



# **EasyRake**

POWERED LAWN TOOLS

## **MODEL D110/D600 DETHATCHERS**

**CAUTION:**  
Read All Instructions and  
Safety Rules Before  
Operating This Equipment

### **OPERATOR'S MANUAL INCLUDING ASSEMBLY & PARTS**

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By EverGreen International, Inc.  
1001 S. Ransdell Rd. Lebanon, IN 46052  
TOLL FREE (800) 777-6074  
FAX (317) 482-1145

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# SPECIFICATIONS

**THANK YOU** for purchasing an *EasyRake Dethatcher*! It has been designed, engineered and manufactured to give you the best possible dependability and performance.

Should you experience any problem you cannot easily remedy, please contact your dealer or call the Customer Service Department at (800) 777-6074.

MODEL NUMBER D110/D600

SERIAL NUMBER \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

THE SERIAL NUMBER WILL BE FOUND ON THE DECK OF THE DETHATCHER.

YOU SHOULD RECORD BOTH THE SERIAL NUMBER AND THE DATE OF PURCHASE HERE, AND KEEP THIS MANUAL IN A SAFE PLACE FOR FUTURE REFERENCE.

## PRODUCT SPECIFICATIONS

### ENGINE:

| Engine No.                   | Engine Mfr.       | Engine Horsepower  |
|------------------------------|-------------------|--------------------|
| 133252-0049-03<br>(Standard) | Briggs & Stratton | 5.0 Max @ 3600 RPM |
| GX160 K1 HX<br>(Optional)    | Honda             | 5.5 Max @ 3900 RPM |

Use Unleaded Gasoline Only

NOTICE TO CUSTOMERS IN THE STATE OF CALIFORNIA: The engine on this unit is NOT equipped with a spark arresting muffler at the factory. Order EasyRake Spark Arrestor Kit No. 94137. Use or operation of this engine on any forest-covered, brush-covered or grass-covered land without a state-approved spark arrestor in effective working order constitutes a violation of the law of the State of California.

MODEL D110: 38" Raking Width; 6:1 Gear Reduction; 100 Counter-Rotating Spring Tines

MODEL D600: 38" Raking Width; 6:1 Gear Reduction; 56 Heavy-Duty Counter-Rotating Spring Tines



LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT SAFETY PRECAUTIONS. IT MEANS "ATTENTION! BE ALERT! YOUR SAFETY IS INVOLVED."

### IMPORTANT:

LOOK FOR THE WORD "IMPORTANT" TO POINT OUT EQUIPMENT SAFETY PRECAUTIONS.

# RULES FOR SAFE OPERATION

1. **KNOW YOUR DETHATCHER.** Become familiar with all the different sections of this Owner's Manual before operating your Dethatcher. Know the controls and how to stop quickly.
2. **READ THE ENGINE OPERATING INSTRUCTIONS** and the engine manual before starting the engine.
3. **LIMIT USE OF YOUR DETHATCHER TO TRAINED ADULTS.** Do not allow children to operate your Dethatcher.
4. **KEEP BYSTANDERS AND PETS AWAY FROM THE AREA** when you are operating your Dethatcher.
5. **ALWAYS KEEP HANDS AND FEET AWAY FROM MOVING PARTS.** Do not wear loose fitting clothing that could get caught in moving parts.
6. **DO NOT PLACE HANDS OR FEET UNDER DECK** while engine is running.
7. **DO NOT MAKE ANY ENGINE ADJUSTMENTS** (except to the carburetor) while the engine is running.
8. **HANDLE FUEL WITH CARE;** it is highly flammable. Never remove fuel tank cap or add fuel to a running or hot engine. Do not fill fuel tank indoors. Turn engine off and let cool before refueling.
9. **CHECK OIL LEVEL** to be sure it is always full. Use high quality detergent oil.
10. **INSPECT THE AREA WHERE THE DETHATCHER IS TO BE USED** and remove all loose objects which might damage the dethatcher such as stones, large sticks, wire, bones and other foreign objects.
11. **ALWAYS START THE ENGINE** with the Dethatcher in the unengaged position, i.e. with the lift handle pulled forward and the tines clear of the ground.
12. **DO NOT OPERATE ON A GRAVEL AREA.** When crossing a gravel area, disengage the tines, i.e. pull the lift handle forward.
13. **STOP THE ENGINE, MAKE SURE ALL MOVING PARTS HAVE COME TO A COMPLETE STOP, AND REMOVE THE SPARK PLUG WIRE** before attempting to clean the spring tines or make any inspections or repairs.
14. **BE SURE THE DETHATCHER IS IN GOOD WORKING ORDER.** Keep all nuts, bolts and screws tight.
15. **STOP THE ENGINE** when leaving your Dethatcher unattended.



CAUTION: Keep all shields and guards in place.  
CAUTION: Keep hands, feet and clothing away from power-driven parts.  
CAUTION: Disengage and shut off all engine power before servicing equipment.

# ASSEMBLY

## TOOLS NEEDED:

Adjustable Wrench; or  
1/2", 9/16" and 7/16" Wrench  
Allen Wrench

## NOTE:

All references to left, right, front and rear of the dethatcher are determined from operator's position while seated on the tractor.

## Unpacking and Checking Contents

A. After unpacking shipping cartons, compare the contents with the parts shown and listed below.

B. If any parts are missing or damaged, contact your dealer or call the Customer Service Department at (800) 777-6074.

## CONTENTS OF SHIPPING CARTON - MODEL D110

### CARTON 1

| KEY | QTY. | PART NO. | DESCRIPTION             |
|-----|------|----------|-------------------------|
| 2*  | 1    | 50510    | Deck Assembly           |
| 3   | 1    | 96005    | Drawbar Assembly        |
| 4   | 1    | 91018    | Upper Chain Guard       |
| 5   | 1    | 91039    | Idler Sprocket Assembly |
|     | 1    | 94211    | Small Parts Package     |
|     | 1    | 98521    | Operator's Manual       |

### CARTON 2

| KEY | QTY. | PART NO. | DESCRIPTION                          |
|-----|------|----------|--------------------------------------|
| 1*  | 1    | 54145    | Engine, 5.0 hp Briggs & Stratton; OR |
| 1*  | 1    | 54146    | Engine, 5.5 hp Honda                 |

\* Shipped Assembled

## CONTENTS OF SHIPPING CARTON - MODEL D600

### CARTON 1

| KEY | QTY. | PART NO. | DESCRIPTION             |
|-----|------|----------|-------------------------|
| 2*  | 1    | 50560    | Deck Assembly           |
| 3   | 1    | 96005    | Drawbar Assembly        |
| 6   | 1    | 91018    | Upper Chain Guard       |
| 5   | 1    | 91039    | Idler Sprocket Assembly |
|     | 1    | 94212    | Small Parts Package     |
|     | 1    | 98521    | Operator's Manual       |

### CARTON 2

| KEY | QTY. | PART NO. | DESCRIPTION                          |
|-----|------|----------|--------------------------------------|
| 1*  | 1    | 54145    | Engine, 5.0 hp Briggs & Stratton; OR |
| 1*  | 1    | 54146    | Engine, 5.5 hp Honda                 |

\* Shipped Assembled



# ASSEMBLY

1. Install the Square Key in the engine crankshaft even with the end of the shaft. Slide the 10-tooth Engine Sprocket on the shaft with the shoulder side of the sprocket toward the Engine (1). Do not tighten the set screws at this time. Final alignment will be made after the idler sprocket is installed.

2. Place the Engine on the Deck (2) and tilt slightly to allow you to put the Chain over the Engine Sprocket. Then position the Engine over the inside four holes in the deck and secure loosely with four 5/16" x 1-1/2" hex bolts. The nuts are welded to the underside of the deck. Loosely align the teeth of the Engine Sprocket with the Tine Reel Sprocket.

3. The Idler Sprocket Assembly (5) can now be attached to the Deck. You will find two bolt holes in the deck between the Engine and the rectangular opening where the Chain comes up from the reel. Place the Idler Sprocket Assembly in position over these two holes. The sprocket itself should be inside of the chain. Secure the assembly to the deck with two 5/16" x 5/8" bolts. Align the idler sprocket with the Engine Sprocket and the reel sprocket. After you have aligned all three sprockets, tighten the set screw on the Engine Sprocket to the engine shaft with an Allen Wrench. Now securely tighten the four bolts that hold the engine to the deck.

4. Slide the idler sprocket forward so that the Chain is tight. Using a 9/16" Wrench, tighten the nut on the idler sprocket bolt. Check again to be sure all three sprockets are in alignment.

5. Attach the Upper Chain Guard (4) using

a 1/4" flat washer and a 1/4" lock nut.

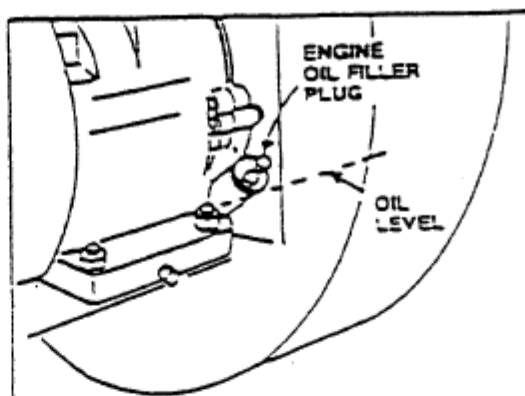
6. Attach the Drawbar Assembly (3) and lift assembly. Slide drawbar pin through the "U" part of the drawbar and the weldment on the Deck. The drawbar fits outside the deck weldment. Align the 1/2" hold in the lift pivot and the 1/2" hole in the handle. Slide these between the lugs on the top of the weldment on the Deck. Secure the clevis pin and hair pin cotter. Tighten the bolt and nut securing the lift handle to the lift pivot.

# OPERATING INSTRUCTIONS

## SERVICING THE ENGINE

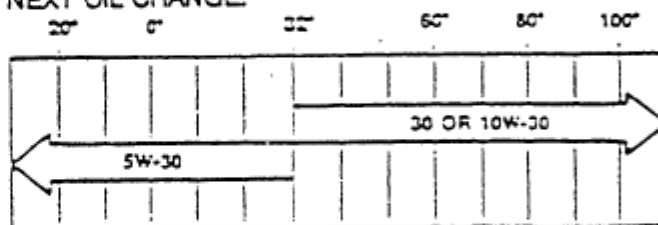
1. Use SAE 30 detergent oil classified "For Service SF, SE & SD". Remove the oil fill plug, fill the crankcase to a point of overflowing (see diagram). Capacity is approximately 1-1/4 pints (0.6 liters). Replace the oil fill plug.

2. Fill the fuel tank. Use fresh, clean, unleaded automotive gasoline. Use of leaded gasoline will increase carbon and lead oxide deposits and reduce valve life.



## RECOMMENDED SAE VISCOSITY GRADES

TEMPERATURE RANGE EXPECTED BEFORE NEXT OIL CHANGE:

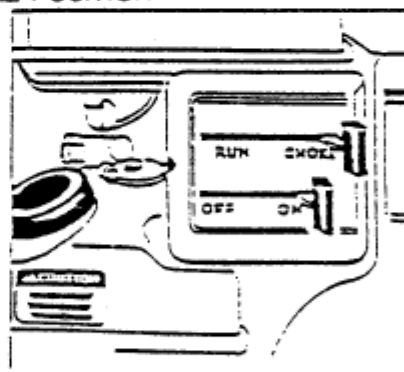


## PRE-START CHECK

1. Make sure the stop switch is in the OFF position and spark plug wire is disconnected. Pull the starter rope slowly to make certain there are no foreign objects in the dethatcher.

2. Be sure the spark plug wire and cover are attached to the spark plug.

## FULL CHOKE POSITION

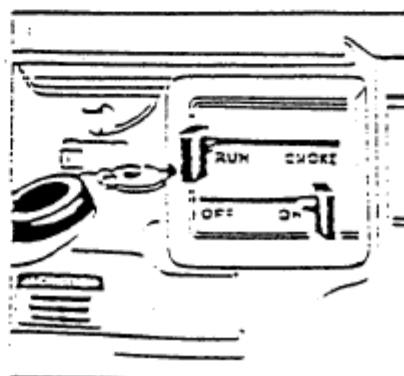


## STARTING THE ENGINE

1. Turn the stop switch to the "ON" position.

2. Move the choke lever to the FULL CHOKE position (see diagram).

## NO CHOKE POSITION



3. Grasp the starter handle firmly. Pull the handle with a rapid continuous motion.

4. When the engine starts, move the choke to 1/2 choke and then to "NO" choke position (see diagram).

## MAINTENANCE

| REQUIRED<br>MAINTENANCE<br>SCHEDULE | Before<br>Each<br>Use | Every<br>5<br>Hours | Every<br>25<br>Hours | Every<br>50<br>Hours |
|-------------------------------------|-----------------------|---------------------|----------------------|----------------------|
| Check Engine Oil Level              | X                     | X                   |                      |                      |
| Change Engine Oil                   |                       |                     | X                    |                      |
| Chg. Air Cleaner Element            |                       |                     | X                    |                      |
| Replace Spark Plug                  |                       |                     |                      | X                    |
| Check/Tighten Nuts & Bolts          | X                     |                     |                      |                      |
| Clean Machine                       |                       |                     |                      | X                    |

NOTES

# MAINTENANCE

## GENERAL RECOMMENDATIONS

Once a year you should replace the spark plug and air filter. A new spark plug and air filter assures proper air/fuel mixture and helps the engine run better and last longer.

## CHANGING ENGINE OIL

Change the oil after the first five hours of operation. Then, under normal operating conditions, change the oil after every 25 hours of operation or after every season, whichever occurs first. In high ambient temperatures or in dusty conditions, the oil should be changed more often.

Remove the drain plug and drain the oil from the engine while it is still warm. Replace the drain plug. Remove the oil fill plug and dipstick and refill with fresh SAE 30 grade oil to the line marked "F" for full. Replace the fill plug. Check the oil level using the dipstick after every five hours of engine operation.

## CHANGING AIR FILTER

Service the pre-cleaner if your engine is so equipped every 25 hours or every season, whichever occurs first.

If the engine is equipped with a pre-cleaner, service the cartridge after every 100 hours or after every season, whichever occurs first. If the engine is NOT equipped with a pre-cleaner, service the cartridge after every 25 hours or after every season, whichever occurs first.

NOTE: Service all parts more often in dusty conditions.

## TO SERVICE THE PRE-CLEANER

Loosen the two screws and remove the air-cleaner cover. Carefully remove pre-cleaner and wash in liquid detergent

and warm water. Squeeze dry in a clean cloth. Saturate in engine oil. Squeeze in clean, absorbent cloth to remove ALL excess oil.

## TO SERVICE CARTRIDGE

Carefully remove cartridge. Clean by tapping gently on a flat surface. If very dirty, REPLACE or wash in non-sudsing detergent and warm water solution. Rinse thoroughly with water flowing from the mesh side until the water flows clear. Allow the cartridge to stand and dry thoroughly before using. Reinstall the cartridge and the pre-cleaner. Reinstall the air-cleaner cover and tighten the screws.

## STORAGE OF DETHATCHER

If you are going to store your dethatcher for 30 days or more, please follow these instructions:

1. Remove all fuel from the gas tank and then run the engine until the fuel system is completely empty and the engine stops.
2. Lubricate as shown in the maintenance check list (page 13).
3. While the engine is still warm, drain the oil from the crankcase. Refill with fresh oil.
4. Remove the spark plug and pour approximately 1/2 ounce of engine oil into the cylinder and crankcase, pouring slowly to distribute the oil. Replace the spark plug.
5. Store your dethatcher in a clean, dry place. DO NOT store it under a plastic cover. Plastic does not breathe and thus condensation will form, causing your dethatcher to rust.



# SERVICE AND ADJUSTMENTS

## ENGINE SPEED

The engine's maximum speed has been factory set. Do not attempt to adjust the speed as it may result in personal injury. If you believe the engine is not running at the proper speed, take the unit to an authorized engine service center for repair and adjustment.

Place speed control in "SLOW" position. Turn needle valve in until engine slows (clockwise - lean mixture). Then turn it out past smooth operating point until engine runs unevenly (rich mixture). Now turn needle valve to the midpoint between rich and lean so the engine runs smoothly.

## CARBURETOR

Gently turn needle valve clockwise until it just closes. Valve may be damaged by turning it too far. Next, open needle valve 1-1/2 turns counterclockwise. This initial adjustment will permit the engine to start and warm up about 5 minutes, prior to final adjustment.

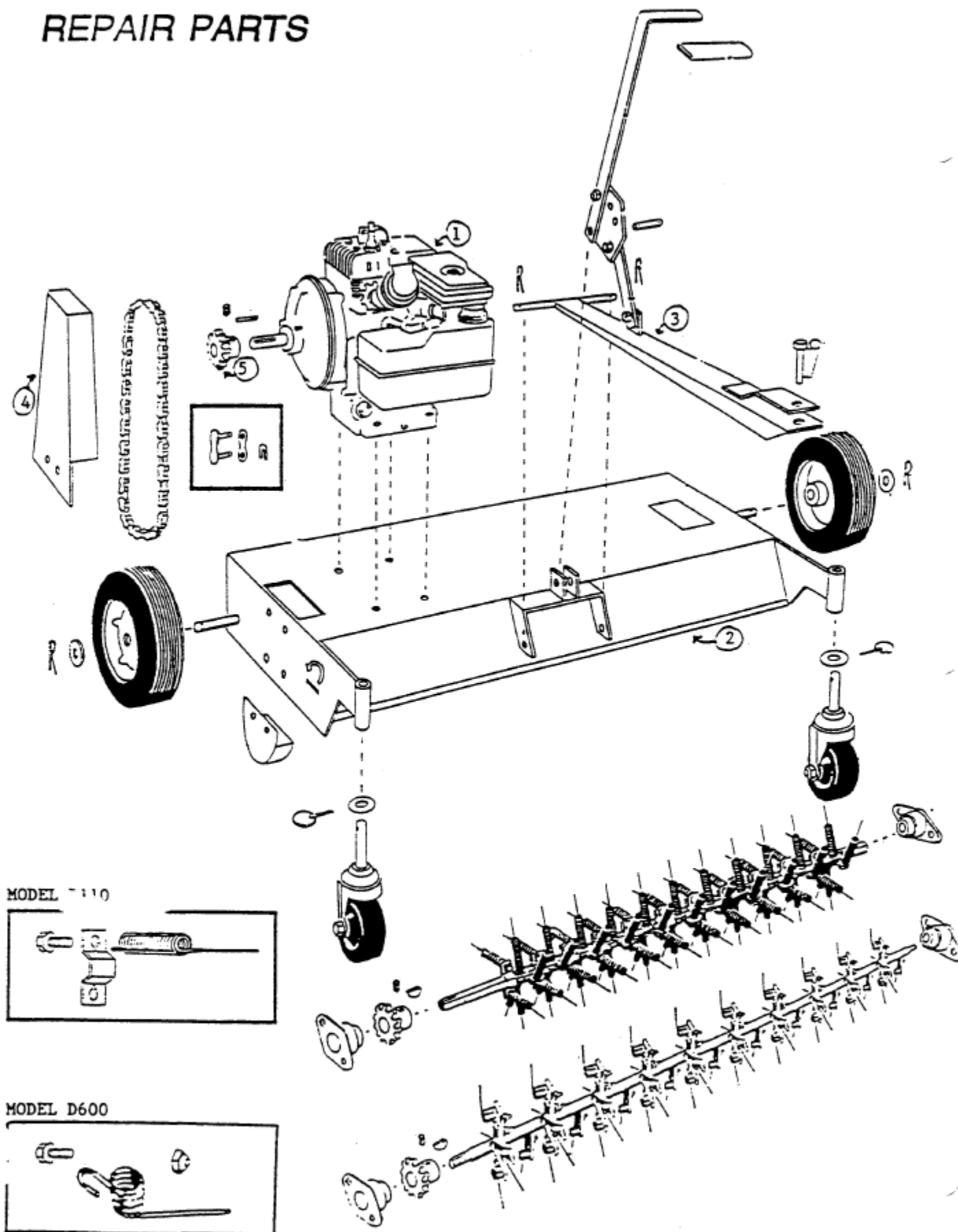
Next adjust idle RPM. Rotate throttle counterclockwise and hold against stop while adjusting idle speed screw to obtain 1750 RPM. Release throttle. Engine should accelerate without hesitation or sputtering. If engine does not accelerate properly, the carburetor should be readjusted, usually to a slightly richer mixture.

## TROUBLESHOOTING POINTS

Before performing any of the corrections in this Troubleshooting Chart, refer to the appropriate information contained in this Manual for the correct safety precautions and operating or maintenance procedures. Contact your local authorized engine service dealer for engine service. Contact you local dealer or call the Customer Service Department at (800) 777-6074 for service problems with the machine.

| PROBLEM                     | POSSIBLE CAUSE  | CORRECTION   |
|-----------------------------|---|--|
| Engine Does Not Start.      | 1. Spark plug wire disconnected.<br>2. Engine ON/OFF switch in OFF position.<br>3. Fuel tank empty.<br>4. Stale gasoline.<br>5. Dirty air filter.   | 1. Reconnect wire.<br>2. Put switch in ON position.<br>3. Add gasoline.<br>4. Drain gasoline and add fresh gasoline.<br>5. Clean or replace.                     |
| Engine Runs Poorly.         | 1. Bad spark plug.<br>2. Dirty air filter.<br>3. Incorrect choke setting.<br>4. Stale gasoline.<br>5. Dirt or water in fuel tank.   | 1. Inspect spark plug.<br>2. Clean or replace.<br>3. Put choke in correct setting.<br>4. Drain gasoline and add fresh gasoline.<br>5. See engine service dealer. |
| Engine Overheats.           | 1. Carburetor out of adjustment.<br>2. Oil level is low.  | 1. See engine service dealer.<br>2. Check and add oil.   |
| Unusual vibration or noise. | 1. Solid object jammed in unit.<br>2. Engine cylinder shaft or crankshaft bent or damaged.<br>3. Loose engine mounting bolts/nuts.<br>4. Loose or missing bolts on unit.<br>5. Engine shaft bearings damaged. | 1. Check and remove any obstruction.<br>2. See engine service dealer.<br>3. Tighten bolts/nuts.<br>4. Tighten or replace bolts.<br>5. See engine service dealer. |

# REPAIR PARTS



# REPAIR PARTS

| Description                          | Part No. | Guide | Qty. |
|--------------------------------------|----------|-------|------|
| Engine, 5.0 hp Briggs & Stratton; OR | 54145    | 1     | 1    |
| Engine, 5.5 hp Honda                 | 54146    | 1     | 1    |
| Deck (Model D110)                    | 91027    | 2     | 1    |
| Deck (Model D600)                    | 91027    | 2     | 1    |
| Decal, EasyRake                      | 91107    | *     | 1    |
| Decal, Pentagon Logo                 | 94054    | *     | 1    |
| Decal, Caution (Model D110)          | 94074    | *     | 1    |
| Decal, Caution (Model D600)          | 94079    | *     | 1    |
| Serial Tag                           | 99129    | *     | 1    |
| Decal, Made in USA                   | 99137    | *     | 1    |
| Wheel, 2.50 x 8                      | 91028    | *     | 2    |
| Cotter Pin, 1/8" x 1-1/4"            | 99063    | *     | 2    |
| Caster Assembly, Front Spindle       | 91029    | *     | 2    |
| Caster Yoke                          | 91034    | *     | 2    |
| Wheel, 1-1/2" x 4-7/8" Plastic       | 91043    | *     | 2    |
| Bushing, Caster Axle                 | 91035    | *     | 2    |
| Bolt, Hex 1/2"-13 x 2-3/4"           | 99083    | *     | 2    |
| Washer, Lock 1/2"                    | 99037    | *     | 2    |
| Nut, Hex 1/2"-13                     | 99034    | *     | 2    |
| Washer, Flat 3/4"                    | 99050    | *     | 14   |
| Pin, Klik 3/16" x 1-1/4"             | 99051    | *     | 2    |
| Tine Reel Assembly (Model D110)      | 91000    | *     | 1    |
| Tine Reel Assembly (Model D600)      | 96015    | *     | 1    |
| Tine Reel Shaft Only (Model D110)    | 91038    | *     | 1    |
| Tine Reel Shaft Only (Model D600)    | 96010    | *     | 1    |
| Spring Tine With Sleeve (Model D110) | 91010    | *     | 100  |
| Tine Clamp (Model D110)              | 91011    | *     | 100  |
| Tine Screw (Model D110)              | 91012    | *     | 100  |
| Spring Tine (Model D600)             | 96012    | *     | 56   |
| Hex Bolt, 1/4"-20 x 1" (Model D600)  | 99008    | *     | 56   |
| Flat Washer, 1/4" (Model D600)       | 99074    | *     | 56   |
| Nylon Nut, 1/4"-20 (Model D600)      | 99072    | *     | 56   |
| Woodruff Key, #61                    | 99048    | *     | 1    |
| 41B15 Sprocket, Reel (Model D110)    | 91065    | *     | 1    |
| #41 Chain, 60-1/2 Pitch (Model D110) | 91066    | *     | 1    |
| 40B15 Sprocket, Reel (Model D600)    | 96014    | *     | 1    |
| #40 Chain, 60-1/2 Pitch (Model D600) | 96013    | *     | 1    |
| 3/4" Reel Bearing                    | 91009    | *     | 2    |
| Hex Bolt, 3/8"-16 x 3/4"             | 99018    | *     | 4    |
| Nylon Nut, 3/8"-16                   | 99065    | *     | 4    |
| Lower Chain Guard                    | 91017    | *     | 1    |
| Guard, Brush                         | 91030    | *     | 1    |
| Bolt, Hex 1/4"-20 x 1-1/2"           | 99010    | *     | 2    |
| Bolt, Hex 1/4"-20 x 5/8"             | 99006    | *     | 4    |
| Nut, Nylon 1/4"-20                   | 99072    | *     | 1    |
| Drawbar                              | 96011    | 3     | 1    |
| Pin, Drawbar                         | 96019    | *     | 1    |
| Pin, Cotter Hair #11, 1/8" x 2-9/16" | 99616    | *     | 2    |
| Pivot Plate                          | 91047    | *     | 1    |
| Lift Link                            | 91051    | *     | 1    |
| Handle, Lower                        | 96017    | *     | 1    |
| Handle, Upper                        | 96016    | *     | 1    |
| Grip, 1/4" x 1" x 4-1/2"             | 99095    | *     | 1    |
| Bolt, Hex 3/8"-16 x 1-1/4"           | 99020    | *     | 5    |
| Nut, Nylon 3/8"-16                   | 99065    | *     | 5    |
| Upper Chain Guard                    | 91018    | 4     | 1    |

\* Shipped Assembled

# REPAIR PARTS

| Description                        | Part No. | Guide | Qty. |
|------------------------------------|----------|-------|------|
| Idler Sprocket Assembly            | 91039    | 5     | 1    |
| Idler Bracket                      | 91037    | *     | 1    |
| Idler Sprocket 13T41 3/8"          | 91031    | *     | 1    |
| 3/8"-16 x 2" Carriage Bolt         | 99075    | *     | 1    |
| 1/2" x 1-3/8" Flat Washer          | 99059    | *     | 1    |
| 3/8" x 7/8" x 3/4" Spacer          | 93415    | *     | 1    |
| 3/8" Flat Washer                   | 99058    | *     | 2    |
| 3/8"-16 Nylon Nut                  | 99065    | *     | 1    |
| 41B15 Engine Sprocket (Model D110) | 91065    | **    | 1    |
| 40B15 Engine Sprocket (Model D600) | 96014    | **    | 1    |
| Pin, Hitch                         | 94115    | **    | 1    |
| Key, Square 3/16" x 3/16" x 1-3/4" | 99002    | **    | 1    |
| Bolt, Hex 5/16"-18 x 5/8"          | 99014    | **    | 2    |
| Bolt, Hex 5/16"-18 x 1-1/2"        | 99015    | **    | 4    |
| Pin, Clevis 1/2" x 1-1/2"          | 99026    | **    | 1    |
| Nut, Nylon 1/4"-20                 | 99072    | **    | 1    |
| Washer, Flat 1/4"                  | 99074    | **    | 1    |
| Pin, Hair #11, 1/8" x 2-9/16"      | 99616    | **    | 2    |
| Operator's Manual                  | 98511    |       | 1    |

\* Shipped Assembled  
 \*\* Small Parts Package #94211/#94212