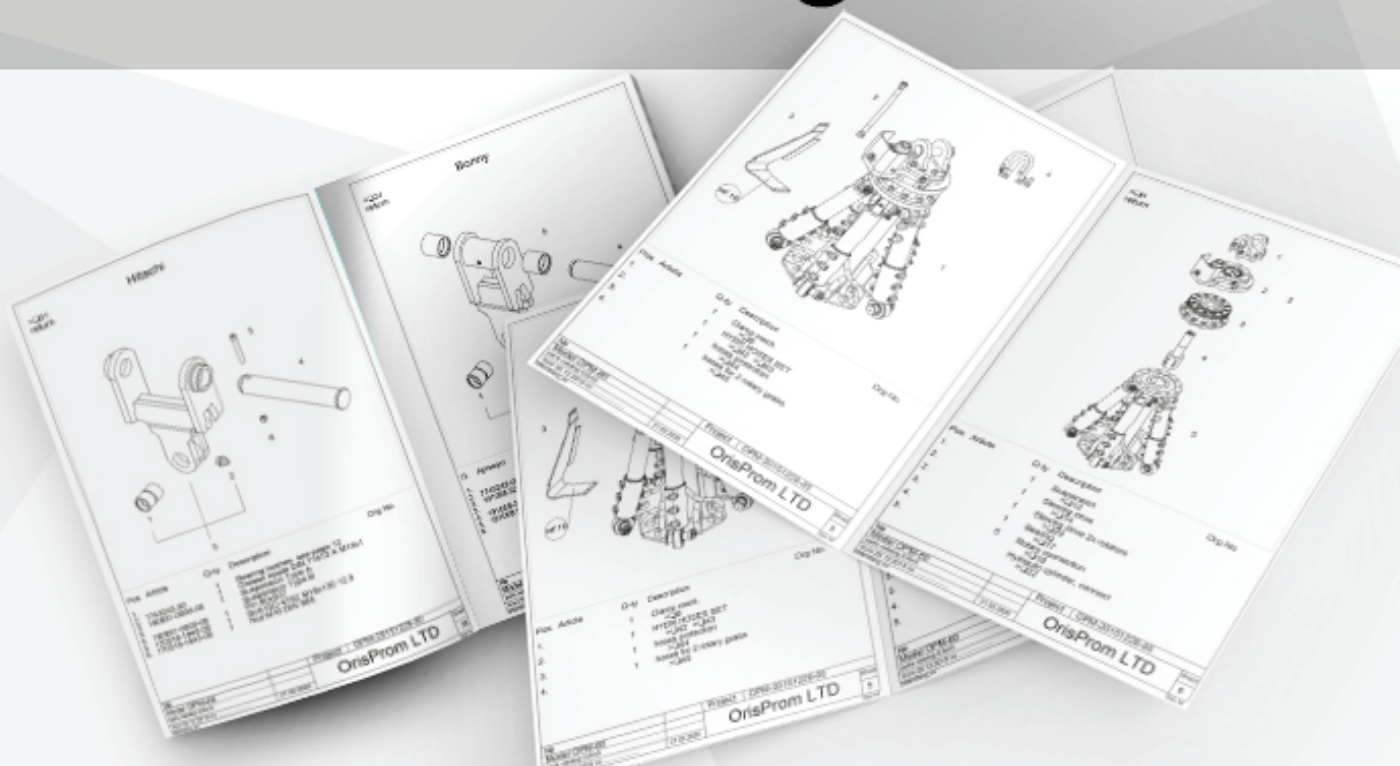




Parts list by **OPM**

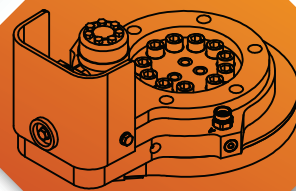
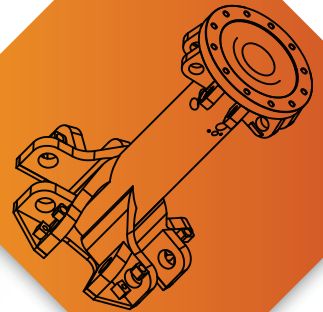
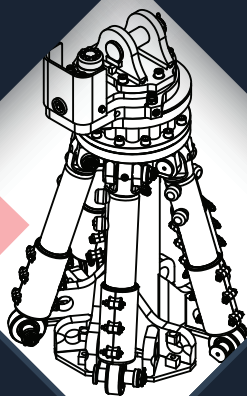




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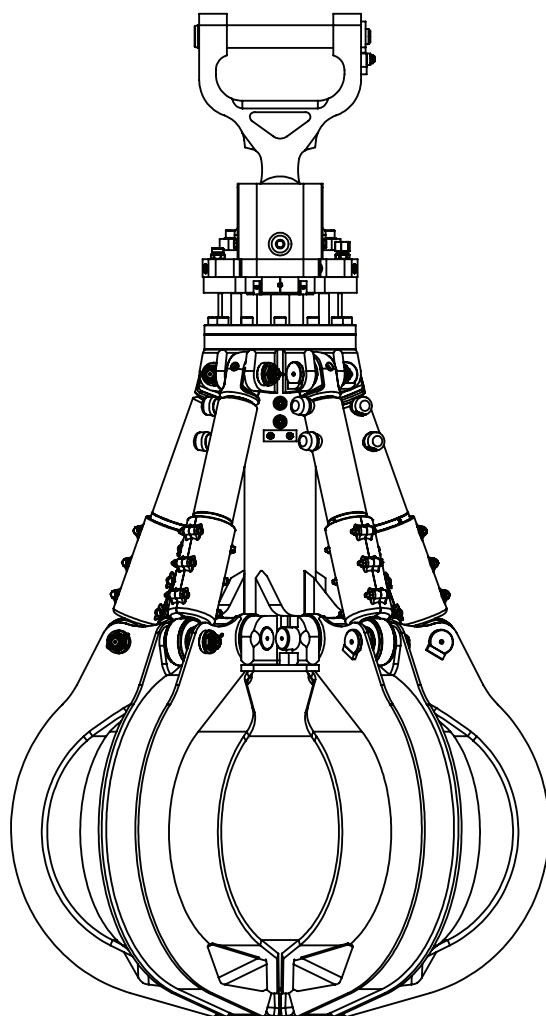


OPM

FINLAND

PARTS LIST

Grab 0,6m³ OPM-60



serial number 06.5 . . _____

serial number hydraulic cylinder _____

serial number hydraulic cylinder _____

serial number hydraulic cylinder _____

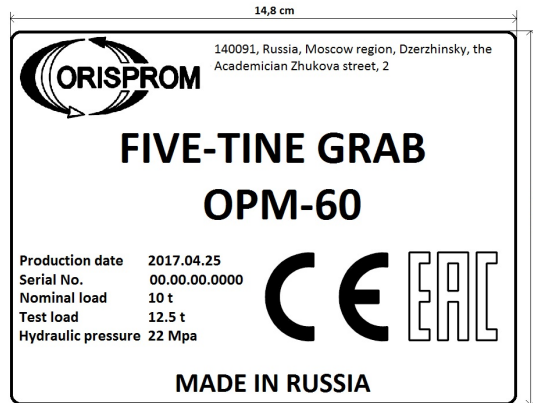
serial number hydraulic cylinder _____

serial number hydraulic cylinder _____

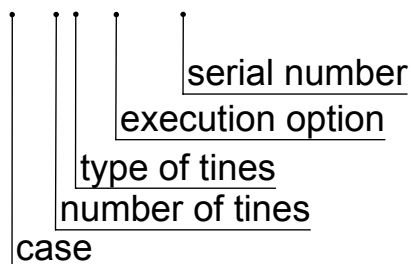
The manufacturer reserves the right to change the product design for improvement of process and operational parameters without notice to any user. The appearance of products can slightly differ from those in pictures.
Reference to the current document is on the last page.

№		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		1
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

Grab label



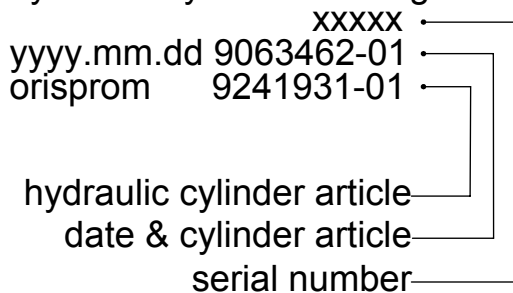
grab marking from
06.51.00.0001 to ...



type of tines:
X0-tines open
X1-tines semi-closed
X2-tines closed
X3-tines semi-closed, Type2

execution option:
00-standart
x2-additional hoses protection
2x-2 rotators
22-2 rotators & add. hoses protection

hydraulic cylinder marking:



Note page 49-50

1. From 20191012 the value of option 22 has been changed, see page 50 p. 20
- 2.

No		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			2
from 25.12.2015 по			

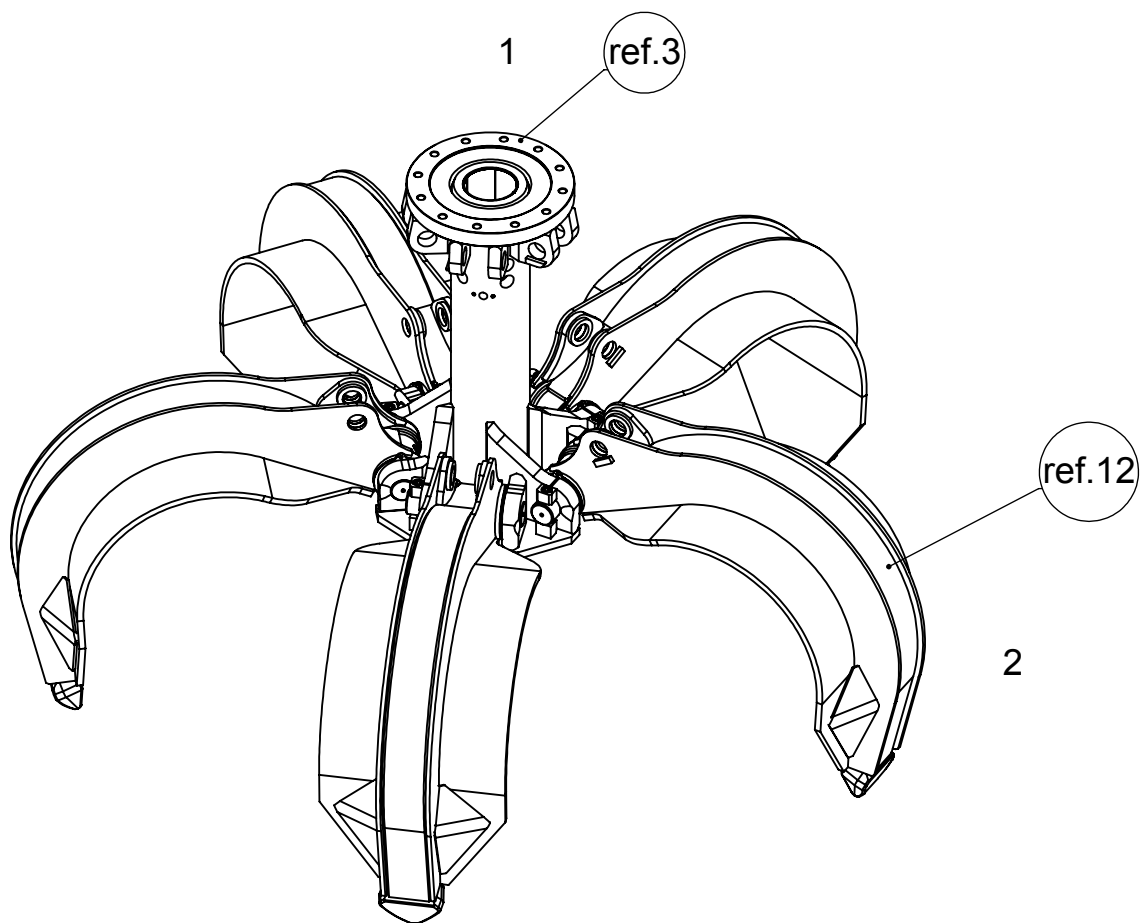
	Article	Description
1.	20151228-00	Grab assly, without suspension
2.	20151228-01	Grab assly for Liebherr, suspension Type A
3.	20151228-02	Grab assly for Cat, suspension Type A
4.	20151228-03	Grab assly for Fuchs, suspension Type A
5.	20151228-04	Grab assly for Sennebogen, suspension Type A
6.	20151228-05	Grab assly for Doosan, suspension Type A
7.	20151228-06	Grab assly for Liebherr (pin 70), suspension Type A
8.	20151228-07	Grab assly for Atlas, suspension Type A
9.	20151228-08	Grab assly for UMG, suspension Type A
10.	20151228-09	Grab assly for UMG, suspension Type A
11.	20151228-10	Grab assly for Hitachi, suspension Type A
12.		

full list of articles (link)

References see page 49-50

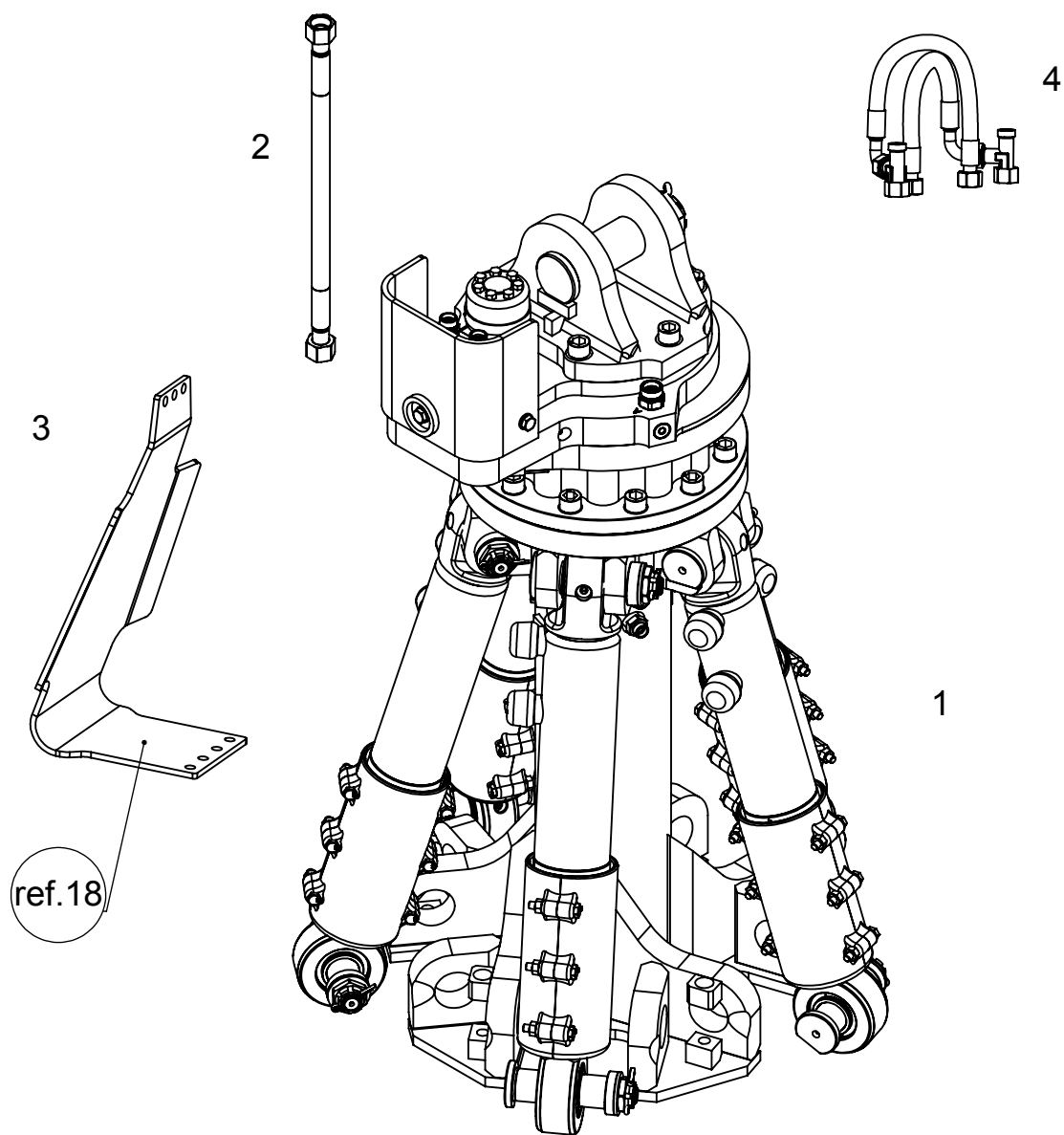
1. The grab is equipped with a suspesion, pin and HYDR.HOSES SET for connection to the hydraulic system of the machine.
2. For UMG see reference ref.15
3. Additional protection of the hoses see reference ref.18

No		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			3
from 25.12.2015 по			



Pos.	Article	Q-ty	Description	Drg No.
1.		1	Grab case >□7	
2.		5	Tine assly >□9	

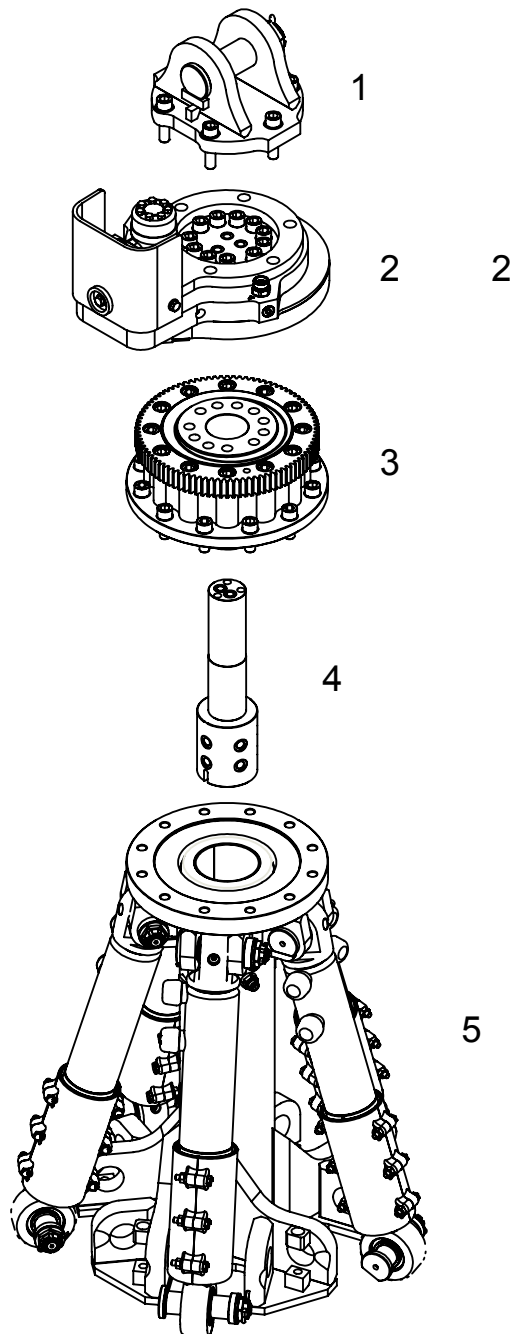
No		Project		Sheet
Model OPM-60		OrisProm LTD		4
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			



Pos.	Article	Q-ty	Description	Drg No.
1.		1	Clamp mech. >□6	
2.		1	HYDR.HOSES SET >□42 >□43	
3.		1	hoses protection >□44	
4.		1	hoses for 2 rotary grabs >□45	

No		Project	OPM-20151228-00
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 no	21.02.2020		
ORM-60eng_sw		Sheet	
		5	

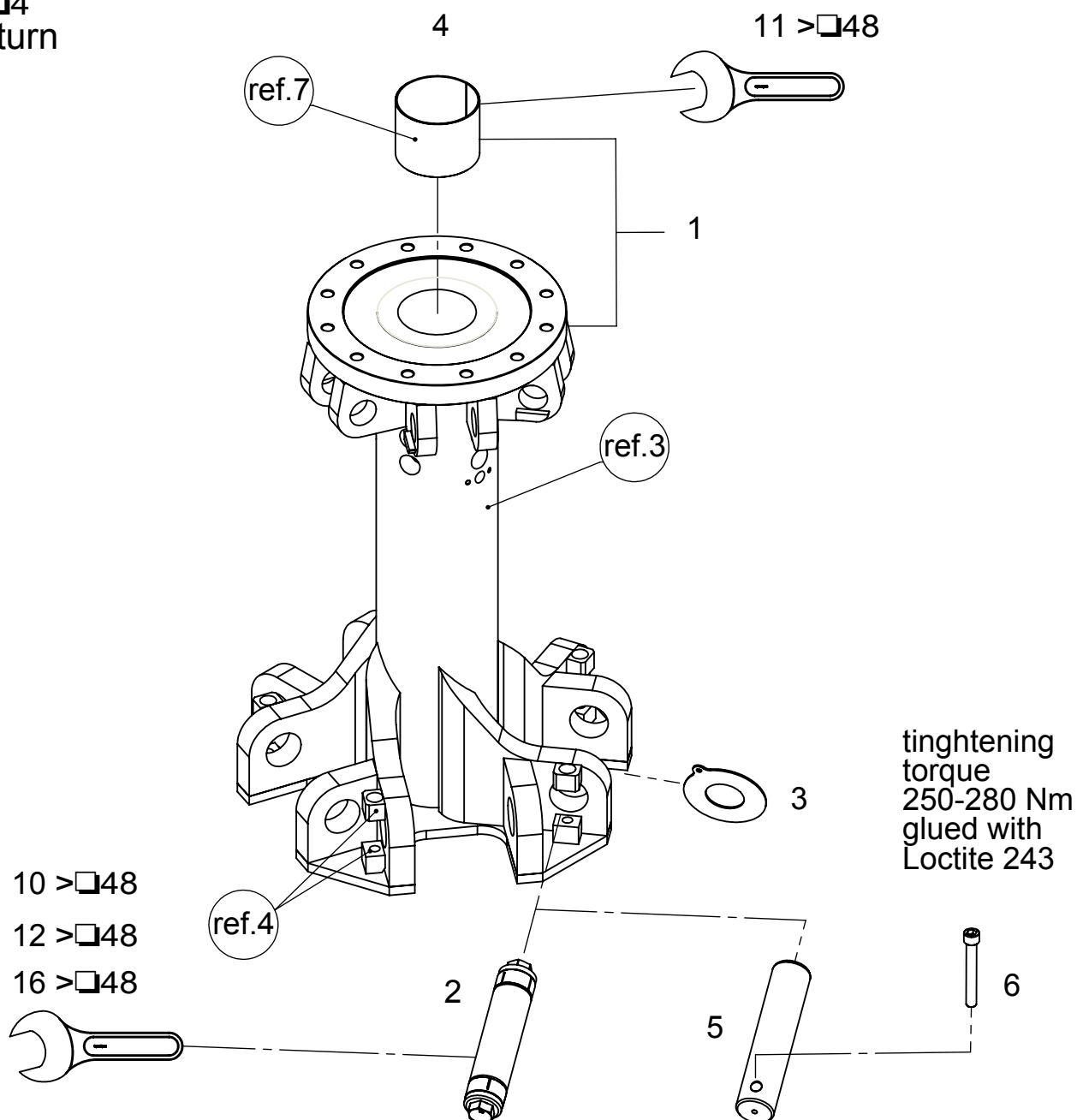
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return



Pos.	Article	Q-ty	Description	Drg No.
1.		1	Suspension >□12	
2.		1	Slewing drive >□14	
2.		1	Slewing drive 2x rotators >□29	
3.		1	Bearing >□17	
4.		5	Rotary connection >□18	
5.			Hydraulic cylinder, connect >□22	

No		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				6
from 25.12.2015 no	21.02.2020			

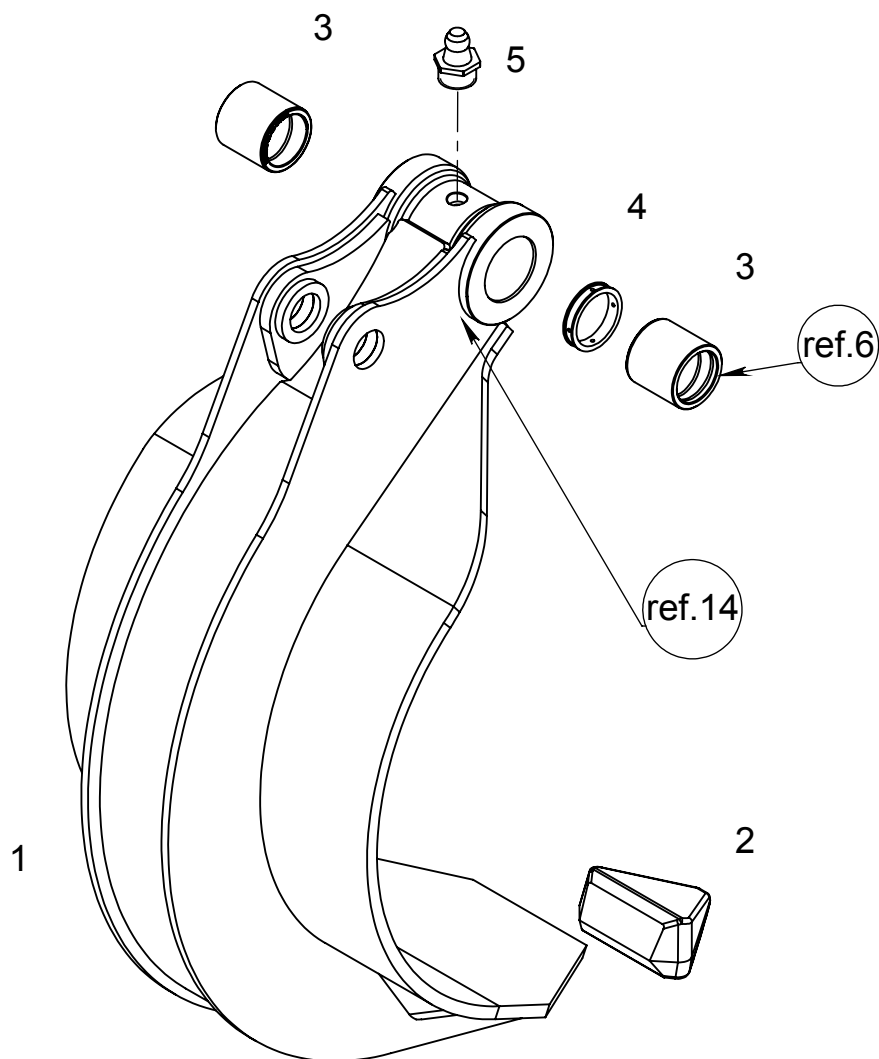
>□4
return



Pos.	Article	Q-ty	Description	Drg No.
1.	151030-01		Grab case with bearing	
	>change to 151030-02			
1.	151030-02	1	Grab case with bearing	
2.	7026761-00	5	Tine pin Exp. assly	
			>□10	
3.		10	Spacing washer	
			>□11	
4.	160105-1413-00	1	Bearing 125	
5.	20070309-2247-01	5	Tine pin	
6.	160113-1928-00	5	Bolt ISO 4762 M16x110 12.9	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		7
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

> 4
return

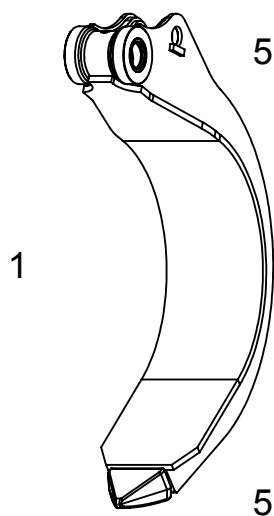


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Tine	
2.	3201712-00	1	Tine tip	
3.	9166643-02-00	2	Bearing 60-75x70	
4.	151217-1747-00	1	Spacing bush	
5.	7743242-00	1	Grease nipple DIN 71412 M10x1	

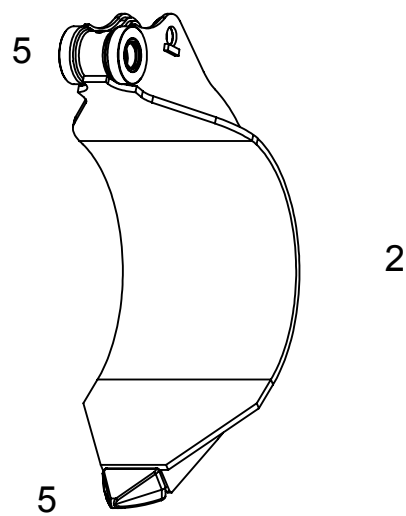
No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		8
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

>□4
return

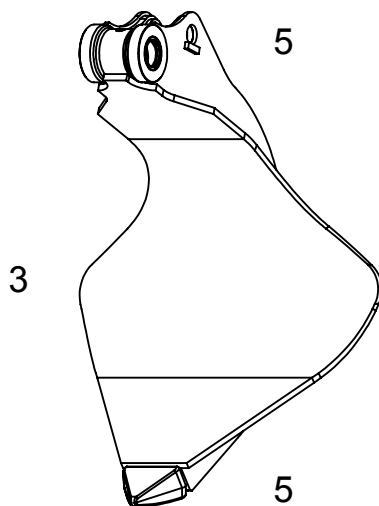
open (code 0)



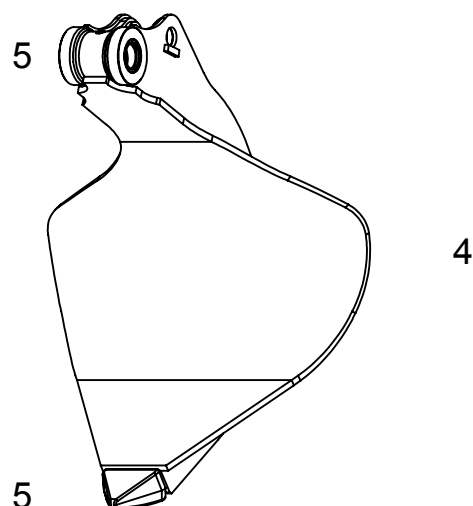
semi-closed (code 1)



semi-closed Type 2 (code 3)



closed (code 2)

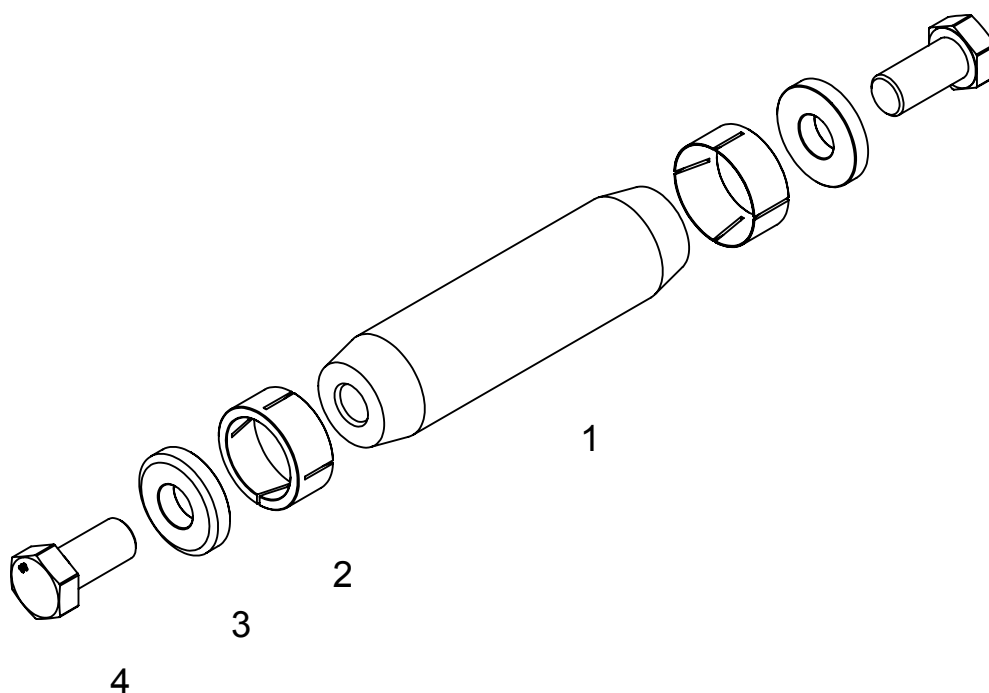


Pos.	Article	Q-ty	Description	Drg No.
1.	180905-0100-01	5	Tine open	
2.	151228-00		Tine semi-closed	
	>change to 151228-01			
2.	151228-01	5	Tine semi-closed	
	>			
2.				
3.	180905-3000-01	5	Tine semi-closed Type2	
4.	180905-0000-01	5	Tine closed	
5.			Tine accessory	
	>□8			

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		9
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

>□7
return

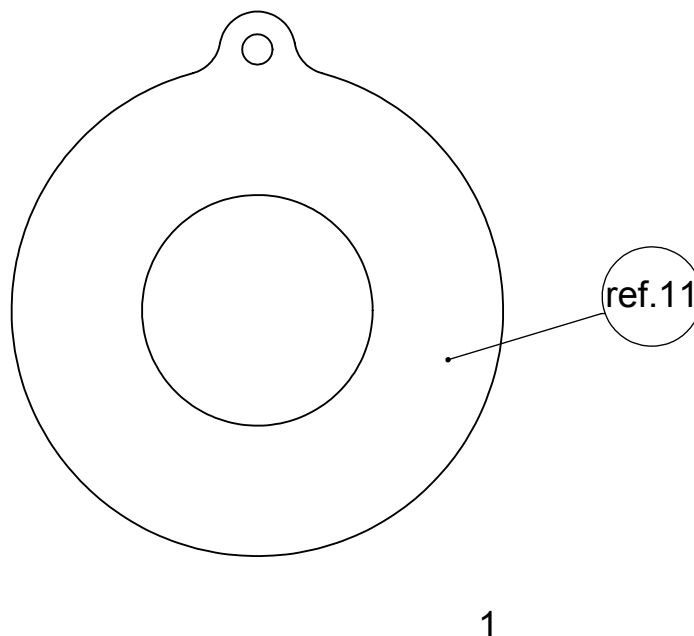
tightening
torque
500 Nm
check up:
in 1 hour
in 3 hours
in 10 hours
in 40 hours



Pos.	Article	Q-ty	Description	Drg No.
1.	130914-1612-00	1	Tine pin 60x230	
2.	131017-1612-00	2	Expanding bush 60	
3.	131017-1613-00	2	Washer 25-59x12	
4.	131017-1614-00	2	Bolt M24x2 x50mm 8.8	

№ 7026761-00		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		10
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

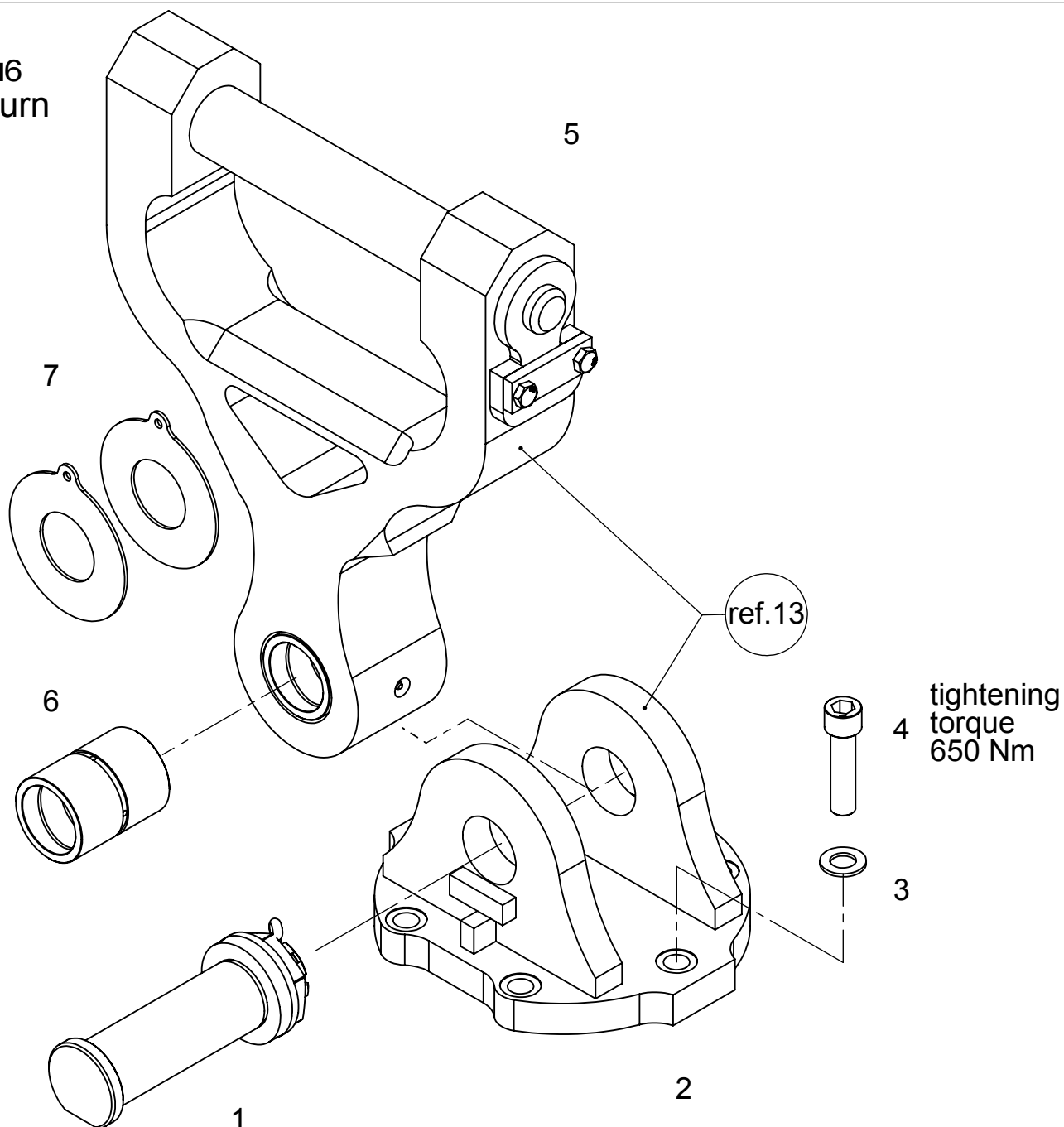
> 7
return



Pos.	Article	Q-ty	Description
1.	151230-1515-00	1	Spacing washer 61/130x1,0MM
1.	151230-1517-00	1	Spacing washer 61/130x2,0MM
1.	151230-1519-00	1	Spacing washer 61/130x3,0MM
1.	151230-1520-00	1	Spacing washer 61/130x4,0MM
1.	151230-7010-00	1	Spacing washer 71/140x1,0MM
1.	151230-7020-00	1	Spacing washer 71/140x2,0MM
1.	151230-7030-00	1	Spacing washer 71/140x3,0MM
1.	151230-7040-00	1	Spacing washer 71/140x4,0MM
1.	151230-8010-00	1	Spacing washer 81/140x1,0MM
1.	151230-8020-00	1	Spacing washer 81/140x2,0MM
1.	151230-8030-00	1	Spacing washer 81/140x3,0MM
1.	151230-8040-00	1	Spacing washer 81/140x4,0MM

No		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				11
from 25.12.2015 по	21.02.2020			

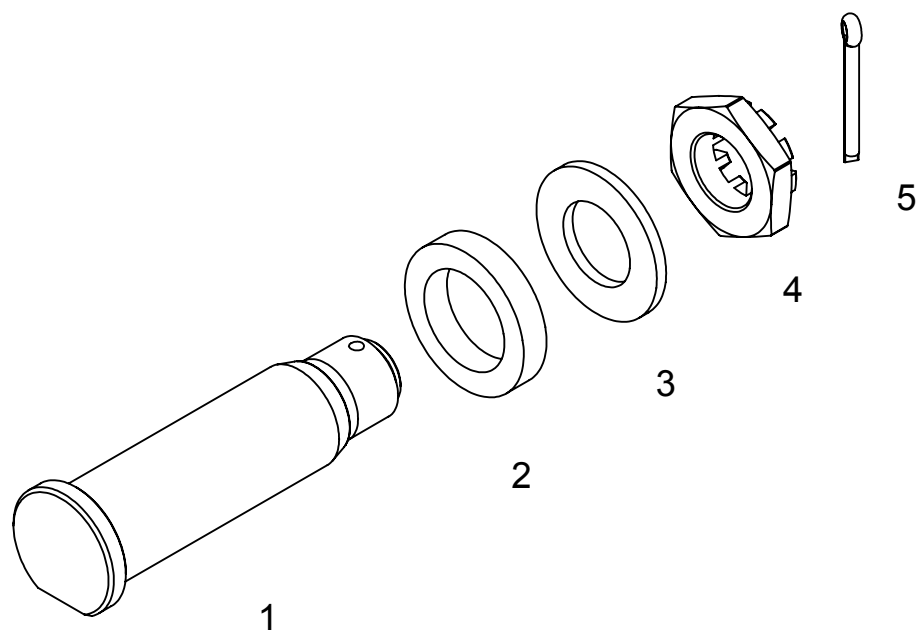
>□6
return



Pos.	Article	Q-ty	Description	Drg No.
1.	9242884-1427-00	1	Bearing yoke pin assly >□13	
2.	9581890-00	1	Bearing yoke Typ A	
2.	200203-0000-00		Bearing yoke Typ B	
3.	7025490-00	6	Washer Nord Lock20	
4.	4002533-00	6	Bolt ISO 4762 M20x80 12.9	
5.		1	Suspension assly >□31	
6.	9173382-00	1	Bearing bush	
7.	see page 11		Spacing washer	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		12
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

>□12
return



Pos.	Article	Q-ty	Description	Drg No.
1.	4553304-00	1	Bearing yoke pin	
2.	9242887-00	1	Ring 60x17	
3.	10289852-00	1	Washer 48	
4.	4118005-00	1	Horned nut M48 DIN 937	
5.	4330042-00	1	Splint DIN 94 8x80 ST	

№ 9242884-1427-00		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				13
from 25.12.2015 по	21.02.2020			

>□6
return

tightening
torque
105 Nm

1

2

11

12

3

4

5

tightening
torque
650 Nm

6

8

10

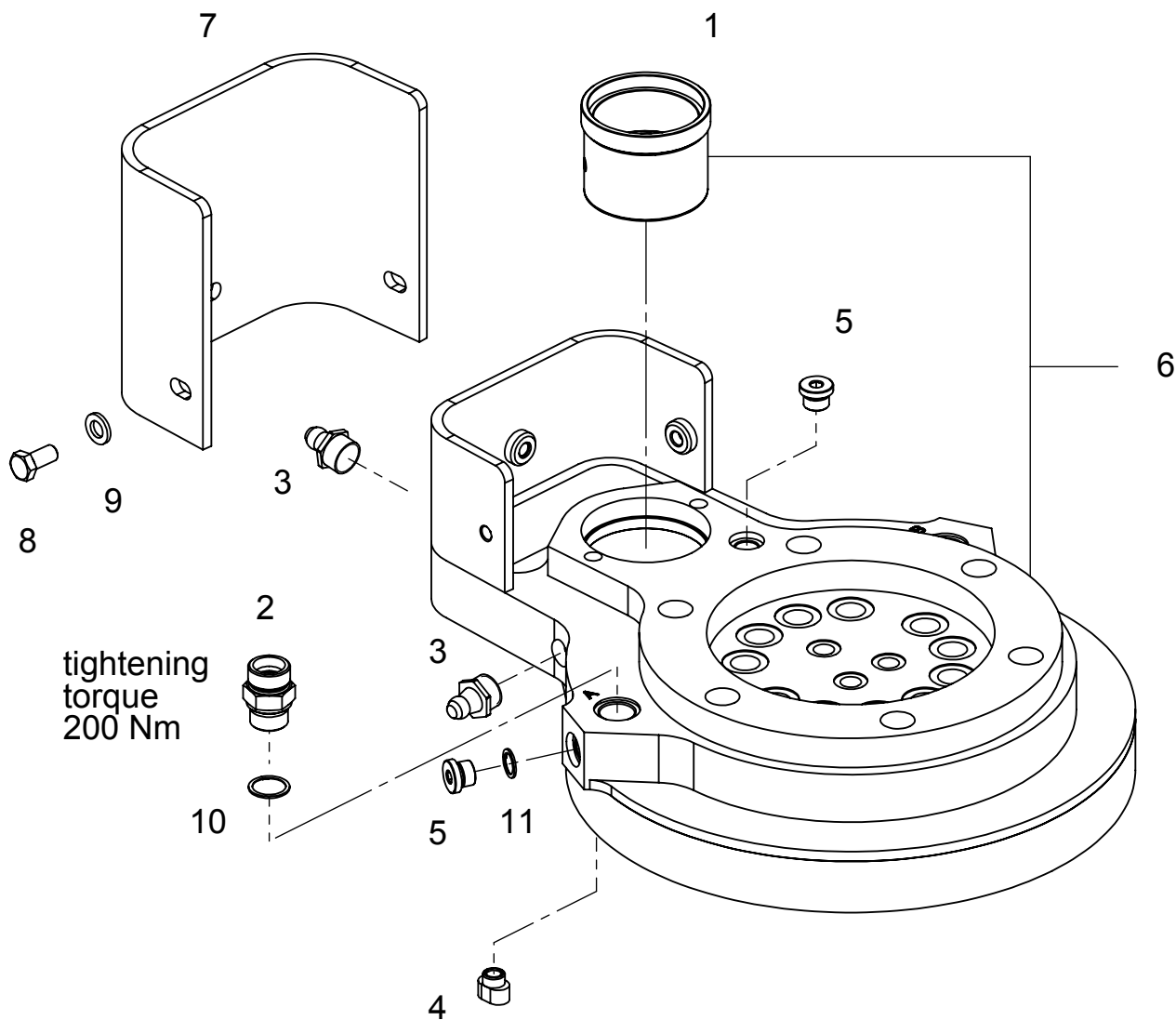
9

7

Pos.	Article	Q-ty	Description	Drg No.
1.	160114-1325-00	2	Bolt ISO 4762 M12x90 12.9	
2.	7015815-00	2	Washer Nord Lock12	
3.	5009768-00	1	Rotator OMP200	
4.	9614599-00	1	Bearing ass >□16	
5.	9959694-00	1	Pinion Z13 OMP200	
6.	4002585-00	11	Bolt ISO 4762 M20x110 12.9	
7.	9622717-00	1	Middle flange assly >□15	
8.	9601122-01	1	Rotator gear protection	
9.	4600198-00	2	Washer ISO 7093 -1 6 -200HV	
10.	4065099-00	2	Bolt ISO 4017 M6x16 8.8	
11.	7002361-00	2	Thread fitting ISO 8434 SDS S 16XG 1/2A	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		14
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

> 14
return

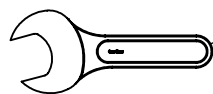


Pos.	Article	Q-ty	Description	Drg No.
1.	160104-1824-00	1	Sleeve 75-88x70	
2.	4900669-00	2	Thread fitting ISO 8434 20XM27X2	
3.	7743242-00	2	Grease nipple DIN 71412 M10x1	
4.	160107-1320-00	2	Nut M12 spec.	
5.	7361960-00	3	Screw plug M18x1.5x17 A3C	
6.	9622718-00	1	Middle flange	
7.	170604-1312-00	1	Rotator protection	
8.	4900094-00	3	Bolt ISO 4017 M12x25 10.9	
9.	4000750-00	3	Washer 12 ISO 7093-1	
10.	160901-1938-00	2	Seal 27 DIN 3869	
11.	081003-1745-00	3	Seal 18 DIN 3869	

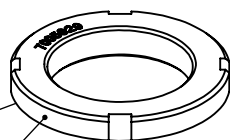
No		Project		Sheet
Model OPM-60		OrisProm LTD		15
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

>□14 >□29
return

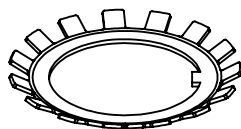
Drg



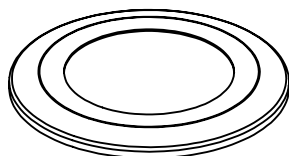
ref.17



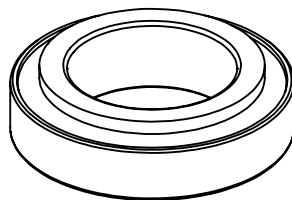
1 tightening torque 60 Nm



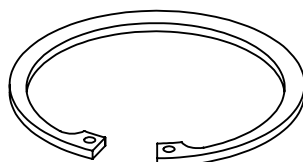
2



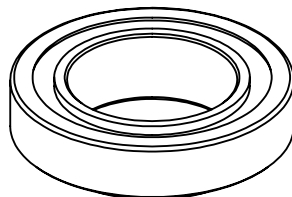
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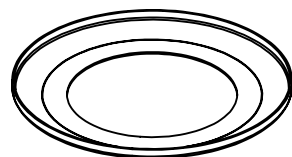
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5



4

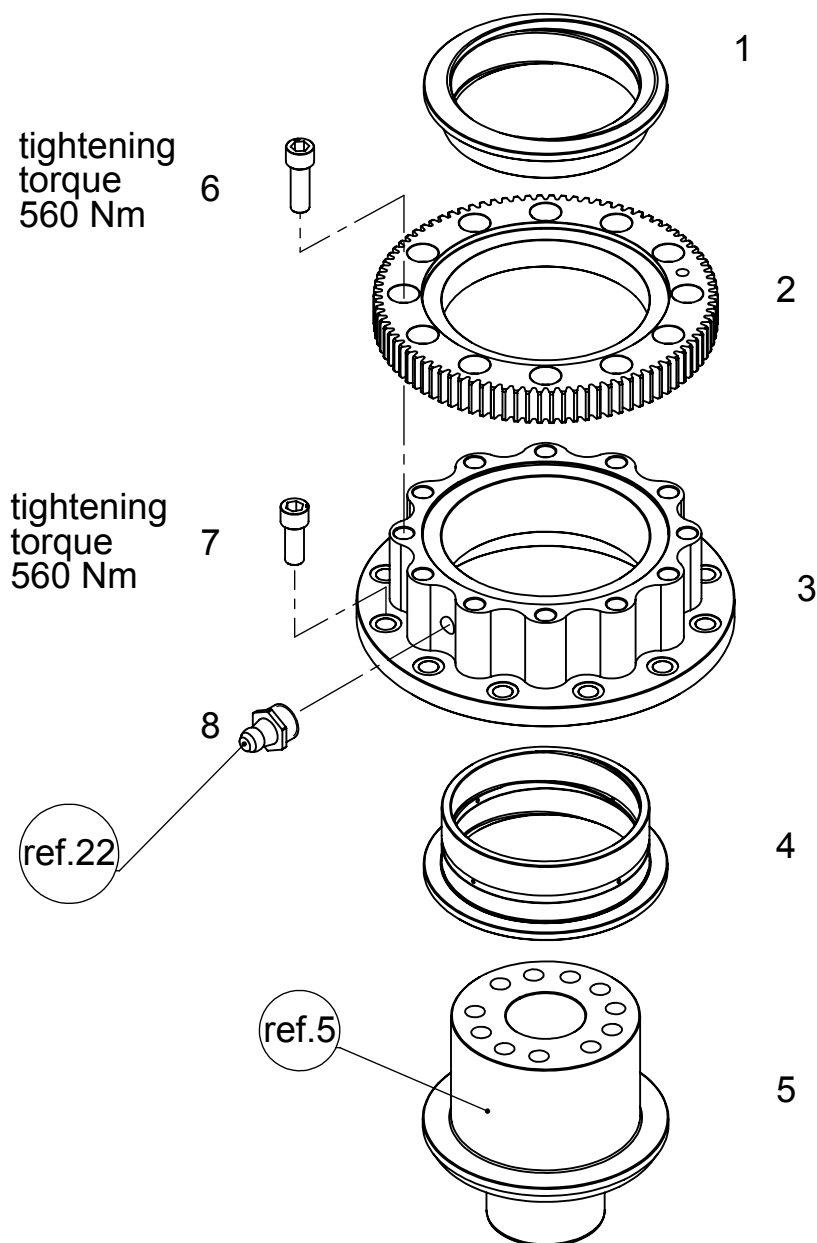


3

Pos.	Article	Q-ty	Description	Drg No.
1.	7005929-00	1	Nut DIN 981 KM8	
2.	7005928-00	1	Locking plate DIN 5406 MB8	
3.	7013785-00	2	Protective washer NILOS-Ring	
4.	4901249-00	2	Roller bearing DIN 720 320 09 CZI	
5.	4281012-00	1	Locking ring DIN 472 75 X2,5	

№ 0000000drw		Project	
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		
			Sheet
			16

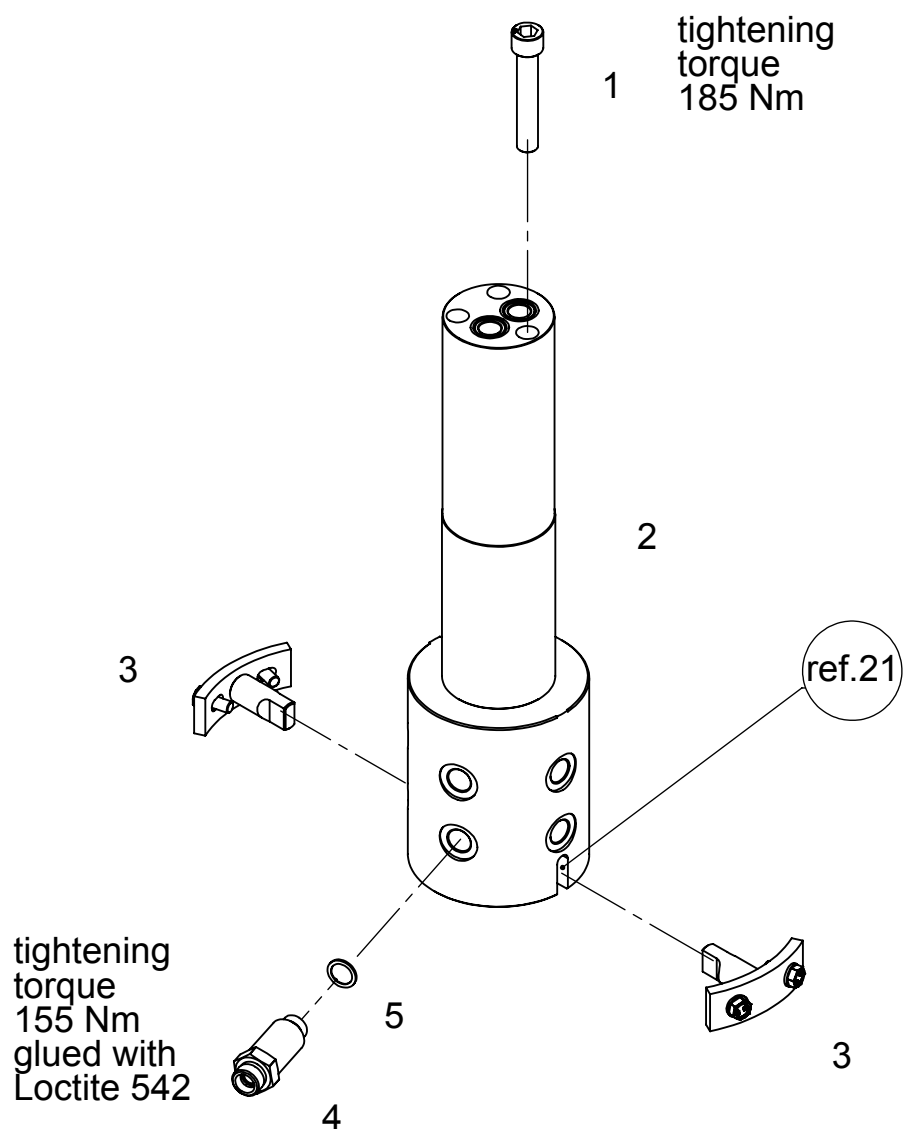
>□6
return



Pos.	Article	Q-ty	Description	Drg No.
1.	9249800-00	1	Upper bearing bushes	
2.	9959529-00	1	Spur gear Z90	
3.	9249746-00	1	Bearing housing	
4.	9249799-00	1	Lower bearing bushes	
5.	9249770-00	1	Bearing flange	
	(standard version without add. bearing (Liebherr))			
5.	9249770-0	1	Bearing flange	
	from 06.51.00.0001 to ... (version with add. bearing)			
6.	4000435-00	12	Bolt ISO 4762 M20x60 10.9	
7.	10001463-00	12	Bolt ISO 4762 M20x50 10.9	
8.	7743242-00	1	Grease nipple M10x1	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		17
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

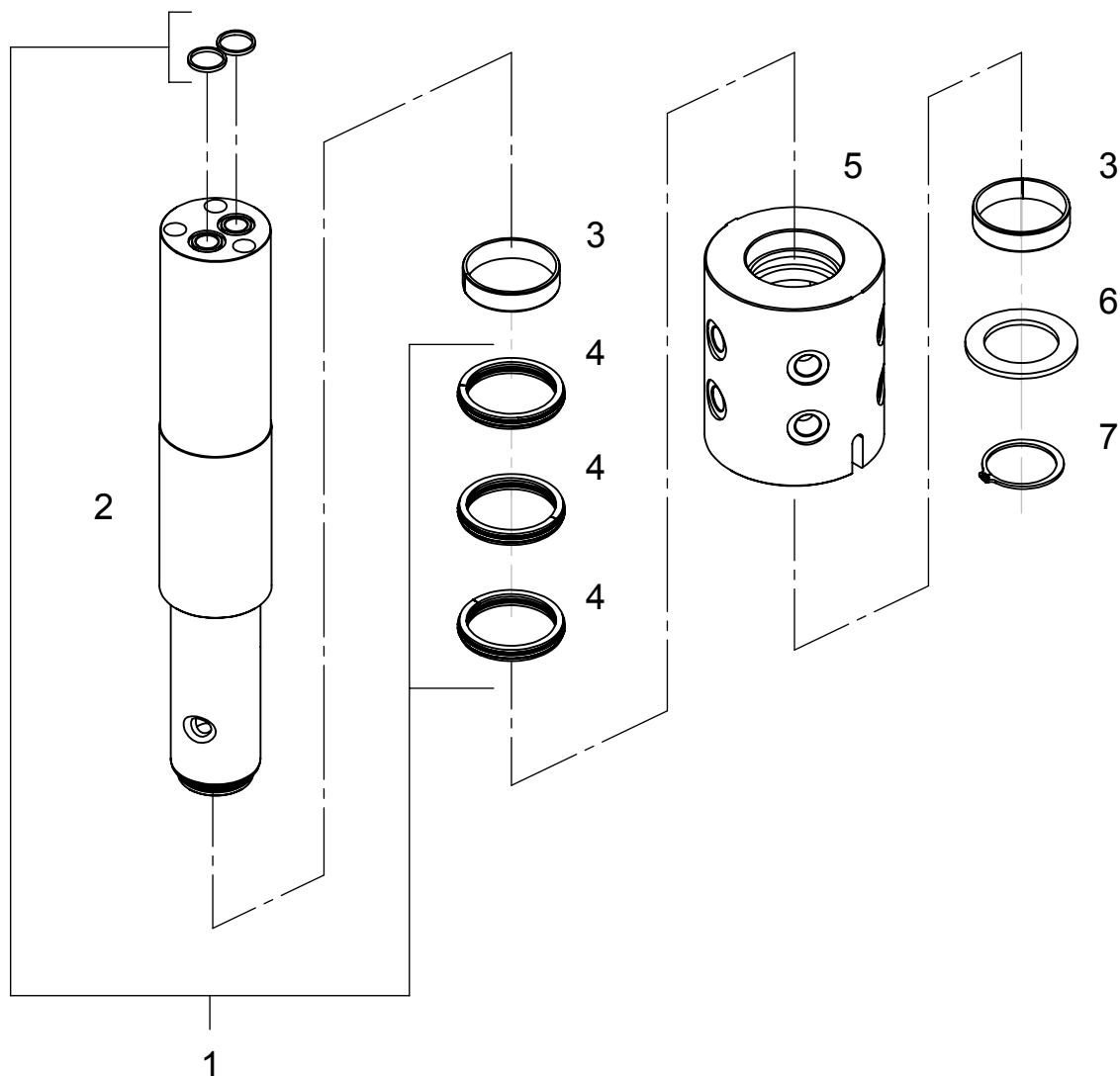
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return



Pos.	Article	Q-ty	Description	Drg No.
1.	4601010-00	3	Bolt ISO 4762 M14x80 10.9	
2.	9226118-00	1	Rotary connection >□19	
3.	9614618-00	2	Carrier assly >□21	
4.	9235119-00	10	Thread fitting with seal	
5.	081003-1745-00	10	Seal 18 DIN 3869	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		18
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

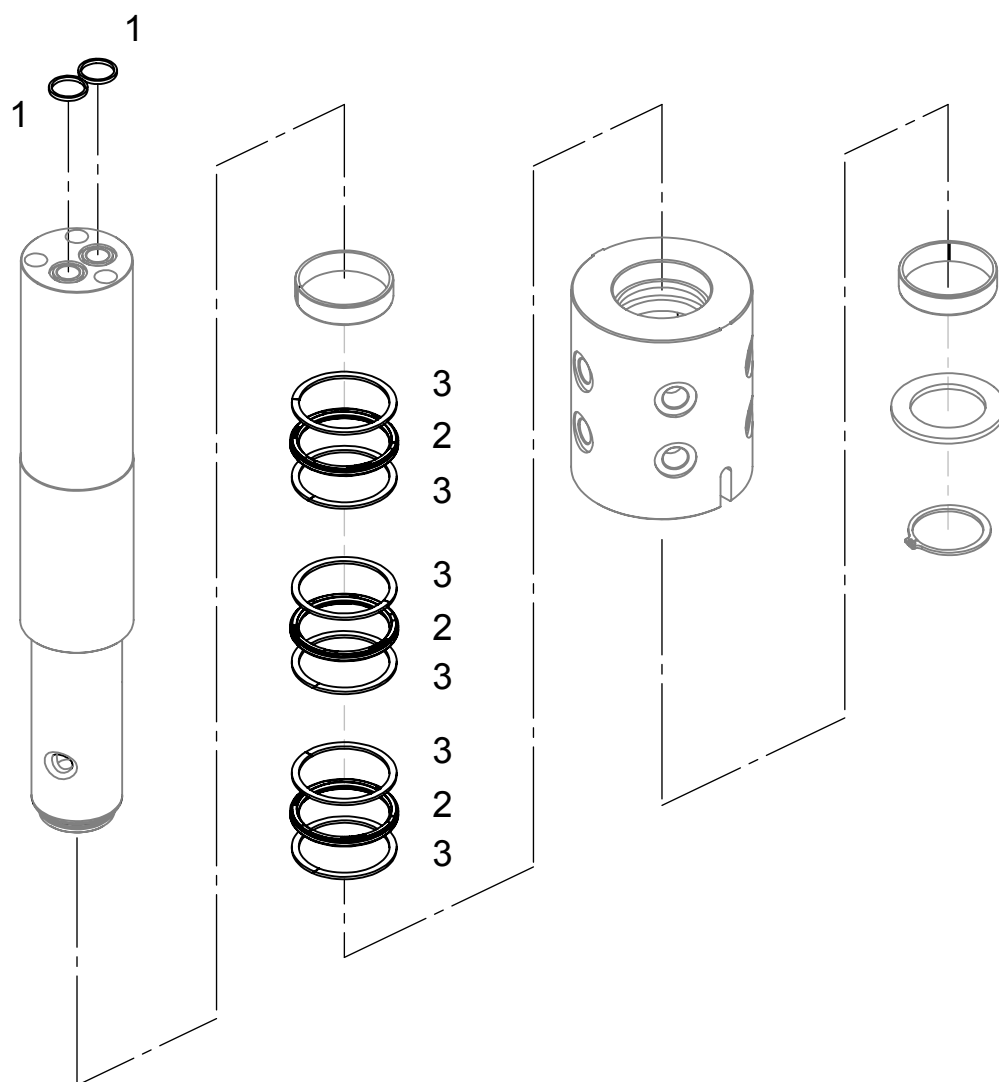
>□18
return



Pos.	Article	Q-ty	Description	Drg No.
1.	9922518-01	1	Set of seal >□20	
2.	9226119-00	1	Axle	
3.	7000004-00	2	Bearing 60-65x15	
4.	7021129-01	3	Seal 60x70x10 >□20	
5.	9922521-01	1	Rotary part	
6.	9710216-00	1	Washer 50	
7.	4280034-00	1	Locking ring DIN 471 50x2	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		19
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

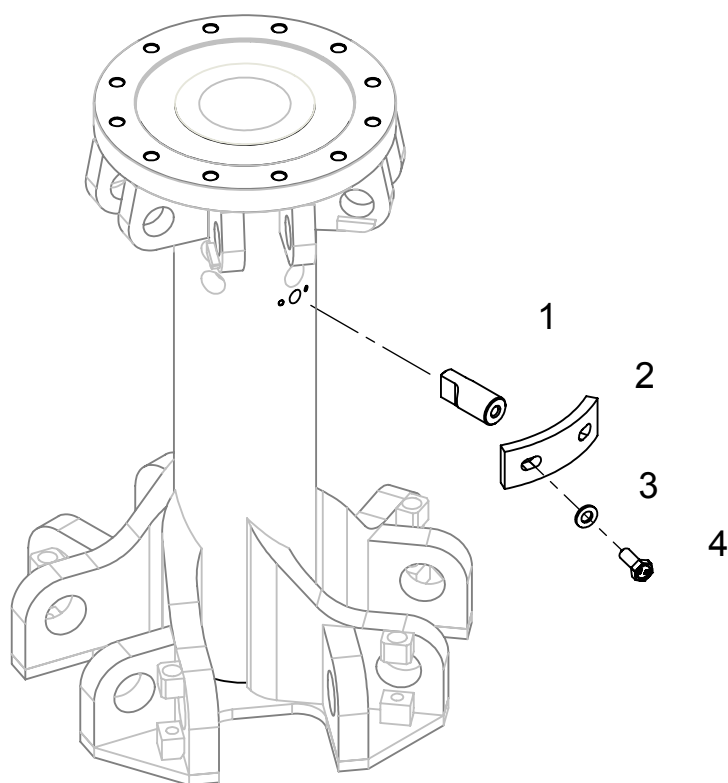
>□19
return



Pos.	Article	Q-ty	Description	Drg No.
1.	7264643-01	2	Seal 25.55x2.55x1.7	
2.	160110-1256-00	3	Seal 60x70x10	
3.	7024215-00	6	Guard ring	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		20
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

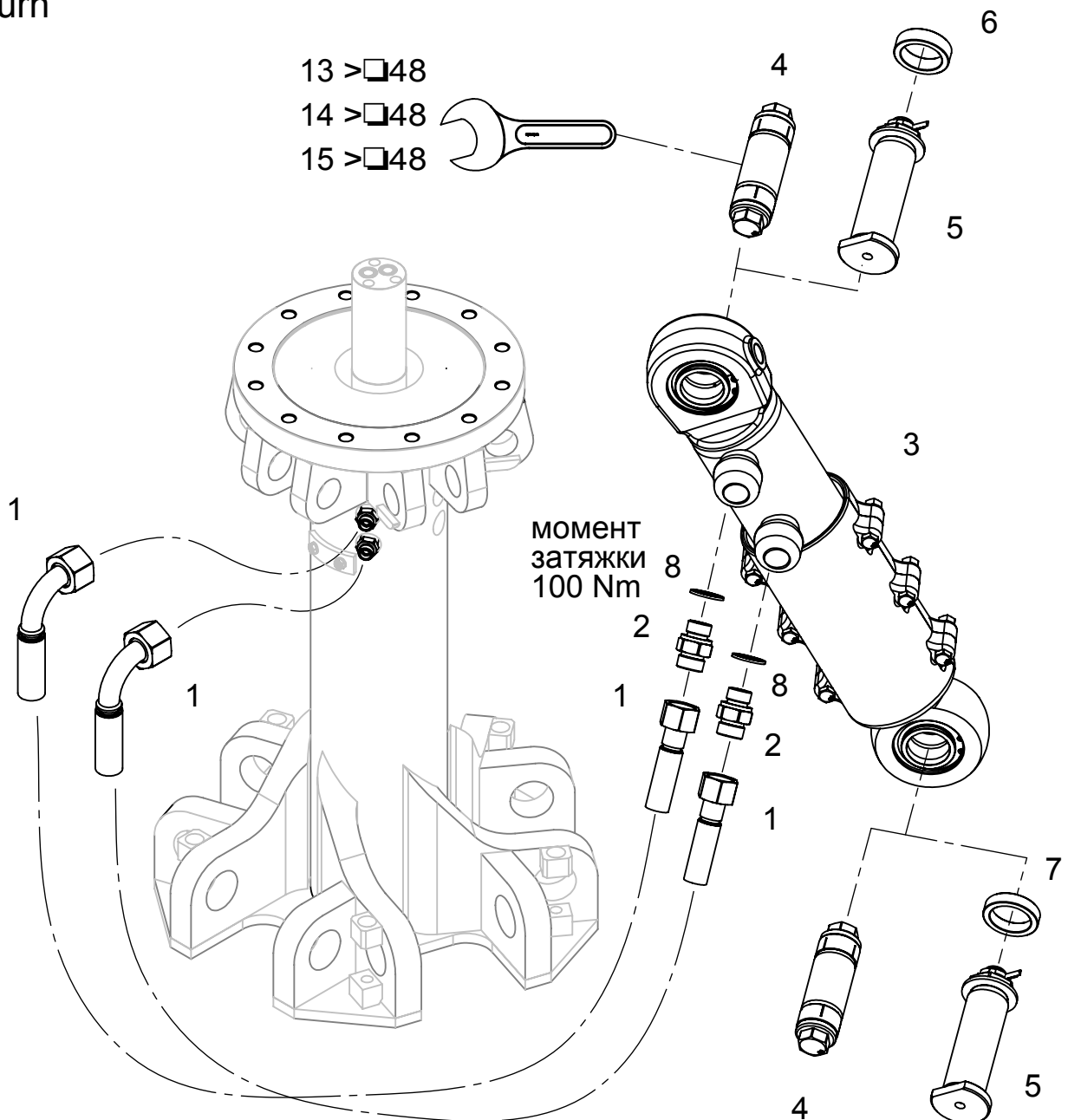
>□18
return



Pos.	Article	Q-ty	Description	Drg No.
1.	9237896-00	1	Carrier	
2.	9237897-00	1	Sheet	
3.	10289803-00	2	Washer 8	
4.	4900089-00	2	Bolt ISO 4017 M8x20 8.8	

№ 9614618-00		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			21
from 25.12.2015 по	21.02.2020		

>□6
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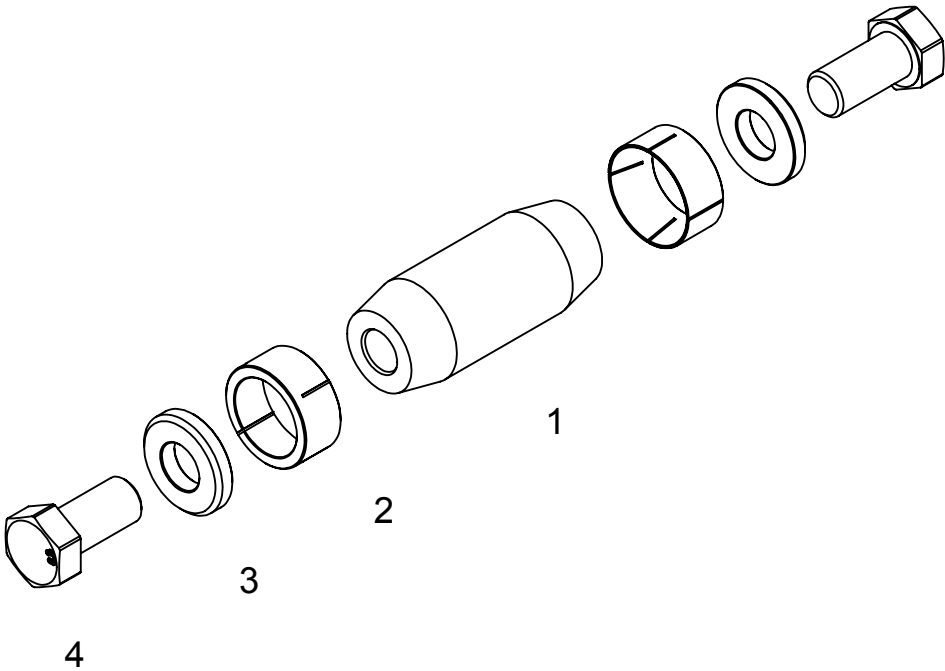


П.	Артикул	Кол-во	Описание	Drg No.
1.	7000901-01	10	HPH	
2.	4600649-00	10	Thread fitting ISO 8434 12XM18X1,5 with seal	
3.	9241931-01	5	Hydraulic cylinder	
4.	7026760-01	10	Hydraulic cylinder pin Exp. assly	
5.	9830051-00	10	Hydraulic cylinder pin assly	
6.	9161350-01	5	Upper ring	
7.	9923177-01	5	Lower ring	
8.	081003-1745-00	10	Seal 18 DIN 3869	

№		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		22
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

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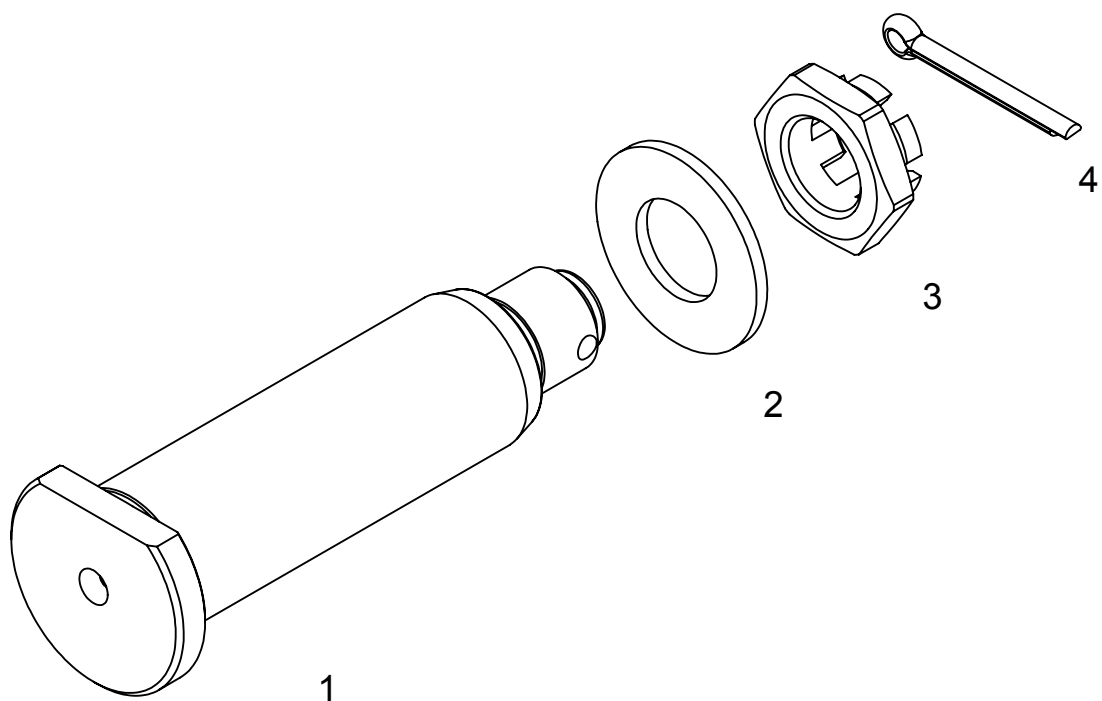
tightening
torque
350 Nm
check up:
in 1 hour
in 3 hours
in 10 hours
in 40 hours



Pos.	Article	Q-ty	Description	Drg No.
1.	160104-2024-00	1	Pin hydraulic cylinder 45x107	
2.	160104-2023-00	2	Expanding bush 45	
3.	160104-2022-00	2	Washer 21-44x8	
4.	160104-2021-00	2	Bolt M20x1,5x40mm 8.8	

№ 7026760-01		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		23
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

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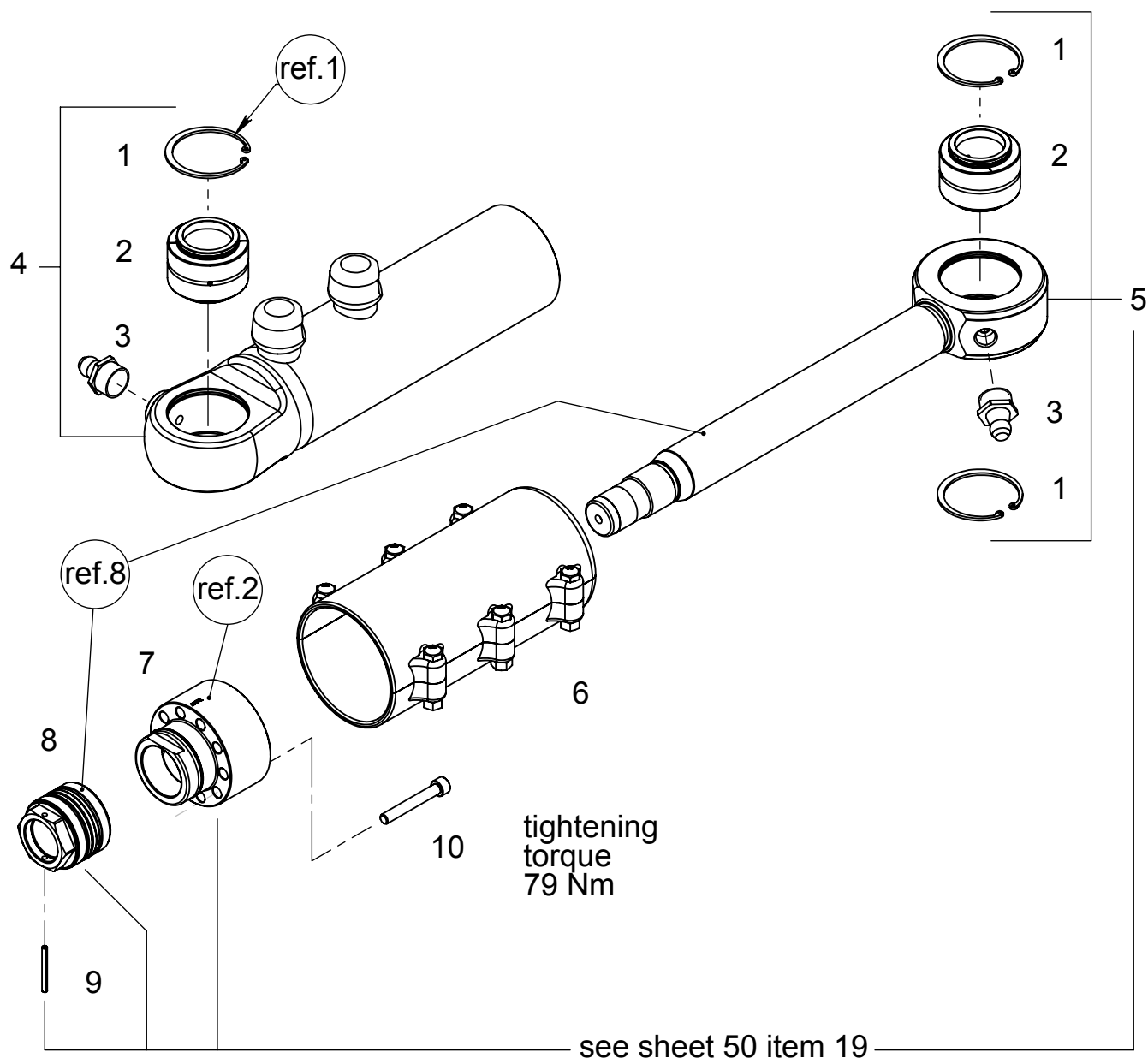
Pos.	Article	Q-ty	Description	Drg No.
1.	9830052-00	1	Hydraulic cylinder pin	
2.	10289811-00	1	Washer 30	
3.	4118003-00	1	Horned nut M30 DIN 937 17H A3C	
4.	4330034-00	1	Splint DIN 94 6,3X 56 ST	

№ LHB-9830051-00		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		24
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

ORM-60eng_sw

Size A4

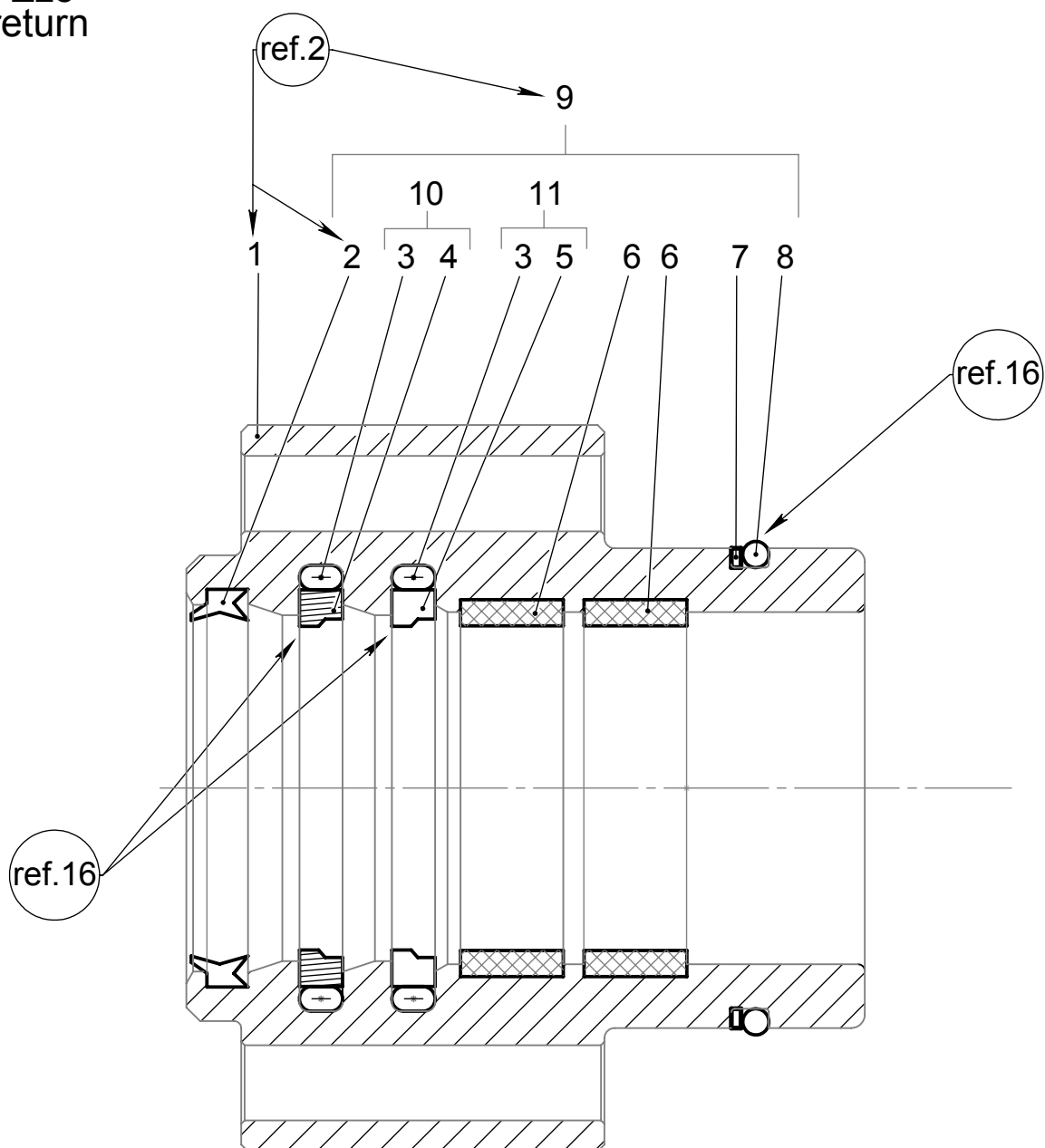
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Pos.	Article	Q-ty	Description	Drg No.
1.	4281012-00		Locking ring DIN 472 75 X2,5	
2.	7025750-01		Pivoting bearing	
3.	7743242-00		Grease nipple DIN 71412 A M10x1	
4.	9063462-01		Cylinder	
5.	081009-2039-02		Rod	
6.			Hydraulic cylinder protection assly >□28	
7.	9958886-01		Piston rod bearing 17 assly >□26	
7.	9958886-02		Piston rod bearing 24 assly >□26	
8.	9242102-03		Piston assly >□27	
9.	160118-1846-00		Pin ISO 8752-ST 5x50	
10.	4000592-00		Bolt ISO 4762 M10x70 12.9	

№ 9241931-01		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				25
from 25.12.2015 по	21.02.2020			

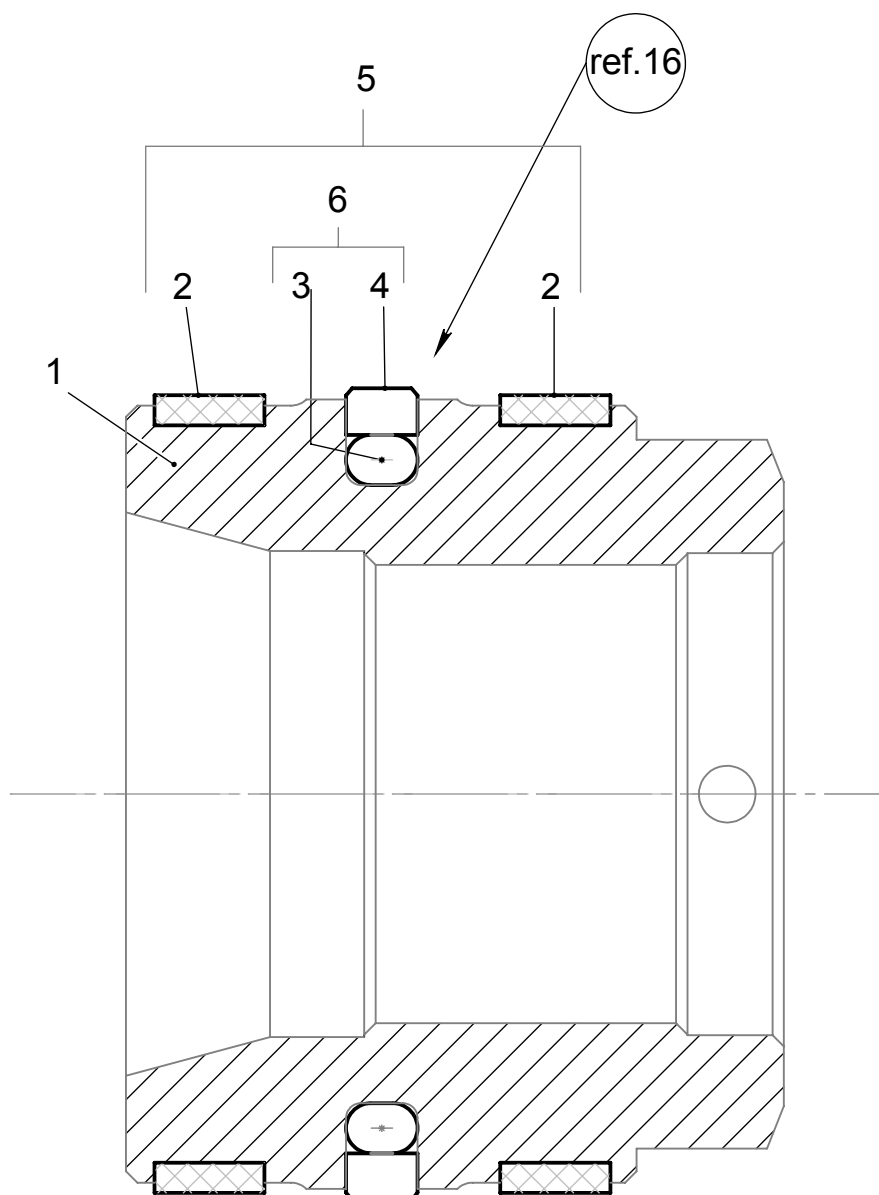
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Pos.	Article	Q-ty	Description	Drg No.
1.	9958887-01	1	Head bearing 17	
1.	9958887-02	1	Head bearing 24	
2.	7025761-00	1	Scraper ring DA17	
2.	160502-1405-00	1	Scraper ring DA24	
3.	7264437-00	2	O-ring 56,50x5,33	
4.	7010666-00	1	Rimseal 50	
5.	7001132-00	1	Stepseal 50	
6.	7006262-00	2	Guide ring	
7.	10101664-00	1	Guard ring	
8.	7264714-00	1	O-ring 63.09x3.53	
9.	9155154-00	1	Seal kit 50	
9.	160502-1430-00	1	Seal kit 50	
10.	160110-1943-00	1	Rimseal assly	
11.	160110-2006-00	1	Stepseal assly	

№		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				26
from 25.12.2015 по	21.02.2020			

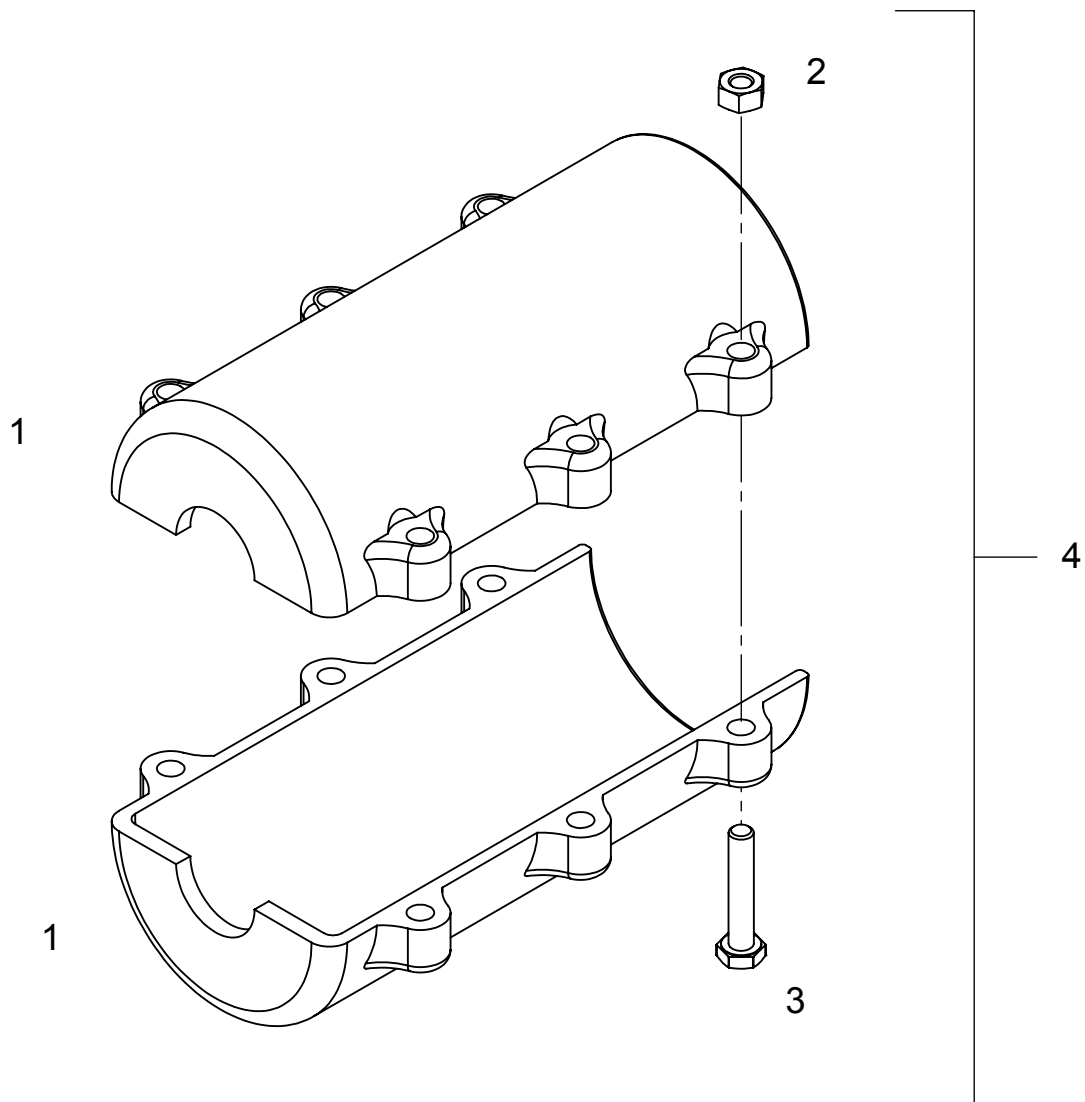
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Pos.	Article	Q-ty	Description	Drg No.
1.	9242100-03	1	Piston	
2.	7003438-00	2	Piston guid ring	
3.	7002482-00	1	O-ring 53.35x5.33	
4.	7002483-00	1	Sealing 70x54.5x6.3	
5.	9063464-00	1	Set of sealing 70	
6.	160512-1321-00	1	Sealing 70 with O-ring	

№ 9242102-03		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		27
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

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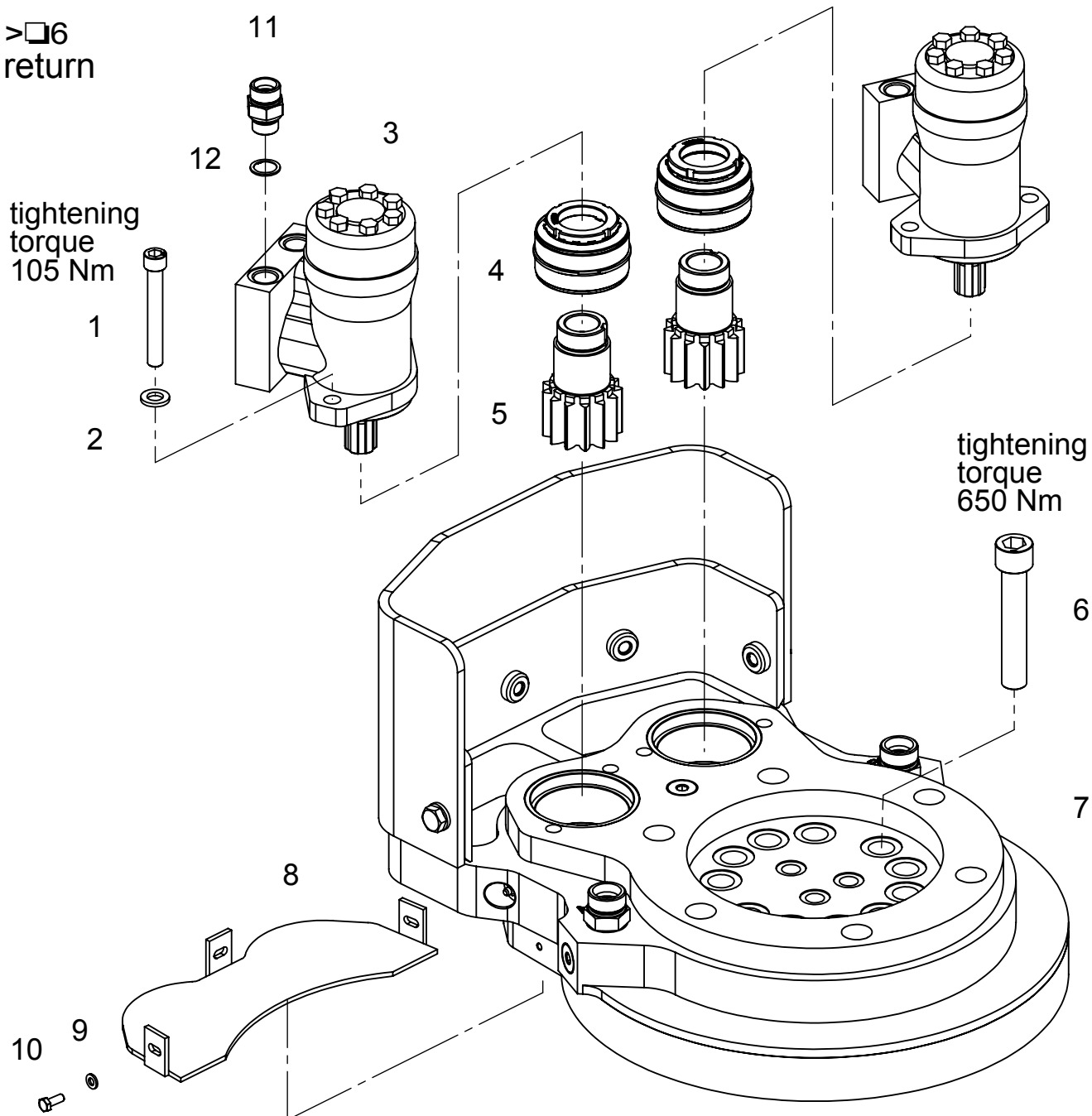


Pos.	Article	Q-ty	Description	Drg No.
1.	3201484-01 >change to 3201484-03		Half shell	
1.	3201484-03	2	Half shell	
2.	4901429-00	6	Nut DIN 6925 M 10 -10 C2E	
3.	4002117-01	6	Bolt ISO 4014 M10x65 10.9	
4.	9200966-01 >change to 9200966-03		Hydraulic cylinder protection assly	
4.	9200966-03	1	Hydraulic cylinder protection assly	

№ 9200966-03		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				28
from 25.12.2015 no	21.02.2020			

>□6
return

tightening
torque
105 Nm

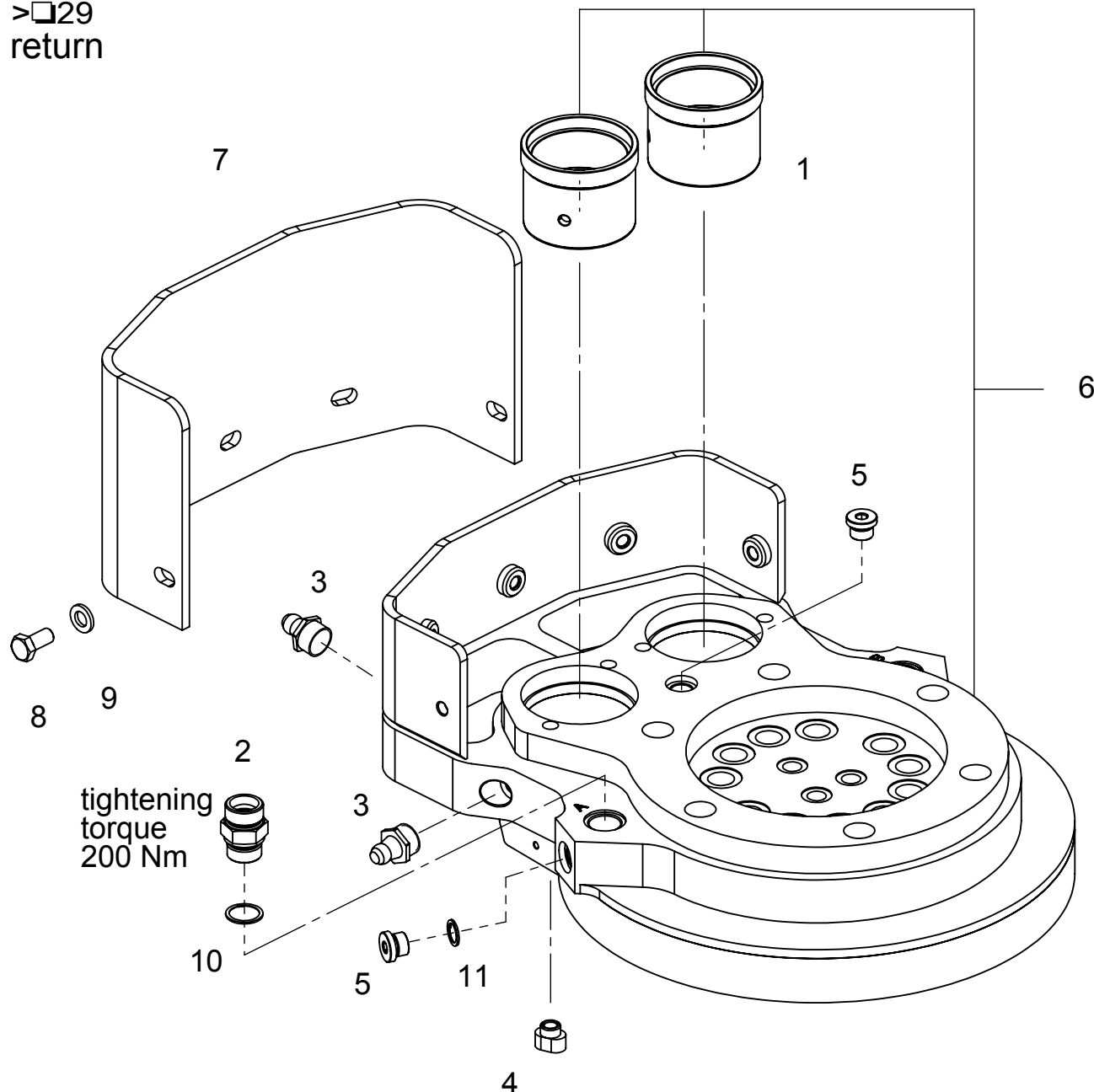


tightening
torque
650 Nm

Pos.	Article	Q-ty	Description	Drg No.
1.	160114-1325-00	4	Bolt ISO 4762 M12x90 12.9	
2.	7015815-00	4	Washer Nord Lock12	
3.	5009768-00	2	Rotator OMP200	
4.	9614599-00	2	Bearing ass >□16	
5.	9959694-00	2	Pinion Z13 OMP200	
6.	4002585-00	11	Bolt ISO 4762 M20x110 12.9	
7.	191011-2000-00	1	Middle flange assly >□30	
8.	191011-2008-00	1	Rotator gear protection	
9.	4600198-00	3	Washer ISO 7093 -1 6 -200HV	
10.	4065099-00	3	Bolt ISO 4017 M6x16 8.8	
11.	7002361-00	4	Thread fitting ISO 8434 SDS S 16XG 1/2A	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		29
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

>□29
return



Pos.	Article	Q-ty	Description	Drg No.
1.	160104-1824-00	2	Sleeve 75-88x70	
2.	4900669-00	2	Thread fitting ISO 8434 20XM27X2	
3.	7743242-00	4	Grease nipple DIN 71412 M10x1	
4.	160107-1320-00	4	Nut M12 spec.	
5.	7361960-00	3	Screw plug M18x1.5x17 A3C	
6.	191011-2001-00	1	Middle flange	
7.	191011-2002-00	1	Rotator protection	
8.	4900094-00	5	Bolt ISO 4017 M12x25 10.9	
9.	4000750-00	5	Washer 12 ISO 7093-1	
10.	160901-1938-00	2	Seal 27 DIN 3869	
11.	081003-1745-00	3	Seal 18 DIN 3869	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		30
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

>□12
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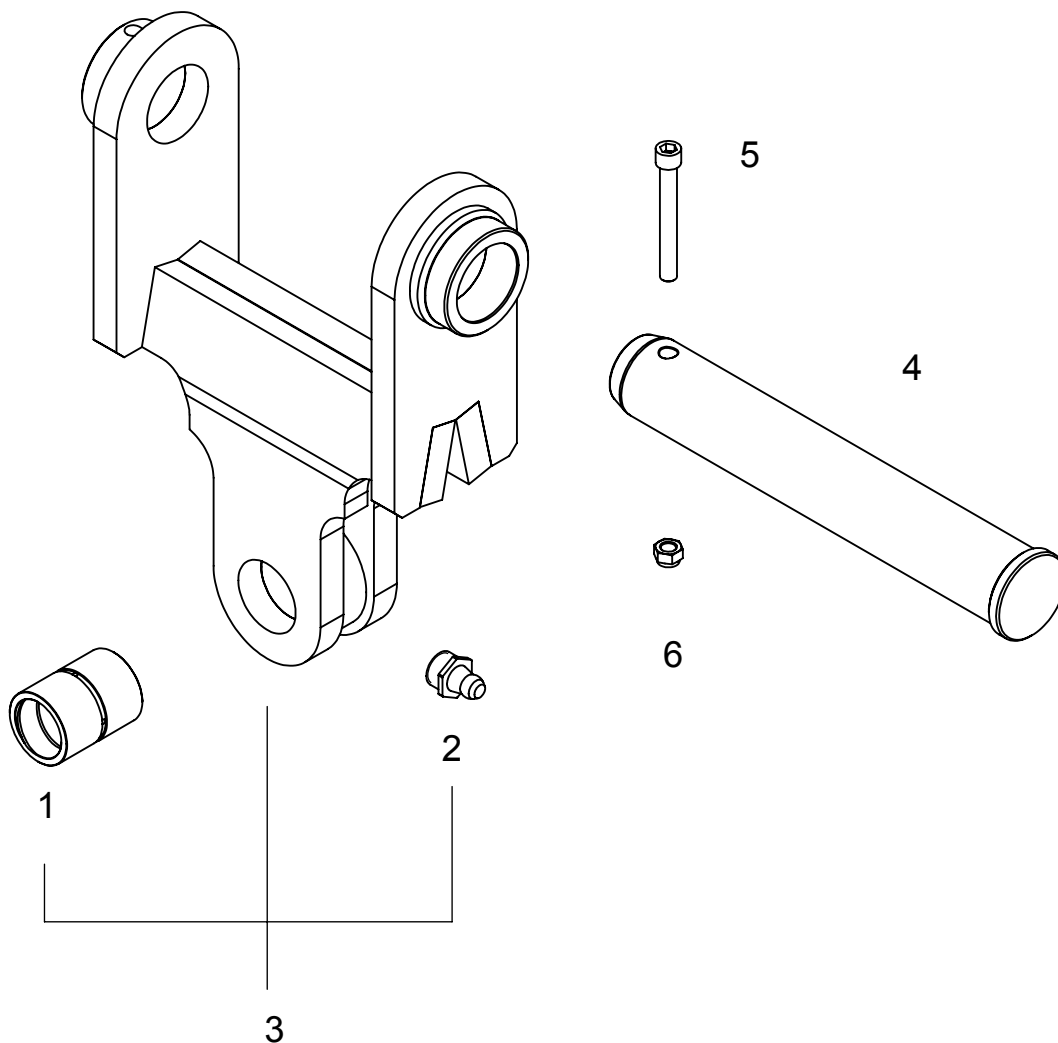
Pos.	Article	Q-ty	Description	
1.	Atlas	1	Grab suspension >□37	-
2.	Bonny	1	Grab suspension >□40	-
3.	Cat	1	Grab suspension >□32	-
4.	Doosan	1	Grab suspension >□36	-
5.	Fuchs	1	Grab suspension >□33	-
6.	Hitachi	1	Grab suspension >□39	-
7.	Liebherr	1	Grab suspension >□34	-
8.	Sennebogen	1	Grab suspension >□35	
9.	UMG	1	Grab suspension >□38	

Suspension, size table

No		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			31
from 25.12.2015 по			

> 31
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Caterpillar

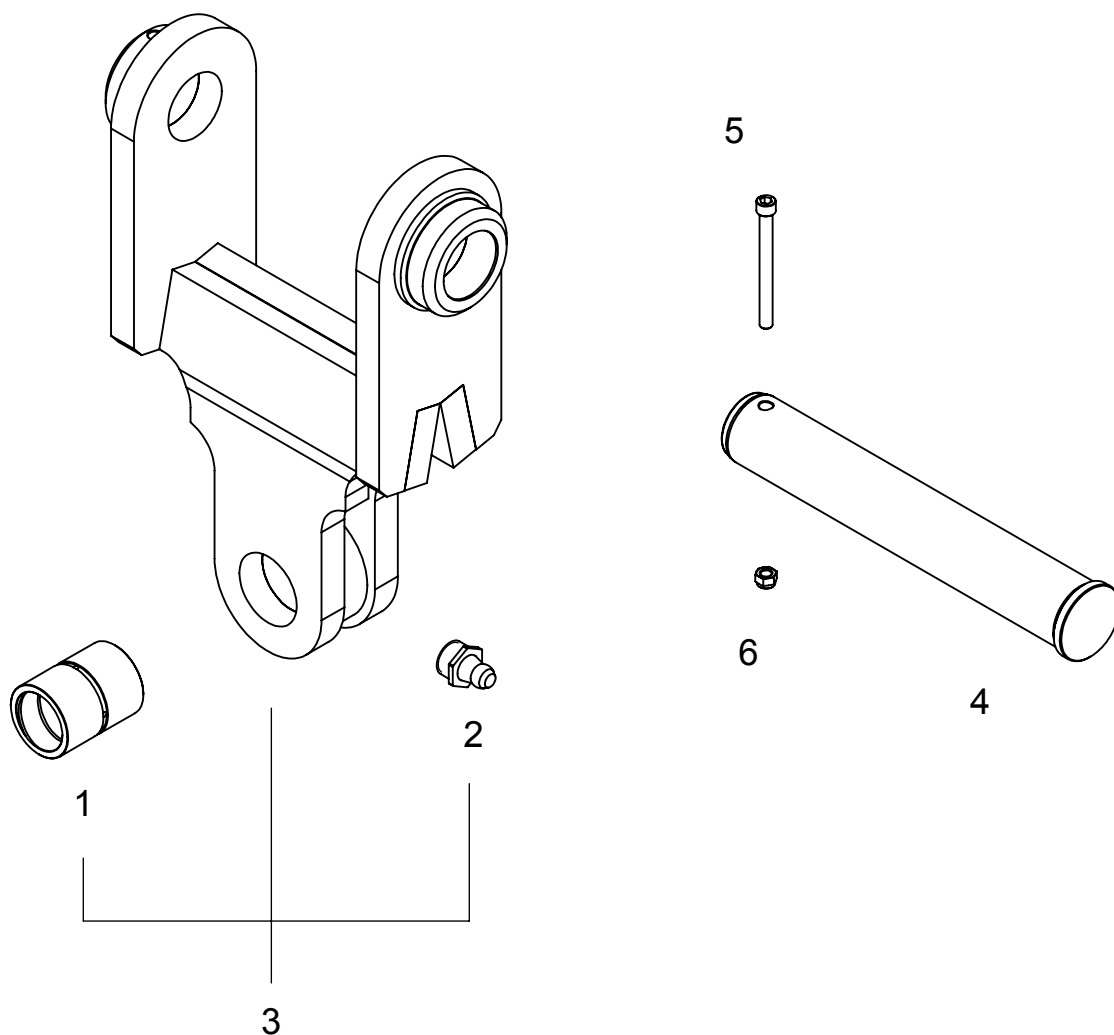


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearin bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.	190516-3180-00	1	Suspension Type A 318MH	
3.			Suspension Type B	
4.	190516-0460-00	1	Pin 80x460	
5.	170318-1940-00	1	Bolt ISO 4762 M16X130 12.9	
6.	170318-1943-00	1	Nut M16 DIN 985	

No		Project		Sheet
Model OPM-60		OrisProm LTD		32
parts catalog 0,6m3				
from 25.12.2015 по	21.02.2020			

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Fuchs

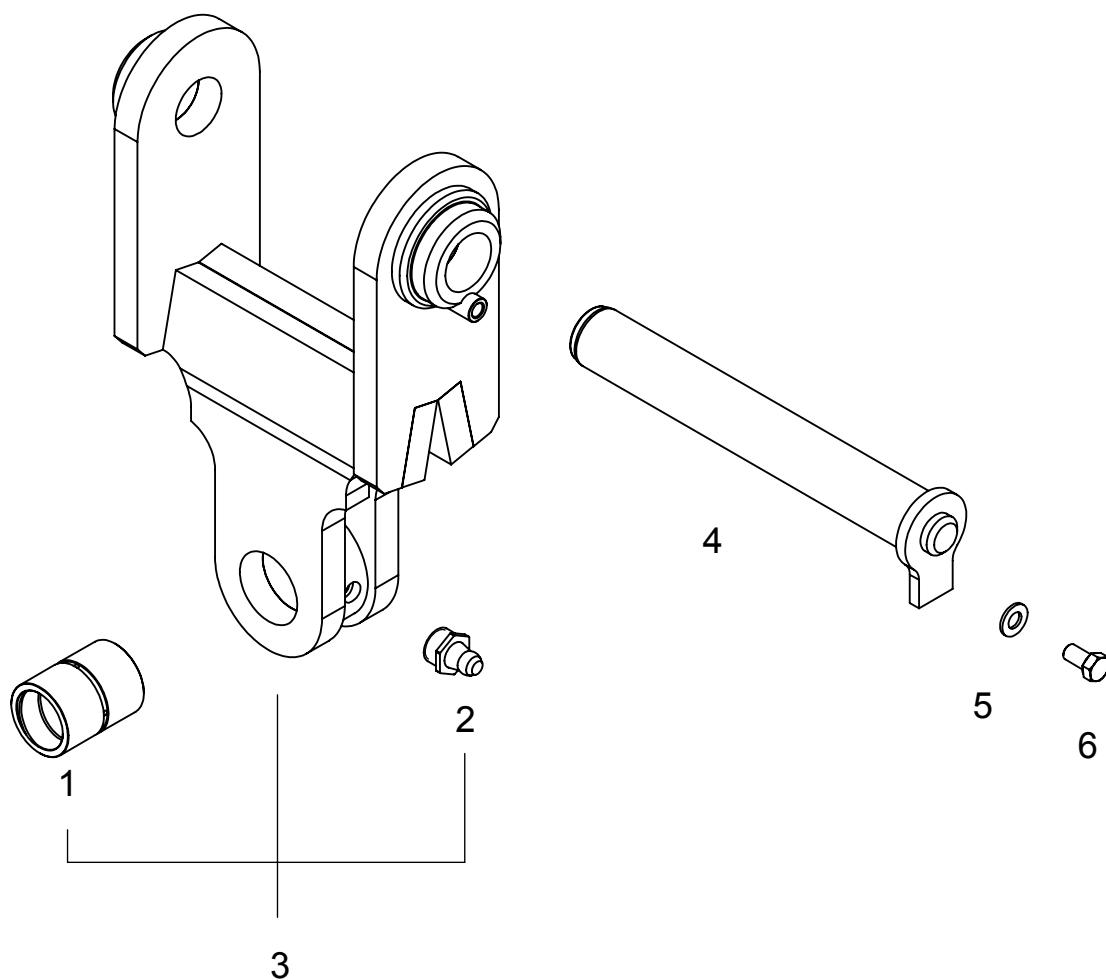


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.			Suspension	
3.	170505-2018-00	1	Suspension Type A	
3.	170913-1455-00	1	Suspension Type B	
4.	170505-2020-00	1	Pin 70x440	
5.	170506-1000-00	1	Bol ISO 4762 M12x130 12.9	
6.	170506-1010-00	1	Nut M12 DIN 985	

No		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				33
from 25.12.2015 no	21.02.2020			

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Liebherr

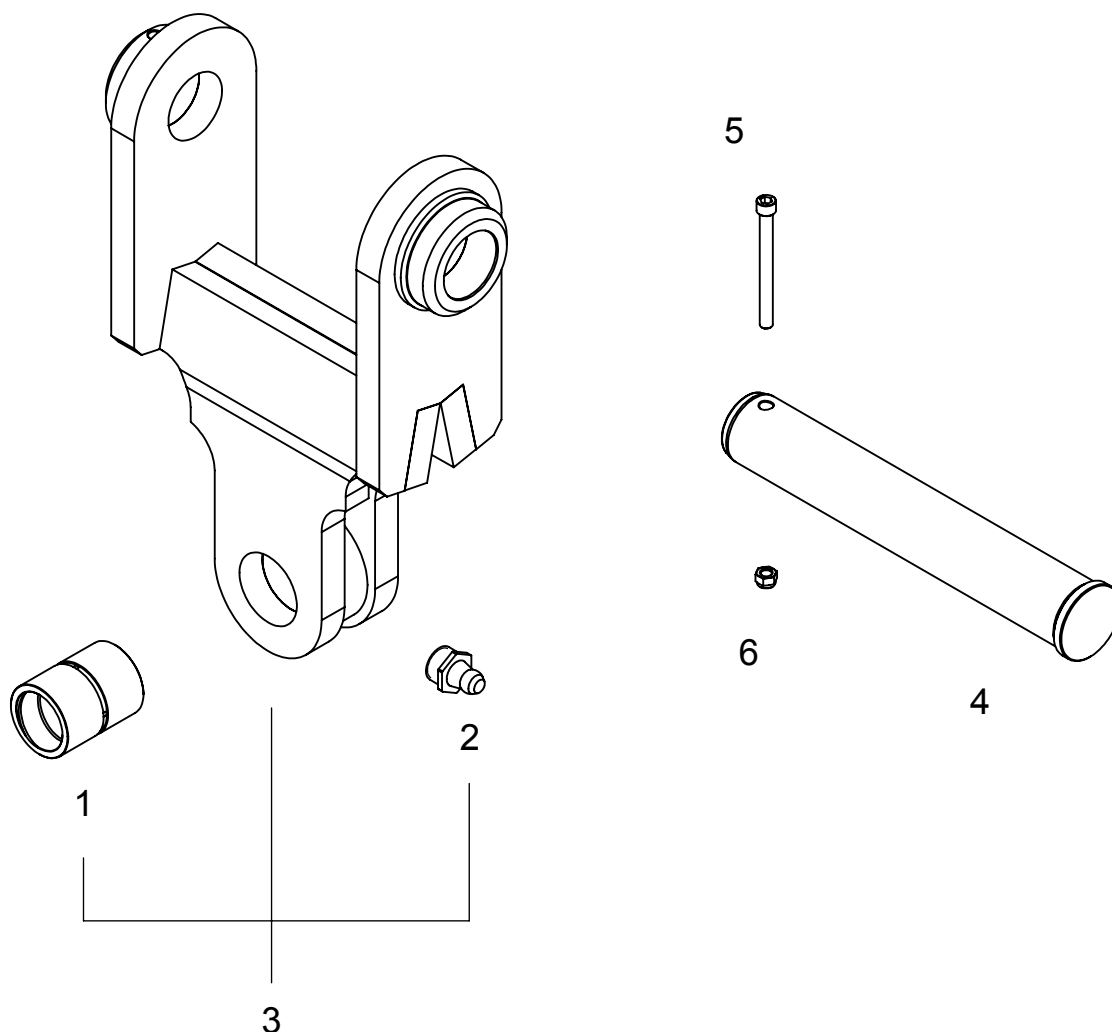


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.			Suspension	
3.	170320-1858-00	1	Suspension Type A	
3.	170917-0000-00	1	Suspension Type B	
3.				
4.	9168097-00	1	Pin 60x440	
5.	170320-2200-00	1	Washer 16	
6.	170320-2300-00	1	Bolt ISO 4017 M16X30 8.8	
7.				
8.				
9.				

No		Project	
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		

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Sennebogen

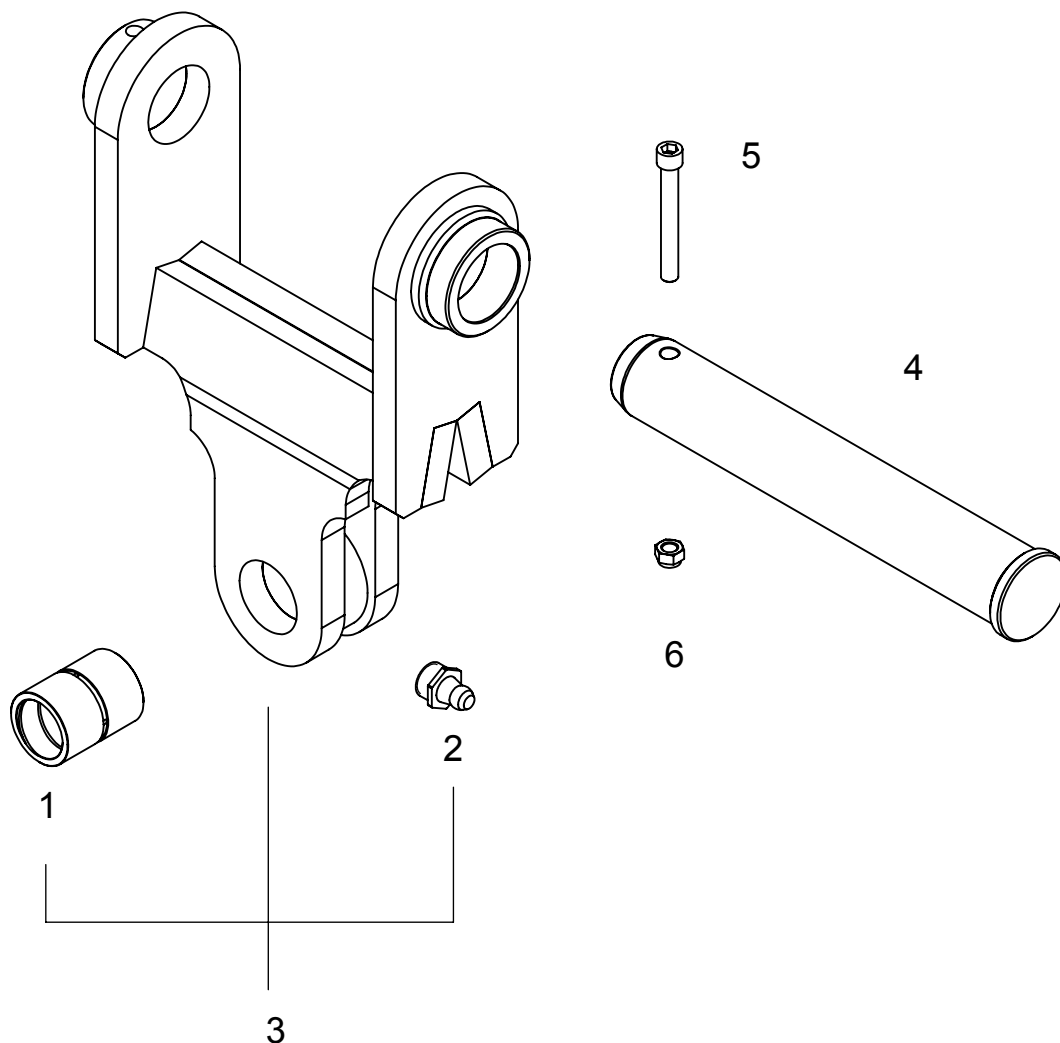


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.	170909-1957-00	1	Suspension Type A	
3.	170914-1050-00	1	Suspension Type B	
4.	170908-2019-00	1	Pin 60x500	
5.	170506-1000-00	1	Bolt ISO 4762 M12x130 12.9	
6.	170506-1010-00	1	Nut M12 DIN 985	

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		35
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

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Doosan

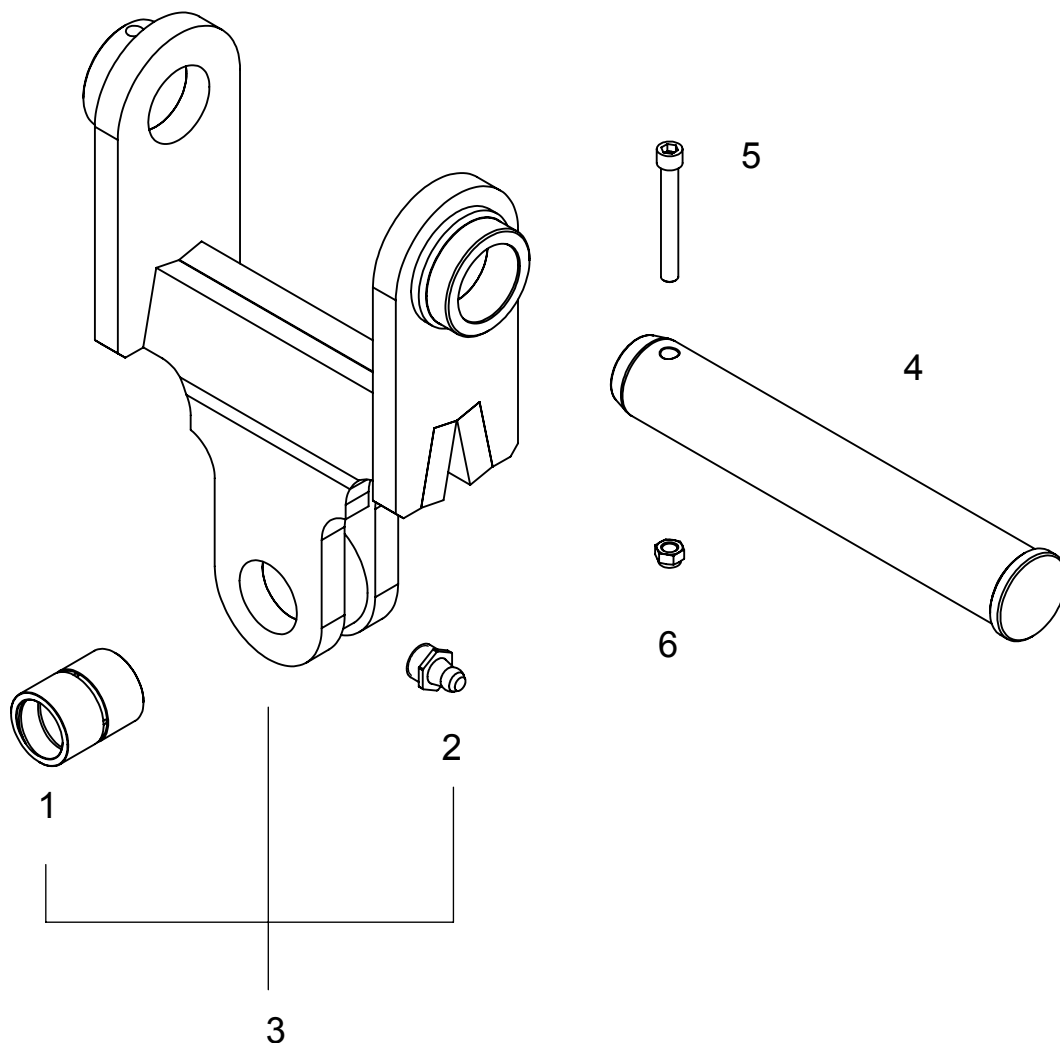


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.	170318-1927-00	1	Suspension Type A	
3.	170916-0000-00	1	Suspension Type B	
4.	170311-1414-00	1	Pin 80x507	
5.	170318-1940-00	1	Bolt ISO 4762 M16x130 12.9	
6.	170318-1943-00	1	Nut M16 DIN 985	

No		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				36
from 25.12.2015 по	21.02.2020			

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Atlas

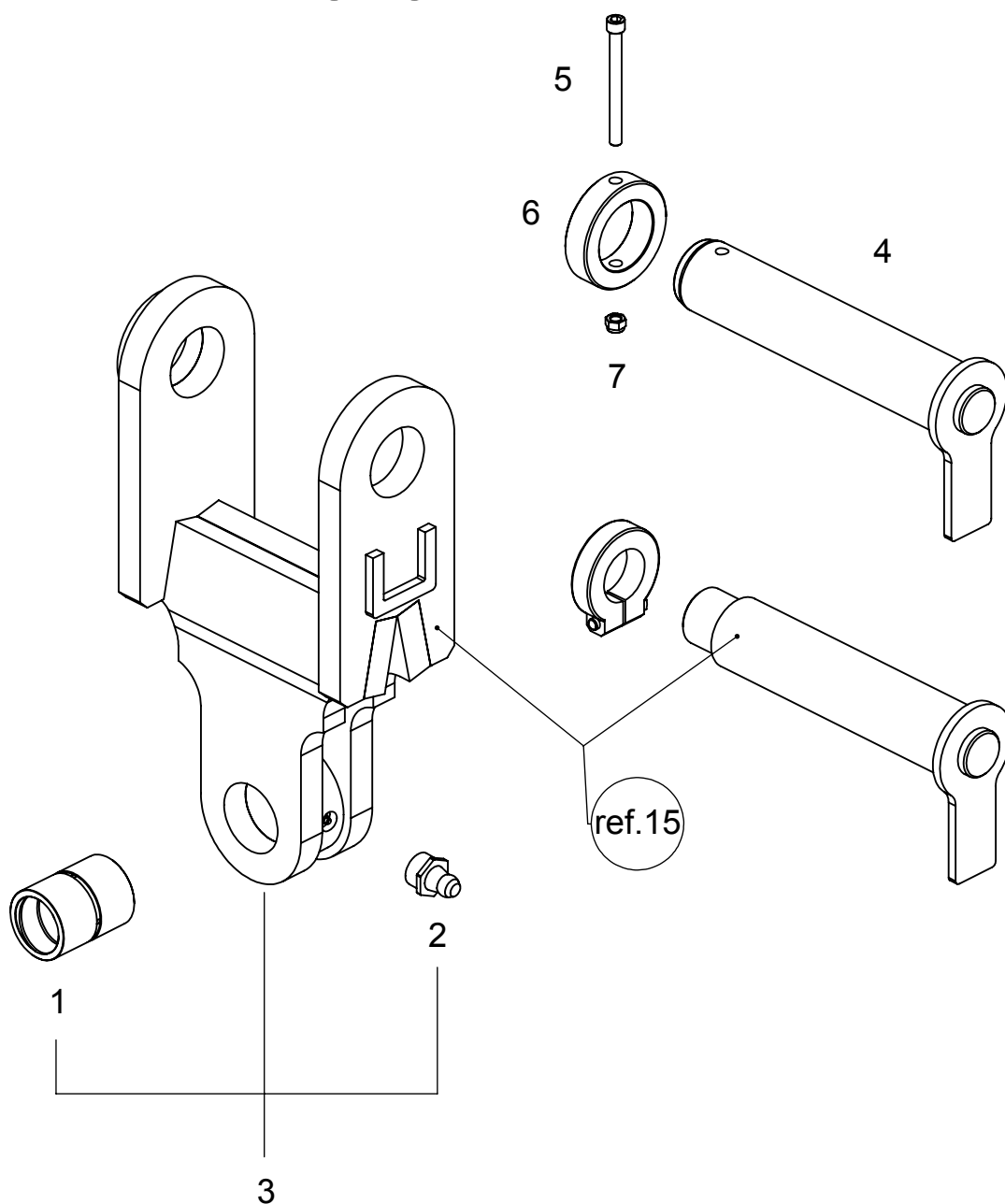


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.	170801-2017-00	1	Suspension Type A	
3.	190415-1800-00	1	Suspension Type A 180MH	
3.	170915-0000-00	1	Suspension Type B	
3.	170918-0000-00	1	Suspension Type B 180MH	
4.	170311-1414-00	1	Pin 80x507	
4.	190415-1802-00	1	Pin 60x413 180MH	
5.	170318-1940-00	1	Bolt ISO 4762 M16x130 12.9 (80)	
5.	170506-1000-00	1	Bolt ISO 4762 M12x130 12.9 (60)	
6.	170318-1943-00	1	Nut M16 DIN 985	
6.	170506-1010-00	1	Nut M12 DIN 985	

No		Project	OPM-20151228-00
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		

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UMG

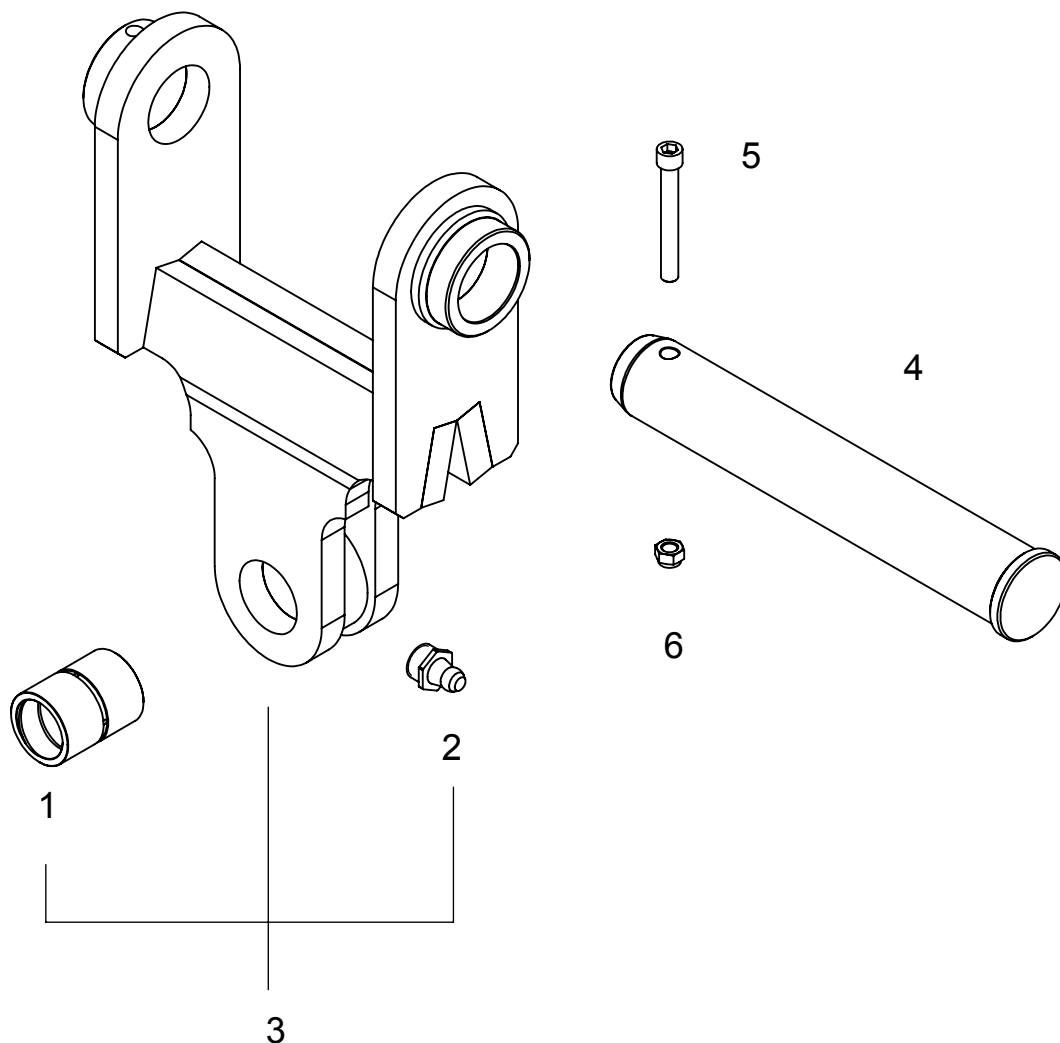


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.	180103-2110-00	1	Suspension Type A	
3.	180104-1620-00	1	Suspension Type A	
3.			Suspension Type B	
4.	180509-2004-00	1	Pin 75x373	
4.	180509-3504-00	1	Pin 75x452	
5.	170506-1000-00	1	Bolt ISO 4762 M12x130 12.9	
6.	180509-2002-00	1	Fixing ring	
7.	170506-1010-00	1	Nut M12 DIN 985	

No		Project	
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		
			Sheet
			38

>□31
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Hitachi

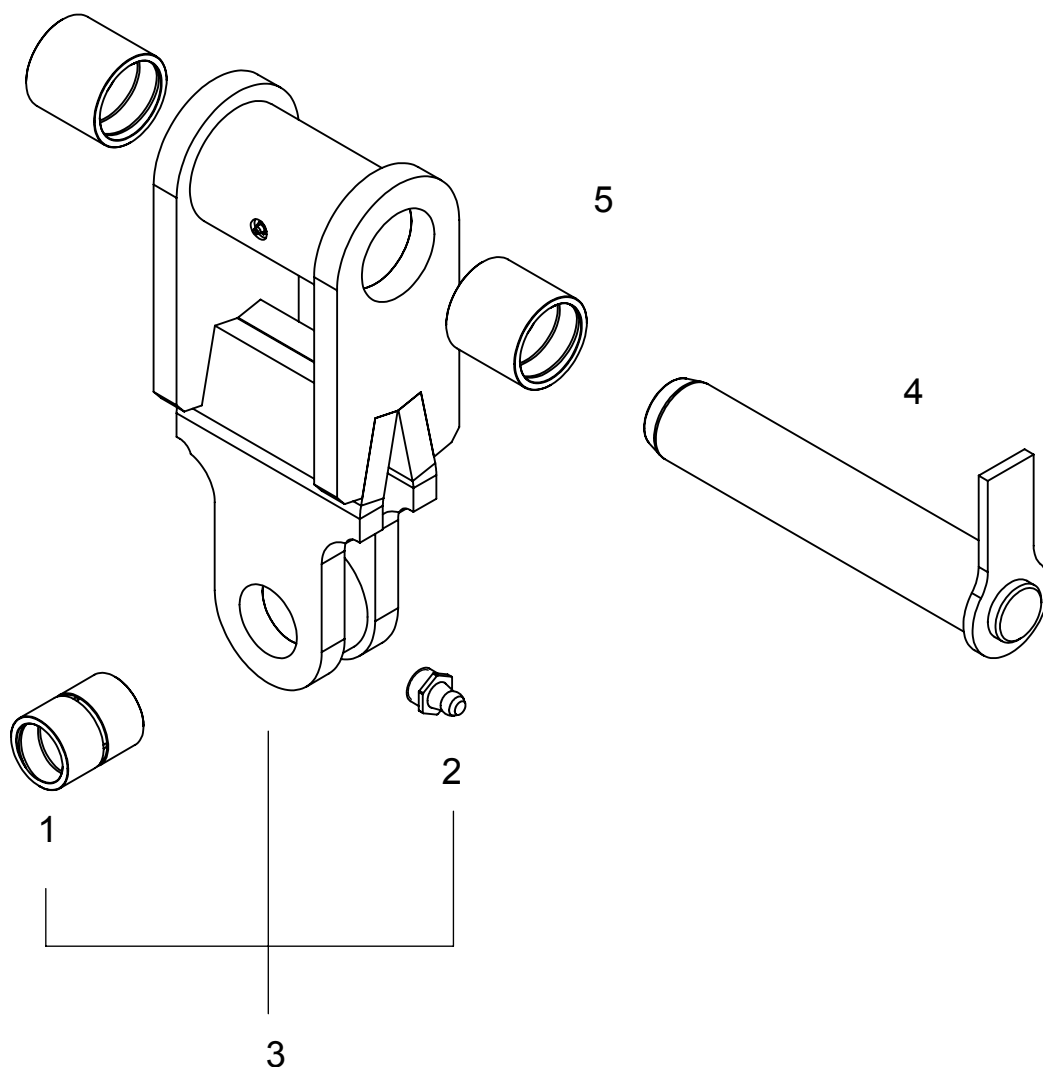


Pos.	Article	Q-ty	Description	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	1	Grease nipple DIN 71412 A M10x1	
3.	180831-0000-00	1	Suspension Type A	
3.			Suspension Type B	
4.	180831-0002-00	1	Pin 80x507	
5.	170318-1940-00	1	Bolt ISO 4762 M16x130 12.9	
6.	170318-1943-00	1	Nut M16 DIN 985	

No		Project	OPM-20151228-00	
Model OPM-60		OrisProm LTD		Sheet
parts catalog 0,6m3				39
from 25.12.2015 по	21.02.2020			

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Bonny



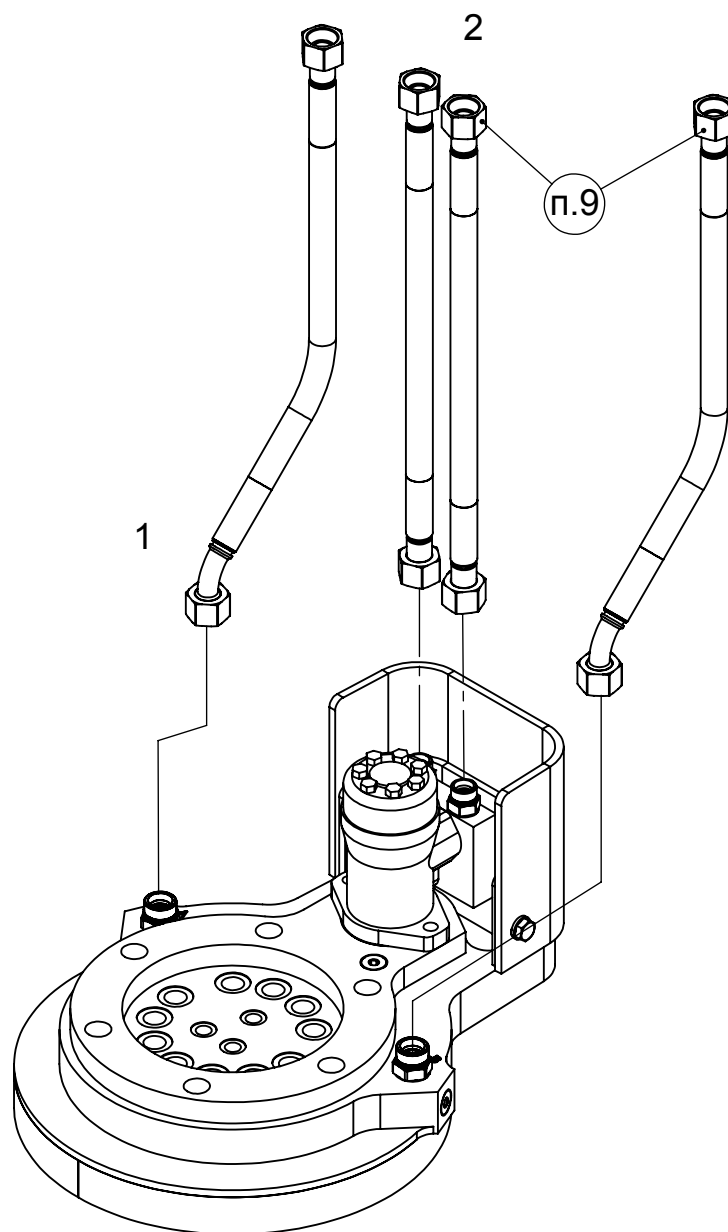
П.	Артикул	Кол-во	Описание	Drg No.
1.		1	Bearing bushes see page 12	
2.	7743242-00	2	Grease nipple DIN 71412 A M10x1	
3.	191008-3200-00	1	Suspension Type A WZY 32-8	
3.			Suspension Type B	
4.	191008-3206-00	1	Pin 80x434	
5.	191008-3205-00	2	Upper bearing bushes	
6.				

№		Project	
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		Sheet
			40

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No		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			41
from 25.12.2015 по			

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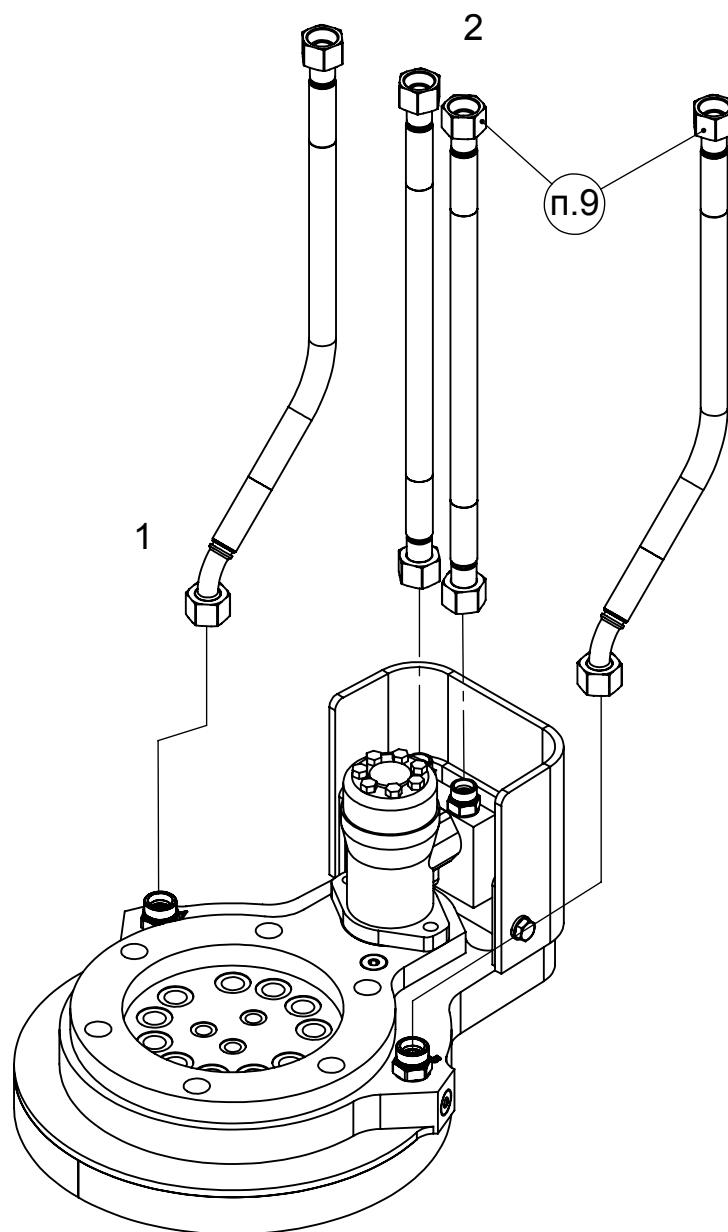


Hoses, pivot table

Pos.	Article	Q-ty	Description	Drg No.
1.	190419-1400-00	2	hose Atlas	
1.		2	hose Cat	
1.	170604-1455-00	2	hose Doosan	
1.	190419-1400-00	2	hose Fuchs	
1.	190420-1800-00	2	hose Hitachi	
1.	10218763-01	2	hose Liebherr	
1.	190417-1500-00	2	hose Sennebogen	
1.	190418-1400-00	2	hose UMG	
1.				
1.				

No		Project	OPM-20151228-00
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		

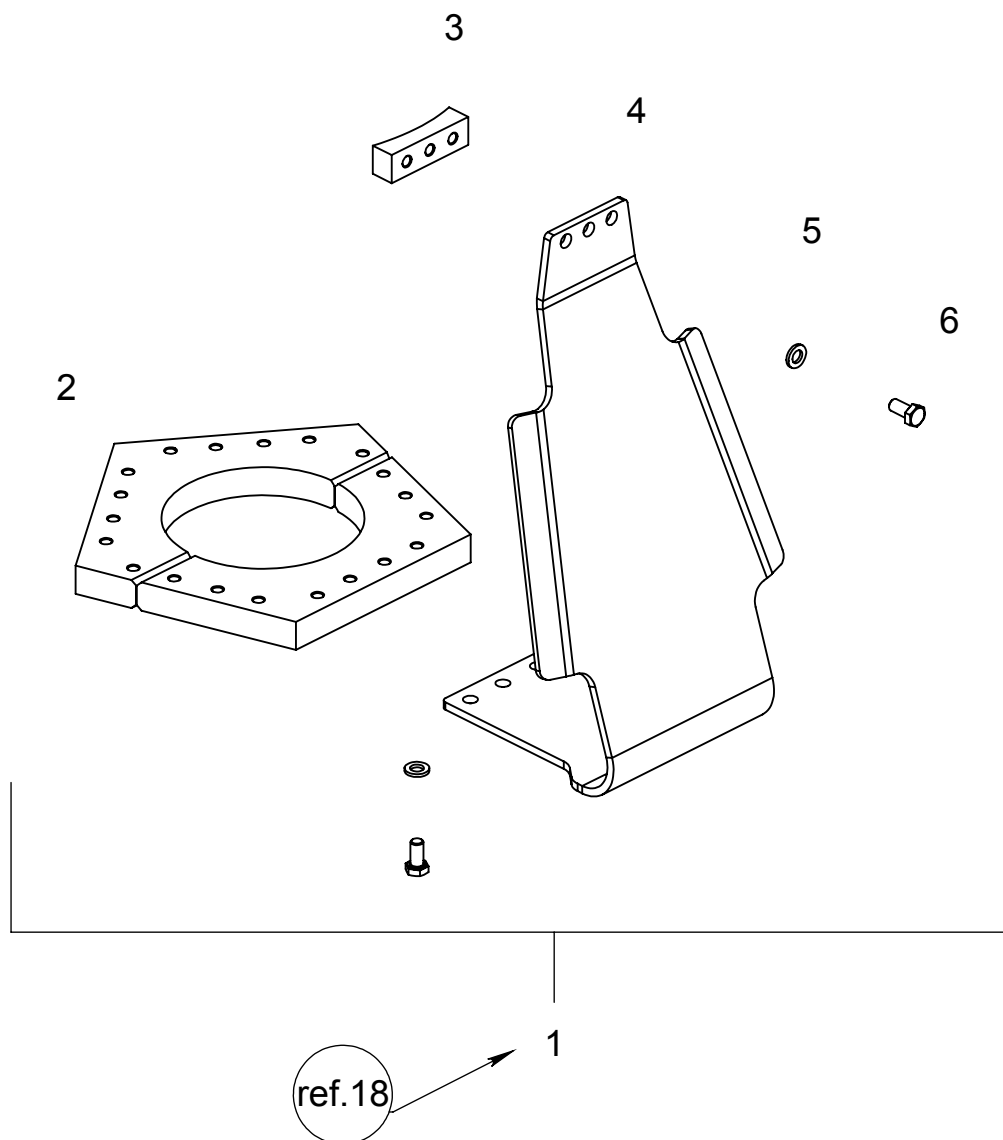
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Pos.	Article	Q-ty	Description	Drg No.
2.	190419-1300-00	2	rotator hose, Atlas	
2.		2	rotator hose, Cat	
2.	170604-1457-00	2	rotator hose, Doosan	
2.	190419-1300-00	2	rotator hose, Fuchs	
2.	190420-1700-00	2	rotator hose, Hitachi	
2.	10112525-01	2	rotator hose, Liebherr	
2.	190417-1400-00	2	rotator hose, Sennebogen	
2.	190418-1300-00	2	rotator hose, UMG	
2.				
2.				

No		Project	OPM-20151228-00
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		
			Sheet
			43

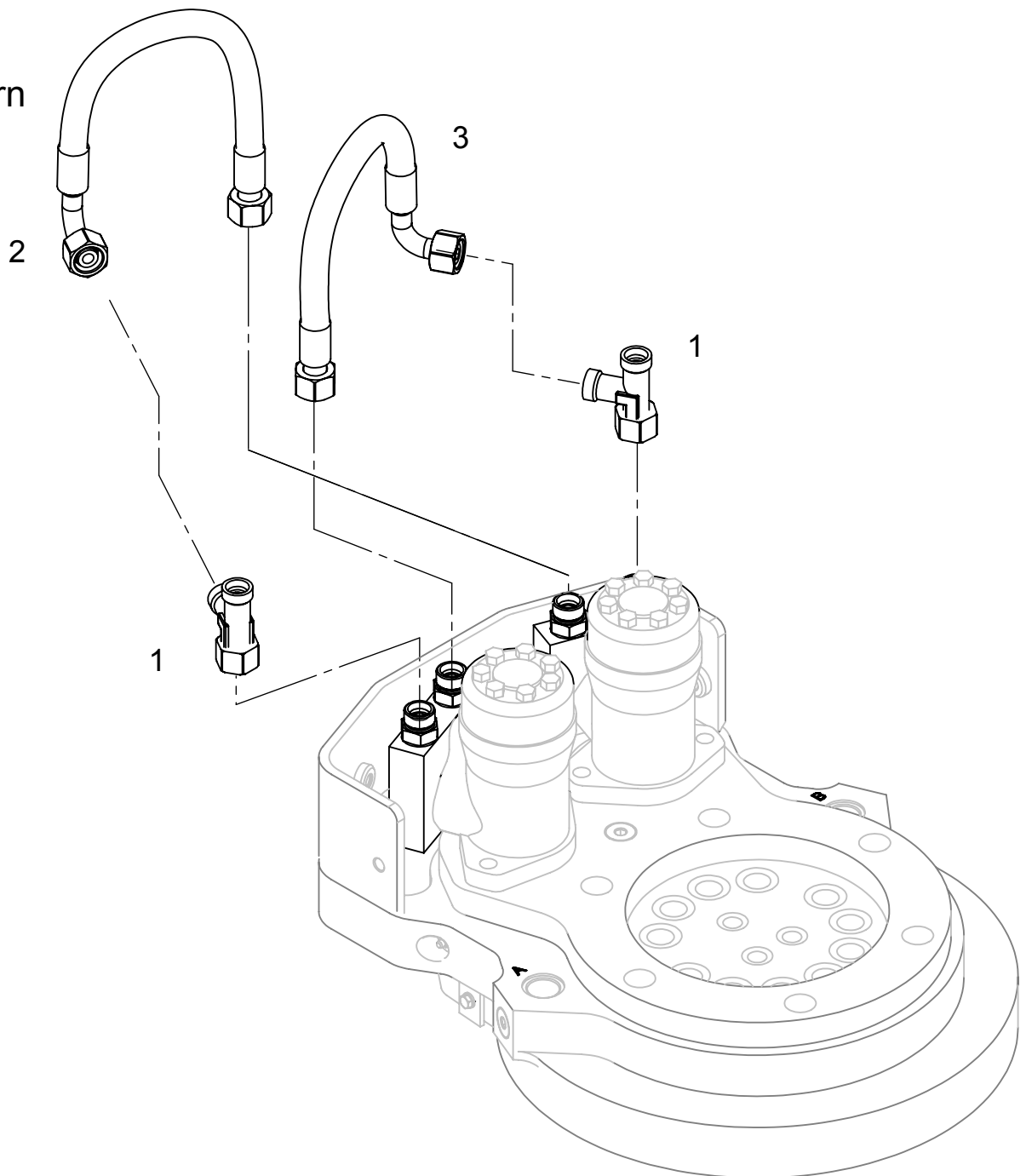
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Pos.	Article	Q-ty	Description	Drg No.
1.	180904-0000-00	1	Protection of HPH assly	
2.	180904-0001-00	1	Bottom mount protection	
3.	180904-0002-00	5	Upper mount protection	
4.	180904-0003-00	5	Protection	
5.	4000750-00	35	Washer 12 ISO 7093-1	
6.	4900094-00	35	Bolt ISO 4017 M12x25 10.9	

№ 180904-0000-00		Project	
Model OPM-60		OrisProm LTD	
parts catalog 0,6m3			
from 25.12.2015 по	21.02.2020		Sheet
			44

>5
return



Pos.	Article	Q-ty	Description	Drg No.
1.	191011-0021-00	2	adapter	
2.	191011-0022-00	1	hoses	
3.	191011-0023-00	1	hoses	
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

No		Project	OPM-20151228-00	Sheet
Model OPM-60		OrisProm LTD		45
parts catalog 0,6m3				
from 25.12.2015 no	21.02.2020			

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No		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			46
from 25.12.2015 по			

return

No		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			47
from 25.12.2015 по			

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return

Pos.	Article	Q-ty	Description	
10.	160107-1210-00	1	Ключ 30 >□7	Inst-160107-1210-00
11.	160111-0941-00	1	Оправка >□7	Inst-160111-0941-00
12.	160323-1224-00	1	Монтажный инстр. >□7	Inst-160323-1224-00
13.	-	1	ключ >□21	
14.	160323-1011-00	1	Монтажный инстр. >□21	Inst-160323-1011-00
15.	-	1	>□21	
16.	-	1	>□7	

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№		Project	
Model OPM-60		OrisProm LTD	Sheet
parts catalog 0,6m3			48
from 25.12.2015 по			

References

- ① for cylinders with №9241931-01 one ring
for cylinders with №9241931-02 two ring
- ② ② for guides with mark:
 "17" scraper 7025761-01 (set of sealing 9155154-01)
 "17" guide assly 9958886-01 (without sealings 9958887-01)
 "24" scraper 160502-1405-00 (set of sealing 160502-1430-00)
 "24" guide assly 9958886-02 (without sealings 9958887-02)
 reference Cyl_Greif-110713-1354-00
- ③ ③ 151030-01 case with prepapation for add. bearing. Interchangeable with
Liebherr 9307058 only in conjunction with 9249746-00.
- ④ The part can be delivered by request,
(ORM-171212-1516-00 bolt holder (upper) & ORM-171212-1515-00 bolt holder
(lower))
- ⑤ 9249770-00 for case without add. bearing 151030-00
9249770-01 for case with preparation for add. bearing 151030-01
- ⑥ By request bush can be delivered unprocessed by outer diameter or turned in
the diameter required.
Mounting bushings, see drawing.
- ⑦ When pressing the sleeve into the body of the cut, place it near the holes for
dismantling.
- ⑧ The piston and rod are selected in the following way. From the number
indicated on the piston subtract the number indicated on the rod $=20^{+15}_{-10}$. When
installing use GLEITMO 805. The piston is pre-twisted 100 Nm and further up to
aligning the holes. Download more information Si-180306-1200-00.
- ⑨ Doosan: Different connection ports on the handle (BSP or ORFS) are possible.
- ⑩ Pin of earning for Liebherr: main 60 mm, option 70 mm
- ⑪ Washers 61(1-4mm) for pages 7, 12, 33.
Washers 71-81(1-4mm) for pages 32, 35, 36, 38.
- ⑫ 151228-00 until №149(s/number of tine) include grab s/number until №
06.51.00.0012. 151228-01 from №150 (s/n c № 06.51.00.0013). Tines are
interchangeable.
- ⑬ Suspension and Bearing yoke Type B allows you not to remove the rotator
during installation.
- ⑭ Service information on tines (on request) 1, 2.

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References

- ⑮ 180103-2110-00 для E190WH, E200CH (grab article 20151228-08)
180104-1620-00 для E230WH, E230WHE, E235WH, E235WHE, E245CH,
E280WH, E350WH (grab article 20151228-09).
When shipped to factory UMG the pin is't included in the package.
- ⑮ ⑮ Instructions for installing seals.
Before mounting the seal, heat up to 80°C. Can be in microwave 1000 watt.
The heating time depends on the seal material.
Turcon - 2,5 min. Zurcon - 0,5 min. POM - 0,5 min.
For mouting use spesial tool.
- ⑮ The nut is installed with a chamfer downwards.
- ⑮ ⑮ ⑮ The assembly is supplied as an option except for the grapples with code
22. Service information for retrofitting grab without code 22
Si-180503-1713-00.
- ⑮ Rod assly 160814-1416-00
- ⑮ Execution option 22:
before 12 oct 2019 - additional hoses protection
after 12 oct 2019 - 2 rotators & add. hoses protection
- ⑮ Swivel manifold has 10 slots for fixing.
- ⑮ During assembly, lubricate the grease until it begin to leave the bearing 1
on page 17.
- ⑮ 7743242-00 grease nippel DIN 71412 AM 10x1 p.2 q-ty 1 на page.: 32, 33,
34, 35, 36, 37, 38, 39, 40, 41.

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Article	Page	Pos.	Q-ty	Description
081003-1745-00	15	11	3	seal 18 DIN 3869
081003-1745-00	18	5	10	seal 18 DIN 3869
081003-1745-00	22	8	10	seal 18 DIN 3869
081009-2039-02	25	5	1	rod
10001463-00	17	7	12	bolt ISO 4762 M20x50 10.9
10101664-00	26	7	1	guard ring
10112525-01	40	2	2	hose rotator, Liebherr
10218763-01	40	1	2	hose Liebherr
10289803-00	21	2	2	washer 8
10289811-00	24	2	1	washer 30
10289852-00	13	3	1	washer 48
130914-1612-00	10	1	1	tine pin 60x230
131017-1612-00	10	2	2	expanding bush 60
131017-1613-00	10	3	2	washer 25-59x12
131017-1614-00	10	4	2	bolt M24x2 50MM 8.8
151030-01	7	1		grab case
151030-02	7	1	1	grab case with bearing
151217-1747-00	8	4	1	spacing washer
151228-01	9	2	5	tine semi-closed (code1)
151230-1515-00	11	1	1	spacing washer 61/130x1,0
151230-1517-00	11	1	1	spacing washer 61/130x2,0
151230-1519-00	11	1	1	spacing washer 61/130x3,0
151230-1520-00	11	1	1	spacing washer 61/130x4,0
160104-1824-00	15	1	1	sleeve 75-88x70
160104-2021-00	23	4	2	bolt M20x1,5 40MM 8.8
160104-2022-00	23	3	2	waser 21-44x8
160104-2023-00	23	2	2	expanding bush 45
160104-2024-00	23	1	1	pin hydraulic cylinder 45x107
160105-1413-00	7	4	1	bearing 125
160107-1210-00	7	10	1	tool
160107-1211-00	22	8	1	tool
160107-1320-00	15	4	2	nut 12 spec.
160110-1256-00	20	2	3	seal 25.55x2.55x1.7
160110-1943-00	26	10	1	Rimseal 50 assly
160110-2006-00	26	11	1	Stepseal 50 assly
160111-0941-00	7	11	1	tool
160113-1928-00	7	6	5	bolt ISO 4762 M16x110 12.9
160114-1325-00	14	1	2	bolt ISO 4762 M12x90 12.9
160118-1846-00	25	9	1	pin ISO 8752-ST 5x50
160502-1405-00	26	2	1	scraper ring DA24

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160502-1430-00	26	9	1	seal kit 50
160512-1321-00	27	6	1	sealing 70 with O-ring
160604-1908-00	14	12	2	seal 21 DIN 3869
160814-1416-00	50	19	1	rod assly
160901-1938-00	15	10	2	seal 27 DIN 3869
161122-1450-00	35	4	1	pin 60x500
170311-1414-00	36	4	1	pin 80x507
170318-1927-00	36	3	1	grab suspension Doosan Type A
170318-1940-00	36	5	1	bolt ISO 4762 M16x130 12.9
170318-1943-00	36	6	1	nut M16 DIN 985
170320-1858-00	34	3	1	grab suspension Liebherr Type A
170320-2200-00	34	5	1	washer 16
170320-2300-00	34	6	1	bolt ISO 4017 M16x30 8.8
170505-2018-00	33	3	1	grab suspension Fuchs Type A
170505-2020-00	33	4	1	pin 70x440
170505-2020-00	34	7	1	pin 70x440
170506-1000-00	33	5	1	bolt ISO 4762 M12x130 12.9
170506-1000-00	34	8	1	bolt ISO 4762 M12x130 12.9
170506-1010-00	33	6	1	nut M12 DIN 985
170506-1010-00	34	9	1	nut M12 DIN 985
170604-1312-00	15	7	1	rotator protection
170604-1417-00	15	8	3	bolt ISO 4017 M12x25 10.9
170604-1421-00	15	9	3	washer 12 ISO 7093-1
170604-1455-00	40	1	2	hose Doosan
170604-1457-00	40	2	2	rotator hose Doosan
170711-1805-00	34	3	1	серьга Liebherr Type A
170801-2017-00	37	3	1	серьга Atlas Type A
170908-2019-00	35	4	1	ось 60x500
170909-1957-00	35	3	1	grab suspension Sennebogen Type A
180103-2110-00	38	3	1	grab susp. UMG E190WH Type A
180104-1620-00	38	3	1	grab susp. UMG E230WHE Type A
180904-0000-00	42	1	1	protection of HPH assly
180904-0001-00	42	2	1	bottom mount protection
180904-0002-00	42	3	5	upper mount protection
180904-0003-00	42	4	5	protection
180905-0000-01	9	4	1	tine closed (code 2)
180905-0100-01	9	1	1	tine open (код 0)
180905-3000-01	9	3	1	tine semi-closed Type2 (code 3)
190415-1800-00	37	3	1	grab susp. Atlas 180MH Type A
190415-1802-00	37	4	1	pin 60x413
190417-1400-00	41	2	2	rotator hose Sennebogen
190417-1500-00	40	1	2	hose Sennebogen
190418-1300-00	41	2	2	rotator hose UMG
190418-1400-00	40	1	2	hose UMG

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190419-1300-00	41	2	2	rotator hose Atlas
190419-1400-00	40	1	2	hose Fuchs
190420-1700-00	41	2	2	rotator hose Hitachi
190420-1800-00	40	1	2	hose Hitachi
190516-0460-00	32	4	1	pin 80x460 Cat
190516-3180-00	32	3	1	grapple susp. Cat 318MH Type A
20070309-2247-01	7	5	5	tine pin
20150001-00	4		1	grab case with tine
20151228-00	3	1	1	grab without suspension

3201484-01	28	1	2	half shell
3201712-00	8	2	1	tine tip
4000435-00	17	6	12	bolt ISO 4762 M20x60 10.9
4000592-00	25	10	10	bolt ISO 4762 M10x70 12.9
4000750-00	15	9	3	washer 12 ISO 7093-1
4000750-00	42	5	25	washer 12 ISO 7093-1
4002117-00	28	3	6	bolt ISO 4014 M10x65 10.9
4002533-00	12	4	6	bolt ISO 4762 M20x80 12.9
4002585-00	14	6	11	bolt ISO 4762 M20x110 12.9
4065099-00	14	10	2	bolt ISO 4017 M6x16 8.8
4118003-00	24	3	1	horned nut M30 DIN 937 17H A3C
4118005-00	13	4	1	horned nut M48 DIN 937
4280034-00	19	7	1	locking ring DIN 471 50x2
4281012-00	16	5	1	locking ring DIN 472 75x2,5
4281012-00	25	1	3	locking ring DIN 472 75x2,5

Conditions are show for an ambiguous choice of parts.

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4330034-00	24	4	1	splint DIN 94 6,3 x 56 ST
4330042-00	13	5	1	splint DIN 94 8 x 80 ST
4553304-01	13	1	1	bearing yoke pin
4600198-00	14	9	2	washer ISO 7093-1 6 -200HV
4600649-00	22	2	10	thread fitt. ISO 8434 12XM18x1,5 with seal
4601010-00	18	1	3	bolt ISO 4762 M14x80 10.9
4900089-00	21	4	2	bolt ISO 4017 M8x20 8.8
4900094-00	15	8	3	bolt ISO 4017 M12x25 10.9
4900094-00	42	6	25	bolt ISO 4017 M12x25 10.9
4900669-00	15	2	2	thread fitt. ISO 8434 20XM27x2 with seal
4901249-00	16	4	2	bearing DIN 720 320 09 CZI
4901429-00	28	2	6	nut DIN 6925 M10 -10 C2E
5009768-00	14	3	1	rotator OMP200
7000004-00	19	3	2	bearing 60-65x15
7000901-01	22	1	10	hose
7001132-00	26	5	1	stepseal 50
7002361-00	14	11	2	thread fitt. ISO 8434 SDS S 16XG 1/2A with seal
7002482-00	27	3	1	O-ring 53,35x5,33
7002483-00	27	4	1	sealing 70x54,5x6,3
7003438-00	27	2	2	piston guid ring
7005928-00	16	2	1	locking plate DIN 5406 MB8
7005929-00	16	1	1	nut DIN 981 KM8
7006262-00	26	6	2	guide ring
7010666-00	26	4	1	Rimseal 5
7013785-00	16	3	2	protective washer NILOS-Ring
7015815-00	14	2	2	washer Nord Lock12
7021129-01	19	4	3	seal 60x70x10
7024215-00	20	3	6	guard ring Back-up ring
7025490-00	12	3	6	washer Nord Lock20
7025750-01	25	2	2	pivoting bearing
7025761-00	26	2	1	scraper ring DA17
7026760-01	22	4	10	hydraulic cylinder pin Exp. assly
7026761-00	7	2	1	tine pin Exp. assly
7264437-00	26	3	2	O-ring 56,50x5,33
7264643-01	20	1	2	seal 25,55x2,55x1,7
7264714-00	26	8	1	O-ring 63,09x3,53
7361960-00	15	5	3	screw plug M18x1,5x17 A3C
7743242-00	8	5	1	grease nipple DIN 71412 AM 10x1
7743242-00	15	3	2	grease nipple DIN 71412 AM 10x1
7743242-00	17	8	1	grease nipple DIN 71412 AM 10x1
7743242-00	25	3	2	grease nipple DIN 71412 AM 10x1
7743242-00	32	2	1	grease nipple DIN 71412 AM 10x1
7743242-00	34	2	1	grease nipple DIN 71412 AM 10x1

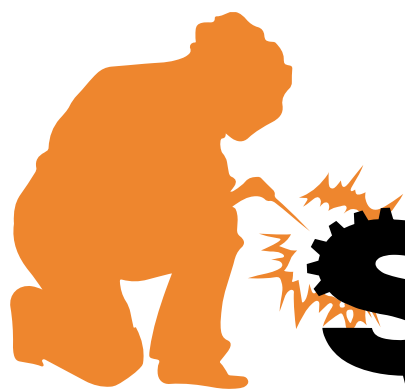
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Article	Page	Pos.	Q-ty	Description
9063462-01		25	4	1 cylinder
9063464-00	27	5	1	set of sealing 70.
9155154-01		26	9	1 seal kit 50
9161350-01	22	6	5	upper ring
9166643-02-00		8	3	2 bearing 60-75x70
9168097-00		34	4	1 pin 60x440
9173382-00	12	6	1	bearing bush
9200966-03		28	4	1 hydraulic cylinder protection assly
9226118-00	18	2	1	rotary connection
9226119-00		19	2	1 axle
9235119-00		18	4	10 thread fitting with seal
9237896-00	21	1	1	carrier
9237897-01	21	2	1	sheet
9241931-01		22	3	5 hydraulic cylinder
9242100-03	27	1	1	piston
9242102-03	25	8	1	piston assly
9242884-1427-00		12	1	1 bearing yoke pin assly
9242887-00		13	2	1 ring 60x17
9249746-00	17	3	1	bearing housing
9249770-01	17	5	1	bearing flange
9249799-00		17	4	1 lower bearing bushes
9249800-00	17	1	1	upper bearing bushes
9581890-00		12	2	1 bearing yoke Type A
9601122-01	14	8	1	rotator gear protection
9614599-00	14	4	1	bearing ass
9614618-00	18	3	1	carrier assly
9622717-00		14	7	1 middle flange assly
9622718-00		15	6	1 middle flange
9710216-00		19	6	1 washer 50
9830051-00		22	5	10 hydraulic cylinder pin assly
9830052-00		24	1	1 hydraulic cylinder pin
9922518-01	19	1	1	set of seal rotary connection
9922521-01	19	5	1	rotary part
9923177-01		22	7	5 lower ring
9958886-01	25	7	1	Piston rod bearing 17 assly
9958886-02	25	7	1	Piston rod bearing 24 assly
9958887-01		26	1	1 head bearing 17
9958887-02		26	1	1 head bearing 24
9959529-00		17	2	1 spur gear Z90
9959694-00		14	5	1 pinion Z13 OMP200

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WORLDWIDE RECYCLING MACHINE MAINTENANCE

WWW.SCRAP-TECH.COM

Ian Wooller

Managing Director

GSM : +359 89 9952165

mail: ian@scrap-tech.com



Yanitsa Valeova

Office Manager

GSM : +359 89 4438327

mail: info@scrap-tech.com

ScrapTech International LTD

17 Ivan Markvichka Str., app. 7

1220 Sofia, Bulgaria

OPM

FINLAND