



# OPERATOR MANUAL

## Fradan Power Blowers Magnum Series



Magnum Self Propelled Model MTSPB-18VG  
Magnum Push Blower MPB-18VG  
Vortex Self Propelled Model VTSPB-14RS

Warning  Danger  
Read instructions carefully and follow rules for safe operation.  
Failure to do so could result in serious injury.

Fradan Manufacturing Corp.  
[www.fradanpower.com](http://www.fradanpower.com)

# WELCOME TO THE FRADAN FAMILY



**Congratulations!** You are now the owner of a quality **FRADAN POWER BLOWER**.

Fradan manufactures a family of high performance, reliable power equipment. Our designs are based on years of personal use of landscape equipment.

We at Fradan have revolutionized the landscaping industry, offering modern, reliable, high performance equipment designed to meet today's environmental demands and exceed tomorrow's.

**FRADAN** built means durability, quality, maximum performance and non-obsolescence. With proper care and maintenance of your unit, we assure you years of service-free operation. This booklet refers to the information which you should learn in order to take advantage of its outstanding performance.

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*Specifications, descriptions and illustrative material in this manual are as accurate as known at the time of publication, but are subject to change without notice. Illustrations may include optional equipment and accessories, and may not include all standard equipment.*

# INTRODUCTION

The **FRADAN Magnum Blower** model is a ruggedly built, high performance gasoline powered unit specially designed for blowing leaves and debris. Proper maintenance and use of the Fradan Blower will guarantee years of safe, service-free, reliable operation.

We wish for you to gain sufficient knowledge from this booklet before operating your Fradan, and make the best use of it in the future. We urge you to follow these instructions to assure safe and reliable operation.



## TECHNICAL DATA

Model	MPB- 18VG	MTSPB- 18VG	VTSPB-14RS
<b>Engine</b>	18hp Briggs & Stratton Vanguard - Twin cylinder air cooled engine	18hp Briggs & Stratton Vanguard - Twin cylinder air cooled engine	Robin Subaru 14hp Overhead Valve/Cam
<b>Displacement</b>	34.8 cubic inch (570 cc)	34.8 cubic inch (570cc)	24.7 cubic inch (404cc)
<b>Spark Plug</b>	RC12YC	RC12YC	NGK BR-6HS
<b>Fuel Tank Capacity</b>	9 quartz	9 quartz	7.4 quartz
<b>Ignition</b>	Fly Wheel Magneto (Electric Ignition System)	Fly Wheel Magneto (Electric Ignition System)	Fly Wheel Magneto (Electric Ignition System)
<b>Maximum Ground Speed</b>	N/A	4 mph (6.44 KPH)	4 mph (6.44 KPH)
<b>Drive Type</b>	Push Type	Hydrostatic Drive System Featuring: 4 miles Forward / 2.5 miles Reverse	Hydrostatic Drive System Featuring: 4 miles Forward / 2.5 miles Reverse
<b>Transmission Lubricant</b>	N/A	S.A.E 20-50 Oil	S.A.E 20-50 Oil
<b>Operating Engine Speed</b>	3200RPM	3200RPM	3600RPM
<b>Tire Pressure</b>	15-20 PSI Max ( Do not over inflate)	15-20 PSI Max ( Do not over inflate)	15-20 PSI Max ( Do not over inflate)
<b>Starter</b>	Recoil Starter	Turn Key Electric Start	Turn Key Electric Start
<b>Dry Weight</b>	168 pounds	225 pounds	225 pounds


*\*All Specifications are subject to change without notice*

# GRAPHIC WARNINGS

Because a power blower uses gasoline and blows air and debris at a high speed, safety precautions must be observed to reduce the risk of personal injury. Read this manual carefully. Be familiar with the controls and the proper use of the machine.



This graphic accompanied by the words **WARNING** and **DANGER** calls attention to an act or a condition which can lead to **SERIOUS INJURY**.

**WHEN YOU SEE THIS SYMBOL,  HEED ITS WARNING!  
STAY ALERT!**



**READ & UNDERSTAND** Operator's Manual and Safety Manual.



**ALWAYS WEAR EYE AND EAR PROTECTION.**



**KEEP HANDS & FEET AWAY FROM AIR DISCHARGE AREAS.  
ROTATING FAN BLADES WILL CAUSE SERIOUS INJURY.**



## CAUTION

Removal of this cover can result in serious bodily injuries, and will cause heavy damage to the machine.



**WARNING**



**DANGER**



The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.



**WARNING**



**DANGER**



To reduce the potential for accidents, comply with the safety instructions in this manual. Failure to comply may result in serious personal injury and/ or equipment and property damage.



# SAFETY RULES & PRECAUTIONS



**IN THE INTEREST OF SAFETY.....BEFORE STARTING  
ENGINE, READ AND UNDERSTAND THE ENTIRE OPERATOR'S  
MANUAL & ENGINE MANUAL**



Proper Safety precautions must be observed. Like all power equipment this unit must be handled carefully. **DO NOT EXPOSE YOURSELF OR OTHERS TO DANGER.** Follow these general rules. Do not permit others to use this machine unless they are thoroughly responsible and have read, and understand the operator's manual and are trained in its operation.

- Always wear safety goggles for eye protection. Dress properly; do not wear loose clothing, scarfs or jewelry that could become caught in moving parts of the unit. Safe, sturdy, nonskid foot wear should always be worn. Long hair should be tied back.
- Inspect the entire machine for loose parts (nuts, bolts, screws, etc.) and any damage. Repair or replace as necessary before using the machine.
- Keep the handles free from oil and fuel.
- **DO NOT USE** any attachment with this Power Blower other than the ones recommended by FRADAN. Serious injury to the operator or bystanders could result as well as damage to the machine.
- Do not smoke while handling fuel or filling tank.
- Do not fuel machine in an enclosed room or near open flames. Assure adequate ventilation. Outdoor refueling is recommended.
- Always store the fuel in a properly marked container that is approved by local codes and ordinances for such usage.
- Never remove the tank cap while the engine is running.
- Never start or run the engine inside a closed room or building. Fumes from the exhaust contain dangerous carbon monoxide.
- Never attempt to make engine adjustments while the unit is running. Always make engine adjustments with the unit resting on a flat, clear surface.
- Do not use the unit if it is damaged or poorly adjusted. Never remove the machine's guard and front air intake cover.
- Keep children away. Onlookers should be kept at a safe distance from the work area, at least **100 feet/30 meters**.
- Never leave the machine unattended.
- Do not use this unit for any job other than those for which it is intended as described in this manual.
- Do not overreach. Keep proper footing and balance at all times. Do not run the unit on very hilly areas or on any unstable footing location.
- Do not use the unit when you are tired or under the influence of medication, drugs or alcohol.
- Do not store in a closed area where fuel vapors can reach an open flame from hot water heaters, furnaces, etc. Store in a locked, well ventilated area only.
- Use only Fradan original equipment parts when servicing the unit. This will ensure safe and proper performance of your product. These parts are available from your dealer. The use of any other accessories or attachments may cause a potential hazard or injury to the user, damage to the machine and void this warranty.
- Clean the machine completely, especially, the fuel tank, its surrounding, and the air cleaner.



When refueling, be sure to stop the engine and confirm that it is cooled down. Never refuel when the engine is running. When gasoline spills, be sure to wipe it up completely dispose of those materials before starting the engine.

- Whenever approaching an operator of the machine, carefully call his attention and confirm that the operator stops the engine. Be careful not to startle or distract the operator which can cause an unsafe situation.



# SAFTY RULES & PRECAUTIONS



**WARNING- KEEP CHILDREN, PETS, AND BYSTANDERS AWAY-** Do not permit children to contact blower. Keep children a safe distance from work area. Never allow a person mentally ill, under influence of alcoholic drinks or drugs or too young in age, to operate the blower.

- Pay attention to loosening and overheating of parts. If there is any abnormality of the machine, stop operation immediately and check the machine carefully. If necessary, have the machine serviced by an authorized FRADAN dealer. Never continue to operate a machine which may be malfunctioning.
- In start-up or during operation of the engine, never touch hot parts such as the muffler, the high voltage wire or the spark plug.
- After the engine has stopped, the muffler is still hot. Never place the machine in any places where there are flammable materials (dry grass, etc.), combustible gases or combustible liquids.
- Pay special attention to operation in the rain or just after the rain as the ground may be slippery.
- Be careful not to drop the machine or hit it against obstacles.
- Before proceeding to adjust or repair the machine, be sure to stop the engine and detach all spark plug caps from the spark plugs. (Remember there are two spark plugs)
- When the machine is placed in storage for a long time, drain fuel from the fuel tank and carburetor, clean the parts, move the machine to a safe place and confirm that the engine is cooled down.
- Make periodic inspections to assure safe and efficient operation. For a thorough inspection of your machine, please contact a FRADAN dealer.
- Keep the machine away from fire or spark.
- Never blow leaves and debris into highways and roadways.
- **DO NOT POINT THE BLOWER OULET** in the direction of people, cars, glass, or other similar items which could be injured or damaged by blown debris.
- When operating, never direct the air stream at walls or vertical objects which can deflect debris back at you.
- Do not choke carburetor to stop engine. To properly stop the engine, gradually reduce engine speed to an idle, allow two minutes for the engine to cool down and then use appropriate switch to stop the engine.
- Never run engine at excessive speeds. This may result in injury and/ or damage to unit.
- Never tamper with governor springs, governor links or other parts which may change the governed engine speed.
- Never tamper with the engine speed selected by the engine manufacturer.
- Do not operate engine without a muffler. Inspect periodically and replace, if necessary.
- Do not operate engine with an accumulation of grass, leaves, dirt or other combustible material in the muffler area.
- **Do not use this engine on any forest covered, brush covered, or grass covered unimproved land unless a spark arrester is installed on the muffler. The arrester must be maintained in effective working order by the operator. In the state of California the above is required by law (section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal lands.**
- Do not run engine without air cleaner or air cleaner cover.
- Do not remove any shields, guards or decals. If a shield, guard or decal is damaged or does not function, repair or replace it before operating the blower.
- Do not operate during excessive vibration.
- Never leave machine unattended while in operation.
- Do not park machine on a steep grade or slope, the machine can roll away uncontrollably causing injury or damage.



# FUEL & OIL



- **Do not attempt to refuel a hot engine.**
- Never fill the fuel tank to the very top.
- Never add fuel to the tank in a closed non-ventilated area.
- Do not add fuel to this unit close to an open fire or sparks.
- Be sure to wipe off spilled fuel before attempting to start engine.



All Fradan Blowers are shipped

***WITHOUT OIL.***

When filling oil, refer to engine manufacturers' Instruction Manual.

Oil Type:

Hydrostatic Transmission: Use S.A.E 20-50 oil.

Engine: Refer to engine owners manual

**For Fradan Model MTSPB-18VG & VTSPB-14RS use S.A.E. 20-50 oil for hydraulic transmission.**

# PREPARING FOR OPERATIONS

When preparing fuel, use only the amount needed for the job you are to do. Do not use fuel that has been stored longer than two months. Fuel stored longer than this will cause hard starting and poor performance. If fuel has been stored longer than this time, it should be removed and filled with fresh fuel.



**WARNING**

Be Sure Blower is Fully Assembled!

Never operate blower without all guards and deflectors in place.  
Ensure that all nuts, bolts, screws are installed and properly tightened.



**WARNING**

Handle fuel with care. It is highly flammable. Fueling a hot engine or an engine near an ignition source can cause fire and result in serious personal injury and/or property damage.

## **CHECK POINTS BEFORE OPERATION**

1. Check for loose bolts, nuts and fittings.
2. Check the air cleaner for dirt. Clean the air filter of all dirt, debris etc. before operation.
3. Check to be sure that air intake screen is securely in place and clean.
4. Check oil level.
5. Check that unit has been removed of all debris, leaves, grass, dirt etc.

# OPERATING INSTRUCTIONS

For best performance, be sure engine recoil starter assembly, front air intake cover and air discharge are clear and free of leaves or other debris.

Air stream can be directed by simply maneuvering the unit and directing the flow of air accordingly. Each unit is also fitted with an air deflector. Slight changing the angle of the deflector will have a big effect on air flow. By moving the air deflector downward, this will allow wet leaves and heavy debris to move more efficiently.

**WARNING**



**DANGER**

Never attempt to remove leaves or other debris from any part of the power blower while it is running.

**WARNING**



**DANGER**

Never attempt to move or adjust deflector while engine is running!

**WARNING**



**DANGER**

**IN ORDER TO AVOID ENGINE DAMAGE DUE TO OVER-HEATING OR OVER-REVVING, KEEP ENGINE RECOIL STARTER ASSEMBLY, THE BLOWER INTAKE AND DISCHARGE AREAS CLEAR AND FREE OF LEAVES OR OTHER DEBRIS. BEFORE ATTEMPTING TO REMOVE ANY LEAVES OR DEBRIS FROM THESE AREAS, THE MACHINE MUST BE TURNED OFF.**

**WARNING**



**DANGER**

- Do not smoke while handling fuel.
- Do not refuel a hot or running engine.
- Do not fill tank indoors.
- **CAUTION** - Do not start or run engine indoors as poisonous carbon monoxide is emitted.
- Do not operate in un-ventilated area.



The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.





# STARTING

**Intended Use:** This machine is designed for cleaning outdoor surfaces, where the debris can be effectively blown into a consolidated area for convenient pickup and removal.



Like all mechanical tools, reasonable care must be used when operating machine. Inspect machine work area and machine before operating. Making sure that all operators of this equipment are trained in general machine use and safety.

## **Starting MTSPB-18VG & VTSPB-14RS Self Propelled Unit**

### **Step 1 – Check First:**

- **Engine:** See engine manufacturer's instructions for type and amount of oil and gasoline used. Engine must be level when checking and filling oil and gasoline.
- **Engine speed:** Is controlled by throttle lever on the engine. Under normal conditions, operate at minimum throttle to accomplish your current cleaning task.
- **Stop switch:** Located on engine. Switch must be in "on" position to start engine
- **Fuel valve:** Move fuel valve to "on" position.
- **Choke:** Operated with choke lever on side or front of engine. Pull choke lever completely out.
- **Throttle:** Move remote throttle control to middle position.

### **Step 2 – Turn Key to start.**

- Turn until engine sputters (almost starts) then close choke by pushing lever inwards.
- Make sure free wheel lever is in the inner most position (engaged)
- Stand behind the blower. Grasp the left control lever in the fingers of your left hand with your thumb hooked under the handle. Gradually squeeze the lever toward the handle. As you do so, the blower will move forward. The speed increases the closer the lever moves toward the handle. To move in reverse, grasp the right control lever in the fingers of your right hand with your thumb hooked under the handle. Gradually squeeze the lever toward the handle. As you do so, the blower will move in reverse.
- To disengage hydrostatic drive simply pull neutral lever out, move it to the right then down to lock it in position. This will allow mobility while the engine is off.

## **Starting MPB-18VG Push Blower Unit**

### **Step 1 – Check First:**

- **Engine:** See engine manufacturer's instructions for type and amount of oil and gasoline used. Engine must be level when checking and filling oil and gasoline.
- **Engine speed:** Controlled by throttle lever on the engine. Under normal conditions, operate at minimum throttle to accomplish your current cleaning task.
- **Stop switch:** Located on engine. Switch must be in "on" position to start engine
- **Fuel valve:** Move fuel valve to "on" position.
- **Choke:** Operated with choke lever on side of engine. Pull Choke lever completely out.
- **Throttle:** Move remote throttle control to middle position.

### **Step 2-**

- Hold starter grip and pull starter cord slowly until resistance is felt. Then pull cord rapidly to avoid kickback and prevent hand or arm injury.
- Pull until engine sputters (almost starts) then close choke by pushing lever inwards.

**CAUTION: excess choking will flood engine preventing it to start.**

**NOTE:** Do not operate if excessive vibration occurs. If excessive vibration occurs, shut engine off immediately and check for damaged or worn impeller, loose impeller bolt, loose impeller key, loose engine or lodged foreign objects.

# MAINTANCE INSTRUCTIONS



Any adjustments needed should be performed by a qualified mechanic and made while engine is not running.

While engine is not running:

1. Clear intake screens on housing and engine throughout use.
2. Keep the blower, drive train and especially the engine air screen and cooling fins clean and free of grease, grass and leaves to reduce the chance of fire and to permit proper cooling.
3. Inspect machine for loose bolts before starting the engine.
4. **Engine Lubrication:** Use proper weight oil specified in engine manual.
5. **Forward and Reverse Control Linkages:** Oil tie rod endings and grease all grease fittings
6. **Tire air pressure:** Check at regular intervals and maintain.
  - Note: Low tire pressure will make unit hard to push and turn.
  - Front tire: at 15-20 psi
  - Rear tires: between 15-20 psi

**NOTE:** Belts are normal replaceable wear items.

**NOTE:** Lead –acid batteries generate hydrogen and oxygen gases which form an explosive mixture. Keep sparks and flames away at all times.



Use only a qualified mechanic for any adjustments, disassmbly, or any kind of repair



## STORAGE

Never store engine indoors or in enclosed poorly ventilated areas with fuel in tank, where fumes may reach and open flame, spark or pilot light, as in furnace, water heater, clothes dryer or other gas appliance.

If engine is to be unused for 60 days or more, prepare as follows:

- Be sure engine is cool. Do not smoke. Remove all gasoline from carburetor and fuel tank to prevent gum deposits from forming on these parts and causing possible malfunction of engine. Drain fuel outdoors, into an approved container, away from open flame. Run engine until fuel tank is empty and engine runs out of gasoline
- Note: Fuel stabilizers may be used, refer to engine manufacture's owners manual.

# TROUBLESHOOTING



Use only a qualified mechanic for any adjustments, disassembly, or any kind of repair



Problem	Possible Cause	Possible Solution
Poor air performance	Air intake or exhaust clogged	Clear clog
Machine is difficult to maneuver	Low tire air pressure	Inflate front and rear tires to correct pressure
Abnormal Vibration	Loose or out of balance impeller or loose engine	Check impeller and replace if required. Check engine
Engine will not start	Stop switches off. Choke lever not in run position. Out of gasoline. Bad or old gasoline. Spark plug wires disconnected. Dirty air cleaner	Check switches, choke, gasoline and oil. Check for spark with approved tester. Clean or replace air cleaner. Contact qualified service dealer.
Engine backfires while turning unit off	1. Stop switch malfunctioning 2. Fuel pre-igniting in exhaust system	1. Install new stop switch. 2. Engine must idle in the idle position for at least three minutes, allowing the engine to cool down before turning engine off.
Engine is locked, will not pull over	Engine Problem	Contact your nearest engine manufacturers servicing dealer

## Trouble Shooting for Self Propelled Only

- For **Model MTSPB- 18VG & VTSPB-14RS**. If engine does not start (crank) make sure neutral safety switch is functioning properly, and wire harness is not cut, fractured or burned.
- If hydro static drive does not engage make sure the belt is tight, and neutral engaging lever is in its engaged position (lever must be in an inward most position)

Problem	Possible Cause	Possible Solution
No – self propelling	1. Engagement lever is not in the engaged position 2. Worn or broken drive belt 3. Improper oil level in transmission	1. Move engagement lever in to engage 2. Install new belt and properly adjust 3. Install oil to the proper level (S.A.E 20-50 oil)
Self propelled drive will not release	Control levers bent or broken or not properly lubricated	Check neutral spring on transmission. Lubricate all levers and check linkage for binding.

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