



Rapeseed side knife Facelift RTC 135 HY - RTC 135 E

Date 16.02.2023

Ziegler-Nr.: 12-053241 Vers. A02_BTA_RT_Classic_Facelift_EN

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ZERTIFIKAT

DIN EN ISO 9001



PÜG Prüf- und Überwachungsgesellschaft mbH
bescheinigt hiermit, dass das Unternehmen



Zertifikatsinhaber: Ziegler GmbH
Schrobenhausener Straße 56, 86554 Pöttmes

Zertifizierte Standorte: + Firmenstandorte (siehe Anlage *)

ein Qualitätsmanagementsystem entsprechend der DIN EN ISO 9001:2015 eingeführt hat und dieses wirksam anwendet.

Der Nachweis wurde im Rahmen des Zertifizierungs-Audits erbracht.

*) Die Anlage ist Bestandteil der Urkunde und umfasst eine Seite.

Dieses Zertifikat ist gültig vom: **04.08.2021**
bis: **03.08.2024**

Zertifikat-Registrier-Nr.: **K24066-20210802-Q-de**



Gäufelden, 02.08.2021


Leitung der Zertifizierungsstelle

Anlage zur Urkunde Seite 2 von 2
vom 02.08.2021

Zertifikat-Registrier-Nr.: K24066-20210802-Q-de

PÜG Prüf- und Überwachungsgesellschaft mbH
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Das Zertifikat ist gültig für die nachstehend genannten Standorte.

Zertifizierte Standorte

<u>Firmenbezeichnung</u>	<u>Straße</u> <u>PLZ und Ort</u>	<u>Bereiche</u>
Ziegler GmbH	Schrobenhausener Straße 56, 86554 Pöttmes	Strategische Geschäftseinheit Harvesting, Transport, Cultivation, Maschinenbau und Automobiltechnik mit Entwicklung/Konstruktion, Einkauf, Disposition, Logistik und Vertrieb
Ziegler Automobiltechnik spol. S.r.o.	Dr. Klementa 1186 330 23 Nýrany (CZ)	Strategische Geschäftseinheit Harvesting, Transport, Cultivation, Maschinenbau und Automobiltechnik mit Entwicklung/Konstruktion, Einkauf, Disposition, Herstellung, Logistik und Vertrieb
Zieglera Masinbūve SIA	Spalu iela 3 5404 Daugavpils (LV)	Strategische Geschäftseinheit Harvesting, Transport, Cultivation, Maschinenbau und Automobiltechnik mit Entwicklung/Konstruktion, Einkauf, Disposition, Herstellung, Logistik und Vertrieb

Gäufelden, 02.08.2021



Leitung der Zertifizierungsstelle



In order to guarantee the handover of the operating instructions to the end customer and the reseller.

Date of delivery: _____

**Please copy and send back completely filled to
ZIEGLER GmbH, Schrobenhausener Straße 56, D-86554 Pöttmes (Germany)**

Address of official distributor / importeur

company

street

zip / city

company stamp / signature

address of customer

name

street

zip / city

I hereby declare that I have purchased the machine / kit mentioned below. I also confirm that the operation instructions were handed out to me upon delivery of the machine. I commit myself to read these operating instructions comprehensively and carefully before commissioning the machine and to operate the machine in accordance with its content. Moreover, I commit myself to hand over the operating instructions in the case of its resale and inform the buyer of his obligation to pass over the instructions with the machine. I am aware that a guarantee claim can be made against ZIEGLER GmbH only after ZIEGLER GmbH has received a completed and signed version of this declaration. Furthermore, I am aware that the guarantee period starts with the date of the machine's / kit's transfer, regardless of the date the declaration was returned.

Machine / kit type

machine / kit number

City / date

customer signature

Guarantee payments can only be made with a completed and signed handover declaration!

EG-Konformitätserklärung

Entspricht der EG-Richtlinie 2006/42/EG

EC Declaration of conformity

According to the directive of the EC 2006/42/EG

Wir, **ZIEGLER GmbH**
We, **Schrobenhausener Straße 56**
D-86554 Pöttmes

Erklären in alleiniger Verantwortung, dass das Produkt
Declare under our own responsibility that the product:

Maschine:	Rapstrennmesser rapeseed side knives
Modell:	CLASSIC
Typ:	RTC-135-HY RTC-135-E
	ab Seriennummer: 4000000

auf das sich diese Erklärung bezieht, den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinie 2006/42/EG entspricht.

Zur sachgemäßen Umsetzung der in den EG-Richtlinien genannten Sicherheits- und Gesundheitsanforderungen wurden insbesondere folgende Normen und technische Spezifikationen herangezogen:

to which this declaration refer are in conformity with the applicable basic safety and health requirements of EC Directive 2006/42/EG.

In order to fulfil the safety and health requirements contained in the EC Directives, the following standards and technical specifications have been taken into account:

EN ISO 12100	Sicherheit von Maschinen
EN ISO 4254-7	Landmaschinen Sicherheit Teil 7
EN 60204-1	Sicherheit von Maschinen, elektrische Ausrüstung von Maschinen Teil 1

Bevollmächtigt zur Zusammenstellung der technischen Unterlagen ist der unterzeichnende Geschäftsführer.

The company officer authorized for the compilation of the technical documentation is the Managing Director (signatory).


Pöttmes, den 01.01.2021
Ort und Datum; Place and date




Dipl./ BW (FH) M. Ziegler
(Geschäftsführer)


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Important information and notices contained in these operating instructions are depicted as follows:

	Attention: The text following the signal word ‚Attention‘ contains information which must be complied with to prevent harm or injury to the user or the machine!
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	Notice: The text following the signal word ‚Notice‘ contains important explanations and notices!
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1. INTRODUCTION

	Notice: Before the initial commissioning of the machine, read and comply with the operating instructions and safety notices!
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The operating instructions at hand for the canola side knife are intended for dealers and end customers. It depicts the mounting process of the canola side knife and the connection of the same to the internal hydraulics system, as well as the initial commissioning and the maintenance.

The designations „ Right“ and „ Left“ refer to the forward direction of motion of the harvester.

To obtain further information in regard to the canola side knife, please contact your respective contact person at the company Ziegler GmbH. He disposes of qualified personnel, original spare parts and equipment which are indispensable for service tasks.

1.1 General Description and Intended Use

The canola side knife has the purpose to separate the intermingled branches of the canola plant. For this purpose, it must be vertically mounted to the lateral sides of the harvester header as an additional aggregate.

1.2 Support

Both the company Ziegler GmbH, as well as all authorised dealers are committed to ensure that the customer is content with the purchased canola side knife.

In the event of any problems, our qualified service department will gladly provide support.

Your authorised dealer can also contact us at all times for further support.

1.3 Serial Number of the Canola Side Knife

In the event of reclamation or the ordering of spare parts, please state the machine type, serial number, and year of manufacture. The data is located on the type shield. (see exemplary Fig. 2)

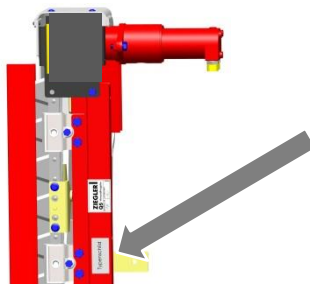



Fig. 1



Fig. 2

In order to simplify the order processing as far as possible, we recommend entering the machine data into the table below to ensure their availability.

Type:	
Serial Number-No.:	
Year of Manufacture:	

	Notice: Only original spare parts, equipment or accessories comply with the safety standards specified by the ZIEGLER GmbH! The use of spare parts, equipment or accessories not manufactured, certified, or authorised by ZIEGLER will lead to the waiver of any warranty claims out of respectively generated damage
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2. SAFETY MEASURES


Attention:

In these operating instructions, we have emphasised all sections related with your safety with this sign. Comply with these notices and also pass on the safety instructions to the other users.

2.1 Intended Use

The canola side knife may only be deployed for the harvesting of canola. Any other further use shall be deemed as not intended use. The manufacturer shall not be liable for any respective resulting damage. The respective risk is at the sole responsibility of the user.

The intended use also comprises the compliance with the conditions specified by the manufacturer for operation, maintenance, and service tasks.

The canola side knife may only be used; maintained; and repaired by personnel that are respectively experienced and briefed in regard to the respective risks.

All relevant accident prevention regulations, as well as all other applicable regulations in regard to safety; occupational health, and traffic must be complied with.

The mounting and equipping with additional equipment that is not original; as well as any modification, is subject to the approval of the manufacturer, as such could cause a deterioration of the quality of the machine and impair the safety. Unauthorised modifications to the machine shall lead to the waiver of any warranty for respectively caused damage.

2.2 General Safety Instructions for the Prevention of Accidents

General

- Check the device for operational and road safety before each commissioning!
- Next to the instructions contained in the operating instructions, also comply with the generally applicable safety and accident prevention regulations!
- The warning and notices attached to the device contain important notices for the risk free operation; they serve for your safety! These must be maintained in a proper and readable condition!
- No persons may reside within the working range of the canola side knife and the header of the harvester!
- When leaving the cabin and when remedying malfunctions, deactivate the canola side knife and the harvester, remove the ignition key: Secure the harvester against rolling (parking brake)!
- The knife protection may only be removed directly before the deployment for harvesting on the field!
- For the operation of the harvester and the harvester header, the respective instructions must be strictly complied with!
- When using public roads, comply with the respective regulations.
- Before commencing with work, get acquainted with all equipment and control elements, as well as their function. During work, it is too late for this!

Hydraulics System

- When connecting the hydraulic hoses to the harvester hydraulics system, ensure that the systems are depressurized both at the harvester and the equipment side!
- Regularly control the hydraulic hoses and exchange in the event of damage or wear! The replacement hoses must accord to the specifications of the device manufacturer!
- Liquids that exit under high pressure (hydraulic oil) can enter through the skin and cause serious injuries that are not visible from the exterior! In the event of injury, immediately consult a hospital! Risk of infection!
- Before performing any work at the hydraulic s system, lower the header, depressurize the system, shut off the motor and pull off the ignition key!

Electrical System

- Regularly control the electrical cables and exchange in the event of damage or wear! The replacement cables must accord to the specifications of the device manufacturer!
- Before performing any work at the electrical system, unplug all cables and plug fuses.

2.3 Maintenance


- Before performing any work or repairs at the lifted device, respectively aggravate, always secure mechanically by deploying suited support elements! Turn off the motor and pull off the ignition key!
- Regularly control screws and nuts for tight fit and tighten, if necessary. Perform first check after approximately 5 operating hours.
- Spare parts must accord to the specifications of the manufacturer! This only applies to original parts!
- Only deploy the specified operating materials and dispose of exchanged material according to the relevant regulations!
- Always wear gloves when working at the mowing knives!

2.4 Noise Level

The permanent sound pressure level is situated below 70 dB (A).

2.5 Safety Stickers with Warning Symbols

Even though the canola side knife disposes of all safety equipment, it would be impossible to completely secure all hazardous sections of the machine without impairing the function. For this reason, graphic warning stickers have been applied that inform you in regard to the residual risks. Please maintain these in readable condition - they serve for your safety! If required, the warning stickers can be ordered from us. If you do, please state the order number.

	<p>ATTENTION!</p> <ul style="list-style-type: none"> Immediately exchange damaged or unreadable stickers! At repairs or the exchange of parts, replace the according warning stickers! When performing cleaning tasks, take care not to damage the warning stickers! Get acquainted with the information on the warning stickers and hazardous sections of the machine!
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The following briefly depicts the positioning and meaning of the deployed warning stickers.

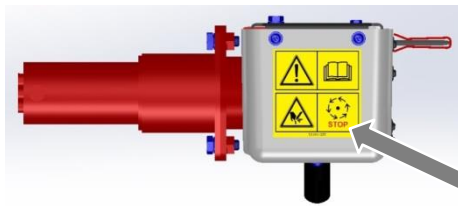
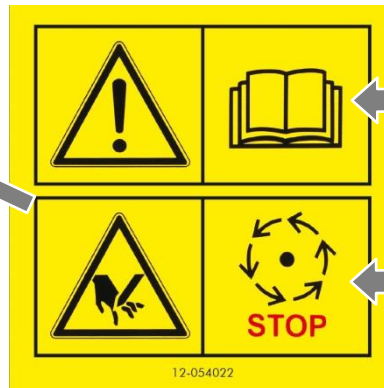


Fig. 3



12-054022

Fig. 4

3. MOUNTING

3.1 General

The canola side knife is delivered by us in a state that accords to EU Machinery Directive 2006/42/EU. The mounting of the canola side knife to the header of the harvester must be performed by a specialist workshop and the Directive stated above must be complied with.

3.2 Retrofit of the Drive System

The canola side knife is available for mounting on both left and right side of the harvester header. The device should always be mounted so that the crankshafts are operated in exterior position. The devices can be converted from right to left and from left to right any time, as required. For this purpose, the upper section of the beam must be turned upwards. The cutter heads and the crank bearings must be accordingly rearranged. At the RT 135, the crank protection can also be retrofitted to be used for mounting of the canola/rapeseed separator both on the left- and right-hand side.

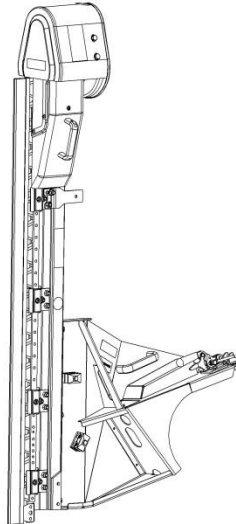


Fig. 5

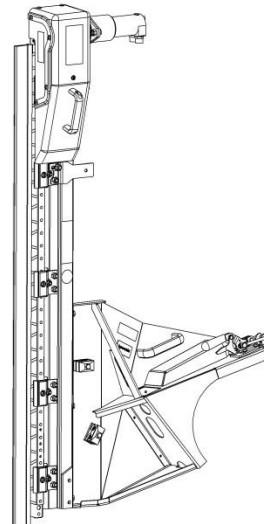



Fig. 6

3.3 Mounting to the Harvester Header

The canola side knife is delivered without mounting brackets. For certain harvester types, these can be ordered from us. The mounting brackets must be constructed in a manner that ensures the canola side knife is tightly fixed to the lateral wall of the header. Ensure that.

- no shear points or crushing points are created when the reel is lifted or lowered.
- the lateral wall of the header is additionally reinforced, should this be necessary.
- the complete crank drive is covered so that shear points or crushing points cannot be reached.
- the clearance to the ground is approximately 12-15 cm.
- the canola side knife is as far in front of the reel as possible.


4. CONNECTION OF DRIVES

	Notice: The connection of the canola side knife must be performed by an authorised specialist workshop!
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4.1 Electrical Drive

Type	Mounted	E-Motor	Ampere	Length
RTC 135-E-12-R	right	12 Volt	25 A	1,35 m
RTC 135-E-24-R	right	24 Volt	40 A	1,35 m
RTC 135-E-12-L	left	12 Volt	25 A	1,35 m
RTC 135-E-24-L	left	24 Volt	40 A	1,35 m

The specified voltage of the electrical motor must accord to the board supply net of the harvester. The board net must be capable to supply an additional 12 Volt; respectively 400 Watt per canola side knife (24 V with approximately 750 Watt) in addition to the other consumers, which approximately accords to the specified amperage. If necessary, install a stronger generator.


	Attention: The electrical motor disposes of magnets in the housing which are very sensitive. Do not hit the housing with anything such as a hammer!
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Pass the cables (cross-section at least 6 mm²) according to **Fig.7**.
In case of two canola side knives, the cabling must accordingly be performed twice!

Battery (Item1): Due to the high amperage, it is strictly necessary to connect the cables directly there! (see **Fig.7**)

Safety fuses (25A resp. KVA) Item 2: connect directly after the battery, into the + line. Never operate the canola side knife without fuse!

Mount the button (Item 3) into the cabin in manner that, when the harvester header is activated with the lever, (Item 4; see Fig. 7) the switch contact is closed. There are harvesters where the header is not activated mechanically via a lever (Item 4) , but electrically via a toggle switch. In this case, the line to the rotary switch (Item 5) must be connected there. The toggle switch therefore assumes the function of the button (Item 3).

	Notice: When putting the harvester header to standstill, it is strictly required to also shut down the canola side knife, respectively knives!
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Switch (Item 5): It serves to also shut down the canola side knife when the harvester header is still in operation. Mount the same near the cabin seat into the dashboard protected from dust and water.

Relay (Item 6): When the switches (Item 3) and (Item5) are closed, current flows into the coil of the relay and closes the current contact. The cables which pass the high voltage current to the motor of the harvester are connected to the terminals 30 and 87. Securely screw the relay beneath the dashboard using the fixing bracket.

Canola side knife motor (Item 7): When connecting the cables, keep the correct rotational direction in mind, respectively see the arrow on the cover hood (clockwise in direction of travel).
Cable sets are available as extra equipment.
Due to the high amperages, each cable set may only be connected to one canola side knife. In case of two canola side knives, 2 sets of cables are required.

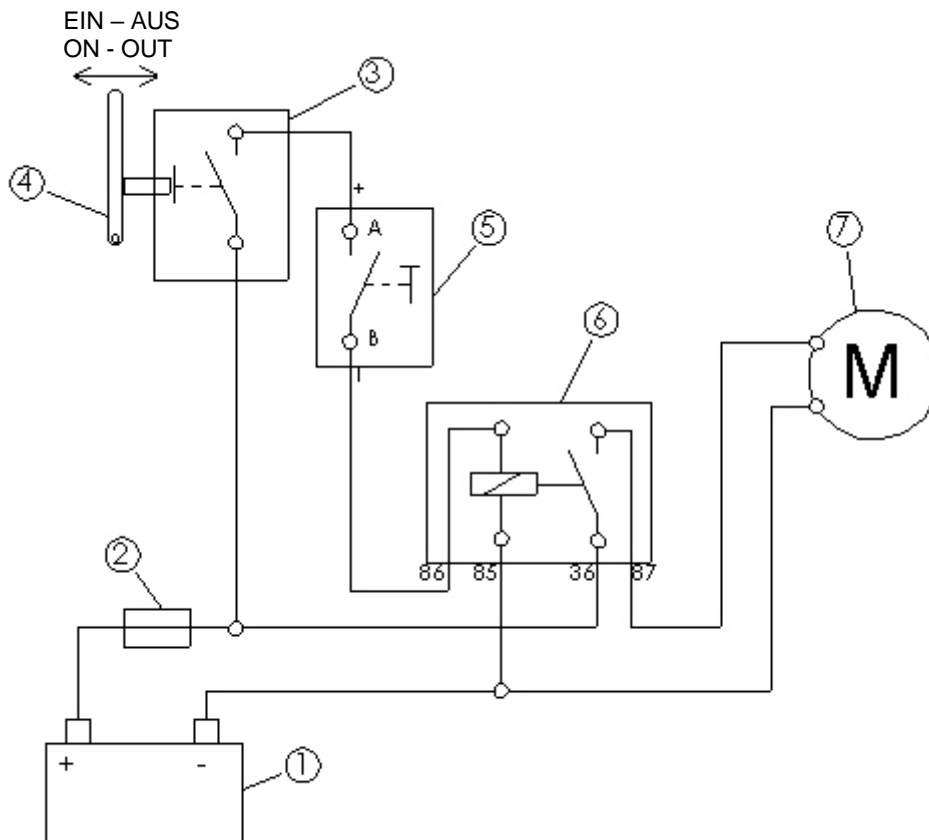


Fig. 7

- Item 1 – Battery
- Item 2 – Safety Fuse
- Item 3 - Button
- Item 4 – Lever
- Item 5 – Toggle Switch
- Item 6 - Relay
- Item 7 - Motor

4.2 Hydraulic Drive

Type	Pressure	Oil Flow	Length
RT130-HY-procut	50 - 180 bar	10 - 12 l/min	1,30 m

The deployed hydraulic motors are resilient to backlogs, i.e., two canola side knives can be connected in series. The specified oil flow rate may not be exceeded. If necessary, a flow control valve must be integrated.

Hydraulic hoses that accord to DIN-EN 853 (2SN; DN 10) or DIN-EN 857 (2SC; DN 10) must be deployed: The operating pressure is 200 bar. In the event the oil supply is provided by the on-board system, contact the manufacturer of the harvester, respectively header.

Due to currently valid safety regulations, the canola side knife and all other additional equipment must also be brought to standstill, if the harvester header is deactivated. This can be realised, if

- the canola side knife is supplied with oil from a hydraulic unit in the header or
- the shutdown of the header also leads to the deactivation of a solenoid valve (Item 8) which in turn deactivates the oil supply. The solenoid valve must be connected.
 - via a button (Item 3), which is actuated by a lever (item 4). (see **Fig. 7**)
 - or
 - via an electrical rocker switch which shuts down the complete cutting unit from the cabin

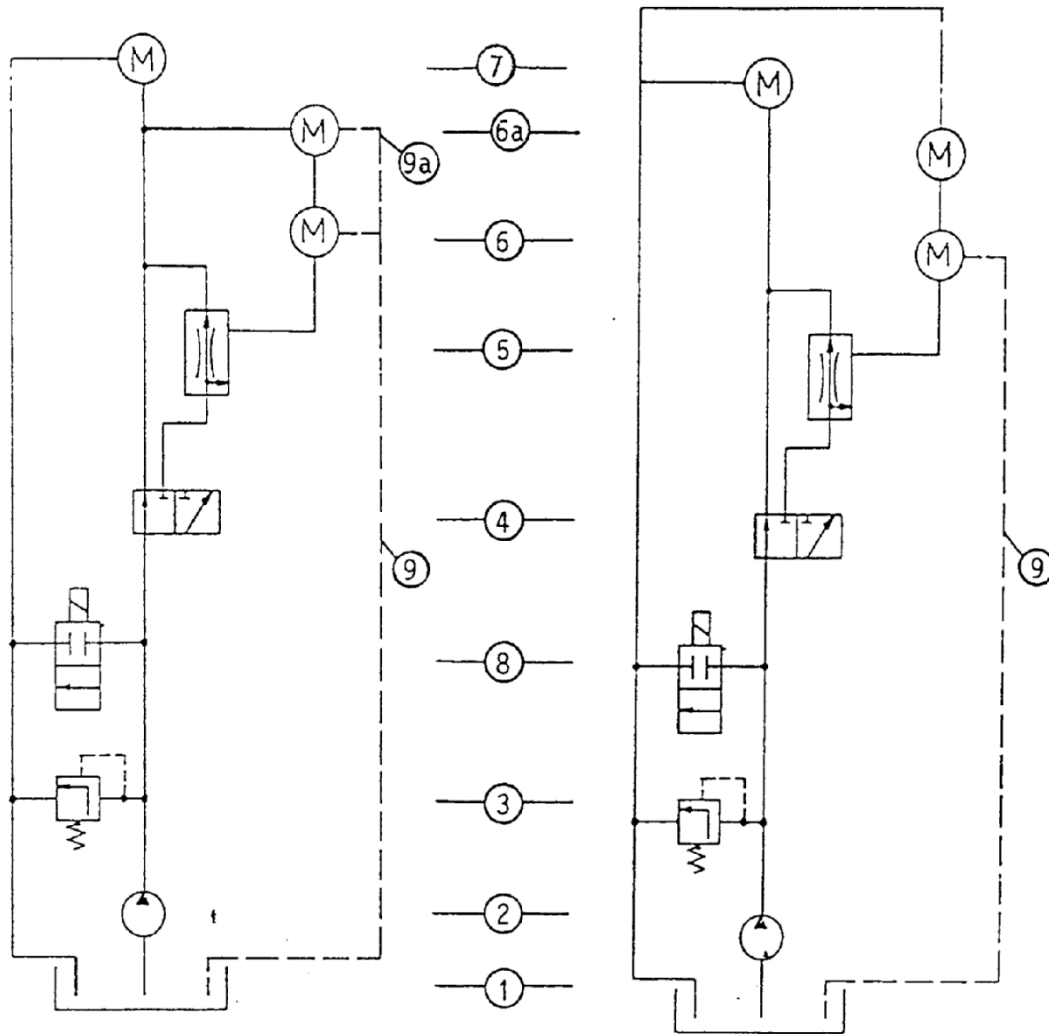


Fig. 8

Reflux oil is passed to a consumer (Item 7)

Reflux oil is passed without pressure. Back to the tank.

- 1 Oil Vessel
- 2 Pump
- 3 Pressure Control Valve (180 bar max.)
- 4 Three-way cock to deactivate canola side knife
- 5 Flow Control Valve
- 6, 6a Canola Side Knife Motor
- 7 Hydraulic Reel Drive, Valve Block in Harvester etc.
- 8 Electro-magnetic Valve
- 9,9a Drain Line: Is required, if 50 bar is exceeded in the line to the canola side knife motor. This is the case, if
 - ⇒ the reflux oil flows into another consumer (Item 7) such as the reel drive, hydraulic reel adjustment system, etc., which could generate backpressure.
 - ⇒ a second canola side knife motor (Item 6a) is connected downstream.

5. OPERATION

The canola side knives are designed for permanent operation and are capable to easily cut canola at a driving speed of 5 - 6 km/h. If the crop is in lying condition; reduce speed.

6. MAINTENANCE AND CARE

6.1 Lubrication


The knives and the knife guides must be appropriately lubricated before each deployment. For this purpose, you can use standard temperature-resistant oils and greases.

6.2 Knife Guides

The knife guides should be adjusted without play but without clamping!
A gap of up to 3 mm at the blade points does not influence the quality of the cut negatively.

6.3 Exchange of Knives

If, for the purpose of sharpening the knives, the crankshaft (A) is removed from the knife head (B), the following must be observed at the later mounting of the crankshaft (A) :

	<p>Attention: It is strictly necessary to set the crankshaft in a manner that the dead centre has been reached. Only then tighten the fastening screw (C) of the rubber-metal bushing. (see Fig. 9)</p>
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When fastening, take care that the rubber -metal bushing (C) does not turn. The same applies, if, due to a repair at the bearing or similar, the crankshaft (D) has been dismantled.

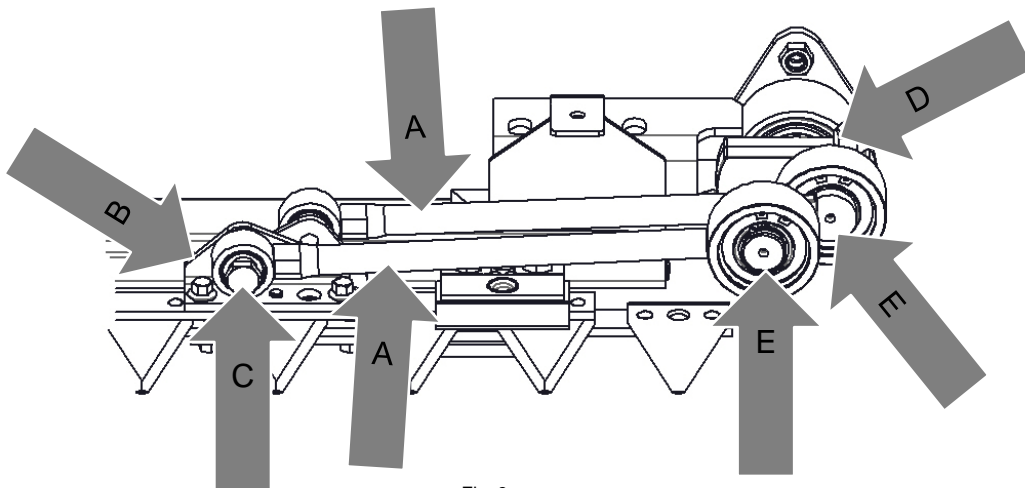


Fig. 9

7. TROUBLESHOOTING

Malfunction	Drive	Remedy
The canola side knife comes to standstill	electric	<ul style="list-style-type: none"> • Control fuse • Remedy broken cables or poor contacts • Exchange toothed belt • Check battery
The canola side knife frequently runs slowly	electric	<ul style="list-style-type: none"> • Remedy poor contacts at the battery, the relay, or at the plugs • Align bent knives • Control the output of the generator
Fuse triggers often	electric	<ul style="list-style-type: none"> • Use cables with at least 6mm², connect directly to battery • Remedy poor contacts at the battery, the relay, or at the plugs • Align bent knives • Loosen to tight knife guides • Remedy worn sections at cables
Knife guides are molten		<ul style="list-style-type: none"> • Align bent knives • Adjust knife guides less tight • Reduce too high speed: 550 - 600 Rev/min is correct
Knives are bent		<ul style="list-style-type: none"> • The canola side knife is mounted too low to the header; therefore contact with ground

ZIEGLER



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Erfüllungsort Pöttmes, Gerichtsstand Aichach
Steuer-Nr. 102/168/10401
Geschäftsführer: M. Ziegler, Dipl. BW (FH)

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Tax no. 102/168/10401
Managing director: M. Ziegler, Dipl. BW (FH)

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