



OMEGA

Separator Units

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IMPORTANT

This operator's handbook should be regarded as part of the machine. Suppliers of both new and second-hand machines are advised to retain documentary evidence that this handbook was supplied along with the machine.

On installation of the machine (i.e. starting off in the field), the New Machine Installation Record Card should be completed by the dealer/distributor and be countersigned by the customer. The document is proof that the correct procedures have been followed.

The New Machine Installation Record Card should be returned to Standen Engineering Limited within 7 days of installation. Failure to do so may invalidate the machine warranty.

On delivery, check that the machine is as ordered and has not been damaged in transit. Please report any shortfall to your Standen dealer.

The contents of this handbook, although correct at the time of publication, may be subject to alteration by the manufacturers without prior notice.

Standen Engineering Limited operate a policy of continual product development. Therefore, some illustrations and/or text within this publication may differ from your machine.

The copyright of this handbook is the property of Standen Engineering Limited, Hereward Works, Station Road, Ely, Cambridgeshire. CB7 4BP. This handbook is issued on the condition that it must not be used, copied or exhibited without their written permission.

Introduction to the Handbook

This handbook provides the information for the installation, operation and maintenance of your Standen Omega Separator. To enable you to achieve the best results from the machine, the manufacturer recommends that you read the handbook thoroughly prior to using the machine for the first time.

Record below the details of your machine.

Dealers Name

Address

.....

Telephone Number

Machine Serial Number

Date Purchased

Date Started Work



This symbol indicates important safety messages within this handbook. When you see this symbol, be alert to the possibility of injury to yourself or others and/or damage to the machine and carefully read the message that follows.

Throughout this handbook the terms 'front', 'rear', 'left-hand' (LH) and 'right-hand' (RH) are derived from the tractor driver's position facing forward in the normal direction of travel.

Adjustments to the machine may have to be made singly or in combination according soil conditions. Always allow the machine to settle to a new setting before making further adjustments.

Recommended lubrication and maintenance instructions are included in this handbook and if followed will help to keep the machine in a safe working condition.

Warranty

Should the machine suffer any faults or defects within the warranty period, please contact your dealer. The warranty shall be effective only if the dealer is informed of any such defect as soon as practicable upon discovery.

Replacement Parts

Recommended replacement parts are designed for your machine and have the full backing of the warranty. Only when recommended parts are used can responsibility be considered under the terms of the warranty.

THE OMEGA SEPARATION UNITS COMPRISED IN THIS MACHINE ARE ONLY APPROVED FOR USE WITH EBONITE AND STEEL ROLLERS. RUBBER ROLLERS MUST NOT BE FITTED INTO THESE MACHINES IN THE PLACE OF THE EBONITE OR STEEL ROLLERS.

Section 2 of this handbook contains a list of spare parts available through your Standen Agents. Each illustration shows a complete unit or assembly in exploded form. Standen's policy of continual product development means that components or even complete assemblies are redesigned from time to time. Where possible the modifications are shown in the remarks column.

The first printing of each page in the spare parts section is identified as issue 1 at the foot of the page. When a complete unit or assembly has been redesigned the appropriate pages are revised and printed as issue 2. The revised pages are filed behind the existing issue so that a complete modification history is gradually built up. When using an illustration and parts list it is essential that both are of the same issue.

Always quote the full serial number of your machine when ordering spare parts.

Safety

The Standen Omega Separators have been designed to comply with current Safety Regulations. However, as with all machinery there will be inherent dangers whilst operating and carrying out maintenance on the machine. The following safety precautions should therefore be brought to the attention of all persons operating and working on the machine. The list is not exhaustive. All machinery is potentially dangerous and the operators must exercise great care at all times. Standen Engineering Limited will not accept liability for damage or injury caused by their products except when such liability is specifically imposed by English statute.



Safety guards must be fitted to prevent access to the Omega drive chains, sprockets and rollers.



Avoid loose clothing near moving parts. Wear gloves when handling the implement or parts with sharp edges.



operated by untrained personnel or children.



Before working on the machine, all free moving parts should be locked to prevent them moving.



Never attempt to fit drive chains or drive belts to the machine while the drive sprockets or pulleys are in motion.



Regularly lubricate the machine as per the operator's handbook and check the tightness of all nuts and bolts.



All guards, covers, warning transfers and safety devices must be correctly fitted and operable at all times.



Always use mechanical or additional help when lifting heavy parts.



Inspect the machine on a regular basis and replace damaged or worn parts as necessary.



Safety is the responsibility of the persons working with this machine. Think "safety" at all times. Read and remember the contents of this handbook.



Inspect the machine for damage after use. Rectify as required.



Never operate the machine in a state of disrepair.



Never set machinery in motion before ensuring that everyone in the vicinity is aware of your intentions.

Omega Separator Installation and Operation

The basic Omega unit consists of a row of polyurethane scrolls followed by a clod roller. The units are available with 2, 3 or 4 scroll shafts. A complete Omega separator assembly is made up of a series of these units to give the required area of separation. For example, 5 scroll shafts (3+2), 6 scroll shafts (3+3), 7 scroll shafts (3+4), 8 scroll shafts (4+4) etc.

The scrolls shafts are driven hydraulically via a gearbox and drive chain. Each clod roller is directly driven by its own hydraulic motor fitted with a manual reversing valve (item 1, fig 1).

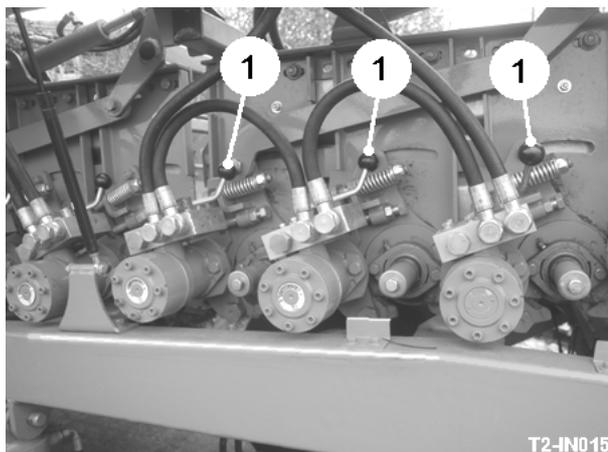


Fig 1

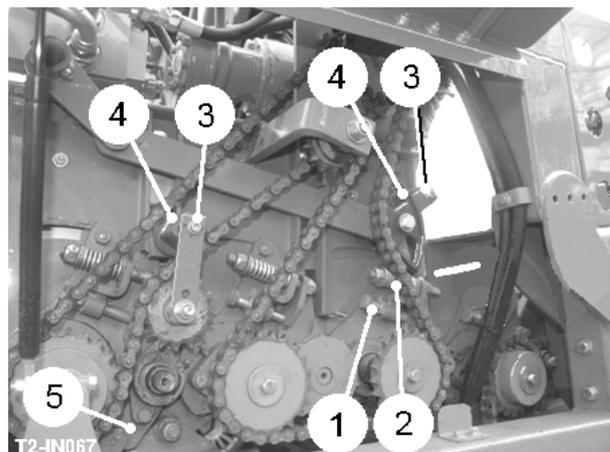


Fig 2

When installing the separator, the scroll shafts and the clod rollers should be made adjustable for speed. This will enable the operator to obtain maximum performance from the separator. Pivot points on the side plates allow the unit to have angle adjustment if required.



Safety guards must be fitted to prevent access to the drive chains, sprockets and rollers.

The height of the scrolls tips can be specified as 10mm (standard) or 6mm for less aggressive action. The clod rollers can be either ebonite, mild steel, or stainless steel and are available in different diameters. Stainless steel is the least aggressive due to the smooth, shiny surface, while ebonite will give more aggressive, general-purpose results. Also, fitting a smaller diameter clod roller allows larger more aggressive gaps to be set through the separator.

The relative height of the clod rollers to the scrolls is set hydraulically by the ram on the RH side of the unit. Raising the height of the clod roller introduces a larger ripple into the crop flow creating more separation by allowing the crop to ride over the soil and top. To work in conjunction with this, the relative speed and rotation direction of the clod rollers can be set. When running the clod roller in reverse to the crop flow, the higher the speed, the more aggressive the separation will be. Reducing the speed lessens the pinching effect of the clod rollers. Running the clod roller 'with the crop flow at a slow speed will give some separation, while increasing the speed will transfer all the crop and soil.

The clod rollers will normally be adjusted to run approximately 1 to 2 mm away from the tip of the scrolls for effective haulm removal. The clod roller gap is set by adjusting the stop bolts (item 1, fig 2) against the spring tension on the clod roller mounting plates. Spring tension is adjusted on the spring tie bolts (item 2, fig 2).

Drive chain tension is set by releasing the bolt (item 3, fig 2) and rotating the tensioner mounting (item 4, fig 2).

Each clod roller is fitted with a scraper (item 5, fig 2) which needs to be closely adjusted to remove loose soil from the rollers.

NOTE: All adjustments must be made evenly on both sides of the units.

Maintenance of the Mechanical Drives

Drive chains must be maintained at the correct tension. Maintaining correct tension, alignment and lubrication will ensure the efficient running of the separator and prolong the life of the drive components. Adjust the chains to give positive drive without undue stretching. Where plastic chain tensioners or guides are fitted, these will show fairly rapid wear initially but will settle down when the chain rollers rather than the chain side plates come into contact with the plastic.

Lubrication

Regular lubrication will ensure that the Standen Omega separator will have a long and efficient service life. Depending on soil and weather conditions, the service schedule can vary. It is recommended that the separator be given a thorough inspection at least weekly during the working season and at this time the machine should be greased and the gearbox oil levels checked.

Shafts and bearings fitted with grease nipples should be lubricated using a good quality general purpose grease. Bearings must not be allowed to run dry. When greasing it is better to give a little frequently than a lot a long intervals.

The bearings are sealed and pre-lubricated. Care should be taken not to flood these bearings with grease or the seals may burst allowing grease to escape and dirt to get in. Should this happen, more frequent greasing will be required in order to keep the dirt at bay. When lubricating sealed bearings, only two strokes of the grease gun every twenty acres of work is necessary.

When checking the chain and gear drives, proprietary chain lubricant or a smear of grease should be applied to prolong their life.

Gearbox oil levels should be checked occasionally and topped up with EP90 gear oil.

Apply grease to all pivot points, slideways and exposed threads etc. to ensure they operate easily and remain free of corrosion.