Original inside

GB Operator‘s manual

+ INSTRUCTIONS FOR PRODUCT DELIVERY . . . Page 3

"Translation of the original Operating Manual"

Nr. 99 3846.GB.80Q.1

NOVACAT V10 ED/RC

(Type 3846 : + . . 01295**)**

• **Disc mower**

Chassis Nr.

Pöttinger - Trust creates Affinity - since 1871

"Quality pays for itself." Therefore we apply the highest quality standards to our products which are constantly monitored by our in-house quality management and our management board. Because the safety, perfect function, highest quality and absolute reliability of our machines in operation are the core competencies for which we stand.

There may be deviations between these instructions and the product as we are constantly developing our products. Therefore no claims may be derived from the data, illustrations and descriptions. Please contact your Specialist Service Centre for any binding information about specific features of your machine.

We would ask you to please understand that changes to the scope of supply with regard to form, equipment and technical specifications are possible at any time.

Product liability, information obligation

Product liability obliges manufacturers and dealers to issue operating instructions for the machine at the point of sale and to instruct the customer on the operation, safety and maintenance regulations governing the machine.

A confirmation is required to verify that the machine and operating instructions have been handed over correctly.

For this purpose

- **Document A** is to be signed and returned to Pöttinger or via the internet to www.poettinger.at
- **Document B** remains with the specialist dealer handing over the machine.
- **The customer receives document C**.

For the purposes of product liability law, every farmer is an entrepreneur.

In the terms of product liability law, damage to property is any damage arising due to the machine, but not to the machine, and an excess (500 euros) exists for this liability.

Corporate damage to property within the terms of the product liability law is excluded from this liability.

Be advised! The operating instructions must also be handed over with any subsequent machine sale or transfer and the transferee must be instructed in the regulations stated.

Refer to PÖTPRO for additional information about your machine:

Are you looking for suitable accessories for your machine? No problem! All the information you require is here at your disposal. Scan the QR code on the machine's type plate or look under www.poettinger.at/poetpro

And if we don't have what your looking for, then your Specialist Service Centre is there for you with help and advice.

(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.

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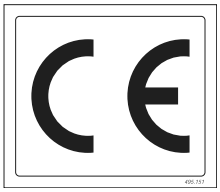
Attention!

Safety hints to observe in supplement!

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.

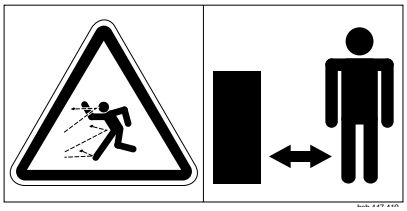
EU Declaration of Conformity (see supplement)

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.

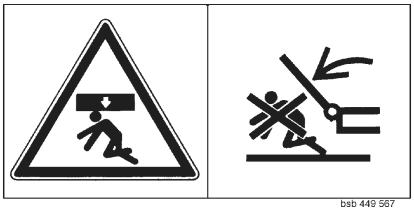
Recommendations for work safety

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

Meaning of warning signs

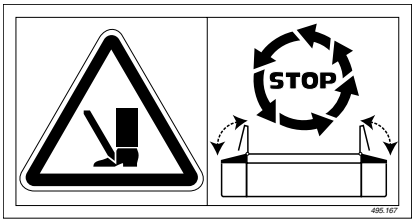


Danger - flying objects; keep safe distance from the machine as long as the engine is running.

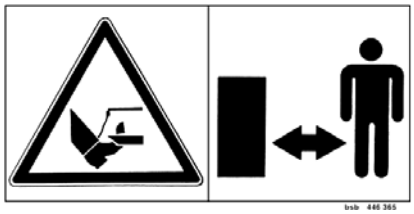


Stay clear of swinging area of implements

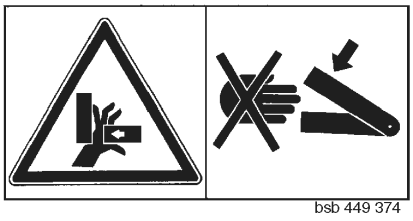
Wait until all machine components have stopped completely before touching them.



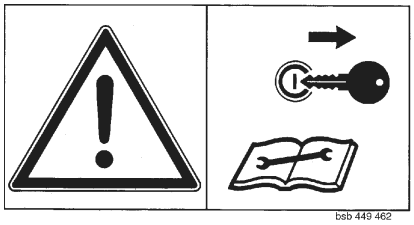
Close both side protective coverings before engaging p.t.o..



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.

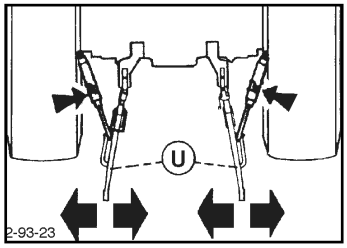


Shut off engine and remove key before performing maintenance or repair work.

Attaching machine to tractor

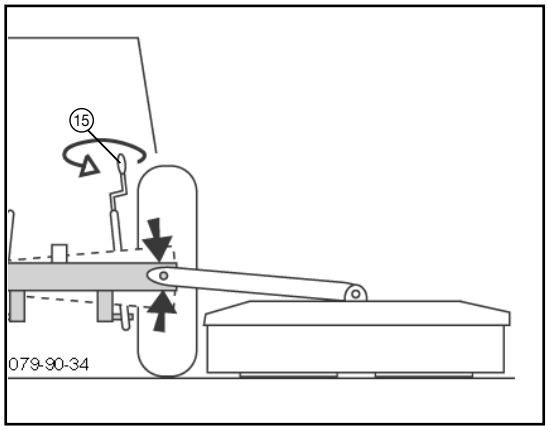
Attach mower centrically to tractor

- Adjust lower link accordingly.
- Secure the lower link so that the machine cannot swing out sideways.



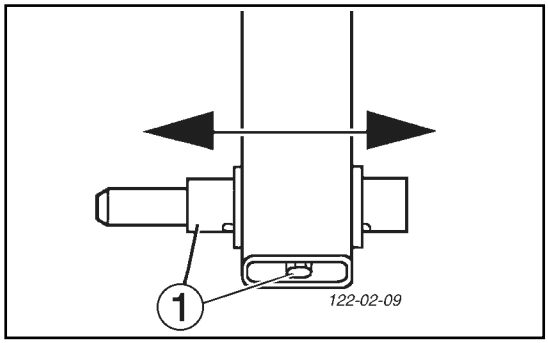
Mounting frame horizontal

- Bring mounting frame to horizontal position by adjusting lower link jackscrew (15).

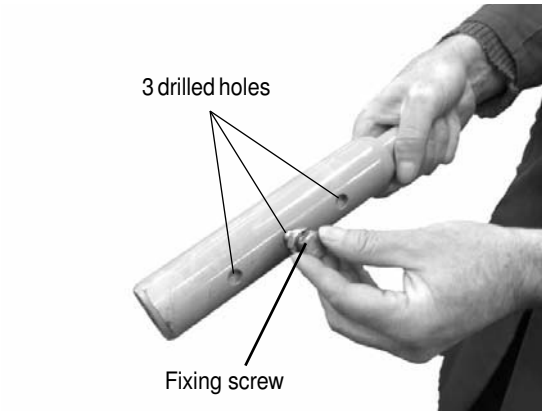


Pin machine to three-point mount

- Adjust lower link bolts (1) on bearing frame according to the three-point category, and adjust track width using the fixing screw. Mower must not touch rear tractor tyres.



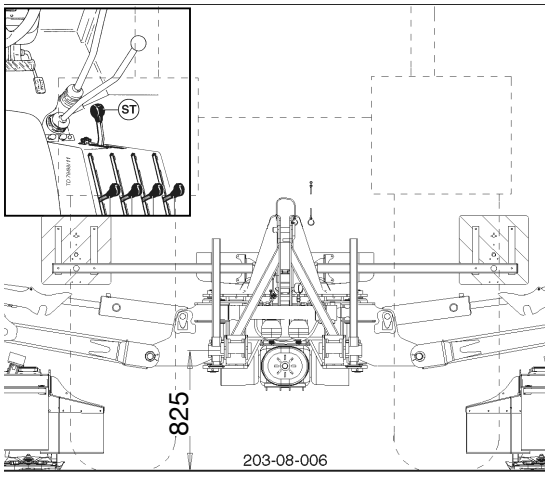
Ensure fixing screw is inserted in required hole (see figure below) on the bolt! Otherwise mower may come loose from coupling, fall to the ground and cause damage to property.



Setting lower link height

- Set tractor hydraulics (ST) using the depth stop.

  This height makes an optimum levelling of the uneven ground possible and does not need to be altered when swivelling the cutter bars up.



Safety hints:

see Supplement-A1, 7.), 8a. - 8h.)

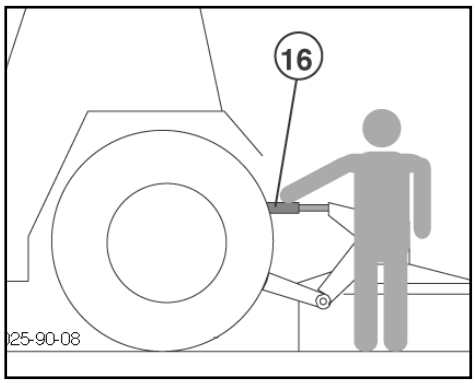
Caution

This machine is designed for operation with a tractor (not for self-drive work machines).

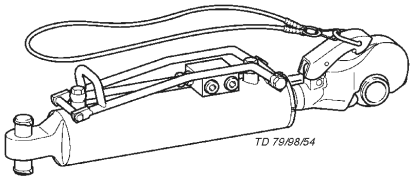
The driver's visual range is limited with self-drive work machines when both outer mower bars are raised in the transport position.

Adjust upper link spindle

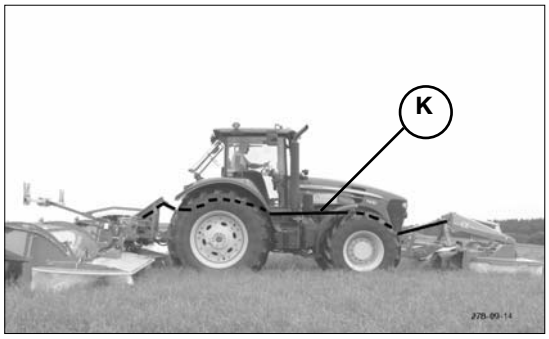
- Turning upper link spindle (16) adjusts the cutting height.



A hydraulic upper link is recommended (double-acting control unit)



Attach connecting lines from the front mower.



"Power Control" variant

With the “Power Control” variant, the possibility exists of controlling the front mower's automatically folding side protection along with the rear mower. (Optional extra)

Note:

The hydraulic hoses between front mower and rear mower are pressurized. These must be depressurized before disconnecting.

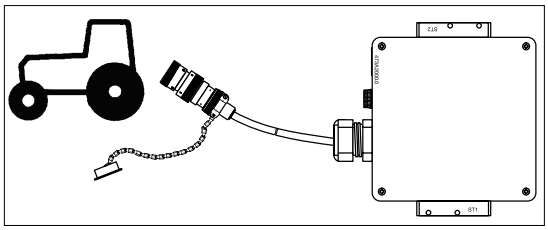
Power Control Press key until signal tone is heard (approx. 3 Sec)

ISO Bus: Press key until signal tone is heard (approx. 3 Sec)

Establish an electrical connection to tractor

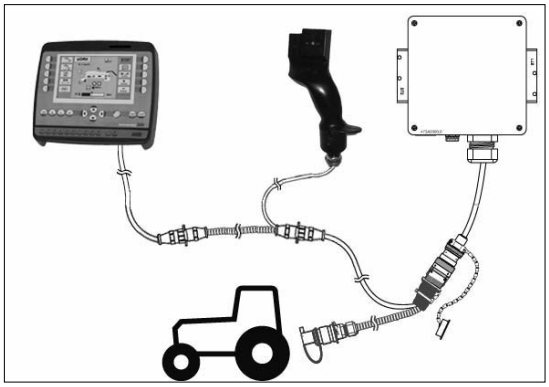
Operating unit on tractor with ISO Bus control

- Connect 9-pin ISO plug to ISO-Bus socket on tractor



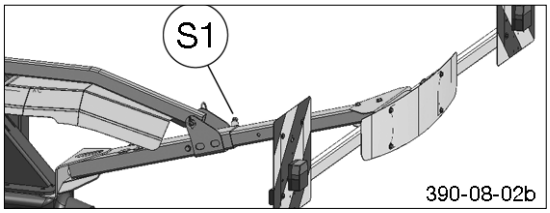
Operating unit on tractor without ISO Bus control

- Attach connection cable between 9-pin ISO plug and 3-pin socket DIN 9680 on tractor or operating unit



Lighting:

- Connect 7-pin plug to tractor
- Adjust lighting carrier position (S1)
- Clean and check that lighting on mower functions properly.

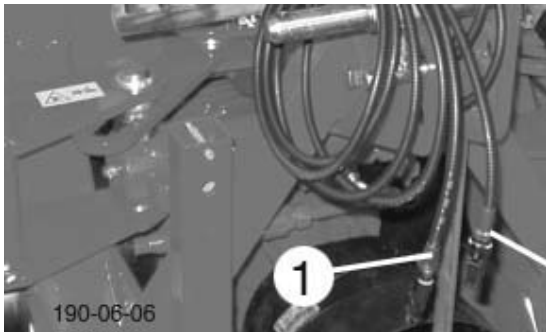


Connect sensor cable from front mower

Electrical cable connection between front mower and mower combination

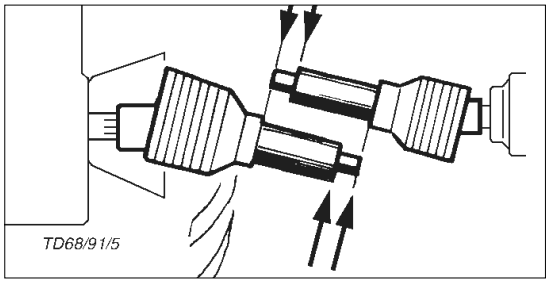
- 3-pin cable for sensor attachment kit (1)

  (Starting from the back, lay sensor cable to tractor so that the cable cannot become damaged e.g. tyres, exhaust, ...)



Detach cardan shaft

- Before initial operation, check the cardan shaft length and adapt if necessary. See chapter "Drive Shaft" in Supplement B also.



Hydraulic connection

Minimum hydraulic system:

1 single-acting hydraulic circuit (EW) with depressurized return flow (T)

Optimum hydraulic system:

1 single-acting hydraulic circuit (EW) with depressurized return flow (T)

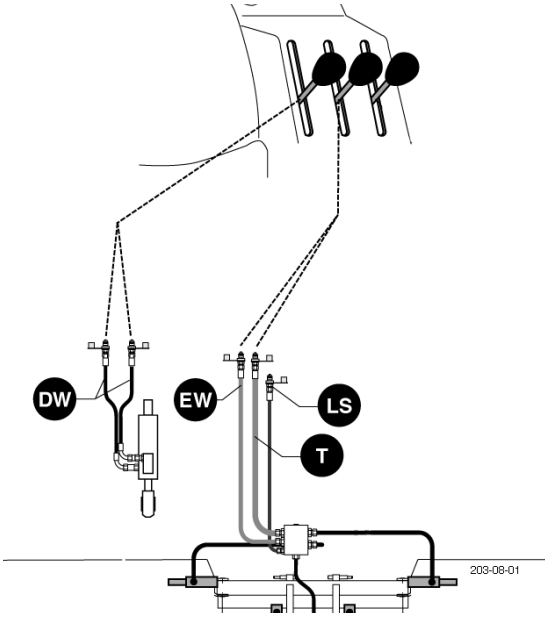
1 dual-acting hydraulic circuit (DW) for hydraulic upper link

or

1x Load sensing hydraulic circuit (LS) (Optional extra) consisting of:

- single-action hydraulic circuit (EW)
- pressureless return (T)
- load sensing line

1 dual-acting hydraulic circuit (DW) for hydraulic upper link

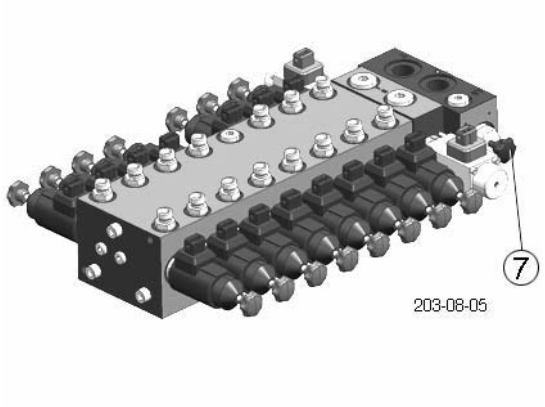


Settings

The screw (7) on the hydraulic block must also be adjusted.

Be advised!

Separate electrical connection



For tractors with "Load sensing"

- Screw in screw (7) completely on hydraulic block

For tractors with a closed hydraulic system

- Screw in screw (7) completely on hydraulic block

For tractors with an open hydraulic system

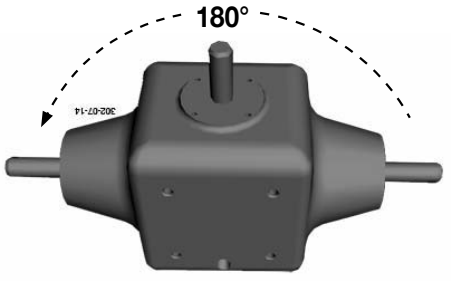
- Unscrew screw (7) completely on hydraulic block

Important!

Check the vehicle for roadworthiness prior to every operation (lights, brakes, protective panels, ...)!

Note rotation direction of mower discs

- Select appropriate rotation direction for the drive
- If the necessary p.t.o. direction of rotation cannot be selected from the tractor, then turn the gearing (G1) **180°** .

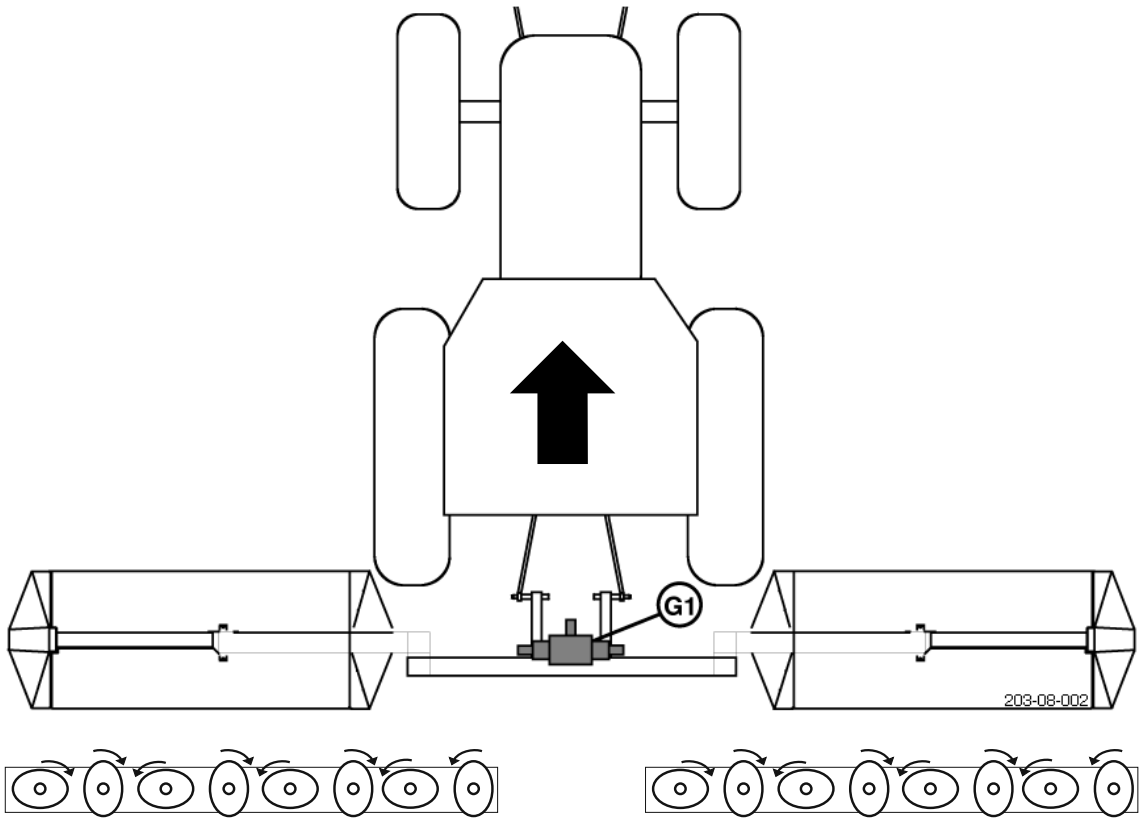


Be advised!

Before gearing is refitted to the machine:

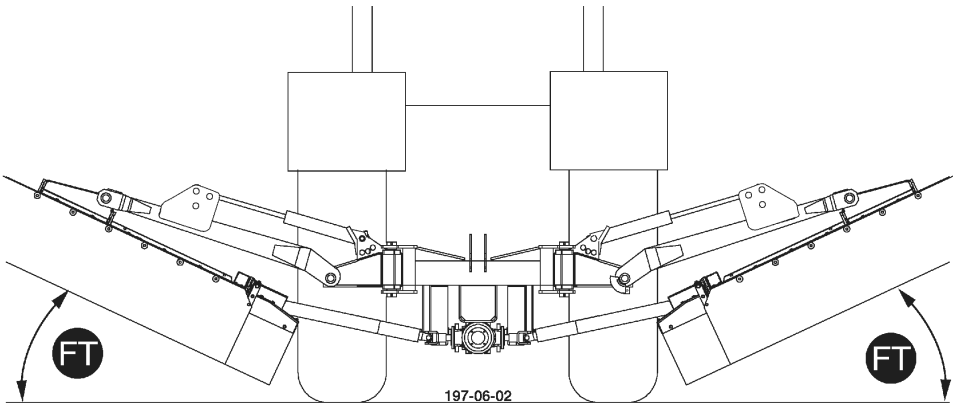
1. Swap ventilation screw and drain plug.

2. Correct position for ventilation screw is on the top.



Conversion from working position to transport position

- **Before swivelling cutter bar up, switch off drive and wait for mower discs to completely stop.**
- **Ensure that swivel range is clear and that no-one is standing in the danger area.**



Safety advice!

Carry out change from working position to transport position only on even, firm ground.

• Move implement only in transport position!

Raise to road transport position

This key's function can only be activated when all mower units are in field transport position (headland FT)

- Switch off drive and wait for complete stop.
- Swivel all hoop guards on mower in

Variant with "Power Control"

Briefly press key 
the function is activated

Press key 
all mower units swivel to end position

Variant with "ISOBus-Terminal"

Press softkey 

to open Transport menu.

Briefly press softkey 
the function is activated

Press softkey 
all mower units swivel to end position

Lower to field transport position

Variant with "Power Control"

Briefly press key 
the function is activated

Press key 
all mower units swivel to field transport position (FT)

Variant mit "ISOBUS-Terminal"

Press softkey 

to open Transport menu.

Briefly press softkey 
the function is activated

Presssoftkey 
all mower units swivel to field transport position (FT)

- Swivel all guard hoops on mower out

Driving on public roads

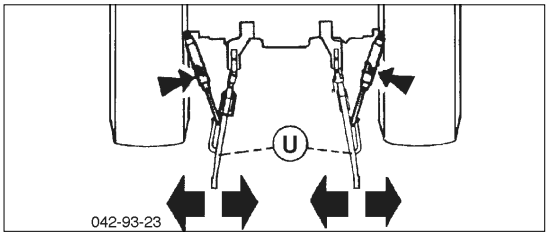
- Observe the official regulations of your state/country.
- Travel on public roads only in the transport position.
- Safety devices must be in proper condition.
- Before travelling, bring swivelling parts to correct position and secure against dangerous position changes.
- Check that lighting functions before travelling.
- Important information is also available in the supplement to this operator's manual.

Be advised!

Be aware of max. permissible transport height (4 m)!

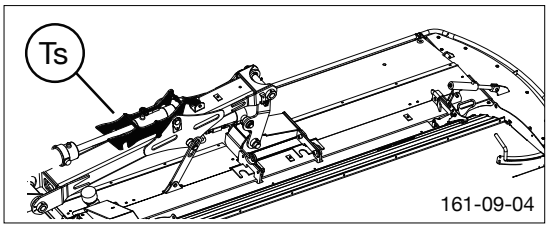
Hydraulic lower link

- Secure hydraulic lower link so that implement cannot swing out sideways.

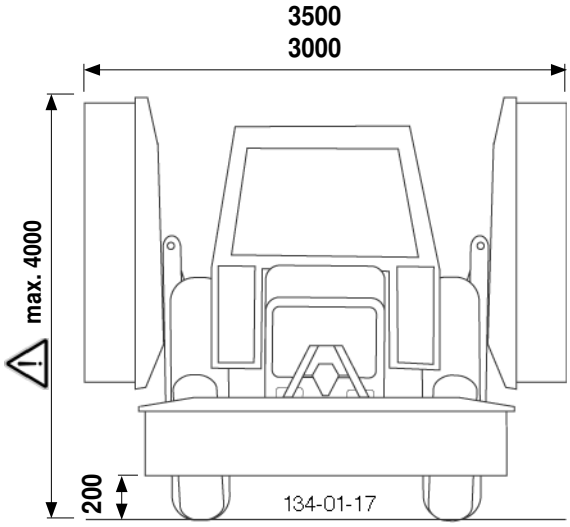


Transport safeguard (Ts)

- Check transport safeguard before travelling!
  Check that both mower units are properly secured with safety hooks!



Transport position



Be advised!

Parking the machine in the transport position is not permitted. Danger of tipping!

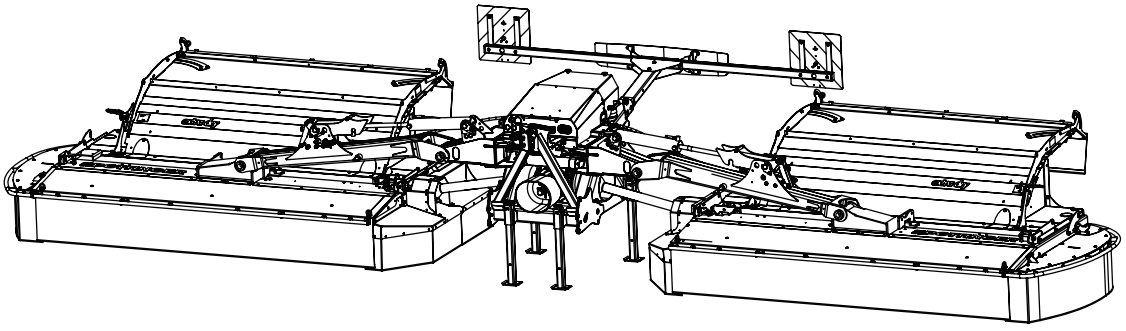
Parking position

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.

Safety note:

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



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Terminal performance features

Connection to power

The power supply for the entire electronic system (job calculator and terminal) is conducted through a plug (compliant with DIN 9680) from the tractor's 12V onboard electrical system. These three-pin plugs may also be two-pin versions as only two main wires (+12 V, ground) are required.

Be advised!

Other plug and socket designs are not permitted otherwise functional reliability cannot be assured.

Technical data

Operating voltage:	+10V / +15V
Operating temperature range:	-20°C +60°C
Storage temperature:	-30°C +70°C
Degree of protection:	IP65
Fuse:	10A multifuse in an operating voltage plug

Function

All of the attached unit's functions can be directly controlled through the Power Control Terminal. In addition, the Power Control Terminal has a large display to indicate the current operating condition, various menus and alarm reports. A prerequisite is a single-acting hydraulic circuit with depressurised return or load sensing.

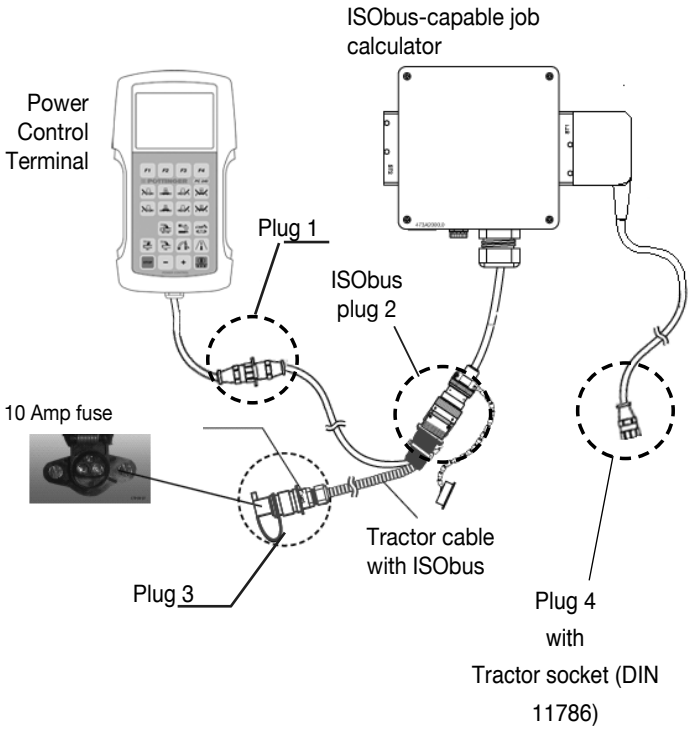
Initial start

Operating with the Power Control Terminal

1. Position Power Control Terminal in tractor cabin where it can be clearly seen. (To secure the terminal there is a holder on the reverse side.
2. Connect terminal to tractor cable with plug 1.
3. Run job calculator cable from implement to tractor cabin and connect to tractor cable via the ISObus plug (2). (Make sure that the cables are properly arranged!)
4. Plug the tractor cable plug (3) in to the tractor's 12V power supply.
5. If hectare counting is required, connect cable with plug (4) to socket in tractor (DIN 11786) and job calculator's cable harness.

To activate terminal, press key "I/O" .

To deactivate terminal, press key "I/O" for three seconds.



Note!

Do not leave the control terminal out in the weather.

Keys allocation

Function keys

a Function key 1*
b Function key 2*
c Function key 3*
d Function key 4*

Raising and lowering the mower unit

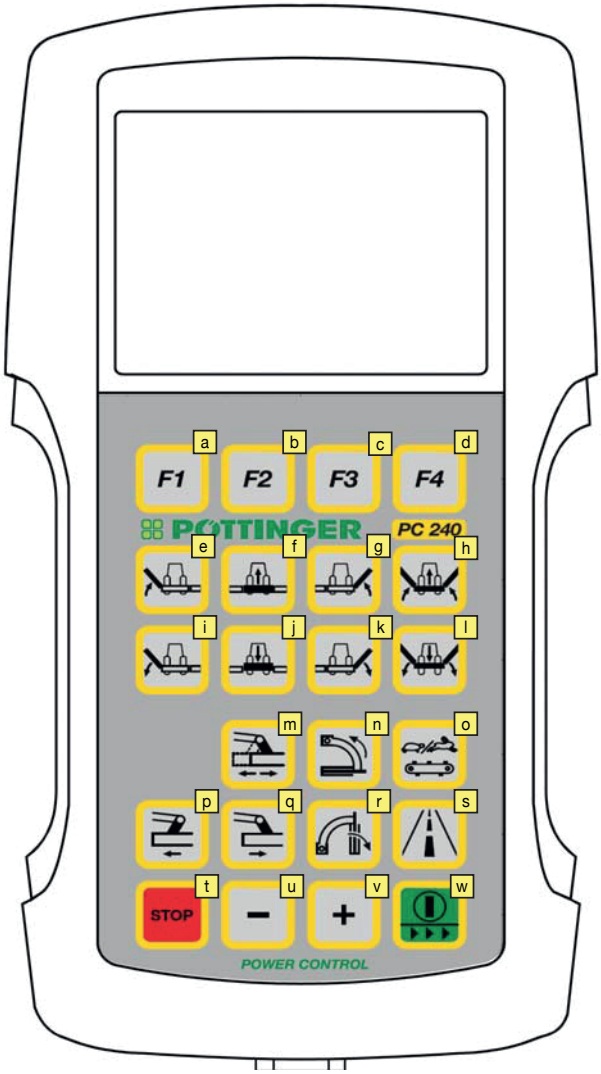
e Raise left mower unit
f Raise front mower unit
g Raise right mower unit
h Raise all mower units
i Lower left mower unit
j Lower front mower unit
k Lower right mower unit
l Lower all mower units

Side shift, cross conveyor, transport

m Slope travel preselection
n Raise cross conveyor
o Change cross conveyor belt speed
p Decrease working width
q Increase working width
r Lower cross conveyor
s Road transport preselection
t Stop - stops every required function
u Decrease value of a setting
v Increase value of a setting
w On/Off

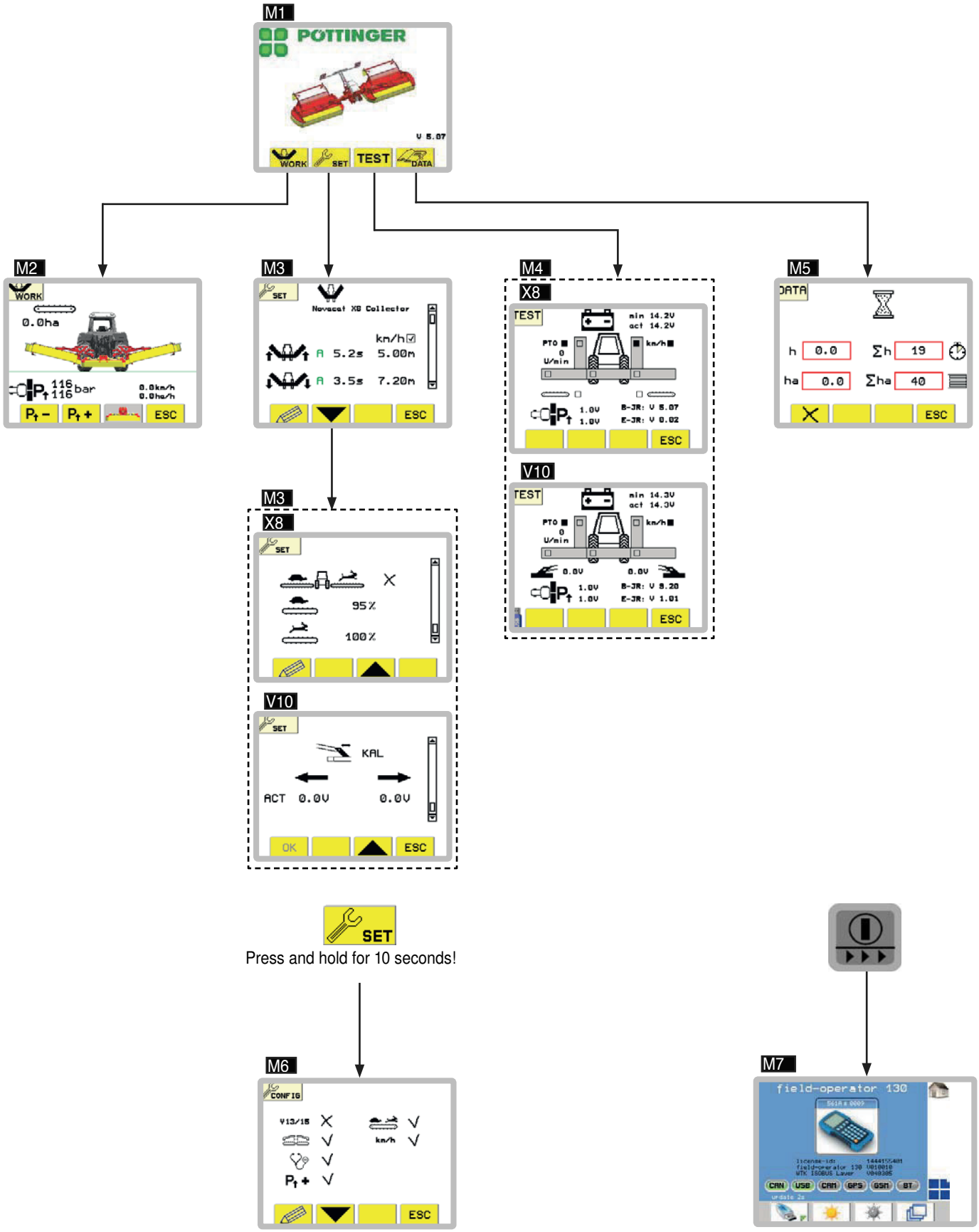
Press [On/Off] key to switch on Power Control Terminal. Press [On/Off] key to open up System Menu.

Press and hold [On/Off] key longer to switch off Power Control terminal.



* Function keys have different functions depending on the menu.

Menu tree

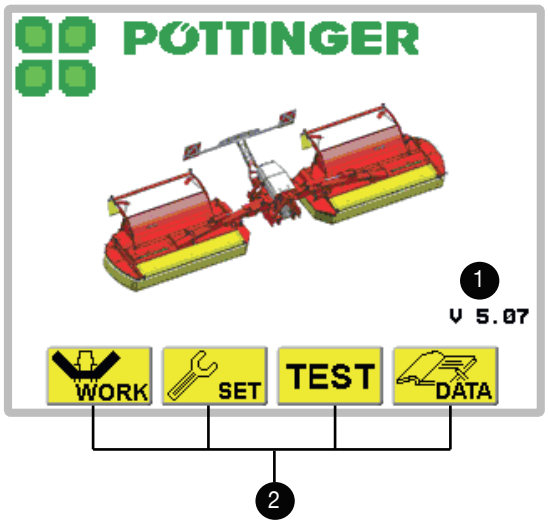

M1
POTTINGER
V 5.07
WORK
SET
TEST
DATA
M2
WORK
0.0ha
116
116 bar
0.0km/h
0.0ha/h
P↑ -
P↑ +
ESC
M3
SET
Novacat X8 Collector
km/h
A 5.2s 5.00m
A 3.5s 7.20m
ESC
M3
X8
SET
95%
100%
V10
SET
KAL
ACT 0.0V 0.0V
OK
ESC
M4
X8
TEST
min 14.2V
act 14.2V
PTO
0
U/min
km/h
1.0V
1.0V
B-JR: V 5.07
E-JR: V 0.02
ESC
V10
TEST
min 14.3V
act 14.3V
PTO
0
U/min
km/h
0.0V
0.0V
1.0V
1.0V
B-JR: V 5.20
E-JR: V 1.01
ESC
M5
DATA
h 0.0
Σh 19
ha 0.0
Σha 40
ESC
SET
Press and hold for 10 seconds!
M6
CONFIG
V13/15
km/h
P↑ +
ESC
M7
field-operator 130
CAN
USB
CAN
GPS
GSM
BT

Menus

Start menu

M1

After activating the Power Control Terminal the Start menu appears.



Display:

1…. Software version
2…. Function keys

Function keys:

WORK ... Work menu M2

SET ... Set menu M3 / press longer: Configuration menu M6

TEST ... Sensor test menu M4

DATA ... Data menu M5

Work menu

M2

In Start menu, press function key F1 to open up Work menu.

Press function key F4 to return to Start menu.

Display:

1.... Cross conveyor belt speed:
Fast (hare)/Slow (tortoise) (only with X8 Collector)

2 ... Preselect to either raise or lower cross conveyor.

3 ... Operating condition of mower units:
Working (pic. 1), Field transport (pic. 2), Road transport (pic. 3)

4 ... a cross conveyor is not in working position

5 ... Tractor speed:
can only be selected if in configuration menu

6 ... ha. per hr.:
only if tractor speed is selected in configuration menu.

7 ... Front mower available. If this symbol is not displayed, there is either no front mower available or it cannot be managed with this control.

8 ... Right rear mower unit relief pressure

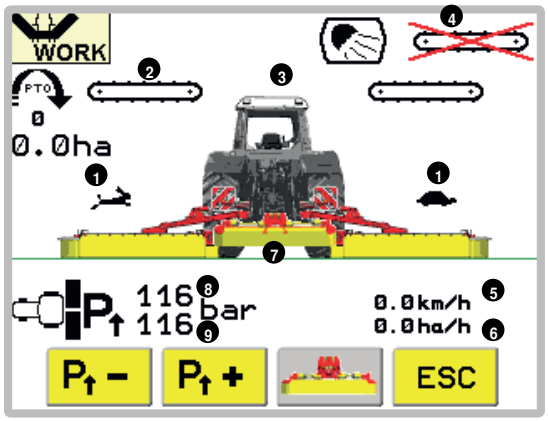
9 ... Left rear mower unit relief pressure

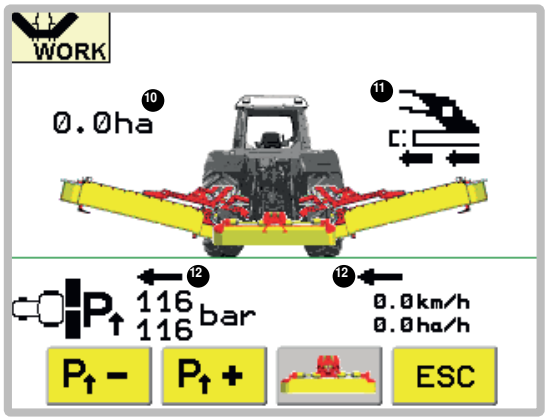
10 ... Daily hectare counter only if tractor speed is selected in configuration menu.

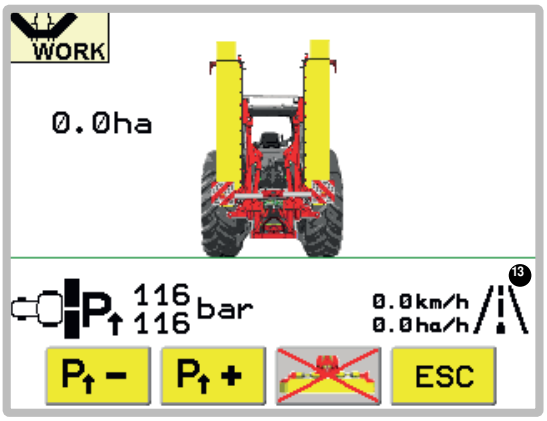
11 ... Slope travel preselection (only with Novacat V10)

12 ... Side shift (only with Novacat V10)
both arrows point outward = max. width
both arrows point inward = min. width
both arrows point in the same direction = slope travel

13 ... Road transport symbol
Only with the symbol displayed is raising and lowering out of, or to, the road transport position possible. If symbol begins to flash then press [Road transport] key once again.







Function keys:

P↑ − ... Decrease relief pressure of rear mower units*

P↑ + ... Increase relief pressure of rear mower units*

... Activate/deactivate front mower

ESC ... Go up one menu level (here: Start menu)

Hard keys: Raising and lowering

Note!

It is not possible to change to road transport position when, at least, one cross conveyor is not in the working position.

Note!

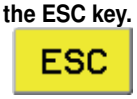
To adjust the relief pressure the mower units must be in the neutral position.

*Momentary pressure differences could arise between left and right rear mower units. But these are automatically balanced out after the filling process.

	Lower left mower unit	Lowers left mower unit from field transport to working position
	Lower front mower	Lowers front mower from field transport to working position
	Lower right mower unit	Lowers right mower unit from field transport to working position
	Lower all mower units	Lowers all mower units from field transport to working position
	Raise left mower unit	Raises left mower unit from working position to field transport position.
	Raise front mower	Raises front mower from working position to field transport position
	Raise right mower unit	Raises right mower unit from working position to field transport position
	Raise all mower units	Raises all mower units from working position to field transport position
	Road transport preselection	1. Press preselection key to make raising to and lowering from road transport position possible. 2. Press either the [Raise] or [Lower] key to move the respective mower units to, or out of, the road transport position.
	Stop	Stops any raising or lowering process.

Note!

Any menu can be exited by pressing the ESC key.



Note!

To be able to activate the key [Road transport preselection], all mower units must be in the field transport position.

Note!

To change to road transport position cardan shaft must be idle. The [Road transport] key will not function as long as the cardan shaft is turning.

Note!

To be able to activate the key [Road transport preselection], both cross conveyors must be in the working position.

Note!

Pressing the "Road transport preselection" key  **will depressurize the side protection hydraulic hoses. (e.g. before uncoupling)**

Hard keys: Raising and lowering cross conveyor (only Novacat X8 Collector)

	Raise cross conveyor	Raises both or the preselected cross conveyor
	Lower cross conveyor	Lowers both or the preselected cross conveyor
	Right cross conveyor preselection	1. Press the preselection key to make raising or lowering an individual cross conveyor possible. The symbol "Right cross conveyor preselection" ❷ appears on the display. 2. Press the appropriate key, [Raise] or [Lower], to move the relevant cross conveyor.
	Left cross conveyor preselection	1. Press the preselection key to make raising or lowering an individual cross conveyor possible. The symbol "Left cross conveyor preselection" ❷ appears on the display. 2. Press the appropriate key, [Raise] or [Lower], to move the relevant cross conveyor.

	Cross conveyor speed levels (Optional extra)	Press the key to change the speed level of the cross conveyor belts. One of two levels can be selected which are represented by a "hare" or a "tortoise" Go to the Set menu to adjust the speed of the speed level.

Hard keys: Side shift (only Novacat V10)

	Slope travel preselection	1. Press the preselection key to move both rear mower units in the same direction, one after the other. 2. Press the appropriate key [side shift] to start the side shift in the relevant direction. The mower units then move one after the other.
	Decrease working width / side shift left	Decreases working width of mower so that both mower units move inward to end position. In conjunction with [Slope travel preselection], both rear mower units move to the left.
	Increase working width / side shift right	Increases working width of mower so that both mower units move outward to end position. In conjunction with [Slope travel preselection], both rear mower units move to the right.

Note!

The keys "Decrease working width" and "Increase working width" are stayput keys (function activated by briefly pressing the key).

The function is interrupted with the STOP key or by pressing the key for the opposite direction. If function is interrupted with STOP key, no arrow appears in the display.

Note!

When mowing on slopes it is sensible to position both mower units uphill. Doing so will prevent streaking.

Note!

Adjusting the working width is only possible in the working and field transport positions.

If both mowers are to be moved to the transport position and one of the mower units is in the field transport position at max. working width, firstly bring both mower units to min. working width so as not to exceed the 4 m transport height.

Set relief pressure for hydraulics

Adapt the relief pressure to the ground conditions.

1. Ensure that both mower units are in the neutral position. Otherwise the relief pressure cannot be adjusted.
2. Raise an outside rear unit. If this is even possible, this is equivalent to a relief pressure of approx. 70kg.
3. Press the function keys P↑ − or P↑ + to adapt the relief pressure to the ground conditions.

Note!

Raise an outside rear unit. If this is even possible, this is equivalent to a relief pressure of approx. 70kg.

Set menu

M3

In the Start menu, press function key F2, to open the Set Menu.

Press function key F4, to return to the Start Menu.

Note:

The values for the distance controlled delay will not appear if the speed has not been selected in the configuration menu.

Display:

1.... Type of machine

2.... Front mower working width (only Novacat V10)

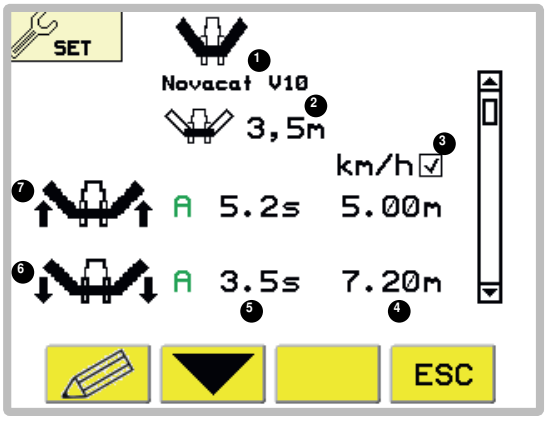
3 ... Time or distance controlled delay when lowering the rear mower.

4 ... Column for the distance controlled delay

5 ... Column for the time controlled delay

6 ... Line for lowering the mower unit

7 ... Line for raising the mower unit

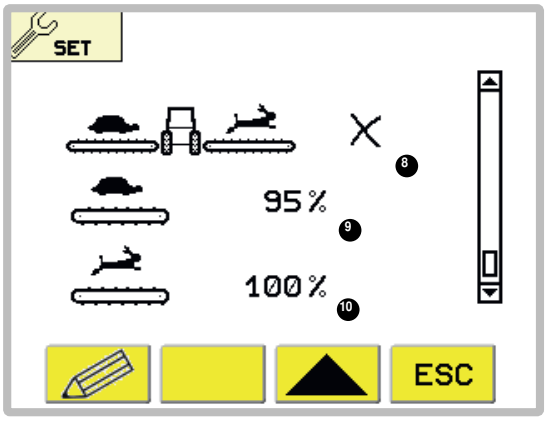


only Novacat X8 Collector:

8 ... Speed selection for cross conveyor belt:
Tick = Differing speeds between the left and right cross conveyor belt (for mowing in contour lines)
Cross = Same speed for both cross conveyor belts with the possibility of switching between two speeds.

9 ... Speed regulator for speed 1 (Tortoise): same percentage = same speed

10 ... Speed regulator for speed 2 (Hare):



only Novacat V10:

11 ... Voltage value for the left angle sensor

12 ... Voltage value for the right angle sensor

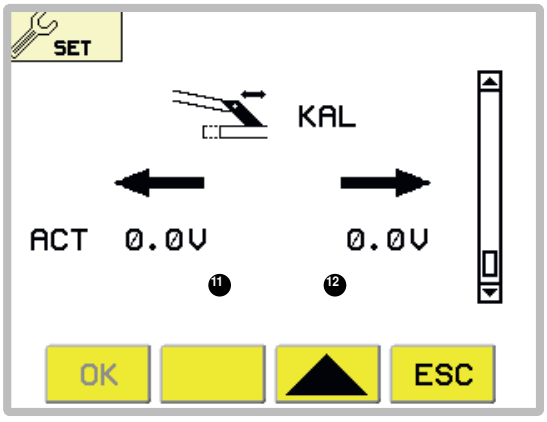
Function keys:

... Edit menu entry

... page down

... page up

ESC ... change to higher menu (here: Start Menu)



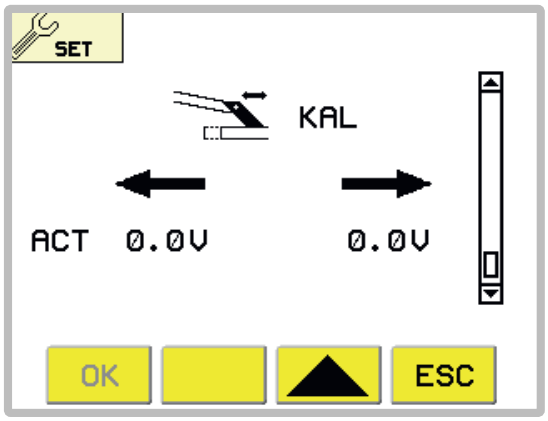
Calibrating the angle sensors: (only Novacat V10)

A sensor swap is necessary to calibrate the angle sensors. The function serves to memorize the voltage level at end positions.

Starting the minimum and maximum working width takes place using keys (the function is only active as long as the [side shift left] key or [side shift right] key is depressed).

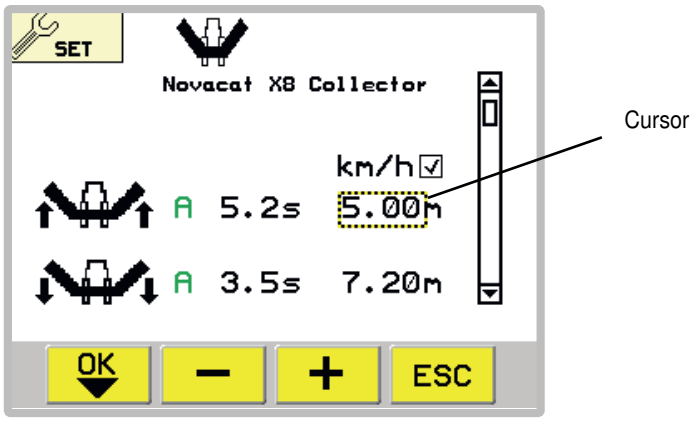
The mower units must be in the field transport position for this.

- Calibration procedure
  - Press key until both mower units are against the inner stop.
  - Press key until both mower units are against the outer stop.
  - Press key [OK] for 2 secs.
    Saving is confirmed by an audible signal.



Changing a value

1. Press function key to change a value.
2. Press function key OK until cursor has reached the value to be changed.
3. Change the value with the keys [− and +] until the desired value is reached.
4. Press the function key [OK] to save the value and to select the next value.
5. Press [ESC] to exit the change screen.



Function keys

OK ... save the current value and change to the next variable

− ... change the current variable value down

\+ ... change the current variable value up

ESC ... change to higher menu

(here: Set Menu)

Sensor test menu (together)

M4

In the Start menu, press the function key F3 to open the Sensor Test menu.

Press function key F4, to return to the Start menu.

Display:

A shaded square shows an active sensor.

A white square shows that the sensor is not active.

Note!

When a turning component with sufficiently low speed rotates past the sensor, the field begins to flash.

Sensors:

a ... S15

Transport position for left mower unit

b ... S13

Transport position for right mower unit

c ... S3

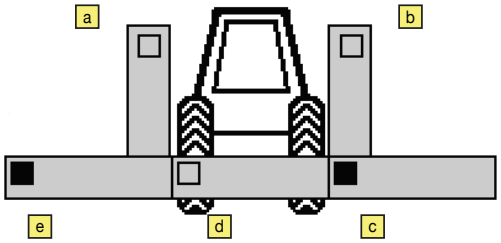
Field transport and working positions for right mower unit

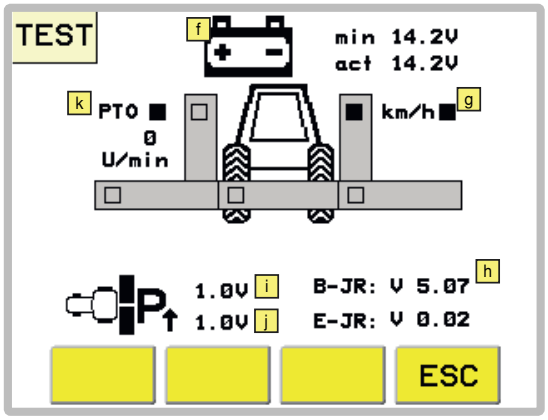
d ... S7

Field transport and working positions for front mower

e ... S5

Field transport and working positions for left mower unit





Value:

f ... Voltage indicator:

The top voltage display (min) shows the lowest measured power supply value since the operation started. This value is stored until the next new start.

The lower voltage display (act) shows the current measured power supply value.

g ... S2 (Speed)

Speed sensor active. To check the signal, compare the kph displayed in the Work menu with the tractor's tachometer display.

h ... Software versions

shows the software versions used for the base board (B) and the expansion board (E).

i ... S4 (Voltage indicator for right pressure transducer)

Shows the current given value of the right pressure transducer. So the function can be checked using the data sheet.

j ... S6 (Voltage indicator for left pressure transducer)

Shows the current given value of the left pressure transducer. So the function can be checked using the data sheet.

k ... S1 (p.t.o. cardan shaft)

Sensor function is checked while cardan shaft is turning. At approx. 10 rpm the field will be shaded black.

Function keys:

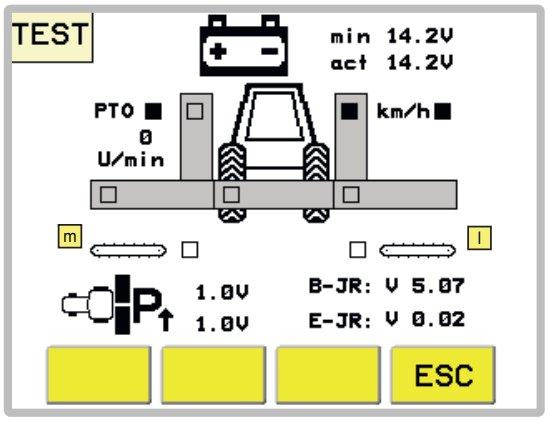
ESC ... change to higher menu (here: Start menu)

Sensor test menu

Novacat X8 Collector

l ...S9
Initiator position for right cross conveyor

m ...S10
Initiator position for left cross conveyor

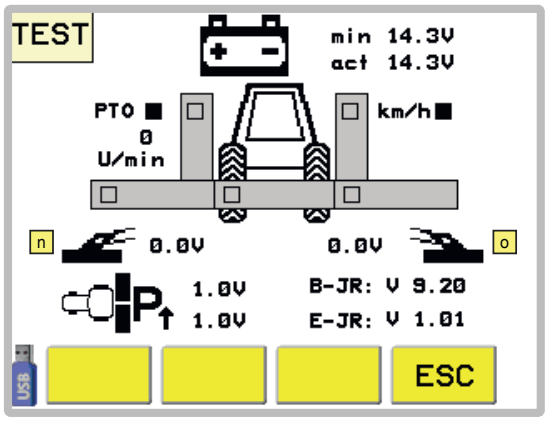


Sensor test menu

Novacat V10

n ...S11
Left angle sensor power, in volts

o ...S12
Right angle sensor power, in volts



Data menu

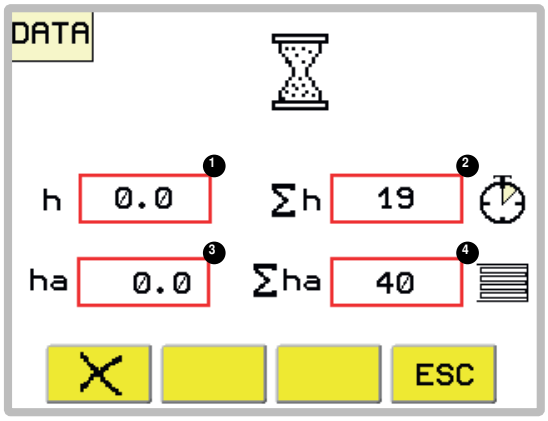
M5

Press function key F4 in the Start menu to open the Data menu.

Press function key F4, to return to the Start menu.

Display:

1 ... Partial hours counter
2 ... Total hours counter
3 ... Partial ha. counter
4 ... Total ha. counter



Function keys:

... resetting both partial counters

ESC ... change to higher menu (here: Start menu)

Note:

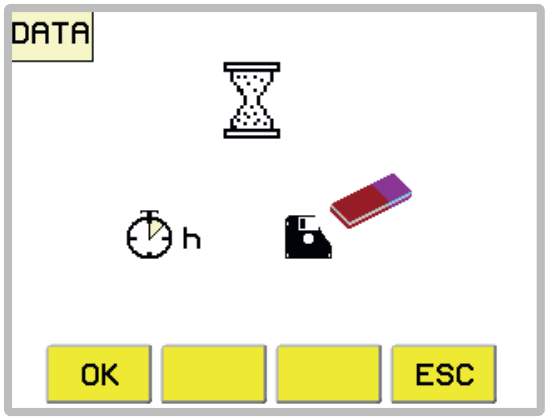
It is not possible to reset one partial counter without the other. Partial counters can only be reset together.

Note

The hectare counter only functions when the "kph" has been selected in the configurations menu and the cable to the tractor's signal socket is fitted..

Resetting partial counters:

1. Press function key [ ] to reset partial counter to nil.
   A new screen appears.
2. Press function key [OK] to confirm the procedure or press function key [ESC] to interrupt the procedure and return to the previous menu.



Note!

Pressing the preselection key "Transport position" for 3 secs. depressurizes the side protection hydraulic hoses. (e.g. before uncoupling)

Note!

Pressing the "STOP" key will stop all functions.

STOP

Configuration menu

M6

In the Start menu, press the function key F2 for 10 seconds to open the Configuration menu.

Press function key F4, to return to the Start menu.

Display:

1.... Swivel assistance
Deactivate this configuration on Novacat X8, X8 Collector and V10!

2.... Single cross conveyor swivelling
(only with Novacat X8)

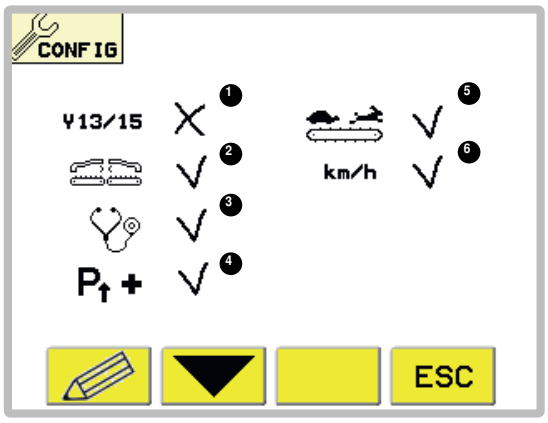
3 ... Inputs/Outputs diagnosis function

4 ... Hydraulic relief

5 ... Cross conveyor belt speed regulator
(only with Novacat X8 Collector)

6 ... Speed signal from tractor available

(Tick = active / cross = inactive)



Function keys:

... Edit menu entry

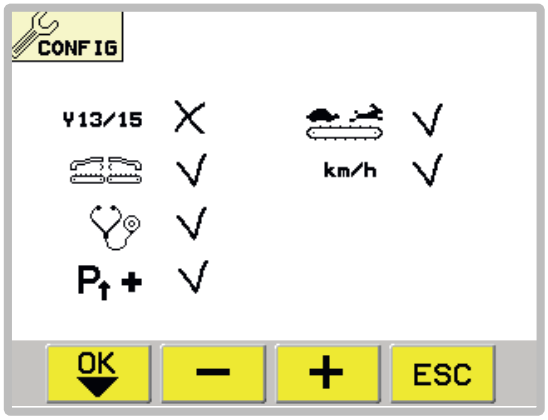
... scroll down

... scroll up

ESC ... change to a higher menu (here: Start Menu)

Changing a value

1. Press function key [ ] to change a value.
2. Press function key [OK] until the cursor reaches the value to be changed.
3. Change the value by using key [−] and [+] until the required value is reached.
4. Press function key [OK] to save the value and to select the next value.
5. Press ESC to exit the change screen.



Function keys

OK ... save the current value and change to the next variable

− ... change the current variable value down

+ ... change the current variable value up

ESC ... change to higher menu (here: Set Menu)

System Menu

M7

Briefly press key to open System menu.

Press key once again to return to previous menu.

Function keys:

... only for service personnel

... Adjust screen brighter

... Adjust screen darker

... only for service personnel

Note:

A display brightness of less than 60% automatically switches on the Power Control Terminal keyboard lighting.

Diagnosis function

In the event of a malfunction, the relevant alarm report is displayed and an acoustic alarm sounds.

Function keys:

... the particular alarm is suppressed until the next system start.

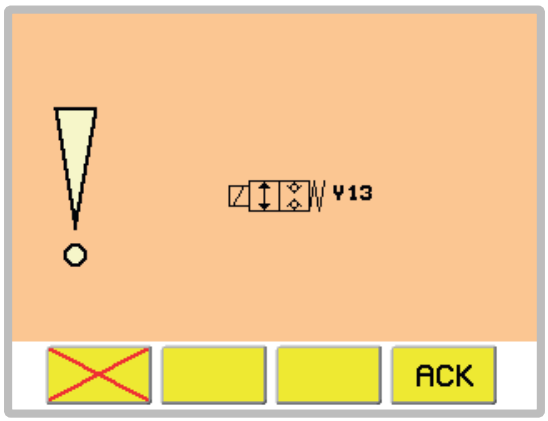
ACK ... Confirm the defect. If the fault repeats itself, another alarm will be set off.

Alarm reports:

Switching output malfunction (Example: Y13)

Causes:

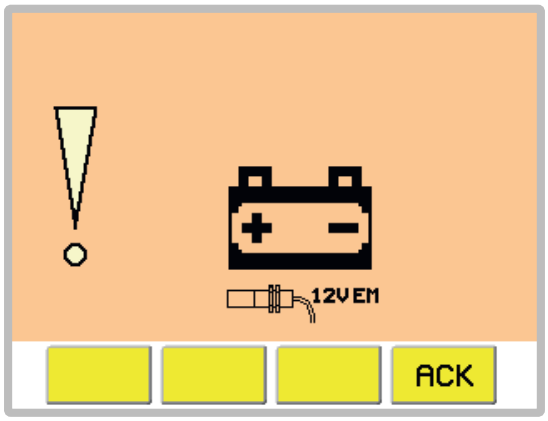
- Short circuit
- Insufficient power
- Valve not plugged in



Sensor power malfunction (Example: Sensor power supply < 12V)

Causes:

- Insufficient power at the job calculator
- defective job calculator



Warning: Cross conveyor not in working position!

Therefore impossible to fold mower together.

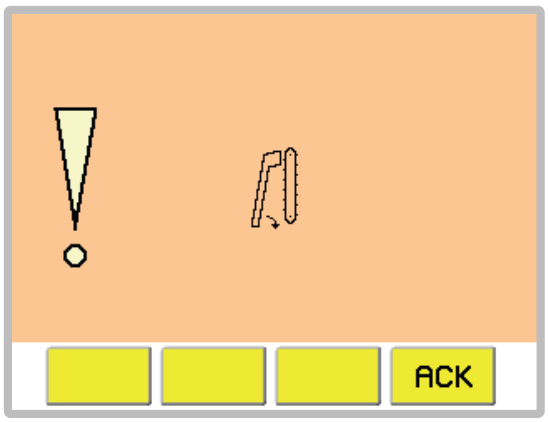
Remedy:

Bring cross conveyor into working position and then fold mower together.

If warning still shows:

Causes:

- Defective sensor (S9, S10)
- Defective line
- Hydraulics leaking



Note!

When a malfunction occurs, every required function can be manually switched by using the emergency operation (see chapter "Electro-hydraulics")

Note!

Confirm a fault with key [ACK]

ACK

Note!

The diagnosis function can be switched off for every single sensor until the next system start by using the function key F1 [Switch off]!

The alarms for the power supply cannot be switched off!

Angle sensor malfunction:

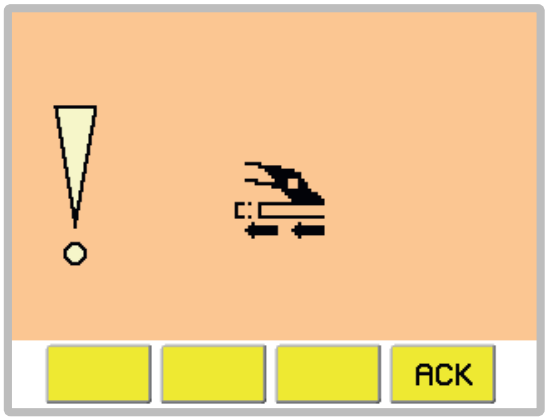
There is no automatic guarantee that the machine does not exceed the max. transport height of 4m.

Remedy:

Minimize sideways movement using emergency activation on hydraulic block.

Causes:

- Defective angle sensor (S11, S12)
- Defective power line to angle sensor



Front mower sensor malfunction:

The front mower sensor does not send a response to the job calculator within 6 seconds of pressing the key [Raise front mower] or [Raise all mowing units].

Causes:

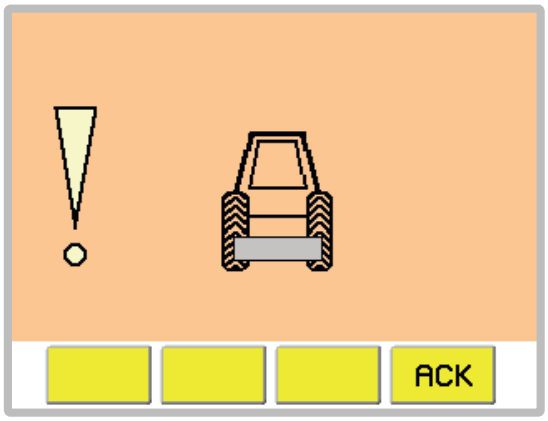
- Defective sensor
- Defective line

Checking the sensor setting:

When the front mower is in transport position the sensor (S7) must be covered.

Immediate measures:

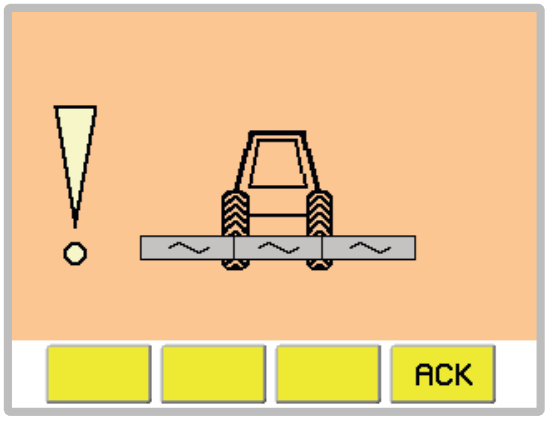
- Check in the menu M2 if the front mower has been activated
- Check the sensor lines.



Warning: Mower units not in neutral position

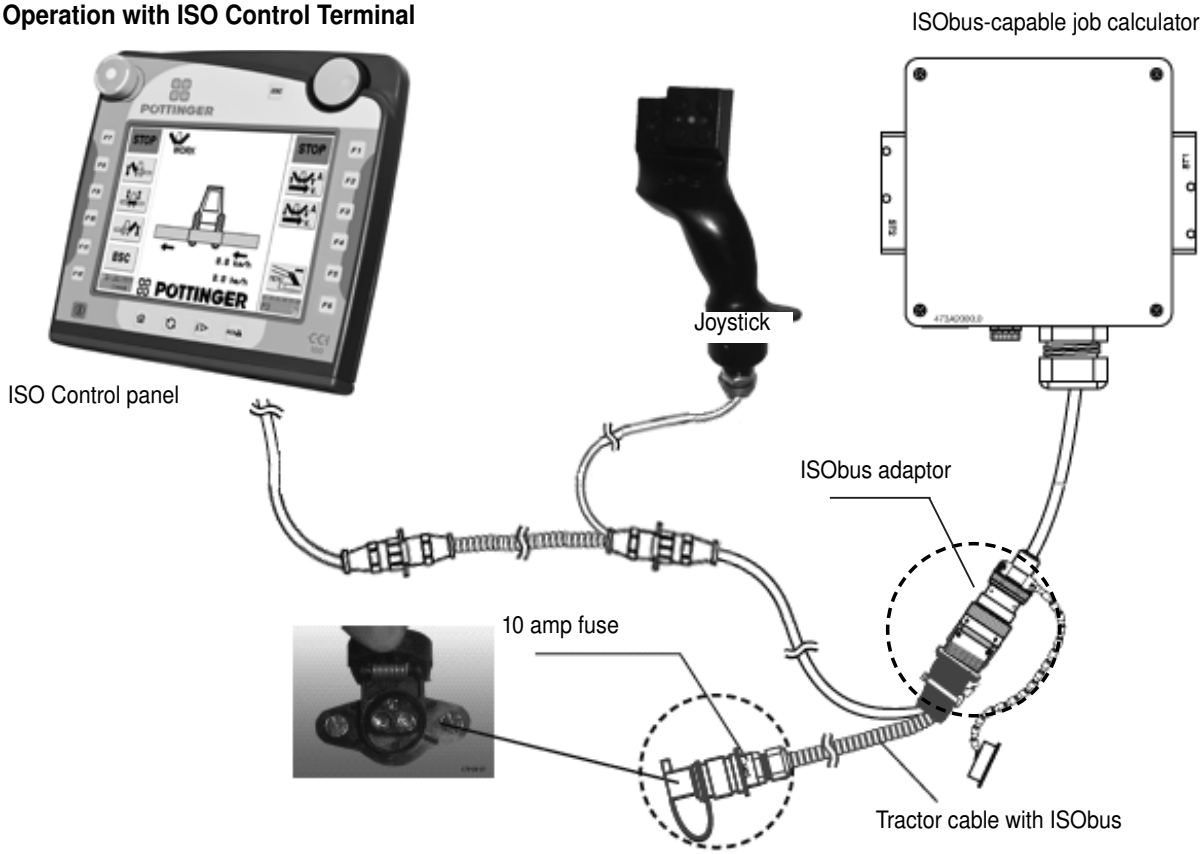
There are two possible causes for this warning to occur:

1. The mower units are not in the neutral position and therefore filling the hydraulic relief is impossible.
2. The cardan shaft is still turning and mower is in working position, but not in the neutral position, and the tractor speed is greater than 0 kph.



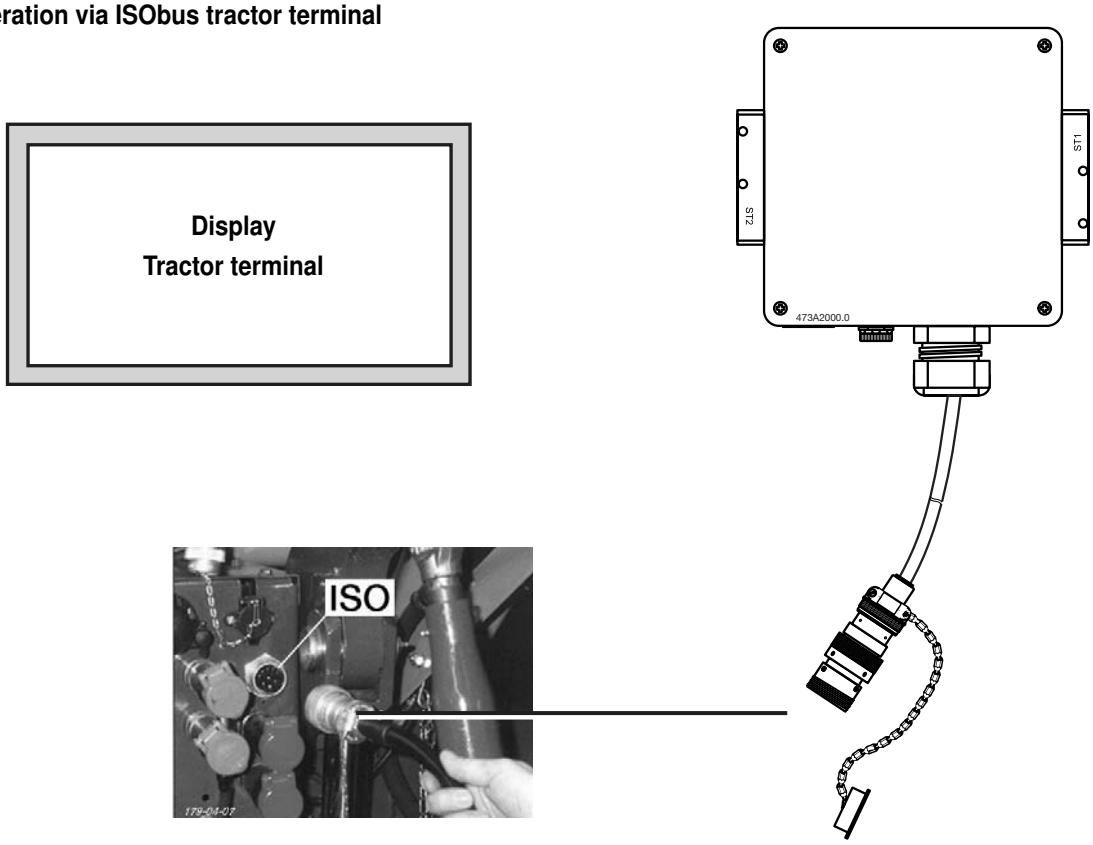
Variant

Operation with ISO Control Terminal

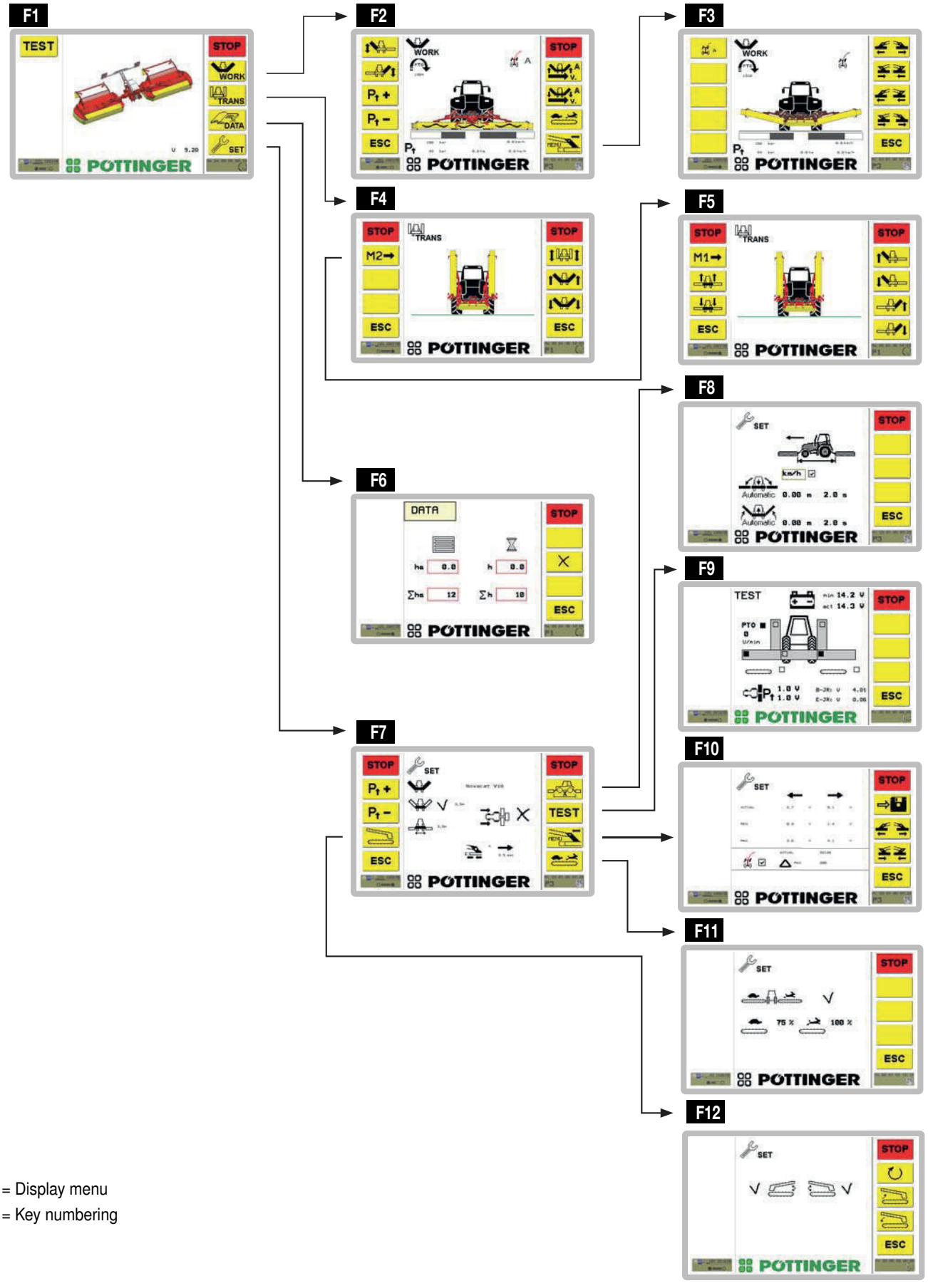


Variant

Operation via ISObus tractor terminal



Operation structure - mower with ISObus solution



F = Display menu

T = Key numbering

Meaning of keys

Start menu

F1 T6

T1 STOP
T2 Work menu
T3 Transport menu
T4 Data menu
T5 Set menu
T6 Test menu

STOP-key function

To stop all procedures currently running.

STOP

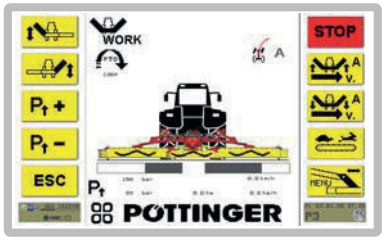
ESC key function

To return to previous menu.

ESC

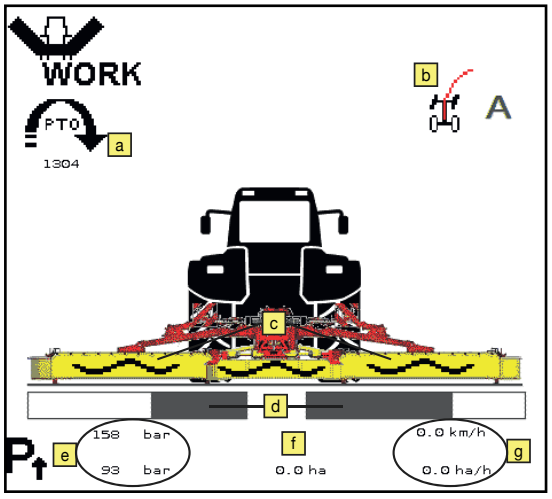
Work menu

F2



T1 Raise/lower left mower unit
T2 Raise/lower right mower unit
T3 Increase relief pressure*
T4 Decrease relief pressure*
T7 Automatic "Raise mower units" function
T8 Automatic "Lower mower units" function
T9 "Change speed" (only X8 Collector)
T10 Navigating the "Side shift" menu
- Change to mask (F3)

Meaning of display:

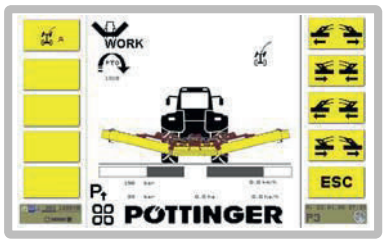


a ... Rotations (U/min) of the driveshaft
b ... Status of curved cut optimisation

	Curved cut optimisation OFF
	Curved cut optimisation ON but inactive
A	Curved cut optimisation ON and active after the expiry of the delay interval, as long as the machine is in working position.

c ... Mower position: Work / headland / transport
d ... Lateral traversing position
e ... Release pressure on the right (above) and left (beneath)
f ... Partial hectare counter (see the Data menu)
g ... Working speed in km/h and ha/h

F3 T6

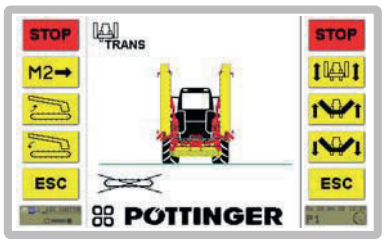


T1 Increase working width
T2 Decrease working width
T3 Lateral traversing left
T4 Lateral traversing right
T6 Switch-on of curved cut optimisation
The curved cut optimisation, also when switched on, is active only in working position.

*Momentary pressure differences could arise between left and right rear mower units. But these are automatically balanced out after the filling process.

Transport menu

F4



T2 T3 T4 T7 T8 T9

T2 Change to page 2 (change over to mask (F5))

T3 Swivel selected cross conveyor out

T4 Swivel selected cross conveyor in

T7 Select "Change from working position to transport position"

Press key T7 for 3 secs. -> the side protection hydraulic hoses are depressurized (e.g. before uncoupling)

T8 Raise mower units to road transport position

T9 Lower mower units to turning position

F5

T2 T3 T4 T7 T8 T9 T10

T2 Change to page 1 (change to mask (F4))

T3 Raise front mower

T4 Lower front mower

T7 Raise left mower unit

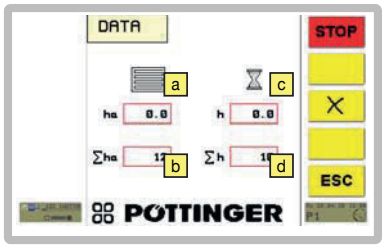
T8 Lower left mower unit

T9 Raise right mower unit

T10 Lower right mower unit

Data menu

F6



T8

T8 Delete partial counter (ha, h)

Meaning of display:

a ... Partial ha. counter

b ... Total ha. counter

c ... Partial hours counter

d ... Total hours counter

Note!

Pressing preselection key "Transport position" for 3 secs. will depressurize the side protection hydraulic hoses. (e.g. before uncoupling)

Note!

In order to press the [Preselect road transport] key, all mower units must be in the field transport position.

Note!

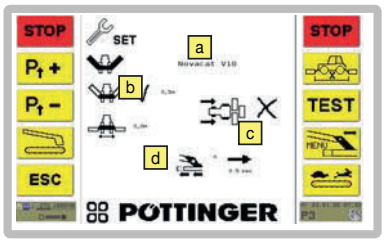
In order to move to the road transport position, the cardan shaft must be idle. The [Preselect road transport] key cannot be used while the cardan shaft is still turning.

Note!

In order to activate the [Preselect road transport] key, both cross conveyors must be in the working position.

SET menu

F7



T4 Navigating in the "Cross conveyor belt swivelling" menu (F123)

T7 Navigating in the "Time-distance dependent lowering/raising" menu

- Change over to mask (F8)

T9 Navigating in the "Side shift calibration" menu

- Change over to mask (F10)

T10 Navigating in the "Cross conveyor belt speed" menu (F11)

Meaning of display:

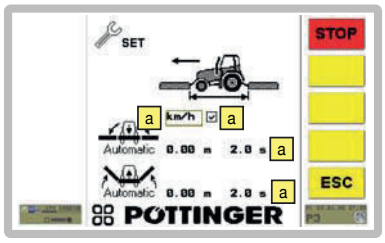
[a] Set machine type

[a] Activate/deactivate front mower

[a] Front mower working width

[a] Delay between the lowering to working position and the activation of the curved cut optimisation.

F8



Meaning of display:

[a] Set time or distance dependent lowering/raising

Kph = Distance-/speed dependent

sec = Time dependent

- When using the curved cut optimisation, you must set here "km/h".

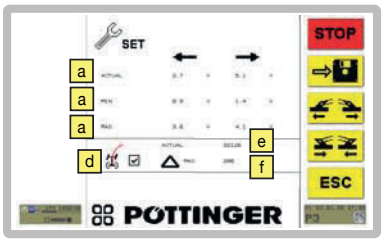
[a] Speed signal from tractor available or not available.

[a] Set the lowering delay between the front and the rear mower. This value is also the delay for the curved cut optimisation

[d] Set the lifting delay between the front and the rear mower.

Different values for (meter (m) or seconds (sec.)) The values for (m) and (sec) are adjustable individually and are used depending on the time setting or the setting for distance dependent [a] lowering/lifting.

F9



T2 Save value

T3 Calibrate position max. working width

T4 Calibrate position min. working width

Novacat V10
Meaning of display:

[a] current tension of the angle sensor left/right

[a] minimum calibrated tension left/right

[a] maximum calibrated tension left/right

[d] Display:Transmission of the steering signal from tractor (tick = active / cross = inactive

[e] Display "current steering lock". (For straight driving a value of around 32128 must be displayed.

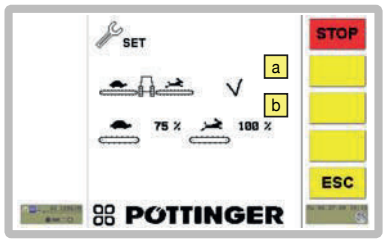
[f] Setting value: "Delta maximum retraction of the mower bar" deviation from the straight driving value above which the mower bar is retracted to the maximum. Must be adjusted function of the tractor (empirical value between 150 and 350) If the value is set too high, one strip will stay still when cornering despite the activated cut optimisation.

Menu function:

A sensor swap is necessary to calibrate the angle sensors. The function serves to memorize the voltage level at end positions.

- For this the mower units must be in the field transport position.
- Calibration procedure
  - Press "Decrease working width" until both mower units are against the inner stop.
  - Press "Increase working width" until both mower units are against the outer stop.
  - Save

F10



Meaning of display:

[a] Tick = Differing speeds between the left and right cross conveyor belt (for mowing in contour lines)

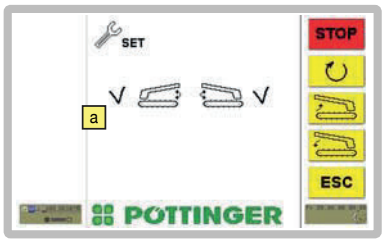
Cross = Same speed for both cross conveyor belts with the possibility of switching between two speeds.

a Set speed level

Two speed levels can be set for the cross conveyor belts.

Setting: in 5% steps, setting range: 5 – 100%

F11



T7 Activate required cross conveyors (left, right or both)

T8 Swivel selected cross conveyor out

T9 Swivel selected cross conveyor in

Meaning of display:

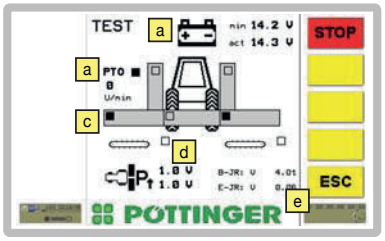
a Individual swivelling cross conveyor

Tick = pivoted

Cross = Pivoting deactivated, hydraulic cylinder is not triggered.

TEST menu Novacat X8 Collector

F12a



Meaning of display:

a Voltage indicator

The top voltage indicator shows the lowest measured supply voltage value since the operation started. This value is saved until the next new start.

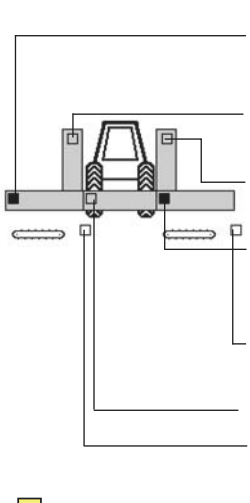
The bottom voltage indicator shows the current measured supply voltage value.

a **S1** PTO (cardan shaft)

In the right field the rotating cardan shaft sensor function is checked. This field will have a black background when the cardan shaft rotates faster than 10 rpm.

c Display of current sensor statuses

A black square indicates an active sensor. When activating and not activating the sensors, the square must change between black and white.



S5 Left mower unit field transport and working positions

S15 Left mower unit transport position

S13 Right mower unit transport position

S3 Right mower unit field transport and working positions

S9 Right cross conveyor initiator position

S7 Front mower position

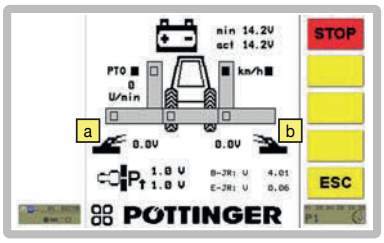
S10 Left cross conveyor initiator position

d **S4** Right pressure transducer voltage indicator

e **S6**Left pressure transducer voltage indicator

TEST menu Novacat V10

F12b



Meaning of display:

a S11 Left angle sensor power, in volts

a S12 Right angle sensor power, in volts

Diagnosing function

Monitoring the job calculator for

Operating voltage	
Power supply sensor	
Short circuit to earth or 12 V Broken cable Overload	

With fault recognition

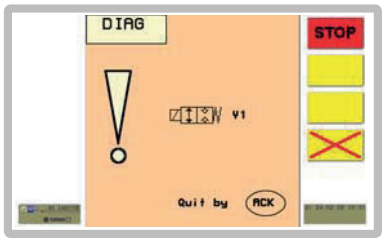
- The alarm mask is superimposed and an alarm tone sounds
- The relevant symbol and the fault is displayed

Confirm a fault with the "ACK" key.

The diagnosing function can be switched off for each individual channel until the next system start by using the key**"T9"**.

Switch outputs example: Y1 = Directional control valve, raise

Diag



T9

Causes:

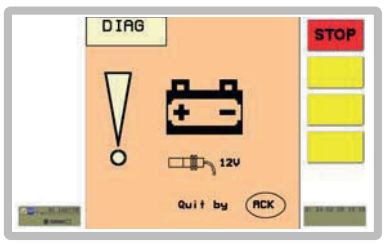
- Short circuit
- Insufficient power
- Valve not connected

Note!

Should a fault occur, every required function can be manually established using the emergency activation (see chapter "Electro-hydraulics").

Sensor inputs (Example: Sensor power supply < 10V

Diag



Causes:

- Insufficient voltage to the job calculator
- Defective job calculator

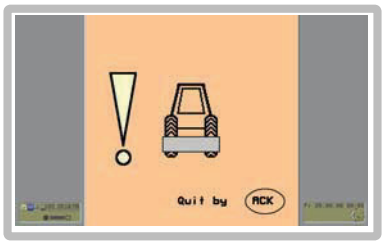
Note!

The power supply alarms cannot be switched off.

Time out - Monitoring

If the front mower sensor is not reached within 6 seconds after pressing the “Raise front mower or all mowers” key.

Diag



Causes:

- Defective sensor
- Defective line

Note:

When this report is displayed, the front mower sensor S7 becomes inactive.

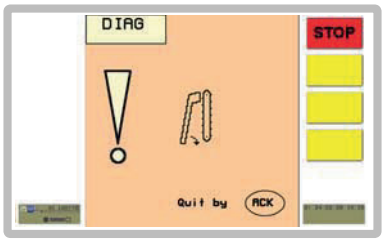
Immediate measures:

- **Check if the front mower has been activated in the SET menu!**
- **Check sensor lines!**

Warning: Cross conveyor is not in working position!

Therefore it is impossible to fold mower together.

Diag



Remedy:

Bring cross conveyor into working position and then fold mower together.

If warning still shows:

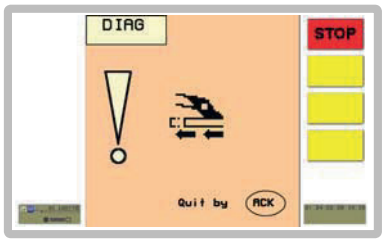
Causes:

- Defective sensor (S9, S10)
- Defective line
- Hydraulics are leaking

Angle sensor malfunction:

It cannot be automatically determined if the machine exceeds the max. transport height of 4m.

Diag



Countermeasures:

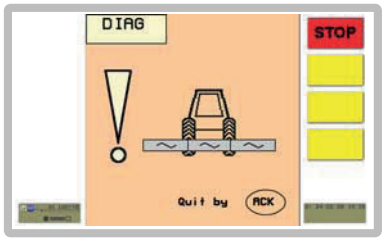
Minimize sideways movement using emergency activation on hydraulic block.

Causes:

- Defective angle sensor (S11, S12)
- Defective supply line to angle sensor

Warning: Mower units are not in neutral position

Diag

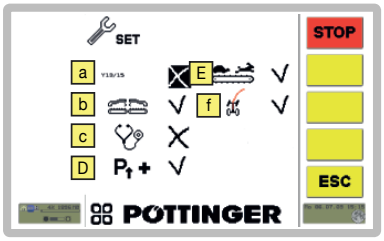


There are two possible causes for this warning to occur:

1. The mower units are not in neutral position therefore filling the hydraulic relief is impossible.
2. The cardan shaft is rotating and the mower is in the working position, but not in the neutral position, and the tractor speed is greater than 0 kph.

Configuration menu

In the START Menu (F6) press and hold the “Set” key SET for 10 seconds to open the Configuration Menu.



a Swivelling assistance

Deactivate this configuration with Novacat X8, X8 Collector and V10!

b Single cross conveyor swivelling

(only with Novacat X8)

c Inputs/outputs diagnosing function

D Hydraulic relief

E Cross conveyor belts speed regulator

(only with Novacat X8)

f Curved cut optimisation:

(only Novacat V10)

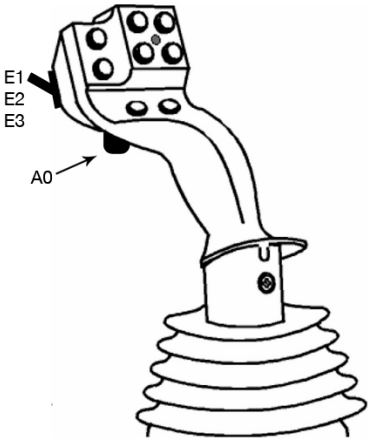
(Tick = active / cross = inactive)

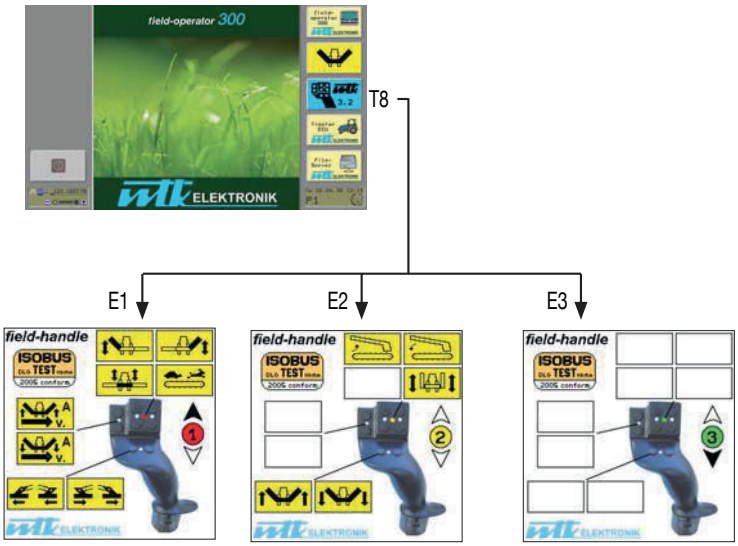
Joystick - Mower configuration

On the joystick there are 8 equivalent function keys (1 – 8), a green clearing key (A0) and a level switch (E1/E2/E3). The keys enable 8 different functions to be allocated per level (E1/E2/E3) = max. 24 different functions can be performed with the joystick.

Joystick configuration - check function keys

Press T8 in the Start menu. With the level switch (E1/E2/E3) change to the respective overview. The allocated function keys are distinguished by the function symbol.





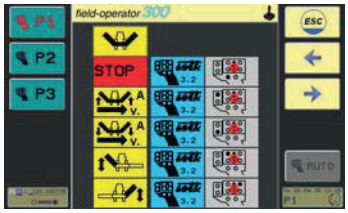
Setting the joystick

Set joystick function keys allocation

1. Press key [T6] in the Start menu. “Field operator 300” menu appears.
2. Press key [T9] in "Field operator 300" menu to open the "Joystick setting menu".

3. With the terminal keypad select the function symbol.
4. Select level on the joystick using the level switch (E1/E2/E3).
5. Press the green clearing key (A0) on the joystick while simultaneously selecting the required function key (1-8).
6. As a check, the following symbols appear on the display: STOP

   In this case it means: The "STOP" function has been assigned to function key 7 of level 1 on the joystick.



Important: The number on the joystick symbol (1/2/3) shows the level selected for the function!

1 - Level 1 - "Switch up" and LED glows red on joystick

2 - Level - 2 "Switch middle" and LED glows yellow on joystick

3 - Level 3 - "Switch down" and LED glows green on joystick

To assign further function keys, repeat steps 3 to 6.

Important notes prior to starting work

1. Check

- the condition of knives and the knife fastenings.
- the mowing discs for damage (see chapter "Maintenance and Service").

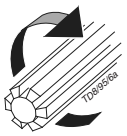
2. Only switch the machine on when in the working position and do not exceed the stipulated p.t.o. speed!

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

1000 Upm

- Always and only switch the p.t.o.drive on when all safety devices (covers, protective aprons, casings, etc.) are in proper condition and are attached to the implement in their safety positions.

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



4. Avoid any damage!

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

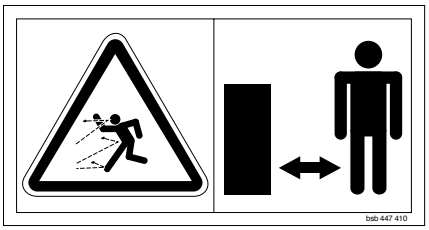
In the event of a collision

- Stop immediately and switch off the drive.
- Check the implement carefully for any damage In particular check the mowing discs and their drive shafts (4a).
- If necessary have it checked over in the work shop as well.

After contact with a foreign object

- Check the condition of knives and the knife holder (see chapter "Maintenance and Service").
- Retighten all knife screw fittings.

5. Keep away from the engine when running.



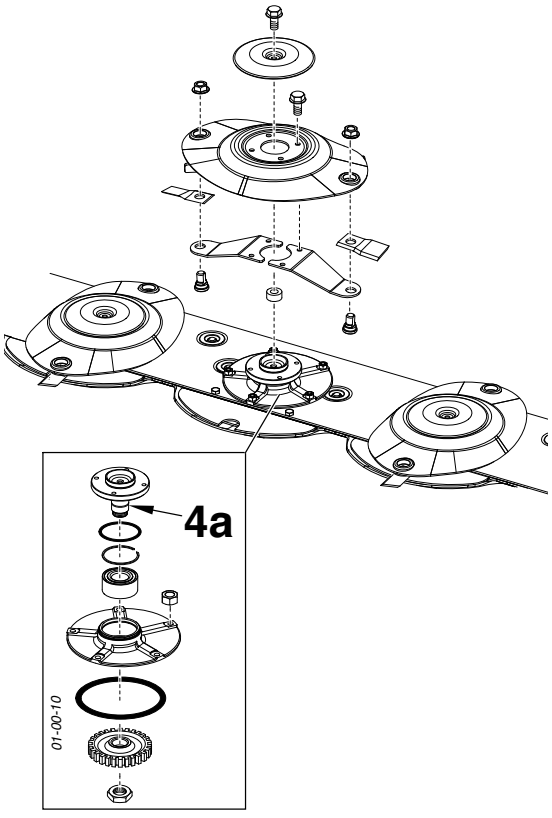
- Guide people out of the danger area as they may receive injuries from foreign objects being ejected by the mower.

  Special care is necessary on stony ground and near roads and paths.

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 an 85 dB(A) noise level is reached or exceeded, then the farmer (or contractor) must provide appropriate hearing protection (UVV 1.1 § 2).
- If a noise level of 90 dB (A) is reached or exceeded, then hearing protection must be worn (UVV 1.1 § 16).



Safety hints:

See Supplement A, pt. 1. - 7.)

Be advised!

After the first hours of operation

- **Retighten all knife screw fittings**

Be advised!

Check all safety equipment before starting work. In particular ensure that the side protection devices are folded down correctly in the off-road transport position!

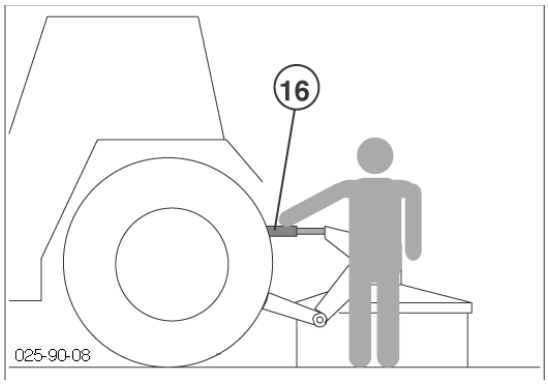
Mowing

1. **Set mowing height by turning the upper link spindle (max. 5° mowing disc incline).**

2. **For mowing, slowly engage the p.t.o. shaft away from the crop and bring the mower rotor up to full speed.**

   Smoothly increasing the p.t.o. speed will avoid system-related noises from the p.t.o. free-wheel.

- The driving speed depends on the ground conditions and the crop to be mown.



Reversing

Raise the mower when reversing!

Be advised!

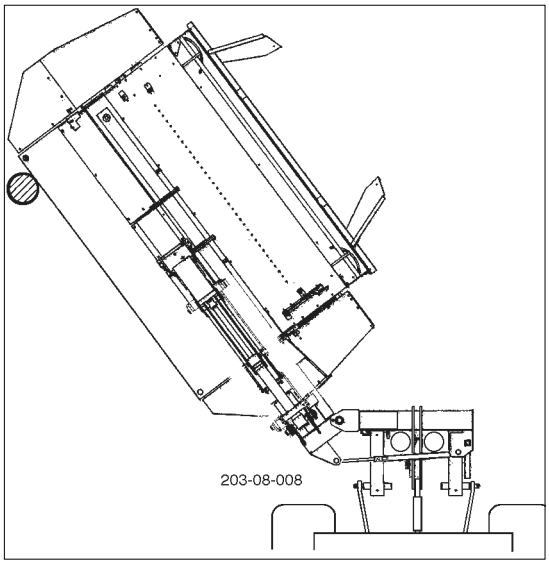
It is not the purpose of the collision safety device to prevent damage to the machine when working at full speed.

Anti-collision device

When mowing around trees, fences, boundary stones etc., collisions between the cutter bar and obstacles can occur despite careful and slow driving. So in order to prevent such damage, an anti-collision device has been provided for the mower.

The function of the hydraulic anti-collision device:

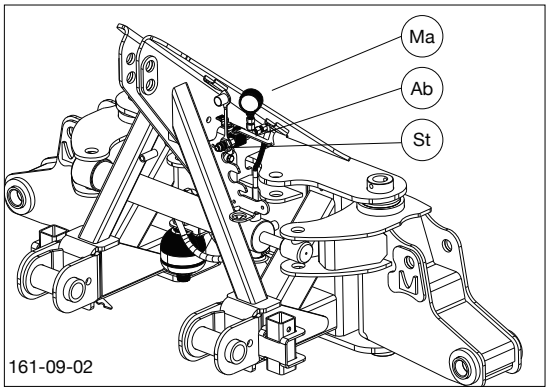
The accumulator pressure will then swing the cutter bar automatically back to the starting position.



Set accumulator pressure:

- Depressurise control valve on tractor.
- Connect plug coupling (St) to the tractor.
- Open shut-off valve (Ab).
- Actuate servo-valve on tractor until pressure setting is reached -> see manometer (Ma) display.

  Pressure setting: 110 bar
- Close shut-off valve (Ab).



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 information

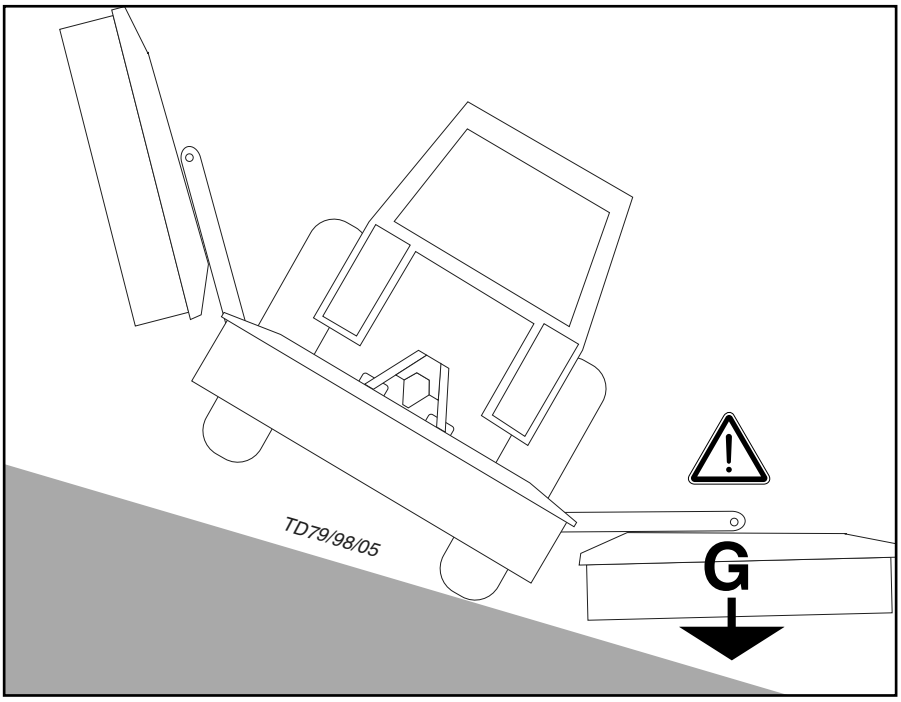
- Reduce speed when bending accordingly.
- It is better to travel in reverse on a slope than to carry out a risky turning manoeuvre.

Danger of tipping occurs

- when the mowing units are lifted hydraulically
- when bending with lifted mowing unit

Note:

Raise the mower when reversing!



Safety advice


Safety information

Before initial operation, read and observe the operating instructions, particularly the safety information,

Warning!

Danger of being drawn-in when components are still rotating. Do not open or remove protective devices with the engine running.

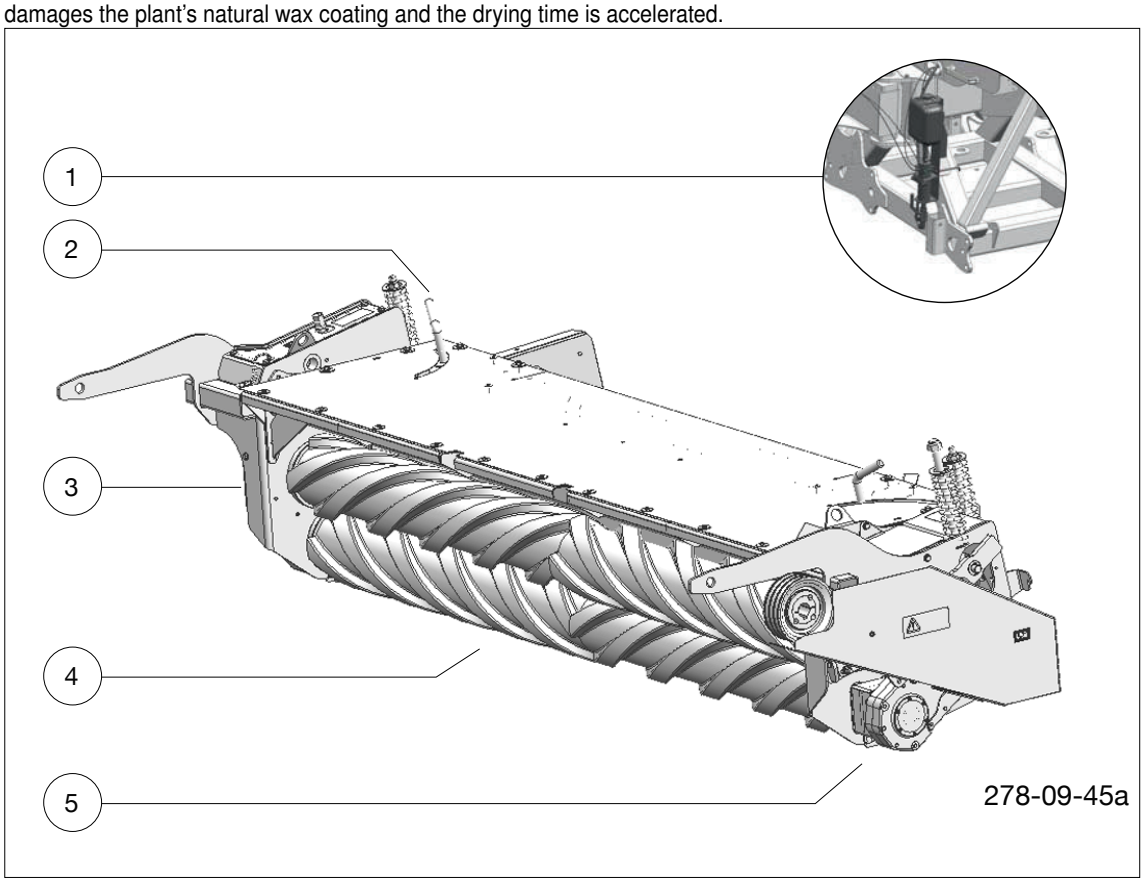
Caution!

Injury hazard from parts flung out.

Keep persons at a sufficiently safe distance during mowing.

Operation mode

The roller conditioner is suitable for lucerne and clover types. Two power-driven interlocking rollers crush the fodder. This damages the plant's natural wax coating and the drying time is accelerated.



Key:

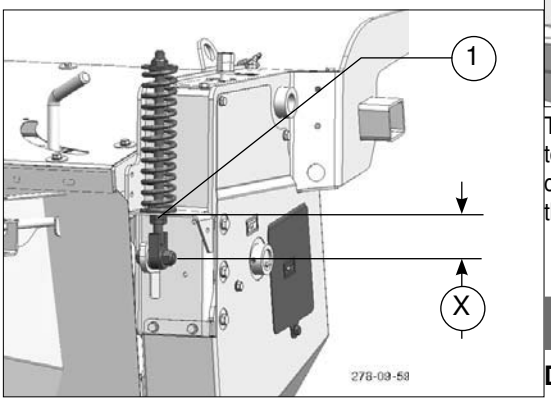
(1) Central lubricating unit (on supporting frame)
(2) Adjusting unit for swath board (left and right)
(3) Maintenance unit: Chain drive
(4) Upper and lower rubber roller
(5) Maintenance unit: Belt drive

Possible settings

When delivered, the roller conditioner is preset for medium intensity. For optimum adaptation to the surrounding conditions the following adjustments can be made:

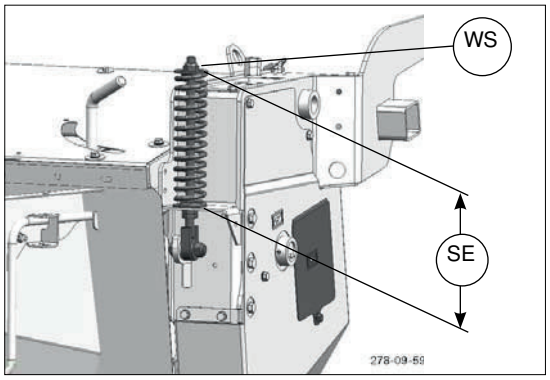
Distance between rollers:

The distance between the rollers is equally set, left and right, using the adjustment screw (1). Basic setting: (X) = 70 mm.



Because of component tolerances an uneven roller gap can occur despite basic setting. Check and unilaterally adjust the adjustment screw (1) if necessary.

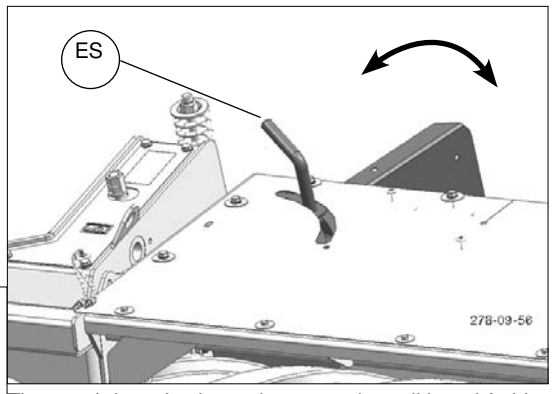
Upper roller spring pre-tension:



The upper roller is moveable and is tensioned left and right with a spring. The spring tension intensity can be adjusted at any time with nut (WS).

Standard setting (SE): 210 mm

Set swath width:



The swath boards shape the cut and conditioned fodder to the desired swath width. Adjusting the swath board is carried out identically left and right by opening and adjusting the adjusting screw (ES).

Operation

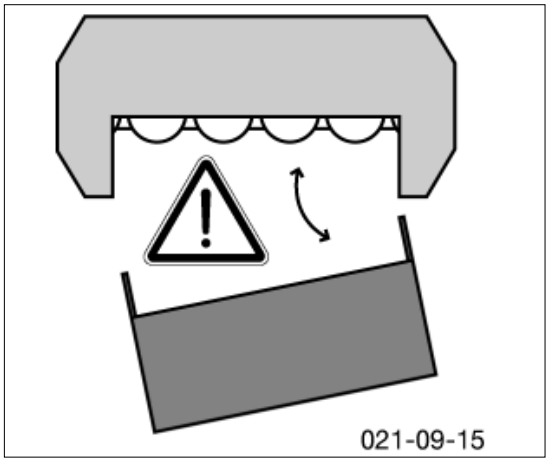
Driving speed:

Adapt the speed to fodder consistency. Travelling too fast reduces conditioning quality and evenness.

Working without roller conditioning:

If required the roller conditioner can also be removed and replaced with a tine conditioner or swath former. (Contact sales department for more information.)

A machine with a conditioner as a complete unit is fitted with the proper protective devices. Should the conditioner be removed then the mower unit is no longer completely encased. In this case mowing must not take place without fitting additional protective devices!



Be advised!

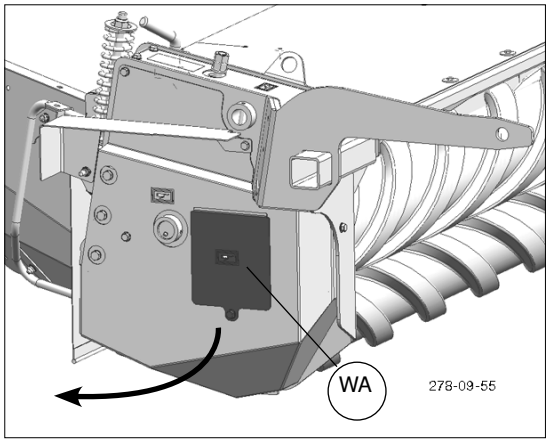
The disc mower cutter blades are freely accessible if the roller conditioner is dismounted. Maximum danger of injury exists. When mowing without a conditioner, protection elements especially designed for this operating mode, must be installed on cutter bar . These safety elements are not included in the scope of delivery for a new machine with conditioner. The parts must be ordered additionally (see spare parts list, component: "REAR PROTECTION“).

Maintenance

Caution!

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

Cleaning: (every 20 hours in operation)



- Screw off the covers and maintenance openings (WA) at the v-belt and chain drive
- Remove dirt deposits
- Clean rubber rollers

Dirt may impair lubrication leading to damage to property!

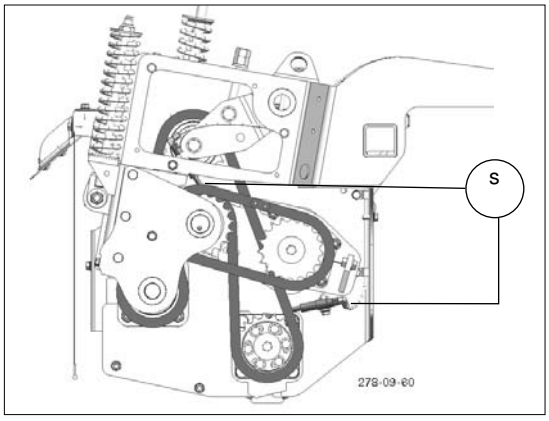
Chain drive maintenance unit

Lubrication: (every 20 hours in operation)

The following oils are recommended for the central lubrication device:
- HEES 46 synthetic oil

- HLP 46 hydraulic oil

Only use clean oil!



The drive chains are lubricated via the main lubricating device. A lubricating impulse is released every time the mower is raised

- Functional check of lubricating device (S)
- Check oil level (The oil container is attached at the bearing frame)

Check the oil level at the main lubrication unit prior to each use. Operation without sufficient lubrication causes damage to the drive chains.

Old oil pump
until July 2011

New oil pump
from August 2011

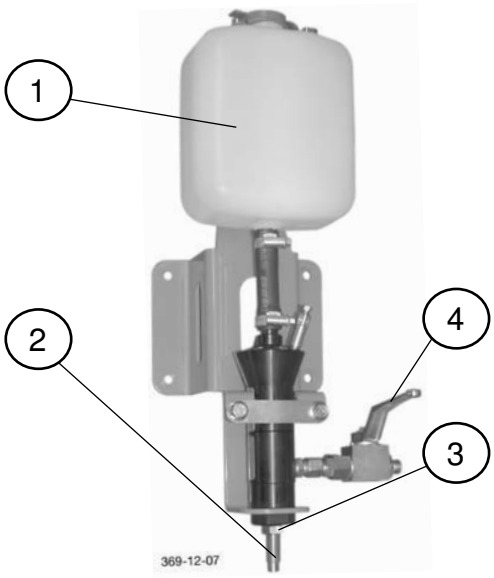
The old pump (until end of July 2011) does not allow adjustment of oil volume per lift. (see illust. 369-12-08) Pump is located on conditioner below oil reservoir (1).

The new pump (from August 2011) allows adjustment of oil volume per lift:

Correct setting for oil volume per lift:

The smaller the field the more often the mower lift per unit of time is triggered, so select the LOWEST oil volume to be injected per lift.

Set oil volume using adjusting screw (2) and lock nut (3). The further the adjusting screw is screwed into the pump, the lower the oil volume per lift.



(1) Oil reservoir
(2) Adjusting screw
(3) Lock nut
(4) Stopcock (Lubrication on/off)

Setting the lubrication amount

- Factory setting: X=27.5 mm
- Unscrew screw to increase the lubrication amount.
- Screw in screw to decrease the lubrication amount.

Check the oil level in the main lubrication unit prior to each use. Operation without sufficient lubrication causes damage to the drive chains.

Chain tension: (after every 60 hours in operation)

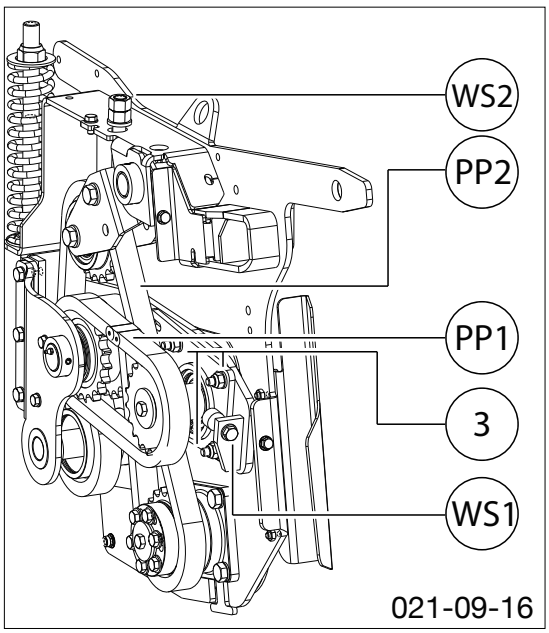
Short drive chain

Check chain tension with your thumb on check point (PP1).
Play: 3.5 –5 mm.

Alter chain tension:

• Loosen screws (3)
• Adjust tensioning screw (WS1)

Long drive chain

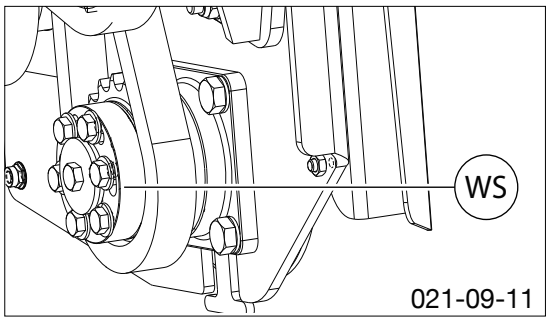


Check chain tension with your thumb on check point (PP2).
Play: 5 – 8 mm.

Alter chain tension:

• Adjust tensioning screw (WS2)

Alter roller position: (as required)



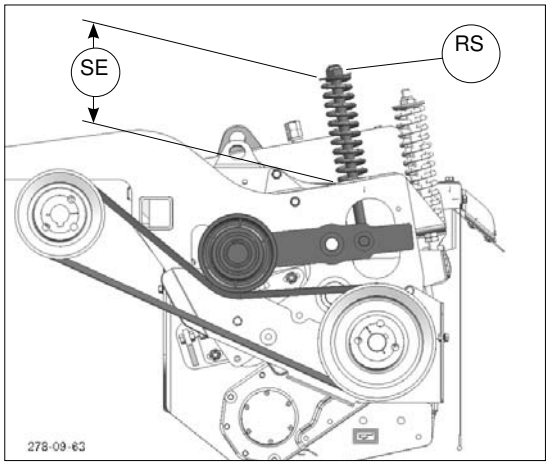
The roller position changes if the drive chains are re-tensioned several times.

Alter roller position:

Loosen the screws (WS) and rotate the roller. Set the position of the lower roller so that the profile of both rollers is optimally interlock and not touch each other.

Optimum roller position reduces wear on the rubber rollers.

Drive belts: (as required)



Check belt tension:

- Basic setting (SE): 200 mm

Changing belt tension:

- Adjust screw (RS)

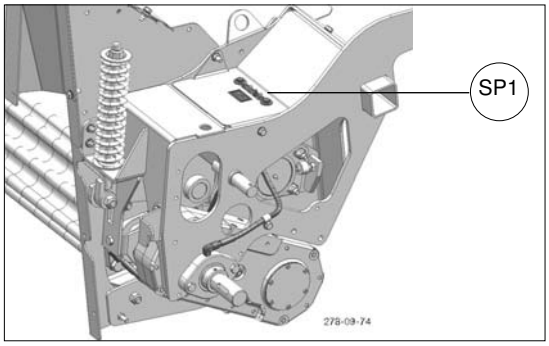
Replacing belts:

When the drive belts show signs of damage or wear, they must be replaced. (Note: Always replace the complete belt set!)

- Loosen belt tension. In support, use the blade quick-change spanner to deactivate the belt tensioner.
- Replace belt
- Restore belt tension

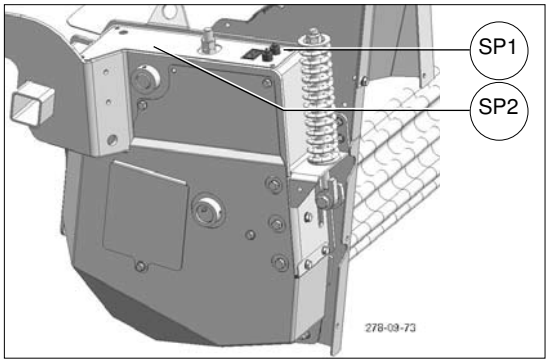
Lubrication:

(After every 50 operating hours)



• SP1

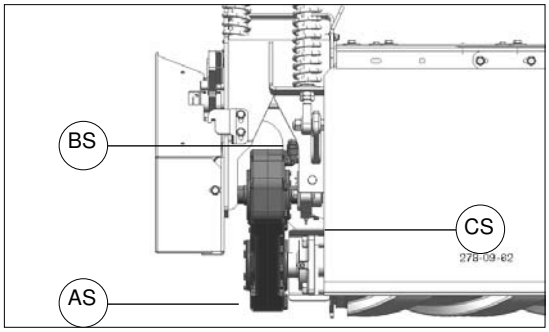
(Every 100 operating hours)



- SP 2 (Unscrew the top cover to lubricate!)

Gear oil:

(After every 100 operating hours)

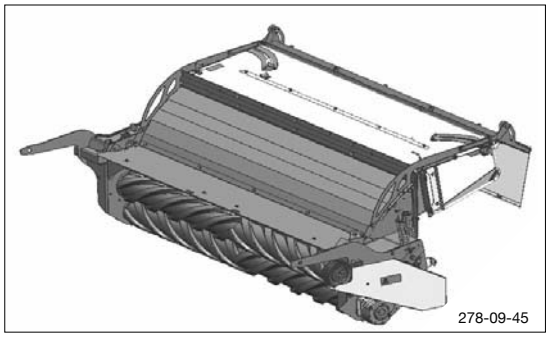


The gearbox is located on the outside of the cutter bar.

- Open drain plug (AS) and drain oil
- Fill gear oil (700ml) at filling screws (BS)
- CS = oil level

(Fully synthetic lubricating oil for high-temperature lubrication, ISO-VG class 220)

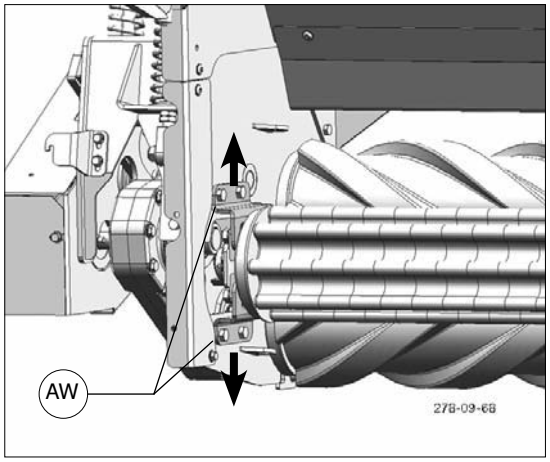
Roller conditioner for collector



A dedicated roller conditioner is necessary if the mower combination is fitted with a collector. The differences are:

- greater ejection
- additional roller

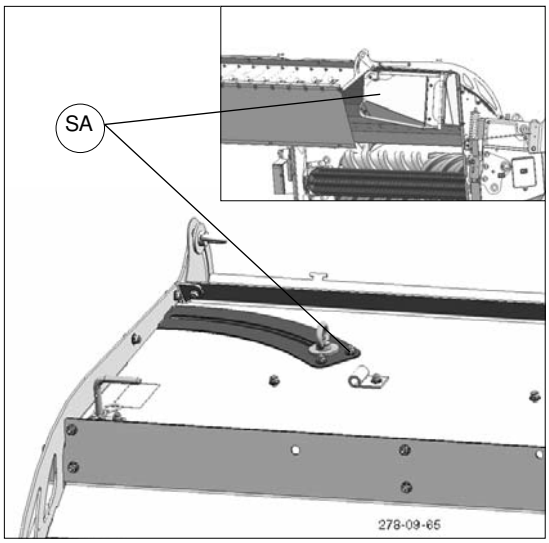
Adjust ejection angle:



The additional roller affects the ejection angle of the mowed material. The height of the roller may be altered to adjust the ejection angle.

- Unscrew the 4 bolts (AW) left and right
- Adjust the roller height and fix in position

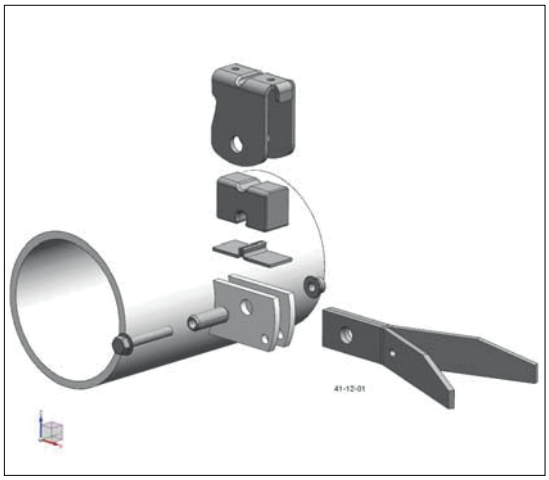
Swath plate in conjunction with collector:



The swath plate is easy to remove and may be pinned to the processor's ejection hood (SA)

Maintenance of the rotor tines:

1. Replacing the tine fastening



If signs of severe wear on the tine fastening are discovered, it must be replaced completely (tines, screw, clamping sleeve, ...).

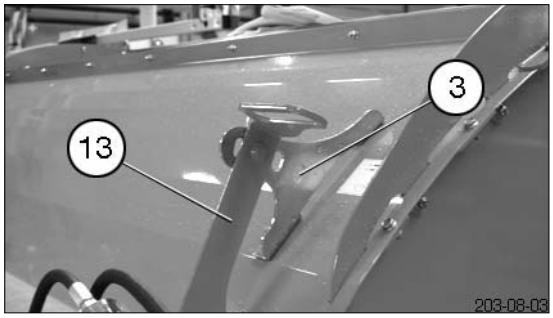
Mowing with the conditioner

The conditioner effect can be modified.

- The distance between the adjusting strip and the rotor is set using lever (13).

  Conditioning is strongest in the deepest position (pos. 3)

  However, the fodder must not be beaten.

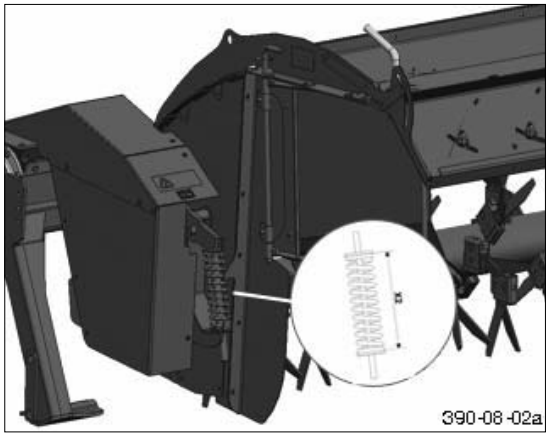


Rotor speed 700 rpm

- less deterioration of the mowed material

  Belt discs, belts and the belt protection must be replaced. See the spare parts list for the parts.

Correct V-belt tension



Control size X2

Rotor speed (rpm) *	Size X2 (mm)
700	192
900	202

*) function of which belt disc the tine conditioner is equipped with.

Rotor tines:

1. Replacing tine fastening

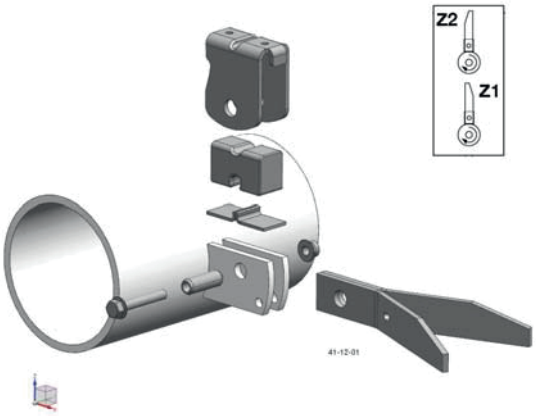
If signs of strong wear are found on the tine fixings, then the affected component(s) must be replaced. (tines, screw, clamping sleeve, ...)

2. Rotor tines position

Pos. Z1: Rotor tines position for normal operating conditions.

Pos. Z2: For difficult operating conditions, e.g. if the fodder winds around the rotor.

Turn the rotor tines 180° (pos.Z2). This tine position solves the problem in most cases. However, the conditioning effect is thereby somewhat reduced.



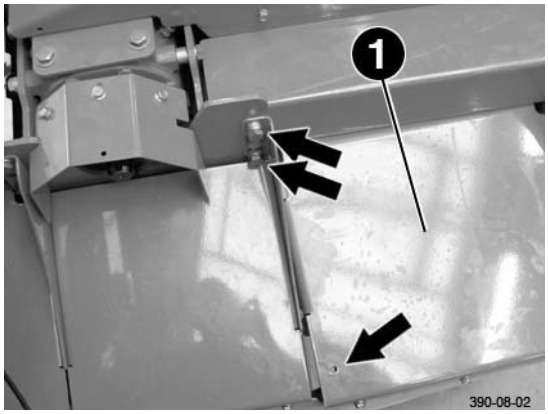
Installing and removing the conditioner

1. Decrease relieving pressure

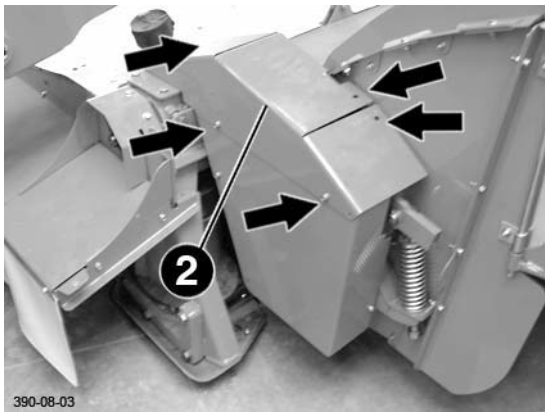
- Decrease pressure to approx. 80 bar from the control device
- For the procedure see "Power Control" or "ISO-Bus" control

2. Remove the protection parts

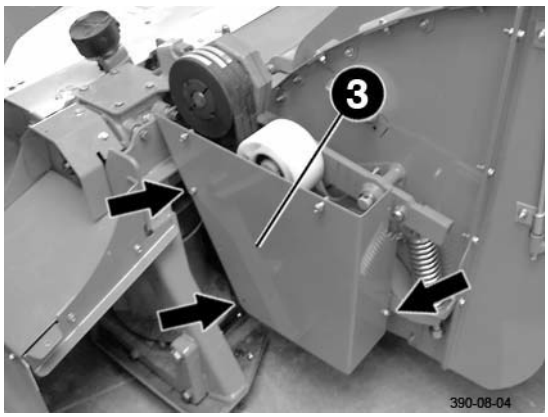
- Unhitch protection (1)



- Unhitch protection (2)

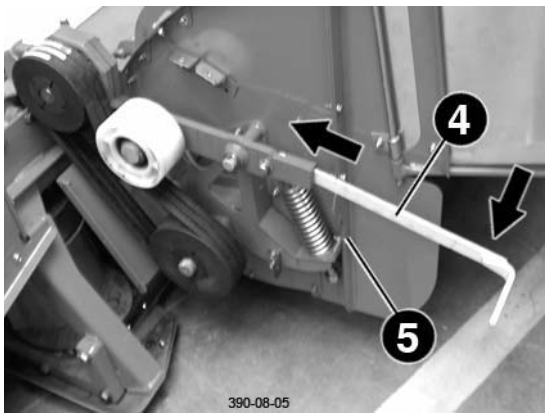


- Unhitch protection (3)



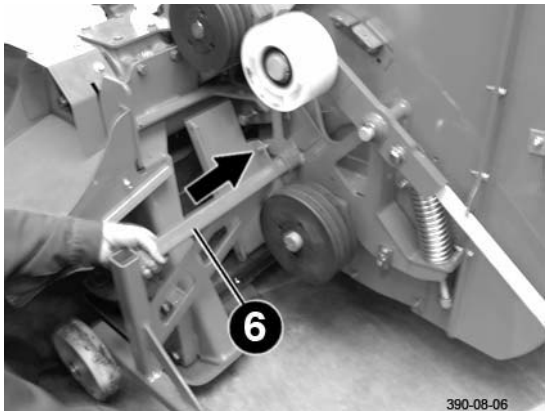
3. Remove belts

- Pin up flat lever (4)
- Push flat lever down and secure it in the strap (5).
- Remove belts



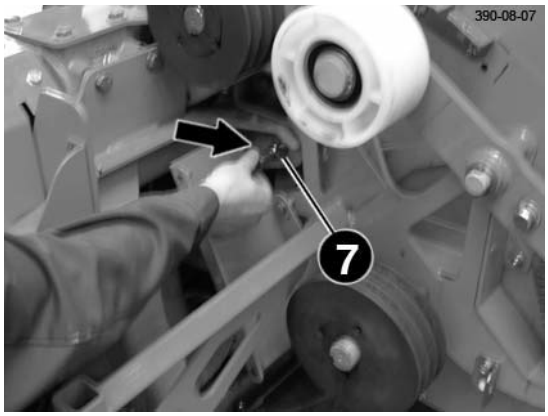
4. Fit transport wheels

- Pin transport wheels (6) left and right



5. Release left and right locks

- Turn out the adjusting screw (7) left and right

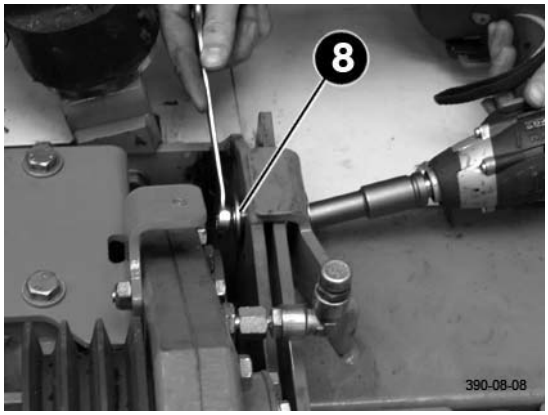


- Remove screw (8) left and right

Be advised!

Reduce the hydraulic pressure of the release mechanism before dismounting the conditioner.

Otherwise there is the danger that the mower bar will suddenly swivel up once the conditioner is uncoupled.



- The conditioner is now detached from the mower unit

Note:

First you must unhitch the upper protection cover on the left side.

6. Remove conditioner

- Take the conditioner out of the machine by pulling it back
- Always park the conditioner in a stable position

7. Reattach the protection covers

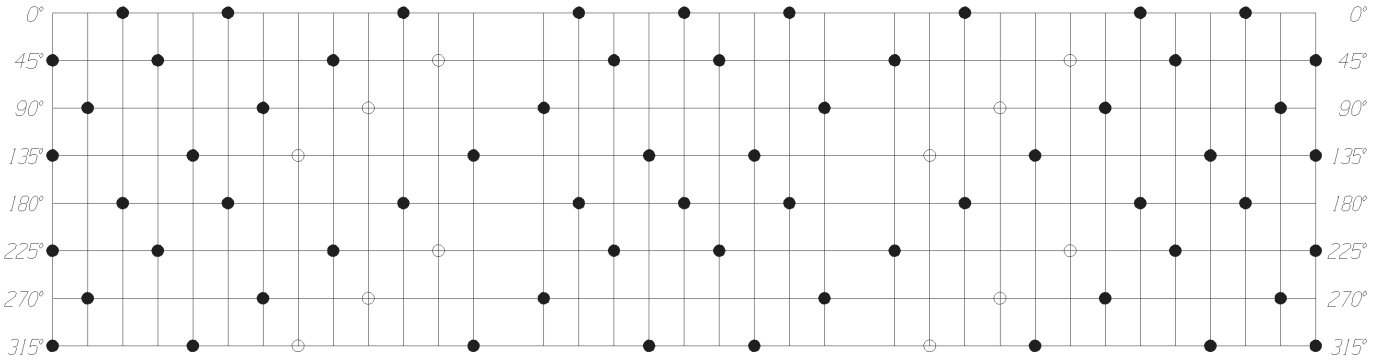
8. Fit the protection element or swath former

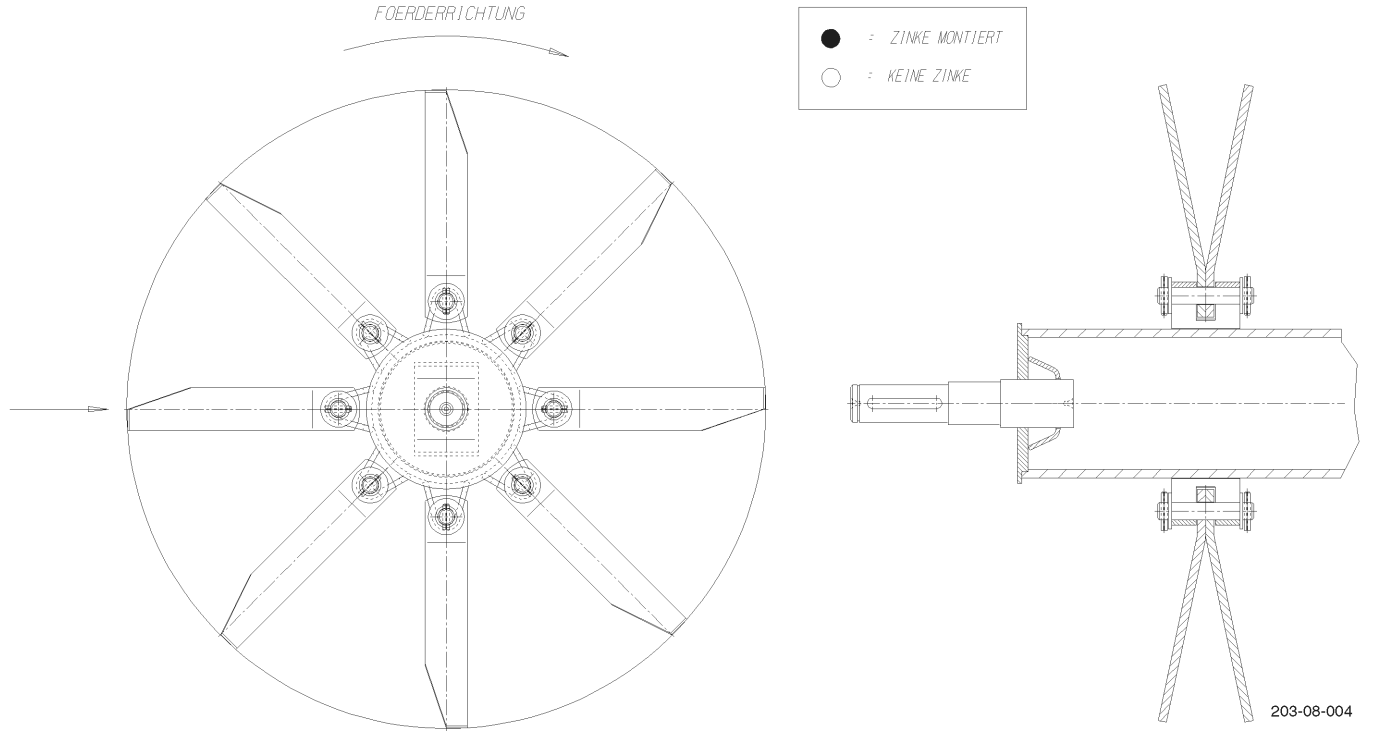
Refitting the conditioner takes place in the logical reverse order.

Important!

When mowing without conditioner, additional safety elements and both swath formers must be attached to the cutter bar. For parts see the spare parts list.

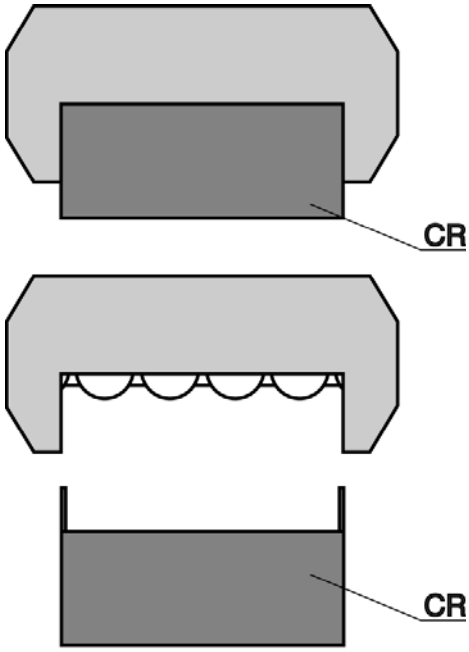
NOVACAT V10 (Type 3846)





Mowing without Conditioner

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



Safety hint

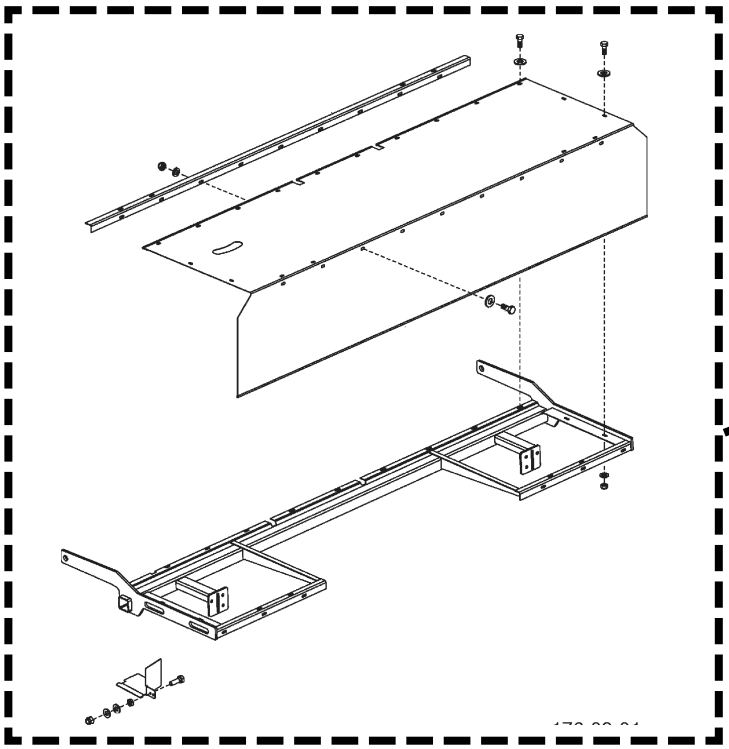
A machine with a conditioner (CR) as a complete unit is fitted with proper protection elements.

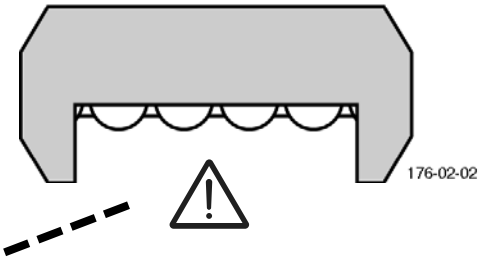
Should the conditioner be detached however, the mowing unit no longer has complete protection covering. In this situation mowing may not take place without additional protection elements!

Beware!

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

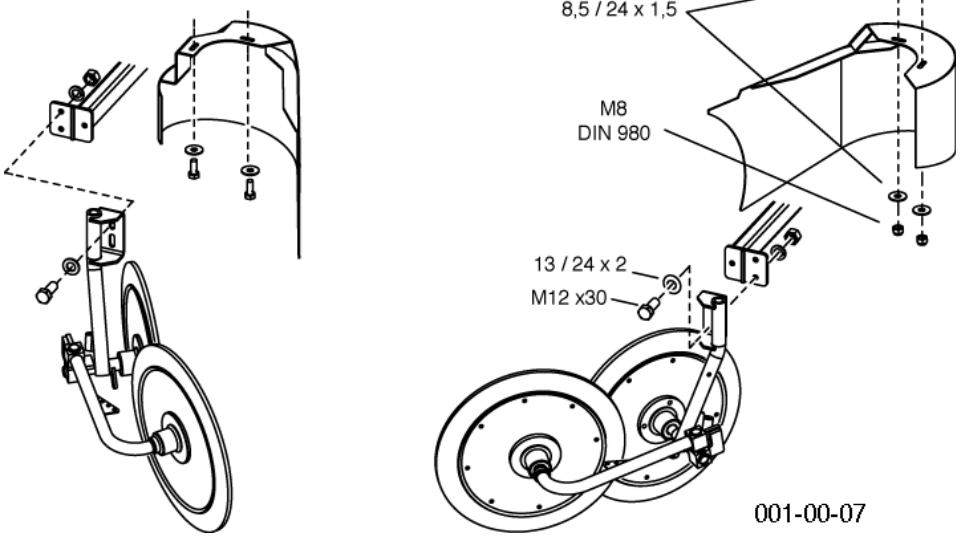
These protection elements are not included in the delivery of a new machine with a conditioner, the parts must be additionally ordered (see Spare Parts List, component group "REAR PROTECTION").





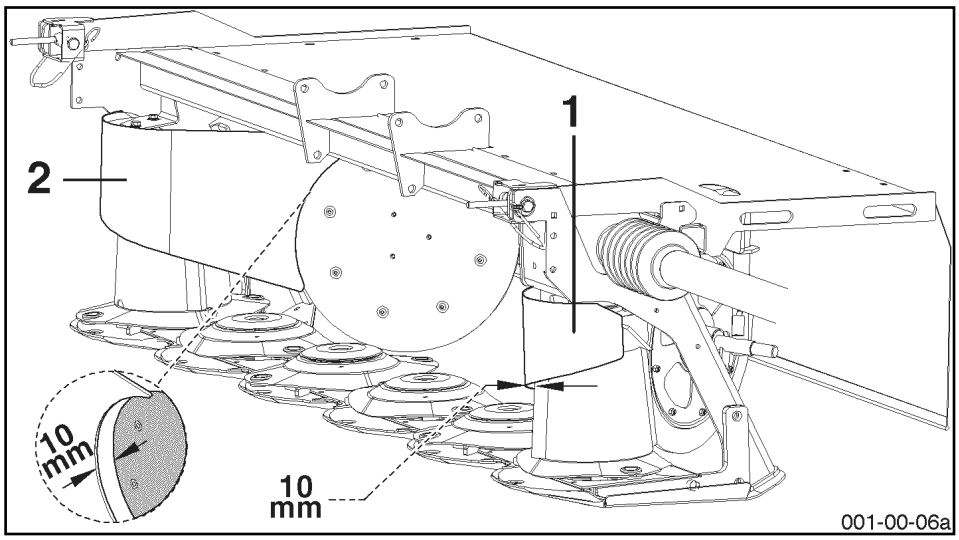
Swath Discs

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)

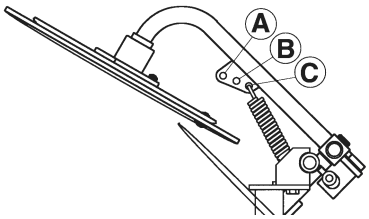


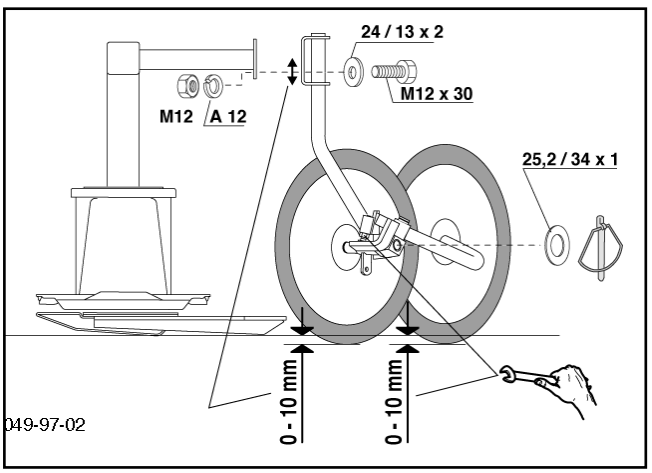
Setting both tension springs

A = for high dense forage

B = basic setting

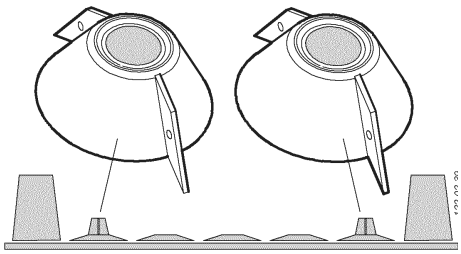
C = for short forage





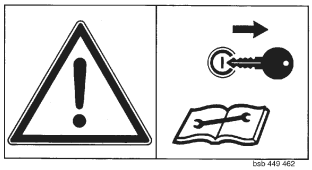
Flat cone conveyor (Optional extra)

- 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 advice

- Switch off engine prior to any adjustment, maintenance or repair work.



General maintenance information

Please observe the infiormation below to maintain the implement in good condition even after a long period in operation:

- Re-tighten all bolts after the first hours in operation.

The following should be checked in particular:

Blade bolt connections at mower

Tine bolt connections at rake and tedder

Spare parts

a. Original parts and accessories are specially designed for the implements.

b. We expressly point out that we have not tested or approved any original parts and accessories not supplied by us.

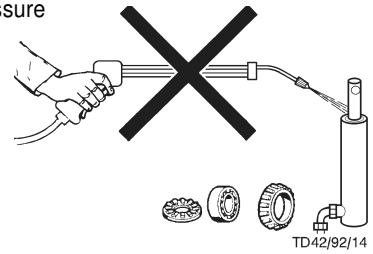
c. The installation and/or use of such products may under certain circumstances negatively modify or impair the propeties of the implement as specified in the design. Any liability on the part of the manufacturer is excluded in the event of any damage due to the use of non-original parts and accessories.

d. Any unauthorised modifications or the use of components and attachments at the implement rules out any liability on the part of the manufacturer.

Cleaning of machine parts

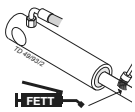
Be advised! Do not use high-pressure washers for the cleaning of bearing- and hydraulic parts.

- Danger of rust!
- After cleaning, lubricate the implement according to the lubrication plan and perform a brief test run.
- Cleaning pressure being too high may damage the paint.



Parking in the open

Clean and protect the piston rods with grease prior to longer periods parked outside.



Winter storage

- Clean implement thoroughly prior to winter storage.
- Put up protection against weather.
- Change or top up gear oil.
- Protect exposed parts from rust.
- Lubricate all greasing points according to lubrication chart.
- Disconnect terminal, store dry and protected from frost.

Cardans

- See information in Attachment

Please observe the following for maintenance!

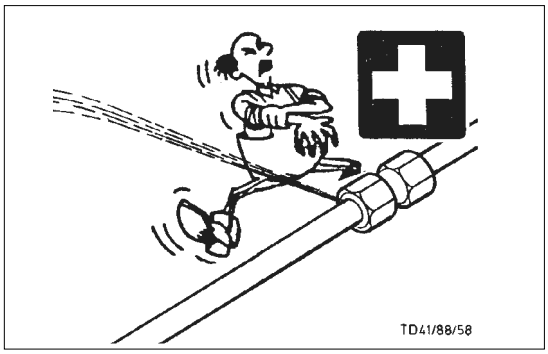
The instructions in these Operating Instructions apply.

If no particular instructions are available here, then the information in the instructions supplied by the respective cardan shaft manufacturer apply.

Hydraulic unit

Caution injury and infection hazard!

Liquids discharging at high pressure may penetrate the skin. Therefore seek immediate medical help!



Make sure that the hydraulic system is suitable for the tractor before connecting the hydraulic lines.

After the first 10 hours in operation and thereafter every 50 hours in operation

- Check hydraulic unit and piping for leaks and if necessary re-tighten bolt connections.

Prior to every taking into operation

- Check hydraulic hoses for wear.

  Replace any 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 advice

• Switch off engine and remove ignition key prior to any adjustment, maintenance or repair work.

• Only perform work underneath the implement with secure supports.

• Re-tighten all bolts after the first hours in operation.

• Only park implement on flat, firm ground.

Repair information

Please observe the repair information in the Attachment (If available).

Safety advice

Clean the coupling plug of the hydraulic hoses and the oil socket prior to each connection.

Note any abrasion and clamping points.

Cutter bar oil level check

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

Caution

Cleaning and maintenance works shall be performed only with the machine turned off and the mowing units lowered.

Note:

Carry out oil level check at operating temperature.

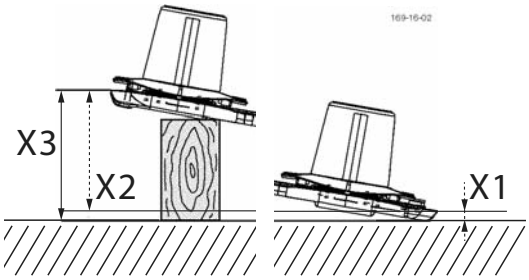
The oil is too viscous when cold. Too much old oil sticks to the gearwheels which then gives a false reading.

1. Lift one side of the mower bar X3 and support it.

X3 = X2 + X1

X1 = Distance from ground to vats upper edge.

X2 = Distance from vats upper edge left to vats upper edge right.



NOVACAT V10: X2 = 300 mm

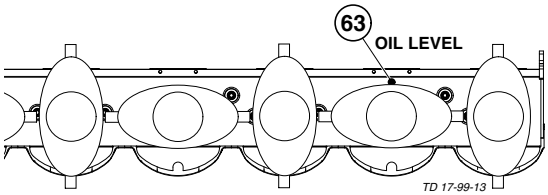
- The side where the oil refill screw is located remains on the ground.
- Lift the other side of the mower bar about X1 and support with a suitable prop.

2. Leave mower bar in this position for about 15 minutes.

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

3. Remove oil fill screw (63).

Measure oil level through the opening (63).

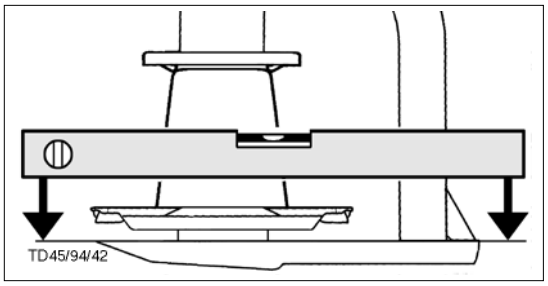


4. Oil level check

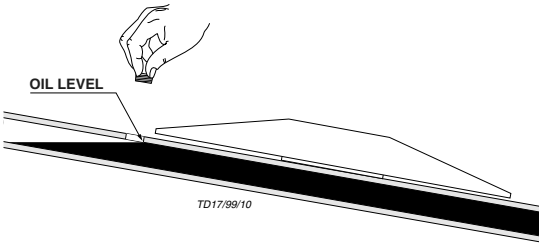
Important information when measuring the oil level:

You jack up the cutter bar depending on the length.

The cutter bar width must be adjusted in precise horizontal position. (see image).



The oil level is correct if the gear oil reaches the lower edge of the level opening (63) (OIL LEVEL).



5. Topping up oil

Complete with the missing oil quantity.

Note

- **Too much oil can cause the cutter bar to overheat during operation.**
- **Too little oil does not guarantee the necessary lubrication.**

Oil change for cutter bar

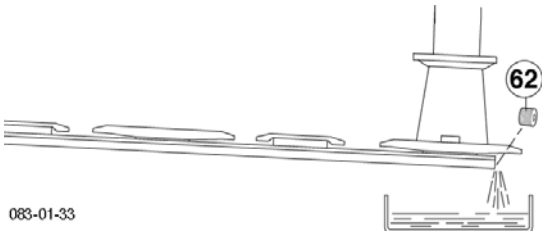
Note:

Carry out oil change at operating temperature

The oil is too viscous when cold. Too much old oil remains stuck to the gearwheels and prevents the removal of any suspended matter present in the gearbox.

Oil change

- Change oil after every 100hrs of operation and then annually, at least.
- Lift cutter bar on the outer side.
- Remove oil drain plug (62), let oil drain and then dispose of waste oil correctly.



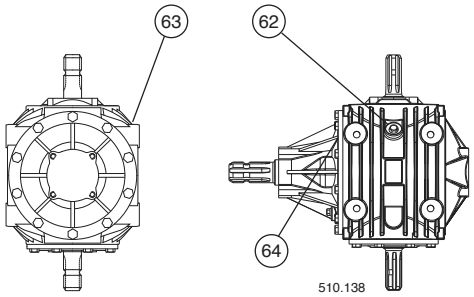
Oil quantity: 3.5 litre SAE 90

Maintaining the gearbox

Note!

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

Input gearbox (IG)

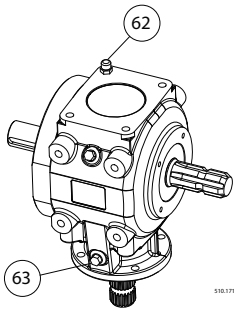


- Change oil after the first 50 operating hours.
- Change oil after 100 operating hours, at the latest.

Oil quantity:

4.0 litre SAE 90

Angular gear (AG)

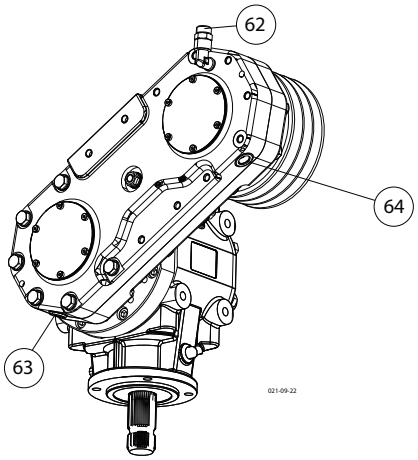


- Change oil after the first 50 operating hours.
- Change oil after 100 operating hours, at the latest.

Oil quantity:

0.8 litre SAE 90

Spur gear for conditioner (SG)



- Change oil after the first 50 operating hours.
- Change oil after 100 operating hours, at the latest.

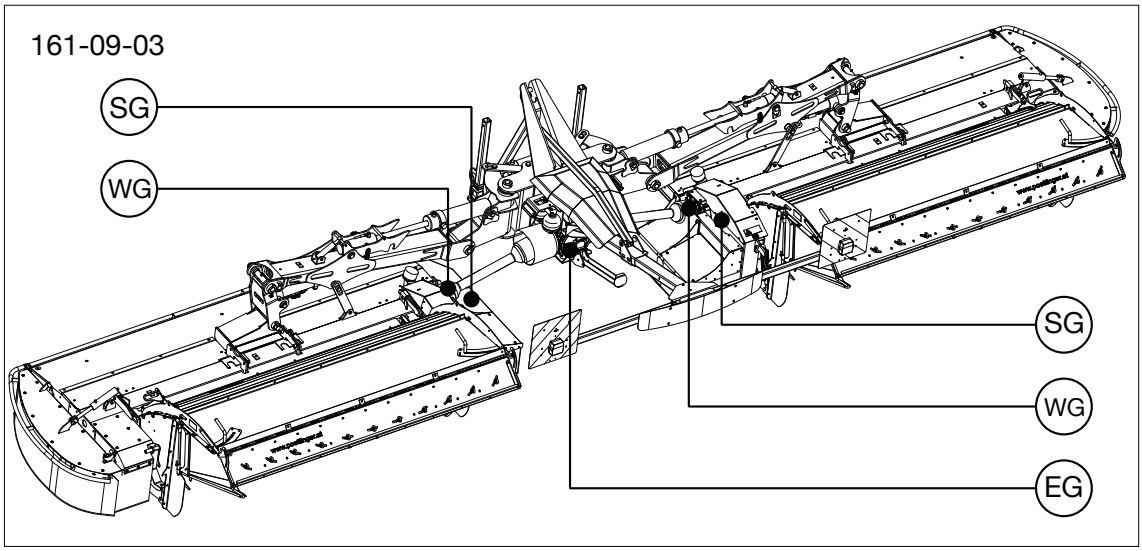
Oil quantity:

(0,7 litres Fully synthetic lubricating oil for high-temperature lubrication, ISO-VG class 220)

Fill opening (62)

Drain opening (63)

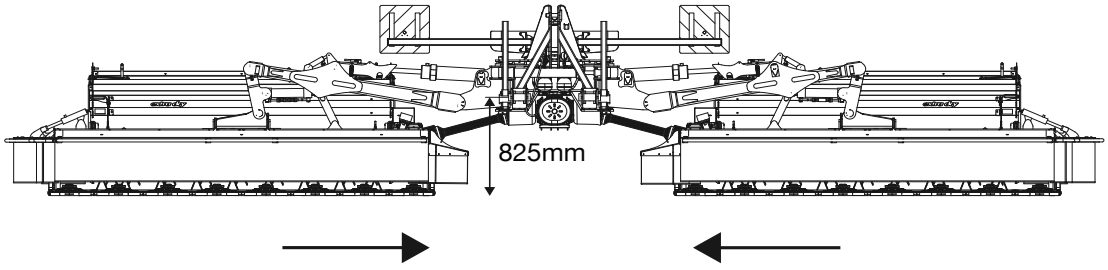
Oil level check (OIL LEVEL) (64)



Maintenance of the mower articulated shafts

For the maintenance of the two articulated shafts on the mower, select the following mower setting:

- Set lower link height at approx. 825mm
- Set the mower units on "Working position, narrow"
- Position the mower unit so that the articulated shafts are 50-60 mm apart. Open the lubricating nipple by removing the black sleeve to the side.



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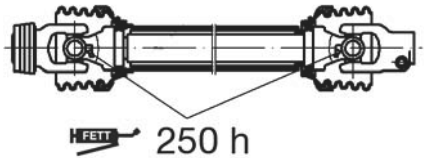
Greasing points:

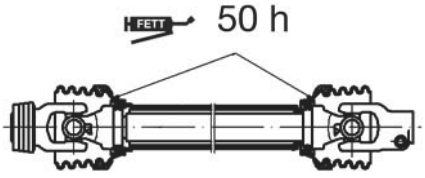
- Lubricate 2x the cardan joints in the cup bottom every 250 operating hours,

  Quantity of grease: until the grease escapes at the seals.



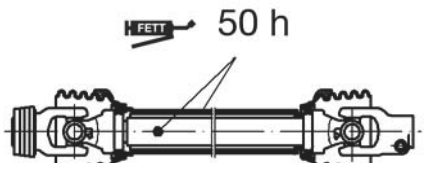
- Lubricate 2x the protective slide bearings (with the exception of the protective guards) every 50 operating hours

  Quantity of grease: 3 strokes



- Lubricate 2x the profile pipe lubrication nipples and the related inner protective slide bearings every 50 operating hours (180° opposite)

  Quantity of grease: Profile pipe lubrication nipples including the inner protective slide bearings: 5 strokes



Note:

The lubrication nipples are 180° offset. Both must be lubricated!

Friction-free clutch:

Ventilate the clutch:

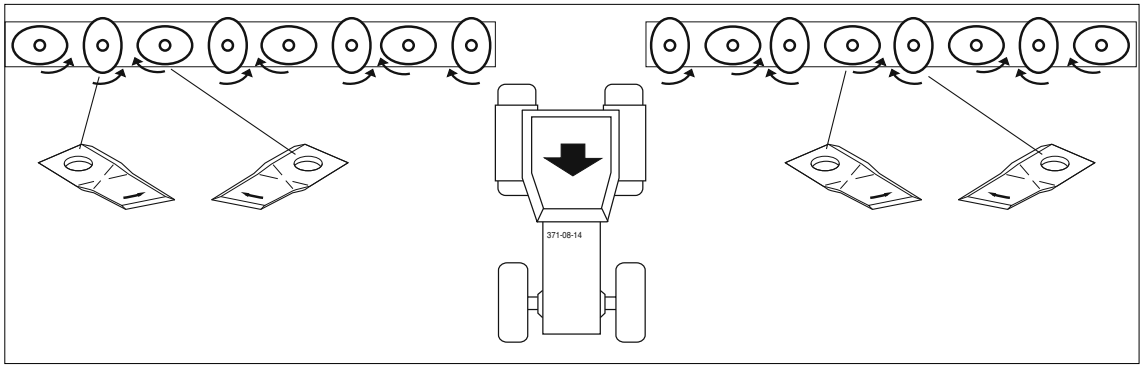
1. at least once a year (ideally after the winter break, before initial operation in spring)
2. after the machine has been at a standstill for longer intervals
3. after frequent washing of the machine

Installing cutter blades

Be advised!

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

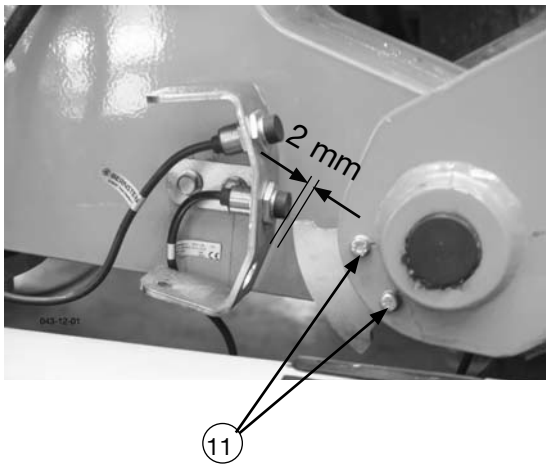
- Before installing, clean the bolt fixing surfaces of paint.



Setting the field transport position (headlands FT)

The following guide is valid for both cutter bars.

1. Set the gap (2 mm) between the sensor and the disc
2. Raise both cutter bars until the hydraulic cylinders have retracted to a measurement of "1170 mm".
3. Loosen the disc screws (11).
4. Move the disc (10) along the slot until the edge is located almost at the sensor (S1).
3. Retighten disc screw fittings.

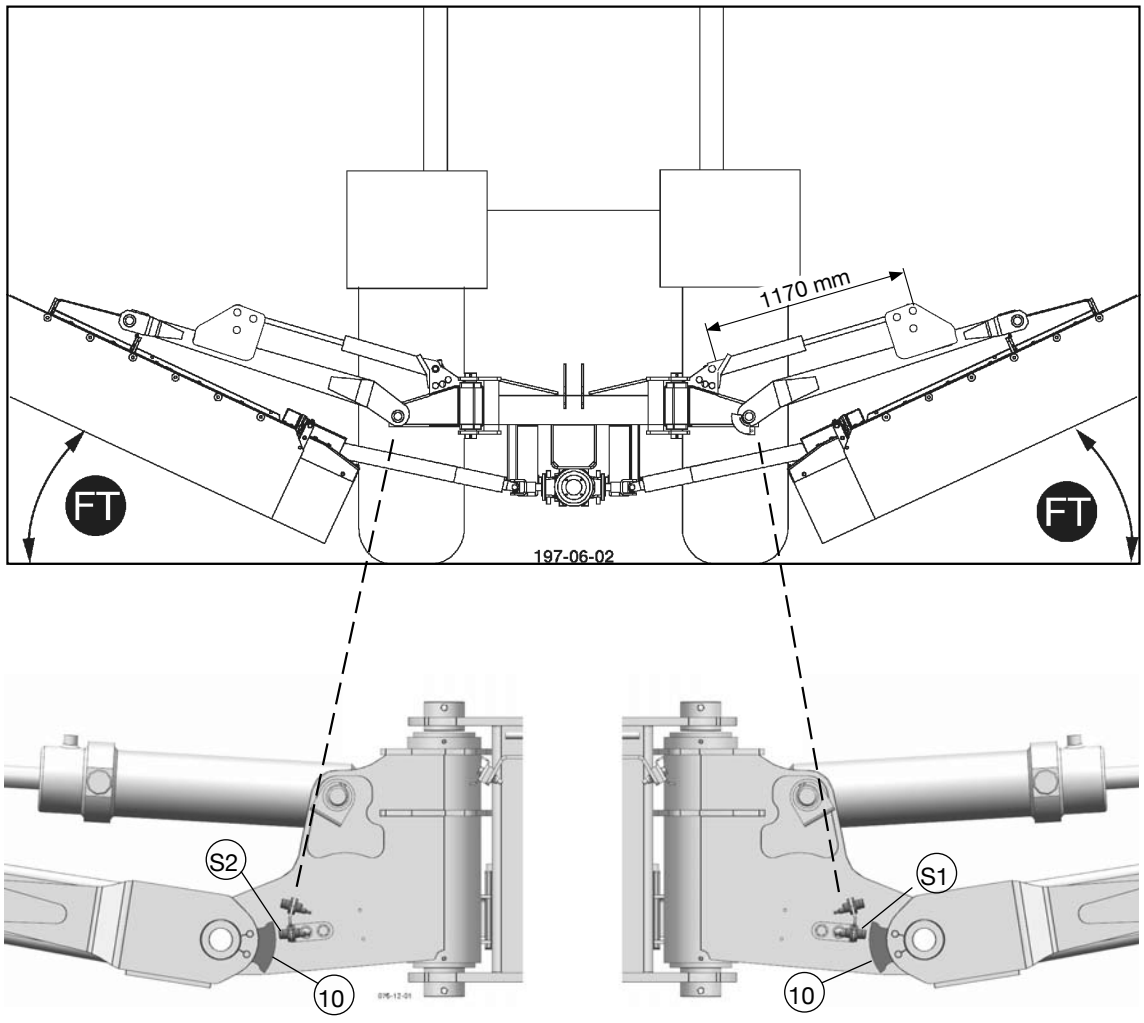


Set sensors

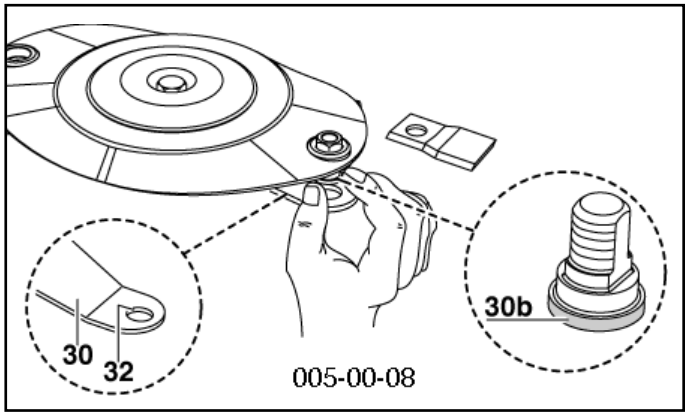
Adjustments and checks must always be carried out in the operating position where the distance from the sensor is smallest.

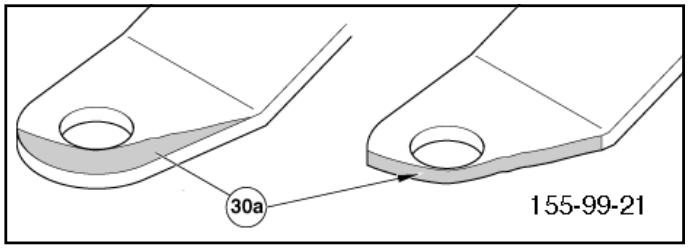
There is also a possible assembly clearance to consider.

Gap 2 mm



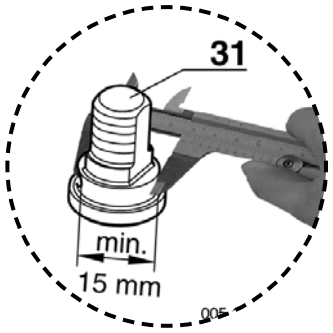
Checking wear on mowing blade holders





Wearing parts are:

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



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...)

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

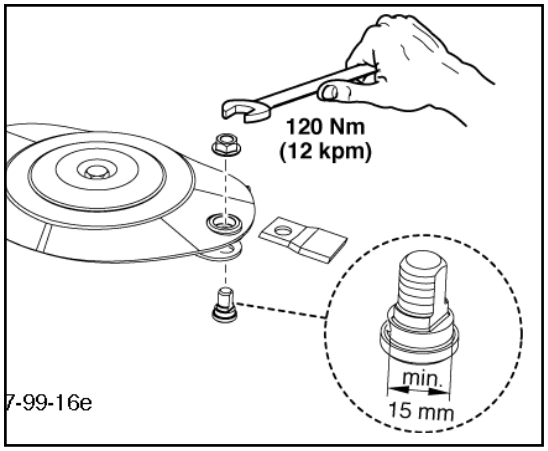
If you notice one or several of these characteristics of wear stop mowing at once!

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,...)



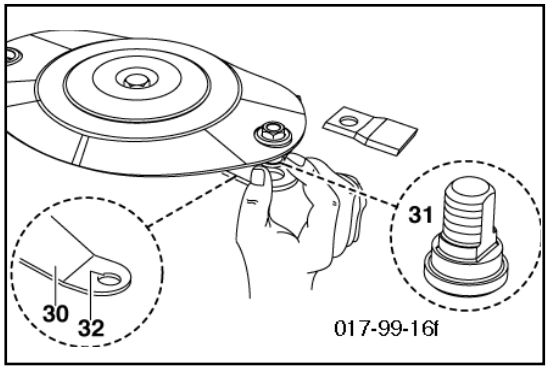
Holder for a quick change of cutter blades

Attention!

For Your Safety

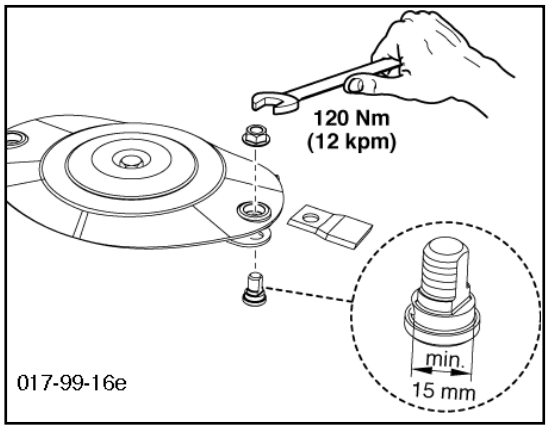
- Regularly check that cutter blades are tightened firmly!
  - Cutter blades on a cutter disc should wear out simultaneously (danger of imbalance).

    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).

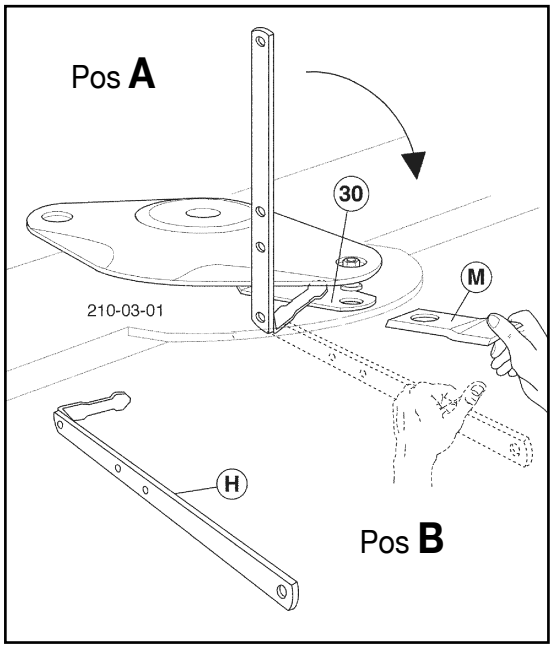


Carry out a check

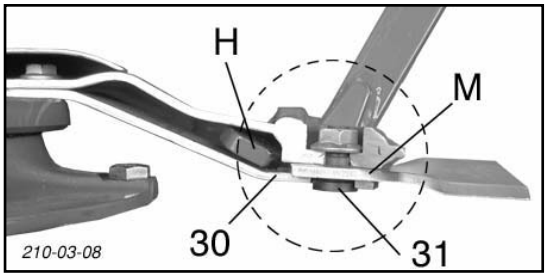
- as described in chapter „Changing the Cutter Blades“

Changing the Cutter Blades

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.

Take note!

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

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.

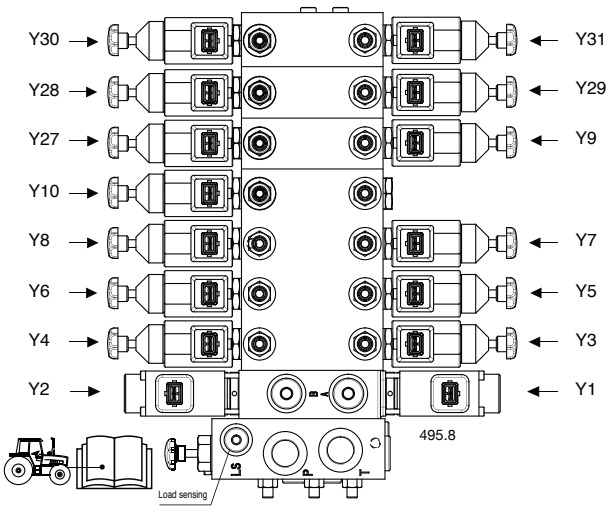
Be alert to the dangers involved with all raising and lowering, and on and off switching activities!

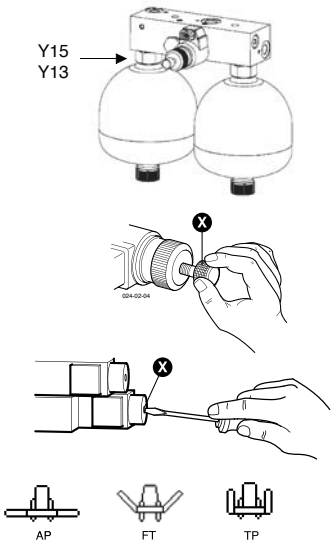
The hydraulic block is located under the front protective cover.

To carry out the desired hydraulic function

- Screw in the correct valve knob
- Turn on servo-valve on the towing vehicle
- The hydraulic function will be carried out
- Afterwards, unscrew the relevant valve knob again

	Remark	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y13	Y15	Y27	Y28	Y29	Y30	Y31
	FT	X		X														
	TP	X		X														
	AP			X								X						
	FT			X														
	FT	X				X												
	TP	X				X												
	AP					X							X					
	FT					X												
	FT / TP	X						X										
	AP							X	X									
	TP		X								X							
	TP										X							
	FT	X								X				X				
	FT		X							X				X				
			X	X	X	X	X					X	X					
				X	X	X	X					X	X					
		X															X	X
			X														X	X
		X													X	X		
			X												X	X		
		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y13	Y15	Y27	Y28	Y29	Y30	Y31





Technical data

Description		NOVACAT V10 (Type 3846)	NOVACAT V10 ED (Type 3846)
Three-point linkage		Kat III	Kat III
No. of mowing discs		2 x 8	2 x 8
No. of knives per disc		2	2
Working width	[m]	8,76 - 9,98	8,76 - 9,98
Transport width with - 3,0 m frame - 3,5 m frame	[m] [m]	2,99 3,42	2,99 3,42
Ground clearance in transport position	[mm]	150	150
Transport height	[m]	3,99	3,99
Transport length	[m]	2,62	2,62
Required power	[kw/PS]	99 / 135	110 / 150
Coverage up to	[ha/h]	12,0	12,0
Max. p.t.o. speed	[U/min^{-1}]	1000	1000
Torque limiter	[Nm]	1100	1100
Weight [1)]	[kg]	2300	2720
Permanent sound emmission level	[db(A)]	93,6	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)

Position of Vehicle Identification Plate

The chassis number is engraved on the name plate illustrated on the left. Warranty claims, enquiries and spare parts orders cannot be made without quoting the chassis number.

Please enter the number on the title page of the Operating Instructions immediately on taking delivery of the vehicle/ equipment.

1) Weight: Variations possible depending on machine features.

The defined use of the mower unit

The „**NOVACAT V10 (Type 3846**)“ 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. Operating instructions

a. The operating instructions are important for the correct operation of the machine. Make sure that the operating instructions are always on hand when operating the machine.

b. Keep the operating instructions as long as the machine is in your hands.

c. Pass the operating instructions on to the buyer when selling the machine.

d. Make sure that all safety and warning symbols remain attached on the machine and keep them readable. The hazard warnings provide important information for a safe operation and, thus, your safety.

2. Qualified personnel

a. Only persons of legal age, mentally and physically able and having been trained or familiarized accordingly must operate this machine.

b. Persons not yet trained or familiarized or under training must only operate this machine under the supervision of an experienced person.

c. Inspection, setting and repair work must only be performed by authorized persons.

3. Repair work

a. These instructions only refer to service, maintenance and repair operations the user is able to carry out without assistance. Any work beyond this scope has to be carried out at authorized workshops only.

b. Repairs on the electrical and hydraulic system, preloaded springs, pressure accumulators, etc. require sufficient knowledge, correct tools and protective clothing and, thus, must only be performed at authorized workshops.

4.) Defined use

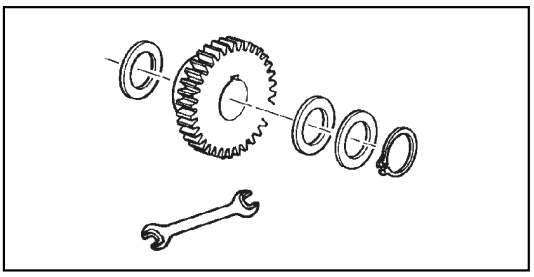
a. See "Technical Data".

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

5.) 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.

6.) Protection devices

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

7.) 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.

8.) Asbestos

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

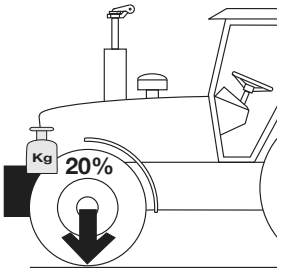
9.) Transport of persons prohibited

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.

10.) 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!

11.) 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!

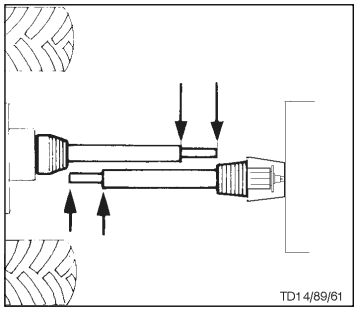
i. For all maintenance, service and modification work, turn driving motor off and remove universal drive.

12.) Cleaning the machine

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

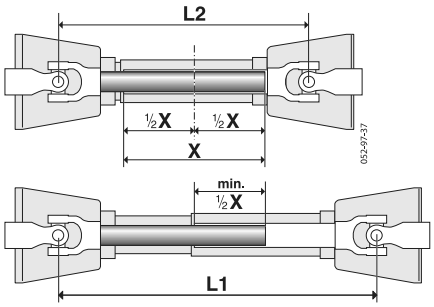
Matching driveshaft to tractor

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



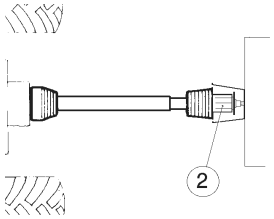
T rimming procedure

- To adjust the length, place the pto halves in the shortest operating position (L2) next to one another and mark.



Caution!

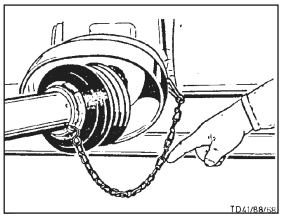
- Note the maximum operating length (L1)
  - Aim at the maximum possible tube superimposition (min. 1/2 X)
- Trim the inner and outer protective tube equally
- Attach overload fuse (2) at the implement!
- Always check that drive shaft locks are securely engaged before starting work.



Safety chain

- Use chain to prevent tube guard from rotating.

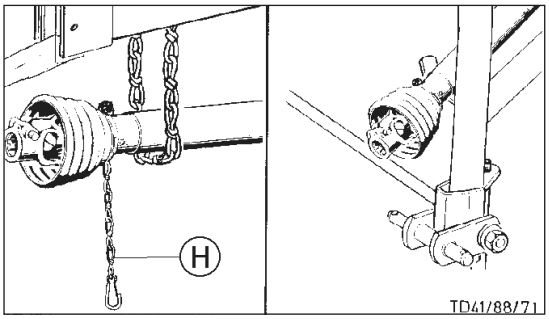
  Ensure sufficient swivel space for the cardan shaft!
- Trim the safety chain so that it cannot wind around the cardan shaft.



Instructions for working

The permissible pto speed may not be exceeded when using the implement.

- The hitched implement may continue to run after the pto is switched off. Work may only be performed once it has reached complete standstill.
- The cardan shaft must be put down or secured using a chain when the implment is parked. Do not use safety chain (H) to suspend the cardan shaft.



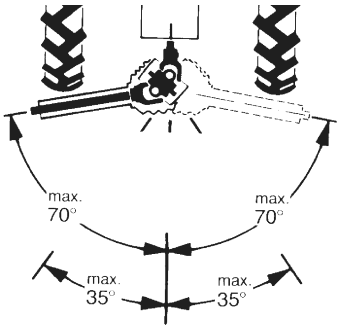
Wide-angle joint:

Maximum angle in operation and at standstill 70°.

Standard joint :

Maximum angle at standstill 90°.

Maximum angle in operation 35°.

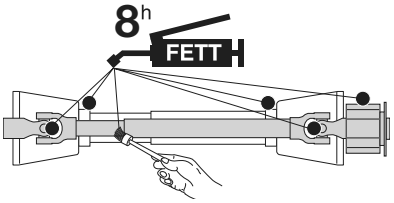


Maintenance

Replace work covers immediately.

- 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.



Be advised!

Only use the cardan shaft supplied or stated; otherwise the warranty claims for any damage are not valid.

Important for driveshafts with friction clutch

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

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

a) Measure dimension „L“ at compression spring of K90, K90/4 and K94/1 or at set screw of K92E and K92/4E.

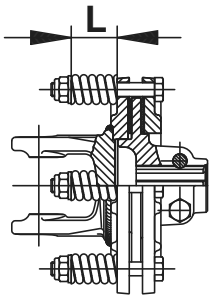
b.) Loosen screws to release the pressure on the friction disk.

Slip the clutch.

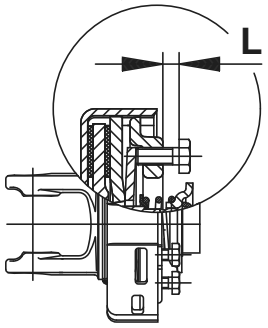
c.) Tighten set screws to dimension "L".

Clutch is ready for use.

K90,K90/4,K94/1

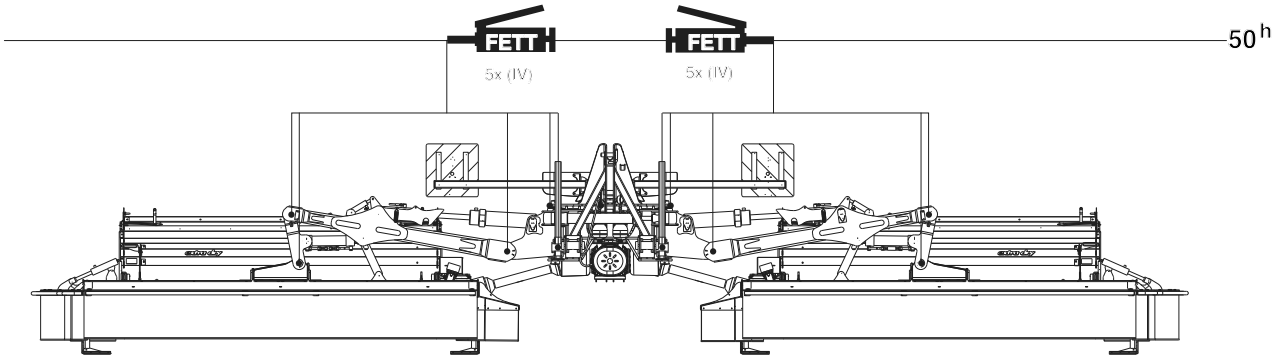


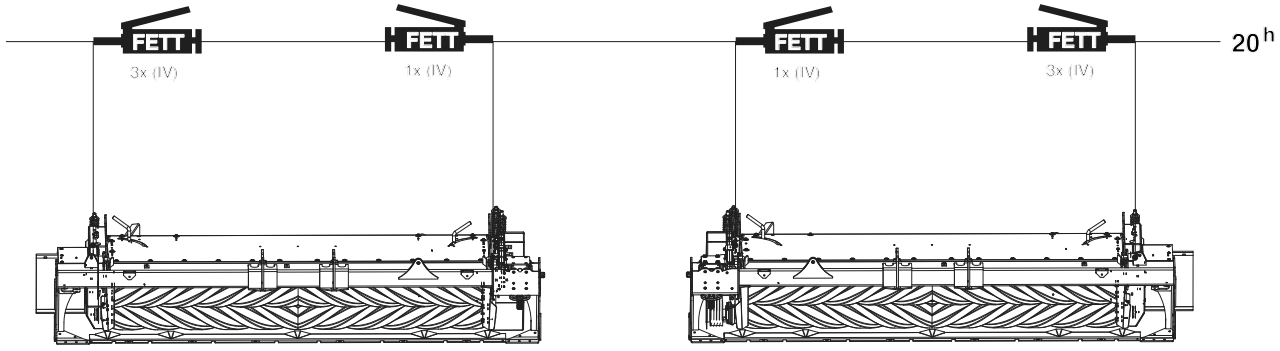
K92E,K92/4E

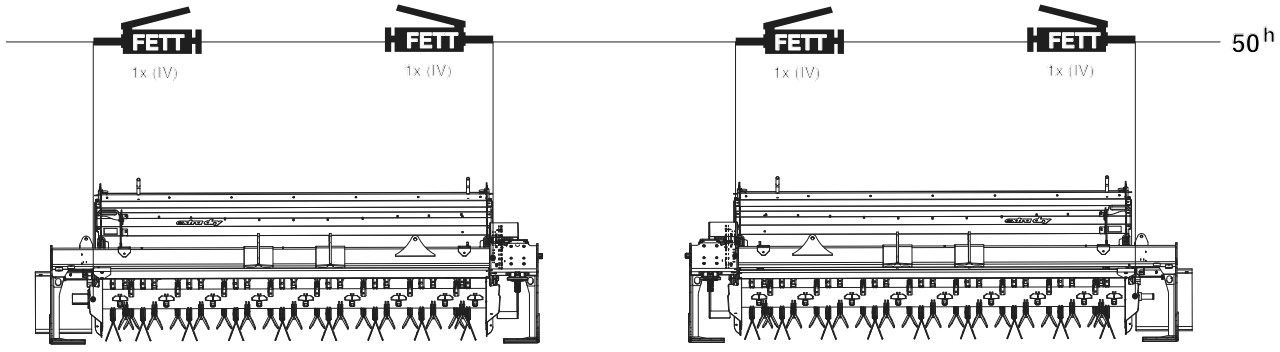


Lubrication chart

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
BB	if necessary
	GREASE
	Oil
 =	Number of grease nipples
 =	Number of grease nipples
(III), (IV)	see supplement „Lubrificants“
[l]	Litre
– – – –	Variation
	See manufacturer’s instructions
↺	Rotations per minute
	Always screw in measuring stick up to stop.







161-09-05

GB

Lubricants

Edition 2013

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.

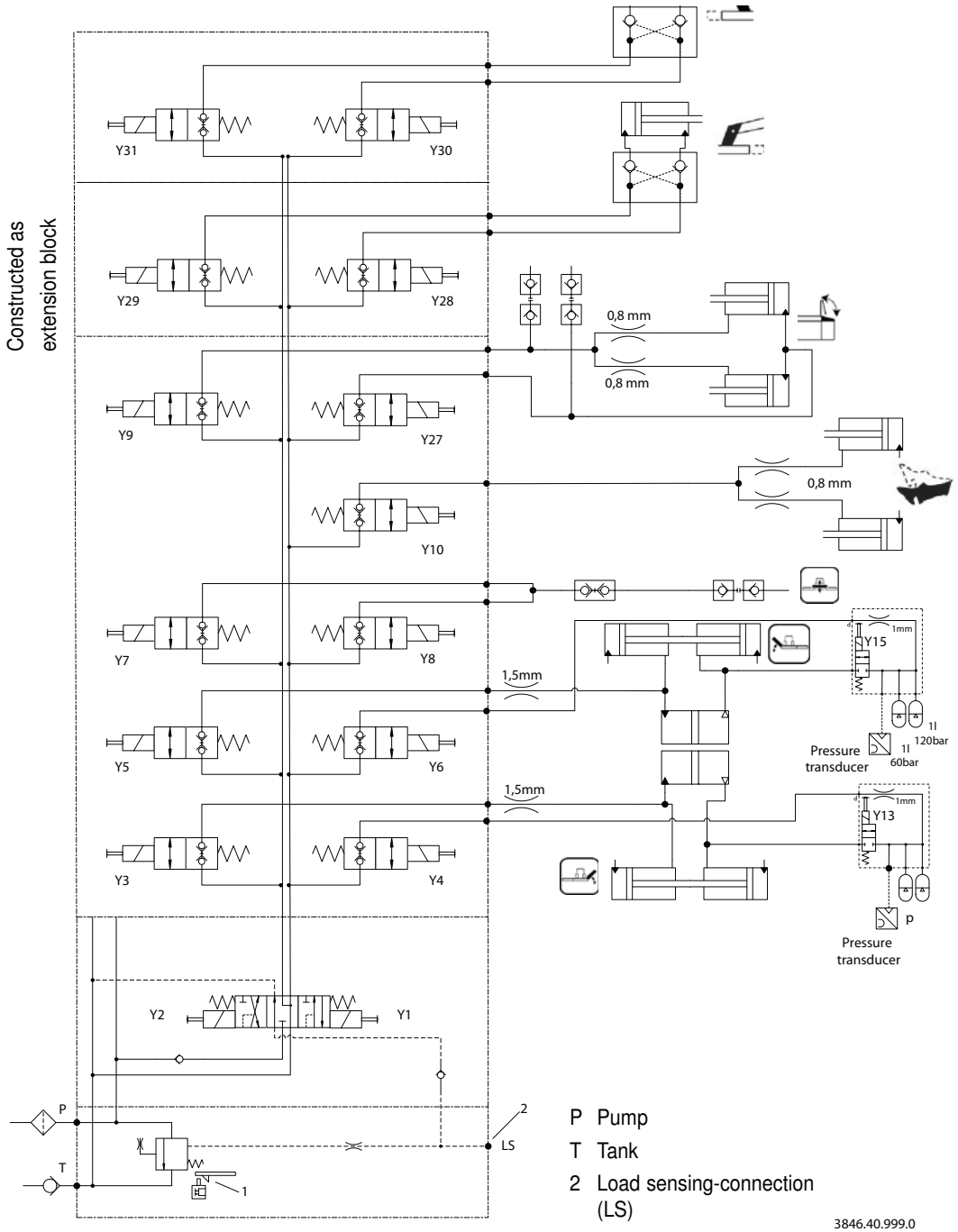
Corrosion protection: Fluid 466

Lubricant indicator	**I**		**III**		**V**	**VI**	**VII**
required quality level niveau	HYDRAULIKöL HLP DIN 51524 Teil 2 See notes: * ** ***	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

Company	I	(II)	III	(IV)	V	VI	VIII	NOTATIONS
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	* The international specification J 20 A is necessary for compound operation with wet brake tractors. ** HLP-(D) + HV hydraulic oils *** HLP + HV hydraulic oils with a vegetable oil basis, biodegradable and therefore environmentally friendly.
ARAL	VITAM GF 32/46/68 VITAM HF 32/46	SUPER KOWAL 30 MULTI TURBORAL SUPER TRAKTORAL 15W-30	GETRIEBEÖL EP 90 GETRIEBEÖL HYP 85W-90	ARALUB HL 2	ARALUB FDP 00	ARALUB FK 2	GETRIEBEÖL HYP 90	
AVIA	AVILUB RL 32/46 AVILUB VG 32/46	MOTOROIL HD 30 MULTIGRADE HDC 15W-40 TRACTAVIA HF SUPER 10 W-30	GETRIEBEÖL MZ 90 M MULTIHYP 85W-140	AVIAMEHRZWECKFETT 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 * HYDRAULIKÖL MC 530 ** PLANTOHYD 40N ***	SUPER 2000 CD-MC SUPER 2000 CD HD SUPERIOR 20 W-30 HD SUPERIOR SAE 30	SUPER 8090 MC HYPOID 80W-90 HYPOID 85W-140	MULTI FETT 2 SPEZIALFETT 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 AUSTROTRAC 15W-30	GETRIEBEÖL MP 85W-90 GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-90	LORENA 46 LITORA 27	RHENOX 34	-	GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-140	
ELF	OLNA 32/46/68 HYDRELF 46/68	PERFORMANCE 2 B SAE 30 8000 TOURS 20W-30 TRACTORELF ST 15W-30	TRANSELF TYP B 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	• TITAN HYD 1030 • AGRIFARM STOU MC 10W-30 • AGRIFARM UTTO MP • PLANTOHYD 40N ***	• AGRIFARM STOU MC 10W-30 • TITAN UNIVERSAL HD	• AGRIFARM GEAR 80W90 • AGRIAFRM GEAR 85W-140 • AGRIFARM GEAR LS 90	• AGRIFARM HITEC 2 • AGRIFARM PROTEC 2 • RENOLIT MP • RENOLIT FLM 2 • PLANTOGEL 2-N	• AGRIFARM FLOWTEC 000 • RENOLIT SO-GFO 35 • RENOLIT DURAPLEX EP 00 • PLANTOGEL 00N	• RENOLIT DURAPLEX EP 1	• AGRIFARM GEAR 8090 • AGRIFARM GEAR 85W-140 • AGRIFARM GEAR LS90	
GENOL	HYDRAULIKÖL HLP/32/46/68 HYDRAMOT 1030 MC * HYDRAULIKÖL 520 ** PLANTOHYD 40N ***	MULTI 2030 2000 TC HYDRAMOT 15W-30 HYDRAMOT 1030 MC	GETRIEBEÖL MP 90 HYPOID EW 90 HYPOID 85W-140	MEHRZWECKFETT SPEZIALFETT GLM PLANTOGEL 2 N	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	

Company	I	(II)	III	(IV)	V	VI	VIII	NOTATIONS
SHELL	TELLUS S32/S46/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	* The international specification J 20 A is necessary for compound operation with wet brake tractors. ** HLP-(D) + HV hydraulic oils *** HLP + HV hydraulic oils with a vegetable oil basis, biodegradable and therefore environmentally friendly.
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 MULTIGEAR B 90 MULTIGEAR C SAE 85W-140	MULTIPURPOSE	-	-	MULTIGEAR B 90 MULTI C SAE 85W-140	
WINTERSHALL	WIOLAN HS (HG) 32/46/68 WIOLAN HVG 46 ** WIOLAN 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	
MOTOREX	COREX HLP 32 46 68** COREX HLPD 32 46 68** COREX HV 32 46 68** OEKOSYNT 32 46 68***	EXTRA SAE 30 FARMER TRAC 10W/30	GEAR OIL UNIVERSAL 80W/90 GEAR OIL UNIVERSAL 85W/140	FETT 176 GP FETT 190 EP FETT 3000	FETT 174	FETT 189 EP FETT 190 EP FETT 3000	GEAR OIL UNIVERSAL 80W/90 GEAR OIL UNIVERSAL 85W/140	

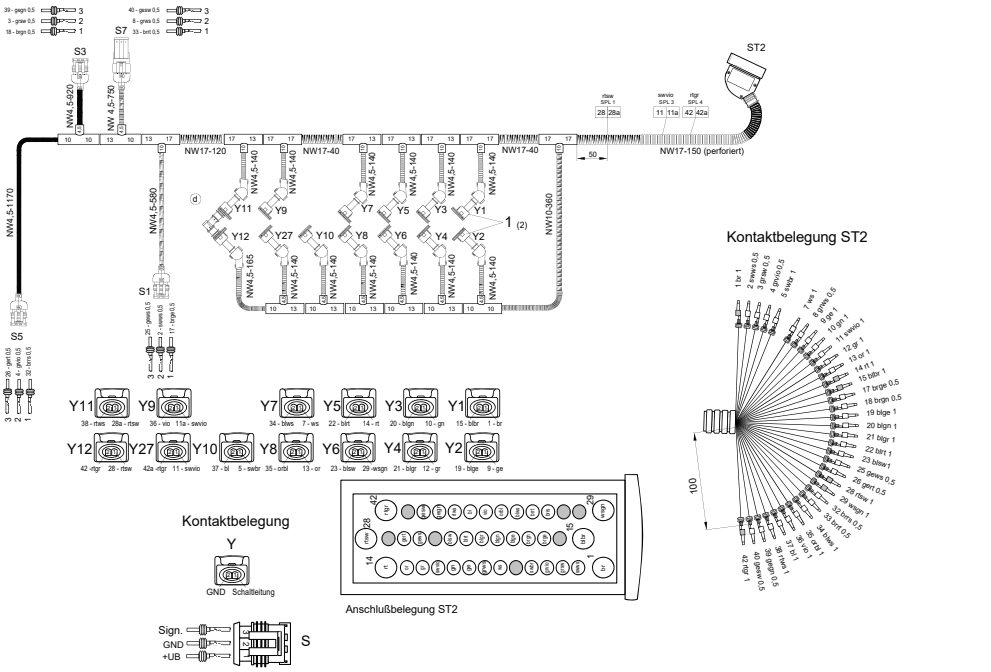
Hydraulic plan

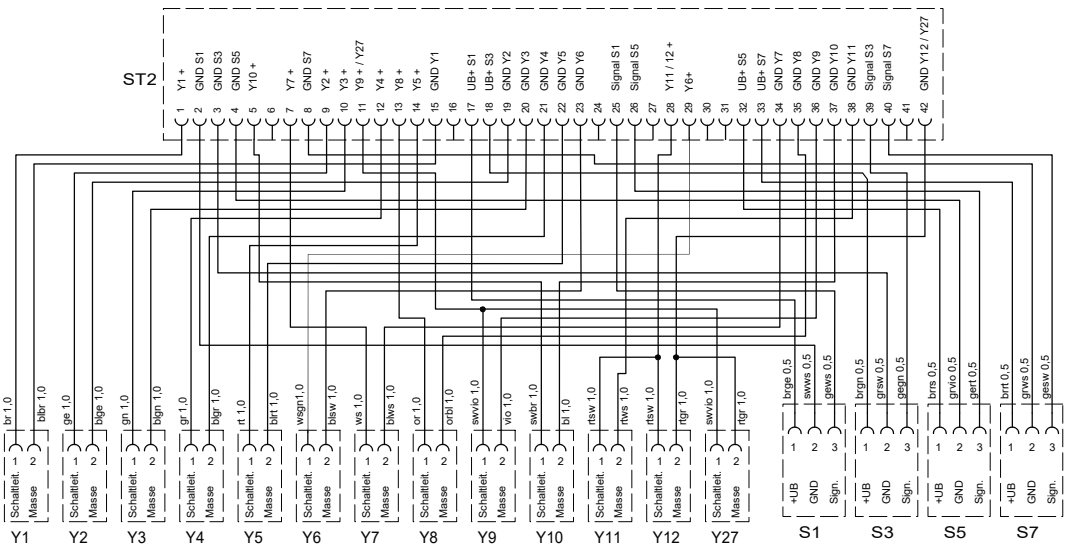


Explanation:

Y1	Directional control valve - Raise	Y10	Seat valve - Transport safeguard folding (ew)
Y2	Directional control valve - Lower	Y13	Seat valve - Hydraulic relief, right
Y3	Seat valve - Mowing unit, right	Y15	Seat valve - Hydraulic relief, left
Y4	Seat valve - Filling hydraulic relief, right	Y27	Seat valve - Side protection folding sequence (dw)
Y5	Seat valve - Mowing unit, left	Y28	Seat valve - Side shift, left
Y6	Seat valve - Filling hydraulic relief, left	Y29	Seat valve - Side shift, left
Y7	Seat valve - Mowing unit, centre	Y30	Seat valve - Side shift, right
Y8	Seat valve - Mower in neutral, centre	Y31	Seat valve - Side shift, right
Y9	Seat valve - Side protection folding (dw)		

Electric circuit diagram





Explanation:

Y1 - Y27 see hydraulic plan

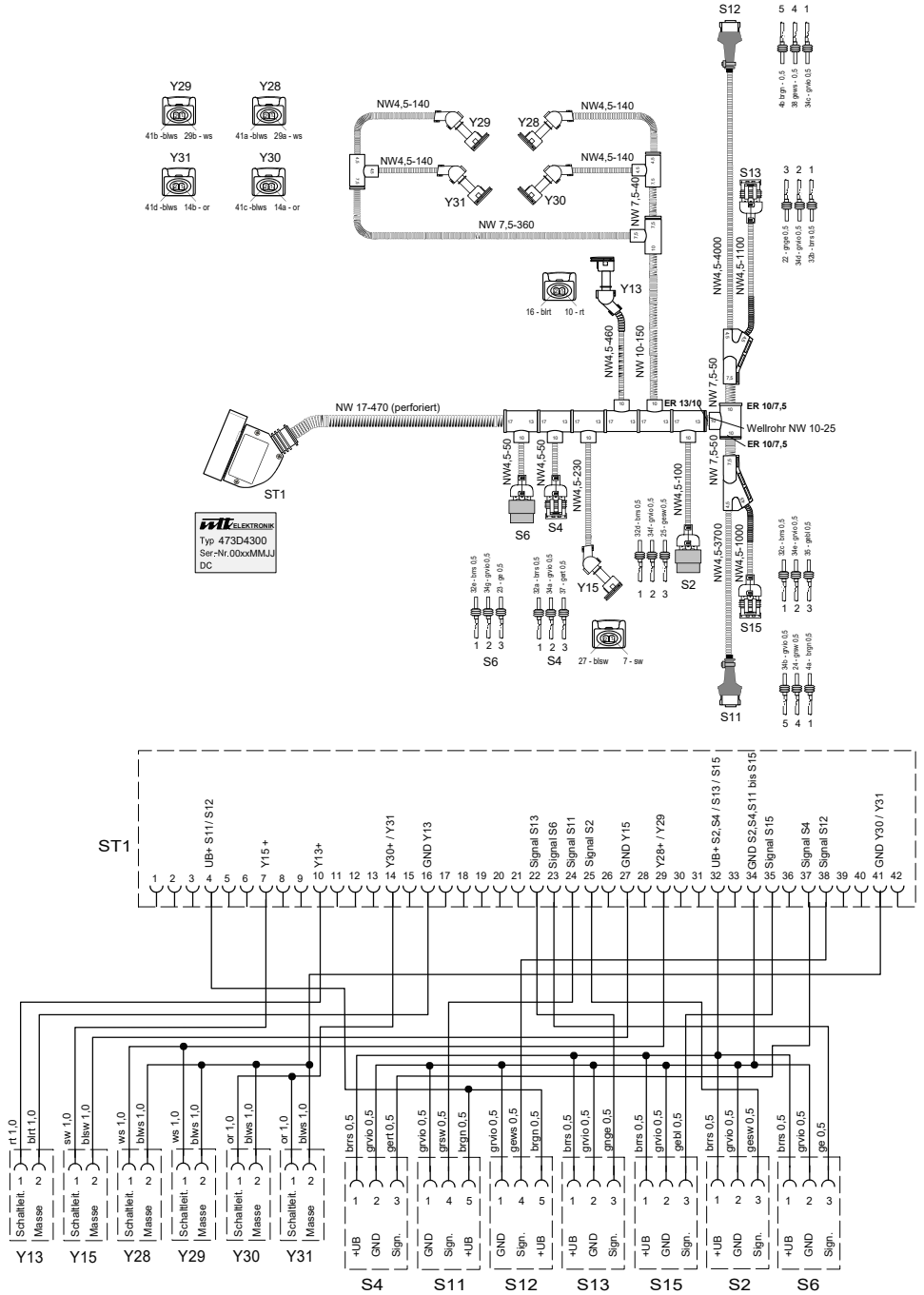
S1 Hall switch - p.t.o. shaft speed

S3 Inductive sensor - Position mower, right

S5 Inductive sensor - Position mower, left

S7 Inductive sensor - Position mower, centre

Electric circuit diagram (hydr. relief)

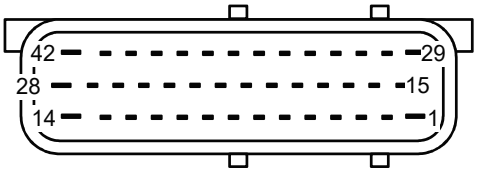


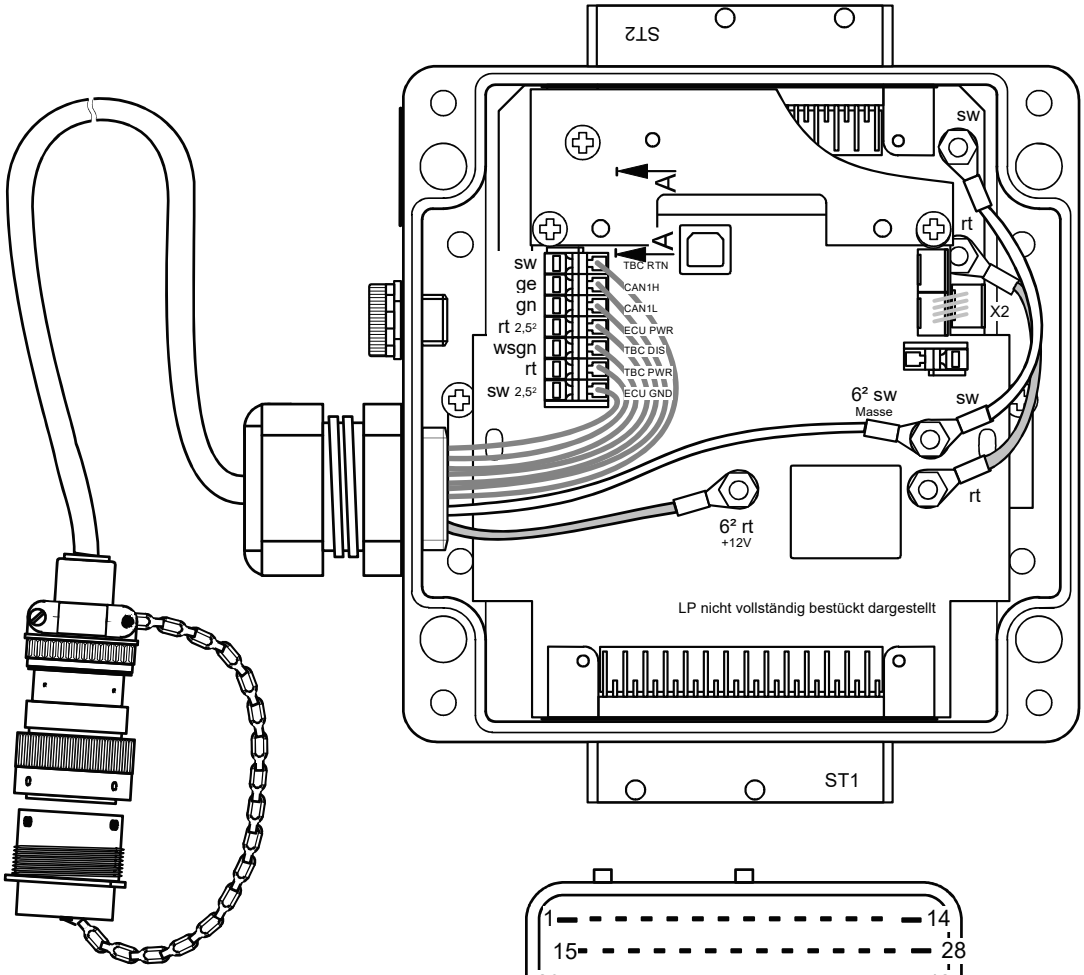
Explanation:

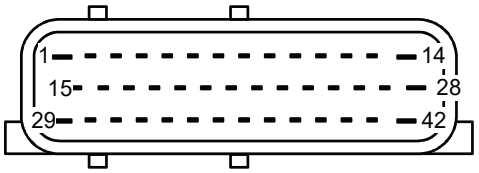
Y13 - Y31	see hydraulic plan
S2	Connection cable for signal socket
S4	Pressure transducer - hydraulic relief - right
S6	Pressure transducer - hydraulic relief - left
S11	Angle sensor - Side shift, left
S12	Angle sensor - Side shift, right
S13	Transport position sensor, rechts
S15	Transport position sensor, left

Processor

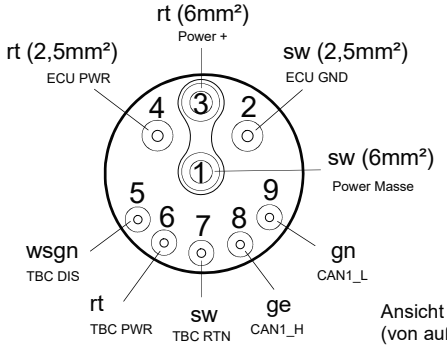
Ansicht auf 42 pol. Steckverbinder ST2
(von außen)







Ansicht auf 42 pol. Steckverbinder ST1
(von außen)

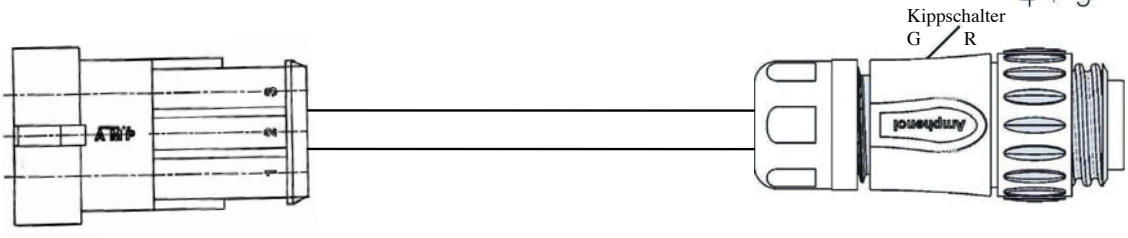


Ansicht auf LBS-Stecker
(von außen)

Anschlussbelegung der 42 pol.
Steckverbinder siehe Blatt 2

Signal socket connection cable

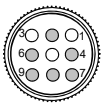
Signal socket connection cable:
Toggle switch: G: Transmission signal from tractor
R: Radar sensor signal from tractor, if available



1	–	n.c.	1	–	Litze Nr. 2– Schalterstellung R
2	–	Litze Nr. 1	2	–	Litze Nr. 2 – Schalterstellung G
3	–	Litze Nr. 2			

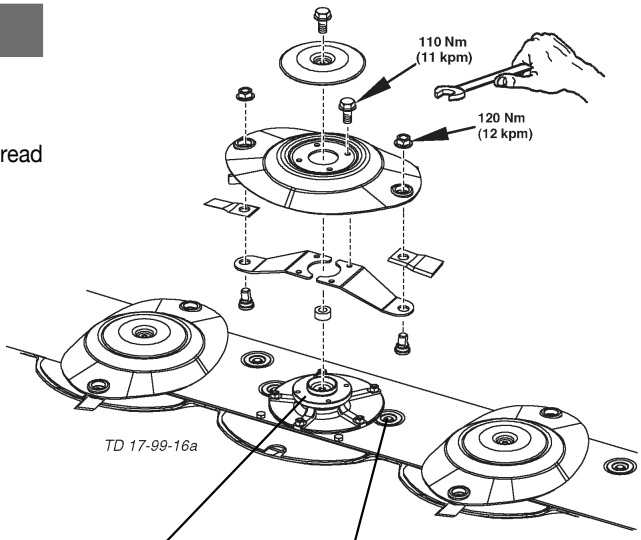
Terminal (Power Control)

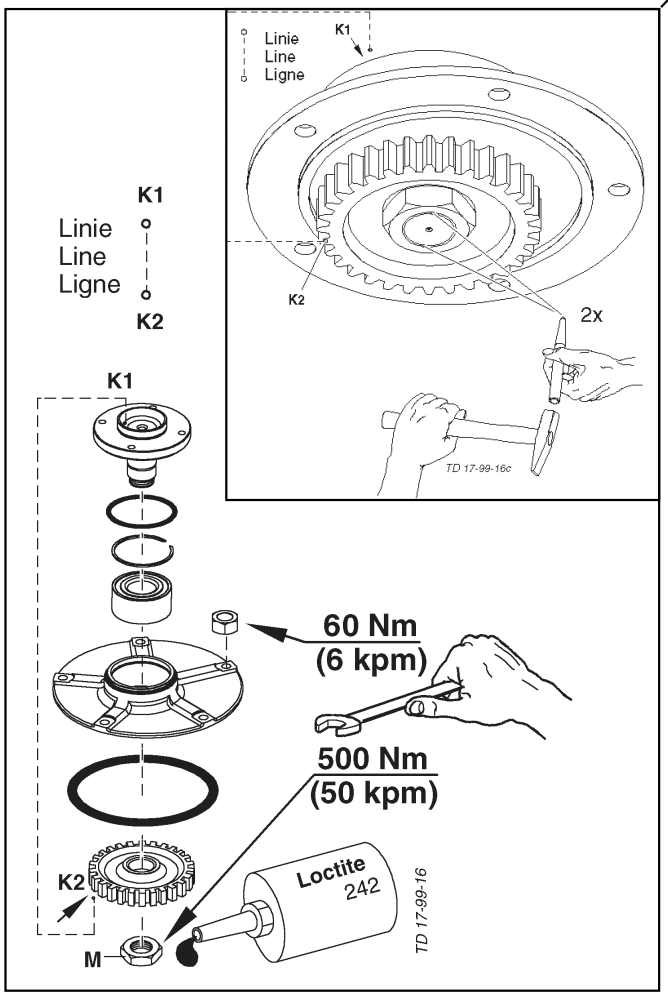
Kontakt	Farbe	Funktion
2	ws	CAN_L
4	gnge	CAN_H
6	sw	TBC PWR
7	gr	ECU PWR
8	br	LIN
9	bl	ECU GND

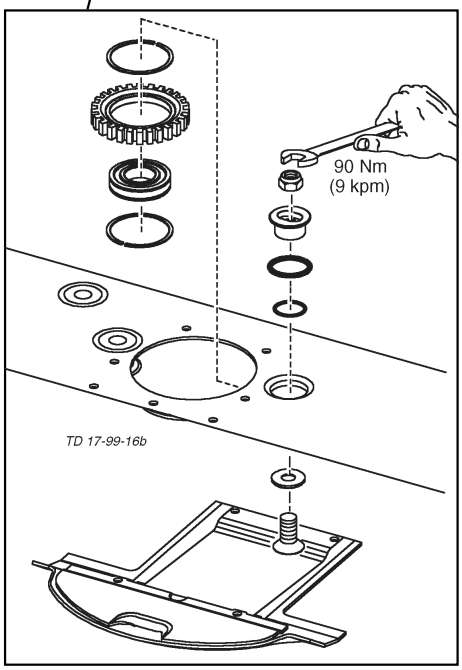


Repairs on the cutter bar

- 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)





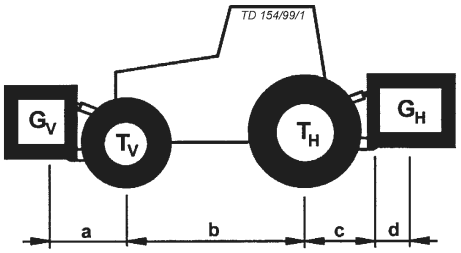


Combination of tractor and mounted implement

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!

The CE norm is not valid in the United States of America and Canada.

EC Conformity Declaration

Original Conformity Declaration

Name and address of the manufacturer:

PÖTTINGER Landtechnik GmbH
Industriegelände 1
AT - 4710 Grieskirchen

Machine (interchangeable equipment):

mower	Novacat V10	V10 ED	V10 RC
Type	3846	3846	3846
Serial no.			

The manufacturer declares that the machines adhere to all relevant provisions in the following EU directive:

machinery 2006/42/EG

In addition to this, the manufacturer also declares adherence to the other following EU directives and/or relevant provisions

Source of applied, harmonised norms:

EN ISO 12100 EN ISO 4254-1 EN ISO 4254-12

Source of applied miscellaneous technical norms and / or specifications:

Person responsible for documentation:
Andreas Gadermayr
Industriegelände 1
A-4710 Grieskirchen

Markus Baldinger,
CTO R&D

Jörg Lechner,
CTO Production

Grieskirchen, 01.08.2016

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