

Operator's manual

+ INSTRUCTIONS FOR PRODUCT DELIVERY . . . Page 3

"Translation of the original Operating Manual"

Nr. 99 353.GB.80I.0

CAT NOVA 310 T ED

(Type PSM 353 : +..01001)

Disc mower



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.

INSTRUCTIONS FOR PRODUCT DELIVERY



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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 or via the internet to www.pottinger.at
- **document B** stays with the specialist factory delivering the machine.
- **document C** stays with the customer.

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**Attention!**

**Observe Safety
Hints in the
supplement!**

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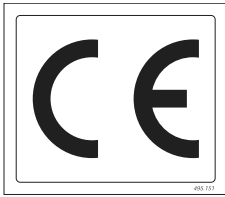
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CE sign



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).

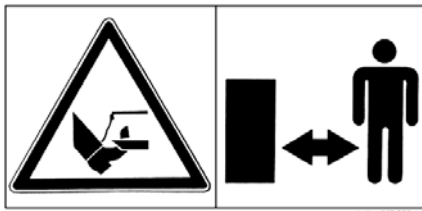
By signing the EU Declaration of Conformity, the manufacturer declares that the machine being brought into service complies with all relevant safety and health requirements.



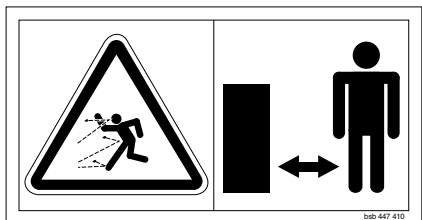
**Recommendations
for work safety**

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

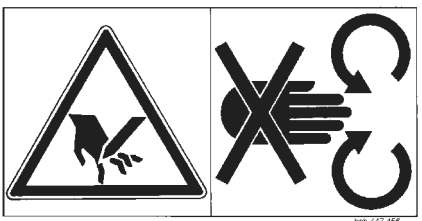
Meanings of warning signs



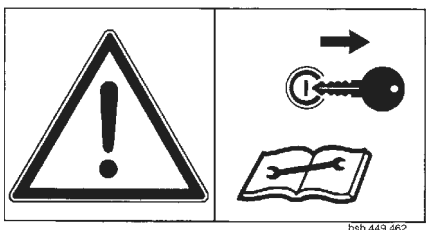
Keep away from running motor with p.t.o. connected.



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



Do not touch any moving parts.
Wait for complete standstill.

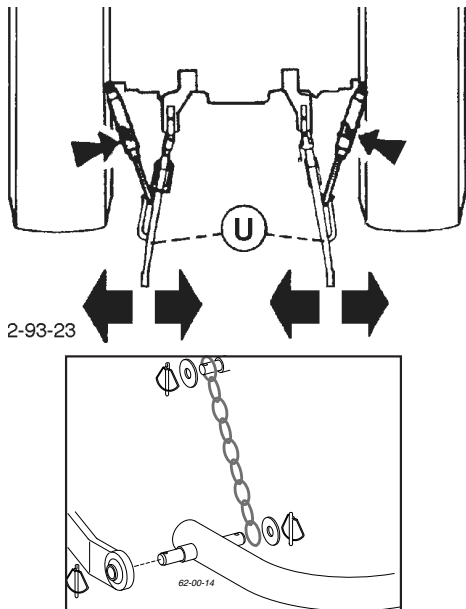


Before maintenance and repair work,
switch motor off and remove key.

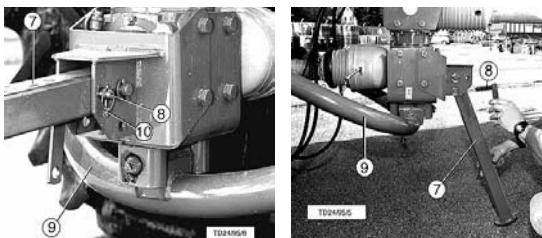
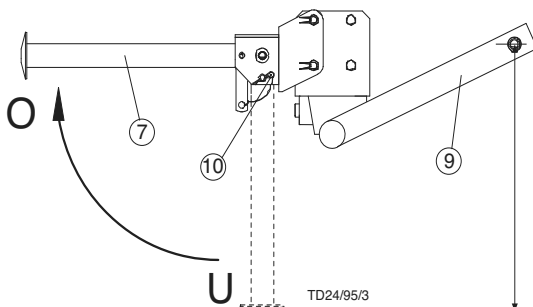
Attaching the machine

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

- Against unsteady, unstable machine after-run



- Starting position:
Park machine on the support stand (7) on level ground with bolts (8) inserted and spring pin (10) secured.



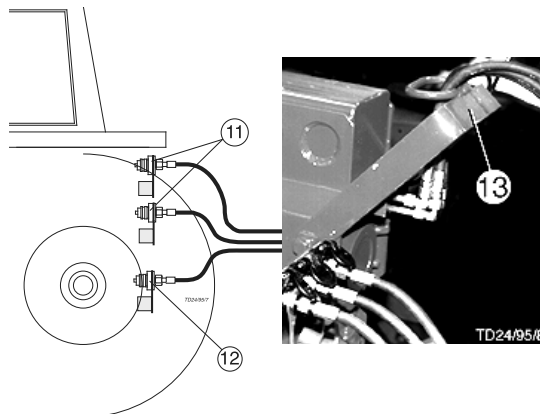
- Attach lower link to the pipe bottom (9) and lock at this height:
The attaching height corresponds to the parking height on firm ground.

Fold support wheel (7) up: Pos. O

- Pin jack stand (7) up using bolts (8) and secure with spring pin (10).

Connecting the hydraulics

- At least one double-action (11) and one single-action (10) hydraulic connection must be available on the tractor.
- Connect hydraulic lines to tractor:
 - Feed hydraulic lines through cable routing (13).
 - Insert plug-in connections of hydraulic lines.



Important!

- **Safety advice:** see Supplement A1, points 1 - 8.
- **Check that cutter screws and processor tines are firmly seated.**

Connecting the electrics

- Feed cable through cable routing (13).
- Connect.

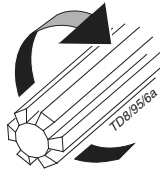
Electrical equipment: see Supplement

Check driving motor speed

(at the tractor)

1000 rpm = standard driving motor speed

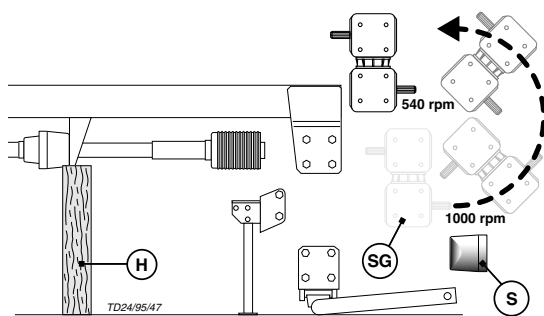
The pivoting gear (SG) has been factory set for operation with this rpm (delivery condition).



540 rpm

When only this driving motor speed (540 rpm) is possible on the tractor, the gear (SG) must be removed and installed again in reverse.

- Ensure the drawbar is



well supported (e. g. with a solid wooden block "H")!

- Remove oil filler neck.
- Then install protective cap again.

For further details see chapter "REVERSING THE GEAR" in the supplement.

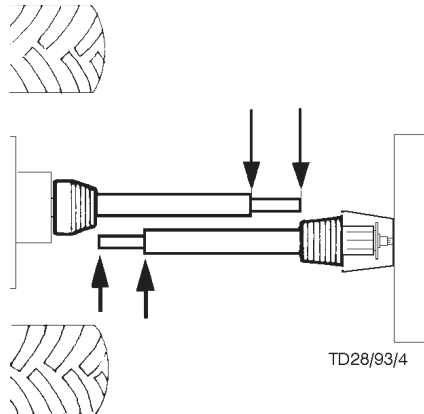
Drive shaft length

Check drive shaft length before initial operation and adapt if necessary. See chapter „DRIVE SHAFT“ also in Supplement B, or the accompanying drive shaft instruction manual.



Note!

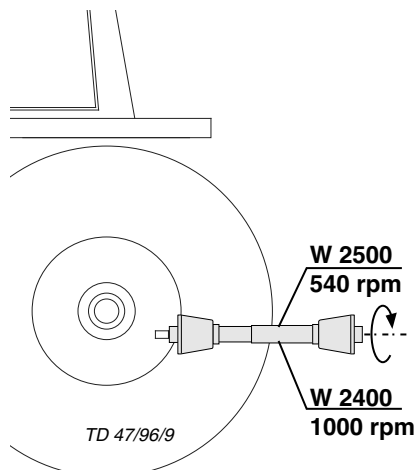
See chapter
„DRIVE SHAFT“
also in
Supplement B.



Correct drive shaft

Use correct drive shaft

- Type W 2500 for a drive motor speed of 540 rpm
- Type W 2400 for a drive motor speed of 1000 rpm



Changing from work to transport position



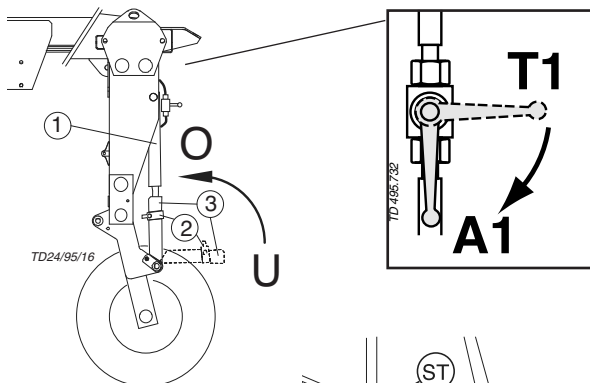
- **Safety advice:** see Supplement A1, pts. 1, 3, 4 and 6-9.

1. Before changing to transport position

- Turn p.t.o. off and wait for cutter to completely stop (mower runs after turning off for approx. 30 seconds)

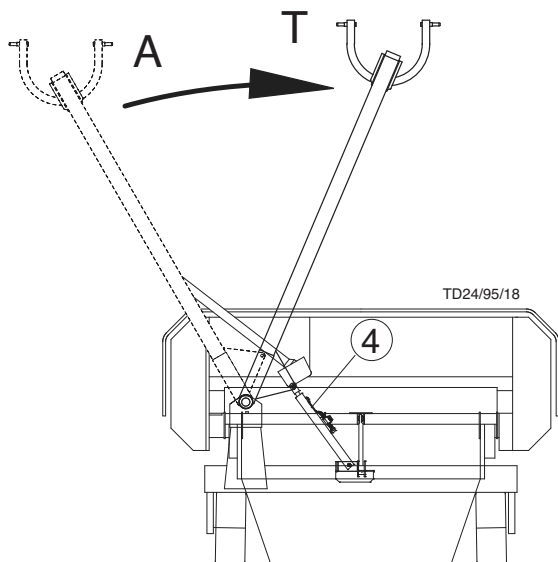
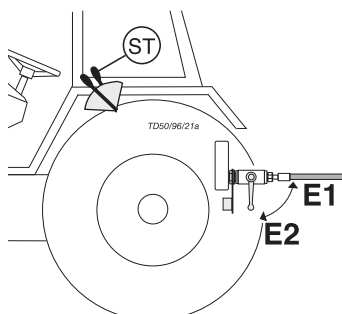
2. Raising the machine

- Raise mower: extend lifting cylinder (1) completely out.
- **Lock (year of construction -1998)**
 - Remove spring pin (2).
 - Fold locking device (3) up: Pos. O
 - Secure with spring pin.
- **Lock (year of construction +1999)**
 - Swing lever into position T1



3. Swivelling the machine in: Pos T

- Retract swivelling cylinder completely.
- **Lock (year of construction +1999)**
 - Swing lever into position E2



Transporting on public roads

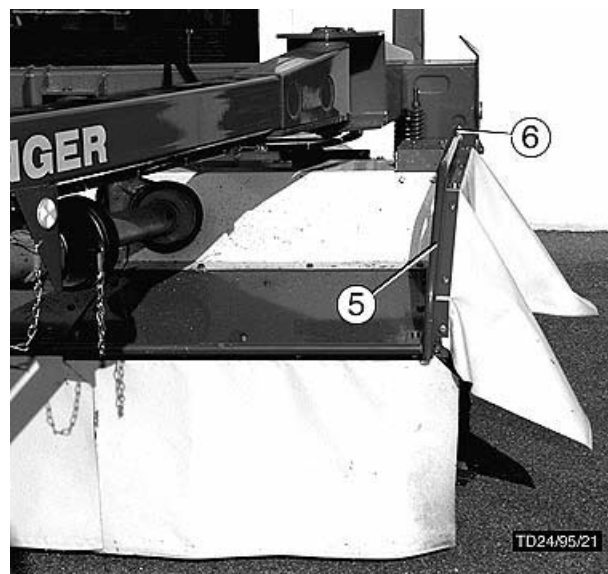
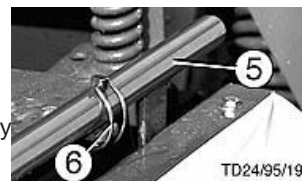


- **Safety advice:** see Supplement A1, pts. 1, 3, 4 and 6-9.

- **Danger of injury can occur if machine swings out during transportation.**

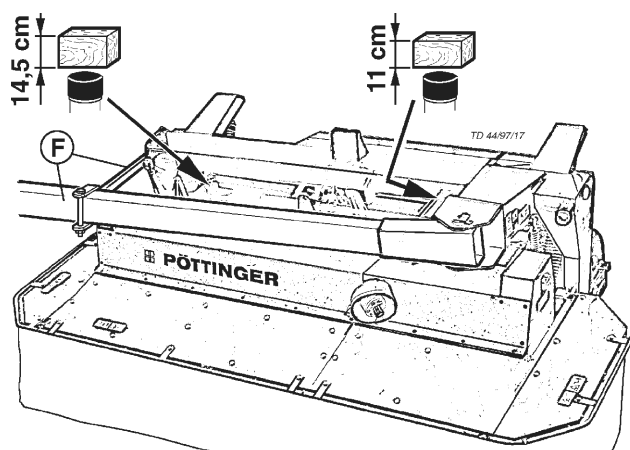
- **When travelling on public roads with machine swivelled in, secure operating lever against swinging (E2).**

- Travel on public roads only in transport position!
- Side guard rails (5):
 - Remove linch pin (6).
 - Fold guard rail up.
 - Secure with linch pin.
- Check lighting and safety equipment.



Transporting on trailer or lorry

- Fit in spacers (right 14,5 cm, left 11 cm).
- Swivel drawbar in and fix it (F).



Important points before starting work

After the first hours of operation

- Retighten all knife screw fittings.

1. Check

- The cutter condition and fixture
- The mower disc for damage (see chapter „Maintenance and Service“).

2. Only turn machine on when in work position and do not exceed the stipulated p.t.o. r.p.m. according to gearing fitted: 540 or 1000 r.p.m.!

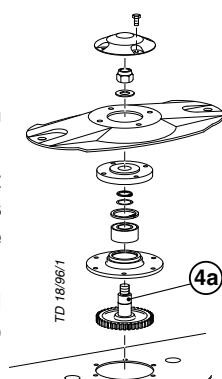
- In principle, only turn p.t.o. on when all safety equipment (covers, protective aprons, facings, etc.) are in proper order and are in their protective position on the implement.

3. Ensure the correct p.t.o. rotation direction! If rotation direction is wrong then the drive runs empty in the drive shaft free-running.



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.



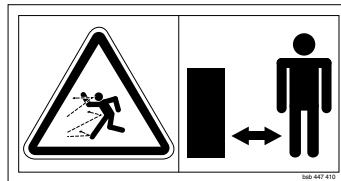
In the event of a collision

- 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 screw fittings.

5. Keep away when motor is running



- Keep people out of the danger area as injury can occur through out-thrown foreign bodies.

Take particular care on stoney fields, and near roads and paths.

6. Wear hearing protection



The noise level in the working place can differ from the measured values (see Technical Data), particularly through the various designs of the different tractor cabins.

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

7. Check condition of V-belts

Replace worn out or damaged V-belts!

8. Check V-belt tension!

The disc on the pressure spring should be set at the top control measurement. Adjustment takes place by turning the adjusting nut accordingly. Secure again with the locking nut afterwards (see chapter "Maintenance and Service").

9. To mow, slowly throw-in the p.t.o. away from the forage to be mowed and bring the mowing drum up to full speed.

An even continuous increase in r.p.m. prevents operating noises in the drive shaft free-running.

- The speed of travel depends on the terrain and forage to be mowed.



Safety advice:

see Supplement A1, pts. 1-4 and 6-8.

Caution when turning on slopes!



Danger of tipping exists

- when turning left
- when mower unit is positioned downhill

Safety advice

- Mount accompanying ballast weights onto left wheel bearer of mower unit (these components are optional with some types, see Spare Parts List also)
- When turning left reduce speed accordingly.
- Travel with mower unit positioned uphill.
- It is better travel in reverse on a slope than to make a risky turn.

Adjusting the machine

(up to 2003 / 1 model)

1. Upper link relieving springs (1)

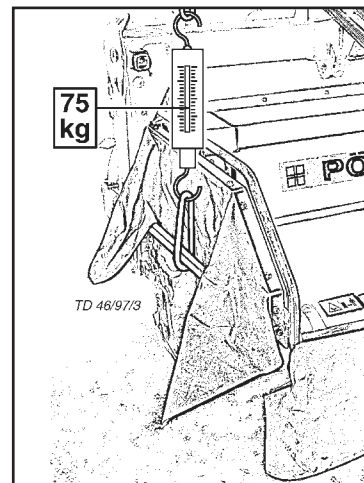
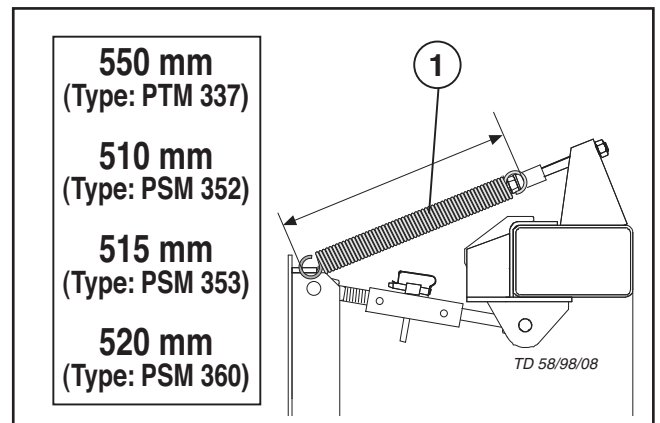
- Improve cutter unit adaption to ground contours.
- Are preset in the factory.
- Inside measurement of the German rings

2. Adjust cutter bar bearing pressure on main springs (38)

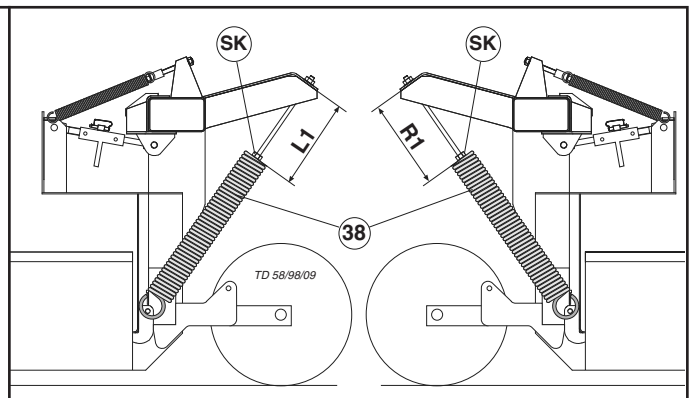
- Preset in the factory: 150 kg
- left: 75 kg
- right: 75 kg

Fixed measurement console spring:

- left: L1
- right: R1
- Decrease bearing pressure: turn screw (4) to the right.
- Increase bearing pressure: turn screw to the left.



	L1	R1
	(mm)	(mm)
CAT 310 T (Type: PSM 337)	140	190
CAT NOVA 260 T (Type: PSM 352)	190	230
CAT NOVA 310 T (Type: PSM 353)	160	200
CAT NOVA 360 T (Type: PSM 360)	88	130



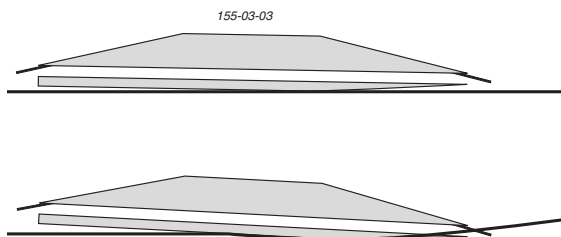
Adjusting the machine

(from 2003 / 2 model)

1. Adjust cutter bar bearing pressure on main springs (3)

- Preset in the factory: 150 kg
- see table

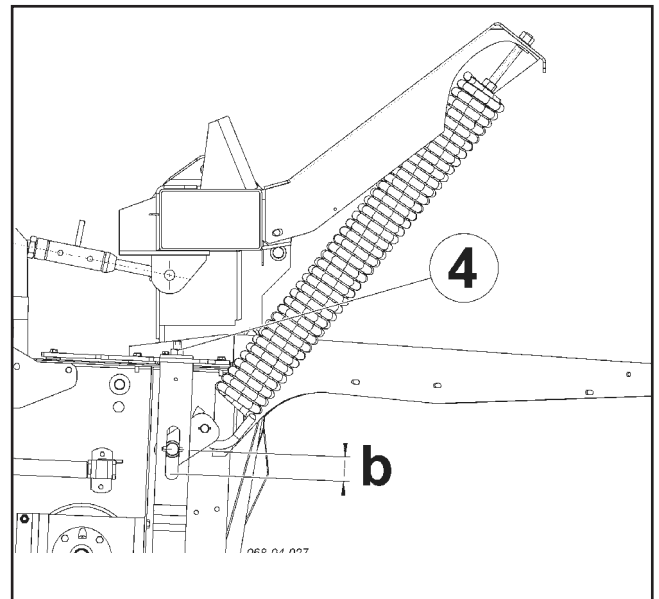
2. Adjust skid bearing pressure at the spindle (4)



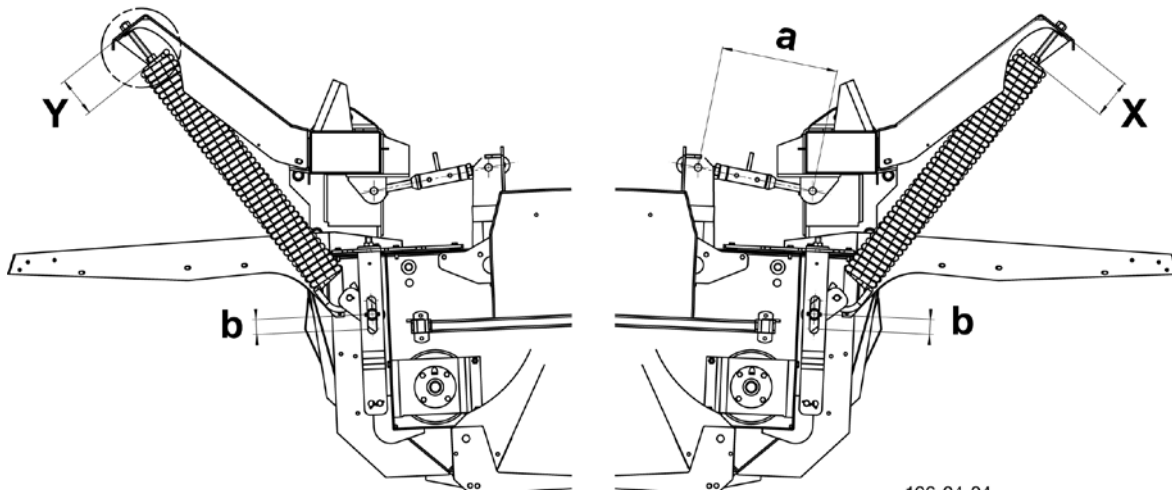
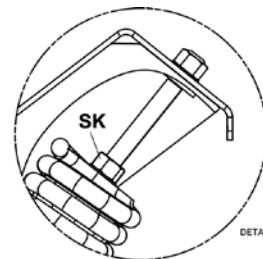
- Decrease bearing pressure: turn screw (4) to the right.



- Increase bearing pressure: turn screw to the left.

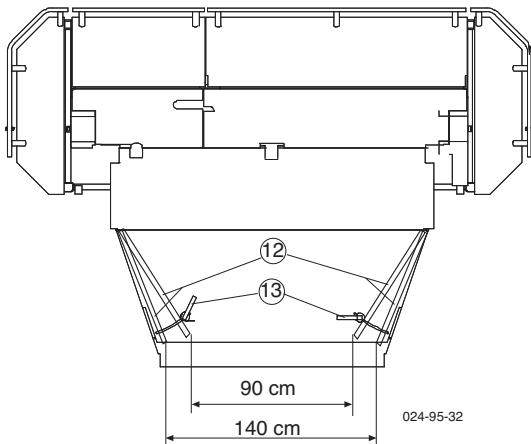


(mm)	PSM 352	PSM 353	PSM 360	PSM 3531
a)	445	445	445	445
b)	65	65	65	65
x)	115	108	75	180
y)	140	138	100	190



3. Adjusting swath width

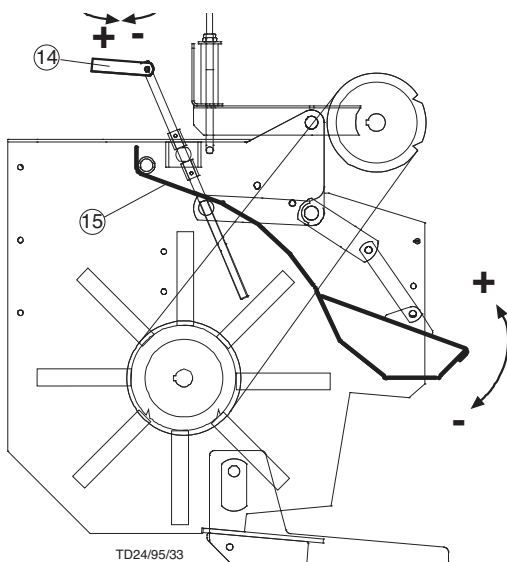
- Loosen swath board (12) with clamping lever (13).
- Adjust swath board by shifting clamping lever.
- Secure.



4. Adjusting processor angle (Baujahr: - 1997)

- Turn lever (14) to the right. This brings impact plate (15) closer to processor tines.
- Turn lever to the left. Impact plate is further away. The distance between the impact plate and processor tines can change the conditioning effect.
- Conditioning is most efficient in the lowest position (-), the forage surface is intensively worn down but it should not be beaten. Mais veiller à ne pas broyer le fourrage.
- The opposite effect is the case for the highest position (+) as the forage surface is only lightly worn down.

The correct setting depends on the volume of forage, speed and tractor power among other things.



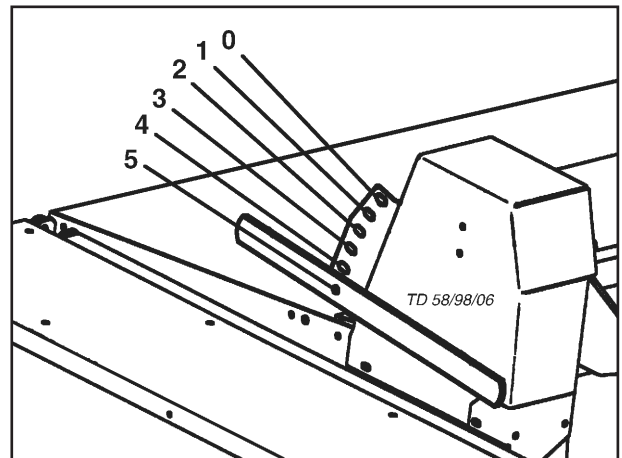
5. Adjusting processor angle (Baujahr: + 1998)

The gap between the beating arm and rotor is adjusted using the hand lever.

Through this the processing effect can be changed.

- Processing is most effective in lowest position (5) where forage surface is strongly reamed. But forage should not be crushed.
- The opposite occurs in the uppermost position (0) where forage is only lightly reamed.

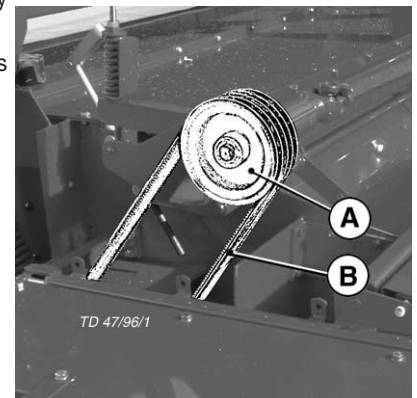
The correct setting depends on the volume of forage, speed and tractor power among other things. Therefore no references necessary for the correct lever position can be given at this point.



6. Altering rotor rpm

- by exchanging pulley (A) and belts (B).

Parts: see Spare Parts List



- 630 rpm
- pulley with $\varnothing$ 147 mm

This rpm is recommended for very leafy forage because it is not intensively crushed.

- 860 rpm
- pulley with $\varnothing$ 197 mm

These prepare forage for quick drying. But forage should not be crushed.

- 1000 rpm
- pulley with $\varnothing$ 224 mm

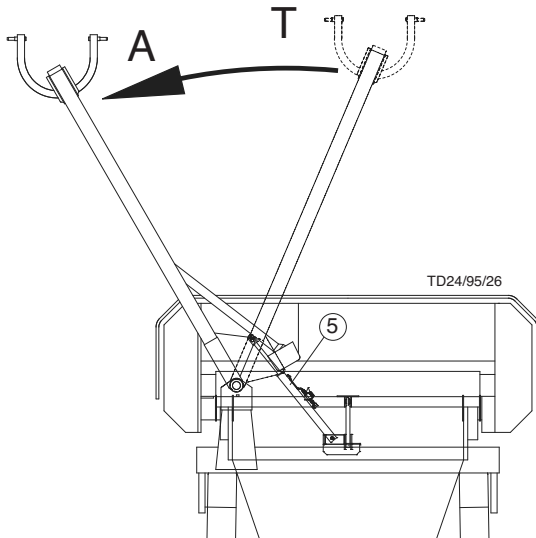
Changing from transport to work position



- **Danger of injury from out-swinging machine:**
- Note free swivel area.

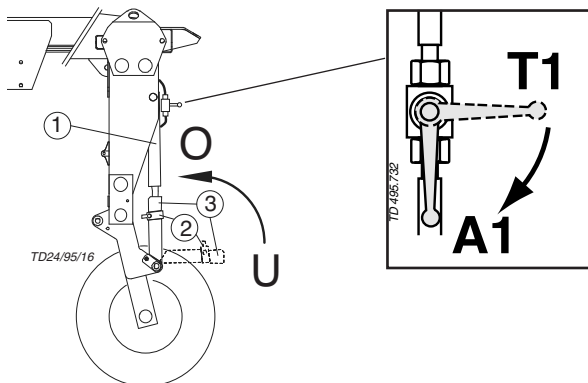
1. Swivel out

- Extend swivel cylinder (5) completely out: Pos. A



2. Lower machine

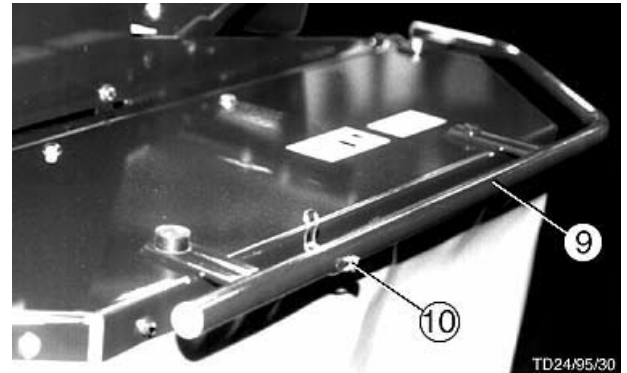
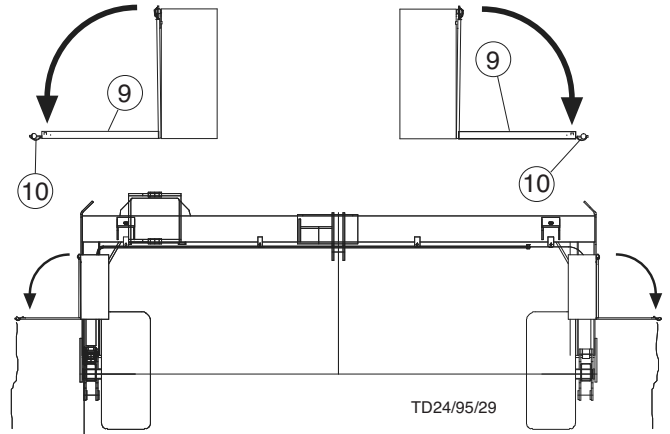
- **Unlock on both sides (year of construction -1998):**
 - Remove spring pin (2).
 - Fold locking mechanism (3) down: Pos. U
 - Secure with spring pin.
- **Unlock on both sides (year of construction +1999)**
 - Swing lever into position A1



3 Lower mower unit: retract lifting cylinder (1) completely.

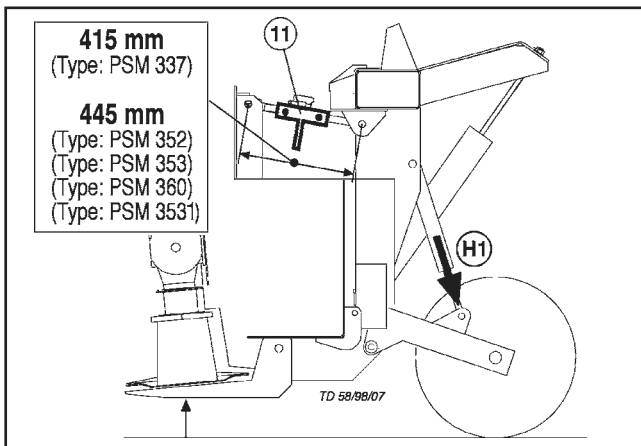
4. Folding down side guard rails (9) in work position

- Remove linch pin (10).
- Fold down guard rail.



5. Adjusting cutting height

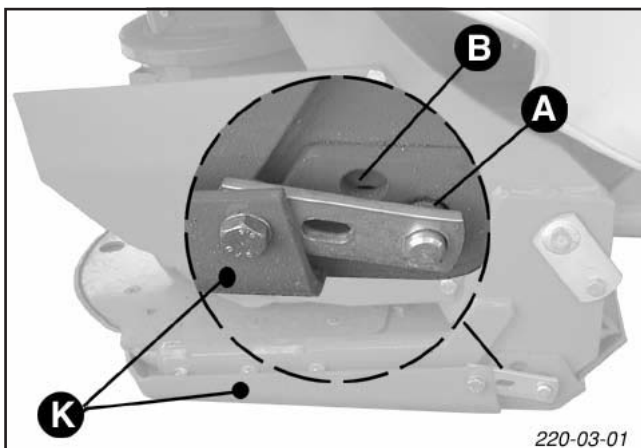
Setting: Lift mower unit hydraulically (H1)



- For optimum operation the set measurement for the telescopic upper link should be 415-445 mm: see drawing (Type)
- Increase:
 - Turn telescopic upper link (11) to the right.
- Decrease:
 - Turn telescopic upper link to the left.

6. Adjust cutting height with runner

(only with CAT NOVA)



- The cutting height can be moved to 2 positions using the runner (K)
- Pos. "A" low, pos. "B" high

Long swath board

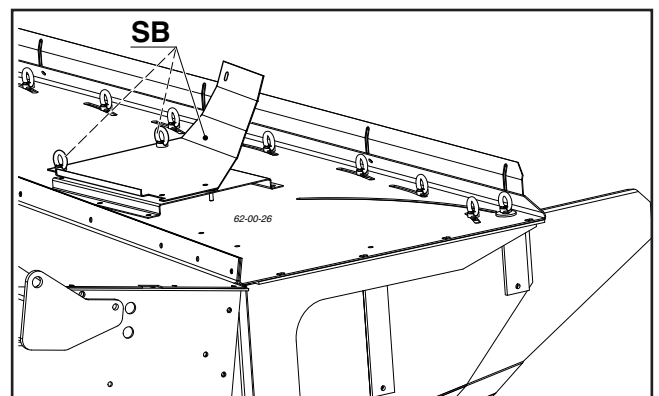
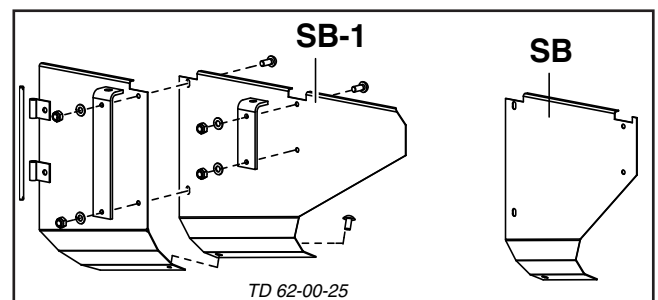
The left standard swath board (SB) can be replaced by a longer one (SB - 1).

By doing so the swath width (S1) can be reduced.



Problem:

In difficult working conditions (long, heavy grass) the longer swath board (SB-1) may lead to clogging. In such a case the standard swath board (SB) must be mounted.



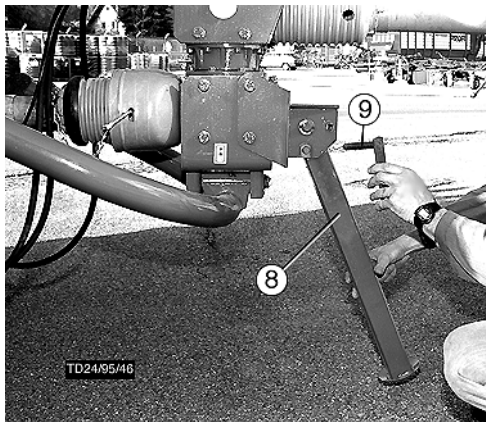
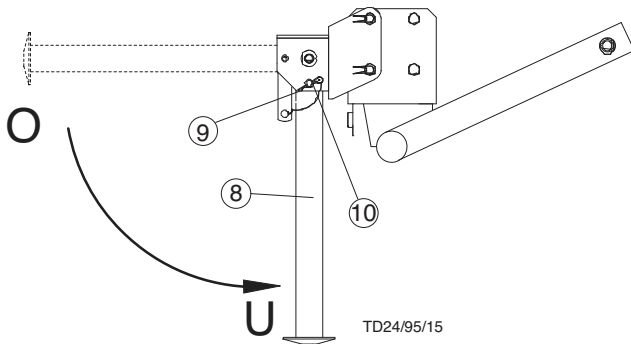
Placing out of service



- Safety advice: see Supplement A1, pts. 1 and 8
- Park machine only on firm level ground.

Parking the machine

- Remove spring pin from support stand.
- Swing support stand (8) down and secure: Pos. U
- Insert bolt (9) and secure with spring pin (10)
- Lower onto support stand using tractor's hydraulics.



Electrics

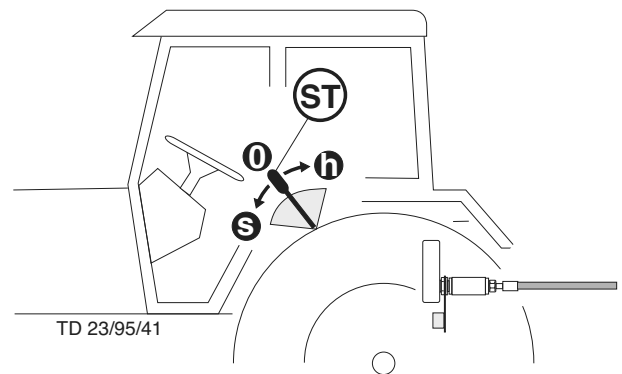
- Pull out plug.

Hydraulics

- Disconnect hydraulic lines from tractor and insert into holder.

Problems when uncoupling

- To reduce remaining pressure: position servo-valve briefly at „lower (S)“.
- Uncouple hydraulic lines.



Disconnecting drive shaft

- Turn motor off.
- Turn p.t.o. off.
- Wait for standstill: The mowing unit runs for about 30 seconds after being shut off.
- Disconnect drive shaft

Uncouple lower link attachment.

Swath formation to the side

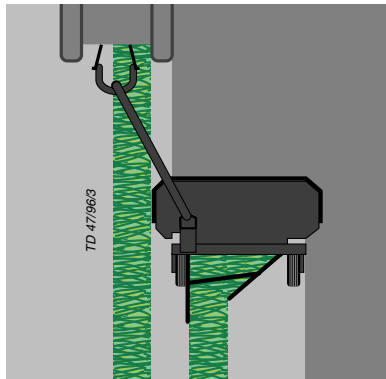
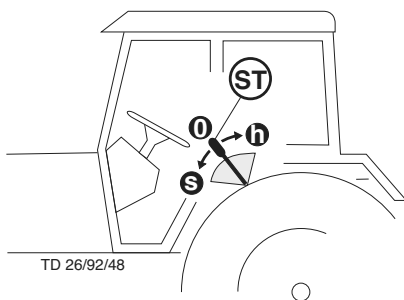
- **Danger of accident when swinging the machine out:**



- Pay attention to free swivelling range.
- Crushing and cutting points within swivelling range of swath board.

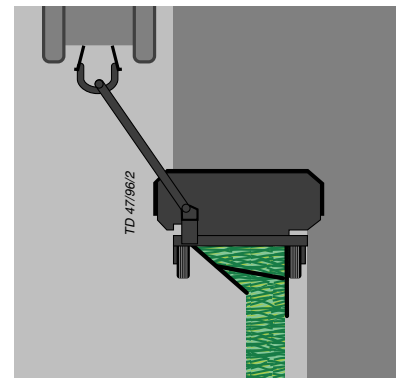
Adjusting swath board

1. Swing drawbar out into working position
2. Then actuate the servo-valve (ST)



Swath formation - left

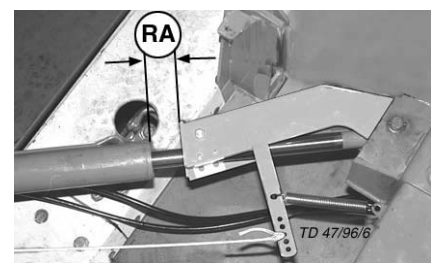
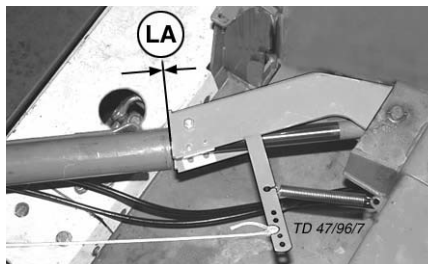
- Lever in "LA" position



Swath formation - right

- Lever in "RA" position

- Swing swath board into position for swath formation - right
- Lever in "RA" position



3. Move servo-valve (ST) to "LOWER" (s)

- Swing swath board into position for swath formation - left
- Lever in "LA" position

Transport position

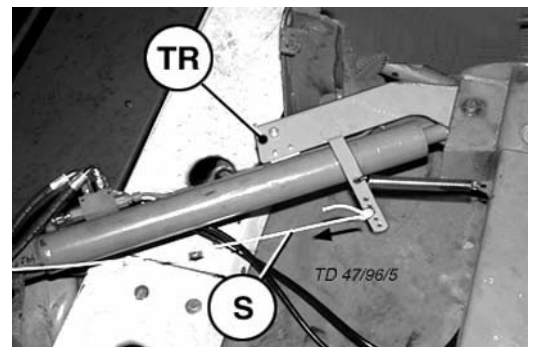
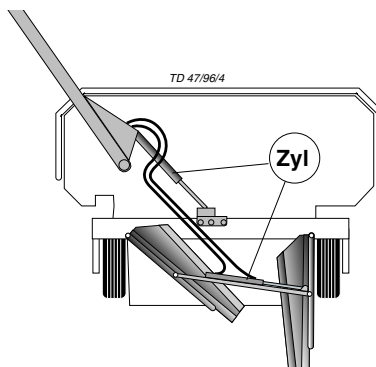
- Lever in "TR" position

Changing to transport position

1. Pull rope (S)

2. Move servo-valve (ST) to "LOWER" (s)

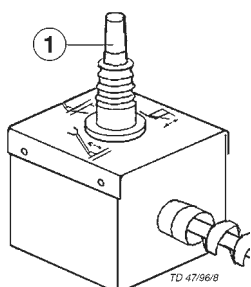
- Drawbar swings into transport position
- Release rope (S)
- Lever in "TR" position



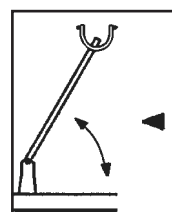
Electrohydraulic operation

Control panel operation

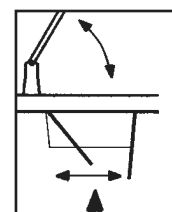
- Pre-select required control panel function (1)
- Actuate servo-valve (ST)



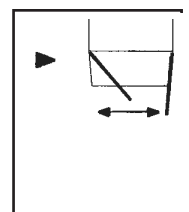
Swing drawbar



Swing drawbar and swath board



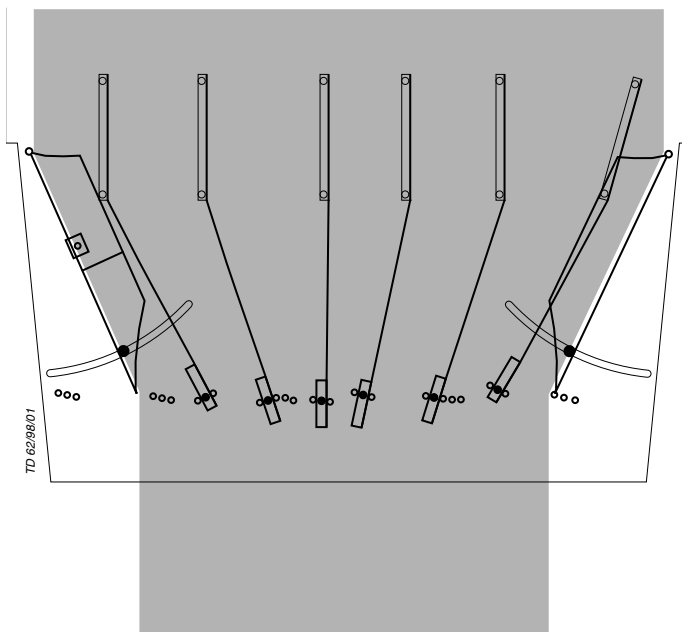
Swing swath board



Variation "Extra dry" system

Swathes

1. Set the positions of the guiding plates
 - see diagram



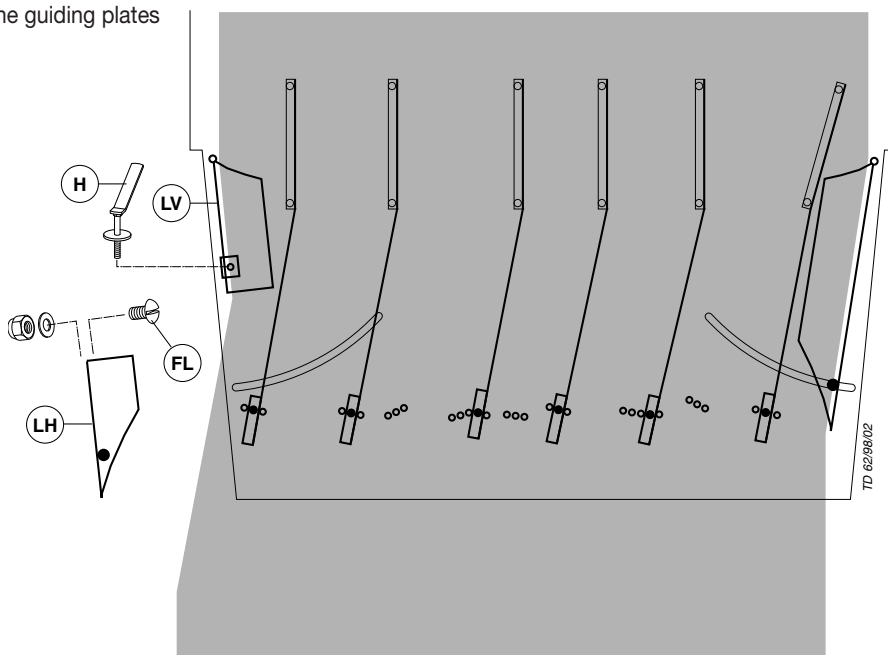
Note

The settings listed below are to be understood as basic settings.

Because of the various types of crops, an optimum setting of the guiding plates can possibly first be ascertained when the machine is in use.

Spread width

1. Remove left rear swath plates (LH)
 - remove truss-head screws (FL) and level (H)
2. Fix left front swath plate (LV) with lever (H)
3. Set the positions of the guiding plates
 - see diagram



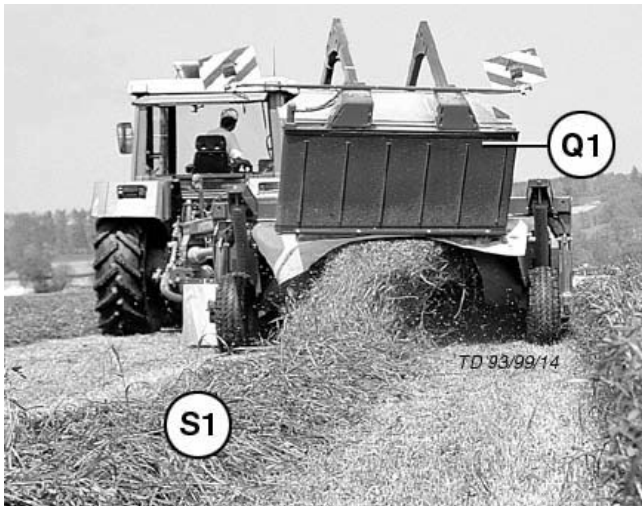
Description

A swath can be deposited offset using the cross conveyor. The forage is not deposited directly behind the machine, but to the left of it. With this a double swath (S1, S2) can be produced. This can be collected up with a wider Pick-up.

- The cross conveyor is driven by a hydraulic motor which is powered by a hydraulic pump (board hydraulic).

Necessary hydraulic connection

- Single action hydraulic connection
 - to raise the cross conveyor



1. Depositing a single swath (S1)

- Cross conveyor raised (Q1)

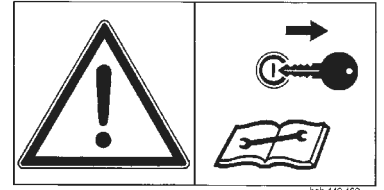
2. Depositing a double swath (S1, S2)

- Cross conveyor lowered (Q2)
- The second swath (S2) is deposited next to the first (S1)
 - Swath width 1.80 - 2.30 m



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.



Road transport

- Cross conveyor lowered (Q2)
 - Only in this position when travelling on public roads

Settings

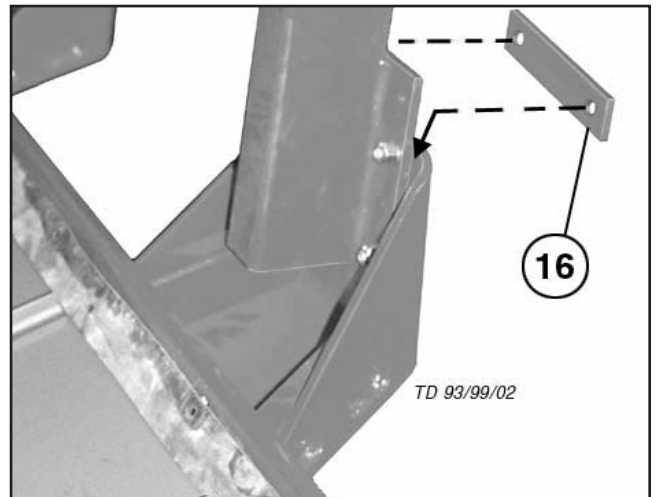
Setting for moist forage:

- Fit both the accompanying shims (16).

This enables the cross conveyor to be mounted more evenly onto the machine. This improves the conveying operation with particularly moist forage.

Setting for normal operation:

- Remove both the accompanying shims (16)



This enables the cross conveyor to be mounted onto the machine in the normal position. This position is adequate for most operations.

Additional cross belt

Description

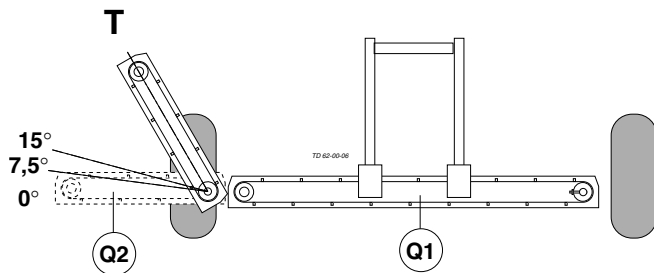
By using the additional cross belt the swath width (S1, S2) can be reduced.



Working position

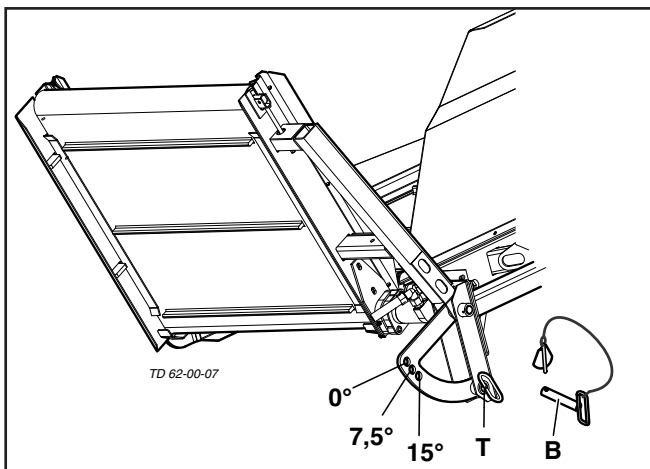
The additional cross belt can be adjusted in 3 different positions (0°, 7,5° and 15°)

- Fix pin (B) with forelock



Road transport

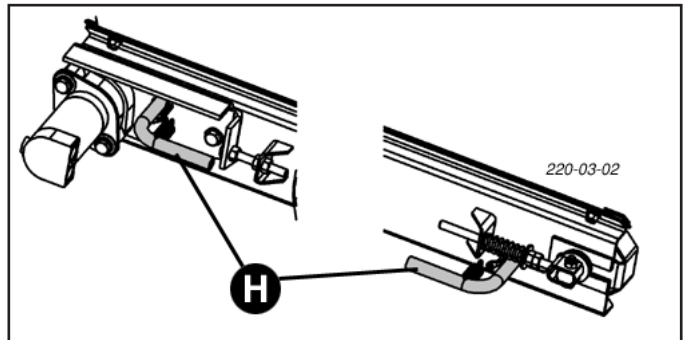
- Additional cross belt swung up (T)
 - Fix pin (B) with forelock
- Public streets must be used only in this position



Cleaning the Rollers

After extensive operation a coating can build up on the conveying belt roller. This can lead to damage to the conveyor belt. Cleaning is absolutely essential as soon as arching becomes visible in the rubber belt.

- Turn cross conveyor belt on.
- Pull out lever (H) and push downward
- Scraper is pressed onto the roller and cleaned
- Carry out cleaning process on both sides



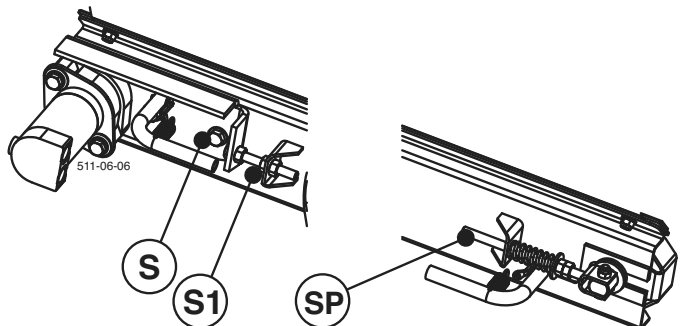
Adjusting the conveyor belt

1. Adjusting the driving roller

- Loosen screw (S)
- Adjust using screw (S1)
- Belt must run in the middle of the roller
- Tighten screw (S)

2. Adjusting the live roller

- Adjust conveyor belt using both straining screws (SP)
- The belt must run in the middle (otherwise wearing occurs!)



Align cross conveyor belt on frame so that on both sides sufficient distance to the wheels exists.

(Standard = 60 mm)

Safety point

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



General maintenance hints

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

- Tighten all screws after the first hours of operation.



In particular check:

- blade screws on the mowers
- tine screws on the swather and tedder.

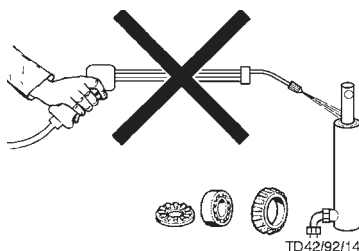
Spare part

- The **original components and accessories** have been designed especially for these machines and appliances.
- We want to make it quite clear that components and accessories 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.

Cleaning of machine parts

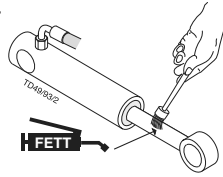
Attention! Do not use high-pressure washers for the cleaning of bearing- and hydraulic parts.

- 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 in the open for long periods of time, clean piston rods and then coat with grease.



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.

Drive shafts

- see notes in the supplement

For maintenance please note!

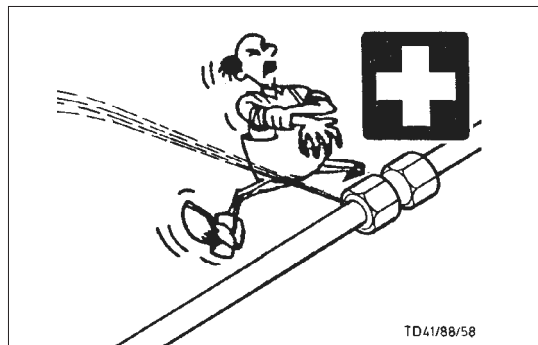
The instructions in this operating manual are always valid.

In case there are no special instructions available, then the notes in the accompanying drive shaft manufacturer's instructions are valid.

Hydraulic unit

Caution! Danger of injury or infection!

Under high pressure, escaping fluids can penetrate the skin. Therefore seek immediate medical help!



After the first 10 operating hours and then every consecutive 50 operating hours

- Check the hydraulic unit and lines for tightness and retighten screw connections if necessary.

Before operation

- Check hydraulic hoses for wear.

Replace worn or damaged hydraulic hoses immediately. The replacement hoses must meet the manufacturer's technical requirements.

Hose lines are subject to natural ageing. The period of use should not exceed 5 – 6 years.



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..



Repair Instructions

Please refer to repair instructions in supplement (if available)

After the first hours of operation

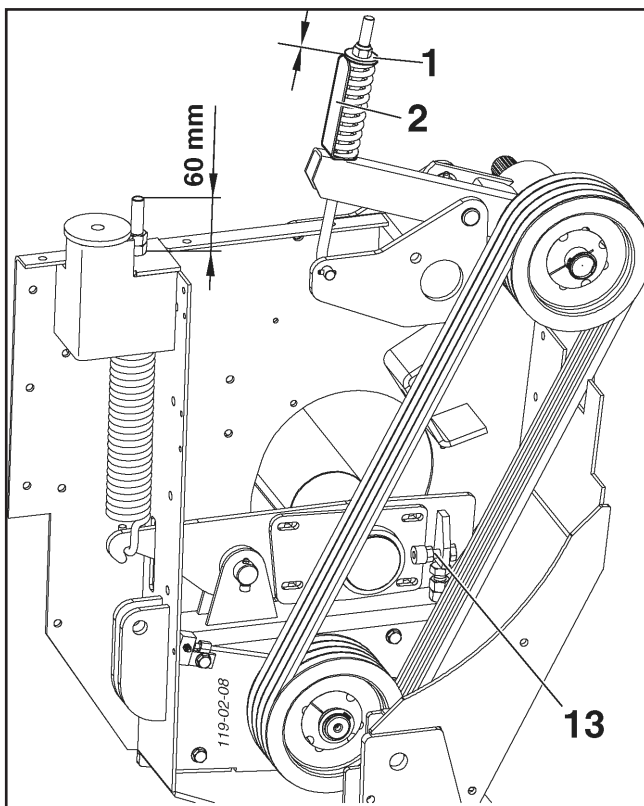
- Retighten all screws.

- Above all, check wheel nuts and cutter screws.



- Always maintain the specified tyre pressure (2 bar).
- Check or adjust V-belt tension.
- After changing V-belts:

- Basic adjustment:



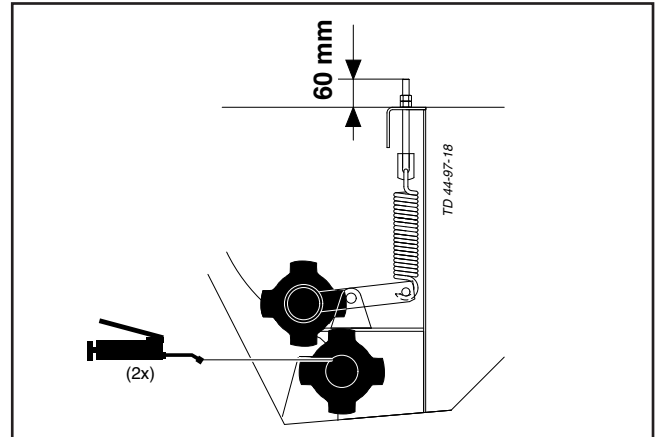
Disc (1) to approx. top control measurement (2).

- Adjust:
 - Tension nut:
 - Tension: turn to the right.
 - Relieve: turn to the left.
 - Secure with lock nut

Roller-type conditioner

Adjustment: 60 mm

Lubrication: 50^h
left and right

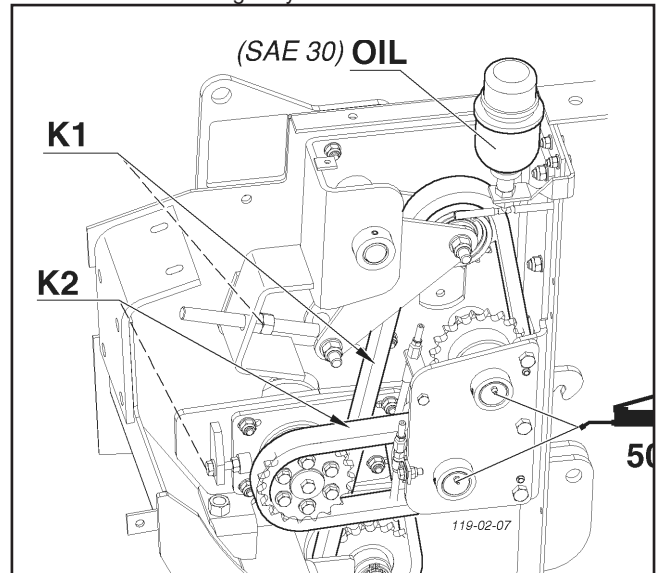


OIL

Check oil level before starting work.

K1, K2

Check chain tension regularly.



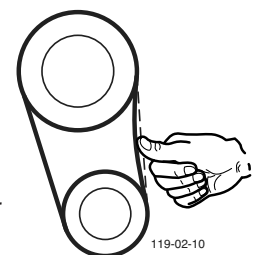
- Do not tension chains too tightly
- Thumb test

K1 = 10 – 12 mm

K2 = 4 – 5 mm

Pos. 13

Adjustment possibility: Both conditioner rollers should be as parallel to each other as possible.



Every 50 hours of operation

- Grease all grease nipples according to lubrication chart.
- Grease both drive shafts in machine (see lubrication chart):
Take sliding sections apart and grease well.

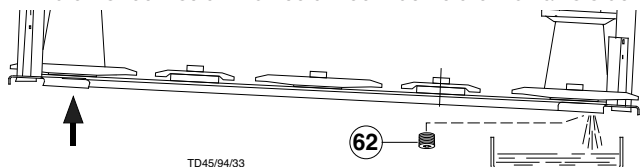
Cutter bar-oil change

After the first 50 hours of operation, then after every 500 hours of operation, or annually.

Note:

- Change oil when at operating temperature.

The oil is too viscid when cold. Too much old oil remains stuck

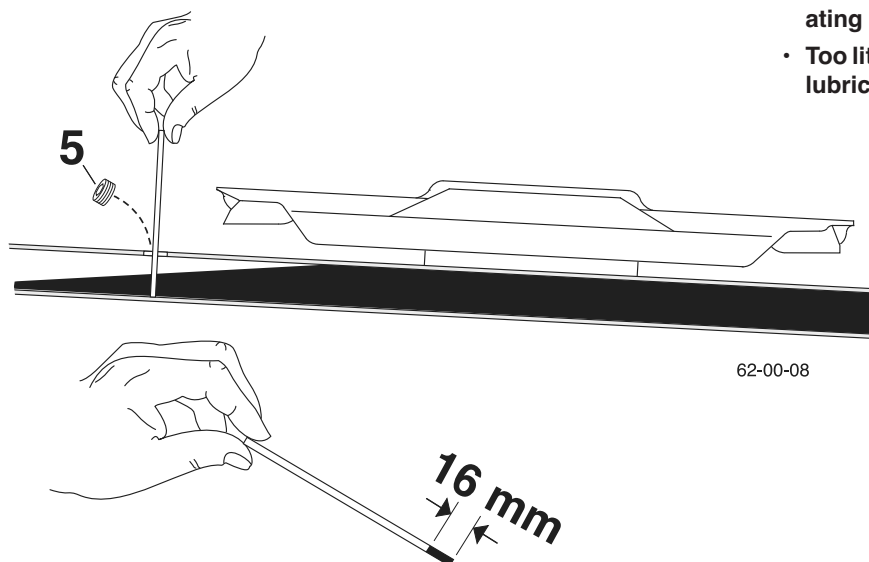


to the gearwheels and because of this any suspended matter present cannot be removed from the gearing.

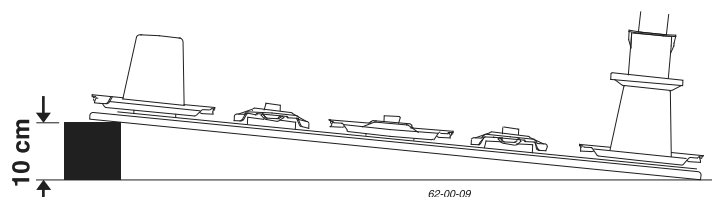
- **Drain oil:**
- Lift the right side of the mower bar so that the oil gathers in the drain plug area.
- Remove drain plug (62), drain old oil and dispose of properly.

- Fill with oil:

Full amount: 3,5 litres: SAE 90 EP



Fill check raised 10 cm



1. Lift one side of the mower bar (10 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 **10 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.

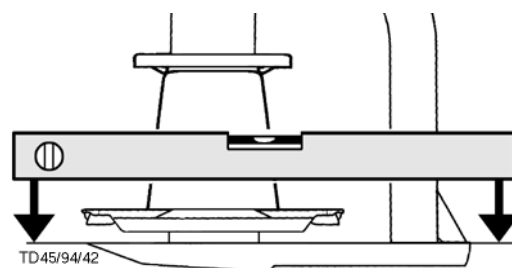
3. Remove oil refill screw (5).

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

Important!

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

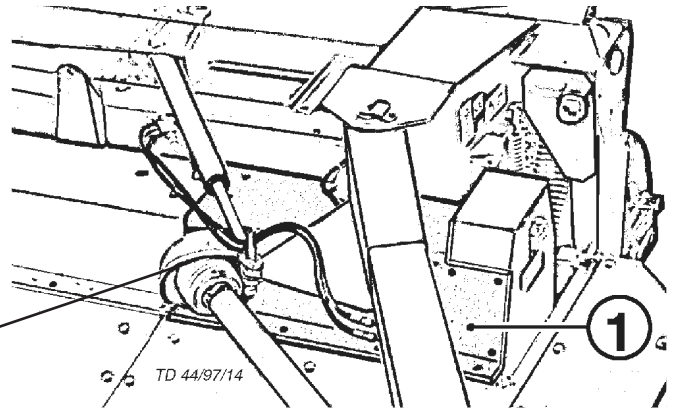
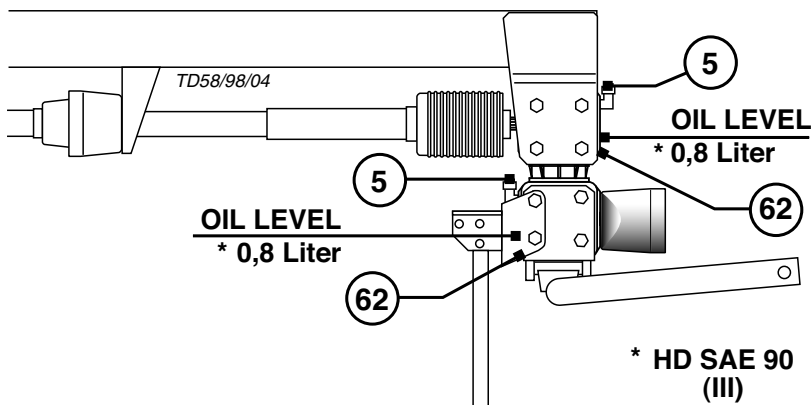
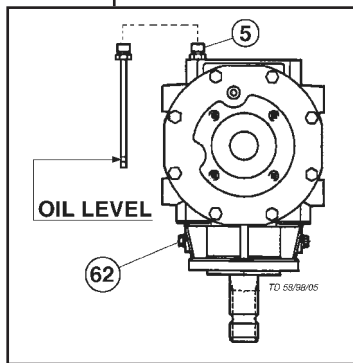
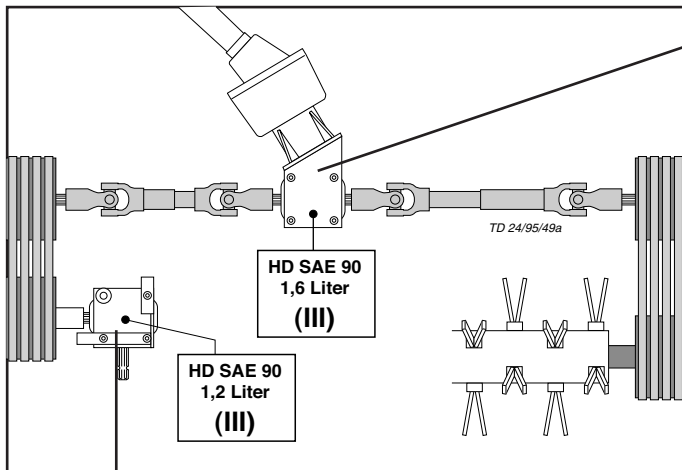
4. Check the "16 mm" oil level using a wooden stick and top-up if necessary.



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

Gearing

- Change oil after the first 50 hours of operation.
- Under normal operating conditions, oil is to be topped-up annually.
- Change oil after 300 ha at the latest.

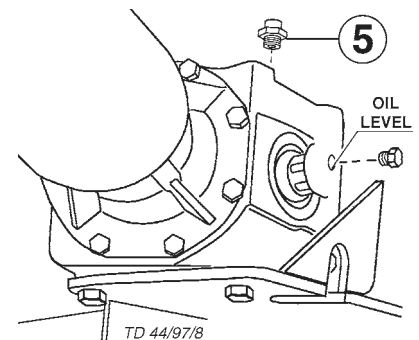
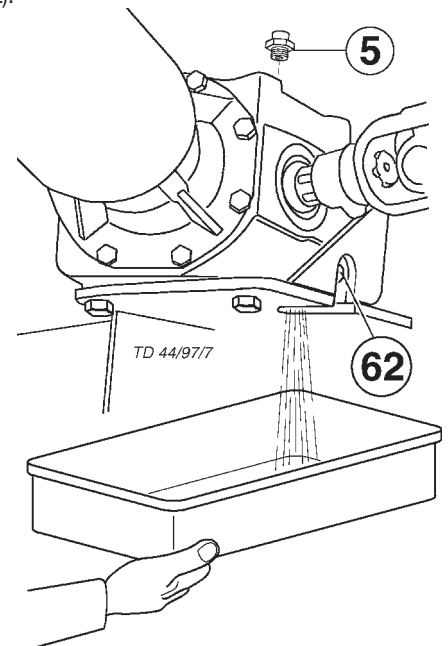


Starting transmission

Fill with oil:

Full amount: 1,6 litres: SAE 90

- Remove shield (1).
- Take out oil drain plug (62), let run out and duly dispose waste oil.
- Take out oil filler plug (5) and top up oil "SAE 90" up to the level screw (OIL LEVEL).



Garaging

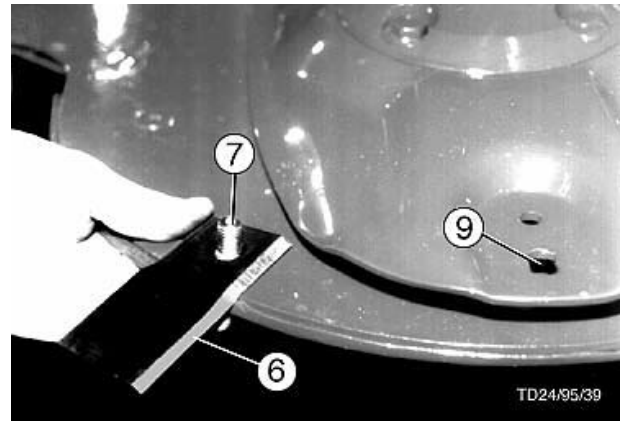
- Thoroughly clean machine.
- Grease all greasing points according to lubrication chart.
- Put up weather protection.



- Protect exposed parts from rust.

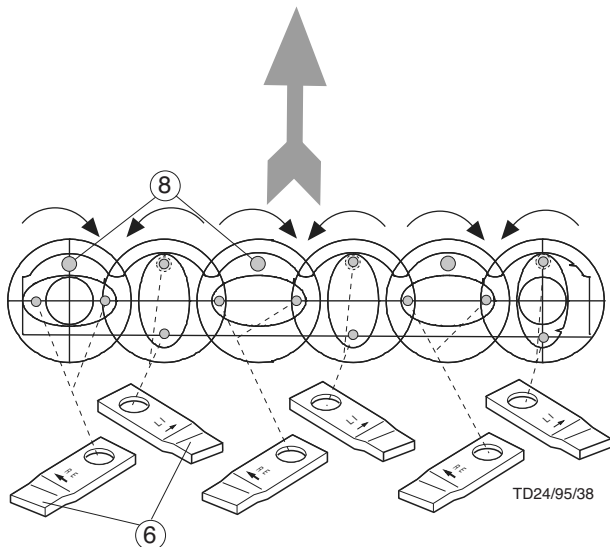
• Danger of imbalance:

- Always install cutters in pairs.

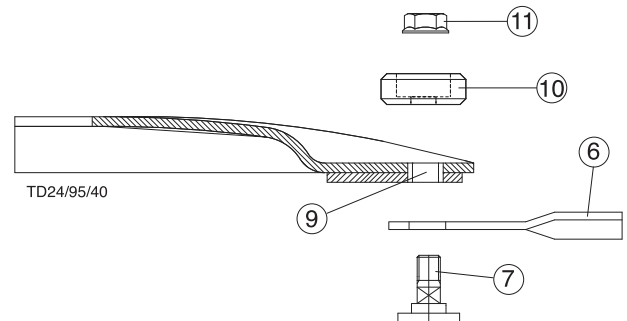


Installing cutters

- Replace in pairs all unevenly worn or bent cutters.
- Cutters worn on one side can be turned around and used again.

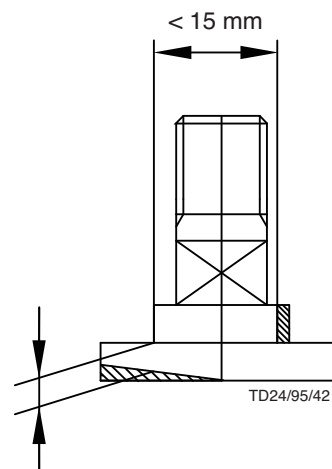


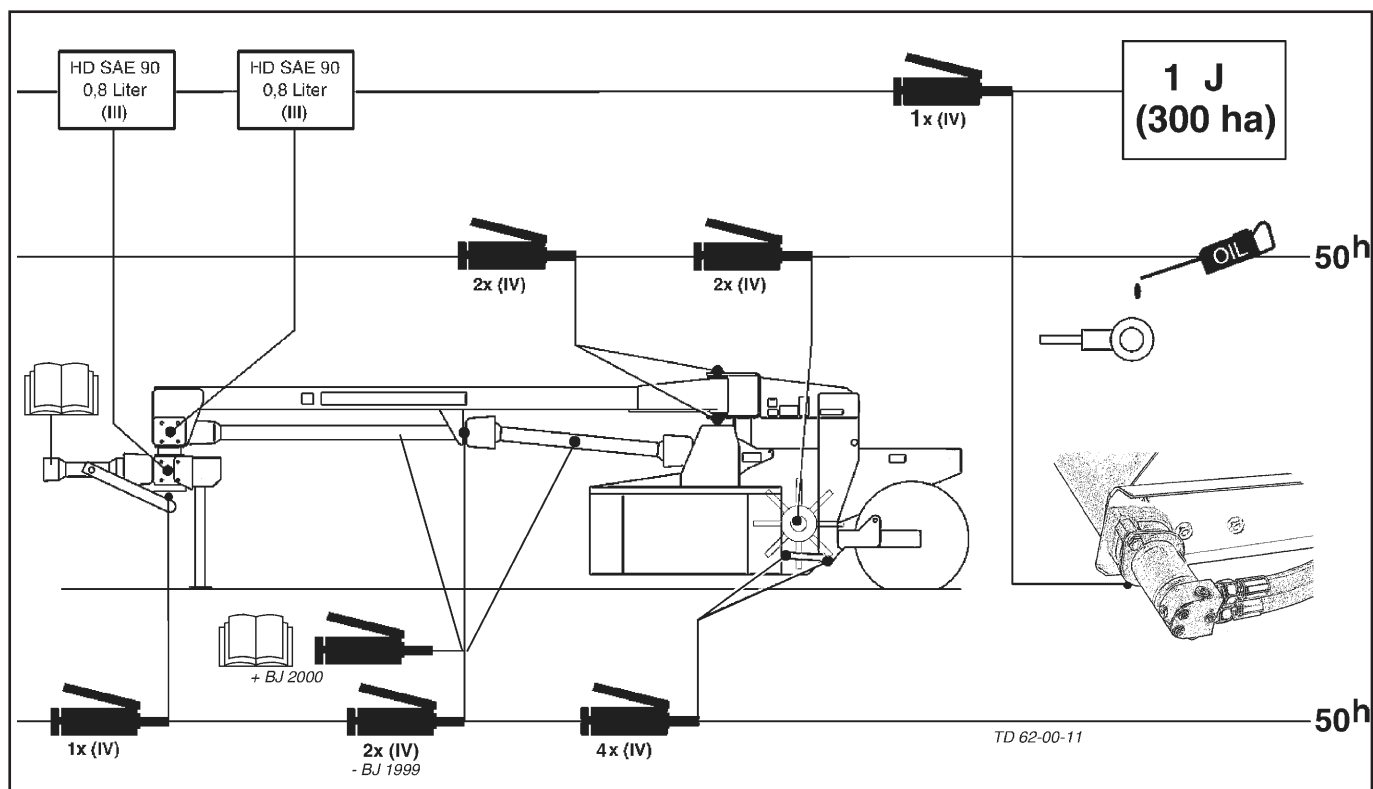
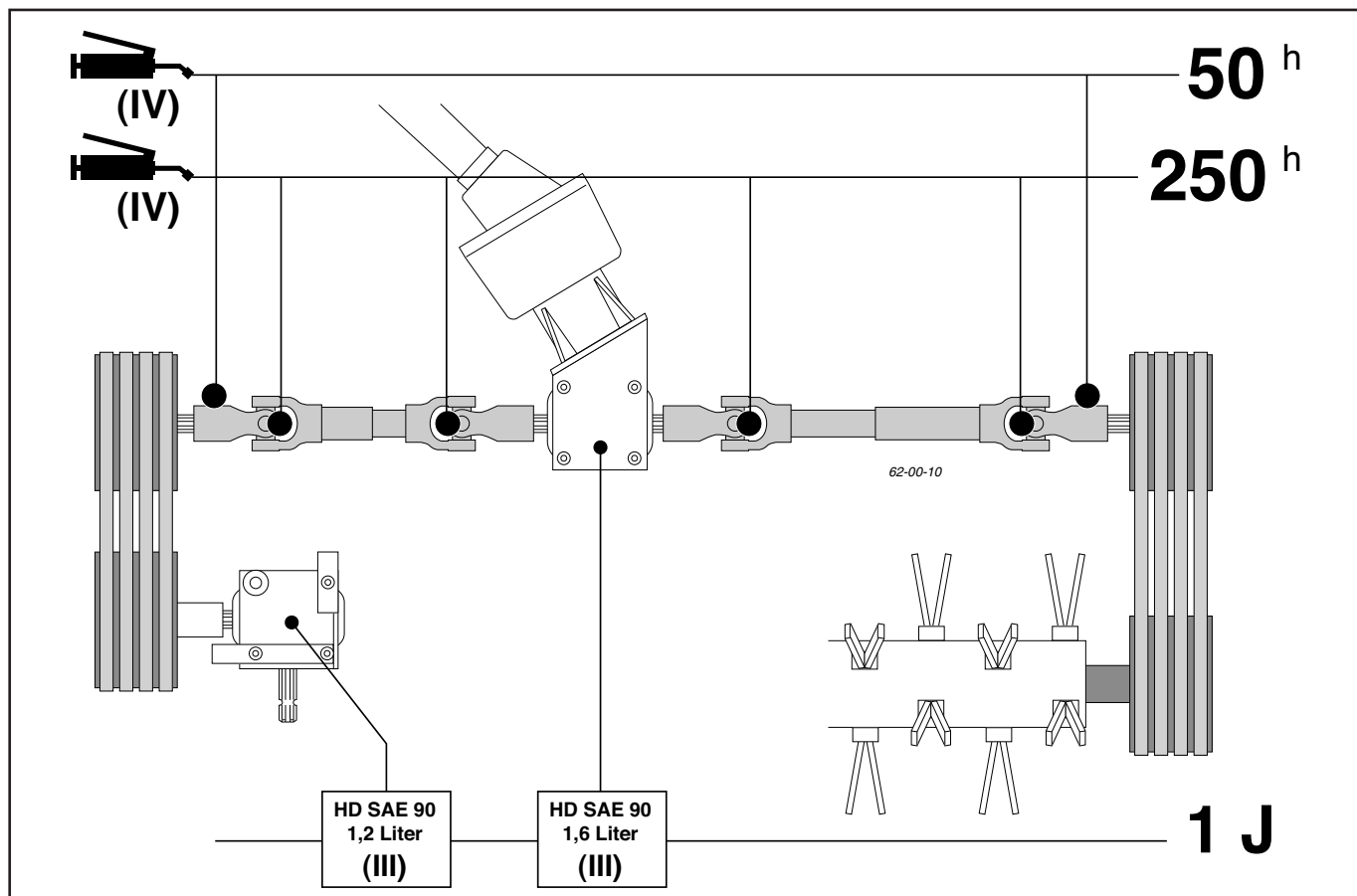
- Put fastening screw (7) through installing hole (8) in the bar.
- Place cutter on it, noting rotation direction!
- Turn mower disc installing hole (9) onto bar installing hole.
- Screw in using washer (10) and nut (11).
The cutter bolts' torque is 120 Nm.



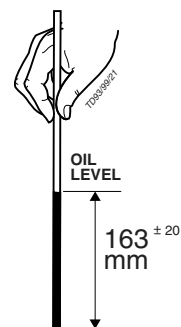
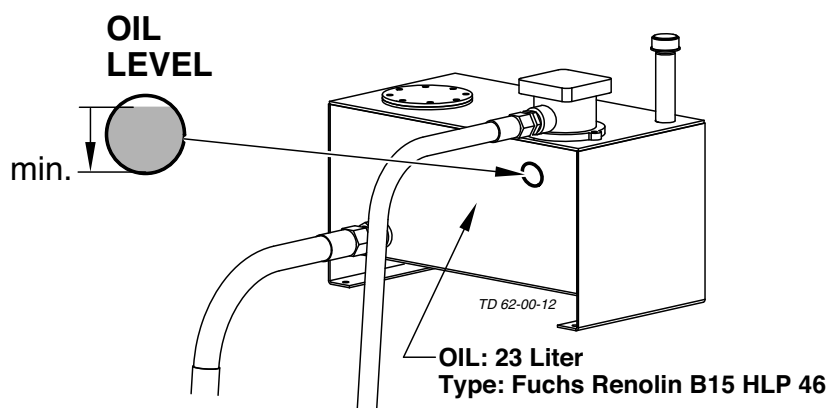
Fastening screw (7)

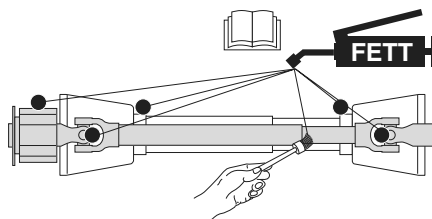
- Replace when screw heads are worn out or a with a diameter of less than 15 mm.





- (D)** **Poikittaisella kuljetushihnalla varustetut koneet**
Öljynvaihto 2 vuoden välein (tai kork. 4000 ha)
- (F)** **Machines avec tapis groupeur d'andains**
Vidanger l'huile tous les 2 ans (ou max. 4000 ha)
- (GB)** **Machines with Cross conveyor**
Change oil after 2 years (or max. 4000 ha)
- (S)** **Maskiner med tvärrmatningsband**
Oljebyte vart annat år (eller max. 400 ha)
- (DK)** **Maskiner med tværgående transportbånd**
Udskift olien for hvert 2. år (eller maks. 4000 ha.)
- (E)** **Máquinas con cinta transportadora transversal**
Cambio de aceite cada 2 años (o máx. a las 4000 ha).
- (FIN)** **Poikittaisella kuljetushihnalla varustetut koneet**
Öljynvaihto 2 vuoden välein (tai kork. 4000 ha)
- (NL)** **Machines met zijafvoerband**
oliewissel om de twee jaren of na 4000 hectares
- (PL)** **Maszyny z bieżnią poprzeczną**
Wymiana oleju co 2 lata (lub max. 400 ha)
- (RUS)** **Машины с поперечным ленточным конвейером**
Замена масла через каждые 2 года (или макс. 400 га)
- (H)** **Gépek szállítószalaggal**
Olajcsere minden 2 év után (vagy max. 400 ha után)
- (UA)** **Машины з поперечним стрічковим конвеєром**
Заміна масла кожні 2 роки (або макс. 4000 га)
- (EE)** **Transportöörlindiga masinad**
Õli vahetus iga 2 aasta järel (või maks 400 ha)
- (GR)** **Poikittaisella kuljetushihnalla varustetut koneet**
Öljynvaihto 2 vuoden välein (tai kork. 4000 ha)





D	Schmierplan
8 ^h	alle 8 Betriebsstunden
20 ^h	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 ^h	Toutes les 8 heures de service
20 ^h	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 ^h	after every 8 hours operation
20 ^h	after every 20 hours operation
40 F	all 40 loads
80 F	all 80 loads
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 ^h	alle 8 bedrijfsuren
20 ^h	alle 20 bedrijfsuren
40 F	alle 40 wagenladingen
80 F	alle 80 wagenladingen
1 J	1 x jaarlijks
100 ha	alle 100 hectaren
FETT	VET
	= Aantal smeernippels
(IV)	Zie aanhangsel "Smeermiddelen"
Liter	Liter
*	Varianten
	zie gebruiksaanwijzing van de fabrikant

S	Smörjschema
8 ^h	Varje 8:e driftstimme
20 ^h	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 ^h	Hver 8. arbeidstime
20 ^h	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 ^h	ogni 8 ore di esercizio
20 ^h	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 ^h	Cada 8 horas de servicio
20 ^h	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	LUBRICANTE
	= Número de boquillas de engrase
(IV)	Véase anexo "Lubrificantes"
Liter	Litros
*	Variante
	Véanse instrucciones del fabricante

P	Plano de lubrificação
8 ^h	Em cada 8 horas de serviço
20 ^h	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

FIN	Voitelukaavio
8 ^h	8 käyttötunnin välein
20 ^h	20 käyttötunnin välein
40 F	40 kuorman välein
80 F	80 kuorman välein
1 J	kerran vuodessa
100 ha	100 ha:n välein
FETT	RASVA
	= Voitelunippojen lukumäärä
(IV)	Katso liite "Polttoaineet"
Liter	Litraa
*	Versio
	Katso valmistajan ohjeet

DK	Smøreplan
8 ^h	Hver 8. driftstime
20 ^h	Hver 20. driftstime
40 F	Hvert 40. læs
80 F	Hvert 80. læs
1 J	1 gang årligt
100 ha	For hver 100 hektar
FETT	Fedt
	= Antal smørenipler
(IV)	Se smøredagrammet
Liter	Liter
*	Udstyrsvariant
	Se producentens anvisninger

(D) Zusammenbauanleitung

- Zinken (2) immer paarweise auswechseln (Unwuchtgefahr)

(DK) Montagevejledning

- Udsift altid tænderne (2) parvist (risiko for ubalance)

(F) Instructions de montage

- Changer toujours les doigts (2) conditionneur deux par deux. (Risque de déséquilibre).

(GB) Mounting instructions

- Exchange the prongs (2) always in pairs (Unwuchtgefahr)

(NL) Montage-aanwijzingen

- tanden (2) altijd per paar verwisselen (onbalans)

(E) Instrucciones de montaje

- Sustituya las cuchillas (2) siempre en pares (peligro de desequilibrio).

(RUS) Монтажное руководство

- Зубы (2) всегда заменять попарно (опасность дисбаланса)

(CZ) Montáž

- prsty (2) montujte pouze do protilehlé polohy

(PL) Instrukcja montażu

- Ostrza (2) zawsze wymieniać parami

(S) Monteringsvägledning

- Byt alltid fingrarna (2) parvis (fara för jämnviktsstörningar)

(H) Összeszerelési utasítás

- A fogakat (2) mindig páronként kell cserélni (kiegyensúlyozatlansági veszély)

(UA) Інструкції з монтажу

- Зубці (2) завжди замінюйте попарно (небезпека розбалансування)

(I) Istruzioni di montaggio

- I denti (2) vanno sostituiti sempre a due a due (pericolo di sbilanciamento)

(GR) Συνολικές οδηγίες συναρμολόγησης

- Αλλάζετε τις λεπίδες (2) πάντα κατά ζεύγη (κίνδυνος έλλειψης ισορροπίας)

(EE) Paigaldusjuhend

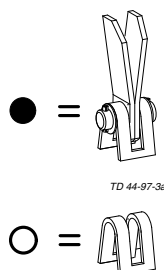
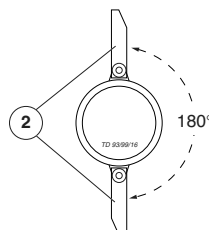
- vahetage piid (2) alati paarikaupa (tasakaalu säilimiseks)

(TR) Montaj talimatı

- Zıvanaları (2) daima çift çift değiştirin (devrilme tehlikesi)

(FIN) Kokoamisohjeet

- Vaihda piikit (2) aina pareittain (muutoin epätasapainon vaara).



Блок попередньої підготовки, ротор

Condizionatore e rotore

Διάταξη επεξεργασίας, δρομέας

Muljur, rootor

Hazırlayıcı, Rotor

Murskain, roottori

Aufbereiter, Rotor

Crimper, Rotor

Conditionneur, Rotor

Conditioner, Rotor

Kneuzer, Rotor

Acondicionador, rotor

Подготовительное устройство, ротор

Kondicionér, Rotor

Rozkladacz pokosu, rotor

Kross, rotor

Szársértő, rotor

Блок попередньої підготовки, ротор

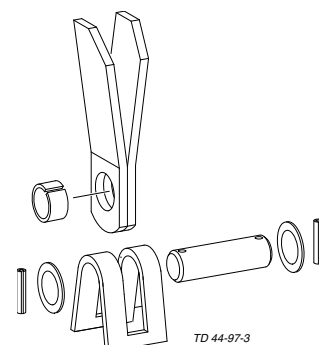
Condizionatore e rotore

Διάταξη επεξεργασίας, δρομέας

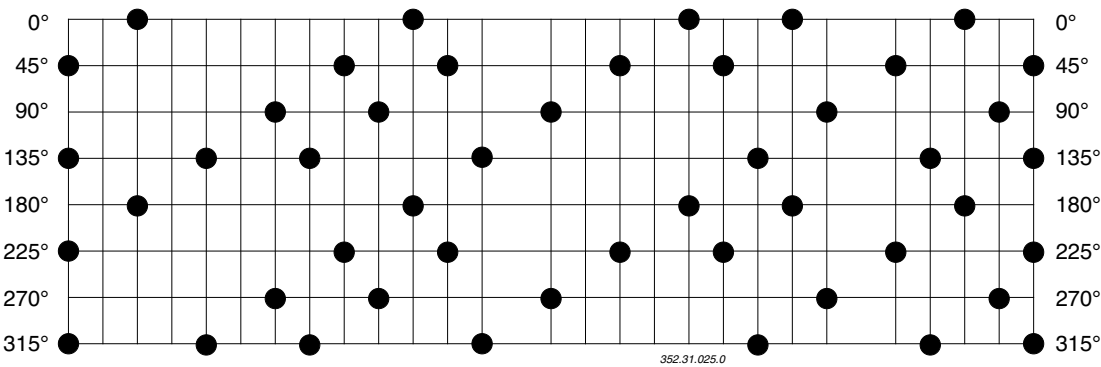
Muljur, rootor

Hazırlayıcı, Rotor

Murskain, roottori

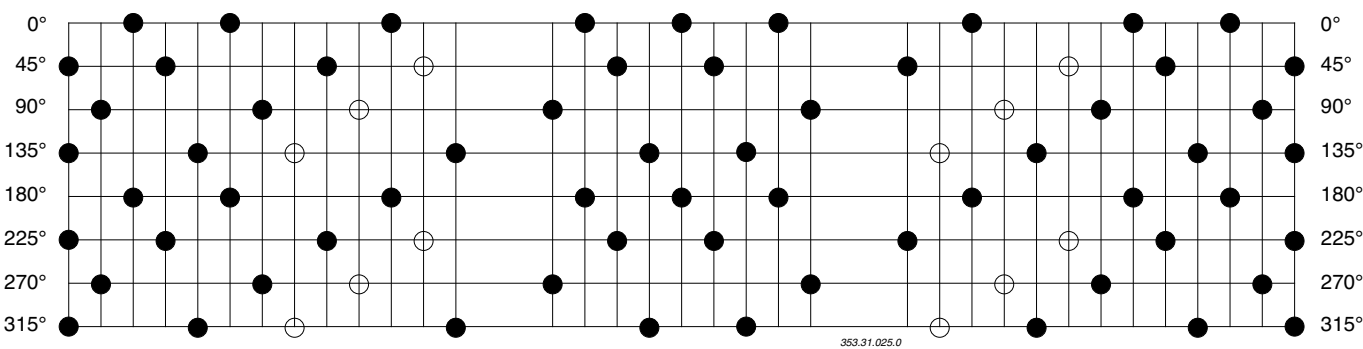


CAT NOVA 260 T (Type PSM 352)

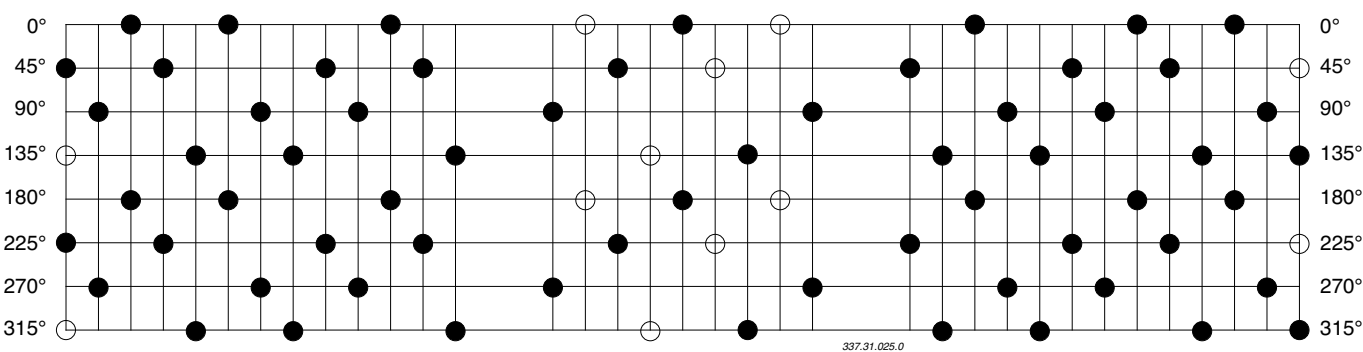


CAT NOVA 310 T (Type PSM 353)

CAT NOVA 3100 T (Type PSM 3531)



CAT 310 T (Type PSM 337)



Technical data

CAT NOVA 310 T

General

Length (transport)	5180 mm
Width (transport)	3000 mm
Height (transport)	1910 mm
Length (work)	4870 mm
Ground clearance (transport)	380 mm
Height (work)	1450 mm
Weight	1710 kg

Attachment	Lower link Kat.II
Tractor capacity	from 59 kW (80 hp)
Driving motor speed	1000/540 r.p.m.
No. of grease nipples (without drive shaft)	9
Continuous noise pressure level	93 dB (A)

Necessary connections

- 1 double-action hydraulic connection
pressure min.: 140 bar
pressure max.: 180 bar
- 1 single-action hydraulic connection
pressure min.: 140 bar
pressure max.: 180 bar
- 7-pole electric connection for lighting (12 Volt)
- 3-pole electric (12 Volt) connection (see supplement)

Cutter bar

Cutting width	3026 mm
No. of mowing discs	6
Cutters per mowing disc	2
Cutting height	25-120 mm
Mowing disc r.p.m.	2500
Horizontal rocking	+5.5°
Longitudinal rocking	±3.5°
Vertical adjustment in the work position	±100 mm

Conditioner

System	Finger (V-form)
Width	2240 mm
No. of tines	58 double-finger
Rotor r.p.m.	860
Rotor diameter	600 mm
Swath width	900-1400 mm

Defined use of the mower

The Rotary Mower "**CAT NOVA 310 T**" is intended solely for normal use in agricultural work:

- For the mowing of paddocks and field forage.
Any other uses are regarded as not included in this definition.
The manufacturer is not liable for any damage resulting from this. The user carries sole risk.
- Keeping to the maintenance and servicing conditions stipulated by the manufacturer is also included in the defined use.

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.

SUPPLEMENT

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

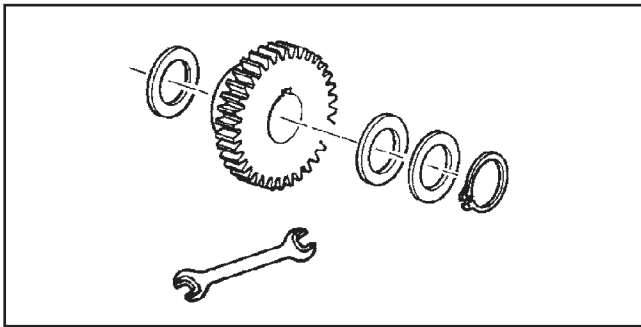
All points referring to safety in this manual are indicated by this sign.

1.) Defined use

- 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.

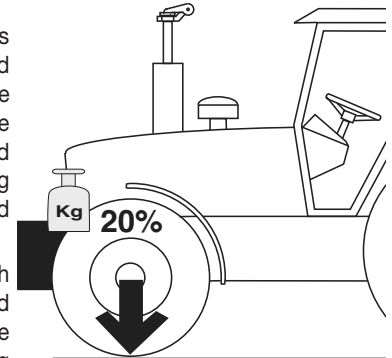


6.) Transport of persons prohibited

- 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.

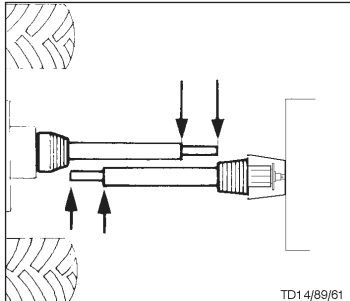
9.) Cleaning the machine

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



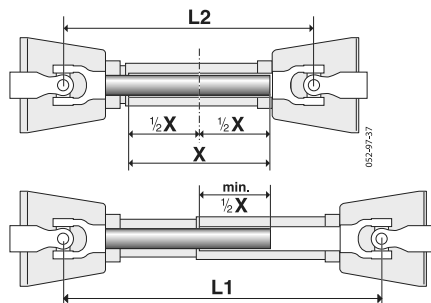
Matching driveshaft to tractor

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



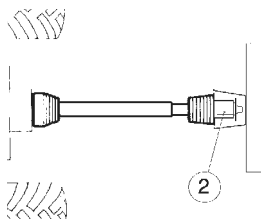
Procedure for cutting to length

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



Important!

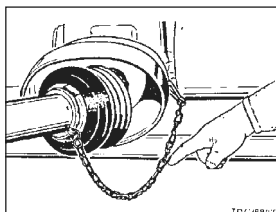
- Note the maximum operating length (L1)
 - Try to attain the greatest possible shaft overlap (min. $\frac{1}{2} X$)!
- Shorten inside and outside tube guard by the same amount.
- Fit torque limiter (2) of drive shaft to implement end of driveshaft!



- Always check that drive shaft locks are securely engaged before starting work.

Retaining chain

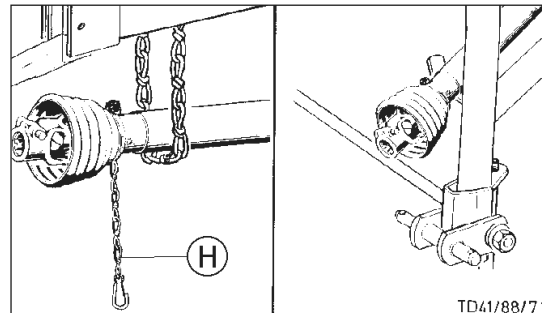
- Use chain to prevent tube guard from rotating. Take care that chain does not impede driveshaft pivoting.



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.



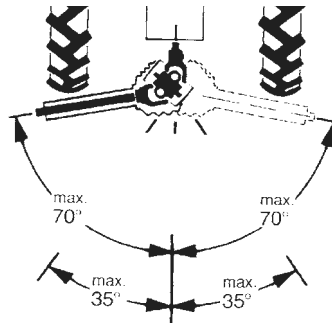
Wide-angle joint:

Maximum angle of deflection when working/stationary: 70°

Standard joint :

Maximum angle of deflection when stationary: 90°

Maximum angle of deflection when working: 35°



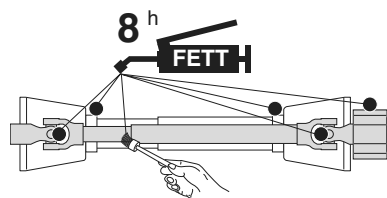
Maintenance



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.





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!



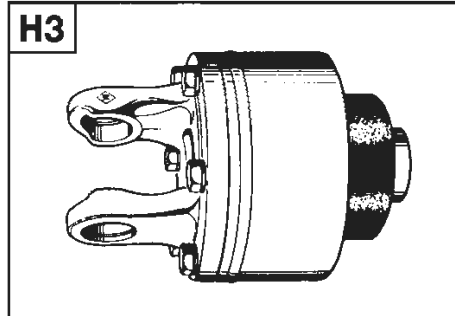
Re-engaging is also possible by decreasing the p.t.o. r.p.m.

TAKE NOTE!

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.

Lubricating interval: 500 hrs (Special lubricant)



Important for driveshafts with friction clutch

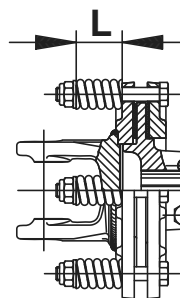
Torque is limited with overloading and brief torque peaks and evenly transferred during slipping.

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

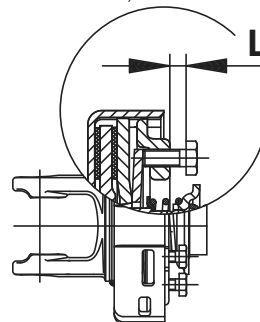
- Measure dimension „L“ at compression spring of K90, K90/4 and K94/1 or at set screw of K92E and K92/4E.
- Loosen screws to release the pressure on the friction disk.
Slip the clutch.
- Tighten set screws to dimension „L“.

Clutch is ready for use.

K90, K90/4, K94/1



K92E, K92/4E



D		Betriebsstoffe		GB		Lubricants		F		Lubrifiants		I		Lubrificanti		NL		Smeermiddelen	
Ausgabe 1997		Edition 1997		Edition 1997		Édition 1997		Edizione 1997		Edizione 1997		I		Lubrificanti		Smeermiddelen		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.	I	HYDRAULIKöl HLP DIN 51524 Teil 2 Siehe Anmerkungen ** ***																	
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 Stillelegung (Winterperiode) Ölwechsel durchführen und alle Fettschmierstellen abschmieren. Blanke Metalteile außen (Gelenke, usw.) mit einem Produkt gemäß "IV" in der umseitigen Tabelle vor Rost schützen.																			
Betriebsstoff-Kennzahl Lubricant indicator Code du lubrifiant Numero caratteristico del lubrificante Smeermiddelen code																			
gefordertes Qualitätsmerkmal required quality level niveau																			
de performance demandé																			
caratteristica richiesta di qualità																			
verlangte kwaliteitskenmerken																			

Firma	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 Verarbeitbarkeit mit Nabbremsen-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	** Hydrauliköle HLP-(D) + HV
AVIA	AVILUB RL 32/46 AVILUB VG 32/46	MOTOROIL HD 30 MULTIGRADE HDC 15W-40 TRACTAVIA HF SUPER 10 W-30	GETRIEBEÖL MZ 90 M MULTIHYP 85W-140	AVIA MEHRZWECKFETT AVIA ABSCHMERZFETT	AVIA GETRIEBEFLEISSFETT	AVIALUB SPEZIALFETT LD	GETRIEBEÖL HYP 90 EP MULTIHYP 85W-140 EP	*** Hydrauliköle auf Pflanzenölbasis HLP + HV Biologisch abbaubar, deshalb besonders umweltfreundlich
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	RENOPLEX EP 1	HYPOID 85W-140	
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	
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 AUS-TROTRAC 15W-30	GETRIEBEÖL MP 85W-90 GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-90	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	TRANSELF TYP B 30 85W-140 TRANSELF EP 90 85W-140	EPEXA 2 ROLEXA 2 MULTI 2	GA O EP POLY G O	MULTIMOTIVE 1	TRANSELF TYP B 30 85W-140 TRANSELF TYP BLS 80 W-90	
ESSO	NUTO H 32/46/68 NUTO HP 32/46/68	PLUS MOTORÖL 20W-30 UNIFARM 15W-30	GEAROL 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 GX 85W-140	
EVVA	ENAK HLP 32/46/68 ENAK MULTI 46/68	SUPER EWAROL HD/B SAE 30 UNIVERSAL TRACTOROIL SUPER	HYPOID GA 90 HYPOID GB 90	HOCHDRUCKFETT LT/SC 280	GETRIEBEFETT MO 370	EVA 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	
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 85W-140 RENOGEAR HYPOID 90	RENOLIT MP RENOLIT FILM 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	
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	RENOPLEX 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	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 32/746	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 SIMMNING GREASE C	AEROSHELL GREASE 22 DOLUIM GREASE R	SPIRAX HD 90 SPIRAX HD 85W-140	
TOTAL	AZOLLA ZS 32. 46. 68 EQUIVIS ZS 32. 46. 68	RUBIA H 30 MULTAGRITM 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 TRAC FE 10W-30 HVL P 32 ** ULTRAPLANT 40 ***	SUPER HPO 30 STOU 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 ZH 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 MULTI-GEAR B 90 MULTIGEAR C SAE 85W-140	MULTIPURPOSE			MULTIGEAR B 90 MULTI C SAE 85W-140	
WINTERSHALL	WIOLAN HS (HG) 32/46/68 WIOLAN G 46 *** WIOLAN HF 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	

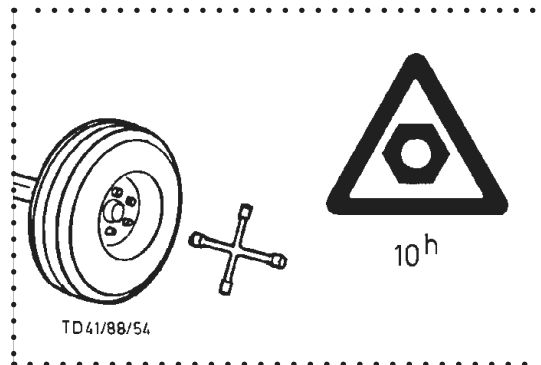
General

Check regularly that wheel nuts are firmly tightened (see table for screw starting torque)!

Attention!

After the first 10 hours of operation retighten wheel nuts.

- If a wheel has been changed retighten the wheel nuts after 10 hours of operation also.



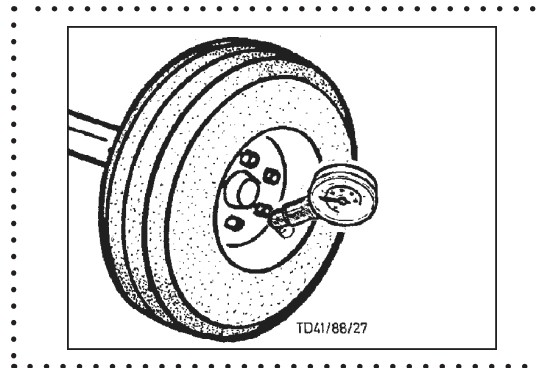
Attention!

Check regularly that wheel nuts are firmly tightened (see table for screw starting torque)!

Air pressure

- Pay attention to correct tyre pressure!
- Regularly check tyre air pressure according to the chart.

Danger of bursting exists when pumping up tyres and with high tyre pressure!



Tyre size	Ply rating	Air pressure (bar)	Starting torque	Highest permitted speed
3,50-6	4 PR	3,00		
4,00-6	4 PR	2,50		
4,00-8	4 PR	2,50		
5,00-8	6 PR	4,00		
5,00-15 AM (M137C)		1,00		
7,00-12	6 PR	3,00		
10,0/80-12	6 PR	3,00	200 Nm	
10,0/80-12	8 PR	4,20	200 Nm	
10,0/75-15,3	6 PR	3,10	200 Nm	
10,0/75-15,3	8 PR	4,20	320/200** Nm	
10,0/75-15,3	10 PR	5,20	320/200** Nm	
11,5/80-15,3	8 PR	3,70	320/200** Nm	
11,5/80-15,3	10 PR	4,60	320/200** Nm	
11,5/80-15,3	12 PR	5,00	320/200** Nm	
12,0-18		5,70	320 Nm	
13,0/55-16	10 PR	3,90	320 Nm	
13,0/55-16	12 PR	4,70	320 Nm	
15,0/55-17	8 PR	2,90	320/200** Nm	
15,0/55-17	10 PR	3,50	320/200** Nm	30 km
15,0/55-17	12 PR	4,30	320/200** Nm	
15 x 6 - 6	4 PR	1,00		
15 x 6 - 6	4 PR	1,20		
16 x 6,5-8	4 PR	1,50		
19,0/45-17	10 PR	3,00	320 Nm	
205 R 14 C	8 PR	3,00	320 Nm	
205 R 14 C*	8 PR	4,25	320 Nm	
325/65 R 18	16 PR	5,70	320 Nm	
335/65 R 18 XP 27		5,0	320 Nm	
500/40-17	10 PR	2,90	320 Nm	40 km
500/50-17	10 PR	2,75	320 Nm	30 km
500/50-17	10 PR	3,75	320 Nm	40 km
500/50-17	14 PR	5,0	320 Nm	65 km

* Only for WID M with built-on motor

** 200Nm only for 5-hole rims

Taper bushes installation instructions

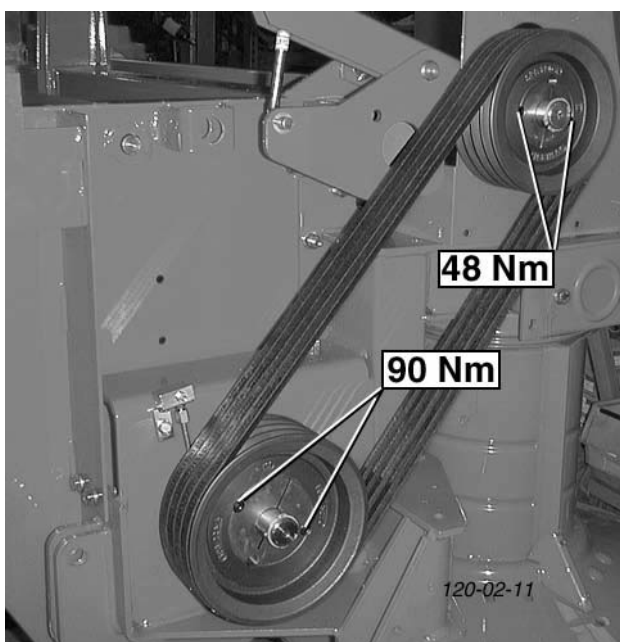
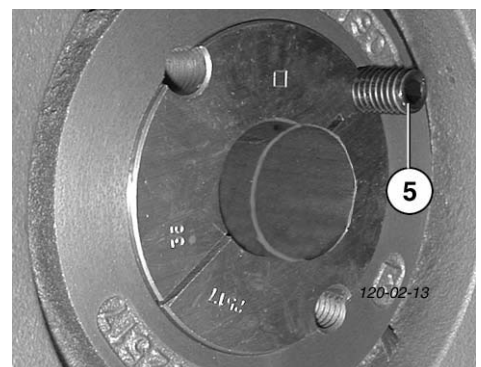
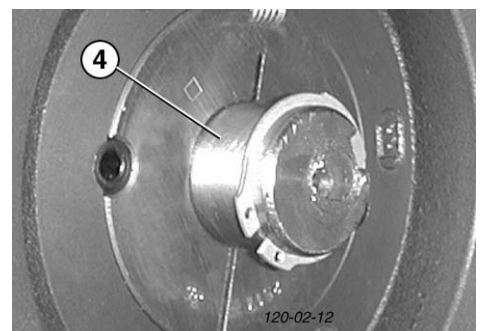
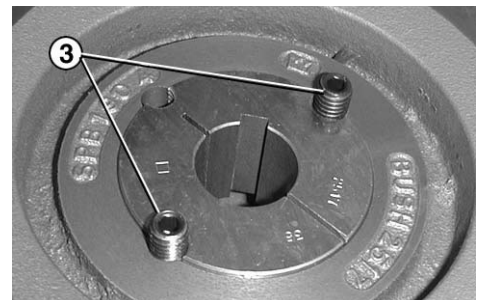
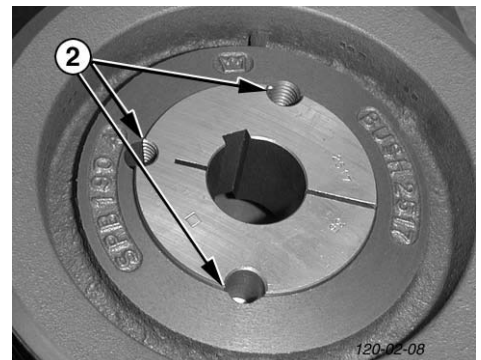
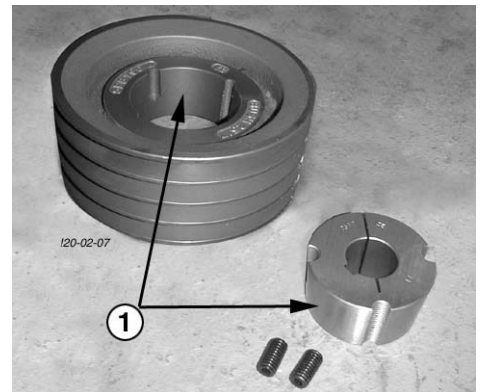
To assemble

1. Clean and degrease the bore and taper surfaces of the bush and the tapered bore of the pulley.
2. Insert the bush in the pulley hub and line up the holes (half thread holes must line up with half straight holes).
3. Lightly oil the grub screws (bush size 1008 to 3030) or the cap screws (bush size 3535 to 5050) and screw them in, do not tighten yet.
4. Clean and degrease the shaft. Fit pulley with taper bush on shaft and locate in desired position.
 - When using a key it should first be fitted in the shaft Keyway. There should be a top clearance between the key and the keyway in the bore.
 - Using a hexagon socket wrench (DIN 911) gradually tighten the grub/cap screws in accordance with the torques as listed in the schedule of screw tightening torques (48 Nm, 90 Nm).
 - When the drive has been operating under load for a short period (half to on hour) check and ensure that the screws remain at the appropriate tightening torque.
 - In order to eliminate the ingress of dirt fill all empty holes with grease.

Removal

1. Slacken all screws. Depending on the size of the bush remove one or two.

After oiling point and thread of grub screws or under head and thread of cap screws insert them into the jacking off hole(s) in bush (Pos. 5).
2. Tighten screw(s) uniformly and alternately until the bush is loose in the hub and pulley is free on the shaft.
3. Remove pulley bush assembly from shaft.



Preparation



- Safety advice: see Supplement A1, pts. 1- 3 and 8.
- Only lift loads using lifting equipment with sufficient load capacity dimensions and stability.

Setting required driving motor speed

Possible are:

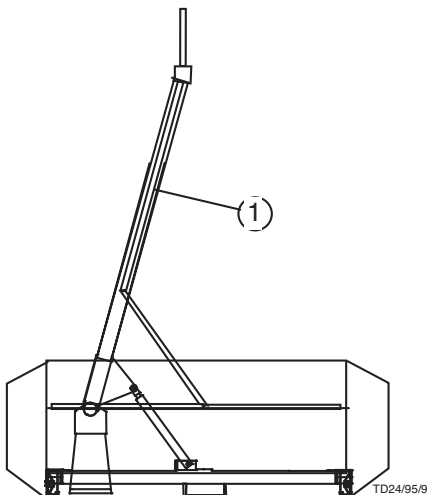
- 540 r.p.m.
- 1000 r.p.m.
- Check the necessary r.p.m.:

Driving motor stub (9)	Intermediate shaft (10)	Driving motor speed
1 revolution	1.3 revolutions	540 r.p.m.
1 revolution	0.75 revolutions	1000 r.p.m.

When only one revolution is possible on tractor and this does not agree with driving motor speed:

Turn gearing round

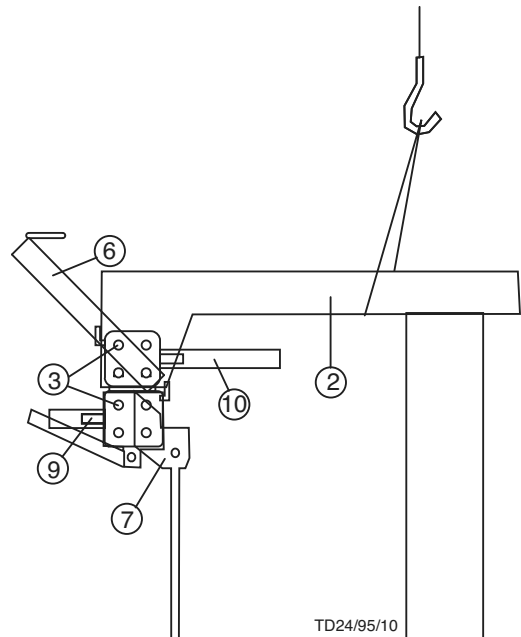
- Disconnect intermediate shaft (1): see accompanying drive shaft instruction manual.



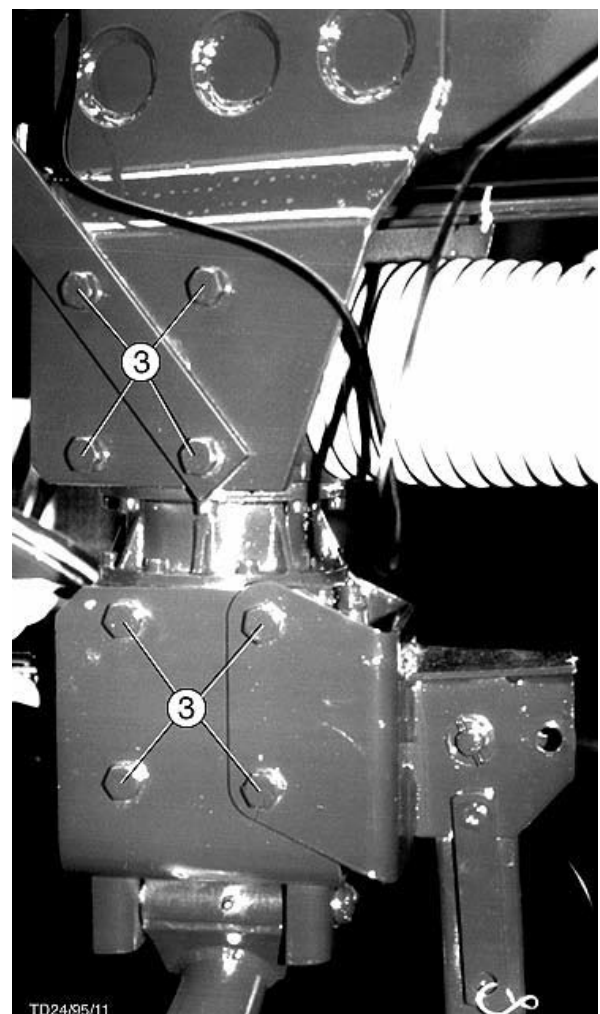
- On both sides:

- Remove safety chain.
- Dismount protection and slide back.
- Unlock: push locking pin in and hold.
- Remove drive shaft.

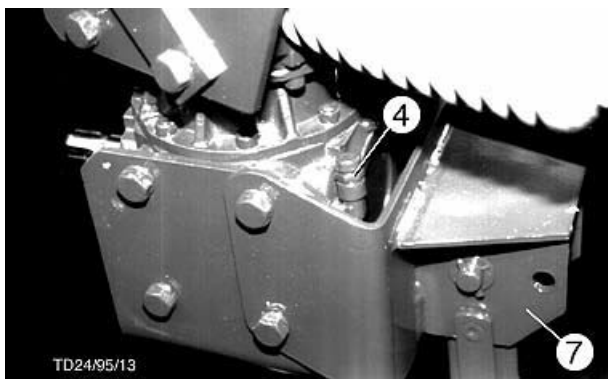
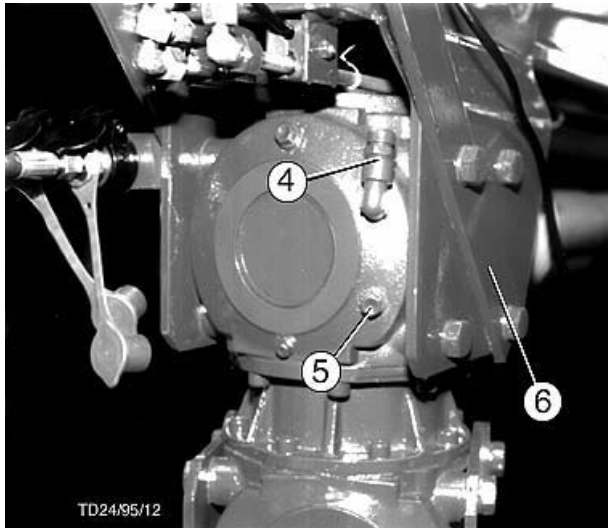
- Support drawbar (2).



- Loosen the 16 fastening screws (3).

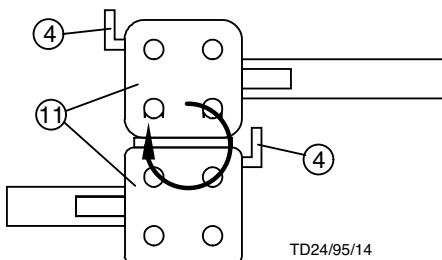


- Change oil filler connections (4) round:
- Screw out connections and screws opposite (5) and screw in reversed.

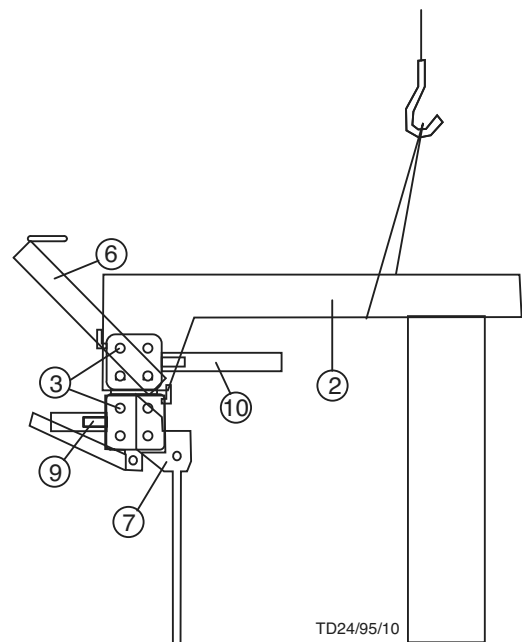


With turned-round gearing (11) the oil fill connections (4) appear in the same position as before.

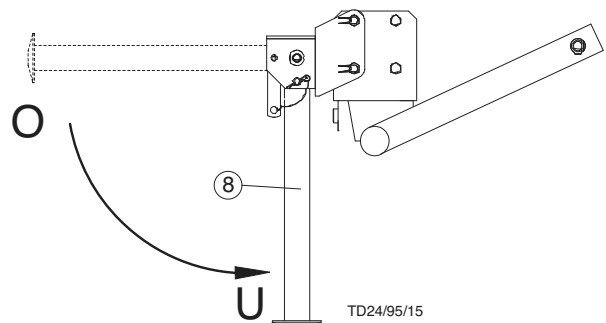
- Turn gearing round



- Screw up the gearing with the drawbar (2), the cable routing (6) and the support stand holder (7).



- Swing support stand (8) down and secure : Pos U



- Lower machine onto support stand.
- Attach intermediate shaft to driven side and secure so that safety device engages in slot:
The locking pin must come out again completely when released.
- Attach intermediate shaft to gearing stub and secure.
- Slide protecting tube over the joint, fasten and secure against turning with the chain.

Power supply

Required fitting to tractor

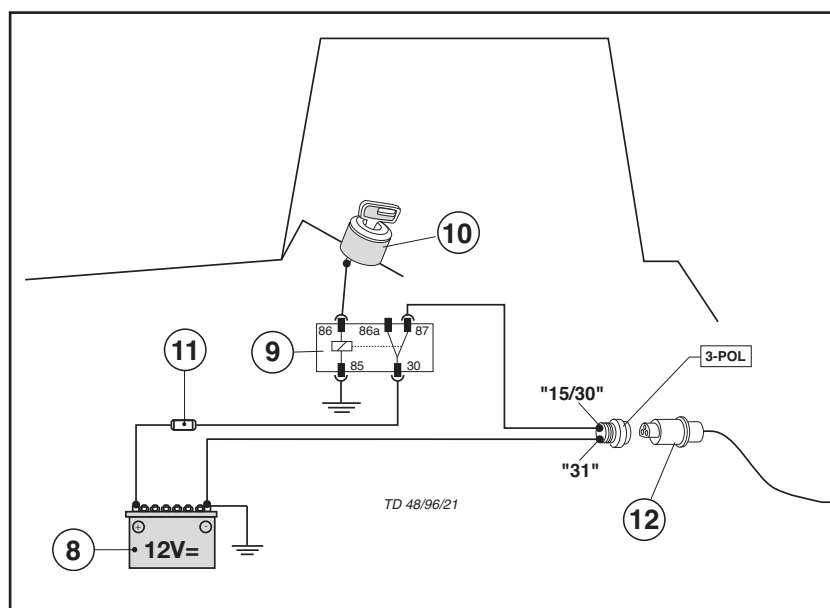
- 3-pole power socket
 - Fix accompanying 3-pole power socket to the rear of the tractor
- Power supply through a relay (9)
 - Relay is connected to the ignition switch (10).
- Conductor diameter at least 2,5 mm²
- Fuse 16A (11)

This conversion is to be made only by a specialist.



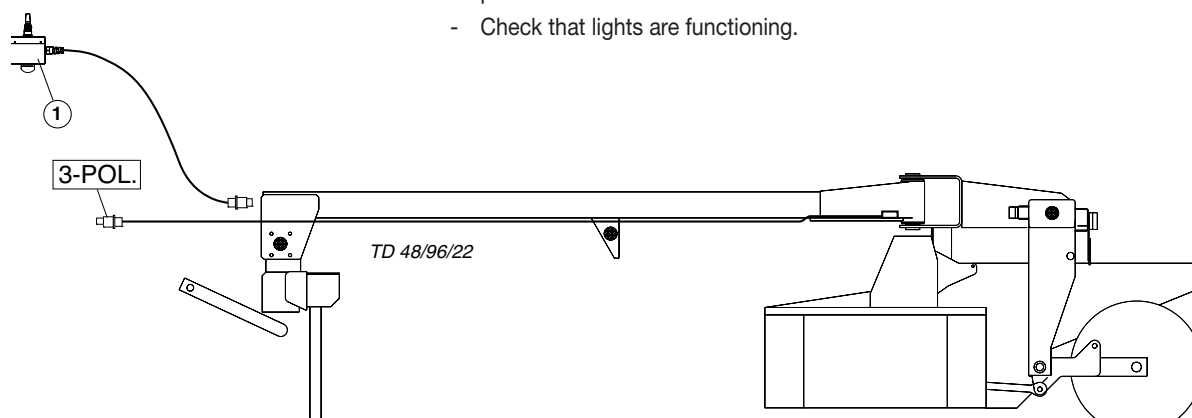
Do not connect directly to ignition switch (danger of fire or damage to electrical unit).

Use only recommended-strength fuses as the use of stronger fuses will destroy the electrical unit!



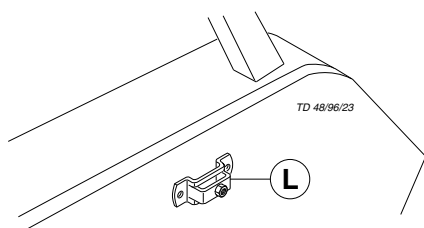
Establishing the connection to tractor

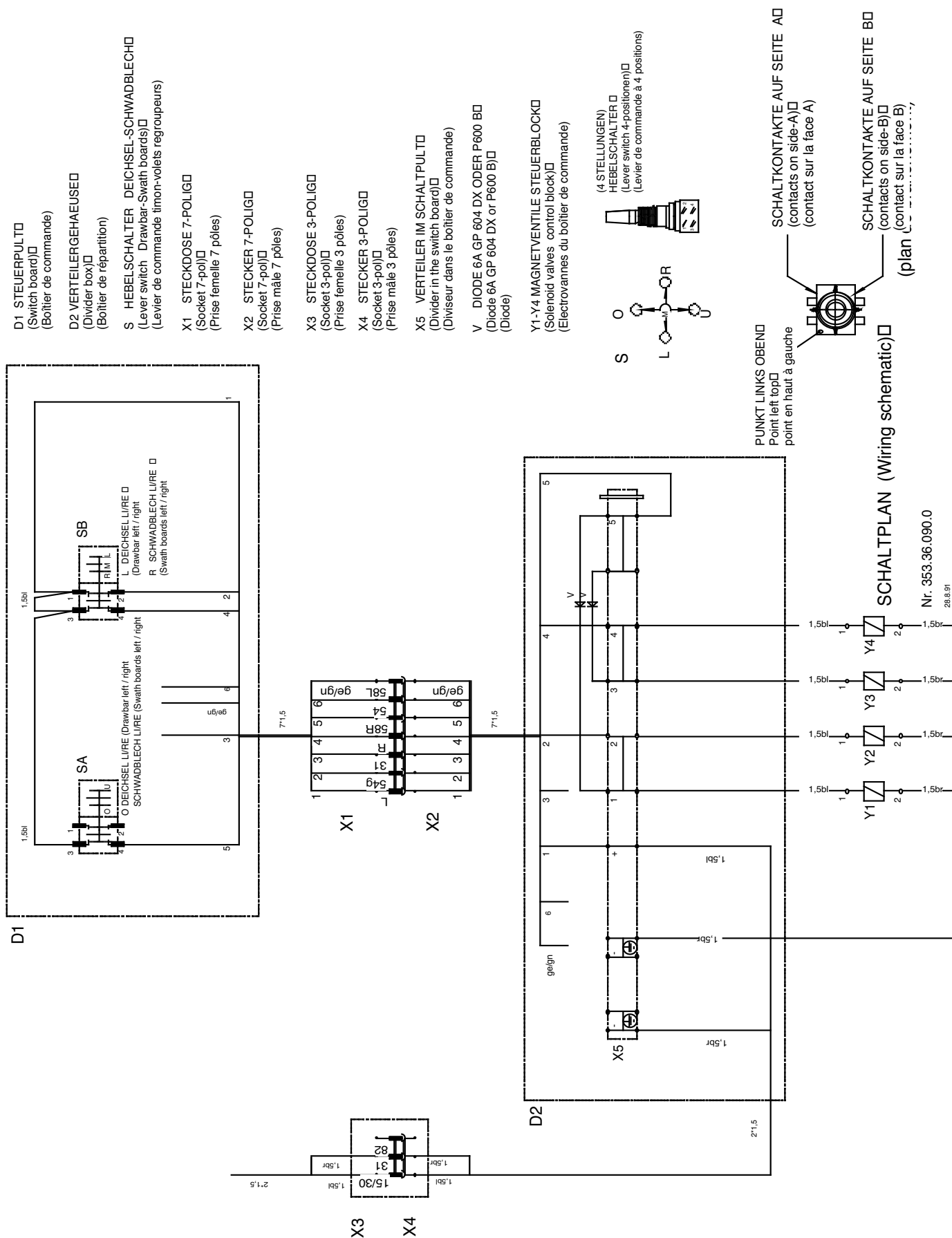
- After completion of the work as shown, plug the 3-pole plugs into the tractor's power sockets.
- Check that lights are functioning.



Installation of control panel

- Install the accompanying splicing plate (L) into tractor cabin so that it is within the driver's sight and reach.
- Insert control panel (1) in splicing plate.





Appendix 1

EC Certificate of Conformity
conforming to EEC Directions 98/37/EG

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

Disc mower CAT NOVA 310 T conditioner, Type 353

(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)

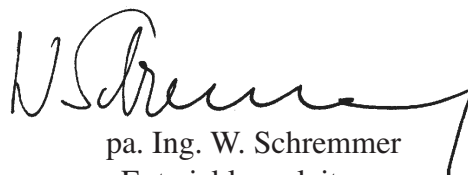
(if applicable)

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

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

Grieskirchen, 18.09.2007

(Place and date of issue)


pa. Ing. W. Schremmer
Entwicklungsleitung

(Name and job function of authorized person)

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