

GB Operating instructions

Nr. 99 366.GB.809.0

Rotary Mower
CAT 220 *alpin*
(Type PSM 366 : + . . 01266)



Ihre / Your / Votre • Masch.Nr. • Fgst.Ident.Nr.

(D)**Sehr geehrter Landwirt!**

Sie haben eine gute Wahl getroffen, wir freuen uns darüber und gratulieren Ihnen zur Entscheidung für Pöttinger und Landsberg. Als Ihr Landtechnischer Partner bieten wir Ihnen Qualität und Leistung, verbunden mit sicherem Service.

Um die Einsatzbedingungen unserer Landmaschinen abzuschätzen und diese Erfordernisse immer wieder bei der Entwicklung neuer Geräte berücksichtigen zu können, bitten wir Sie um einige Angaben.

Außerdem ist es uns damit auch möglich, Sie gezielt über neue Entwicklungen zu informieren.

Produkthaftung, Informationspflicht

Die Produkthaftungspflicht verpflichtet Hersteller und Händler beim Verkauf von Geräten die Betriebsanleitung zu übergeben und den Kunden an der Maschine unter Hinweis auf die Bedienungs-, Sicherheits- und Wartungsvorschriften einzuschulen. Für den Nachweis, daß die Maschine und die Betriebsanleitung ordnungsgemäß übergeben worden ist, ist eine Bestätigung notwendig.

Zu diesem Zweck ist das

- **Dokument A** unterschrieben an die Firma Pöttinger einzusenden (falls es sich um ein Landsberg-Gerät handelt an die Firma Landsberg).
- **Dokument B** bleibt beim Fachbetrieb, welcher die Maschine übergibt.
- **Dokument C** erhält der Kunde.

Im Sinne des Produkthaftungsgesetzes ist jeder Landwirt Unternehmer.

Ein Sachschaden im Sinne des Produkthaftungsgesetzes ist ein Schaden, der durch eine Maschine entsteht, nicht aber an dieser entsteht; für die Haftung ist ein Selbstbehalt vorgesehen (Euro 500,-).

Unternehmerische Sachschäden im Sinne des Produkthaftungsgesetzes sind von der Haftung ausgeschlossen.

Achtung! Auch bei späterer Weitergabe der Maschine durch den Kunden muß die Betriebsanleitung mitgegeben werden und der Übernehmer der Maschine muß unter Hinweis auf die genannten Vorschriften eingeschult werden.

(F)**Cher agriculteur!**

Vous avez fait un bon choix, nous nous en réjouissons et nous voulons vous féliciter de votre décision pour Pöttinger. En tant que votre partenaire, nous vous offrons de la qualité et des performances, en relation avec un service après vente sûr.

Afin de mieux apprécier les conditions dans lesquelles nos machines vont travailler et pour que ces exigences puissent influencer la construction de nouvelles machines, nous nous permettons de vous demander quelques renseignements. De plus il nous sera possible de pouvoir vous informer d'une manière plus précise des nouveaux produits.

Responsabilité envers les produits. Obligation d'informer.

La législation concernant les produits oblige le constructeur et le concessionnaire, au moment de la vente, à donner au client le livret d'entretien ainsi que les indications concernant l'utilisation, la sécurité et les consignes d'entretien. Comme preuve que la machine et que le manuel ont été correctement remis à l'acheteur, il est nécessaire de le certifier.

Pour cette raison,

- **le document A**, signé, est à renvoyer à la société Pöttinger
- **Le document B** revient au concessionnaire et
- **le document C** appartient au client.

Conformément à la loi sur la responsabilité produit, chaque agriculteur est entrepreneur. Suivant la loi sur la responsabilité produit, un dégât matériel est un dégât causé par une machine et non sur la machine ; une franchise est prévue pour la responsabilité (EURO 500,-)

Les dégâts matériels d'entreprise dans le sens de la loi sur la responsabilité produit sont exclus de la responsabilité.

Attention! Lors de la revente de la machine plus tard, le manuel doit suivre la machine!

(GB)**Dear Farmer**

You have just made an excellent choice. Naturally we are very happy and wish to congratulate you for having chosen Pöttinger. As your agricultural partner, we offer you quality and efficiency combined with reliable servicing.

In order to assess the spare-parts demand for our agricultural machines and to take these demands into consideration when developing new machines, we would ask you to provide us with some details. Furthermore, we will also be able to inform you of new developments.

Important information concerning Product Liability.

According to the laws governing product liability, the manufacturer and dealer are obliged to hand the operating manual to the customer at the time of sale, and to instruct them in the recommended operating, safety, and maintenance regulations. Confirmation is necessary to prove that the machine and operating manual have been handed over accordingly.

For this purpose,

- **document A** is to be signed and sent to Pöttinger,
- **document B** remains with the dealer supplying the machine, and
- the customer receives **document C**.

In accordance with the laws of product liability, every farmer is an entrepreneur.

According to the laws of product liability, property damage is damage caused by a machine and not to it. An excess of Euro 500 is provided for such a liability.

In accordance with the laws of product liability, entrepreneurial property damages are excluded from the liability.

Attention! Should the customer resell the machine at a later date, the operating manual must be given to the new owner who must then be instructed in the recommended regulations referred to herein.

GB INSTRUCTIONS FOR
PRODUCT DELIVERY

Dokument **D**



ALOIS PÖTTINGER Maschinenfabrik GmbH
A-4710 Grieskirchen
Tel. (07248) 600 -0
Telefax (07248) 600-511
GEBR. PÖTTINGER GMBH
D-86899 Landsberg/Lech, Spöttinger-Straße 24
Telefon (0 81 91) 92 99-111 / 112
Telefax (0 81 91) 92 99-188

GEBR. PÖTTINGER GMBH
Servicezentrum
D-86899 Landsberg/Lech, Spöttinger-Straße 24
Telefon (0 81 91) 92 99-130 / 231
Telefax (0 81 91) 59 656

According to the product liability please check the above mentioned items.

Please check. ☒

- ☐ Machine checked according to delivery note. All attached parts removed. All safety equipment, drive shaft and operating devices at hand.
- ☐ Operation and maintenance of machine and/or implement according to operating instructions explained to the customer.
- ☐ Tyres checked re. correct pressure.
- ☐ Wheel nuts checked re. tightness.
- ☐ Drive shaft cut to correct length.
- ☐ Correct power-take-off speed indicated.
- ☐ Fitting to tractor carried out: to three-point linkage
- ☐ Trial run carried out and no defects found.
- ☐ Functions explained during trial run.
- ☐ Pivoting in transporting and operating position explained.
- ☐ Information given re. optional extras.
- ☐ Absolute need to read the operating manual indicated.

In order to prove that the machine and the operating manual have been properly delivered, a confirmation is necessary.
For this purpose please do the following:

- sign the **document A** and send it to the company Pöttinger
(in case of Landsberg equipment: to the company Landsberg)
- **document B** stays with the specialist factory delivering the machine.
document C stays with the customer.

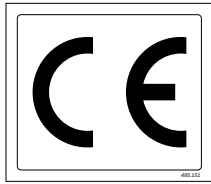


Observe safety hints in supplement-A

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CE sign

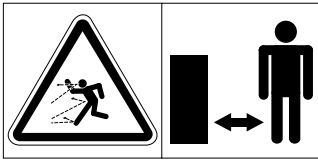


The CE sign, which is affixed by the manufacturer, indicates outwardly that this machine conforms to the engineering guideline regulations and the other relevant EU guidelines.

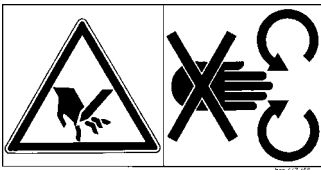
EU Declaration of Conformity (see supplement)

By signing the EU Declaration of Conformity, the manufacturer declares that the machine being brought into service complies with all relevant safety and health requirements.

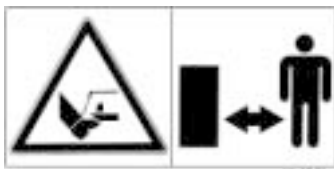
Meaning of warning signs



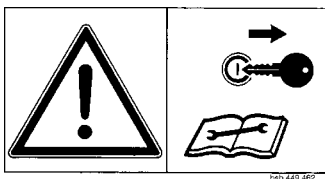
Danger - flying objects; keep safe distance from the machine as long as the engine is running.



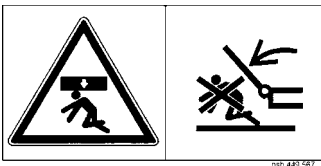
Danger - stay clear of rotating machine parts



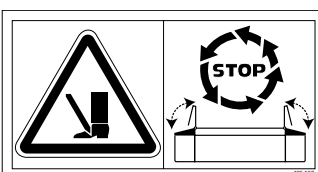
Stay clear of mower knife area as long as tractor engine is running with PTO connected.



Shut off engine and remove key before performing maintenance or repair work.



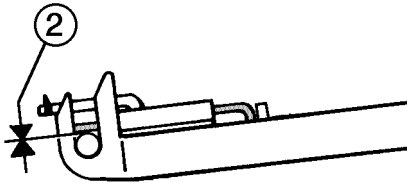
Stay clear of swinging area of implements



Close both side protective coverings before engaging p.t.o..

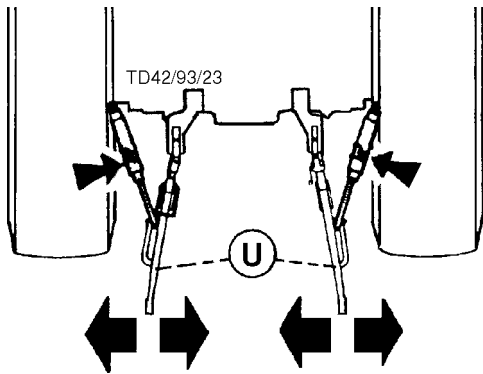
Attaching in general

1. Observe safety tips in supplement A.
 - Please take note of comments in chapter "Custom-built Attaching" also.
2. Mark off the implement at the tractor's three-point linkage.
 - Secure locking bolts with linch pins.
 - Lock lower link bolts (2) so that they are free from play.



TD29/91/26

3. Fasten lower hydraulic link (U) so that implement cannot swing out sideways.



4. Connect hydraulic lines (Hyd) to plug-in coupling using double acting servo-valve.

Setting gap "A"

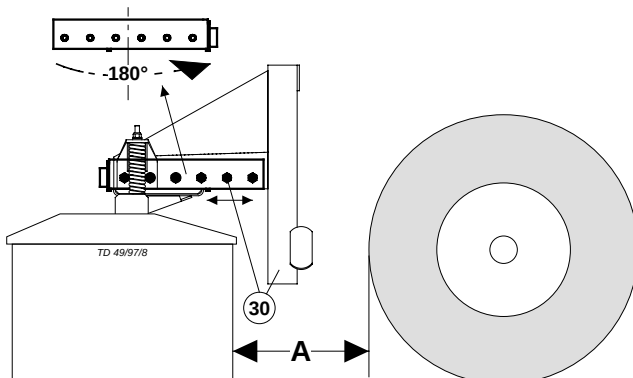
Refers to mower units without conditioner and swathe discs.

- Mount attachment frame (30) in the relevant position.

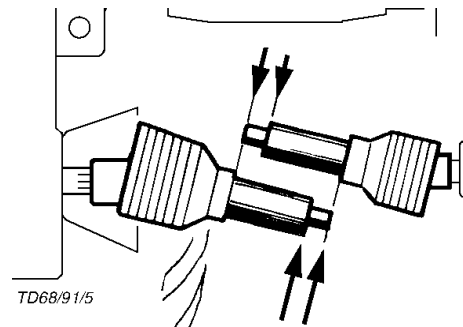
When the setting range is insufficient

- Remove console
- Turn 180° and refit.

With this, gap "A" can be reduced 70 mm.



Drive shaft

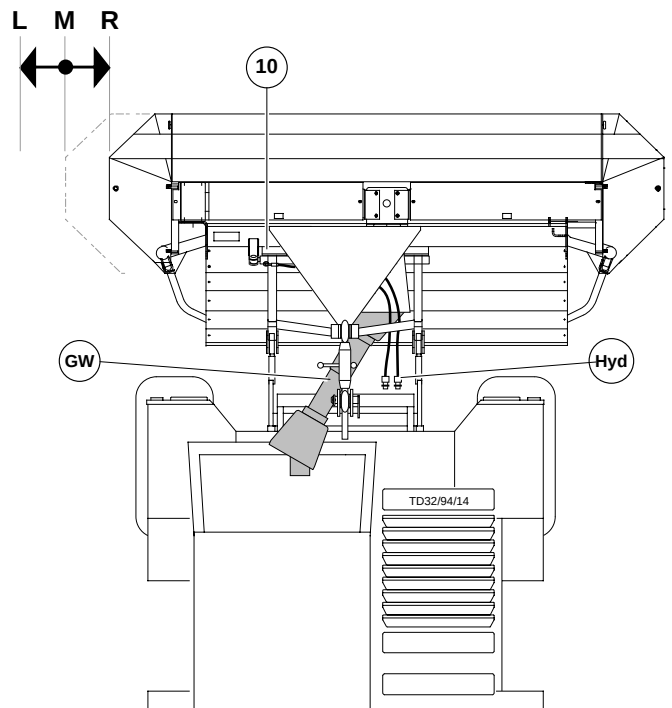


- Before operating for the first time, drive shaft is to be checked and adapted if necessary. See also chapter "Fitting the drive shaft" in supplement B.



Important!

*The mower bar can be moved left (L) or right (R) using the hydraulic cylinder (10). This shifting must be taken into account when shortening the drive shaft (GW).
M = Central Position.*



Road Transport

- Observe the regulations issued by your country's legislative body.
- Travelling on public roads may only be undertaken as is described in the chapter "Transporting Position".
- Fasten lower hydraulic link (U) so that implement cannot swing out sideways.

Custom-built Attaching

Aebi
Carraro
De Pietri
Nußmüller Rasant
Reform Metrac



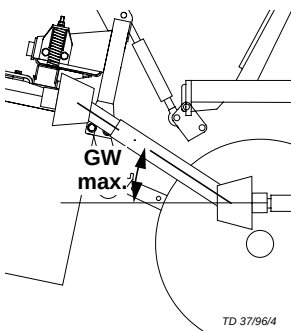
Because of differing types of lifting gears on various tractor models, special attaching kits are to be used.

- See Spare Parts list also.
- See supplement-D

Maximum drive shaft angle

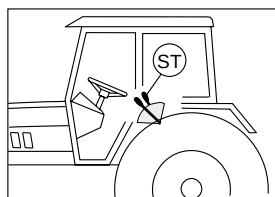
Most drive shafts may only be angled up to a **maximum of 25°** when in continuous operation (GW max.)

- Observe the advice in the drive shaft manufacturer's operating manual.

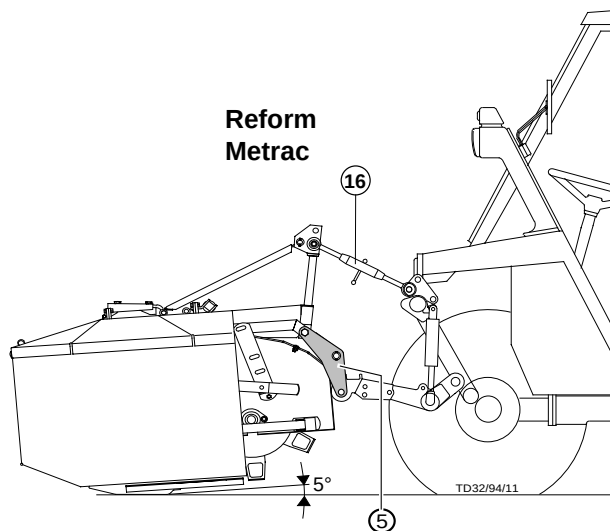


In order to prevent damage

- Limit the lifting height with lever (ST)



Reform
Metrac



Transport position

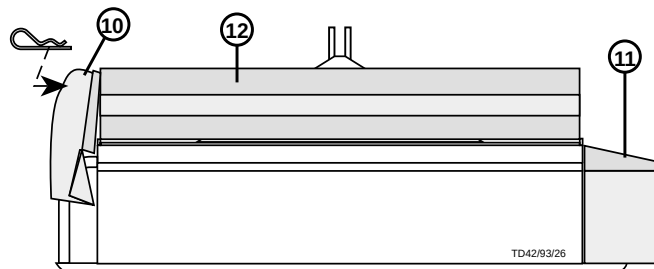


Safety Precaution!

see supplement-A1 points 7.), 8c. - 8h.)

Changing from working position to transport position is only to be carried out on even, firm ground.

Never let the mowing mechanism run with the mower raised.



When transporting, side guard plates (10 and 11) can be raised and secured to reduce width.

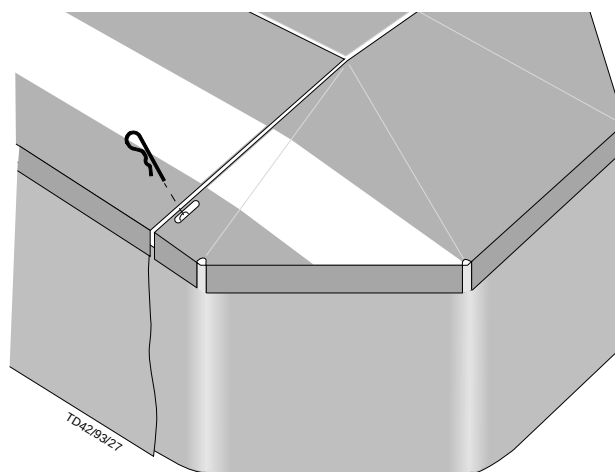


For safety reasons it is necessary to wait for mowing disks to stop completely before raising and securing guard plates.

- Secure both guard plates in this position with spring pin.
- Use tractor's lifting gear to raise implement.

Work position

Side guard plates (10 and 11) must be lowered before commencing work.



- Secure both guard plates in this position with spring pin.



For safety reasons mowing may only be conducted in this position.

Adjusting the Cutting Height

By turning the upper link spindle (16) cutting disks can be brought into a horizontal or slightly inclined forward position.

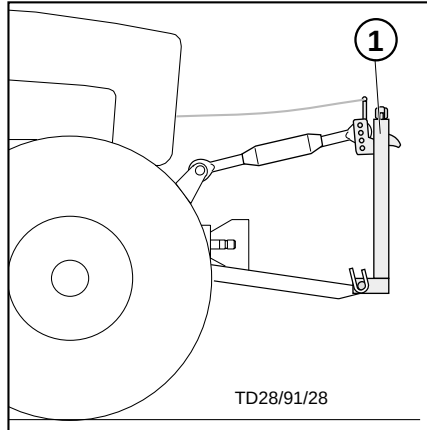
This inclination should not be more than 5° max.

Quick-coupler (1)

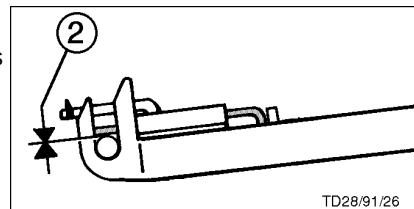
Sicherheitshinweise:

siehe Anhang-A1 Pkt. 8a.-h.)

- Install quick-coupler (Weiste triangle) on the front lifting gear in a vertical or slightly tilted forward position.



- Tighten lower link bolts (2) free from play.

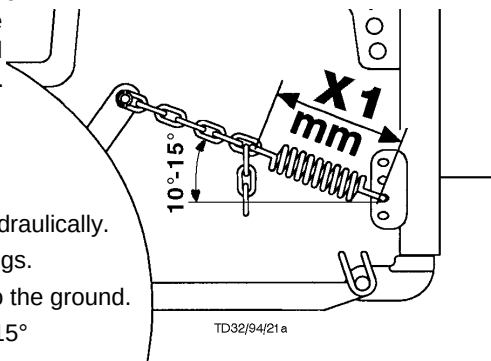


Spring Tension

Installation kit (optional extra)

The application force of mowing drums to the ground is controlled through spring tension.

- Raise implement hydraulically.
- Connect draw springs.
- Lower implement to the ground. Check angle 10° - 15°



Setting measurement "X1"

CAT 220 alpin: X1 = 420 mm with Conditioner
X1 = 410 mm without Conditioner

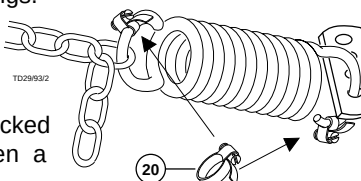
CAT 260 alpin: X1 = 440 mm with Conditioner
X1 = 420 mm without Conditioner

The optimal setting measurement (X1) was not available when this book went to print. Please contact Customer Service.

- Fit hose clips (20) to draw springs.

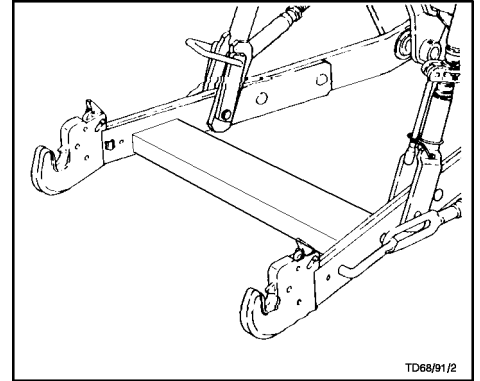
The spring tension setting need not be checked everytime implement is coupled to tractor.

However setting should be checked and, if necessary, reset when a different tractor is to be used.



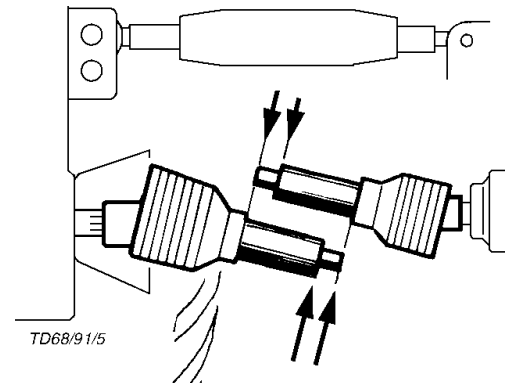
Problems with attaching

- Damage may occur to drive shaft when lowering attached implement using lifting gear with a transverse bar fitted between lower links.



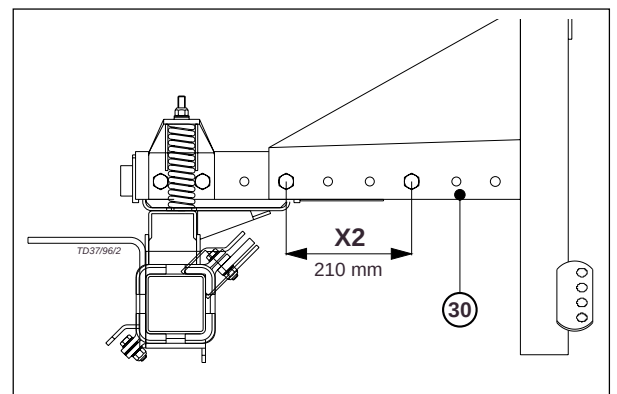
In order to prevent damage it is necessary to install an attachment lift between lifting gear and Weiste triangle. In such a case please contact Customer Service.

- On tractors where p.t.o. stub is located right at the front, the drive shaft must be shortened greatly. That means when implement is raised there is not sufficient drive shaft covering available.



In this case the attaching frame (30) is to be installed in the appropriate position.

Observe the minimum gap "X2" (210 mm) between screws!



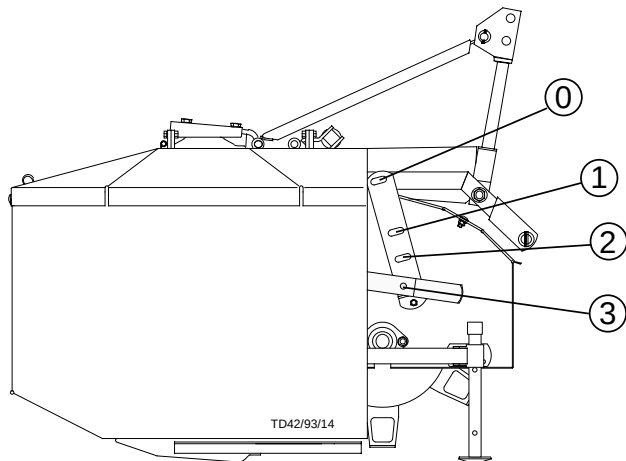
- Connect drive shaft (see chapter "Adapting the Drive Shaft" also).

Mähen mit dem Aufbereiter

Der Aufbereitungseffekt kann verändert werden.

- Mit dem Handhebel wird der Abstand zwischen Einstelleiste und Rotor verstellt.

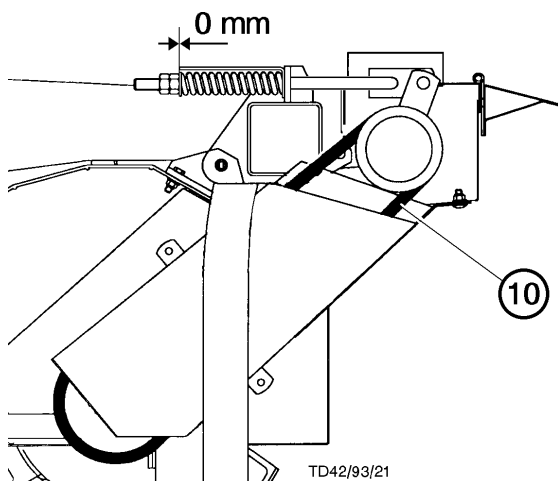
In der tiefsten Stellung (3) ist die Aufbereitung am stärksten.
Das Futter soll aber nicht zerschlagen werden.



Keilriemenspannung

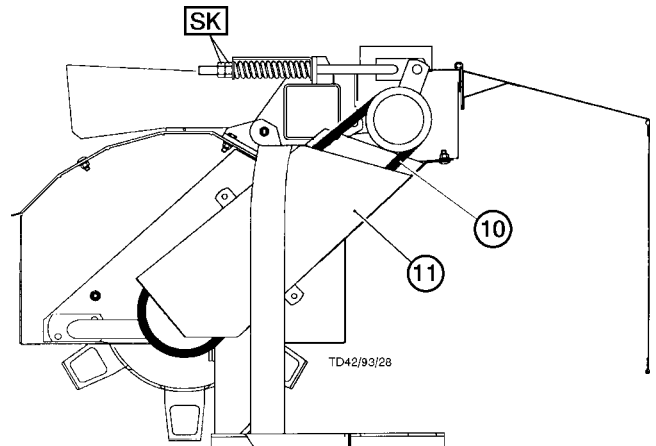
Bei richtig eingestellter Keilriemenspannung beträgt der Abstand zwischen Anzeiger und Scheibe "0 mm".

Wird der Abstand größer, muß die Feder entsprechend nachgespannt werden.



Aus- und Einbau des Aufbereiters

- Schutzverkleidung (11) demontieren.
- Durch zurückdrehen der Sechskantmutter (SK) die Keilriemenspannung verringern.
- Die 4 Antriebsriemen (10) abnehmen.

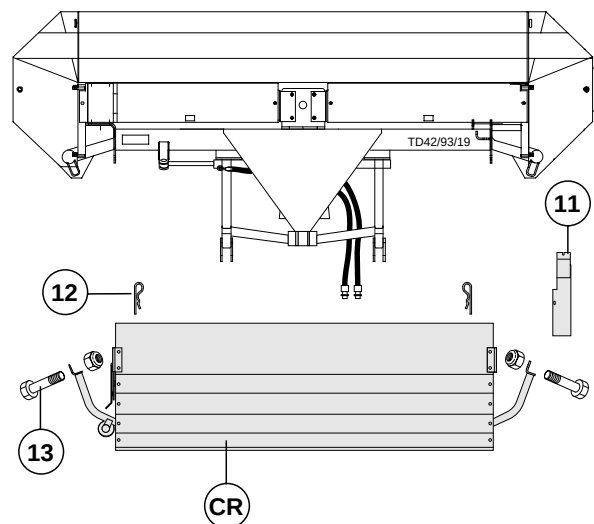


- Die beiden Federvorstecker (12) herausziehen.
- Schrauben (13) entfernen und Aufbereiter nach hinten wegziehen.



Vorsicht beim Demontieren!

Das Gewicht des Aufbereiters beträgt etwa 100kg.



Einbau des Aufbereiters

Der Einbau erfolgt in umgekehrter Reihenfolge als der Ausbau.

- Achten Sie darauf, daß alle Schrauben festgezogen sind.

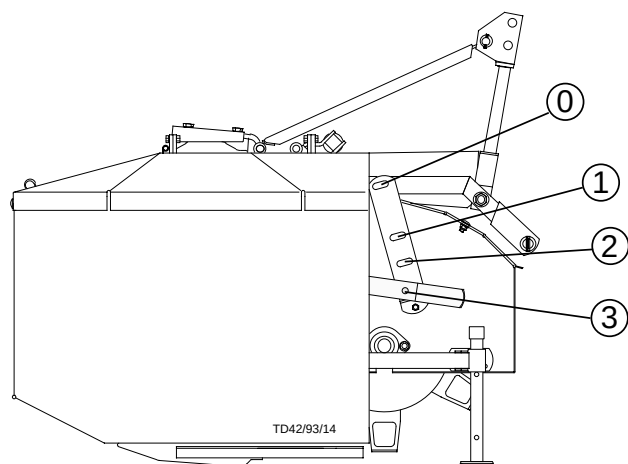
Mowing with the conditioner

The conditioning effect can be modified.

- With lever (13), which adjusts the gap between adjustable plate and rotor.

The conditioning effect is most intense with the lever at the bottom of its travel.

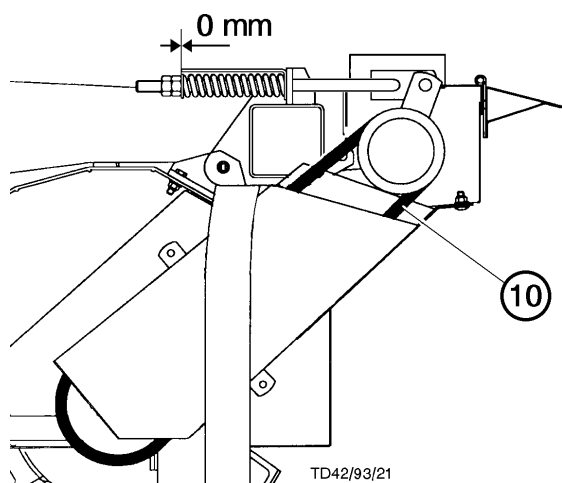
However the crop should not be chopped.



V-belt tension

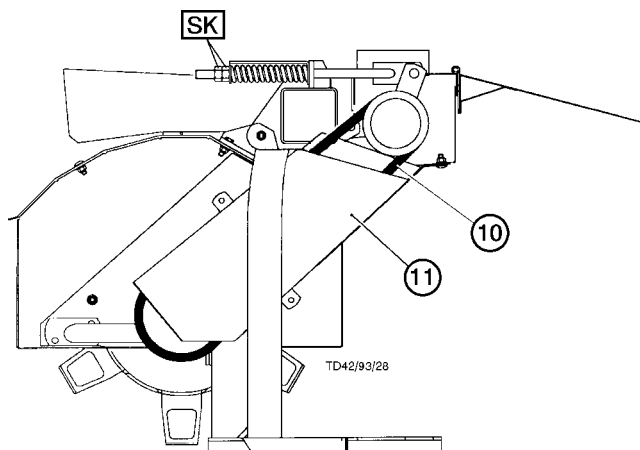
To tension pulleys correctly, the gap between indicator and pulley is "0 mm".

If the gap is greater, the tension on the spring must be increased.



Removing and fitting the Conditioner

- Detach protective cover (11).
- Decrease V-belt tension by unscrewing nuts (SK).
- Remove 4 driving belts (10).

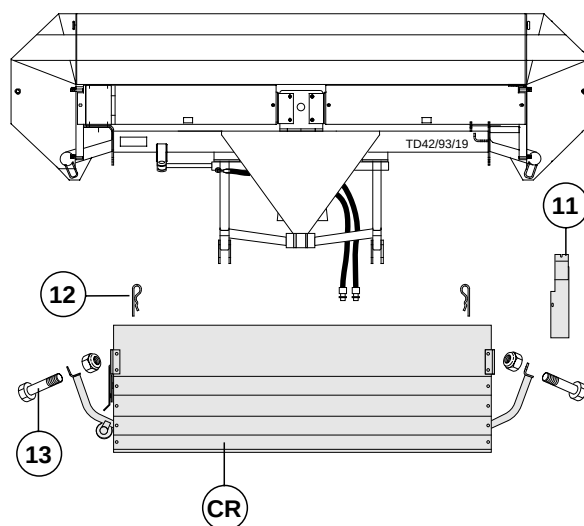


- Remove both spring pins (12).
- Remove screws (13) and pull the conditioner backwards.



Take care when removing!

The conditioner weighs approx. 100 kg.



Fitting the Conditioner

Fitting is carried out in reverse order to removal.

- Make sure that all screws are tightened firmly.

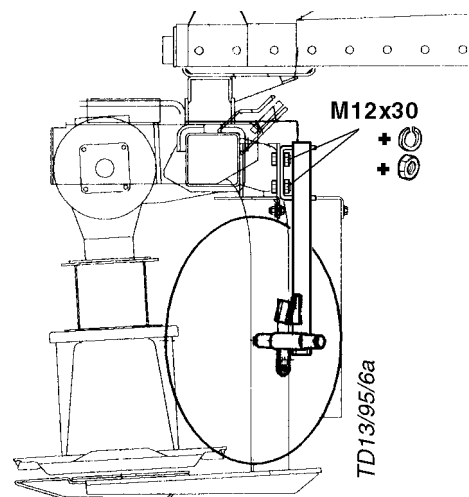
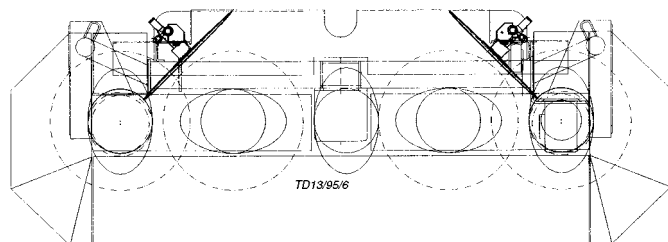
CAT 220 *alpin* to Masch Nr. . . .1525

CAT 260 *alpin* to Masch Nr. . . .1360

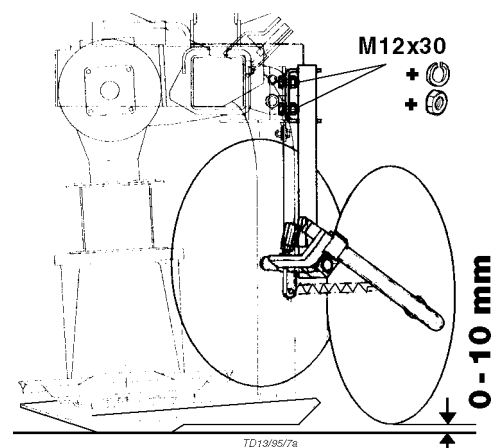
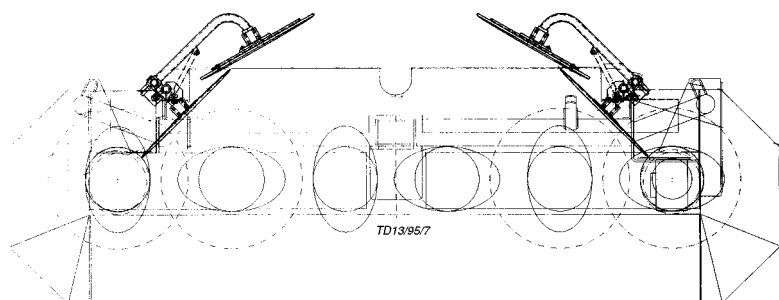
Mower unit with swath discs ¹⁾

If a conditioner is not attached to the mower unit then the swath former can be attached for mowing.

CAT 220 *alpin* to Masch Nr....1525



CAT 260 *alpin* to Masch Nr....1360



Setting both rubber discs

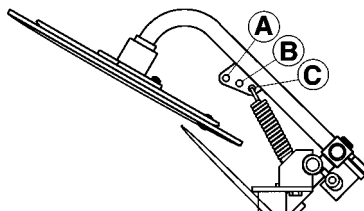
Both rubber discs should touch the ground (0 - 10 mm) when mowing.

Setting both tension springs

A = for high dense forage

B = basic setting

C = for short forage



CAT 220 *alpin* from Masch Nr. . . .1526

CAT 260 *alpin* from Masch Nr. . . .1361

Mower unit with swath discs ¹⁾

If a conditioner is not attached to the mower unit then the swath former can be attached for mowing.

Setting both rubber discs: 0 - 10 mm

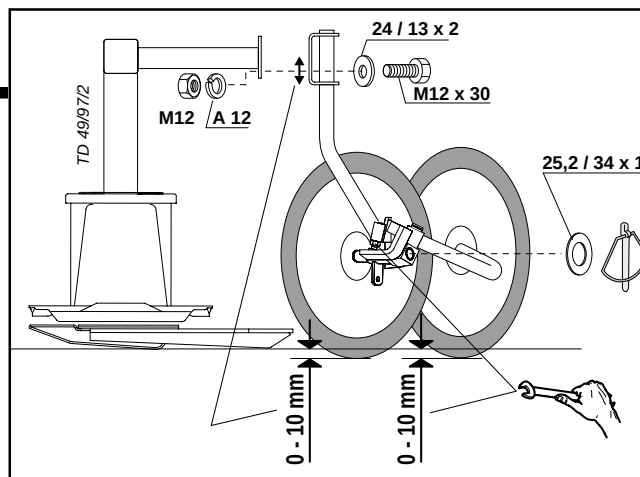
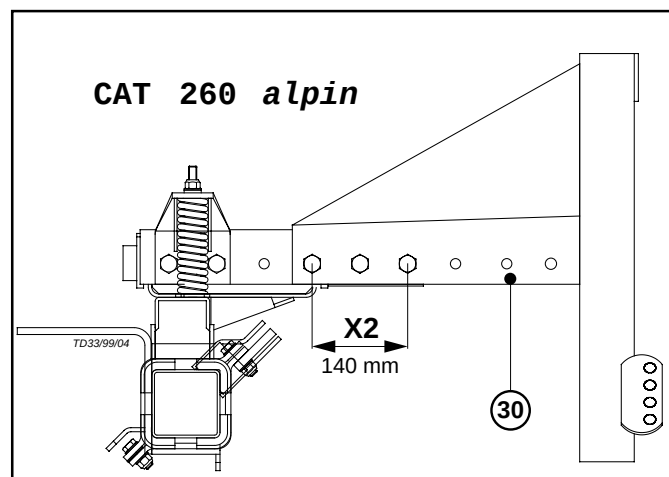
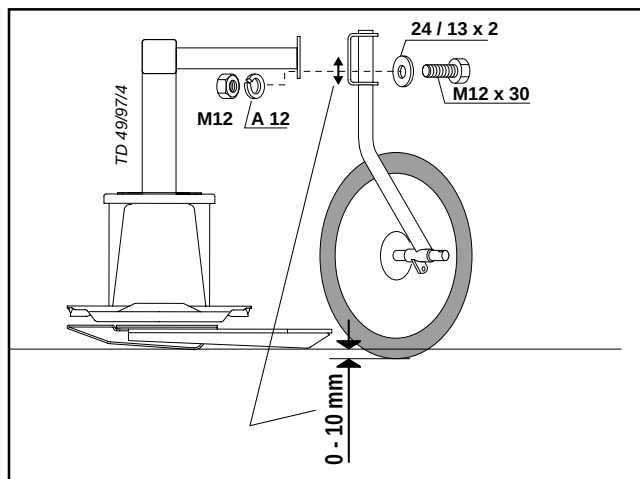
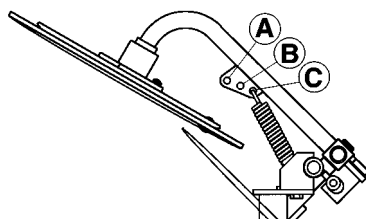
- left and right

Setting both tension springs

A = for high dense forage

B = basic setting

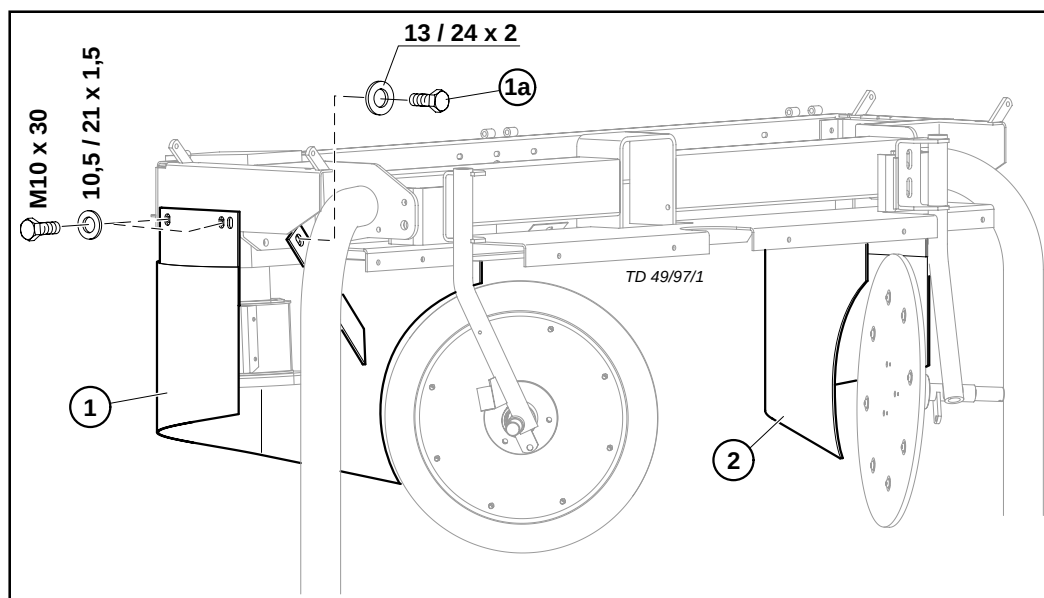
C = for short forage



Mount guide plates

- left (1) and right (2)

1a = Fix with gear box screws



Important points before starting work



Safety hints:
see supplement-A1 points 1. - 7.)

After the first hours of operation

- Retighten all knife screw fittings.

Safety hints

1. Check

- Check the condition of knives and the knife holder.
- Check cutting drums for damage (see also chapter "Maintenance").

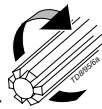
2. Switch-on the machine only in working position and do not exceed the prescribed power take-off speed (for example max. 540 rpm).

A transfer, which is located near the gear, advises which p.t.o. speed your mower unit is equipped for.

540 Upm

1000 Upm

- Turn the p.t.o. on only when all safety devices (coverings, protective aprons, casings, etc.) are in proper condition and attached to the implement in the correct protective positions.



3. Pay attention to correct p.t.o. direction of rotation!

4. Damage protection!

- The surface to be mowed must be free of obstructions or foreign objects. Such objects (e.g. large stones, pieces of wood, boundary stones, etc.) can damage the mower unit.

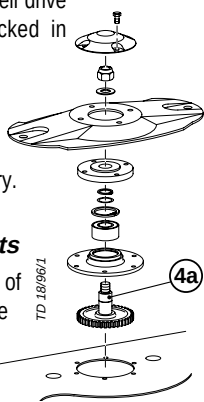


In the event of a collision

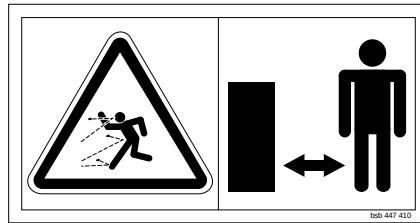
- Stop immediately and switch off the drive.
- Carefully check the implement for damage. The mowing discs and their drive shaft must be checked in particular.
- Have the implement checked also by a specialist workshop if necessary.

After any contact with foreign objects

- Check the condition of knives and the knife holder.
- Retighten all knife screws



4. Stay clear while engine is running.



- Keep people out of the danger zone - foreign bodies which can be ejected by the mower could injure them.
Special care is necessary on or near stony ground.

5. Wear hearing protection

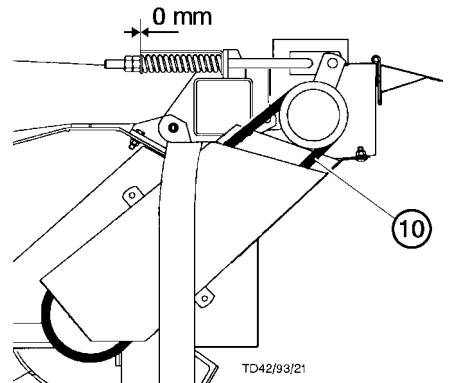


The noise level in the workplace can deviate from the measured value (see Technical Data) partly because of the differing cabin types of various tractors.

- If a noise level of 85 dB (A) is reached or exceeded, the farmer must have suitable hearing protection in readiness (UVV 1.1 §2).
- If a noise level of 90 dB (A) is reached or exceeded, the hearing protection must be worn (UVV 1.1 § 16).

6. Check V-belt tension!

If the gap between indicator and pulley is greater than "0 mm" the tension on the spring must be increased accordingly.



- Fix hydraulic lower links in a way that the machine cannot swing out sideways.

Operation

1. Adjust cutting height by turning upper link spindle (inclination of the cutting discs max. 5°).

2. To mow, gradually supply power to the p.t.o. before entering the crop and bring the mowing discs up to full revs.

Smoothly increase the p.t.o. speed, in order to avoid noises in the free-wheel conditioned by the system.

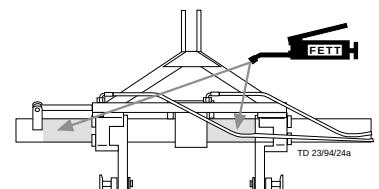
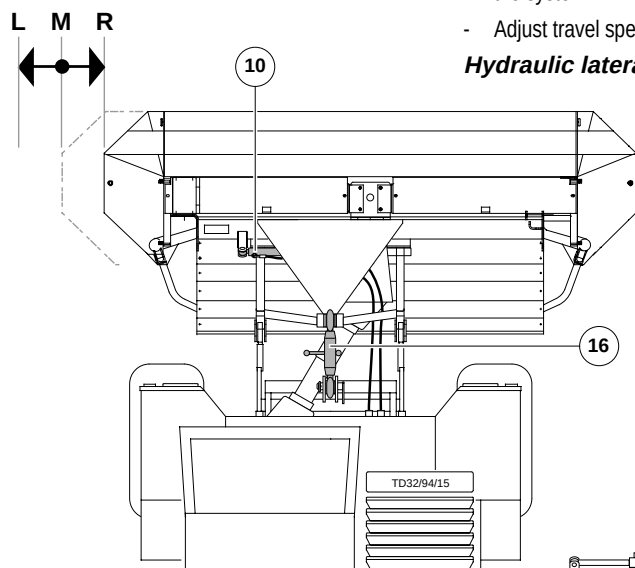
- Adjust travel speed to terrain and crop.

Hydraulic lateral shifting

The cutter bar can be shifted left (L) or right (R) using the hydraulic cylinder (10). This is advantageous for tractors with an extra wide track (dual tyres) for example.

Take note! Hydraulic lateral shifting must only be effected when the implement has been raised.

Vor Inbetriebnahme das Schiebepfahl einfetten.

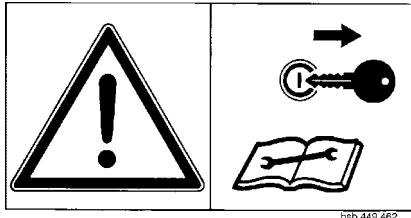


General maintenance hints

In order to keep the implement in good condition after long periods of operation, please observe the following points:

Safety points

- Turn engine off when adjustment, service and repair work is to be done.



- Do not work under the machine without safe support.
- Retighten all screws after the first hours of operation.
Check blade screws in particular.
- Observe maintenance hints for angular gear and cutter bar.

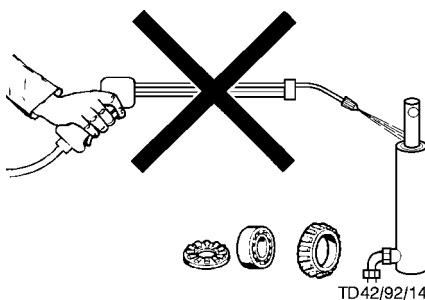
Winter storage

- Thoroughly clean machine before storage.
- Put up protection against weather.
- Change or replenish gear oil.
- Protect exposed parts from rust.
- Lubricate all greasing points according to lubrication chart.

Cleaning of machine parts

Attention!

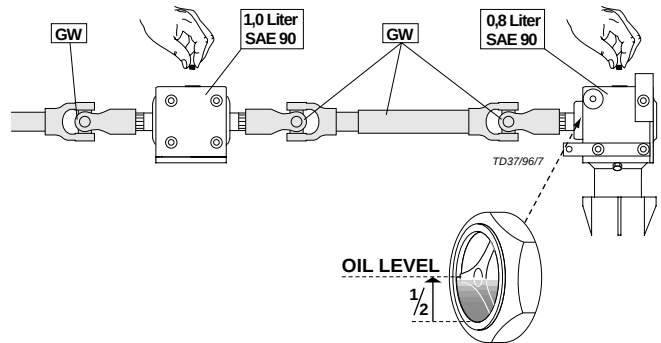
Do not use high-pressure washers for the cleaning of bearing- and hydraulic parts.



- Danger of rust!
- After cleaning, grease the machine according to the lubrication chart and carry out a short test run.
- Cleaning with too high pressure may do damage to varnish.

Cardan shafts

- Lubricate both shafts (GW) every 20 hours of operation.
- Pull sliding sections apart and grease well.



Angular gear

**1,0 litre SAE 90
0,8 litre SAE 90**

- Change oil after the first 50 operating hours.
Under normal operating conditions, oil is to be replenished annually.

Oil level check

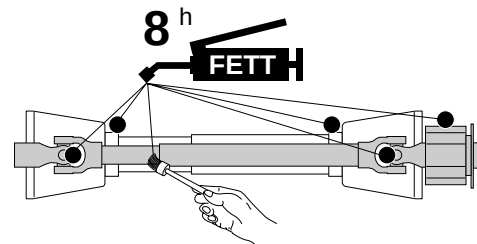
- at observation window (OIL LEVEL)

Change oil

- after 100 ha at the latest.
- Remove drain plug, drain old oil and dispose of properly.

Drive shaft

- Lubricate drive shaft every 8 hours of operation.
- Pull sliding sections apart and grease well.



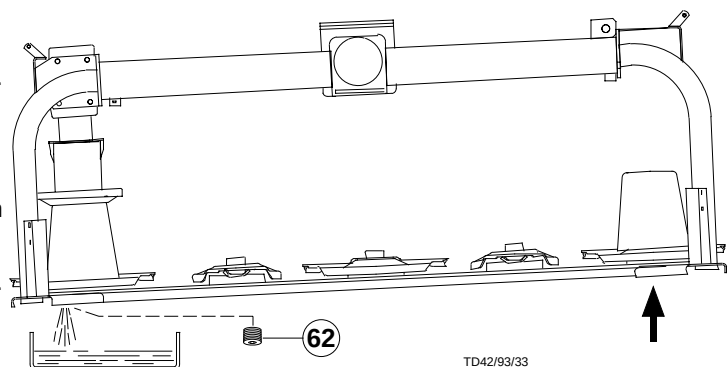
Cutter bar oil change

- First oil change after the first 50 operating hours.
- An oil change should then be carried out after every 100 ha.

Quantity: CAT 220 *alpin* = 1,6 lt. SAE 90

Quantity: CAT 260 *alpin* = 2,6 lt. SAE 90

- Lift the right side of the mower bar so that the oil gathers in the drain plug area.
- Remove drain plug (62), drain old oil and dispose of properly.



Variation-1

Fixing cutter blades using screw-threaded blade bolts

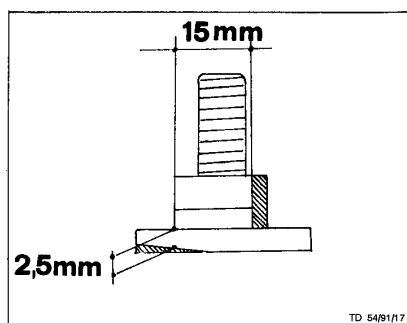


Attention!

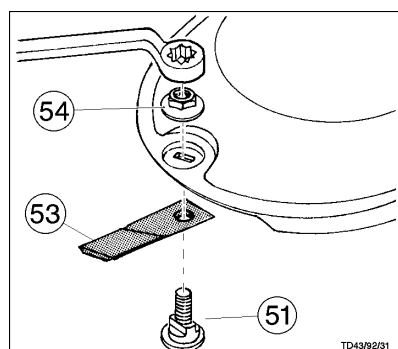
For your safety!

Regularly check that cutter blades are tightened firmly!

- Buckled or damaged cutter blades must not be used further.
- Cutter blades worn on one side can be turned over and installed again.
- Blade bolts must be replaced when lower edge is well worn or at a diameter of 15 mm.



- Cutter blades on a cutter disc should wear out simultaneously (danger of imbalance). Otherwise they are to be replaced with new ones (replace in pairs).



Parts:

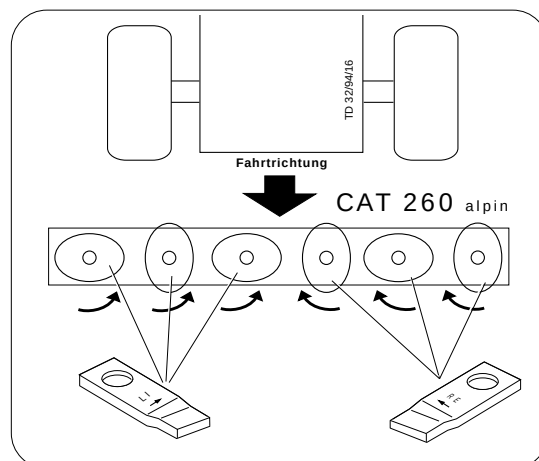
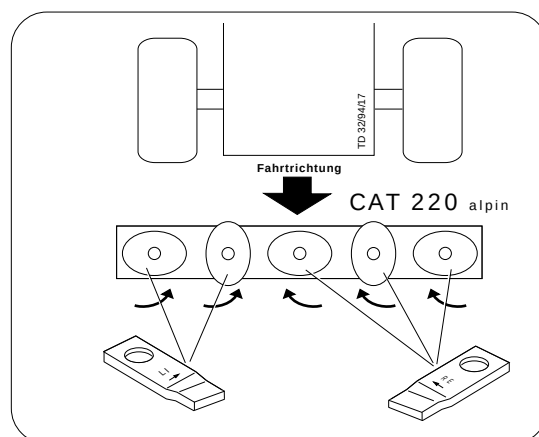
- Screw (51)
- Cutter blade (53)
- Nut (54) (STM = 120 Nm).

Installing cutter blades

Take note!

The arrow on the cutter blade shows the cutter disc's direction of turn.

- To install, clean back plates from varnish.

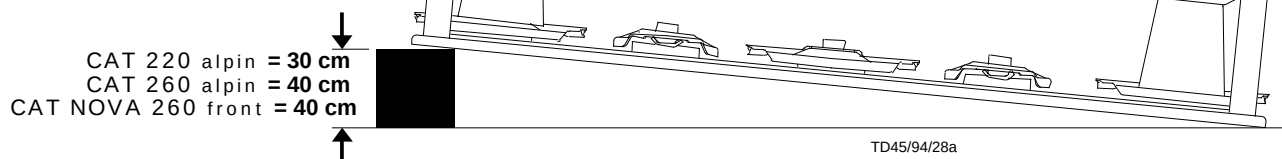


Cutter bar oil level check

- Under normal operating conditions, oil is to be replenished annually.

1. Lift one side of the mower bar (30 cm / 40 cm) and support.

- The side where the oil refill screw is located remains on the ground.
- Lift the other side of the mower bar about 30 cm resp. 40 cm and support with a suitable prop.



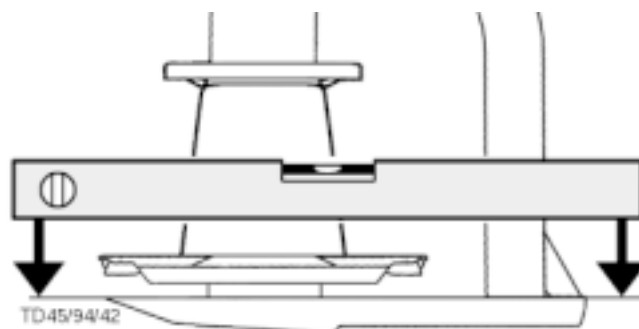
2. Let mower bar stand in this position for some 15 minutes.

- This time is necessary to allow the oil to gather in the lower area of the mower bar.

Important!

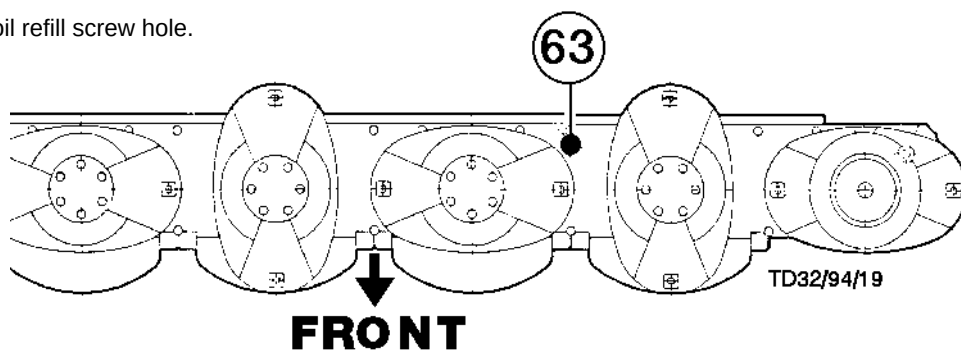


In doing so the cutter bar must be in horizontal position.



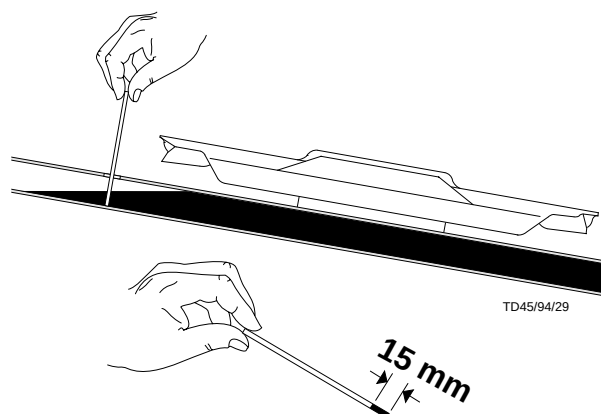
3. Remove oil refill screw (63).

The oil level is measured at the oil refill screw hole.



4. Check the "15 mm" oil level using a wooden stick and top-up if necessary.

- Too much oil leads to the mower bar overheating during operation.
- Too little oil does not guarantee the necessary lubrication.



Variation 2

Holder for a quick change of cutter blades

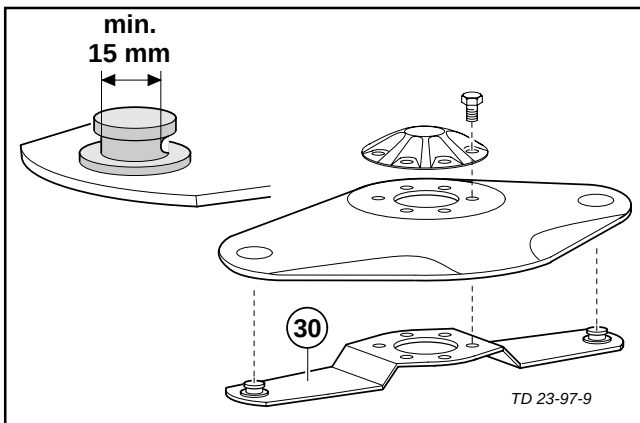


Attention!
For Your Safety

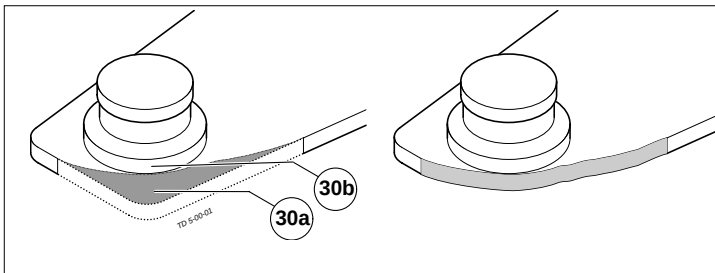
- Regularly check that cutter blades are tightened firmly!
 - Cutter blades on a cutter disc should wear out simultaneously (danger of imbalance).
Otherwise they are to be replaced with new ones (replace in pairs).
 - Buckled or damaged cutter blades must not be used further.
- Buckled, damaged and/or worn cutter blade holders (30) should not be used further.

Replace with new cutter holder (30)

- If the the cutter blade bolt in the centre are worn down to 15 mm.



- If the worn area (30a) has reached the cutter blade bolt.
- If the cutter blade bolt is worn in the lower area (30b).
Cutter blade bolts may not be worn in this area (30b) otherwise the fit cannot be guaranteed.



Checking the mowing blade suspension

- Normal check every 50 hours.
- Check more often when mowing on stony terrain or in other difficult operating conditions.
- Check immediately after driving over a hard obstacle (e.g. stones, pieces of wood, ect).

Carry out a check

- as described in chapter „Changing the Cutter Blades“

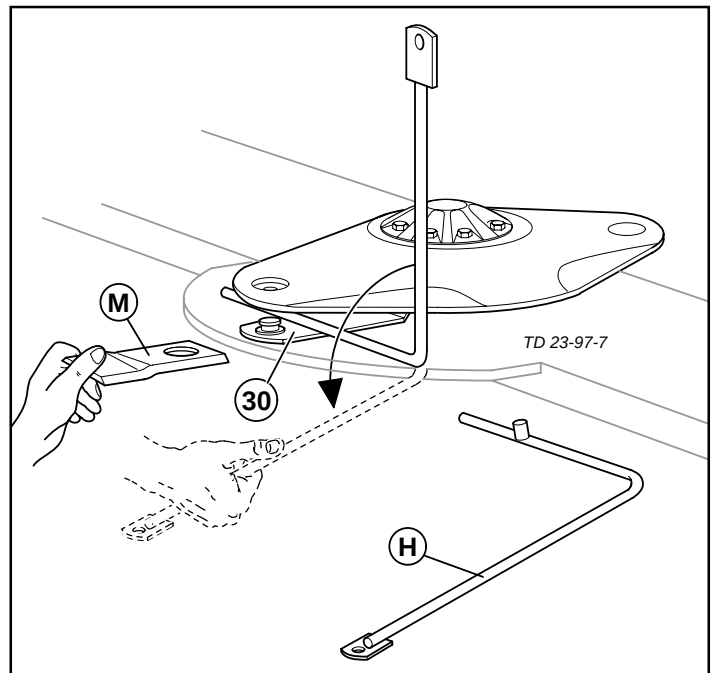


Take note!

Damaged, buckled and worn out parts must not be used further (danger of accident).

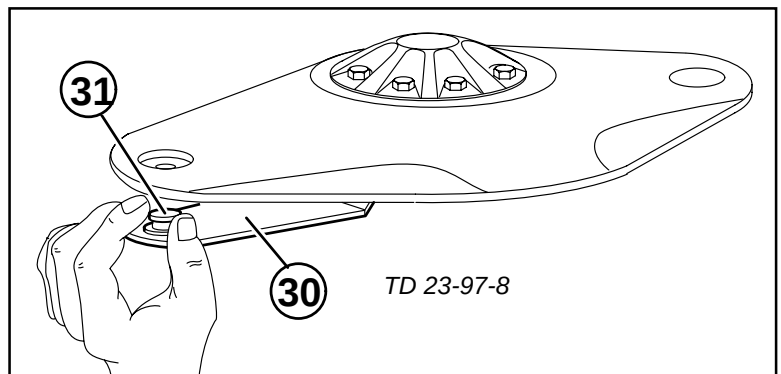
Changing the Cutter Blades

1. Insert lever (H) horizontally between cutter disc and holder (30)
2. Push movable holder (30) down using lever (H).
3. Remove cutter blade (M)
4. Clean forage remains and dirt away.
 - around the bolts (30) and inside the lining (32)



5. Check:

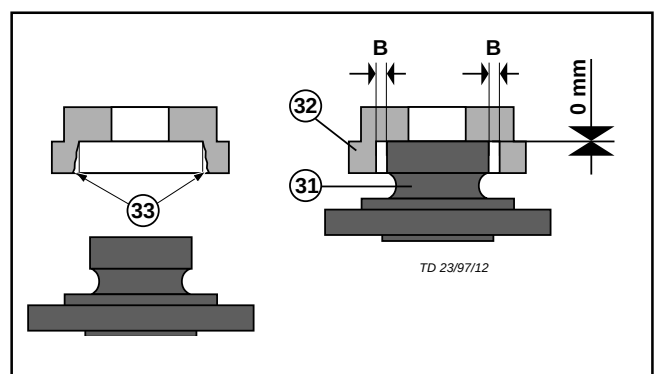
- blade bolts (31) for damage, wear and fitting
- holder (30) for damage, change in position and fitting
- lining (32) for damage.
 - Side surfaces must not show signs of deformation (33)



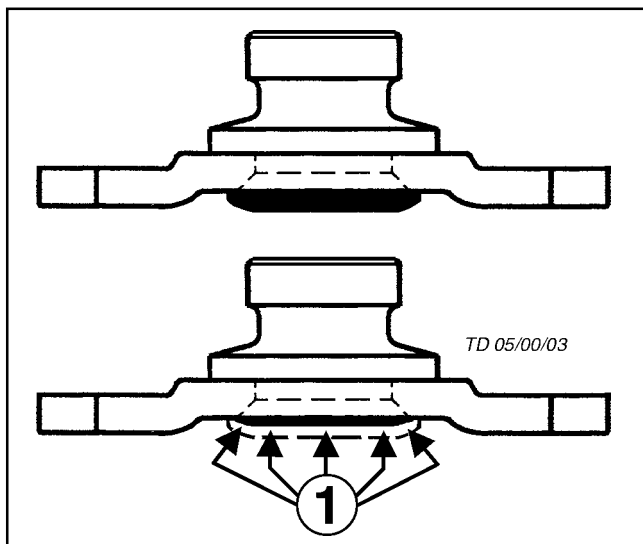
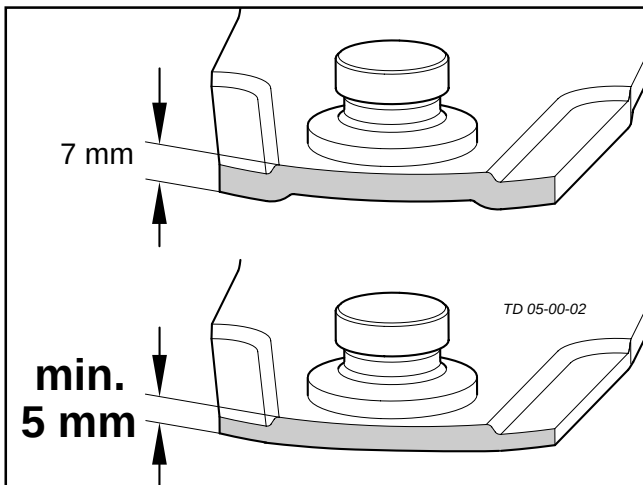
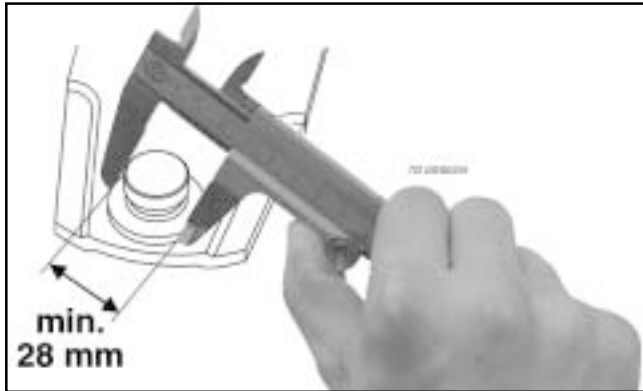
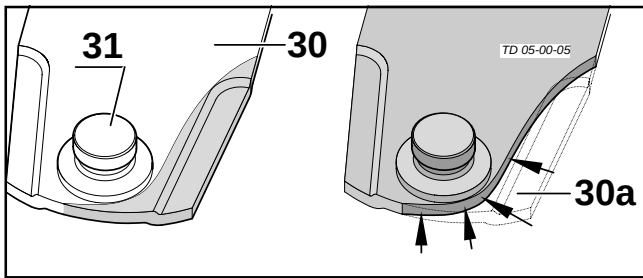
6. Fit cutter blades and remove lever (H)

7. Check:

- cutter blades (31) for correct position (visual check)
 - **Gap (0 mm).** The top surface of the bolt must lie free of play.
 - **Side gap (B).** Bolts must not touch the lining.
- that cutter blade (M) can move freely on bolt.



Visual check



Attention ! Danger of accident if wearing parts are worn

Wearing parts are:

- mounting of mowing blades (30)
- bolts of mowing blades (31)



If such wearing parts are worn out they must not be used any longer, otherwise it can no longer be guaranteed that the pin of the mowing blade is firmly adjusted and accidents may be caused through parts that are flinged away (e.g. mowing blades, fragments...)



Check the suspension of mowing blades as to wear and other damage:

- every time before bringing the machine into operational use
- several times during use
- immediately after hitting an obstacle (e.g. a stone, piece of wood, metal,...)

Process of visual control:

1. remove mowing blades
 2. remove grass and dirt
- around pin (31)

Attention !

Danger of accident if:

- the wearing area (30a) is worn up to the pin of the mowing blade (31)
- the large pin diameter is 28 mm or less
- the profile is only 5 mm or less (original measure = 7 mm)
- the riveted joint (1) of the pin is worn
- the pin of the blade is no longer firmly seated



If you notice one or several of these characteristics of wear stop mowing at once! Worn parts must be replaced by original parts made by Pöttinger immediately !

D

Schmierplan

8^h alle 8 Betriebsstunden
20^h alle 20 Betriebsstunden
1 J 1 x jährlich
* Variante

F

Plan de graissage

8^h Toutes les 8 heures de service
20^h Toutes les 20 heures de service
1 J 1 fois par an
* Variante

GB

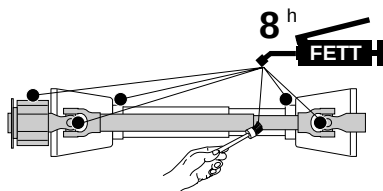
Lubrication chart

8^h after every 8 hours operation
20^h after every 20 hours operation
1 J once a year
* Variation

I

Schema di ingrassaggio

8^h ogni 8 ore d'esercizio
20^h ogni 20 ore d'esercizio
1 J volta all'anno
* Variante



1 J
(100 ha)

HD SAE 90
0,8 Liter

HD SAE 90
1,0 Liter

H FETT (IV)

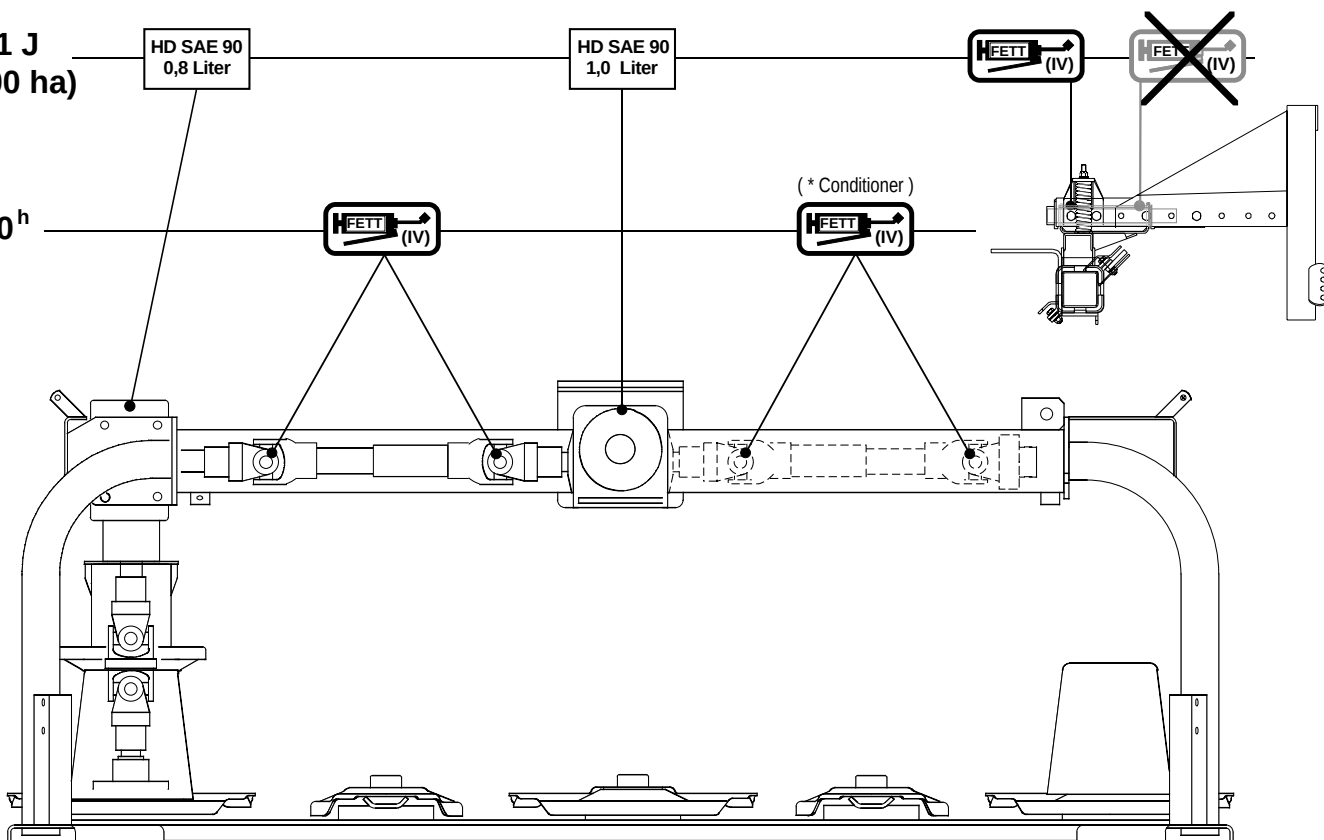
~~H FETT (IV)~~

20^h

H FETT (IV)

(* Conditioner)

H FETT (IV)



TD32/99/06

1/ = H FETT (IV)

Anzahl der Schmiernippel
Nombre de graisseurs
Number of grease nipples
Numero dei raccordi filettati
Antal smörjnipllar

CAT 220 *alpin*

(Type PSM 366)

Three-point linkage (40 cm adjustable)	Cat. I/II
Working width	2,16 m
No. of mowing discs	5
No. of knives per disc	2
Coverage up to	2,2 ha/h
Max. p.t.o. speed	540 rpm
Weight without conditioner	approx. 295 kg
Weight with conditioner	approx. 390 kg
Required power without conditioner	21 kW (28 HP)
Required power with conditioner	26 kW (35 HP)
Use with tractors up to max.	40 kW (55 HP)
Permanent sound emission level	91,1 dB(A)

Optional equipment:

Conditioner
Hydraulic lateral shifting

All data subject to revision.

CAT 260 *alpin*

(Type PSM 367)

Three-point linkage (40 cm adjustable)	Cat. I/II
Working width	2,58 m
No. of mowing discs	6
No. of knives per disc	2
Coverage up to	2,7 ha/h
Max. p.t.o. speed	540 rpm
Weight without conditioner	approx. 350 kg
Weight with conditioner	approx. 460 kg
Required power without conditioner	26 kW (35 HP)
Required power with conditioner	33 kW (45 HP)
Use with tractors up to max.	40 kW (55 HP)
Permanent sound emission level	92,9 dB(A)

Optional equipment:

Conditioner
Hydraulic lateral shifting

All data subject to revision.

The defined use of the mower unit

The "CAT 220 *alpin*" mower is intended solely for normal use in agricultural work.

- The mowing of grassland and short stemmed fodder.
Any other uses outside of these are regarded as undefined.
The manufacturer takes no responsibility for any resulting damage which occurs henceforth. The risk is carried by the user alone.
- The keeping of operating, service and maintenance requirements layed down by the manufacturer also come under the heading of „defined use“.

The defined use of the mower unit

The "CAT 260 *alpin*" mower is intended solely for normal use in agricultural work.

- The mowing of grassland and short stemmed fodder.
Any other uses outside of these are regarded as undefined.
The manufacturer takes no responsibility for any resulting damage which occurs henceforth. The risk is carried by the user alone.
- The keeping of operating, service and maintenance requirements layed down by the manufacturer also come under the heading of „defined use“.



Ihre/Your/Votre
Masch.Nr. / Fgst.Ident.Nr.

Position of Vehicle Identification Plate

The factory number is imprinted on the accompanying Vehicle Identification Plate (as shown) and on the frame. Guarantee issues and further inquiries cannot be processed without the factory number being stated.

Please enter the number onto the front page of the operating manual immediately after taking delivery of the vehicle/implement.

Supplement



Recommendations for work safety

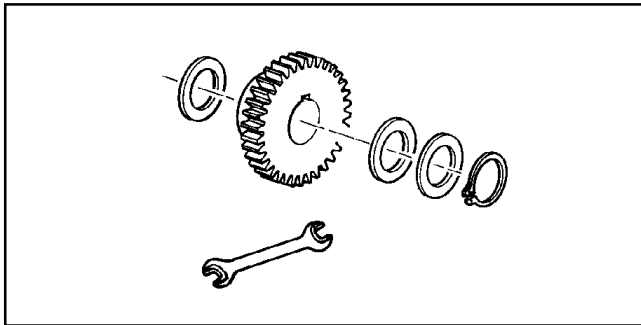
All points referring to safety in this manual are indicated by this sign.

1.) Defined use

- See "Technical Data".
- The keeping of operating, service and maintenance requirements layed down by the manufacturer also come under the heading of "defined use".

2.) Spare parts

- The **original components and accessories** have been designed especially for these machines and appliances.
- We want to make it quite clear that components and accesories that have not been supplied by us have not been tested by us.
- The installation and/or use of such products can, therefore,



negatively change or influence the construction characteristics of the appliance. We are not liable for damages caused by the use of components and accessories that have not been supplied by us.

- Alterations and the use of auxiliary parts that are not permitted by the manufacturer render all liability invalid.

3.) Protection devices

All protection devices must remain on the machine and be maintained in proper condition. Punctual replacement of worn and damaged covers is essential.

4.) Before starting work

- Before commencing work, the operator must be aware of all operating devices and functions. The learning of these is too late after having already commenced operation!
- The vehicle is to be tested for traffic and operating safety before each operation.

5.) Asbestos

- Certain sub-supplied components of the vehicle may contain asbestos due to technical reasons. Observe the warning on spare parts.

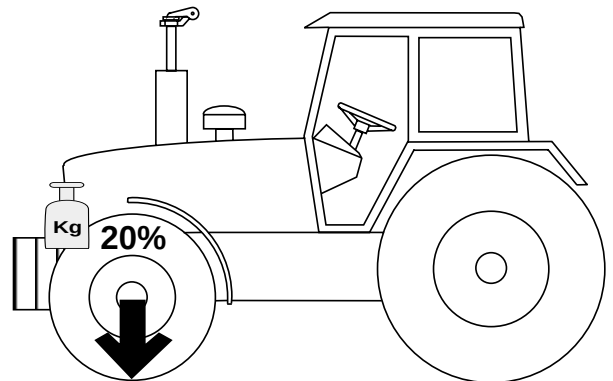


6.) Transport of persons prohibited

- The transport of persons on the machine is not permitted.
- The machine may only be driven on public roads when in the position stipulated for road transport.

7.) Driving ability with auxiliary equipment

- The towing vehicle is to be sufficiently equipped with weights at the front or at the rear in order to guarantee the steering and braking capacity (a minimum of 20% of the vehicle's tare weight on the front axle).



- The driving ability is influenced by ground conditions and by the auxiliary equipment. The driving must be adapted to the corresponding terrain and ground conditions.
- When driving through curves with a connected appliance, observe the radius and swinging mass of the appliance.
- When travelling in a curve with attached or semimounted implements, take into account the working range and swing mass of the implement!

8.) General

- Before attaching implement to three-point linkage, move system lever into a position whereby unintentional raising or lowering is ruled out!
- Danger of injury exists when coupling implement to tractor!
- Danger of injury through crushing and cutting exists in the three-point linkage area!
- Do not stand between tractor and implement when using three-point linkage external operation!
- Attach and detach drive shaft only when motor has stopped.
- When transporting with raised implement, secure operating lever against lowering!
- Before leaving tractor, lower attached implement to the ground and remove ignition key!
- Nobody is to stand between tractor and implement without tractor being secured against rolling using parking brake and/or wheel chocks!
- For all maintenance, service and modification work, turn driving motor off and remove universal drive.

9.) Cleaning the machine

Do not use high-pressure washers for the cleaning of bearing- and hydraulic parts.

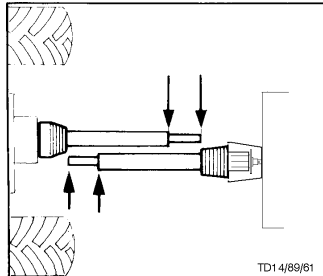


DRIVESHAFT

Important! Only use the indicated or accompanying drive shaft, otherwise the right to claim under guarantee for any possible damage does not exist.

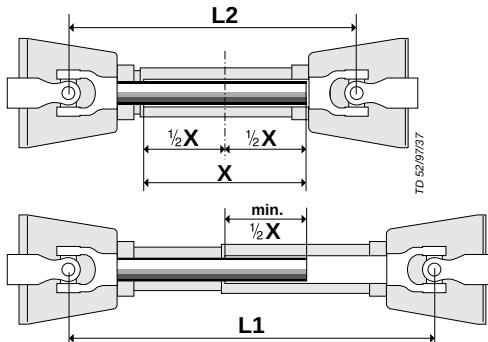
Matching driveshaft to tractor

To determine the actual length required, hold the two halves of the driveshaft side by side.



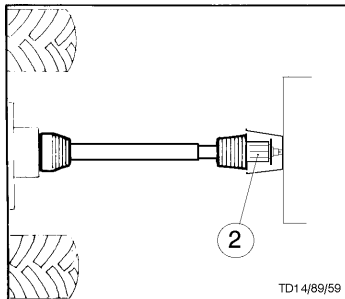
Procedure for cutting to length

- To determine length required, set implement in closest working position (L2) to tractor, hold driveshaft halves side by side and mark off.



Important!

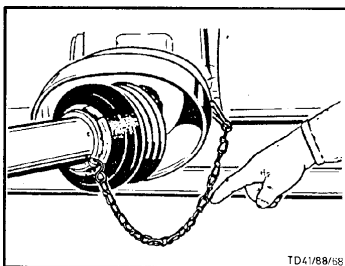
- Note the maximum operating length (L1)
 - Try to attain the greatest possible shaft overlap (min. $\frac{1}{2} X$)!
- Shorten inside and outside tube guard by the same amount.
- Fit torque limiter (2) of drive shaft to implement end of driveshaft!
- Always check that drive shaft locks are securely engaged before starting work.



Retaining chain

- Use chain to prevent tube guard from rotating.

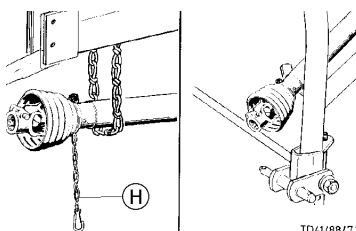
Take care that chain does not impede driveshaft pivoting.



Rules for working

Never exceed the maximum p. t. o. speed when using the implement.

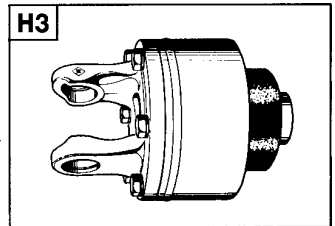
- When the p.t.o. is switched off, the implement hitched up may not stop at once.
Do not go close to the implement until all motion has stopped; only then may work be done on it.
- When the implement is parked, either remove the driveshaft and store it, or secure it with a chain. (Do not use retaining chain (H) for this).



1) How a cam type cut out safety clutch works:

This overload clutch switches the torque transmitted to zero if overloaded. To revert to normal operation, stop the p.t.o. drive briefly.

The clutch reengages at a speed below 200 rpm.



IMPORTANT !

The overload clutch on the driveshaft is not a "Full up" indicator. It is purely a torque limiter designed to protect the implement against damage.

Driving the right way will avoid triggering the clutch too often, and thus causing unnecessary wear on it and the implement.

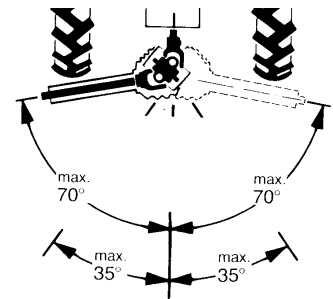
2) Wide-angle joint :

Maximum angle of deflection when working/stationary : 70°

3) Standard joint :

Maximum angle of deflection when stationary: 90°

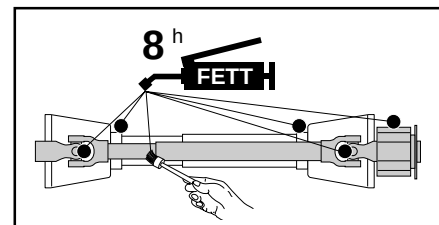
Maximum angle of deflection when working: 35°



Maintenance

Replace worn-out covers/guards at once.

- Lubricate with a brand-name grease before starting work and every 8 hours worked.
- Before any extended period of non-use, clean and lubricate driveshaft.



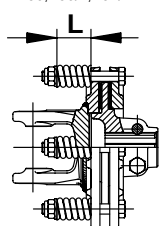
For winter working, grease the tube guards, to avoid them freezing together.

• Important for driveshafts with friction clutch

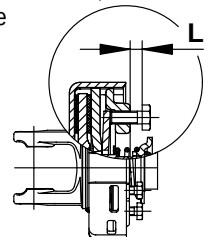
Prior to initial operation and after long periods out of use, check friction clutch for proper function.

- Measure dimension „L“ at compression spring of K90, K90/4 and K94/1 or at set screw of K92E and K92/4E.
 - Loosen screws to release the pressure on the friction disk.
 - Tighten set screws to dimension „L“.
- Clutch is ready for use.

K90, K90/4, K94/1



K92E, K92/4E

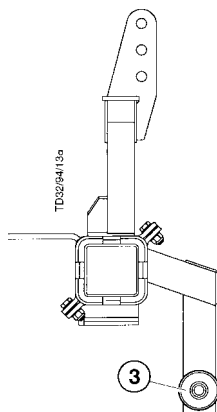


Custom-built Attaching

Because of differing types of lifting gears on various tractor models, special attaching kits are to be used. See Spare Parts list also.

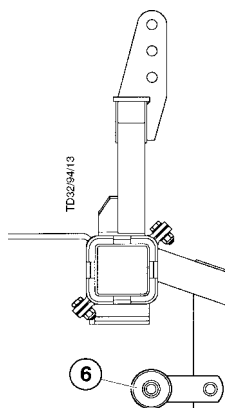
Nußmüller Rasant and Aebi

- Installation of a kit (Pos. 3) on mower units without conditioner is necessary.
- It is not necessary to install a kit on the tractor for mower units with conditioner. This implement is already equipped with a longer attaching frame.



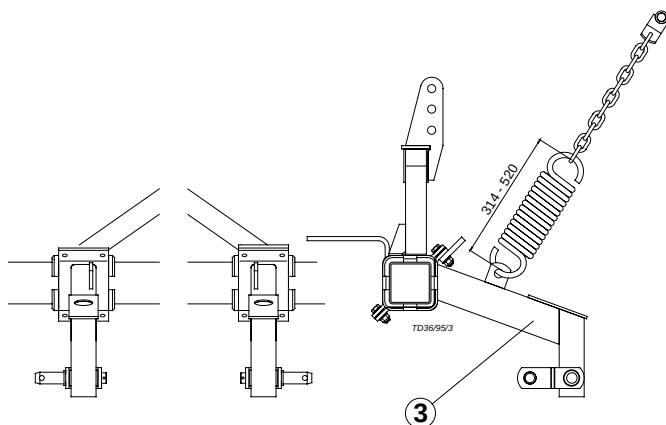
Reform Metrac

- Installation of a kit (Pos. 6) on the tractor for mower units without conditioner is not necessary.
- Mower units with conditioner are already equipped with a longer attaching frame. The kit (Pos. 5) is to be installed in addition to this.



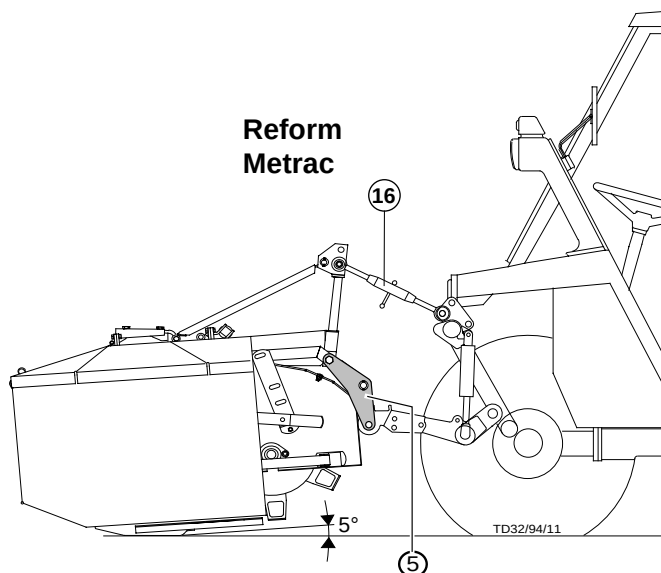
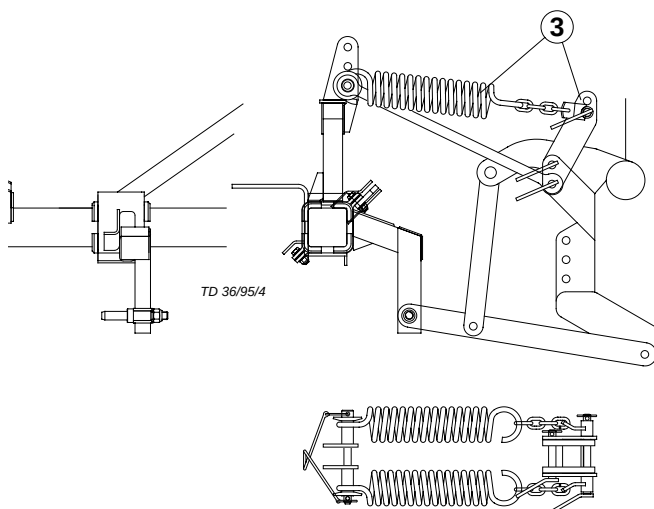
De Pietri

- Installation of a kit (Pos. 3) on mower units without conditioner is necessary.
- It is not necessary to install a kit on the tractor for mower units with conditioner. This implement is already equipped with a longer attaching frame.



Carraro

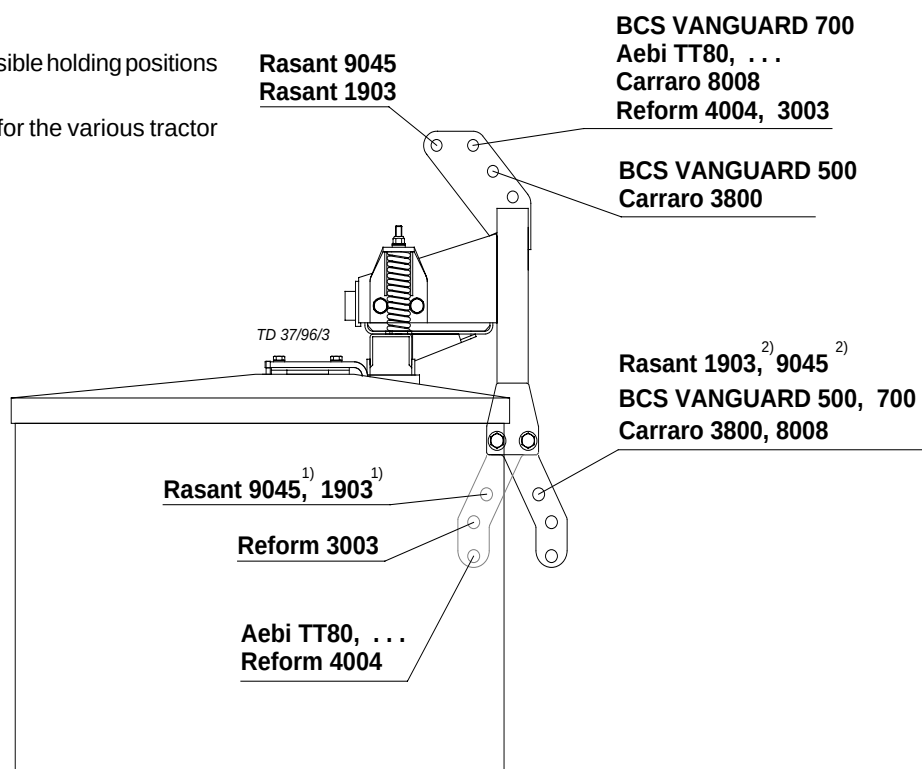
- Installation of a kit (Pos. 3) on mower units without conditioner is necessary.
- It is not necessary to install a kit on the tractor for mower units with conditioner. This implement is already equipped with a longer attaching frame.



Universal attachment frame

This attachment frame offers many possible holding positions for the various tractor lifting gears.

This enables good mower adaptation for the various tractor types.



¹⁾ with short Oberlenker

²⁾ with original Oberlenker

Maximum drive shaft angle

Most drive shafts may only be angled up to a **maximum of 25°** when in continuous operation (GW max.).

- Observe the advice in the drive shaft manufacturer's operating manual.

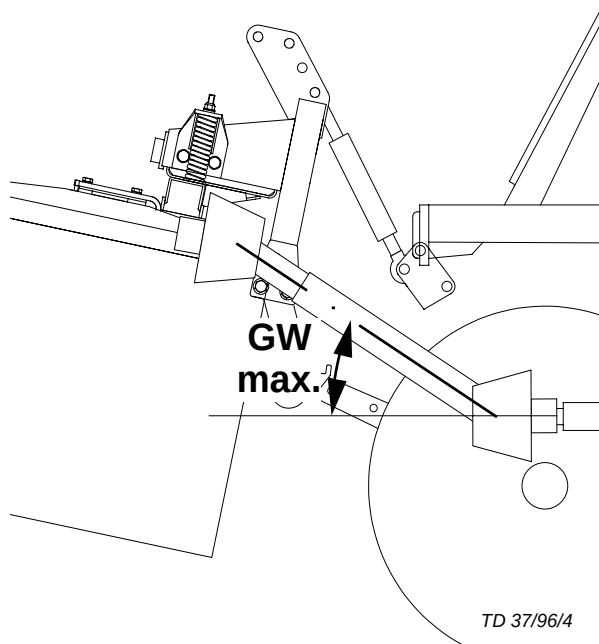
In order to prevent damage

Because of the lifting gear geometry of some tractors (BCS, Carraro), an unfavourable universal-joint angle can occur when raising the implement. This leads to irregular drive shaft action.



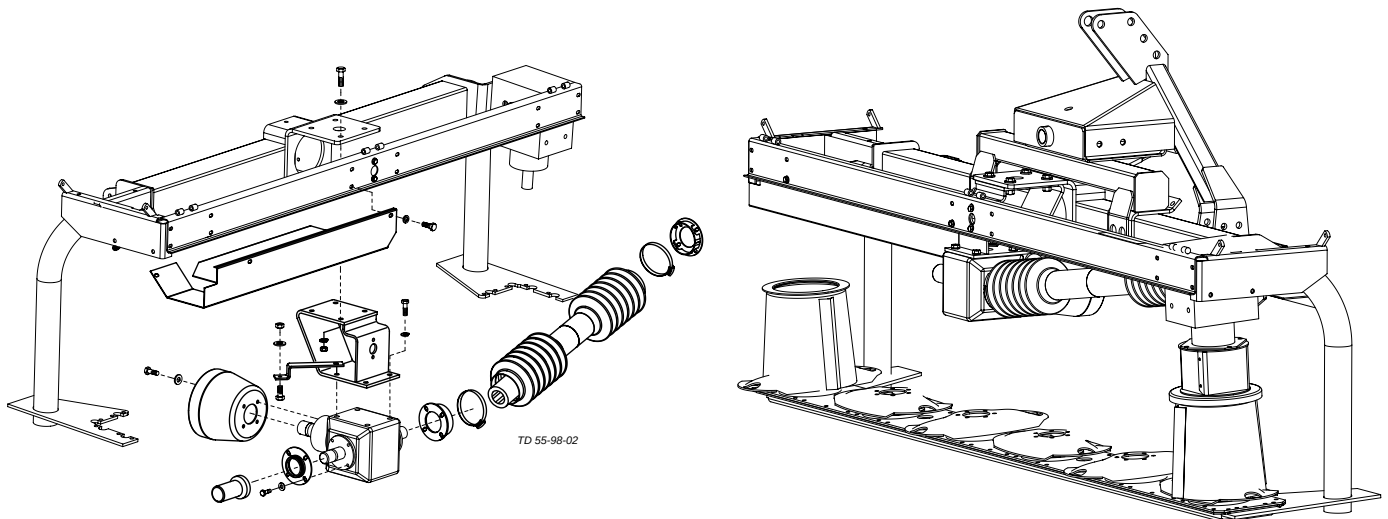
This is noticeable through abnormal noise development and vibrations.

- In order to prevent damage in such a case, turn the drive shaft off immediately and reduce the lifting height before further.



Getriebeversetzung

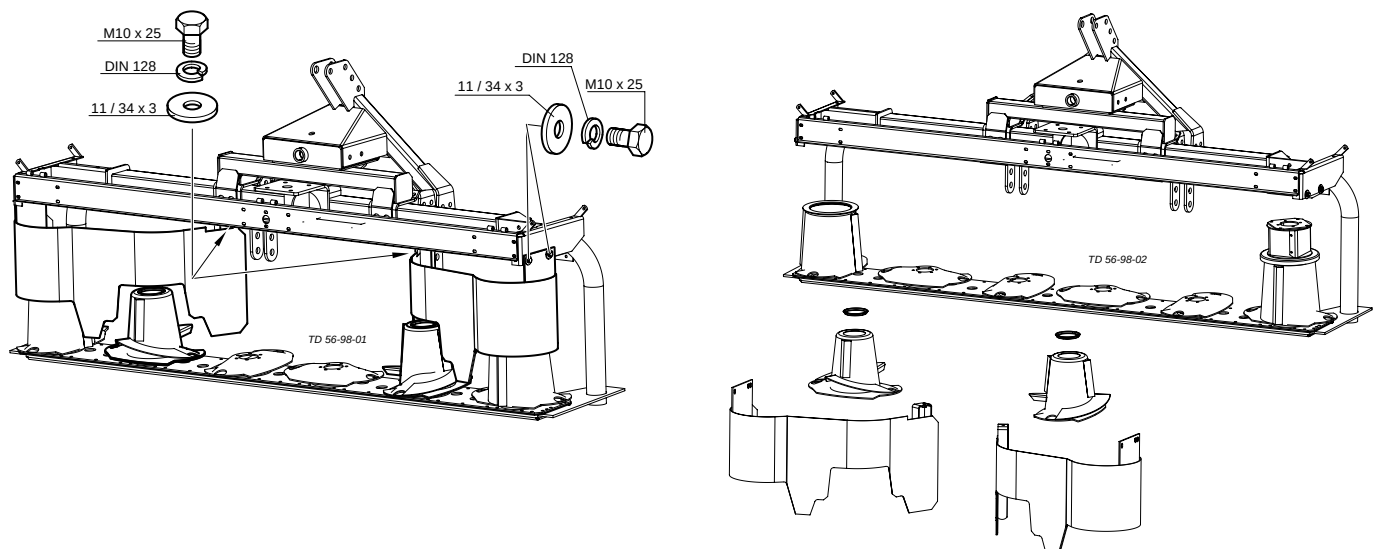
- Pasquali - Ergo 8.60 u. 8.80
- BCS - Vanguard 500 MT u. 700 MT
- Antonio Carraro - Tigretac 5500 ; 7700 u. 8008
- Ferrari - Wedetrac RS 50 u. RS 70
- Valpadana - Trattori 9065 u. 9585



CAT 260 alpin (Type 367)

Schwadformer für

- AEBI - Terratrac
- RASANT - Kombi Trac
- REFORM - Metrac



D Betriebsstoffe		GB Lubricants		F Lubrifiants		I Lubrificanti		NL Smeermiddelen	
Ausgabe 1997		Edition 1997		Édition 1997		Edizione 1997		Uitgave 1997	
Leistung und Lebensdauer der Maschine sind von sorgfältiger Wartung und der Verwendung guter Betriebsstoffe abhängig. Unsere Betriebsstoffaufleistung erleichtert die richtige Auswahl geeigneter Betriebsstoffe. Im Schmierplan ist der jeweils einzusetzende Betriebsstoff durch die Betriebsstoffkennzahl (z.B. "III") symbolisiert. Anhand von "Betriebsstoffkennzahl" kann das geforderte Qualitätsmerkmal und das entsprechende Produkt der Mineralölfirmen festgestellt werden. Die Liste der Mineralölfirmen erhebt keinen Anspruch auf Vollständigkeit.		The performance and the lifetime of the farm machines are highly depending on a careful maintenance and application of correct lubricants. Our schedule enables an easy selection of selected products. The applicable lubricants are symbolized (eg. "III"). According to this lubricant product code number the specification, quality and brand name of oil companies may easily be determined. The listing of the oil companies is not said to be complete. Gear oils according to operating instructions - however at least once a year. - Take out oil drain plug, let run out and duly dispose waste oil.		Le bon fonctionnement et la longévité des machines dépendent d'un entretien soigneux et de l'utilisation de bons lubrifiants. Notre liste facilite le choix correct des lubrifiants. Sur le tableau de graissage, on trouve un code (p.ex. "III") se référant à un lubrifiant donné. En consultant ce code on peut facilement déterminer la spécification demandée du lubrifiant. La liste des sociétés pétrolières ne prétend pas d'être complète. Pour l'huile transmission consulter le cahier d'entretien - au moins une fois par an. - Retirer le bouchon de vidange, laisser l'huile s'écouler et l'éliminer correctement.		L'efficienza e la durata della macchina dipendono dall'accuratezza della sua manutenzione e dall'impiego dei lubrificanti adatti. Il nostro elenco dei lubrificanti Vi agevola nella scelta del lubrificante giusto. Il lubrificante da utilizzarsi di volta in volta è simbolizzato nello schema di lubrificazione da un numero caratteristico (per es. "III"). In base al "numero caratteristico del lubrificante" si possono stabilire sia la caratteristica di qualità che il progetto corrispondente delle compagnie petrolifere. L'elenco delle compagnie petrolifere non ha pretese di completezza. Motori a quattro tempi: bisogna effettuare il cambio dell'olio ogni 100 ore di funzionamento e quello dell'olio per cambi come stabilito nel manuale delle istruzioni per l'uso (tuttavia, almeno 1 volta all'anno). - Togliere il tappo di scarico a vite dell'olio; far scolare l'olio e eliminare l'olio come previsto dalla legge anti-inquinamento ambientale.		Olie in aandrijvingen volgens de gebruiksaanwijzing verwisselen - echter tenminste 1 x jaarlijks. - Ölablaßschraube herausnehmen, das Altöl auslaufen lassen und ordnungsgemäß entsorgen.	
Vor Stilllegung (Winterperiode) Ölwechsel durchführen und alle Fettschmierstellen abschmieren. Blanke Metallteile außen (Gelenke, usw.) mit einem Produkt gemäß "IV" in der umseitigen Tabelle vor Rost schützen.		Before garaging (winter season) an oil change and greasing of all lubricating points has to be done. Unprotected, blanc metal parts outside (joints, etc.) have to be protected against corrosion with a group "IV" product as indicated on the reverse of this page.		Avant l'arrêt et hiver: vidanger et graisser. Métaux nus à l'extérieur protéger avec un produit type "IV" contre la rouille (consulter tableau au verso).		Effettuare il cambio dell'olio ed ingrassare tutte le parti che richiedono una lubrificazione a grasso prima del fermo invernale della macchina. Proteggere dalla ruggine tutte le parti metalliche esterne scoperte con un prodotto a norma di "IV" della tabella riportata sul retro della pagina.		Voor het buiten gebruik stellen (winterperiode) de olie-wisels uitvoeren en alle vetnippels smeerpunten doorsmeren. Blanke metaaldelen (koppelingen enz.) met een produkt uit groep "IV" van de navolgende tabel tegen corrosie beschermen.	
Betriebsstoff-Kennzahl Lubricant indicator Code du lubrifiant Numero caratteristico del lubrificante Smeermiddelen code	I				V	VI	VII		
gefordertes Qualitätsmerkmal required quality level niveau de performance demandé caratteristica richiesta di qualità verlangte kwaliteitskenmerken	HYDRAULIKÖL HLP DIN 51524 Teil 2 Siehe Anmerkungen * ** ***	Motoröl SAE 30 gemäß API CD/SF motor oil SAE 30 according to API CD/SF huile moteur SAE 30 niveau API CD/SF olio motore SAE 30 secondo specifiche API CD/SF	Getriebeöl SAE 90 bzw. SAE 85 W-140 gemäß API-GL 4 oder API-GL 5 gear oil, SAE 90 resp. SAE 85 W-140 according to API-GL 4 or API-GL 5 huile transmission SAE 90 ou SAE 85 W-140, niveau API-GL 4 ou API-GL 5 olio per cambi e differenziali SAE 90 o SAE 85W-140 secondo specifiche API-GL 4 o API-GL 5	Li-Fett (DIN 51 502, KP 2K) lithium grease graisse au lithium grasso al litio	Getriebeöl SAE 90 bzw. SAE 85 W-140 gemäß API-GL 5 gear oil SAE 90 resp. SAE 85 W-140 according to API-GL 5 huile transmission SA 90 ou SAE 85 W-140, niveau API GL 5 olio per cambi e differenziali SAE 90 o SAE 85 W-140 secondo specifiche API-GL 5	Komplexfett (DIN 51 502: KP 1P) complex grease graisse complexe grasso a base di saponi complessi	Getriebeöl SAE 90 bzw. SAE 85 W-140 gemäß API-GL 5 gear oil SAE 90 resp. SAE 85 W-140 according to API-GL 5 huile transmission SA 90 ou SAE 85 W-140, niveau API GL 5 olio per cambi e differenziali SAE 90 o SAE 85 W-140 secondo specifiche API-GL 5		

Firma Company Société Societá	I				V	VI	VII	ANMERKUNGEN
AGIP	OSO 32/46/68 ARNICA 22/46	MOTORÖL HD 30 SIGMA MUL.TI.15W-40 SUPER TRACTORÖL UNIVERS. 15W-30	MOTORÖL HD 30 MULTIGRADE HDC 15W-40 TRACTAVIA HF SUPER 10 W-30 15W-30	GR MU 2	GR SLL GR LFO	-	ROTRA MP 80W-90 ROTRA MP 85W-140	* Bei Verbundarbeit mit Nabdbremsen- schleppern ist die internationale Spezifikation J 20 A erforderlich
	VITAM GF 32/46/68 VITAM HF 32/46	SUPER KOWAL 30 MULTI TURBORAL SUPER TRAKTORAL 15W-30	GETRIEBEÖL EP 90 GETRIEBEÖL HYP 85W-90	ARALUB HL 2	ARALUB FDP 00	ARALUB FK 2	GETRIEBEÖL HYP 90	
ARAL	AVILUB PL 32/46 AVILUB VG 32/46	MOTORÖL HD 30 MULTIGRADE HDC 15W-40 TRACTAVIA HF SUPER 10 W-30	GETRIEBEÖL MZ 90 M MULTIHYP 85W-140	AVIA MEHRZWECKFETT AVIA ABSCHMIERFETT	AVIA GETRIEBEFLEISSFETT	AVIALUB SPEZIALFETT LD	GETRIEBEÖL HYP 90 EP MULTHYP 85W-140 EP	
AVIA								
BAYWA	HYDRAULIKÖL HLP 32/46/68 SUPER 2000 CD-MC * HYDRA HYDR. FLUID * HYDRAULIKÖL MC 530 ** PLANTOHD 40N ***	SUPER 2000 CD-MC SUPER 2000 CD HD SUPERIOR 20 W-30 HD SUPERIOR SAE 30	SUPER 8090 MC HYPOID 80W-90 HYPOID 85W-140	MULTI FETT 2 SPEZIALFETT FLM PLANTOGEL 2 N	GETRIEBEFLEISSFETT NLGI 0 RENOLIT DURAPLEX EP 00 PLANTOGEL 00N	RENOPLEX EP 1	HYPOID 85W-140	** Hydrauliköle HLP-(D) + HV
BP	ENERGOL SHF 32/46/68	VISCO 2000 ENERGOL HD 30 VANELLUS M 30	GEAR OIL 90 EP HYPOGEAR 90 EP	ENERGREASE LS-EP 2	FLIESSFETT NO ENERGREASE HTO	OLEX PR 9142	HYPOGEAR 90 EP HYPOGEAR 85W-140 EP	*** Hydrauliköle auf Pflanzenölbasis HLP + HV Biologisch abbaubar, deshalb besonders umwelt- freundlich
CASTROL	HYSPIN AWS 32/46/68 HYPSPIN AWH 32/46	RX SUPER DIESEL 15W-40 POWERTRANS	EPX 80W-90 HYPOY C 80W-140	CASTROL GREASE LM	IMPERVIA MMO	CASTROL GREASE LMN	EPX 80W-90 HYPOY C 80W-140	
ELAN	HLP 32/46/68 HLP-M M32M46	MOTORÖL 100 MS SAE 30 MOTORÖL 104 CM 15W-40 AUSTROTRAC 15W-30	GETRIEBEÖL MP 85W-90 GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-30	LORENA 46 LITORA 27	RHENOX 34	-	GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-140	
ELF	OLNA 32/46/68 HYDRELIF 46/68	PERFORMANCE 2 B SAE 30 8000 TOURS 20W-30 TRACTORELF ST 15W-30	TRANSSELF TYP B 90 85W-140 TRANSSELF EP 90 85W-140	EPEX 2 ROLEXA 2 MULTI 2	GA O EP POLY G O	MULTIMOTIVE 1	TRANSSELF TYP B 90 85W-140 TRANSSELF TYP BLS 80 W-90	
ESSO	NUTO H 32/46/68 NUTO HP 32/46/68	PLUS MOTORÖL 20W-30 UNIFARM 15W-30	GEARÖL GP 80W-90 GEARÖIL GP 85W-140	MULTI PURPOSE GREASE H	FIBRAX EP 370	NEBULA EP 1 GP GREASE	GEAR OIL CX 90W-90 GEAR OIL GX 85W-140	* When working in conjunction with wet- brake tractors, the international specification J 20 A is necessary.
EVVA	ENAK HLP 32/46/68 ENAK MULT 146/68	SUPER EWAROL HD B SAE 30 UNIVERSAL TRACTORÖL SUPER	HYPOID GA 90 HYPOID GB 90	HOCHDRUCKFETT LT/SC 280	GETRIEBEFETT MO 370	EVVA CA 300	HYPOID GB 90	
FINA	HYDRAN 32/46/68	DELTA PLUS SAE 30 SUPER UNIVERSAL OIL	PONTONIC N 85W-90 PONTONIC MP 85W-90 85W-140 SUPER UNIVERSAL OIL	MARSON EP L 2	NATRAN 00	MARSON AX 2	PONTONIC MP 85W-140	** Hydraulic oil HLP-(D) + HV.
FUCHS	RENOLIN 1025 MC *** TITAN HYDRAMOT 1030 MC ** RENGEAR HYDRA * PLANTOHD 40N ***	TITAN HYDRAMOT 1030 MC TITAN UNIVERSAL HD	RENOGEAR SUPER 8090 MC RENOGEAR HYPOID 85 W-140 RENOGEAR HYPOID 90	RENOLIT MP RENOLIT FLM 2 RENOLIT ADHESIV 2 PLANTOGEL 2 N	RENOSOD GFO 35 DURAPLEX EP 00 PLANTOGEL 00N	RENOPLEX EP 1	RENOGEAR SUPER 8090 MC RENOGEAR HYPOID 85W-140 RENOGEAR HYPOID 90	*** Hydraulic oil with vegetable oil base HLP + HV is bio-degradable and is therefore especially safe for the environment.
GENOL	HYDRAULIKÖL HLP 32/46/68 HYDRAMOT 1030 MC * HYDRAULIKÖL 520 ** PLANTOHD 40N ***	MULTI 2030 2000 TC HYDRAMOT 15W-30 HYDRAMOT 1030 MC	GETRIEBEÖL MP 90 HYPOID EW 90 HYPOID 85W-140	MEHRZWECKFETT SPEZIALFETT GLM PLANTOGEL 2 N	GETRIEBEFLEISSFETT PLANTOGEL 00N	RENOPLEX EP 1	HYPOID EW 90 HYPOID 85W-140	
MOBIL	DTE 22/24/25 DTE 13/15	HD 20W-20 DELVAC 12/30 SUPER UNIVERSAL 15W-30	MOBILUBE GX 90 MOBILUBE HD 90 MOBILUBE HD 85W-140	MOBILGREASE MP	MOBILUX EP 004	MOBILPLEX 47	MOBILUBE HD 90 MOBILUBE HD 85W-140	
RHG	RENOLIN B 10/15/20 RENOLIN B 32 HV/46HV1	EXTRA HD 30 SUPER HD 20 W-30	MEHRZWECKGETRIEBEÖL SAE 90 HYPOID EW 90	MEHRZWECKFETT RENOLIT MP DURAPLEX EP	RENOSOD GFO 35	RENOPLEX EP 1	HYPOID EW 90	
SHELL	TELLUS S32/S 46/S68 TELLUS T 32/146	AGROMA 15W-30 ROTELLA X 30 RIMULA X 15W-40	SPIRAX 90 EP SPIRAX HD 90 SPIRAX HD 85/140	RETINAX A ALVANIA EP 2	SPEZ. GETRIEBEFETT H SIMMUNA GREASE O	AEROSHELL GREASE 22 DOLLIUM GREASE R	SPIRAX HD 90 SPIRAX HD 85W-140	
TOTAL	AZOLLA ZS 32, 46, 68 EQUIVIS ZS 32, 46, 68	RUBIA H 30 MULTAGRI TM 15W-20	TOTAL EP 95W-90 TOTAL EP B 85W-90	MULTIS EP 2	MULTIS EP 200	MULTIS HT 1	TOTAL EP B 85W-90	
VALVOLINE	ULTRAMAX HLP 32/46/68 SUPER TRAC FE 10W-30* ULTRAMAX HVP 32 ULTRAPLANT 40 ***	SUPER UPO 30 STOJ 15W-30 SUPER TRAC FE 10W-30 ALL FLEET PLUS 15W-40	HP GEAR OIL 90 oder 85W-140 TRANS GEAR OIL 80W-90	MULTILUBE EP 2 VAL-PLEX EP 2 PLANTOGEL 2 N	RENOLIT ZPS 000 DEGRALUB ZSA 000	DURAPLEX EP 1	HP GEAR OIL 90 oder 85W-140	
VEEDOL	ANDARIN 32/46/68	HD PLUS SAE 30	MULTIGRADE SAE 80/90 MULTIGEAR B 90 MULTIGEAR C SAE 85W-140	MULTIPURPOSE	-	-	MULTIGEAR B 90 MULTI C SAE 85W-140	
WINTERSHALL	WIOLAN HS (HG) 32/46/68 WIOLAN HVG 46 ** WIOLAN HP 32/46 *** HYDROLFLUID *	MULTI-REKORD 15W-40 PRIMANOL REKORD 30	HYPOID GETRIEBEÖL 80W-90, 85W-140 MEHRZWECKGETRIEBEÖL 80W-90	WIOLUB LFP 2	WIOLUB GFW	WIOLUB AFK 2	HYPOID-GETRIEBEÖL 80W-90, 85W-140	

Repairs on the cutter bar

Install flange (F)

Use suitable tools (W)!

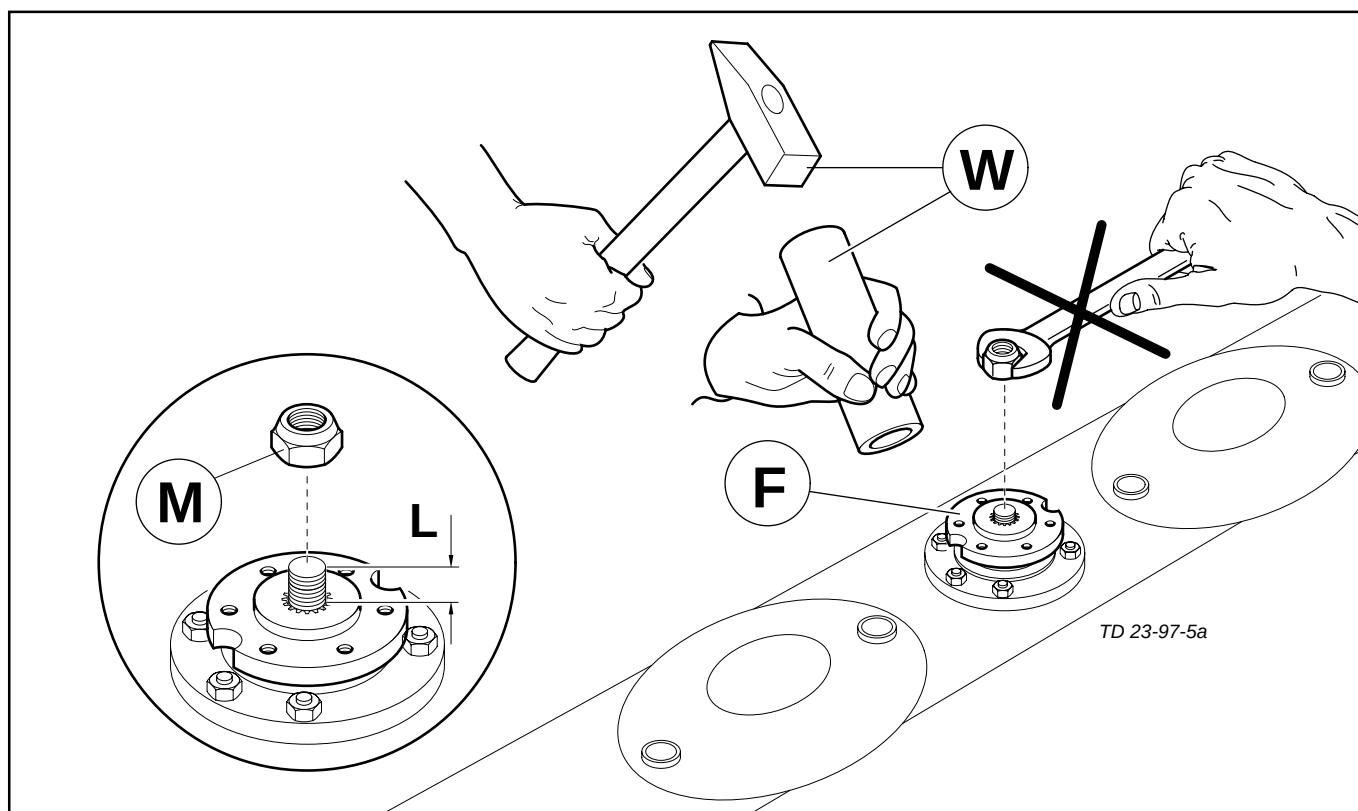
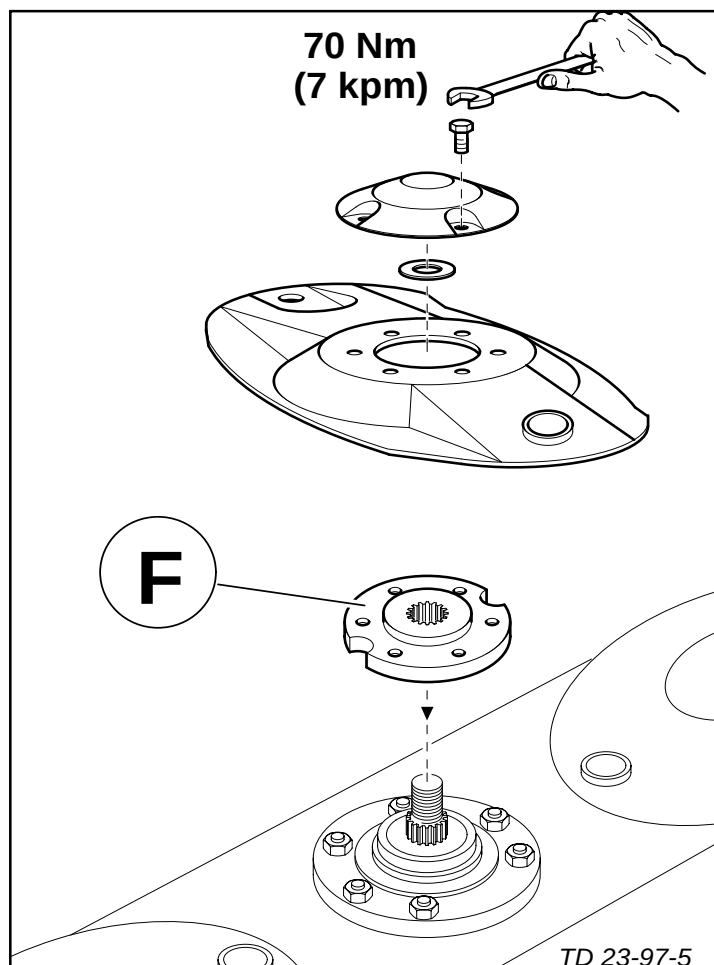
Important Point!



When screwing the nut on, do not push the flange (F) onto the drive shaft profile - the thread on the drive shaft could become damaged.

Only screw the nut (M) on when there is sufficient thread length (L) in order to prevent any damage.

- Secure nut (M) against loosening.
 - with „Loctite 242“ or an equivalent product.





Appendix 1

EC Certificate of Conformity

conforming to EEC Directions 89/392

We ALOIS PÖTTINGER Maschinenfabrik Gesellschaft m.b.H.*(name of supplier)*A-4710 Grieskirchen; Industriegelände 1*(full address of company - where this concerns authorized agents within the Common Market, also state the company name and manufacturer)*

declare in sole responsibility, that the product

Scheibenmäher CAT 220 alpin, Type PSM 366*(make, model)*

to which this certificate applies, conforms to the basic safety and health requirements of EEC Directions 89/392,

(if applicable)

and to the other relevant EEC Directions.

*(title and/or number and date of issue of the other EEC Directions)**(if applicable)*

To effect correct application of the safety and health requirements stated in the EEC Directions, the following standards and/or technical specifications were consulted:

EN 292-1 : 1991 EN 292-2 : 1991*(title and/or number and date of issue of standards and/or specifications)*Grieskirchen, 21.01.2000*(Place and date of issue)*
ppa. Ing. W. Leposa
Entwicklungsleitung*(Name and job function of authorized person)*

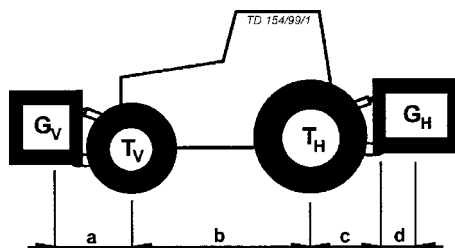
Combination of tractor and mounted implement



The mounting of implements on the front or rear three point linkage shall not result in exceeding the maximum permissible weight, the permissible axle loads and the tyre load carrying capacities of the tractor. The front axle of the tractor must always to be loaded with at least 20 % of the unladen weight of the tractor.

Make sure before buying an implement that these conditions are fulfilled by carrying out the following calculations or by weighing the tractor/implement combination.

Determination of the total weight, the axle loads, the tyre load carrying capacity and the necessary minimum ballasting



For the calculation you need the following data:

T_L [kg]	unladen weight of tractor	①	a [m]	distance from centre of gravity for combined front mounted implement/front ballast to front axle centre	② ③
T_V [kg]	front axle load of unladen tractor	①			
T_H [kg]	rear axle load of unladen tractor	①	b [m]	Tractor wheelbase	① ③
G_H [kg]	combined weight of rear mounted implement/rear ballast	②	c [m]	distance from rear axle centre to centre of lower link balls	① ③
G_V [kg]	combined weight of front mounted implement/front ballast	②	d [m]	distance from centre of lower link balls to centre of gravity for combined rear mounted implement/rear ballast	②

- ① see instruction handbook of the tractor
- ② see price list and/or instruction handbook of the implement
- ③ to be measured

Consideration of rear mounted implement and front/rear combinations

1. CALCULATION OF MINIMUM BALLASTING AT THE FRONT $G_{V \min}$

$$G_{V \min} = \frac{G_H \cdot (c + d) - T_V \cdot b + 0,2 \cdot T_L \cdot b}{a + b}$$

Record the calculated minimum ballasting which is needed at the front of the tractor into the table.

Front mounted implement

2. CALCULATION OF THE MINIMUM $G_{H \min}$

Record the calculated minimum ballasting which is needed at the rear of the tractor into the table.

$$G_{H \min} = \frac{G_V \cdot a - T_H \cdot b + 0,45 \cdot T_L \cdot b}{b + c + d}$$

3. CALCULATION OF THE REAL FRONT AXLE LOAD $T_{V\text{tat}}$

(If with the front mounted implement (G_V) the required minimum front ballasting ($G_{V\text{min}}$) cannot be reached, the weight of the front mounted implement has to be increased to the weight of the minimum ballasting at the front!)

$$T_{V\text{tat}} = \frac{G_V \cdot (a + b) + T_V \cdot b - G_H \cdot (c + d)}{b}$$

Record the calculated real front axle load and the permissible front axle load of the tractor into the table.

4. CALCULATION OF THE REAL TOTAL WEIGHT G_{tat}

(If with the rear mounted implement (G_H) the required minimum rear ballasting ($G_{H\text{min}}$) cannot be reached, the weight of the rear mounted implements has to be increased to at least the weight of the minimum ballasting at the rear!)

$$G_{\text{tat}} = G_V + T_L + G_H$$

Record the calculated real and the permissible total weight given in the instruction handbook for the tractor into the table.

5. CALCULATION OF THE REAL REAR AXLE LOAD $T_{H\text{tat}}$

Record the calculated real and the permissible rear axle load given in the instruction handbook for the tractor into the table.

$$T_{H\text{tat}} = G_{\text{tat}} - T_{V\text{tat}}$$

6. TYRE LOAD CARRYING CAPACITY

Record double the value (two tyres) of the permissible load carrying capacity into the table (see for instance documentation provided by the tyre manufacturer).

Table

	Real value according to calculation		Permissible value according to instruction handbook		Double permissible tyre load carrying capacity (two tyres)
Minimum ballasting front/rear	/ kg		---		---
Total weight	kg	≤	kg		---
Front axle load	kg	≤	kg	≤	kg
Rear axle load	kg	≤	kg	≤	kg

The minimum ballasting has to be attached to the tractor either in form of a mounted implement or ballasting weight!

The calculated values must be less or equal (<) the permissible values!

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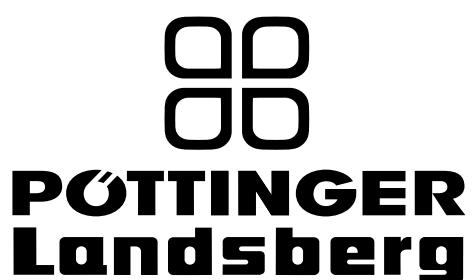
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