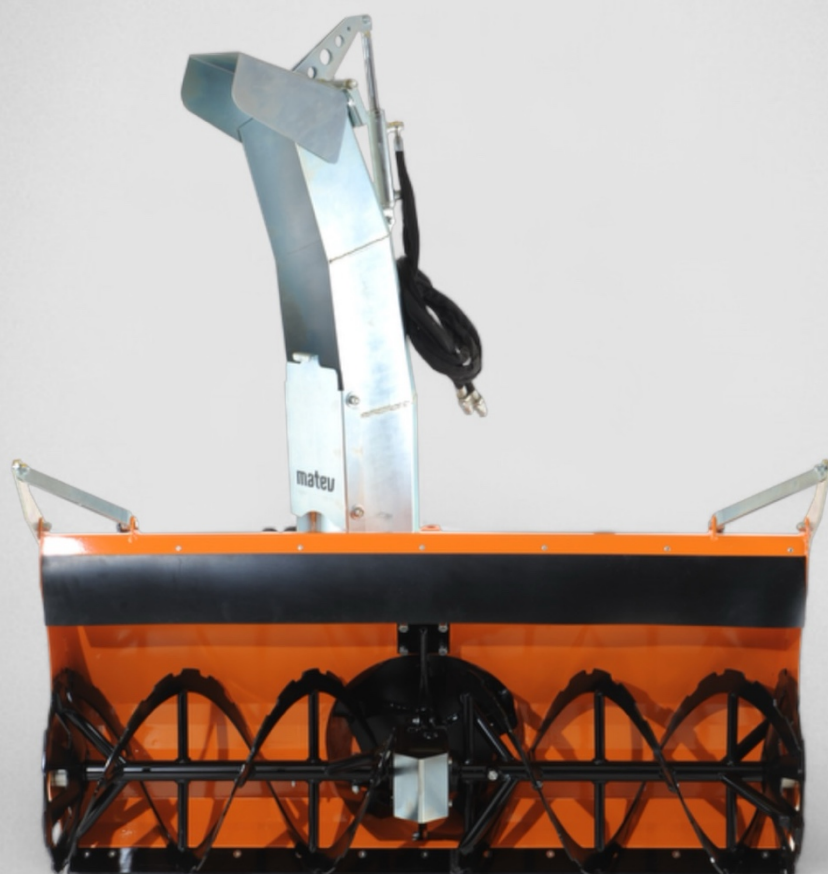


Operating manual

# **SBL-40**

**Snow blower**



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### 1 About this operating manual

Dear customer!

Thank you for purchasing this snow blower, we appreciate your trust.

Prior to using this implement for the first time, read this operating manual carefully and conscientiously all the way through.

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

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



**The snow blower is 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.**

## 2 Safety



### **Note** **Must be read!!!**

Guidelines and instructions with which you must comply, are summarized in this section.

Personnel who install, operate and maintain the snow blower, must have read and understood this operating manual.

### 2.1 Intended use

- The implement is used exclusively in winter service for clearing snow on roads, lanes, walking paths, plazas, and industrial areas.
- Any use extending beyond the intended use cited above is considered non-intended use. The manufacturer bears no liability whatsoever for resulting damage; the risk associated with non-intended use is borne solely by the operator.
- Intended use also includes compliance with the operating, service, and maintenance conditions prescribed by the manufacturer.
- The implement should only be used, maintained, and repaired by persons who are familiar with these tasks and who have been instructed in the hazards.
- Moreover, intended use includes exclusive use of original spare parts and supplemental equipment, or use of such parts and equipment that meet the technical requirements specified by the manufacturer.
- Unauthorized modifications to the machine result in exclusion of liability on the part of the manufacturer. For the resulting damage, in the case of non-intended use:
  - Health hazards for the operator or for third parties
  - Damage to the tractor and the implements
  - Environmental damage
  - immediate invalidation of the warranty
- To avoid accidents and to reduce the risk of accidents, the relevant accident prevention regulations and the other generally acknowledged occupational health and safety and road traffic regulations apply without limitation.

### 2.2 Qualifications of personnel

Only persons who meet the following qualifications should mount, operate, and maintain the implement:

- They must be at least 18 years old.
- They must have read and understood this operating manual.

## 2.3 General safety notices

In this section general safety notices are explained that are used in the subsequent sections.

Comply with these safety notices to ensure safe operation and to save work time and costs.

- In addition to the instructions in this operating manual, also comply with the generally valid safety and accident prevention regulations! Young persons under the age of 16 are not allowed to operate the implement!
- Comply with the respective regulations for use on public traffic routes!
- Prior to commencing work, become familiar with all features and activation elements, and their function. Ensure that all protective devices are properly attached.
- The user is responsible to third persons in the work area!
- Do not enter the danger zone of the machine!
- Check the immediate vicinity of the implement before start-up. Ensure sufficient visibility!
- Fluids (hydraulic oil) escaping under high pressure can penetrate the skin and cause severe injuries. Seek medical attention immediately – danger of infection!
- Always execute repair, maintenance, and cleaning tasks, as well as rectification of malfunctions with the drive switched off and the engine at a standstill. Remove the ignition key! After execution of these tasks re-attach all protective devices!
- For maintenance tasks with the implement lifted, always ensure that the lifted implement is secured with suitable support elements!

These safety notices are used in the subsequent sections.



**Danger!**  
Severe injury to the operator or third parties occurs.  
Comply with the safety notice.



**Attention!**  
Minor injury to the operator or third parties can occur. The walk-behind tractor, the sweeper or the environment can be damaged. Comply with the safety notice.



**Note!**  
Important, helpful tips or information for the operator.  
Read this note. It facilitates your work.



**Attention!**  
Injuries can occur.  
Wear protective work clothing.

## 2.4 Special safety notices

The safety instructions specified in this section are also affixed as stickers on the implements.



### Attention!

Ensure that the engine PTO shaft is at a standstill.

Only use cloths, water soap for cleaning. Do not use any solvents, diesel fuel or gasoline. Replace damaged signs. If the sign is on a component that must be replaced, you must ensure that a new sign is affixed on the spare part.

1



- Carefully read the operating manual before commissioning the machine

- Danger entanglement  
Danger of hand or arm injuries

- Ensure that the complete machine is at standstill before you approach it

- Danger due to ejected objects  
Always maintain a safety distance while the snow blower is in operation

- Danger of hand and arm injuries  
Always maintain a safety distance while the snow blower is in operation

2



- Pay attention to the direction of rotation as well as the specified rotational speed

3



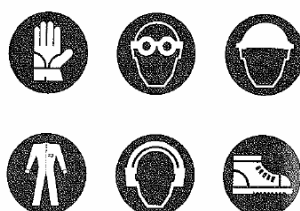
- Identification of the lubrication point

4

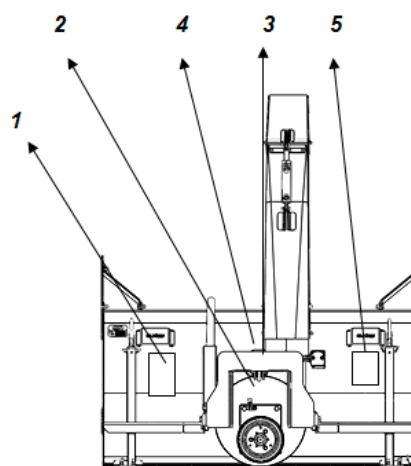


- Hard point for lifting the equipment.  
Use suitable lifting gear and prescribed accessories.

5



- Use of personal protective equipment (PPE) is mandatory



### 2.5 Basic rules

- **Each time before starting up, check the machine for operational reliability!!!**
- **Cleaning tasks, e.g. with a high-pressure cleaner, should be executed in such a manner that the water jet is not held directly on bearing parts and turned parts (shaft seals, lubricating nipples, etc.) Otherwise, check the moving parts for ease of movement, regrease if necessary!**
- **Failure to comply with these instructions invalidates the guarantee claim.**

## 3 Task and use

In conjunction with a tractor the snow blower is used to clear large quantities of snow off of roads, lanes, walking paths, plazas and industrial areas.

The snow blower clears off snow, with the exception of wet snow or frozen snow. The work speed depends on the depth of the snow.

The implement is mounted on the tractor as a front attachment is driven by the tractor via a universal joint shaft. The throw direction of the machine can be rotated hydraulically. The baffle plate for setting the throw distance can be adjusted either electrically or hydraulically.

All work functions must be controlled from the driver seat.

## 4 Delivery and transport

The snow blower is delivered lashed on a pallet.

### Lifting the snow blower off of the pallet

1. Remove the protective packaging and the transport safeguard.
2. Lift the snow blower off of the pallet with a suitable device (crane or forklift) and set it down.  
Use the intended points for lifting, so that the implement remains properly balanced

Only use belts and ropes with a safety lock!

To not turn the lifted implement.

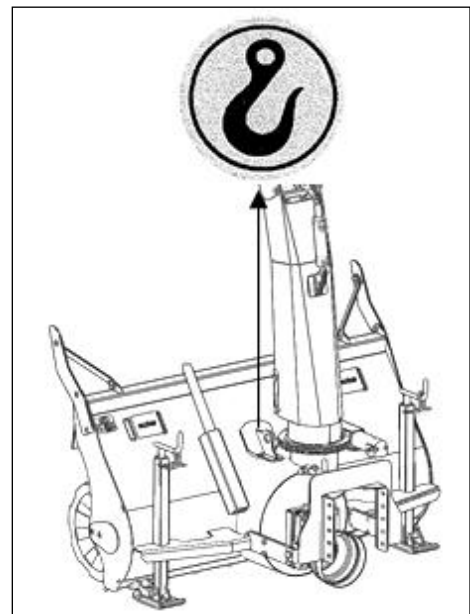


Fig. 1: Attachment point

### Long-distance transport

If you want to transport the snow blower over longer distances (e.g. shipping via freight forwarder), you must lash the machine onto a pallet, as it was when it was originally delivered.

## 5 Installation



### **Danger!**

**Switch off the tractor and remove the ignition key before mounting or dismounting the implements.**



### **Note!**

**Enter the vehicle chassis number of the snow blower in section 7.4 of this operating manual.**

The rear axle of the vehicle is offloaded depending on the weight of the equipment. To avoid loss of adhesion, the weight on the off-loaded axle must be at least 25% of the empty weight of the vehicle. If required, or if possible put on chains. Check the lift capacity and the stability, and if required, weight with ballast, to prevent the vehicle from tipping.

In the movement phase the load on the equipment must be at maximum of 400 mm above the ground, so that the vehicle does not lose stability.

### 5.1 Mounting the snow blower on the tractor



### **Attention!**

**The connection between attachment on the snow blower and coupling support on the tractor must be safeguarded against uncoupling.**

#### 5.1.1 Mounting snow blower SBL - M 12-40 QH an JD X700

- With the JD attachment – as shown in the photos, approach the snow blower
- pick up the bolts of the snow blower with the JD attachment
- With bolts left and right on the JD receptacle lock the snow blower
- Fit on universal joint shaft ad hydraulic connections

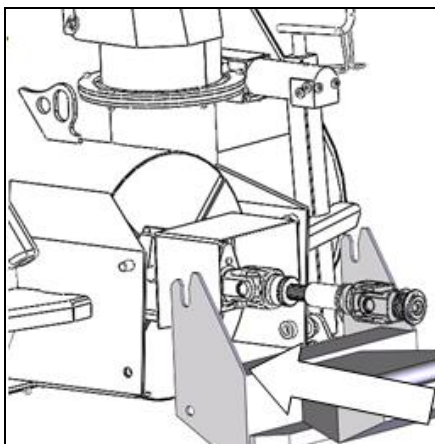
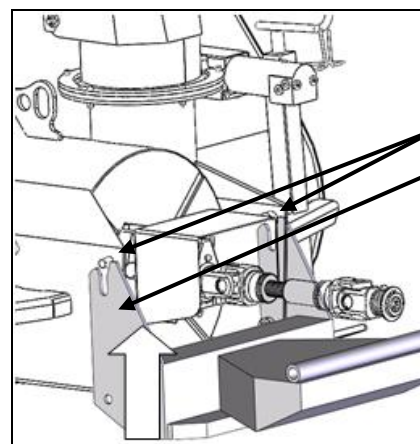


Fig. 2: Attach SBL - M 12-40 QU



bolts  
JD - attachment

Fig. 3: Attach SBL - M 12-40 QU



### 5.1.2 Mount snow blower SBL - M 12-40 C and SBL - M 12-40 C on tractor

Depending on tractor size and type and size of the coupling support, the attachment triangle on the snow blower is fastened with screws. The height of attachment must be selected depending on the tractor size. The attachment can also be shifted in length.

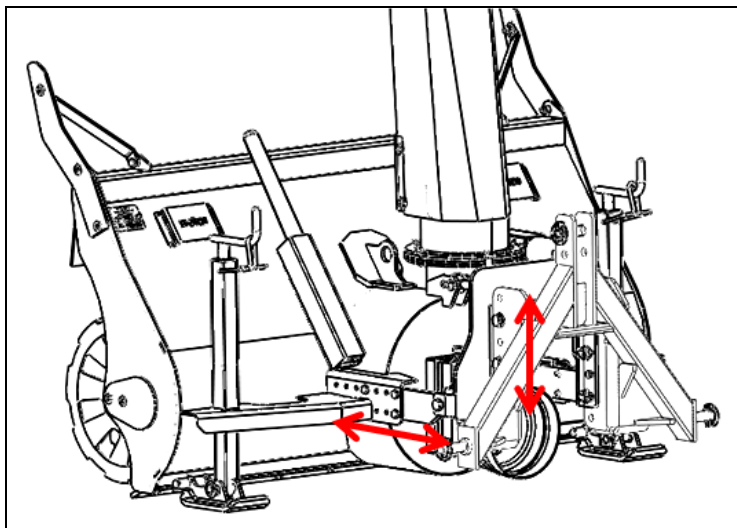


Fig. 4: Attachment of the snow blower

The connection between coupling support and attachment must be secured against uncoupling of the connection, depending on the design of the attachment.

Possible securing options are:

- Peg with bolts and secure with cotter pin
- Fasten with screw
- Secure with catch

Via the top link the snow blower is aligned horizontally to the ground.

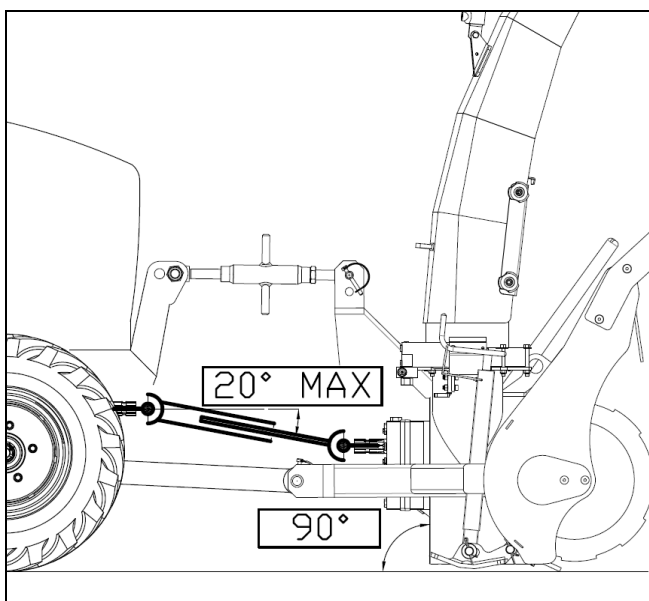


Fig. 5: Adjusting the snow blower

## 5.2 Installation of the universal joint shaft

The transmission of force between tractor and snow blower occurs mechanically via a universal joint shaft.

Depending on tractor type the supplied universal joint shaft may be too long. Execute the steps described below to shorten the universal joint shaft. Only use the universal joint shaft provided by the manufacturer.



### Attention!

**Damage can occur to the attached implement or on the tractor. Only use the provided universal joint shaft.**



### Note!

**In addition, when mounting the joint shaft, comply with the instructions in the original manual provided by the manufacturer of the universal joint shaft.**



**The safety and maintenance instructions that are contained in the operating manual provided with the universal joint shaft, must be strictly complied with!**

### 5.2.1 Adaptation of the universal joint shaft

1. Pull the two halves of the universal joint shaft apart.
2. Mount the one end of the universal joint shaft on the tractor.
3. Mount the other end of the universal joint shaft on the implement.
4. In the shortest work position, mark the piece that will be sawn off on one half of the universal joint shaft.

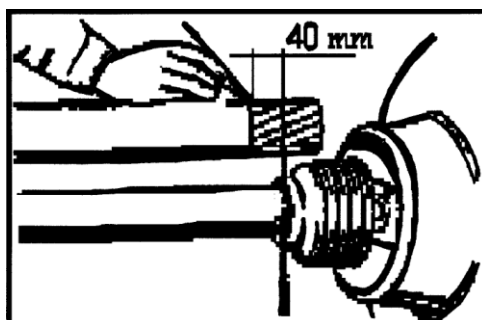


Fig. 6: Mark the interface

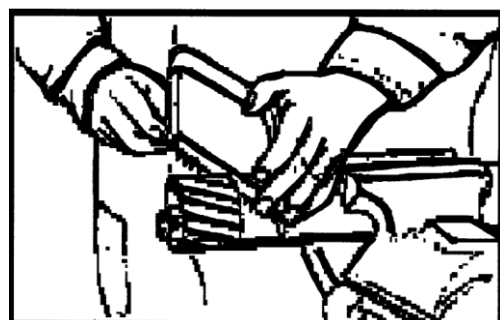


Fig. 7: Saw off the universal joint shaft

5. Cut off the universal joint shaft guard to the marking.
6. Saw off the profile tube. Attention: The profile tube must be 10 mm longer than the guard.

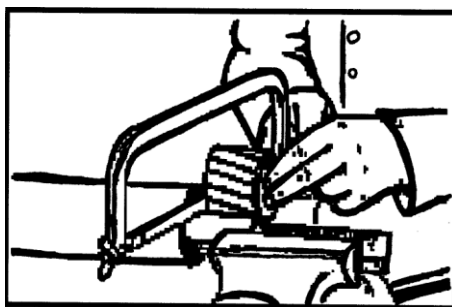


Fig. 8: Saw off the profile tube

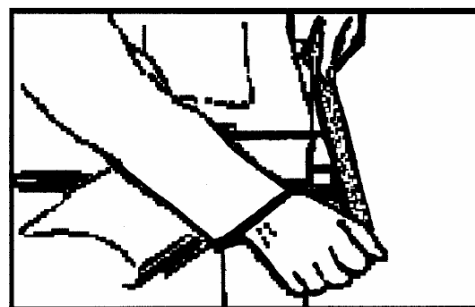


Fig.9: Deburr the sawn edges

7. Repeat steps described steps on the other half of the universal joint shaft.
8. Deburr the sawn edges.
9. Grease the profile tube.

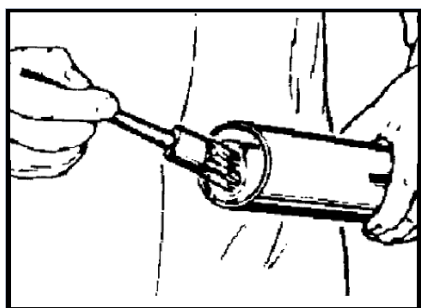


Fig. 10: Grease the profile tube.

10. Slide the profile tubes together.

### 5.2.2 Mounting the universal joint shaft

1. Press the locking disk that is on the outer side and keep it depressed.
2. Slide the splined shaft onto the splined shaft of the PTO shaft.
3. Release the lock disk.
4. Slightly move the universal joint shaft back and forth until the locking disk audibly locks in place.

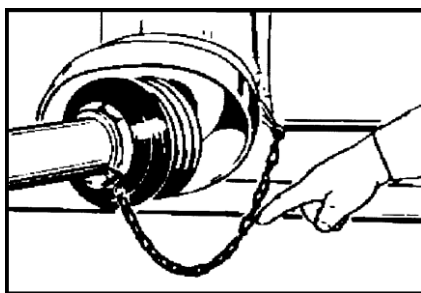


Fig. 11: Allow the locking disk to lock in place

5. Connect the counter-piece of the shaft with the implement and secure this with the screw included in the scope of delivery.
6. Hook the universal joint shaft safety chains to a stationary part on the tractor and on the implement.

## 6 Operation

### 6.1 Working with the snow blower



**Attention!**

**The vehicle behavior, steering and brake capacity are influenced through the attached equipment**



**Attention!**

**The snow blower can be damaged. Before each use, check to ensure proper adjustment of the support skids.**

Only operate the snow blower from the driver's seat of the tractor.



**Attention!**

**Third persons can be severely injured and objects can be damaged. Ensure for yourself that no objects are concealed under the snow. When operating the snow blower no one should be in a radius of 50 m around the machine, as a precaution against being caught by the rotor, in addition rocks or similar objects can be accelerated to the front through the rotor. Consequently always maintain an adequate distance to persons who could be injured or objects that could be damaged.**

**The manufacture accepts no liability in such cases of injury or damage.**

1. Lower the snow blower.
2. Switch the hydraulics to the float setting.
3. Bring the throw-out tower into the desired position
4. Switch on the machine on a surface that is free of snow, at 80% engine speed and the maximum speed can be reached incrementally.
5. Move forward at an appropriate speed. The snow can be optimally cleared at a consistency of 80-140 Kg/m<sup>3</sup> (new snow) or also in compact but slightly frozen (crystalline) condition.
6. When driving, always check the direction of the throw-out tower, so that snow does not hit people or objects.



**Attention!**

**The pivoting must always occur with the utmost safety and the tower must not be directed at persons, dangerous locations or places.**

**The tower is pivoted hydraulically, mechanical standstill is not intended, and consequently you must ensure that the hydraulic lines do not wrap around the tower.**

7. End of work: Bring the vehicle to a standstill and only switch off the tractor PTO shaft when the tower is completely empty.

## 6.2 Adjusting the work height of the machine



### **Note!**

**Adjust the support skids of the machine in such a manner that in working position the snow blower glides just barely above the ground. Watch out for uneven terrain, projecting edges and objects, such as manhole covers and shaft covers, to prevent machine damage.**

1. Flip the anti-rotation lock of the height adjustment element upward
2. Turning the handle adjusts the height of the skid
3. Press the anti-rotation lock downward
4. Adjust the second skid to the same height!

On non-paved roads the turbine must be kept several centimeters above the ground, to prevent rocks or other material from accumulating through the front auger.

## 7 Maintenance

### 7.1 General information



#### **Attention!**

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



#### **Danger!**

**Only perform service and maintenance tasks when the tractor is switched off and the snow blower is on the ground.**



#### **Attention!**

**Remove the ignition key before performing maintenance tasks on the implement.**



#### **Attention!**

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

**If there is pressure loss there is danger of crushing and shear injuries in the lift-out mechanism.**

**Attention!**

Properly reattach all protective devices that have been dismantled after executing the maintenance tasks.

**Note!**

- After the first 20 hours of operation check all screw and bolt connections.
- Subject the implement to regular maintenance.
- Use multi-purpose grease to lubricate the moving parts.

## 7.2 Maintenance

At regular intervals, and always at the beginning and end of the season, the moving parts of the implement must be greased or oiled.

### 7.2.1 Front auger and deflector group

After ending work any snow remaining in the turbine must be removed with the aid of the provided wooden rod, and you must check whether the screws for the blade (A) and the holder of the deflector group (B) are firmly seated (B).

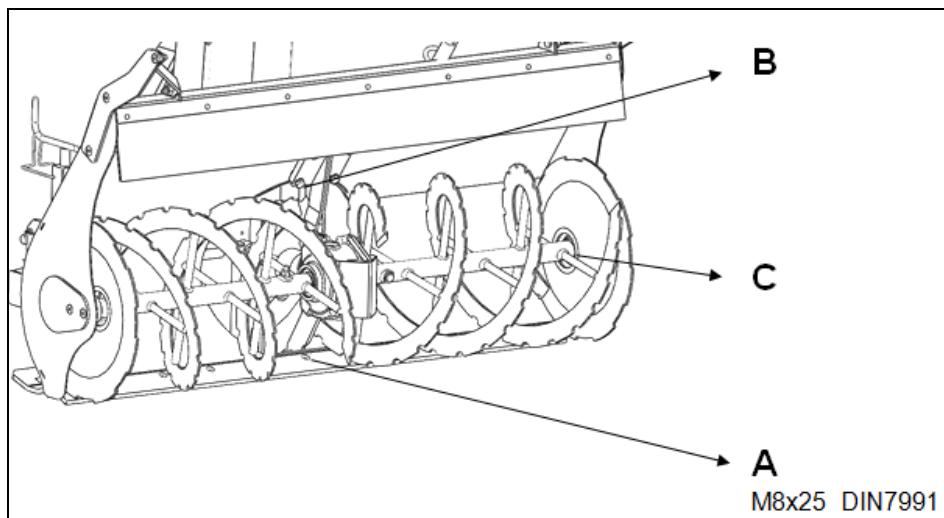


Fig. 12: Front auger and deflector group

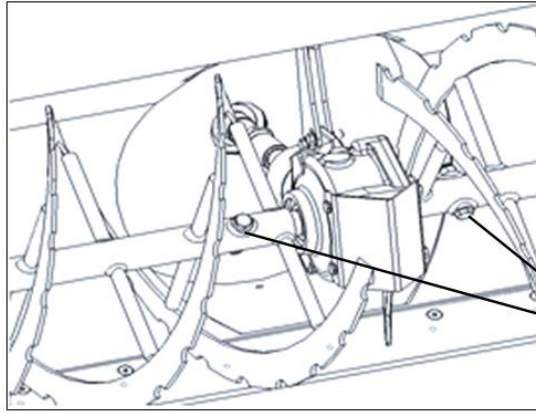
Check whether the augurs and the throw blades turn freely, otherwise you must check whether the bearings and the side holders (C) are still intact.

If during use you determine that you have hit a rock or other object, you must check whether the augurs and the throw blades have become deformed, if they have the defective parts must be replaced to prevent imbalance and machine vibration.

If unusual vibration occurs on the machine, the cause must be identified and rectified immediately; do not, under any circumstances, continue working

## 7.2.2 Safety screw

Both augers have a safety screw (D). To prevent transport of heavy material, through which the equipment can be damaged, the safety screw breaks at a specific load. We recommend always keeping several replacement screws of the following dimensions with you when operating the implement.



<u>D for</u>
<b><u>SBL-M12-40C &amp; SBL-M12-40 QH</u></b>
2x DIN931 M8x60-10.9
+
2x DIN982 M8 (35 Nm)
<b><u>SBL - M 14 - 40C</u></b>
2x DIN931 M10x70-10.9
+
2x DIN982 M10 (69 Nm)

Fig.13: Auger

## 7.2.3 Throw-out tower

At the beginning and end of each work cycle, the bearing shell must be greased with consistency class 2 mineral grease, applied with a grease gun.

With the tower tilted back, grease the continuous flight screw (D).

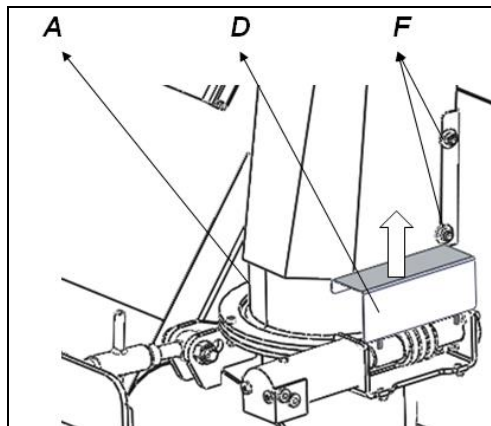


Fig. 14: Throw-out tower

If the tower opening is clogged, the following must occur:

1. Turn the tower to the machine side.
2. Switch off the vehicle engine.
3. Unscrew the screws F of the protective housing (4x), lift the protective housing and lift it off to the outside.
4. Use the provided wooden rod to remove snow remaining in the tower. Remount the protective housing in the same position tighten the screws F.

### 7.2.4 Gearbox

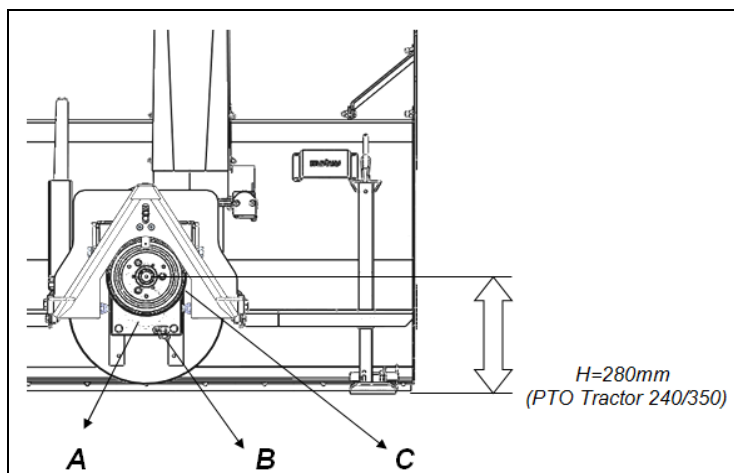


Fig. 15: Gearbox

Every 400 work hours the oil must be changed at operating temperature. To do this, remove the two plugs located below and on the filler neck B top up with oil type VANGUARD HCZ 80W90 –API GL3 up to position (C).

(Changing the oil for the first time is recommended after 80-100 hours).

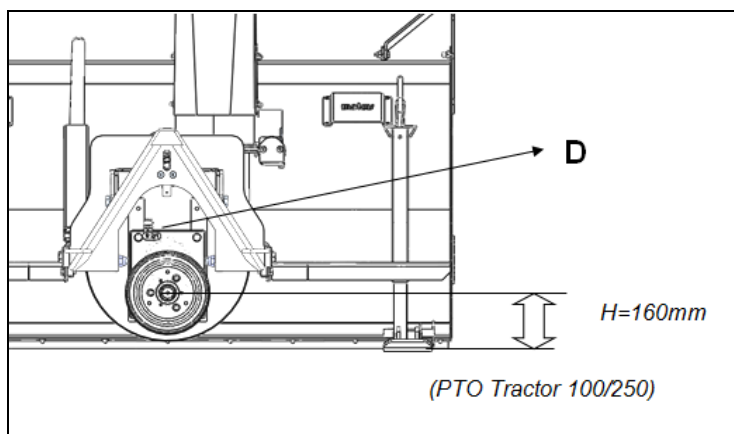


Fig. 16: Ground clearance of the gearbox



### 7.2.5 Lubricating the universal joint shaft

The universal joint shaft must be greased.

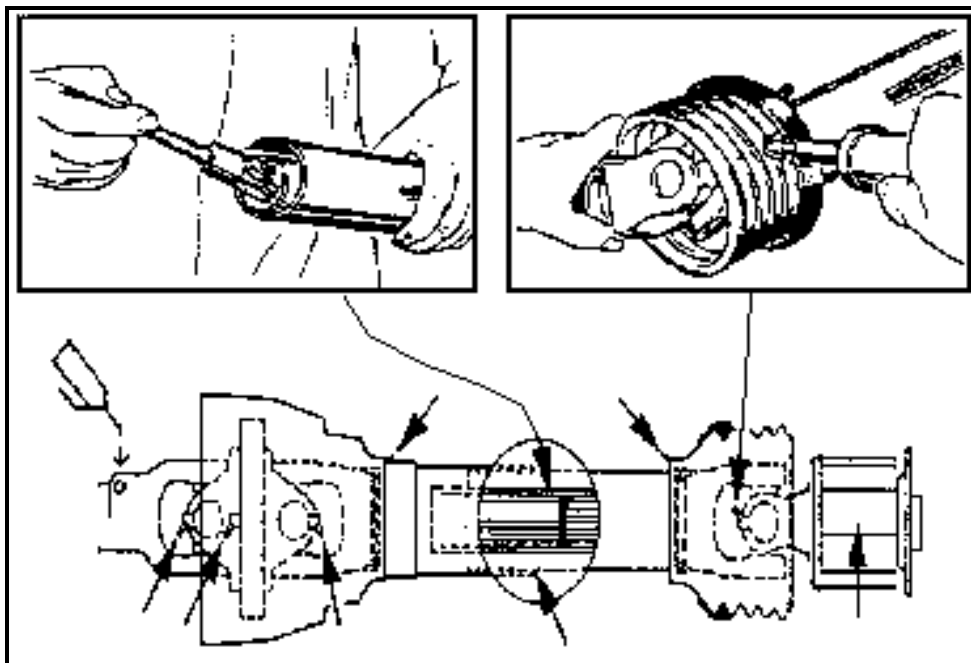


Fig. 17: Universal joint shaft

## 7.3 Faults

Fault:	Possible cause / rectification:
Snow is no longer thrown out smoothly	Snow adhering on the blades or the rotor: Switch off the machine and use the provided wooden rod to remove the snow
Tractor does not work effectively with the snow blower	Check all moving parts for ease of movement – tractor power is insufficient for the machine
The tower does not turn	Rotary bearing is iced up, mechanical blocking of the rotation motor / remove icing through heat or remove it mechanically
Sheet metal throw-out element cannot be adjusted	Sheet metal throw out element is iced up – remove icing through heat or remove it mechanically, Check adjustment cylinder for icing or breakage.

## 7.4 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, Germany

Tel.: (switchboard) +49 9101/90 87-0

Enter the article number and the chassis number here.

This information is on the type plate of the implement.

Article number: .....

Chassis number: .....

## 8 Disposal

The implements 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.

## 9 Guarantee

The General Terms & Conditions of matev GmbH provide information on the guarantee conditions.

**matev GmbH**

**Nürnberger Str. 50**

**90579 Langenzenn, Germany**

## 10 Technical data, implements and optional equipment

	SBL - M 12 – 40C (QH)	SBL - M 14 – 40C
Working width	1200 mm	1400 mm
Weight, approximate	156 kg (165 kg)	240 kg
Min./max. power	20/40 HP	28/55 HP
Working width	650 mm	700 mm
Auger diameter	400 mm	400 mm
Throw blade diameter	390 mm	395 mm
Input speed	2000 rpm	2000 rpm

Oil quantity required for tower regulation (at least 6 liters/min. - max. 25 liters

Oil pressure required for tower regulation 40/60 bar.

### Note

The weights cited above are indicative only and are subject to variation, also in function of the desired applications, as well as special changes.

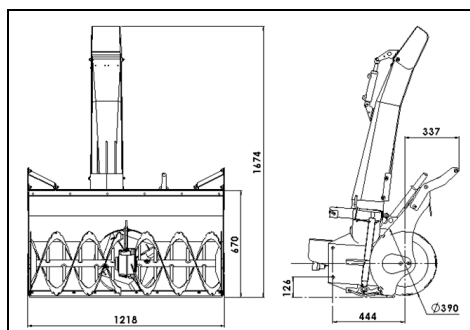


Fig. 18: Diagram SBL - M 12 – 40QH

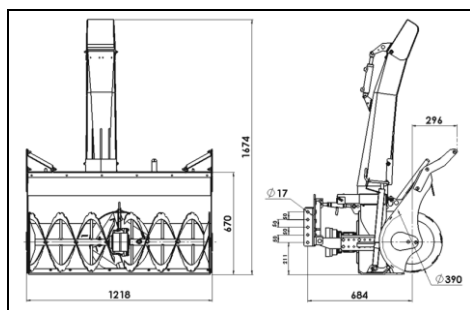


Fig. 19: Diagram SBL - M 12 – 40C

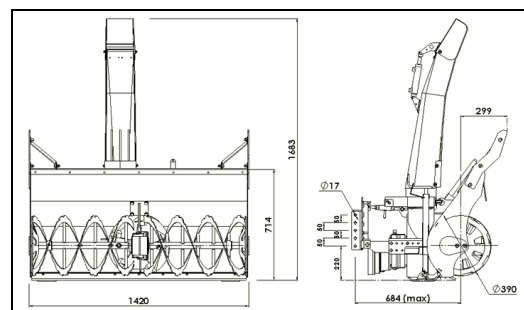


Fig 20: Diagram SBL - M 14 – 40C

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## 12 EC Declaration of Conformity

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

The manufacturer                      matev GmbH  
    Nürnberg Str.50  
    90579 Langenzenn

that the machine                      SBL - M 12 – 40 QH – JD Quick Hitch  
    SBL - M 12 – 40C  
    SBL - M 14 – 40C

complies with the provisions of the Machinery Directive 2006/42/EC and with the implementing national statutory regulations.

The signer is authorized to compile the technical documents.

The address is the address of the manufacturer.

Date / signature  
Name of signer  
Signer information

November 2017

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Georg Hemmerlein  
Managing Director