

USE AND MAINTENANCE MANUAL

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1.2. Series : **PELLICANO – MASTER SHREDDER**

1.3. Model:

1.4. Series number:

CAREFULLY NOTE:

- THIS MANUAL MUST ACCOMPANY EACH EXAMPLE OF THE ABOVE MENTIONED SERIES.
- IN ORDER TO ENSURE A COMPLETE UNDERSTANDING OF THE MACHINE'S CORRECT FUNCTIONING THE USER MUST FULLY READ EACH SECTION OF THE MANUAL.
- **PARTICULARLY IMPORTANT NOTES REGARDING SAFETY ARE WRITTEN IN BOLD PRINT.**
- **ANY USERS WHO MUST CARRY OUT PARTICULAR OPERATIONS ON THE MACHINE FOR WHICH NO SPECIFIC INSTRUCTIONS HAVE BEEN SUPPLIED MUST DIRECTLY ASK OUR SALES OR TECHNICAL OFFICE.**

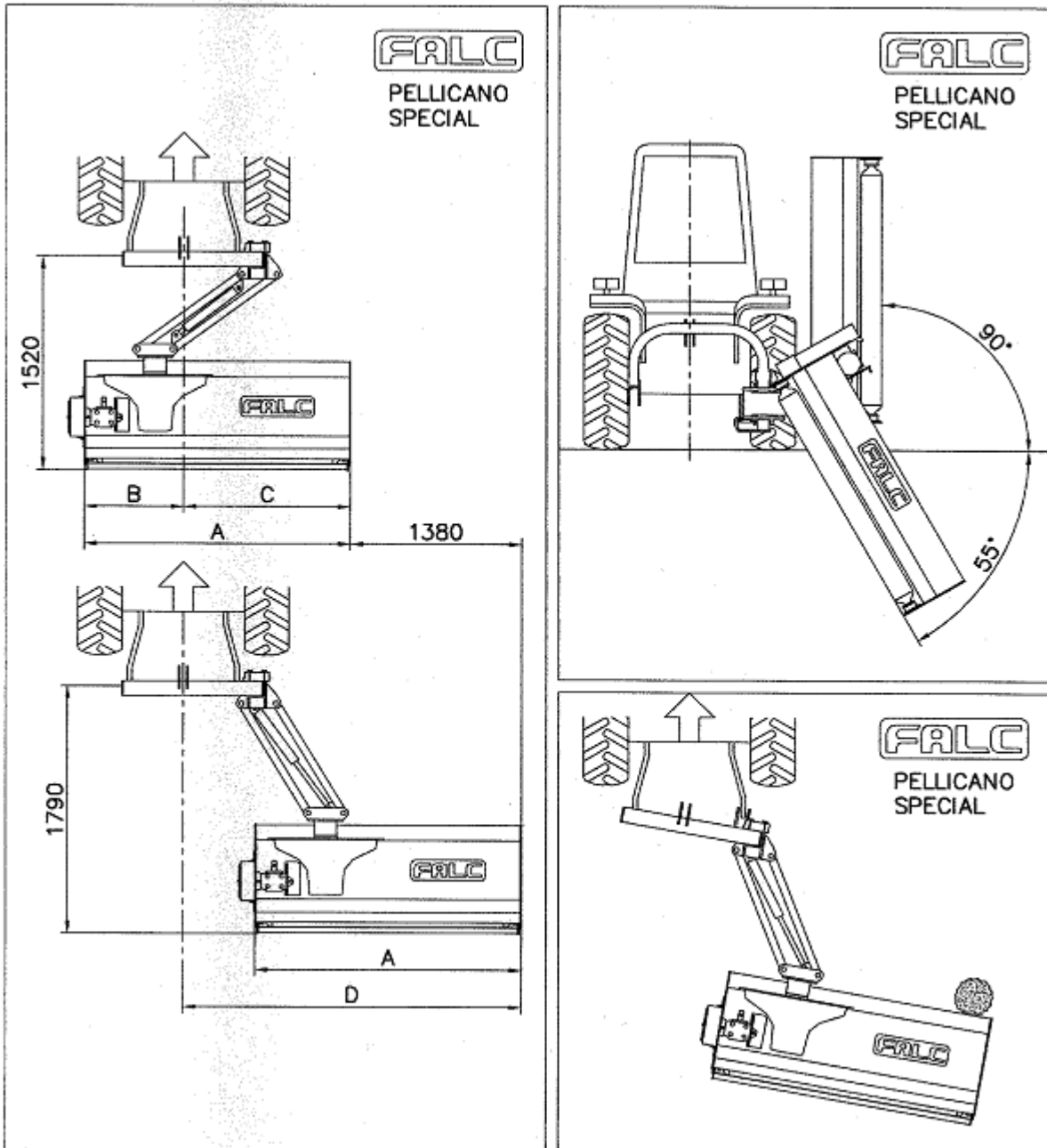
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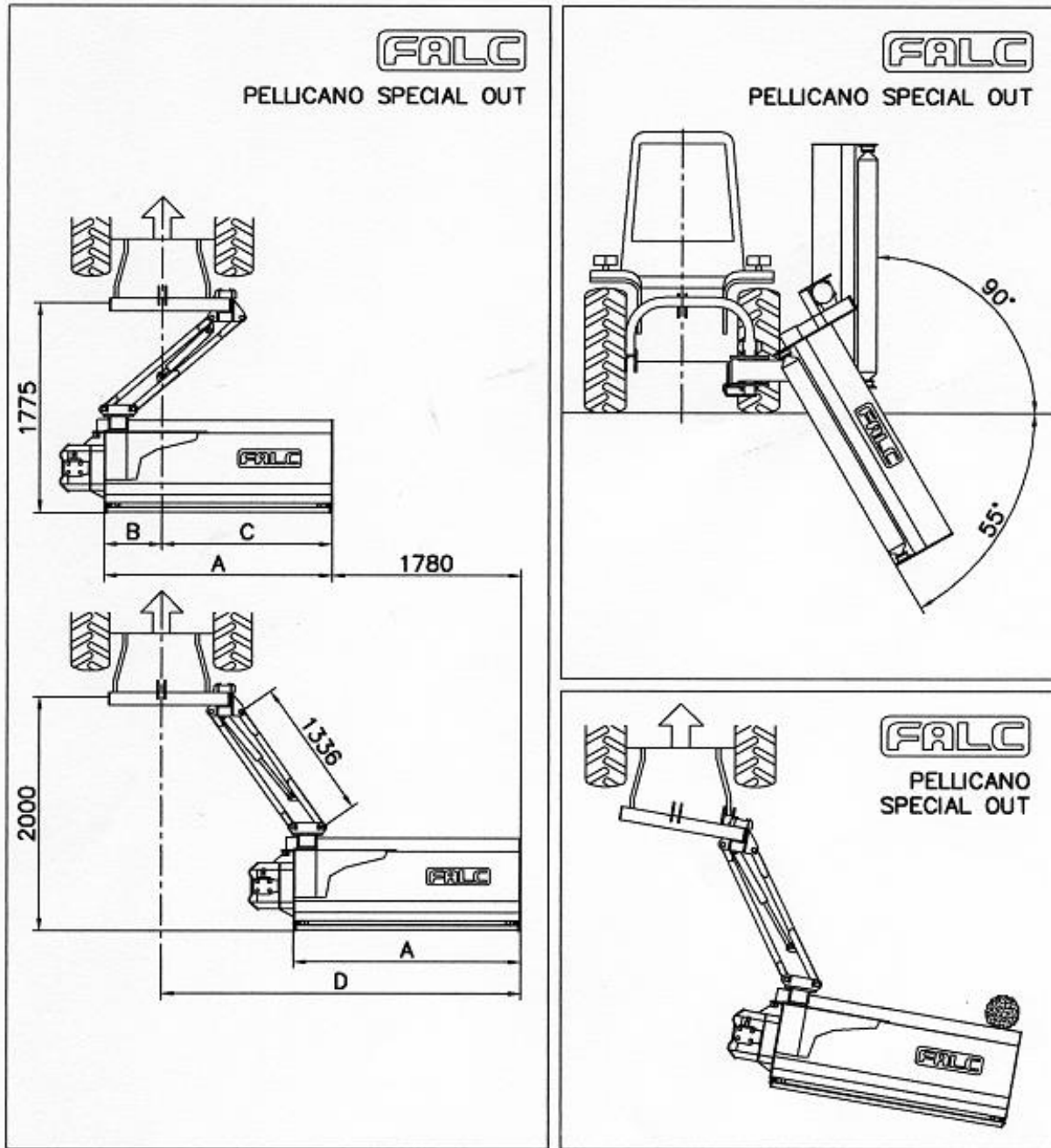
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2. USE CONDITIONS

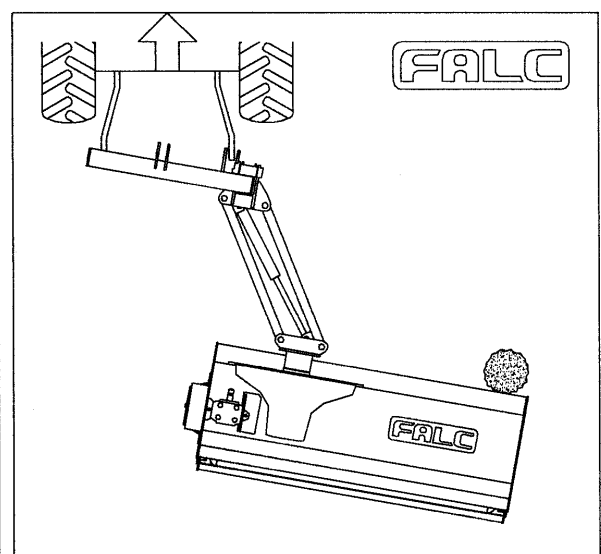
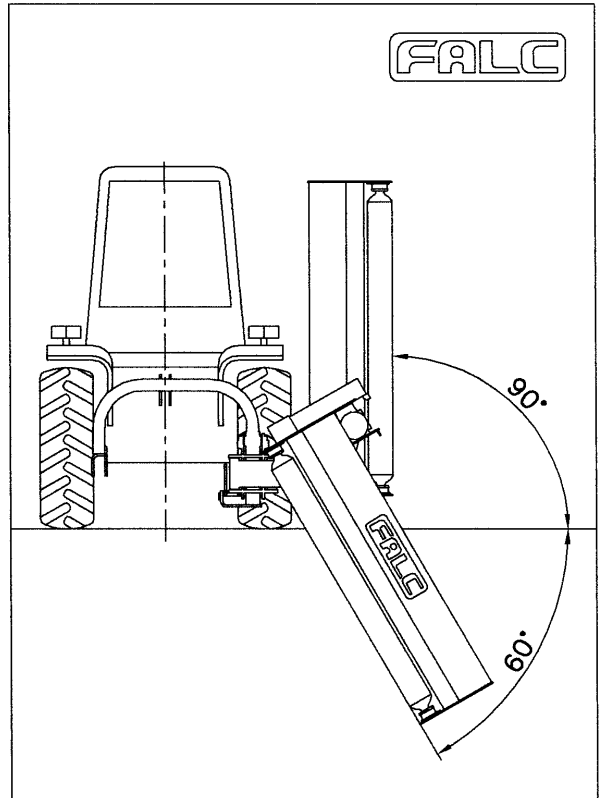
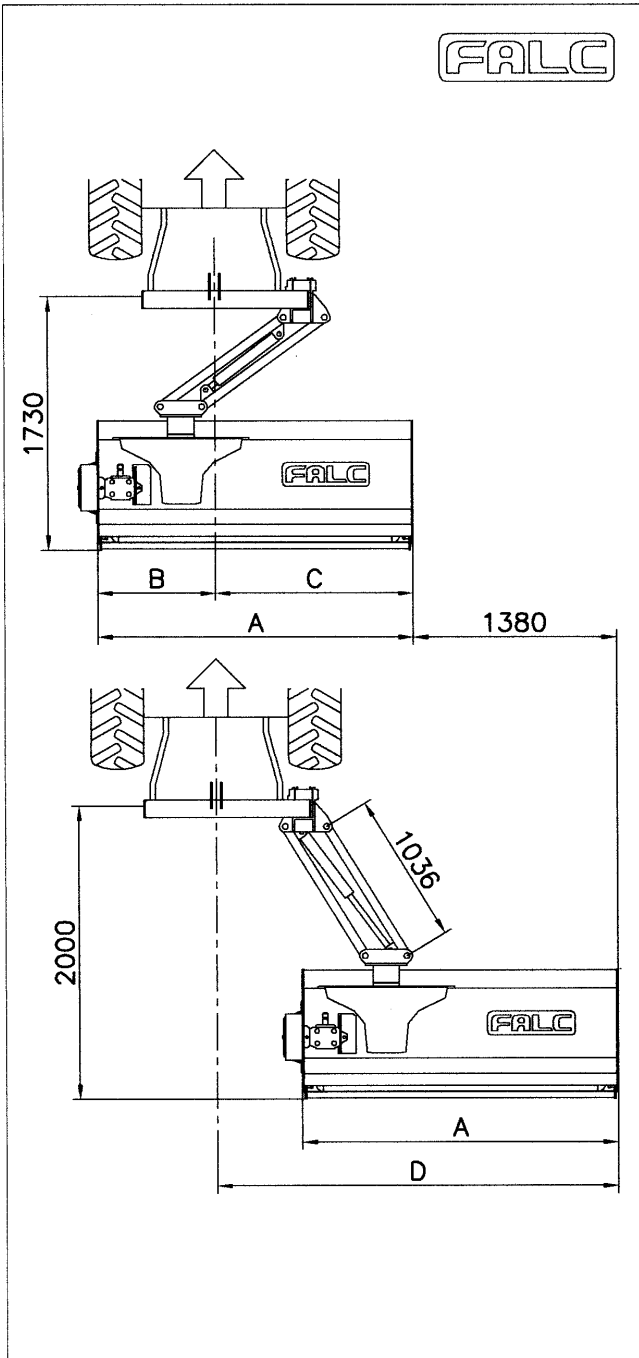
The Pellicano and Master serie shredders are manufactured to be combined with a suitable tractor equipped with 3 point linkage and driven by a cardan shaft.

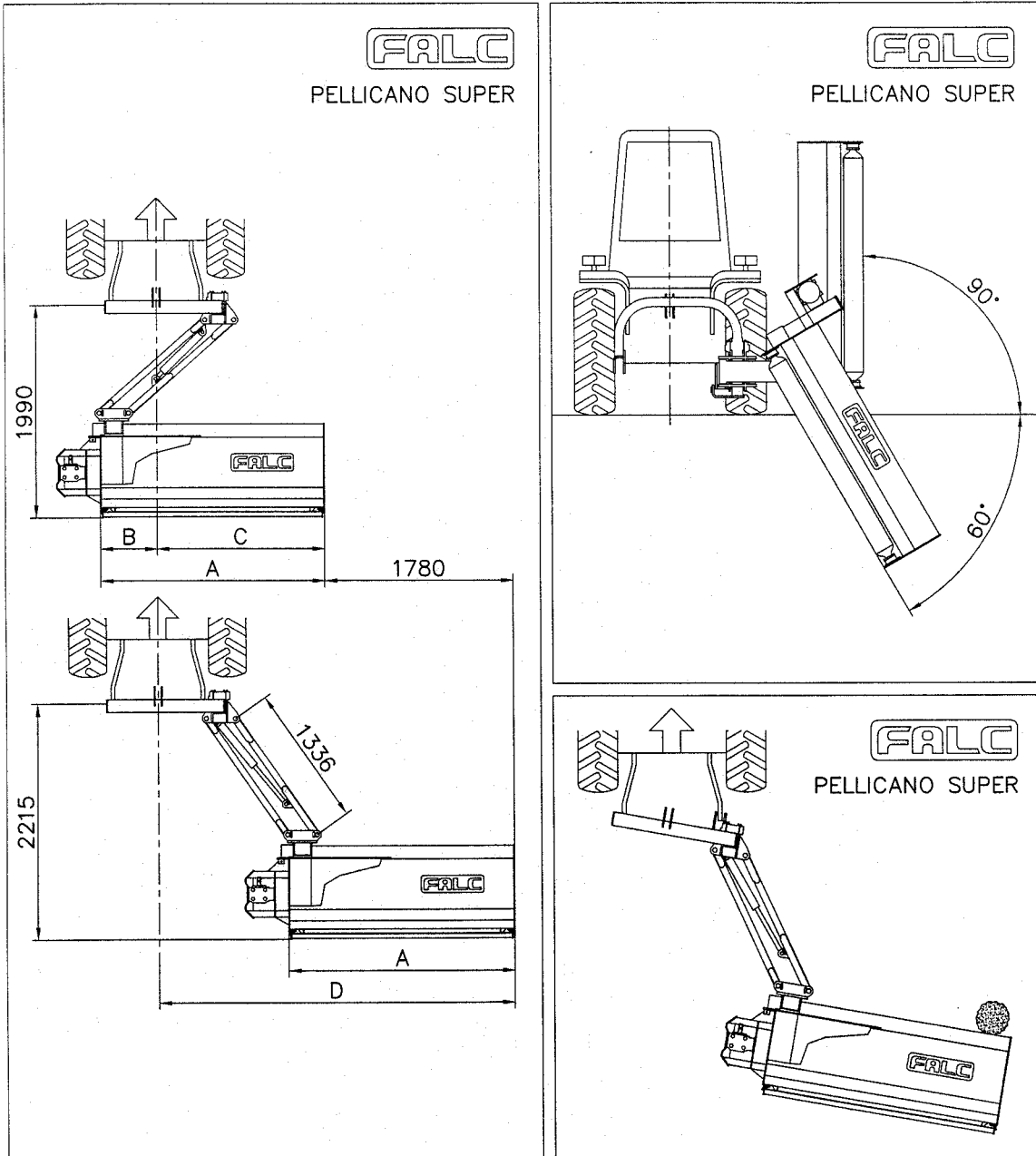




Model	A	B	C	D	Weight
Pellicano 1600 Special	mm 1680	mm 800	mm 880	mm 2260	kg 600
Pellicano 1800 Special	mm 1820	mm 800	mm 1020	mm 2400	kg 620
Pellicano 2100 Special	mm.2100	mm 800	mm 1300	mm 2680	kg 660
Pellicano 1600 Special OUT	mm 1680	mm 540	mm 1140	mm 2920	kg 650
Pellicano 1800 Special OUT	mm 1820	mm 540	mm 1280	mm 3060	kg 670
Pellicano 2100 Special OUT	mm 2100	mm 540	mm 1560	mm 3340	kg 710

Model	A	B	C	D	Weight
Pellicano / Master 1600	mm 1600	mm 800	mm 800	mm 2180	kg 750
Pellicano / Master 1800	mm 1780	mm 800	mm 980	mm 2360	kg 790
Pellicano / Master 2100	mm 2140	mm 800	mm 1340	mm 2720	kg 850
Pellicano / Master Super 1600	mm 1600	mm 540	mm 1060	mm 2840	kg 850
Pellicano / Master Super 1800	mm 1780	mm 540	mm 1240	mm 3020	kg 920
Pellicano / Master Super 2100	mm 2140	mm 540	mm 1600	mm 3380	kg 980
Pellicano / Master Super 2500	mm 2500	mm 540	mm 1960	mm 3740	kg 1130





The Pellicano and Master series shredders are particularly recommended for the shredding of bushes, branches, grass and reeds along street banks, canal and well edges in the breakflame band and underneath electrical cables. They are further recommended for the shredding of grass and pruning in fruit, vineyard, olive and citrus cultivation. They may also be used for shredding residues after corn, wheat, Soya, cotton, sunflower, artichoke and tobacco collection.

ANY OTHER USE OF THE SHREDDER IS TO CONSIDERED ILLEGAL AND IS NOT ALLOWED BY THE MANUFACTURER

The Pellicano and Master serie shredders are equipped with:

1 piston for obtaining the lateral movement

1 piston for adjusting the inclination of the shredding part from +90° to -60° (-55 for Special)

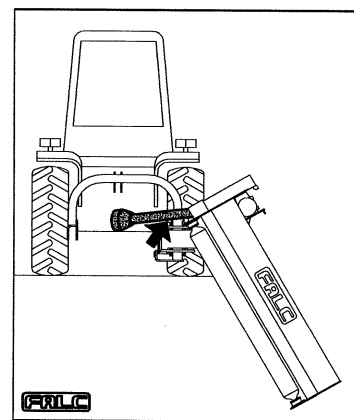
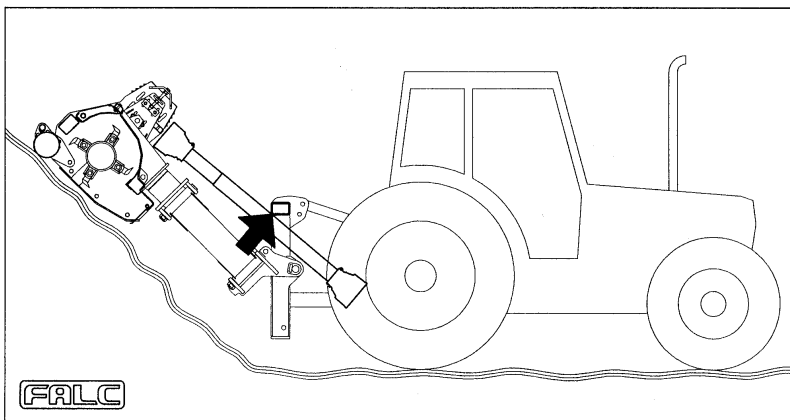
A safety system guarantees the withdrawal of the shredder and a return to automatic in the presence of obstacles.

MINIMUM Power, Weight and Size of the tractors on which the Pellicano and Master shredders are to be applied:

Model	Hp	Kw	Tractor weight MINIMUM	Tractor size MINIMUM
Pellicano 1600 Special – OUT	50-80	37-59	kg 2200	mm 1600
Pellicano 1800 Special – OUT	50-80	37-59	kg 2400	mm 1800
Pellicano 2100 Special – OUT	50-80	37-59	kg 2600	mm 2100
Pellicano/Pell. Super // Master/Master Super 1600	80-90	59-66	kg 2500	mm 1600
Pellicano/Pell. Super // Master/Master Super 1800	80-100	59-74	kg 2700	mm 1800
Pellicano/Pell. Super // Master/Master Super 2100	80-120	59-88	kg 2900	mm 2100
Pellicano Super // Master Super 2500	80-120	59-88	kg 3500	mm 2500

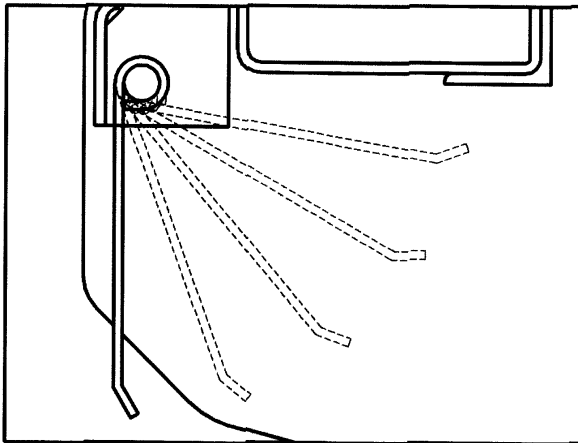
LETTING PERSONS, ANIMALS OR THINGS GET ONTO OR BE TRANSPORTED BY THE PELLICANO AND MASTER SERIES SHREDDERS IS STRICTLY PROHIBITED.

ATTENTION: as shown in the picture below, it is possible that – during the work – the cardan shaft can touch the 3 point linkage of the machine, causing its irreparable damage. The operator, in order not to damage the cardan shaft itself, constantly must verify that during the work the cardan shaft NEVER touch the 3 point linkage of the machine.



3. OPERATOR CONDITIONS

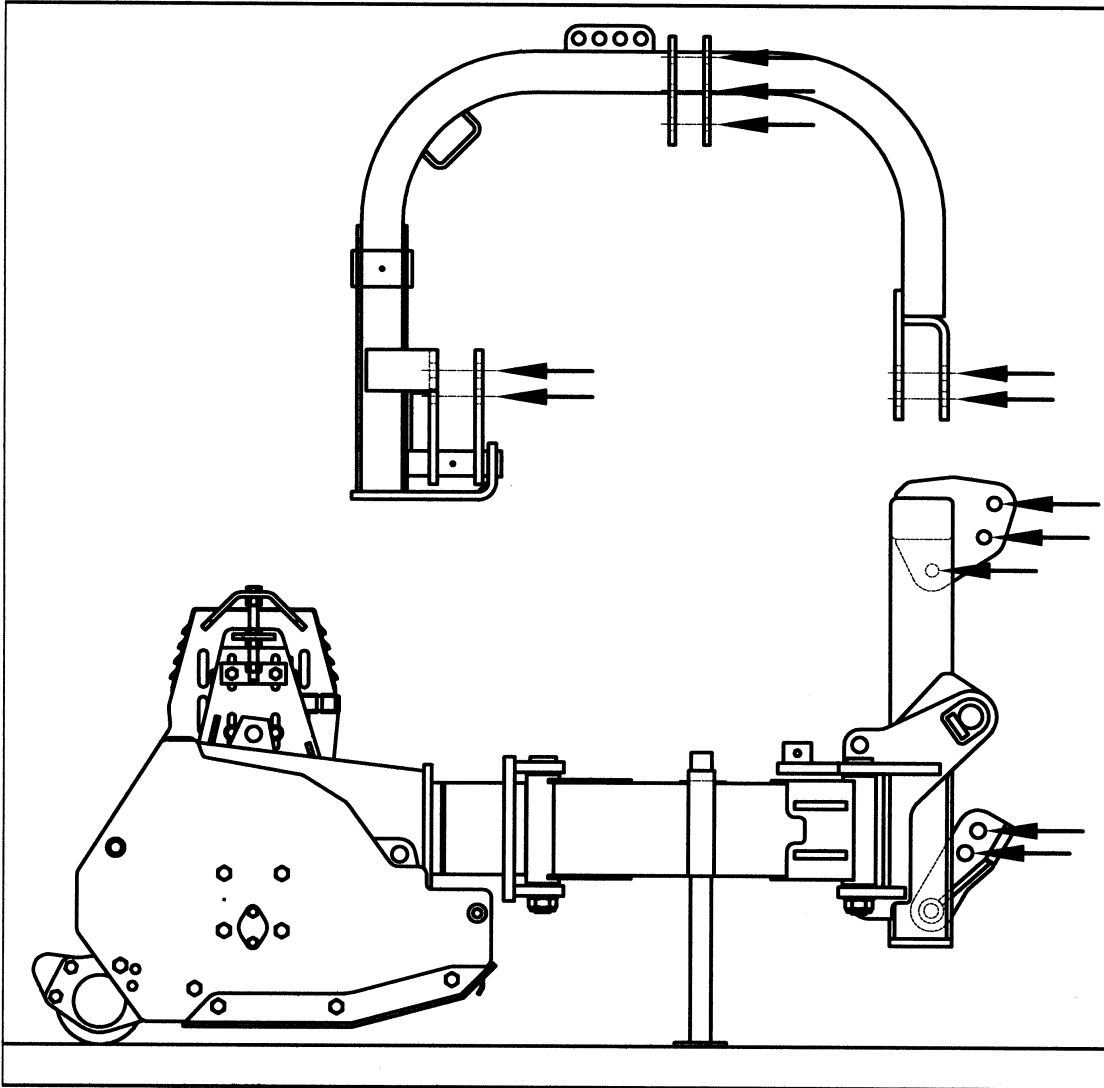
- a) The operator must remain at the tractor driving seat when using the shredder. **The operator must not leave the tractor driving seat if the tractor's power take-off has not been removed and if the shredders moving parts (rotors etc) have not come to a complete standstill. The arrest time for the rotating parts of the shredder is approximately 3 minutes.**
- b) Under normal conditions, that is with the rear hood closed, the operator must ensure that there are no persons present within a 20 metre range surrounding the shredder when starting the shredder and during work. **The operator must immediately stop both the tractor and the shredder if one or more persons enter the 20 metre range surrounding the machine.**
- c) The operator cannot use the tractor's lifter without having first removed the power take-off (PTO). **Prior the lifting the shredder using the tractor lifter the operator must ensure that the power take-off (PTO) is removed and that the rotor is at a standstill.**
- d) It is strictly prohibited to go in reverse while continuing to chop; i.e. with the tractor PTO engaged. Before starting the reverse manoeuvre, always wait till the rotor has completely stopped.
- e) The front part of the machine is equipped with oscillating protective devices designed to prevent any material from being thrown out while working. You need to check these devices constantly to make sure that they are free to oscillate and that they are not deformed (crooked or bent). This check is very important particularly on stony ground where these protective devices are subject to numerous impacts during normal work. If the protective devices are deformed, they must be replaced immediately.



- f) To protect your eyes from any objects thrown out from the shredder while working, always wear suitable work goggles.



4.1. CONNECTING THE SHREDDER TO THE TRACTOR



- a) All Falc shredders may be applied to all types of tractors provided that they are equipped with a universal 3 point linkage (see MINIMUM Power, Weight and Size of tractors).
- b) The shredder must be positioned level and in a stable position on the supporting leg.
- c) The tractor must reverse towards the shredder until its arms correspond to the shredder's 3p arms. Any operators on the ground must keep a distance of at least 5 metres from the machine during this phase.
- d) Position the pins of the lower 3 point and lock with the split pins supplied.
- e) Connect the upper arm of the tractor to the upper pin of the 3 point, adjusting so that the machine assumes a horizontal position with regards to the ground.
- f) Position the cardan shaft and check that its ends are properly connected with the tractor's and multiplier's power take-off. Fix the anti-rotation chains present on the cardan on both the tractor side and the shredder side. **The tractor engine must be off during this phase in order to avoid any erroneous movement starting up the power take-off (PTO).**
- g) Connect the hydraulic system tubes to the tractor's distributor.
- h) Having carried out these operations it is possible to move the tractor's lifter enough to free the supporting foot which must be completely lifted and locked with the pin supplied.
- i) For the series' machines: Tractor's power take-off (PTO) = 550 cycles/minute

4.2. USING THE SHREDDER

After having correctly attached the shredder to the tractor the operator may begin work always respecting the conditions in point 3 (point 4.3. if working with the hood open).

Carefully check that the safety pins for transport which impede any movement by the shredder have been removed. If not, using the 2 pistons could provoke severe damage to the machine.

ATTENTION: the operator must always ensure that there are NO persons present within a 5 metre range and that the rotor is at a standstill whenever he/she must raise or lower the machine to change from working condition to transport position or vice versa.

Prior to starting work it is advisable that the operator first practises with the horizontal and vertical movements made possible by the 2 pistons if it is the first time that the he/she uses the shredder.

The rear roller must always be rested on the ground during work both with the shredder in a horizontal position or inclined.

The tractor's forward speed is independent of the shredder; it depends on the operator who, depending on a number of factors such as tractor power, height of residue to be shredded, working height adjustment, etc, must regulate it in order to obtain the best performance from the machine.

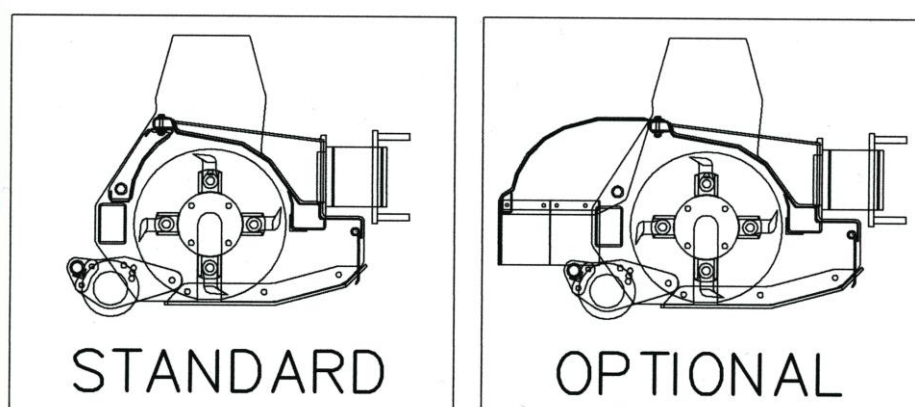
4.3. REAR COVER FOR ROTOR MAINTENANCE

Just for Pellicano serie

Remove the rear cover for servicing the rotor only when the machine is DISCONNECTED from the tractor's power take-off (PTO) and only for the time necessary for performing maintenance.

During work the cover must be closed and bolted to the frame.

As an alternative to the standard cover installed on the machine, the special cover shown in the figure below may be used.



4.4. DETACHING THE SHREDDER FROM THE TRACTOR

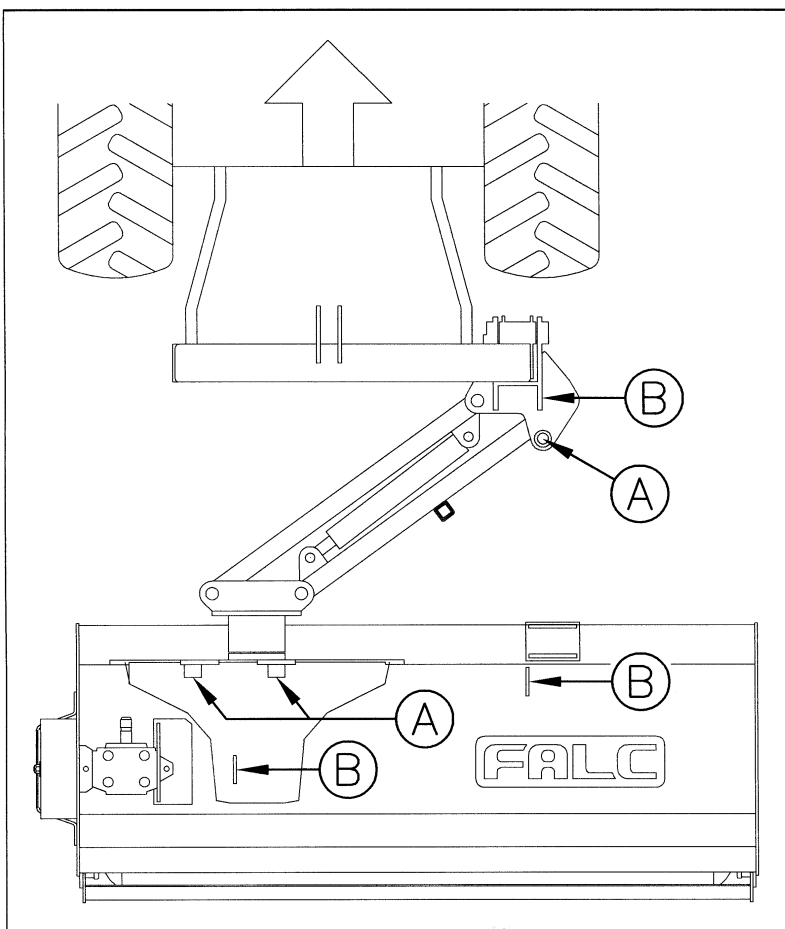
The manoeuvres necessary for correctly detaching the shredder from the tractor are as follows:

- a) Stop the tractor level, use the hand brake and disconnect the power take-off.
- b) Rest the shredder on the ground so that the rear roller is in a stable and horizontal position.
- c) Switch off the tractor engine and wait the approximately 3 minutes needed for the shredder's moving parts to come to a complete halt prior to getting off.
- d) Position the supporting foot.
- e) Detach the cardan joint from the tractor's power take-off and arrange in the appropriate shredder support.
- f) Detach the hydraulic system's tubes from the tractor's distributor.
- g) Detach the shredder from the tractor's 3p linkage drawing out first the split pins which lock the pins and then removing the pins themselves.
- h) Get back on the tractor and move it forward in order to completely extricate the arms of the tractor from the shredder's 3p.

4.5. TRANSPORT

During work, at the rear the shredder rests on the roller and at the front it is kept raised by the arms of the tractor at the front.

During transport the shredders are completely born by the tractor (see Point 2).



During transport the shredder can be positioned both HORIZONTALLY and VERTICALLY but it is compulsory for the operator to lock that position with the appropriate safety pins. A pictogram is applied on the shredder indicating the points at which to place the safety pins.

Always use equipment appropriate to the weight of the machine itself for any handling rendered necessary by loading, unloading and storing and use the grips positioned on the machine.

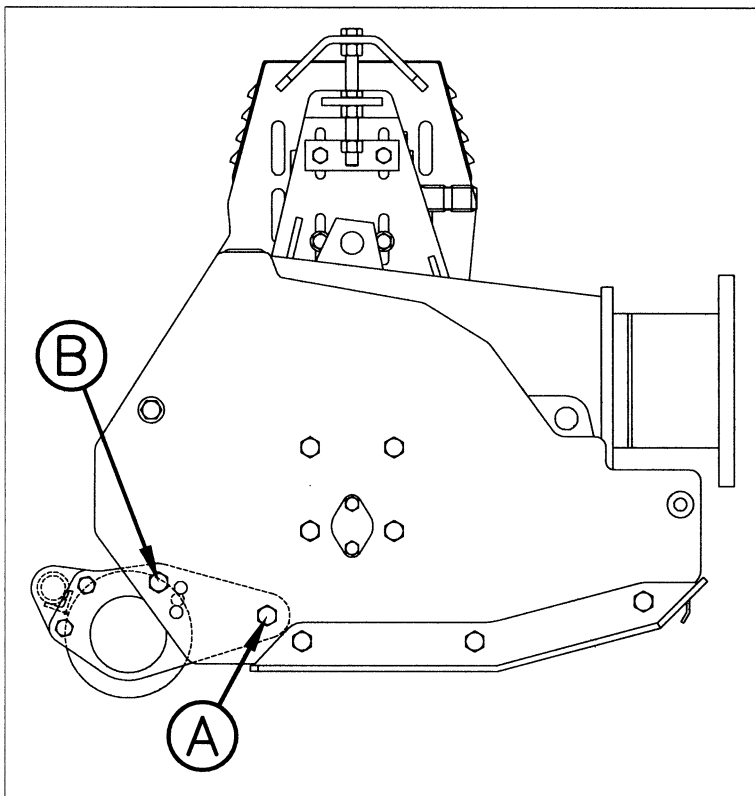
A= safety pin for the transport

B= attachment points for lifting the machine

4.6. ADJUSTING THE WORK HEIGHT

The adjustment of the work height must be taken care of in a particular manner prior to using the shredder.

- a) The work height is adjusted by moving the rear roller's linkage flange one or more holes.
A= screws to be loosened for adjusting the roller
B= screws to be moved to adjust the roller
- b) The work height adjustment is correct when the knives, or the hammers, skim over the ground without touching it. If, due to an erroneous adjustment, the rotating organs touch the ground there will be a higher absorption of power on the part of the tractor and a faster wearing of the rotating organs themselves.
- c) The machine must always be at a horizontal position to the ground.



4.7. MAINTENANCE AND REPAIRS

Prior to approaching the machine in order to carry out any maintenance or repair operations a number of precautions are obligatory:

- a) **Stop the tractor level**
- b) **Rest the shredder on the ground**
- c) **Use the handbrake**
- d) **Remove the power take-off**
- e) **Switch off the tractor's engine.**
- f) **Wait approximately 3 minutes until all of the shredder's moving organs are at a complete halt.**

For specific maintenance or repair operations in which it is necessary to raise the machine from the ground or tip it, the use of equipment adapted to this scope is indispensable.

It is advisable to always contact your area dealer or a suitably equipped mechanical office.

The machine weights are shown in point 2 of this manual.

Before carrying out any interventions on machine parts which may reach high temperatures, such as the multiplier, the bearings, the belts, etc, ensure that they have cooled sufficiently before handling. The cooling time of these parts depends upon the work carried out prior to stopping and the external atmospheric conditions.

4.7.1. Maintenance

Given that all of the shredders are consigned greased and lubricated, listed below are a number of rules which must be strictly adhered to in order to ensure that the best results are obtained.

- a) **After the first hour of operation**
 - Check the tightness of all of the screws.
- b) **Daily**
 - Check the oil level of the transmission box.
 - Lubricate the cardan joint (see the instruction book specifically relevant to the cardan)

ATTENTION : usually the cardan joint is supplied by Falc and it is suitable for the effective power necessary for the tractor-shredder coupling. In case of replacement never use a cardan joint with less features than the original.
- c) **Every 8 working hours (use EP2-NLGI2 lithium grease)**
 - Grease the rotor bearings using the appropriate greasers clearly indicated on the machine. Grease with moderation introducing a little grease at a time.
 - Lubricate all of the points indicated on the machine with grease.
- d) **Every 8 working hours**
 - Check the tension of the belts in order to avoid their rapid wear and that of the pulleys. The tension is correct when the belt is lowered a maximum of 10 mm when the centre line point between the pulleys is pressed.
- e) **Every 8 working hours**
 - Check the tightness of the nut coupled to the hammer holder pin.
- f) **Every 300 working hours**
 - Replace the oil in the transmission box.
 - Check to ensure that the bleeder plug of the multiplier is not internally clogged with dust or earth. If in doubt replace the bleeder plug.

The transmission box is lubricated with MobilGear 634/SAE 140 when delivered.

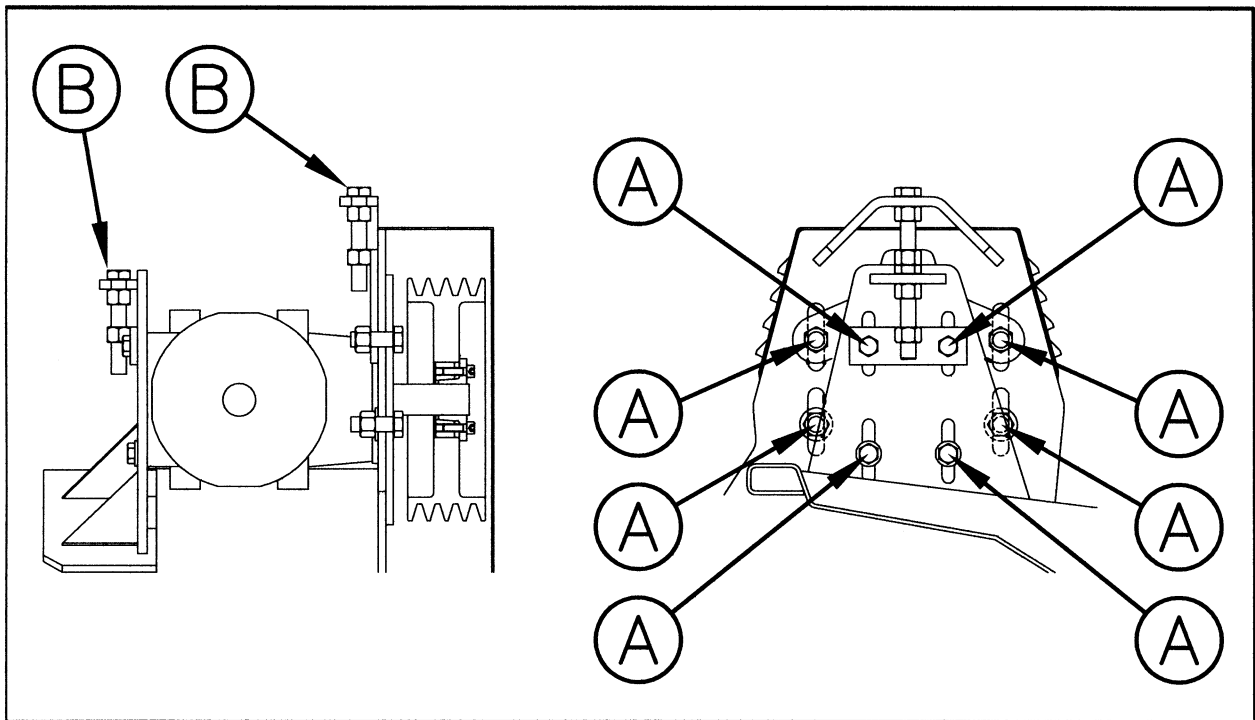
ATTENTION: do not disperse used oil but place it in the organs predisposed for its disposal.
- g) **IMMEDIATELY STOP THE SHREDDER AND REMOVE THE POWER TAKE-OFF** if vibrations are felt during work. Check for any breakage or excessive wear of the knives or the hammers. Carry out a partial or total replacement of these if necessary, taking care to maintain the absolute balance of the rotor by replacing both the broken knives (hammers) as well as those diametrically opposite.

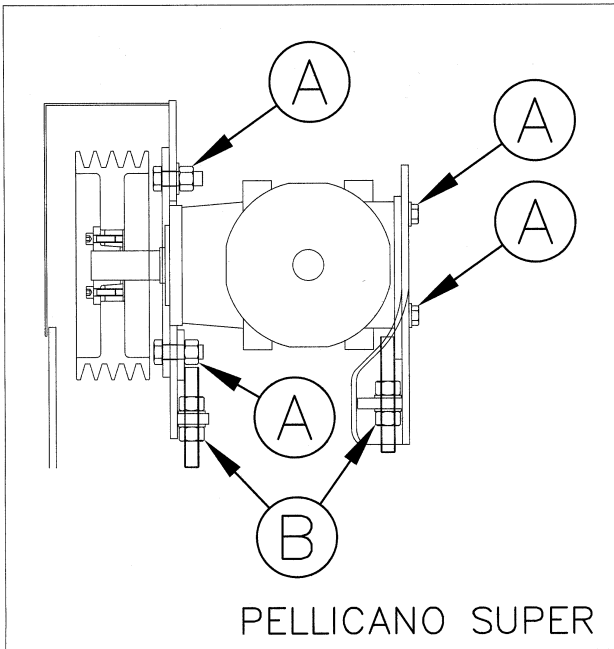
- h) Check if there are residues or incrustations present on the knives, hammers or on the rotor and clean if present.
- i) Always carefully clean the machine of any residues accumulated during work prior to any prolonged period of inactivity. Also protect the machine from atmospheric agents during this inactive period.

4.7.2. Replacing the belts

Carry out the following operations to replace the belts:

- a) Disassemble both the plate which protects the belt cover guard as well as the belt cover guard
- b) Loosen the screws (A) which lock the multiplier
- c) Loosen the screws (B) so that it is possible to draw the belts out from the pulley housing
- d) Replace all of the belts with new ones. Carefully check to see that the new belts are the same as the old ones with regards to length and type. Falc uses SPB type teethered belts on the series' machines.
- e) Use the previously loosened screws (B) to tension the belts.
- f) Check the tension of the belts
- g) Tighten the previously loosened locking screws (A).
- h) Replace the belt cover guard and the relative protective plate.





4.7.3. Disassembly and reassembly of the pulleys

The pulleys are fixed on the relative shafts using a taper bush similar to that shown in the figure.

a) To disassemble the pulleys proceed as follows :

Use a suitable key to loosen the screws (A)

Remove n. x screws (A) and insert in the threaded holes (B) uniformly tightening them.

The pulley may be easily drawn from the shaft after the screws have been turned a number of times.

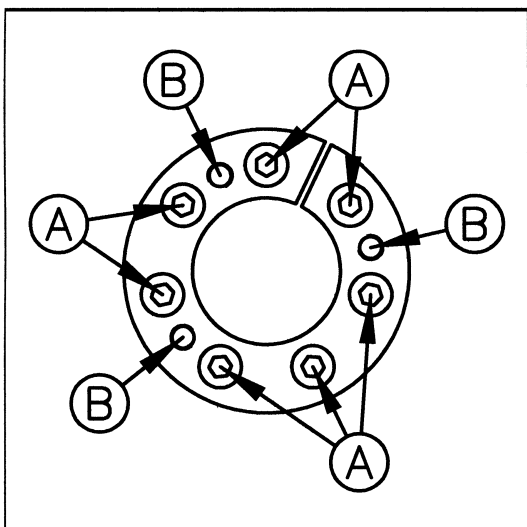
b) To reassemble the pulley proceed as follows :

Insert the taper bush in the pulley hole.

Couple to the shaft ensuring that the pulley is properly positioned.

Use a suitable key to uniformly tighten the screws (A).

ATTENTION : tightening moment = 40 N/m (4,1 kg/m)



4.7.4. Causes of possible inconveniences and relative interventions

If the shredder is obviously vibrating

CAUSE :

One or more of the knives (hammers) are broken which provokes an imbalance in the rotor.

The support bearings of the rotor have been consumed.

Residues and incrustations are visible on the knives (hammers) of the rotor.

INTERVENTIONS :

Replace the broken knives (hammers) and those diametrically opposite.

Replace the supports.

Clean the knives (hammers) and the rotor.

If the rotor turns at a slower speed than that foreseen

CAUSE :

The belts have become loose.

The belts and the pulleys are excessively worn.

INTERVENTIONS :

Reset the correct tension of the belts.

Replace the worn parts.

Excessive consumption of the knives (hammers) is noted

CAUSE :

The knives (hammers) touch the ground when working.

INTERVENTIONS :

Reset the machine's correct height from the ground.

5. GUARANTEE

- a) The guarantee is valid 1 year from the date of the delivery. The company is committed to replacing parts which present material or manufacturing defects in as short a time as possible. The manpower necessary for replacing parts is excluded from the guarantee. Any transport or forwarding expenses are excluded from the guarantee.
- b) The guarantee ceases if breakage is the result of major force, incorrect use of the machine or any erroneous action carried out by the purchaser, employees or third parties. Repairs, replacements, modifications carried out by the purchaser or for the purchaser without the authorisation of the manufacturer are included in these actions. Incorrect use of the machine is understood to mean actions which are not listed in the user norms listed in this instruction manual.
- c) Parts which due to their very nature or use are subject to inevitable deterioration or wear are excluded from this guarantee.
- d) The bearings and oil retainers are not under guarantee.
- e) The cardan shaft is not under guarantee.
- f) The following standards are valid for the parts for which a warranty is requested:
 - the piece to be replaced must be returned to the manufacturer the moment in which a request is made for a new piece.
 - the spare parts are always invoiced when forwarded.
 - **only examination by the manufacturer's technicians can result in the guarantee being upheld and, therefore, accredited.**

6. NORMS TO BE FOLLOWED FOR CORRECTLY ORDERING SPARE PARTS

In order to quickly deal with the orders relative to spare parts it is necessary to specify :

- a) Type of machine, Model, Series number.
(E.g. Pellicano 1800 series' number. XXXXX)
- b) Number of the spare parts table in which the piece in question is to be located, identification number, piece code.
(E.g. Table no. YY ; Item no. JJ ; Code KKKKKK)
- c) Exact denomination of the item.
- d) Quantity of pieces requested.
- e) Instructions for the forwarding.
(rail, postal package, courier, etc.)
- f) The minimum delivery time for the parts requested is 3 days from the date of receiving the order.

If parts of this manual are not sufficiently clear please contact the authorised dealer in your area or directly contact our technical and sales office.

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Falc reserves the right to carry out any modifications on the machine deemed to be necessary at any time without each time updating this publication.