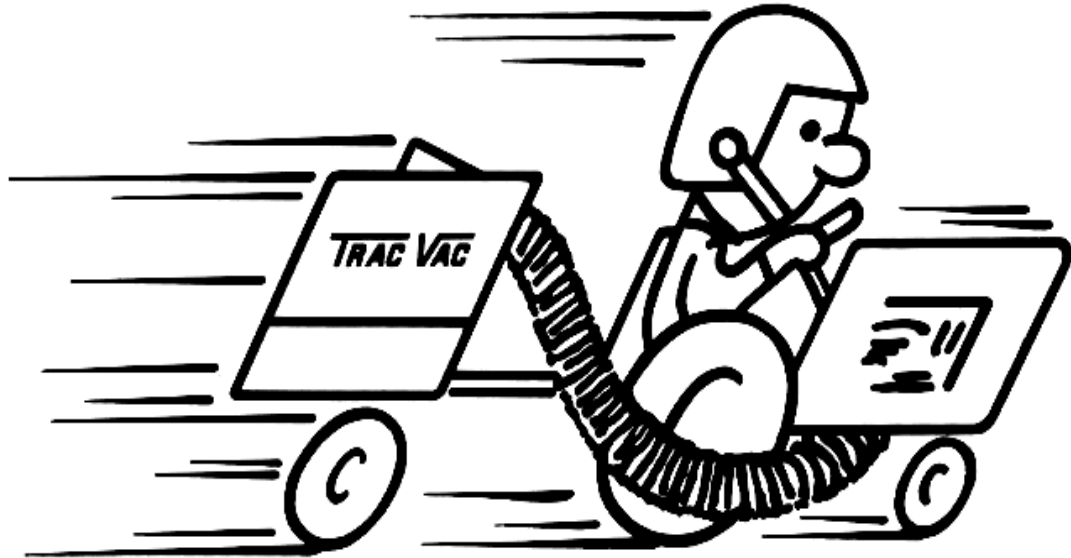


TRAC VAC

Model 470-/H/PRO/IC



Operating and Assembly Manual

**Midwest Equipment Manufacturing, Inc.
5225 Serum Plant Road
Thorntown, IN 46071**

SAFETY RULES

Remember, any power equipment can cause injury if operated improperly or if the user does not understand how to operate the equipment. Exercise caution at all times when using power equipment.

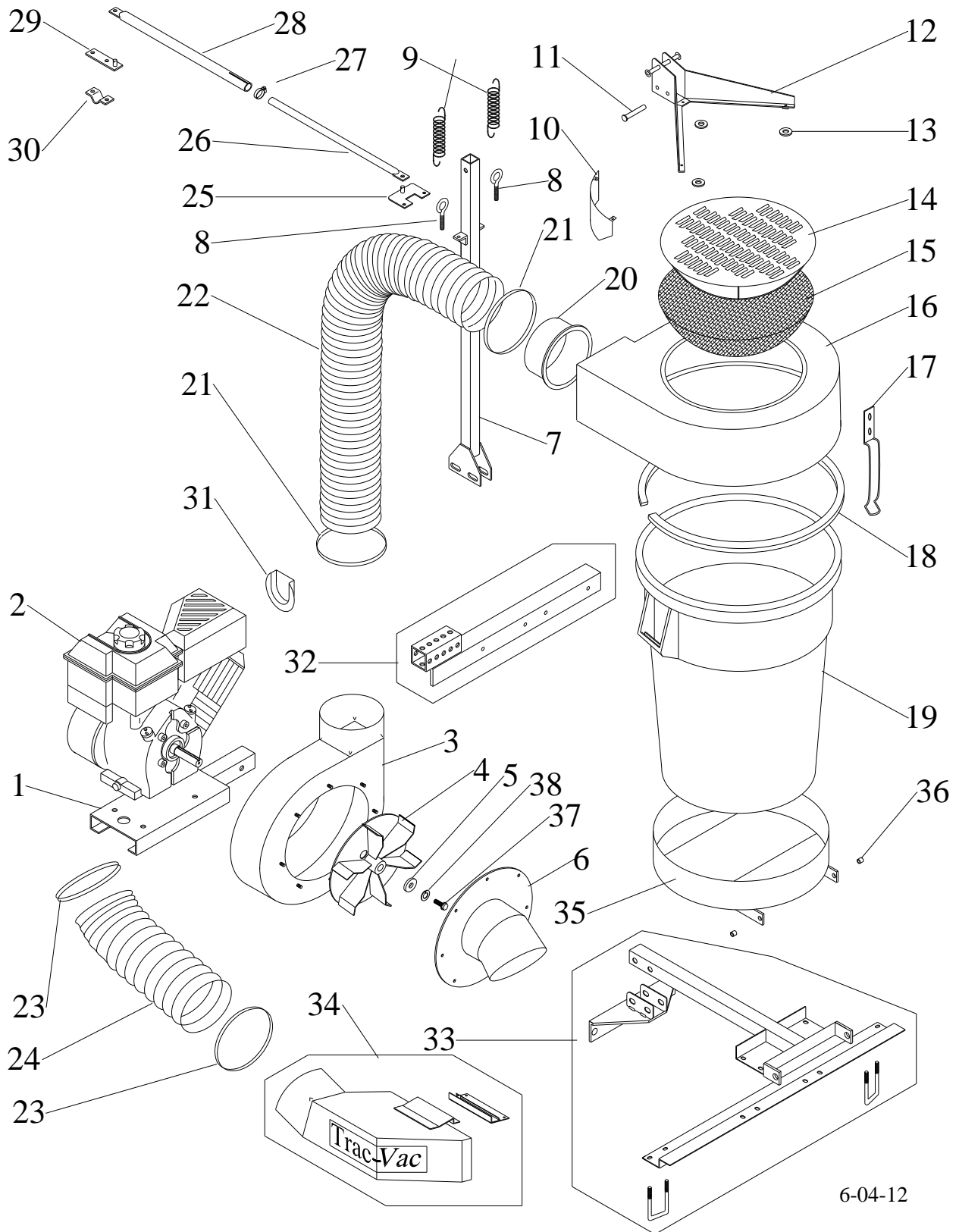


This symbol means Attention!!!! It is used to point out safety precautions.

- Read and follow all instructions in this manual before assembly or operation of this equipment. Failure to comply with these instructions may result in personal injury. Keep this manual for future reference and for ordering replacement parts.
- Read this instruction manual carefully. Become familiar with the controls and proper use of this equipment.
- Read the engine owners manual and safe operation rules before using this equipment.
- Never allow children less than 16 years of age to operate the Trac-Vac. Children 16 years and older should operate **only** under close parental supervision.
- Do not allow anyone to operate this equipment without proper instruction.
- Do not allow passengers to ride on the Trac-Vac or on the towing vehicle.
- Keep children and pets out of area of operation.
- Check fuel before starting engine. **Do Not** fill fuel tank indoors, or while engine is running or hot. Wipe off any spilled fuel before starting engine.
- Engine and muffler get **HOT! Do Not** touch! Keep debris from accumulating on or around engine and muffler to avoid fire hazard.
- Allow engine to cool before storing in any enclosed area. Never store Trac-Vac with fuel in tank.
- Do not operate engine if air cleaner or cover is removed, except for adjustments. Removal of the part could create a fire hazard.
- Keep hands, feet, face, long hair and clothing out of inlet and discharge areas. There are **ROTATING BLADES** inside these openings.
- Make certain that all moving parts come to a complete stop before cleaning, repairing or inspection. Disconnect spark plug wire and keep away from plug to prevent accidental starting.
- If Trac-Vac should become clogged with debris, **SHUT OFF ALL ENGINES** and wait until impeller comes to a complete stop before attempting to remove obstruction. Disconnect spark plug wire to prevent accidental starting.
- If excessive vibration occurs while operating your Trac-Vac, stop the engine immediately, disconnect the spark plug wire and allow all moving parts to stop completely before taking the following steps.
 - A. Inspect for damage.
 - B. Repair or replace any damaged parts.
 - C. Check for loose parts and tighten to assure continued safe operation.
- Check all hardware periodically to insure safe operation.
- Check cart cover periodically for wear and replace if worn or damaged.
- **Never** operate Trac-Vac without intake hose and exhaust hose attached in proper place.
- **Do Not** remove exhaust hose or attempt to empty contents of container while engine in running.
- Keep all shields and guards in place and securely attached.
- Always wear eye protection (safety glasses or goggles) when operating this equipment.
- **Do Not** stand behind unit in exhaust discharge area while engine is running.
- **Do Not** operate this equipment while intoxicated or while taking medications that could impair reactions or senses.
- Operate this equipment at reduced ground speed on rough terrain, along creeks and ditches and on slopes to prevent tipping or loss of control.
- Vehicle stability and braking are affected by the addition of this unit. Do not fill the Trac-Vac to its full capacity without checking the capability of the towing vehicle to safely pull and stop with the unit attached.
- **Do Not** operate on slopes in excess of 10 degrees. **STAY OFF OF STEEP SLOPES!**
- Follow the maintenance instructions outlined in this manual.



Trac-Vac Model 470-/H/PRO/K/IC



Model 470 Parts List

<u>Key</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	47010	1	Frame, Engine Assembly
2	56022	1	Engine (5.5 HP Honda)
	56021		Engine (5.5 HP Intek)
	56018		Engine (6.5 HP Briggs Intek)
3	56030	1	Turbine Housing (5.5 Honda, 5.5 Briggs)
	46242		Turbine Housing (6.5 Briggs Intek)
4	56040	1	Turbine (5.5 HP Honda, 5.5 HP Briggs)
	46253		Turbine (6.5 HP Briggs Intek)
5	56107	1	Turbine Spacer , 5.5HP Briggs
	56029		Turbine Spacer, Honda
6	88040	1	Inlet (5.5 HP Honda, 5.5 Briggs)
	47050		Inlet 6.5 HP Briggs Intek)
7	47020	1	Vertical Upright
8	3120518	2	Eyebolt
9	48038	2	Springs
10	46248	1	Filter Shield
11	46218	1	Clevis Pin, Vertical Support
12	46217	1	Top Support, 462
13	56115	3	Nylon Spacer
14	46233	1	Filter Support Assembly
15	46228	1	Filter, Open Mesh for 46227
16	47222	1	Molded Top, 470
17	46235	1	Container Latch
18	46219	1	Seal, Molded Top
19	46210	1	Container, 44 Gallon
20	48040	1	Intake Nozzle
21	56102	2	Band Clamp, 6"
22	45102	1	Hose, 6" X 60"
23	18119	2	Band Clamp, 8"
24	47035	1	Hose, 8" X 24"
25	47040	1	Eyebolt Bracket
26	20037	1	Hose Support Extension, 2000
27	20039	1	Hose Clamp, Support Arm
28	20036	1	Hose Support, 2000
29	47041	1	Handle Bracket
30	47042	1	Handle Strap
31	86115	1	Muffler Deflector, (5.5 HP, 6.5 HP Briggs Intek)
	56022		Muffler Deflector, (6 HP Honda)
32	*****	1	Hitch, (Tractor Specific)
33	474**	1	Container Frame Mount Kit, (Tractor Specific)
34	***-6	1	Chute, (Tractor Specific)
35	47018	1	Container Holder, 470
36	47019	2	Bushing, 471, Container Holder
37	3130112	1	Turbine Bolt
38	3120801	1	Split Lock Washer

MOUNTING INSTRUCTIONS, MODEL 470

1. Locate hitch (32) across rear of mowing machine. Most mowers have holes that match holes in hitch; however, it is advisable to drill on far right of some models. (Fig. 1.) Secure with a minimum of three (3) bolts provided.
2. Slide tube end of engine assembly frame (1) into tube on hitch. (Fig. 2) Align holes and secure with clevis pin (11) and #3 hairpin clip.
3. Slide vertical upright (7) over frame (33). (NOTE: eyebolt brackets on upright should be located toward front of frame assembly.) Align slots on upright with holes on frame and mounting brackets from kit (if required). (Fig.3) Join frame and upright (and bracket if required) with 3/8" x 2 1/2" HHC, flat washers and 3/8" whizlock nuts. Do not tighten.
4. Spin 5/16" whizlock with flange, down onto eyebolt (8). Position eyebolt bracket as shown in Fig 4. Align slots with holes. Slip eyebolts thru brackets. Secure with 5/16" free nut. Tighten whizlock nuts.
5. Align brackets on container holder (35) to brackets on front of frame. (Fig. 5) Slip spacers (36) from bolt bag thru each hole and secure with 5/16" flange nut per side. Fit container (19) into holder. Adjust bolt tension so that holder can support container in tilted position.
6. Slide intake nozzle (20) thru intake opening with lip on the inside. (Fig. 6) Slip one end of 6" x 60" hose (22) over nozzle and secure with 6" band clamp (21).
7. Fit filter (15) over lip on filter support (14). (Fig. 7) Apply seal as shown in (Fig. 8).
8. Align slots on container latch (17) to holes in molded top (16). Secure with 1/4" x 1/2" truss screws and whizlocks. (Fig. 9)
9. Place molded top on top of container. (Fig. 10) Align pivot hole on top support to pivot hole on vertical upright. Secure with 1/2" x 1 2/4" HHC and 1/2" nylon locknut. Tighten until a slight drag is felt when pivoting top assembly. Pivot top upwards until springs (9) can be attached to spring retainer on top support and to eyebolts. Lower top assembly and slip 3/8" x 2 1/8" clevis pin thru locking pin hole. Secure with 1/8" x 1" cotter key.
10. Slip free end of 6" x 60" hose over neck on turbine housing and secure with 6" band clamp. (Fig. 11)
11. Latch molded top over container handle. If necessary, adjust tension by loosening 1/4" truss screws and sliding latch to proper tension. See that container is vertical in container holder. If necessary, shift vertical upright and tighten bolts at base of vertical support.
12. Attach chute to mower deck with pins or bolts provided. If necessary, trim off excess hose. Tighten clamps. (Fig. 12)
13. Slip 8" band clamp (23) over each end of the 8" x 24" hose (24). Slip one end of hose over inlet (6) and the other end over neck on chute (34). (Fig. 13)
14. The stabilizer assembly ties to the vertical upright and mounts to the mower (may be attached to side of handlebar if crossbar is not accessible). (Fig. 14) With handle bracket (29) and handle clamp (30) in position as shown, strap handlebar cross brace between clamp assembly. Secure with 5/16" x 1" HHC and 5/16" whizlock nuts. Slide hose clamp (27) over support arm (28) and support arm extension (26). Slip hole on extension over pin on eyebolt bracket and secure with #3 hairpin clip. Slide hose clamp to slotted end of support and tighten.
15. Read engine operating instructions and service engine before starting.

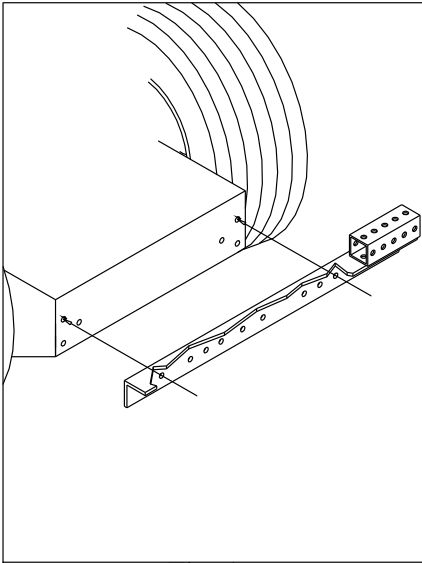


Fig. 1

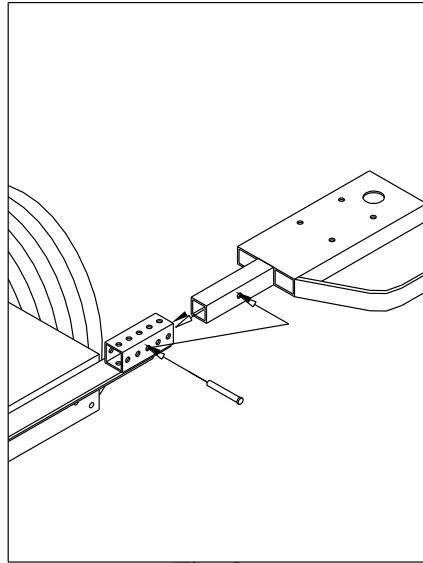


Fig. 2

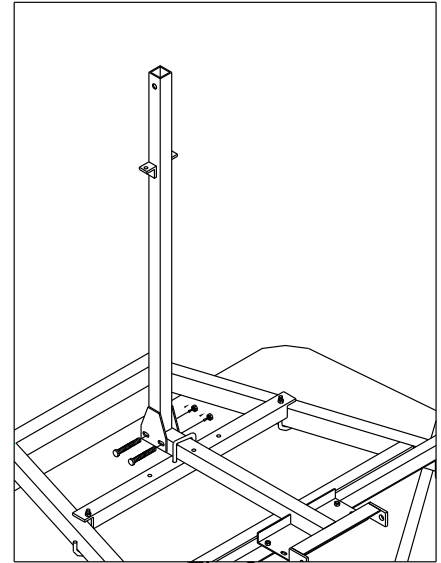


Fig. 3

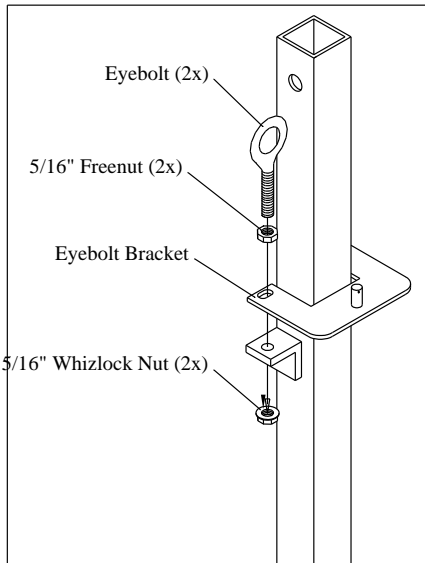


Fig. 4

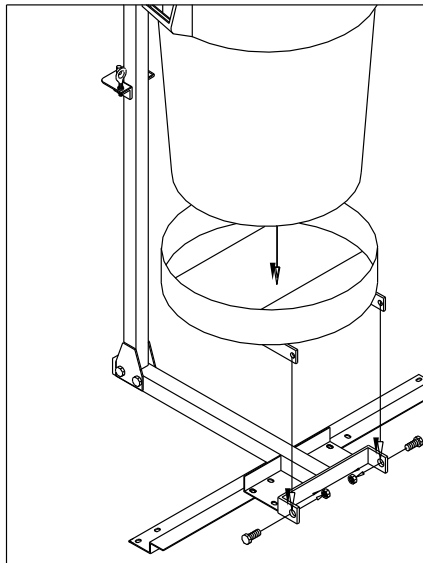


Fig. 5

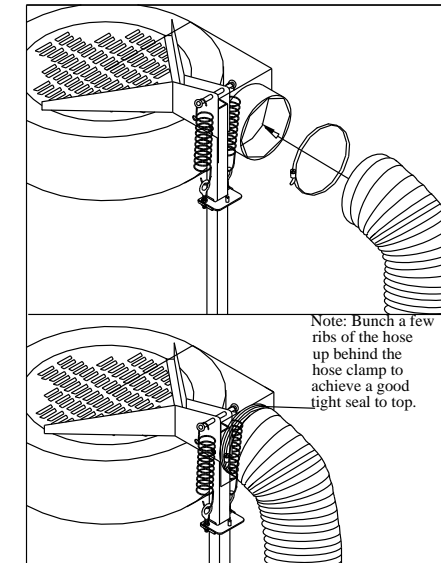


Fig. 6

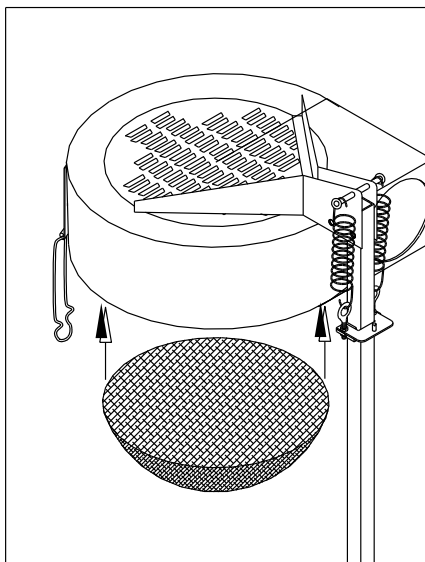


Fig. 7

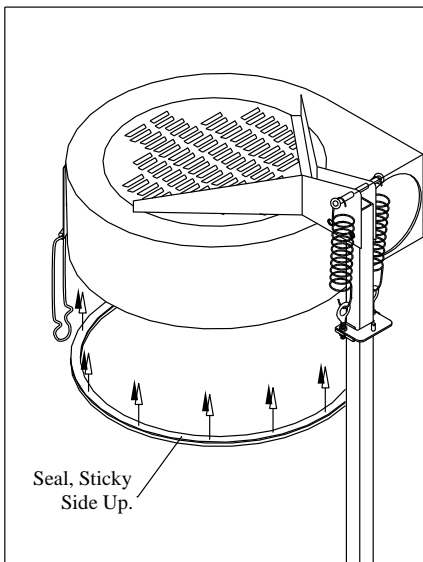


Fig. 8

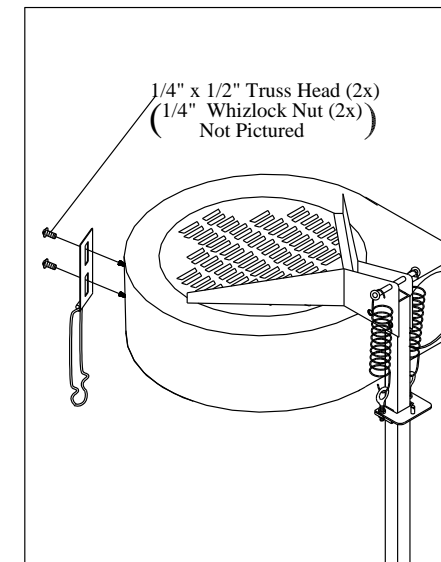


Fig. 9

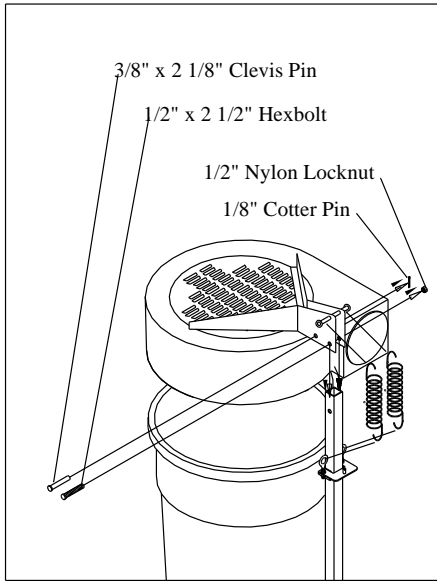


Fig. 10

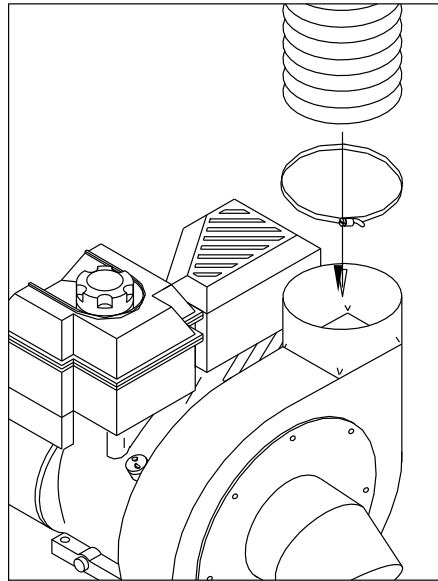


Fig. 11

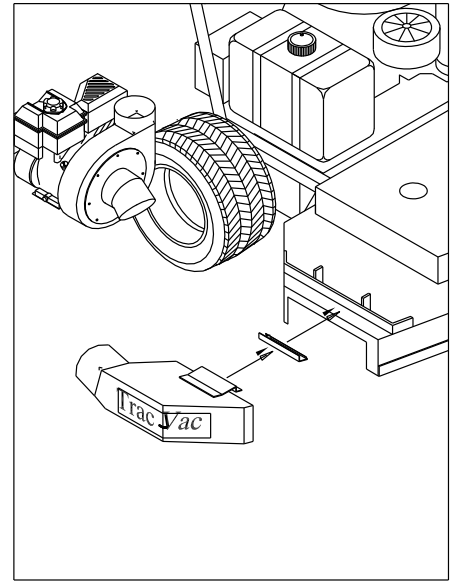


Fig. 12

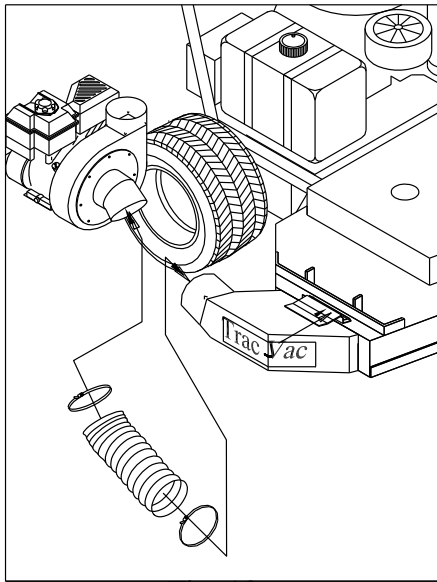


Fig. 13

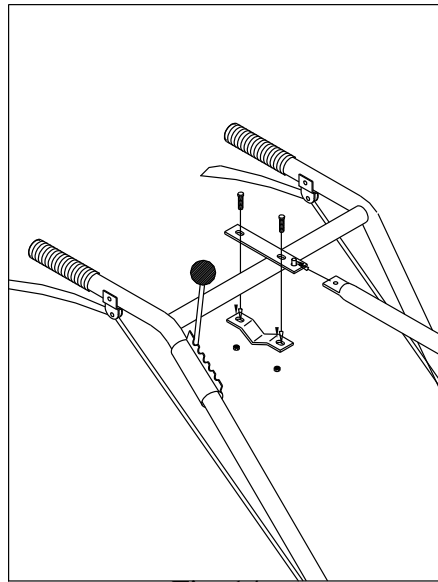


Fig. 14

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> 1. Spark plug wire disconnected 2. Fuel tank empty 3. Faulty spark plug 	<ol style="list-style-type: none"> 1. Connect wire to spark plug 2. Fill tank with clean fuel 3. Clean, adjust gap or replace
Loss of power or erratic operation	<ol style="list-style-type: none"> 1. Spark plug wire loose 2. Blocked fuel line 3. Water or dirt in fuel system 4. Dirty air cleaner 5. Unit running on choke 	<ol style="list-style-type: none"> 1. Connect & tighten spark plug wire 2. Clean fuel line 3. Disconnect fuel line at carburetor drain fuel tank. Refill with fresh fuel 4. Service air cleaner (refer to engine manual) 5. Move choke lever to OFF position
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low 2. Operating below full RPM 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil 2. Run throttle full open.
Excessive vibration	<ol style="list-style-type: none"> 1. Damaged turbine or loose parts 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Tighten all bolts & nuts. Make necessary repairs. If vibration continues, have unit serviced by an authorized dealer.
Unit won't pick up.	<ol style="list-style-type: none"> 1. Discharge chute clogged 2. Foreign object lodged in turbine. 3. Container full 	<ol style="list-style-type: none"> 1. Stop engine & disconnect spark plug wire. Clean inside of discharge chute. 2. Stop engine and disconnect spark plug wire. Remove lodged object in turbine. 3. Stop engine and empty container.

NOTE: Please contact the nearest authorized service dealer for repairs beyond the minor adjustments above.

OPERATING PROCEDURE



BEFORE STARTING, Follow the engine manufacturer's instructions in preparing engine for operation. Never fill fuel tank indoors, with engine running or while engine is hot.

Do not smoke while filling tank!

1. Inspect area to be vacuumed and pickup all harmful objects and litter. Rocks and other harmful debris can do serious damage to vacuum assembly and cause bodily injury.
2. For best vacuuming results operate tractor at manufacturer's recommended speed for best cutting. If grass is high, mow first and vacuum on the second pass.
3. Your vacuum is preset to run at approximately 3800-RPM (385), at no load. Do not slow down engine.
4. **SHUT OFF ENGINE TO UNLOAD.**
5. When operating tractor on slope or grade, exercise **EXTREME CAUTION.** Do not cut across grade or slope. Mow directly up and down hills.
6. Periodically check all fasteners for tightness.
7. Listen for unusual vibration of engine or air turbine. If excessive vibration is present, **STOP** engine and check for damage to turbine fan.
8. Always shut off tractor engine and vacuum engine before servicing.
9. Replace deflector shield when discharge chute is removed.
10. When removing clogs, **SHUT OFF ALL ENGINES and wait for all moving parts to come to a complete stop! Failure to do so can cause serious bodily injury!**
11. Do not tow unit on public roads
12. Do not carry passengers on unit
13. Avoid sudden turns or maneuvers.



CAUTION!!!!
SPINNING BLADE

EXTENDED STORAGE PROCEDURES

1. Wash and clean vacuum, and lubricate any lubrication points.
2. Drain fuel from the tank and run vacuum until fuel is exhausted in carburetor.
3. Drain and change the engine oil.
4. Clean tires and check pressure. Raising and supporting unit with weight off tires is recommended.
5. When storing a unit with Rubbermaid® containers, leave containers latched to top.
6. Store inside a clean dry area, when not in use.

TRAC VAC WARRANTY POLICY

Midwest Equipment Manufacturing, Inc. will repair or replace, free of charge, any part, or parts that are defective in material or workmanship or both for a period of one year residential use, and 90 day's for commercial and rental use. The purchaser will pay transportation charges on parts submitted for replacement under warranty. For warranty service, contact your local dealer from whom the unit was purchased. There are no other express or implied warranties. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

MIDWEST EQUIPMENT MANUFACTURING, INC.-5225 Serum Plant
Rd.-Thorntown, IN 46071
Phone: 1-800-Trac-Vac

Web Page: www.trac-vac.com E-Mail: sales@midmfg.com