



**Model 860**

**Model 880**



# **Operating and Assembly Manual**

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

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# 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.

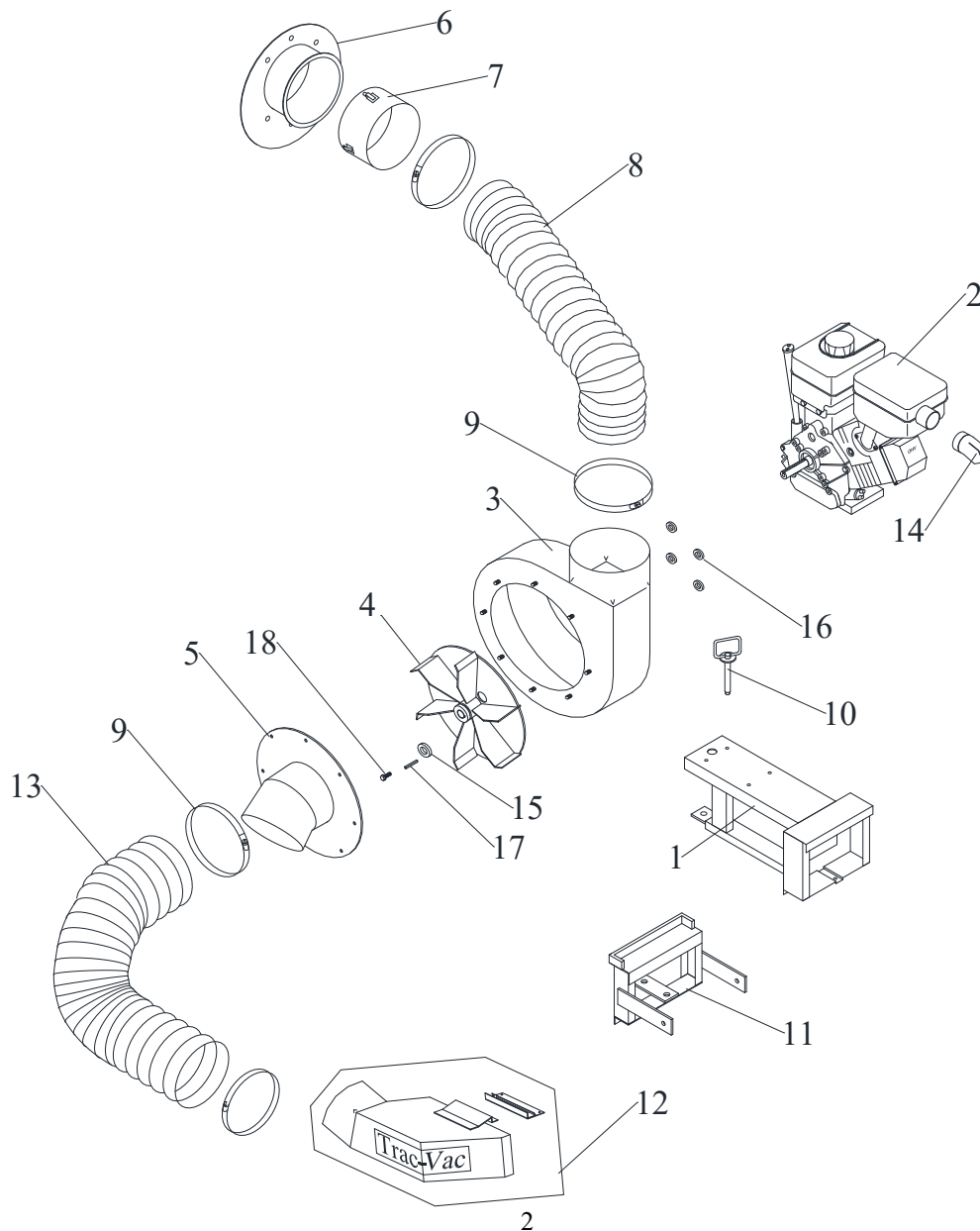


**This symbol means Attention!!!! It is used to point out safety precautions.**

- 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 cart while engine is 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 cart 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.

# MODEL 860 Trac-Vac Parts List

Key	Part #	Description	Key	Part#	Description
1	86010	Main Frame	10	58104	Hitch Pin
2	86026	Engine, 305CC, Intek IC, Elec.	11	*****	Hitch (Tractor Specific)
	86022	Engine, 305CC, Briggs IC	12	***-8	Chute Assembly (deck specific)
	86028	Engine, 9HP Robin (Subaru)	13	86101	Intake Hose, 8" X 60"
3	86030	Turbine Housing, RH	14	86032	Muffler Deflector
	86031	Turbine Housing, 8", LH	15	86107	Washer, Turbine, 3/16"
4	86040	Turbine, 8 HP	16	86207	Spacer, Turbine Housing
5	88040	Inlet, 8" angled, small back	17	2501716	Key Stock
6	18070	Cart Connector, 8"	18	4370109	Turbine Bolt
7	86060	Hose Connector, 8"		18110	Key Switch (elec. Only)
8	86104	Hose, HD 8" x 60"			
9	18119	Band Clamp			

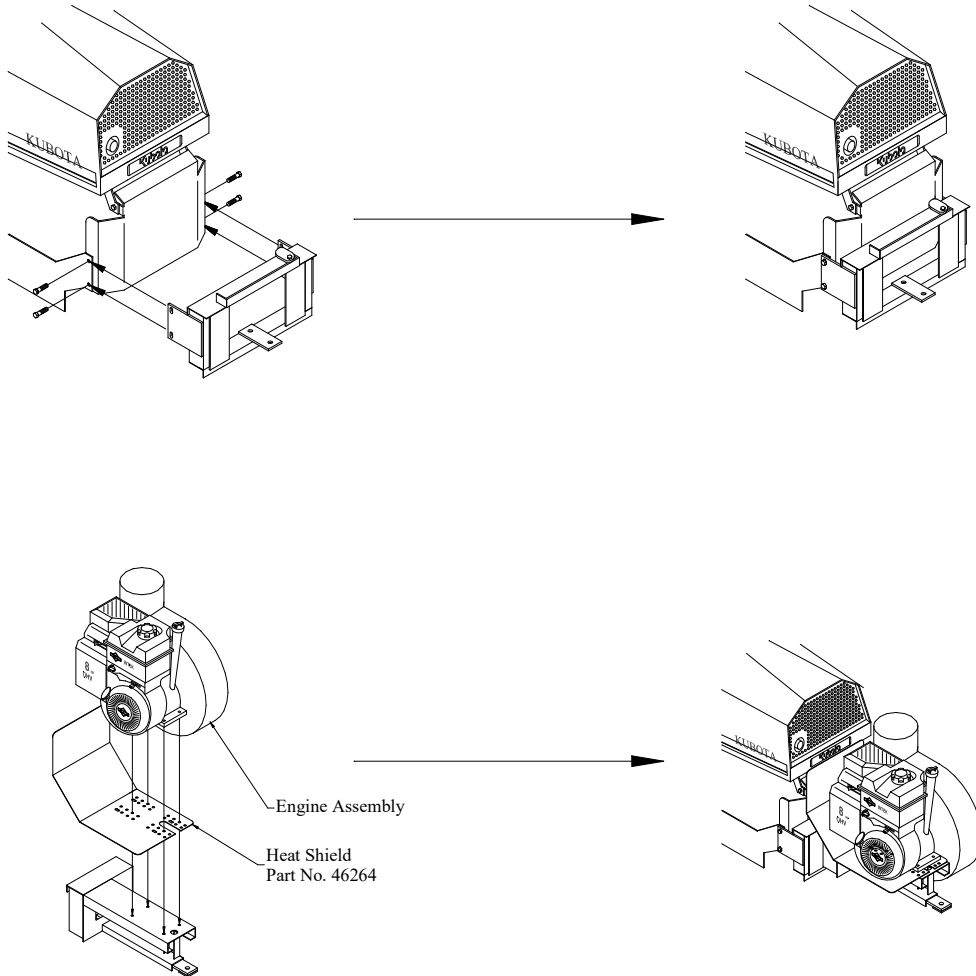


# Model 860

## General Instructions

Your Model 860 **TRAC VAC** is designed to mount directly to your lawn and garden tractor and is assembled to make your task easier and quicker. The attachment to your tractor is simple and can be done in short order.

First attach the hitch to the rear of your tractor with the lip upward. Attach with pins or bolts supplied.



Next, mount the air turbine assembly by hooking lip of attaching frame onto hitch and bolting securely to drawbar with 5/8" HHC, free spinning nut and lock washer.

To mount the discharge chute it is sometimes necessary to remove the deflector shield or lift it out of the way. Place chute adapter on mower deck. Line up holes in chute adapter with holes in mower deck. Attach with hardware supplied and tighten securely. If the holes do not line up with holes in chute adapter, place discharge chute in position on mower deck. Mark and drill holes through deck. Attach adapter and discharge chute.



Next, attach hoses. Slip hose clamps over ends of hose. One 60" length connects air turbine assembly and discharge chute. Fasten clamps about 1 inch from ends and tighten securely. The other 60" hose attaches to discharge side of air turbine and snap connector.

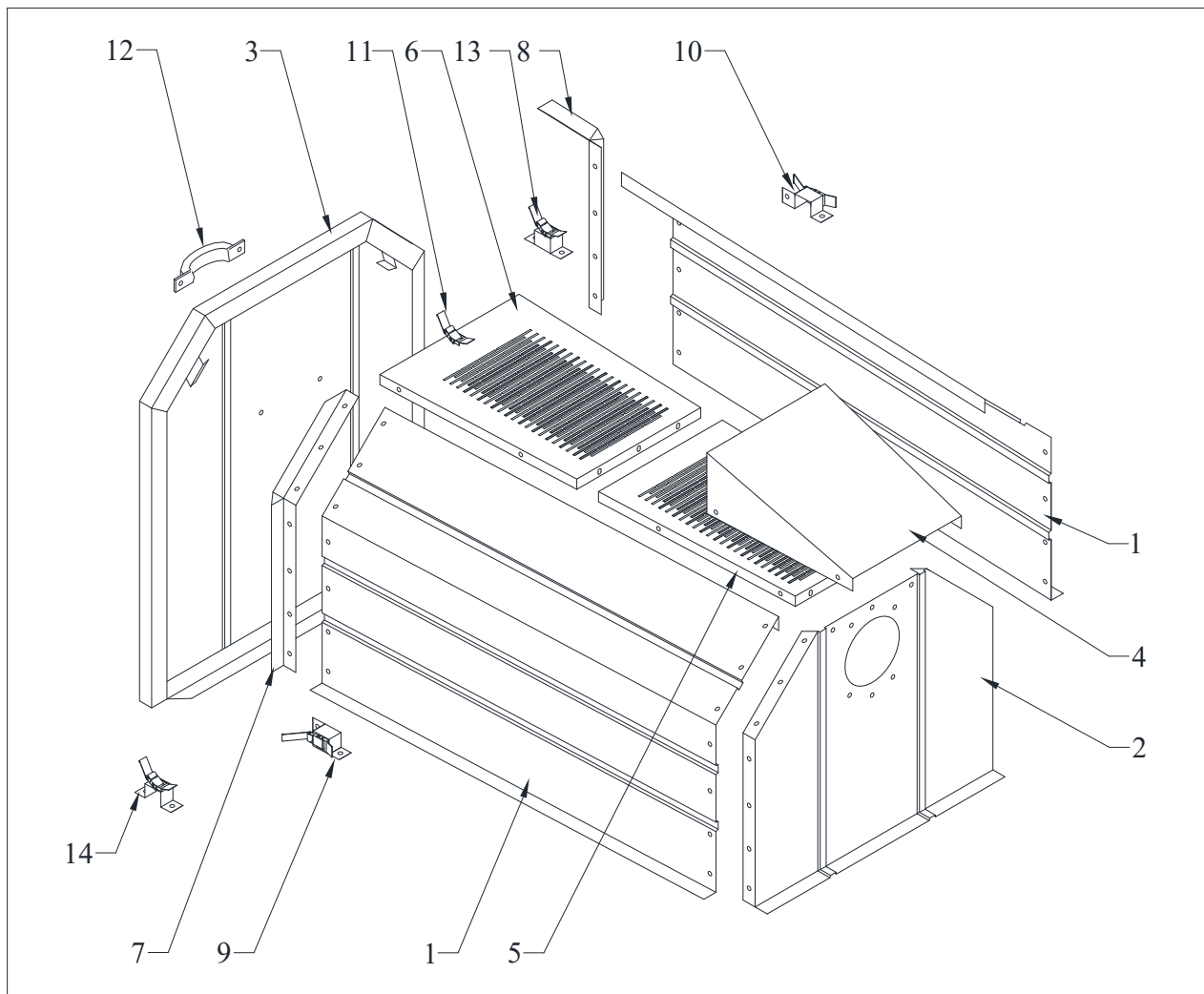


### CAUTION!

**Replace deflector shield when running mower without discharge chute. DO NOT remove discharge chute when tractor is running.**



# Model 348/368L Cart Covers



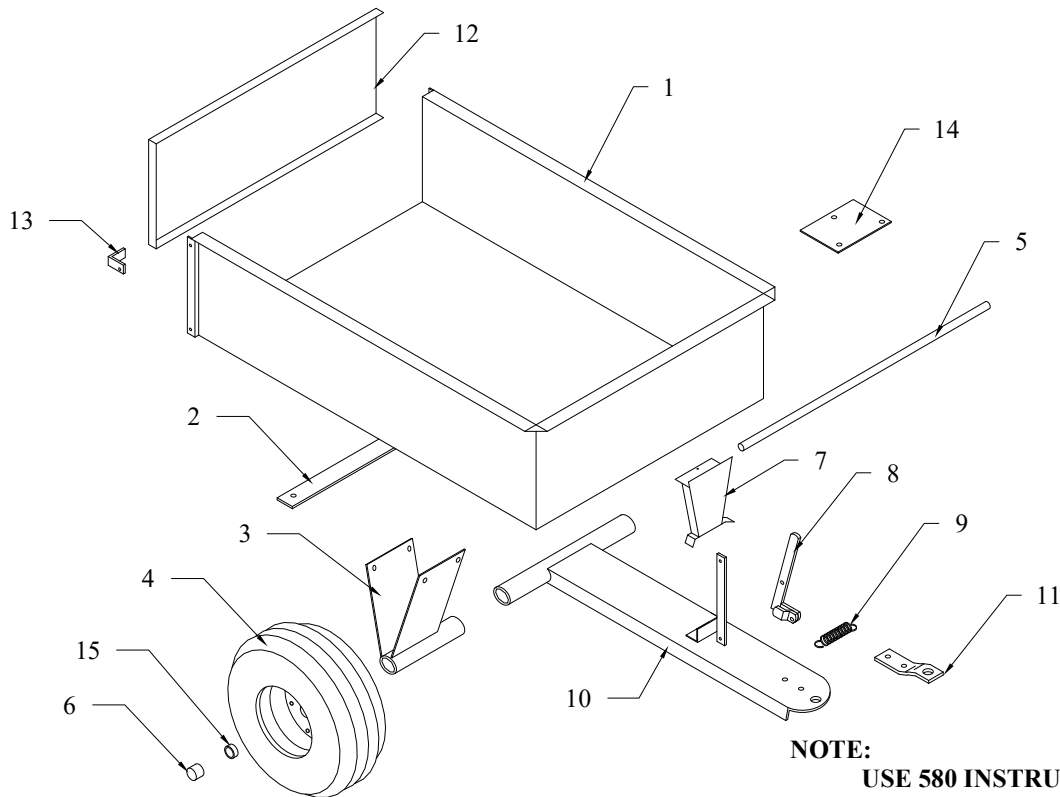
## Model 280/348L Cart Cover

Key	Part No.	Description
1	28047	Side Panel
2	28030	Front Panel
3	28236	Tailgate
4	28232	Deflector
5	28242	Front Screen
6	28243	Rear Screen
7	28100	Rear Angle RH
8	28101	Rear Angle LH
9	28102	Latch Ass'y RH
10	28103	Latch Ass'y LH
11	28105	Top Latch
12	28104	Handle

## Model 280/368L Cart Cover

Key	Part No.	Description
1	28059	Side Panel
2	28035	Front Panel
3	28238	Tailgate
4	28235	Deflector
5	28240	Front Screen
6	28241	Rear Screen
7	28100	Rear Angle RH
8	28101	Rear Angle LH
9	28102	Latch Ass'y RH
10	28103	Latch Ass'y LH
11	28105	Top Latch
12	28104	Handle
13	28156	Latch Ass'y LH
14	28157	Latch Ass'y RH

# PALMOR TAPERED DUMP CARTS

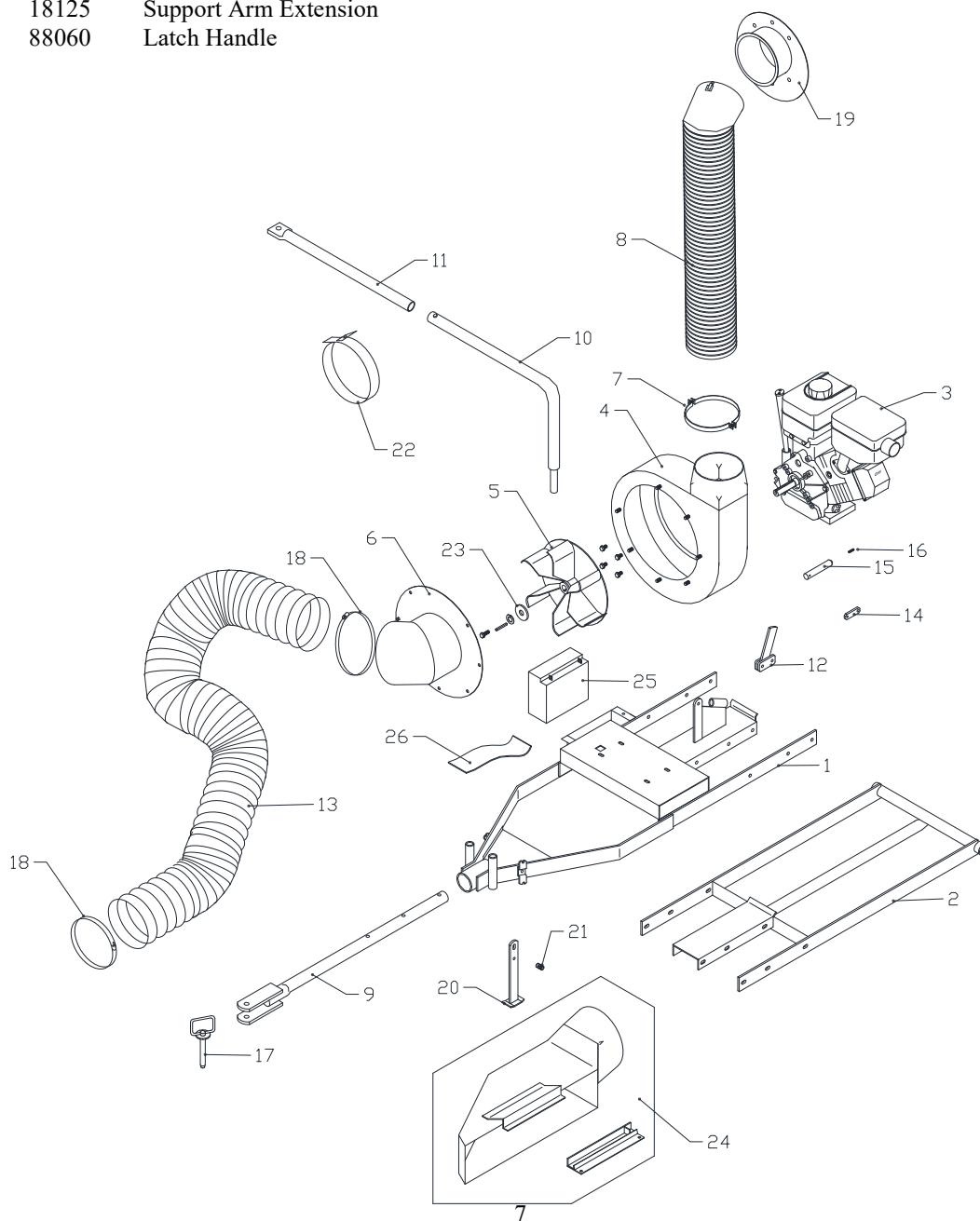


**NOTE:**  
USE 580 INSTRUCTION  
SHEET WHEN ASSEMBLING  
FOR MODEL 580 APPLICATION

Model 348-X 10 cubic foot			Model 368-X 18 cubic foot		
Item	Part No.	Description	Item	Part No.	Description
1	58120	Cart Body	1	88120	Cart Body
2	58052	Axle Holder Brace	2	-----	(only on 348)
3	58053	Axle Holder	3	88114	Axle Holder
4	58109	Wheel 16-6.5 x 3/4	4	88054	Wheel 16-6.5 x 1
5	58055	Axle, 3/4" x 32 1/2"	5	88113	Axle, 1" x 40 1/2"
6	58058	Hub Cap	6	58058	Hub Cap
7	58057	Drawbar Spacer	7	88116	Drawbar Spacer
8	58056	Latch Arm	8	58056	Latch Arm
9	58062	Latch Spring	9	58062	Latch Spring
10	58121	Drawbar	10	88121	Drawbar
11	58067	Hitch Plate	11	58067	Hitch Plate
12	58065	Tailgate	12	88119	Tailgate
13	58066	Tailgate Brackets	13	58066	Tailgate Brackets
14	88122	Reinforcement Plate	14	88122	Reinforcement Plate
15	58111	Bushing, 3/4" ID	15	88111	Bushing, 1" ID

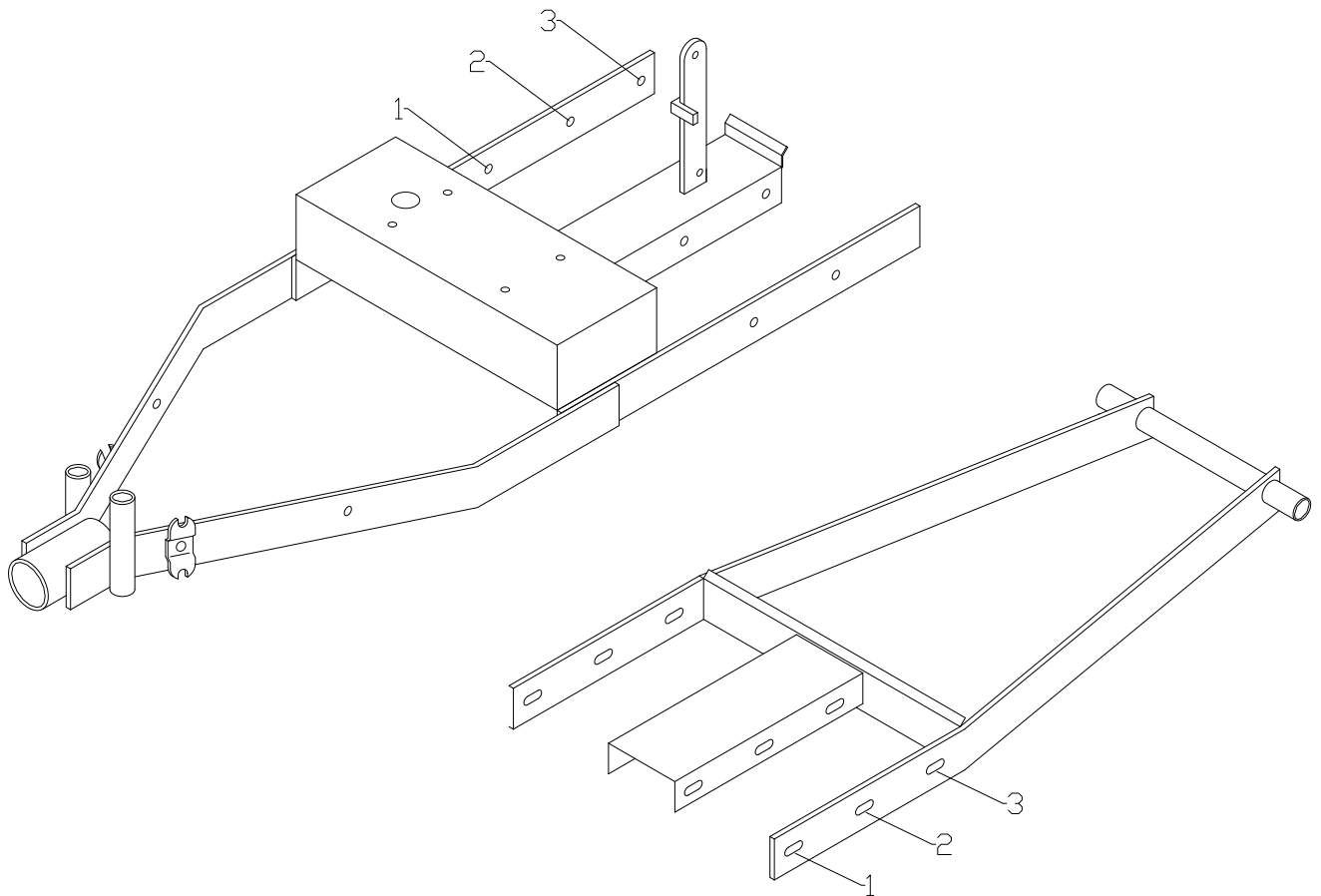
# MODEL 880 Trac-Vac Parts List

Key	Part No.	Description	Key	Part No.	Description
1	88011	Main Frame	13	18124	Intake Hose, 8 X 120
	88015	Main Frame, Elec.	14	88105	Latch Link
2	88012	Rear Frame	15	88104	Latch Pin
3	86026	Engine, 305cc Briggs Intek IC/elec.	16	88103	Latch Adjust. Screw
	86022	Engine, 305cc Briggs Intek IC (chipper vacs)	17	58104	Hitch Pin
	86034	Engine, 305cc Briggs Intek IC serial #24570/up	18	18119	Hose Clamp. 8"
	88102	Engine, 8HP L head	19	18070	Cart Connector, 8"
	86028	Engine, 9HP Robin (Subaru)	20	58071	Stand
4	86030	Turbine Housing	21	32108	Spring, Stand
5	86040	Turbine	22	18118	Strap, Hose Support
6	88040	Inlet, 8" Small Back (angled)	23	86107	Washer, Turbine
7	18120	Metal Hose Clamp	24	***-8	Chute Assembly
8	88050	Metal Exhaust Hose, serial #23552 to 24569	25	16009	Battery (elec. start)
	88055	Metal Exhaust Hose, serial #24570/up	26	16008	Battery Pad
9	88031	Draw Bar, 880			
10	88020	Support Arm			
11	18125	Support Arm Extension			
12	88060	Latch Handle			





The Model 880 frame has two (2) components: The main frame (88011) and the rear frame (88012). When using the 360 or 368-P Dump Cart, Slide front frame over rear frame to the shortest position. Using bolt holes #1 & #2 on the front and bolt holes #2 & #3 on the rear frame fasten with 3/8" x 1" HHC and nuts. If using the 368-x cart, use bolt holes #1 & #3 on both the front and rear frames. Secure the center channel as well.



# MAINTENANCE



**DANGER:** The Trac-Vac 860/880 was built to be operated according to the rules for safe operation as outlined in this manual. Carelessness or error on the part of the operator can Result in serious injury. This unit is capable of amputating fingers or hands and throwing objects. Failure to comply with the safety instructions could result in serious injury or death.



MAINTENANCE SCHEDULE	Before each use	After each use	Every season	Before Storage	Service Dates											
Check engine oil level	X															
Check tire pressure	X															
Check all hardware for tightness	X															
Check cover for wear	X															
Lubricate			X													
Clean		X		X												
Maintain engine per engine manual																

## BEFORE EACH USE

### CHECK FOR LOOSE HARDWARE

- Make a thorough visual check of the unit for any bolts and nuts which may have become loose. Retighten any loose nuts and bolts

### CHECK TIRE PRESSURE

- Check tire pressure regularly. The recommended tire pressure is printed on the tire.

### CHECK ENGINE OIL LEVEL

- Check oil level before each use. Maintain engine oil as instructed in engine manual.

### LUBRICATION

- Use a light machine oil to lubricate the axle where the hitch tongue pivots and the latch and pivot bolt at the beginning of each season.
- Grease or oil wheel bearings, using automotive wheel bearing grease at least once every season.



**WARNING:** Always stop engine and disconnect spark plug wire before lubricating, cleaning or before maintenance or repairs.

## ENGINE MAINTENANCE

- Check oil level before each use, maintain engine oil according to the engine manual
- Service air cleaner after every 25 hours of normal conditions. Under extremely dusty conditions, clean every few hours. Poor engine performance usually indicates that the air cleaner needs to be serviced.
- Clean spark plug and reset gap once every season. It is recommended that the spark plug be replaced at the start of each season. Check the engine manual for the correct spark plug and gap specifications.

## CLEANING

- Clean the cart & top after each use. Grass clippings and leaves can mildew and cause damage if not properly cleaned.
- Clean the engine regularly with a cloth or brush. Remove all dirt and debris from muffler area.

## TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> <li>1. Spark plug wire disconnected</li> <li>2. Fuel tank empty</li> <li>3. Faulty spark plug</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect wire to spark plug</li> <li>2. Fill tank with clean fuel</li> <li>3. Clean, adjust gap or replace</li> </ol>
Loss of power or erratic operation	<ol style="list-style-type: none"> <li>1. Spark plug wire loose</li> <li>2. Blocked fuel line</li> <li>3. Water or dirt in fuel system</li> <li>4. Dirty air cleaner</li> <li>5. Carburetor out of adjustment</li> <li>6. Unit running on choke</li> </ol>	<ol style="list-style-type: none"> <li>1. Connect &amp; tighten spark plug wire</li> <li>2. Clean fuel line</li> <li>3. Disconnect fuel line at carburetor drain fuel tank. Refill with fresh fuel</li> <li>4. Service air cleaner (refer to engine manual)</li> <li>5. Adjust carburetor (refer to engine manual)</li> <li>6. Move choke lever to OFF position</li> </ol>
Engine overheats	<ol style="list-style-type: none"> <li>1. Carburetor not adjusted properly</li> <li>2. Engine oil level low</li> <li>3. Operating below full RPM</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust carburetor (refer to engine manual)</li> <li>2. Fill crankcase with proper oil</li> <li>3. Run throttle full open.</li> </ol>
Excessive vibration	<ol style="list-style-type: none"> <li>1. Damaged turbine or loose parts</li> </ol>	<ol style="list-style-type: none"> <li>1. Stop engine immediately and disconnect spark plug wire. Tighten all bolts &amp; nuts. Make necessary repairs. If vibration continues, have unit serviced by an authorized dealer.</li> </ol>
Unit won't pick up.	<ol style="list-style-type: none"> <li>1. Discharge chute clogged</li> <li>2. Foreign object lodged in turbine.</li> <li>3. Cart is full</li> </ol>	<ol style="list-style-type: none"> <li>1. Stop engine &amp; disconnect spark plug wire. Clean inside of discharge chute.</li> <li>2. Stop engine and disconnect spark plug wire. Remove lodged object in turbine.</li> <li>3. Stop engine and empty cart.</li> </ol>

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



# Operation

**BEFORE STARTING,** Follow 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 pick up all harmful objects and litter.
2. For best vacuuming results, operate tractor at manufacturer's recommended speed for best cutting. If grass is high, mow and vacuum the second time.
3. Your vacuum engine is preset to run approximately 3800 RPM no-load. Do not slow engine down. Optimum vacuum is at 3600 RPM.
4. Do not overload cart. When cart is filled, **shut off vacuum engine** and disconnect hose at snap disconnect, remove tailgate and dump.
5. When operating tractor on slope or grade, exercise much caution. Do not cut across grade or slopes. Mow directly up or down hill.
6. Periodically check all hardware for tightness.
7. Listen for unusual vibration of engine or air turbine. If excessive vibration is present, STOP engine and check for damaged blade.
8. 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!**
9. Always shut off tractor engine and vacuum engine before servicing.
10. Replace deflector shield when discharge chute is removed.
11. Do not carry passengers in cart
12. Do not tow cart on public roads
13. Avoid sudden turns or maneuvers.



CAUTION!!!!  
SPINNING BLADE

## TRAC VAC WARRANTY POLICY

Midwest Equipment Mfg. 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.

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