

# WINTON VERGE FLAIL MOWER

## WVF SERIES



**OWNERS MANUAL**

**PLEASE READ THIS MANUAL BEFORE OPERATING THE MOWER**

Congratulations on purchasing your new **Winton** mower!

Before you get started, we have provided a helpful space to jot down a few important details about your new Winton machine.

Model Number: **WVF**

Serial Number:

Date of purchase:

Factory Reference: AGLM130/AGLM150

This manual should be considered a permanent part of this machine and should remain with it even if the machine is subsequently sold.

Winton continually seeks advancements in its product design and quality. Therefore, while this manual contains the most current product information available at the time of printing, there may be minor discrepancies between your machine and this manual.

If you have any questions concerning this manual, please consult your local dealer.

## **General Safety Information**

Ensure all potential operators read this manual thoroughly before using the machine.

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

**Safety:** Failure to follow good safety standards could result in severe injury or even death.

**Misuse:** This machine is designed for use with compact tractors, and should be used only for the indicated purpose. Winton does not take responsibility if the machine is used for any other purpose. Children must not operate the machine under any circumstance.

**Modification:** Do not modify equipment in any way. This may impair the operation and overall safety of the machine.

**Tractor requirements:** Use only with compact tractors within power range specified.

**Misuse transport:** Do not use machinery to transport personnel or livestock.

**Condition:** For the safety of personnel and optimum performance of the machine, you should check the condition of the machine and the tractor before starting. Before use check all nuts and bolts are tight.

**Spatial awareness:** Always check the operating area is safe before starting machinery.

**Operator clothing:** The operator should not wear loose clothing while operating machinery.

**Safety wear:** Always use appropriate ear protection when running a tractor and machinery. Ensure you are wearing protective gloves when servicing and using machinery.

**Bystander safety:** Ensure bystanders keep away from the machine when it is in use. Do not touch moving parts when the machine is at work.

**Public places:** When travelling on the road/public places, always keep the PTO turned off.

**Maintenance:** Always keep the machine maintained and in a good state. Where necessary, repair or replace any defective parts. Do not modify the machine.

**Sharp objects:** Pay attention to the sharp/pointed parts while servicing the machine.

**Safety guards:** All protective parts should be in good condition before operating machinery.

**Safety signs/stickers:** Keep all safety signs clean and legible. Replace any which are missing or illegible. If a component with safety sign/(s) is replaced, make sure new safety sign/(s) are attached in the same locations.

**Operating speeds:** Machinery and PTO should be operated at the recommended speed at all times.

**Safety awareness:** Good safety requires that you familiarise yourself with various safety signs, the type of warning and the area, or particular function related to that area.

**Alertness:** Never consume alcohol or drugs these can hinder alertness/coordination. Consult your doctor about using this machine while taking prescription medications.

## **General Safety Information (continued)**

### **Machinery Pre-Use Checks**

On receipt of your new Winton machine and again within the first 4 hours of use, or the 'shake in' period as we like to call it, we always recommend checking over the machine.

- Check all bolts, nuts and screws are tight on the unit.
- Tighten/check any bolts and nuts securing blades.
- If your machine has belts check the tension and adjust if required.
- Apply grease to grease points if necessary.
- Check gear oil level and top up if needed. Do not overfill.

### **Tractor Pre-Use Checks**

Check that the machine is properly attached to the tractor. Ensure that secure pins are used on the linkage mounting pins.

Be sure to add extra weights to the front of the tractor or add wheel weights if required.

Check that the tractor PTO shaft turns freely and that the machines PTO drive shaft can extend easily. Grease the PTO drive shaft using the grease points.

The chain on the PTO shaft should be checked and in a good condition. The universal joints installed should be in a good state, with proper protective parts.

Before installing the PTO shaft, the tractor and machine should be stopped and remove the key.

Install and secure all safety guards, doors and covers before starting.

Bystanders should leave the immediate area before connecting the drive from the tractor.

### **Running/Operating Checks**

- Always keep the PTO output from the tractor at **540 RPM** when running machinery.

### **Post-Use Regular Checks**



Check blades, belts and wearing parts. Be sure they are not damaged and blades swing freely in their mount. Repair or replace as required.

Clean machinery and check for/clear any entangled material which may have got stuck around any rotating parts.

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## 1. Dimensions & Specifications

Model	WVF130	WVF150
Weight	260kg	290kg
Working Width	128cm	148cm
PTO Turning Speed	540 RPM	540 RPM
Hammer Flail Type		
Number Of Flails	22	26
Recommended Tractor HP	30-45 hp	35-55 hp
Width	155cm	190cm
Depth	76cm	76cm
Height	60cm	60cm
PTO Shaft Size	150-160cm	150-160cm
Cutting Height	3-8cm	3-8cm
Linkage Size	Category 1	Category 1
Number Of Belts	3	3
Hydraulics Required	2x double acting spools	2x double acting spools

## **2. INSTALLATION & SET UP**

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

**Safety:** Make sure the PTO drive isn't connected at any point until instructed to do so.

You will need:

Your tractor, tractor top link arm (adjustable), linkage pins, PTO shaft & some elbow grease!

### **Attaching The Mower**

Start by finding a flat piece of ground. Lower the three point linkage on your tractor to its lowest position and attach the mower to the tractor using the three point linkage pins and linch pins.

Attach the hydraulic connections [see section on hydraulic fitting & operation]. Then, with the rear roller on the mower on the ground, adjust the length of the top link arm and use the tractor hydraulics to ensure the skids at the side of the flail mower are parallel with the ground when horizontal.

Then by hand rotate the blade rotor by hand so that a row of blades hang vertically towards the ground to give an idea of the cutting height. Check the clearance between the bottom of the blades and the ground, this should be at least 50mm.

The cutting height can be set for longer grass by simply raising the hydraulic lift arms on your tractor or/and by adjusting the rear roller and skids on the machine to increase or decrease the blade clearance as required [see section on adjusting the cutting height].

The working speed of the machine should always be at a walking pace (approx. 2 to 5 mph) depending on the working conditions. Overgrown grass and weeds should be cut at a much slower pace for the best cut and to avoid any damage to the mower.

Check your PTO shaft's grease points and apply grease if needed. Then attach the PTO drive shaft and ensure the locking pin is secure on both the tractor and mower sides. Attach the chain to a secure point on the tractor/implement.

Operate the flail mower the with tractor in low range gear and the PTO delivering 540 RPM.

### **Pre-Mowing Checklist**

Before starting the machine, always check and adjust the following:

- Hydraulics are fitted and operated correctly. [Section 3]
- Set correct cutting height. [Section 4]
- Tension of the drive belt [Section 5]
- Oil level of the gearbox. [Section 6]
- Lubrication/grease points. [Section 7]
- Tightness of all bolts, nuts and screws.
- All protective guards are in place and storage stands are removed.

### **3. OPERATING ADVICE**

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

**Safety:** Before attaching/detaching machinery ensure the hydraulic lift system is in a neutral position.

#### **Hydraulic Fitting & Operation**

Always check your tractor's operating manual for the recommended type of hydraulic fluid for your specific tractor. This should also give an idea of the tractor's reservoir capacity and how to check the level of fluid. Always check your tractor's hydraulic reservoir is topped up before using any hydraulically operated machinery. Your tractor will fill the pipes and RAMs with the hydraulic fluid on first use. So it is always best to check the hydraulic fluid reservoir after your first connection as well.

Start by setting the hydraulic lever on your tractor in to the position to release the hydraulic pressure. Connect the hydraulic hoses from the machine to the tractor using the quick release couplings. Start your tractor and activate the hydraulics to test the connection. Check there are no leaks from the tractor or implement.

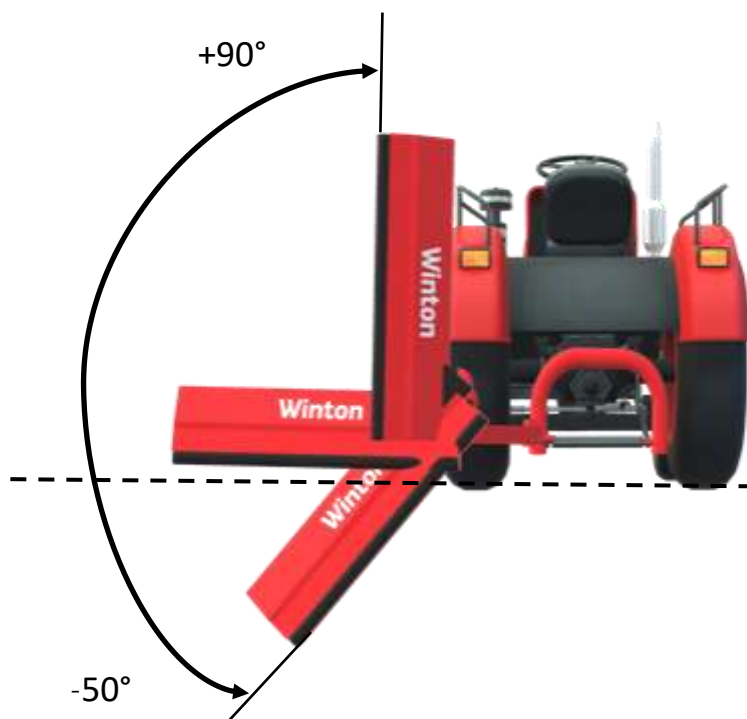
Never suddenly change the direction of hydraulic flow/the direction of the machine as this may cause excess pressure and damage to the machine/tractor.

Before disconnecting always stop the engine and move the hydraulic control levers backwards and forwards to release any pressure.

One pair of hoses operate the tilt function on the cutting head. The second pair operate the offset reach of the cutting head. It is key to get to grips with both before any cutting is started.

#### **Tilt Adjustment**

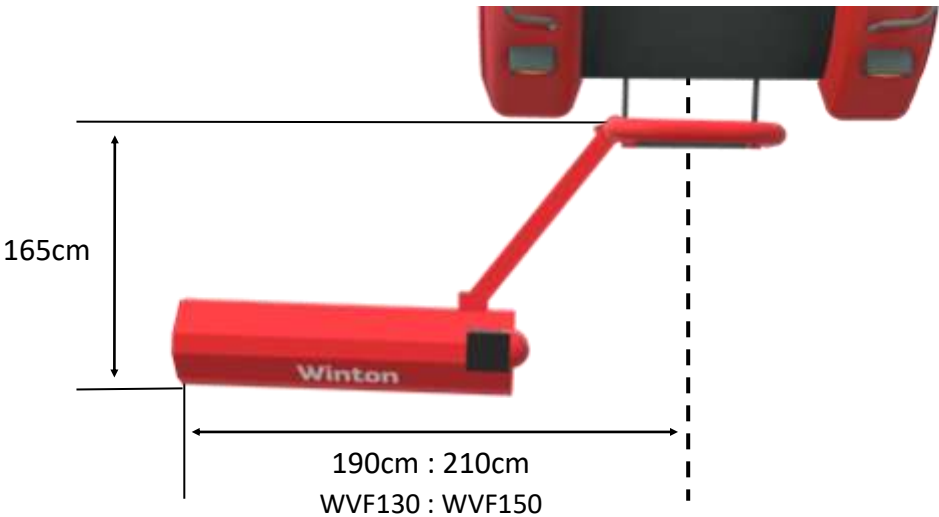
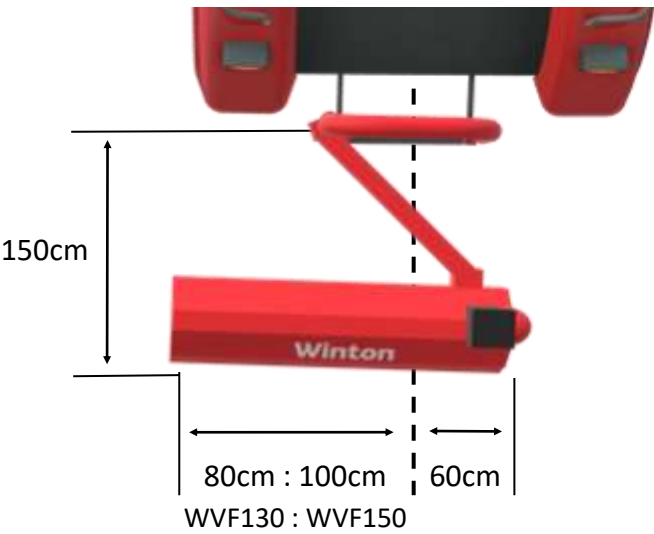
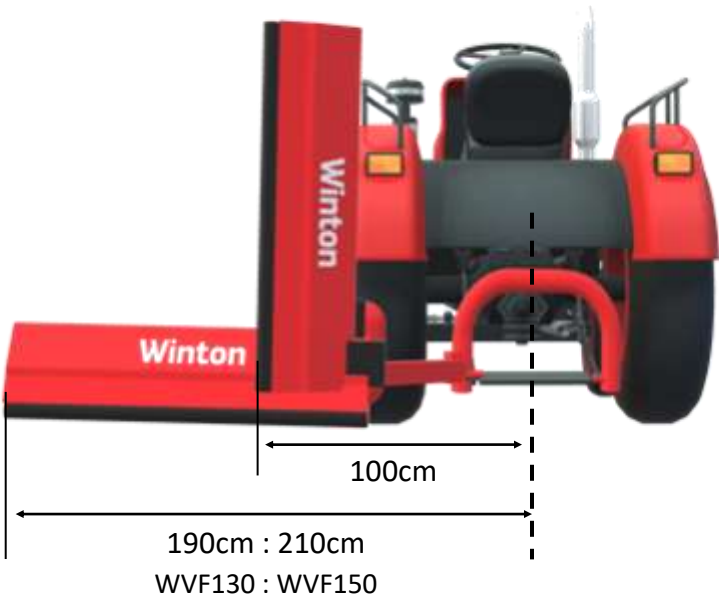
The mower head can be moved up to a vertical for cutting low hedgerows (+90 degrees), set horizontally for general paddock mowing (0 or moved downwards to (-50 degrees). These measurements are for indication and may require a degree of adjustment on the tractor's lower linkage arms to achieve.



**3. OPERATING ADVICE (Continued)**

Cutting Reach

The cutting head can be hydraulically offset from the tractor. The reach achieved is dependent on the model width.





## **4. CUTTING HEIGHT ADJUSTMENT**

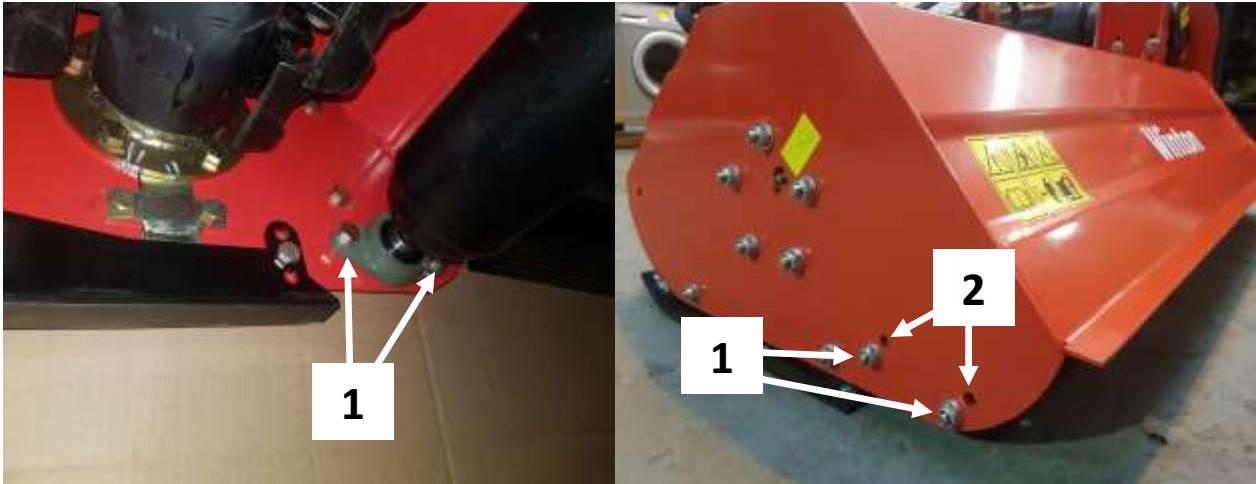
**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

**Note:** Clearance of blades to the ground should be at least 50mm and higher on uneven ground.

Getting the cutting height right is the key to creating the best cut and finish when mowing. This needs to be adjusted depending on the lay of the land and also the length of grass and density of weeds.

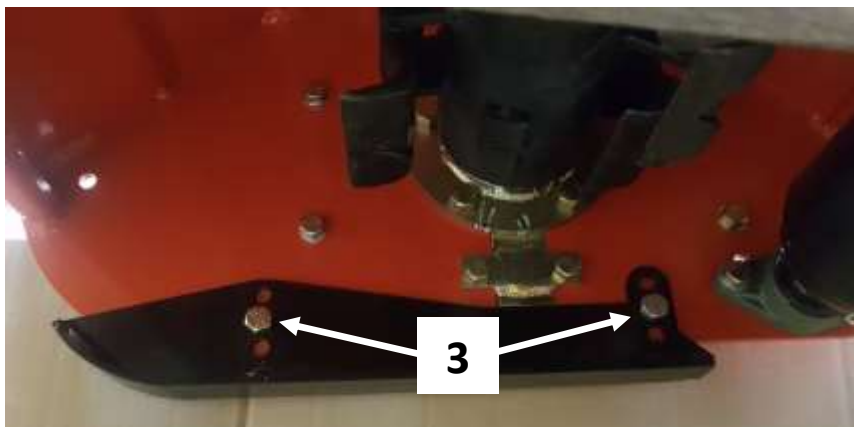
The cutting height can be set for longer grass by simply raising the hydraulic lift arms on your tractor or/and by adjusting the rear roller and skids on the machine.

### **Roller Adjustment**



1. Remove bolt/bolts **1** on both sides of the machine to adjust to desired height.
2. Adjust roller by aligning the selected holes in the roller support holes at position **2** (using the hole closest to the ground gives the highest working height).
3. Put bolt **1** into the selected hole/holes **2** and re-tighten bolt/bolts **1**.

### **Skid Adjustment**



1. Remove the nuts and bolts **3** on the skids on the front & back of both sides of the machine.
2. Move the skids up or down to the desired height with the set holes on the skids.
3. Re-fit nuts and bolts **3**.

## **5. ADJUSTING BELT TENSION**

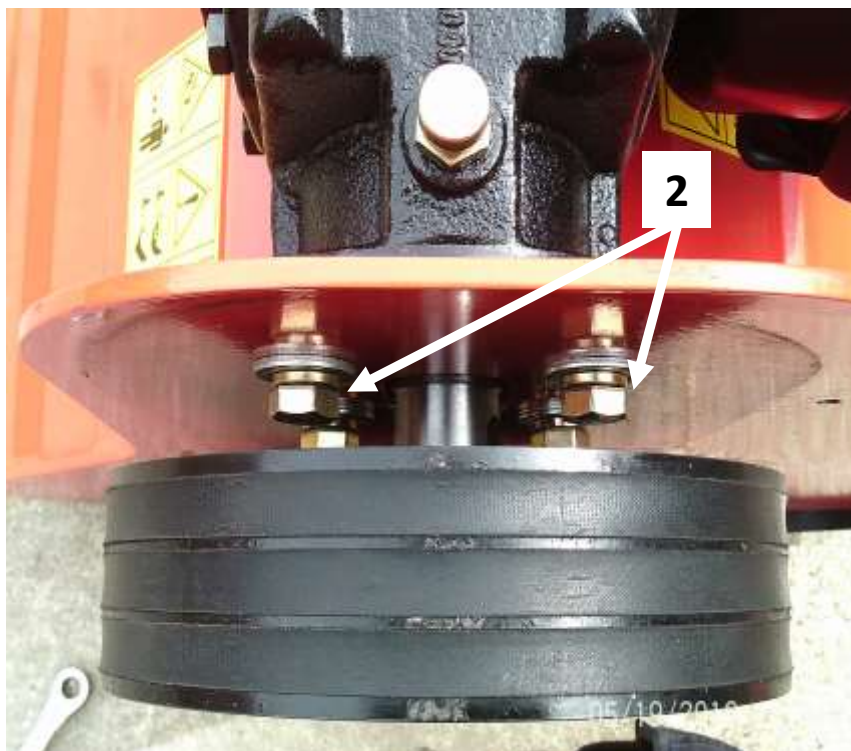
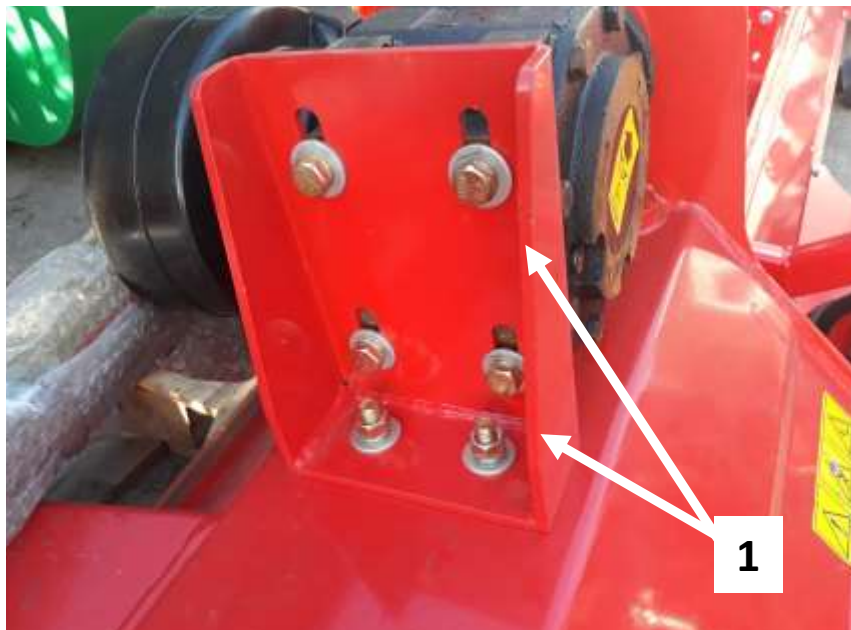
**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

### **Correct Belt Tension**

The correct belt tension is achieved when the belt can be deflected by the belt thickness about 10mm at the centre point between the pulleys. Tension should be checked regularly.

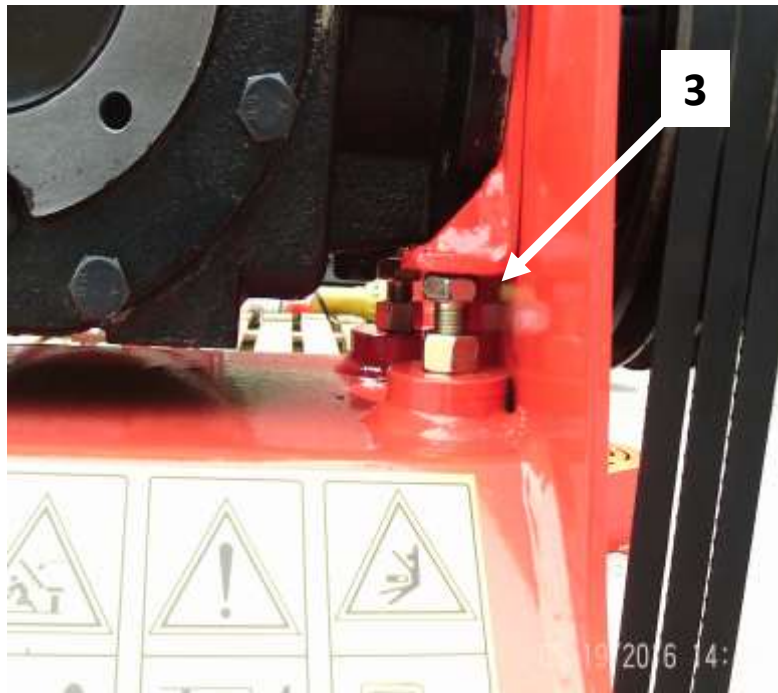
A generic measure across machines is the belt should be able to twist a quarter turn by hand. Any more and they are too loose and any less and too tight, you may run the risk of losing drive to the mower or burning the belts out prematurely.

### **Belt Tensioning**



## **5. ADJUSTING BELT TENSION (continued)**

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.



1. Remove the belt cover.
2. Loosen the four bolts **1** securing the gear box to the mounting plate.
3. Loosen bolts **2** behind the belt cover holding the support shaft.
4. Loosen off the counter locking nuts **3**.
5. Adjust belt tension by adjusting the height of counter nuts **3**.
6. Align the gearbox ensuring the drive shaft is parallel with the body and re-tighten nuts.
7. Re-tighten all bolts.
8. Replace the belt cover.

Always use a straight edge to make sure the belt pulleys are in line and running true. If misaligned, call your dealer or service engineer for technical support.

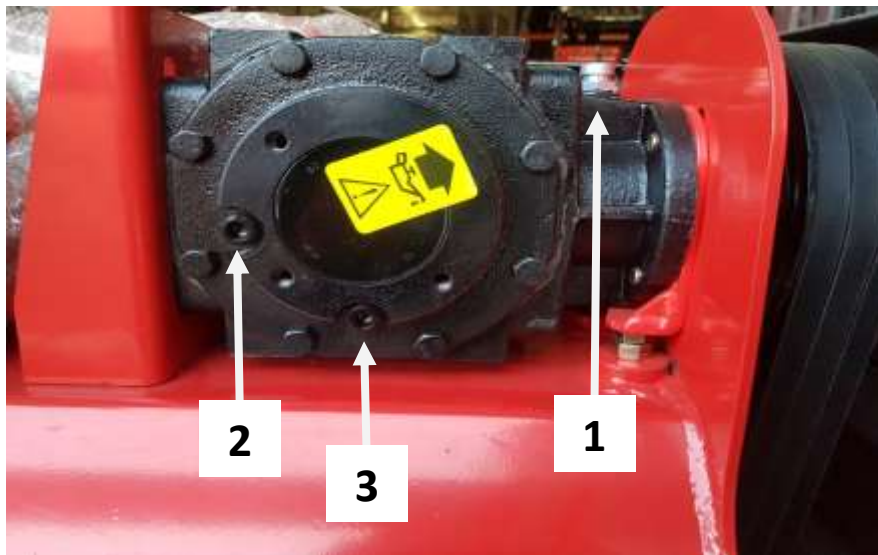
## **6. GEAR OIL CHANGE & CHECK**

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

Always check oil when the machine has cooled down and on a level surface. Make sure bolts are tightened correctly. The filler/level plug should be secure but not over tightened.

### **Important Information**

Gear Oil Grade	80w90 gear oil for all conditions (or equivalent)
Gearbox Oil Level	Approx. 0.5 litres to half full
Level/Drain Plug Size	8mm Allen key
First Oil Change	50 hours use
Oil Change Frequency	250 hours/yearly (whichever is first)



### **Oil Change/Check Gearbox**

1. Remove the filler/breather plug **1** ready to add oil if needed.
2. Remove level plug **2** to check oil level.
3. Remove drain plug **3** if oil is overfilled or ready to be drained, replace once oil is drained.
4. Add oil through the filler/breather plug hole **1** until it begins to seep out from the level plug hole **2**.
5. Re-install both the plugs **1** & **2** once filled.

### **Oil Change Log**

Oil Change #1	Oil Change #2	Oil Change #3	Oil Change #4	Oil Change #5	Oil Change #6
/ /	/ /	/ /	/ /	/ /	/ /

## **7. SERVICING & MAINTENANCE**

**Safety:** Store all lubricants away from excessive heat, dust, moisture and contaminants.

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

Grease Type	Multi-purpose lithium based grease
Grease Frequency	Check every 4-8 hours (top up if required)

### **Greasing & Lubrication Points**

1. Bearings on the blade rotor x2
2. Bearings on the rear roller x2
3. PTO shaft x2
4. Body arm x4
5. Hydraulic ram x2

Wipe grease nipples with a clean cloth before greasing to avoid injecting any dirt and grit. Press grease into each grease nipple three to five times. We recommend using a hand-held grease gun for best results.

If grease nipples will not take grease, remove and clean thoroughly. Also clean lubricant passageway. If you notice any grease points are broken replace or repair them immediately.

### **Other Maintenance**

**Blades:** Check condition of the blades and replace if worn/broken. Always take care when handling blades, wear gloves and use suitable tools for changing blades. If blades are replaced check they are balanced in order to avoid any excessive vibration.

**Belts:** Check the condition of belts, if worn or frayed replace. Adjust the belt tension if required.

**Oils:** Ensure oil levels are checked and topped up when needed. Replace any oils per the schedule.

**PTO Shaft:** Check the condition of your PTO shaft and replace if worn or damaged immediately.

**Cleaning:** Ensure the mower deck & blades are cleaned of mud/grass. Remove debris is from moving parts to prevent entanglement. Do not spray bearings when cleaning with a high pressure washer.

**Bearings:** Check the bearings on the blade rotor and the rear roller. If the oil seals are damaged debris may enter the bearings. Clean and replace with new bearings if necessary. Run the mower without a load for 3-5 minutes to check bearings are operating smoothly.

**Paintwork:** Re-coat any damaged paintwork to prevent corrosion.

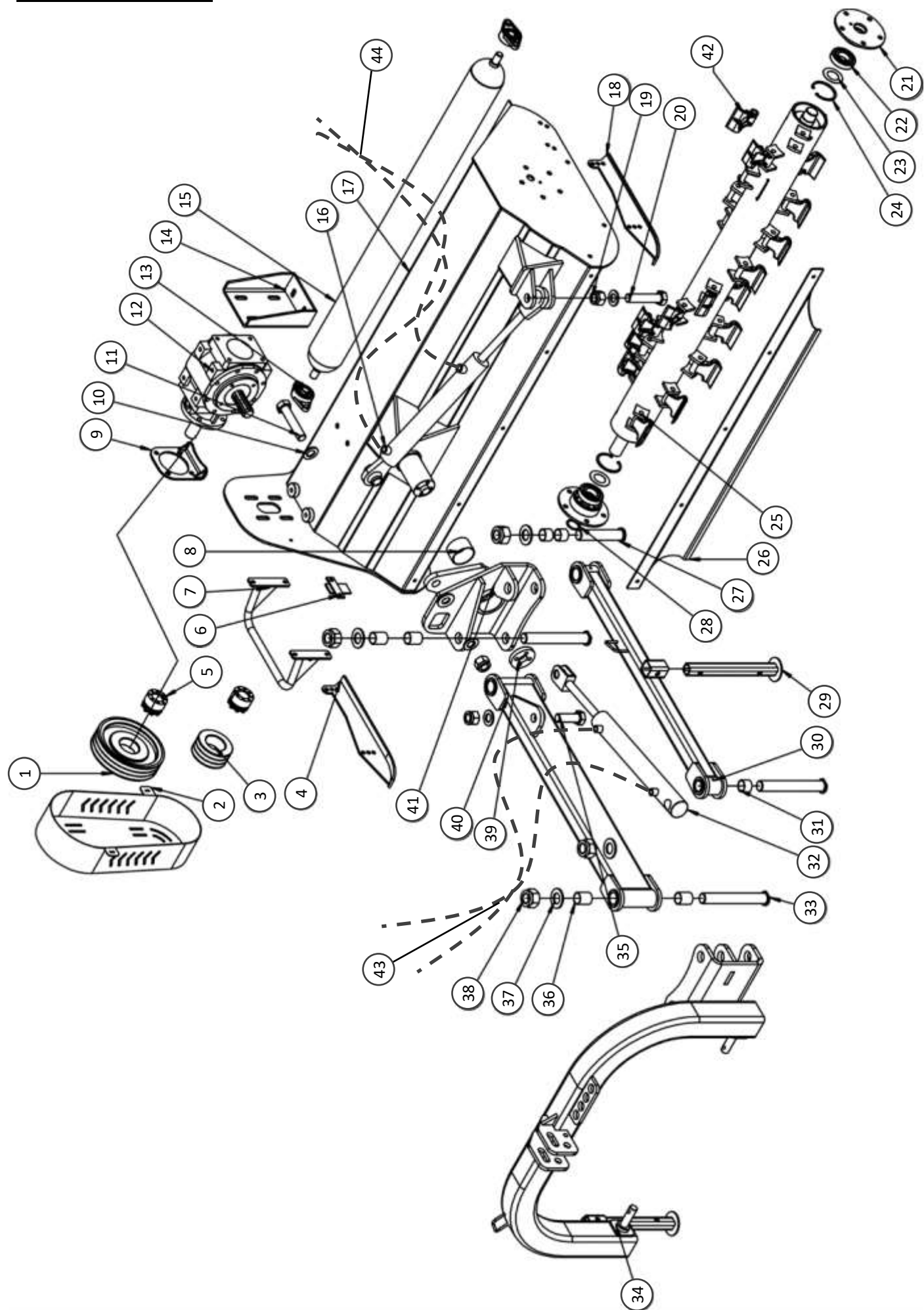
Store the machine in a dry, level area and ensure it is stable and unable to move or overturn.

**Skids:** Check the condition of the side skids and replace if worn.

**The periods recommended are based on normal operating conditions. Severe or unusual conditions may require more frequent maintenance.**



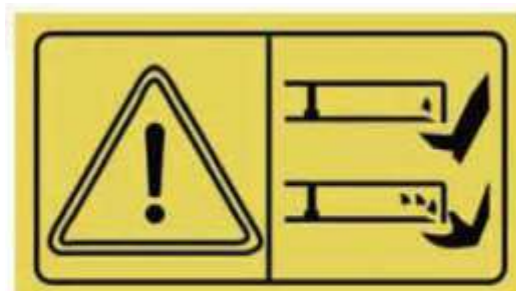
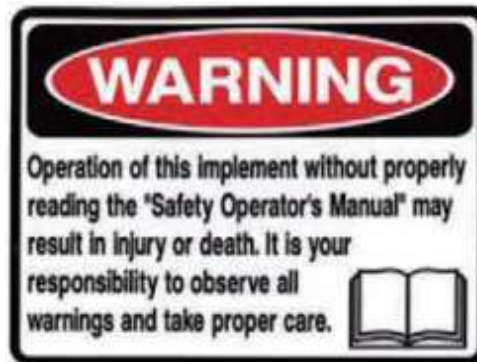
8. PARTS DIAGRAM



## 9. PARTS LIST

Dia. No.	Part Number	Part Description	Qty	Dia. No.	Part Number	Part Description	Qty
1	KDM130-118	Big pulley	1	23	KDM130-109	Plate for adjustment	2
2	KDM130-110	Belt cover	1	24	GB 893.1-86	Circlip 72	2
3	KDM130-119	Small pulley	1	25		Flail axle weldment	1
4	KD130-015	Skids	1	26	KDM130-105	Scraper	1
5		Power lock	2	27	AGL125-105	Pin	1
6		Closed plate welding	1	28	GB 894.1-86	Circlip 35	1
7	AGRM130-015	Protection plate	1	29	AGL125-014	Support foot weldment	2
8		Bearing 63*68*40	2	30	AGRM130-013	Small overturn weldment	1
9	AGL125-020	Adjustment weldment for gearbox	1	31		Bushing 30*34*40	4
10	GB/T 97.1	Flat washer 24	6	32		Swing cylinder	1
11	GB/T 5782	Bolt M24*120	1	33	AGL125-103	Pin	3
12		Gearbox	1	34	AGRM130-011	3 point linkage weldment	1
13		Bearing UCF204	2	35	GB/T 5783	Bolt M24*70	1
14	AGL125-016	Base weldment for gearbox	1	36		Bushing 30*34*40	4
15	KDM130-018	Rear roller weldment	1	37	GB/T 97.1	Flat washer 30	4
16		Turning cylinder	1	38	GB/T 889.1	Lock nut M30	4
17	AGRM130-016	Mower deck	1	39	AGL125-104	Plate for adjustment	1
18	KD130-015A	Skids	1	40	AGRM130-012	Big turn weldment	1
19	GB/T 889.1	Lock nut M24	3	41	AGRM130-014	Over turn weldment	1
20	GB/T 5782	Bolt M24*110	1	42		Hammer blades	22
21	KDM130-013	Bearing seat weldment for flail axle	2	43	WVFARMHOSE	Sway arm hydraulic hose	2
22	GB/T 276-94	Bearing 6207	2	44	WVFTILTTHOSE	Mower tilt hydraulic hose	2

## 10. SAFETY STICKERS





## PTO SHAFT RESIZING

**Safety:** Ensure tractor & machine is stopped & keys out of ignition before carrying out any work. If you are not confident in carrying out the work consult your local supplier or mechanic.

Most PTO driven implements are supplied with a standard sized PTO shaft. As all tractors vary this often means cutting it down to size. Always replace worn or damaged PTO shafts.

Attach the machine to the tractor without the PTO shaft, raise the linkage so the PTO shaft is level/horizontal. Measure the length between tractor PTO and the machine's shaft. If the compressed (closed) PTO shaft length exceeds the one measured here then the driveline will need to be cut.

1. PTO length adjustment, first remove PTO shaft shielding.



2. Shorten the driveline tubes to proper equal lengths.



3. Tidy edges of the drive tube with a file and clean all fillings from the tubes.



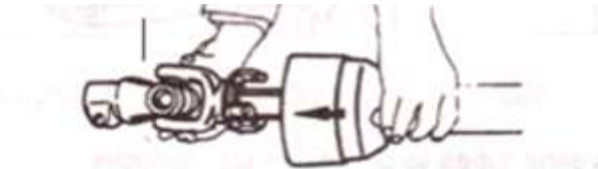
4. Shorten the equally long guard tubes to the same length as the driveline tubes.



5. Grease the internal driveline tube.



6. Fit the guard on the shaft.



7. Make sure that the length allows for at least 16cm (6 inches) of overlap.



## WINTON PRODUCT WARRANTY

We always strive to create great products, but when something does go wrong we have a strong network of resellers on hand throughout the UK to help out.

### Warranty Claims

Before you get in touch here are 5 pieces of information your Winton reseller will need to progress your claim:

- Your invoice/order details - to include date of purchase
- Machine model number
- Machine serial number
- Details of the fault
- Images/videos of the fault

### The Terms & Conditions

All products purchased as new are covered under our 12 month warranty from the date of purchase. During this period Winton will repair or replace defective parts free of charge. This warranty is given on the proviso that the product has been used and maintained according to the Owner's Manual.

Warranty is carried out on a return to reseller / manufacturer basis and excludes any labour or delivery / collection costs.

### Exclusions

- Wearing parts are excluded; including but not limited to blades, belts and bearings.
- Modification of the product in any way will cease the manufacturers warranty.
- The machine is warranted for one year to the original purchaser, resale within the period will cease the warranty.
- Damage in transit is not covered. Claims will need to be made through the courier or your Winton reseller directly.
- Compensation for down-time, labour or loss of earnings is not covered by the warranty.
- No warranty extension will be granted for replacement parts fitted.
- Damage caused by continued use of a faulty machine will not be covered.

Your **Winton** reseller will provide their own terms and conditions upon purchase, consult this for any additional queries.

## **TROUBLE SHOOTING**

**Safety:** Ensure tractor and machine is stopped & keys out of ignition before set-up/maintenance.

<b>WVF Problem</b>	<b>Solution</b>
Belt Slipping	Clean the mower deck. Adjust the belt tension. Replace belts.
Patches of uncut grass	Mow at 540 PTO rpm, check PTO speed & tractor power output. Change into a lower gear on the tractor. Tighten belts. Replace any missing/damaged blades.
Excessive vibration	Replace blades. Replace belts. Align/replace belt pulleys. Remove belt guard and clean debris from belt area. Remove debris from rotor. Check PTO shaft for damage and replace.
Gearbox noisy	Check oil level and top up if required. Extract the oil/debris and replace with new oil.
Blades scalping	Raise cutting height. Change mowing pattern/route. Reduce speed when turning.
Uneven cut	Change into a lower gear on the tractor. Level the mower using tractor linkage/hydraulics. Replace any missing/damaged blades.
Tractor loaded down by mower	Mow at 540 PTO rpm. Change into a lower gear on the tractor. Clean off the mower. Check power output on your tractor.

Always consult your **Winton** dealer if you have any questions about your machine.



**W Winton**

[www.wintonmachinery.co.uk](http://www.wintonmachinery.co.uk)