Original Instruction Manual

Carefully read these instructions before starting and using your log winch!

Set-up & installation
Use
Maintenance
Accessories

Logging Winch

FSW 9.5 HV Profi
hydraulic drive

CE

TÜV International Certification
TÜV THÜRINGEN CERT
ISO 9001:2008
15 100 63645
TIC

BGU maschinen

Südharzer Maschinenbau GmbH
Helmestraße 94 · 99734 Nordhausen/Harz
Zentrale: ☎03631/6297-0 · 🖷-111
Internet: www.bgu-maschinen.de
e-mail: info@bgu-maschinen.de

CONTENT

1. GENERAL INFORMATION

Dear customer,
Thank you very much for your trust and preference in choosing our equipment and joining the number of our best customers in the world. We are confident that our equipment will be up to all your expectations and assure you a long lasting quality and performance.

Our timber winches are available in two different versions of different pull force.

FSW 9.5 pull force 9,5 tons hydraulic operation system

All versions are designed and conceived for farming and logging applications. Any other use shall be considered non-compliant application. The manufacturer accepts no responsibility for damages caused by non-compliant application. In this case the operation of the machine is completely at user's risk.

1.1 About the manual

Please take time to read this manual and learn to how operate and maintain the processor safely. For your easier reading this manual is laid out in several sections. The sections are progressively numbered and listed on the "content" page. The information, pictures and technical data in this document reflect current or planned product features, functions, and characteristics as of the publication date. Because of on-going product improvements and feature additions, information in this document is subject to change without notice. If you are experiencing a problem or a functional trouble on your machine, please read the "trouble-shooting" section to identify possible causes and remedies. If the problem or functional trouble is not listed in the trouble-shooting chart contained in this manual, ask your Authorized Service Centre for service. When you have checked all the possible causes listed and you are still experiencing the problem, ask your Authorized Service Centre for help. When you order parts, maintenance or repair services, your Authorized Service Centre, your dealer or eventually the manufacturer need your machine serial number and engine serial number. These are the numbers that you have recorded on the product identification label of the manufacturer on the machine.

1.2 Delivery and transport claims

Upon delivery of the machine please check for visual machine damages such as damaged packing or scratched buckled parts. If so, make a remark on all copies of the delivery bill before signing for acceptance. The truck driver must absolutely sign all copies of the delivery bill. Should your shipper or the truck driver refuse to accept your claim, fully reject delivery and make sure to inform us (the manufacturer) immediately.

Also have the truck driver sign al copies of the delivery bill.
Should your shipper or the truck driver refuse to accept your claim, fully reject delivery and make sure to inform us (the manufacturer) immediately. No claims shall be taken into account by the shipper or by the insurance company, if a reservation note is not made on the delivery bill.
All transport damages must be notified within latest 2 days from delivery. Therefore delivery must be collected and inspected within this term. Later claims shall be disregarded. In case of assumed but not visually clear transport damages, make sure to mark the following sentence on the delivery bill: „**Reserved delivery due to assumed transportation damages**." Insurance and shipping companies act with extreme caution in case of transport damages and sometimes refuse to accept responsibility. Please make sure to provide clear and exhaustive evidence (photos) of the claimed damages.

Thank you in advance for your help and attention to this matter.

2. SAFETY PICTOGRAMS AND WARNING LABELS

1 . Warning label

„Never operate or install a winch without reading or understanding the operator's manual!"

2. Danger sign

"Keep yourself and others at safe distance from the dangerous area!"

This label reminds operators and bystanders of the dangerous area between the tractor and the winch.

3. Machine safety label

" max 540 min"
This label shows the max number and the direction of rotation of the driveshaft connecting the winch to the tractor.

4. Danger sign
„Nur für Bodenzug"

5. Winch operation sign

"Disconnect the winch, read and comply with manufacturer's maintenance instructions."

6. Identification label

„Product identification"

This label shows the company details of the manufacturer and the main technical data of the machine.

7. Identification label

„BGU-Maschinen" manufacturer's logo

8. Operator's safety label

„Wear steel-toe safety shoes"

4. SAFETY

Strictly perform installation, set-up, maintenance, cleaning and transportation of your winch with the power switched off and all moving parts motionless against accidental operation.

The user shall strictly comply with these operation, set-up, maintenance, repair and trouble-shooting instructions in order to assure safe operation and no damages to the equipment. Moreover we recommend to let the machine be run only and strictly by trained and skilled staff who must be familiar with the applicable occupational safety and health administration rules as well as applicable transportation rules. Qualified operators shall be familiar with all risks and harzards related to use and operation as well as best practices. Incorrect use of the saw can cause serious injury or death.

No person under school leaving age should operate a circular saw. Those who have reached school leaving age but are below the age of 18 may operate a circular saw if supervised by a competent person of 18 years or over. The machine shall be installed and kept in a suitable location selected by the customer for safest operation.

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The working area around the machine must be kept as clear as possible from surrounding obstacles and slippery foundation floors should be duly treated (do not use saw dust or wood ash for this purpose). Make sure that the equipment stands on a safe stable foundation. Also make sure to comply with the following provisions:

- Due and proper illumination of the working site must be provided at all times.
- Set up the machine on a firm surface and ensure that a wide but confined area is available around the machine assuring maximum working freedom.
- Mind all operation sings and warning labels on the winch and comply with the instruction given herein.
- Operators must wear steel toe safety shoes, working protective gloves, protective helmet and snug-fitting, tear-resistant work cloths.
- It very dangerous and strictly prohibited to sit/stand on the winch while transporting it.
- Never leave the forestry winch unattended with the running motor.
- Before switching power on and putting the winch to work make sure that there are no bystanders in the dangerous area and that you have good and clear visibility on the work area.
- Provide due and correct mounting of the winch.
- Make sure to comply with driving speed requirements for the specific road conditions. Use caution when changing direction or turning while winching uphill, downhill or across slopes.

- Do not stand in the dangerous area. Assure that nobody stands in-between winch and tractor, unless the tractor is safely braked and blocks have been put underneath the wheels to avoid accidental moving.
- Do not remove nor start handling timber before the winch has come to a complete stop.
- Periodically check that all screws and fixations are tightly in place.
- Before putting the winch to work perform a visual checkup of the overall conditions and let a skilled technicial overhaul and service your winch at least once a year.
- It is strictly prohibited to use the winch for any other application than mentioned in this manual. CAUTION: do not use the winch for hoisting applications! (Figure 5)
- Make sure that power is fully disconnected from the winch and that the tractor has been switched off before performing any repair or work on the winch.
- Never operate the winch without its safeties and protections duly in place.
- Strictly use wire rope of adequate crush resistance, strength and quality. Provide for immediate wore rope replacement, if any fault or anomaly is detected.
- Be sure that your wire rope length provides for a free gap to the up per drum profile of least 1.5 the rope diameter when fully spooled. In other words, when the rope is fully spooled there should be space left on the drum for at least two more coils.
- Make sure that your helpers do not put any extra load on the winch without prior informing the tractor driver.
- Strictly operate the winch from a safe place, at safety distance from the load, the rope and such other dangers as unfelled trees. The driver seat accounts as a safe place only if a safety screen is provided to separate the winch from the tractor in such a way that it may not be removed or by passed.

Ensure compliance and familiarity with all applicable occupational safety and health administration rules as well as applicable transportation rules.

Site must be free of slippery surfaces and tripping obstacles. Make sure that all access ways are properly maintained so that logs can be safely delivered, loaded and shipped.

4.1 Mandatory application field

Any other use or skidding method than described herein is considered by the manufacturer as "misuse". In case of misuse the manufacturer will not be liable for any injuries or damages and the operator will be held entirely responsible.

Please make sure to comply with these set-up, operation and maintenance/repair instructions in order to avoid happening of any injury or dangerous condition.

• CAUTION: it is very dangerous to stand in front of a tree to be felled and winched away. (Figure 1)

Fig. 1

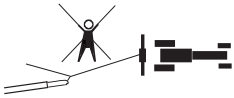


Fig. 2

• Winching with a pulley originates a three-sides dangerous area where none is allowed to stand during winching operations. (Figure 2)
• Never exceed the max admissible pull angle of 30° (Figure 3).
• CAUTION: tip-over risk (Figure 4) when winching on rough terrain or exceeding the maximum admissible pull angle.

Fig. 3

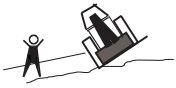


Fig. 4

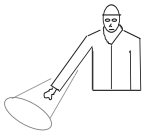
Fig. 5

Keep away from the dangerous area!

• You and your helper must establish clear and precise hand signals and review them so everyone clearly understands.

Pull

Stop



Release rope

• If your winch is equipped with lower snatch block, use it also for pulling operations.
• The operator should monitor the load throughout the entire pulling operation. Although winches are one-man equipment, you should never work alone and a second person should be always ready to help.
• Attach your winch to any tractor equipped with road transport tires to avoid infringement of road travel profiles. If this is not available, provide your towing vehicle with protection chains. Chains are mandatory on all types of tire for travel on icy or snowy foundations.
• Before disconnecting the winch from the tractor, park on a safe and fl at surface. Drive the winch down on the special stabiliser foot and hang the driveshaft on the special mount provided on board of the winch.
• Pinched-hands and injuries danger in the three-point hitching area!

Read this basic guide carefully, familiarize yourself with the operation of your winch before having to maintain it and be constantly safety oriented.

5. ABOUT PTO

Use only and strictly CE approved drivelines duly connected and secured in compliance with manufacturer's instructions!

- Never use a PTO driveline without safety shield or with a damaged guard.
- Make sure that the shield is of the correct size and length for the drive shaft and is duly mounted on it.
- Use safety chains to secure the shield agaist dangerous rotation and distortion.
- Before operating the PTO driveshaft make sure the rpm number and direction comply with the one shown by the arrow-sign on the winch. Take all due measures to avoid unauthorized thirds standing the the dangerous area of the winch!!

Never run the PTO shaft when the tractor motor is switched off! After dismouting the PTO shaft use the special holder on the winch to safely store it away.

6. OPERATING INSTRUCTIONS

This timber winch is designed for logging applications only. The winch comprises a welded frame, a main shaft, a chain wheel clutch, a drum with wire rope, a brake and a snatch-block.

The wire rope is slipped around the timber, the timber is pulled to the skid and the rope is hung up to the special grooves in the skid by means of fixation chains. Timber and long tree trunks are so winched to a parking area for loading on trucks and further delivery

6.1 Minimum tractor requirements

Do not PTO operate winch at any faster speeds than max. 540 RPM.

To mount your winch to the tractor use three-point hitch CAT I and Cat II only.

6.2. Attaching the winch to the tractor

Make sure that nobody stand in the dangerous area while connecting the winch to your tractor

Logging winches can be mounted on any tractor equipped with 3-point hitch of category I or II.

With a special arrangement it is also possible to mount the winch to a tractor with automatic hitch mechanism on the lower hitch points.

Make sure to strictly use approved IID types and that proper shielding with chain fixation is available.

Make sure to perform accurate connection of your PTO driveline both on winch and power input side.

In order to transfer torque from the tractor to the winch you must use a driveline with torque overload clutch coupler. Mount the winch to the tractor and then secure the stabilisers underneath the lower hitch points. Finally incline the winch by approximately 20° using the upper hitch bar.

6.3 Positioning the drawbar to the PTO shaft

The length and height of a tractor drawbar may need to be adjusted to match the implement to the manufacturer's specifi cations. It is important to make these adjustments to ensure that the PTO driveline does not compress or separate during operation.

To make this adjustment:

- Mount the winch to the tractor!
- Pull the two halves of your shaft apart and respectively mount them to the tractor and to the winch and perform a crosscheck as shown below (Fig. 6)
- For increased safety make sure that a minimum wrapping of 200mm (b) occurs when pulling the hitch bar all the way up and down. With the shaft parallel to the ground also make sure that the shaft doesn't hit the stand (wrapping (a) should be still at least 20mm).
- For shortening of the PTO shaft, first cut the telescope off and then the external one by the same length.
- Grind both shaft ends, clear chips and dust away and oil all slinding contact areas before final assembly.

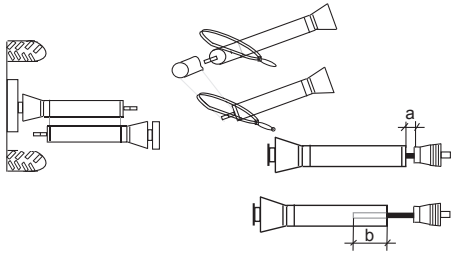
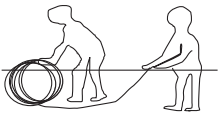
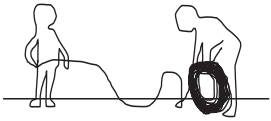


Fig.6

6.4 Wire rope installation



DO



DON'T

Remove the small protection grid and then take the cap off. Now turn the drum to the right position for releasing and removing the drum screw. Insert the wire rope through the inlet fairlead and feed it to the drum by means of the upper block. (Fig. 9, Pos. 8).

Fit the rope into the special groove and tighten the screw (Pos. 9). Now start spooling as described under skidding operations.
In order to avoid possible rope damages keep winding up for a while after complete spooling of the entire rope length, as described under section "Spooling of the wire rope". Follow exactly these instructions in order to avoid troubles and assure smooth working with your winch.

6.4.1 Spooling off the wire rope

After you have correctly installed the winch, you can start spooling the rope off. In order to ensure compliance of your power voltage to the requirements, first switch the tractor rear lights on.

• Press the white push-button (2) Fig. 7 to undo the safety brake.
• Press the black push-button (1) Fig. 7 to engage the brake and allow the rope to spool off. If no spooling off occurs at this stage, you are probably missing suffient operating pressure in your system. Remember that your driveline must be engaged for the hydraulic pump to actively power the spooling system.
• Press the white push-button again and pull the wire rope. If the wire rope is tangled or badly wounded on the drum, first undo 3-4 rope winds and then wind tightly and evenly back onto the drum to the desired length.
• Should timber hook up on an obstacle (tree trunks, branches or roots) down the skidding route and skidding be discontinued due to insufficient pullforce to bypass the obstacle, a large pressure will build up into the rope leading to a risk of backlash during spooling off. In this case, you need to operate the white push-button (1) by quickly tipping on it several times.

6.4.2 Checking the rope quality

- Stricly use brand new ropes.
- Make sure to use ropes of approved quality, suitable strength and compliant to the specifications on the identification label.
- Do not use longer ropes than instructed in the technical specifications of this manual.

6.4.3 Spooling the wire rope

Completely spool the rope making sure to wind tightly and evenly onto the drum and avoiding both over-winding and underwinding. Correct winding is accomplished by:

- Simply pulling the load
- Firmly attach one end of the rope to a firm stable anchor-point suitable to withstand the pull force while the rope starts spooling onto the drum and the tractor with the winch starts pulling towards the anchored rope end.

It may be convenient to carry out this operation either on a slight gradient with the idled tractor facing uphill or alternatively with braked tractor.

Wind the rope tightly and evenly onto the drum. Before putting your winch to work, spool the rope nearly completely off (just leave 3-4 winds on the drum) and then respool it again under load on the free end! Check the rope over for any signs of damage, flattening, broken wires, wear and corrosion.

6.4.4 Adjusting the line pull (amount of force the winch needs to produce to move a load)

Adjust the line pull of the winch so that the drum stops rotating at once when no more skidding occurs. This will reduce chances of "binding", which is wire rope working it's way down into a loosely wound wire rope layer, and catching or damaging itself. To adjust the pullout force:

- Release the locknut
- Release or tighten the adjustment screw used to adjust the flat spring of the brake band
- The line pull is increased or decreased by respectively tightening or releasing the screw
- Tighten the locknut back in place

6.5 Skidding operations

Set the hydraulic cylinder of the tractor three-point hitch in its lowest position. Firmly settle the winch down on the ground and engage the tractor manual brake. NEVER start pulling operations before having securely and firmly settled the winch in a stable position.
Press the black push-button on the control panel. The wire rope will now start to wind up onto the drum. To stop winding simply release the pressure the black push-button. When doing so, the brake immediately stops the drum and keeps the load away.
For safety reasons, spooling of the rope occurs strictly and only if a consistent pressure is maintained on the black push-button.

Do not raise the hydraulic cylinder of the tractor three-point hitch during skidding! (DANGER: you may damage your driveline)

The rated pull force is the largest force produced as the rope starts winding up onto the drum. This is also the figure that is shown in the technical data reported on the product identification label on the winch. The pull force of the winch decreases as the rope keeps winding further more onto the drum. At fully wounded rope the pull force of the winch amounts 50-60% of the rated force.

6.5.1 Use of a frontend bucket

For operation of a frontend bucket a separate hydraulic system is required than the one used to operate the log winch. One of the double-acting control valves of the tractor is required for bucket operation.

The bucket is hinged and infinite bucket adjustment is possible from the tractor.

When you take the winch off the tractor make sure to shut the gate valve of the control line by turning it 90° off in order to prevent the bucket from dropping down while the winch remains parked. During skidding operations the gate valve must be set along the axis of the control line .

6.6 Settings

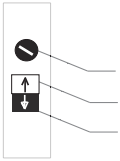


Fig. 7

6.6.1 Clutch mechanism

Make sure to switch the tractor drive off before attempting any intervention on the winch!

Proper clutch settings will ensure optimum pull force. The clutch is set by the manufacturer during final testing of the product before shipment. However possible wear of the lining may require some extent of adjustment as the time passes. If the winch fails to reach the rated pull force, then it means that new clutch adjustment is required.

To perform clutch adjustment:

- Loosen the small nut (Pos. 1),
- Slightly tighten the nut (Pos. 2),
- As the system is switched on, the motor and the driveline start turning,
- If the wire rope winds up without you having pressed the black push-button (1), then you probably tightened the nut (Pos. 7) too much and no more gap is available between the clutch and the drum. In this case release the nut and keep doing so till the rope no longer moves unless the black push-button was operated.

6.6.2 Prebrake regulation

To facilitate winding of the wire rope, perform prebrake regulation with the screw (10) and the respective wingnut (11) (Fig. 8). A certain extent of prebraking is also performed by the roller fairlead (Pos. 12, Fig. 8). Exact prebrake regulation will also prevent the rope from unwinding excessively fast or accidentally slipping off the drum. Extreme fast unwinding and abrupt brake disengagement may cause severe damages to the wire rope.

Exact prebrake regulation occurs when the rope can be effortless spooled off the drum.
The prebrake arrangement must be disengaged for uphill winching operations in order to ensure easier pulling of the rope.

6.6.3 Safety brake

As pulling out is over and the brake is ready for use, the safety brake will automatically take up the load (the drum must not unwind and the rope must be held straight and well stretched). The brake is set by the manufacturer during final testing of the product before shipment. However, possible wear of the lining may require some extent of adjustment as the time passes. If the safety brake fails to hold the load uniformly , then it means that new adjustment is required.

To adjust the safety brake:

- Tighten the nut (Pos. 3, Fig. 8) used to tension the spring
- Adjust the nut (Pos. 3 and 4), so that the distance measured between the two nuts (Pos. 1 and 3) on the threaded spindle is **7 mm**
- Finally tighten the nut Pos. 4 to assure perfect adjustment

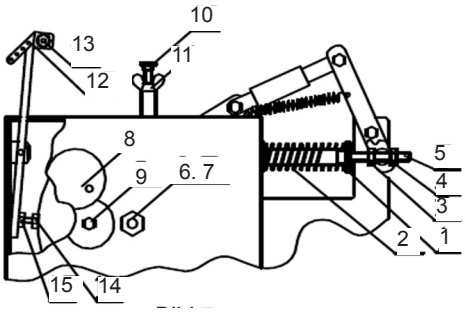


Fig. 8

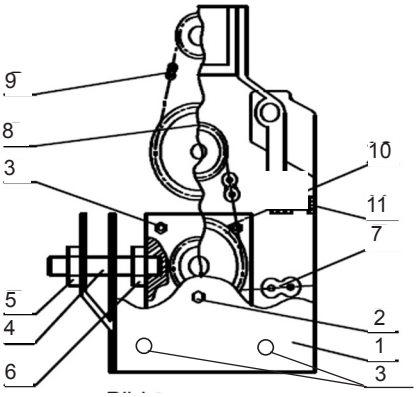


Fig. 9

6.6.4 Stretching of the drive chains

After the first operation hours you may possibly experience some extent of release of the drive chain that will then need to be restretched. Under normal continuing operating conditions the drive chain should be stretched every 60 operating hours. To perform stretching of the drive chain (fig. 8):

- Remove the safety guard (Pos.1), unscrew the fixation screw (Pos. 2) and finally loosen the 4 adjustment screws (Pos. 3).
- Loosen the nut (Pos. 6) of the tension screw (Pos. 4) and tighten the tension screw on nut (Pos. 5)
- Keep tightening nut (Pos. 5) until the drive chain (Pos. 7) is duly stretched
- Under a hand pressure, the duly stretched chain must be still capable of minimally moving
- Turn the PTO driveline (Pos. 8) and make sure that this is effortlessly done
- Check the pump drive chain (Pos. 9) and perform new stretching if required. To do so, release the screw (10) and tighten with nut (11) making sure to avoid excessive tensioning of the chain

6.7 Lubrication

Make sure that the motor is switched off, pull out the tractor keys and wait for all moving parts to be secured before performing any maintenance/repair work on the machine.

4 lubrication nipples are available on the winch to respectively perform lubrication of both the upper and lower snatchblocks and of the rope fairlead. Perform lubrication of the nipple (13) of the pre-braking arrangement (12, Fig. 8).

Make sure to perform lubrication every 15 - 20 operation hours.

CAUTION: improper lubrication may cause dangerous contamination of the sliding parts. In this case the manufacturer will not be liable for any resulting damage or injury!

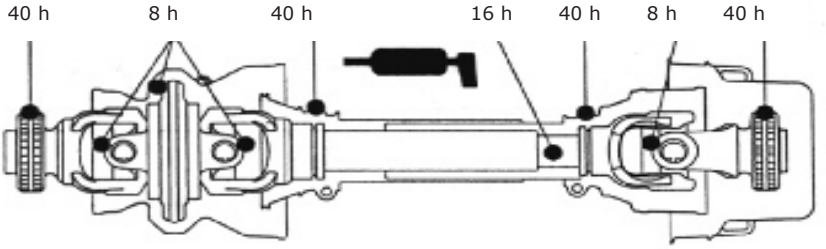
Lubricate the driving chain after every 40 operation hours.

To lubricate the driving chain use grease suitable for high temperature (it should not melt as common low-price lithium grease) in order to prevent grease contamination of the sliding clutch surfaces. Strictly use special spray lubricant for link chains. Provide regular maintenance of the drive chain by removing any eventual residual dirt before greasing it.

BE AWARE: Do not grease the clutch lining because this may lead to a significant reduction of the line pull and in this case you may be forced to replace the clutch plates!

All other bearings are self-lubricating ones that require no further lubrication or maintenance.

Provide PTO shaft lubrication in accordance with the instructions of the manufacturer (Fig. 10).



6.8 Checking the hydraulic oil

Perform periodical oil temp checks during operation. Should the oil temp exceed 70°C, stop the motor, search for the possible causes and fix the overheating problem before continuing to work. BEWARE: longterm overheating may permanently damage your winch hydraulics.

6.9 Troubleshooting

Type of trouble	Possible causes	Remedies
No winch reaction to activation of the control buttons of either the control board or the radio control.	• Winch drive damage	• Check the winch drives (the driveline must be connected for the pump to be powered) and the oil level in the oil tank. • Check power connections (check the plugging on the tractor, position lamps ON) • Check the batteries of the radio control, Check for oxidation of the contacts and clean them if required
	• No power in the system	• In case of a power failure, fix the problem and provide power
	• Control valve failure	• Should the control valve repeatedly fail to operate, concurrently press the keys of the control panel and the magnetic pressure peg (located centrally to the front part of the magnets) to release it.
Line pull is insufficient	• Excessive rope on the drum	
	• Oiled clutch disks due to faulty lubrication of the drive chain	• Clean or replace the clutch lining
	• Worn-out clutch lining	• Replace the clutch disk
	• Winch drive is damaged	• Replace the damaged parts
	• Oil pressure is too low	
Less than 145 bar oil pressure	• Not enough oil in the tank	• Check the oil quantity and touch up if requried. Seal eventual leaking spots.
Insufficient oil pressure	• Damaged pump	• Ask for customer service
	• Faulty setting of the pressure switch or of the safety valve	• Ask for customer service
Sudden pressure drop while the winch is not in use	• Damaged check-valve, relief valve, control valve or pressure accumulator	• Ask for customer service
Braking effect is insuffiecient	• Wrong brake adjustment	• Adjust the brake force
	• Grease on the brake band lining	• Clean the brake lining and surface
	• Damaged brake mechanism	• Replace all damaged parts
	• Worn-out brake band	• Replace the worn-out band

Type of trouble	Possible causes	Remedies
Rope hard to spool off	• Wrong setting of the rope pull-out force	• Adjust the rope pullout force
	• Damaged rope	• Replace the rope
	• Damaged brake band	• Replace the brake band
The winch keeps skidding although the clutch was deactivated	• Wrong setting of clutch cylinder hub	• Adjust the hub of the clutch cylinder
	• Damaged drum	
	• Damaged clutch disk	• Replace the drum
	• Drive chains excessively stretched	• Replace the clutch

7. REPAIRS AND MAINTENANCE

Make sure that the machine is fully disconnected and all moving parts are secured before performing any maintenance/repair work on the machine. In the event of any malfunctioning, switch the machine off before trouble-shooting.

7.1 Ordinary maintenance

Make maintenance a regular part of daily operation. The daily maintenance routine needs to include:

- Check for tightness of all screws and nuts.
- Check for visual mechanical damages of the winch.
- Make sure all safety pins are safely in place.
- Check for PTO shaft correct installation and connection and make sure that safety shield and chains are duly in place.
- Check the lower hitch points of the tractor and make sure they are firmly secured (no cross, horizontal movements).
- Check for proper settings of the clutch, brake and rope pullout force.
- Make sure to fix all problems and anomalies before operating your winch.

Perform the following maintenance works, when required or at regular time intervals:

- Check-up of the hydraulic oil level (if an oil leakage is suspected, inspect the entire hydraulic system, hoses and couplings).
- Lubricate all moving parts when required.

Functional controls	When to do it	How to do it
• Spool the rope off leaving 3-4 winds on the drum and pull out with load attached to the winch. • Check rope anchorage and fixation	• On all new winches • Always as the rope is loose	visual control
• Check the chain tension • Replace the clutch disks	every 48 operation hours if required or after 3000 operation hours	through customer service
• Replace the brake band	Every time when adjsting the brake force is no longer possible and latest after 3000 operation hours	through customer service
• Lubricate the drive chain	Every 48 operation hours	Lithium grease
• Lubricate all bearings of the upper and lower pulleys as well as all moving parts	at least once a month	Lithium grease
• Clean casings inside	every 100 operation hours or more frequently in case of hard working conditions	Release all screws and remove cover without removing the nuts

All log winches are function and safety tested by the manufacturer before shipment. Please strictly use original spare parts for replacements. Use of non-original spare parts may lead to functional troubles or damages that will void the manufacturer's warranty and liability.

7.2 Effects of overload and misuse

- burnt clutch or brake lining
- damaged brake mechanism
- broken chain
- broken rope reel or damaged reel bearing
- damaged power drive/PTO shaft housing
- damaged power drive, PTO shaft or chain wheels
- strain of winch frame parts
- overstrained, cracked, broken lines, rope or Choker-chain
- deformed drum axle.

7.3 Hydraulic oil specifications

Periodically check the oil level inside the hydraulic oil tank. When doing so, accurately avoid contaminating the tank with dirt, wood chips, sow dust etc... Make sure that the winch never runs without oil or with a low oil level. When this happens, air is likely to reach inside the hydraulic loop. Failure to maintain due oil level may cause poor running and irregular splitter operation (very rough, jerky motions) as well as major pump damages.
Please schedule your first oil change after approximately 200 operation hours and second one after each 600 operation hours. Thereafter provide a complete oil change every 1000 operation hours or once a year.

Recommended oil types:
Mobil DTE 16, Shell Tellus T 46, Castrol Hyspin AVH 46

Perform periodical oil temp checks during operation. Should the oil temp exceed 70°C, stop the motor, search for the possible causes and fix the overheating problem before continuing to work. BEWARE: longterm overheating may permanently damage your winch hydraulics.

When changing the oil, never let used oil drop down on the ground, rather collect whole of it in a sealedcontainer for due disposal. Oil disposal containers should be of at least 7 l capacity. If you are using smaller containers, make sure to drain the tank in more than one round to avoid spilling old oil out on the ground.

Used oil is very polluting and should be disposed in accordance with local!

8. DISPOSING OF AN OBSOLETE MACHINE

When the winch is fully obsolete and cannot be of any longer use, it should be duly dismounted ahead of discarding. Certain components need deactivation and dismantling in order to assure that no further use is made by other parties and that no worn out parts are recycled for other applications.

During dismantle be alert for possible recyclable materials and components that belong to differentiated waste collection procedures applicable in your country.

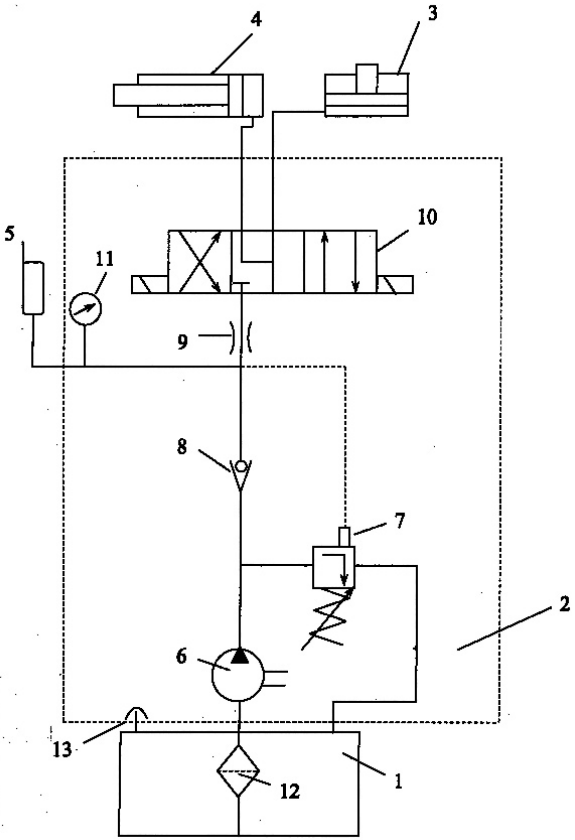
The manufacturer is not liable and undertakes no responsibility for personal injuries or damages that may result from the recycling of worn out machine parts and eventual re-use in other applications different than originally stated in this manual.

Dismantling procedure:
Take good note please: each and every dismantling task must beperformed by authorized service centres or trained skilled staff only!
• Pull the machine down into single components
• Lock and clamp all moving machine parts
• Deliver each single component only to authorized waste manage ment facilities
• Drain oil and fuel out of respective tanks and lines before disposal of the machine
• Remove rubber and plastic parts from the machine that must be separately disposed of.

Deactivated, clamped moving/driving parts and components are of no further risk and danger.

Electric components must be separately disposed to avoid substantial environmental threat. In the event of fire on the electric deployment system of the machine, use of an explosion-proof extinguish system is required (for example powder fire extinguishers).

9. HYDRAULIC SCHEMATIC DIAGRAM

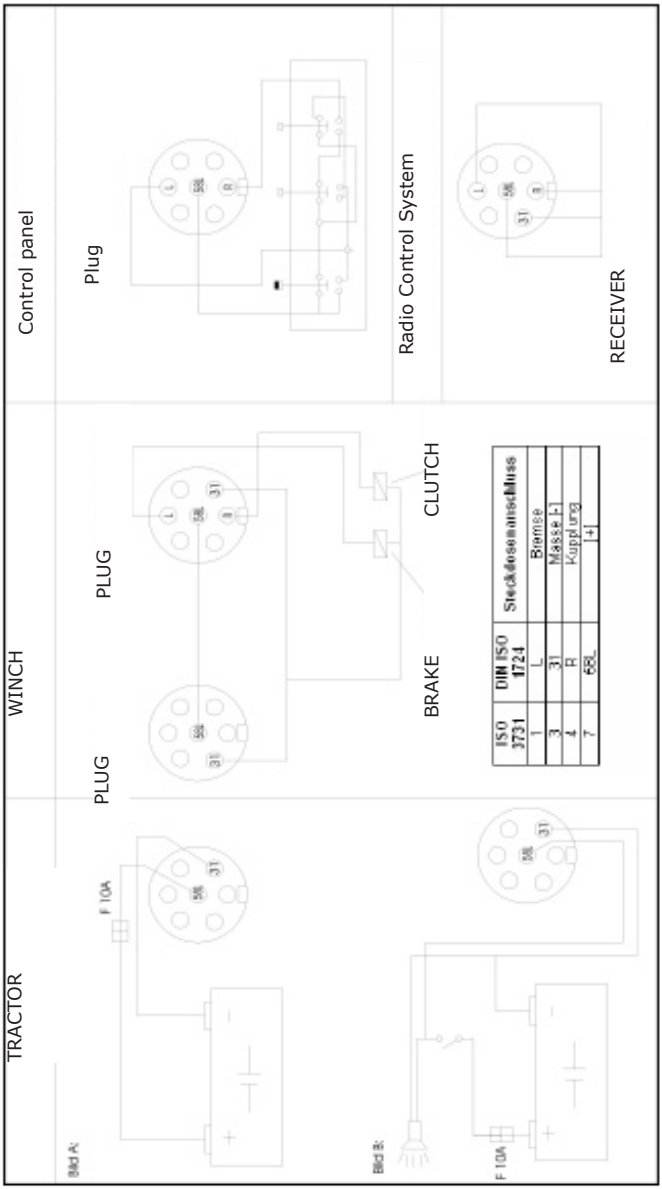


Pos.	Description	Pos.	Description
1	Oil tank	8	Check valve
2	Control valve	9	Chocke, 2 mm
3	Drum hyd. cylinder	10	Directional valve, 4/3
4	Hyd. brake cylinder	11	Pressure gauge
5	Hydraulic accumulator	12	Filter
6	Hydraulic pump	13	Vent valve
7	Pressure limiter		

10. TECHNISCHE DATEN

Technical data	Measuring Unit	FSW 9,5 HV Profi
Max. skidding power	t	9,5
Winching speed at 300 RPM or PTO dependent	m/s	0,60
Rope length	m	100
Compacted rope diameter	mm	13
Ultimate strength of the rope	kp	20700
Tractor power requirements	kW(PS)	ca. 85 (116)
Width	V	2020
Overall height with safety shield	mm	2350
Length	mm	710
Weight	kg	5
Chainsaw holder and peaveys, acks or axes mount		standard
Lower snatchblock		standard
4-channels radio control		8-channels version (Motor on/off) available as optional on request

11. WIRING DIAGRAM



12. OTHER AREAS OF POSSIBLE

12.1 Mechanical dangers

Possible dangers related to machine moving parts (wedge) are minimized by means of suitable safeties and protections that cannot be dismounted unless special tools and equipment is used.

WARNING: Do not remove any other safety and protection device from the machine. Skiddng without due safety devices might result into serious injures to the operator or the other person around the workplace.

12.2 Electric dangers

All machine parts staying under voltage are duly insulated or sealed inside a fixed casing to avoid accidental contact. For safety reasons all fixed casings can be only removed using special tools and equipment.

WARNING: removing a fixed protection casing when the machine is running or without having priory cut thepower off, may result into major danger of electrical shock!.

13. LEGAL WARRANTY

All BGU machines are covered with warranty terms in accordance with the law. Customers should promptly notify the manufacturer eventual material or production claims on their detection. While asking for warranty service, customer should show copy of their purchase invoice or receipt.
The warranty does not cover for faults due to natural wear, temperature or weather agents as well as misuse, faulty installation or set-up, improper operations and lubrication or act of vandalism. No warranty will be given on parts damaged by improper handling, use and application.
The manufacturer is further not responsible for warranty service on machines used for other applications as mentioned in this manual, altered or modified by the customer or other thirds, or overloaded.

No warranty applies to consumable parts (for instance: V-belts, blades, tools, and other implements) and to adjustment/calibration works.

14. EXTENDED WARRANTY

All SŰMA consumer products are covered with 24 or 12 months total warranty from the date of purchase for private/industrial users and rentals. This warranty extension does not substitute nor void the legal warranty. Customers should promptly notify eventual material, production or workmanship claims on their detection. While asking for warranty service, customers should show copy of their purchase invoice or receipt. Buyer's address and type/model of equipment must be clearly stated in the case of industrial users/contractors/dealers. All claims related to material or production failures during the total warranty time, shall be repaired notwithstanding eventual user's faulty/ wrong operation or maintenance.

15. EC STATEMENT OF COMPLIANCE

to EC Machines Directive No. 42/2006, Annexure IIA and EMV (Low Voltage) Directive EC 2004/108EG

We hereby declare that the equipment described in this manual responds in full to the actual version brought on the market. We, the manufacturer further declare that this equipment was duly designed and manufactured in accordance with the actual European Safety and Health Standards settled by the relevant EEC directives as well as the latest electromagnetic standards issued by the European Council and later enforced by all member states. This statement of compliance does not apply to customer modifications of the equipment without manufacturer's written approval.

Machine type:	**Logging winch**
Models:	**FSW 9,5 HV Profi**
Production Nr.:	see product identification label
Applicable European Standards:	EC Machine Directive 42/2006 and following additions and amendments.
Other applicable Standards and technical specifications:	DIN EN ISO 12100-1, DIN EN ISO 12100-2, DIN EN ISO 14492-1, DIN EN ISO 4254-1
Manager of the tecnical documents:	Jörg Kernstock (Director)

Südharzer Maschinenbau GmbH
Helmestraße 94 · 99734 Nordhausen/Harz
Service-Tel. 03631/6297-104 · Fax 03631/6297-111
Internet: www.bgu-maschinen.de
e-mail: info@bgu-maschinen.de

Nordhausen, 10.06.2010

Date

Jörg Kernstock (Director)

Official user language: English (User's release)

16. WARRANTY TIPS FOR FIRST USE OF A WIRE ROPE

Before putting your new winch to work make sure to read the user's manual and get familiar with all operation and safety instructions contained in the manual.

- Spool the rope off making sure to leave 3 to 4 coils on the drum
- Check for possible eventual damages
- Apply approximately 1.5 - 2 t load when rewinding

Lack of compliance with this instruction may cause rope damages!

Common damages cause by lack of compliance to these instructions include twirling, changes of rope construction, strands nicking and wear!

The warranty applies only to brand new, undamaged wire ropes.
No warranty claim shall be considered for worn-out , damaged or used ropes or parts!

Südharzer Maschinenbau GmbH
Helmestraße 94 · 99734 Nordhausen/Harz
Service-Tel. 03631/6297-104 · Fax 03631/6297-111
Internet: www.bgu-maschinen.de
e-mail: info@bgu-maschinen.de

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