



Instruction

Cylinder repair guide

Revisions and changes

Rev:	Prepared by	Summary of changes
00	EJ	New document
01	EJ	Scope added, Note on piston seal change only for Light repair kits
02	EJ	Note on position sensor dismount / remount added
03	EJ	Tool Kit drawings with BOM added
04	KKF	The cylinder 5056800 and 5057235 is taking out of the document and the cylinder 5066813 is put in the document
05	KKF	The update of various parts in the toolkit 9515121
06	KKF	In paragraph 2.2, the following subsections 2.2.1 and 2.2.2 have been added. In paragraph 3.3, the following subsections 3.3.1 and 3.3.2 have been added.
07	KKF	Add a text in section 2.2.1 and change the order of images in section 2.2.1 Update the text in section 3.3.1 and 3.3.2 Add tightening torque 950 Nm in paragraph 3.2

TABLE OF CONTENTS

1	Scope	2
2	Disassembly	2
2.1	Positions sensor	2
2.2	Bearing head	2
2.2.1	Bearing head without pretension flange	2
2.2.2	Bearing head with pretension flange	3
2.3	Gland	4
2.4	Piston	5
3	Assembly	5
3.1	Piston	5
3.2	Gland	6
3.3	Bearing head	6
3.3.1	Bearing head without pretension flange	6
3.3.2	Bearing head with pretension flange	6
3.4	Positions sensor	6
3.5	End assembly / Inspection	6
4	Tool kit no. 9515121 – Vestas VT20012342	7
5	Tool kit no. 9515135 (for 5056412) – Vestas VT ??	8

1 SCOPE

This instruction can be used for these toolkits / spare part repair kits:

9515121 Toolkit 125/80 [VT20012342] 5066609; 5066492; 5067091; 5066813

5201261L	Repair kit Light Sparepart Sales 125/ 80	For 5066609/5066492/5067091 V80 (29079541)
5271802H	Repair kit Heavy Sparepart Sales 125/ 80	For 5066609/5066492 V80 (29079542)
5201261H	Repair kit Heavy Sparepart Sales 125/ 80	For 5067091 (29079543)
5271936L	Repair kit Light Sparepart Sales 125/ 80	For 5066813
5271936H	Repair kit Heavy Sparepart Sales 125/ 80	For 5066813

9515135 Toolkit 100/65 [VT.....] 5056412

5200695H	Repair kit Heavy Sparepart Sales 100/ 65	For 5056412 (29079580)
5200695L	Repair kit Light Sparepart Sales 100/ 65	For 5056412 (29079582)

2 DISASSEMBLY

Before disassembly, the system must be in safe mode, pressureless and the cylinder drained for oil. Prepare for oil collection when dismounting valve block, pipes, and cylinder enclosure.

2.1 POSITIONS SENSOR

Unscrew and pull the position sensor out of the cylinder.



2.2 BEARING HEAD

2.2.1 Bearing head without pretension flange

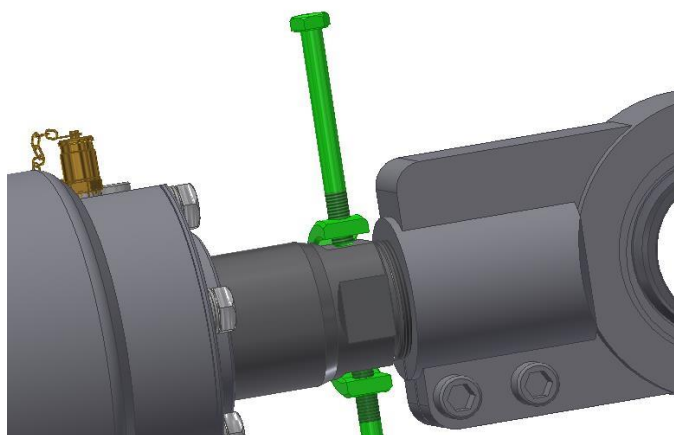
Measure the distance between the piston rod and bearing head.

Loosen all the bolts in the clamping bearing head:

Widen out the clamping by mounting plate chisels in the slots on each side.



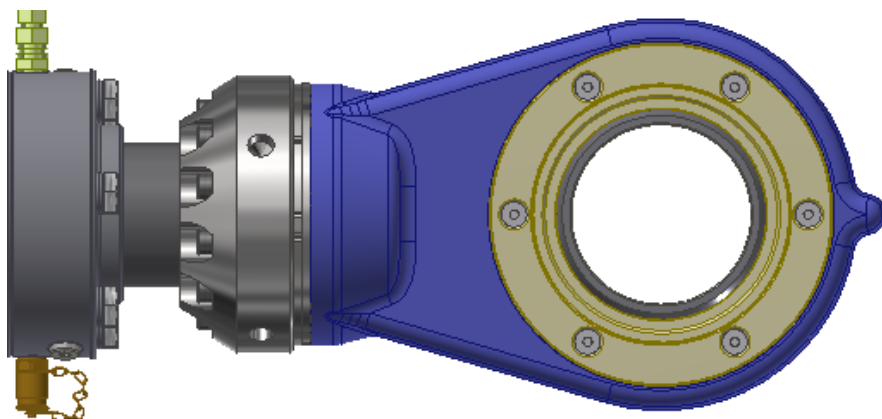
Use the special spanner to unscrew rod from bearing head:



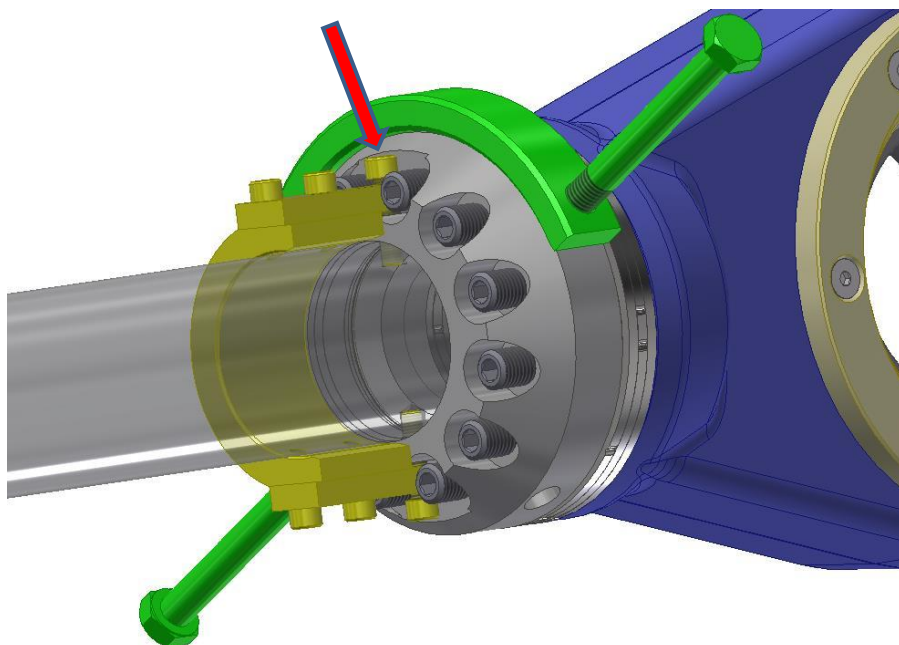
Unscrew rod from bearing head with the chisels still sitting in the slots.

2.2.2 Bearing head with pretension flange

Loosen all bolts in the pretension flange and rotate it to align holes in rod and flange. Then fix rod to flange with the "Flange lock" tool (yellow on illustration below).



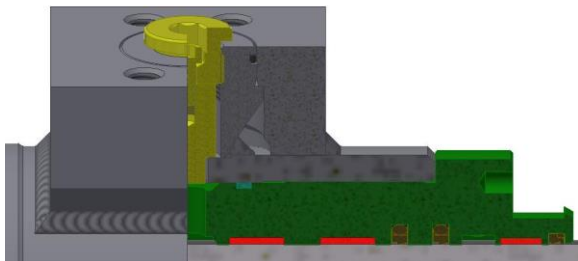
Use the special spanner to unscrew rod from bearing head.



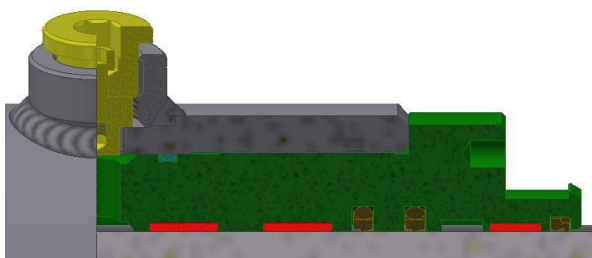
2.3 GLAND

Mount the nylon plug in the B-port.

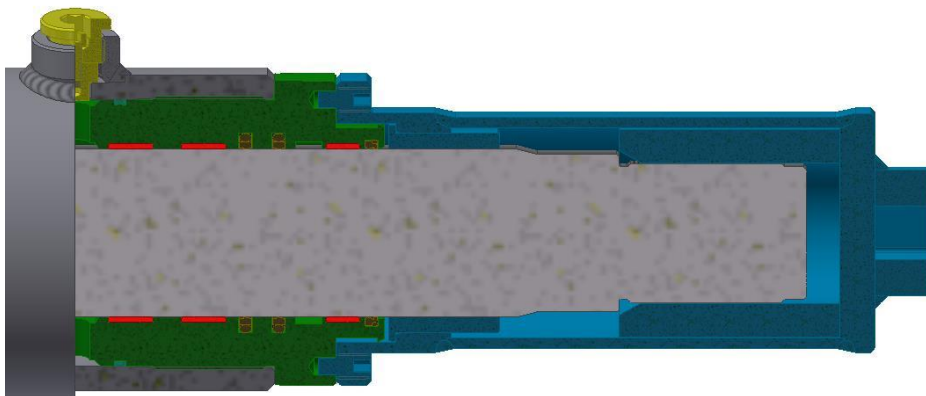
Use the plug 59 mm on this type of cylinder.



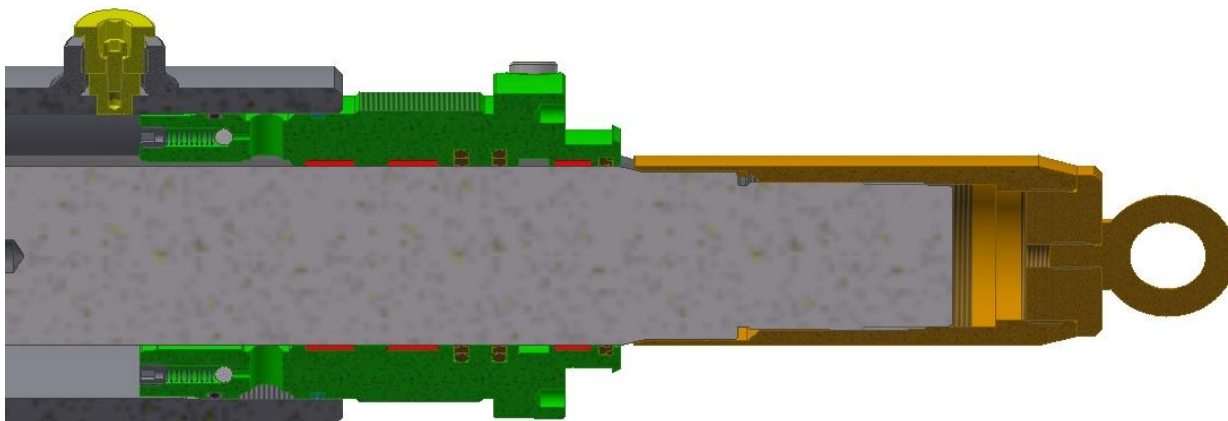
Use the plug 39 mm on this type of cylinder.



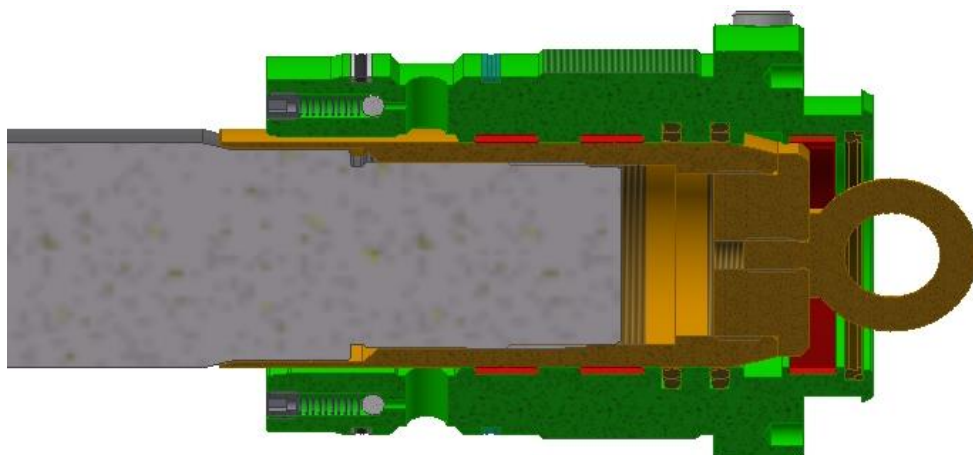
Use the special socket to unscrew the gland, as shown below.



Screw the assembly bush on the rod end.



Slide the gland over the rod end assembly bush, as shown below.



2.4 PISTON

Pull the rod with piston out of the tube.

If LIGHT repair kit:

Cut the piston seal with a Stanley knife. (be carefully not to damage the piston)

3 ASSEMBLY

Inspect tube inside for damages. Replace cylinder if scratched or worn out.

Oil/grease all seals/mating surfaces and threads before assembling.

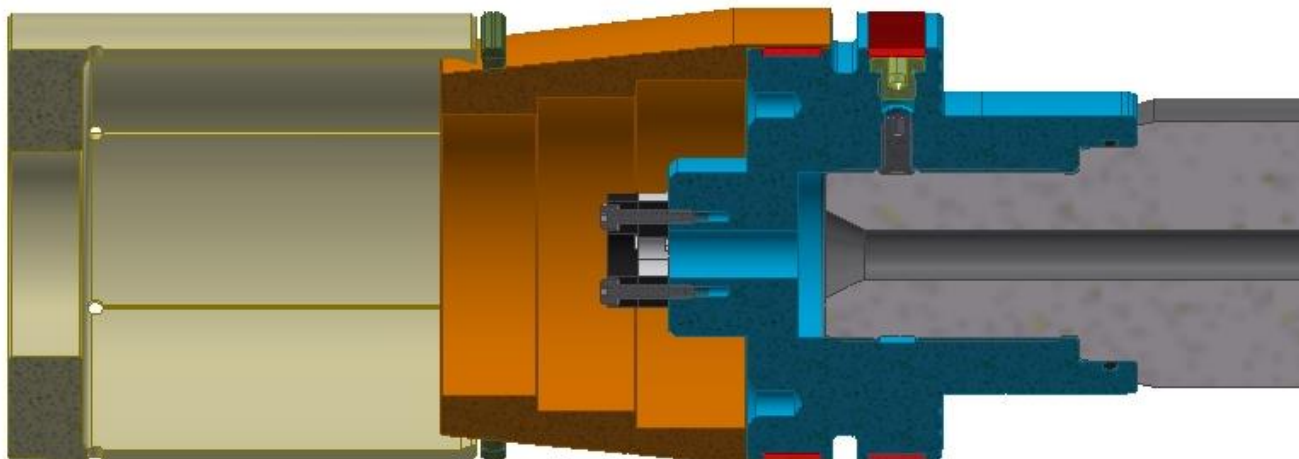
Be careful with the cleanliness during assembly.

3.1 PISTON

Slide the piston with rod into the tube. Be carefully when the piston seal pass the tube threads and B-port. On heavy repair kits the piston seal is pre-mounted.

If LIGHT repair kit:

Mount new guide rings and piston seal. Use the piston assembly bush as shown below.



Mount calibration bushing over piston seal, and keep it there for more than 15 min.

3.2 GLAND

Make sure the nylon plug is still installed in the B-port.

Slide the gland with premounted seals over the rod end assembly bush, screw it into the tube, and tighten it with 950 Nm.

[All as shown in section 2.3, just in reverse order.]

3.3 BEARING HEAD

3.3.1 Bearing head without pretension flange

Grease on the thread before screw the bearing head on the rod end with the chisels still sitting in the slots.

Use tools show in section 2.2.1

Adjust it into position and remove the chisels.

Tighten all the clamping bolts.

3.3.2 Bearing head with pretension flange

Mont flange, screw and bearing head on the rod end.

Adjustment of bearing head (cylinder length at full stroke) to match blade lock, according to WTG manufacturer instruction.

Use tools show in section 2.2.2 and apply pretension according to WTG manufacturer instruction.

3.4 POSITIONS SENSOR

Reinstall position sensor in cylinder. Tighten with 80 Nm

3.5 END ASSEMBLY / INSPECTION

Mount valveblock, pipes and all other disconnected parts.

Drive the cylinder full stroke a number of times without load, to bleed air out of the system.

Test the cylinder under full pressure and check for tightness.

4 TOOL KIT NO. 9515121 – VESTAS VT20012342

Reservedelsliste - Spare Part List - Ersatzteilliste						
Pos.	Stk. Pcs. Stück	Vare nr. Item. no. Warennr.	Beskrivelse	Description	Beschreibung	
10	1	5271818	Montagebøsning f. Ø80 mm Stang	Assembly bush f. Ø80 mm Rod	Montagebuchse f. Ø80 mm Stab	
20	1	5271817	Montagebøsning f. Ø125 mm M-sko	Assembly bush f. Ø125 mm piston	Montagebuchse f. Ø125 mm stempel	
30	1	5271822	Nylon Montagebøsning f. Ø125 mm M-sko	Nylon Assembly bush f. Ø125 mm Piston	Nylon Montagebuchse f. Ø125 mm Stempel	
40	1	31725	O-ring 5,7x119,3	O-ring 5,7x119,3	O-ring 5,7x119,3	
50	1	5271819	Montagenøgle	Mounting key	Montageschlüssel	
60	1	5271827	Montagetop Ø104x228;DC=Ø127	Mounting top Ø104x228;DC=Ø127	Montagetop Ø104x228;DC=Ø127	
70	1	5271883	Kalibreringsbøsning ø125	Calibration bushing ø125	Kalibrierung Buchse ø125	
80	1	5272300	Nylonblændprop 3/4" RG sæt Ø12,5x9,9	Nylon plug 3/4" RG set Ø12,5x9,9	Nylonstöpsel 3/4" RG set Ø12,5x9,9	
90	1	5271832	Nylonblændprop 3/4" RG sæt Ø12,5x8,4	Nylon plug 3/4" RG set Ø12,5x8,4	Nylonstöpsel 3/4" RG set Ø12,5x8,4	
100	1	9515166	Montagenøgle for AF=68	Mounting key for AF=68	Montageschlüssel für SW=68	
110	1	9515165	Flangelås for (29082565) Ø80x50-PA6	Flange lock for (29082565) Ø80x50-PA6	Flanschsperr für (29082565) Ø80x50-PA6	
120	1	9515149	Montagenøgle for flange (29082565)	Mounting key for flange (29082565)	Montageschlüssel Flansch (29082565)	

5 TOOL KIT NO. 9515135 (FOR 5056412) – VESTAS VT ??

Reservedelsliste - Spare Part List - Ersatzteilliste

Pos.	Stk. Pcs. Stück	Vare nr. Item. no. Warennr.	Beskrivelse	Description	Beschreibung
10	1	9515137	Montagebøsning f. Ø100 mm M-sko	Assembly bush f. Ø100 mm piston	Montagebuchse f. Ø100 mm Kolben
20	1	9597820	Nylon Montagebøsning f. Ø100 mm M-sko	Nylon Assembly bush f. Ø100 mm Piston	Nylon Montagebuchse f. Ø100 mm Kolben
30	1	31753	O-ring 5,7x 94,2	O-ring 5,7x 94,2	O-ring 5,7x 94,2
40	1	9515138	Montagetop Ø84x252;DC=Ø102	Mounting top Ø84x252;DC=Ø102	Montagetop Ø84x252;DC=Ø102
50	1	9515136	Montagebøsning f. ø65mm Stang	Assembly bush f. Ø65 mm Rod	Montagebuchse f. ø65 Stange
60	1	9597822	Kalibreringsbøsning ø100	Calibration bushing ø100	Kalibrierung Buchse ø100
70	1	9515166	Montagenøgle for AF=68	Mounting key for AF=68	Montageschlüssel für SW=68

