Winton Agri-Machinery

HEAVY DUTY GRASS VERGE FLAIL MOWER

WVF130 & WVF150

IMPORTANT

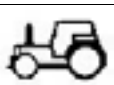
Read these instructions before installing and using this implement

HEAVY DUTY GRASS VERGE FLAIL MOWER WVF MODELS

DESCRIPTION:

The WVF model offset verge flail mower is ideal for smallholdings cutting a variety of grasses. The hydraulic offset allows the WVF flail mower to be flexible and perfectly suited for verges or cutting tricky grass areas around trees and hedges.

SPECIFICATIONS:

PART No.	Working width	Implement Width	Implement Depth	Implement Height			
WVF130	130 cm	154 cm	160 cm	78 cm	22	26-50 hp	260
WVF150	150 cm	190 cm	160 cm	78 cm	26	30-55 hp	290

Specifications are for indication and are subject to change without notice

SAFETY FIRST

YOU are responsible for the SAFE operation and maintenance of your Flail mower. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Flail mower is familiar with the operating and maintenance procedures and related SAFETY information contained in this manual. This manual will take you step-by-step through your working day and alert you to all good safety practices that should be adhered to while operating the Flail mower.

Remember, YOU are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a working part of your safety program. Be certain that EVERYONE operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury of death by ignoring good safety practices.

1 Flail mower owners must give operating instructions to operators or employees before allowing them to operate the machine.

2 The most important safety feature on this equipment is a SAFE operator. It is the operator's responsibility to read and understand ALL Safety and Operating instructions in the manual and to follow these. All accidents can be avoided.

3 A person who has not read and understood all operating and safety Instructions Is not qualified to operate the machine .An untrained operator Jeopardise himself and bystanders to possible serious injury or death.

4 Do not modify the equipment In any way. Unauthorized modification may weaken the function and/or safely and could affect the life of the equipment.

5 Think SAFETY! Work SAFELY!

GENERAL SAFETY

1. Read the operator’s Manual and all safety signs carefully before operating, maintaining, adjusting or removing the Flail mower.

2. Do not allow passengers to ride on the Flail mower

3. Operate only at safe distance from bystanders. Clear the area of people especially small children, before starting.

4. Stop PTO before dismounting tractor.

5. Keep feet and hands from under Flail mower at all times.

6. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.

7. Do not stay between the tractor and the Flail Mower.

8. Do not approach the Flail mower until all motion has stopped.

9. All rotary blades have the ability to discharge objects at high speeds, which could result in serious injury to bystanders or passers-by, use with extreme caution.

10. Place all controls in neutral, stop tractor engine. set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing, attaching or removing.

11. Review safety instructions annually with all personnel who will operate or maintain the Flail mower.

12, Do not operate machine If you are unwell or physically unfit, in which case you should stop working.

13. This machine was designed with safety very much in mind. However, there is no real substitute for caution and attention in preventing accidents. Once an accident has happened. it is too late to think about what you should have done.

14. Use a tractor equipped with a Roll Over Protective Structure (ROPS).Always wear your seat belt. Serious injury or even death could result from falling off the tractor - particularly during a turn over when the operator could be pined under the ROPS or the tractor.

15. Never exceed the limits of a piece of machinery. If its ability to do a Job, or when its not safe to do so- DON'T TRY IT.

16. Clear working area or stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.

OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, servicing, adjusting, repairing or removing.

2. Do not allow riders.

3. Install and secure all guards and shields before starling or operating.

4. Keep hands, feet, hair and clothing away from moving parts.

5. Place all controls In neutral, stop tractor engine, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting. Repairing, attaching or removing.

6. Place all tractor and machine controls in neutral before starting.

7. Never start or operate machine unless sitting on tractor seat.

8. Clear the area of bystanders, especially small children, before starting.

9. Stay away from PTO shaft and machine when engaging PTO. Keep others away. 10. Use warning lights on tractor when transporting.

11. Do not put hands or feet under machine while tractor engine or machine is running. 12. Do not operate Flail mower in the raised position.

13. Objects can be thrown out from under machine with sufficient force to severely injure people. Stay away from machine when it is running.

14. Always know what you are cutting. Never operate Flail mower in an area that has hidden obstacles. Remove sticks, stones, wire or other objects from working area before starting.

15. Review safely instructions with all operators annually.

MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.

2. Follow good shop practices.

3. Keep service area clean and dry.

4. Be sure electrical outlets and tools are properly grounded.

5, Use adequate lighting for the job at hand.

6. Make sure there is plenty of ventilation. Never operate the engine of the tractor in a closed building. The exhaust fumes may cause asphyxiation.

7. Before working on this machine, shut off the engine, set the brakes and remove the ignition key.

8. Never work under equipment unless it is secured by a mechanical stand.

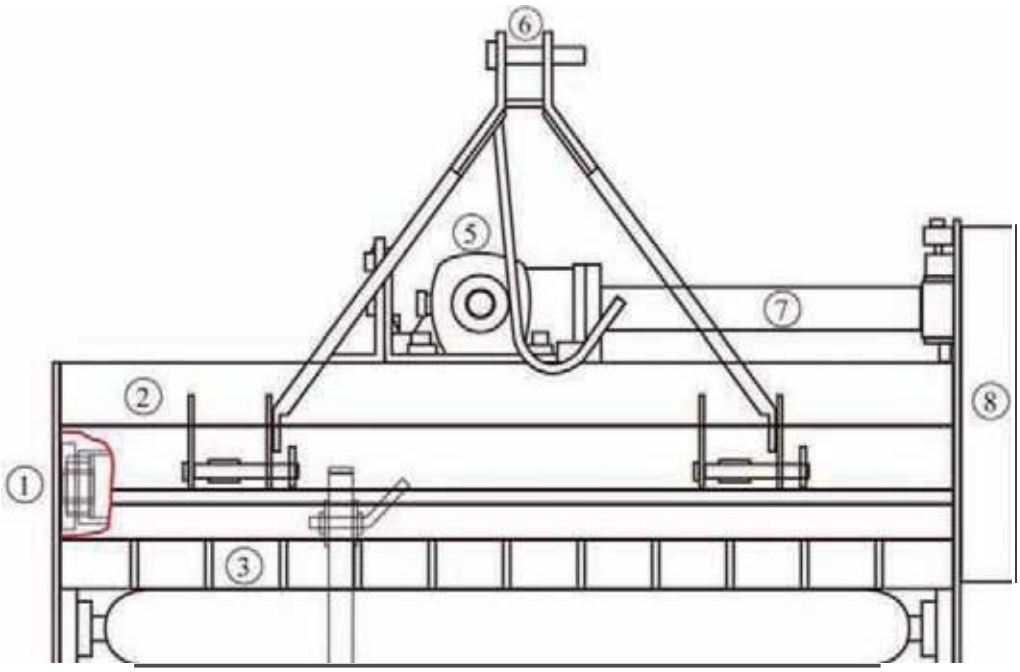
9. Use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy gloves when handling blades.

10. Only use genuine parts for service and maintenance.

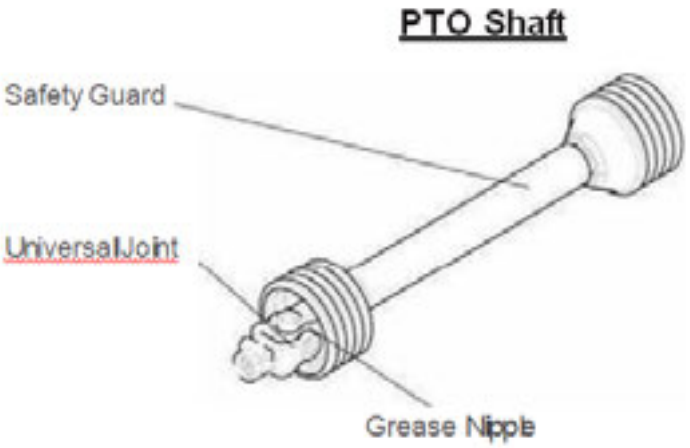
11. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on lh1s equipment.

12. Periodically tighten all bolts, nuts and screws and check that all pins are properly installed to ensure it is in a safe condition.

13. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing machine in service.



1.Blade axle	2. Blade axle cover	3. combined render
4 Stand	5. Gear box	6.Top Link Bracket
7. Transmission shaft	8. Belt & Pulley Cover	



CHECKING BEFORE OPERATING

Before operating the machine, the following areas should be checked off:

1. Before starting up the machine check and lubricate all grease points on the machine and drive shaft.

2. Use only an agricultural tractor with horsepower within limits or the Implement.

3. Check that the machine is properly attached to the tractor. Be sure retainers are used on the mounting pins.

4. Be sure extra weights are mounted on the front of the tractor, if required.

5. Check the oil levelling the gearbox. Add as required.

6. Check that the tractor PTO shaft turns freely and that the machine driving shaft can telescope easily.

7. Check the blades. Be sure they are not damaged or broken and swing freely in their mount. Repair or replace as required.

8. Check and tighten the blade bolts.

9. Check for entangled material in all rotating parts. Remove the material.

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

11. Before installing the PTO. Ensure the engine is stopped and the PTO shaft is in safe working order.

12. All other people shall leave the area before connecting the driving power from the tractor. Keep the output of the tractor at 540 RPM.

13. Before cleaning, repairing and lubricating the machine, stop the motor and take the key away with you.

14. When the PTO shaft is not connected with the tractor, support it through the frame to protect it from lying in the dirt.

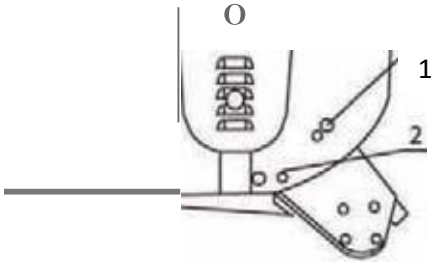
15. Don't approach the machine when it is operating.

ADJUSTING THE HEIGHT

To get the most out of your flail mower, it should be set within the recommended height.

To save fuel and power, and to reduce wear and tear, the cutting height must be regulated correctly.

When adjusting the working height, loosen screw (1), remove screw (2) on both sides; the roller height (see following drawing) can be adjusted by aligning the selected hole in the roller support bracket at position 2. The lowest hole is the highest working height; put the screw (2) into the selected hole, tighten screw (1) and screw (2).



FLAIL MOWER ADJUSTMENT

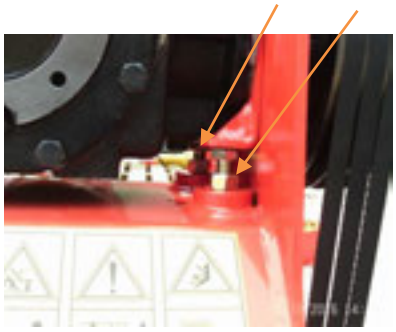
1. On a flat piece of ground, attach the Flail Mower to the Tractor using the three point linkage
2. Use a solid adjustable top link
3. Lower the three point linkage to its lowest position
4. With the roller at the rear in contact with the ground, adjust the length of the top link so that the lower edge at the side or the flail mower is parallel with the ground
5. Rotate the blade drum by hand so that a row of blades align vertically towards the ground.
6. Measure the clearance between the bottom of the extended blades and the ground. Minimum 50mm

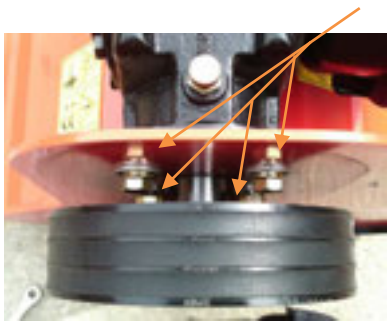
Note - In rough or lumpy paddocks the clearance needs to be increased to ensure that the blades don't Impact the ground in operation.

7. Adjust the roller height to Increase or decrease the blade clearance as required
8. Go through steps 4 to 7 until the required clearance is achieved. When the Flail Mower has been set up with the required tolerances
9. Operate the Flail Mower with tractor in low range and the PTO delivering 540 RPM.

DRIVE BELT ADJUSTMENT

Loosen the Screw A and B that locks the support shaft and loosen the counter nuts C.





Adjust the drive bell tension. The correct belt tension is achieved when the belt can be directed by the belt thickness about 10mm at the centre point between the pulleys.

Align the gearbox so the drive shaft is parallel with the body.

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

Fit the safety covers and tighten the mounting bolts before operation.

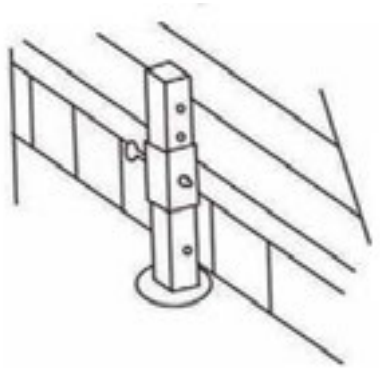
Approx. 10mm direction.

Align with straight edge.

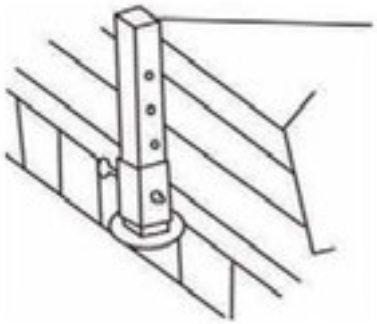
STARTING UP

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

- Drive belt tension.
- Gearbox oil level.
- Grease nipples on bearings and PTO shaft.
- All bolls, nuts and screws.



Storage Position



Operating Position

In order to keep the machine stable, lower the adjustment stand when the machine is stopped (see above drawing).

Follow all safety precaution detailed in this manual.

The machine is equipped with a standard category one, three point linkage.

Back the tractor into position in front of the flail mower Lower the tractor hydraulic lift arms. Turn the tractor off. Manoeuvre the implement by hand and attach the lower link arms to the lower link pin. Ensure they are secured with lynch pin. Attach the top link to the top link bracket. Adjust the lower link sway chains to allow minimal lateral movement. Attach the PTO shaft to the Tractor PTO ensuring it has been cut to the required length.

HYDRAULIC CONNECTION

- Switch the engine off, set the handbrake and remove the Ignition key. Push the hydraulic lever to release pressure at the remotes. Connect the implement's hydraulic hoses to the remotes using the quick couplers, having checked the quick couplers are clean and in good condition.
- Start the engine and activate the hydraulics to check the connection. Check there are no oil leaks at the connection or the implement.
- Before disconnecting, stop the engine and move the remotes lever back and forth to release the hydraulic oil pressure as previously mentioned.

GREASING AND LUBRICATION

After 4 hours of work:

- Check and tighten nuts and bolts
- Grease with lithium based grease when it is indicated by the symbol GREASE

After 50 hours of work:

- Check and fill the gearbox to the required level, using oil type SAE 90 EPAPI GL4 Oil.

Each 100 hr or work:

- Check the gearbox oil level. Replace as required

FLUIDS AND LUBRICANTS

1. Grease: Use multi-purpose lithium based grease. Gear Box Oil: Use SAE 90 Gear oil.
2. Storing Lubricants: Your machine can operate at top efficiency only if clean lubricants are used.
3. Use clean containers to handle all lubricants. Store them in an area that protects them from dust, moisture and other contaminants.

GREASING

1. Use a handheld grease gun for all greasing.
2. Wipe grease nipple with a clean cloth before greasing to avoid Injecting dirt and grit.
3. Replace broken nipples immediately.
4. If nipples will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace nipple if necessary.

MAINTENANCE

The period recommended is based on normal operating conditions. Severe or unusual conditions may require more frequent maintenance.

HOURS OR DAILY MAINTENANCE:

- Check all nuts and bolts, tighten as required.
- Check the blade and blade bolts every day and replace the damaged parts. Don't install damaged, worn and unbalanced blades. Replace sleeves as they become worn.

NOTE: The operator should put on gloves and use suitable tools before changing blade.

- Check the oil in gearbox. Fill up to line if necessary.
- Pump grease into each grease nipple three to five times. Clean the Implement: remove grass and mud.

SEASON MAINTENANCE:

- Check the oil in the gearbox and replace it if it is contaminated.
- Check the blade spindles for wear and tear. If warn, disassemble and clean them and replace them. If it is necessary, grease as required.

ANNUAL MAINTENANCE:

- Thoroughly clean mud and grass off the machine.
- Check and clean blade axles. Replace seals and grease as required. Check all blades, replace then 1f they are wear-out or damaged.

- Repair or replace the side skirts back to their original size and shape. Replace damaged or broken protective devices.

GEARBOX MAINTENANCE

The oil should be drained out and replaced alter the first 50 hours of operation. Then the oil should be changed every 250 hours, or at least once a year.

Drain oil from the gearbox thoroughly. Check and clean it. Fill with new gear oil up to the dedicated oil level.

The draining procedures as follows:

- Remove the draining bolt under the gear box, so that the oil drains off.
- After the oil has drained out, put the plug back and fill with gear oil up to the dedicated oil level.

	5hrs/Daily	50hrs/Weekly	Annually
Lubricate PTO Shaft	✓	✓	✓
Lubricate Blade Spindle	✓	✓	✓
Check Gearbox Oil Level		✓	✓
Clean Machine			✓
Lubricate and Clean PTO Shaft Cover			✓

PTO SHAFT MAINTENANCE

The PTO shaft is designed to telescope and allow dimensional changes as the machine goes through its operating range. A tubular guard encloses the driving components and is designed to turn relative to the driving components. The shell should telescope easily and the guard turn freely on the shaft al all times. Annual disassembly, cleaning and lubricating is recommended to ensure that all components are function as intended. To maintain the shaft follow this procedure:

1. Remove the shell from the machine.
2. Pull shaft apart.
3. Use a screw driver to prise the tabs out of the sleeves on each end.
4. Pull the shaft out or the plastic tubular guard.
5. Use a solvent to clean the male and female portions or the telescoping ends.
6. Apply a light coat or grease to each end.
7. Clean the grooves on each end where the tabs are located. Clean each lab also.
8. Apply alight coat of grease to each groove.
9. Insert the shaft into its respective guard and align the slots with the groove.
10. Insert the tabs through the slots and seat in the groove.
11. Check that each guard turns freely on the shaft.
12. Assemble the shell
13. Check that the shaft telescopes easily.
14. Replace any components that are damaged or worn

15. Install the shaft on the machine.

The gearbox used on the Flail mower will give many years of trouble-tree service with minimal maintenance requirements. Maintain the gearbox by following this procedure:

Oil Level:

- Remove the level plug from the rear or side of the gearbox.
- Add oil through the filler plug located on top or gearbox until oil comes out or reaches the level plug. Add through the level plug if required.
- If the gearbox has a dipstick on filler plug, then fill to Indicator mark.

IMPORTANT: Check the oil level only when the unit is cold and the machine is on the level.

STORAGE

Clean the machine inside and out so as to avoid corrosion.

Don't spray water on the rolling bearing if you clean the machine with high pressure sprayer. Check and clean the universal Joint, driving belt press roller, or replace them if they are not in good condition.

Spread oil on all parts required.

Recoat the parts rubbed and damaged for anti corrosion. Store the machine in a dry, level area.

OPERATION AFTER STORAGE

Before the machine is started up, check the following items regularly; Check oil level and add if required.

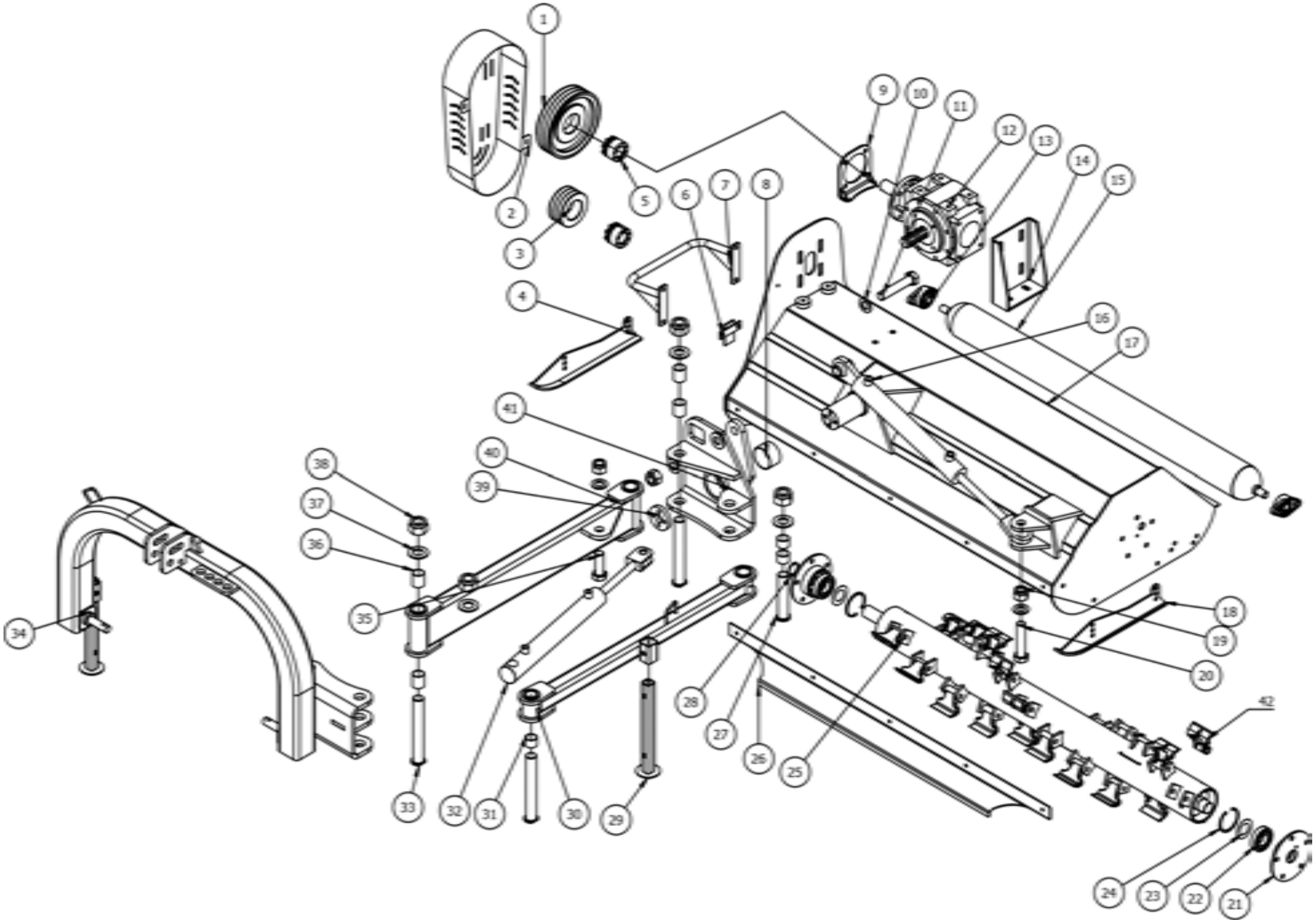
Check and tighten all screws and nuts.

Check the blade condition. Replace as required.

Check the air hole on the gearbox. If it is blocked, clean or open the hole with compressed air. Don't spread oil or grease on the driving belts. If there is oil or grease on the belts, wipe the belts, to avoid slippage and premature wear.

Check all moving parts and replace them if necessary.

Check the protective covers are complete and operate correctly.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AGLM（UK）			
No.	Part No.	Description	Qty
1	KDM130-118	Big Pulley	1
2	KDM130-110	belt cover	1
3	KDM130-119	small Pulley	1
4	KD130-015	skids	1
5		Power lock	2
6		closed plate welding	1
7	AGRM130-015	Protection plate	1
8		bearing 63*68*40	2
9	AGL125-020	adjustmennt weldment for gearbox	1
10	GB/T 97.1	flat washer 24	6
11	GB/T 5782	Bolt M24*120	1
12		Gearbox	1
13		bearingUCF204	2
14	AGL125-016	base weldment for gearbox	1
15	KDM130-018	rear roller weldment	1
16		turning cylinder	1
17	AGRM130-016	mower deck	1
18	KD130-015A	skids	1
19	GB/T 889.1	lock nut M24	3
20	GB/T 5782	Bolt M24*110	1
21	KDM130-013	bearing seat weldment for flail axle	2
22	GB/T 276-94	Bearing 6207	2
23	KDM130-109	plate for adjustment	2
24	GB 893.1-86	circlip72	2
25		flail axle weldment	1
26	KDM130-105	scraper	1
27	AGL125-105	pin	1
28	GB 894.1-86	circlip35	1

29	AGL125-014	support foot weldment	2
30	AGRM130-013	small overturn weldment	1
31		bushing 30*34*25	4
32		swing cylinder	1
33	AGL125-103	pin	3
34	AGRM130-011	3-point-linkage weldment	1
35	GB/T 5783	Bolt M24*70	1
36		Bushing 30*34*40	4
37	GB/T 97.1	flat washer 30	4
38	GB/T 889.1	lock nut M30	4
39	AGL125-104	plate for adjustment	1
40	AGRM130-012	big turn weldment	1
41	AGRM130-014	over turn weldment	1
42		hammer	22

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