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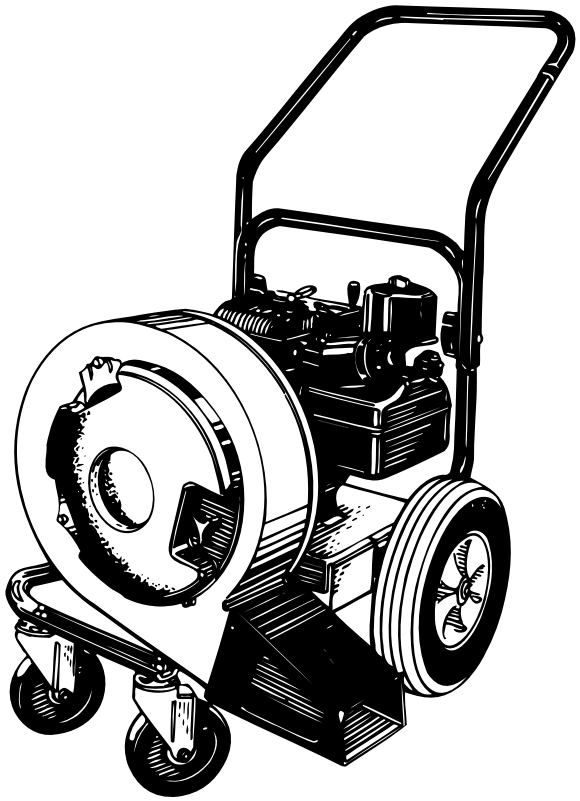
Safety • Assembly • Operation • Tips & Techniques • Maintenance • Troubleshooting • Parts Lists • Warranty

TROY-BILT®

Operator's Manual



Leaf Blower — Model 657

IMPORTANT: READ SAFETY RULES AND INSTRUCTIONS CAREFULLY

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.

TROY-BILT LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019

PRINTED IN U.S.A.

FORM NO. 769-00834C
(4/06)

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TABLE OF CONTENTS

Content	Page	Content	Page
Important Safe Operation Practices	3	Maintaining Your Leaf Blower	7
Assembling Your Leaf Blower	5	Trouble Shooting	8
Operating Your Leaf Blower	6	Illustrated Parts List	9
Adjusting Your Leaf Blower	6	Warranty	12

FINDING MODEL NUMBER

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

Before you start assembling your new equipment, please locate the model plate on the equipment and copy the information from it in the space provided below. A sample model plate is also given below. You can locate the model plate by standing at the operating position and looking down at the rear of the leaf blower. This information will be necessary to use the manufacturer's web site and/or help from the Customer Support Department or an authorized service dealer.

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www.troybilt.com

TROY-BILT LLC
P. O. BOX 361131
CLEVELAND, OH 44136
330-558-7220
866-840-6483

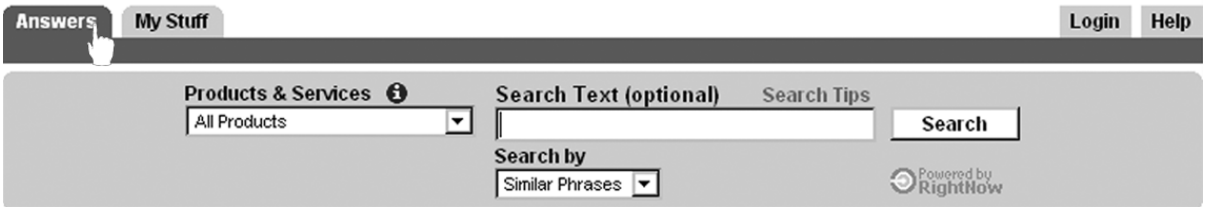
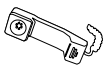
Copy the model number here: _____

Copy the serial number here: _____

Customer Support

Please do NOT return the unit to the retailer from where 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:

	Visit **troybilt.com** for many useful suggestions. Click on Customer Support button and you will get the four options reproduced here. Click on the appropriate button and help is immediately available. 
	If you prefer to reach a Customer Support Representative, please call **1-800-520-5520**.
	The **engine** manufacturer is responsible for all engine-related issues with regard 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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SECTION 1: IMPORTANT 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**.

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.

General Operation

1. Read this operator's manual carefully in its entirety before attempting to assemble this machine. Read, understand, and follow all instructions on the machine and in the manual(s) before operation. Be completely familiar with the controls and the proper use of the machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. Your leaf blower is a powerful tool, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform one job; to blow leaves. Do not use it for any other purpose.
3. Never allow children under 14 to operate the unit. Children 14 years and older should only operate under close parental supervision. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use your unit.
4. Keep the area of operation clear of all persons, particularly small children and pets. Stop the engine when they are in the vicinity of the unit.
5. Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair, to protect eyes from debris or foreign objects that may be thrown from machine.
6. Wear close fitting slacks and shirt. Shirt and slacks that cover the arms and legs are recommended. Do not wear loose fitting clothes or jewelry and secure hair so it is above shoulder length. They can be caught in moving parts.
7. Do not operate the unit while under the influence of alcohol or drugs.
8. Never place your hands or any part of your body or clothing near rotating parts. Keep clear of the discharge opening at all times. Never insert your hands, fingers, feet, or any other part of your body or clothing into the discharge or air intake openings as the rotating impeller inside the housing can cause serious injury.
9. Never operate unit without directional discharge chute and plastic impeller guard properly affixed to unit. These devices shield the operator from accidental contact with the rotating impeller.
10. Keep all guards and safety devices in place and operating properly.
11. Exercise caution when operating blower. Do not allow the discharge to point in the direction of bystanders or pets.
12. If your machine should start making an unusual noise or vibration, immediately stop the engine, 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 any loose parts and tighten to assure continued safe operation.
13. Muffler and engine become hot and can cause a burn. Do not touch.
14. Do not allow leaves or other debris to build up on engine's muffler. The debris could ignite and cause a fire.
15. Do not operate engine if air cleaner or cover over carburetor air intake is removed, except for adjustment. Removal of such parts could create a fire hazard.
16. Only use accessories approved for this machine by the manufacturer. Read, understand, and follow all instructions provided with the approved accessory.
17. Only operate unit in good daylight. Do not operate unit at night or in dark areas where your vision may be impaired.
18. If situations occur which are not covered by this manual, use care and good judgment. Contact your dealer for assistance.

Children

Tragic accidents can occur if the operator is not alert to the presence of small children. Children are often attracted to the blowing activity. Never assume that children will remain where you last saw them.

1. Keep children out of the work area and under the watchful eye of a responsible adult other than the operator.
2. Be alert and turn the unit off if a child enters the area.
3. Never allow children under the age of 14 to operate the leaf blower.

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Service

1. Use extreme care in handling gasoline and other fuels. They are extremely flammable and the vapors are explosive.
2. Store fuel and oil in approved containers, away from heat and open flame, and out of the reach of children.
3. Check and add fuel before starting the engine. Never remove gas cap or add fuel while the engine is running. Allow engine to cool at least two minutes before refueling.
4. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
5. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
6. Never refuel unit indoors because flammable vapors will accumulate in the area.
7. Never store the machine or fuel container inside where there is an open flame or spark such as a gas hot water heater, clothes dryer or furnace.
8. Never run your machine in an enclosed area as the exhaust from the engine contains carbon monoxide, which is an odorless, tasteless and deadly poisonous gas.
9. To reduce fire hazard, keep engine and muffler free of leaves, grass, and other debris build-up.
10. Clean up fuel and oil spillage. Allow unit to cool at least 5 minutes before storing.
11. Before cleaning, repairing, or inspecting, make certain the impeller and all moving parts have stopped. Disconnect the spark plug wire and keep wire away from spark plug to prevent accidental starting. Do not use flammable solutions to clean air filter.
12. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
13. Never tamper with safety devices. Check their proper operation regularly.
14. Do not alter or tamper with the engine's governor setting. The governor controls the maximum safe operating speed of the engine. Over-revving the engine is dangerous and will cause damage to the engine and to other moving parts of the machine.

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.

NOTE: *Not all safety labels shown may apply to your leaf blower.*

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SECTION 2: ASSEMBLING YOUR LEAF BLOWER

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 unit.

NOTE: *Reference to right or left hand side of the leaf blower is observed from the operating position.*

Removing Unit From Carton

- Remove staples, break glue on top flaps, or cut tape at carton end and peel along top flap to open carton.
- Remove loose parts if included with unit (i.e., operator's manual, etc.)
- Cut along corners, lay carton down flat, and remove packing material.
- Roll or slide unit out of carton and check carton thoroughly for loose parts.

Loose Parts In Carton

- Upper Handle
- Directional Discharge
- Hardware Pack
- Operator's Manual

Hardware Pack

This leaf blower is shipped with the following loose parts in the hardware pack:

Hardware A

- Curved Head Bolts (710-1174) - Qty. 2
- Saddle Washers (736-0451) - Qty. 2
- Handle Knobs (720-04052) - Qty. 2

Hardware B

- Hex Sems Bolts (710-0259) - Qty. 2

Disconnecting Spark Plug Wire

WARNING: Before setting up your leaf blower, disconnect the spark plug wire from the spark plug and ground against the engine.

Attaching The Upper Handle (Hardware A)

- Place the upper over the lower handle, aligning the holes in the upper handle with the middle holes in the lower handle. See Figure 1.
- Secure with the curved head bolts, saddle washers, and handle knobs.

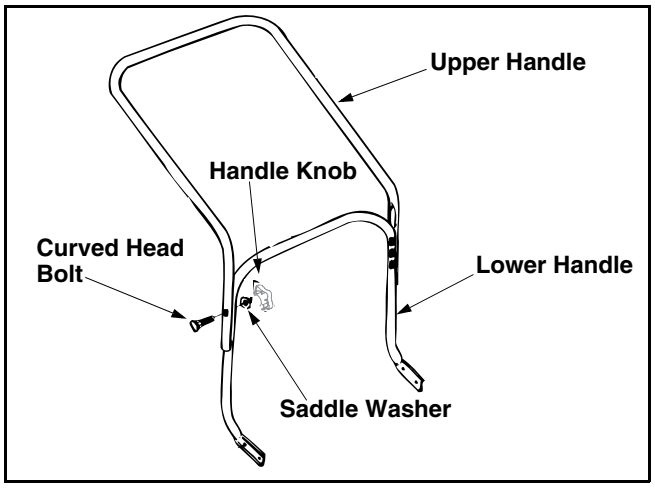

Figure 1

Attaching The Directional Discharge

(Hardware B)

- Slip end of directional discharge over chute opening and secure with the hex sems bolts. See Figure 2.

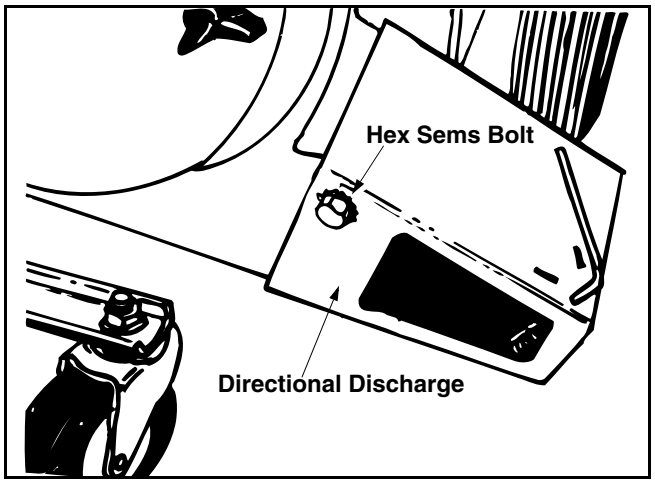

Figure 2

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SECTION 3: OPERATING YOUR LEAF BLOWER

WARNING: Read, understand, and follow all instructions and warnings on the machine and in this manual before operating.

Gas And Oil Fill-Up

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

WARNING: Use extreme care when handling gasoline. Gasoline is extremely flammable and the vapors are explosive. Never fuel machine indoors or while the engine is hot or running. Extinguish cigarettes, cigars, pipes, and other sources of ignition.

Stopping Engine

- To stop engine, move throttle control lever to OFF position.
- Disconnect spark plug wire from spark plug and ground against the engine.

Starting Engine

- Attach spark plug wire to spark plug. Make certain the metal cap on the end of the spark plug wire is fastened securely over the metal tip on the spark plug. See engine operator's manual.
- Move the choke lever on engine to CHOKE position. (A warm engine may not require choking.)
- Move the throttle control 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. Keeping a firm grip on the starter handle, let the rope return to the starter slowly. Repeat until engine starts.
- When engine starts, move choke control gradually to RUN position.

NOTE: *See your engine manual packed with your unit for more detailed instructions.*

SECTION 4: ADJUSTING YOUR LEAF BLOWER

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

Two-Way Discharge

The leaf blower can be adjusted to discharge toward the front of the unit or to the side.

- Simply push down on the handle and swing door toward the front to discharge out the side or swing door to the side to discharge out the front.

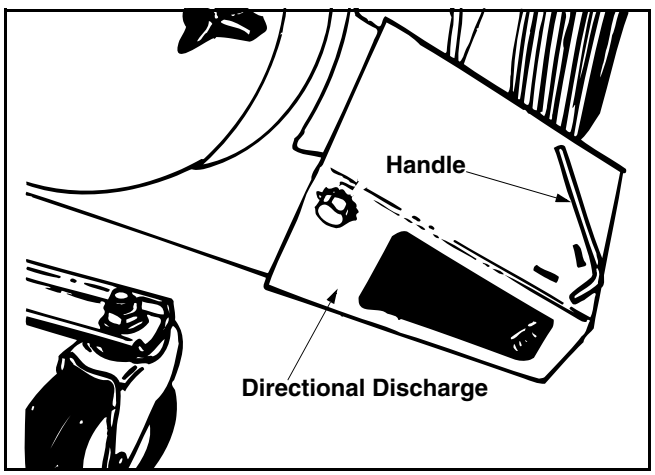

Figure 3

Height Adjustment

The height adjustment crank is located on the right hand side of the leaf blower.

- Turn the crank clockwise to raise the discharge chute.
- Turn the crank counterclockwise to lower.

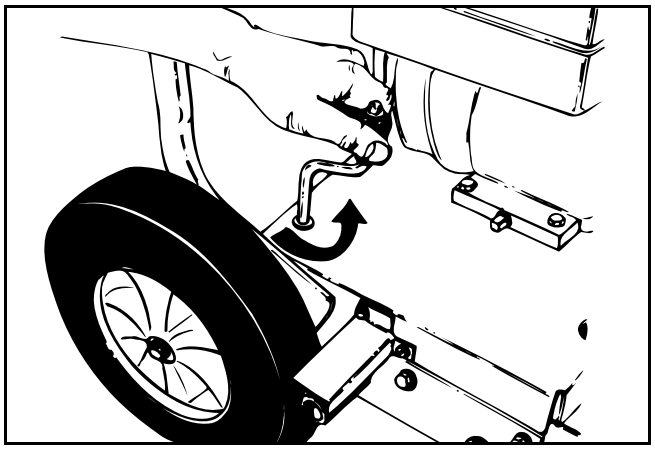

Figure 4

Engine Adjustment

Refer to the separate engine manual for engine adjustment instructions.

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SECTION 5: MAINTAINING YOUR LEAF BLOWER

WARNING: Before performing any maintenance or repairs, stop the engine, wait until the machine comes to a complete stop, disconnect the spark plug wire and ground against the engine to prevent unintended starting.

Lubrication

Wheels: Rear wheels are provided with light oil bearings. Lubricate by placing a few drops of SAE 30 oil on each bearing once a season.

Engine: Follow the separate engine manual packed with you unit for lubrication instructions.

Engine

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

- Maintain engine oil as instructed in the separate engine manual packed with your unit.
- Service air cleaner every 25 hours under normal conditions. Poor engine performance and flooding usually indicate that the air cleaner should be serviced. To service the air cleaner, refer to the separate engine manual packed with your unit.
- The spark plug should be cleaned and the gap reset once a season. Spark plug replacement is recommended at the start of each leaf blowing season.

Clean the engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation which is essential to engine performance and life. Be certain to remove all leaves, dirt, and combustible debris from muffler area.

Storing Your Leaf Blower

- Clean the equipment thoroughly.
- Wipe equipment with a oiled rag to prevent rust.
- Refer to engine manual for correct engine storage instructions.
- Store unit in a clean, dry area. Do not store next to corrosive materials such as fertilizer.
- For more compact storage, store unit in the shipping position with the upper handle folded toward engine. See ASSEMBLY section for details.

WARNING: Never store the machine or fuel container indoors where there is an open flame, spark, or pilot light such as on a water heater, furnace, clothes dryer, or other gas appliance.

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SECTION 6: TROUBLESHOOTING

Problem	Cause	Remedy
Engine fails to start	1. Spark plug wire disconnected. 2. Fuel tank empty or stale fuel. 3. Throttle control lever not in correct starting position. (If Equipped) 4. Blocked fuel line. 5. Faulty spark plug. 6. Engine flooded.	1. Connect wire to spark plug. 2. Fill tank with clean, fresh gasoline. 3. Move throttle lever to start position. 4. Clean fuel line. 5. Clean, adjust gap, or replace. 6. Wait a few minutes to restart, but do not prime.
Engine runs erratic	1. Spark plug wire loose. 2. Blocked fuel line or stale fuel. 3. Vent in gas cap plugged. 4. Water or dirt in fuel system. 5. Dirty air cleaner. 6. Carburetor out of adjustment.	1. Connect and tighten spark plug wire. 2. Clean fuel line; fill tank with clean, fresh gasoline. 3. Clear vent. 4. Drain fuel tank. Refill with fresh fuel. 5. Replace air cleaner. 6. See authorized service dealer.
Engine overheats	1. Engine oil level low. 2. Dirty air cleaner. 3. Air flow restricted.	1. Fill crankcase with proper oil. 2. Replace air cleaner. 3. Remove blower housing and clean.
Idles poorly	1. Spark plug fouled, faulty or gap too wide. 2. Carburetor improperly adjusted. 3. Dirty air cleaner.	1. Reset gap to .030” or replace spark plug. 2. See authorized service dealer. 3. Replace air cleaner.

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

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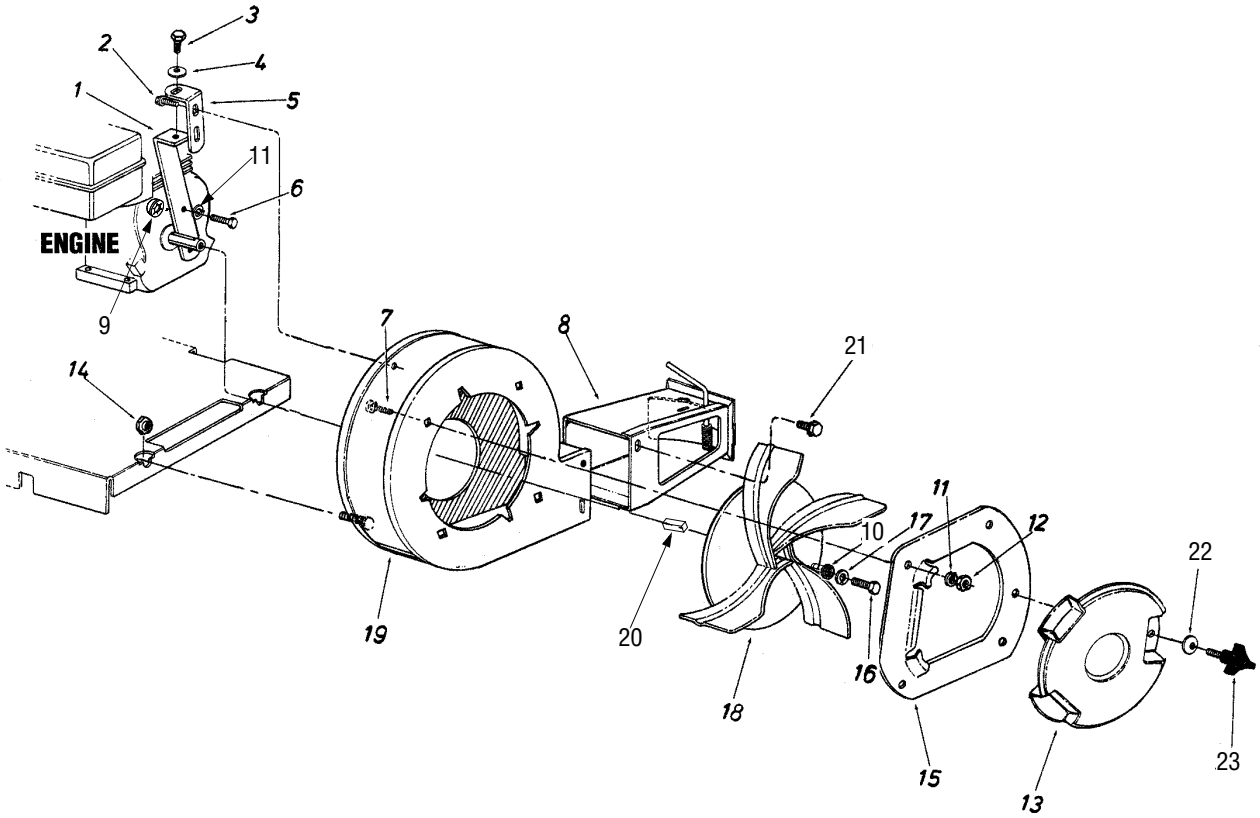
SECTION 7: PARTS LIST FOR MODEL 657



Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	14540B	Engine Housing Brace Assembly	13.	731-0608	Blower Guard
2.	710-0607	Hex Self Tapping Screw 5/16 x .5	14.	711-0758	Hex Shoulder Nut .50”
3.	710-1260A	Hex Bolt 5/16-18 x .75	15.	14563A	Nozzle Plate Assembly
4.	736-0170	Special L-Washer 5/16” x.88 OD	16.	710-1273	Hex Screw, 3/8-24 x 2.75
5.	14541	Right Angle Bracket	17.	736-0217	Lock Washer 3/8
6.	710-0672	Hex Screw, 5/16-24 x 1.25	18.	681-04015	Impeller Assembly
7.	710-0260A	Carriage Bolt 5/16-18 x .62	19.	14496B	Blower Housing Assembly
8.	14479	Directional Discharge Assembly	20.	714-0105	Square Key, 3/16 x 1.00
9.	750-3198	Engine Spacer, 1.0 x.34Lg x.35	21.	710-0259	Hex Sems Bolt 5/16-18 x .62
10.	711-04221	Impeller Hub	22.	736-0242	Bell Washer .34 ID x .87 OD
11.	736-0119	Lock Washer 5/16	23.	710-3008	Screw 5/16-18 x.75
12.	712-3010	Hex Nut 5/16-18			

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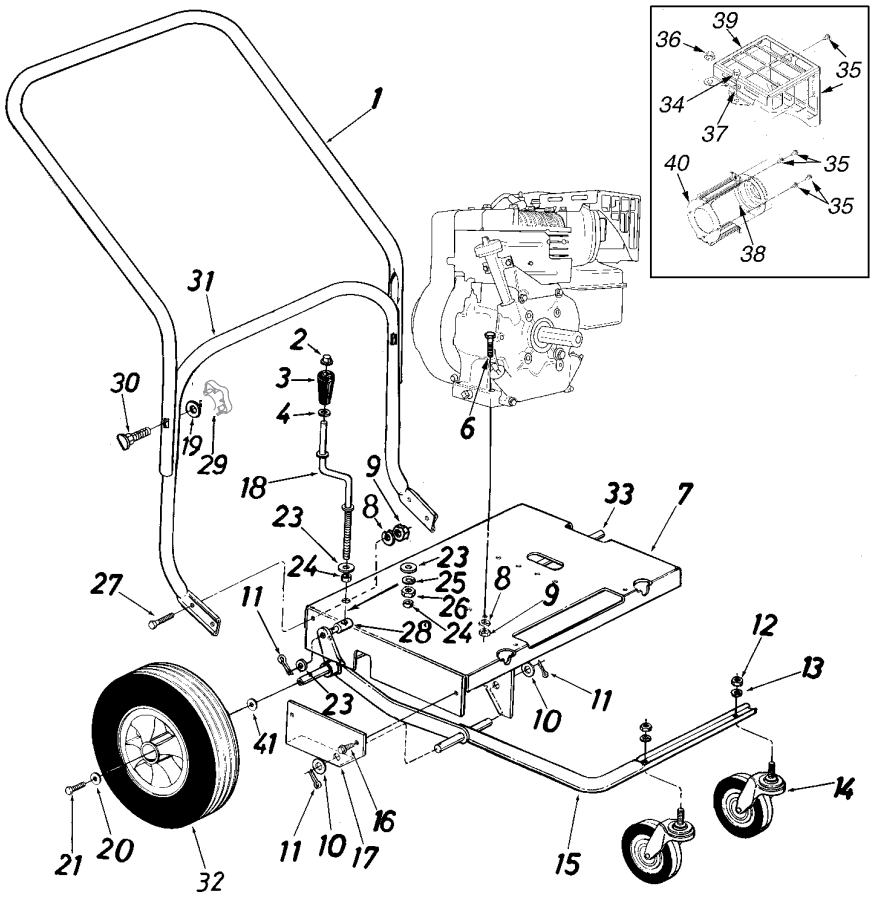
MODEL 657



Ref. No.	Part No.	Part Description	Ref. No.	Part No.	Part Description
1.	749-0784	Upper Handle	23.	736-0300	Flat Washer.38 ID x.57 OD
2.	726-0100	Push Nut 3/8	24.	750-0528	Spacer.382 ID x.50 OD x.180Lg
3.	720-0171	Crank Knob	25.	736-0169	Lock Washer 3/8 ID
4.	736-0117	Flat Washer.385 ID x.62 OD	26.	712-0354	Hex Nut 3/8-8
6.	710-0805	Hex Bolt 5/16-18 x 1.50	27.	710-0118	Hex Bolt 5/16-18 x.75
7.	16453	Engine Mounting Frame Assembly	28.	711-0797	Ferrule
8.	736-0119	Lock Washer 5/16 ID	29.	720-04052	Hand Knob
9.	712-0267	Hex Nut 5/16-18	30.	710-1174	Carriage Bolt 5/16-18 x 2.0
10.	736-0187	Flat Washer.63 ID x 1.25	31.	749-0785	Lower Handle
11.	714-0115	Cotter Pin	32.	734-1035	Wheel Assembly 12 x 3
12.	712-0206	Hex Nut 1/2-13	33.	738-0185	Rear Axle
13.	736-0921	Lock Washer 1/2	34.	710-0599	Self Tap Screw 1/4-20 x.5 †
14.	734-1036	Swivel Caster Wheel 5” Dia x 1.25	35.	710-1502	Screw 8-18 x.375 †
15.	16273	Caster Arm Assembly	36.	712-3004A	Hex Lock Nut 5/16-18 †
16.	710-0726	Hex Washer Screw 5/16x.75	37.	736-0329	Lock Washer †
17.	14529	Caster Arm Bracket	38.	751-0447	Deflector †
18.	747-0542	Height Adjustment Crank	39.	751-0632	Muffler Guard †
19.	736-0451	Saddle Washer.32 ID x.93 OD	40.	751-0646	Muffler Guard Bracket †
20.	736-0159	Flat Washer.34 ID x.87 OD	41.	736-0162	Flat Washer
21.	710-0170	Hex Lock Bolt 5/16-24 x.64	42.	712-3004A	Hex Lock Nut 5/16-18

† If Equipped

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NOTES

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MANUFACTURER'S LIMITED WARRANTY FOR:

TROY-BILT®

The limited warranty set forth below is given by Troy-Bilt LLC with respect to new merchandise purchased and used in the United States, its possessions and territories.

"Troy-Bilt" warrants this product 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, 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, check your Yellow Pages, or contact Troy-Bilt LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-800-520-5520 or 1-330-558-7220, or log on to our Web site at www.troybilt.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, its 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.

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.

Troy-Bilt LLC, P.O. BOX 361131 CLEVELAND, OHIO 44136-0019; Phone: 1-800-520-5520, 1-330-558-7220

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