

**TRI-TILL**  
**(2011)**  
**2.4m, 3m & 3.6m**  
**Mounted Machines**  
**OPERATOR MANUAL**

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## **Safety**

This manual contains basic advice which should be observed during setting-up, operation and maintenance. Therefore, this operating manual must be read by the personnel concerned prior to starting up, using the machine and be available at all times.

If safety instructions are not complied with, then this can lead to the risk of injury to yourself and others as well as damage to the environment or the machine. Non-compliance to the safety instructions can also lead to claims for damages becoming invalid.

## **Qualification and Training**

- Ensure that only reliable, authorised personnel work on or with the machine. Statutory minimum age limits must be observed.
- Employ only trained or instructed staff; the individual responsibilities of the personnel concerning operation, setting up, maintenance and repair must be clearly established.
- Define the machine operators' responsibilities – also with regard to observing traffic regulations. The operator must have the authority to refuse any instructions issued by third parties, which contravene safety.
- Persons undergoing training and instruction or taking part in a general training course should not be allowed to work on or with the machine unless they are under the constant supervision of an experienced person.
- The use of spare parts, accessories and ancillary equipment not supplied and/or not approved by Philip Watkins Ltd could have detrimental effects to the construction of the Philip Watkins Ltd machine or on its functions and hence impair the active and/or passive driving and/or operating safety (accident prevention).
- Philip Watkins Ltd shall not be responsible for any damage caused by the use of spare parts, accessories and ancillary equipment not supplied and/or approved by Philip Watkins Ltd.
- Conversions of or modifications to the machine may only be carried out after consultation with Philip Watkins Ltd.

## **General Safety**

- Warning signs and other notices on the machine provide important information for the safe operation. Observing them will serve your safety
- Before starting work, make yourself familiar with all the equipment and control as well as their functions
- The user should wear close-fitting clothing
- Keep the machine and in particular the bearings clean to avoid risk of fire
- Check around the machine before moving off or starting up (watch out for children!). Make sure you have adequate all-round visibility.
- Always match your speed to the local conditions. Avoid sudden turning manoeuvres when driving uphill or downhill or when travelling across a slope.
- Observe the respective regulations when using public roads.
- Take into account the wide overhang and or the sideways force acting on the machine when turning or negotiating curves.

### **Special Safety Instructions**

- Take extreme care when hitching up or unhitching machine to/from the tractor.
- Never allow person to stand between tractor and the machine unless the tractor is secured against rolling away by means of parking brake and/or wheel chocks.
- Driving, steering and braking characteristics are influenced by mounted machines and ballast weights. Therefore, ensure adequate steering and braking ability.
- Never stand or work beneath suspended loads. Ensure stands are in position before commencing maintenance work.
- If there is a requirement to lift the (TRI-TILL), appropriate lifting apparatus must be attached through the lifting eye on each corner of the machine. The machine weight is on its ID plate.
- When making adjustments to the machine care should be taken not to trap any body parts in moving or pivoting parts.

### **Top Link Pin**

Due to the physical nature and weight distribution of the (enter machine here) a category three enclosed ball top link (category four on 3.5m machine) is highly recommended.

Due to exaggerated loads experienced during normal working conditions, the top link pin is considered as a consumable part and should be checked for wear on a regular basis.

### **Maintenance**

The packer bearings should be greased every day until you see old grease come out and after washing off.

The disc bearings are a sealed unit and require no grease.

The condition of the subsoiler legs, the points and the discs should be regularly monitored in order to maintain the most efficient use of the machine.

The condition and position of the packer scrapers (if equipped) should also be observed in order to prevent soil building up on the packer. Ensure the scrapers are not touching the packer though, as this will add rolling resistance as well as causing premature wear of the spacers.

### **Auto Reset**

Grease points can be found on all rams on auto reset machines. These require one pump of grease every 20 hours

### **Spares**

When ordering replacement parts please have your serial number, part name and quantities at hand. Please email your order to [info@philipwatkins.co.uk](mailto:info@philipwatkins.co.uk).

### **Winter Storage**

When machines are to be parked up for the winter period, correct storage techniques are an important part of protecting the machine to ensure a hassle free season. When the machine has finished work it should be cleaned down and washed off to remove all traces of soil.

Following washing off, the packer bearings and disc bearings should be greased until old grease is forced out. Other grease points are located on all rams on auto reset machines and these should receive two or three pumps of grease.

When the machine is parked up a note should be made of what wearing parts require replacing ready for the next seasons work. The wearing parts can then be ordered in time ready for the next seasons work to avoid delays when the machine is required earlier than expected!

### **General Usage**

This machine is designed so main frame runs level but if needed in trashy conditions you can lengthen tractor top link to allow better flow.

This machine is designed to travel in a straight line while working elements are soil engaged, however you may negotiate slight curves around headlands.

The front discs are aimed at working 40 to 60mm deep and usually the 2<sup>nd</sup> row of discs will run about 20 to 25mm deeper than the 1<sup>st</sup> row. Adjust disc depth via threaded adjusters (spanner in toolbox).

If equipped with hyd disc depth set depth with spacers on ram and adjust front to back pitch with turnbuckle.

Sub soil legs will run 175 to approx 375mm deep and are adjusted via a pin on each leg. **DO NOT LINE HOLES UP WITH FINGER!!**

Set hyd auto reset leg pressure by opening tap and setting pressure with tractor spool valve. Pressure should be set as low as possible between 100PSI and 1200PSI to keep legs in work in normal conditions.

Harrow bar (if equipped) (if not needed for a long period of time it may be better to remove it and place in storage). Angle of harrow can be adjusted with the bolts on the bracket.

Seeder unit (if fitted) please refer to seeder instructions.