Hover Mowers & Hovertrim

OWNER'S HANDBOOK

MODELS:
446 Hovertrim
450 Professional
453 Professional
Main Features

1. Spark Plug/Lead.
2. Exhaust Guard.
3. Engine Cover.
5. Engine Start-Grip.
7. Throttle Control.
8. Engine Stop Lever.
11. Oil Dipstick.
13. Air Cleaner.

Specifications

<table>
<thead>
<tr>
<th>Code</th>
<th>Model</th>
<th>Engine</th>
<th>Engine type</th>
<th>Fuel type</th>
<th>Fuel capacity</th>
<th>Engine Oil type</th>
<th>Oil sump capacity</th>
<th>Cutting width</th>
<th>Dry Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>180</td>
<td>446 Hovertrim</td>
<td>Honda</td>
<td>GCV135</td>
<td>Unleaded petrol</td>
<td>0.9 litres</td>
<td>SAE 10W-30</td>
<td>.55 litres</td>
<td>46 cm (18&quot;)</td>
<td>17.6kg</td>
</tr>
<tr>
<td>181</td>
<td>450 Professional</td>
<td>Honda</td>
<td>GCV160</td>
<td>Unleaded petrol</td>
<td>1.1 litres</td>
<td>SAE 10W-30</td>
<td>.55 litres</td>
<td>51cm (20&quot;)</td>
<td>19kg</td>
</tr>
<tr>
<td>182</td>
<td>453 Professional</td>
<td>Honda</td>
<td>GCV160</td>
<td>Unleaded petrol</td>
<td>1.1 litres</td>
<td>SAE 10W-30</td>
<td>.55 litres</td>
<td>53cm (21&quot;)</td>
<td>19kg</td>
</tr>
</tbody>
</table>
CONTENTS

1.3 Main Features/Specifications

1.5 Contents

1.6 Introduction

1.7 Warranty

1.8 - 1.11 Safety Precautions

1.8 - Training

1.9 - 1.10 - Preparation

1.10 - 1.11 - Operation

1.10 - 1.11 - Maintenance and Storage

1.11 - Safety Symbols

1.11 - Decal Symbols

1.12 Assembling the Machine

1.12 - Delivery Checklist

1.12 - Assembling

1.13 Before Starting the Machine

1.13 - Prevent Engine Damage

1.13 - Oil Type

1.13 - Check Oil Level

1.13 - Fuel Type

1.14 - 1.19 Operating the Machine

1.14 - Controls

1.14 - Starting

1.15 - Cutting Grass

1.15 - Cutting Grass on Slopes and Banks

1.15 - Stopping

1.16 - Adjusting the Cutting Height

1.16 - Before Mowing

1.17 - 1.21 Machine Maintenance

1.17 - Engine

1.17 - Carburettor Adjustments

1.17 - Air Cleaner Service

1.18 - Spark Plug Service

1.18 - Keeping Engine Clean

1.19 - Deck Housing

1.19 - Securing Nuts and Bolts

1.19 - Oil Service

1.20 - Cutterbar Removal

1.20 - 1.21 - Cutterbar Sharpening

1.21 - Storage

1.22 - 1.23 Trouble Shooting

1.24 - 1.28 Parts List

1.24 - Mainframe Parts List

1.25 - Exploded View - Mainframe

1.26 - 1.27 - Blade Options / Kits Parts List

1.28 - Kit Undercarriage Parts List

1.28 - Kit Extension Handles

1.29 - 1.30 Declaration of Conformity

1.31 - 1.32 Notes

1.33 - 1.34 Customer Info
INTRODUCTION

Thank you for purchasing an Allen machine. The following pages are designed to help you gain safe and efficient service from your machine.

IMPORTANT: This ‘Owners Handbook’ should be regarded as part of the product as it gives essential information regarding mower safety, operation, maintenance and specifications. Read and understand this handbook prior to operating your machine for the first time. Make sure you are familiar with all the controls and points of regular maintenance. If you have any doubts, consult your local authorised dealer who will be pleased to give you assistance.

IMPORTANT: This machine is designed solely for cutting grass and other low lying ground vegetation within the limitations stated in this manual. Use in any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation, service and repair as specified in this handbook also constitute essential elements of the intended use.

This machine should be operated, serviced and repaired only by persons who are familiar with its particular characteristics and who are acquainted with the relevant safety procedures.

The safety precautions listed in this handbook and all other generally recognised regulations on safety must be observed at all times.

Any arbitrary modifications carried out to this machine may relieve the manufacturer of liability for any resulting damage or injury.

Allen machines are robustly constructed and designed for efficient economical performance under normal mowing conditions. Correct operation and maintenance will ensure a long and satisfactory service life. Prior to despatch from our factory every effort is made to ensure that your mower is delivered in perfect condition.

Throughout this handbook all references to left and right are as viewed from behind the handlebar, in the direction of forward travel.

This handbook is based on information available at the time of publication.

We reserve the right to amend product specifications without prior notification.
LIMITED WARRANTY

Allen mower's are manufactured by Hayter Limited.

The manufacturer warrants to the original user/purchaser that this unit shall be free from defects in material and workmanship under normal use and service for a period of one year from the date of purchase. The manufacturers of the engine furnish their own warranty and services are provided through their authorised network (Refer to “Engine Warranty Statement”). To qualify for the full benefit of the warranty, the Warranty Registration Card must be returned within 14 days of purchase. If the selling dealer has not returned the Warranty Registration Card please complete and return. Subject to the conditions and exclusions noted in this limited warranty, we shall at our option, repair or replace any warranted part during the applicable period. If you are in doubt or experience any difficulty, please contact an Authorised Service Dealer for clarification.

A 90 day warranty period applies to those items which are subject to normal wear and tear e.g. flexiblades, cables and other consumable wearing parts.

This warranty does not apply to any unit that has been tampered with, altered, misused, abused or used for hire, and will become invalid if non genuine parts are fitted. This warranty does not cover for minor mechanical adjustments unless they are due to defective material or workmanship. Consult the Owner’s Handbook or an Authorised Service Dealer for assistance when making these adjustments.

To make a warranty claim, return the unit to an Authorised Service Dealer along with proof of purchase stating the machine serial number and date of purchase. Subject to the conditions and exclusions in this limited warranty, the authorised dealer will, at our option, repair or replace any warranted part within the duration of the warranty period.

This limited warranty gives you specific legal rights and is in addition to any statutory rights to which you may be entitled and your statutory rights are not affected by this warranty. If you need additional information concerning this written warranty, or assistance in obtaining services, please write to: HAYTER LIMITED, Service Department, Spellbrook, Bishop’s Stortford, Hertfordshire CM23 4BU

UK ONLY: Details of your local authorised dealer are contained in Yellow Pages and the Hayter website www.hayter.co.uk or contact contact:- Freephone 0800 616298.
SAFETY PRECAUTIONS

Safety Alert Symbol

This safety alert symbol indicates important safety messages. When you see this symbol be alert to the possibility of injury. Carefully read the following and inform others.

Your machine is perfectly safe if used correctly. Failure to observe the following precautions may result in serious injury.

Training

Read the Owner’s Handbook and other training material. If the operator(s) or mechanic(s) cannot read English it is the owner’s responsibility to explain this material to them.

Become familiar with the safe operation of the equipment, operator controls, and safety signs.

All operators and mechanics should be trained. The owner is responsible for accidents or injuries occurring to themselves, other people or property.

Never let children or untrained people operate or service the equipment. Local regulations may restrict the age of the operator.

Preparation

While using the machine, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing sandals.

Thoroughly inspect the area where the machine is to be used and remove all objects which may be thrown by the machine.

WARNING: Petrol is highly flammable.
- Store fuel in containers specifically designed for this purpose.
- Before starting the engine add fuel outdoors only. Never remove the cap from the fuel tank or add petrol while the engine is running or when the engine is hot. Allow the engine to cool for at least two minutes before refuelling. Do not smoke while refuelling.
SAFETY PRECAUTIONS

Preparation

- Do not attempt to start the engine if petrol is spilled or a smell of petrol is present. Move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapours have dissipated.
- Replace faulty silencers.
- Always use fresh fuel. Stale fuel can block the carburettor and cause leakage.
- Replace fuel tank and oil tank caps securely.

A damaged cutting device or impeller or both must be replaced. Before use, always visually inspect the cutting mechanism to ensure that it is in good condition. Do not operate the machine with an out of balance cutting device or impeller.
- Check all nuts and bolts and tighten when necessary.

Operation

Do not operate the engine in a confined space where exhaust fumes (carbon monoxide) can collect. Refuel outdoors only and do not smoke while refuelling.

Always pull the starter cord slowly until resistance is felt. Then pull the cord rapidly to avoid kickback and prevent hand or arm injury.

Operate only in daylight or good artificial light.

Avoid using the machine on wet grass, where feasible.

Always be sure of your footing on slopes.

Walk, never run.

Operate across the face of slopes, never up and down.

Exercise extreme caution when changing direction on slopes.

Do not use on excessively steep slopes.

Use extreme caution when pulling the machine towards you.

Stop the engine before moving the machine across areas other than grass.

Do not change the engine governor settings or overspeed the engine.

Start the engine carefully, with feet well away from the cutting device.
SAFETY PRECAUTIONS

Operation

Do not put hands or feet near or under rotating parts.

Never pick up or carry the machine while the engine is running.

Never touch the exhaust/exhaust guard or cooling fins when the engine is hot.

**Stop the engine and disconnect the spark plug lead:**
- Before clearing blockages.
- Before cleaning/checking or working on the machine.
- After striking a foreign object. Inspect the machine for damage and ensure necessary repairs are made before re-starting.
- If the machine starts to vibrate abnormally (check immediately). (An out of balance cutting device causes severe vibration).

**Stop the engine:**
- Whenever you leave the machine.
- Before refuelling.

Never operate the trimmer with defective guards, or without safety devices, in place.

Maintenance & Storage

Keep all nuts, bolts and screws tight to ensure that the equipment is in safe operating condition.

Frequently check fuel lines and fittings for cracks or leaks and replace if necessary.

Never check for a spark when the spark plug is removed. (Use approved tester)

Inspect the exhaust periodically and replace if worn or leaking.

Never crank the engine with the spark plug removed.

Never start the engine with the air-cleaner or air-cleaner cover removed.

Never store the machine with petrol in the tank within an enclosed area where fumes may reach an open flame or spark.

Allow the engine to cool before storing in any enclosure. To reduce the fire hazard, keep the engine and the surrounding deck area free of grass, leaves, or excessive grease.
SAFETY PRECAUTIONS

Maintenance & Storage

If the fuel tank has to be drained, this should be done outdoors and when the engine is cool.

Wear strong work gloves when removing and reassembling the cutting device.

Always replace worn or faulty parts with genuine Allen parts.

Safety Symbols

Safety Alert - Be aware to the possibility of injury.

Danger of severing toes or fingers in cutting mechanism.

Danger of being hit by thrown objects.

Carefully read the Owners Handbook before using the machine.

Stop engine and remove spark plug lead before working on the mower.

Keep bystanders at a safe distance from the mower.

Hearing and eye protection should be worn.

Code 180 only

Never fit metal cutting parts.

Code 180 only

Keep bystanders at least 15m from the trimmer.

Code 180 only

Information Symbols

Engine Stop

Throttle Control (Symbols)

Choke Fast Slow
Delivery Checklist

Remove the machine from the packaging and check that the following items have been supplied correctly. If any items are missing contact your local dealer. Main deck, lower and upper handlebars.

1. Handlebar bolt x 2  
2. Bush x 4  
3. Nut x 2  
4. Washer x 6  
5. Throttle bolt x 2  
6. Washer x 4  
7. Spring washer x 2  
8. Nut x 2  
9. Spanner x 1*  
10. Ties x 2*  
11. Ties*  
12. U Bolt x 2*  
13. Handwheel x 2*

*Items 9 - 13 Not Illustrated

Assembling

Step 1 Lower Handlebar

Fit the lower handle first, and position the white bushes (2) as shown on both sides. Place the lower handle between bushes with the kick stop assembly on the right hand side. Attach the lower handle using the fixings supplied.

Step 2 Upper Handlebar

Assemble the upper handle align holes and fit U-bolts, washer and hand/wheel.

Step 3 Throttle Assembly

Attach throttle assembly to the outside of the handlebar as shown and secure the cable using ties supplied.
To prevent engine damage the engine is shipped without oil or petrol. The engine must be filled with the correct grade of oil and petrol before starting.

Always use high quality detergent oil classified SAE 10W-30. Never use additives with recommended oil. To prolong the life of your engine it is important that the oil is changed after the first 5 hours of use - refer to ‘Maintenance Schedule’.

Clean around the oil filler cap before removing. With the mower on a level surface, unscrew and remove the oil filler - dipstick. Wipe oil from it with a clean cloth. Insert the dipstick into the oil filler neck, but do not screw it in, then remove to check the oil level.

The oil level is correct when it is at the full mark on the dipstick. DO NOT OVERFILL.

Always use clean, fresh unleaded petrol. Purchase fuel in quantities that can be used within 30 days. Never mix oil with petrol.

Fill to base of neck to allow for fuel expansion. Do not overfill the fuel tank.
Check that the engine stop lever moves freely and returns to it’s rest position when released.

**Starting - Step 1**

Place the throttle control to the start position, ensure that the fuel tap is in the ‘On’ position and the tank vent is open (if fitted).

**Step 2**

Release the handlebar from it’s parked position. Hold the engine stop lever against the handlebar, place your foot on the deck and tilt the mower towards you. This will take the load off the engine making it easier to start.

Pull the starter grip lightly until you feel resistance, then pull briskly. Return the starter grip gently.

The engine stop lever must be held firmly against the handlebar to start and keep the engine running. If the engine stop lever is released the engine will stop.

**Step 3**

Allow the engine to warm up and move the throttle lever to the ‘run’ position after starting a cold engine.

To prevent damage never pull the engine start grip when the engine is running.
Cutting Grass

Start at the outside border of the lawn and move up and down as you would with a conventional walk behind mower.

Cutting Grass on Slopes and Banks

Start at the top and move the machine from side to side while slowly and carefully moving down the slope.

Caution: Try to keep the machine moving to reduce excessive loading on the engine.

Stopping

Release the engine stop lever.

Emergency stop: Release the engine stop lever.
If the engine fails to stop, disconnect the spark plug lead.
The cutting height of your mower has been set at the highest position (1). If you prefer a lower cut follow these instructions:

a. Turn the petrol tap to the off position.

b. Disconnect the spark plug lead.

c. Turn the mower on its left hand side, keeping the carburetor uppermost.

d. Wearing protective gloves remove the flexiblade/cutterbar.

e. Remove the retaining bolt with the spanner provided whilst holding the blade or disc. Make sure your hands are adequately protected from the cutting edge.

f. Reposition the spacers as required. See diagrams for cutting device option.

Note for the 446 Hovertrim: One spacer is required above the disc at all times.

NOTE: The large spacer must be positioned directly below the impeller at all times.

TIGHTEN THE BLADE RETAINING BOLT - USE ONLY THE SPANNER PROVIDED.

To prevent accidents, thoroughly inspect the area and remove all objects which when contacted by the mower cutterbar could become dangerous projectiles. Inspect the area for hidden obstructions which when contacted by the cutterbar could risk health and safety or result in damage to the mower. Remember the location of these obstructions and ensure that you mow around them.
To prevent accidents stop the engine disconnect the spark plug lead before attempting to carry out maintenance procedures on the mower.

1. Finger Guard
2. Carburettor
3. Spark Plug / Lead
4. Exhaust Guard
5. Exhaust
6. Oil filler Cap/ Dipstick
7. Start Grip
8. Fuel Cap
9. Air cleaner.

Should only be made by an authorised Honda dealer. Under no circumstances should the engine be adjusted to run at a speed in excess of that shown on the Declaration of Conformity.

Air Cleaner Service

To service the air cleaner remove the air cleaner cover (1) by releasing two top catches (2) and tilting away from body until lower tabs release. Remove cartridge (3) and clean by tapping gently on a flat surface. If very dirty or damaged replace.
- Do not brush
- Do not use petroleum solvents.
- Do not oil the cartridge.

After servicing, install the cartridge in the cover. Insert the tabs on the bottom of the cover into the slots in the bottom of the base. Tilt the cover upwards until the two catches (2) hold it in place.
**MOWER MAINTENANCE**

**Spark Plug Service**

Use only an approved spark tester (1) to check for a spark as shown in the diagram.

Replace the spark plug every 100 hours or every season, whichever occurs first. A spark plug wrench is available from any authorised Honda service dealer.

Check the spark plug gap with a feeler gauge and set at 0.7 - 0.8mm.

**Keeping Engine Clean**

Remove all grass and debris from the engine including the exhaust/exhaust guard, the air ways in the top cowl and the surrounding deck areas on a daily basis after use. Never spray the engine with water during cleaning. Water can contaminate the fuel. Always clean with a brush or compressed air.

Grass and debris may clog the engine’s air cooling system especially after prolonged operation while cutting tall, dry grass. The internal cooling fins and surfaces may require cleaning to prevent overheating and engine damage. We recommend that this service be carried out by an authorised dealer.
Remove grass debris from the top and underside of the deck immediately after use.

Regularly check that all securing nuts and bolts are tight. Replace missing or damaged items immediately.

The following torque settings apply:
Bolt 111-1504 2 1/4 x 1/4 Hex Head tighten to 25Nm.

Check the oil level daily before starting the engine and ensure that the correct oil level is maintained. Refer to “Before Starting the Mower” for oil checking and filling instructions.

Change the engine oil after the first 5 hours of operation and thereafter according to the “Maintenance Schedule”:-

1. Drain fuel by running the engine until the fuel tank is empty.
2. Remove the spark plug lead.
3. Allow the engine to cool.
4. Drain the oil while the engine is warm. (Not hot)
5. Tip the machine over on to its side ensuring that the air cleaner is uppermost.
6. Remove the oil filler dipstick and drain the oil into a suitable container.
7. Refill with new oil of the recommended SAE viscosity grade. (Refer to “Before Starting the Mower”)
Drain the fuel by running the engine until the fuel tank is empty and the engine stops. **Remove the spark plug lead** and allow the engine to cool. Turn the mower on its left hand side and ensure that the carburettor is uppermost.

Firmly grip the end of the cutterbar with the gloved hand and remove the bolt with the supplied spanner.

**To prevent accidents never work on the cutterbar unless the spark plug lead has been removed.** The cutterbar has sharp edges. ALWAYS wear strong gloves to protect your hands when working on the cutterbar. DO NOT rotate tools towards the cutting edges to avoid the risk of injury should the tool slip. ALWAYS use genuine replacement parts.

The condition of the cutterbar and its mounting arrangement should be checked regularly for signs of wear or damage. Ensure that the cutterbar is not bent or cracked.

A damaged cutterbar that is out of balance will vibrate excessively and may break. DO NOT use an unbalanced cutterbar.

Regularly check that the bolt securing the cutterbar is tightened.

Replace the cutterbar every 2 years of sooner if excessively worn or damaged.

**Cutterbar Sharpening**

A slightly worn cutterblade may be re-sharpened. Both blade edges must be sharpened equally to ensure balance. Sharpen the cutterblade every 25 mowing hours or more frequently if conditions require. Remove the cutterblade from the mower and clean using a brush and water. Inspect the cutterblade for signs of damage. Sharpen both cutting edges with a flat file to restore performance.

Ensure that the cutterblade is balanced. Use a screw driver with a round shaft to support the cutterblade through its centre hole. Hold the cutterblade horizontal and then release. A balanced cutterblade will remain horizontal.
Continued

Cutterbar Sharpening

If the cutterblade is not balanced the heavy end will rotate downwards. Sharpen the heavy end until the cutterblade is correctly balanced.

Flexiblade Replacement

Drain the fuel by running the engine until the fuel tank is empty and the engine stops. Remove the spark plug lead and allow the engine to cool. Turn the mower on its left hand side and ensure that the carburettor is uppermost. Wearing protective gloves remove flexiblade and replace with new.

Storage

Engines stored in excess of 30 days need to be protected with a fuel additive or drained of fuel to prevent gum from forming in the fuel system or on essential carburettor parts. To ensure your mower is maintained in good working order it is important that the following procedure is adopted. Refer to the engine handbook as necessary.

Drain fuel from the engine by operating the engine until it stops. See Engine Manual.

Disconnect the spark plug lead.

Change the engine oil.

Remove the engine spark plug and pour 15ml of engine oil into the engine cylinder and replace the spark plug. Do not exceed the stated volume of oil as engine damage may occur on re-starting. Do not replace the spark plug lead. Slowly pull the engine start - grip once to crank the engine. This will distribute the oil and help prevent engine corrosion.

Clean grass and debris from the engine cylinder, cylinder head cooling fins, under top cowl, and around and behind exhaust/exhaust guard.

Treat metal parts with a water repellent anti-corrosion product.

Cover the mower with a protective sheet and store it in a dry, ventilated area.
<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE FAULT</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine will not turn over</td>
<td>Engine stop lever released</td>
<td>Operate engine stop lever.</td>
</tr>
<tr>
<td></td>
<td>Incorrect oil level</td>
<td>Check oil level.</td>
</tr>
<tr>
<td></td>
<td>Obstruction under deck</td>
<td>Remove obstruction.</td>
</tr>
<tr>
<td>Engine smokes</td>
<td>Excess oil level</td>
<td>Check oil level.</td>
</tr>
<tr>
<td></td>
<td>Air cleaner cartridge oil soaked or blocked.</td>
<td>Service air cleaner.</td>
</tr>
<tr>
<td>Engine runs then stops</td>
<td>Fuel starvation.</td>
<td>Fill fuel tank.</td>
</tr>
<tr>
<td></td>
<td>Fuel cap vent blocked</td>
<td>Clean fuel cap vent.</td>
</tr>
<tr>
<td></td>
<td>Fuel tap closed.</td>
<td>Open fuel tap (if fitted).</td>
</tr>
<tr>
<td>Engine will not start</td>
<td>Engine under load.</td>
<td>Raise height of cut.</td>
</tr>
<tr>
<td></td>
<td>Fuel starvation.</td>
<td>Fill fuel tank.</td>
</tr>
<tr>
<td></td>
<td>Engine cold.</td>
<td>Set throttle to ‘choke’ position.</td>
</tr>
<tr>
<td></td>
<td>Incorrect/contaminated fuel.</td>
<td>Drain fuel tank and fill with correct fuel.</td>
</tr>
<tr>
<td></td>
<td>Spark plug lead disconnected.</td>
<td>Connect spark plug lead.</td>
</tr>
<tr>
<td></td>
<td>Throttle setting incorrect.</td>
<td>Set throttle to ‘start’ position.</td>
</tr>
<tr>
<td></td>
<td>Faulty spark plug.</td>
<td>Clean and adjust gap or replace.</td>
</tr>
<tr>
<td>Engine runs rough</td>
<td>Spark plug lead becoming disconnected in use.</td>
<td>Connect spark plug lead.</td>
</tr>
<tr>
<td></td>
<td>Faulty spark plug.</td>
<td>Clean and adjust gap or replace.</td>
</tr>
<tr>
<td></td>
<td>Air cleaner blocked.</td>
<td>Service air cleaner.</td>
</tr>
<tr>
<td></td>
<td>Incorrect/contaminated fuel.</td>
<td>Drain tank and fill with correct fuel.</td>
</tr>
</tbody>
</table>
## TROUBLE SHOOTING

<table>
<thead>
<tr>
<th>PROBLEM</th>
<th>POSSIBLE FAULT</th>
<th>REMEDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine vibrates excessively</td>
<td>Mounting bolts loose.</td>
<td>Tighten bolts</td>
</tr>
<tr>
<td></td>
<td>Cutterbar bolt loose.</td>
<td>Tighten bolt</td>
</tr>
<tr>
<td></td>
<td>Cutterbar out of balance.</td>
<td>Balance cutterbar</td>
</tr>
<tr>
<td></td>
<td>Bent crankshaft.</td>
<td>Consult your dealer</td>
</tr>
<tr>
<td></td>
<td>Damaged impeller or blade.</td>
<td>Consult your dealer</td>
</tr>
<tr>
<td>Uneven cut</td>
<td>Cutterbar out of balance</td>
<td>Balance the cutterbar</td>
</tr>
<tr>
<td>Poor hovering</td>
<td>Engine running slow</td>
<td>Consult your dealer</td>
</tr>
<tr>
<td></td>
<td>Impeller air vents blocked</td>
<td>Check and unblock</td>
</tr>
<tr>
<td></td>
<td>Underdeck not clean</td>
<td>Clean</td>
</tr>
<tr>
<td></td>
<td>Blade loose</td>
<td>Tighten blade</td>
</tr>
</tbody>
</table>
### MAINFRAME PARTS LIST

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Qty</th>
<th>Qty</th>
<th>Qty</th>
<th>Item Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Upper Handle</td>
<td>H290237</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Engine Stop Lever</td>
<td>H290239</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Grip - Handle Upper</td>
<td>H292276</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Kit Cable Securing</td>
<td>H190139</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Throttle/Brake Control</td>
<td>H292315</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Lower Handle</td>
<td>H290288</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>M6 U Bolt BZP</td>
<td>H292026</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Handwheel M6</td>
<td>H192204</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Footstop</td>
<td>H290286</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Kit Footstop Securing</td>
<td>H290265</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Handlebar/Deck Fix Kit</td>
<td>H290097</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Kit Engine Securing</td>
<td>H290267</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Kit Engine Mount frame</td>
<td>H290003</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Screw</td>
<td>H292279</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Upstop Bracket</td>
<td>H292269</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Deck 446</td>
<td>H290270</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Deck 450/453</td>
<td>H290271</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Kit Engine Bolts</td>
<td>H290004</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Key Woodruff D16 X 4</td>
<td>H292329</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Drive Hub</td>
<td>H290011</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Impeller Mk II</td>
<td>H192268</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Spanner Petrol</td>
<td>H190210</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Decal-Warning</td>
<td>111-0083</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Decal 446 Hovertrim Logo</td>
<td>H295125</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>Not Shown</td>
</tr>
<tr>
<td>25</td>
<td>Decal 450 Professional Logo</td>
<td>H295126</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>Not Shown</td>
</tr>
<tr>
<td>26</td>
<td>Decal Logo Allen</td>
<td>H295128</td>
<td>1</td>
<td>1</td>
<td></td>
<td>Not Shown</td>
</tr>
<tr>
<td>27</td>
<td>Decal - Man Eye / Ear Protection</td>
<td>111-2153</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>Not Shown</td>
</tr>
<tr>
<td>28</td>
<td>Decal Stop</td>
<td>H295159</td>
<td>1</td>
<td>1</td>
<td></td>
<td>Not Shown</td>
</tr>
<tr>
<td>29</td>
<td>Decal 453 Hover Prof</td>
<td>H295160</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>Not Shown</td>
</tr>
<tr>
<td>30</td>
<td>Decal-Warning</td>
<td>111-2521</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>Not Shown</td>
</tr>
</tbody>
</table>
## Blade Options Parts List

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Part No.</th>
<th>Code 446 Qty</th>
<th>Code 450 Qty</th>
<th>Code 453 Qty</th>
<th>Item Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spacer</td>
<td>H192270</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spacer Disc</td>
<td>H192025</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Blade Ret. Spigot Steel</td>
<td>H192272</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Blade/Head Bolt</td>
<td>H292018</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Safeway Disc</td>
<td>H292401</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Flexiblade 143mtr</td>
<td>H292384</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Flexiblade 27mtr</td>
<td>H292385</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Blade 20&quot;</td>
<td>H292351</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Blade 21&quot;</td>
<td>H192299</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

### Code 446 Diagram

- 1: Spacer
- 2: Spacer Disc
- 3: Blade Ret. Spigot Steel
- 4: Blade/Head Bolt
- 5: Safeway Disc
- 6: Flexiblade 143mtr
- 7: Flexiblade 27mtr
- 8: Blade 20"
- 9: Blade 21"

### Code 450/453 Diagram

- 1: Spacer
- 2: Spacer Disc
- 3: Blade Ret. Spigot Steel
- 4: Blade/Head Bolt
- 5: Safeway Disc
- 6: Flexiblade 143mtr
- 7: Flexiblade 27mtr
- 8: Blade 20"
- 9: Blade 21"
### Kit - Swinging Blade

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Part No.</th>
<th>446 Qty</th>
<th>450 Qty</th>
<th>453 Qty</th>
<th>Item Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spacer</td>
<td>H192270</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Spacer Disc</td>
<td>H192025</td>
<td>3</td>
<td>3</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Bottom Plate</td>
<td>H292340</td>
<td>1</td>
<td>0</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Bottom Plate</td>
<td>H292341</td>
<td>0</td>
<td>1</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Swinging Blade (Pack 3)</td>
<td>H292318</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Swinging Blade (Pack 60)</td>
<td>H292318-60</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Blade Retaining Kit (Pack 3)</td>
<td>H290276</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Blade Ret. Spigot Steel</td>
<td>H192272</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

### Kit - Swinging Blade

Code 446/450

![Diagram of Kit - Swinging Blade](image-url)
Kit - Undercarriage (Transport Wheel)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Part No.</th>
<th>446 Qty</th>
<th>450 Qty</th>
<th>453 Qty</th>
<th>Item Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Undercarriage</td>
<td>H192284</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Kit Axle Securing Bolts</td>
<td>H190235</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Wheel</td>
<td>H292033</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Kit Axle Spacers</td>
<td>H290032</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Axle</td>
<td>H192286</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Spacer Under Carriage</td>
<td>H192281</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Hook Petrol Hover</td>
<td>H192282</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Handlebar/Deck Fix Kit</td>
<td>H290097</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Kit - Extension Handles

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description</th>
<th>Part No.</th>
<th>446 Qty</th>
<th>450 Qty</th>
<th>453 Qty</th>
<th>Item Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Throttle Control &amp; OPC</td>
<td>H292387</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Not Shown</td>
</tr>
<tr>
<td>2</td>
<td>Handwheel</td>
<td>H192204</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>Not Shown</td>
</tr>
<tr>
<td>3</td>
<td>Handlebar Extension</td>
<td>H292392</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Not Shown</td>
</tr>
</tbody>
</table>
EC DECLARATION OF CONFORMITY

Manufacturer: HAYTER LIMITED,  
Address: Spellbrook, Bishop's Stortford, Herts. CM23 4BU. ENGLAND

declare that the trimmer:

Model name: Hovertrim  
Model No: CODE 180E  
Cutting width: 46 cm  
Speed of rotation of the cutting device: 3400 rpm  
Engine Manufacturer: Honda  
Speed of rotation of engine: 3400 rpm

Relating to the Design & Construction of Machinery and Safety Components, as amended and the regulations transposed into national law.


Complies with harmonized standards: EN 14910, EN 14982.

NOISE INFORMATION

The noise levels measured in accordance with European Standard EN 14910

Machine sound power level: 98 dB(A)  
Sound level at operator’s ear: 85 dB(A)

Declaration done and technical documentation kept at:

HAYTER LIMITED  
Spellbrook, Bishop’s Stortford, Herts. CM23 4BU ENGLAND

Date: 02.03.2007  Authorised Signatory: Mr. S. A. Maryniak

Vibration Information

The vibration level at the operator contact positions, measured in accordance with European Standard EN 836.

CODE 180E – 5.59 ms⁻²

Operators Daily Personal Noise Exposure:

HAYTER LIMITED have no control over site conditions, duration of use, state of maintenance or adjustment of the mower. All these factors will affect the operator’s daily personal noise exposure level – LEP,d. Under typical working conditions operators could be exposed to a daily personal noise exposure level in excess of 85 dB(A) LEP,d.

If hearing protection is required, ear protectors with good attenuation in the 63 – 8000 Hz frequency range should be used.

Employers of personnel using this machine are advised to read “The Control of Noise at Work Regulations 2005” as the operator’s daily personal exposure level could be above the ‘First Action Level’.
Manufacturer: HAYTER LIMITED,  
Address: Spellbrook, Bishop's Stortford, Herts. CM23 4BU. ENGLAND  

declare that the lawnmower:

Model name: Hovermower Hovermower  
Type: Pedestrian rotary Pedestrian rotary  
Model No: CODE 181E CODE 182E  
Cutting width: 51 cm 53 cm  
Speed of rotation of the cutting device: 3300 rpm 3300 rpm  
Engine manufacturer: Honda Honda  
Speed of rotation of engine: 3300 rpm 3300 rpm  

Also Directive 2000/14/EC Noise emission in the environment by equipment for use outdoors as amended and the regulations transposed into national law.  

Procedure applied for the conformity assessment: ANNEX VI, procedure 1.  
Notified Body: Intertek Testing & Certification Ltd, Intertek House, Cleeve Road, Leatherhead. KT22 7SB. ENGLAND  
Notified body identification No: 0359  

Measured sound power level: 97 dB(A) 97 dB(A)  
Guaranteed sound power level: 98 dB(A) 98 dB(A)  

Complies with harmonized standards: EN 836 and EN ISO 14982  
Signed:  
S.A. Maryniak  
(technical Director)  
Date: 02.03.2007  
Declaration done and technical documentation kept at:  
HAYTER LIMITED  
Spellbrook, Bishop’s Stortford, Herts.  
CM23 4BU ENGLAND  

Vibration Information  
The vibration level at the operator contact positions, measured in accordance with European Standard EN 836.  
CODE 181E – 4.6 m/s^2  CODE 182E – 5.93 m/s^2  

Operators Daily Personal Noise Exposure:  
HAYTER LIMITED have no control over site conditions, duration of use, state of maintenance or adjustment of the mower. All of these factors will affect the operator’s daily personal noise exposure level – LEP,d. Under typical working conditions operators could be exposed to a daily personal noise exposure level in excess of 85 dB(A) LEP,d.  

Sound pressure level:  
The maximum sound pressure level at the operator’s position is 84 dB(A) measured in accordance with European Standard EN836.  
If hearing protection is required, ear protectors with good attenuation in the 63 – 8000 Hz frequency range should be used. Employers of personnel using this machine are advised to read “The Control of Noise at Work Regulations 2005” as the operator’s daily personal exposure level could be above the ‘First Action Level’.
CUSTOMER INFORMATION

Serial No: ____________________________

Engine Type: GCV135  Engine: Honda
Engine Type: GCV160  Engine: Honda

Date of Sale: __________________________

Your Local Dealer: ______________________________

Notes: ________________________________