

# Merit M130 Flat Saw

## **OPERATOR MANUAL**

## WARNING: READ AND UNDERSTAND ALL SAFETY WARNINGS AND ALL INSTRUCTIONS BEFORE YOU USE THIS EQUIPMENT.

Failure to follow the warnings and instructions may result in fire, serious injury, or death.

SAVE ALL WARNINGS AND INSTRUCTIONS FOR FUTURE REFERENCE

### INTRODUCTION

## **A**WARNING

To reduce the risk of injury, all operators and maintenance personnel must read and understand these instructions before operating, changing accessories or performing maintenance on equipment. All possible situations cannot be covered in these instructions. Care must be exercised by anyone using, maintaining or working near this saw.

Specifications subject to change without notice. For most up-to-date version of this manual, please visit:

https://icsdiamondtools.com/en/document-library





#### **NO OIL IN ENGINE**

Fill the engine with oil to the correct level before starting the engine. Failure to add oil will result in engine failure and void the warranty. See p. 39 of thismanual or the engine operator manual for oil recommendations.

To receive decals and instructions in French or Spanish, please call: 800.321.1240

Pour recevoir les autocollants et les instructions en français ou en espagnol, veuillez appeler 800.321.1240

Para recibir calcomanías e instrucciones en francés o español, llame a: 800.321.1240

#### **Proposition 65**

WARNING: This product produces gasoline or diesel engine exhaust, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to: WWW.P65WARNINGS.CA.GOV

#### Spark Arrester Law

In the State of California, "No person shall use, operate, or allow to be used or operated, any off-highway motor vehicle, as defined in Section 38006, on any forest-covered land, brush-covered land, or grass-covered land unless the vehicle is equipped with a spark arrester maintained in effective working order.

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### I. RULES FOR SAFE OPERATION



Failure to follow instructions in this manual may lead to serious injury or even death! This equipment is to be operated by trained and qualified personnel only! This equipment is for industrial use only. The following safety guidelines should always be used when operating the M130 flat saw.

### **1.1 LABELS & PLACEMENT**

### LABEL SHEET



### LABEL PLACEMENT



### **1.2 EXPLANATION OF WARNING LEVELS**

## 

Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.



Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

## **ACAUTION**

Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

## NOTICE

Indicates a potential situation exists which, if not avoided, may result in damage to your flat saw or property.

### **1.3 GENERAL SAFETY**

Manufacturer does not assume responsibility for any accident due to equipment modifications.

### 

**ALWAYS** read, understand, and follow procedures in the Operator's Manual before attempting to operate equipment

**ALWAYS** use extreme caution when working with flammable liquids. When refueling or adding oil, stop the engine and allow it to cool.

**DO NOT** smoke around or near the machine. Fire or explosion could result from fuel vapors, or if fuel is spilled on a hot engine.

**NEVER** operate this flat saw in areas that contain combustible material and or fumes. Explosions may result from errant sparks from the equipment.

Do Not overfill the saw with fuel as it risks spilling excess fuel.

#### **Exhaust Fumes Safety**

- Long-term inhalation or exposure to exhaust fumes can cause health problems
- Exhaust fumes from the engine contain carbon monoxide, which is an odorless, poisonous, and very dangerous gas. Breathing carbon monoxide can cause death. Because carbon monoxide is odorless and cannot be seen, it is not possible to sense it. A symptom of carbon monoxide poisoning is dizziness, but it is possible that a person becomes unconscious without
- warning if the quantity or concentration of carbon monoxide is sufficient.
- Exhaust fumes that are visible also contain carbon monoxide.
- Do not use combustion engine equipment indoors and/or inside buildings that do not have sufficient ventilation.

### **A**WARNING

This equipment is not to be operated by persons under 18 years of age.

**NEVER** operate this equipment without personal protective equipment such as respirators, protective clothing, steel toe safety shoes etc. as required by the job.

NEVER operate this equipment when not feeling well due to fatigue, illness or taking medicine.

**NEVER** operate this equipment under the influence of drugs or alcohol.

**NEVER** use accessories or attachments, which are not recommended by Merit for this equipment. Damage to the equipment and / or injury to user may result.

**NEVER** touch the hot exhaust manifold, muffler or cylinder. Allow these parts to cool before servicing engine or saw.

**ALWAYS** Allow the engine to cool before adding fuel or performing service and maintenance functions. Contact with hot components can cause serious burns.

### 

The engine section of this flat saw requires an adequate free flow of cooling air.

**NEVER** use fuel as a cleaning agent.

ALWAYS be sure operator is familiar with proper safety precautions.

- Stop the engine when leaving the flat saw unattended.
- Never assume the equipment will remain still when parking/stopping the equipment on a slope. Chock the wheels to help prevent unnecessary movement.
- Maintain this equipment in a safe operating condition at all times.

**ALWAYS** store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children, bystanders and animals.

Keep all inexperienced and unauthorized people away from the equipment at all times.

DO NOT operate this equipment unless all guards and safety devices are attached and in place.

### **ACAUTION**

Caution must be exercised while servicing this equipment. Rotating and moving parts can cause injury if contacted.

Whenever necessary, replace nameplate, operation, and safety decals when they become difficult to read.

ALWAYS check the machine for loosened or damaged nuts and/or bolts before starting.

### NOTICE

**NEVER** Run engine without air filter. Severe engine damage will occur.

ALWAYS service air cleaner frequently to prevent carburetor malfunction.

Unauthorized equipment modifications will void all warranties.

### **1.4 DIAMOND BLADE SAFETY**

### 

Diamond blade must be in serviceable condition to prevent failure and thrown object hazard that could result in serious injury or death.

Use appropriate steel sintered diamond blades manufactured for use on concrete flat saws.

**ALWAYS** inspect diamond blades before each use. The diamond blade should exhibit no cracks, dings, or flaws in the steel centered core and / or rim. Center(arbor) hole must be undamaged and true.

Examine diamond blade flanges for damage, excessive wear and cleanliness before mounting diamond blades.

Diamond blade should fit snugly on the shaft and against the inside / outside diamond blade flanges.

Always use water when cutting. Dry cutting is never permitted

### **A**WARNING

Ensure that the diamond blade is marked with and operating speed greater than the diamond blade shaft speed of the flat saw.

Only cut the material that is specified by the diamond blade. Read the specifications of the diamond blade to ensure the proper tool has been matched to the material being cut.

**ALWAYS** keep diamond blade guards in place. Exposure of the diamond blade must not exceed 180 degrees.

When moving between cuts on the job site, ensure that the diamond blade does not come into contact with ground or surface.

DO NOT drop the diamond blade on ground or surface.

The engine governor is designed to permit maximum engine speed in a no-load condition. Speeds that exceed this limit may cause the diamond blade to exceed the maximum safe allowable speed.

Ensure that the diamond blade is mounted for proper operating direction.

### **RULES OF SAFE OPERATION**

### **1.5 FLAT TRANSPORTATION SAFETY**

Use the lifting frame and appropriate lifting equipment to ensure safe movement of the flat saw.



NEVER use the handlebars and /or front pointer as lifting points.

**NEVER** tow the saw behind a vehicle.

To prevent diamond blade damage, **NEVER** transport the flat saw with the diamond blade mounted. Damaged blade can fracture and throw segments.

### NOTICE

Ensure that pointer bar is positioned appropriately to minimize exposure during transportation.

Keep saw as level as possible at all times. Tipping engine on face or back, can cause oil to leak into combustion chamber, and excessive smoking.

### **1.6 MAINTENANCE**

### 

**NEVER** lubricate components or attempt service on a running flat saw. Entanglement and/or lacerations may result in death or serious injury.



**ALWAYS** allow the flat saw a proper amount of time to cool before servicing. Servicing while engine is hot can result in serious burns

### **ACAUTION**

Fix damage to the flat saw, and always replace broken or damaged parts immediately. Failure to maintain saw properly may result in injury or death and poor saw performance.

Dispose of hazardous waste properly. Examples of potentially hazardous waste are used motor oil. In accordance with your local government regulations.

### NOTICE

Refer to the engine manufacturer's manual for engine maintenance and repair.

### **II. OPERATION**

### 2.1 DELIVERY CHECKS

Immediately upon taking delivery of your new equipment and before putting it into service:

- Read the handbook completely.
- Read the engine manual supplied.
- Check the general condition of the flat saw.
- Check engine oil level. Check fuel levels.
- Recommended lubricants are detailed in the LUBRICATION & SERVICE section.
- Ensure you have 1 flat saw, 1 blade guard wrench (on the saw), operator manual, engine operator manual (Funnel, spark plug wrench)
- Saw ships with handlebar disassembled. Comes with hardware needs to be assembled before initial startup.
- Ensure all hardware is tight.
- Ensure all belts are installed and tensioned.

### NOTICE

Saw is shipped <u>without oil</u>. Oil must be added before initial startup. Failure to add oil <u>will</u> result in engine failure and void the warranty.

### 2.2 INSTALLING DIAMOND BLADE

### 

When handling blades, wear appropriate PPE and if the blade is hot, allow to cool before installing or changing blade. Don't maintain or operate with loose clothing and long hair.

- 1. Turn the engine run dial to the "STOP" position
- 2. Loosen blade guard locking bolt. Swing blade guard out of way
- 3. Remove the blade shaft bolt and take off outside blade shaft flange.
- **4.** Clean off any foreign particles on the clamping surfaces of flanges and on the mounting surface of the blade.
- 5. Place the blade on the blade shaft, lining up the offset drive pin in the blade with drive pin in the mounting collar.
- **6.** When installing the diamond blade, always point the arrow printed on the blade in the direction of the diamond blade shaft's rotation. Contact the blade manufacturer if an arrow is not present on the blade and ask for assistance.

Figure: Blade Rotation

Blade shown for reference only



- 7. Reinstall the outside blade shaft flange on the blade shaft. Drive pin on the inside collar must project through the drive in the blade and into the outside collar.
- **8.** Tighten the blade shaft bolt securely against washer and outside flange, using wrench supplied.
- 9. Return blade guard to cutting position. Retighten guard locking nut.
- 10. When ready to return to cutting, turn dial to "RUN" position.

### 2.3 TYPES OF CUTTING

Cut speed depends entirely on using the correct blade for the material to be cut. Diamond blades of various specifications are available for cutting concrete or asphalt. Consult with your blade manufacturer as to what diamond blade is best for material being cut.

This saw is to be used for wet cutting only. Dry cutting will result in a dust that can damage lungs and will result in blade overheating and damage

### 2.4 BEFORE STARTING

- 1. Use correct blade for cutting conditions, ensure diamond blade is balanced, round and all segments are intact.
- 2. Ensure arbors and flanges are clean and undamaged.
- 3. Mount blade and tighten securely using wrench.
- 4. Check water jets for adequate flow.
- **5.** Align pointer with flat saw blade.

### **ACAUTION**

Set unit up in an open area. Avoid close proximity to structures or other equipment. Failure to do so may cause inadvertent injury to operator or other persons in the area.

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#### To start the engine:

NOTE: These starting instructions are general guidelines only. Since many engine options are available, consult the Engine Manual included with this flat saw for specific instructions.

#### Cold start

- Ensure oil is at an appropriate level to start.
- Ensure belts are tensioned and in good condition (no cracks, frays or exposed cords).
- Move the fuel valve lever to the ON position
- Move the choke lever or choke rod to the CLOSED position.
- Move the throttle lever away from the MIN position, about 1/3 of the way to the MAX position
- Turn the engine switch to the ON position
- Pull the starter rope sharply.
- When the engine starts, open the choke and adjust the throttle as necessary to keep it running.
- Allow the engine to warm up for a few minutes before placing it under the load.
- If the engine doesn't start after (3) pulls, open choke slightly to prevent flooding.
- Always operate the engine at full throttle when under load.

#### Hot Start

- Move the fuel valve lever to the ON position
- Move the choke lever or choke rod to the CLOSED position.
- Move the throttle lever away from the MIN position, about 1/3 of the way to the MAX position
- Turn the engine switch to the ON position
- Pull the starter rope sharply.
- When the engine starts, adjust the throttle.
- Always operate the engine at full throttle when under load.

### **ACAUTION**

#### **Gasoline Engine**

- To improve the engine service life, allow the engine to idle without load for two (2) to five (5) minutes before shutting it down.
- When the idling period is up, use the stop switch located on the engine and turn it to stop. Close the fuel valve under the gas tank. Engine flooding can occur if the valve is left open during transport.

### 2.5 TO START CUTTING

- 1. Only start the saw with a blade that is already mounted. Ensure blade is clear of the ground before starting.
- 2. Start engine and let engine warm up. All cutting is done at full throttle.
- **3.** Align blade and flat saw with cut. Open water valve and ensure water is flowing.
- **4.** ((Caution)) Never cut dry, excessive dust will occur and blade and saw life will be compromised.

### 2.6 CUTTING

- Lower the diamond blade into concrete to required depth by turning the tilt crank counterclockwise.
- Ease the saw slowly forward.
- Use slow forward pressure if the saw begins to stall.

**Note:** For deeper cuts (4 inches/102mm or more), several cuts should be made in incremental steps of 1-1/2 inch (38mm) to 2 inches (51mm) until the desired depth is reached.

- Push the saw steadily forward using the front pointer as a guide.
- Exert enough forward pressure so that the engine / motor begins to labor, but does not slow down.
- If the engine begins to stall, slow forward movement until full RPM is restored to the blade.
- If engine stalls, raise the blade out of the cut before restarting.
- Avoid excessive side pressure or twisting of the blade in cut.

### 2.7 BELTS & PULLEYS

### **A** DANGER

#### NEVER MAKE ADJUSTMENTS TO V-BELTS AND PULLEYS WHILE ENGINE IS RUNNING

- 1. The best tension for a v-belt drive is the lowest tension at which the belts will not slip under full load.
- 2. Take up tension until the belts are snug in the grooves. Run the drive for about five (5) minutes to "seat" the belts. Then impose the peak load. If the belts slip, tighten them until they no longer slip at peak load. Most new belts will need additional tensioning after seating.
- 3. Note: too much tension shortens belt and bearing life.
- **4.** Check the belt tension frequently during the first day of operation. Check the belt tension periodically thereafter and make any necessary adjustments.
- The two most common causes of sheave misalignment are:
   a.) the engine drive shaft and the blade shaft are not parallel
  - b.) The pulleys are not located properly on the shafts.
- 6. To check alignment, use a steel straight edge. See Figure 1 at right.
- 7. Line up the straight edge along the outside face of both pulleys shown in the drawing. All pulleys have two (2) set screws in the bottom of their grooves. Set screws require thread locking threadlock
- **8.** Misalignment will show up as a gap between the pulley face and straight edge. Make sure there is clearance between arbor pulley and saw base on both sides.

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### Figure 1



Apply straight edge against pulley faces. No gap should be present.

Using belt tool, ensure belt is appropriately tensioned.

Belt Tension tool OTC 6673 is recommended. Tool can be purchased from Amazon.



### **III. TROUBLESHOOTING**

| Problem                | Cause   | Remedy   |
|------------------------|---|--|
| UNEVEN<br>SEGMENT WEAR | <ul> <li>Insufficient water (usually<br/>on one side of blade).</li> <li>Equipment defects also<br/>can cause the segments<br/>to wear unevenly.</li> <li>Saw head is misaligned.</li> </ul>  | <ul> <li>Flush water system</li> <li>Check flow to both sides of blade.</li> <li>Replace bad bearings, worn arbor<br/>shaft or misalignment to spindle.</li> <li>Check alignment for squareness,<br/>both vertically and horizontally, of<br/>the saw blade.</li> </ul>  |
| SEGMENT<br>CRACKS      | <ul> <li>Blade is too hard for<br/>material being cut</li> </ul>  | <ul> <li>Use a blade with a softer bond/<br/>mix</li> </ul>  |
| SEGMENT LOSS           | <ul> <li>Blade overheats because<br/>of coolant (water or air)</li> <li>Core is worn from<br/>undercutting</li> <li>Defective collars /<br/>flanges set blade out<br/>of alignment</li> <li>Blade is too hard for<br/>material being cut</li> <li>Blade is cutting out of<br/>round, causing a<br/>pounding motion</li> <li>Improper blade tension</li> </ul> | <ul> <li>Check water lines</li> <li>Make sure flow is adequate on<br/>both sides of blade and there are<br/>no blockages</li> <li>Use sufficient water to flush out<br/>the cut</li> <li>Clean collars / flanges or replace<br/>if they are under recommended<br/>diameter</li> <li>Use proper blade specification for<br/>material being cut</li> <li>Replace worn bearings; realign<br/>blade shaft or replace worn blade<br/>mounting arbor</li> <li>When ordering blades be<br/>sure to meet or exceed RPM<br/>requirements for the M130 saw</li> <li>Check spindle speed to<br/>ensure blade is running at<br/>correct RPM</li> <li>Avoid twisting or turning blade in<br/>the cut</li> </ul> |

### III. TROUBLESHOOTING cont.

| Problem               | Cause  | Remedy   |
|-----------------------|--|--|
| CRACKS IN CORE        | <ul> <li>Blade flutters in cut as<br/>a result of losing blade<br/>tension</li> <li>Blade specification is<br/>too hard for the material<br/>being cut</li> <li>Core overheating</li> <li>Core overheating as a<br/>result of blade spinning<br/>on arbor</li> <li>Core overheating from<br/>rubbing the material<br/>being cut</li> <li>Unequal pressure at<br/>blade clamping collars /<br/>flanges</li> <li>Blade is too hard for the<br/>material being cut</li> </ul> | <ul> <li>Tighten the blade shaft nut</li> <li>Make sure blade is running at proper speed and that drive pin is functioning properly</li> <li>Use a softer bond / matrix to eliminate stress</li> <li>Make certain blade RPM is correct</li> <li>Check water flow, distribution and lines</li> <li>Tighten the blade shaft nut. Make certain the drive pin is functioning</li> <li>Properly align the saw to square cut</li> <li>Collars / flanges must be identical in diameter and the recommended size</li> <li>Use a softer bond / matrix to reduce stress</li> </ul> |
| BLADE<br>WOBBLES      | <ul> <li>Blade is on a damaged<br/>or worn saw</li> <li>Worn collar</li> <li>Blade runs at an<br/>incorrect speed</li> <li>Collar / flange diameters<br/>are not identical</li> <li>Blade is bent as a result<br/>of dropping or twisting</li> </ul>   | <ul> <li>Check collars / flanges to make<br/>sure they are clean, flat and of<br/>correct diameter</li> <li>Set engine at proper RPM</li> <li>Use proper size blade collars /<br/>flanges</li> <li>DO NOT use bent blade. Contact<br/>blade manufacturer</li> </ul>  |
| BLADE<br>WILL NOT CUT | <ul> <li>Blade is too hard for<br/>material being cut</li> <li>Blade has become dull</li> <li>Blade does not cut<br/>material it was specified<br/>for</li> </ul>  | <ul> <li>Select proper blade for material being cut</li> <li>Sharpen by cutting on softer abrasive material to expose diamonds. If continually sharpening, the blade is too hard for the material being cut</li> <li>Break-in blade on the material to be cut. Expose diamonds by cutting in softer, more abrasive material</li> </ul>   |

### III. TROUBLESHOOTING cont.

| Problem                                | Cause   | Remedy  |
|--|---|---|
| EXCESSIVE WEAR<br>ON THE BLADE<br>CORE | <ul> <li>Abrasive wearing of the core faster than the segments</li> <li>Cutting past concrete thickness into aggregate</li> </ul>   | <ul> <li>Use water to flush out slurry generated during cutting</li> <li>Use wear-resistant cores</li> <li>Check depth of concrete before cutting to set depth stop appropriately</li> </ul>  |
| ARBOR HOLE<br>OUT OF ROUND             | <ul> <li>Collars / flanges are not<br/>properly tightened,<br/>permitting blade to<br/>rotate or vibrate on the<br/>shaft</li> <li>Collars / flanges are worn<br/>or dirty.</li> <li>Blade is not properly<br/>mounted</li> <li>Shaft bearing are worn</li> <li>Surges occur because<br/>engine is not properly<br/>tuned</li> <li>Blade arbor hole is<br/>damaged from<br/>incorrectly mounting<br/>the blade</li> <li>Bond / matrix is too hard<br/>for material</li> <li>Blade is slipping, wearing<br/>one half of blade more<br/>than other.</li> <li>Check for bad<br/>bearings, bent shaft or<br/>worn mounting arbor</li> </ul> | <ul> <li>Make certain the blade is<br/>mounted on the proper shaft<br/>diameter. Tighten the shaft nut<br/>with a wrench to make certain<br/>that the blade is secure</li> <li>Clean collars / flanges, make sure<br/>they are not worn</li> <li>Tighten arbor nut</li> <li>Make sure the pin hole slides over<br/>drive pin</li> <li>Install new blade shaft bearing or<br/>blade shaft, as required</li> <li>Tune engine according to<br/>engine manufacturer's manual</li> <li>If core is worn or arbor hole<br/>damaged <b>DO NOT USE</b>. Contact<br/>blade manufacturer</li> <li>Replace worn shaft or mounting<br/>arbor bushing</li> <li>Make certain that drive pin is<br/>functioning</li> <li>Tighten spindle nut</li> </ul> |

### IV. LUBRICATION AND SERVICE

- Ensure machine is on solid, level ground before starting maintenance.
- Check oil levels, wiring, hoses (air, fuel, water) and lubricate flat saw daily. Refer to engine
  manual for recommended engine oil.
- Repair or replace all worn or damaged components immediately.
- Check drive belt tension, do not over-tension.
- Make sure flat saw has full set of matched belts.
- Check blade shaft, make sure arbor and threads are not worn, damaged, or bent.
- Blade shaft bearings should be tight, no free play side-to-side or up and down.
- Grease blade shaft bearings daily.
- Blade collars should be clean, free of nicks and burrs. No diameter wear and not out of round.
- Drive pin not excessively worn or bent and free of gouges.
- All guards in place and secure.
- All fasteners tight and secure.
- Air filter and engine oil should be replaced per engine manufacturer recommendations (refer to engine service manual)
- Clean machine before starting lubrication maintenance.
- During lubrication maintenance ensure strict cleanliness is observed at all times.
- To avoid the risk of accidents, use the correct tool for the job and keep tools clean.
- The draining of engine oil is best carried out when the oil is warm NOT hot.
- Any spilled oil must be cleaned up immediately.
- Use only clean containers for oil and only CLEAN, FRESH oils and grease of correct grade.
- Contaminated Water / Fluids / Oil / Filters Must Be Disposed of Safely.
- Use a NLGI #2 grease i.e.: Lucas Oil X-Tra Heavy Duty Grease



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### **V. REPLACEMENT PARTS**

**1. Pulley & Belt Kit** Unless noted, individual items not sold separately



| Part          | : No.  | ID # | Description        | Quantity |
|---------------|--------|------|--------------------|----------|
|               | 650614 | 1-1  | Belt               | 1        |
| 650828 650508 |        | 1-2  | Pulley, engine     | 1        |
|               | 650508 | 1-3  | Flat key           | 1        |
|               |        | 1-4  | Bigger flat washer | 1        |
|               |        | 1-5  | Spring washer      | 1        |
|               |        | 1-6  | Hex bolt           | 1        |

### 2. Pointer Frame Kit



| Part No. | ID # | Description   | Quantity |
|----------|------|---------------|----------|
|          | 2-1  | Locknut       | 1        |
|          | 2-2  | Pointer plate | 1        |
|          | 2-3  | Nut           | 1        |
|          | 2-4  | Hex bolt      | 1        |
|          | 2-5  | Spring washer | 3        |
| 650524   | 2-6  | Nut           | 1        |
| 050534   | 2-7  | Flat washer   | 3        |
|          | 2-8  | Pointer arm   | 1        |
|          | 2-9  | Hex bolt      | 1        |
|          | 2-10 | Locknut       | 3        |
|          | 2-11 | Pointer arm 2 | 1        |
|          | 2-12 | Hex bolt      | 1        |

**REPLACEMENT PARTS** 

**3. Blade Spindle Kit** Unless noted, individual items not sold separately



| Part No. | ID # | Description        | Quantity |
|----------|------|--------------------|----------|
|          | 3-1  | Hex bolt           | 1        |
|          | 3-2  | Spring washer      | 1        |
|          | 3-3  | Bigger flat washer | 1        |
|          | 3-4  | Collar             | 1        |
|          | 3-5  | Flat key           | 1        |
| 650505   | 3-6  | Main shaft         | 1        |
| 000030   | 3-7  | Bearing            | 2        |
|          | 3-8  | Flat washer        | 4        |
|          | 3-10 | Spring washer      | 5        |
|          | 3-11 | Hex bolt           | 4        |
|          | 3-12 | Bigger flat washer | 1        |
|          | 3-13 | Hex bolt           | 1        |

## **3a. Blade Spindle Pulley Kit** Unless noted, individual items not sold separately



| Part No. | ID # | Description    | Quantity |
|----------|------|----------------|----------|
| 650615   | 3-14 | Flat key       | 1        |
|          | 3-15 | Pulley, driven | 1        |

### 3b. Blade Collar Kit



| Part No. | ID # | Description          | Quantity |
|----------|------|----------------------|----------|
|          | 3-16 | Blade flange (outer) | 1        |
| 650616   | 3-17 | Pin                  | 1        |
|          | 3-18 | Blade flange (inner) | 1        |

### 4. Rear Wheel Kit



| Part No. | ID # | Description        | Quantity |
|----------|------|--------------------|----------|
|          | 4-1  | Liner tube         | 1        |
|          | 4-2  | Bearing            | 2        |
| 650536   | 4-3  | Rear Wheel         | 1        |
|          | 4-4  | Bigger flat washer | 1        |
|          | 4-5  | Spring washer      | 1        |
|          | 4-6  | Hex bolt           | 1        |

### **5. Front Wheel Kit**



| Part No. | ID # | Description        | Quantity |
|----------|------|--------------------|----------|
| 650537   | 5-1  | Bearing            | 2        |
|          | 5-2  | Front wheel        | 1        |
|          | 5-3  | Bigger flat washer | 1        |
|          | 5-4  | Spring washer      | 1        |
|          | 5-5  | Hex bolt           | 1        |

**REPLACEMENT PARTS** 

## 6. Blade Guard Assembly Kit Unless noted, individual items not sold separately



| Part No.   | ID #  | Description        | Quantity |  |
|------------|-------|--------------------|----------|--|
|            | Blade | Guard Assembly Kit |          |  |
|            | 6-1   | Hex bolt           | 1        |  |
|            | 6-2   | Spring washer      | 1        |  |
|            | 6-3   | Bigger flat washer | 1        |  |
|            | 6-4   | blade cover        | 1        |  |
| 650520     | 6-5   | Nut                | 2        |  |
| 000038     | 6-6   | Rubber mat bigger  | 1        |  |
|            | 6-7   | Nylon washer       | 1        |  |
|            | 6-8   | Locknut            | 1        |  |
|            | 6-9   | Flat washer        | 2        |  |
|            | 6-10  | Screw              | 2        |  |
| Guard Flap |       |                    |          |  |
| 650617     | 6-6   | Rubber mat bigger  | 1        |  |
|            | Bl    | ade Guard Cover    |          |  |
| 650829     | 6-4   | blade cover        | 1        |  |

7. Depth Mechanism Kit Unless noted, individual items not sold separately



| Part No.       | ID # | Description        | Quantity |
|----------------|------|--------------------|----------|
|                | 7-1  | Hex bolt           | 1        |
|                | 7-2  | Spring washer      | 2        |
|                | 7-3  | Bigger flat washer | 1        |
|                | 7-4  | Wheel              | 1        |
|                | 7-5  | Flat key           | 1        |
| 650520         | 7-6  | Jackscrew          | 1        |
| 650539         | 7-7  | Screw              | 2        |
|                | 7-8  | Flat washer        | 2        |
|                | 7-9  | Bearing            | 1        |
|                | 7-10 | Locknut            | 2        |
|                | 7-11 | Jackpost assy.     | 1        |
|                | 7-12 | Gas spring rod     | 1        |
| Flange Bearing |      |                    |          |
| 650618         | 7-9  | Bearing            | 1        |

## 8. E-Stop Switch Assembly Kit Unless noted, individual items not sold separately



| Part No. | ID # | Description    | Quantity |
|----------|------|----------------|----------|
| 650540   | 8-1  | Emergency Stop | 1        |
|          | 8-2  | Relay          | 1        |

## **9. Front Axle Bearing Plates Kit** Unless noted, individual items not sold separately



| Part No. | ID # | Description   | Quantity |
|----------|------|---------------|----------|
| 650541   | 9-1  | Plate         | 1        |
|          | 9-2  | Flat washer   | 2        |
|          | 9-3  | Spring washer | 2        |
|          | 9-4  | Hex bolt      | 2        |

### 10. Front Axle Kit

![](_page_33_Figure_4.jpeg)

| Part No. | ID # | Description        | Quantity |
|----------|------|--------------------|----------|
| 650529   | 10-1 | Wheel rack module  | 1        |
|          | 10-2 | Bearing            | 4        |
|          | 10-3 | Front wheel        | 2        |
|          | 10-4 | Plate              | 2        |
|          | 10-5 | Flat washer        | 4        |
|          | 10-6 | Bigger flat washer | 2        |
|          | 10-7 | Spring washer      | 6        |
|          | 10-8 | Hex bolt           | 2        |
|          | 10-9 | Hex bolt           | 2        |

### 11. Belt Guard Kit

![](_page_34_Figure_4.jpeg)

| Part No. | ID # | Description   | Quantity |
|----------|------|---------------|----------|
| 650530   | 11-1 | Hex bolt      | 4        |
|          | 11-2 | Spring washer | 12       |
|          | 11-3 | Flat washer   | 12       |
|          | 11-4 | Belt cover    | 1        |

### 12. Water Tank Kit

![](_page_35_Figure_4.jpeg)

| Part No.       | ID # | Description    | Quantity |
|----------------|------|----------------|----------|
| Water Tank Kit |      |                |          |
| 650533         | 12-1 | Water Tank Cap | 1        |
|                | 12-2 | Water Tank     | 1        |
| Water Tank Cap |      |                |          |
| 650531         | 12-1 | Water Tank Cap | 1        |

### 13. Handlebar Kit

![](_page_36_Figure_4.jpeg)

| Part No.             | ID # | Description  | Quantity |
|----------------------|------|--------------|----------|
| Handlebar & Grip Kit |      |              |          |
| 650836               | 13-1 | Handle (set) | 1        |
|                      | 13-2 | Handle grip  | 2        |
| Handlebar            |      |              |          |
| 650532               | 13-1 | Handle (set) | 1        |

### VI. WARRANTY

Merit warrants that products manufactured by it come with the following limited warranty:

Equipment and parts are free from defects in workmanship and material for one year from the date of original purchase. All components not manufactured by Merit offer separate warranty periods.

During the warranty period, Merit will repair or replace any product or part manufactured by Merit that is found to be defective in material or workmanship. Merit's commitment under this warranty is explicitly limited to products confirmed to be defective by Merit or an authorized service center. Until such a determination is made, all shipping and labor costs will be assumed by the purchaser.

To make a claim under this warranty, the purchaser must:

- Notify Merit in writing (email is acceptable) of defective product within 10 days of failure.
- Have operated and maintained the product in accordance with Merit's instructions and/or manual; and
- Provide the product serial number with the claim.

Warranty does not extend to any product that has been abused, misused, neglected, involved in an accident, repaired or modified without Merit's authorization, or used in violation of instructions provided by Merit.

Merit shall have no liability for any **(a)** consequential, special or liquidated damages arising from or related to use of the product or breach of the warranty contained herein, including, without limitation, lost revenue or a loss of production or downtime; **(b)** damages to or from products or services not provided by Merit; or **(c)** repair, replacement or other expenses incurred in correcting any products, including, without limitation, products manufactured by Merit. There are no express warranties other than those contained in this warranty.

For more information, please call 800.321.1240 or email merit.service@oregontool.com

### **VII. SPECIFICATIONS**

| ENGINE TYPE                  | GASOLINE HONDA GX 390                         |
|------------------------------|---|
| POWER                        | 13 HP / 9.6 kW                                |
| NET/GROSS WEIGHT             | NET: 231 LBS / 105 kg GROSS: 255 LBS / 116 kg |
| MAX CUTTING DEPTH            | 8 inch / 20 cm                                |
| BLADE SIZE                   | 12 - 20 inch / 30.5 - 50 cm                   |
| ARBOR SIZE                   | 1 inch / 2.54 cm                              |
| DEPTH ADJUSTMENT             | HANDLE ROTATION                               |
| ENGINE SPEED                 | 3,900 RPM                                     |
| PROPULSION                   | MANUAL PUSH                                   |
| ENGINE PULLEY SIZE           | 2.313 inch / 5.8 cm                           |
| SPINDLE SHAFT PULLEY         | 3.100 inch / 7.8 cm                           |
| SHAFT OUTPUT SPEED           | 2,900 RPM                                     |
| WATER TANK CAPACITY          | 8 Gallon / 30 Liter                           |
| <b>RECOMMENDED FUEL - US</b> | Pump octane rating 86 or higher               |
| RECOMMENDED FUEL             | Research octane rating 91 or higher           |
| OUTSIDE US                   | Pump octane rating 86 or higher               |

#### **RECOMMENDED OIL**

Use 4-stroke motor oil that meets or exceeds the requirements for API service category SJ or later (or equivalent). Always check the API service label on the oil container to be sure it includes the letters SJ or later (or equivalent).

![](_page_38_Figure_6.jpeg)

SAE 10W-30 is recommended for general use. Other viscosities shown in the chart may be used when the average temperature is your area is within the indicated range.

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