# **OWNER'S MANUAL**

## 26" Twin Clutch VERTIMOWER Model No. 26TCVM



#### INTRODUCTION

The technical data and service recommendations referred to in this maintenance manual relates to M. E. Y. Equipment Vertimowers.

Although most adjustments & repairs can be carried out by the operator - should difficulty be experienced, it is recommended that it be serviced by a suitable workshop.

A comprehensive range of spares are available directly from the manufacturer and selected dealers.

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### SAFETY INSTRUCTIONS

Please read before using vertimower.

- Never vertimow while barefoot or wearing open sandals or thongs. Wear long trousers and strong protective shoes.
- Know your controls. Learn how to stop the engine quickly in any emergency.
- Make sure the lawn is clear of sticks, stones, bones, wire and any debris, as they could be picked up and thrown by the blades.
- Stop the engine and disconnect the spark plug cap before clearing blockages, checking or working on the vertimower.
- Before using, always visually inspect to see that the blades are not worn or damaged.
- Check all nuts, bolts and screws often; always be sure the vertimower is in safe operating condition. Use only genuine replacement parts.
- Refuel outdoors only. Do not smoke while fueling engine. Add fuel before starting engine. Never remove the cap off the fuel tank or add fuel while the engine is running or the engine is hot. If fuel is spilled, do not attempt to start the engine but move machine away from the area of the spill and avoid creating any source of ignition until fuel vapours have dissipated.
- Do not vertimow whilst people, especially children or pets are in the mowing area.
- Replace worn or faulty silencers.
- Vertimow only in good daylight.
- Never use the vertimower unless all guards provided by the manufacturer are in position.
- Start the engine carefully with hands and feet well away from the blades.
- Do not operate in a confined space where exhaust fumes (carbon monoxide) can collect.
- Stop the engine whenever you leave the machine.
- Do not allow children or people unfamiliar with these instructions to use the vertimower.
- Store the vertimower in a well ventilated room away from naked flames such as may be found in hot water heaters.
- Do not over speed the engine or alter governor settings. Excessive speed is dangerous and shortens vertimower life.
- It is advisable to wear suitable eye protection when operating a vertimower.
- Turn the fuel off at the conclusion of vertimowing and reduce the throttle setting during engine runout.
- Store fuel in cool place in a container specifically designed for the purpose. In general, plastic containers are unsuitable.
- Stop the engine, disconnect the spark plug cap and inspect the mower if: (a) the machine begins to vibrate abnormally; or (b) after striking a foreign object.
- Never vertimow while walking backwards.
- Disengage the blades before pushing vertimower across gravel drives, walks or roads.
- Walk, never run.
- Vertiimow across the face of slopes, never up and down. Exercise extreme caution when changing direction slopes. Do not vertimow excessively steep slopes.

## SETTING UP THE VERTIMOWER

- To obtain an even depth of cut, setting up the vertimower correctly is important and the following procedure is recommended.
- Turn off petrol.
- Turn engine to Top Dead Centre (TDC).
- Lay back mower on 20 ltr drum or catcher.
- Place straight edge between back and front rollers, chain case side.
- Measure from tip of blade to straight edge and adjust front roller to the desired cutting depth normally the first pass might be at -2mm and then the cam adjuster would allow this to be increased to -6mm
- Check alignment of front roller to cutting blade and adjust front roller accordingly.
- Rub chalk on back roller.
- Check back roller alignment to front roller.
- Adjust back roller accordingly by rotating the back roller cam.
- Re-check height on chain case side using your straight edge.

#### **OPERATING RECOMMENDATIONS**

We recommend that the following checks be made before operation of the vertimower:-

- Check engine oil level top up with manufacturer's recommended lubricant.
- Check that the air filter is clean follow manufacturer's recommendations.
- Grease the nipples on the drive shaft bearings.
- Oil the cutter clutch, remove the slotted countersunk screw from the female clutch cone and add a couple of drops of light engine oil, add two or three drops of oil through the male clutch cone hole between the clutch forks (you may need to rotate either of the cones for the lubrication points to be readily accessible).
- Adjust the cutter reel height to the required first cut depth see section on height adjustment.
- Lubricate the chains on a regular basis with good quality chain oil.
- Check that all the vertimower's bolts are secure.

#### MOWER CARE TIPS

- When cleaning the mower, avoid using pressure hoses of air or water which may force grit into the bearings, oiled clutch and the engine.
- The twin clutch enables the cutter reel to be stationary when moving over hard paved areas and for loading. This minimises accidental blade damage from hard objects.
- The M.E.Y. Vertimower has been designed to throw approximately 75% of the grass The motor should not be inclined more than 45° when adjusting the blade setting, servicing the machine or loading it onto trailers or other transport. This is to prevent sump oil entering the cylinder or carburetor.
- When using a ramp to load the mower for transportation, avoid exposed nuts or steel fastenings that may damage the blade or cause the rear roller to skid out of control.
- clippings into the catcher. The deflector can be adjusted to maximise the performance.

#### **CLUTCH CONTROLS**

All vertimowers are fitted with two clutches which enables either the back roller drive or the cutter reel to be used individually or both together. Ensure that the vertimower blades are lifted above the ground before testing the cutter clutch.

## CUTTING HEIGHT ADJUSTMENT

The front roller side plates are secured by two pivot point nuts and two locking bolts with nuts operating in a radiused slot. By loosening these four nuts, the front roller can be moved to increase or decrease the cutter depth. A straight edge can be used to measure the required setting.

In addition, a quick cam height adjuster is fitted to provide up to 4mm variation. The special spanner provided with the vertimower can be used to free off the roller end bolts and the cams can then be rotated. 90° represents 2mm and the full 180° gives 4mm change. It is essential that the cams are set at the same position each end to provide an even cut. Both end bolts need to be secured prior to operating the vertimower.

## **CUTTING REEL**

Vertimowers can be fitted with a choice of blades:-

- 2 Tooth Crinolin spring steel blades are normally fitted as standard. They can be reversed by removing the reel, removing the bearing housings, removing the nyloc nut and all the blades with their spacers. The reel can then be reassembled presenting the back edge as the new cutting face. Note the alternating pattern of the blades on the shaft.
- **2 Tooth Tungsten Tipped blades** wear better but cost more and are easily damaged by impact with solid objects such as concrete or paving. These are preferred by experienced operators with a large workload.
- **9 Tooth Tungsten Tipped blades** are available and recommended for regular use on hardened fine turf surfaces such as tennis courts, bowling greens or cricket wickets. Smaller spacers can be used in this application to increase the number of blades in the reel.

## TO REMOVE CUTTER REEL

- Remove the dummy sole plate by removing the two side bolts at each end.
- Remove cutter reel chain.
- Remove sprocket boss (NOTE: left-hand thread).
- Remove bolts securing bearing housings and the two safety stop square headed bolts these prevent the reel being raised to the point where the blades destroy the deflector.
- Pull out cutter reel through the bottom.
- Check condition of bearings and replace if necessary.
- Replace the cutter reel in the machine and refit the four side bolts.
- Refit dummy sole plate ensuring that the deflector is secured within the two locating tabs.
- Adjust cutter reel down to closely miss the dummy sole plate. Then fit the two safety stop bolts.
- Refit sprocket boss, cutter chain and lubricate chains.
- Check the tension of the two drive chains and adjust if required and replace the chain case.
- Check all bolts are secure and then test run machine.

## BACK ROLLER

The back rollers are fabricated from thick line pipe, rolled on both ends to prevent scuffing and mounted on discs secured to a main drive shaft rotating on sealed ball bearings with machined steel bearing housings. The drive is through a 35 tooth sprocket on the chain case side.

## TO REMOVE THE BACK ROLLER

- Turn off petrol.
- Remove chain case.
- Remove back roller chain.
- Remove back roller sprocket (left-hand thread) if required.
- Remove small cover plate behind the 35 tooth sprocket.
- Lift machine forward and lean petrol tank on 20 litre drum or lift handles.
- Remove bearing housing bolts and this will release the rear roller including the sprocket.
- Lift out back roller from chassis.
- Service bearings and roller as found necessary.
- Refit roller, bearing bolts and cover plate in side case.
- Lift mower back taking care not to drop on the back roller.
- Refit drive sprocket (knock up tight).
- Refit chain and adjust.
- Refit chain case and seal.
- Check alignment and use the cam nut on the non chaincase sideplate to adjust as required.

## VERTIMOWING

As the name suggests, the machine is designed to cut or 'mow' the grass vertically. The process aims to free the root base of thatch which restricts water, and nutrient penetration.

The M.E.Y. vertimower has not been designed as a tiller! Depending on the turf condition, one might expect the blades to penetrate 10mm into the soil. The life of the blades will be directly related to the depth of cut and the soil hardness. Watering the surface on the night before can greatly ease the blade wear.

Scarifiers are available for slicing the turf root system to depths of say 40mm.

## MAINTENANCE NOTES:-

(Servicing, Oil Changes, Bearing Replacements etc.)



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