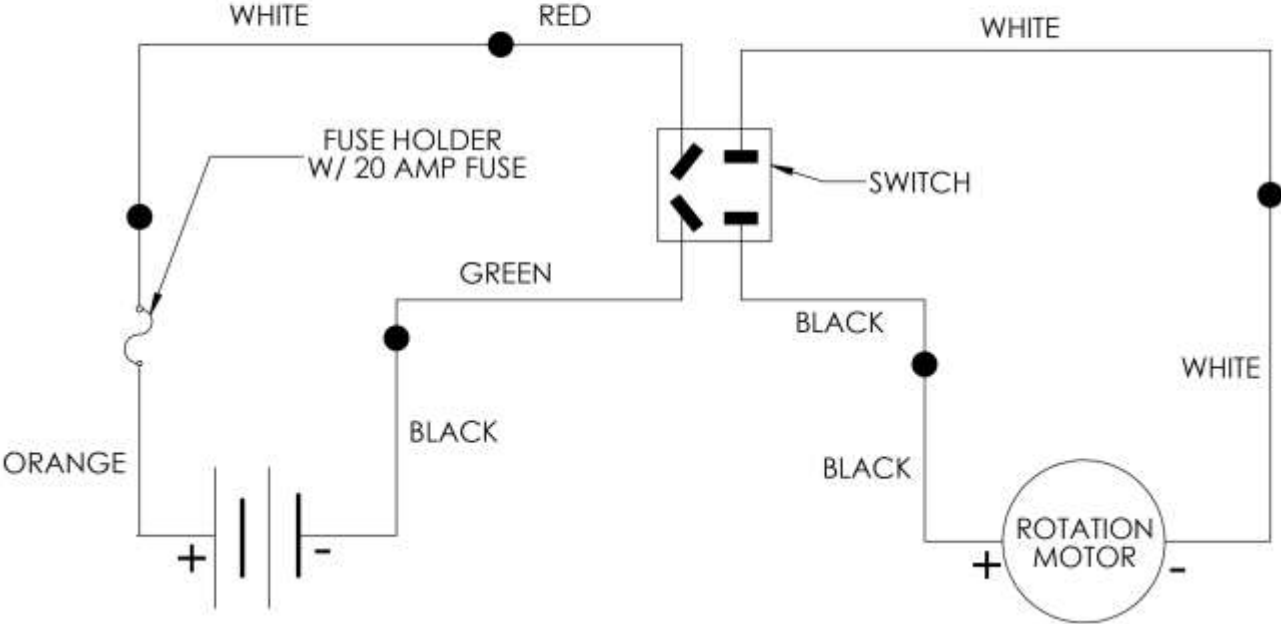
- (CL) Machine

DO NOT OPERATE BLOWER UNIT WITHOUT GUARDS SECURELY ATTACHED



REF PAGE #	PN	DESCRIPTION	QTY
13	1100	3/8-24 X 1-1/4 HHCS ZINC GR 5	5
	1101	3/8-24 X 1-1/2 HHCS ZINC GRADE 5	6
	1102	3/8-24 X 1-3/4 HHCS ZINC	8
	1104	3/8-24 X 2 HHCS ZINC GR 5	4
	1105	3/8-24 HEX NUT ZINC PLATED GRADE 5	18
	1106	SPACER-3/8 X 3/16 THICK WASHER	4
13	1107	3/8 LOCK WASHER ZINC PLATED	25
	1108	3/8 FLAT WASHER ZINC PLATED	18
13	1110	KEY, 1/4 X 1-1/2	2
13	1119	14-221-D1 BELLMOUTH	1
	1130	SET SCREW	1
13	1142	AX54 V-BELT	1
13	1145	ROTATION PULLEY	1
	1156	SERIAL TAG	1
	1167	COV 5/16 X 1/4 WIRE CLAMP	3
13	1173	CLAMP BAND W/ BOLT & NUT	1
	1182	4 X 4 BT Decal	2
	1184	WARNING – EYE PROTECTION DECAL	1
	1185	WARNING – EAR PROTECTION DECAL	1
	1186	CAUTION DO NOT OPERATE DECAL	1
	1187	8 x 10 BT DECAL	2
13	1218	BOLT, 1/2 PUSHOVER	2
13	1220	RETAINER WASHER 3/8 X 1-5/8	1
	1228	ROTATING DRIVE HAZARD DECAL	1
	1230	3/8-16 X 1 HHCS ZINC GR 5	1
	1233	AMERICA & SAFETY FIRST DECAL	1
	1236	3/16 X 1 ROLL PIN	2
	1237	1/2-20 HEX NUT	2
	1259	1/4 LOCKWASHER	3
	1271	5/16-18 HEX NYLOC NUT	1
13	1346	3/3VX375 POWERBAND BELT	1
13	1351	1" PILLOWBLOCK BEARING	2
13	1352	1" FLANGE BEARING	1
13	1353	1" SDS BUSHING	2
	1419	5/16-18 X 2 HHCS GR5 ZINC	1
	1417	10" ROUND NOZZLE	1
	1423	BLOWER ASSEMBLY WALKER	1
13	1430	CASTER BUSHING	2
	1431	BUSHING 5/8 LONG	2
13	1442	3/3V6.50 SDS SHEAVE	1
13	1448	3/8 X 3-1/2 HITCH PIN	1
13	1459	OFF WHITE BLOWER HOUSING	1
	1499	NUT PLATE 3/8	4
13	1517	MAIN FRAME (GRASSHOPPER)	1
13	1518	GUARD (GRASSHOPPER)	1
13	1543	DRIVESHAFT ASSEMBLY COMPLETE (GRASSHOPPER)	1
13	1544	1/8"NPT STRAIGHT GREASE FITTING	2
13	1545	5/8-11 X 6" CARRIAGE BOLT	2
13	1546	5/8-11 SIDELOCK NUT	2
	1547	"C" CLIP	2
	1548	SPRING FOR GRASSHOPPER	2
	1549	PIN, 730433	2
13	1580	YOKE WELDMENT	1
13	1774	3/3V5.3 SHEAVE, SDS	1
13	1822	CASTER WHEEL ASSEMBLY	1
	2045	PIN FOR GRASSHOPPER	2
	2046	FLAT WASHER FOR GRASSHOPPER	2
	2047	RETAINING WASHER	2
	2048	HAIRPIN CLIP FOR GRASSHOPPER	2
13	2094	STAND, GRASSHOPPER	1
13	2851	PLASTIC NOZZLE	1
	3152	1/4-28 X 1" LONG HHCS	3
	3209	WIRING HARNESS, MORIDGE	1
13	3398	ROTATION MOTOR, 12V	1
13	3407	ROTATION MOTOR BRACKET	1
13	3836	3/8-24 X 2" LG FHCS	4
13	3837	ELBOW BASE RING BEARING	4
13	3840	V-GROOVE BASE RING	1
13	3843	BEARING BUSHING	8

WIRING SCHEMATIC CONTROL BOX (AFTER SERIAL #22452)



OPTIONS PTO, HYDRAULIC, FRONT MOUNT, ELECTRIC

NOZZLES



Aerospace Polymer Nozzle - Part# 2851
Standard Clamp Band - Part# 1173



Flexible Nozzle Assembly - Part# 3345
Various lengths available.
Ideal for rough terrain.

Gyratory Atomizing Nozzle - Part# 2547
(Safety guard removed for clarity)



ALUMINUM NOZZLES

Optional aluminum nozzles **will not** connect to the standard Aerospace Polymer Nozzle (Part# 2851).
Requires: Two 45° elbow segments (Part# 1171) and two additional clamp bands (Part# 1173).

- 12" Nozzle Extension - Part# 1468
- 15" Nozzle Extension - Part# 1842
- 20" Nozzle Extension - Part# 1845

10" Round Nozzle - Part# 1417
12" Round Nozzle - Part# 1172
Improves air velocity with lower horsepower and hydraulic blower units



12" Rectangular Nozzle - Part# 1469
19" Rectangular Nozzle - Part# 1425
5.5"x15" opening - extra length/more concentrated air flow. Uses - heavy wet debris, plugs, top dressing. No ground clearance in the vertical down position.



Fishtail Nozzle - Part# 1743
5"x30" (wide angle) opening. Distributes a large volume of air at a lower velocity over a wide area. Easily converts blower into a "Greens Fan". Adaptable to all models. Not as effective at moving debris.



1" HYRAULIC HOSES

Part# 3922
For hydraulic machines with flow rates over 25gmp.
Quantity needed : 2



FORK POCKET

Part# 3894
Great for moving blowers around jobsites and bed mount / skid mount applications.



ROTATION BEARING KIT

Part# 3838
Increases rotation speed and reduces load on rotation motor.



BUFFALO TURBINE PRODUCTS

CYCLONE 8000

The Cyclone 8000 Debris Blower is strategically priced to fit most budgets. This little powerhouse is already proving its worthiness in saving Time and Labor.



MEGA

The word "MEGA" is defined as Impressive, Extreme and Mammoth. The NEW Buffalo Turbine MEGA lives up to its name!



CYCLONE PTO

The Cyclone PTO incorporates an "Advanced" direct drive gearbox which significantly reduces routine maintenance. At 238lbs, it's the lightest, meanest turbine style PTO blower available!



CYCLONE SQUARED

The Cyclone Squared with its "Twin Turbines", and wireless controlled dual independent nozzles, in most cases can handle twice the work in half the time. This versatile powerhouse is already a favorite on Golf courses, Racetracks, and the Paving Industry.



CYCLONE KB4

The Cyclone KB4 with its "More Powerful" CH740 Kohler Engine and a "State of the Art" Wireless Remote System is the most powerful KB unit to date.



HYDRAULIC

The Hydraulic debris blower features our built in "flow and pressure" control system and easily attaches to most skid steers. This handy attachment comes complete with mounting plate and hoses.

