

## © Operating instructions

Nr. 99 212.GB.809.0

+ INSTRUCTIONS FOR PRODUCT DELIVERY . . . Page 3

---

### **HIT 58 N**

( Type ZK 212 : + . . . 01001 )

### **EUROHIT 58 N**

( Type ZK 212 : + . . . 01931 )

Tedder

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



### 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.

<sup>GB</sup> **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.



Table of contents

Hitching of machines with three point linkage ..... 5  
 Locking the headstock during use on roads and when lowering ..... 5  
 Release rope ..... 5  
 Note ..... 5

**HITCHING ===== 5**  
 Lowering the rotary tedder ..... 6

**LOWERING THE MACHINE ===== 6**  
 Cleaning of machine parts ..... 6  
 Parking in the open ..... 6  
 Winter storage ..... 6  
 Adjustment of rotor inclination ..... 7  
 Tine adjustment ..... 7

**ADJUSTMENTS BEFORE OPERATION ===== 7**  
 Driving on public roads: ..... 7  
 Driving on public roads: ..... 8  
 Conversion from working to transport position ..... 8  
 Attention! ..... 8  
 The order of operation must be adhered to. .... 8  
 Locking the headstock during use on roads : ..... 8

**TRANSPORTPOSITION ===== 8**  
 Warntafeln ..... 9  
 Tableau de signalisation ..... 9  
 Warning plates ..... 9

**ECLAIRAGE ===== 9**

**REMOVABLE LIGHTNING ===== 9**  
 Conversion from transport to working position ..... 11

**WORKING POSITION ===== 11**  
 General guidelines for working with the machine ..... 12  
 Beware! implements with three-point-linkage ..... 12  
 Operating on slopes ..... 12  
 Adjustment to implements with three-point-linkage: ..... 12  
 Unterlenker fixieren ..... 12  
 P.t.o. speed ..... 12  
 Tractor control device (ST) ..... 12  
 Zinkeneinstellung ..... 12

**USE ===== 12**  
 Clearing field edges (border tending) to the left or to the right ..... 13  
 Anti-vibration braces ..... 14  
 Remedy for noisy machine running ..... 14  
 Turning manoeuvre in working position ..... 14  
 Maintenance and servicing ..... 15  
 Intake transmission ..... 15  
 Changing tines ..... 15  
 Gas container ..... 15  
 Note ..... 15  
 Alteration of gas container pressure ..... 15

**MAINTENANCE ===== 15**  
 Technical Data ..... 16  
 Optional extras ..... 16  
 Position of Vehicle Identification Plate ..... 16

**TECHNICAL DATA ===== 16**  
 The defined use of the rotary tedder ..... 16

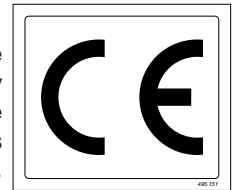
**SUPPLEMENT ===== 17**  
 Recommendations for work safety ..... 19  
 DRIVESHAFT ..... 20

Lubrication chart ..... 21

Important! Additional Information ..... 25  
 Combination of tractor and mounted implement ..... 25

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** 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.

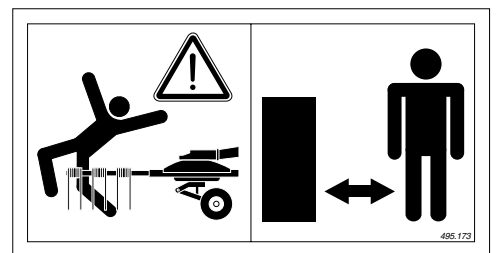
Meaning of warning signs

Never reach into the crushing danger area as long as parts may move.



bsb 449 374

Do not enter rotor area while driving motor is running.



495.173

Stay clear of swinging area of implements



bsb 449 567

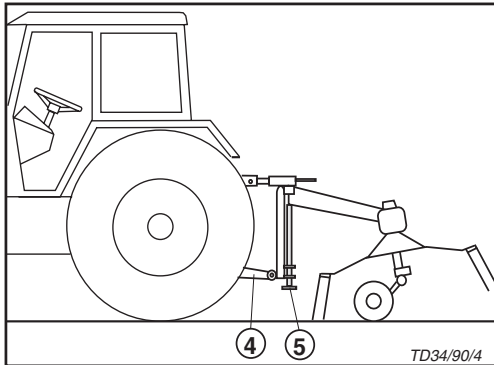
### Hitching of machines with three point linkage



**Safety hints:**

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

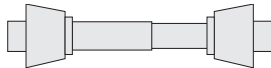
1. Pinning the machine to the three point linkage.
2. Fix the hydraulic lower link (4) in such a way that the



machine cannot swing out sideways.

3. Push in the support foot (5) and secure.

- Before using for the first time, the length of the drive shaft must be checked and adjusted if necessary (see also supplement B "Drive shaft adaption").

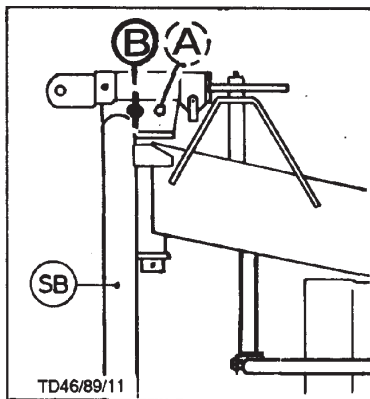


### Locking the headstock during use on roads and when lowering

For transport the headstock (SB) must be locked using a lock nut. A = working position B = transport position

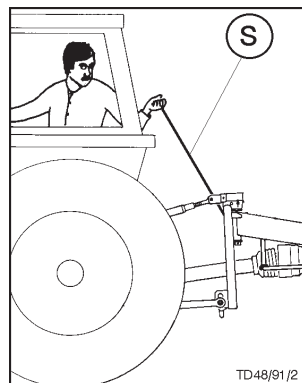
**Important!**

Only reposition the lock pin when the machine is in the raised position.



### Release rope

- Run rope (S) into tractor cabin.

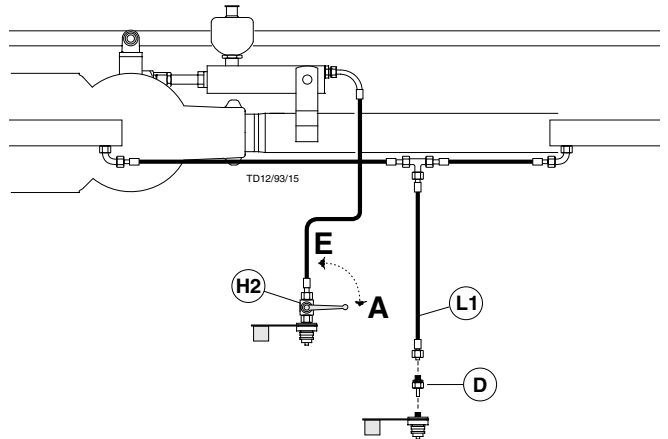


### Connecting hydraulic system to the tractor



For reasons of accident prevention the p.t.o. must be switched off and the rotors must come to a stand still before raising the side rotors.

- Only connect hydraulic system to the tractor when stopcock is closed (position A).



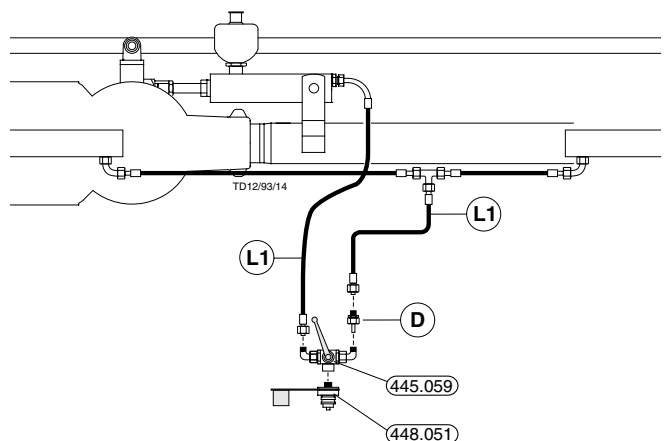
### Note

- Hydraulic line L1 is available in every model.
- For machines with hydraulic wheel adjusting equipment it is necessary to have a second simple functioning hydraulic connection on the tractor. The two-way stopcock (H2) is connected to this.
- If the tractor only has one hydraulic connection, then instead of a two-way stopcock (H2), a three-way stopcock (order no. 445.059) and the plug (order no. 448.051) which goes with it can be fitted.

This means any individual hydraulic circuit can be selected.



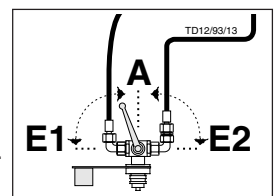
With this connection variation, the backflow choke valve (D) may not be removed.



**Position A:** Stopcock closed.

**Position E1:** Swivelling of outer rotors.

**Position E2:** Swivelling of wheels.



## Lowering the rotary tedder

The machine can be lowered both from the working position and from the transport position.



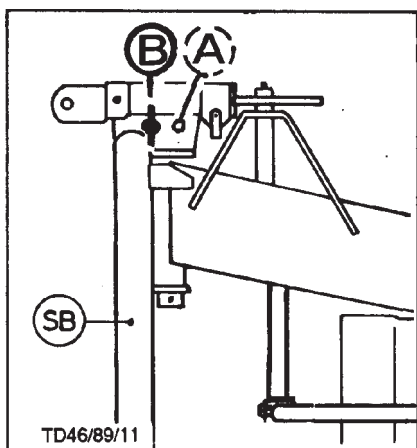
### Danger of tipping

Park the machine on firm, level ground.

If the ground is soft then the area where the support foot is to stand must be appropriately increased using a suitable aid (e.g. wooden board).

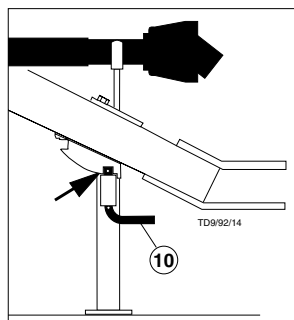
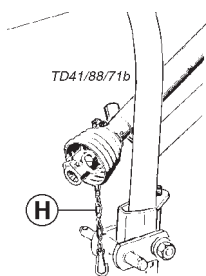
- Unpin bolt on the slewing headstock (SB) in position A.

### Important!

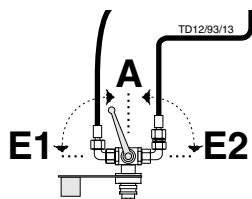
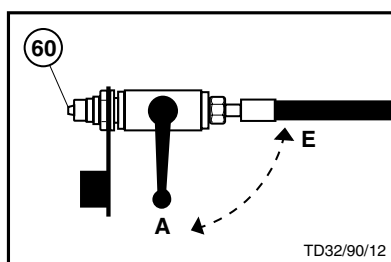


Only reposition bolts when the machine is in the raised position.

- Lower the machine with the tractor hydraulic system and place on support foot.
- Pull off drive shaft and rest on support.
- Do not rest drive shaft on safety chain!



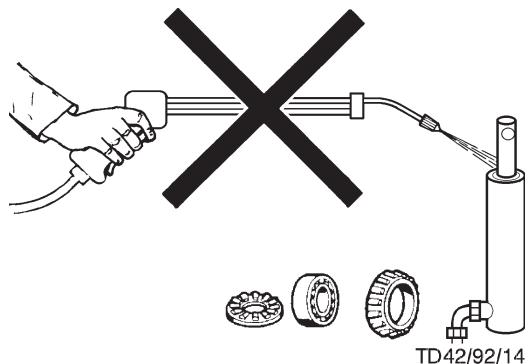
- Close stopcock (position A).



- Unhitch machine from tractor.
- Remove hydraulic cables.

## Cleaning of machine parts

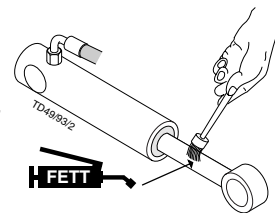
**Attention!** Do not use high-pressure washers for the cleaning of bearing- and hydraulic parts.



- 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.

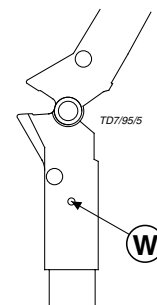
## Parking in the open

When parking for longer periods in the open, clean plunger rods and then coat with grease.



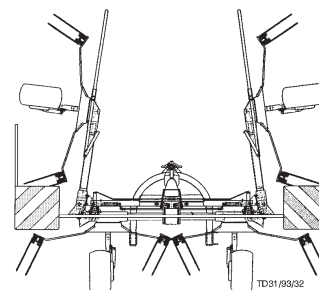
### Check when parking

- So that rain water can run off unhindered, the holes "W" must not be blocked.



## Winter storage

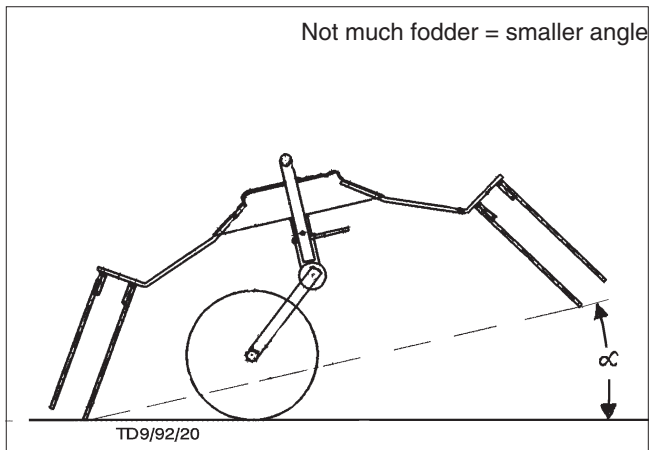
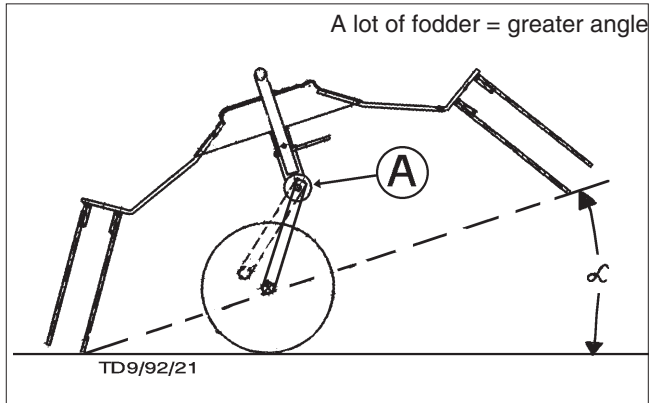
- Thoroughly clean machine before storage.
- Put up protection against weather.
- Protect exposed parts from rust.
- Lubricate all greasing points according to lubrication chart.
- Park machine with liftet rotors, which will protect plunger from rust.



### Adjustment of rotor inclination

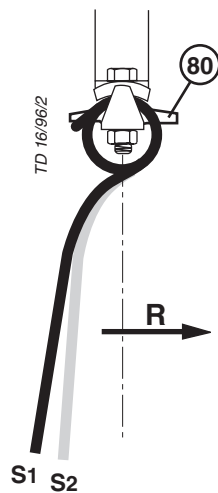
The cog enables the carrier axles to be adjusted within a swivel range.

1 setting = 1° alteration to rotor inclination



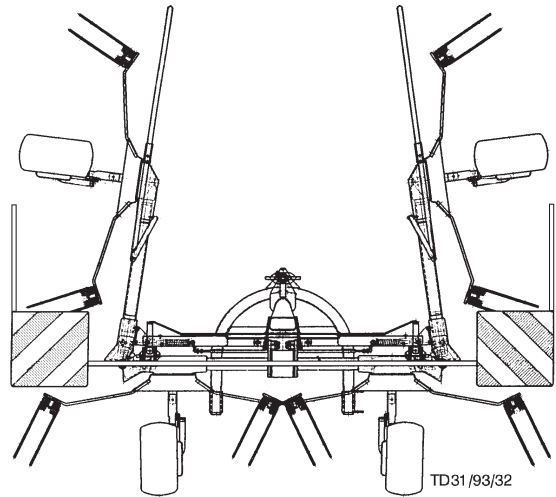
### Tine adjustment

It is also important that tine inclination is correct (see chapter "USE").



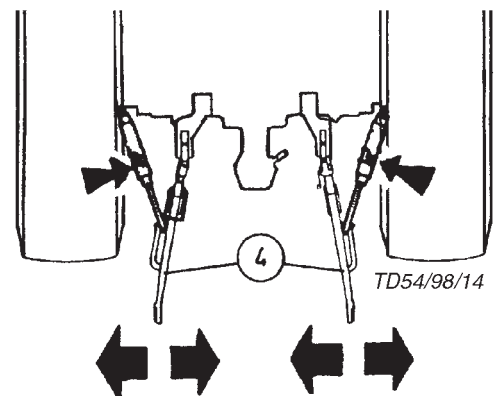
### Driving on public roads:

- Observe the official regulations of your country.
- Travelling on open roads may only be carried out as described in chapter "Transport position".



### Hydraulic lower link

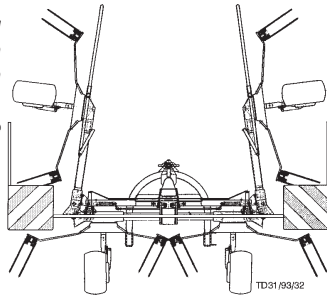
- Fix the hydraulic lower link (U) in such a way that the machine cannot swing out sideways.



**Driving on public roads:**

**Safety Precaution!**

*Changing from working position to transport position is only to be carried out on even, firm ground. Only transport the machine in the transport position!*



**Conversion from working to transport position**

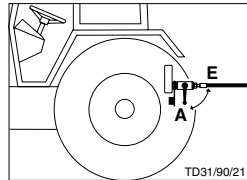


For safety reasons, turn off drive shaft and wait for rotor to stop completely.

- Make sure that swivel area is free and that nobody is standing in the danger area.



- Stopcock opened (position E)

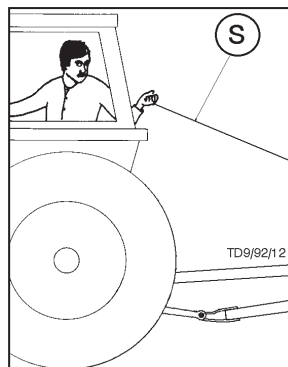
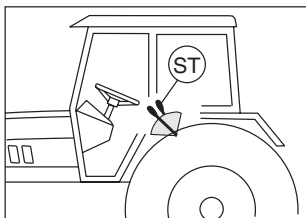


**Attention!**



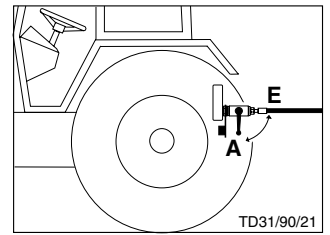
**The order of operation must be adhered to.**

1. Pull rope (S). The stop function is raised.
2. The outer rotors are raised into the transport position by actualing the control valve (ST).



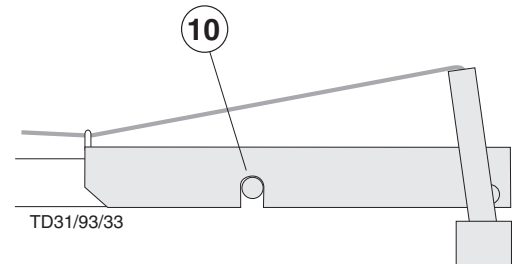
3. Release rope (S) during swivelling procedure so that locking hooks can engage.

- Close stopcock (position A).



**Attention !**

- Check whether the locking hooks (10) are locked



*into position correctly.*

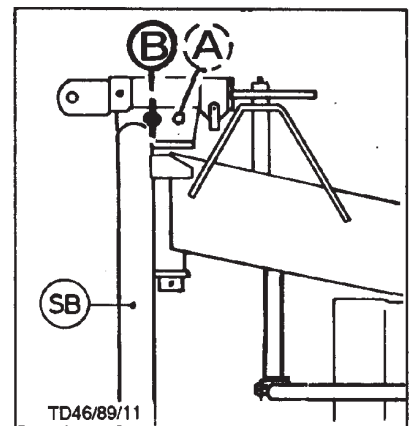
**Locking the headstock during use on roads :**

For transport the headstock (SB) must be locked using a lock nut.

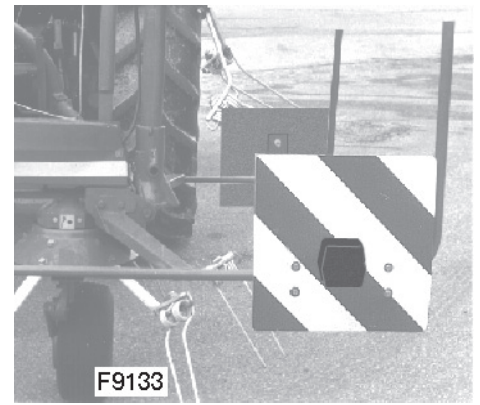
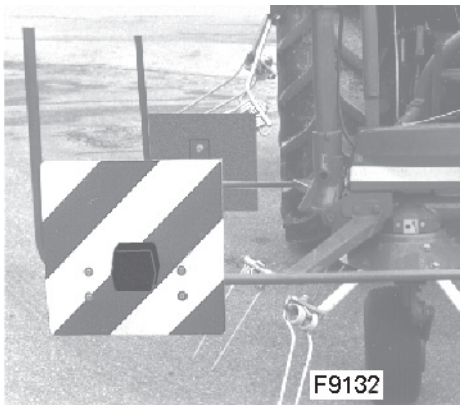
B = transport position

**Important!**

Only reposition the lock pin when the machine is in the raised position.





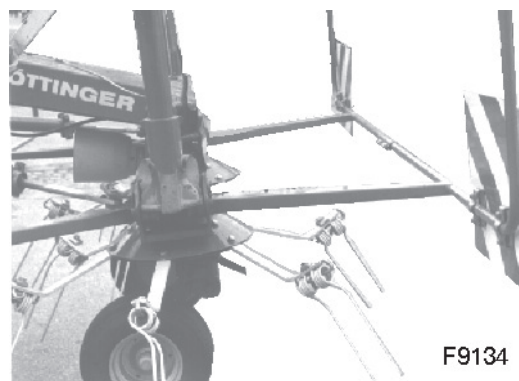


**Warntafeln  
Tableau de signalisation  
Warning plates**

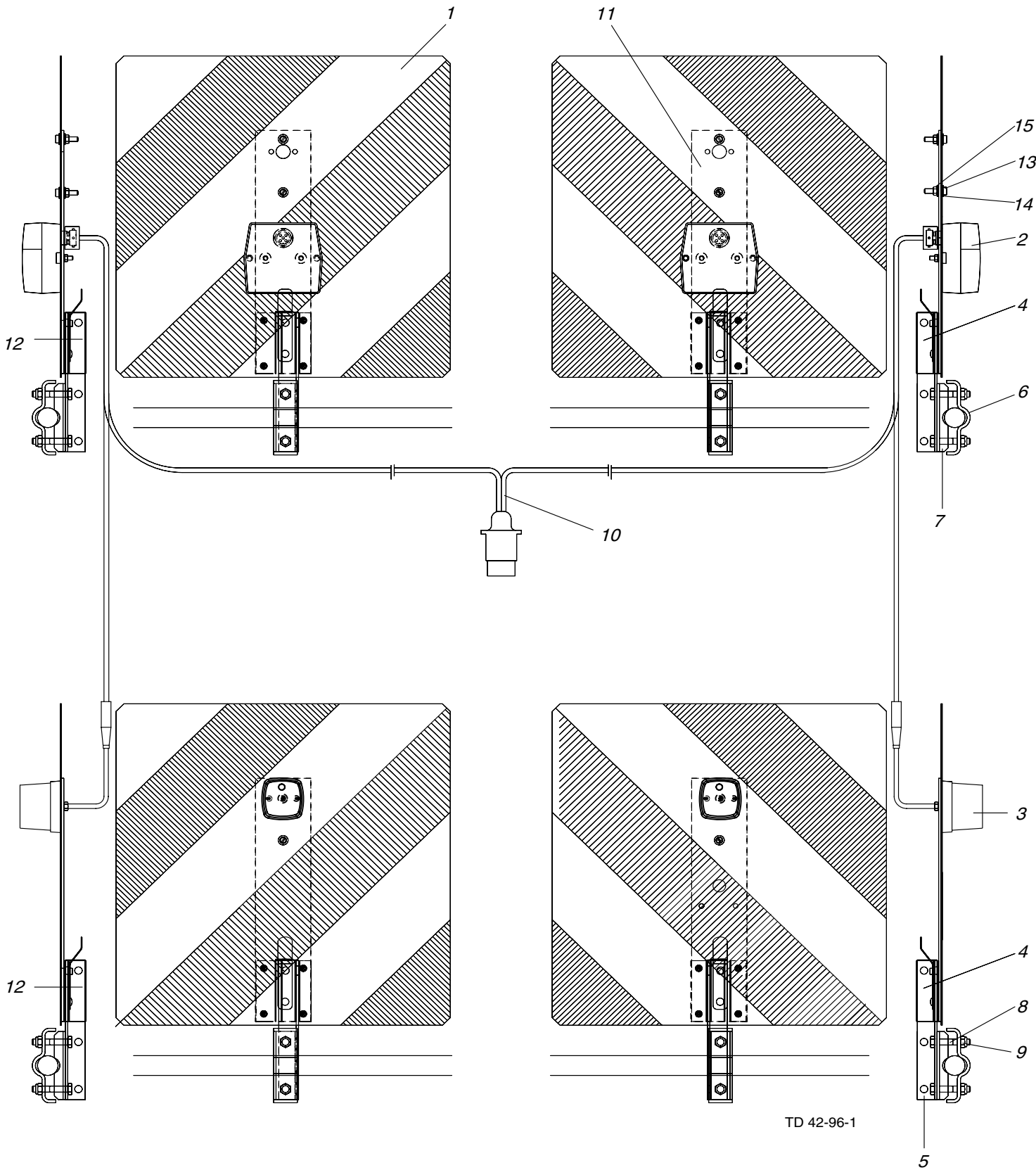
Einzelteile  
siehe Ersatzteilliste.

Pièces détachée voir liste des pièces de  
rechange.

For single parts see spare parts list.



**BELEUCHTUNG  
ECLAIRAGE  
REMOVABLE LIGHTNING**



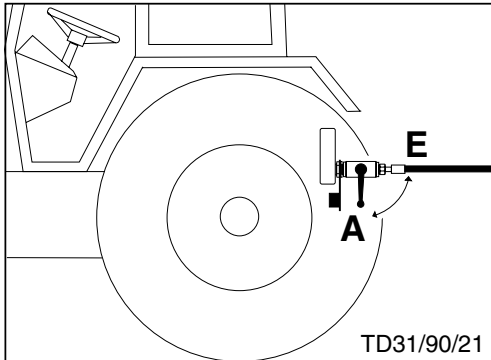
TD 42-96-1

**Conversion from transport to working position**



**Safety Precaution!**

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

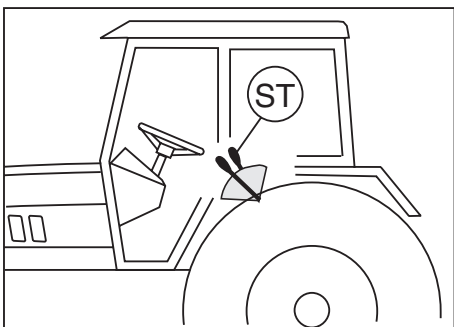


- Stopcock opened (position E)

- Make sure that swivel area is free and that nobody is standing in the danger area.

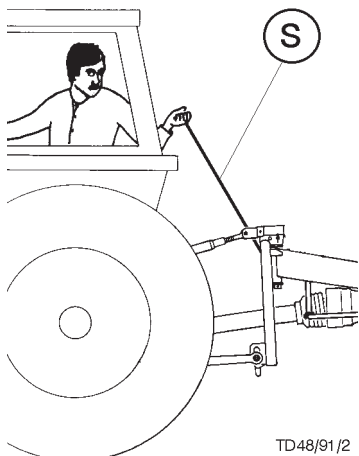


bsb 449 567

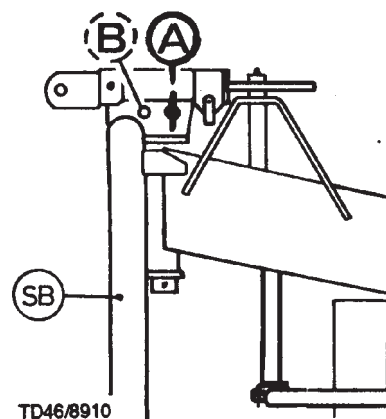


- With hydraulic raising: move the control valve (ST) briefly to the "raise" position simultaneously pulling on the rope (S).

Doing this releases the mechanical locks.



- Position tractor's servo-valve (ST) at "lower". The rotor is swivelled down to working position.



- Pin the bolts on the slewing headstock (SB) into position A.

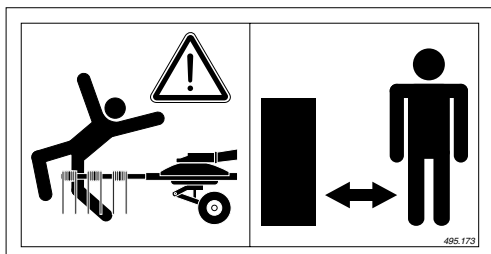
**Important!**

Only reposition bolts when the machine is in the raised position.

## General guidelines for working with the machine

All work in the immediate area of the rotors may only be carried out when the p.t.o. is switched off.

**Caution! Do not enter rotor area while driving**



*motor is running.*

- Choose the speed of travel so that all crops are picked up thoroughly.
- In cases of overloading, shift down one gear.
- Lift three point follower machine before going around sharp bends and when reversing.

## Beware! implements with three-point-linkage

*Machine swings automatically back to central position when lifted and is locked into position. Take care that the swinging machine does not endanger anybody and does not hit solid obstacles. When lowering the machine the locking device is automatically lifted.*



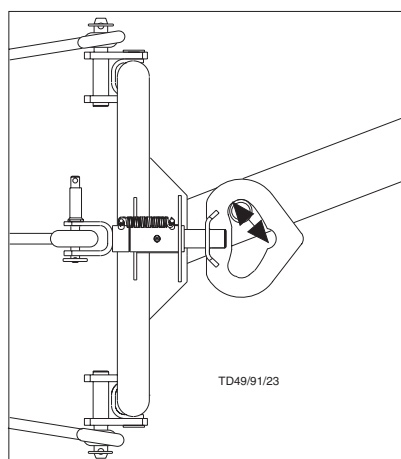
### Operating on slopes

**Take note! implements with three-point-linkage**

If the implement is being raised by the lifting gear whilst travelling in a curve, the implement swings automatically into the central position. If working on slopes this can lead to dangerous situations, partly due to the balance weight of the implement.

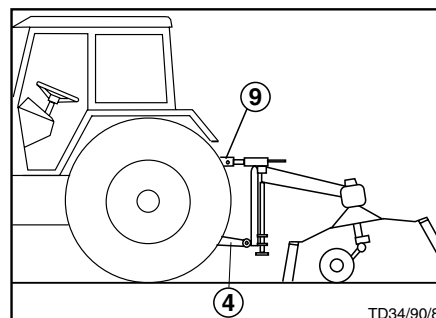
- The function of the shock absorbtion struts is to allow the swinging procedure to be executed slowly and continuously, not in jerks and jolts.

**Important!** Pay attention to the appropriate setting of both shock absorber struts



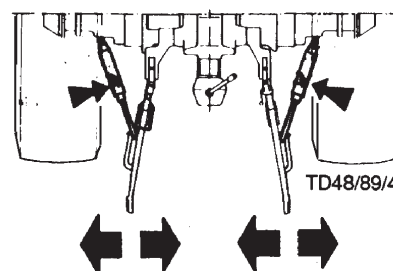
## Adjustment to implements with three-point-linkage:

- Adjust length of upper link (9) so that rotors are inclined forward and spring tines lightly touch the ground (see chapter "Adjustment of rotor inclination" also). Check upper link (9) adjustment regularly during work operation.



## Unterlenker fixieren

- Die Unterlenker (4) des Schleppers müssen seitlich spielfrei verriegelt werden, um ein Hin- und Herschwenken des Zettlers zu vermeiden.



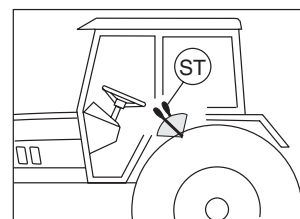
## P.t.o. speed

- P.t.o. speed max. = 540 rpm  
The most favourable p.t.o. rpm is about 450 rpm.

## Tractor control device (ST)

- Put tractor control device (ST) into "free gear" (floating position or "lower").

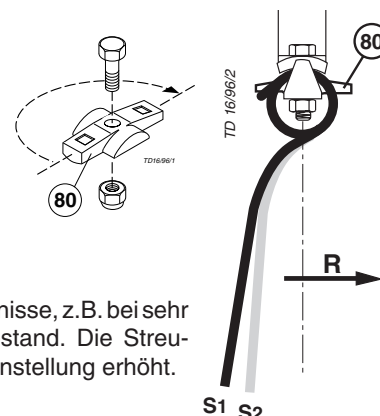
In this way the rotors adapt to uneven ground.

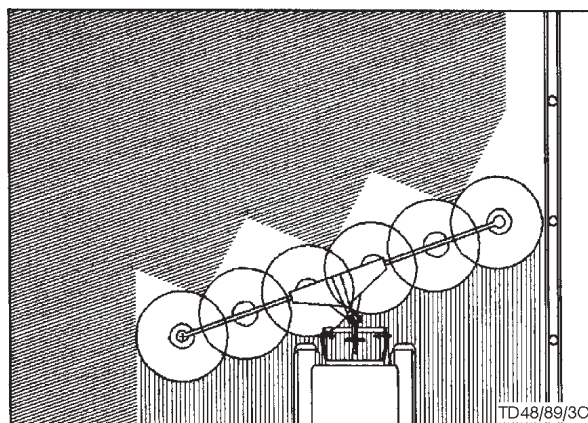
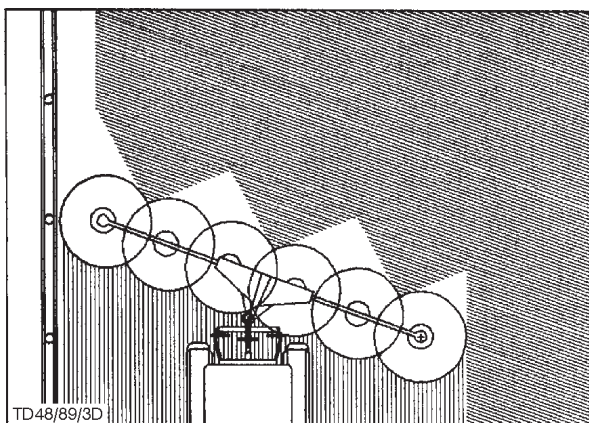


## Zinkeneinstellung

Durch Drehen des Zinkenhalters (80) kann die Zinkenstellung verändert werden.

- **Position "S1"**  
Standardeinstellung (ab Werk)
- **Position "S2"**  
Für schwierige Einsatzverhältnisse, z.B. bei sehr dichtem, schwerem Futterbestand. Die Streuwirkung wird mit dieser Zinkenstellung erhöht.
- **Drehrichtung "R"**  
bei der Zinkenmontage beachten



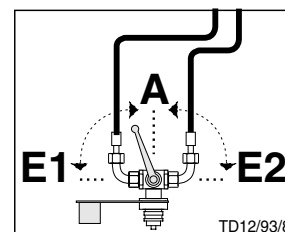
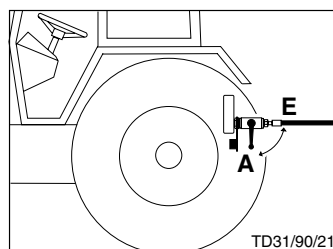


## Clearing field edges (border teding) to the left or to the right

Clearing field edges can be carried out by swinging the runner wheel.

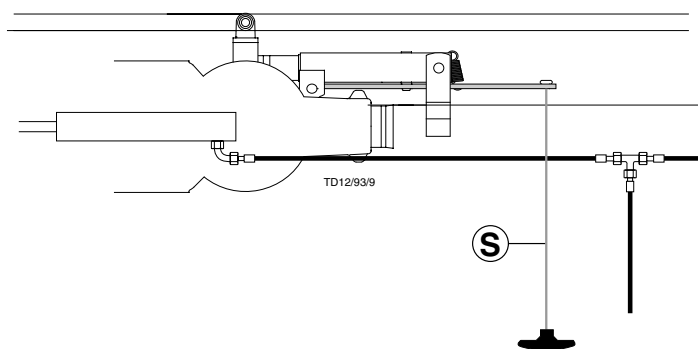
### 1.) *Swinging the runner wheel hydraulically on machines with central adjusting equipment*

- Open stopcock (position E with two-way stopcock). Position E1 when using a three-way stopcock (see also chapter "HITCHING").
- Operate servo-valve on the tractor.
- To swing the runner wheel left move servo-valve to "lift" position. To swing runner wheel right move servo-valve to "lower" position.



### 2.) *Swinging the runner wheel mechanically on machines with central adjusting equipment*

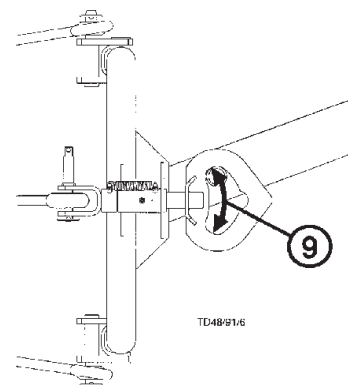
- Release locking bolts by pulling the rope (S).
- Turn the tractor wheels in the direction of the field edge and drive forward at the same time. The machine's runner wheels swing in the opposite direction.
- Let go of the rope (S) and make sure that the locking bolts are correctly engaged.



### Note

The slanting axles make border teding possible with the three point machines. In this working position the swivel area (9) is used to its full extent.

When driving around bends away from the edge of the field or at the end of the field, the machine must therefore be lifted.



### Attention!

The machine swings back into the central position (M).

### Anti-vibration braces

Anti-vibration braces bring about quiet machine running during operation.

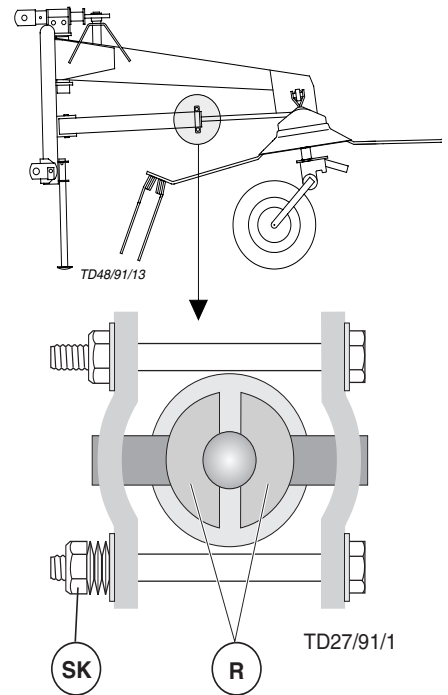
### Remedy for noisy machine running

Spring washer tension and friction element (R) pressure on the pressure can be altered by turning hexagonal nut (SK).

### Turning manoeuvre in working position

#### Implement with three-point-linkage:

- Raise implement using tractor's hydraulics.



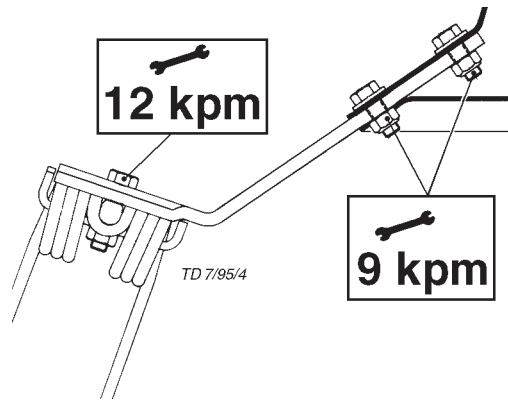
## Maintenance and servicing

In order to keep the machine in good condition even after a longer period of operation, please observe the following notes:

- After the first hours of operation, tighten all screws.



In particular the tine connections (12 kpm), the tine bar connections (9 kpm) and the slewing headstock connections should be checked.

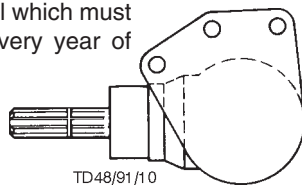


- Always keep the stipulated air pressure in the tyres.
- Grease the lubrication points in accordance with the regulation (see lubrication schedule).  
Grease the lubrication nipples with universal grease after every 20 hours of operation.
- Before leaving the machine over winter, oil all the joints well and grease all bearings.

## Intake transmission

The intake transmission runs in oil which must be renewed or added to after every year of operation:

- Pour gear lubricant oil into the intake transmission (see enclosure on fuel regulation).



## Changing tines

- Remove broken tine after loosening the hexagonal nut and fit new tine.
- For correct fitting observe the direction of the rotors!
- Tighten hexagonal screw with 12 daNm (= 12 kpm).
- Fit the safety shackle correctly (longer side (6) outside)!
- **Bj. 2001:** Using the tine gauge check the correct position of the tine.

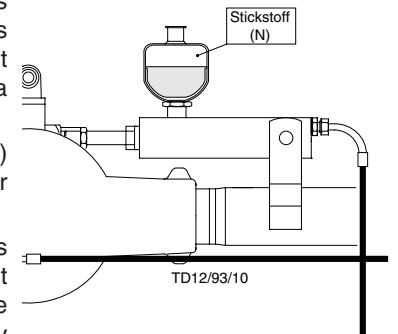
## Beware!



No welding, soldering or mechanical works of any kind may be carried out on the container.

## Note

- According to manufacturer's information all gas containers have a slight pressure drop after a certain amount of time.
- The gas loss (nitrogen) amounts to 2-3 % per year.
- After 4-5 years it is recommended that container pressure be checked and if necessary corrected.



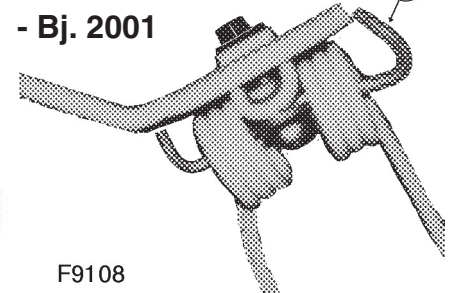
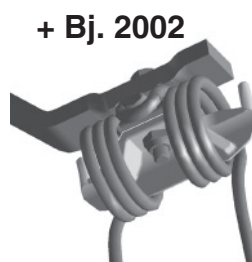
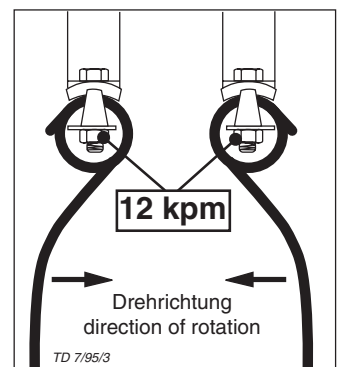
## Alteration of gas container pressure



*This work may only be carried out by customer service or a specialist.*

*In order to reduce or increase the pressure in the gas container a special filling and checking device is necessary.*

Pressure in the gas container: 80 bar Nitrogen (N).





**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.

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

**Technical Data**

**HIT 58 N (Typ ZK 212)**

no. of rotors	4
Number of tine arms per rotor	6
working width (m)	5,40 m
width of appliance in working position	5,80 m
maximum height	2,73 m
width swung up for transport	2,99 m
mass (kg) without drivershaft	~ 500 kg
Required power	ab 13 kW
maximum p.t.o. speed (rpm)	540
Drivershaft torque limiter	800 Nm (80 kpm)
Tyres at the rotors	15,0x6,00-6 / 4 Ply rating / 1,5 bar
permanent sound emmission level	70 dB(A)
maximum permissible speed (km/h)	30 km/h

*All data subject to revision.*

**The defined use of the rotary tedder**

The „HIT 58 N“ rotary tedder is intended solely for normal use in agricultural work.

- For the tedding, turning and raking of green and raw fodder and silage.

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“.

**Optional extras**

- **Tyres at the rotors** 16,0x6,5-8 / 4 Ply rating / 1,5 bar
- **Shock absorbtion struts** (see chapter "Use")
  - for particularly quiet machine running when in use.
  - for increased travel safely on slopes.



---

***SUPPLEMENT***

The original cannot be copied

---

Things will run better with  
genuine Pöttinger parts


**Original**  
*inside*



- **Quality and precise fitting**
  - Operating safety.
- **Reliable operation**
- **Longer lasting**
  - Economy
- **Guaranteed availability** through your Pöttinger Sales Service.

The decision must be made, "original" or "imitation"? The decision is often governed by price and a "cheap buy" can sometimes be very expensive.

***Be sure you purchase the "Original" with the cloverleaf symbol!***

  
**PÖTTINGER**



**Recommendations for work safety**

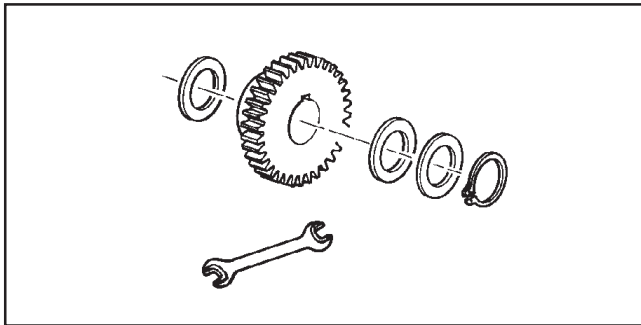
All points referring to safety in this manual are indicated by this sign.

**1.) Defined use**

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

**2.) Spare parts**

- a. The **original components and accessories** have been designed especially for these machines and appliances.
- b. We want to make it quite clear that components and accesories that have not been supplied by us have not been tested by us.
- c. 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.

- d. 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**

- a. 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!
- b. 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.

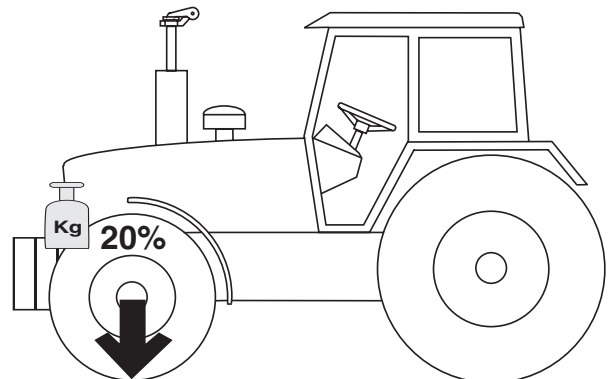


**6.) Transport of persons prohibited**

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

**7.) Driving ability with auxiliary equipment**

- a. 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).



- b. 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.
- c. When driving through curves with a connected appliance, observe the radius and swinging mass of the appliance.
- d. When travelling in a curve with attached or semimounted implements, take into account the working range and swing mass of the implement!

**8.) General**

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

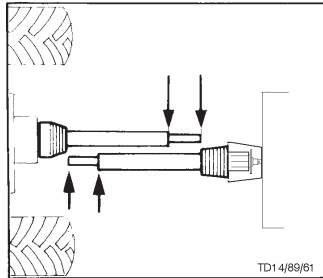


**DRIVESHAFT**

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

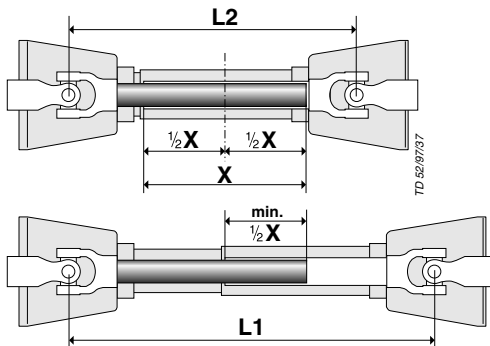
**Matching driveshaft to tractor**

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



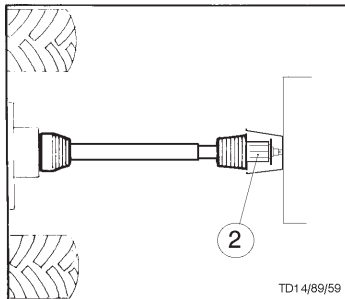
**Procedure for cutting to length**

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



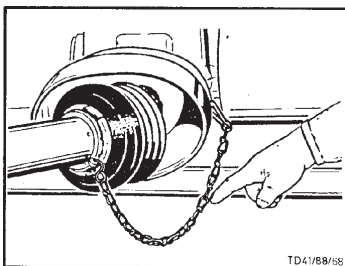
**Important!**

- Note the maximum operating length (L1)
  - Try to attain the greatest possible shaft overlap (min. 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**

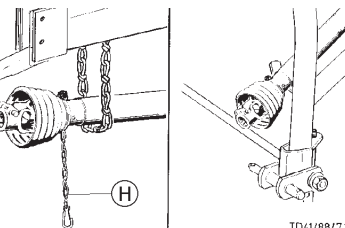
- Use chain to prevent tube guard from rotating.
- Take care that chain does not impede driveshaft pivoting.



**Rules for working**

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

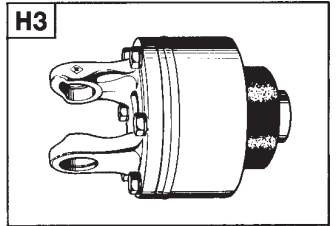
- When the p.t.o. is switched off, the implement hitched up may not stop at once. Do not go close to the implement until all motion has stopped; only then may work be done on it.
- When the implement is parked, either remove the driveshaft and store it, or secure it with a chain. (Do not use retaining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

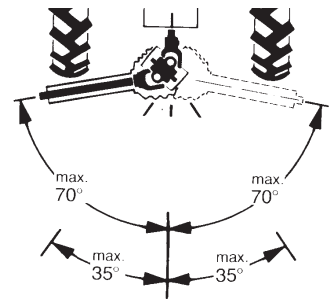
**2) Wide-angle joint :**

Maximum angle of deflection when working/stationary : 70°

**3) Standard joint :**

Maximum angle of deflection when stationary: 90°

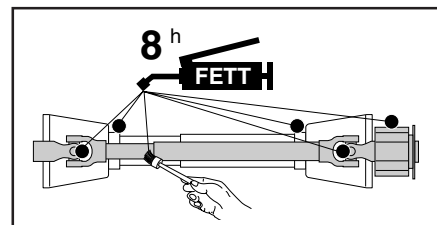
Maximum angle of deflection when working: 35°



**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.



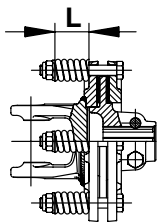
For winter working, grease the tube guards, to avoid them freezing together.

**• Important for driveshafts with friction clutch**

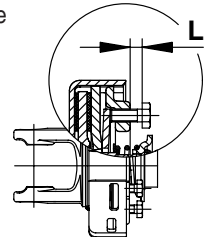
Prior to initial operation and after long periods out of use, check friction clutch for proper function.

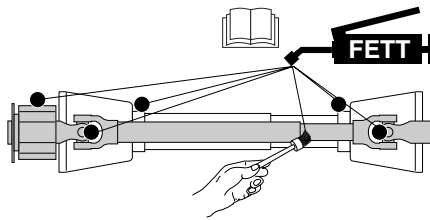
- Measure dimension „L“ at compression spring of K90, K90/4 and K94/1 or at set screw of K92E and K92/4E.
  - Loosen screws to release the pressure on the friction disk.
  - Tighten set screws to dimension „L“.
- Clutch is ready for use.

K90, K90/4, K94/1



K92E, K92/4E





### D Schmierplan

8 <sup>h</sup>	alle 8 Betriebsstunden
20 <sup>h</sup>	alle 20 Betriebsstunden
40 F	alle 40 Fahren
80 F	alle 80 Fahren
1 J	1 x jährlich
100 ha	alle 100 Hektar
FETT	FETT
▽	= Anzahl der Schmiernippel
(IV)	Siehe Anhang "Betriebsstoffe"
Liter	Liter
*	Variante
	Siehe Anleitung des Herstellers

### F Plan de graissage

8 <sup>h</sup>	Toutes les 8 heures de service
20 <sup>h</sup>	Toutes les 20 heures de service
40 F	Tous les 40 voyages
80 F	Tous les 80 voyages
1 J	1 fois par an
100 ha	tous les 100 hectares
FETT	GRAISSE
▽	= Nombre de graisseurs
(IV)	Voir annexe "Lubrifiants"
Liter	Litre
*	Variante
	Voir le guide du constructeur

### GB Lubrication chart

8 <sup>h</sup>	after every 8 hours operation
20 <sup>h</sup>	after every 20 hours operation
40 F	alle 40 operations
80 F	alle 80 operations
1 J	once a year
100 ha	every 100 hectares
FETT	GREASE
▽	= Number of grease nipples
(IV)	see supplement "Lubricants"
Liter	Litre
*	Variation
	See manufacturer's instructions

### NL Smeerschema

8 <sup>h</sup>	alle 8 bedrijfsuren
20 <sup>h</sup>	alle 20 bedrijfsuren
40 F	alle 40 wagenladingen
80 F	alle 80 wagenladingen
1 J	1 x jaarlijks
100 ha	alle 100 hektaren
FETT	VET
▽	= Aantal smeernippels
(IV)	Zie aanhangsel "Smeermiddelen"
Liter	Liter
*	Varianten
	zie gebruiksaanwijzing van de fabrikant

### S Smörjschema

8 <sup>h</sup>	Varje 8:e driftstimme
20 <sup>h</sup>	Varje 20:e driftstimme
40 F	Varje 40:e lass
80 F	Varje 80:e lass
1 J	1 x årligen
100 ha	Varje 100:e ha
FETT	FETT
▽	= Antal smörjnippel
(IV)	Se avsnitt "Drivmedel"
Liter	liter
*	Utrustningsvariant
	Se tillverkarens anvisningar

### N Smøreplan

8 <sup>h</sup>	Hver 8. arbeidstime
20 <sup>h</sup>	Hver 20. arbeidstime
40 F	Hvert 40. lass
80 F	Hvert 80. lass
1 J	1 x årlig
100 ha	Totalt 100 Hektar
FETT	FETT
▽	= Antall smørenipler
(IV)	Se vedlegg "Betriebsstoffe"
Liter	Liter
*	Unntak
	Se instruksjon fra produsent

### I Schema di lubrificazione

8 <sup>h</sup>	ogni 8 ore di esercizio
20 <sup>h</sup>	ogni 20 ore di esercizio
40 F	ogni 40 viaggi
80 F	ogni 80 viaggi
1 J	volta all'anno
100 ha	ogni 100 ettari
FETT	GRASSO
▽	= Numero degli ingrassatori
(IV)	vedi capitolo "materiali di esercizio"
Liter	litri
*	variante
	vedi istruzioni del fabbricante

### E Esquema de lubricación

8 <sup>h</sup>	Cada 8 horas de servicio
20 <sup>h</sup>	Cada 20 horas de servicio
40 F	Cada 40 viajes
80 F	Cada 80 viajes
1 J	1 vez al año
100 ha	Cada 100 hectáreas
FETT	FETT
▽	= Número de boquillas de engrase
(IV)	Véase anexo "Lubrificantes"
Liter	Litros
*	Variante
	Véanse instrucciones del fabricante

### P Plano de lubrificação

8 <sup>h</sup>	Em cada 8 horas de serviço
20 <sup>h</sup>	Em cada 20 horas de serviço
40 F	Em cada 40 transportes
80 F	Em cada 80 transportes
1 J	1x por ano
100 ha	Em cada 100 hectares
FETT	Lubrificante
▽	= Número dos bocais de lubrificação
(IV)	Ver anexo "Lubrificantes"
Liter	Litro
*	Variante
	Ver instruções do fabricante

### CZ Mazací plán

8 <sup>h</sup>	každých 8 hodin
20 <sup>h</sup>	každých 20 hodin
40 F	každých 40 vozů
80 F	každých 80 vozů
1 J	1 x ročně
100 ha	po 100 ha
FETT	TUK
▽	= Počet mazacích hlaviček
(IV)	Viz kapitola "Mazací prostředky vydání"
Liter	litru
*	Varianta
	viz. příručka výrobce

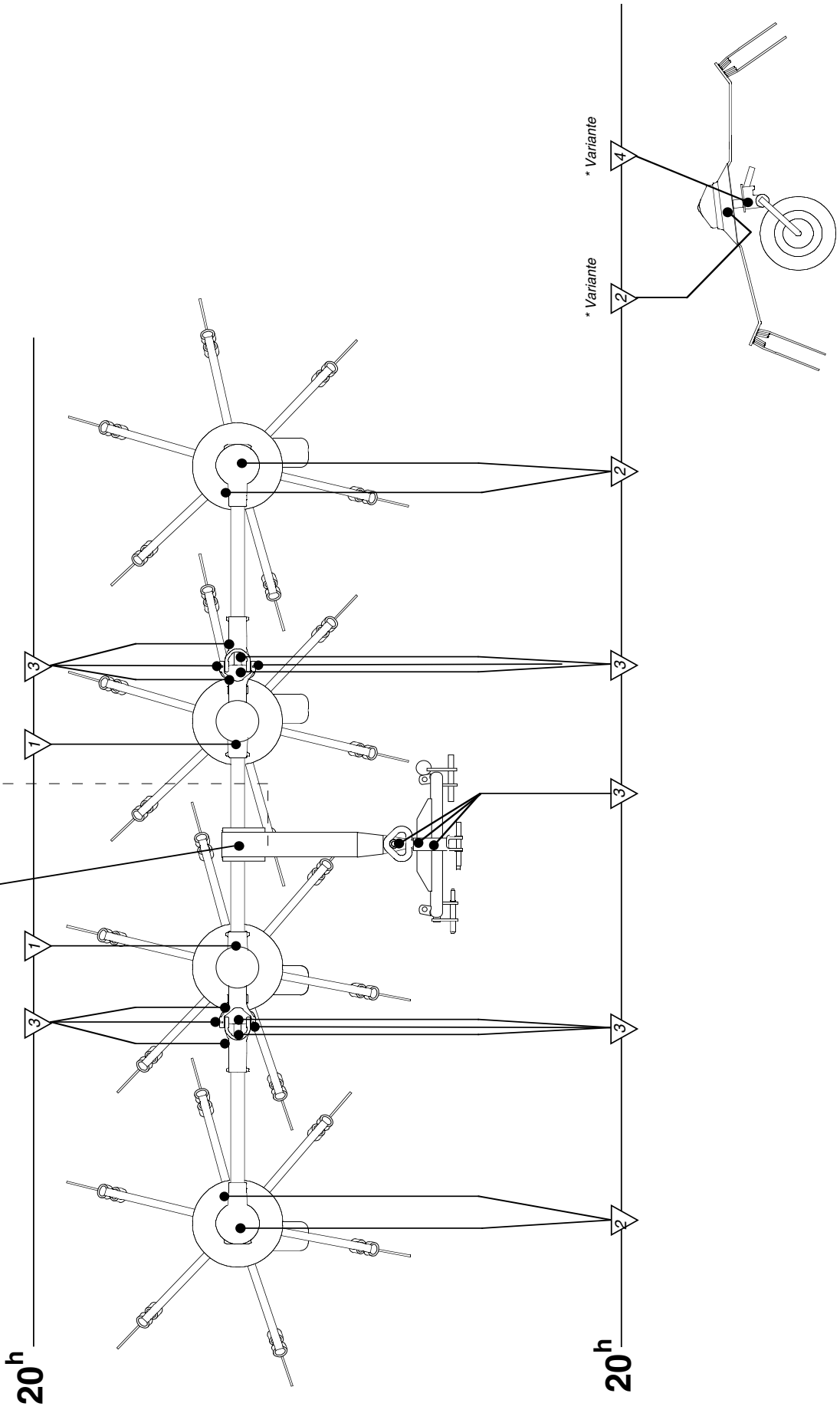
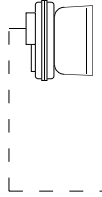
### H Kenési terv

8 <sup>h</sup>	minden 8 üzemóra után
20 <sup>h</sup>	minden 20 üzemóra után
40 F	minden 40 menet után
80 F	minden 80 menet után
1 J	1-szer évente
100 ha	minden 100 Hektár után
FETT	ZSÍR
▽	= A zsírzógombok száma
(IV)	Nézd a "Kenőanyagok" c. fejezetet
Liter	Liter
*	Változat
	Nézd a gyártó utasításait!

### RUS Схема смазки

8 <sup>h</sup>	через каждые 8 часов работы
20 <sup>h</sup>	через каждые 20 часов работы
40 F	через каждые 40 подвоя
80 F	через каждые 80 подвоя
1 J	1 раз в год
100 ha	через каждые 100 га
FETT	СМАЗКА / OIL МАСЛО
▽	= количество смазочных ниппелей
(IV)	См. приложение «Эксплуатационные материалы»
Liter	литр (количество масла, жидкость,...)
*	Вариант
	Смотри руководство изготовителя

**1J**  
HD SAE 90  
0,5Liter



Leistung und Lebensdauer der Maschine sind von sorgfältiger Wartung und der Verwendung guter Betriebsstoffe abhängig. Unsere Betriebsstoffauslistung 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.

Getriebeöl gemäß Betriebsanleitung - jedoch mindestens 1 x jährlich wechseln.  
- 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.

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.

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.

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.

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).

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.

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.

Prestaties en levensduur van de machines zijn afhankelijk van een zorgvuldig onderhoud en het gebruik van goede smeermiddelen.




Dit schema vergemakkelijkt de goede keuze van de juiste smeermiddelen.

Olíe in aandrijvingen volgens de gebruiksaanwijzing verwisselen - echter tenminste 1 x jaarlijks.

- Ölablaßschraube herausnehmen, das Altöl auslaufen lassen und ordnungsgemäß entsorgen.

Voor het buiten gebruik stellen (winteperiode) de olie-wissel uitvoeren en alle vetnippel 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	(II)	(III)	HEFT (IV)	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 oilo 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 (DIN 51 502: GOH)  transmission grease  graisse transmission  grasso fluido per riduttori e motoriduttori	Komplexfett (DIN 51 502: KP 1F)  complex grease  graisse complexe  grasso a base di saponi complessi	Getriebeöl SAE 90 bzw. 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	MOTOROIL HD 30 SIGMA MULTI 15W-40 SUPER TRACTOROIL UNIVERS. 15W-30	ROTRA HY 80W-90/85W-140 ROTRA MP 80W-90/85W-140	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
ARAL	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 GETRIEBEÖL HYP 90 EP MULTIHYP 85W-140 EP	
AVIA	AVILUB RL 32/46 AVILUB VG 32/46	MOTOROIL HD 30 MULTIGRADE HDC 15W-40 TRACTAVIA HF SUPER 10 W-30 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 MULTIHYP 85W-140 EP	
BAYWA	HYDRAULIKÖL HLP 32/46/68 SUPER 2000 CD-MC * HYDRA HYDR. FLUID * HYDRAULIKÖL MC 530 ** PLANTOHYD 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 FILM PLANTOGEL 2 N	GETRIEBEFLEISSFETT NLGI 0 RENOLIT DURAPLEX EP 00 PLANTOGEL 00N	RENOPLX EP 1	HYPOID 85W-140	** Hydrauliköle HLP-(D) + HV  *** Hydrauliköle auf Pflanzenölbasis HLP + HV Biologisch abbaubar, deshalb besonders umwelt- freundlich
BP	ENERGOL SHF 32/46/68	VISCO 2000 ENERGOL HD 30 VANELLUS M 30	GEAR OIL 90 EP HYPOGEAR 90 EP	ENERGEGREASE LS-EP 2	FLIESSFETT NO ENERGEGREASE HTO	OLEX PR 9142	HYPOGEAR 90 EP HYPOGEAR 85W-140 EP	
CASTROL	HYSPIN AWS 32/46/68 HYSPIN AWH 32/46	RX SUPER DIESEL 15W-40 POWERTRANS	EPX 80W-90 HYPOY C 80W-140	CASTROL GREASE LM	IMPERVIA MMO	CASTROL GREASE LMX	EPX 80W-90 HYPOY C 80W-140	
ELAN	HLP 32/46/68 HLP-M M32/M46	MOTORÖL 100 MS SAE 30 MOTORÖL 104 CM 15W-40 AUSTROTRAC 15W-30	GETRIEBEÖL MP 85W-90 GETRIEBEÖL B 65W-90 GETRIEBEÖL C 85W-140	LORENA 46 LITORA 27	RHENOX 34	-	GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-140	
ELF	OLNA 32/46/68 HYDRELF 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	EPEXA 2 ROLEXA 2 MULTI 2	GA O EP POLY GO	MULTIMOTIVE 1	TRANSSELF TYP B 90 85W-140 TRANSSELF TYP BLS 80 W-90	
ESSO	NUTO H 32/46/68 NUTO HF 32/46/68	PLUS MOTORÖL 20W-30 UNIFARM 15W-30	GEARÖL GP 80W-90 GEAROIL GP 85W-140	MULTI PURPOSE GREASE H	FIBRAX EP 370	NEBULA EP 1 GP GREASE	GEAR OIL GX 80W-90 GEAR OIL CX 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 MULTI 46/68	SUPER EWAROL HDB SAE 30 UNIVERSAL TRACTOROIL 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 ** RENOGEAR HYDRA * PLANTOHYD 40N ***	TITAN HYDRAMOT 1030 MC TITAN UNIVERSAL HD	RENOGEAR SUPER 8090 MC RENOGEAR HYPOID 85 W-140 RENOGEAR HYPOID 90	RENOLIT MP RENOLIT FILM 2 RENOLIT ADHESIV 2 PLANTOGEL 2 N	RENOSOD GFO 35 DURAPLEX EP 00 PLANTOGEL 00N	RENOPLX 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 *** PLANTOHYD 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	RENOPLX EP 1	HYPOID EW 90 HYPOID 85W-140	
MOBIL	DTE 22/24/25 DTE 13/15	HD 20W-20 DELVAC 1230 SUPER UNIVERSAL 15W-30	MOBILUBE GX 90 MOBILUBE HD 90 MOBILUBE HD 85W-140	MOBIL GREASE 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 20 SUPER HD 20 W-30	MEHRZWECKGETRIEBEÖL SAE 90 HYPOID EW 90	MEHRZWECKFETT RENOLIT MP DURAPLEX EP	RENOSOD GFO 35	RENOPLX EP 1	HYPOID EW 90	
SHELL	TELLUS S32/S 46/S68 TELLUS T 32/146	AGROMA 15W-30 ROTELLA X 30 RIMULUX 15W-40	SPIRAX 90 EP SPIRAX HD 90 SPIRAX HD 85/140	RETNAX A ALVANIA EP 2	SPEZ GETRIEBEFETT H SIMMUNA GREASE O	AEROSHELL GREASE 22 DOLIUM GREASE R	SPIRAX HD 90 SPIRAX HD 85W-140	
TOTAL	AZOLLA ZS 32, 46, 68 EQUIVUS ZS 32, 46, 68	RUBIA H 30 MULTAGRI TM 15W-20	TOTAL EP 85W-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 HYP 32 10W-30 ULTRAMAX ULTRAPLANT 40 ***	SUPER HPO 30 TOP 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-PLX EP 2 PLANTOGEL 2 N	RENOLIT LZB 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 HF 32/46 *** HYDROFLUID *	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	



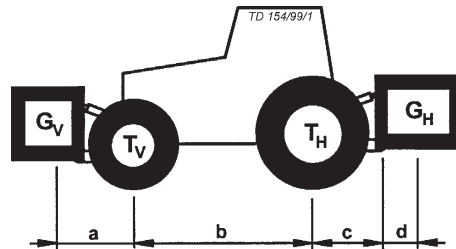
## Combination of tractor and mounted implement



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 $G_{\text{tat}}$

(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!**

**EC Certificate of Conformity**

conforming to EEC Directions 98/37

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

Zettkreisel HIT 58 N Type ZK 212

*(make, model)*

to which this certificate applies, conforms to the basic safety and health requirements of EEC Directions 98/37,

*(if applicable)*

and to the other relevant EEC Directions.

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

*(if applicable)*

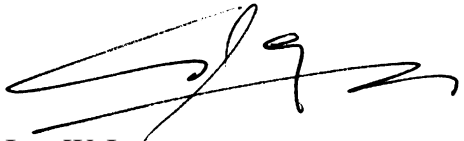
To effect correct application of the safety and health requirements stated in the EEC Directions, the following standards and/or technical specifications were consulted:

EN 292-1 : 1991 EN 292-2 : 1991

*(title and/or number and date of issue of standards and/or specifications)*

Grieskirchen, 19.07.2002

*(Place and date of issue)*

  
pa. Ing. W. Leposa  
Entwicklungsleitung

*(Name and job function of authorized person)*

**D** Im Zuge der technischen Weiterentwicklung arbeitet die PÖTTINGER Ges.m.b.H ständig an der Verbesserung ihrer Produkte.

Änderungen gegenüber den Abbildungen und Beschreibungen dieser Betriebsanleitung müssen wir uns darum vorbehalten, ein Anspruch auf Änderungen an bereits ausgelieferten Maschinen kann daraus nicht abgeleitet werden.

Technische Angaben, Maße und Gewichte sind unverbindlich. Irrtümer vorbehalten.

Nachdruck oder Übersetzung, auch auszugsweise, nur mit schriftlicher Genehmigung der

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen.

Alle Rechte nach dem Gesetz des Urheberrecht vorbehalten.

**NL** De PÖTTINGER Ges.m.b.H werkt permanent aan de verbetering van hun producten in het kader van hun technische ontwikkelingen. Daarom moeten wij ons veranderingen van de afbeeldingen en beschrijvingen van deze gebruiksaanwijzing voorbehouden, zonder dat daaruit een aanspraak op veranderingen van reeds geleverde machines kan worden afgeleid.

Technische gegevens, maten en gewichten zijn niet bindend. Vergissingen voorbehouden.

Nadruk of vertaling ook gedeeltelijk, slechts met schriftelijke toestemming van de

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen.

Alle rechten naar de wet over het auteursrecht voorbehouden.

**E** La empresa PÖTTINGER Ges.m.b.H se esfuerza continuamente en la mejora constante de sus productos, adaptándolos a la evolución técnica. Por ello nos vamos obligados a reservarnos todos los derechos de cualquier modificación de los productos con relación a las ilustraciones y a los textos del presente manual, sin que por ello pueda ser deducido derecho alguno a la modificación de máquinas ya suministradas.

Los datos técnicos, las medidas y los pesos se entienden sin compromiso alguno.

La reproducción o la traducción del presente manual de instrucciones, aunque sea tan solo parcial, requiere de la autorización por escrito de

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen.

Todos los derechos están protegidos por la ley de la propiedad industrial.

**CZ** V důsledku technického vývoje pracuje firma PÖTTINGER Ges.m.b.H neustále na zlepšení svých výrobků.

Změny v návodu k používání si výrobce vyhrazuje. Požadavky na změnu návodu k používání na práve dodané stroje nemohou být vyvzovány.

Technické údaje, rozměry a hmotnosti jsou nezávazné.

Dotisk nebo nový překlad je možný pouze za písemného souhlasu firmy

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen

Všechna práva podléhají autorskému právu.

**F** La société PÖTTINGER Ges.m.b.H améliore constamment ses produits grâce au progrès technique. C'est pourquoi nous nous réservons le droit de modifier descriptions et illustrations de cette notice d'utilisation, sans qu'on en puisse faire découler un droit à modifications sur des machines déjà livrées.

Caractéristiques techniques, dimensions et poids sont sans engagement. Des erreurs sont possibles.

Copie ou traduction, même d'extraits, seulement avec la permission écrite de

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen.

Tous droits réservés selon la réglementation des droits d'auteurs.

**S** Beroende på den tekniska utvecklingen arbetar PÖTTINGER Ges.m.b.H. på att förbättra sina produkter.

Vi måste därför förbehålla oss förändringar gentemot avbildningarna och beskrivningarna i denna bruksanvisning. Däremot består det inget anspråk på förändringar av produkter beroende av denna bruksanvisning.

Tekniska uppgifter, mått och vikter är oförbindliga. Fel förbehållna.

Ett eftertryck och översättningar, även utdrag, får endast genomföras med skriftlig tillåtelse av

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A – 4710 Grieskirchen

Alla rättigheter enligt lagen om upphovsmannarätten förbehålls.

**I** La PÖTTINGER Ges.m.b.H è costantemente al lavoro per migliorare i suoi prodotti mantenendoli aggiornati rispetto allo sviluppo della tecnica.

Per questo motivo siamo costretti a riservarci la facoltà di apportare eventuali modifiche alle illustrazioni e alle descrizioni di queste istruzioni per l'uso. Allo stesso tempo ciò non comporta il diritto di fare apportare modifiche a macchine già fornite.

I dati tecnici, le misure e i pesi non sono impegnativi. Non rispondiamo di eventuali errori. Ristampa o traduzione, anche solo parziale, solo dietro consenso scritto della

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen.

Ci riserviamo tutti i diritti previsti dalla legge sul diritto d'autore.

**HU** A műszaki termékfejlesztés folyamatában a Pöttinger Ges.m.b.H. folyamatosan dolgozik termékei minőségének javításán.

Ezen kezelési utasítás ábráinak és leírásainak változtatási jogát fenntartjuk, emiatt nem lehet követeléssel fellépni egy már kiszállított gép megváltoztatásával kapcsolatban.

A műszaki adatok, méretek, tömegek, kötelezettség nélküliek. A tévedések joga fenntartva.

Utánnyomás vagy fordítás, akárcsak kivonatossan is, csak az

ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen írásos engedélyével történhet.

A szerzői jogi törvény értelmében minden jog fenntartva.

**GB** Following the policy of the PÖTTINGER Ges.m.b.H to improve their products as technical developments continue, PÖTTINGER reserve the right to make alterations which must not necessarily correspond to text and illustrations contained in this publication, and without incurring obligation to alter any machines previously delivered.

Technical data, dimensions and weights are given as an indication only. Responsibility for errors or omissions not accepted.

Reproduction or translation of this publication, in whole or part, is not permitted without the written consent of the ALOIS PÖTTINGER

Maschinenfabrik Gesellschaft m.b.H.

A-4710 Grieskirchen.

All rights under the provision of the Copyright Act are reserved.

**RUS** В ходе технического развития фирма «ПЁТТИНГЕР Гез.м.б.Х.» постоянно занимается усовершенствованием своей продукции.

В связи с этим мы сохраняем за собой право вносить изменения в рисунки и описания этой инструкции по эксплуатации, однако, требование вносить такие изменения в уже поставленные машины предъявлению не подлежит.

Технические данные, указание размеров и массы даются без обязательств. Ошибки не исключены.

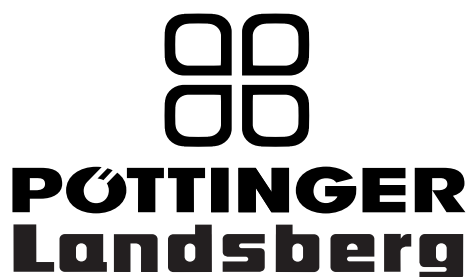
Перепечатка или перевод, в том числе отрывками, разрешается только с письменного согласия фирмы

«АЛОИС ПЁТТИНГЕР

Машиненфабрик Гезельшафт м.б.Х.»

A-4710 Грискирхен.

С сохранением всех прав в соответствии с авторским правом.



**ALOIS PÖTTINGER**

**Maschinenfabrik Gesellschaft m.b.H**

A-4710 Grieskirchen

Telefon: 0043 (0) 72 48 600-0

Telefax: 0043 (0) 72 48 600-511

e-Mail: landtechnik@poettinger.co.at

Internet: <http://www.poettinger.co.at>

**GEBR. PÖTTINGER GMBH**

**Stützpunkt Nord**

Wentruper Mark 10

D-48 268 Greven

Telefon: (0 25 71) 93 45 - 0

Ersatzteildienst: (0 25 71) 93 45 - 11

Kundendienst: (0 25 71) 93 45 - 12

Telefax: (0 25 71) 93 45 - 14

**PÖTTINGER France**

129 b, la Chapelle

F-68650 Le Bonhomme

Tél.: 03.89.47.28.30

Fax: 03.89.47.28.39

**GEBR. PÖTTINGER GMBH**

**Servicezentrum**

Spöttinger-Straße 24

Postfach 1561

D-86 899 LANDSBERG / LECH

Telefon:

Ersatzteildienst: 0 81 91 / 92 99 - 166 od. 169

Kundendienst: 0 81 91 / 92 99 - 130 od. 231

Telefax: 0 81 91 / 59 656