



Operator's manual

+ INSTRUCTIONS FOR PRODUCT DELIVERY . . . Page 3

"Translation of the original Operating Manual"

Nr. 99 3843.GB.80L.1



| | | I | I | | I | | I | I | 1 | |
|-------------|--|---|---|--|---|--|---|---|---|--|
| Chassis Nr. | | | | | | | | | | |

Disc mower



GB Dear Farmer

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

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

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

Important information concerning Product Liability.

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

For this purpose,

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

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

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

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

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

Pöttinger Newsletter

www.poettinger.at/landtechnik/index_news.htm The latest expert information, useful links and entertainment

^{GB} INSTRUCTIONS FOR PRODUCT DELIVERY



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| According to the produc | t liability please chec | k 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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Recommendations for work safety

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

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SWATH FORMER

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CE sign



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

EU Declaration of Conformity (see supplement)

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



Recommendations for work safety

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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.



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



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



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



Stay clear of swinging area of implements



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



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





Designations:

- (1) Select Control
- (2) Power Control (ISOBUS-compatible)
- (3) Coupling jack with removable lighting beam
- (4) Mower unit

- (5) Swath former
- (6) Tine conditioner
- (7) Roller conditioner
- (8) Cross conveyor belt

| Versions | | |
|--|---|--|
| Designation | Description | |
| Select Control | Operation by means of Select Control (preselection circuit), spring relief, (not suitable for roller conditioners) and manual side protection folding. | |
| Power Control (ISOBUS-compatible) | Operation by means of Power Control/ISOBUS, optionally hydraulic or spring pressure relief, automatic side protection folding, suitable for roller conditioner and cross conveyor belt. | |
| Reverse drive (tractor drives backwards) | Both versions are suitable for reverse drive in triple combinations. | |
| ED | The mower units are fitted with a tine conditioner. | |
| RC | The mower units are fitted with a roller conditioner. | |
| Swath former | The mower units are fitted with a swath former. | |
| COLL | The mower units are fitted with a cross conveyor belt. | |

TRACTOR REQUIREMENTS



Tractor

To operate this machine the following tractor requirements are necessary:

- Tractor power: Combination "Front/rear mower" above 90 kW/120 PS, Combination "Reverse drive" from 130 kW/200 PS
- Linkage: lower link cat. III
- Connections: see table "Necessary hydraulic and power connections"

Ballast weight

The front of the tractor is to have sufficient ballast to guarantee braking and steering abilities



At least 20% of the tractor's tare weight on the front axle!



Lifting gear (Three-point linkage)

- The tractor's lifting gear (three-point linkage) must be designed for the occurring load (see technical information).
- The lifting struts are to be set at the same length (4) using the relevant adjusting equipment

(See the tractor manufacturer's operator's manual)

- If the lifting struts on the lower linkage can be fixed in various positions, then select the back position. this will relieve the tractor's hydraulic unit.
- The limiting chain or lower link stabilisers (5) are to be set so that the coupled implement CANNOT move sideways. (Safety measure for transportation)



Hydraulic positioning control on the lifting gear

The lifting hydraulics are to be switched to positioning control when:







| Necessary hydraulic connections | | | | | |
|---|-------------|--|--|--|-----------------------------------|
| Design | Used for | | Single action hydraulic connection | Double action hydraulic connection | Identification (on the implement) |
| Select Control | Rear mower | | Х | | |
| | Front mower | | Х | | |
| hydraulic upper link (version) | | | Х | | |
| Hydraulic connection "Advance" SN 16 red Hydraulic connection "Return" SN 20 blue Load sensing connection SN 6 *) | | | | | |
| Operating pressure Caution! | | | | | |

| - | | | |
|----------------------------|---------|---|---|
| Operating pressure minimum | 170 bar | | Check the compatibility of the hydraulic oils before connecting the machine to the hydraulic system of your tractor |
| Operating process maximum | 000 har |] | to the hydraulic system of your tractor. |
| Operating pressure maximum | 200 bar | | Do not mix mineral oils with bio oils! |

| necessary power connections | Necessary | power | connec | tions |
|-----------------------------|-----------|-------|--------|-------|
|-----------------------------|-----------|-------|--------|-------|

| Design | Used for | Pole | Volt | Power connection |
|------------------------|--------------|-------|---------|---------------------------|
| Standard | Lighting | 7-pin | 12 V DC | According to DIN-ISO 1724 |
| Select Control | Control unit | 3-pin | 12 V DC | to DIN-ISO 9680 |
| Power Control / ISOBUS | Control unit | 3-pin | 12 V DC | to DIN-ISO 9680 |

Setting upper link height using spindle

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

16

A hydraulic upper link is recommended.

TD 79/98/54

(double-action hydraulic connection)

Attaching implement to tractor

-

adjusted.

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Centre-mount (M) mower unit to tractor

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



Frame in horizontal position

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



Setting lower link height

- Adjust tractor's hydraulics (ST) using bottom stop. Recommended height of lower link: 55 cm
 - The drive shaft (GW) should be about horizontal when mowing.

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



Safety hints: see supplement-

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

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

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





To make the connection to the tractor

Operation:

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

Lighting:

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

For tractors with ISO Bus control

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



Fitting drive shaft

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





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

Connection of connecting lines from front mower unit

"Power Control" Version

In the "Power Control" version, there is a possibility of controlling the automatically folding side guard of the front mower unit with the rear mower unit. (non-standard equipment)





Caution!

The connecting lines between front and rear mower units must be routed according to the tractor and attached properly!



Note:

The hydraulic hoses between front and rear mower units are pressurised. They must be depressurised prior to uncoupling:

Power Control: Press key ¹⁰⁰¹ until signal tone is heard (approx. 3 Sec)

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

Hydraulic connection ("Power Control" Version)

Settings

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



Break electrical connection

In tractors with "load sensing"

- Completely screw in screw (7) on hydraulic block

In tractors with closed hydraulic system

- Completely screw in screw (7) on hydraulic block

In tractors with open hydraulic system

- Completely unscrew screw (7) on hydraulic block



Pay attention to the direction of rotation of the mowing discs.



Caution!

Before a gearbox is remounted on the machine:

- Swap bleed screw and drain screw for each other.
- The correct position of the bleed screw is on top.



Unhitch device from tractor



Safety note:

(GB

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



Uncouple disc mowers

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.

- Uncouple connecting lines and PTO drive shaft.
- Extend the 4 support feet on the coupling jack and secure properly with the linch pin (K).
- Set down operating unit and connecting lines on the holder on the coupling jack.
- Uncouple upper link and lower link.



"Cross conveyor belt" version:

- Uncouple connecting lines and PTO drive shaft.
- Extend the 3 support feet on the coupling jack and the support foot on the cross conveyor belt respectively and secure properly with the linch pin (K).
- Uncouple the cross conveyor belt.
- (Details see section on "Cross Conveyor Belt")





Safety note:

Only park the cross conveyor belt on firm, level ground and ensure a secure position.

Mechanical pressure relief of the mower units (SELECT Control)

The contact weight of the mower units is reduced in the "Select Control" version by way of an adjustable spring pressure relief.

Adjustment:

स्थि

To change the setting, raise the mower unit until the pressure relief springs are depressurised, peg the linch pin (A) in one of the 2 possible positions and secure. The linch pin may be rotated through 180° (P2) for intermediate settings.

Note:

Pegging position (P1 and P2) is the minimum pressure relief and cannot be adjusted!





Only open the linch pin when the spring is not under tension.



The machine cannot be brought into the transport position if there is no pressure in the pressure relief system.

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Note:

Maintenance of hydraulic Pressure relief: Reduce the relief pressure prior to lubricating the cylinder mountings to ensure even lubrication.



No-one may remain within range of the machine during the adjustment process. The mower units can pivot slightly forwards. Danger of crushing!

Hydraulic pressure relief of mower units (Power Control)

0

The contact weight of the mower units is reduced in the "Power Control" version by way of an adjustable hydraulic pressure relief. The adjustment is made via the control panel.

Adjustment:

siehe Kapitel "Power Control" bzw. "ISOBUS"

Lowering speed

takes place automatically.

The lowering speed of the mower units can be adjusted using the restrictor valve (D).

An adjustable counterpressure is generated hydraulically

for the collision lock. The mower unit swings back slightly if

this is exceeded. Return swivelling to the working position







Adjust pressure (X) in hydraulic cylinder:

- Depressurize control valve on tractor.
- Connect plug-in coupling (St) on tractor and on mower combination.
- Open shut-off valve (Ab) (position E).
- Activate control valve on tractor until working pressure is reached -> see pressure gauge (Ma) display

Collision lock: Working pressure (x): 110 bar

- Close shut-off valve (Ab) (position A). _
- Disconnect plug-in coupling (St).

Conversion from working to transport position

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





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

 Only transport the machine in the transport position!

Raising into road transport position

Swinging into the road transport position can only be activated if all mowing units are in the field transport position (headland FT).

- Switch off drive and wait for complete standstill
- Swing in all protective hoop guards on mowing unit

Version with "Select Control"



Version with "Power Control"



Version with "ISOBUS Terminal"





Note!

The relevant sections of the control system (Select Control, Power Control, ISOBUS) contain details about the individual operating versions!



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TRANS

Note!

The relevant sections of the control system (Select Control, Power Control, ISOBUS) contain details about the individual operating versions!



Caution!

Activate all protective devices of the mowing combination prior to use.

Lower into Transport Position

Version with "Select Control"

Version with "Power Control"

Version with "ISOBUS Terminal"

Driving on public roads

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

Hydraulic lower link

Transport safeguard (Ts)

hooks!

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

- Before travelling check transport safeguards!

Both mower units are properly secured with safety

042-93-23



Transport position



of tipping!







Attention! Be alert to the ma-

ximum permissible transportation height (4m)!

Features of the Terminal

Electrical Connection

The terminal's electricity is supplied via a plug in accordance with DIN 9680 from the tractor's 12 V on-board electrical system. These 3-pin plugs are also used in a 2-pin version as only the two main connections (+12 V, earth) are required.



Caution!

Plugs and sockets of a different design are not permissible as functional safety is not guaranteed.

| Technical Data | |
|------------------------------|--|
| Operating voltage: | +10V+15V |
| Operating temperature range: | -5°C +60°C |
| Storage temperature: | -25°C +60°CL |
| Degree of protection: | IP65 |
| Fuse: | 10 A multi-fuse in operatingvoltageplug. |

Function

The attachment is operated by way of a single-action control unit on the tractor with which the individual functions can be pre-selected using the Select Control terminal. The pre-selected functions are indicated by means of an active LED display next to the key.



Commissioning

Position the Select Control terminal so that it is easily visible in the tractor cab. (There is a magnet on the rear for attaching the terminal.)

Insert plug (1) into tractor's 12 V power supply.

Route job computer's cable from attachment into tractor cab and connect using plug (2).

(Ensure that the cable is routed properly!)

Press the "I/O" key to switch on the terminal.

Keep the "I/O" key depressed for 3 seconds to switch off the terminal.

SELECT CONTROL

GE

SELECT CONTROL

| | User Interface | | | |
|-----|--------------------------------|-------------|--|--|
| Mea | ning of Buttons | | | |
| a | LED (for keys a-i) | <u> </u> | | |
| b | Pre-select left mower unit | a POTTINGER | | |
| С | Pre-select right mower unit | | | |
| d | Transport lock | | | |
| е | Pre-select automatic operation | | | |
| f | no function | | | |
| g | no function | | | |
| h | Road transport | f | | |
| i | Ι/Ο | | | |

Operating Notes

Press the desired key to pre-select a function. The activated function will be indicated by a lit LED.

Functions

Automatic Mowing Operation:

The intelligent step sequence ensures easy operation of the mowing units (see example)

C.

unit takes place.



Using the tractor's control device, both mowing units are swung between the "Field transport" and "Working position" position.

Using the tractor's control unit, only one mowing unit is swung between the "Field transport" and "Working position" position. sAfter the swinging action there is an automatic switchover back to both mowing units.

traT.

Example:

frill 1

| | A | A 🔭 | A M |
|-----------------------------------|--|--|--|
| Control device: Floating position | Control device: Raise | Control device: Floating position | Control device: Raise |
| | When automatic operation is pre-selected, once an individual lifting procedure has ended, after a short time an automatic switchoverto the second mowing | The left mowing unit is back in the floating position without further pre-selection. | If the second mowing unit is also back in the working position, then both mowing units are automatically pre-selected for the next lowering procedure. |

Manual Mowing Operation:

If necessary, it is also possible to operate without automatic pre-selection; the pre-selected function is carried out using the control device.



Using the tractor's control unit, both mowing units are swung between the "Field transport" and "Working position" position.

Using the tractor's control device, only one mowing unit is swung between the "Field transport" and "Working position" position. The second mowing unit remains in the home position.

Using the tractor's control unit, the transport lock is opened or closed manually.

Swinging from the "Field transport" to the "Road transport" position:

Requirement for this function: Standstill of the PTO drive shaft and working position of both mowing units!

Pre-select "Road transport" button -> both mowing units are activated (pre-select relevant mowing unit for individual lifting)

Keep "Road transport" button pressed and operate the tractor's control device, until the "Road transport" position is reached and the mechanical transport lock has engaged.



Caution!

Danger of tipping if swinging is carried out on a slope!

For safety reasons the mowing units must be swung into road transport position by means of individual lifting! Always swing the downhill side mower unit first and only then may the uphill side mower unit be swung into road transport position.

Swinging from the "Road transport" to the "Field transport" position:



Pre-select "Road transport" button, keep "Transport lock" button pressed and operate the tractor's control device, until the mechanical transport lock has disengaged.

Keep "Road transport" button pressed and switch the tractor's control device to the floating position until the "Field transport" position is reached.

When the "Field transport position" has been reached, a switchover back to automatic operation takes place after a short time and both mowing units are de-selected.



Caution!

Danger of tipping if swinging is carried out on a slope!

For safety reasons the mowing units must be pivoted into field transport position by means of individual lifting! Always swing the uphill side mower unit first and only then may the downhill side mower unit be swung into field transport position!



Note!!

Note!



Display

When the machine is turned on, the machine's current status is displayed on the work screen



Symbol description:

- 1 Machine's operating status
- 2 "Transport position" selection activated
- 3 Conveyor belt status (swung in/out)

Display indicator:

- Main indicator
 - Special menu
 - SET

.

(Settings for machines, setting the time differences, setting the speed control)

- TEST (sensor test)
- DATA (software versions, operating hours)
- Alarms

Description of the buttons:

- 1 Raise left cutter bar
- 2 Lower left cutter bar
- 3 Raise centre cutter bar
- 4 Lower centre cutter bar
- 5 Raise right cutter bar
- 6 Lower right cutter bar
- 7 Raise all cutter bars
- 8 Lower all cutter bars
- 9 Special menu
- 10 Navigation menu + Cross conveyor belt preselect
- 11 Navigation menu + Cross conveyor belt preselect
- 12 Swing cross conveyor belt out
- 13 Swing cross conveyor belt in
- 14 Cross conveyor belt speed (slow/fast)
- 15 Select transport position
- 16 STOP
- 17 Alter menu value (-)
- 18 Alter menu value (+)
- 19 ON / OFF



Switching on operating device



pressing the I/O button

pressing the I/O button

Switch off the control panel and job calculator by



Note!!

After turning off the control panel (OFF). Move the hydraulic control valve to the O position.

This is particularly necessary for tractors with open hydraulic systems, otherwise oil heating occurs.

स्त्रि



Always store control panel in a weather-resistant location.



The power control may go into an undefined state in during a malfunction due to incorrect sensor values. The power control is reset to the normal state by pressing the STOP button for 10 seconds. This is confirmed by means of an acoustic signal. The locking hooks open if the transport pre-selection button is activated immediately afterwards. Then bring the mower units back into the working position.





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Cross conveyor belt speed rate



Button function:

- By pressing the button the cross conveyor belt speed rate is changed between fast and slow
- On the display the tortoise (slow) and hare (fast) symbols represent the speed of the relevant cross conveyor belt
- The relevant settings are carried out in the SET menu.

| SE The following menu pages are displayed by pressing the "Menu" button on the console MENÜ OK | T menu Mea | anings of Indicators: Choice of machine types | Note! Navigating to input fields takes place with the arrow buttons on the console |
|---|---------------|---|--|
| SET C X8 Collector SET C X8 Collector P. C 120 bar act. 120 bar act. 120 bar act. 120 bar act. 120 bar | С | Adjustable types: NC X8 / NC X8 Collector Centre mower available Tick = mower is co-controlled Cross = mower is not co-controlled Set relief pressure Both side mowers must be located in the working position The current relief pressure is shown Max. value is 230 bar | Note! Altering the respec- tive configuration takes place with the plus and minus buttons on the console |
| SET | e | t1 time difference when lowering t2 time difference when raising Setting range for both sides: 0.0 secs – 0.9 secs Times are set using the plus and minus buttons in 0.1 second intervals. A speed specific distance control is not possible | Note! The menu can be exited at any time by pressing the "I/O" button |



Speed control of cross conveyor belts



With the operating method "Speed variance left and right", the speed between both cross conveyor belts is changed so that one belt is always running faster than the other.

The tortoise (slow) and hare (fast) symbols indicate the speed of the relevant cross conveyor belt.

Speed indication is shown only when the cross conveyor belts are in the working position.

g Set operating method

Tick = varying speed between left and right cross conveyor belt (for mowing in lineal contours)

Cross = Even speed for both cross conveyor belts with the possibility of switching between two speed rates

h Set speed rate

Two speed rates can be set for cross conveyor belts

Setting: in 5% intervals

Setting range: 5-100%

Note!



This menu will not be shown if the speed control is not activated in the configuration of machines



| TEST n | nenu | | |
|---|----------|---|---|
| The following menu pages are displayed by pressing the "Menu" button on the console. | Mea a | anings of Indicators: PTO | Note! Navigating to input fields takes |
| The TEST menu comes after the SET menu | | In the left field the sensor function during p.t.o still stand is checked. | place with the arrow buttons |
| Sensor Test | | In the right field the sensor function during turning p.t.o is checked. This field has a black background when the p.t.o turns faster than 10 r.p.m | on the console |
| TEAT | b | Voltage indicator | |
| | | The top voltage indicator shows the lowest measured distribution voltage value since work started. This value is stored until the next new start. The bottom voltage indicator shows the current | |
| <u>⊫</u> ta.4 @ai ₂ ie⊃ ₂ | | measured distribution voltage value. | Note! |
| | С | Pressure measuring transmitter voltage indicator | Altering the respec- tive configuration |
| A black coloured square means: | | This indicator shows the current pressure measuring transmitter voltage level output. Consequently the function can be checked aided by the data sheet. | takes place with the plus and minus buttons on the console |
| | d | S5 | - + |
| | | Off-road transport / working position of left mower | |
| | е | S15 | |
| | _ | Transport position of left mower | |
| | f | S13 | |
| | a | Iransport position of right mower | Note! |
| | 9 | Off-road transport / working position o fright | The menu can be exited at any |
| | h | S9 | time by pressing the "I/O" button |
| | | Right cross conveyor belt | 1 0 |
| | i | S10 | (SET |
| | | Left cross conveyor belt | |
| | J | S7 | |
| | | From mower position | |
| DATA n | nenu | | |
| The following menu pages are displayed by pressing the "Menu" button on the console. The DATA menu comes after the TEST menu | Меа | anings of Indicators: | |
| | | | |



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Note!

Any desired function may be established manually using the emergency actuator in the event of a malfunction (see Section "Electrohydraulics").

Diagnostic Function

Monitoring of the job computer for

| - operating voltage | ÷ - |
|-----------------------------------|---------|
| - sensor supply voltage | ₫⊐ |
| - short-circuit to ground or 12 V | |
| - cable break | ∣╙ӏŧӏ≖Ӥ |
| - overload | |

| Å | ¤≇≣⊭ ¥1 ⊡ [∕₀ |
|---|-------------------------|
| | |

Switching outputs (example: Y1 = raise directional control valve)

On fault identification

- the alarm screen is faded in and an alarm sound is audible.
- the corresponding symbol and fault are displayed.



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An error should be acknowledged using the "ESC" key

Sensor inputs (example: sensor voltage supply < 10 V)



Note!

Note!

Note!

The alarms for the voltage supply cannot be switched off.





12V Sen. BM

Time out monitoring

When, after 6 seconds and after pressing the "Raise front mower or all mowers" button, the front mower sensor is not reached.

Note:

When this message is displayed, the front mower S7 sensor is not active.

Immediate action:

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



Configuration Menu

The following menu is displayed on the control panel Meaning of display: MENÜ а ОК after pressing the "menu" key for 10 seconds.

NFIG X P+ 5 🗖

Pivoting aid

This configuration must be deactivated in the case of Novacat X8 and X8 Collector !

- b Hydraulic pressure relief
- С Individual cross conveyor belt pivoting
- d Speed control of the cross conveyor belts
- е Diagnostic function of the inputs and outputs

(tick = active/cross = inactive)

Press the "I/O" key on the control panel to leave the menu.



Version

Operation via ISO Bus tractor terminal





| Button indication | | | | | |
|---|---|--|--|--|--|
| Start menu Transport menu | | | | | |
| F1 T1 T2 T3 T4 T5 T1 STOP T1 STOP T1 STOP T1 STOP | F3 T2 T3 T4 T7 T8 T9 SPOTTINGER T2 Switch to page 2 (change to screen (F4)) | | | | |
| T2 Work menu T3 Transport menu T4 Data menu T5 Set menu STOP button function To stop all procedures currently running | T3 Swing cross conveyor belts out T4 Swing cross conveyor belts in T7 Change from working position to road transport position Press button T7 for 3 seconds -> the side protection hydraulic hoses are switched without pressure (e.g. before uncoupling). T8 Raise cutter bars into road transport position T9 Lower cutter bars into working position | | | | |
| ESC button function: To return to previous menu Work menu T2 T2 T3 T4 T7 T8 T9 | F4 T2 T3 T4 T7 T8 T9 T10 T0 F4 T7 T8 T9 T10 T0 T10 T0 T10 T10 T10 T10 | | | | |
| T2 Raise / lower left mower unit T3 Raise / lower middle mower unit T4 Raise / lower right mower unit T7 Automatic "Raise mower units" function T8 Automatic "Lower mower units" function T9 Cross conveyor belt speed (slow/fast) | T3 Raise front mower T4 Lower front mower T7 Raise left mower unit T8 Lower left mower unit T9 Raise right-hand mower unit T10 Lower right-hand mower unit | | | | |
| | Data menu F5 Stop Work Mans T8 | | | | |

T8 Delete partial counter (ha, h)

SET

🚟 🏽 🕮 POTTINGER

Set menu

F6

STOP STOP a T2 Τ7 b T3 品 X Τ8 TEST Τ4 Т9 <u>a 2</u> ESC ESC **SPOTTINGER**

F7



F8



- T2 Increase relieving pressure
- T3 Decrease relieving pressure
- T4 Individual cross conveyor belt pivoting
- a Set machine type
- b Activate/deactivate front mower
- C Set push movement (only possible without cross conveyor belt)
- d Set relieving pressure
- T7 Navigating the "Time-traverse dependant lowering/raising" menu - change to screen (F7)
- T8 Navigating the "Test" menu
 - change to screen (F8)
- T9 Navigating the "Calibrating lateral traversing" menu
 - change to screen (F9)

Meanings of Indicators:

a Adjusting time or traverse dependant lowering/raising

- km/h = depending on path and speed
- sec = depending on time
- b Speed signal from tractor available or not available
- C Adjusting the values for lowering
- Adjusting the values for raising
 Display (meter (M) or seconds (sec)

Meanings of Indicators:

Voltage indicator

The top voltage indicator shows the lowest measured distribution voltage value since work started. This value is stored until the next new start.

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

PTO

In the right field the sensor function during turning p.t.o is checked. This field has a black background when the p.t.o turns faster than 10 r.p.m

C Momentary sensor stand display

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



d Pressure measuring transmitter voltage indicator

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Meanings of Indicators:

 a Tick = different speed between left and right cross conveyor belt (for mowing on contour line on slopes)
 Cross = same speed of both cross conveyor belts with possibility

of switching between two speed levels.

b Set speed levels

Two speed levels of the cross conveyor belts may be set. Adjustment: in 5% steps, adjustment range: 5 - 100%

F10

F9



T7 Activate the required cross conveyor belt (left, right or both)T8 Swing required cross conveyor belt out

T9 Swing required cross conveyor belt in

a Individual pivoting of cross conveyor belt

Tick = pivotable

Cross = pivoting deactivated, hydraulic cylinder not driven.

Diagnostic Function

Monitoring of the job computer for

| operating voltage | ÷ - |
|--|--------------|
| sensor supply voltage | đ |
| short-circuit to ground or 12 V cable break overload | ∠ ‡‡₩ |

Switching outputs (example: Y1 = raise directional control valve)



On fault identification

- the alarm screen is faded in and an alarm sound is audible.
- the corresponding symbol and fault are displayed.

An error must be acknowledged using the "ESC" key.

The diagnostic function for every single channel can be switched off until the next system start using the **"T9"** key.



P Note!

Any desired function may be established manually using the emergency actuator in the event of a malfunction (see Section "Electrohydraulics").

Sensor inputs (example: sensor voltage supply < 10 V)
Diag



Note!

The alarms for the voltage supply cannot be switched off.

Time out monitoring

When, after 6 seconds and after pressing the "Raise front mower or all mowers" button, the front mower sensor is not reached.



School Note:

When this message is displayed, the front mower S7 sensor is not active.

Immediate action:

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

Calibration

Starting from the SET menu (**F6**) the "Test" button **TEST** must be pressed for 10 seconds to enter the diagnostic menu.



a Pivoting aid

This configuration must be deactivated in the case of Novacat X8 and X8 Collector!

- **b** Individual cross conveyor belt pivoting
- **c** Diagnostic function of the inputs and outputs
- d Hydraulic pressure relief
- Speed control of the cross conveyor belts

(tick = active/cross = inactive)

Joystick - Mower Configuration

The joystick has 8 equivalent function keys (1-8), a green activation button (A0) and a levels switch (E1/E2/E3). The keys can be used to assign 8 different functions per level (E1/E2/E3) = max. 24 different functions can be carried out using the joystick.



Check assignment of joystick function keys

Starting from the START menu, press T8. Switch to the relevant overview using the level switch (E1/E2/E3). Assigned function keys are identified by the function symbol.



Setting the Joystick

Set assignment of joystick function keys

Starting from the START menu, press T6 and in the Field operator 300 menu press T9 to access the joystick setting menu.



4. The following symbols appear on the display:

The "STOP" function on the joystick has been assigned to function key 7 on level 1.

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

- 1 Switch up (LED lights up red)
- 2 Switch centre (LED lights up yellow)
- 3 Switch down (LED lights up green)
- 5. Set all other assignments of the function keys using the same method.



Important points before starting work



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

2. Protective devices

- Fold down side protection in "Select Control" version or check activated side protection in "Power Control" version.
- Check safety equipment (covers, protective skirts, panels, etc.) for proper condition and function.
- 3. Switch-on the machine only in working position and do not exceed the prescribed power takeoff speed (max. 1000 rpm).
- Turn the p.t.o. on only when all safety devices (coverings, protective aprons, casings, etc.) are in proper condition and attached to the implement in the correct protective positions.
- 4. Pay attention to correct p.t.o. direction of rotation!



5. Damage protection!



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

In the event of a collision

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

After any contact with foreign objects

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

6. Stay clear while engine is running.



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

7. Wear hearing protection



If a noise level of 90 dB (A) is reached or exceeded, the hearing protection must be worn.







Safety

see supplement-A1 points 1. - 7.)



- After the first hours of operation
- Retighten all kni-
- fe screw fittings.





Mow

- 1. Adjust cutting height by turning upper link spindle (inclination of the cutting discs max. 5°).
- 2. To mow, gradually supply power to the p.t.o. before entering the crop and bring the mowing discs up to full revs.

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

- Adjust travel speed to terrain and crop.

Adjustment:

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



6



Caution!

Risk of injury due to flying parts. Keep a sufficiently safe distance from people while mowing.

Collision safety device

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



Attention!

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

Return swivelling takes place automatically via a gas pressure reservoir.



Note:

The counterpressure (= gas reservoir pressure) of the collision lock is adjustable. (See Section headed "Pressure relief and collision lock)



Working on slopes



Take care when turning on slopes!

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

Safety advice

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

Danger of tipping occurs

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


Operating Principle

A narrow swath is formed when using the swath plates while mowing. This avoids driving over the crop with wide tractor tyres.



Safety note: Read and comply with the Operating Instructions and particularly the safety notes prior to commissioning.

Designations:

1

2

(1) Swath plates

(2) Swath plate mounting

Working range:

The horizontal working range of the swath former is adjustable via the slots (L).

Optimum adjustment:

The discs are mounted 0-10 mm lower than the bottom edge of the cutter bar.





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Warning!

Rotating parts, danger of being pulled in. Never open or remove protective devices when engine is running.

Non-standard equipment

Additional swath plate

Adjusting the two tension springs:

- A = For tall, dense fodder crops.
- B = Basic setting.
- C= For short fodder crops.



Conveying cone

The conveying cones are recommended:

- To improve the output for the swath deposit, particularly with heavy, dense fodder crops.
- See Spare Parts List for spare parts



maintenance

The swath former is maintenance-free with the exception of cleaning activities.



Caution!

Removal and installation of the swath former

The mower unit is compatible for optional hitching of a tine conditioner, roller conditioner or swath former. Special work steps are necessary for the conversion depending on the attachment unit.

For details see the Section "REPLACE CONDITIONER"



Operating Principle

The aim of processing is to roughen the wax layer (protective layer) on the blade of grass. The feed thus releases water more easily and dries faster. Processing is carried out with V-shaped tines that are arranged in a spiral shape on the processor shaft. The intensity is adjusted by way of a baffle plate with processor bars.



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Read and comply with the Opera-

ting Instructions and particularly the safety notes prior to commissioning.

Designations:

- (1) Adjustable swath guide plates
- Tine rotor (3)
- Adjustable baffle plate (5)

- (2) Adjusting unit for intensity
- Drive unit (4)

Adjustment Possibilities

The following adjustments should be made on the tine conditioner for optimum adaptation to the environmental conditions:

Adjust processing effect:

The gap between adjusting strip and rotor is adjusted using lever (1).

- Position (3): processing is most effective. The surface of the crop is heavily roughened. The feed should not, however, be broken up.
- _ Position (0): The surface of the crop is only slightly roughened.

The correct setting depends among other things on the volume of crop arising, travelling speed and tractor power. Thus it is not possible at this point to give any binding recommendation about the correct lever position.



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Warning!

Rotating parts, danger of being pulled in. Never open or remove protective devices when engine is running.

TINE CONDITIONER

Baffle plate:

The angle of the baffle plate is adjustable for the desired casting distance of the crop:

- Loosen clamping screw (P)
- Adjust baffle plate
- Fix clamping screw (P)

Adjust swath width:

The mown and conditioned crop is formed into the desired swath width using the swath plates. Adjustment of the swath plates is performed identically left and right by opening and adjusting the adjusting screw (S)

Scattering device:

individually adjustable guide plates (L) support the desired shape of the swath deposited.

Adjust position of swath and guide plates

The settings described below are to be seen as basic settings. It may not be possible to determine the best possible adjustment of the guide plates until in practical use due the different types of fodder.

Scattering

- Swing swath plates (12) completely outwards
- Adjust position of guide plates (See diagram (L))

Swaths

- Swing swath plates (12) inwards
- Adjust position of guide plates (See diagram (L))











Note!

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Incorrect adjustment of the swath plates and guide plates means:

- Increased power requirement

- Blockage of the machine

- Damage to the V-belts

Use

Travelling speed:

Adapt the driving speed to the amount of feed. Too high a speed reduces the quality and evenness of processing.

Working without processor:

The tine conditioner can also be dismantled if necessary and replaced with a roller conditioner or swath former. (More detailed information about this is available from your sales partner)

A machine with conditioner is equipped as a complete unit with proper protective elements. The mower unit is no longer completely enclosed if the conditioner is removed. Mowing may not be carried out in the condition without protective elements!

Caution!

The cutting blades of the disc mower are freely accessible if the processor is dismantled. There is a very high risk of injury. Protective elements that are specially intended for this mode of operation must be installed on the cutter bar for mowing without conditioner. For a new machine with conditioner these protective devices are not included in the delivery; these parts must be ordered additionally (see spare parts list, component group "REAR PROTECTION")





Risk of injury due to flying parts. Keep a sufficiently safe distance from people while mowing.

Maintenance

Correct belt tension: Check dimension X2 NOVACAT X8: X2 = 185 mm (lateral mower units)





Caution!

Switch off the engine before carrying out maintenance and repair work and remove the ignition key.

Position of rotor tines

Item Z1: Position of rotor tines for normal conditions of use.

Item Z2: For difficult conditions such as if the fodder wraps around the rotor.

Rotate the rotor tines through 180° (pos. Z2). This tine position gets rid of the problem in most cases. However, this reduces the processing effect somewhat.



Removal and installation of the conditioner

The mower unit is compatible for optional hitching of a tine conditioner, roller conditioner or swath former. Special work steps are necessary for the conversion depending on the attachment unit.

For details see the Section "REPLACE CONDITIONER"

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Designations:

- (1) Central lubricating unit (on lighting carrier)
- (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

Adjustment possibilities

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

Distance of rollers from each other:

The roller gap is set identically on the left and right side with the adjusting screw (1). base setting: (X) = 70 mm.



By reason of component tolerances an uneven roller gap can occur despite the base setting. Check and if needed reset the adjusting screw (1) on one side.





Warning!

Rotating components, danger of catching. Never open or remove protection devices when the motor is running.

ROLLER CONDITIONER

Upper roller spring 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





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).

\triangle

Beware!

Danger of injury through flying parts. Keep people at a sufficiently safe distance during mowing.

Operation

Travelling speed:

Set swath width:

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

Working without roller conditioner:

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

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



Take note!

If the roller conditioner is removed, the disc mower cutting blades can be accessed freely. Great danger of injury now exists. For mowing without a conditioner, protective devices especially designed for this type of operation must be fitted to the mower bar. For a new machine with conditioner these protective devices are not included in the delivery; these parts must be ordered additionally (see spare parts list, component group "REAR PROTECTION")



ROLLER CONDITIONER (GB

Maintenance

Cleaning: (every 20 operating hours)

- Unscrew the covers and maintenance openings (WA) during belt and chain drive
- Remove deposited dirt
- Clean rubber rollers



Dirt can impair lubrication that will subsequently cause equipment damage!





Take care! Turn motor off and remove key before any maintenance and repair work



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The following oils are recommended for the central lubricating device:

Note:

- HEES 46 synthetic oil

- HLP 46 hydraulic oil

Only use new oil!

Chain drive maintenance unit

Lubrication: (every 20 operating hours)

The driving chains are lubricated through the central lubricating device.

A lubricating impulse is released every time the mower is raised

- Lubricating device function check
- Check oil level. (Oil container is located on the lighting carrier)



Check the central lubricating device oil level before each operation. Operating with insufficient lubrication leads to drive chain damage.

Chain tension: (every 60 operating hours)

Short drive chain

Check chain tension with your thumb on the checking point (PP1). Optimal tolerance: 3.5 - 5 mm.

Alter chain tension:

- Loosen (3) screws
- Adjust straining screw (WS1)

Long drive chain

Check chain tension with your thumb on the checking point (PP2). Optimal tolerance: 5 - 8 mm. Alter chain tension:

• Adjust straining screw (WS2)





Altering the roller position: (when required)

After the drive chains have been tensioned several times the roller position changes.

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.



Optimal roller position prevents premature wear and tear of the rubber rollers.

Drive belts: (when required)

Check belt tension:

• Standard setting (SE): XX mm

Alter belt tension:

• Adjust screw (WS)

Replace belts:

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

- Loosen belt tension. To assist, the belt tightener can be deactivated using the cutter quick-change spanner (1)
- Replace belts
- Reset belt tension

Lubrication:

(every 20 operating hours)

• SP 1

(every 100 operating hours)

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

Transmission oil:

(every 100 operating hours)

The gearbox is on the outside of the cutter bar.

- Open the drain screw (AS) and drain off oil
- Pour in transmission oil (700 ml) at filling screw (BS)

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











ROLLER CONDITIONER (GB

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 height of roller 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)



Operating Principle

The mower unit is compatible for optional hitching of a tine conditioner, roller conditioner or swath former. The conditioners or swath formers are additionally designed as a safety device and are imperative for use.

Dismantle conditioner

1. Reduce relief pressure of mower unit

(A) Version: Hydraulic pressure relief

Reduce to the relief pressure to 0 on the operating panel in the "SET" menu.

(B) Version: Mechanical pressure relief

Raise the mower unit until the pressure relief springs are depressurized and open the linch pin.

(See Section headed "Pressure relief and collision lock")





Caution!

Danger of crushing! Reduce the relief pressure prior to dismantling the conditioner or swath former.

2. Remove protective cover and belt

Loosen the belt tension using the knife wrench (1) and remove the belt (2) on the conditioner side.

Then remove knife wrench.

The belts must be removed completely if a swath former is attached. Unhitch PTO drive shaft (3) and remove belt.



3. Loosen conditioner fixing

The conditioner fixing (1) to be loosened is located under the conditioner's outer side guard.

The optimum alignment between mower unit and conditioner is adjusted using the conditioner fixing (1). The belt pulleys on the inside of the conditioner must be aligned flush with the belt pulleys of the mower unit.

4. Attach chassis

Insert the chassis (1) supplied into the mounting on both sides until the limit is reached for transporting the dismantled conditioner.





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Pos. A

В

Pos. E 🖸

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5. Open retaining bolt

The conditioners are each attached to the mower unit with 2 retaining bolts.

Standard (A): Screw + sleeve

Non-standard equipment (B): Spring-assisted quick closure.

6. Disconnect lubricating line:

(The lubricating line is only attached when using the roller conditioner!)

 $Close \, shut-off \, valve \, of \, central \, oil \, lubrication \, on \, coupling \, jack \, (pos. \, A)$

For connecting and disconnecting, push out the connection of the lubricating line on the mower unit.

7. Remove conditioner

Install conditioner

1. Clean

Clean the conditioner/swath former and the mower unit thoroughly especially the connecting points.

2. Push conditioner or swath former into mounting of mower unit.

3. Close retaining bolt

Standard (A): Screw + sleeve

Standard equipment (B): Spring-assisted quick closure.

4. Disconnect chassis

5. Adjust and secure conditioner fixing

The optimum alignment between mower unit and conditioner is adjusted using the conditioner fixing (1). The belt pulleys on the inside of the conditioner must be aligned flush with the belt pulleys of the mower unit. Secure conditioner fixing!

6. Install belt, tension and attach protective cover.

For details see the Section "Dismantle conditioner"

7. Connect lubricating line (only with roller conditioner)

Open shut-off valve of central oil lubrication on coupling jack (pos. E)

8. Adapt relief pressure to mower unit:

The relief pressure of the mower unit must be reset after installation of the new conditioner.

The following are deemed to be guide values for the "hydraulic pressure relief" version:

| Swath former: | 90 - 100 bar |
|---------------------|---------------|
| Tine conditioner: | 130 - 140 bar |
| Roller conditioner: | 160 - 170 bar |

9. Adjust lighting beam

The lighting beam can be changed in length depending on the conditioner or swath former using an adaptor (Z).



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Tip!

Checking the correctly adjusted relief pressure: The mower unit can be raised manually on the outside (approx. 80 kg).



Function

A variable swath deposit is possible using a cross conveyor belt (single swath, broad deposit or triple swath). Using the operating terminal, the cross conveyor belt is swung out or in and the belt speed per unit infinitely adjusted.



Safety note:

Before initial operation read and observe the operator's manual, especially the safety advice.



Possible settings

Deflector plate (P):

Set deflector plate (P) so that forage is thrown onto the centre of the cross conveyor belt

Belt speed: (Optional extra)

Cross conveyor belt speed can be set using the control



Note!

When operating on slopes (contours), different speeds for the cross conveyor belts can be set. The downhill-side belt can run faster than the uphill-side belt.





Warning!

Rotating parts, danger of being drawn-in. When motor is running do not open or remove protection equipment!

CROSS CONVEYOR BELT (GB

Accelerating roller (Option):

Accelerating rollers are used to convey forage closer to the centre.

Setting:

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The height of accelerating rollers can be adjusted to alter the throw distance.

- Remove screw (1) (front and rear)
- Move roller to the desired position

Note!

points.

- Insert screw (1) into the appropriate hole and tighten

The roller must be pinned equally at all





Operation



Note!

Check and clean belt run regularly to prevent premature wear and tear (see chapter "Maintenance").

Swing cross conveyor belt in:



Cross conveyor belts will always be in this position when swinging from transport to working position. - Swinging the cross conveyor belts in and out is carried out using the operating panel.



Take note!

Cross conveyor belts are fixed to the mower units and therefore move with them when swinging from transport to working position.



Take care!

Danger of injury from ejected parts. Ensure that persons maintain a sufficient safe distance during operation.

Swing cross conveyor belt out:



If a swath is not to be deposited, the cross conveyor belts can be swung out.

- Swinging the cross conveyor belts in and out is carried out using the operating panel.



Note!

If the cross conveyor belts are no longer required, they can be removed from the machine. The tractor will therefore have less load.

Laying down swaths

A variable swath deposit is possible using a cross conveyor belt (single swath, broad deposit or triple swath). Using the operating terminal, the cross conveyor belt is swung out or in and the belt speed per unit infinitely adjusted.

Mowing without a cross conveyor belt

- Forage is deposited with the same swath width as the conditioner (= single swath).



Mowing with a cross conveyor belt

- Both conveyor belts move forage to the centre and create a "triple swath".

The swath width can be narrowed using the additional roller.



Mowing with only one cross conveyor belt

- If operating with only one cross conveyor belt, the possibility exists of laying a swath row over the other two swath rows.

Advantage:

The total swath width is optimally prepared for a windrower with a minimum working width of 10m.



Note!

Remove the separating plate for this operating method.



Dismounting the Cross conveyor belt



- Raise and place in turn-over position
- Briefly swing cross conveyor belt out and then swing completely in

2. Position support stands and disconnect cardan shaft:

- Swing out support stand (1) per belt
- Disconnect cardan shaft between mower unit and cross conveyor belt.

Note:

Disconnect cardan shaft from cross conveyor belt first!

- Fit the 2 support stands (2) to the front main frame of the cross conveyor belt



These support stands are not transported on the mower unit!

- Secure support stand (3) on the rear main frame of the cross conveyor belt at the very outside position.

3. Undo locking flap:

- Undo the flap screws (4)

4. Lower mower unit to working position:



Lowering can be interrupted using the STOP button on the control unit. This enables lowering to be gradual and smooth.

5. Undo lower link:

- Undo the upper screw (5) in the lower link safeguard
- Fold lower ling safeguard (6) out

6. Secure upper link:

- Relieve the upper link (7) and secure it on the side of the mower unit





Park cross conveyor belt only on firm, even ground.

No one is to stand between the mower combination and cross conveyor belt unit when mounting/dismounting cross conveyor belt. Danger of crushing!







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CROSS CONVEYOR BELT (GB

7. Unplug connection lines:

- Unplug electrical connection lines
- Unplug hydraulic connection lines



Do not unplug hydraulic lines if the line pressure is too high. To assist, screw in the emergency actuation of the last 4 valve blocks on the hydraulic block (under the white hitching frame protection cover).

Take note:



After successfully unplugging the hydraulic lines, unscrew the emergency actuation of the last 4 valve blocks. If this is forgotten, the cross conveyor belts swing when the control device is actuated!

8. Lower mower unit and move freely

- Lower mower unit until cross conveyor belt lower links (9) are free.

Beware:

Do not lower to far otherwise the upper link bearer (10) will collide with the cross conveyor belt spring!

Carefully move mower unit free

9. Alter software setting

The mower type can be altered on the control panel in the "SET" menu (see chapter "Power Control and ISO Bus")

Configuration:

- with cross conveyor belt = Type: Novacat X8 Collector
- without cross conveyor belt = Type: Novacat X8



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Do not climb on the cross conveyor belt when parked. **Danger of tipping** exists!

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Mounting the Cross Conveyor Belt

Mounting the cross conveyor belt to the mower unit is carried in reverse order.

Setting the upper link:

A = 493mm

Connections:

- A: 1 = raise left Collector
 - 2 = raise right Collector
 - 3 = swing left belt out
 - 4 = swing left belt in
 - 5 = swing right belt out
 - 6 = swing right belt in
- B: Lighting
- C: Connection cable for Collector







After altering the weight, check the mower relieving pressure and adjust if necessary.

Cross conveyor belt maintenance

- Set belt tension by turning the perforated disk (L)
- Set the roller position by moving the tensioning block (S)
 - Set the roller so that the belt runs centrically

Possible causes for high belt wearing:

- Belt tension to tight
- Belt not running centrically





Take care!

Turn motor off and remove key before any maintenance or repair work!



- Check belt run after 5, 10, 20 hours and then every 20 hours thereafter.
- The belt must not run to the side.
- The belt must run centrically on both rollers.

Setting belt tension:

- Pretension belt at approx. 0.4 0.5 % Setting advice:
 - Mark loose belt at 2000mm (see sketch)
 - Tension belt until marked distance reaches 2008 – 2010 mm0





Always set the distance between feed plate and conveyor belt with screws (1) so that gap on conveyor belt ejector side (A) is greater than gap on feed-in side (E). **Min. distance: 5mm**



A correctly set feed-in plate prevents blockages and/or minimizes cleaning.

Sensor setting:

The cross conveyor belt sensor advises the swinging status of the belt. Set the sensor distance (S) between $3 \rightarrow 5$ mm.

Oil change:

Interval:Every 2 years (max. 4000 ha)Amount:26 litresType:SAE 10W-30







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Requirements for reverse drive

- Tractor suitable for reverse drive
- Conditioner suitable for reverse drive
- "Non-standard equipment" conversion set

Establish suitability for reverse drive

The following additional components must be mounted on the coupling jack (3) for reverse drive suitability.

- Upper link (1)
- Remove depending on central mower unit or A-frame mounting and adjust desired inclination
- Attach hitching lugs for central mower unit (2) or A-frame mounting
- Attach hitching lugs for tractor (4)



Adaptation of the tractor to the mower unit

The tractor's 3-point suspension must be adapted such that no collision (K) occurs on swivelling the mower unit.



Safety point

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



General maintenance hints

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

Tighten all screws after the first hours of operation.



In particular check:

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

Spare part

- The original components and accessories have been designed especially for these machines and appliances.
- 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.
- Alterations and the use of auxiliary parts that are not permitted by the manufacturer render all liability invalid.

Cleaning of machine parts

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

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



Parking in the ope

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

Winter storage

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

Drive shafts

- see notes in the supplement

For maintenance please note!

The instructions in this operating manual are always valid.

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

Hydraulic unit

Caution! Danger of injury or infection!

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



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

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

Before operation

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

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



Safety points!

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

 Do not work under the machine without safe support.

 Retighten all screws after the first hours of operation..



Please refer to repair instructions in supplement (if available)

62

Oil change on cutter bar

083-01-33

Changing oil

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

Quantity:

NOVACAT X8: 3.5 litre SAE 90

Cutter bar oil level check

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





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

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

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

3. Remove oil refill screw (63).

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

Important!

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

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

4. Oil level check

12mm.

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



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

• Too little oil does not guarantee the necessary lubrication.







⁰⁸³⁻⁰¹⁻²⁹

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

Note:

Change oil when at operating temperature.

The oil is too viscous when cold. Too much old oil remains stuck to the gearwheels and because of this any suspended matter present cannot be removed from the gearing.



Check the level of the oil at a working temperature.

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



Gearing maintenance

(62)

13

Note:

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

Input Gearbox

(If the mower combination is supplied without collector preparation, the gearbox is only designed with 3 stubs)

- Oil change after the first 50 hours of operation.
- Oil change after no more than 100 h.

Oil quantity:

Version "3 stubs": 4.0 litre SAE 90 Version "4 stub": 4.4 lire SAE 90

Angular gear

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

Quantity:

0.8 litre SAE 90





- * Filler opening (62)
- * Oil outlet (63)
- * Oil level control (OIL LEVEL)

Installing cutter blades



Take note!

- The arrow on the cutter blade shows the cutter disc's direction of turn.
- To install, clean back plates from varnish.



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

The following guide is valid for both cutter bars.

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



Adjustment of sensors

Always carry out adjustments and controls in that operating position where the distance from the sensor is smallest. When doing this, a possible assembly clearance should also be taken into account.

Distance 3-5 mm



Winter storage using optional parking supports

1. Remove mower's support stands: remove the spring pin then the clamping sleeve from each stand, then remove the stands.

2. Bring the rear guides left and right into position and secure with linch pin.

3. Bring mower into position and lower onto parking supports.



level, firm ground.





4. Secure front guides on parking supports against slipping using chocks.



5. Fit support stand to, secure using linch pin.





Checking wear on mowing blade holders





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.

Wearing parts are:

_

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





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...)



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

- 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!

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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



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Direct operation (Power Control/ISOBUS)



| Technical data | | | | |
|--|--------------------|---------------|---------------------------|--|
| Designation | | | NOVACAT X8 (Type 3843) | |
| Three-point hitch | | | Cat III | |
| Number of mower of | discs | | 2 x 7 | |
| Number of knives p | ber disc | | 2 | |
| Power requirement [kw/PS] | | 110 / 150 | | |
| Area output [ha/h] | | 10.0 | | |
| PTO drive shaft speed [rpm ⁻¹] | | 1000 | | |
| PTO drive shaft ove | erload protection | [Nm] | 1100 | |
| Weight ¹⁾ [kg] | NovaCat X8 | 2020 | | |
| | | NovaCat X8 ED | 2550 | |
| | [kg] | NovaCat X8 RC | 2760 | |
| | NovaCat X8 ED Coll | 3810 | | |
| | NovaCat X8 RC Coll | 4120 | | |
| Continuous sound | pressure level | [db(A)] | 93.6 | |

| Dimensions: Transport | [mm] |
|-----------------------|------|
| M 1 | 3000 |
| M 2 | 3960 |
| М 3 | 200 |



| Dimensions: Mower blades | [mm] |
|--------------------------|----------------------|
| M 1 | 9100 |
| M 2 | 8300 |
| М 3 | min: 250 max: 400 |



¹⁾ Weight: Variations possible depending on machine features.



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.

The defined use of the mower unit

The 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 or

The manufacturer takes no responsibility for any resulting damage which occurs henceforth. The risk is carried by the user alone.

• Compliance with operating, service and maintenance requirements laid down by the manufacturer also comes under the heading of "defined use".

SUPPLEMENT

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- 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!





Recommendations for work safety

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

1.) Defined use

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

2.) Spare parts

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



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

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

3.) Protection devices

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

4.) Before starting work

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

5.) Asbestos

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



6.) Transport of persons prohibited

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

7.) Driving ability with auxiliary equipment

- a. The towing vehicle is to be sufficiently equiped with weights at the front or at the rear in order to guarantee the steering and braking capacity (a minimum of 20% of the vehicle's tare weight on the front axle).
- b. The driving ability is influenced by ground conditions and by the auxiliary equipment. The driving must be adapted to the corresponding terrain and ground conditions.
- c. When driving through curves with a connected appliance, observe the radius and swinging mass of the appliance.



d. When travelling in a curve with attached or semimounted implements, take into account the working range and swing mass of the implement!

8.) General

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

9.) Cleaning the machine

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



DRIVESHAFT (GB

Matching driveshaft to tractor

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



Procedure for cutting to length

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



Important!

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



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

Retaining chain

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



Rules for working

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

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



Wide-angle joint:

Maximum angle of deflection when working/stationary: 70°

Standard joint :

Maximum angle of deflection when stationary: 90° Maximum angle of deflection when working: 35°



Maintenance



Replace worn-out covers/guards at once.

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

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





Important!

Only use the indicated or accompanying drive shaft, otherwise the right to claim under guarantee for any possible damage does not exist.
How a cam type cut out safety clutch works

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

The clutch reengages at a speed below 200 rpm.

IMPORTANT!



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

TAKE NOTE!

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

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

Lubricating interval: 500 hrs (Special lubricant)



Important for driveshafts with friction clutch

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

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

- a.) Measure dimension "L" at compression spring of K90, K90/4 and K94/1 or at set screw of K92Eand K92/4E.
- b.) Loosen screws to release the pressure on the friction disk.
 - Slip the clutch.
- c.) Tighten set screws to dimension "L".

Clutch is ready for use.

K90,K90/4,K94/1







| D | Schmierplan | F | Plan de graissage | GB | Lubrication chart | | | | | | |
|------------------------|---|-------------------------|-------------------------------------|------------------------|--|--|--|--|--|--|--|
| X ^h 40 F | alle X Betriebsstunden | X ^h 40 F | Toutes les X heures de service | X ^h 40 F | after every X hours operation | | | | | | |
| 80 F | alle 80 Fuhren | 80 F | Tous les 80 voyages | 80 F | all 80 loads | | | | | | |
| 1 J | 1 x jährlich | 1 J | 1 fois par an | 1 J | once a vear | | | | | | |
| 100 ha | alle 100 Hektar | 100 ha | tous les 100 hectares | 100 ha | every 100 hectares | | | | | | |
| FETT | FETT | FETT | GRAISSE | FETT | GREASE | | | | | | |
| 1/= | Anzahl der Schmiernippel | 1/= | Nombre de graisseurs | 1/= | Number of grease nipples | | | | | | |
| <u>/1</u> = | Anzahl der Schmiernippel | <u>/1</u> = | Nombre de graisseurs | <u>/1</u> = | Number of grease nipples | | | | | | |
| (IV) | Siehe Anhang "Betriebsstoffe" | (IV) | Voir annexe "Lubrifiants" | (IV) | see supplement "Lubrificants" | | | | | | |
| Liter | Liter | Liter | Litre | Liter | Litre | | | | | | |
| * | Variante | * | Variante | * | Variation | | | | | | |
| | Siehe Anleitung des Herstellers | | Voir le guide du constructeur | | See manufacturer's instructions | | | | | | |
| NL | Smeerschema | E | Esquema de lubricación | | Schema di lubrificazione | | | | | | |
| Xh | alle X bedriifsuren | Xh | Cada X horas de servicio | Xh | ogni X ore di esercizio | | | | | | |
| 40 F | alle 40 wagenladingen | 40 F | Cada 40 viajes | 40 F | ogni 40 viaggi | | | | | | |
| 80 F | alle 80 wagenladingen | 80 F | Cada 80 viajes | 80 F | ogni 80 viaggi | | | | | | |
| 1 J | 1 x jaarlijks | 1 J | 1 vez al año | 1 J | volta all'anno | | | | | | |
| 100 ha | alle 100 hectaren | 100 ha | Cada 100 hectáreas | 100 ha | ogni 100 ettari | | | | | | |
| FETT | VET | FETT | LUBRICANTE | FETT | GRASSO | | | | | | |
| ¥ = | Aantal smeernippels | ¥ = | Número de boquillas de engrase | ¥ = | Numero degli ingrassatori | | | | | | |
| <u>/1</u> = | Aantal smeernippels | <u>/1</u> = | Número de boquillas de engrase | <u>/1</u> = | Numero degli ingrassatori | | | | | | |
| (IV) | Zie aanhangsel "Smeermiddelen" | (IV) | Véase anexo "Lubrificantes" | (IV) | vedi capitolo "materiali di esercizio" | | | | | | |
| Liter | Liter | Liter | Litros | Liter | litri | | | | | | |
| * | Varianten | * | Variante | * | variante | | | | | | |
| | zie gebruiksaanwijzing van de fabrikant | | Véanse instrucciones del fabricante | | vedi istruzioni del fabbricante | | | | | | |
| P | Plano de lubrificação | P Plano de lubrificação | | | | | | | | | |

| \smile | |
|-------------|-----------------------------------|
| Xh | Em cada X horas de serviço |
| 40 F | Em cada 40 transportes |
| 80 F | Em cada 80 transportes |
| 1 J | 1x por ano |
| 100 ha | Em cada100 hectares |
| FETT | Lubrificante |
| 1/= | Número dos bocais de lubrificação |
| <u>/1</u> = | Número dos bocais de lubrificação |
| (IV) | Ver anexo "Lubrificantes" |
| Liter | Litro |
| * | Variante |
| | Ver instruções do fabricante |
| | |





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Edition 1997

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 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. 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.

| iebeol SAE 90 bzw. SA äß API-GL 4 oder API-G |
|--|
| · oil, SAE 90 resp. SAE 8 ording to API-GL 4 or API |
| e transmission SAE 90 of 85 W-140, niveau API-G GL 5 |
| per cambi e differenziali S LE 85W-140 secondo spe GL 4 o API-GL 5 |

| NOTATIONS | * The international spe- cification J 20 A is ne- | operation with wet brake tractors. | <pre>** HLP-(D) + HV hydrau- lic oils *** HI P + HV hydraulic</pre> | oils with a vegetable oil basis, biodegradable and therefore environ- | - dipercent in the second s | | | | | | | | | | | | | | | |
|----------------------------------|---|--|---|--|---|---|---|---|---|---|--|--|--|---|--|--|---|--|---|---|
| IIA | ROTRA MP 80W-90 ROTRA MP 85W-140 | GETRIEBEÖL HYP 90 | GETRIEBEÖL HYP 90 EP MULTIHYP 85W-140 EP | HVPOID 85W-140 | HYPOGEAR 90 EP HYPOGEAR 85W-140 EP | EPX 80W-90 HYPOY C 80W-140 | GETRIEBEÖL B 85W-90 GETRIEBEÖL C 85W-140 | TRANSELF TYP B 90 85W-140 TRANSELF TYP BLS 80 W-90 | GEAR OIL GX 80W-90 GEAR OIL GX 85W-140 | HYPOID GB 90 | PONTONIC MP 85W-140 | • AGRIFARM GEAR 8090 • AGRIFARM GEAR 85W-140 • AGRIFARM GEAR LS90 | HYPOID EW 90 HYPOID 85W-140 | MOBILUBE HD 90 MOBILUBE HD 85W-140 | HYPOID EW 90 | SPIRAX HD 90 SPIRAX HD 85W-140 | TOTAL EP B 85W-90 | HP GEAR OIL 90 oder 85W-140 | MULTIGEAR B 90 MULTI C SAE 85W-140 | HYPOID-GETRIEBEÖL 80W-90, 85W-140 |
| 7 | | ARALUB FK 2 | AVIALUB SPEZIALFETT LD | RENOPLEX EP 1 | OLEX PR 9142 | CASTROLGREASE LMX | | MULTIMOTIVE 1 | NEBULA EP 1 GP GREASE | EVVA CA 300 | MARSON AX 2 | RENOLIT DURAPLEX EP 1 | RENOPLEX EP 1 | MOBILPLEX 47 | RENOPLEX EP 1 | AEROSHELL GREASE 22 DOLIUM GREASE R | MULTIS HT 1 | DURAPLEX EP 1 | | WIOLUB AFK 2 |
| > | GR SLL GR LFO | ARALUB FDP 00 | AVIA GETRIEBEFLIESSFETT | GETRIEBEFLIESSFETT NLGI 0 RENOLIT DURAPLEX EP 00 PLANTOGEL 00N | FLIESSFETT NO ENERGREASE HTO | IMPERVIA MMO | RHENOX 34 | GA O EP POLY G O | FIBRAX EP 370 | GETRIEBEFETT MO 370 | NATRAN 00 | AGRIFARM FLOWTEC 000 RENOLIT SO-GFO 35 RENOLIT DURAPLEX EP 00 PLANTOGEL 00N | GETRIEBEFLIESSFETT PLANTOGEL 00N | MOBILUX EP 004 | RENOSOD GFO 35 | SPEZ. GETRIEBEFETT H SIMMNIA GREASE O | MULTIS EP 200 | RENOLIT LZR 000 DEGRALUB ZSA 000 | | WIOLUB GFW |
| | GR MU 2 | ARALUB HL 2 | AVIA MEHRZWECKFETT AVIA ABSCHMIERFETT | MULTI FETT 2 SPEZIALFETT FLM PLANTOGEL 2 N | ENERGREASE LS-EP 2 | CASTROLGREASE LM | LORENA 46 LITORA 27 | EPEXA 2 ROLEXA 2 MULTI 2 | MULTI PURPOSE GREASE H | HOCHDRUCKFETT LT/SC 280 | MARSON EP L 2 | • AGRIFARM HITEC 2 • AGRIFARM PROTEC 2 • RENOLIT MP • RENOLIT M2 • PLANTOGEL 2-N | MEHRZWECKFETT SPEZIALFETT GLM PLANTOGEL 2 N | MOBILGREASE MP | MEHRZWECKFETT RENOLIT MP DURAPLEX EP | RETINAX A ALVANIA EP 2 | MULTIS EP 2 | MULTILUBE EP 2 VAL-PLEX EP 2 PLANTOGEL 2 N | MULTIPURPOSE | WIOLUB LFP 2 |
| | ROTRA HY 80W-90/85W-140 ROTRA MP 80W-90/85W-140 | GETRIEBEÖL EP 90 GE- TRIEBEÖL HYP 85W-90 | GETRIEBEÖL MZ 90 M MULTIHYP 85W-140 | SUPER 8090 MC HYPOID 80W-90 HYPOID 85W-140 | GEAR OIL 90 EP HYPOGEAR 90 EP | EPX 80W-90 HYPOY C 80W-140 | GETRIEBEŐL MP 85W-90 GETRIEBEŐL B 85W-90 GETRIEBEŐL C 85W-90 | TRANSELF TYP B 90 85W-140 TRANSELF EP 90 85W-140 | GEAROIL GP 80W-90 GEAROIL GP 85W-140 | HYPOID GA 90 HYPOID GB 90 | PONTONIC N 85W-90 PON- TONIC MP 85W-90 85W-140 SUPER UNIVERSAL OIL | • AGRIFARM GEAR 80W90 • AGRIAFRM GEAR 85W-140 • AGRIFARM GEAR LS 90 | GETRIEBEŐL MP 90 HYPOID EW 90 HYPOID 85W-140 | MOBILUBE GX 90 MOBILUBE HD 90 MOBILUBE HD 85W-140 | MEHRZWECKGETRIEBEÖISAE90 HYPOID EW 90 | SPIRAX 90 EP SPIRAX HD 90 SPIRAX HD 85/140 | TOTAL EP 85W-90 TOTAL EP B 85W-90 | HP GEAR OIL 90 oder 85W-140 TRANS GEAR OIL 80W-90 | MULTIGRADE SAE 80/90 MULTIGEAR B 90 MULTIGEAR C SAE 85W-140 | HYPOID-GETRIEBEÖL 804-90, 854-140 MEHRZWECKGETRIEBEÖL 8044-90 |
| | MOTOROIL HD 30 SIGMA MULTI 15W-40 SUPER TRACTOROIL UNIVERS. 15W-30 | SUPER KOWAL 30 MULTI TURBORAL SUPER TRAK- TORAL 15W-30 | MOTOROIL HD 30 MULTIGRADE HDC 15W-40 TRACTAVIA HF SUPER 10 W-30 | SUPER 2000 CD-MC SUPER 2000 CD HD SUPERIOR 20 W-30 HD SUPERIOR SAE 30 | VISCO 2000 ENERGOL HD 30 VANELLUS M 30 | RX SUPER DIESEL 15W-40 POWERTRANS | MOTORÖL 100 MS SAE 30 MOTORÖL 104 CM 15W-40 AUSTROTRAC 15W-30 | PERFORMANCE 2 B SAE 30 8000 TOURS 20W-30 TRACTORELF ST 15W-30 | PLUS MOTORÖL 20W-30 UNIFARM 15W-30 | SUPER EVVAROL HD/B SAE 30 UNIVERSAL TRACTOROIL SUPER | DELTA PLUS SAE 30 SUPER UNIVERSAL OIL | • AGRIFARM STOU MC 10W-30 • TITAN UNIVERSAL HD | MULTI 2030 2000 TC HYDRAMOT 15W-30 HYDRAMOT 1030 MC | HD 20W-20 DELVAC 1230 SUPER UNIVERSAL 15W-30 | EXTRA HD 30 SUPER HD 20 W-30 | AGROMA 15W-30 ROTELLA X 30 RIMULA X 15W-40 | RUBIA H 30 MULTAGRI TM 15W-20 | SUPER HPO 30 STOU 15W-30 SUPER TRAC FE 10W-30 ALL FLEET PLUS 15W-40 | HD PLUS SAE 30 | MULTI-REKORD 15W-40 PRIMANOL REKORD 30 |
| _ | OSO 32/46/68 ARNICA 22/46 | VITAM GF 32/46/68 VITAM HF 32/46 | AVILUB RL 32/46 AVILUB VG 32/46 | HYDRAULIKÔL HLP 32/46/68 SUPER 2000 CD-MC * HYDRANLIKOL MC 530 ** PLANTOHYD 40N *** | ENERGOL SHF 32/46/68 | HYSPIN AWS 32/46/68 HYSPIN AWH 32/46 | HLP 32/46/68 HLP-M M32/M46 | OLNA 32/46/68 HYDRELF 46/68 | NUTO H 32/46/68 NUTO HP 32/46/68 | ENAK HLP 32/46/68 ENAK MULTI 46/68 | HYDRAN 32/46/68 | • TITAN HYD 1030 • AGRIFARM STOU MC 10W-30 • AGRIFARM UTTO MP • PLANTOHYD 40N *** | HYDRAULIKÖL HLP/32/46/68 HYDRAMOT 1030 MC * HYDRAULIKÖL 520 ** | DTE 22/24/25 DTE 13/15 | RENOLIN B 10/15/20 RE- NOLIN B 32 HVI/46HVI | TELLUS S32/S 46/S68 TELLUS T 32/T46 | AZOLLA ZS 32, 46, 68 EQUIVIS ZS 32, 46, 68 | ULTRAMAX HLP 32/46/68 SUPER TRAC FE 10W-30* ULTRAMAX HVLP 32 ** ULTRAPLANT 40 *** | ANDARIN 32/46/68 | WIOLAN HS (HG) 32/46/68 WIOLAN HVG 46 ** WIOLAN HR 23/46 *** HYDROLFLUID * |
| Firma Company Société Societá | AGIP | ARAL | AVIA | BAYWA | ВР | CASTROL | ELAN | ELF | ESSO | EVVA | FINA | FUCHS | GENOL | MOBIL | RHG | SHELL | TOTAL | VALVOLINE | VEEDOL | WINTERSHALL |

- D 2 -

Hydraulic plan (Select Control)



Explanation:

- Y1 Directional control valve right mower unit
- Y9 Directional control valve mower unit left
- Y7 Directional control valve interlock floating position
- Y2 Directional control valve interlock raise/lower



1100-GB SERVICE_3843





Explanation:

- Y1 Directional control valve raise
- Y2 Directional control valve lower
- Y3 Seat valve mower unit right
- Y6 Seat valve fill hydraulic pressure relief right
- Y5 Seat valve mower unit left
- Y6 Seat valve fill hydraulic pressure relief left
- Y7 Seat valve mower unit centre
- Y8 Seat valve floating position mower unit centre
- Y9 Seat valve side protection
- Y10 Seat valve interlock
- Y11 Cross conveyor belt (QFB) swivelling (left)

- Y12 Cross conveyor belt (QFB) swivelling (left)
- Y27 Seat valve side protection
- Y33 Cross conveyor belt (QFB) swivelling (right)
- Y34 Cross conveyor belt (QFB) swivelling (right)
- S1 Speed sensor
- S3 Position mower unit left
- S5 Position mower unit right
- S7 Position from mower unit

:



Explanation:

- Y13 Seat valve hydraulic pressure relief right
- Y15 Seat valve hydraulic pressure relief left
- S4 Pressure measuring sensor
- S15 Transport position of left mower unit
- S13 Transport position of right mower unit
- X1 Plug-in connector



Explanation:

- Y16 Directional control valve right mower unit
- Y17 Directional control valve left mower unit
- Y18 Directional control valve interlock floating position
- Y19 Directional control valve interlock raise/lower
- W Non-standard equipment

SERVICE GB



- Restrictor CCB speed left Y17
- Y18 Seat valve - cross conveyor belt on/off right
- Y19 Seat valve - cross conveyor belt on/off left
- S10 Sensor - Cross conveyor belt left





TAPER BUSHES

GE

Taper bushes installation instructions

To assemble

- 1. Clean and degrease the bore and taper surfaces of the bush and the tapered bore of the pulley.
- 2. Insert the bush in the pulley hub and line up the holes (half thread holes must line up with half straight holes).
- 3. Lightly oil the grub screws (bush size 1008 to 3030) or the cap screws (bush size 3535 to 5050) and screw them in, do not tighten yet.
- 4. Clean and degrease the shaft. Fit pulley with taper bush on shaft and locate in desired position.
 - When using a key it should first be fitted in the shaft Keyway. There should be a top clearance between the key and the keyway in the bore.
 - Using a hexagon socket wrench (DIN 911) gradually tighten the grub/cap screws in accordance with the torques as listed in the schedule of screw tightening torques

| Bush identifier | Torque [Nm] |
|-----------------|-------------|
| 2017 | 30 |
| 2517 | 49 |

- When the drive has been operating under load for a short period (half to on hour) check and ensure that the screws remain at the appropriate tightening torque.
- In order to eliminate the ingress of dirt fill all empty holes with grease.

Removal

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

After oiling point and thread of grub screws or under head and thread of cap screws insert them into the jacking off holie(s) in bush (Pos. 5).

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











Combination of tractor and mounted implement

 \triangle

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

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

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



For the calculation you need the following data:



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 $\rm T_{H\,tat}$

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).





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): NOVACAT X 8 ED / RC / COLL mower 3843 Type 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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