# **INTER-ROW ROTARY CULTIVATOR AGILE**







Code: Q00A00191/4

**Use and** maintenance manual

**Translation of original** instructions





Read these instructions carefully before using the first time.





# **Table of contents**

TABLE	E OF CONTENTS	3
LIST C	OF FIGURES	6
LIST C	OF TABLES	7
1	GENERAL INFORMATION	6
1.1	Receiving the machine	6
1.2	Documents that come with the machine	6
1.3	Purpose of the manual	
1.4	Updating the manual	
1.6	Guide to consultation	
1.7	Testing	
1.8	Spare parts	
1.9	Warranty conditions	
1.10	Personnel qualifications and tasks	
1.11 1.11.1	Manufacturer and machine identification data	
1.11.2		
1.11.3		
1.11.4	•	
1.12	Safety regulations and residual risks	
1.12.1	Instructions	
1.13	Skills and controls	
1.14	Installing electrical and electronic components	
1.15	Tractor stability and lifting capacity check	
2	GENERAL SAFETY INFORMATION	
2.1	Residual risks and personal protective equipment	
2.2	Ecology and pollution	
2.3	Safety signs	26
<b>3</b> 3.1	TECHNICAL SPECIFICATIONS	
3.1 3.2	Machine description  Technical specifications of the machine	
3.2.1	AGILE technical specifications	
3.3	Machine parts	
3.3.1	AGILE	
3.4	Wiring diagram ISOBUS	
3.5	Wiring diagram MASTER CAN	
3.6	Solenoid valve connection chart	
3.7	Transport and lifting	
4	HITCHING THE TRACTOR	
4.1	3 point hitch	
4.2	Hydraulic and cardan shaft connection	
4.3	Machine adjustments	
4.4	ELECTRONIC SYSTEM	
4.5	Structure	
4.5.1 4.6	Main page	
4.0	Manual mode	4 1



4.7	Parameters	42
4.7.1	Info	
4.7.2	Software upgrade and technical area	45
5	USE ON FIELD	46
5.1	Work width setting	
5.2	Work height setting	
5.3	Opening	
5.4	Row end closing	
5.5	Automatic centring on the row	
5.6	Manual control of the tools	
5.7	Side exclusions	
5. <i>1</i> 5.8	Ridging mode	
5.0 5.9	Adjustment of the speed of the wheel cylinders	
5.9 5.10	Speed rotor variation	
5.10 5.11	Ending the work	
-	· · · · · · · · · · · · · · · · · · ·	
5.12	Uncoupling	55
6	MAINTENANCE	
6.1	Cleaning	
6.2	Routine maintenance	
6.3	Avoid high pressure fluids	
6.3.1	Disposal of waste products	
6.4	Tightening of the bolts	58
6.5	Lubrication	59
6.6	Lubrication diagram	59
6.7	Safety data sheet for the lubricants	61
6.8	Storing lubricants	61
6.9	Hydraulic cylinders	61
6.10	Replacing the blades	62
6.11	Replacing the hydraulic hoses	62
6.12	Filter cartridge replacement	62
7	STRUCTURAL DEFORMATION	63
7.1	Repair	
7.2	Non-routine interventions	
8	STORING THE IMPLEMENT	
8.1	Demolition and disposal	
8.2	Function control register	64
9	TROUBLESHOOTING	66
List	of figures	
	The images in this manual are for illustrative surposes only and may not always accurately	roprocent the
	The images in this manual are for illustrative purposes only and may not always accurately appearance of the product or its application.	represent the
Fig. 1	Driving direction	Я
Fig. 2	Marking data	
Fig. 3	Overview of AGILE parts	
Fig. 4	Wiring diagram ISOBUS	
· ·y. +	Trining diagram 100000	



Fig. 5	Wiring diagram MASTER CAN	32
Fig. 6	Transport and lifting	34
Fig. 7	3 point hitch	
Fig. 8	Hydraulic and cardan shaft connection	
-		
_	Machine adjustments	
-	Tools adjustments	
•	closed machine	
_	Open machine	
•	Half machine	
	Manual mode	
•	Parameters	
_	Info	
	Info Software update and technical area	
-	·	
-	Work width setting Work height setting	
-	Automatic centring on the row	
	Manual control of the tools	
-	Side exclusions	
•	Side exclusions	
_	Ridging mode	
_	Hydraulic locking	
-	Speed rotor variation	
•	Lubrication scheme	
Fig. 30	Replacing the blades	62
Fig. 31	Filter cartridge	62
List	of tables	
Tab. 1	Tractor stability and lifting capacity check	23
Tab. 2	Personal protective equipment	
Tab. 3	Safety signs applied to the machine	
	AGILE complete	
Tab. 4	•	
Tab. 5	AGILE complete	
Tab. 6	·	
Tab. 7	Wiring diagram ISOBUS parts description	31
Tab. 8	Wiring diagram MASTER CAN parts description	32
Tab. 9	Solenoid valve connection chart	33
Tab. 10	) Manual mode	42
	Description of user parameter menu	
	2 Manual control of the tools	
	3 Change of machine speed	
	Fightening of the bolts	
	5 Lubricants Chart	
	S Lubricants chart - OIL	60
Tab. 17	S Lubricants chart - OIL	60 61
Tab. 17	S Lubricants chart - OIL	60 61
Tab. 17 Tab. 18	S Lubricants chart - OIL	60 61



## 1 GENERAL INFORMATION

Thank you for choosing Alpego, you have purchased a top quality product that is guaranteed by a decade of experience.

Before leaving the factory, each machine is accurately inspected to guarantee that it is in perfect condition. Should you however, find any faults in the material, kindly contact your retailer immediately. Please do not hesitate to contact us should you need further information or assistance, our aim is to constantly improve the product, keeping it at top level.

## 1.1 Receiving the machine

- Il materiale spedito viene accuratamente controllato prima della consegna allo spedizioniere.
- Al ricevimento della macchina accertarsi che la stessa non abbia subito danni durante il trasporto o che l'eventuale imballo non sia stato manomesso.
- Nel caso si riscontrassero danni o parti mancanti avvisare il vettore ed il costruttore entro 8 giorni producendo documentazione fotografica. Si raccomanda di verificare che la fornitura corrisponda alle specifiche dell'ordine.

## 1.2 Documents that come with the machine

All references or indications in this manual relating to:

- · CE marking;
- · EC declaration of conformity;
- · declarations of incorporation of partly-completed machinery;
- directives and regulations issued by the European Parliament and the Council and related transposition Laws in Italy;
- harmonised standards whose references have been published in the Official Journal of the European Union; refer exclusively to machines intended for the European community market.
   For all machines not intended for the European community, these references and indications have no meaning and value.

The machine comes complete with:

- · Machine instruction manual.
- EC Declaration of conformity.
- · Spare parts catalogue.



## 1.3 Purpose of the manual



This manual is an integral part of the machine and provides the personnel in charge of operation and maintenance with information for the correct use of the machine. It must accompany the machine until its complete demolition.

This manual must be carefully read and understood before transporting, installing, using and servicing the machine.

The manual must be carefully stored for the entire life of the machine and transferred to any other subsequent owner user.

It must be placed near the machine, available for consultation by users.

By users we mean operators and maintenance personnel.

Make sure that all users have fully understood the operating rules and the meaning of any symbols on the machine.

The manual must be consulted with care. Do not remove pages, replace or delete information or modify its content.

It must be stored in a place protected against heat, humidity and corrosive agents.

Possible accidents can be avoided by following the technical instructions indicated in the manual. In any case, always comply with the national safety regulations.

This manual must always be delivered together with the machine in the event of transfer or sale. Should it be damaged or lost, request a copy from the machine manufacturer or from the previous owner. The manual is an integral part of the machine.

We also recommend contacting the Manufacturer for any information, spare parts or accessories.



It is forbidden to carry out operations for which the methods have not been understood.

## 1.4 Updating the manual

The information, descriptions and illustrations contained in this manual reflect the state of the art at the time the machine was placed on the market. The Manufacturer reserves the right to make any changes to the machines at any time for technical or commercial reasons. These changes do not oblige the Manufacturer to intervene on the machines marketed up until that moment or to consider this publication inadequate. Any integrations that the Manufacturer deems appropriate to provide in the future must be kept together with the manual and considered an integral part thereof.

## 1.5 Recipients

The machine is intended for professional use, therefore, it must be entrusted to qualified operators who meet the following requirements:

- · Be of legal age.
- Be physically and mentally fit to perform work of a particular technical difficulty.
- Be adequately trained in relation to the use and maintenance of the machine.
- Be able to understand and interpret the Instruction Manual and safety requirements.
- Know the emergency procedures and their implementation.
- · Have understood the operating procedures defined by the machine Manufacturer



### 1.6 Guide to consultation



### THE FOLLOWING SYMBOL INDICATES AN IMPORTANT NOTE OR RECOMMENDATION



8

### THE FOLLOWING SYMBOL INDICATES DANGER

The illustrations shown in this manual are to be considered informative. Therefore, they may have minor differences which are irrelevant for the instructions given in the manual itself.

All the safety regulations indicated are important and as such must be strictly observed.

- The unauthorised tampering/replacement of one or more parts or units of the machine, the use
  of accessories, tools and consumables other than those recommended by the manufacturer may
  represent a risk of injury and release the manufacturer from civil and criminal liability.
- Any arbitrary change made to the machine, failure to comply with scheduled maintenance and any other misuse, relieve the manufacturer from all civil and criminal liability for any resulting damage.
- Any changes must be requested directly from ALPEGO, specifying all machine data and the
  reasons; in case of approval, the changes must only be carried out by personnel authorised by
  ALPEGO and consistent with its specific instructions.
- The machine must only be operated by personnel who are aware of its particular features and familiar with the safety procedures.
- For each operation to be performed on the machine, please refer to the qualification levels
  described in the manual to identify the personnel qualified to carry it out.

The warranty only covers design, assembly and painting defects and exclusively in the case of use of the product in accordance with the instructions provided in this instruction manual; The Seller is not liable for components supplied by third parties and installed on its machines. For what is not expressly foreseen therein, please refer to the general sales conditions.

ALPEGO usually considers the machine seen from behind with respect to the driving direction; this is in order to identify the details and the correct assembly positions that must be respected for the pieces with the indication "right or left" in the description. (E.g.: right or left cardan, right or left blade, etc.).

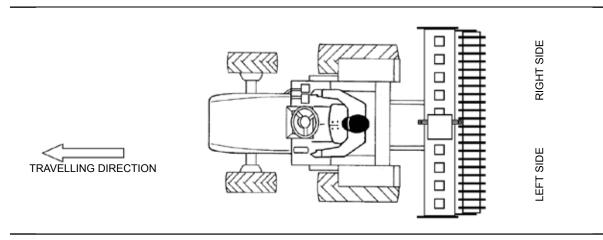


Fig. 1 Driving direction

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



## 1.7 Testing

### Given that:

- The machine was built under the close surveillance of qualified personnel; tried and tested with the aim of eliminating any possible "negligence" during construction.
- Testing was carried out by simulating normal operating cycles and situations of the machine.
- The machine was designed and created taking into account the safety regulations in force.

### **DURING TESTING NOTHING WAS FOUND TO BE DEFECTIVE.**

## 1.8 Spare parts

Codice: Q00A00191 - Rev. 04\_12/2022

We remind you of the importance of using Alpego original spare parts and lubricants to ensure top quality.

The use of Alpego spare parts and lubricants is mandatory to benefit from the warranty during the established period. The use of non-original spare parts, and the faulty, incorrect assembly exonerate the manufacturer from all liability.



## 1.9 Warranty conditions

- The ALPEGO S.p.a. agricultural machines are covered by warranty for twelve months starting from the day of delivery to the end customer: the date indicated on the transport document activates the warranty period.
- 2. The warranty covers any material or construction defect and is exclusively for the intended use of the supply product. It is, therefore, up to the buyer to request and clarify whether the supplied product meets the purposes that the sale must satisfy. If the inconvenience, subject of the complaint, does not compromise the behaviour, function or safety of the machinery, ALPEGO S.p.a. reserves the right to identify the most suitable solution, without, in any case, being obliged to completely replace the machinery or parts thereof. The warranty exclusively ensures the replacement and relative repositioning (i.e. assembly) of the material/component deemed nonconforming and does not include the acknowledgement of any further connected burden (which, however, the behaviour of the good family man must foresee and avoid, in the sense in which this term is defined by the Italian legislative system).

# AND, THEREFORE, THE WARRANTY IMMEDIATELY BECOMES NULL AND VOID IN THE FOLLOWING CASES:

- · Improper use of the product.
- · Inability to identify the serial number.
- Changes to the product by unauthorised third parties.
- Insufficient, inadequate, lack of maintenance or methods of storage or protection.
- On items of normal direct consumption or periodic spare parts.
- Use of non-original ALPEGO S.p.a. parts.
- Exceeding of power and load limits indicated in the technical data and in the operating manuals.

### THE FOLLOWING ARE EXCLUDED FROM THE WARRANTY:

- All lubricants and grease.
- All wear components and in contact with the ground.
- · Accidental breakage during transport.
- · Defects due to incorrect installation.
- Routine or extraordinary maintenance costs.
- 3. The material deemed to be nonconforming must be contested, using the intended procedures, upon discovery of the non-compliance. It is necessary, under penalty of forfeiture of the warranty, to agree in writing (an e-mail or fax to ALPEGO S.p.a. with acknowledgement of receipt is sufficient) the possible use of the goods or the continuation of the work or type of intervention to be carried out in force and if the found non-conformity persists.
- 4. Different warranty conditions are not permitted, except those exclusively and explicitly accepted by the ALPEGO S.p.a. SALES MANAGEMENT.
- 5. Any modification to the supply not explicitly authorised by the ALPEGO S.p.a. SALES MANA-GEMENT in writing, will make the warranty void and null.

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



- 6. The product, deemed nonconforming or defective, must be made available at the headquarters of ALPEGO S.p.a. or to its authorised representative.
- 7. The formality of the complaint procedure involves (as per the instructions on the form itself):
- The completion of the NON-CONFORMITY COMPLAINT FORM (the form contains a guide for its completion, if necessary, contact the ALPEGO S.p.a. sales service).
- The sending of this form (via mail, Registered letter or fax, provided that the latter is acknowledged by the ALPEGO S.p.a. Sales Service) to ALPEGO S.p.a.
- The sending of any additional elements to clarify or document the reasons of the complaint (photos, videos, analysis, objective findings, sketches, etc.).
- Make the contested material available to ALPEGO S.p.a., only if explicitly requested by the same, in compliance with the provisions of point 6).
- 8. To provide immediate assistance and for management and fiscal reasons, all replacement materials will be charged and invoiced to the customer upon shipment; any acknowledgement of the warranty coverage, upon receipt of the materials and/or analysis of the causes of the alleged defect or non-conformity, will entitle to credit of the price of the product and its possible repositioning.

### CHECKS TO BE CARRIED OUT UPON RECEIPT OF THE GOODS

- 9. Complaints relating to the quantity or condition of the received goods (packaging and/or evident and significant discrepancies) must be contested, with notes on the delivery document, directly to the carrier at the time the goods are unloaded at the buyer's premises. Notification at the time of delivery, gives access to any insurance, if present, entered into by the carrier and/or the buyer. The company ALPEGO S.p.a., to guarantee the correct loading upon departure, keeps photographic evidence.
- 10. Any complaints on the quality of the goods supplied must be submitted using the specific complaint form, sent by registered letter or fax (provided that the latter is acknowledged for receipt by the ALPEGO S.p.a. Sales Service) within 8 days of receipt of the goods and do not exempt the buyer from making the agreed payment and respecting the deadlines.



## 1.10 Personnel qualifications and tasks



Machine use is only allowed to the appointed and adequately trained personnel, who are in such health conditions as to be able to regularly perform their activities.

### **DANGER ZONE**

Any zone within and/or around machinery in which a person is subject to a risk to his health or safety.

### **EXPOSED PERSON**

Any person wholly or partially in a danger zone.

### **OPERATOR**

An operator who carries out the duties of ordinary operations required for machine operation: operating the controls, supervision of the operative cycle, cleaning of surfaces and intervention in case of malfunction. In normal production, the operator must operate with all the protectors enabled.

### **MANUFACTURER'S TECHNICIAN**

The Manufacturer's personnel or other personnel authorised by the same to perform complex activities of installation, preparation, repair and, on request, training of machine operating personnel.

### **MECHANICAL MAINTENANCE TECHNICIAN**

Person directly employed by the user or the manufacturer, and is in any case adequately trained to perform routine and extraordinary maintenance on the system, and reports the results in special registers.

### **ELECTRICAL MAINTENANCE TECHNICIAN**

Specialised technical personnel able to operate the machine under normal conditions, intervene on the electrical parts to carry out all the necessary adjustments, maintenance and repairs.

### HANDLING AND TRANSPORT PERSONNEL

Personnel who have been adequately trained on the use of the lifting and handling devices.

### PERSONNEL IN CHARGE OF DISPOSAL

Skilled person able to correctly carry out their specific tasks and who are adequately trained by the Employer on health and safety matters.



## 1.11 Manufacturer and machine identification data

### 1.11.1 Manufacturer's name and address

The manufacturer's identification data are given below:

ALPEGO S.p.A.

Administrative headquarters: Via Torri di Confine, 6 36053 GAMBELLARA (VICENZA) - ITALY Registered office: Via Giovanni e Giuseppe Cenzato, 9 36045 LONIGO (VICENZA) - ITALY

Tel: +39 0444/646100 Fax: +39 0444/646199

E-mail: info@alpego.com Website: <u>www.alpego.com</u>

## 1.11.2 Instructions for requesting interventions

For servicing, the user must contact the dealer from whom he purchased the machine.



### 1.11.3 EC Declaration of Conformity





ALPEGO S.p.a. con Socio Unico Via Giovanni e Giuseppe Cenzato, 9

36045 Lonigo (VI) - Italy

Tel +39 0444 64.61.00 e-mail: info@alpego.com website: www.alpego.com

Capitale Sociale € 2.000.000 i.v. Cod. Fisc. / Part. IVA EORI IT02009840246 REX (TREX)T02009840246 R.E.A. 199795/VI/1996 Reg. Imp. VI Nº 22374/VI/1996 N. Mecc. VI 011754

### ITALIANO

## chiarazione di conformità' CE

Ai sensi della Direttiva Europea 2006/42 CE la ditta dichiara sotto la propria responsabilità che la macchina agricola sotto indicata è conforme ai requisiti essenziali di sicurezza e di tutela della salute previsi della Direttiva Europea. Per l'adeguamento della macchina sono stata adottata le norme: EN ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014

La persona autorizzata a costituire il fascicolo tecnico è il Direttore Tecnico di Alpego presso la sede aziendale.

### ENGLISH

# EC Certificate of conformity Rotary Tiller

conforming to European Directive 2006/42 EC We declare in sole exponsability that the agricultural machine to which this applies, conforms to the basic safety and health requirements of European Directive. For the adaptation of it blots some have been adopted the norms: EN ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014

The person authorized to drawn up the technical dossier is the Technical Director of Alpego at the company headquarters.

### ESPANOL

## Declaración de conformidad CE Fresadoras

Conforme a la Directiva Europea 2006/42 CE la empresa declara bajo su propia Consome a la Directiva Europea 2000/42 CE la empresa declara bajo su propa-responsabilidad que la maquinaria agricola modelo: está conforme a los requisitos esenciales de seguridad y de defensa de la Directiva Europea. Para la equiparación de las máquinas han sido adoptadas las normas EN ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014. La pessona autorizada para preparar el expediente técnico es el Director Técnico de Alpego en la sede de la empresa.

### PORTUGUES

## Declaração de conformidade CE Fresas

Nos termos de Diretiva Europeia 2006/42 CE, a empresa declara sob a própria responsabilidade que a máquina agricola indicada abaixo está em conformidade com os requistos essenciais de segurança e de tutela da saúde previstos pela Diretiva Europeia. Para a adequação da máquina, foram adoladas as seguintes

normas: En ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014 A pessoa autorizado para a realização do arquivo técnico é o Diretor Técnico d e Alpego junto à sede da empresa.

### MAGYAR

# EK megfelelőségi nyilatkozat Rotációs Kapálógépek

Az Európai Unió 2006/42/EK irányelve értelmében a vállalat saját felelőssége alatt kijelenői, hogy az alábbi mezőgazdasági gép megfelel az Európai Irányelv által előít fényege biztonsági és egőszágródelmi követelményeknek. A gép megfelelteteséhez az alábbi szabványok kenültek alkalmazásas:
EN SO 4254-12015 - EN SO 4254-12015 - EN SON 4255-12015 - EN SON 4255-12015

az Alpego Műszaki Igazgatója.

### POLSKI

# Deklaracja zgodności WE Glebogryzarek

Zgodnie z treścią dyrektywy Unii Europejskiej 2066/42 WE, firma oświadcza na wiasną odpowiedzialność, że wymieniona poniżej maszyna folnicza jest zgodna z podstawowymi wymaganiami dotyczącymi bezpieczeństwa i ochrony zdrowia określonymi w Dyrektywie Europejskiej. W celu dostosowania maszyny

zaskosowano następujące nomy:
EN ISO 4254-1:2015 - EN ISO 254-5:2018 - EN15811:2014
Osobą upoważnioną do cyracowania dokumentacji technicznej jest Dyrektor
Techniczny Alpego w siedzibie firmy.

Codice / Code : ArticoloHY

Lonigo: gg/mm/aa

## FRANCAIS Déclaration de conformité CE Fraises rotatives

conforme à la Directive Européenne de la 2006/42CE Nous déclarons sous notre seule responsabilité que le machine agricole faisant l'objet de la déclaration est conforme aux prescriptions fondamentales en matière de sécurité et de santé stipulées dans la Directive Européenne. Pour l'adaptation d'elle en éponge ent été

adoptés les normes : EN ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014 La personne autorisée à constituer le dossier technique est le Directeur Techn d'Alpego au siège de la société

### DEUTSCH EG Konformitatserklarung Bodenfrasen

entsprechend der Europäische Richtlinie 2006/42 EG Wir erklaren in alleineger Verantwortung, da das landmaschine auf das sich diese Erklanung bezeith, den einschlägigen grundlegenden Sicherheits und Gesundheitsan-forderungen der Europäische Richtlinie. Für die Anpassung von ihr befleckt einiges sind angenommen worden den Normen: EN ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014 Die zur Erstellung der Technischen Dokumentalion befugte person ist der technische Direktor von Alpego am Firmensitz.

### Ελληνικά

## Δήλωση συμμόρφωσης ΕΚ μηχανικές τσάπες

Σύμφωνα με την Ευρωπαϊκή Οδηγία 2006/42 ΕΚ, η εταιρεία δηλώνει υπεύθυνα ότ Συρφονά με την ευρωπιακή Οσήμα Ζαυακές Εκ. η απορεία ο όρωνοι απευθένα απ το γεωργικό μητάντμα που αναφέρεται παρακότια συμμορφώνεται με τις βασικές απαιπήσεις υγείας και ασφάλειας της Ευρωπιαίκής Οδηγίας. Τα την προσορμογή του μηχανήματος έχουν μοθετηθεί τι α έξης πρόσυπα: ΕΝ ISO 4254-1:2015 - ΕΝ ISO 4254-5:2018 - ΕΝ15811:2014 Το πρόσωπο που έχει εξουσιοδοσηθεί για την καπάρπαη του τεχνικού φακέλου είναι ο Τεχνικός Διευθυντής της Αίρφο, στην έδρα της επαρείας.

### NEDERLANDS

## EG-Conformiteitsverklaring Grondfrezen

In de zin van Europese Richtlijn 2006/42 EG verklaart het bedrijf op eigen veranheoording dat de hieronder vermeidse landbouwmachin ei no vereenstemming is met de essentiële veiligheids – en gezondheidseisen die door de Europese Richtlijn beoogd worden. Voor de aanpassing van de machine zijn de volgende normen eelbuik.

normen gebruikt: EN ISO 4254-1:2015 - EN ISO 4254-5:2018 - EN15811:2014 De person die bevoogd is om het technisch doesier samen te stellen is de Technisch Directeur van Alpego bij de vestiging van de onderneming.

### ROMĀNĀ

# Declarație de conformitate CE Prășitoare

În conformitate cu Directiva Europeană 2006/42 CE societatea declară pe proprie răspundere că mașina agricolă indicată mai jos este conformă cerințelor esențiale în materia de sigurantă și de prosigare a sănătății previzua de Directiva Europeană. Pentru adaptarea mașini au fost adoptate următoarele standarde: Europeană. Pentru adaptarea mașini au fost adoptate următoarele standarde: Persoana autorizată să întocmească documentația terinică este Directorul Tehnic

al Alpego de la sediul societății.

## SUOMI

### EU-vaatimustenmukaisuusvakuutu Pyöröjyrsime

EU-direktiivin 2006/42 EY mukaisesti yritys vakuuttaa omalla vastuullaan, että alti mainiltu maatalouskone täyttää EU-direktiivin mukaiset olennaiset turvallisuus- ja terveysvaatimukset. Koneen mukauttamista varten on otettu käyttöön seuraava

standardit: EN ISO 4254-1:2015 - EN ISO 4254-5:2018 – EN15811:2014 Teknisen tiedotteen kokoamiseen valtuutettu henkilö on Alpego

Serial:Matricola

ALPEGO S.p.a/con Socio Unico PEGORARO LUCA

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.







ALPEGO S.p.a. con Socio Unico societa soggetta a direzone e coordinamento di Torroo Sar Via Giovanni e Giuseppe Cenzato, 9 36045 Lonigo (VI) – Italy

Tel +39 0444 64.61.00 e-mail: info@alpego.com website: www.alpego.com Capitale Sociale € 2.000.000 i.v.
Cod. Fisc. / Part. IVA EORI IT02009840246
REX.ITREXIT02009840246
R.E.A. 199795/V/1996
N. Mecc. VI 011754
N. Mecc. VI 011754

### **UK Declaration of Conformity**

We as the manufacturers:

### ALPEGO S.p.a con Socio Unico

VIA Giovanni e Giuseppe Cenzato, 9 36045 Lonigo (VI) ITALIA

conforming to:

The Supply of Machinery (Safety) Regulations 2008 - S.I. 2008/1597

declare under our sole responsability, that the agricultural machine (Rotary Tiller):

Codice / Code : ArticoloHY Serial: Matricola

fulfils all the relevant provisions of The Supply of Machinery (Safety) Regulations 2008, and also fulfils all the relevant provisions of the following UK Regulations:

Electomagnetic Compatibility Regulations 2016.

The machine referenced above is manufactured in accordance with the following designated standards:

EN ISO 4254-1:2015 EN ISO 4254-5:2018 EN 15811:2014

The person authorized to draw up the technical file is the Technical Director of Alpego at the company headquarters

Lonigo: gg/mm/aaaa

ALPEGO S.p.a/con Socio Unico PEGGRARO LUCA Cycl populog/office

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



### 1.11.4 Machine identification

The machine covered by this manual is identified by the serial number label with its technical characteristics, located at the point indicated at Fig. 1.

The label must NEVER BE REMOVED until the machine is decommissioned, at which time it is removed from the support and destroyed.

The serial number unambiguously identifies the machine, makes it possible to trace its specific characteristics and identify the components installed in it. Without this number it is not possible to identify product-specific spare parts with certainty.

Always provide the type of machine and the serial number, or at least the serial number, in the event of a call-out. The registration plate is characterised by the following entries:

- 1. Machine model.
- 2. Machine serial number.
- 3. Maximum weight.
- 4. Date of manufacture.

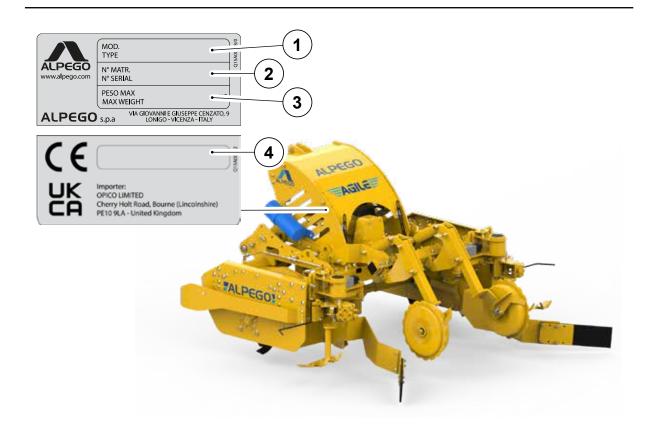


Fig. 2 Marking data



IT IS FORBIDDEN to remove, cover, move or damage the machine's identification plate.

In case the nameplate should deteriorate or become poorly visible or missing, it is mandatory to replace it by requesting it directly from ALPEGO S.p.a.

16



## 1.12 Safety regulations and residual risks

Below is a list of the safety regulations to be followed before and during machine use.

### 1.12.1 Instructions

The operator, or any person interacting with the machine, is recommended to carefully read the manual before any intervention.

- Make sure that the following instructions have been read and understood and that they become routine procedures in the use and maintenance of the machine.
- Failure to comply with or carelessness in following the safety regulations when using and servicing the machine are cause of accidents.
- For each operation to be performed on the machine, please refer to the qualification levels described above to identify the personnel qualified to carry it out.



Whenever the machine is also intended to be used by people who do not understand any of the languages in this manual, the importer or employer (or the machine user) will be responsible for having the instructions for use translated into a language that the users understand.



The operator is required to perform only the operations described in this manual. If additional operations or interventions to those described below are necessary, please contact the Manufacturer who will provide the information it deems most appropriate depending on the circumstances. The Company is relieved of any liability for damage to property or harm to people.



The unauthorised tampering/replacement of one or more parts or units of the machine, the use of accessories, tools and consumables other than those recommended by the manufacturer may represent a risk of injury and release the manufacturer from civil and criminal liability. Any changes must be requested directly from the Manufacturer, specifying all characteristic machine data and the reasons; if approved, the changes must only be carried out by personnel authorised by the Manufacturer and consistent with its specific instructions. The Manufacturer is exempt from any liability for any damage to property or harm to people caused by failure to read and implement the procedures and/or instructions contained in the manual.

### 1.13 Skills and controls

- Machine installation, commissioning and extraordinary maintenance must be carried out by qualified people.
- The machine must be commanded and controlled by one person in order to avoid dangerous conditions for their safety and that of others.
- Before using the machine, make sure that any conditions dangerous to safety have been properly eliminated.
- Do not lubricate the machine while it is in operation.
- Warn the persons in charge of any changes made to the machine or irregular operation that may compromise its safety.
- During work, strictly follow the indications of the signs and/or labels placed on the machine.
- Do not introduce body parts into the machine during operation and where prohibited.



- Operators must pay attention to the risk of clothing and/or long hair getting caught and entangled in moving parts; the use of hair caps is recommended.
- It is strictly forbidden to discharge production products or waste or any polluting substances into streams and rivers, on the ground and in the environment. These products or substances must be collected in special containers, stored or recycled and in any case not released in the environment. During machine operation, make sure that no unauthorised persons incautiously approach it or the controls.
- Unauthorised persons must not be allowed to approach the operating machine (even if stopped).
- If third parties (unauthorised persons or colleagues) are present near the machine, the operator must supervise their safety and warn them of the dangers.
- Do not leave the machine on and unattended during work breaks (even if idle). Failure to comply with this provision may be cause of serious accidents.
- Before intervening on the machine, make sure that it is stopped and that the ignition key has been removed from the tractor.
- Do not use machine parts that are separated from the unit or from the configuration envisaged by the manufacturer.
- When the machine emits a noise above 85 decibels for 8 hours, according to local regulations in force, ear protectors or earplugs must be used.
- Only allow the machine to be used by authorised personnel, adequately trained, over the age of 18 and with a driving licence.
- · Do not reverse the machine while operating it.
- Make sure that the machine is stable and check the slope of the ground on which to operate.
- Do not use the machine if faulty, even if it is only suspected; also notify your nearest dealer or the technical customer service of ALPEGO directly of any found irregularities and request intervention.
- Do not use the machine in an altered psycho-physical state, under the influence of alcohol or medicines such as sleeping pills, tranquillisers, stimulants, drugs or any other legal or illegal substance that may, in some way, slow down or alter your sensory perceptions, reflexes or eyesight. In case of impact against an obstacle, stop the machine and check the extent of the damage. In case of damage, even minor, make the necessary repairs before continuing.
- Pay attention to the state of wear of hydraulic hoses (if any): replace them if damaged. In any case, they must be replaced at least every 5 years, or check the expiry date (in some cases) printed on the pipe itself.
- Check that the protections, guards and all safety devices are in place and in good condition and efficient.
- Pay attention to slippery ground surrounding the machine; furthermore, do not approach ditches or channels in order to avoid possible tipping of the machine.
- Do not use machine parts as grips as they are not safe anchoring elements. Furthermore, an involuntary movement of a command could cause the operating machine to move unexpectedly.
- Do not park the machine on steep slopes or on unstable ground.
- Repair or replace any broken parts, always and only if the interventions are indicated in the instruction



manual. If not, contact the manufacturer's local dealer or an authorised mechanical workshop.

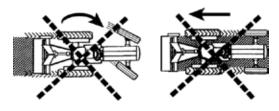
- When loading the machine on the trailer, the surrounding area is to be considered a danger zone.
- As required by the legislation in force, the user must be professionally trained by the employer but, in consideration of the dangerousness of the machine, it is essential for the machine manufacturer or the local dealer to put their expertise and experience at the Customer's disposal to help train personnel.
- Before starting work, it is necessary to familiarise with the machine controls. Before using the machine, make sure that all the controls are in the neutral position.
- The machine is equipped with all the safety devices and control equipment, however, the user is not
  exempt from checking their proper operation. It is strictly forbidden to operate the machine with the
  fixed and/or movable guards disassembled or with the safety devices disabled
- It is strictly forbidden to remove or tamper with the safety devices. Do not perform any machine
  maintenance or adjustment operation without having read and understood the contents of this
  manual. Do not put your hands, screwdrivers, spanners and any other tool inside the moving areas.
- To prevent a fire hazard, always keep the machine clean of foreign bodies or flammable products (oils, diesel, etc.).
- Never move the machine while it is in the field of work or on the road, while the operator or animals are on board.
- Only remove the safety guards to perform maintenance or checks. Reposition them correctly at the end of the operations (guards, sensors, etc.).
- Before starting the machine and/or moving, make sure that there are no other people or animals near if
- It is forbidden for people with physical disabilities in relation to the needs of the machine to use it.
- The Manufacturer cannot reasonably envisage every possible improper use of the machine which may lead to potential danger.
- Keep the machine clean from foreign materials (debris, tools, various objects) that could damage the machine parts.
- Before circulating on public roads, place the machine in the transport position, as indicated by the manufacturer. When using the high-pressure cleaner, do not direct the water jet on electrical components and connections, seals, joint parts, greasing points and rubber or plastic parts.
- If the structure of your machine has deformed areas (for example due to possible blows) it must not be used for work. Damaged parts must be replaced.
- Use special caution when on rough or uneven ground in relation to the machine height from the ground.
- Proceed with the utmost caution to avoid sudden braking during transfers.
- Do not force any control level if there is resistance to engage.
- During machine movement, do not exceed the limit angles of the cardan shaft set by the manufacturer.
- No additional welds or attempts at cold or hot straightening of deformed parts are permitted.



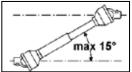
- Before unhitching the machine from the tractor, always park it stably on the ground and ensure that it is balanced, and only then unhitch the machine from the tractor, always checking that it is stable.
- Make sure that the tractor is fitted with rear-view mirrors to ensure visibility on both sides of the machine.
- Remember that road holding, steering and braking performance are affected by the carrying or towing of machinery.
- During transport, detach the quick couplings that connect the machine to the hydraulic system (if included).
- When disconnecting the machine, be sure to first disconnect the hydraulic hoses (if any). Place them in the appropriate marked housing, in order to avoid possible breakages or oil spills.
- Pay particular attention when using the machine downhill as this could increase the tractor's forward speed.
- In any case, check the use and maintenance manual of the tractor for the maximum slope on which the tractor can operate. The machine must be coupled to the tractor using only the attachment points provided for this purpose, in accordance with the safety regulations in force.
- Turn carefully, bearing in mind the overhang, length, height and weight of the machine.
- Before hitching the machine, make sure that the front axle ballast of the tractor is sufficient. The weights of the ballasts must be applied on the supports provided for this purpose, in accordance with the regulations of the tractor's manufacturer. The load on the front axle of the tractor must not be lower than 20% of the sum of the no-load weight of the tractor and that of the operator.
- The machine is not suitable for use in sectors other than agricultural.
- Before getting off the tractor and before any maintenance operation, engage the parking brake, turn off the engine, engage a gear and remove the ignition key from the dashboard.
- · Do not operate on muddy, sandy or loose ground.
- The cardan shaft must be mounted with the PTO disengaged, the tractor engine off and the ignition key removed.
- Do not approach the cardan shaft while wearing clothing that can get entangled.
- When coupling with the tractor, only use EC approved cardan shafts.
- Before performing any work on the hydraulic system (if any), store the machine and eliminate the
  pressure from the system.
- Before working in a new area, you must become familiar with the ground before working in it.
   Do not work in areas which could have obstacles such as stones, sticks or roots since these could ruin machine integrity.
- Always use the rotating flashing light when circulating on public roads.
- When circulating on the road, it is necessary to follow the traffic regulations of the country where the machine is being used. Always remember that road holding, braking and changing direction could be influenced by the weight of the machine applied to the tractor lift. When taking turns, take into consideration the action of the centrifugal force that shifts the machine centre of gravity. Do not allow the machine to turn idle. Do not take turns while the machine is being lowered, and do not work in reverse gear. Always raise the machine when changing direction and reversing.



21



- During transportation, or whenever it is necessary to lift the machine, the tractor lifting device should be regulated in such a manner as to keep the machine at a maximum distance of approx. 35 cm from the ground. Do not circulate on public roads if the machine is dirty with soil, grass or other things that could dirty the road and block normal traffic. Do not drop the machine abruptly to the ground, but lower it slowly to allow the ploughshares to gradually engage the soil. If lowered violently, all machine components would become heavily stressed, and this could compromise their integrity.
- During road transport, with the machine raised, put the control lever of the hydraulic lift of the tractor in the locked position.
- Use only the cardan shaft indicated by the manufacturer. This shaft is equipped with safety devices against overloads.
- Before activating the power takeoff, check the pre-set speed. Do not exchange the speed of 540 rpm with that of 1000 rpm.
- Disconnect the Power Takeoff whenever the cardan shaft angle is greater than 15°.



- To avoid burns, do not touch the gearbox after a prolonged use of the machine.
- Before replacing the gearbox, disconnect the PTO, engage the parking brake and remove the ignition key, then refit the gearbox lid before restarting the machine.



## 1.14 Installing electrical and electronic components

- The machine is equipped with electronic components whose operation can affect other tools through electromagnetic transmission. These influences can endanger people if the following safety instructions are not observed.
- If electrical and electronic tools and/or components are subsequently installed on the machine, with connection to the on-board network, the user must test whether the installation causes anomalies in the vehicle electronics or other components.
- In particular, make sure that the subsequently installed electrical and electronic components comply with EMC Directive 891336/EEC in the respective version in force and that they are CE marked.
- For the subsequent installation of mobile communication systems (e.g. radio, telephone), the following requirements must also be observed:
- 1. Only install equipment compliant with the national regulations in force (e.g. BZT approval for Germany).
- 2. Install the equipment firmly.
- 3. The use of mobile or portable devices in the vehicle is only permitted when connected to a fixed external antenna.
- 4. Fit the transmitter well away from the vehicle electronics.
- 5. When installing the antenna, make sure it is installed properly, with good earthing connection between the antenna and the vehicle earth.

For the wiring, installation and maximum permissible current absorption, also follow the assembly instructions of the machine manufacturer.



## 1.15 Tractor stability and lifting capacity check



As far as road circulation is concerned, hitching equipment to the tractor to have a single unit, can alter stability and make it difficult to drive and work.

When you add a machine to the tractor, you will change the weight distribution over the axles. It is therefore recommended to add suitable ballasts to the front of the tractor in order to properly distribute the weight over the axles.

Calculate the ballast to be used with the following formula:

$$M \times s < 0.2 T \times i + Z (d + i)$$

$$Z > \frac{(M \times s) - (0,2 T \times i)}{(d + i)}$$

# CALCULATION OF THE TRACTOR STABILITY

where

i = tractor wheelbase (m)

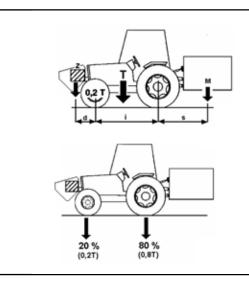
d = distance between the front axle and the front ballasts (m)

s = projection of the piece of equipment from the rear axle (m)

T = tractor mass (kg)

Z = ballast mass + hopper with seeds (Kg)

M = equipment mass (Kg)



In any case, at least 20% of the total tractor-tool mass in running order should rest on the front bridge of the tractor. It should be remembered, however, that stability can be improved with the right choice of tractor-tool coupling and with the application of ballasts at the front, in the limits and methods indicated by the tractor manufacturer. Moreover, when the tractor is stopped, the tool should be lowered to the ground, thus avoiding possible involuntary reductions, improving, at the same time, the stability.

Tractor wheelbase	i = m
Distance between the front axle and the front ballasts	d =m
Projection of the piece of equipment from the rear axle	s =m
Tractor mass	T =Kg
Ballast mass	Z =Kg
Equipment mass	M =Kg

Tab. 1 Tractor stability and lifting capacity check



## 2 GENERAL SAFETY INFORMATION

## 2.1 Residual risks and personal protective equipment

The machine poses risks that have not been completely eliminated by design or by the installation of suitable guards. In any case, the customer has been informed of these risks by means of this manual, carefully indicating which PPE should be used by users and what precautions should be taken to minimise the risk.

Personal Protective Equipment (PPE) means any device intended to be worn and held by the worker for the purpose of protecting him/her against one or more risks likely to threaten safety or health at work, as well as any complement or accessory intended for that purpose.



Please note that careful and correct behaviour by operators reduces the risk of accidents in the workplace.

Sufficient space is provided during the machine installation phases to limit these risks. To maintain these conditions, the areas around the machine and access to working positions must always:

- Be kept clear of obstacles (such as ladders, tools, containers, boxes).
- Be clean and dry (remove any oil or water stains promptly).
- · Be well lit.

For the customer's complete information, the residual risks remaining on the machine are listed below.

The PPE listed in the table below refers to the specific residual risk (where present).

Danger	Symbol	Operation	Precautions	PPE to be used
Crushing hazard Contact with moving parts, during operation or mainte- nance or accessory installa- tion.		Use. Maintenance. Installation of accessories.	Do not under any circumstances touch moving parts throughout the machine (only carry out necessary checks or maintenance).	
Tripping hazard During operation, maintenance or installation of accessories, there is a risk of tripping over various parts of the machine.	<u>~</u>	Use. Maintenance. Installation of accessories.	Avoid passing close ments inside and ou	
Danger of blows to the head or body parts! During maintenance or accessory installation work, there is a risk of blows to the head or parts of the body due to the composition of the machine.		Maintenance. Installation of accessories.	Pay attention while carrying out the necessary operations to all machine components and their overall dimensions.	

Tab. 2 Personal protective equipment

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



Danger	r Symbol Operation		Precautions	PPE to be used
Danger of moving parts!		Use. Maintenance. Installation of accessories. Hydraulic test.	Do not touch movin	g parts.
Attention rotating rollers! Drawing-in hazard. The danger exists on the rotating rollers of the accessories.	8	Use. Maintenance. Installation of accessories. Hydraulic test.	Avoid contact with the rollers of the machine during use, maintenance and accessory in- stallation. Fluttering clothes are prohibited.	

Tab. 2 Personal protective equipment

Personnel working on the machine must wear the personal protective equipment (PPE) required to protect them, in accordance with the accident prevention regulations in force in the country where the machine is installed. Any PPE used must be CE marked or approved by the standards in force in the country of use.



IT IS FORBIDDEN to wear clothing and accessories that could get caught in the machine: loose clothes, ties, belts, necklaces, bracelets, watches, earrings, rings, etc.



Please note that the non-use of personal protective equipment by operators, specialised technicians or in any case those working on the machine may lead to exposure to risk and possible damage to health.

ALPEGO S.p.a. declines all responsibility for any damage to persons caused by failure to use the PPE.

## 2.2 Ecology and pollution

Comply with the laws in force in the country where the machine will be used, regarding the use and disposal of products used for cleaning and maintenance of the machine, observing the recommendations of the manufacturer of these materials.



## 2.3 Safety signs

The colours of warning signs are defined by the international standard ISO 3864.

Their placement on site should meet the requirements of good visibility and proximity to the source of danger.



There are safety labels on the machine, which must be strictly observed by any person operating the machine.



IT IS FORBIDDEN to remove or make illegible the safety, danger and obligation signs on the machine.



The total or partial failure to comply with the safety signs releases ALPEGO S.p.a. from any liability for damage to persons, property or animals.

Safety signs in the workplace are a measure that further improves the operators' safety conditions by providing correct information on needs and situations requiring caution and certain behaviours. The safety messages to be conveyed to operators by means of appropriate signs must comply with the provisions of the directive in force. By way of example, the most commonly used signs are shown below.

ADHESIVE LABEL	CODE	MEANING
PRIMA DI USARE L'ATTREZZATURA E' OBBLIGATORIO LEGGERE IL LIBRETTO USO & MANUTENZIONE DO L'ODSIGLI SULLA SICUREZZA ED OSSERVARE TUTTE LE ISTRUZIONI DURANTE L'USO.  VOR INBECTEIBENAME DIB BETRIEBSANLEITUNG UND SICHERHEITSHIWWEISE LESEN UND BEACHTEN.	D02612	Before using the machine, it is mandatory to read the use and maintenance manual and the safety tips and to observe its contents during use.
3	D02627	Indicates the hooking point for transporting the machine.
	D02624	Indicates the danger caused by pressurised oil in the event of hydraulic hose ruptures, consult the instruction manual before carrying out repairs on hydraulic systems.
	D02614	Indicates the danger of crushing on all rotating gears

Tab. 3 Safety signs applied to the machine

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



ADHESIVE LABEL	CODE	MEANING
	D02609	Indicates the strict prohibition to climb on top of the machine while working.
	D02615	Indicates the need to switch off the tractor and remove the ignition key during maintenance operations.
	Q15A00531	Indicates the PPE (personal protective equipment) provided: overalls, mask, earmuffs, shoes and gloves.

Tab. 3 Safety signs applied to the machine

In the event that the plates should deteriorate or become poorly visible in general or missing, it is mandatory to replace them by requesting them directly from ALPEGO S.p.a.

ALPEGO S.p.A. declines all responsibility for any accidents or damage to persons, property or animals caused by the absence of safety plates on the machine.



## 3 TECHNICAL SPECIFICATIONS

## 3.1 Machine description

Agile is a machine used for tilling vineyards. It is equipped with a central transmission and two side rotary tillers which, by working under the plant, remix the soil burying any grass and residues.

Thanks to the ground moved by the rotary tillers, the work of the tool is also facilitated which, in the case of the blade, cleans the area between the plants from weeds (several tools are available)

Furthermore, Agile is equipped with an electronic system for the following functions:

- · The electronic setting of the work width with automatic centring on the row
- · The electronic setting of the work depth with automatic levelling
- · The exclusion of one side of the machine
- · Automatic row start and end program
- · Electronic deactivation of the individual inter-rows
- Automatic closure on vineyards with irregular width (e.g. conical)

For the design and construction of the machine in question, the following Standards of Directive 2006/42/ EC were examined and followed:

UNI EN 14018	UNI EN ISO	UNI EN ISO	UNI EN ISO	ISO 11684	UNI EN ISO
	4254-1	13857	4254-5		4413

The smooth operation of the machine depends on correct use and adequate maintenance. It is, therefore, advisable to observe the contents of this manual in order to prevent any inconvenience that could affect the machine's proper operation and duration.

It is important to comply with this manual as the Manufacturer declines all liability due to negligence and failure to comply with these regulations.

However, the Manufacturer is at your complete disposal for technical assistance and all that may be necessary for the best operation and maximum performance of the machine.



# 3.2 Technical specifications of the machine

## 3.2.1 AGILE technical specifications

	: <b>13</b> :		<b>₽</b>	Q Kg
Mod.	mm	mm	mm	Kg
AGILE M	2200/2700	1694	395	1000
AGILE L	2400/3200	1894	395	1050

Tab. 4 AGILE complete

	mm		<b>Kg</b> Kg
1"3/8 Z=6	With shear bolt  Max 540 RPM	1"3/8 Z=6	25

Tab. 5 AGILE complete



# 3.3 Machine parts

## 3.3.1 AGILE

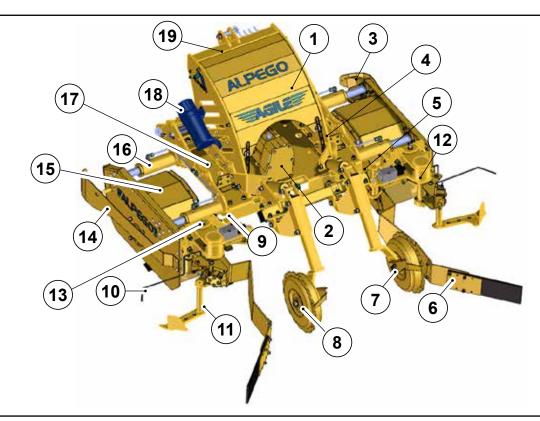


Fig. 3 Overview of AGILE parts

Ref.	Description	Ref.	Description
1	Electrohydraulics	11	Tool
2	Transmission	12	Tool holder
3	Right rotary tiller feeler	13	Height adjustment screw
4	Right width sensor	14	Left rotary tiller feeler
5	Right depth sensor	15	Rotary tiller
6	Conveyor	16	Opening/closing cylinders
7	Right wheel	17	Left width sensor
8	Left wheel	18	Document and monitor holder pipe
9	Left depth sensor	19	3 Point hitch
10	Tool feeler		

Tab. 6 AGILE parts description



# 3.4 Wiring diagram ISOBUS

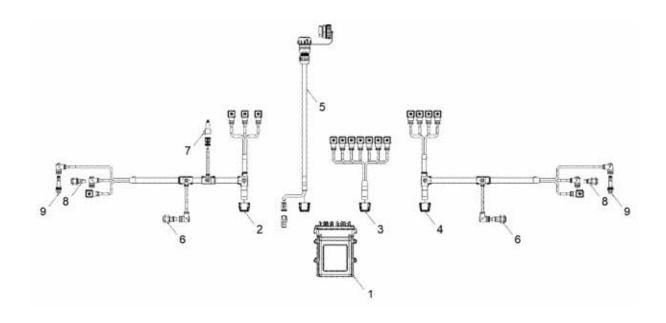


Fig. 4 Wiring diagram ISOBUS

Ref.	Description	Ref.	Description
1	ECO Isobus	6	Ultrasonic width sensor
2	Left-hand wiring	7	Pressure sensor
3	Central wiring	8	Ultrasonic height sensor
4	Cablaggio destro	9	Inductive centring sensor
5	Cavo Isobus		

Tab. 7 Wiring diagram ISOBUS parts description

31



# 3.5 Wiring diagram MASTER CAN

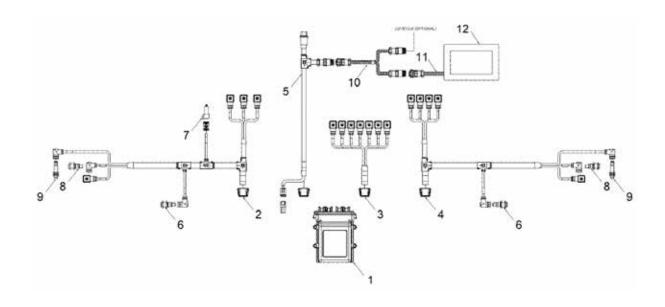


Fig. 5 Wiring diagram MASTER CAN

Rif.	Descrizione	Rif.	Descrizione
1	ECO Master Can	7	Pressure sensor
2	Left-hand wiring	8	Ultrasonic height sensor
3	Central wiring	9	Inductive centring sensor
4	Right-hand wiring	10	Joystick splitter (opt)
5	Power cable + can	11	Monitor cable
6	Ultrasonic width sensor	12	Monitor can

Tab. 8 Wiring diagram MASTER CAN parts description



### 3.6 Solenoid valve connection chart

WIRING LABEL	BLOCK OUTFEED ENGRAVING	FUNCTION
DUMP EV/VALVE	-	Electric discharge
SIDE R A/B	SIDE R	Right width solenoid valve
CENTER A/B	-	Centring solenoid valve
SIDE L A/B	SIDE L	Left width solenoid valve
WHEEL SLOW L/R	-	Rapid - slow module
WHEEL L A/B	WHEEL L	Left wheel solenoid valve
WHEEL R A/B	WHEEL R	Right wheel solenoid valve
TOOL R	TOOL R	Right tool
TOOL L	TOOL L	Left tool
FILTER	-	Oil filter clogging sensor

Tab. 9 Solenoid valve connection chart

## 3.7 Transport and lifting

The machine can be easily transported over long distances with suitable transport vehicles: trucks, trailers, railway wagons, etc.



Machine loading and unloading can be very difficult operations if not carried out with the utmost attention: move away unauthorised people; clear and delimit the loading area; check the integrity and suitability of the vehicles available.



Also make sure that the area of work is clear and that there is enough escape space, that is, a free and safe area in which you can quickly move if the machine falls. These operations must on-ly be carried out by personnel trained accordingly.

Before proceeding with the loading, check that the available vehicle is enabled for such transport and that it has the capacity to carry the weight of the machine.

In this regard, check the TECHNICAL INFORMATION CHART for the weight of the machine.



The latter are also useful for checking the possibility of transiting with the machine on forced or narrow passages.

The machine should be lifted and transported with the right means, suitable for its weight, and by personnel trained in this kind of work.



Should it be necessary to lift the machine, hook it as indicated in the figure and go ahead. The machine should not be raised by more than 200 mm from the ground while carrying out these operations.



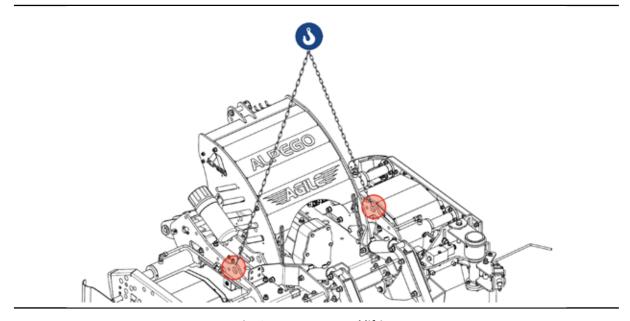


Fig. 6 Transport and lifting



## 4 HITCHING THE TRACTOR

## 4.1 3 point hitch



The operation must be performed on a horizontal plane.

Agile is standard supplied with 1st and 2nd category hitch for tractors with rear lift, so proceed with the coupling:

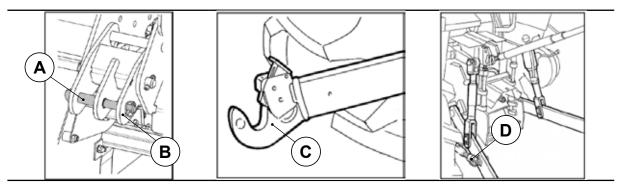


Fig. 7 3 point hitch

- 1. Remove pin (B)
- 2. Remove pin (A)
- 3. Insert detent into the hole, reinsert pin (A) and lock with pin (B)
- 4. Repeat the procedure for the other 2 hitches
- 5. Couple the tractor hooks (C) and the third point with the assembled detents
- 6. Act on the tension rods (D) so that the machine is perfectly centred on the tractor and lock it in position.
- 7. If the tractor is set up, it is recommended to use the upper tension rods in floating mode.



Failure to comply with step 5 compromises the work of the machine and can damage the equipment and the vineyard.

## 4.2 Hydraulic and cardan shaft connection

Connect the hydraulic hoses to the tractor distributor. In this regard:

- · The use of a free drain is recommended
- It is recommended to use the machine with variable displacement tractors or with independent pump oil delivery
- · Oil required: 30lt/min

35



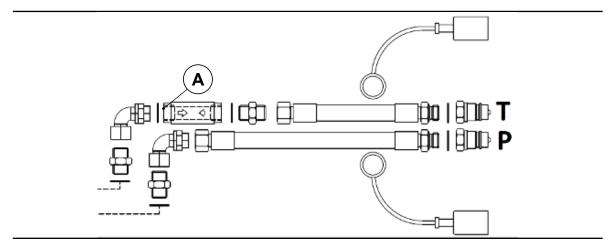


Fig. 8 Hydraulic and cardan shaft connection



The drain pipe (T) is characterised by the presence of a one-way valve (A) useful to avoid damage in case the pipes are incorrectly connected. In case of machine failure, check that the pipes are not inverted.

To connect the cardan shaft, proceed as follows:

- 1. Remove the power takeoff guard (A) of the machine by loosening screws (B);
- 2. Connect the cardan shaft on the gear/cam clutch side by means of button (C) in their slots
- 3. Reposition the power takeoff guard (A) and fix it with screws (B).
- 4. Make sure that the maximum and minimum lengths of the joint are compatible with the required working lengths.
- 5. Connect the opposite end of the cardan shaft to the tractor, and make sure that the pushbutton is in its slot.

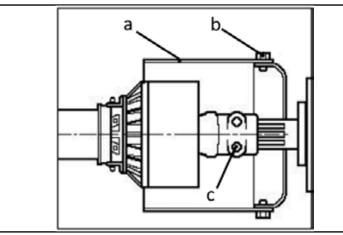


Fig. 9 Cardan shaft connection



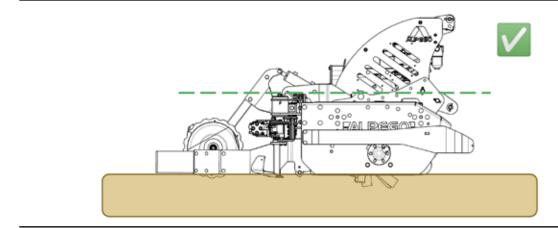
The guard is an important safety device. Never use the machine without it. Read and follow the regulations in the cardan shaft instruction manual.

36



# 4.3 Machine adjustments

1. Adjust the third point so that once the machine is lowered, it is parallel with the ground.



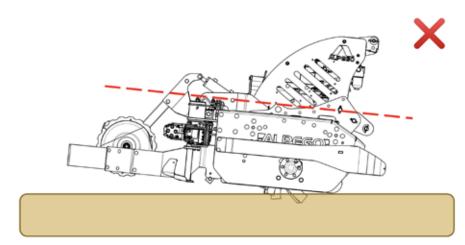


Fig. 10 Machine adjustments



The work depth is given by the wheels, refer to the subsequent chapters for further details.

2. The tool can be adjusted according to the following criteria:



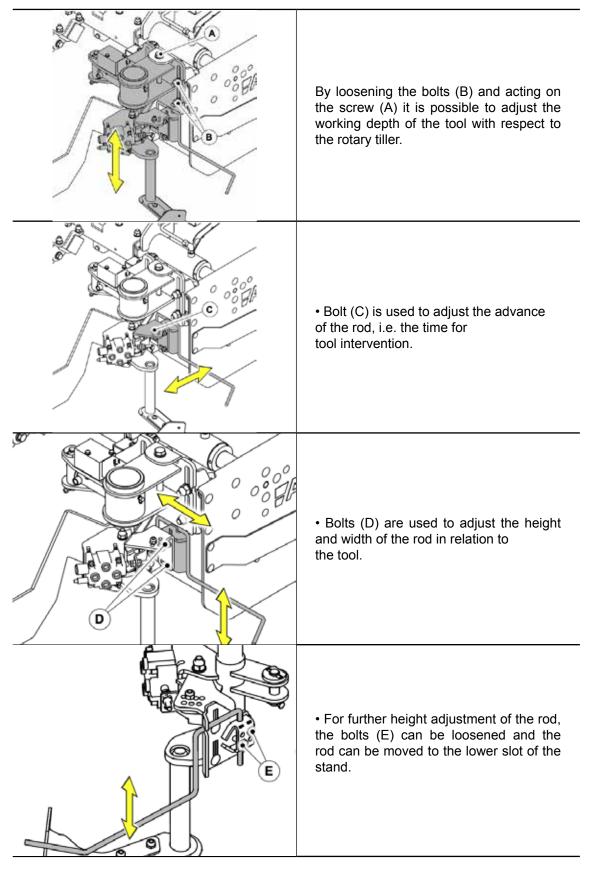


Fig. 11 Tools adjustments

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



# 4.4 ELECTRONIC SYSTEM

### 4.5 Structure

# 4.5.1 Main page

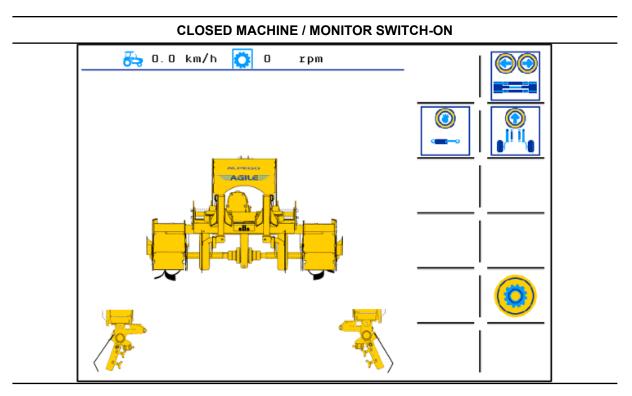


Fig. 12 closed machine



# OPEN MACHINE 0.0 km/h 0 rpm L- 200 cm L+ H+ 57 % 4 cm

Fig. 13 Open machine

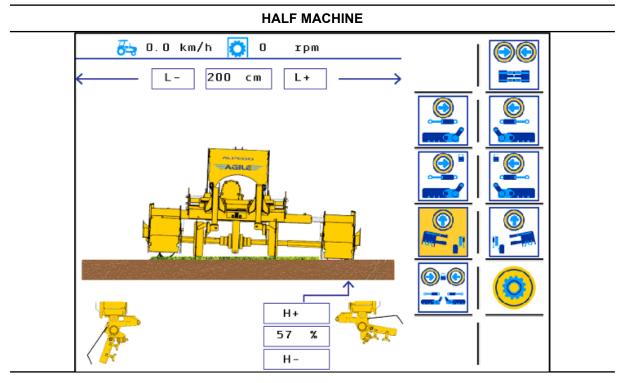


Fig. 14 Half machine



<b>3</b> 0.0	km/h	Forward speed
<b>Ö</b> 0	rpm	PTO revs



Forward speed and PTO are only available on Agile ISOBUS coupled with ISOBUS tractor (not available on tractors with ISOBUS system independent/mounted afterwards)

### 4.6 Manual mode

The manual mode enables machine use without automatisms.

It can be used in case of sensor failure or malfunction.

The system maintains:

- · Control of the tools
- · Automatic work of the tools

The system inhibits:

- · The width sensors
- · The depth sensors
- The side exclusions
- · The automatic centring on the row

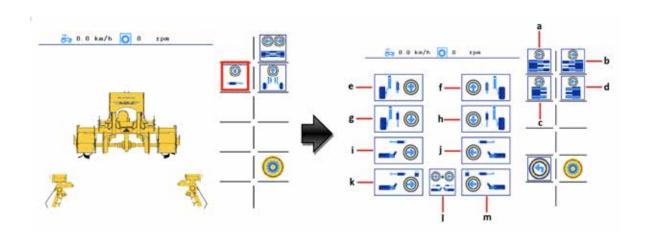


Fig. 15 Manual mode



Ref.	Description	Ref.	Description
а	Left opening	h	Right wheel down
b	Right opening	i	Temporary left-hand tool
С	Left closing	j	Temporary right-hand tool
d	Right closing	k	Left-hand tool in/out block
е	Left wheel up	1	Both tools in/out block
f	Right wheel up	m	Right-hand tool in/out block
g	Left wheel down		

Tab. 10 Manual mode

Press and hold the key corresponding to the desired function based on the extent of the adjustment.



By entering the manual control page, the inter-rows (if closed) will open, make sure there are no obstacles (people or things) within their range of action.

### 4.7 Parameters

Menu used to change the essential operating parameters.

The parameters manage each machine function.

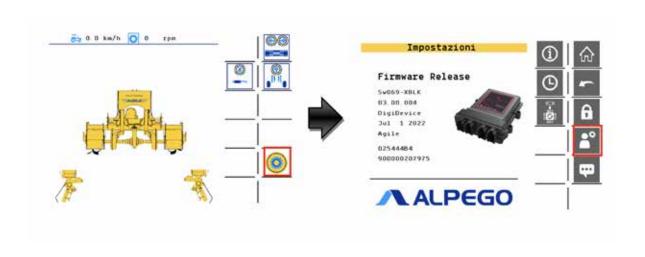


Fig. 16 Parameters



Parameter	Description	Function
O VT instance 6 0	Virtual terminal instance used	Set VT instance in case of multi-mo-
O TC instance	Task controller instance used	nitor use
Task Controller On	Task controller on/off	
O TC Bas	Bas Task controller on/off	Machine management from task controller in case of prescription map
TC Geo	Geo Task controller on/off	. (working depth)
O TC SC	SC Task controller on/off	
Rit. Centraggio 2.0 5	Symmetrical machine repositio- ning delay time	Manages machine responsiveness to automatic centring Range: 0 – 1000 Factory set: 5
Chiusura esclusione 37 Si ENUM	Retraction of the excluded side during the half machine yes/no	Enables or disables the closing of the excluded side during half-machine operation  Factory set: Si
O Rincalzatura 17 Sì	Modalità rincalzatura si/no	Enables or disables use of the machine with ridging discs Factory set: No

Tab. 11 Description of user parameter menu



### 4.7.1 Info

Shows information about the software installed in the device, accessible by following this path.

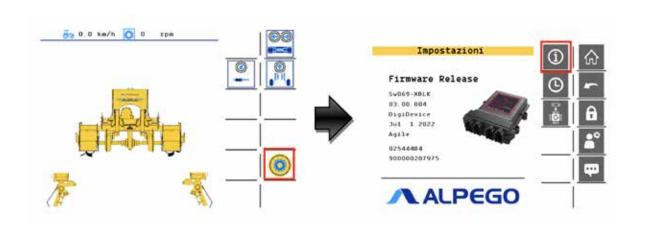


Fig. 17 Info

### **Description**



Fig. 18 Info



# 4.7.2 Software upgrade and technical area

Menus reserved for the manufacturer to carry out software upgrades from a key or to access sensitive machine parameters.

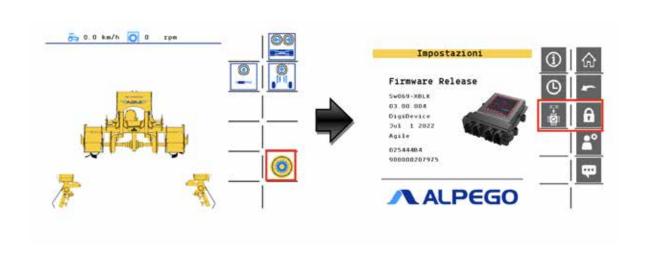


Fig. 19 Software update and technical area



# 5 USE ON FIELD

# 5.1 Work width setting

1. Identify the distance between the rows in centimetres and apply the following formula:

F = Distance between rows in centimetres

L= Work width in centimetres

Row

L=F - 30

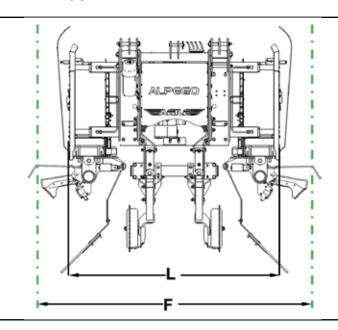


Fig. 20 Work width setting



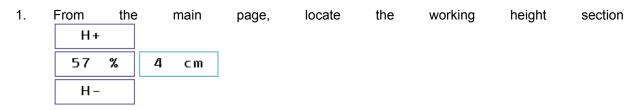
The recommended work distance from the row is 15 cm on both sides. In any case, the operator is free to work at the desired distance

2. From the main page, locate the working width section. L - 200 cm L+

3. Use L- o L+ or write the value directly in the box



# 5.2 Work height setting



- 2. Use H- o H+ or write the value directly in the box 57 %
- 3. You can also view the working depth in centimetres from the box

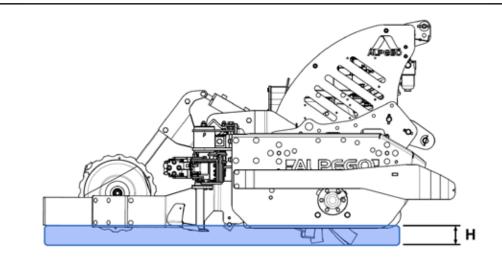


Fig. 21 Work height setting



The "WORK H" parameter is expressed as a percentage and its recommended operating range is 1-60

- Raising it increases the work height (e.g. H=60 maximum working height)
- Lowering it decreases the work height (e.g. H=1 minimum working height)



Inside the box the actual width value is always shown, once the desired value is entered it will be saved and reached when working.



### 5.3 Opening

Set the width and depth, perform the described procedure to start working.

- 1. Give oil to the system using the control on the tractor and set the flow to 30 L/min
- 2. Go inside the vineyard and completely lower the machine





the movement sequence performed by the

- · Total downward thrust of the wheels
- · Machine opening at the set width
- Tool opening
- Set work depth adjustment
- 4. Now, by activating the PTO, it is possible to start working.



The width and depth can be dynamically modified during work, to carry out any type of correction.

# 5.4 Row end closing

- 1. With the corresponding function key it is possible to carry out two types of movements:
- Total downward thrust of the wheels and tool closure at the same time
- · Closing the machine
- 2. Once the headland manoeuvre has been carried out, position yourself on the next row and repeat the procedure no. 3 chapter 5.2



# 5.5 Automatic centring on the row

During work, the system keeps the machine centred on the row even if the operator does not always go straight

When one of the side feelers located on the rotary tillers touches the vineyard, it activates a sequence that moves the machine to the opposite side as long as the feeler remains pressed.

During these phases, a flashing arrow will appear on the bottom-left of the monitor accompanied by an acoustic signal that warns the operator to return to the centre of the row to avoid damage.

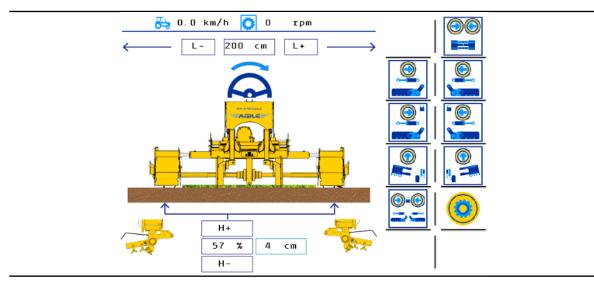


Fig. 22 Automatic centring on the row

Once the feeler is released, the machine returns to the symmetrical position after a parameterised time (seconds). which determines the reactivity of the machine to symmetrical repositioning. .

To change the parameter "CENTRING DEL.": see chapter 4.6.1



If the feelers simultaneously touch both rows or, in any case, are too close to them, it is necessary to decrease the work width.



### 5.6 Manual control of the tools

During work it is possible to manually disable the tools to overcome obstacles or small plants.

There are 3 modes:

Mode	Control	Effect
Temporary closure		Right tool closure
(hold down)		Left tool closure
Closure with lock		Right tool permanent closure
(press once)		Left tool permanent closure
Double closure with lock (press once)	<b>0-0</b>	Permanent closure of both tools

Tab. 12 Manual control of the tools



The tool status is visible on page of work.

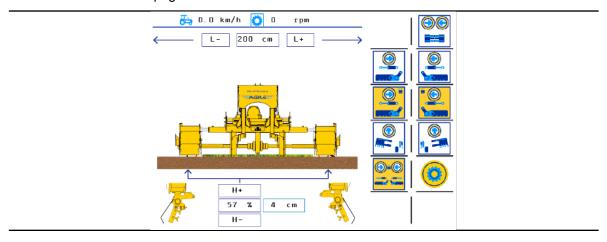


Fig. 23 Manual control of the tools

**50** 



### 5.7 Side exclusions

The system makes it possible to work on one side only, excluding the other thanks to the movement of the wheels.

Lateral exclusions are handled by parameter H 1/2

Defines the height of the working side. Normally, the parameter H 1/2 is slightly higher than H WORK.

H+	
57	%
H-	

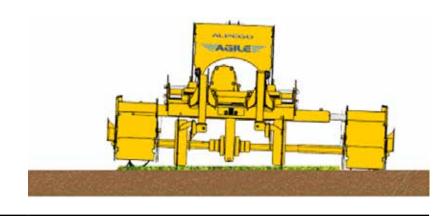


Strictly observe the following order of magnitude

# H 1/2 > WORK H ES. 80 > 70

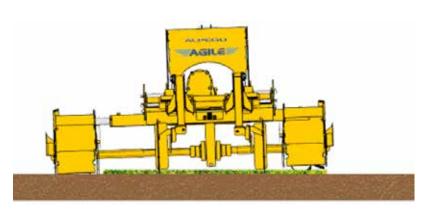
# EXCLUDE LEFT SIDE





### **EXCLUDE RIGHT SIDE**





Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



### **RESTORE LEFT SIDE**



### **RESTORE RIGHT SIDE**



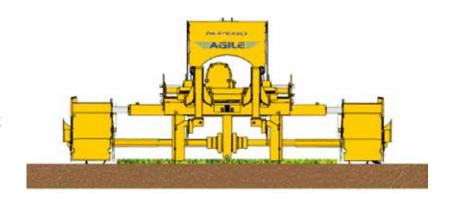


Fig. 24 Side exclusions

Several processes take place when one side of the machine is excluded

- The tool corresponding to the excluded side closes
- · The excluded side lifts up to the limit switch
- · The excluded side is retracted
- The side still working lifts up to the H 1/2 set value

Once all the operations have been performed, it is still possible to adjust the H 1/2 as desired, even during work.

The retraction of the excluded side can be activated/deactivated via the parameter 'CLOSURE EXCLUSION' see Chapter 4.6.1



Retraction makes it easier to move around obstacles; its deactivation is useful if you want to speed up manoeuvring time while still having the right amount of space. The exclusion status visible on the work page.

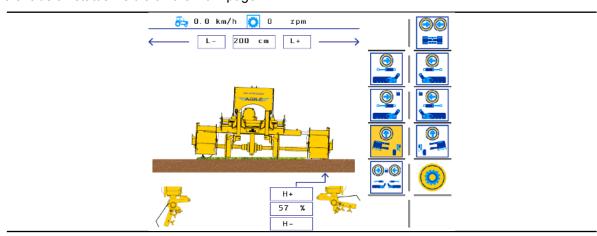


Fig. 25 Side exclusions



# 5.8 Ridging mode

The ridging mode is used to use Agile with ridging discs instead of standard blades.

- Remove bolts (A)
- Position the new tool (C)
- In the case of ridging disc, also remove the rod (B) and adjust its height with bolt (D)

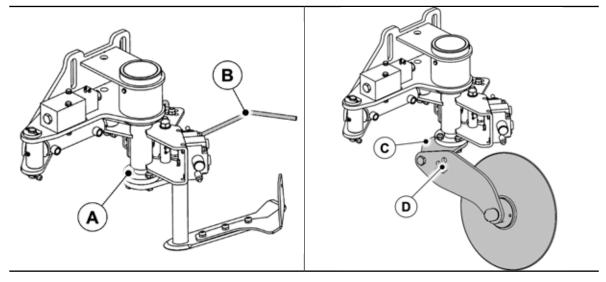


Fig. 26 Ridging mode

After the discs have been mounted, they need to remain stationary in the closed position at all times, so a specific mode must be activated by adjusting the parameter "RIDGING" see chapter 4.6.1

### 5.9 Adjustment of the speed of the wheel cylinders

During automatic operation (when the system follows WORK H, MAX H or MIN H), it is possible to adjust the movement speed by acting on the 2 hydraulic locking knobs (see figure).

- + increases the speed
- decreases the speed



Fig. 27 Hydraulic locking



It is recommended to keep the speed low for proper operation. A speed that is too high during the automatic correction phases could compromise the work of the machine.





All adjustment operations must be carried out with the machine at standstill and the PTO disengaged.

### 5.10 Speed rotor variation

In order to obtain the best possible crumbling of the soil, the following two factors must be taken into consideration:

- The speed pf the tractor.
- The rotation speed of blades rotor

Therefore, it is advisable to use the lowest possible speeds but which can give as a result a good working of the soil. The greater the number of the rotor revolutions, the greater the crumbling degree of the soil but also higher is the power absorbed by the tractor and the wear of the blades.

It is clear that the faster the rotors rotate, the faster the tractor advance; at any rate, make sure not to exceed the speed limit of 8 km/h. The gear box allows the machine to work the soil with different rotor speeds, by using different gear couples available on request and interchangeable with those supplied standard.

In order to invert or substitute the gear couple of the gear box, remove the lid (A) (making sure not to break the gasket), remove the springs (B) and the gears (C and D) and invert their position or replace them with new ones. Then replace the springs (B) and the lid (A) by lightening the M10 screw (E) at not no more than 4Kgm.

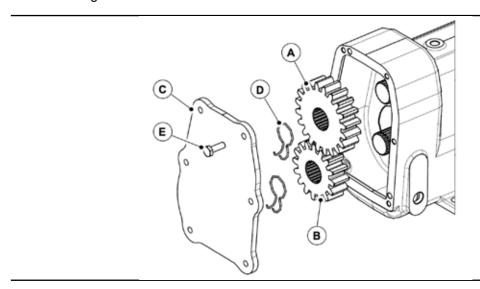


Fig. 28 Speed rotor variation

The figure shown the available couple of gears the couple standard is to make evident on the figure as serial mounting the other couple are available on request.



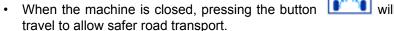
	(@) (@)				Kg	
Code			350 rpm	400 rpm	540 rpm	Kg
SA0A00008	20/16		211	241	325	4
54040000	19/17	rpm	188	215	290	2.5
SA0A00009	17/19		151	172	233	3.5

Tab. 13 Change of machine speed

# 5.11 Ending the work

After finishing the work in the field, proceed as follows:

- Lift the machine from the ground by about 350 mm.
- · Stop the PTO of the tractor gradually.





will raise the wheels to the end of their



On the way from the field to the farm and vice versa, it is absolutely forbidden to transport people, animals or things on the machine.

### 5.12 Uncoupling

To uncouple the machine from the tractor:

- · Disengage tractor power takeoff.
- Lower the equipment onto the ground, switch off the motor and pull the handbrake up.
- · Uncouple the drive shaft from the tractor power takeoff and place it in the support joint.
- Uncouple the connections, following the operations given in section "HITCHING TO TRACTOR".



### 6 MAINTENANCE

### 6.1 Cleaning



Carry out cleaning operations on a weekly basis, or depending on the intensity and frequency of use.

- These operations can be performed in the field, in work intervals or at the company centre if they require longer periods of time and the use of specific tools
- · Perform cleaning activities on a flat and sturdy surface.
- It is a good rule to carry out periodical cleaning of the machine in order to remove foreign bodies (e.g. dust, foreign and soiling substances, etc.) that could excessively wear all the mobile parts of the machine.



All cleaning operations must be carried out with the engine stopped and the ignition key of the tractor removed.

KEEP THE MACHINE CLEAN!

Apart from the considerations concerning the outer appearance of the vehicle, remember that it is easier to detect faults or problems on the chassis or in the hydraulic or electric circuits if the machine is clean.



Clean the machine regularly after the day's work, especially after working on wet or muddy terrain.

- Do not spray water directly on the electromechanical parts or the relative wiring.
- · Clean the jointed areas.
- Clean the mobile parts.
- Clean all the warning and safety stickers so that they are intact and always clearly legible.



As far as possible, use rags or non-metallic brushes for cleaning residues. Otherwise, wash your machine with water and dry it immediately.



Cleaning operations carried out using a high-pressure machine (e.g. high-pressure cleaner) must be carried out at a distance of at least 1 metre, avoiding directing the jet towards electronic parts, paying particular attention to the sensors.

- During cleaning (if necessary), use harmless and non-pollutant detergent substances.
- During cleaning avoid intervening directly with your hands, use protective gloves and brushes or oil-cans for lubricating.



### 6.2 Routine maintenance

- The continuous observance of the following guidelines guarantee a greater efficiency and duration of the machine.
- The intervention timescale described in this manual is relative to normal conditions of utilisation and therefore it has a purely informative purpose.
- Such indications in fact are strictly related to the environment where the machine is used (open spaces, places more or less dusty, and so on).
- Reserve a suitable flat and compact area for the maintenance work.
- · Clean all the grease nipples, lids and caps before maintenance.
- When the maintenance is done mount all the guards again.
- · Do not use aggressive solvents or acids.



Routine maintenance operations must be carried out by authorised personnel. All maintenance operations must be carried out with the ignition key removed from the tractor and the parking brake engaged (if the machine is connected to the tractor).

It is a good idea to keep in mind that manual lifting and movement of loads cannot exceed 30 Kg per individual operator.

Use only and exclusively ORIGINAL SPARE PARTS.

### 6.3 Avoid high pressure fluids

The pressurised fluid sprays penetrate under the skin causing serious injuries

- Discharge the pressure before disconnecting the hydraulic hoses. Tighten all the joints before pressurising the hoses again.
- Use a piece of cardboard to check for leaks.
- Hands and the body must be protected from high pressure fluids by using appropriate personal protective equipment (PPE).

### 6.3.1 Disposal of waste products

All waste products must be disposed of in accordance with the relative regulations.



Collection and disposal of old oil must be carried out in compliance with local regulations. Never pour oil in drains, gutters or on the ground.



Given below is a list of materials and liquids to be taken to the authorised Collection Centres:

- · Depleted lubricant oils.
- Filters.
- · Lubrication grease.

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



Ancillary material for cleaning (e.g. greasy or fuel-soaked rags).

The relative laws in force in each country where the machine is used provide for severe penalties for offenders. Remember that the collection and disposal of depleted oils and the components listed above is regulated in accordance with the Law. Therefore, always take the abovementioned residues to the special Collection Centres.



The disposal of residues and oils in unauthorised dumps or in streams and rivers or in the drainage system is strictly prohibited!

The Manufacturer declines any responsibility in the event the instructions for safety and use are not strictly complied with.

### 6.4 Tightening of the bolts

During the first 8 working hours it is important to check that all the bolts are perfectly tight, because the power generated while the machine is at work, causes the structure to settle. If necessary tighten bolts as indicated in the chart. Repeat this check every 50 working hours.

Check the blades, the tines and the tightness of their bolts on a daily basis.

<b>∑</b> E	M		8.8 [Nm]	10.9 [Nm]	12.9 [Nm]
13	M 8	1.25	25	37	44
13	IVI O	1.00	27	40	47
17	M 10	1.50	50	73	86
17	IVI TO	1.25	53	78	91
19	M 12	1.75	86	127	148
19	IVI 12	1.25	95	139	163
22	M 14	2.00	137	201	235
22	IVI 14	1.50	150	220	257
24	M 16	2.00	214	314	369
24	M 16	1.50	229	336	393
27	M 18	2.50	306	435	509
21	IVI 10	1.50	345	491	575
20	M 20	2.50	432	615	719
30	M 20	1.50	482	687	804
22		2.50	502	843	987
32	M 22	1.50	654	932	1090
26	M 24	3.00	744	1080	1240
36	M 24	2.00	814	1160	1360

Tab. 14 Tightening of the bolts



### 6.5 Lubrication



Read the warnings written on the containers carefully. Always keep oils and greases out of the reach of children. Avoid contact with skin, after use wash well and thoroughly. You have to follow the current anti-pollution laws when handling spent oil.

Check lubricant level when starting the machine for the first time. Clean well these parts or areas before checking, before adding and before replacing lubricants. Before you start working, check the oil level in the gearbox ( use gauge, or level dipstick). If necessary put more oil through the filling tap. Always use the same type of oil. In this regard, see the "LUBRICANTS TO BE USED" chart.



WARNING! Before injecting lubricant into the grease nipples, clean the grease fittings carefully to prevent mud, dust or strange objects from mixing with the grease, which would decrease or even eliminate the lubricating effect.

### 6.6 Lubrication diagram

INTERVAL	OPERATION	POINT TO LUBRICATE
every 8 hours service	<ul> <li>Grease the drive shaft</li> <li>Check the level of the oil in the gearbox or final drive. Top up if the level is low</li> </ul>	A - E - C
every 20 hours service	Grease throught the special grease nipple	E
after the first 30 hours service	Change gearbox oil completely	A - B - C
every 50 hours service	Grease throught the special grease nipple	F
every 100 hours service	Check the oil level and if it is not sufficient, restore it	D
every 400 hours service	Completely change the oil in the gearbox after every 400 hours service.  Clean the drain plugs if they are magnetic	A - B - C - D

**Tab. 15 Lubricants Chart** 



WARNING! MAKE SURE THAT YOU DO NOT POLLUTE THE ENVIRONMENT DURING THE MAINTENANCE OPERATIONS.



When the machine is under heavy working conditions, these kind of interventions should logically increase.

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



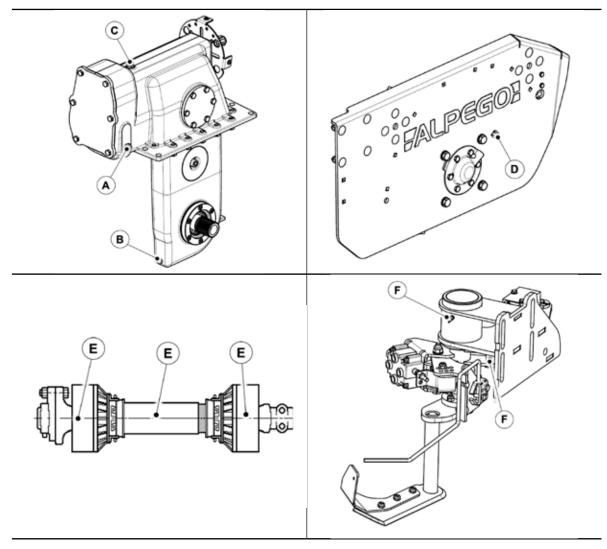


Fig. 29 Lubrication scheme

# **LUBRICANTS CHART**

OIL:

USE	REFERENCE PRODUCT (FIRST FILL FROM ALPEGO)	OIL VISCOSITY INDEX OF ALTERNATIVE PRODUCT	INTERNATIONAL SPECIFICATIONS OF ALTERNATIVE PRODUCT
C (6 litres)	PAKELO GEAR OIL EP/E GL-5 SAE 85W90	SAE 85W90	API GL-5 MIL-L-2105D
D (0.15 litres)	PAKELO GEAR OIL EP/E GL-5 SAE 85W90	SAE 85W90	API GL-5 MIL-L-2105D

Tab. 16 Lubricants chart - OIL



### GREASE:

USE	REFERENCE PRODUCT (FIRST FILL FROM ALPEGO)	ALTERNATIVE PRODUCT CONSISTENCY	NOTE
E-F (0.01 Kg/ grease nipple)	PAKELO EP GREASE NLGI 2	NLGI 2	

Tab. 17 Lubricants chart - GREASE

### 6.7 Safety data sheet for the lubricants

The physical and chemical properties of the lubricants used are detailed on the relative "SAFETY DATA SHEETS" supplied by the respective manufacturers/suppliers.



ALPEGO is not responsible if the oil companies change the chemical composition of the oils, leaving the lubrication type unchanged.



WARNING! If the lubricants indicated in the table are not available, use other brand lubricants that are compatible and have the same characteristics.



WARNING! Never mix different oils.

### 6.8 Storing lubricants

Keep lubricants out of reach of children and persons not qualified and authorised to handle lubricants.



WARNING! For the deposit area and methods, comply with the regulations in force in your country. Never store lubricants in open containers or containers not marked with a label.

### 6.9 Hydraulic cylinders



When the cylinders remain idle for a few months, it is necessary to run them, in order to create an oil film on the rod so as to prevent any future corrosion and rusting. Seals and scraper rings of hydraulic cylinders must be checked and replaced when broken.

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.



### 6.10 Replacing the blades

Agile is equipped with two 6-blade flanges (6 right and 6 left) plus a counterflange and another two 3-blade flanges (3 right and 3 left). Always use original ALPEGO blades.



We recommend observing the same original assembly diagram, replacing one blade at a time and reassembling the new one in the same position as the old one.

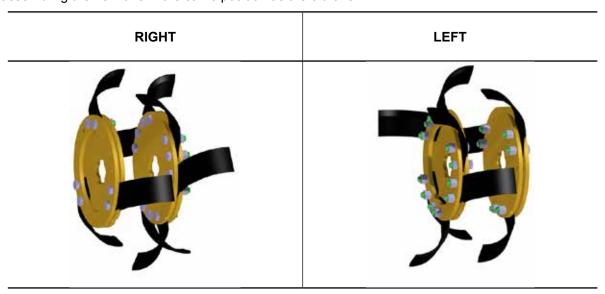


Fig. 30 Replacing the blades

# 6.11 Replacing the hydraulic hoses

The hydraulic oil hoses must be replaced with original ALPEGO hoses having identical features at least every five years, independently of how much the machine has been used.

For the replacement operations, contact ALPEGO directly or an authorised dealer.

### 6.12 Filter cartridge replacement

Filter elements protect the hydraulic system from contamination by solid particles, which are the main cause of malfunction or failure in the hydraulic systems.

Replacement must be carried out whenever the filter clogging alarm is displayed.

Only use original ALPEGO cartridges.

Fig. 31 Filter cartridge

Strictly confidential information - All rights to the contents of this document are reserved. It is forbidden to copy, use, distribute, even partially or otherwise disclose such information, unless expressly authorised by "ALPEGO S.p.a.". Violations will be prosecuted in accordance with the law.

**62** 



### 7 STRUCTURAL DEFORMATION

Incorrect machine movements, anomalous closure of mobile parts, slightly deformed structures, vibrations during movement, etc., could be caused by impact against obstacles or, in some cases, yielding of the structure. In such cases, take the machine to the parking area, disconnect the battery (if present) and contact ALPEGO immediately.

### 7.1 Repair

In the event it is necessary to perform welding interventions the machine must once again undergo inspection tests at ALPEGO premises or at the area dealership.

### 7.2 Non-routine interventions

These are repair and replacement operations of one or more machine components required only after years of good operation and which do not alter the characteristics of the machine.



In case of substantial modifications, the manufacturer cannot be deemed responsible for any dangers that can arise.



### 8 STORING THE IMPLEMENT

When the machine (and its accessory equipment) is to be stored away for long periods, wash and dry it before parking it indoors, in a dry place. If it can only be left parked outdoors, park it on a concrete surface with efficient drainage and cover it with sheets; proceed as follows:

- · Disconnect the machine from the tractor.
- Wash the machine with a water jet, paying attention to the electric parts (if present).
- Lubricate all the components.
- Apply a thin layer of grease on the metal surfaces of the hydraulic pistons.
- · Check for oil leakage.
- · Check for slackened or missing bolts.

After a long period of inactivity, it is good practice to perform an inspection at the manufacturing company or distribution company service centre.

### 8.1 Demolition and disposal



Demolition operations must be carried out by specialised and authorised companies. Before starting the dismantling phase, make sure that there is adequate space around the machine for comfortably carrying out the operations.

In any case, make sure the every part of the machine is disposed of in accordance the laws in force in the country where the machine is used.

### 8.2 Function control register

This register must contain:

- All the inspections and routine maintenance operations indicated in chapter "MAINTENANCE", or those required to ensure proper storage conditions and efficiency for machine safety, either if they are performed by the user (if expert) or other technicians.
- Periodical inspections carried out by authorised body.
- Inspections and special maintenance, in order to ensure proper conditions every time exceptional
  events occur that can affect safety, such as repairs, accidents, natural events or long periods of
  inactivity.

Should space not be sufficient, continue on another sheet which must be similar, photocopied, numbered and attached to the first one.



This register, if filled out properly, is essential for the validity of the warranty and proves that maintenance and inspections indicated in the manual have been performed.



DATE	OPERATIONS AND RESULTS OF THE INSPECTIONS	SIGNATURE OF PERSON RESPONSIBLE

Tab. 18 Table of operations and results of the inspections



# 9 TROUBLESHOOTING

ALARM	DESCRIPTION	CORRECTIVE ACTION
LOW PRESSURE	The hydraulic system is not under pressure	<ul> <li>Give oil to the system using the control on the tractor.</li> <li>Check that the "low pressure" parameter has not been set too high.</li> </ul>
DEVICE ABSENT (+ DEVICE NAME)	The control unit cannot find a particular device in the system already at start-up or when already started it stops receiving its messages	Check the condition of the device and wiring.
FILTER CHECK	The inlet oil filter is clogged	Replace the filter cartridge.
PROBLEM	DESCRIPTION	CORRECTIVE ACTION
NOISE FROM THE TRANSMISSION NEAR THE LIFTING DEVICES	<ul><li>Unsuitable lifting couplings.</li><li>Lifting height too high.</li></ul>	<ul> <li>Set the third point hitch parallel to the lower lifting links.</li> <li>Limit the lifting travel.</li> <li>If the fault persists, disengage the PTO as the machine starts to lift.</li> </ul>
NOISE FROM THE MACHINE AS IT WORKS	<ul> <li>The machine tilts too far forward or backwards as it works.</li> <li>Machine with insufficient side stability.</li> </ul>	<ul> <li>Lengthen or shorten the third point hitch so that the upper surface of the machineis parallel to the ground tilled (the PTO connections of the tractor and machine must be parallel).</li> <li>Ensure that the machine remains stable by means of the rods of the lower lift links.</li> </ul>
POWER DRAW TOO HIGH ON DRY GROUND	<ul><li>Too much soil tilled.</li><li>Soil tilling too deep.</li><li>Worn blades.</li></ul>	<ul> <li>Reduce the work depth</li> <li>Replace the complete set of cultivator blades to ensure that the rotor is stable.</li> <li>Reduce the forward speed</li> </ul>
POWER DRAW TOO HIGH ON WET GROUND	<ul><li>Too much soil tilled.</li><li>Soil tilling too deep.</li></ul>	Reduce the work depth
SOIL CRUMBLED TO AN EXCESSIVE EXTENT	Ground speed too low.	Increase the ground speed.
SOIL BROKEN INTO EXCESSIVELY LARGE CLODS	<ul><li>Ground speed too high.</li><li>Soil too wet.</li></ul>	<ul><li>Reduce the forward speed.</li><li>Do not till soil that is too wet.</li></ul>

Tab. 19 Troubleshooting



ROTOR CLOGGED	<ul> <li>Soil too wet.</li> <li>Ground speed too high.</li> <li>The blades retain the tilled soil.</li> <li>Very tall grass and/or excessively long plant cuttings.</li> </ul>	<ul> <li>Do not till soil that is too wet.</li> <li>Reduce the forward speed.</li> <li>Do not work when the grass is too high or the plant cuttings are very long. If necessary, remove the clogged plants from the supports at the sides of the rotor to prevent them from overheating.</li> </ul>
THE MACHINE JOLTS OVER THE GROUND OR VIBRATES	<ul> <li>Foreign bodies wedged between the blades.</li> <li>Blades assembled incorrectly without respecting the helical positions or with blunt edges penetrating the soil first.</li> <li>Worn or broken blades.</li> <li>Rotor deformation caused by hits from strange objects in the central part while working.</li> </ul>	<ul> <li>Free the rotor from foreign bodies.</li> <li>Disassemble the set of blades and fit them back in place correctly.</li> <li>Replace the complete set of blades.</li> <li>Replace the rotor.</li> </ul>
SOIL TILLING DEPTH TOO SHALLOW	<ul><li>Insufficient work depth set</li><li>Insufficient tractor power.</li><li>Soil too hard.</li></ul>	<ul> <li>Adjust the depth set on the monitor</li> <li>Reduce the forward speed.</li> </ul>
THE HYDRAULICS DO NOT WORK	<ul> <li>Incorrect connection of the quick couplings</li> <li>Insufficient power supply</li> <li>Absent or insufficient oil pressure</li> <li>Minimum pressure set on the monitor too high</li> <li>Disconnected or damaged solenoid valve wiring.</li> </ul>	Check for any alarms when switching on the monitor, then:  Check the connection of the hydraulic hoses on the tractor  Activate the oil distributor  Check the power supply voltage (12v)  Set the correct minimum pressure (see chapter "parameters")  Check all wiring and that the LED on the valve connector lights up according to the function.

Tab. 19 Troubleshooting



THE MACHINE DOES NOT RESPOND TO THE SET WIDTH OR DEPTH VALUES OR DOES NOT PERFORM SPECIFIC MOVEMENTS (E.G. EXCLUSION)	<ul> <li>Wiring damage</li> <li>Faulty ultrasonic sensor(s)</li> <li>Foreign body in front of the sensor(s)</li> <li>Incorrect factory parameters</li> <li>Breakage or excessive play on the lever mechanisms connecting the conveyor to the sensor striker (depth sensors only)</li> </ul>	Check for any alarms when switching on the monitor, then:  Check the wiring and replace any damaged wires  Check if the sensor light is lit yellow + green  Check the status of the aforementioned lever mechanisms (depth sensors only)  Replace the sensor(s)  if the problem persists, contact the assistance
THE ROTARY TILLER FEELER(S) DO NOT RESPOND TO THE DEMANDS	<ul> <li>Wiring damage</li> <li>Distance too wide between sensor and striker</li> <li>Damaged striker</li> <li>Faulty inductive sensor(s)</li> </ul>	Check for any alarms when switching on the monitor, then:  Check the wiring and replace any damaged wires  Approach the sensor to the striker  Check the striker integrity  Replace the sensor
THE TOOL DOES NOT OPEN	<ul> <li>Ridging mode active</li> <li>Accidental closing</li> <li>Insufficient oil flow</li> <li>Damaged 6-way valve</li> </ul>	<ul> <li>Disable the ridging mode</li> <li>Check not to have closed the tool</li> <li>Check the presence of 30 L/min from the tractor</li> <li>Check the state of the 6-way valve</li> </ul>
THE TOOL DOES NOT RESPOND TO THE ROD DEMANDS	<ul> <li>Worn or damaged rod lever mechanisms</li> <li>Incorrect rod adjustment</li> <li>Plants too small</li> <li>Insufficient oil flow</li> <li>Damaged tool distributor</li> </ul>	<ul> <li>Check the lever mechanisms</li> <li>Adjust the rod height</li> <li>Close the tool with the special control in the presence of plants that are too small</li> <li>Check the presence of 30 L/min from the tractor</li> <li>Check the operation of the tool distributor</li> </ul>

Tab. 19 Troubleshooting



**69** 



Note



Note



### Alpego S.p.a con Socio Unico

Via Giovanni e Giuseppe Cenzato, 9 36045 - Lonigo (VI) Italy Tel: 0444 646100 Mail: info@alpego.com www.alpego.com

Choose only **ALPEGO** original SPARE PARTS WW.ALPEGO.COM