

Harrier
48

CODE 486V

OWNER'S HANDBOOK

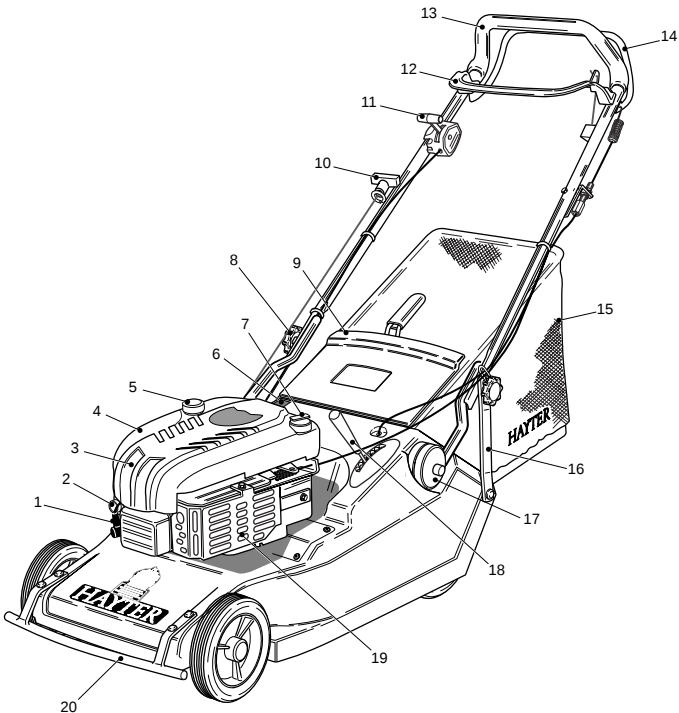
(English Version)
FROM SERIAL NO: 486V001001
Issue : 20.10.00

HANDBOOK: 486038 (Rev.1.)

MAIN FEATURES /SPECIFICATIONS

Main Features

- Spark Plug Gap
- Pinch
- Engine Cover
- Frame
- Height
- Oil Number
- Oil Dipstick
- Handbar Swing Knob
- Rear Drive
- Engine Stop
- Throttle Control
- Engine Speed
- Handbar
- Ground Fault
- Bag Only
- Support
- Handbar Height Adjust
- Height of Cut
- Exhaust Guard
- Front Rail



Specifications

MODEL	CODE 486V
Engine	Gas & Steel Edge
Engine Type	1
Engine / Cutterblade Speed	2000
Fuel Type	Gasoline
Fuel Capacity	15
Oil Type	SAE 30
Oil Sump Capacity	1.5
Spark Plug	16mm (Gas & Steel)
Spark Plug Gap	0.6
Width of Cut	41
Height of Cut	2-40
Overall Dimensions	48 x 38 x 38
Dry Weight	14.5 Kg

CONTENTS

1.2	Main Features/Specifications	1.16	Maintenance Schedule
1.3	Contents	1.17 - 1.23	Mower Maintenance
1.4	Introduction	1.17	- Engine
1.5	Warranty	1.17	- Throttle Cable Adjustment
1.6 - 1.9	Safety Precautions	1.17	- Carburettor Adjustments
1.9	Safety Symbols	1.18	- Oil Service
1.9	Decal Symbols	1.18	- Air Cleaner Service
1.10	Assembling the Mower	1.19	- Spark Plug Service
1.10	- Delivery Checklist	1.19	- Keeping Engine Clean
1.10	- Handlebar	1.19	- Grassbag
1.10	- Adjust Handlebar Height	1.20	- Deck Housing
1.10	- Grassbag Attachment	1.20	- Securing Nuts and Bolts
1.11	Before Starting the Mower	1.20	- Clutch Cable Adjustment
1.11	- Prevent Engine Damage	1.21	- Lubrication
1.11	- Oil Type	1.21	- Cutterblade Removal
1.11	- Check Oil Level	1.22	- Cutterblade Assembly
1.11	- Fuel Type	1.22	- Cutterblade Sharpening
1.12 - 1.15	Operating The Mower	1.23	- Storage
1.12	- Controls	1.24 - 1.25	Trouble Shooting
1.12	- Starting Step 1	1.26	Declaration of Conformity
1.12	- Step 2	1.27 - 1.28	Parts List
1.12	- Step 3	1.30	Parts list Diagram
1.13	- Forward Travel	1.31	Customer Info/Notes
1.13	- Turning		
1.13	- Stopping		
1.13	- Slopes		
1.14	- Height of Cut		
1.14	- Before Mowing		
1.14	- Grassbag		
1.14	- Without Grass Collection		
1.15	- Heavy Growth		
1.15	- Friction Disc		
1.15	- Non-Grassed Areas		

INTRODUCTION

Thank you for purchasing a **Hayter mwe**. The following pages are designed to help you gain safe and efficient use of your mwe.

IMPORTANT: This 'One Handbook' should be regarded as part of how we assist give vital information regarding mwe safety, operation, maintenance and performance. Read and understand this handbook prior to opening your mwe 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 **Hayter** authorised dealer who will be pleased to give you assistance.

IMPORTANT: This mwe is designed solely for use in a domestic gas cutting environment. In any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation, maintenance and performance in this handbook also constitute part of the intended use. This mwe should be operated, stored and packed only by persons who are familiar with particular characteristics and who are acquainted with relevant safety procedures.

The safety precautions listed in this handbook and all other legally recognised regulations should be observed at all times. Any abusive modifications could result in the machine not being Hayter Ltd of liability for any resulting damage or injury.

Hayter mwe are robustly constructed and designed for efficient economical performance under normal working conditions. Get operation and maintenance will ensure a long and satisfactory service. Prior to each use, check for any damage or wear and ensure that your mwe is in perfect condition.

Throughout this handbook all **faces** **left** and **right** are as viewed from the hand side bar in the direction of forward travel.

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

HAYTER LIMITED reserves the right to alter product specifications without prior notification.

WARRANTY

LIMITED WARRANTY

Hayter Limited 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. This one year Warranty is extended to a two year Warranty for aluminum decks only. 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 60 days of purchase. 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 consult a Hayter Authorised Service Dealer for clarification.

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

All machines which are fitted with a **genuine** Hayter friction disc or crankshaft support bearing as original equipment before use, are covered by a **Lifetime Warranty** against the engine crankshaft bending. **Note:** friction washers, blade brake units and other such devices are not applicable. Only machines fitted with a **genuine** Hayter friction disc or crankshaft support bearing, which are used in accordance with the recommended operating and maintenance procedures, are covered.

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 Hayter 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 a Hayter Authorised Service Dealer for assistance when making these adjustments.

To make a warranty claim, return the unit to a Hayter 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 **Hayter** authorised dealer are contained in Yellow Pages or 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 mower is perfectly safe if used correctly. Failure to observe the following precautions may result in serious injury.

Training



Read the owner's manual carefully. Pay particular attention to safety precautions. Ensure that you are familiar with the controls and the proper use of the equipment and how to stop the mower quickly in an emergency.

Never allow children or people unfamiliar with the machine to use the mower.

Never mow while people, especially children, or pets are nearby.

Keep in mind that the user is responsible for accidents or hazards occurring to other people or property.

Preparation



When mowing, always wear substantial footwear and long trousers. Do not operate the equipment while barefoot or wearing sandals.

Thoroughly inspect the area where you will be mowing and move all objects which may be thrown by the machine.

WARNING: Fuel is highly flammable.

- Fuel is contained specifically designed for this purpose.
- Add fuel before starting the engine. Never remove the cap from the fuel tank or add fuel while the engine is running or while the engine is hot. Allow the engine to cool for at least two minutes before refueling.
- Do not attempt to start the engine if fuel is spilled or a leak of fuel is present. Move the mower away from the area of spillage and avoid creating any source of ignition until the fuel vapour has dissipated.

SAFETY PRECAUTIONS

Preparation

- Always use fuel. Fuel can block the carburetor and cause leakage.
- Replace fuel tank and oil tank caps securely.

Always use a genuine Hayabusa replacement cutterblade. A damaged or loose fitting bolt is a major hazard. Be sure to always visually inspect the cutting chain to ensure it is in good condition. Always use a genuine Hayabusa replacement.



Operation

Do not operate the engine in a confined space where carbon monoxide can collect. Use outdoors only and do not smoke while fueling.

Always pull the handle slowly until it clicks. The pull handle is designed to avoid kickback and prevent hand or arm injury.

Mow only in daylight or good artificial light.

Avoid using the mower on wet grass when possible.

Always be aware of your footing on slopes.

Walk, never run.

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

Exercise caution when changing direction on slopes.

Do not mow across the top of slopes or near ditches.

Exercise caution when swinging or pulling the handle towards you.

Stop the engine before moving the mower across a sloped area or gas.

Never operate the mower unless the guards are securely in position and in good condition.

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

Disengage the rear roller drive clutch before starting the engine.

Start the engine carefully, with feet well away from the cutterblade.



SAFETY PRECAUTIONS

Operation



Do not tilt the mower when starting the engine.

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

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

Never lift the rear deflector 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 or unclogging the discharge chute.
- Before cleaning/checking or working on the mower.
- After striking a foreign object. Inspect the mower for damage and ensure necessary repairs are made before re-starting.
- If the mower starts to vibrate abnormally (check immediately).

Stop the engine:

- Whenever you leave the mower.
- Before refuelling.

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 mower with petrol in the tank within an enclosed area where fumes may reach an open flame or spark.

SAFETY PRECAUTIONS

Maintenance & Storage

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.

Check the rear deflector and grassbag frequently for wear or deterioration. Replace worn or damaged parts for safety.

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 cutterblade.

Always replace worn or faulty parts with genuine Hayter parts.



Safety Symbols

Stay alert to the possibility of injury.



Engage the parking brake when cutting.



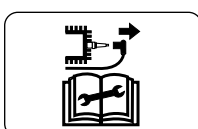
Engage the safety lock when working on the machine.



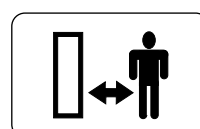
Read the Operator's Handbook before using the machine.



Do not use the spark plug lead before working on the engine.

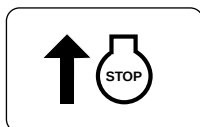


Keep bystanders at a safe distance from the machine.



Decal Symbols

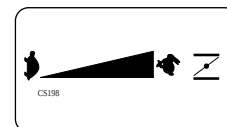
Engine Stop (Symbol)



Height of Cut Adjustment (Symbol)

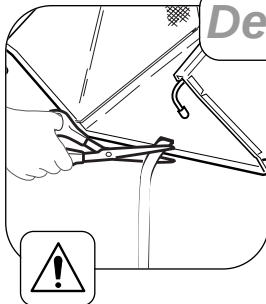


Throttle Control (Symbol)



ASSEMBLING THE MOWER

Delivery Checklist

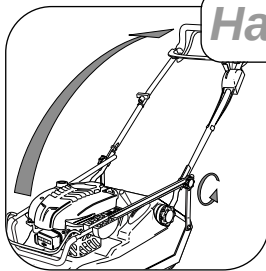


Remove the mower from the packaging and check that the following have been applied correctly. If any missing contact your local Haydale.

1. Engine Handbook.
2. Warranty Rg. Card.
3. Grassbag.

To prevent accidents cut off the long ribbon attached to the grass-bag and discard.

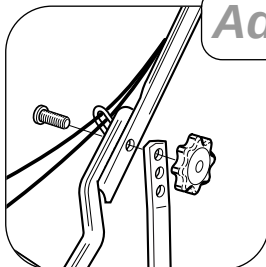
Handlebar



Move the handlebar using knobs sufficiently to allow the handle bar to pivot. Move the handlebar away from the engine to avoid damage and unfold the handlebar at the pivot point. Tighten both handlebar knobs to secure the handlebar in place.

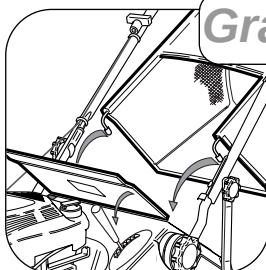
Take care to ensure that the control cables do not become snagged at the pivot point.

Adjust Handlebar Height



Move the two handlebar adjusting knobs to the handlebar back to loosen the two nyloc nuts at the base of the handlebars sufficiently to allow them to be moved to the desired height position. Retighten the handlebar back to the handlebar hole for the position and confirm. Ensure that both sides are at the same height. Tighten both nyloc nuts and knobs to secure the handlebar in place.

Grassbag Attachment



Raise the handlebar low enough for the grassbag to hook into the pivot point. Once the handlebar is in position, lower the handlebar.

BEFORE STARTING THE MOWER

Prevent Engine Damage

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 the engine.



Oil Type

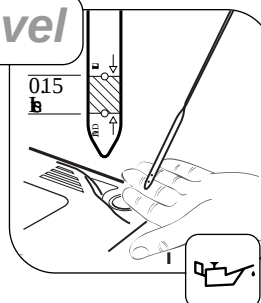
Always use high quality detergent classed "SG" SAE 30 oil. Never add oil with engine oil. SAE 10W30 may be used in both winter and high engine operating temperatures with consequent high oil consumption. It is not recommended to use multi-grade oil in order to guard against engine damage. To prolong life of your engine, it should be changed after 25 hours of use or at the 'Maintenance Schedule'.



Check Oil Level

Clean around the oil filler cap before opening. Wipe the oil dipstick with a clean cloth. Screw the oil dipstick back in place and check the oil level.

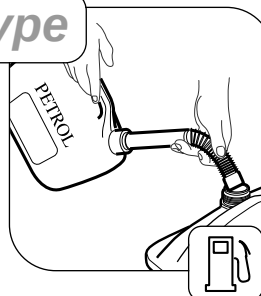
The oil level should be at the full mark on the dipstick. **DO NOT OVERFILL.**



Fuel Type

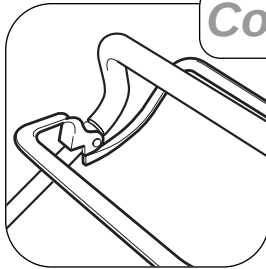
Always use clean, unleaded petrol. Purchased in quantities that can be used within 30 days. Never use old petrol. Branded petrol from Biggs & Saxon is recommended. Fuel additives which are available from auto oil Biggs & Saxon are available.

Fill to base of neck to allow for fuel expansion. Do not overfill the fuel tank.



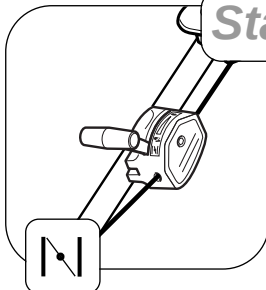
OPERATING THE MOWER

Controls



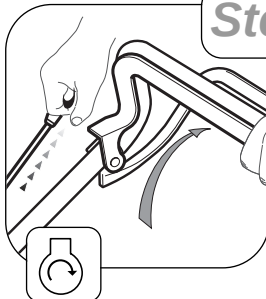
Open all control levers and ensure that the cable is in the 'choke' position. Check that the engine stop lever is in the 'stop' position when the engine is started. While opening the engine stop lever, the engine should be running before the 'choke' position.

Starting - Step 1



Move the engine stop lever to the 'stop' position before starting a cold engine. Move the engine stop lever to the 'fast' position before starting a warm engine.

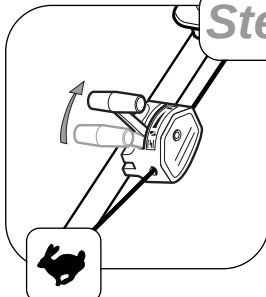
Step 2



Stand behind the engine and hold the handlebar with the engine stop lever in your left hand. With your right hand hold the engine start grip and pull slowly until the engine starts. Pull the engine start grip to the 'fast' position when the engine starts. If the engine does not start after 5 attempts - see "Trouble Shooting".

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 engine stop lever to the 'fast' position after starting a cold engine.

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

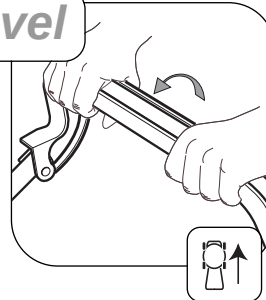
OPERATING THE MOWER

Forward Travel

Hold the handlebar and operate the ground drive clutch lever to power the mower in a forward direction.

When the ground drive clutch lever is engaged, the mower may be pushed. This is useful when mowing in confined areas.

If the engine stop lever is released the engine will stop.



Turning

To make a wide turn, release the handlebar and the front wheel will turn.

To make a tight turn, push the ground drive clutch lever down and pull the handlebar to the front wheel just above ground level and the mower will turn.

To prevent accidents do not raise the front of the mower excessively when making a turn. Never raise the rear of the mower when the engine is running.

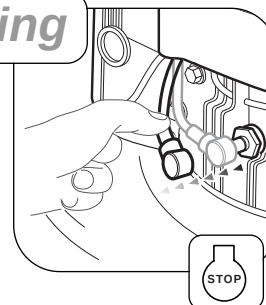


Stopping

Release the ground drive clutch lever and the engine stop lever.

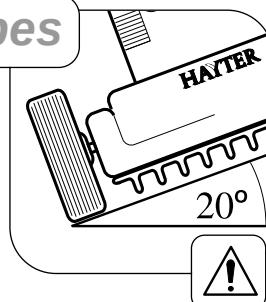
Emergency stop: Release the ground drive clutch lever and engine stop lever.

If the engine fails to stop, move the throttle lever to the 'slow' position and disconnect the spark plug lead.



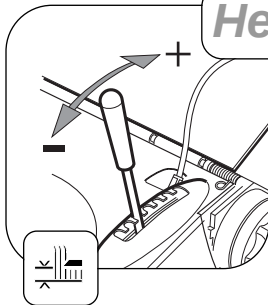
Slopes

To prevent engine damage do not use the mower on slopes greater than 20 degrees.



OPERATING THE MOWER

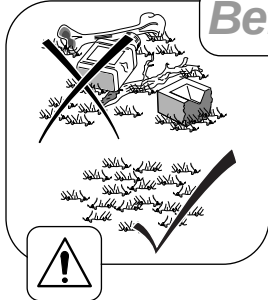
Height of Cut



Move the height of cut lever always to the desired position before mowing. To raise the height of cut, pull the lever forward. To lower the height of cut, push the lever backward. The lever has a locking notch. Push the lever forward or backward until it clicks into one of the notches.

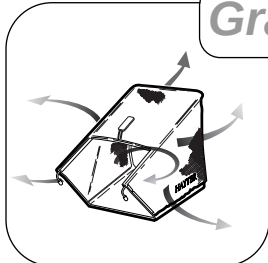
Always set a height of cut to suit the growing conditions. Prevent engine overloading and blockage by avoiding low cut in long grass conditions. Be prepared to make two cuts where the grass is long.

Before Mowing



To prevent accidents thoroughly inspect the area and remove all objects which when contacted by the mower cutterblade could become dangerous projectiles. Inspect the area for hidden obstructions which when contacted by the cutterblade could risk health and safety. Remember the location of these obstructions and ensure that you mow around them.

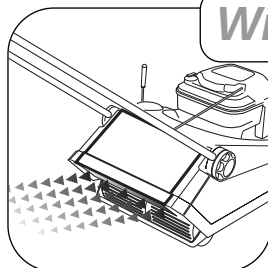
Grassbag



Raise the handle and latch the bag through the handle bar and lower the handle to engage the bag.

To empty the bag, pour out the grass clippings and shake the bag vigorously to clean the always fold gas collection panel on good airflow through the bag. When collecting grass clippings in the bag, the bag will regulate to prevent blockage and engine overloading.

Without Grass Collection

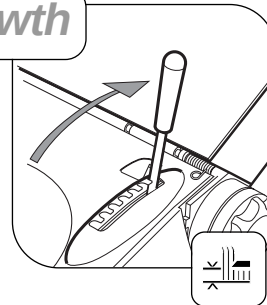


Remove the bag and operate the mower with the handle in the closed position.

OPERATING THE MOWER

Heavy Growth

As of heavy growth should be mown without collecting helpings of collection is not, from the without the gas bag at the maximum height of cutting. Allow the grass clippings to dry out and the mow the at the maximum height of cutting with the gas bag full. Reduce the height of cut and mow the again as necessary until the grass is mown.

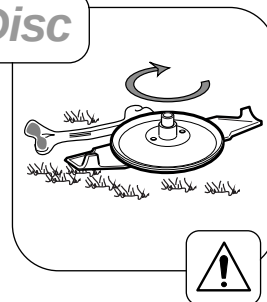


To prevent gas damage do not mow more than one third of the grass height in one cut.

Friction Disc

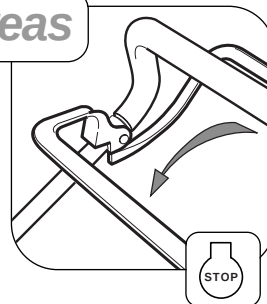
The cutting disc is driven by the engine via a friction disc to help prevent damage occurring to the engine crankshaft and cutting disc when a hidden obstruction or overload is encountered.

Always stop the engine when a hidden obstruction or obstruction is encountered. Do not use the spark plug lead and cable when cutting in areas where there is a danger of cutting the cable. Always place a danger label on the "Maintenance" label.



Non-Grassed Areas

When mowing in non-grassed areas stop the engine and check the maximum height of cut to prevent cutting the ground.



MAINTENANCE SCHEDULE

Follow the hourly or calendar intervals which ever occurs first. More frequent service will be required if working for prolonged periods under dusty, dry conditions or when the abradable disc motor is exposed to cutting oil, dry gas

First 5Hrs

- After the first five hours change the engine oil

Daily

- Check fuel level
- Remove debris from around engine exhaust guard and airways in hood cowl and under of hood housing.
- Remove debris from the bag and check for signs of damage
- Check the condition of guards and safety devices and the cutting blade

25Hrs or Every Season

- Change the engine oil if continuously operating under heavy load or high ambient temperature
- Service the air cleaner
- Lubricate the pivot points and linkage and gas line control cable at points of entry and exit from the housing.
- Check the clutch cable adjustment
- Sharpen the cutting blade

50Hrs or Every Season

- Change the engine oil.

100Hrs or Every Season

- Clean the engine cooling system. Clean the engine under dusty conditions or when the abradable disc motor has been exposed to prolonged operation while cutting oil, dry gas
- Replace the spark plug.
- Check valve clearance

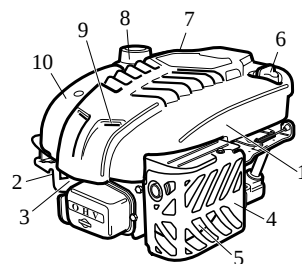
MOWER MAINTENANCE

To prevent accidents stop the engine disconnect the spark plug lead before attempting to carry out maintenance procedures on the mower.



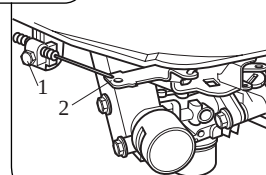
Engine

1. Engine Cowl
2. Spark Plug / Ad
3. Carburetor
4. Exhaust Guard
5. Exhaust
6. Oil Fill Dipstick
7. Start
8. Filter Cap
9. Air Filter
10. Air Cleaner



Throttle Cable Adjustment

Loosen cable clamp (1) and move governor lever (2) in the direction of arrow (1) as far as possible. Move the throttle control to the choke position. Tighten cable clamp (1).

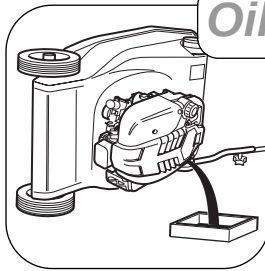


Carburettor Adjustments

Should only be carried out by an authorised Briggs & Stratton dealer. In no circumstances should the engine be adjusted to run at a speed in excess of that shown on the Declaration of Conformity.

MOWER MAINTENANCE

Oil Service

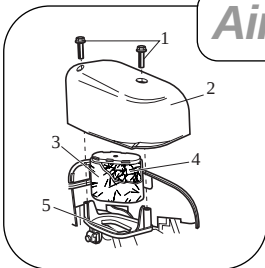


Check the oil level daily before starting the engine and ensure that the oil level is in the correct range. Refer to the 'Before Starting the Mower' section for checking and filling instructions.

Change the oil after the first 5 hours of operation and then 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 mower over on to its left hand side using a hat to prevent engine damage.
6. Remove the oil filler cap 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' section).

Air Cleaner Service



To service the air cleaner, remove the top cover (1) and the side cover (2). Carefully remove the pre-filter (3) and the main filter (4) and wash in a solution of liquid detergent and water. Allow to air dry thoroughly before fitting.

If very dirty, place

- Do not use solvents
- Do not use compressed air
- Do not oil the main filter

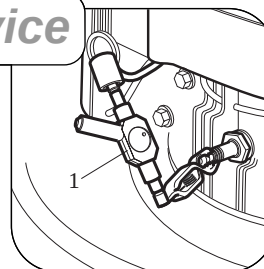
After washing, allow the pre-filter and main filter to dry thoroughly. Replace the covers and ensure they are correctly fitted.

MOWER MAINTENANCE

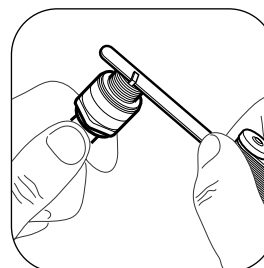
Spark Plug Service

Only Briggs & Stratton spark plug (1) to check for a spark as shown in the diagram.

Replace spark plug every 100 hours or every season, whichever occurs first. A spark plug wrench is available from any authorized Briggs & Stratton dealer.



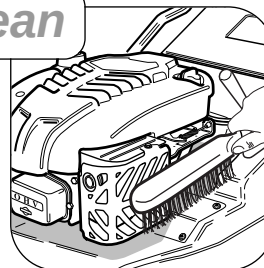
Check the spark plug gap with a feeler gauge and set at 0.76 mm.



Keeping Engine Clean

Remove all gas and debris from the engine including the exhaust guard, airways in the cowl and the surrounding deck as soon as a daily basis. Use a high-pressure water spray to clean the engine. Water can contain fuel. Always clean with a brush or compressed air.

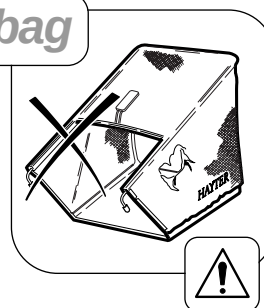
Gas and debris can clog the engine's air cooling system. After a long operation while cutting tall, dry grass, the thermal cooling fins and surfaces require cleaning to prevent overheating and engine damage. We recommend having this service performed by an authorized Briggs & Stratton dealer.



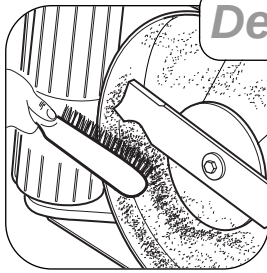
Grassbag

Remove gas and debris from the grassbag immediately after use and check its condition for signs of damage.

To prevent accidents, replace a damaged grassbag immediately.



MOWER MAINTENANCE



Deck Housing

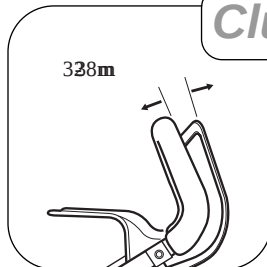
Remove grass from top and underside of deck housing immediately after use.

To prevent damage fertilisers and top dressings are particularly corrosive. Thoroughly clean the mower deck immediately after use on treated grass and store well away from corrosive materials.



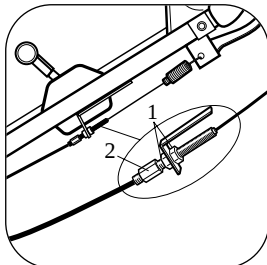
Securing Nuts & Bolts

Regularly check that all securing nuts and bolts are tight. Replace any worn or damaged parts immediately.



Clutch Cable Adjustment

Check the clutch cable operation every 3 opening hours and adjust if necessary. The clutch cable adjuster is located on the handlebar just above the clutch lever and 328mm from the handlebar.



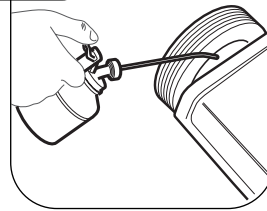
Loosen the lock nut (1) and turn the adjuster screw (2) in or out as necessary. Tighten the lock nut (1) when correctly adjusted.

MOWER MAINTENANCE

Lubrication

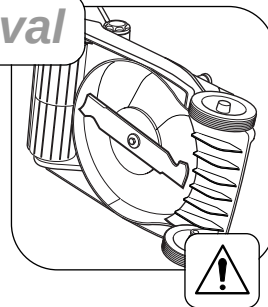
Lubricate the pivot point and linkage with engine oil every 25 operating hours.

Apply a good quality multi-grade engine oil to the pivot point of the blade and the cutting edge.



Cutterblade Removal

Disconnect the spark plug lead from the spark plug and allow the engine to cool. Turn the engine over by hand and disconnect the spark plug lead from the spark plug. Wear safety glasses and gloves when working on the cutterblade. Use a 9/16" spanner to remove the bolt securing the cutterblade.



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

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

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

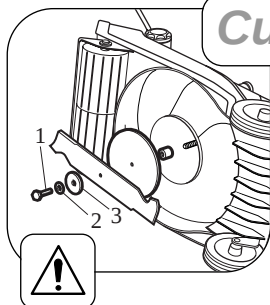
Regularly check the bolt securing the cutterblade to be tightened to a torque of 54Nm.

Replace the cutterblade every 2 years or sooner if it is worn or damaged.

To prevent injury, always disconnect the spark plug lead from the spark plug before working on the cutterblade.

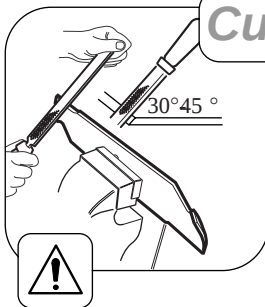
MOWER MAINTENANCE

Cutterblade Assembly

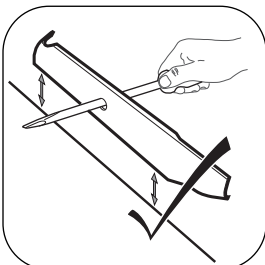


Hold the cutterblade up edge facing towards the engine. Insert the blade using the bolt (1), spring washer (2), and the pin (3) and tighten to a torque of 54Nm.

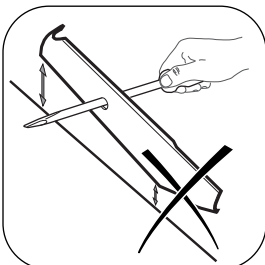
Cutterblade Sharpening



Sharpen both cutterblades equally. Both blade edges must be sharpened equally to ensure balance. Shape the cutterblade every 3 mowing hours or more frequently if conditions require. Remove the cutterblade from the mower and clean using a brush and water. Then the cutterblade for signs of damage. Shape both cutting edges with a flat file to restore performance.



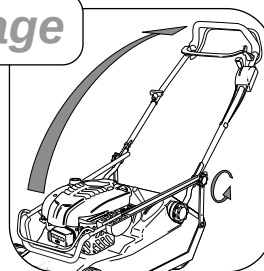
Ensure that the cutterblade is balanced. Use a saw to cut a round shaft to support the cutterblade through the hole. Hold the cutterblade horizontal and the balanced cutterblade will stay horizontal.



If the cutterblade is not balanced, the heavy end will point downwards. Shape the heavy end until the cutterblade is correctly balanced.

MOWER MAINTENANCE

Storage



To store the mower, set the deck height knob sufficiently low to allow the deck to pivot forward against the stop. Take care that the control cable does not become tangled at the pivot point and does not come in contact with the spark plug.

Engine oil in less than 30 days and to be replaced with Briggs & Stratton fuel additive and oil to prevent rust and corrosion in the fuel system and carburetor. To ensure the mower is stored in good working order, it is important that the following procedures be followed. Refer to the Maintenance section as necessary.

Drain fuel from the engine by opening the fuel tank cap.

Disconnect the spark plug lead.

Change the engine oil.

Remove the spark plug and pour 15 ml of oil into the engine cylinder and replace the spark plug. Do not exceed the volume of oil as specified or an oil leak may occur. **Do not replace the spark plug lead.** Slowly pull the starter rope once to crank the engine. This will distribute the oil and help prevent corrosion.

Clean gas and debris from the engine cylinder cooling fins under the cowl, and around and behind the exhaust guard.

Clean all oil and debris from the deck and the bag.

Lubricate the wheels.

Wash the mower with a water and mild detergent product.

Cover the mower with a protective cover in a dry, well-ventilated area.

TROUBLE SHOOTING

PROBLEM	POSSIBLE FAULT	REMEDY
Engine will not turn over	Engine oil level too low. Incorrect oil level. Obstruction under deck.	Operate engine at low speed. Check oil level. Remove obstruction.
Engine overheats	Excess oil level. Air cleaner clogged or blocked.	Check oil level. Service air cleaner.
Engine runs rough	Fuel starvation. Fuel cap vent blocked.	Fill fuel tank. Clean fuel cap vent.
Engine will not start	Engine under load. Fuel starvation. Engine cold. Incorrect timing. Spark plug lead disconnected. Throttle linkage incorrect. Engine battery not fully charged. Fully charged spark plug. Wiring fault	Raise height of cut. Fill fuel tank. Start engine at 'choke' position. Drain fuel tank and fill with correct fuel. Connect spark plug lead. Set throttle linkage. Operate engine battery charger. Clean and adjust gap or replace. Check wiring.
Engine runs rough	Spark plug lead being disconnected in use. Fully charged spark plug. Air cleaner blocked. Incorrect timing.	Connect spark plug lead. Clean and adjust gap or replace. Service air cleaner. Drain fuel tank and fill with correct fuel.

TROUBLE SHOOTING

PROBLEM	POSSIBLE FAULT	REMEDY
Engine base safety Mowing bolts loose	Tighten bolts Cut blade bolt loose Cut blade out of balance Bad crankshaft	Tighten bolt Balance cut blade Consult your dealer
Uneven cut	Uneven ground conditions Cut blade worn Cut blade out of balance Wheel/differential	Change direction of travel Sharpen cut blade Balance cut blade Inspect and replace as necessary
Discharge chute blocks	Grass too high Cut height too low Grass bag full Flow through the grass bag is not Engine speed too low	Mow dry grass Increase cut height Empty grass bag Clean the grass bag Select a faster speed
Mower is hard to push	Cut height too low Wheel/differential	Increase cut height Inspect and replace as necessary
Mower will not start properly	Clutch out of adjustment Drive belt damaged	Adjust clutch cable Replace drive belt
Poor grass collection	Flow through the grass bag is not Discharge chute blocked Wet grass Grass bag full Engine speed too low	Clean the grass bag Remove blockage Mow dry grass Empty grass bag Select a faster speed

DECLARATION OF CONFORMITY

EC DECLARATION OF CONFORMITY

I, the undersigned M.A. Wright, of: HXTER MIED,
Spillbrook, Bhop 'Sofod, HeCM3 4BIENED

certify that the lawnmowers:

Model:	Ha48
MachineTypeNo:	CODE 486V
Category:	Cobution Engine
Make	Haye
Type	Roby
Engine -Manufacturer	Biggs & Saxon
-Type	12 168027E1
-Speed of rotation	2 870 pm
Type of cutting device	Cutblade
Width of cutting device	48 cm
Speed of rotation of the cutting device	2 870 pm



Guaranteed maximum sound power level. 96 dB(A)

NOISE TEST CARRIED OUT BY: SDBRY, SDBK, ENED 00199

Directly copied with:
9837EC Ensil Health & Safety Requirements of the Design & Construction of Machinery and
Safety Components
84538EEC and by 87EEC and 88/ 180EEC Parts of Sound Power of Lawn Mowers
89336EEC and by 921EEC Electromagnetic Compatibility

Standards: EN92EN 836 and EN60 14982

I declare on behalf of Haye that the machine conforms to the EC Ensil Health & Safety
Requirements

Signed Date 191000

M.A. Wright

MAWright
(Technical Director)

VIBRATION INFORMATION

Lawnmower vibration information. RMS acceleration in 3 axes at operator's contact point on
the handlebars CODE 486V = 5 ms⁻²

486V PARTS LIST

NO.	DESCRIPTION	PART NO.	QTY	ITEM NOTE
1	Mainframe Cabing	486015V	1	
2	Plate-hcabn RH	480083V	1	
3	Clamp-Boshne	480084W	2	
4	Clamp-BosOut	480085W	2	
5	Nut-Nyloc h 'T' Type	09441	4	
6	Ky -Woodnff	1662	1	
7	ThroteConbl	486031	1	
8	Engine-BS h k dge55 OHV	3402	1	
9	Deal -Engine	486005	1	
10	Knob -Handlbar	480088	2	
11	Handlbar-hwe	480168W	2	
12	Bolt-Handlbar	09785	2	
13	Nut-Nylon h	09544	1	
14	Wale-Plain	09472	1	
15	GideRope	305093	1	
16	Ph -Pivot	340182	2	
17	Deal -EngineSop	331046	1	
18	Le-Engine	340179	1	
19	Wale-Nylon	09688	2	
20	Handlbar	34109	1	
21	Le-Cluth	306094W	1	
22	Scw	09687	2	
23	CableGle	48012	1	
24	Backe-CableCluth	306108	1	
25	Scw	09704	1	
26	Cable-Cluth	480094	1	
27	Bag -S	48602	1	includes 2, 36 & 101
28	Bag	486018W	1	
29	Delebr-Rer	480140	1	
30	Ph -Roll	03997	1	
31	Sping -DelebrRH	480131	1	
32	Rod -Delebr	480062	1	
33	Scw -PoziPan Tap	09758	2	
34	Bolt-Coach	09549	2	
35	Knob -HOC	480134	1	
36	Bag -Hbr	486019	1	
37	Sping -DelebrH	480130	1	
38	Plate-hcabn H	480083V	1	
39	Plate-HandlbarRane	480055	2	
40	Cove-ATO	480014	1	
41	Beag -ATO	480050	1	
42	Scw -WaleHd Tap	09575	3	
43	Bush	340154	2	
44	Scw -Tap	09349	3	
45	BarSp	480119	1	
46	Le-HOC	48012	1	
47	RacheHOC Mouldng	480147	1	

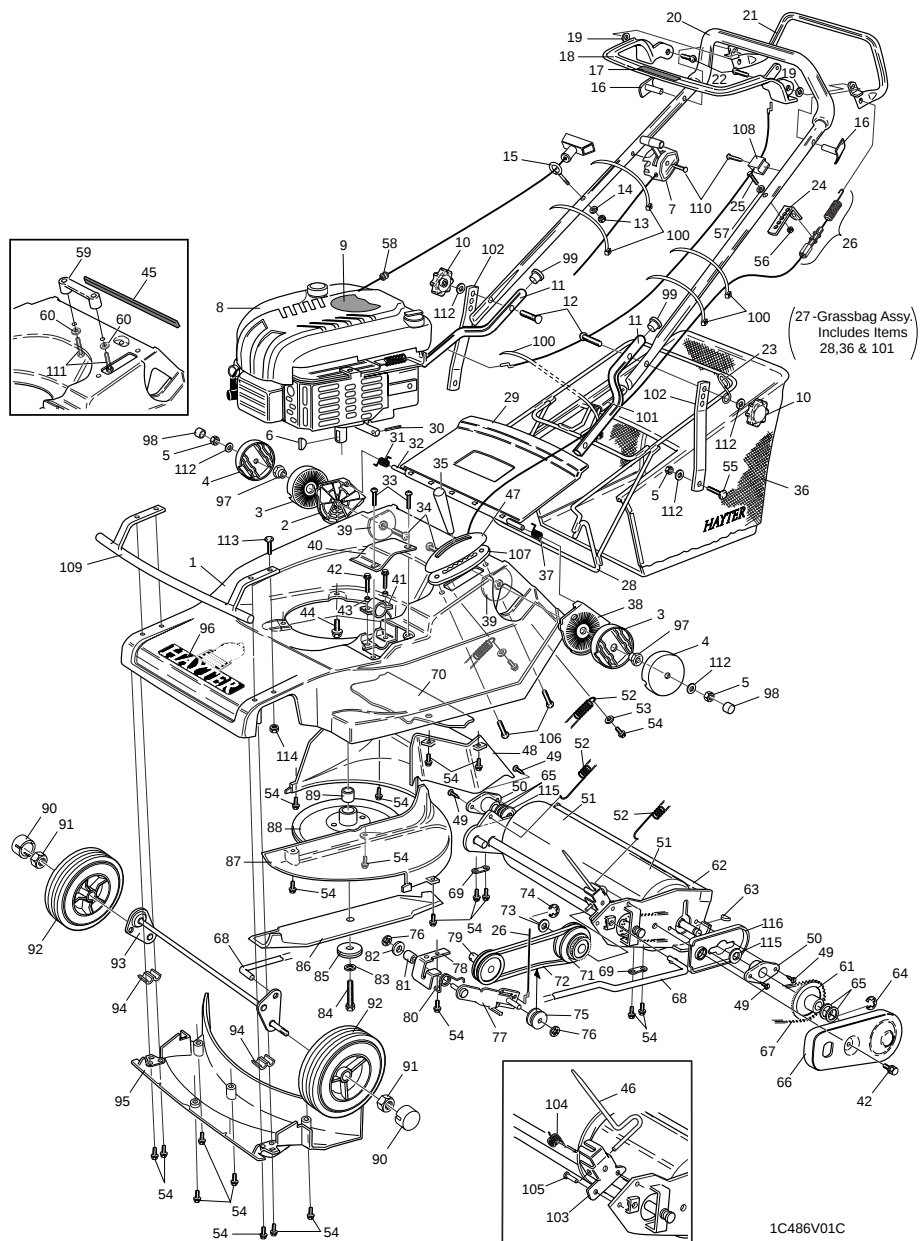
486V PARTS LIST

NO.	DESCRIPTION	PART NO.	QTY	ITEM NOTE
48	Throwplate-Main Body	480011	1	
49	Scrw -Tap	09545	4	
50	Ballg -RolleHousg	29102	2	
51	Rolle-RarWA	48603W	1	
52	Spng Toin -RarAle	480133	2	
53	Wah	0902	2	
54	Scrw -Tap	09365	2	
55	Bolt-Coach	09666	2	
56	Nut	09657	1	
57	Wah	09658	1	
58	Rope-Sub	M4289	1	
59	Handle	486016	1	
60	Wah-Spng	03469	2	
61	Spocke-2T	480039	1	
62	RarRolleWA	480159W		Include 103
63	Key -woodnff	532	1	
64	Clip	142	1	
65	Wah	480097	4	
66	Cove-Tanion	480043	1	
67	Chain	486037	1	
68	Rod -Connehg	480045	1	
69	Plate-Seung	2 19037	2	
70	He-Throwplate	480017W	1	
71	Pully -Spocke-2T	486030	1	
72	Blt-V RTO	486035	1	
73	Wah	0375	1	
74	Clip	03096	1	
75	Pully -Jocky	2 19156	1	
76	Wah-Satock	02 01086	2	
77	Backe-file	480115	1	
78	Blt-Gle	480116	1	
79	Pully -DiveRTO	486034	1	
80	Spng -Toion file	480066	1	
81	Bush	4452	1	
82	Wah-M12HD.	0920	1	
83	Wah-Spng	0923	1	
84	Bolt-NF	0912	1	
85	DancePre-Cutbar	4014	1	
86	Cutbar-19 "	480149	1	
87	Cove-ThrowplateDive	480012	1	
88	Dk -Fbn	480070W	1	
89	Space	480072	1	
90	Cap -Hub	29143	2	
91	Nut-NENyloc	4486	2	
92	Whe	528	2	
93	Ale-BntWA	2 19031	1	

486V PARTS LIST

NO.	DESCRIPTION	PART NO.	QTY	ITEM NOTE
94	Moulding -EntaxleBaing 2	19036	2	
95	Fi -Bnth	480013	1	
96	Deal -Haye& Royal Wannt 2	19186	1	
97	Nut-M8 Shouldel	480086	2	
98	Cap	34051	2	
99	Plug -Tube	300160	2	
100	Ti-Cable	3966	4	
101	Handle-6	480106	1	
102	Bace-Suppot	486039W	2	
103	BackeHOC	480157W	1	
104	Toion Sping HOC	480132	1	
105	Rive	-	2	
106	Scw	09634	2	
107	Rathe	480156	1	
108	Cable-EngineBake	486007	1	
109	Ral -Bnt	486008W	1	
110	Scw	09358	2	
111	Scw	09368	2	
112	Wabe	09475	6	
113	Bolt-Coach	09668	4	
114	Nut	09438	4	
115	Wabe-Nylon	4017	2	
116	Garl -Tanion	480164	1	

486V PARTS LIST



CUSTOMER INFORMATION /NOTES

Mower Serial No: _____

Engine Model _____ Type _____ Code _____ -

Notes