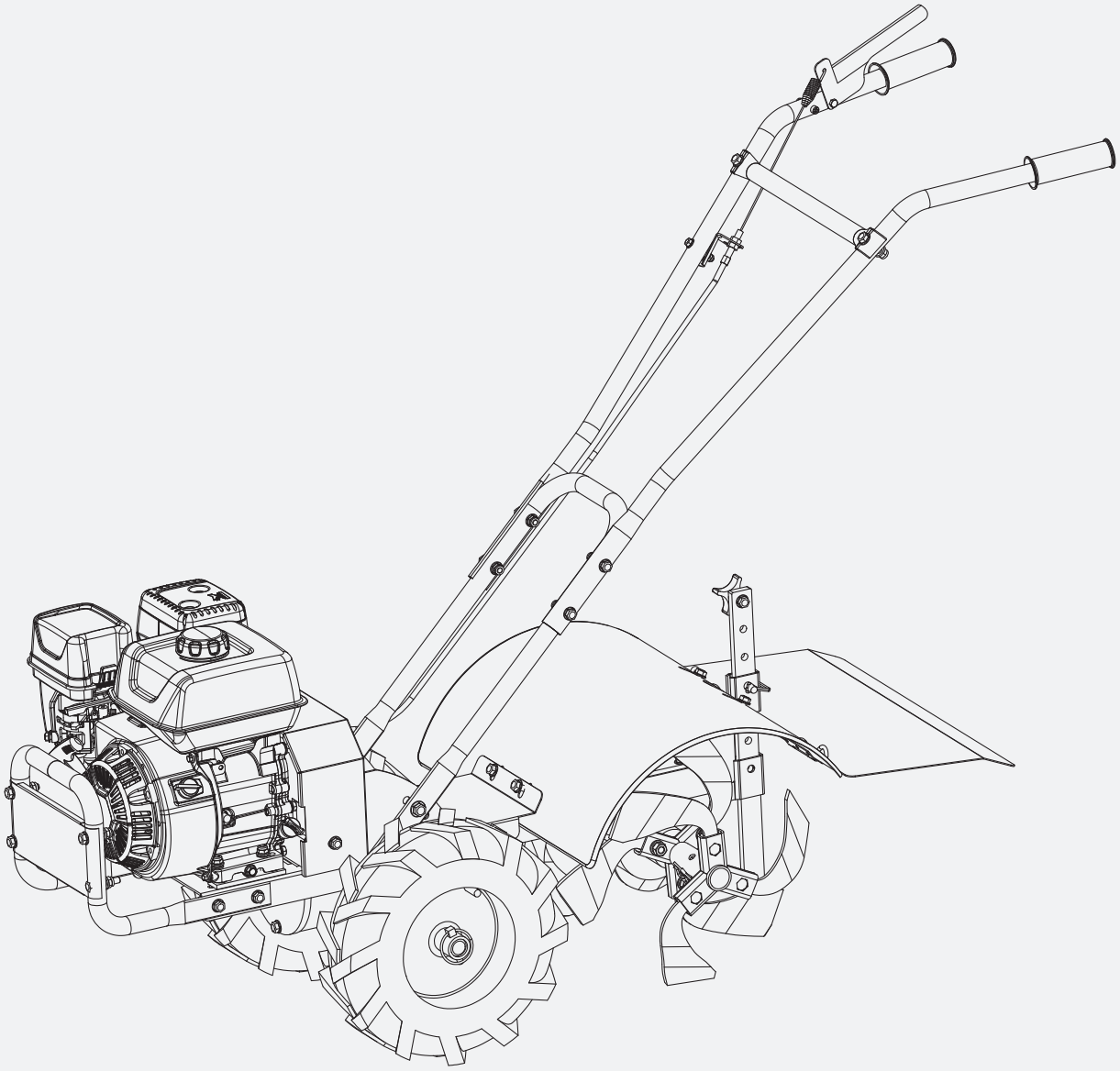
Rear Tine Tiller | GUO116
Operator's Manual



Warning: Please read and thoroughly understand all instructions before operating. Failure to follow safety rules and other basic safety precautions may result in serious personal injury. Keep these instructions in a safe and easily accessible place so that they can be referred to when needed. Retain these instructions to assist in future servicing.

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SuperHandy®

INDEX

1. WARNING ---------- 1-3
2. TECHNICAL SPECIFICATIONS ---------- 3
3. MAIN COMPONENTS ---------- 4-5
4. ASSEMBLY ---------- 6-9
5. OPERATION ---------- 9-11
6. MAINTENANCE ---------- 12-13
7. STORAGE ---------- 14
8. TROUBLE SHOOTING ---------- 15
9. EXPLODED AND PARTS LIS ---------- 16

1. WARNING

Understanding Your Machine

- Be sure to read and understand the operator's manual and labels affixed to the machine. Learn its proper usage and capabilities as well as the specific potential hazards unique to this product.
- Be familiar with the controls and their proper operation. Know how to stop the machine and disengage the controls quickly before you start to operate the product.
- Be sure to read and understand all the instructions and safety precautions as outlined in the Engine Manual. This manual is included with your unit. Do not attempt to operate the machine until you fully understand how to properly operate and maintain the Engine and how to avoid accidental injuries and/or property damage.

Work Area

- Never start or run the engine inside a closed area. Exhaust fumes produced by gasoline engines can be hazardous. Containing carbon monoxide, an odorless and deadly gas. Operate this unit only in a well ventilated outdoor area.
- Never operate the machine without good visibility and lighting.

Personal Safety

- Do not operate the machine while under the influence of drugs, alcohol, or any medication that could impair your motor coordination and ability to use it properly.
- Dress appropriately. Wear sturdy long pants, boots and gloves. Do not wear loose fitting clothing, short pants, or jewelry of any kind. Secure long hair so it is out of the way and preferably above shoulder level. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts resulting in severe injury.
- Check your machine before starting it. Keep guards in place and in working order. Make sure all nuts, bolts, etc. are securely tightened.
- Never operate the machine when it is in need of repair or is in poor mechanical condition.
- Replace damaged, missing or failed parts before use. Check for fuel leaks. Always maintain the machine in good working order.
- Do not use the machine if the engine's switch does not turn it on or off properlu. Any gasoline powered machine that cannot be controlled with the engine switch is dangerous and should not be operated until it have been repaired.
- Check to see that keys and adjusting wrenches that were used on the machine are removed before starting it. A wrench or a key that is left attached to a rotating part of the machine may result in personal injury.
- Stay alert, watch what you are doing and use common sense when operating the machine.
- Do not overreach. Do not operate the machine while barefoot or when wearing sandals or similar lightweight footwear. Wear protective footwear that will protect your feet and improve your footing on slippery surfaces. Maintain proper footing and balance at all times. This enables better control of the machine in unexpected situations.
- Avoid accidental starting. Be sure the engine's switch is in the off position before transporting the machine or performing any maintenance or service on the unit. Transporting or performing maintenance or service on a machine with its switch in the ON position invites accidents.

Fuel Safety

- Fuel is highly flammable, and its vapors can explode if ignited. Take precautions when using to reduce the chance of serious personal injury.
- When refilling or draining the fuel tank, use an approved fuel storage container while in a clean, well-ventilated outdoor area. Do not smoke, or allow sparks, open flames or other sources of ignition near the area while adding fuel or operating the unit. Never fill fuel tank indoors.
- Keep grounded conductive objects, such as tools, away from exposed, live electrical parts and connections to avoid sparking or arcing. These events could ignite fumes or vapors.
- Always stop the engine and allow it to cool before filling the fuel tank. Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot. Do not operate the machine with known leaks in the fuel system.
- Loose the fuel tank cap slowly to relieve any pressure in the tank.
- Never overfill fuel tank (there should be no fuel above the upper limit mark).
- Replace all fuel tank and container caps securely and wipe up spilled fuel. Never operate the unit without the fuel cap securely in place.
- Avoid creating a source of ignition for spilled fuel. If fuel is spilled, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until fuel vapors have dissipated.

- Store fuel in containers specifically designed and approved for this purpose.
- Store fuel in a cool, well-ventilated area, safely away from sparks, open flames or other sources of ignition.
- Never store fuel or machine with fuel in the tank inside a building where fumes may reach a spark, open flame, or any other source of ignition, such as a water heater, furnace, clothes dryer and the like. Allow the engine to cool before storing in any enclosure.

Machine Use and Care

- Never pick up or carry a machine while the engine is running.
- Do not force the machine. Use the correct machine for your application. The correct machine will perform the task better and more safely at the rate for which it was designed.
- Do not change the engine governor settings or over-speed the engine. The governor controls the maximum safe operating speed of the engine.
- Do not run the engine at a high speed on areas that you are not intending to till.
- Do not put hands or feet near rotating parts and tilling blades.
- Avoid contact with hot fuel, oil, exhaust fumes and hot surfaces. Do not touch the engine or muffler. These parts get extremely hot during operation. They remain hot for a period of time after you turn off the unit. Allow the engine to cool before performing maintenance or making adjustments.
- If the machine should start to make an unusual noises or vibrations, immediately shut off the engine, disconnect the spark plug wire, and check for the cause. Unusual noise or vibration is generally warning of trouble.
- Use only attachments and accessories approved by the manufacturer. Failure to do so can result in personal injury and void the warranty for the product.
- Maintain the machine. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the machine's proper operation. If damaged, have the machine repaired before use. Many accidents are result of poorly maintained equipment.
- Keep the engine and muffler clear,clean and free of grass, leaves, excessive grease or carbon build up to reduce the chance of a fire hazard.
- Never douse or spray the unit with water or any other liquid while is use. Keep handles dry, clean and free from debris. Clean after each use.
- Observe proper disposal laws and regulations for gas, oil, etc. to protect the environment.
- Store machine while not in use out of the reach of children and do not allow persons unfamiliar with the machine or these instructions to operate it.

Service

- Before cleaning, repairing, inspecting, or adjusting the machine, shut off the engine and make certain all moving parts have stopped. Always make sure the engine's switch is in its "OFF" position. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting.
- Have your machine serviced by a qualified repair personnel using only approved replacement parts. This will ensure that the safety of the machine is maintained.

Specific Safety Rules

- To avoid injury, keep your hands and feet away from tiller tines. Hold the tiller handle firmly with both hands when operating.
- This product is only suitable for soil rototilling. It should not be used on soil with large stones, roots or other hard impurities.
- If the device encounters a foreign object or a foreign object becomes entangled in the rotary tiller tines, stop the engine, disconnect the clutch device completely. Remove foreign object and check the machine for any damage, and then restart and operate the machine.
- Do not start or operate the tiller on hard surfaces (e.g. concrete or pavement) or hard surfaces to avoid damage to the tiller and tines.
- Never leave the tiller unattended while the engine is running.
- Start or operate the tiller away from the edge of ditches or other steep embankments. Avoid tipping of the tiller.
- Always carefully climb along straight and reverse slopes to prevent the tiller from tipping over onto the operator.
- Always park the unit on a solid, level surface and turn it off before leaving the tiller.

Safety Symbols
The rating plate on your machine may show symbols. These represent important information about the product or instructions on its use.

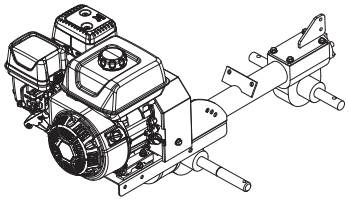
	Read these instructions carefully.		No smoking,sparks,or flames.
	Wear eye protection. Wear hearing protection.		Do not touch parts that are hot from operation. Serious burns may result.
	Wear protective gloves.		Keep your feets clear from all rotating parts.
	Wear safety footwear.		Be aware, objects may be thrown whilein use.
	Do not remove or tamper with the protection and safety devices.		Keep children and bystanders off and away.

Use extreme caution when storing, handling and using fuels, as they are highly volatile and explosive in vapor state.

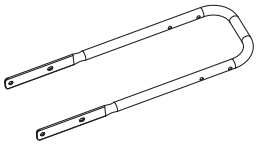
2. TECHNICAL SPECIFICATIONS

SKU#	**GUO116**
Engine	7HP
Start Type	Recoil
Transmission	Sprocket Feed Gear+Belt
Speed	1 Forward
Tines	12
Tine Rotation Direction	Backwards
Tilling Width	16 in.
Tilling Depth	12 in.
Depth Stake Adjustment	6 Positon
Tine RPM	190RPM
Tire	13 in.

3. MAIN COMPONENTS

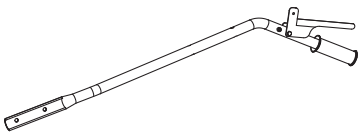


Equipment body

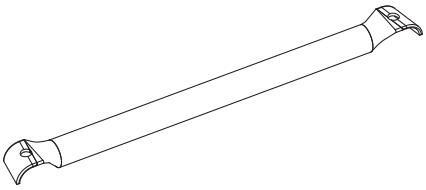


Handle support

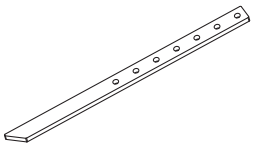
Left handle



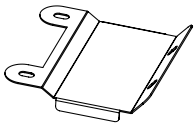
Right handle



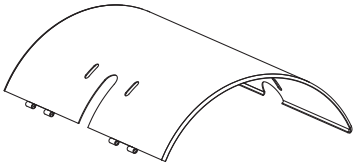
Handle linkage



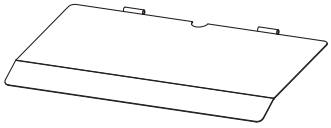
Depth stake



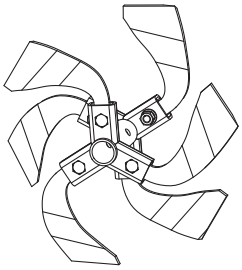
Drive shaft cover plate



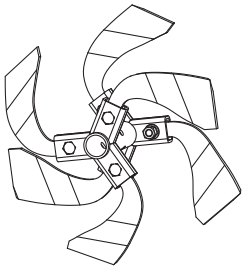
Tine shield



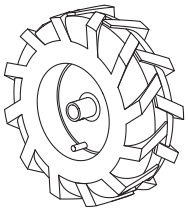
Rear shield



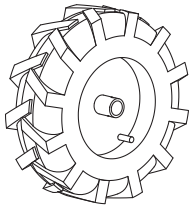
Left rotary tines



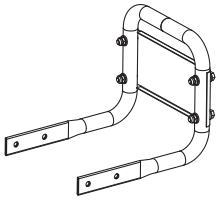
Right rotary tines



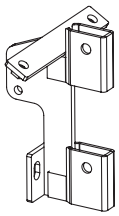
Left wheel



Right wheel



Engine Protector



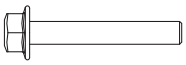
Shield mounting kit

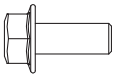
Contents Included

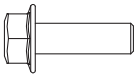
The engine tiller comes partially assembled and is shipped in carefully packed carton. After all the parts have been removed from the carton, you should have:

1	Equipment body	**9**	Rear shield
2	Handle support	**10**	Left rotary tines
3	Left handle	**11**	Right rotary tines
4	Right handle	**12**	Left wheel
5	Handle linkage	**13**	Right wheel
6	Depth stake	**14**	Engine Protector
7	Drive shaft cover plate	**15**	Shield mounting kit
8	Tine shield	**16**	Fastening parts

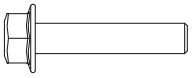
Fastening parts:

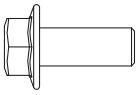

M6x40 Bolt x 1pc


M8x20 Bolt x 12pcs


M8x25 Bolt x 2pcs

M8x30 Bolt x 1pc

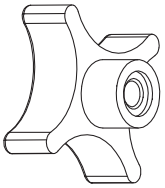

M8x40 Bolt x 6pcs

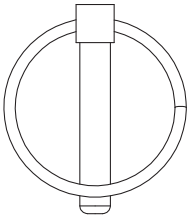

M10x25 Bolt x 4pcs

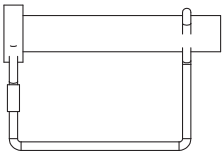
M6 Nut x 1pc

M8 Nut x 12pcs

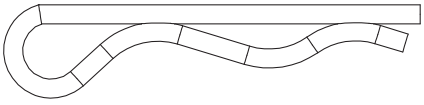
M10 Nut x 2pcs

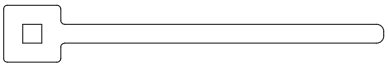

M8 Hand Knob x 1pc

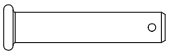

O type pin x 2pcs


Square pin x 1pc

2.5x45 B type pin x 2pcs


5x100 B type pin x 2pcs


Ribbon 2pcs


Tine axis pin x 2pcs

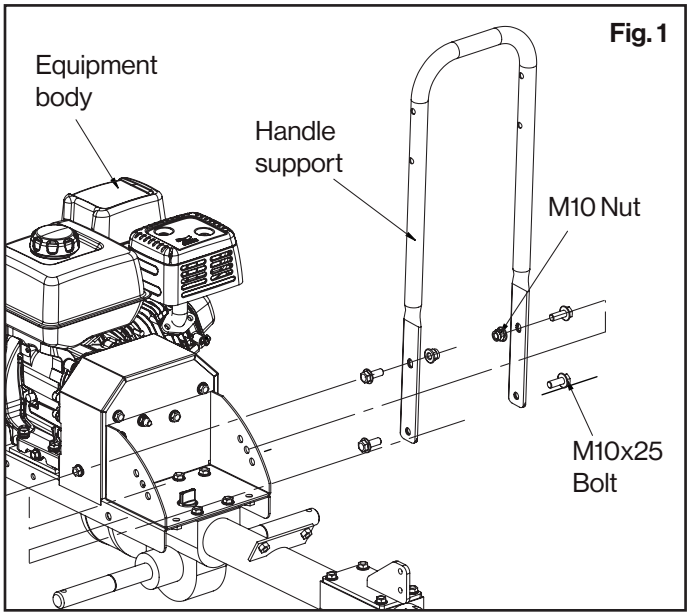
4. ASSEMBLY

READ THROUGH COMPLETELY FIRST BEFORE STARTING YOUR ASSEMBLY

Required tools for using this product: 2 adjustable wrenches.

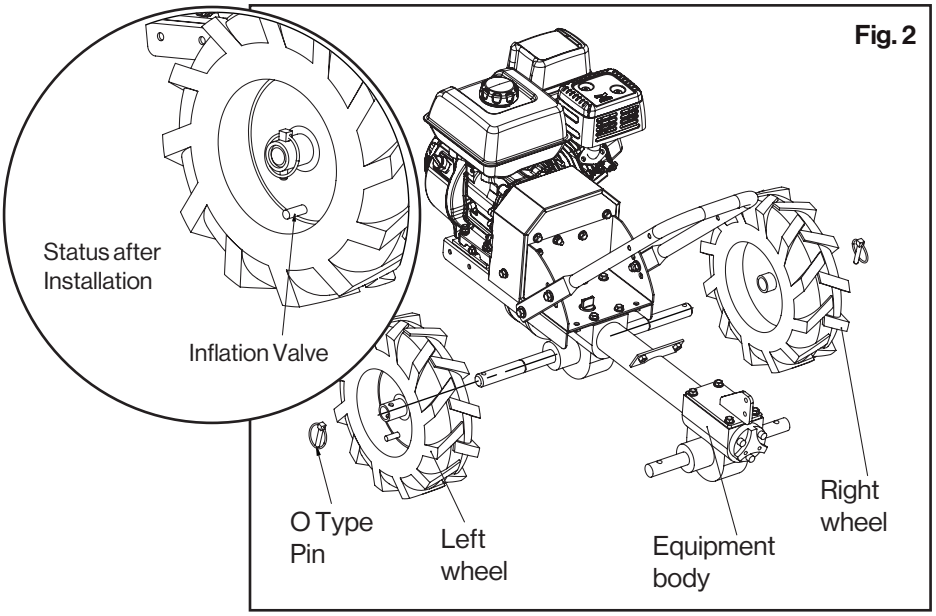
1. Using 4 M10x25 bolts and 2 M10 nuts, mount the Handle support to the blueprint hole locations on the Equipment body.**(See Fig. 1)**

Fig. 1



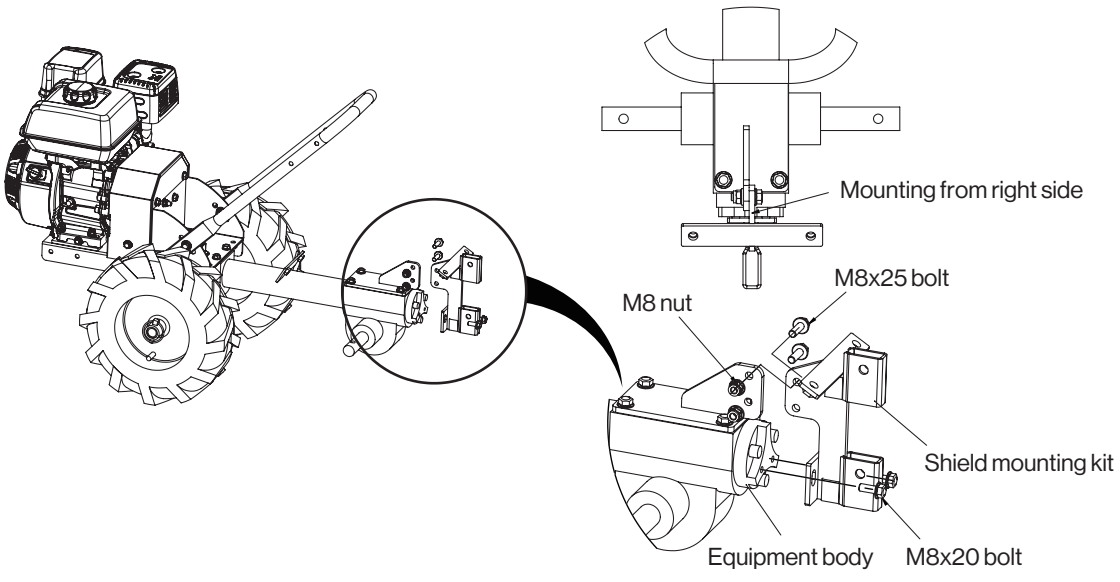
2. Install the Left wheel and the Right wheel onto the axle ends of the Equipment body and secure with cotter pins.
   Note: After installation, ensure the tire inflation valve faces outward; do notinstall the wheels in reverse. (See Fig. 2)

Fig. 2



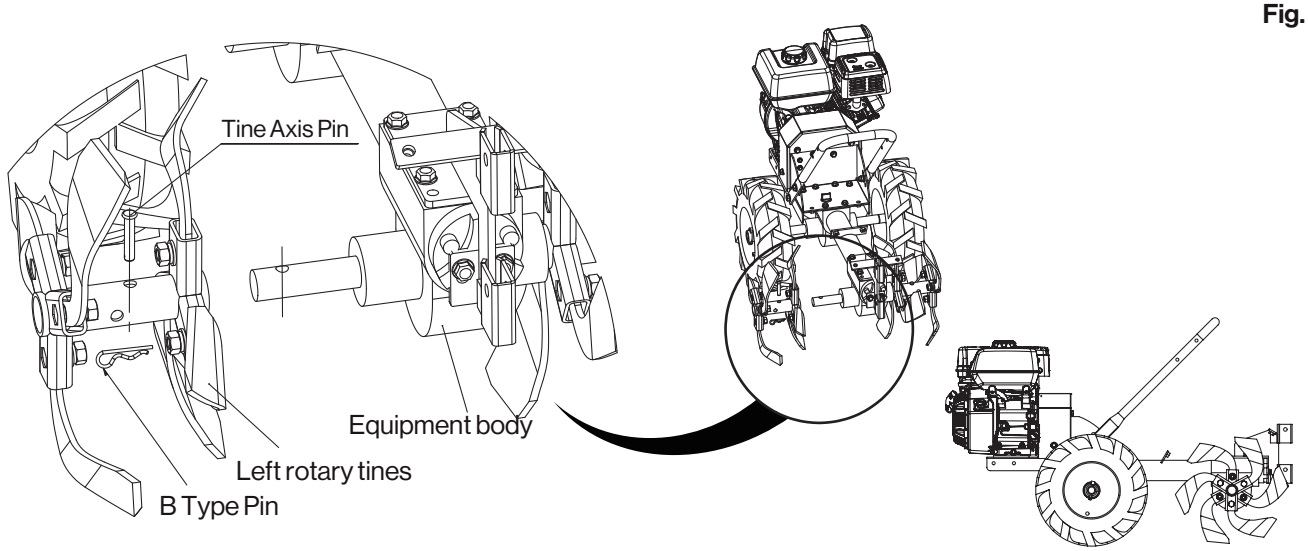
3. Install the shield mounting kit to the equipment body by using 2 M8x25 bolts, 2 M8 nuts, and 2 M8x20 bolts.**(See Fig. 3)**

Fig. 3

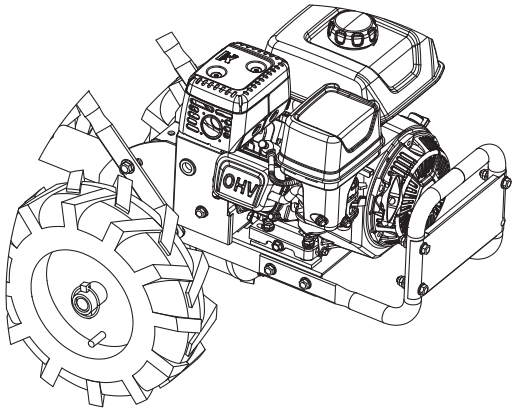


4. With the axle pin and a 2.5x45 B-type pin, attach the Left rotary tines to the power shaft of the Equipment body via its inner mounting holes. Install the Right rotary tines in the same manner.
Note: Ensure the tiller blades are not installed backward. If reversed, the tiller won't operate correctly. After installation, verify the direction of rotation of the tiller blades as shown in the diagram.(See Fig. 4)

Fig. 4



5. Secure the Engine protector to the engine base of the Equipment body using 4 M8x20 bolts and 4 M8 nuts.**(See Fig. 5)**



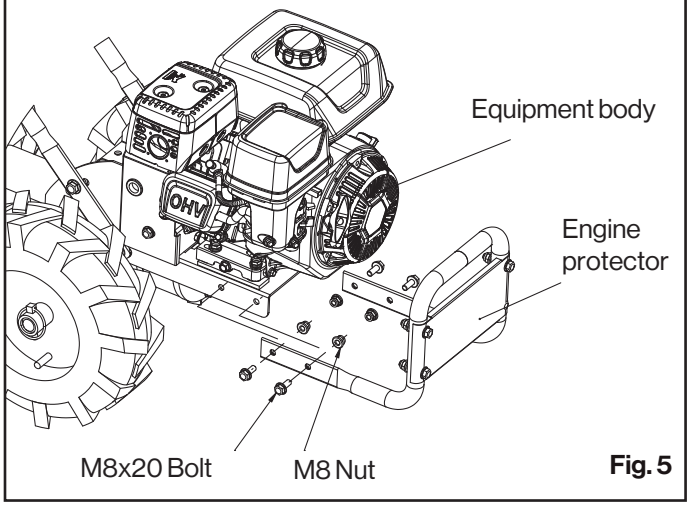


Fig. 5

6. Position the Tine shield in its slot, followed by the Drive shaft cover plate. Secure with 6 M8x20 bolts.**(See Fig. 6)**

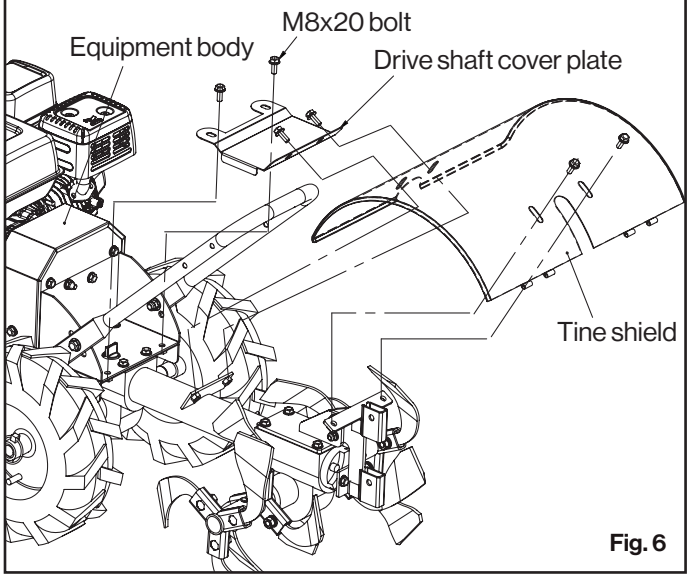
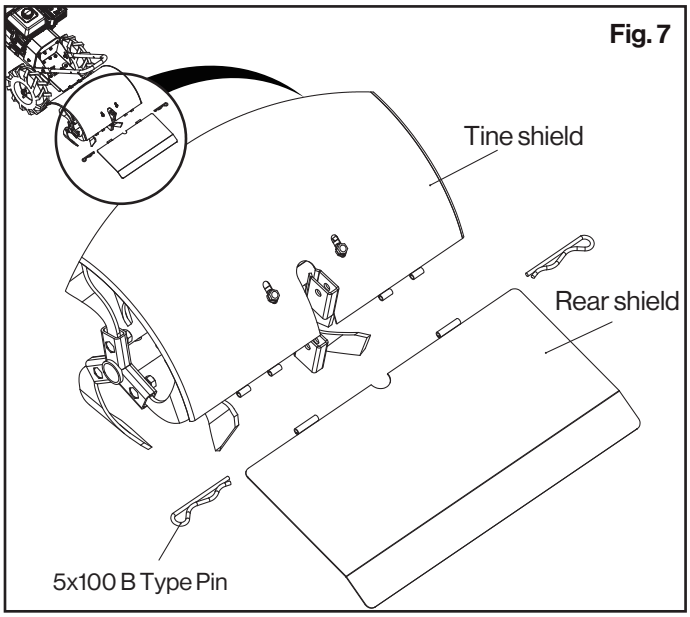


Fig. 6

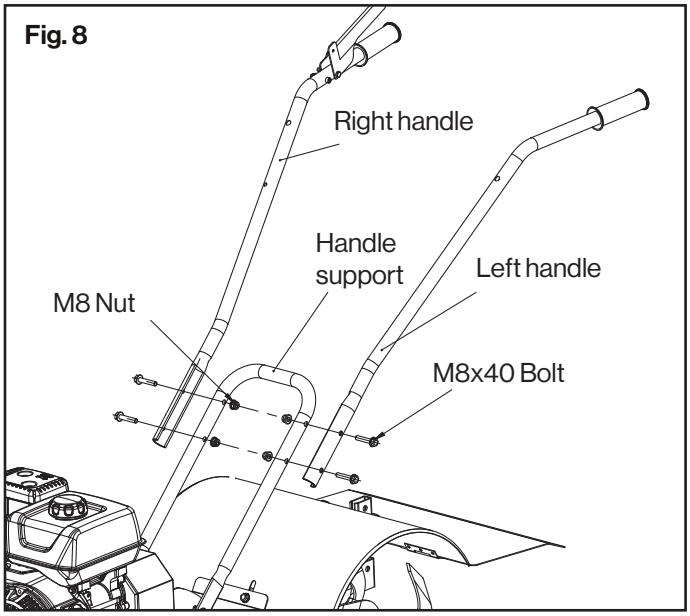
7. Using two 5x100 B-type pins, mount the Rear shield onto the Tine shield.**(See Fig. 7)**

Fig. 7



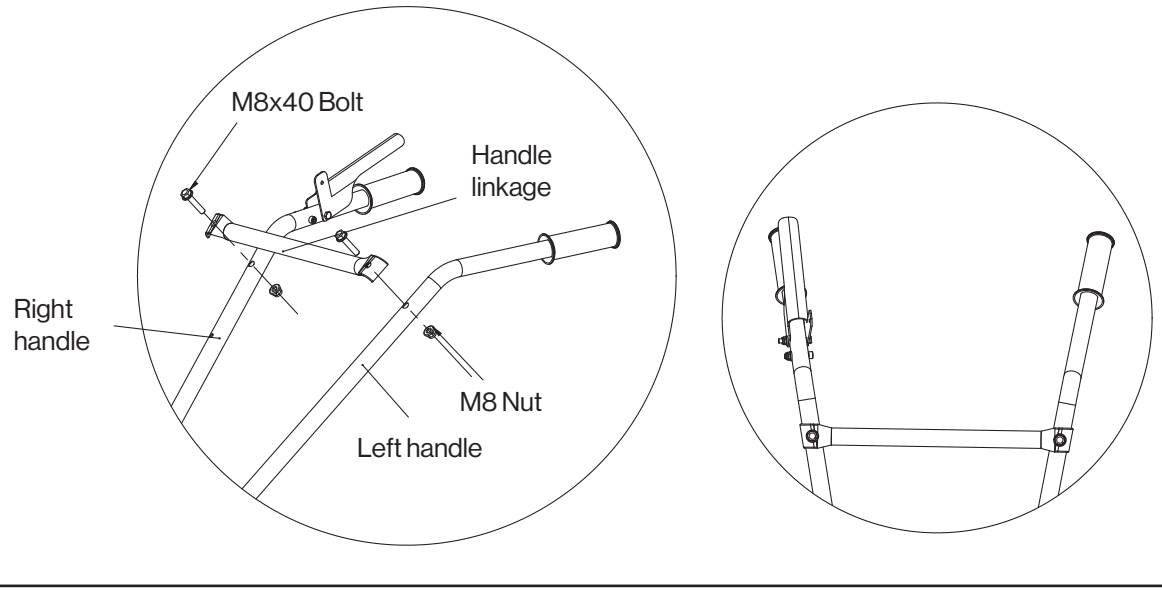
8. Using 4 M8x40 bolts and 4 M8 nuts, attach the Left handle and the Right handle to the Handle support . Ensure you don't reverse the two handles. **(See Fig.8)**

Fig. 8



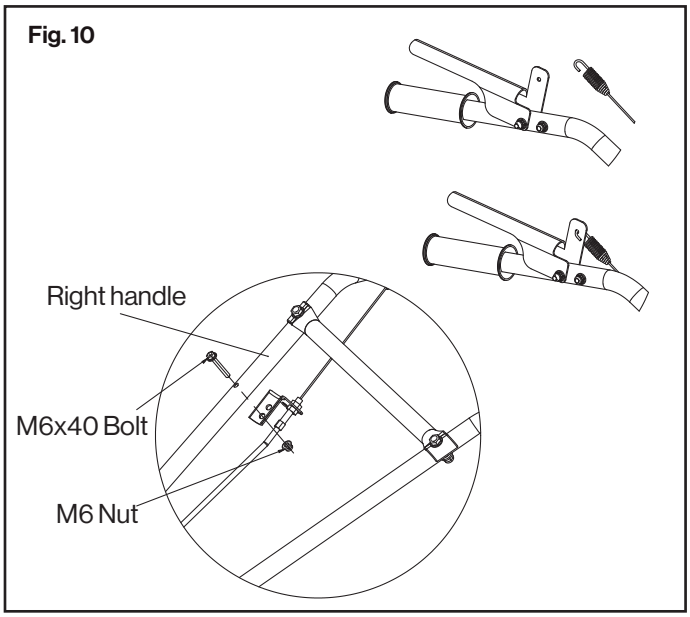
9. Connect the Left handle and the Right handle with the Handle linkage and fasten using two M8x40 bolts and two M8 nuts. Pay attention to the orientation of the protectivecrossbeam during installation.**(See Fig. 9)**

Fig. 9



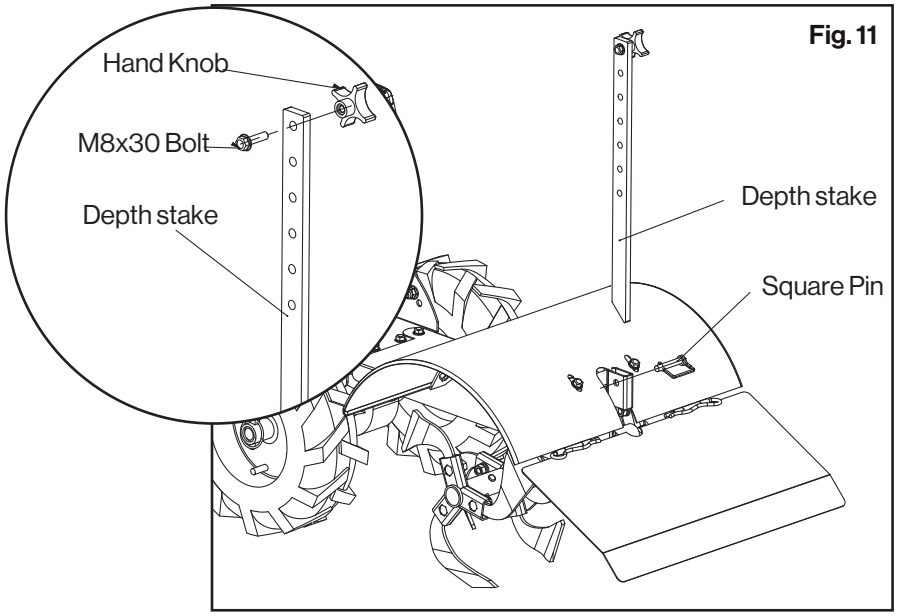
10. Insert the spring end of the clutch cable into the mounting hole of the clutch handle and secure the clutch cable to the Right handle using one M6x40 bolt and one M6 nut.
Note: As illustrated, when installing the clutch cable, use the lower mounting hole of the clutch cable bracket. If the wrong hole is used, the clutch handle will become ineffective.
(See Fig. 10)

Fig. 10



11. Using an M8x30 bolt, secure the handle nut to the top hole position of the Depth stake. Then insert the Depth stake into the tiller mounting position, choosing the appropriate depth and secure with a square pin.**(See Fig. 11)**

Fig. 11



5. OPERATION

Adding Engine Oil

⚠WARNING

OIL HAS BEEN DRAINED BEFOR SHIPPING.
Failure to fill engine sump with oil before starting engine will result in permanent damage and void engine warranty.
Add oil according to Engine Manual.

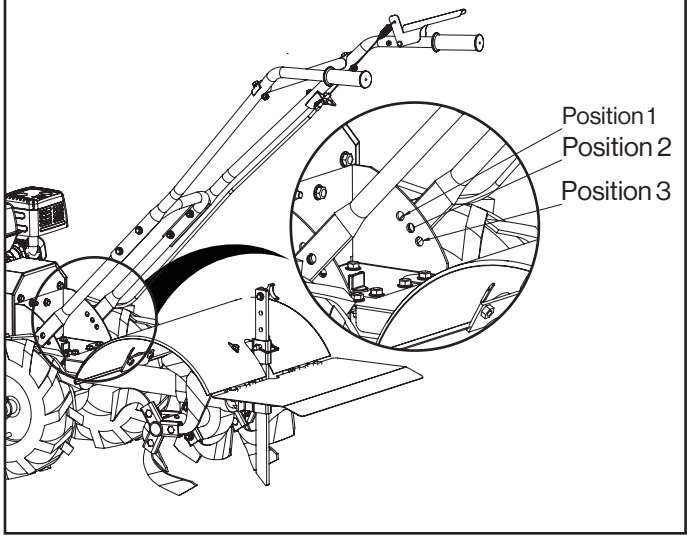
Adding Fuel

1. Fill the fuel tank as instructed in the separate Engine Manual.
2. More detailed description of the engine operation and all related precautions and procedures can be found in the Engine Manual.

Adjusting Handle Height

This tiller allows you to adjust the handle height based on your preference, offering three different adjustment positions as shown in the figure below.**(See Fig. 12)**

Fig. 12



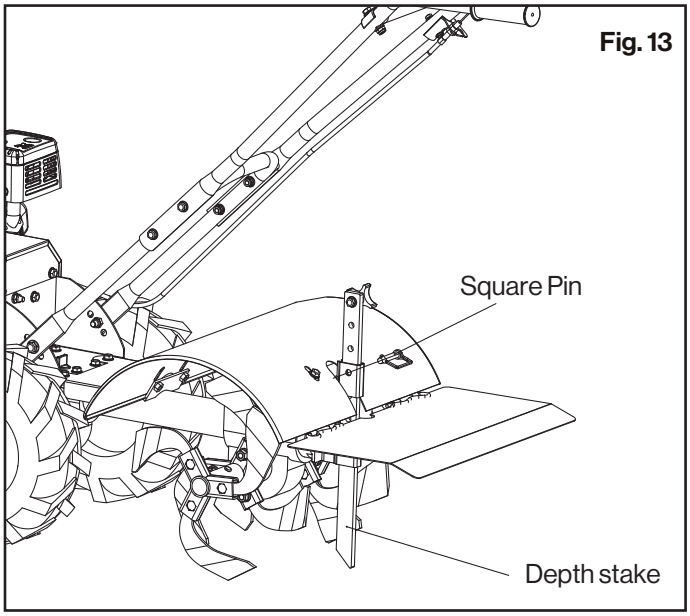
Adjusting Tillage Depth

The tilling depth can be adjusted based on different working conditions. Remove the square pin from the Depth stake to adjust its height. As illustrated, increasing the height of the Depth Stake will result in deeper tilling, whereas lowering it will result in shallower tilling.**(See Fig. 13)**

⚠WARNING

Do not adjust the Depth Stake while the machine is in operation.

Fig. 13



Starting Engine

⚠WARNING

Ensure the work environment is safe and appropriate before starting the engine. Adjust the throttle to the appropriate level.

1. Move the fuel valve lever to the ON position.
2. To start a cold engine, move the choke to the CLOSE position. To restart a warm engine, leave the choke lever in the OPEN position.
3. Move the throttle lever away from the SLOW position, about 1/3 of the way toward the FAST position.
4. Turn the engine switch to the ON position.
5. Operate the starter.

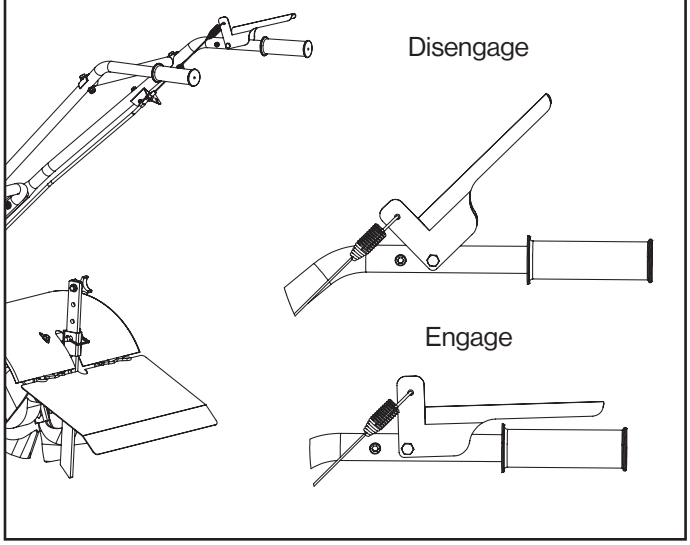
Operating Tiller

Since the engine started, you can control whether the tiller rotates by using the clutch handle, when you squeeze the clutch handle, the tilling unit will begin to rotate; releasing the clutch handle will immediately stop the tilling unit from rotating. When you are done working, release the clutch handle and shut down the engine.

⚠WARNING

Do not touch the tines while they are rotating, as this could result in injury.Never use anything to secure the clutch handle in an engage state, as this may result in serious personal injury or product damage.
(See Fig. 14)

Fig. 14



Stopping Engine

⚠WARNING

Before you start turning off the engine, make sure the clutch is disengaged
1. Move the throttle lever to the SLOW position.
2. Let engine idle for one or two minutes.
3. Turn the engine switch to the OFF position.
4. Turn the fuel valve lever to the OFF position.

⚠WARNING

To stop the engine in an emergency, simply turn the engine switch to the OFF position.

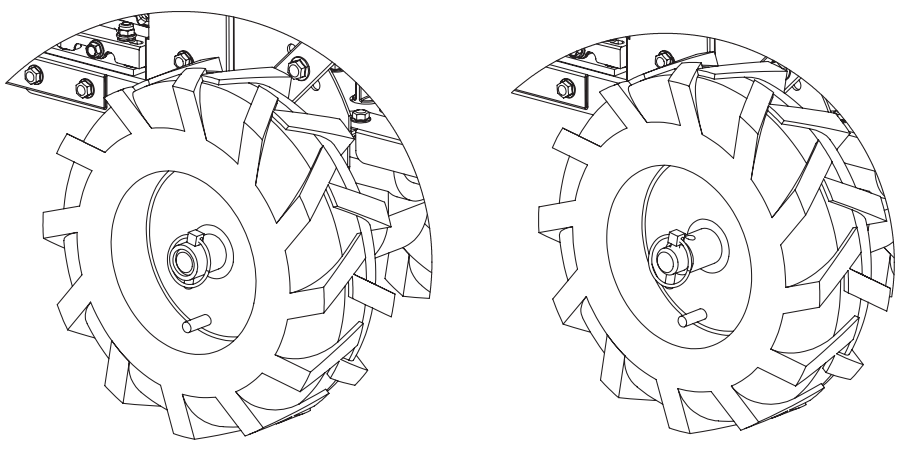
Transferring Tiller

To transfer this tiller without starting the engine, simply attach the O-pin individually to the axle, the wheels will be in neutral as shown in figure.15. Then, you can push the tiller freely and easily.

⚠WARNING

Before starting tilling work, please ensure that the wheels are fixed in the drive mode by O-pins, as shown in the figure below.(See Fig. 15)

Fig. 15



6. MAINTENANCE

Maintaining your rear tine tiller will ensure long life to the machine and its components.
PREVENTIVE MAINTENANCE

⚠WARNING

Any maintenance or repairs on the tiller must be conducted with the engine switch in the OFF position.Never attempt to clear debris while the equipment is running, even if the tiller blades are not rotating. This poses a serious risk of injury.

1. After each use, promptly clear any debris or wrapped material around the blades. Failure to clean can lead to decreased efficiency during your next use. Severe entanglement may even damage the tiller.
2. Before each use, regularly check that all nuts and bolts are securely tightened to ensure the machine operates safely.

NOTE: Vibrations from engine operation can loosen bolts and nuts.

3. Periodically check the engine oil level. Adequate oil ensures smoother engine operation.

⚠WARNING

Never operate the tiller with low oil levels. This can damage the engine and drastically reduce its lifespan.

4. After the tiller has been used for a period of time, you need to regularly check the state of the grease, such as the colour, consistency, the presence of contaminants, etc., and add or replace the grease according to the actual situation.

⚠NOTE

Grease Specify semi-fluid grease labeled 000# ; Try not to fill with liquid lubricant, there is a risk of lubricant leakage in prolonged use.

⚠WARNING

Never use grease other than the specified grade, as this will result in the direct scrapping of the gearbox.
If you need to change the grease, we recommend your authorised dealer to have this service carried out by a professional.

⚠WARNING

Incorrect grease condition will lead to a decline in the efficiency of future use, and in serious cases, it may even damage the transmission box, making the rotary tiller unusable.

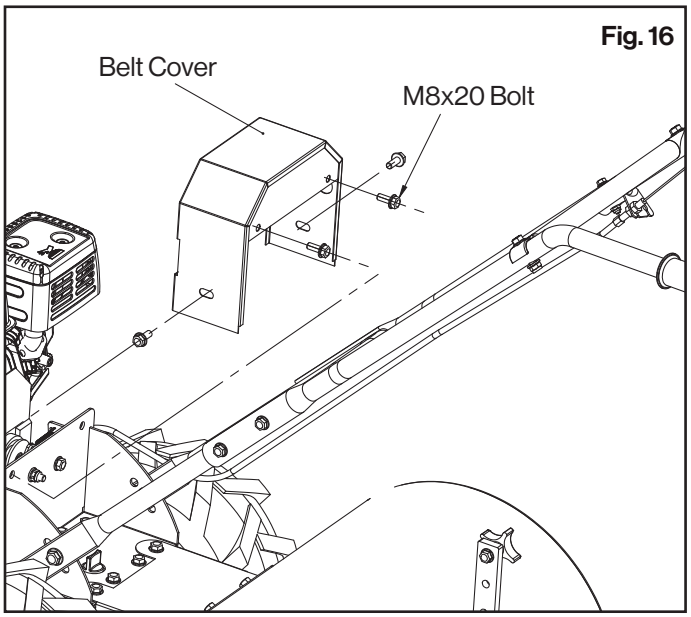
5. Regularly inspect and clean components like the spark plug and muffler, following the manufacturer's guidelines. Replace if damaged.
6. Checking the Belt system

To ensure optimum power transfer from the engine to the gearbox, the belt system must be in good condition and operate under proper tension.

7. Replacement of belt

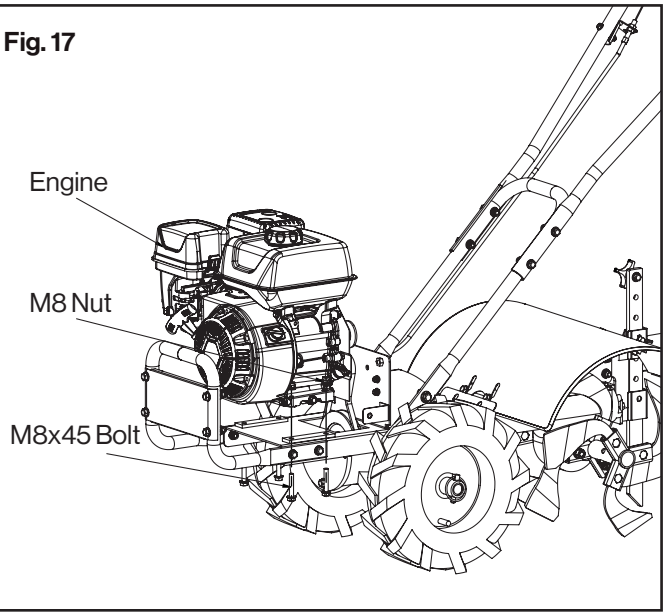
7.1 Remove the belt cover by loosen the 4 M8x20 bolts. **(See Fig. 16)**

Fig. 16



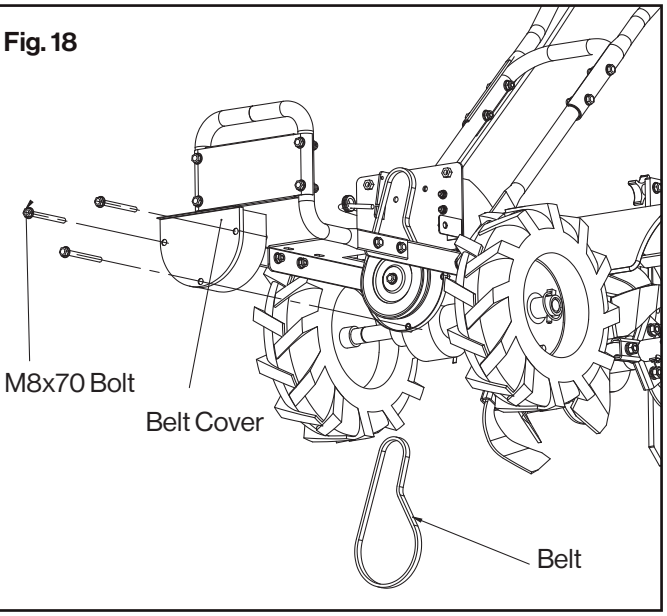
7.2 Loosen all four engine fastening bolts (M8x45 bolts) and M8 nuts and remove the engine.**(See Fig. 17)**

Fig. 17



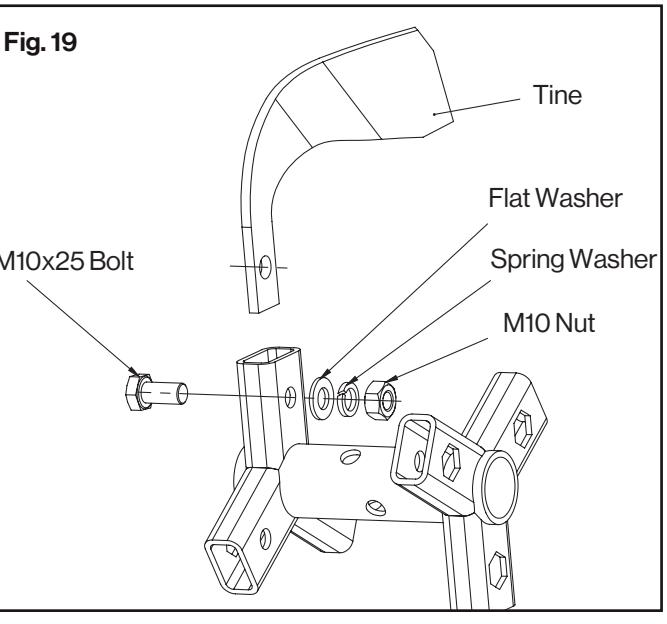
7.3 Remove the belt cover by loosen the 3 M8x70 bolts, , and you can then access and replace the old belt from below.
After replacing the belt, reassemble the engine in the order of ③→②→①.**(See Fig. 18)**

Fig. 18



8. Replacement of tines
When replacing tilling blades, always use identical replacements. This product has both left and right tilling blades. Installing one incorrectly will drastically reduce the efficiency of the tiller and may cause damage.**(See Fig. 19)**

Fig. 19



7. STORAGE

If the rear tine tiller will not be used for a period longer than 30 days, follow the steps below to prepare your unit for storage.

1. Drain the fuel tank completely. Stored fuel containing ethanol or MTBE can start to go stale in 30 days. Stale fuel has high gum content and can clog the carburetor and restrict fuel flow.
2. Start the engine and run until it stops. This helps prevent gum deposits from forming inside the carburetor and possible engine damage.
3. While the engine is still warm, drain the oil from the engine. Refill with fresh oil of the grade recommended in the Engine Manual.
4. Use clean clothes to clean off the outside of the machine and to keep the air vents free of obstructions.

⚠WARNING

Do not use strong detergents or petroleum based cleaners when cleaning plastic parts. Chemical can damage plastics.

5. Inspect for any loose or damaged parts. Repair or replace damaged parts and tighten loose screws, nuts or bolts.
6. Store your unit on flat ground in a clean, dry building that has good ventilation.

⚠WARNING

Do not store the machine with fuel in a non-ventilated area where fuel fumes may reach flame,sparks, pilot lights or any ignition sources.

⚠WARNING

Machine may fall and cause damage or injury if lifted incorrectly. Lift using handles at base of plate.

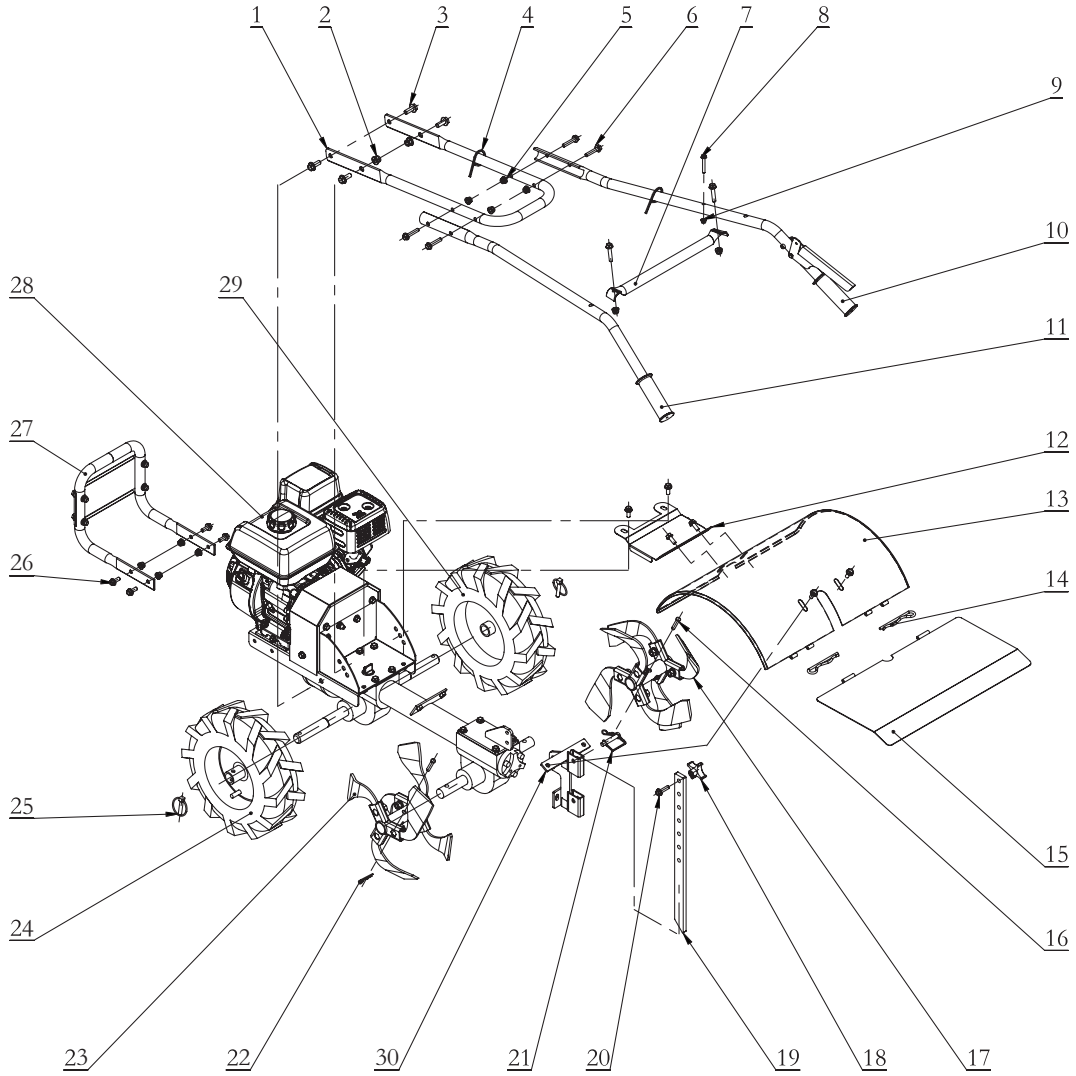
7. Warranty

Warranty covers twelve (12) months for workmanship of the product, except for wearing parts.
Warranty period starts from the product purchase date.
Warranty covers material quality and workmanship only. Warranty does not cover product for issues caused by improper usage or any operation not in accordance with the specifications of this manual.
Any modification or tampering with the product in any way voids the warranty.

8.TROUBLE SHOOTING

Problem(s)	Possible Cause	Corrective Action
Engine fails to start.	1. Engine and/or Fuel valve is not in ON position. 2. Out of fuel or stale fuel 3. Spark plug wire is disconnected. 4. Choke lever is not in CLOSE position. 5. Blocked fuel line. 6. Fouled spark plug. 7. Engine Flooding. 8. Belt tension lever is engaged.	1. Attach spark plug wire securely to spark plug. 2. Fill with clean, fresh gasoline. 3. Engine and Fuel valve must be in ON position. 4. Choke level must be in CLOSE position for a cold start. 5. Clean fuel line. 6. Clean, adjust gap, or replace. 7. Wait a few minutes to restart, but do not prime. 8. Disengage the belt tension lever.
Engine runs erratically.	1. Spark plug wire is loose. 2. Unit running with Choke lever in CLOSE position. 3. Blocked fuel line or stale fuel. 4. Vent plugged. 5. Water or dirt in fuel system. 6. Dirty air cleaner. 7. Improper carburetor adjustment.	1. Connect and tighten spark plug wire. 2. Move choke lever to OPEN position. 3. Clean fuel line. Fill tank with clean, fresh gasoline. 4. Clear vent. 5. Drain fuel tank.Refill with fresh fuel. 6. Clean or replace air cleaner. 7. Refer to engine manual.
Engine overheats	1. Engine oil level low. 2. Dirty air cleaner. 3. Air flow restricted. 4. Carburetor not adjusted properly.	1. Fill crankcase with proper oil. 2. Clean air cleaner. 3. Remove housing and clean. 4. Refer to engine manual.
Engine will not stop when throttle control is positioned at stop, or engine speed does not increase properly when throttle control is adjusted.	1. Debris interfering with throttle linkage. 2. Importer throttle linkage adjustment.	1. Celan dirt and debries. 2. Refer to engine manual to check and adjust throttle linkage.
Tiller is difficult to control when tilling (machine jumps or lurches forward)	1.Improper tilling depth setting. 2.Too heigh engine speed on hard ground.	1. Raise the Depth Stake to the proper position to allow the rototiller to plow deeper. 2. Set the throttle lever at lower speed.
Tine do not engage.	1. Foregin debris is lodged in between tines. 2. Belt worn and /or stretched.	1. Stop tiller completely, remove and discard any foreign debris from tines. 2. Replace belt.

9. EXPLODED AND PARTS LIST



No.	Description	Qty.	No.	Description	Qty.
1	Handle support	1	16	Tine axis pin	2
2	M10 nut	2	17	Right rotary tines	1
3	M10*25 bolt	4	18	M8 Hand knob	1
4	Ribbon	2	19	Depth stake	1
5	M8 nut	10	20	M8*30 bolt	1
6	M8*40 bolt	6	21	Square pin	1
7	Handle linkage	1	22	2.5*45 B type pin	1
8	M8*40 bolt	1	23	Left rotary tines	2
9	M6 nut	1	24	Left wheel	1
10	Right handle	1	25	O type pin	2
11	Left handle	1	26	M8*20bolt	10
12	Drive shaft cover plate	1	27	Engine protector weldment	1
13	Tine shield	1	28	Equipment body	1
14	5*110 B type pin	2	29	Right wheel	1
15	Rear shield	1	30	Shield mounting kit	1

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