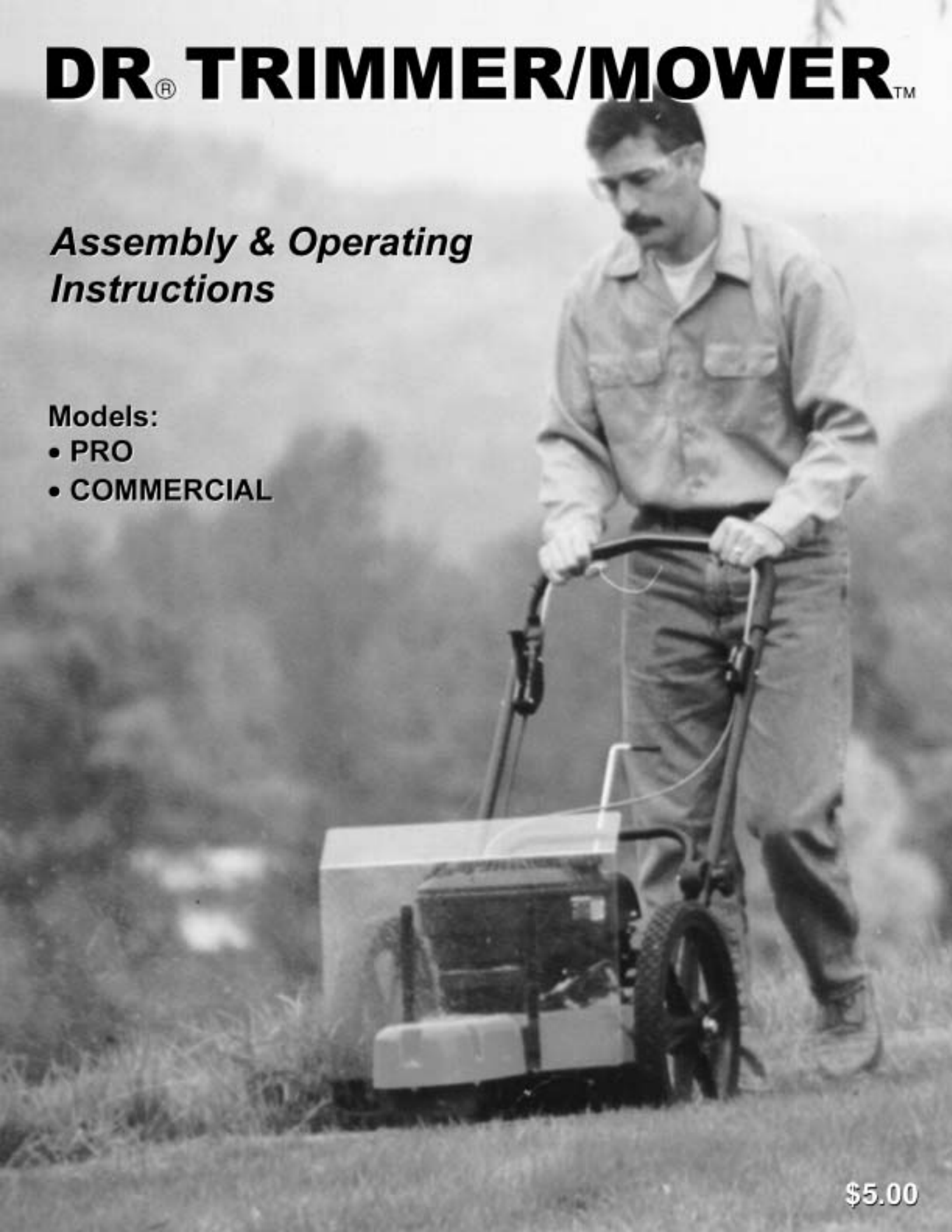
DR® TRIMMER/MOWER™



Assembly & Operating Instructions

Models:

- **PRO**
- **COMMERCIAL**

$5.00

And congratulations on your purchase of a new DR® TRIMMER/MOWER™!

We have done our utmost to ensure that your DR® will be one of the most trouble-free and satisfying pieces of equipment you have ever owned.

Please let us know of any questions or problems you may have. We want to answer or correct them as quickly as possible. (When you do call or write, please have your serial number and/or order number handy—it will speed things up!) We also hope to hear from you on how much you like your new helper.

And please tell your friends about your new DR® TRIMMER/ MOWER™. Having DR® Owners spread the word about our products and our way of doing business is the best advertising we can have, and it's the best way to help us provide even better service in the years to come.

Thanks once again!

for all of us at...
COUNTRY HOME PRODUCTS®

Safety Instructions

We want you to enjoy years of productive use from your DR® TRIMMER/MOWER™. We don't want you to get injured, so please take a few moments to read the following guidelines for safely operating your new machine.

Dress Appropriately

- Always wear protective goggles (provided with your DR® TRIMMER/MOWER™) while mowing, to protect your eyes from possible thrown objects.
- Wear shoes with non-slip treads when using your DR® TRIMMER/MOWER™. If you have safety shoes, we recommend wearing them. Do not use the machine while barefoot or wearing open sandals.
- Wear long pants while trimming, and avoid wearing loose clothing or jewelry which might get caught on the mower's moving parts.
- Use ear muffs or ear plugs to protect your valuable hearing.

Preparation

- Read these *Assembly & Operating Instructions* and the engine manufacturer's owner's manual before you use the DR® TRIMMER/MOWER™. Become familiar with the controls, engine and service recommendations to ensure the best performance from your machine.
- Inspect the area you'll be working in for hidden objects such as large rocks, logs, rope, wire, garden tools, etc., and remove these obstacles before mowing. Do not attempt to mow over obstacles as this could damage the machine and cause injury.

Operating the Machine Safely

- Only use the DR® TRIMMER/MOWER™ for trimming and mowing grass, weeds, and other growth as specified in this manual.
- Use only manufacturer-recommended replacement parts and accessories.
- Never bend, cut, fit, weld, or alter the DR® TRIMMER/MOWER™ in any way. Modifications to your machine could cause personal injuries and property damage, and may void your warranty.
- ALWAYS shut off the engine and remove the spark plug wire prior to making any adjustments to the machine. If you have to stop to remove grass or debris from the underside of the deck, ALWAYS disconnect the spark plug wire first.
- The exhaust area on the engine becomes very hot. Allow the engine to cool before doing maintenance or making adjustments.
- When operating over uneven terrain and slopes, use EXTREME CAUTION and ensure solid and firm footing at all times.
- Use extra caution when mowing in wet, slippery conditions.
- As with any trimmer, the tips of the cutting cords on the DR® TRIMMER/MOWER™ can throw sticks, small stones, gravel, and bits of debris for long distances at great velocity. The faster the cutting cords are spinning, the farther debris may be thrown. Do not move over loose materials such as gravel or mulch with the trimmer head spinning. Doing so could cause personal injury or property damage from thrown objects.

- Turn off the engine whenever you leave the operating position. Never leave the engine running when refueling, changing cords or checking, cleaning or working on the machine.
- Never allow children or animals near the work area. Keep at least 50 feet clear of bystanders, and always turn the machine off when someone approaches to avoid causing injury from thrown objects.
- Never allow children or people unfamiliar with these instructions to use the DR® TRIMMER/ MOWER™.
- Be cautious when using your DR® TRIMMER/MOWER™ around fencing, wires, ropes, and hoses. It is possible that these and other debris can become wound around the line plates of the machine, potentially damaging the bearings or injuring the operator.
- Use the machine only in daylight or good artificial light.
- Never operate the machine with a damaged shield or without the shield in place.
- Do not operate the machine when under the influence of alcohol or medication.
- Watch for traffic when mowing near roadways.

Safety with Gas-Powered Machines

- Do not run the engine in an enclosed area or without proper ventilation.
- Store all fuel in containers specifically designed for this purpose. Plastic containers are more likely to prevent sediment and condensation problems.
- Refuel outdoors only, and do not smoke while refueling or operating the machine.
- If gas is spilled, do not attempt to start the engine. Move the machine away from the area of the spill and avoid creating any source of ignition until the gas vapors have dissipated. Wipe up any spilled fuel to prevent a fire hazard, and properly dispose of the waste.
- Allow the engine to cool completely before storing in any enclosure. Never store the machine with gas in the tank near an open flame or spark.
- Do not change the engine governor settings or modify the engine speed.
- **Some state and local regulations require the use of a spark arrester on gas powered engines. Contact your local fire marshal or forest service for specific information pertaining to your area. If you are required to use a spark arrester, please contact one of our Customer Service Representatives for assistance in obtaining and installing one.**

Warning to All California and Other Users

Under California and Washington State laws, and the laws of some other states, you are not permitted to operate an internal combustion engine using hydrocarbon fuels without an engine spark arrester. All DR® TRIMMER/ MOWERS shipped to California and Washington state are provided with spark arresters. Failure of the owner/operator to maintain this equipment in compliance with state regulations is a misdemeanor under California law and may be in violation of other state and/or federal regulations. Contact your local fire marshal or forest service for specific information in your area.

Table of Contents

Trimmer Parts & Components

The following parts and assembly components should be in your DR® TRIMMER/MOWER™ package. Please check your shipping box(es) and parts package(s) for the items listed below. If your shipment is incomplete or if you have any questions, please call us **TOLL-FREE 1(800)DR-OWNER(376-9637)**.

Assembly Components:

1—Upper Handlebar [#143641], Commercial Model, or
[#144071], PRO Model

1—Lower Handlebar [#143631], Commercial Model, or
[#144061], PRO Model

2—Handlebar Adjuster Assemblies [#145801] in separate plastic bag

1—Axle [#114261]

1—Rubber Stone Guard [#116801]

1—PTA™ Lever [#118221]

1—Acrylic Shield Assembly [#120521]

2—Wheels [#139861], Commercial Model, or
[#121761], PRO Model

Parts Bag Contents:

2—Wheel Retainer Rings [#119551]

2—Stone Guard Clamps [#131031]

1—Black Nylon Axle Washer [#121521]

4—5/16" Washers [#121691]

5—Lock Nuts 5/16"-18 (larger size) [#110761]

2—Set Screws 1/4"-20 Square Head [#120161]

7—Slotted Hex Head Bolts 10-24 x 5/8" Long [#114781]

7—Lock Nuts 10-24 (smaller size) [#118731]

2—U-Bolts [#114851]

1—PTA™ Lever Grip [#117491]

Please refer to Figure 1 on the next page when preparing to assemble your DR® TRIMMER/MOWER™. We recommend laying the parts out in sets, as we have shown them, before assembly.

Assembly Components

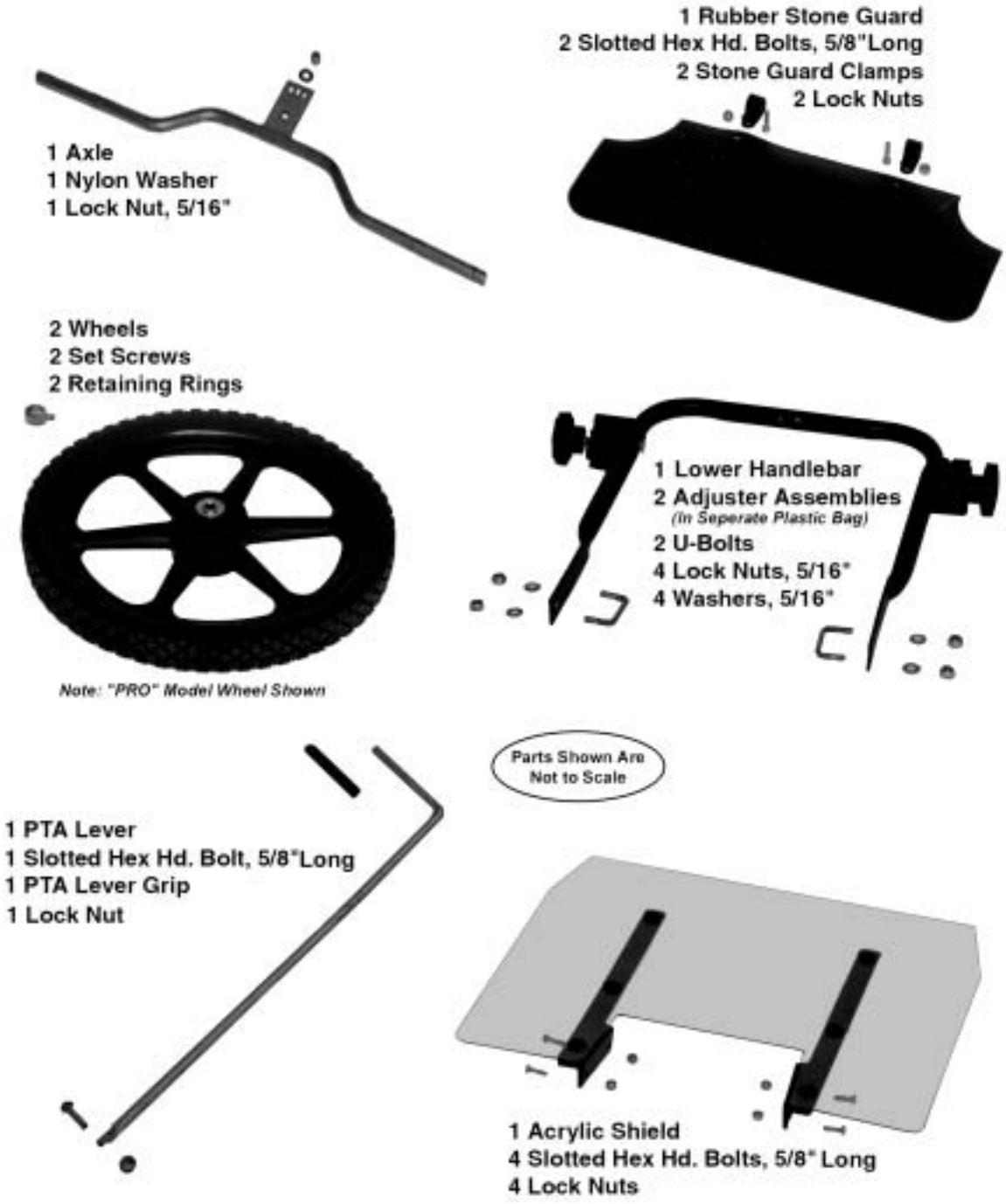


Figure 1

Assembly

WARNING! Do not attempt to start the engine until all assembly steps are complete, and you have ADDED GAS AND OIL to the engine.

Tools & Supplies Needed:
- flat head screwdriver
- 1/2" and 3/8" wrenches, adjustable wrench, or socket set
- 7/16" wrench (Commercial Model)
- pliers
- SAE30 High Detergent motor oil
- funnel (preferably with filter)
- unleaded gasoline

WARNING!

THIS MACHINE IS SHIPPED WITHOUT OIL! TRACES OF OIL MAY BE IN RESERVOIR FROM FACTORY TESTING, BUT YOU MUST ADD OIL BEFORE STARTING ENGINE. FILL RESERVOIR SLOWLY, CHECKING DIPSTICK FREQUENTLY TO AVOID OVERFILLING.

Step 1: Install the Axle

1. Start with the orange housing upside down. Leave the packaging on the front end in place to balance the machine during assembly.
2. Place the black nylon axle washer over the axle stud at the center back of the housing *(Figure 2)*.
3. Insert the axle through the slot in the outside of the housing so the plate faces the axle stud *(Figures 2 & 3)*.
4. Center the axle and slide the hole in the notched plate over the stud so that it rests flush against the nylon washer. Be sure the axle is seated on the axle stud solidly *(Figure 3)*.
5. Screw a 5/16" lock nut onto the axle stud using a 1/2" wrench or socket. Tighten it until there is resistance, then back off 1/2 turn. [If the bolt is too tight, it will be hard to operate the Parallel Trimming Action (PTA™) Feature.]

Figure 2

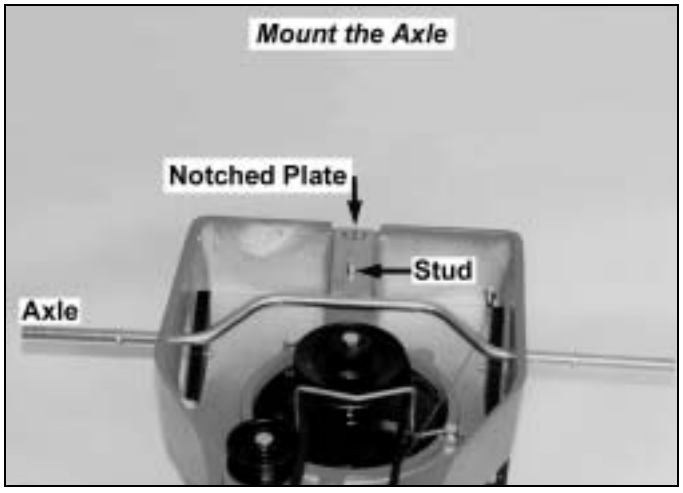


Figure 3

Step 2: Attach the Rubber Stone Guard

1. Take one of the two stone guard clamps and position it around the axle *(Figure 4)*. Install the second clamp midway along the opposite side of the axle in the same way. Turn the open ends of the clamps upward.
2. Holding the rubber stone guard vertically over the axle, slip one side of the stone guard in between the clamp end so that the hole in the guard is aligned with the holes in the clamp. Insert a 5/8" long bolt and attach a lock nut *(Figure 5)*. Tighten with a 3/8" wrench or socket and screw driver until the threads show. Do not over tighten. Repeat on the other side. The stone guard should swing freely from the axle.

Figure 4

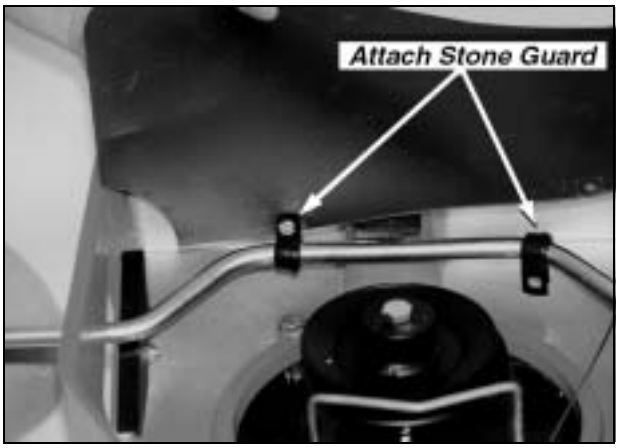


Figure 5

Step 3: Install the Wheels

1. Mount each wheel on the axle. Push the wheels firmly against the axle stop.
2. Place a retaining ring on the axle, against the wheel, and tighten the set screw *(Figure 6)* with a wrench or pliers. Repeat on the other side.

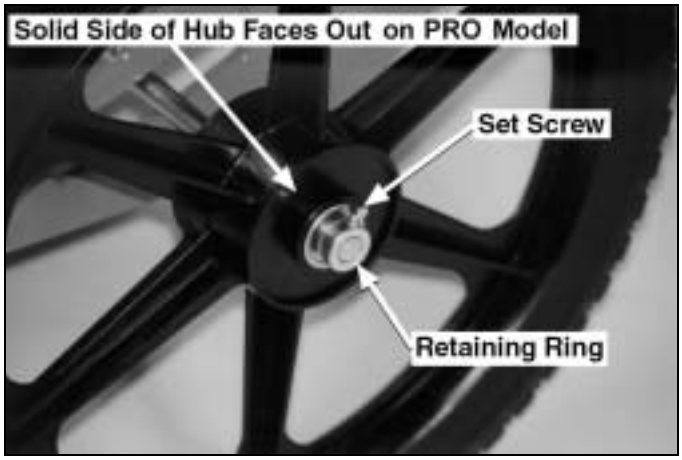


Figure 6

Step 4: Set the Machine Upright

Note: Be careful not to kink, twist or stretch the control cables.

1. Remove the packaging from the front end.
2. Stand at one side of the machine, holding on to one wheel with one hand, and the nose of the machine with the other. Lift the nose of the machine up and over until the Mow-Ball™ Support is resting on the ground and the machine is upright (most of the weight is on the wheels during this maneuver).

3. Bring the upper handlebar section up and over the front end of the machine. Let it rest there.

Caution: DO NOT add gas or oil to the engine at this time.

Step 5: Install the Handlebars

A) Lower Handlebar

Note: There are 2 U-bolts, 4 washers, and 4 lock nuts in your parts bag that will be needed for the lower handlebar assembly.

1. With the control cables on the inside of the handlebar, position the lower handlebar over the bolt holes in the trimmer frame *(Figure 7)*.
2. Place the U-bolts through the bolt holes in the trimmer frame from the inside out *(Figure 7)*. Be sure the black control cable on the underside of the trimmer is clear of the U-bolt.
3. Mount the washers and nuts and secure them snugly on both sides *(Figure 8)*.

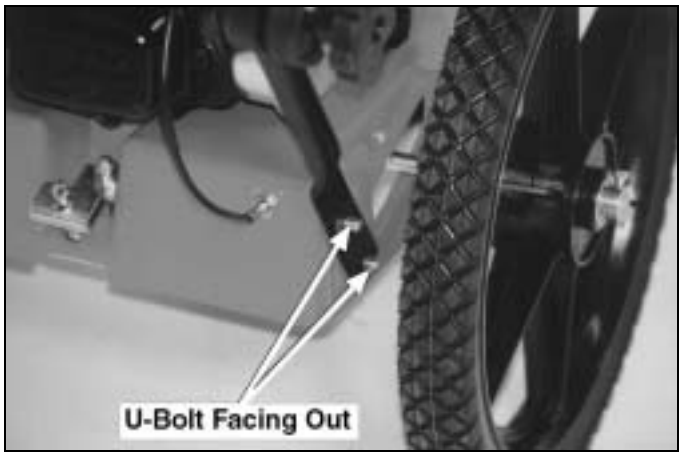


Figure 7

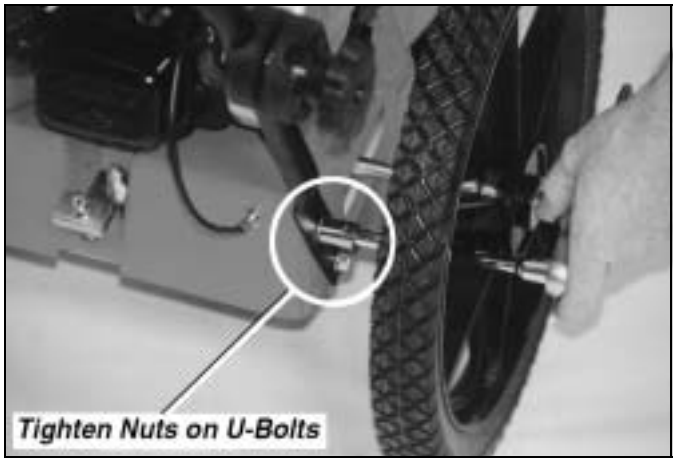


Figure 8

B) Upper Handlebar

Note how the components of the handlebar adjuster assemblies go together before mounting the upper handlebars. There is an inside and an outside adjuster. The outside adjuster has a beveled edge *(Figure 9)*.

1. Take apart the handlebar adjustment assemblies one at a time.
2. Insert the bolt through the bottom hole in the lower handlebar from the inside facing out *(Figure 9)*.
3. Mount the inside adjuster (no beveled edge) with the cup snug to the lower handlebar.
4. Mount the spring on the bolt, then add the outside adjuster (has a beveled edge). There is a notch at the top of each adjuster—they should line up, and the teeth should fit snuggly together *(Figure 9)*.

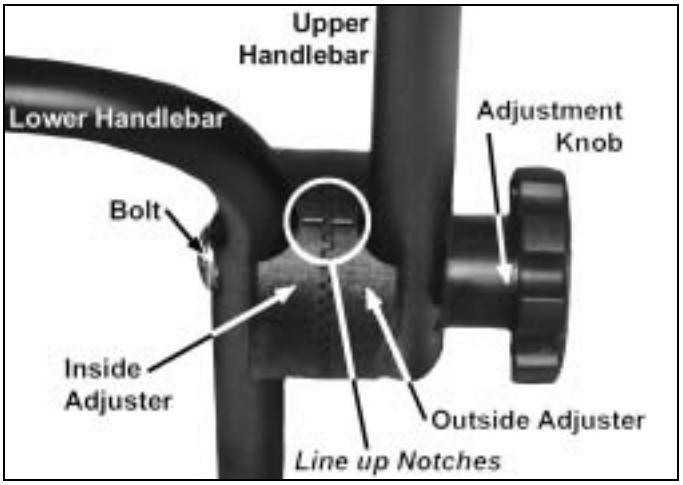


Figure 9

5. Make sure the control cables are over the lower handlebar. Mount the upper handlebar with the bolt going through the bottom hole. The cup in the outside adjuster should fit snuggly against the upper handlebar *(Figure 9).*
6. Add the knob and tighten.
7. Repeat on the other side.

Step 6: Install the Parallel Trimming Action (PTA™) Lever

1. Insert the straight end of the L-shaped PTA™ lever through the hole in the center of the lower handlebar *(Figure 10).*
2. Align the flat end of the PTA™ lever with the corresponding hole in the PTA™ latch installed at the center rear of the frame *(Figure 11).*
3. Mount a 5/8" long bolt through the two holes. Tighten with a lock nut until there is slight resistance, then back off two full turns.
   Note: If the lock nut is too tight, the PTA™ lever will be hard to engage.
4. Install the black, vinyl handle grip over the operator's end of the PTA™ lever.

Figure 10

Figure 11

Step 7: Attach the Acrylic Engine Shield

Use the four remaining sets of 5/8" long bolts and lock nuts to attach the acrylic engine shield.

You may find it easier to tip the machine back on its handlebars in order to reach the underside.

1. Position the shield on the frame in front of the engine with the bend at the top facing the handlebars.
2. Insert the bolts from the outside facing in, screw on the nuts and tighten *(Figure 12).*

Figure 12

Step 8: Connect the Battery Wires *(Electric-Starting models only)*

To prevent the battery from discharging during shipment, all electric-starting trimmers are shipped with one or both battery wires disconnected.

On the PRO Model:

Connect the two black wires by pushing the plastic ends together *(Figure 13)*. See the red wires for comparison. The wires are located on the left front side when standing in the operator's position.

On the Commercial Model:

Connect both wires to the battery terminals as shown in Figure 14. Red to red and black to black.

Note: Be careful not to hit the wires on the metal bracket. You may short them out.

Figure 13

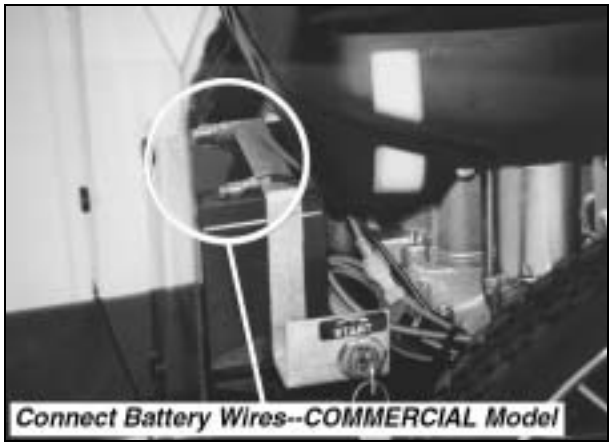


Figure 14

Step 8a: Connect the Throttle Cable *(Commercial Model Only)*

Tools Needed:

- 7/16" wrench

1. Remove the 1-1/2" long bolt from the left handlebar.
2. Attach the throttle control to the left handlebar with the 1-1/2" long bolt *(Figure 14a)*. The throttle cable should go around the front of the engine, along the left side of the engine, then up toward the handlebar. Be sure the cable is over the lower handle bar before attaching it.
3. Secure the throttle cable to the lower handle bar with a cable tie.

Figure 14a

Step 9: Add Oil and Gas

WARNING! You must add oil before starting engine. There may be 1 to 2 ounces of oil left in your machine from factory testing. Check the dipstick frequently while adding oil to avoid overfilling.

Reminder: To avoid confusion, we recommend leaving the caps on the fuel and oil fills until you are ready to pour either gasoline or oil into the correct fill.

1. Use SAE30 High Detergent oil. Add approximately 15 ounces of oil and wait one minute for the oil to settle. Check the dipstick, then continue adding small amounts of oil and rechecking the dipstick until it reaches the full mark *(Figure 15)*. Do not overfill.

Figure 15

   Important! To get an accurate reading when checking the oil level:
   - On the PRO model the dipstick should be screwed down.
   - On the Commercial model the dipstick should **not** be screwed down.

   Please refer to your engine manufacturer's owner's manual for more detailed oil information.
2. Fill the gas tank to within 1/4 inch of the top with fresh, unleaded gas. See your engine manufacturer's owner's manual for more detailed fuel recommendations.

Caution: Once you have added the oil and gas, avoid tipping the trimmer back on its handlebars. Doing so will cause the cylinder to fill with oil. If you need to reach the underside of the trimmer, drain the oil and gas first, or set the machine up on a workbench.

Controls & Features

Note: PRO Model Shown

Figure 16

Starting & Operating

WARNING!

THIS MACHINE IS SHIPPED WITHOUT OIL! TRACES OF OIL MAY BE IN RESERVOIR FROM FACTORY TESTING, BUT YOU MUST ADD OIL BEFORE STARTING ENGINE. FILL RESERVOIR SLOWLY, CHECKING DIPSTICK FREQUENTLY TO AVOID OVERFILLING.

Electric-Starting

1. Push the throttle lever on the left side of the handlebar *(Figure 16)* all the way forward to the START position.
2. On the PRO model:
   Prime the engine. Make sure you completely cover the air hole. Push the black primer bulb *(Figure 17)* for three seconds and completely release it, letting it pop back to its original position. Repeat three to four times. The Commercial model does not have a primer.
   Note: Priming is usually unnecessary when restarting a warm engine. In cool weather priming may need to be repeated.
3. Turn the key *(Figures 17 & 18)* to the START position until the Trimmer starts, then release. The key will snap back to the RUN position.
   Note: The key switch on the Commercial model is located between the engine and the shield on the left side of the trimmer *(Figure 18).*

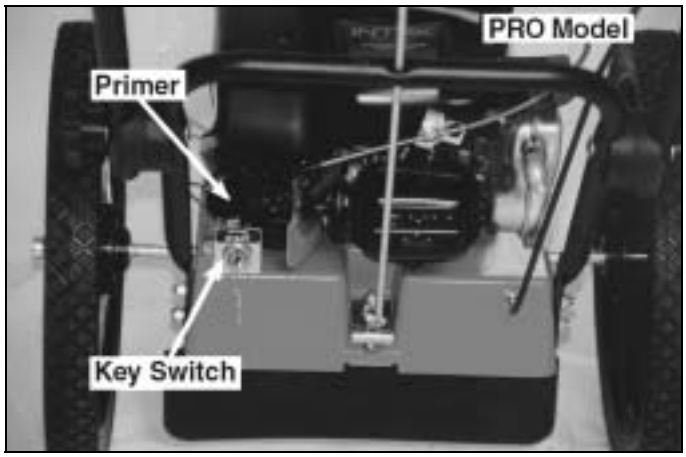


Figure 17

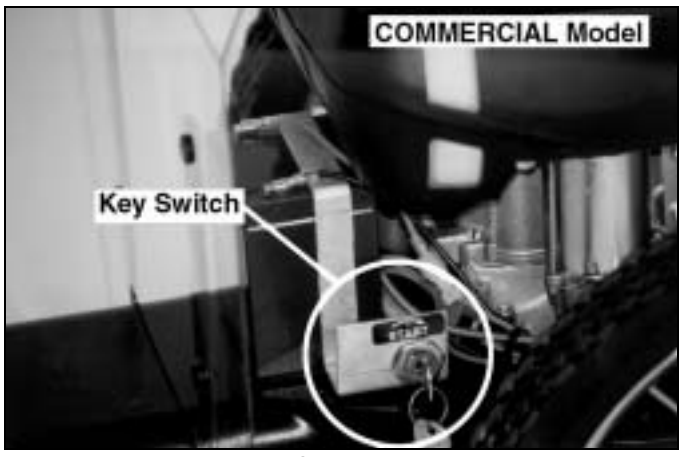


Figure 18

Manual-Starting

Can be used with both Manual- and Electric-Starting models.

1. Push the throttle lever on the left side of the handlebar *(Figure 16)* all the way forward to the START position.

2. On the PRO model:
   Prime the engine. Push the black primer bulb *(Figure 17)* for three seconds and completely release it, letting it pop back to its original position. Repeat three to four times.
   The Commercial model does not have a primer.

   Note: Priming is usually unnecessary when restarting a warm engine. In cool weather priming may need to be repeated
3. Grasp the recoil starter handle *(Figure 16)*, and slowly pull until resistance is felt. Let the cord retract a little bit, then pull the cord rapidly to start the engine. One or two pulls usually starts the DR® TRIMMER/MOWER™, but it may be necessary to repeat the priming (on PRO models).

Stopping the Engine

Move the throttle lever *(Figure 16)* back to the STOP position.

Note that on Electric-Starting models the key does not stop the engine. You must throttle down.

The key has a pressure lock that prevents it from vibrating loose during operation. If you wish to remove the key, push it in and then quickly and firmly pull it out. If the key is difficult to remove, spray FLUID FILM® or a comparable lubricant into the keyhole.

Engaging the Trimmer Head

1. Bring the bail bar *(Figure 16)* toward you and grip it together with the handlebar. Keep holding the bail bar to the handlebar.
2. With your right hand, push the trimmer head control lever (marked "Blade Control") on the right side of the handlebar all the way forward—until it engages. You may have to push hard until you feel it engage. Once the trimmer head control engages, release the lever and continue to hold the bail bar. The cutting cords will now be rotating and will continue to rotate until you release the bail bar.

Stopping the Cords Spinning

Release the bail bar from the handlebar. The trimmer head will stop spinning while the engine continues to run.

If the trimmer head keeps spinning after the bail bar is released you may need to adjust the trimmer control cable. See page 28.

Using the Parallel Trimming Action (PTA™) Feature

The DR® TRIMMER/MOWER'S PTA™ Feature allows the machine to move in a straight line while the trimmer head is both pivoted and tilted for better access to fence lines and other obstacles *(Figure 19).* This feature allows you to trim in difficult areas without having to pull the machine back and forth.

Figure 19

The cutting cords extend beyond the wheel base when in the PTA™ mode, which allows you to easily cut under obstacles. The trimmer head and the cutting cords also tilt slightly when in the PTA™ mode so you can edge and trim along gardens, paths and driveways.

Note: Use caution when edging along gravel paths and driveways. Flying debris can cause serious damage.

When using your PTA™ along garden edges, fences, and buildings, we recommend making your first pass with the DR® TRIMMER/ MOWER™ in the regular mowing position, staying 4 to 8 inches from the obstacle. Then, return for another pass with the machine cutting in the left or right PTA™ mode.

Figure 20

To Engage Parallel Trimming Action

1. Pull up on the PTA™ lever until you see the two dog ears at the bottom of the lever *(Figure 21).* You may need to turn the lever to see them. This unlocks the axle.
2. Turn the lever one quarter turn so the dog ears rest on the PTA™ latch bracket at the base of the frame after the lever is released *(Figure 21).*
3. Push down on the handlebar to tip the nose of the machine off the ground about six inches. By balancing the weight of the machine on the wheels, it is easier to pivot the front of the trimmer to the left or right.

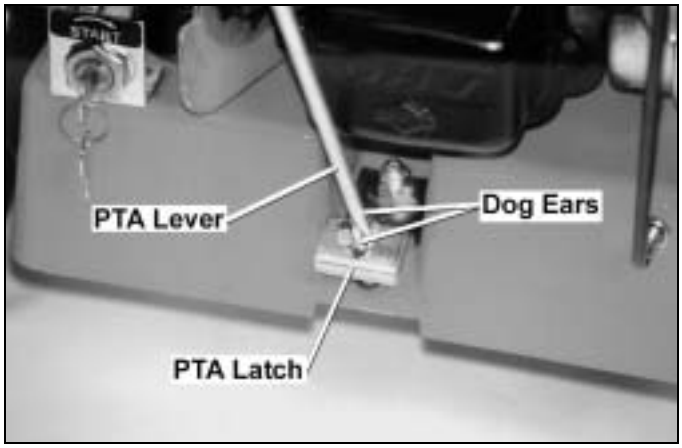


Figure 21

4. Grip the sides of the handlebar, pulling up with one hand and pushing down with the other, swinging the front of the trimmer to the left or right. If this action is difficult please see the section "To Adjust the PTA™ Feature" on page 29.
5. To lock in the left or right position, pull the PTA™ lever back and turn it a quarter of a turn and release. It will spring into place and lock into the axle plate.

To Return to Flat and Forward Mode

1. Pull the PTA™ lever and turn a quarter of a turn so the lever is resting on the dog ears.
2. Release the lever, push down on the handlebars, and pivot the trimmer head straight ahead.
3. Pull and turn the PTA™ lever a quarter turn, release the lever, and it will automatically lock the machine into the forward position.

Cutting Cords

WARNING! Always turn the engine off when installing or changing cutting cords.

Note: Before trimming, engage the cutting head with the engine running and spin new cords for a few seconds so they pull tight and set.

Figures 22 and 23 illustrate how the cords are installed on the line plates. There are two sets of installation points on each line plate, 180 degrees apart. One set of holes is for larger cord (155 mil) and is marked with large arrows. The other set of holes accommodates smaller cord (130 mil) and is marked with small arrows. Always install two cords opposite each other for the best performance.

Caution! Running the trimmer with only one cord installed, or cords installed at other than 180 degrees can cause excessive vibration and may damage the machine.

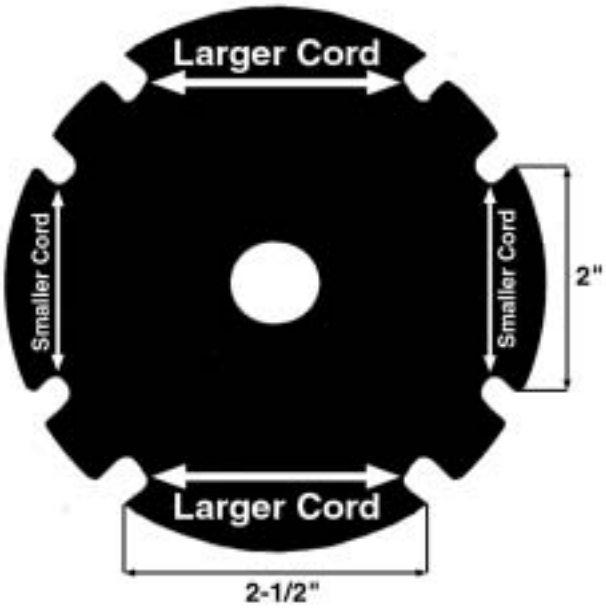


Figure 22

Figure 23

Cord Installation

The standard cord installation method is shown in Figures 24-26. This is how your trimmer is shipped from the factory.

1. Insert the ends of the cords into the openings in the line plate, as shown in Figures 23 and 24. There are different sized arrows at the insertion points to indicate what size cords fit the holes.

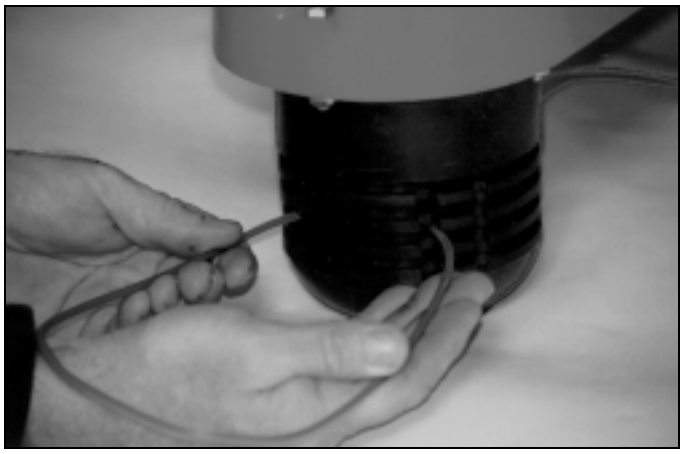


Figure 24

2. Push the cord through until it comes out the center hole in the line plate as shown in Figure 25. Adjust the cords so the tips are even.

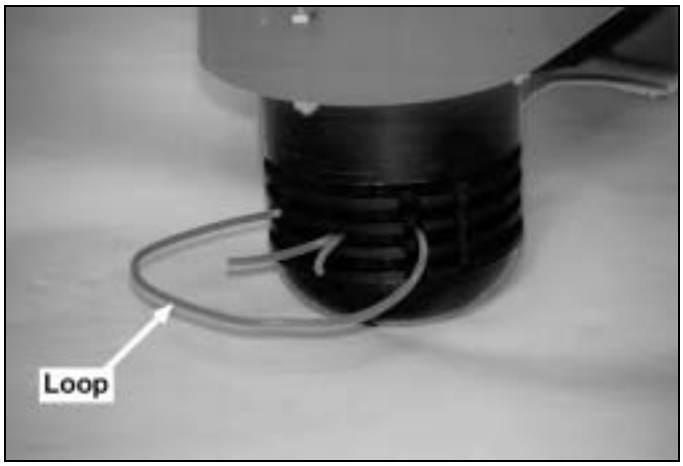


Figure 25

3. Pull the cords below the loop and push the loop up into the groove above them, as shown in Figure 26. Then pull the cords tight.

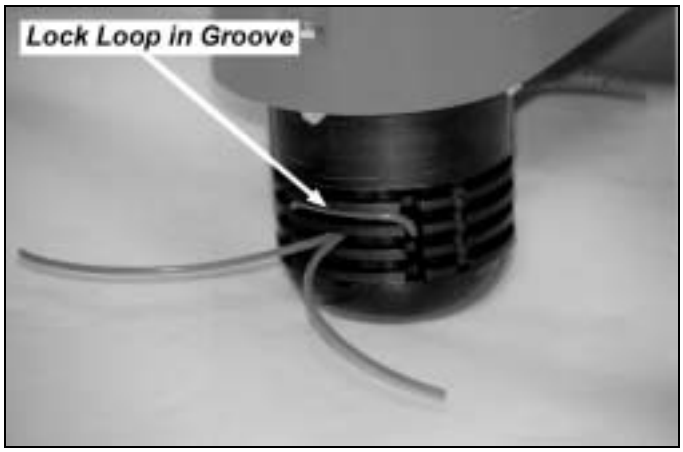


Figure 26

Cord Tips

Two thicknesses of cutting cord ship with your DR® TRIMMER/MOWER™: Heavy-Duty (130 mil) and Extra Heavy-Duty (155 mil). Because conditions and vegetation vary so much, experiment with the different cord weights in order to discover what works best for your particular mowing and trimming situations. Here are a few things to keep in mind:

- The best trimming performance will usually come from using the smallest diameter cord (which is still capable of cutting the material at hand), combined with the fastest engine speed. When more power is needed for thicker growth such as berry canes, brambles, thistles or ragweed, you may want to use the Extra Heavy-Duty (155 mil) cord in combination with the highest engine speed.
- Move slowly into thick growth. If there are woody weeds in the material being cut, the cutting cords may wrap around the stalks they cannot cut and pull away from the trimmer head.

  ☞ **Reminder:** The ends of the cutting cords do the cutting.

- To increase the cutting swath, install each cord slightly offset, with one side about and inch longer than the other. Be careful not to offset the cords by more than an inch. Doing so may cause the cords to hit the wheels.
- Please note that installing more than two cords at a time does not improve trimming performance—in fact it can lessen it. Adding additional cords creates drag on the trimmer head, robs the engine of power and may cause wrapping. Installing two cords, 180 degrees apart, is the best method for optimal trimming performance.
- If you buy cutting cord in rolls, cut it in 23" lengths.
- When replacing cords, do it one at a time and use the old cord to mark the position for the new cord to be installed.
- If the cord breaks off flush at the line plate, use the new cord to push the old cord out.
- Storing the cord in a plastic bag with a damp sponge or cloth will help keep it pliable. You can also soak your cutting cord in a bucket of room temperature water for a few days before use to make it more pliable.

Adjusting the Cutting Height

Adjusting the cutting height is easy. Simply install the cutting cords at the line plate that gives you the desired height.

Cutting heights range from 1-1/2" when using the bottom line plate, to approximately 3-1/4" when using the top line plate *(Figure 27).*

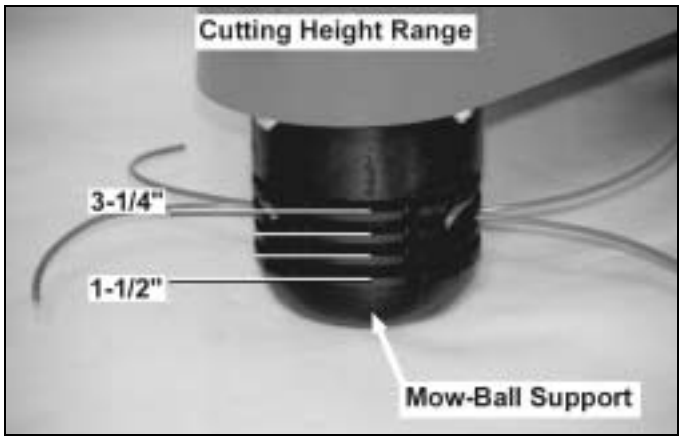


Figure 27

Mow-Ball™ Support

Allow the front end of the machine to rest lightly on the Mow-Ball™ Support *(Figure 27)* as you are trimming. The Mow-Ball™ Support should glide on the ground as you maneuver the machine.

In order to achieve the best and smoothest cut, do not lift up on the handlebar while operating your DR® TRIMMER/MOWER™. Lifting the handlebar causes weight to be forced down on the Mow-Ball™ Support. This uses more energy, slows down the cutting, and produces a less than satisfactory cut. Ideally, the Mow-Ball™ Support should lightly rest on the ground while the wheels balance most of the weight of the machine *(Figure 28).*

Figure 28

Adjusting the Handlebar

The correct handlebar height depends on many factors for each individual. However, it is crucial to find a height that allows the Mow-Ball™ Support to glide along the ground and remain balanced without the operator having to push down or pull up on the handlebar.

At the proper height, your hands should rest at a comfortable level and the front end of the trimmer should roll easily on the Mow-Ball™ Support as shown in Figure 28.

You may find you like different handlebar heights for different mowing conditions.

Figure 29

There are two ways to adjust the height of the handlebar:

1. Loosen both of the adjustment knobs *(Figure 29)* and move the handlebar up or down as needed. It's important that the adjustment is the same on both sides. Use the notches on the adjusters to measure how many teeth you've moved away from the center. When you've found a comfortable height, tighten the adjustment knobs securely.

2. For additional adjustment options, there are two holes in the upper and lower handlebars that can be used to adjust the height. Most people start with the handlebars set in the lower holes of both the upper and lower handlebar. You can adjust the height up or down by removing the adjustment knob assembly and repositioning the handlebars to a higher or lower hole. See page 5 for information on reassembling the handlebar adjuster knobs.

Obstacles

Many Owners like to mow easy, open areas with their regular riding or walk-behind mower, then they finish trimming all the odd and hard-to-reach spots with the DR® TRIMMER/MOWER™ *(Figure 30)*.

Figure 30

The DR® TRIMMER/MOWER™ discharges cut material to the right. Always try to cut and trim with the uncut tall grass or weeds on the left *(Figure 32)*.

☞ Suggestion: For the neatest appearance, do your trimming first, discharging clippings away from borders and shrubs, then do your mowing.

- Always check your work area before trimming and remove any debris that might tangle or damage the machine.
- If you do run into debris and the trimmer gets tangled, turn off the engine and disconnect the spark plug wire before attempting to untangle the machine.
- DO NOT run the machine over gravel driveways or over loose stones or mulch with the trimmer head spinning. The engine's power can easily throw stones, sticks and other debris at great velocity, which could cause personal injury or property damage.

Figure 31

Heavy Growth

Take your time in heavy growth. Be sure to keep the uncut material to your left, maintaining a clear discharge area to your right *(Figure 32)*. If the machine can't do it all in one pass, overlap half of the cutting swath. And if the grass is very thick and heavy, try raising the trimmer head off the ground a few inches by pushing down on the handlebar. Cut the material at this height, and then make a second pass with the Mow-Ball™ Support on the ground.

Figure 32

EASE the DR® TRIMMER/MOWER™ into denser growth. If the material is too tough or woody and can't be cut, the cutting cords will wrap around it, wear down or even break off.

Sometimes, growth is so heavy that it can't be mowed in rows. A back and forth "vacuum cleaner" motion often works better when tackling really tough material.

Wet Conditions

Because there is no housing to restrict the flow of cut material, you can also use your DR® TRIMMER/MOWER™ to mow wet or heavy growth. The DR® can be used in damp conditions—after a rain or in the early morning dew—without clogging or stalling. You can also mow wet areas such as ditches and around ponds *(Figure 33)*.

Figure 33

Very Dry Conditions

When trimming and mowing in very dry conditions, be extra cautious of cut grass, chaff, weeds, seeds, etc., accumulating on the engine, especially around the recoil-starter housing and engine cooling fins. Frequently remove debris from the recoil guard on top of the engine to prevent overheating and engine damage.

Please see the engine manufacturer's owner's manual for more detailed information on cleaning the air intake and cooling system on the engine.

Slopes

You can trim and mow on slopes up to 20 degrees. Continuous use on slopes steeper than 20 degrees may deprive the engine of adequate lubrication, and damage components.

Windrows

The DR® TRIMMER/MOWER'S cutting cords cut even tall grass in just one pass, so you can collect clippings and leaves for mulch without raking *(Figure 34)*. The machine ejects cut material to its right, so you can use it like a lawn broom to make windrows for easy clean-up.

Figure 34

Firebreaks

Use the DR® as a labor-saving tool to cut material when creating firebreaks.

End-of-Season Garden Clean-Up

The DR® is perfect for cutting down dead perennials, annuals and wildflowers, saving you hours of hand deadheading and pruning. You can also re-cut downed material a second time to create mulch for garden beds.

Maintenance

*** For engine maintenance, please refer to the engine manufacturer's owner's manual. ***

IMPORTANT!: Because of the conditions the DR® TRIMMER/MOWER™ is used in, air filters and oil should be changed more frequently than is recommended in your engine manufacturer's owner's manual. Please follow these recommendations:

Paper Air Cartridge: Should be replaced every 25 hours of operation. More frequently if operating in extremely dry and dusty conditions.

Oil: Should be drained and replaced after the first 5 hours, and every subsequent 25 hours of operation.

Regular Maintenance

Regular maintenance is the way to ensure the best performance and long life of your machine. Below is a list of recommended maintenance procedures. Follow the instructions in this manual and your engine manufacturer's owner's manual.

WARNING: Always allow the engine to cool completely and remove the spark plug wire before performing any maintenance procedure.

Caution: Do not tip the trimmer back on its handlebar to access the underside unless you first drain the gas and oil.

1. Clean any debris from the top and bottom of the machine, cylinder head fins, blower housing, finger guard, filter and muffler areas with a brush or rag.
2. Replace the paper air filter(s) and clean the foam filter every 25 hours of operation. More frequently if operating in extremely dry and dusty conditions.
3. Replace the oil after the first 5 hours and every subsequent 25 hours of operation.
4. Clean the spark plug and replace it if needed.
5. Check the Mow-Ball™ Support assembly and clean out any debris.
6. Drop the bearing housing and clean out any debris. Check for burrs on the pulley.
7. Lubricate the engine throttle cable, trimmer control cable, and idler pulley with FLUID FILM® or a similar lubricant.
8. Check the Mow-Ball™ Support and line plates for wear.
9. Replace broken or frayed cutting cords.
10. Check the belt for fraying or stretching. Replace it if necessary.
11. Check the bolts and nuts on the bearing housing assembly. If they are loose, tighten them. Check the bolts occasionally throughout the season to be sure they're secure.

Battery Care

(Electric-Starting Models Only)

Proper care can extend the life of a battery. Follow these recommendations to ensure your battery's best performance and long life:

- Do not continue to crank the engine with a low battery.
- Try to keep the battery at full charge to maximize its life. If the machine is not used, the battery should be charged every three months. See below for charging information.
- Store an unused battery in a dry area that does not freeze.
- Do not charge an already charged battery. In theory, our battery cannot be overcharged with a trickle charger; however, when a battery is fully charged and the charger is still on, it generates heat that could be harmful to the battery.

Automobile batteries last for years because they are recharged every time you drive your car—usually on a daily basis. An Electric-Starting DR® TRIMMER/MOWER™ will recharge its battery while you operate it. However, if you run your DR® infrequently or let it sit during the off-season without recharging, the battery life will be dramatically shortened. If the battery loses its charge, use the DR® Battery Charger or other trickle charger, to recharge it. The charger should have an output of 12 Volts at 1-2 amps.

- At 1 amp the battery may need to be charged for as long as 48 hours.
- At 2 amps the battery may need to be charged for as long as 24 hours.

Note: Using the recoil starter and then running the engine will not recharge a dead or significantly discharged battery.

To Connect a Battery Charger

1. Detach the two battery wires going to the wiring harness ("PRO model) or terminals (Commercial model) on your DR® TRIMMER/MOWER™.
2. Next, attach the black (-) battery charger wire to the black (-) wire or terminal on the battery. Then attach the red (+) battery charger wire to the red (+) wire or terminal on the battery.
3. Plug the battery charger into an outlet.
4. When the battery is charged, disconnect the charger from the battery before unplugging it from the outlet.

Battery Troubleshooting

Symptoms of a battery needing a charge:

- The engine won't start with the key but will start with the recoil starter.
- A whirring noise coming from the starter.
- A grinding noise coming from the starter.
- No noise at all.

What to do:

- Check that the battery is fully charged. A fully charged battery should read 12 volts under load. Manually start the engine and then put a volt tester on the battery. If you need to charge the battery, follow the directions above.
- Check all cable connections.
- The wiring harness consists of a set of wires that lead from the ignition switch to the battery. Disconnect and reconnect the battery wires (black to black and red to red) and check the wire connections at the key switch.
- Call one of our Technical Service Representatives TOLL-FREE 1(800)DR-OWNER(376-9637) for assistance.

To Remove the Mow-Ball™ Support Assembly

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Tool Needed:

• #3 Phillips head screwdriver or one with at least a 6" shank

Set the machine on a bench if possible. Do not tip the machine all the way back on its handlebar unless you have drained the gas and oil.

1. Insert the screwdriver into the hole in the outer cylinder, then rotate the Mow-Ball™ Support until the screwdriver fits into a second hole in the bearing housing, locking it into place *(Figure 35)*.
2. Turn the Mow-Ball™ Support assembly as you would a light bulb (counterclockwise) until it unscrews completely from the bearing housing *(Figure 36)*.

   Note: If the Mow-Ball™ Support assembly continues to turn, but does not come off, rotate it until the screwdriver fits into a third hole in the bearing housing shaft. This should lock it in place and allow you to remove the Mow-Ball™ Support assembly.

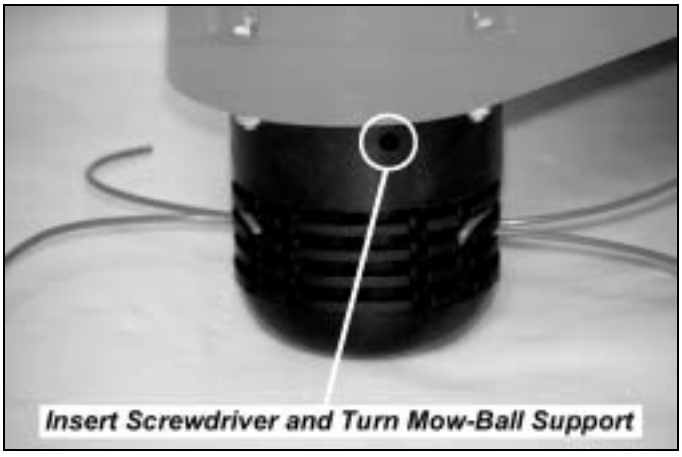


Figure 35

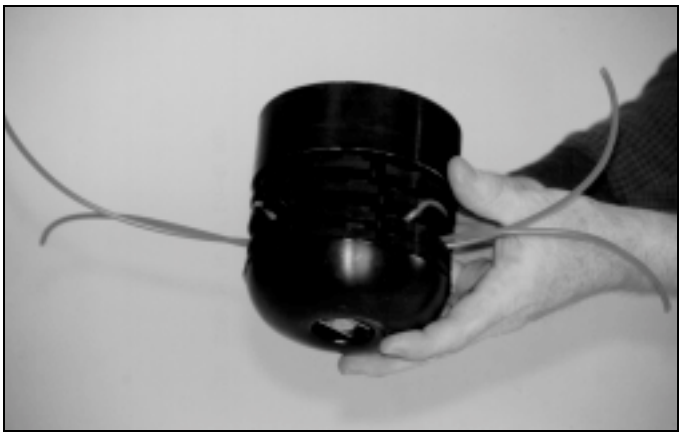


Figure 36

To Reassemble the Mow-Ball™ Support Assembly

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Caution: Improper installation may cause damage to the bearings. Please follow these directions carefully.

1. Reassemble the components in the order shown in Figure 37.
   - The line plates stack on top of one another with the bumps on the bottom locking into the grooves on the top of each plate.
   - The head of the Mow-Ball™ bolt should sit in the groove of the rectangular washer at the bottom of the Mow-Ball™ Support. Hold the bolt head in place with one finger and turn the Mow-Ball™ Support assembly clockwise until it's finger tight.

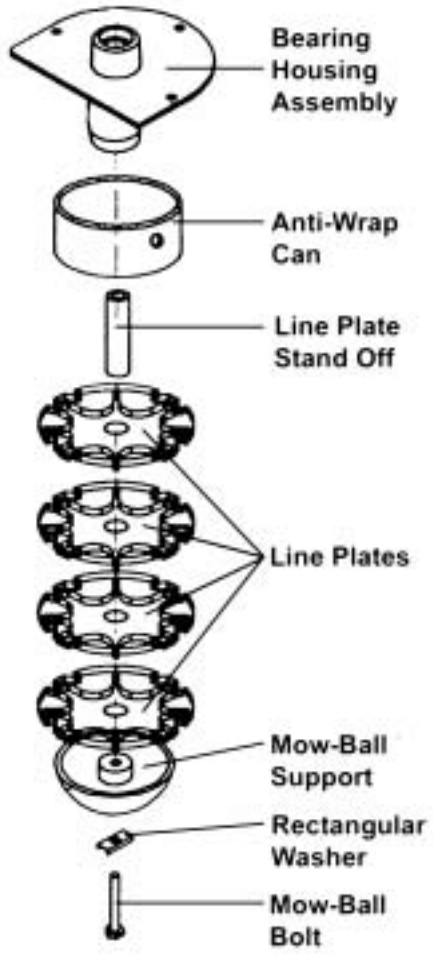


Figure 37

To Partially Lower the Bearing Housing Assembly *(to remove debris)*

If the bearing and trimmer head become clogged with debris the machine will not perform well. As part of your regular maintenance routine, follow the steps below to keep the bearing housing assembly free of debris.

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Tools Needed:
• 1/2" socket
• 1/2" open end or adjustable wrench

If possible, set the machine up on a bench. Do not tip the machine all the way back on its handlebar unless you have drained the gas and oil.

1. Remove the three bearing housing nuts *(Figure 38)* and carefully lower the bearing housing assembly from the frame. Brush out any dirt and debris *(Figure 39)* and check the pulley for burrs or dents.
2. Replace the bearing housing assembly and tighten the bolts.

Note: If the belt comes off, please refer to the instructions on page 27 to ensure proper positioning.

Figure 38

Figure 39

To Check the Bearing Housing Assembly for Damage

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Tool Needed:
• 1/2" wrench

If the trimmer head doesn't rotate when you engage the trimmer head control and the bail bar, try the following test:

1. Leaving the Mow-Ball™ Support assembly in place, loosen and remove the three bearing housing nuts and lower the bearing housing from the frame *(Figures 38 & 39)*.

2. Detach the brake arm *(Figure 40).*
3. Pull the belt off the pulley.
4. Remove the spring or release the break from the bearing housing *(Figure 40).*
5. Turn the Mow-Ball™ Support assembly by hand. It should turn freely, without resistance. If it doesn't turn freely or you hear a grinding noise, the bearings may be worn and you may need to replace the bearing housing assembly.
6. Call one of our Technical Service Representatives at TOLL-FREE 1(800)DR-OWNER(376-9637) for information about replacing the bearing housing assembly.

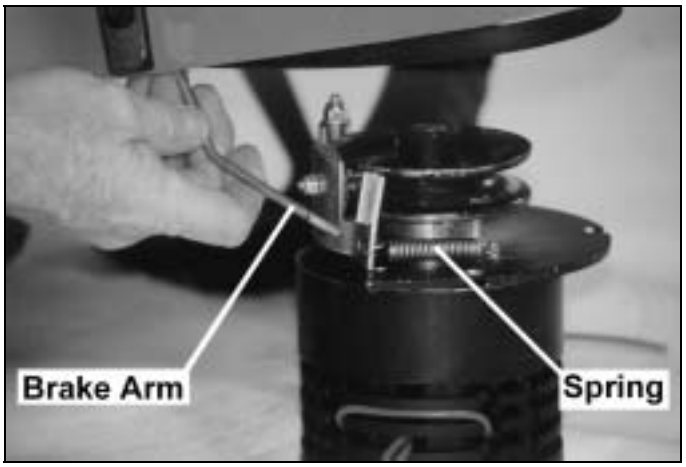


Figure 40

To Remove and Replace the Bearing Housing Assembly

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Tools Needed:

- 1/2" wrench
- 7/16" wrench
- pliers
- 5/32" Allen wrench
- you may also need a pulley extractor

To Remove the Old Bearing Housing

1. Remove the Mow-Ball™ Support assembly. See page 22 for instructions.
2. Loosen and remove the three bearing housing nuts and lower the bearing housing from the frame *(Figure 41).*

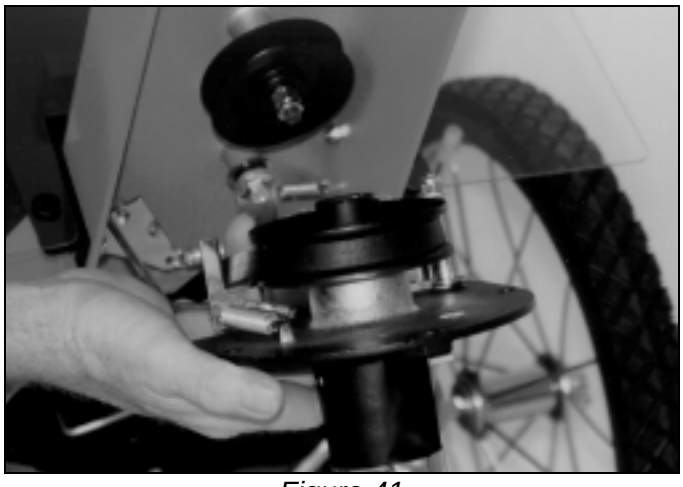


Figure 41

3. Detach the brake arm from the brake assembly *(Figure 40)*.
4. Pull the belt off the pulley.
5. Remove the brake assembly and spring from the bearing housing *(Figure 42)*.
6. To remove the pulley, unscrew the set screw from the pulley *(Figure 43)* with an Allen wrench. Then tap the pulley to loosen it from the shaft. Be careful not to hit the shaft, as it will expand and make the pulley harder to remove. Remove the pulley. You may need a pulley extractor.

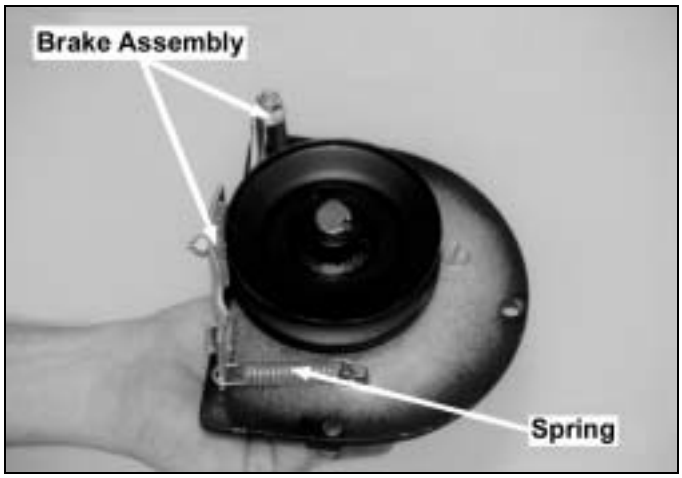


Figure 42

To Mount the New Bearing Housing

1. On the new bearing housing *(Figure 44)*, mount the pulley and key *(Figure 43)*, leaving the shaft recessed about 1/16", and secure with the set screw. You may want to use LOCTITE® 242 to keep the set screw in place.
2. Mount the brake assembly and spring *(Figure 42)*.
3. Attach the brake arm to the brake assembly *(Figure 40)*.
4. Mount the belt on the bearing housing pulley. Be sure the belt is placed on the INSIDE of the belt guides and that the other end of the belt goes through the belt retainer and around the engine pulley. Also, be sure the belt is on the INSIDE of the idler pulley #1. Please see page 27 for proper belt installation.
5. Set the new bearing housing assembly into place. Insert the three bearing housing bolts through the frame, and tighten the nuts *(Figure 38)*.
6. Reassemble the Mow-Ball™ Support assembly. See page 23 for instructions.

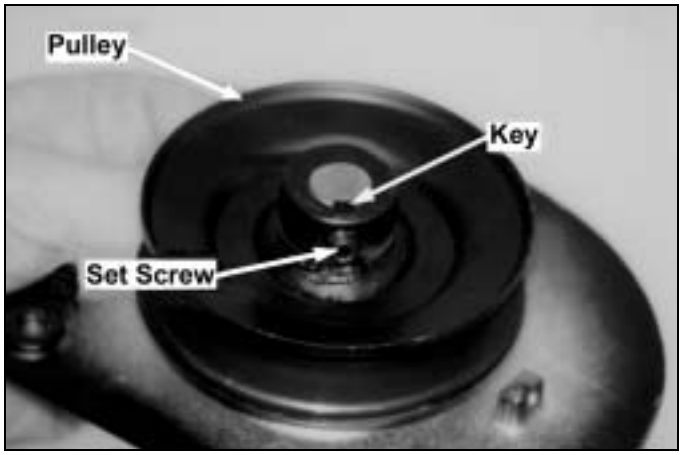


Figure 43

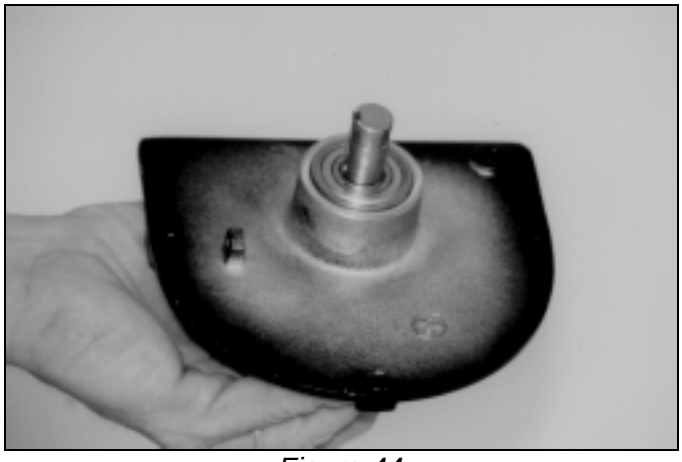


Figure 44

To Replace the Belt

Figures 45 & 46 show the belt and pulley system from the underside of the machine.

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

1. Remove the bearing housing assembly (see page 25).
2. Remove the old belt.
3. Take the new belt and loop it over the bearing housing pulley and in between the pivot sleeve and belt guide *(Figure 47)*.
4. Put the opposite end of the belt around the engine pulley, making sure the belt is INSIDE the belt retainer, on the INSIDE of idler pulley #1 and on the OUTSIDE of idler pulley #2 *(Figure 45)*.

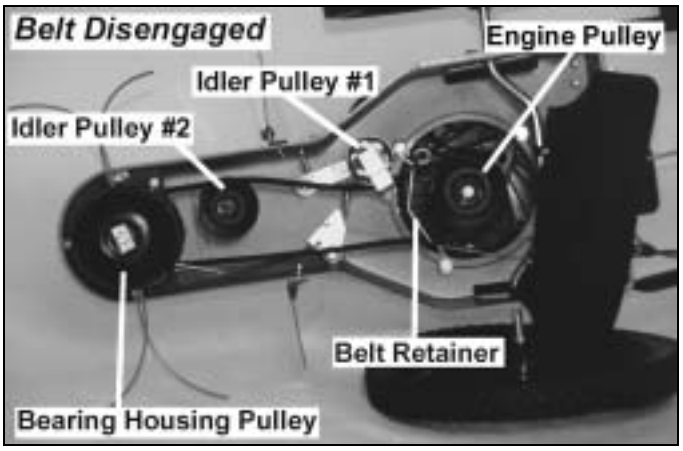


Figure 45

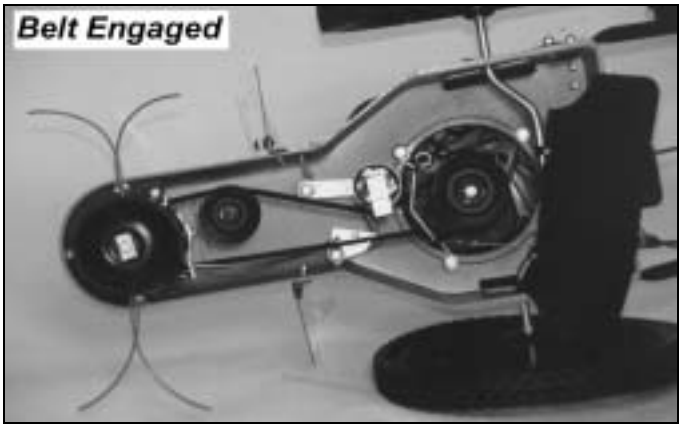


Figure 46

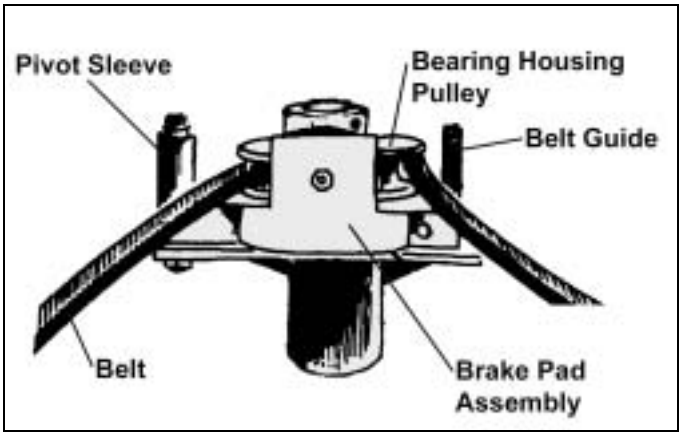


Figure 47

To Adjust the Belt Tension through the Trimmer Control Cable

If the trimmer head stops spinning when the bail bar is engaged and the machine is operating under a heavy load, the belt may be too loose and the trimmer control cable may need to be adjusted to put more tension on it.

When the trimmer control cable is properly adjusted, you should begin to feel tension on the clutch control lever when it's pushed about half way down. If you feel tension before halfway, the belt is too tight. If you don't feel tension until past the half way point the belt is too loose. Before making any adjustments to the trimmer control cable, check that the belt is mounted on the correct side of the idler pulleys (see Figure 45), and is not frayed, worn or stretched.

⚠ **WARNING!** Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Tools Needed:
• (2) 1/2" open-end or adjustable wrenches, or pliers

To adjust the belt tension through the trimmer control cable *(Figure 48)*, you may find it easier to set the trimmer up on a workbench, or, after draining the gas and oil from the engine, tip the machine back on the handlebar.

To increase tension on the belt:

1. With a wrench or pliers, loosen the control cable adjustment nut in front of the frame, leaving about 1/8" of space between nut and frame *(Figure 49)*.
2. Grip the metal end of the black cable with pliers, making sure you DO NOT pinch it. At the same time, tighten the rear nut until it is flush and snug against the frame. The parts will then be in the same position as in step 1, but 1/8" to the right *(Figure 49)*.

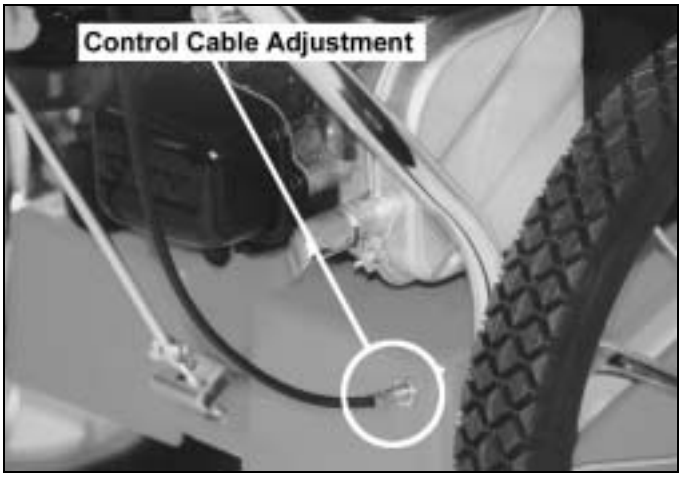


Figure 48

If the trimmer head keeps spinning after the bail bar is released the belt may be too tight.

To decrease tension on the belt:

Repeat the above steps, except this time loosen the rear nut, then tighten the front nut.

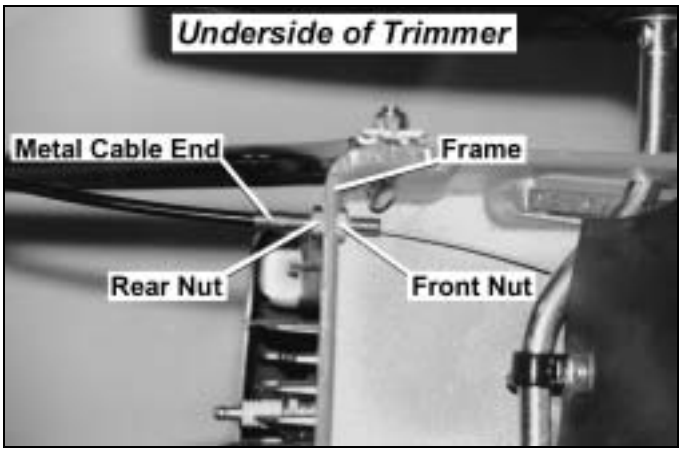


Figure 49

To Adjust the PTA™ Feature

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Tool Needed:
• 5/16" socket

It should be easy to engage the PTA™ Feature. If you find it hard to release the PTA™ lever and pivot the frame to the side, loosen the axle nut one quarter turn or so *(Figure 50)*. Also be sure there is some play between the bottom of the PTA lever and the PTA pin at the rear of the machine frame.

Keeping the axle clean will also help the PTA™ feature work smoothly.

Lubricating the black axle slides *(Figure 50)* with FLUID FILM® or comparable lubricant will also help keep the PTA action smooth.

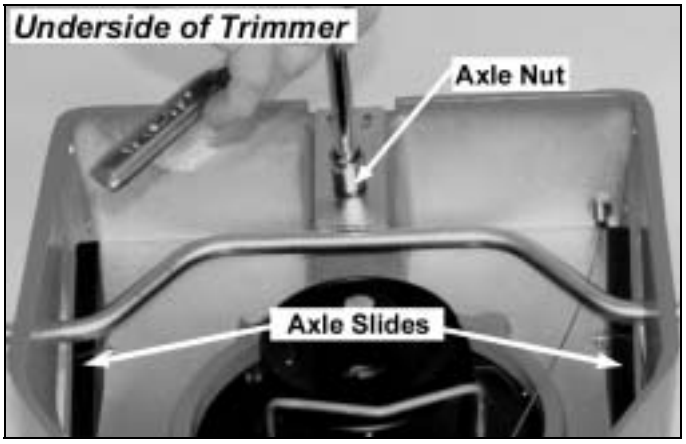


Figure 50

*****For engine maintenance, please refer to the engine manufacturer's owner's manual.*****

Troubleshooting

WARNING! Before performing any maintenance procedure, the engine should be stopped and the spark plug wire disconnected.

Engine won't start manually *(Please refer to the engine manufacturer's owner's manual for engine-specific procedures.)*	⇒ On the PRO model: Are you priming? Push the primer bulb 3 to 5 times, releasing completely each time. ⇒ Are you using fresh, clean gas? If it's old, change it. Use a fuel stabilizer if you keep gas longer than two weeks or so. ⇒ Does the engine have the right amount of clean oil? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual. ⇒ Is the spark plug clean? If it's fouled or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull the recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it. ⇒ Is the air filter clean? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual. ⇒ Is the throttle cable attached to the engine and moving freely? ⇒ If your engine still won't start, call **1(800)DR-OWNER(376-9637)** for advice and assistance.
Engine won't start using electric-start *(Please refer to the engine manufacturer's owner's manual for engine-specific procedures.)*	⇒ Have you checked all the items under manual start above? If not, do so. ⇒ Is your battery charged? Check it yourself or at a gas station. If it's low, charge it with a 12-volt, 1.5 to 2 amp trickle charger. If you don't use your DR® for 45 minutes or so at a time, the battery may need to be periodically charged. See the Battery Maintenance section on page 21. ⇒ If your battery is charged and your DR® still won't start, call **1(800)DR-OWNER(376-9637)** for advice and assistance.
Engine lacks power or is not running smoothly *(Please refer to the engine manufacturer's owner's manual for engine-specific procedures.)*	⇒ Are you using fresh, clean gas? If it's old, change it. Use a fuel stabilizer if you keep gas longer than two weeks or so. ⇒ Does your engine have the right amount of clean oil? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual. ⇒ Is the spark plug clean? If it's fouled or cracked, change it. If it's oily, leave it out, hold a rag over the plug hole and pull your recoil cord several times to blow out any oil in the cylinder, then wipe off the plug and reinsert it.
Engine lacks power or is not running smoothly (continued)	⇒ Is the air filter clean? If it's dirty, change it following the procedure in the engine manufacturer's owner's manual.

(Please refer to the engine manufacturer's owner's manual for engine-specific procedures.)	⇒ Is the throttle cable attached to the engine and moving freely? ⇒ Are the blower housing, throttle linkage and cooling fins free of debris? Clean them following the instructions in the engine manufacturer's owner's manual. ⇒ Are the bearing housing and trimmer head clogged with debris? Drop it and clean it according to the "To Partially Lower the Bearing Housing Assembly" instructions on page 24. ⇒ If your engine still lacks power, call **1(800)DR-OWNER(376-9637)** for advice and assistance.
Trimmer head won't spin	⇒ Is the trimmer head control fully engaged? Pull the bail bar all the way back to the handlebar, then firmly push the trimmer head control lever all the way down until you hear a click. When you release it, it will spring part way back. The head will keep spinning as long as you hold the bail bar against the handlebar. ⇒ Is your v-belt properly aligned? Check it against the diagram in the Belt section on page 27. Make sure the belt is **inside** idler pulley #1, that the springs on the idler pulley arm and triangular brake actuator are in place, and that the actuator moves when you engage the trimmer head control lever. ⇒ Is your v-belt worn or frayed? If so, replace it. ⇒ Are your bearings in good shape? Follow the "To Check the Bearing Housing Assembly" instructions on page 24. ⇒ Are the bearing housing and trimmer head clogged with debris? Drop and clean them according to the "To Partially Lower the Bearing Housing Assembly" instructions on page 24. ⇒ If the head still will not spin, follow the procedure for "To Adjust the Belt Tension through the Trimmer Control Cable" on page 28. ⇒ If none of the above helps, call **1(800)DR-OWNER(376-9637)** for advice and assistance.
Trimmer head keeps spinning	⇒ Is the trimmer head control disengaging? When you release the bail bar, the control lever should come all the way up against the bar, just below the curve. ⇒ Is the sleeve on the trimmer head control cable clogged with debris? If so, clean it out and spray some FLUID FILM® on the cable.
Trimmer head keeps spinning (continued)	⇒ Is your v-belt properly aligned? Check it against the diagram in the Belt section on page 27. Make sure the belt is **inside** idler pulley #1, that the springs on the idler pulley arm and triangular brake actuator are in place, and that the actuator moves when you engage the trimmer head

	control lever. ⇒ Is the brake pad worn? Drop the bearing housing according to the procedure in the maintenance section of this manual and check the pad for wear. Also make sure the spring is not broken, missing or stretched. ⇒ If the head keeps spinning when you release the bail bar, see "To Adjust the Belt Tension through the Trimmer Control Cable" on page 28. ⇒ If none of the above works, call **1(800)DR-OWNER(376-9637)** for advice and assistance.
Cutting cords are breaking	⇒ Are your cords dry? Store cords in a plastic bag with a damp sponge or cloth to make them less prone to breaking. Or, soak them in a bucket of water for a few days. ⇒ Are you trying to do too much too fast? Ease into material to be cut; the cord tips do the work. Take small bites of tall or tough vegetation. Cut half a swath at a time, keeping the cut area to the discharge or right side of the DR®. Go over tall material twice, the first time with the head tilted up and back, the second time with the Mow-Ball™ Support on the ground. ⇒ Try a lighter cord. ⇒ Are you hitting your cords against a stone or a chain-link fence? The cords just won't last as long as in the open. Work on controlling the cutting pattern; with practice you'll learn to cut closer to obstacles without hitting them.
Cutting cords are pulling out	⇒ Are you moving too fast into tough, woody growth? If so, cords may wrap on stalks and pull out. Check the operating tips in the section on breaking cords above. ⇒ Are you trying to cut material too heavy for the cord? The DR® is designed to cut green material up to about the thickness of a pencil. For very heavy material, you may need the BEAVER BLADE® attachment. ⇒ Are you installing the smaller cord in the larger openings?
Parallel Trimming Action is difficult	⇒ Is the axle binding when you shift into PTA™ mode? Spray some FLUID FILM® at the points where the axle slides on the frame. ⇒ Is the self-locking nut over the bolt that holds the flat end of the PTA™ lever to the latch too tight? If so, loosen it 1/4 turn at a time until the PTA™ works smoothly. ⇒ Is the axle nut under the frame too tight? If so, loosen it a bit. ⇒ If you still have trouble engaging the PTA™ feature, call **1(800)DR-OWNER(376-9637)** for advice and assistance.

Mow-Ball™ Support is wearing too quickly	⇒ Are you pushing the trimmer head down into the ground? The DR® TRIMMER/MOWER™ works best with a light touch, with the Mow-Ball™ Support resting easily on the ground. ⇒ Are you hitting the Mow-Ball™ Support against rocks, concrete driveways or other hard obstacles? Try approaching them slowly, and from different directions, to avoid unnecessary wear. ⇒ Are you trimming in sand or other abrasive soils? The aluminum Mow-Ball™ Support may be more appropriate for your working conditions. Call **1(800)DR-OWNER(376-9637)** for advice and assistance.

Parts List

Please refer to the schematic drawings on pages 36-37.

Ref #	Part #	Description
1	116891	Main Frame Orange, PRO Model
1	139531	Main Frame Black, Comm. Model
2	145531	Cast Bearing Housing Assembly
2H	145541	Head Assembly Complete
3	143641	Upper Handlebar, Comm. Model
3	144071	Upper Handlebar, PRO Model
4	143631	Lower Handlebar, Comm. Model
4	144061	Lower Handlebar, PRO Model
5	125141	Wheel Retaining Ring & Set Screw
6	144101	Mow-Ball™ Support, Nylon
6a	121131	Aluminum Mow-Ball™ Support
8	114261	Axle
9	123951	Clevis, 3/16" x 1/2"
10	114031	Brake Actuator
11	114111	Idler Arm
12	115121	Brake Assembly
13	114681	Clutch/Brake Control
14	144571	Throttle Control with Cable, PRO Model
14	144591	Throttle Control with Cable, Comm. Model
15	114681	Hex Head Bolt, 1/4"-20 x 1-1/4"
16	143661	Handlebar Knob
18	139861	Wheel 16", Comm. Model
18	121321	Wheel 16" Resin, PRO Model
20	143691	Bail bar
21	119621	Brake Rod
22	143541	Backup Plate
23	116801	Rubber Stone Guard
24	131031	Stone Guard Clamp
25	120891	Idler Return Spring
26	118221	PTA Lever
27	143571	Line Spacer Plate
28	120521	Shield Assembly with Brackets
29	144081	Line Plate Stand-Off
30	121101	Axle Pivot Stud
31	144541	Carriage Bolt, 5/16" – 18 x 3"
32	120641	Bushing, 1/4"
33	117491	PTA Lever Vinyl Grip
34A	114251	PTA Latch Bracket Assembly
35	115001	Latch Bracket Only
36	118941	PTA Pin
36A	125341	PTA Pin, Spring, Clip Assembly
37	120901	PTA Spring
38	119591	PTA Snap Ring/Clip
39	118811	Wear Strip
40	115831	24 Heavy-Duty Cords (pre-cut)
41	115871	Roll of Heavy-Duty Cord
42	115811	24 Extra Heavy-Duty Cords (pre-cut)
43	115861	Roll of Extra Heavy-Duty Cord
44	121661	Nylon Washer .180 thick
45	120771	Extension Spring, 2" x .52
46	121521	Plastic Axle Washer, .01"
47	118161	Key, 3/16" Square
48	121691	Flat Washer, 5/16"
49	144551	Bolt, HHCS, Gr. 5, 3/8"-16 x 3-1/4"
50	125371	Engine Pulley with Set Screw
51	120171	Set Screw, 5/16"-18 x 5/16"
52	125381	Head Pulley
53	118691	Hex Nut, 5/16"
54	118731	Nylon Lock Nut 10-24
55	114621	Hex Head Bolt, 1/4"-20 x 2-1/2"
56	121701	Flat Washer, 3/8", SAE
57	112391	Flat Washer, 3/8" USS, for Engine Pulley
58	120161	Set Screw 1/4"-20 x 3/8" Sq Head
59	121551	Brake Pivot Washer
60	114431	V-Belt 1/2" x 45", 4L450
61	120101	Hex Head Screw, 10-24 x 5/8"
62	118641	Elastic Stop Nut, 1/4"-20

Ref #	Part #	Description
64	121591	Flat Washer, #10
65	118781	Elastic Stop Nut, 3/8"-16
66	110761	Elastic Stop Nut Axle 5/16"-18
67	114741	Hex Head Bolt, 5/16" – 18 x 2"
68	114761	Hex Head Bolt, 5/16-18 x 3-1/4"
69	114721	Hex Head Bolt, 3/8"-24 x 1/2"
70	119851	Hex Head Bolt, 3/8"-16 x 1-1/2"
71	119911	Shoulder screw
72	113071	Idler Pulley #1, Flat, 2-1/4"
74	119381	Belt Retainer
75	119231	Idler Pulley #2 (V shape)
76	121681	Rectangular Washer, Nylon Mow-Ball only
77	114851	Handlebar U-Bolt
78	117471	Safety Goggles
79	113081	Electric Starter Switch
80	114861	U Bolt, 1/4"-20 x 3/4", for Switch Plate
81	121191	Switch Mounting Plate
82	117811	Ignition Wiring Harness
83	135101	Battery Clamp, Nylon
84	131191	Battery
84	141351	Battery w/ Clamp Kit & Hardware

Ref #	Part #	Description
85	113051	Neoprene Battery Pad
86	143561	Anti-Wrap Can
87	119611	Plastic Rivet
88	120151	Round Head Screw, 10-24 x 2"
89	127421	Nylon Cable Clip
89	112141	6" Black Cable Tie
90	118111	Electric Start Key, Set of 2
91	118881	Brake Pad
92	133071	Flange Bolt, 1/4" – 20 x 7/8"
93	114411	Wheel Bearing, PRO Model only
94	115581	Bowden Clamp, Briggs & Stratton Models
95	119821	Bowden Clamp Bolt, Briggs & Stratton Models
96	120101	Screw, Wear Strip, 10-24 x 5/8"
97	114381	Bearing, 17mm
98	144531	Shaft, 17mm
99	143721	Handlebar Adjuster, Inside
100	143731	Handlebar Adjuster, Outside
101	143931	Handlebar Adjuster Spring
102	145801	Handlebar Adjuster Assembly
103	145541	Trimmer Head Assembly Complete

Schematic Drawings

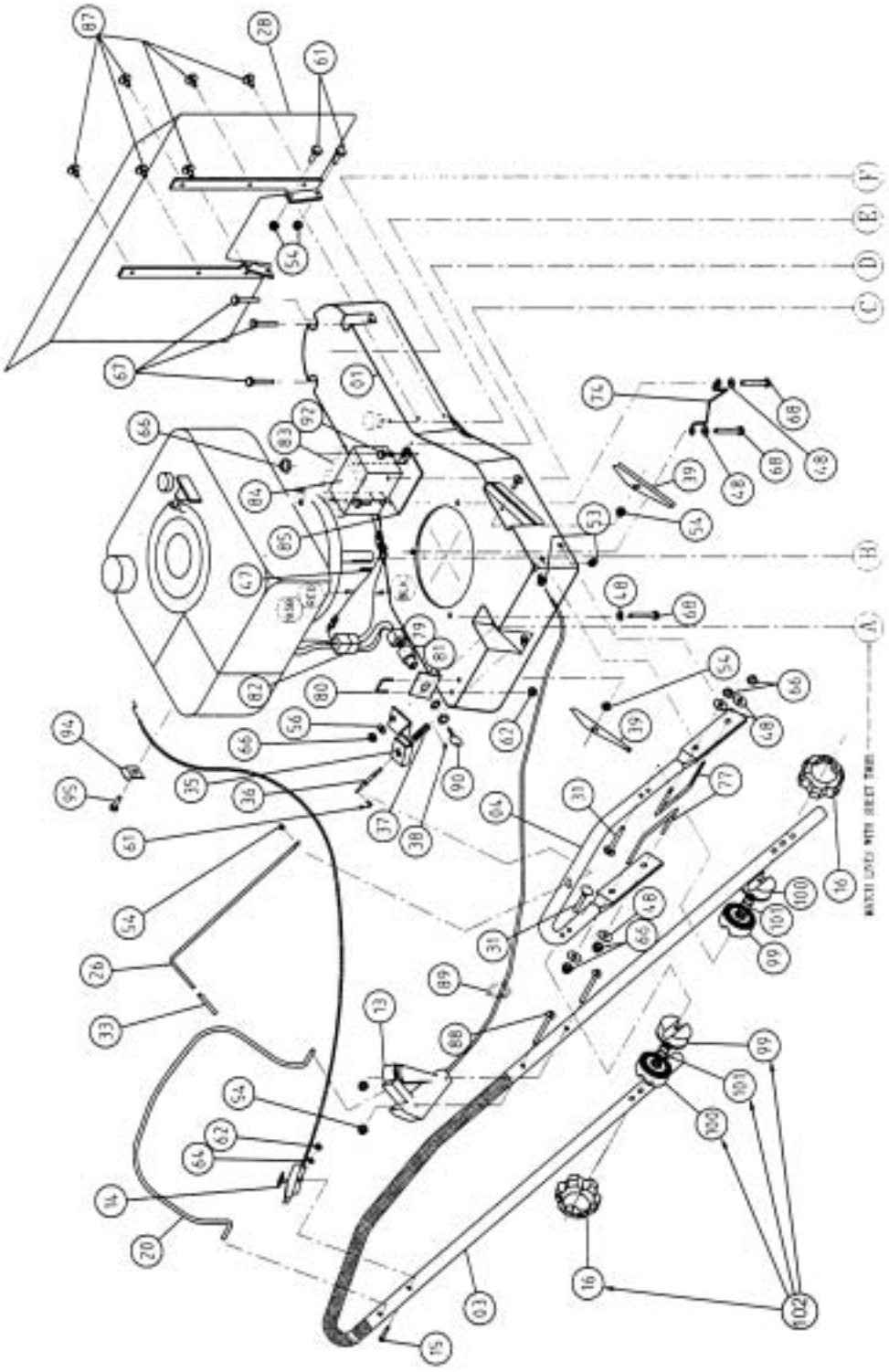


Figure 51

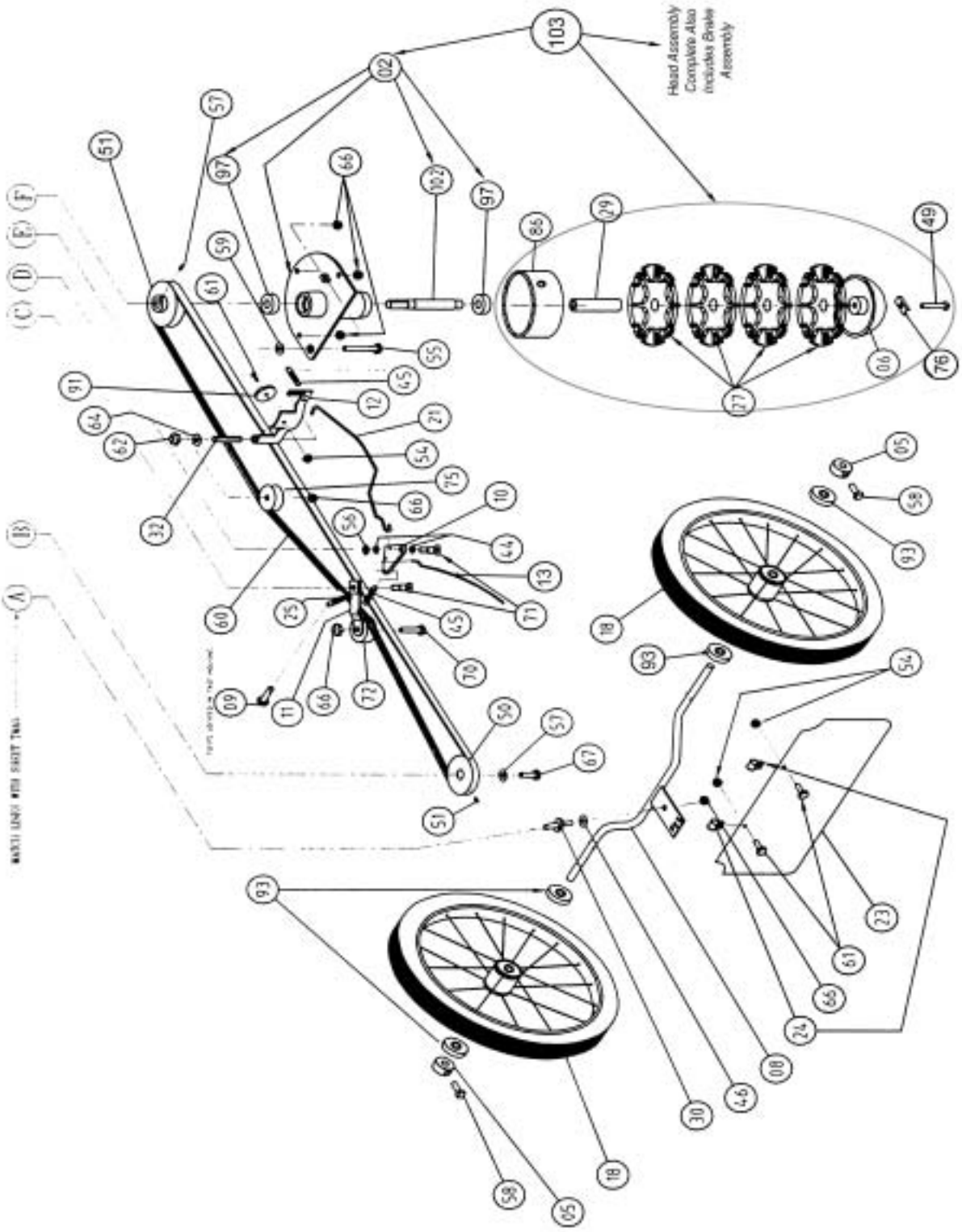

103
Head Assembly
Complete Also
Includes Brake
Assembly
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Figure 52

Notes

Notes

Notes

Daily Checklist for the DR® TRIMMER/MOWER™

To help maintain your DR® for optimum performance, we recommend you follow this checklist each time you use your machine.

- ✓ GAS: Fill the gas tank with clean, fresh, unleaded gas. Be careful not to spill gas on the engine shield. Gasoline will cloud the acrylic. If gas does spill on the shield, rinse it immediately with soap and water.

- ✓ OIL: Check the oil level with the dipstick and add more if necessary (only add oil to the level indicated on the dipstick—do not overfill). Use SAE 30 high detergent oil.

- ✓ SPARK PLUG: Clean the spark plug and replace if needed.

- ✓ AIR FILTER: A clean air filter will mean a much easier-starting and better running engine. You should replace the paper air filter after every 25 hours of use, more frequently if you are trimming and mowing in dusty conditions.

- ✓ ENGINE AIR COOLING SYSTEM: It is very important to keep the engine clean of debris. Remove grass and other built-up materials from the air intake screen before, during and after you mow. Regularly remove debris from the blower housing and cooling fins. A dirty engine retains heat and can cause damage to the internal engine parts.

- ✓ BELT: Check the belt for wear, proper alignment and tension.

- ✓ CUTTING CORDS: Replace broken or frayed cords.

- ✓ MOW-BALL™ SUPPORT: Check the Mow-Ball™ Support for wear.

DR® POWER EQUIPMENT

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