

# ***TRAC VAC***

**Model 865/865R**



## **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.



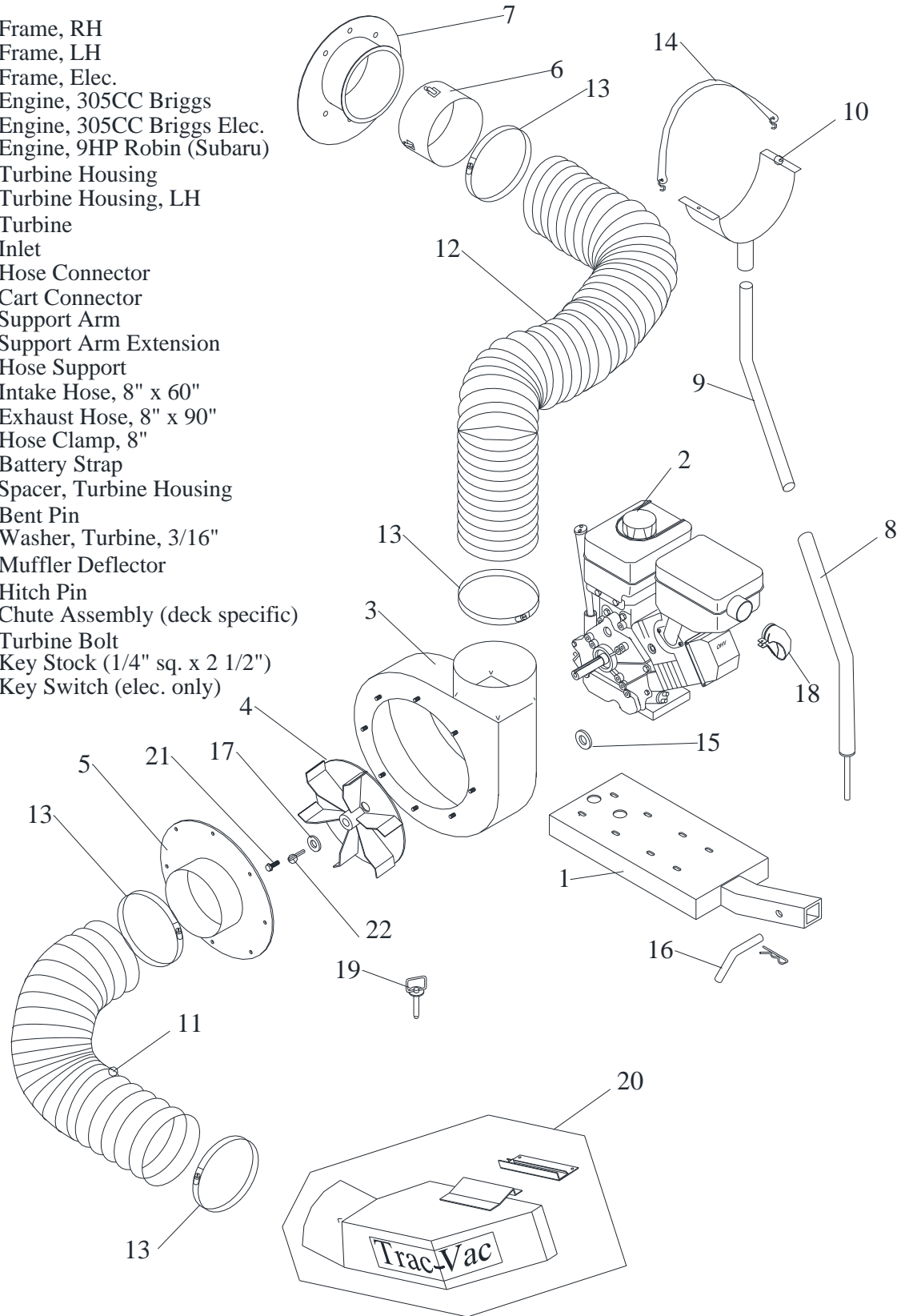
This symbol means Attention!!!! It is used to point out safety precautions.

- 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.



# Model 865 Trac-Vac Parts List

KEY	PART NO.	DESCRIPTION
1	86510-1	Frame, RH
	86509-1	Frame, LH
	86511-1	Frame, Elec.
2	86022	Engine, 305CC Briggs
	86026	Engine, 305CC Briggs Elec.
	86028	Engine, 9HP Robin (Subaru)
3	86030	Turbine Housing
	18030	Turbine Housing, LH
4	86040	Turbine
5	18050	Inlet
6	86060	Hose Connector
7	18070	Cart Connector
8	86501	Support Arm
9	86502	Support Arm Extension
10	86503	Hose Support
11	86101	Intake Hose, 8" x 60"
12	88101	Exhaust Hose, 8" x 90"
13	18119	Hose Clamp, 8"
14	18117	Battery Strap
15	86027	Spacer, Turbine Housing
16	85225	Bent Pin
17	86107	Washer, Turbine, 3/16"
18	86032	Muffler Deflector
19	58104	Hitch Pin
20	***-8	Chute Assembly (deck specific)
21	4370109	Turbine Bolt
22	2501716	Key Stock (1/4" sq. x 2 1/2")
	18110	Key Switch (elec. only)



## **MODEL 865 TRAC VAC ASSEMBLY INSTRUCTIONS**

1. Attach hitch and drawbar to tractor. Refer to application guide for mounting instructions. Attach engine frame (1) by inserting tube on frame into receiving tube on hitch. Secure with 5/8" bent pull pin (16).
2. Attach engine assembly to frame. With inlet (5) facing toward mower deck discharge opening, align mounting holes on engine to slots on frame and secure with four 5/16" x 1 3/4" HHC and lock nuts.
3. Attach cart connector (7), with lip outside, to cart cover front opening. Align holes and secure with six 1/4" x 1/2" truss screws and whizlock nuts. NOTE: Whizlocks should go inside cart cover. Slip Hose connector (6) in position as shown in drawing, into cart connector and secure with clips.
4. Slip support arm (8) assembly pin into tube on drawbar. Slip hose support (10) tube over support arm extension. Rotate support arm assembly so that it angles toward cart.
5. Slip band clamp (13) over each of 8"x 90" hose. Slip one end over turbine housing (3) neck and tighten clamp. Slip remaining end over hose connector and tighten clamp. Rest hose in hose support. Loosen set screw on support arm and adjust hose support height as desired. Tighten set screw.
6. Attach chute to mower deck discharge opening. Slip band clamps (13) over each end of 8" x 60" hose. Slip one end of hose over chute and tighten clamp. Slip remaining end over inlet and tighten clamp.

### **TRIMMING HOSE LENGTH**

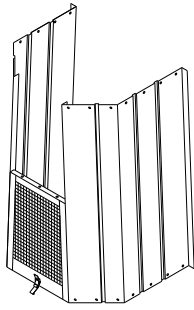
Intake side: for maximum performance, the intake hose (11) should be routed as straight as possible from chute to inlet without stretching convolutions. Lift deck and allow extra hose length, if necessary. Cut off any excess hose and reattach hose to unit.

Exhaust side: turn tractor as far to the left as possible (turn right for left discharge). This will stretch hose to its maximum length. Loosen clamp and cut off excess length. Reattach hose to unit.

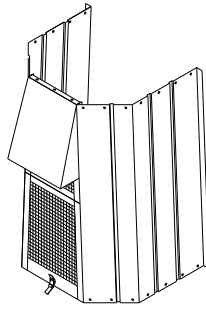
7. Read engine operating instructions and service engine before starting.

# Model 280 Cart Cover Assembly Instructions

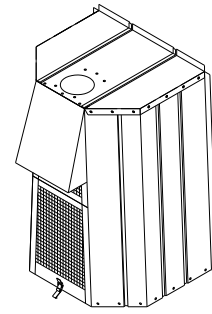
**NOTE:** Do not tighten any bolts until the end of construction.



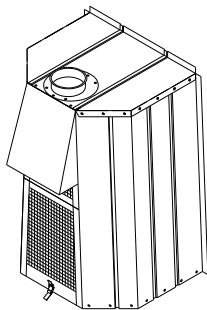
Place side panels on end with decal outward and about a foot apart at top. Place screen with latch, ( rear screen), on end between sides with latch outward and to the floor. Attach to sides with 1/4 x 1/2 bolts.



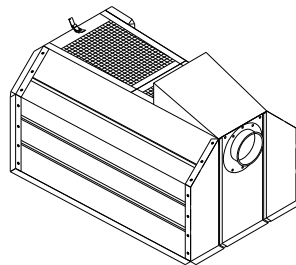
Place screen without latch, (front screen), on top of rear screen and between sides. Secure to rear screen with 1/4 x 1/2 bolts. Slip deflector between sides and front screen with tapered end up. Secure with 1/4 x 1/2 bolts.



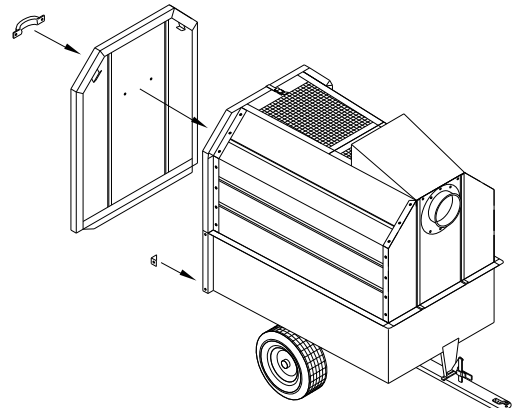
Place front on sides with flanges on outside. Start corner bolts in sides and screen before tightening. Start bolts at top & bottom of side panels and work your way toward center, with truss head, round, to the outside.



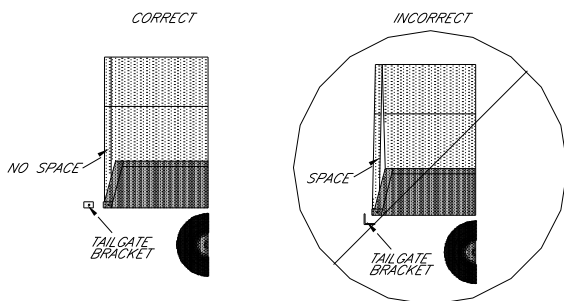
Place connector, (packed in with vac), on outside of front with the lip to the outside. Attach with 1/4 x 1/2 bolts.



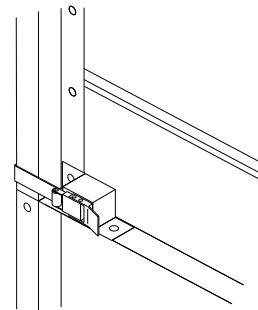
Place cover flat on floor and attach angles to side panels at rear of cover with angles on the outside of cover. Secure with 1/4 x 1/2 bolts. Start at the top and second hole from the bottom, (latch uses bottom hole), then work towards the center of the panels. Bolts truss, (round), head should be to the inside of cart.



Attach handle to tailgate on smooth side. Place cover on cart. Make sure the two lower black angle brackets have been installed on the lower rear of the cart. Fit tailgate to the cover using the top latch and lower brackets only.

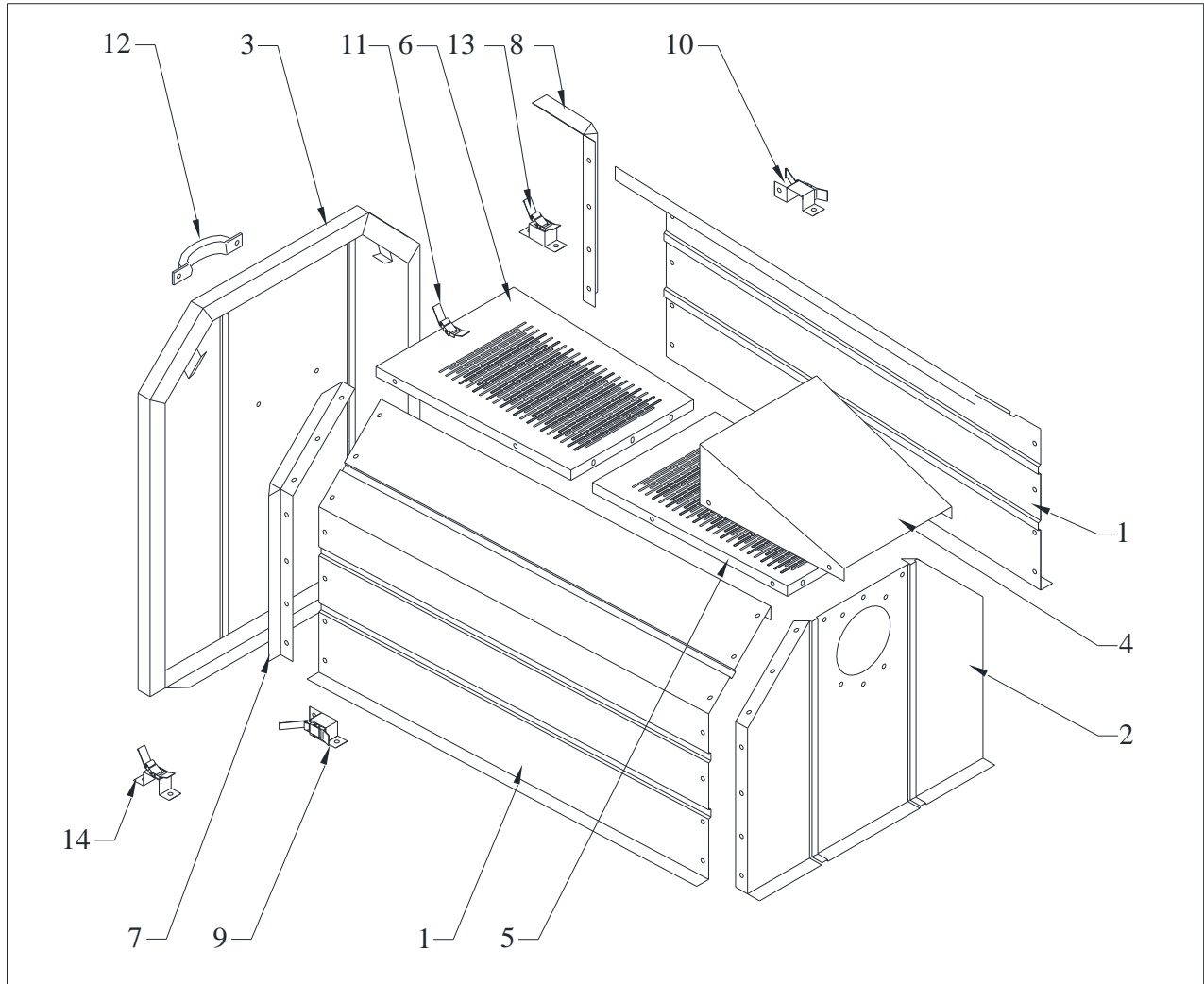


Gently move cover to the rear to insure contact between the tailgate and cover, (along entire contacting surface). Center front on cart. Mark hole locations, and drill 9/32" holes. Attach cover with 1/4 x 1/2 bolts.



Place latch on each side of cart with tongue of latch to rear. Attach to side panel and cart with 1/4 x 1/2 bolts. Tighten all hardware.

# Model 348/368L Cart Covers



## Model 280/348L Cart Cover

## Model 280/368L 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

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

# MAINTENANCE



**DANGER:** The Trac-Vac was built to be operated according to the rules for safe operation 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.



CAUTION!!!!  
SPINNING BLADE

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																	
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.

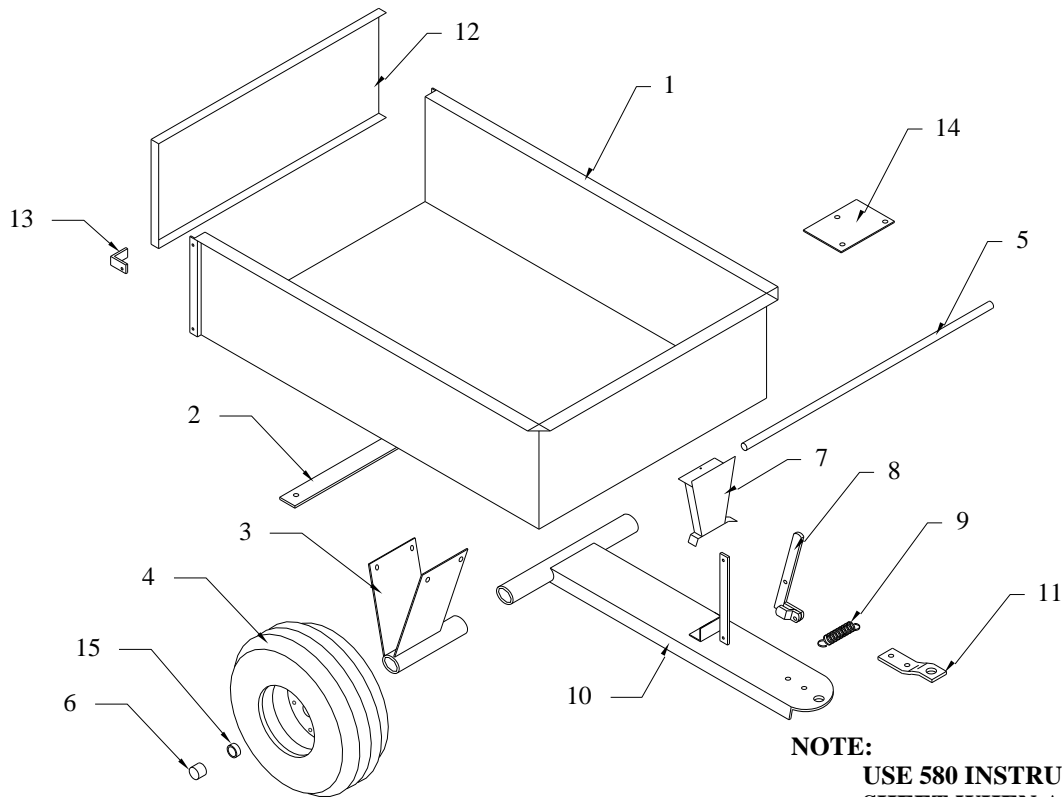
## ENGINE MAINTENANCE

- 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 unit 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.

# 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



## 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. Container 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 container.</li> </ol>

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 3200-RPM (380), 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, remove containers, remove clevis pin from top support, and rotate top around to completely open.

## 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.-

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