

SPEARHEAD

QUADSAW LRS 1402 ROTARY SAW BLADE



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HANDBOOK

Model type: Type modèle : <i>Entwerfen Sie Typ:</i>		Quadsaw LRS 1402
Model number: Nombre modèle : <i>Entwerfen Sie Zahl:</i>		9991401/2
Serial numbers: Numéros de série : Seriennummern:	Machine: Machine: <i>Maschine:</i>	S _____
	Cutting implement: Instrument de coupe: <i>Schneidenwerkzeug</i>	S _____
	Other: Autre: <i>Anderer:</i>	
Name of owner: Le nom de propriétaire : <i>Name des Eigentümers:</i>		
Date of delivery / installation: La date de livraison/l'installation : <i>Datum der Lieferung / Installation:</i>		

IMPORTANT

At the point of transfer of ownership record the above information. Note the serial number of your machine and always quote it in any communication with us or your dealer. (The serial number plate is located on the machine mainframe.) This is particularly important when ordering spares. Remember to include all numbers and letters.

The information given throughout this manual is correct at the time of publication. However, in the course of constant development of Spearhead machines, changes in specification are inevitable. Should you find the information given in this book to be at variance with the machine in your possession, you are advised to contact the Spearhead Service department where up-to-date information will be provided.

The manual can contain standard and optional features and is not to be used as a machine specification.

The machine has been tested and is considered safe if carefully used. Ensure your operator is properly trained in its use and maintenance.

IMPORTANT

Au point de transfert de possession enregistrez les informations ci-dessus mentionnées. Noter le numéro de série de votre machine et mentionnez les dans toute communication avec nos services ou votre revendeur. (La plaque de numéro de série est localisée sur le central de machine). Ceci est important pour la commande de pièces détachées. Pensez à noter tous les numéros et toutes les lettres.

Les informations données dans ce manuel sont correctes cependant, du fait de développement constant des machines Spearhead. Changements dans les caractéristiques sont inévitables. Si vous trouvez que les informations données ne correspondent pas à votre machine veuillez contacter le service des réparations ou des informations plus récentes vous seront données.

Ce manuel peut montrer des caractéristiques optionnelles et ne peut pas être considéré comme spécification de la machine. Cette machine a été testée, et elle est considérée comme fiable à condition d'une bonne utilisation. Assurez-vous que votre opérateur est qualifié en ce qui concerne l'utilisation de la machine ainsi que son entretien.

WICHTIG

Am Punkt der Übertragung des Eigentumsrecht zeichnet die oberen Informationen auf. Merken Sie die Seriennummer von Ihrer Maschine ein und geben sie diese immer an, wenn sie sich an uns oder ihren Händler wenden. (Die Seriennummerplatte ist auf der Maschinenzentraleinheit befunden). Das ist besonders bei ersatzteilbestellungen wichtig. Vergessen sie nicht, alle Zahlen und Buchstaben zu notieren.

Die Angaben in diesem Handbuch sind bei Veröffentlichung korrekt. Aufgrund der konstanten Weiterentwicklung von Spearhead Maschinen sind jedoch Änderungen in der Spezifikation unvermeidlich. Wenn die Information in diesem Handbuch nicht mit Ihrer Maschine übereinstimmen, nehmen sie bitte Kontakt mit der Spearhead Kundendienstabteilung auf, die Ihnen gerne die aktuellen Informationen zukommen lässt.

Das Handbuch kann sowohl Beschreibungen für die Standardausführung als auch für Zubehör enthalten und ist nicht als Maschinenspezifikation zu verwenden. Die Maschine ist getestet und bei sachgemäßem Betrieb als sicher befunden worden. Sorgen sie dafür, dass ihr Bedienpersonal in Anwendung und Wartung richtig geschult wird.

**This machine is produced by GreenTec.Eu on behalf of
Spearhead Machinery Limited.**

EU DECLARATION OF CONFORMITY

Adaptive EEC Directive

EG Guideline 2006/42/EF, 89/392/EEC & 98/37/EC

We,

GreenTec A/S, Merkurvej 25, 6000 Kolding.

Hereby declare that in terms of its design, method of construction and our execution thereof, the item of machinery described below complies with the basic health and safety regulations of the respective EU Directives.

ROTARY SAW BLADE SERIES LRS

MODEL	SERIAL NO(s)	YEAR
LRS 1402	9991401 & 9991402	

- DS/EN ISO 12100 3rd edition 2011. Safety of Machinery – General principles for design – Risk assessment and risk reduction.
- DS/EN 953+A1 4th edition 2010. Safety of Machinery – Guards-General requirements for the design and construction of fixed and movable guards.
- DS/EN ISO 4413 1th edition 2010. Hydraulic fluid power – General rules and safety requirements for systems and their components.

The EC Declaration only applies if the machine stated above is used in accordance with the operating instructions.

GreenTec A/S

Mr John Christensen

Signed
Sales Director

Date: 22 /10 /2014

Quadsaw LRS 1402 Rotary Saw Blade

The Quadsaw is used for cutting branches and trees up to a maximum diameter of 100 mm without the branches being torn.

Branches with a diameter over 40 mm must be cut one at the time.

Vertical cutting is allowed up to a 45 degree angle. Horizontal cutting is possible on hedges with a width up to 80 cm. and a branch diameter up to 20 mm; thicker branches might stop the blades and get stuck in the machine. This manual is an integral part of the Quadsaw, defining the scope for which it was built, and contains all the information required for its proper and safe use.

Regular machine operation depends on its correct use and adequate maintenance: it is advisable, therefore, to follow these instructions carefully to prevent any situation that could compromise the machine's operation and durability. It is also important to follow that which is described in this manual since Spearhead declines any liability resulting from negligence of from not observing these norms, since it would result in the warranty being annulled.

It is mandatory to verify upon delivery that the Quadsaw is integral and complete in all its parts. Any complaints must presented in written within 8 (eight) days from receiving the machine. Spearhead can however be contacted at any time for immediate and precise technical assistance and anything required for optimum operation and maximum performance of the equipment. Upon receiving the product, carefully read the manual and carefully follow the instructions contained in it.

IMPORTANT

All technical material or description in this manual is exclusively owned by Spearhead who prohibits the complete or partial reproduction of the same unless written approval has been issued by the Spearhead.

Data, illustrations and descriptions in the manual cannot be considered binding. Spearhead reserves the right to make changes at any time that it considers to be suitable for improvement or for a constructive or commercial requirement.

This manual reflects the state of techniques at the time of marketing the saw blade and cannot be considered inadequate if updated at a later date due to modifications of related legal provisions.

Spearhead declines any and all liability for damages caused by the saw blade to persons, animals or property, resulting from use other than that described in this manual, or due to damage caused by negligence or by not observing the instructions contained in this manual.

The manual should be carefully stored in a suitable area to guarantee its physical integrity; it should be easy to access by anyone authorised to consult it. The manual is an important document that should accompany the Quadsaw and all users should be held responsible for safeguarding it.

For additional information or clarifications regarding anything contained in this manual, or if the manual deteriorates, is destroyed or lost, using the saw blade is prohibited and it is mandatory to request a new manual as soon as possible exclusively through:

Spearhead Machinery Limited

Green View, Salford Priors,
Evesham, Worcestershire, WR11 8SW

Direct download via Spearhead's online PDF manual library

<http://dealerinside.spearheadmachinery.com/dealerinside/manuallibrary/default.aspx>

For technical enquiries email: mwaddoups@spearheadmachinery.com or call +44 (0)1789 491867

For parts enquiries email: snel@spearheadmachinery.com or call +44 (0)1789 491862

The following manual is an integral part of the product and must be stored carefully, in order that it keeps its integrity and can be consulted repeatedly throughout the entire life of the Quadsaw.

The Quadsaw is manufactured to conform to the provisions contained in Directive 2006/42/EF. It is therefore equipped with EC marking and accompanied by the following EC conformity declaration.

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1 Machine Description

1.1 Intended Usage

1.1.1 Allowed Uses

The Quadsaw is used for cutting branches and trees up to a max. diameter of 100 mm without the branches being torn by being mounted on hydraulic hedge cutters. The machine is supplied with a special bracket enabling mounting on various vehicles/machines.

Branches with a diameter over 40 mm, must be cut one of the time.

Vertical cutting is allowed up to a 45 degree angle. Horizontal cutting is possible on hedges with a width up to 80 cm. and a branch diameter up to 20 mm. Thicker branches might stop the blades and get stuck in the machine. When the Quadsaw works it guarantees the required level of safety even in the presence of an insignificant malfunction of its components or hazardous operating conditions, however, always within the permitted uses.

The Quadsaw must not be used for purposes other than those described in this manual.

1.1.2 Improper Uses

- 1.1.2.1 Blades must be mounted to cut in a downward, vertical direction only, in the same direction as the tractor. The Quadsaw is usable up until **a maximum angle of 45°** and must not be used at any greater angle than this to ensure that debris doesn't hit the tractor. It should **never cut horizontally**.
- 1.1.2.2 The machine must not be used if there are any broken or missing saw blades.
- 1.1.2.3 Never use the Quadsaw on an unstable or non-suitable vehicle.
- 1.1.2.4 The Quadsaw is specifically designed for Spearhead's various reach arm machines and HXF frames.

The Quadsaw must not be used for purposes other than those described in this manual.



DANGER! Spearhead declines any and all liability for damages caused by the Quadsaw to persons, animals or property, resulting from use other than that described in this manual, or due to damage caused by negligence or by not observing the instructions contained in this manual.



Figure 1.1 Spearhead Quadsaw LRS 1402

1.2 General Arrangement

With reference to Figure 1.2, the Quadsaw is a machine designed and built exclusively for cutting branches and trees. It must not be used for other uses or with other materials. The Quadsaw consists of the following parts:

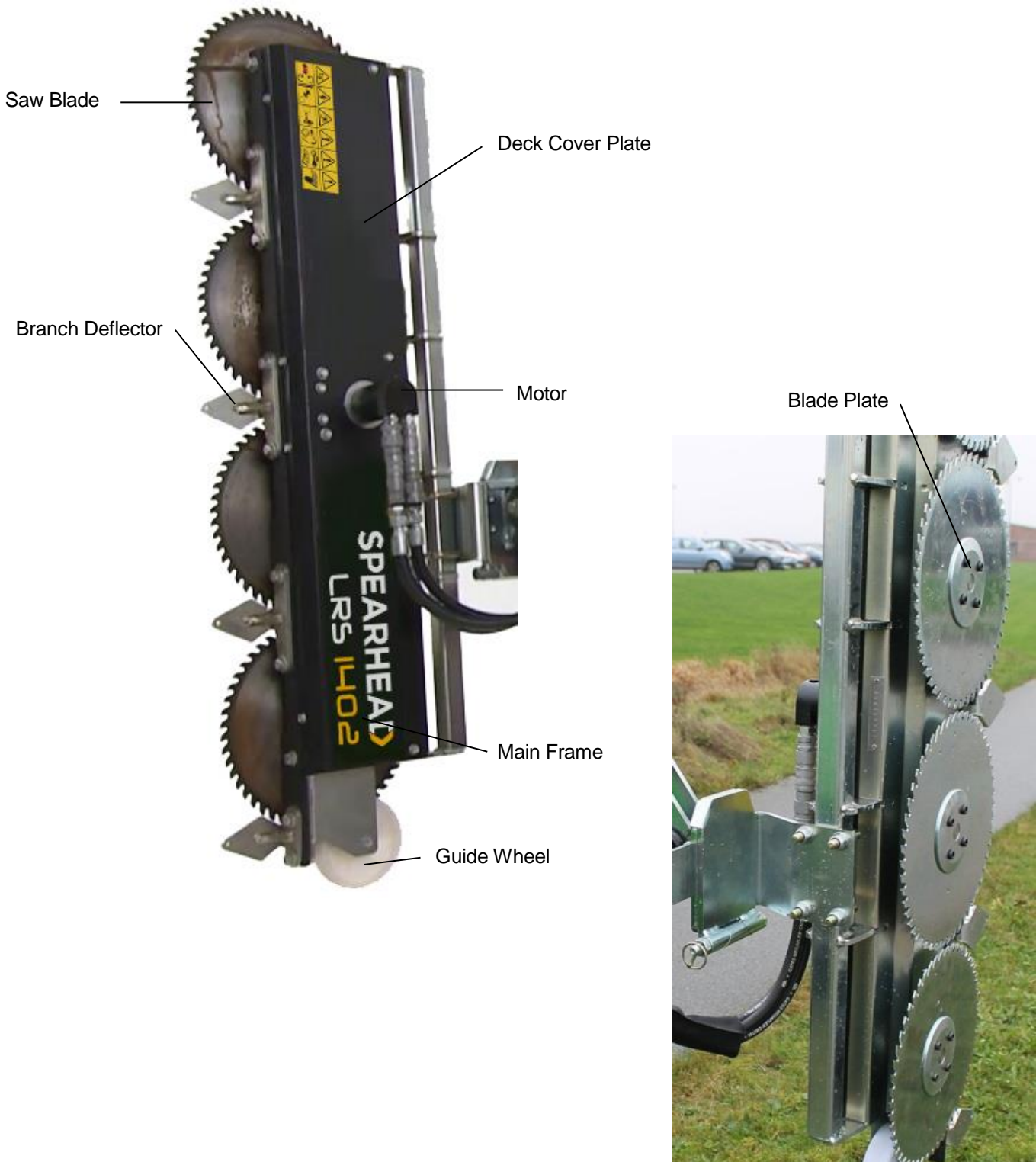


Figure 1.2

1.3 Identification

Each Quadsaw is equipped with a serial plate; see Figure 1.3 that includes the following data in this order:

- EC Marking.
- Manufacturer marking.
- Name and address of the manufacturer.
- Machine Whole Goods Code (WGC).
- Machine Product Group Code.
- Serial number of the machine.
- Year of construction.
- Mass in kg.
- Model year.

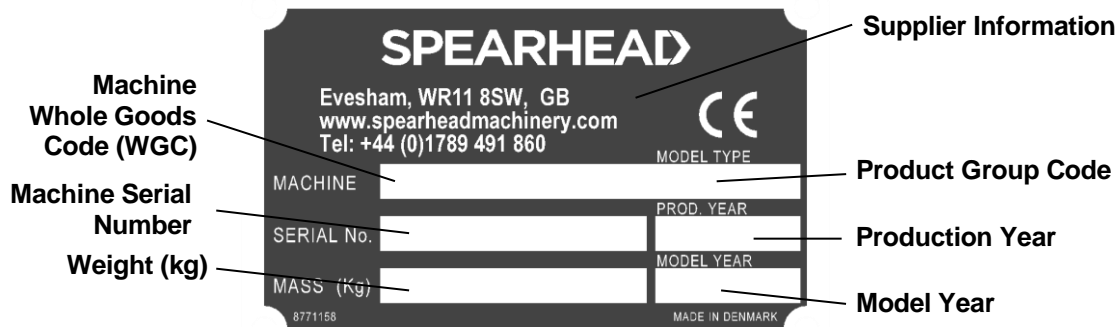


Figure 1.3

Data on the manufacturer's plate should always be referred to when requesting assistance and/or supply of spare parts.

This data can identify the Quadsaw and its characteristics, certifying that it responds to current regulations. For this reason the plate **should never therefore be removed** nor be used for other purposes; if the Quadsaw is dismantled, it should be destroyed to prevent any form of abuse.

1.4 Machine general specification

Quadsaw HXF series (1)	1402
Working Width (mm)	1400
Blade Speed (rpm)	4000
Blades	4 x 340mm diameter
Teeth per Blade	60
Material	Hardened metal with special teeth HM precision blade
Performance (mm)	5-100mm branch diameter
Application	Vertical
Oil Flow (11.2cc)	25 l/min. Maximum 200 bar
Required Hydraulic Connections	1 x Single acting, 1 x Return, 1 x Drain
Working Speed	Up to 5 km/h
e.g Twiga 320	350 PTO rpm

Notes:

- (1) Spearhead constantly reviews and improves product designs and reserve the right to change this information. Actual machines may vary from the above specification. Contact your Spearhead Sales representative if you have any queries.

1.5 Sound Level

Noise measuring has been made on the machine during normal working conditions at GreenTec A/S in Denmark, with an Elma 1350B Noise measurer, ICE 651 type II.

The energy A-weighted Sound pressure is lower than 84 dB (A).

The test has been done in a distance of 1 metre from the machines critical noise maker and in a height of 1.5 metres over the ground.

1.6 EC marking of the Quadsaw

Directive 2006/42/EF specifies the minimum conditions with which a machine can be placed on the EU market. All machines can only be marketed and put into service if the health and safety of persons, domestic animals or property are not affected. The Quadsaw is not an actual machine because it does not have its own drive system, however, for legal purposes, it is considered interchangeable equipment because once it is coupled to the agricultural tractor it provides a new function to the assembly and in all respects it is equivalent to a machine and must therefore meet the essential health and safety requirements of the Machinery Directive.

2 Safety

2.1 Level of danger

The safety of the operator and exposed persons is the main concern of the designer and the manufacturer of the machine. When designing a new machine, one tries to plan for all possible danger situations and risks connected to using the machine, adopting the steps necessary to make the equipment as safe as possible. The number of accidents remains very high however, especially due to incautious and awkward use of the machine. It is therefore recommended to carefully read this manual and this section in particular, regarding safety standards, avoiding behaviour that is inappropriate or in contrast with the instructions contained in this manual.

Pay attention to the following danger signal where contained in this manual and follow safety instructions.



DANGER!

Level 1 - This signal warns that if the described operations are not carried out properly, they will cause serious injury, death or long-term health risks.



WARNING!

Level 2 - This signal warns that if the described operations are not carried out properly, they may cause serious injury, death or long-term health risks.



CAUTION!

Level 3 - This signal warns that if the described operations are not carried out properly, they may cause damage to the machine.

2.2 Terminology

The indicated levels of danger refer to specific risk situation that may occur during machine use and may involve the same machine, the operator and any exposed persons (according to Directive 2006/42/EF). With the purpose of highlighting situations or operations that may result in risks, the meanings of terms used in this manual are indicated here:

- **HAZARDOUS AREA:** Any area in and/or around a machine where the presence of an exposed person constitutes a risk to the health and safety of said person.
- **EXPOSED PERSON:** A person fully or partly in a hazardous area.
- **OPERATOR:** The person or personnel in charge of the installation, the operation, the adjusting, the cleaning, the repairing and the moving of the machine.
- **USER:** the person, entity or company, who purchased or rented the machine and intends to use it according to the intended use foreseen by the manufacturer.
- **SPECIALISED PERSONNEL:** any person specifically trained and approved to carry out maintenance or repair interventions that require particular knowledge of the machine, its operation, the installed safety devices, intervention modes. It must be capable of recognising danger present on the actual machine, therefore avoiding at risk situations.
- **RISK:** a combination of the probability and seriousness of injury or damage to health which can arise in a dangerous situation.
- **GUARD:** a part of the machine that is used to specifically guarantee protection by way of a material barrier.
- **PROTECTION DEVICE:** a device that reduces risk (unlike the guard) either on its own or together with the guard.
- **INTENDED USE:** the use of the machine in accordance with the information provided in the operating instructions.
- **REASONABLE FORESEEABLE MISUSE:** the use of the machine different to the information provided in the operator's instructions, which may be the result of readily predictable human behaviour.
- **AUTHORISED ASSISTANCE CENTRE:** The Authorised Assistance Centre, legally authorised by the Manufacturer, is formed by specialised staff able to carry out all types of assistance, maintenance and repair work, even of a certain complexity, required to maintain the machine in perfect working order.



WARNING! Carefully read the following rules. If the instructions described are not followed, a situation may arise which causes irreparable damage to the machine or property, or injury - even severe - to people or animals. Spearhead declines all responsibility for damage caused by not complying with the safety and injury prevention regulations described below. Spearhead also declines any responsibility for damage caused by improper use of the machine and/or as a result of modifications made without authorisation by the manufacturer.

2.3 Safety Decals

The Quadsaw is equipped with safety decals warning about residual risks present on the machine that were not possible to eliminate. Figure 2.1 specifies the meaning of symbols contained in the decals. The operator must memorise the meaning of these decals. The labels should always be kept clean and replaced immediately if they are fully or partially detached or damaged.

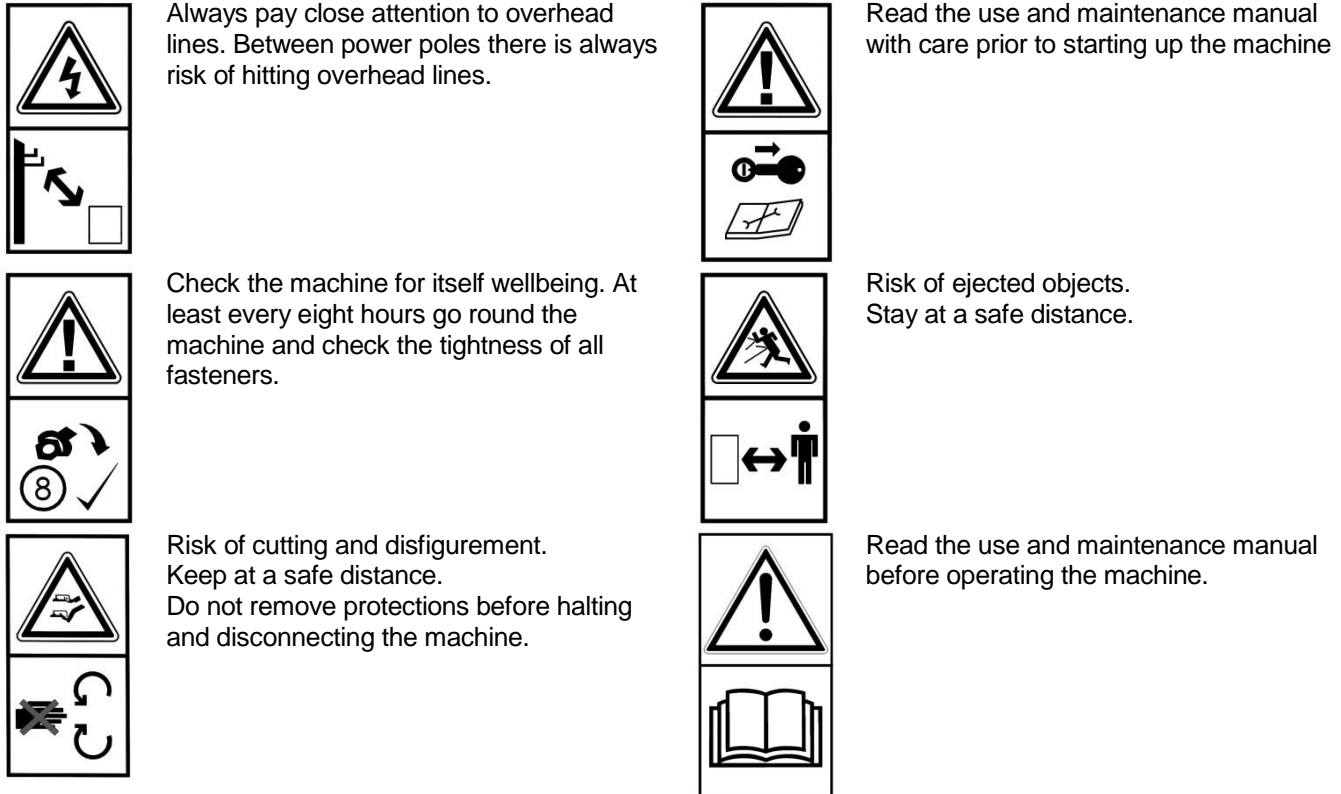


Figure 2.1

2.4 Personal Protective Equipment

In general it is necessary to wear suitable clothing for the work to be carried out. In particular, as far as saw blading use, obey the following provisions:

- **It is mandatory** to use clothing which is as suitable as possible, meaning not too loose and without any protruding or moving parts (for example ties or necklaces). Do not wear belts, rings and chains. Always use sturdy safety footwear. Long hair must be tied using a specific cap.
- **It is mandatory** to use protective goggles or a mask before proceeding with the work in order to protect the face and eyes from vegetable fragments which may be projected outwards during mulching.
- **It is mandatory** to use protective muffs in order to safeguard hearing from noise from the equipment during work.

2.5 Ecology and pollution

Below are the minimum provisions to be followed in order to reduce the risk of environmental impact connected to the use of the machine according to European directives related to the Eco-compatibility of products connected to power and Restrictions in the use of dangerous substances in electrical and electronic equipment:

- If the country where the machine is used foresees specific sound emission limits, it is best to adapt to the provisions in these standards, if necessary, being supplied with suitable protective equipment (earplugs, muffs, etc.).
- **It is mandatory** to respect current legislation of the country where the Quadsaw is used, related to use and disposal of lubricants and products used for machine cleaning and maintenance, observing the recommendations of the manufacturer of those products.
- If replacing worn parts or during demolition, one must follow anti-pollution laws foreseen in the country where the Quadsaw is used.
- **It is prohibited** to pour products used for cleaning or polluting substances into the sewerage drain, on the ground, in watercourses, or into the environment.
- **It is mandatory** to collect products used for cleaning and polluting substances in appropriate containers, store them and deliver them to companies authorised for their disposal.

2.5.1 Disposal

When the Quadsaw reaches the end of its working life, it is best to take a few precautions in order to avoid the risk of environmental pollution. The various parts of the machine must be treated as if they were special waste. The machine must be disassembled, grouping the various parts and components into similar materials (rubber, metal, plastic, etc.), with each being disposed of according to existing anti-pollution laws locally of where the machine was used. Please note that, in general, **exhausted lubricating oil, rubber parts and scrap metals are special waste**.

2.5.2 Preparation for storage

If the machine is to be stored unused for a long period, it is recommended to:

- Treat the Quadsaw according to the instructions contained in Section 5.2 "Cleaning the Quadsaw" paragraph;
- Check the machine and have any damaged parts replaced;
- Fully tighten all screws and bolts, in particular those which secure the saw blades;
- Perform a general thorough lubrication and smear grease on all areas vulnerable to corrosion;
- Slacken rotor drive belts;
- Place the Quadsaw in a dry area where it cannot be touched by persons not authorised to use it. Ideally rest it on a pallet or off the ground and ensure the machine is stable and unable to tip or fall down when it is in storage;
- Ensure that the blade guard is in place;
- Leave the hydraulic hoses in a suitable place where they won't be stumbled over. Place all hoses on the Quadsaw;
- Protect the entire machine with a tarpaulin.

If these operations are carried out properly, the user will find the Quadsaw in perfect condition when it is required again.

If the Quadsaw is to be dismantled, comply with the relative anti-pollution legislation of the local area of use. It should not be forgotten that the manufacturer is always available if you require any assistance or spare parts.

2.6 Safe use

- **It is prohibited** to use the Quadsaw in ways that are different from the indications contained in Section 1.1 "Intended use".
- **It is prohibited** to use or have the Quadsaw used by anyone who has not read and completely understood the information contained in this manual.
- **It is prohibited** to use or have the Quadsaw and the machine it is attached to unless the personnel are competent and properly trained with good health and physical condition.
- **It is forbidden** to drive the agricultural tractor attached to the Quadsaw if the personnel do not have an appropriate driving licence.
- **It is forbidden** to approach or stand close to the Quadsaw when the machine is running.
- **It is forbidden** to abandon the driver's seat on the agricultural tractor with the combustion engine running when the Quadsaw and power supply/PTO is running.
- **It is forbidden** to alter, tamper with or bypass the safety devices provided by the manufacturer.
- **It is forbidden** to operate the Quadsaw when the decals indicating the warning signs are missing or damaged. Have them immediately replaced with other decals having the same meaning.
- **It is forbidden** to use the Quadsaw when components are missing.
- **It is prohibited** to come close and/or touch moving parts during the work.
- **It is prohibited** to tamper with, remove, damage or exclude any part of the Quadsaw.
- **It is forbidden** to deposit items on the Quadsaw which can harm persons/animals or damage property should they fall.
- **It is forbidden** to abandon the Quadsaw and leave it unattended. The Quadsaw, the machine it's attached to and the work area should always be monitored.
- **It is forbidden** to transport persons or items on board the Quadsaw while driving with the tractor.
- **It is forbidden** to transport the Quadsaw without the blade protection guards mounted.
- **It is mandatory** to check that all the safety devices of the Quadsaw are intact and functional before using it.
- **It is mandatory** to always inspect the work area for wire, steel posts, large stones and other dangerous materials. If such items are found remove them.
- **It is mandatory** to check that the agricultural tractor on which the Quadsaw is installed is of adequate power, weight and configuration, compatible with the model fitted.
- **It is mandatory** to comply with highway regulations in force in the country where the Quadsaw is used.
- **It is mandatory** to never drive with wire or the like wrapped around the blades / knife axles. Stop immediately and remove the unwanted material.
- **It is mandatory** to verify that the ground on which the tractor moves is level and sturdy, before using the Quadsaw.
- **It is mandatory** for the environment where the Quadsaw operates to have adequate lighting. Insufficient or excessive lighting may pose a risk to the operator.
- **It is mandatory** to familiarize yourself with the control devices and their functions prior to starting work;
- **It is mandatory** to make sure that the maximum number of revolutions of the blades is no more than 4000 rpm when powering the Quadsaw.
- **It is mandatory** to make sure there is no more than 200 bar oil pressure in the hydraulic hoses.
- **It is mandatory** to use suitable clothing. Strictly avoid long or loose clothing that could be caught in any way by moving parts. Wear suitable helmets, glasses, gloves, footwear, etc.
- **It is mandatory** to lower the Quadsaw attached to the reach arm or carrier frame, switch the combustion engine off and remove the ignition key from the dash of the tractor and engage the parking brake before leaving the driver's seat.
- **It is mandatory** for the maintenance and adjustments to always be performed with the Quadsaw switched off and disconnected from the power.
- **It is mandatory** to never stop the engine, when the power transmission is engaged.
- **It is mandatory** to stop the Quadsaw and inspect it if abnormal vibration is noted or have it inspected by personnel assigned by the manufacturer until the causes are identified and eliminated.
- **It is mandatory** to contact a dealer if the Quadsaw stops during operations or a component malfunctions.
- **It is mandatory** to always verify, before starting up the Quadsaw, that no persons and/or animals are within 50 metres in any direction from the machine.
- **It is mandatory**, to always ensure all cab safety guards are in place and all tractor windows are closed when the machine is in use.
- **It is mandatory** to periodically verify that the screws and bolts are tightened and secure, especially those that secure the blades.
- **It is mandatory** to use the types of lubricating oils indicated by the manufacturer.
- **It is mandatory** to periodically check the integrity and functionality of the safety devices.
- **It is mandatory** to comply with the laws in force in the country of installation on the use and disposal of products used for cleaning and performing maintenance on the Quadsaw, considering the recommendations of the manufacturer of the given products.
- **It is mandatory** for the Quadsaw to be handled without being subjected to impact with other objects which could compromise the optimal functionality of the machine.
- **It is mandatory** for the Quadsaw to be lifted adequately and with suitable lifting accessories and harness and according to the regulations in force in the country where these operations take place.

- **It is mandatory** for maintenance on the Quadsaw to only be performed by skilled and specialized personnel, in strict compliance with the instructions in this manual, and any worn or damaged parts should be replaced.
- **It is mandatory** to always use original spare parts when carrying out repairs and maintenance.
- **It is mandatory** to store the Quadsaw in a safe place which is protected from the elements, when the work is completed.

The Quadsaw has been designed and built in accordance with current safety regulations. Special maintenance (repairs) must only be performed by qualified personnel and original spare parts must be used.

2.7 Safe maintenance

In order to guarantee safe maintenance of the Quadsaw it is necessary to respect the following provisions:

- **It is prohibited** to remove or tamper with the safety devices.
- Periodically check safety device integrity and operation.
- Periodically check screws and bolts tightness.
- **It is mandatory** to periodically verify the condition of the hoses. They must not be cut or have abrasions, otherwise immediately replace them with other hoses having the same characteristics.
- **It is mandatory** to comply with the recommended oils.
- **It is mandatory** to switch the tractor engine off and always disconnect the PTO shaft before cleaning or performing maintenance on the Quadsaw.
- **It is mandatory** to strictly perform maintenance on the Quadsaw according to the instructions in this manual and replace the damaged or worn parts with original spare parts only.
- **It is mandatory** for maintenance on the Quadsaw to only be performed by skilled and specialized personnel, in strict compliance with the instructions in this manual.
- **It is mandatory** to always use original spare parts when performing repairs and maintenance on the Quadsaw. Using non-original parts immediately renders the warranty null and void and can compromise the durability and reliability of the machine.
- **It is mandatory** for parts or components of the Quadsaw to be lifted adequately and with suitable lifting accessories and harness and according to the regulations in force in the country where these operations take place.
- **It is forbidden** to perform welding, flame-cutting or modify the structure of the Quadsaw.
- The dangers signalled on the machine by way of decals of suitable dimensions, applied on the Quadsaw in easy to see places.
- These decals give the proper indications in an essential manner in order to avoid danger and prevent the risk of damage or injury. These decals must always be kept clean and immediately replaced when removed, even partially, or damaged: **it is prohibited** to operate the Quadsaw when even one of these signs is missing from the spot where it was installed by the Manufacturer.
- **It is mandatory** to save and keep this manual for the entire life of the Quadsaw.

3 Machine Preparation

Before starting to use the Quadsaw it is mandatory to read and perfectly understand the instructions contained below.



WARNING! Read the instructions contained in Section 2 "Safety".

3.1 Transport

The Quadsaw is supplied fully assembled. Spearhead recommends that the Quadsaw is stored on a suitable pallet when not in use. If it needs to be moved use a pallet lifter or forklift. Alternatively it can be lifted with an authorized rope or something similar, as illustrated in Figure 3.1. The 1402 weighs 48 kg. The rope must be authorized for the required weights as a minimum, but preferably more for greater safety.

To transport by carriage make sure that the Quadsaw is securely anchored to the floor with suitable standard ropes or straps, in accordance with the requirements set out in Section 4.4.

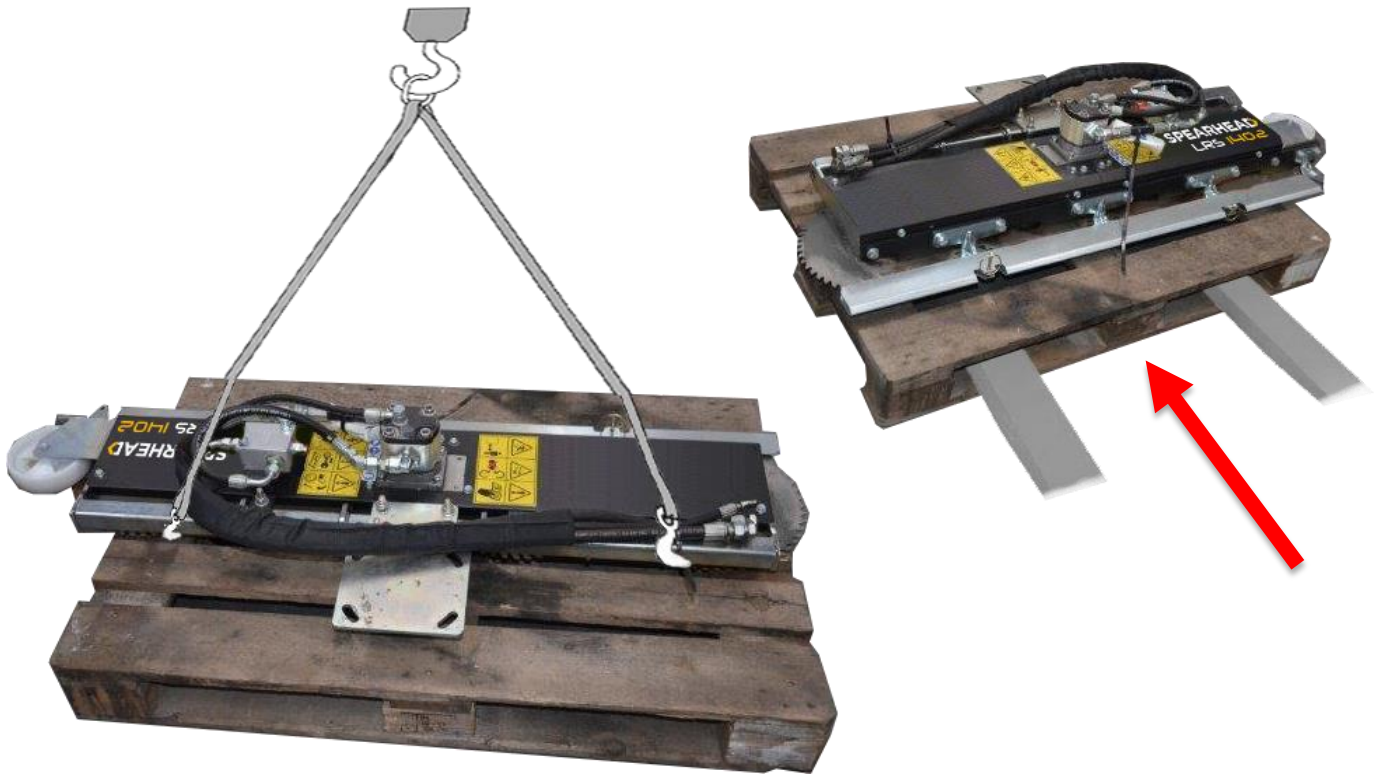


Figure 3.1



CAUTION! The machine must be lifted with maximum care and by using lifting devices suitable for the weight and size of the same.



CAUTION! Due to the danger of this operation, it must be performed by expert and responsible personnel. For the lifting device to be used **it is mandatory** to comply with the safety regulations prescribed by the laws in force in the country where the machine is used. Do not touch the Quadsaw and do not stop within the operating range of the crane.

After transportation, check that the machine was not damaged in any way. Spearhead cannot be held responsible for any damage caused by handling carried out any differently from that described in the manual.

3.2 First use



DANGER! Connecting the Quadsaw to the reach arm is a very dangerous phase. Ensure you carry out the entire operation in strict compliance with the instructions.

The Quadsaw features a hydraulic motor with three hydraulic hoses, $\frac{3}{4}$ " pressure, $\frac{1}{2}$ " return and $\frac{1}{4}$ " case drain. This allows the Quadsaw to be adapted to any reach arm or carrier frame with standardised fittings. Upon request quick release fittings can be options. Upon the first installation, simply remove the machine from the packaging and set it up correctly.

The installation, adjustment and testing of the Quadsaw involve hazardous operations. Carefully read all the instructions described in this manual. If in doubt, contact the manufacturer directly. In any case, before commissioning the Quadsaw, immediately after transport, check that the machine supplied is intact and complete. The Quadsaw can be installed and subsequently removed from the reach arm/carrier frame according to the requirements of the user.



DANGER! Spearhead cannot be held liable for damage to persons, animals or property, caused by non-compliance with the safety and accident prevention regulations or operations which do not conform to the information provided in the user and installation instructions.

3.2.1 Prior to installation and application to the tractor

Before installing the Quadsaw it is advisable to check the suitability, good condition and adjustment of the agricultural tractor and reach arm/carrier frame on which it will be installed:

- 3.2.1.1. Begin by first checking the minimum mass required of the reach arm/carrier frame. They must match the minimum characteristics stipulated by the manufacturer of the Quadsaw, which are indicated in this manual in Section 1.4 "Machine general specification" paragraph;
- 3.2.1.2. Move the tractor to the place where the Quadsaw was deposited after being transported and stop it in a safe and practical position for assembly to be performed on level ground;
- 3.2.1.3. If the reach arm and Quadsaw are intended to be fitted with a "standard" hitch aim to line up the bolt holes by lowering the reach arm/carrier frame to line up the faces;
- 3.2.1.4. For the optional "quick release" fitment aim to line up the faces with an intention to guide the mounting plate under the Quadsaw hook.



WARNING! Due to the danger of this operation, it must be performed by expert and responsible personnel. Do not touch the Quadsaw and do not stop within the operating range of the reach arm.

3.2.2 Application to the tractor



WARNING! Clean and clear the installation area from any obstruction before starting to work. The area must be specifically closed off and personnel not assigned to the works must be made to move away. The available means must be verified to be intact and suitable. The operator must also tighten all the bolts and fittings properly, using suitable tools.



DANGER! All the following assembly and installation operations must be carried out with the tractor engine switched off.

The application of the Quadsaw to the reach arm/carrier frame must take place on flat ground.

The Manufacturer declines all responsibility for the breakage of the tractor or reach arm/carrier frame.

Proceed as follows for the coupling, see Figure 3.2:

For Standard Mounting

- 3.2.2.1 Use appropriate protective gloves align the reach arm mounting face to the Quadsaw with an aim at lining up the bolt holes. Ensure the blade is mounted, so the direction of rotation of the saw goes down Figure 3.2
- 3.2.2.2 Switch the tractor off and engage the parking brake.

3.2.2.3 Fit the bolts, flat washers and Nylock nuts and tighten.

For Quick Release Mounting

3.2.2.4 Use appropriate protective gloves align the reach arm mounting face to the Quadsaw with an aim at lining up the mounting plate and slot. Ensure the blade is mounted, so the direction of rotation of the saw goes down

3.2.2.5 Switch the tractor off and engage the parking brake.

3.2.2.6 Slide the mounting plate through the Quadsaw slot and secure the reach arm to the Quadsaw with the quick release pin. See Figure 3.4

3.2.2.7 Connect the hydraulic hoses so the blades run in the correct direction. The case drain hose shall go in free to the hydraulic oil tank. Pressure (P) and Return (T) mounting locations are shown in Figure 3.3. Note however that Figure 3.3 shows quick release fittings (optional). For torque settings see Section 5.1.3.

3.2.2.8 Check the hydraulic system for leaks.

3.2.2.9 First time the machine is used; measure the blade rpm. The machine works at its optimum performance when it runs at 4000 rpm (25 L/min).

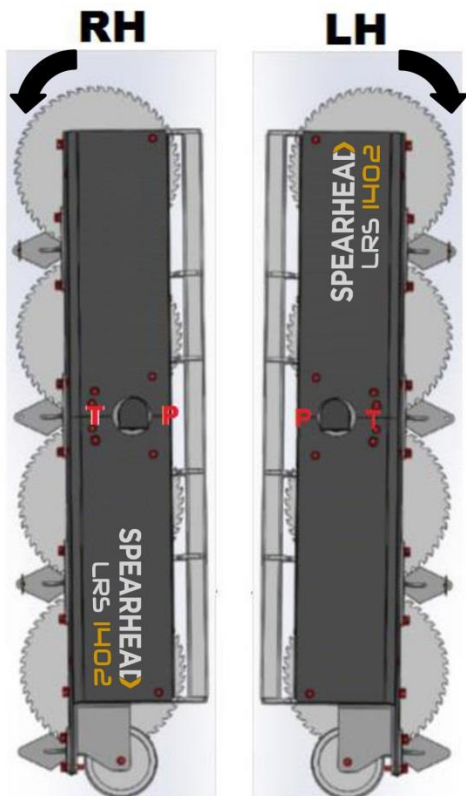


Figure 3.2

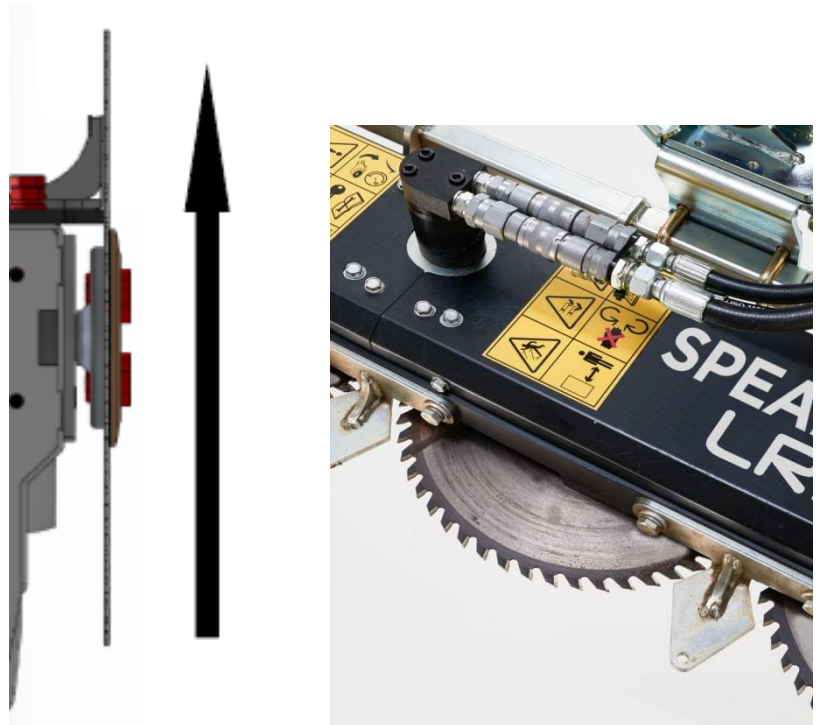


Figure 3.3

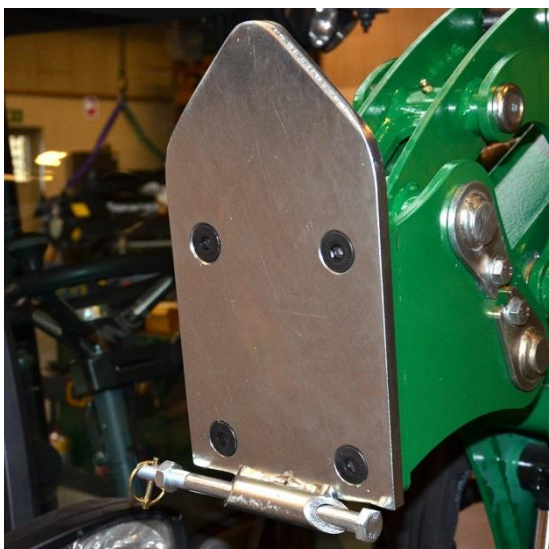
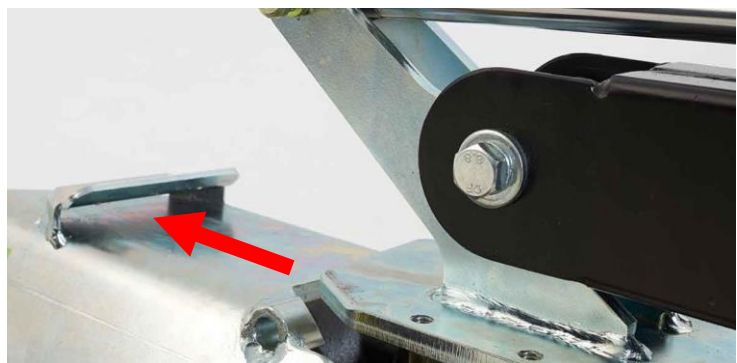


Figure 3.4



4 Usage Instructions

4.1 Before use

Prior to starting up the Quadsaw, carry out the following operations;

- 4.1.1. Check that all the screws and nuts are fastened, especially those that secure the blades. For torque setting see Section 5.1.3;
- 4.1.2. Check that the PTO shaft is inserted correctly between the gearbox and the tractor PTO and also check the operation of the hydraulic pump and the distributor (if the machine is mounted on a reach arm).
- 4.1.3. Check the hydraulic hoses condition and ensure that they are secure.



WARNING! Before operating the Quadsaw, check the efficiency of the power systems and familiarize yourself with the controls.

During transport the Quadsaw and the reach arm must be positioned to take up the least amount of space and ensure that it will not have the potential to collide with other road users and bystanders, see Figure 4.1. The Quadsaw should also be fitted for transport purposes with the supplied blade guard.

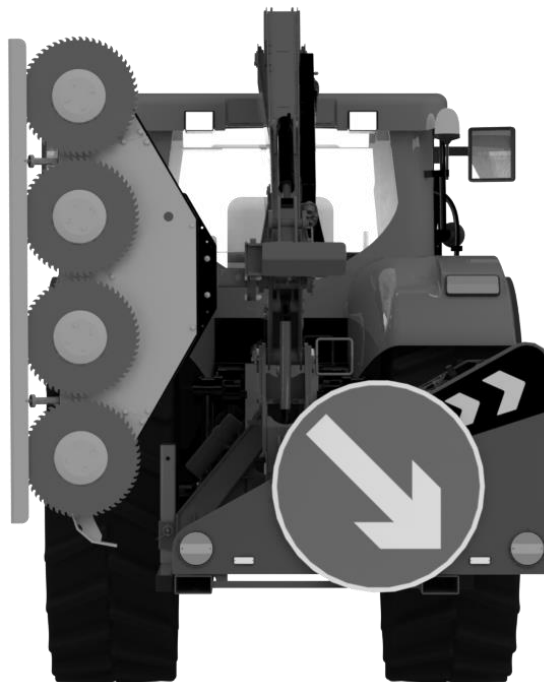


Figure 4.1

The authorisation for road use (valid for one year and renewable) is issued by:

- the National Road Board of the town in which the journey starts as regards the national road network;
- the region as regards the rest of the road network.

4.2 Using the Quadsaw

After having familiarized yourself well with the controls, dressed in the correct PPE (personal protective equipment) required. Then set the machine in the working position, connected the hydraulic hoses, secured it properly to the reach arm or carrier frame and removed the blade guard. Start the tractor engine, disengage the parking brake, and engage the oil supply while maintaining the engine at a low rpm.

Before starting work, make sure that there are no exposed persons and/or animals near the machine. Otherwise, have them move away.

Starting and stopping the saw shall always be at the lowest PTO rpm.

It is recommended to travel at a slow forward speed when starting work in order to obtain and keep the recommended rpm of the blades (4000). Adjust the angle of the saw to approximately 90 degrees in relation to the branches, see Figure 4.2. If a thick branch is approaching the branch deflectors, the working height must be adjusted for the branch to hit the saw blades straight on.

If small branches or other unwanted material get stuck in the blades, the machine must be stopped and cleaned. Always ensure that the blades are running vertical related to the direction of the travel. This will pre-vent the blades from bending too much.

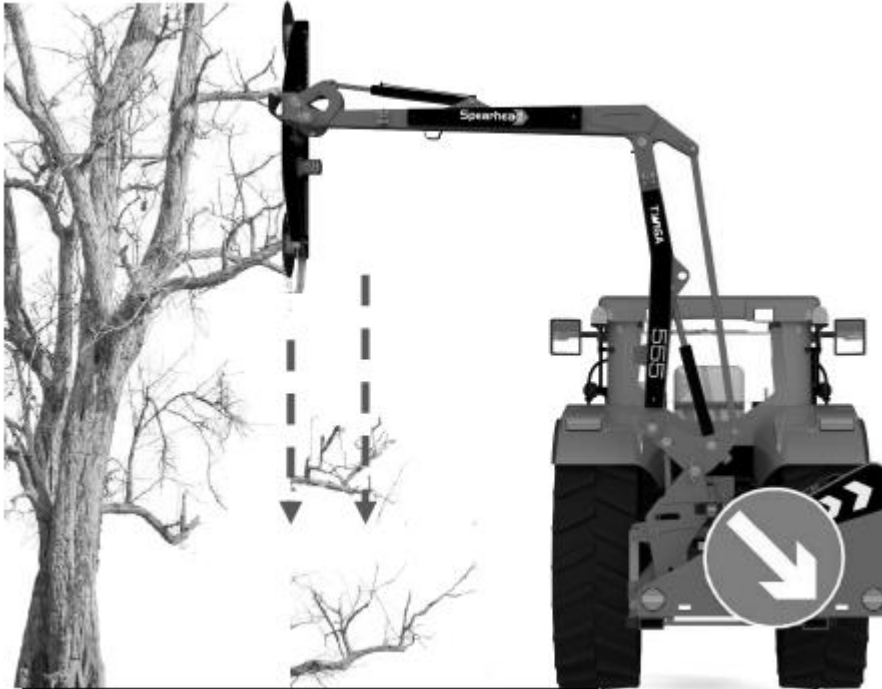


Figure 4.2

N.B: Spearhead recommends that you ALWAYS use a tractor equipped with a closed booth.



CAUTION! The speed of the tractor with the Quadsaw working must never exceed 5km/h in order to avoid breakage or damage.



DANGER! During work, stones or other objects found in the terrain can be lifted and projected by the rotating blades. Constantly check that there are no persons or animals within the operating range of the Quadsaw



WARNING! Spearhead declines any and all liability for damages caused by the Quadsaw and its accompanying Spearhead machinery to persons, animals or property, resulting from use other than that described in this manual, or due to damage caused by negligence or by not observing the instructions contained in this manual.

Avoid driving on public roads when the Quadsaw is dirty with earth, grass or branches at any time when it produces dirt or obstructs the traffic on the roads.

4.3 After use

A few guidelines must be complied with when the work is complete; in order to make sure the Quadsaw is stable if/when released from the reach arm or carrier frame:

- 4.4.4.1 Move to the storage area of the Quadsaw, making sure that the supporting surface is flat and free from obstructing material. Ensure that the blade protection is in place.
- 4.4.4.2 Place the Quadsaw on level ground by manoeuvring the tractor with the reach arm/carrier frame. Spearhead ideally recommends that the Quadsaw is stored on a suitable pallet when not in use.
- 4.4.4.3 Switch the tractor off and engage the parking brake.
- 4.4.4.4 Before leaving the driver's seat of the tractor remove the ignition key from the dashboard.
- 4.4.4.5 Disconnect the hydraulic hoses that connect the Quadsaw with the reach arm. A reverse of Figure 3.3

4.4.4.6 Ensuring the Quadsaw is stable and level on the pallet go about removing the nuts and bolts or split pin, depending on whether the machine is standard attachment or fitted with the optional quick release set-up. A reverse of Figure 3.4

4.4.4.7 Climb into the driver's seat of the tractor, start up and gently move the reach arm away from the Quadsaw.

Store the equipment, preferably in a covered area, on a suitable and flat surface.

Follow the instructions given in Section 2.5.2 "Preparation for storage" in this manual.

4.4 Safety devices

There are safety devices on the Quadsaw to safeguard the operator.



WARNING! The safety devices must not be tampered or excluded. They should always be kept in perfect working order.

The following are installed:


REMOVABLE PROTECTION – Blade guards – Blade guards protect prevents hands from being introduced into the blade cutting area when the machine is not in use.


FIXED PROTECTION - Belt protection covers - Belt protection covers all belts and prevents hands from being introduced into the transmission area.


FIXED WARNINGS – Warning safety decals - The warning decals of the residual risk on the Quadsaw essentially indicate an existing danger, a prohibition or requirements that are to be met for the operator's safety and for the Quadsaw to operate correctly and remain intact.

5 Maintenance

Routine maintenance operations are listed below. Extraordinary maintenance operations (repairs of parts or components) can be carried out by specialised personnel authorised by the manufacturer.

 **WARNING!** The schedule is for information purposes only and depends on normal operation conditions. Conditions can in fact change depending on the service, the environment and on frequency of use. If conditions are particularly awkward, the frequency of maintenance operations should be amended accordingly.

 **WARNING!** It is mandatory to make sure that the hydraulic hoses connecting the motor of the Quadsaw are disconnected from the agricultural tractor before starting any maintenance.

 **WARNING!** After maintenance, always restore any safety devices that may have been removed, so that they are in place before new work is started.

- **It is mandatory** that any repair and/or maintenance intervention be carried out by an operator with suitable physical and intellectual requirements.
- **It is mandatory** to verify that during maintenance or repair operations, unauthorised personnel are kept away from the Quadsaw.
- **It is prohibited** to deactivate protection and safety devices. When it becomes necessary to deactivate these devices in order to carry out extraordinary maintenance, the operation must only be completed for extraordinary maintenance and only by a maintenance mechanic, who will guarantee operator safety and avoid any damage to the machine, as well as restoring the effectiveness of the same devices at the end of maintenance operations.
- **It is mandatory** to switch off the engine of the agricultural tractor which the Quadsaw is powered by before performing any maintenance or mechanical setting, and disconnect the PTO shaft.
- **It is recommended** to perform all maintenance that is not covered in this manual in an authorised service centre.
- Before restarting the Quadsaw after lubrication and/or maintenance, **it is mandatory** to wait for the authorization of the mechanical maintenance technician who must verify that:
 - The works have been completed;
 - The Quadsaw works perfectly;
 - The safety devices are in their correct place and fully functional;
 - No other operations are being performed on the Quadsaw.

5.1 Periodic Maintenance

5.1.1 Routine Maintenance

In order to guarantee proper operation of the Quadsaw and improved operator safety, it is necessary to periodically intervene with controls and maintenance operations listed below.

- 5.1.1.1 After 2 hours driving tighten everything. Tighten the Allen screws for the saw blades to **40 Nm**.
- 5.1.1.2 After 10 hours work all bolts, screws and retightened
- 5.1.1.3 All bolts shall be retightened / checked every 8 hour.
- 5.1.1.4 The plastic rail needs to be adjusted down to the blades, with a distance of 1 mm. If there is more than 5 mm, replace it. Branch deflectors need to be adjusted as close as possible to the saw blades, without touching the blades.
- 5.1.1.5 Remove the protection cover to the belts, and clean the inner housing for dirt.
- 5.1.1.6 Inspect, and if necessary adjust the belts. See Figure 5.1
- 5.1.1.7 After inspection or service ALL protection covers and guards must be replaced.



WARNING! The machine must be checked by an authorised concessionary if any of its parts are worn or in poor condition.



WARNING! Replace the hydraulic hoses each time they are damaged or, in any case, before the sixth year. The used hydraulic oil must be properly collected and must not be dispersed into the environment since, according to the laws in force, it is classified as dangerous waste and for this reason it must be given to the proper collecting centres. Please, refer directly to the closest company for the collection of the used oils.

5.1.2 Belt maintenance

It is of utmost importance that the belts are correctly mounted and tightened. When **new belts are mounted they must be tensioned to 370 Nm**. See Figure 5.1, for guidance on left-hand and right-hand build machines.

After 3-5 working hours the belts may have slackened and must be checked. Once **used, belts must be tensioned to 330 Nm**. See Figure 5.1, for guidance on left-hand and right-hand build machines.

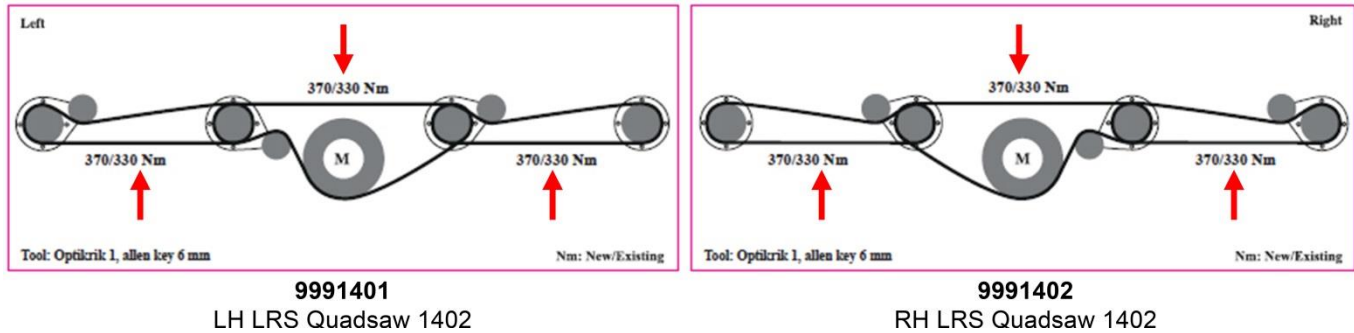


Figure 5.1

Recommended Tools

- Belt Tension tool – OPTIKRIK I (Part number 140155.0). See Figure 5.5
- 13mm (M8) spanner. Or socket with ratchet with short extension
- 6mm Allen key
- Gloves

With reference to the images seen below, operations to be carried out are the following:

- 5.1.2.1 Remove the nuts fastening the protective cover, see Figure 5.2;
- 5.1.2.2 There are three belt tensioners, one for each belt, see Figure 5.3;
- 5.1.2.3 Loosen the four Allen screws, see Figure 5.4;

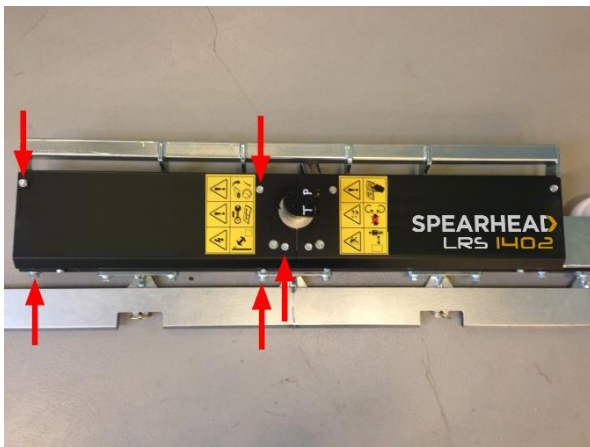


Figure 5.2

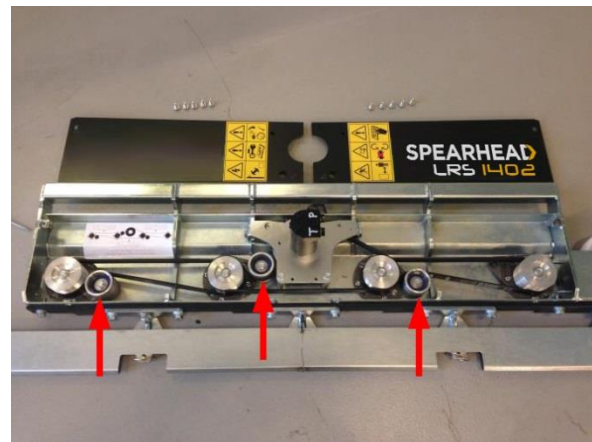


Figure 5.3

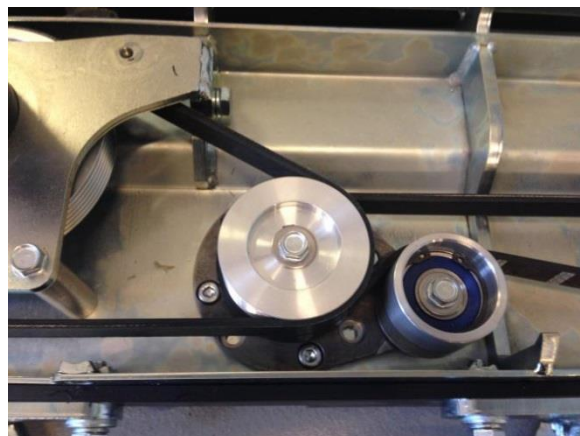


Figure 5.4

5.1.2.4 Adjust to the correct tension as directed in Figure 5.1 (370/330 Nm);

5.1.2.4.1 Position the OPTIKRIK I on one of the belts in the middle of a length as shown in Figure 5.5. Take care to ensure that the indicator arm is pushed down into the gauge body. Align the gauge so that its body is parallel with the sides of the belt.

5.1.2.4.2 Push down on the pressure pad slowly and firmly with one finger. When a “click” is heard/felt, stop immediately and remove the gauge carefully to avoid disturbing the indicator arm.

5.1.2.4.3 Read the gauge to judge the tension as follows and as illustrated in the sketch below. See Figure 5.6

5.1.2.4.4 Turn the gauge sideways to ascertain the exact point where the top surface of the indicator arm crosses the scale.

5.1.2.4.5 Tighten or slacken the belts, as necessary.

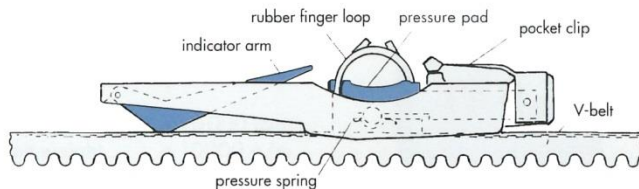


Figure 5.5

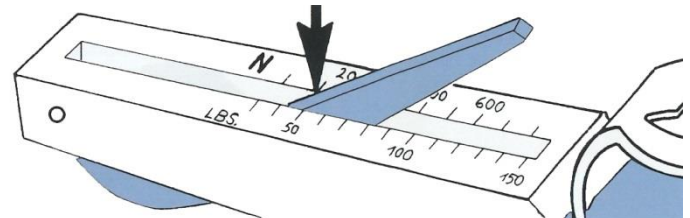


Figure 5.6

5.1.3 Torque Settings

5.1.3.1. Hydraulic Fittings

HYDRAULIC HOSE ENDS		
BSP	Setting	Metric
1/4"	18 Nm	19 mm
1/2"	49 Nm	27 mm
3/4"	80 Nm	32 mm

PORT ADAPTORS WITH BONDED SEALS		
BSP	Setting	Metric
1/4"	34 Nm	19 mm
1/2"	102 Nm	27 mm
3/4"	149 Nm	32 mm

5.1.3.2. Other Various Torque Settings

Belts	New	370 Nm
	Used	330 Nm
Saw Blade Allen Screws	40 Nm	

5.2 Cleaning the Quadsaw



DANGER! This operation is extremely hazardous so the following instructions must be followed.

- Wear protective gloves and shut off the thermal engine of the agricultural tractor, subsequently disconnecting the PTO shaft;
- For cleaning at the end of work, before completely stopping the machine, leave it on for 20-30 seconds so that any material residue is ejected;
- The Quadsaw must be cleaned inside using an air jet and rags.
- Eliminate any residue of material or dust from the external surface of the machine.

5.3 Lubricants

The following lubricants are to be used for the different parts of the machine:

- For all greasing points: **SHELL RETINAX WB 2 GREASE or equivalent** is recommended.

6 Troubleshooting

If the Quadsaw malfunctions, search the causes and the solution of the problems in the following table:

PROBLEM	CAUSE	REMEDY
Valve or engine leak	Too high return oil pressure	Check oil pressure. Free to tank. Change washer
	Too high leak oil pressure	Check oil pressure. Free to tank. Change washer
	Return hose not correctly mounted or has fallen off	Install correctly or reinstall. Change seals and/or lid on the valve
Overheating	Incorrect machine speed	Test RPM on tool
	Wrong oil level	Check oil level
	Wrong oil type	Empty the tank and refill with correct oil type
	Blockage of blades	Remove cutting/debris
	Air temperature is too high	Install a hydraulic oil cooler. Reduce operating speed
Hydraulic failure	Oil level too low	Refill with oil to the correct level
	Oil leak in pressure hose	Check machine for oil leaks
	Oil pump filter is blocked	Replace the filter element
Branches get "frayed"	Larger branches than recommended	Never exceed the recommended maximum branch sizes of the Quadsaw
	Working during winter time	Work during growth season
Cutting result skewed/hacked	Defective rotor bearings	Change bearings
	Rotor or blade damaged/bent	Change rotor/blade and only work on suitable material
	Forward drive too fast	Adjust speed
Tool is shaking	Rotor or blade damaged/bent	Change rotor
	Weight of blades uneven due to wear	Sharpen until even weight or replace
	A blade is stuck	Loosen the blade
	A blade is broken	Replace the blade
Cuttings are thrown towards the cab	Tool is turned so that the rotor is facing the cab	Only operate as recommended by Spearhead Machinery
A rotor stops	Belt tension incorrect	Adjust to correct tension

7 Spare Parts

For routine maintenance or repair spare parts may be obtained from the Spearhead parts department.

To obtain correct part numbers; refer to the Spearhead on-line parts books. This is available at dealerinside.spearheadmachinery.com/partsmanuals/manual.aspx. You will need to enter the machine serial number. The correct part numbers must be quoted when ordering spares.

8 Warranty Information

Despite our best efforts to ensure that your new machine is delivered on time, works correctly and is defect free, some defects do infrequently slip through our quality net. Equally, when in use, accidents happen and damage is caused. To cover these situations Spearhead operates a Warranty policy.

8.1 Warranty policy

8.1.1 Warranty registration

All machines must be registered, by the selling dealer with Spearhead, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

8.1.2 Limited warranties

All machines supplied by Spearhead are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.

All spare parts supplied by Spearhead and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.

The warranty offered by Spearhead is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.

This warranty does not extend to any product from which Spearhead's serial number plate has been removed or altered.

This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.

Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.

Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected. Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which Spearhead cannot be held liable, and may have safety implications.

If in exceptional circumstances a non-Spearhead part is used to affect a repair, warranty reimbursement will be at no more than Spearhead's standard dealer cost for the genuine part.

Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of Spearhead.

For machine warranty periods in excess of 12 months the following additional exclusions shall apply:

- Hoses, exposed pipes and hydraulic tank breathers.
- Filters.
- Rubber mountings.
- External electric wiring.
- Bearings and seals

All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.

Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.

NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. Spearhead cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.

8.1.3 Remedies and procedures

The warranty is not effective unless the Selling Dealer registers the machine, via the Spearhead web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.

Any fault must be reported to an authorised Spearhead dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which Spearhead cannot be held liable.

Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by Spearhead. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.

All claims must be submitted, by an authorised Spearhead Service Dealer, within 30 days of the date of repair.

Following examination of the claim and parts, Spearhead will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by Spearhead and appropriate labour and mileage allowances if applicable.

The submission of a claim is not a guarantee of payment.

Any decision reached by Spearhead is final.

8.1.4 Limitation of liability

Spearhead disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.

Spearhead makes no warranty as to the design, capability, capacity or suitability for use of the goods.

Except as provided herein, Spearhead shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.

No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.

8.1.5 Miscellaneous

Spearhead may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.

If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.

Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.

8.2 How to make a claim

In the event of a warranty claim being made, the process of making a claim will be carried out entirely by your selling agent. This is an arrangement that exists between Spearhead Ltd and its agents. All claims will be made via the Spearhead web site.

Qualifying warranty claims can only be made providing the machine has been previously registered with Spearhead by the selling dealer within 10 days of delivery and installation.

The correct part numbers must be quoted when ordering spares, see section 8.3 below.





IMPORTANT: Any pumps, motors gearboxes, rams or electric control units fitted to any machine that fails during the first twelve months of warranty must be returned to us unexamined. Warranty will be rejected if they have been dismantled. This only applies to the first twelve months of warranty.

8.3 How to obtain the correct spare part numbers

For correct part numbers; refer to the Spearhead on-line parts books. This is available at dealerinside.spearheadmachinery.com/partsmanuals/manual.aspx. You will need to enter the machine serial number.

Spearhead Machinery Limited

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