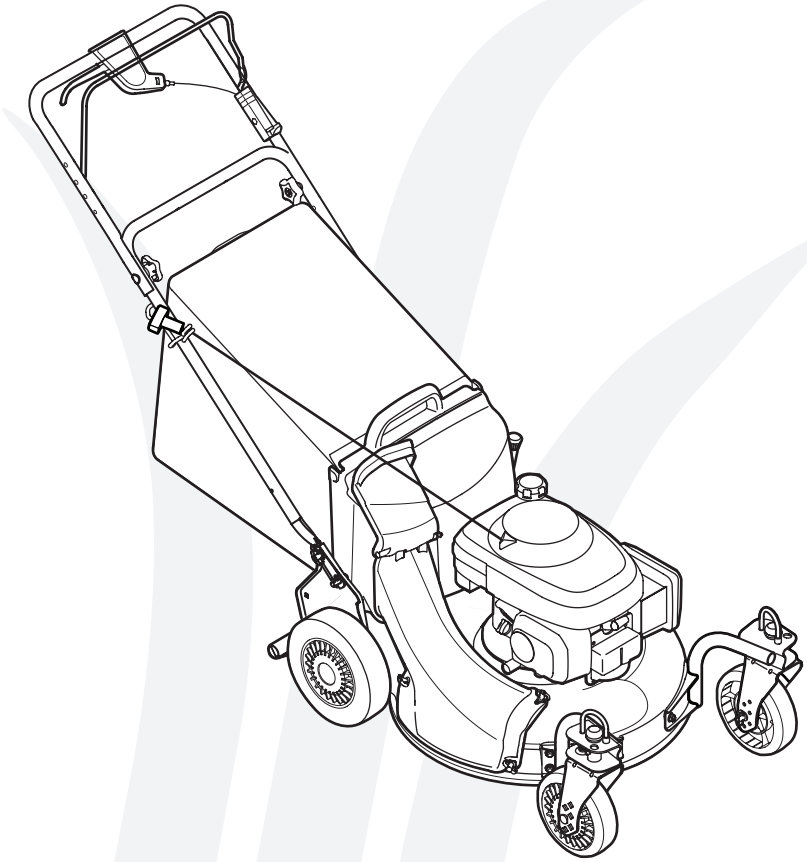
For Parts Call 606-678-9623 or 606-561-4983

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

OPERATOR'S MANUAL



21-inch Self-Propelled Mower — Model Series 980

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.

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

FORM NO. 769-02331A
12/21/2006

www.mymowerparts.com

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

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MTD LLC reserves the right to change product specifications, designs, and equipment without notice and without incurring obligation.

Finding and Recording Model Number

BEFORE 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 at the operating position and looking down at the rear of the deck. This information will be necessary to use the manufacturer's web site, to obtain assistance from the Customer Support Department, or when contacting an authorized service dealer.

Model Number _____

Serial Number _____

MTD For A Growing World.™

www.mtdproducts.com

MTD LLC
P.O. BOX 361131
CLEVELAND, OH 44136
330-220-4683
800-800-7310

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:

- Visit **www.mtdproducts.com**
- Call a Customer Support Representative at **1-800-800-7310**.
- 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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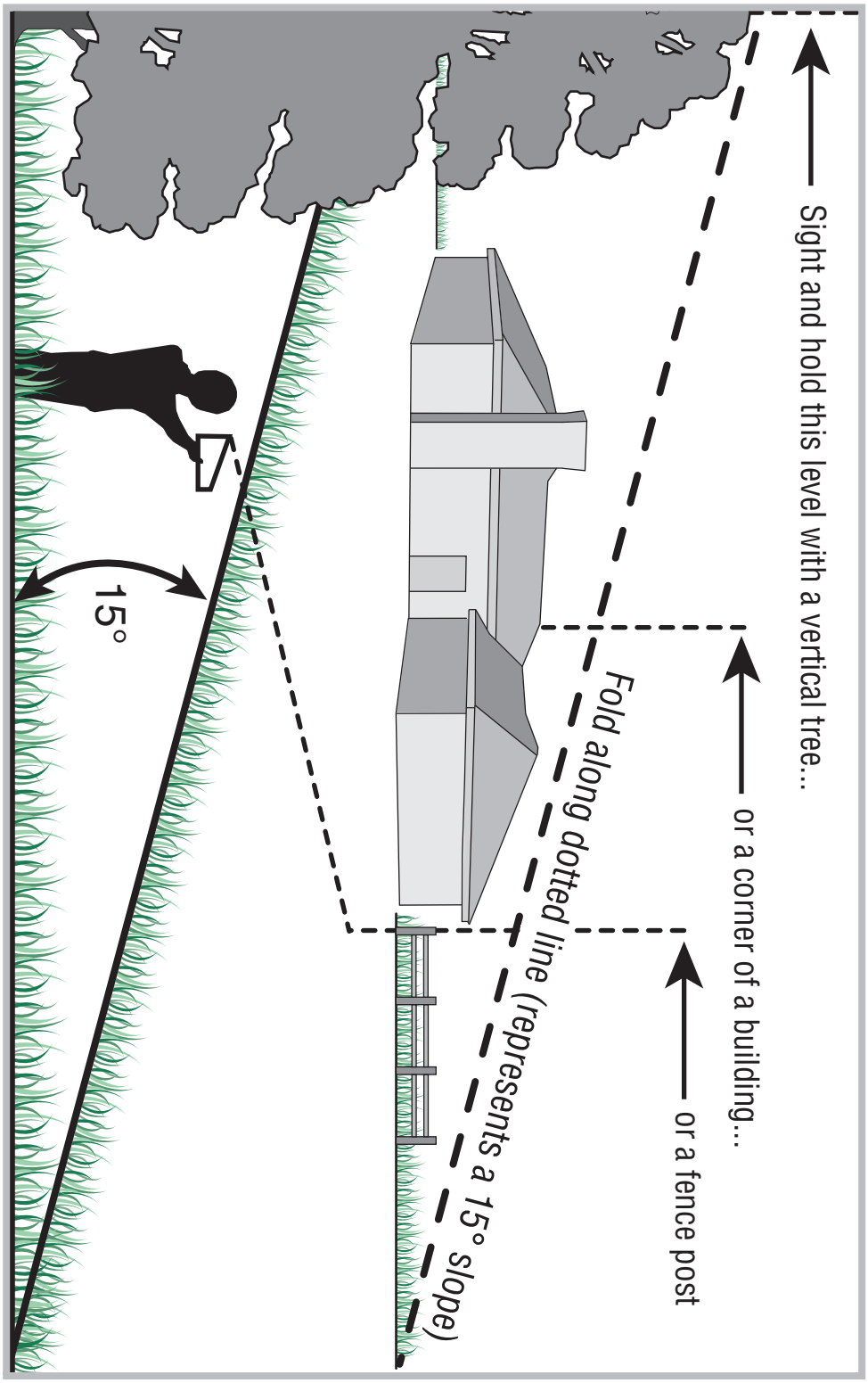
Use this page as a guide to determine slopes where you may not operate safely.

Do not operate your lawn mower on such slopes.



1

Slope Gauge

WARNING

Do not mow on inclines with a slope in excess of 15 degrees (a rise of approximately 2-1/2 feet every 10 feet).

Operate WALK-BEHIND mowers across the face of slopes, never up and down slopes.

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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.

Children

Tragic accidents can occur if operator is not alert to presence of children. Children are often attracted to mower and mowing activity. They do not understand the dangers. Never assume that children will remain where you last saw them.

1. Keep children out of the mowing area and under watchful care of a responsible adult other than the operator.
2. Be alert and turn mower off if a child enters the area.
3. Before and while moving backwards, look behind and down for small children.
4. Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child who may run into the mower.
5. Keep children away from hot or running engines. They can suffer burns from a hot muffler.
6. Never allow children under 14 years old to operate a power mower. Children 14 years old and over should read and understand operation instructions and safety rules in this manual and should be trained and supervised by a parent.

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 this machine before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
2. This machine is a precision piece of power equipment, not a plaything. Therefore, exercise extreme caution at all times. Your unit has been designed to perform one job: to mow grass. Do not use it for any other purpose.
3. Never allow children under 14 years old to operate this machine. Children 14 years old and over should read and understand the instructions in this manual and should be trained and supervised by a parent. Only responsible individuals who are familiar with these rules of safe operation should be allowed to use this machine.
4. Thoroughly inspect the area where the equipment is to be used. Remove all stones, sticks, wire, bones, toys and other foreign objects, which could be tripped over or picked up and thrown by the blade. Thrown objects can cause serious personal injury. Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction, which may cause discharged material to ricochet back toward the operator.
5. To help avoid blade contact or a thrown object injury, stay in operator zone behind handles and keep children, bystanders, helpers and pets at least 75 feet from mower while it is in operation. Stop machine if anyone enters area.
6. Always wear safety glasses or safety goggles during operation and while performing an adjustment or repair to protect your eyes. Thrown objects which ricochet can cause serious injury to the eyes.
7. Wear sturdy, rough-soled work shoes and close-fitting slacks and shirts. Shirts and pants that cover the arms and legs and steel-toed shoes are recommended. Never operate this machine in bare feet, sandals, slippery or light-weight (e.g. canvas) shoes.
8. Do not put hands or feet near rotating parts or under cutting deck. Contact with blade can amputate hands and feet.
9. A missing or damaged discharge cover can cause blade contact or thrown object injuries.
10. Many injuries occur as a result of the mower being pulled over the foot during a fall caused by slipping or tripping. Do not hold on to the mower if you are falling; release the handle immediately.
11. Never pull the mower back toward you while you are walking. If you must back the mower away from a wall or obstruction first look down and behind to avoid tripping and then follow these steps:
    a. Step back from mower to fully extend your arms.
    b. Be sure you are well balanced with sure footing.
    c. Pull the mower back slowly, no more than half way toward you.
    d. Repeat these steps as needed.
12. Do not operate the mower while under the influence of alcohol or drugs.
13. Do not engage the self-propelled mechanism on units so equipped while starting engine.
14. The blade control handle is a safety device. Never attempt to bypass its operation. Doing so makes the safety device inoperative and may result in personal injury through contact with the rotating blade. The blade control handle must operate easily in both directions and automatically return to the disengaged position when released.
15. Never operate the mower in wet grass. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your footing, release the blade control handle immediately and the blade will stop rotating within three seconds.
16. Mow only in daylight or good artificial light. Walk, never run.
17. Stop the blade when crossing gravel drives, walks or roads.
18. If the equipment should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.

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19. Shut the engine off and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute.
    The cutting blade continues to rotate for a few seconds after the engine is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
20. Never operate mower without proper trail shield, discharge cover, grass catcher, blade control handle or other safety protective devices in place and working. Never operate mower with damaged safety devices. Failure to do so can result in personal injury.
21. Muffler and engine become hot and can cause a burn. Do not touch.
22. Only use parts and accessories made for this machine by manufacturer. Failure to do so can result in personal injury.
23. If situations occur which are not covered in this manual, use care and good judgment. Contact your dealer for assistance.

Slope Operation

Slopes are a major factor related to slip and fall accidents, which can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it. For your safety, use the slope gauge included as part of this manual to measure slopes before operating this unit on a sloped or hilly area. If the slope is greater than 15 degrees, do not mow it.

Do:

1. Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
2. Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. Tall grass can hide obstacles.
3. Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your balance, release the blade control handle immediately, and the blade will stop rotating within 3 seconds.

Do Not:

1. Do not mow near drop-offs, ditches or embankments, you could lose your footing or balance.
2. Do not mow slopes greater than 15 degrees as shown on the slope gauge.
3. Do not mow on wet grass. Unstable footing could cause slipping.

Service

Safe Handling Of Gasoline:

1. 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.
2. Use only an approved gasoline container.
3. Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
4. Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.
5. Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.
6. Extinguish all cigarettes, cigars, pipes and other sources of ignition.
7. Never fuel machine indoor because flammable vapors will accumulate in the area.
8. Never remove gas cap or add fuel while engine is hot or running. Allow engine to cool at least two minutes before refueling.
9. Never over fill fuel tank. Fill tank to no more than ½ inch below bottom of filler neck to provide for fuel expansion.
10. Replace gasoline cap and tighten securely.
11. If gasoline is spilled, wipe it off the engine and equipment. Move unit to another area. Wait 5 minutes before starting engine.
12. Never store the machine or fuel container near an open flame, spark or pilot light as on a water heater, space heater, furnace, clothes dryer or other gas appliances.
13. To reduce fire hazard, keep mower free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel soaked debris.
14. Allow a mower to cool at least 5 minutes before storing.

General Service:

1. Never run an engine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas.
2. Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Disconnect the spark plug wire and ground against the engine to prevent unintended starting.
3. Check the blade and engine mounting bolts at frequent intervals for proper tightness. Also, visually inspect blade for damage (e.g., bent, cracked, worn) Replace blade with the original equipment manufacture's (O.E.M.) blade only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
4. Mower blades are sharp and can cut. Wrap the blade or wear gloves, and use extra caution when servicing them.
5. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
6. Never tamper with safety devices. Check their proper operation regularly.
7. After striking a foreign object, stop the engine, disconnect the spark plug wire and ground against the engine. Thoroughly inspect the mower for any damage. Repair the damage before starting and operating the mower.
8. Never attempt to make a wheel or cutting height adjustment while the engine is running.
9. Grass catcher components, discharge cover, and trail shield are subject to wear and damage which could expose moving parts or allow objects to be thrown. For safety protection, frequently check components and replace immediately with original equipment manufacturer's (O.E.M.) parts only, listed in this manual. "Use of parts which do not meet the original equipment specifications may lead to improper performance and compromise safety!"
10. Do not change the engine governor setting or over-rev the engine. The governor controls the maximum safe operating speed of the engine.
11. Maintain or replace safety labels, as necessary.
12. Observe proper disposal laws and regulations. Improper disposal of fluids and materials can harm the environment.

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.

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3

Setup and Adjustment

NOTE: Stand behind the mower as if you were going to operate it. Your right hand corresponds to the right side of the mower; your left hand corresponds to the left side of the mower.

NOTE: Make certain the cables are routed around the handles so they do not interfere with attaching the grass bag.

IMPORTANT: This unit is shipped without gasoline or oil in the engine. Fill up gasoline and oil as instructed in the accompanying engine manual BEFORE operating your mower.

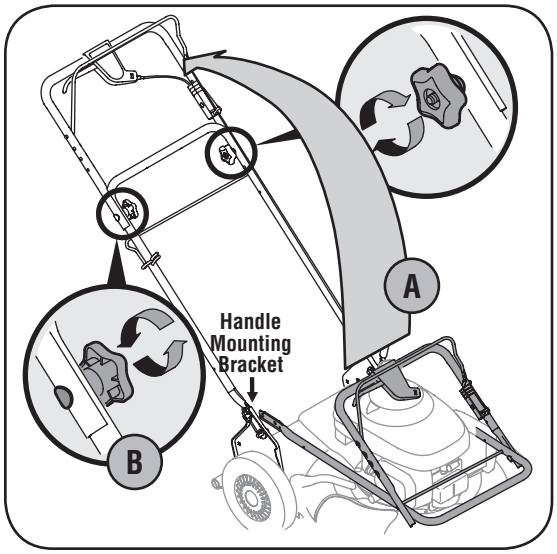

Figure 3-1: Unfold handle and tighten hardware.

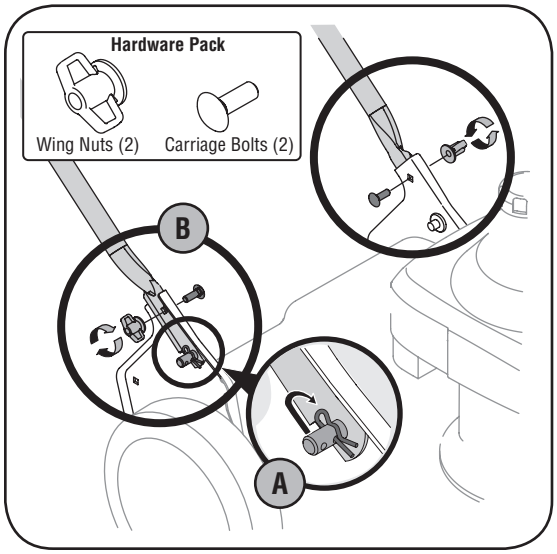

Figure 3-2: Secure lower handle to mounting brackets.

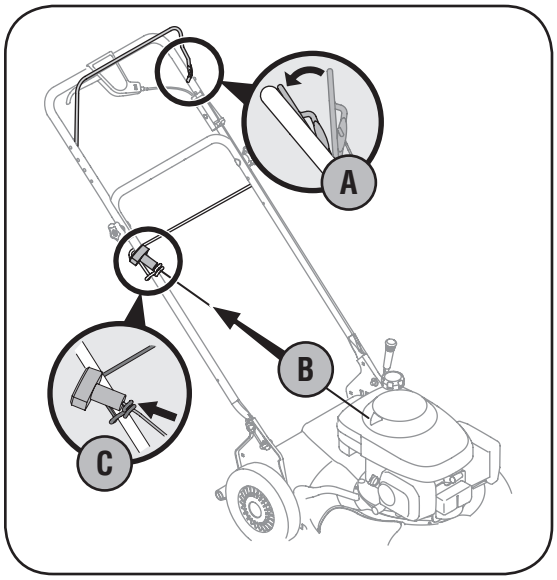

Figure 3-3: Pull recoil starter through rope guide.

1. Remove any packing material which may be between upper and lower handles.
   a. Pull up and back on upper handle as shown in Figure 3-1. Make certain the lower handle is seated securely into the handle mounting brackets.
   b. Tighten hand knobs securing upper handle to lower handle. Make sure that each carriage bolt is seated properly in the handle.
2. Locate hairpin clip in one hole on the weld pin on each side of lower handle.
   a. Remove hairpin clip from this hole. Using a pair of pliers, insert hairpin clip into the other hole on the weld pin. Repeat on other side. See Figure 3-2.
   b. Insert a carriage bolt from the hardware pack into the upper hole on the handle mounting bracket. Secure with one plastic wing nut, also included in the hardware pack. Repeat on other side with remaining items from hardware pack.
3. The rope guide, which is connected to the support rod, is located on the right side of the lower handle. See Figure 3-3.
   a. Hold the blade control against upper handle.
   b. Pull starter rope out of the engine. Release the blade control.
   c. Slip starter rope into rope guide.
4. Attach cables to the lower handle with the cable ties already on the lower handle. Insert pegs on cable ties into the holes on the lower handle. Pull cable ties tight and cut off the extra.
5. The mower was shipped with the mulching baffle installed on the unit. For bagging purposes, you will have to attach the grass bag and its adapter in place of the mulching baffle.
   a. Remove three wing nuts holding the mulching baffle in place and remove from unit.
   b. Replace with grass bag adapter, while making sure the front lip of adapter goes under the edge of the deck. Secure with wing nuts previously removed. See Figure 3-4.

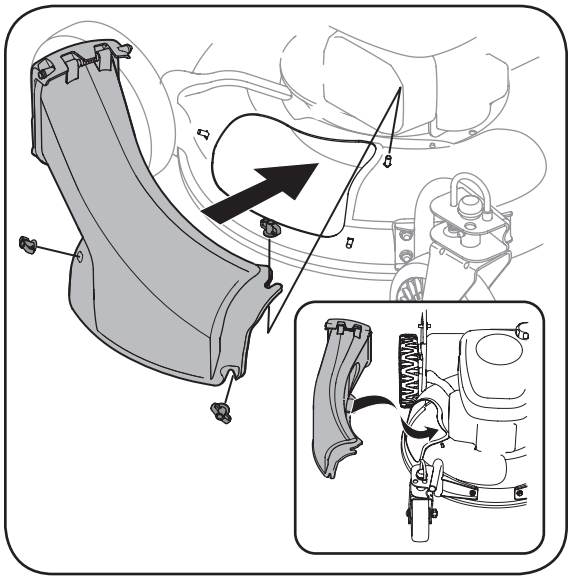

Figure 3-4: Use wing nuts to secure discharge chute to deck.

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c. Lift chute door on the grass bag adapter and slide grass bag onto the adapter. See Figure 3-5.

6. Follow steps below to install the side discharge chute:
   a. Remove mulching baffle or grass bag adapter from unit by disconnecting wing nuts.
   b. Attach side discharge chute to unit and secure with the three wing nuts. See Figure 3-6.
7. The cutting height adjustment lever is located above the rear left wheel. See Figure 3-7A insert.
   a. Pull lever out and away from mower, move lever forward or back for desired cutting height, and release lever towards mower deck.

   The front wheel cutting height is determined by selecting one of six positions on each caster assembly. To adjust front cutting height, proceed as follows:
   b. Remove wing nut from axle bolt. Slide axle bolt and wave washer from the assembly and select a cutting height.

      With wave washer on axle bolt, reinsert hardware in the square hole desired through wheel assembly and secure with wing nut previously removed.

   The casters can be locked in a straight ahead position or position to swivel freely. See Figure 3-7C insert.
   c. Lift and place lock pins in larger holes to lock wheels. Place pins in smaller holes to allow casters to rotate freely for turning.
8. The adjustment wheel is located in the drive control handle housing and is used to tighten or loosen the drive belt. You will have to adjust the drive control if any of the following happens:
   a. The mower does not propel itself with the drive control engaged.
   b. The mower's drive wheels hesitate with the drive control engaged.

If either of these conditions occur, rotate the adjustment wheel clockwise to tighten and counter-clockwise to loosen cable to adjust the drive control. See Figure 3-8.

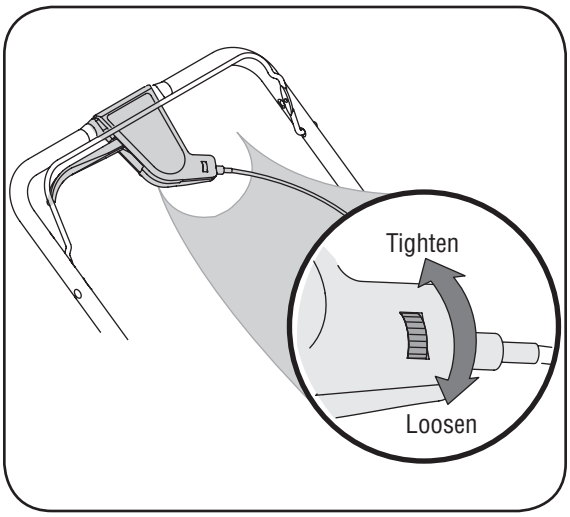

Figure 3-8: Use the adjustment wheel to adjust the drive belt.

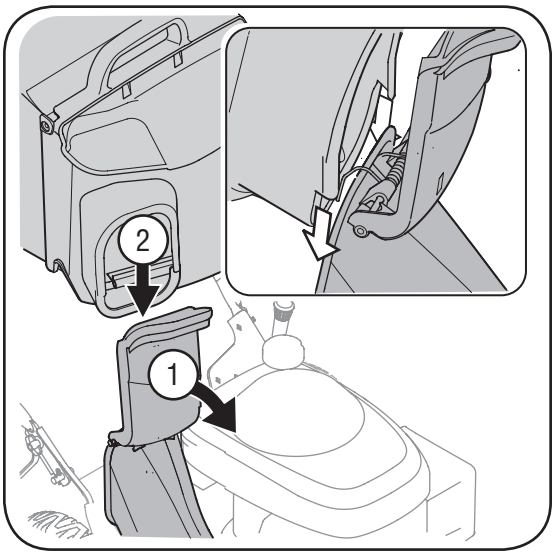

Figure 3-5: Attach the grass bag to discharge chute.

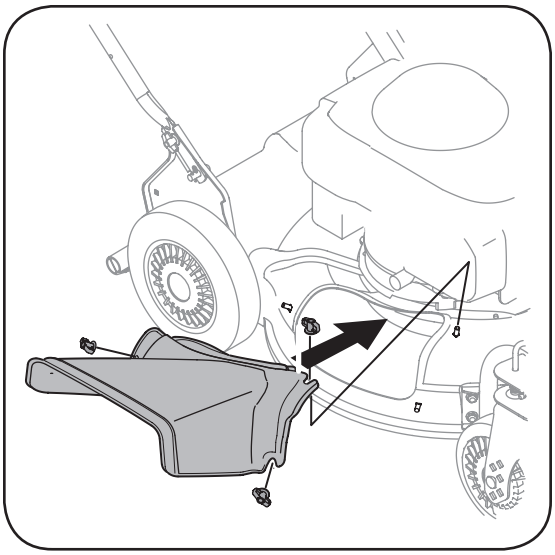
Figure 3-6: Remove mulching cover or grass bag before installing side discharge chute.

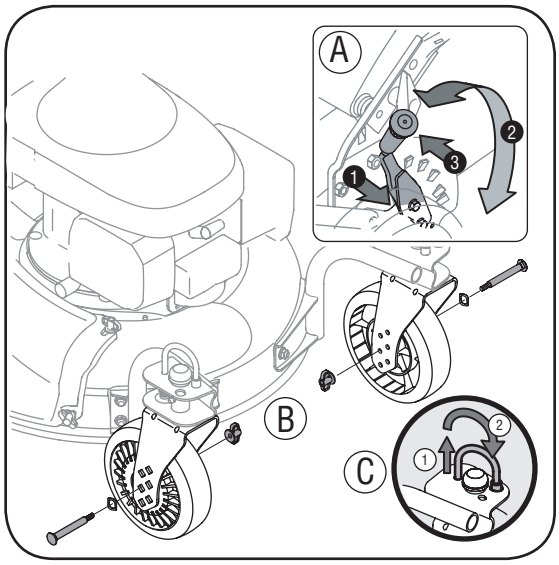

Figure 3-7: Front and rear height adjustment; caster locks.

3

Setup and Adjustment

CUTTING HEIGHT
All wheels must be in the same relative position. For rough or uneven lawns, move the height adjustment lever to a higher position.

Drive Control
For some people the drive control may not be in a comfortable position. You can adjust the handle by tightening the adjustment wheel.

NOTE: Make certain the drive cable is routed around the outside and above the lower handle so it does not interfere with attaching the grass bag.
The chute door has been designed to move the starter rope out of the way of the bag when the chute door is opened.

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4

Operating Your Lawn Mower

WARNING

The blade control mechanism is a safety device. Never attempt to bypass its operations.

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

Keep hands and feet away from the chute area on cutting deck. Refer to warning label on the unit.

Know Your Lawn Mower

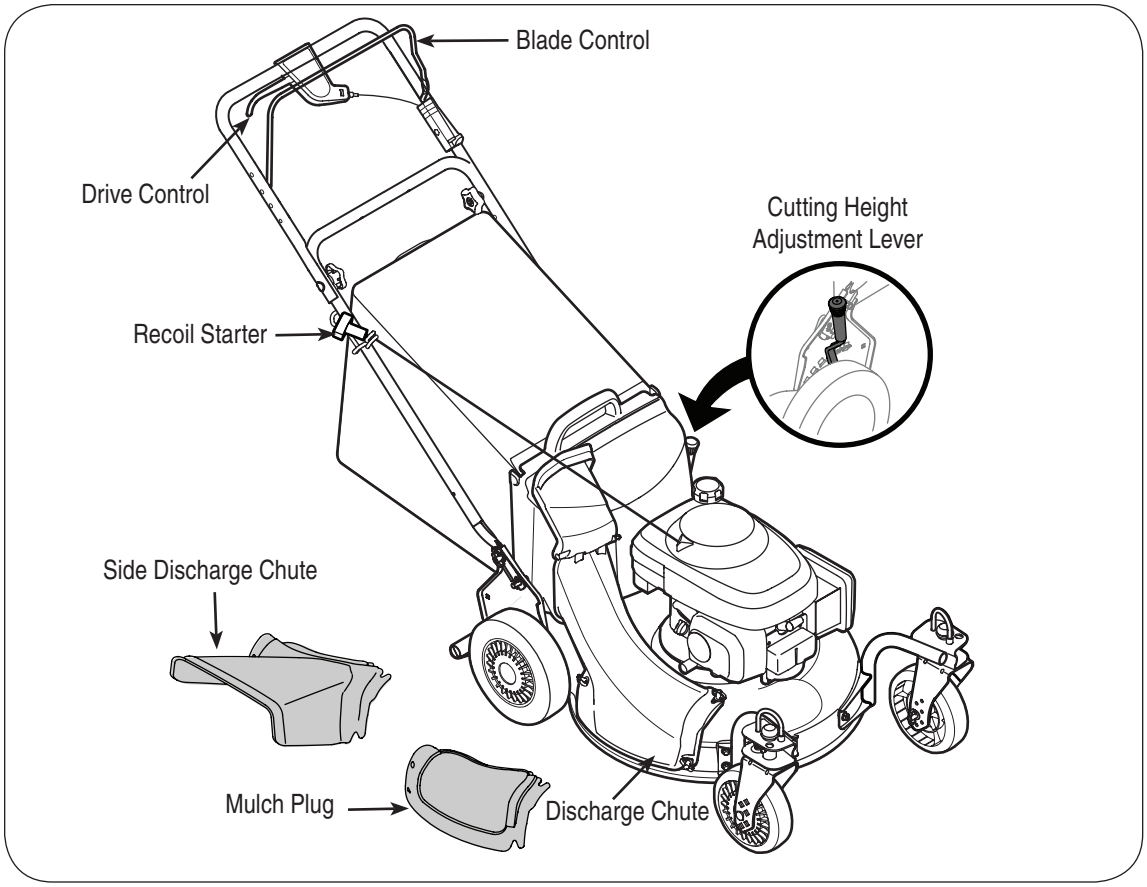

Figure 4-1: The major components on the mower.

Now that you have setup your lawn mower, it's important to become acquainted with its controls and features.

Blade Control

The blade control is attached to the upper handle of the mower. Depress and squeeze it against the upper handle to operate the unit. Release it to stop engine and blade.

WARNING: This blade control mechanism is a safety device. Never attempt to bypass its operations.

Cutting Height Adjustment Lever

The cutting height adjustment lever is located above the left rear wheel. To adjust the cutting height, refer to Adjustment Section in this manual.

Drive Control

The drive control is located on the upper handle. Squeeze the drive control to engage the drive system. Release it to disengage the drive system. Release the drive control to slow down when approaching an obstacle, making a turn, or stopping.

Mulch Cover

To use the mower as a mulcher, remove the discharge chute and install the mulch cover.

Recoil Starter

The recoil starter is connected to the support rod and is located on the right side of the lower handle. Stand behind the unit and pull the recoil starter rope to start it.

Side Discharge Chute

Instead of collecting grass clippings in the bag, you may attach the side discharge chute to expel the clippings.

Discharge Chute

The discharge chute must be attached to the deck to use the grass bag.

Gas and Oil Fill-Up

1. Check oil level and add oil if necessary. Follow engine manual for this.
2. Service the engine with gasoline as instructed in the engine manual. See engine manual for location of oil and gas fill.

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

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WARNING: The operation of any lawn mower can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear safety glasses while operating the mower, or while performing any adjustments or repairs on it.

Starting the Engine

WARNING: Be sure no one other than the operator is standing near the lawn mower while starting engine or operating mower. Never run engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas. Keep hands, feet, hair and loose clothing away from any moving parts on engine and lawn mower.

1. Place the fuel valve lever found on the left side of the engine into the ON position. See Figure 4-2.
2. Move the choke lever (if equipped) all the way backward into the choke position. See Figure 4-2.
3. Standing behind the mower, squeeze the blade control against upper handle. See Figure 4-2. The choke will now begin to slowly return to the off choke position after activating the blade control. Therefore, quickly move onto step four below. Refer to the engine manual for further details.
4. Holding these two handles together firmly, grasp recoil starter handle and pull rope out with a rapid, continuous, full arm stroke. See Figure 4-2. Keeping a firm grip on the starter handle, let the rope rewind slowly. Repeat until engine cranks. Let the rope rewind each time slowly.

Stopping the Engine

1. Release blade control to stop the engine and blade.
2. Disconnect spark plug wire from spark plug and ground against the engine.

Using Your Lawn Mower

WARNING: Do not operate mower without mulching baffle, discharge chute or grass catcher properly installed.

Be sure lawn is clear of stones, sticks, wire, or other objects which could damage lawn mower or engine. Such objects could be accidently thrown by the mower in any direction and cause serious personal injury to the operator and others.

WARNING: If you strike a foreign object, stop the engine. Remove wire from the spark plug, thoroughly inspect mower for any damage, and repair damage before restarting and operating. Extensive vibration of mower during operation is an indication of damage. The unit should be promptly inspected and repaired.

- For best results, do not cut wet grass.
- For a healthier lawn, never cut off more than one-third of the total length of the grass.

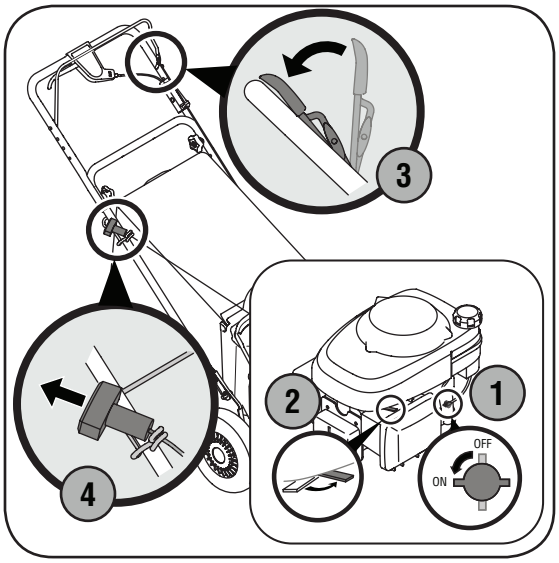

Figure 4-2: The steps involved in starting the mower.

Using as Mulcher

For mulching grass, remove the grass catcher and adapter from the mower. Reattach mulching baffle with the three wing nuts.

- For effective mulching, do not cut wet grass.
- New or thick grass may require a narrower cut. Adjust ground speed according to condition of lawn.
- If the grass has been allowed to grow in excess of four inches, mulching is not recommended. Use the grass catcher to bag clippings instead.

Using Grass Catcher

You can use the grass catcher bag to collect clippings while you are operating the mower.
The grass bag is equipped with a bag-fill indicator to add convenience to your work. While the mower is running, air will flow through the bag and into the Grass Gauge. If the grass catcher is empty, air flows through easily pushing the gauge up. If the grass catcher is full, air does not flow through it allowing the gauge to fall. So the position of the gauge acts as a bag-fill indicator signifying when to empty the grass bag.

1. Attach grass catcher following instructions in “Setup and Adjustment”. Grass clippings will automatically collect in the bag as you run the mower.
2. Operate the mower till the grass bag is full.
3. Stop engine completely by releasing the blade control. Make sure that the unit has come to a complete stop.
4. While holding the grass bag by both the rear handle and the lower handle, lift the grass bag straight up off the adapter. The chute door will move the rope out of the way of the bag.
5. Continue to hold the lower handle and raise the rear of the grass bag up toward your chest. The grass bag will open and the grass clippings will disperse. When replacing the grass bag, be sure the top of the bag rests on the wire support between the handles.

4

Operating Your Lawn Mower

WARNING

The operation of any lawn mower can result in foreign objects being thrown into the eyes, which can damage your eyes severely. Always wear safety glasses while operating the mower, or while performing any adjustments or repairs on it.

Be sure no one other than the operator is standing near the lawn mower while starting engine or operating mower. Never run engine indoors or in enclosed, poorly ventilated areas. Engine exhaust contains carbon monoxide, an odorless and deadly gas. Keep hands, feet, hair and loose clothing away from any moving parts on engine and lawn mower.

www.mymowerparts.com

For Parts Call 606-678-9623 or 606-561-4983

5 Maintaining Your Lawn Mower

WARNING

Always stop engine, disconnect spark plug and ground against engine before performing any type of maintenance on your machine.

IMPORTANT: Do not use a pressure washer or garden hose to clean your unit. These may cause damage to pulleys, bearings, or the engine. The use of water will result in shortened life and reduce serviceability.

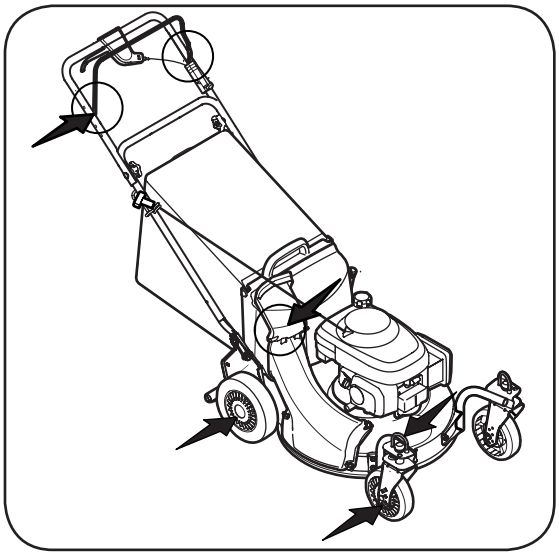

Figure 5-1: Areas to lubricate on the mower.

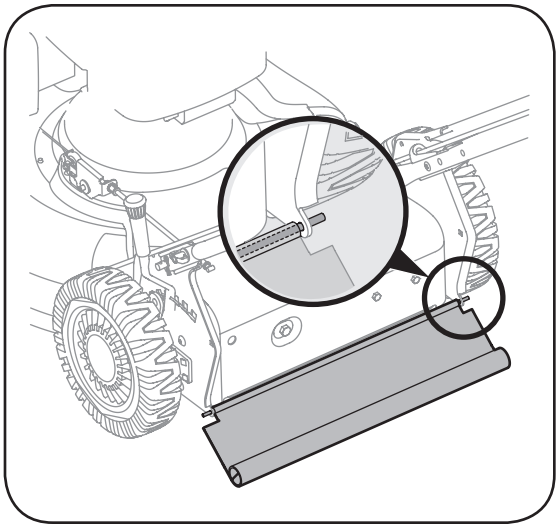

Figure 5-2: Cut wire to remove rear flap.

General Recommendations

- Always observe safety rules when performing any type of maintenance.
- The warranty on this lawn mower does not cover items that have been subjected to operator abuse or negligence. To receive full value from warranty, operator must maintain the lawn mower as instructed here.
- Changing of engine-governed speed will void engine warranty.
- All adjustments should be checked at least once each season.
- Periodically check all fasteners and make sure these are tight.

WARNING: Always stop engine, disconnect spark plug, and ground against engine before performing any type of maintenance on your machine.

Lubrication

- Lubricate pivot points on the blade control at least once a season with light oil. The blade control must operate freely in both directions. See Figure 5-1.
- Lubricate the wheels and casters at least once a season with light oil (or motor oil). If wheels are removed for any reason, lubricate the axle bolt and inner surface of the wheel with light oil.
- Lubricate the torsion spring and pivot point on each end of the adapter door at least once a season with light oil to prevent rust. See Figure 5-1.
- The transmission is pre-lubricated and sealed at the factory and does not require lubrication.
- Follow the accompanying engine manual for lubrication schedule and instruction for engine lubrication.

Deck Care

WARNING: Never tip the mower more than 90° in any direction and do not leave the mower tipped for any length of time. Oil can drain into the upper part of the engine causing a starting problem.

1. Disconnect spark plug wire. Drain gasoline from lawn mower or place a piece of plastic under the gas cap.
2. Tip mower so that it rests on the housing. Keep the side with the air cleaner facing up. Hold mower firmly.
3. Scrape and clean the underside of the deck with a suitable tool. Do not spray with water.
4. Put the mower back on its wheels on the ground. If you had put plastic under the gas cap earlier, make sure to remove it now.

Engine Care

- Maintain oil level as instructed in engine manual.
- Service air cleaner every 25 hours under normal conditions. Clean every few hours under extremely dusty conditions. Refer to engine manual.
- Clean spark plug and reset the gap once a season. Check engine manual for correct plug type and gap specifications.
- Clean engine regularly with a cloth or brush. Keep the cooling system (blower housing area) clean to permit proper air circulation. Remove all grass, dirt and combustible debris from muffler area.

Replacing Rear Flap

1. Cut off the flat end of the wire rod which secures it to the deck. See Figure 5-2.
2. Attach the new flap and new rod to the deck, bending the ends of the new rod over to secure to deck.

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For Parts Call 606-678-9623 or 606-561-4983

Blade Care

WARNING: When removing cutting blade for sharpening or replacement, protect your hands with a pair of heavy gloves or use a heavy rag to hold blade.

1. Disconnect spark plug wire from spark plug. Turn mower on its side making sure that the air filter and carburetor are facing up.
2. Remove bolt, bell blade support, blade, and blade adapter from the engine crankshaft. See Figure 5-3.

NOTE: When removing these items, the pulleys and washers may also break free from the crankshaft. Be sure to make note of the orientation of these items for reassembly.

3. The blade can be sharpened with a file or on a grinding wheel. Do not attempt to sharpen the blade while it is still on the mower. Balance the blade on a round shaft screwdriver. Grind cutting edges equally and follow the original angle of grind. Remove metal from the heavy side until it balances evenly.

WARNING: An unbalanced blade will cause excessive vibration when rotating at high speeds. It may cause damage to mower and could break causing personal injury.

4. Lubricate the engine crankshaft and the inner surface of the blade adapter with light oil. Reinsert the spacer (if needed), pulleys and washers. Slide the blade adapter onto the engine crankshaft. Place the blade on the adapter such that the side of the blade marked "Bottom" (or with part number) faces the ground when the mower is in the operating position. Make sure that blade is aligned and seated on blade adapter flanges.
5. Place bell blade support on the blade. Align notches on the bell blade support with small holes in blade. Replace hex bolt and tighten hex bolt to torque: 450 in. lbs. min., 600 in. lbs. max.

To ensure safe operation of your mower, periodically check the blade bolt for correct torque.

Belt Care

WARNING: When removing the cutting blade or when sliding the belt around it, protect your hands with a pair of heavy gloves.

Removing the Belt

1. Disconnect the spark plug wire and ground it against the engine.
2. Drain the fuel tank or place a piece of plastic beneath the cap to prevent gasoline leakage.
3. Tip mower on its side (air cleaner side of engine up).
4. Move height adjustment lever to the highest position.
5. Remove blade, blade adapter, and related hardware. **Be sure to make note of the orientation of these items for reassembly.** Remove the three hex screws holding baffle to the deck. See Figure 5-4.
6. Lift baffle towards the rear of the mower. Remove the hex bolt that holds the tranmission to the mower deck from the rear of unit, Figure 5-5.

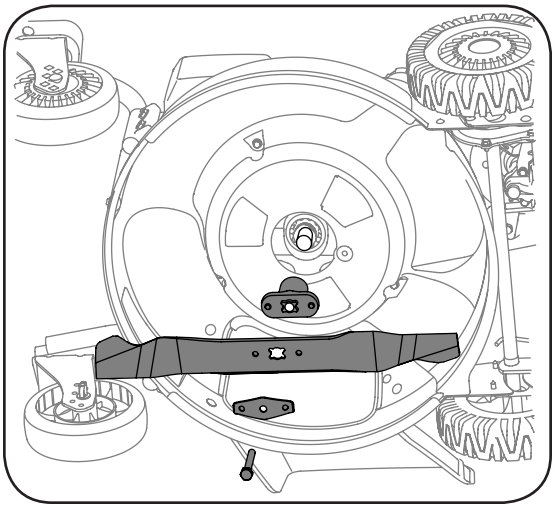

Figure 5-3: To access blade, remove the bolt, support, blade, and adapter.

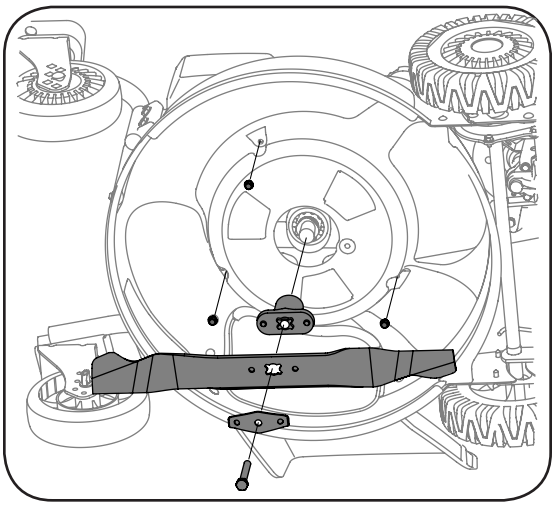

Figure 5-4: Remove blade, hardware, and baffle screws.

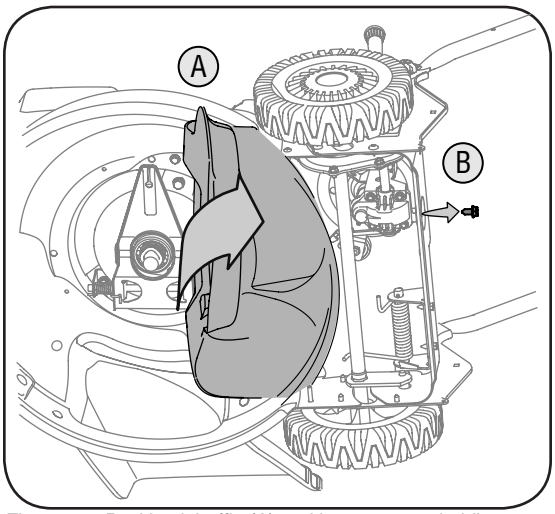

Figure 5-5: Peel back baffle (A) and loosen screw holding transmission to deck. (B)

5

Maintaining Your Lawn Mower

WARNING

An unbalanced blade will cause excessive vibration when rotating at high speeds. It may cause damage to mower and could break causing personal injury.

When removing the cutting blade for sharpening or replacement or when sliding the belt around it, protect your hands with a pair of heavy gloves or use a heavy rag to hold the blade.

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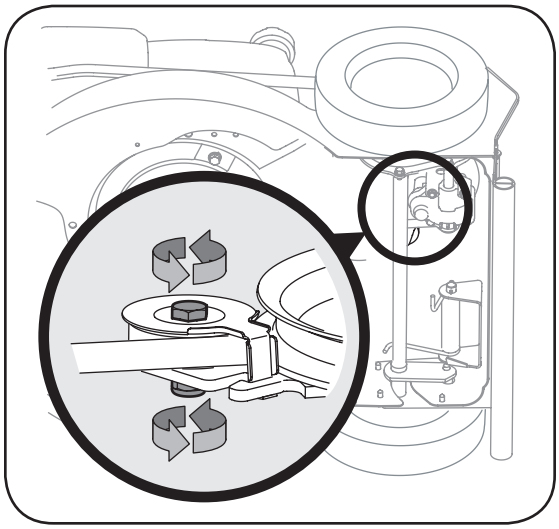

Figure 5-6: Loosen bolt and nut on belt keeper and idler bracket.

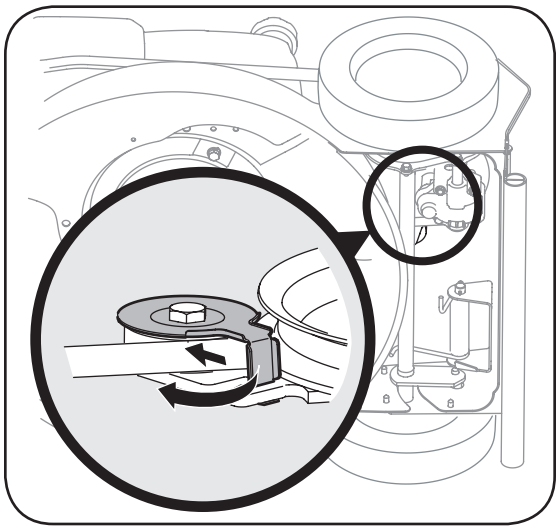

Figure 5-7: Rotate belt keeper to free the belt.

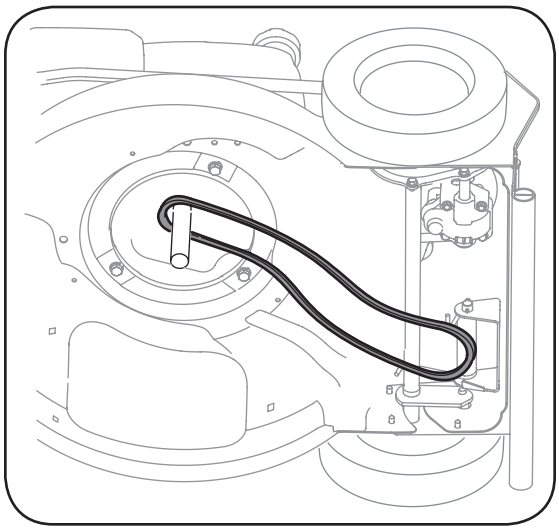

Figure 5-8: Remove belt from crankshaft after freeing it from the transmission pulley.

7. Tilt the transmission forward to make it easier to work in this area.
8. Loosen the belt keeper bolt and lock nut half a turn, Figure 5-6.
9. Using a pair of pliers, pull back and rotate belt keeper from the slot on the idler bracket. See Figure 5-7.
10. Slide the belt out from between the belt keeper and the idler bracket.
11. Slide the belt out from around the pulley on the transmission.
12. Remove belt from around the crankshaft. See Figure 5-8. Discard the worn belt.

Installing the Belt

1. Place the new belt over the transmission pulley. Place the belt in the pulley groove and rotate the pulley until the belt is seated in transmission pulley.
2. Place the belt between the idler bracket and the belt keeper.
3. Using pliers, rotate the belt keeper so that it snaps into slot on the idler bracket.
4. Tighten the belt keeper bolt and lock nut.
5. Reinstall the screw that secures the transmission to the mower deck.

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For Parts Call 606-678-9623 or 606-561-4983

6. Place upper pulley on crankshaft, loop belt around crankshaft, and then install the lower pulley. See Figure 5-9.
7. a. Squeeze the blade control against the upper handle to tighten the belt.
   b. Return baffle back to its original position and release the blade control. See Figure 5-10.

NOTE: It is important that the belt is routed within the inside of the belt keeper rod attached to the underside of the baffle. Refer to Figure 5-11.

8. Secure the baffle to deck using the three screws removed earlier.
9. Lightly lubricate the inside of the blade adapter and reinstall the blade adapter, blade, and blade bell support in the correct order (Refer to Blade Care section). Tighten the hex bolt to 450-600 in. lbs. torque.

Off-Season Storage

The following steps should be taken to prepare your lawn mower for storage.

1. Clean and lubricate mower thoroughly as described in the lubrication instructions.
2. We do not recommend the use of a pressure washer or garden hose to clean your unit.
3. Refer to engine manual for correct engine storage instructions.
4. Coat mower's cutting blade with chassis grease to prevent rusting.
5. Store mower in a dry, clean area. Do not store next to corrosive materials, such as fertilizer.

When storing any type of power equipment in a poorly ventilated or metal storage shed, care should be taken to rust-proof the equipment. Using a light oil or silicone, coat the equipment, especially cables and all moving parts of your lawn mower before storage.

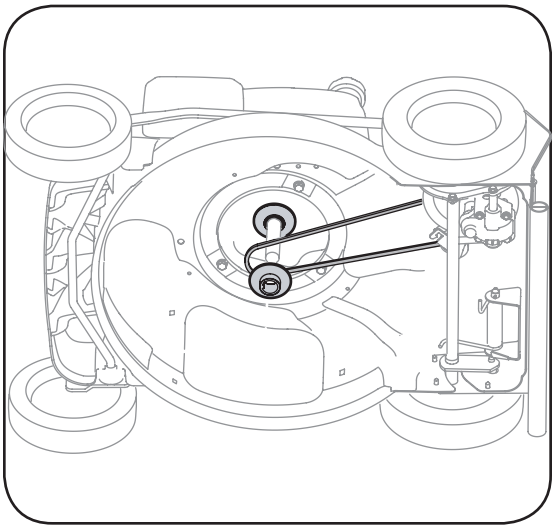

Figure 5-9: Place upper pulley on crankshaft, loop belt around crankshaft, then install the lower pulley.

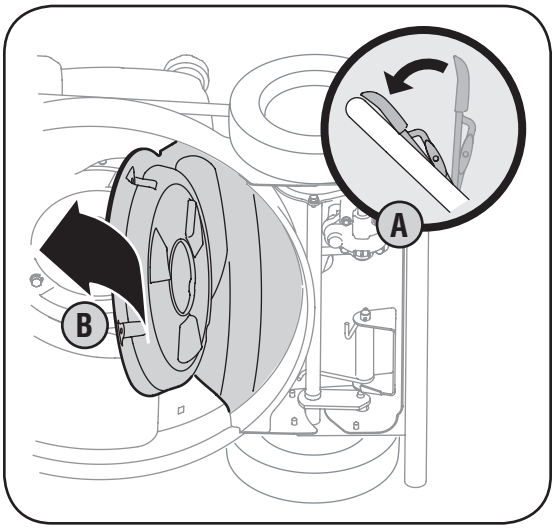

Figure 5-10: Engage the blade control to tighten the belt (A) and place baffle back onto deck (B).

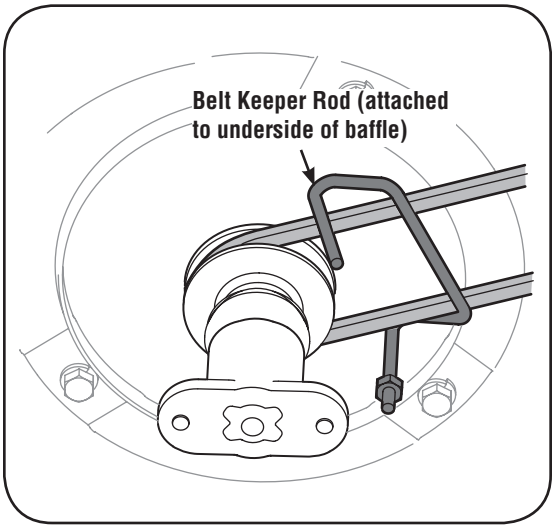

Figure 5-11: The belt should be routed to the inside of the belt keeper rod.

NOTE: When replacing belt, It is important that the belt is routed within the inside of the belt keeper rod attached to the underside of the baffle.

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For Parts Call 606-678-9623 or 606-561-4983

6

Trouble Shooting

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

Problem	Cause	Remedy
Engine fails to start	1. Blade control disengaged. 2. Spark plug wire disconnected. 3. Fuel tank empty or stale fuel. 4. Engine not primed (if equipped with primer). 5. Faulty spark plug. 6. Blocked fuel line. 7. Engine flooded. 8. Fuel valve (if equipped) closed. 9. Engine not choked (if equipped w/choke).	1. Engage blade control. 2. Connect wire to spark plug. 3. Fill tank with clean, fresh gasoline. 4. Prime engine as instructed in "Operating Your Lawn Mower". 5. Clean, adjust gap, or replace. 6. Clean fuel line. 7. Wait a few minutes to restart, but do not prime. 8. Open fuel valve. See engine manual. 9. Choke engine. See engine manual.
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. Refer to engine manual. 6. Refer to engine manual.
Engine overheats	1. Engine oil level low. 2. Air flow restricted. 3. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Remove blower housing and clean. 3. Refer to engine manual.
Occasional skips (hesitates) at high speed	1. Spark plug gap too close. 2. Carburetor idle mixture adjustment improperly set.	1. Adjust gap to .030". 2. Refer to engine manual.
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. Refer to engine manual. 3. Refer to engine manual.
Excessive Vibration	1. Cutting blade loose or unbalanced. 2. Bent cutting blade.	1. Tighten blade and adapter. Balance blade. 2. See an authorized service dealer.
Mower will not mulch grass (If Equipped)	1. Wet grass. 2. Excessively high grass. 3. Dull blade.	1. Do not mow when grass is wet; wait until later to cut. 2. Mow once at a high cutting height, then mow again at desired height or make a narrower cutting path. 3. Sharpen or replace blade.
Uneven cut	1. Wheels not positioned correctly. 2. Dull blade.	1. Place all four wheels in same height position. 2. Sharpen or replace blade.
Mower will not self propel	1. Belt not installed properly. 2. Debris clogging drive operation. 3. Damaged or worn belt.	1. Check belt for proper pulley installation and movement. 2. Stop engine, disconnect spark plug wire and clean out debris. 3. Inspect and replace belt.

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Safety Labels Found On Your Lawn Mower

7

Safety Labels

WARNING

DO NOT remove safety (or any) labels from mower for any reason.

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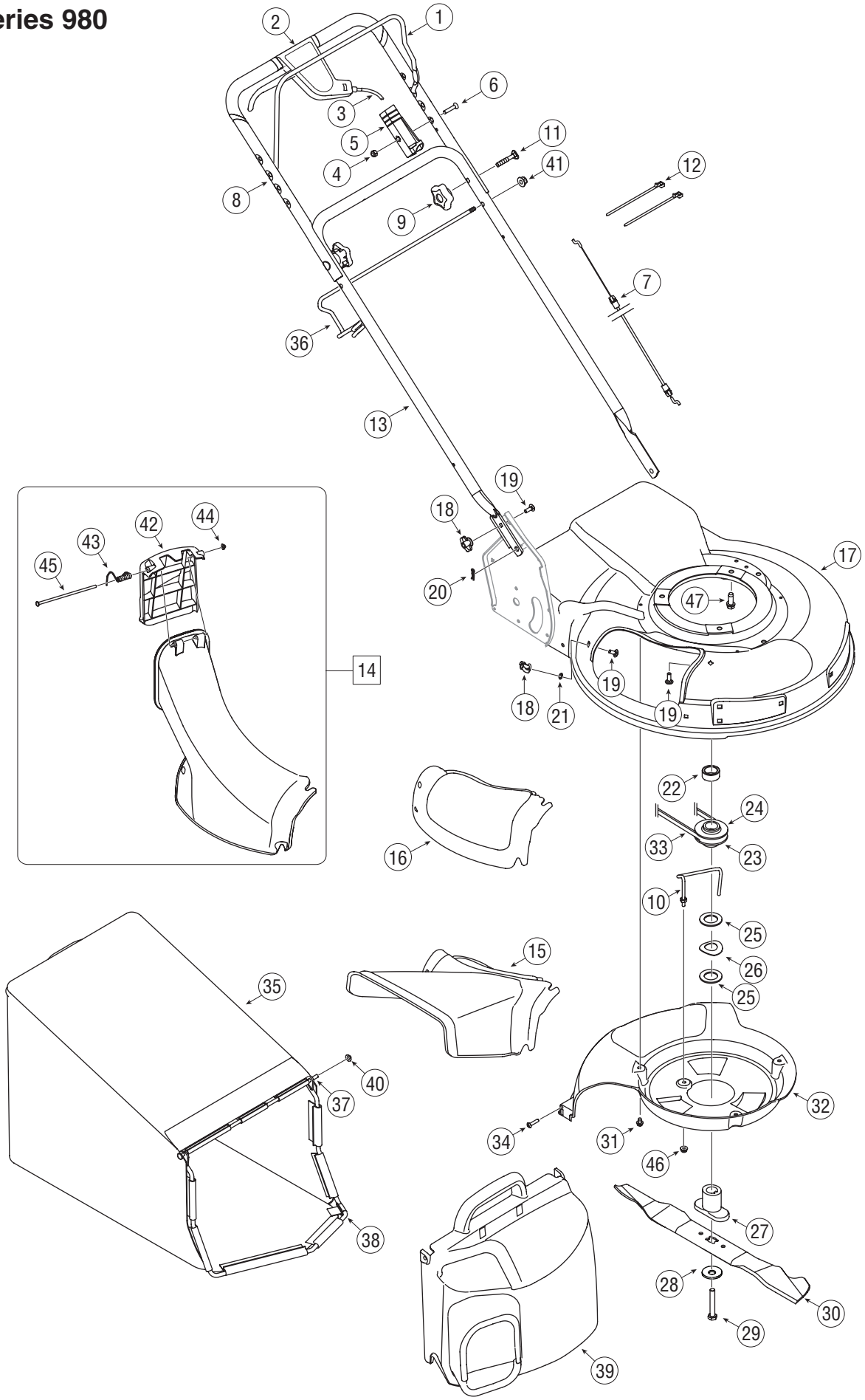
Model Series 980



For Parts Call 606-678-9623 or 606-561-4983

Ref.	Part No.	Description
1	747-0824	Control Lever
2	753-05096A	Control Lever Assembly
3	746-0711B	Drive Cable 51”
4	712-0324	Top Lock Nut 1/4-20
5	746-0883	Control Housing
6	710-1270	Oval C-Sunk Screw
7	746-0557	Control Cable 47”
8	749-0439D	Upper Handle
9	720-04072	Star Knob
10	747-04451	Belt Keeper
11	710-1174	Carriage Bolt 5/16-18 x 2.0
12	726-0240	Cable Tie
13	749-0907B	Lower Handle
14	631-0066	Chute Assembly
15	731-1832	Side-Discharge Chute
16	731-1833A	Mulch Cover
17	782-0078B	Deck 21-inch
18	712-0397	Wing Nut
19	710-0703	Carriage Bolt 1/4-20 x .75”
20	714-0104	Cotter Pin
21	726-0233	Push Nut .25 x ID x .50 OD
22	750-04438A	Slv. Spcr., 25mm x 1.375 x .440
23	756-04160	Half Pulley: Key 25mm x 2.62 OD
24	756-04161	Half Pulley: Upper 25mm x 2.62

Ref.	Part No.	Description
25	736-0277	Flat Washer 1.031 x 1.620 x .095
26	736-0447	Wave Washer, 1.5 x 1.0 x .029
27	748-04082	Blade Adapter
28	736-0452	Bell Washer, .396 x 1.140 x .095
29	710-1257	Hex Bolt 3/8-24 x 2.5
30	742-0741	21” Mulching Blade
31	710-0653	Screw 1/4-20 x 3.75
32	731-1828	Baffle
33	754-0460	Belt 3/8 x 39.24
34	710-0895	HL Screw 1/4-15 x .75
35	664-0180	Grass Catcher
36	747-0940A	Support Rod w/ Rope Guide
37	747-0939	Pivot Rod
38	747-0937	Grass Bag Frame
39	631-0071	Grass Bag Cover
40	726-0106	Cap Nut
41	712-04063	Hex Nut 5/16-18
42	731-1874	Chute Door
43	732-0819	Torsion Spring
44	726-0111	Push Cap
45	747-0965	Pivot Rod
46	712-04064	Flange Lock Nut, 14-20
47	710-0654A	Sems Screw 3/8-16 x 1.00

8

Parts List

MTD GENUINE FACTORY PARTS

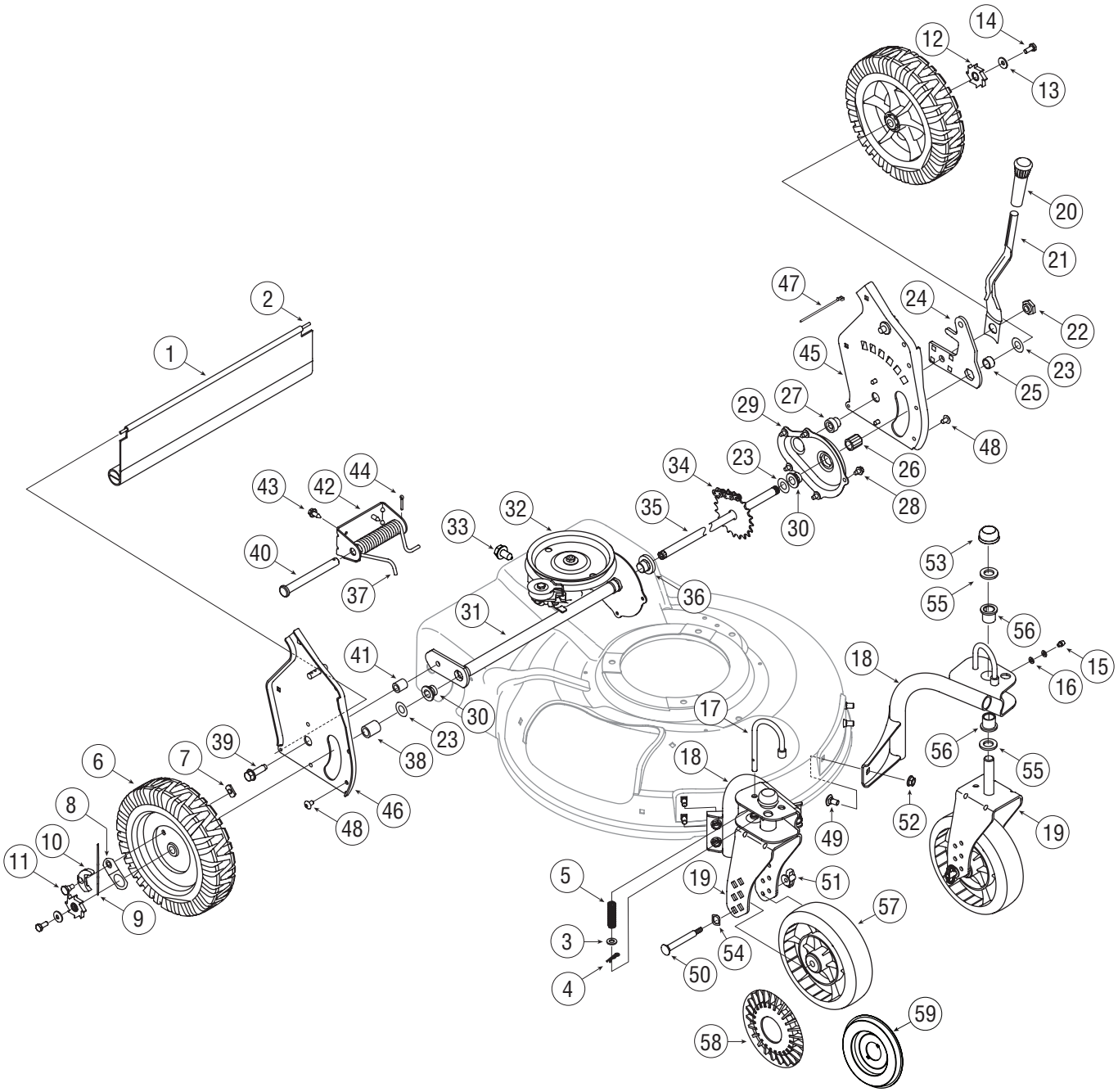
To order replacement parts, call 1-800-800-7310 or visit us on the web at www.mtdproducts.com

IMPORTANT

For a proper working machine, use Factory Approved Parts. **V-BELTS** are specially designed to engage and disengage safely. A substitute (non-OEM) V-Belt can be dangerous by not disengaging completely.

www.mymowerparts.com

Model Series 980



For Parts Call 606-678-9623 or 606-561-4983

Ref.	Part Number	Description
1	731-1901A	Trail Shield
2	732-0842	Trail Shield Wire
3	736-0264	Flat Washer.330 ID x.630 OD
4	714-0104	Cotter Pin
5	732-0306	Compression Spring
6	734-2044	Rear Wheel, 9 x 2.125
7	712-0414	Top Lock Tab Weld Nut 1/4-20
8	16855	Ratchet Pawl Plate
9	10622B	Plastic Spring Ratchet
10	748-0381	Pawl RH
	748-0188B	Pawl LH
11	738-0137A	Shoulder Screw.340 ID x.285 OD
12	748-0318	Wheel Ratchet
13	736-0270	Bell Washer.265 ID x.75 OD
14	710-0751	Hex Cap Screw 1/4-20 x.620
15	737-3000	Grease Fitting
16	736-0931	Flat Washer.203 ID x.403 OD
17	747-0924	Wheel Pin Lock
18	682-9020A	Caster Assembly RH
	682-9021A	Caster Assembly LH
19	682-9024	Caster Bracket Assembly RH
	682-9026	Caster Bracket Assembly LH
20	720-0223	Grip
21	732-0803A	Spring Lever
22	738-0529	Shoulder Nut.825 x .165 Lg.
23	736-0369	Flat Washer .508 ID x 1.0 OD
24	782-0566B	Pivot Arm Assembly
25	750-0515	Spacer .510 ID x .70 OD
26	741-0978	Sleeve Bearing .504 ID x .830 OD
27	750-1056	Shoulder Spacer
28	710-0653	Tap Screw 1/4-20 x .375

Ref.	Part Number	Description
29	682-7528	Chain Cover Assembly
30	741-0324A	Flange Bearing .506 ID x .590 Lg
31	682-7526	Transmission Axle Assembly
32	618-0263A	Transmission Assembly Complete
33	710-0604A	Hex Screw 5/16-18
34	713-0453	Chain
35	638-0012	Rear Axle Assembly
36	741-0522	Flange Bearing .506 ID x .715 Lg
37	732-0832	Torsion Spring
38	750-0151	Spacer .550 ID x .750 OD
39	710-1315	Screw 3/8-16 x .25
40	711-0835	Clevis Pin .50 Dia x 4.82 Lg.
41	750-0807	Spacer .385 ID x .624 OD
42	782-0568	Spring Bracket: Height Adjustment
43	710-1652	Screw 1/4-14 x .825
44	714-0474	Cotter Pin
45	682-3053	Handle Bracket Assembly - LH
46	682-3052	Handle Bracket Assembly - RH
47	725-0157	Cable Tie
48	710-1348	Screw 1/4-14 x.500
49	710-0260A	Carriage Bolt 5/16-18 x.62
50	711-1146	Caster Axle
51	712-0397	Wing Nut
52	712-04063	Flange Lock Nut 5/16-18
53	726-0214	Push Cap
54	736-0232	Wave Washer.531 ID x.781 OD
55	736-0366	Flat Washer.640 ID x 1.12 OD
56	741-0685	Flange Bearing
57	734-1857	Front Wheel, 7 x 2
58	731-1887	Hubcap - Spoke w/ Hole
59	731-0981A	Hubcap - Radial Spoke

MTD For A Growing World. GENUINE FACTORY PARTS

To order replacement parts, call 1-800-800-7310 or visit us on the web at www.mtdproducts.com

www.mymowerparts.com

For Parts Call 606-678-9623 or 606-561-4983

MANUFACTURER'S LIMITED WARRANTY FOR

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

"MTD" 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 MTD 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 MTD LLC at P.O. Box 361131, Cleveland, Ohio 44136-0019, or call 1-800-800-7310 or 1-330-220-4683 or log on to our Web site at www.mtdproducts.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. MTD does not extend any warranty for products sold or exported outside of the United States, its possessions and territories, except those sold through MTD's authorized channels of export distribution.

f. Replacement parts that are not genuine MTD 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 MTD. 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. MTD 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.

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