

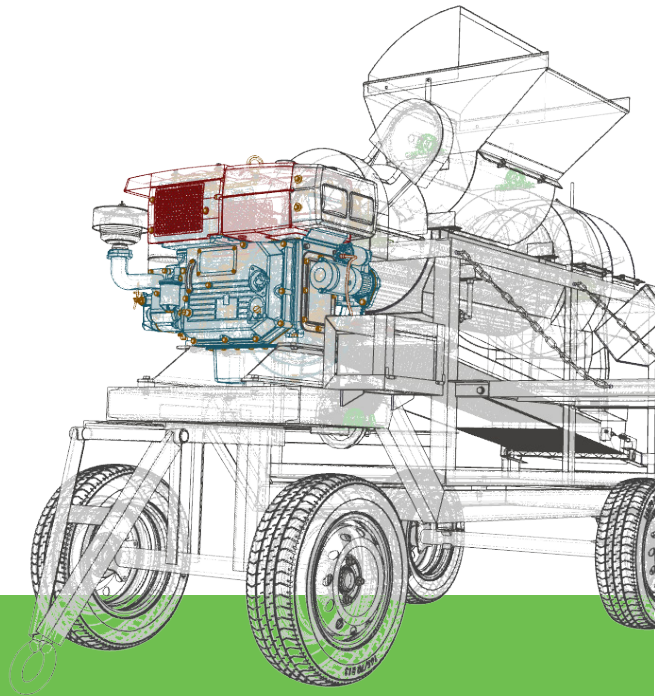


**ST6000 Gen II
Review Video**

Multi-Crop Thresher ST6000 series

Product Manual

A Comprehensive Guide to Operating and Maintaining
Your Thresher



Preface

This manual contains information on how the SAYeTECH Multi- Crop Thresher (SMT) operates and functions; general safety precautions in the operation of the machine and the standard operating procedures, guidelines and instructions. It also contains information on general maintenance and method for troubleshooting.

It is a stock of knowledge for training newly recruited operators, and could serve as a reference material for refresher programmes for machine operators using the multicrop thresher.

The SMT Product Manual could also be useful to farm managers, machine supervisors, and mechanics.

This SAYeTECH Multi-crop Thresher User Manual remains the property of SAYeTECH Company and any unauthorized commercial use, or reprint for sale, or for any other purpose, is strictly banned.

Some of the information in this document have been adopted from the learning material of the Agricultural Mechanization Training Centre (AMTCs) under the Agricultural Engineering Services Directorate (AESD) of the Ministry of Food and Agriculture (MoFA); the operator manual for the SAYeTECH Multi-crop Thresher and the Chang Fa ZS1115G diesel engine operation manual.

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Providing Farmers With Efficient Agricultural Equipment



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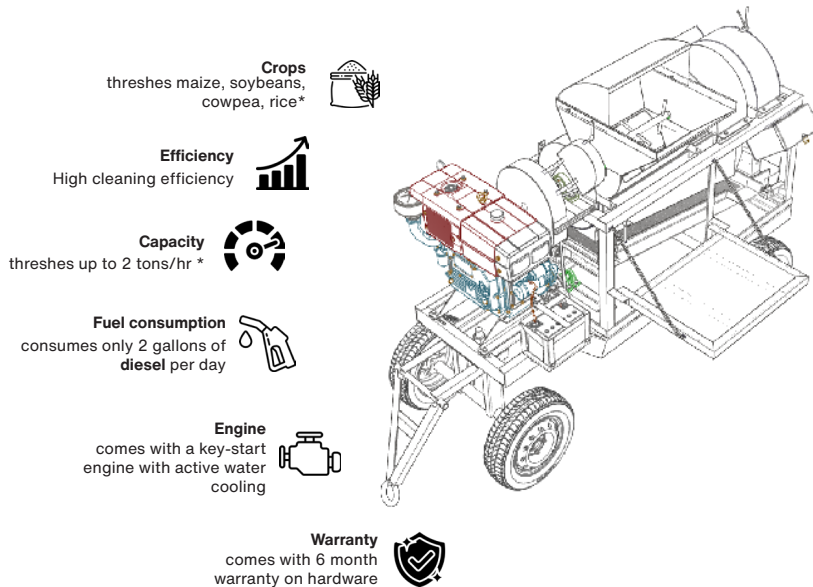
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Module 1

Parts Of The MCT ST6000 Gen II

Technical Specifications

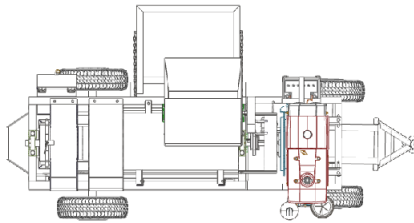
Threshing element	Spikes
Cleaning mechanism	Suction type
Threshing drum	200mm diameter 915mm length
Max speed of threshing drum	1800rpm*
Net weight	670kg
Dimensions	3m x 1.7m x 2.1m
Engine type	18 to 24 HP Diesel Engines*
Crop Flow	Axial
Feeding type	Feed-in



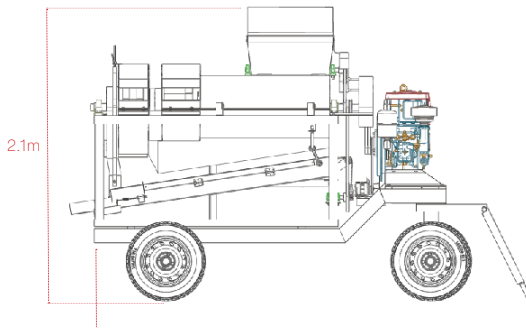
*the output for crops varies

**capacity depends on the crop being threshed

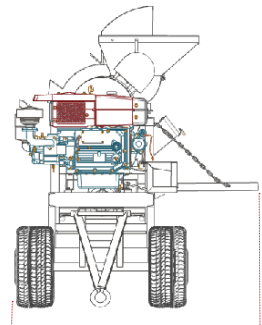
Parts Of The MCT ST6000 Gen II



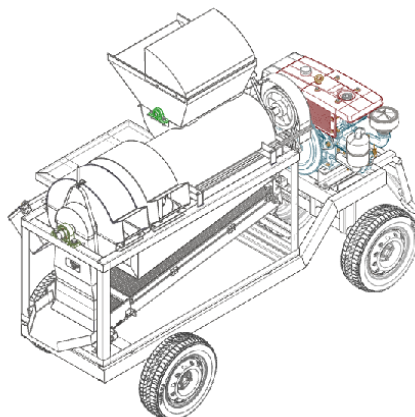
Top View



Right View

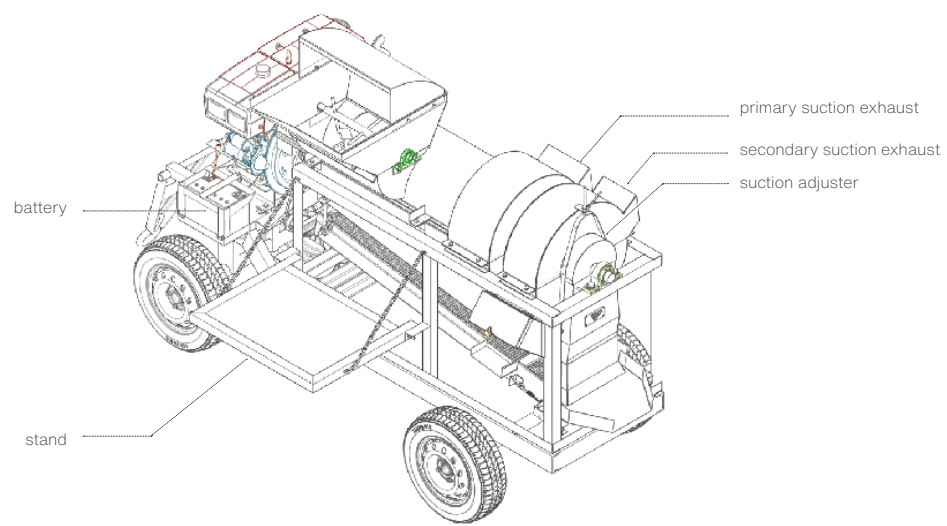
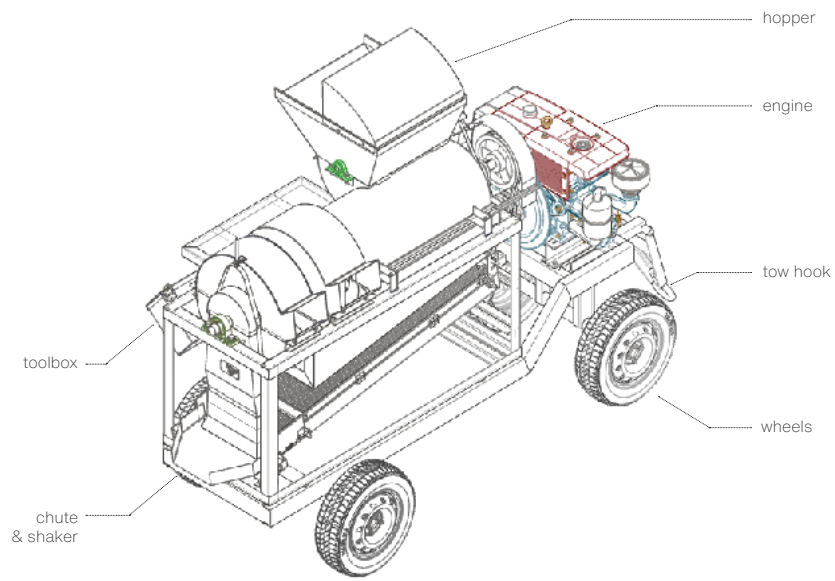


Front View

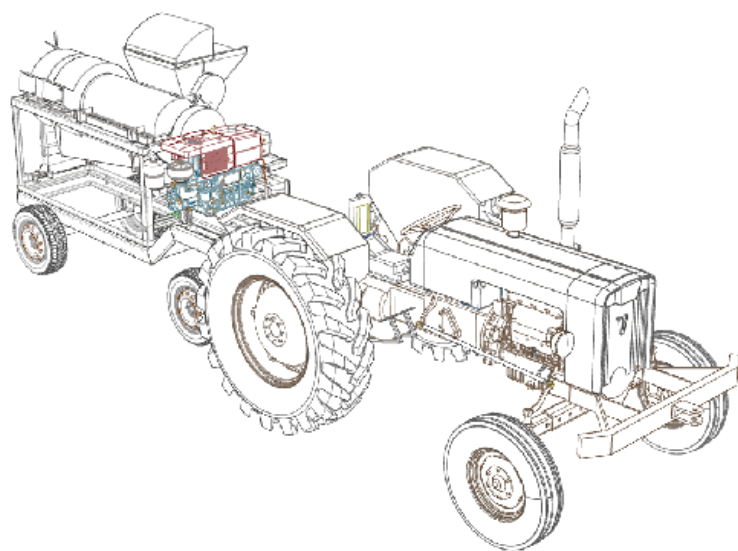


Isometric View

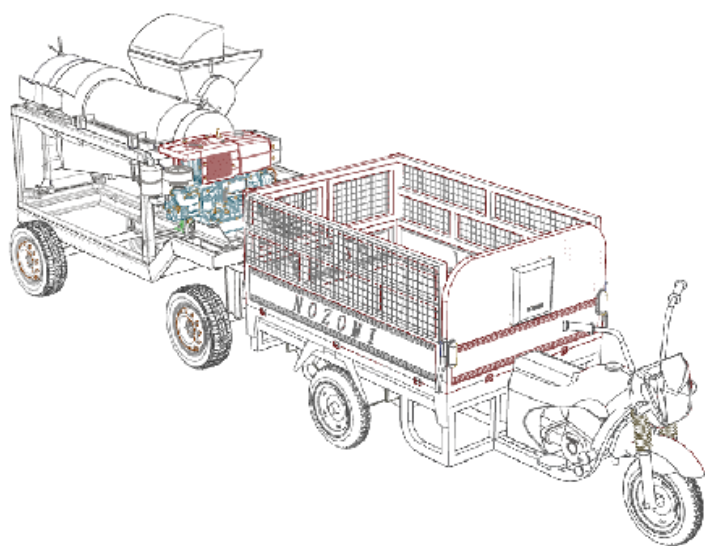
Main Features



Part	Function
toolbox	for storing the tools and accessories
chute	exit for collecting threshed grains
hopper	the harvested crop are fed into the thresher through this opening
engine	provides the rotational motion to run the threshing
tow hook	serves as the point for attaching the thresher to a vehicle
battery	provides electric power needed to start the engine by key
stand	serves as the platform for the machine to stand while feeding the thresher with crops
primary suction exhaust	allows the heavy chaff to leave the thresher
secondary suction exhaust	allows lighter chaff to leave the thresher
shaker assembly	moves to allow the sieving and separation of the grains from the chaff
suction adjuster	controls the amount of lighter chaff sucked from the grain stream
alternator	provides power to keep the battery level charged



Can be towed by a tractor



Can be towed by tricycle

Module 2

General Maintenance And Safety Precautions

The objective of this module is to ensure utmost safety of the operators and other people present to avoid accidents and damages and additionally give information on practices that ensure efficient operation and maintenance

General Safety Precautions

To ensure safety during the operation of the thresher, the operator is required to:

1. **Wear appropriate personal protective clothing, PPE;** including sturdy work boots, gloves, goggles, and hearing protection.
2. **Wear close-fitting clothing and avoid loose items** that could get caught in moving parts.
3. **Keep a safe distance from the thresher's moving parts** and discharge area during operation.
4. **Be cautious of hot surfaces on the thresher** such as the exhaust of the engine
5. **Ensure that the exhaust/discharge streams are pointed away from people** during operation
6. **Turn off the thresher and wait for all moving parts to come to a complete stop** before performing any maintenance or adjustments
7. **Do not operate the thresher on the steep or uneven terrain** that may cause that may cause instability.
8. Ensure that only **diesel** fuel is used for the engine.



Specific Maintenance Of The ST6000 Gen II

Daily Maintenance

1. Check engine oil level using the dip stick.
2. Inspect and tighten loose bolts and moving parts.
3. Grease all bearings and moving parts before or after use.
4. Avoid depleting all fuel (**diesel**) before refilling fuel tank. It is recommended you have extra fuel before starting operation.
5. Clean the air filter element.
6. Clean the thresher after use to get rid of chaff.

Weekly Maintenance

1. Check tyre pressure and inflate when necessary.
2. Remove air filter element and blow dust off using compressed air under low pressure.
3. Inspect the thresher to ensure that all parts including the belts, are in good condition without tear and cracks.
4. Drain cooling water to dredge water channel and remove dirt, and replace with clean water or coolant

Monthly Maintenance

1. Open threshing drum to inspect the following:
 - a. Inner sieve: check for breaks and tears.
 - b. Spikes: Check for damage on spikes.
2. Contact the SAYeTECH to fix all broken parts of sieve and loose spikes or replace damaged spikes.
3. Check primary and secondary suction systems for possible damages. Contact SAYeTECH to fix all breakages.

Module 3

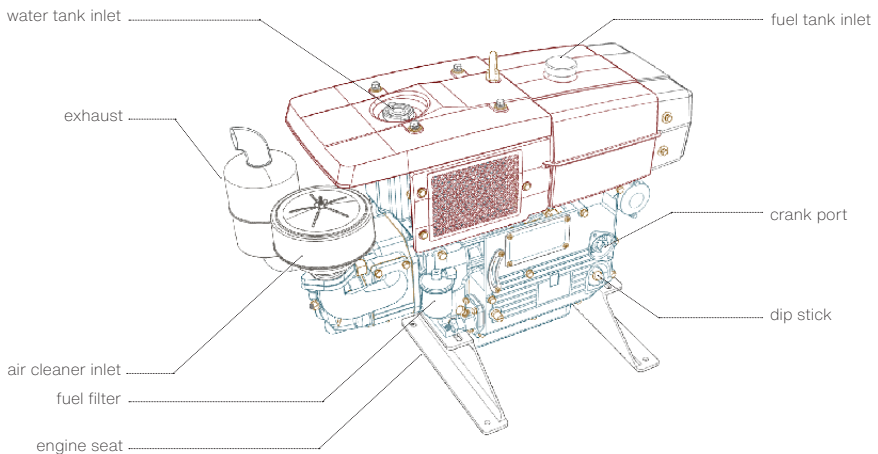
Operation Guidelines, Procedures and Instructions

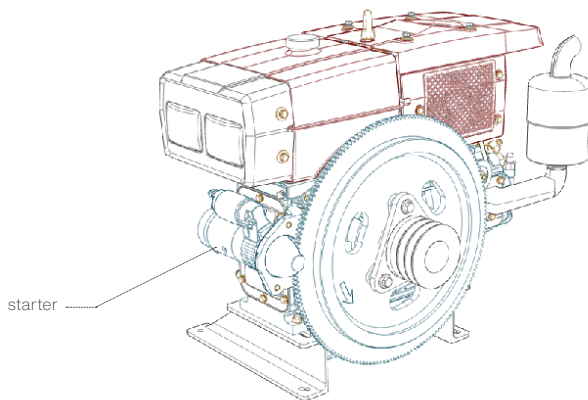
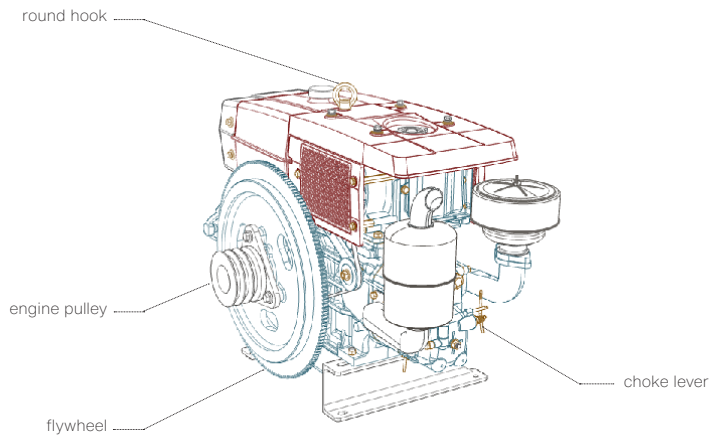
This module covers the initial preparation, starting and stopping protocol, recommended running procedure before, during, and after threshing.

Before You Start

1. Ensure the exhaust chutes of the primary and secondary suction are in line with the wind's direction to allow the wind to carry the chaff away from the engine inlet.
2. It is recommended that you cover the immediate surroundings of the thresher with tarpaulin material.
3. Check the engine's water/coolant level, fuel and oil level and ensure all levels are at the optimum levels.
4. Check that all belts and battery connections are in place.
5. Make sure all bolted connections are tight.
6. Ensure that bearings are greased before operating the thresher

Parts Of The Engine





Starting the Engine Manually

1. Ensure that the speed-control knob is on the centre mark or below it.
2. Place the crank arm in the crank port
3. Hold down the choke lever
4. Turn the crank gradually and increasingly faster after each cycle until you see smoke from the exhaust.
5. Upon seeing smoke after a few more turns, quickly release the choke lever then remove promptly the crank arm from the crank port as the engine begins to run.

Check the following link to watch a video on starting your engine manually.

https://drive.google.com/file/d/15TaEp5_A9Uj5OkKTVFD0L_2DcT9Ex-kb/view?usp=sharing

*jump to 15:50 min in the video

Starting the Engine With A Key

1. Ensure that the speed-control knob is on the centre mark or below it.
2. Hold down the choke lever
3. Turn the key to the 'start' position. At this point a bulb would light indicating the connections to the battery are fine.
4. Turn the key further to start the engine and release the choke lever to allow the engine run

Check the following link to watch a video on starting your engine with a key.

https://drive.google.com/file/d/15TaEp5_A9Uj5OkKTVFD0L_2DcT9Ex-kb/view?usp=sharing

*jump to 16:55 min in the video

Operating The Thresher

1. After starting the engine, allow the engine to run for about 5 minutes at a lower speed, then gradually increase to the optimum speed of running for the crop to be threshed.
2. You will need about three people to do threshing optimally. The operator who feeds the thresher, another who collects the crop to be threshed; and the last person who would either be collecting the threshed grains.
3. While threshing is ongoing, it is advised that the operators pay attention to the sound and cooling of the engine.

Check the following link to watch a video on starting your engine with a key.

https://drive.google.com/file/d/15TaEp5_A9Uj5OkKTVFD0L_2DcT9Ex-kb/view?usp=sharing

*jump to 29:19 min in the video

Stopping The Engine of The Thresher

1. When threshing is completed, allow thresher runs for about 5 more minutes to evacuate any debris within the chamber.
2. Pull the speed-control up above the centre mark and hold it there for a while as the speed of the engine reduces.
3. Hold on the choke lever as the engine slows down to a stop and finally comes to a stop, then release the choke lever

Check the following link to watch a video on starting your engine with a key.

https://drive.google.com/file/d/15TaEp5_A9Uj5OkKTVFD0L_2DcT9Ex-kb/view?usp=sharing

*jump to 34:25 min in the video

Post Operation Activities

1. Allow the heated parts to cool before carrying on any subsequent activities
2. Tighten any loose bolts and moving parts.
3. Clean the thresher after use.



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Sieve Replacement Guide

1. Remove the two bolts on the side of the shaker
2. Open the flange member holding down the sieve
3. Pull the sieve out and replace with the desired sieve
4. Clamp the flanged member back and tighten the two bolts back.

Check the following link to watch a video on starting your engine with a key.

https://drive.google.com/file/d/15TaEp5_A9Uj5OkKTVFD0L_2DcT9Ex-kb/view?usp=sharing

*jump to 31:41 min in the video



**ST6000 Gen II
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Module 4

Troubleshooting Methods

This module addresses starting difficulties, power insufficiency, engine stall, reduced efficiency of thresher and other problems that may interfere with the smooth operations of the thresher.

Problem	Possible Cause	Solution
Thresher is choked	1. Incorrect RPM of threshing 2. High rate of feeding 3. Wrong sieve in shaker 4. Crop is not well dried/ moisture content still higher than recommended	1. Set proper RPM on engine 2. Reduce feed rate 3. Change to proper sieve according to sieve guide
Thresher breaks grains	1. Engine speed is high 2. Concave clearance is small	1. Reduce engine speed 2. Contact SAYeTECH to increase concave clearance
Threshing drum speed fluctuates	Loose belts	Replace loose belts
Grains not coming out clean enough	1. Shaker speed is low 2. Secondary suction is reduced 3. Crop is not well dried/moisture content still higher than recommended	1. Increase shaker speed 2. Adjust secondary suction down to increase suction 3. Allow crops to dry well
Thresher making excessive noise	4. Loose bolts and nuts 5. Moving parts not lubricated	1. Tighten bolts and nuts 2. Lubricate all points that need lubrication 3. Contact SAYeTECH if the above do not resolve issues

Module 5

Warranty And Customer Information

This module spells out the warranty terms, including coverage duration and what actions may void warranty. It also provides information on frequently asked questions (FAQs).

Warranty Information

SAYeTECH offers a limited product warranty valid for 6 months from the date of delivery. The warranty covers defects in material and workmanship that affects the product's function and render it inoperable provided that is operated and maintained in accordance with the instructions in the product manual or operator training session.

During this time, the company will repair or replace any product or parts that proves flawed due to a defect in manufacturing. The warranty does not cover the engine of the machine, damages resulting from negligence or misuse of the machinery, normal wear and tear of parts, or damage caused by external factors such as accidents, floods, fire or earthquake among others.

Customers are given the option to extend their warranty period the original period as stated. However, service rendered by SAYeTECH in such event will come at a reasonable charge. To claim the benefit provided by the warranty, the customer must:

1. Contact the company to determine the problem and present a copy of the purchaser's receipt
2. Demonstrate to the SAYeTECH's satisfaction that the customer complied at all times with the maintenance and operations procedure as stipulated in the manual
3. Be ready to go through our troubleshooting, checks and recommendations

Frequently Asked Questions, FAQs

- 1. What should I do if the thresher is not threshing or separating the grain effectively?**
Check for blockages, adjust the settings, or inspect the condition of the concave sieve. Refer to the troubleshooting section in the manual for further guidance.
- 2. How do I troubleshoot issues with the engine or power source of the thresher?**
Check the fuel supply, injectors, and battery connections. If problems persist contact SAYeTECH.
- 3. How can I prevent overheating during prolonged thresher use?**
Monitor the engine temperature regularly, maintain proper coolant levels, and take breaks during extended use to allow the engine to cool down.
- 4. Where can I find replacement parts for the thresher, and how can I order them?**
Contact our customer support to inquire about part replacement. A professional from our team would have your thresher fixed.
- 5. How do I safely transport the thresher from one location to another?**
Follow transportation guidelines in the manual, secure the thresher on a suitable trailer, and ensure all moving parts are locked or disengaged.
- 6. What should I do if I encounter any unusual noises or vibrations while using the thresher?**
Stop the thresher immediately and inspect for the source of the noise or vibration. Do not continue operation until the issue is resolved or diagnosed by a qualified technician
- 7. What is the recommended storage procedure for the thresher during off-seasons?**
Clean the thresher thoroughly, apply protective coatings where necessary, and store it in a dry, covered area and cover with material (preferably tarpaulin) to prevent corrosion.
- 8. How do I adjust the thresher settings for different types of crops?**
The user manual provides guidelines for changing sieves, sieves types, cylinder speed, and other settings based on the crop being threshed.

Contact Information

For technical/customer support call

Phone: +233 (0)20 987 9370

+233 (0)24 215 7512

Or visit our workshop for assistance

GhanaPost GPS Address : AE-0492-4335

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