



AF2000 – AF6250 Flexi Roller

Operator's Manual & Parts Listings



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'Prosperity Through Soil Care'

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1.0 Safety

1.1 Safety is the Operators Responsibility

The Flexi Roller is a robust and versatile machine capable of operating under a wide variety of conditions. It can be used for direct drilling applications as well as traditional cultivation and seeding to maximise seed germination and plant establishment for pastures, summer crops, cereals, oil seeds and legumes.

The Flexi Roller presents an operator with hazards associated with setting up, on and off road transport, tillage and seeding applications, as well as machine service and maintenance. The operator must be aware of these hazards.

The dealer will explain the capabilities, safe application, service requirements and restrictions of the Flexi Roller and demonstrate the safe operation of the Flexi Roller according to Soil Care Systems International instructions. The dealer can also identify unsafe modifications or use of unapproved attachments.

The following publications provide information on the safe use and maintenance of the Flexi Roller and attachments:

- The operator's manual delivered with the Flexi Roller gives operating information as well as routine maintenance and service procedures. It is a part of the Flexi Roller and must stay with the machine if it is sold. Replacement operator's manuals can be ordered from your Agrowplow Dealer.
- The Flexi Roller has machine decals that instruct on safe operation and care.

1.2 Safe Operation Needs a Qualified Operator

1.2.1 Understand the Instructions, Rules and Regulations

- The written instructions for the operation of the Flexi Roller are included in the Flexi Roller operator's manual and on the machine decals.
- Check the rules and regulations for your location. These rules may include any Federal and State safety requirements.

1.2.2 Have Training with Actual Operation

- Operator training must consist of a demonstration and verbal instruction. This training is given by your dealer when the Flexi Roller is delivered.

- New operators must start in an area without bystanders and use all the controls until they can operate the Flexi Roller safely under all conditions of the work area.

1.2.3 Know the Work Conditions

- Operators must know any prohibited uses or work areas. They need to know about excessive slopes and rough terrain.
- Operators must know the local road transport regulations, and understand the dangers and requirements of transporting wide and heavy equipment.
- Always wear protective clothing when maintaining or servicing the Flexi Roller.
- For operators to be qualified, they must not use drugs or alcoholic drinks that impair their alertness or coordination while working. Operators who are taking prescription drugs must get medical advice to determine if they can safely operate a machine.

1.3 Safety Instructions

READ THESE SAFETY INSTRUCTIONS CAREFULLY BEFORE ALLOWING ANY PERSON TO OPERATE THE AGROWDRILL

1. Review this manual before each season of use.
2. Never allow anyone unfamiliar or untrained to operate the implement.
3. Operators must know and abide by any road transport regulations pertinent to the transit of your Flexi Roller.
4. Never leave the Flexi Roller in a raised position. Accidental release of control levers or hydraulic hose failure will result in the machine dropping. This can cause serious injury to someone near or under the implement.
5. Do not transport the Flexi Roller without the tractor or vehicle drawbar being in a locked position. Transporting without the drawbar locked will result in loss of implement control and serious damage or injury.
6. Do not transport a Flexi Roller in excess of 20 kph. Transporting at greater speeds will result in loss of implement control and cause serious damage or injury.
7. Do not transport a Flexi Roller with a vehicle of less gross mass than that of the Flexi Roller being towed (see table 2.1). Transporting with a smaller lead vehicle will result in loss of implement control and cause serious damage or injury.
8. Do not pull trailed Flexi Rollers from any point other than from the tractor or towing vehicle drawbar. Pulling from a point other than the designated tractor or towing vehicle drawbar can result in tractor instability and cause serious damage or injury.
9. Do not ride on the Flexi Roller at any time.
10. Use due care when adjusting or maintaining any aspect of the Flexi Roller. Failure to do so may result in serious injury.

11. When undertaking maintenance on the Flexi Roller the operator must ensure that the tractor is turned off and the hydraulics are fully lowered. Accidental release of control levers or hydraulic hose failure will cause the implement to drop down. This can cause serious injury to someone near or under the machine.
12. If the Flexi Roller must be in a raised position for service or maintenance, ensure the unit is securely supported with proper support stands. After the implement is secured release the hydraulics on to the supports and stop the tractor engine before starting work. If supports are not used accidental release of control levers or hydraulic hose failure will cause the implement to drop down. This can cause serious injury to someone near or under the machine.
13. Do not remove any safety instruction decals.
14. Ensure that any safety decals are clear and visible. Clean and replace as necessary.



2.0 Flexi Roller Specifications

| Model | Transport Width | Working Width | Weight | Number of Rings |
|--------|-----------------|---------------|--------|-----------------|
| AF2500 | 2.9m | 2.5m | 748kg | 41 |
| AF3000 | 3.4m | 3.0m | 874kg | 49 |
| AF3250 | 3.7m | 3.25m | 937kg | 53 |
| AF3500 | 3.9m | 3.5m | 1001kg | 57 |
| AF4000 | 4.4m | 4.0m | 1127kg | 65 |
| AF4500 | 4.9m | 4.5m | 1254kg | 73 |
| AF5000 | 5.4m | 5.0m | 1380kg | 81 |
| AF5500 | 5.9m | 5.5m | 1507kg | 89 |
| AF5750 | 6.2m | 5.75m | 1570kg | 94 |
| AF6000 | 6.4m | 6.0m | 1633kg | 99 |
| AF6250 | 6.7m | 6.25m | 1700kg | 104 |

Table 2.1: Flexi Roller Specifications

Ring Specifications

| | |
|-------------------|-------|
| Outside Diameter: | 400mm |
| Inside Diameter: | 300mm |
| Width: | 60mm |
| Weight: | 10kg |

Optional Equipment

- Manual Transport Kit
- Hydraulic Transport Kit



Figure 2.1: Agrowplow AF4000 Flexi Roller

3.0 Operating Instructions

3.1 Hitching

The Flexi Roller should be matched to the tractor size to maximise performance and efficiency. A mismatched tractor and implement will be inefficient and cost money, as well as being unsafe.

The hitching procedure is as follows:

1. Pin the tractor drawbar into the central position.
2. Attach the Flexi Roller to the drawbar.

Warning: Ensure the drawbar pin is locked into position so that it cannot work itself out when the machine is in operation or transit. Failure to do this may result in serious injury or death.

3. Attach the hydraulic coupling (if fitted) to your tractor remote outlet, taking care to clean away any dirt.

The working height of a trailing Flexi Roller is controlled by the hydraulic rams attached to the wheel assemblies. These are operated by the remote hydraulic system.

On some tractors it is necessary to set the hydraulic system to operate in the “single acting” or “bypass”. Consult the tractor operator’s manual for details.

4. Disengage the jack stand.

3.2 Hydraulic Lift Circuit

The procedure to connect and prime the hydraulic lift circuit (if fitted) is as follows:

1. Ensure both the tractor remotes and the hose couplings are clean and then connect the hose couplings to the tractor.
2. Loosen the hydraulic connector on the input line (see figure 3.1) of the right hand wheel lift cylinder. This should be done to allow air to escape while the hydraulics are being primed.
3. Slowly pressurise the hydraulics until oil appears at the loosened connection on the right hand cylinder.

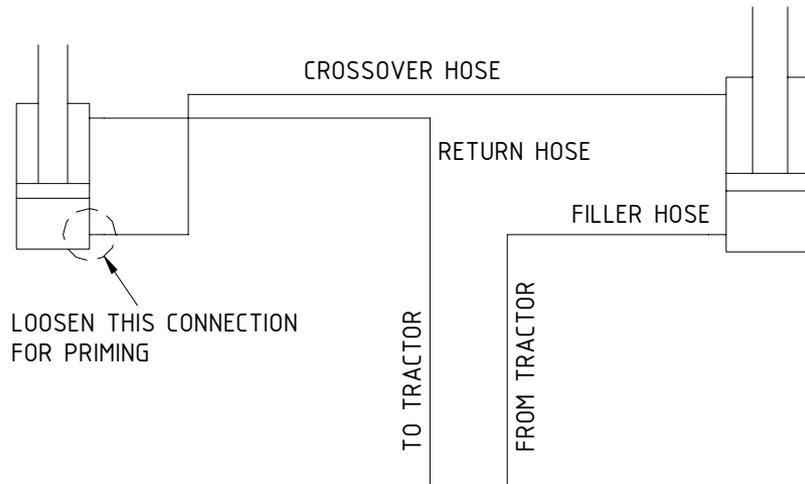


Figure 3.1: Hydraulic Circuit Diagram

Note: Stand well clear of the loosened connection as oil under pressure can spray wildly outwards. It is a good idea to place a hessian bag or similar material over the connection to minimise oil movement.

4. Retighten the connection as soon as oil appears.
5. Continue to prime the hydraulic lift circuit until the right hand cylinder is fully extended. Hold the hydraulics open for a further 15 to 20 seconds to allow air to clear from the circuit.
6. Fully raise and lower the machine several times to expel any residual air trapped in the circuit.

The lift circuit is now fully primed and the Flexi Roller can now be moved.



Figure 3.2: Optional Hydraulic Transport Kit

3.3 Tyre Pressures

On trailing models ensure that both tyres are inflated to a pressure between 350 – 490 kPa (50 – 70 psi).

3.4 Operating Direction

The Flexi Roller is a multi purpose unit and can be utilised in either direction. In aggressive mode the Flexi Roller will shatter clods and mulch topsoil. It can also be used to break the crust on newly sown soil after rain. In passive mode the Flexi Roller provides a firming, pressing action.

The procedure to change modes is as follows:

1. Place the Flexi Roller on a flat surface.
2. Remove the three locking pins along the carrier bar
3. Swing tow bar over 180°
4. Replace the three locking pins.

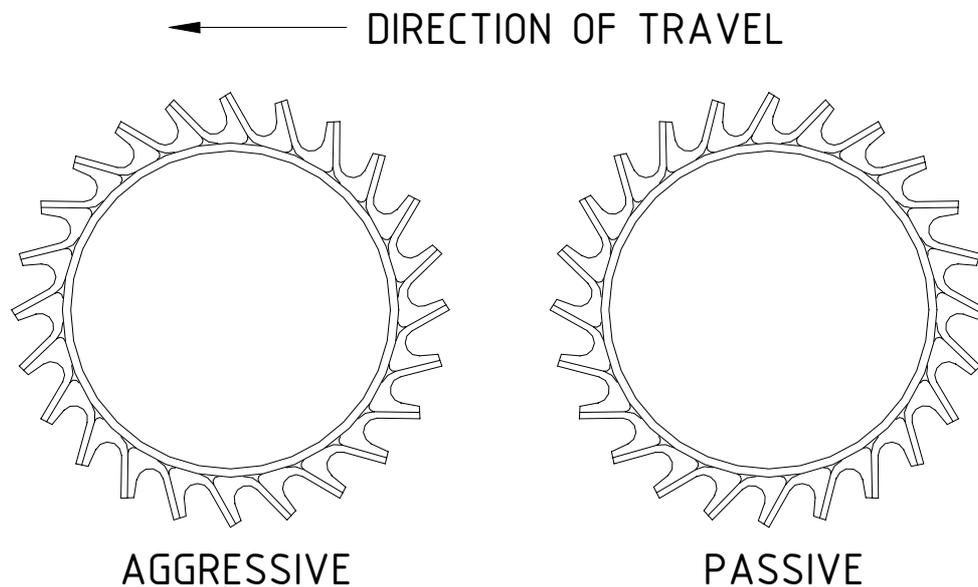


Figure 3.3: Flexi Roller Modes of Operation

The transport kit wheel assemblies do not need to be moved when changing between operating modes.

3.5 Operating Speed

The optimum operating speed of the Flexi Roller will vary depending on the task. Generally lower speeds will be required in the passive mode, as this will provide less soil disturbance for firming actions. Conversely, operating at higher speeds in the aggressive mode will increase soil surface disturbance and hence clod shattering. High speeds will also increase wear on the roller rings.

3.6 Operating Height

The Flexi Roller rings are allowed to work up and down in a vertical plane enabling individual contour following. Best results will occur if the entire weight of the machine is rested on the roller rings. Therefore if hydraulic or manual transport kits are fitted the wheels should be raised clear and as high as possible.



Figure 3.4: The Contour Following Ability is Ideal for Raised Beds.

4.0 Lubrication and Maintenance

The Flexi Roller is an extremely robust and durable machine and will give many years of service with simple routine maintenance.

4.1 Pre-Operation Check

Check the following points before operation:

- Check all nuts and bolts are tight.
- Check all grub screws are tight.
- Add roller rings as necessary.
- Perform a quick visual check of entire machine.

4.2 Lubrication

The lubrication schedule for the Flexi Roller is as follows:

| Item | Action | Interval |
|-----------------------|--------|---------------------|
| Rotor Bearings | Grease | 20 Operating Hours |
| Wheel Axle Bearings | Grease | 100 Operating Hours |
| Manual Levelling Tube | Grease | 100 Operating Hours |

Table 4.1: Flexi Roller Lubrication Schedule

4.3 Adding Roller Rings

You should add new roller rings when there is enough space (60mm) between the end roller ring and the stopper plate to fit a new ring in.

The procedure for adding roller rings is as follows:

1. Place the Flexi Roller on a hard surface.
2. Remove the retaining bolts holding the roller rotor to the carrier plate.
3. Carefully raise the carrier frame clear of the rotor far enough to enable the addition of new roller rings.
4. Loosen lock nuts and bolts on stopper ring.
5. Remove stopper ring.
6. Add new roller rings as required making sure they face the same direction as the existing roller rings.

7. Replace stopper ring and tighten bolts and lock nuts.
8. Lower frame and fasten retaining bolts.
9. Check position of stopper plate after a short period of use. Reposition as necessary according to the settling of the roller rings. It is important to keep the rings 'tight' to prevent any horizontal movement as this will lead to premature breaking of the rings.

4.4 End of Season Storage

To ensure a long and trouble free working life please take the following steps when storing the Flexi Roller for long periods.

- Shed the Flexi Roller for protection against the weather.
- Ensure all grease nipples are thoroughly greased before storage. By excluding air and moisture from inside the bearings the chance of corrosion will be minimised. For best results grease the bearings while they are still warm from the last working.
- All weight of the Flexi Roller should be placed on the roller rings during storage. This will prevent flat spots occurring in the tyres.