



ZIJTVELD

CE Operating and maintenance manual

Combi Cutter
Type CC350

Introduction



Dear user,

The Multi grab is a piece of equipment for excavators. The Multi grab is available in various weights, capacities and versions and is always a fast and purpose-built device.

It is imperative you read this manual and follow all the instructions given when working with our machinery in accordance with our recommendations.

The Multi Grab products are provided with a CE marking, thereby complying with all the necessary European regulatory safety regulations.

It is essential to follow the safety regulations at all times.

These safety regulations refer to those laid out in this manual, including both the operating instructions for excavators and the safety regulations that apply to the vicinity in which the Multi grab product is being used, maintained and repaired.

Modifications made to the Multi Grab may only be implemented with the written consent of the manufacturer. Only under these circumstances do the warranty conditions and CE liabilities remain applicable.

Warning



- The excavator with a Multi Grab may only be operated by a qualified person.
- Maintenance and/or repairs may only be carried out by appropriately trained and competent personnel.
- Prevent dangerous work situations. Stay at a safe distance from moving parts.
- Ensure that whilst operating the machinery no other people are within the working vicinity of the excavator with selector grab.
- Maintenance or repair work must only be carried out when the engine is turned off.
- Refer to the safety regulations before starting on any maintenance or repair work.
- Replace defective parts only with original parts from the manufacturer.
- Failure to replace defective parts with original parts from the manufacturer will result in cessation of the entire warranty and CE liability.

Content	Page
EU declaration of compliance	04
Safety regulations	05
Conditions of guarantee	06
Operation	07
Daily maintenance	08
Lubrication schedule	09
Exploded view	10
Part list 1	11
Part list 2	12
Part list + exploded view cylinder	13
Part list + exploded view C.O.D.	14
Tightening torques	15
Technical specifications	16

® Zijtveld Grippers is a registered brand name of Zijtveld Grippers BV te 's-Graveland, Nederland. None of the content of this publication may be copied elsewhere without the express permission of Zijtveld Grippers BV. The manufacturer reserves the right to make alterations or modifications to products and literature at all times.

EU declaration of compliance



(Guideline 2006/42/EC)



Manufacturer Zijtveld Grippers B.V.
Address De Boomgaard 1
 's Graveland

Hereby declares that Zijtveld Gripper®

Type	CC350
Serial number	

meets all the required machine guidelines (Guideline 2006/42/EC, as most recently updated) as well as national legislative implementation of this directive.

Attention: Any adjustment that is made to this product without written consent on the manufacturer, makes this declaration void and invalid.

We should draw your attention to the fact that the combi cutter product is designed to be assembled with another machine, and that the product, on the grounds of the machine Guide Line, can only be used once the whole machine is in accordance to the conditions laid down by European regulations.

Date

.....

(signed)

The Combi Cutter should always be attached to an excavator of the correct weight, class and capacity of machine. Refer to the data information plate on the grab and consult the technical specifications in this manual. When in doubt contact the supplier.

The weight of the Combi Cutter, increased by the weight of the load being picked up, must never exceed the maximum allowance of lifting power. For further information consult the excavator manual.

It is prohibited for people to be within the rotation range of the machine and grab. Keep in mind that material being lifted that extrude from the grab will enlarge the rotation range.

It is always possible that material can fall out of the excavator's jaw. For this reason, never rotate the machinery above people, machines nor vehicles.

Always pick up a long load at its centre of gravity, to prevent the excavator from either rotating or tipping over. It is not permissible to use the grab to hit or pound.

Whilst connecting or disconnecting, lubricating or other maintenance work, the Combi Cutter must be stable and on a flat surface. Before performing lubricating or other maintenance work the engine should always be shut down.

Warning

Never work on the hydraulic system if the system is still under pressure! Keep hands away from moving parts at all times.

The manufacturer cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this publication are, therefore, not all-inclusive. If a tool, procedure, work method or operating technique that is not specifically recommended by the manufacturer is used, then you must assure yourself that it is safe for you and others.

You should also ensure that the product will not be damaged or made unsafe by the operation, lubrication, maintenance or repair procedures that you choose.

Terms of guarantee



The manufacturer provides a warranty of 12 months from the date of delivery.

All defective parts proven to be caused by faults in either manufacture, production or material are covered by warranty.

Defective parts that are replaced and fall under guarantee become property of the manufacturer. They must be kept available and returned immediately, in complete and unaltered condition, upon the first request from the manufacturer.

Any claim that is made under guarantee will only be taken into consideration once a written appeal is made to the dealer or manufacturer. This must be done directly after the damage or fault occurs and at least within 24 hours of any irregularities and problems arising.

All claims under conditions of the warranty must contain the following data; the type of machine the product has been mounted on, the serial number of the grab, the record of the defective part(s) and a description of the fault, photographs, copy of the delivery papers and invoice and a copy of the piece of equipment concerned.

Minor repairs can be carried out in consultation with the dealer; necessary parts which fall under the warrantee, will be delivered without charge. For larger repairs the Combi Cutter should be sent to your dealer or manufacturer for repairs or modifications. The work and necessary parts are free of charge. However, transport costs and call-out charges to and from your dealer or manufacturer are not covered.

The manufacturer is not liable for consequential loss caused by a defective Combi Cutter (consequential loss to excavators, consequential loss due to a stationary excavator or the suspending of work activity).

EXCLUDED FROM GUARANTEE

- Damage caused by faulty assembly of a machine and/or the hydraulic system.
- Defects resulting from improper repairs and/or maintenance including that carried out by an unauthorised third party.
- Defects arising from neglect or improper execution of preventive maintenance procedures e.g. regular lubrication or greasing.
- Defects to parts which are subject to normal wear like blades.
- Consequential loss caused by failure to replace normal wearing parts in time.

N.B. If defective or worn parts are replaced by non-original parts, the entire warrantee and liability will cease to apply.

Before taking the machine into operation and to ensure the good functioning of the apparatus, it is important that the following points are checked and correspond to the technical specifications as shown on the information plate and in the manual.

- The type and weight of the Combi Cutter must conform to weight and machine class of the intended excavator.
- The oil flow and the pressure for rotating the Multi grab should be checked and adjusted.
- Beware: the return pressure of the rotating oil at a continuous level may be at a maximum of 25 bar and only briefly (maximum of 10% of the working time).
- The oil flow and pressure of the pinching (opening and closing) of the tree grab needs to be controlled and adjusted.
- Check if the hydraulic quick release hitch is in good order and screwed on firmly.
- Check if the ball valves and valves are in the correct position.
- Check if the connecting pins between the excavator and the Combi Cutter are well secured, as well as the wedge and the security pin of the quick release hitch system.
- Ensures that the hoses have the correct length and are at no risk of interfering with any of the moving parts. Also make sure they cannot wear or damage because of contact with the grab or material that is moved by the grab.

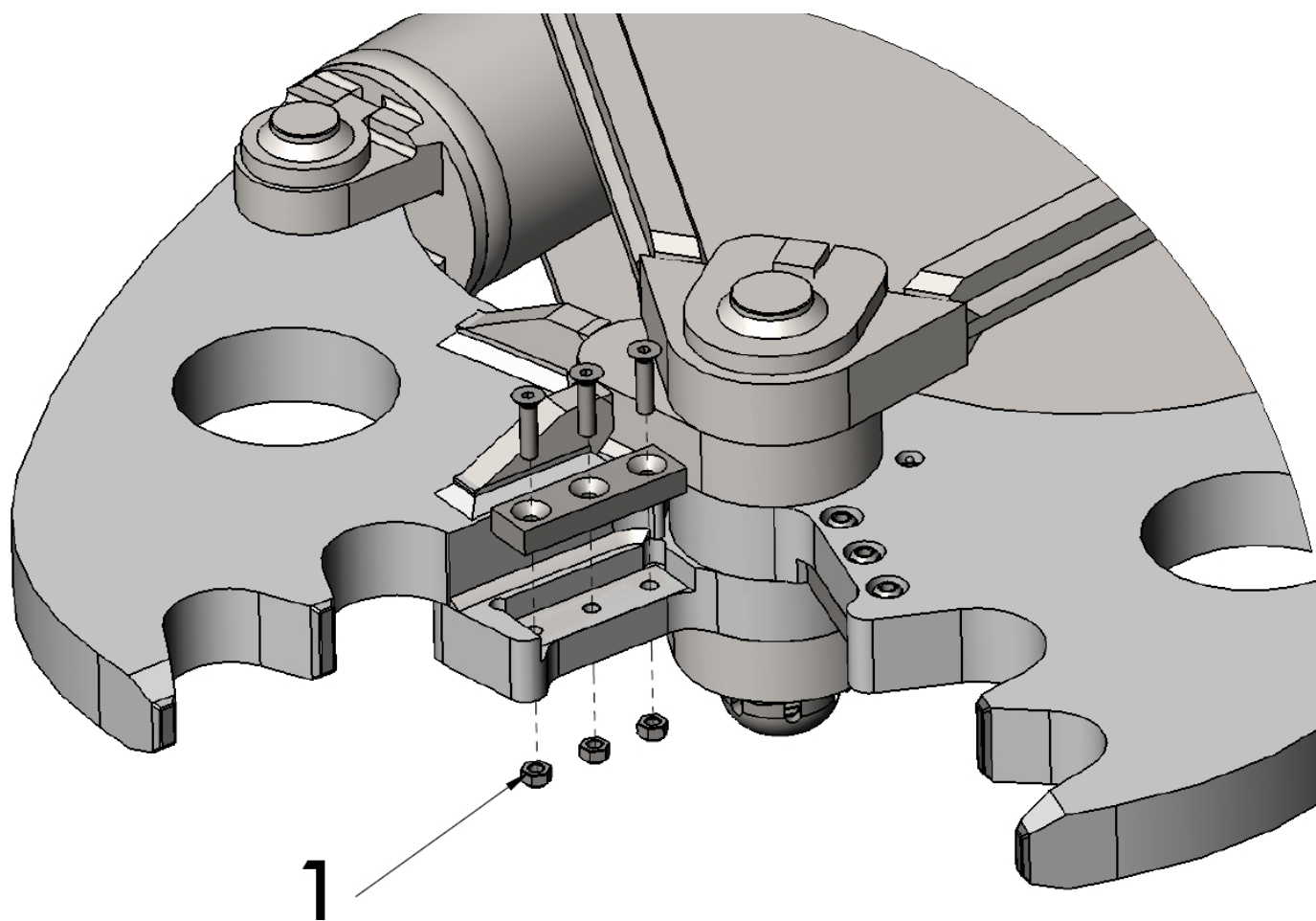
Always place the Combi Cutter for maintenance on a flat stable surface and make sure that the excavator cannot move.

During maintenance of the hydraulic system the hydraulic hoses need to be disconnected. Before disconnecting the hydraulic hoses, make sure that there is no pressure on the hoses. Refer to the operating manual of the excavator.

The Combi Cutter should be lubricated once every 8 operating hours with the same type of grease as prescribed for the excavator. For the position of the grease nipples and lubrication frequency, see the lubrication schedule on page 9.

When the blades in the jaw construction are worn to such an extent that the Combi Cutter no longer cut completely, work must be stopped and the wear blades must be replaced or exchanged.

Image 1: instructions for assembling the blades



1 = Attention: fix nut with the conical side to the inside.

2 = Bolts need to be tightened with a torque as shown in the table (see page 16).

To ensure the wear blades are securely fastened to the shell it is recommended to place some additional spot welding between knives and shell base.

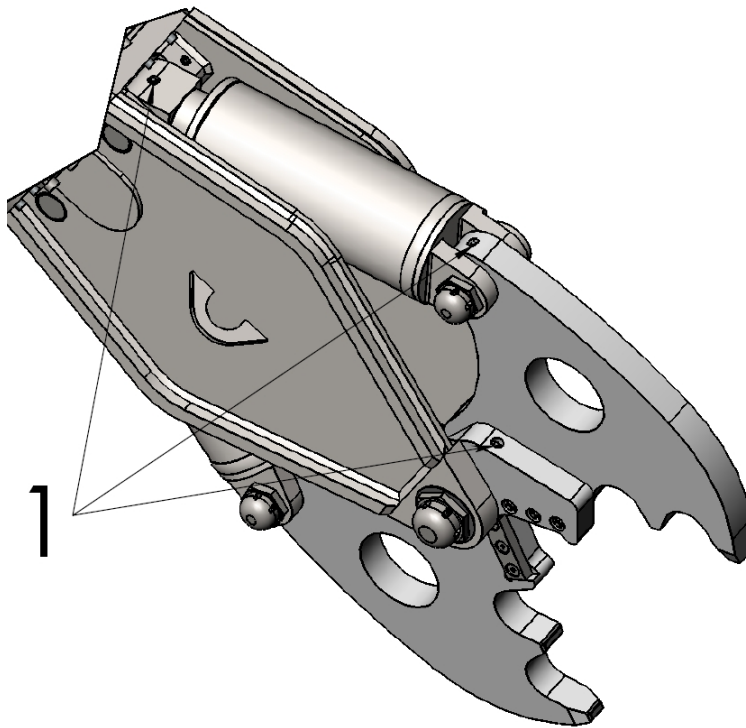


Image 3: Lubricating pivoting points

1 = Lubricate 1 x per 8 operating hours.

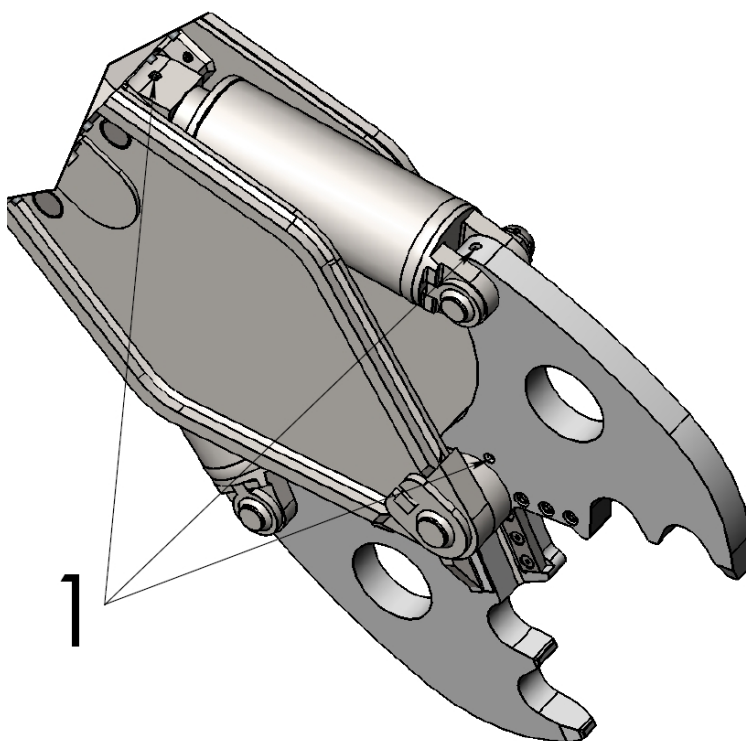


Image 4: Lubricating pivoting points

1 = Lubricate 1 x per 8 operating hours.

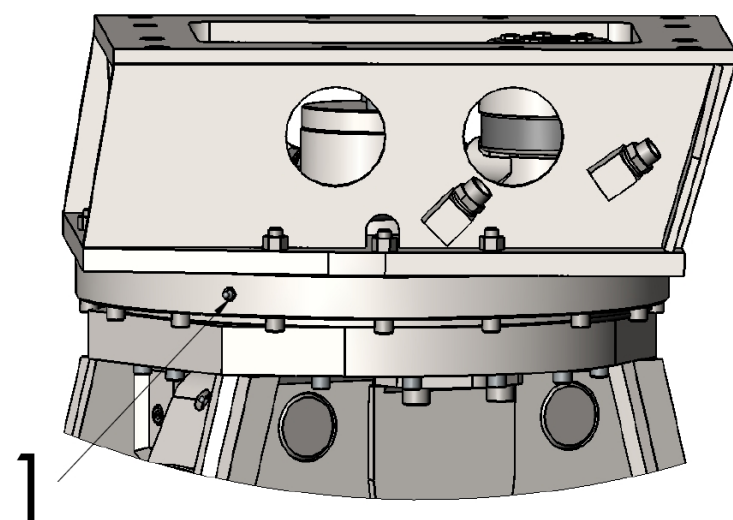
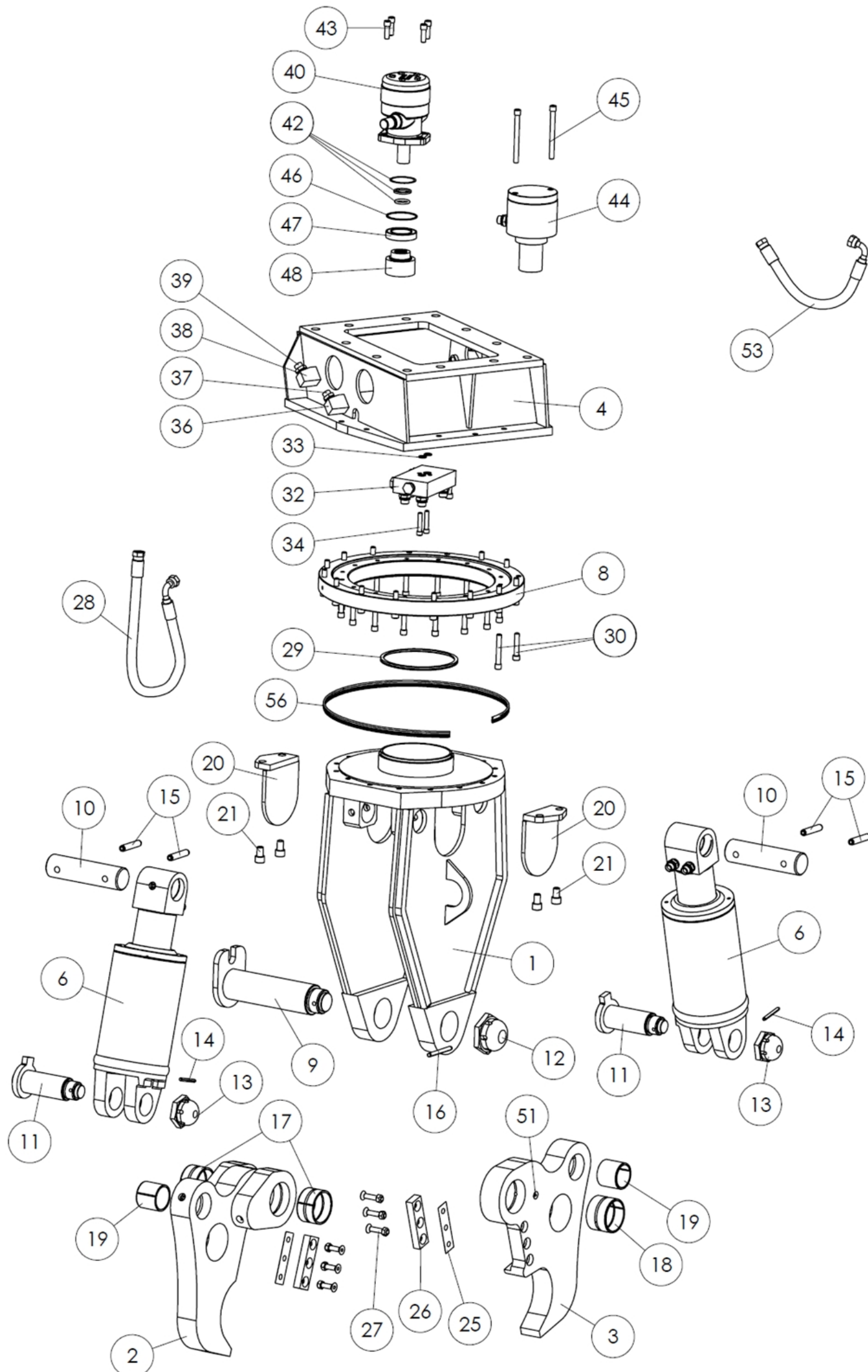


Image 5: Lubricating rotator

1 = Lubricate 1 x per 8 operating hours.

Exploded view CC350



Part list CC350



Part no.	Qty	Decription	Order no.
1	1	Welded main frame construction	CC350.001
2	1	Welded jaw construction (left jaw)	CC350.002
3	1	Welded jaw construction (right jaw)	CC350.003
4	1	Welded head construction	CC350.004
6	2	Hydraulic cylinder	CC350.006
8	1	Slewing ring	CC350.008
9	1	Main hinge pin	CC350.009
10	2	Cylinder pin	CC350.010
11	2	Cylinder pin	CC350.011
12	1	Locker nut	CC350.012
13	2	Locker nut	CC350.013
14	2	Rod pin	CC350.014
15	4	Rod pin	CC350.015
16	1	Rod pin	CC350.016
17	2	Bearing main pivot point (welded jaw construction)	CC350.017
18	1	Bearing main pivot point (jaw construction)	CC350.018
19	2	Bearing cylinder pivot point	CC350.019
20	2	Protective cover lower frame	CC350.020
21	1 set	Bolt set protective cover lower frame	CC350.021
22	1	Disk spring	CC350.022
25	2	Shim blade	CC350.025
26	1 set	Cutting blade	CC350.026
27	1 set	Bolt set cutting blade	CC350.027
28	1 set	Hose set lower frame	CC350.028
29	1	V-ring	CC350.029

Part list CC350

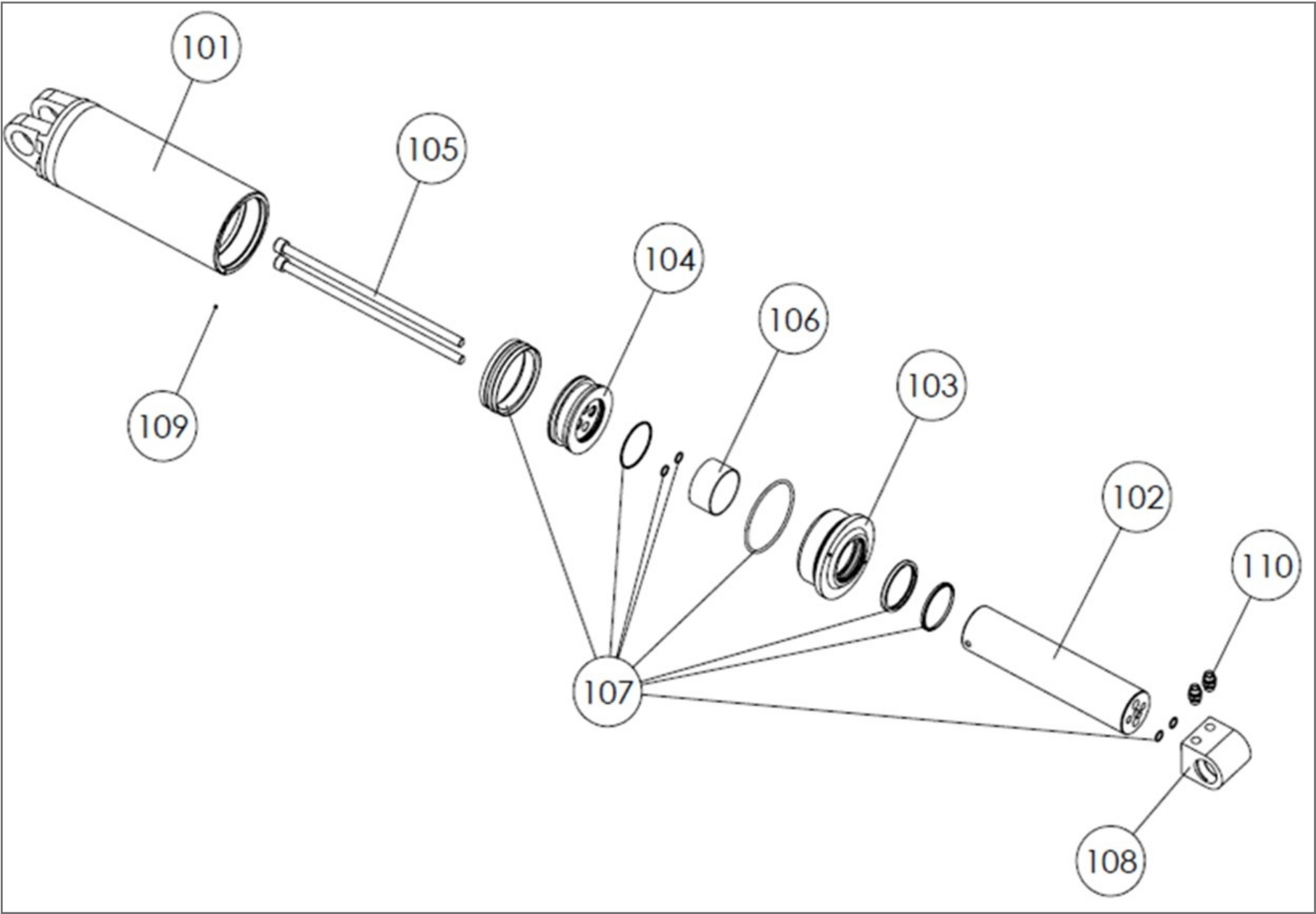


Part no.	Qty	Decription	Order no.
30	1 set	Bolt set slewing ring	CC350.030
32	1	Connection block C.O.D.	CC350.032
33	1 set	O-ring for the benefit of connection block	CC350.033
34	1 set	Bolt set C.O.D. connection block	CC350.034
36	2	Main connection pinch function	CC350.036
37	2	Main connection nipple pinch function	CC350.037
38	2	Main connection block rotation function	CC350.038
39	2	Main connection nipple rotation function	CC350.039
40	1	Hydro motor	CC350.040
42	1 set	Seal kit hydro motor	CC350.042
43	1 set	Bolt set hydro motors	CC350.043
44	1	C.O.D. complete	CC350.044
45	1 set	Bolt set C.O.D.	CC350.045
46	1	Vulring	CC350.046
47	1	Gear screw	CC350.047
48	1	Screw	CC350.048
51	1 set	Lubrication nipples	CC350.051
53	1 set	Hose set head	CC350.053
56	1	Slewing ring seal	CC350.056

Part list cylinder CC350

Part no.	Qty	Description	Order no.
101	1	Cylinder housing	CC350.101
102	1	Piston rod	CC350.102
103	1	Cylinder nut	CC350.103
104	1	Cylinder piston	CC350.104
105	1 set	Cylinder head bolt set	CC350.105
106	1	Bearing (cylinder nut)	CC350.106
107	1 set	Cylinder seal kit	CC350.107
108	1	Cylinder head	CC350.108
109	1	Secure bolt	CC350.109
110	1 set	Cylinder nipple set	CC350.110

Exploded view cylinder CC350



Torques specification



Maximum torque specified to bolts on the cutting blades and rotator of the multi grab.

Please consult this listing on diameter, pitch and metric size and maximum torque specified prior to fastening.

Bolt size	Torque (Nm)	Torque (Kgm)
	Bout 10,9	Bout 10,9
M8	40 Nm	4 Kgm
M10	80 Nm	8 Kgm
M12	130 Nm	13 Kgm
M12x1,25	110 Nm	11 Kgm
M14	200 Nm	20 Kgm
M16	300 Nm	30 Kgm
M20	600 Nm	60 Kgm
M24	1000 Nm	100 Kgm
M27	1500 Nm	150 Kgm
M30	2000 Nm	200 Kgm
M36	3600 Nm	360 Kgm
M39	4600 Nm	460 Kgm

Note, fine pitch

Technical specifications: CC350



		CC350
Excavator weight class	ton	2 - 4
Weight	kg	300
Operating pressure max.	bar	250
Operating pressure rotation min.	bar	180
Operating pressure rotation max.	bar	200
Oil flow max.	l/min.	50
Oil flow rotation max.	l/min.	10
Jaw width	mm	50
Maximum Jaw opening	mm	410
Height	mm	1000
Closing force	Kn	315