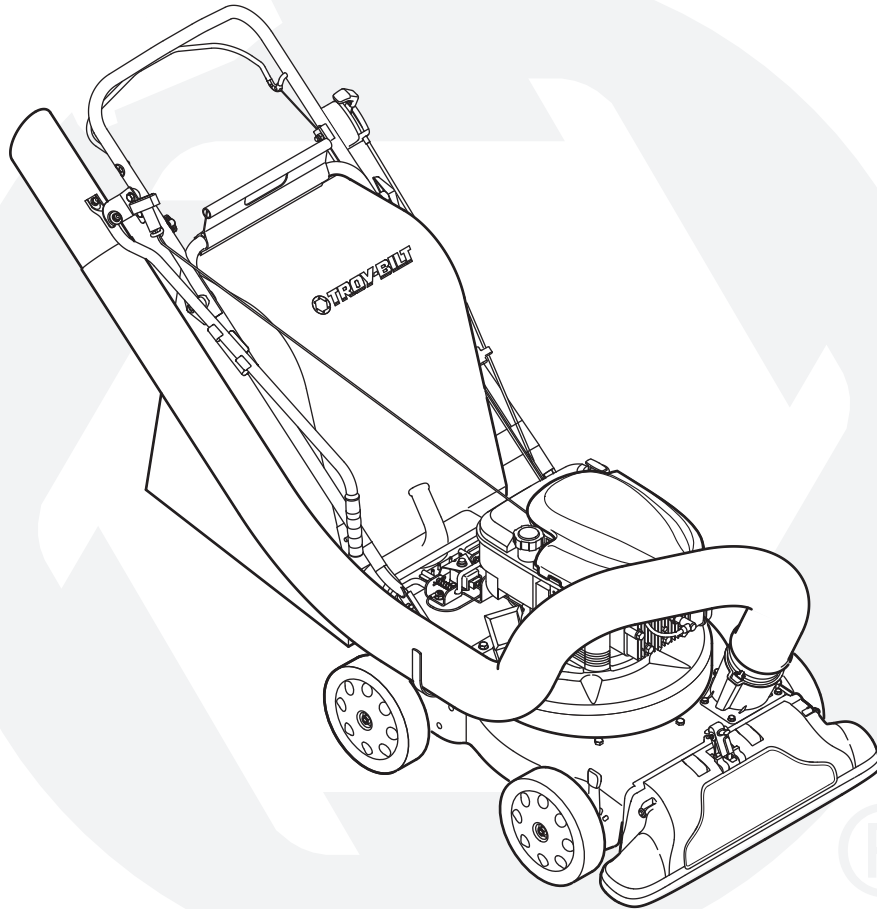


OPERATOR'S MANUAL



Self Propelled Yard Vacuum/Chipper/Shredder/ Vacuum/Hose — Model 24A-070F766

IMPORTANT

READ SAFETY RULES AND INSTRUCTIONS CAREFULLY BEFORE OPERATION

Warning: This unit is equipped with an internal combustion engine and should not be used on or near any unimproved forest-covered, brush-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 for the muffler is available through your nearest engine authorized service dealer or contact the service department, P.O. Box 361131 Cleveland, Ohio 44136-0019.

This Operator's Manual is an important part of your new yard vacuum. It will help you assemble, prepare and maintain the unit for best performance. Please read and understand what it says.

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Finding and Recording Model Number

BEFORE YOU START ASSEMBLING YOUR NEW EQUIPMENT,

please locate the model plate on the equipment and copy the information to the sample model plate provided to the right. You can locate the model plate by standing behind the unit and looking down at the frame below the engine. This information will be necessary to use the manufacturer's web site and/or obtain assistance from the Customer Support Department or an authorized service dealer.


www.troybilt.com

TROY-BILT LLC
P. O. BOX 361131
CLEVELAND, OH 44136
330-558-7220
1-800-520-5520

Customer Support

Please do **NOT** return the unit to the retailer from which it was purchased, without first contacting Customer Support.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this unit, you can seek help from the experts. Choose from the options below:

1. Visit **troybilt.com**. Click on Customer Service at the bottom of the page.
2. Phone a **Customer Support Representative** at 1 (800) 520-5520.
3. The **engine manufacturer** is responsible for all engine-related issues with regards to performance, power-rating, specifications, warranty and service. Please refer to the engine manufacturer's Owner's/Operator's Manual, packed separately with your unit, for more information.

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1

Safety Labels



WARNING

This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol.

HEED ITS WARNING!

Your Responsibility

Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

DANGER

TO AVOID SERIOUS INJURY

- READ OPERATOR'S MANUAL.
- KEEP HANDS OUT OF INLET AND DISCHARGE OPENINGS WHILE MACHINE IS RUNNING. ROTATING BLADES ARE INSIDE.
- TURN ENGINE OFF AND ALLOW IMPELLER TO COME TO COMPLETE STOP BEFORE REMOVING BAG.
- DO NOT ATTEMPT TO CLEAR A CLOG OR JAM WITH THE ENGINE RUNNING.
- DO NOT OPERATE UNIT WITHOUT BAG OR OPTIONAL BLOWER CHUTE IN PLACE.
- DO NOT STAND OR WALK IN FRONT OF BLOWER CHUTE OR AIM IT AT BYSTANDERS. OBJECTS THROWN OUT OF DISCHARGE CAN CAUSE PERSONAL INJURY.
- DO NOT OPERATE WHEN CHILDREN OR OTHERS ARE AROUND.
- WEAR APPROVED SAFETY GLASSES.

STOP

! DANGER

KEEP HANDS OUT OF INLETS WHILE ENGINE IS RUNNING. ROTATING BLADES ARE INSIDE.

S30258

2

Safe Operation Practices



WARNING

This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate this machine. Failure to comply with these instructions may result in personal injury. When you see this symbol.

HEED ITS WARNING!

Your Responsibility

Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.



WARNING: Engine Exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to State of California to cause cancer and birth defects or other reproductive harm.

DANGER: This machine 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 machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

Training

1. Read, understand, and follow all instructions on the machine and in the manual(s) before attempting to assemble and operate. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Be familiar with all controls and their proper operation. Know how to stop the machine and disengage them quickly.
3. Never allow children under 16 years old to operate this machine. Children 16 years old and over should read and understand the operation instructions and safety rules in this manual and should be trained and supervised by a parent.
4. Never allow adults to operate this machine without proper instruction.
5. Keep bystanders, helpers, pets, and children at least 75 feet from the machine while it is in operation. Stop machine if anyone enters the area.
6. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
7. Do not put hands and feet near rotating parts or in the feeding chambers and discharge opening. Contact with the rotating impeller can amputate fingers, hands, and feet.
8. Never attempt to unclog either the feed intake or discharge opening, remove or empty vacuum bag, or inspect and repair the machine while the engine is running. Shut the engine off and wait until all moving parts have come to a complete stop. Disconnect the spark plug wire and ground it against the engine.

Preparation

1. Thoroughly inspect the area where the equipment is to be used. Remove all rocks, bottles, cans, or other foreign objects which could be picked up or thrown and cause personal injury or damage to the machine.
2. Always wear safety glasses or safety goggles during operation or while performing an adjustment or repair, to protect eyes. Thrown objects which ricochet can cause serious injury to the eyes.
3. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Loose fitting clothes or jewelry can be caught in movable parts. Never operate this machine in bare feet or sandals. Wear leather work gloves when feeding material in the chipper chute.
4. Before starting, check all bolts and screws for proper tightness to be sure the machine is in safe working condition. Also, visually inspect machine for any damage at frequent intervals.
5. Maintain or replace safety and instructions labels, as necessary.
6. To avoid personal injury or property damage use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Serious personal injury can occur when gasoline is spilled on yourself or your clothes which can ignite. Wash your skin and change clothes immediately.
 - a. Use only an approved gasoline container.
 - b. Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
 - c. Never fuel machine indoors.
 - d. Never remove gas cap or add fuel while the engine is hot or running.
 - e. Allow engine to cool at least two minutes before refueling.
 - f. Never over fill fuel tank. Fill tank to no more than 1/2 inch below bottom of filler neck to provide space for fuel expansion.
 - g. Replace gasoline cap and tighten securely.
 - h. If gasoline is spilled, wipe it off the engine and equipment. Move machine to another area. Wait 5 minutes before starting the engine.
 - i. Never store the machine or fuel container inside where there is an open flame, spark, or pilot light (e.g. furnace, water heater, space heater, clothes dryer, etc.).
 - j. To reduce a fire hazard, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
 - k. Allow machine to cool at least 5 minutes before storing.

Operation

1. Do not put hands and feet near rotating parts or in the feeding chambers and discharge opening. Contact with the rotating impeller can amputate fingers, hands, and feet.
2. Before starting the machine, make sure the chipper chute, feed intake, and cutting chamber are empty and free of all debris.
3. Thoroughly inspect all material to be shredded and remove any metal, rocks, bottles, cans, or other foreign objects which could cause personal injury or damage to the machine.
4. If the impeller strikes a foreign object or if your machine should start making an unusual noise or vibration, immediately shut the engine off. Allow the impeller to come to a complete stop. Disconnect the spark plug wire, ground it against the engine and perform the following steps:
 - a. Inspect for damage.
 - b. Repair or replace any damaged parts.
 - c. Check for any loose parts and tighten to assure continued safe operation.
5. Do not allow an accumulation of processed material to build up in the discharge area. This can prevent proper discharge and result in kickback of material through the feed opening.
6. Do not attempt to shred or chip material larger than specified on the machine or in this manual. Personal injury or machine damage could result.
7. Never attempt to unclog either the feed intake or discharge opening while the engine is running. Shut the engine off, wait until all moving parts have stopped, disconnect the spark plug wire and ground it against the engine before clearing debris.
8. Never operate without vacuum bag and discharge chute properly attached to the machine. Never empty or change vacuum bag while the engine is running. Zippered end of vacuum bag must be kept closed at all times during operation.
9. Never operate without either the inlet nozzle or optional hose attachment properly attached to the machine. Never attempt to attach or change either attachment while the engine is running.
10. Keep all guards, deflectors and safety devices in place and operating properly.
11. Keep your face and body back and to the side of the chipper chute while feeding material into the machine to avoid accidental kickback injuries.
12. Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles.
13. Do not operate this machine on a gravel surface.
14. Do not operate this machine while under the influence of alcohol or drugs.
15. Muffler and engine become hot and can cause a burn. Do not touch.
16. Never pick up or carry machine while the engine is running.

Maintenance & Storage

1. Never tamper with safety devices. Check their proper operation regularly.
2. Check bolts and screws for proper tightness at frequent intervals to keep the machine in safe working condition. Also, visually inspect machine for any damage and repair, if needed.
3. Before cleaning, repairing, or inspecting, stop the engine and make certain the impeller and all moving parts have stopped. Disconnect the spark plug wire and ground it against the engine to prevent unintended starting.
4. Do not change the engine governor settings or overspeed the engine. The governor controls the maximum safe operating speed of the engine.
5. Maintain or replace safety and instruction labels, as necessary.
6. Follow this manual for safe loading, unloading, transporting, and storage of this machine.
7. Never store the machine or fuel container inside where there is an open flame, spark or pilot light such as a water heater, furnace, clothes dryer, etc.
8. Always refer to the operator's manual for proper instructions on off-season storage.
9. If the fuel tank has to be drained, do this outdoors.
10. Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.

Do not modify engine

To avoid serious injury or death, do not modify engine in any way. Tampering with the governor setting can lead to a runaway engine and cause it to operate at unsafe speeds. Never tamper with factory setting of engine governor.

Notice regarding Emissions

Engines which are certified to comply with California and federal EPA emission regulations for SORE (Small Off Road Equipment) are certified to operate on regular unleaded gasoline, and may include the following emission control systems: Engine Modification (EM) and Three Way Catalyst (TWC) if so equipped.

Your Responsibility

Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

2

Safe Operation Practices



WARNING

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HEED IT'S WARNING!

Your Responsibility

Restrict the use of this power machine to persons who read, understand and follow the warnings and instructions in this manual and on the machine.

3

Setting Up Your Yard Vacuum



IMPORTANT

This unit is shipped without gasoline or oil in the engine. Be certain to service engine with gasoline and oil as instructed in the separate engine manual before operating your machine.

NOTE: Reference to right and left hand side of the Yard Vacuum is observed from the operating position.

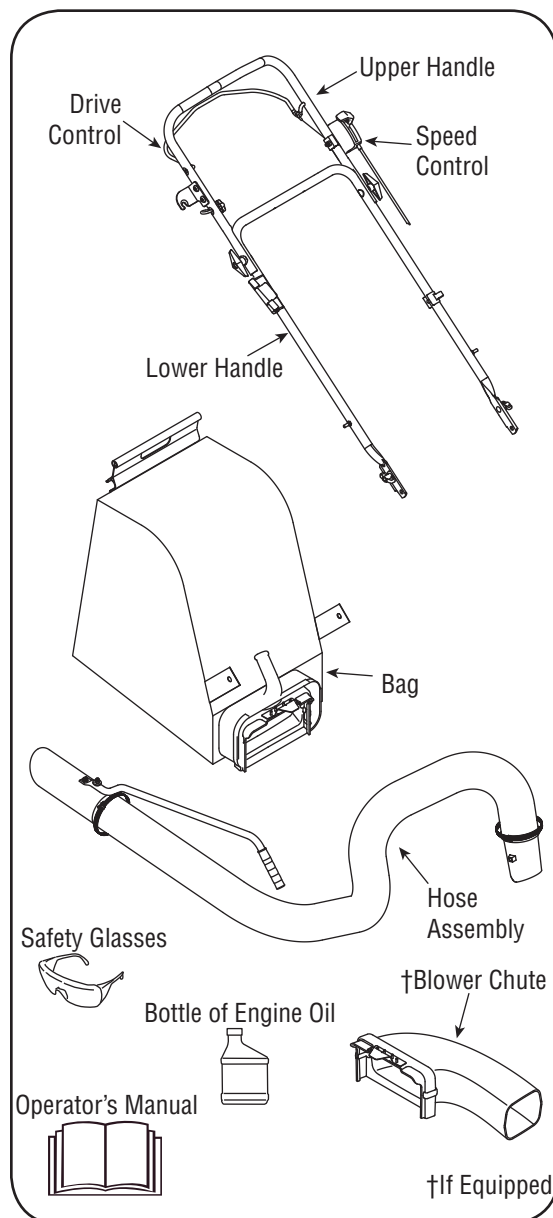


Figure 1

IMPORTANT: This unit is shipped without gasoline or oil in the engine. Be certain to service engine with gasoline and oil as instructed in the separate engine manual before operating your machine.

NOTE: Reference to right and left hand side of the Yard Vacuum is observed from the operating position.

Opening Carton

1. Cut each corner of the carton vertically from top to bottom.
2. Remove all loose parts.
3. Remove loose packing material.

Removing Unit From Carton

1. Lift unit from the rear to detach it from underlying carton material and roll unit out of carton.
2. Check carton thoroughly for any other loose parts.

NOTE: Make sure not to crimp cables while removing loose parts or the entire unit from the carton.

Loose Parts In Carton (See Figure 1)

- a. Upper and Lower Handle
- b. Hose Assembly
- c. Safety Glasses
- d. Engine Oil (May be located in bag)
- e. Bag
- f. Blower Chute (If Equipped)
- g. Operator's Manual

Attaching The Handle

1. Remove the hairpin clips from the handle brackets and remove the carriage screws and wing nuts from the lower handle.
 - a. Place the bottom holes in lower handle over the pins on the handle brackets and secure with hairpin clips. See Figure 2.
 - b. Insert carriage screws through upper hole in lower handle from the inside and secure with wing nuts. See Figure 2.
2. a. Unfold the upper handle until it aligns with lower handle. Make sure the rope guide is on the right side of upper handle. See Figure 3.

IMPORTANT: Make sure the cables are routed outside the lower handle. Also, do not crimp the cables while lifting up the handles.

- b. Secure the two handles by tightening the handle knobs (carriage bolts must be seated properly into the handle). See Figure 3.
3. Pull the two cable ties attached to the cables tight approximately 8 inches from each cable end and place the cables into the cable guide.
 4. Loosen the wing nut that secures the rope guide to the right side of upper handle.
 - a. Pull the starter rope out of the engine slowly. See Figure 4.
 - b. Slip the starter rope into the rope guide. Tighten the wing nut. See Figure 4.

Attaching The Hose Assembly

5. a. Slide hose adapter of hose assembly into the base adapter located on the left front of the Yard Vacuum. See Figure 5.
- b. Pull spring loaded pin out on the base and align pin with the first hole (closest to the end of the tube) in the hose adapter.
- c. Release the pin to lock the hose in place.

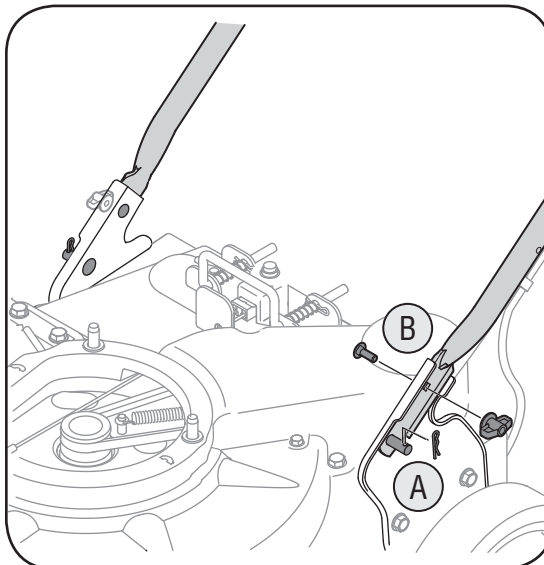


Figure 2

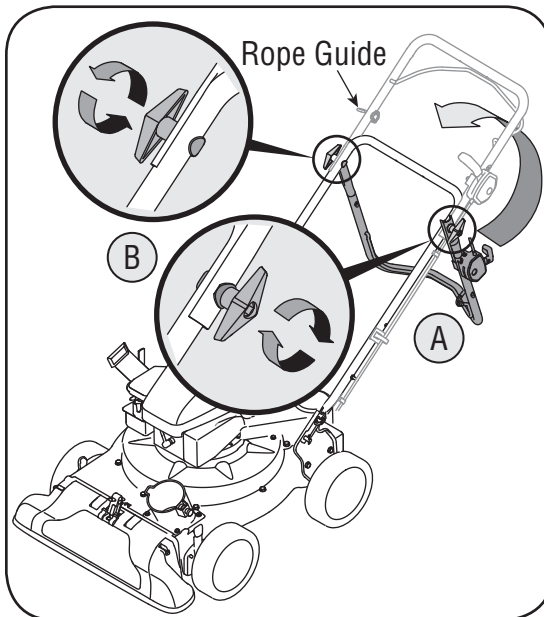


Figure 3

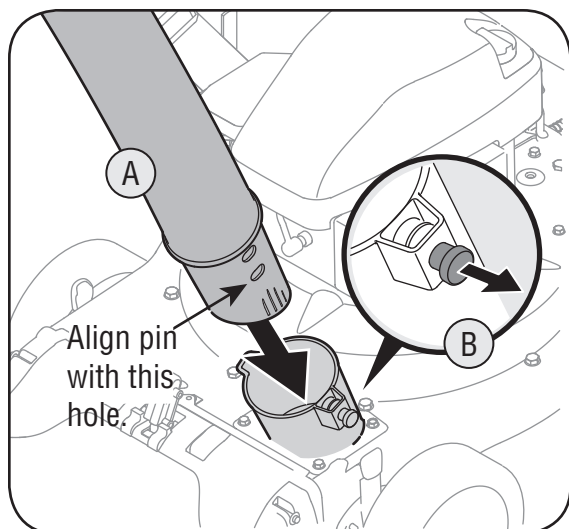


Figure 5

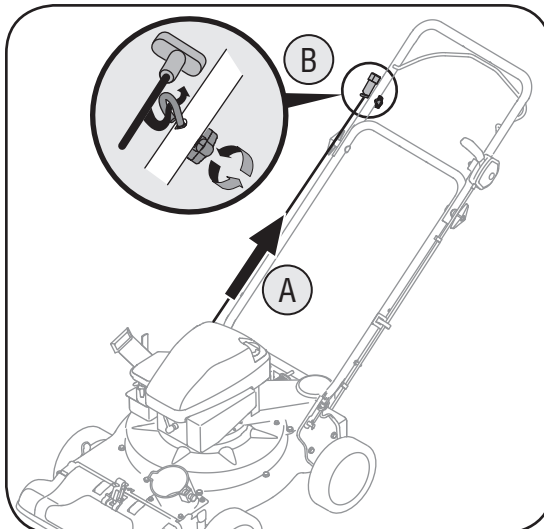


Figure 4

3

Setting Up Your Yard Vacuum



IMPORTANT

Make sure the cables are routed outside the lower handle. Also, do not crimp the cables while lifting up the handles.

3

Setting Up Your Yard Vacuum



NOTE: The bag/chute switch button attached to the mounting bracket must be fully depressed by the tip of front tab on bag handle when securing the bag or engine will not start.

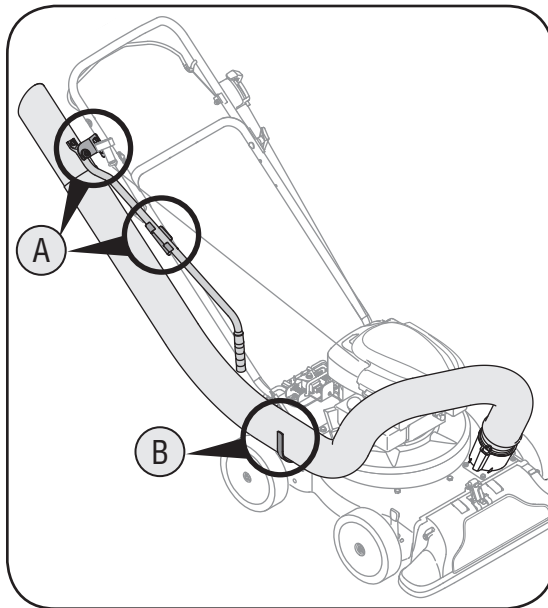


Figure 6

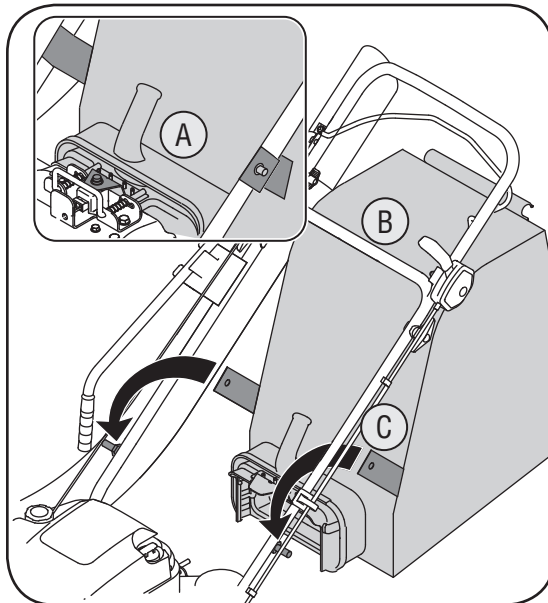


Figure 7

6. a. Snap the hose handle first into the upper hose handle bracket and then into the lower hose handle bracket. See Figure 6.
- b. Lay hose tubing on hanger bracket next to chipper chute.

Attaching The Bag

7. Grasp bag handle with one hand and slide locking rod on mounting bracket with other hand toward engine. Use the end of mounting bracket as leverage when sliding the locking rod.
 - a. Slip bag over the rim of the discharge opening and release locking rod to secure bag in place. See Figure 7.
 - b. Snap bag clip to the top of the lower handle.
 - c. Place the lower straps on the bag over the top of lower handle, hooking them on the studs. See Figure 7.

NOTE: The bag/chute switch button attached to the mounting bracket must be fully depressed by the tip of front tab on bag handle when securing the bag or engine will not start.

Attaching The Blower Chute

(If Equipped)

NOTE: The bag must be removed before installing the blower chute.

8. a. Grasp blower chute with one hand and slide locking rod on mounting bracket with other hand toward engine. Use the end of mounting bracket as leverage when sliding the locking rod. See Figure 8.
- b. Slip blower chute over rim of discharge opening and release locking rod to secure chute in place.
- c. Raise the nozzle height to the highest setting when using the blower chute. Refer to nozzle height adjustment in the MAINTENANCE section on page 16.

NOTE: The bag/chute switch button attached to the mounting bracket must be fully depressed by the tip of front tab on the blower chute or engine will not start.

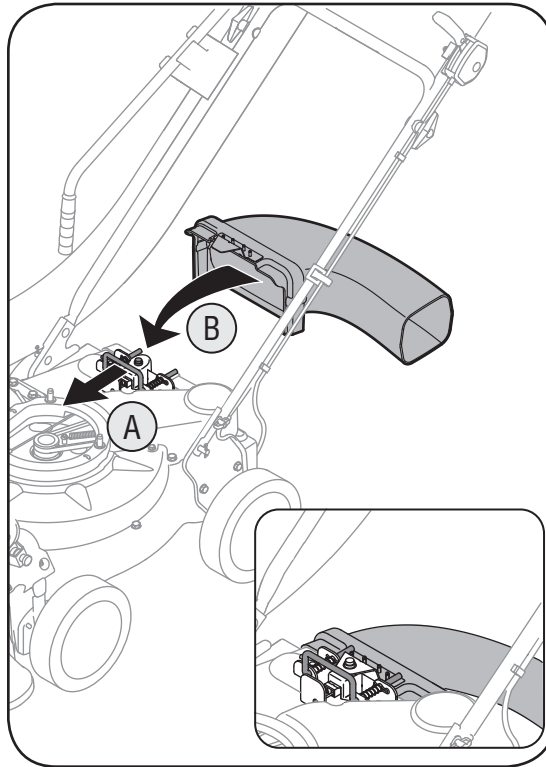


Figure 8

3

Setting Up Your Yard Vacuum



NOTE: The bag must be removed before installing the blower chute.

4

Operating Your Yard Vacuum



WARNING

The operation of any chipper shredder can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear the safety glasses provided with this unit or eye shields while operating or while performing any adjustments or repairs.



WARNING: The operation of any chipper shredder can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear the safety glasses provided with this unit or eye shields while operating or while performing any adjustments or repairs.

Chipper Chute

Allows twigs and small branches up to 1-1/2" in diameter to be fed into the impeller for chipping. See Figure 9.

Drive Control

Located on the underside of the upper handle, the drive control is used to engage/disengage wheels. Fully squeeze the drive control against the upper handle to engage the wheels; release to disengage. (DO NOT slip clutch).

Know Your Yard Vacuum

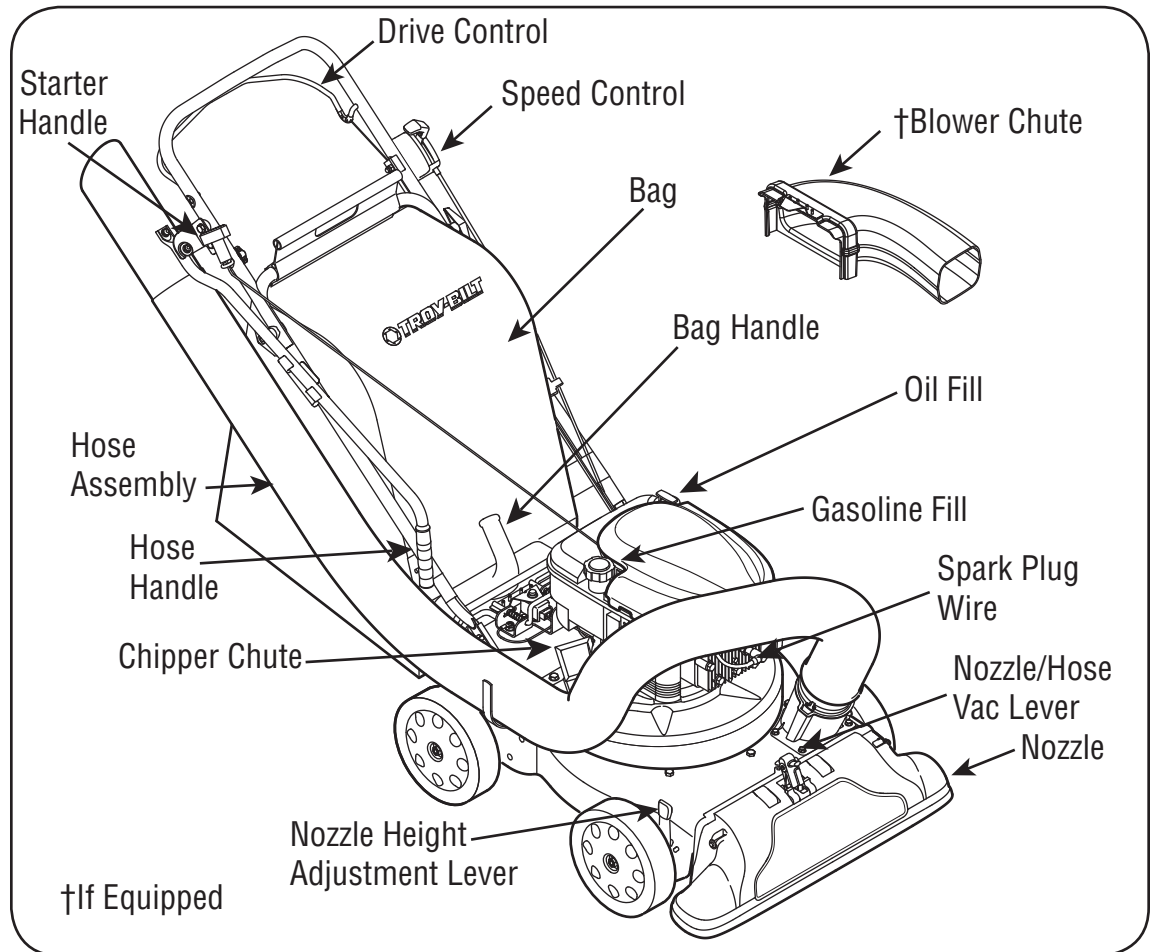


Figure 9

Speed Control

Located on the left side of the upper handle, the speed control is used to select the forward speed of the yard vacuum.

IMPORTANT: Move the speed control only when the engine is running. Changing the speed control setting with the engine off can damage the yard vacuum.

Nozzle Height Adjustment Lever

Used to adjust the nozzle ground clearance ranging approximately from 5/8" to 4 1/8". See Figure 9.

Throttle Control Lever (Not Shown)

The throttle control lever is located on the engine. It controls the engine's speed and stops the engine. See separate engine manual packed with unit for details.

Engine Controls

See the separate engine manual for the location and function of the controls on the engine.

Nozzle

Yard waste such as leaves or pine needles can be vacuumed up through the nozzle for shredding.

Hose Assembly

Used as an alternative to the nozzle to vacuum yard waste such as leaves or pine needles in hard to reach places. See Figure 9.

Nozzle/ Hose Vac Lever

The nozzle/hose vac handle is located on top of the nozzle. Use it to switch vacuum suction between the nozzle and the hose assembly.

Hose Handle

Used to guide hose assembly when vacuuming.

Bag Handle

Used to grasp bag in order to assist in attaching, removing, and emptying bag. See Figure 9.

Bag

Collects shredded material fed through the chipper chute or vacuumed through the nozzle or hose.

Blower Chute

When attached to unit, the blower chute is used to blow or scatter yard waste such as leaves, pine needle, or small twigs across yard.



WARNING: The operation of the Yard Vacuum can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear the safety glasses provided with this unit or eye shields before chipping or blowing and while performing any adjustments or repairs.

Gas And Oil Fill-Up

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your Yard Vacuum. Read instructions carefully.



WARNING: Never fill fuel tank indoors with engine running or until the engine has been allowed to cool for at least two minutes after running.

Starting Engine

1. Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug is fastened securely over the metal tip on the spark plug.
2. Make sure safety switch wire is connected to engine and properly grounded.
3. **Engines with choke lever:**
Move choke lever on engine to CHOKE position. (A warm engine may not require choking).
Engines with primer:
Prime engine as instructed in separate engine manual.
4. The throttle control is located on the engine. Move engine throttle control lever to FAST or ON position.
5. Stand behind unit, grasp starter handle and pull rope out slowly until engine reaches start of compression cycle (rope will pull slightly harder at this point).
6. Pull rope with a rapid, continuous, full arm stroke. Keep a firm grip on starter handle. Let rope rewind slowly.
7. Repeat previous steps until engine fires. When engine starts, move choke control (if equipped) gradually to RUN position.



WARNING: Never run the engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

Stopping Engine

1. Move throttle control lever to STOP or OFF position.
2. Disconnect spark plug wire from spark plug and ground against the engine.

4

Operating Your Yard Vacuum



WARNING

Never fill fuel tank indoors with engine running or until the engine has been allowed to cool for at least two minutes after running.

Never run the engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.

4

Operating Your Yard Vacuum



IMPORTANT

Move the speed control only when the engine is running. Changing the speed control setting with the engine off can damage the yard vacuum.

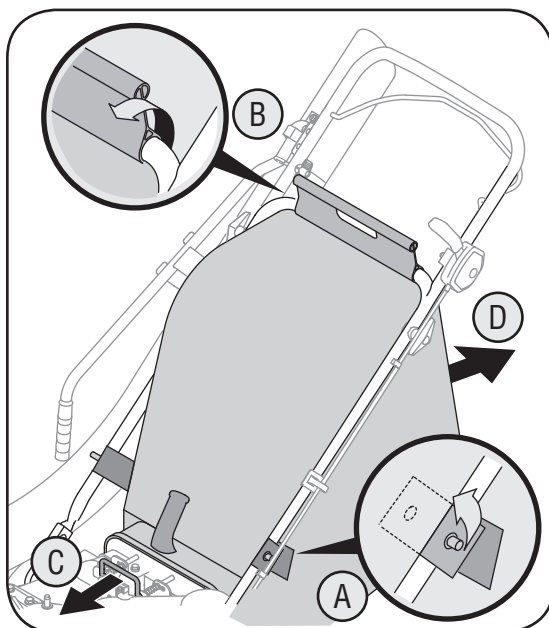


Figure 10

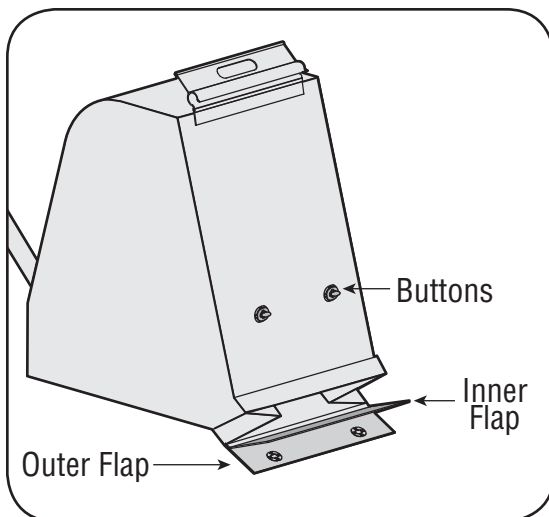


Figure 11

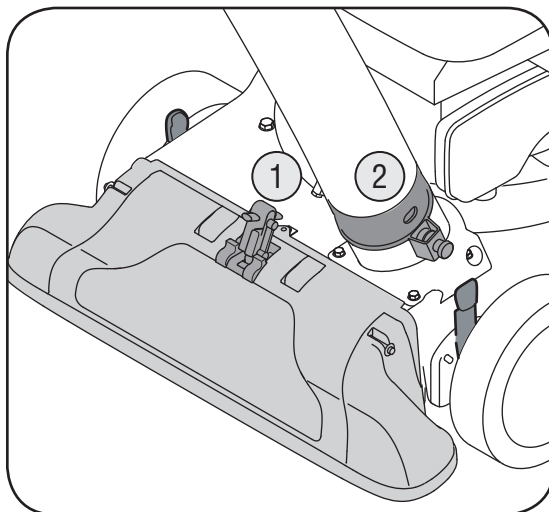


Figure 12

To Empty Bag

1. a. Unhook bag straps from the lower handle.
b. Unsnap bag clip from the top of lower handle. See Figure 10.
c. Grasp bag handle with one hand and pull lock rod on mounting bracket with other hand toward engine to release.
d. Lift bag off back of unit.
2. Twist the two buttons on the back of the bag to unlock and empty contents. See Figure 11. Hold bag handle and bag clip while emptying the contents.
3. Compress bag opening and fold inner flap over opening.
4. Fold outer flap over inner flap and insert buttons on the bag through metal outlets. See Figure 11.
5. Twist the buttons to lock bag. Place bag back onto unit as instructed on page 8.

To Remove Blower Chute

1. Grasp blower chute with one hand and pull lock rod on mounting bracket with other hand toward engine to release. Refer to Figure 8 on page 9.
2. Remove blower chute from rim of the discharge opening.

Using The Nozzle Vacuum

1. Place nozzle/hose vac lever in the top position on the nozzle to vacuum through nozzle. See Figure 12.
2. The spring loaded pin must be in the first hole (closest to the end of the tube) of the hose adapter to operate the nozzle vac.
3. Place both hands on top of the upper handle and fully lift the drive control against the upper handle to propel the unit over yard.
4. Use the speed control to choose either the high or low speed. The speed control may be moved either while the unit is propelling or before engaging the wheels.

IMPORTANT: Move the speed control only when the engine is running. Changing the speed control setting with the engine off can damage the yard vacuum.

Yard waste such as leaves and pine needles can be vacuumed up through the nozzle for shredding. After material has been shredded by the flail blades on the impeller assembly, it will be discharged into catcher bag or through blower chute. Do not attempt to shred or chip any material other than vegetation found in a normal yard (i.e. branches, leaves, twigs, etc.) Avoid fibrous plants such as tomato vines until they are thoroughly dried out. Materials such as stalks or heavy branches up to 1-1/2" in diameter may be fed into the chipper chute.



WARNING: Do not attempt to shred, chip, or vacuum any material larger than specified on the machine or in this manual. Personal injury or damage to the machine could result.

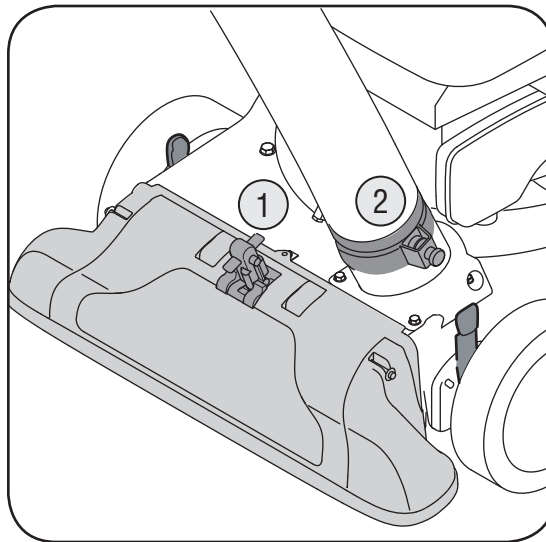


Figure 13

IMPORTANT: The flail screen is located inside the housing in the discharge area. If the flail screen becomes clogged, remove and clean as instructed in the Maintenance section on page 16. For best performance, it is also important to keep the chipper blade sharp.



WARNING: Do not at any time make any adjustments without first stopping engine and disconnecting spark plug wire.

Using The Hose Assembly

1. Place nozzle/hose vac handle in the bottom position on the nozzle to redirect vacuum to the hose assembly. See Figure 13.
2. The spring loaded pin must be in the second hole of the hose adapter to operate the hose assembly.
3. Unhook the hose from upper handle bracket and grasp the hose handle to guide while vacuuming yard waste such as leaves or pine needles in hard to reach places.

4

Operating Your Yard Vacuum



WARNING

Do not attempt to shred, chip, or vacuum any material larger than specified on the machine or in this manual. Personal injury or damage to the machine could result.

Do not at any time make any adjustments without first stopping engine and disconnecting spark plug wire.

5

Maintaining Your Yard Vacuum



WARNING

Always stop engine, disconnect spark plug, and ground against engine before cleaning, lubricating or doing any kind of maintenance on your machine.

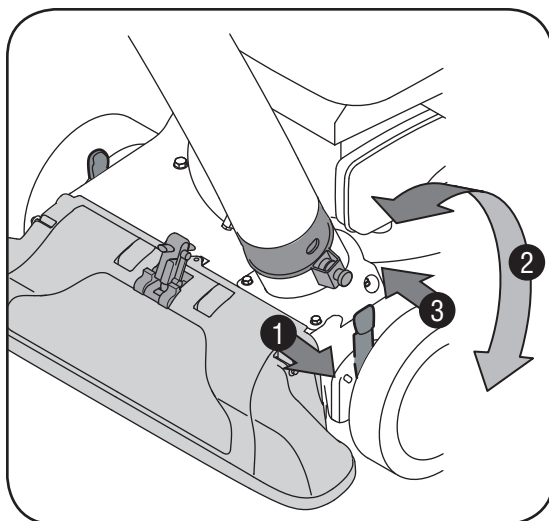


Figure 14

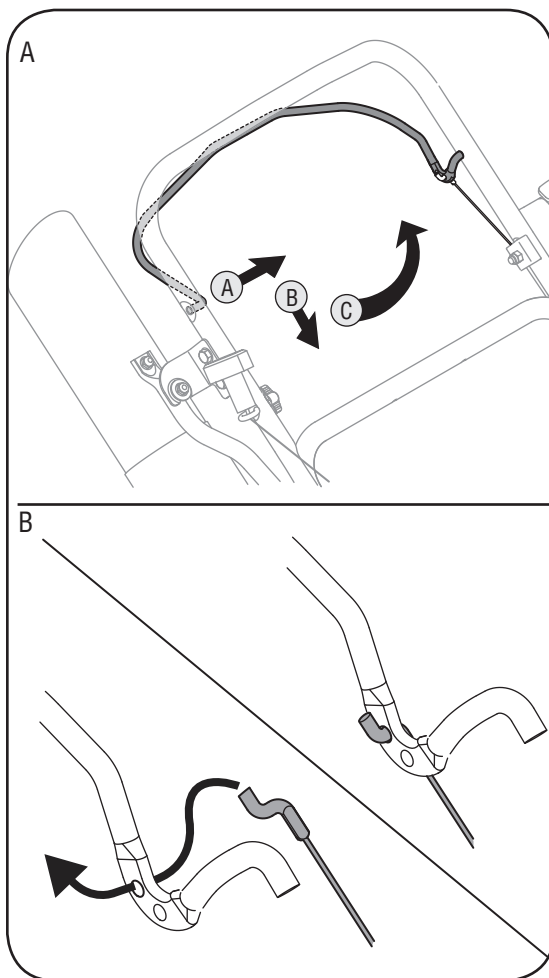


Figure 15



WARNING: Always stop engine and disconnect spark plug wire before cleaning, lubricating or doing any kind of maintenance on your machine.

Lubrication

1. **Wheels:** Lubricate each wheel shoulder screw (rear wheel) and pivot arm axle (front wheel) once a season with light oil. Refer to Figure 17.
2. **Nozzle height adjustment levers:** Lubricate the pivot points of the nozzle height adjustment levers once a season with light oil. Refer to Figure 9 on page 10.
3. **Locking Rod:** Lubricate the locking rod with light oil to ease the application of attaching on or removing bag or blower chute. Refer to Figure 8 on page 9.
4. **Nozzle/Hose Vac Lever:** Lubricate the nozzle/hose vac lever on top of nozzle once a season with light oil. Refer to Figure 9.
5. **Engine:** Follow the separate engine manual packed with your unit for lubrication instructions.

Engine Maintenance

Refer to the separate engine manual for all engine maintenance instructions.

1. Check **engine oil level** before each use as instructed in the separate engine manual packed with your unit. Read and follow instructions carefully.
2. Clean **air cleaner** every 25 hours under normal conditions or once a season. Clean every few hours under extremely dusty conditions. To service the air cleaner, refer to the separate engine manual packed with your unit.
3. The **spark plug** should be cleaned and the gap reset once a season. Check engine manual for correct plug type and gap specifications.

Nozzle Height Adjustment

The nozzle can be adjusted to any six positions, ranging from 5/8" to 4 1/8" ground clearance. The nozzle height has to be adjusted according to yard conditions.

1. Depress nozzle height adjustment lever towards wheel. See Figure 14.
2. Move the height adjustment lever forward or backward to adjust the nozzle upwards or downwards. Make sure both levers are in the same position.
3. Release lever towards deck.

NOTE: In general, raise the nozzle height to vacuum a thick layer of leaves or to operate with the blower chute. Lower the nozzle height for smoother surfaces.

5

Maintaining Your Yard Vacuum

Drive Control Cable Adjustment

Adjust the drive control cable if the yard vacuum does not self propel with the drive control engaged, or if the unit hesitates while the engine maintains the same speed after approximately 20 hours of use.

To move the z-fitting of the drive control cable from its factory set position in the front hole of the drive control to the rear hole, proceed as follows:

1. a. Push the right side of the control out of the right hole in the upper handle. See Figure 15A.
b. Pivot control down towards the lower handle.
c. Pivot straight up to remove it from the left hole in the upper handle. See Figure 15A.
2. There is now sufficient slack in the drive control cable to grasp the z-fitting with your hand and move it from the front hole to the rear hole of the drive control. See Figure 15B.

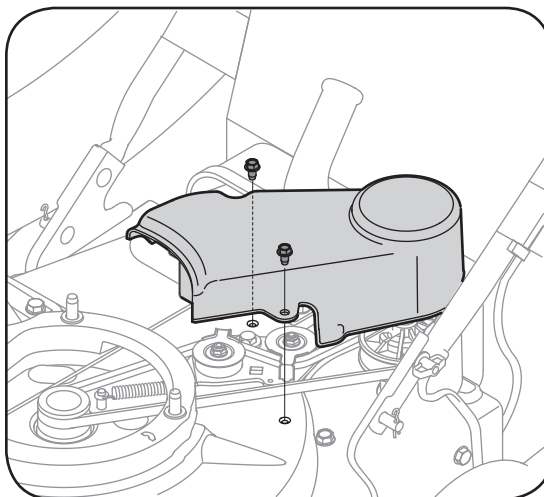


Figure 16

IMPORTANT: Make sure to insert the z-fitting into the rear hole as it was inserted in the front hole, that is from the **outside** of the drive control.

3. You may now carefully reinstall the drive control by performing the previous steps in the opposite order and manner of removal.

IMPORTANT: Once assembled and prior to restarting, make sure that the cable is properly adjusted. With the drive control disengaged, the unit should freely pull in reverse.

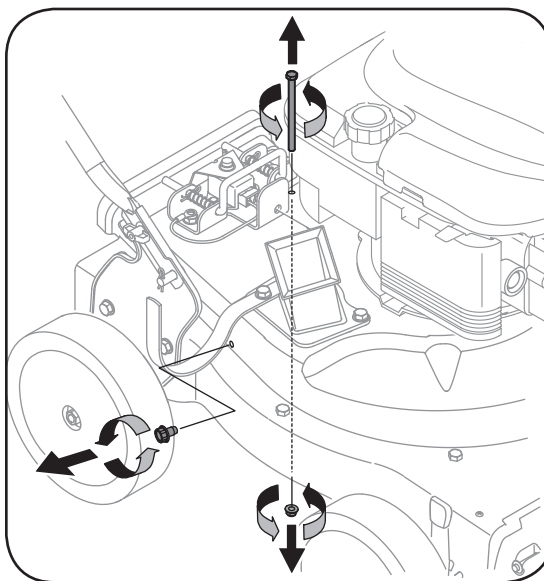


Figure 17

Removing The Flail Screen

If the discharge area becomes clogged, remove the flail screen and clean area as follows.

1. Stop the engine. Make certain the chipper/shredder vacuum has come to a complete stop.
2. Before unclogging the discharge chute, **disconnect and ground the spark plug wire to retaining post.**
3. Remove the vacuum bag or blower chute from the unit as instructed in the OPERATION section to obtain access to flail screen.
4. Remove the three self tapping screws securing the belt cover, and remove the belt cover. See Figure 16.
5. Remove self tapping screw on right side of unit that attaches to the flail screen. See Figure 17.
6. Remove hex screw on top of rear housing near mounting bracket and the flange lock nut that secures flail screen. See Figure 17.
7. Remove and clean the screen by scraping or washing with water. See Figure 18.
8. Reinstall the screen.

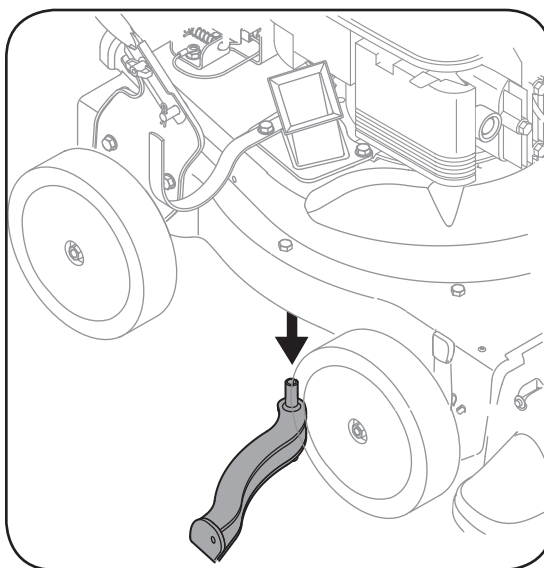


Figure 18

5

Maintaining Your Yard Vacuum



NOTE: When tipping unit, empty the oil and fuel tank and keep engine spark plug side up..

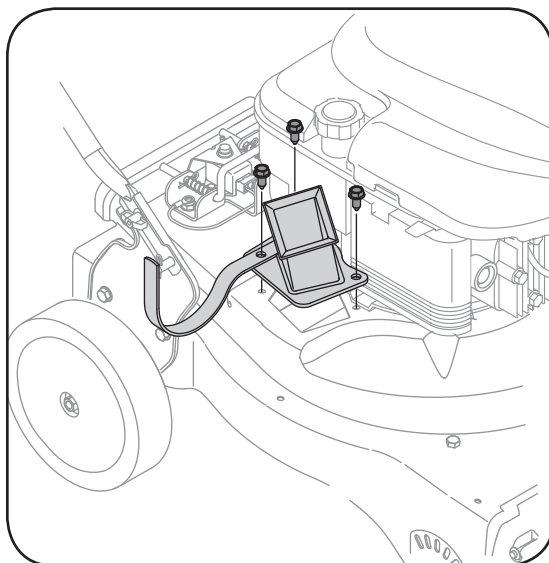


Figure 19

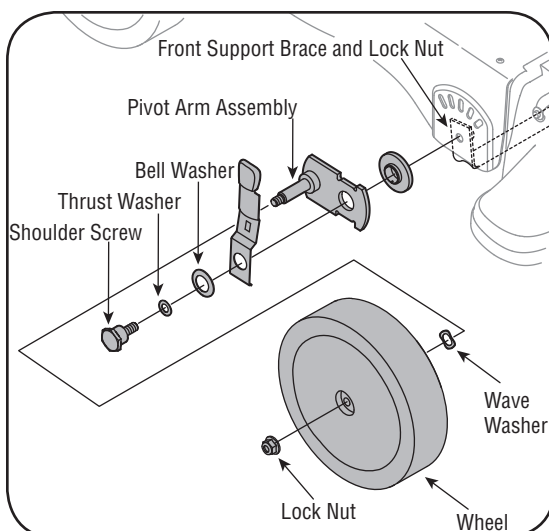


Figure 20

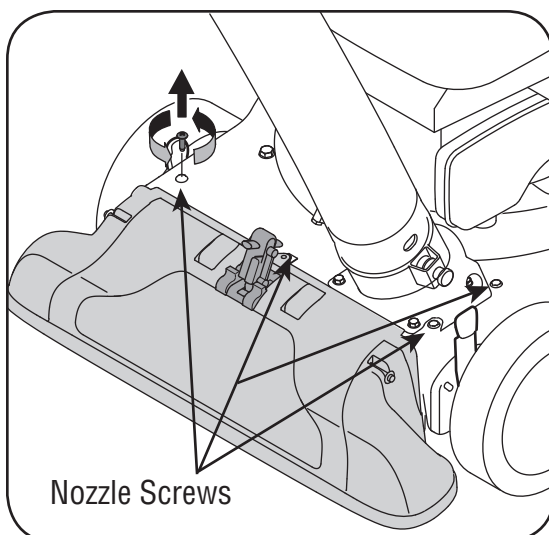


Figure 21

Sharpening Or Replacing Chipper Blade

NOTE: When tipping the unit, empty the oil and fuel tank and keep engine spark plug side up.

1. Disconnect and ground the spark plug wire to retaining post.
2. Remove hose assembly and bag assembly.
3. Remove the three hex cap screws holding the hose hanger bracket and chipper chute to the upper housing. See Figure 19.
4. Remove the front hubcaps, flange lock nuts, front wheels, and wave washers that attach to the pivot arm assemblies. See Figure 20.
5. Remove the shoulder screws, thrust washers, and bell washers that go through the pivot arms to the front support brace. The front support brace and lock nut can be removed at this time as well.
6. Remove the four screws on the upper housing that secure the nozzle cover. See Figure 21.
7. Carefully tilt and support the unit up to provide access underneath to the nozzle mounting hardware and impeller. Remove the three shoulder bolts securing the black plastic nozzle to the lower housing. Refer to Figure 22.
8. Tilt top of black plastic nozzle toward the engine to remove.

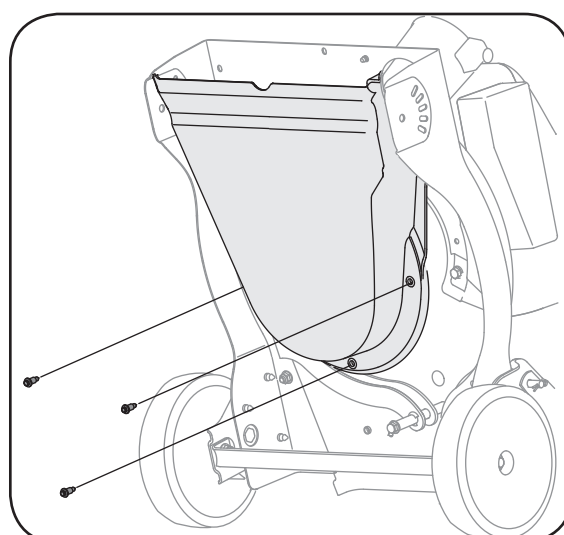


Figure 22

9. Using a 3/16" allen wrench, remove the flat head cap screws that hold the chipper blade to the impeller. These screws are accessible through the opening created when the chipper chute was removed earlier. See Figure 23.

10. The nuts on the flat head cap screws can be reached from underneath using a 1/2-inch socket, universal, and extension. See Figure 24.

11. Replace or sharpen chipper blade. The blade can be sharpened with a file or on a grinding wheel.

12. When sharpening blade, protect hands by using gloves and follow the original angle of grind.

13. Reassemble by performing the previous steps in the opposite order and manner of removal.

NOTE: Tighten blade screws to 210 - 250 in.-lbs. Make certain chipper blade is reassembled with the sharp edge facing upward.

Storing Your Yard Vacuum

1. Clean the equipment thoroughly.
2. Wipe equipment with an oiled rag to prevent rust.
3. Refer to engine manual for correct engine storage instructions.
4. Store unit in a clean, dry area. Do not store next to corrosive materials such as fertilizer.

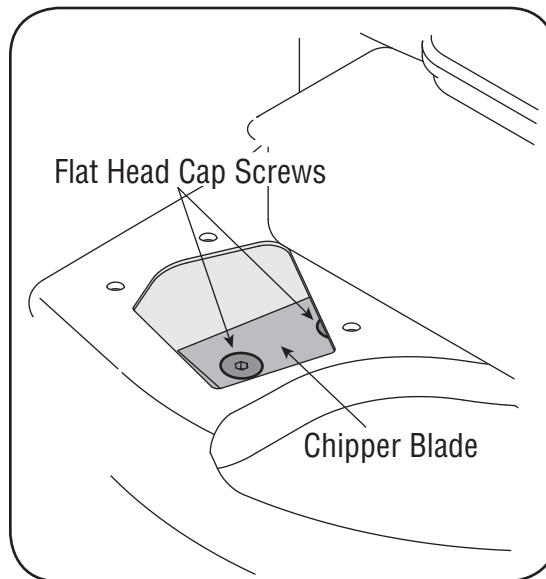


Figure 23

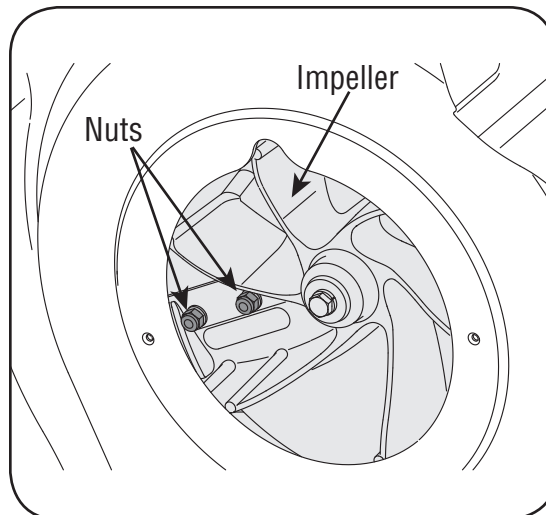


Figure 24

5

Maintaining Your Yard Vacuum



NOTE: Tighten blade screws to 210-250 in.-lbs. Make certain chipper blade is reassembled with the sharp edge facing upward.

6

Trouble Shooting



For repairs beyond the minor adjustments listed here, contact an authorized service dealer.

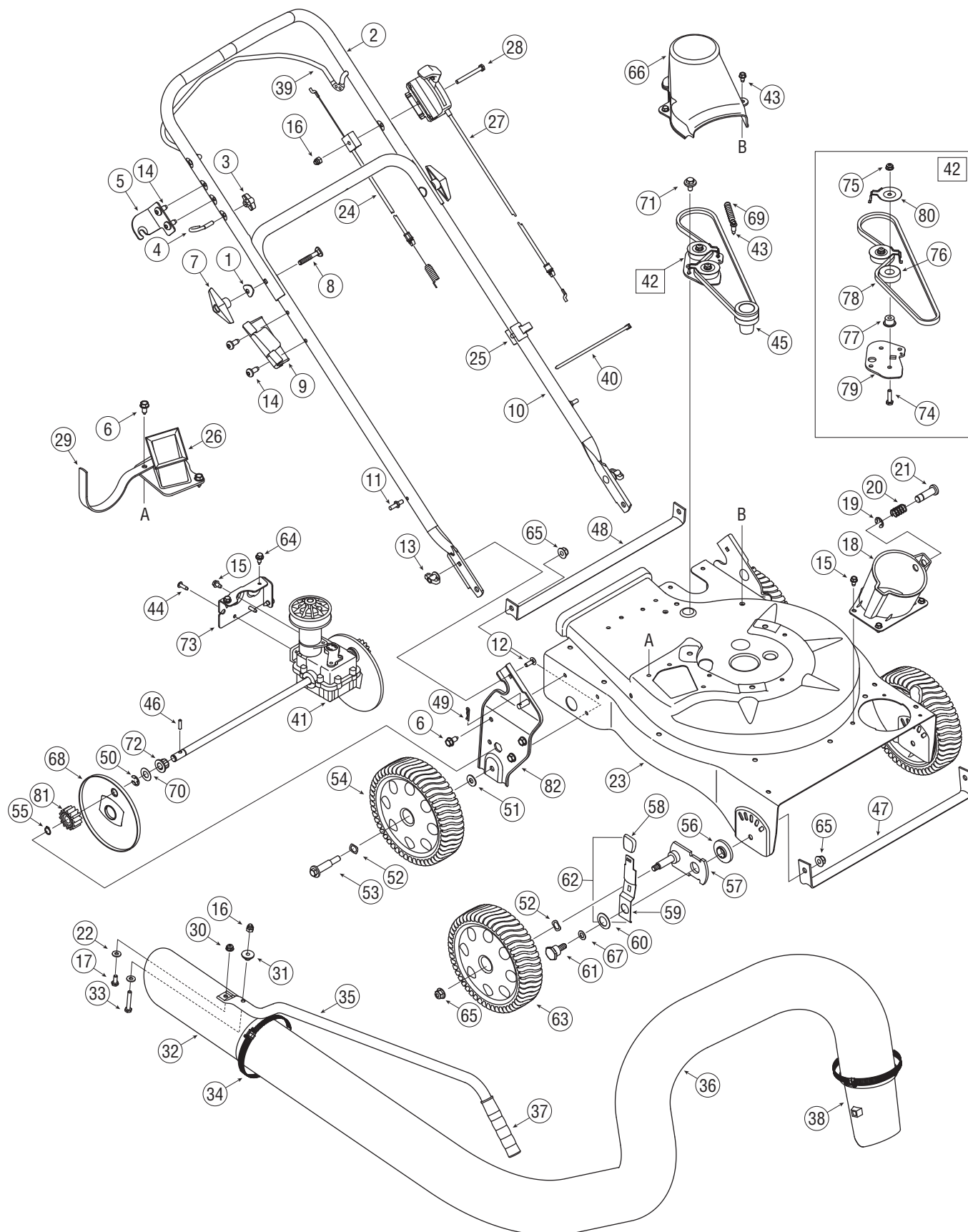
Problem	Cause	Remedy
Engine fails to start	<ol style="list-style-type: none"> 1. Throttle lever not in correct starting position. 2. Spark plug wire disconnected. 3. Choke not in CHOKE position (if equipped). 4. Fuel tank empty or stale fuel. 5. Engine not primed (if equipped). 6. Faulty spark plug. 7. Safety switch not depressed. 8. Safety switch wire is not connected to engine or not properly grounded. 	<ol style="list-style-type: none"> 1. Move throttle lever to FAST or START position. 2. Connect wire to spark plug. 3. Move choke lever to CHOKE position. 4. Fill tank with clean, fresh gasoline. 5. Prime engine as instructed in Engine Manual. 6. Clean, adjust gap, or replace. 7. Safety switch must be depressed by the front tab on the bag handle when securing the bag. 8. Connect safety switch wire to engine connector and ground to mounting bracket.
Engine runs erratic	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Unit running on CHOKE (if equipped). 3. Blocked fuel line or stale fuel. 4. Low engine RPM. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Carburetor out of adjustment. 	<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. Always run engine at full throttle. 5. Drain fuel tank. Refill with fresh fuel. 6. Refer to engine manual. 7. See authorized service dealer.
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low. 2. Dirty air cleaner. 3. Carburetor not adjusted properly. 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Refer to engine manual. 3. See authorized service dealer.
Occasional skips (hesitates) at high speed	<ol style="list-style-type: none"> 1. Spark plug gap too close. 2. Carburetor idle mixture adjustment improperly set. 	<ol style="list-style-type: none"> 1. Adjust gap to .030". 2. See authorized service dealer.
Excessive Vibration	<ol style="list-style-type: none"> 1. Loose parts or damaged impeller. 	<ol style="list-style-type: none"> 1. See authorized service dealer.
Unit does not discharge	<ol style="list-style-type: none"> 1. Discharge area clogged. 2. Foreign object lodged in impeller. 3. Low engine RPM. 4. Vacuum bag is full. 	<ol style="list-style-type: none"> 1. Stop engine immediately and disconnect spark plug wire. Clean flail screen and inside of discharge opening. 2. Stop engine and disconnect spark plug wire. Remove lodged object. 3. Always run engine at full throttle. 4. Empty bag.
Rate of discharge slows considerably or composition of discharged material changes	<ol style="list-style-type: none"> 1. Low engine RPM. 2. Chipper blade dull. 	<ol style="list-style-type: none"> 1. Always run engine at full throttle. 2. Replace chipper blade or see your authorized service dealer.
Unit fails to propel itself or slips when drive control is engaged	<ol style="list-style-type: none"> 1. Drive control cable out of adjustment. 2. Drive belt worn or damaged. 	<ol style="list-style-type: none"> 1. Follow adjustment procedure in Servicing Your Yard Vacuum section of manual. 2. See authorized service dealer.

NOTES:

*Use this page to make
notes and write down
important information.*



*For parts and/or
accessories
please call
1-866-840-6483, or
1-330-558-7220.
www.troybilt.com*



1.	736-0451	Saddle Washer, .320 x.93
2.	749-04163	Upper Handle
3.	720-0279	Knob
4.	710-1205	Eye Bolt
5.	781-1056	Upper Handle Bracket
6.	710-0726	Hex Cap Screw 5/16-12 x.750
7.	720-0241	Handle Knob 5/16-18
8.	710-1174	Carriage Bolt
9.	731-04911	Nozzle Handle Clip
10.	749-04165	Lower Handle
11.	711-1293	Studs
12.	710-0703	Carriage Screw 1/4-20 x.75
13.	712-0397	Wing Nut 1/4-20
14.	710-1611B	TT Screw, 5/16-18 x .750
15.	710-0599	Screw, 1/4-20 x .500
16.	712-0442	Cap Lock Nut, 1/4-20
17.	710-0751	Hex Cap Screw 1/4-20 x.620
18.	681-0195	Hose Base Adapter Assembly
		(Incl. Ref.# 19-21)
19.	716-0104	E Ring.500 Dia
20.	732-3035	Compression Spring
21.	711-1571	Clevis Pin
22.	736-3020	Flat Washer.271 ID x.630 OD
23.	781-04069	Upper Flail Housing
24.	746-04156	Drive Control Cable
25.	731-1820	Cable Guide
26.	681-0122	Chipper Chute Assembly
27.	746-04155	Speed Control Cable
28.	710-1122	Hex Screw, 1/4-20 x 2.50
29.	781-1058	Hose Hanger Bracket
30.	712-04064	Flange Lock Nut, 1/4-20
31.	748-0457	Spacer
32.	731-2478	Hose Nozzle
33.	710-3288	Hex Cap Screw 1/4-20 x 2.625
34.	723-0295	Adjustment Clamp
35.	749-1270	Nozzle Handle
36.	764-0648	Vacuum Hose
37.	07071	Handle Grip
38.	731-2292	Hose Adapter
39.	747-04305	Drive Control
40.	725-0157	Cable Tie
41.	618-04175	Transmission Assembly
42.	681-04027	Idler Assembly (Incl. Ref.# 74-80)

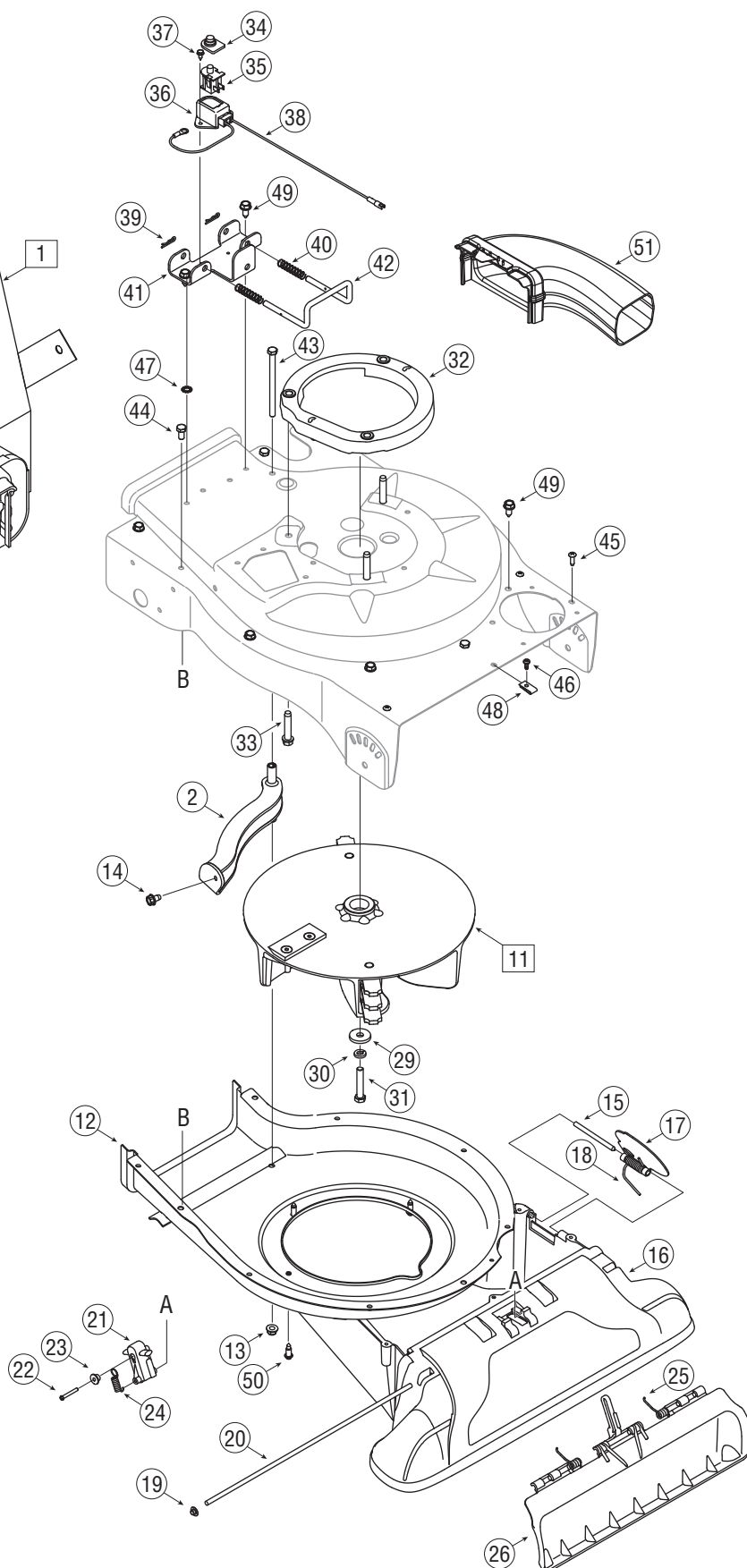
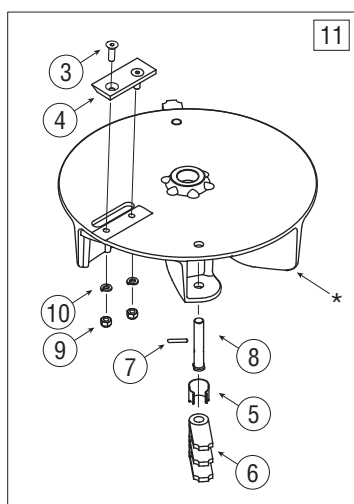
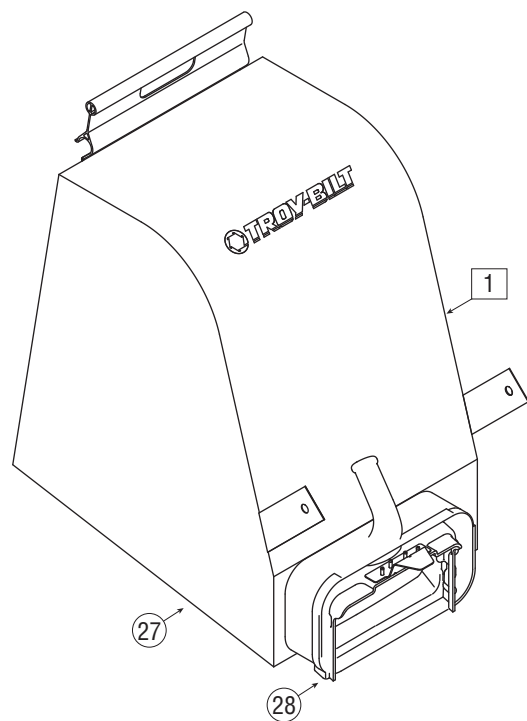
43.	710-1650	Shoulder Screw, #12-24 x .30 x .46
44.	710-1220	Screw, #12-16 x .750
45.	711-04245	Impeller Hub
46.	715-0221	Dowel Pin
47.	781-04082	Front Wheel Support Brace
48.	781-04081	Rear Wheel Support Brace
49.	714-0104	Cotter Pin
50.	716-0104	E-Ring
51.	736-0258	Flat Washer, .385 x 1.00 x .135
52.	736-0232	Wave Washer.531 ID x.781 OD
53.	738-1015	Shoulder Screw 3/8-16
54.	734-04018	Wheel, 8 x 2.125
55.	716-0865	Snap Ring
56.	741-0751	Height Adjustment Bearing
57.	687-02094	Pivot Arm Assembly
58.	720-0426	Height Adjustment Knob
59.	732-1026	Spring Lever
60.	736-0741	Bell Washer.760 ID x.25 OD
61.	738-1172	Shoulder Screw,.750 x.500
62.	687-02051	Height Lever Assembly
		(Incl. Ref.# 58-59)
63.	734-04033	Wheel 8 x 2
64.	710-1652	Screw, 1/4-20 x .625
65.	712-04065	Flange Lock Nut, 3/8-16
66.	731-04879	Belt Cover
67.	736-0314	Thrust Washer.375 ID x.70 OD
68.	731-2522	Wheel Cover
69.	732-04217	Extension Spring,.375 x 2.95
70.	736-0369	Flat Washer,.508ID x1.00OD x.020
71.	738-0930	Shoulder Screw,.560 x.165
72.	741-04108	Drive Axle Bushing
73.	781-04078	Transmission Mounting Bracket
74.	710-0597	Screw, 1/4-20 x 1.00
75.	712-04064	Flange Lock Nut, 1/4-20
76.	741-0124	Ball Bearing
77.	750-1050	Flange Spacer,.260 x.659 x.517
78.	754-0369	Belt, 3/8 x 32.5
79.	781-04077	Idler Bracket
80.	782-7598	Belt Keeper
81.	717-1762	Spur Gear - RH
—	717-1761	Spur Gear - LH (Not Shown)
82.	681-0156A	Handle Bracket Ass'y RH
—	681-0155A	Handle Brkt Ass'y LH (Not Shown)

7

Parts List



To order replacement parts, contact
1-800-520-5520,
1-330-558-7220
 or visit
www.troybilt.com.



1.	664-04031	Bag Assembly
2.	681-0154	Screen Assembly
3.	710-1054	Hex Screw 5/16-24 x 1.0
4.	781-0490	Chipper Blade
5.	781-0735	Pin Clip
6.	719-0329	Flail
7.	715-0166	Spiral Pin
8.	711-1401	Clevis Pin
9.	712-0411	Lock Nut, 5/16-24
10.	736-0119	Lock Washer, 5/16
11.	681-0152	Impeller Assembly
		(Incl. Ref.# 3 – 10)
12.	781-0721B	Lower Flail Housing
13.	712-04063	Flange Lock Nut 5/16-18
14.	710-0607	Screw, 5/16-18 x.500
15.	747-04297	Hinge Pin
16.	731-2293A	Nozzle
17.	781-1064	Base Adapter Door
18.	732-1156	Torsion Spring
19.	726-0106	Cap Speed Nut 1/4
20.	711-1551	Pivot Rod
21.	731-04967	Nozzle Door Lever
22.	710-1256	Hex Screw, #8-18 x 1.25
23.	750-1294	Shoulder Spacer
24.	732-3118	Extension Spring
25.	732-1151A	Nozzle Door Torsion Spring
26.	731-2294A	Nozzle Door

27.	664-04029	Bag
28.	631-0083	Chute Assembly
29.	736-0247	Flat Washer.375 ID x 1.25 OD
30.	736-0217	Lock Washer 3/8
31.	710-1273	Hex Cap Screw, 3/8-24 x 2.75
32.	631-04118	Engine Spacer Assembly
33.	710-1008	Screw, 3/8-16 x 1.875
34.	725-1700	Switch Cover
35.	725-3166	Safety Switch
36.	731-1613	Safety Switch Cover
37.	710-0224	Hex Washer Screw #10-16 x.50
38.	629-0920A	Wire Harness
39.	714-0104	Cotter Pin
40.	732-0962	Compression Spring
41.	781-0778A	Mounting Bracket
42.	747-1153	Lock Rod
43.	710-3195	Hex Cap Screw 5/16-18 x 4.5
44.	710-3025	Hex Cap Screw 5/16-18 x.625
45.	710-1220	Screw, #12-16 x.750
46.	710-0351	Screw #10 - 16 x.500
47.	736-0607	External L-Washer 5/16
48.	726-0139	Speed Nut
49.	710-0726	Hex Index Screw, 5/16-12 x.750
50.	710-1650	Shoulder Screw, #12-24 x .30 x .46
51.	631-0090†	Blower Chute
—	723-0400	Safety Glasses (Not Shown)

† If Equipped

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Parts List



To order replacement parts, contact
1-800-520-5520,
1-330-558-7220
 or visit
www.troybilt.com.

MANUFACTURER'S LIMITED WARRANTY FOR



The limited warranty set forth below is given by Troy-Bilt LLC with respect to new merchandise purchased and used in the United States and/or its territories and possessions, and by MTD Products Limited with respect to new merchandise purchased and used in Canada and/or its territories and possessions (either entity respectively, "Troy-Bilt").

"Troy-Bilt" warrants this product (excluding its normal wear parts as described below) against defects in material and workmanship for a period of two (2) years commencing on the date of original purchase and will, at its option, repair or replace, free of charge, any part found to be defective in materials or workmanship. This limited warranty shall only apply if this product has been operated and maintained in accordance with the Operator's Manual furnished with the product, and has not been subject to misuse, abuse, commercial use, neglect, accident, improper maintenance, alteration, vandalism, theft, fire, water, or damage because of other peril or natural disaster. Damage resulting from the installation or use of any part, accessory or attachment not approved by Troy-Bilt for use with the product(s) covered by this manual will void your warranty as to any resulting damage.

Normal wear parts are warranted to be free from defects in material and workmanship for a period of thirty (30) days from the date of purchase. Normal wear parts include, but are not limited to items such as: batteries, belts, blades, blade adapters, grass bags, rider deck wheels, seats, snow thrower skid shoes, friction wheels, shave plates, auger spiral rubber and tires.

HOW TO OBTAIN SERVICE: Warranty service is available, WITH PROOF OF PURCHASE, through your local authorized service dealer. To locate the dealer in your area:

In the U.S.A.

Check your Yellow Pages, or contact Troy-Bilt LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-866-840-6483 or 1-330-558-7220, or log on to our Web site at www.troybilt.com.

In Canada

Contact MTD Products Limited, Kitchener, ON N2G 4J1, or call 1-800-668-1238 or log on to our Web site at www.mtdcanada.com.

This limited warranty does **not** provide coverage in the following cases:

- a. The engine or component parts thereof. These items may carry a separate manufacturer's warranty. Refer to applicable manufacturer's warranty for terms and conditions.
- b. Log splitter pumps, valves, and cylinders have a separate one- year warranty.
- c. Routine maintenance items such as lubricants, filters, blade sharpening, tune-ups, brake adjustments, clutch adjustments,

deck adjustments, and normal deterioration of the exterior finish due to use or exposure.

- d. Service completed by someone other than an authorized service dealer.
- e. Troy-Bilt does not extend any warranty for products sold or exported outside of the United States and/or Canada, and their respective possessions and territories, except those sold through Troy-Bilt's authorized channels of export distribution.
- f. Replacement parts that are not genuine Troy-Bilt parts.
- g. Transportation charges and service calls.
- h. If Products are used commercially. (Troy-Bilt may separately offer Limited Commercial Warranties on certain select products. Ask your dealer or retailer for details or contact Troy-Bilt Service for more information).

No implied warranty, including any implied warranty of merchantability of fitness for a particular purpose, applies after the applicable period of express written warranty above as to the parts as identified. No other express warranty, whether written or oral, except as mentioned above, given by any person or entity, including a dealer or retailer, with respect to any product, shall bind Troy-Bilt. During the period of the warranty, the exclusive remedy is repair or replacement of the product as set forth above.

The provisions as set forth in this warranty provide the sole and exclusive remedy arising from the sale. Troy-Bilt shall not be liable for incidental or consequential loss or damage including, without limitation, expenses incurred for substitute or replacement lawn care services or for rental expenses to temporarily replace a warranted product.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

In no event shall recovery of any kind be greater than the amount of the purchase price of the product sold. **Alteration of safety features of the product shall void this warranty.** You assume the risk and liability for loss, damage, or injury to you and your property and/or to others and their property arising out of the misuse or inability to use the product.

This limited warranty shall not extend to anyone other than the original purchaser or to the person for whom it was purchased as a gift.

HOW STATE LAW RELATES TO THIS WARRANTY: This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IMPORTANT: Owner must present Original Proof of Purchase to obtain warranty coverage.