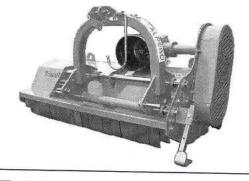
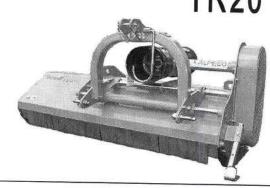


RANGE PRUNING MULCHER

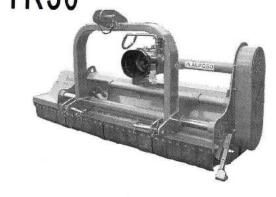
TR15



TR20



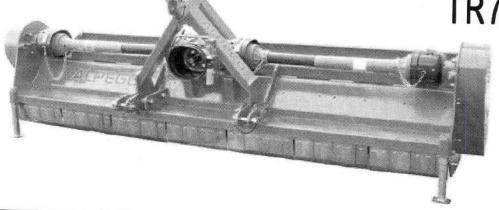
TR30







TR70





USE AND MAINTENANCE MANUAL

To consult before attentively this manual to use the machine, the knowledge of it and' essential for the use in safety, it must be preserved for all through the machine.

We thank you for the choice sort, you have purchased a product of good quality, quaranteed by a decennial experience.

Every machine before going out of the factory is carefully inspected for guaranteeing it from

In the eventuality' that the machine apparent equally some defect of material immediately consulted your concessionaire.

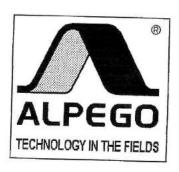
With the objective to constantly improve the product and to maintain it to the maximum levels we are to your disposition to furnish you every explanation or information.



YOU WATCH OUT AT THE TRIANGLE, IT POINTS OUT DANGER

THE DEFINITION PLOTS, IT REPLACES THE COMMERCIAL DENOMINATION OF WHICH AGO REFERENCE THE MANUAL IN OBJECT

ALL THE CONTAINED DATA IN THIS MANUAL PROVIDED AS INFORMATION AND DON'T HOCK THE BUILDER THAT IS ABLE' TO VARY THEM WITHOUT WARNING.

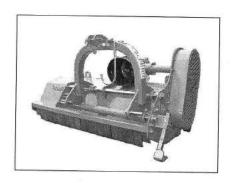


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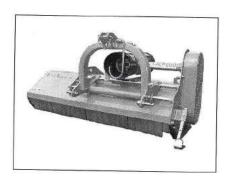
E-mail: info @ alpego.com Internet: www.alpego.com



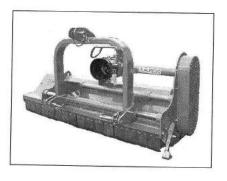
RANGE PRUNING MULCHER:



TR15



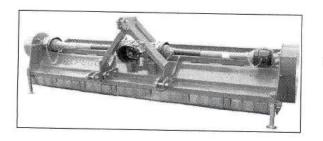
TR20



TR30



TR60



TR70

PREMISE

The machine is destined to a professional use, it allows the use the specialized operating solos.

The use is not allowed from smaller, illiterate, people in condition physics or psychic alter.

The use is not allowed to personal unprovided of suitable driver's licence or not sufficiently informed and trained. The operator is responsible of the control of the functionality of the machine, the substitution and the reparation of the subject parts to usury that they could cause damages.

This agricultural equipment, can operate only through a cardan shaft applied to the power takeoff of an agricultural tractor provided of group lifter, with universal attack to the three points.

From the correct use and from the suitable maintenance the depends to regulate operation of the equipment.

It is advisable therefore, to meticulously observe how much described to the purpose to prevent an any drawback that could jeopardize the good operation and the duration of the machine.

It is important to follow also to how much described in the present brochure in how much the Firm Builder declines every and any responsibilities owed to negligence and the missed observance of such norms.

The Firm Builder, is however to complete disposition to assure an immediate and accurate technical support and what can be necessary for the good operation and the maximum surrender of the equipment.



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- 1.2 Documentation attached to the machine
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- 2.2 Component pruning mulcher
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- 2.4 Identification of the cardan shaft

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1.1 PURPOSE OF THE MANUAL

This manual and' compiles from the builder of the machine and it makes integral part of the documentation attached to the machine.

The manual defines the purpose for which and' builds the machine, it establishes the correct application and the limits of use of it.

The constant application of the indications brought in this manual guarantees the safety of the people that they use the machine, the economy of exercise and a longer duration of the machine.

The manual present and divides in various paragraphs, to facilitate the search of the matters to consult the initial index.

The illustrations brought in the manual present are furnished to title exemplifying and however even if they are sensitively different from the machine in your possession, the safety and the information they are guaranteed however.

1.2 DOCUMENTATION ATTACHED AT THE MACHINE

With the machine to attach the following documentation:

- Manual use and maintenance
- Declaration CE of conformity'
- Manual of use and maintenance of the cardan shaft

1.3 GUARANTEE

To check to the action of the delivery that the machine and the possible accessories have not suffered damages during the transport and that the accessories are entire and complete.

Possible claims must have introduced in writing within 8 days from the reception near the concessionaire.

DECADENCE OF THE GUARANTEE

The guarantee immediately decays:

- if it was had to verify an error of manoeuvre
- if it was had to go beyond the limit of power allowed (you see chart 2.3)
- if the instructions were not followed described in the manual present
- if original exchanges were not used
- if you/he/she was brought any change without authorization of the builder

1.4 IDENTIFICATION OF THE MACHINE

In correspondence of the 3 points of attack to the tractor and' fixed the nameplate of identification of the machine that brings the followings data:



- 1-Type of machine
- 2-serial number
- 3-Maximum weight of the machine with roll
- 4-Year of construction

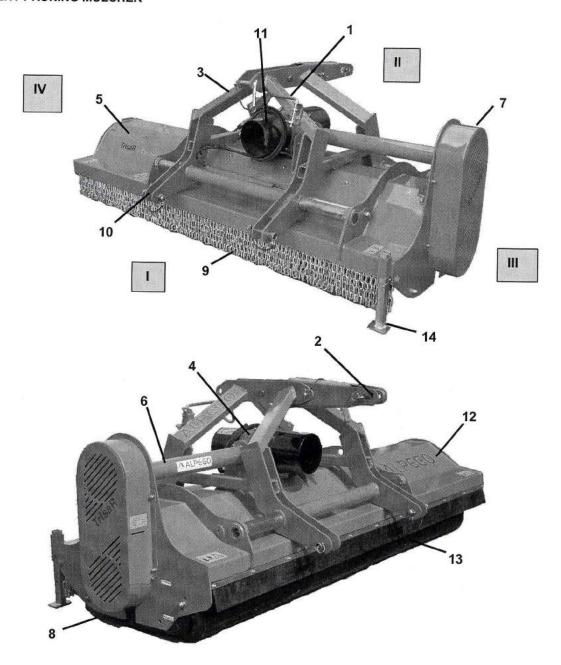
The suitable weight is related to the complete machine of the heaviest roll without accessories.

2 - SPECIFIC TECHNIQUES

2.1 DESCRIPTION OF THE MACHINE

The Shredders are machines endowed with a rotor operated by the power takeoff of the tractor through a cardan shaft and through the multiplier and the side transmission to bolts. They are used for the maintenance of green areas or the direct crushes on the ground through to crumble of organic residues of cultivations (both grassy that woody). You quality of the cut depends on the elevated speed of rotation of the rotor, that is contrary to the sense of advancement of the tractor.

2.2 COMPONENT PRUNING MULCHER

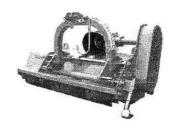


- SUPPOR HOOK FOR CARDAM SHAFT 3RD CONNECTION,UPPER POINT
- 3 THREE POINT HITCH
- 4 OVERDRIVE UNIT
- IDENTIFICATION PLATE
- 6 TRASMISSIONE MOLTIPLICATORE
- 7 SIDE TRASMISSION GUARD
- 8 SIDE SKIDS
- 9 BARS CHAINS OF PROTECTION 10 3RD CONNECTION, LOWER POINTS
- 11 CARDAN SHAFT CONNECTION WITH PROTECTION
- 12 BONNET
- 13 ROLLER LEVELLING
- 14 SUPPORT

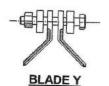
- I. BEFORE
- II. BEHIND
- III. LEFT SIDE
- IV. RIGHT SIDE

2.3 CHART DATES TECHNICAL

MOD. TR15



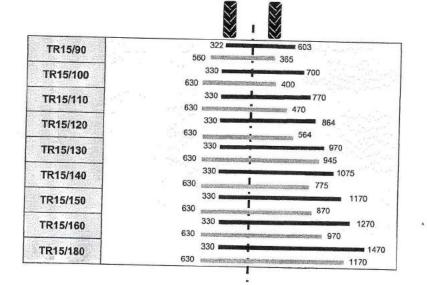




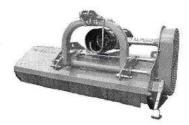
TECHNICAL DESCRIPTION

Model		TR15	TR15	arthrap design of the Lorentz Charles	TR15		TR15	TR15	TR15
Width of job		90	100					- 160 -	- 180 -
In demand power	(hp)	20/25		120	130	140	150	160	180
Blades	(No.)	177	25/30	30/35	30/35	35/40	35/40	35/40	40/45
Hammer blades			16	16	20	24	24	28	28
Power multiplier with free	(No.)	8	8	8	10	12	12	14	14
wheel	(hp)	50	50	50	50	50	50	50	50
Straps of transmission	(No.)	3	3	3	3	3	-	-	
Encumber width	(cm)	108	118	138			3	3	3
Encumber depth'	(cm)	90	90		148	158	168	178	198
Encumber height	(cm)	78		90	90	90	90	90	90
Weight	7-10-10-10-10-10-10-10-10-10-10-10-10-10-		78	78	78	78	78	78	78
Attach to three points	(Kg)	210	230	250	260	270	280	350	380
(category)									
Regime PDF	(RPM)	5	540						
Speed Peripheral rotor	(m/s)		540						
Regime rotor	(RPM)					43			
Position transport	(,		2.140 TRANSVERSALLY BROUGHT THE LIFTER						
Primary transmission				MINOVER			THE LIFT	ER	
Secondary transmission						N SHAFT			
Regulation height of cut			TO STRAPS SEZ.SPB						
Regulation side move	1.6		MECHANICS - MANUAL: SKIDS / WHEELS / ROLL MECHANICS / HYDRAULIC						
Multiplier appears		1/3	1/0				JLIC		
Diameter superior pulley	(mm)	1000	1/3	1/3	1/3	1/3	1/3	1/3	1/3
Diameter inferior pulley		212	212	212	212	212	212	212	212
Diameter rotor	(mm)	160	160	160	160	160	160	160	160
Diameter pipe	(mm)	380	380	380	380	380	380	380	380
zidineter hibe	(mm)	127X10	127X10	127X10	127X10	127X10	127X10	127X10	127X10

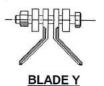
Scheme side moves



MOD. TR20



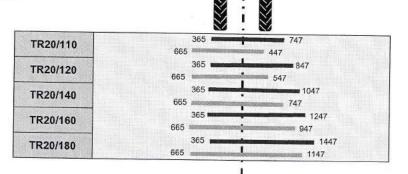




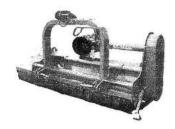
TECHNICAL DESCRIPTION

Model		TR20 - 110-	TR20 - 120 -	TR20 - 140 -	TR20 - 160 -	TR20 - 180 -
Width of job		110	120	140	160	180
In demand power	(hp)	25/30	30/35	35/40	35/40	40/45
Blades	(No.)	16	20	24	28	28
Hammer blades	(n°)	8	10	12	14	14
Power multiplier with free wheel	(hp)	60	60	60	60	60
Straps of transmission	(n°)	3	3	3	3	3
Encumber width	(cm)	122	132	152	172	192
Encumber depth'	(cm)	95	95	95	95	95
Encumber height	(cm)	78	78	78	78	78
Weight	(Kg)	300	310	350	390	430
Attach to three points (category)		1				
Regime PDF	(RPM)	540				
Speed Peripheral rotor	(m/s)	43				
Regime rotor	(RPM)	2.140				
Position transport		TRANSVERSALLY BROUGHT THE LIFTER				
Primary transmission	10.6			RDAN SH		
Secondary transmission			TO S	TRAPS SI	EZ.SPB	
Regulation height of cut	Marie Tr	MECHANICS - MANUAL: SKIDS / WHEELS /				
Regulation side move	1000	MECHANICS / HYDRAULIC				
Multiplier appears	100	1/3	1/3	1/3	1/3	1/3
Diameter superior pulley	(mm)	212	212	212	212	212
Diameter inferior pulley	(mm)	160	160	160	160	160
Diameter rotor	(mm)	380	380	380	380	380
Diameter pipe	(mm)	127X10	127X10	127X10	127X10	127X10

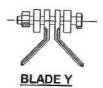
Scheme side moves



MOD. TR30 - TR30S







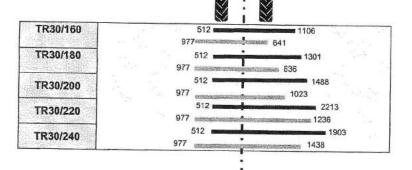
TECHNICAL DESCRIPTION

Model		TR30 - 160 -	TR30 - 180 -	TR30 - 200 -	TR30 - 220 -	TR30
Width of job		160	180	200	220	240
Hectares / now (theoretical)		1,9	2,2	2,4	2,7	3
In demand power	(hp)	40/50	50/55	55/60	60/65	65/70
Blandes	(No.)	28	28	32	36	36
Hammer blades	(No.)	14	14	16	18	18
Power multiplier with free wheel	(hp)	80	80	80	80	80
Straps of transmission	(No.)	4	4	4	4	4
Encumber width	(cm)	180	200	220	240	260
Encumber depth'	(cm)	110	110	110	110	110
Encumber height	(cm)	108	108	108	108	108
Weight	(Kg)	520	560	640	660	680
attach to three points (category)	1	00	_ 000	040	000	000
Regime PDF	(RPM)	540				
Speed Peripheral rotor	(m/s)	45,2				
Regime rotor	(RPM)	2.130				
Position transport	7.5	TRANSVERSALLY BROUGHT THE LIFTER				
Primary transmission				ARDAN SH		FIER
Secondary transmission					10.000 LPC	
Regulation height of cut		TO STRAPS SEZ.SPB MECHANICS - MANUAL: SKIDS / WHEELS / ROLL				SIROLL
Regulation side move				NICS / HYI		O / NOLL
compare multiplier		1/3	1/3	1/3	1/3	1/3
Diameter superior pulley	(mm)	250	250	250	250	250
Diameter inferior pulley	(mm)	190	190	190	190	190
Diameter rotor	(mm)	405	405	405	405	405
Diameter pipe	(mm)	159X10	159X10	159X14	159X14	159X14

Scheme side moves

NOTE:

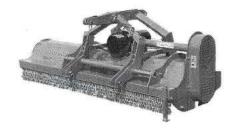
In central position the cardan works right it.



NOTE: In side position the cardan works right it.

TR30S/160	512
	739 894
TR30S/180	512 1316
11/202/100	992
TR30S/200	512 1503
1 K303/200	992 1023

MOD. TR60





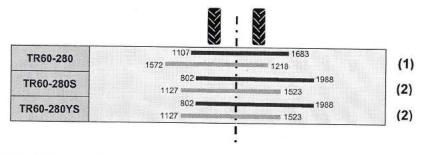


BLAI

TECHNICAL DESCRIPTION

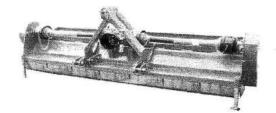
Model	DE I	TR60 - 280-	TR60 - 280S -	TR60 - 280YS -		
Width of job	1.0	280	280	280		
Hectares / now (theoretical)	Elektrici.	3,5	3,5	3,5		
In demand power	(hp)	90/110	90/110	90/110		
Blandes	(n°)	24	24	-		
Hammer blades	(n°)	-	-	48		
Power multiplier with free wheel	(hp)	120	120	120		
Straps of transmission	(n°)	5	5	5		
Encumber width	(cm)	-	-	-		
Encumber depth'	(cm)	-	-	_		
Encumber height	(cm)	_	-	-		
Weight	(Kg)	1100	1100	1100		
l attach to three points (category)	1 0	11				
Regime PDF	(RPM)	M) 1000				
Speed Peripheral rotor	(m/s)					
Regime rotor	(RPM)					
Position transport		BROU	JGHT THE L	IFTER		
Primary transmission			ARDAN SHA			
Secondary transmission		-	STRAPS SEZ	QL_/73		
Regulation height of cut		MECHANICS - MANUAL: SKIDS/BACK ROLL				
Regulation side move MECHANICS / HYDE						
l compare multiplier		1/1,92 1/1,92 1/1,92				
Diameter superior pulley	(mm)	250x5	250x5	250x5		
Diameter inferior pulley	(mm)	250	250	250		
Diameter rotor	(mm)	405	405	405		
Diameter pipe	(mm)	203X12,5	203X12,5	203X12,5		

Scheme side moves

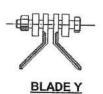


- (1) the model TR60-280 is predisposed for mainly working in central position.
- (2) I models TR60-280S TR60-280YS is predisposed for mainly working in side position.

MOD. TR70







HAMMER BLADE

TECHNICAL DESCRIPTION

Model		TR70
Width of job		- 320-
		320
Hectares / now (theoretical)		3,8
In demand power	(hp)	90/100
Blades	(No.)	64
Hammer blades	(No.)	32
Power multiplier with free wheel	(hp)	130
Straps of transmission	(No.)	3+3
Encumber width	(cm)	-
Encumber depth'	(cm)	-
Encumber height	(cm)	
Weight	(Kg)	1230
Attach to three points (category)		II.
Regime PDF	(RPM)	1000
Speed Peripheral rotor	(m/s)	48
Regime rotor	(RPM)	1.950
Position transport		TRANSVERSALLY BROUGHT THE LIFTER
Primary transmission		CARDAN SHAFT
Secondary transmission		TO STRAPS SEZ.SPB
Regulation height of cut		MECHANICS - MANUAL: SKIDS / WHEELS / ROLL
Regulation side move		CENTRAL FIXED DRAUGHT
Back hatch		3 POSITIONS
Compare multiplier		1/1,56
Diameter superior pulley	(mm)	290x3
Diameter inferior pulley	(mm)	224x3
Diameter rotor	(mm)	470
Diameter pipe	(mm)	219x16
Accessories	(mm)	RUOTA 215/65-15

Scheme side moves

TR70-320	1600	1600
SET TOTAL SEEDING		000000A16

2.4 IDENTIFICATION OF THE JOINT CARDAN SHAFT

The cardan shaft has to work with the least possible angling (not to overcome the 10-15 degrees) to favor the duration both of the tree and of the machine.

To replace the cardan shaft be worn or broken with another marked "CE".

Don't effect changes or adaptations on the cardan shaft for not to cause a decompensation the balancing effected in phase of testing.

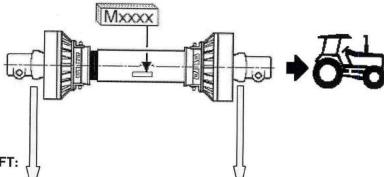


TR70-320

The machine is furnished complete of cardan shaft.

Is forbidden to exchange with other cardan shaft different from the original one.

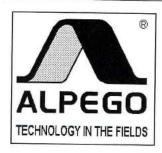
Light attentively the contained instructions in the book attached to the joint cardan shaft.



Machine	Y Type		Code
TR15-100	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-110	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-120	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-130	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-140	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-150	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-160	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR15-180	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR20-110	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR20-120	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR20-140	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR20-160	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR20-180	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR20-200	A5-900-1"3/8 z = 6	1"3/8 z = 6	MO6950
TR30-160	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30-180	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30-200	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30-220	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30-240	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30S-160	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30S-180	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR30S-200	A6-900-1"3/8 z = 6	1"3/8 z = 6	M06951
TR60-280	A8-1100-1"3/4 z = 6	1"3/8 z = 6	M06953
TR60-280S	A8-1100-1"3/4 z = 6	1"3/8 z = 6	M06953
TR60-280YS	A8-1100-1"3/4 z = 6	1"3/8 z = 6	M06953
TD70 220	AO 4400 48044 - 0		1000000

A8-1100-1"3/4 z = 6





1"3/8 z = 6

M06953

3.1 SAFE USE



Light attentively the manuals for the use and the maintenance before proceeding to the operations of starting, use and maintenance of the equipment.

The builder declines every responsibility' for damages to people, animals or things caused by the non-observance of the safety norms.

And' absolutely forbidden to expressly use the machine for a different use from that suitable in this book.

To absolutely avoid to touch in any way the parts in movement.

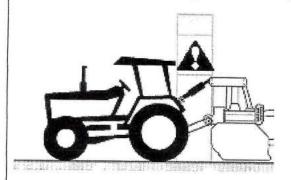
The machine and its possible accessories for the transport on road must have provided of signallings and suitable protections.

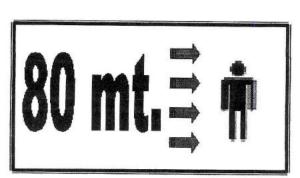
And absolutely forbidden to conduct or to make to conduct not the personnel tractor in possession of suitable driver's licence, inexperienced and not under good conditions of health.

To attentively examine the adhesive labels brought on the machine and to respect the indications in them contained. The transfers related to the safety have to be always well evident: cleaning up must be held and they must be replaced if few legible become (they can eventually be required to the concessionaire).

The safety distance from the machine to the job or however with the rotor in rotation it is of 80 meters. During the job not to allow people's approach, animals and things the ray of action of the sod and the stones projected by the machine.

And' absolutely forbidden to intervene in the zone between the tractor and the machine to operate the external commands of the hydraulic hoisting unit.





To remain always sat on the place of guide of the tractor and to only go down when the power takeoff of the tractor is disconnected and the brake of parking of the tractor and inserted.

During the breaks of job to disconnect the power takeoff, to extinguish the motor, to support the machine on the ground and to insert the brake of parking of the tractor.

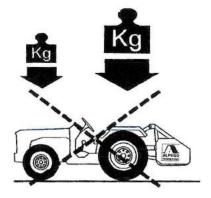
Don't work with removed protections.

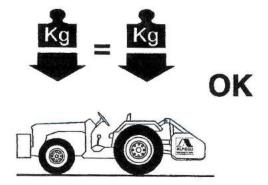
Don't work on terrestrial or places that can jeopardize the stability of the machine.

To know well the area in which he is working. Never operate in an area in which there is obstacles as stones beat up or roots in how much they would ruin the integrity of the machine.

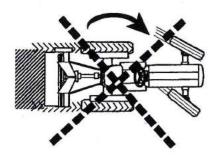
For the transport on road to always use the flashing one of danger.

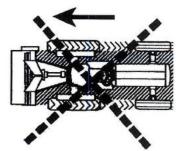
For the circulation on road to respect the norms in force own country. And a lot of main point to remember that the street estate, the ability of braking and the direction are influenced by the weight of the machine applied to the lifter of the tractor; in the curves besides to consider the action of the centrifugal strength that the barycentre of the machine moves.





To avoid to make to turn to empty (out of the ground) the machine. During the job to avoid to effect curves with the buried machine, of it less so much to work in reverse. Raise the machine always for the changes of direction and the inversions of march.





During the transport or every whenever makes him necessary the lifting of the machine, it is opportune that the power takeoff of the tractor is regulated so that the same machine is not lifted by earth for more than 30 cm around. To avoid to introduce him on public roads with the dirty machine of earth, grass or anything else other than produces dirt and obstacle to the road traffic. Don't make to fall with violence the machine on the ground but to make to slowly go down it to allow the gradual insertion of the blades the ground. In contrary case strong solicitations would be provoked on all the components of the machine same that you/they could jeopardize their integrity of it.

In phase of transport on road, with the lifted machine, to put in position of block the joy stick of the hydraulic lifter of the tractor.

Not do use the machine inside closed structures there are not a suitable ventilation

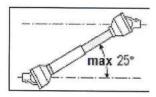
Before inserting the power takeoff to verify some number of turns pre-arranged. Don't exchange The regime of 540 rpm. with 1000 rpm.

To only use the cardan shaft foreseen by the builder, endowed with the safeties against the overloads.

The installation and the dismantlement of the cardan shaft must always have done to out motor.

The protection of the cardan shaft has to be always efficient, it must periodically be checked, and fixed with the chains to prevent its rotation.

To always disconnect the power takeoff when the cardan shaft a superior angle to the 25°, sees ago figure.



To watch out a lot of for the protection of the cardan shaft, both in position of transport and of job.

The installation and the dismantlement of the cardan shaft must always have done to out motor.

To watch out a lot of for the correct assemblage and the safety of the cardan shaft, (and is to the power takeoff of the machine that to the P.T.O. of the tractor).

Before inserting the power takeoff to make sure that there are not people or animals in the zone of action and that the select regime corresponds to the allowed one. Never to overcome the maximum expectation.

To avoid scorching not to touch the change of speed or multiplier and the possible organs of the hydraulic plant after an use prolonged of the machine.

The side sleighs also act from protections avoiding the easy access to the rotor. In lack of the sleighs the machine is furnished with two plates of protection.

The machine cannot be used at night or however under conditions of insufficient visibility.

Before beginning the job to familiarize with the devices of command and their functions.

To hook the machine, as foreseen, on a tractor of suitable power and configuration through the special device (lifter), conforming to the norms.

To pay the maximum attention in the phase of hooking and I unhooking some machine.

With tractor in motion, to leave never the place of guide.

Before abandoning the tractor, to lower the machine hooked lifter to the group, to arrest the motor, to insert the brake of parking and to remove the key of lighting from the picture commands.

The category of the pivots of attack of the machine has to correspond to that some attack of the lifter. In phase of transport, to fix with the relative chains and tighteners the side arms of lifting.



In the case used a tractor deprived of cabin soundproof and pressurized, it is necessary that the operator uses individual systems of protection:

Protective bonnet for the noise, if the levels of exposure exceed him as a rule.

It disguises anti-dust, if because of the type of worked product or the very dusty ground or use of open machine, a notable quantity of dust lifts him.

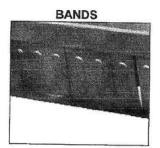
3.2 SAFE MAINTENANCE

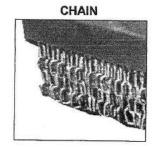


Don't allow people not authorized to effect operations of maintenance or to do any other type of intervention on the machine.



And' forbidden the use of the machine without of chain and protection bars .





The maintenance and the reparations must be effected in shops opportunely equipped.

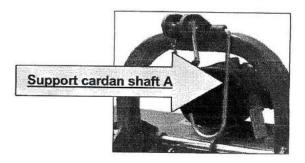
In case of maintenance of the machine to disengage the hydraulic pipes from the takings of the tractor.

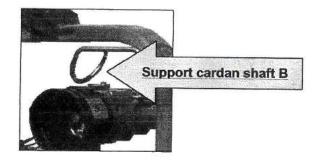
To always use accessories and original exchanges to respect the demands required by the builder in contrary case besides decaying the guarantee anomalies of operation they can be caused that jeopardize the safety of the machine. To respect the conformity of the recommended oils.

In to effect any operation on the machine to disconnect the power takeoff of the tractor, to insert the brake of parking to remove the key of starting and to watch out that other people don't climb on the tractor.

Before cleaning and to fatten up the cardan shaft to disconnect the power takeoff, to extinguish the motor, to insert the brake of parking and to remove the key of starting.

Before effecting the substitution of the gears of speed to disconnect the power takeoff, to insert the brake of parking and to remove the key of starting, therefore to reassemble the cover of the change before restarting the machine. When it doesn't serve the cardan shaft, to support it on the anticipated support (type A - B you see figure).





Periodically to verify the tighten and the estate of the grapevines and dice, eventually tightening.

In the jobs of maintenance and substitution of the knives with the machine lifted, to put for precaution adjusted supports under the equipment.

Before working on the cut utensils; to detach the power takeoff, to extinguish the tractor, to insert the brake of parking and to make sure that the utensils are completely firm.

To respect the conformity of the recommended oils.

The parts of exchange have to correspond to the demands defined by the builder. To use only original exchanges.

The book of the instructions for the use, has to be preserved for all through the machine.

3.3 CLOTHING

To always wear garments that protect the body without parts dangling that could get entangled on component in movement, to remove besides clocks, rings necklaces etc. that they could represent the same danger. To pick up the long hair.

If required by the normative ones that are in force in the country of affiliation the conductor of the machine it will have to wear fit means of protection (glasses, gloves, helmet, shoes, bonnets, mask, etc.).











3.4 ECOLOGY

To respect the laws in force in the country in which the machine is relatively used to the use and the disposal of the products employed for the lubrication, the maintenance and the cleaning of the machine; to attentively observe the indications brought on the wrappings of the products themselves.

To also respect the norms in force in case of demolition of the machine.

3.5 SAFETY SIGNALS

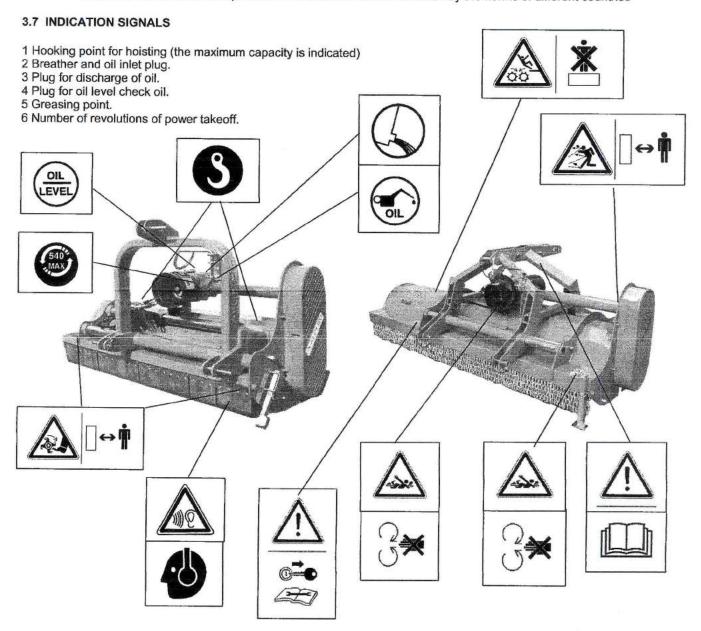
The various present adhesive labels on the machine serve to signal the source of the danger, attentively observe you her and you follow the indications for the use of the machine in safety., cleaning up must be maintained and legible if you damage they must be replaced

figure		code	indications
PRIMA DI UBARE L'ATTRE 1 OBBLIGATORIO LEGGERI UBO A MANTENDONE E	PRIMA DI URARE L'ATTREZZATURA E ORBUJANTONE L'EGIGERE IL LIBRETTO UNE A MANUTERIQUE ED I CONREUL THE PRIMA DI URARE L'ATTREZZATURA E ORBUJANTONE DI CONREUL TORRESTORIO ORBUJANTONE DI CONREUL TORRESTORIO ORBUJANTONE OR		Before using the equipment and obligatory to read the book use and maintenance and the suggestions on the safety and to observe all the instructions during the use
6	WeMARE-III IF	D02627	It points out the point of hooking for the transport and for the refuge of the machine
	*	D02613	It points out the danger of shearing during the movements in job of the machine
]↔∰	D02618	It points out the danger of projection of stones during the job, it advises to remain to proper distance
]↔∰	D02619	It points out the danger of rotation of the rotor during the job, it advises to remain always to proper distance
	© *	D02608	It points out the danger of twisting during the job on the cardan shaft, it advises not to draw near to the tree in rotation.
<u>^</u>		D02615	Point out it needs it to extinguish the tractor and to remove the key of starting during the operations of maintenance
	*	D02609	It points out the absolute prohibition to climb above the machine during the job
	⊕ *	D02614	It points out the danger of shearing on belts and pulleys in rotation
	2	D02624	It points out the danger caused by the oil in pressure in the case of break up of the hydraulic pipes to consult the manual instructions before effecting operations of reparation on the hydraulic plant
4		D08155	It points out the danger caused by the excessive noise during the phase of job

3.6 SOUND LEVEL



If the tractor is equipped of box the sonorous level it will depend on the level of isolation of the same cabin. If the tractor is not equipped of box or it works with the opened car windows noise's level sent forth by the machine in measured job to a distance of 200 millimeters. from the back window it is superior to 85 dB, for which the use of bonnets of protection recommends him as foreseen by the norms of different countries

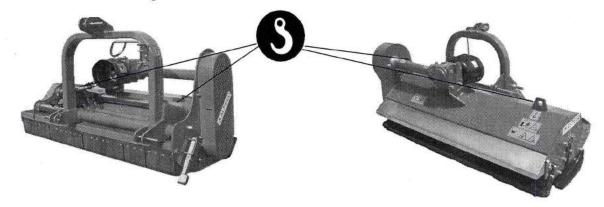




To install, before the in operation mass of the machine, the protections accident-free if you furnish you get off for reasons for transport.

4.1 HOISTING OF THE MACHINE

The operations of hoisting and transport must be perform with means suitable to the weight of the machine. Hooking the machine as suitable in figure and to perform the transport, during this operation the machine must not have hoisted more than 200 millimeters from the ground.



4.2 MACHINES PARTIALLY FURNISHED CLIMBED ON

For motives for encumbrance machines can be furnished with loose or disconnected groups (however contained in the same packing).

To take care of the assemblage of these parts, also reporting to the tables of the catalog spare parts. Particularly, to respect the values of the couples of tightening of the screws to outfit.

4.3 HOOKING-UP TO TRACTOR AND THREE POINT HITCH

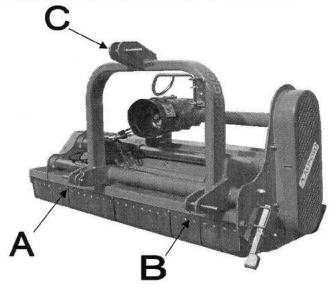


The application to the tractor is a very dangerous phase. To watch out a lot of to effect the whole operation following the instructions. The Firm Builder declines every responsibility for break-ups or damages to things and people caused by the missed respect of the furnished indications.

The correct tractor/machine position is determined by placing the tractor at distance from the machine so that the cardan joint remains extended 5 -10 cm from the position of maximum closure.

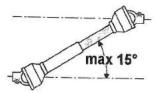
At this point, to proceed as follows:

- Near the lift bars, setting them in the most suitable plates (A-B-C Figure). Insert the pin into the relative hole and lock in place with the snap-in split pins.
- 2. Lock the lift links using the relative chains and couplings parallel to the tractor. This operation must be carried out to prevent the machine from moving in a horizontal direction,
- 3. Connect the upper third-point (C Figure) and correctly regulate by means of the adjuster, checking that the upper surface of the machine is parallel to the ground. This is very important since it achieves parallelism between the axis of the machine and that of the tractor pto. When the implement operates in these condition, there will be less stress on the pto itself while the cardan shaft and implement will be much less subject to wear.
- Engage the cardan shaft and check that it is perfectly locked on the pto. Check that the guard is free to turn and fix it with the relative latch. Remove the cardan shaft support.
- Move the supports of support from the position of support to the position of job.



4.4 CONNECTION OF THE JOINT CARDAN

The working angulation of the cardan shaft must be the minimum possible (not to overcome $10 - 15^{\circ}$). This prolongs the duration of both shaft and machine (you see figure).



It is a machine part that rotates at a steady speed and, during the testing phase, is submitted to balancing, therefore any modifications could cause unbalance which might reflect on the working of the machine and on the integrity of the shaft itself. When it is fully inserted, the minimum play must be 4 cm.

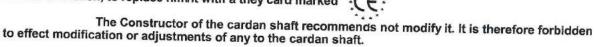
If this is not the case, see the Technical Service of the manufacturer.

Before operating the machine, make sure that the special security chains are on the protecting guards to prevent them from rotating together with the cardan shaft. Check that the guards are in perfect condition.



Light attentively the book of instructions that the House Builder of the they card it applies to the same.

If worn or broken, to replace him/it with a they card marked



4.5 VERIFICATION OF ABILITY OF LIFTING IS STABILITY OF THE TRACTOR



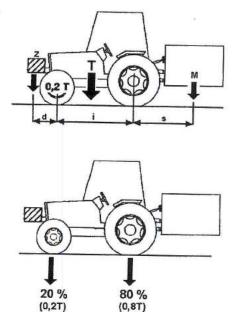
When an utensil is joined to the tractor, becoming to the goals of the circulation road integral part of the same, it can alter the stability of it and to cause difficulty in the guide and in the job.

The application of a machine to the tractor, involves a different distribution of the weights on the aces. It is advisable therefore to add special ballasts in the anterior part of the tractor so that to adequately leave again the weight on the aces. It ballasts her to apply it is calculated with the following formula:

$$M \times s < 0,2 T \times i + Z (d+i)$$



- i = distance among the aces of the wheels of the tractor (m)
- d = distance of the anterior axle from the anterior ballasts(m)
- s = start from the back axle of the equipment (m)
- T = mass of the tractor (kg)
- Z = mass of the ballasts (Kg)
- M = mass of the equipment (Kg)



On the anterior bridge of the tractor it owes, in every case, to burden at least 20% of the mass general tractorutensil in order of march. It is to keep in mind however that, besides the appropriate choice of the joining tractorutensil, the application of ballasts in anterior position, in the limits and with the formalities pointed out by the builder of the tractor, you/he/she can improve the stability of it. Besides, with firm tractor it is had to make to go down to earth the utensil avoiding so possible unintentional descents, improving of it, at the same time, the stability.

Start from the back axle of the equipment

s =.....m

Mass of the tractor T =Kg

Mass of the ballasts Z =.....Kg

M =.....Kg

Mass of the equipment

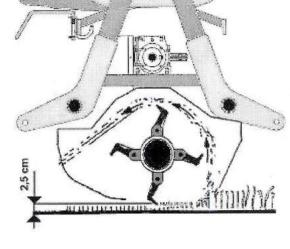
5 - INSTRUCTIONS FOR THE USE

5.1 REGULATION OF THE DEPTH' OF JOB

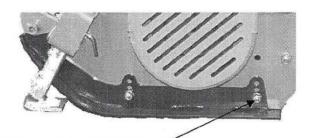
To lift the machine from the ground and to record the height of cut.Regular the order of the machine with the lifter, doing so that the machine is horizontal, or as soon as taller anteriorly, to favor the entry of the material.

For a correct use of the machine it is necessary that the knives work to a least height from earth of 2,5 centimetres. And' possible to regulate the height of the cut acting on the sleighs on the back roll or on the connecting rod of the third point of the tractor. The machine is lifted anymore by earth, smaller it is the usury of the knives and the absorption of power.

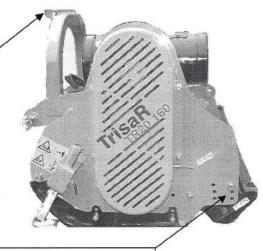
- a) regulation sleighs: to unscrew the bolts of fixing of the sleighs to the sides of the shredders, to position the sleighs to the wanted height and screw
- b) regulation roll to unscrew the bolts of fixing of the roll, to position the roll to the wanted height and screw
- c) regulation connecting rod three point hitchen: to lengthen or to shorten the connecting rod of the three point of the tractor to regulate the height of job and to parallelly position the machine to the ground.



Third Point



Regulation skids



Regulation roll

5.2 HAMMER BLADES - BLADES

The blades fitted on the machine are suitable for work on ground of normal conformation. Check their state and condition daily. If, during work, on of them should accidentally, bend or break it is necessary to replace it immediately, making sure to mount the new blade in the identical position of the one to be replaced. If it is necessary to replace more than one blade, we recommend disassembling and reassembling the one at a time to avoid errors in their positions. The normal wear and tear (particularly rapid on soils or working with the machine too low) and collision with obstacles can produce twisting or cracks in the blades or

- increase in vibrations and consequent mechanical damage to the machine
- worsening of the quality of works
- total or partial breakage of the blades with consequement throwing off of B fragments at high speed.



The partial substitution of the hammer blades must always have done to couples, a hammer blade and that opposite.

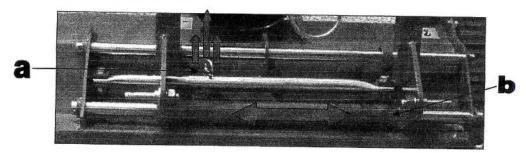
5.3 SHIFTING

The pruning mulcher can be equipped of move side mechanic or hydraulic of the castle of the attack to three points. This move is used in case of workmanship in proximity of ditches or crops that sideways ask for the move of the machine.

* MECHANICAL SHIFTING (with telescopic pipe)
The mechanical shifting (or manual) it is to effect to firm machine, and detached by the tractor.

For the move it needs so to proceed:

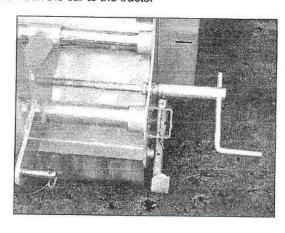
- to remove the pin of lock from the bar (a)
- to move the castle of the attack to the three points (b), in the position desired to the job which he intends to do
- to put again the pin of lock in the first hole profit
- to hook the car to the tractor.

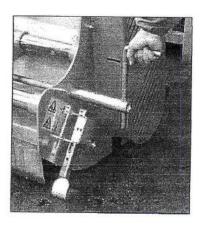


* SHIFTING A WITH CRANK

The shifting is easier to firm machine and detached by the tractor. For the move it needs:

- using the crank that is in endowment for the device to act rotating it up to find the desired position
- to remove the crank
- to hook the car to the tractor

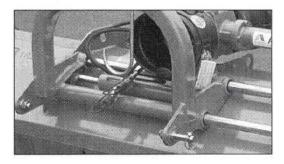




5 - INSTRUCTIONS FOR THE USE

HYDRAULIC SHIFTING

Can comfortably be used with the machine hooked to the tractor to connect the hydraulic pipes in endowment in the special attacks of the hydraulic circuit on the tractor holding lifted the machine of some earth centimeter. To act on the commands from the place of guide of the tractor and to determine the side move of the machine (you see photo).



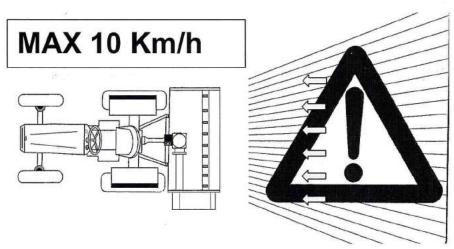


To watch out that the move of the machine makes to vary the angle of job of the joint cardan and to make sure that this remains within the safety limits

5.4 WAY OF USE

After having performed all the operations previously described, to start the tractor, holding the machine slightly lifted by the ground to insert the power takeoff with the lower part motor regime.

To hand that is advanced with the tractor, to progressively lower the machine to level of the ground and to bring the regime motor.



5.5 USEFUL ADVACE

In phase of job it is possible that stones or other blunt bodies are lifted by the knives in rotation.

To check therefore, constantly, that is not people, children or pets in the ray of action of the machine. Also the operator has to watch out to how much above-mentioned.

To avoid to make to turn to empty (out of the ground) the machine. During the job to avoid to effect curves with the lowered machine, neither so much less to work in reverse.

To always lift it for the changes of direction and the inversions of march. During the transport and every whenever makes him necessary the lifting of the machine, it is opportune that the group of lifting of the tractor is regulated so that the same machine is not lifted by earth for more than 30÷35 centimetre around.

To avoid to introduce him on public roads with the dirty machine of earth, grass or how much anything else other than produces dirt and/or obstacle to the road traffic.

Don't make to fall with violence the machine on the ground but to make to slowly go down it. In contrary case strong solicitations would be provoked on all the components of the machine same that they could jeopardize their integrity of it.

5.6 RELEASING

For I unhook it some machine from the tractor to operate as it follows:

- to disconnect the power takeoff of the tractor;
- to lower the equipment supporting it on the ground, to extinguish the motor and to operate the brake of parking.
- to unhook the tree cardan from the power takeoff of the tractor and to systematize it in the special hook of support.
- to position the footsies of support before unhooking the machine.
- to unhook the attacks performing the inverse operations from as described in the paragraph 4.3.

5.7 STORAGE

If the machine is inactive for a long period, it is necessary, with the purpose to preserve it entire in its organs, to perform the following operations:

- a) to Wash above all carefully the machine from fertilizers or from chemical products etc., therefore to dry.
- b) to Verify that the machine is under perfect conditions.

It will be your advantage in to find next time her ready for the use.

c) to Protect all the metallic parts not painted through lubricating, therefore to cover her or stored in dry environment.

5.8 INCONVENIENCES IT IS POSSIBLE REMEDIES

- If during the job anomalous noises are noticed coming from the machine, to stay and to verify to have restored the correct conditions of job
- To correctly work with a machine not function causes situations of danger for the one who uses it
- I work in the hill
- If possible progress "climbing" in the sense of the inclination. If it is not possible to avoid to work along
 the sides of the hill, to effect downward the passages from the tall one to reduce the effect terraces.
 Practical observations:

The worked ground should always be to the right of the driver. It systematizes best it is to work to alternate strips. to reduce the effect terraces.

inconveniences		causes	remedy
excessive vibrations	1	break up or excessive usury of the knives or hammer blades	to replace the pieces worns or cracked
	2	block of the knives or clubs on the pivot	to clean and to fatten up the pivots
	3	non suitable balancing of the rotor	to check the weight of the blocks knives
	4	usury of the pads of the rotor	to get off and to replace pads and the estates
l cut not optimal, because of a decrease of speed of the motor	1	tension bolts non enough	to record the tension
	2	excessive usury bolts	to replace the bolts
overheating of the bolts	1	tension bolts erred	to check the tension
	2	position of job too much low	to check the alignment
	3	skew among axle, delay and axle rotor	
overheating group conic couple	1	lack of oil	to restore the level
	2	exhausted oil	to replace
rapid usury of the knives or clubs	1	position of job too much low	o regulate the height from the ground of the rotor
osses of oil from the transmission side bolts	1	usury and break up of the oil seal	Replace seal
deformation of the supports of the roll or the wheels	1	the supports of the roll or the wheels have sideways been solicited	to lift the machine from the ground during the inversions of march

deformation of the fins of protection	1	the machine has been lowered above the material cutting from a position hoist (transport)	the machine has to assume the position of job before meeting the cutting material
usury excessive bolts	2	tension bolts erred skew pulleys of transmission	to record the tension to check the tension
break-up organs of transmission	1	the machine has been operated or jammed suddenly	to replace the interested parts

5.9 OTHER SUGGESTIONS FOR THE TRACTOR DRIVER

Inconveniences		remedy
Excessive mince of the cutting product	1	to slightly lift the machine from the ground regulating the height with the wheels (the shredders doesn't have to touch the ground with the clubs)
	2	to increase the speed of advancement
Scarce crumble of the cutting product	1	to slightly lower the machine on the ground
	2	to reduce the speed of advancement
	3	don't work on terrestrial too wet
Stoppage of the rotor	1	terrestrial too wet to work
	2	to lift the machine from the ground
	3	to reduce the speed of advancement
	4	to avoid to work with presence of very tall grass
	5	to clean well to the sides of the rotor what on the supports is eventually stopped for avoiding excessive overheatings
The machine bounces on the ground or it waves	1	jammed extraneous bodies among the clubs
	2	clubs correctly climbed on not without the helical disposition or with the edge that penetrates in the ground
	3	to replace the consumed clubs or routs
	4	deformation of the rotor owed to hits received by extraneous bodies in the central part during the job
The machine doesn't work equally on the whole width	1	If, it minces too much for example on the right side, to shorten the right arm .

6.1 VERIFICATIONS IT IS CONTROLS

During the first 8 hours of job and' well to check the tightness of all the bolts, in how much I strive him/it produced during the job it creates an arrangement of the structure, eventually to tighten as from chart, to repeat the control every 50 hours of job.

M	M 8	M 10	M 12	M 14	M16	M18	M20	M 22	M 24
() E	13	17	19	22	24	27	30	32	36
couple of tightness Kgm	3	6	10	14	21	24	40	54	70
couple of tightness Nm	30	59	98	137	205	250	390	530	685

6.2 SIDE TRANSMISSION

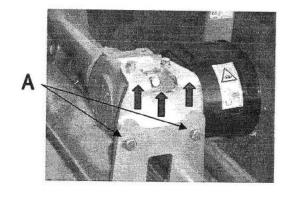
The strength's transmission engine to the rotor happens through belts with pulley record Periodically, to avoid malfunction or skid of the belts, to check the tension of the bolts of transmission.

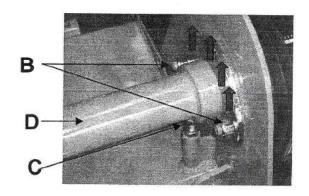
Tension of the belts of transmission

To do this, is necessary assuring that the tractor is out:

- remove the bolts that fix the carter of protection to open the carter throwing it toward the outside;
- check the tension press on the belt, in the central zone among the two pulleys, with a strength of 6 kilogram's for
- to provoke a deformation on the single belt of 1 centimeter;
- loosen the bolts that fix the overdrive to the structure;
- go to act on the two bolts of register doing so that the belts reaches the correct tension;
- belts in tension to check the alignment of the pulleys;
- fix all the loosened bolts;
- reassemble the carter

The bolts must be check regularly: later the first 2 hours of job and subsequently every 8 hours. control must have effected even if an excessive slipping is noticed testified by spillage of smoke by the chest of protection. To guarantee a tension uniform and a correct distribution of the strengths it is necessary to also replace all the bolts in the case an alone is damaged.



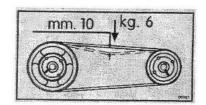


To loosen the grapevines A. and B (you see photo), to increase or to decrease the tension of the bolts intervening on the grapevine C. To try to always maintain the tree D in horizontal position.

When regulating in tension the bolts, to watch out maximum for the level state of the pulleys

To press on the bolt, in the central zone among the two pulleys, with a strength of 6 kilogram's to provoke a deformation on the single bolt of 1centimeter.

And advisable to protect of a metallic line of suitable length that, supported on the edges of the two pulleys, you touch all and four the edges.





6 - MAINTENANCE

6.3 SUBSTITUTION OF THE BLADES OR HAMMER BLADES

To replace worn or broken hammer blades:

Position the tractor and machine in plain.

Position suitable easels of support on both the sides under the machine.

- Arrest the tractor and to insert the brake of parking.

Replace the hammer blades shutting with strength the bolts with die that stare at it.

The fixing of the pivots can be effected with splits or dice according to the model of the machine

6.4 LUBRIFICATION



Light always attentively the prudence pointed out on the containers. Always keep oil and grease away from children. Avoid the contact with the skin, after using wash hands at length and thoroughly. Treat used oils in conformity with the ant-pollution laws in force.

The times of intervention listed in this manual have only informative character and they are related to normal conditions of employment, they can suffer insofar variations in relationship to the kind of service, dustier environment, seasonal factors, etc.

In the case of more serious conditions of service, the interventions of maintenance must logically be increased.

- Before injecting the lubricating fat in the lubricators, it is necessary to clean with care the lubricators themselves to prevent that mud, dust or extraneous bodies mix him with the fat, making to decrease, or even to annul, the effect of the lubrication.
- In to perform the restoration or the change oil, it is necessary to use the same type of oil previously
 used.

In to put the equipment in operation for the first time to verify the level lubricating as described. Before performing control's operations, restoration or substitution lubricating, to carefully clean the parts or the interested areas. Before beginning the job to check through always the level of the oil in the change of speed the spy of level, or through the auction of level, eventually to restore oil introducing him/it from the cork of load.

To perform the first change after 30 hours of job, subsequently after 400 hours or at least once a year. This operation must be performed in shop equipped with means of lifting adjusted to the weight of the machine making it stable with appropriate supports. To unload the oil unscrewing the cork of unloading.

Every 8 hours

- grease the crosses of the cardan shaft
- grease the bearings of the rotor
- check the tightness of the fastening bolt
- to check the tension of the belts

Every 5 hours

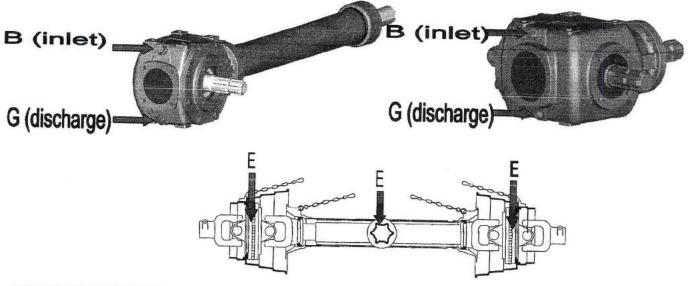
- check the oil level in the overdrive box

Every 400 hours

-Carry out a complete oil change of the overdrive, discharging all the oil from the discharge cap located below the overdrive box

6.5 SCHEME OF LUBRICATION

INTERVAL h=hours	OPERATION	STUNG BY TO	
every 8/10h of job	- GREASE UP ON THE SPECIAL LUBRICATORS - GREASE UP THE PIPES IS THE CRUISES OF THE THEY CARD - TO VERIFY THE LEVEL OIL, IF SCARCE TO RESTORE IT	E-B-G	
after the first 30h of job	TO REPLACE THE OIL FROM THE MULTIPLIERS	B - G	
every 400/450h of job	- TO REPLACE COMPLETELY THE OIL FROM THE REDUCTION GEARS IS TO CLEAN THE CORKS OF UNLOADING IF MAGNETIC	B - G	



6.6 LUBRICATING CHART TO BE USED (L. = liters)

stung by to lubricate	Model shreddres	Sigla ISO	lubricating comparative							
	(quantity)	Lubrific.	VANGUARD	SHELL	AGIP	ESSO	PAKELO	MOBIL		
В	TR15 (L.1.0) TR20 (L.1.3) TR30 (L.1.3) TR60 (L.2.4) TR70 (L.1.8)	Oil CKC 320	GEARING EP 320	OMALA 320	BLASIA 320	SPARTAN EP 320	EROLUBE EP C 320	MOBIL GEAR 632		
E	Kg.0.01 for lubricator	Grease XBCEA 2	LIKO 2	ALVANIA R 2	GR MU EP 2	BEACON 2	EP GREASE NLGI 2	MOBILUX EP 2		

7 - ACCESSORIES



the machine is able' to be furnished of different accessories; to every application to keep in mind that vary the weights of the machine and therefore to verify that the stability of the tractor is not jeopardized.

7.1 EDGES AVAILABLE ACCESSORIES

TR15

Code	Description
P40006	Kit for shifting to mechanical manual command
P40001	Kit for shifting to hydraulic command
P40010	Complete tooth for back rake (n° 8 xTR100) (n° 9 xTR120) (n° 10 xTR130) (n° 11 x TR140) (n° 12 xTR150) (n° 12 xTR160) (n° 14 x TR180)
P	Kit Skids Side
P	Kit attacks tractor 2 rd category

TR20

Code	Description
P40005	Kit for shifting to mechanical manual command
P40002	Kit for shifting to hydraulic command
P40010 (q.tà=nota)	Complete tooth for back rake (n° 9 xTR110) (n°9xTR120) (n°11xTR140) (n°12.xTR160) (n°14xTR180) (n°1xTR200)
P40009	Kit attacks tractor 2° category

TR30

Code	Description				
P40004	Kit for move to command crank manual				
P40003	Kit for move to hydraulic command				
P40015	Set complete back rake of crossroad P40015 x150				
P40016	Set complete back rake of crossroad P40016 x160				
P40018	Set complete back rake of crossroad P40018 x180				
P40020	Set complete back rake of crossroad P40020 x200				
P40022	Set complete back rake of crossroad P40022 x220				
P40024	Set complete back rake of crossroad P40024 x240				

TR60

Code	Description
P40057	Couple additional skids

TR70

Code	Description
P40040	Back roll TR70-320
P40049	Kit Skids Side
P40050	Back wheels (215/65-15)
P40052	Device for the transport (couple wheels + rudder)