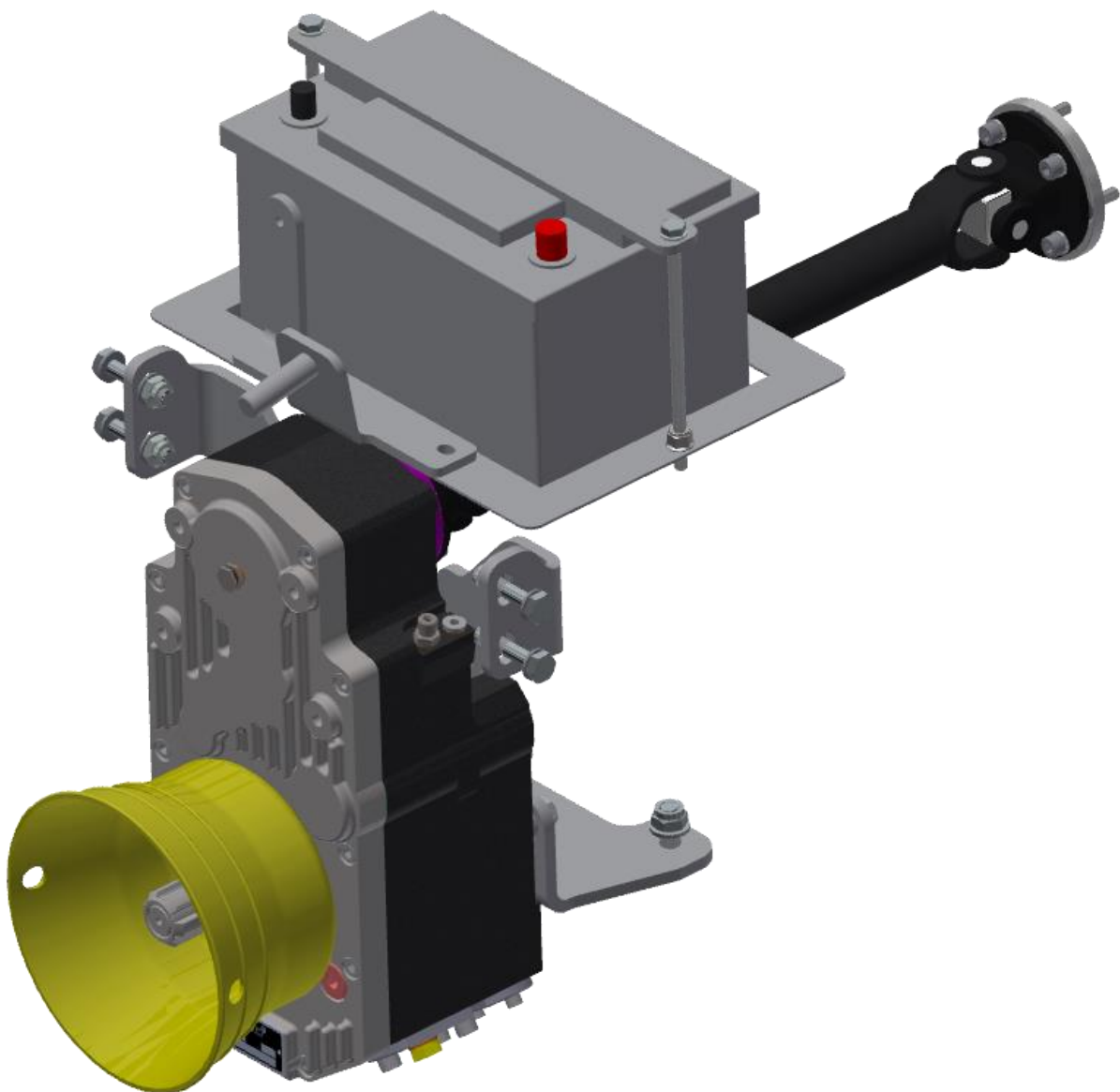


FPS-MZW-NH Boomer ^{35/40}_{45/50/55} **MJ 2021**

Operating Manual



Order numbers

Order no.	Designation
131 9043	Engine PTO shaft 1000 rpm CW NH Boomer 35/40
131 9044	Engine PTO shaft 1000 rpm CCW NH Boomer 35/40
131 9045	Engine PTO shaft 2000 rpm CW NH Boomer 35/40
131 9046	Engine PTO shaft 2000 rpm CCW NH Boomer 35/40
131 9053	Engine PTO shaft 1000 rpm CW NH Boomer 45/50/55
131 9054	Engine PTO shaft 1000 rpm CCW NH Boomer 45/50/55
131 9055	Engine PTO shaft 2000 rpm CW NH Boomer 45/50/55
131 9056	Engine PTO shaft 2000 rpm CCW NH Boomer 45/50/55

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1 Introduction

Welcome to the matev family

and thank you for purchasing a product from matev GmbH; we appreciate your trust. You have acquired a quality product, if contrary to expectations you should have problems with the implement, contact your responsible sales partner.

Company stamp – sales partner

Please read this entire manual carefully before operating the machine for the first time. The manual describes the handling of the machine in detail and will help you to work safely and effectively.

We will not acknowledge warranty claims for damage resulting from improper use.

Variants may be described in the manual that do not agree with the scope of delivery of your implement.

Please enter the data of the rating plate on the implement in the manual. This information will be helpful for communication in case servicing is necessary.

matev GmbH	
90579 Langenzenn	
CE	
Modell:	
Code Nr.:	
Fabr. Nr.:	
Baujahr:	
Ges.Gew.:	

Products from matev are subject to change in the interest of technical progress. All information, illustrations, and technical specifications represent the latest status at the time this manual was published. The manufacturer reserves the right to make changes at any time in the interest of technical progress.

Regards

matev GmbH

2 About this operating manual

Read this entire manual carefully before operating this machine for the first time.

Keep this manual where it is easily accessible. This will enable you to refer to important information and handling instructions as needed.

When the machine is delivered the owner receives instruction regarding operation and maintenance of the machine from his sales partner.

The owner must ensure that operating and maintenance personnel have been instructed in full scope in the operation and maintenance of the machine.

Listings with bullet points are marked as follows:

- Text
- Text
- Text. . .

Handling instructions are marked in the sequence in which they should be executed, as follows:

1. Text
2. Text
3. Text.

When directions (left, right, front, rear) are specified in the operating manual, they always refer to the carrier vehicle's direction of travel.

The front PTO shaft direction of rotation is always specified in the top view from the front. CW (clockwise), CCW (counter clockwise).

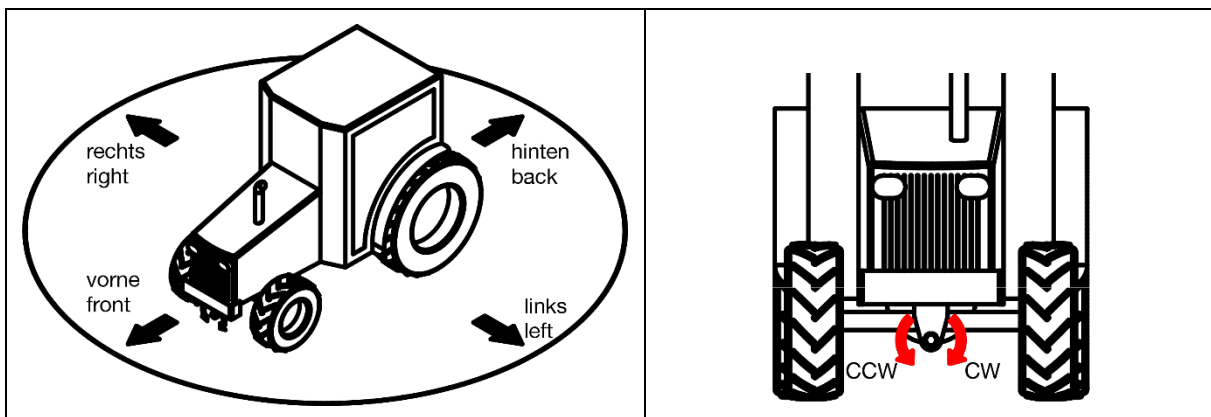


Fig. 1: Definition of orientation and direction of rotation

3 Technical data

3.1 Engine PTO shaft NH Boomer 35/40

Output shaft	1-3/8" – 6-piece
PTO output	1000 min ⁻¹ CW/CCW, 2000 min ⁻¹ CW/CCW
Ground clearance (see Fig.9)	approx. 200mm

Table 1: Technical data Engine PTO shaft NH Boomer 35/40

3.2 Engine PTO shaft NH Boomer 45/50/55

Table 2: Technical data NH Engine PTO shaft NH Boomer 45/50/55

Output shaft	1-3/8" – 6-piece
PTO output	1000 min ⁻¹ CW/CCW, 2000 min ⁻¹ CW/CCW
Ground clearance (see Fig. 10)	approx. 260mm

4 General safety notices

This chapter summarizes regulations and information that must be observed in connection with machines.

4.1 Depiction of safety information

The safety information in the text is combined with pictograms and signal words which together indicate the severity of the expected risk



Danger!
Hazardous situations that will result in serious injuries or death.



Caution!
Hazardous situations that could result in moderate injuries or material damage.



Notice!
Recommendations or information for the operator.
Read this notice. It will facilitate your work.

4.2 Intended use

The engine PTO shaft extends the crankshaft of the tractor to the front. It is used to power sweepers, front-end mowers or similar implements that are driven by PTO shafts. This engine PTO shaft may be mounted only on tractors such as those specified on the cover sheet.

- The implements and accessories are designed for municipal tractors or carrier vehicles used for comparable work.
- They may be operated only on carrier vehicles with the power range specified in the technical data.
- Intended use also includes compliance with the operating, service, and maintenance conditions prescribed by the manufacturer.
- Intended use also comprises the exclusive use of original replacement parts and additional equipment or such components and equipment that meet the manufacturer's technical requirements.
- Unauthorized modifications to the implements will void any liability on the part of the manufacturer.

All other uses are prohibited!

Non-intended use causes:

- Danger of injury to the operator or third parties
- Damage to the carrier vehicle and the implements
- Environmental damage

4.3 Instructions for the owner

4.3.1 Qualifications of assembly and maintenance personnel

Assembly and maintenance of safety-related components may be carried out only by personnel with the following qualifications:

- They must have completed specialized training as an agricultural machinery mechanic, motor vehicle mechanic, etc.
- Personnel without qualified training must be supervised by someone with qualified training.
- They must have read and understood this operating manual.
- They must be familiar with the relevant safety regulations (accident prevention).

4.3.2 Qualifications of operating personnel

- They must be fully instructed on how to operate the machine.
- They must have read and understood this operating manual.
- They must be familiar with the relevant safety regulations (accident prevention).

4.3.3 Accident prevention

The safety regulations and accident prevention regulations are legally regulated in every country. The shop foreman and/or the assigned industrial safety specialist at the company performing the work are responsible for compliance with the applicable regulations.

4.3.4 Instruction

When the implement is delivered the owner receives instruction regarding operation and maintenance.

The owner must take measures to ensure that operating and maintenance personnel are fully instructed regarding operation and maintenance.

4.4 Warning pictograms

Warning pictograms point out dangers that cannot be counteracted by means of safety measures. Strict observance of the pictograms is necessary to prevent severe injuries or death.



Danger!

Missing warning notices must be replaced immediately.

Do not operate the machine if warning notices are missing.

You can order warning pictograms with the spare parts numbers specified in chapter 4.6.2.

4.4.1 General warning pictograms

This section explains general warning pictograms that are not specific to a particular machine.



Read the operating manual and observe the safety information.



Shut down the engine before performing maintenance and repairs
Remove the key.



Injuries from emerging high-pressure fluid.
Comply with the notice in the operating manual.

4.4.2 Machine-specific notice

This section explains machine-specific warning pictograms and notices for operation and maintenance of the machine.



Caution!

Increased risk of accident due to rotating PTO shaft.

Do not enter the work area of the PTO shaft when it is rotating.

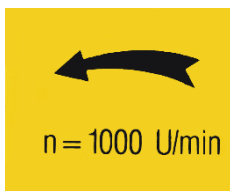
For your safety, do not wear loose clothing. Switch off the implement and wait until all machine parts have stopped moving before converting or servicing the implement.



Engine PTO shaft speed 1000 rpm CW (clockwise)!

The specified direction of rotation always refers to the view of the end of the PTO shaft from the front (see Fig.1).

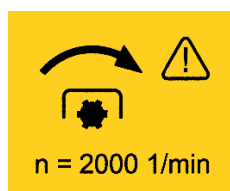
The implement must be aligned accordingly!



Engine PTO shaft speed 1000 rpm CCW (counter clockwise)!

The specified direction of rotation always refers to the view of the end of the PTO shaft from the front (see Fig.1).

The implement must be aligned accordingly!



Engine PTO shaft speed 2000 rpm CW (clockwise)!

The specified direction of rotation always refers to the view of the end of the PTO shaft from the front (see Fig.1).

The implement must be aligned accordingly!



Engine PTO shaft speed 2000 rpm CW (counter clockwise)!

The specified direction of rotation always refers to the view of the end of the PTO shaft from the front (see Fig.1).

The implement must be aligned accordingly!

1. Ölwechsel nach 50 Bh,
danach alle 500 Bh oder
mindestens 1 mal jährlich
Ölorte: 10W30 STOU →

Notice sticker for oil change



Tighten all screws after each use

4.5 Supplemental provisions



- Ensure that the speed and the direction of rotation of the engine PTO shaft are suitable for driving the implement before coupling an implement to the tractor.
- Always switch off the engine PTO shaft and wait until the PTO shaft is no longer turning when you leave the tractor or work on the connected implement.

4.6 Safety devices

Machines are equipped with various safety devices to protect people who work with a machine or are in the direct vicinity of the machine while working, to avoid premature wear and also to prevent environmental damage. These safety devices are integral components of the machine or the accessories; it is prohibited to manipulate or remove them. Missing or damaged safety devices must be replaced immediately.

There are two types of safety devices: those that prevent contact with the hazard point, and those that point out a hazard on the machine.

Hazards can also arise as a result of insufficient maintenance, so that warning notices are also to be regarded as a type of safety notice.



Before each use of the machine, ensure that all of the safety devices described here are complete and fully functional. Do not operate the implement or accessories if any safety devices are missing or damaged.

4.6.1 Guard on the machine

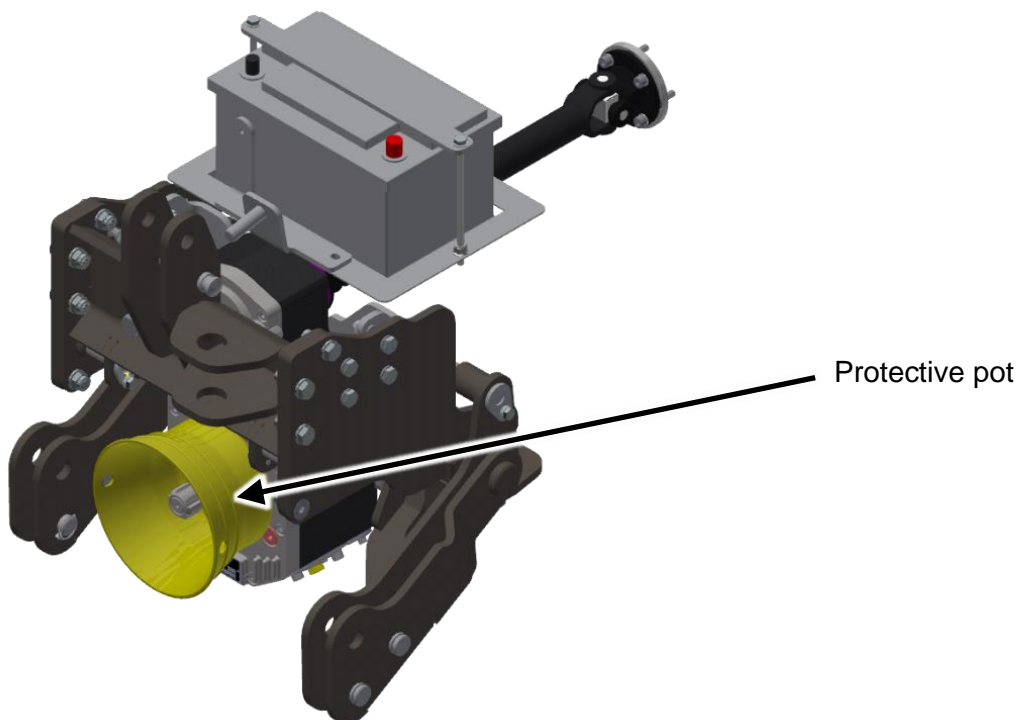


Fig. 2: Engine PTO shaft safety device

4.6.2 Warning pictograms on the machine

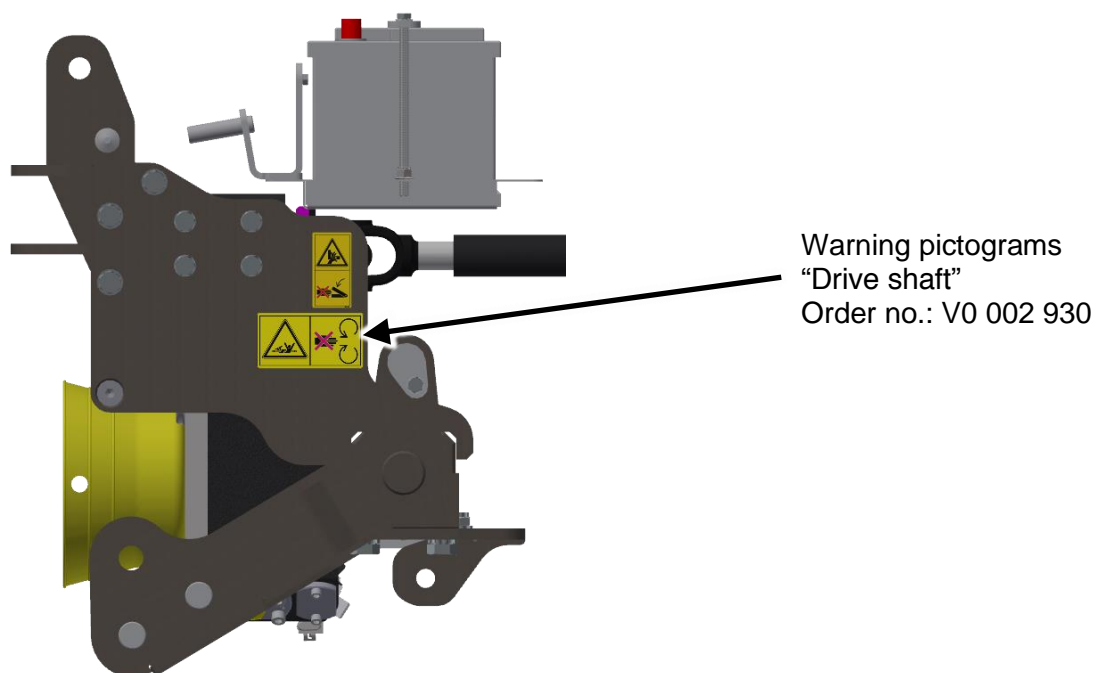


Fig. 3: Warning pictogram: Drive shaft

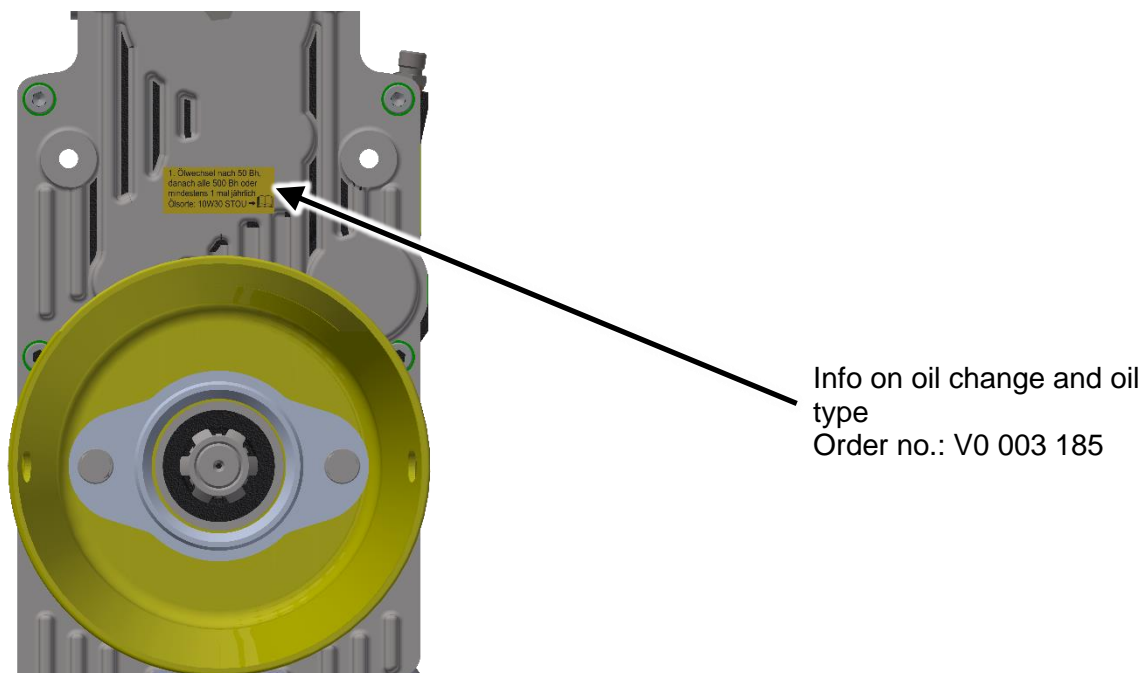


Fig. 4: Warning pictogram: Oil change

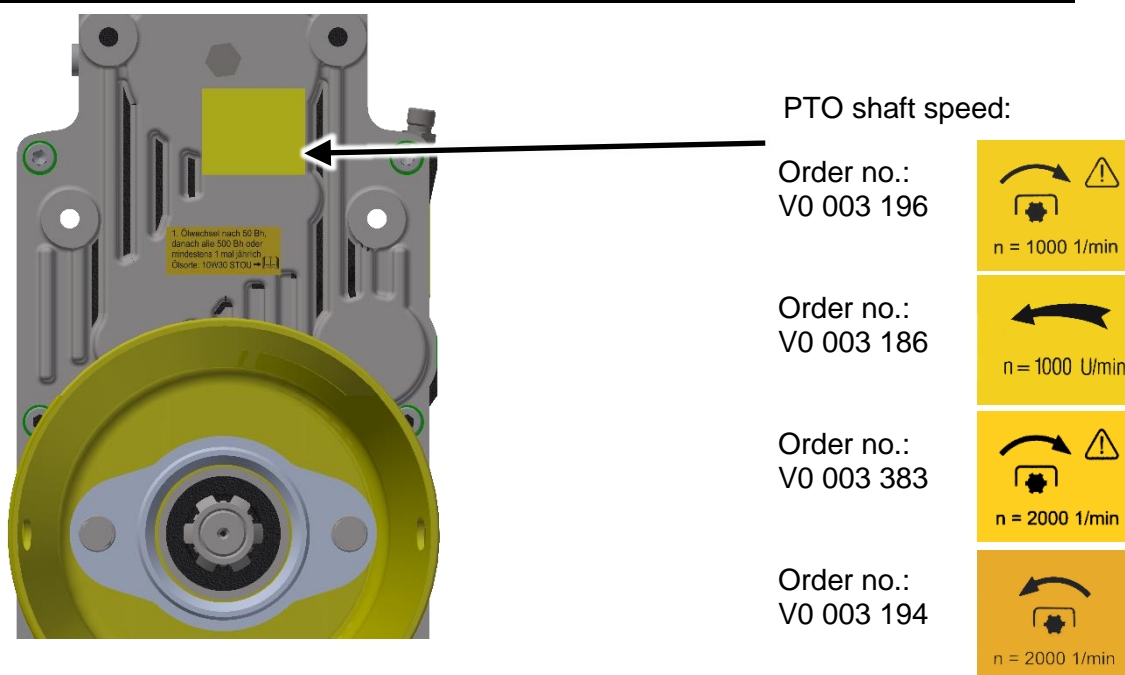


Fig. 5: Warning pictogram: Engine PTO shaft direction of rotation

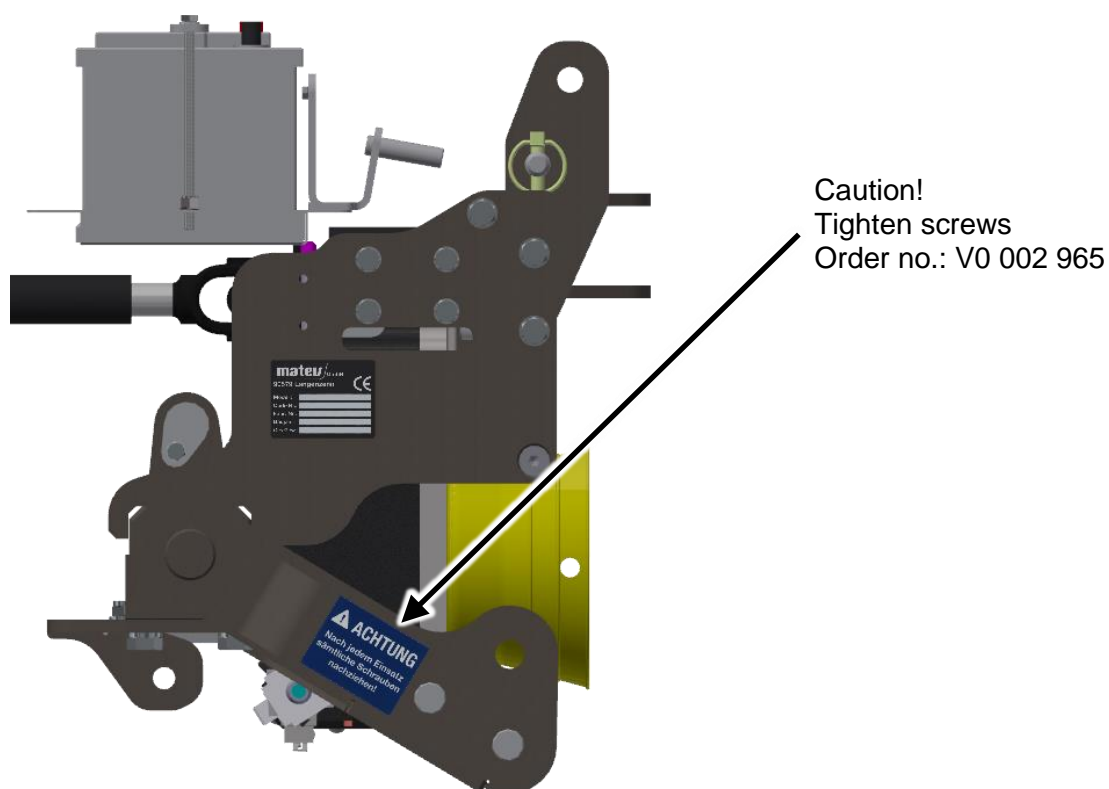


Fig. 6: Safety notice: Tighten screws

4.6.3 Position of type plate

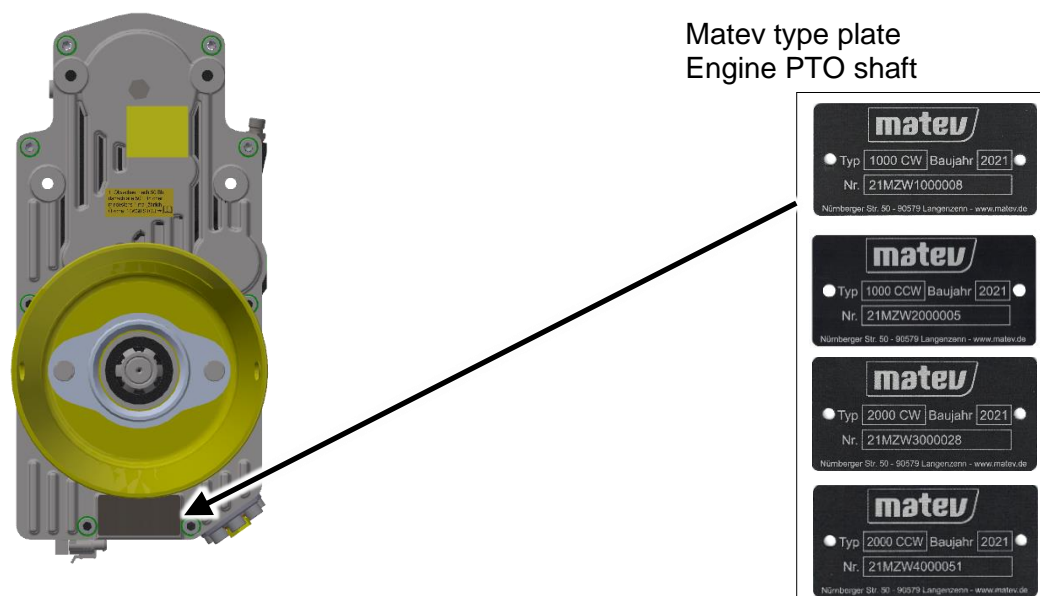



Fig. 7: Position of type plate



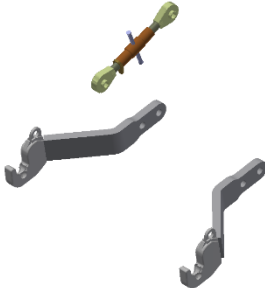
Fig. 8: Explanation of type plate

5 Equipment


5.1 Conversion kit CAT. 0

	Basic machine, hydraulic kit
---	------------------------------


5.2 Extension kit cat. 1

	Lower link, upper link
--	------------------------


5.3 Coupling support cat. 1

	Coupling support
---	------------------


5.4 Front power system basic machine

	Basic unit, hydraulic system, frame trussing
---	--


5.5 Front PTO shaft

	Drive shaft, mount, universal joint shaft, protective pot
---	---


5.6 Hydraulic extension kit: BG2-TF and BG3 available

	BG2-TF couplings, clip covers, hydraulic hoses, holders – for BG2-TF; BG3 couplings, clip covers, hydraulic hoses, holders – for BG3
---	---

5.7 Pressure accumulator


	Pressure accumulator, bulkhead fitting – 1/2" - 12L, Reduction fitting 12L-8L, hydraulic hose, L-fitting, adjustable angle 8L, holder
---	---

5.8 Mudguard


	Mudguard, mounts
---	------------------

5

5.9 Hose clamp mount with bracket for front loader

	Hose clamp, mount
---	-------------------

5.10 Hose clamp mount without bracket for front loader

	Hose clamp, mount
---	-------------------

6 Operation of the engine PTO shaft



Before starting up the implement, read the instructions on safety and handling for operation of the entire implement and connection to the tractor. When driving in traffic make sure that the vehicle meets the requirements of the road traffic and licensing regulations.



Do not operate the engine PTO shaft unless all safety devices are mounted and fully functional. Prior to starting work the operator must familiarize himself with the device and ensure for himself that the entire device is operationally reliable.



Missing or lost safety devices and warning pictograms must be replaced immediately.

6.1 Switching the engine PTO shaft on and off

- **Switching on the engine PTO shaft** – switch on the engine PTO shaft at an engine speed of approx. 1000 rpm, and do **not** increase the rpm of the tractor engine when switching on the engine PTO shaft.
Important notice: Never switch on the engine PTO shaft if the engine speed of 1200 rpm has been exceeded.
- **Switching off the engine PTO shaft** – switch off the switch for the engine PTO shaft.
- Never attempt to loosen a seized front implement by switching the engine PTO shaft on and off.

6.2 Installing the engine PTO shaft



Danger!

Severe injury to the operator or third parties occurs.

Switch off the tractor, remove the ignition key and set the hand brake before mounting or dismounting the engine PTO shaft.



Install the engine PTO shaft as described in the assembly manual provided. If they are not available to you, please contact matev GmbH.

6.2.1 Preparatory measures

- Use of the engine PTO shaft requires the front power system (basic machine_131 9038).

6.3 Front PTO shaft NH Boomer 35/40

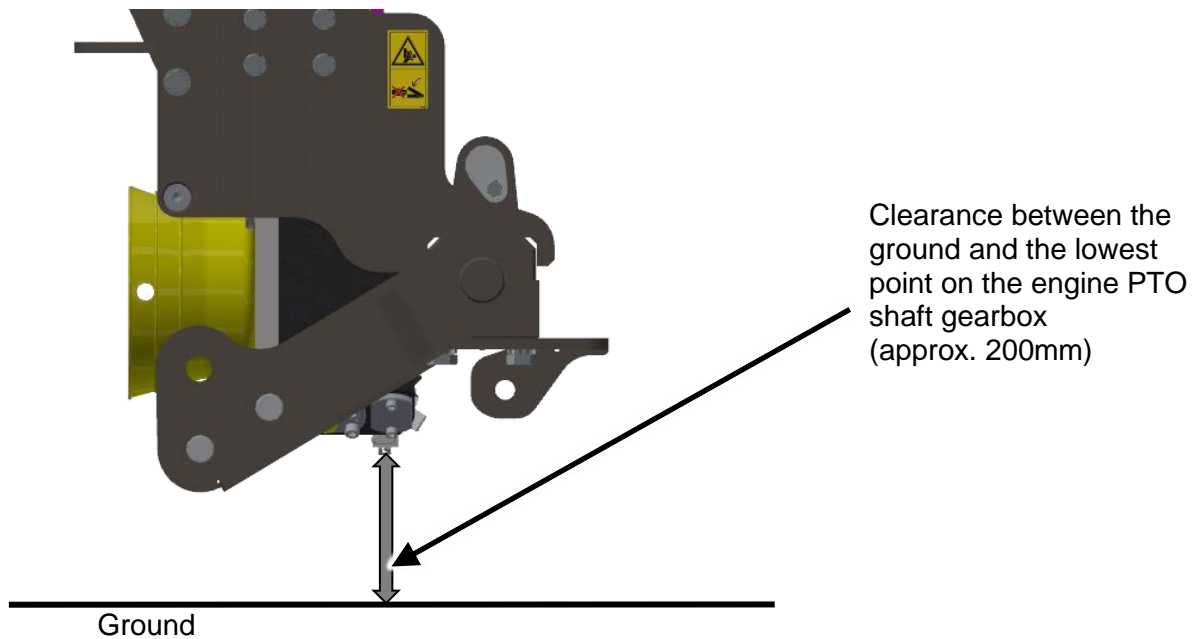


Fig. 9: Ground clearance engine PTO shaft NH Boomer 35/40



The ground clearances are measured with front tires 210/75-15 (28x8.5-15).



Caution! The clearance to the ground always depends on:

- **Vehicle tires**
- **Tire pressure**
- **Tire tolerances**

6.4 Ground clearance NH Boomer 45/50/55

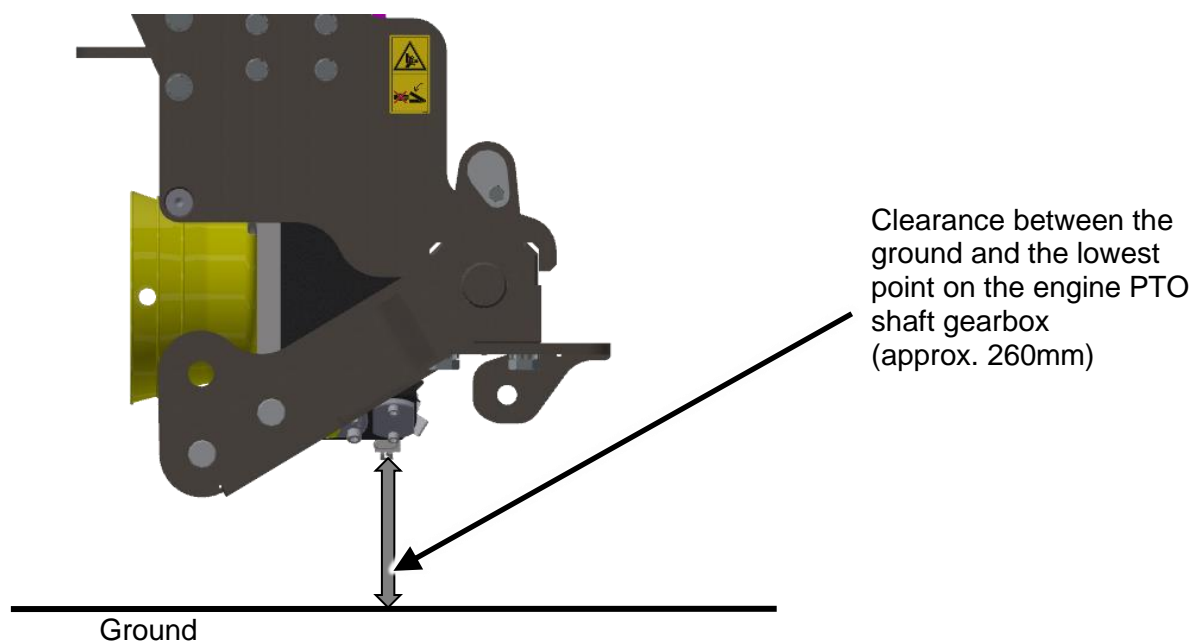


Fig. 10: Ground clearance engine PTO shaft NH Boomer 45/50/55



The ground clearances are measured with front tires 12-16.5 RG400 N.H.S.



Caution! The clearance to the ground always depends on:

- Vehicle tires
- Tire pressure
- Tire tolerances

7 Maintenance

7.1 General information about safety during maintenance (oil change / oil filter change)



Switch off the tractor, remove the ignition key and set the hand brake before working on the engine PTO shaft.



Repairs to components under tension or pressure (springs, accumulators) require sufficient knowledge and proper tools, and must always be carried out by specialists.



Properly reattach all protective devices that have been dismantled after executing the maintenance tasks. Replace any worn or non-functioning safety devices!



Personal injury and material damage to the tractor and implements can occur. Before each use of the implements check all safety-relevant parts and the hydraulic connections.



**Danger of crushing due to moving parts.
Never reach into the crushing hazard zone if parts are moving or can move.**



Wear suitable protective clothing (goggles, gloves, overalls)!



**Change oil / oil filter only after the engine PTO shaft has cooled down!
Danger of burns!**



After the first 20 hours of operation check all screw and bolt connections. Subject the implement to regular maintenance.

To ensure serviceability and compliance with occupational safety requirements, the following tasks must be carried out after each use.

- Cleaning the machine.
- Check to ensure that all safety notices and safety devices are complete and functioning.
- After 5 to 10 operating hours with a new engine PTO shaft, or after a repair, check to ensure that all bolts are still tightened to the correct torque. (see Table 2)

Thread size:	Tightening torque:
M6	9.9 Nm
M8	24 Nm
M10	48 Nm
M12	85 Nm
M16	210 Nm

Table 3: Screw tightening torques (property class 8.8)

7.1.1 Maintenance intervals

- Change the gearbox oil first after 100, then every 500 hours of operation, but at least once per year.
- Change the oil filter first after 100, then every 500 hours of operation.

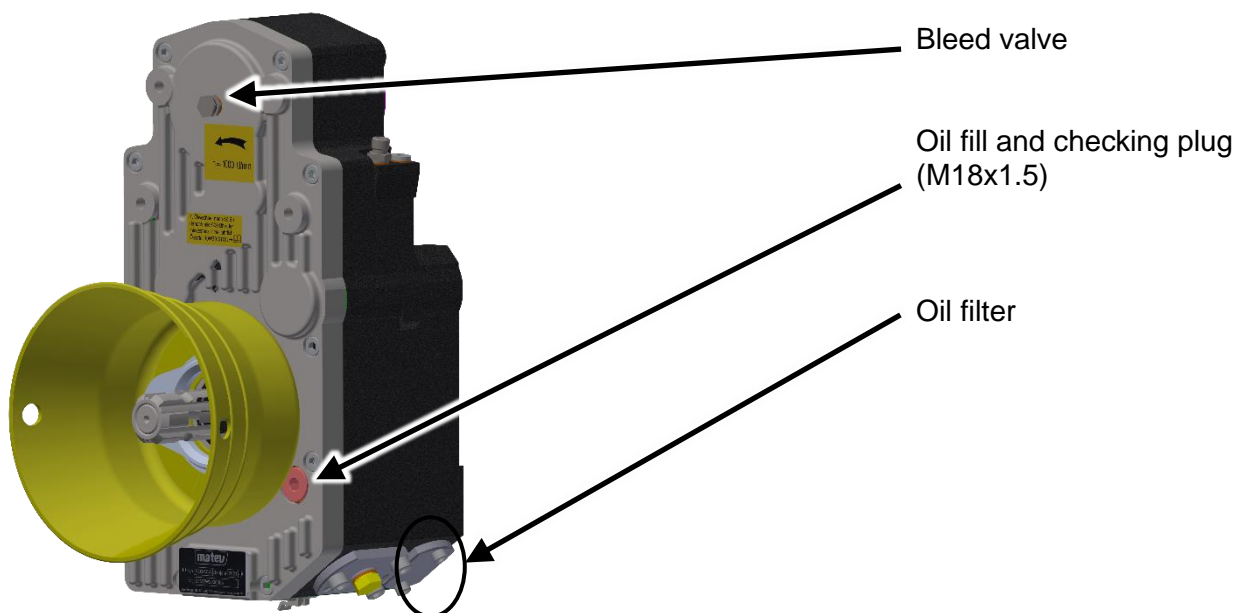


Fig. 11: Position of bleed valve / oil fill plug / oil filter

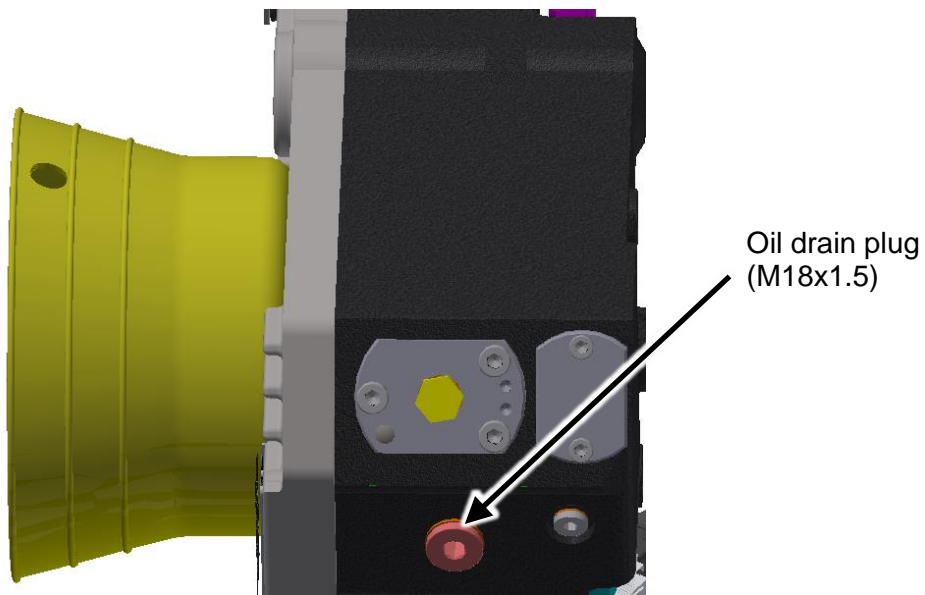


Fig. 12: Position of drain plug

7.1.2 Procedure for changing oil

1. Park the tractor on a level surface and shut off the engine. Remove the ignition key and secure the tractor.
2. Place a drip pan under the engine PTO shaft.
3. Unscrew both the oil fill plug and the oil drain plug and drain the oil. (see Figure 10 and 11).
4. Replace the oil filter.
5. Replace the seals on the oil fill and oil drain plugs.
6. Re-insert the oil drain plug.
7. Fill with new oil and screw in the oil fill plug.
8. Check the oil level again after a test run and add oil, if necessary.



Dispose of used oil in accordance with environmental regulations!

7.1.3 Information about gearbox oil

Gearbox type	Oil type	Oil quantity
HNL	10 W 30 STOU	0.7l (without coolant)

Table 4: Gearbox oil info table

With oil fill nozzle: The gearbox must be filled with oil to the lower edge of the oil fill hole.

7.1.4 Procedure for changing the oil filter

1. Clean the outside of the engine PTO shaft gearbox and drain the oil.
2. Unscrew the oil fill cap.
3. Use pliers on the stopper to pull out the oil filter.
4. Grease all O-rings.
5. Insert the new filter and fasten the oil filter cover.
6. Fill with new oil (see chapter 7.1.2).

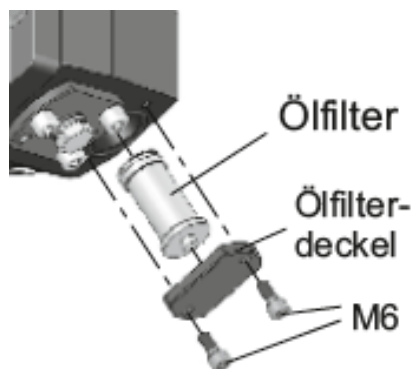


Fig. 13: Oil filter

8 Repair

If there are faults, problems, or other indications of malfunction, contact your sales consultant or contact the manufacturer directly:

matev GmbH

Nürnberger Str. 50
90579 Langenzenn
Phone: +49 (0) 9101 9087-0

www.matev.eu

info@matev.eu

Please note the following information as well:

- All repairs must be carried out by a specialized company.
- Use only original matev replacement parts.
- Modifications to the machine are prohibited.

9 Disposal

The implement must be disposed of in accordance with the applicable regulations of the municipality or the country.

Take the parts to the collection points for residual waste, special waste, or recycle them depending on material.

matev GmbH does not provide any disposal services.

10 Guarantee

The general terms and conditions of matev GmbH apply.

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13 EC Declaration of Conformity

EC Declaration of Conformity for a machine to confirm compliance with Machinery Directive 2006/42/EC and the statutory regulations issued for its implementation.

The manufacturer

matev GmbH
Nürnberger Str. 50
90579 Langenzenn

declares that the machine FPS-MZW-NH Boomer 35/40/45/50/55

complies with the provisions of Directive 2006/42/EC and with the national statutory regulations for its implementation.

The signer is authorized to compile the technical documents.

The address is the address of the manufacturer.

Date / signature July 2021

A handwritten signature in black ink, appearing to read 'Michael Volz', with a stylized flourish at the end.

Name of signer Michael Volz

Signer information Managing Director