

STONE BURIER

FISL



OPERATING AND MAINTENANCE MANUAL

COLLARI

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1. STATEMENT OF CONFORMITY

CE Statement of Conformity

in accordance with Directive 2006/42/CE
and subsequent modifications

The undersigned GIAN LUCA COLLARI, as legal representative of the company:

COLLARI s.n.c. di Collari Gian Luca e Valeria
Via Provinciale sud 24 A/B
40050 Castello d'Argile (BO)
ITALY

Declares under his own responsibility that the machine:

Stone Burier **COLLARI** Mod. FISL_____ Serial N°: _____

Conforms with:

- the Essential Safety and Health Safeguarding Requisites in accordance with EEC Directive :
 - 2006/42/CE
 - 91/368
 - 93/44
 - 93/68

And subsequent modification

- Internal Constructional Specifications
- National Standards and Specifications:
 - DL 81 dated on 09/04/2008.

The following were consulted for verification of Conformity in accordance with the above Directives:

- EN ISO 4254-1-2015
- EN ISO 4254-5-2018

BEFORE STARTING

2. GUARANTEE VALIDITY AND EXPIRY

VALIDITY

If not agreed otherwise in the purchase contract the machine guarantee lasts 12 months from date of delivery to the user and covers all defects in materials or construction. Parts acknowledged to be defective will be supplied free. The costs of transport and labour necessary for replacement are not included in the guarantee. All cardan shafts and bearings which follow the relevant directives of their respective manufacturers are excluded from the guarantee.

The **COLLARI** company will in no case be responsible with regard to the location and installation of the machine.

The guarantee does not cover defects in machine conformity defects or problems due to normal wear and tear of parts which by their very nature are subject to rapid and continuous wear.

On taking delivery, check that there has been no damage during transport and that the machine is complete with all its accessories.

After having tried and examined the machine the user must communicate, in detail and in writing, the nature of any conformity defects or other faults encountered.

Complaints are accepted only in writing and within 15 days of delivery.

This guarantee excludes all further responsibility of the **COLLARI** company with regard to the goods supplied and excludes any responsibility for lost profits and/or production.

In particular, the user cannot make other requests for compensation, reduction in purchase price or cancellation of the contract.

Once the guarantee has expired, no claim may be made against the **COLLARI** company.

EXPIRY

The guarantee shall become absolutely null and void in the following cases:

- If the necessary maintenance on the cardan shaft safety clutch has not been performed.
- If the purchaser or third parties carry out modifications to the machine without our consent.
- If repairs are carried out with non-original spare parts without our consent.
- Use of tractor with power over the limits for the machine (see chapter "9. TECHNICAL DATA AND CHARACTERISTICS").
- If the machine or tractor is mishandled or if the directions of this manual are not observed.
- If the instructions in this manual are not followed.
- If the user fails to permit any reasonable check requested by **COLLARI**.
- If the user fails to send, at his own expense and within 8 days from our request, the part considered defective.

3. FOREWORD

This manual must be read **BEFORE STARTING TO USE THE MACHINE.**

Otherwise, the manufacturer shall not be responsible for damage caused to persons or property or to the machine itself.

This manual describes use and maintenance rules and gives the necessary instructions for correct use of the machine. It also gives a spare part list.

In general use of the machine, you must be aware that all the parts can cause serious damage to persons or property if used incorrectly or carelessly.

In order to operate in maximum safety and with all necessary knowledge it's indispensable that:

- All the documentation supplied with the machine on delivery is available: it's an integral part of the machine and must remain with the machine also in the case of a change in ownership.
- The said documentation has been read and the instructions contained therein applied.
- A suitably trained operator is assigned to the machine.

To keep machine safety requirements unaltered, the user must:

- Absolutely avoid incorrect use of the machine.
- Not override or remove the protective or safety devices.
- Regularly carry out all envisaged maintenance.
- Use only original spare parts and recommended lubricants.
- Immediately replace all damaged protective or safety devices.

In the manual you will find all the instructions necessary for correct use of the machine, together with the qualification of operating personnel, whom we shall call:

OPERATOR: Person trained in normal use of the machine who can also carry out adjustments and small maintenance jobs.

TECHNICIAN: Qualified person who carries out more complex adjustment, maintenance and repair.

Correct use and regular maintenance guarantee good functioning of the machine over the years.

The rules in this manual must be scrupulously observed because the **COLLARI** company **declines all responsibility for their non-observance or for negligence in use or maintenance.**

The **COLLARI** company is at your disposal for any clarifications and for technical assistance with view to obtaining best machine performance.

COLLARI reserves the right to carry out all necessary modifications of the product without the obligation to promptly update this documentation.

Any controversy must refer to the text in Italian.

4. SAFETY AND ACCIDENT PREVENTION REGULATIONS

Reading this manual you will find various danger signals that draw attention to parts that are important for the safety of persons and the machine:

DANGER

Indicates a serious danger which could cause serious harm or death to persons

WARNING

Indicates a danger of serious harm to persons and damage to the machine

ATTENTION

Indicates a danger that the machine could be damaged to a greater or lesser degree.

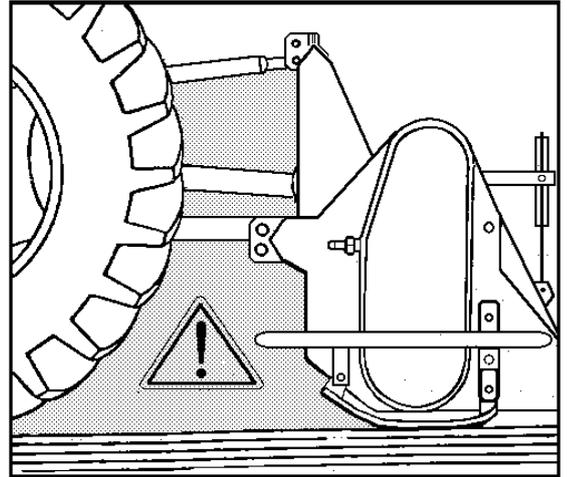
The instructions in this manual must be read carefully. The **COLLARI** company and its agencies are at your disposal for any clarifications regarding use of the machine.

COLLARI declines all responsibility for anything deriving from inobservance of the rules described below :

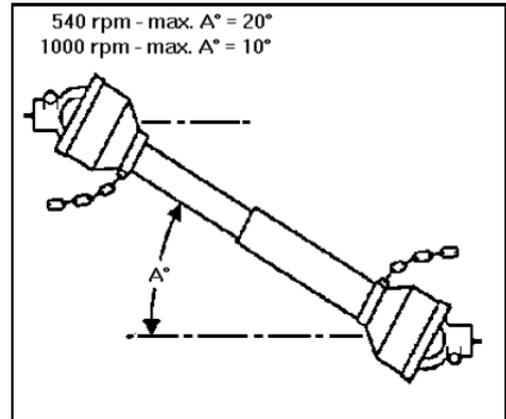
- 1 Pay maximum attention to the danger symbols on the machine and in this manual.
- 2 Always keep the machine's danger signals and ID plates clean and clearly visible.
- 3 Any type of machine adjustment or maintenance must be carried out with the motor stopped, the tractor with emergency brake pulled and rear lifting device blocked, lower gear and the tires blocked.
- 4 Do not stay close to the machine or in proximity of the rotating/moving parts of the machine, keep a safety distance (20 meters) from the operating area of the machine.
- 5 While using the machine, wear appropriate clothing with no projecting or hanging parts and as close fitting as possible in order to avoid getting caught up in rotating or projecting parts.
- 6 Before beginning work, get familiar with all the controls and all the adjustment systems.
- 7 Running of the machine must be entrusted to an expert **OPERATOR**, well trained, with driver license as required by law and in good health.
- 8 It is not allowed the transportation of animals or goods on the machine since it has not been designed for this.
- 9 When the machine is driven on public roads, the local regulation/laws should be taken into consideration as far as longitudinal or lateral oversized dimension, axis loads, lifting device capacity, lights, brakes and other devices not specified here.
- 10 In case of necessity and respecting the limits specified in the local traffic laws, the appropriate ballasts can be installed in order to balance the loads on the axis of the machine.
- 11 The conduct of a tractor can be strongly affected by the equipments carried or pulled. It is therefore necessary to keep extreme caution when driving a tractor with such equipments since the capacity of the vehicle to break, to maintain the direction of drive, to well bear the different conditions of the road can be affected by the presence of these equipments that can cause a modification in the position of the COG of the overall vehicle.
- 12 When the tractor is driven on public roads check the cleanliness of the machine in order to avoid to loose clods on the ground, they can be dangerous to other vehicles.
- 13 Every equipment or part of it necessary to the transportation should bear the signs required by the local traffic laws.
- 14 Never leave the tractor unattended with the engine turned on. Before you leave it, disconnect the power takeoff, put the machine on the ground, turn off the engine, put the lower gear, pull the emergency brake and remove the key from the panel.
- 15 Before any transfer, lift the machine, put the lifting device in the block position and set the lifting arms by means of the relative chains or tight-tenders to prevent an excessive side swinging of the machine.
- 16 Check the integrity and function of all the safety equipments before you start to drive the tractor. All the

safety protections shall be maintained in perfect conditions, efficient and functional.

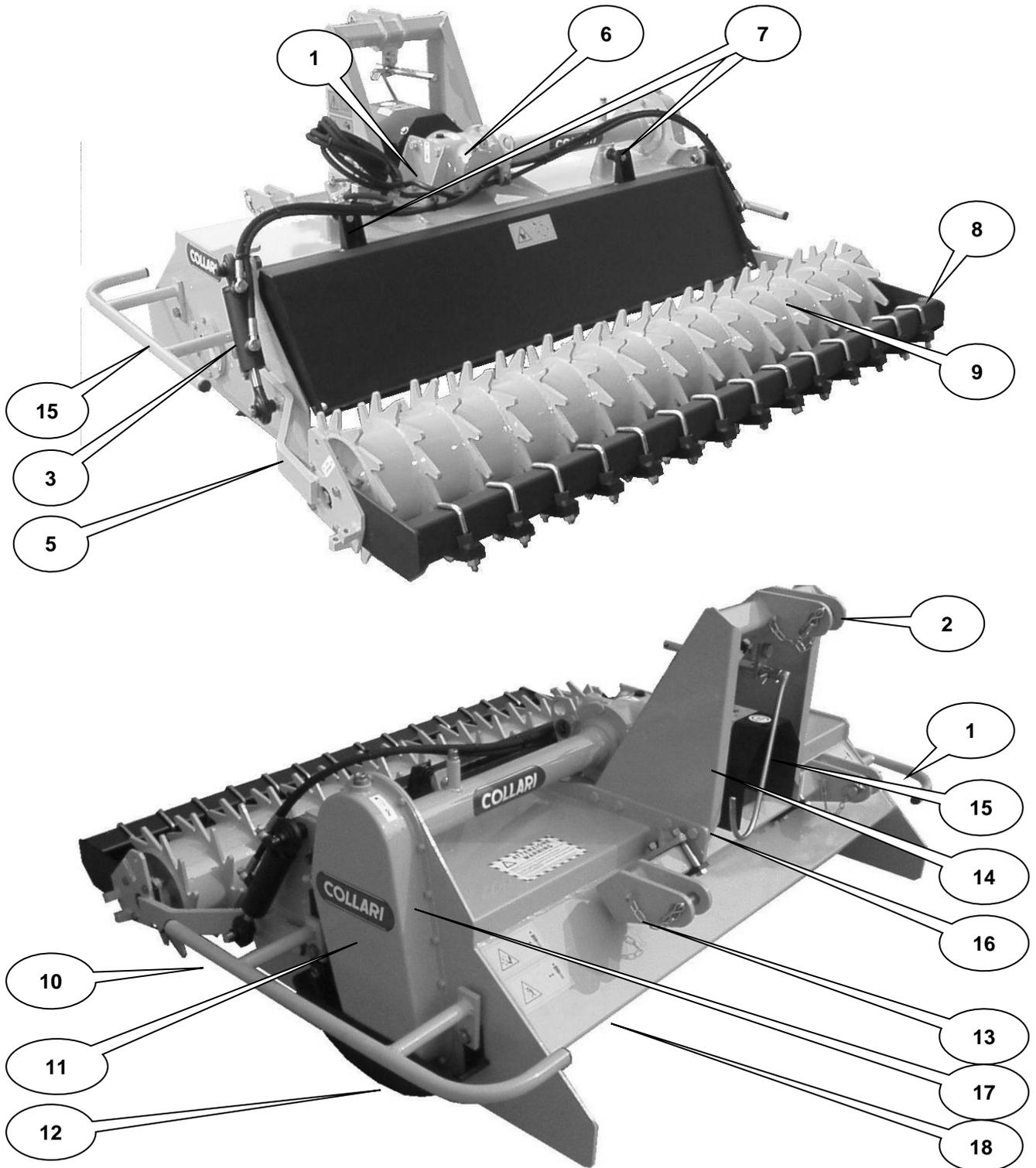
- 17 Before you start the engine of the tractor the gear shall be in neutral position and the power takeoff shall be disconnected.
- 18 Connect the machine to an adequate tractor as far as power transmitted as already indicated; the machine has not been designed for higher level of power, all mechanical parts will undergo premature braking or serious damages if the above will not be followed and the guarantee will become null.
- 19 The machine shall be connected to a lifting device conform to the normative (1st, 2nd or 3rd Cat. depending on the model).
- 20 During the coupling of the machine with the tractor it is necessary to keep the maximum attention and caution.
- 21 Check in advance that the category of the lifting connection of the machine is the same of the lifting device in the tractor and the capacity of the lifting device considering the position of the COG of the machine.
- 22 The area between tractor and the machine has to be considered very dangerous, do not stay or go by this area when the engine of the tractor is turned on or the power takeoff (PTO) ENGAGED. Furthermore, it is necessary to pull the stationary/emergency brake, to put the lower gear and place under the tires the required blockers to prevent movements of the vehicle. Keep extreme caution when you operate within the above described area (see picture aside).
- 23 Check the compatibility of the connection that should be of the same type between tractor and machine takeoff. Substitution with a suitable connection is required if the above is not complied.
- 24 The machine shall be operated only and exclusively with the transmission shaft supplied by the constructor that includes a safety device against overloads and safety protections to be hooked always with the anti-rotation chain in the holes located on the edge of the above mentioned protection; keep always extreme caution to the cardan shaft while rotating, keep the protections always efficient and perform the periodic checks, verify that the same protections are not in touch with other parts neither during transportation or work. Always check that the cardan shaft is correctly assembled, the power limiter device shall always be mounted on the machine.
- 25 Every maintenance job on the cardan shaft shall be made with the engine turned off, stationary brake inserted, lower gear, power takeoff disconnected and key removed from the control panel.
- 26 Before connecting the power takeoff in order to start to operate the machine, always check for the presence of people or animals nearby the machine, do not start to operate if the area within 20 meters of the machine is not free, and keep the power takeoff disconnected until the area is clear. Furthermore verify always that the speed of the power takeoff is not over the limit of the machine, do not exceed the limit indicated.
- 27 Do not connect the power takeoff when the engine is turned off.



- 28 During the operation disconnect the power takeoff in case of stop and or if you lift the machine, the angle of the cardan shaft is more than 10°- 20° degrees depending on the speed of the same (see picture on the side).
- 29 Before you connect or disconnect the machine, put the control lever of the lifting device in the block position.
- 30 Always put the cardan shaft on the supplied support when the same is disassembled from the machine and cover the power takeoff with the provided sheath or protection cover.
- 31 Do not attempt to extract or introduce any kind of part when the machine is in operation.
- 32 Avoid if possible to lift the machine more than 35 cm over the ground level.
- 33 During the maintenance works, if the machine has to be lifted it is necessary to provide suitable supports underneath the machine; the engine shall be turned off, stationary brake on, the key removed from the panel and the cardan shaft disassembled.
- 34 Always and exclusively use the original spare parts or conform with the commercial items and use the lubricants indicated in this manual.
- 35 Periodically check the intactness and presence of all the safety and protective devices before starting up the machine. All the safety devices must be kept in perfect conditions of efficiency and functionality. Damaged protective devices or broken safety devices must be replaced immediately.
- 36 Pay maximum attention and take greatest care during all phases of the work process.
- 37 It is binding to use adequate protection means such as anti-injury gloves and shoes, during each processing phase.
- 38 It is absolutely forbidden to tamper with the protection and safety devices in any way. Any tampering will exonerate **COLLARI** from any type of responsibility.
- 39 The rules in this manual must be scrupulously observed.



5. MAIN PARTS



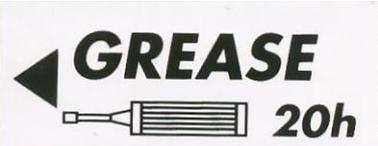
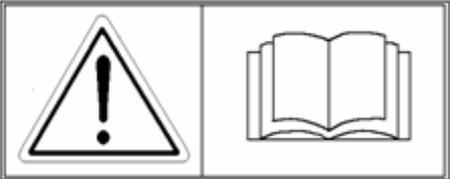
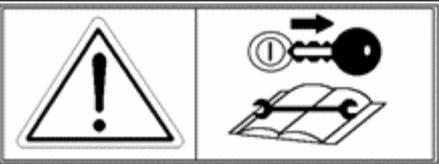
MAIN PARTS

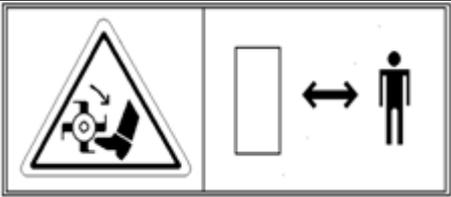
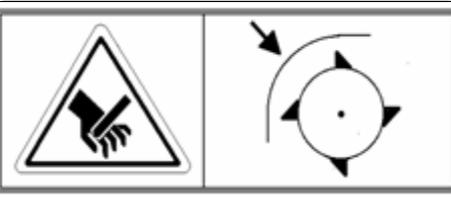
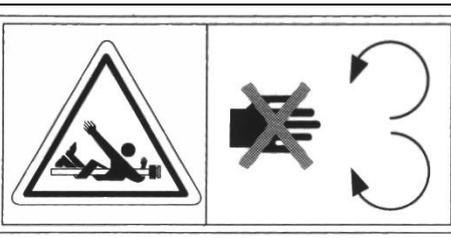
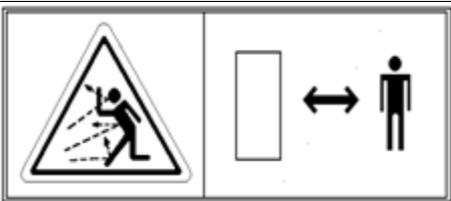
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|----|--|----|---|
| 1 | Right lateral safety protection | 11 | Chain lateral drive with chain tightening screw |
| 2 | 3 rd point connection | 12 | Lateral Slider |
| 3 | Screw or hydraulic cylinder for work depth setting | 13 | Lifting adjustable device connection 1 st - 2 nd category |
| 5 | Levelling roller lateral frame | 14 | Power takeoff 1" 3/8 Z6 |
| 6 | Gear box | 15 | P.T.O. protection |
| 7 | Arm for rear bonnet setting | 16 | Cardan support |
| 8 | Levelling roller scraper | 17 | Machine frame |
| 9 | Rear levelling roller | 18 | Hoes / tools rotor |
| 10 | Left lateral safety protection | | |

COLLARI

6. INFORMATIVE AND DANGER SIGNS

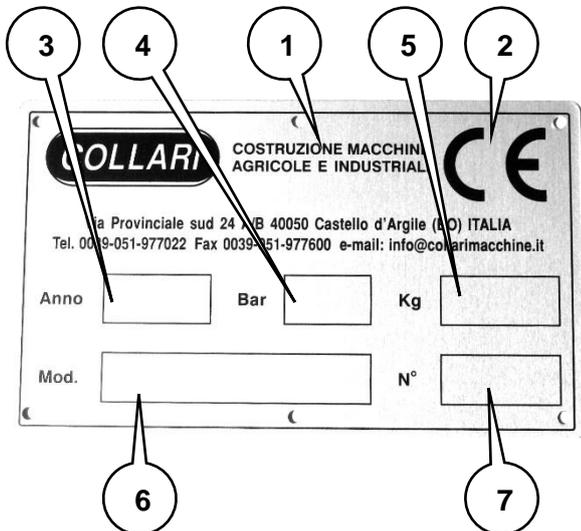
You will find various stickers on the machine, some of which are merely informative (white or green) while others refer to danger (yellow) or warning (orange).

INFORMATIVE SIGNS	DESCRIPTION	POSITION
	OIL INLET	A
	OIL LEVEL	B
	OIL DRAIN	C
	GREASE FILL POINT	D
	HOISTING POINT	E
	SPEED AND DIRECTION OF ROTATION POWER TAKEOFF	F
ATTENTION SIGNS	DESCRIPTION	POSITION
	READ THE MANUAL BEFORE OPERATING	G
	BEFORE ANY MAINTENANCE, UNLOAD THE MACHINE, TURN OFF THE ENGINE, TAKE OFF THE KEYS AND READ THE MAINTENANCE MANUAL	H

DANGER SIGNS	DESCRIPTION	POSITION
	<p>INJURIES DANGER TO LOW LIMBS. KEEP A SAFETY DISTANCE</p>	<p>K</p>
	<p>INJURIES DANGER TO LIMBS. KEEP A SAFETY DISTANCE DO NOT REMOVE THE SAFETY PROTECTIONS</p>	<p>L</p>
	<p>CARDAN JOINT HOOKING DANGER. KEEP A SAFETY DISTANCE DO NOT REMOVE THE SAFETY PROTECTIONS</p>	<p>M</p>
	<p>PROJECTED OBJECTS DANGER. KEEP A SAFETY DISTANCE OF 20 METERS</p>	<p>N</p>

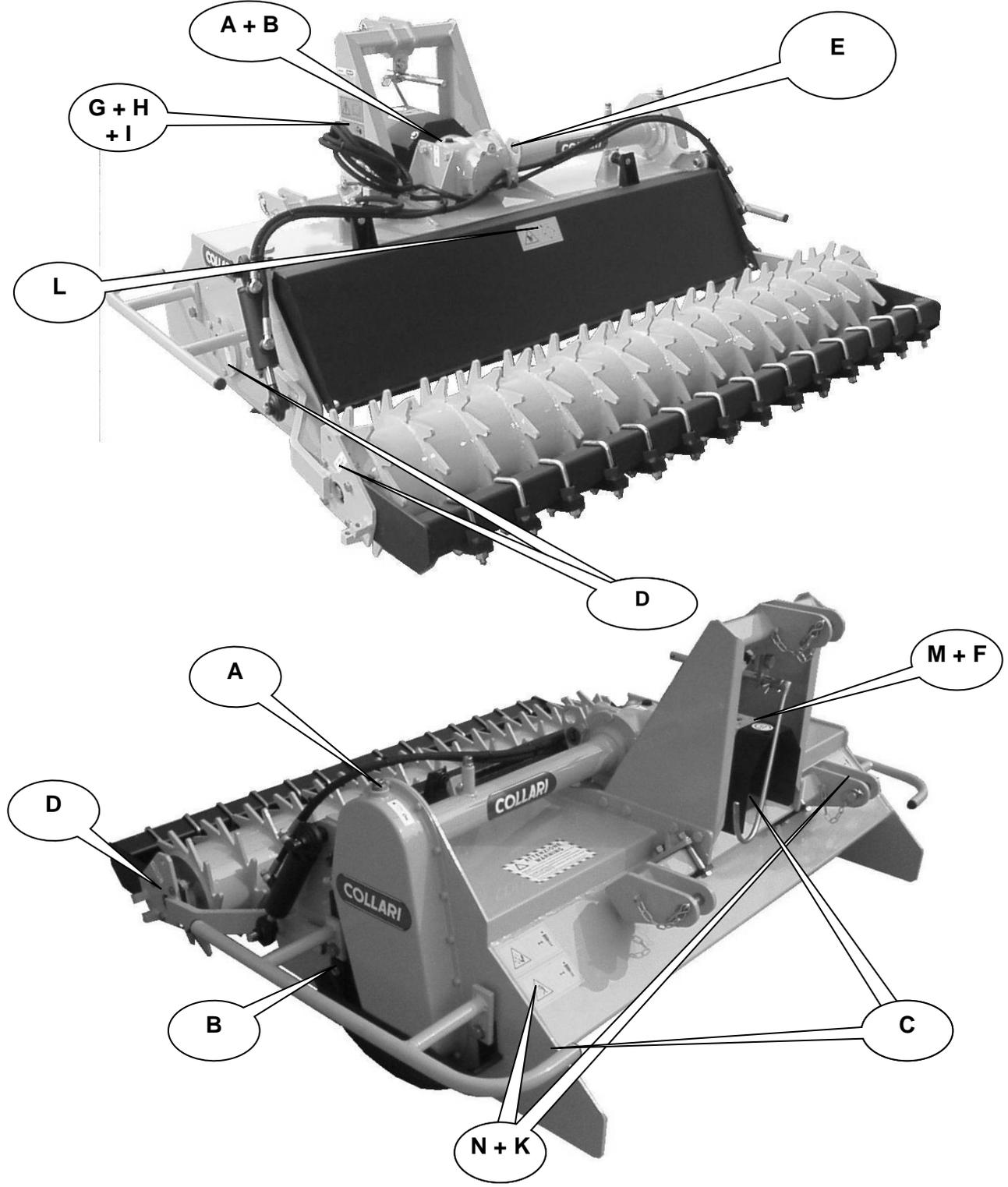
6.1 ID PLATE

An aluminium ID plate is firmly fixed to the machine (position I). It bears general identification data together with the CE mark which certifies the machine's conformity with EEC Directive 2006/42/CE.



- (1) Manufacturer Data
- (2) CE Marking
- (3) Year of construction
- (4) Maximum pressure of hydraulic or pneumatic system (depending on the type of machine)
- (5) Weight KG
- (6) Model
- (7) Serial N°

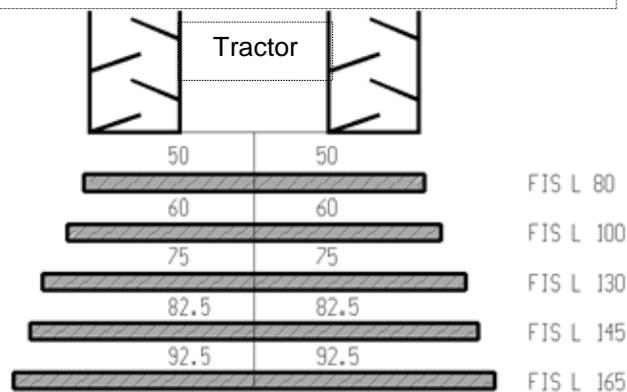
7. POSITION OF INFORMATIVE SIGNS AND ID PLATE



9. TECHNICAL DATA AND CHARACTERISTICS

Description	Model				
	FISL080	FISL100	FISL130	FISL145	FISL165
WORKING WIDTH AND DEPTH, POWER ABSORPTION AND WEIGHT					
Working Width CM	80	100	130	145	165
KW	18↔25	18↔25	18↔25	18↔36	18↔36
HP	25↔35	25↔35	25↔35	25↔50	25↔50
Depth CM	15	15	15	15	15
Number Tools ¹	16	24	28	32	36
Weight KG ²	260	290	330	350	380
OVERALL DIMENSIONS					
Width CM	105	125	155	170	190
Lenght CM	132	132	132	132	132
Height CM	90	90	90	90	90

FISL LATERAL OVERHANG REAR SIDE
Measures in centimetres



Lifting connection Category: 1st
 Noise level at no load: dB Lpam 83 (A) - LwA 98 (A)
 Maximum temperature level of power transmission parts: ... 40° - 45° Celsius
 Power Take Off 540 RPM, speed rotor 240 RPM

Painting:

Frame and fixed parts: Bi-component epoxy undercoat
 Bi-component polyurethane external enamel coat
 colour yellow RAL 1028 (others on request)

Various parts: Matt black synthetic enamel.

¹ Rotor with: 4 tools per flange (standard)

² Weight without optional accessories, with standard equipment

10. USE OF THE MACHINE

The machine you just bought used to work the soil is called "Stone Burier", it can be used only in conjunction with a tractor with a rear three point linking and is operated by means of a cardan joint for the power transmission, it can be used either in open field or between orchards, to prepare the ground for further sowing and to bury stones and pebbles less than 10 cm in diameter (in order to work lands with large stones it is absolutely necessary to remove those stones larger than what indicated above to prevent the machine from damages and overloads).

The machine operates lifting the ground from the preset depth, the soil will be thrown against a grid made of steel springs that will separate the stones and large clods depositing them first on the bottom of the dig and afterwards depositing the rest of fine ground over them, levelled by a rear bonnet and a final levelling rotor.

It is also possible to apply in the back a sower for lawns so that in one step both works preparation and sowing are possible.

In general use of the machine you must be aware that all the parts can cause serious damage to persons or property if used incorrectly or carelessly.

The characteristics of the soils (soil compaction, the presence of rocks or roots, moisture content and uneven ground) shall never cause safety problems to the operator.

COLLARI assumes no responsibility for damages to objects or persons. The customer shall take care to verify the soil features to be tilled in order to avoid any possible risks to third persons' or to the operator's safety.

During load operation it is necessary to strictly follow the security provisions of the lifting system.

If during operation the machine produces noises, smoke or dust, the operator shall provide, under his responsibility, for all the appropriate protection devices for the operator (DPI).

USES OTHER THAN THOSE INDICATED ARE FORBIDDEN

11. HOISTING AND TRANSPORT

When the machine is to be hoisted or transported, use hoisting equipment with the necessary capacity and apply the hoisting hook only at the points indicated by the green sticker (see chapter "7. POSITION OF INFORMATIVE SIGNS AND ID PLATE"). Verify that the rope or lifting chain is perpendicular to the ground before you put it in tension in order to avoid dangerous swingings of the load.

In case the transportation is made by means of a motor vehicle on the road, check that the latter has the necessary load capacity and the lateral dimensions are within the limits imposed by the local traffic laws. Fasten accurately the machine and all the related accessories (example: cardan shft and its protections).

USE AND INSTALLATION RULES

13. BEFORE USE

Before using the machine the user shall check that all the protections and the safety devices are present and perfectly working, that all the involved and exploitable parts are employable and efficient, and that the greasing parts have been properly lubricated (to this purpose see the chapter "MAINTENANCE").

All parts must comply with this manual.

The user shall not use the machine until the faulty or damaged part has been removed, or if a part does not comply with this manual for use and maintenance.

14. CONNECTION TO THE TRACTOR

Personnel Required: OPERATOR

The machine can be assembled to tractors with a power and a rear lifter with controlled strain and a universal 3-points hitch, as indicated in chapter "9. TECHNICAL DATA AND CHARACTERISTICS".

Since tractors have different dimensions, during the first assembly it should be checked if the lifter dimensions correspond to those of the machine's hitch. If they are different contact our agent or **COLLARI** directly to provide for the related modifications or adjustments.

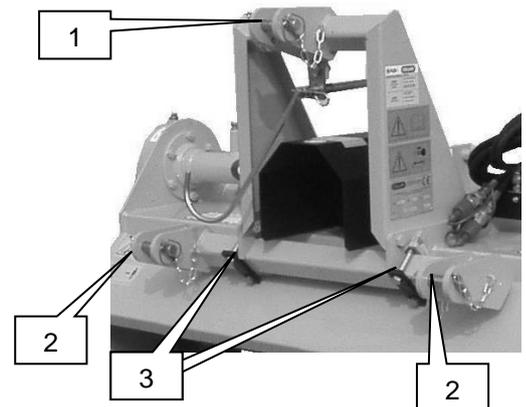
15. ATTACHING THE MACHINE TO THE TRACTOR

Personnel Required: OPERATOR

DANGER

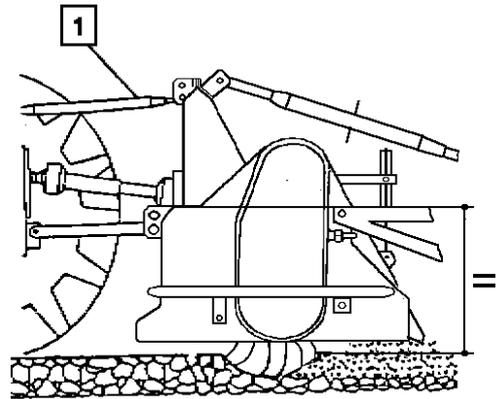
Dangerous operation: follow the instruction carefully.

- 1- Place the machine and the tractor on a levelled flat field.
- 2- Dismount the protection bonnet of the machine, insert the cardan shaft with safety clutch on the machine side, tighten the blocking screws on the hub then reassemble the protection bonnet (to be done only during the first connection to the tractor).
- 3- Hook the anti-rotation chain of the cardan shaft protection to the hole located on the protection bonnet.
- 4- If the tractor is provided with a quick disconnect system, insert in the connecting supports, ('1' and '2' on the side picture) by means of the supplied pivot, the spherical joints and block the pivot with the pin.
- 5- In case you want to move lifting connection laterally (see '2' picture aside) on the right or on the left, for getting the machine more projecting over one side of the tractor, proceed by unscrewing slightly the four fixing screws (see '3' picture aside), then move the lifting connection bar to the desired direction (maximum 10 cm), then firmly tighten the screws for blocking the bar to the new location.
- 6- In reverse gear with the tractor get close to the machine in such a way that the connecting points of the machine with the three point linking device of the tractor can match easily.
- 7- Place the lifting bars inside the connecting supports ('2' in the above picture), insert the pivot in the hole and block it with the pin.
- 8- If the tractor is provided with a quick disconnect system it will be sufficient to position the hook of the lifting arms underneath the spherical joints and raise the lifting arms until the sphere get blocked automatically. Afterwards proceed with the third point fixation.
- 9- Block both lifting arms by means of the lateral tight-tenders in order to avoid lateral swingings when the machine is lifted.
- 10- Insert on the tractor side the cardan shaft checking that the button yoke blocks it and verify that the shaft cannot slip off the power takeoff. Hook the anti-rotation chain in the hole of the protection bonnet and

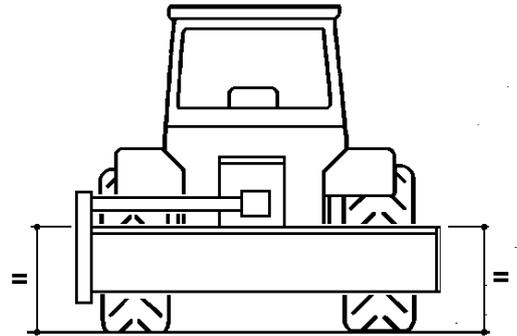


check that the same is free to rotate.

- 11- Connect the upper third point and set the length in order to have the machine frame parallel to the ground, this is the best working condition for the machine itself and the cardan shaft operation (see picture). Place the third point arm in such a way that during operation the same will be slightly tilted upward, for this purpose connect lower holes on the tractor and/or higher on the machine ('1' on the side picture).
- 12- If available, connect the hydraulic hoses of the machine to the tractor distributor with quick connect couplings 1/2".
- 13- Check carefully that the plumbing have been done correctly and all pivot have been fixed and blocked with the pins.



- 14- By means of the lifter, raise the machine and set the lifting arms in order to keep the machine frame as much as possible horizontal to the ground as shown in the picture aside.



15.1 CARDAN SHAFT ADAPTERS AND SETTINGS

Personnel Required: TECHNICIAN

When you receive the machine, that has been provided with a telescopic cardan shaft of standard length, or when you change the tractor, it is possible that you need to adjust the cardan shaft length.

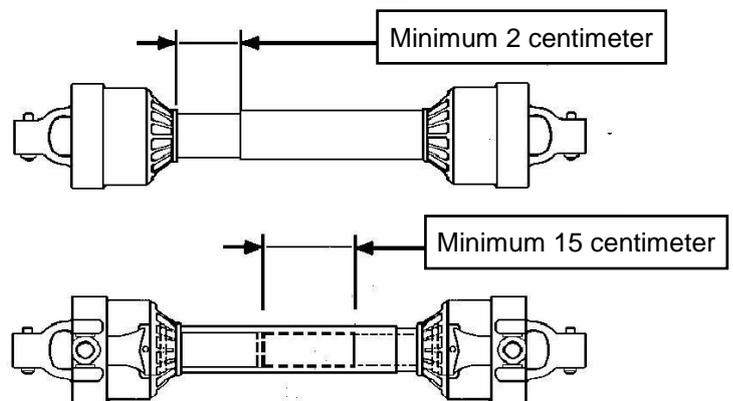
In order to proceed with this adjustment, operate as follows:

1. Measure the distance between the power takeoff of tractor and machine when they have been already connected and the machine is laying on the ground;
2. Measure the total length of the cardan shaft when the same is closed and with the joint axis collinear with the shaft axis;
3. Compare the two dimensions.

IF THEY MATCH: The cardan should have the right length. Assemble it on the machine as described on Chapter "15. ATTACHING THE MACHINE TO THE TRACTOR" and check the conditions of minimum and maximum gap lifting and moving down the machine by means of the lifter.

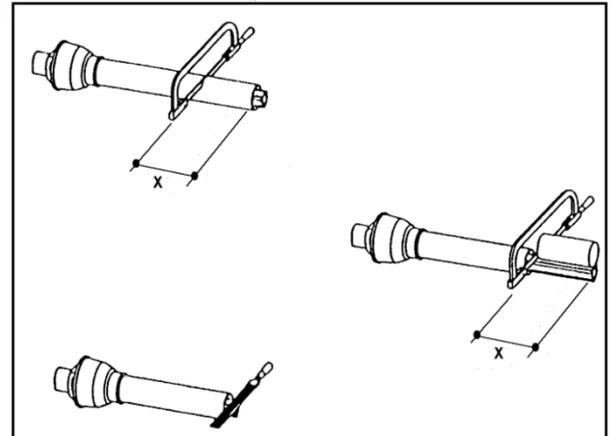
IF THE SHAFT DIMENSION IS SMALLER:

The cardan shaft could be short. Assemble it on the machine as described on Chapter "15. ATTACHING THE MACHINE TO THE TRACTOR" and verify the conditions of minimum and maximum gap (see picture on side) lifting and moving down the machine by means of the lifter. If those conditions are not satisfied substitute the cardan shaft with one of the same type but longer as required.



IF THE SHAFT DIMENSION IS GREATER: Identify the dimension in excess subtracting the distance between tractor and machine takeoff from the cardan shaft dimension, this is "X" dimension.

Separate the two halves of the shaft and remove the plastic protection. Cut both parts of the shaft of an "X" length and the protections too (see picture on side). Trimming carefully and lubricate the entry points of the tubes. Reassemble the cardan shaft and mount it on the machine as described on Chapter "15. ATTACHING THE MACHINE TO THE TRACTOR" then check the conditions of minimum and maximum gap lifting and lowering the machine with the lifter (picture above).



The procedure above indicated is valid for the adjustment of concentric telescopic tubes cardan shafts, of every different shape. In case your machine is equipped with a telescopic splined cardan shaft UNI or CUNA, you shall contact a specialized shop for the adjustment. Incorrect assembly of a splined cardan shaft can cause damaging vibrations, instability during the operation and overloads on all transmission parts.

ATTENTION

The cardan shaft is very dangerous, check the functionality of all parts and replace immediately those parts that are broken or not anymore useful. Check always the correct installation of the cardan shaft to the machine and tractor in order to avoid risks and injuries beside damages to the machine.

SAFETY CLUTCH

The cardan shaft can be equipped (depending on the machine model) with a friction disc type safety clutch useful to avoid sudden overloads or excessive continued stresses that can cause damages to the machine.

The cardan is provided already tared to a medium value of the transmissible torque depending on the rotation speed used on the power takeoff.

In case the clutch undergoes over-heating during operation, tighten all the setting screws with springs rotating of one full turn each one per time, uniformly (see '1' in picture on side).

Replace the internal friction discs in case you still experience slipping and overheating of the clutch after the screw tightening.

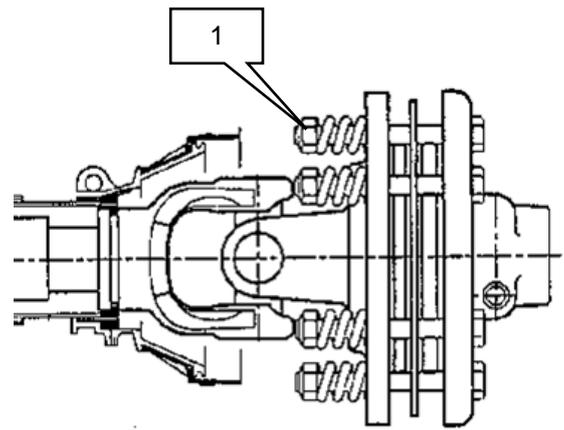
Vice versa if you feel that the clutch does not slip when you overload the machine, release the spring compression by unscrewing the setting screws uniformly of one turn per time for each screw, check after few minutes that the clutch is working properly in case repeat the procedure again.

If the clutch is working correctly during operation, it will keep a temperature between 30° and 40° Celsius.

The excess of humidity the prolonged inactivity and the oxidation can cause the blocking of the clutch making this safety device useless, it is therefore good practice to avoid leaving the device outside in a damp surroundings for long periods, specially in winter time.

If you experience a blocking of the clutch due to oxidation of internal parts, it is necessary to disassemble the device completely cleaning all parts and replacing eventually the internal friction discs. For this maintenance / repair it is recommended to contact a specialized workshop.

Make sure that the safety clutch screws with springs are not completely tighten, if so the device cannot work properly because the torque level to slip the discs would be too high, the risk is to damage the transmission parts of the machine.



ATTENTION

An improper setting of the safety clutch can cause serious damages to the transmission parts of the machine, if so the damages are excluded from the warranty even if not expired yet.

FOLLOW ANYWAY ALL THE INDICATIONS GIVEN BY THE MANUFACTURER, SEE FOR THIS PURPOSE THE MANUAL PROVIDED WITH THE CARDAN SHAFT.

16. DURING OPERATION

To start the operation raise the machine using the lifting device in such a way that when the machine is in the highest point the distance between it and the ground is maximum 35 cm (see pict on the side).

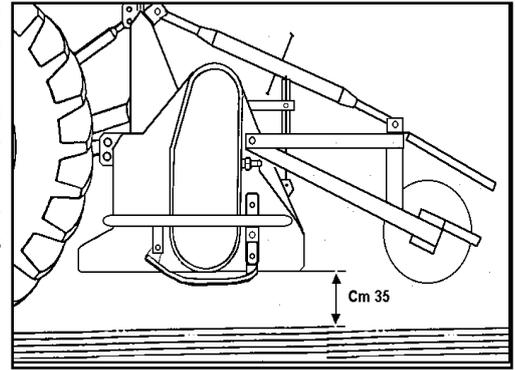
Insert the power takeoff and let the machine go down smoothly, in the mean time increase the engine speed accelerating and move forward with the tractor in the selected gear.

Avoid when possible to move too fast the machine down into the ground, in order to prevent unnecessary and dangerous overloads to the tractor, the cardan shaft and the machine itself.

When you finish to operate, raise smoothly the machine and at the same time remove the power.

In order to make the machine setting easy, we recommend to start the job using small operating depth with the rear bonnet quite open and a low advancement with the tractor.

Then proceed increasing gradually the operating depth and all other parameters till you reach the working degree expected optimizing the power absorption of the tractor.



ATTENTION

Avoid rough accelerations when the power takeoff is inserted.

Avoid to use the machine at no load out of the ground with a high speed. Those actions can cause damages to the tractor and machine.

DANGER

During operation stones or clods can be thrown away at a great distance. Keep attention to the ray of action of the machine, in case persons or animals are getting closer to the machine stop the operation and wait till the area is free again.

ATTENTION

Do not exceed the speed of 10 Km per hour during the operation with the machine.

ATTENTION

Do not turn or in reverse gear with the tractor when the machine is operating in the ground, always proceed straight and forward.

You can turn or go backward only if the machine is lifted from the ground.

17. SETTING

The settings to be done on the Stone Burier are few and simple:

17.1 OPERATING DEPTH SETTING

Personnel Required: OPERATOR

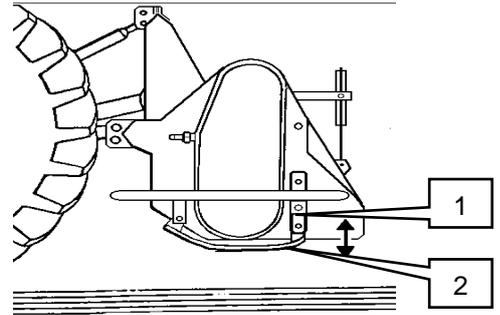
In order to set the operating depth, the machine has a rear levelling roller and can be provided with lateral supporting slides used to help the rear roller when the machine is operated in a particularly soft ground to prevent its subsiding or in order to reduce the compacting pressure of the roller to the ground.

To set the operating depth proceed as follows:

SLIDES SETTING

The operating depth setting can be done adjusting the height of both supporting slides. Proceed as follows:

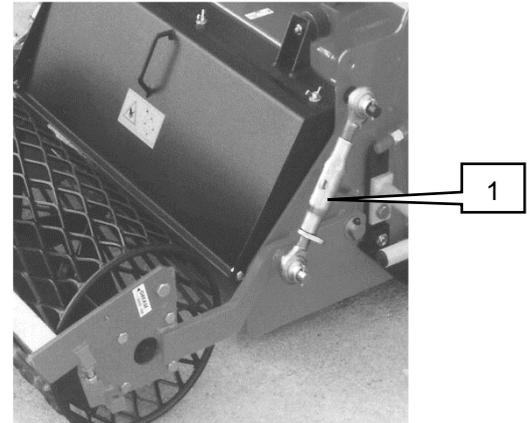
- 1 Remove the blocking screw ('1' Picture aside).
- 2 Adjust the height of the slide as needed ('2' Picture aside).
- 3 Insert and tighten the blocking screw ('1' Picture aside).
- 4 Repeat for the other slides.



LEVELLING ROLLER SETTING

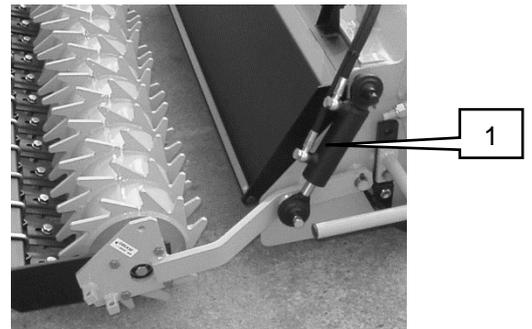
The operating depth can be set by changing the position of the levelling roller, turning the lateral screws of 2 or 3 turns per time alternating.

Lift the roller shortening the screw in order to increase the operating depth and vice versa (see picture on the side).



On machines provided with hydraulic system for the operating depth setting, the adjustment shall be done by means of the control lever on the tractor.

Lift the roller shortening the hydraulic cylinder in order to increase the operating depth and vice versa (see picture on the side).



17.2 CHAIN TIGHT-TENDER SETTING

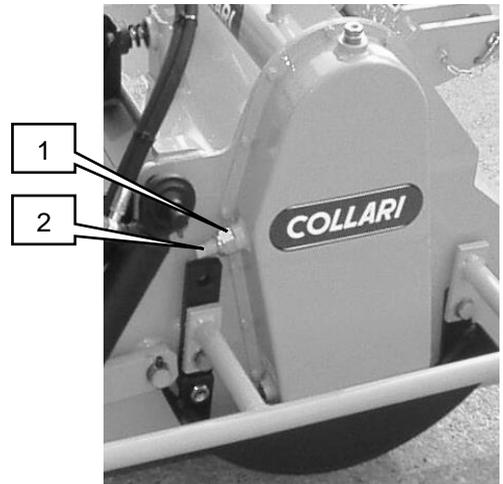
All our machines are built with a lateral transmission chain, during operation it might be that the chain settles and become loose, vibrations and noise can be heard during operation.

It is therefore necessary to set the chain tight-tender as follows:

Personnel Required: TECHNICIAN

Follow scrupulously all the indications given in the "MAINTENANCE" chapter.

- 1 Unfasten the blocking counter nut ('1' picture on the side);
- 2 Turn clockwise the set screw ('2' picture on the side) till the tools rotor starts to give you resistance to free rotation;
- 3 At this point turn back counter-clockwise the screw in order to have the right tension in the chain;
- 4 Check manually that the hoe rotor can rotate freely;
- 5 Tighten the blocking counter nut ('1' picture on the side) holding the set screw with another wrench ('2' picture in the side).



ATTENTION

Don not turn excessively the set screw of the chain tight-tender. An extreme tension in the chain can cause vibrations, overheating and serious damages to the machine.

17.3 REAR LEVELLING BONNET SETTING

Personnel Required: OPERATOR

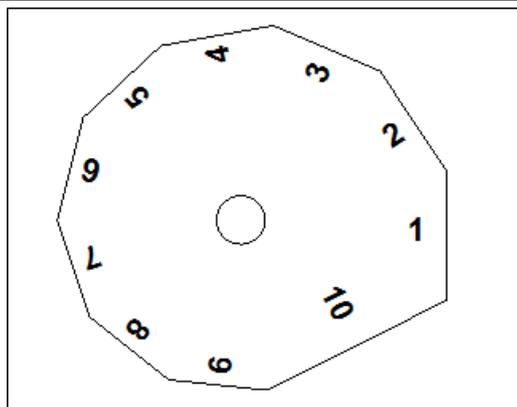
The rear levelling bonnet is necessary to level the ground just worked and has also a protective function since it avoids the projections of clods and stones or other objects lifted by the rotor during operation.

The bonnet is fixed and can be regulated single acting on the relative screws of implantation (see pos. "7" "5. MAIN PARTS").

DANGER

If you open the bonnet in the last lock position, it's possible that the clods are shooting out from the rotating hoes. Keep always under control the radius of action of machine and stop immediately the work if anybody is near to the machine and restart the work only if anybody is out of machine range and on safety distance.

17.6 TECMA SEEDING MACHINE ADJUSTMENT



SEEDING TABLE

POSITION	QUANTITY	SEED DIMENSION	SEED DIAMETER	GRASS TYPE
	g/m ²	mm	mm	
1	13	3-4	1	FESTUCA RUBRA
2	27	3-4	1	FESTUCA RUBRA
3	42	3-4	1	FESTUCA RUBRA
4	55	3-4	1	FESTUCA RUBRA
5	69	3-4	1	FESTUCA RUBRA
6	83	3-4	1	FESTUCA RUBRA
7	96	3-4	1	FESTUCA RUBRA
8	110	3-4	1	FESTUCA RUBRA
9	123	3-4	1	FESTUCA RUBRA
10	135	3-4	1	FESTUCA RUBRA
1	23	2-3	0,5	LOLIUM PERENNE
2	48	2-3	0,5	LOLIUM PERENNE
3	75	2-3	0,5	LOLIUM PERENNE
4	99	2-3	0,5	LOLIUM PERENNE
5	124	2-3	0,5	LOLIUM PERENNE
6	149	2-3	0,5	LOLIUM PERENNE
7	172	2-3	0,5	LOLIUM PERENNE
8	198	2-3	0,5	LOLIUM PERENNE
9	221	2-3	0,5	LOLIUM PERENNE
10	243	2-3	0,5	LOLIUM PERENNE

SEED MIXED WITH SAND 50%

POSITION	QUANTITY	SEED DIMENSION	SEED DIAMETER	GRASS TYPE
	g/m ²	mm	mm	
1	19	1-2	0,5	GROSTID
2	40	1-2	0,5	GROSTID
3	63	1-2	0,5	GROSTID
4	82	1-2	0,5	GROSTID
5	103	1-2	0,5	GROSTID
6	124	1-2	0,5	GROSTID
7	144	1-2	0,5	GROSTID
8	165	1-2	0,5	GROSTID
9	184	1-2	0,5	GROSTID
10	200	1-2	0,5	GROSTID

19. INACTIVITY

To disassemble the machine from the tractor, proceed as follows:

Personnel Required: OPERATOR

- 1- Put the machine on the ground in a flat area;
- 2- Operate in a reverse way to that indicated in Chapter "15. ATTACHING THE MACHINE TO THE TRACTOR";
- 3- Stop the tractor and insert the stationary brake, insert a low gear;
- 4- Disassemble the cardan shaft and place it on the special provided support;
- 5- Eventually disconnect the hydraulic QD's.

MAINTENANCE

In this chapter you will find indicated the minimum required operations of ordinary maintenance, to be carried out periodically.

Following these instructions will guarantee the expected machine life and will lower the costs for its service.

Further operations can be carried out based on the operator experience taking into account the special conditions on which the machine operates and the work load.

WARNING

Every maintenance operation below indicated shall be done in the following conditions:

- 1- Machine setting on the ground or on firm supports;
- 2- Power take off disconnected;
- 3- Engine stopped;
- 4- Lower gear;
- 5- Stationary brake inserted;
- 6- Cardan shaft disassembled;
- 7- Use all personal safety protections appropriate to the type of operation performed (gloves, protective glasses, special shoes, etc.), as prescribed by local laws.

ATTENTION

Before starting any maintenance activity, always clean carefully all lubrication points to prevent contamination from external parts that can cause serious damages to the machine.

Use always lubricants of the same type or with the same characteristics of those indicated in this manual, **COLLARI** will not be responsible for damages due to incorrect choice of lubricants.

WARNING

All lubricants should be kept out of reach of children. Read always the instructions and precautions specified on the lubricant container for their use. Clean your hands carefully after use.

The exhausted oil shall not be dispersed in the environment, hand over to an authorised disposal company and during transportation treat them according to local laws.

ATTENTION

If you need to top up always use the same type of oil indicated. Do not mix different brands because they can show chemical incompatibility.

Check frequently the lubricant level after the delivery of the machine and during prolonged inactivity.

28. DAILY (every 8 - 10 hours worked)

Personnel Required: OPERATOR

Every day or every 8 hours (max 20 hours) of operation:

- Fill up with grease the connection collar housing on the internal yoke, the telescopic tube and the collar housing of the cardan shaft as indicated on the shaft itself;
- Fill up with grease the lateral supports of the levelling roller till the exhausted grease comes out;
- Fill up with grease the external support of the hoe rotor till the exhausted grease comes out;
- Check the tightening of the hoe fastening screws (especially after a couple of hours of operation).

28.1 FREQUENT (every 50 - 60 hours worked)

Personnel Required: OPERATOR

Regularly every 50 - 60 hours of operation:

- Check the oil level in the central gear box, top up if necessary from the inlet point till the oil comes out from the level plug threaded hole.
- Check the oil level in the lateral chain box, top up if necessary from the inlet point till the oil comes out from the level plug threaded hole.
- Check the overall integrity of the section and of all its parts, repair or restore any anomaly.

28.2 PERIODICALLY (every 300 hours worked)

Personnel Required: OPERATOR

Every 300 hours of operation or every year:

- Wholly replace the oil in the central gear box, remove it from the drain point already indicated. Afterwards plug it again and top up with new lubricant till it comes out from the level plug threaded hole.
- Wholly replace the oil in the lateral chain box, remove it from the drain point already indicated. Afterwards plug it again and top up with new lubricant till it comes out from the level plug threaded hole.
- Check the correct operation of the cardan shaft safety clutch as indicated on chapter "15.1 CARDAN SHAFT ADAPTERS AND SETTINGS".
- Check the overall integrity of the section and of all its parts, repair or restore any anomaly.

ATTENTION

Tighten strongly all inlet, level and drain plugs.

An accidental loosening of any plug can bring a severe loss of lubricant and/or undesired contamination of the same with external particles causing serious damages to the machine.

28.3 HOES/TOOLS REPLACEMENT

Personnel Required: TECHNICIAN

The machine can be provided on demand with two different type of tool:

- Semi curved hoes;
- Squared hoes.

Check every day the wearing level of the tools and their integrity, in case they get deformed or partially broken proceed with their replacement with tools of the same shape and fasten them the same way and direction, replace the fastening bolts if needed.

It is recommended to replace the tools one each time mounting the new one immediately, this to avoid mistakes in positioning the new tools.

When the tools show a wear of about 50% of the original working surface it is necessary to replace them.

Do not replace partially the wore tools, replace the complete set of tools when necessary.

It is strongly recommended to check the tightening of all fastening bolts of the tools after 8-10 hours of operation.

ATTENTION

In case of necessity replace the hoe fastening bolts, use only bolts of the type indicated in this manual in the annexed spare parts catalogue.

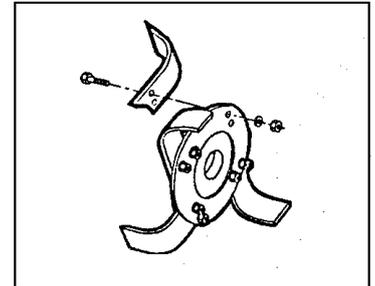
The use of different bolts can cause deformations to the hoe rotor and will not guarantee the same tool resistance.

SQUARED OR SEMI CURVED HOES

They are suitable for deep operating on soils with grass or residual tillage. Suitable also with damp soils or with the presence of stones.

The hoe rotor is normally mounted with four hoes per flange. The hoes shall be mounted with cutting edge left and right alternatively.

Always place the fastening bolts with the bolt head on the tool side and the nut and washer on the flange welded on the rotor (see picture on the side).



28.4 SEPARATING SPRINGS REPLACEMENT

Personnel Required: TECHNICIAN

The stone burier is provided with a separating grid made with a series of compression springs of music wire material enclosed in a special rack.

The separating grid is used to separate clods and large stones from finer soil that will be left on the top of the layer while the other will lay on the bottom.

It can occur that during operation some of the springs in the grid get damaged.

It is recommended to replace the damaged springs in order to maintain a good job quality and a good functionality of the machine.

In order to replace the springs put the machine in security following the general indications given in the chapter "MAINTENANCE".

The access to the separating grid springs take place removing the cover located on the top of the rear levelling bonnet.

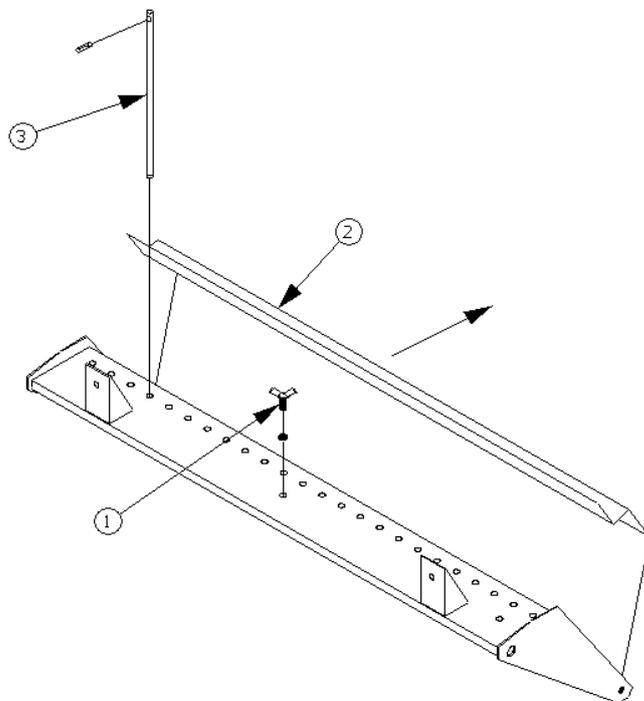
Then proceed as follows:

- Remove the upper cover (see '2' picture on the side) unscrewing the three fastening bolts of the same (see '1' on the side);
- Identify the damaged springs then slip them off from above (see '3' on the side);
- Insert the new springs in the specific seats and reassemble the upper cover.

The separating grid has a standard spring axis distance of 40 millimetres.

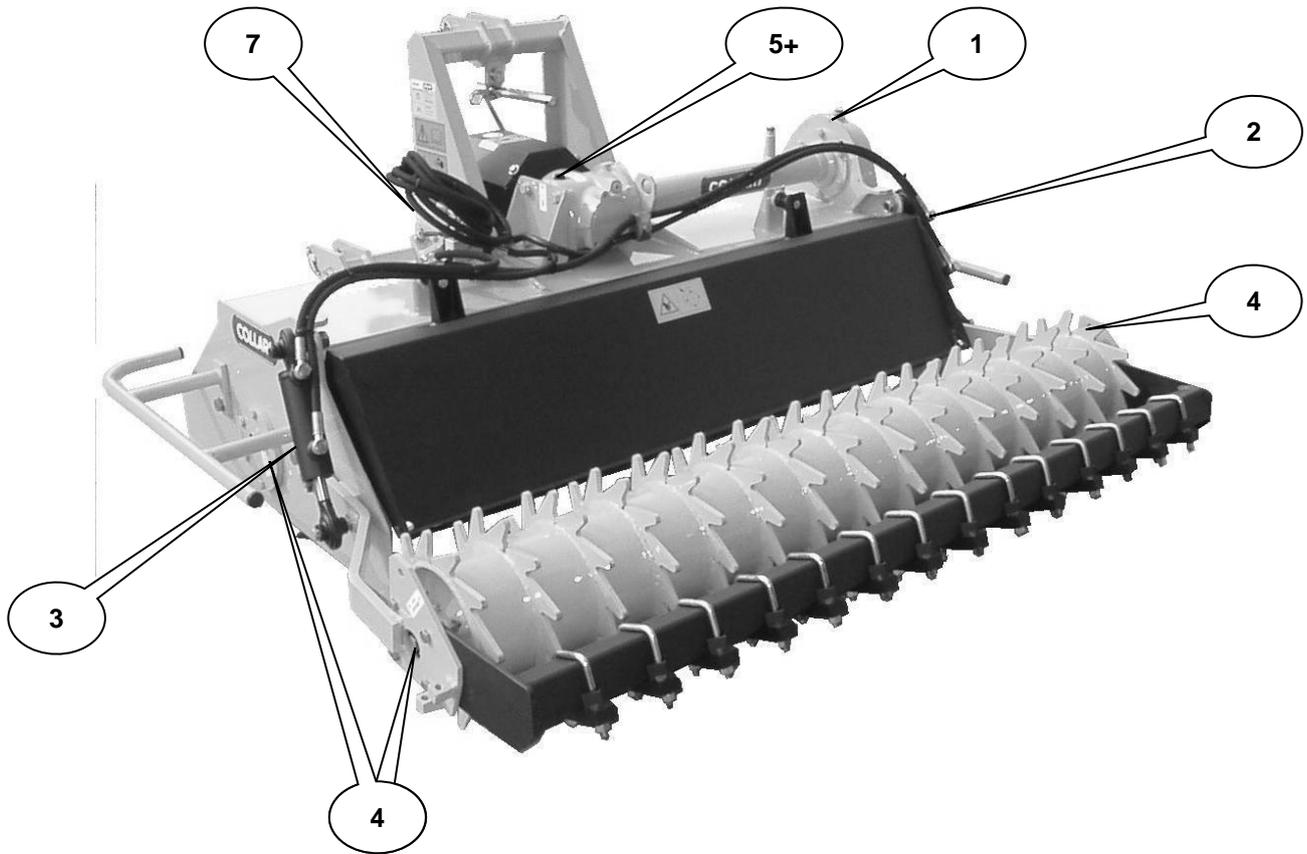
In case with special operations (usual operation on damp soils or with large stones or if you want to obtain coarse clods) you need to enlarge the gap between springs, you can remove one spring every two alternatively so you double the distance between springs to 80 millimetres.

It's also possible to operate the machine removing all springs from the rack.



30. LUBRICATION AND LUBRICANTS

- For all the greasing points we recommend: **AGIP GREASE 30**
- Central gear box, lateral chain box we recommend: **OLIO AGIP BLASIA 220 EP SAE 80W / 90 - ROTRA MP 80W / 90**



CAPTION

- | | | | |
|---|--|---|----------------------------|
| 1 | Chain box oil inlet | 5 | Central gear box oil inlet |
| 2 | Chain box oil level | 6 | Central gear box oil level |
| 3 | Chain box oil drain (inside) | 7 | Central gear box oil drain |
| 4 | Rear roller support and external rotor support grease fill point | | |

31. PROLONGED INACTIVITY - STORAGE

At the end of the working season or if you foresee a prolonged inactivity of the machine it is recommended to perform a couple of simple maintenance operations before the storage.

In this way when you start the season again you will find the machine in perfect conditions.

- 1- Wash the machine carefully removing all type of residues of soil, mud, grass etc.
- 2- Fill up with grease all indicated points and check all the lubricant levels, protect the unpainted parts applying an anticorrosive product or a thin layer of oil.
- 3- Check the tightening of all bolts of the machine with special attention to the hoes fastening bolts.
- 4- Store the machine possibly in a dry, closed place and cover it with a sheet.

32. DEMOLITION AND DISPOSAL

At the end of the machine's working life or when it is necessary to demolish, proceed as follows:

- 1- Remove all the oil contained in the gear box, in the lateral chain box and in the lateral rotor support treating it for disposal as indicated in the chapter "*MAINTENANCE*".
- 2- Give the machine to a fully authorised disposal company because it is wholly built in ferrous materials that may be completely recycled.

34. SPARE PARTS

To order spares or machine parts contact the agent in your area or **COLLARI** directly, specifying the following:

1. Part numbers of the requested spares, Table number + position number, as per the attached spare parts catalogue (see "*SPARE PARTS TABLES*", if available).
2. Model, Serial number and year of construction of the machine as per the metal ID plate (Pos. "1" "*Z. POSITION OF INFORMATIVE SIGNS AND ID PLATE*").
3. Description of the spares and quantities required.
4. Form of transport requested. All transport costs are always at the consignee's expense. We cannot be held responsible for shipping delays due to circumstances beyond our control. Goods are always and in any case shipped at the purchaser's risk.
5. Precise company title and shipping address.

As far as the term left or right indicated in this manual, they are always referred to the rear view of the machine connected to the tractor.

WHAT TO DO IF

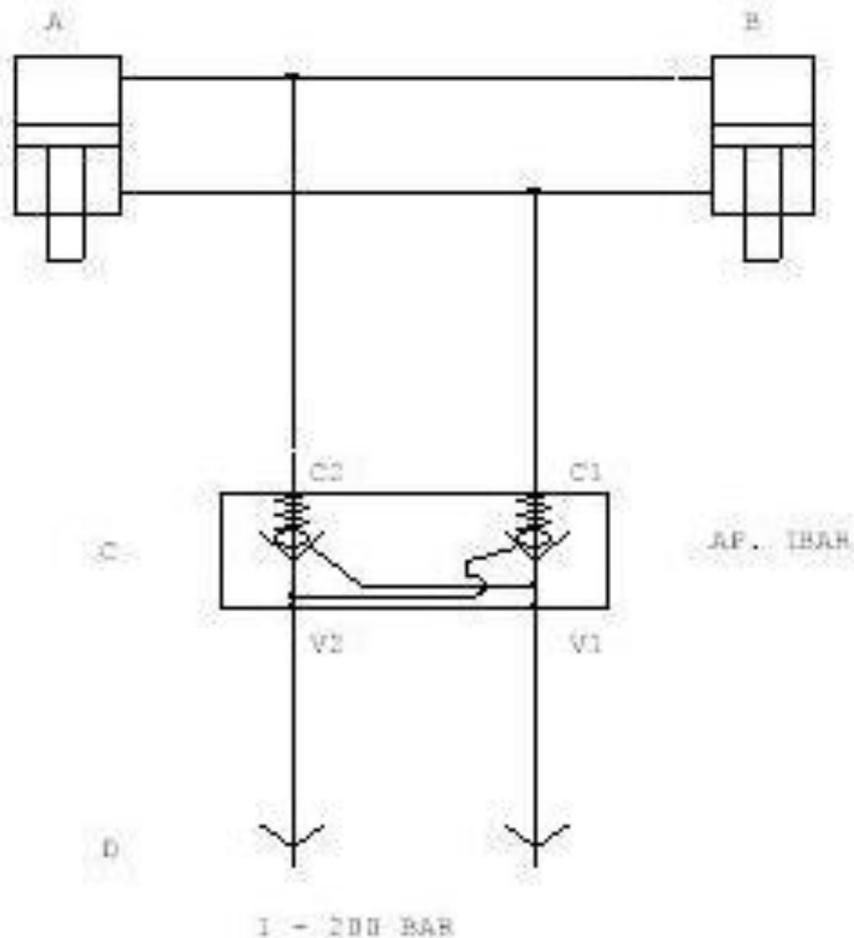
TROUBLESHOOTING	CAUSES	CHECK AND REMEDIES
The tools rotor is blocked		<ul style="list-style-type: none"> Check the integrity of the cardan shaft and the friction disc safety clutch Check integrity of the lateral chain transmission Check integrity of all mechanical parts Check integrity of rotor dragging screws
Excessive vibrations on the machine		<ul style="list-style-type: none"> Check the correct assembly of tools Check the integrity of the cardan shaft Check the chain tight-tender setting Check the integrity of the mechanical parts
Noisy machine		<ul style="list-style-type: none"> Check the tools tightening Check the chain tight-tender setting Check the integrity of the mechanical parts
Gear box or lateral chain box overheating		<ul style="list-style-type: none"> Check gear box oil level and exhausting level Check integrity of mechanical parts Check power level applied according to manual
Frequent tool breaking		<ul style="list-style-type: none"> Check the correct assembly of tools Check the presence of big stones or roots in the ground
Frequent breaking or loss of tool fastening screws		<ul style="list-style-type: none"> Check the correct assembly of tools Check the right tightening of the tool fastening screws Check the presence of big stones or roots in the ground
Oil leakage from the gear box		<ul style="list-style-type: none"> Check the correct tightening of the screws Check integrity of mechanical parts
Oil leakage from rotor support		<ul style="list-style-type: none"> Check all screws tightening Replace all internal seals
Excessive tractor exertion		<ul style="list-style-type: none"> Check the speed of the power take off Excessive operating depth Check if the power level applied is according to this manual

In case of doubts or if you cannot fix the above-mentioned problems, we kindly ask you to contact our representative or our sales office/technical service.

HYDRAULIC SYSTEM

Hydraulic system diagram levelling roller setting

HYDRAULIC SYSTEM SKETCH 11/1995

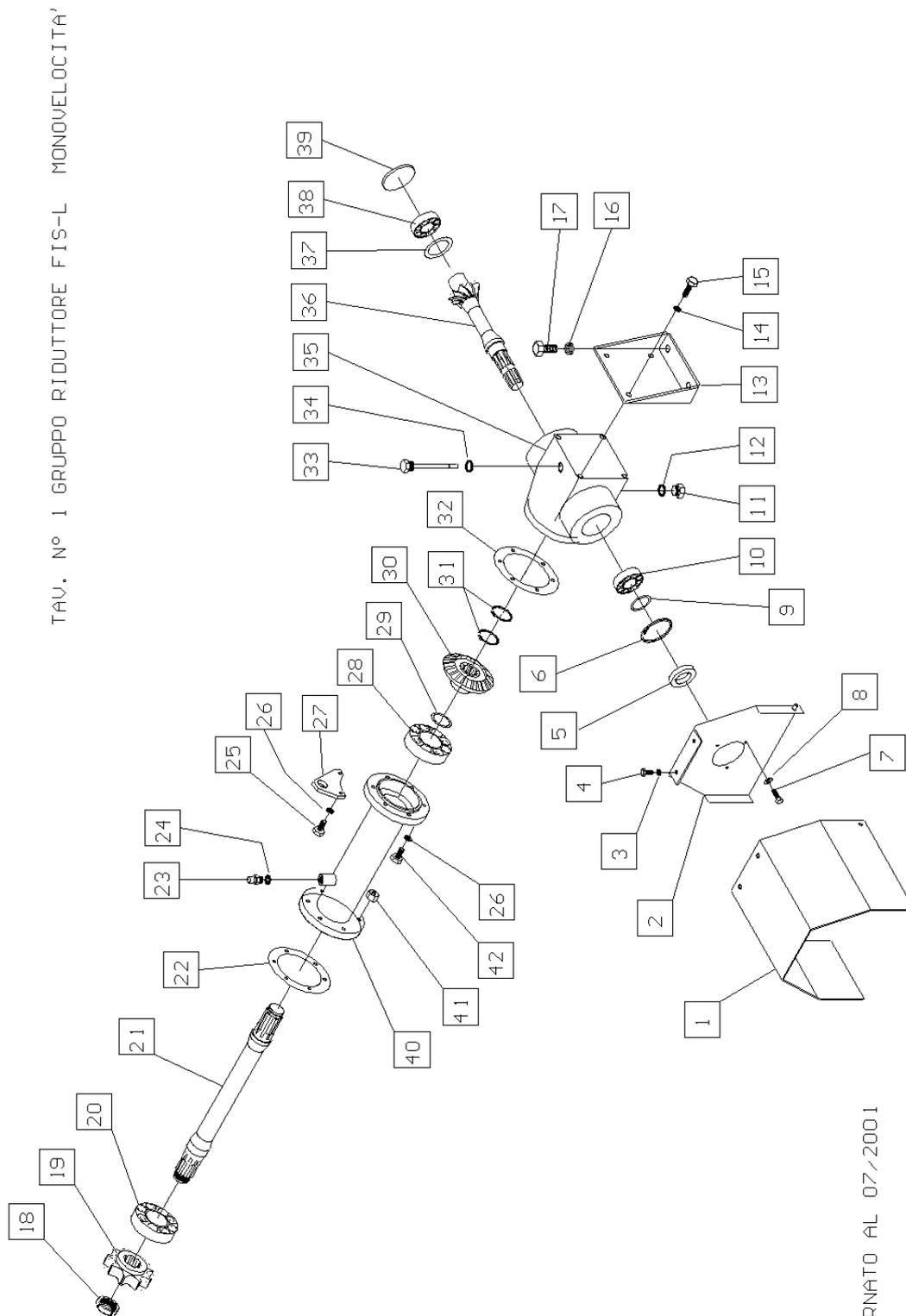


KEY HYDRAULIC SYSTEM SKETCH LEVELLING ROLLER

- A Hydraulic cylinder Diameter 50 rod 25 stroke 250 connection 1/4 (see spare parts catalogue)
- B Hydraulic cylinder Diameter 50 rod 25 stroke 250 connection 1/4 (see spare parts catalogue)
- C Check valve 1/4 double effect (LU-EN VNR/SO/DE 1/4)
- D Quick disconnect 1/2 needle (Faster NV 12 push-pull)

SPARE PARTS CATALOGUE

Table 1



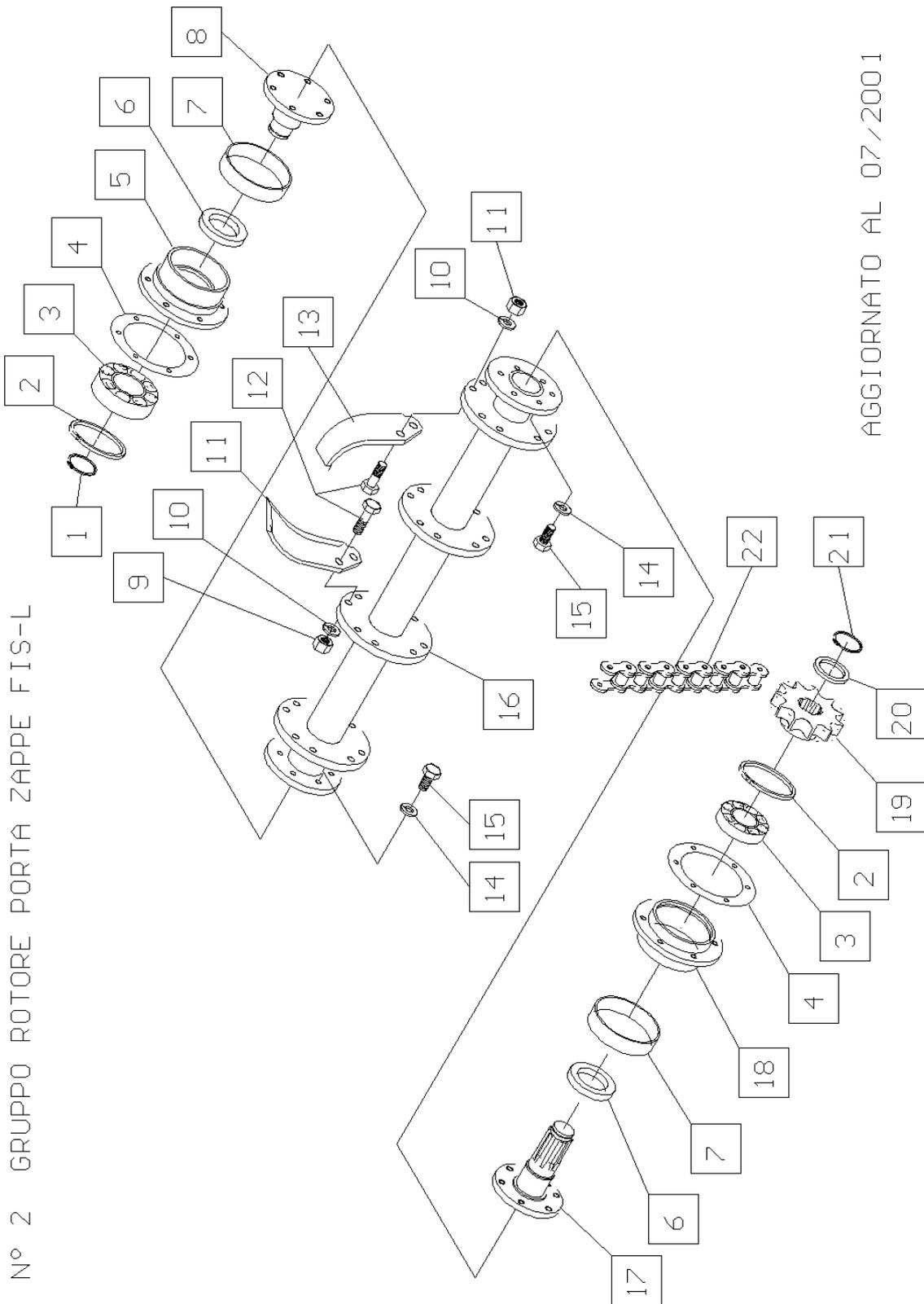
AGGIORNATO AL 07/2001

1 - Gear Box assembly

Detail	Note	Code	Quantity	Description
1		0454R	1	POWER TAKE-OFF GUARD
2		0455R	1	PTO GUARD HITCH
3		0105V	2	WASHER
4		0042V	2	SCREW HEX. HEAD
5		0015P	1	OIL SEAL
6		0013S	1	SEEGER
7		0001V	4	SCREW HEX. HEAD
8		0135V	4	WASHER
9	?	0037E	0	THICKNESS
10		0040C	1	BEARING
11		0091OL	1	PLUG
12		0058OL	1	WASHER
13		0456R	1	SUPPORT
14		0107V	4	WASHER
15		0032V	4	SCREW HEX. HEAD
16		0009V	2	WASHER
17		0094V	2	SCREW HEX. HEAD
18		0163V	1	RING NUT
19	<03/2002	0151I	1	CHAIN PINION Z11
19	>03/2002	0151.1I	1	CHAIN PINION Z10
20		0008.2C	1	BEARING
21	0.80	0153I	1	COMMAND CHAIN SHAFT
21	1.00	0154I	1	COMMAND CHAIN SHAFT
21	1.30	0155I	1	COMMAND CHAIN SHAFT
21	1.45	0155.1I	1	COMMAND CHAIN SHAFT
21	1.65	0155.2I	1	COMMAND CHAIN SHAFT
22		0004G	1	SEAL
23		0006R	1	OIL BREATHER PIPE WITH VALVE
24		0001E	1	WASHER
25		0023V	2	SCREW HEX. HEAD
26		0035V	6	WASHER
27		0457R	1	HOOK
28		0008.1C	1	BEARING
29	?	0038E	0	THICKNESS
30		0016O	1	BEVEL GEAR Z23
31		0012S	2	SEEGER
32		0021G	1	SEAL
33		0092OL	1	PLUG
34		0093OL	1	WASHER
35		0012F	1	GEAR BOX
36		0156I	1	PTO SHAFT
37	?	0039E	0	THICKNESS
38		0009C	1	BEARING
39		0016P	1	COVER
40	0.80	0675A	1	GEAR BOX - CHAIN TUBE
40	1.00	0676A	1	GEAR BOX - CHAIN TUBE
40	1.30	0677A	1	GEAR BOX - CHAIN TUBE
40	1.45	0677.1A	1	GEAR BOX - CHAIN TUBE
40	1.65	0677.2A	1	GEAR BOX - CHAIN TUBE
41		0007V	6	SCREW HEX. HEAD
42		0129V	4	SCREW HEX. HEAD

1 - Gear Box assembly

Detail	Note	Code	Quantity	Description
	Note	Description		
	?			Quantity is variable and it depends on width and preparation
	<03/2002			Verify year and month of construction: article mounted up to February 2002
	>03/2002			Verify year and month of construction: article mounted from March 2002 onwards



TAV. N° 2 GRUPPO ROTORE PORTA ZAPPE FIS-L

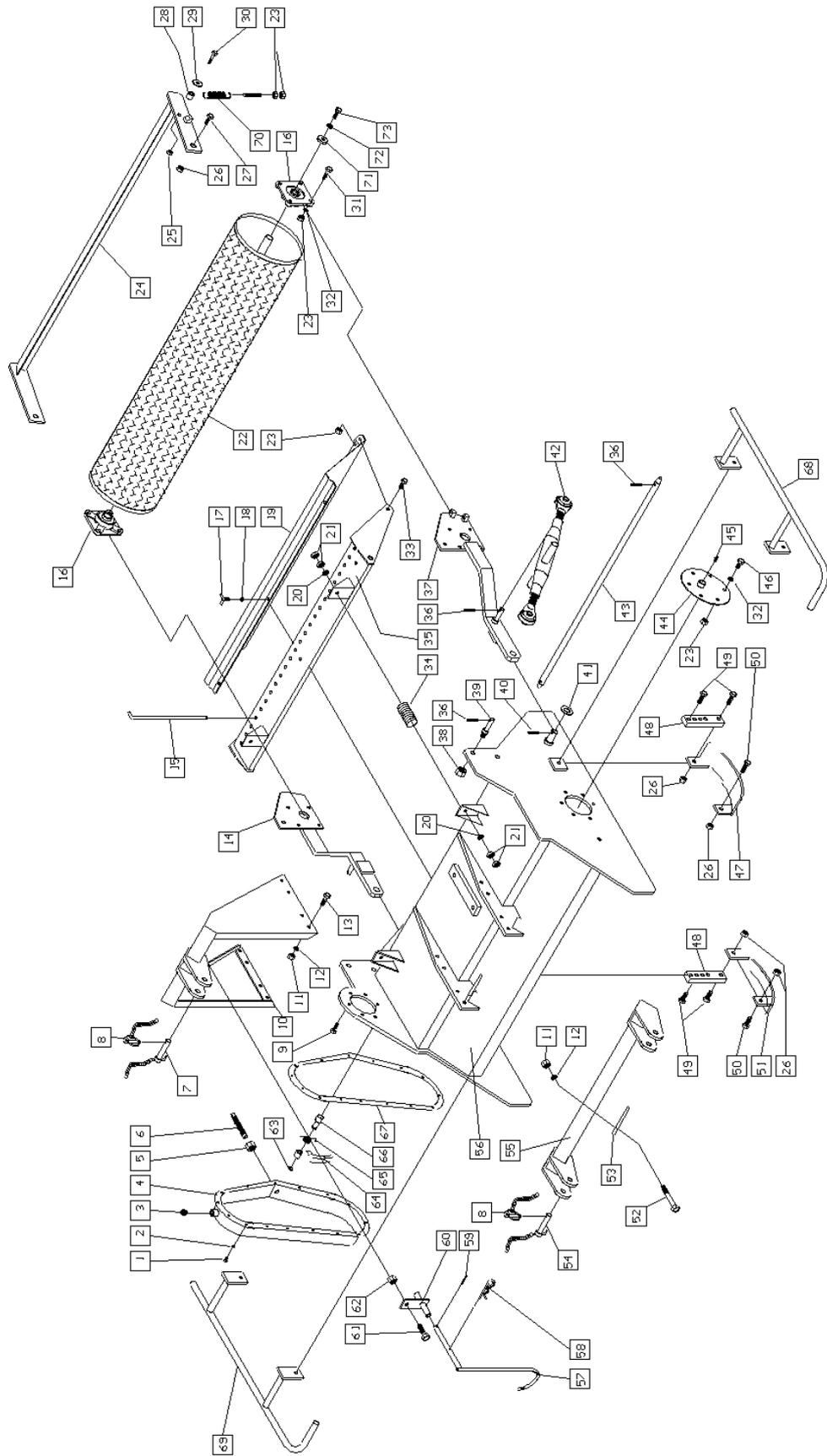
AGGIORNATO AL 07/2001

2 - Hoes Rotor Assembly

Detail	Note	Code	Quantity	Description
1		0012S	1	SEEGER
2		0004S	2	SEEGER
3		0008C	2	BEARING
4		0004G	2	SEAL
5		0458R	1	SUPPORT
6	<1999	0017P	2	OIL SEAL
6	>1999	0002P	2	OIL SEAL
7		0460R	2	DUST GUARD
8	C	0158I	1	EXTERNAL ROTOR SHAFT
9	?	0010V	0	NUT
10	?	0009V	0	WASHER
11	A ?	0027Z	0	HOE CURVED
11	B ?	0039Z	0	HOE SQUARED
12	?	0008V	0	SCREW HEX. HEAD FOR TOOL
13	A ?	0027Z	0	HOE CURVED
13	B ?	0039Z	0	HOE SQUARED
14		0012V	12	WASHER
15		0017V	12	SCREW HEX. HEAD
16	0.80	0678A	1	ROTOR FOR HOES
16	1.00	0679A	1	ROTOR FOR HOES
16	1.30	0680A	1	ROTOR FOR HOES
16	1.45	0680.1A	1	ROTOR FOR HOES
16	1.65	0680.2A	1	ROTOR FOR HOES
17	C	0157I	1	COMMAND ROTOR SHAFT
18		0459R	1	SUPPORT
19	<03/2002	0152I	1	CHAIN PINION Z13
19	>03/2002	0152.1I	1	CHAIN PINION Z14
20		0461R	1	THIMBLE
21		0014S	1	SEEGER
22		0011N	1	CHAIN
Note	Description			
?	Quantity is variable and it depends on width and preparation			
<03/2002	Verify year and month of construction: article mounted up to February 2002			
>03/2002	Verify year and month of construction: article mounted from March 2002 onwards			
<1999	Verify year of construction: article mounted up to 1998			
>1999	Verify year of construction: article mounted from 1999 onwards			
A	Standard Hoe			
B	Squared Hoe			
C	Purchasable article only with dust guard [0460R]			

AGGIORNATO AL 02.2005

TAV. N° 3 GRUPPO TELAIIO FIS-L



3 - Frame Assembly

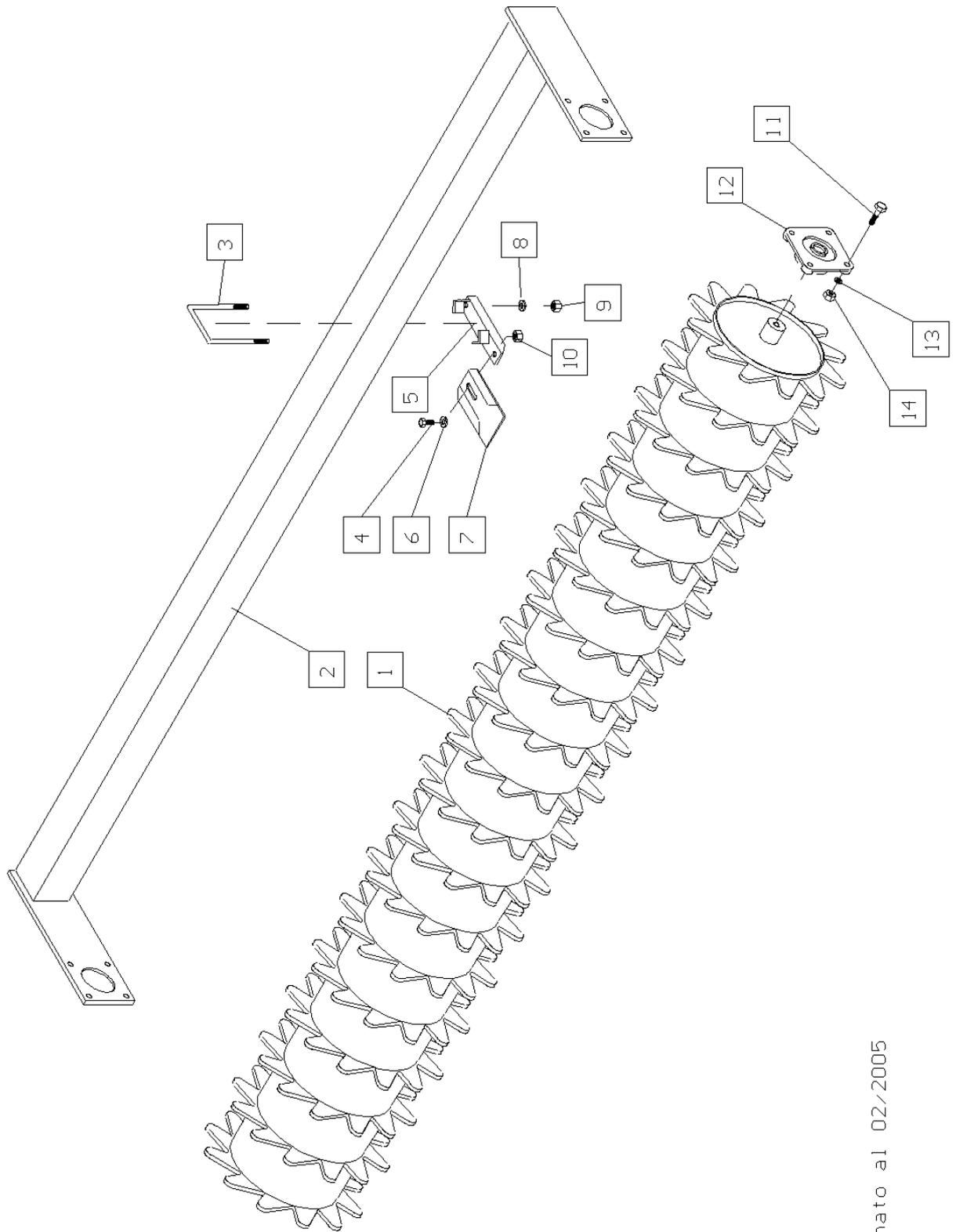
Detail	Note	Code	Quantity	Description
1		0164V	15	SCREW HEX. HEAD
2		0165V	15	WASHER
3		0006V	1	PLUG
4		0681A	1	COVER
5		0156V	1	LOCK NUT
6		0022.1R	1	CHAIN ADJUSTMENT SCREW
7		0469R	1	PIN
8		0032E	3	SPRING PIN
9		0007V	6	SCREW HEX. HEAD
10		0682A	1	THREE POINT FRAME
11		0040V	12	NUT
12		0012V	12	WASHER
13		0118V	8	SCREW HEX. HEAD
14		0683A	1	RIGHT FRAME BAR
15	?	0465R	0	SEPARATING SPRING
16		0039C	2	SUPPORT + BEARING
17		0167V	3	SCREW
18		0135.1V	3	WASHER
19	0.80	0696A	1	GUARD HOOD
19	1.00	0697A	1	GUARD HOOD
19	1.30	0698A	1	GUARD HOOD
19	1.45	0698.1A	1	GUARD HOOD
19	1.65	0698.2A	1	GUARD HOOD
20		0061V	8	WASHER
21		0166V	8	NUT
22	0.80	0487.1A	1	GRID ROLLER
22	1.00	0487A	1	GRID ROLLER
22	1.30	0487.2A	1	GRID ROLLER
22	1.45	0487.3A	1	GRID ROLLER
22	1.65	0487.4A	1	GRID ROLLER
23		0028V	12	NUT
24	0.80	0502.1A	1	GRID SCRAPER
24	1.00	0502A	1	ADJUSTABLE GRID SCRAPER
24	1.30	0502.2A	1	GRID SCRAPER
24	1.45	0502.3A	1	GRID SCRAPER
24	1.65	0502.4A	1	GRID SCRAPER
25		0112V	2	NUT
26		0039V	6	NUT
27		0038V	2	SCREW HEX. HEAD
28		0375R	2	THIMBLE
29		0135V	2	WASHER
30		0113V	2	SCREW HEX. HEAD
31		0036V	8	SCREW HEX. HEAD
32		0035V	14	WASHER
33		0169V	2	SCREW
34		0008AU	2	SPRING
35	0.80	0693A	1	SUPPORT
35	1.00	0694A	1	SUPPORT
35	1.30	0695A	1	SUPPORT
35	1.45	0695.1A	1	SUPPORT
35	1.65	0695.2A	1	SUPPORT
36		0018E	6	SPRING PIN

3 - Frame Assembly

Detail	Note	Code	Quantity	Description
37		0684A	1	LEFT FRAME BAR
38		0156V	2	LOCK NUT
39		0474R	2	PIN
40		0019E	2	SPRING PIN
41		0476R	2	WASHER
42		0475R	2	ADJUSTABLE TIE ROD
43	0.80	0466R	1	HINGE ROD
43	1.00	0467R	1	HINGE ROD
43	1.30	0468R	1	HINGE ROD
43	1.45	0468.1R	1	HINGE ROD
43	1.65	0468.2R	1	HINGE ROD
44		0477R	1	COVER
45		0006E	1	GREASE FITTING
46		0023V	6	SCREW HEX. HEAD
47		0685A	1	EXTERNAL SLIDE
48		0081R	2	SLIDE GUIDE
49		0008V	4	SCREW HEX. HEAD FOR TOOL
50		0067V	2	SCREW HEX. HEAD
51		0686A	1	CHAIN SLIDE
52		0101V	4	SCREW HEX. HEAD
53		0464R	2	PLATE
54		0471R	2	PIN
55		0687A	1	HITCH
56	0.80	0690A	1	FRAME
56	1.00	0691A	1	FRAME
56	1.30	0692A	1	FRAME
56	1.45	0692.1A	1	FRAME
56	1.65	0692.2A	1	FRAME
57		0383R	1	SUPPORT
58		0028E	1	COTTER PIN
59		0040E	1	SPRING PIN
60		0380R	1	CARDAN HITCH
61		0066V	1	SCREW HEX. HEAD
62		0016V	1	NUT
63		0003S	1	SEEGER
64		0462R	1	TENSIONER SLIDE
65		0020R	1	SPRING
66		0463R	1	PIN
67		0022G	1	SEAL
68		0688A	1	RIGHT LATERAL GUARD
69		0689A	1	LEFT LATERAL GUARD
70		0376R	2	SPRING
71		0525R	2	WASHER
72		0009V	2	WASHER
73		0094V	2	SCREW HEX. HEAD
	Note	Description		
	?	Quantity is variable and it depends on width and preparation		

Table 3.1

TAV. N° 3.1 Gruppo rullo livellatore packer FIS L



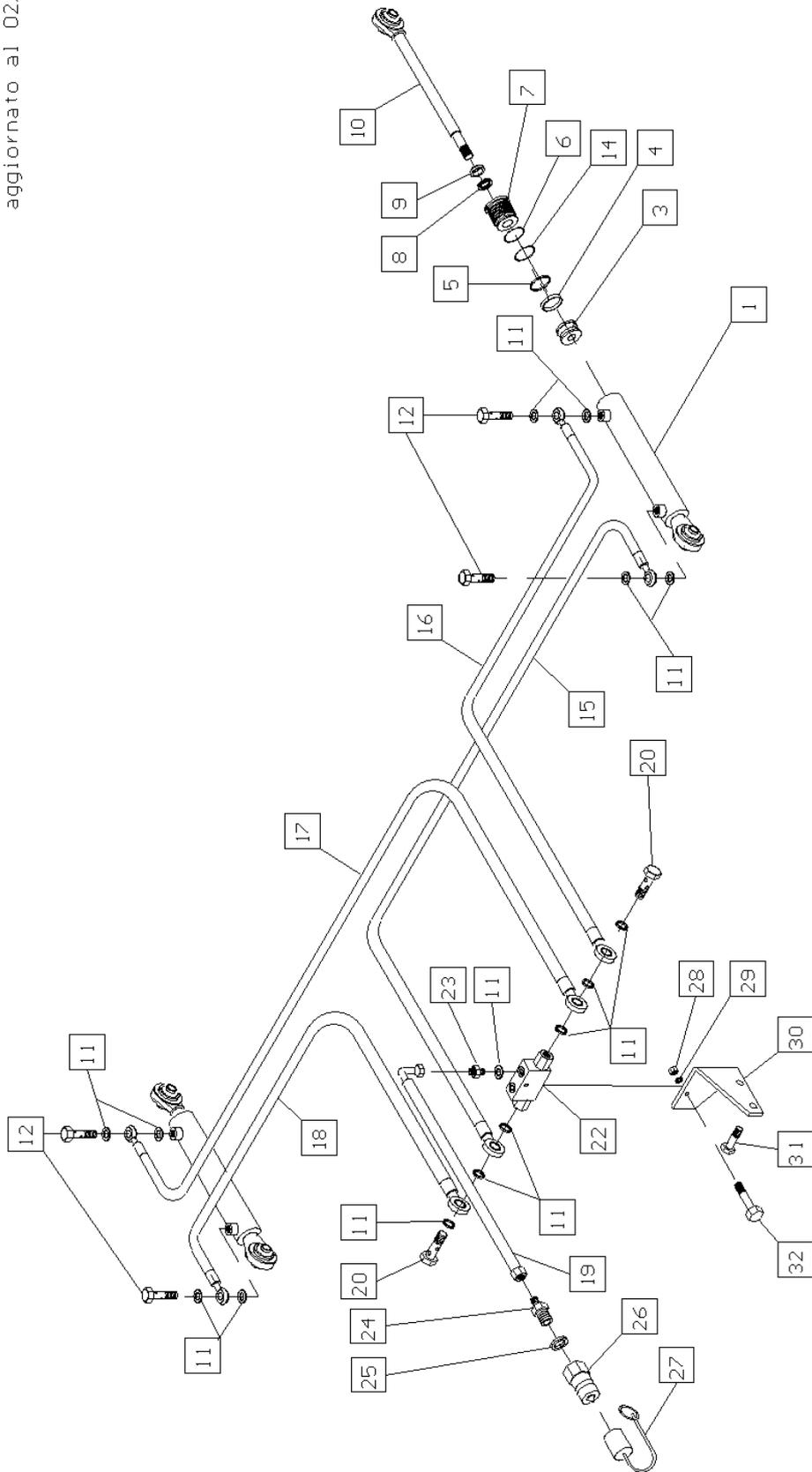
aggiornato al 02/2005

3.1 - Packer Levelling Rotor Assembly

Detail	Note	Code	Quantity	Description
1	0.80	0734A	1	PACKER ROLLER
1	1.00	0735A	1	PACKER ROLLER
1	1.30	0736A	1	PACKER ROLLER
1	1.45	0737A	1	PACKER ROLLER
1	1.65	0738A	1	PACKER ROLLER
2	0.80	0739A	1	PACKER BAR
2	1.00	0740A	1	PACKER BAR
2	1.30	0741A	1	PACKER BAR
2	1.45	0742A	1	PACKER BAR
2	1.65	0743A	1	PACKER BAR
3	?	0183V	0	U-BOLT
4	?	0118V	0	SCREW HEX. HEAD
5	?	0197.3A	0	SUPPORT
6	?	0109V	0	WASHER
7	?	0149.1R	0	PACKER SCRAPING
8	?	0035V	0	WASHER
9	?	0028V	0	NUT
10	?	0040.1V	0	NUT
11		0137V	8	SCREW HEX. HEAD
12		0039C	2	SUPPORT + BEARING
13		0035V	8	WASHER
14		0028V	8	NUT
	Note	Description		
	?	Quantity is variable and it depends on width and preparation		

TAU. N° 4 Gruppo regolazione idraulica FIS L

aggiornato al 02/2005

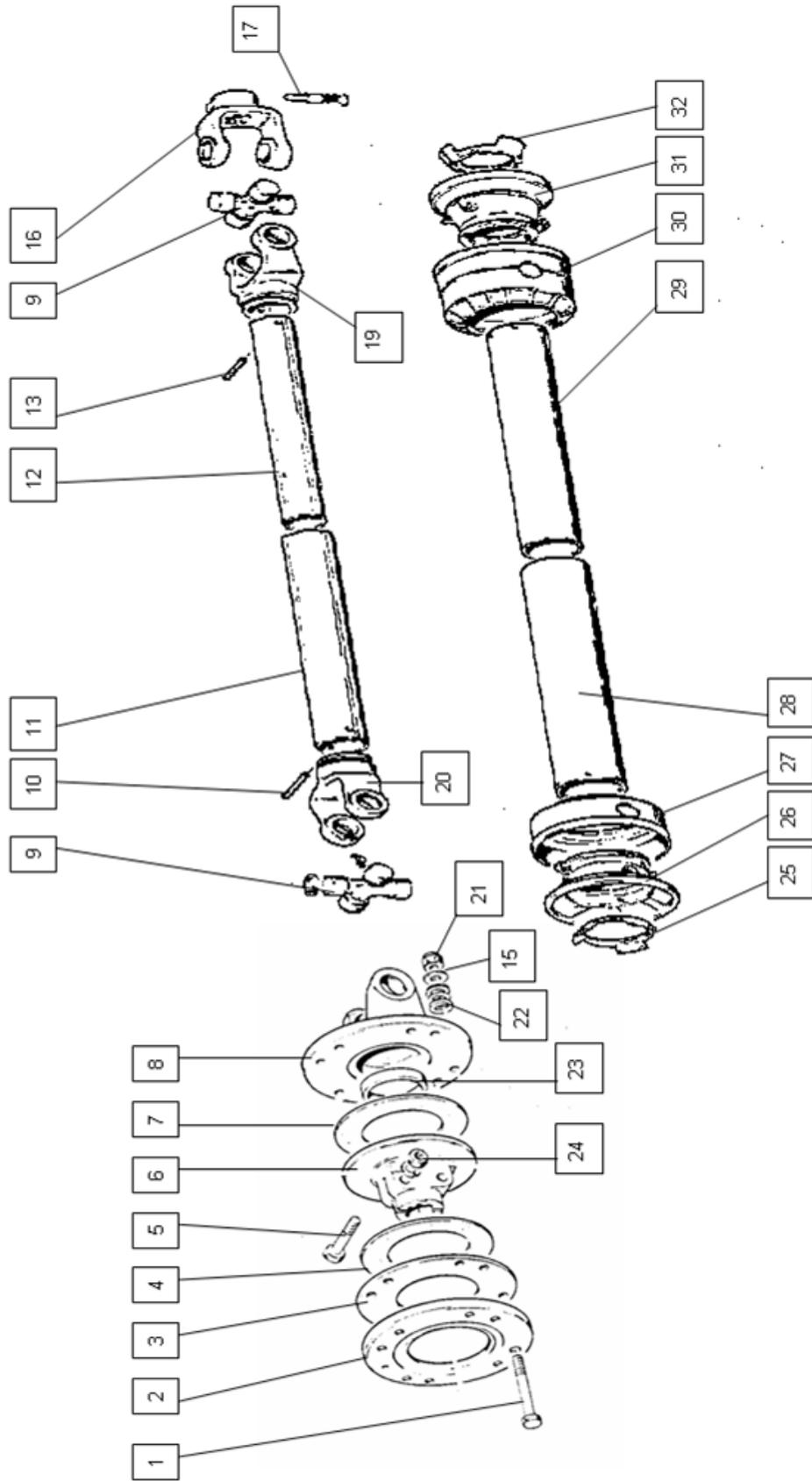


4 - Hydraulic Circuit Assembly

Detail	Note	Code	Quantity	Description
1		0055.1OL	2	CILINDER TUBE
3		0028.1OL	2	INTERNAL PISTON
4		0120OL	2	DRIVE RING
5		0119OL	2	OIL SEAL
6		0121OL	2	O-RING
7		0029.1OL	2	RING NUT FOR CYLINDER
8		0118OL	2	OIL SEAL
9		0117OL	2	OIL SCRAPER
10		0030.2OL	2	ROD + ARTICULATION
11		0058OL	16	WASHER
12		0017.1OL	4	HOLED SCREW
14		0101OL	2	O-RING
15	0.80	0104OL	1	HOSE
15	1.00	0107OL	1	HOSE
15	1.30	0110OL	1	HOSE
15	1.45	0113OL	1	HOSE
15	1.65	0116OL	1	HOSE
16	0.80	0104OL	1	HOSE
16	1.00	0107OL	1	HOSE
16	1.30	0110OL	1	HOSE
16	1.45	0113OL	1	HOSE
16	1.65	0116OL	1	HOSE
17	0.80	0103OL	1	HOSE
17	1.00	0106OL	1	HOSE
17	1.30	0109OL	1	HOSE
17	1.45	0112OL	1	HOSE
17	1.65	0115OL	1	HOSE
18	0.80	0102OL	1	HOSE
18	1.00	0105OL	1	HOSE
18	1.30	0108OL	1	HOSE
18	1.45	0111OL	1	HOSE
18	1.65	0114OL	1	HOSE
19		0059OL	2	HOSE
20		0017.2OL	2	HOLED SCREW
22		0061OL	1	BLOCKING VALVE
23		0060OL	2	NIPPLE
24		0014OL	2	NIPPLE
25		0010OL	2	WASHER
26		0015OL	2	FAST JOINT
27		0026OL	2	JOINT PROTECTION
28		0112V	1	NUT
29		0105V	1	WASHER
30		0744A	1	BRACKET
31		0118V	2	SCREW HEX. HEAD
32		0114V	1	SCREW HEX. HEAD

Table 5

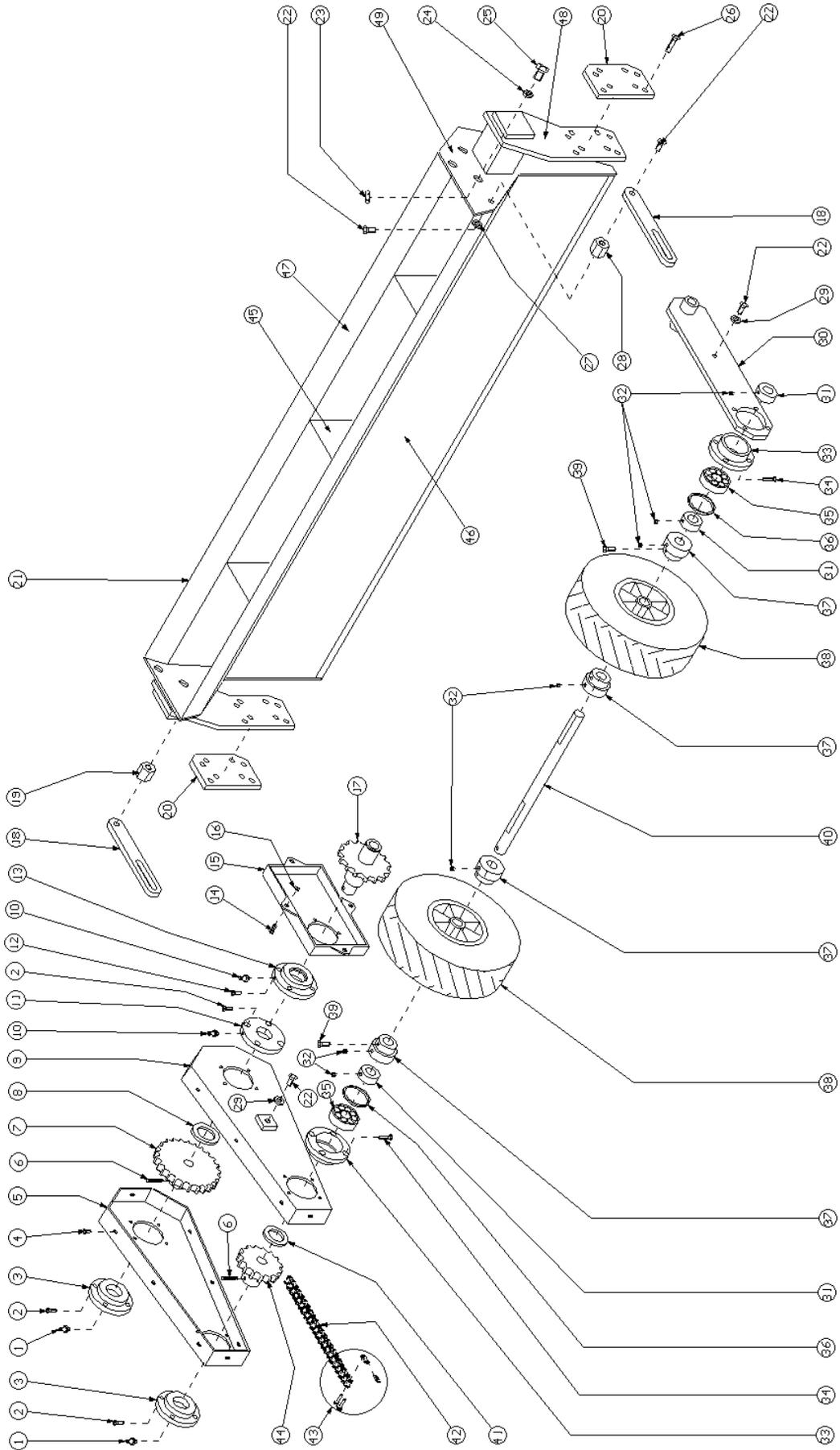
TAV. N°5 GRUPPO ALBERO DI TRASMISSIONE FIS (130-145-165-205)



5 - Power Transmission Shaft Assembly

Detail	Note	Code	Quantity	Description
1		0090CA	8	COMPLETE BOLT
2		0091CA	1	PRESSURE PLATE
3		0092CA	1	INTERNAL DISC
4		0093CA	1	FRICTION DISC
5		0094CA	1	COMPLETE BOLT FOR HUB
6		0095CA	1	HUB WITH FLANGE
7		0093CA	1	FRICTION DISC
8		0096CA	1	FLANGE
9		0012.1CA	2	SPIDER
10		0085CA	1	SPRING PIN
11	CM	0087CA	0	EXTERNAL TUBE
12	CM	0088CA	0	INTERNAL TUBE
13		0086CA	1	SPRING PIN
15		0090.1CA	1	WASHER
16	1" 3/8 Z6	0084CA	1	EXTERNAL FORK
17		0089CA	1	PUSH BUTTON FOR FORK
19		0083CA	1	INTERNAL PIPE FORK
20		0082CA	1	EXTERNAL PIPE FORK
21		0090.2CA	8	NUT
22		0097CA	8	SPRING
23		0009CA	1	BUSHING
24		0094.1CA	2	NUT
25		0098CA	1	EXTERNAL PIPE RING
26		0099CA	1	EXTERNAL PIPE CAP
27		0100CA	1	SHORT CONE
28	CM	0079.1CA	0	EXTERNAL TUBE
29	CM	0080.1CA	0	INTERNAL TUBE
30		0100.1CA	1	STANDARD CONE
31		0099.1CA	1	INTERNAL PIPE CAP
32		0098.1CA	1	INTERNAL PIPE RING
	Note	Description		
	CM	Specify the length (CM) too		

Table 6



TAU. 6

-Gruppo kit attacco seminatrice Fag-Melò 2° serie
-Connection group kit for Fag-Melò seeder 2° series

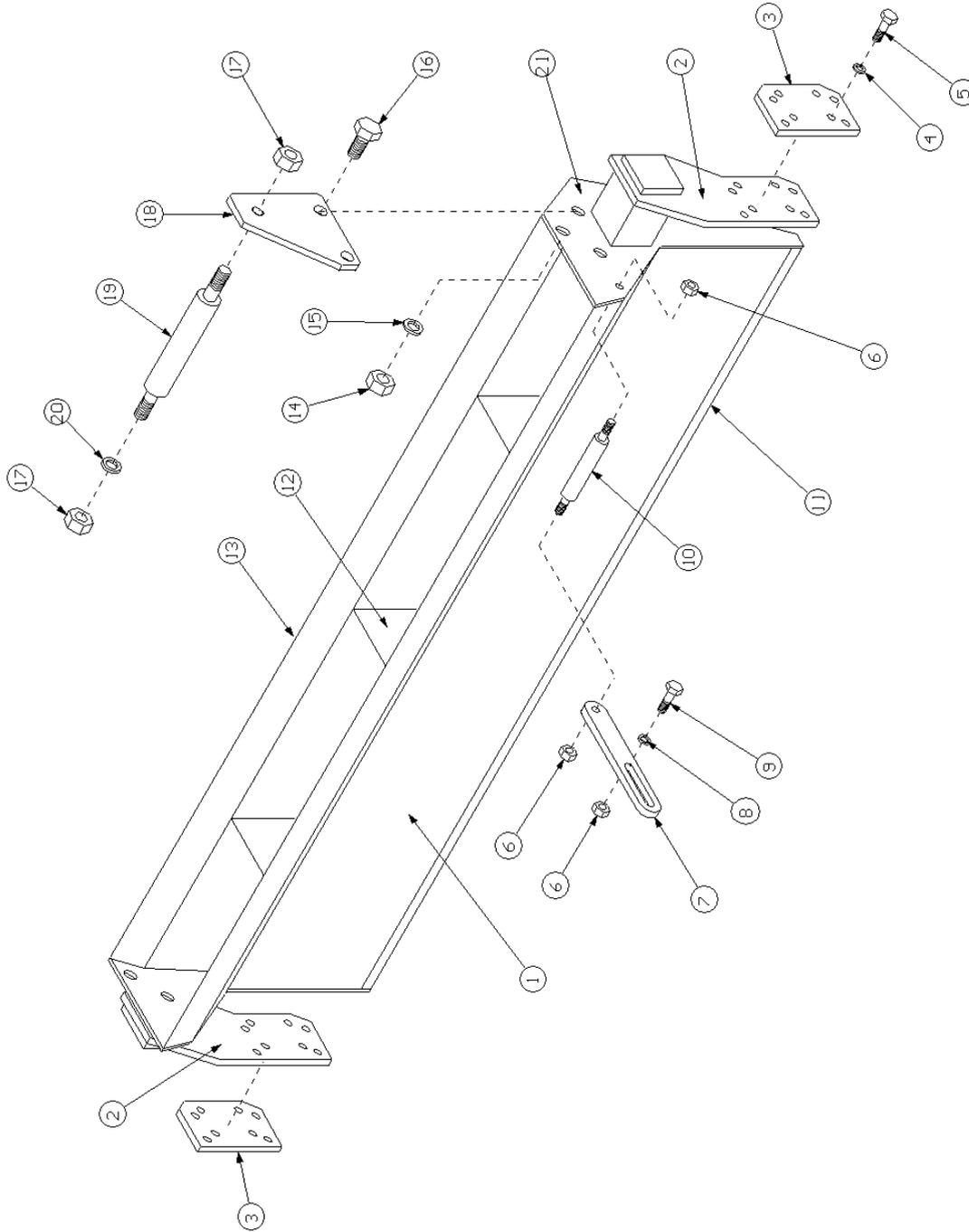
Per Interrasassi mod. FIS-L / ACL IS
For mod. FIS-L / ACL IS stone burier

dal 12/2006
from 12/2006

6 - Connection FAG-MELO' seeder kit 2' series

Detail	Note	Code	Quantity	Description
1		0006.2E	2	GREASE FITTING
2		0005.1V	12	SCREW
3		0542R	2	NYLON BEARING
4		0127V	8	SCREW HEX. HEAD
5		0543R	1	EXTERNAL CARTER
6		0018E	2	SPRING PIN
7		0164I	1	CHAIN PINION Z30
8		0544R	1	THIMBLE
9		0545R	1	INTERNAL CARTER
10		0006.1E	2	GREASE FITTING
11		0546R	1	NYLON BEARING
12		0005V	4	SCREW
13		0547R	1	NYLON BEARING
14		0127.1V	4	SCREW HEX. HEAD
15		0548R	1	GEAR CARTER
16		0208V	4	LOCK NUT
17		0558R	1	DISTRIBUTION SHAFT
18		0554R	2	ROD WITH SLOT
19		0555R	1	THIMBLE
20		0557R	2	BLOCKING PLATE
21	0.80	0772A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	1.00	0773A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	1.30	0532A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	1.45	0533A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	1.65	0534A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
22		0129.1V	6	SCREW HEX. HEAD
23		0116V	4	NUT
24		0110V	4	WASHER
25		0066.1V	4	SCREW HEX. HEAD
26		0104V	8	SCREW HEX. HEAD
27		0106V	2	WASHER
28		0556R	1	THIMBLE
29		0061V	2	WASHER
30		0553R	1	SEEDER EXTERNAL ARM
31		0552R	3	STOP RING
32		0173.4V	7	DOWEL
33		0549R	2	BEARING SUPPORT
34		0154.1V	8	SCREW
35		0052C	2	BEARING
36		0021S	2	SEEGER
37		0551R	4	WHEEL CONNECTION
38		0068E	2	WHEEL
39		0001V	2	SCREW HEX. HEAD
40	0.80	0571R	1	WHEELS ROD SEEDER
40	1.00	0572R	1	WHEELS ROD SEEDER
40	1.30	0559R	1	WHEELS ROD SEEDER
40	1.45	0560R	1	WHEELS ROD SEEDER
40	1.65	0561R	1	WHEELS ROD SEEDER
41		0550R	1	THIMBLE
42		0016N	1	CHAIN
43		0017N	1	CHAIN JOINT
44		0165I	1	CHAIN PINION Z12

Table 7



TAV. 7
 -Gruppo kit attacco seminatrice TECMA
 -Connection group kit for TECMA seeder

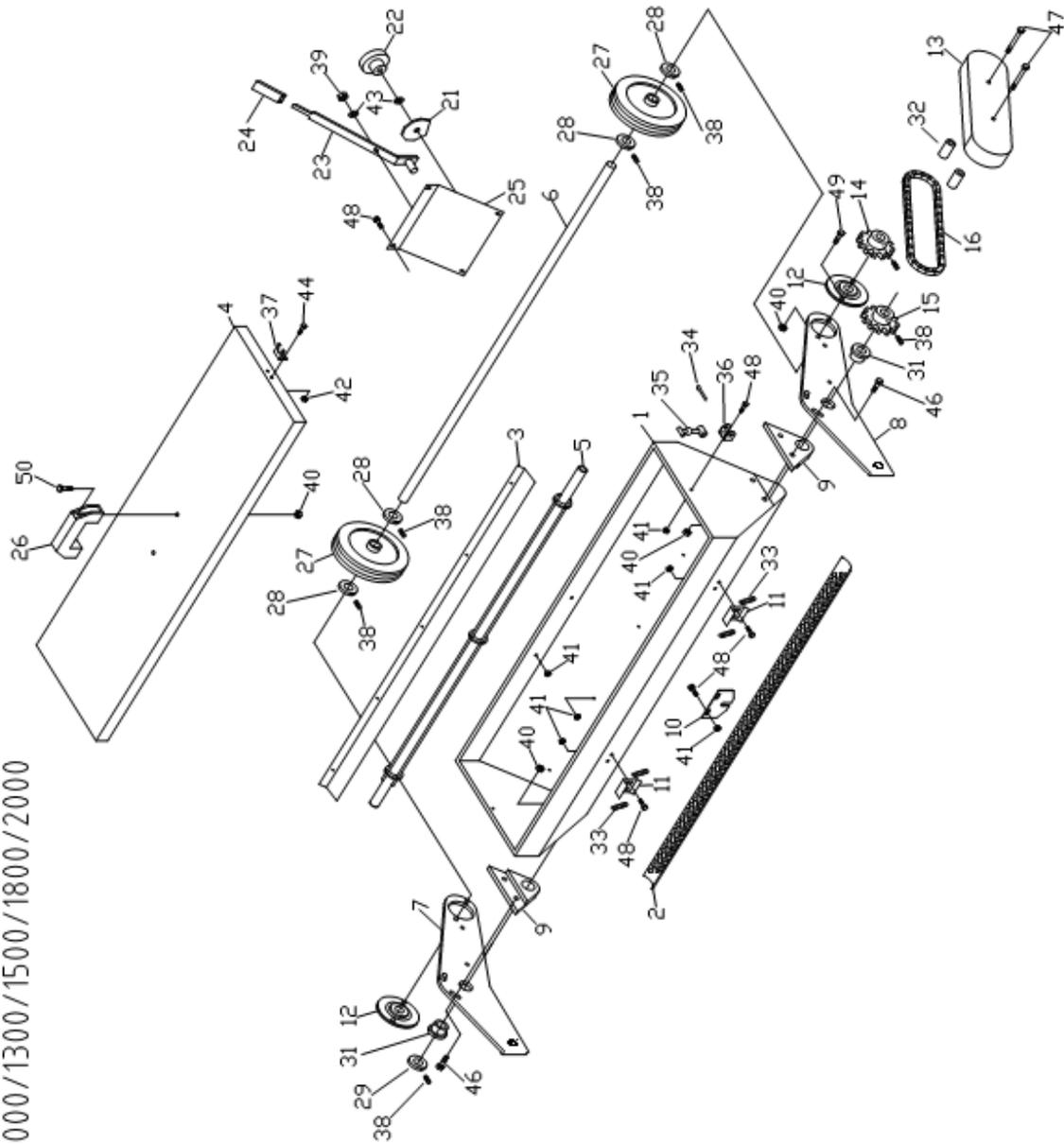
Per Interrasassi mod. FIS-L / ACL IS
 For mod. FIS-L / ACL IS stone burier

7 - Connection TECMA' seeder kit

Detail	Note	Code	Quantity	Description
1	0.80		1	SEEDER FRAME
1	1.00		1	SEEDER FRAME
1	1.30		1	SEEDER FRAME
1	1.45		1	SEEDER FRAME
3		0557R	2	BLOCKING PLATE
4		0106V	8	WASHER
5		0060.1V	8	SCREW HEX. HEAD
6		0078.2V	6	LOCK NUT
7		0554R	2	ROD WITH SLOT
8		0061V	2	WASHER
9		0104V	2	SCREW HEX. HEAD
10			2	STUD FOR BLOCK ROD
14		0116V	4	NUT
15		0015V	4	WASHER
16		0066.1V	4	SCREW HEX. HEAD
17		0016.3V	4	LOCK NUT
18			2	PLATE
19			2	STUD FOR SEEDER
20		0111V	2	WASHER

Table T.1

SMG 800/1000/1300/1500/1800/2000



02/09/2015

T.1 - Tecma Seeder

Detail	Note	Code	Quantity	Description
1	1000			HOPPER
1	1300			HOPPER
1	1500			HOPPER
1	1800			HOPPER
1	2000			HOPPER
1	800			HOPPER
2	1000			SHUTTER
2	1300			SHUTTER
2	1500			SHUTTER
2	1800			SHUTTER
2	2000			SHUTTER
2	800			SHUTTER
3	1000			GUARD
3	1300			GUARD
3	1500			GUARD
3	1800			GUARD
3	2000			GUARD
3	800			GUARD
4	1000			COVER
4	1300			COVER
4	1500			COVER
4	1800			COVER
4	2000			COVER
4	800			COVER
5	1000			MIXER
5	1300			MIXER
5	1500			MIXER
5	1800			MIXER
5	2000			MIXER
5	800			MIXER
6	1000			AXLE
6	1300			AXLE
6	1500			AXLE
6	1800			AXLE
6	2000			AXLE
6	800			AXLE
7				RH SUPPORT
8				LH SUPPORT
9				PLASTIC SUPPORT
10				SETTING PLATE
11				SLIDE SUPPORT
12				BEARING PFL204
13				TRANSMISSION COVER
14				WHEEL PINION
15				MIXER PINION
16				CHAIN
21				SLIDE ADJUSTMENT PLATE
22				KNOB
23				LEVER
24				LEVER COVER
25				LEVER SUPPORT
26				COVER HANDLE

T.1 - Tecma Seeder

Detail	Note	Code	Quantity	Description
27				WHEEL
28				WHEEL FASTENER
29				FASTENER
31				PLASTIC BUSH
32				SPACER
33				SPRING
34				PIN
35				RUBBER HOOK
36				HOOK SUPPORT
37				HOOK PLATE
38				SCREW
39				NYLOC NUT M 10
40				NYLOC NUT M 8
41				NUT M 5
42				NUT M 4
43				FLAT WASHER M 10
44				BOLT HEX HEAD M 4X10
46				SCREW M8X30
47				SCREW M8X60
48				SCREW M5X10
49				SCREW Ø 8 X 20 MM
50				BOLT HEX HEAD M 8X20
	Note	Description		
	800	Seeder Model		
	1000	Seeder Model		
	1300	Seeder Model		
	1500	Seeder Model		
	1800	Seeder Model		
	2000	Seeder Model		

USER STATEMENT

MACHINE TYPE: FISL_____

SERIAL NUMBER: _____

DATE OF MANUFACTURE : October '20

I the undersigned:_____

Company position:_____

In the name and on behalf of the company:_____

Declare that:

→ I have collected number _____ use and maintenance instruction manuals;

→ I have read their contents in detail and in depth;

→ I have fully understood and am perfectly clear about all aspects of machine safety and am therefore capable of using it responsibly in the best way from the point of view of my own safety and that of anyone present in the area near the machine.

Date _____

Stamp and signature

P.S. - Please fill in all parts and return a copy to:

COLLARI s.n.c. di Collari Gian Luca e Valeria

Via Provinciale sud 24 A-B

40050 Castello d'Argile (BO)

Italy