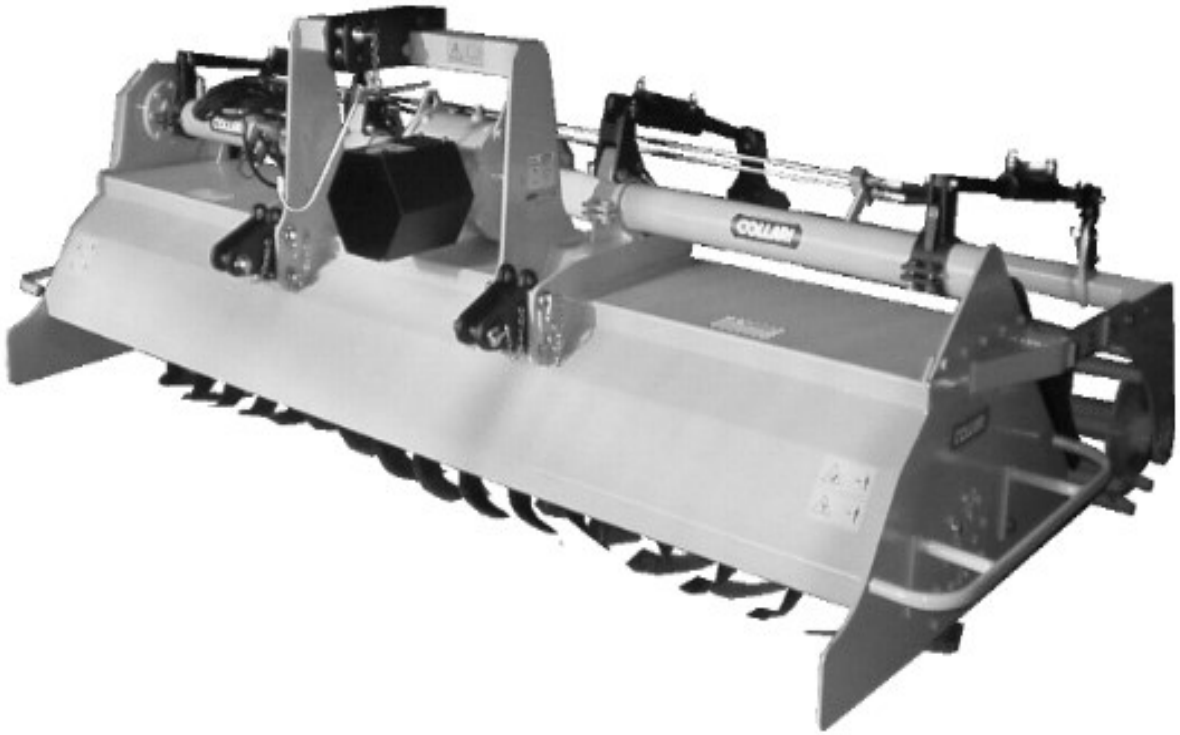
STONE BURIER MOD.:

ACP TR IS



CE

USE AND MAINTENANCE MANUAL

EN

COLLARI s.n.c. di Collari Gian Luca e Valeria
Via Provinciale sud n° 24 A-B
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COLLARI

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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. ACPTRIS _____ Type,

Serial N°: _____, conforms with:

- the Essential Safety and Health Safeguarding Requisites in accordance with EEC Directive:
  - 2006/42/CE

  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

Castello d'Argile, 02 April 2026

Collari Gian Luca: Legal Representative

BEFORE STARTING

2. FOREWORD

This manual must be read <u>BEFORE STARTING TO USE THE MACHINE.</u> 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.
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.

In order to operate in maximum safety and with all necessary knowledge it is indispensable that:
- All the documentation supplied with the machine on delivery is available: it is 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 Stone Burier.
- 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 **Manufacturer 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.

3. 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 mt) 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, turn off the engine, put the lower gear, pull the emergency brake and remove the key from the panel, disconnect the power takeoff and put the machine on the ground.

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.

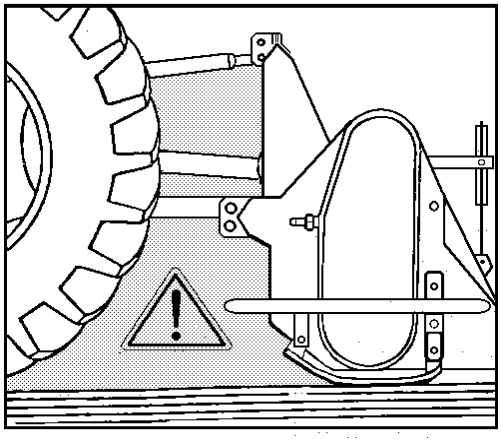
18- Connect the machine to an adequate tractor as far as power transmitted as already indicated; the machine has not been designed for higher level of power, all mechanical parts will undergo premature braking or serious damages if the above will not be followed and the guarantee will become null.

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 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 connected. 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 side Fig.)



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.

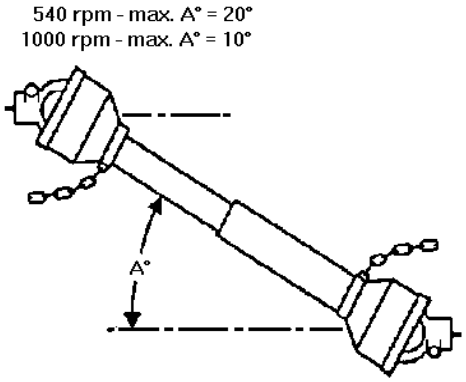
24- The machine shall be operated only and exclusively with the transmission shaft supplied by the constructor that includes a safety device against overloads and safety protections to be hooked always with the anti-rotation chain in the holes located on the edge of the above mentioned protection; keep 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 mt of the machine is not free, 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° 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.

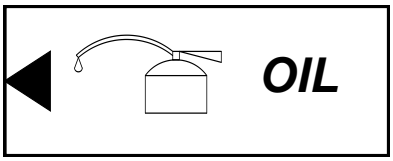
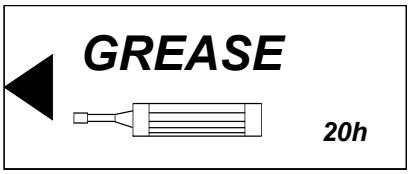
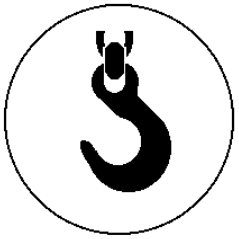
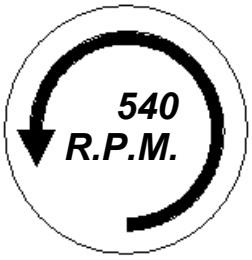
32- Avoid if possible to lift the machine more than 35 cm over the ground level.

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.

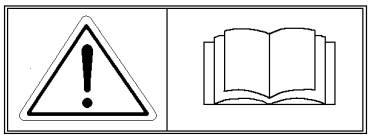
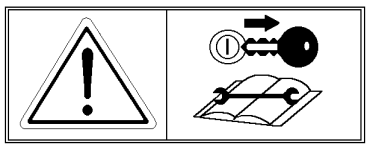
34- Always and exclusively use the original spare parts or conform with the commercial items and use the lubricants indicated in this manual.

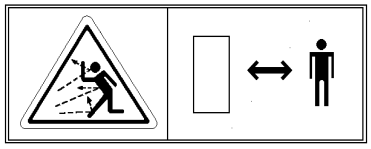
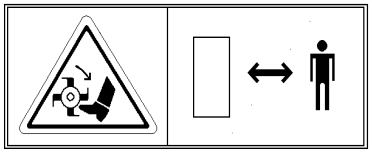
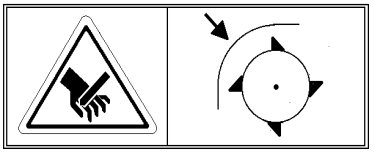
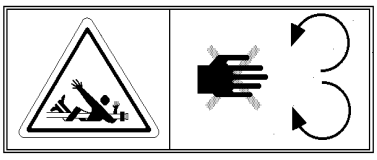
4. INFORMATIVE AND DANGER SIGNS

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

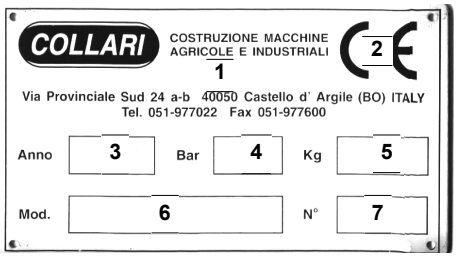
	INFORMATIVE SIGNS	POSITION
	Oil Inlet	A
	Oil Level	B
	Oil Drain	C
	Grease Fill Point	D
	Hoisting Point	E
	Speed and direction of rotation Power takeoff	F
		

4. INFORMATIVE AND DANGER SIGNS (Continued)

ATTENTION SIGNS	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	POSITION
 Projected objects danger. Keep a safety distance of 20mt	I
 Injuries danger to low limbs. Keep a safety distance of 2 mt	K
 Injuries danger to limbs. Keep a safety distance of 2 m. Do not remove the safety protections	L
 Cardan joint hooking danger. Keep a safety distance of 2 m. Do not remove the safety protections	M

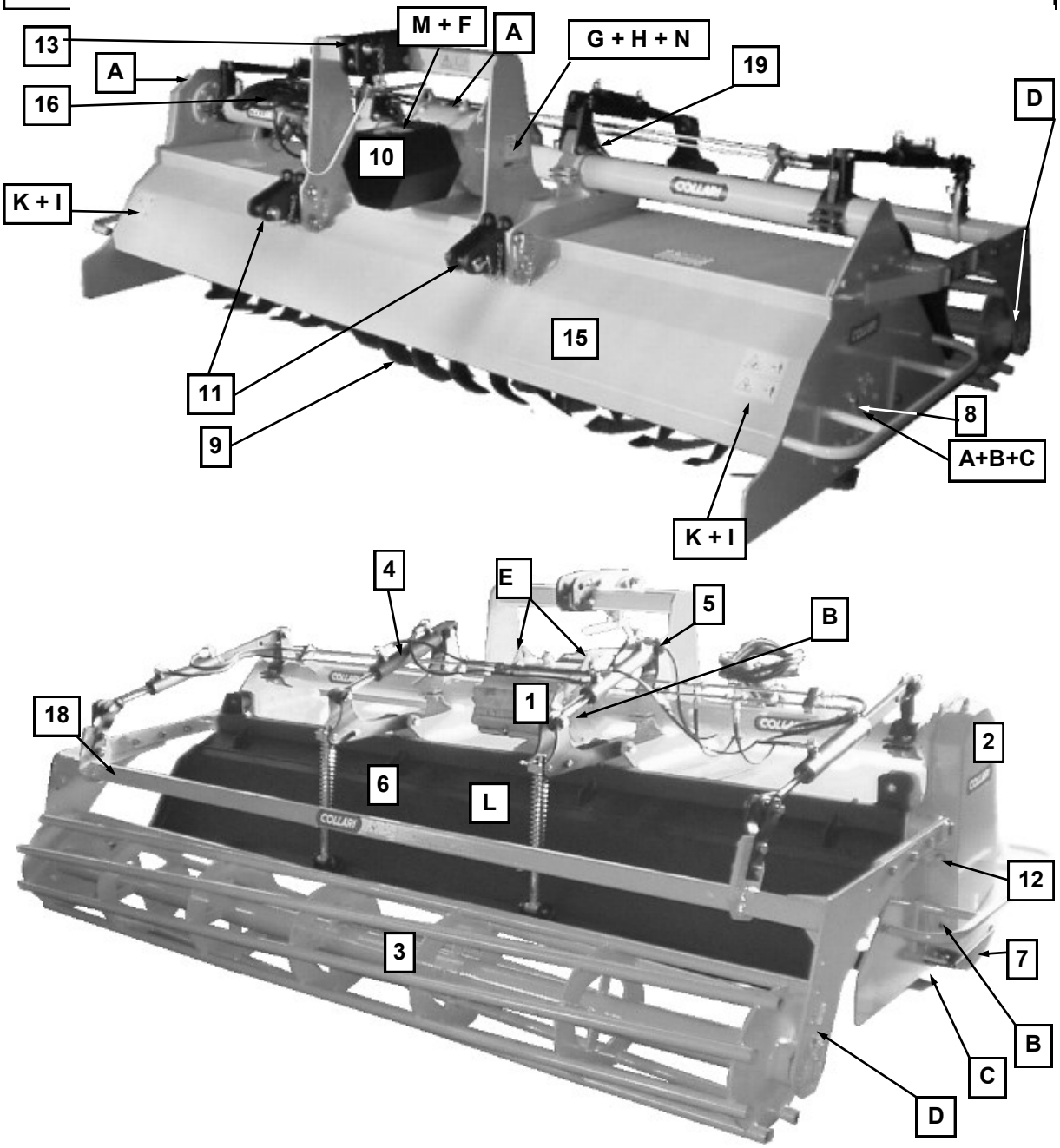
5. ID PLATE.



1- Manufacturer Data
2- CE Marking
3- Year of Construction
4- Max. Pressure Pneumatic System
5- Weight Kg
6- Model
7- Serial N°

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

6. MAIN PARTS AND POSITION OF INFORMATIVE SIGNS.



LIST OF MAIN PARTS IDENTIFICATION

1- Gear box
2- Chain lateral drive
3- Rear levelling rotor
4- Screw or hydraulic cylinder for work depth setting
5- Screw or hydraulic cylinder for rear bonnet setting
6- Rear levelling and protection bonnet
7- Slider
8- External support hoes/tools rotor
9- Hoes / tools rotor
10- Power takeoff with protection
11- Lifting device connection 2nd cat.
12- Chain tightening screw
13- Third point connection
14- Lateral containing sheet
15- Machine frame
16- Check valve and hydraulic system
18- Levelling rotor movable frame
19- Rear bonnet quick opening pivot.

7. TECHNICAL DATA AND CHARACTERISTICS

MODEL ACP TR IS SERIES TRITER WITH HOE ROTOR

Models	Width CM	KW	HP	Depth CM	Tool N° *	Max Weight KG
ACP 185	185	50-66	70-90	25	40-60	960
ACP 205	205	50-66	70-90	25	44-66	1050
ACP 225	225	66-74	90-100	25	48-72	1100
ACP 235	235	66-74	90-100	25	48-72	1150
ACP 245	245	74-88	100-120	25	52-78	1220
ACP 285	285	88-95	100-130	25	60-90	1390
ACP 305	305	88-95	100-130	25	64-96	1480

***** Rotor assembled with: 4 hoes for every flange - 6 hoes for every flange

Noise level at no load: dB Lpam 83 (A) - LwA 98 (A)

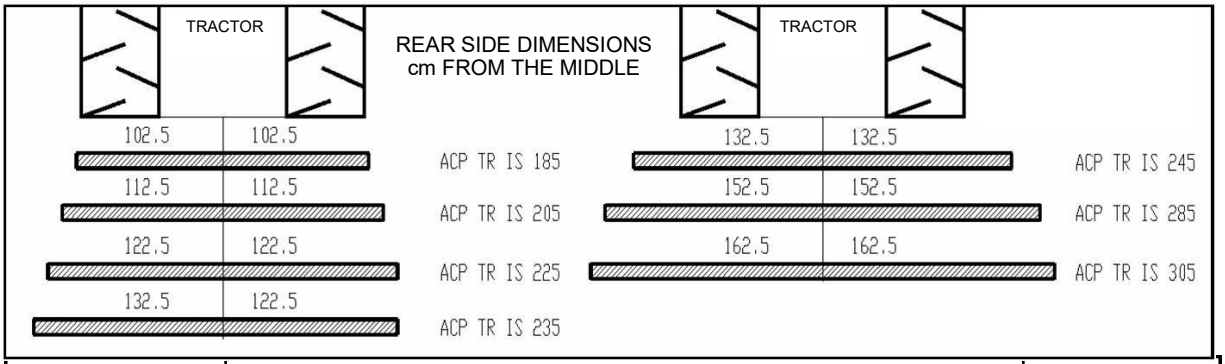
Maximum temperature level of power transmission parts: 40 - 45 C°

DIMENSIONS

Models	Width CM	Lenght* CM	Height CM
ACP 185	210	173-185	125
ACP 205	230	173-185	125
ACP 225	250	173-185	125
ACP 235	260	173-185	125
ACP 245	270	173-185	125
ACP 285	310	173-185	125
ACP 305	330	173-185	125

* Levelling rotor frame closed - open see Sh. 19

SIDE DIMENSIONS ACP TR IS



8. GUARANTEE VALIDITY AND EXPIRY

VALIDITY

If not agreed otherwise in the purchase contract the Stone Burier 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.
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 8 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:

- Use of tractor with power over the limits for the machine (see table sh. 11).
- If the operator has made a mistake while driving the tractor causing damages to the machine
- 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.
- If a machine manoeuvring error is carried out through failure to observe the contents of this manual.
- If the instructions in this manual are not followed.
- If the maintenance instructions in this manual are not observed.
- 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.

9. BEFORE USE

Every time the machine is to be used it is good practice to check that all the protective and safety devices are in place and perfectly functioning, and that all the parts involved in the work process, and therefore subject to wear, are utilisable and still efficient and all the lubricants are at a normal level and the grease points have been filled (see the maintenance section of the manual).

USE RULES

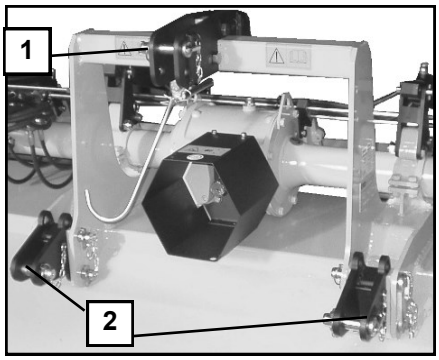
Personnel Required: **OPERATOR**

10. CONNECTION TO THE TRACTOR

The hoe can be connected to every tractor with the appropriate power provided with a rear lifting device with three point universal connection 2nd Cat.

Dangerous operation: follow the instruction carefully.

DANGER



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 & 2 on the side pict.) by means of the supplied pivot, the spherical joints and block the pivot with the pin.

5- 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.

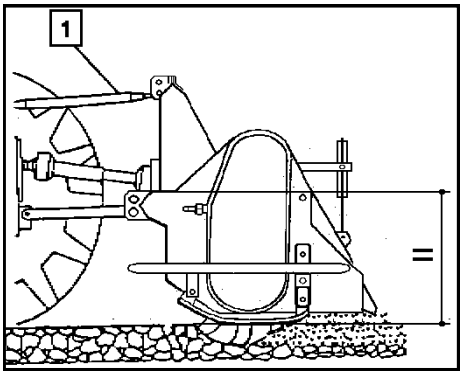
6- Place the lifting bars inside the connecting supports (2 in the above pict., insert the pivot in the hole and block it with the pin.

7- 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.

8- Block both lifting arms by means of the lateral tight-tenders in order to avoid lateral swingings when the machine is lifted.

9- 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.

10- Connect the 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 pict). 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 pict.).

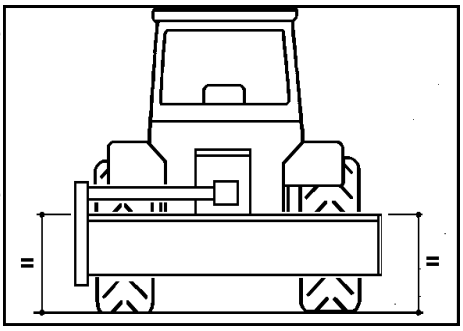


10. CONNECTION TO THE TRACTOR (continued)

11- Connect the hydraulic hoses of the machine to the tractor distributor with quick connect couplings 1/2".

12- Check carefully that the plumbing have been done correctly and all pivot have been fixed and blocked with the pins.

13- 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.



11. LIFTING DEVICES POSITION

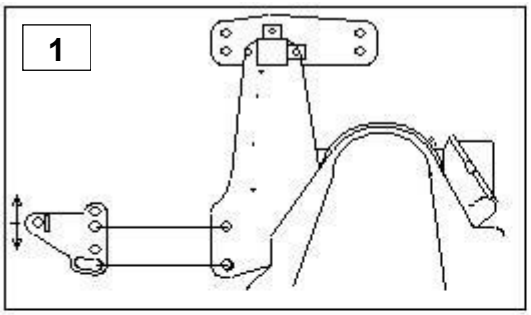
Personnel Required: **TECHNICIAN**

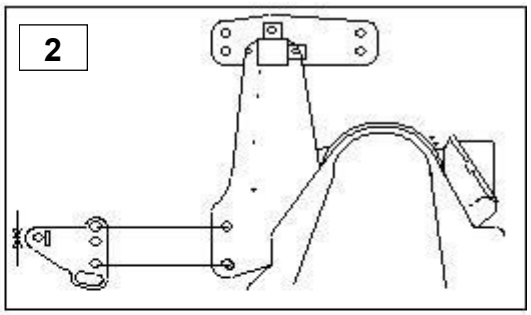
The connection joints (n° 2 of pict. in sh.13) can be mounted in four different positions as shown in the pictures below:

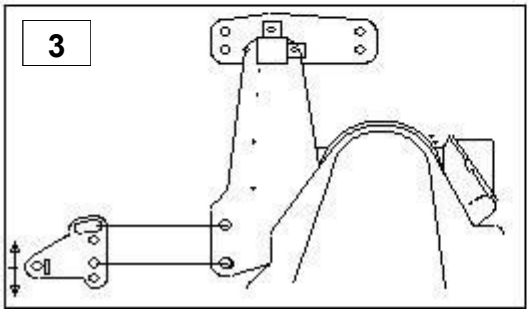
Pos. n° 1 : High connection hole and possibility for the joint to swing in the slot.
Pos. n° 2 : High connection hole and fixed joint.
Pos. n° 3 : Low connection hole and possibility for the joint to swing in the slot.
Pos. n° 4 : Low connection hole and fixed joint.

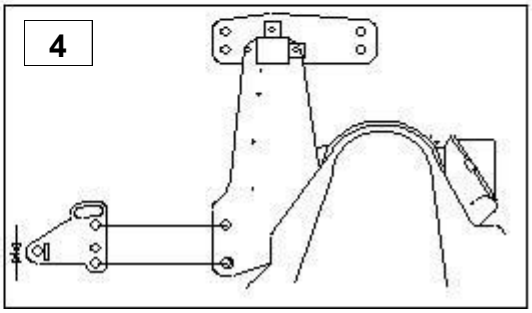
The connection mounting depends on necessities during operation and the height of the lifting hole on the tractor in order to have a smooth connection.
Mounting the machine in a swinging configuration allows the machine to better follow the irregularity and asperity of the ground on the other side the fixed joint forces the machine to follow the tractor.

Mostly used are pos. 1 and 4.









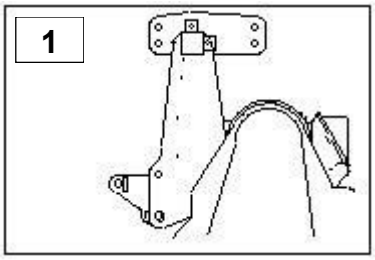
12. POSITION OF THIRD POINT CONNECTION

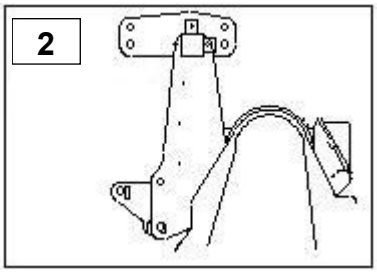
Personnel Required: **TECHNICIAN**

The third point connection (n° 1 pict. sh. 13) can be mounted in two different positions as shown in picture aside:

Pos. n° 1 : Short third point connection.
Pos. n° 2 : Long third point connection.

The connection mounting depends on the position of the third point connection on the tractor in order to have the right assembly of the machine to the tractor.
To change the position it is sufficient to remove the fixing bolts, rotate the plates and reassemble the same tightening the bolts.
Mostly used is pos. 2.





13. 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.

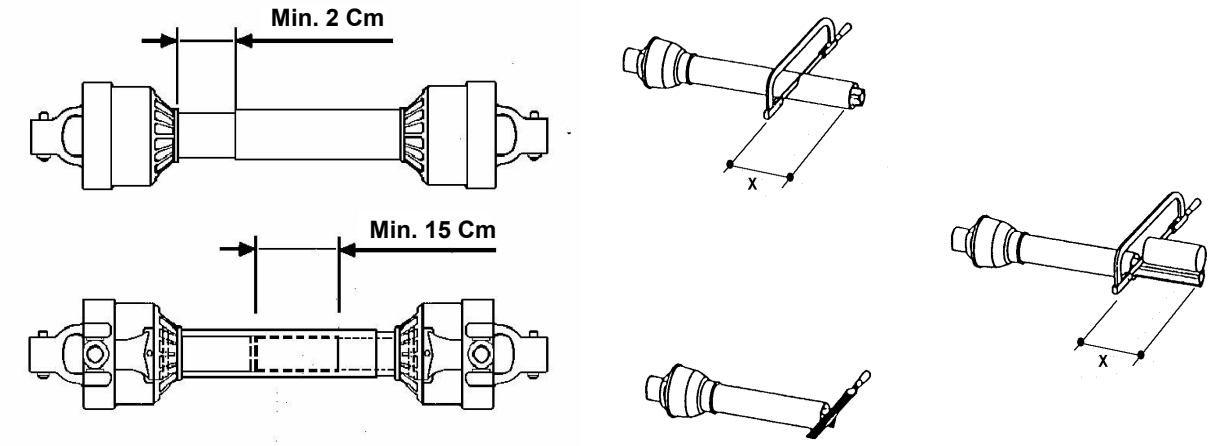
IF THEY MATCH: The cardan should have the right length. Assemble it on the machine as described on Ch. 10 and check the conditions of minimum and maximum gap (See pict. on sh. 16) lifting and moving down the machine by means of the lifter.

IF THE SHAFT DIMENSION IS SMALLER: The cardan shaft could be short. Assemble it on the machine as described on Ch. 10 and verify the conditions of minimum and maximum gap (See pict on sh. 16) 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 sh. 16). Trimming carefully and lubricate the entry points of the tubes. Reassemble the cardan shaft and mount it on the machine as described on ch. 10 then check the conditions of minimum and maximum gap lifting and lowering the machine with the lifter (Pict. on sh. 16).
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

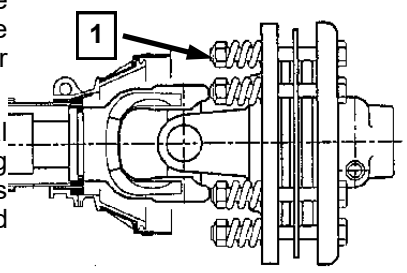
The cardan shaft can be equipped (depending on the machine model) with a friction disc type safety clutch useful to avoid sudden overloads or excessive continued stresses that can cause damages to the machine.
The cardan is provided already tared to a medium value of the transmissible torque depending 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 (1 in pict. below).

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°C.

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.

13. CARDAN SHAFT ADJUSTMENT AND SETTING (Continued)

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.

14. MANUAL CHANGE OF GEAR

Personnel Required: **OPERATOR**

The hoe model ACP TR IS is normally built with a 4 speeds gear with manual replacement of gears.

WARNING

Before you proceed to change the gears, wait for the complete cooling of the gear box, place down the machine, disconnect the power takeoff and, turn off the engine, put a low gear and pull the stationary brake. In case the gear reducer is still warm use insulated gloves in order to avoid burns.

Proceed as follows to change the gears:

1- Shorten the third point arm so that the machine is tilting forward (this operation will prevent the oil to come out from the box if in excess).

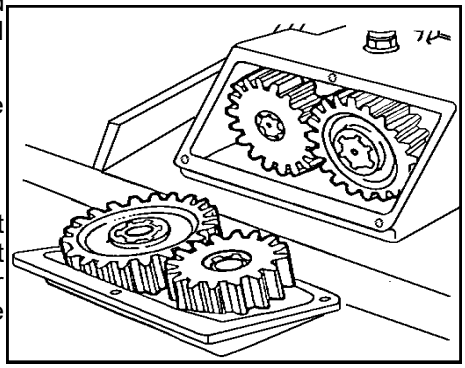
2- Unscrew the three fixing bolts on the cover.

3- Remove the rear cover taking care to not damage the sealing gasket (Pict. aside).

4- Remove the gears and replace or reverse them depending on the speed that you need to obtain. On sheet 18 of this manual and on the machine you'll find a table with the indication of the different available speed options with the gears provided together with the machine.

5- Put the gear not used in the special supports inside the box cover.

6- Reassemble the cover and tighten the screws.



ATTENTION

There are couple of gears that cannot be reversed. Do not exchange gears from one to another couple. Strictly follow the above mentioned table

ATTENTION

During this procedure pay attention that the oil can come out from the box. Carry out these operations with the maximum care since a wrong assembly of the gears can cause damages to the machine.

14. MANUAL CHANGE OF GEAR (Continued)

The right speed is always proportional to the grade of crush that you want to obtain, the ground conditions and the translation speed of the tractor. A higher speed of the rotor brings a better crushing level of the soil and will require higher power.
Depending on the hoe rotor type and the speed rate of the power takeoff you can use different gear speed options as follows:

The indication left-right is referred to the rear view of the machine.

ROTOR WITH HOES - P.T.O. 540 RPM Z = Number of gear cogs			
P.T.O. SHAFT	PINION SHAFT	R.P.M.	SPEED N°
Z 16	Z 17	192	II
Z 17	Z 16	217	III
Z 15	Z 18	170	I
Z 18	Z 15	245	IV

LEFT SHAFT | RIGHT SHAFT

ROTOR WITH HOES - P.T.O. 1000 RPM Z = Number of gear cogs			
P.T.O. SHAFT	PINION SHAFT	R.P.M.	SPEED N°
Z 15	Z 23	250	I
Z 23	Z 15	580*	IV
Z 14	Z 19	280	II
Z 19	Z 14	520*	III

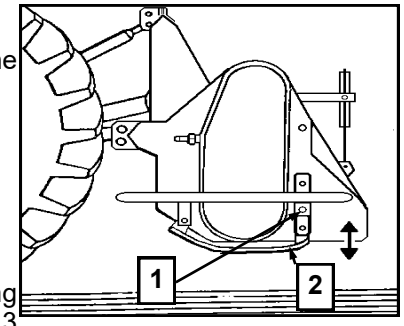
LEFT SHAFT | RIGHT SHAFT

* Don't use this speed , is too high.

15. OPERATING DEPTH SETTING

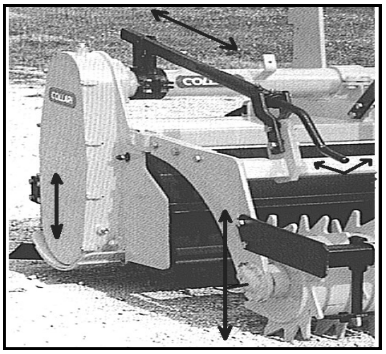
Personnel Required: **OPERATOR**

In order to set the operating depth the machine has a rear levelling rotor and can be provided with lateral supporting sleds used to help the rear rotor when the machine is operated in a particularly soft ground to prevent its subsiding or in order to reduce the compacting pressure of the rotor to the ground.
To set the operating depth proceed as follows:



Sleds setting: The operating depth setting can be done adjusting the height of both supporting sleds. Proceed as follows:
1– Remove the blocking screw (1 Pict aside).
2- Adjust the height of the sled as needed (2 Pict aside).
3– Insert and tighten the blocking screw (1 Pict aside).
4– Repeat for the other sled.

Levelling rotor setting: The operating depth can be set by changing the position of the levelling rotor, turning the lateral screws of 2 or 3 turns per time alternating.
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 rotor shortening the screw or the hydraulic cylinder in order to increase the operating depth and vice versa. (See pict on the side).

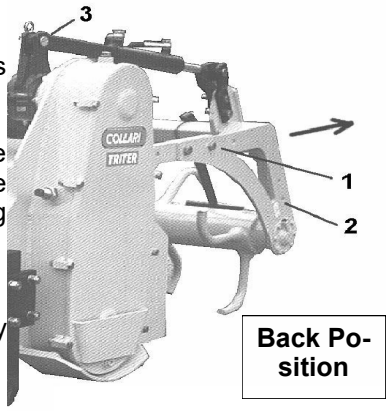
16. LEVELLING ROTOR POSITION SETTING

Personnel Required: **TECHNICIAN**

It is possible to mount the levelling rotor in two different positions depending on necessity.

- Back position.
  Allows a better discharge of the soil from the back of the machine and avoids obstructions furthermore allows more space for the opening of the rear bonnet when is mounted the spike levelling rotor or the rear sower.

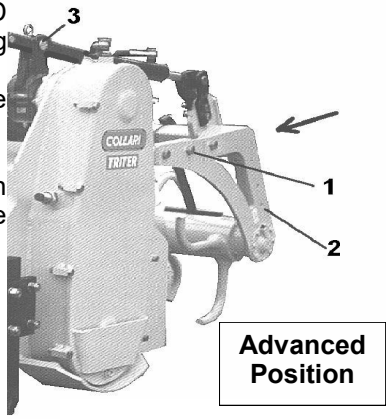
- Advanced position.
  Reduces the size of the machine and keeps the centre of gravity closer to the tractor.



Back Position

For the setting proceed as follows:

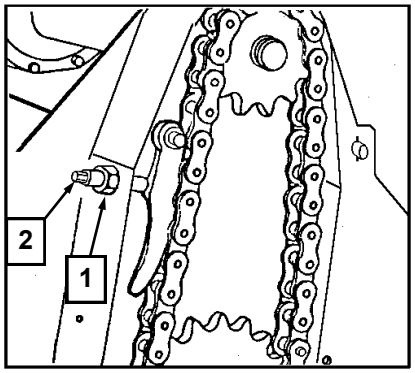
- Sling the machine as indicated on HOISTING AND TRANSPORTATION putting the straps in tension without raising the machine to avoid for swinging.
- Unscrew on both lateral sides the fastening screws 1 (pict on the side) and remove pivots 3.
- Place the levelling rotor frame in the requested position.
- Insert and tighten the fastening screws 1. Please consider that in the back position four screws are used instead of six when the rotor is in the advanced position.
- Reinsert the pivots 3 in the holes blocking them with the pins.
- Remove the straps.



Advanced Position

17. 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**

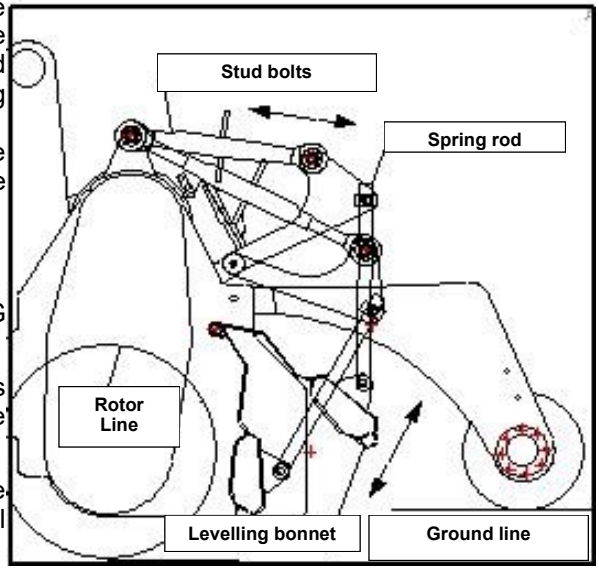
Follow scrupulously all the indications given in the "MAINTENANCE" chapter.

1- Unfasten the blocking counter nut (1 pict on the side)
2- Turn clockwise the set screw (2 pict on the side) till the hoe 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 pict on the side) holding the set screw with another wrench (2 pict 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.

18. REAR LEVELLING ROTOR BONNET SETTING

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.
It can be set in different ways depending on the results that the operator wants to obtain or the working conditions.



Personnel Required: **OPERATOR**

GENERAL SETTING OF REAR LEVELLING BONNET

Turn alternatively the two stud bolts by 2 or 3 turns each till you reach the intended position of the levelling bonnet. (Pict on the side).

For machines provided with hydraulic setting of the bonnet, adjust the position acting on the control lever on the tractor till you reach the position.

The rear bonnet position change in dependence of the working degree that you want to obtain or the operating conditions.

Generally speaking, the rear bonnet is kept closed when you work in dry soils or if you want to obtain a very fine levelled ground, on the other side with wet soil or if you want a coarse work, keep the bonnet in an open position so that the machine will discharge easily the worked ground.

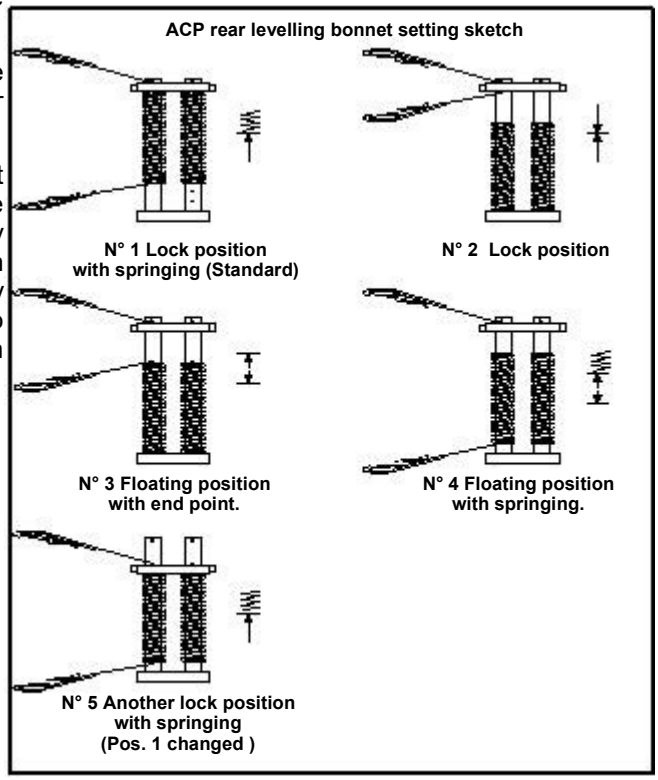
ATTENTION

Keep in consideration that the more you close the bonnet in order to obtain a finer ground the more power you will absorbe with the machine at the same operating depth.

In order to avoid unwanted loss of power, it is recommended to set the rear bonnet regularly depending on the working conditions, type of soil, requested operating depth and degree of refinement and levelling of the ground.

The main setting is made by means of the specific setting stud bolts with manual or hydraulic control.

Further fine settings of the levelling bonnet height and the reactions of the same to the stresses during operation can be done by changing the position of the compression springs that have different assembly configurations on the machine, in order to do that place the “R” pins accordingly as shown in the picture on the side.



19. QUICK OPENING OF REAR LEVELLING ROTOR BONNET

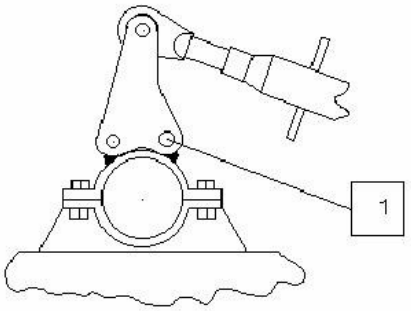
Personnel Required: **OPERATOR**

In order to have a rapid access to the internal parts of the machine (rotor, separation grid supports etc.) and allow to do maintenance operations, cleaning and checks, it is possible to quickly open the rear levelling bonnet without loosing the setting of the same for the machine operation.

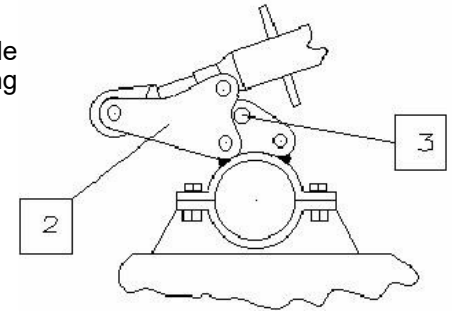
Proceed as follows:

- First of all put the machine in security as indicated in the “MAINTENANCE” chapter (Sh. 23).
- From position A slip off the pins from both blocking pivots (Item 1 pict on the side).
- Lift the rear bonnet overturning the support plates (Item 2 pict on the side) and place the bonnet in position B of quick opening.
- Place both blocking pivots in the specific holes and secure them using the pins (Item 3 pict on the side).
- After all the necessary activities have been made replace the bonnet in the operating position A using reversely the above described procedure.

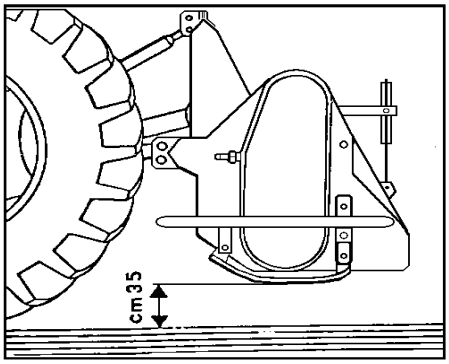
Pos. A: Normal position



Pos. B: Quick opening



20. 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 hoe 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 hoe 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 10Km per hour during the operation with the hoe 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.

21. INACTIVITY

Personnel Required: **OPERATOR**

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

1- Put the machine on the ground in a flat area.

2- Operate in a reverse way to that indicated in Chapter 10 (Connection 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.

22. DAILY (Every 8h)

Personnel Required: **OPERATOR**

Every day or every 8 hours (max 20 h) 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. (See also cardan shaft manufacturer manual)
- Fill up with grease the lateral supports of the levelling rotor till the exhausted grease comes out.
- Check the tightening of the hoe fastening screws (specially after a couple of hours of operation).

23. FREQUENT (Every 50 - 60 h)

Personnel Required: **OPERATOR**

Regularly every 50 - 60 hours of operation:

- Check the oil level in the central reducer 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 oil level in the external support of the hoe rotor, top up if necessary using a standard oiler, from the inlet plug threaded hole till the oil comes out from the same point.

24. PERIODICALLY (Every 300 h)

Personnel Required: **OPERATOR**

Every 300 hours of operation or every year:

- Wholly replace the oil in the central reducer 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.
- Top up the oil in the external support of the hoe rotor, using a standard oiler, from the inlet plug threaded hole till the oil comes out from the same point.
- Check the correct operation of the cardan shaft safety clutch as indicated on sheet 16.

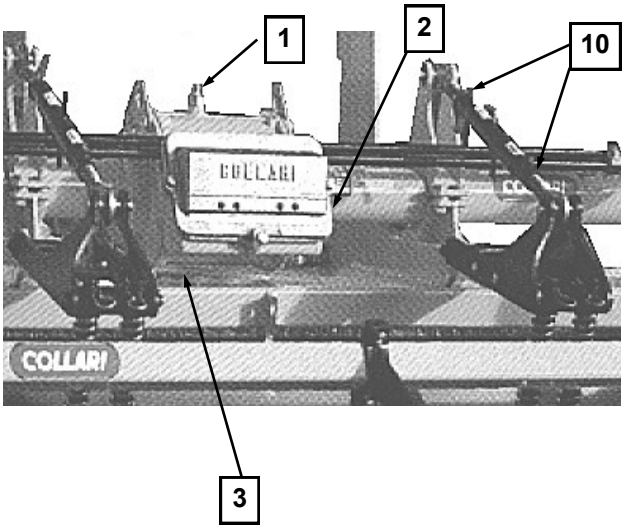
ATTENTION

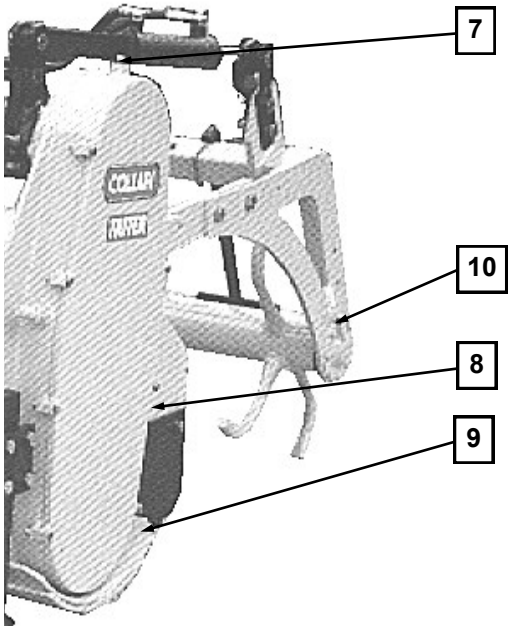
Tighten strongly all inlet, level and drain plugs.
An accidental loosening of any plug can bring a severe loss of lubricant and/or undesired contamination of the same with external particles causing serious damages to the machine.

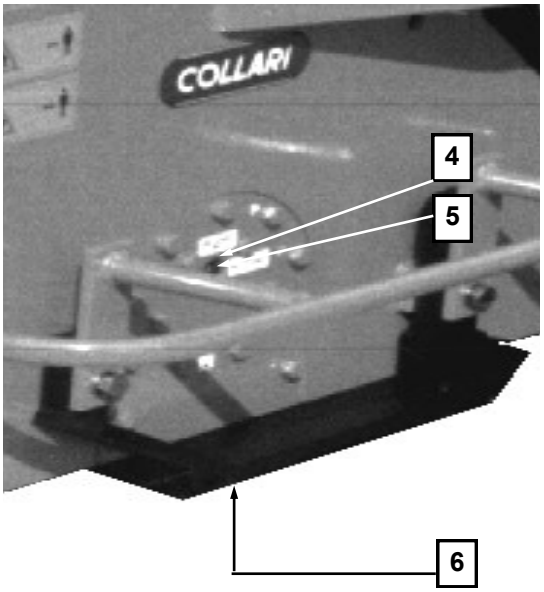
25. LUBRICATION AND LUBRICANTS

POINT OF LUBRICATION:

1- Central reducer oil inlet
2- Central reducer oil level
3- Central reducer oil drain
4- External rotor support oil inlet
5- External rotor support oil level
6- External rotor support oil drain (not indicated)
7- Chain box oil inlet
8- Chain box oil level
9- Chain box oil drain
10- Grease fill point







SUGGESTED LUBRICANTS:

- Central reducer, lateral chain box, external hoe rotor support we recommend:
  OIL AGIP BLASIA 220 EP SAE 80W / 90
  OIL AGIP ROTRA MP 80W / 90
- For all grease fill points we recommend:
  AGIP GREASE 30

As indicated on the label applied on the side of the machine.

->>>>>>

Agip	COLLARI
LUBRIFICANTI RACCOMANDATI	IMPIEGO
AGIP ROTRA MP 80 W/90	RIDUTTORE CENTRALE SCATOLA CATENA SUPPORTO ESTERNO ROTORE PORTA ZAPPE
AGIP GREASE 30	SUPPORTI RULLO LIVELLATORE ALBERO CARDANICO VITI RULLO LIVELL.

26. HOSE/TOOLS REPLACEMENT

Personnel Required: **TECHNICIAN**

The hoe machine can be provided on demand with two different type of tool:
- Semi curved hoes
- Squared hoes.

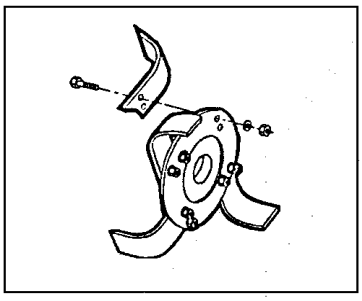
Check every day the wearing level of the tools and their integrity, in case they get deformed or partially broken proceed with their replacement with hoes of the same shape and fasten them the same way and direction, replace the fastening bolts if needed.
It is recommended to replace the tools one each 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, on request it can be supplied with six hoes per flange, with this configuration you will obtain a better refinement of the ground when you work with very dry soil. 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 Pict. on the side)

27. SEPARATING SPRINGS REPLACEMENT

Personnel Required: **TECHNICIAN**

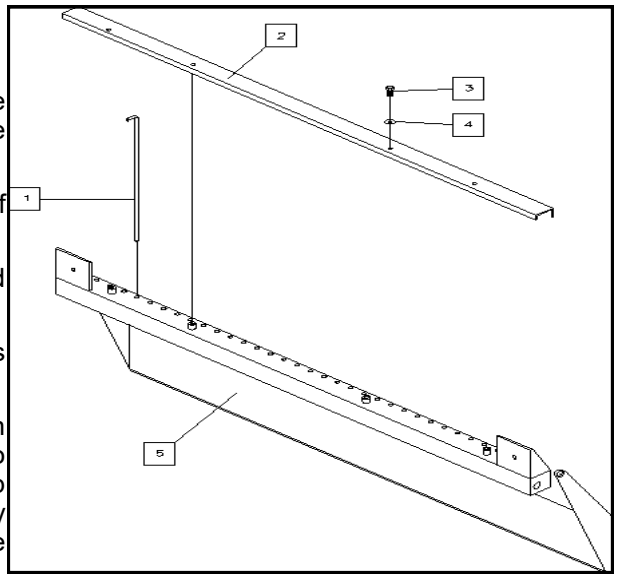
The hoe mod. ACP TR IS is provided with a separating grid made with a series of compression springs of music wire material enclosed in a special rack.
The separating grid is used to separate clods and large stones from finer soil that will be left on the top of the layer while the other will lay on the 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 MAINTENANCE chapter (Sh.23).
The access to the separating grid springs take place removing the cover located on the top of the rear levelling bonnet.

27. SEPARATING SPRINGS REPLACEMENT (continued)

Personnel Required: **TECHNICIAN**

Then proceed as follows:

- Remove the upper cover (Item 2 pict. on the side) unscrewing the four fastening bolts of the same. (Items 3-4 on the side).
- Identify the damaged springs then slip them off from above. (Item 1 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 mm.

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 mm.

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

28. 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.

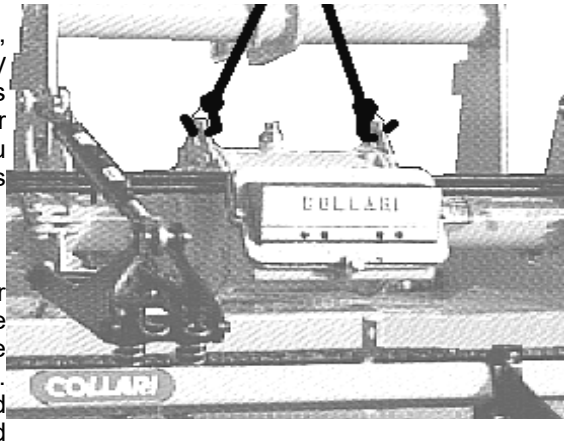
3- Check the tightening of all bolts of the machine with special attention to the hoes fastening bolts.

4- Store the machine possibly in a dry, closed place and cover it with a sheet.

29. HOISTING AND TRANSPORTION

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. 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.

See picture aside.



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. (For example the cardan shaft and protections).

30. 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 sh.23.

2- Give the machine to a fully authorised disposal company because it is wholly built in ferrous materials that may be completely recycled.

31. 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, as per the attached Spare Parts Catalogue.

2- Model, Serial N° and year of construction of the machine as per the metal ID plate (see Page 9).

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.

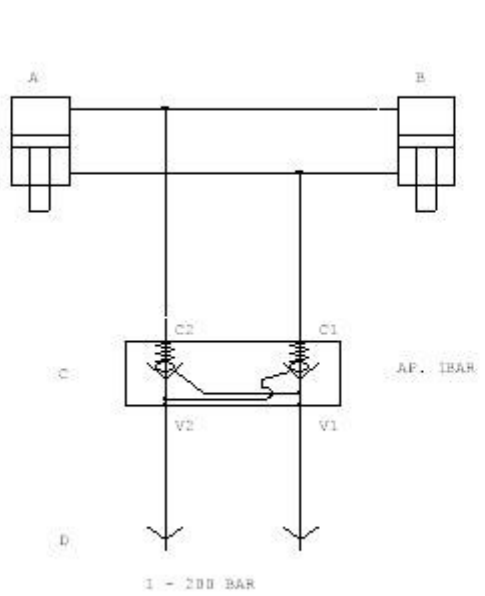
WHAT TO DO IF:

TROUBLESHOOTING	CAUSES AND REMEDIES
The hoe rotor is blocked	- 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	- Check the correct assembly of tools. - Check the integrity of the cardan shaft. - Check the chain tight-tender setting. - Check the assembly of the gears. - Check the integrity of the mechanical parts.
Noisy machine	- Check the tools tightening. - Check the chain tight-tender setting. - Check the assembly of the gears. - Check the integrity of the mechanical parts.
Reducer or lateral chain box overheating	- Check reducer oil level and exhausting level. - Check integrity of mechanical parts. - Check power level applied according to manual.
Frequent tool breaking	- 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.	- 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 reducer box.	- Check the correct tightening of the screws. - Check integrity of mechanical parts.
Oil leakage from rotor support.	- Check all screws tightening. - Replace all internal seals.
Excessive tractor exertion.	- Check the speed of the power take off. - Check the speed of the rotor. - Excessive operating depth. - Check if the rear levelling bonnet is too close. - Check if the power level applied is according to this manual.

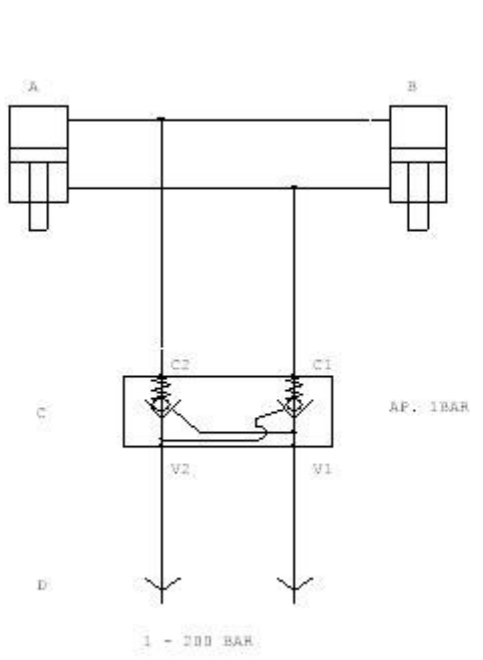
In case of doubts or if you cannot fix the above mentioned problems, we kindly ask you to contact our representative or COLLARI sales office/technical service.

HYDRAULIC DIAGRAM LEVELLING ROTOR SETTING AND REAR BONNET SETTING

Hydraulic Diagram
Levelling Rotor Setting ACP - ACS



Hydraulic Diagram
Rear Bonnet Setting ACP - ACS



LEGENDA HYDRAULIC DIAGRAM LEVELLING ROTOR SETTING AND REAR BONNET SETTING ACP - ACS

A Hydraulic cylinder Diam. 50 rod 25 stroke 200 connection 3/8 (See spare parts catalogue).
B Hydraulic cylinder Diam. 50 rod 25 stroke 200 connection 3/8 (See spare parts catalogue).
C Check valve 3/8 double effect (LU-EN VNR/SO/DE 38).
D Quick disconnect 1/2 needle (Faster NV 12 push-pull).

SPARE PARTS CATALOGUE

Last Upgrade 08 / 2004

Table n° 1 GEAR BOX ASSEMBLY ACP TR IS (PTO 540 - 1000 RPM)

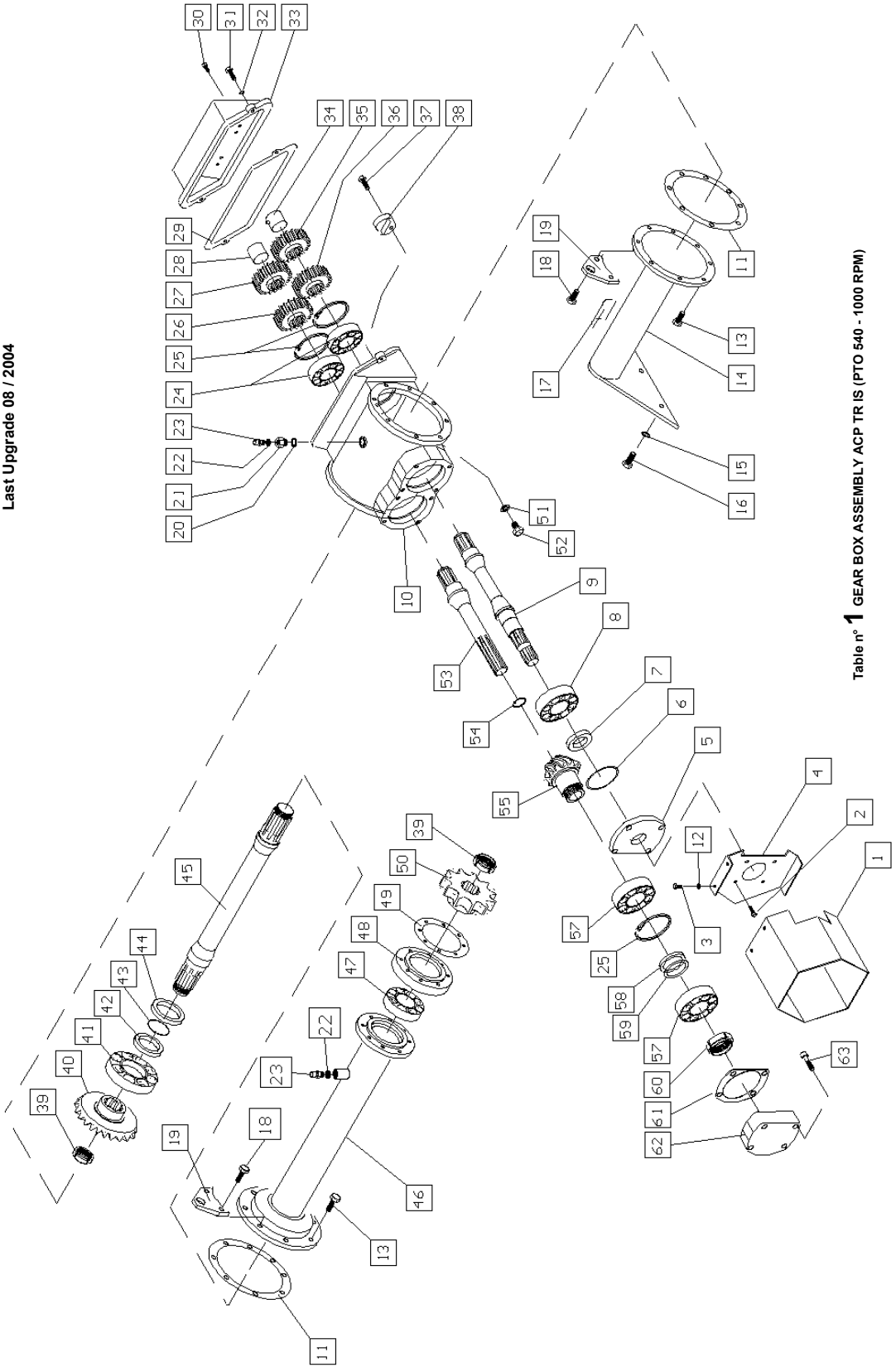


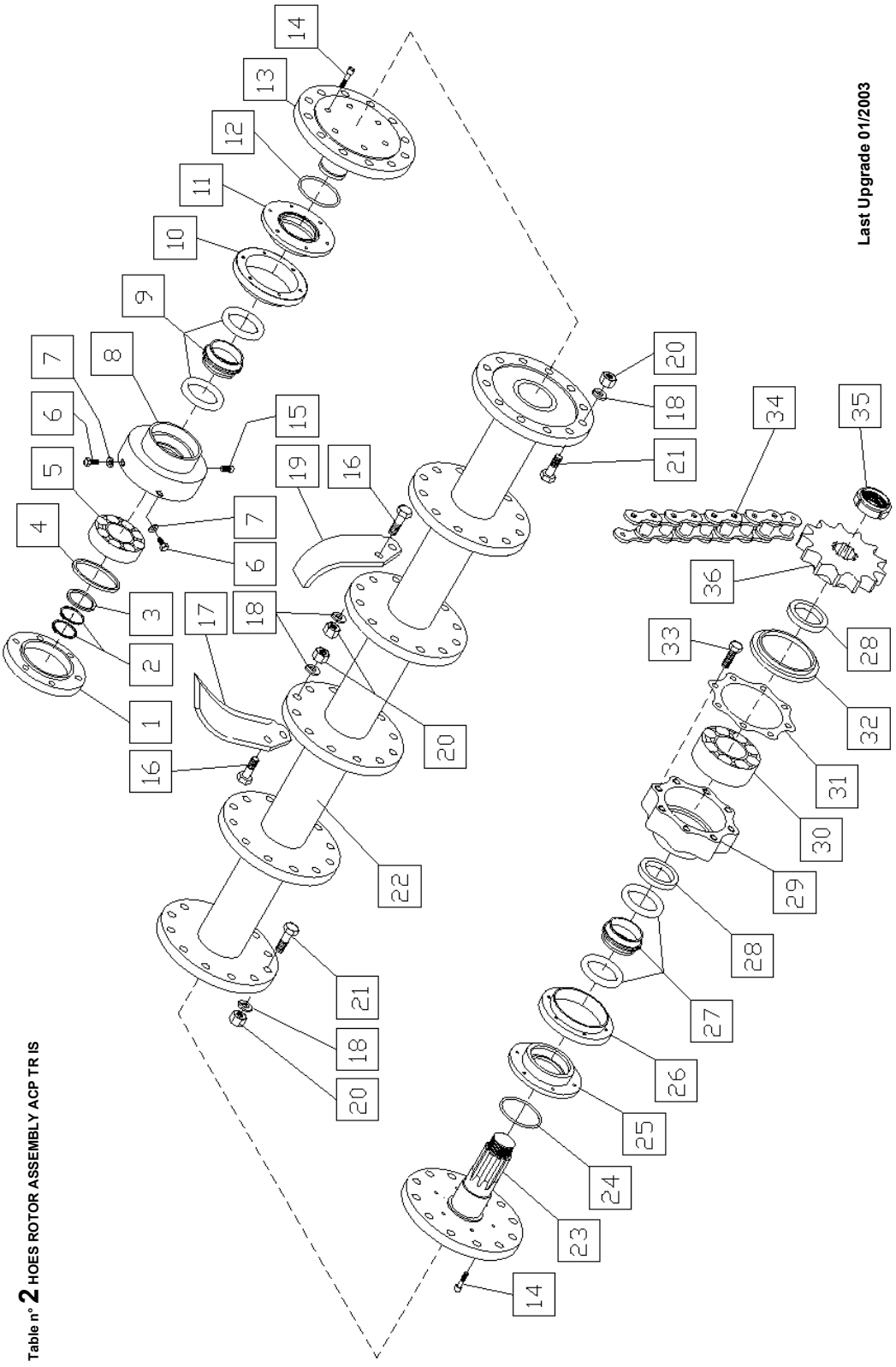
Table 1 - Gear Box assembly

Detail	Note	Code	Quantity	Description
1		0287R	1	COMPLETE POWER TAKE-OFF GUARD
2		0118V	4	SCREW HEX. HEAD
3		0042V	2	SCREW HEX. HEAD
4		0403R	1	PTO GUARD HITCH
5		0070R	1	COVER
6		0007P	1	O-RING
7		0006P	1	OIL SEAL
8		0011C	1	BEARING
9		0036I	1	PTO SHAFT
10		0011F	1	TRANSMISSION HOUSING
11		0012G	2	SEAL
12		0105V	2	WASHER
13		0032V	12	SCREW HEX. HEAD
14	1.85	0147A	1	SUPPORT
14	2.05	0148A	1	SUPPORT
14	2.25	0149A	1	SUPPORT
14	2.35	0150A	1	SUPPORT
14	2.45	0151.1A	1	SUPPORT
14	2.85	0151.2A	1	SUPPORT
14	3.05	0151.3A	1	SUPPORT
15		0012V	5	WASHER
16		0017V	5	SCREW HEX. HEAD
17		0014E	1	PLATE
18		0118V	4	SCREW HEX. HEAD
19		0314R	2	HITCH
20		0062OL	1	WASHER
21		0311R	1	BREATHER PIPE HOLDER
22		0001E	2	WASHER
23		0006R	2	OIL BREATHER PIPE
24		0014C	2	BEARING
25		0008S	3	SEEGER
26	A	0041.1I	1	Z17 GEAR
26	B	0060.1I	1	Z19 GEAR
27	A	0040.1I	1	Z18 GEAR
27	B	0058.1I	1	Z23 GEAR
28		0077.1R	1	PIN
29		0013G	1	SEAL
30		0048V	4	SCREW
31		0033V	2	SCREW HEX. HEAD
32		0106V	2	WASHER
33		0076R	1	COVER
34		0077R	1	PIN
35	A	0042.1I	1	Z15 GEAR
35	B	0059.1I	1	Z14 GEAR
36	A	0043.1I	1	Z16 GEAR
36	B	0057.1I	1	Z15 GEAR
37		0104V	1	SCREW HEX. HEAD
38		0312R	1	FACE
39		0066R	2	RING NUT

Table 1 - Gear Box assembly

Detail	Note	Code	Quantity	Description
40		0017O	1	BEVEL GEAR
41		0034C	1	BEARING
42		0404R	1	THIMBLE
43		0014P	1	O-RING
44		0008P	1	OIL SEAL
45	1.85	0047I	1	GEAR BOX CHAIN SHAFT
45	2.05	0048I	1	GEAR BOX CHAIN SHAFT
45	2.25	0049I	1	GEAR BOX CHAIN SHAFT
45	2.35	0050I	1	GEAR BOX CHAIN SHAFT
45	2.45	0049.1I	1	GEAR BOX CHAIN SHAFT
45	2.85	0049.2I	1	GEAR BOX CHAIN SHAFT
45	3.05	0049.3I	1	GEAR BOX CHAIN SHAFT
46	1.85	0334.1A	1	GEAR BOX CHAIN TUBE
46	2.05	0334A	1	GEAR BOX CHAIN TUBE
46	2.25	0335A	1	GEAR BOX CHAIN TUBE
46	2.35	0335.1A	1	GEAR BOX CHAIN TUBE
46	2.45	0336.1A	1	GEAR BOX CHAIN TUBE
46	2.85	0336.2A	1	GEAR BOX CHAIN TUBE
46	3.05	0336.3A	1	GEAR BOX CHAIN TUBE
47		0028C	1	BEARING
48		0085R	1	SUPPORT
49		0014G	1	SEAL
50		0046I	1	PINION
51		0053OL	1	WASHER
52		0131V	1	PLUG
53		0044I	1	PINION SHAFT
54		0009S	1	SEEGER
55		0018O	1	PINION
57		0012C	2	BEARING
58		0013E	1	THIMBLE
59		0012E	0	THICKNESS
60		0072R	1	RING NUT
61		0011G	1	SEAL
62		0071R	1	COVER
63		0041V	1	SCREW

	Note	Description
	A	Gear for PTO with 540 rpm
	B	Gear for PTO with 1000 rpm



Last Upgrade 01/2003

Table n° **2** HOES ROTOR ASSEMBLY ACP TR IS

Table 2 - Hoes Rotor Assembly

Detail	Note	Code	Quantity	Description
1		0095R	1	COVER
2		0010S	2	SEEGER
3		0132R	1	THIMBLE
4		0134R	1	THIMBLE
5		0011C	1	BEARING
6		0004.1V	2	SCREW HEX. HEAD
7		0003V	2	WASHER
8		0136R	1	SUPPORT
9		0002T	1	SEAL GROUP
10		0011R	1	DUST GUARD
11		0012R	1	FLANGE
12		0003P	1	O-RING
13		0146I	1	EXTERNAL ROTOR SHAFT
14		0013.1V	12	SCREW
15		0048V	1	SCREW
16	?	0064V		SCREW HEX. HEAD FOR HOE
17	A ?	0042Z		HOE
17	B ?	0043Z		HOE
18	?	0015V		WASHER
19	A ?	0042Z		HOE
19	B ?	0043Z		HOE
20	?	0065V		NUT
21	?	0086V		SCREW HEX. HEAD
22	1.85	0563.2A	1	HOE ROTOR
22	2.05	0563A	1	HOE ROTOR
22	2.25	0563.3A	1	HOE ROTOR
22	2.35	0563.4A	1	HOE ROTOR
22	2.45	0563.1A	1	HOE ROTOR
22	2.85	0563.5A	1	HOE ROTOR
22	3.05	0563.6A	1	HOE ROTOR
23		0147I	1	COMMAND ROTOR SHAFT
24		0009P	1	O-RING
25		0093R	1	FLANGE
26		0092R	1	DUST GUARD
27		0004T	1	SEAL GROUP
28		0180R	1	THIMBLE
29		0135R	1	SUPPORT
30		0017C	1	BEARING
31		0014G	1	SEAL
32		0133R	1	RETAINER RING
33		0032V	8	SCREW HEX. HEAD
34		0003N	1	CHAIN
35		0066R	1	RING NUT
36		0052I	1	PINION

Note	Description
?	Quantity is variable and it depends on width and preparation
A	Standard Hoe
B	Squared Hoe

Last Upgrade 08/2008

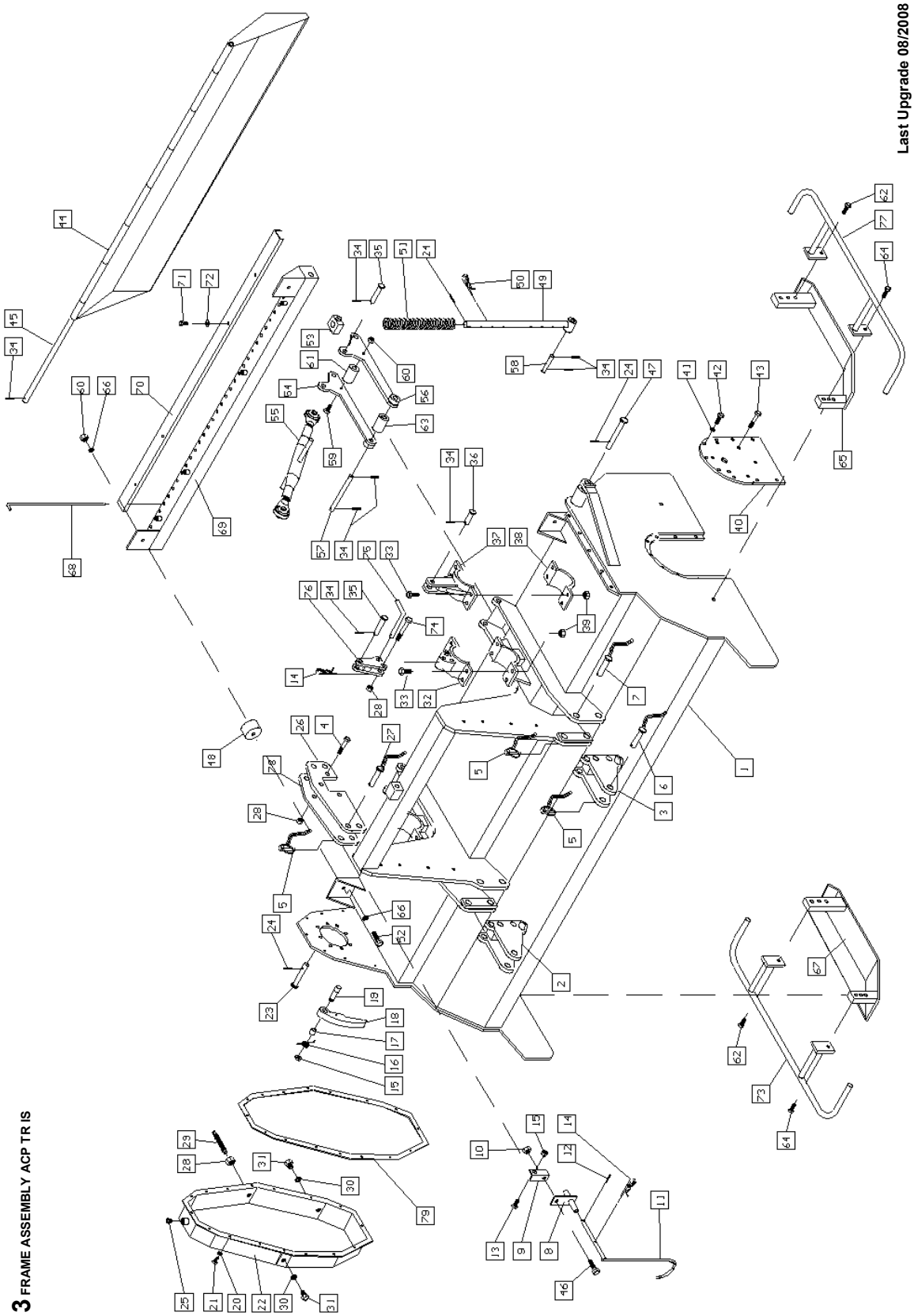


Table n° 3 FRAME ASSEMBLY ACP TR IS

Table 3 - Frame Assembly

Detail	Note	Code	Quantity	Description
1	1.85	0564.3A	1	FRAME
1	2.05	0564.1A	1	FRAME
1	2.25	0647.3A	1	FRAME
1	2.35	0647.4A	1	FRAME
1	2.45	0647.1A	1	FRAME
1	2.85	0647.5A	1	FRAME
1	3.05	0647.6A	1	FRAME
2		0600A	1	LEFT SUPPLE HITCH
3		0601A	1	FRAME
4		0108V	2	SCREW HEX. HEAD
5		0016E	3	SPRING FASTENER
6		0201R	2	PIN
7		0137R	4	PIN
8		0380R	1	CARDAN HITCH
9		0518R	1	ANGULAR
10		0116V	1	NUT
11		0383R	1	SUPPORT
12		0040E	1	SPRING PIN
13		0124V	1	SCREW HEX. HEAD
14		0028E	2	COTTER PIN
15		0024V	2	NUT
16		0020R	1	SPRING
17		0101R	1	BUSHING
18		0102R	1	TENSIONER SLIDE
19		0103R	1	PIN
20		0135.1V	18	WASHER
21		0042V	18	SCREW HEX. HEAD
22		0100.1R	1	COVER
23		0485R	1	PIN
24		0019E	4	SPRING PIN
25		0006V	1	PLUG
26		0434R	1	3'POINT HITCH
27		0138R	1	PIN
28		0156V	5	LOCK NUT
29		0022R	1	TENSIONER REGULATOR
30		0053OL	2	WASHER
31		0131V	2	PLUG
32		0702A	2	BRACKET
33		0008V	16	SCREW HEX. HEAD FOR HOE
34		0018E	16	SPRING PIN
35		0416R	4	PIN
36		0202R	2	PIN
37		0180A	2	BRACKET
38		0139R	2	BRACKET
39		0010V	16	NUT
40		0569A	1	PLATE
41		0012V	5	WASHER

Table 3 - Frame Assembly

Detail	Note	Code	Quantity	Description
42		0017V	5	SCREW HEX. HEAD
43		0062V	6	SCREW HEX. HEAD
44	1.85	0704.2A	1	REAR HOOD
44	2.05	0704.1A	1	REAR HOOD
44	2.25	0704.3A	1	REAR HOOD
44	2.35	0704.4A	1	REAR HOOD
44	2.45	0705.1A	1	REAR HOOD
44	2.85	0705.2A	1	REAR HOOD
44	3.05	0705.3A	1	REAR HOOD
45	1.85	0706.1A	1	ROD OF REAR HOOD
45	2.05	0706A	1	ROD OF REAR HOOD
45	2.25	0706.2A	1	ROD OF REAR HOOD
45	2.35	0706.3A	1	ROD OF REAR HOOD
45	2.45	0707A	1	ROD OF REAR HOOD
45	2.85	0707.1A	1	ROD OF REAR HOOD
45	3.05	0707.2A	1	ROD OF REAR HOOD
46		0123V	1	SCREW HEX. HEAD
47		0486R	1	PIN
48		0487.1R	2	PLUG
49		0199.1A	2	SELECTOR ROD
50		0020E	4	COTTER PIN
51		0151R	2	SPRING
52		0051V	2	SCREW HEX. HEAD
53		0182R	2	BLOCK
54		0409.1R	2	BRACKET
55		0411R	2	ADJUSTABLE TIE ROD
56		0410.1R	2	BRACKET
57		0412R	2	PIN
58		0146.1R	2	PIN
59		0044V	2	SCREW HEX. HEAD
60		0078V	4	LOCK NUT
61		0504R	2	THIMBLE
62		0096V	2	SCREW HEX. HEAD
63		0505R	2	THIMBLE
64		0064V	2	SCREW HEX. HEAD FOR HOE
65		0576.1A	1	EXTERNAL SLIDE
66		0109V	4	WASHER
67		0577.1A	1	INTERNAL SLIDE
68	?	0484R	0	SPRING
69	1.85	0708.1A	1	SUPPORT
69	2.05	0708A	1	SUPPORT
69	2.25	0708.2A	1	SUPPORT
69	2.35	0708.3A	1	SUPPORT
69	2.45	0709A	1	SUPPORT
69	2.85	0709.1A	1	SUPPORT
69	3.05	0709.2A	1	SUPPORT

Table 3 - Frame Assembly

Detail	Note	Code	Quantity	Description
70	1.85	0489.1R	1	COVER
70	2.05	0489R	1	COVER
70	2.25	0489.2R	1	COVER
70	2.35	0489.3R	1	COVER
70	2.45	0490R	1	COVER
70	2.85	0490.1R	1	COVER
70	3.05	0490.2R	1	COVER
71		0004.1V	4	SCREW HEX. HEAD
72		0061V	4	WASHER
73		0609.1A	1	LATERAL GUARD
74		0072V	2	SCREW HEX. HEAD
75		0488R	2	PIN
76		0703A	2	PLATES
77		0609.1A	1	LATERAL GUARD
78		0433R	1	3'POINT HITCH
79		0026G	1	SEAL

Table n° **3.1** GRID LEVELLING ROTOR ASSEMBLY ACP TR IS

Last Upgrade 01/2003

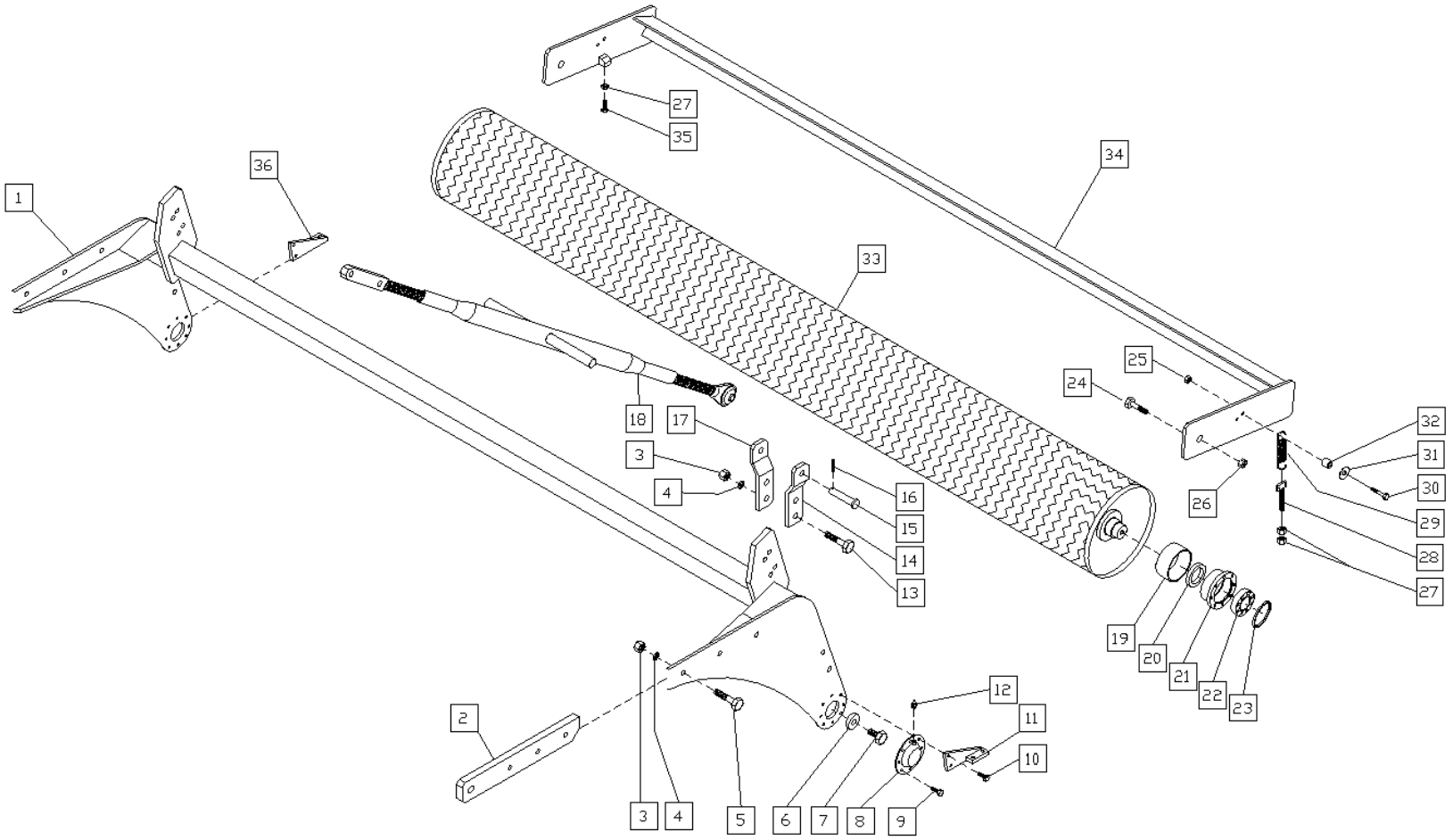


Table 3.1 - Grid Levelling Rotor Assembly

Detail	Note	Code	Quantity	Description
1	1.85	0401.1A	1	FRAME
1	2.05	0402.1A	1	FRAME
1	2.25	0402.2A	1	FRAME
1	2.35	0402.3A	1	FRAME
1	2.45	0404.2A	1	FRAME
1	2.85	0404.3A	1	FRAME
1	3.05	0404.4A	1	FRAME
2		0408R	2	ADJUSTABLE BAR
3		0065V	6	NUT
4		0015V	6	WASHER
5		0096V	6	SCREW HEX. HEAD
6		0140R	2	WASHER
7		0063V	2	SCREW HEX. HEAD
8		0109A	2	COVER
9		0001V	16	SCREW HEX. HEAD
10		0029V	12	SCREW HEX. HEAD
11		0421R	1	RIGHT SPRING HITCH
12		0006E	2	GREASE FITTING
13		0085V	4	SCREW HEX. HEAD
14		0415R	2	BRACKET
15		0416R	2	PIN
16		0018E	2	SPRING PIN
17		0414R	2	BRACKET
18		0413R	2	ADJUSTABLE TIE ROD
19		0141R	2	DUST GUARD
20		0005P	2	OIL SEAL
21		0050R	2	SUPPORT
22		0009C	2	BEARING
23		0006S	2	SEEGER
24		0067V	2	SCREW HEX. HEAD
25		0112V	4	NUT
26		0010V	2	NUT
27		0102V	10	NUT
28		0377R	4	TIE ROD
29		0376R	4	SPRING
30		0113V	4	SCREW HEX. HEAD
31		0135V	4	WASHER
32		0375R	4	THIMBLE
33	1.85	0570.1A	1	GRID ROLLER
33	2.05	0570A	1	GRID ROLLER
33	2.25	0570.2A	1	GRID ROLLER
33	2.35	0570.3A	1	GRID ROLLER
33	2.45	0649A	1	GRID ROLLER
33	2.85	0649.1A	1	GRID ROLLER
33	3.05	0649.2A	1	GRID ROLLER

Table 3.1 - Grid Levelling Rotor Assembly

Detail	Note	Code	Quantity	Description
34	1.85	0572.1A	1	SCRAPING BAR
34	2.05	0572A	1	SCRAPING BAR
34	2.25	0572.2A	1	SCRAPING BAR
34	2.35	0572.3A	1	SCRAPING BAR
34	2.45	0650A	1	SCRAPING BAR
34	2.85	0650.1A	1	SCRAPING BAR
34	3.05	0650.2A	1	SCRAPING BAR
35		0104V	2	SCREW HEX. HEAD
36		0421.1R	1	LEFT SPRING HITCH

Table n° **3.2** PACKER LEVELLING ROTOR ASSEMBLY ACP TR IS

Last Upgrade 01/2003

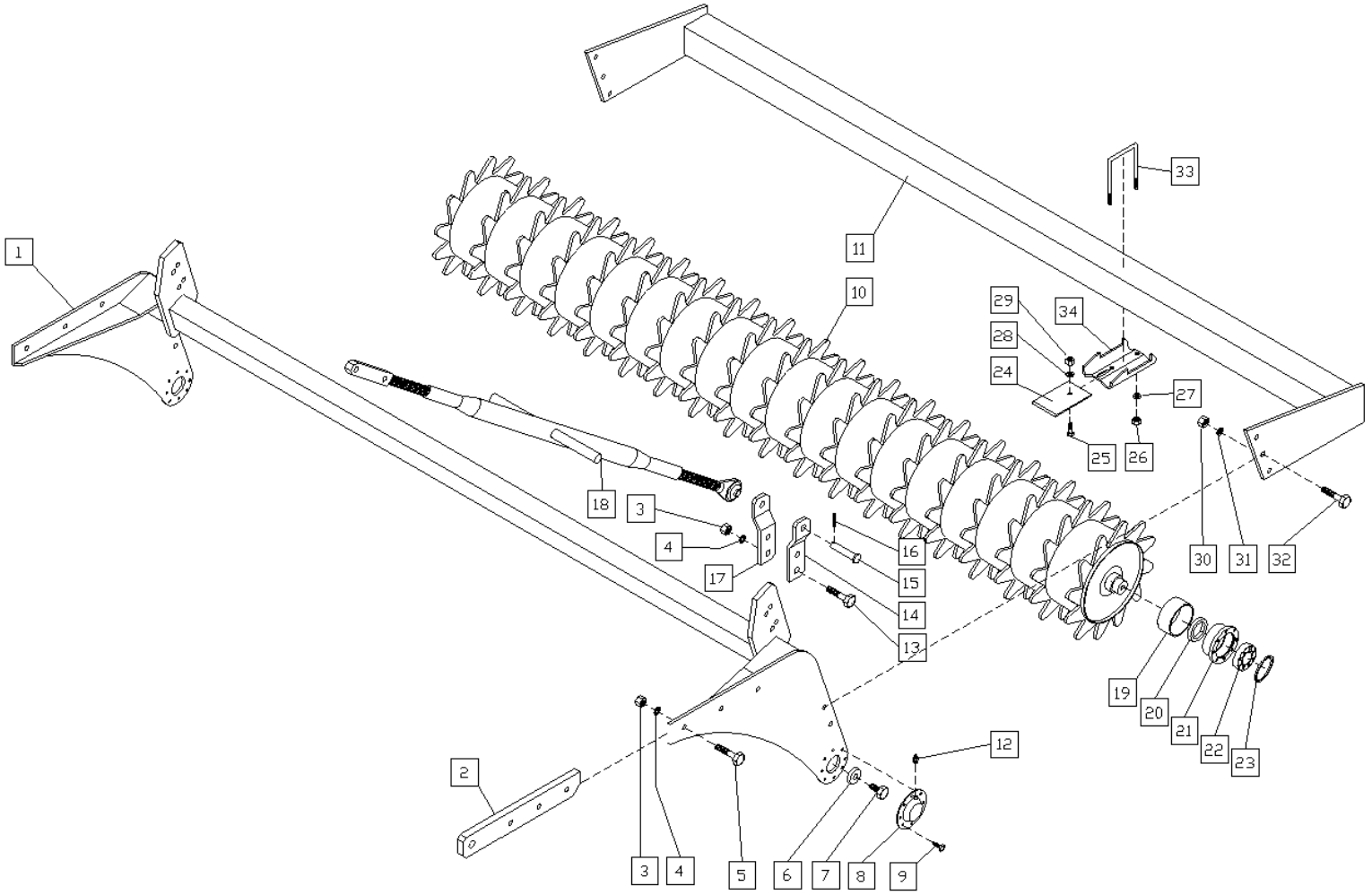


Table 3.2 - Packer Levelling Rotor Assembly

Detail	Note	Code	Quantity	Description
1	1.85	0401.1A	1	FRAME
1	2.05	0402.1A	1	FRAME
1	2.25	0402.2A	1	FRAME
1	2.35	0402.3A	1	FRAME
1	2.45	0404.2A	1	FRAME
1	2.85	0404.3A	1	FRAME
1	3.05	0404.4A	1	FRAME
2		0408R	2	ADJUSTABLE BAR
3		0065V	6	NUT
4		0015V	6	WASHER
5		0096V	6	SCREW HEX. HEAD
6		0140R	2	WASHER
7		0063V	2	SCREW HEX. HEAD
8		0109A	2	COVER
9		0001V	16	SCREW HEX. HEAD
10	1.85	0189.1A	1	PACKER ROLLER
10	2.05	0190.1A	1	PACKER ROLLER
10	2.25	0192.3A	1	PACKER ROLLER
10	2.35	0192.4A	1	PACKER ROLLER
10	2.45	0192.2A	1	PACKER ROLLER
10	2.85	0192.5A	1	PACKER ROLLER
10	3.05	0192.6A	1	PACKER ROLLER
11	1.85	0193.1A	1	PACKER BAR
11	2.05	0194.1A	1	PACKER BAR
11	2.25	0196.2A	1	PACKER BAR
11	2.35	0196.4A	1	PACKER BAR
11	2.45	0196.3A	1	SCRAPING BAR
11	2.85	0196.5A	1	PACKER BAR
11	3.05	0196.6A	1	PACKER BAR
12		0006E	2	GREASE FITTING
13		0085V	4	SCREW HEX. HEAD
14		0415R	2	BRACKET
15		0416R	2	PIN
16		0018E	2	SPRING PIN
17		0414R	2	BRACKET
18		0413R	2	ADJUSTABLE TIE ROD
19		0141R	2	DUST GUARD
20		0005P	2	OIL SEAL
21		0050R	2	SUPPORT
22		0009C	2	BEARING
23		0006S	2	SEEGER
24	?	0149.2R	0	PACKER SCRAPING
25	?	0017V	0	SCREW HEX. HEAD
26	?	0102V	0	NUT
27	?	0061V	0	WASHER
28	?	0107V	0	WASHER
29	?	0040V	0	NUT
30		0010V	6	NUT

Table 3.2 - Packer Levelling Rotor Assembly

Detail	Note	Code	Quantity	Description
31		0009V	6	WASHER
32		0008V	6	SCREW HEX. HEAD FOR HOE
33	?	0183.1R	0	U-BOLT
34		0197.1A	0	SUPPORT

Note	Description
?	Quantity is variable and it depends on width and preparation

Table n° **4** LEVELLING ROTOR HYDRAULIC CIRCUIT ASSEMBLY ACP TR IS

Last Upgrade 01/2003

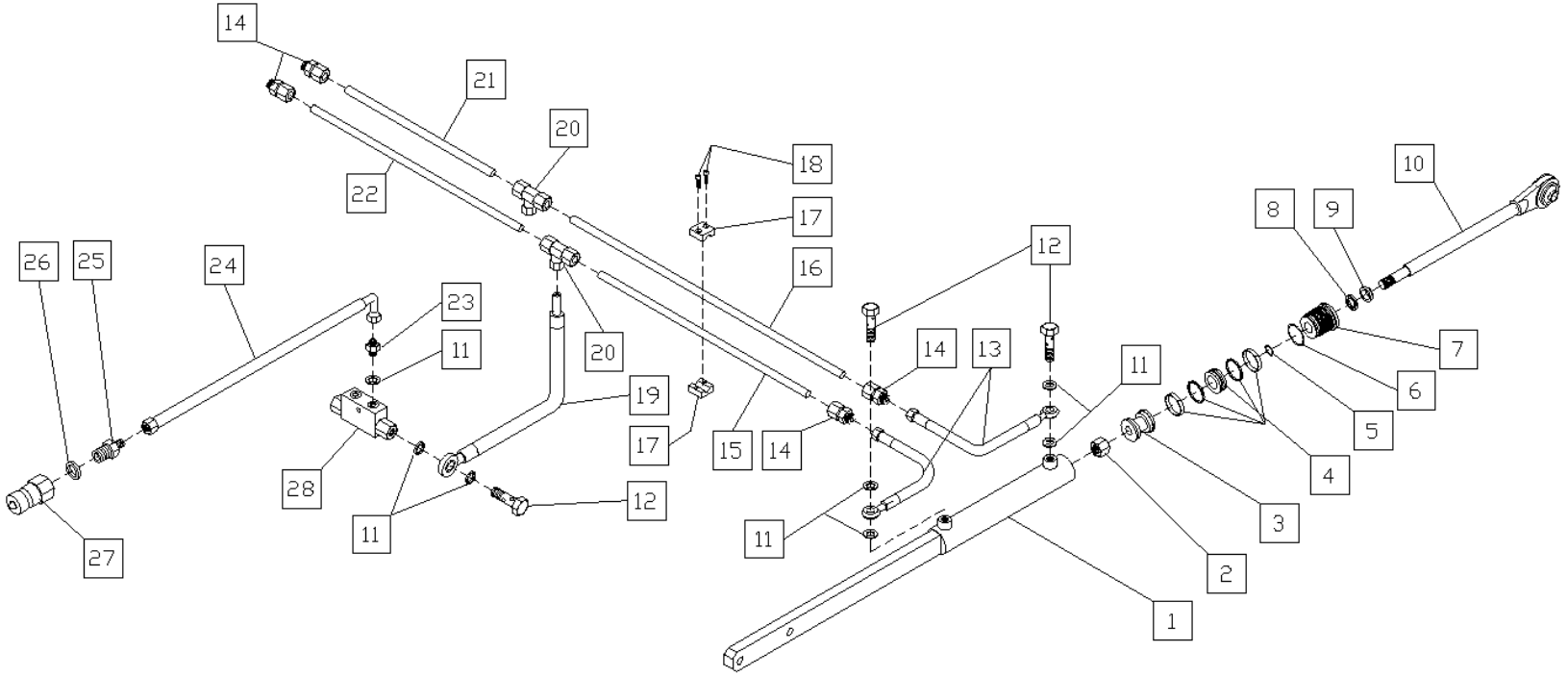


Table 4 - Levelling Rotor Hydraulic Circuit Assembly

Detail	Note	Code	Quantity	Description
1		0031OL	1	TUBE
2		0119V	1	LOCK NUT
3		0028OL	1	INTERNAL PISTON
4		0021OL	1	SEAL
5		0100OL	1	O-RING
6		0101OL	1	O-RING
7		0029OL	1	RING NUT FOR CYLINDER
8		0022OL	1	SEAL
9		0023OL	1	SEAL
10		0030OL	1	ROD + ARTICULATION
11		0011OL	14	WASHER
12		0017OL	6	HOLED SCREW
13		0063OL	4	HOSE
14		0057OL	4	STRAIGHT FITTING
15	CM	0064OL	1	TUBE
16	CM	0064OL	1	TUBE
17		0065OL	8	SLEEVE
18		0013V	8	SCREW
19		0066OL	2	HOSE
20		0067OL	2	T FITTING
21	CM	0064OL	1	TUBE
22	CM	0064OL	1	TUBE
23		0068OL	2	NIPPLE
24		0069OL	2	HOSE
25		0014OL	2	NIPPLE
26		0010OL	2	WASHER
27		0015OL	2	FAST JOINT

Note	Description
CM	Specify the length (CM) too

Last Upgrade 01/2003

Table n° **4.1** REAR BONNET HYDRAULIC CIRCUIT ASSEMBLY ACP TR IS

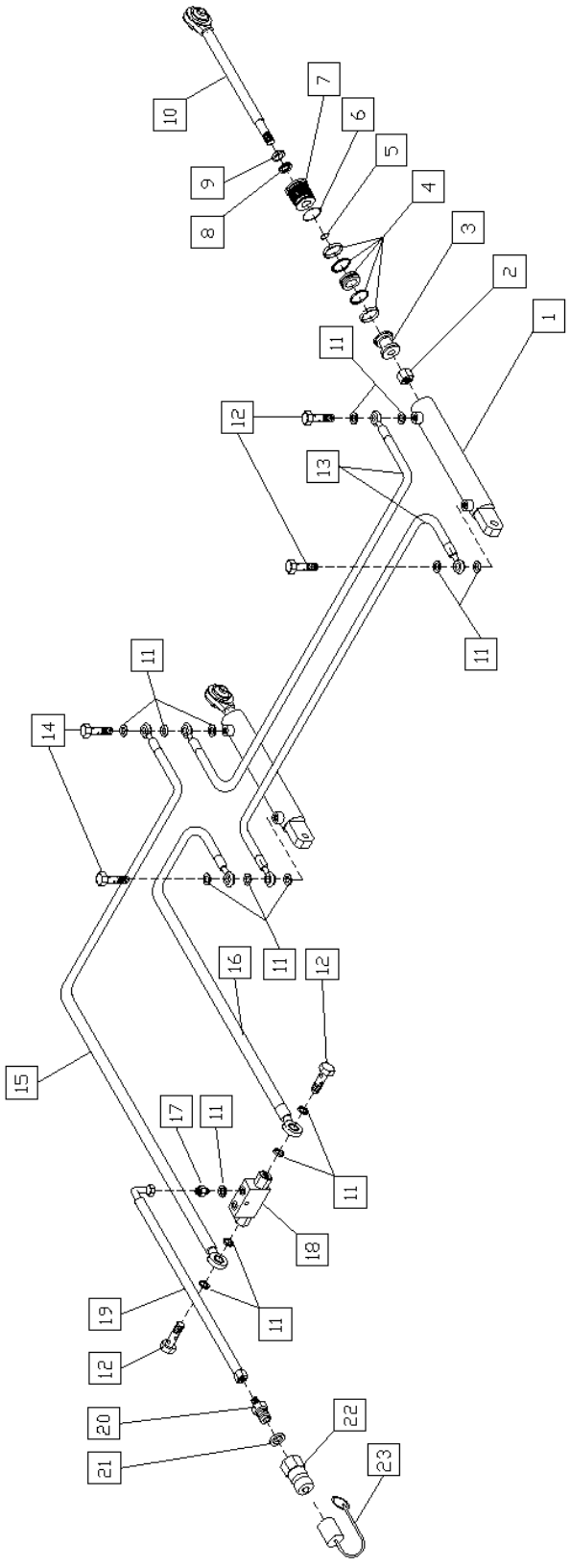


Table 4.1 - Rear Bonnet Hydraulic Circuit Assembly

Detail	Note	Code	Quantity	Description
1		0031.1OL	2	TUBE
2		0119V	2	LOCK NUT
3		0028OL	2	INTERNAL PISTON
4		0021OL	2	SEAL
5		0100OL	2	O-RING
6		0101OL	2	O-RING
7		0029OL	2	RING NUT FOR CYLINDER
8		0022OL	2	SEAL
9		0023OL	2	SEAL
10		0072OL	2	ROD + ARTICULATION
11		0011OL	16	WASHER
12		0017OL	6	HOLED SCREW
13		0073OL	2	HOSE
14		0071OL	2	HIGH HOLED SCREW
15		0074OL	1	HOSE
16		0075OL	1	HOSE
17		0068OL	2	NIPPLE
18		0070OL	1	BLOCKING VALVE
19		0069OL	2	HOSE
20		0014OL	2	NIPPLE
21		0010OL	2	WASHER
22		0015OL	2	FAST JOINT
23		0026OL	2	JOINT PROTECTION

Table n° **6** POWER TRANSMISSION SHAT ASSEMBLY ACP TR IS

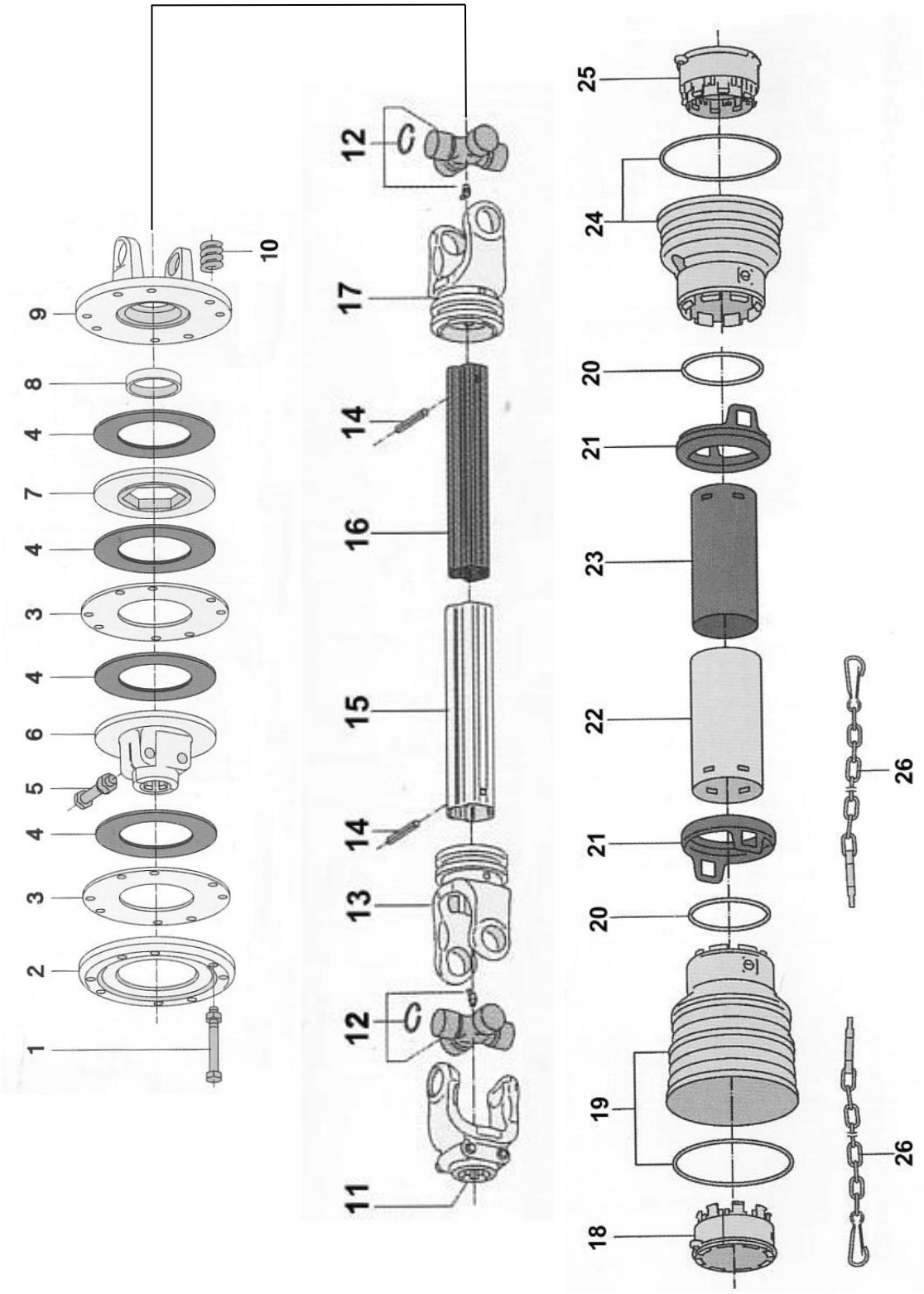
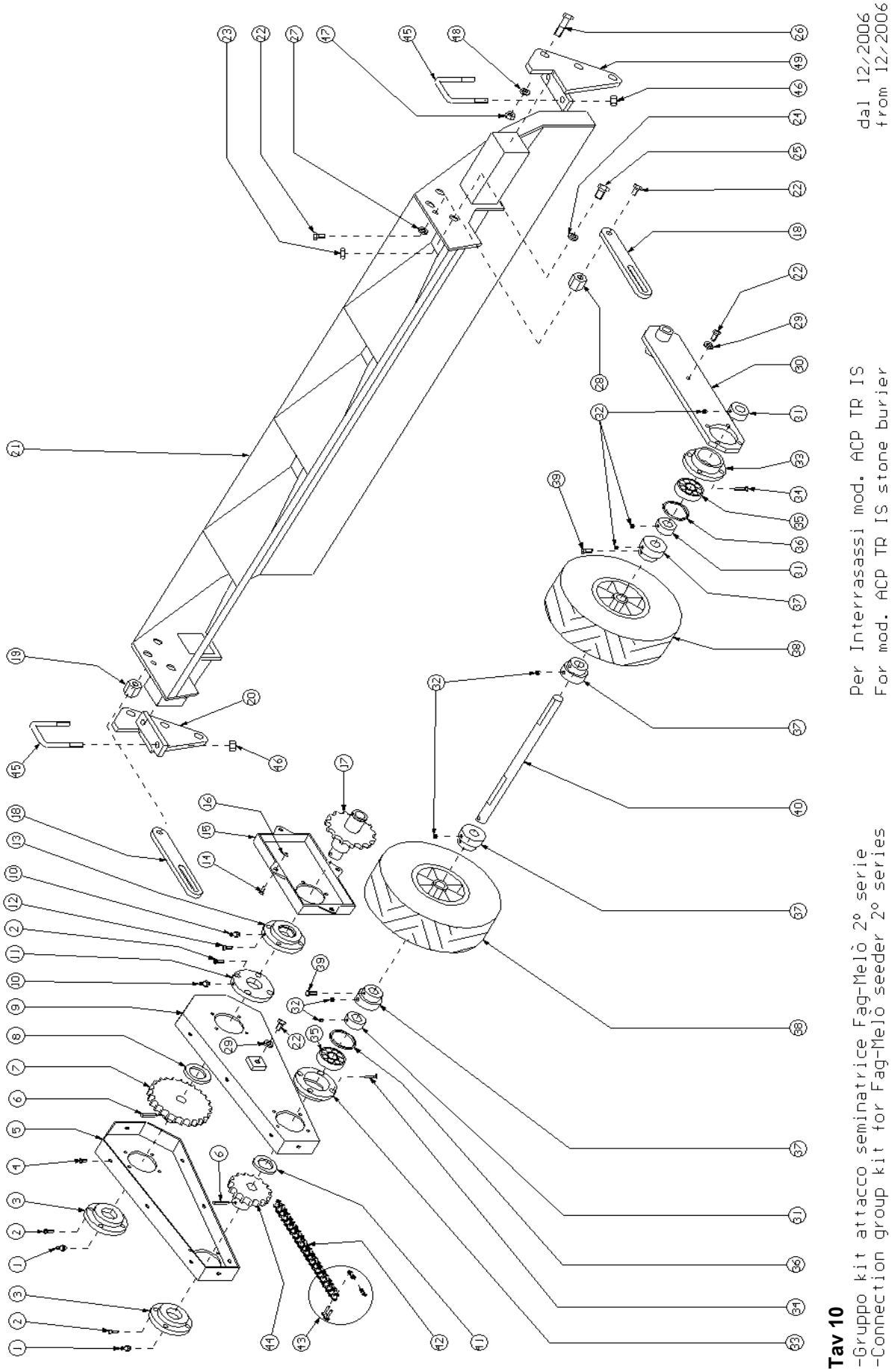


Table 6 - Power Transmission Shaft Assembly

Detail	Note	Code	Quantity	Description
1		0054CA	8	COMPLETE BOLT
2		0071CA	1	THRUST FLANGE
3		0092.1CA	2	INTERNAL DISC
4		0029CA	4	CLUTCH DISC
5		0056CA	1	COMPLETE BOLT
6		0041CA	1	HUB WITH FLANGE
7		0017.1CA	1	DRIVER PLATE
8		0009CA	1	BUSHING
9		0034.2CA	1	FLANGE YOKE
10		0078CA	8	SPRING
11	3/4 Z20	0021CA	1	EXTERNAL FORK
11	3/4 Z6	0020CA	1	EXTERNAL FORK
11	3/8 Z21	0018CA	1	EXTERNAL FORK
11	3/8 Z6	0019CA	1	EXTERNAL FORK
12		0015CA	2	SPIDER
13		0107CA	1	FORK
14		0108CA	2	SPRING PIN
15	CM	0060.4CA	1	YORK INTERNAL TUBE
16	CM	0060.3CA	1	YORK EXTERNAL TUBE
17		0106CA	1	FORK
18		0098.4CA	1	EXTERNAL PIPE RING
19		0100.4CA	1	STANDARD CONE
20		0102.1CA	2	STOP RING
21		0103.1CA	2	SAFETY COUPLING
22	CM	0079.3CA	1	EXTERNAL TUBE
23	CM	0080.3CA	1	INTERNAL TUBE
24		0100.5CA	1	SHORT CONE
25		0098.5CA	1	INTERNAL PIPE RING
26		0101CA	2	ANTI-ROTATION CHAIN

Note	Description
CM	Specify the length (CM) too



dal 12/2006
from 12/2006

Per Interrasassi mod. ACP TR IS
For mod. ACP TR IS stone burier

Tav 10
-Gruppo kit attacco seminatrice Fag-Melò 2° serie
-Connection group kit for Fag-Melò seeder 2° series

Table 10 - 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
8		0544R	1	SPACER RING
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	SPACER
20		0570R	1	FIXING PLATE
21	1.85	0540A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	2.05	0766A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	2.25	0767A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	2.35	0768A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	2.45	0769A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	2.85	0770A	1	SUPPORT FRAME FOR FAG-MELO SEEDER
21	3.05	0771A	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		0047V	6	SCREW HEX. HEAD
27		0106V	2	WASHER
28		0556R	1	SPACER
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		0069E	2	WHEEL
39		0001V	2	SCREW HEX. HEAD

Table 10 - Connection FAG-MELO' seeder kit 2' series

Detail	Note	Code	Quantity	Description
40	1.85	0562R	1	WHEELS ROD SEEDER
40	2.05	0563R	1	WHEELS ROD SEEDER
40	2.25	0564R	1	WHEELS ROD SEEDER
40	2.35	0565R	1	WHEELS ROD SEEDER
40	2.45	0566R	1	WHEELS ROD SEEDER
40	2.85	0567R	1	WHEELS ROD SEEDER
40	3.05	0568R	1	WHEELS ROD SEEDER
41		0550R	1	SPACER RING
42		0016N	1	CHAIN
43		0017N	1	CHAIN JOINT
44		0165I	1	CHAIN PINION
45		0155V	2	U-BOLT
46		0078V	4	LOCK NUT
47		0010V	6	NUT
48		0009V	6	WASHER
49		0569R	1	FIXING PLATE

USER STATEMENT

MACHINE TYPE: Stone Burier mod. ACP TR IS _____

SERIAL NUMBER: _____

DELIVERY DATE: April 26

I the undersigned:_____

Company position:_____

In the name and on behalf of the company:_____

declare that:

- I have collected N° _____ 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

_____

N.B. – Please fill in all parts and return a copy to:
COLLARI s.n.c. di Collari Gian Luca e Valeria
Via Provinciale sud n° 24 A-B
40050 Castello d'Argile (BO)
Italy