



LEADING EDGE  
SALES

EQUIPMENT DIVISION  
2018/19



# IRONMAN

HYDRAULIC TEAROFF  
MACHINE

# IRONMAN

## HYDRAULIC TEAROFF MACHINE

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**TOUGH MUSCLE TO  
GET THE JOB DONE  
EASIER & FASTER.**



# TABLE OF CONTENTS



## INSTRUCTION MANUAL

OPERATOR MANUAL	04
HOISTING	06
MACHINE COMPONENTS & CONTROLS	07
MACHINE OPERATION	08

## MACHINE OVERVIEW

ENGINE INFO: HONDA GX390	10
FM SERIES HYDRA-TRAK	12
MAINTENANCE & SERVICE SCHEDULE	16


## SAFETY & COMPLIANCE

SAFETY INFO	14
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# OPERATOR'S MANUAL

This manual is an important part of your machine and should remain with the machine at all times for continued reference on proper use and care of this machine.



## OPERATOR TRAINING AND JOBSITE PREPARATION

1. Do not place this machine on any roof without ensuring the roof substrate is capable of safely supporting the weight of the machine, operator and any other personnel that will be on the roof.
2. Do not operate this machine without reading and understanding the contents of this manual in its entirety.
3. Do not operate this machine without reading and understanding the Engine Manufacturer's operation and safety instructions in their entirety.
4. Do not operate the machine under the influence of drugs or alcohol.
5. Operators of this machine can subject themselves and others to serious injury and/or death.
6. Operators are obligated to familiarize themselves and convey explicit instruction to any other personnel who may come in to contact with the machine, with the machine's controls and operation and safety signs.
7. Ensure safety labels, nameplates and instructions visible.
8. Only a competent adult shall operate this machine.
9. Always wear proper work attire such as a long sleeve shirt, long pants, hearing protection, safety glasses, goggles or a face shield, hard hat, safety toe shoes or boots and other safety attire as required.
10. Never wear loose fitting clothing when operating or working around this machine.
11. Prior to operation, ensure the work area is clean and free from obstructions. Remove any debris, obstacles or hazards that could cause personal injury to the operator or other persons.
12. Keep all persons from in front of the machine and its oscillating blade.



Use the safety and operating information in the machine Operators Manual to operate and service the machine safely and correctly.

The engine manufacture owner's manual is included with your machine. This will provide maintenance and troubleshooting information for the engine installed in your machine.

13. Inspect the machine before operation for loose hardware, bent members, broken welds, worn parts, missing parts or other damaged components. Do not operate if any part of the machine is damaged or missing. Tag and remove the machine from service and have the machine properly repaired by a qualified person before further use. Replace all damaged components before operation. Do not operate this machine without all the shields, guards and covers in place and secured.
14. Always check the engine oil before starting and operating the machine. Refer to the Engine Manufacturer's instructions to add or change oil. Honda Engines are equipped with an Oil Alert System. If the engine will not start or run, it may be low on oil.
15. Gasoline and its vapors are extremely flammable and explosive under certain conditions.
16. Check the fuel supply before operation. Only refuel in well-ventilated areas with the engine stopped. Do not smoke or allow flames or sparks in the gasoline refueling or storage area. Do not overfill the fuel tank. After refueling, properly close and secure the fuel tank cap.
17. Be careful to avoid spilling fuel when refueling. Fuel vapor or spilled fuel may ignite. If any fuel spill occurs, make sure the area is clean and dry before starting the engine.
18. Never run the engine in an enclosed or confined area. Exhaust contains carbon monoxide gas and exposure may cause loss of consciousness or death.
19. The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Do not touch the muffler while it is hot. To avoid burns or fire hazards, let the engine cool before transporting or storing under cover or indoors.
20. Do not change the engine governor setting or over throttle the engine. Operating the engine at excessive speed can increase the risk of personal injury or property damage.
21. Never allow anyone to ride on the machine.

# HOISTING

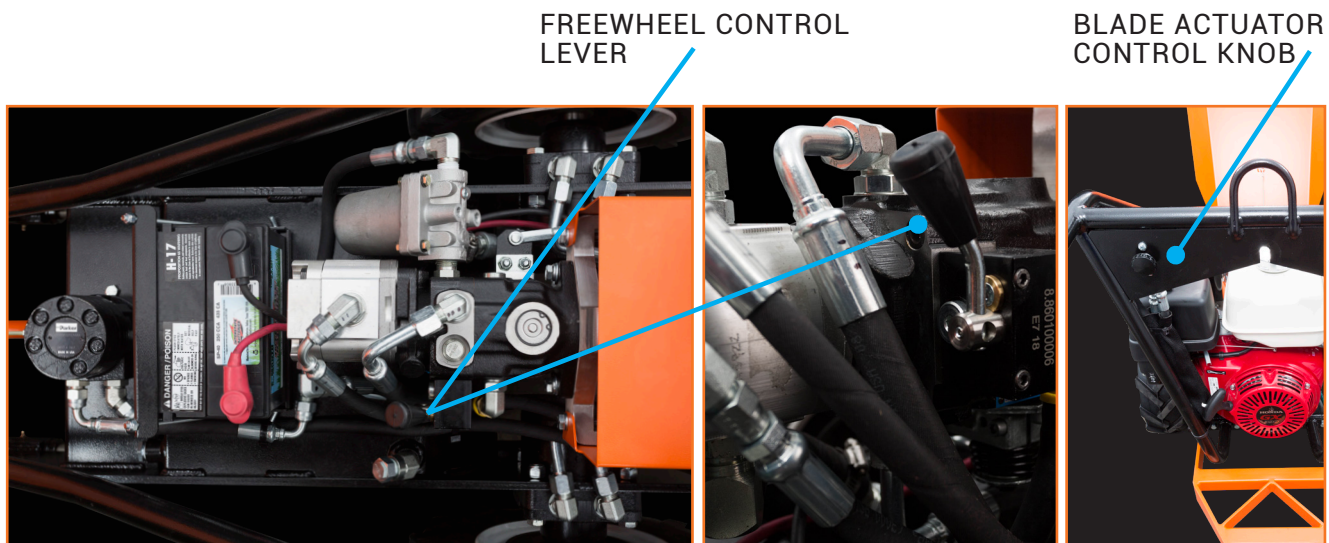
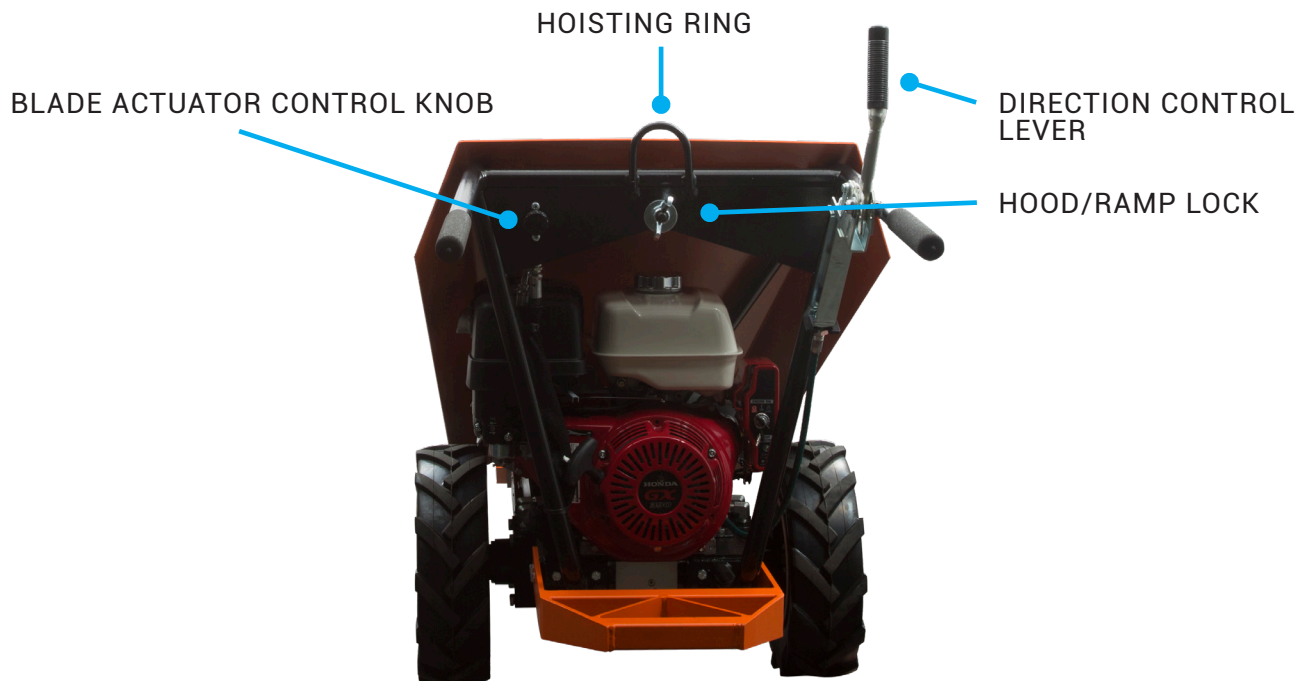
Complete fall protection training before exposing a worker to fall hazards in accordance with OSHA standards or other governing bodies.

## HOISTING THE MACHINE

1. Do not hoist with damaged slings, chains or other components.
2. Only use rigging gear suitable for overhead lifting.
3. Conduct regular inspection and maintenance of rigger gear per manufacturer's instructions.
4. Only use a hoist, crane or forklift rated for the weighted of this machine.
5. The machine may slip or fall if not hoisted properly, resulting in serious injury or death.
6. Only hoist this machine by the lifting ring on the center of the dash.



# MACHINE COMPONENTS & CONTROLS





# MACHINE OPERATION

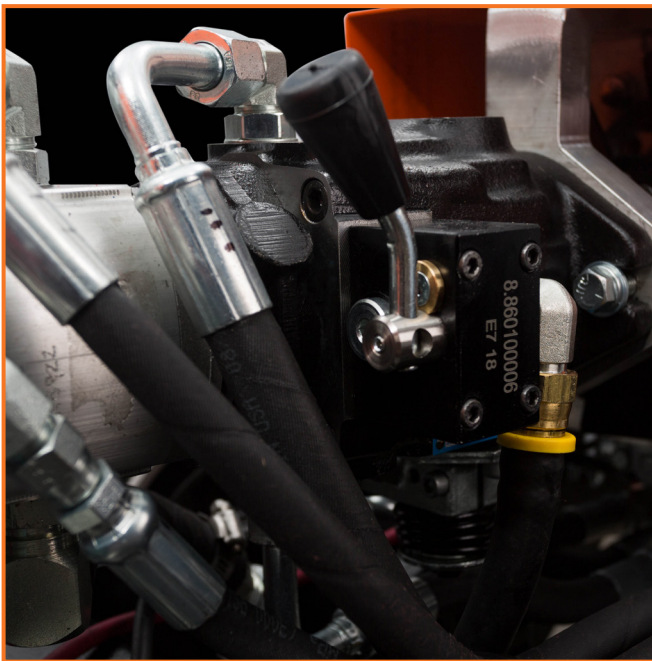
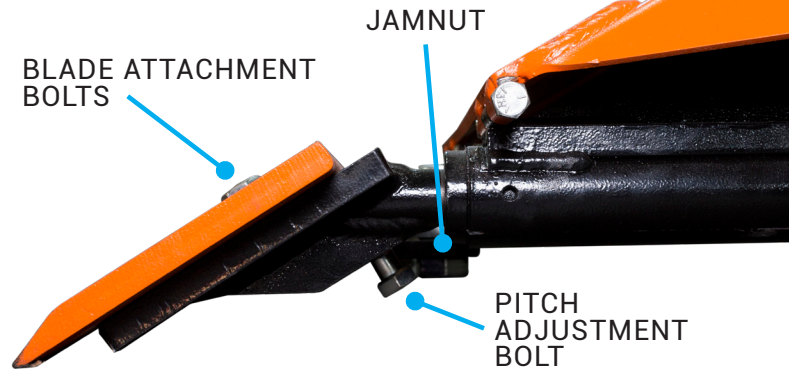


## OPERATING INSTRUCTIONS

1. Before starting, ensure the Blade Actuator Knob is in its off position and the Direction Control Lever is in its neutral position.
2. Slide the engine Fuel Valve lever to the ON position.
3. Slide the engine Choke Lever to the CLOSED position. (NOTE: The choke may not be needed if the engine is warm or the air temperature is high.)
4. Move the engine Throttle Lever slightly to the left.
5. Turn the Engine Switch to the ON position.
6. Turn the Engine Switch to the START position hold it there until the engine starts, but no longer than 5 seconds. (NOTE: Damage to the Starter Motor may occur if used for more than 5 seconds. If the engine fails to start, release the switch and wait 10 seconds before operating the Engine Switch again.)
7. When the engine starts, allow the Engine Switch to return to the ON position.
8. As the engine warms up, gradually move the engine Choke Lever to the OPEN position.
9. Position the Throttle Lever for the desired engine speed.
10. Slowly move the machine forward by pushing the Direction Control Lever forward, away from the operator. The machine will move faster the further the Direction Control Lever is pushed forward.
11. Move the machine backward by pulling the Direction Control Level backward, toward the operator. The machine will move faster the further the Direction Control Lever is pulled backward.
12. Engage the Oscillating Blade by pulling the Blade Actuator Control Knob out toward the operator.
13. Disengage the Oscillating Blade by pushing the Blade Actuator Control Knob in toward the machine.

**Blade Pitch Adjustment:** A standard blade pitch is set at the factory.

To adjust the pitch, first loosen the two Blade Attachment Bolts (A) on the top side of the blade. Loosen the two Pitch Jam Nuts (B) on the underside of the blade. Turn both adjustment Pitch Adjustment Bolts (C) equal amounts to the desired pitch and retighten the Pitch Jam Nuts (B). Tighten the two Blade Attachment Bolts (A) on the top of the blade.



**Freewheel Control Lever:** Using valve pressure when engaged, this lever locks the wheels when the machine is not in use. When opened, the machine may be moved without engine operation.

## **\*\*CAUTION\*\***

Always operate the machine parallel with the deck flutes and laps. Operating the machine at angle or perpendicular to the flutes or laps could damage the deck and create an immediate safety hazard.

The oscillating blade should always be disengaged while positioning the machine for tearoff.

## SECTION VIEW : ENGINE

# POWERED BY HONDA GX390

## THE ENGINE INSTALLED ON THIS MACHINE IS A HONDA GX390.

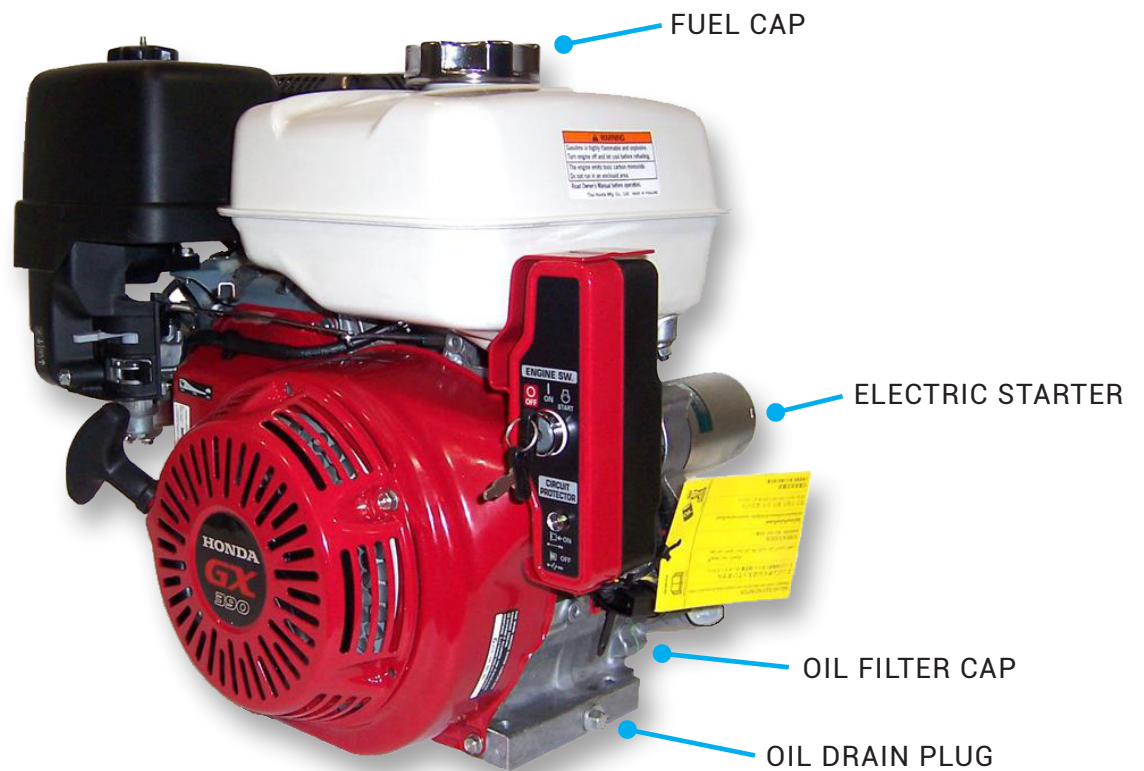
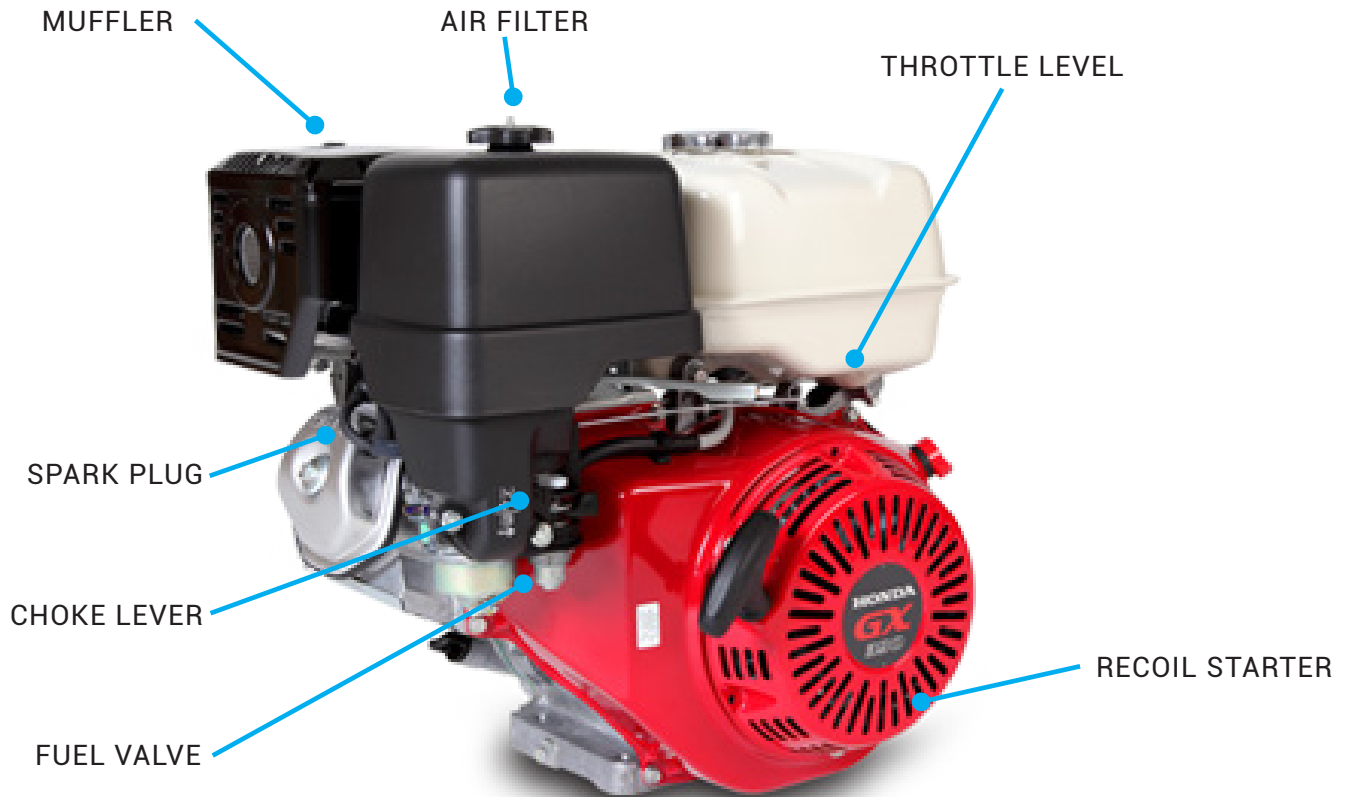
### THE NEXT GENERATION OF GX ENGINE

The GX390, is one of the best engines in the business. With more power, quieter performance, lower fuel consumption, lower emissions, and better features, exceptional performance comes standard. The Honda GX series lives up to the legend.

ENGINE TYPE	Air-cooled 4-stroke OHV
BORE X STROKE	88 X 64 MM
DISPLACEMENT	389 CM3
NET POWER OUTPUT*	11.7 HP (8.7 KW) @ 3,600 RPM
NET TORQUE	19.5 LB-FT (26.4 NM) @ 2,500 RPM
PTO SHAFT ROTATION	COUNTERCLOCKWISE (FROM PTO SHAFT SIDE)
COMPRESSION RATIO	8.2:1
CARBURETOR	BUTTERFLY FLOAT TYPE
IGNITION SYSTEM	DIGITAL CDI WITH VARIABLE TIMING
STARTING SYSTEM	RECOIL/ELECTRIC
AIR CLEANER	DUAL ELEMENT
OIL CAPACITY	1.16 US QT (1.1 L)
FUEL TANK CAPACITY	6.4 U.S. QTS (6.1 LITERS)
FUEL TYPE	UNLEADED 86 OCTANE OR HIGHER







SECTION VIEW : DRIVE TRAIN

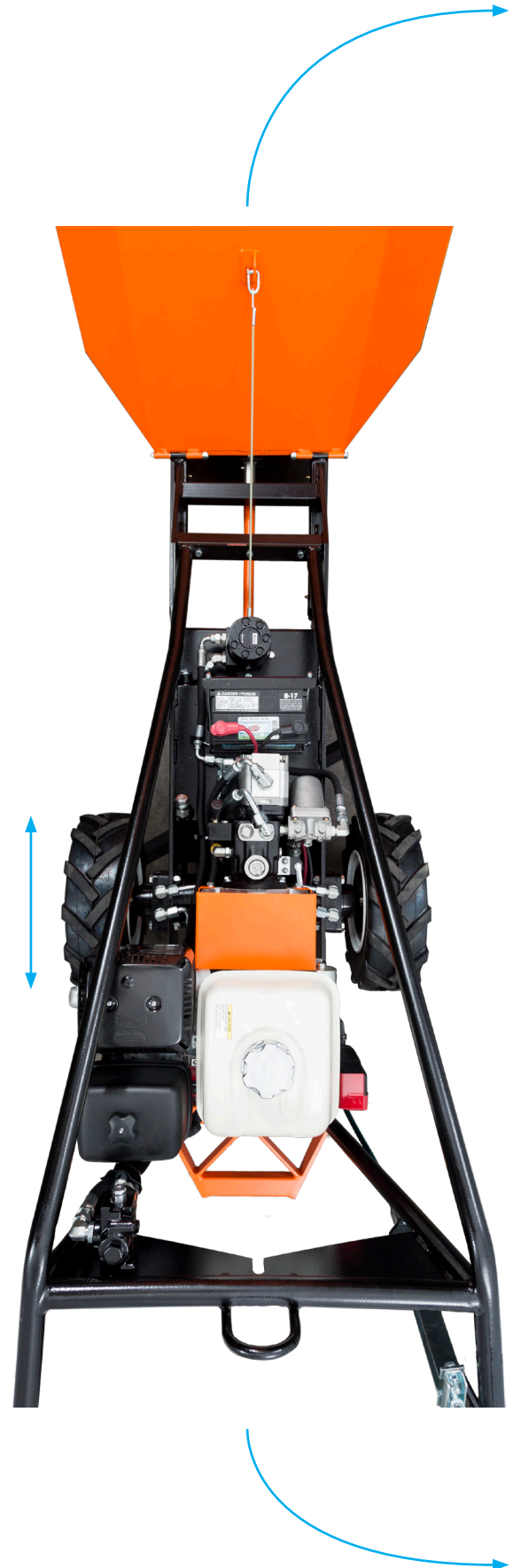
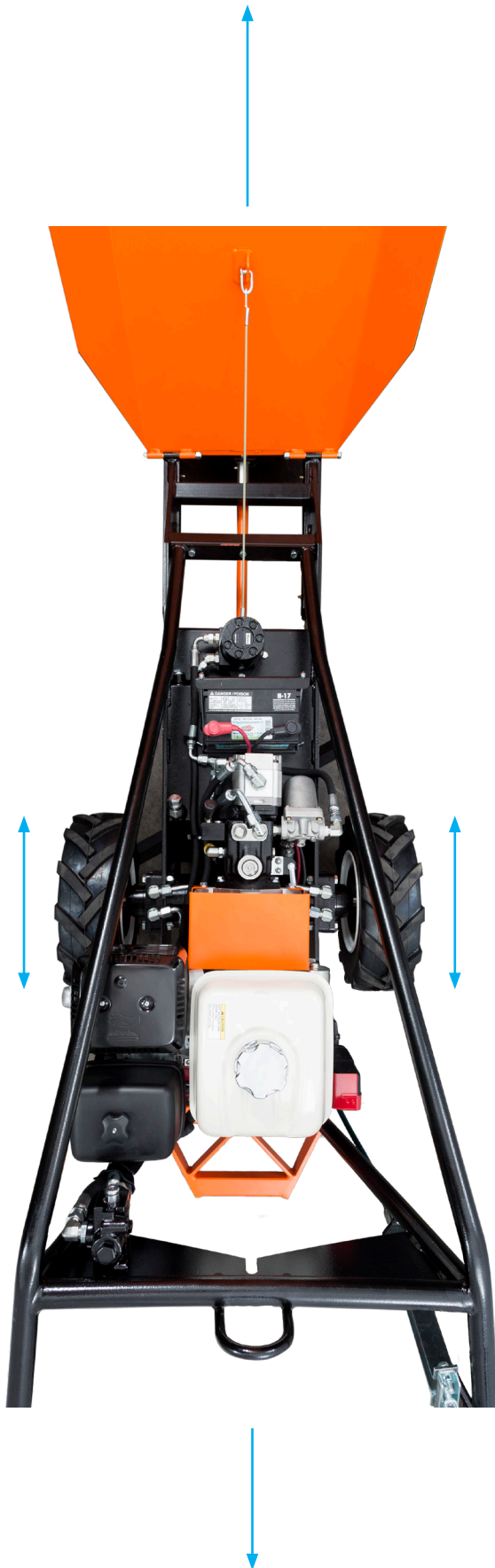
# FM SERIES HYDRA-TRAK™

THIS MACHINE IS EQUIPPED WITH FM SERIES  
HYDRA-TRAK FOR IMPROVED TRACTION  
CONTROL.

The Hydra-Trak™ will engage if one wheel begins to slip under load, transferring power and causing both wheels to rotate in unison for optimal traction. Hydra-Trak™ will automatically disengage when the need for increased traction diminishes. In combination with non-directional flat free rubber tires, this insures that ease of use for the operator.

When traveling in forward or reverse, if one wheel loses traction and begins to spin, the automatic traction locks and provides positive two wheel drive. When turning left or right, the outside wheel automatically unlocks and frees the wheels to allow easy turning.







# SAFETY

Complete fall protection training before exposing a worker to fall hazards in accordance with OSHA standards or other governing bodies.

## SAFETY PRECAUTIONS

1. Observe and follow all applicable local, state, federal, or provincial regulations.
2. Check the roof and deck for deterioration before allowing personnel on the roof or operating this machine on the roof. The Machine Owner and/or Building Owner are responsible for ensuring the roof and structure are strong enough to support the weight of this machine any workers.
3. Check the roof system depth prior to operating the machine. This machine can easily cut or damage the roof deck, creating an immediate safety hazard to personnel.
4. Remove all potential hazardous obstacles from the work area before operating the machine.
5. Properly cover and/or guard and label any roof openings in accordance with OSHA or other governing bodies.
6. Never operate the machine near a roof edge without proper fall protection in accordance with OSHA or other governing bodies.
7. Wear safety glasses at all time with operating or working around this machine.
8. Keep hands, feet, hair, jewelry and loose clothing away from the engine and any other moving parts.
9. Do not make adjustments to the machine while the machine is running.
10. Do not touch the engine or muffler during or immediately after use.
11. Turn off the machine and allow it to cool before performing any maintenance.
12. Do not fill the fuel tank while the engine is running or hot.
13. Use caution when operating to avoid tripping and falling.
14. Slow down and use caution when making turns, changing direction or operating on low-slopes.
15. Shut off the engine before leaving the machine unattended. Turn the Engine Switch to the off position to shut down the engine.



Properly cover and/or guard and label any roof openings in accordance with OSHA Standards or other governing bodies to avoid serious injury or death.



Properly guard any leading edge in accordance with OSHA Standards or other governing bodies to avoid serious injury or death.



Never operate this machine while walking backwards to avoid trips or falls through holes or openings.

## Safety Decals

Replace worn, damaged or illegible decals before operating the machine. Obtain replacement Safety Decals from Leading Edge or your local distributor. A copy of the Safety Decals is included in this manual along with their reorder code.

## Machine Usage

This machine shall be used and operated as described in this manual and may be supplemented by additional media published by Leading Edge. The owner and/or operators of this machine are responsible for ensuring its use for intended purposes only. Improper use not described herein may result in damage to the machine, property and/or serious injury or death to the operator or other persons.

### **\*\* WARNING \*\***

Serious injury or death may result if this machine is used for purposes other than designed. Careless or improper use may result in machine damage, property damage and or serious injury or death. Misuse of this equipment resulting in damage or injury is the sole responsibility of the operator or equipment owner. This machine is for use on low slope roofs not exceeding 2:12 slope (9.5 degrees). Any other use of this machine will void the manufacturer's warranty. The manufacturer

#### **CALIFORNIA PROPOSITION 65:**

Engine Exhaust from this machine contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

It is the responsibility of the Owner to understand, train and convey explicit instruction to each user before operating this machine. New users need to read and comprehensively understand this manual before operating this machine. Even if you are an experienced user, it is your responsibility to familiarize yourself with this manual and the latest rules and regulations regarding the use of this machine.

# MAINTENANCE & SERVICE SCHEDULE

**THE ENGINE INSTALLED ON THIS MACHINE IS A  
HONDA GX390.**

## ENGINE MAINTENANCE:

For complete use and maintenance refer to the Honda owner's manual provided with this machine.

Leading Edge Equipment's warranty does not cover the engine. A separate warranty from Honda covers the engine.

Periodic maintenance and adjustment is necessary to keep the engine in good operating condition. Perform the service and inspection scheduled in the provided maintenance schedule.

**Notice:** Use only genuine HONDA parts or their equivalent. The use of replacement parts which are not of equivalent quality may damage the engine and void any warranty.

## MACHINE MAINTENANCE:

**IMPORTANT:** Avoid Damage! Operating in extreme conditions may require more frequent service intervals. Keep moving parts lubricated to avoid accelerated wear and machine failure.

Engine and Hydraulic pump components may become dirty or plugged when operating in extreme heat, dust or other severe conditions.

**NOTICE:** Always ensure the machine is on a level surface with wheels chocked and secure from movement before servicing.

## HYDRAULIC OIL:

Check the Hydraulic Tank Sight Glass while the machine is level before each use to verify hydraulic oil levels are adequate.

This machine uses **ISO #46 HYDRAULIC OIL** during most temperatures. During extreme cold temperatures, use ISO #61 hydraulic oil.

## LUBRICATION:

Use a high quality lithium-based multipurpose grease

- Grease both ends of Blade Actuator Rod (A)  
**WARNING: Overfilling the bearings can rupture the bearing seals.**
- Grease Crank Shaft Bearing (B)
- Grease the Blade Slide Bushings (C)



REGULAR SERVICE PERIOD	EACH USE	EVERY 8 HOURS	FIRST MONTH OR EVERY 20 HOURS	EVERY 3 MONTHS OR 50 HOURS	EVERY 6 MONTHS OR 100 HOURS	EVERY YEAR OR 300 HOURS
<b>HONDA GX390</b>						
<b>ENGINE OIL</b>	CHECK LEVEL	X				
	CHANGE		X			
<b>REDUCTION GEAR OIL</b>	CHECK LEVEL	X				
	CHANGE		X			
<b>AIR CLEANER</b>	CLEAN	X				
	CLEAN		X			
<b>SEDIMENT CUP</b>	CLEAN				X	
<b>SPARK PLUG</b>	CLEAN - RE-ADJUST				X	
<b>SPARK ARRESTER</b>	CLEAN				X	
<b>FUEL TANK AND STRAINER</b>	CLEAN					X
<b>FUEL LINE</b>	CHECK (REPLACE IF NECESSARY)					X
<b>TEAR OFF MACHINE LUBRICATION</b>						
<b>CRANK SHAFT BEARING</b>	GREASE	X				
<b>ACTUATOR ROD BEARINGS</b>	GREASE	X				
<b>BLADE SLIDE BUSHINGS</b>	GREASE	X				
<b>HYDRAULIC SYSTEM</b>						
<b>HYDRAULIC OIL</b>	CHECK	X				
	CHANGE					X
<b>HYDRAULIC FILTER</b>	CHECK			X		
	CHANGE					X



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