

**NOBILI** COSTRUZIONI  
MECCANICHE  
PER VIGRICOLTURA

Trince Broyeur  
Shredder Mulchgerat

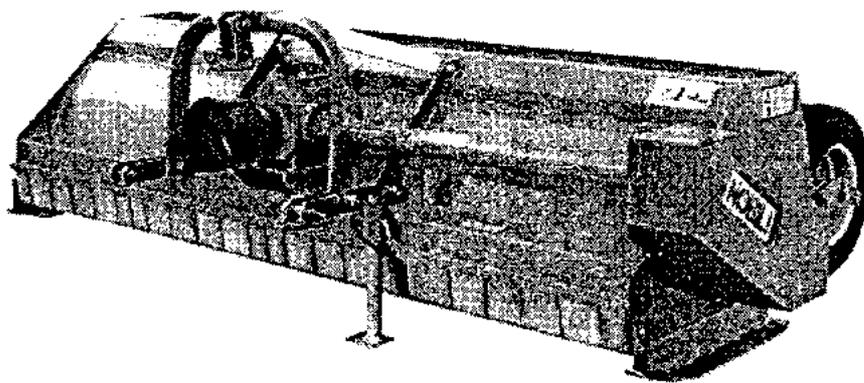
**BNG 230**



**BNG 270**



**BNG 310**



**Instructions  
for use and  
maintenance**



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## INTENDED USE

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**NOBILI S.p.A. - Agricultural Machinery Manufacturers -**  
**wishes first of all to thank you for the wise choice you have made in purchasing one of its machines, whilst assuring you that the maximum efforts have been put into making the machine as advanced and practical as possible.**

In order to get the best use out of the machine and prolong its working life, NOBILI S.p.A. has decided to give a few practical hints to help you use it to its full potential and to help you avoid those problems that are due, in the majority of cases, not to manufacturing defects, but mainly to negligence and carelessness.

**NOBILI BNG** multivalent shredders have been designed for treating:  
beet leaves, potato leaves, maize stalks, grass, etc.

Machine tools - blades or rams - must NEVER touch the ground.

The correct use of the machine includes:

- following carefully manufacturer's instructions regarding use, maintenance and care of your machine.

- using original spare parts only, as well as original or approved units and accessories.

The use of the machine, its maintenance and repairs are reserved to specialized people, who are familiar with the technical data and features of these machines.

### **CORRECT USE OF THE MACHINE**

**WARNING:** Before using the machine it is necessary to check the following points:

- 1°) The machine should be included in the weight and overall dimension limits mentioned in the tractor use manual, regarding the equipped tools
- 2°) In case of rear coupling, with the machine raised from the ground, check that on the tractor front axle (steering) there is a residual weight not lower than 20% of total weight.

#### **EXAMPLE**

Total weight = Tractor weight + Machine weight = 2500 Kg + 800 Kg = 3300 Kg  
Residual weight on the steering axle = 20% di 3300 Kg = 660 Kg

#### **IT IS NOT ALLOWED:**

- Working on stony or uneven grounds.
- Transporting persons, animals, or things.
- Towing cars or equipment.
- Working near houses or roads.
- Fitting other equipment which may change the machine's characteristics.
- Machine tools must NEVER touch the ground.



**WARNING! THIS SYMBOL, USED THROUGHOUT THIS MANUAL, MARKS INSTRUCTIONS THAT MAY AFFECT YOUR SAFETY. OTHER PEOPLE'S SAFETY, AND THE EFFICIENT WORKING OF THE MACHINE. ALWAYS FOLLOW THE SAFETY INSTRUCTIONS SCRUPULOUSLY.**

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## **USER'S MANUAL No. A 0 932**

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### **SHREDDERS: BNG 230 - 270 - 310**

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DECLARATION OF CONFORMITY



Dichiarazione di Conformita ai sensi della direttiva CEE 89/392 e successive modificazioni.  
Il costruttore:

Declaration de conformite a la directive "machines" (Directive 89/392/CEE modifiee)  
et aux reglementations prises pour sa transpositio!  
Le fabricant.

EC declaration of conformity (conforming to directive 89/392/EEC amended)  
The manufacturer:

EG-Konformitätserklärung (entsprechend der EG-Richtlinie 89/392/EWG und deren Änderungen).  
Der Hersteller:

**NOBILI S.p.A.**

Via Circonvallazione Sud, 46 40062 MOLINELLA (BO)

dichiara che la macchina sottodescritta:

declare que la machine designee ci-dessous:

declares that the prod described hereafter:

erklärt in alleiniger Verantwortung, daß das Produkt:

Tip0 - Type

Type - Typ : . . . . .

N° - N°

No - Nr. : . . . . .

**TRINCIA  
BROYEUR  
SHREDDER  
MULCHGERAT**

e conforme ai Requisiti essenziali di Sicurezza e di Tutela della Salute di cui alla Direttiva CEE /89/392e sue successive modificazioni. nonche ai Requisiti di cui alle seguenti Direttive CEE : 86/188/CEE  
Per la verifica della Conformita di cui alle Direttive sopra menzionate, sono state consultate le seguenti:  
Norme Armonizzate: EN 294 EN 349  
Norme e specifiche Tecniche U.V.V.3.1-U.V.V.3.3-U.V.V.3.4-ZH 1/74

est conforme aux dispositions de la directive europeenne 89/392/CEE modifiee ainsi qu'a celles de la directive : 86/188/CEE.

est conforme aux dispositions des normes europeennes harmonisees suivantes: EN294 EN349

est egalment conforme aux normes nationales et aux dispositions techniques suivantes : U.V.V.3.1-U.V.V.3.3-U.V.V.3.4-ZH 1/74

to which this declaration applies, conforms to the essential health and safety requirements of European Council Directive 89/392 CEE amended and conforms also to the requirements of Directive 86/188/EEC. To conform to these essential health and safety requirements, the provisions of following harmonized standards were particularly considered: EN 294 EN 349 the provision of following national standards and specifications were also considered: U.V.V.3.1.-U.V.V.3.3.-U.V.V.3.4.-ZH 1 / 74

auf das sich diese Erklärung bezieht, den einschlagigen grundlegenden Sicherheits- und Gsundheitsanforderungen der EG-Richtlinie 89/392/EWG und deren Änderungen, sowie den Anforderungen der einschlagigen EG-Richtlinie 86/188/EWG entspricht.  
Zur sachgerechten Umsetzung der in den EG-Richtlinien genannten Sicherheits- und Gesundheitsanforderungen wurden die harmonisierten Normen: EN 294 EN 349 sowie die nationalen Normen und lechischen Spezifikationen: U.V.V.3.1-U.V.V.3.3-U.V.V.3.4-ZH 1/74 herangezogen.

Aesponsabile della Sicurezza -- Responsable Securite et Homologations -- Safety Officer--Beauftragter fur Geratesicherheit

Piccoli Ing Gastone

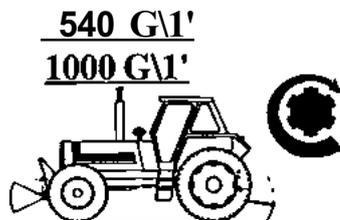
Molinella ( BO ) Li-Le-Date-Den: . . . . .

In caso di vendita della macchina, la presente dichiarazione deve essere consegnata all'acquirente.  
En cas de revente de la machine, la presente declaration de conformite est a remettre a l'acheteur.  
In the case of resale of the machine, this declaration of conformity is to be passed on to the buyer.  
Bei Weiterverkauf dieser Maschine ist diese Konformitätserklärung dem Käufer zu iibergeben.

DIRETTIVA 89/392/CEE

# TECHNICAL CHARACTERISTICS

TECNICAL CHARACTERISTIC		BNG230	BNG270	BNG 270/B	BNG 270/F Front	BNG 310
Tractor coupling	Range	2"	2"	2°	2°	2°
P.T.O. speed	r\l'	540	540	540 \ 1000	1000 DX SX	540 \ 1000
Power required	Kw	37	44	42 / 44	38 / 42	52
Trasport position		Trasversal				
Max trasport width	mm	2540	2920	2920	2960	3330
Weight of standard version	Kg	695	910	920	1010 *	1150
Working position		Central Offset 400	Central			
	Rams N°	24	28	28	28	32
	Blades N°	48	56	56	56	64
Working width	mm	2174	2530	2530	2530	2890
Knifetip speed	m\sec	63	68	62 \ 68	44 \ 60	59 \ 56
Rotor speed	r\l'	1974	2016	1833 \ 1960	1272 \ 1768	1738 \ 1642
		Yes	Yes	Free wheel	Double Free wheel	Yes
Belts secondary drive		Type: SPBX N°4	Type: SPBX N°4	Type: SPBX N°4	Type: SPBX N°4	Type: C 68 N°5
Cutting height		40 / 85 / 135			40 / 80 / 120	40 / 85 / 135
Rear bonnet opening		Yes	Yes	Yes	No	SI
Rear wheels		2	2	2	No	2
Rear roller		Yes	Yes	Yes	Yes	No
Open machine guards		Yes	Yes	Yes	No	Yes
Product spraeader flaps	N"	6	8	8	No	8
Restings skids		Yes	No	No	Yes	No



MACHINE POWER INPUT:  
 BNG 230      37 Kw      50 CV  
 BNG 270      44 Kw      60 CV

BNG 270 B    43-44KW    58-60CV  
 BNG 270 F    38-42KW    51-57CV  
 BNG 310      51-52 KW    66-70CV

MODEL AND  
TYPE

SERIAL  
NUMBER

YEAR OF  
MANUFACTURE

MANUFACTURER'S NAME AND ADDRESS

		<b>NOBILI</b> <small>CONFEZIONI MECCANICHE PER L'AGRICOLTURA</small>		
SPA Via Circosvalazione Sud 14 40062 AMMINI (LA) (BO)				
<b>TRINCIA BROYEUR SHREDDER MULCHGERÄT</b>		BLASIA 220 (150-220)	SUPERTRACTOR UNIVERSAL	MEL'EP2
Tipo : <input type="text"/> N° : <input type="text"/> Anno : <input type="text"/>				
<b>LUBRIFICANTI CONSIGLIATI</b> LUBRIC. ACONSEJADOS - RECOMMENDED LUBRICANTS EMPFOHLENE OEL/FETTE - LUBRIFIANTS CONSEILLES				

MACHINE IDENTIFICATION PLATE ATTACHED TO THE  
FRAME See also pag. 6

## ADHESIVE LABELS REGARDING SAFETY AND PROPER OPERATION

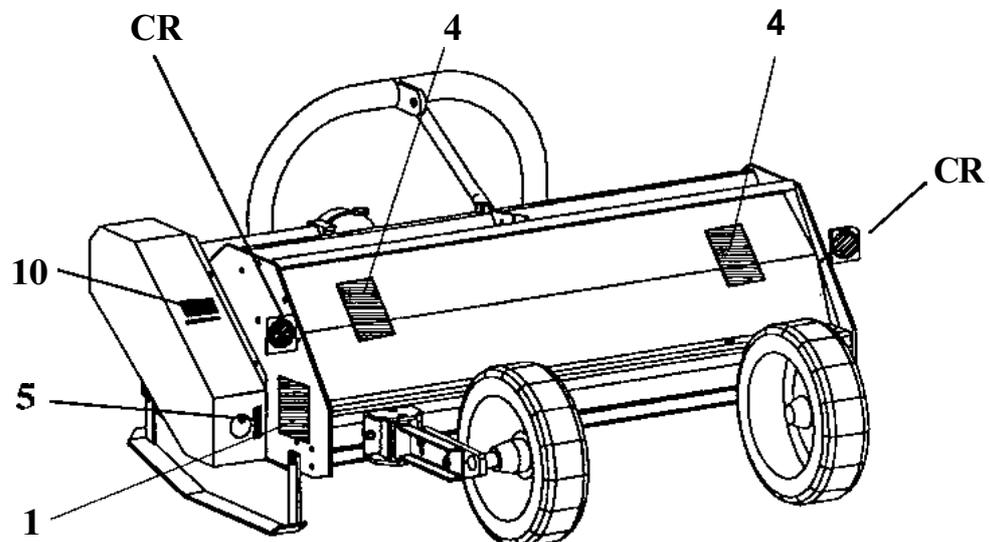
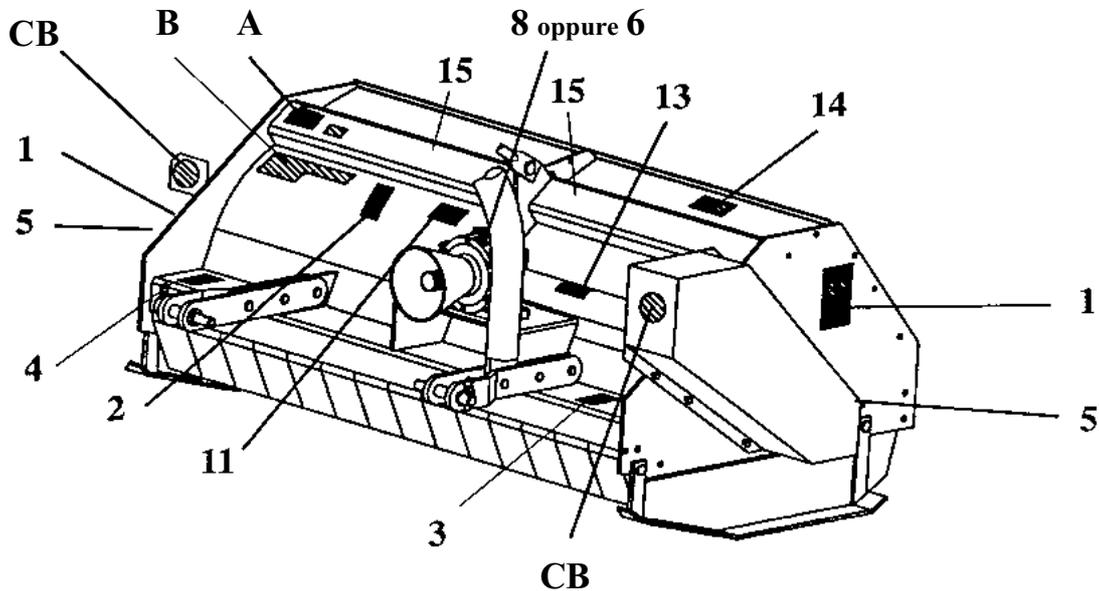
### A) Machine identification metal plate



- B) Type and model of the machine
- CB) White reflectors
- CR) Red reflectors

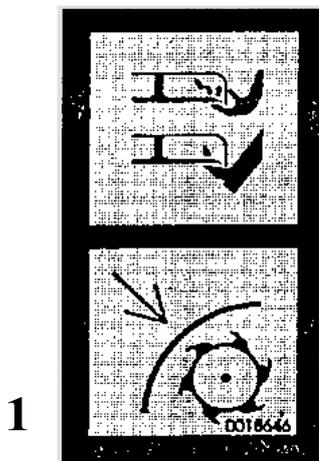
Safety labels are located on the machine according to the pictures below. Decals have been designed for your safety and for other people's safety. The machine's owner or the person in charge must be sure the operator has read the Instruction Manual carefully.

**Keep decals in good conditions and replace the damaged ones.**

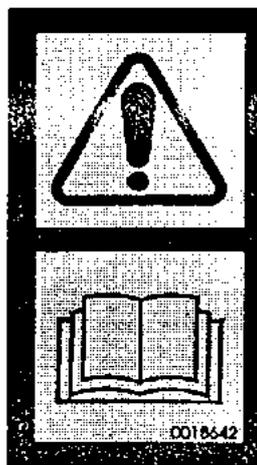


The adhesive labels N° 7 - 12  
are not applied on the BNG 230-270-310 series machine

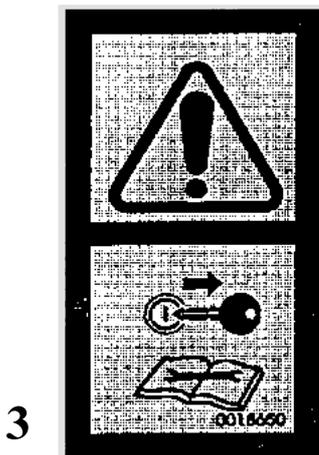
## ADHESIVE LABELS



DO NOT REMOVE  
GUARDS UNTIL  
ALL ROTATING PARTS  
ARE IDLE



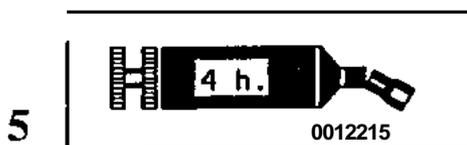
READ THE  
INSTRUCTION  
MANUAL BEFORE  
STARTING THE  
MACHINE



TURN OFF THE  
TRACTOR ENGINE AND  
TAKE THE KEY OFF  
BEFORE SERVICING OR  
ADJUSTING THE  
MACHINE



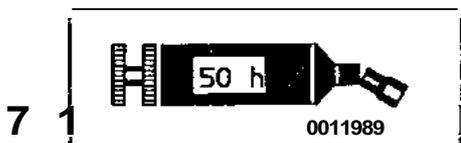
DANGER!  
THROWN OBJECTS.  
STAND OFF.  
DO NOT WORK NEAR  
BUILDINGS OR ROADS



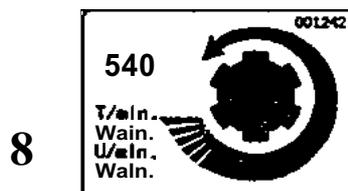
GREASE EVERY 4 WORKING HOURS



MACHINE SET FOR  
POWER INPUT AT 1000 r.p.m



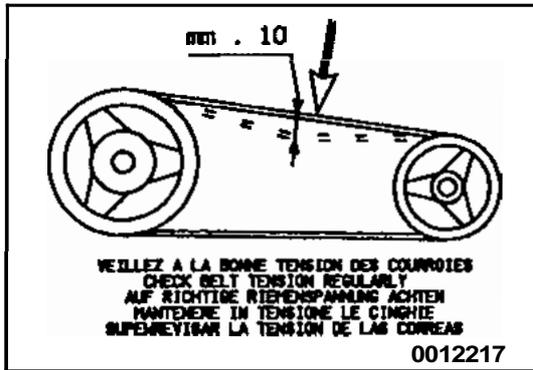
GREASE EVERY 50 WORKING HOURS



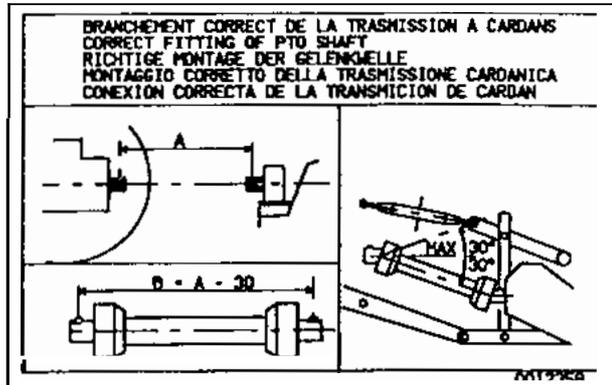
MACHINE SET FOR  
POWER INPUT AT 540 r.p.m.

# DECALS

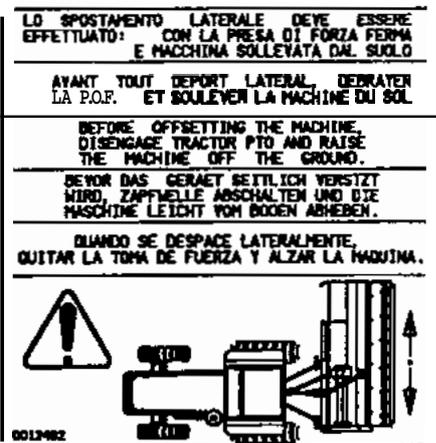
10



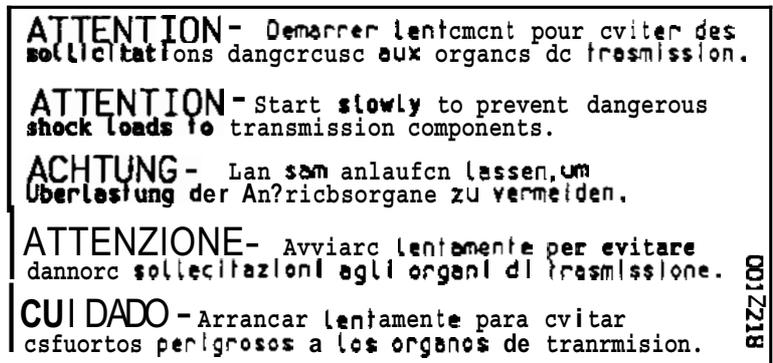
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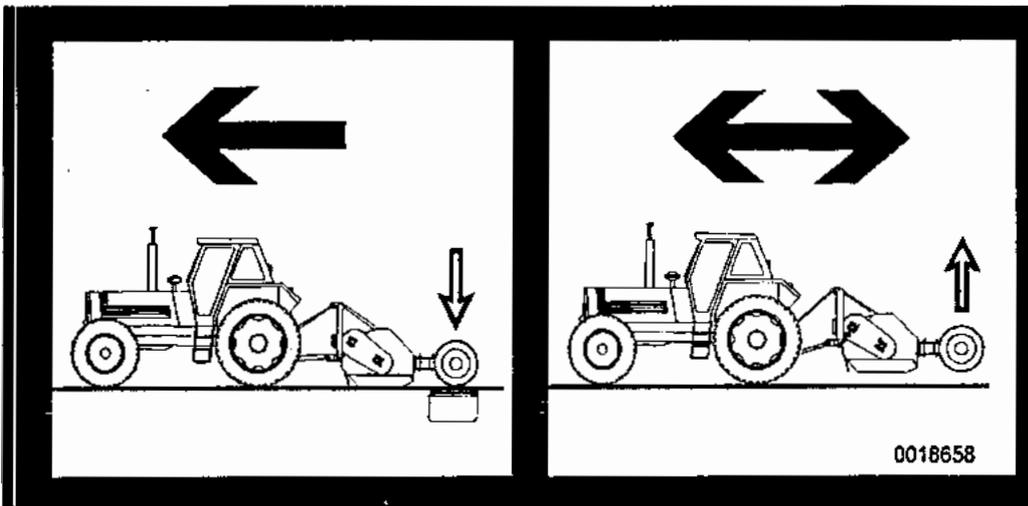
12



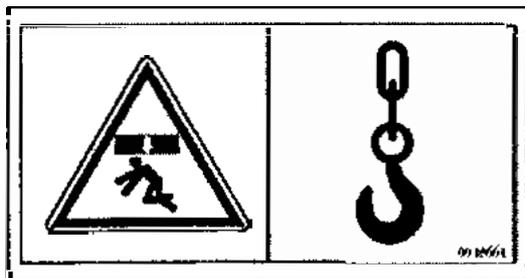
13



14



15



INDICATION OF THE HITCHING POINTS FOR MACHINE HOISTING

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# SAFETY PRECAUTIONS

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**THE MAJORITY OF WORK ACCIDENTS ARE DUE TO A LACK OF RESPECT FOR THE MOST BASIC SAFETY RULES.**



THEREFORE, IT IS NECESSARY THAT ANYONE WHO CARRIES OUT OPERATIONS ON THE MACHINE, EITHER FOR WORK OR MAINTENANCE PURPOSES, IS FAMILIAR WITH THE INSTRUCTIONS AND WARNINGS GIVEN IN THE MANUAL OR ON THE DECALS AFFIXED ON THE MACHINE.

BEFORE PERFORMING ANY OPERATION OF CLEANING OR SERVICE, REST THE MACHINE ON A FLAT SURFACE \* ON THE GROUND OR ON SOLID SUPPORTS -, TURN OFF THE TRACTOR ENGINE AND DISCONNECT THE PROPELLER SHAFT.

BEFORE STARTING WORK, CHECK BOLTS TIGHTNESS AND THE CONDITION OF GUARDS AND SAFETY DEVICES; MOREOVER, MAKE SURE ALL SAFETY PINS ARE FITTED CORRECTLY.

ENSURE THAT TRACTOR POWER IS SUITABLE FOR THE MACHINE.

CLEAR AWAY ALL PERSONS AND ANIMALS IN THE VICINITY OF THE MACHINE BEFORE STARTING.

DO NOT LEAVE THE MACHINE RUNNING UNSUPERVISED.

DO NOT WEAR CLOTHING THAT MAY CATCH UP IN THE MOVING PARTS.

DO NOT TRANSPORT PERSONS AND ANIMALS ON THE MACHINE.

MAKE SURE THE TRANSMISSION SHAFT IS MARKED **EC**.  
BEFORE ASSEMBLING THE SHAFT, CHECK THAT GUARDS ARE LOCKED WITH THE SUITABLE ANTI-ROTATION CHAINS.

MAKE SURE THE MACHINE CAN NOT BE STARTED ACCIDENTALLY WHEN PARKED OR STOPPED.

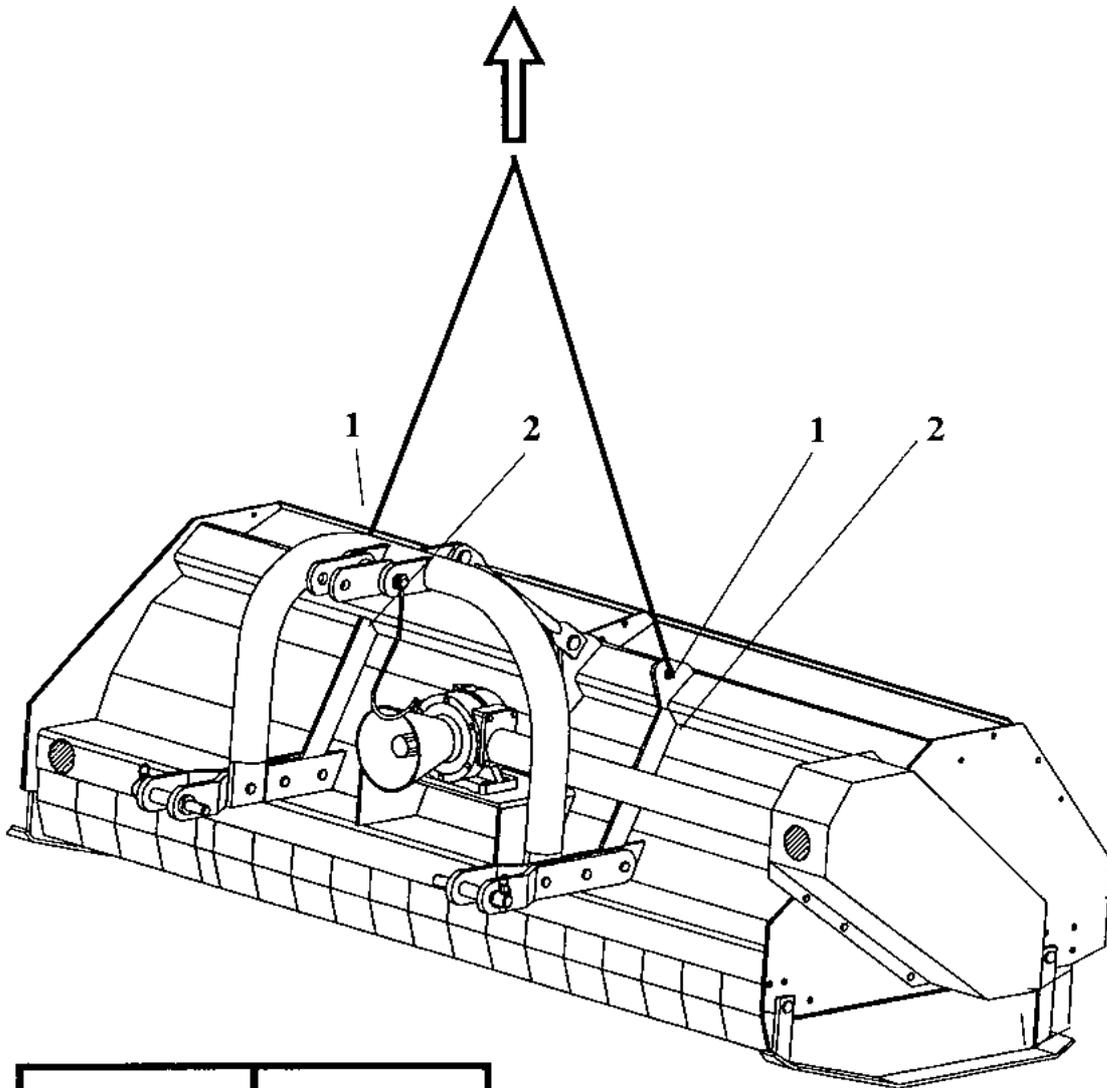
PAY SPECIAL ATTENTION WHEN CROSSING RISES OR DITCHES;  
THE HARSHNESS OF GROUND MAY AFFECT TEMPORARY GUARDS AND ALLOW STONES AND FRAGMENTS TO BE LAUNCHED ALL AROUND ( SEE PAGE 10).

PAY SPECIAL ATTENTION WHEN TRANSPORTING THE MACHINE ON THE ROAD.  
IN SUCH CASE THE USER IS RESPONSIBLE FOR A CORRECT ROAD HAULAGE OF THE MACHINE, ACCORDING TO THE RULES OF THE HIGHWAY CODE OF THE COUNTRY IN WHICH THE TRANSPORT IS CARRIED OUT.

**WARNING: THIS SYMBOL, USED THROUGHOUT THIS MANUAL, MARKS INSTRUCTIONS THAT MAY AFFECT YOUR SAFETY, OTHER PEOPLE'S SAFETY, AND THE EFFICIENT WORKING OF THE MACHINE. ALWAYS FOLLOW THE SAFETY INSTRUCTIONS SCRUPULOUSLY.**



## HOISTING THE MACHINE



MACHINE	WEIGHT Kg
BNG 230	695
BNG 270	920
BNG 270 F	1010
BNG 310	1150

### Available hitch points:

- 1)  $\varnothing$  40 holes over the BNG 230
- 2) Hicch point for BNG 270 - 270 B - 270 F - 310

LOCK THE WHEELS. ARMS SO AS TO PREVENT THEIR ROTATION

( If mounted)

USE HOISTING ECQUIPMENT ACCORDING TO THE RULES IN FORCE AND RAIGHT FOR THE MACHINE WEIGHT.

WARNING: BE AS ACCESSOIRES AFFECT MACHINE BALANCE. NEVER LIFT UNBALANCED LOADS.



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## DANGEROUS AREAS

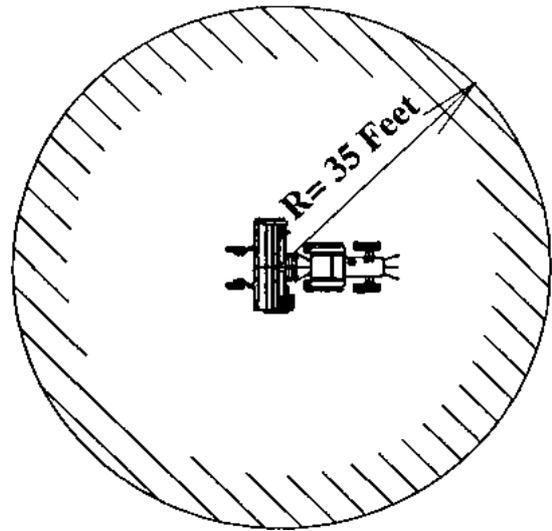
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### DANGEROUS AREAS FOR POSSIBLE THROWING OF BODIES



#### SAFETY RANGE MACHINE IN CLOSED MODEL

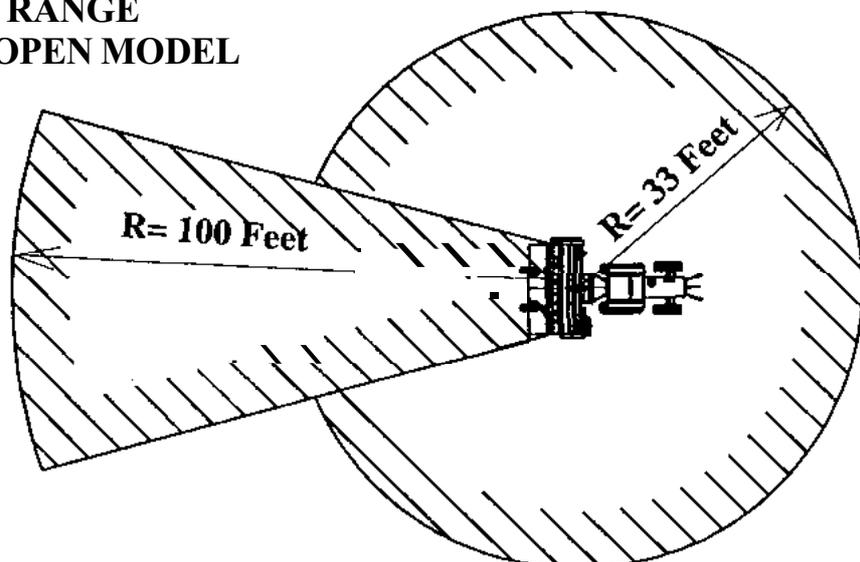


**BE PARTICULARLY CAREFUL WHEN YOU WORK ON RISES OR  
DITCHES.**

**THE UNEVEN GROUND CAN MAKE THE GUARDS TEMPORARILY  
INEFFICIENT AND ALLOW THE PROJECTION OF STONES OR  
FRAGMENTS IN A WIDE RANGE**



#### SAFETY RANGE MACHINE IN OPEN MODEL



## CHECK BLADES OR RAMS AND THEIR FASTENING ELEMENTS

**Blades or rams: to be checked always before using the machine  
: to be checked immediately after an obstacle**



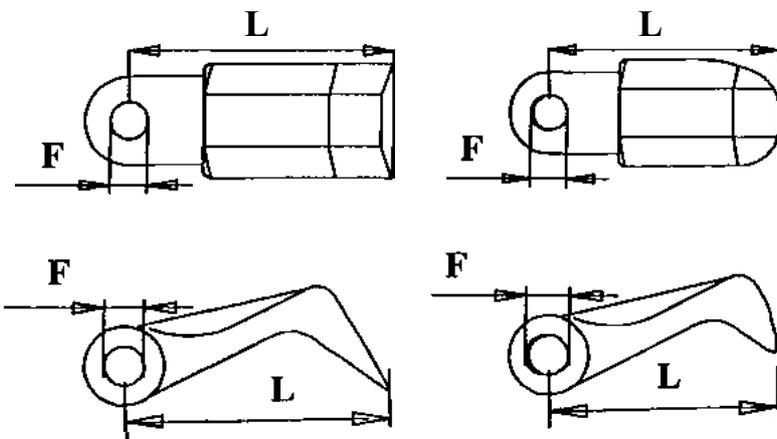
Shredding quality, machine integrity **and safety** depend on the care which will be devoted to these elements. They must be replaced immediately if damaged.

Normal wear (speciall y rapid on sandy grounds or working with the machine too low) and bumps against obstacles can cause distortions or cracks in the blades or rams, which can lead to:

Worsening in the work quality

Increase in vibrations and consequent mechanical damages in the machine

Total or partial break of the blades and rams with consequent **projection of fragments at high speed.**



MACHINE	BNE VK VKD VKE WMU VKR	BNU BNG NK
INITIAL DIAMETER OF THE HOLE	0.63"	1"
MAXIMUM DIAMETER ADMITTED	0.71"	1.07"
INITIAL LENGTH OF BLADE OR HAMMER	4.33"	7.09"
MINIMUM LENGTH ACCEPTABLE	3.54"	5.92"

### Worn blades or rams:

from the original diameter.

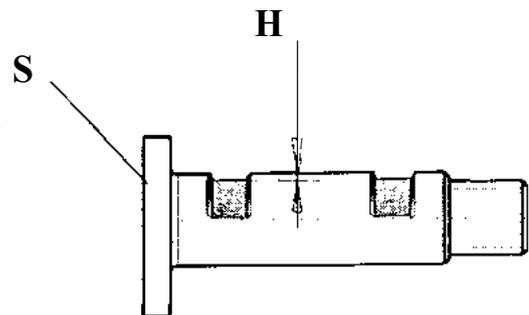
The length (L) of the blade or ram should not be reduced over 0.8".

**The pin fixing can be carried out with split pins or nuts, according to the model of the machine.**

### Pins should be replaced if:

They are clearly bent or damaged in the thread; in particular check (if welded) the welding integrity of the plate (S).

The tracking made by the wear of the blade or ram (H) is greater of 0.08 ...



### During assembly:

The selflocking split pins or nuts **should be changed every time.**

Torque wrench setting for MI 6 nut: 75 lb-ft

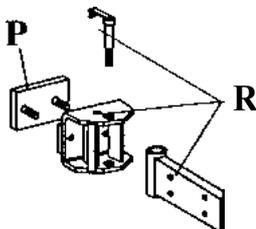
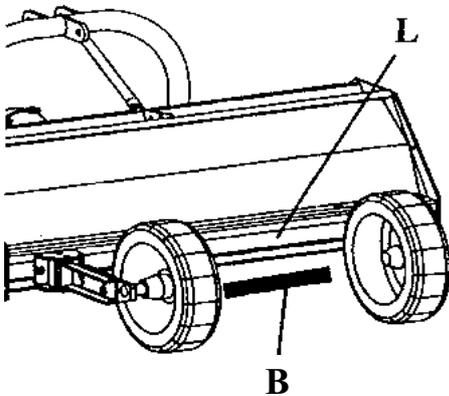
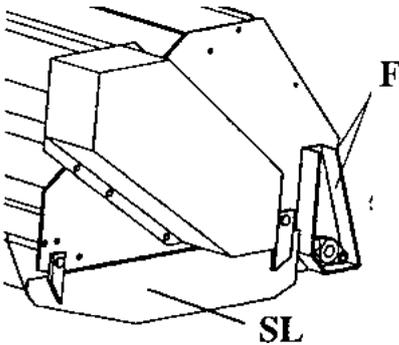
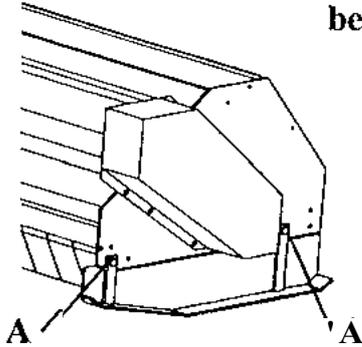
Torque wrench setting for M20 nut: **180** lb-ft

Check that the pin with tooth or the pin with hexagonal head, **CANNOT** rotate in their seat on the support, because this could cause an **abnormal** consumption.



## INSTRUCTIONS FOR SKIDS, ROLLER, WHEELS ASSEMBLY

Whenever the machine is delivered with skids, roller and wheels not mounted because of shipping requirements.



In order to use the machine with roller or wheels, mount side guards (SL), according to CE rules.

### Skids assembly:

Make use of the holes (A) on the side. On the roller support, select the proper holes so as to get up the machine from the ground, at the height required. See page 17. Mount the safety bar (B) on the rear side.

### Roller assembly:

Make use of the pair of holes (F) on the lateral sides. On the roller support, select the proper holes so as to get up the machine from the ground, at the height required. See page 17.

Mount guards (SL) on the lateral sides.

### Wheel unit assembly:

Position, inside the rear beam (L), the plate (P). Position wheel unit (R) against beam (L) so as to get the track desired. Tighten fastening nuts. For any height adjustment, see page 17. Mount guards (SL) on the lateral sides. Mount the safety bar (B) on the rear side.



In order to use the machine with skids or wheels, mount the bar (B) which determines the rear safety distance required by CE rules.

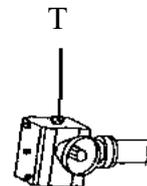
TYRE FEATURES

Machine	TYPE OF TYRES	DIAMETER	WIDTH	INFLATION PRESSURE bars
BNG 125-100-195	145-10 4Pr	510	137	3.0
BNG 230	145-10 4Pr	510	137	3.0
BNG 270	185/70-13	590	184	3.5
BNG 310	205/70-14	652	206	3.5

### WARNING:

Before connecting the machine to the tractor, make sure the transmission unit is equipped with oil drain plug (T).

For shipping requirements the machine may be shipped in vertical position; in such a case, a blind plug is fitted on the transmission unit so as to avoid oil overflow. Therefore, replace the fitted plug with the drain plug contained in the proper packing joined to the tie rod, 3rd point.



## COUPLING TO THE TRACTOR



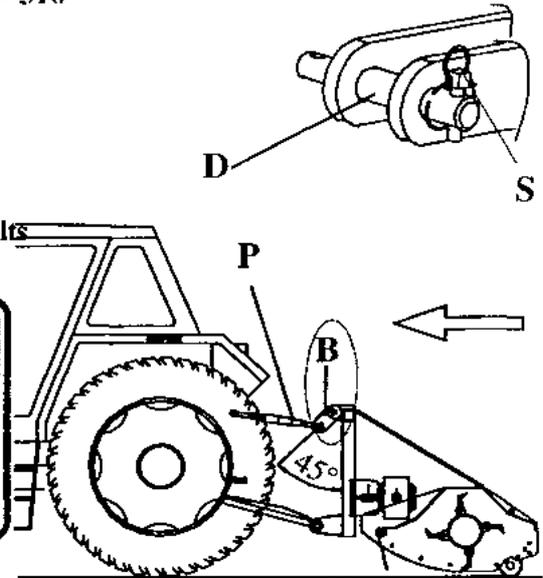
### REAR APPLICATION BNG : 230 - 270 - 270 B - 310

Introduce the lift joints, checking that they are at the same height in the lower hitches.

by the proper pin; make sure the connecting rod ( B ) tilts up to 45°, when the machine is in the working position.



**If you run the machine without connecting rod, or with connecting rod blocked, the warranty will be voided, as the roller or wheel supports could have been damaged irreparably by such operations.**



### FRONT APPLICATION : BNG 270 F

Introduce the lift joints, checking that they are at the same height in the lower hitches.

Introduce the pins ( D ) and the safety pins.

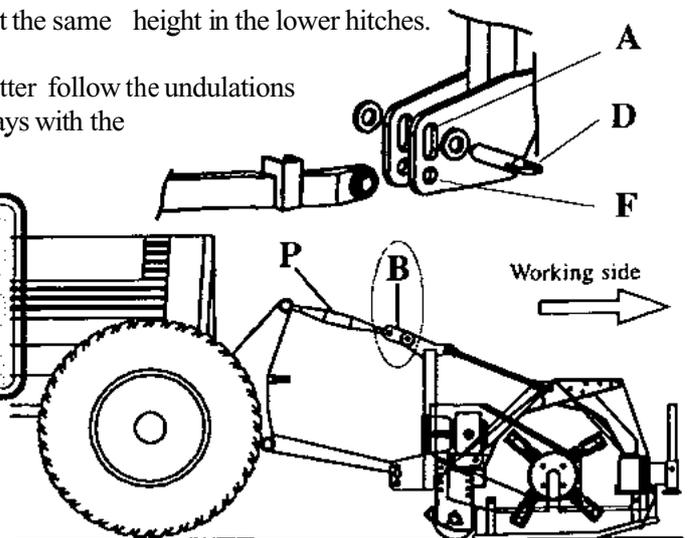
Use the slots ( A ) for allowing the machine to better follow the undulations of the land. Use the holes ( F ) in case of long ways with the machine raised from the ground.



**If you run the machine without connecting rod, or with connecting rod blocked, the warranty will be voided, as the roller or wheel supports could have been damaged irreparably by such operations.**

**WARNING:** the BNG 270 F machine use the double freewheel gearbox unit.

The rotation way of machine is right, any is the PTO rotation direction. ( 1000 rpm )



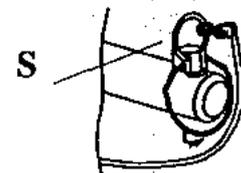
Get up the machine from the ground and adjust cutting height ( working height adjustment : page I7 ).  
Raise foot and secure it.

**Adjust** machine and elevator attitude by placing the machine horizontally or slightly higher on the rear side so as to make material infeed easier.



**SECURE ALL PINS  
WITH SAFETY PINS**

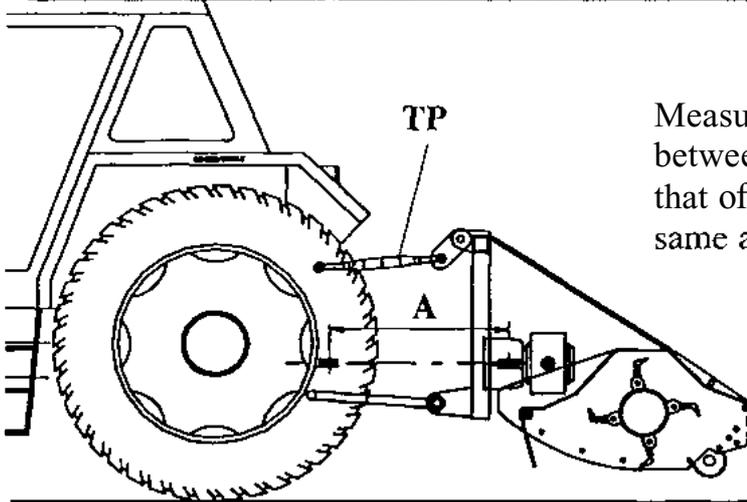
**REPLACE LOCKS IF DAMAGED**



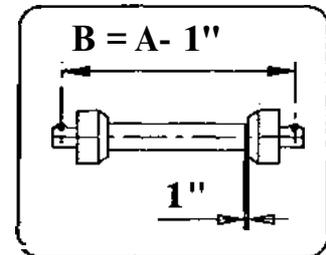
## CONNECTING THE PROPELLER SHAFT



THE TRACTOR ENGINE SHOULD NOT RUN, THE MACHINE SHOULD BE CORRECTLY CONNECTED TO THE TRACTOR  
IT IS FUNDAMENTAL TO HAVE A PROPELLER SHAFT OF APPROPRIATE LENGTH.



Measure the minimum distance (A) between the notch of the tractor PTO and that of the shredder, when they are on the same axis.



Measure the distance of the propeller shaft, in the position of minimum extension (all closed).

The measure B should be smaller than A of at least 1 inches.

During work both inside that outside plastic pipes should not bump against heads.

If the propeller shaft is too long, **before cutting** metal pipes and guards, it is necessary to check that, when it is in the maximum extension position, inside metal pipes remain overlapped at least of 1/3 of the length (L).

**If the overlapping is smaller, there is too much difference between the minimum and maximum position of the transmission.**

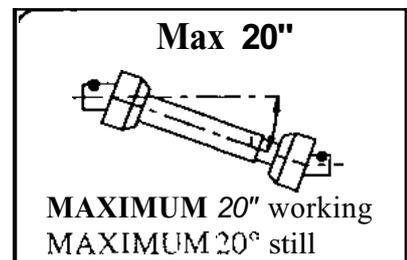
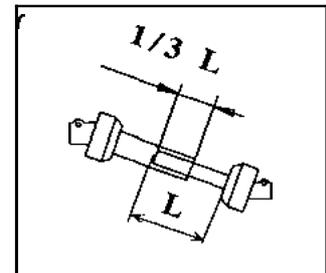
**If this occurs, it is necessary to ask for longer lower connecting arm to space more the machine from the tractor.**

Be careful to cut surface: trim the cut inside and outside, clean for eliminating chips and dirt, and grease with lithium grease.

Always check that the shaft is dimensioned according to the power of the machine declared.

Check that the propeller shaft does not take angles over the value admitted.

Check that the machine cannot be raised over the maximum dimension allowed by the shaft length: **it could come out.**



**If the machine is fitted on a caterpillar tractor or a tractor without the double clutch, it is fundamental to use a Cardan shaft with free-wheel to avoid that the inertia of the shredder rotor prevents stopping the machine-tractor unit quickly.**



**BLOCK THE ROTATION OF THE CARDAN JOINT GUARDS WITH THE APPROPRIATE CHAINS**



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## WORKING HEIGHT ADJUSTMENT

BLADES MUST NEVER TOUCH THE  
GROUND LEAVE AT LEAST 1.5"



### ROLLER VERSION:

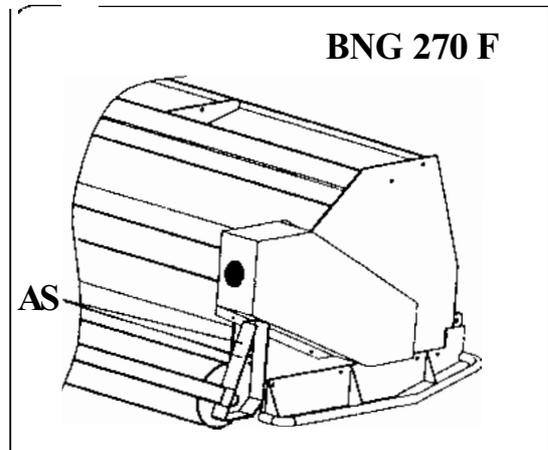
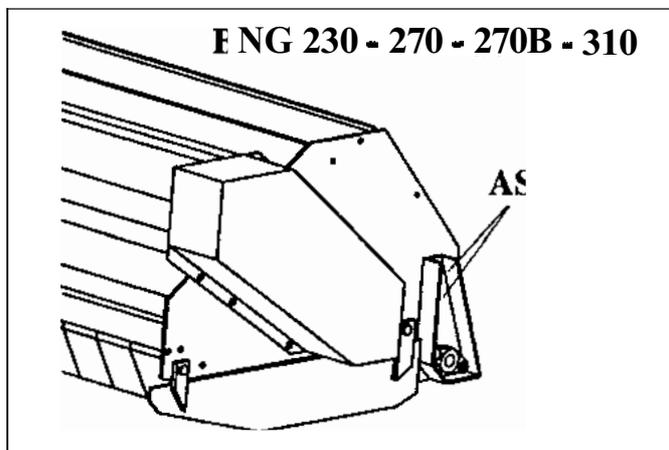
#### LIFT THE MACHINE FROM THE GROUND

Loose bolts (AS) on a side, remove bolts (AD) on the other side.

On the support select the holes right for the desired height, then fit bolts (AD) and screw nuts do not tighten them.

Remove bolts (AS), and fit them into the holes corresponding to those selected on the other side.

Screw and tighten all bolts..



### WHEELS VERSION

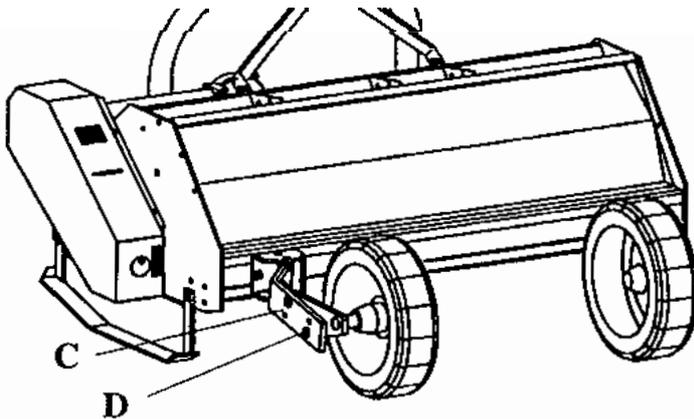
#### LIFT THE MACHINE FROM THE GROUND

Loosen bolt (C), remove bolt (D).

On the support select the holes right for the desired height, then fit bolt (D).

Tighten all nuts.

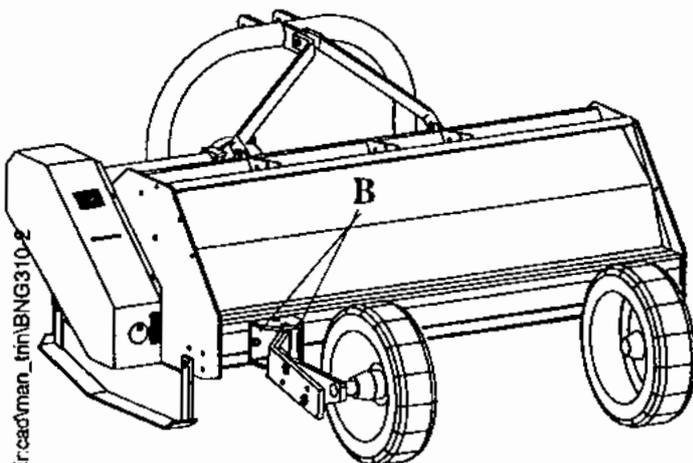
Perform the same operation on the other wheels.



#### TO ADJUST WHEEL TRACK:

#### LIFT THE MACHINE FROM THE GROUND

Loosen bolts (B), make the wheel block slide until it reaches the position required, then tighten bolts (B).



dir:cad/man\_fm\BNG310-2

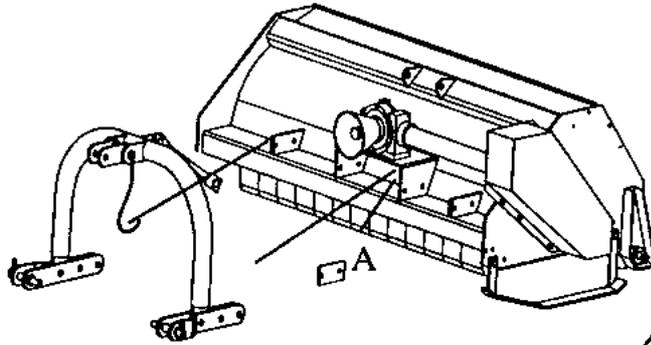
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## HOW TO DISPLACE THE DRAWBAR

---

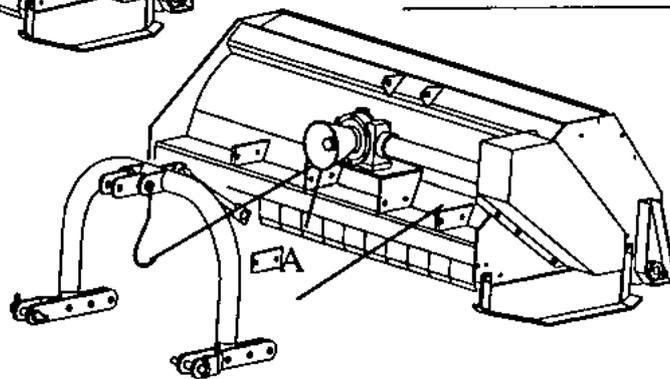
### BNG230 ONLY

Hitch points for drawbar in central position



Remove the machine from the tractor.

Hitch points for drawbar shifted



A ) Thickness plate



**STOP TRACTOR ENGINE  
DISCONNECT TRACTOR P.T.O.  
TAKE THE KEY OFF THE DASHBOARD  
MAKE SURE ALL MOVING PARTS ARE IDLE**

### **ADJUSTMENT TO PTO SPEED**

**ONLY machine: BNG 270\B e BNG 310.**

Remove the guard.

Loosen the fastening screws of the transmission (see pag.22), remove the belts.

Loosen the bolts of the connection, remove pulley.

Reassemble the pulley change their position, tightening the locking bolts of the connection

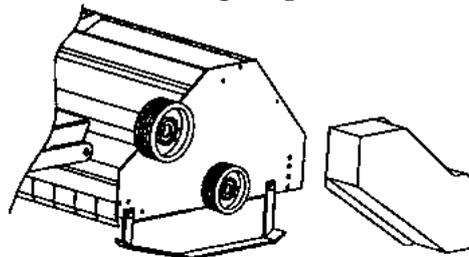
Reassemble the belts and put them in tension, checking the parallelism of the pulley.

See also pag. 22

Reassemble the guard.

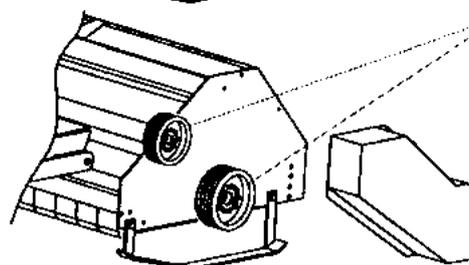
**Pulley position necessary  
if P.T.O. rotates at**

**540 rpm**



**Pulley position necessary  
if P.T.O. rotates at**

**1000 rpm**



Torque 25.5 Nm

---

## PARKING POSITION

---

**DISCONNECT TRACTOR P.T.O.  
TURN OFF TRACTOR ENGINE WHEN THE MACHINE  
IS RAISED FROM THE GROUND.  
TAKE THE KEY OFF THE DASHBOARD.  
MAKE SURE ALL MOVING PARTS ARE IDLE.**



### CHOOSE A STABLE, FLAT GROUND TO PERFORM THE FOLLOWING OPERATIONS

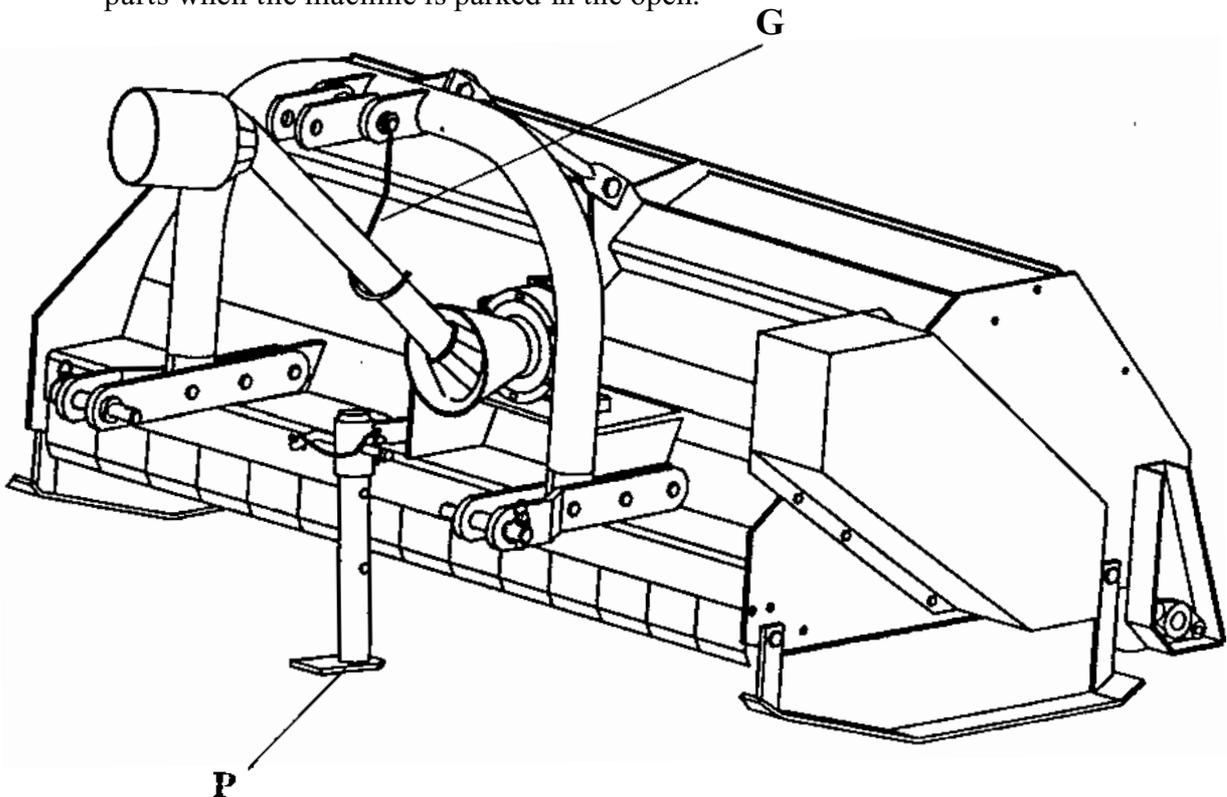
Lower foot ( P ).

Lower the elevator until the machine rests on the ground.

Disconnect propeller shaft and hitch it to the suitable hook ( G ), so as to avoid dirtying the end.

Extract pins and move away the tractor.

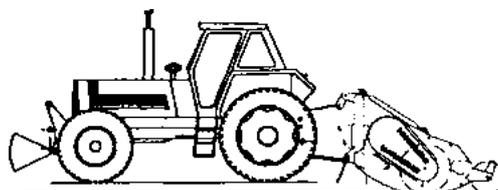
Make sure the machine is slightly tilted forward so as to prevent backwater on flat parts when the machine is parked in the open.



## AIR NOISE EMITTED

Data taken according to the following rules:

UNI 7712  
AFNOR S 3 1-069  
NF S 3 1-027



TRATTRICE  
100 CV

MACHINE : <b>BNG 230</b>				
Tractor cab	TRACTOR ONLY		TRACTOR + MACHINE	
	Open	Closed	Open	Closed
Level of acoustic pressure: operator place      dB(A)	89.0	81.2	94.7	83.6
Level of acoustic power: dB(A)	111.2		115.7	

MACHINE : <b>BNG 270</b>				
Tractor cab	TRACTOR ONLY		TRACTOR + MACHINE	
	Open	Closed	Open	Closed
Level of acoustic pressure: operator place      dB(A)	89.2	81.4	94.8	83.6 4
Level of acoustic power: dB(A)	111.0		115.2	

MACHINE: <b>BNG 310</b>				
Tractor cab	TRACTOR ONLY		TRACTOR + MACHINE	
	Open	Closed	Open	Closed
Level of acoustic pressure: operator place      dB(A)	89.4	81.6	94.8	83.7
Level of acoustic power: dB(A)	111.7		116.0	

MACHINE :				
Tractor cab	TRACTOR ONLY		TRACTOR + MACHINE	
	Open	Closed	Open	Closed
Level of acoustic pressure: operator place      dB(A)				
Level of acoustic power: dB(A)				

MACHINE :				
Tractor cab	TRACTOR ONLY		TRACTOR + MACHINE	
	Open	Closed	Open	Closed
Level of acoustic pressure: operator place      dB(A)				
Level of acoustic power: dB(A)				

When determining the noise value within the limit of 85 dB ,  
take into consideration the **acoustic pressure level**.

## MAINTENANCE AND LUBRICATION

**Hevery 8 hours** clean and grease : the cardan trasmission, crossjournls (through the suitable greasers), grooved sleeves, and guards, with lithium grease.

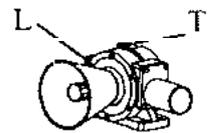
Oil	BLASIA 460 ISO 460	BNG 230	BNG 270	BNG 310
<b>Gear unit</b>	<b>Quantity Lt:</b>	2.1	2.9	3.1
			2.9	3.1

**GEAR UNIT**  
 Changr oil after **30-40 hours**.  
 Afterwards, change oil every **250 hours**.

Every day check oil level, BNG 230-270-310

Rest the machine horizontally and unscrew the main plug located on the rear side ( **L** ),oil shall touch the lower hole edge.

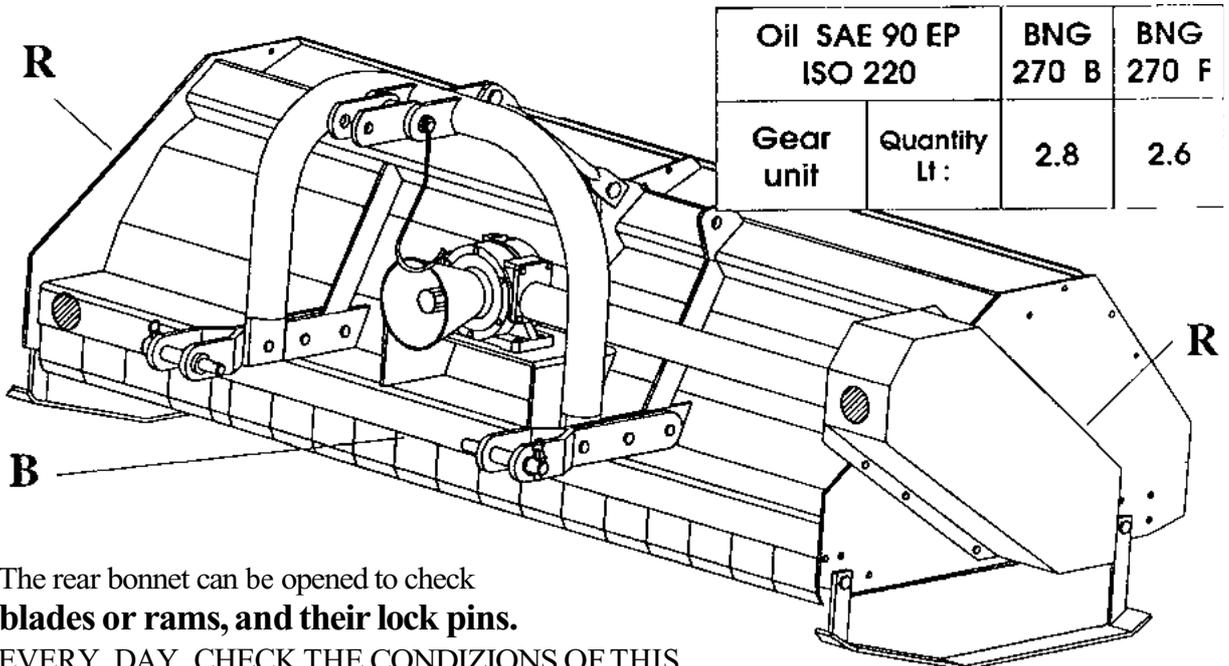
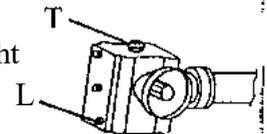
Make sure the unit is equipped with air drain plug ( **T** )



Every day check oil level. BNG 270F-270B

Rest **the** machine horizontally and unscrew the main **plug** located on the right side ( **L** ),oil shall touch the lower hole edge.

Make sure the unit is equipped with **air drain plug** ( **T** )



Oil	SAE 90 EP ISO 220	BNG 270 B	BNG 270 F
<b>Gear unit</b>	<b>Quantity Lt:</b>	2.8	2.6

The rear bonnet can be opened to check **blades or rams, and their lock pins.**

EVERY DAY CHECK THE CONDIZIONS OF THIS PARTS.

EVERY DAY CLEAN AND LIJBRICATE SAFETY VANES. ( **B** )

MAKE SURE VANES **ARE NOT WARPED** AND RUN FREELY.

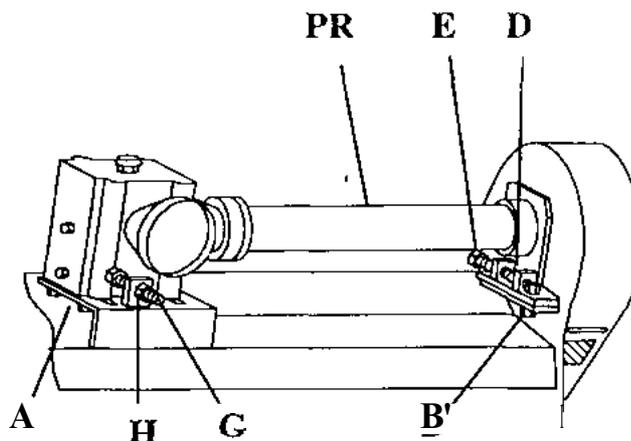


Grease bearings of rotor and roller ( **R** ) every 4 hours with lithium grease.

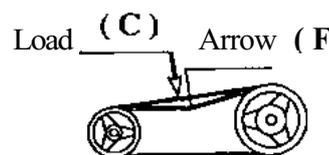
## BELT TENSION

**Every day check belt tension.**

**See the suitable slot on the guard side.**



Machine	Belts	C (N)	F (mm)
BNG 230	SPBX 1700	25	7.2
BNG 270	SPBX 1800	25	8
BNG 270 B	SPBX 1700	25	8
BNG 310	C 68	40	8.2



Loosen bolts ( A, no. 4 ) and ( B, no. 1 ) which fasten transmission to shredder frame. Loosen adjusting screw counter nuts ( H and D ).

**Turn** adjusting screw ( E ) clockwise, and turn screw ( G ), anticlockwise, up to get the tension desired ( See the table ).

That operation allows transmission axis ( PR ) to be parallel to rotor axis.

Tighten bolts ( A and B ) and counter nuts ( D and H ).

**In order to check parallelism between transmission axis and rotor axis, follow the indications listed below:**



**IF THE MACHINE IS COUPLED TO THE TRACTOR,  
REMOVE THE CARDAN TRANSMISSION**



Dismount the belt safety guard.

Put a scale on the edges of the rotor pulley and rotate it until it touches the edges of the other pulley. Both pulley edges shall touch the scale; otherwise, screw or unscrew adjusting screw ( G ) accordingly, after loosening screws ( A and B ).

Shredders model BNG are equipped with belts type SPBX : **tension of such belts must be restored within the first 3 working hours.**

Afterwards, check belt tension periodically.

If rotor rotation speed decreases and belt tension can not be restored correctly, **change belts.**

## GENERAL INSTRUCTIONS FOR BLADE OR RAM REPLACEMENT

Every day check the condition of blades or rams, and corresponding locking pins.  
In case of unusual wear or breaks, replace the parts immediately.



**USE ORIGINAL SPARE PARTS ONLY.  
BEFORE REPLACING ANY PART,  
DISCONNECT THE MACHINE FROM THE  
TRACTOR AND TILT IT FORWARD, BY RESTING  
IT ON THE COUPLING IF THE MACHINE IS NOT  
EQUIPPED WITH BONNET.**



### **Partial replacement:**

In addition to the worn-out, broken couple of blades or rams, replace the couple of blades or rams diametrically opposed, **so as** to maintain the already existing balancing.

### **Total replacement:**

Light differences in weight of the parts are acceptable.

Weigh blade or ram **units** singularly, **selecting** couples of same weight.

**Those** couples shall be mounted on rotor in diametrically **opposed** positions.

REPLACE THE SELF-LOCKING NUTS IN ANY CASE

Tighten M 16 nuts with a 100Nm torque wrench setting.

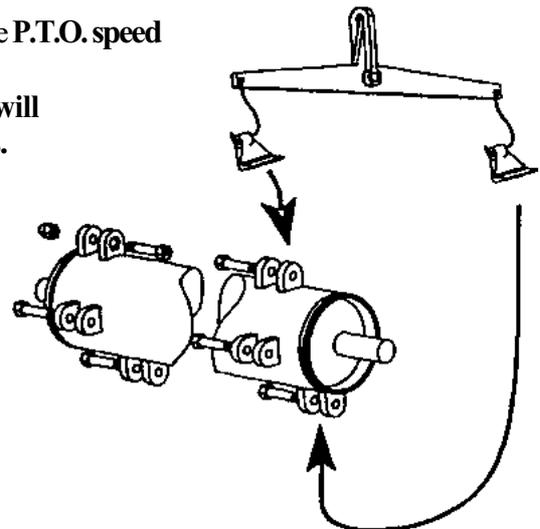
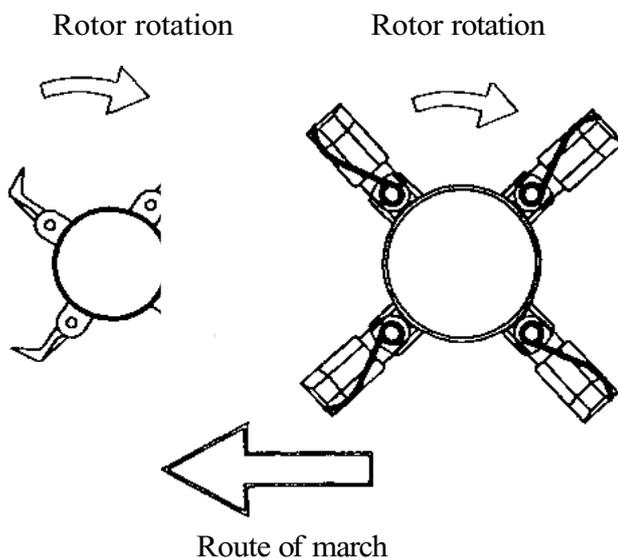
Tighten M 20 nuts with a 250 Nm torque wrench setting..

When adjustment has been **performed**, make **sure** axial clearance ( 1-2mm ) between blades or rams and supports is **still** allowed.

Thus, to **check balance**, **connect the** tractor.

By keeping the machine raised from **the ground**, increase **P.T.O. speed** slowly up to get the **rated speed**.

If **repair has been performed correctly**, the machine will run **at its rated speed without remarkable vibrations**.



If the machine is equipped with Y blades with ventilating vanes, consider vane weight too. If ventilating vanes are fitted, make sure that their assembly was performed correctly, **i.e.** correct direction.  
( See the drawing ).

---

## ACCESSORY WEARING METAL SHEET

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METAL SHEET ASSEMBLY Remove the lower counterblade.

On machine: BNG 230 e BNG 270 with internal metal sheet ONLY counterblades low profile.

Position the metal sheet **and** the specified counterblade.

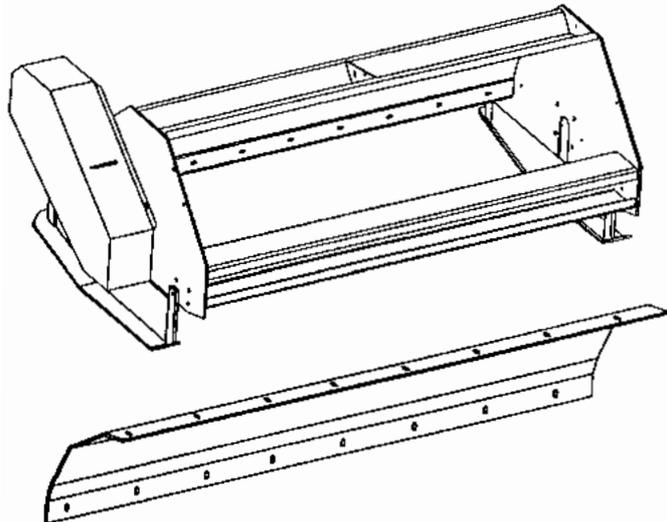
Usually nuts are fitted at the external side.

Fit the upper row of fastening bolts by drilling the sheet if necessary (holes : Ø 10mm) .



STOP TRACTOR ENGINE  
DISCONNECT TRACTOR P.T.O.  
TAKE THE KEY OFF THE DASHBOARD  
MAKE SURE ALL MOVING PARTS ARE IDLE

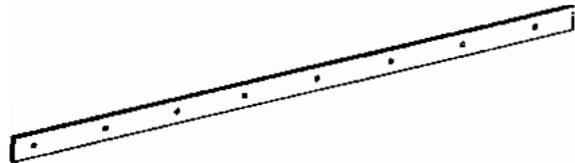
FRAME



METAL SHEET

COUNTERBLADE  
FOR METALSHEET

BNG 230 40 x 10 L= 2290 mm  
Cod: 1681128



COUNTERBLADE  
FOR METAL SHEET

BNG 270 40 x 18 L = 2635 mm  
Cod: 1421049



BNG 310 40 x 20 L= 1070 mm?40x20 L=1920  
Cod: 1681101 ,Cod: 1561103. (NO CHANGE)

BEFORE STARTING THE MACHINE MAKE SURE THAT THE METAL SHEET IS PROPERLY POSITIONED  
SO AS TO MAKE SURE THAT BLADES DO NOT TOUCH THE FRAME



## GENERAL INSTRUCTIONS FOR BLADE OR RAM REPLACEMENT

Every day check the condition of blades or rams, and corresponding locking pins.  
In case of unusual wear or breaks, replace the parts immediately.



**USE ORIGINAL SPARE PARTS ONLY.  
BEFORE REPLACING ANY PART,  
DISCONNECT THE MACHINE FROM THE  
TRACTOR AND TILT IT FORWARD, BY RESTING  
IT ON THE COUPLING IF THE MACHINE IS NOT  
EQUIPPED WITH BONNET.**



### **Partial replacement:**

In addition to the worn-out, broken couple of blades or rams, replace the couple of blades or rams **diametrically** opposed, so as to maintain the already existing balancing.

### **Total replacement:**

Light differences in weight of the parts are acceptable.

Weigh blade or ram units singularly, selecting couples of same weight.

**Those** couples shall be mounted on rotor in diametrically **opposed** positions.

### **REPLACE THE SELF-LOCKING NUTS IN ANY CASE**

Tighten M 16 nuts with a 100Nm torque wrench setting.

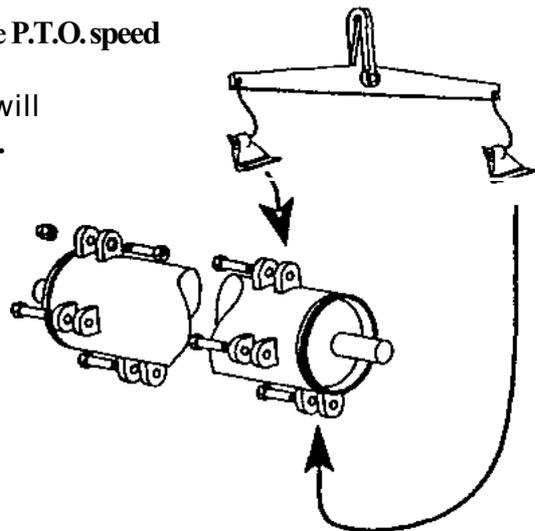
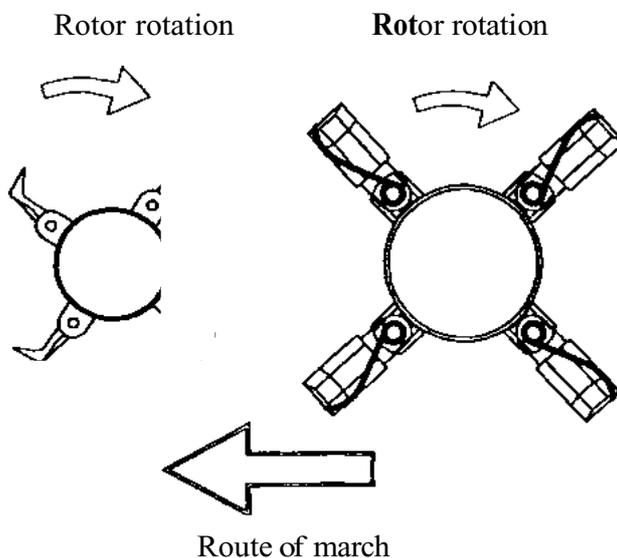
Tighten M 20 nuts with a 250 Nm to que wrench setting..

When adjustment has been performed, make sure **axial** clearance ( 1-2mm ) between blades or rams and supports is **still** allowed.

**Thus, to check balance**, connect the tractor.

**By** keeping the machine raised from **the ground**, increase **P.T.O. speed** slowly **up** to get the rated **speed**.

If **repair has been performed correctly**, the machine will run **at its rated speed without remarkable vibrations**.



If the machine is equipped with Y blades with ventilating vanes, consider vane weight too. If ventilating vanes are fitted, make sure that their assembly was performed correctly, i.e. correct direction.  
( See the drawing ).

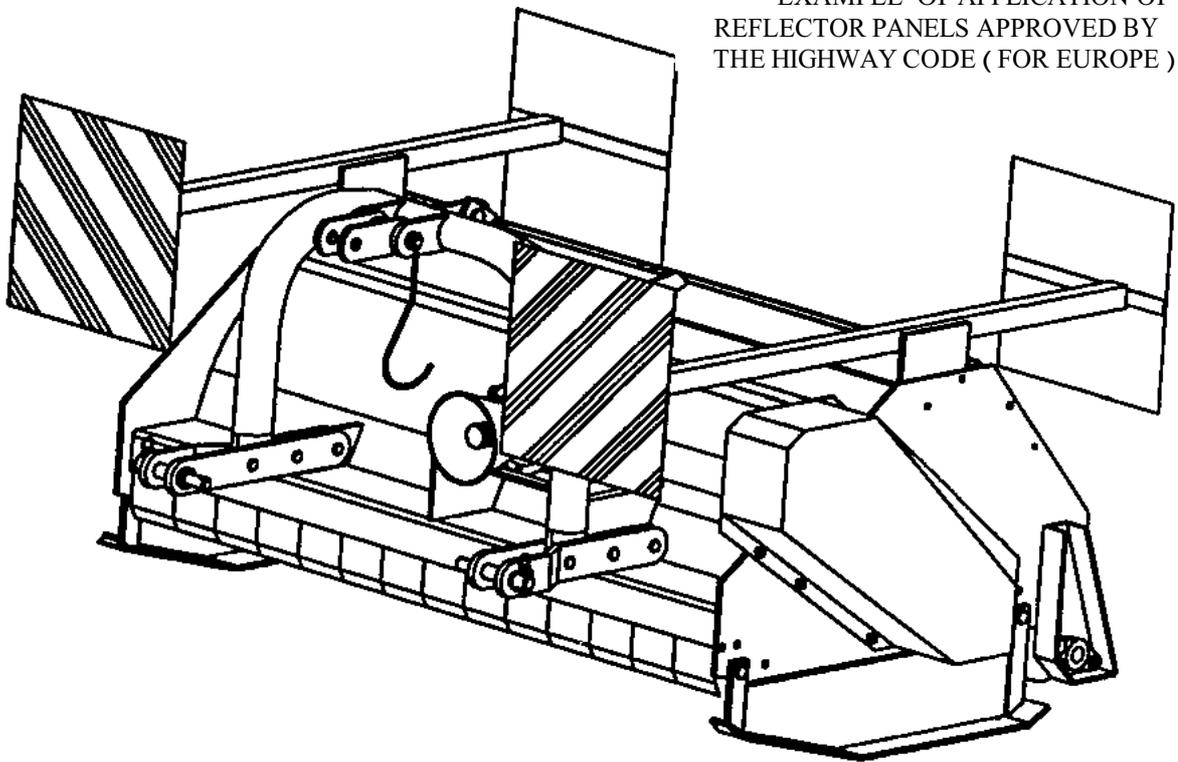
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**FITTINGS OF THE WARNING SIGNS  
FOR ROAD CIRCULATION**

---

**MACHINE BNG 230 - BNG 270 - BNG 310**

EXAMPLE OF APPLICATION OF  
REFLECTOR PANELS APPROVED BY  
THE HIGHWAY CODE ( FOR EUROPE )

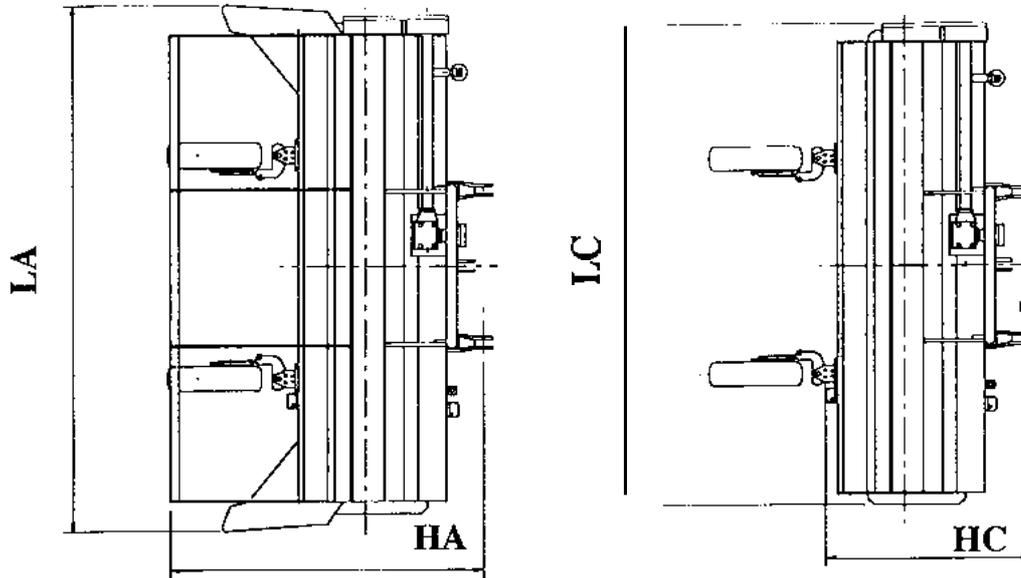


**IN CASE OF ROAD HAULAGE OF THE  
MACHINE YOU MUST  
FIT THE WARNINGS SIGNS REQUIRED AND  
APPROVATED BY THE HIGHWAY CODE OF  
YOUR COUNTRY**

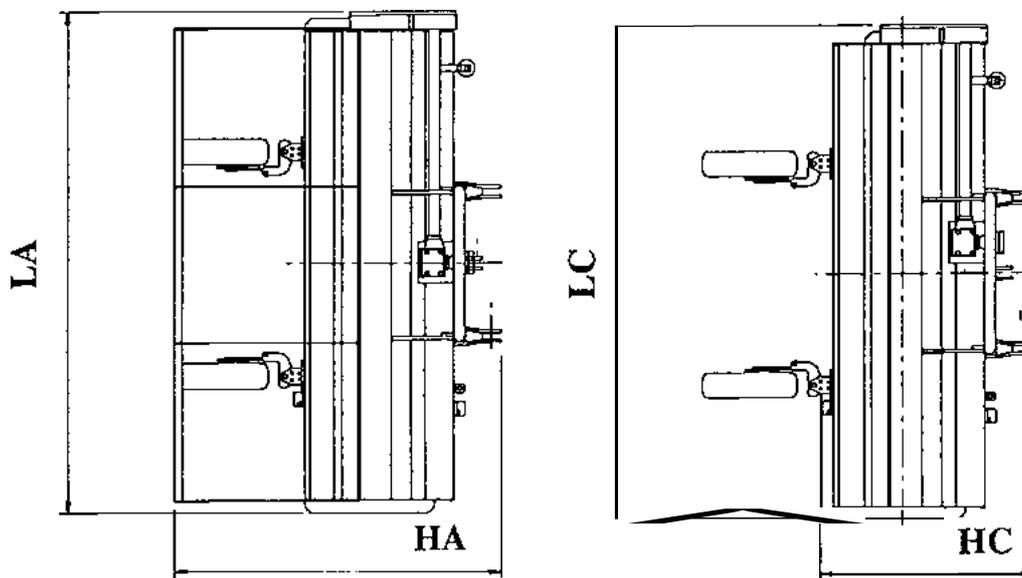


**MACHINE OVERALL DIMENSIONS,  
OPEN OR CLOSED VERSION**

**BNG 230**

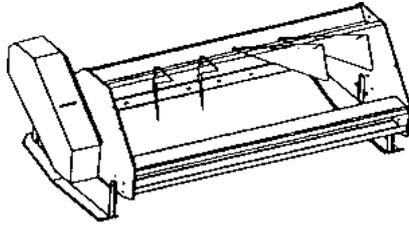


**BNG 270 BNG 310**

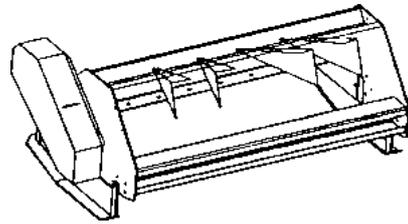


MACHINE	LA mm	HA mm	LC mm	HC mm
<b>BNG 230</b>	2780	2020	2540	1280
<b>BNG 270</b>	2920	2130	2920	1350
<b>BNG 310</b>	3330	2130	3330	1350

**ACCESSORY: PRODUCT SPRAYNG FLAPS  
GUARDS FOR OPEN MACHINE OPERATIONS**



MAX SPRAYNG  
FLAPS POSITION

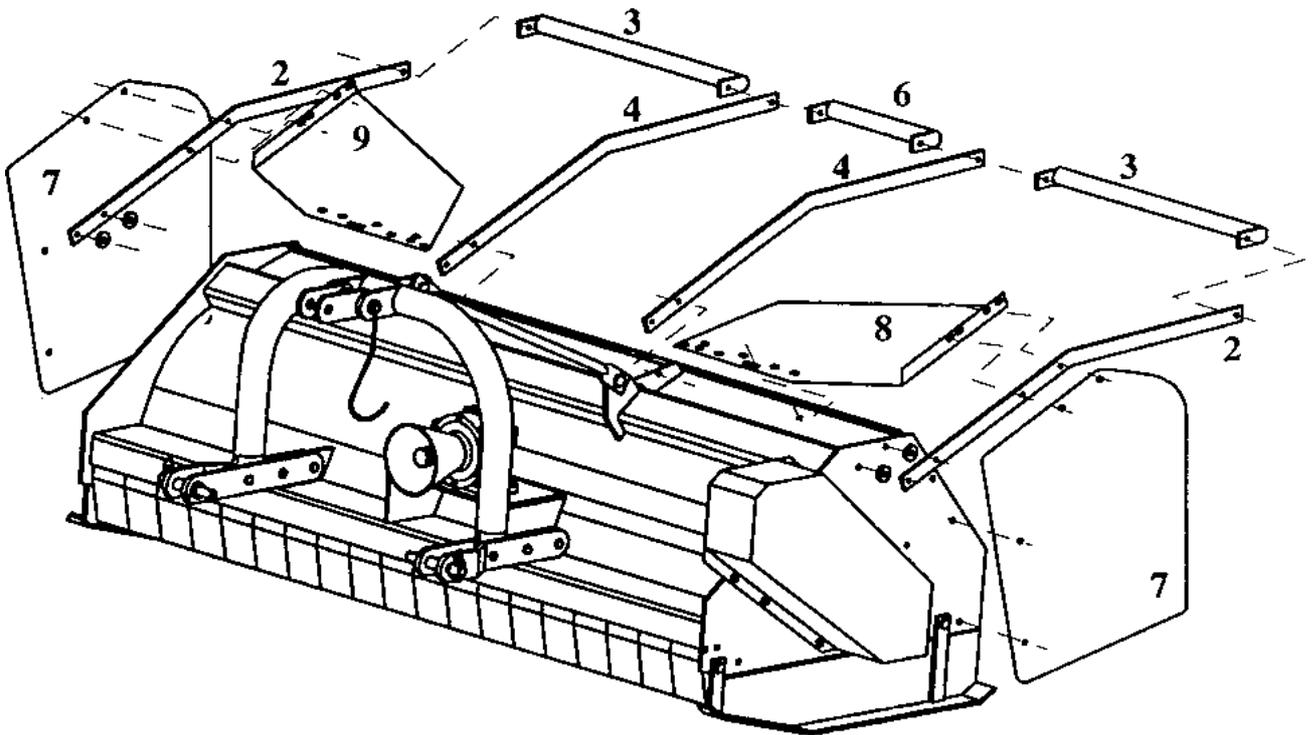


MIN SPRAYNG  
FLAPS POSITION

The flaps inclination can be changed by choosing different holes.

**IT IS COMPULSORY**

IN CASE YOU ARE WORKING WITH OPEN MACHINE,  
TO FIT THE SAFETY GUARDS SHOW BELOW,  
ACCORDING TO THE **CE** SAFETY RULES



**FITTING**

- Firts mount parts **2** with spacer and bolts, after lateral sheet **7**, do not tighten nuts .
- Fit sheet **8**, and now tighten all bolts.
- Repeat operation on the other side.
- Fit parts **4**, and rear protections **3** and **6**.

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## TROUBLESHOOTING

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Problem	Cause	Remedy
Excessive vibrations	A) Blades or rams worn or broken. B) Blades or rams locked by pins. C) Rotor balancing not correct. D) Rotor bearings worn.	Replace worn-out or broken parts. Clean and grease pins. Check the weight of blade or ram units. Dismount and replace bearings and seals.
Poor cutting due to rotor low speed.	A) Belt tension really poor. B) Worn-out belts.	Adjust belt tension. Replace belts.
Belt overheating	A) Belt tension not correct. B) Transmission axis and rotor axis not aligned.	Check tension. Check alignment.
Bevel gear pair overheated.	A) Lack of oil B) Oil spent.	Top up oil. Replace.
Quick wear of blades or rams.	A) Working position too low, blades or rams are touching the ground.	Adjust the height of rotor with respect to the ground.
Oil leaking from transmission unit, belt side.	A) Oil retainer broken or worn.	Replace oil retainer.
Roller or wheel supports warped.	A) Roller or wheel supports suffered from lateral strain.	Raise up the machine from the ground when you change gear.
Safety vanes are warped.	A) In order to reach the working position, the raised machine (transport position), was lowered onto the material to shred.	Make the machine get to its working position before shredding.

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# GUARANTEE

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**NOBILI S.p.A. Via Circonvallazione Sud 46,40062 Molinella (Bologna) Italy, warrants** this product against defects in materials and workmanship, under the condition the machine is used according to the instructions provided in the use and maintenance guide, and with the restrictions mentioned below.

The guarantee period is 12 (twelve) months commencing on the date of delivery of the machine to the customer; such date shall be proved by the stamp on the **guarantee card** correctly filled in and returned to the Nobili offices.

The guarantee is restricted to the sole replacement, ex-works, free of charge, of the parts held to be defective by our Service Centre.

### **Not covered by this guarantee:**

- Parts of the machine not manufactured by Nobili (ex.: tyres, transmission belts, cardan shafts, gear boxes, etc.); such parts are covered by their own Manufacturer's guarantee.
- Parts subject to normal wear when the machine is used correctly.

### **The guarantee becomes void if:**

- Modifications have been performed without prior written permission of Nobili.
- Repairs are undertaken by unauthorized persons.
- Original Nobili parts are not used.
- Maintenance is performed improperly.
- The machine is not used according to the '**Intended Use**' specified in the user's manual.
- Machine guards are removed. Guards shall never be removed: they shall be periodically checked and, if damaged, their original condition shall be restored.
- Safety instructions listed in the user's guide are not respected.

### **Nobili shall not be liable for:**

- Damages in connection with transport or unloading of the machine.
- Incidental or consequential damages resulting from broken parts or non-use of the machine.

### **The User is in charge of:**

- Usual machine maintenance, lubrication, topping up of oil level, adjustments.
- Transport costs and labour costs for disassemble, assembly and adjustment of the parts subject to replacement under the guarantee.

### **Guarantee Application:**

The guarantee application shall be filled in by the seller and sent to Nobili within **4** weeks since the damage occurred, providing: name and address of the user, type, model and serial number, date of purchase, date on which the damage occurred, actual working hours, circumstances and supposed causes.

The parts shall be sent to Nobili and shall be inspected by the Nobili Technical Department in order authorised the replacement of the part.

### **Modifications:**

Nobili reserves the right to change the machines without prior notice to the customers, and without changing the machines already in use or the machines already put up for sale.

# NOBILI

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*Il nome che conta*

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DA:  
RE: PRESENTED BY  
RE: PRESENTE PAR:  
VERTRETEN DURCH:

