

EDER POWERWINCH 500

by
Eder Maschinenbau GmbH



CE



Owner's Manual

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Attention!

Risk of hearing loss:

During the use of this machine the operator is permanently exposed to a noise level of 106db.

Dear Customer, thank you for choosing a quality product from Eder Maschinenbau GmbH. For the correct use of the device and to avoid accidents, please read the instructions carefully. Ignoring the safety instructions can result in serious injuries! This document provides the various inspection and maintenance procedures which enables the smooth operation of this device.

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Symbols

	Notes , danger and warning		The transport of persons is prohibited.
	Read the instructions carefully before using the device		The use in closed rooms is prohibited.
	During operation, wearing of personal protective equipment is required.		Refuelling the hot Motor is prohibited
	Warning! Flammable Substances		Presence of people under downhill loads is prohibited.

Technical data

Weight (no rope)	8,5 kg
Length	33 cm
Width	29 cm
Height	26 cm
Gears	no
Transmission ratio	1:156
Traction	Max. 500kg
Speed	Max. 12m/min
Motor details	
Type	Air-cooled, 4-Stroke
Power	1 Kw / 1.3 Hp
Cylinder Capacity	35,8 cm ³
Motor Speed	Max. 7000 rpm
Carburettor	Diaphragm Carburettor Walbro WYK 60 Primer Type
Tank capacity	0,58 l
Clutch	Centrifugal
Noise level	106 dB (A)
Rope (equipment)	
Material	Synthetic rope
Diameter	8mm – 12mm
Length	Unlimited
Strength	Min. 2400 daN

Field of use

The EDER Powerwinch 500 is the lightest among the Eder-Powerwinches thus enabling easy handling and smooth running. It is powered by a Honda 4-stroke engine that can operate in any position. It can be operated using a light weight synthetic rope of any length, the rope can be transported or stored with ease using the transport bag.

Some of the applications of EDER Powerwinch 500 include:

Forest:

Pull heavy loads in places that cannot be accessed by heavy machineries and supports tree falling operations

Rescue Operations:

Rescue vehicles that endured an accident and also stuck vehicles

Hunting:

Aids in movement of hunted animal carcass

Construction:

Transportation of construction materials, Enables the safe and controlled movement of wires and pipes

Military use, Fire Department, Relief Operations

The winch should not be used for tree climbing, in rescue operations at heights or hoisting suspended loads.

Safety regulations

1. Read carefully the instructions for use of the device. Pay attention to all warnings and safety instructions. Keep this manual for future reference.
2. The operator of the EDER Powerwinch 500 must be at least 18 years old and know how to tie ropes correctly. Under the supervision of a major, minors (16 years old) can use the device.
3. Never use the winch when you are tired, ill irritable, under the influence of sedatives, sleeping pills, alcohol or drugs.
4. During operation, wear protective shoes and gloves. Also use eye, ear and head protection.
5. Fuel needs to be handled with caution. Remove spilled fuel before starting the engine.

- Keep the device at least 3 meters away from the refilling place.
6. Eliminate all sources of sparks or flames (for example, cigarettes, open flame or spark producing tools) from the area where the fuel is mixed, poured, or stored.
 7. Smoke neither during fuelling nor while working with the device.
 8. Before using the EDER Powerwinch 500 the operating conditions should be checked. Pay special attention to all nuts and bolts, make sure they are in position and properly tightened.
 9. Do not use the EDER Powerwinch 500 if damage on the device or the equipment is detected.
 10. Use appropriate tools for maintenance and setting up.
 11. Safety and protective devices must not be modified or removed.
 12. Keep the rope away from sharp edges. A damaged rope is very dangerous.
 13. Staying under floating or sloping loads and inside the rope angle (see Fig. 1 and 2) is prohibited.
 14. Existing obstacles in the work area must be removed before starting work.
 15. The EDER Powerwinch 500 must be fastened on a suitable object so that it can move freely. Note: The anchor point must have at least double the full winch load. To fasten the EDER Powerwinch500 use only the textile slings rated WLL 2000kg.
 16. The operator must view the entire workspace.
 17. During the winching operation no mechanical part of the EDER Powerwinch 500 should be blocked. The throttle should be opened and closed only by the operator's rope.
 18. During operation the engine tends to be loud (106db), hence the acoustic signals (e.g. shouting) may not be audible
 19. The EDER Powerwinch 500 should not be used for dynamic loads: The rope must always be under tension during the operation so that the load cannot swing or fall.

The danger zones in Fig. 1 and Fig. 2 need to be cleared before starting winching operation. The operator should always be positioned 5m from the winch.

Further guidance on safe forestry rope work can be found for example under:

[http://www.forestry.gov.uk/pdf/FCTG001.pdf/\\$FILE/FCTG001.pdf](http://www.forestry.gov.uk/pdf/FCTG001.pdf/$FILE/FCTG001.pdf)

or

<http://publikationen.dguv.de/dguv/pdf/10002/i-8627.pdf>

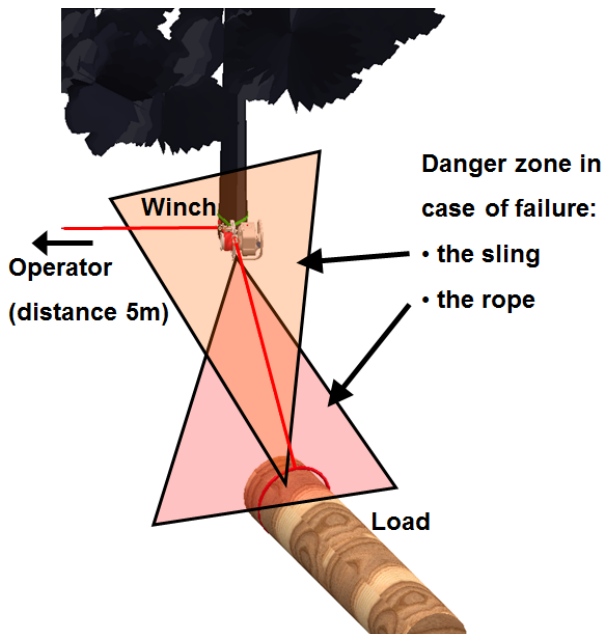


Fig. 1: Danger zone in case of failure of the anchor or rope

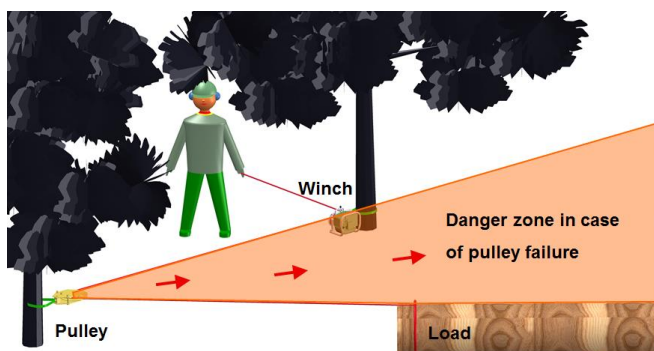


Fig. 2: Danger zone in case of pulley failure (if used)

Fuel and filling the tank

The EDER Powerwinch 500 is powered by a 4-stroke engine:



Attention

Engine can only run with unleaded gas

Do not use gasoline that has been stored longer than two years.

Gasoline is extremely flammable and can be explosive under certain conditions, creating the potential for serious burns. Turn the ignition switch to "OFF" (Fig. 10). Do not smoke. Make sure the area is well-ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light. Never fill the tank completely to the top – not over 3/4. If the tank is filled completely to the top, heat may cause the fuel to expand and overflow through the vents in the tank cap.

After refuelling, make sure the tank cap is closed securely. If gasoline is spilled on the fuel tank, wipe it off immediately.

Engine oil

Use a 4-stroke automotive oil that meets or exceeds the API service classification SJ, SL or equivalent e.g. SAE 10W-30.

Before each use of the winch check the engine oil level.

To avoid overfilling or underfilling, be sure the engine is in a level position.

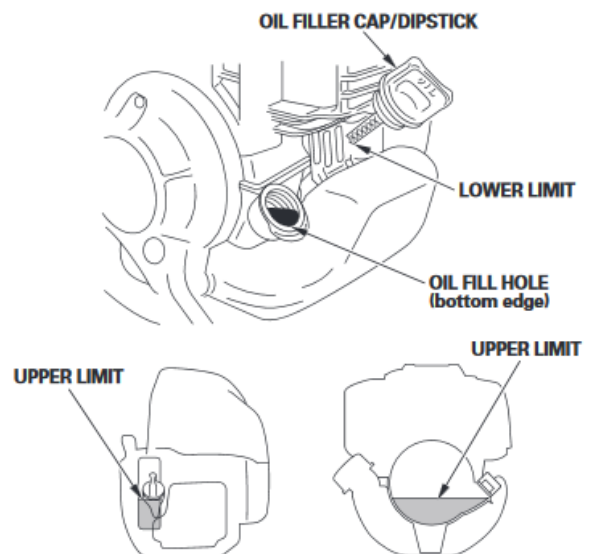


Fig. 3: Oil refilling

Slings and rope guide

The EDER Powerwinch 500 should be anchored to a firm standing object (such as a tree) strong enough to withstand at least a 1000 kg force, using a round sling rated at least WLL 1000 kg (or similar **textile sling** of the same strength) threaded through the winch's anchor eye. **The winch must still be free to move (Fig. 4).**



Fig. 4: EDER Powerwinch 500 in working position

The object to be pulled can be attached to the longest available rope (or preferably an endless rope). The rope should be guided through the rope hook and then looped anti-clockwise at least **3-5 times** around the capstan (depending on rope diameter).

During pulling the throttle lever, guide the rope through the rope clamp and around the white guide roller (Fig. 5).



Fig. 5: Guiding the rope through the clamp

When setting the winch up like this, take great care to ensure that the loops on the capstan are neatly alongside each other and never over one another, as that will cause a jam as soon as you start winching.

To start the winching operation, the operator should stand at a 90° angle to the winching direction and at least 5 metres away from the EDER Powerwinch 500 so the whole operation, both winch and load, can be carefully and continuously observed. Then pull the rope but only with sufficient force to open the throttle and achieve the required winching speed.

Please note: During the winching operation the rope must slide smoothly around the capstan so rope entering the winch can be taken up. Do not pull the rope excessively as this will only increase

friction and cause unnecessary wear on the rope. Should there be insufficient traction, make one or two more turns around the capstan. Also note that **pulling hard** on the end rope will **not increase** the EDER Powerwinch 500 traction power!

When winching a load up a slope there is no danger of it slipping back because the rope is held in the zero throttle position by the cable clamp (Fig. 5). Careful control on the throttle allows loads to be positioned exactly as required. Once tension is off the winch rope, the operator's end of the rope can be carefully removed from the cable clamp.

The EDER Powerwinch 500 should always be positioned above the level of the load's fixing point, to avoid the risk of the load being pushed into the ground (Fig. 4).

Safety instruction for fastening EDER Powerwinch 500

The fastener eye is not constructed to fix the winch with a hook, a shackle or any other metal objects. These objects can cause damage at the winch and disabling the safety devices.



Attention

Only use textile slings to fasten the EDER Powerwinch 500. Use only the fastening eye.

See figure 6 to 7 for the wrong and the correct fastening of EDER Powerwinch 500.



Fig. 6: wrong fastening the EDER Powerwinch 500



Fig. 7: Correct fastening the EDER Powerwinch 500

Starting and Stopping the EDER Powerwinch 500

Before starting the EDER Powerwinch 500 fix it in the working position and push the primer (Fig. 8b) 3 to 7 times to fill the fuel into the carburettor. Move the choke lever to the closed position (Fig. 9) and switch the short circuit button on to “I” (Fig. 10).

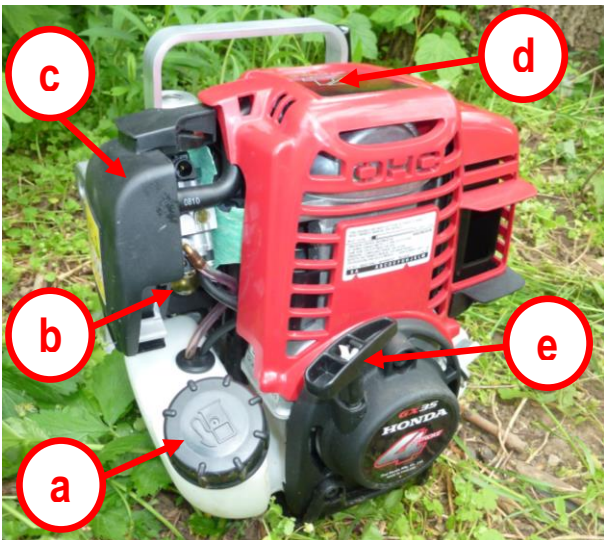


Fig. 8: motor of EDER Powerwinch 500

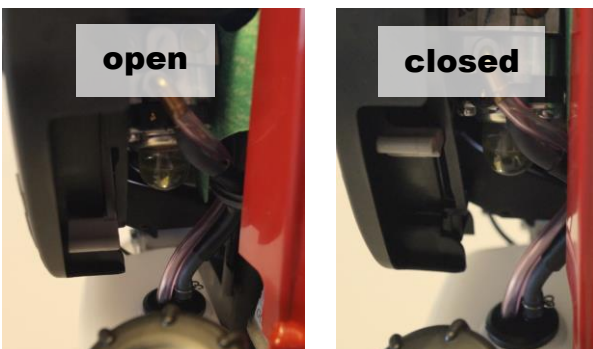


Fig. 9: Choke

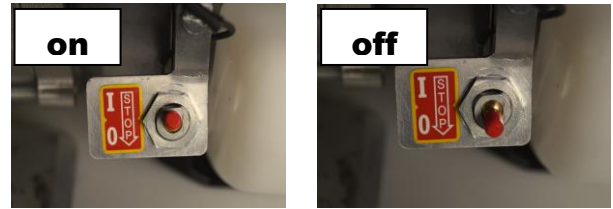


Fig. 10: short circuit button

Pull the starter handle firmly (Fig. 8e) until the motor starts.

If the choke lever was moved to the CLOSED position to start the engine, gradually move it to the OPEN position as the engine warms up.

WARNING: When restarting a warm motor do not switch the choke lever to the closed position.

To stop the motor keep the rope slack and the throttle sets immediately to idle. Allow the motor to cool by running on idle for a few seconds. Then turn the circuit breaker off to “O” (Fig. 10) and the motor stops.

Adjusting idle and half throttle position

If the engine runs on idle the winch’s capstan should not rotate. But if the idle speed is too large, and the winch’s capstan rotates, adjust the idle speed by turning the setting screw anti-clockwise until the capstan stops (Fig. 11). The Bowden cable can also be adjusted so that the idle and full throttle is influenced (Fig.12).

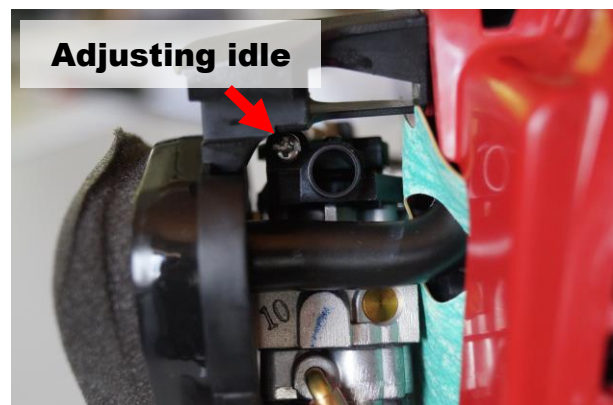


Fig. 11: Adjusting idle



Fig. 12: Adjusting bowdencable

Guidelines for the use of pulleys

When a pulley is used the traction power of the EDER Powerwinch 500 is doubled.

Max traction power of EDER Powerwinch 500: 5kN

Max traction power with pulley: 10kN

Note the minimum and maximum rope diameter for the pulley and the winch (Ø8mm-12mm).

If using the same round textile sling for the pulley as for fixing the winch then guide the sling around the tree and through the pulley's eyelet and secure it with a load hook.

Check before starting work that the dangerous zone is cleaned (Fig. 2).

Make sure the danger zone is cleaned at the start of operation.

Further guidance on safe forestry work with pulley can be found under:

[http://www.forestry.gov.uk/pdf/FCTG001.pdf/\\$FILE/FCTG001.pdf](http://www.forestry.gov.uk/pdf/FCTG001.pdf/$FILE/FCTG001.pdf)

or

<http://publikationen.dguv.de/dguv/pdf/10002/i-8627.pdf>

Service and maintenance

Before starting work the EDER Powerwinch 500 should be checked for safety. If there are any defective parts do not start work.

Only use original spare parts for EDER Powerwinch 500. Please see spare part list on page 10 and 11. Do not try to open the gear or disassemble the capstan from flange or the guarantee would be lost.



Attention

Any maintenance work not covered in these Service and Maintenance instructions must be carried out by an authorized workshop.

Combustion engines generates heat therefore always wait for the motor to cool down or wear gloves before carrying out any maintenance operation.

Storage when not in use

Before storing the EDER Powerwinch 500 for a long period it should be cleaned and the metal parts should be greased. Empty the fuel tank (Fig. 8a) and let the motor run until all fuel is consumed.

When motor is cool remove the spark plug and pour a few drops of oil into the cylinder. Afterwards pull the starting handle (Fig. 8e) to distribute the oil and replace the spark plug.

Store the EDER Powerwinch 500 dry.

Periodic maintenance

Check regularly that all nuts and bolts are properly tightened and in the right position.

Replace a worn out rope, or damaged rope with a new one in time. Lubricate all moving parts around the throttle.

Air filter

Check the air filter regularly. Especially in dusty conditions check it at least once every working day.

Note:

- Remove the cover (Fig. 8c)
- Remove the air filter (Fig. 12)
- Only use compressed air for cleaning the filter.
- Do not use sharp tools or wire brushes and do not clean the air filter with cleaners or oil paper
- Replace the air filter if it is damaged

Fuel filter

To clean the fuel filter open the cap of the tank and remove the filter carefully with a wire hook (Fig.13). Check the fuel filter regularly and replace it when it is dirty.

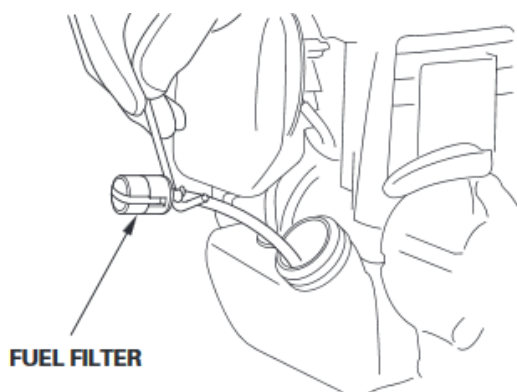


Fig. 13: Fuel filter

Motor

Clean the motor regularly from dust and dirt to avoid overheating. Use a brush or compressed air to clean the exhaust, cylinder and the cover.

Spark Plug

To change or to remove the spark plug - open the cover (Fig. 8d). Check the spark plug (Fig. 14) from time to time (approx. every 50h) and ensure that the electrode gap is between 0.5mm and 0.6mm (Fig.15). Replace the spark plug after 100 operating hours or when the spark plug is crusted.



Fig. 14: Spark Plug

Crusting can be caused by a wrong carburettor setting or when the used oil is of poor quality.

Use only spark plugs labeled with CM5H (NGK) or CMR5H (NGK) (order number: 203703).

After replacing the spark plug, switch the choke to the close position (Fig. 9) and pull the starter handle until the motor starts. Switch the choke to the open position and let the motor run warm in idle.



Attention

Do not use choke for the restart if the engine is already warm.

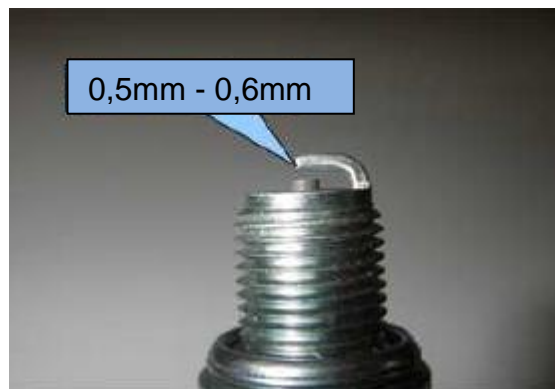


Fig. 15: Electrode gap of the spark plug

Lubrication

The gears are lubricated for the whole life of the EDER Powerwinch 500.

It is possible that the EDER Powerwinch 500 loses lubrication during the first few working hours. The oil has to distribute in the gears and needless oil leaks out. Clean the excess oil.

Regularly oil all other moving parts (for example Brunox® Lub & Cor)

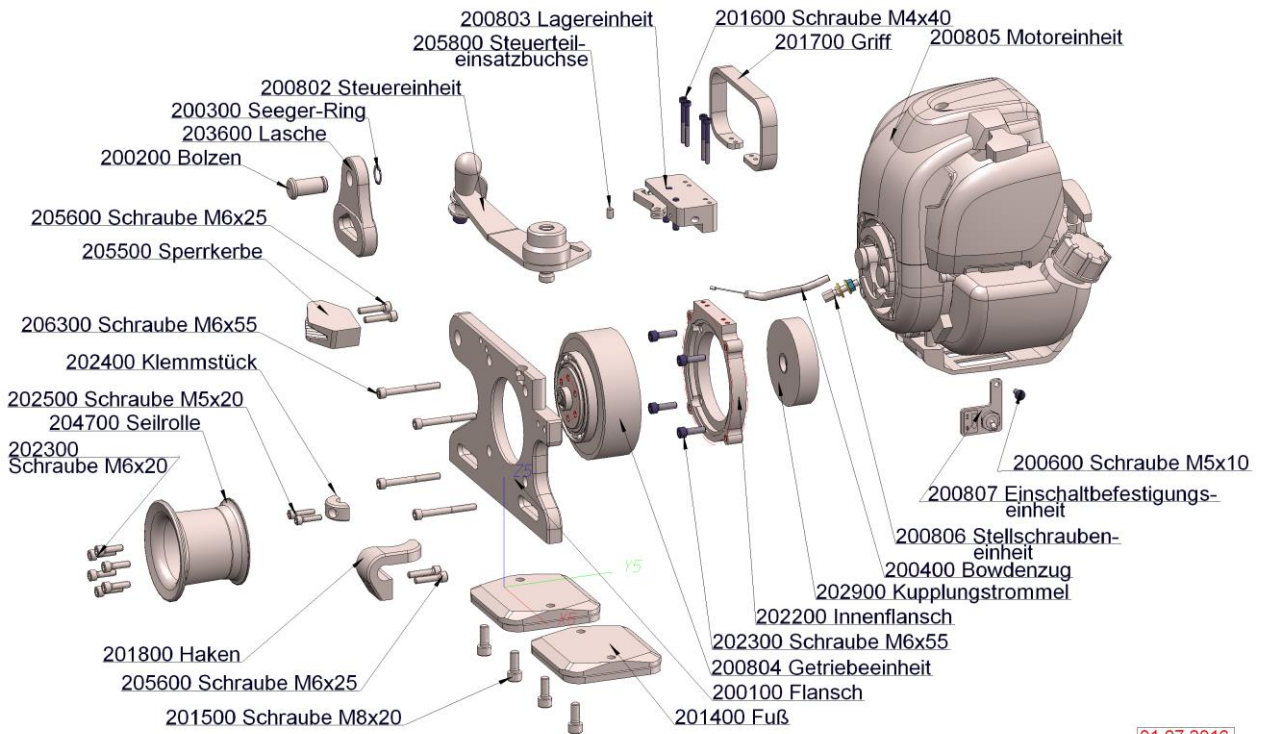
Recycling

The Eder Powerwinch contains oil and has to be disposed by a recycling company.



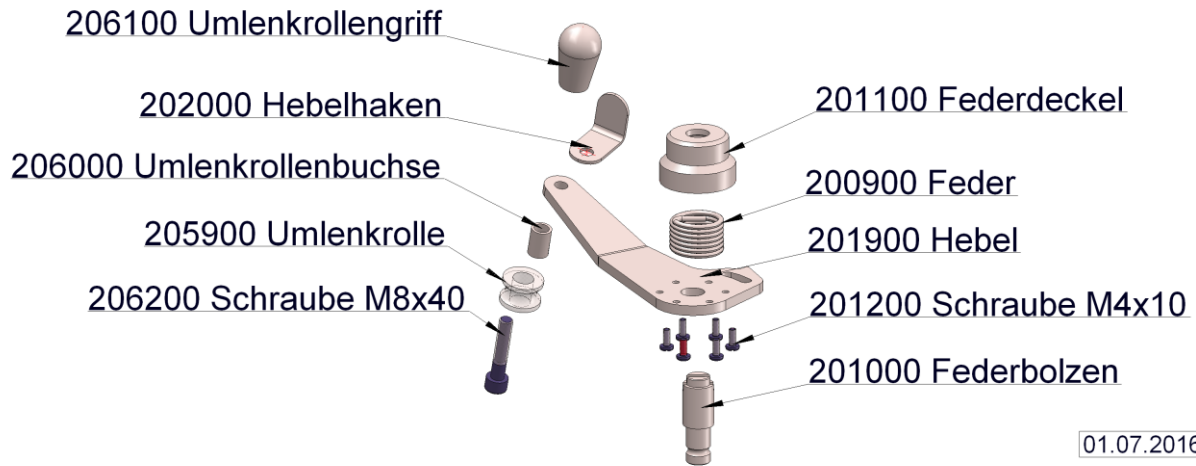
Spare part list

Eder Powerwinch 500



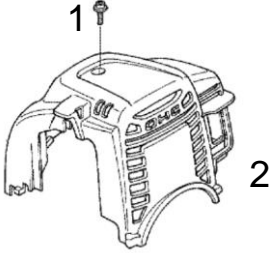
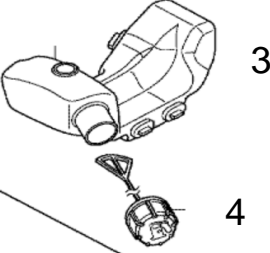
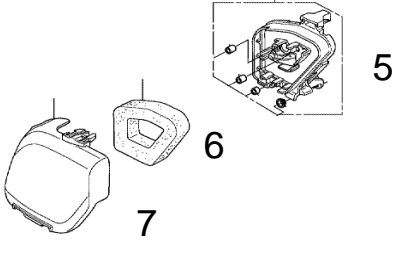

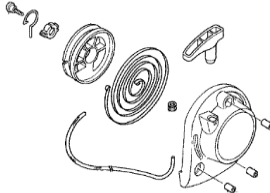
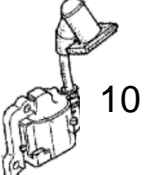


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Spare part list motor

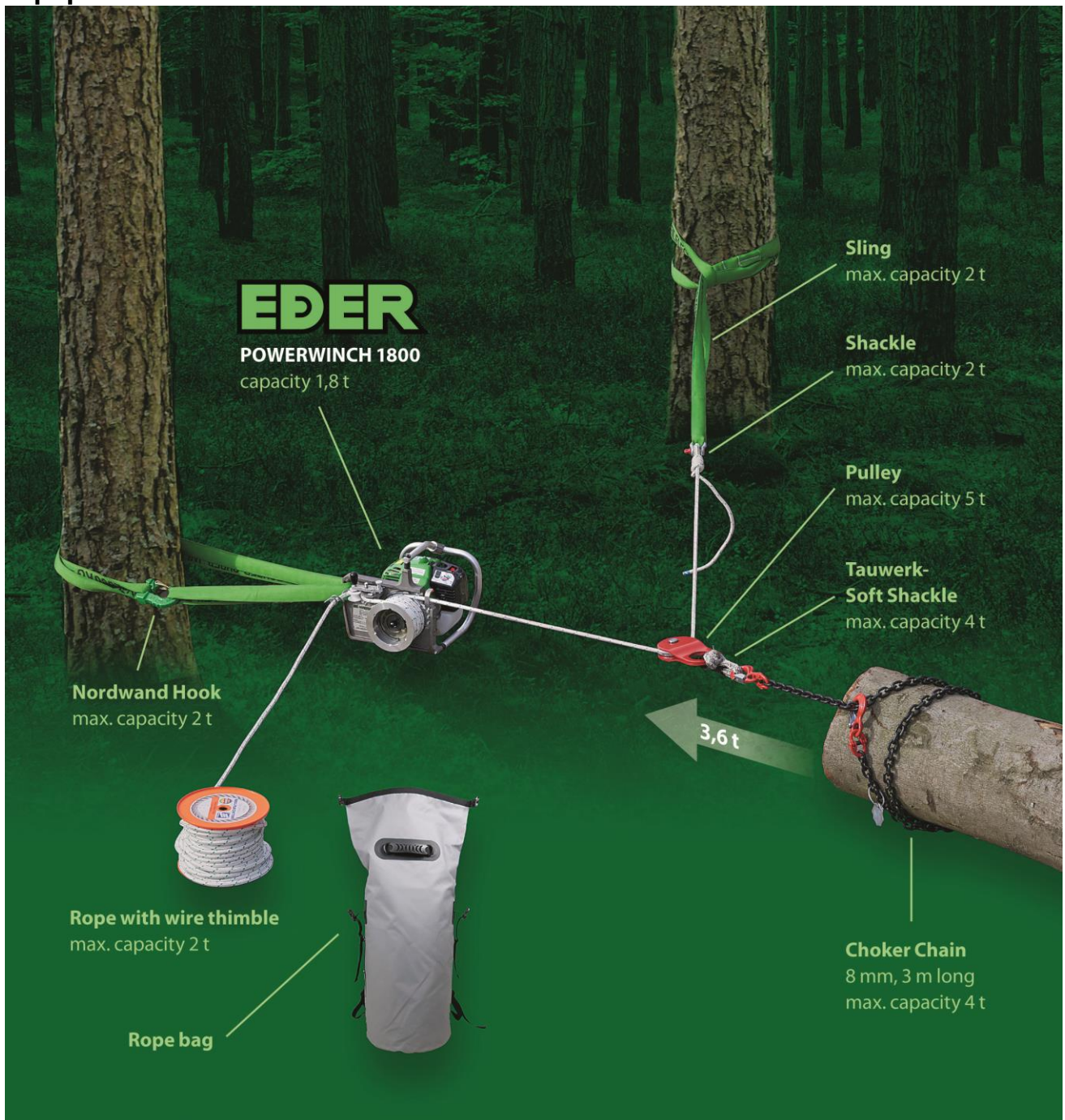
	No.	Part number	name
	1	203707	Cover
	2	203713	Screw Cover
	3	203710	Fuel tank
	4	203704	Fuel tank cap
	5	203701	Air filter housing
	6	203709	Air filter
	7	203708	Air filter cover
	8	203712	Carburetor
	9	203706	Motor starter
	10	203701	Ignition coil
	11	203702	Spark plug
	12	203711	Oil tank cap

All other engine spare parts can be found at <http://www.honda-engines-eu.com/en/web/eec-public-site/spare-parts>

Declaration of Conformity

Eder Maschinenbau GmbH Schweigerstrasse 6 DE 38302 Wolfenbuettel	Declaration of Conformity Conformity with Directive 2006/42/EG	Phone +49-5331-76046 Fax +49-5531-76048 www.eder-maschinenbau.de info@eder-maschinenbau.de
-Original-		
Responsibility for documentation Ulrich Schrader Schweigerstrasse 6 38302 Wolfenbuettel		
We, the company		
EDER Maschinenbau GmbH Schweigerstrasse 6 38302 Wolfenbuettel		
Declare sole responsibility for the product		
Eder Powerwinch 500 Eder Capstan Winch Type: ESW 500		
To which this declaration relates, as meeting the norms and normative documents of:		
Directive 2006/42/EG		
Of the European Parliament and Council of 17 May 2006 on machinery and the amending directive 95/16/EG (new version).		
Signed in Wolfenbuettel on 20.06.2011		
By Ulrich Schrader, Chief Executive.		
		

Equipment for EDER Powerwinch 500



For more information contact your local dealer or visit

www.eder-powerwinch.com