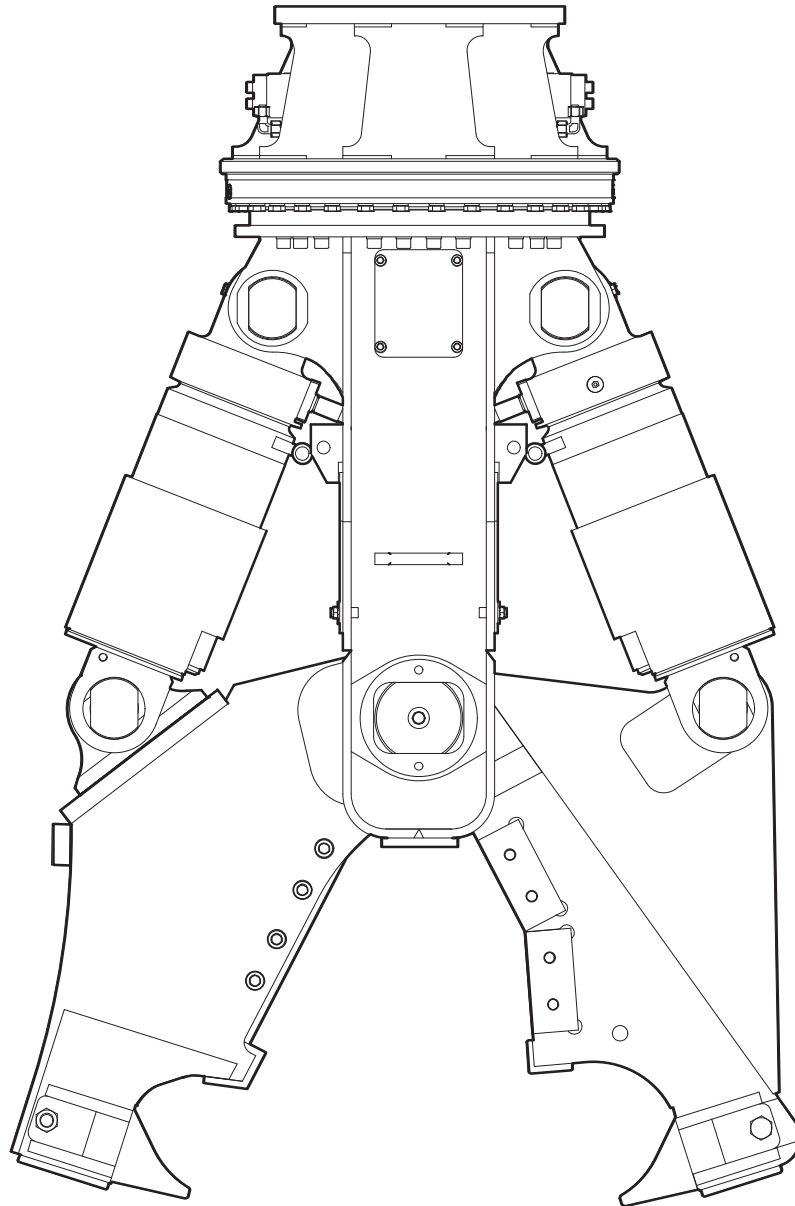


Safety and operating instructions

Combi cutter

CC 1700, CC 2500 and CC 3300



Part.-id.-no. 3390 5081 01 - Original instructions

2012-01-16

Safety and operating instructions

Combi cutter

CC 1700, CC 2500, CC 3300

© Atlas Copco Construction Tools GmbH

Atlas Copco Construction Tools GmbH

P. O. Box: 102152, D - 45021 Essen
Helenenstrasse 149, D - 45143 Essen

Federal Republic of Germany

Telephone: +49 201 633 - 0

Table of contents

1	Foreword	6
2	Accident prevention regulations	7
3	Marking according with machinery directive 2006/42/EC	11
3.1	CE-name plate	11
4	General informations	12
4.1	Applications	12
4.2	Scope of supply	12
5	Main components	13
5.1	Components of the Combi cutters CC 1700, CC 2500 and CC 3300	13
6	Installation	14
6.1	Media/consumables	14
6.1.1	Mineral hydraulic fluids	14
6.1.2	Environment-friendly fluids	14
6.1.3	Grease	15
6.2	Transportation and storage	15
6.3	Attaching the adapter to the Combi cutter	16
6.4	Mounting the Combi cutter on the excavator - mechanical aspects	17
6.5	Mounting the Combi cutter on the excavator - hydraulic aspects	18
6.6	Switching the Combi cutter on/off from the carrier	19
6.7	Dismounting the Combi cutter from the excavator for short or lengthy periods of non-use	19
6.7.1	Dismounting from excavator	19
7	Operating the Combi cutter	20
7.1	Start-up the Combi cutter	20
7.2	Functional test	20
7.3	Limitations when cutting steel	21
7.4	Instructions on the correct use of the Combi cutter	22
7.5	Changing the CC 1700 U/S, CC 2500 U/S and CC 3300 U/S jaws	29
7.6	Changing the CC 1700 U - CL, CC 1700 S - CL and CC 3300 B jaws	31
7.7	Underwater applications	31
7.8	Working in high ambient temperature	31
7.9	Working in low ambient temperature	31
7.10	Operating the Combi cutter with the cylinders fully extended or retracted	31
8	Maintenance and care of the Combi cutter	32
8.1	General informations	32
8.2	Maintenance work (to be carried out by the carrier driver)	33
8.2.1	Lubrication of the combi cutters CC 1700 U/S, CC 2500 U/S, CC 3300 U/S/B	33
8.3	Automatic lubrication using of the combi cutters CC 1700 U - CL, CC 1700 S - CL	34
8.3.1	Automatic lubrication using ContiLube® II	34
8.3.2	Changing the lubricant cartridge	34
8.3.3	Operating the ContiLube® II	34
8.4	Manual lubrication upon failure of ContiLube® II	35
8.4.1	Checking for cracks	36
8.4.2	Checking for wear	36
8.4.3	Checking the hydraulic lines before starting work	36
8.4.4	Checking the adapter bolts for wear	36
8.4.5	Checking and cleaning the hydraulic oil filter	36
8.4.6	Checking screw couplings	36

8.4.7	Checking the blade clearance	36
8.5	Care and replacement of cutter blades	37
8.6	Checking and correcting the blade clearance	38
8.6.1	Checking the blade clearance CC 1700, CC 2500 and CC 3300	38
8.6.2	Correcting the blade clearance CC 1700, CC 2500 and CC 3300	38
8.7	Replacing the cutter teeth	39
8.8	Welding instructions for cutter jaws	39
8.8.1	Presentation - cutter jaw CC 3300 B (single)	40
8.8.2	Presentation - cutter jaw CC 3300 B (double)	40
8.8.3	Presentation - cutter jaw CC 1700 U (single)	41
8.8.4	Presentation - cutter jaw CC 1700 U (double)	42
8.8.5	Presentation - cutter jaw CC 1700 S (double)	42
8.8.6	Presentation - cutter jaw CC 2500 U (single)	43
8.8.7	Presentation - cutter jaw CC 2500 U (double)	43
8.8.8	Presentation - cutter jaw CC 2500 S (double)	44
8.8.9	Presentation - cutter jaw CC 3300 U (single)	44
8.8.10	Presentation - cutter jaw CC 3300 U (double)	45
8.8.11	Presentation - cutter jaw CC 3300 S (double)	45
8.8.12	Presentation - cutter jaw CC 1700 S (single)	46
8.8.13	Presentation - cutter jaw CC 2500 S (single)	47
8.8.14	Presentation - cutter jaw CC 3300 S (single)	47
8.9	Screw couplings with tightening torques	48
9	Troubleshooting	50
9.1	Combi cutter does not work	50
9.2	Insufficient breaking force	50
9.3	Combi cutter does not cut	50
9.4	Combi cutter cannot be rotated	51
9.5	Operating temperature too high	51
9.6	Oil leaks from hydraulic ports	51
9.7	Oil or grease leaks from ContiLube® II	51
9.8	Insufficient lubrication	51
10	Disposal	52
11	Technical specifications	53
12	EC Declaration of Conformity (EC Directive 2006/42/EC)	55
13	EC Declaration of Conformity (EC Directive 2006/42/EC)	56
	Index	57

1 Foreword

Please read this operating manual before using your Atlas Copco Combi cutter for the first time so as to avoid errors and breakdowns through incorrect usage.

These operating instructions contain:

- important safety regulations
- operating instructions for the Combi cutter
- maintenance instructions for the Combi cutter
- aids to troubleshooting

The operating instructions describe how to use the Combi cutter on site and should therefore be kept in the document compartment of the excavator cab.

Please pay careful attention to the safety regulations which are listed at the beginning of this manual and repeated in the relevant sections.

Responsibility for the observation of these safety regulations lies at all times with the operator.

All safety regulations listed in this manual comply with the laws and regulations of the European Union. Additional national regulations have also been taken into consideration wherever applicable.

Combi cutter operation outside the European Union is subject to the laws and regulations valid in the country of use. More specific national regulations and laws that apply in your country must be observed.

Please note that reliable operation of the Combi cutter can only be guaranteed if genuine spare parts are used.

We wish you every success with your Combi cutter.

Atlas Copco Construction Tools GmbH

2 Accident prevention regulations

To avoid the risk of injury, please observe the following instructions.

Familiarise yourself with the operating manual and the applicable regulations before starting work with the Combi cutter.

When using Combi cutter in states of the European Union, the regulations contained in the EC machinery directive 2006/42/EC must be observed and followed, as must all applicable national accident prevention regulations. In countries outside the European Union, the valid local statutes and regulations shall apply. In countries outside of this zone the corresponding general and specific laws and regulations must be observed.

Explanation of the symbols used in this operating instructions

To emphasise their importance, certain points in the operating instructions are marked with symbols,

which are described below.

Note

The marked text provides instructions on the correct use of the hydraulic tool aimed at avoiding incorrect operation or errors during work.



CAUTION!

The marked text provides safety regulations and instructions aimed at **avoiding damage to equipment**.



DANGER!

The marked text provides safety regulations and instructions aimed at **avoiding accidents and possible injuries**.

Qualification

Transporting the hydraulic attachment is only allowed if carried out by people who:

- are authorised to operate a crane or a forklift truck according to the applicable national provisions,
- know all the relevant national/regional safety provisions and accident prevention rules,
- have read and understood the safety and transport sections of these Safety and operating Instructions.

Installing, storing, maintaining and disposing of the hydraulic attachment are only allowed if carried out by people who:

- know all the relevant national/regional safety provisions and accident prevention rules,
- have read and understood these Safety and operating Instructions.

Welding of the hydraulic tool is only permitted if carried out by qualified welders who:

- have been trained to operate MIG welding equipment according to the national regulations,
- know all the relevant national/regional safety provisions and accident prevention rules,
- have read and understood these Safety and Operating Instructions.

Operating the hydraulic attachment is only allowed if carried out by qualified carrier drivers. Carrier drivers are qualified if they:

- have been trained to operate a carrier according to the national regulations,
- know all the relevant national/regional safety provisions and accident prevention rules,
- have read and understood these Safety and operating Instructions.

Testing the hydraulic installation is only allowed if carried out by professionals. Professionals are people who are authorised to approve a hydraulic installation for operation according to the national regulations.

The hydraulic attachment must only be repaired by professionals trained by Atlas Copco Construction Tools who have read and understood these Safety and operating Instructions. The operational safety of the hydraulic attachment is not guaranteed otherwise.

Intended use

Only attach the combi cutter to a hydraulic carrier of a suitable load-bearing capacity. Read the carrier manufacturer's Safety and Operating Instructions before attaching the combi cutter to the carrier and operating it. Observe all instructions.

Only use the hydraulic jaw function of the equipment for the following work:

U-version (universal)

- light- to medium-duty building demolition
- heavy-duty industrial demolition (heavily reinforced concrete)
- cutting steel profiles (general structural steels)
- secondary reduction
- material separation

S-version (steel-cutting)

- demolition of steel structures (general structural steels)
- secondary reduction
- material separation

B-version (Box shape)

- light- to medium-duty building demolition
- heavy-duty industrial demolition (heavily reinforced concrete)
- Primary crushing of reinforced concrete elements for mobile crushers.

Intended use also implies observing all instructions in these Safety and operating instructions.

Use other than intended

Never use the combi cutter

- to cut steel plate and sheet metal
This damages the combi cutter.
- as scrap shears
- to cut high-quality steel grades, tensile strength >370 Nmm², such as railway rails, trolley car rails and spring steels
This may damage the combi cutter. Rails which break during the cutting process may be flung away and can cause serious injury if people are hit by them.
- to cut reinforcements with a tensile strength >500 Nmm²
This may damage the combi cutter.
- to cut wire rope
This may damage the combi cutter. Wire ropes that are under tension can spring away during the cutting process. This can lead to serious injury if the ropes strike a person.
- to pull/tear at girders, braces and walls
This damages the combi cutter and adapter plate. The carrier may lose stability. It can topple over and cause injuries.
- to hit or chop
This destroys the combi cutter.

- as a crow bar
This destroys the combi cutter.
- to push debris aside
This destroys the combi cutter.
- to move the carrier supported by the combi cutter
This severely damages the combi cutter.
- to lift or transport loads
This damages the combi cutter.
- under water
This destroys the combi cutter. and may damage the whole hydraulic installation.
- in explosion-hazard environments
Explosions cause serious injury or death.

Protective equipment:

Personal protective equipment must comply with the applicable health and safety regulations. Always wear the following personal protective equipment:

- protective helmet
- safety glasses with side protectors
- protective gloves
- protective shoes
- warning vest

Before the first installation:

Before mounting/dismounting the hydraulic tool and/or any maintenance work on the hydraulics of the hydraulic tool/carrier the hydraulic system must be depressurized!

When using or transporting the carrier with the Combi cutter attached, the instructions included in the operating manual supplied by the carrier manufacturer must also be observed.

Do not run any hydraulic lines through the driver's cab since they may spring leaks or even burst. During operations, the hydraulic oil becomes very hot.

Mounting the Combi cutter:

Mounting the Combi cutter requires the presence of an assistant, who must be instructed by the carrier driver. The carrier driver and assistant should agree beforehand on clear hand signals.

For transport purposes, use only the lugs provided and hoisting equipment of sufficient capacity.

The Combi cutter should only be mounted on an excavator with sufficient load capacity. The carriers specified under Section 11, Technical specifications are needed to install the Combi cutter.

Carriers below this weight class will not provide the required degree of stability and could even fall over during Combi cutter use, causing injury and damage.

Carriers above this weight class may apply excessively high mechanical loads to the attachment.

When attaching the adapter use only the special steel allen screws included in supply.

Check the nominal width of the hydraulic lines on existing hydraulic systems. It is important that supply and return lines for the hydraulic oil are adequately dimensioned.

Keep your hands away from bores and fitting surfaces when mounting the Combi cutter, especially when the carrier boom is moving.

Collect any oil which runs out and dispose of it in accordance with the applicable statutory provisions to avoid environmental hazards.

Operating the Combi cutter:

Close the front screen/splinter guard on the driver's cab to protect the driver from flying rock splinters during Combi cutter operations.

The Combi cutter should only be operated from the driver's cab. Exception: remote carrier control. See Section 6.6.

Do not start up the Combi Cutter until both carrier and Combi cutter are in the correct position.

Stop the Combi cutter immediately as soon as persons are in the danger zone. The danger zone during the Combi cutter operation is considerably greater than during the excavation operation - on account of fractions of stones and pieces of steel flying around - and for this reason, the danger zone must, depending on the type of material to be worked on, be enlarged correspondingly, or the danger zone must be secured in a suitable manner through corresponding measures.

Do not touch any hot parts

The Combi cutter heats up during operation.

Monitor the oil temperature

The temperature of the hydraulic oil must never exceed 80 °C. If higher temperatures are measured in the tank, the hydraulic system and/or the pressure-relief valve have to be checked.

Observe the excavator manufacturer's safety regulations.

CAUTION!

With regard to excavator operation when working with an attached Combi cutter, please refer to Section 6.6.

The Combi cutter is only to be used for the applications described.

Changing the CC 1700, CC 2500 and CC 3300 jaws:

The cutter jaws must be replaced on a level, stable surface.

An assistant is required when changing cutter jaws. Agree with the assistant on clear hand signals. The assistant must be instructed by the excavator driver.

Single cutter jaws for combi cutters CC 1700 and CC 3300 manufactured in or before 2006 may have a transport lug.

The connected cutter jaws must not be transported by the transportation lug of the single jaw. The transportation lug is only designed for transportation of the single jaw alone.

After removal, secure the jaws to ensure they do not open unexpectedly.

After removal, secure the cutter jaws against falling over.

Removing the cylinder pins displaces the bores for the piston rod and jaw.

Use a drift of adequate length.

Dismounting the Combi cutter:

Dismounting the Combi cutter from the carrier requires the presence of an additional assistant who must be instructed by the carrier driver. The carrier driver and assistant should agree beforehand on clear hand signals.

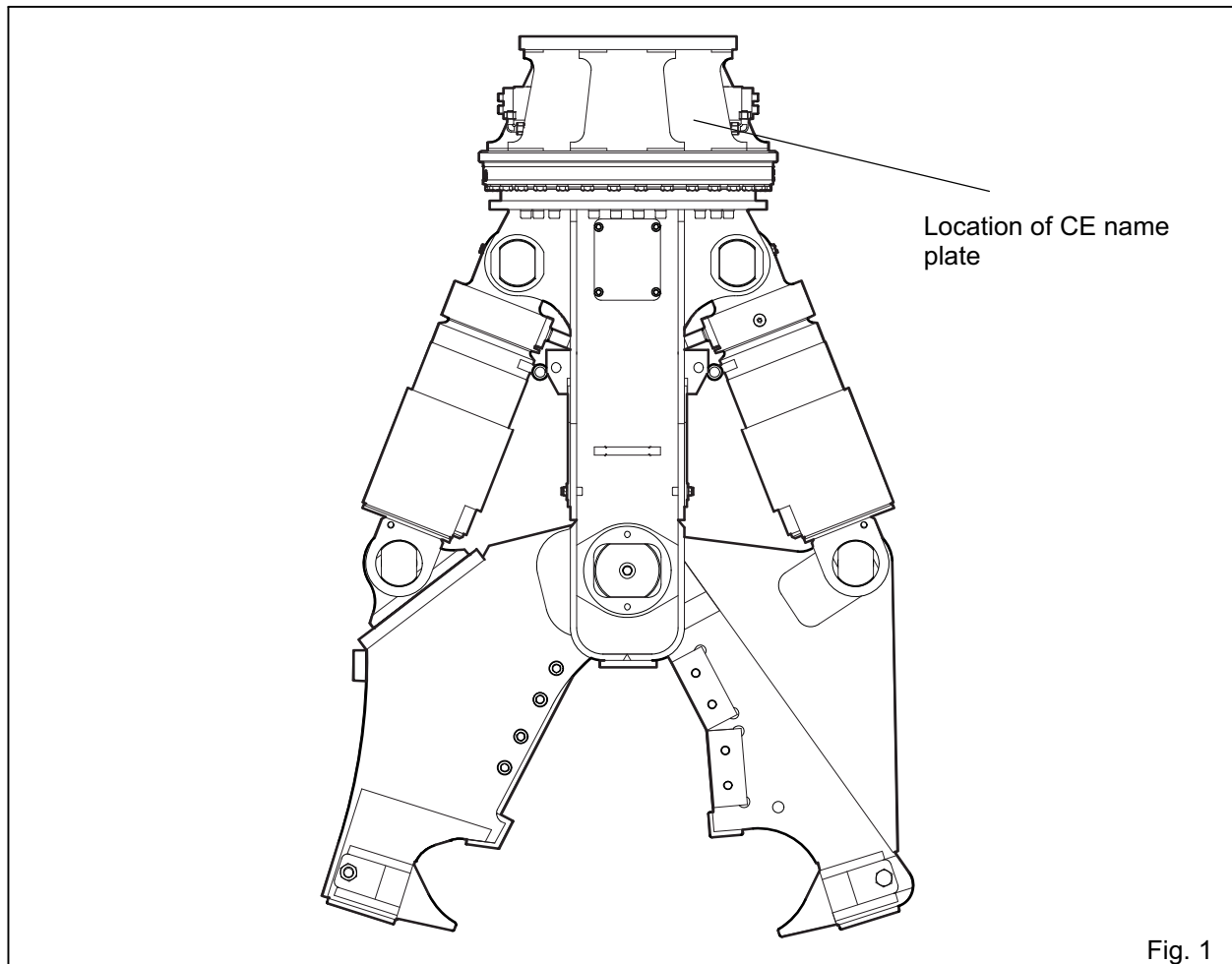
When using the excavator or putting it out of operation, the safety instructions of the excavator manufacturer must be observed.

Keep your hands away from bores and fitting surfaces when dismounting the Combi cutter, especially when the carrier boom is moving.

Collect any oil which runs out and dispose of it in accordance with the applicable statutory provisions to avoid environmental hazards.

Secure the Combi cutter after dismounting so that it cannot fall over.

3 Marking according with machinery directive 2006/42/EC



3.1 CE-name plate

<p>The sample nameplate is rectangular with a black border. It contains the following information: the Atlas Copco logo, the company name 'Atlas Copco Construction Tools GmbH', the address 'Helenenstr. 149, 45143 Essen, Germany', a list of fields to be filled (Type, Ser. No., Deliv. Wt, P max. (o/c), P max. (rot.), Year) with circles next to them, a warning triangle icon, a CE mark, and the text 'Made in Germany'.</p>	<p>Name and address of manufacturer</p> <p>Model</p> <p>Serial no.</p> <p>Weight of product group</p> <ul style="list-style-type: none">Max. operating pressure "opening - closing"Max. operating pressure "rotating"Year of construction of product group
---	--

The CE nameplate contains information on the Combi cutter. The weight indicated refer to the weight of the Combi cutter.

When selecting hoists and suspension aids for transporting the unit, the weight of the and adapter may also have to be considered.

In according with EC directives CE nameplates must be affixed firmly and in a clearly visible position. Should these nameplates be lost or defaced, replacements can be ordered from your dealer/from Atlas Copco Construction Tools GmbH.

4 General informations

4.1 Applications

The Combi cutter is an attachment suitable for mounting on hydraulic-powered excavators.

The Combi cutter has been suited for the following operations:

U-Version:

light to medium demolition of buildings,
light to medium reinforced concrete,
thick masonry

heavy industrial demolition, heavily reinforced
concrete elements

cutting steel girders

secondary reduction

material separation

S-Version

reduction of metal structures
(standard structural steel sections)

B-Version:

light to medium demolition of buildings,
light to medium reinforced concrete,
thick masonry

heavy industrial demolition, heavily reinforced
concrete elements

Primary crushing of reinforced concrete elements for
mobile crushers



CAUTION!

Incorrect operation may result in damage to the
Combi cutter and to the equipment of the excavator.

Under normal circumstances the Combi cutter is
operated from the driver's cab of the carrier.
Please refer to Sections [2](#) and [6.6](#).

4.2 Scope of supply

The scope of supply of a Combi cutter generally
includes:

Combi cutter, operating instructions, spare parts list
and EC declaration of conformity.

Accessories: hoses and service tool according to the
order.

Special accessories: e. g. adapter, hydraulic adapter
kit for the excavator according to the order.

5 Main components

5.1 Components of the Combi cutters CC 1700, CC 2500 and CC 3300

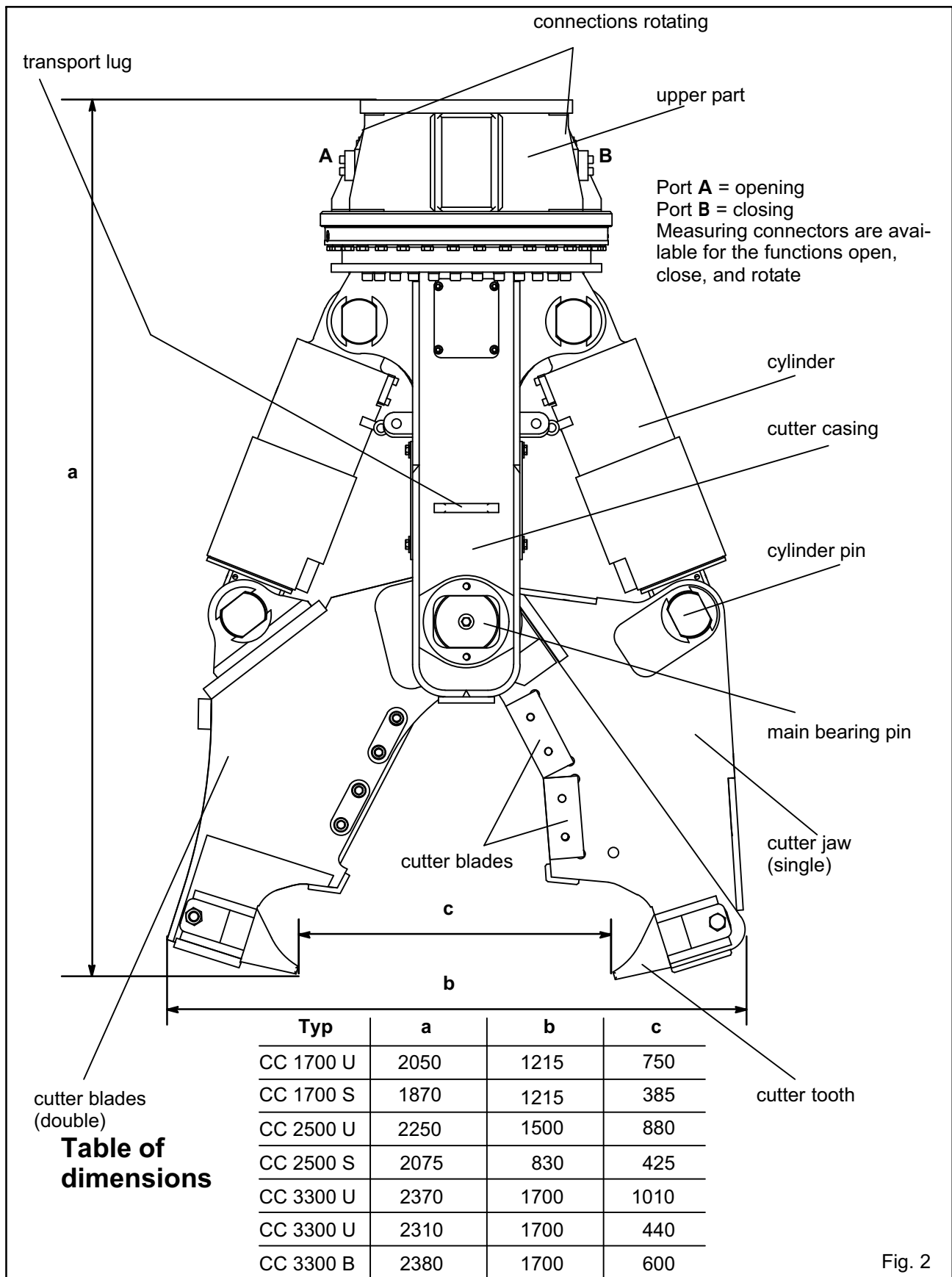


Fig. 2

6 Installation

6.1 Media/consumables

Operating the Combi cutter requires the following resources:

6.1.1 Mineral hydraulic fluids

All hydraulic oil brands prescribed by the carrier manufacturer are suitable for operating the Combi cutter.

The oil should however correspond to viscosity class HLP 32 or higher.

In summer and in hotter climates, oils of viscosity class HLP 68 or higher should be used.

In all other respects the regulations of the carrier manufacturer are to be considered.

Optimum viscosity range	= 30 - 60 cSt
Max. initial viscosity	= 2000 cSt
Max. oil temperature	= 80 °C

Please refer to section 7.9. for low-temperature Combi cutter applications.

Check the oil filter.

An oil filter has to be installed in the return line of the hydraulic system. The mesh width of this filter should not exceed 50 micrometers and a magnetic separator must be fitted.



CAUTION!

Monitor the oil temperature.

The temperature of the hydraulic oil must never exceed 80 °C. If higher temperatures are measured in the tank, the hydraulic system and/or the pressure-relief valve have to be checked.

6.1.2 Environment-friendly fluids

In order to protect the environment or on technical grounds, hydraulic oils are currently being used which are not classified as HLP mineral oils.

Before using hydraulic oils of this kind it is imperative to enquire with the carrier manufacturer whether operations with such fluids are possible.

Our tools are basically designed for use with mineral oils. Before using other fluid types which have been approved by the carrier manufacturer, always consult the Atlas Copco Customer Center/Dealer in your area. Following initial assembly and after any workshop repairs, our tools are subjected to a test run on a test bed powered by **mineral oil**.

Note

When returning tools for repair, it is imperative that the name of the oil in use be indicated if you are using non-mineral oil.



CAUTION!

Never mix mineral and non-mineral hydraulic oils! Even small traces of mineral oil mixed in with non-mineral hydraulic oil can result in damage to both hydraulic attachment and carrier.



CAUTION!

Non-mineral oil is no longer biodegradable if it is contaminated with mineral oil. Contaminated non-mineral oil must be disposed of as special waste in accordance with the applicable statutory regulations for environmental protection.

6.1.3 Grease

Agents/consumables	Part ID No.
Cutter grease 400 g for hand-held grease gun	3363 0949 14
Cutter grease 500 g for ContiLube® II (KP2K greases, lithium soaped mineral oils of NLGI Class 2 with EP additives)	-

Always observe the relevant safety regulations when handling oils and greases.

6.2 Transportation and storage



DANGER!

When lifting the Combi cutter, use only the lug provided and sufficiently powerful lifting equipment.

Ropes and lug must be in good condition.

The Combi cutter should be deposited on a wooden support of sufficient size and strength.

Oil may run out of the hydraulic connections when removed. Collect any oil which runs out and dispose of it in accordance with the applicable statutory

provisions to avoid environmental hazards. Close off all open lines!

Always observe the relevant safety regulations when handling oils and greases.



CAUTION!

To avoid damage to the piston rod of the hydraulic cylinder when transporting the Combi cutter, the piston rod must be retracted, i.e. the Combi cutter must be in "**open**" position.

6.3 Attaching the adapter to the Combi cutter

Deposit the Combi cutter on squared beams or pallets within reach of the carrier boom. All connections must be facing upward.

Bolt the adapter to the Combi cutter's mounting plate swivel or mounting plate. The tightening torques and required Allen key sizes are listed in the table below.

Combi cutter	Wrench and wrench size / tightening
CC 1700	Allen key SW 17 / 390 Nm
CC 1700, CC 2500, CC 3300	Allen key SW 22 / 1500 Nm
CC 3300	Allen key SW 27 / 2300 Nm

Apply anti-seize to the threads of the cylindrical bolts before screwing them in. The contact face of the bolt head and the locking rings must be free of lubricant.

The striking face wrench (width across flats 22 mm), part ID no. 3363 0888 03, and the striking face wrench (width across flats 27 mm), part ID no. 3363 0888 01, can be ordered separately.

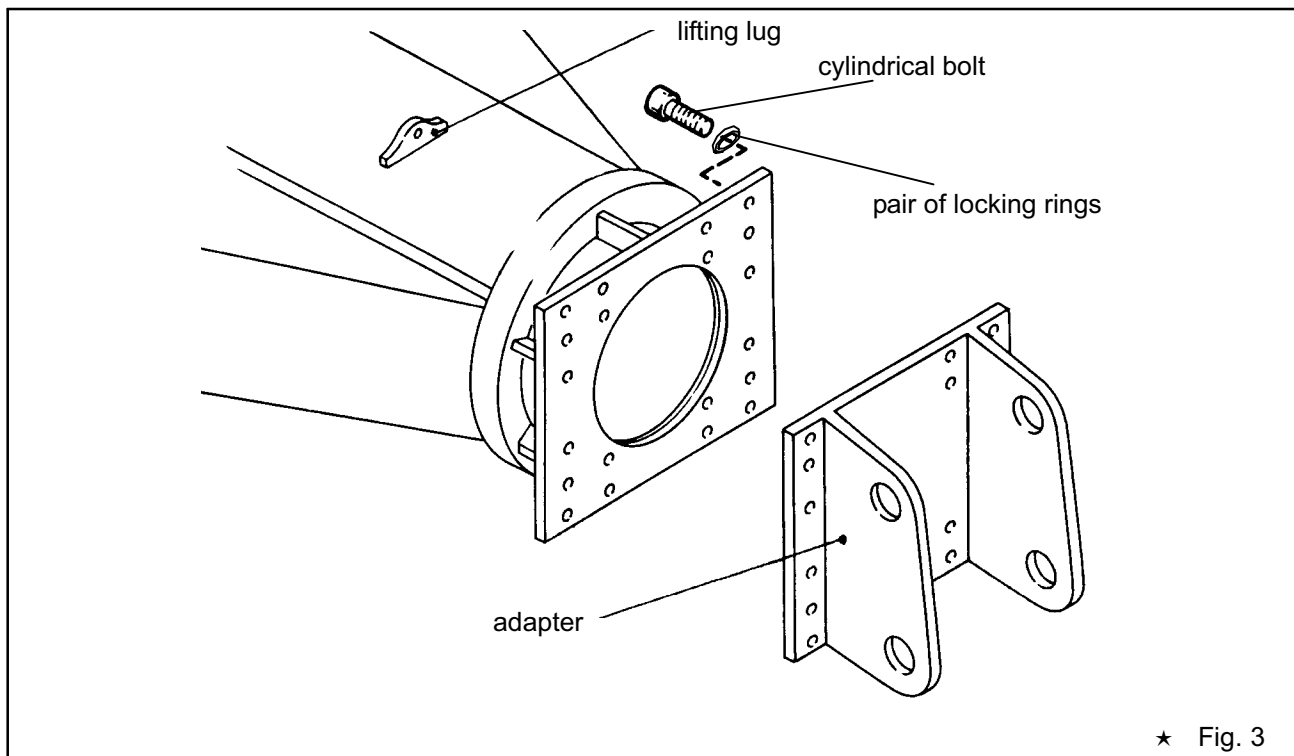


DANGER!

Use only the special steel allen screws and locking rings included in supply.

When transporting the Combi cutter use only the transport lug provided and sufficiently powerful lifting equipment. Note the weight (name plate, section 3.1)

Figures marked with ★ do not correspond exactly to the CC 1700, CC 2500 and CC 3300 Combi cutter models but are only intended to depict the process described.



6.4 Mounting the Combi cutter on the excavator - mechanical aspects



DANGER!

Only mount the Combi cutter on an excavator with sufficient load capacity.
If the excavator is too light it may become unstable and fall over.

The operator of the carrier must remain in the driver's seat when the Combi cutter is being installed.

Agree with the assistant on clear hand signals. The assistant must be instructed by the excavator driver.

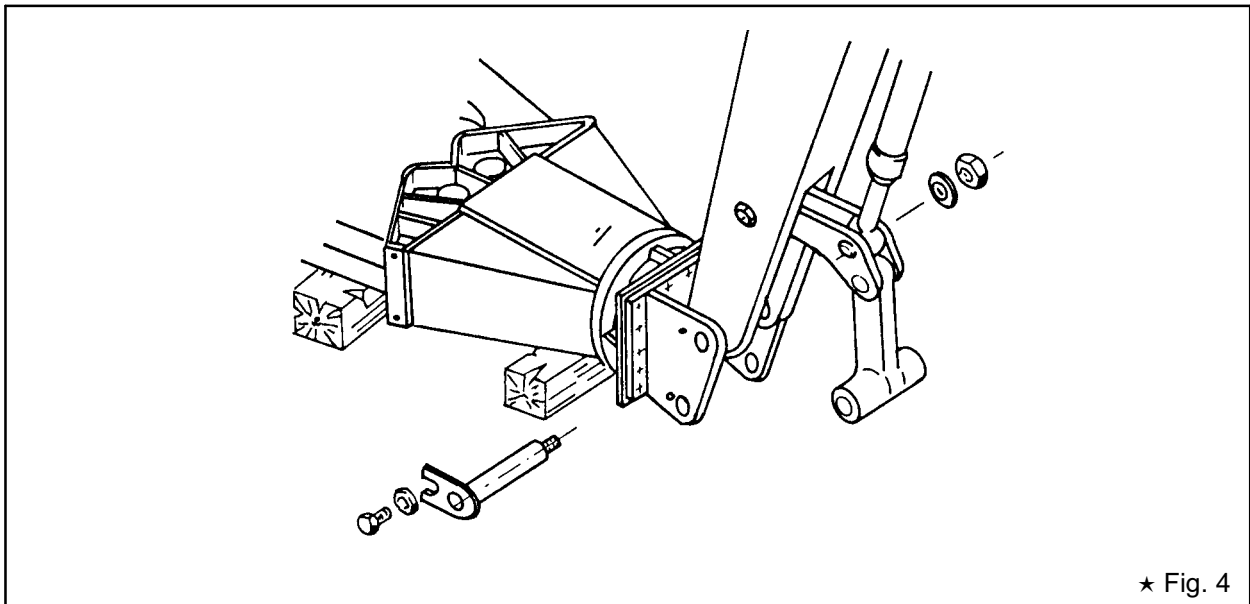
Keep your hands away from bores and fitting surfaces when mounting the Combi cutter.

Do not touch any parts when the boom is moving.

Never use your fingers to check whether the bores are flush.

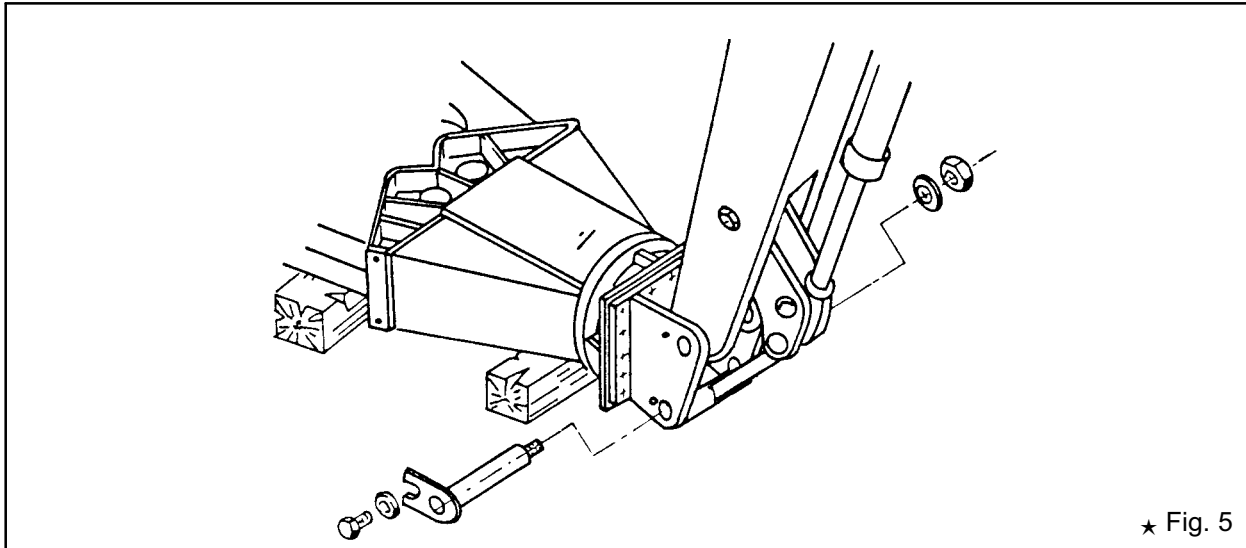
Once the adapter has been attached, position the Combi cutter facing the carrier boom (stick) as shown in Figs 4 and 5. In this way the stick of the excavator boom can be moved into the adapter in such a way that the bores in the stick/adapter are aligned.

Insert stick pin and secure as shown in Fig. 4.



To fit the toggle pin, extend the shovel cylinder and position the toggle by hand until the bores are

aligned with those in the adapter. Insert toggle pin and secure.



CAUTION!

After installing the Combi cutter, carefully drive the bucket cylinder to both end positions. The cylinder must travel smoothly and without hindrance to both end positions without striking the adapter (unless the adapter is fitted with an end stop).

6.5 Mounting the Combi cutter on the excavator - hydraulic aspects



DANGER!

Before mounting/dismounting the hydraulic tool and/or any maintenance work on the hydraulics of the hydraulic tool/carrier the hydraulic system must be depressurized.

The excavator must have a hydraulic system suitable for Combi cutter operations.

Check the nominal width of the hydraulic lines on existing hydraulic systems. All feed and return lines for the hydraulic oil must have a sufficient inside diameter. Refer to Section 11, Technical specifications.

Use only hoses/pipes which satisfy the following quality criteria:

Hydraulic hoses with 4 wire spiral layers to DIN EN 856. Hydraulic pipes: seamless, cold drawn steel pipes to DIN EN 10305.

Check the pressure-relief valve on the hydraulic system.

The pressure-relief valve must be set to the maximum permissible pressure, see Section 11, Technical specifications. For reasons of liability we recommend subsequent lead of the valve.

The pressure-relief overflow line must run direct from the pressure-relief valve to the tank to ensure the reliable functioning of the valve.

Do not run any hydraulic lines through the driver's cab.

Hydraulic lines may spring a leak or even burst, releasing hot hydraulic oil.

Detach the screw caps from the connections, and keep them in a safe place.

Check the connecting threads on the Combi cutter ports and the corresponding hose connectors to ensure they are undamaged. Sand or other foreign bodies in the threads must be cleaned away.

Screw the hoses to the ports. (Tightening torques see section 8.9)

In the interests of safety, if you come to the conclusion that the system does not comply with the requirements listed above, always consult the Atlas Copco Customer Center/Dealer in your area.

If there is no corresponding installation site, the original conversion kit must be attached. There are special instructions for this installation type.

When connecting or reconnecting the hydraulic lines, the carrier must be secured in such a way that automatic start-up of the Combi cutter is reliably avoided.

If no genuine conversion kit has been used on the hydraulic system, check that the ports on the excavator match the Combi cutter hose connectors. Refer to Section 11, Technical specifications.

6.6 Switching the Combi cutter on/off from the carrier

The installation of a genuine conversion kit in the carrier's hydraulic system allows the Combi cutter to be powered using the carrier hydraulics. All functions for normal excavator operations remain intact. The Combi cutter is switched on/off via electrical signals.

When leaving the driver's cab, the safety switch for these electrical signals must be set to "OFF" position

so as to reliably prevent any unintended start-up of the Combi cutter.

Both carrier and Combi cutter can be operated by remote control. For further details please contact the carrier manufacturer and/or the Atlas Copco Customer Center/Dealer in your area.

6.7 Dismounting the Combi cutter from the excavator for short or lengthy periods of non-use

6.7.1 Dismounting from excavator

Before mounting/dismounting the hydraulic tool and/or any maintenance work on the hydraulics of the hydraulic tool/carrier the hydraulic system must be depressurized.

For safety reasons, the carrier must be switched off before performing the following work.

Unless otherwise stipulated, the Combi cutter is dismantled in reverse order to mounting.

Open the jaws of the Combi cutter.

Deposit the Combi cutter on squared beams or pallets away from other transport routes. The hoses must be facing upward.

Unscrew the hoses from the boom and seal them with appropriate caps.

Unlock the toggle and stick pins and knock out the pins using a steel rod and a hammer.

Cover up the Combi cutter to protect it against the weather.

Collect any oil which runs out and dispose of it in accordance with the applicable statutory provisions to avoid environmental hazards.



DANGER!

Agree on hand signals with the assistant.

Keep your hands away from bores and fitting surfaces when dismantling the Combi cutter.

Do not touch any parts when the boom is moving.

Observe the excavator manufacturer's safety regulations.

When putting the excavator out of operation, please observe the excavator manufacturer's instructions.

7 Operating the Combi cutter

7.1 Start-up the Combi cutter

First of all, precautionary measures should be taken to rule out the risk of accidents.



DANGER!

Only operate the Combi cutter from the driver's seat in the excavator cab.

7.2 Functional test

Using the carrier boom raise the Combi cutter until it is suspended vertically.

First functional test: opening - closing

The cutter jaws are opened and closed by actuating the switch in the leg-space area of the cab.

Second functional test: Rotation, to the left and to the right

The cutter can be rotated either by using the carrier function **"rotate cutter"** or mechanically by pushing one of the cutter jaws against a firm object.

Close the front screen / splinter guard on the driver's cab to avoid injury from flying rock splinters.

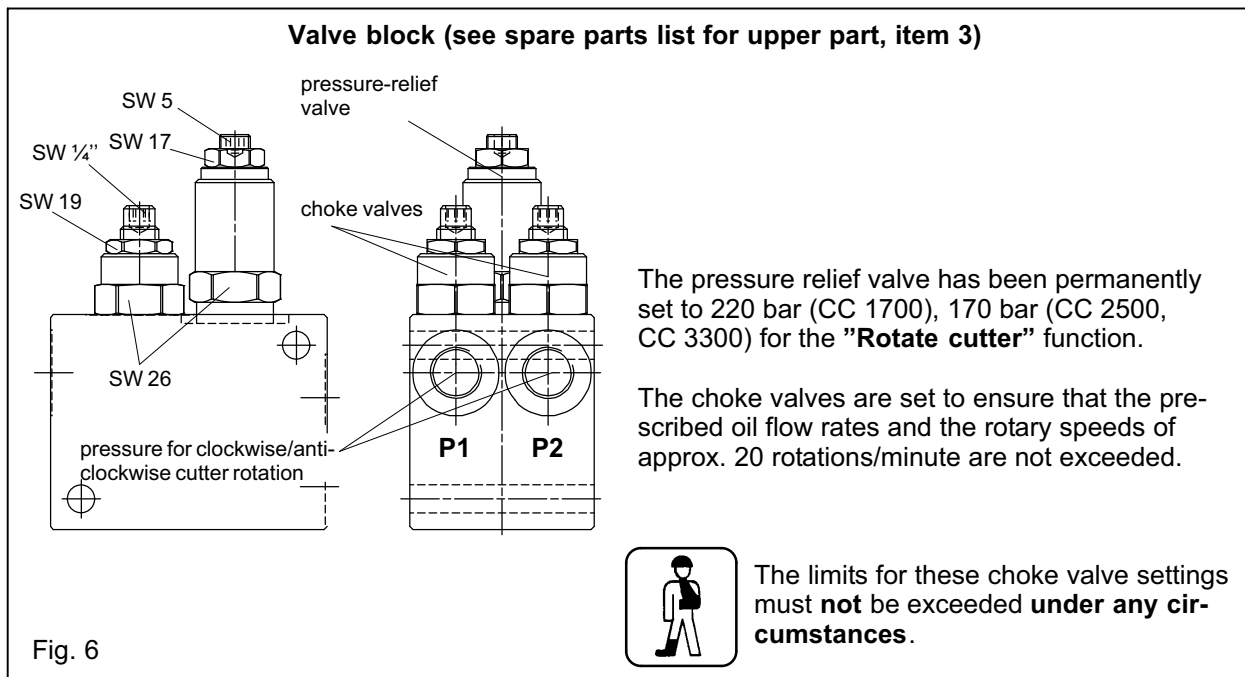
Stop the Combi cutter immediately as soon as persons are in the danger zone. The danger zone during the Combi cutter operation is considerably greater than during the excavation operation - on account of fractions of stones and pieces of steel flying around - and for this reason, the danger zone must, depending on the type of material to be worked on, be enlarged correspondingly, or the danger zone must be secured in a suitable manner through corresponding measures.

When rotating the cutter mechanically, ports **"rotating"** (see chapter 5) must be closed using the screw plugs included in supply.

Connection via "rotate cutter" function:

Make sure that the provided hoses for rotating the Combi cutter are connected correctly.

The Combi cutter can now be rotated clockwise and anticlockwise when the control lever is pressed (direction of rotation depends on wiring assignment).



7.3 Limitations when cutting steel



CAUTION!

The Combi cutter is **not** suitable for cutting steel

sheets and plates.

By the same token the Combi cutter must **not** be used to cut through tanks (oil tanks).

All steel sections of tensile strength < 370 N/mm² can be cut using the Combi cutter.

Cutting higher steel grades e. g. rails for railways or streetcars, wire cables or spring steels may cause damage to the Combi cutter.

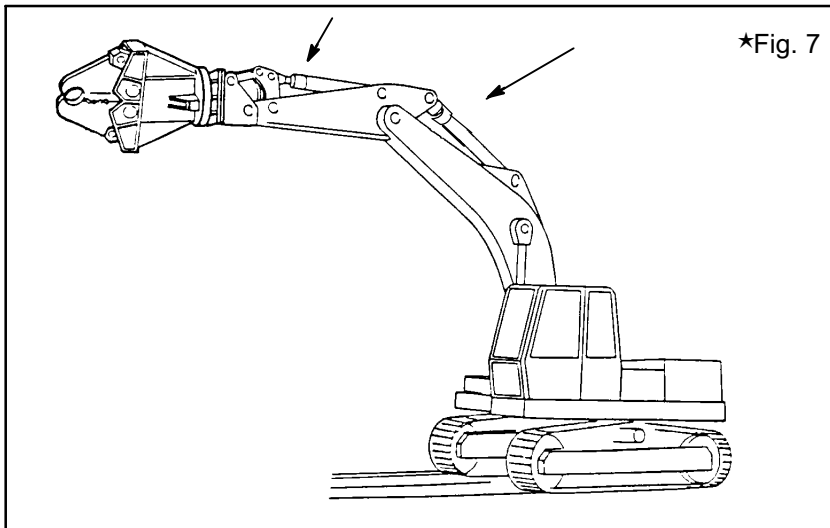
Section	CC 1700 U	CC 1700 S	CC 2500 U	CC 2500 S
I	240 mm	280 mm	240 mm	300 mm
I	160 mm	180 mm	160 mm	200 mm
□	220 mm	300 mm	240 mm	320 mm
L	150/150/20mm	160/160/20mm	160/160/22mm	200/200/24mm
●	7 x Ø28 mm	9 x Ø28 mm	10 x Ø28 mm	14 x Ø28 mm

Section	CC 3300 U	CC 3300 S	CC 3300 B
I	360 mm	400 mm	80 mm
I	240 mm	260 mm	-
□	400 mm	400 mm	80 mm
L	250/250/24mm	250/250/24mm	80/40/8mm
●	18 x Ø28 mm	20 x Ø28 mm	10 x Ø28 mm

7.4 Instructions on the correct use of the Combi cutter

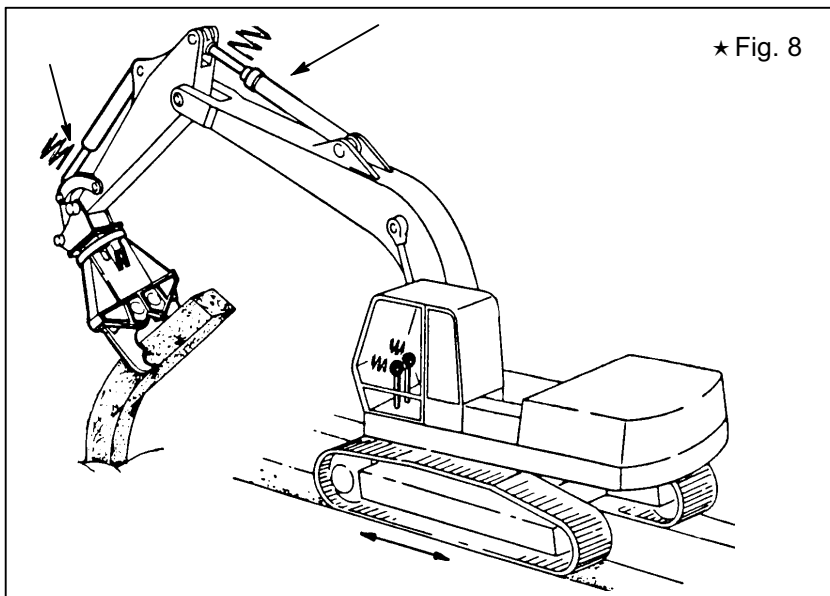
The Combi cutter must be used exclusively for the work listed under subsection 4.1. In the following a number of examples show how the Combi cutter is operated properly.

The depictions are not intended to reproduce the Combi cutters, but to illustrate the circumstances described.



CAUTION!

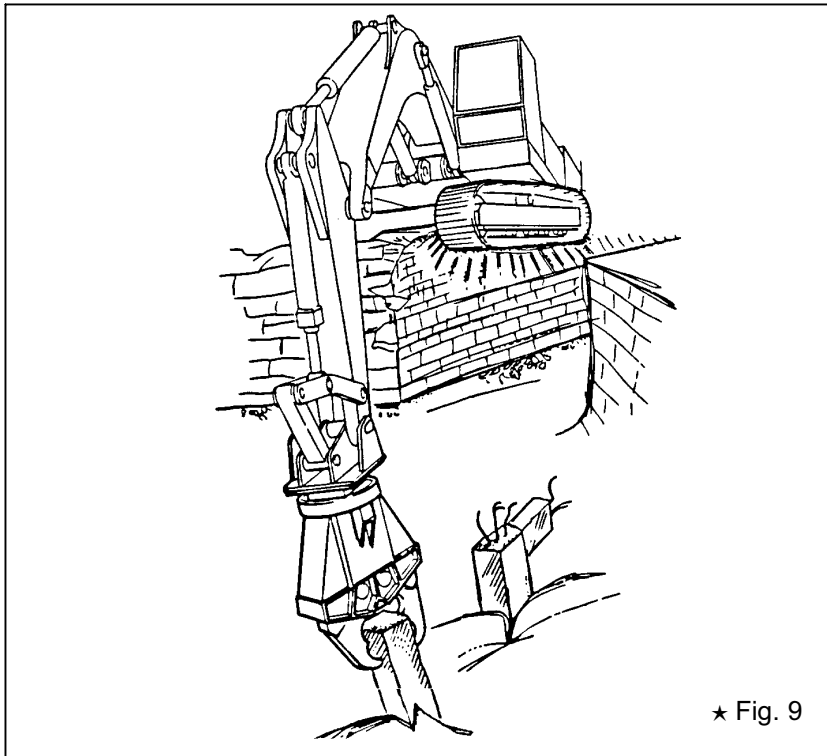
The hydraulic cylinders on the carrier boom must **not** be retracted to their full extent, since this could result in damage to both carrier and Combi cutter.



CAUTION!

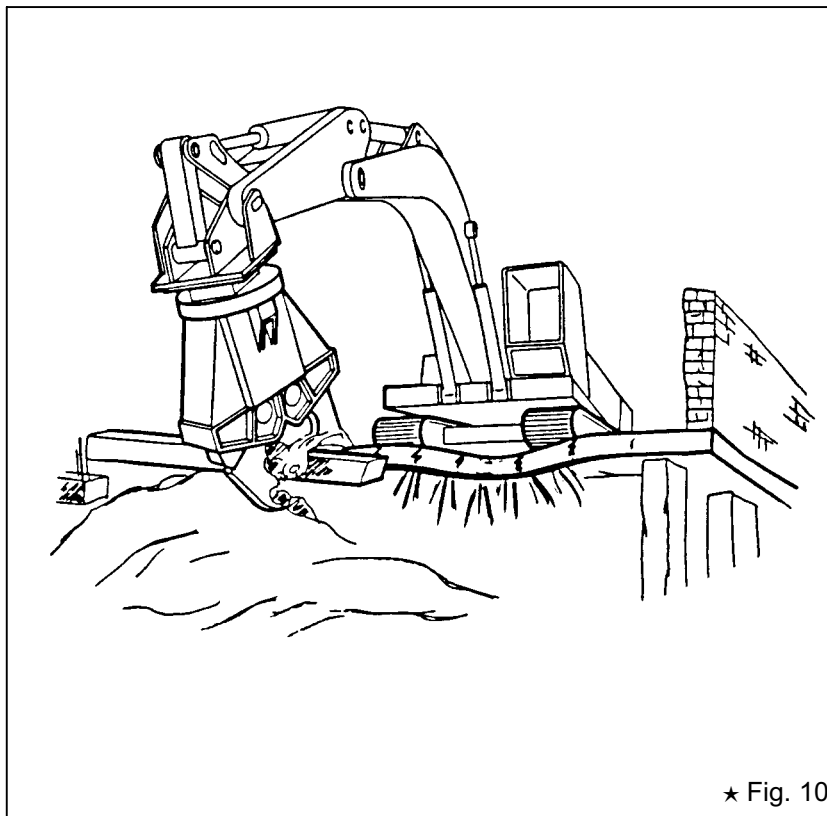
The hydraulic cylinders on the carrier boom must **not** be extended to their full extent, since this could result in damage to both carrier and Combi cutter.

Instructions on the correct use of the Combi cutter



DANGER!

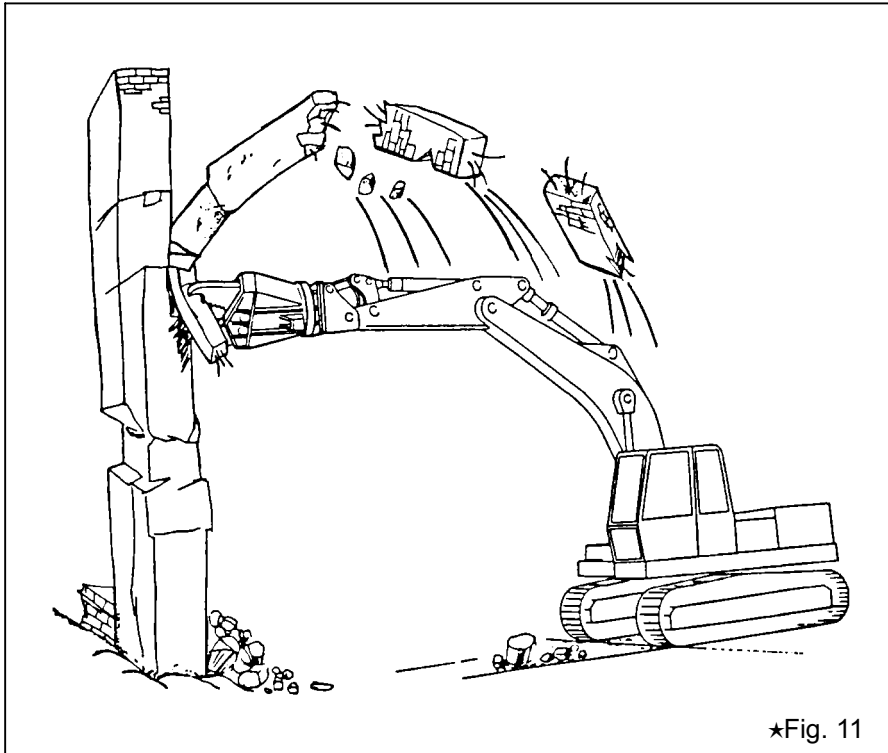
Ensure that the carrier is positioned on firm ground. If this is not the case, the carrier may fall over.



DANGER!

When working on floors/roofs, ensure that they are strong enough to bear the weight of the carrier. Danger of collapse!

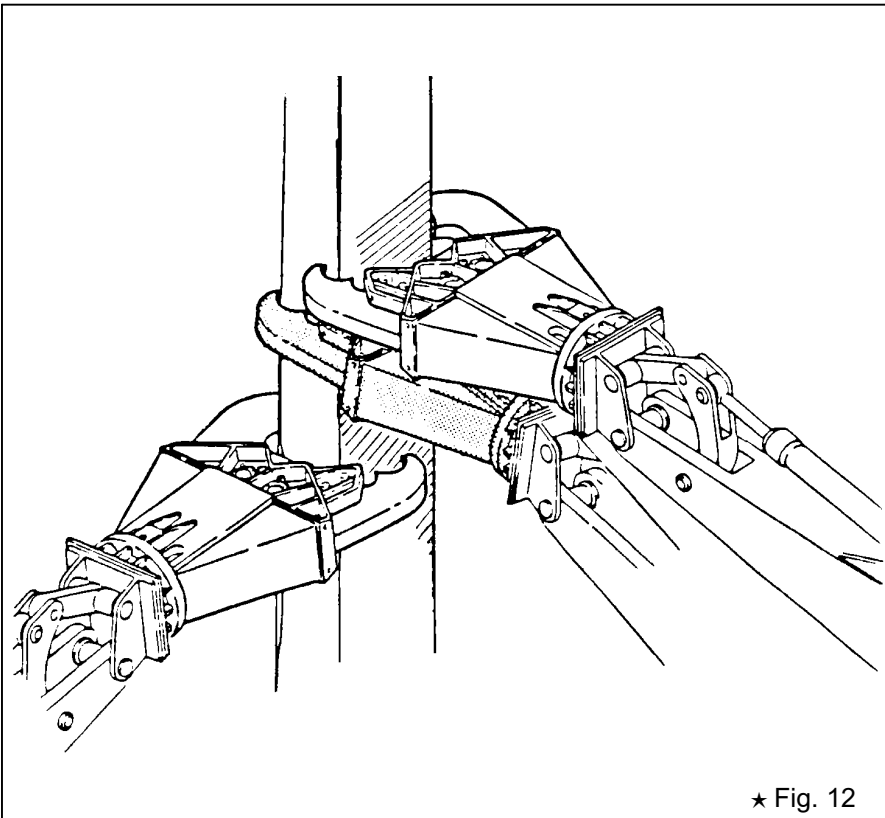
Instructions on the correct use of the Combi cutter



DANGER!

When demolishing columns, supports and brickwork, always start breaking from the top downwards.

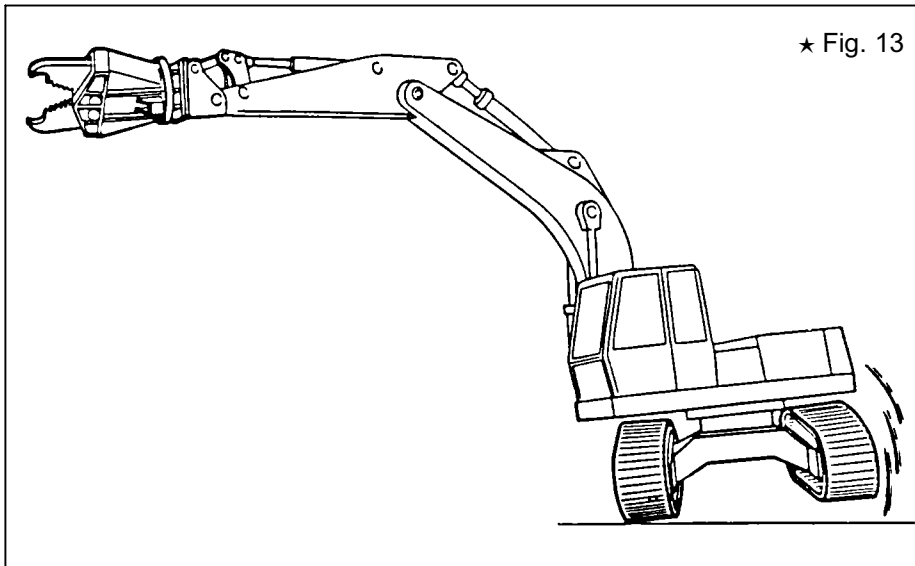
Large chunks of the broken material may otherwise fall onto the cutter or carrier and cause damage. If necessary, larger elements should be secured beforehand.



CAUTION!

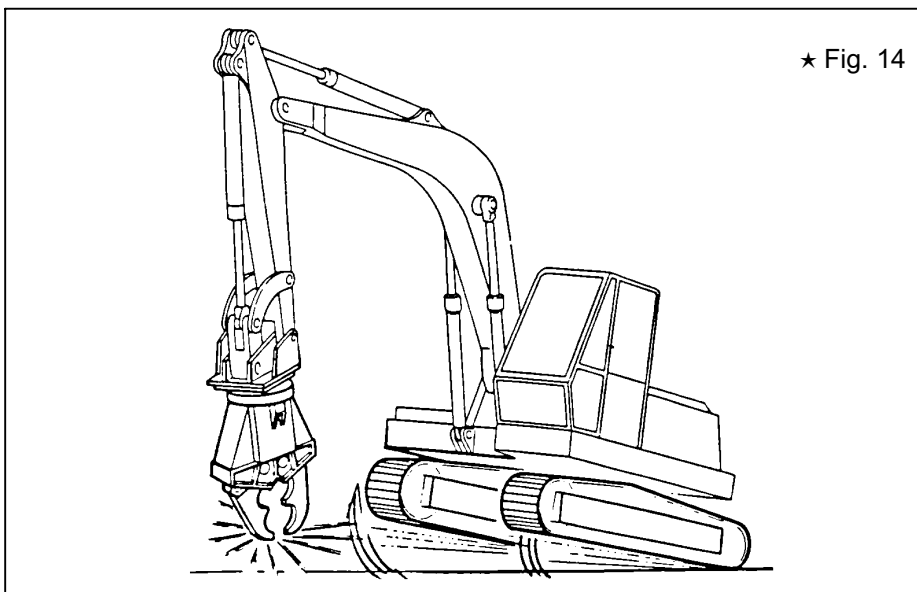
Change the Combi cutter's point of attack in good time. Wherever possible, demolition should be started on narrower faces.

Instructions on the correct use of the Combi cutter



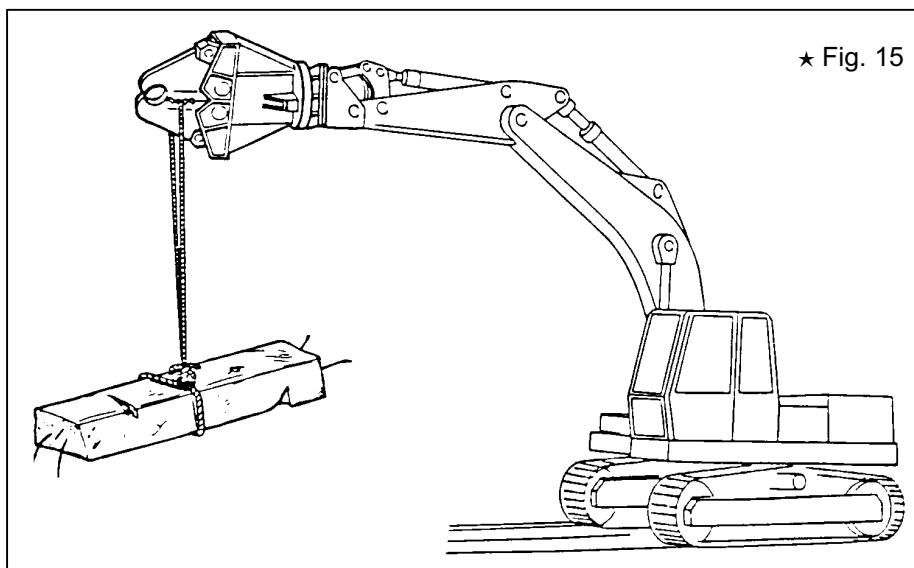
DANGER!

Never work with the boom extended to the side. This will restrict the carrier's stability and may cause it to fall over.



CAUTION!

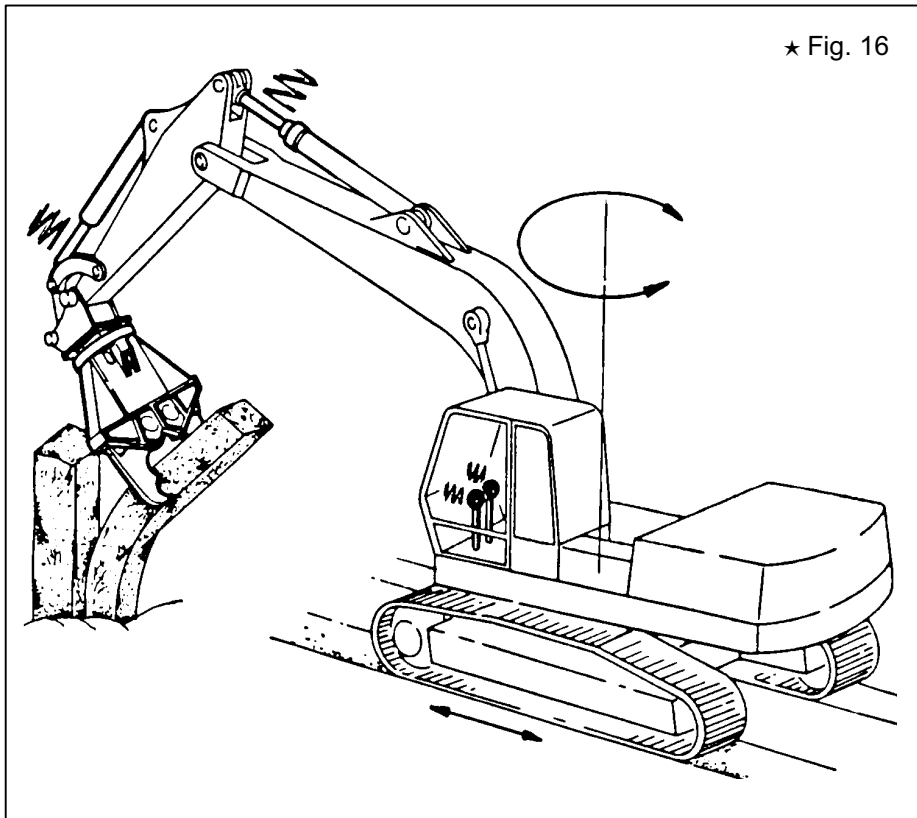
Never support the weight of the carrier on the Combi cutter so as to shift the carrier to the side.



CAUTION!

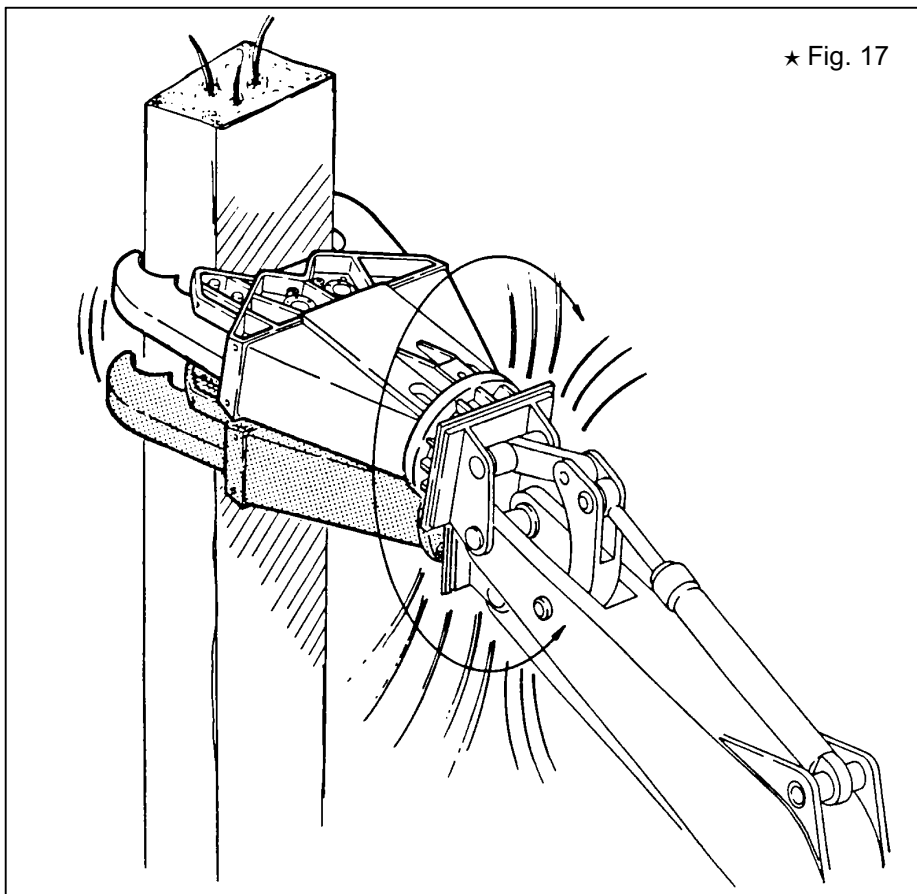
Never lift or transport loads with the Combi cutter.

Instructions on the correct use of the Combi cutter



CAUTION!

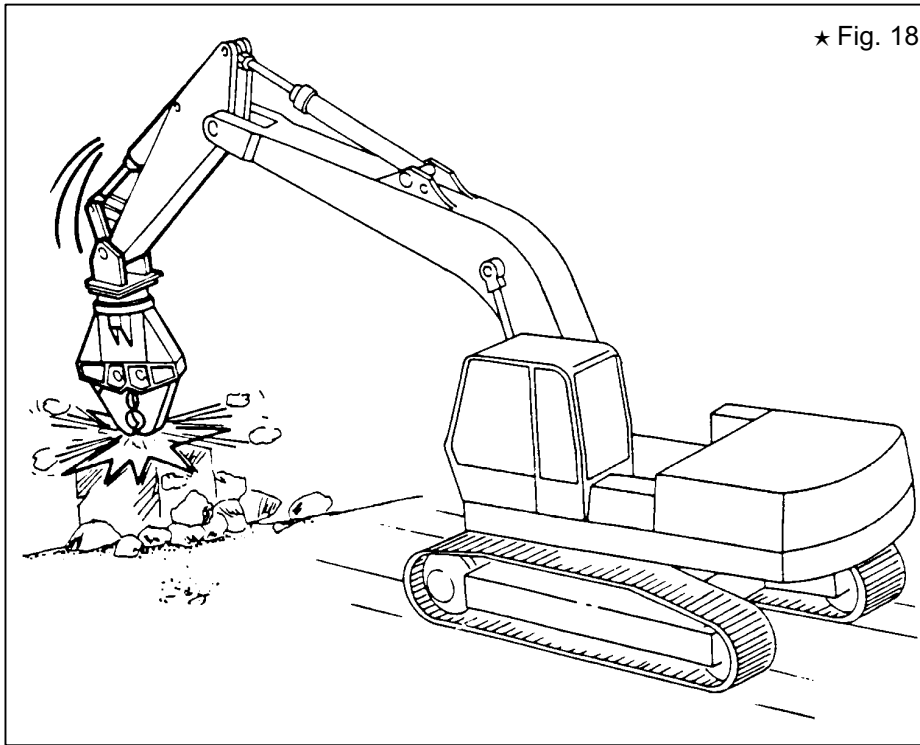
Never move the boom or the cutter when demolition is in progress. This will cause serious damage to the Combi cutter.



CAUTION!

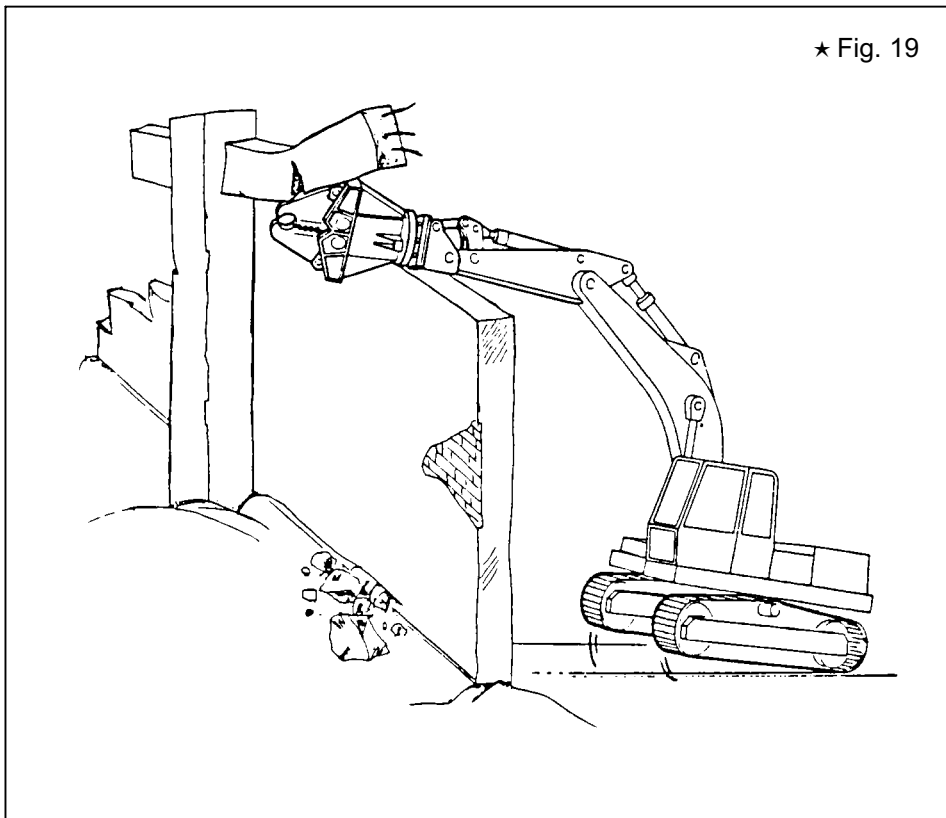
Never rotate the Combi cutter when demolition is in progress. This will cause serious damage to the Combi cutter and the boom.

Instructions on the correct use of the Combi cutter



CAUTION!

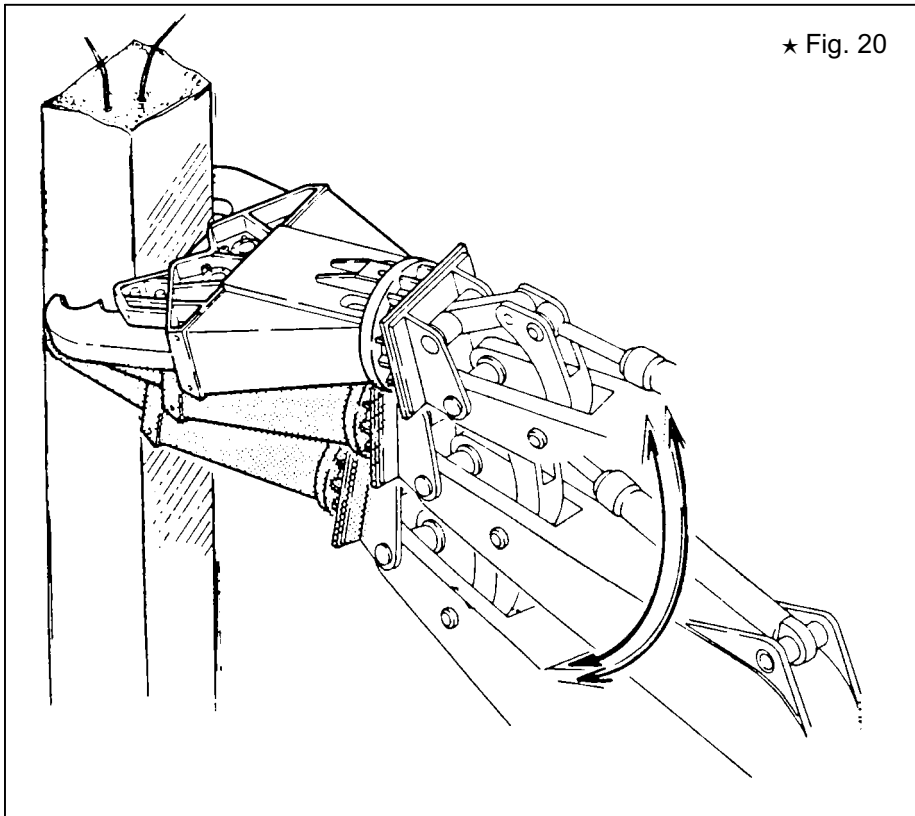
Never hack or pound with the Combi cutter since this will cause serious damage to the Combi cutter.



CAUTION!

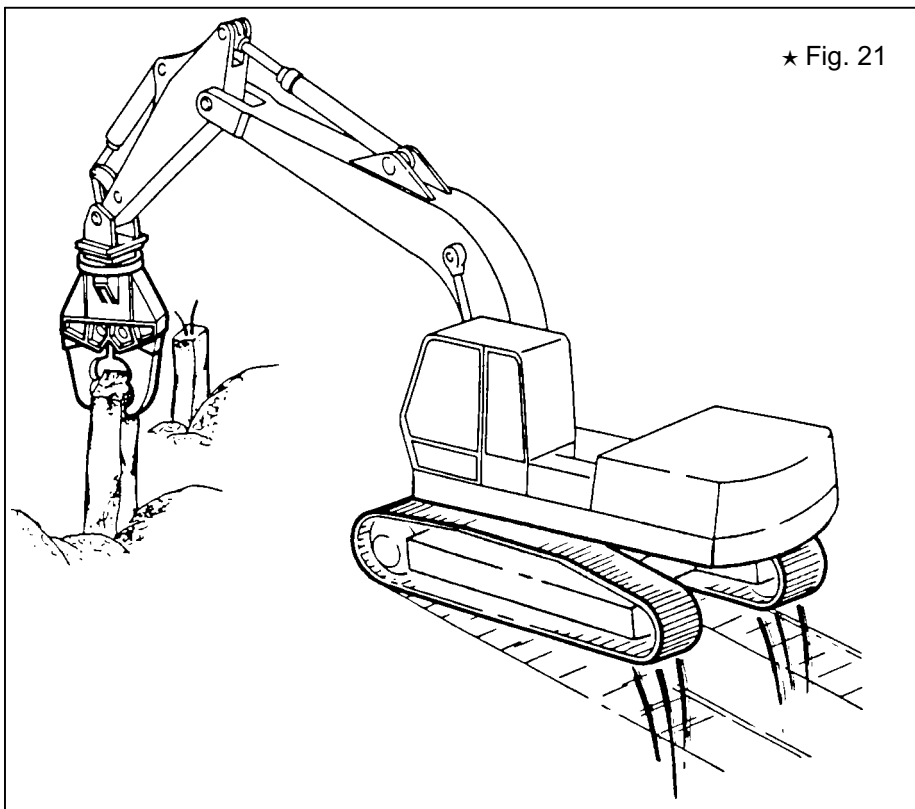
Never use the Combi cutter as a crowbar since this will cause serious damage to the Combi cutter.

Instructions on the correct use of the Combi cutter



CAUTION!

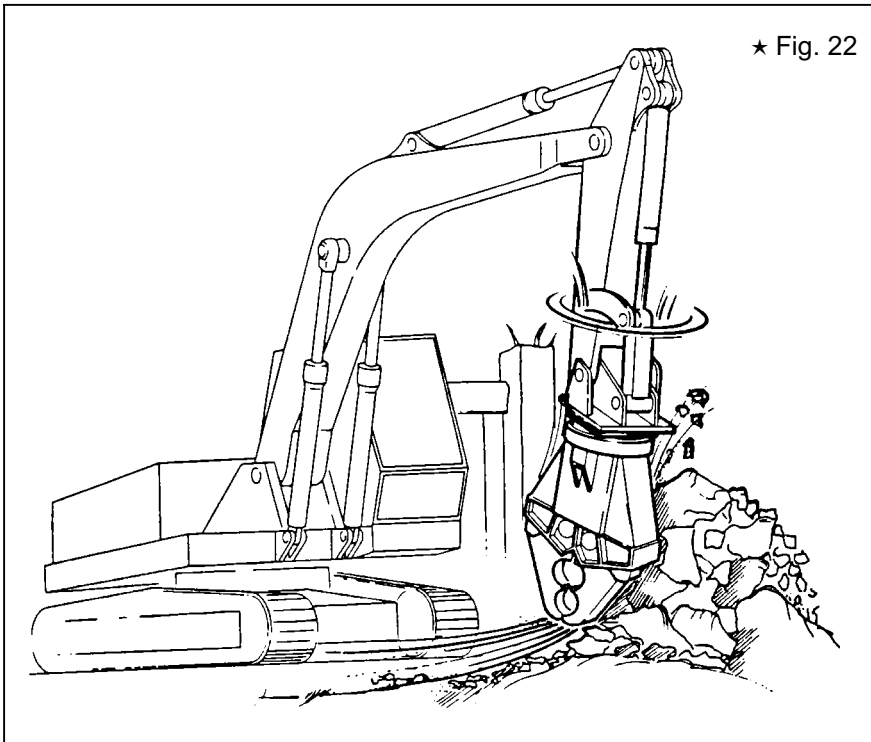
Never move the shovel cylinder when demolition is in progress. Bending movements of this nature will cause serious damage to the Combi cutter.



CAUTION!

Never pull at girders, supports and walls with the Combi cutter. This will damage both the Combi cutter and the adapter. The carrier may also become unstable and fall over.

Instructions on the correct use of the Combi cutter



CAUTION!

Never use the Combi cutter to clear away broken material. The Combi cutter is not designed for this kind of work.

7.5 Changing the CC 1700 U/S, CC 2500 U/S and CC 3300 U/S jaws

Before changing the jaws:

The cutter jaws must be changed on flat, firm ground.

An assistant is required when changing cutter jaws. Agree with the assistant on clear hand signals. The assistant must be instructed by the excavator driver.

The Combi cutter is connected, mechanically and hydraulically, to the mount.

The jaws of each pair are connected to each other with two half rings.



DANGER!

Single cutter jaws for combi cutters CC 1700 and CC 3300 manufactured in or before 2006 may have a transport lug.

The connected cutter jaws must not be transported by the transportation lug of the single jaw. The transportation lug is only designed for transportation of the single jaw alone.

Risk of shearing and crushing injuries!

After removal, secure the jaws to ensure they do not open unexpectedly.

Risk of accident!

After removal, secure the cutter jaws against falling over.

Risk of crushing!

Removing the cylinder pins displaces the bores for the piston rod and jaw.

Risk of crushing!

Use a drift of adequate length.

Step	
1.	Place the jaw pair near the carrier on the wide rear side of the double jaw.
2.	Close the Combi cutter's jaws (advance the hydraulic cylinder)
3.	CC 1700, CC 2500, CC 3300, from serial number 210: Insert pins in both bores for the piston rod eyes. CC 3300, up to serial number 209: Screw the screws approx. 12 mm out of the piston rod eyes. This will secure the piston rod preventing it falling down.
4.	Do not place the Combi cutter on the floor. Keep it suspended vertically from the carrier.
5.	Secure the hydraulic cylinder in place with two pins.
6.	Remove the locking rings from the cylinder pins. Remove the cylinder pins from the cylinder/cutter jaw connection point and remove the washer.
7.	Retract the hydraulic cylinder.
8.	Place the Combi cutter on the floor on the wide rear side of the double jaw. Lower the jaw housing so that it is in line with the jaw pair.
9.	Remove the cap bolts from the cover.
10.	Unscrew the cover.
11.	Fit the removal safety device, CC 1700: ident. no. 3363 0946 47 CC 2500: ident. no. 3363 0945 42, CC 3300: ident. no. 3363 0946 48.
12.	Drive out the main pin as far as it will go against the removal safety device. Secure it against sliding back in with a screw.
13.	Raise the Combi cutter at a steep angle. The disconnected jaw pair remains lying on the floor.
14.	Position the jaw housing at the correct angle to the new jaw pair. The jaw housing is guided by the jaw pair. Move the jaw housing so that the bores for the jaw housing and jaw pair are in alignment.
15.	Drive in the main pin and remove the removal safety device.
16.	Bolt the cover on the main pin, and tighten it by hand.
17.	Secure the cover in place with the hex bolts.
18.	Do not place the Combi cutter on the floor. Keep it suspended vertically from the carrier.
19.	Advance the cylinders.
20.	Align the bores for the cylinder pins. Fit the cylinder pins and spacer rings. Secure the cylinder pins and spacer rings using locking rings.
21.	Remove the pins for securing the hydraulic cylinders.
22.	CC 1700, CC 2500, CC 3300, from serial number 210: Remove the pins from both bores for the piston rod eyes. CC 3300, up to serial number 209: Fully screw in the piston rod eye screws and tighten them.
23.	Grease the Combi cutter.
24.	Store the removed jaw pair at a protected place.

7.6 Changing the CC 1700 U - CL, CC 1700 S - CL and CC 3300 B jaws

Changing the CC 1700 U - CL, CC 1700 S - CL and CC 3300 B cutter jaw set is only possible in a

workshop. For further details contact the Atlas Copco Customer Center/Dealer in your area.

7.7 Underwater applications



CAUTION!

The Combi cutter must never be used for underwater applications.

7.8 Working in high ambient temperature

The temperature of the hydraulic oil must be monitored to ensure it does not exceed 80 °C. If higher temperatures are measured in the tank, oil cooler must be fitted, and/or installation and

pressure-relief valve have to be checked. Only use hydraulic oils of sufficient viscosity. In summer and in tropical climates, the minimum requirement is a hydraulic oil of type HLP 68.

7.9 Working in low ambient temperature

For temperatures down to 20 °C below freezing there are no special regulations.

At temperatures below minus 20 °C, the carrier must be warmed up prior to use in the way described by the excavator manufacturer. In the majority of cases, carriers and attachments are kept in protected or even heated areas when not in use.

However, if the carrier and the Combi cutter are left out in the open, the carrier and all equipment must be warmed up before the Combi cutter can be started up. The excavator manufacturer's regulations must be observed in full.

Ensure that the hydraulic oil in the carrier is at least at 0 °C.

The Combi cutter cannot be started up until the oil temperature is over 0 °C.

Observe the excavator manufacturer's regulations.



CAUTION!

During operations, leave the excavator engine and pumps running even during breaks.

Note

The Combi cutter and excavator will not operate to full capacity until the oil temperature has reached at least 60 °C.



CAUTION!

Feeding hot hydraulic oil to an extremely cold Combi cutter will cause internal stresses in the unit resulting in its failure.

7.10 Operating the Combi cutter with the cylinders fully extended or retracted



CAUTION!

Operating the Combi cutter with the shovel/stick

cylinders fully extended or retracted must be avoided at all costs. These end positions are equipped with damping functions; continuous operation at full extension/retraction can result in damage to the hydraulic cylinders.

Remedy: Reposition carrier and/or boom.

8 Maintenance and care of the Combi cutter

8.1 General informations

In order to obtain the best performance from the Combi cutter, maintenance work should be carried out by the operator at the prescribed intervals.



DANGER!

Observe all relevant safety regulations when performing maintenance work.

The hydraulic system must be depressurised before all maintenance work on the Combi cutter!

Procedure as follows:

- Switch off engine but leave ignition switched on.
- Repeatedly actuate the switches for opening/closing/rotating Combi cutter.
- disconnect hydraulic hoses from Combi cutter

When working on the Combi cutter, ensure that no-one is standing between the open jaws.

Risk of injury!



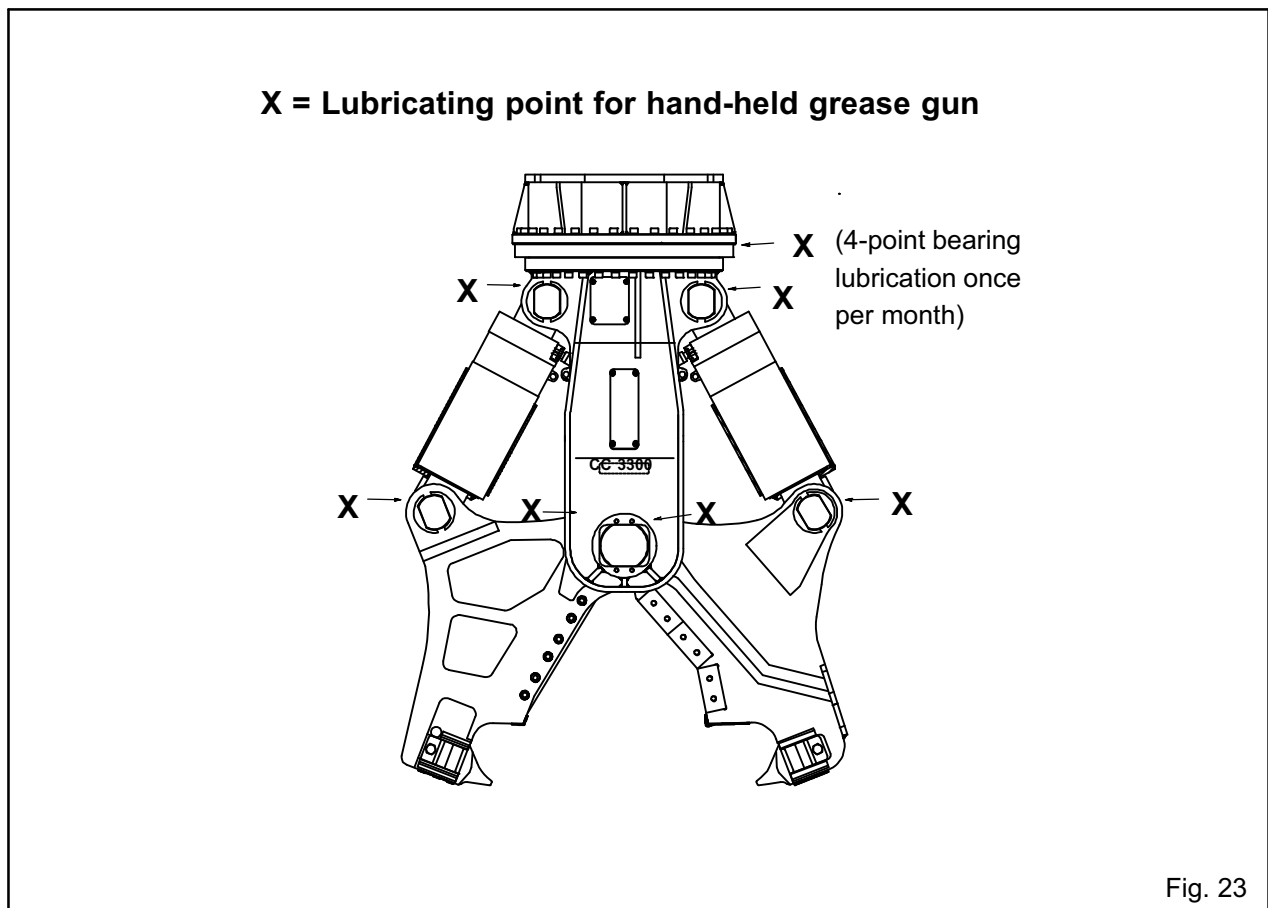
DANGER!

The non-return choke valves in the control valve block (see spare parts list for upper part - main components) are factory set to the oil flow rate required for cutter rotation. They settings must **not** be adjusted.

Risk of injury!

8.2 Maintenance work (to be carried out by the carrier driver)

8.2.1 Lubrication of the combi cutters CC 1700 U/S, CC 2500 U/S, CC 3300 U/S/B



The Combi cutter must be lubricated once every shift at all grease nipples on the pins (see Fig. 23).

Use Atlas Copco cutter grease, part ID no. 3363 0949 14 (is delivered in 400-g cartridges, in boxes of 12 cartridges), or KP2K greases, lithium soaped mineral oils of NLGI Class 2 with EP additives.

Four to six strokes of the grease gun (part ID no. 0909 1071 00) are adequate for lubrication.

CAUTION!

The lubricating sites on the four-point bearing (live ring) must be greased once every month.

8.3 Automatic lubrication using of the combi cutters CC 1700 U - CL, CC 1700 S - CL

8.3.1 Automatic lubrication using ContiLube® II

Combi cutters CC 1700 U - CL, CC 1700 S - CL are equipped with the ContiLube® II automatic lubrication unit as standard.

The ContiLube® II provides quasi-continuous lubrication to the link pin bearings. 4-point bearing

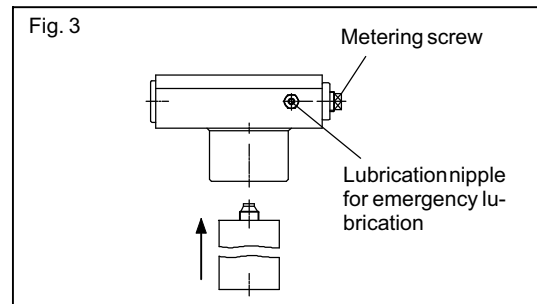
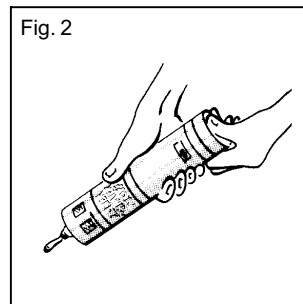
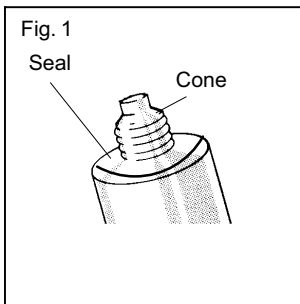
(live ring) must be lubricated as combi cutters CC 1700 U and CC 1700 S with a hand-held grease gun (see chapter 8.2.1).

ContiLube® II is attached beneath a protective hood to the upper part of the cutter housing.

8.3.2 Changing the lubricant cartridge

The diagrams below depict the logical steps involved in preparing and fitting a new cartridge.

- Open the cartridge by taking off the cap and, on sealed cartridges, by cutting off the seal above the cone (Fig. 1)
Important: Do not cut off or damage the cone itself!
- Depress the cartridge piston with your thumb until lubricant emerges from the threaded end (Fig. 2).
- Screw the cartridge into the bore provided in the pump unit as far as it will go. The ContiLube® II is now ready for operation (Fig. 3).



8.3.3 Operating the ContiLube® II

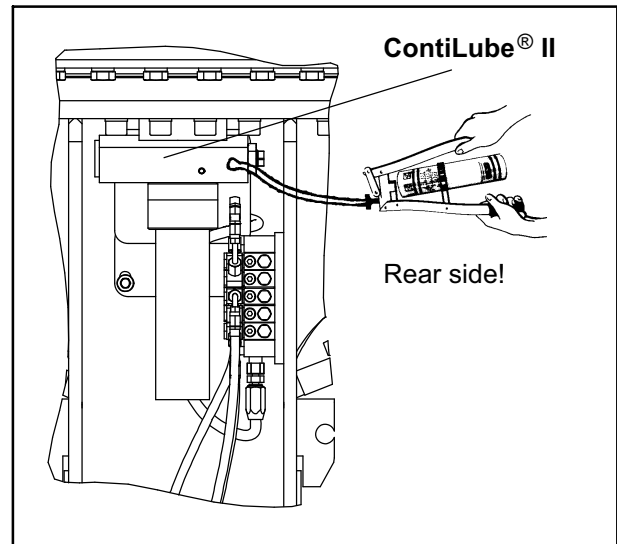
Please observe the following information:

- ContiLube® II is self-bleeding, i.e. the system requires no additional bleeding.
- The piston end of the cartridge must never be sealed off, as this would render delivery impossible.
- The amount of lubricant delivery per stroke can be set using the metering screw, allowing the unit to be adapted to differing requirements.
Turn the screw clockwise = smaller delivery per stroke
Turn the screw anticlockwise = greater delivery per stroke
- Once the cartridge is empty, the pump unit must be sealed off to prevent water or dust penetration. Close the unit with a dust cap or simply leave the empty cartridge in position until a new cartridge is available.
- Emergency lubrication is possible via the lubrication nipple on the front of the ContiLube® II.
See chapter 8.3.2, Fig. 3.
- The connections for hoses used to operate the ContiLube® II unit must be checked once a week to ensure they have not come loose.

8.4 Manual lubrication upon failure of ContiLube® II

Manual lubrication is required if the lubrication unit has failed. Lubrication intervals: once per shift. 4 to 6 shots from a hand-held grease gun are sufficient.

For preference, only cutter grease should be used for lubrication.



8.4.1 Checking for cracks

Before starting work, check the Combi cutter and adapter for cracks.

(Visual inspection of load-bearing components and welds).

8.4.2 Checking for wear

Cutter jaws, blades and teeth must be checked regularly for wear.

Worn blades and teeth must be replaced in good time.

8.4.3 Checking the hydraulic lines before starting work

Carry out a visual check on all lines (pipes and hoses) from the pump to the Combi cutter and back to the tank. Tighten any loose screw couplings and

hose clamps. Damaged pipes/hoses must be replaced.

8.4.4 Checking the adapter bolts for wear

This visual check is only possible when the Combi cutter has been dismantled from the excavator. If excessive wear is detected (cracks, notches,

noticeable indentations etc.) the screws must be replaced.

8.4.5 Checking and cleaning the hydraulic oil filter

In the return line of the hydraulic system there must be installed an oil filter. This filter, with a mesh width not exceeding 50 micrometers, must be fitted with a magnetic separator and changed at regular intervals.

On a new Combi cutter the oil filter should be changed after the first 50 operating hours and thereafter 500 operating hours must be controlled and replaced as necessary.

8.4.6 Checking screw couplings

All screw unions must sit tightly or must be retightened with the specified torques.

The table in Section 8.9 and Fig. 38 show the types

and locations of the connecting sites with the corresponding values for the tightening torques and widths across flats.

8.4.7 Checking the blade clearance

CC 1700, CC 2500, CC 3300:

The cutter clearance must not exceed 2 mm.

The procedure for correcting blade clearance is described in section 8.6

8.5 Care and replacement of cutter blades

When the cutting edge becomes worn or damage has been sustained during operation, the cutter blade must be reversed or replaced. The blade can only be reversed if the contact face is undamaged (see Fig. 24).

When fitting new blades, always use new fastening screws.

Use only genuine Atlas Copco fastening screws.

Missing blades must be replaced immediately. Working without blades causes serious damage to the blade seat on the cutter jaw. Repairing the blade seat is highly time-consuming and expensive.



DANGER!



CAUTION!

When removing the blades, it is imperative that a copper drift be used to knock them out. The blades are made of hardened steel. If they are struck with a hand hammer, metal chips may fly off and cause injury.

Always wear protective glasses.

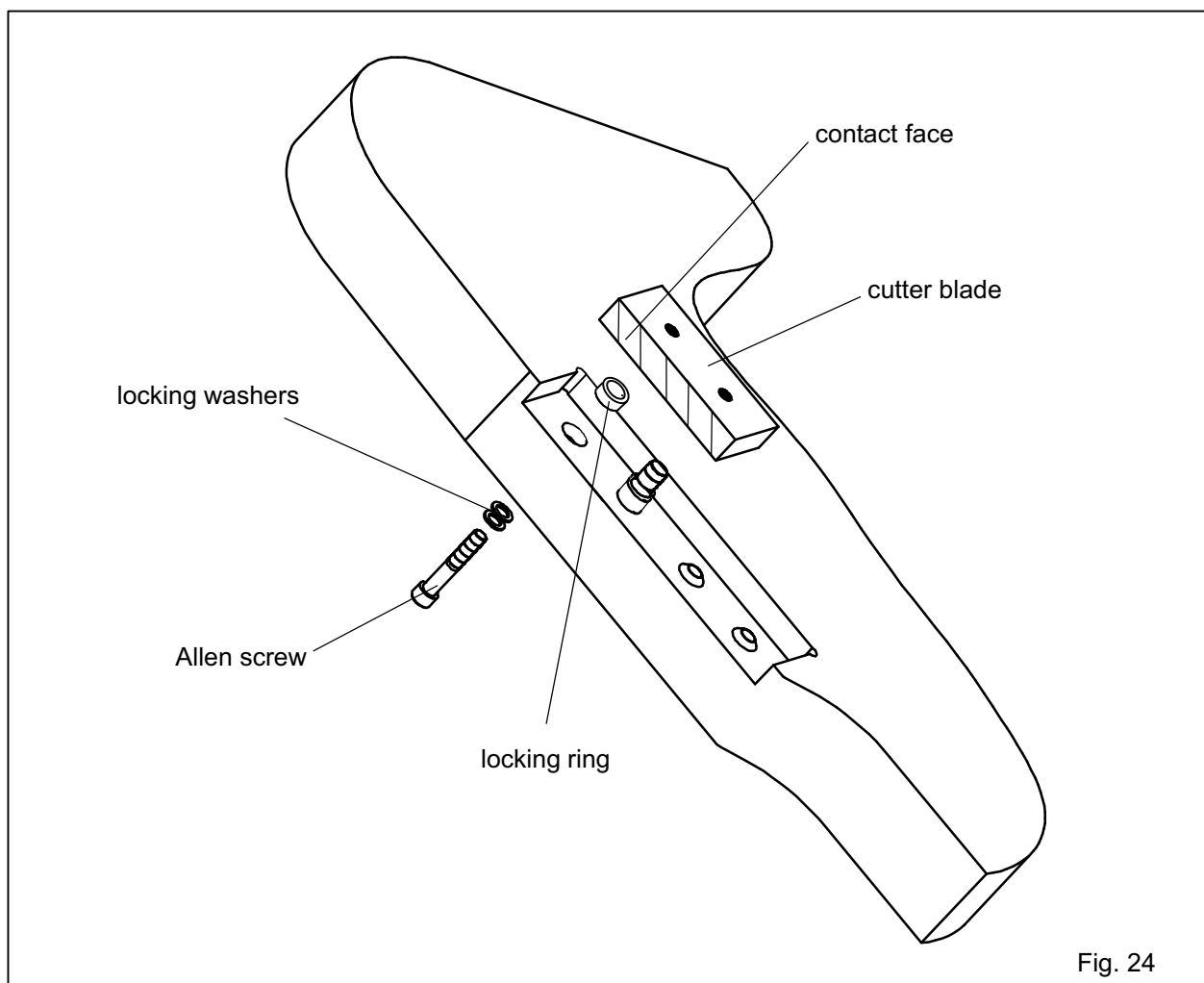


Fig. 24

8.6 Checking and correcting the blade clearance

8.6.1 Checking the blade clearance CC 1700, CC 2500 and CC 3300

- Close the jaws until the first pair of cutters overlaps.
 - Measure blade clearance using a feeler gauge
 - Continue to close the jaws until the second pair of cutters overlaps.
 - measure blade clearance using a feeler gauge
 - Continue to close the jaws until the third pair of cutters overlaps.
 - measure blade clearance using a feeler gauge.
- If the clearance exceeds **2 mm**, resetting is required, correcting the blade clearance.

8.6.2 Correcting the blade clearance CC 1700, CC 2500 and CC 3300



DANGER!

When working on the cutter, ensure that no-one is standing between the open jaws. **Risk of injury!**



DANGER!

Metal fragments expelled at high velocity

The cutter blades are made of hardened steel. If the cutter blade pairs come in contact with each other when the cutter jaws close, fragments may be expelled as projectiles and cause serious injuries and damage property.

Wear safety glasses when making adjustments to the blade clearance.

Only shim the blades pairs so there is minimum blade clearance when the cutter jaws close.

Step	
1.	Open the Combi cutter to the full extent.
2.	Loosen the fastening bolts on the cutters.
3.	Push the shims between the cutters and their seats.
4.	Tighten the fastening bolts on the cutters with the specified torque (see Table 8.7).
5.	Again check the cutter clearance.

8.7 Replacing the cutter teeth

Worn teeth must be replaced in good time. In many cases, the damaged retainer bolt can only be unscrewed by mechanically damaging the nut or the bolt.



CAUTION!

Missing teeth must be replaced immediately. Working without teeth causes serious damage to the tooth support and the cutter jaw. Repairing the cutter jaws is highly time-consuming and thus expensive.

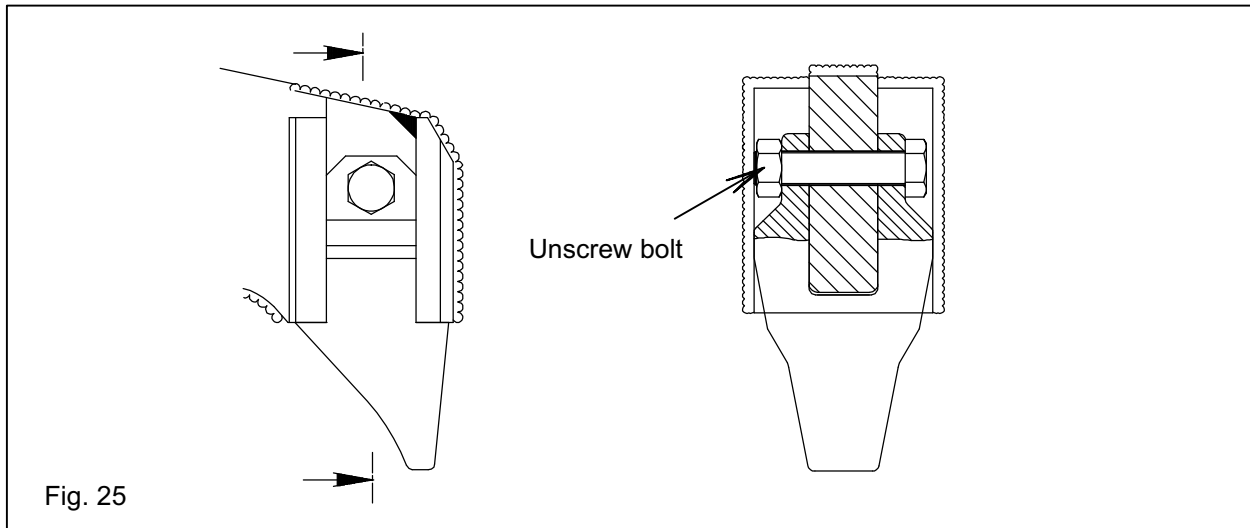


Fig. 25

8.8 Welding instructions for cutter jaws

When the armouring in the lower cutter jaw area becomes worn, it can be renewed (hard facing) by a qualified welding specialist. When renewing the armouring, it must be ensured that there is still a buffer layer on the base metal. If this is not the case, the buffer layer must first be welded in place before

hard facing.

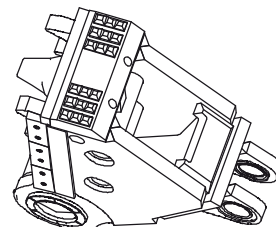
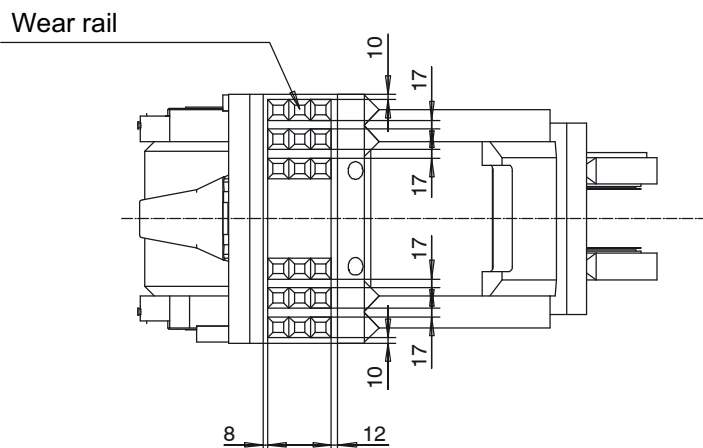
Before welding, the cutter jaw in question must be removed from the cutter and fitted components such as blades and teeth removed.

In order to achieve the best possible results, the following welding regulations must be observed.

Welding instructions:

Welding filler:	EN 12534 Mn 3 Ni 1 Mo
Shield gas:	EN 439-M 21
Preheating for welding:	150–180 °C
Interpass temperature:	max. 160 °C
Annealing to eliminate hydrogen:	1 hour at 150–200 °C
Cooling:	under cover

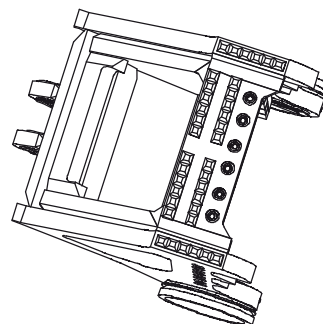
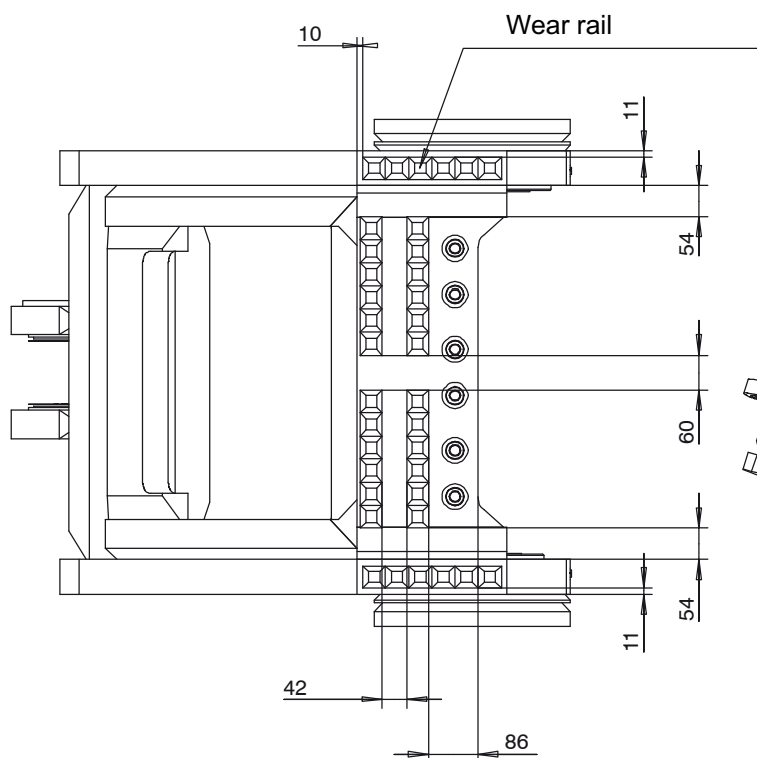
8.8.1 Presentation - cutter jaw CC 3300 B (single)



CAUTION!
Only the welding filler indicated may be used.

Fig. 26

8.8.2 Presentation - cutter jaw CC 3300 B (double)



CAUTION!
Only the welding filler indicated may be used.

Fig. 27

Welding regulations for hard-facing layer on cutter jaws:

Preheating temperature for buffer layer: max. 160-180 °C

Welding filler for buffer layer: DCMS-IG EN 12070 G Cr Mo 1 Si,
Material no. 1.7339

Shield gas: EN 439-M 21

Interpass temperature: max. 160 °C

Preheating temperature for welding: max. 100 °C

Interpass temperature: max. 200 °C

Annealing to eliminate hydrogen: 1 hour at 150–200 °C

Filler for hard facing: DIN 8555/MSG-1-GZ-250 Dura EA-250-SG
DIN 8555/MSG-1-GZ-60 Dura EA-600-SG

Shield gas: EN 439-M 21

Cooling: under cover

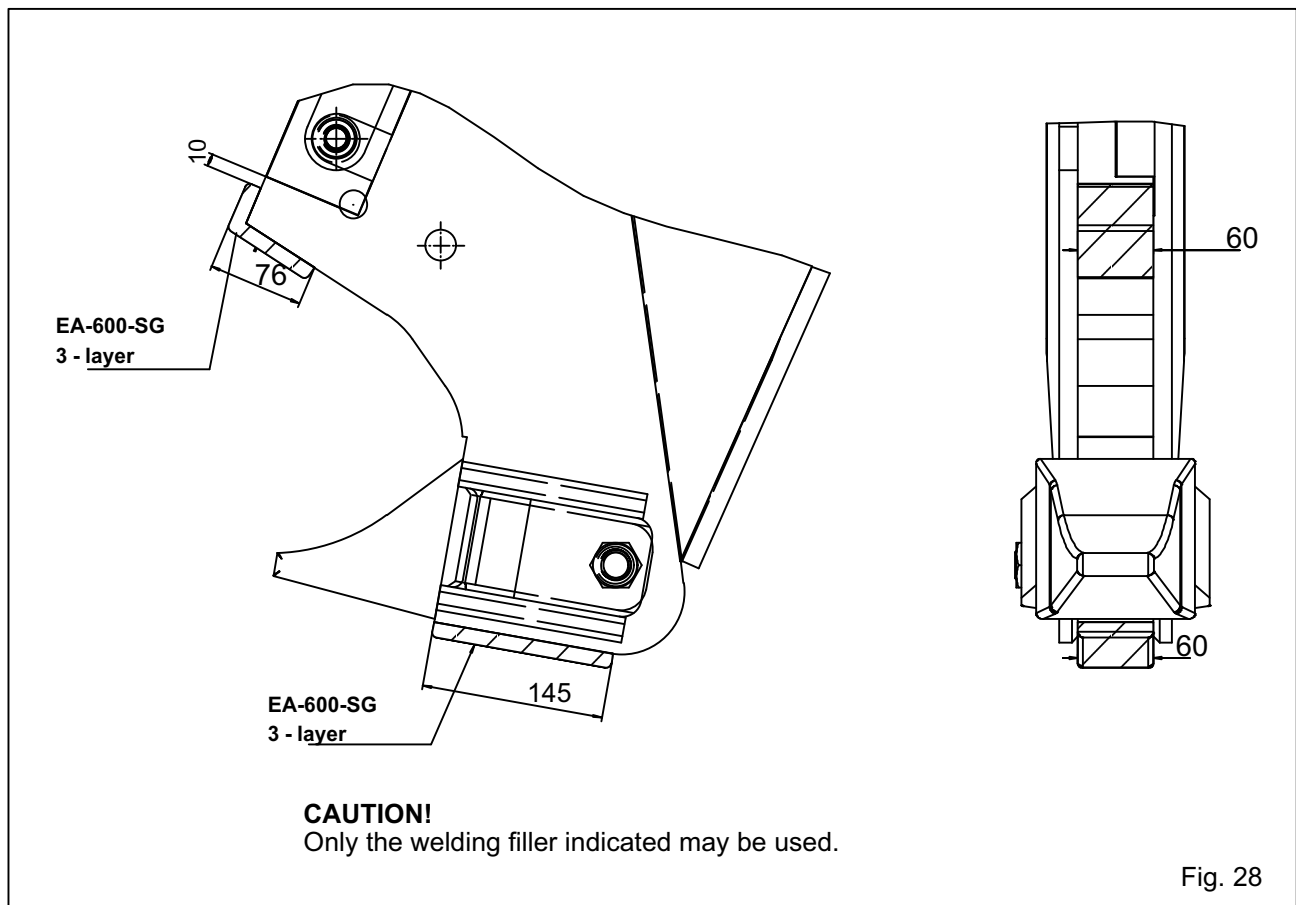
Fig. 26 to 37 shows the zone which is armoured by hard facing.

Note

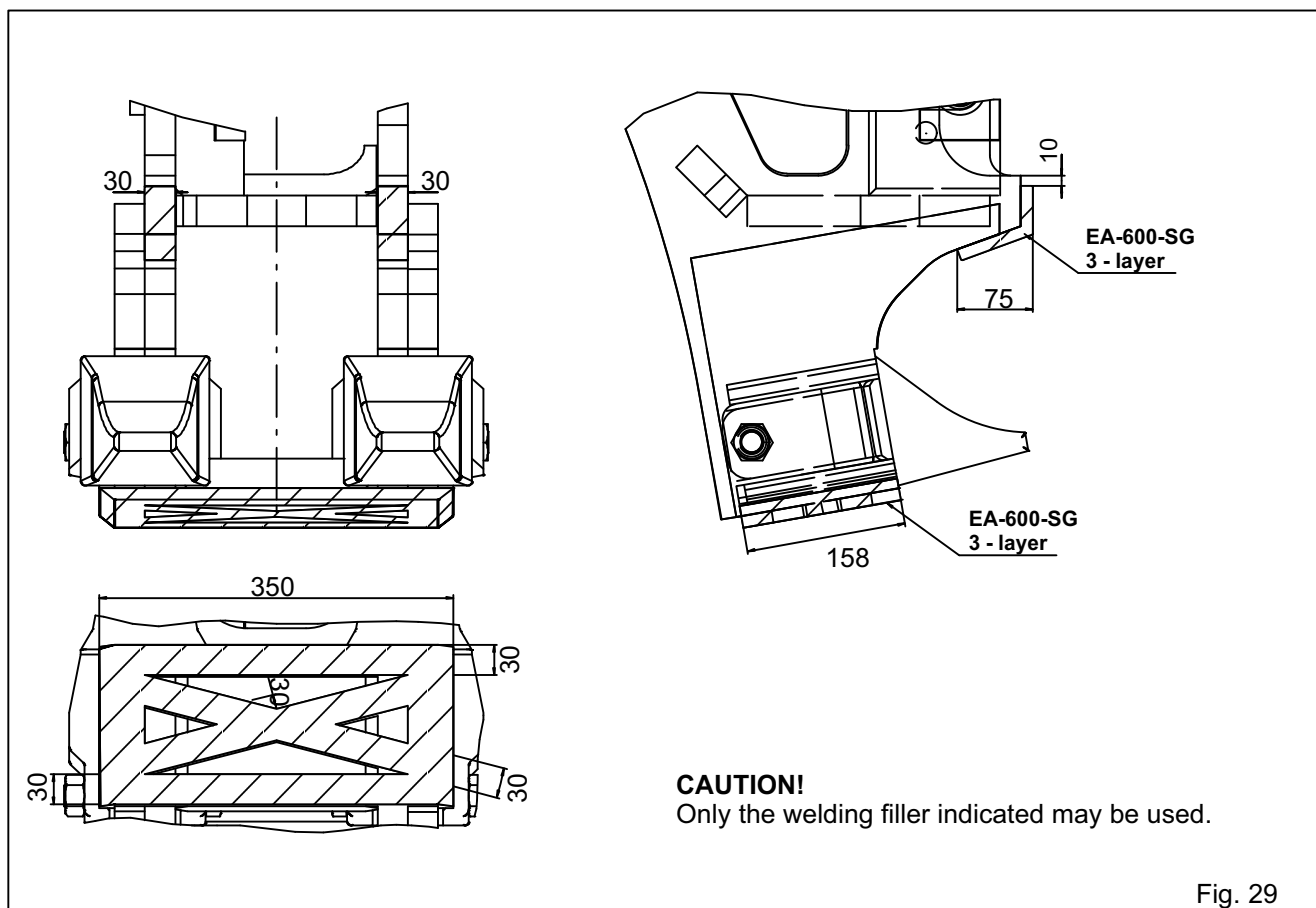
Hard facing may only be applied to a buffer layer.

The number of facing layers is also indicated.

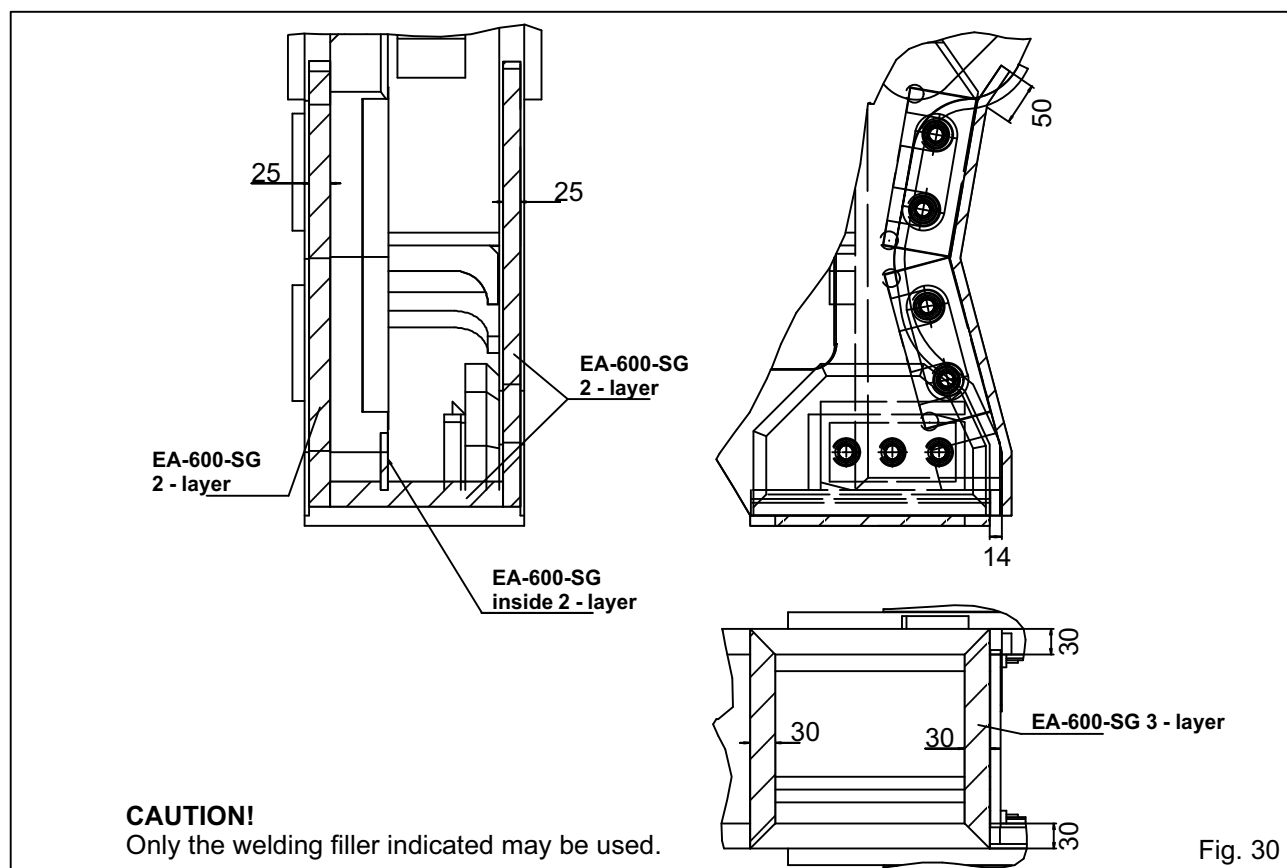
8.8.3 Presentation - cutter jaw CC 1700 U (single)



8.8.4 Presentation - cutter jaw CC 1700 U (double)



8.8.5 Presentation - cutter jaw CC 1700 S (double)



8.8.6 Presentation - cutter jaw CC 2500 U (single)

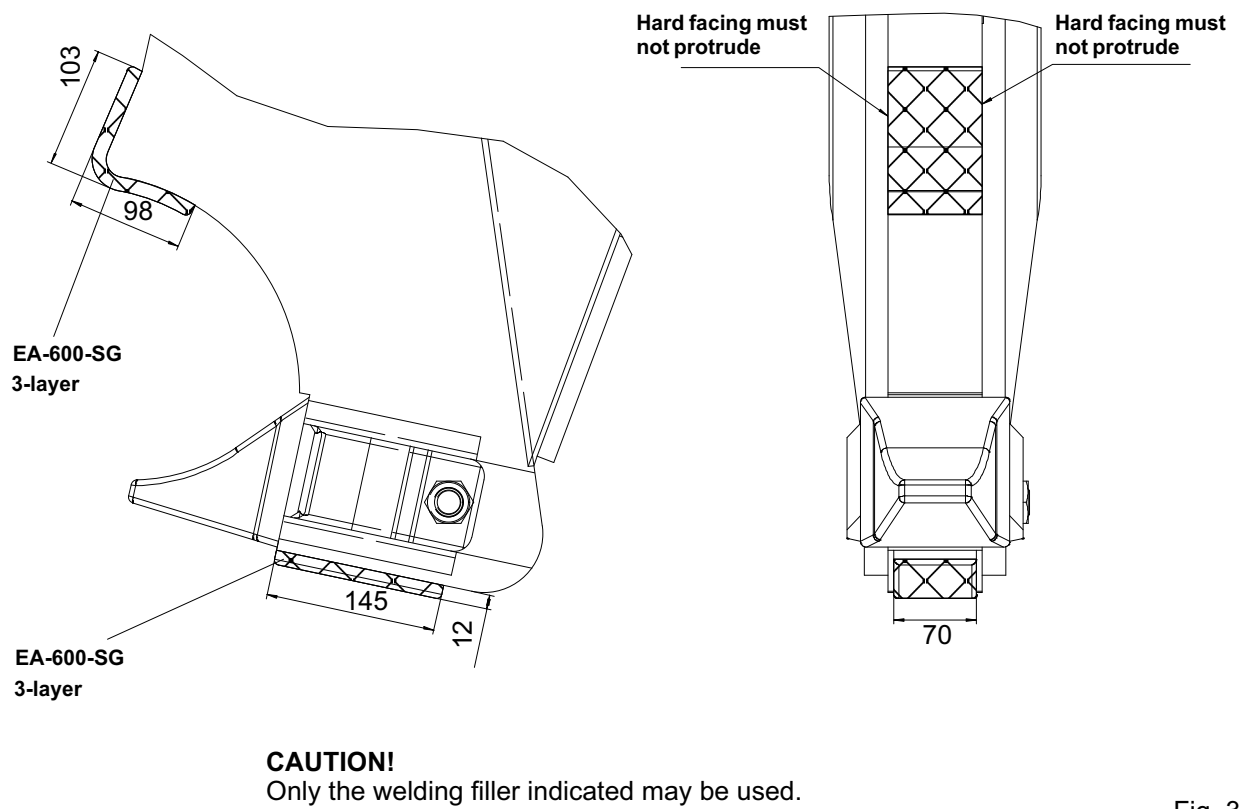


Fig. 31

8.8.7 Presentation - cutter jaw CC 2500 U (double)

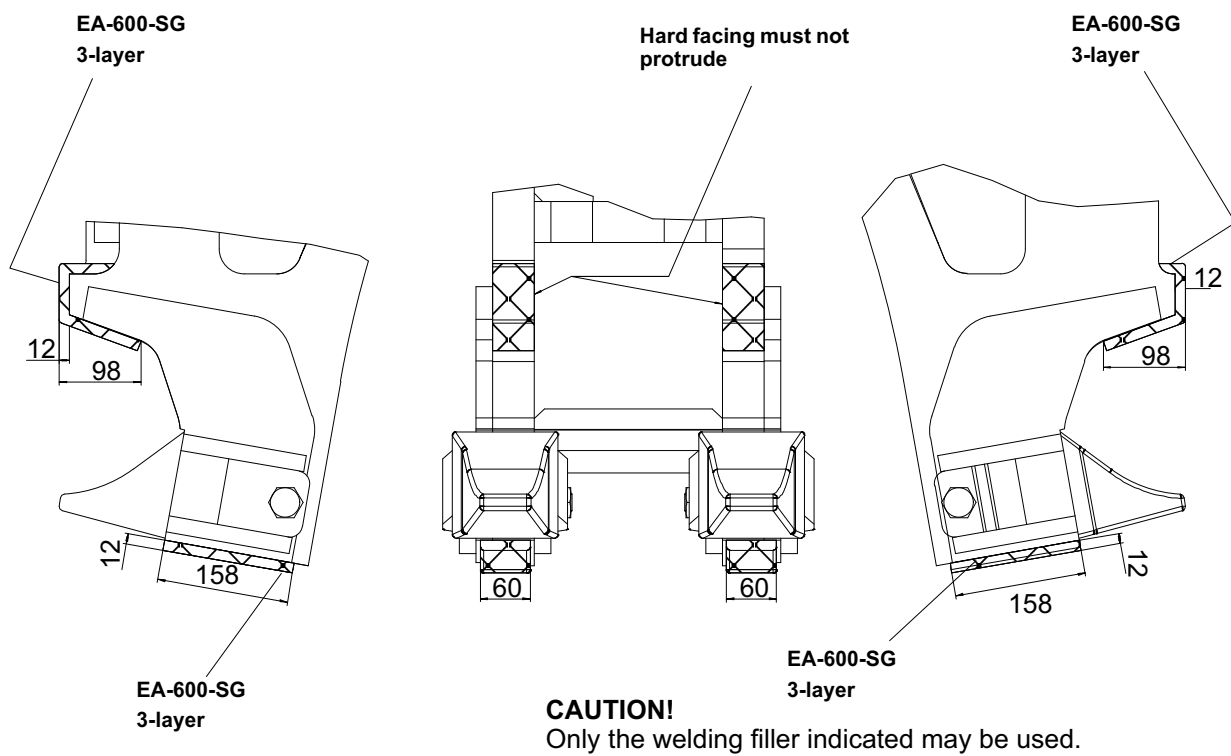
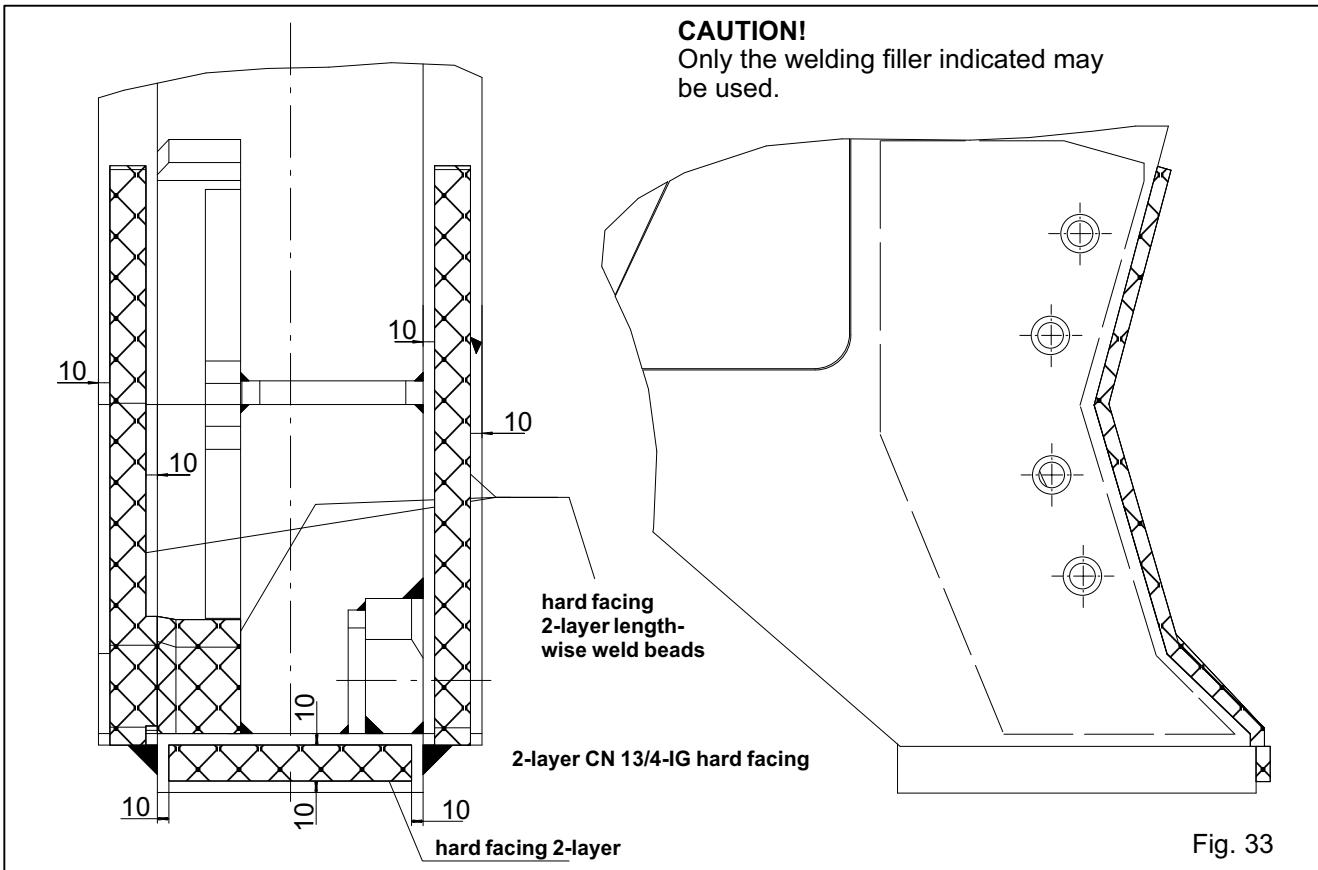
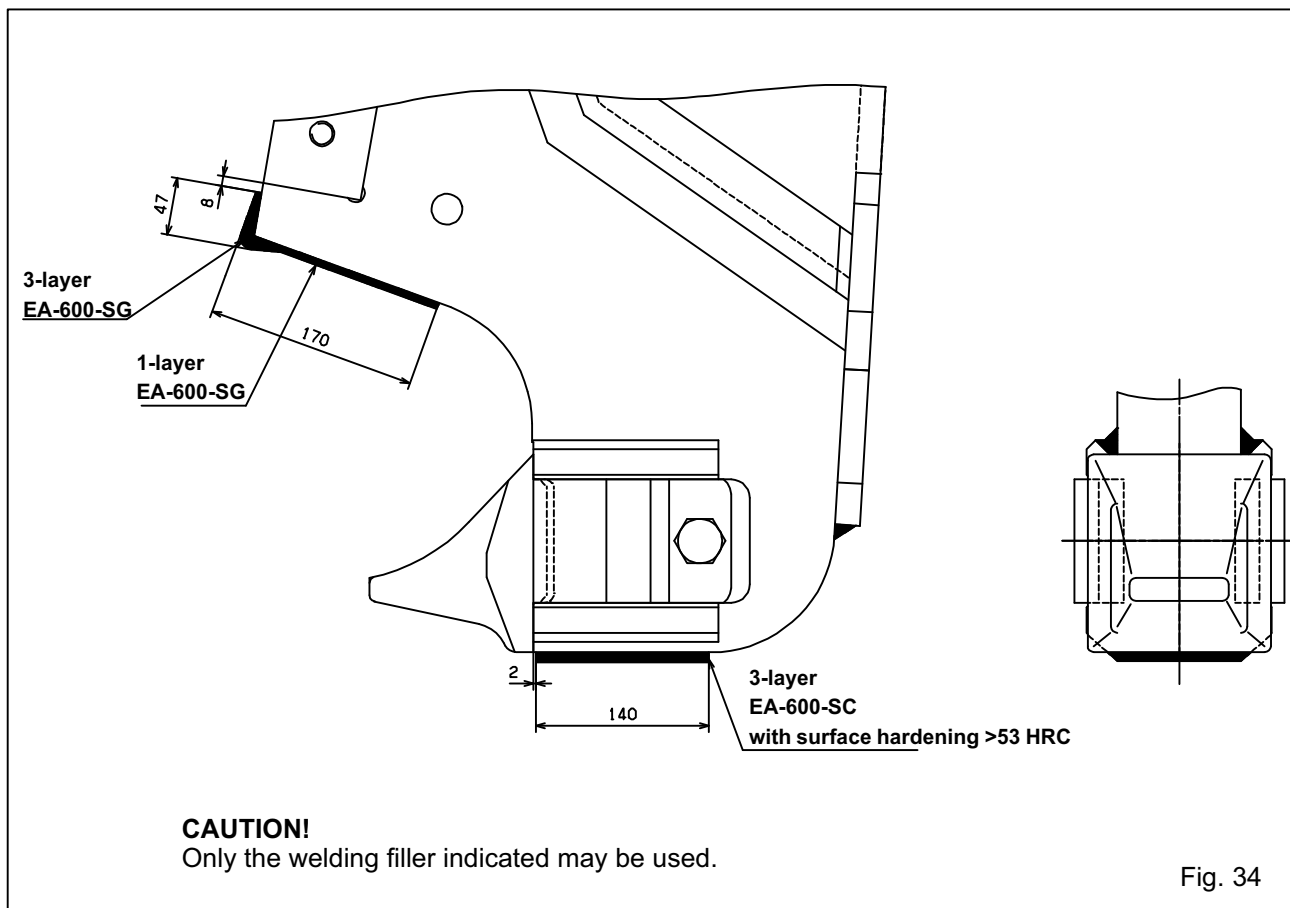


Fig. 32

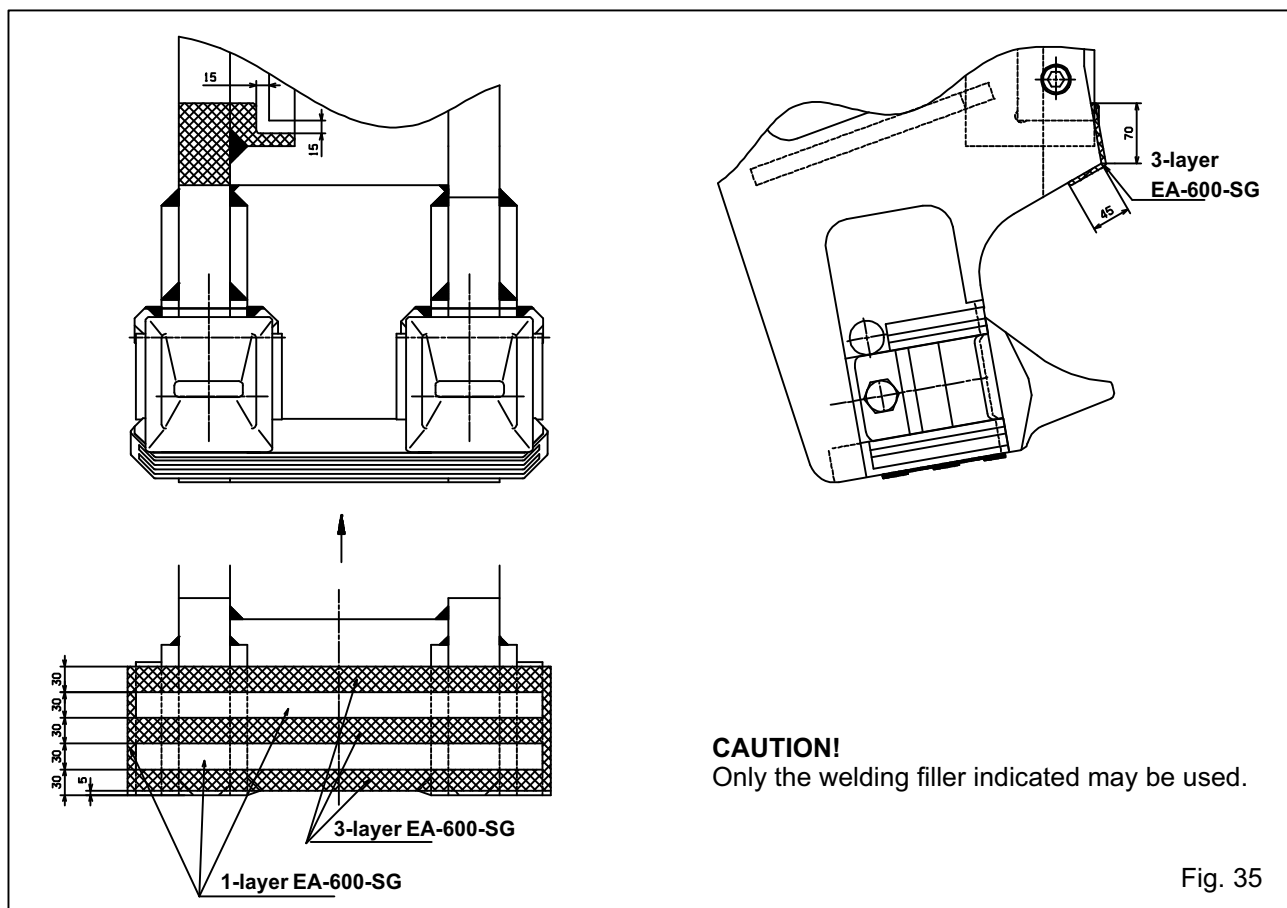
8.8.8 Presentation - cutter jaw CC 2500 S (double)



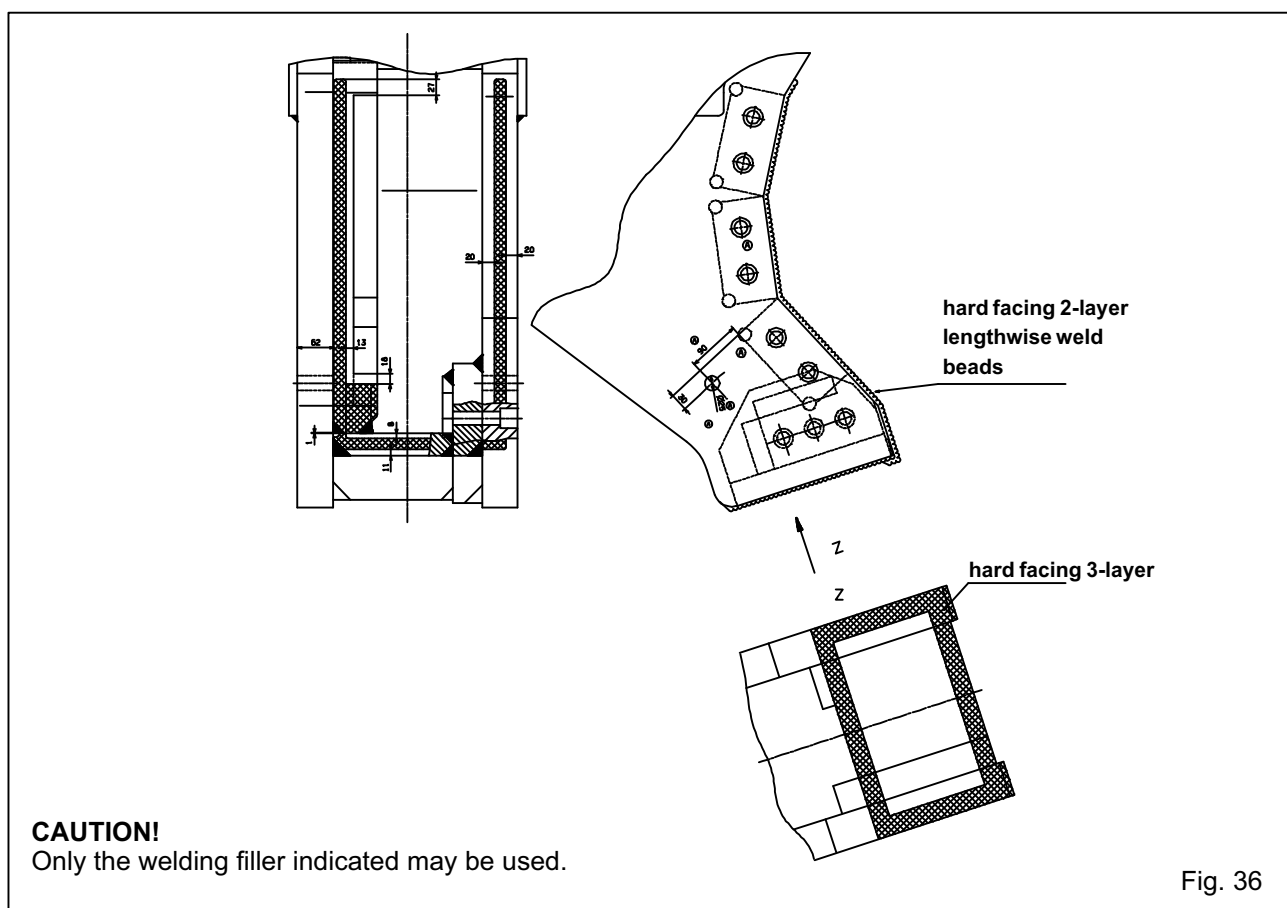
8.8.9 Presentation - cutter jaw CC 3300 U (single)



8.8.10 Presentation - cutter jaw CC 3300 U (double)



8.8.11 Presentation - cutter jaw CC 3300 S (double)



Welding regulations for hard-facing layer on cutter jaws S single:

Preheating temperature for buffer layer: ... > 100 °C

Welding filler for buffer layer: DCMS-IG wire electrode EN 12070 G CrMo1Si
(Material no. 1.7339)

Shield gas: EN 439-M 21

Interpass temperature: 100–180 °C

Preheating temperature for

hard facing welding: 100 °C

Interpass temperature: 100–200 °C

Filler for hard facing: EN 12072 G 13/4

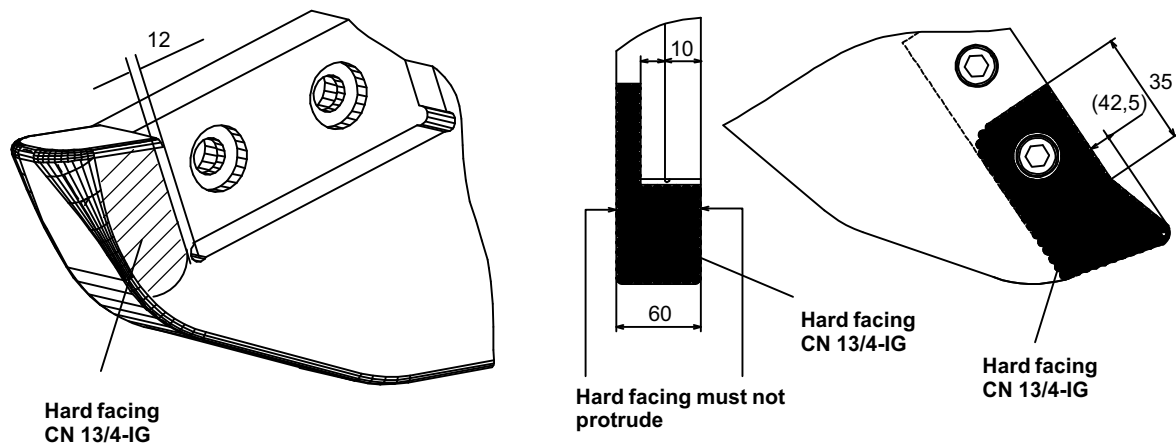
..... CN 13/4 - IG wire electrode (Fa. Böhler)

Shield gas: EN 439-M 21

Cooling: under cover

Hardness 38 - 42 HRC

8.8.12 Presentation - cutter jaw CC 1700 S (single)

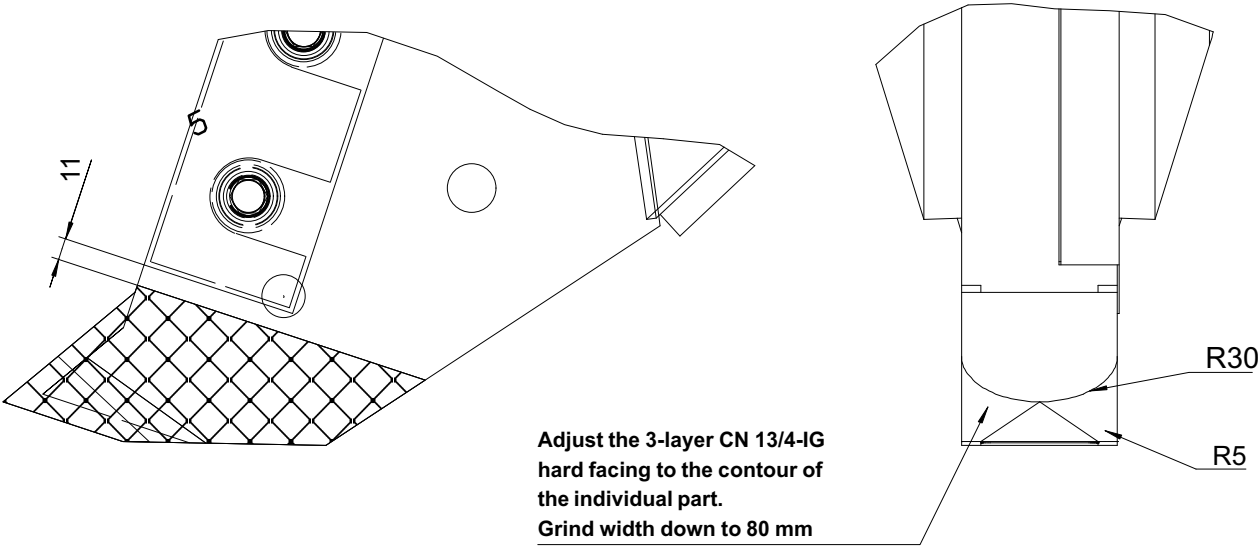


CAUTION!

Only the welding filler indicated may be used.

Fig. 37

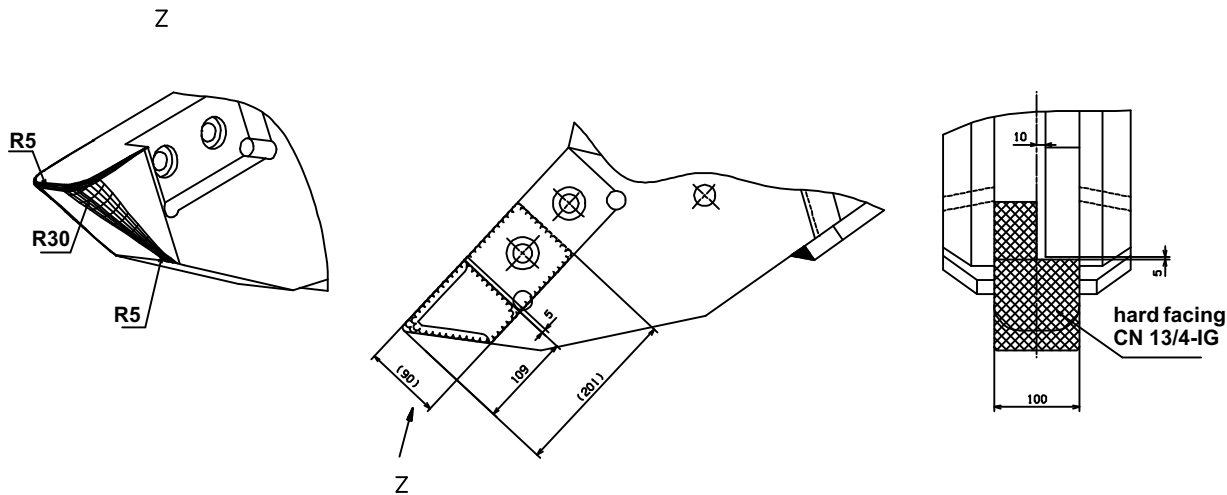
8.8.13 Presentation - cutter jaw CC 2500 S (single)



CAUTION!
Only the welding filler indicated may be used.

Fig. 38

8.8.14 Presentation - cutter jaw CC 3300 S (single)



CAUTION!
Only the welding filler indicated may be used.

Fig. 39

8.9 Screw couplings with tightening torques

Connection point	No.	Interval	Combi cutter model	Tool required	Tightening torque [Nm]
Adapter with upper cutter part ★	1	daily	CC 1700	Allen key size 17	390
			all models	Allen key size 22	1500
			CC 3300	Allen key size 27	2300
Hydraulic oil ports	2	weekly	all models	Allen key size 10	75 + 10
Hydraulic port „rotate cutter“	3	weekly	all models	Jaw spanner size 24	70 + 10
Cutter blades	4	daily	all models	Allen key size 17	530 + 30
4-point bearing ★★	5	weekly	CC 1700	Allen key size 14	270 + 10
			CC 2500 CC 3300	Allen key size 17	530 + 30
4-point bearing ★★	6	weekly	CC 1700	Allen key size 14	255 + 30
			CC 2500	Allen key size 17	530 + 30
			CC 3300	Allen key size 17	560 + 30
Tip of tooth	7	daily	all models U/B	Jaw spanner size 36	920 + 30
Hose connections ContiLube® II	-	weekly	CC 1700 U/S - CL II	Socket and jaw spanners of varying sizes	-

Please refer to Fig. 40

★ Apply anti-seize to the threads of the cylindrical bolts before screwing them in. The contact face of the bolt head and the locking rings must be free of lubricant.



CAUTION!

Loose screws/bolts should be tightened without exceeding the tightening torque. Broken screws/bolts must be replaced immediately.

Risk of serious damage!

★★ The Allen screws for the 4-point bearing (no. 5 and 6) must only be replaced by genuine Atlas Copco screws.

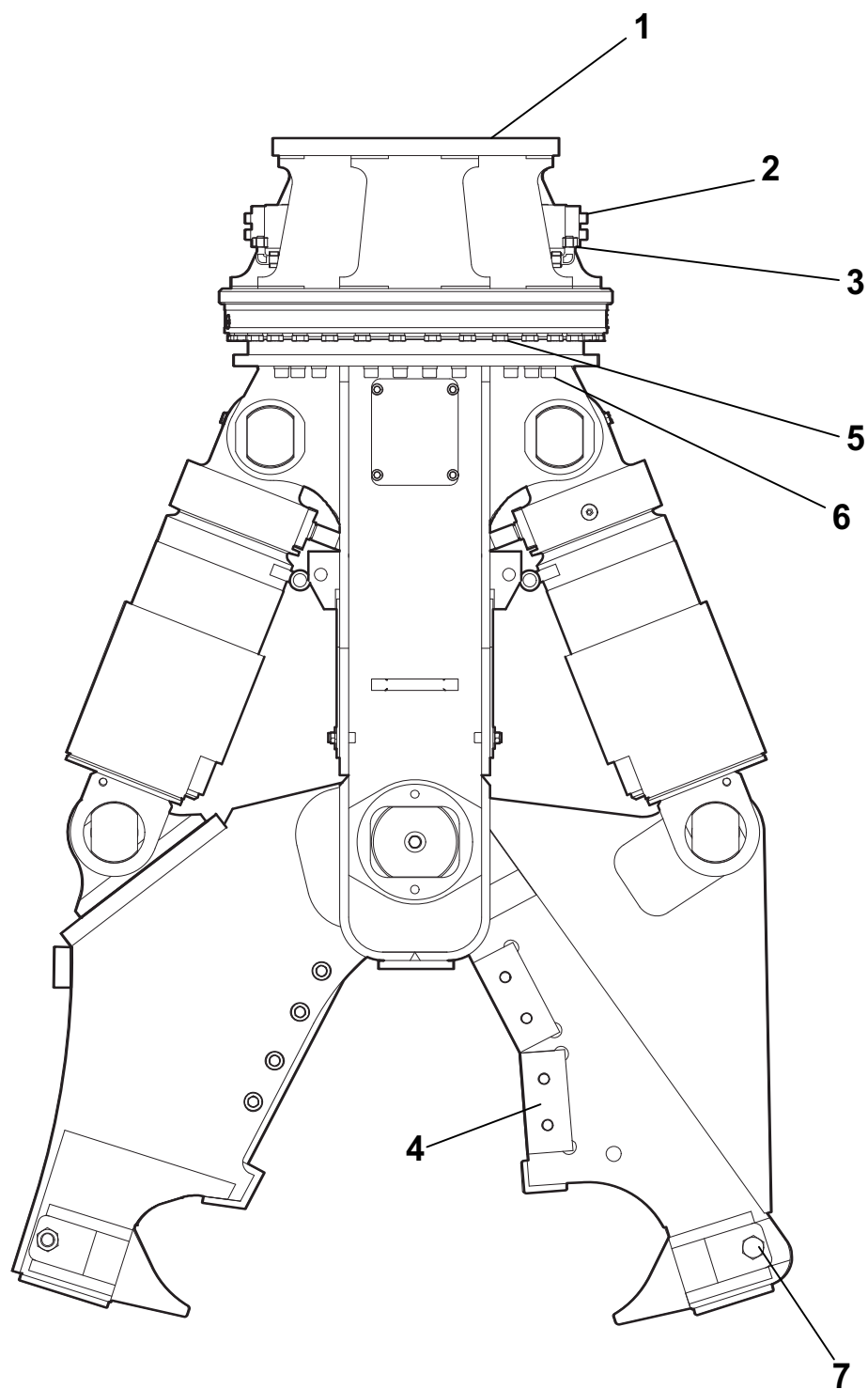


Fig. 40

9 Troubleshooting

9.1 Combi cutter does not work

Cause	Remedy	By
Check valve in line A or B closed	Open check valve	Carrier driver
Defective couplings blocking lines A/B	Replace defective coupling parts	Workshop
Electrical equipment for cutter hydraulics defective	Check electrical equipment for cutter hydraulics, repair as necessary	Workshop
Rocker switch defective	Check rocker switch, repair as necessary	Workshop
Magnet on switch-on valve defective	Replace magnet	Workshop

9.2 Insufficient breaking force

Cause	Remedy	By
Operating pressure too low, connections for lines A and B mixed up	Connect up lines A and B correctly	Carrier driver
Operating pressure too low	Correct operating pressure	Workshop or Atlas Copco Customer Center/ Dealer in your area

9.3 Combi cutter does not cut

Cause	Remedy	By
Blades worn/broken. Blade clearance too great	Check blades, if necessary reset or replace	Workshop

9.4 Combi cutter cannot be rotated

Cause	Remedy	By
Rotary motor/gear unit/transmission defective	Replace defective parts	Atlas Copco Customer Center/ Dealer in your area

9.5 Operating temperature too high

Cause	Remedy	By
Pump delivery too high - excess oil flows to tank via pressure relief valve	Correct carrier engine speed. Correct pump pilot system if available	Carrier driver or Atlas Copco Customer Center/ Dealer in your area
Pressure relief valve defective	Fit new pressure relief cartridge	Atlas Copco Customer Center/ Dealer in your area
Oil level in tank too low	Top up oil	Carrier driver or workshop

9.6 Oil leaks from hydraulic ports

Cause	Remedy	By
Cap nuts loose	Tighten cap nuts	Carrier driver

9.7 Oil or grease leaks from ContiLube® II

Cause	Remedy	By
Screw couplings are loose	Tighten screw couplings	Carrier driver

9.8 Insufficient lubrication

Cause	Remedy	By
Intervals between lubrication too long	Lubricate more frequently	Carrier driver

10 Disposal



CAUTION!

Dispose of the Combi cutter and the hydraulic oil in accordance with the applicable statutory provisions on environmental protection.

- Put the Combi cutter out of operation and disassemble it as described in section [6.7](#).
- Dispose of the Combi cutter in line with all applicable regulations or consult an authorised and specialised recycling company.

11 Technical specifications

Model	CC 1700	CC 1700	CC 2500	CC 2500
Type	U	S	U	S
Service weight ★ [kg]	1900	1750	2840	2550
Carrier weight class [t]	15 - 25	15 - 25	22 - 35	22 - 35
Oil flow rate [l/min]	150 - 250	150 - 250	150 - 250	150 - 250
Operating pressure [bar]	350	350	350	350
Max. jaw opening [mm]	740	370	860	400
Rotation capability [°]	> 360 hydraulic			
Oil flow rate [l/min] (rotating mechanism)	30	30	50	50
Max operating pressure [bar] (rotating mechanism)	210		170	
Blade (for cutting steel) [N/mm²]	< 370 (see section 7.3)			
Blade length [mm]	350	380	350	380
Connecting thread hose connections (hydraulic motor)	Non-soldered coupling with cutting ring DIN 2353 or 24° conical seal M 20 x 1,5			
Connecting thread hose connections (Hydraulic cylinder)	SAE 1" 6000 PSI			
Min. hose size [mm] (nominal ID)	25			
Pipes [mm]	30 x 4			

★ Combi cutter with medium-sized adapter.

Please note that the working weight can be considerably higher, depending on the adapter plate.

The safety regulations from the manufacturer of the excavator must be observed when the excavator is transported with mounted Combi cutter.

Model	CC 3300	CC 3300	CC 3300
Type	U	S	B
Service weight ★ [kg]	3480	3280	4400
Carrier weight class [t]	30 - 50	30 - 50	38 - 55
Oil flow rate [l/min]	220 - 350	220 - 350	220 - 350
Operating pressure [bar]	350	350	350
Max. jaw opening [mm]	1000	440	570
Rotation capability [°]	> 360 hydraulic		
Oil flow rate [l/min] (rotating mechanism)	30	30	30
Max. operating pressure [bar] (rotating mechanism)	170		
Blade (for cutting steel) [N/mm ²]	< 370 (see section 7.3)		
Blade length [mm]	525	525	705
Connecting thread hose connections (hydraulic motor)	Non-soldered coupling with cutting ring DIN 2353 or 24° conical seal M 20 x 1,5		
Connecting thread hose connections (Hydraulic cylinder)	from serial number 269: SAE 1" 6000 PSI to serial number 270: SAE 1¼" 6000 PSI		
Min. hose size [mm] (nominal ID)	32		
Pipes [mm]	38 x 4		

★ Combi cutter with medium-sized adapter.

Please note that the working weight can be considerably higher, depending on the adapter plate.

The safety regulations from the manufacturer of the excavator must be observed when the excavator is transported with mounted Combi cutter.

12 EC Declaration of Conformity (EC Directive 2006/42/EC)

We, Atlas Copco Construction Tools GmbH, hereby declare that the machines listed below conform to the provisions of EC Directive 2006/42/EC (Machinery Directive), and the harmonised standards mentioned below.

Hydraulic demolition cutter	Part number	Year of first marketing
CC 1700 U	3363 0935 41	05/2006
CC 1700 U - CL II	3363 1042 01	11/2009
CC 1700 S	3363 0935 51	05/2006
CC 1700 S - CL II	3363 1042 51	11/2009
CC 2500 U	3363 0937 51	03/2007
CC 2500 S	3363 0932 01	03/2007
CC 3300 U	3363 0876 20	10/2004
CC 3300 S	3363 0876 21	10/2004

Following harmonised standards were applied:

- ◆ EN 12100-1
- ◆ EN 12100-2
- ◆ EN ISO 14121-1
- ◆ EN ISO 9001:2000

Technical Documentation authorised representative:

Stephan Schröer
Atlas Copco Construction Tools GmbH
45143 Essen
Germany

General Manager:

Lothar Sprengnetter

Manufacturer:

Atlas Copco Construction Tools GmbH
45143 Essen
Germany

Place and date:

Essen, 29 December 2009

13 EC Declaration of Conformity (EC Directive 2006/42/EC)

We, Atlas Copco Construction Tools GmbH, hereby declare that the machines listed below conform to the provisions of EC Directive 2006/42/EC (Machinery Directive), and the harmonised standards mentioned below.

Hydraulic demolition cutter	Part number	Year of first marketing
CC 3300 B	3363 1001 01	04/2010

Following harmonised standards were applied:

- ◆ EN 12100-1
- ◆ EN 12100-2
- ◆ EN ISO 14121-1
- ◆ EN ISO 9001:2000

Technical Documentation authorised representative:

Stephan Schröer
Atlas Copco Construction Tools GmbH
45143 Essen
Germany

General Manager:

Lothar Sprengnetter

Manufacturer:

Atlas Copco Construction Tools GmbH
45143 Essen
Germany

Place and date:

Essen, 2010-04-15

Index

A

- Accident prevention regulations, 7
- Applications, 12
- Attaching the adapter to the Combi cutter, 16
- Automatic lubrication using ContiLube® II, 34
- Automatic lubrication using of the combi cutters CC 1700 U - CL, CC 1700 S - CL, 34

C

- Care and replacement of cutter blades, 37
- CE-name plate, 11
- Changing the CC 1700 U - CL, CC 1700 S - CL and CC 3300 B jaws, 31
- Changing the CC 1700 U/S, CC 2500 U/S and CC 3300 U/S jaws, 29
- Changing the lubricant cartridge, 34
- Checking and cleaning the hydraulic oil filter, 36
- Checking and correcting the blade clearance, 38
- Checking for cracks, 36
- Checking for wear, 36
- Checking screw couplings, 36
- Checking the adapter bolts for wear, 36
- Checking the blade clearance, 36
- Checking the blade clearance CC 1700 and CC 3300, 38
- Checking the hydraulic lines before starting work, 36
- Combi cutter cannot be rotated, 51
- Combi cutter does not cut, 50
- Combi cutter does not work, 50
- Components of the Combi cutters CC 1700 and CC 2500, 13
- Components of the Combi cutters CC 1700, CC 2500 and CC 3300, 13
- Correcting the blade clearance CC 1700 and CC 3300, 38

D

- Dismounting from excavator, 19
- Dismounting the Combi cutter from the excavator for short or lengthy periods of non-use, 19
- Disposal, 52

E

- Environment-friendly fluids, 14
- Explanation of the symbols used in this operating instructions, 7

F

- Foreword, 6
- Functional test, 20

G

- General informations, 12 , 32
- Grease, 15

I

- Installation, 14
- Instructions on the correct use of the Combi cutter, 22
- Insufficient breaking force, 50
- Insufficient lubrication, 51

L

- Limitations when cutting steel, 21
- Lubrication of the combi cutters CC 1700 U/S, CC 2500 U/S, CC 3300 U/S/B, 33

M

- Main components, 13
- Maintenance and care of the Combi cutter, 32
- Maintenance work (to be performed by the carrier driver), 33
- Manual lubrication upon failure of ContiLube® II, 35
- Marking according with machinery directive 2006/42/EC, 11
- Media/consumables, 14

- Mineral hydraulic fluids, 14
- Mounting the Combi cutter on the excavator - hydraulic aspects, 18
- Mounting the Combi cutter on the excavator - mechanical aspects, 17

N

- name plate, 11

O

- Oil leaks from hydraulic ports, 51
- Oil or grease leaks from ContiLube® II, 51
- Operating temperature too high, 51
- Operating the Combi cutter, 20
- Operating the Combi cutter with the cylinders fully extended or retracted, 31
- Operating the ContiLube® II, 34

P

- Presentation - cutter jaw CC 1700 S (double), 42
- Presentation - cutter jaw CC 1700 S (single), 46
- Presentation - cutter jaw CC 1700 U (double), 42
- Presentation - cutter jaw CC 1700 U (single), 41
- Presentation - cutter jaw CC 2500 S (double), 44
- Presentation - cutter jaw CC 2500 S (single), 47
- Presentation - cutter jaw CC 2500 U (double), 43
- Presentation - cutter jaw CC 2500 U (single), 43
- Presentation - cutter jaw CC 3300 B (double), 40

- Presentation - cutter jaw CC 3300 B (single), 40
- Presentation - Cutter jaw CC 3300 S (double), 45
- Presentation - Cutter jaw CC 3300 S (single), 47
- Presentation - Cutter jaw CC 3300 U (double), 45
- Presentation - Cutter jaw CC 3300 U (single), 44

R

- Replacing the cutter teeth, 39

S

- Scope of supply, 12
- Screw couplings with tightening torques, 48
- Start-up the Combi cutter, 20
- Switching the Combi cutter on/off from the carrier, 19
- symbols, 7

T

- Technical specifications, 53
- Transportation and storage, 15
- Troubleshooting, 50

U

- Underwater applications, 31

W

- Welding instructions for cutter jaws, 39
- Working in high ambient temperature, 31
- Working in low ambient temperature, 31



Atlas Copco Construction Tools GmbH
Helenenstrasse 149 • 45143 Essen
P. O. Box 10 21 52 • 45021 Essen
Federal Republic of Germany
Telephone +49 201 633 - 0
Internet: www.atlascopco.com

Your partner:

A large, empty rectangular box with a thin black border, occupying the bottom right portion of the page. It is positioned below the "Your partner:" text.