



SP5EN Log Splitter



Operating Instructions

Before commissioning the machine, read operating instructions and observe warning and safety instructions.

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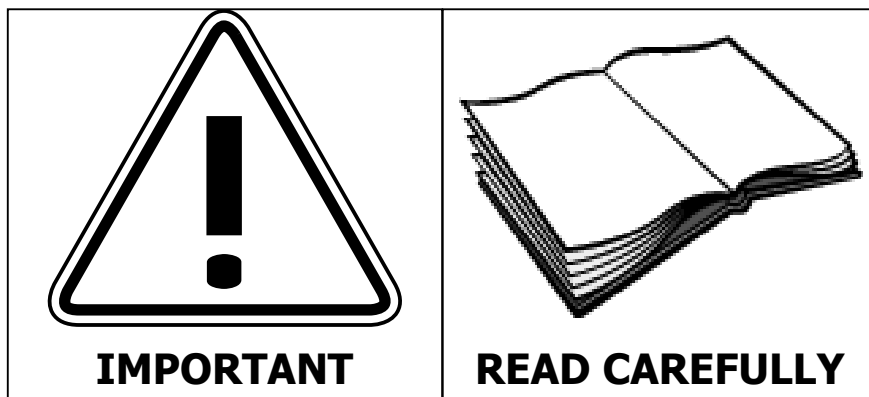


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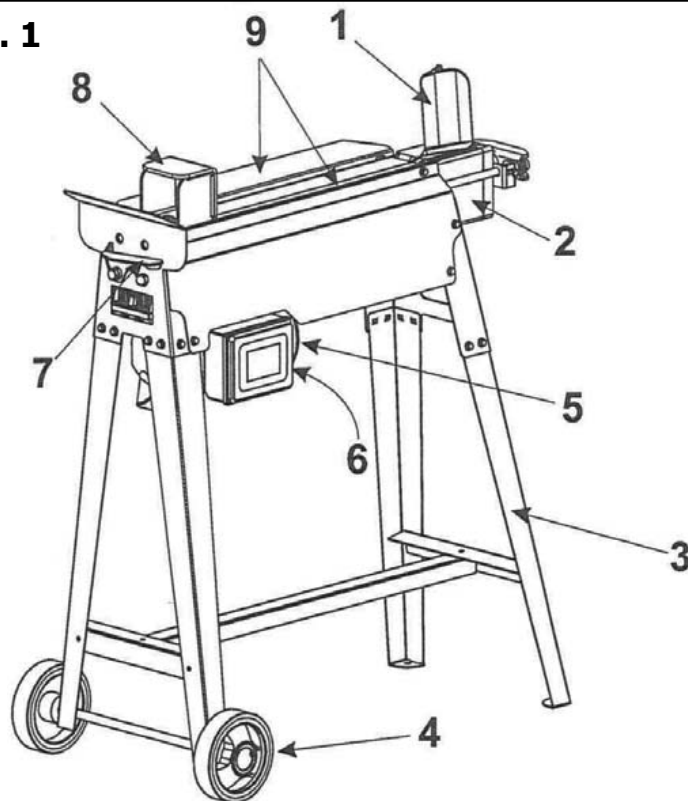
No liability will be accepted for any damage caused to persons or property through failure to observe the operating and safety instructions.

Description of the Machine

The CAMON SP5EN is a portable horizontal log splitter equipped with its own electric motor. The various parts of the machine are shown in fig. 1 below.

- 1 - Wedge
- 2 - Oil tank
- 3 - Foot
- 4 - Wheels for minor movements
- 5 - Electric motor
- 6 - Electric motor starter button
- 7 - ZHB hydraulic control lever
- 8 - Log pusher
- 9 - Log retention brackets

Fig. 1



Illustrations

Fig. 2

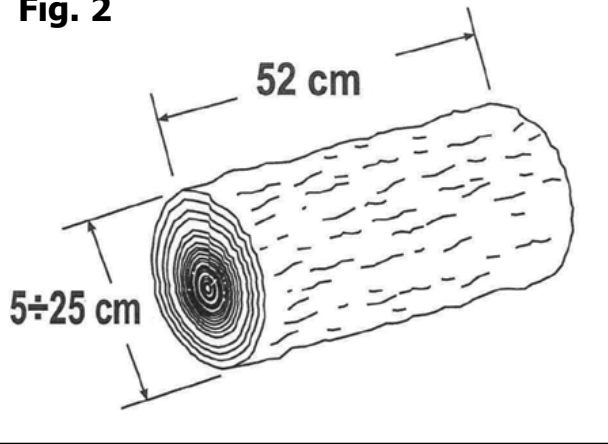


Fig. 3

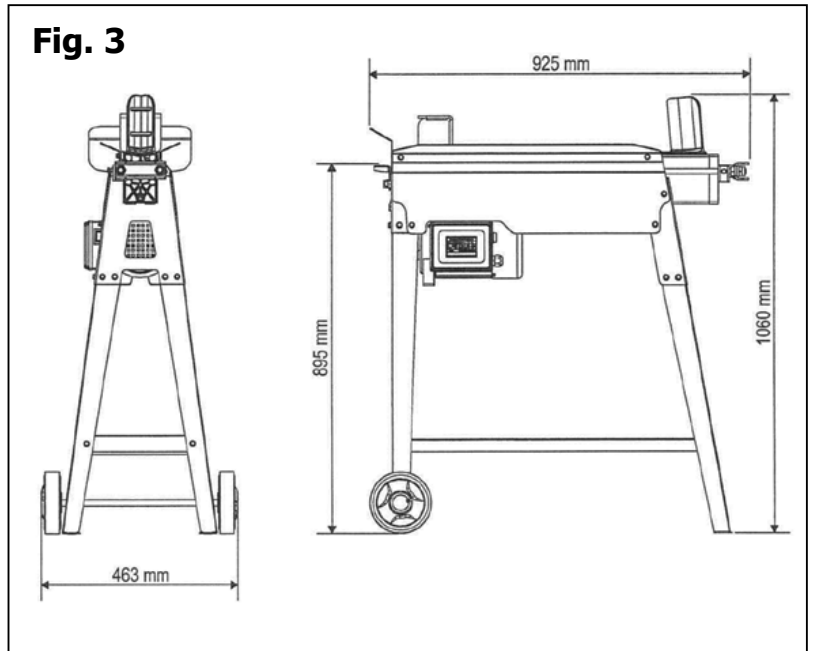


Fig. 4

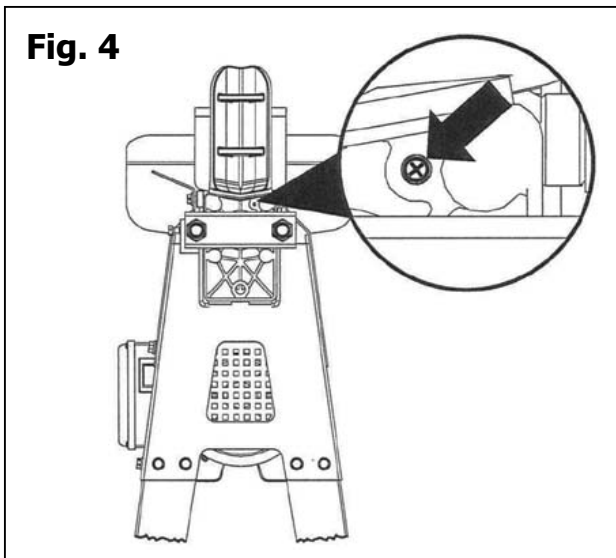


Fig. 6

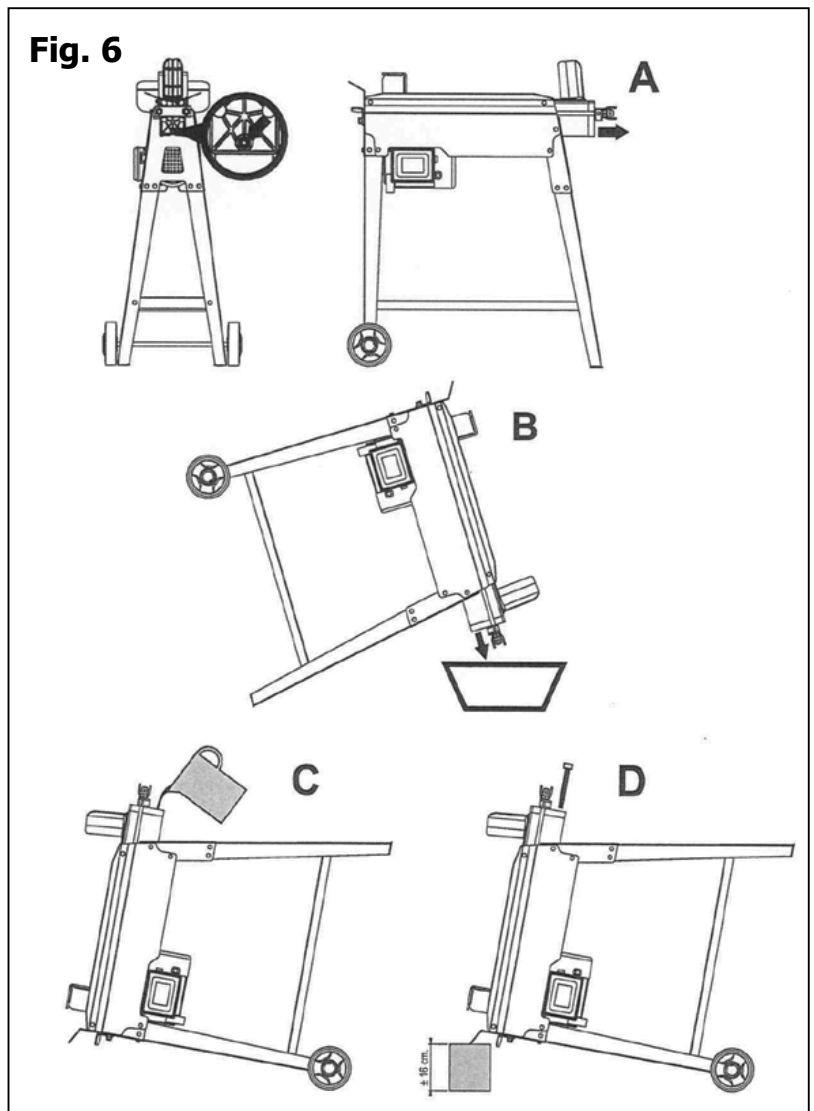


Fig. 5



Illustrations

Fig. 7

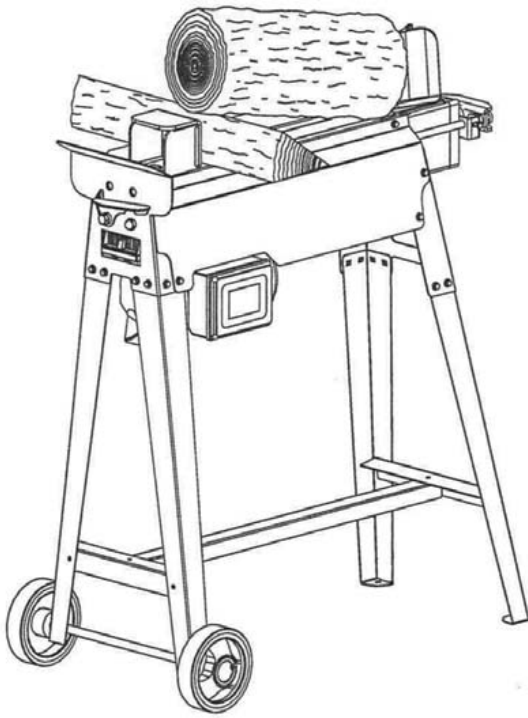


Fig. 8

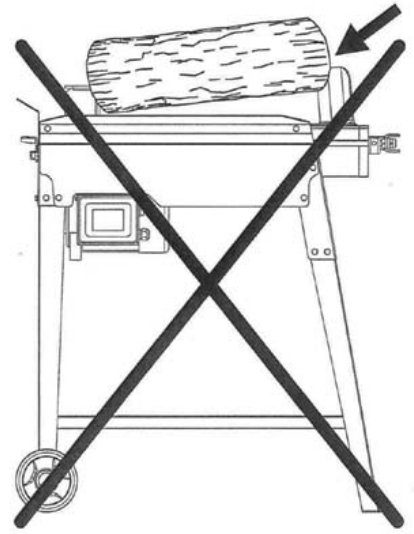


Fig. 9

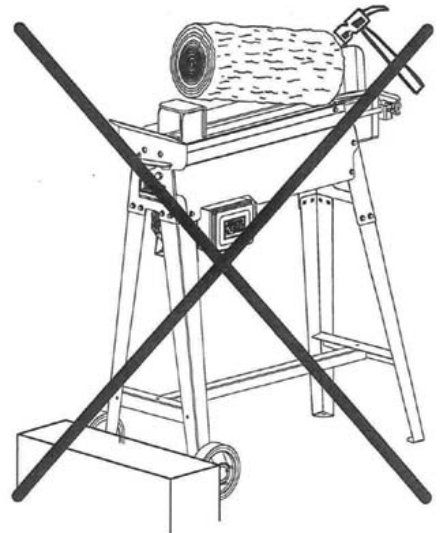


Fig. 10

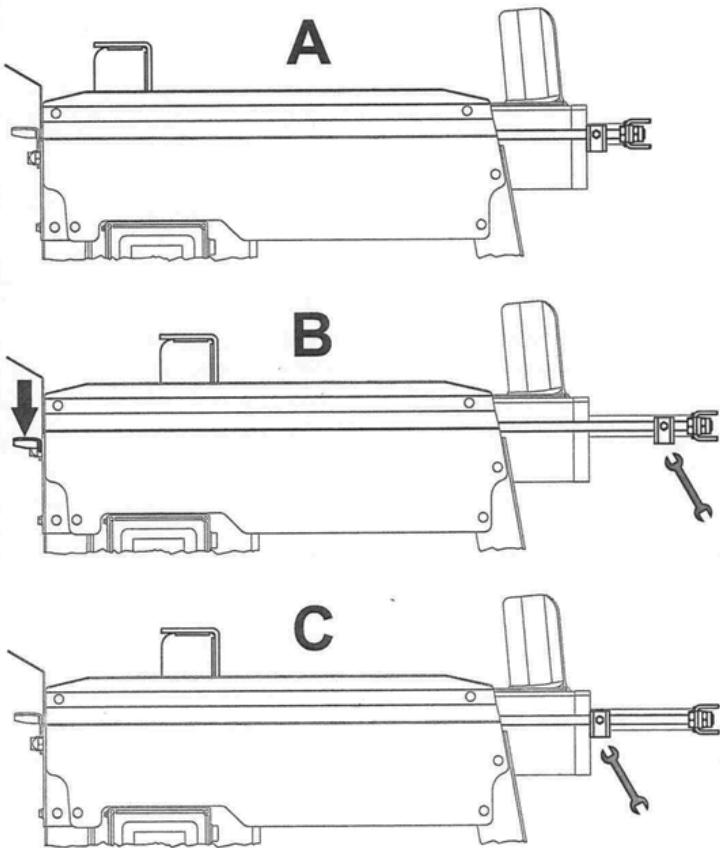
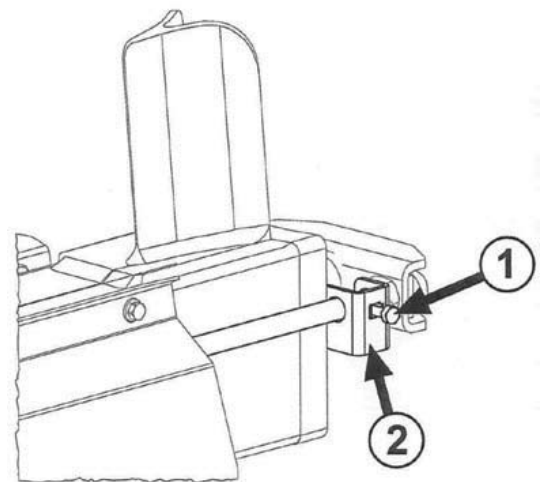


Fig. 11



Illustrations

Fig. 12

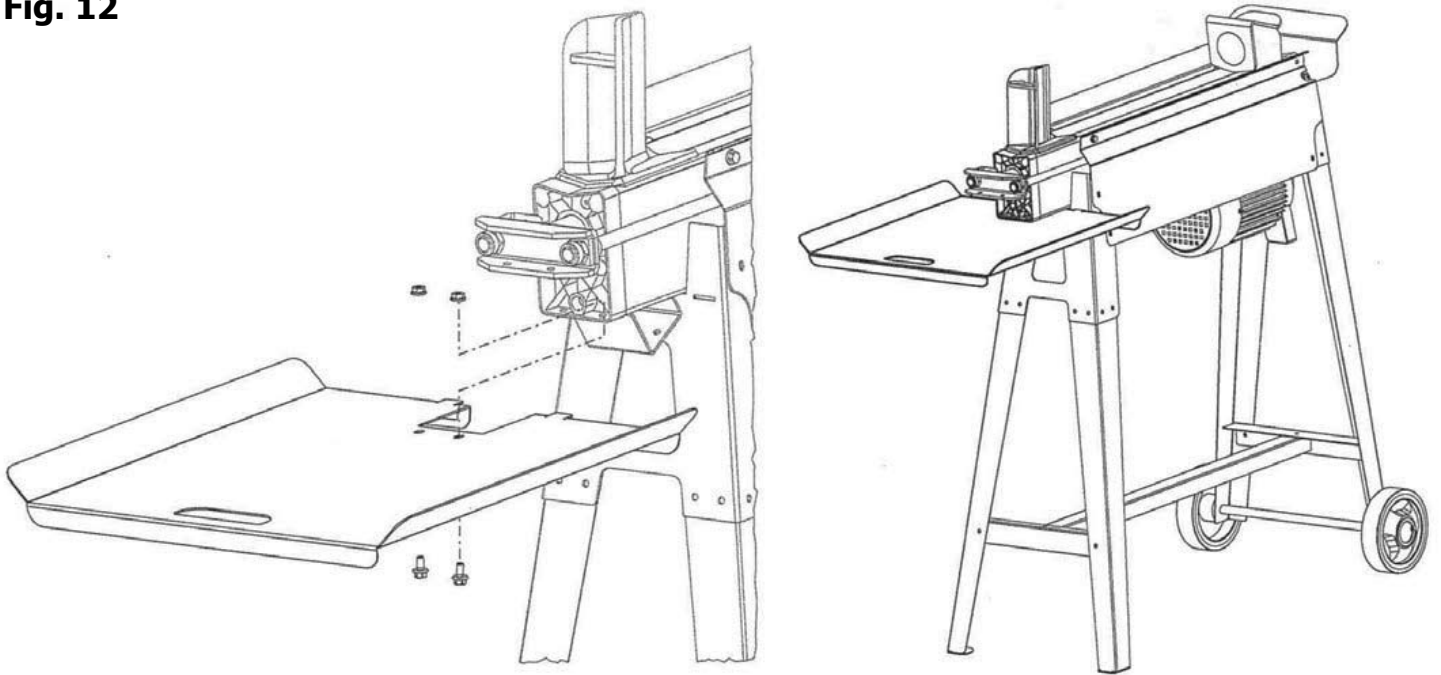
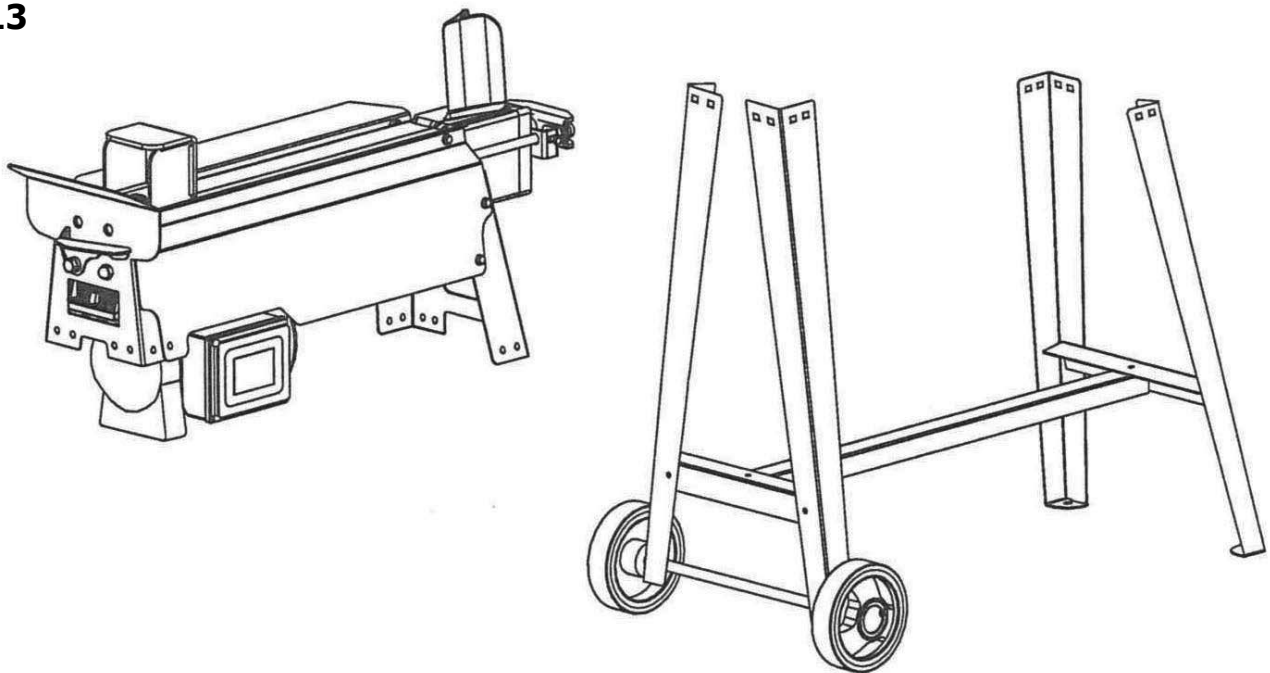


Fig. 13



Introduction

Before using the Log Splitter please read this manual carefully. Following all the instructions provided will ensure that you get excellent results and the best performance from your Log Splitter.

The CAMON SP5EN Log Splitter has been designed and manufactured in compliance with the most recent European safety regulations with particular reference to the EN 609-1 and CEI EN 60204-1 standards.

The two-hands control systems have been designed and engineered so that the operator is forced to work in the safety area, employing both hands, without any possibility of inserting hands or arms into dangerous areas.

This Log Splitter is produced in conformity with the specifications contained in the RoHS directive 2002/95/CE.

Before transporting, installing or operating the machine, read all parts of this manual, paying particular attention to the specific safety regulations.

Operators who are unable to understand the language in which this manual is written are responsible for asking the retailer to provide a manual in their own language.

The operator must also train any other person authorised to use the machine.

Failure to comply in any way with these instructions, improper use of the machine, extraordinary maintenance operations not carried out by skilled, authorised personnel, removal of data plates or markings of any type, removal or tampering with the guards and safety mechanisms of the machine or any other action not expressly authorised that may impair the active and passive safety systems of the machine shall relieve the manufacturer of all and any liability and may result in serious injury and damage.

If the machine is tampered with in any way by unauthorised personnel, the guarantee is automatically null and void. This manual is an integral part of the machine and must accompany it even in the case of transfer of ownership.



WARNING: The ignition system of your machine produces an electromagnetic field of very low intensity. This field could interfere with certain pacemakers. To reduce the risk of serious or fatal injury, persons with pacemakers should consult their doctor or the manufacturer of the pacemaker before using this machine.

Explanation of Symbols Used

Standard graphic symbols are used on all machines in order to ensure complete safety of all parts of the Log Splitter. As these symbols are very important, read the information below carefully.



It is necessary to read carefully the entire use and maintenance manual of the machine, before using it.



It is obligatory to wear safety footwear at all times to provide protection against the risk of logs accidentally falling on feet.



It is obligatory at all times to wear gloves which protect the hands against chips and splinters which may be produced during work.



It is obligatory at all times to wear goggles which protects the eyes against chips and splinters which may be produced during work.



The log splitter must be used by one person alone.



It is forbidden to stand in the range of action of the machine, apart from the operator, no other person or animal may be present within a radius of 5 metres from the machine.



Dumping of used oil in the environment is forbidden. The oil must be disposed of according to current legislation in the country where this operation is carried out.



Danger of cutting or crushing of the hand: never touch hazardous areas while the wedge is moving.



Warning: always pay attention to the movement of the log pusher.



Warning: never remove a log trapped in the wedge with your hands.



Warning: Before carrying out any maintenance operation described in this manual, disconnect the plug of the machine.



Warning: voltage as indicated on the rating plate.



Machines fitted with electrical parts must not be disposed of as general waste but must be separated for disposal and deposited at authorised collection points.

Technical Data

Length	~ 925mm
Width	~ 463mm
Height	~ 1060mm
Weight	~ 50kg
Max force	~ 5 tonnes
Max log capacity	~ 520mm
Hydraulic oil capacity	~ 3.3 litres
Supply	240V 50Hz 1-phase
Absorption	~ 10A
Power	2.5hp - 1.85KW
Noise (average)	<= 71 dB(A)/1m (ear defenders are not essential)
Vibration	<= 2.5 m/s ²

Size of the logs to be split

See fig. 2 on page 4 for the maximum log sizes that can be split.

Please note that the diameter of the log is indicative; a small log can be difficult to split if it has knots or a particularly twisted fibre.

Recommended oils

We recommend use of the following oils for the hydraulic cylinder (see page 14 for how to change hydraulic oil):

SHELL TELLUS T22

ARAL VITAM GF22

BP ENERGOL HCP22

TEXACO RANDO HDZ 22/32

MOBIL DTE11 or equivalent

DO NOT USE OTHER GRADE OILS

Safety



IMPORTANT

The information given in the chapter is extremely important for safety purposes. It describes possible hazards tied to use of the machine and instructions for correct use of this to avoid injury or damage.

WARNING: The CAMON SP5EN Log Splitter has been designed and manufactured to split logs of the sizes recommended on page 4, fig. 2 only.

Use of the machine for any other purpose shall be considered improper and the manufacturer shall not be liable for any injuries or damage to be ascribed to improper use of the machine.

The operator must operate the machine drive control with both hands without using other improvised systems and without tampering with the controls.

When the machine is working, persons and animals must be kept at a distance of at least 5 metres from the machine.



NEVER ATTEMPT TO TAMPER WITH THE PROTECTIONS OF THE LOG SPLITTER OR TO OPERATE THE MACHINE WITHOUT THESE. FAILURE TO COMPLY WITH THE INSTRUCTIONS GIVEN IN THIS CHAPTER MAY RESULT IN SERIOUS INJURY OR DAMAGE TO PERSONS, THINGS AND TO THE MACHINE.

Do not use the Log Splitter to break stone materials (stones, concrete, etc.) or to crush pieces or metal containers.

Safety

General safety regulations

The machine must always be used by one operator only.

Do not use the machine outdoors when it is raining or snowing.

Nobody must be allowed to use the Log Splitter unless they have read the instruction manual and have been instructed in the regulations to follow for correct and safe use.

The machine must be used by adults only.

Never wear loose, unbuttoned clothing which may become trapped in moving parts.

Do not move the Log Splitter while the motor is running.

Do not work on sloping or slippery ground. Position the machine in a flat area and ensure that the operator's work space is free of objects which may impede the freedom of movement of the operator.

Keep the log support bench free of waste materials (page 3, fig. 1, no. 9) and ensure that the operator's work space is free of obstacles: logs, chippings, sawdust, etc.

Check that the logs to be split are free from nails or wire, which may fly up or damage the machine, the ends of the logs must be cut square. branches must be cut off flush with the trunk.

Never try to split logs larger than those indicated in fig. 2, page 4. This could be dangerous and may damage the machine.

Break wood in the direction of the grain, do not place wood across the Log Splitter and leave it in that position for splitting; it may be dangerous and may seriously damage the machine.

Never attempt to cut two logs at once; one may fly up and hit you.

If the log moves away from the blade, retract the ram or the blade and turn the log through 90°.

Do not attempt to load the log in the Log Splitter while the ram is in motion, you could get trapped and injured.

Keep your hands well away from any splits and cracks which open in the log; these may close suddenly and crush or amputate your fingers.

Do not force the blade by pushing the log on the upper part (fig. 8, page 5) as this can cause the blade to break or damage the body of the machine. Always set the log on the guides.

Safety

Never leave the machine unattended while it is running. If you leave the machine, even for a short time, remove the power supply or any possible cause of accidental start-up.

The Log Splitter must never be used by an operator who is under the influence of alcohol, drugs, medicines, or who is tired. A clear mind is essential for safety.

Never try to release a jammed log while the machine is running. The machine must be switched off during this operation.

Never request the assistance of another person to help you remove a jammed log.

Do not use machines if natural gas, petrol fumes or other inflammable vapours are present.

Check that the electric circuit to which the machine will be connected is suitable. Power, voltage and frequency of the motor must be checked (verify the nameplate on the motor and the data in this manual). The machine must be connected to a circuit with a regulation differential switch upstream and, in compliance with the norms **(30 mA rated fault current)**, with a ground connection.

Use cables with a section of 2.5mm². Avoid use of free and inadequately insulated connections. Connections must be made with protected material suitable for outdoor use. **Do not use cable extensions longer than 5m. Cables that are too long or cables with inadequate section may cause voltage drops and don't allow the motor to develop all the power.** Always check the cable extension for any damage before using it.

Never open the pushbutton box on the motor. Should this be necessary, contact a qualified electrician.

Make sure that the machine and the cable never come in contact with water.

Treat the power cable with care. Do not attempt to move the machine by pulling the cable. do not yank the cable to unplug it; keep the cable away from excessive heat, oil and sharp objects.

Never leave the machine unattended with the power supply "on". After use, always switch the machine off and disconnect it from the power supply, especially when any maintenance work is required.

Do not use alcohol, petrol, or solvents to clean the machine. This could cause the safety information applied to the machine itself to become illegible.

Operating the Machine



BEFORE OPERATING THE MACHINE, ASSEMBLE FEET AND WHEELS AS INDICATED IN THE ATTACHED ASSEMBLY INSTRUCTIONS.

The Log Splitter, in compliance with standard EN 609-1, is activated with a two hand control. One hand is used to press the motor drive button (fig. 5, no. 1, page 4) while the second activates the lever of the hydraulic control (no. 2, fig. 5, page 4).

Never use the Log Splitter if it is not in perfect order or if it needs servicing. Before starting work, check correct functioning of all the safety devices (ZHB, push button).

On the back side of the machine there is a bleed screw that must be loosened by about 3 or 4 turns when the Log Splitter is being used (fig. 4, page 4). When the Log Splitter is to be moved, tighten the screw to prevent oil leakage.

Lighting

Lighting must be provided in the entire work area of the Log Splitter to ensure perfect visibility when operating the machine and during maintenance and adjustments. Even when working outdoors, there must be sufficient light to work safely. Working at times when insufficient light may result in poor visibility of the machine and its components (dawn, dusk, night) is prohibited.

Use



DO NOT USE THE MACHINE OUTDOORS WHEN IT IS RAINING OR SNOWING.

Switching the Log Splitter on/off

Connect the Log Splitter to the power supply.

Never pass the power cable over the log pusher, close to the wedge or anywhere where it may be damaged or severed.

Position the log on the beam as shown in fig. 5, page 4. The supporting guides (no. 9, fig. 1, page 3) help to keep the log at the centre of the wedge.

If the log tends to wobble, it must be repositioned turning it so that it remains firmly on the beam.

With your right hand, **THOROUGHLY** press the starter button of the electric motor (1), and with your left hand press the control lever (2) all the way down as shown in fig. 5 on page 4. The log pusher will go into action and split the log.

Warning: the button must be pressed thoroughly in order to avoid burning of the inside contacts.

Repeat the operation with the pieces obtained so as to split the log into several parts.

Never force the Log Splitter for more than a few seconds keeping the cylinder under pressure in the attempt to split excessively hard wood. Under pressure, the oil will overheat and the machine could be damaged. It is thus better to stop and rotate the log by 90° to see whether it can be split in a different position. In any case, if you are not able to split the log, this means that its hardness exceeds the capacity of the machine and so that log should be discarded so as not to damage the Log Splitter.

On completing the work, pull the plug. Never yank the plug using the cable. Grasp the body of the plug and pull it firmly.

When not in use, store the machine where it is protected from atmospheric agents.

When transporting (e.g. loaded on motor vehicles), ensure that all parts of the machine have cooled down completely, and that the bleeder screw is screwed tight, and the machine is positioned horizontally.

Use

How to adjust the log pusher's stroke

To save time, a system has been designed that makes it possible to adjust the log pusher's stroke so that this can be set for short logs. In this way, the log pusher travels for the distance required only.

After checking the length of the longest logs to be split, regulate the log pusher's stroke as follows:

Start the log splitter and bring the log pusher to the position required. Release the motor's switch only (no. 6, fig. 1, page 3). The control lever (no. 7, fig. 1, page 3) must be still pressed, so that the log pusher stops in the selected position (fig. 10/B, page 5).

With your other hand, loosen the screw (no. 1, fig. 11, page 5) using the spanner supplied.

Move the retainer (no. 2, fig. 11, page 5) against the machine head (fig. 10/C, page 5).

Retighten the screw (no. 1, fig. 11, page 5) thoroughly, then release the control lever.

The log splitter will now reposition at the point selected (fig. 10/C, page 5).

Assembly of the optional log collection plate

The SP5EN Log Splitter can be equipped on request with a log collection plate.

To assemble the plate, follow the instructions on page 6, fig. 12.

Routine Maintenance

This chapter describes routine maintenance, i.e. operations carried out by the operator, on the SP4E Log Splitter to keep it in perfect working order and therefore reliable for continuous, long-term use.

All routine maintenance operations must be carried out with the machine off and in the case of log splitters with electric motor with the power cable disconnected.

Any other maintenance operation not specifically outlined in this manual must be carried out by authorised personnel as a hazardous situation may arise for which the operator is not prepared.

Where extraordinary maintenance or part replacement operations are not carried out by authorised personnel, the guarantee shall be immediately null and void and the supplier shall be relieved of any responsibility for injury to persons or animals or damage.

How to change the hydraulic oil

The spent oil must be replaced with new oil of the type indicated on page 8 every 400 hours of operation. To change the oil, proceed as follows.

Make sure that the log pusher of the machine is fully retracted.

Unscrew the cap shown in fig. 6/A on page 4 and remove it completely.

Position a container under the Log Splitter that can hold 8 litres of oil; then tilt the machine to empty the oil (fig. 6/B, page 4).

Tilt the machine in the other direction (fig. 6/C, page 4) and pour in 6 litres of oil of one of the types indicated on page 9.

Clean the dipstick and insert it (fig. 6/D, page 4) to check that the oil level is between the two notches on the stem.

Clean the cap and washer thoroughly and re-tighten completely but carefully so as not to break the threading of the cap.



WARNING: NEVER MIX OIL WITH GENERAL WASTE! USED OIL MUST BE DISPOSED OF ACCORDING TO CURRENT REGULATIONS IN THE COUNTRY WHERE THE MACHINE IS USED.

Routine Maintenance

Refilling the hydraulic oil

Periodically check the oil level, which must be between the two notches on the oil cap dipstick (fig. 6/D, page 5).

If the level is low, refill using the recommended types of oil on page 8.

Sharpening the wedge

After long periods of operation and when required, sharpen the wedge of the Log Splitter using a fine-toothed file and taking care to remove any burrs or crushed parts of the metal.

Troubleshooting

How to free a jammed log

Release both controls: the log pusher will be fully retracted.

Insert a triangular block of wood under the jammed log and activate the Log Splitter until the wedge is pushed completely under the piece of wood (fig. 7, page 5).

Repeat the operation with larger pieces of wood until the log is completely free.



WARNING:

- **NEVER ASK FOR THE ASSISTANCE OF ANOTHER PERSON WHEN FREEING A JAMMED LOG.**
- **NOT TO TRY TO EXTRACT THE LOG HITING IT WITH A TOOL AND KEEPING THE FOOT BLOCKED, THIS COULD CAUSE THE BREAKAGE OF THE MOTOR BLOCK (FIG. 9, PAGE 5).**
- **ALL THE SAFETY RULES DESCRIBED IN CHAPTER "SAFETY" ON PAGES 10-13 APPLY WHEN CARRYING OUT THE OPERATIONS DESCRIBED ABOVE.**

THE MANUFACTURER SHALL NOT BE HELD RESPONSIBLE IN ANYWAY FOR INJURY TO PERSONS AND ANIMALS OR DAMAGE TO OBJECTS CAUSED BY IMPROPER USE OF THE MACHINE OR FAILURE TO COMPLY WITH THE REGULATIONS DESCRIBED.

Troubleshooting

Problems that may arise when using the Log Splitter and recommended remedies are given in the table on the following page.

In the case of operations carried out by unauthorised personnel, the guarantee will be immediately null and void and the manufacturer will be relieved of any responsibility for injury to persons and animals and damage.

Troubleshooting

Problem	Probable Cause	Corrective Action
Log fails to split	Incorrect positioning of the log.	Position the log correctly.
	Log exceeds permitted dimensions or the wood is too hard for the capacity of the machine.	Try to cut a small part or use other means to reduce the size of the log.
	Wedge does not cut.	Sharped the wedge, check for burrs or nicks, file if necessary.
	Oil leak.	Locate the leak using a piece of card or wood. Contact your dealer.
	Hydraulic pressure too low.	Contact your dealer.
Rod advances jerkily or with strong vibrations	Air in the circuit.	Check oil level. Top up if necessary. If problem persists contact your dealer.
Oil leak from the rod or from other external points	Leakage from the tank.	Check that the bleed screw has been tightened before moving the machine (fig. 4, page 4).
	Seals worn.	Contact your dealer.

Scrapping & Disposal of the Machine

The machine must be scrapped in compliance with all safety regulations for the prevention of personal injury and damage to the environment and animals.

All parts of the machine must be scrapped and disposed of in accordance with applicable legislation in the place of scrapping.

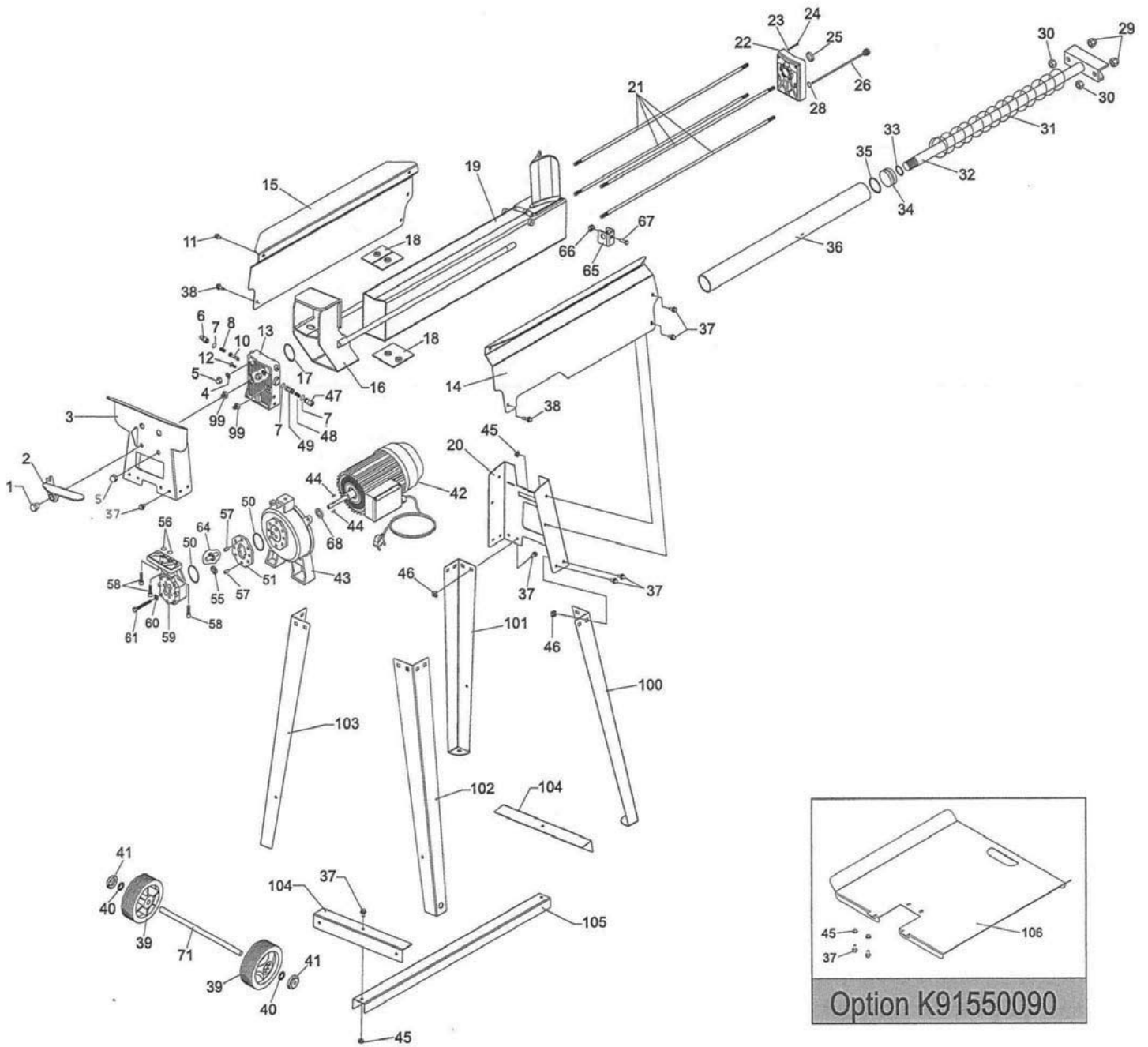
Dispose of hydraulic fluid and electric parts correctly. Do not dispose of these in the environment, as they are hazardous pollutants, and treat them in accordance with applicable legislation.

Machines fitted with electrical parts must not be disposed of as general waste and must be separated for disposal as separately collected fractions, deposited at authorised collection points.

The manufacturer is committed to waste recycling (WEEE) and is a member of specialised waste disposal consortiums.

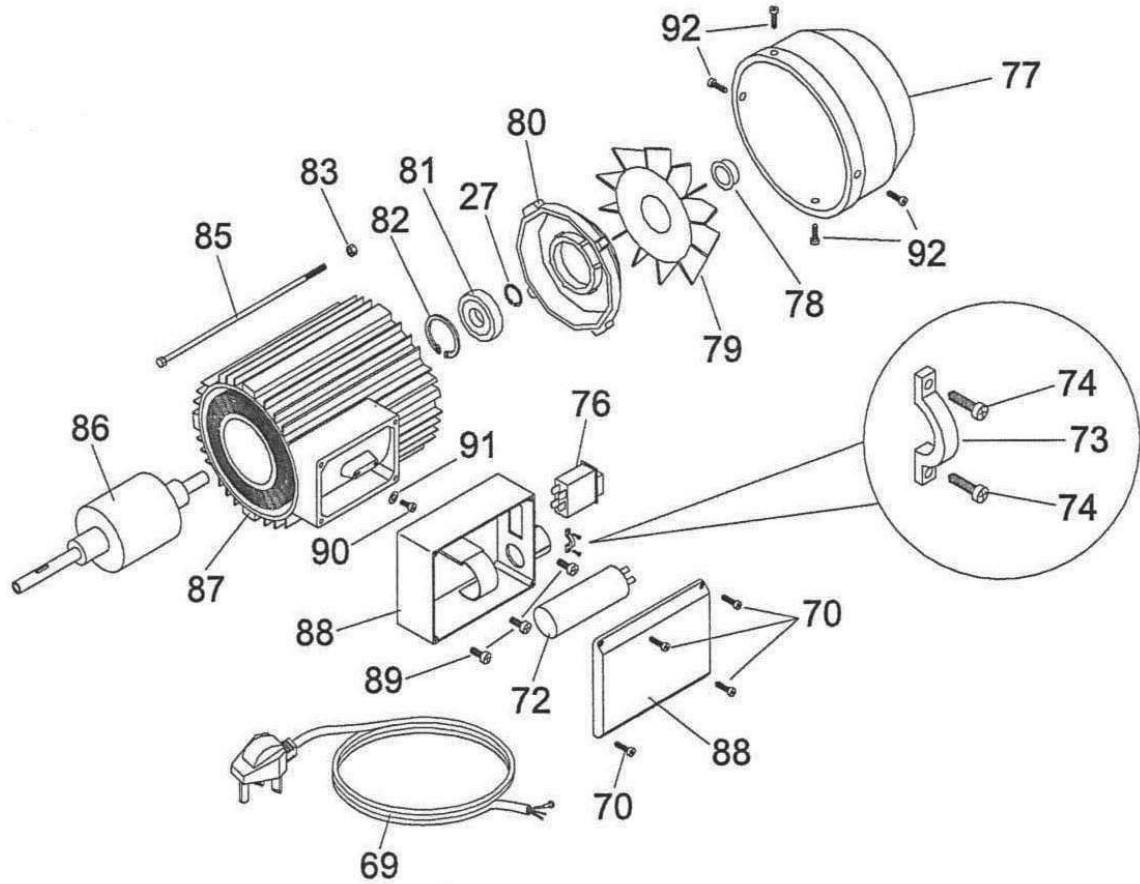
Incorrect waste disposal is punishable by law.

Parts Diagrams

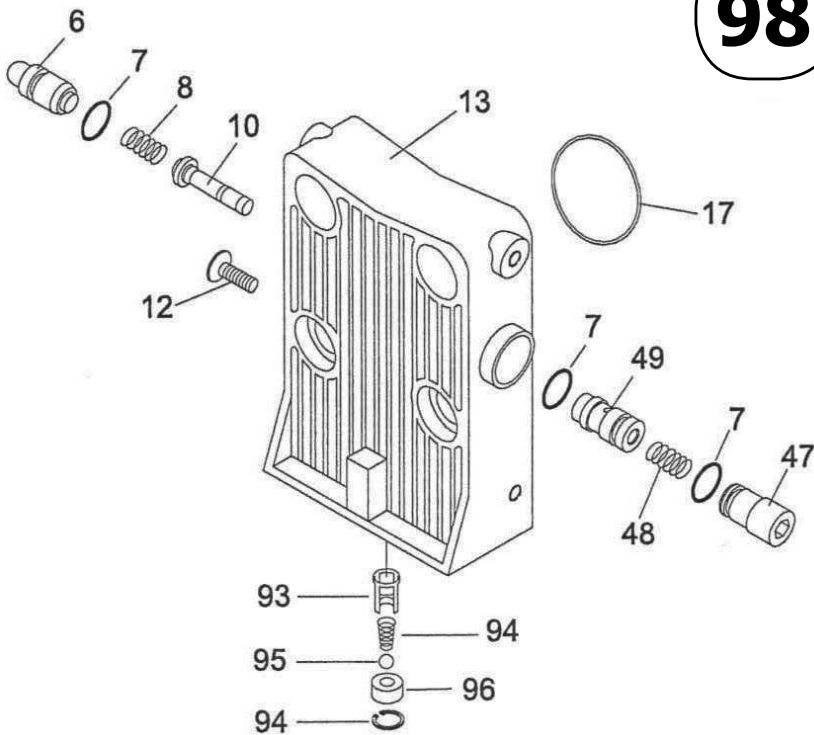


Parts Diagrams

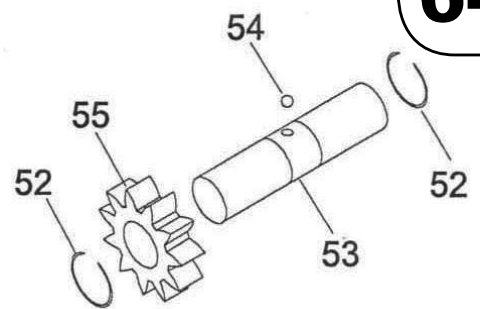
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Part Numbers

Key	Part No.	Key	Part No.	Key	Part No.	Key	Part No.
1	B41000480	28	E51450210	54	E28620015	83	E26561311
2	D05411380	29	E26560519	55	B53100010	85	E87300130
3	B62200250	30	E26513371	56	E25830083	86	E87300270
4	E51432014	31	B51050215	57	E27350280	87	E87300280
5	E26525740	32	D30390025	58	E26051550	88	E87400200
6	B60820040	33	E25830190	59	D02100080	89	E26221039
7	E25830017	34	B60220010	60	E26830055	90	E26401106
8	B51050152	35	E25353745	61	E26015104	91	E26840011
10	B60840021	36	B22300125	64	D02100090	92	E26351120
11	E26050510	37	E26050520	65	B41000670	93	B50050020
12	E26115074	38	E26050540	66	E26600050	94	B51100090
13	B84000060	39	E31650040	67	E26035065	95	E28620042
14	862100320	40	E26790020	68	E25910015	96	B82030110
15	B62100330	41	B82110090	69	D17120100	97	E27160050
16	D05240280	42	D01100110	70	E26401140	98	D02100066
17	E25850055	43	D02100073	71	B02270040	99	B41350050
18	B50010080	44	E28610034	72	E78000010	100	B77120520
19	D05150085	45	E26530442	73	E87100120	101	B77120530
20	B62100500	46	E26640010	74	E26401117	102	B77120500
21	B02170885	47	B82030080	76	E78100130	103	B77120510
22	B84000050	48	B51050250	77	E87300080	104	B77120540
23	E26940609	49	B72150070	78	E87100300	105	B77120550
24	E26224018	50	E25830043	79	E87300085	106	B62200290
25	E25710512	51	B31050020	80	E87300120		
26	E28400090	52	E27201113	81	E36023017		
27	E27150170	53	B02070010	82	E26160550		

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