Original inside

(GB) Operator‘s manual

+ INSTRUCTIONS FOR PRODUCT DELIVERY . . . Page 3

"Translation of the original Operating Manual"

Nr. 99 384.GB.80J.0

NOVACAT 8600

(Type PSM 384 : + . . 01403**)**

• Disc mower

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

(GB) Dear Farmer

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

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

Furthermore, we will also be able to inform you of new developments.

Important information concerning Product Liability.

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

For this purpose,

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

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

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

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.

Pöttinger Newsletter

www.poettinger.at/landtechnik/index_news.htm

The latest expert information, useful links and entertainment

(GB) INSTRUCTIONS FOR PRODUCT DELIVERY

Dokument D

PÖTTINGER Landtechnik GmbH
Industriegelände 1
A-4710 Grieskirchen
Tel. 07248 / 600 -0
Telefax 07248 / 600-2511

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

Please check. [X]

- ❑ 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 lenght.
- ❑ 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:

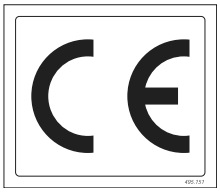
- sign the **document A** and send it to the company Pöttinger or via the internet to www.poettinger.at
- **document B** stays with the specialist factory delivering the machine.
- **document C** stays with the customer.

Table of contents

Recommendations for work safety

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

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.

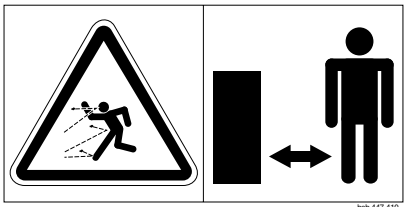
EU Declaration of Conformity (see supplement)

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.

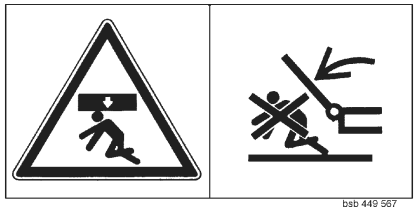
Recommendations for work safety

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

Meaning of warning signs

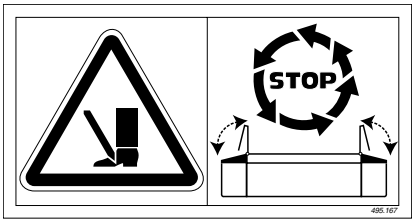


Danger - flying objects; keep safe distance from the machine as long as the engine is running.

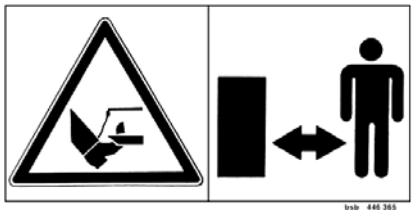


Stay clear of swinging area of implements

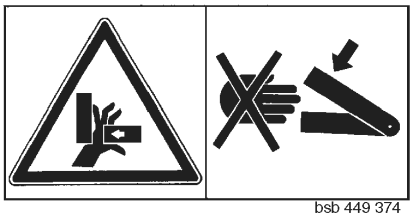
Wait until all machine components have stopped completely before touching them.



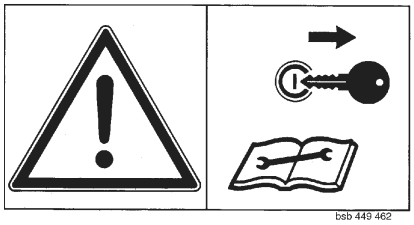
Close both side protective coverings before engaging p.t.o..



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



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

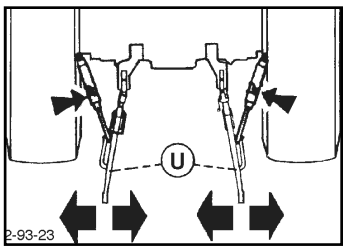


Shut off engine and remove key before performing maintenance or repair work.

Attaching implement to tractor

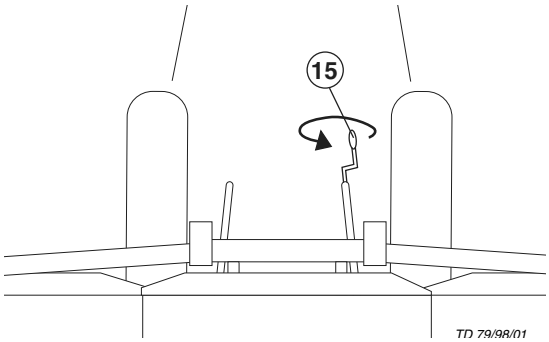
Centre-mount (M) mower unit to tractor

- Adjust lower link accordingly.
- Secure the lower hydraulic link so that the appliance cannot swing sideways.



Frame in horizontal position

- Bring frame into horizontal position by adjusting linkage arm spindle (15).



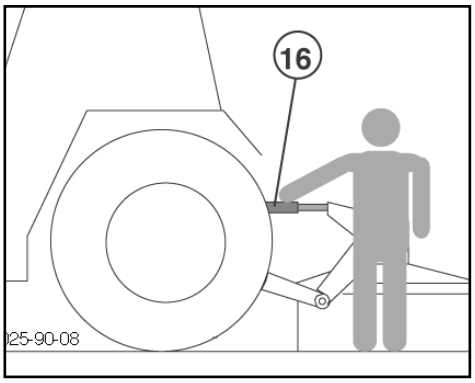
Setting lower link height

- Adjust tractor's hydraulics (ST) using bottom stop.
  - The drive shaft (GW) should be about horizontal when mowing.

  This height allows optimal evenness when working on uneven ground and need not be changed for swinging cutter bar up.

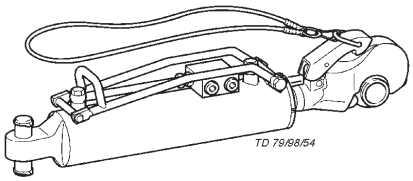
Setting upper link height using spindle

- By turning upper link spindle (16) the cutting height is adjusted.



A hydraulic upper link is recommended.

(double-action hydraulic connection)



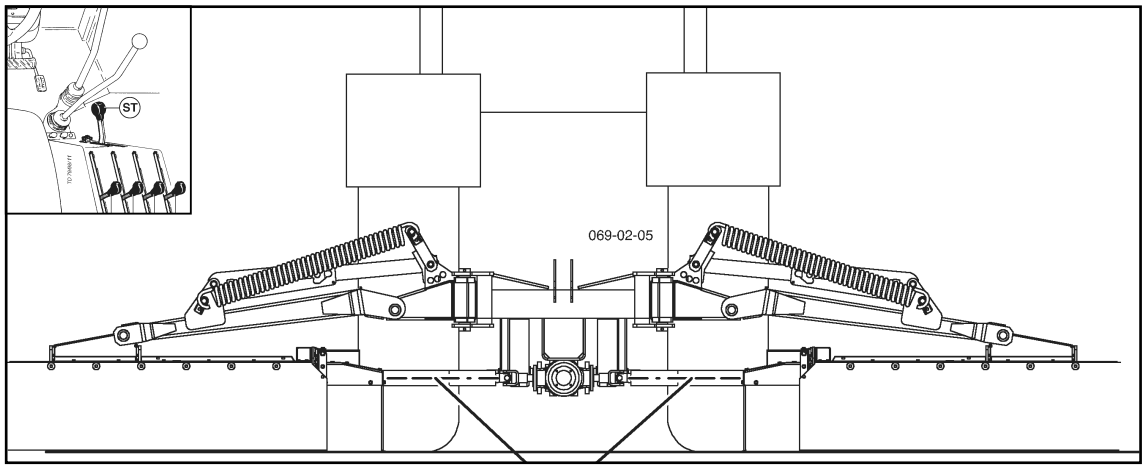
Safety hints:

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

Safety hints

This appliance is designed only for use with tractors (not for automotive machines).

In the case of automotive machines, the driver´s visual range is restricted when the two outer mower bars are raised in the transport position.



To make the connection to the tractor

Operation:

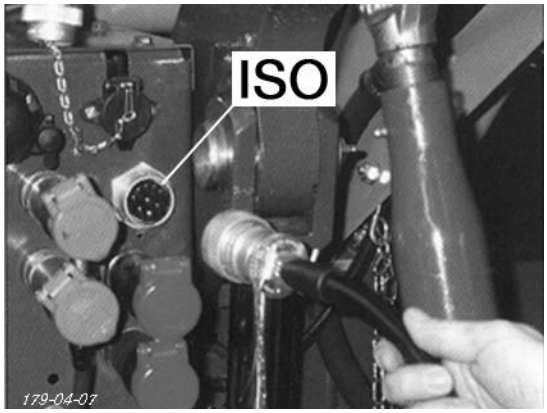
- Connect the 3-channel plug to the DIN 9680 socket on the tractor

Lighting:

- Connect 7-channel plug to tractor
- Check that lighting is functioning on wagon

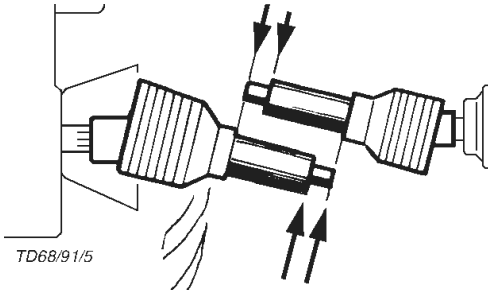
For tractors with ISO Bus control

- Connect 9-channel ISO plug to ISO Bus socket on the tractor



Fitting drive shaft

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



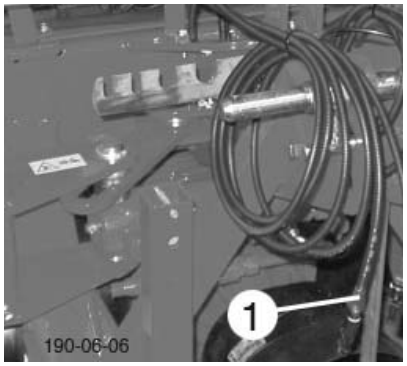
Important!

Before putting the tractor into operation check vehicle safety (lights, brake unit, protective covering, ...).

Connecting the Sensor and valve cables from front mower unit

Electrical able connections between front mower unit and mower combination

- 3 channel cable for sensor kit (1)



Hydraulic connection

Minimal hydraulic system:

1 x single-action hydraulic connection (EW) with unpressurized backflow (T)

1 x double-action hydraulic connection (DW), for the starting lock

Optimal hydraulic system:

1 x single-action hydraulic connection (EW) with unpressurized backflow (T)

1 x double-action hydraulic connection (DW) for the starting lock

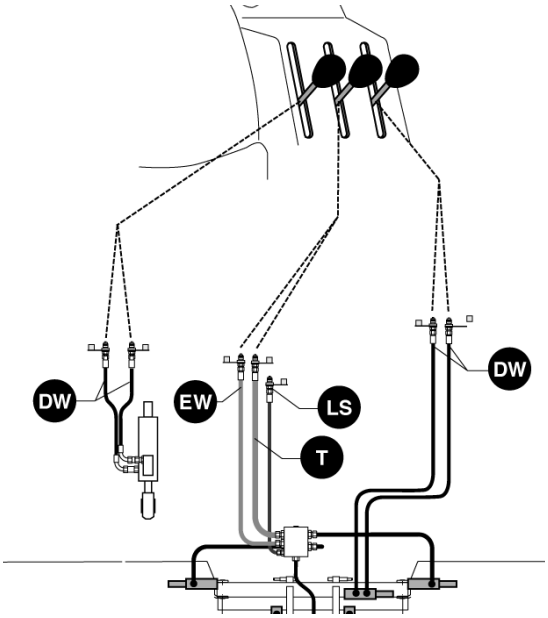
1 x double-action hydraulic connection (DW) for the hydraulic upper link

or

Load-sensing hydraulic connection (LS) (Optional equipment)

1 x double-action hydraulic connection (DW) for the starting lock

1 x double-action hydraulic connection (DW)for the hydraulic upper link



Settings

Screw (7) on the hydraulic unit must also be adjusted accordingly.

Important!
Disconnect electrical connection

Tractors with a "Load sensing" system

- Screw (7) on the hydraulic unit must be screwed in all the way

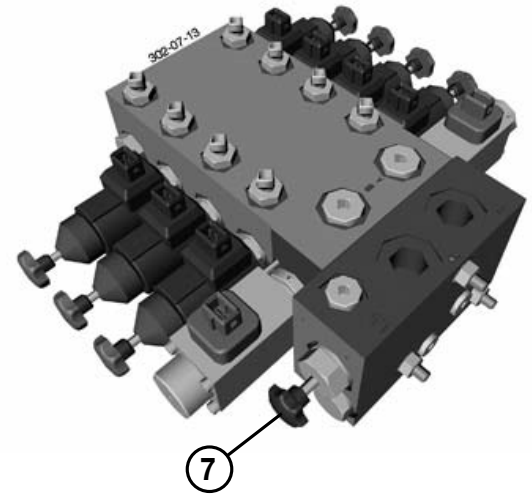
Tractors with a closed hydraulic system

JOHN DEERE, CASE MAXUM, CASE MAGNUM, FORD Series 40 SLE

- Screw (7) on the hydraulic unit must be screwed in all the way

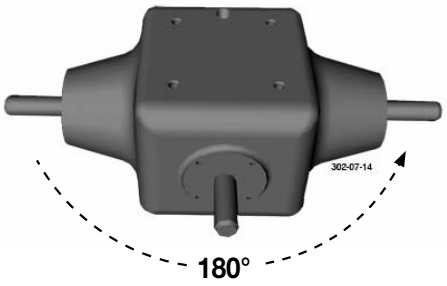
Tractors with a open hydraulic system

- Completely unscrew screw (7) on the hydraulic unit



Observe rotation direction of cutting discs

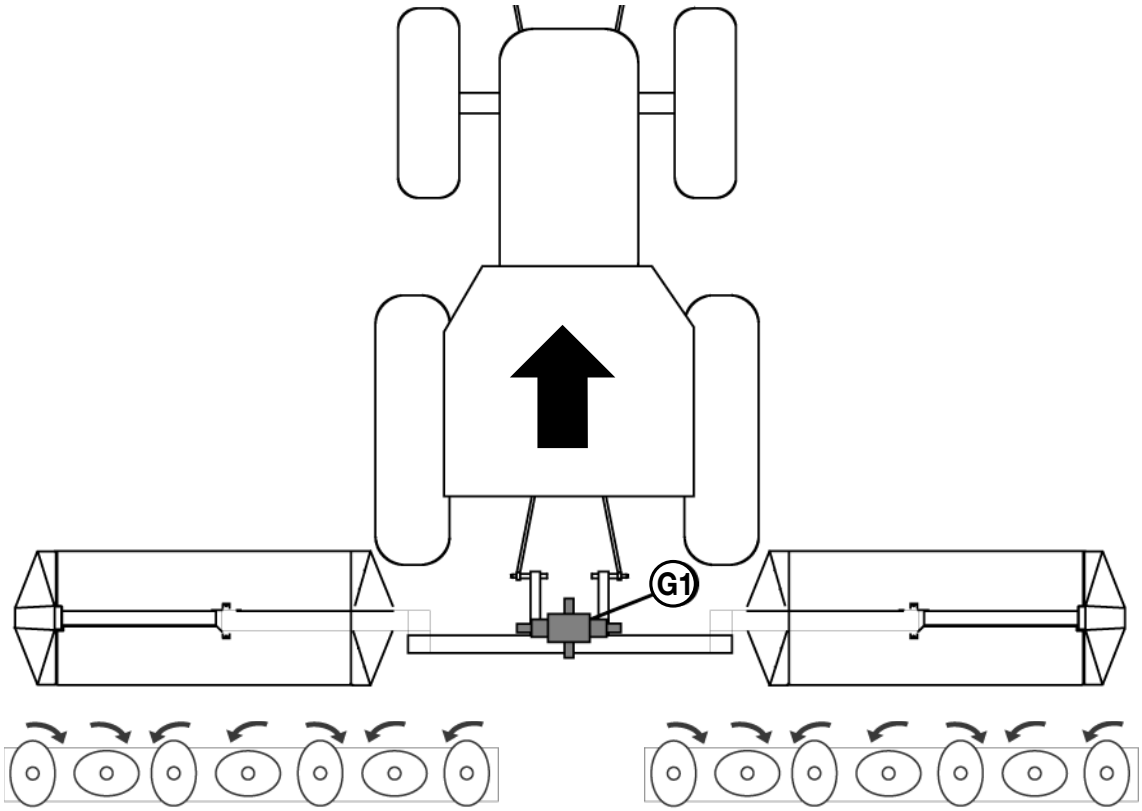
- Select appropriate rotation direction for the drive
- If the necessary p.t.o. rotation direction cannot be selected from the tractor, rotate the mechanism (G) 180°.



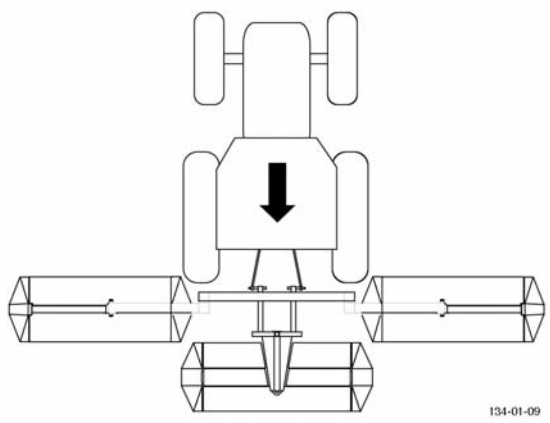
Note!

Before reinstalling a gearing on the machine:

- **Swap ventilation screw and drain plug positions.**
- **The correct ventilation screw position is on top.**



Combination 3



Should it be necessary to convert from Combination 2 to Combination 3, the following steps must be carried out:

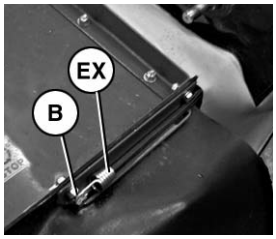
1. Remove adapter (pos. 5)
2. Detach attaching axle and install in pos. 4a
3. Install lifting gear (pos. 1)
4. Set up hydraulic connection (pos. 3)
5. Set up electric connection (pos. 2)
6. Attach mower unit to lifting gear (1)
   - Attach expander (EX)
7. Attach both chains (7)
   - when doing this, please note instructions in chapter on Adjustments

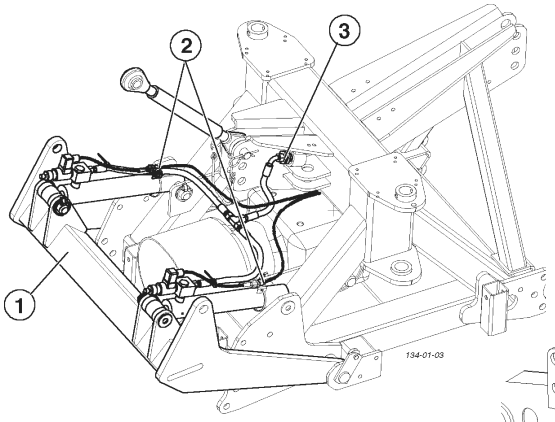
Safety hint:

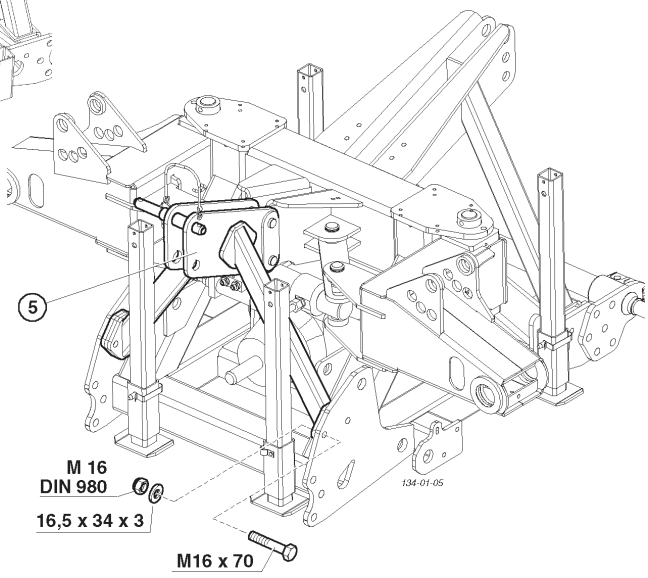
see supplement A1/ pt. 7, 8a-8h

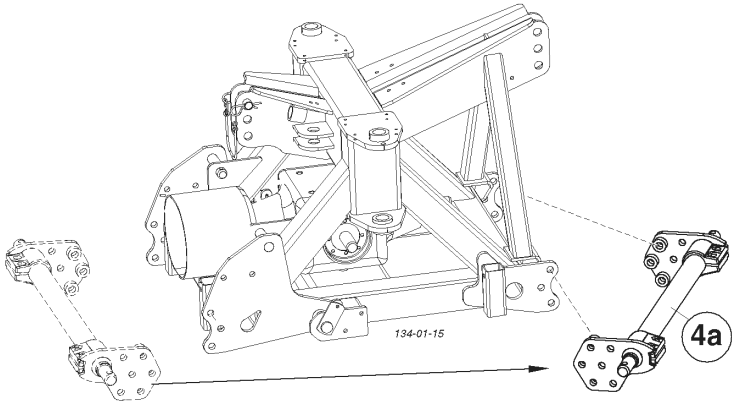
Take note!

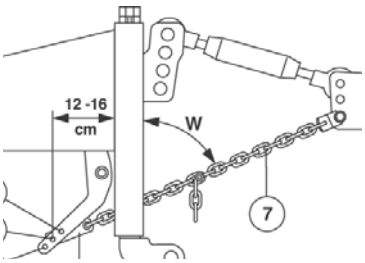
The lifting gear cannot be progressively raised or lowered. When the hydraulic control valve is activated, the central cutter bar is either completely raised or lowered (danger of crushing).



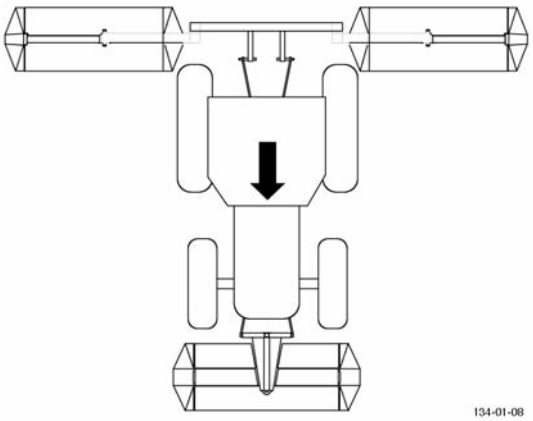








Combination 2



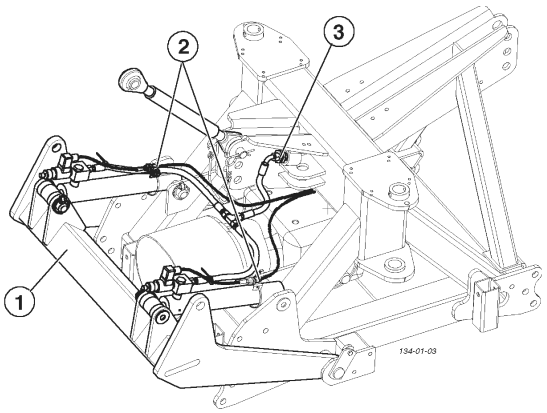
Should it be necessary to convert from Combination 3 to Combination 2, the following steps must be carried out:

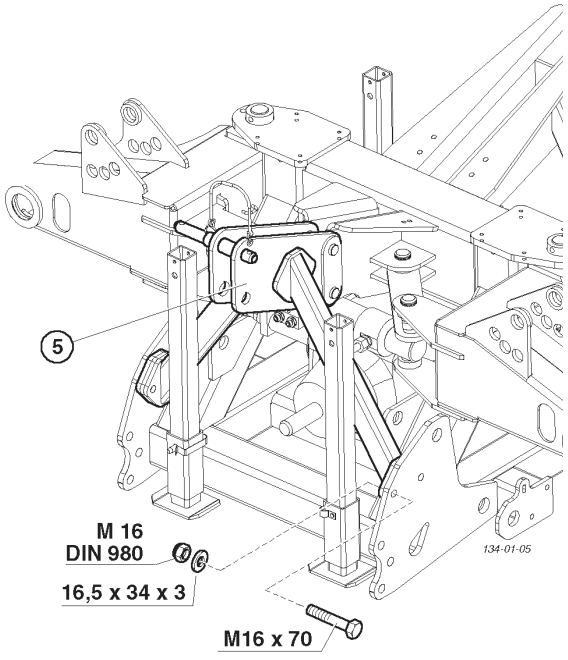
1. Disconnect electrical connection (pos. 2)
   - Attach the cable to a suitable place on the frame
2. Disconnect hydraulic connection (pos. 3)
3. Detach lifting gear (pos. 1)
4. Mount attachment axle (pos. 4)
5. Attach adapter (pos. 5)
6. Attach mower unit to tractor´s lifting gear

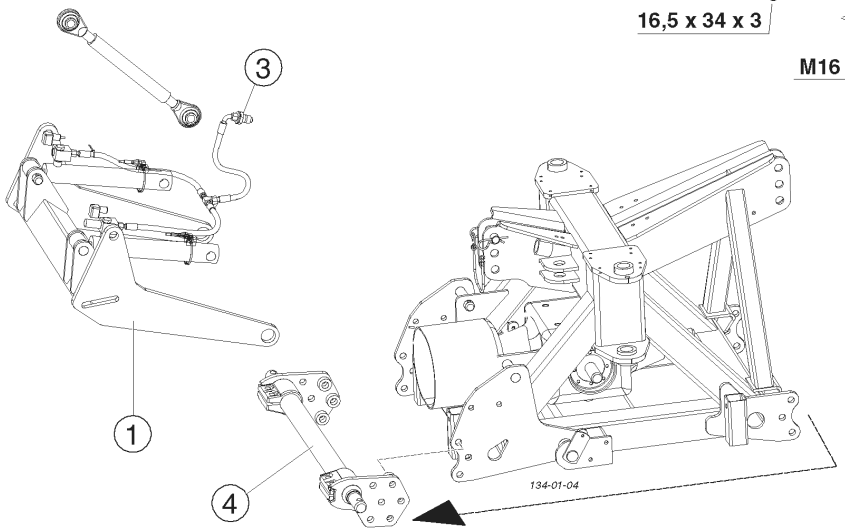
Attach front mower to the lifting gear

When doing this, please also note instructions in the chapters on

- Adjustments Front-Mower
- Special Attaching Kits

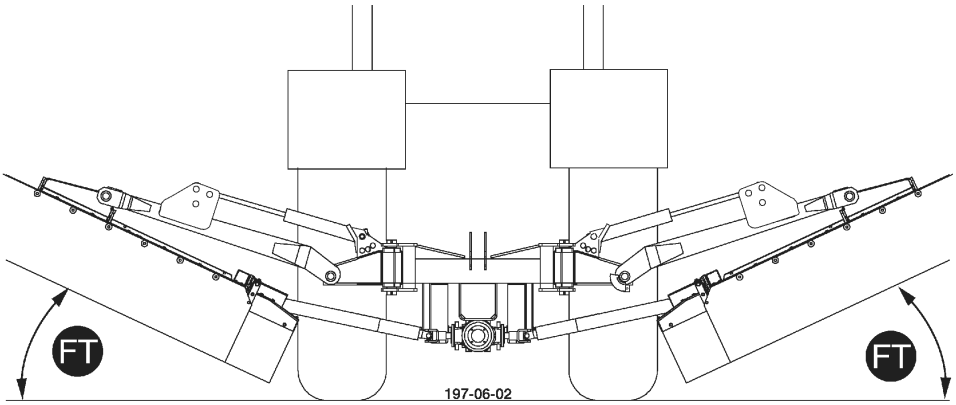






Conversion from working to transport position

- **Before swivelling the cutter bar up, turn off the drive and wait for the mower discs to come to a complete standstill.**
- **Make sure that swivel area is free and that nobody is standing in the danger area.**



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!

Raising for road transport

This button will only function when all cutting bars are in the field transport position (FT)

- Turn drive off and wait for standstill
- Swing in all hoop guards on the cutting bars

Variant with "Power Control"

Press **button**  to activate its function

Press **button**  and all cutting bars swivel until the end position is reached.

Variant with "ISOBUS-Terminal"

Briefly press  **Softkey button**, function is activated

Briefly press  **Softkey buton**, all mower units swivel to the end position

Lowering into field transport position

Variant with "Power Control"

Press **button**  to activate its function

Press **button**  and all mower units swivel to field transport position (FT)

Variant with "ISOBUS-Terminal"

Briefly press  **Softkey button**, function is activated

Briefly press  **Softkey button,** all mower units swivel to field transport position (FT).

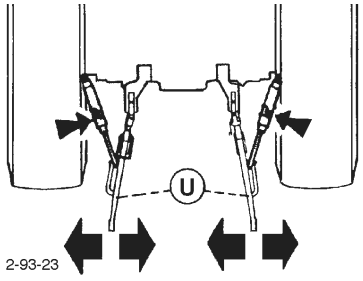
- Swing out all hoop guards on the mower

Driving on public roads

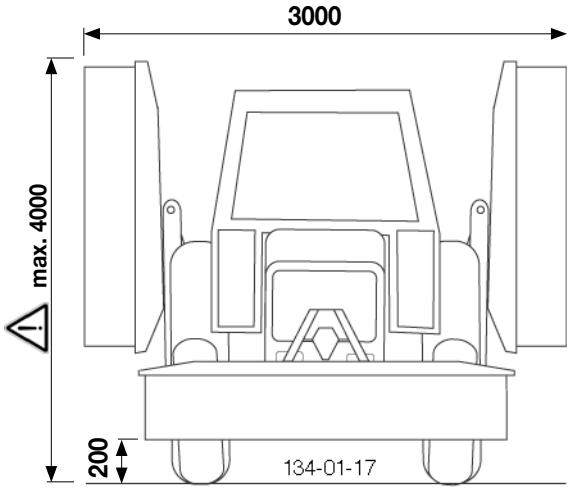
- Observe the official regulations of your country.
- Driving on public roads must be carried out in the transport position only
- Protection devices must be in proper condition.
- Before travelling bring all swivelling parts into their correct positions and secure against dangerous changes to position.
- Check that lighting functions before travelling.
- Important information can also be found in the supplement of this operating manual.

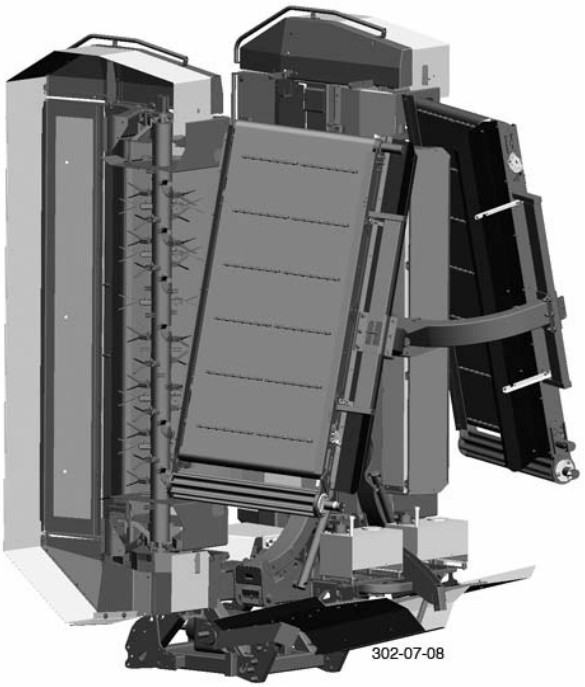
Hydraulic lower link

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



Transport position

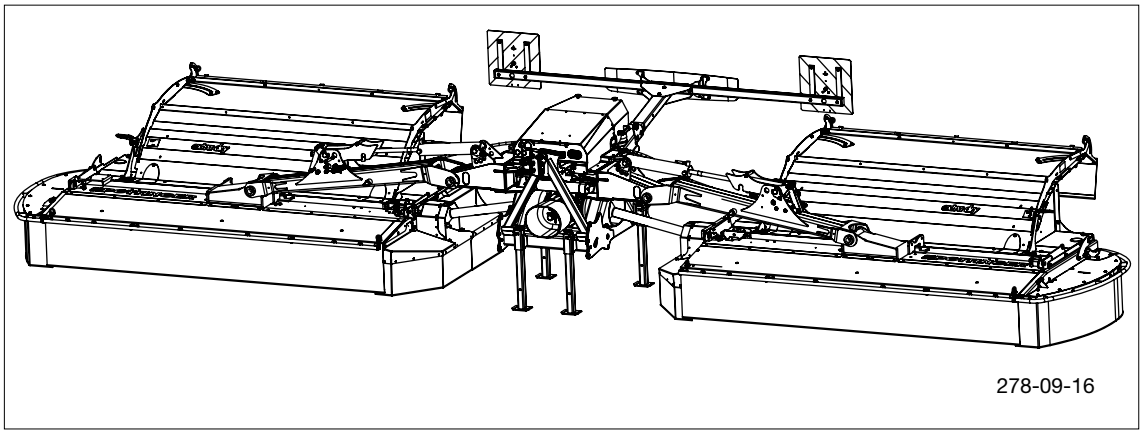




Unhitch device from tractor

Caution!

Only park the mower combination in the working position (both mower units are folded down). Maximum danger of tipping over if the mower combination is parked in the transport position.



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Safety note:

Only park the disc mower on firm, level ground and ensure a secure position.

Working on slopes

Take care when turning on slopes!

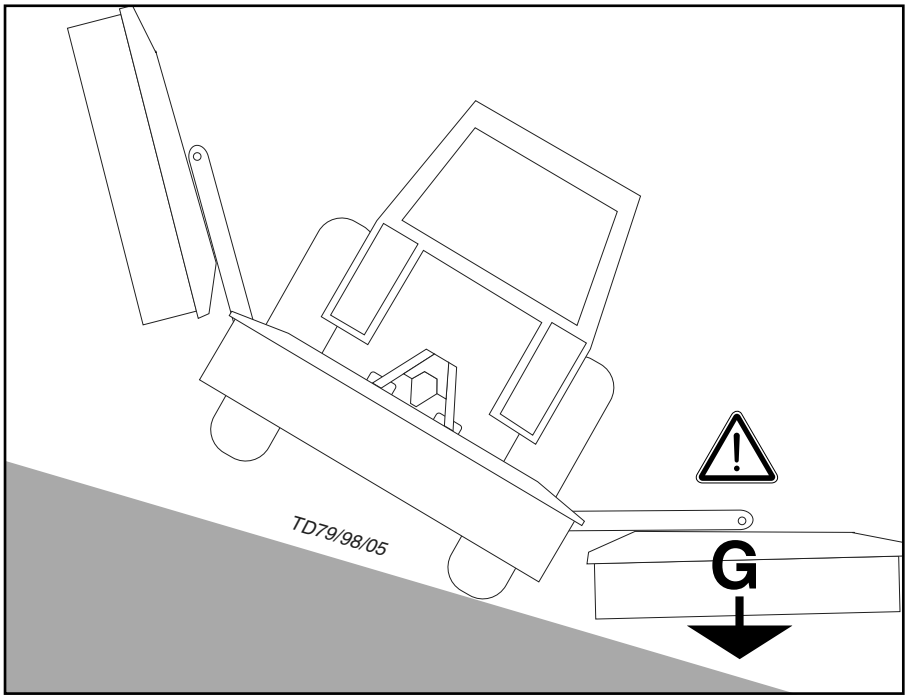
The tractor's travelling characteristics are influenced by the weight (G) of the mower unit. This can lead to dangerous situations, especially on slopes.

Safety advice

- Reduce speed in curves accordingly.
- It is better to travel in reverse on a slope than to carry out a risky turning manoeuvre.

Danger of tipping occurs

- when the mower units are in a raised position
- when travelling in a curve with the mower units raised



Meaning of the buttons on the control device

10 ON / OFF button

Important! After switching off the control device (OFF):

- **switch hydraulic control valve to the 0 position. This is absolutely essential in the case of tractors with an open hydraulic system - otherwise the oil will overheat.**

11 Swings all mower units up and down

- Conversion from operating to transport position and vice versa (see button 15 also)
- “load sensing” hydraulic system (LED 11)

12 Swings front mower up and down

13 Swings left mower unit up and down

Rotor r.p.m on the conditioners

1019 min-1/844 min^{-1}

14 Swings right mower unit up and down

Rotor r.p.m on the conditioners

771 min-1/639 min^{-1}

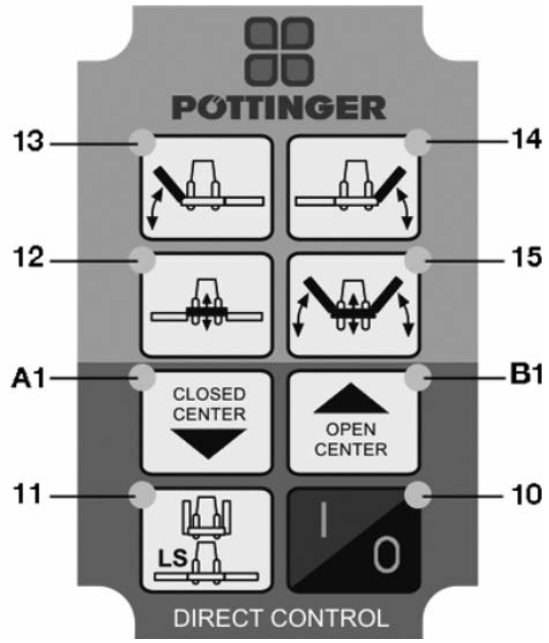
15 Swings all mower units up and down in the field transport position (headland turns)

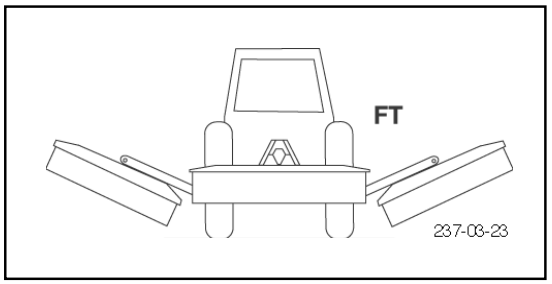
A1 Downward swing movement "Lower"

Closed hydraulic system (LED A1)

B1 Upward swing movement "Raise"

Open hydraulic system (LED B1)





Note!

Press the relevant button to preselect the desired hydraulic function. If one of the two arrow buttons (A1, B1) are pushed afterwards, the desired hydraulic function will be carried out.

If a malfunction occurs: see "Establsih power supply" in the chapter "ATTACHING TO TRACTOR"

How to carry out desired hydraulic function

1. Press the button for desired function (11-15)

- The control light (LED) integrated in the button lights up.
- Through pressing any other button, the hydraulic function already selected will be deactivated, and the new hydraulic function activated.
- Pressing button a second time deactivates the hydraulic function once more.

2. Press one of the two arrow buttons (A1, B1)

- and the desired hydraulic function will be carried out

3. Deactivating the hydraulic function

- Press button, the integrated control light (LED) goes off.
- The hydraulic function has been deactivated.

Safety warning: always deactivate the selected function.

Control light (LED)

If one of the control lights (LEDs) lights up, it means that that particular function has been activated.

Example:

- **The top left integrated control light (LED) is on**
- **Swing action of left mower unit has been activated**

Settings before initial operation

After turning on the operation panel (ON)

The following LED will light up for about 0.5 secs:

* the LED for the selected hydraulic system
* the LED for the r.p.m. of the conditioner rotors

Selecting the hydraulic system

1. Make the connection to the switch box (E1)
   Couple power supply cable to tractor (E2)
2. Press and hold down the button for the hydraulic system needed
   A1 = closed hydraulic system (LED A1)
   B1 = open hydraulic system (LED B1)
   11 = “load sensing” hydraulic system (LED 11)
3. Zusätzlich die Taste "I/O" (10) drücken.
   After about 5 seconds the relative LED lights up briefly and the selected hydraulic system is stored.
   When the storing process is completed, a short signal is heard.
4. Release the button (A1, B1, 10, 11)

Setting the r.p.m of the conditioner rotors

1. Make the connection to the switch box (E1)
2. Press and hold down the button for the drive variant needed

Variant 1: Button 13

Rotor r.p.m on the left and right conditioner: 1019 min-1

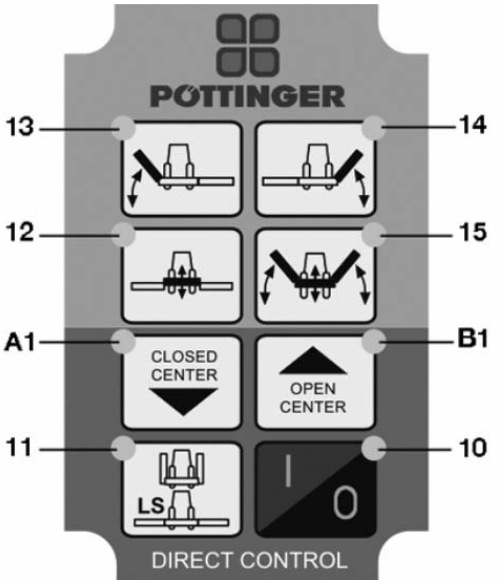
Rotor r.p.m on centre conditioner: 844 min-1

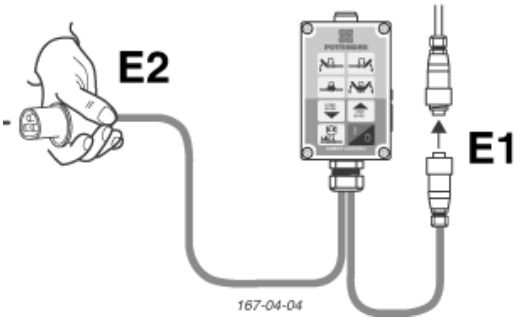
Variant 2: Button 14

Rotor r.p.m on the left and right conditioner: 771 min-1

Rotor r.p.m on centre conditioner: 639 min-1

3. Couple power supply cable to tractor (E2)
   After about 5 seconds the relative LED lights up briefly and the selected drive variant is stored.
   When the storing process is completed, a short signal is heard.
4. Release the button (13, 14)





In general

Before initial operation, various selections must be made using the “Direct Control” operation unit.

These selections are particularly important so that the electronic monitoring systems are functioning correctly.

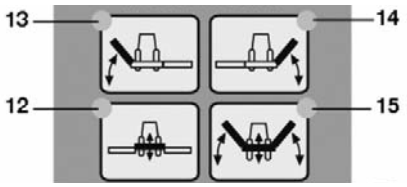
Other settings

Monitoring the r.p.m. of the conditioner rotors

In general:

During operation the desired r.p.m of each individual conditioner is monitored.

If the desired r.p.m. of a conditioner drops more than 180 min-1, a signal is heard and the LED of the respective button on the switch panel blinks quickly (12, 13, 14).



Cancelling: When the r.p.m increases again, the whistling and blinking passes at a slow rate. Only now can the button be pushed (cancelling) and the whistling and blinking will cease.

Note: In every instance the reason for the drop in r.p.m must be eliminated otherwise cancelling cannot take place.

- Decrease speed,
- remove blockage,
- repair plug connection and cable.
- replace faulty sensor.

Monitoring only functions when the sensor is plugged in and is not faulty.

Monitoring the r.p.m. of the p.t.o.

The p.t.o is monitored in order to prevent any damage to the cardan shaft when swinging the side mower unit out over the field transport position

The button 11 function (road transportation) can only be selected when the p.t.o sensor hasn’t sent any impulses for at least 8 seconds.

- **Drive shafts should no longer be turning.**

Elapsed time meter

Elapsed time will start to be counted as soon as the r.p.m of the p.t.o exceeds 300 min-1.

Elapsed time can be read on the LCD indicator inside the job calculator housing.

Elapsed time is displayed in the following format alternating with sensor diagnostics:

Elapsed time < 100:

14:36

Elapsed time < 100>

0346

Setting time difference – Raising/lowering front mower and side mower

From 2007 model

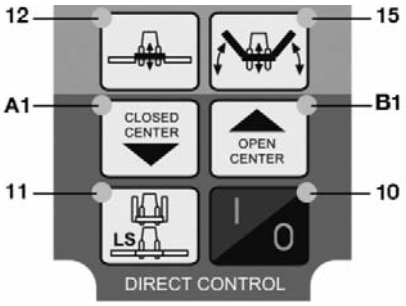
Control with dual coloured light emitting diodes (LEDs)

1. Change to other operation mode

- Briefly press button I/O
- the (LED) changes to green

2. Switch on programming mode:

- Press button 15 for 5 secs.
- The button LED should blink green



Note!

The set times remain stored until altered

Setting time difference - raising

- Put control into programming mode
- Press button B1 (front mower raised)

  To set the desired time difference keep pressing button B1
- When button is released both side mowers are raised and the time difference is stored.
- Programming mode ends automatically

Setting time difference - lowering

- Put control into programming mode
- Press button A1 (front mower lowered)

  To set the desired time difference keep pressing button A1
- When button is released both side mowers are lowered and the time difference is stored
- Programming mode ends automatically

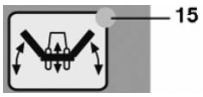
Switching “time difference function” on/off:

Switching function on:

- Briefly press button 10 “I/O”
- The LEDs change colour to green
- By pressing button 15 all set time differences are active

Switching function off:

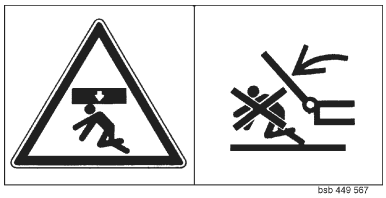
- Briefly press button 10 “I/O”
- The LEDs change colour to red
- By pressing button 15 all mower units are simultaneously raised or lowered

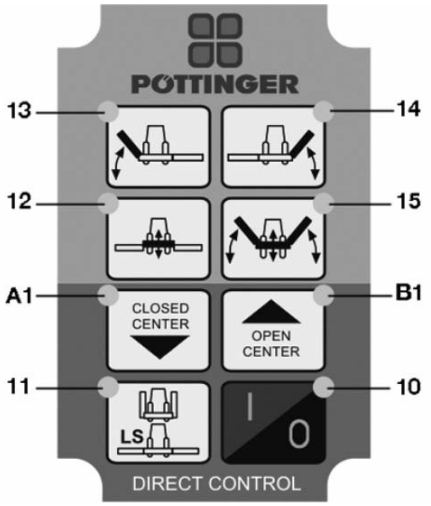


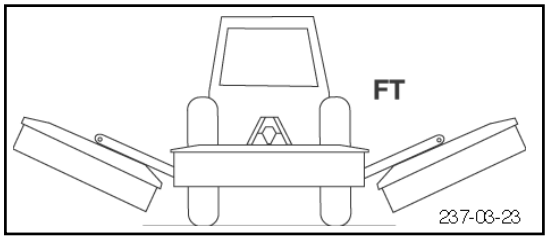
Conversion from working to transport position

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!**
- **Before swivelling the cutter bar up, turn off the drive and wait for the mower discs to come to a complete standstill.**
- **Make sure that swivel area is free and that nobody is standing in the danger area.**







Conversion from operating to transport position

1. Press button **15**
2. Briefly press button **B1**

   Mower units swing into the field transport position (headland turns)
3. Press button **11**
4. Press button **B1** and hold

   Mower units swing into road transport position

Conversion from transport to operating position

1. Press button **15**
2. Press button **11**
3. Press button **A1** and hold

   Mower units swing into the field transport position (headland turns FT)
4. Briefly press button **A1**

   The mower units swing downwards (with delayed action);

   First the front mower, and then both side mowers; the swivel cylinders remain in the floating position.

Conversion from operating to field transport position (headland turns FT)

1. Press button **15**
2. Briefly press button **B1**

   The mower units swing upwards (with delayed action);

   first the front mower, and then both side mowers

Conversion from the field transport position (headland turns FT) to operating position

1. Button **15** must be activated (LED lights up)
2. Briefly press button **A1**

   The mower units swing downwards (with delayed action);

   First the front mower, and then both side mowers; the swivel cylinders remain in the floating position.

Important

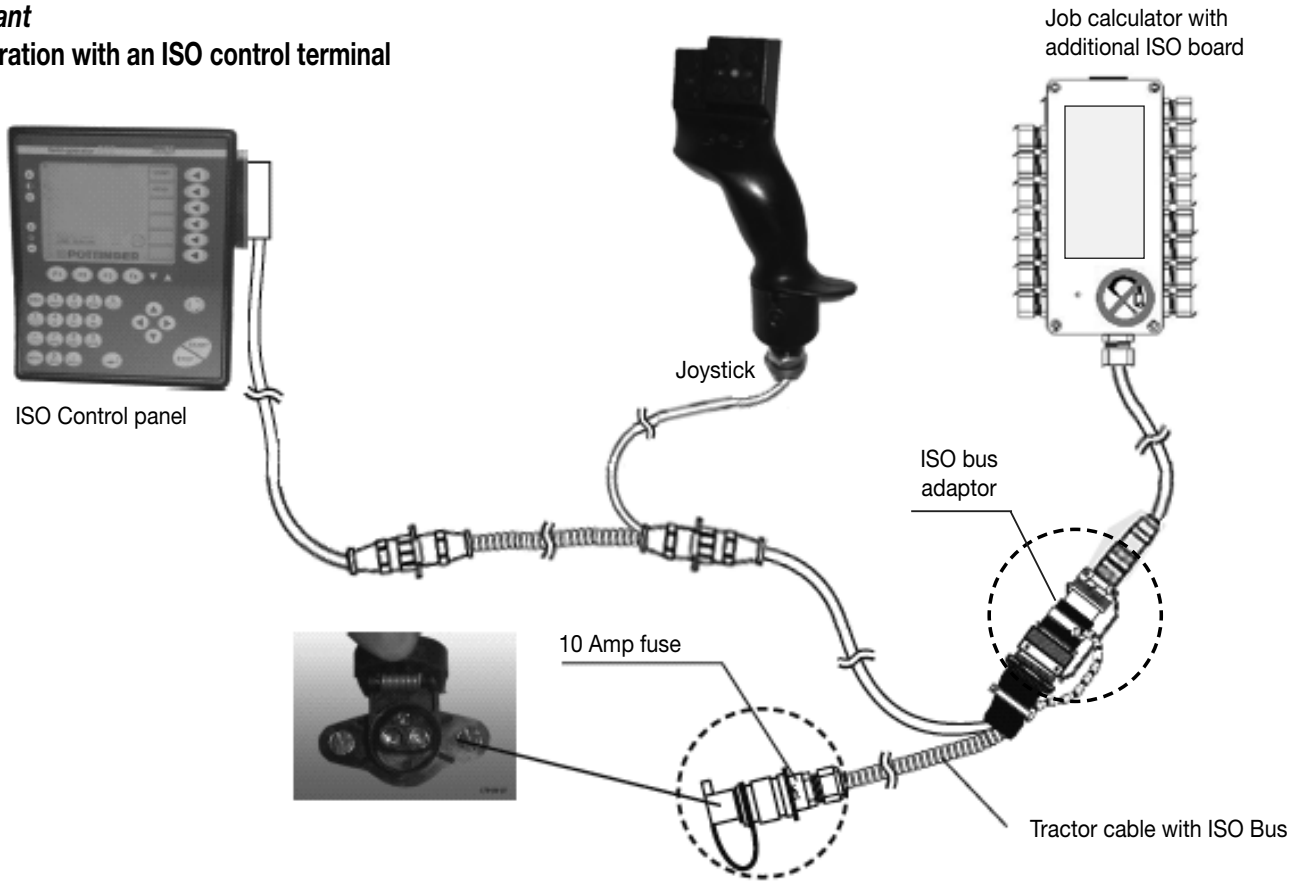
Each mower unit can also be individually swung upwards and downwards.

1. Select desired hydraulic function (12, 13, 14)

2. Press button (A1, B1)

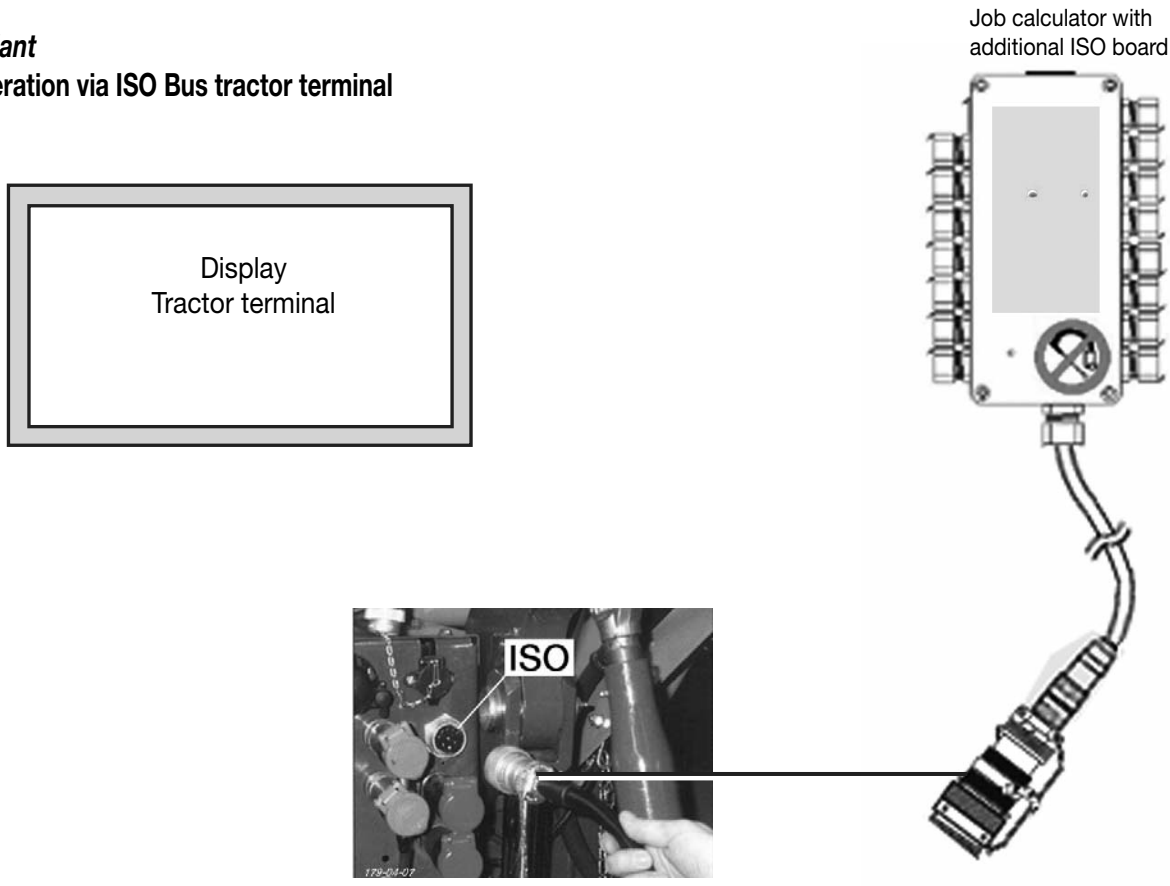
Variant

Operation with an ISO control terminal



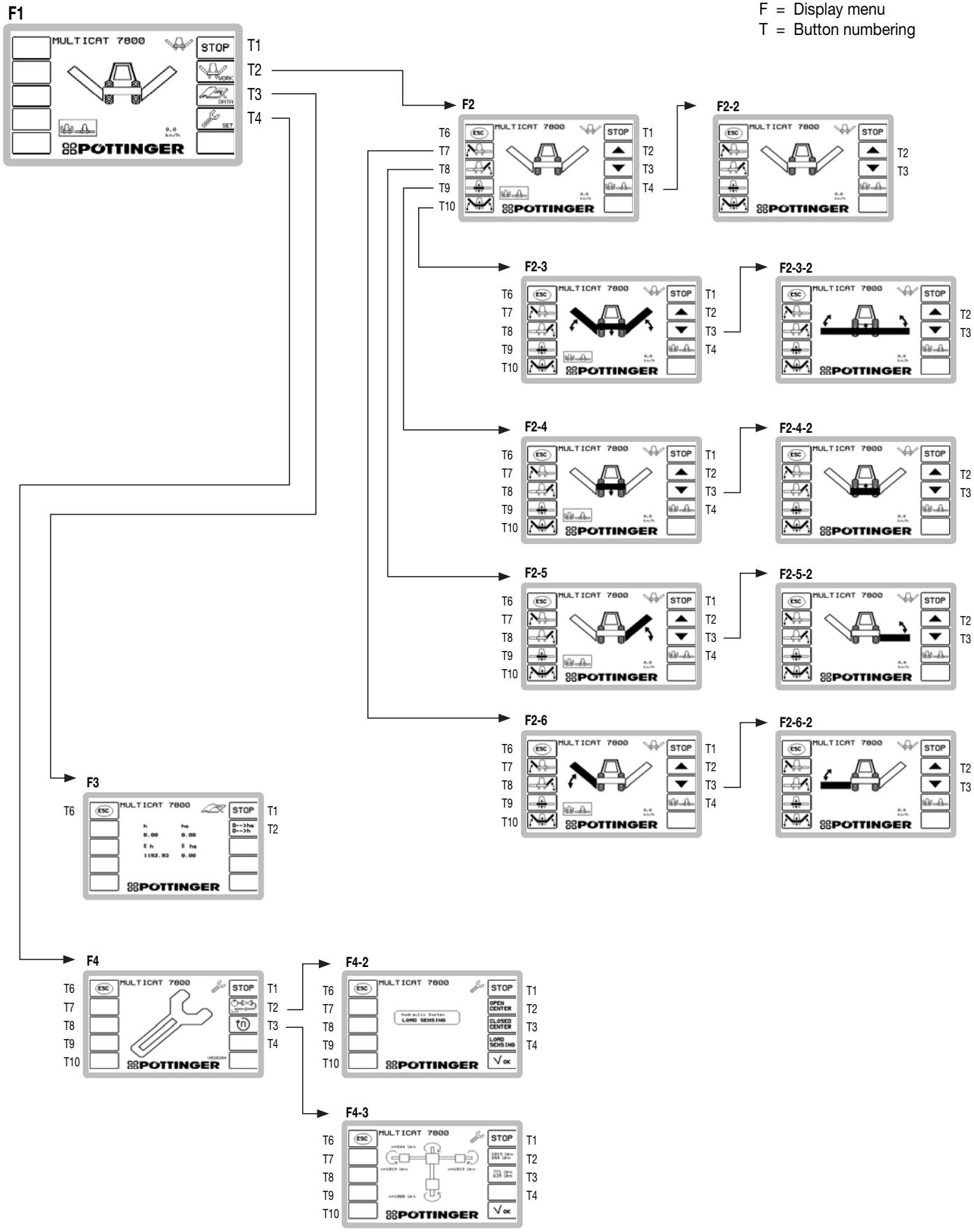
Variant

Operation via ISO Bus tractor terminal



Operation ISO-terminal

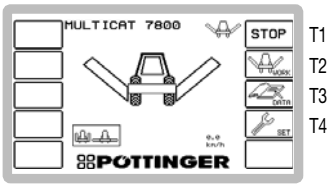
F = Display menu
T = Button numbering



Button indication

F1 - Start menu

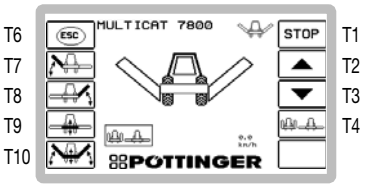
F1



T1 STOP
T2 Work menu
T3 Data menu
T4 Set menu

F2 - Work-Menü

F2



T1 STOP
T2 "Upward" according to preselection
T3 "Downward" according to preselection

T4 Conversion from operating to transport position
(preselection)
- Switch to another mask (F2-2)
- (Display indicator  disappears)

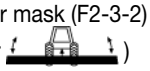
T2 - Raise cutter bars into road transport position
T3 - Lower cutter bars into working position

T6 Back a level

T7 Left cutter bar (preselection)
- Switch to another mask (F2-6)
- (display indicator )
- Lower left cutter bar with T3 key
- Switch to another mask (F2-6-2)
- (display indicator )
- Raise left cutter bar with T2 key

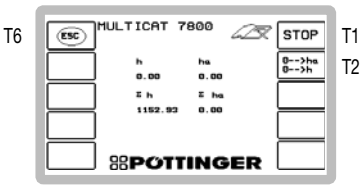
T8 Right cutter bar (preselection)
- Switch to another mask (F2-5)
- (display indicator )
- Lower right cutter bar with T3 key
- Switch to another mask (F2-5-2)
- (display indicator )
- Raise right cutter bar with T2 key

T9 Centre cutter bar (preselection)
- Switch to another mask (F2-4)
- (display indicator )
- Lower centre cutter bar with T3 key
- Switch to another mask (F2-4-2)
- (display indicator )
- Raise centre cutter bar with T2 key

T10 All cutter bar (preselection)
- Switch to another mask (F2-3)
- (display indicator )
- Lower cutter bars with T3 key
- Switch to another mask (F2-3-2)
- (display indicator )
- Raise cutter bars with T2 key

F3 - Data menu

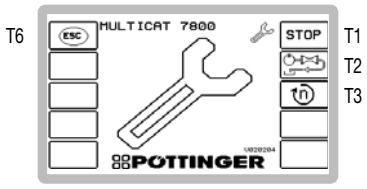
F3



T1 STOP
T2 Clears the hectare metre (ha) and hour counter (h)
T6 Back a level

F4 - Set menu

F4

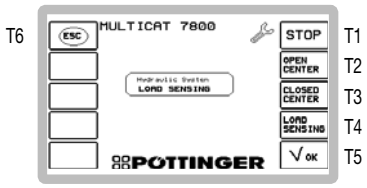


T1 STOP

T2 Selecting the hydraulic system

- Switch to another mask (F4-2)

F4-2

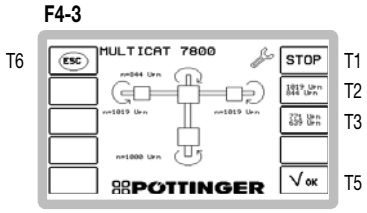


T2 closed hydraulic system
T3 open hydraulic system
T4 “load sensing” hydraulic system
T5 Store input

T3 Setting the r.p.m of the conditioner rotors

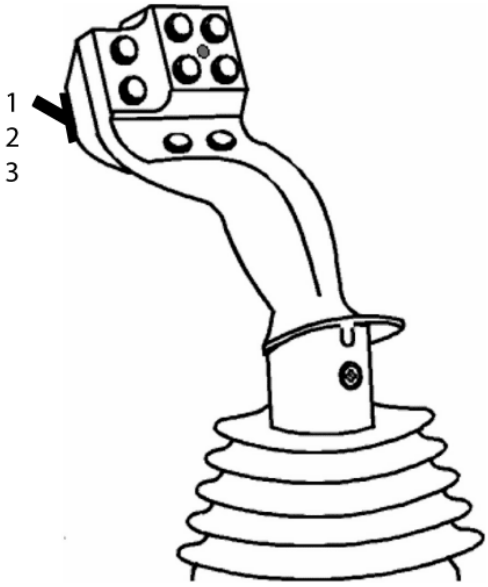
- Switch to another mask (F4-3)

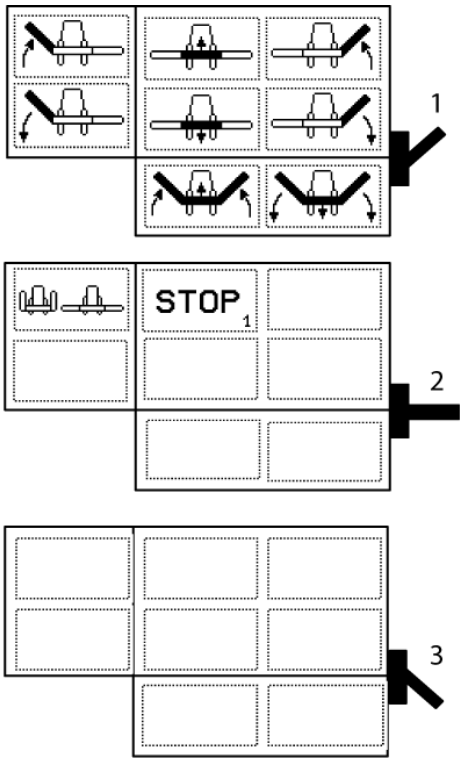
F4-3



T2 Rotor r.p.m on the left and right conditioner:
1019 min^{-1}
Rotor rpm for centre conditioner
844 min^{-1}
T3 Rotor r.p.m on the left and right conditioner:
771 min^{-1}
Rotor rpm for centre conditioner
639 min^{-1}
T5 Store input

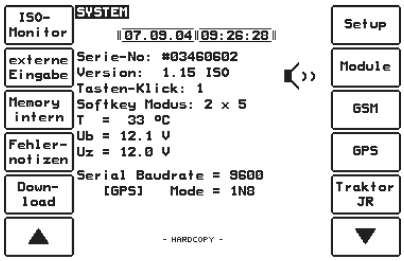
Joystick - Mower Configuration



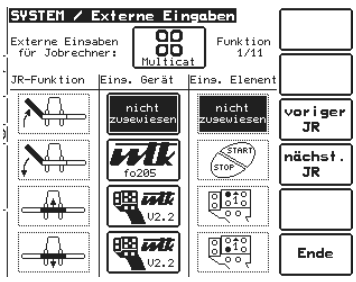


Setting the Joystick

- System Menu appears when “F4 key” on ISO control device is pressed



- Configuration Menu appears when “External Input” key on ISO control device is pressed



- Initial state is always (nicht zusewiesen)
- Select functions using the key block

- Select configuration style

  1 x pressing the button „+ (YES)“ or „- (NO) „

Variant 1

Can only be utilized twice: 1 function on the start key and 1 function on the stop key. Not necessary for joystick configuration

2 x pressing the button „+ (YES)“ or „- (NO) „

Variant 2

Allocate the required functions to the joystick key

- Continue switching using the “+ (YES)” key

Attention: The numerals on the joystick symbol (1/2/3) show the relevant switch position!

1 Switch up (LED lights up red)

2 Switch centre (LED lights up yellow)

3 Switch down (LED lights up green)

Advantage:

Through pressing the joystick key the function can be directly controlled.

Important points before starting work

1. Check

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

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

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

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

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

4. Damage protection!

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

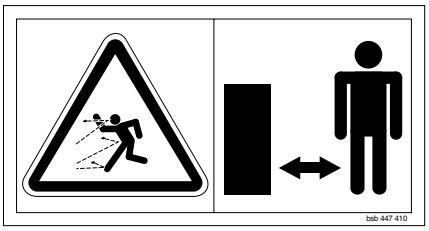
In the event of a collision

- Stop immediately and switch off the drive.
- Carefully check the implement for damage. The mowing discs and their drive shaft must be checked in particulare.
- 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 (see chapter "Maintenance and service").
- Retighten all knife screw fittings.

5. Stay clear while engine is running.



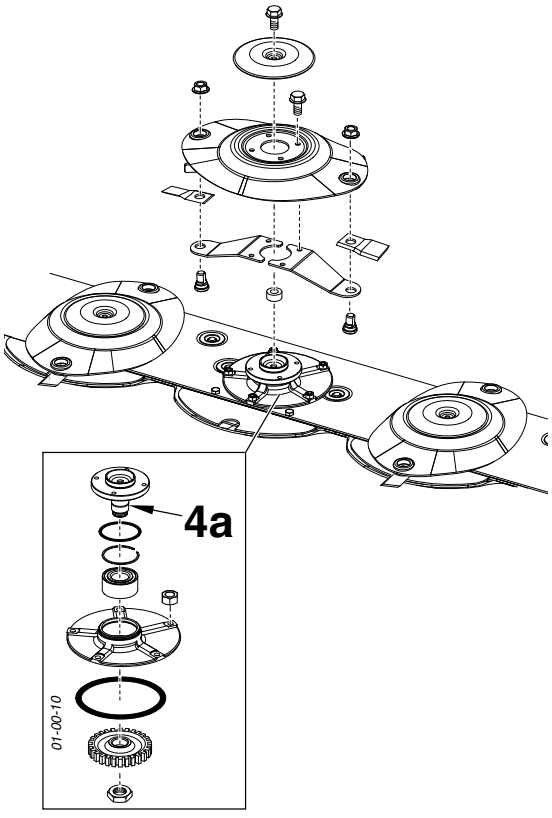
- Keep people out of the danger zone - foreign bodies which can be ejected by the mower could injure them.

  Special care is necessary on or near stony ground.

6. Wear hearing protection

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

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



Safety hints:

see supplement-A1 points 1. - 7.)

Attention!

After the first hours of operation

- **Retighten all knife screw fittings.**

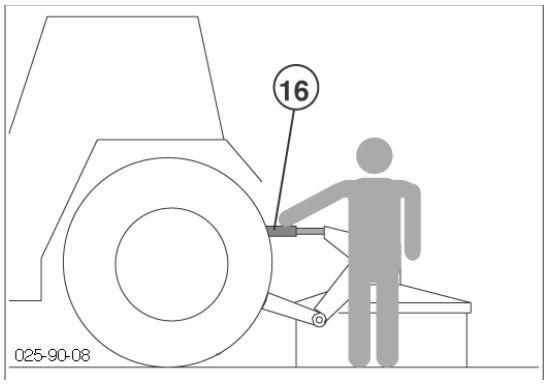
Mow

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

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

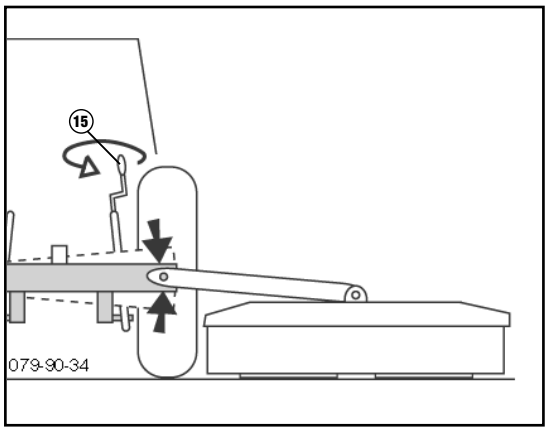
   Smoothly increase the p.t.o. speed, in order to avoid noises in the free-wheel conditioned by the system.

- Adjust travel speed to terrain and crop.



Adjustment:

- Frame horizontal (15).
- Fix hydraulic lower links in a way that the machine cannot swing out sideways.

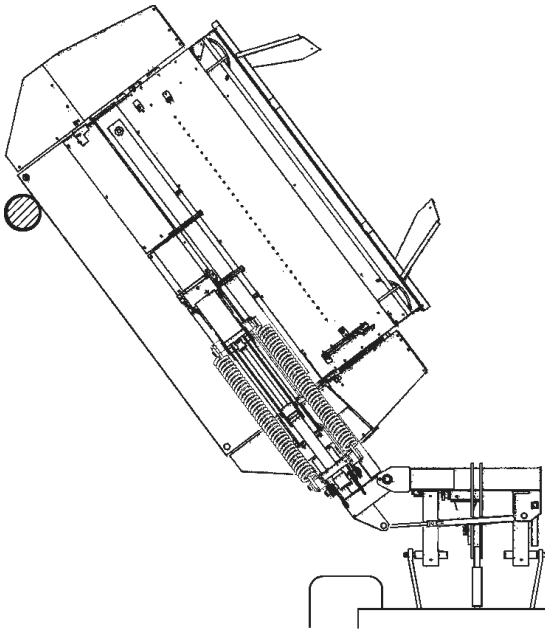


Collision safety device

When mowing around trees, fences, boundary stones etc., collisions between the cutter bar and obstacles can occur despite careful and slow driving. Therefore, in order to prevent such damage, collision protection has been planned for the cutting device.

Attention!

It is not the intention of the collision safety device to prevent damage to the machine when working at full speed.



How the hydraulic collision safety device functions

When a collision with an obstacle occurs, the cutter bar swivels back far enough for it to pass by.

Then the cutter bar can be swivelled back hydraulically into the operating position.

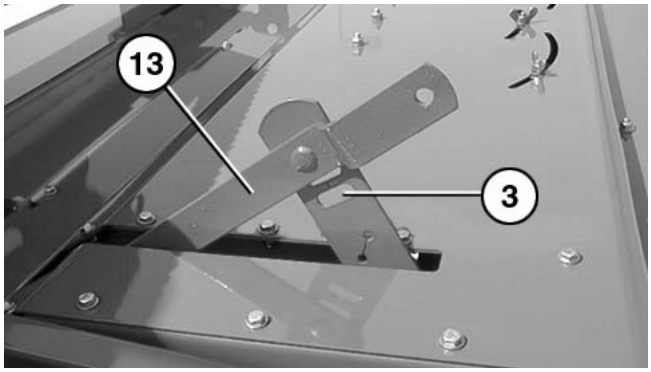
To do this, actuate the double-action control valve (ST).

Mowing with the conditioner

The conditioning effect can be modified:

- with lever (13), which adjusts the gap between adjustable plate and rotor. The conditioning effect is most intense with the lever at the bottom of its travel (Pos. 3).

  However the crop should not be chopped.

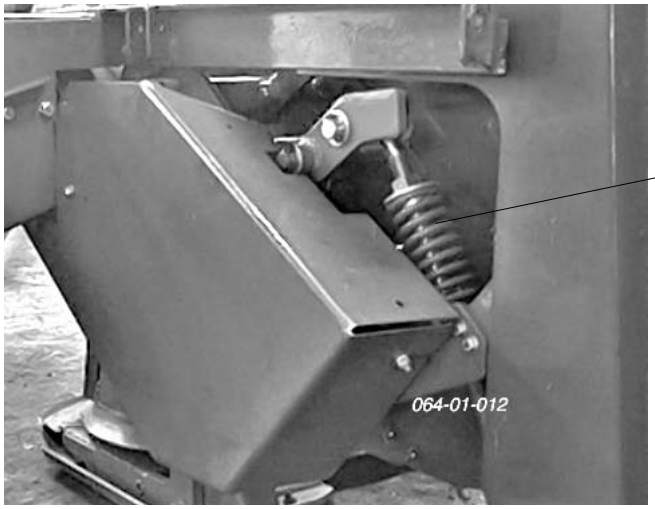


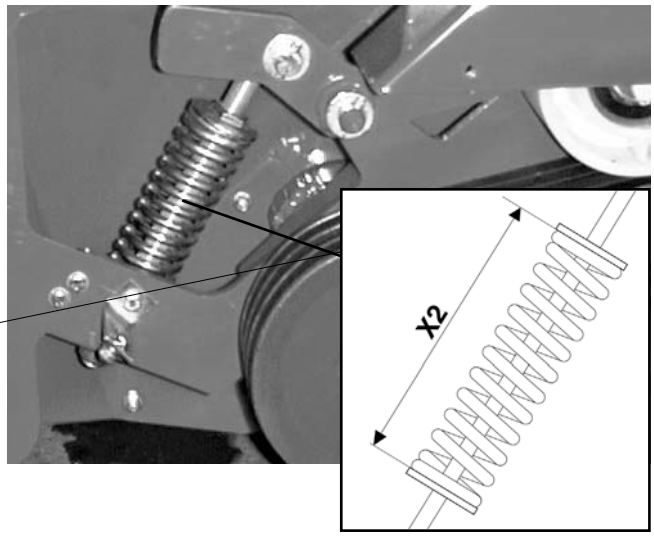
Correct belt tension

Check X2 size

NOVACAT 7800: X2 = 164 mm(side mowers)

NOVACAT 8600: X2 = 164 mm (side mowers)





700 r.p.m. for rotor

- less damage to crop

Pulley, belt and belt guard must be replaced.

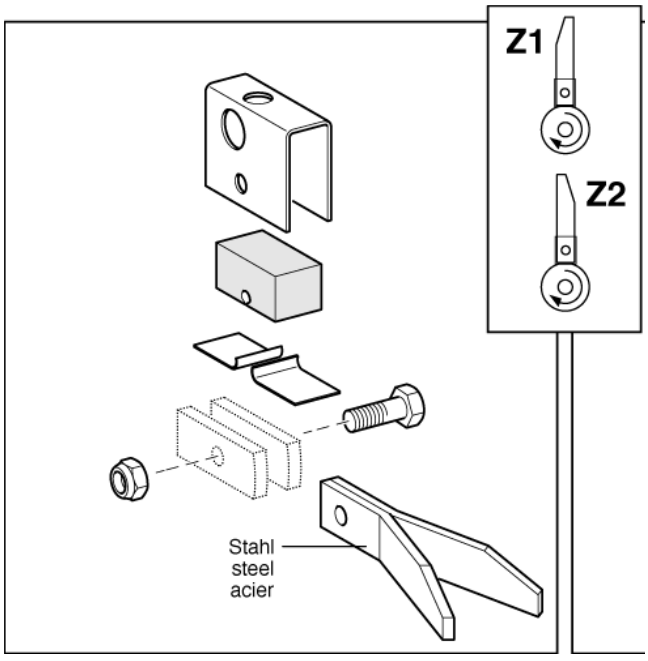
See replacement parts list for parts.

Position of the rotor prongs

Pos. Z1: position of the rotor prongs for normal operating conditions

Pos. Z2: for difficult operating conditions if for example the chuck wraps around the rotor

The rotor prongs turn 180° (pos.Z2). This prong position removes the problem in most cases. The preparation effect is thereby somewhat reduced.



Dismounting and mounting the conditioner

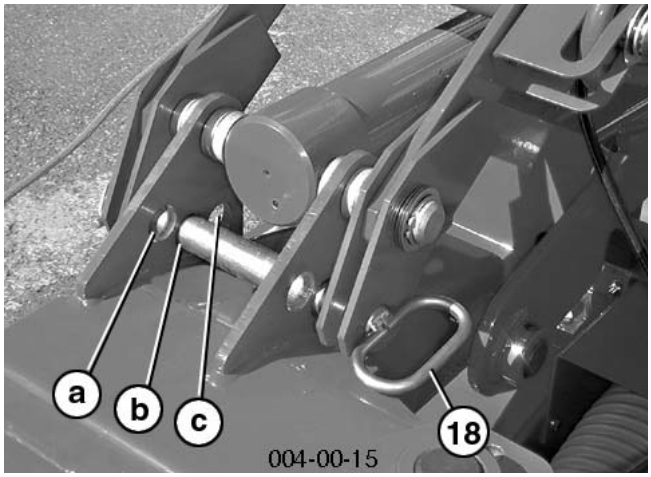
Side mowers

Reduce spring tension before dismounting the conditioner

Pin bolt (18) in the relative position (a)

- see chapter "MAINTENANCE"

Otherwise the danger exists that the mounting frame of the cutter bar could swivel up in jerks and jolts when uncoupling the lower link

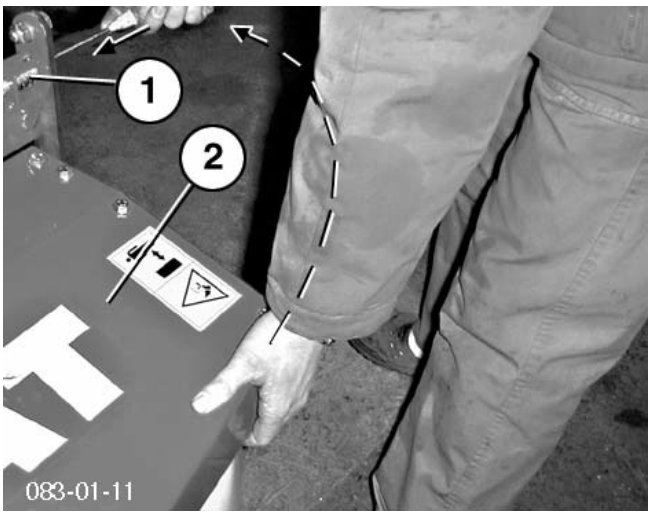


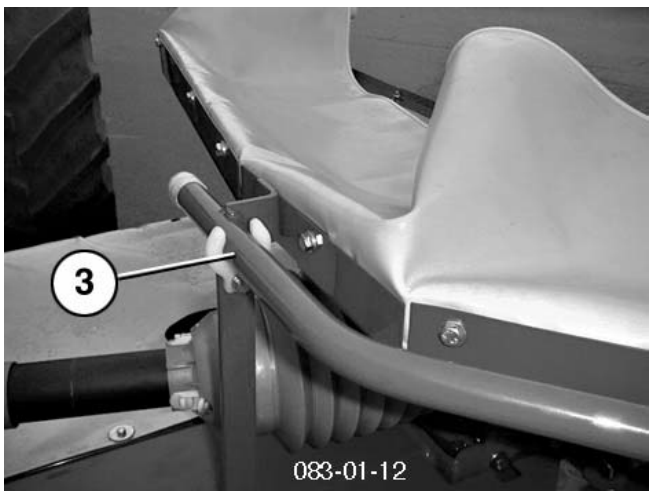
1. Dismounting cutter bar from tractor

(only in cutter bar Combination 3)

2. Loosen locking mechanism (1) and swing protection (2) up.

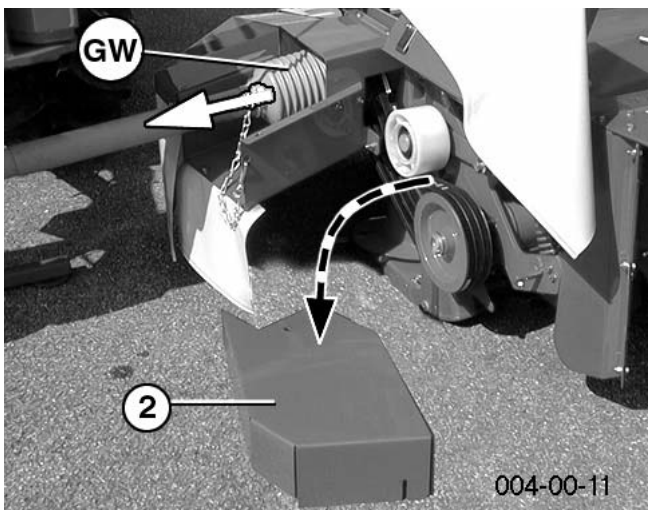
- engage protective frame in holder (3)
- left and right

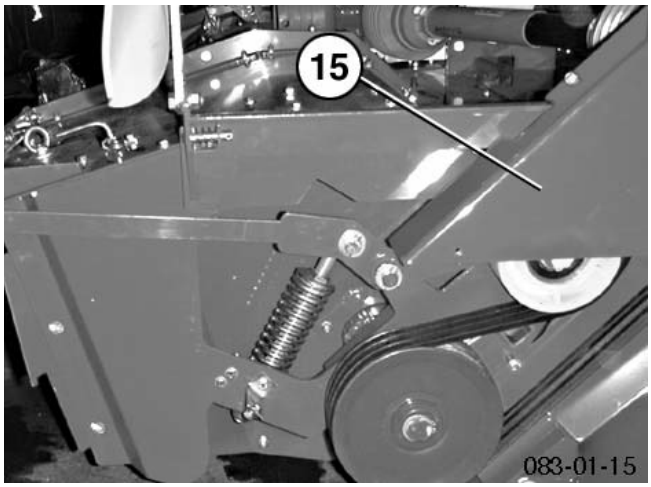




3. Remove the belt protection (15) (Front-Mower)

3a. Remove the belt protection (2) and withdraw the drive shaft (GW) from the gear (side mowers).

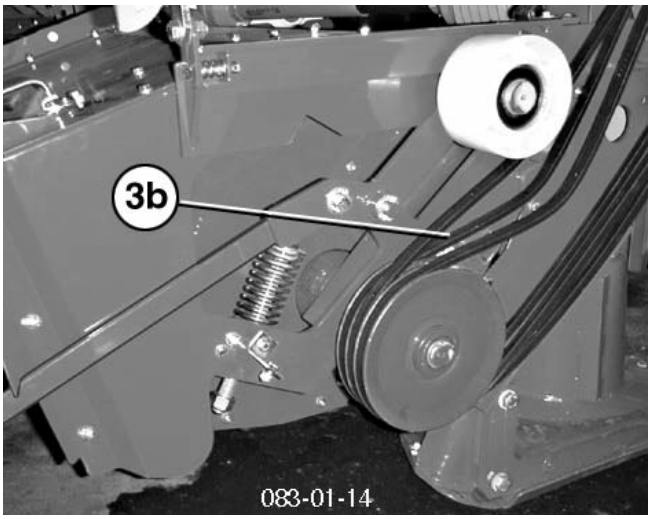


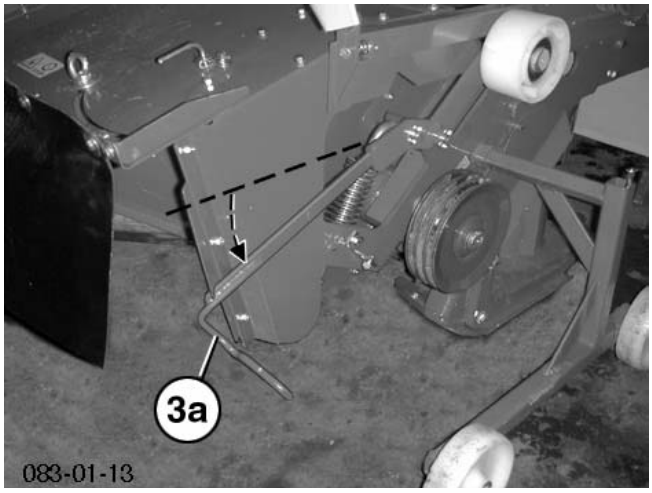


Front mower

3. Remove belts (3b)

- Release the tension using lever (3a) beforehand

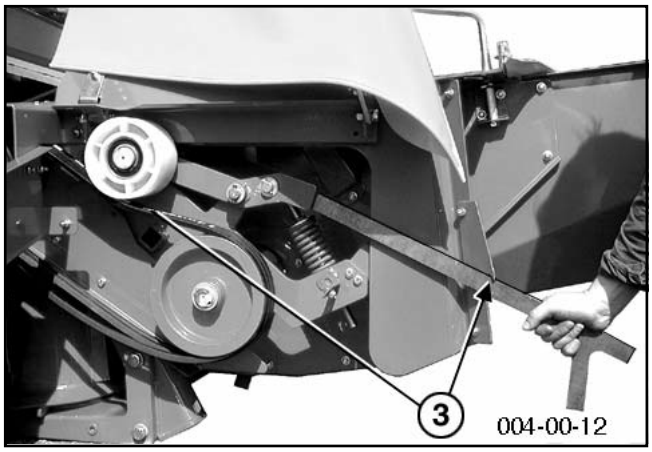




Side mowers

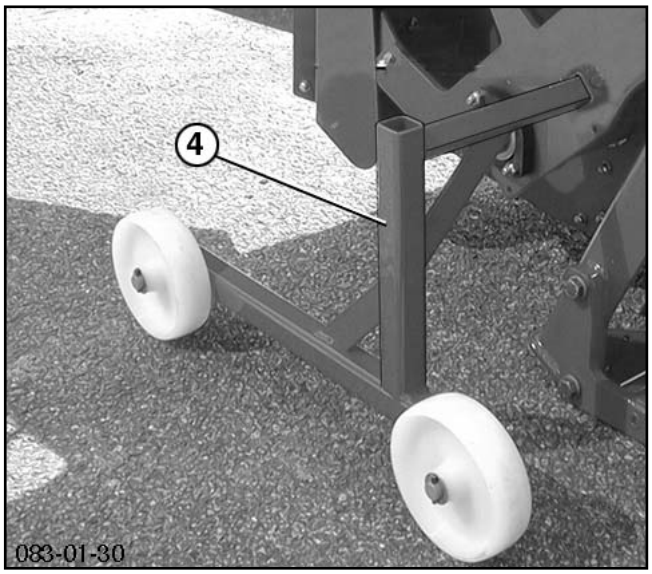
3a. Remove belts

- Release the tension using lever (3) beforehand



4. Fit transport wheels (4)

- left and right

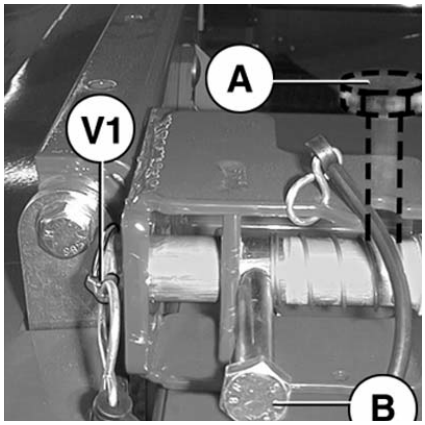


5. Release left and right locks

- **Spring loaded positioning bolt up to 2004 model**

  Remove linch pin (V1) and release bolts

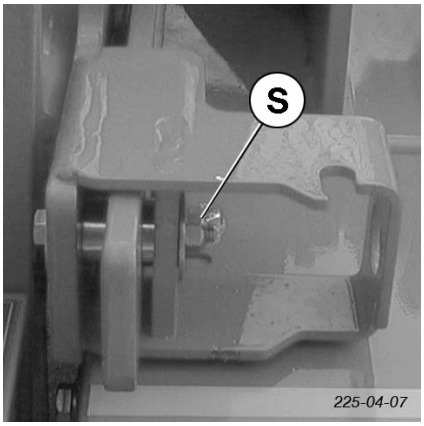
  • Pos. A = released • Pos. B = Locked



- **Screwed in from 2004 model**

  Remove screw (S)

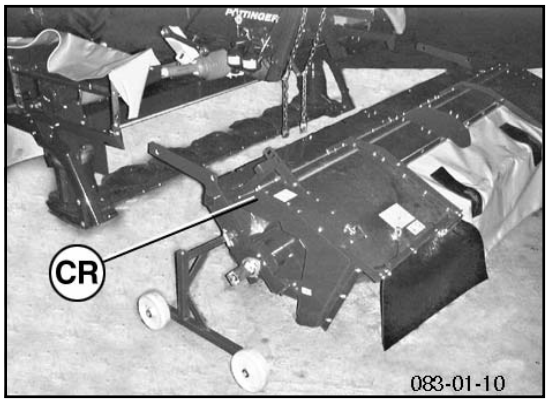
  (Spring loaded positioning bolt = optional)

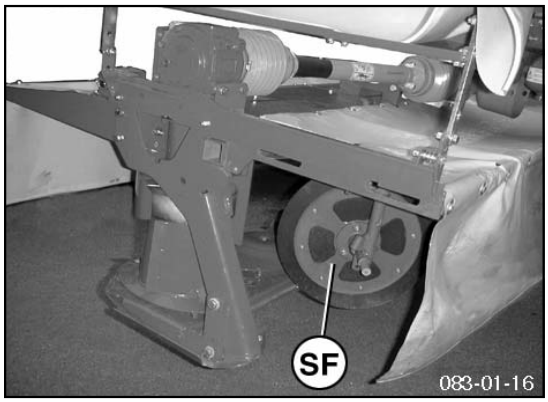


Important!

When mowing without conditioner, protective elements and the both swath formers (SB) must be mounted additionally on the cutter bar. Parts see spare parts list.

6. Always park conditioner (CR) steadfast.



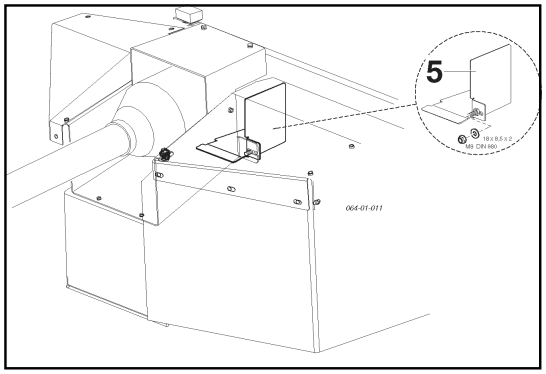


Installation of the conditioner (CR) or the swath formers (SF)

- is effected in the reverse sequence to dismounting.

7. Mount the guard (5) (Front-Mower)

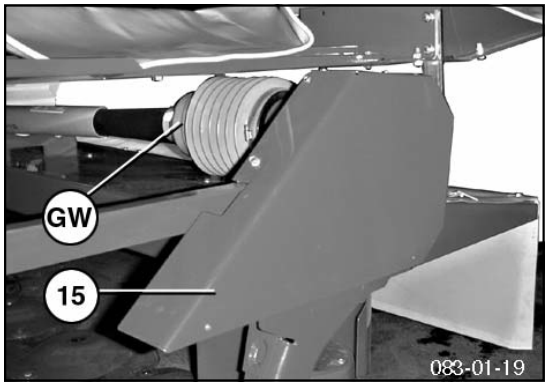
This guard (5) prevents the penetration of dirt into the gear area.



8. Mount the guard (15) (only applies to side mowers)

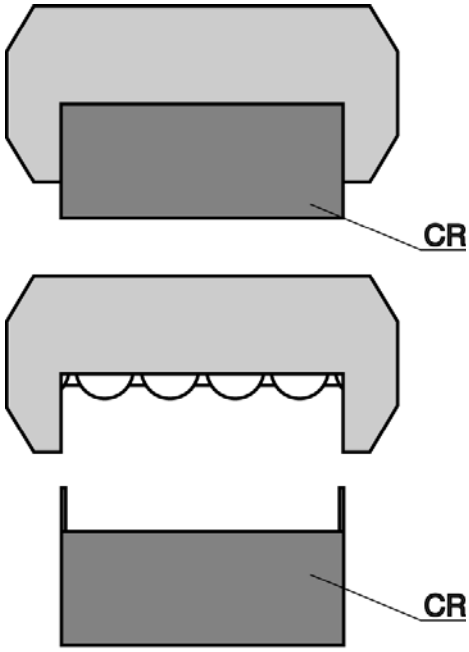
This guard (5) prevents the penetration of dirt into the gear area.

• connect drive shaft (GW)



Mowing without Conditioner

Take particular notice when the conditioner is detached rom the cutter bar



Safety hint

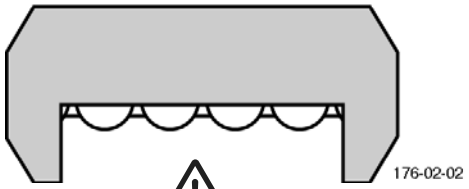
A machine with a conditioner (CR) as a complete unit is fitted with proper protection elements.

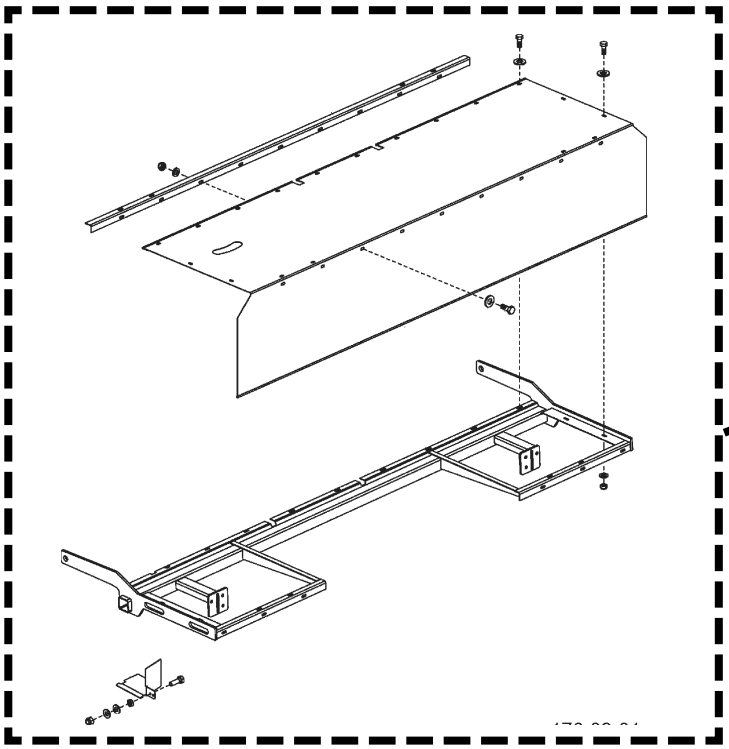
Should the conditioner be detached however, the mowing unit no longer has complete protection covering. In this situation mowing may not take place without additional protection elements!

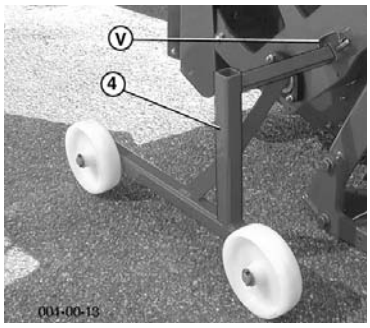
Beware!

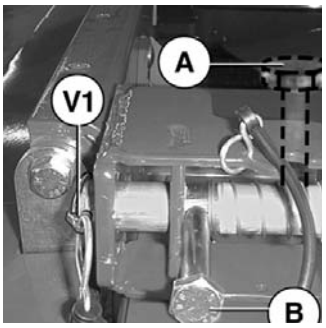
Protection elements, especially intended for this mode of mowing, must be fitted to the mowing unit.

These protection elements are not included in the delivery of a new machine with a conditioner, the parts must be additionally ordered (see Spare Parts List, component group "REAR PROTECTION").







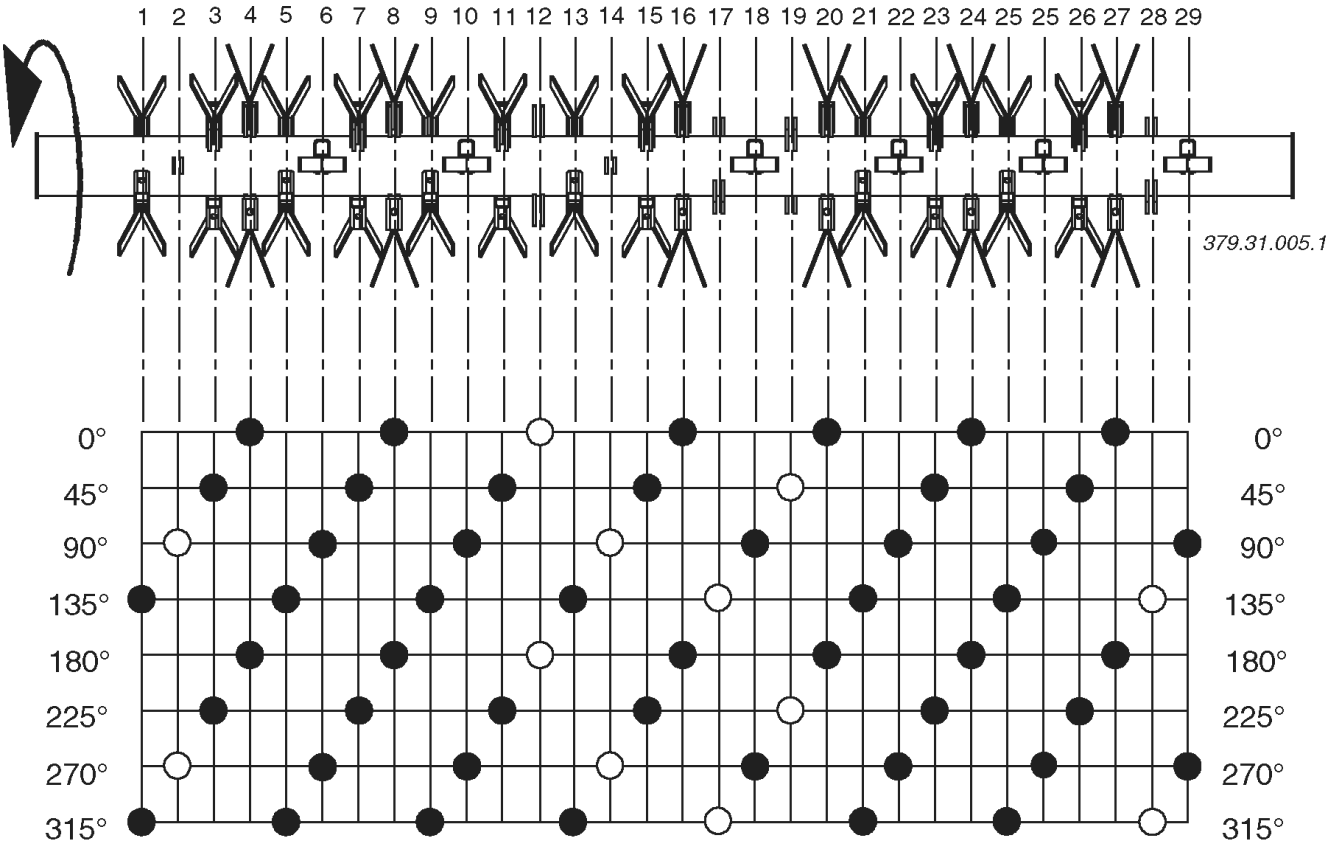


Optional extra

- Chassis (4)
- Spring-loaded fixing bolts (A-B)

For mowing without conditioner (CR)

- Observe safety hint (above) without reservation!

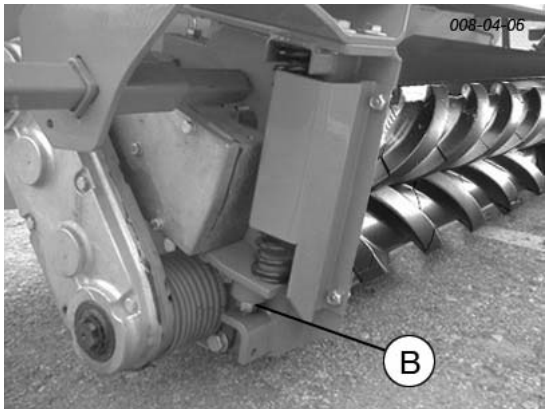


NOVACAT 8600 (Type 384)
NOVACAT 8600 Collector (Type 3841)

Settings

Side pressure springs

- to set the gap between the rubber cylinders
- adjustable through screw (B)



Note!

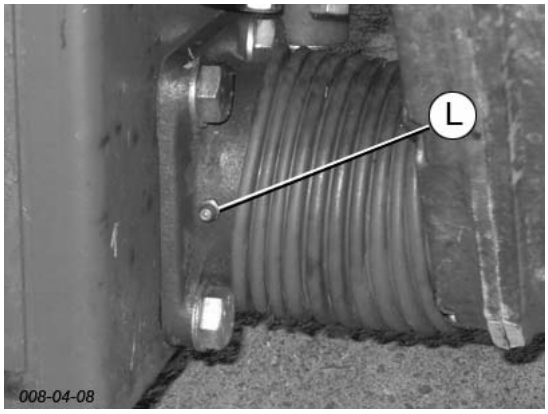
Dismounting and mounting the roller conditioner -see chapter „CONDITIONER“

Cleaning and maintenance

Clean with water after every operation

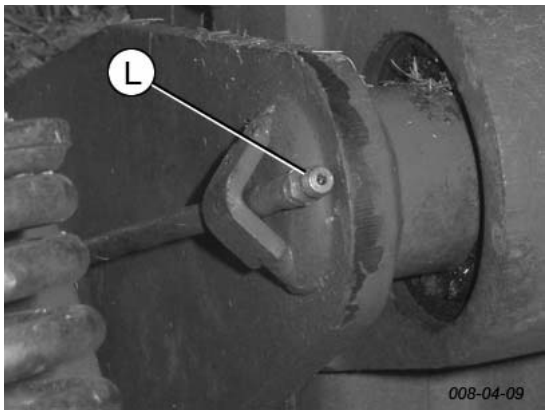
- the rubber cylinders
- the side bearing

(if using a high pressure cleaner see chapter „Maintenance and Service”)



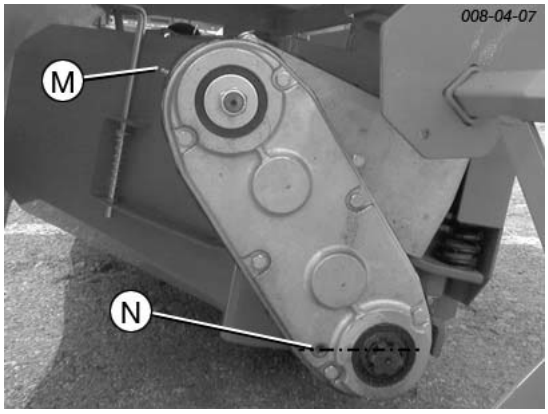
After ever operation, grease

- the lower roller side bearings (L) left and right
- the upper roller side bearing (L) left



Lubricate after every 100 hours of operation

- the upper roller gearing (M) right



After every 500 operating hours

- change the oil
- fill with SAE 90 (III) oil to the mark (N)

Variation

"Extra dry" system

Note

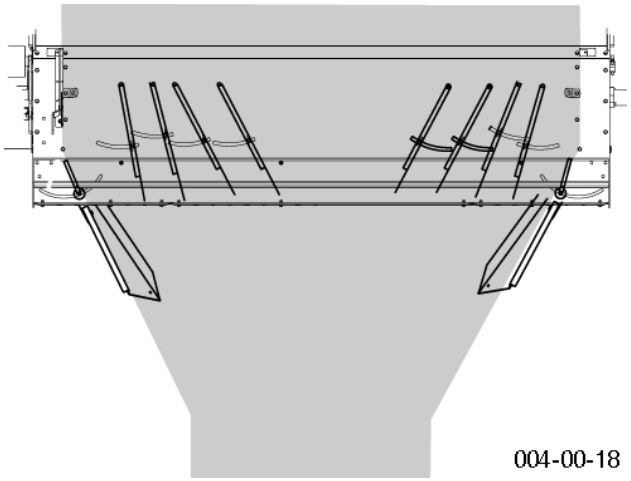
The settings listed below are to be understood as basic settings. Because of the various types of crops, an optimum setting of the guiding plates can possibly first be ascertained when the machine is in use.

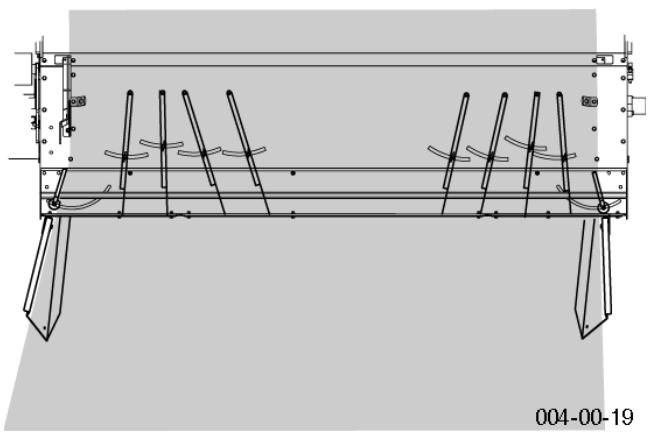
Swathes

Spread width

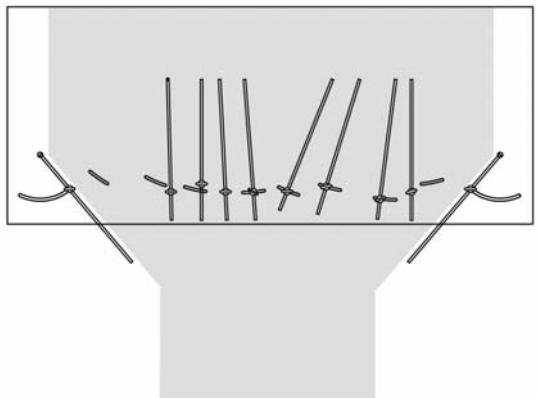
1. Set the positions of the guiding plates
   - see diagram

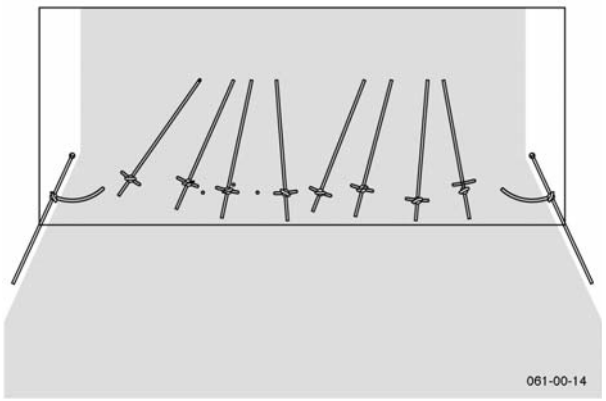
NOVACAT 8600 extra dry





NOVACAT 7800 extra dry

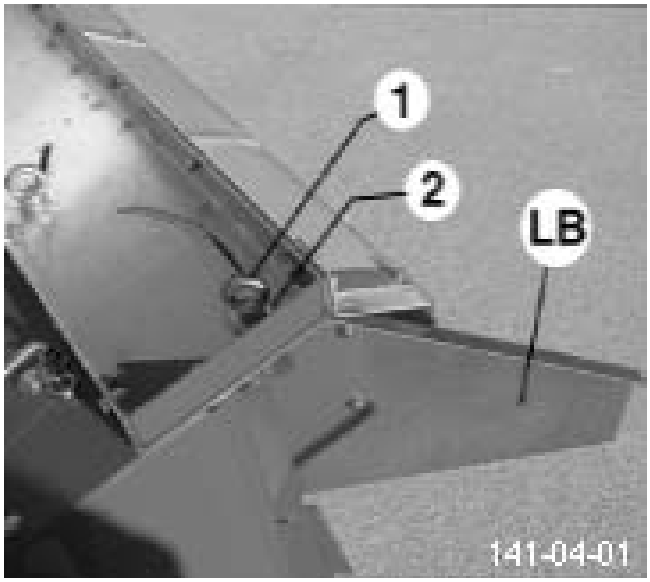




Dismount guide plate

When spreading it could occur that the left mounted guide plate (LB) reduces the spread width.

If a greater spread width is required, the guide plate can be

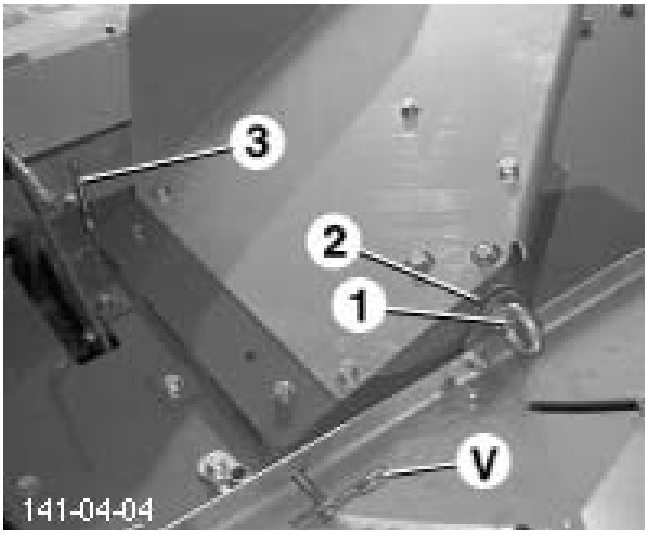


removed.

- Remove ring bolt (1) and washer (2).

- Remove split pin (V) and pull bolt (3) out

- Mount guide plate (LB) onto the top side of the conditioner



- Bolt (3) and split pin (V)
- Ring screw (1) and washer (2)

Important: Washers in the order as shown in diagram

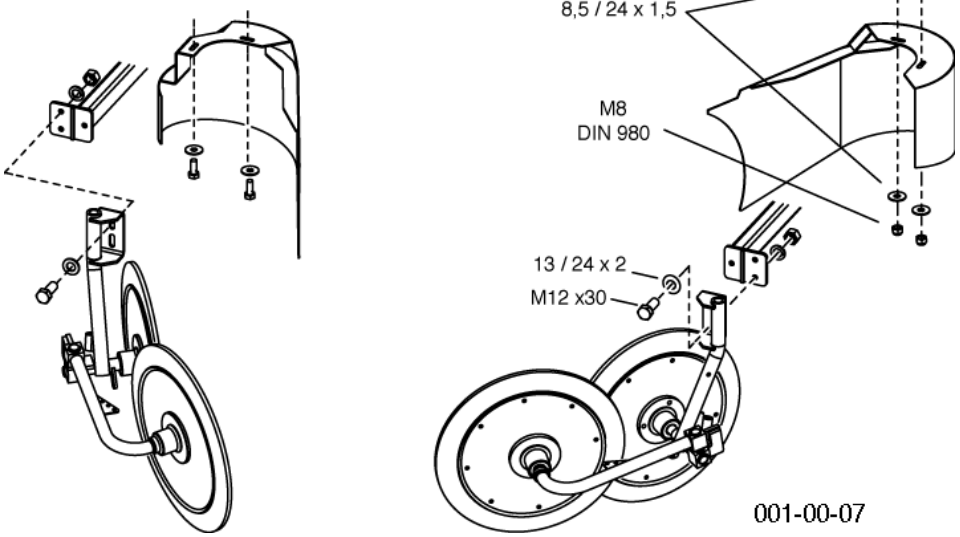
Mount guide plate

For swathing, the guide plate is to be mounted in the position provided.

- Mounting takes place in the reverse analogical order as by dismounting.

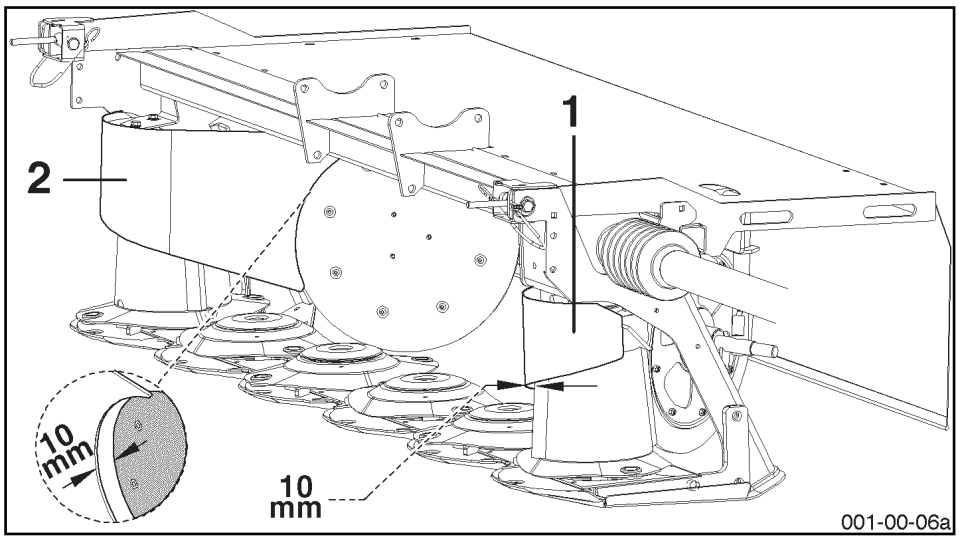
Swath Discs

With the swath discs a narrower swath is formed when mowing. This prevents them from being run over by the tractor's wide tyres.



Mount guide plates

- left (1) and right (2)

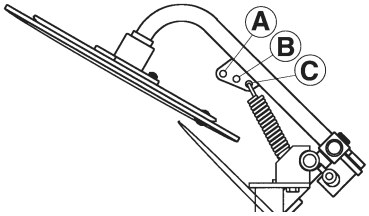


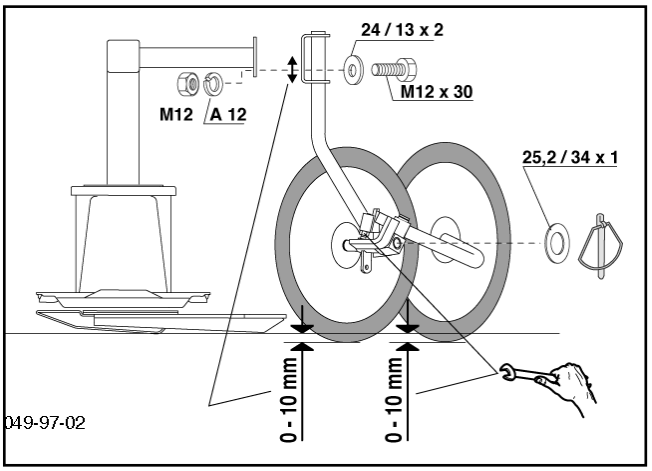
Setting both tension springs

A = for high dense forage

B = basic setting

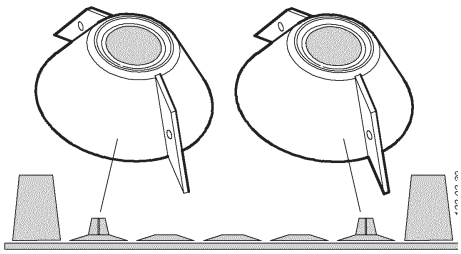
C = for short forage





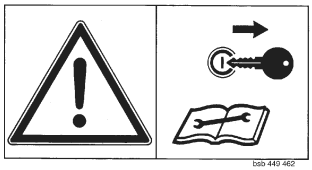
Flat cone conveyor (Optional extra)

- Flat cone conveyor are recommended
  to improve the conveyance rate of swath deposits, particularly with heavy, thick fodder components
- For individual parts see Spare Parts List



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

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.

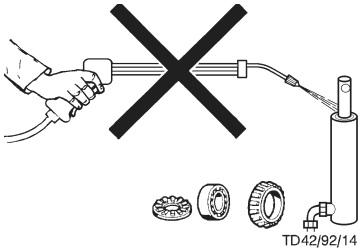
c. The installation and/or use of such products can, therefore, negatively change or influence the construction characteristics of the appliance. We are not liable for damages caused by the use of components and accessories that have not been supplied by us.

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

Cleaning of machine parts

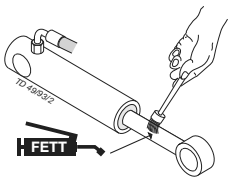
Attention! Do not use high-pressure washers for the cleaning of bearing- and hydraulic parts.

- 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 ope

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!

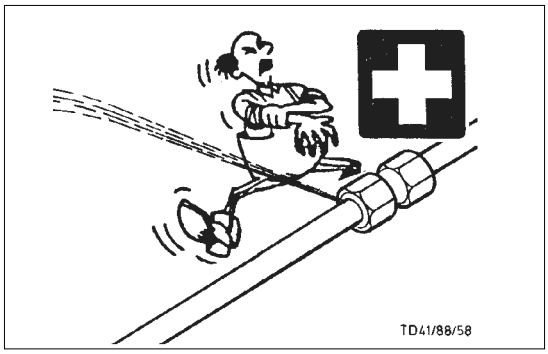
The instructions in this operating manual are always valid.

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

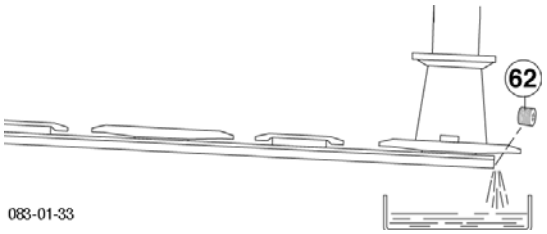
Repair Instructions

Please refer to repair instructions in supplement (if available)

Oil change on cutter bar

Changing oil

- Change oil after first 100 operating hours the at least once a year
- Raise cutter bar on the outer side
- Take out oil drain plug (62), let run out and duly dispose waste oil.



Quantity:

NOVACAT 8600: 3,5 Liter SAE 90

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.

Cutter bar oil level check

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

NOVACAT 8600: X1 = 38 cm

1. Lift one side of the mower bar (X1) and support.

- The side where the oil refill screw is located remains on the ground.
- Lift the other side of the mower bar about **X1** 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.

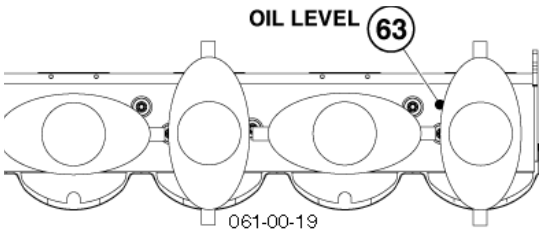
3. Remove oil refill screw (63).

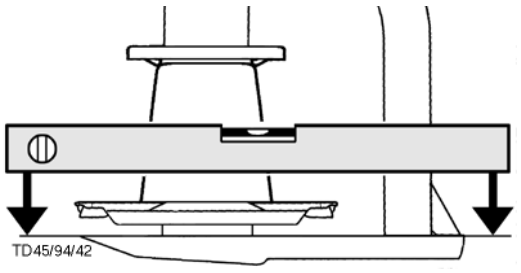
The oil level is measured at the oil refill screw hole.

Important!

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

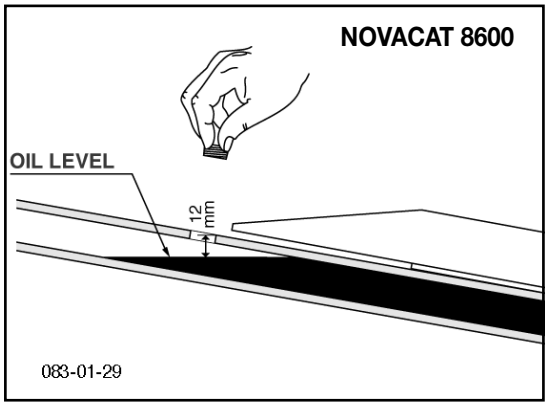
- Take out oil filler plug (63) and top up oil "SAE 90"





4. Oil level check

- Measure the distance up to the level of the oil.
- The oil level is correct when the measurement is **12mm.**



Note:

- Check the level of the oil at a working temperature.

When cold, the oil is too viscous. Too much used oil would stick to the gear teeth, thus giving a false reading.

• Too much oil leads to the mower bar overheating during operation.

• Too little oil does not guarantee the necessary lubrication.

1) The oil filler plug (63) is also the level screw (OIL LEVEL)

Gearing maintenance

Note:

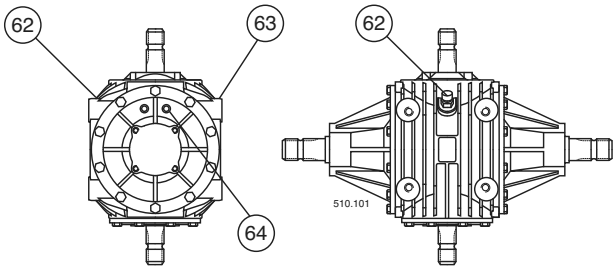
Under normal operating conditions, oil is to be replenished annually (OIL LEVEL).

Starting transmission

- Change oil after the first 50 operating hours.
- Change oil after 100^{h} at the latest.

Quantity:

4,3 Liter SAE 90

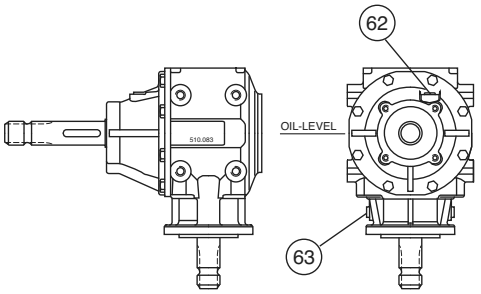


Angular gear

- Change oil after the first 50 operating hours.
- Change oil after 100^{h} at the latest.

Quantity:

0,8 Liter SAE 90



* Filler opening (62)

* Oil outlet (63)

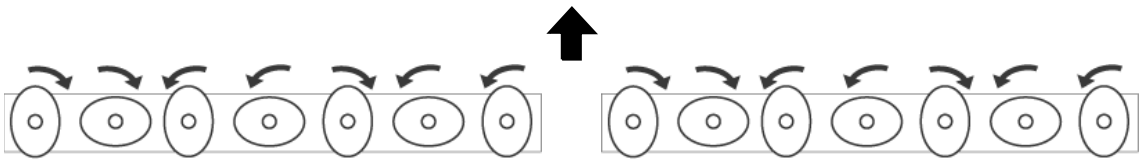
* Oil level control (OIL LEVEL)

Installing cutter blades

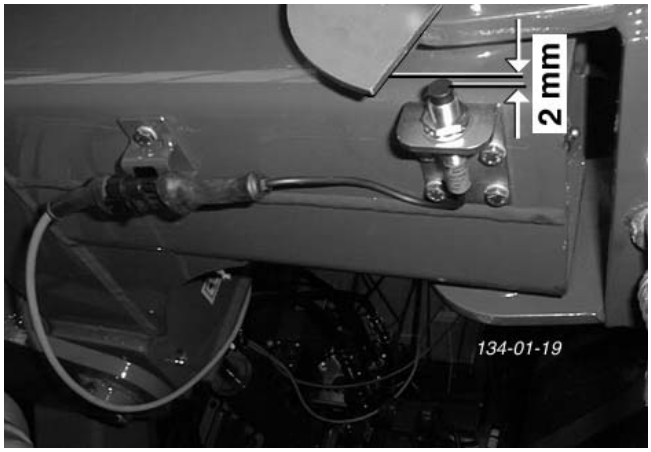
Take note!

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

- To install, clean back plates from varnish.



Setting the field transport position (end-of run turns)



The following guide is valid for both cutter bars.

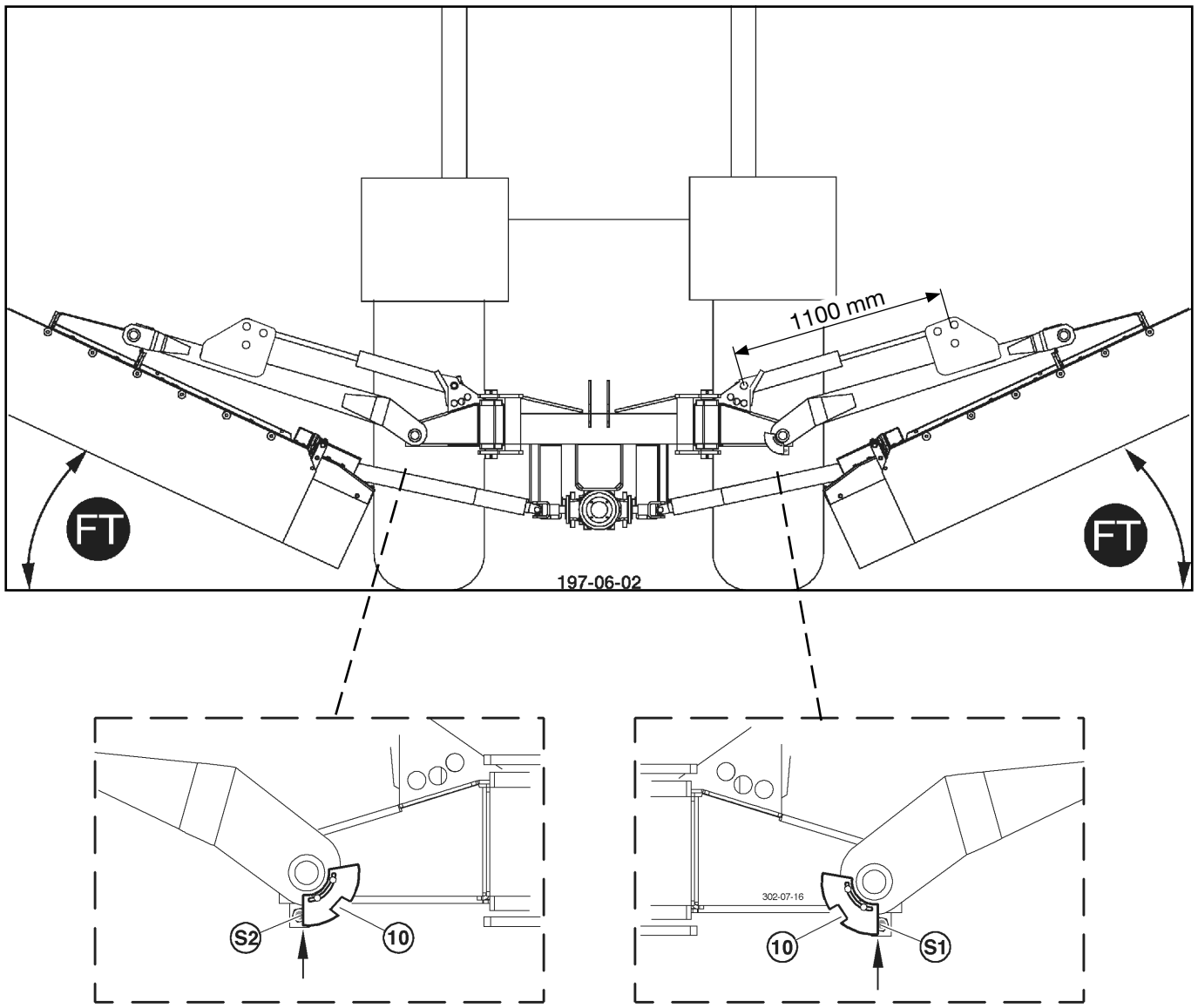
1. Set sensors´ gap (2 mm).
2. Raise both cutter bars until hydraulic cylinders have travelled in to a measurement of ”1100 mm”.
3. Loosen plate screws (10).
4. Move plate (10) in slot until edge is positioned just at sensor (S1).
5. Retighten plate screws.

Adjustment of sensors

Always carry out adjustments and controls in that operating position where the distance from the sensor is smallest.

When doing this, a possible assembly clearance should also be taken into account.

Distance 2 mm



Disruptions and remedies to power failure

- **When there is a disruption in the electrical unit, the required hydraulic function can be carried out by means of an emergency application.**
- **This mode of operation is not suitable for use while working with the machine.**

The function diagram´s analogue shows the respective outlet button to be used for the required function.

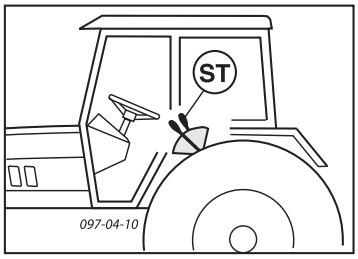
Be alert to the dangers involved with all raising and lowering, and on and off switching activities!

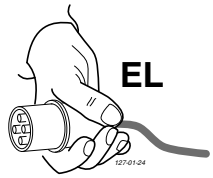
Caution!

The emergency application must be carried out by 2 people.

Please carefully read through the following instructions before carrying out any of the hydraulic functions.

During such swinging operations, the hydraulic system is comparatively unsafe. Therefore proceed with special caution!





Raising a mower bar

1. Disconnect electrical connection (EL)
2. Screw in screw (7) all the way
3. Screw in the valve screw (8) all the way
4. Press the corresponding valve button on the hydraulic unit
5. In the case of tractors with a ”load-sensing” system: press the LS valve button on the hydraulic unit:

   the hydraulic function will be carried out
6. In the case of tractors without a ”load-sensing” system:

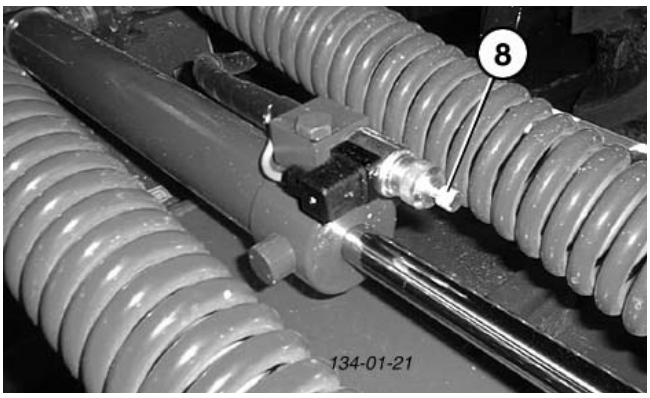
set control valve (ST) on the towing vehicle to ”lift”:

the hydraulic function will be carried out

Important! Hold the control valve (ST) in this position until the valve screw (8) has been unscrewed again. Only then switch control valve (ST) to 0 position.

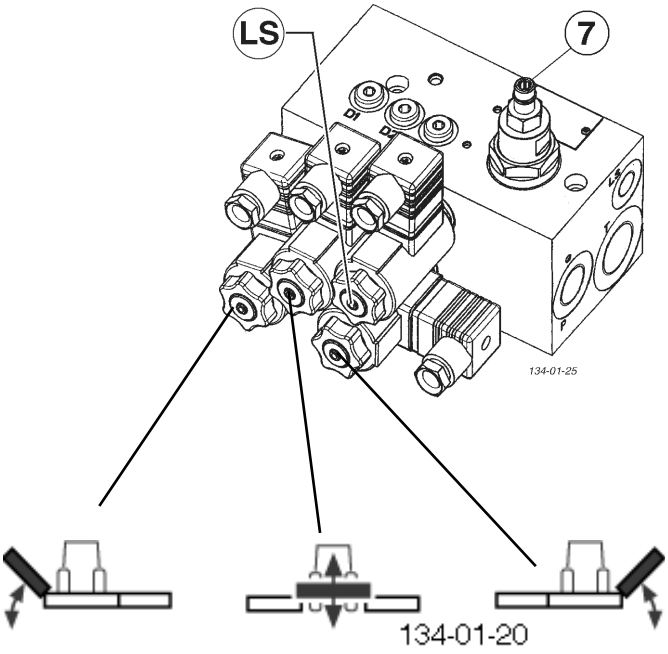
Unscrewing the valve screw (8) ensures that the raised mower bar is stabilised in this position.

Otherwise there is the risk of an accident, as the raised mower bar would immediately swing down again.



Lowering a mower bar

1. Disconnect electrical connection (EL)
2. Check tractors with electronic hydraulic valve: the hydraulic backflow must unrestricted.
3. Screw valve screw (8) slowly in.
   - the hydraulic function is activated, the mower bar swings down.



Hydraulik system	Funktionen / functions		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
Load Sensing		⇧	X			X	↓				X
		⇩					↓				X
		⇧		X		X	↓		X	X	
		⇩					↓		X	X	
		⇧			X	X	↓	X			
		⇩					↓	X			
geschlos-senes System / Closed Center		⇧	X				↓				X
		⇩					↓				X
		⇧		X			↓		X	X	
		⇩					↓		X	X	
		⇧			X		↓	X			
		⇩					↓	X			
offenes System / Open Center		⇧	X				↑				X
		⇩					↑				X
		⇧		X			↑		X	X	
		⇩					↑		X	X	
		⇧			X		↑	X			
		⇩					↑	X			
	keine Funktion /	no function				X	↑				

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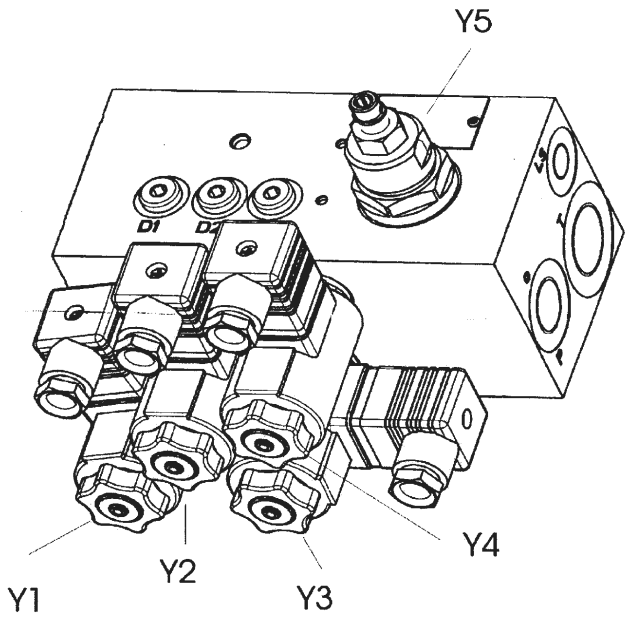
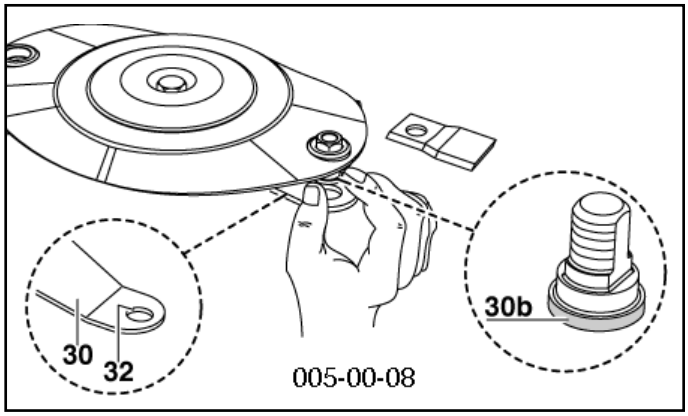
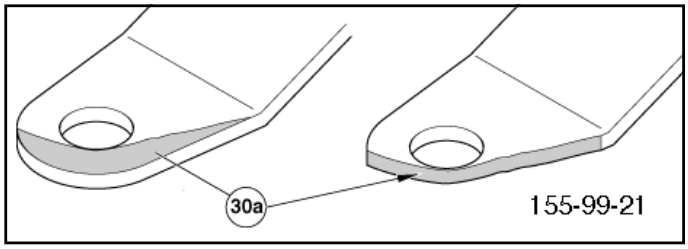


⇧ Y5 **screwed out**
⇩ Y5 **screwed in**

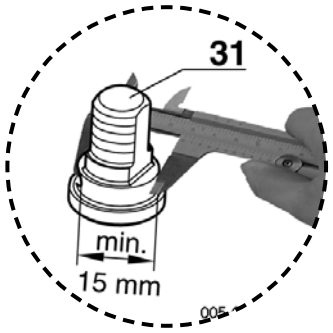
Checking wear on mowing blade holders





Wearing parts are:

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



Process of visual control:

1. remove mowing blades

2. remove grass and dirt

- around pin (31)

Attention !

Danger of accident if:

- the central part of pin of blade must have a minimum of 15 mm
- the wearing area (30a) has reached the edge of the boring
- the pin of the blade is worn in the lower part (30b)
- the pin of the blade is no longer firmly seated

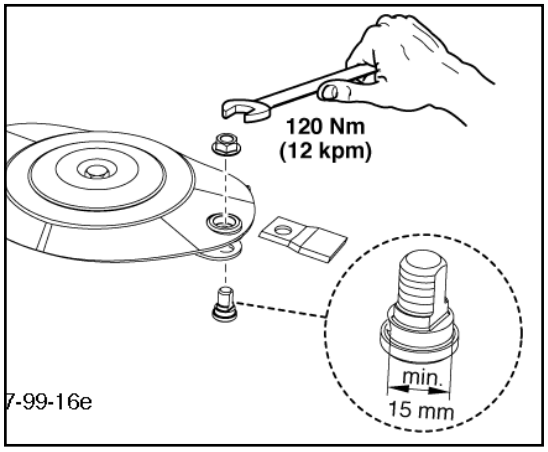
If you notice one or several of these characteristics of wear stop mowing at once!

Worn parts must be replaced by original parts made by Pöttinger immediately !

Screw down the pin of the blade with the nut with 120 Nm.

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

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



Attention!

Danger of accident if wearing parts are worn

If such wearing parts are worn out they must not be used any longer.

Otherwise accidents may be caused through parts that are flinged away (e.g. mowing blades, fragments...)

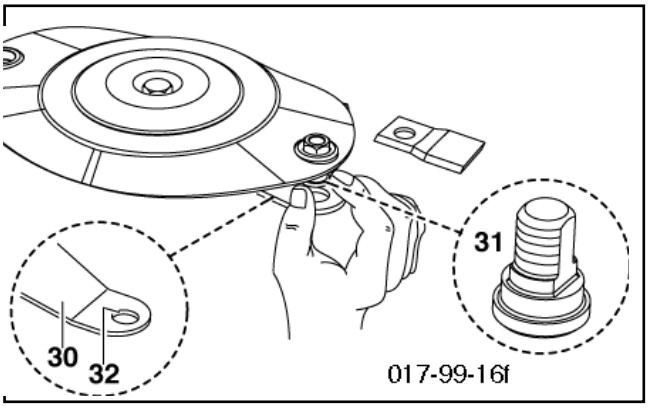
Holder for a quick change of cutter blades

Attention!

For Your Safety

- Regularly check that cutter blades are tightened firmly!
  - Cutter blades on a cutter disc should wear out simultaneously (danger of imbalance).

    Otherwise they are to be replaced with new ones (replace in pairs).
  - Buckled or damaged cutter blades must not be used further.
- Buckled, damaged and/or worn cutter blade holders (30) should not be used further.



Checking the mowing blade suspension

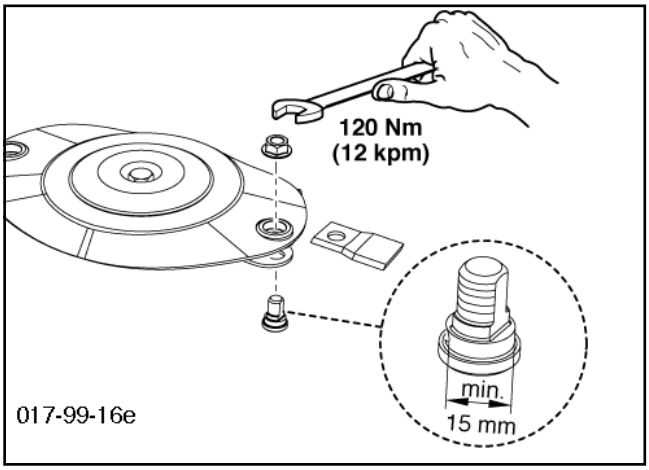
- Normal check every 50 hours.
- Check more often when mowing on stony terrain or in other difficult operating conditions.
- Check immediately after driving over a hard obstacle (e.g. stones pieces of wood, ect).

Carry out a check

- as described in chapter „Changing the Cutter Blades“

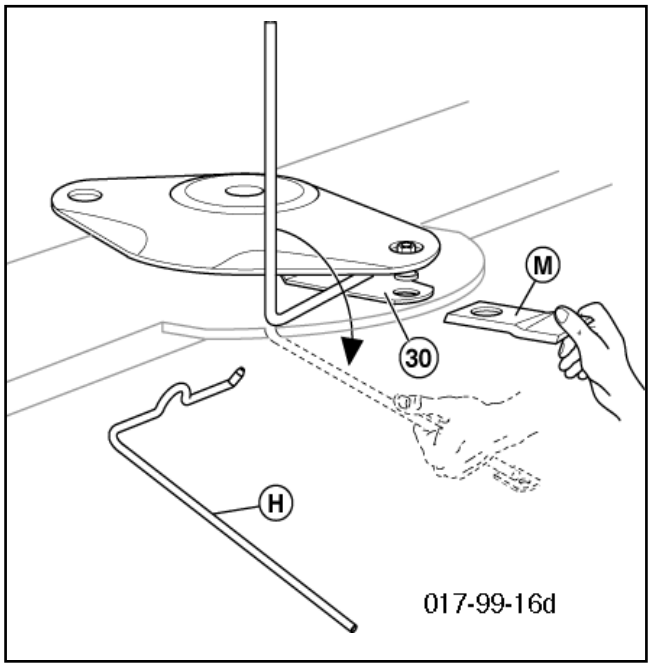
Take note!

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



Changing the Cutter Blades (up to 2003 model)

1. Insert lever (H) horizontally between cutter disc and holder (30)



2. Push movable holder (30) down using lever (H).

3. Remove cutter blade (M)

4. Clean forage remains and dirt away.

- around the bolts (31) and inside the borehole (32)

5. Check:

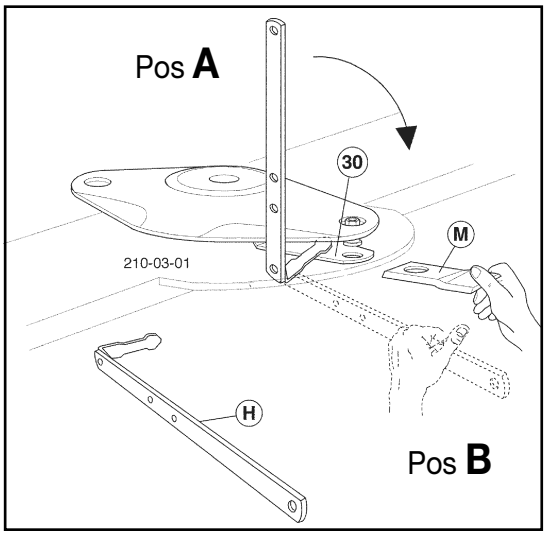
- blade bolts (31) for damage, wear and fitting
- holder (30) for damage, change in position and fitting
- borehole (32) for damage.
  - Side surfaces must not show signs of deformation

6. Fit cutter blades and remove lever (H)

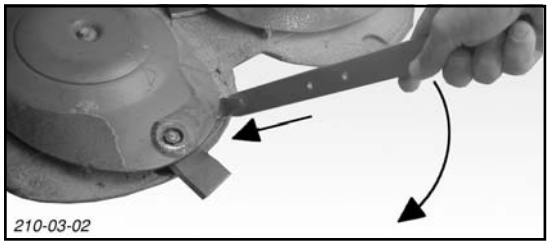
- Insert the lever (H) into both of the U-clips.

Changing the Cutter Blades (from 2004 model)

1. **Insert lever from left or right side on the cutter disc "Pos A" until it stops.**
2. **Swing lever from "pos. A" to "pos. B" and push the movable holder (30) down.**
3. **Remove cutter blade (M)**

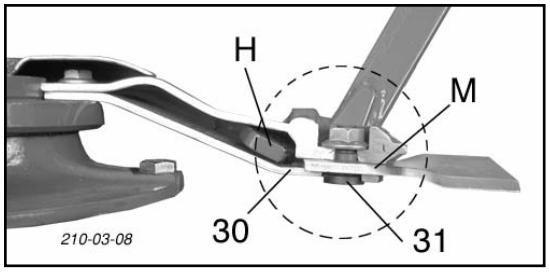


4. **Clean forage remains and dirt away.**
   - around the bolts (31) and inside the borehole (32)
5. **Check:**



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

6. **Install cutter blades**
7. **Visual check! Check that blade (M) is correctly**



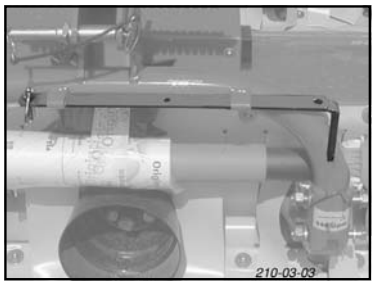
positioned between blade bolts (31) and holder (30) (see diagram)**.**

8. **Swivel lever (H) to "A" again and remove.**

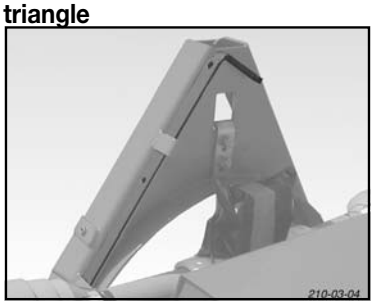
Storing the lever

- Place lever in the respective holding pouch and secure.
- See diagrams for storage places.

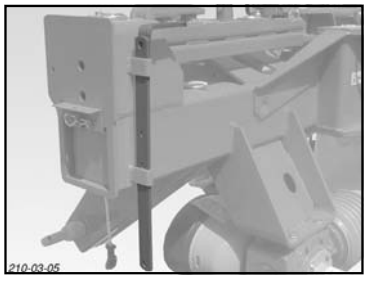
Nova Alpin 226/266



Nova Alpin 226/266 Weiste triangle

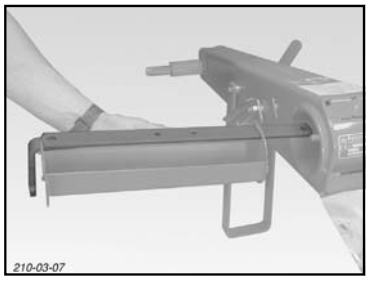


Nova Cat 225/ 265 / 305 / 350 / 400



Nova Cat 266F / 306F

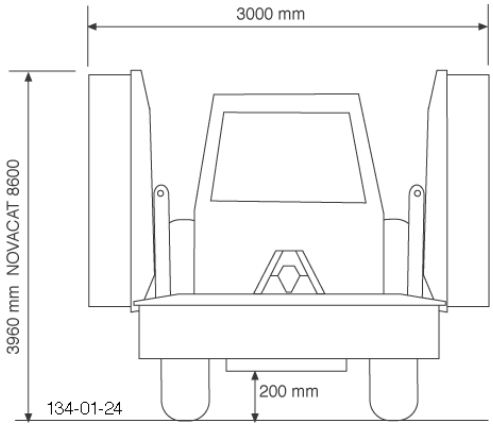
Nova Disc 225

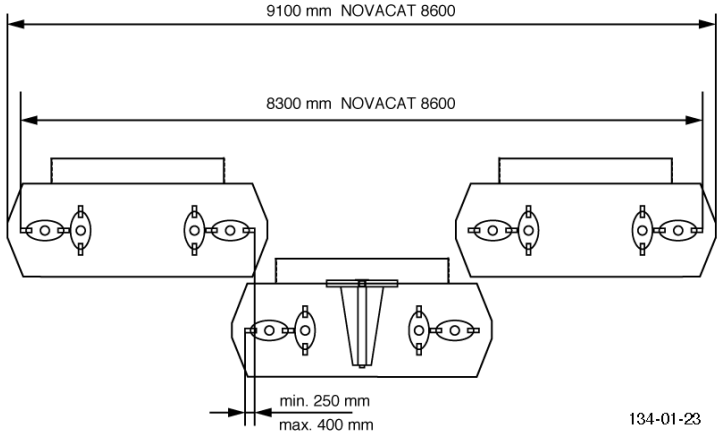


Technical data

Description			NOVACAT 8600 (Type 384)
Three-point linkage (front / stern)			Kat II / III
Working width		[m]	8,30
Transport width		[m]	3,00
No. of mowing discs			2 x 7
No. of knives per disc			2
Conditioner width		[m]	2,26
Required power	without conditioner	[kw/PS]	82 / 110
	with conditioner	[kw/PS]	112 / 150
Coverage up to		[ha/h]	10,0
Max. p.t.o. speed		[U/min^{-1}]	1000
Torque limiter (3x)	[Nm]		1110
Weight[1)] NOVACAT 8600		[kg]	1800
NOVACAT 8600 ED		[kg]	2200
NOVACAT 8600 CRW		[kg]	2200
Permanent sound emmission level		[db(A)]	93,6

All data subject to revision.





Necessary connections

- Hydraulic connection
  - see chapter " *ATTACHING TO TRACTOR* "

  pressure min.: 140 bar

  pressure max.: 200 bar

- 7 channel connection for the lighting equipment (12 volt)
- 3 channel connection for the electro-hydraulic system (12 volt)

1) Weight: Variations possible depending on machine features.

Position of Vehicle Identification Plate

The factory number (Masch. Nr. / Fgst.Ident.Nr.) 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.

The defined use of the mower unit

The „**NOVACAT 8600 (Type PSM 384)“** mower is intended solely for normal use in agricultural work.

- The mowing of grassland and short stemmed fodder.

  Any other uses outside of these are regarded as undefined.

  The manufacturer takes no responsibility for any resulting damage which occurs henceforth. The risk is carried by the user alone.
- The keeping of operating, service and maintenance requirements layed down by the manufacturer also come under the heading of „defined use“.

SUPPLEMENT

The original cannot be copied ...

GB

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 refering to safety in this manual are indicated by this sign.

1.) Defined use

a. See "Technical Data".

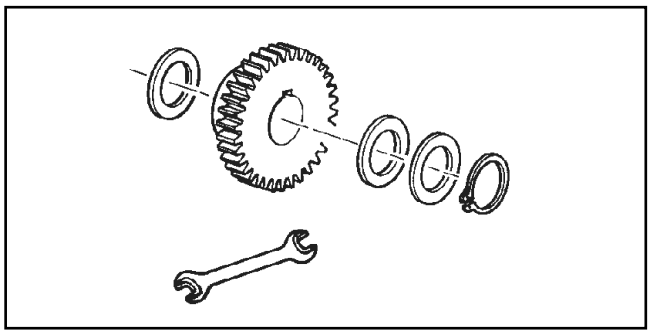
b. The keeping of operating, service and maintenance requirements layed down by the manufacturer also come under the heading of "defined use".

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.

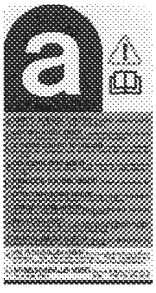
4.) Before starting work

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

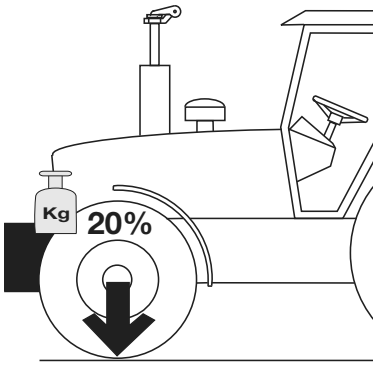
a. The transport of persons on the machine is not permitted.

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 equiped 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!

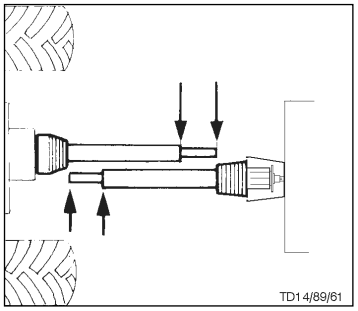
i. For all maintenance, service and modification work, turn driving motor off and remove universal drive.

9.) Cleaning the machine

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

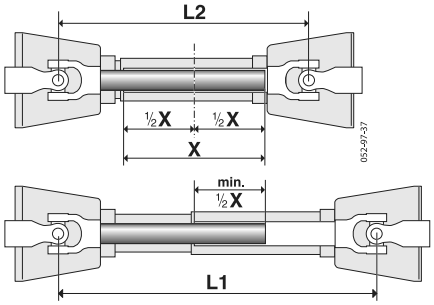
Matching driveshaft to tractor

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



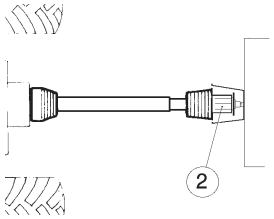
Procedure for cutting to length

- 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!

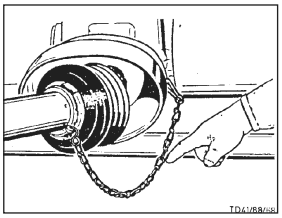


- Always check that drive shaft locks are securely engaged before starting work.

Retaining chain

- Use chain to prevent tube guard from rotating.

  Take care that chain does not impede driveshaft pivoting.

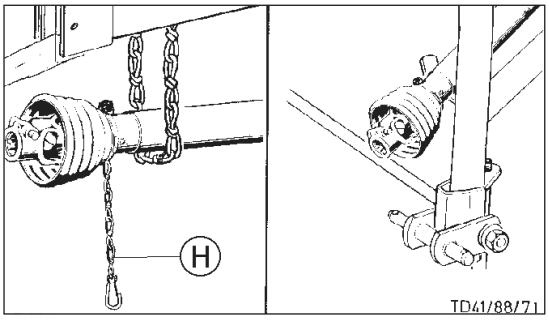


Rules for working

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 ist parked, either remove the driveshaft and store it, or secure it with a chain. Do not use retaining chain (H) for this.



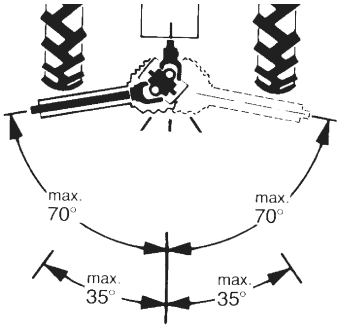
Wide-angle joint:

Maximum angle of deflection when working/stationary: 70°

Standard joint :

Maximum angle of deflection when stationary: 90°

Maximum angle of deflection when working: 35°

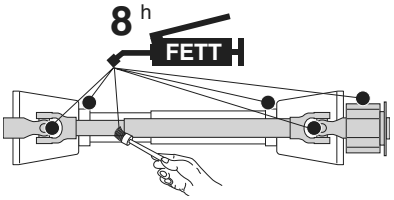


Maintenance

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.



Important!

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

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!

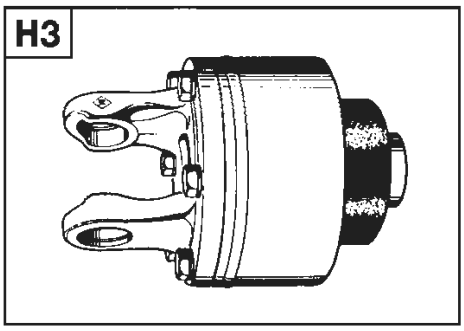
Re-engaging is also possible by decreasing the p.t.o. r.p.m.

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 proprer function.

a.) Measure dimension „L“ at compression spring of K90, K90/4 and K94/1 or at set screw of K92Eand K92/4E.

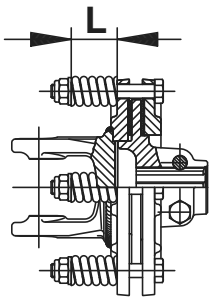
b.) Loosen screws to release the pressure on the friction disk.

Slip the clutch.

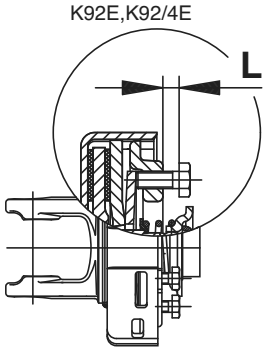
c.) Tighten set screws to dimension „L“.

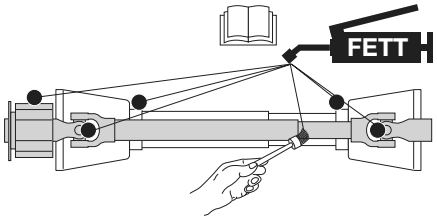
Clutch is ready for use.

K90,K90/4,K94/1



K92E,K92/4E





D Schmierplan

X[h]	alle X Betriebsstunden
40 F	alle 40 Fuhren
80 F	alle 80 Fuhren
1 J	1 x jährlich
100 ha	alle 100 Hektar
FETT	FETT
▽1 =	Anzahl der Schmiernippel
△1 =	Anzahl der Schmiernippel
(IV)	Siehe Anhang "Betriebsstoffe"
Liter	Liter
*	Variante
📖	Siehe Anleitung des Herstellers

F Plan de graissage

X[h]	Toutes les X 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
▽1 =	Nombre de graisseurs
△1 =	Nombre de graisseurs
(IV)	Voir annexe "Lubrifiants"
Liter	Litre
*	Variante
📖	Voir le guide du constructeur

GB Lubrication chart

X[h]	after every X hours operation
40 F	all 40 loads
80 F	all 80 loads
1 J	once a year
100 ha	every 100 hectares
FETT	GREASE
▽1 =	Number of grease nipples
△1 =	Number of grease nipples
(IV)	see supplement "Lubrificants"
Liter	Litre
*	Variation
📖	See manufacturer's instructions

NL Smeerschema

X[h]	alle X bedrijfsuren
40 F	alle 40 wagenladingen
80 F	alle 80 wagenladingen
1 J	1 x jaarlijks
100 ha	alle 100 hectaren
FETT	VET
▽1 =	Aantal smeernippels
△1 =	Aantal smeernippels
(IV)	Zie aanhangsel "Smeermiddelen"
Liter	Liter
*	Varianten
📖	zie gebruiksaanwijzing van de fabrikant

E Esquema de lubricación

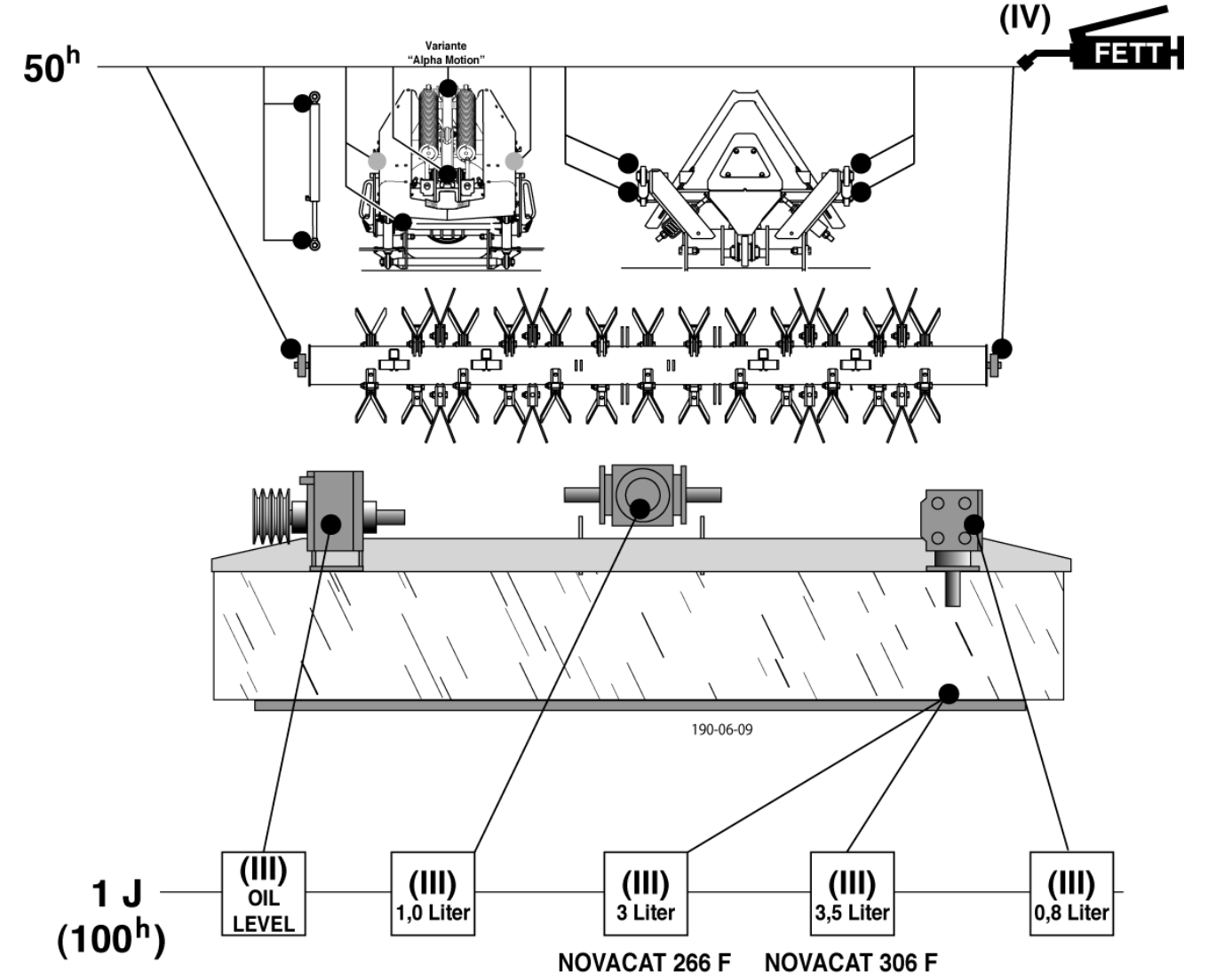
X[h]	Cada X horas de servicio
40 F	Cada 40 viajes
80 F	Cada 80 viajes
1 J	1 vez al año
100 ha	Cada 100 hectáreas
FETT	LUBRICANTE
▽1 =	Número de boquillas de engrase
△1 =	Número de boquillas de engrase
(IV)	Véase anexo “Lubrificantes”
Liter	Litros
*	Variante
📖	Véanse instrucciones del fabricante

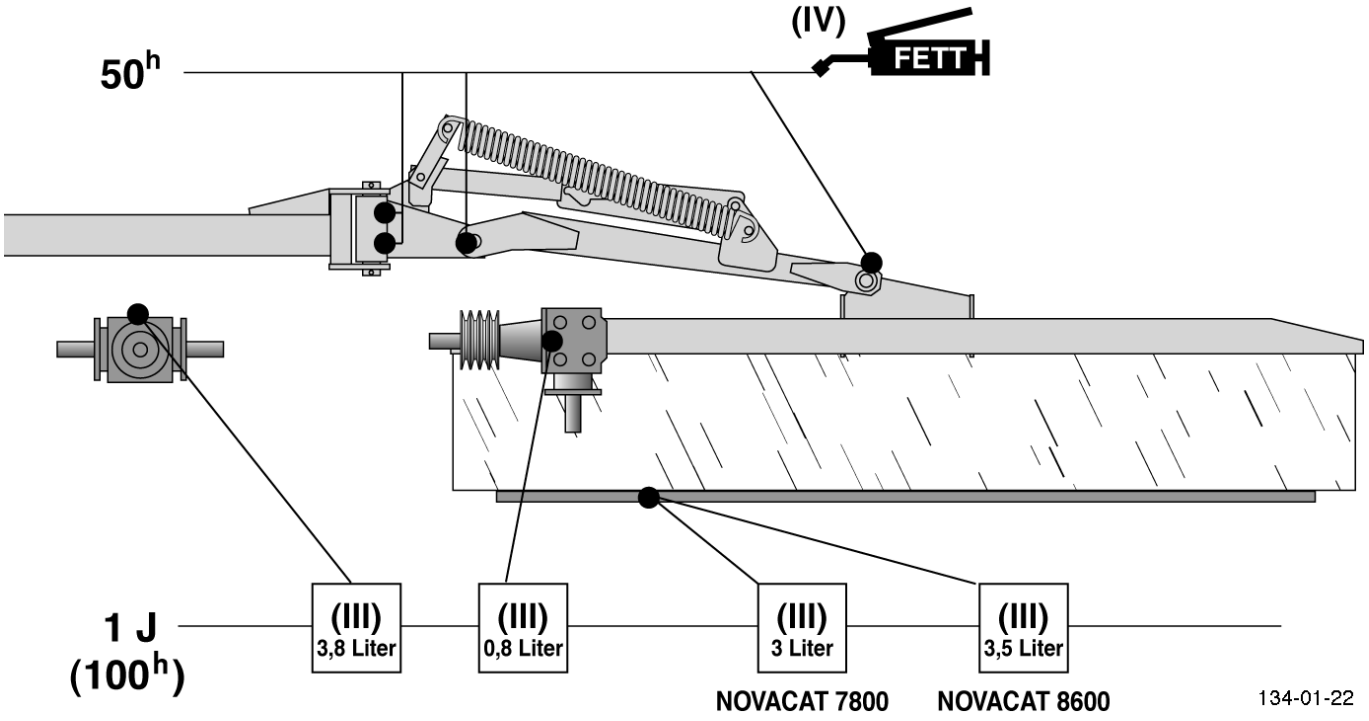
I Schema di lubrificazione

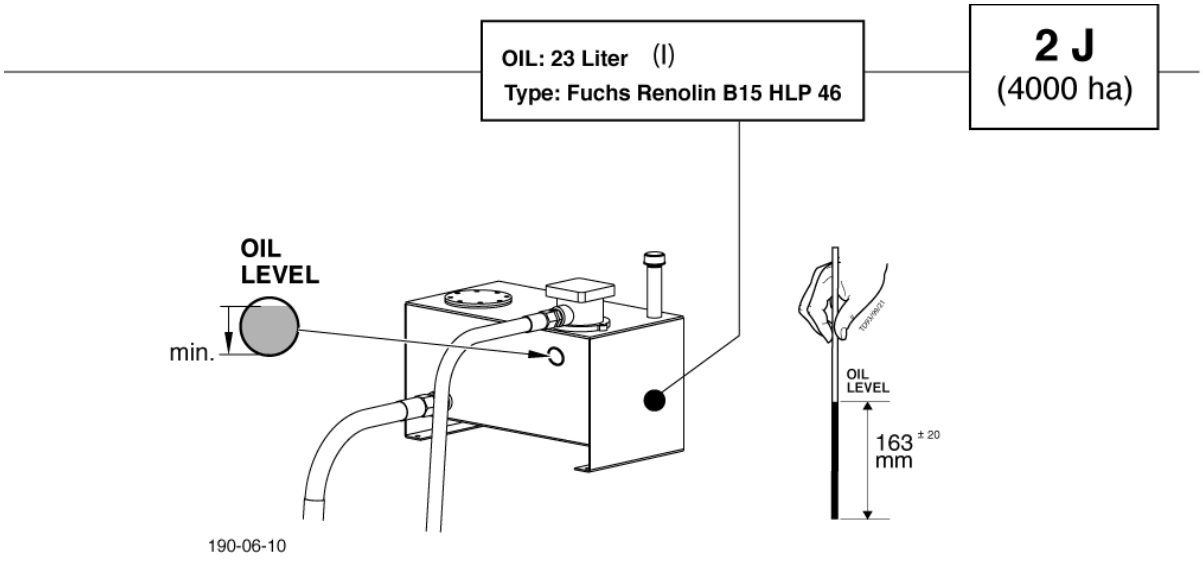
X[h]	ogni X ore di esercizio
40 F	ogni 40 viaggi
80 F	ogni 80 viaggi
1 J	volta all'anno
100 ha	ogni 100 ettari
FETT	GRASSO
▽1 =	Numero degli ingrassatori
△1 =	Numero degli ingrassatori
(IV)	vedi capitolo “materiali di esercizio”
Liter	litri
*	variante
📖	vedi istruzioni del fabbricante

P Plano de lubrificação

X[h]	Em cada X horas de serviço
40 F	Em cada 40 transportes
80 F	Em cada 80 transportes
1 J	1x por ano
100 ha	Em cada100 hectares
FETT	Lubrificante
▽1 =	Número dos bocais de lubrificação
△1 =	Número dos bocais de lubrificação
(IV)	Ver anexo ”Lubrificantes"
Liter	Litro
*	Variante
📖	Ver instruções do fabricante


(IV)
FETT
50h
Variante
"Alpha Motion"
190-06-09
1 J
(100h)
(III)
OIL
LEVEL
(III)
1,0 Liter
(III)
3 Liter
(III)
3,5 Liter
(III)
0,8 Liter
NOVACAT 266 F
NOVACAT 306 F


(IV)
FETT
50h
1 J
(100h)
(III)
3,8 Liter
(III)
0,8 Liter
(III)
3 Liter
(III)
3,5 Liter
NOVACAT 7800
NOVACAT 8600
134-01-22


OIL: 23 Liter (l)
Type: Fuchs Renolin B15 HLP 46
2 J
(4000 ha)
OIL
LEVEL
min.
OIL
LEVEL
163 ± 20
mm
190-06-10

D Betriebsstoffe

Ausgabe 1997

Leistung und Lebensdauer der Maschine sind von sorgfältiger Wartung und der Verwendung guter Betriebsstoffe abhängig. Unsere Betriebsstoffauflistung 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 Stillegung (Winterperiode) Ölwechsel durchführen und alle Fettschmierstellen abschmieren. Blanke Metallteile außen (Gelenke, usw.) mit einem Produkt gemäß “IV” in der umseitigen Tabelle vor Rost schützen.

GB Lubricants

Edition 1997

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 brandname 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.

F Lubrifiants

Édition 1997

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 - Vidanger les boîtiers et carters au moins une fois par an.

- retirer le bouchon de vidange, laisser l'huile s'écouler et les dispositions nécessaires au recyclage de celle-ci

Avant l’arrêt et hiver: vidanger et graisser les éléments sensibles avec un produit type "IV" pour les protégés de la rouille (consulter tableau au verso).

I Lubrificanti

Edizione 1997

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 caratter-istico (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.

NL Smeermiddelen

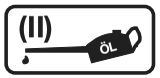
Uitgave 1997

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.

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

- Aftapplug er uit nemen, de olie aftappen en milieuvriendelijk verwerken.

Voor het buiten gebruik stellen (winterperiode) de olie-wissel uitvoeren en alle vetnippel smeerpunten doorsmeren. Blanke metaaldelen (koppelingen enz.) met een product uit groep "Iv" van de navolgende tabel tegen corrosie beschermen.

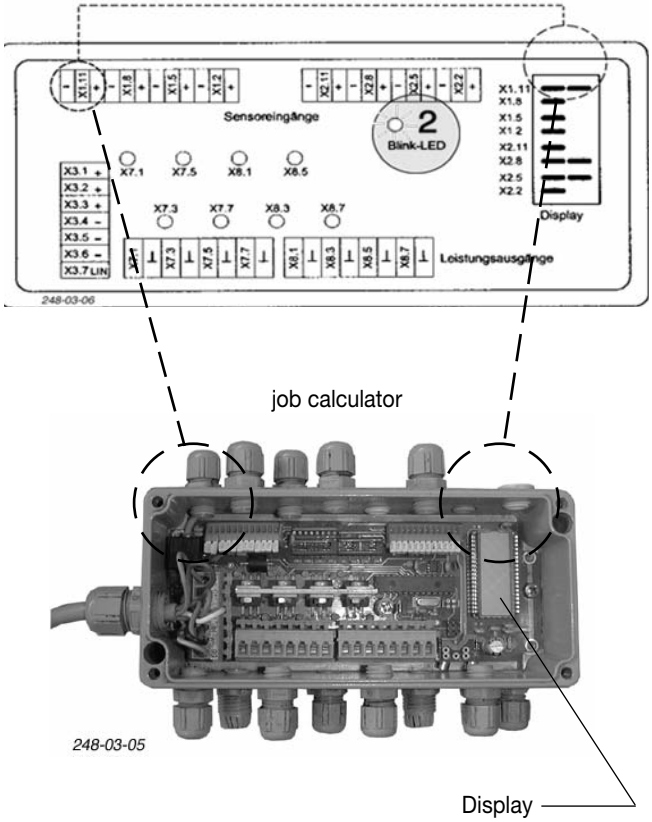
Betriebsstoff-Kennzahl Lubricant indicator Code du lubrifiant Numero caratteristico del lubrificante Smeermiddelen code	**I**		**III**		**V**	**VI**	**VII**
gefordertes Qualitätsmerkmal	HYDRAULIKöL HLP DIN 51524 Teil 2	Motorenöl SAE 30 gemäß API CD/SF	Getriebeöl SAE 90 bzw. SAE 85 W-140 gemäß API-GL 4 oder API-GL 5	Li-Fett (DIN 51 502, KP 2K)	Getriebefließfett (DIN 51 502:GOH	Komplexfett (DIN 51 502: KP 1R)	Getriebeöl SAE 90 bzw. 85 W-140 gemäß API-GL 5
required quality level niveau	Siehe Anmerkungen * **	motor oil SAE 30 according to API CD/SF	gear oil, SAE 90 resp. SAE 85 W-140 according to API-GL 4 or API-GL 5	lithium grease	transmission grease	complex grease	gear oil SAE 90 resp. SAE 85 W-140 according to API-GL 5
de performance demandé	***	huile moteur SAE 30 niveau API CD/SF	huile transmission SAE 90 ou SAE 85 W-140, niveau API-GL 4 ou API-GL 5	graisse au lithium	graisse transmission	graisse complexe	huile transmission SA 90 ou SAE 85 W-140, niveau API GL 5
caratteristica richiesta di qualità		oilo motore SAE 30 secondo specifiche API CD/SF	olio per cambi e differenziali SAE 90 o SAE 85W-140 secondo specifiche API-GL 4 o API-GL 5	grasso al litio	grasso fluido per riduttori e motoroduttori	grasso a base di saponi complessi	oilio per cambi e differenziali SAE 90 o SAE 85 W-140 secondo specifiche API-GL 5
verlangte kwaliteitskenmerken							

Firma	I	(II) OIL	III	HFETT (IV)	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 Naßbremsen-schlepp-pern ist die internatio-nale Spezifikation J 20 A erforderlich ** Hydrauliköle HLP-(D) + HV *** Hydrauliköle auf Pflan-zenölbasis HLP + HV Biologisch abbaubar, deshalb besonders umweltfreundlich
ARAL	VITAM GF 32/46/68 VITAM HF 32/46	SUPER KOWAL 30 MULTI TURBO-RAL SUPER TRAKTORAL 15W-30	GETRIEBEÖL EP 90 GETRIEBEÖL HYP 85W-90	ARALUB HL 2	ARALUB FDP 00	ARALUB FK 2	GETRIEBEÖL HYP 90	
AVIA	AVILUB RL 32/46 AVILUB VG 32/46	MOTOROIL HD 30 MULTIGRADE HDC 15W-40 TRAC-TAVIA HF SUPER 10 W-30	GETRIEBEÖL MZ 90 M MULTIHYP 85W-140	AVIA MEHRZWECKFETT AVIA ABSCHMIERFETT	AVIA GETRIEBEFLIESSFETT	AVIALUB SPEZIALFETT LD	GETRIEBEÖL HYP 90 EP MULTIHYP 85W-140 EP	
BAYWA	HYDRAULIKÖL HLP 32/46/68 SUPER 2000 CD-MC * HYDRA HYDR. FLUID * HYDRAU-LIKÖL 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 FLM PLANTOGEL 2 N	GETRIEBEFLIESSFETT 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	CASTROLGREASE LM	IMPERVIA MMO	CASTROLGREASE 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 GETRIE-BEÖL B 85W-90 GETRIEBEÖL C 85W-90	LORENA 46 LITORA 27	RHENOX 34	-	GETRIEBEÖL B 85W-90 GETRIEBE-ÖL 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 90 85W-140 TRANSELF EP 90 85W-140	EPEXA 2 ROLEXA 2 MULTI 2	GA O EP POLY G O	MULTIMOTIVE 1	TRANSELF TYP B 90 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	GEAROIL 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 EVVAROL HD/B 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	
FUCHS	RENOLIN 1025 MC *** TITAN HYDRAMOT 1030 MC ** RENOGEAR HYDRA * PLANTOHYD 40N ***	TITAN HYDRAMOT 1O3O MC TITAN UNIVERSAL HD	RENOGEAR SUPER 8090 MC RENOGEAR HYPOID 85 W-140 RENOGEAR HYPOID 90	RENOLIT MP RENOLIT FLM 2 RENOLIT ADHESIV 2 PLANTOGEL 2 N	RENOSOD GFO 35 DURAPLEX EP 00 PLANTOGEL 00N	RENOPLEX EP 1	RENOGEAR SUPER 8090 MC RENOGEAR HYPOID 85W-140 RENOGEAR HYPOID 90	
GENOL	HYDRAULIKÖL HLP/32/46/68 HYDRAMOT 1030 MC * HYDRAU-LIKÖL 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	GETRIEBEFLIESSFETT 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 HVI/46HVI	EXTRA HD 30 SUPER HD 20 W-30	MEHRZWECKGETRIEBEÖISAE90 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/T46	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 SIMMNIA GREASE O	AEROSHELL GREASE 22 DOLIUM GREASE R	SPIRAX HD 90 SPIRAX HD 85W-140	
TOTAL	AZOLLA ZS 32, 46, 68 EQUIVIS ZS 32, 46, 68	RUBIA H 30 MULTAGRI TM 15W-20	TOTAL EP 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 HVLP 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 LZR 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 HVG 46 ** WIOLAN HR 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	

Sensor diagnostic function

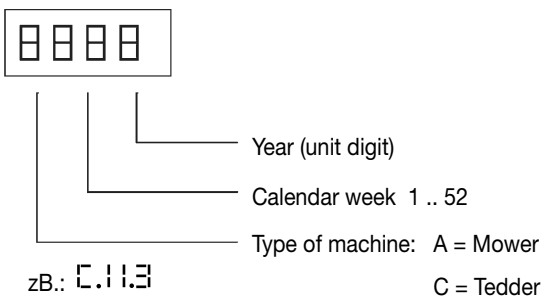
- For every sensor a vertical bar is shown on the display
  - long bar = active sensor (sensors recognizes metal)
  - short bar (sensor has no contact to metal)

Example: Sensor X1.11 is active = large bar (2 lines)



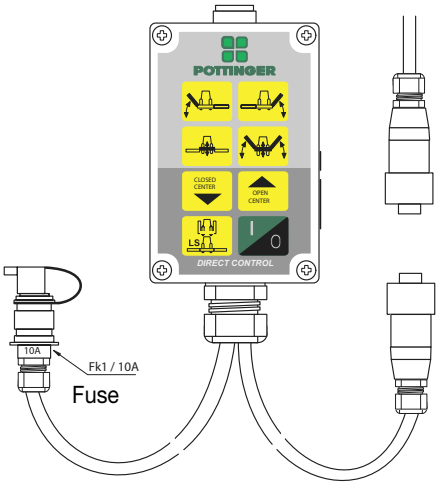
Display for Software version

- after power has been connected
- software version is displayed for 5 seconds (codification)



Function check for "Direct Control" operating unit and job calculator

Take care! When opening the casing do not damage the seal.



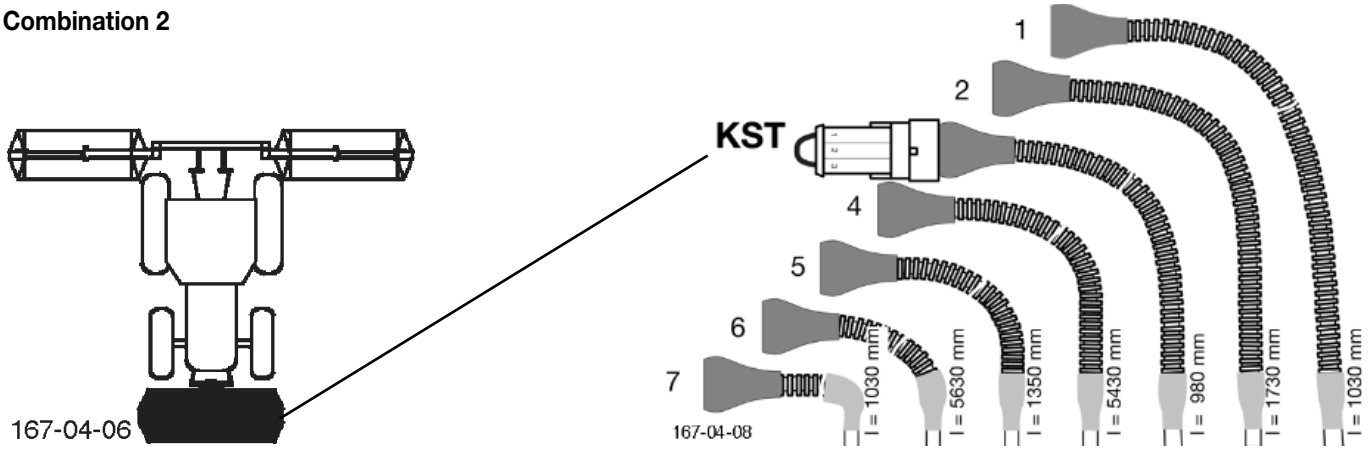
* **Checking the "Direct Control" operating unit!**

- Connect power supply with12V on-board voltage
- Turn operating unit on by pressing "I/O".
- LED (1) in I/O button lights up for 2 seconds.
- If properly linked to job calculator, LED (1) lights up in I/O button
- If improperly linked to job calculator, LED begins to blink after 2 seconds.
- If LED (!) does not light up
  - check voltage supply (cable)
  - operating unit is defective.

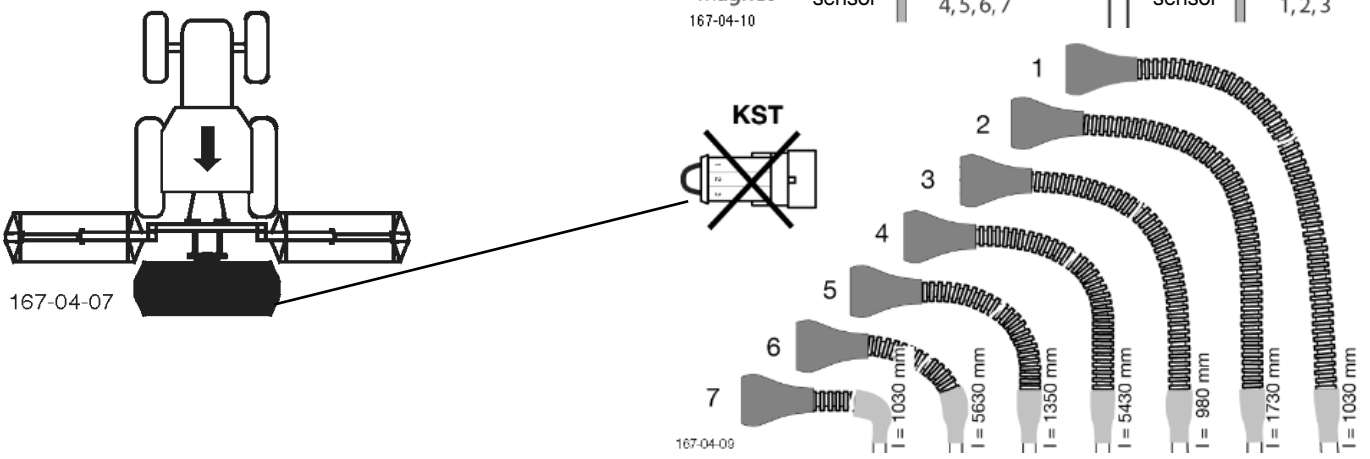
* **Checking the Job calculator**

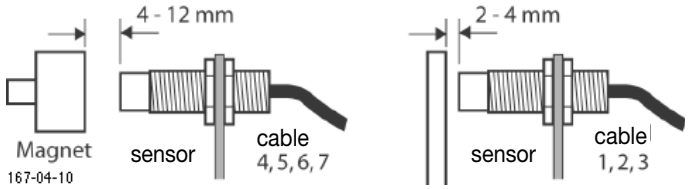
- Connect power supply with 12V on-board voltage
- Blinking LED (2) on job calculator board lights up for 1 second
- Software version appears on display for 5 seconds
- After that there are alternate displays of the
  - operating hours (if sensors are provided) and
  - status of the sensors
- Activate job calculator by pressing I/O button on the operating unit
- Blinking LED (2) on job calculator board blinks in 2 second phases
- Press relative function button on job calculator board
- Function display through LEDs (X7.1 to X8.7) for each power outlet

Combination 2



Combination 3





Legend

1 Sensor on the right cutter bar
2 Sensor on the left cutter bar
3 Sensor on the centre cutter bar
4 Sensor on the rotor of the right conditioner
5 Sensor on the rotor of the centre conditioner
6 Sensor on the rotor of the left conditioner
7 Sensor on the front-end drive (p.t.o driving motor speed)

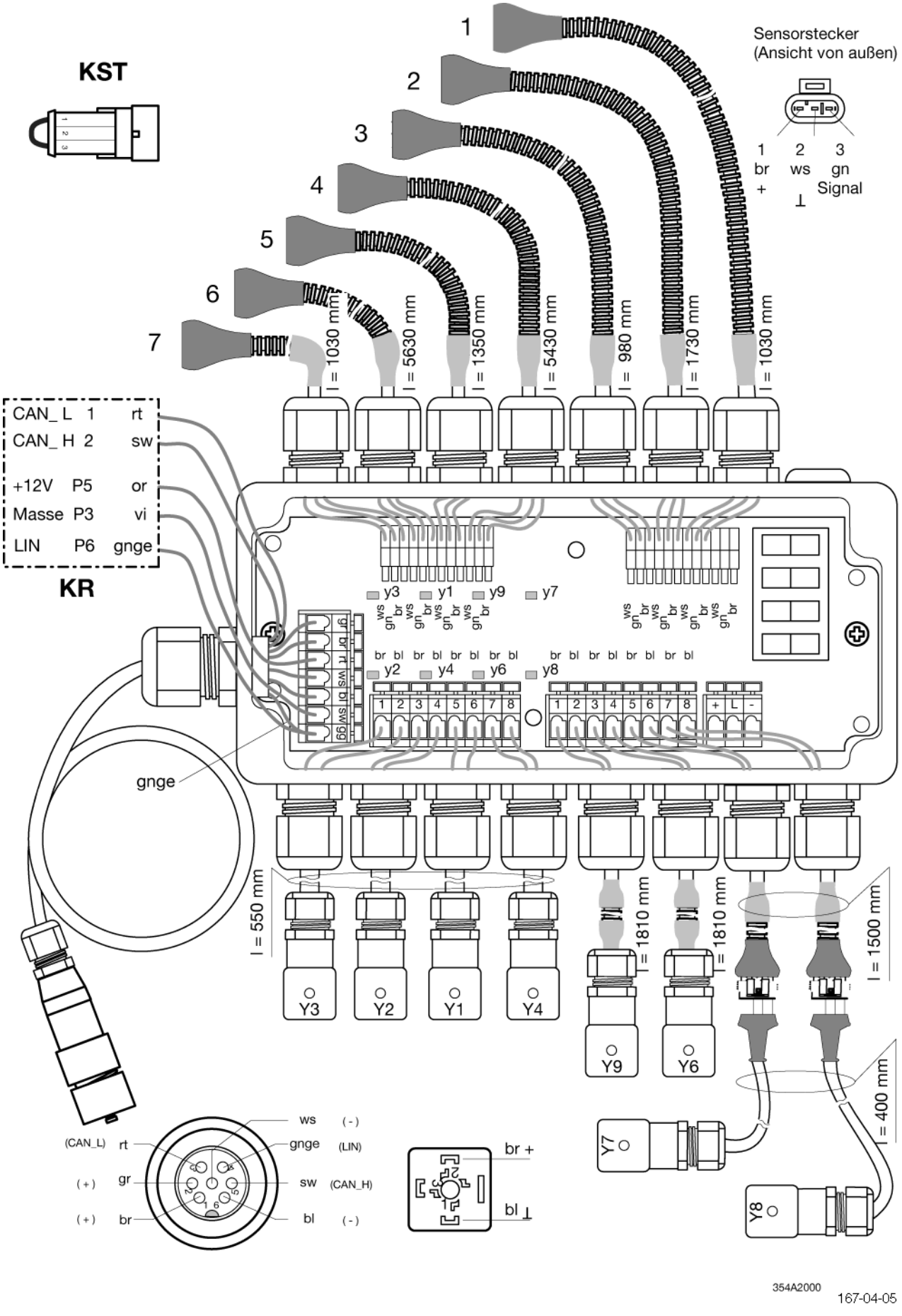
KST (Short circuit plug)*

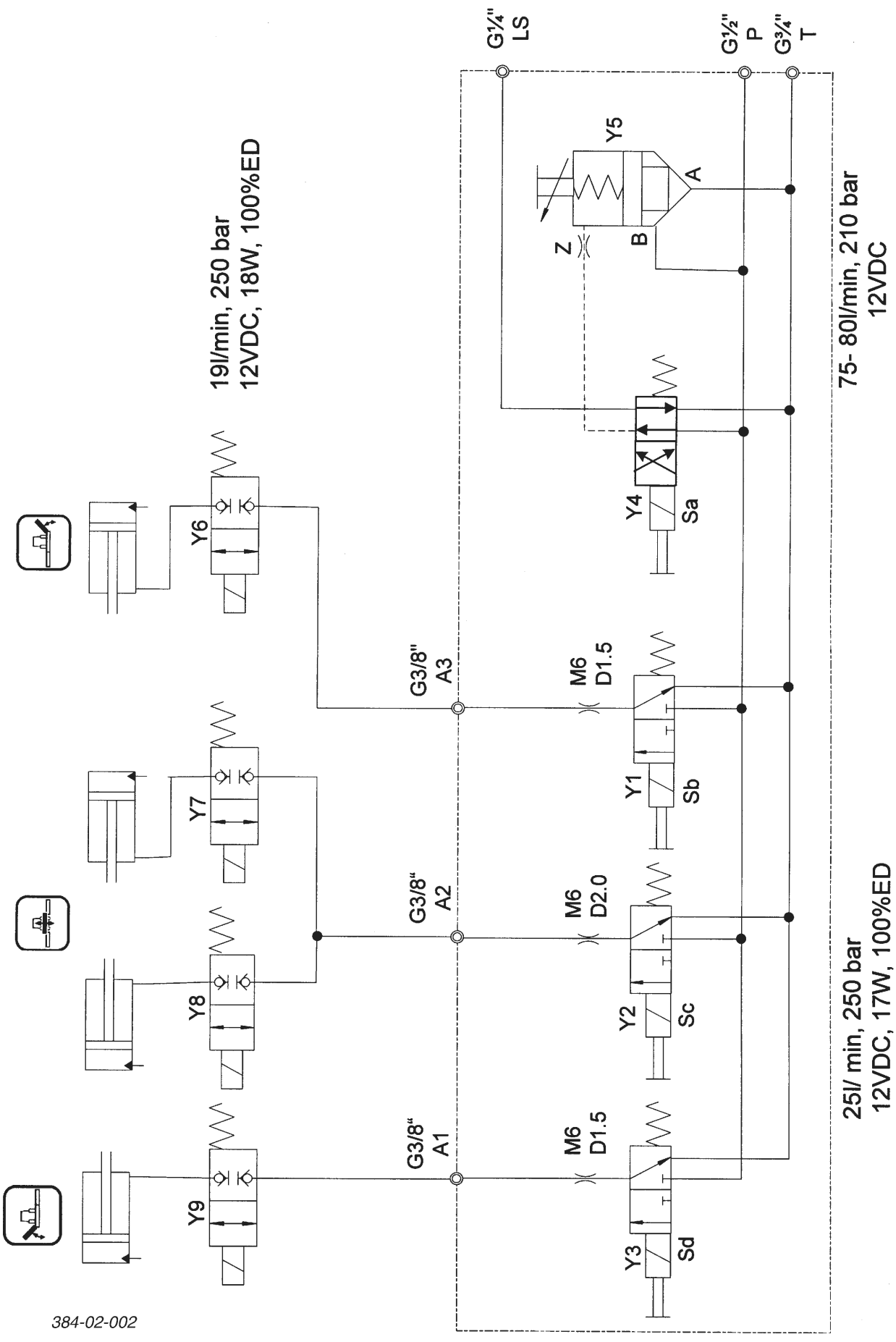
- The short circuit plug is fitted to the sensor cable when the centre cutter bar is mounted onto the front lifting gear of the tractor (combination 2).
- The short circuit plug is removed when the centre cutter bar is mounted onto the lifting gear of the cutter combination (combination 3).

KR	additional calculator for ISOBUS
Y1	Distributing valve on the right cutter bar
Y2	Distributing valve on the centre cutter bar
Y3	Distributing valve on the left cutter bar
Y4	Valve for the working mode “load sensing”
Y6	Seat valve on the right cutter bar
Y7	Seat valve on the centre cutter bar
Y9	Seat valve on the left cutter bar

bl	blue
br	brown
gn	green
gr	grey
gnge	green/yellow
or	orange
rt	red
sw	black
vi	violet
ws	white

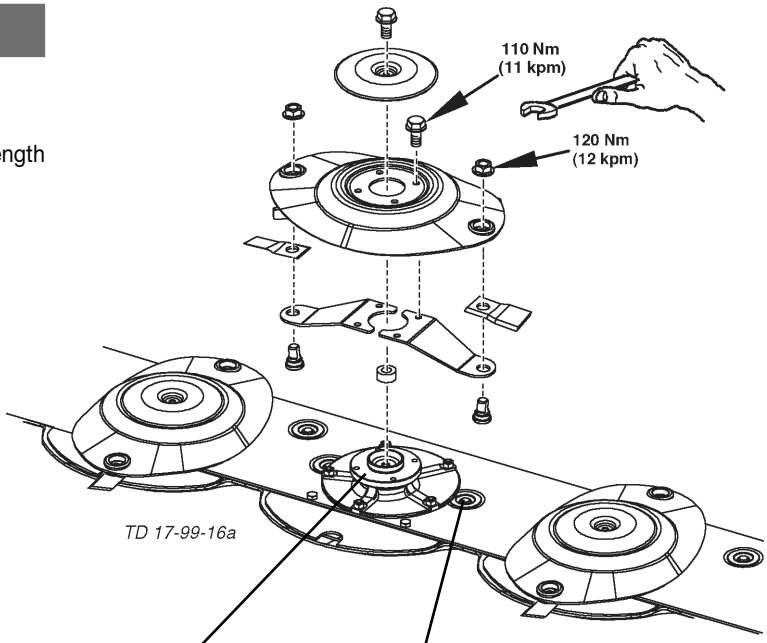
* not necessarily with version "alpha Motion"

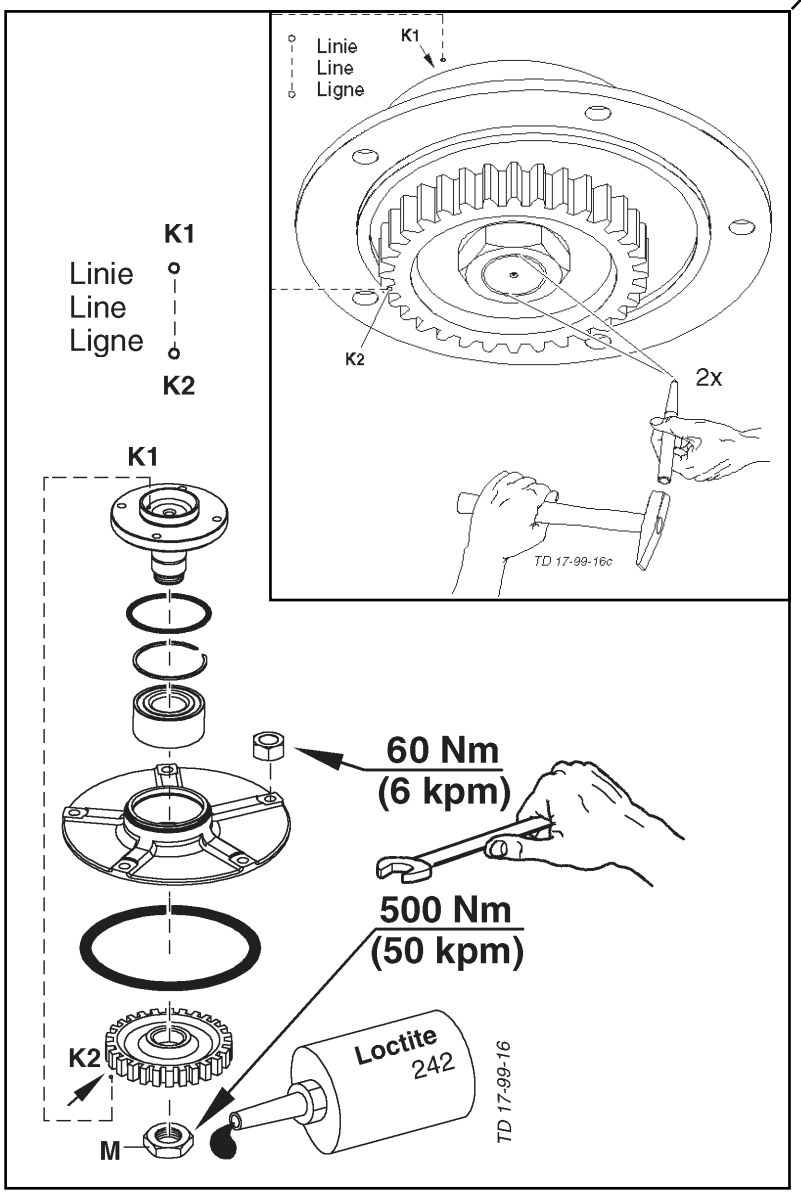

KST
Sensorstecker
(Ansicht von außen)
1 2 3
br ws gn
+ ⊥ Signal
1
2
3
4
5
6
7
l = 1030 mm
l = 5630 mm
l = 1350 mm
l = 5430 mm
l = 980 mm
l = 1730 mm
l = 1030 mm
CAN_ L 1 rt
CAN_ H 2 sw
+12V P5 or
Masse P3 vi
LIN P6 gnge
KR
y3 y1 y9 y7
y2 y4 y6 y8
gnge
l = 550 mm
l = 1810 mm
l = 1810 mm
l = 1500 mm
l = 400 mm
Y3
Y2
Y1
Y4
Y9
Y6
Y7
Y8
(CAN_L) rt
(+) gr
(+) br
ws (-)
gnge (LIN)
sw (CAN_H)
bl (-)
br +
bl ⊥
354A2000
167-04-05

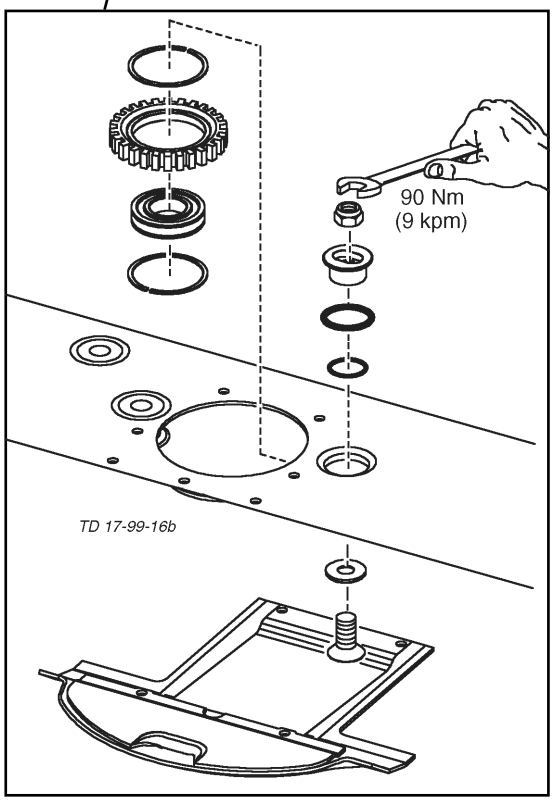

G¼" LS
G½" P
G¾" T
Y5
A
B
Z
Y4
Sa
Y6
Y7
Y8
Y9
G3/8" A3
G3/8“ A2
G3/8“ A1
M6 D1.5
M6 D2.0
M6 D1.5
Y1
Sb
Y2
Sc
Y3
Sd
19l/min, 250 bar
12VDC, 18W, 100%ED
75- 80l/min, 210 bar
12VDC
25l/ min, 250 bar
12VDC, 17W, 100%ED
384-02-002

Repairs on the cutter bar

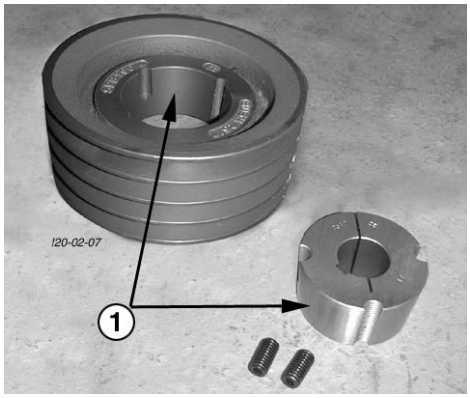
- Adjust markings in a line (K1, K2).
- Only screw the nut (M) on when there is sufficient thread length in order to prevent any damage.
- Secure nut (M) against loosening.
  - with „Loctite 242“ or an equivalent product
  - and center-point (2x)







Taper bushes installation instructions

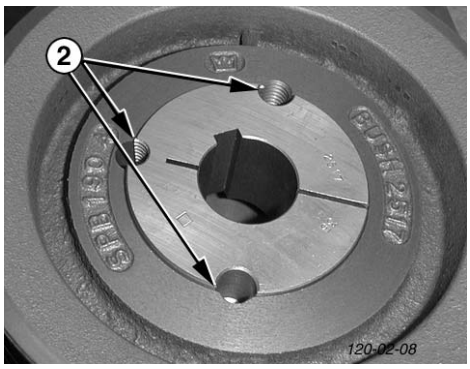


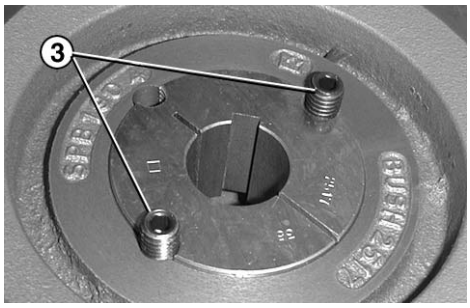
To assemble

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

Bush identifier	Torque [Nm]
2017	30
2517	49

   - 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.

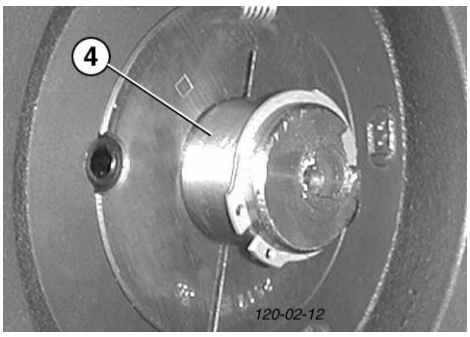


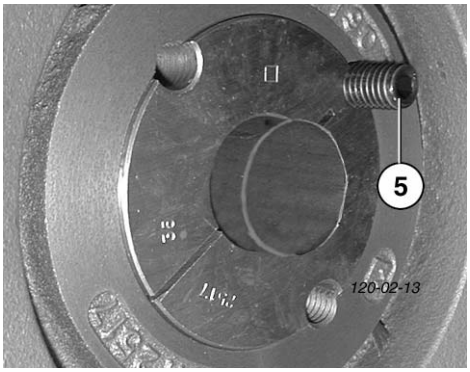


Removal

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 holie(s) in bush (Pos. 5).
2. Tighten screw(s) unitormly and alternately until the bush is loose in the hub and pulley is free on the shaft.
3. Remove pulley bush assembly from shaft.



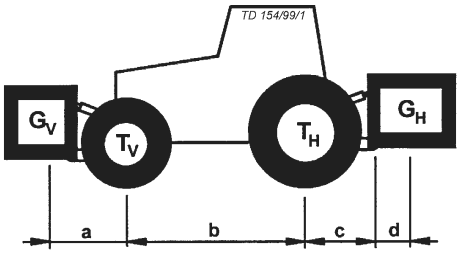


Combination of tractor and mounted implement

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 ot 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 $G_{V\ min}$

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

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

Front mounted implement

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

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

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

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

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

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

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

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

(If with the rear mounted implement (G_H) the required minimum rear ballasting ($G_{H\ min}$) 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!)

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

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 $T_{H\ tat}$

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

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

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!

GB

PÖTTINGER
Landsberg

Appendix 1

EC Certificate of Conformity

conforming to EEC Directions 2006/42/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

NOVACAT 8600	Type 384
NOVACAT 8600 ED	Type 384
NOVACAT 8600 CRW	Type 384

(make, model)

to which this certificate applies, conforms to the basic safety and health requirements of EEC Directions 2006/42/EG,

(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 EN 745

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

(Place and date of issue)

(Name and job function of authorized person)

9800 D/F/GB/NL/I/E/P/S/SF EG Konformitätserkl.

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