

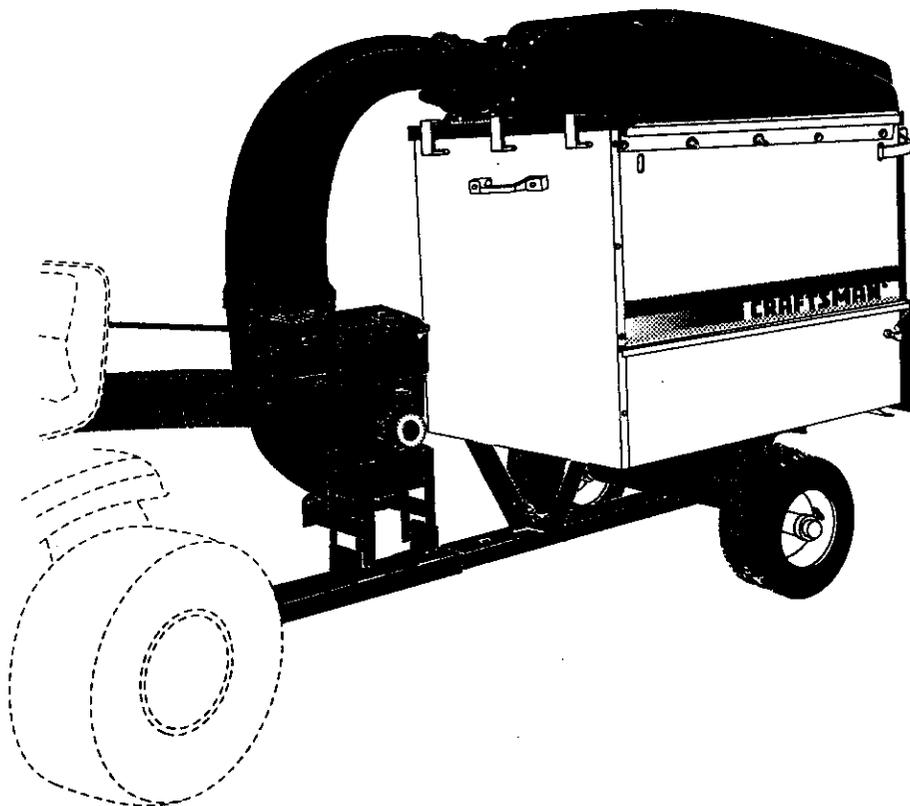
Operators Manual

CRAFTSMAN®

5 H.P.

VAC SYSTEM

Model No. 486.24506



CAUTION:

Before using this product, read this manual and follow all Safety Rules and Operating Instructions.

- Safety
- Assembly
- Operation
- Maintenance
- Parts

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A.
www.sears.com/craftsman

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WARRANTY

LIMITED WARRANTY ON CRAFTSMAN POWERED TRACTOR ATTACHMENTS

For one (1) year from the date of purchase, if this Craftsman Equipment is maintained, lubricated and tuned up according to the instructions in the owner's manual, Sears will repair or replace free of charge any parts found to be defective in material or workmanship. Warranty service is available free of charge by returning your Craftsman equipment to your nearest Sears Service Center. In-home warranty service is available but a trip charge will apply. This Warranty applies only while this product is in the United States.

This Warranty does not cover:

- Expendable items which become worn during normal use, such as spark plugs, air cleaners, belts, and oil filters.
- Tire replacement or repair caused by punctures from outside objects, such as nails, thorns, stumps, or glass.
- Repairs necessary because of operator abuse, including but not limited to, damage caused by impacting objects that bend the frame or crankshaft, or over-speeding the engine.
- Repairs necessary because of operator negligence, including but not limited to, electrical and mechanical damage caused by improper storage, failure to use the proper grade and amount of engine oil, or failure to maintain the equipment according to the instructions contained in the owner's manual.
- Engine (fuel system) cleaning or repairs caused by fuel determined to be contaminated or oxidized (stale). In general, fuel should be used **within 30 days** of its purchase date.
- Equipment used for commercial or rental purposes.

LIMITED WARRANTY ON BATTERY

For ninety (90) days from date of purchase, if any battery included with the equipment proves defective in material or workmanship and our testing determines the battery will not hold a charge, Sears will replace the battery at no charge. Warranty service is available free of charge by returning your Craftsman equipment to your nearest Sears Service Center. In-home warranty service is available but a trip charge will apply. This Warranty applies only while this product is in the United States.

TO LOCATE THE NEAREST SEARS SERVICE CENTER OR TO SCHEDULE SERVICE, SIMPLY CONTACT SEARS AT 1-800-4-MY-HOME.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.



SAFETY



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.

- Read and follow all instructions in this manual before attempting to assemble or operate this equipment. Failure to comply with these instructions may result in personal injury. Keep this manual in a safe place for future reference and for ordering replacement parts.
- Read this operating and service instruction manual carefully. Be thoroughly familiar with the controls and proper use of this power vacuum.
- Read the vehicle owners manual and vehicle safe operation rules before using this equipment.
- Never allow children under 16 to operate this Mow-N-Vac. Children 16 years and older should only operate under close parental supervision.
- Do not allow anyone to operate this equipment without proper instructions.
- Do not allow passengers to ride on this equipment or on the towing vehicle.
- Keep the area of operation clear of all persons, particularly small children. Also keep area clear of pets.
- Check fuel before starting engine. Do not fill fuel tank indoors, or when engine is running, or while engine is hot. Wipe off any spilled fuel before starting engine.
- Engine and muffler get hot. Do not touch! To avoid fire hazard, keep clean of debris and other accumulations.
- Never store Mow-N-Vac with fuel in tank. Allow engine to cool before storing in any enclosure.
- Do not change engine governor settings.
- Do not operate engine if air cleaner or cover is removed, except for adjustment. Removal of these parts could create a fire hazard.
- Keep hands, feet, face, long hair and clothing out of inlet and discharge area. There are ROTATING BLADES inside these openings.
- Before cleaning, repairing or inspecting, make certain all moving parts come to a complete stop. Disconnect spark plug wire and keep wire away from plug to prevent accidental starting. Keep throttle control lever in stop position.
- If the Mow-N-Vac should become blocked with debris at any point, shut engine off and wait until the impeller comes to a complete stop before attempting to remove the obstruction. Disconnect spark plug wire to prevent accidental starting.
- If the cutting mechanism strikes a foreign object, or if your Mow-N-Vac should start to vibrate abnormally, stop the engine immediately, disconnect the spark plug wire and move the wire away from the spark plug. Allow the machine to stop and take 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 bolts for tightness at frequent intervals to help insure safe operation.
- Check vinyl hard top boot frequently for wear. Replace if worn or damaged.
- Never operate Mow-N-Vac unless deck adapter, hose, hose adapter (nozzle), discharge chute (elbow), and top cover are properly attached in their place.
- Do not remove top cover or attempt to empty contents of cart while engine is running.
- Never attempt to change hose adapter (nozzle) or to install remote hose attachment when engine is running.
- Keep all shields and guards (e.g. discharge chute (elbow) and hose adapter (nozzle) in place and securely attached.
- Always wear safety glasses or other suitable eye protection when operating or maintaining 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 drugs or medication that impairs the senses and reactions.
- When using this equipment, start with the vehicle transmission in first (low) gear and then gradually increase speed only as conditions permit.
- Operate this equipment at reduced speed on rough terrain, along creeks and ditches and on slopes to prevent tipping or loss of control. Do not drive too close to a creek or ditch.
- Vehicle braking and stability are affected by the addition of this equipment. Do not fill the Mow-N-Vac to its full capacity without checking the capability of the towing vehicle to safely pull and stop with the Mow-N-Vac attached.
- Before operating on any grade (hill) refer to the safety rules in the vehicle owner's manual concerning safe operation on slopes. Also refer to the SLOPE GUIDE on page 23 of this owner's manual. Do not operate on slopes in excess of 10 degrees. **STAY OFF STEEP SLOPES.**
- Follow the maintenance instructions outlined in this manual.



Look for this symbol to point out important safety precautions. It means--**Attention!! Become alert!! Your safety is involved.**



DANGER: This Vac System was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. This unit is capable of amputating fingers and hands and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

WARNING

TO AVOID SERIOUS INJURY

- Read Owner's Manual and all safety labels on machine before starting and using machine.
- Do Not remove top cover or attempt to empty contents of cart while engine is running.
- Do Not stand behind cart in exhaust discharge area while engine is running.
- Keep hands, feet, face, long hair and clothing out of chipper inlet, vac inlet, and discharge area. There are **ROTATING BLADES** inside these openings.
- Wear approved safety glasses and gloves. Avoid loose fitting clothes.
- Keep the area of operation clear of all persons, particularly small children and pets.
- Keep all shields and guards (e.g. upper chipper chute extension, discharge chute, nozzle assembly) in place and securely attached.
- Check discharge boot frequently for wear. Replace if worn or damaged.
- If unit becomes clogged or jammed, shut off engine right away. Do Not attempt to clear clog or jam with engine running.
- Muffler and engine get hot and can cause burns. Do Not Touch. To avoid a fire hazard, keep leaves, grass and other combustible debris off hot muffler and engine.
- Do Not attempt to remove or attach vac nozzle or optional Hose Kit with engine running.
- Do Not operate unit unless nozzle or optional Hose Kit is secured in place.
- Do Not fill gas tank while engine is running. Allow engine to cool at least 2 minutes before refueling.



WARNING

**MUFFLER & ADJACENT AREAS
MAY EXCEED 150° F**



DANGER

HAZARDOUS ROTATING BLADES INSIDE. KEEP HANDS AWAY FROM ALL OPENINGS. DO NOT REMOVE OR ATTACH HOSE, HOSE ADAPTER, ELBOW OR OPTIONAL HOSE KIT WHEN ENGINE IS RUNNING!



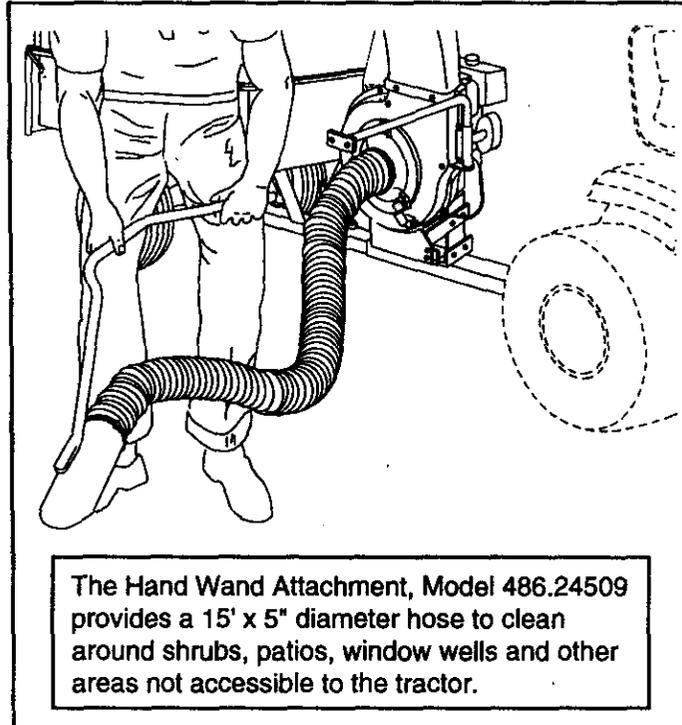
WARNING

This unit is equipped with an internal combustion engine and should not be used on or near unimproved forest-covered, or grass-covered land unless the engine's exhaust system is equipped with a spark arrester meeting applicable local or state laws (if any). If a spark arrester is used, it should 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. A spark arrester muffler is available at your nearest engine authorized service center.

ACCESSORIES AND ATTACHMENTS

These accessories were available when the unit was purchased. They are also available at most Sears retail outlets and service centers. Most Sears stores can order repair parts for you when you provide the model numbers of your tractor and Vac System.



The model and serial numbers will be found on a decal attached to the engine base.

You should record both the serial number and the date of purchase and keep in a safe place for future reference.

MODEL NUMBER:

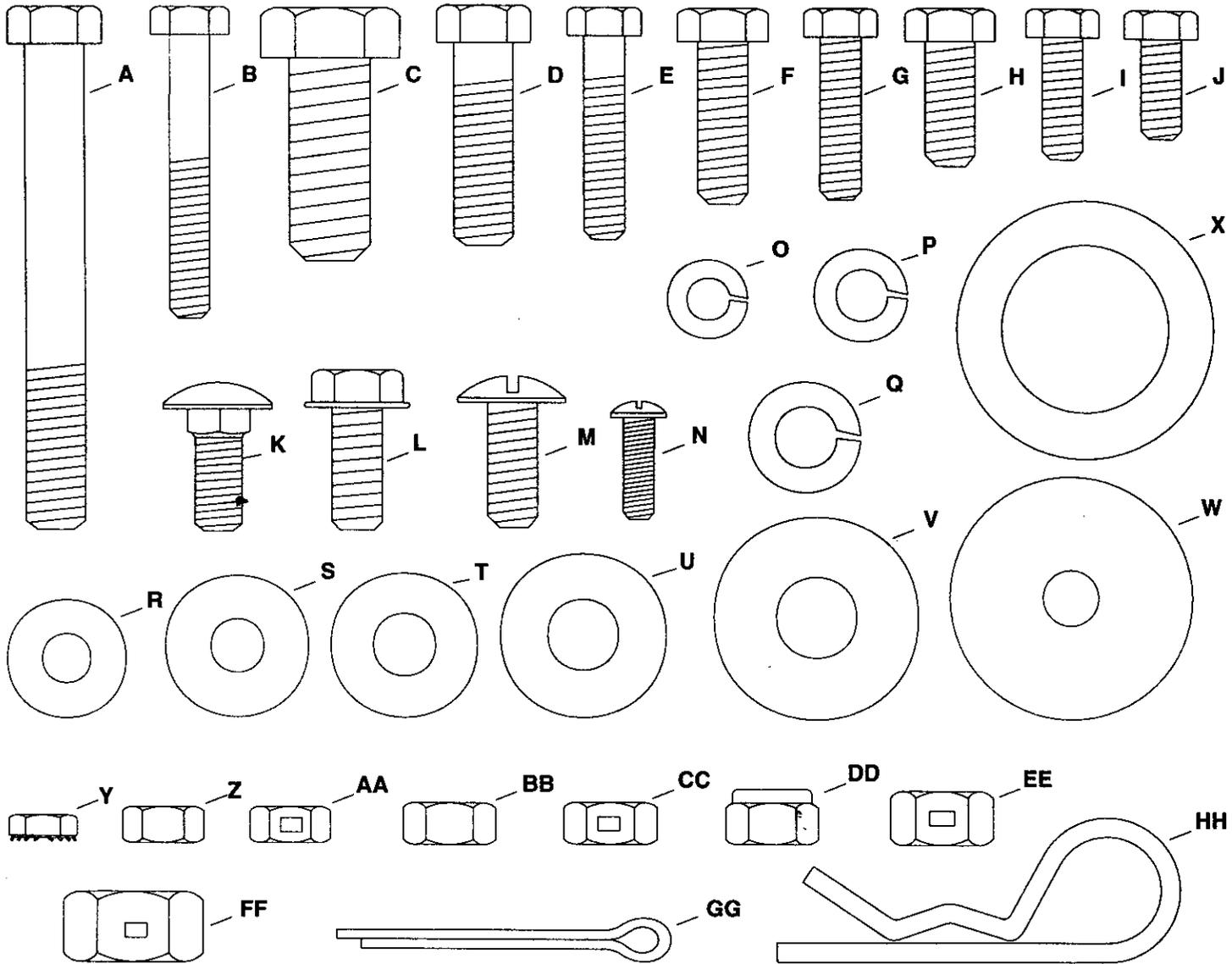
486.24506

SERIAL NUMBER:

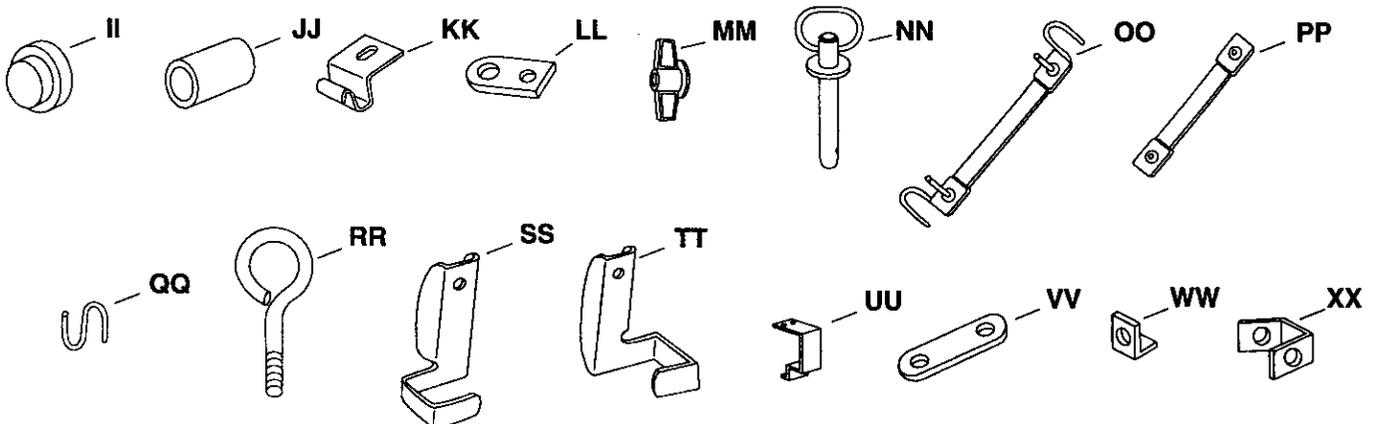
DATE OF PURCHASE:

HARDWARE PACKAGE CONTENTS

SHOWN FULL SIZE



NOT SHOWN FULL SIZE



ATTENTION! Keep contents of each hardware package separate for easier assembly.

CONTENTS OF HARDWARE PACKAGES IN CART CARTON

Ref.	Qty.	Description	Ref.	Qty.	Description
A	3	Bolt, Hex 3/8" x 3"	Z	11	Hex Nut, 1/4"
B	2	Bolt, Hex 1/4" x 1-3/4"	BB	14	Hex Nut, 5/16"
D	2	Bolt, Hex 3/8" x 1-1/4"	EE	5	Nut, Hex Lock 3/8"
J	9	Bolt, Hex 1/4" x 5/8"	GG	2	Pin, Cotter 1/8" x 1-1/2"
M	14	Bolt, Truss Head 5/16" x 3/4"	HH	1	Hair Cotter Pin, 1/8"
O	11	Lockwasher, 1/4"	II	2	Hub Cap
P	14	Lockwasher, 5/16"	JJ	2	Spacer Tube
Q	5	Lockwasher, 3/8"	KK	2	Door Support
R	2	Flat Washer, 1/4"	NN	1	Hitch Pin
X	4	Flat Washer, 1"			

CONTENTS OF (2) VAC HARDWARE PACKAGES IN VAC CARTON

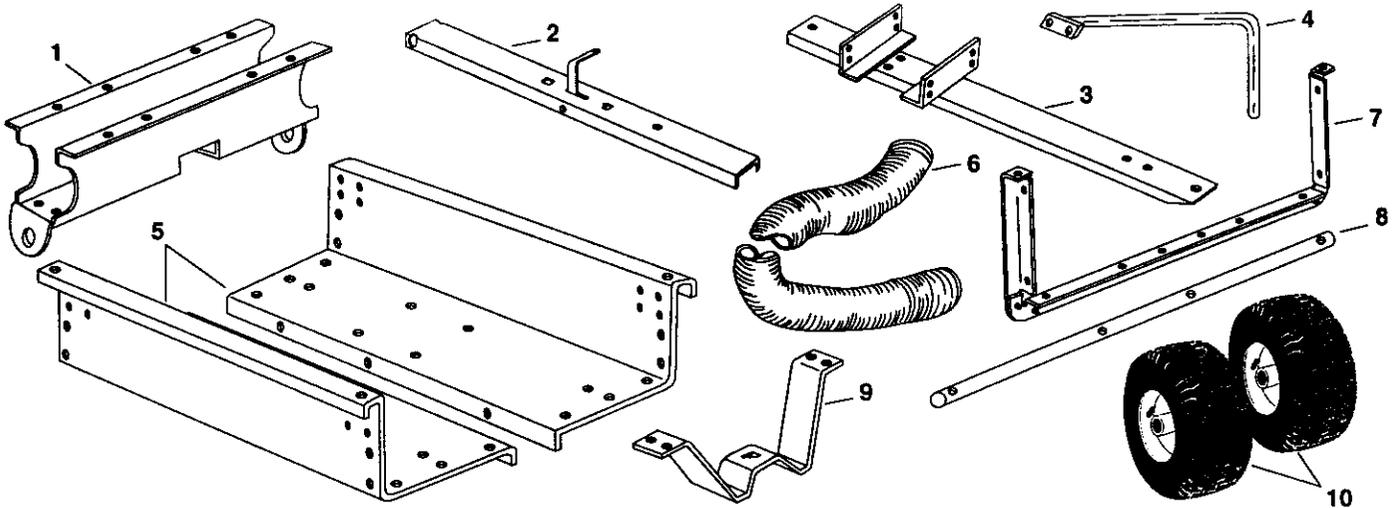
Extra nuts and washers are included in these packages.

Ref.	Qty.	Description	Ref.	Qty.	Description
C	1	Hex Bolt, 1/2" x 1-1/4"	Y	2	Hex Nut, #10-32
E	2	Hex Bolt, 1/4" x 1-1/4"	Z	46	Hex Nut, 1/4"
G	4	Hex Bolt, 1/4" x 1"	AA	2	Hex Lock Nut, 1/4"
H	6	Hex Bolt, 5/16" x 3/4"	DD	6	Nylock Nut, 5/16"
J	30	Hex Bolt, 1/4" x 5/8"	EE	2	Hex Lock Nut, 3/8"
L	4	Hex Bolt, 5/16" x 3/4" Thread Forming	FF	1	Hex Lock Nut, 1/2"
N	2	Truss Bolt Head, #10-32 x 5/8"	LL	1	Hitch Plate
O	40	Lock Washer, 1/4"	MM	3	Knob
P	4	Lock Washer, 5/16"	OO	1	Tarp Strap, 25"
R	26	Flat Washer, 1/4"	PP	2	Tarp Strap (Less Hooks)
S	6	Nylon Washer	QQ	2	"S" Hooks
U	4	Flat Washer, 3/8"	RR	2	Eye Bolt
V	1	Flat Washer, 7/16"	SS	1	Door Latch (RH)
W	4	Flat Washer, 11/32" x 1-1/2"	TT	1	Door Latch (LH)
			UU	3	Hinge

CONTENTS OF DECK ADAPTER HARDWARE PACKAGE IN VAC CARTON

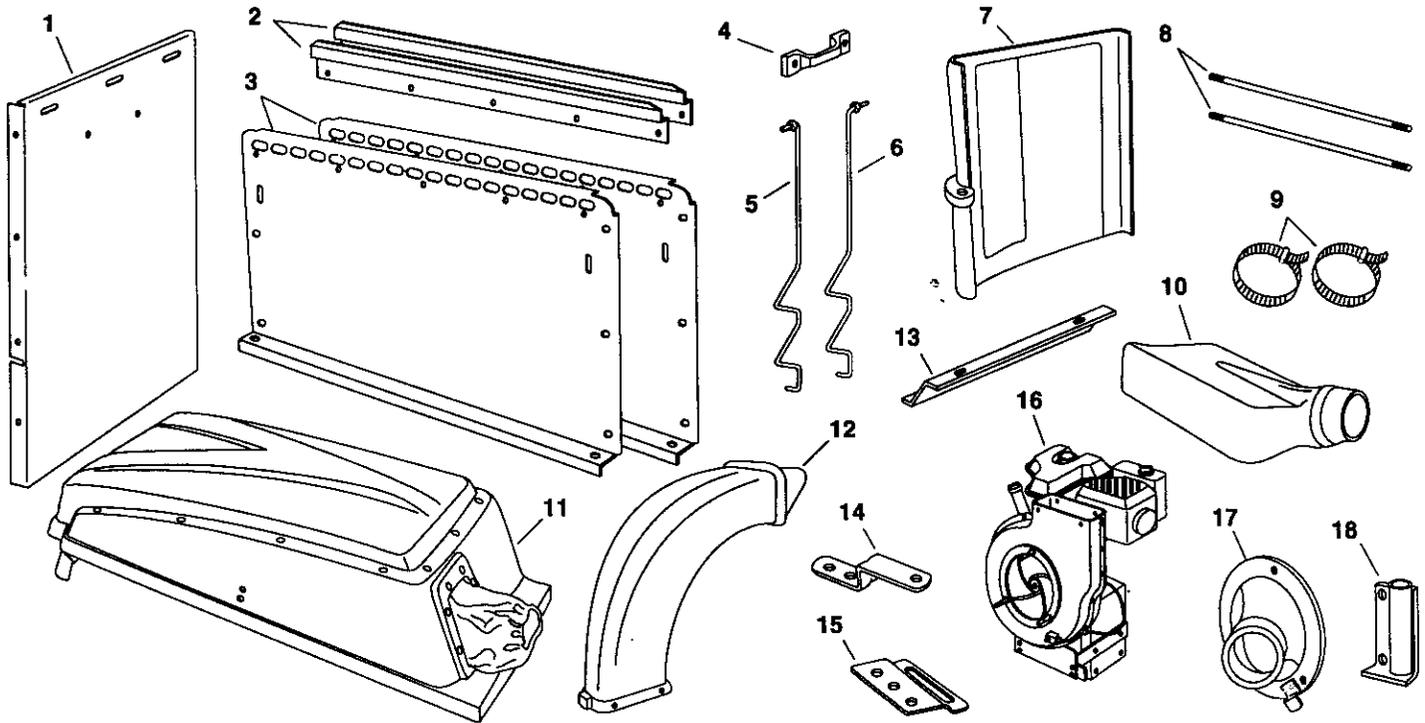
Not all parts in this list will be used for any one tractor.

Ref.	Qty.	Description
F	2	Hex Bolt, 5/16" x 1"
I	3	Hex Bolt, 1/4" x 3/4"
K	2	Carriage Bolt, 5/16" x 3/4"
R	3	Flat Washer, 1/4"
S	3	Nylon Washer
T	12	Flat Washer, 5/16"
AA	3	Hex Lock Nut, 1/4"
CC	3	Hex Lock Nut, 5/16"
VV	1	Mounting Strap
WW	1	Angle Bracket
XX	1	Mounting Bracket



CARTON CONTENTS (Cart Carton)

Ref.	Qty.	Description	Ref.	Qty.	Description
1	1	Wheel Support	6	1	Hose
2	1	Rear Tongue	7	1	Tailgate Reinforcement Bracket
3	1	Front Tongue	8	1	Axle
4	1	Hose Hanger Rod Assembly	9	1	Latch Stand Bracket
5	2	Cart Bodies	10	2	Wheels



CARTON CONTENTS (Vac Carton)

Ref.	Qty.	Description	Ref.	Qty.	Description
1	1	Front Panel	10	1	Deck Adapter
2	2	Side Brackets	11	1	Poly Hard Top
3	2	Side Panels	12	1	Elbow
4	1	Dump Handle	13	1	Skid Plate
5	1	Prop Rod (Right)	14	1	Hitch Bracket
6	1	Prop Rod (Left)	15	1	Adapter Bracket
7	1	Rear Door	16	1	Engine/Impeller Assembly
8	2	Tie Rods	17	1	Hose Adapter (Nozzle)
9	2	Hose Clamps	18	1	Hose Hanger Bracket

ASSEMBLY

This unit is shipped WITHOUT GASOLINE or OIL. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

TOOLS REQUIRED FOR ASSEMBLY

- (1) Screwdriver
- (1) Pliers
- (1) 3/8" Wrench
- (2) 7/16" Wrenches
- (2) 1/2" Wrenches
- (2) 9/16" Wrenches
- (2) 3/4" Wrenches (only if figure 27 on page 15 is used)

REMOVAL OF PARTS FROM CARTONS

- Remove the hardware packs and all loose parts from the cartons.
- Lay out and identify parts shown in carton contents.
- Lay out and identify parts in the hardware packs. Keep contents of each hardware package separate for easier assembly.

ASSEMBLING THE VAC SYSTEM

- Place cart body halves upright on a smooth level surface such as a garage floor or a paved driveway. See figure 1.



CAUTION: Do not leave the cart unattended in upright position during assembly. A falling cart can cause personal injury! Pay close attention to the stability of the cart while it remains in an upright position. For best stability, assemble on a smooth level surface.

- Assemble cart body halves together using three 1/4" x 5/8" hex bolts, 1/4" lock washers and 1/4" hex nuts as shown in figure 1. **Do not tighten yet.**

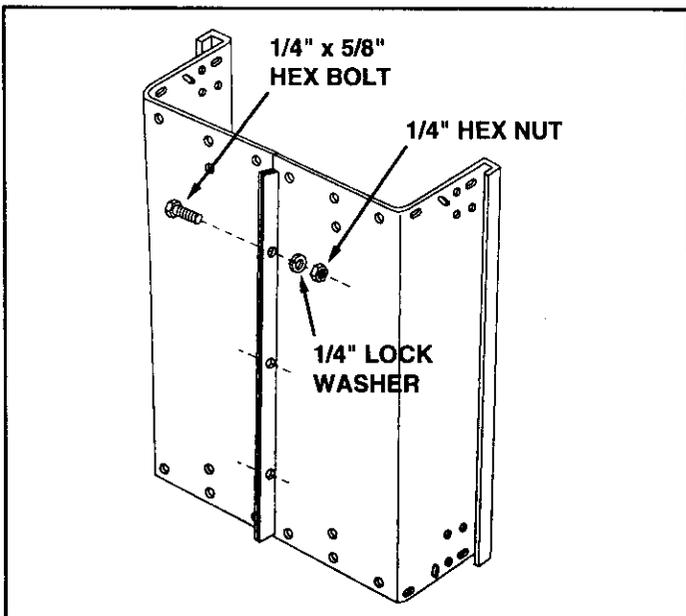


FIGURE 1

- Fit the tailgate reinforcement bracket over the end of the cart bed. Position the two door support brackets on the bottom of the reinforcement bracket as shown in figure 2. Fasten the reinforcement bracket and the door supports to the bottom of the cart using six 5/16" x 3/4" truss head screws, 5/16" lock washers and 5/16" hex nuts. **Do not tighten yet.** See figure 2.
- Fasten the tailgate reinforcement bracket to the sides of the cart body using four 1/4" x 5/8" hex bolts, 1/4" lock washers and 1/4" hex nuts as shown in figure 2. **Do not tighten yet.**

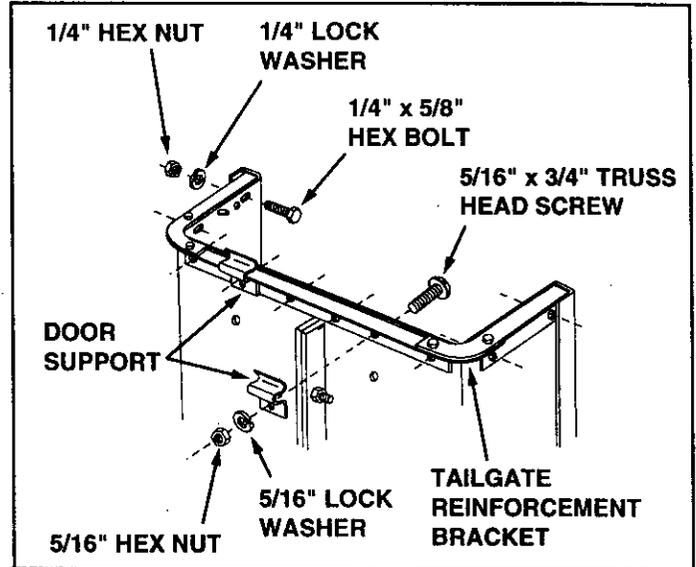


FIGURE 2

- Pull the cart body halves together. **Tighten** the six truss head screws in figure 2. **Tighten** the four hex bolts in figure 2. **Tighten** the three hex bolts in figure 1, keeping the bottom aligned and pulled together.
- Carefully flip the cart end for end so that it rests on the tailgate reinforcement bracket. See figure 3.

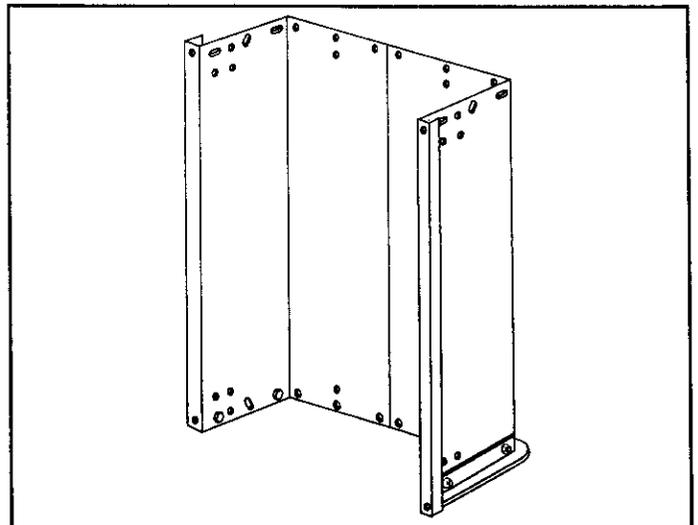


FIGURE 3

- Assemble the wheel support to the bottom of the cart using eight 5/16" x 3/4" truss head screws, 5/16" lock washers, and 5/16" hex nuts as shown in figure 4. Heads of screws go on the inside of cart. **Tighten.**

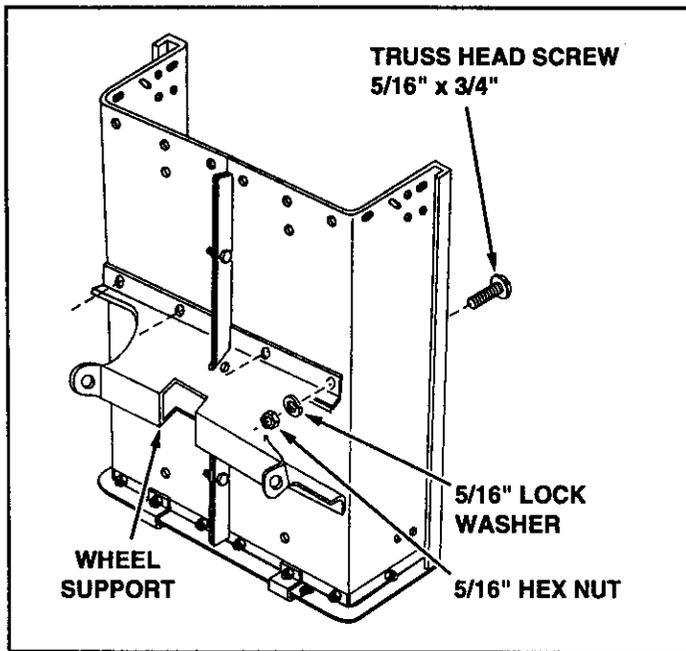


FIGURE 4

- Lower the cart to rest upside down, with the wheel support facing up, as shown in figure 5.

NOTE: The parts assembled in the next paragraph are shipped in the Vac carton.

- Assemble the skid plate to the bottom of the cart using two 1/4" x 1" hex bolts, four 1-1/2" flat washers, two 1/4" lock washers and two 1/4" hex nuts. See figure 5.

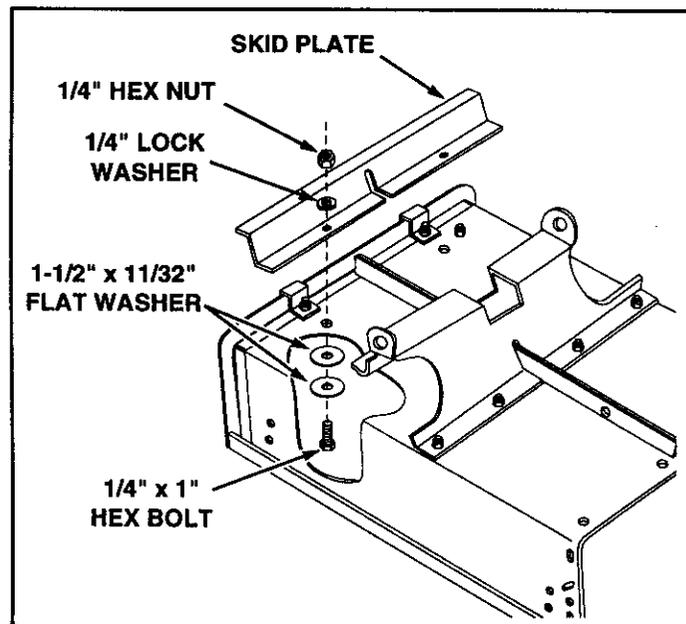


FIGURE 5

- Align the latch stand bracket so that the tab is at the rear. Fasten the bracket to the rear set of holes at the front of the cart using two 1/4" x 5/8" hex bolts, 1/4" flat washers, 1/4" lock washers, and 1/4" hex nuts. Use the 1/4" flat washers as shims between the bracket and the cart bed. **Make finger tight at this time.** See figure 6.

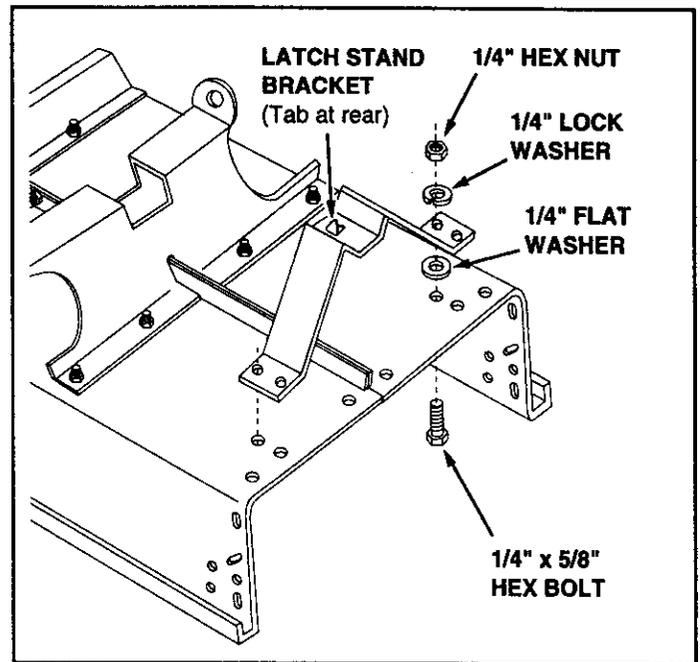


FIGURE 6

- Place the rear tongue onto the wheel support and the latch stand bracket. Assemble the axle through the ends of the wheel support and the tongue. Fasten the axle to the wheel support using two 1/4" x 1-3/4" hex bolts, 1/4" lock washers and 1/4" hex nuts. **Tighten.** See figure 7.

IMPORTANT: Make sure the tongue is securely locked to the latch stand bracket by the latch lock lever.

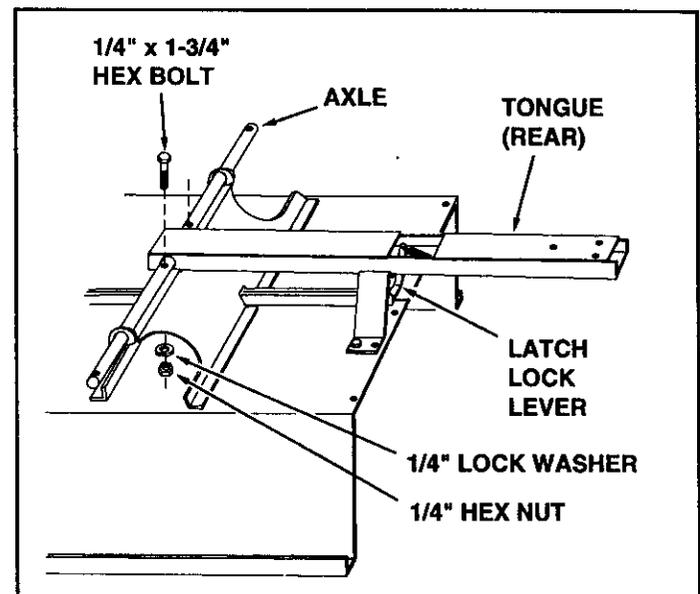


FIGURE 7

- Assemble a spacer tube onto each end of the axle as shown in figure 8.
- Assemble a 1" flat washer, a wheel (valve stem facing out), and another 1" flat washer onto the axle as shown in figure 8. Secure the wheel with a 1/8" x 1-1/2" cotter pin, spreading the ends so that a hub cap will fit over the pin. Assemble the hub cap by pressing it onto the flat washer. Repeat on other end of axle.

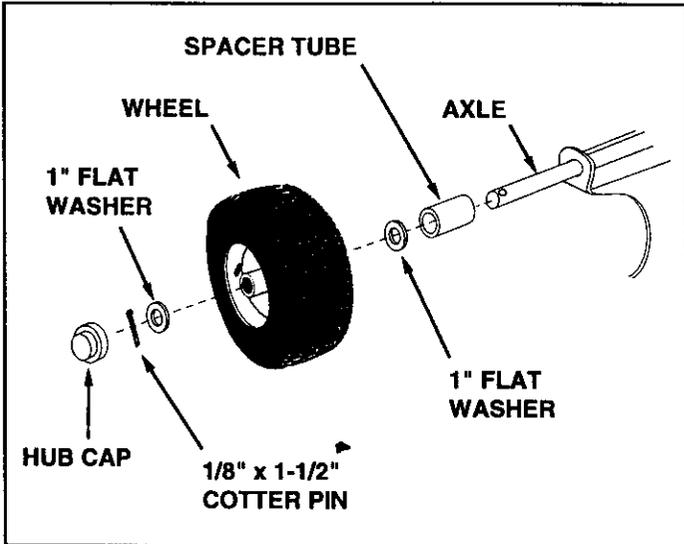


FIGURE 8

- Flip the cart over so that it rests on its wheels.
- Assemble the front tongue on top of the rear tongue using three 3/8" x 3" hex bolts, 3/8" lock washers and 3/8" hex lock nuts. See figure 9.

HINT: For easier assembly, support the rear tongue with a block of wood.

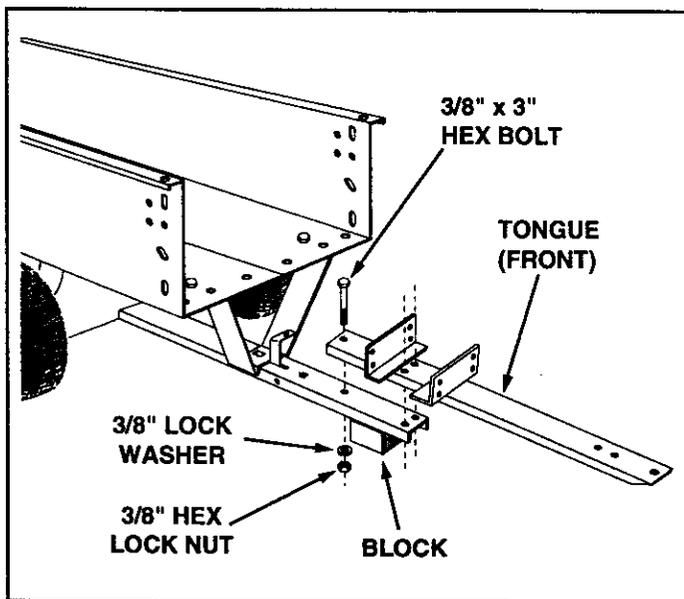


FIGURE 9

- Assemble the hitch bracket to the front tongue using two 3/8" x 1-1/4" hex bolts, 3/8" lock washers and 3/8" hex lock nuts. **Tighten.** See figure 10.
- Assemble the hitch pin to the hitch bracket and tongue, securing it with the 1/8" hair cotter pin. See figure 10.

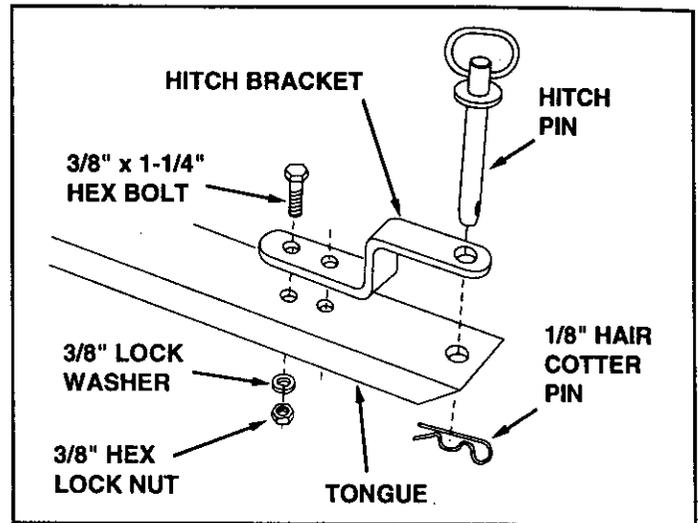


FIGURE 10

- Release the latch lock lever and tilt the cart bed back. See figure 11.
- Assemble the front panel to the outside of the cart bed, sliding the bottom lip of the panel in between the cart bed and the latch stand bracket. Fasten the panel to the bottom and the sides of the cart bed using eight 1/4" x 5/8" hex bolts, 1/4" lock washers and 1/4" hex nuts. **Tighten.** See figure 11.

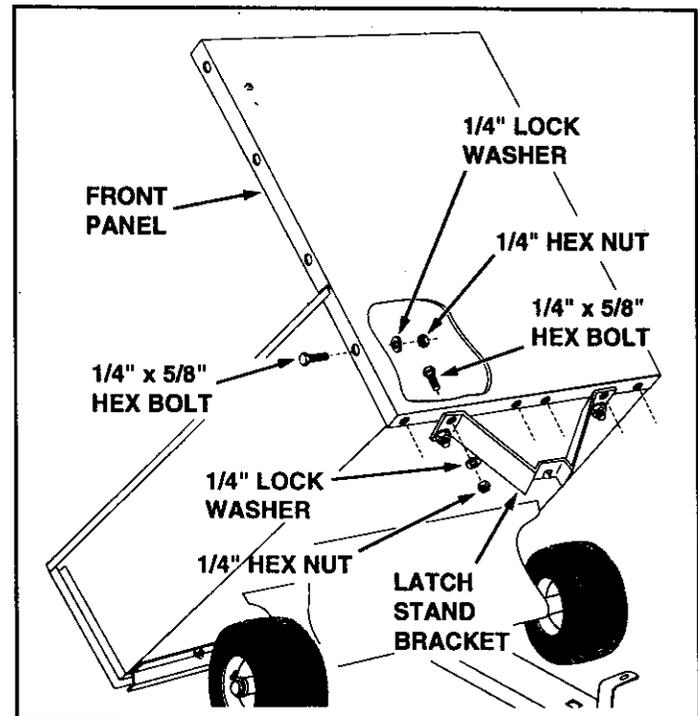


FIGURE 11

- **Tighten** the two bolts which were assembled to the latch stand bracket in figure 6.

- Lower the front of the cart and lock it to the tongue with the latch lock lever.
- Place a side panel down onto the cart, fitting it **inside** the front panel. Fasten the side panel to the front panel using three 1/4" x 5/8" hex bolts, 1/4" lock washers and 1/4" hex nuts. Fasten the side panel to the cart bed flange using two 1/4" x 5/8" hex bolts, 1/4" flat washers, 1/4" lock washers and 1/4" hex nuts. **Tighten.** See figure 12. Repeat on other side.

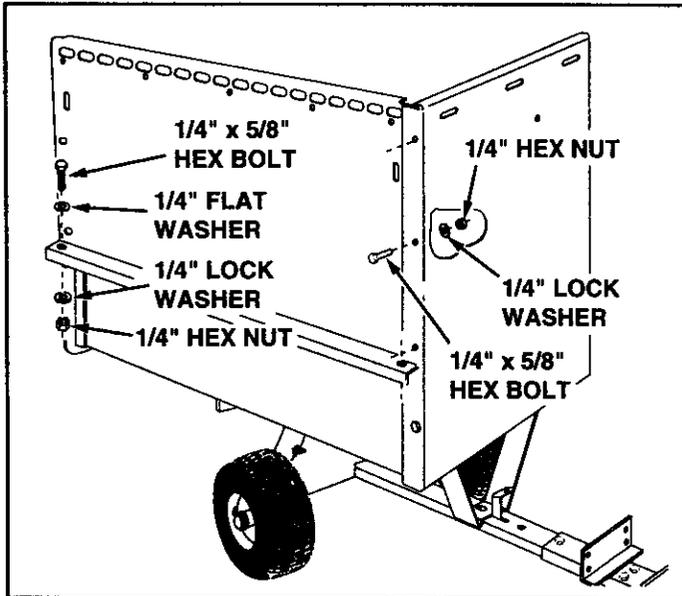


FIGURE 12

- Assemble the dump handle to the front panel using two #10-32 x 5/8" truss head bolts and #10-32 hex nuts. **Tighten.** See figure 13.
- Assemble the a side bracket to the front hole and the two rear holes in a side panel. Use three 1/4" x 5/8" hex bolts, 1/4" lock washers and 1/4" hex nuts. **Tighten.** See figure 13. Repeat for other side.

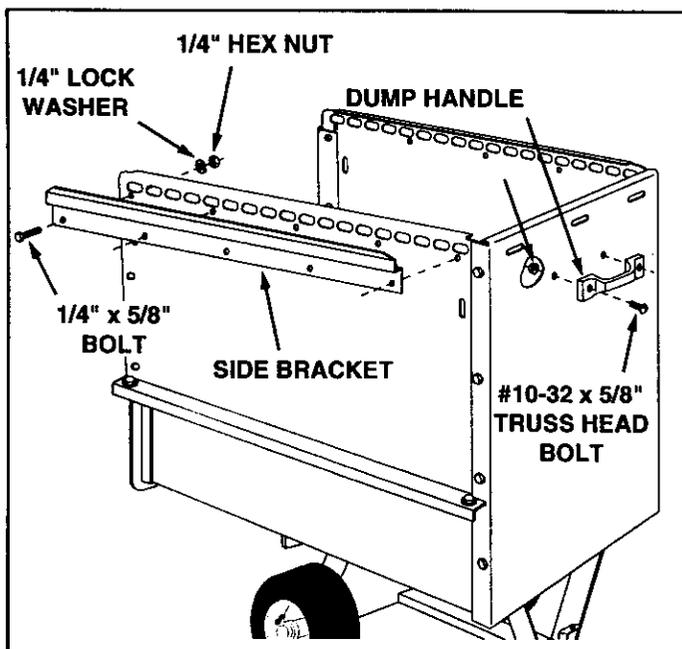


FIGURE 13

- Assemble a 1/4" hex nut, 1/4" lock washer and 1/4" flat washer onto each end of a tie rod. Insert the rod ends through the middle hole in each side panel and side bracket. Assemble another 1/4" flat washer, 1/4" lock washer and 1/4" hex nut onto each end of the tie rod. Adjust the hex nuts to make the sides the same distance apart at the middle of the cart as at the front. **Tighten** the nuts. See figure 14.

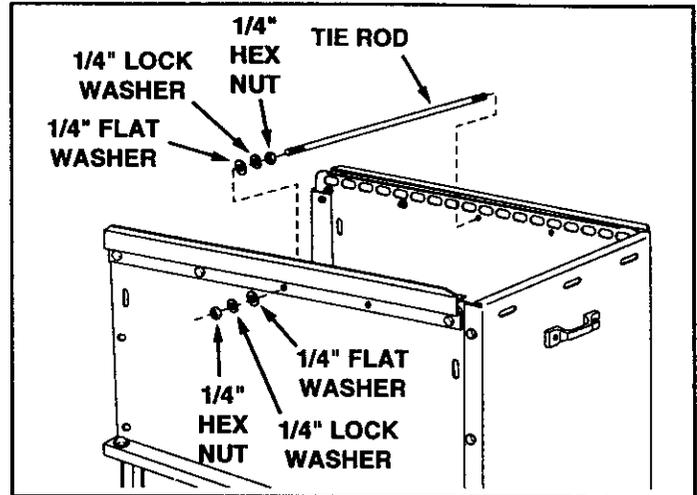


FIGURE 14

- Place a 1/4" flat washer onto a 1/4" eye bolt and insert the bolt through the second hole from the front in the side panel and side bracket. Assemble another 1/4" flat washer and a 1/4" hex lock nut onto the bolt. **Tighten,** leaving the nut loose enough that the eye bolt turns freely. Repeat on other side. See figure 15.
- Insert the left prop rod through the eye bolt and temporarily rest it on top of the tie rod as shown in figure 15. Make sure the hook end of the prop rod points down and the threaded end points outward. Repeat for the right prop rod.

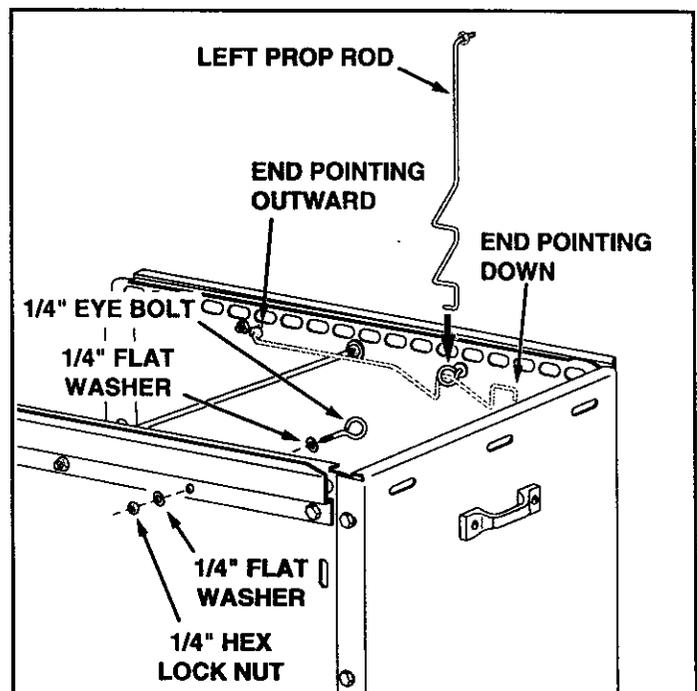


FIGURE 15

- Assemble a 1/4" hex nut and then a 1/4" flat washer onto each end of a tie rod. Insert the rod ends through the upper holes in the sides of the hardtop. Assemble another 1/4" flat washer and 1/4" hex nut onto each end of the tie rod. Adjust the hex nuts to make the distance between the sides approximately the same front to rear. **Tighten** the nuts. See figure 16.
- Assemble the three hinges to the front of the hard top using six 1/4" x 5/8" hex bolts, 1/4" flat washers, 1/4" lock washers and 1/4" hex nuts. Assemble the bolts and flat washers from the bottom. See figure 16.

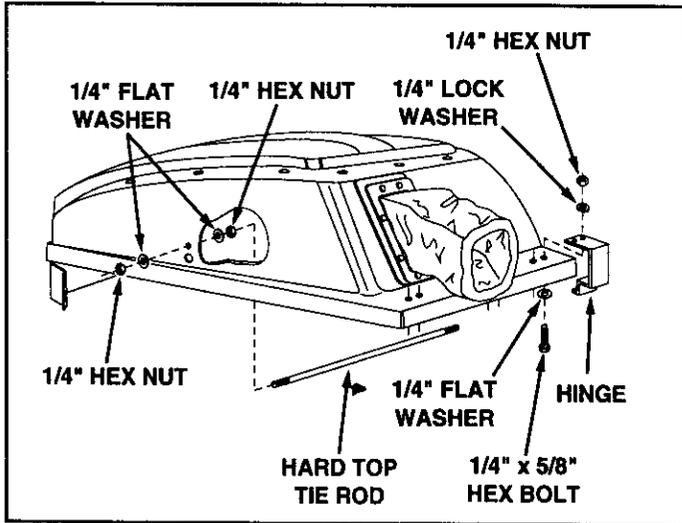


FIGURE 16

- Assemble the right hand and left hand door latches to the back of the hard top using two 5/16" x 3/4" hex bolts, nylon washers and 5/16" nylock nuts. Place the nylon washer beneath the door latch. Tighten so that the latch is snug but will still rotate. See figure 17.

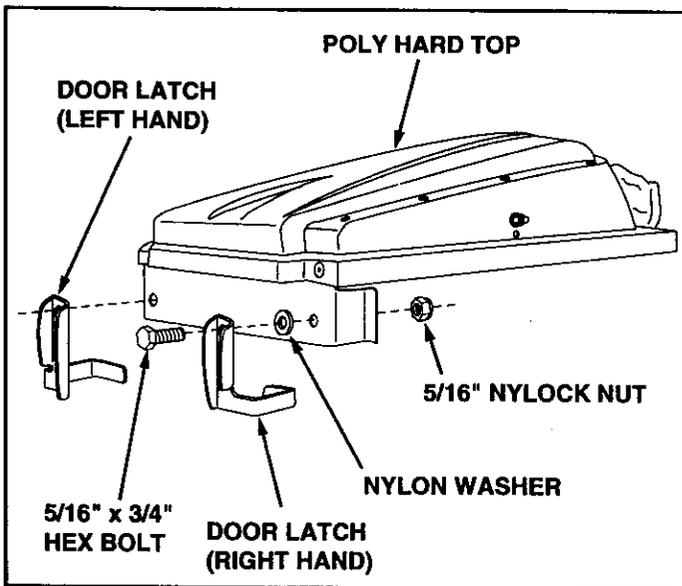


FIGURE 17

- Mount the hard top to the cart by inserting the hinges into the slots in the front panel of the cart. See figure 18.

- Place a 3/8" flat washer onto the end of the right prop rod and insert the rod into the lower hole in the side of the hardtop. Assemble a 3/8" flat washer and a 3/8" hex lock nut onto the rod on the outside of the hard top. **Tighten** the nut and then loosen 1/2 turn. See figure 18. Repeat for the left prop rod.

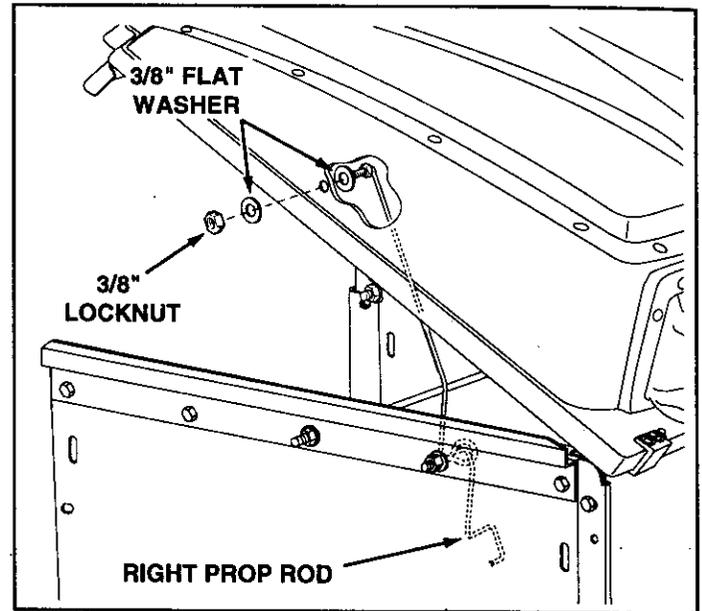


FIGURE 18

- Lower the hard top. If it does not fit down easily into the "Z" brackets, adjust the width of the hardtop by adjusting the nuts on the tie rod. See figure 19.
- Screw a 1/4" hex nut approximately half way onto a 1/4" x 1" hex bolt. Insert the bolt into the hole in the side of the cart as shown in figure 19. Fasten the bolt to the cart using a 1/4" lock washer and 1/4" hex nut. **Tighten** so that the nut is even with the end of the bolt. Repeat on the other side. See figure 19.

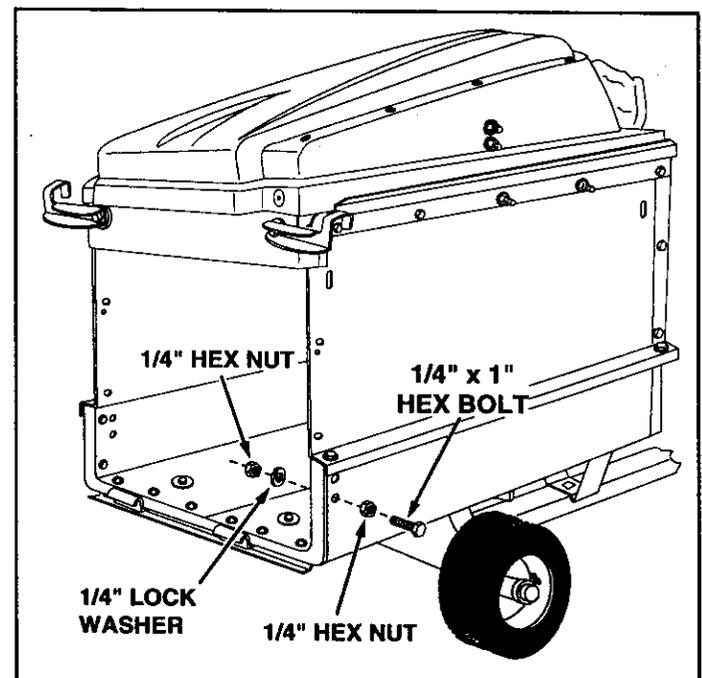


FIGURE 19

- Assemble a short tie strap to the rear door using one 1/4" x 1-1/4" hex bolt, two 1/4" flat washers, one 1/4" lock washer and one 1/4" hex nut. Assemble an "S" hook through the loose end of the strap. See figure 20. Repeat on other side of door.
- Attach the door to the rear of the cart by resting the bottom of the door on the door supports and pushing the top in against the cross brace. Swivel the door latches down until they lock into the slots in the sides of the cart. See figure 20.
- Hook both the tie straps onto the 1/4" x 1" hex bolts in the sides of the cart. See figure 20.

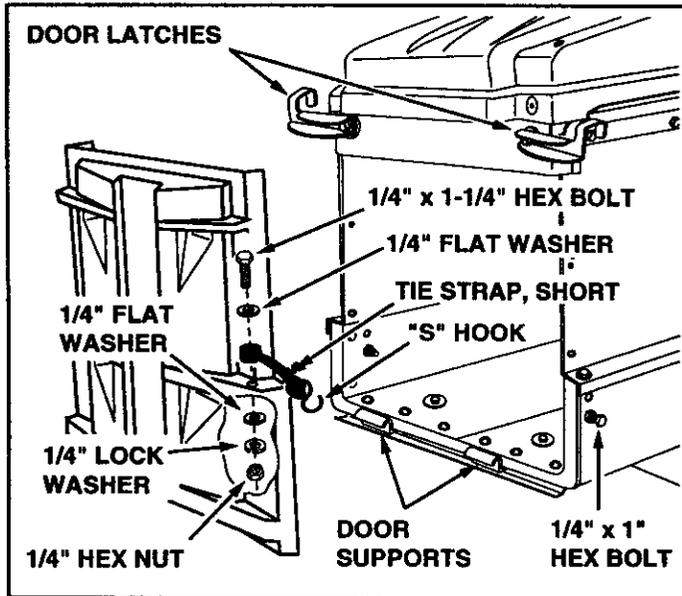


FIGURE 20

- Assemble the engine base assembly to the welded angles on the tongue using four 5/16" x 3/4" hex bolts, 5/16" lock washers and 5/16" nylock nuts. Tighten the bolts securely. See figure 21.

NOTE: Use the upper holes in the welded angles.

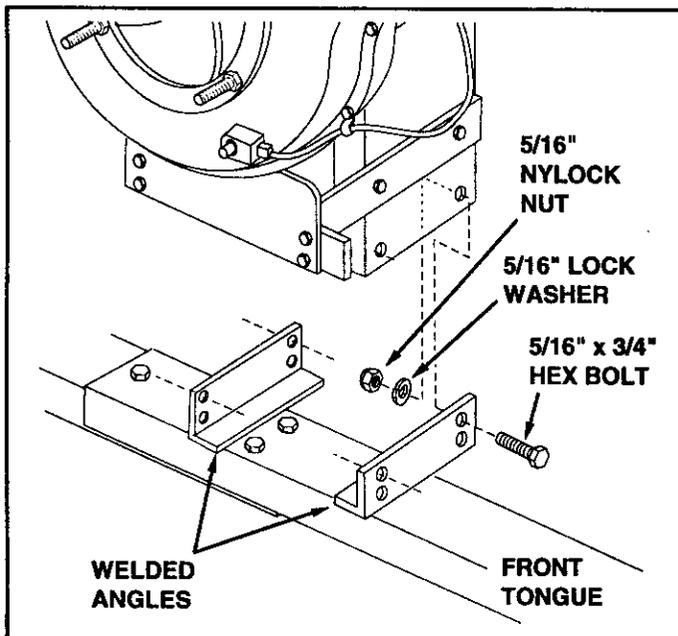


FIGURE 21

- Remove the hex bolts, lock washers and hex lock nuts from the two holes in the impeller housing as shown in figure 22. Assemble the hose hanger bracket to the two holes using the bolts, lock washers and lock nuts which you removed.

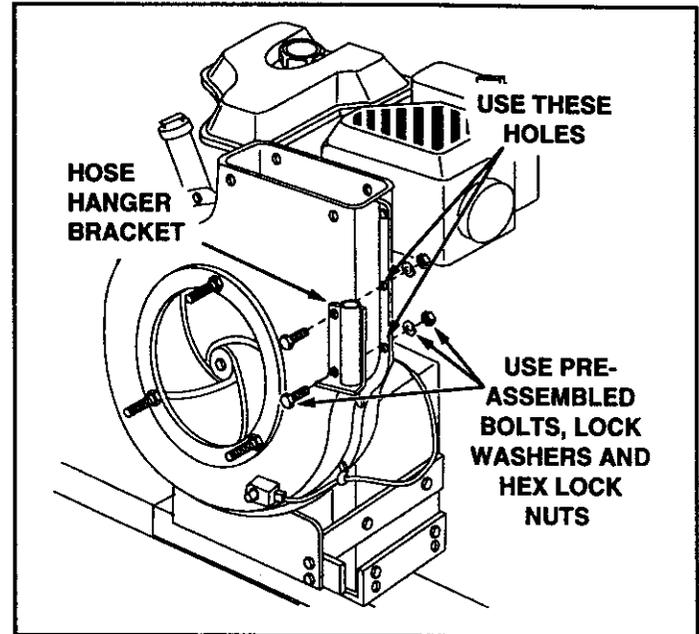


FIGURE 22

- Temporarily push the vinyl boot back inside the hard top.
- Assemble the elbow to the impeller housing, using four 5/16" x 3/4" thread forming hex bolts, and four nylon washers. Align the upper end of the elbow side to side with the opening in the hard top. Tighten the bolts. Pull the boot forward over the end of the elbow. See figure 23.

HINT: To start a bolt into an unthreaded hole, push the bolt into the hole while turning it with a wrench.

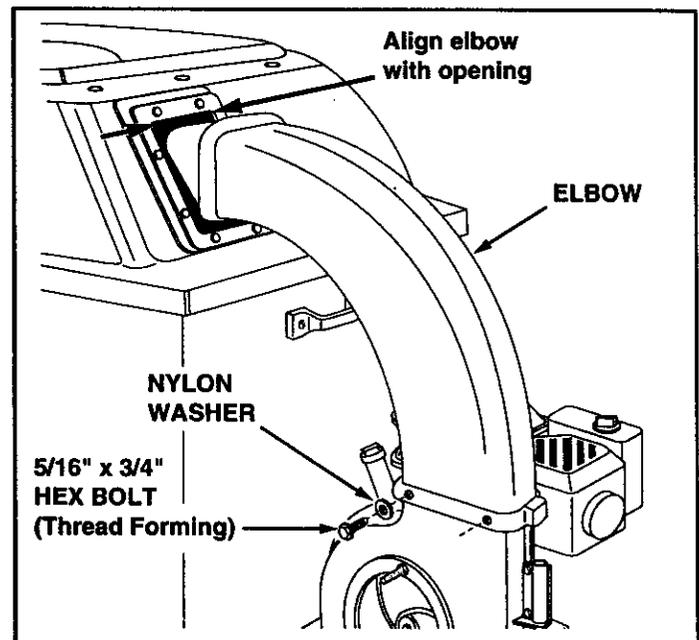


FIGURE 23

- Assemble the hose adapter (nozzle) to the front of the impeller housing, securing it with the three knobs. Make sure that the switch actuator bracket depresses the switch on the housing. See figure 24.

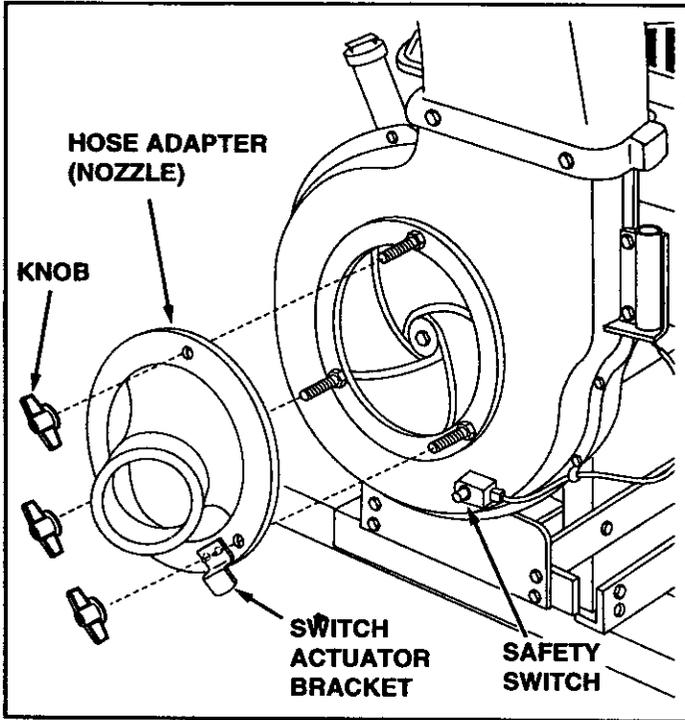


FIGURE 24

- Place the hose hanger rod assembly down into the hose hanger bracket on the impeller housing assembly. See figure 26.
- Loop the rubber tie strap under the hose. Fasten the hooks to the hose hanger rod assembly. See figure 26.

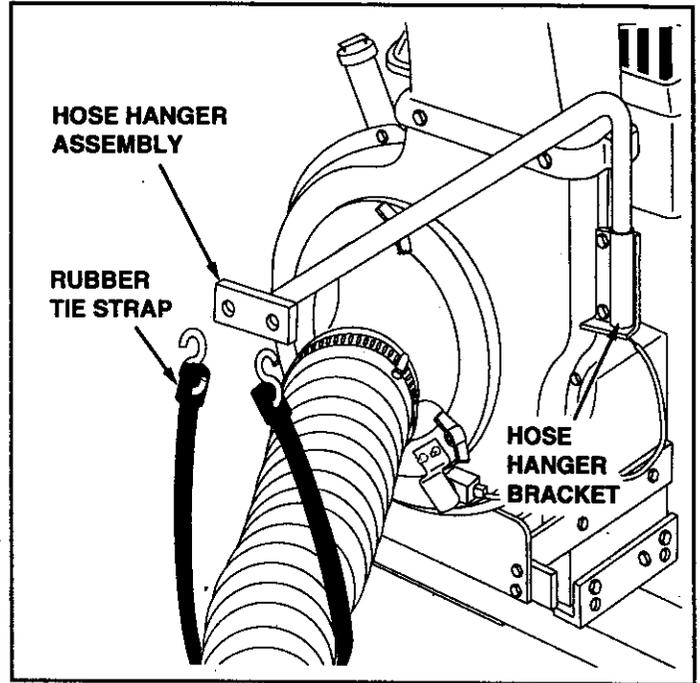


FIGURE 26

- Place a hose clamp onto the end of the hose. Push the hose onto the hose adapter (nozzle). Tighten the hose clamp onto the hose and hose adapter. **Do not collapse the hose adapter when tightening the clamp.** See figure 25.
- The remaining hose clamp will be used later to fasten the hose to the deck adapter.

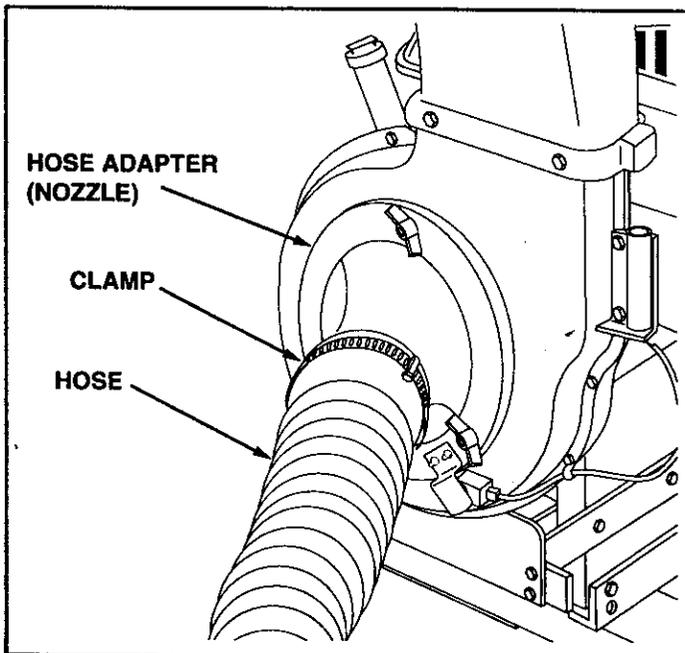


FIGURE 25

- Assemble the hitch plate to the tractor hitch if:
 - a. Your tractor has a square (straight) hitch frame, to help prevent binding.
 - b. Your tractor has a lightweight hitch frame that needs reinforcing for towing the Mow-N-Vac. Use a 1/2" x 1-1/4" hex bolt, a 7/16" flat washer and a 1/2" hex lock nut. See figure 27.

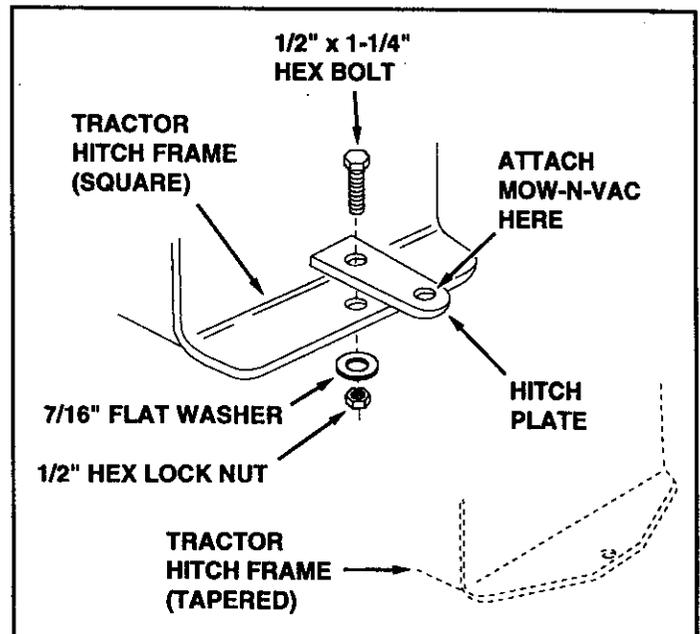


FIGURE 27

ASSEMBLING THE DECK ADAPTER (#62468) TO THE MOWER DECK

NOTE: Not all of the parts in the deck adapter hardware package will be used for any one particular fit up.

- Remove the mower discharge deflector from your mower deck. Save the deflector and hardware for remounting deflector.

IF YOU HAVE A MURRAY TRACTOR WITH A 38" or 40" DECK, SKIP DIRECTLY TO PAGE 17.

IF YOU HAVE A MURRAY TRACTOR WITH A 46" DECK, SKIP DIRECTLY TO PAGE 18.



CAUTION: Mower deflector must be replaced when Vac System deck adapter is removed. Do Not operate mower unless adapter or deflector is in place and properly mounted.

- Identify your mower deck (see fold outs) and cut out the correct discharge opening template for your mower deck size. If there is no template for your deck size you can make your own template by marking around a piece of cardboard held against the edge of the discharge opening.
- Tape the template to the face of the adapter, locating template approximately 1/2" from front and 1/4" down from top of adapter. Keep as close to top as possible. See figure 28. Mark outline of template on face of adapter using white crayon, nail or scribe. Drill a starting hole inside the outline, then use a saber saw or key hole saw to cut out the opening. See figure 28.

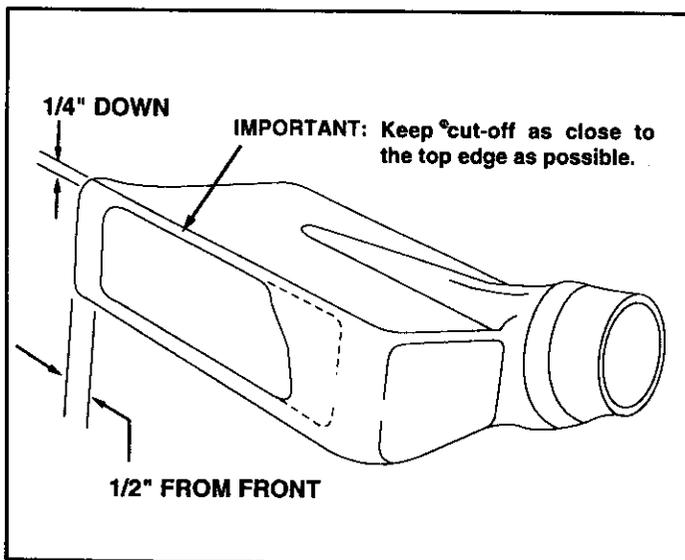


FIGURE 28

- Position the adapter over the deck opening, and check for fit of cutout as shown in figure 29. Trim cutout, if necessary, to allow tilting of adapter, keeping the fit as close as possible for best vacuum suction.

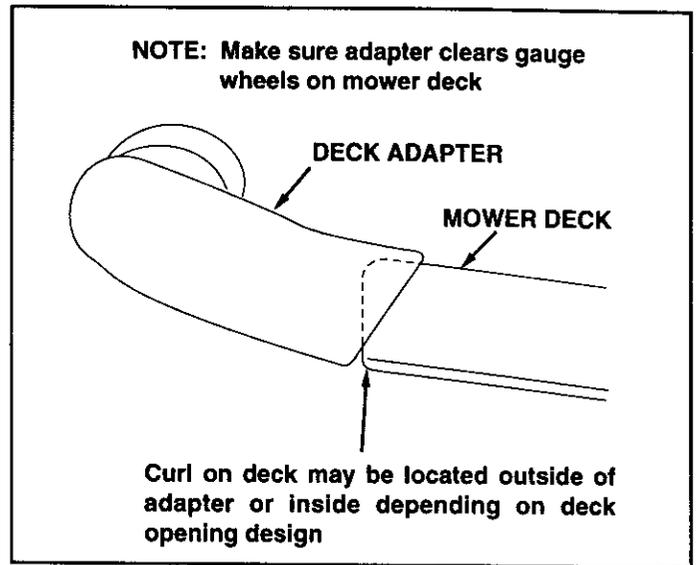


FIGURE 29

- Holding the adapter bracket and the deck adapter together, position the deck adapter on the mower deck. Keeping the edge of deck adapter as close as possible to the offset in the adapter bracket, see if the slot in the adapter bracket can be aligned with one or two of the deflector holes in your mower deck's discharge opening. If the bracket can not be located correctly using existing holes, it will be necessary to drill one or two 5/16" diameter holes in the deck. See figure 30.

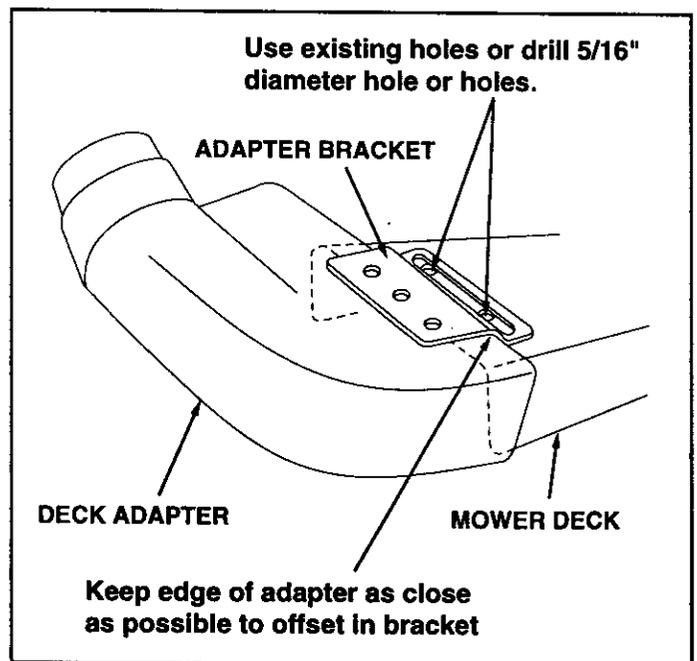


FIGURE 30

- Assemble the adapter bracket to the deck using two 5/16" x 1" hex bolts, 5/16" flat washers and 5/16" hex lock nuts. See figure 31.

NOTE: It may be necessary to use extra 5/16" flat washers to shim under the bracket next to the deck surface. Ten extra washers have been furnished as shims. See figure 31.

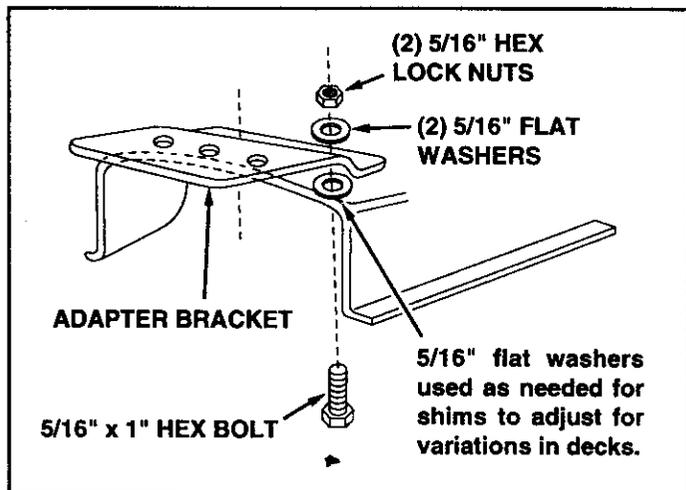


FIGURE 31

- With deck adapter positioned correctly over the discharge opening, use the adapter bracket as a template and drill three 9/32" diameter holes in the top of the deck adapter. See figure 32.
- Bolt deck adapter to bracket using three 1/4" x 3/4" bolts, nylon washers, 1/4" flat washers and 1/4" hex lock nuts. Nylon washers should be against the inside of the deck adapter. See figure 32.

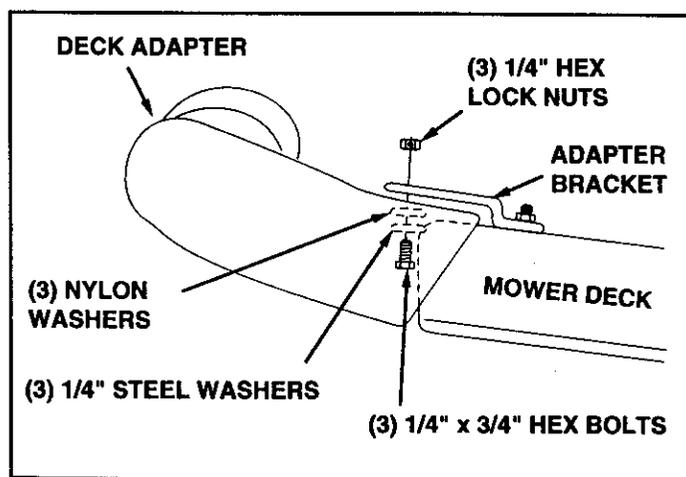


FIGURE 32

9. Assemble end of hose and a hose clamp over the round opening of deck adapter and tighten clamp. **GO DIRECTLY TO THE OPERATION INSTRUCTIONS ON PAGE 19.**

FOR 1990 AND NEWER MURRAY TRACTORS WITH A 38" OR 40" DECK

- Cut out two templates and place on deck adapter as shown in figure 33. Tape smaller one on top and larger one on the side and bottom. After they are in place, carefully mark around the templates, then cut out adapter to obtain correct opening.
- Bolt end of mounting strap to the 5/16" bolt on the mower deck. The other end of the strap will bolt to a hole in the deck adapter, which must be drilled. Position the adapter on the deck, then drill a 5/16" hole in the bottom of the adapter that will align with the hole in the strap. Fasten the adapter to the strap using one 1/4" x 3/4" hex bolt, 1/4" flat washer, nylon washer and 1/4" hex lock nut. See figure 33.

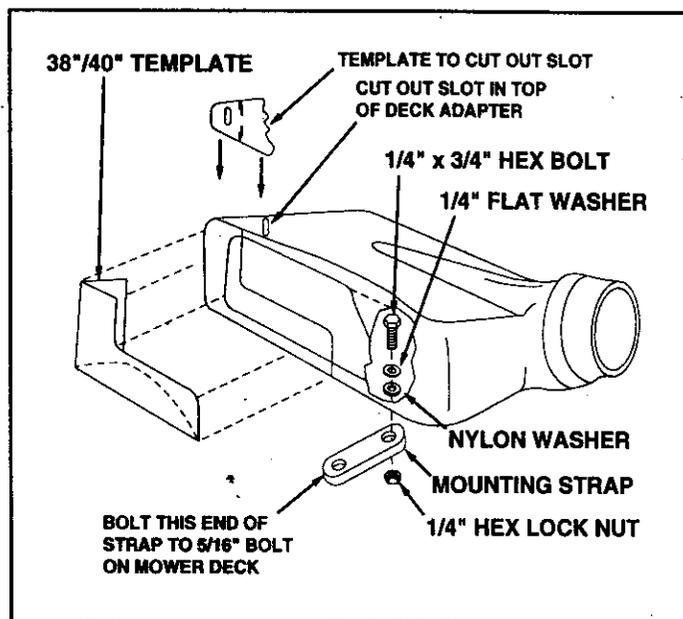


FIGURE 33

- Assemble end of hose and hose clamp over the round opening of deck adapter and tighten clamp. **GO DIRECTLY TO THE OPERATION INSTRUCTIONS WHICH ARE LOCATED ON PAGE 19.**

FOR 1990 AND NEWER MURRAY TRACTORS WITH A 46" DECK

- Tape 46" template onto deck adapter. Mark and then cut out adapter .
- Fasten the angle bracket and the mounting bracket to the mower deck as shown in figure 34. Use two 5/16" x 3/4" carriage bolts, 5/16" flat washers and 5/16" lock nuts. The bolt heads go on inside of mower deck.
- Drill two 5/16" diameter holes in the deck adapter that will align with the holes in the angle bracket and the mounting bracket. Assemble the deck adapter to both brackets using two 1/4" x 3/4" hex bolts, 1/4" flat washers, nylon washers and 1/4" hex lock nuts. See figure 34.

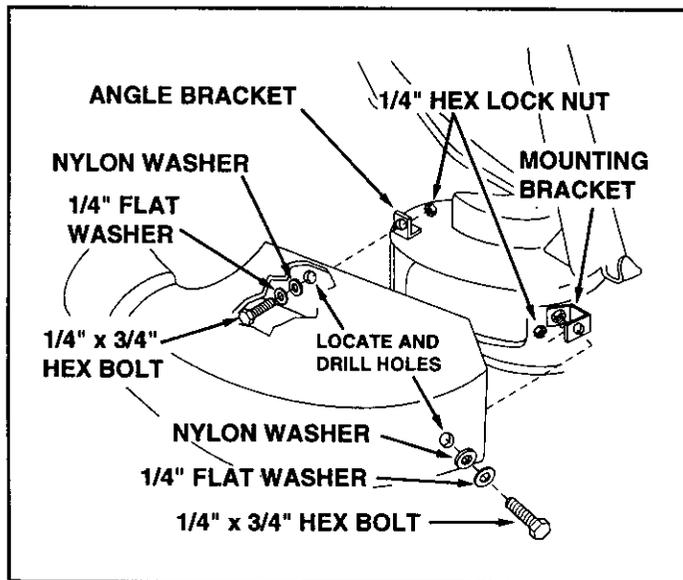


FIGURE 34

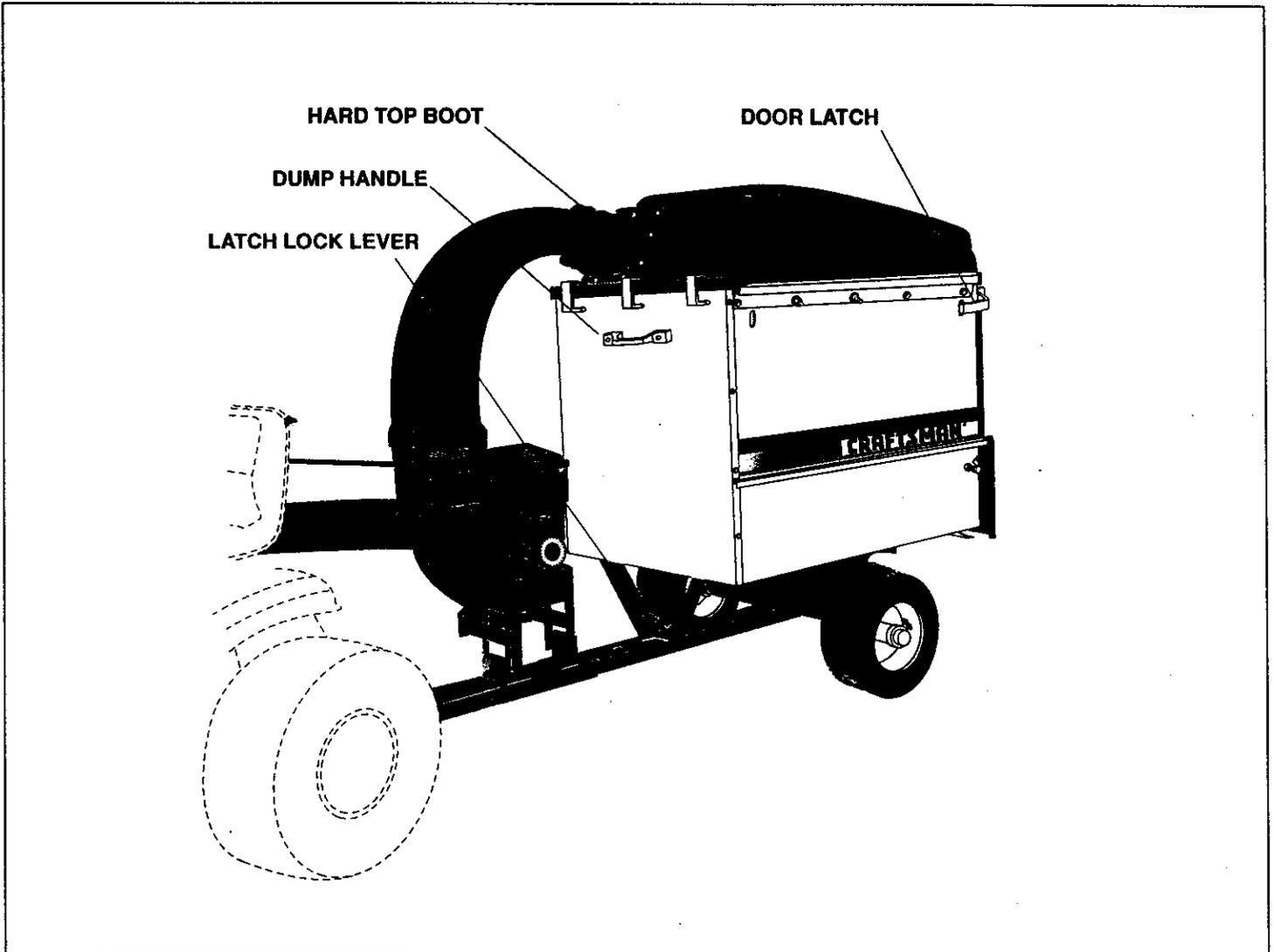
- Assemble end of hose and hose clamp over the round opening of deck adapter and tighten clamp. **GO DIRECTLY TO THE OPERATION INSTRUCTIONS WHICH ARE LOCATED ON PAGE 19.**

OPERATION

KNOW YOUR VAC SYSTEM

Read this owner's manual and safety rules before operating your Vac System.

Compare the illustration below with your Vac System to familiarize yourself with the various controls and their locations.



HARD TOP BOOT Connects the plastic elbow to the hard top, directing discharged material into the cart.

TARP STRAP Hooks onto the side of the cart to hold the rear door securely up against the rear of the cart.

DOOR LATCH Locks the rear of the hard top to the cart and locks the top of the rear door to the cart.

LATCH LOCK LEVER Locks the cart bed down to the tongue. Releases to allow cart to be tipped back for dumping.

DUMP HANDLE Allows the cart bed to be easily tilted back for dumping.

BEFORE STARTING

- Your Vac System engine is shipped without oil or gasoline. Service the engine with oil and gas as instructed in the separate engine manual.
- Inspect the Vac System to make sure all covers (rear door, hardtop boot, elbow, hose adapter, hose and deck adapter) are properly attached.
- Check tires for proper inflation (12 - 14 lbs).



WARNING: Never fill fuel tank indoors, or with the engine running, or while the engine is hot. Do not smoke while filling tank.

HOW TO STOP YOUR VAC SYSTEM

- To stop engine, move the throttle control lever to the OFF position.
- Disconnect spark plug wire from plug to prevent accidental starting while equipment is unattended or is being worked on.



CAUTION: The muffler and adjacent areas are hot!

HOW TO START YOUR VAC SYSTEM



WARNING: Never start or run the engine without all covers being properly attached to the blower housing and cart.

- Check oil and gas in Vac engine.
- Attach spark plug wire to spark plug.
- Move choke lever on engine to CHOKE position. (A warm engine may not require choking.)
- Move throttle control lever on engine to FAST position.
- Grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point). Let the rope rewind slowly.
- Pull rope with a rapid, continuous, full arm stroke. Keep a firm grip on starter handle. Let rope rewind slowly. Do not let starter handle snap back against starter.
- Repeat instructions in two preceding paragraphs until engine fires. When engine starts, move choke control gradually to RUN position.

HOW TO USE YOUR VAC SYSTEM



CAUTION: Vehicle braking and stability may be affected with the addition of an accessory or an attachment. Be aware of changing conditions on slopes.

- Inspect the Vac to make sure all covers (rear door, hard top boot, elbow, hose adapter (nozzle), hose and deck adapter) are properly attached.
- Check tires for proper inflation (12 - 14 lbs).
- Check oil and gas in Vac engine.
- Begin operation at low speed, adjusting forward speed to match grass height and/or moisture condition to prevent clogging.
- Do not attempt to vacuum up any material other than vegetation found in a normal yard, such as light branches, leaves, twigs, etc.



WARNING: Should your Vac System become clogged, shut off tractor and Vac engines. Before attempting to unclog, remove wire from spark plug to prevent accidental starting.

- To empty cart, shut off tractor engine and set brake.
- Shut off Vac engine.
- Remove rear door from cart.
- Release latch lock lever on tongue and tip cart back. See figure 35.



CAUTION: To avoid possible injury, be sure that no one is near the cart before releasing the latch lock lever.

- Lift rear of hardtop and secure it in the upper raised position with right and left prop rods.
- Using a rake or suitable tool, pull grass clippings and/or leaves out of cart.
- After cart is emptied, close hard top, tip cart forward and secure it to the tongue. Reattach rear door and hardtop boot.

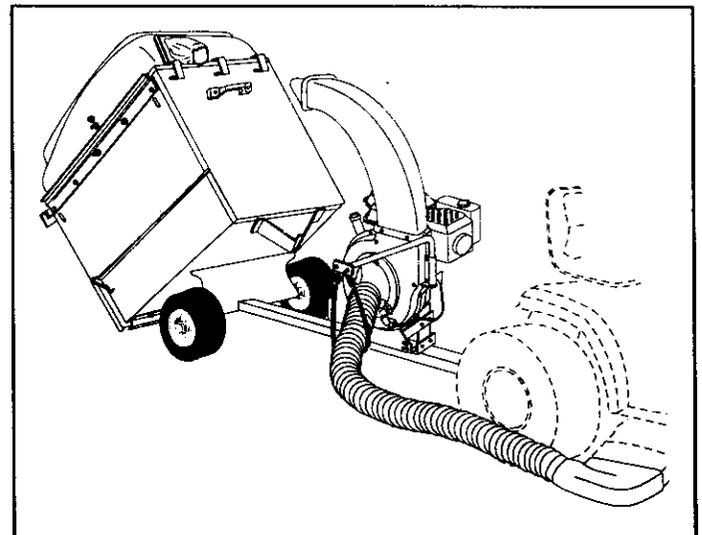


FIGURE 35

MAINTENANCE

CUSTOMER RESPONSIBILITIES

- Read and follow the maintenance schedule and the maintenance procedures listed in this section.

MAINTENANCE SCHEDULE Fill in dates as you complete regular service.	Service Dates											
	Before each use	After each use	Every season	Before storage								
Check for loose fasteners	X											
Check soft vinyl boot	X											
Check tire pressure	X											
Check engine oil level	X											
Lubricate			X									
Clean		X		X								

Maintain engine per instructions below and in engine manual.

BEFORE EACH USE

CHECK FOR LOOSE FASTENERS

- Make a thorough visual check of the Vac System for any bolts and nuts which may have loosened. Retighten any loose bolts and nuts.

CHECK SOFT VINYL BOOT

- Check the soft vinyl boot (on front of hard top) for wear. Replace if worn or damaged.

CHECK TIRE PRESSURE

- Check tire pressure regularly. Recommended tire pressure is 12-14 Lbs.

CHECK ENGINE OIL LEVEL

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

LUBRICATION

- At the beginning of each season, lubricate the latch, latch pivot bolt, and the axle where the hitch tongue pivots, with a light machine oil.
- At least once a season, grease or oil the wheel bearings. Use automotive wheel bearing type grease or 20 weight oil.



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

ENGINE MAINTENANCE

- Check **oil level** before each use. Maintain engine oil as instructed in the separate engine manual.
- Service **air cleaner** every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Poor engine performance and flooding usually indicates that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual.
- The **spark plug** should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each season. Check the engine manual for correct plug type and gap specifications.

CLEANING

- Make sure the cart, the sides and front panel and top are cleaned after each use. Grass clippings and leaves left in the cart will mildew and cause damage if not cleaned out.
- **Clean the engine** regularly with a cloth or brush. Keep the cooling fins on the engine housing clean to permit proper air circulation which is essential to engine performance and life. Be sure to remove all dirt and debris from muffler area.

STORAGE

- Clean the engine and the entire unit thoroughly.
- Refer to engine manual for correct engine storage instructions.
- If storing in an unventilated or metal storage shed, coat metal parts with light oil or silicone to prevent rust.
- Store unit in a clean, dry area.

TROUBLESHOOTING

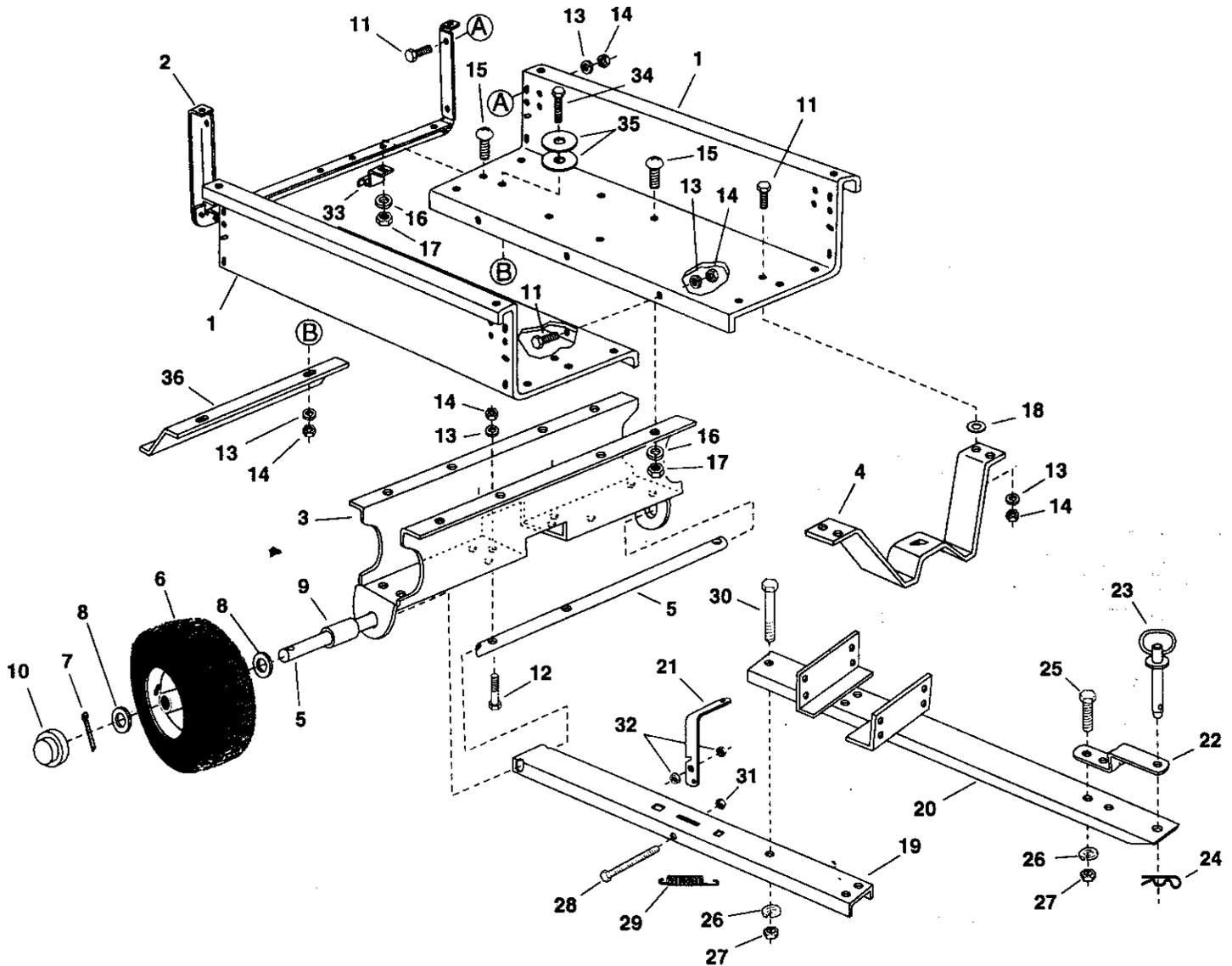
PROBLEM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Engine fails to start	<ol style="list-style-type: none"> 1. Spark plug wire disconnected. 2. Safety switch not contacted. 3. Fuel tank empty, or stale fuel. 4. Fuel shut-off valve closed (if so equipped). 5. Faulty spark plug. 	<ol style="list-style-type: none"> 1. Connect wire to spark plug. 2. Correctly install hose adapter nozzle. 3. Fill tank with clean, fresh fuel. 4. Open fuel shut-off valve. 5. Clean, adjust gap or replace.
Loss of power; operation erratic.	<ol style="list-style-type: none"> 1. Spark plug wire loose 2. Unit running on CHOKE. 3. Blocked fuel line or stale fuel. 4. Water or dirt in fuel system. 5. Carburetor out of adjustment. 6. Dirty air cleaner. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Move choke lever to OFF position. 3. Clean fuel line; fill tank with clean fresh gasoline. 4. Disconnect fuel line at carburetor to drain fuel tank. Refill with fresh fuel. 5. Adjust carburetor.* 6. Service air cleaner.*
Engine overheats	<ol style="list-style-type: none"> 1. Carburetor not adjusted properly. 2. Engine oil level low. 	<ol style="list-style-type: none"> 1. Adjust carburetor.* 2. Fill crankcase with proper oil.
Too much vibration	Loose parts or damaged impeller.	Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. Make all necessary repairs. If vibration continues, have unit serviced by an authorized service dealer.
Unit does not discharge	<ol style="list-style-type: none"> 1. Discharge chute (elbow) clogged. 2. Foreign object lodged in impeller. 3. Vac Cart is full. 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Clean inside of housing and discharge chute (elbow). 2. Stop engine immediately and disconnect spark plug wire. Remove lodged object. 3. Empty cart.

*Refer to the engine manual packed with your unit.

NOTE: For repairs beyond the minor adjustments listed above, please contact your nearest authorized service dealer.

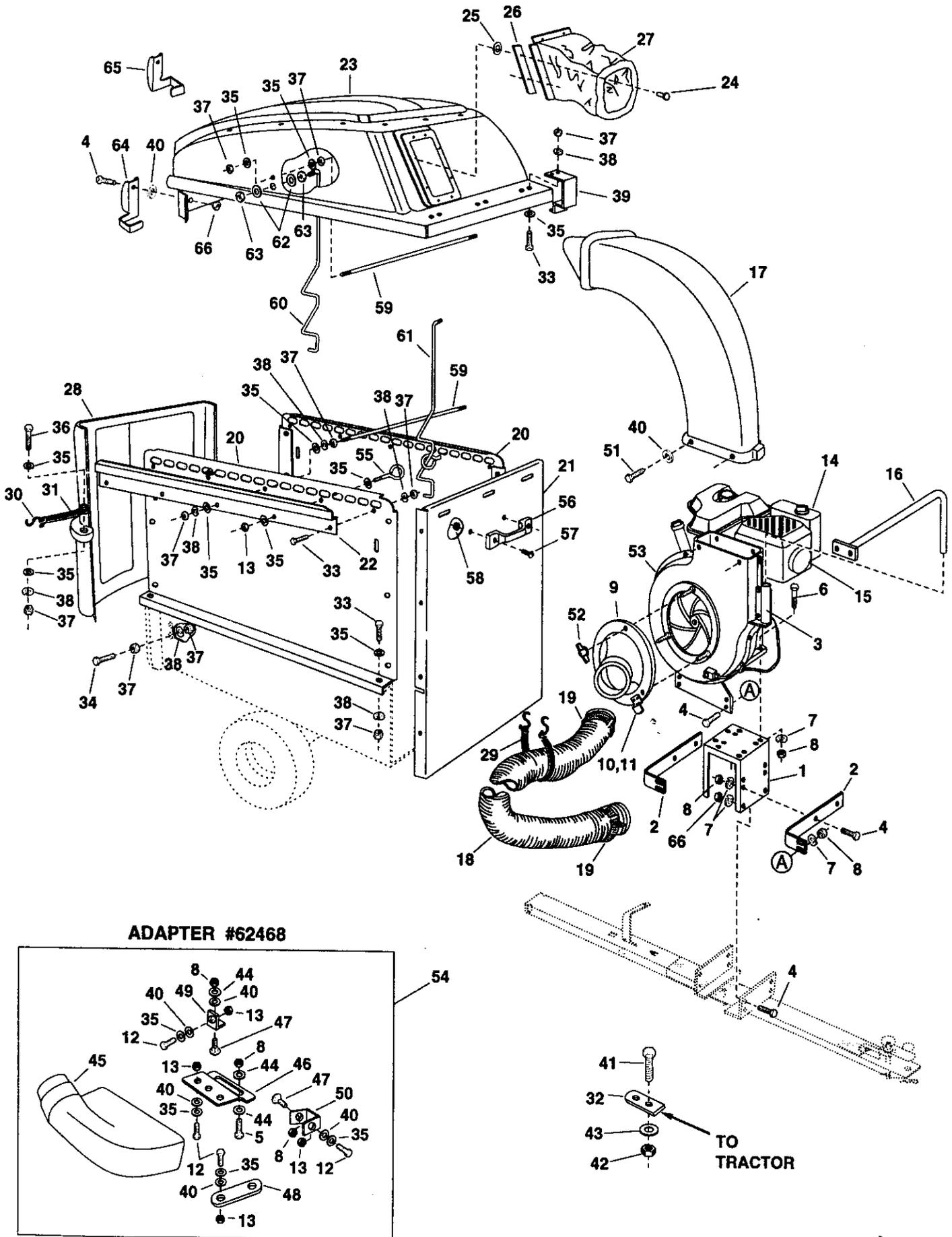
PARTS

REPAIR PARTS FOR MODEL 486.24506 CART BODY



REF. NO.	PART NO.	QTY.	DESCRIPTION	REF. NO.	PART NO.	QTY.	DESCRIPTION
1	23985	2	Cart Body	19	63917	1	Tongue Weldment Ass'y. (Rear)
2	62458	1	Tailgate Reinforcement Bracket	20	63155	1	Tongue Weldment Ass'y. (Front)
3	23507	1	Wheel Support	21	24614	1	Latch Lock Lever
4	24497	1	Latch Stand Bracket	22	23475	1	Hitch Bracket
5	23488	1	Axle, Wheel 1" Dia.	23	43884	1	Hitch Pin
6	46272	2	Wheel w/Tire, 15 x 6.00	24	43343	1	Pin, Hair Cotter 1/8"
7	43093	2	Cotter Pin, 1/8" Dia. x 1-1/2"	25	43087	2	Hex Bolt, 3/8-16 x 1-1/4"
8	43601	4	Washer, Flat 1"	26	43003	5	Lockwasher, 3/8"
9	44678	2	Spacer Tube, 1-1/4" x 2" Lg.	27	43082	5	Hex Lock Nut, 3/8-16 Thread
10	43014	2	Hub Cap	28	47407	1	Hex Bolt, 5/16-18 x 3-3/4"
11	43866	9	Hex Bolt, 1/4-20 x 5/8"	29	47408	1	Spring, Extension
12	1509-69	2	Hex Bolt, 1/4-20 x 1-3/4"	30	43574	3	Hex Bolt, 3/8-16 x 3"
13	43177	13	Lockwasher, 1/4"	31	43064	1	Hex Lock Nut, 5/16-18
14	43178	13	Hex Nut, 1/4-20 Thread	32	46980	2	Hex Nut, 5/16-18 (SEMS)
15	43814	14	Truss Hd. Bolt, 5/16-18 x 3/4"	33	23838	2	Door Support
16	43086	14	Lockwasher, 5/16"	34	43661	2	Hex Bolt, 1/4-20 x 1"
17	43083	14	Hex Nut, 5/16-18 Thread	35	43572	4	Flat Washer, 1-1/2" x 11/32"
18	43088	2	Washer, Flat 1/4"	36	24604	1	Skid Plate

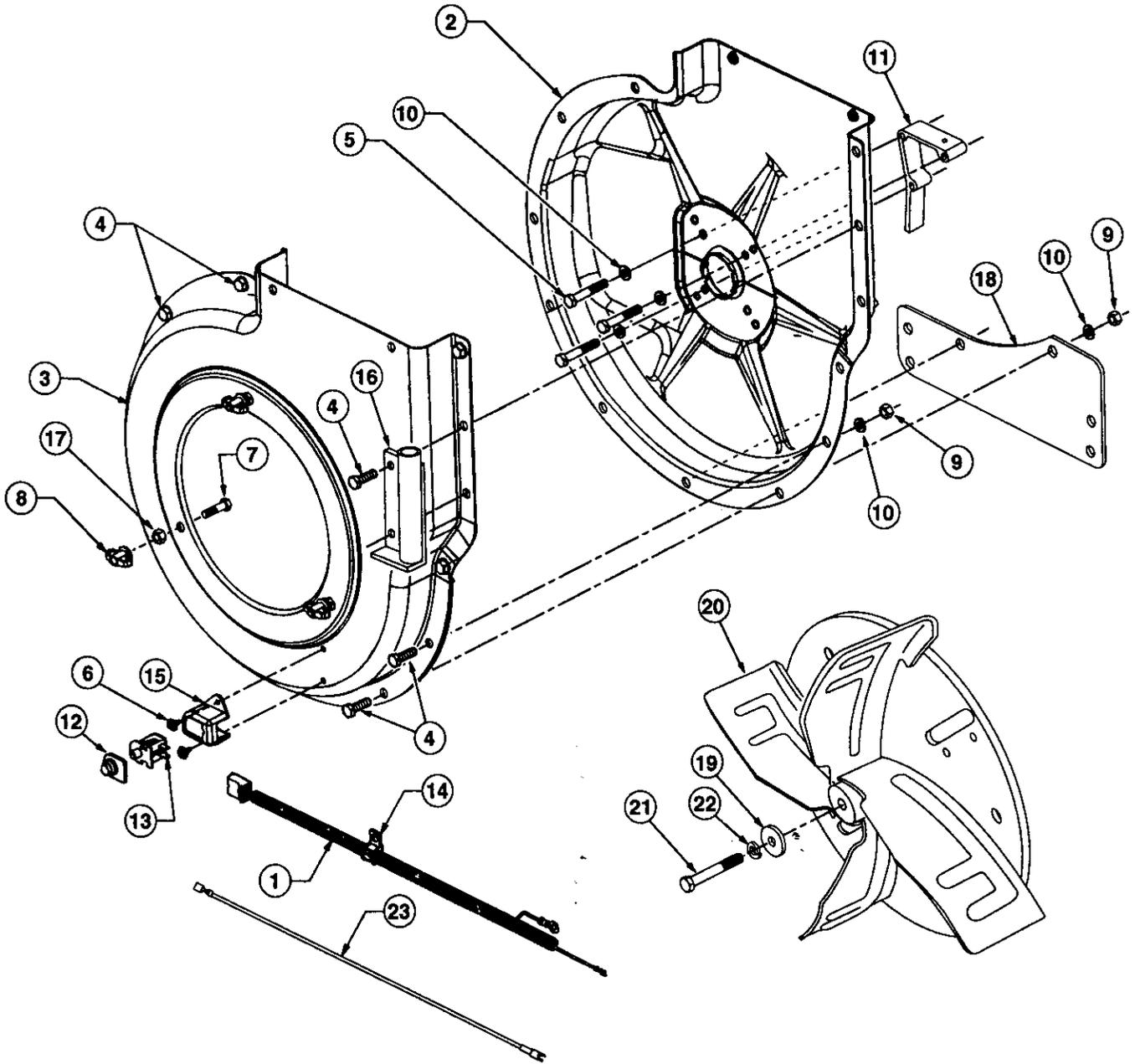
REPAIR PARTS FOR MODEL 486.24506 VAC SYSTEM



REPAIR PARTS FOR MODEL 486.24506 VAC SYSTEM

REF. NO.	PART NO.	QTY.	DESCRIPTION	REF. NO.	PART NO.	QTY.	DESCRIPTION
1	24080	1	Engine Base	33	43866	30	Bolt, Hex 1/4-20 x 5/8"
2	24078	2	Brace, Housing	34	43661	2	Bolt, Hex 1/4-20 x 1"
3	63226	1	Hose Hanger Bracket Ass'y. (Ref. item #16 on page 22.)	35	43088	29	Washer, 1/4" STD
4	43182	14	Bolt, Hex 5/16-18 x 3/4"	36	1509-90	2	Bolt, Hex 1/4-20 x 1-1/4"
5	43063	2	Bolt, Hex 5/16-18 x 1"	37	43178	44	Nut, Hex 1/4-20
6	43085	4	Bolt, Hex 5/16-18 x 1-1/2"	38	43177	38	Lockwasher, Spring 1/4"
7	43086	16	Lockwasher, 5/16" Spring Type	39	24582	3	Hinge, Poly Top
8	43064	19	Nut, Hex Lock 5/16-18	40	1543-69	9	Washer, Nylon 21/64"
9	63375	1	Assembly, Hose Adapter (Nozzle) (Includes items 10 and 11))	41	43351	1	Bolt, Hex 1/2-13 x 1-1/4"
10	781-0635	1	Bracket, Switch (Actuator)	42	43262	1	Nut, Hex Lock 1/2-13
11	728-3001	3	Rivet, Pop 5/32"	43	43352	1	Washer, Flat 7/16"
12	43012	3	Bolt, Hex 1/4-20 x 3/4"	44	43081	12	Washer, 5/16" STD
13	43013	3	Nut, Hex Lock 1/4-20 Thd.	45	43830	1	Adapter, Deck
14	110412-0158-E1	1	Engine, B & S 5 HP	46	23560	1	Bracket, Deck Adapter
15	222261	1	Deflector, Muffler	47	43080	2	Bolt, Carr. 5/16" x 3/4"
16	63227	1	Hose Hanger Rod Ass'y.	48	23825	1	Mounting Strap
17	46420	1	Elbow	49	23826	1	Angle Bracket
18	43792	1	Hose (6" x 84")	50	23827	1	Mounting Bracket
19	43793	2	Hose Clamp 6"	51	47630	4	Screw, Self Tap 5/16-18 x 3/4"
20	24608	2	Side Panel Cart Extension	52	712-0421	3	Knob (See also Item #8, Page 26)
21	24609	1	Front Panel Cart Extension	53		1	Impeller Housing Assembly (See page 26)
22	24610	2	Side Bracket ("Z")	54	62468	1	Deck Adapter Kit (Includes parts in box shown on page 24)
23	63918	1	Hard Top Assembly (Includes 24,25,26,27)	55	44419	2	Eyebolt, 1/4"
24	43882	8	Rivet, 3/16"	56	47640	1	Handle, Dump
25	43910	8	Washer, Flat 3/16"	57	43364	2	Bolt, Truss Hd. #10-32 x 5/8"
26	23842	4	Boot Mounting Strap	58	43662	2	Nut, Hex #10-32 (SEMS)
27	46480	1	Hard top Boot	59	23476	2	Rod, Tie
28	44790	1	Poly Rear Door	60	47642	1	Rod, Prop (RH)
29	43790	1	Strap, Tarp 25"	61	47641	1	Rod, Prop (LH)
30	44849	2	"S" Hook, #32	62	43070	4	Washer, Flat 3/8"
31	44850	2	Strap, Tarp (Less Hooks)	63	43082	4	Nut, Hex Lock 3/8-16
32	23540	1	Hitch Plate	64	24612	1	Latch, Door (RH)
				65	24613	1	Latch, Door (LH)
				66	47810	6	Nut, Nylock, 5/16-18
					47763	1	Owner's Manual

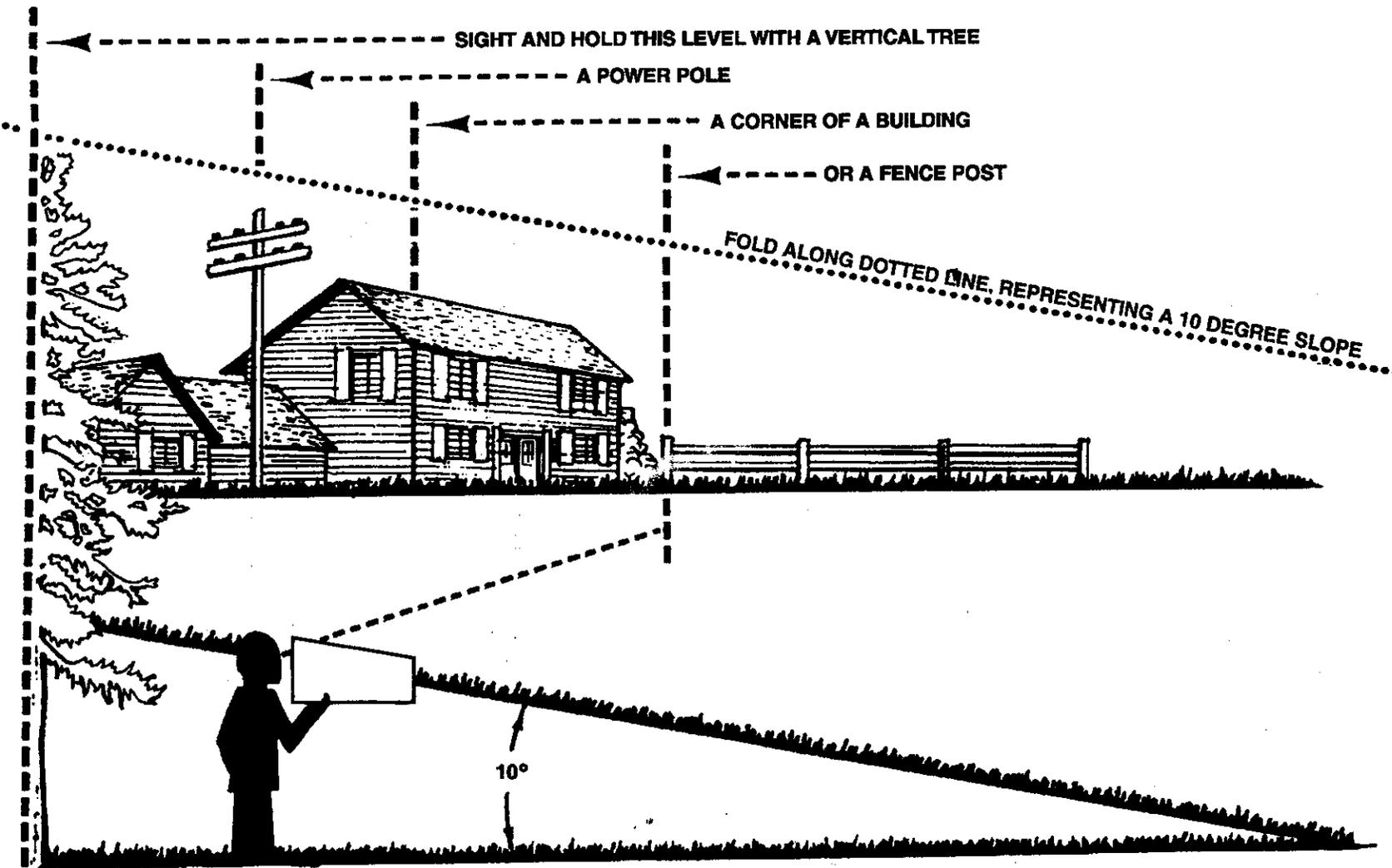
REPAIR PARTS FOR MODEL 486.24506 VAC SYSTEM IMPELLER HOUSING ASSEMBLY



REF. NO.	PART NO.	QTY.	DESCRIPTION	REF. NO.	PART NO.	QTY.	DESCRIPTION
1	629-0241A	1	Harness, Wire	13	725-3166	1	Snap Mount Switch
2	24634	1	Housing Ass'y. Inner	14	726-0272	1	Clamp
3	24633	1	Housing Ass'y. Outer	15	731-1613	1	Cover, Switch
4	43182	12	Bolt, Hex 5/16-18 x 3/4"	16	63226	1	Hose Hanger Bracket. Ass'y.
5	710-0772	3	Bolt, Hex 5/16-24 x 2"	17	712-3046	3	Nut, Hex Jam 5/16-18 Thd.
6	710-1268	2	Screw, Self Tap #10-16 x 3/8"	18	24606	1	Spacer, Housing
7	43063	3	Bolt, Hex 5/16-18 x 1"	19	736-0247	1	Flat Washer, 13/32" x 1-1/4"
8	712-0421	3	Knob	20	63924	1	Impeller Assembly
9	43064	12	Nut, Hex Lock 5/16-18	21	710-1273	1	Bolt, Hex 3/8-24 x 2-3/4"
10	43086	15	Washer, Lock 5/16" Spring Type	22	43003	1	Lockwasher, 3/8"
11	719-0330A	1	Adapter, Mounting	23	629-0923	1	Harness Adapter
12	725-1700	1	Cover, Switch				

SLOPE GUIDE

(Keep this sheet in a safe place for future reference.)
Use this guide to determine if a slope is safe for the operation of your tractor and Vac System. Refer also to the instructions in your vehicle owners manual.



CAUTION: Do not operate your tractor and Vac System on a slope in excess of 10 degrees. Be sure of your tractor's towing and braking capabilities before operating on a slope. Avoid any sudden turns or maneuvers while on a slope.

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