



AGRISEM®

USER MANUAL

Smartplow (Standard, Mix, Compact) Biomulch HD

EN - Original manual

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NOTT-EN-630-A

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Table of contents

FOREWORD	5
1. Introduction	6
1.1. Purpose of the user manual	6
1.2. Using the manual	6
1.3. Ordering the manual.....	7
1.4. Understanding the instruction manual version	7
1.5. Description of warning terms.....	7
2. Presentation of the machine	9
2.1. Intended use of the equipment.....	9
2.2. General view of the machine.....	10
3. Identification	14
3.1. Validity of the user manual	14
3.2. Description and location of identification plate	14
3.3. Identification of the machine.....	17
4. Warranty	18
4.1. Warranty conditions.....	18
4.2. Exclusion of liability clause.....	21
5. Safety instructions	22
5.1. Safety regulations.....	22
5.2. Safety symbols on the machine	36
6. Operation	43
6.1. Location and description of controls.....	43
6.2. Commissioning.....	51
6.3. Hitching/unhitching	51
6.4. Folding/unfolding	55
6.5. When driving	57
6.6. Braking	57
6.7. Adjusting the working depth	58
6.8. Types of roller and applications.....	64
6.9. Recommendations for adjustment on soft soil	65
6.10. Recommendations for adjustment on firm soil	66
6.11. Immobilising the tractor/machine.....	66

7. Winter Storage - Handling - Transport	68
7.1. Storage - Warehousing	68
7.2. Handling	69
7.3. Transportation	72
8. Servicing - Maintenance	76
8.1. Maintenance advice	76
8.2. Maintenance consumables.....	80
8.3. Maintenance schedule	80
8.4. Maintenance operations	81
9. Faults, causes and remedies	90
10. Characteristics.....	91
10.1. Smartplow/Smartplow Mix/Biomulch HD - fixed ranges.....	91
10.2. Smartplow Compact/Smartplow Mix Compact - fixed mounted	93
10.3. Smartplow / Smartplow Mix / Biomulch HD - foldable mounted.....	95
10.4. Smartplow Compact / Smartplow Mix Compact - foldable mounted	97
10.5. Smartplow/Smartplow Mix/Biomulch HD - trailed.....	99
11. Technical terms and abbreviations.....	101
12. Appendices	103

FOREWORD

We thank you for the confidence you have shown in AGRISEM INTERNATIONAL by purchasing this item of equipment.

This manual is provided with your machine to enable you to make best use of your equipment, and in particular in compliance with the safety requirements.

All owners are reminded that the manual is an essential accessory which must remain with the machine at all times, and that in the event of resale, article 1615 of the Civil Code requires that as such it must be handed over to the new owner.

You are also reminded that as the manual is essential to the machine, all owners must undertake to leave it physically available with the machine for all users to consult.

This manual contains details of the characteristics of your new equipment. Please read it and ensure that all users scrupulously follow the instructions contained. The following pages provide essential information on your machine, read them carefully.

Your AGRISEM INTERNATIONAL dealer will provide high quality servicing, as well as any assistance you may require. For servicing, remember that your dealer is the person who is most familiar with your machine and wishes to give you complete satisfaction.

All information and characteristics given in this manual are current at the time of publication. However, the policy of continuous improvement of our products requires us to reserve the right to make changes at any time without prior notice.

This user manual is published for wide circulation and the availability of the equipment indicated, whether on the basic machine or as accessories, may vary according to the region in which the machine is used. All combinations available at the time of publishing the manual will be described therein.

1. Introduction

1.1. Purpose of the user manual

You have just taken ownership of your machine AGRISEM INTERNATIONAL. This machine has been designed to ensure complete satisfaction.

The equipment has been specially designed to incorporate new solutions for lowering the costs of operation.

However, to use your machine correctly AGRISEM INTERNATIONAL and get the most out of it, read this manual carefully before using it and carefully follow the instructions given in this user manual. In particular, follow the instructions for adjusting and servicing the machine, as well as the safety regulations, very carefully.

Please contact our distributor for any information or advice.

This user manual is an integral part of the machine and must always accompany it, especially in the event of resale.

In an effort to improve its products, AGRISEM INTERNATIONAL reserves the right to modify or improve its manufacturing processes without being obliged to apply these modifications or improvements to products already on the market.

The instructions in this manual are not exhaustive and cannot cover all eventualities. The user must comply with the applicable legislation, in particular with regard to safety, ensure that the rules of safety and caution dictated by the situation are applied, use common sense and adapt the use of the machine to the circumstances.

It is the responsibility of each purchaser to verify that the machine AGRISEM INTERNATIONAL complies with the legislation and regulations of its final destination.

DANGER



The instructions in this user manual must be read, understood and applied by any persons who will be carrying out work on or with the machine, in particular:

- use of the machine (including preparation, repairs required during work and maintenance),
- maintenance (servicing and inspection),
- transport.

AGRISEM INTERNATIONAL shall not be held liable for physical injury, material damage and malfunctions resulting from failure to comply with the manufacturer's instructions in this manual.



IMPORTANT

Information AGRISEM INTERNATIONAL

Return the warranty certificate within 15 days together with a copy of the invoice (*without these documents the warranty procedure cannot be implemented*).

1.2. Using the manual

1.2.1. Functional organisation

Wherever possible, the contents of the user manual are classed by function.

1.2.2. Search help

The table of contents helps you to find information.

1.3. Ordering the manual

You can order the user manual by sending a request to:

AGRISEM INTERNATIONAL S.A.

535 Rue Pierre Levasseur

CS 60263

44158 ANCENIS - France

Tel.: 02.51.14.14.40 – Fax: 02.40.96.32.36

1.4. Understanding the instruction manual version

The version of the manual is indicated on the cover page and consists of the following.

Description of manual version

Example: NOTT-GB-705-A

Feature	Description
NOTT	User manual
FR	French
GB	English
DE	German
PL	Polish
RU	Russian
705	Type of machine
A	Version of the manual

1.5. Description of warning terms



DANGER

This pictogram indicates a hazardous situation for the user.

Consequences: death or unavoidable serious injury.



WARNING

This pictogram indicates a hazardous situation for the user.

Consequences: death or serious injury may occur.



ATTENTION

This pictogram indicates a hazardous situation for the user and the equipment.

Consequences: the user may suffer minor injuries, the equipment may suffer minor damage.



IMPORTANT

This pictogram indicates required information.

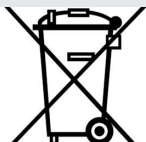
Consequences: material damage, physical risks, financial risks.



NOTE

This pictogram provides advice.

Consequences: more efficient use.



CROSSED-OUT DUSTBIN

Indicates that the waste must not be disposed of in a standard bin but must be collected by a specific waste management service.



MOEBIUS LOOP

The universal recycling symbol. It indicates that the product or its packaging is technically recyclable, not that it is or will be recycled.



The products will only be recycled under two conditions:

- the sorting and recycling channel exists in your region,
- it has been sorted correctly.

2. Presentation of the machine

2.1. Intended use of the equipment

The Smartplow and Biomulch HD AGRISEM INTERNATIONAL ranges are exclusively designed for professional use. These products are manufactured in accordance with the recognised rules of agricultural practice.

The Smartplow and Biomulch HD ranges are designed and adapted to be attached to a tractor's hitch and towing system in order to:

- Smartplow and Smartplow Compact: perform soil cracking by lifting, from a depth of 15 to 25 cm,
- Smartplow Mix and Smartplow Mix Compact: perform shallow tillage, work crop residues into the soil and prepare the soil in depth
- Biomulch HD: perform mechanical weeding, precise surface work for scalping weeds and plant cover, and for false sowing at a depth of 3 to 10 cm.

The Smartplow and Biomulch HD ranges must only be handled, maintained and repaired by persons who are fully familiar with the machine and aware of the risks involved.

Correct use implies strictly adhering to the instruction given in the user manual as well as the operating, servicing and repair rules defined by the manufacturer.

The user and the owner are responsible for complying with the specific accident prevention regulations and well as the general rules relating to safety, occupational medicine and highway legislation.

Any use other than that defined above shall be considered non-compliant with the intended purpose and shall release the manufacturer from any liability in the event of damage; the user shall bear sole responsibility for any risks resulting from such use.

Competencies and level of training

Activity	Instructed person	Person who has undergone specialised training	Person specially trained for this activity
Loading/transport	-	X	X
Start-up	X	X	-
Installation and set-up of equipment	-	X	-
Operation	X	X	-
Servicing	X	X	-
Troubleshooting and resolution of faults and incidents	X	X	-
Waste reprocessing/disposal	-	-	X

2.2. General view of the machine

2.2.1. Mounted machines

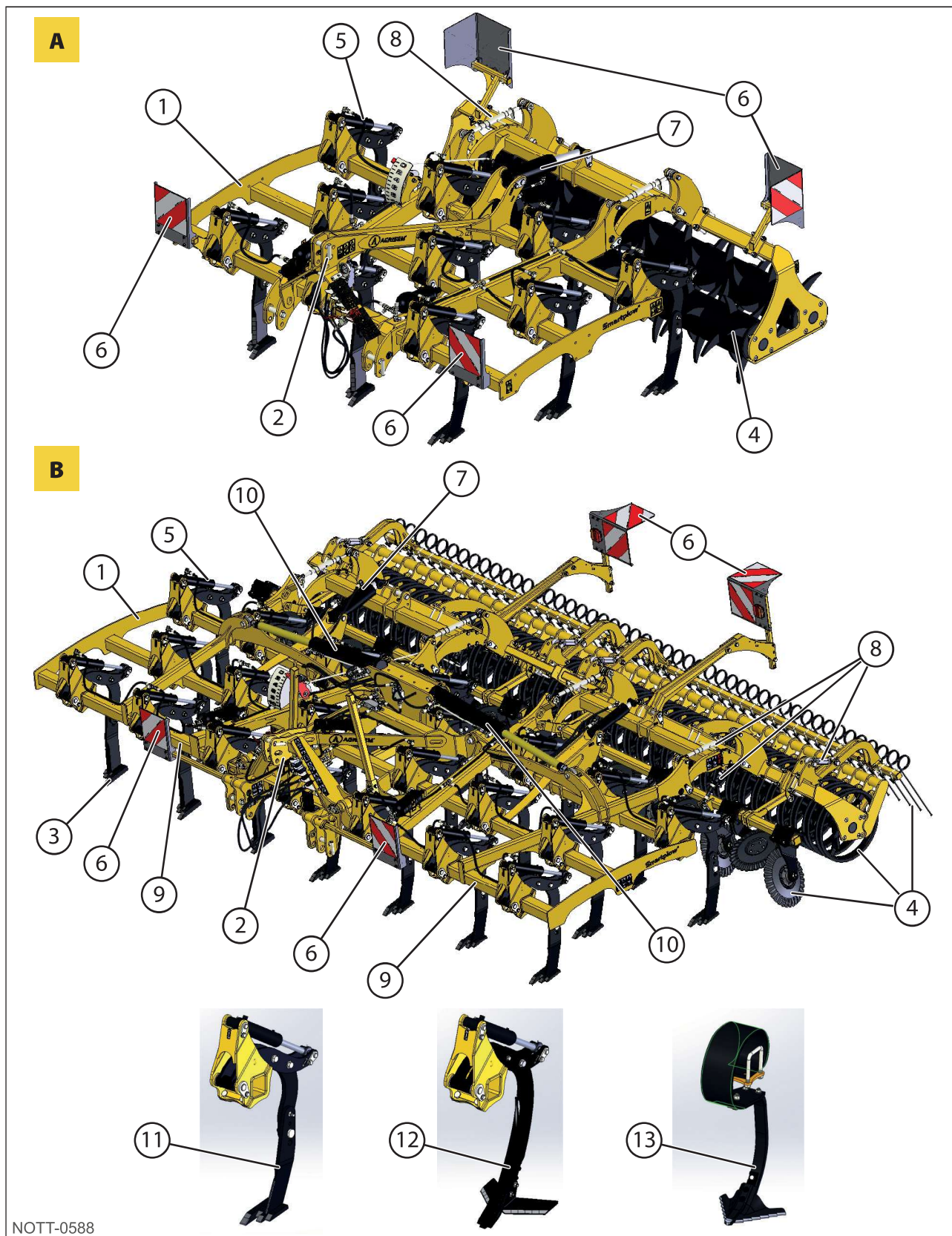
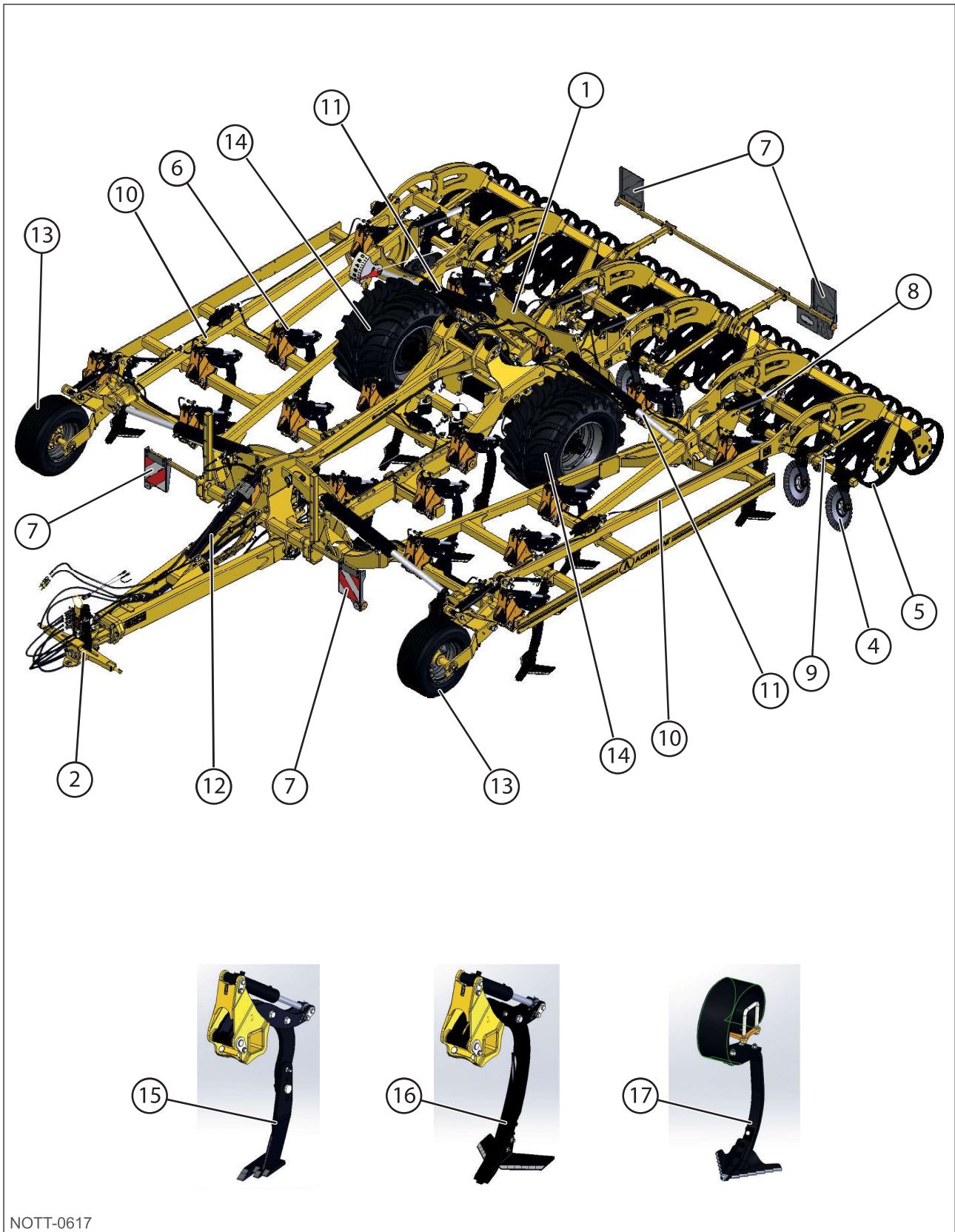


Fig. 1

Marking	Designation
1	Chassis - Smartplow - Smartplow Mix - Biomulch HD: 3 rows - Smartplow Compact - Smartplow Mix Compact: 2 rows
2	Hitch
4	Rear elements (rollers, rakes... see options for the various types)
5	Hydraulic safety
6	Signalisation
7	Adjusting the blade working depth
8	Height adjustment of rear elements
9	Extension (lengths 4, 5 and 6 m)
10	Folding system (lengths 4, 5 and 6 m)
11	Cracking blades 20x590 - Smartplow - Smartplow Compact
12	80 mm stubble cultivator tines with 365 mm wings - Smartplow Mix - Smartplow Mix Compact
13	320 mm scalping shares on 150x14 mm spring tines - Biomulch HD
[A]	Fixed model
[B]	Foldable model

2.2.2. Trailing machine



NOTT-0617

Fig. 2

Marking	Designation
1	Chassis - Smartplow - Smartplow Mix: 4 rows - Biomulch HD: 5 rows
2	Hitch
4	Levelling disc
5	Roller (see options for different types of rollers)
6	Hydraulic safety
7	Signalisation
8	Working depth adjustment
9	Height adjustment of the discs
10	Extension
11	Folding system
12	Hydraulic drawbar
13	Depth control wheels
14	Transport wheel
15	Cracking blades 20x590 - Smartplow - Smartplow Compact
16	80 mm stubble cultivator tines with 365 mm wings - Smartplow Mix - Smartplow Mix Compact
17	320 mm scalping shares on 150x14 mm spring tines - Biomulch HD

3. Identification

3.1. Validity of the user manual

This user manual is valid for the following machines.

Machine	Serial number	
	From	A
Mounted, fixed and foldable Smartplow	23SPLOWEX001	-
Smartplow, Mix, Compact Mix, trailed	VXCAGT14HPA60001	-
Smartplow Mix mounted, fixed and foldable	23SPLOWMEX001	-
Smartplow Mix Compact mounted and Foldable	23SPLOWMCEX001	-
Biomulch HD mounted, fixed, and foldable	24BIOHDEX001	-
Biomulch HD, trailed HD	VXCVMT20HPA60001	-



IMPORTANT

This user manual is published for wide circulation and the availability of the equipment indicated, whether on the basic machine or as accessories, may vary according to the region in which the machine is used. All combinations available at the time of publishing the manual will be described therein.

3.2. Description and location of identification plate

3.2.1. Mounted machine

The identification plate is located on the hitch.

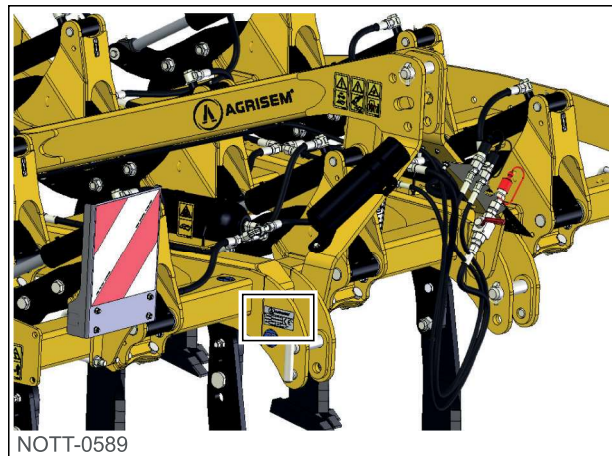


Fig. 3

The identification plate includes the following information.

Marking	Designation
1	Model
2	Working width
3	Serial or identification number
4	Year of manufacture
5	Empty weight of the equipment

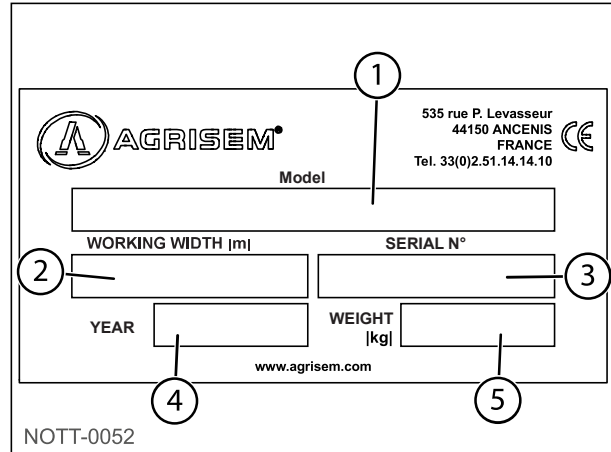


Fig. 4

Serial number details

The serial number is made-up of the following elements.

Marking	Designation
1	Year of manufacture
2	Smartplow
3	Characteristics
4	Incremental number

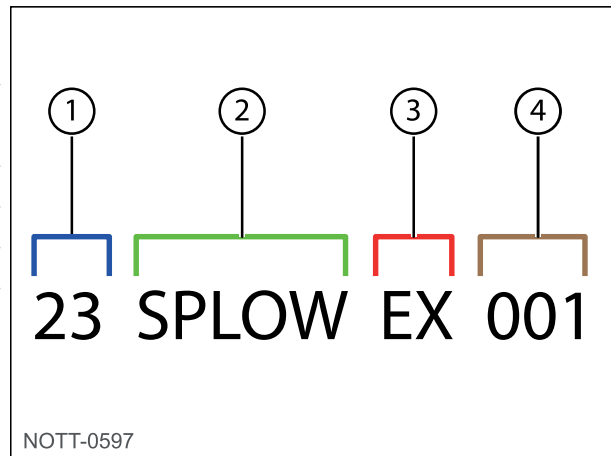


Fig. 5

3.2.2. Trailed machine

The identification plate is located on the hitching beam.

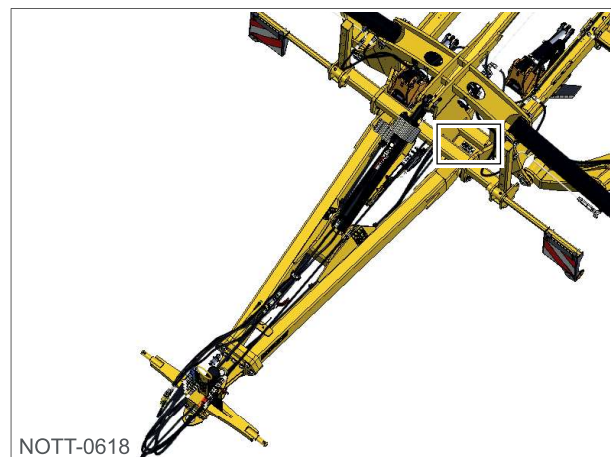


Fig. 6

The identification plate includes the following information.

Marking	Designation
1	Machine category
2	Serial number
3	Maximum load weight
4	A-0: Axle weight
5	A-1: Kerb weight

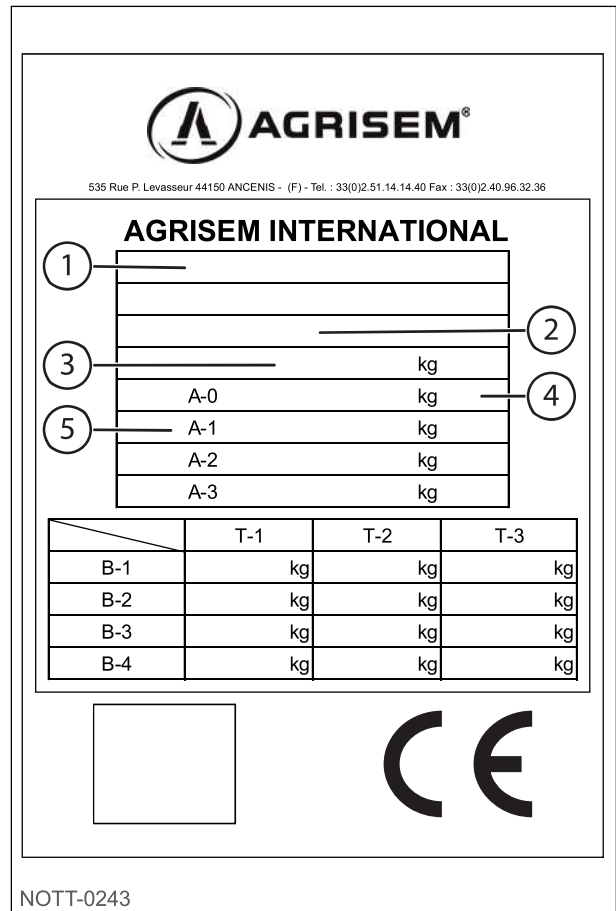


Fig. 7

Description of the identification number

The identification number is made up of the following elements.

Marking	Designation
1	World Manufacturer Identifier (WMI) code
2	Vehicle description section (VDS) code
2a	Machine family
2b	Type of brake
3	Vehicle identification (VIS) code
3a	Year of manufacture
3b	Place of manufacture
3c	Manufacturing number
3d	Width of machine
3e	Incrementation

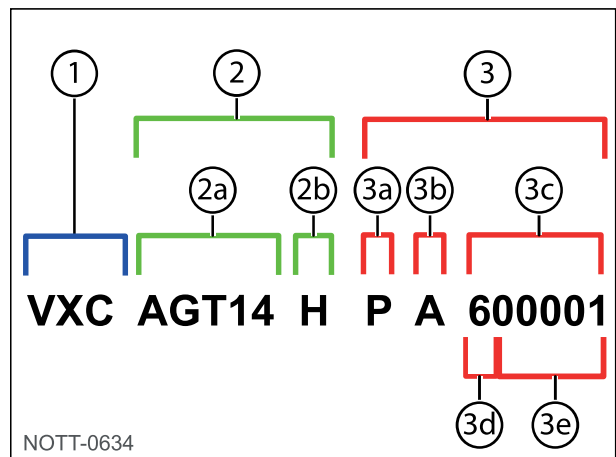


Fig. 8

3.3. Identification of the machine

Upon receipt of the machine, please enter the relevant details below.

Information	Fill-in the column with the requested information
Type of machine
Serial number
Year of manufacture
Date of first use
Name of the dealer
Dealer's address
Dealer's telephone number

AGRISEM INTERNATIONAL S.A.


535 Rue Pierre Levasseur

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Email: agrisem@agrisem.com



IMPORTANT

This document should be kept inside this user manual.

4. Warranty

4.1. Warranty conditions



NOTE

Return the warranty certificate within 15 days together with a copy of the invoice (without these documents the warranty procedure cannot be implemented).

The warranty conditions that apply to machines equipped exclusively with original parts AGRISEM INTERNATIONAL are as follows.

By selling new products to its dealers, the manufacturer provides a warranty that, subject to certain conditions, the goods are free from defects in material and workmanship. The purchasers of new AGRISEM INTERNATIONAL equipment shall request all necessary information from the dealer who supplied the equipment.

As part of its policy of constant improvement of its products, the manufacturer reserves the right to change the characteristics of its equipment without notice and accepts no liability in the event of possible differences between the characteristics of its products and the description of said products in its publications.

4.1.1. Duration

If a defect is observed on a structural part within a period of 12 months as from the date of delivery of the machine, and if this defect is due to faulty raw materials, or its manufacture at the factory. The parts alleged to be faulty must be returned to the Company's address for expert inspection:

AGRISEM INTERNATIONAL S.A. – 535 Rue Pierre Levasseur – CS 60263 – 44158 ANCENIS - France
Tel.: 02.51.14.14.40 – Fax: 02.40.96.32.36

The following shall be considered to constitute proof of the date of delivery of the equipment:

- the date of the delivery note and the purchaser invoice date.
- the return of the warranty certificate (stamped and signed by the dealer and the purchaser) within 15 days of the delivery of the equipment.

4.1.2. Machines and parts concerned

For the purposes of this warranty, the term "Machine" is exclusively used to designate machines and parts manufactured by AGRISEM INTERNATIONAL. (It does not include external components, in particular tyres, hydraulic hoses, etc. even though these parts are also supplied by the company)



NOTE

The warranty is void if any modifications have been made to the machine without the formal approval of AGRISEM INTERNATIONAL or if parts other than those manufactured by the company have been fitted (e.g. counterfeit wear parts).

4.1.3. Scope of the warranty

The warranty is limited to the reimbursement or repair of parts accepted as faulty with regard to their raw materials or machining, in our factories and by our Technical Departments.

Any costs associated with the dismantling and replacement of the faulty part are not covered by the warranty. The costs of transporting machines or machine parts to the place of repair and their return to their owner are also not covered.

Wear parts are not covered by the warranty.

4.1.4. Preconditions

The machine must be maintained and used in accordance with the instructions in this user manual.

All of the safety measures described in the user manual and in the manuals of any additional equipment must be complied with.

All protection and safety components are to be inspected regularly and replaced if necessary, including cylinders, hydraulic hoses, spring and turbo safety devices. refer to the chapters "Safety instructions", page 22 and "Servicing - Maintenance", page 76".

The warranty is only applicable if the customer has complied with the general obligations of the contract and, in particular, the payment terms.

4.1.5. Pre-delivery inspection

When supplying a machine, the dealer is required to perform a number of operations. These involve, firstly, a complete inspection of the machine prior to delivery so that the machine is supplied ready for immediate use. They also involve providing comprehensive training to the purchaser regarding the basic principles of machine operation and servicing. This training covers the instruments and controls, routing servicing and safety regulations. All those who will be involved in the use and the servicing of the machine are required to attend this training.

4.1.6. Warranty exclusions

The warranty will not apply:

- If the faults are due to normal wear, incorrect use, lack of maintenance, inadequate monitoring or negligence.
- If the machine is damaged by an accident or develops a fault due to being used for purposes other than those specified by AGRISEM INTERNATIONAL.
- In the event of improper use of the machine. On this point, please refer to chapter "Intended use of the equipment", page 9.
- If the manufacturer's regulations and requirements given in this manual are not complied with, particularly those regarding safety, assembly, start-up, use, operation and servicing.
- In the event of improper handling on the part of the user.
- Causes due to the passage of foreign bodies.
- In the event of damage resulting from combining the machine with other machines or equipment without the prior written consent of AGRISEM INTERNATIONAL, and/or without complying with the instructions of the manufacturers of the tractor and other equipment or machines.
- In the event that the machine is used with improperly attached or non-functioning protection and safety devices.
- If the machine has been modified without prior written permission from AGRISEM INTERNATIONAL, or if spare parts, accessories or equipment have been fitted to the machine which were not recommended by AGRISEM INTERNATIONAL.
- In the event of non-compliant repair.
- In the event of damage during transport or handling by a carrier. The recipient shall be responsible for taking any corrective action against the carrier.
- The harmful consequences of the immobilisation of the instrument due to a fault or incident on the machine are not covered by the warranty.
- Personal injury to the owner or a third party and the indirect consequences resulting therefrom are not covered by the warranty.

Moreover, AGRISEM INTERNATIONAL shall not be liable for the payment of compensation for any reason whatsoever in the event of the loss of crops or any damage whatsoever due to a fault, hidden defect or machine breakdown.

The purchaser is always responsible for choosing the right product and selecting a machine that is capable of achieving the desired result. The purchaser is responsible for its correct use in line with good professional practice and the regulations.

Under no circumstances will AGRISEM INTERNATIONAL have any obligation with regard to the final result.

4.1.7. Limitations and liability

The warranty cannot be assigned or transferred to any other person without the prior written permission of AGRISEM INTERNATIONAL.

Under no circumstances do those selling our machines have the right or power to make any decision whatsoever, either express or tacit, in the company's name.

The technical assistance given by the company or its representatives with the repairing or operation of equipment does not make it liable for any costs and in no way alters or leads to the waiving of the conditions of this warranty.

4.1.8. Warranty enforcement procedure

TO BE STRICTLY ADHERED TO BY THE DISTRIBUTOR AND BY THE PURCHASER

The warranty's enforcement is subject to strict compliance by the dealer and the user with the following requirements:

- 1 - Return of the warranty certificate, duly completed and signed by the retailer and the purchaser.
- 2 - Claims must be made without fail using an AGRISEM INTERNATIONAL "WARRANTY CLAIM FORM" (see appendix) and sent by registered letter with acknowledgement of receipt by the dealer to the company's technical department within 10 days of the incident. This form must be completed legibly by the dealer and must include the following information:
 - Name and address of the dealer, code No.,
 - Name and address of the purchaser,
 - Type of machine,
 - Working width,
 - Machine serial number,
 - Date of delivery to purchaser,
 - date of the malfunction,
 - Precise references of the parts replaced, No. and date of invoice,
 - Make and model of tractor used,
 - Detailed description and alleged cause of the incident.
 - Surface worked with the Disc-O-Mulch,
 - Utilised agricultural area of the farm,
 - type of soil % clay,
 - proof of purchase for wear parts,
 - stones (yes/no),
 - parts replaced (yes/no) (send the photocopy of the invoice).
- 3 - Allegedly faulty parts are to be returned by the dealer to the company's address for an expert inspection, together with the copy of the warranty claim form provided for this purpose. The dealer must order the faulty part from the spare parts department. Any transport costs incurred by the returning of said parts are payable by the sender.
- 4 - The final decision regarding payment under the terms of the warranty shall be made by the company's technical or general management. Whatever the reason for the warranty claim, this decision is final and irrevocable and the purchaser undertakes to accept this decision both with regard to the fault and the replacement of the part or parts.

Under no circumstances are the company's salespersons authorised to make such a decision, which would be deemed null and void.

**NOTE**

In the event of refusal, the part remains at the customer's disposal for eight days. After this time it will be disposed of with no appeal possible.

Under no circumstances do those selling our machines have the right or power to make any decision whatsoever, either express or tacit, in the Company's name.

4.1.9. Warranty claim request on my.agrisem.com

To submit a warranty claim on my.agrisem.com, please refer to the following videos:

- in French: <https://youtu.be/vv5CC0fMis8>
- in English: <https://youtu.be/RShENIsiAJA>

4.1.10. Warranty extension

If the customer subscribes to the warranty extension, please see this agreement for the terms and conditions of the enforcement of this warranty extension.

4.2. Exclusion of liability clause

The company AGRISEM INTERNATIONAL shall not be liable for any damage (and any related indirect consequences) resulting from one or more of the following causes.

- Non-compliant use of the machine.
- Failure to follow the manufacturer's regulations given in this manual, particularly those regarding safety, assembly, start-up, use, operation and servicing.
- Improper assembly, start-up, use and maintenance of the machine.
- Using the machine with defective or incorrectly installed or non-operational protective and safety devices.
- Combining the machine with other instruments or machines without the written consent of AGRISEM INTERNATIONAL, and/or not complying with the instructions of the manufacturers of the tractor and other instruments or machines.
- Modifications made to the machine without the written permission of AGRISEM INTERNATIONAL.
- Fitting of spare parts, accessories or equipment on the machine which are not genuine or which have not been recommended by AGRISEM INTERNATIONAL.
- Failure to monitor the machine's wear parts.
- Use of the machine other than for the purposes specified by the manufacturer.
- Non-compliant repair and maintenance.
- Catastrophes resulting from the presence of foreign bodies, unforeseeable circumstances and cases of force majeure.

Furthermore AGRISEM INTERNATIONAL, the company shall not be held liable for any bodily injury to the owner or any third party, nor for any indirect consequences resulting therefrom, whether or not they are the result of a defect. You are also reminded that a safe distance of 50 m must be maintained around the machine.

Any claim for compensation for damage that did not occur directly on the machine is excluded.

The company AGRISEM INTERNATIONAL shall not be held liable for any damage resulting from improper handling or use.

The company cannot be held liable AGRISEM INTERNATIONAL for compensation for any harmful consequences resulting from the instrument being out of service due to a defect or incident involving the machine.

5. Safety instructions

5.1. Safety regulations

5.1.1. Introduction

The instructions in this user manual must be read and understood before the machine is used for the first time.

This user manual is published for wide circulation and the availability of the equipment indicated, whether on the basic machine or as accessories, may vary according to the region in which the machine is used.

Always consult the dealer/retailer if you do not understand any part of this manual. It is important that you understand and observe these instructions.

The safety regulations given in this chapter are in addition to those given in other chapters of this manual.

The machine is used in conjunction with an agricultural tractor. Only careful reading of the user manuals of both items of equipment (tractor + machine/tool) will ensure the complete safety of property and people when working.

Most accidents which occur during work, maintenance or travel from one place to another are due to a failure to observe the most basic safety rules. Consequently, it is essential that anyone who may work with this machine strictly complies with the following basic rules and the safety regulations stated on the stickers affixed to the machine.

This machine has been designed for a specific task and must always be in perfect working order. It should only be repaired using original parts AGRISEM INTERNATIONAL.

This machine must be used, maintained and repaired only by competent persons who are familiar with its features and its operating procedures and who are aware of the accident prevention safety rules and the hazards to which they may be exposed.

This machine must only be used in accordance with its purpose and in a condition that does not present any safety risks. Any malfunctions that could compromise safety must be rectified immediately.

The user is required to strictly adhere to the safety regulations in this manual and the stickers affixed to the machine. The safety panels and guards have been omitted from some illustrations in this manual for the sake of clarity. Never use the machine if these items are not installed. If any of these items have been removed to carry out a repair, they must be reinstalled before operation.

The user is also required to strictly comply with the current legislation with regard to accident prevention, safety at work (labour code), occupational health, highway legislation and waste treatment.

Before using the machine for the first time, read all of the safety instructions in this user manual carefully and familiarise yourself with the controls.

The machine must never be entrusted to a person who is not trained to use it.

Liability and warranty

In addition to the other cases mentioned in this manual, the manufacturer is not liable for any damage (personal injury or property damage) resulting from one or more of the following causes:

- Failure to follow the manufacturer's regulations given in this manual, particularly those regarding safety, assembly, start-up, use, operation and servicing.
- Non-compliant use of the machine.
- Improper assembly, start-up, use and maintenance of the machine.
- Using the machine with defective or incorrectly installed or non-operational protective and safety devices.
- Combining of the machine with other instruments or machines without the written agreement of AGRISEM INTERNATIONAL and/or without complying with the instructions given by the manufacturers of the tractor and the other instruments or machines.

List of compatible AGRISEM INTERNATIONAL machines

- Combiplow: Disc-O-Mulch / Maximulch / Actimulch

- DSF: Disc-O-Mulch / Maximulch / Actimulch
 - DSA: Disc-O-Mulch / Maximulch / Actimulch
 - DS500/200: Disc-O-Mulch / Maximulch / Actimulch
- Modifications made to the machine without the written permission of AGRISEM INTERNATIONAL.
 - Fitting of spare parts, accessories or equipment on the machine which are not original or which have not been recommended by AGRISEM INTERNATIONAL. Spare parts are available via the online spare parts catalogue (accessible at <http://parts.agrisem.com/>) or from your authorised after-sales network.
 - Failure to monitor the machine's wear parts.
 - Use of the machine other than for the purposes specified by the manufacturer.
 - Non-compliant repair and maintenance.
 - Catastrophes resulting from the presence of foreign bodies, unforeseeable circumstances and cases of force majeure.

Similarly, in addition to the other cases referred to in this manual, any warranty claim relating to damage resulting from one or more of the causes listed above is precluded.

5.1.2. Instructions to be followed before using the machine

Wear close-fitting clothes. Loose clothing may become caught in moving parts.

Wear the appropriate personal protective equipment (PPE) for the tasks to be performed (gloves, shoes, goggles, helmet, ear protection, etc.).

Be aware that even narrow soil cultivation equipment has sharp components (such as blades, ploughshares and discs). These can cause serious injury in the event of an accident.

Operate the controls with care.

Before each use, check the area around the machine, no-one must be within 50 metres of the machine. Make sure there is sufficient visibility to fulfil this condition for use.

Before starting any work, ensure that the weight distribution on the tractor is such that the whole machine is stable. To avoid any danger of the front lifting, the tractor must be sufficiently ballasted at the front. If not, add weights to the front.

Check before each use that screws, nuts and bolts are correctly tightened in accordance with the maintenance operation described in this manual. Re-tighten if necessary.

During unfolding and folding manoeuvres, no one is permitted to stand within 50 metres of the machine.

Check that the machine is correctly hitched.

Always install the pins and locking systems.

Check that the machine meets personal safety requirements.

Whenever you use the machine, check that the safety and protection devices (safety devices, emergency stop, wheel chock, extinguisher) are in place and working. Replace any worn or damaged safety guards immediately.

Keep all persons and animals away from the area where the machine is being operated or used. A 50 metre safety zone must be kept clear around the machine.

Inspect the machine for any external damage and check the condition of the protective devices. Protective devices must be clean, visible and in good condition. If this is not the case, contact after-sales service AGRISEM INTERNATIONAL to have them replaced.

Only persons authorised by the owner of the machine and who have been trained and instructed are allowed to work on and with this machine. The operator is liable towards third parties while working on and with the machine.

Do not use the machine on very uneven or steeply sloping ground.

Do not use the machine in the event of thunderstorms and lightning.

The owner of the machine must:

- Provide the operator with the user manual.
- Ensure that the operator has read it and understands it.
- Ensure that the operator knows the basic regulations regarding safety at work and accident prevention.

Immediately disinfect any cut or injury that comes into contact with the substances contained in the machine.

5.1.3. Instructions to be followed for hitching and unhitching

Ensure good compatibility of the tractor-to-machine hitching device. Only combine equipment that is compatible (machine and tractor). If in doubt, contact the AGRISEM INTERNATIONAL after-sales service network .

Check that the tractor has the characteristics necessary for hitching the machine (see "Characteristics", page 91).

WARNING



If the tractor is not compatible with the attached machine, you may be exposed to the following risks:

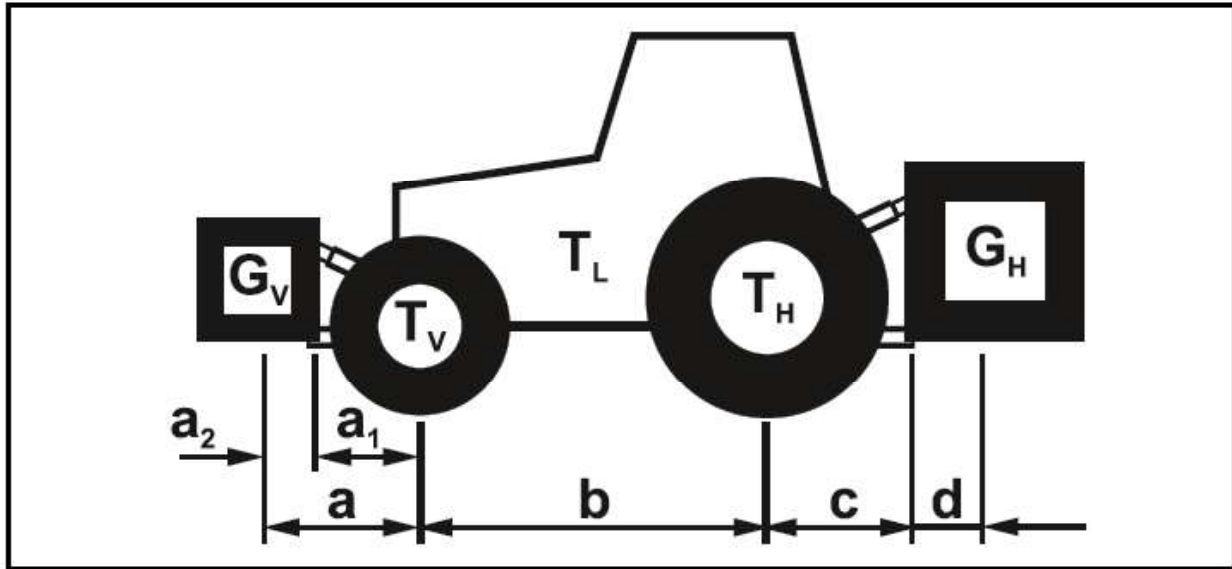
- Defective hitch
- Instability under load
- Instability during manoeuvring
- Insufficient braking capacity

Check that the tractor meets the necessary requirements before installing or hitching the machine.

The machine must only be mounted on or hitched to a tractor that meets the necessary requirements.

Perform a brake test to verify that the tractor can provide the required deceleration effort, including when the machine is attached/ hitched.

Refer in the first instance to the tractor's operating instructions; the following information is provided for guidance only.

Data needed for calculation


NOTT-0222

Fig. 9

Marking	Unit	Designation	Comment
T_L	[kg]	Empty weight of tractor	see the tractor's user manual or registration document
T_V	[kg]	Front axle load of the empty tractor	
T_H	[kg]	Rear axle load of the empty tractor	
G_H	[kg]	Total weight of rear-mounted machine or rear ballast	See technical characteristics of the machine or the rear ballast
G_V	[kg]	Total weight of front-mounted machine or front weight	see technical characteristics of the front-mounted machine or front ballast
a	[m]	The distance between the centre of gravity of the front-mounted machine or front ballast and the centre of the front axle can be calculated (sum of $a_1 + a_2$)	or consult the technical specifications of the tractor and the front-mounted machine or front ballast, or measurement
a_1	[m]	For the distance between the centre of the front axle and the centre of lower arms' hitch point	see the tractor's user manual, or measurement
a_2	[m]	For the distance between the centre of the lower arms' hitch point and the centre of gravity of the front-mounted machine or front ballast (distance from the centre of gravity)	see technical characteristics of the front-mounted machine or front ballast, or measurement
b	[m]	Wheel base of the tractor	see the tractor's user manual or registration papers or measurement

Marking	Unit	Designation	Comment
c	[m]	For the distance between the centre of the rear axle and the centre of lower arms' hitch point	see the tractor's user manual or registration papers or measurement
d	[m]	For the distance between the centre of the lower arms' hitch point and the centre of gravity of the rear-mounted machine or rear ballast (distance from the centre of gravity)	see technical characteristics of the machine

Calculation of the required minimum ballasting at the front $G_{V \min}$ of the tractor to ensure manoeuvrability

Enter the value for the calculated minimum ballast ($G_{V \min}$) required on the front of the tractor in the table on page 27.

$$G_{V \min} = \frac{G_H \cdot (c + d) - T_V \cdot b + 0,2 \cdot T_L \cdot b}{a + b}$$

NOTT-0223

Fig. 10

Calculation of the actual front axle load of the tractor $T_{V \text{ act}}$

Enter the value for the calculated actual front axle load and the permissible tractor front axle load specified in the tractor's user manual in the table page 27.

$$T_{V \text{ act}} = \frac{G_V \cdot (a + b) + T_V \cdot b - F_H \cdot c}{b}$$

NOTT-0224

Fig. 11

Calculation of the actual total weight of the combined tractor and machine

Enter the value for the actual total weight calculated and the total permitted weight indicated in the tractor's operating instructions in the table page 27.

$$G_{tat} = G_V + T_L + F_H$$

NOTT-0225

Fig. 12

Calculation of the actual load on the rear axle of the tractor $T_{H\ act}$

Enter the numeric value for the calculated actual rear axle load and the approved tractor rear axle load specified in the tractor user manual in the table page 27.

$$T_{H\ tat} = G_{tat} - T_{V\ tat}$$

NOTT-0226

Fig. 13

Tyre load capacity

Enter the double value (two tyres) of the permissible load capacity (see for example the tyre manufacturer's documents) and enter the result in the table on page 27.

Table

	Actual value obtained by calculation	Authorised value according to the tractor's user manual	Double the permissible load capacity of the tyres (2 tyres)
Minimum ballast front/rear	<input type="text"/> / <input type="text"/> kg	--	--
Total weight	<input type="text"/> kg	<input type="text"/> kg	--
Front axle load	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg
Rear axle load	<input type="text"/> kg	<input type="text"/> kg	<input type="text"/> kg

**NOTE**

Refer to the tractor's registration documents to obtain the values for the permitted total weight, axle loads and tyre load capacities.

The calculated actual values must be less than or equal to (\leq) the permitted values.

**WARNING**

Risk of crushing, cutting, entanglement, entrapment and impact through insufficient stability of the tractor under load and insufficient tractor manoeuvrability and braking power.

It is forbidden to couple the machine to the tractor used as the basis for calculation if:

- even if one of the actual, calculated values is greater than the permitted value.
- there is no front weight (if required) attached to the tractor corresponding to the minimum required front ballast ($G_{V_{min}}$).

Ballast the tractor with a front or rear weight when the tractor's axle load is exceeded on only one axle.

Special cases

If the minimum ballast required at the front ($G_{V_{min}}$) is not achieved with the weight of the front-mounted machine (G_V), use additional weights in addition to the front-mounted machine.

If the minimum required ballast at the rear ($G_{H_{min}}$) is not reached with the weight of the rear-mounted machine (G_H), you must use ballast weights in addition to the rear-mounted machine.

Immobilising the tractor / machine**WARNING**

Accidents involving crushing, shearing, cutting, tearing, entanglement, winding, entrapment or impact may occur when working on the machine in the following cases:

- accidental lowering of a non-immobilised machine, raising of the tractor's three-point hitch via the hydraulic circuit.
- accidental lowering of raised, non-immobilised components of the machine.
- accidental start-up and movement of the combined tractor-machine.

Before carrying out any operations on the machine, take all necessary measures to prevent any accidental start-up or movement of the combined tractor-machine.

Operations performed on the machine, e.g. fitting, adjustment, troubleshooting, servicing and repair, are prohibited:

- if the machine is running,
- while the tractor's engine is running with a connected transmission shaft / hydraulic system,
- when the ignition key has not been removed and the tractor's engine with a connected transmission shaft/ hydraulic system can be accidentally started,
- when the tractor and machine are not immobilised with their respective parking brakes and/or chocks,
- when moving parts are not blocked against accidental movement.

These operations in particular carry a risk of contact with non-immobilised components.

Lower the machine/parts of the machine that are raised and not immobilised.

The way to avoid any accidental lowering is as follows:

- 1 - Switch off the tractor engine,
- 2 - Remove the ignition key,
- 3 - Apply the tractor's parking brake.

4 - Immobilise the machine (only for a hitched machine):

- on a flat surface using the parking brake (where applicable) or chocks,
- on sloped or uneven ground using the parking brake and chocks.

The requirements relating to the tractor include:

- the authorised total weight (including ballasting),
- the permitted axle loads,
- the authorised vertical load on the tractor coupling point,
- the permissible load capacities of the tyres mounted on the tractor,
- the permitted hitching capacity must be sufficiently high,
- the Power Take-Off (PTO) sleeves (6/21 splines),
- the compatibilities of the hitching devices,
- the load capacities of the tyres.

This information is shown on the identification plate or in the vehicle's registration papers and in the tractor user manual. If it is missing, contact the tractor after-sales service network in order to confirm this information.

The front axle must systematically support at least 20 % of the tractor's empty weight. Refer to the tractor user manual for further details.

Calculating the actual values for the total tractor weight, tractor axle loads and load capacities, as well as the minimum ballast required

The total authorised weight of the tractor indicated in the vehicle's registration papers must be greater than the sum of:

- the tractor's empty weight,
- the ballast
- the total weight of the mounted machine or the vertical load of the hitched machine.

This instruction applies only to Germany:

If the axle loads and/or the permissible total weight are exceeded and all other options have been exhausted, the competent authority of the respective federal state may, on the basis of an expert opinion from a certified motor vehicle expert and with the consent of the manufacturer, grant an exemption in accordance with Section 70 of the German Road Traffic Licensing Regulations (Straßenverkehrs-Zulassungs-Ordnung) and the prescribed approval in accordance with the German Road Traffic Regulations (Straßenverkehrsordnung).

Combining of machines: do not combine machines that are incompatible or are incompatible with the tractor when combined.

List of compatible AGRISEM INTERNATIONAL machines

- Combiplow: Disc-O-Mulch / Maximulch / Actimulch
- DSF: Disc-O-Mulch / Maximulch / Actimulch
- DSA: Disc-O-Mulch / Maximulch / Actimulch
- DS500/200: Disc-O-Mulch / Maximulch / Actimulch

The company AGRISEM INTERNATIONAL accepts no liability in the event of damage resulting from a machine combination that has not been authorised in writing by AGRISEM INTERNATIONAL.

Accidents linked to the failure of components during operation may result from unauthorised combinations of hitching equipment.

Hitching and unhitching operations involve a risk of injury.

Before hitching or unhitching

- Place the machine on stable ground.
- Lower the pressure in all hydraulically controlled systems.

- Before climbing down from the tractor, take all of the necessary measures to avoid the accidental movement of the tractor.
- Chock the machine and take all of the necessary measures to avoid the accidental movement of the machine.

The machine must only be hitched to the designated hitching points and in accordance with the relevant regulations.

5.1.4. Instructions to be followed when using the machine



WARNING

Risks of accidents involving crushing, cutting, entanglement, trapping and impact due to a safety defect relating to movement or operation.

Before start-up, check that the machine and the tractor are able to move and operate in complete safety.

Never climb onto the machine or stand on it when it is moving.

It is essential never to work while reversing.

Never allow children to climb on the tractor or the machine, or to play near the equipment, even if the machine is stopped.

The machine must only be used or manoeuvred in areas that are clear of people. A 50 metre safety zone must be kept clear around the machine.

The machine components, which are driven by an external power source, have crushing and shearing zones. Keep away from these hazardous areas.

Be aware of hidden obstacles (stones, roots, pipes, cables, etc.). In the event of a collision with an obstacle, it is essential to stop the drive, switch off the tractor engine, remove the ignition key and wait for the machine to come to a complete standstill. Some parts may have inertia, wait 5 minutes after switching off the ignition before working on the machine. Before resuming work, check the machine for any damage.

If the obstacle is an electric cable or gas pipe, inform the appropriate authorities.

When using the machine, stones or other foreign objects are likely to be thrown a considerable distance. A 50 metre safety zone must be kept clear around the machine

Keep all persons and animals away from the danger zone surrounding the machine.

Do not stand in the machine's working area nor in the machine's rotation or swivel area.

Each time the machine is used, carry out a careful visual inspection of the machine to detect any external damage and ensure the correct operation of safety and protection devices. Also check the various settings regularly. Protective devices must be clean, visible and in good condition.

Do not use the machine on very uneven or steeply sloping ground.

Do not use the machine in the event of thunderstorms and lightning.

With regard to driving

Adapt your driving style so that you can control the tractor with the mounted or attached machine under all circumstances.

When operating the tractor, take into account your personal abilities, the condition of the terrain, traffic, visibility, weather conditions, the tractor's driving characteristics, and the intended use of the machine when mounted or hitched.

Ensure that the rules of safety and caution dictated by each situation are observed in respect of the applicable regulations.

The speed and driving style must always be appropriate to the ground, roads and tracks.

On uneven terrain or in tight bends, reduce your speed.

When cornering, take the overhang and inertia of the mounted implement into account.

At all times, avoid sudden changes of direction.

Do not leave the driver's seat until the equipment has come to a complete stop, the engine is switched off and the parking brake is on.

Do not transport any persons or animals on the machine / additional tools during operation or transport.

When travelling on public roads

Observe with the highway code applicable in your country.

Before driving on public roads, check the machine's road clearance and remove any components that exceed the clearance limits.

Take into account the widths authorised for transport and the transported height depending on the hitched machine, in line with current legislation.

Take into account the higher centre of gravity with a vertical folding machine, as the stability of the unit will differ between the unfolded and folded positions. Adjust your driving accordingly.

Before setting off on the road, ensure that the hitched appliance is equipped with lighting and signalling devices that comply with the Highway Code, and any other features required by the regulations in force.

As the rear AGRISEM INTERNATIONAL lights can be removed during work, check that they have been correctly refitted before driving on the road.

Check that the equipment is clean and in good working order. Replace any missing or damaged equipment before driving on the road.

The user must not consume alcohol, medication or any substance that could affect their perception, causing a loss of alertness or coordination. A user who takes prescription or non-prescription drugs should seek medical advice regarding their ability to safely operate a machine.

Before travelling on the road, secure all of the machine's pivoting parts in their transport position to avoid dangerous changes of position. Also check that the screws, nuts and bolts are tightened and that all of the machine parts are correctly attached and cannot move or become detached.

If the machine is a folding machine, the locking system must be engaged.

Follow the instructions in this manual on how to prepare the machine for transport.

If necessary, also check:

- the connection of the supply lines,
- the braking system and the hydraulic circuit.

Ensure that no movement can be made involuntarily.

If the equipment does not already have them, fit signalling devices: lighting board, reflectors, reflective plates or adhesive strips. The signalling devices must be clean, legible and in good condition. If this is not the case, contact the AGRISEM INTERNATIONAL after-sales service in order to replace them.

Ensure that the machine or additional equipment does not obstruct the tractor's lights.

Ensure that the inflation pressure of the tractor tyres is correct and suitable for the situation.

Never exceed a speed of 25 km/h when carrying a load.

Clean off any soil stuck to the machine before taking to the road.

After using the public highway, ensure that the road is cleaned of any mud left by the tractor and tools.

The driver/owner has sole responsibility when transporting the machine on the public highway. Always comply with applicable rules and regulations.

5.1.5. Instructions to be followed during any work on the machine

These instructions in particular relate to cleaning, servicing and repair operations.

Observe the instructions for machine maintenance set out in this operating manual.

Before working on the machine

Before carrying out any work on the machine, ensure that it cannot be accidentally started.

- Take care to ensure that the machine is placed on stable ground.
- Switch off the tractor engine, remove the ignition key, wait for all of the moving parts to come to a stop and engage the hand brake.
- Set the machine on the ground, depressurise the hydraulic circuit and allow the machine to cool down.
- Secure the machine or elements that are in a raised position to avoid any accidental lowering.
- Chock the machine.

If using a high-pressure washer or steam cleaner, it is essential to comply with the following points:

- Do not clean the electrical and hydraulic components.
- Never direct the high-pressure washer or steam cleaner nozzle directly at the lubrication points or bearings.
- Systematically keep the nozzle a reasonable distance from the machine.
- Comply with the rules for using high-pressure washers.

Wear appropriate personal protective equipment for the work to be performed. In particular, wear safety shoes and gloves when handling sharp objects.

Take all of the necessary precautions when fitting working parts that are both heavy and sharp.

The machine must be used, serviced and repaired only by competent persons who are familiar with the machine's features and operation.

The machine must only be repaired using original AGRISEM INTERNATIONAL parts.

To protect exposed metal parts, use either a rust inhibitor that leaves an oily film or thick grease.

Depending on the type of machine: before carrying out any work on the electrical circuit or before welding, disconnect the electrical cables from the tractor. Disconnect the battery and alternator cables.

Do not weld or use blow torches near pressurised fluids or inflammable products.

5.1.6. Instructions regarding installation

The machine may be fitted with electronic components and elements which may be affected by electromagnetic emissions from other devices. This type of interference may be a source of danger for people if the following safety regulations are not observed.

- In the event that electrical devices and/or components are retrofitted to the machine and connected to the on-board electrical system, the user must first check that the installation does not cause any interference with the vehicle's electronics or other components.
- Ensure that any retrofitted electrical and electronic components comply with Directive 2004/108/EEC on electromagnetic compatibility in its current version and bear the CE marking.

Before carrying out any work on the electrical system, disconnect the battery's negative terminal.

Only use the recommended fuses. Using fuses with an unsuitable amperage can cause damage to the electrical installation, resulting in a fire hazard.

Always comply with the safety rules for carrying out work on a machine fitted with a battery. Refer to the user instructions of the machine concerned for more details.

5.1.7. Instructions regarding the hydraulic system

If your machine is fitted with a hydraulic circuit, the following instructions must be followed.

The machine is driven by pressurised hydraulic fluid. Working on a pressurised circuit may result in the risk of injury due to contamination. All work must be carried out by professionals trained in the handling of hydraulic systems.

If you wish to replace hydraulic components, please contact after-sales service AGRISEM INTERNATIONAL.

Mark the sockets and connectors of the hydraulic connections between the tractor and the machine to avoid handling errors. Refer to "Operation", page 43 for more details.

Before connecting a hose to the tractor's hydraulic circuit, ensure that the circuits on both the tractor side and the machine side are perfectly clean and not under pressure.

Before carrying out any work on the hydraulic circuit, lower the machine, depressurise the circuit, switch off the tractor engine, engage the parking brake and remove the ignition key.

Allow the machine to cool before carrying out any work.

Check the hydraulic hoses regularly. Damaged or worn hoses must be replaced immediately. Visually inspect flexible hydraulic hoses for any signs of damage or abnormal wear.

When replacing hydraulic hoses, ensure that only hoses with the characteristics and quality specified by the machine manufacturer are used. If in doubt, contact the AGRISEM INTERNATIONAL after-sales service network .

After each use of the machine, clean the hydraulic quick connectors' end fittings and fit the protective caps. Replace connectors which do not lock correctly or which leak.

Hydraulic hoses must never trail on the ground.

If a leak is detected, take all of the necessary precautions to avoid accidents. Never try to plug the leak with your hand or fingers.

Any pressurised liquid, in particular oil in the hydraulic circuit, can penetrate the skin and cause serious injury and infection.

In the event of injury, seek immediate medical attention.

To prevent accidents caused by unexpected movement of hydraulic equipment or by unauthorised persons, the control valves on the tractor must be locked or secured when not in use or locked in the transport position.

5.1.8. Instructions relating to the braking system

The braking system must be checked and serviced regularly. Servicing and repair work and adjustments must only be carried out by brake system specialists. Contact the AGRISEM INTERNATIONAL after-sales service network .

Stop the tractor immediately in the event of a brake system malfunction and have it repaired.

Before carrying out any work on the braking system, place the machine on stable ground and chock it.

For fitted machines, after carrying out any adjustment or repair operation on the braking system, perform a braking test in accordance with the appended procedure.

5.1.9. Instructions specific for seeders AGRISEM INTERNATIONAL

In addition to the instructions applicable to all machines, users of AGRISEM INTERNATIONAL seeders must comply with the following instructions.

Never mount the machine outside the walkway AGRISEM INTERNATIONAL provided for this purpose.

Only climb onto the machine when it is stationary.

When operations are performed on the AGRISEM INTERNATIONAL seeder or during flow tests, the seeder must be stationary and a 50 metre safety area must be enforced around it. The hydraulic system must be depressurised (e.g. turbine stopped) and the rear window of the tractor must be shut, the tractor switched off and the ignition keys removed.

Ensure that no one is on or near the seeder when the seed is being loaded. The AGRISEM INTERNATIONAL walkway must only be used when the seeder is stationary.

Always ensure that the entire area corresponding to the seeder's overall dimensions is completely clear.

Enforce the 50 m safety zone:

- take care to avoid the impact of flying debris (e.g. soil, oil, stones or metal) when starting up the turbine.
- while using the machine

Users must comply with the highway regulations applicable in their country with regard to the front hopper.

If the tractor's signalling equipment is not sufficient (or not sufficiently visible) ensure that you fit your front hopper with lighting and signalling plates.

5.1.10. Instructions relating to machines fitted with spring-assembly safety systems

A number of tools AGRISEM INTERNATIONAL feature safety devices with pre-compressed spring elements. These can be dangerous if the necessary precautions are not taken when performing technical operations on the machine.



ATTENTION

Any work on the 'Spring block' assembly must be preceded by written authorisation from the company AGRISEM INTERNATIONAL.

5.1.11. Instructions relating to machines equipped with universal-joint transmission shafts

Consult the tractor manufacturer's instructions when performing any operations on universal-joint transmission shafts.

5.1.12. Instructions relating to shipments and transport

Unless covered by a special transport contract, all shipments shall comply with the regulations applicable in the territories through which the assembly passes.

- For deliveries of less than three tonnes: the carrier is responsible for the loading, chocking, securing and unloading of the equipment from when he takes charge of it until its delivery.
- For deliveries of more than 3 tonnes: loading, chocking and securing on the one hand, and unloading on the other hand, are the responsibility of the contracting party or the recipient respectively. The responsibility for any equipment damage that occurs during these operations lies with the person carrying them out.

Unless there is a specific transport agreement, and for deliveries of more than 3 tonnes, the Purchaser will therefore unload the machine under his own responsibility.

Similarly, if the Purchaser sells the machine and has it delivered, as the sender, he will be responsible for the loading, chocking and securing of the equipment when it is sent.

If you have any doubts regarding the unloading, loading, securing or securing of the machine, please contact AGRISEM INTERNATIONAL.


The user shall acknowledge receipt of the machine and the official documents once handed-over by the dealer. To do this, go to <https://my.agrisem.com> and follow the instruction given on the web site.

5.1.13. User's workstation

The machine must be operated by one person only, from the tractor driver's seat. Before each use, check the area around the machine, no-one must be within 50 metres of the machine. Make sure there is sufficient visibility to fulfil this condition for use.

5.2. Safety symbols on the machine


DANGER



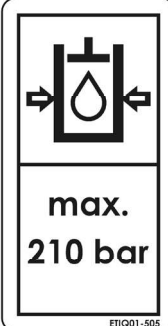


You are the sole guarantor of safety. Correctly applying the safety regulations will not only serve to protect you but also those around you. Before using the machine, carefully study the instructions given in this manual as well as all the safety and instruction stickers affixed to the machine: consider them as an integral part of your safety programme. Also study all the usual work protection measures and above all, do not forget:






Safety depends on you. Accidents that result in serious injury or death can be avoided.


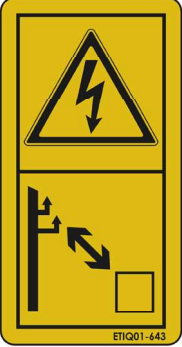



IMPORTANT






These safety symbols must be present on the machine and legible. If any symbols are missing or damaged, contact AGRISEM INTERNATIONAL.

Marking	Reference	Symbol	Meaning
1	ETIQ01-505		<p>WARNING DANGER</p> <p>Stop the engine and remove the ignition key before carrying out servicing or repair operations.</p>
2	ETIQ01-601		<p>WARNING DANGER</p> <p>Stop the engine and remove the ignition key before carrying out servicing or repair operations.</p>
3	ETIQ01-603		<p>WARNING DANGER</p> <p>Read the instruction manual and safety instructions before starting up the machine and abide by them during operation.</p>

Marking	Reference	Symbol	Meaning
4	ETIQ01-605		<p>RISK OF CRUSHING</p> <p>Do not remain in the working area to avoid any risk of crushing.</p>
5	ETIQ01-607		<p>RISK OF CRUSHING</p> <p>Do not remain in the area between tractor and machine in order to avoid any risk of crushing.</p>
6	ETIQ01-625		<p>RISK OF PINCHING</p> <p>Keep away from all moving parts to avoid any risk of pinching.</p>
7	ETIQ01-627		<p>RISK OF CRUSHING</p> <p>Stay clear of swinging area of implements.</p>
8	ETIQ01-633		<p>RISK OF CRUSHING/CUTS</p> <p>Keep away from the machine to avoid the risk of cuts or crushing.</p>

Marking	Reference	Symbol	Meaning
9	ETIQ01-641		RISK OF INFECTION THROUGH PENETRATION INTO THE BODY Follow the servicing and maintenance instructions in the user manual.
10	ETIQ01-643		RISK OF ELECTRIC SHOCK Risk of electrocution, keep away from electric lines.
11	ETIQ01-651		RISK OF FALLING Risk of falling, do not transport anyone on the machine.
12	ETIQ01-657		RISK OF LOOSENING Risk of loosening, regularly check the tightness of the components in accordance with the maintenance plan.
13	ETIQ01-637		RISK OF BEING IMPACTED Risk of being impacted, do not stand near the machine while it is operating.

Marking	Reference	Symbol	Meaning
14	ETIQ01-649		<p>RISK OF CRUSHING</p> <p>Never climb on the machine while the tractor engine is running.</p>
15	ETIQ01-639		<p>RISK OF EXPLOSION</p> <p>Pressure tank, do not service or repair.</p>
16	ETIQ01-611		<p>DANGER WARNING</p> <p>Warning: never exceed the maximum air pressure specified in the instructions, as this may damage the machine.</p>

5.2.1. Fixed mounted machines

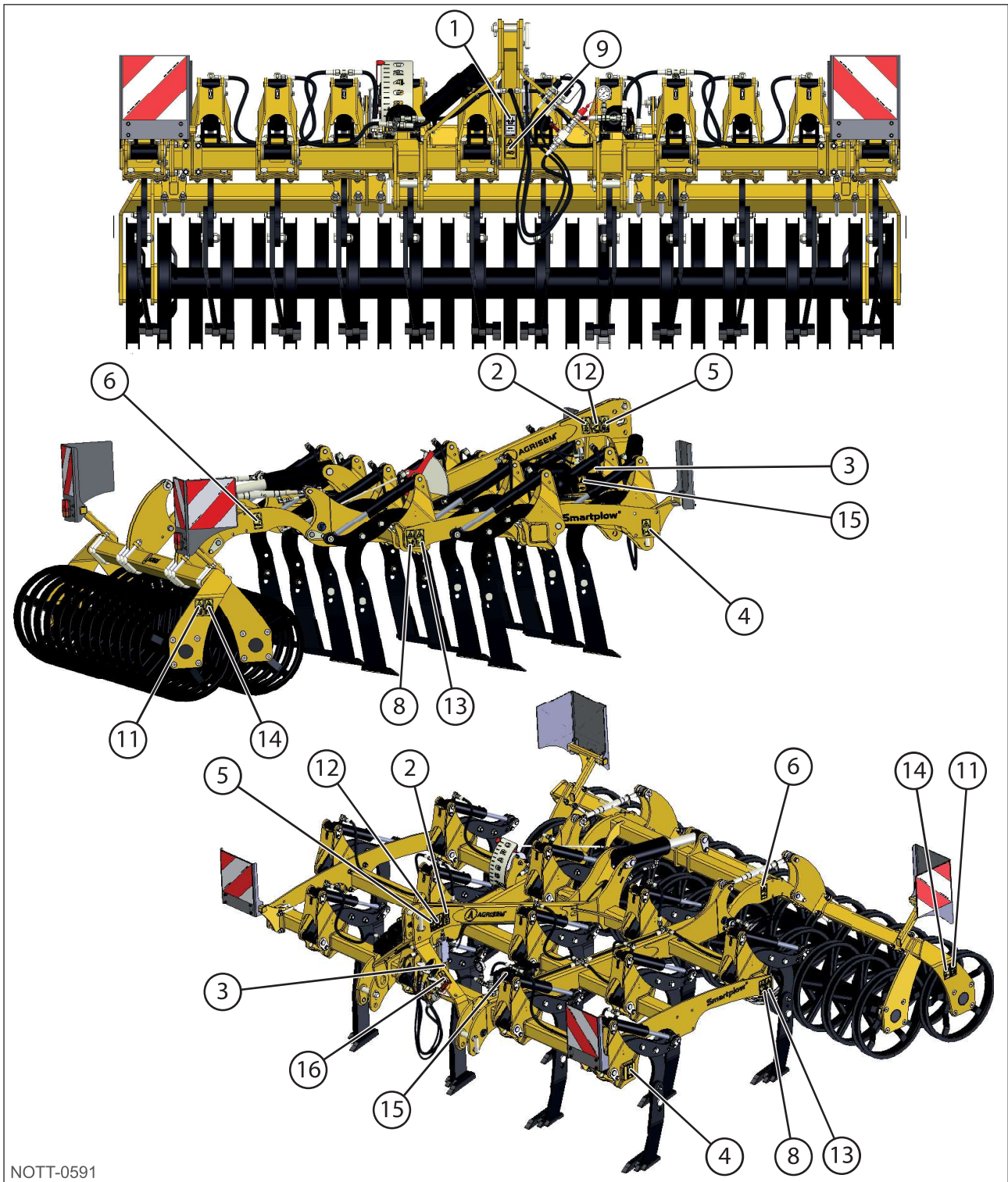


Fig. 14

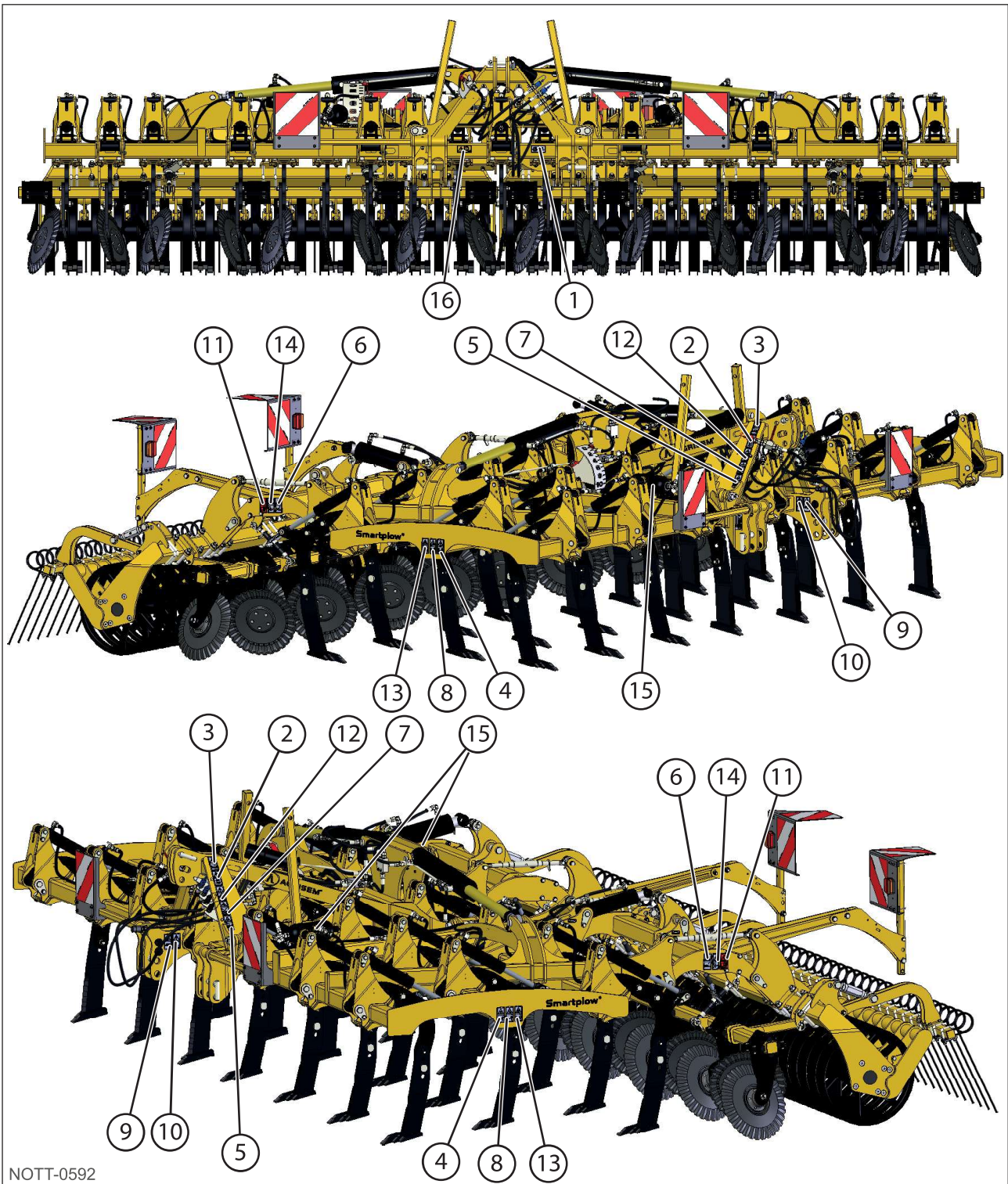
5.2.2. Foldable mounted machines


Fig. 15

5.2.3. Trailing machine

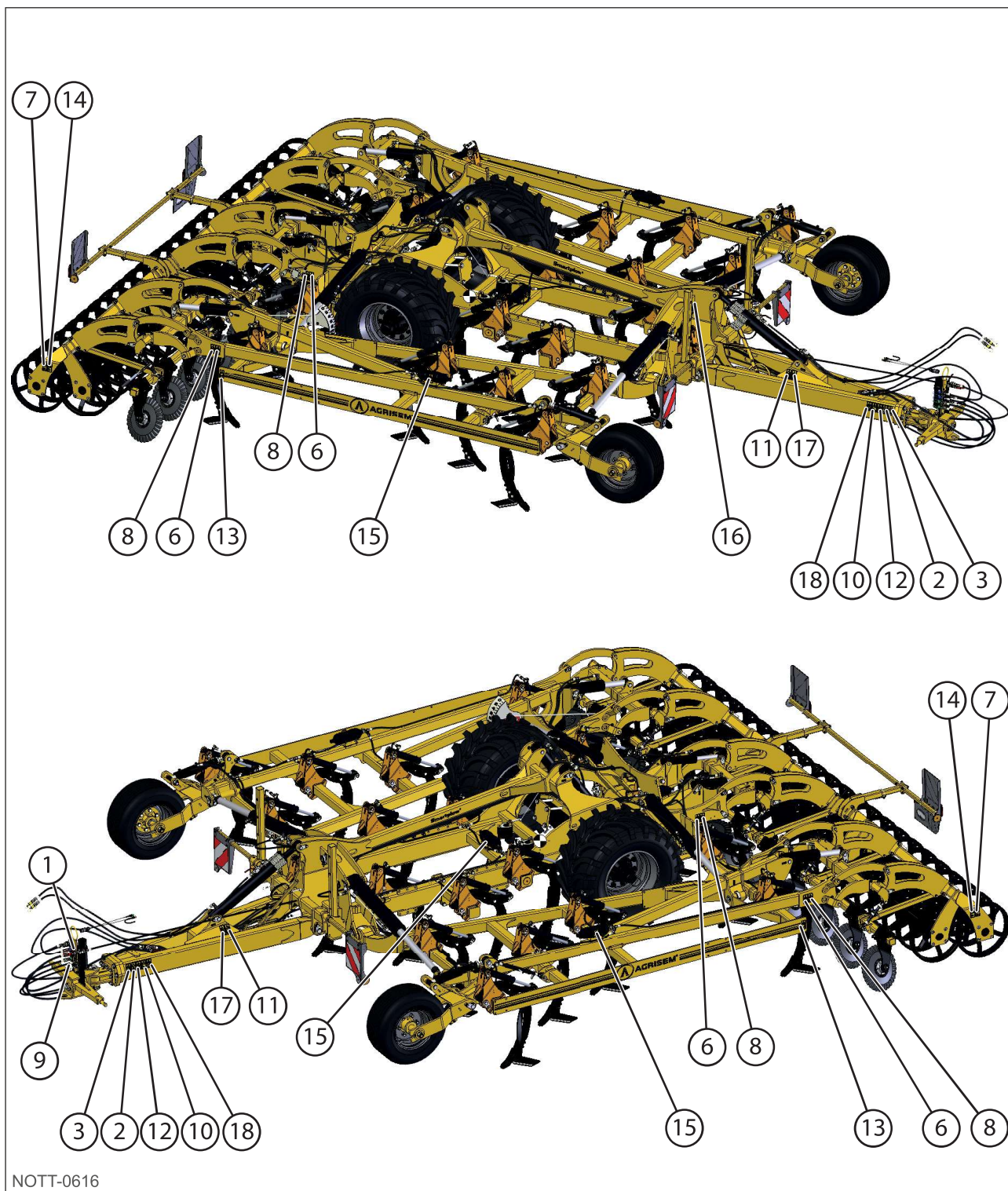


Fig. 16

6. Operation

6.1. Location and description of controls

6.1.1. Tractor-mounted machine coupling

Marking	Designation
1	Floating position of the upper hitch arm pin (3rd point)
2	Upper hitch arm pin (3rd point)
3	Fixed position of the upper link pin (3-point linkage)
4	Lower link coupling pin
5	Fixed bottom link pin position

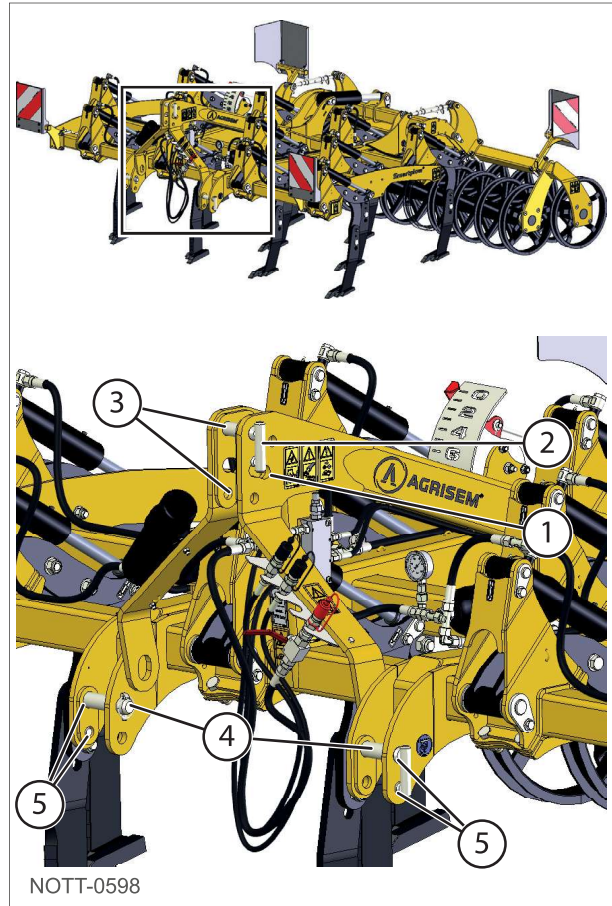


Fig. 17

6.1.2. Hitching of trailed machine

Marking	Designation
1	Drawbar coupling
2	Towing bracket
3	Drawbar
4	K80 hitching ball head
5	Hitching ring

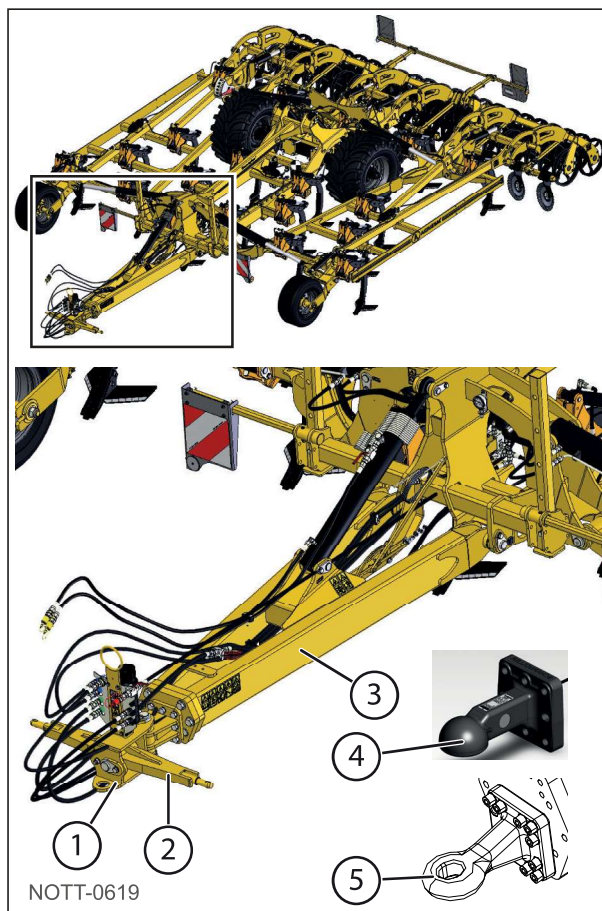


Fig. 18

6.1.3. Hydraulic connectors



WARNING

Any pressurised liquid, in particular oil in the hydraulic circuit, can penetrate the skin and cause serious injury and infection.

The functions controlled by each hydraulic line are indicated by colour-codes on the hydraulic hoses and the following pictograms. The pictograms are positioned on the hitch bracket.

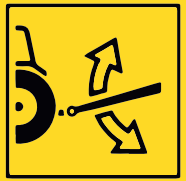






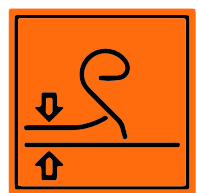
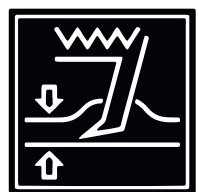

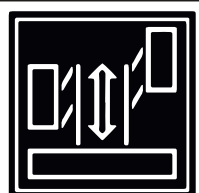
NOTE

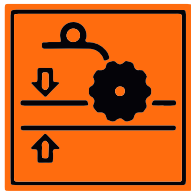
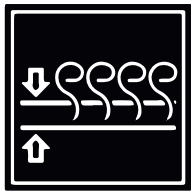
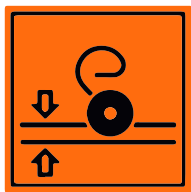
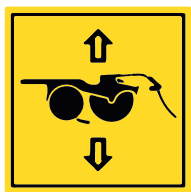
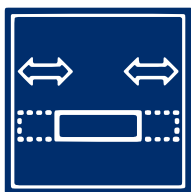
The pictograms are common to the entire AGRISEM INTERNATIONAL machine range, certain functions may not be available on your machine.



Fig. 19

Marking	Designation	Flexible colour coding
 NOTT-0251	Raise / Lower hydraulic drawbar	Yellow
 NOTT-0252	Pressure-free return of turbine	Red
 NOTT-0253	Roller folding	Blue

Marking	Designation	Flexible colour coding
 NOTT-0254	Raise / Lower axle	Green
 NOTT-0255	Turbine	Red
 NOTT-0256	Raise / Lower markers	Black
 NOTT-0259	Strength adjustment of crossboards	Orange
 NOTT-0258	Adjusting the depth of the tines	Black
 NOTT-0257	Fold / Unfold	Blue
 NOTT-0260	Extend / Retract extensions	Black

Marking	Designation	Flexible colour coding
 <p>NOTT-0261</p>	Depth adjustment of discs	Orange
 <p>NOTT-0262</p>	Depth adjustment of tines	Black
 <p>NOTT-0263</p>	Depth adjustment of cultivators	Orange
 <p>NOTT-0264</p>	Raise / Lower seed ramp	Yellow
 <p>NOTT-0265</p>	Extend / Retract extensions	Blue

6.1.4. Hydraulic control valves

Marking	Designation
1	Folding and unfolding the extensions Hydraulic line with blue connector

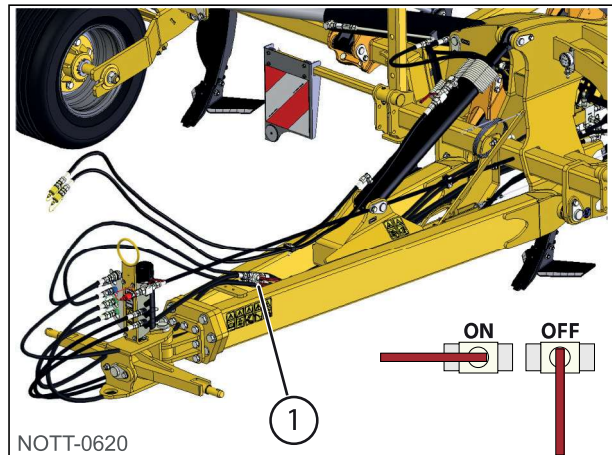


Fig. 20

Marking	Designation
2	Folding/unfolding speed adjustment

Turn clockwise to reduce the folding/unfolding speed.
 Turn anti-clockwise to increase the folding/unfolding speed.

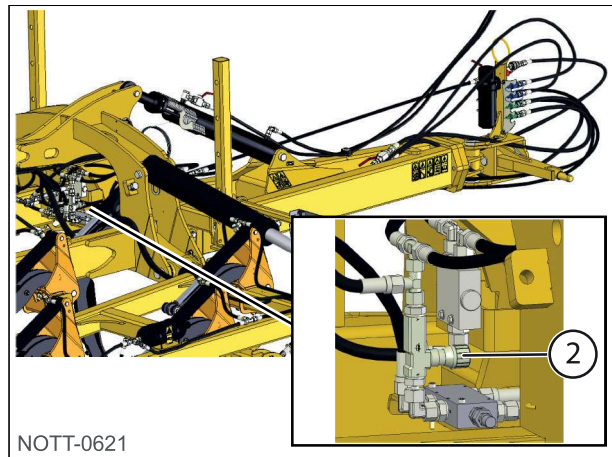


Fig. 21

Marking	Designation
3	Transport Hydraulic line with green connector

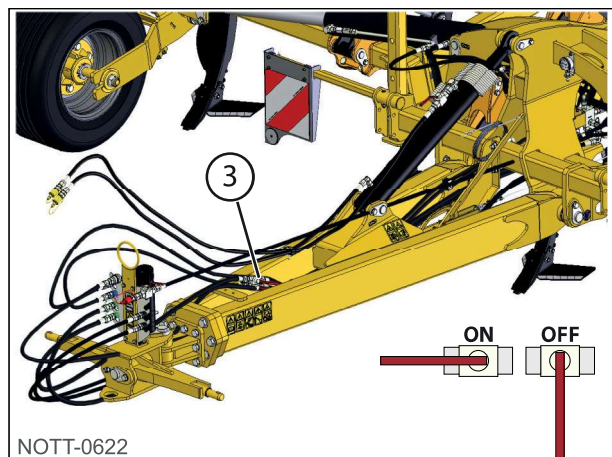


Fig. 22

Marking	Designation
4	Hydraulic drawbar Hydraulic line with yellow connector

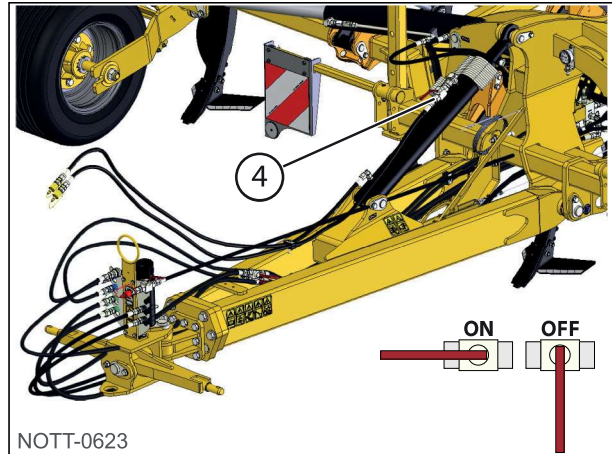


Fig. 23

Marking	Designation
5	Safety Hydraulic line with red connector

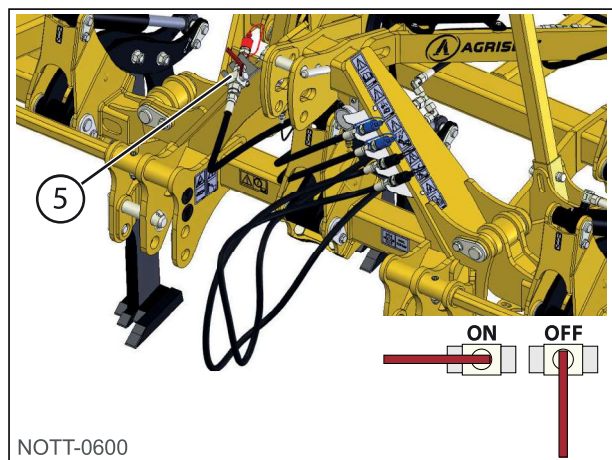


Fig. 24

6.1.5. Lighting and signalling system

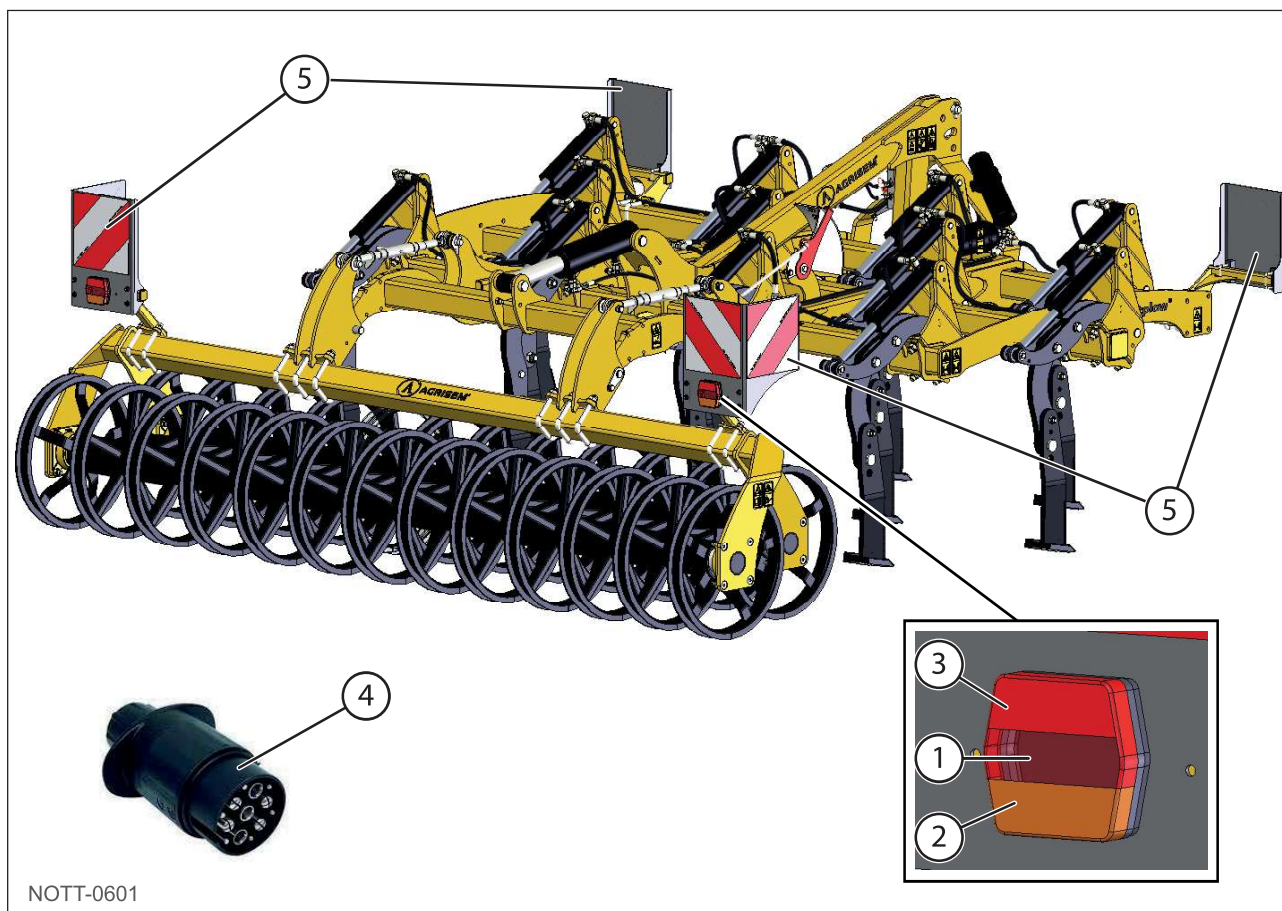


Fig. 25

Marking	Designation	Characteristics
1	Headlight	12 V 55 W
2	Indicator lamp	12 V 21 W
3	Brake light	12 V 21 W
4	Trailer socket	
5	Reflective stripes	



WARNING

Lighting and signalling systems must be maintained in good condition and replaced if necessary.

6.2. Commissioning

6.2.1. Foreword



NOTE

When accepting the machine, check that it has the required characteristics. Then carry out all of the preliminary operations prior to start-up as described in this manual.

6.2.2. Tractor/machine compatibility



NOTE

The information listed below is provided for informational purposes only and does not replace the assembly instructions. Please contact the after-sales service network.



ATTENTION

Check the compatibility of the tractor and the machine.

- Front link arm of sufficient capacity
- Double-acting hydraulic control valve
- Single hydraulic line connected to the pressure-free return
- A 7-pin 12 V female connector for the tractor front lighting kit

6.3. Hitching/unhitching



ATTENTION

Always carry out hitching and unhitching operations carefully and smoothly, without sudden movements.



ATTENTION

Before carrying out hitching and unhitching operations, you must refer to the safety regulations.



ATTENTION

No-one must be within 50 metres of the machine during the hitching or unhitching operation.

Before hitching or unhitching the machine, it is important to ensure the following.

- The machine is on stable ground and no persons may be present within a radius of 50 m.
- The top-links of the tractor's three-point hitch must be set to the same length.
- The tyres of the tractor are inflated to the same pressure.
- The tractor is suitable for the machine to which it is to be hitched and has been tested accordingly (see "Characteristics", page 91).
- The tractor's hydraulic, mechanical and electrical connections are suitable for the machine to which it will be hitched.

6.3.1. Required tractor characteristics



ATTENTION

Check that the tractor meets the necessary requirements before hitching the machine:

- Total authorised weight
- Permissible load capacities of the tyres
- The permitted axle loads of the tractor



NOTE

The permitted values for the total weight, the axle loads and the tyre load capacities can be found in the tractor's registration papers and user manual.



ATTENTION

The headroom necessary for transportation must be taken into account, particularly when bridges and low power lines must be passed.



ATTENTION

The drawbar hitch on rear-mounted machines must be attached to the holes at the top of the lower links. This improves the stability of the machine when working.

6.3.2. Hitching a tractor-mounted machine

- 1 - Ensure that the machine is on stable ground.
- 2 - Bring the tractor up to the coupling on the machine.
- 3 - Align the lower arms of the hitch with the hitching pins.
- 4 - Hitch the lower link arms using the appropriate equipment.
- 5 - Adjust the length of the top link then secure with the pin and clip provided.
- 6 - Lock all hitch pins with the locking clips.
- 7 - Connect the hydraulic hoses if the machine is fitted with them.
- 8 - Connect the plug for the lighting equipment and check its operation.
- 9 - Raise the machine.
- 10 - Fold the side extensions for transport.
- 11 - Lock the machine for transport if it folds using hydraulically controlled hooks or mechanical locks.
- 12 - Ensure that everything is correctly connected and locked and that there are no foreign bodies on the machine.

NOTE


Depending on the working conditions, the tractor's push bar can be positioned in the fixed hole (1) or the slotted hole (2).

In order to improve monitoring of the drilling area, it should be illuminated.

When using illuminate drilling, always ensure that the hitch pin is in the centre of the illuminated area.

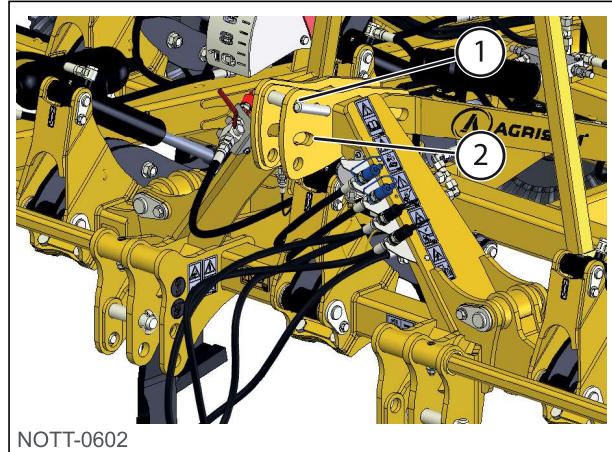


Fig. 26

6.3.3. Hitching a trailed machine

- 1 - Ensure that the machine is on stable ground.
- 2 - Bring the tractor up to the coupling on the machine.
- 3 - Depending on the type of towbar attachment, hitch the machine to the hitch ring or the tractor hitch arms.
- 4 - Connect the hydraulic hoses (if the machine is fitted with them) according to the colour marking. When using a drawbar, firstly connect the hydraulic lines in order to correct the height of the drawbar.
- 5 - Connect the plug for the lighting equipment and check its operation.
- 6 - Remove the parking stands (if the machine is fitted with them).
- 7 - Raise the machine with the drawbar and the trailed or semi-mounted equipment.
- 8 - Fold the side extensions for transport (see "Transportation", page 72).
- 9 - Lock the machine for transport if it folds using hydraulically controlled hooks or mechanical locks.
- 10 - Ensure that everything is correctly connected and locked and that there are no foreign bodies on the machine.

6.3.4. Point of convergence

The point of convergence can be adjusted to improve the tractor's traction, stability and grip.

This also affects the tractor's lifting capacity.

On a tractor with 2 drive wheels, the point of convergence must be located close to the centre of the tractor.

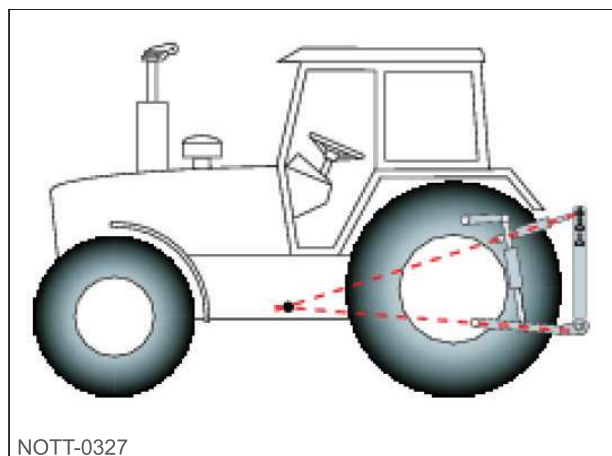


Fig. 27

On a tractor with 4 drive wheels, the point of convergence must be located towards the front drive axle.

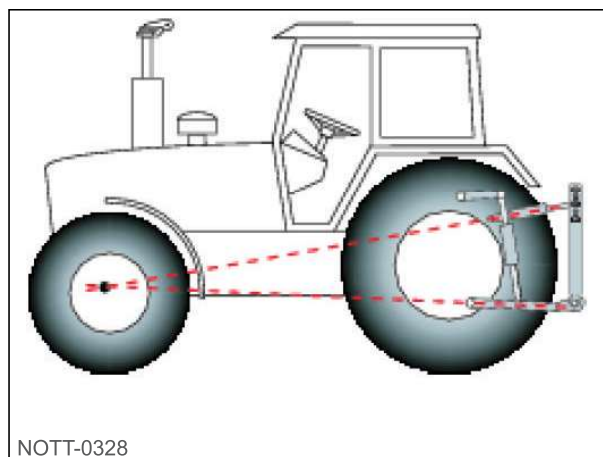


Fig. 28

6.3.5. Unhitching a tractor-mounted machine

- 1 - Ensure that the machine is unhitched on stable ground.
- 2 - Unlock the machine before unfolding it.
- 3 - Unfold the machine if it folds.
- 4 - Disconnect the hydraulic hoses if the machine is fitted with them.
- 5 - Disconnect the plug for the lighting equipment.
- 6 - Unhitch the machine.

6.3.6. Unhitching a towed machine

- 1 - Ensure that the machine is unhitched on stable ground.
- 2 - Unlock the machine before unfolding it.
- 3 - Unfold the machine if it folds.
- 4 - Put the parking stands in place (if the machine is fitted with them).
- 5 - Lower the machine with the drawbar and the trailed or semi-mounted kit.
- 6 - Disconnect the hydraulic hoses if the machine is fitted with them. If you are using a drawbar hook, disconnect the hydraulic hoses last so that you can adjust the drawbar's height.
- 7 - Operate the mechanical handbrake system, if fitted.
- 8 - Disconnect the plug for the lighting equipment.
- 9 - Unhitch the machine.

6.4. Folding/unfolding

6.4.1. General considerations

**WARNING**

Before carrying out hitching and unhitching operations, you **MUST** refer to the safety regulations.

**WARNING**

Before folding or unfolding check that there are no foreign bodies that could hinder movement.

**WARNING**

No-one must be within 50 metres of the machine while it is being folded or unfolded.

6.4.2. Folding/unfolding the roller

Fixed-mounted

An optional foldable roller for transport is available.

The roller is hydraulically operated from the cab to position itself above the section with the tines.

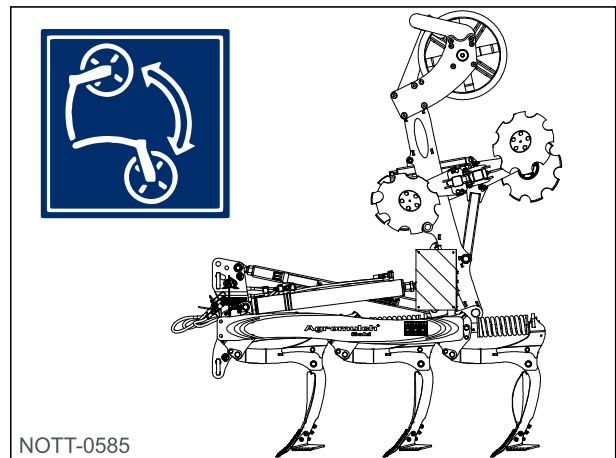
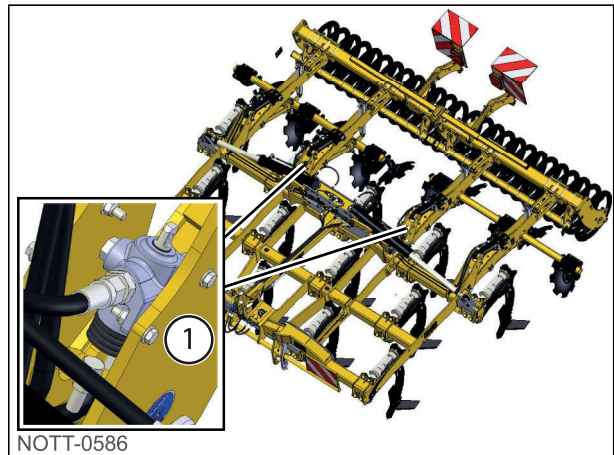


Fig. 29

Folding, mounted

The hydraulic sensor (1) ensures that the roller is in the lowest possible position (cylinder extended). Thus, there is no interference when folding the extensions.

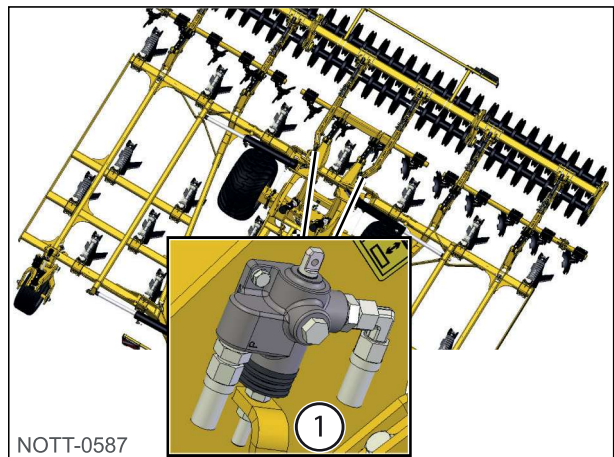


NOTT-0586

Fig. 30

Foldable trailer

The hydraulic sensor (1) ensures that the roller is in the lowest possible position (cylinder extended). Thus, there is no interference when folding the extensions.



NOTT-0587

Fig. 31

6.4.3. Folding and unfolding the extensions

Activate the hydraulic distributor in the desired direction.



NOTT-0257



WARNING

Never set out on the public highway if the width of the Vibromulch in the folded position exceeds 2.98 m.

**WARNING**

Never set out on the public highway if the extensions are not locked.

6.4.4. Adjustment of the extensions

During transport on public roads, and to prevent the machine from unfolding, a locking mechanism is mandatory. Locking is ensured by a balancing valve and by safety valves should a cylinder hose rupture.

6.5. When driving

When driving on the road the machine must be converted to the transport position:

- fold the extensions,
- securely block extensions,
- fold the roller.

Raise the machine completely to prevent the working elements dragging on the ground. Road transport speed should not exceed 25 kph.

6.6. Braking

6.6.1. Single-line hydraulic brake system

For machines equipped with a single-line hydraulic braking system, connect the brake hydraulic take-off to the tractor to ensure safe braking of the towed unit.

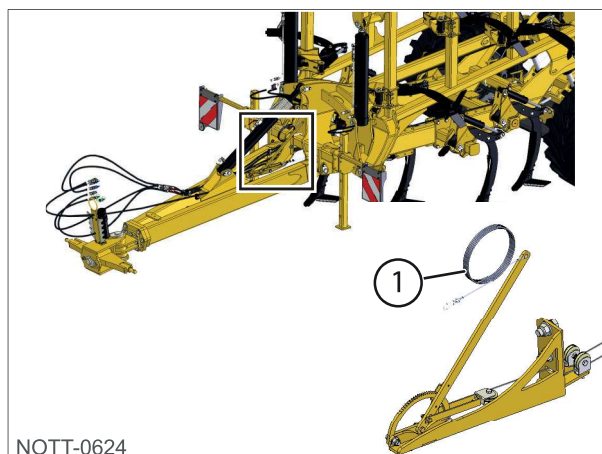


Fig. 32

6.6.2. Mechanical braking system

For machines equipped with mechanical brakes, connect the lanyard (1) to the tractor to ensure safe braking of the towed unit in the event of a hitch failure.

Once the machine is immobilised, manually operate the handbrake.



NOTT-0624

Fig. 33

6.7. Adjusting the working depth

6.7.1. Adjustment at the hitch

Mounted machine

The inclination of the machine during operation is adjusted at the 3rd point.



NOTT-0603

Fig. 34

Trailed machine

- Mechanical tow bar

Adjust the push rod to an intermediate length and set the depth of the front of the machine using the tractor's lift arm.



Fig. 35

- Adjusting the hydraulic drawbar

Add or remove spacers to increase or reduce the working depth of the front row of discs.

To increase the number of shims, open valve (2) and actuate the corresponding auxiliary control valve to extend the drawbar cylinder. Insert the necessary shims (1), then retract the drawbar cylinder by means of the corresponding auxiliary control valve.

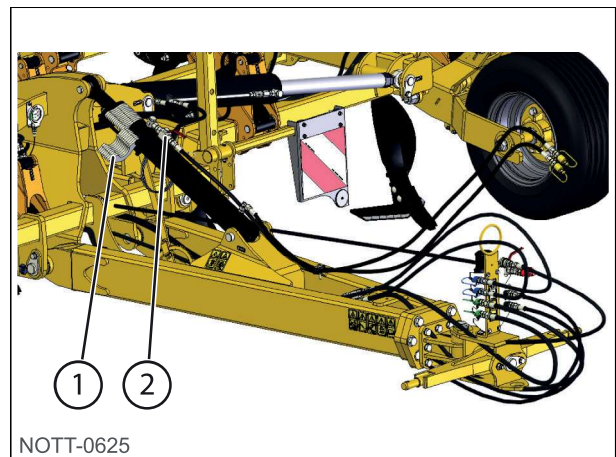


Fig. 36

6.7.2. Roller adjustment

The working depth of the cracking blades, stubble cultivators or scalping discs is affected by the roller setting.

It also serves to level and compact the soil after the blades or ploughshares have passed.

The roller is adjusted by the cylinders (1):

- 1 cylinder for fixed mounted machines,
- 2 cylinders for foldable mounted machines,
- 4 cylinders for trailed machines.

Adjustment

- 1 - Raise the machine to release the pressure on the roller.
- 2 - Extend or retract the cylinder(s) (1) using the hydraulic control in the driver's cab of the carrier vehicle:
 - extend the cylinder(s) (1): reduce the working depth;
 - retract the cylinder(s) (1): increase the working depth.

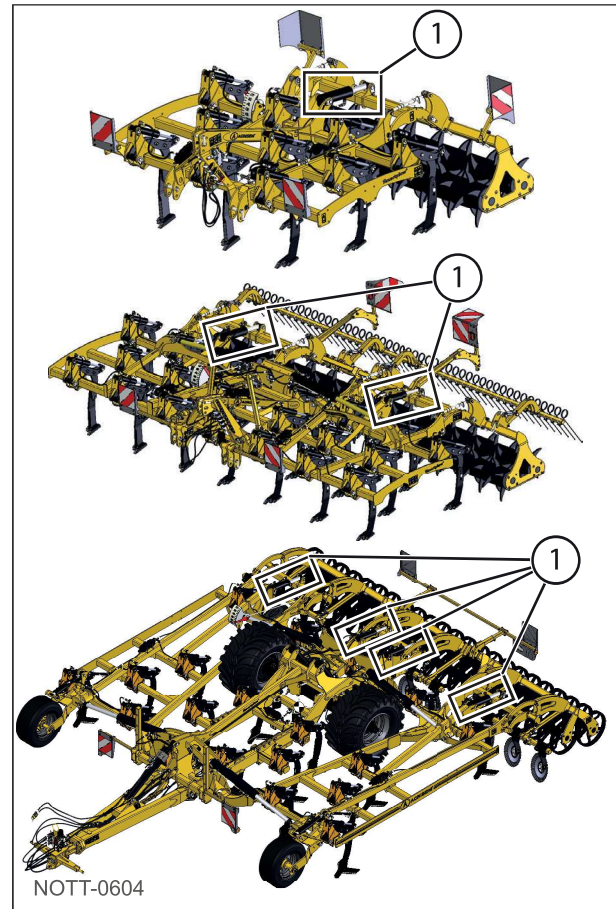


Fig. 37

The roller adjustment level is indicated on the graduated scale (2).

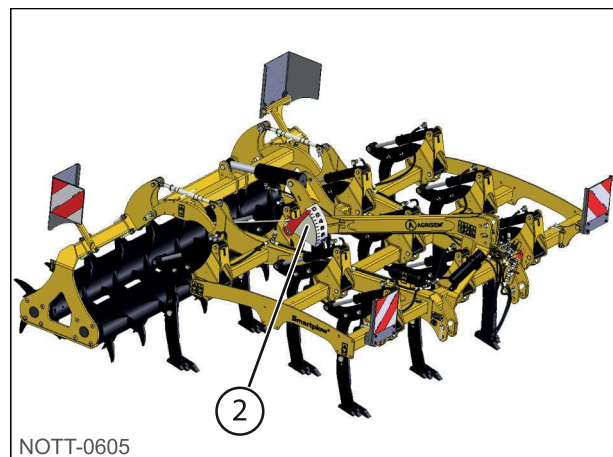
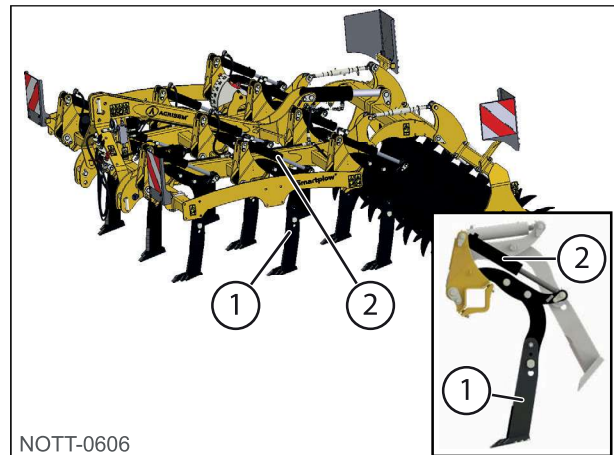


Fig. 38

6.7.3. Adjusting the angle of the blades or ploughshares

The angle of each blade (1) or ploughshare is adjusted using cylinder (2).

Extend or retract the cylinders using the hydraulic control in the driver's cab of the carrier vehicle.



NOTT-0606

Fig. 39

6.7.4. Adjusting the rear elements

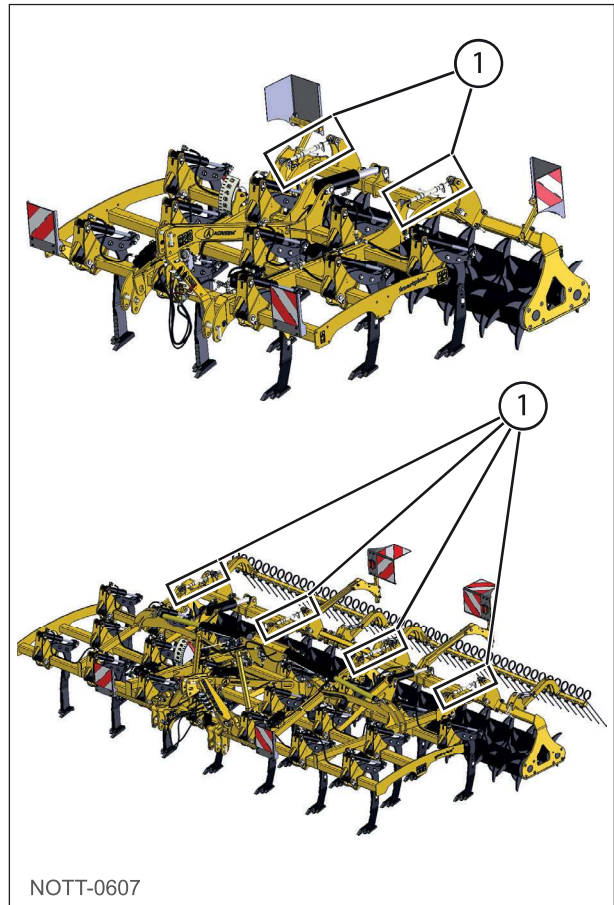
The rear components are designed to level the ground after the blades have passed. The height of these elements depends on the type of soil and the working depth.

The working depth of the discs is adjusted using the push bars (1):

- 2 push bars for fixed mounted machines,
- 4 push bars for foldable mounted machines,
- 6 push bars for trailed machines.

To increase the working depth of the tines, lengthen the push bar.

To reduce the working depth of the rear elements: screw in the push bars (1).



NOTT-0607

Fig. 40



ATTENTION

The adjustment of each of the push rods must be identical.

6.7.5. Harrow adjustment

The harrow inclination is adjusted using the push bars (1):

- 2 push bars for fixed mounted machines,
- 4 push bars for foldable mounted machines,
- 6 push bars for trailed machines.

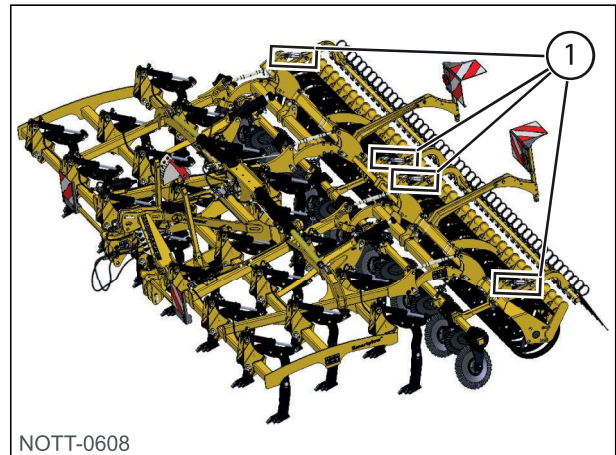
To increase the working depth of the tines, lengthen the push bar.

To increase the working depth of the tines, lengthen the push bar.



ATTENTION

The adjustment of each of the push rods must be identical.



NOTT-0608

Fig. 41

6.7.6. Disc adjustment

The discs are designed to level the ground after the blades or ploughshares have passed. The height of the discs depends on the type of soil and the working depth.

The working depth of the discs is adjusted using the push bars (1) and the adjustment ratchet (2):

- 2 push bars for fixed mounted machines,
- 4 push bars for foldable mounted machines,
- 6 push bars for trailed machines.

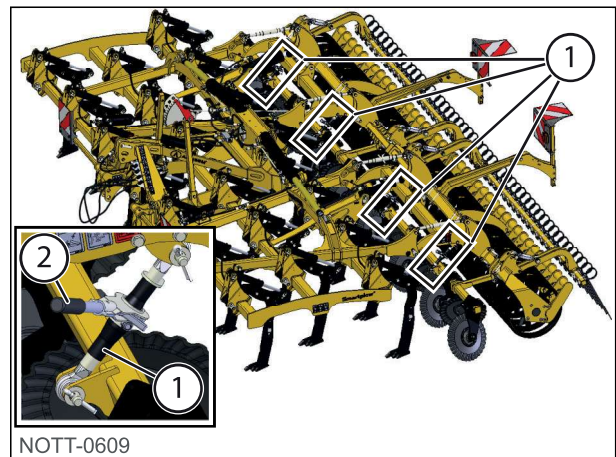
To increase the working depth of the tines, lengthen the push bar.

Screw in the push bars (1) to reduce the working depth of the levelling discs.



ATTENTION

The adjustment of each of the push rods must be identical.



NOTT-0609

Fig. 42

6.7.7. Adjusting the depth control wheels

The control wheels (2) support the extensions during operation to ensure the working depth. These wheels also support and lock the extensions during transport by road.

- 1 - Operate the main tilt circuit to extend the cylinders and support the weight of the machine on the rear roller. Continue to extend the cylinders until all 3D safety springs/tines are fully out of the ground.
- 2 - Activate the axle cylinder circuit to open the wheel cylinders and extend the control wheel cylinders (1).

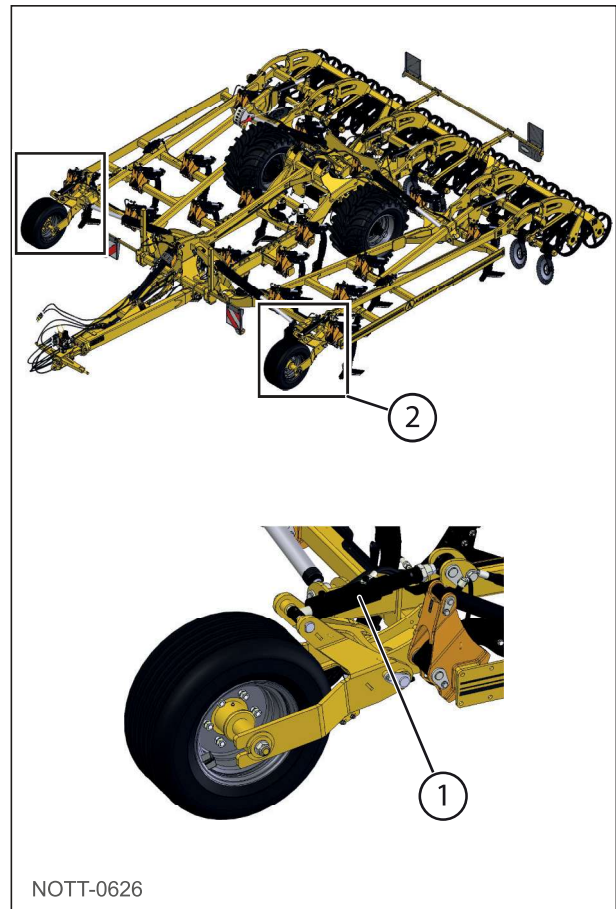


Fig. 43



NOTE

Ensure the shims on the axle cylinders and the roller are tightly clamped.

Ensure that there is no-one close to the machine before lowering it back into the work position.

As long as the limit switch remains turned on, the pressure will return to the previous setting.

6.7.8. Transport wheel adjustment

Remove or add spacers to increase or decrease the transport height.

To change the number of wedges, open the valve (2) (on the hydraulic line with the green connector) and activate the corresponding auxiliary spool valve to extend the transport cylinders (3).

Insert or remove the necessary spacers (1), then retract the transport cylinder using the corresponding auxiliary spool valve.

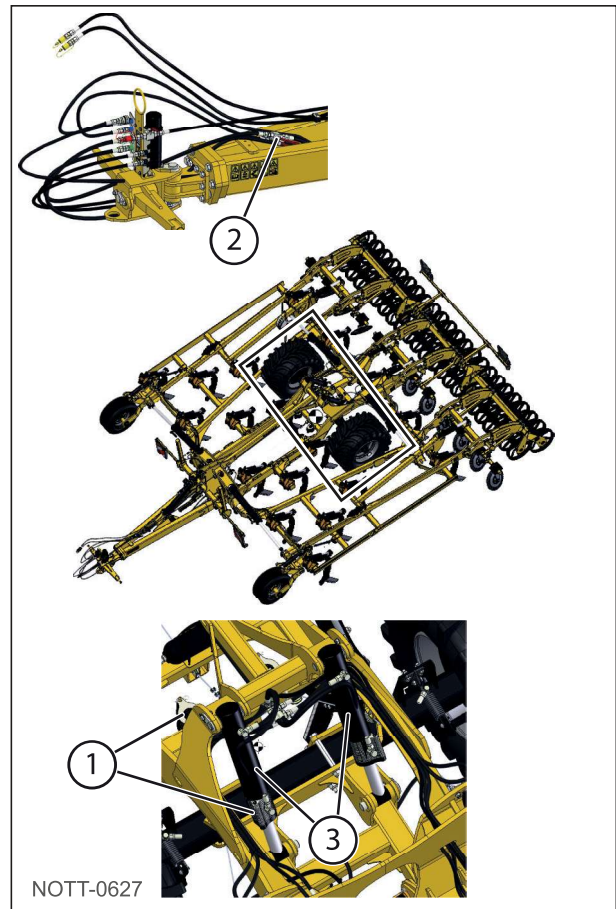

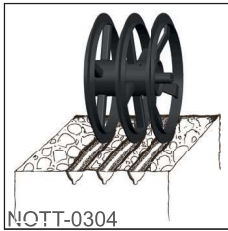





Fig. 44

6.8. Types of roller and applications

Roller	Designation	Recommended usage	Type of soil
 <p>NOTT-0303</p>	V-Sem	Deep vertical consolidation Good level of consolidation and crumbling	All types of soil
 <p>NOTT-0304</p>	T-Sem	Deep vertical consolidation Good level of consolidation and crumbling	All types of soil

Roller	Designation	Recommended usage	Type of soil
 NOTT-0305	U-Sem	Deep vertical consolidation Good soil-seed contact	Tacky and damp soils
 NOTT-0306	Roller cage	Shallow horizontal consolidation Versatile, lightweight, crumbling	All types of soil
 NOTT-0311	Steel pack	High consolidation in difficult conditions High consolidation over entire width Ideal levelling and crumbling	Tacky and damp soils

6.9. Recommendations for adjustment on soft soil

On soft ground, the weight of the machine on the tractor's third support point can cause instability. The machine's settings should therefore be changed.

- 1 - Disconnect the third point of the tractor from the machine.
- 2 - Precisely adjust the working depth of the first row of blades or ploughshares using the tractor's lift position control.
- 3 - Validate the working depth at high speed without the top link.
- 4 - Once the working depth has been adjusted, reconnect the tractor's third support point to the machine in the floating position. Ensure that the coupling bolt is in the centre of the illuminated area.

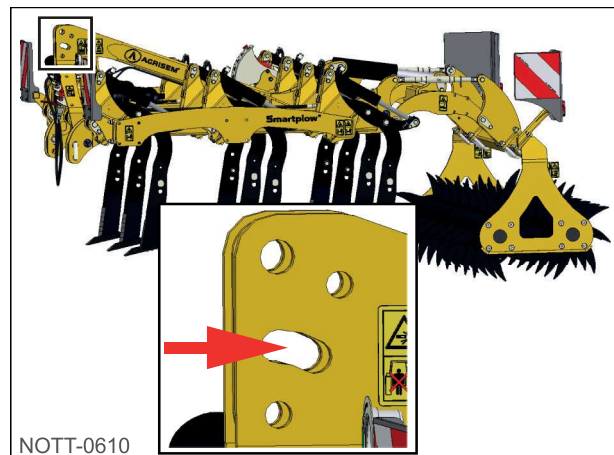


Fig. 45

6.10. Recommendations for adjustment on firm soil

Under these conditions, it is recommended to use the tractor 3-point hitch in the floating position with no position control.

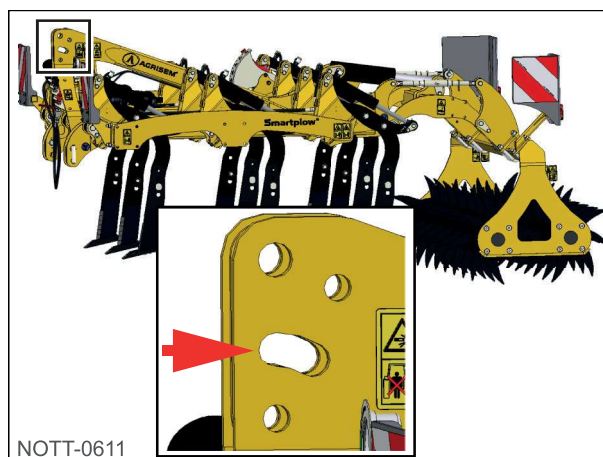


Fig. 46



ATTENTION

The working depth apparent when the machine is at a standstill is often less than when the machine is in movement. With increasing speed, the machine's pressure on the top link and the percussion effect of the 3D safety increases the working depth. You should therefore check the working depth by examining the profile of the topsoil in an area worked at high speed and not at the edge of the field.

6.11. Immobilising the tractor/machine

6.11.1. Precautions

In order to avoid moisture damage, the machine should be parked, if possible, indoors or under cover. When manoeuvring the machine, pay attention to your surroundings. Ensure that nobody is in the manoeuvring area.

Park with the machine on level solid ground, if leaving parked for a long period of time it is advised the machine is left in the unfolded or work position.

6.11.2. Immobilisation in unfolded position

- 1 - Follow the steps to unfold the machine but stop at the point where all working elements are touching the ground.
- 2 - At this stage, the hitch bar can be raised, relieving the load on the tractor hitch.
- 3 - Switch off the tractor and remove the hitch pin.
- 4 - Check that the tilt cylinders support the weight of the hitch bar. Start-up the tractor and move it forward far enough to clear the hitch.
- 5 - Turn off the tractor, depressurise all hydraulic lines and remove all hoses and cables from the rear of the tractor. Start-up the tractor and drive slowly forward.

6.11.3. Immobilisation in folded position

- 1 - Turn off the tractor. Swing the ¼ turn valve of the folding control hydraulic circuit from the transport position to the work position.
- 2 - open the hydraulic valve and activate the hydraulic connection.
- 3 - Turn off the tractor.
- 4 - Start-up the tractor and move forward to clear the hitch.
- 5 - Retract the cylinder.
- 6 - Turn off the tractor and place all the hoses on the support bracket.
- 7 - Remove all the hoses and slowly move the tractor forward.
- 8 - After immobilisation, cover the machine with a tarpaulin to avoid cuts.

7. Winter Storage - Handling - Transport

7.1. Storage - Warehousing

If the machine is not going to be used for an extended period:

- Perform the maintenance cleaning operation on the machine
- Store the machine away from moisture and bad weather.
- Place the machine on flat, solid, stable ground
- Disconnect electrical control devices and store them in a dry place.
- Protect the machine against rust. Only spray with oils that are easily biodegradable, e.g. rape oil.
- Unload the wheels using lifting and wedging equipment and accessories that are in compliance with and have been checked in accordance with the applicable regulations. Use standard, secure wedging systems to avoid any risk of accident linked to unstable blocking.
- Protect the hydraulic cylinder piston rods against corrosion.
- Carry out lubrication in accordance with the maintenance plan in the user manual.



IMPORTANT

The machine should, as far as possible, be stored indoors to avoid premature ageing. However, if stored outdoors, it must be unfolded to prevent damage caused by moisture. This will prevent the water from rain or snow accumulating and penetrating into the hubs during storage. This would irreparably damage the hub bearing and thus shorten its service life. The warranty will be void if traces of water or moisture are found during the assessment of a claim.



ATTENTION

Never work on a machine that is raised off the ground without having first secured it using suitable hoisting and propping devices.



ATTENTION

Do not spray plastic and rubber parts with oil or an anti-corrosion agent. Otherwise these parts may become brittle and break.

7.2. Handling



ATTENTION

Never stand in the handling area as this could result in serious or fatal injury.



ATTENTION

The lifting points must be used simultaneously for the safety of handling.



ATTENTION

During handling, some components may have sharp edges. Wear suitable personal protective equipment (safety gloves, goggles, safety shoes) when handling the components.

The machines are equipped with attachment points for lifting operations. Pictograms enable them to be more quickly identified.

Handling must be carried out using appropriate lifting and wedging equipment and accessories for the load to be moved, that are compliant and have been checked in accordance with the applicable regulations.

To know the approximate weight of the assembly, see Characteristics.



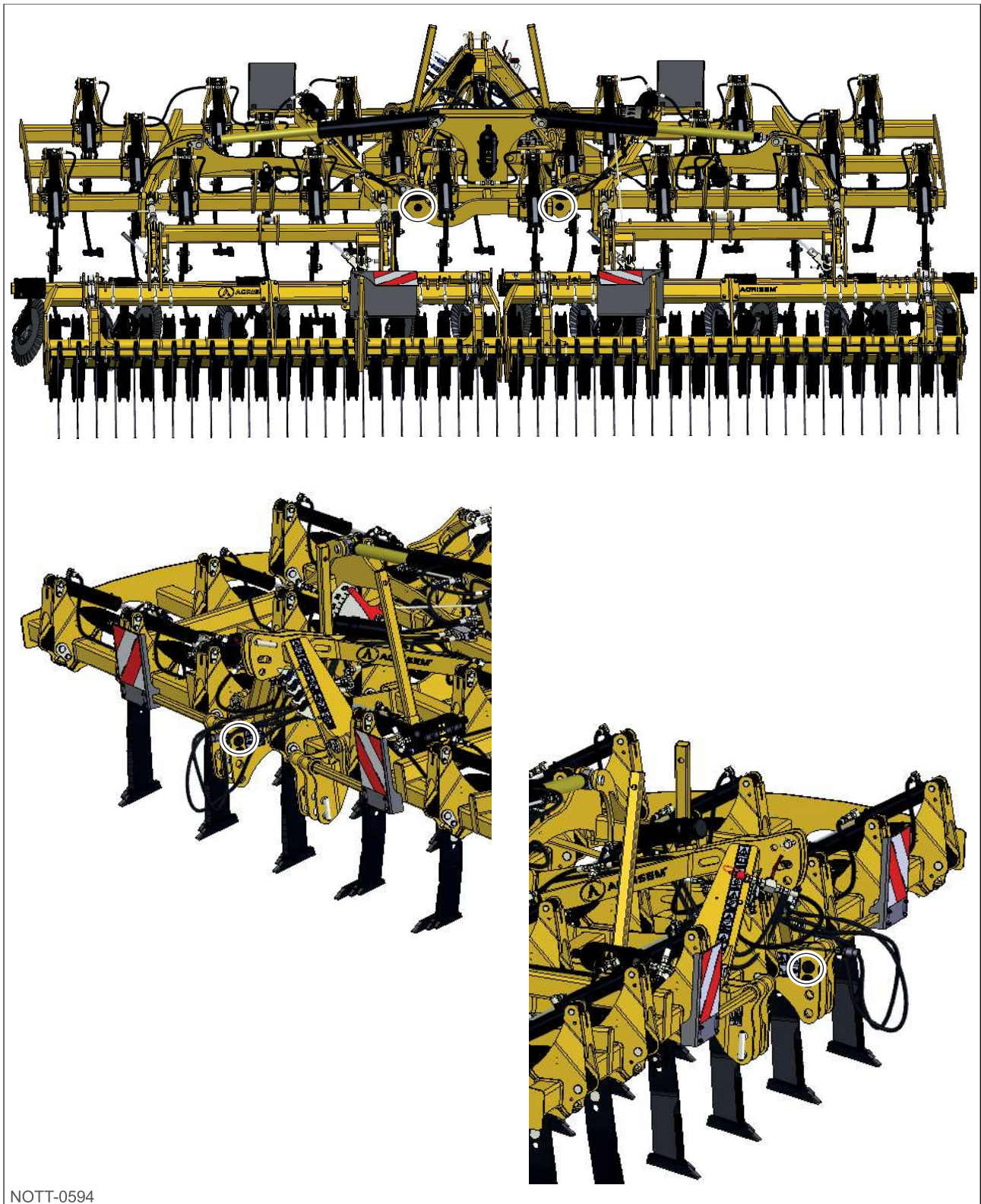
Fig. 47

7.2.1. Fixed mounted machines



Fig. 48

7.2.2. Foldable mounted machines



NOTT-0594

Fig. 49

7.2.3. Trailing machine

These machines are not intended to be lifted.

In case of problems, contact AGRISEM INTERNATIONAL.

7.3. Transportation



ATTENTION

Firmly secure the machine on the flat-bed using straps that are compliant and have been checked in accordance with the applicable regulations.

Ensure that there are no unsecured items on the flat-bed which might be thrown against the machine during transport.

The machines are equipped with attachment points for the transport phases. Pictograms enable them to be more quickly identified.

All transport must take place using blocking and bracing equipment and accessories that are compliant and inspected in accordance with the applicable regulations.



Fig. 50

During transportation, the machine must be secured as described below.

7.3.1. Fixed mounted machines

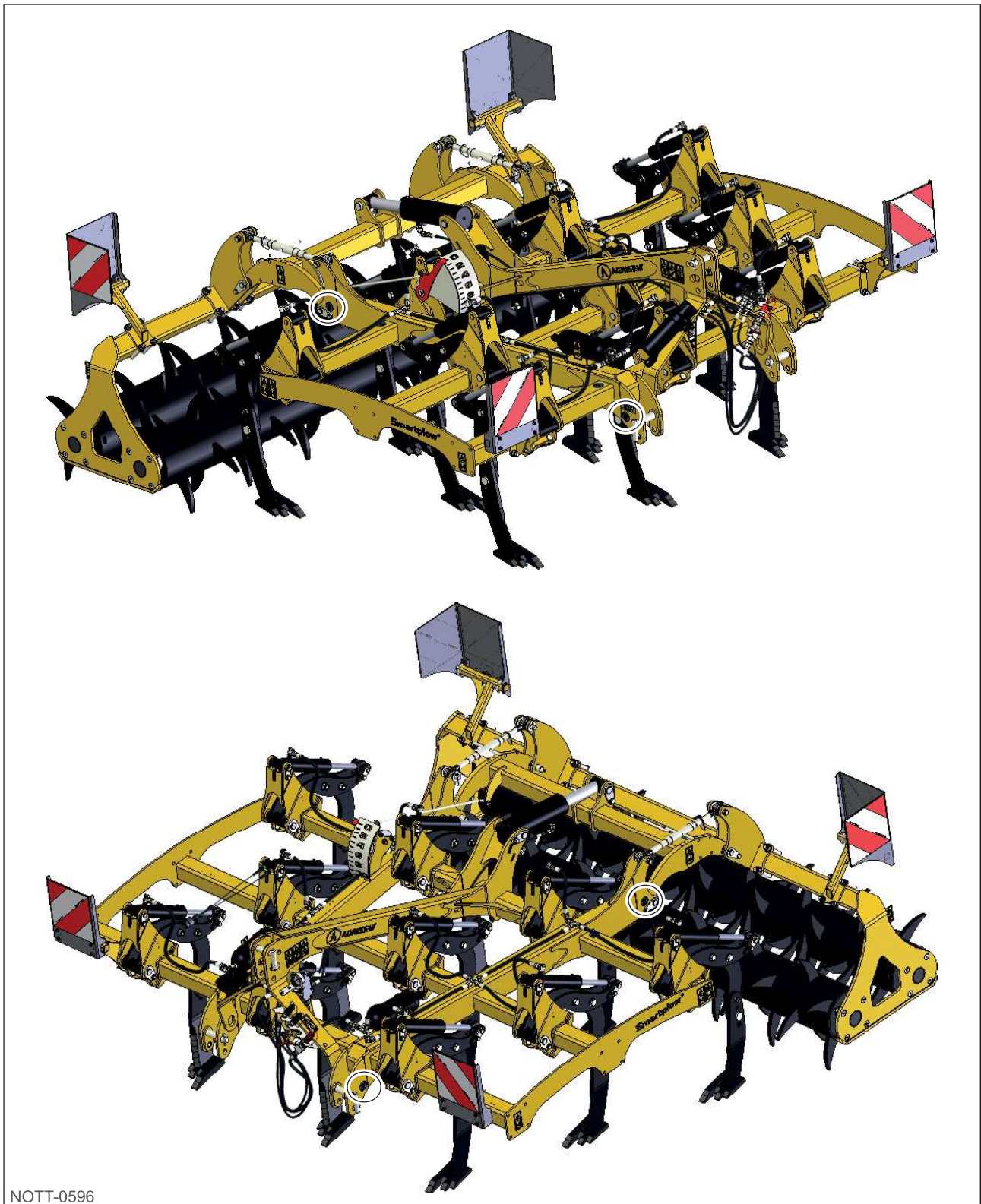


Fig. 51

7.3.2. Foldable mounted machines



NOTT-0595

Fig. 52

7.3.3. Trailing machine

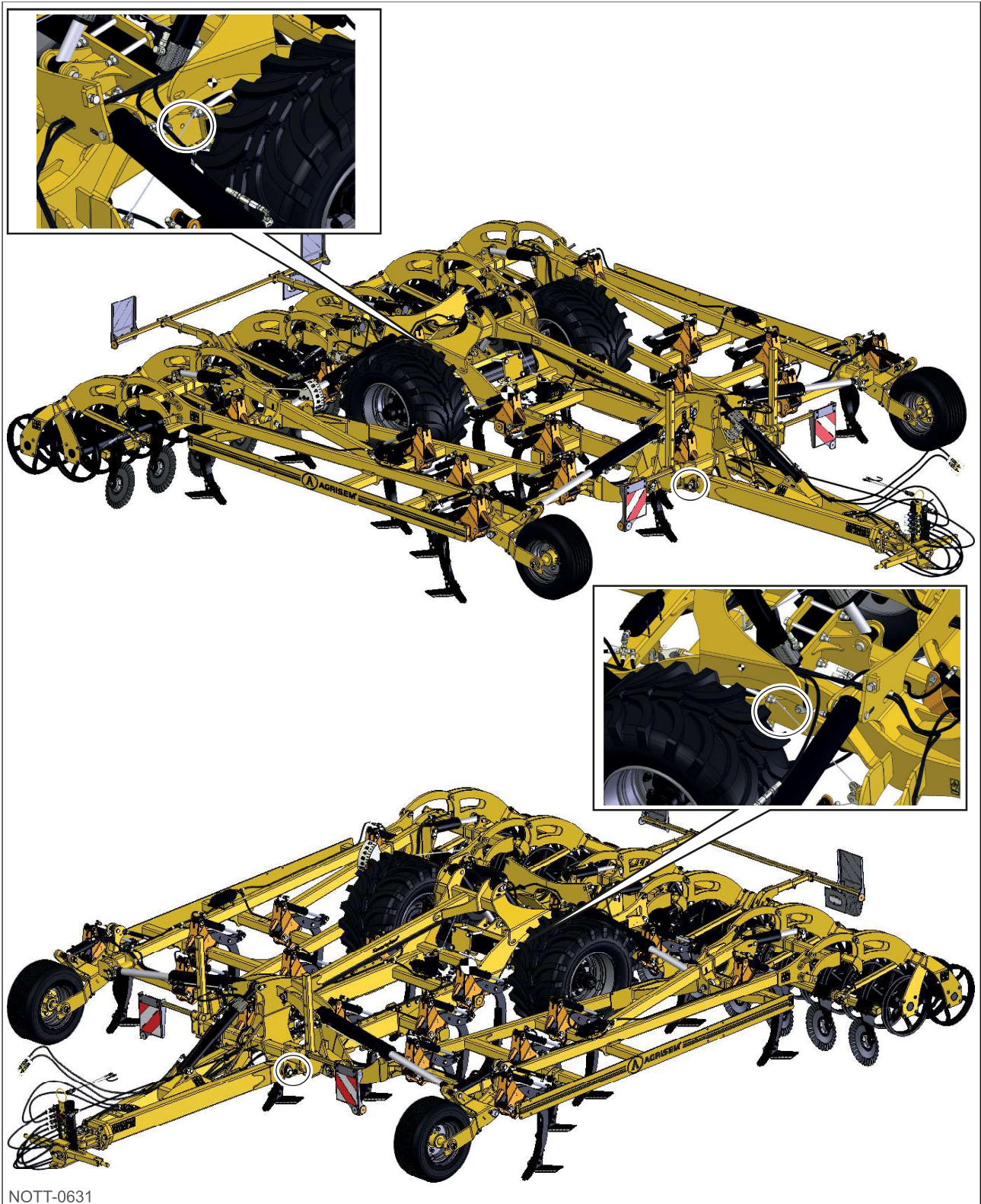


Fig. 53

8. Servicing - Maintenance

8.1. Maintenance advice

8.1.1. Introduction

Comply with the safety regulations regarding servicing and maintenance. The machine has been designed and built for maximum yield, profitability and comfort under many different usage conditions. It has been checked at the factory and by the dealer before its delivery to ensure that the machine is received in perfect condition. To maintain it in good working condition, it is important that servicing and maintenance operations are performed at the recommended frequency.

In order to ensure that the machine always operates correctly and to obtain an optimum performance, it must be cleaned and maintained at regular intervals. The hydraulic components and bearings must not be cleaned with a high-pressure washer or directly hosed down. The housings, screwed connectors and bearings are not watertight to VERY high pressure cleaning.

8.1.2. Personal protective equipment (PPE)



ATTENTION

The maintenance operations involve the handling of loads and materials requiring the wearing of personal protective equipment.

This personal protective equipment must be worn while performing maintenance operations.

Risk	Examples of personal protective equipment
Cuts	Gloves
Crushing	Gloves, safety shoes, safety helmet
Hydrocarbons	Gloves
Dust	Mask
Noise	Ear protection

8.1.3. Shutting-down the machine



WARNING

Before performing any maintenance operation, the machine's hydraulic, mechanical and electrical power must be shut down. Chock the machine and take all of the necessary measures to avoid the accidental movement of the machine

8.1.4. Cleaning the machine



WARNING

Before performing any maintenance operations, the machine must be cleaned to prevent any risk of accidental injury.

8.1.5. Welding

**NOTE**

According to the type of machine: before carrying out any work on the electrical circuit or before any welding operations, disconnect the wiring harnesses coming from the tractor. Disconnect the battery and alternator cables.

**WARNING**

Do not weld or use blow torches near pressurised fluids or inflammable products.

**ATTENTION**

Wear suitable personal protective equipment for welding work.

8.1.6. Protection devices

**WARNING**

Inspect the machine for any external damage and check the condition of the protective devices. The protection devices must be clean, legible and in good condition. If this is not the case, contact the AGRISEM INTERNATIONAL after-sales service department in order to replace them.

8.1.7. Tyres

**DANGER**

The tyres contain pressurised air. Never exceed the recommended inflation pressures.

**WARNING**

Regularly check the condition of the tyres over their entire surface.

**WARNING**

Remove all traces of oil from the tyres.

**WARNING**

The permissible load capacities of the tyres mounted on the tractor must not be exceeded.

8.1.8. Hydraulic circuit



WARNING
The machine is driven by pressurised hydraulic fluid. Working on a pressurised circuit may result in the risk of injury due to contamination. All operations must be carried out by professionals trained to handle hydraulic technical equipment. In the event of an injury caused by hydraulic oil, consult a doctor immediately. Risk of infection.



DANGER
Do not, under any circumstances, attempt to plug a leak in the hydraulic hoses with your hand or fingers. Use a suitable leak-detection tool.



WARNING
Depressurise the hydraulic circuit completely before working on it.
When connecting hydraulic hoses to the tractor's hydraulic circuit, ensure that the hydraulic circuits on the tractor and machine are not under pressure.



NOTE
Using lubricants and mineral products in line with the recommendations does not represent any risk to health. However, avoid prolonged contact with the skin or avoid inhaling the vapours.



WARNING
Protect against direct contact with oils by wearing gloves or protective cream. Avoid the skin coming into contact with clothes that are soaked in oil. Change clothes and rags when they are dirty. Carefully wash all traces of oil off your skin with soap and hot water. Do not clean your skin with petrol, diesel or other detergent products.
Oil is toxic. In the event of ingestion of oil, consult a doctor immediately. If oil splashes in your eyes, rinse with clean water and consult a doctor if necessary.



WARNING
Keep lubricants out of reach of children.
Never store lubricants in open containers or containers that are not labelled.



WARNING
Soak up spilt oil with a binder product and dispose of it.
Never extinguish fires caused by oil with water. Only use authorised, appropriate extinguishing products and wear breathing apparatus.



WARNING
Check that the hydraulic hoses are correctly connected.
Regularly check that the hydraulic hoses and connections are in good condition and are clean.

NOTE

The service life of hydraulic hoses must not exceed six years, including a possible storage period of up to two years. Even when stored appropriately and used within the permissible limits, hoses and fittings undergo normal ageing, which limits their storage and service life.



Have the hydraulic hoses checked by a specialist at least once a year to ensure that they are in good condition.

Replace damaged or worn hydraulic hoses.

Only use genuine AGRISEM INTERNATIONAL hydraulic hoses.

Nevertheless, the duration of use may be determined in accordance with empirical values, particularly taking into account potential risks. Other reference values can be taken into consideration for thermoplastic hoses and pipes.



Waste must not be disposed of in a conventional dustbin but collected through special channels in accordance with the applicable standards.

Dispose of used oil in line with current regulations. If this poses a problem, contact your oil supplier.

Dispose of shoes impregnated with oil as hazardous waste.



The product or its packaging is technically recyclable, not that it is or will be recycled.

The products will only be recycled under two conditions:

- The sorting and recycling channel exists in your region,
- The products have been correctly sorted.

Waste polluted by oil and used oil must be disposed of in line with current regulations.

Take care not to contaminate the soil or water with hydraulic oil. Follow the instructions on the container of the consumable and comply with the regulations in force.

8.1.9. Electric

**WARNING**

Depending on the type of machine: before carrying out any work on the electrical circuit or before welding, disconnect the electrical cables from the tractor.

**WARNING**

Before carrying out any work on the electrical system, disconnect the battery's negative terminal.

**WARNING**

Ensure the battery terminals are correctly connected, starting with the positive terminal, then the negative terminal. When disconnecting the terminals, start with the negative terminal, then disconnect the positive terminal.

You must always place the cover provided on the positive terminal of the battery. Beware of the risk of explosion when earthing.



DANGER

Risk of explosion: avoid sparks and naked flames near the battery.

8.2. Maintenance consumables

Consumable	Characteristics	Volume
Grease	lithium grease enhanced with molybdenum disulphide / Grade NLG12	-



NOTE

Only use the specified consumables. No liability shall be accepted by AGRISEM INTERNATIONAL if other types of consumables are used.

8.3. Maintenance schedule



NOTE

The servicing frequency is determined by many factors. Various factors influence the required maintenance interval, including operating conditions, atmospheric influences, driving and working speeds, exposure to dust and soil type. The quality of lubricants and maintenance products also plays a role.



NOTE

The servicing frequencies indicated can therefore only serve as a guide. If you deviate from the normal conditions of use, you must adapt the frequency at which this maintenance and servicing is carried out to suit the conditions.


Maintenance operations to be carried out before each utilisation
Check the hydraulic lines.
Check the lighting and signalling system.
Check the tyre pressure.
Maintenance operations to be carried out before each folding
Clean the folding areas.
Maintenance operations to be carried out after the first 10 hours of operation
Check the tightness of the nuts and bolts.
Check the hydraulic system (tightness and sealing).
Check the tightness of the wheel nuts.
Perform a comprehensive diagnosis of the machine to ensure that there are no problematic elements.
Clean the soil off the machine.
Maintenance operations to be carried out 50 hours or every 6 months
Check the tightness of the nuts and screws.
Check the hydraulic system (tightness and sealing).
Check the tightness of the wheel nuts.
Perform a comprehensive diagnosis of the machine to ensure that there are no problematic elements

Maintenance operations to be carried out 50 hours or every 6 months
Lubricate the joints with grease guns.
Clean the soil off the machine.
Adjust the braking system.
Maintenance operations after each pressure wash
Lubricate the machine.
Maintenance operations every 100 hours or every 12 months
Wear rings
Maintenance operations every 6 years
Replace the hydraulic hoses.

8.4. Maintenance operations

8.4.1. Check the hydraulic lines

Inspection criteria for hydraulic hoses




ATTENTION

For your own safety, comply with the following inspection criteria.

If one of the following faults is observed, immediately change the hydraulic hose:

- Deterioration of the outer layer down to the lining (e.g. friction points, cuts, splits).
- Embrittlement of the outer layer (formation of cracks on the outer layer).
- Deformations that do not correspond to the natural shape of the hose or pipe, whether in a pressureless or pressurised state, or under bending (e.g. separation of layers, blistering, crushing points, kinks).
- Areas that are leaking.
- Damaging or distortion of the end fitting (affecting its leak tightness). Slight superficial damage does not warrant replacement.
- Hose becoming detached from the end fitting.
- Corroded end fitting leading to reduced solidity and function.
- Non compliance with mounting specifications.
- Exceeding of the 6-year usage period. The following information is vital: the date of manufacture of the hydraulic hose marked on the end fitting, to which you must add 6 years. If the date of manufacture indicated on the connector is "2004" the usage period will end in February 2010.

Installation and removal of hydraulic hoses




WARNING

When fitting and removing hydraulic hoses, the following regulations must be strictly adhered with.

- Only use genuine AGRISEM INTERNATIONAL hydraulic hoses.
- Always ensure cleanliness.

- Always lay hydraulic pipes in such a way that, under all operating conditions:
 - They are not subject to tension other than that caused by their own weight.
 - There is no crushing over short lengths.
 - There are no external mechanical stresses on the hydraulic hoses.
 - Prevent hoses from rubbing against machine components or each other by positioning and securing them correctly. Protect hydraulic hoses with protective sheaths if necessary. Cover parts with sharp edges.
 - The permitted bending radii must not be exceeded.
- If hydraulic hoses are connected to moving parts, measure the length of the hose to ensure that the total range of movement is no less than the smallest authorised bending radius and/or that the hose is not subject to tension.
- Attach hydraulic hoses at the locations provided for this purpose. In this regard, avoid supports that may hinder natural movement and changes in the length of the hose.



WARNING

Hydraulic hoses must not be painted.

Marking of hydraulic hoses

Hoses must be replaced every six years from their date of manufacture.

The hydraulic hoses have markings indicating their year of manufacture.

Marking	Designation
1	Month of manufacture
2	Year of manufacture
3	Batch N°

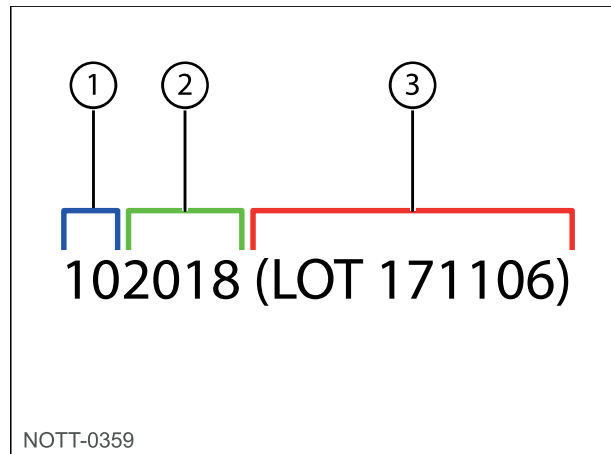



Fig. 54

8.4.2. Check the lighting and signalling system

Always check that your lighting system is in full working order and clean before driving on the road.



WARNING

Never set out on the public highway if one of these elements is not in good condition.

Replacing bulbs:

- 1 - Disconnect the lighting board.
- 2 - Unscrew the protective glass.
- 3 - Remove the faulty bulb.
- 4 - Fit the replacement bulb (ensure that the voltage and amperage are correct).
- 5 - Refit and tighten the protective glass.

For machines fitted with LED lighting, replace the entire lighting unit with an original unit.

8.4.3. Clean the folding areas

The folding areas must be cleaned each time before folding. The accumulation of earth, of stones or other obstacles may result in damage to the machine

Failure to observe this requirement will void the warranty.

Fixed attached machines

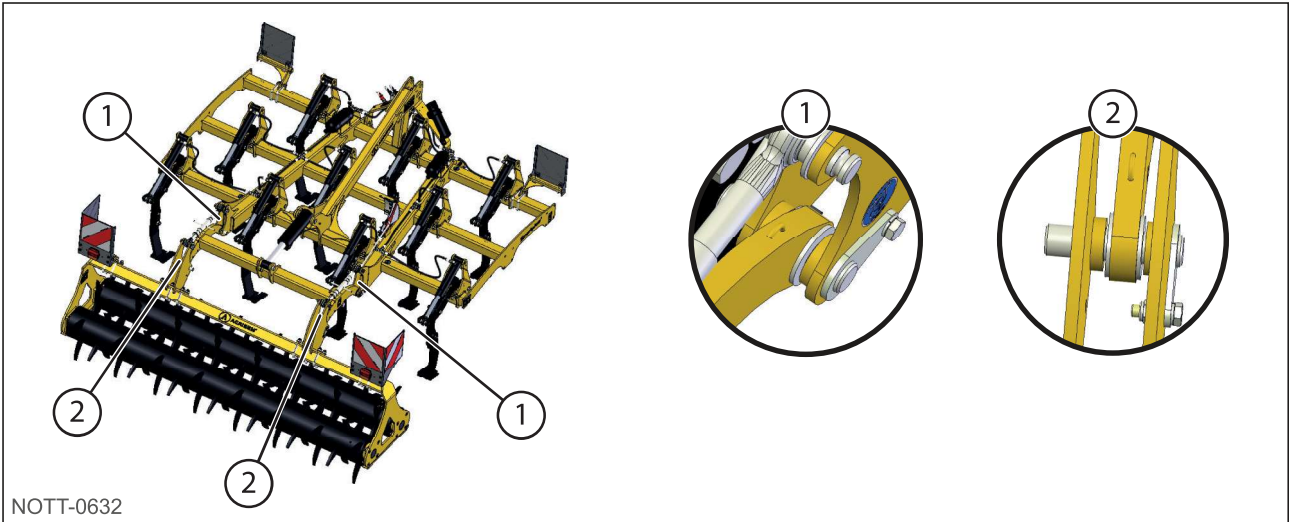


Fig. 55

Foldable attachable machines

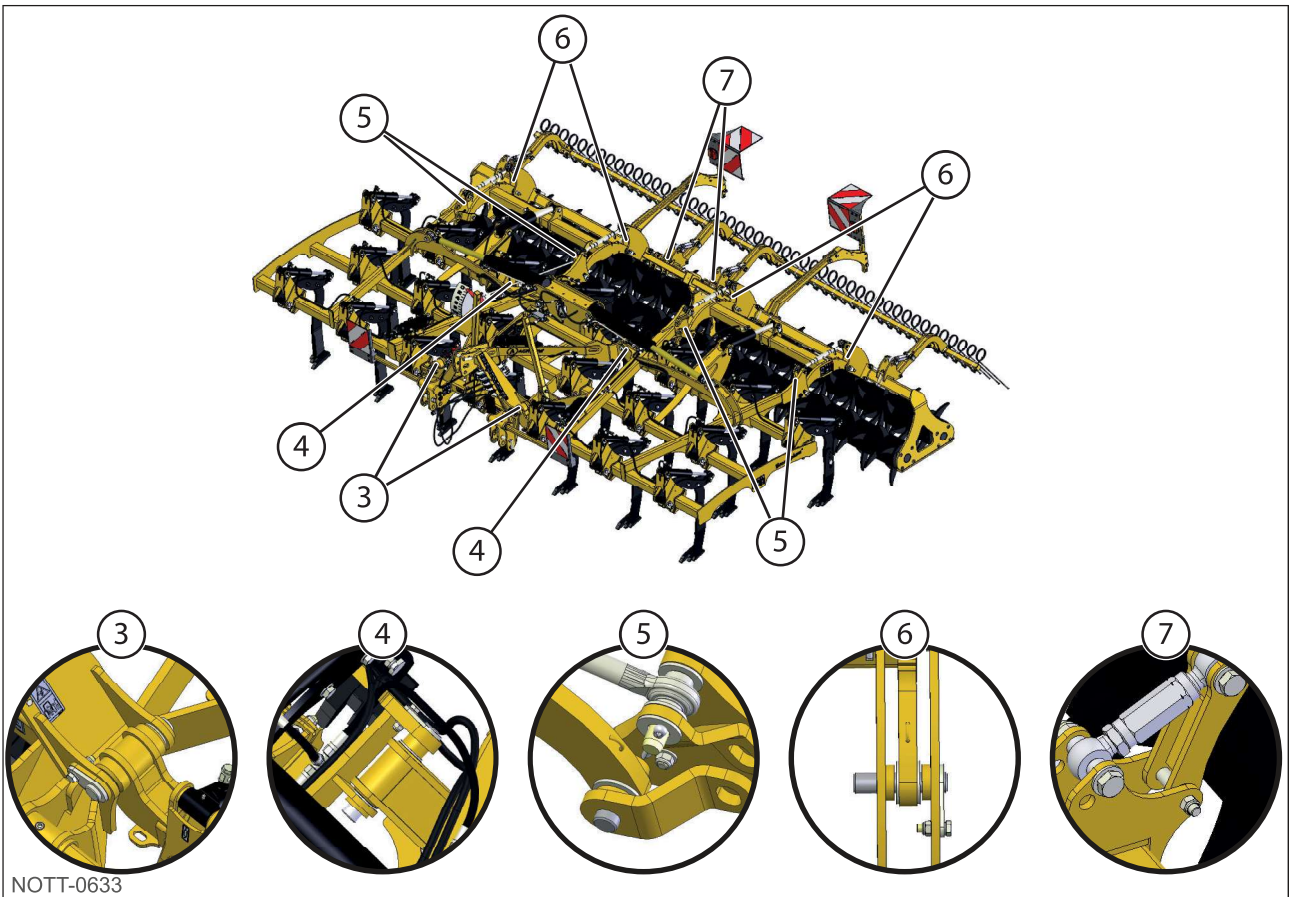


Fig. 56

Trailed machine

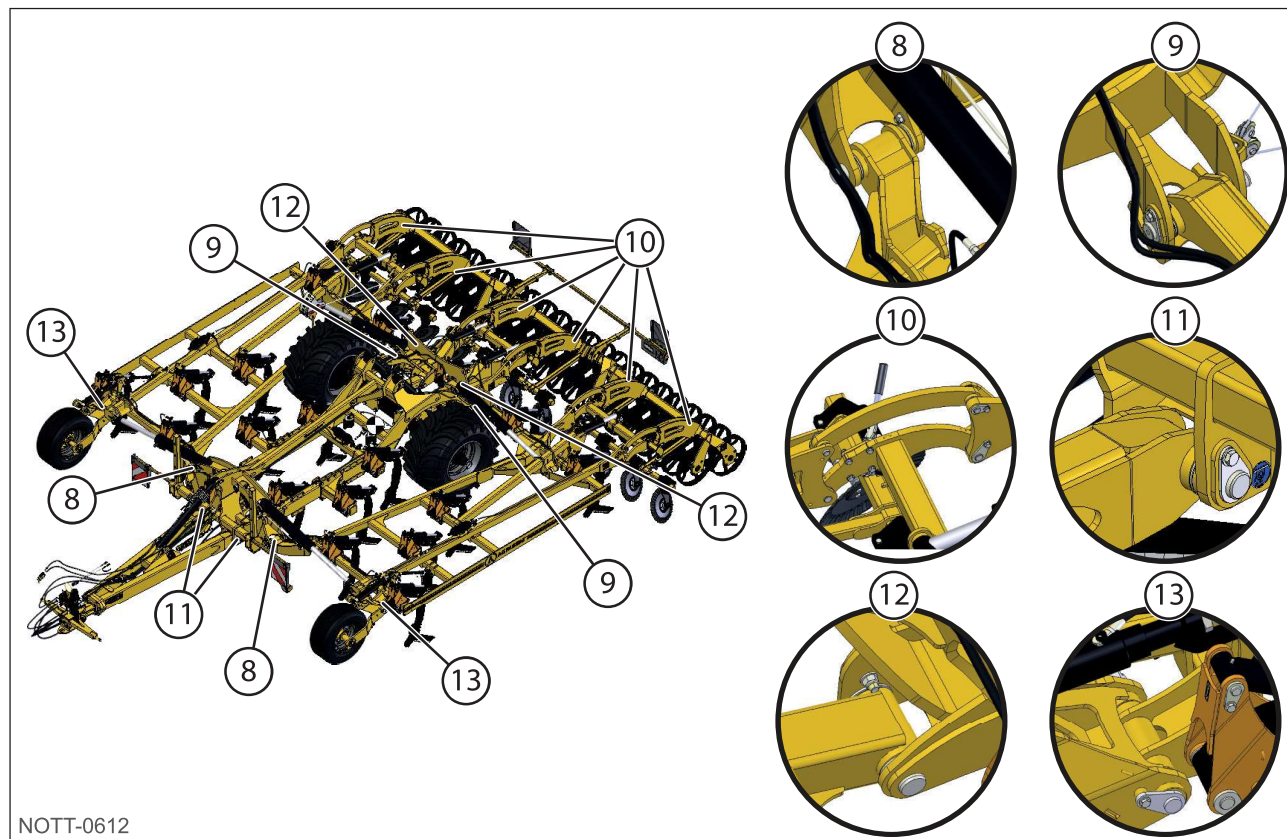


Fig. 57

8.4.4. Check the tightness of the nuts and bolts

Refer to the table.

ISO 272			Steel fastener quality class ISO898-1													
d mm	ISO mm	mm	5.6		5.8		6.8		8.8		9.8		10.9		12.9	
			Cs	Fo	Cs	Fo	Cs	Fo	Cs	Fo	Cs	Fo	Cs	Fo	Cs	Fo
1.6**	0.35	3.2	0.086	210	0.120	294	0.137	335	0.183	447	0.206	503	0.269	657	0.315	769
2**	0.40	4	0.183	349	0.256	488	0.293	558	0.390	744	0.439	837	0.573	1,093	0.671	1,279
2.5**	0.45	5	0.383	582	0.536	815	0.612	931	0.816	1,242	0.918	1,397	1.20	1,824	1.40	2,134
3	0.50	5.5	0.66	874	0.92	1,224	1.06	1,399	1.41	1,866	1.60	2,099	2.07	2,740	2.43	3,207
4	0.70	7	1.51	1,514	2.11	2,120	2.42	2,422	3.22	3,230	3.66	3,635	4.74	4,744	5.5	5,552
5	0.80	8	3.00	2,481	4.20	3,473	4.81	3,970	6.4	5,293	7.27	5,958	9.4	7,774	11.0	9,098
6	1	10	5.2	3,498	7.2	4,893	8.3	5,598	11.1	7,464	12.57	8,392	16.3	10,962	19.1	12,828
8	1.25	13	12.6	6,426	17.7	8,997	20	10,283	27	13,710	30.62	15,423	39	20,137	46	23,565
10	1.50	16	25	10,238	35	14,334	40	16,382	53	21,843	61	24,575	78	32,082	92	37,542
12	1.75	18	43	14,934	60	20,908	69	23,895	92	31,860	105	35,849	136	46,795	159	54,760
14	2	21	69	20,514	97	28,719	111	32,822	148	43,763	167	49,142	218	64,277	255	75,218
16	2	24	108	28,280	152	39,592	174	45,248	232	60,331	262	67,944	341	88,611	399	103,694
18	2.5	27	149	34,324	209	48,054	239	54,919	330	75,421			469	107,549	549	125,856
20	2.5	30	213	44,188	298	61,863	341	70,700	471	97,253			667	138,456	781	162,023
22	2.5	34	293	55,298	411	77,418	470	88,478	648	121,574			920	173,269	1,077	202,762
24	3	36	366	63,630	513	89,083	586	101,809	809	140,084			1,148	199,376	1,343	233,313
27	3	41	544	83,910	762	117,474	871	134,257	1,201	184,517			1,706	262,920	1,997	307,672
30	3.5	46	737	101,914	1,032	142,679	1,180	163,062	1,628	224,292			2,311	319,331	2,704	373,685
33	3.5	50	1,004	127,210	1,406	178,094	1,607	203,536	2,216	279,953			3,148	398,593	3,684	466,438
36	4	55	1,288	149,174	1,803	208,844	2,060	238,679	2,840	328,236			4,036	467,413	4,723	546,973
39	4	60	1,677	179,487	2,348	251,282	2,683	287,179	3,697	394,919			5,255	562,393	6,150	658,119
42**	4.5	65	2,070	205,323	2,898	287,452	3,312	328,516	4,554	451,710			6,486	643,344	7,590	752,849
45**	4.5	70	2,596	240,641	3,635	336,897	4,154	385,025	5,712	529,410			8,136	754,008	9,520	882,350
48**	5	75	3,130	270,321	4,383	378,449	5,009	432,514	6,887	594,706			9,809	847,006	11,478	991,177
52**	5	80	4,041	324,763	5,657	454,668	6,465	519,620	8,889	714,478			12,661	1,017,590	14,816	1,190,797
56**	5.5	85	5,034	374,739	7,048	524,635	8,054	599,582	11,075	824,426			15,773	1,174,182	18,458	1,374,043
60**	5.5	90	6,266	438,337	8,772	613,672	10,026	701,340	13,785	964,342			19,634	1,373,457	22,976	1,607,237
64**	6	95	7,533	495,676	10,546	693,947	12,052	793,082	16,572	1,090,488			23,603	1,553,119	27,620	1,817,480

*Class 8-8a up to d=16 mm, 8-8b from d=118 mm

NOTT-0229

Fig. 58

8.4.5. Check the hydraulic system (tightness and sealing)

Check that all of the hydraulic circuit's components are sealed. If necessary, tighten screwed connectors.

8.4.6. Check the tightness of the wheel nuts

Check the tightness of the wheels each time before and after use.

Refer to the instruction of the axle supplier attached.

8.4.7. Perform a complete diagnosis of the machine

Perform all operations described in the start-up section.

Carry out all maintenance operations prior to each use.

8.4.8. Clean the soil off the machine

Clean the soil on the machine with a high pressure cleaner.



ATTENTION

If using a high-pressure washer or steam cleaner, it is essential to comply with the following points:

- Do not clean the electrical and hydraulic components.
- Never direct the high-pressure washer or steam cleaner nozzle directly at the lubrication points or bearings.
- Systematically keep the nozzle a reasonable distance from the machine.

Comply with the rules for using high-pressure washers. The machine must be lubricated regularly and after each pressure wash.

8.4.9. Lubricate the joints with grease guns

The lubrication points are identified by this pictogram:

The machine must be lubricated regularly and after each pressure wash.



Fig. 59

Cracking blade or ploughshare cylinders

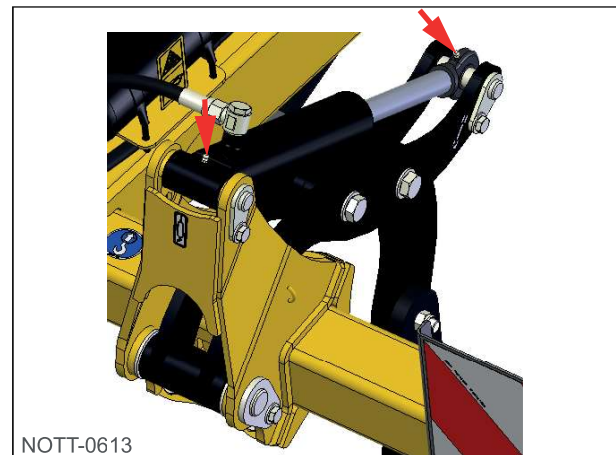


Fig. 60

Depth control cylinder(s)

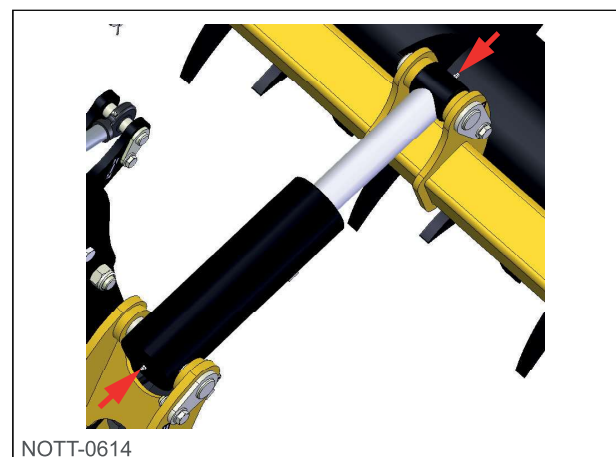


Fig. 61

Folding speed

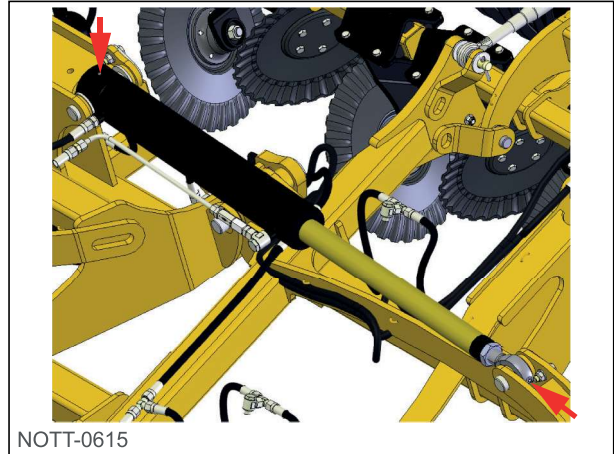


Fig. 62

Hydraulic drawbar cylinder

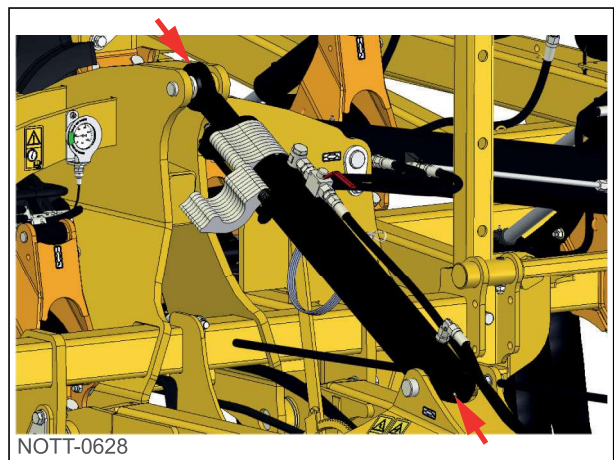


Fig. 63

Cylinders for controlling wheel depth

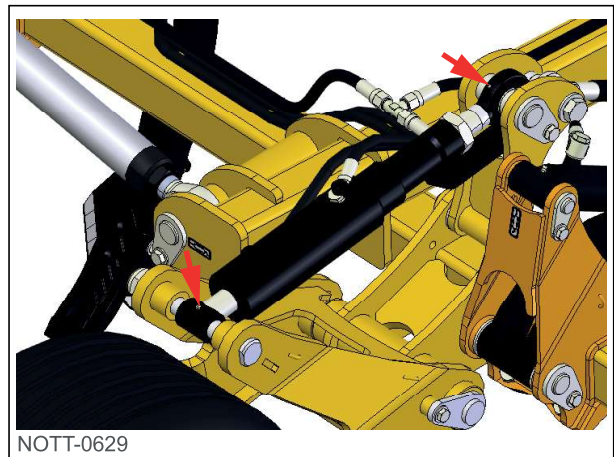


Fig. 64

Cylinders for transport wheels

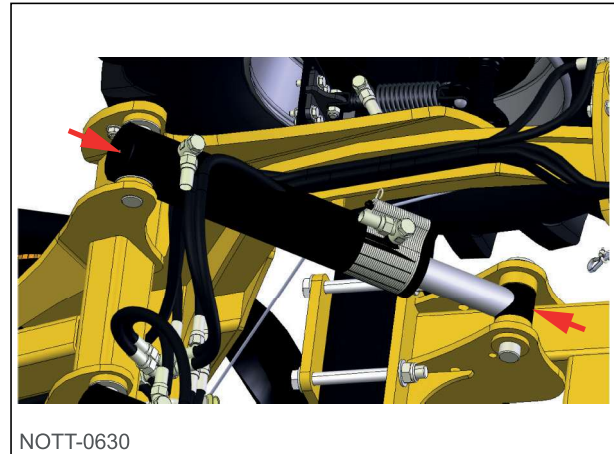


Fig. 65



ATTENTION

The machine must be lubricated regularly and after each pressure wash.
 This keeps the machine in good working order and reduces the costs of repairs and downtime.

8.4.10. Replace the hydraulic hoses

After replacing all the machine's hoses, check that all of the components of the hydraulic system are sealed, see "8.4.5. Check the hydraulic system (tightness and sealing)", page 85.

8.4.11. Wear rings

Wear rings must be replaced when the wearing strip is completely worn, when wear causes jamming or hard spots. The wearing strip is approximately 1.5 mm thick.

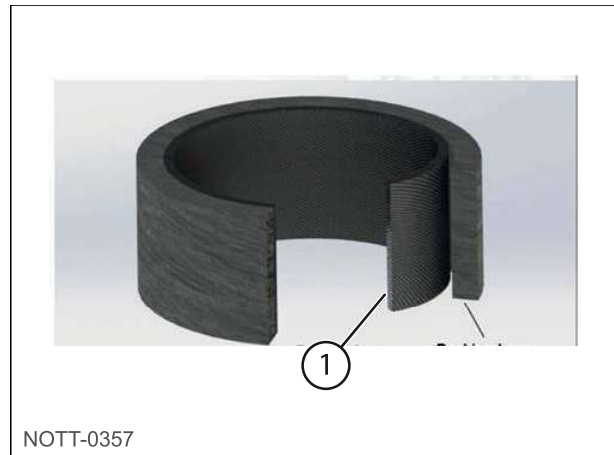


Fig. 66

Depending on the assembly and options, wear rings are located at the main pivot points of the machine.

8.4.12. Tyre pressures

System	Average pressure	Maximum pressure
Main axle	2.5 bar	4.1 bar

8.4.13. Braking system adjustment

- 1 - Lift the axle, the tyre must no longer be in contact with the ground
- 2 - Release the parking brake system.
- 3 - Turn the adjusting nut (1) clockwise to bring the brakes into contact and until the wheel no longer rotates.
- 4 - Turn the adjusting nut (1) anti-clockwise, stop when the wheel rotates freely.
- 5 - Check the brake by applying the handbrake a few notches, and check that the wheels no longer turn.
- 6 - Release the handbrake.
- 7 - Check that the braking cylinder stroke is identical when the axle is in the working position and in the transport position.

If the cylinder stroke is identical, adjustment is completed.

If the stroke varies, restart the adjustment from step 3.

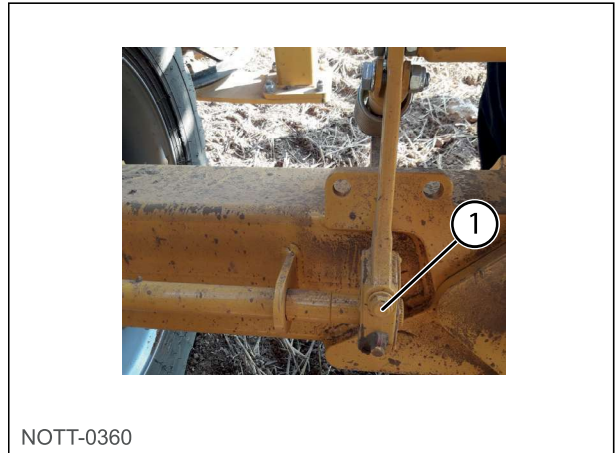


Fig. 67

9. Faults, causes and remedies

Problem	Point to be checked	Solution
The Maximulch is not working at the same depth on the right and the left.	Tractor lift links	The tractor's lift links must be set to the same length.
The machine does not sink into the ground.	Wear on the ploughshares	Replace the ploughshares.
A build-up appears at the tines.	Working depth	Decrease the machine's working depth.
	Wear on the ploughshares	Replace the ploughshares.
Irregular working depth.	Adjustment of the extensions	Adjust the extensions.

10. Characteristics

10.1. Smartplow/Smartplow Mix/Biomulch HD - fixed ranges

		3 m	3.50 m	4 m
Working width (m)		3	3.5	4
Transport width - without accessories (m)		3	3.5	4
Transport height (m)		1.414	1.414	1.414
Length without rollers or discs (m)		2.273	2.273	2.273
Weight according to configuration (in kg)	Blades 20x590 - R. cage Ø450	1635	1820	1945
	Blades 20x590 - R. double U-Semi Ø580	1875	2110	2235
	AGM tines - Discs - R. cage Ø450	1880	2115	2240
	AGM tines - Discs - R. T-Sem Ø620	2115	2380	2500
Type of hitch		Cat. 3		
Chassis		Reinforced chassis with 3 rows, 100 x 100 mm		
Clearance under chassis		750 mm		
Safety		Non-stop hydraulic safety device with progressive retraction (30 cm)		
Adjusting the working depth		Hydraulic		
Recommended min-max power (in hp)		110 - 150	125 - 170	150 - 210
Number of hydraulic spool valves		1 double acting + 1 single acting		
Signalisation		Reflective plates		
Smartplow - cracking blade				
No. of tines		3 rows of cracking blades		
Working depth		15 to 25 cm		
Type of blade		20 x 590 offset fine-tip blades - Tungsten carbide tips at the front of the blade and ploughshare		
Number of blades		10	12	14
Options		<ul style="list-style-type: none"> - Roller cage Ø526 - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Double roller U-Sem Ø580 - Roller steel pack Ø600 - Covering harrow behind the roller - Lighting kit and reflective plates 		
Smartplow Mix - Smoothing with tines				
No. of tines		3 rows of stubble cultivation tines		
Working depth		5 to 25 cm		
Type of tines		80 mm stubble cultivator with tines + mixing blades - 365 mm fins		
Type of discs		Ø460 mm levelling mulching discs with elastomer safety feature		
No. of tines		10	12	14

	3 m	3.50 m	4 m
Options	<ul style="list-style-type: none"> - Roller cage Ø526 - Carbide tip ploughshares - Carbide tip fins - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Roller steel pack Ø600 - Fertiliser dump kit - Covering harrow behind the roller - Additional set of cracking blades + supports - Lighting kit and reflective plates 		
Biomulch HD - Mechanical weeding			
No. of tines	3 rows of scalping shares		-
Working depth	5 to 15 cm		-
Type of tines	320 mm crowsfoot scalping shares on a 150x14 mm spring tine		-
No. of tines	13	15	-
Options	<ul style="list-style-type: none"> - Roller T,V or U-sem - Cover harrow behind the roller - Lighting kit 		-

10.2. Smartplow Compact/Smartplow Mix Compact - fixed mounted

		3 m	3.50 m
Working width (m)		3	3.5
Transport width - without accessories (m)		3	3.5
Transport height (m)		1.414	1.414
Length without rollers or discs (m)		1660	1910
Weight according to configuration (in kg)	Blades 20x590 - R. cage Ø450	1410	1620
	Blades 20x590 - R. double U-Semi Ø580	1650	1910
	AGM tines - Discs - R. cage Ø450	1655	1915
	AGM tines - Discs - R. T-Sem Ø620	1890	2180
Type of hitch		Cat. 3	
Chassis		Reinforced chassis with 2 rows, 100 x 100 mm	
Clearance under chassis		750 mm	
Safety		Non-stop hydraulic safety device with progressive retraction (30 cm)	
Adjusting the working depth		Hydraulic	
Recommended min-max power (in hp)		90 - 130	100 - 150
Number of hydraulic spool valves		1 double acting + 1 single acting	
Signalisation		Reflective plates	
Smartplow Compact - Cracking blade			
No. of tines		2 rows of cracking blades	
Working depth		15 to 25 cm	
Type of blade		20 x 590 offset fine-tip blades - Tungsten carbide tips at the front of the blade and ploughshare	
Number of blades		7	9
Options		<ul style="list-style-type: none"> - Roller cage Ø526 - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Double roller U-Sem Ø580 - Roller steel pack Ø600 - Covering harrow behind the roller - Lighting kit and reflective plates 	
Smartplow Mix Compact - Stubble cultivation using tines			
No. of tines		2 rows of stubble cultivation tines	
Working depth		5 to 25 cm	
Type of tines		80 mm stubble cultivator with tines + mixing blades - 365 mm fins	
Type of discs		Ø460 mm levelling mulching discs with elastomer safety feature	
No. of tines		7	9

	3 m	3.50 m
Options	<ul style="list-style-type: none"> - Roller cage Ø526 - Carbide tip ploughshares - Carbide tip fins - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Roller steel pack Ø600 - Fertiliser dump kit - Covering harrow behind the roller - Additional set of cracking blades + supports - Lighting kit and reflective plates 	

10.3. Smartplow / Smartplow Mix / Biomulch HD - foldable mounted

		4 m	5 m	6 m
Working width (m)		4	5	6
Transport width - without accessories (m)		3	3	3
Transport height (m)		2.532	2.720	3.176
Length without rollers or discs (m)		2.273	2.273	2.273
Weight according to configuration (in kg)	Blades 20x590 - R. cage Ø450	2860	3200	3690
	Blades 20x590 - R. double U-Semi Ø580	3240	3770	4215
	AGM tines - Discs - R. cage Ø450	3220	3735	4165
	AGM tines - Discs - R. T-Sem Ø620	3510	4090	4650
Type of hitch		Cat. 3		
Chassis		Reinforced chassis with 3 rows, 100 x 100 mm		
Clearance under chassis		750 mm		
Safety		Non-stop hydraulic safety device with progressive retraction (30 cm)		
Adjusting the working depth		Hydraulic		
Recommended min-max power (in hp)		150 - 210	180 - 250	210 - 290
Number of hydraulic spool valves		2 double acting + 1 single acting		
Signalisation		Reflective plates + lighting		
Smartplow - cracking blade				
No. of tines		3 rows of cracking blades		
Working depth		15 to 25 cm		
Type of blade		20 x 590 offset fine-tip blades - Tungsten carbide tips at the front of the blade and ploughshare		
Number of blades		13	17	21
Options		<ul style="list-style-type: none"> - Roller cage Ø526 - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Double roller U-Sem Ø580 - Roller steel pack Ø600 - Covering harrow behind the roller 		
Smartplow Mix - Smoothing with tines				
No. of tines		3 rows of stubble cultivation tines		
Working depth		5 to 25 cm		
Type of tines		80 mm stubble cultivator with tines + mixing blades - 365 mm fins		
Type of discs		Ø460 mm levelling mulching discs with elastomer safety feature		
No. of tines		13	17	21

	4 m	5 m	6 m
Options	<ul style="list-style-type: none"> - Roller cage Ø526 - Carbide tip ploughshares - Carbide tip fins - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Roller steel pack Ø600 - Fertiliser dump kit - Covering harrow behind the roller - Additional set of cracking blades + supports 		
Biomulch HD - Mechanical weeding			
No. of tines	3 rows of scalping shares		
Working depth	5 to 15 cm		
Type of blade	320 mm crowsfoot scalping shares on a 150x14 mm spring tine		
Number of blades	17	21	25
Options	<ul style="list-style-type: none"> - Roller T,V or U-SEM - Steel pack 600 - Covering harrow - Lighting kit - CAT.2 axle kit 		

10.4. Smartplow Compact / Smartplow Mix Compact - foldable mounted

		4 m	5 m	6 m
Working width (m)		4	5	6
Transport width - without accessories (m)		3	3	3
Transport height (m)		2.532	2.720	3.176
Length without rollers or discs (m)		2.273	2.273	2.273
Weight according to configuration (in kg)	Blades 20x590 - R. cage Ø450	2995	3290	3725
	Blades 20x590 - R. double U-Semi Ø580	3235	3530	3965
	AGM tines - Discs - R. cage Ø450	3240	3535	3970
	AGM tines - Discs - R. T-Sem Ø620	3480	3775	4210
Type of hitch		Cat. 3		
Chassis		Reinforced chassis with 3 rows, 100 x 100 mm		
Clearance under chassis		750 mm		
Safety		Non-stop hydraulic safety device with progressive retraction (30 cm)		
Adjusting the working depth		Hydraulic		
Recommended min-max power (in hp)		140 - 180	160 - 220	180 - 250
Number of hydraulic spool valves		2 double acting + 1 single acting		
Signalisation		Reflective plates + lighting		
Smartplow - cracking blade				
No. of tines		2 rows of cracking blades		
Working depth		15 to 25 cm		
Type of blade		20 x 590 offset fine-tip blades - Tungsten carbide tips at the front of the blade and ploughshare		
Number of blades		11	13	15
Options		<ul style="list-style-type: none"> - Roller cage Ø526 - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Double roller U-Sem Ø580 - Roller steel pack Ø600 - Covering harrow behind the roller 		
Smartplow Mix - Smoothing with tines				
No. of tines		2 rows of stubble cultivation tines		
Working depth		5 to 25 cm		
Type of tines		80 mm stubble cultivator with tines + mixing blades - 365 mm fins		
Type of discs		Ø460 mm levelling mulching discs with elastomer safety feature		
No. of tines		11	13	15

	4 m	5 m	6 m
Options	<ul style="list-style-type: none"> - Roller cage Ø526 - Carbide tip ploughshares - Carbide tip fins - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Roller steel pack Ø600 - Fertiliser dump kit - Covering harrow behind the roller - Additional set of cracking blades + supports 		

10.5. Smartplow/Smartplow Mix/Biomulch HD - trailed

		6 m	7.5 m	8 m
Working width (m)		6	7.5	8
Transport width - without accessories (m)		3	3	3
Transport height (m)		3.66	4.00	4.23
Length without rollers or discs (m)		7.30	7.30	7.30
Weight according to configuration (in kg)	Blades 20x590 - R. cage Ø 526	7892	8785	9085
	Blades 20x590 - R. double U-Sem Ø 580	8220	9195	9482
	AGM tines - Discs - R. Double U-Sem Ø 580	8815	9800	10088
	AGM tines - Discs - R. T-Sem Ø 620	8338	9240	9526
	Vibrating tines - R. Double U-Sem Ø 580	7921	8570	8633
Type of hitch		Ring Ø 50, Ø 55 or Ø 73, ball K80, 2-point ball hitch		
Clearance under chassis		750 mm		
Safety		Non-stop hydraulic safety device with progressive retraction (30 cm)		
Adjusting the working depth		Hydraulic		
Recommended min-max power (in hp)		250 - 360	320 - 430	360 - 480
Number of hydraulic spool valves		4 + 1 for the safety nitrogen cylinder		
Signalisation		Reflective plates + lighting		
Smartplow - cracking blade				
No. of tines		4		
Working depth		15 to 25 cm		
Type of blade		20 x 590 offset fine-tip blades - Tungsten carbide tips at the front of the blade and ploughshare		
Number of blades		19	25	27
Options		<ul style="list-style-type: none"> - Roller cage Ø526 - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Double roller U-Sem Ø580 - Roller steel pack Ø600 - Covering harrow behind the roller 		
Smartplow Mix - Smoothing with tines				
No. of tines		4		
Working depth		5 to 25 cm		
Type of tines		80 mm stubble cultivator tine + mixing mouldboards + 365 mm fins		
Type of discs		Mulching levelling discs Ø460 mm		
No. of tines		13	17	21

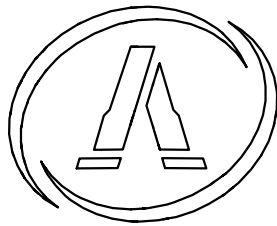
	6 m	7.5 m	8 m
Options	<ul style="list-style-type: none"> - Roller cage Ø526 - Carbide tip ploughshares - Carbide tip fins - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Roller steel pack Ø600 - Fertiliser dump kit - Covering harrow behind the roller - Additional set of cracking blades + supports 		
Stubble cultivation with MIX tines			
No. of tines	4		
Working depth	5 to 15 cm		
Type of tines	80 mm stubble cultivator tine + mixing mouldboards + fins		
Types of levellers	Levelling tines 60 x 10		
No. of tines	25	31	33
Options	<ul style="list-style-type: none"> - Roller cage Ø526 - Carbide tip ploughshares - Carbide tip fins - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Roller steel pack Ø600 - Fertiliser dump kit - Covering harrow behind the roller - Additional set of cracking blades + supports 		
Biomulch HD - Mechanical weeding			
No. of tines	5 rows of scalping shares		
Working depth	5 to 15 cm		
Type of blade	320 mm crowsfoot scalping shares on a 150x14 mm spring tine		
Number of blades	19	25	27
Options	<ul style="list-style-type: none"> - Blade levellers - Roller T-Sem Ø620 - Roller V-Sem Ø600 - Roller U-Sem Ø580 (scrapers) - Double U-sem - Steel pack 600 mm - Covering harrow - lighting kit - Ring hitch, HD ball joint, mechanical or hydraulic drawbar 		

11. Technical terms and abbreviations

Term	Meaning
A	ampere - unit of intensity of electrical current
bar	bar - unit of pressure
cm	centimetre - unit of length
cm ³	cubic centimetre - unit of volume
PPE	personal protective equipment
ha	hectare - unit of area
ISOBUS	standard data transfer system
kg/h	kilogram per hour - unit of mass flow
kg/ha	kilogram per hectare - unit of density
km/h	kilometre per hour - unit of speed
l	litre - unit of volume
l/min	litre per minute - unit of flow
LS	load sensing - hydraulic load detection system
m	metre - unit of length
mm	millimetre - unit of length
rpm	revolution per minute - unit of speed of rotation
V	volt - unit of voltage
W	watt - unit of power

12. Appendices

DECLARATION OF CONFORMITY WITH THE "MACHINERY" DIRECTIVE



AGRISEM®

535 rue P. Levesseur 44150 ANCENIS - (F) - Tel. 33(0)2.51.14.14.40 Fax. 33(0)2.40.96.32.36



MODEL

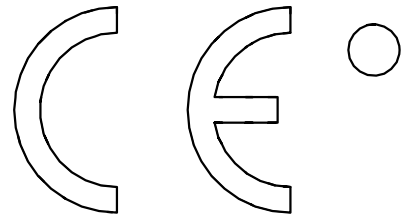
SERIAL N°

YEAR

WEIGHT

kg

EQUIPMENT MANUFACTURED UNDER LICENCE



The manufacturer referred to above certifies that the new equipment described below:

SMARTPLOW/SMARTPLOW MIX
SMARTPLOW COMPACT/SMARTPLOW MIX COMPACT
BIOMULCH HD

Complies with the provisions of the amended "Machinery" directive (Directive 2006/42/EC) and with the applicable national legislation.

Signed in Ancenis,

12 January 2021

Michal GUZOWSKI
CEO

**AGRISEM®****WARRANTY CERTIFICATE N°****TO BE RETURNED UPON RECEPTION
OF THE MACHINE**

Dealer	Purchaser
Name	Name
Address	Address
Tel.:	Tel.:
Code N°	

Type of machine	
Working width	
Machine serial number	
Date of delivery to customer and user	
Make, model and et power of tractor used	
Type of soil - % clay	
Utilised agricultural land belonging to the farm	

Dated:

Purchaser's signature and stamp

Dealer's signature and stamp

We acknowledge that we have read the whole of the user manual and the warranty terms to which we adhere.

AGRISEM INTERNATIONAL SA - 535 rue Pierre Levasseur - CS 60263 - 44158 ANCENIS - FRANCE
Tel.: 02.51.14.14.40 - Fax: 02.40.96.32.36

**WARRANTY CLAIM FORM N°**

Name of the dealer		Dealer stamp	
Claim managed by			
Date of purchase of the machine		AGRISEM invoice number	
Name and address of user customer			
Date of delivery to user <i>(attach a copy of the invoice and the dealer's delivery note)</i>		UAA of farm(s)	
Machine serial number		Working width	
Description of the equipment combination (make and type)			
Make of tractor used			
Model of tractor used		Power rating	
Detailed description and alleged cause of the incident			
Date of the malfunction		Current date	
Part reference	Quantity	Description	
Send parts requested	YES	Credit note requested	YES
Photographs attached	YES	Parts returned <i>Shipping costs payable by the sender</i>	YES
Result of expert assessment AGRISEM INTERNATIONAL			
Comments			
Date		Signature	
Technical manager			
agrisem@agrisem.com			