

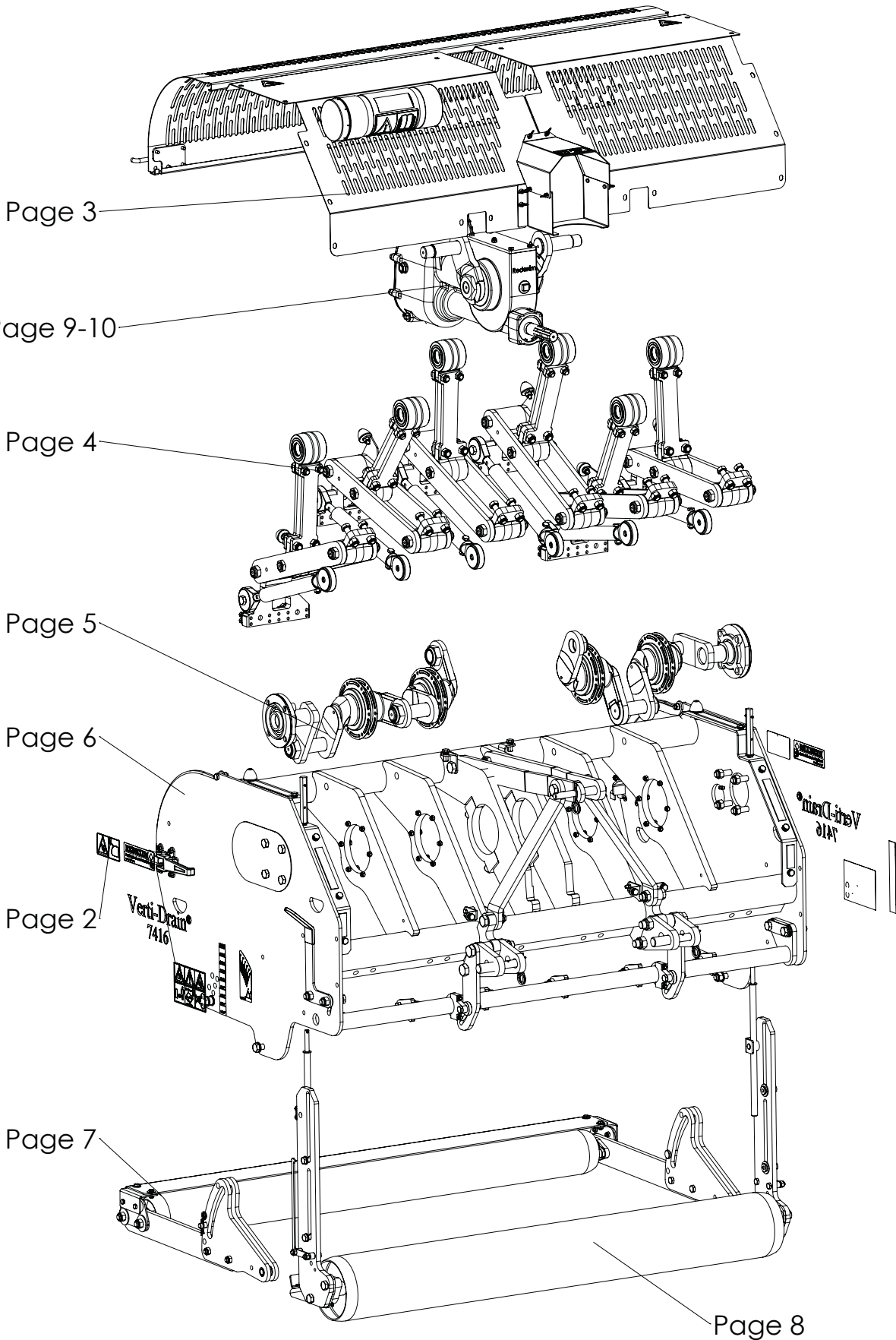
VERTI-DRAIN 7416



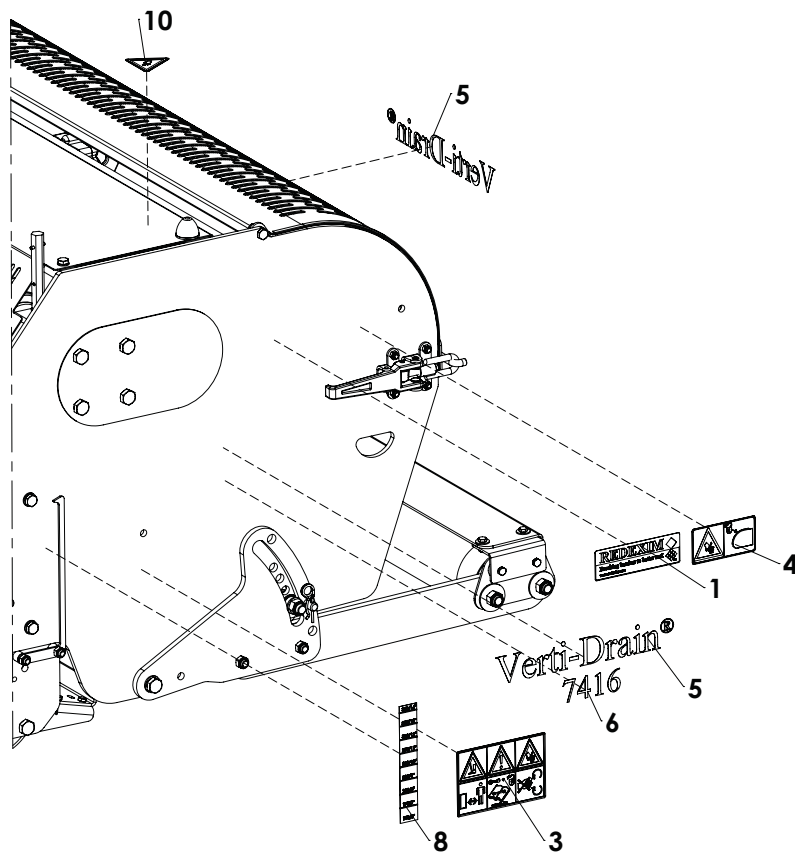
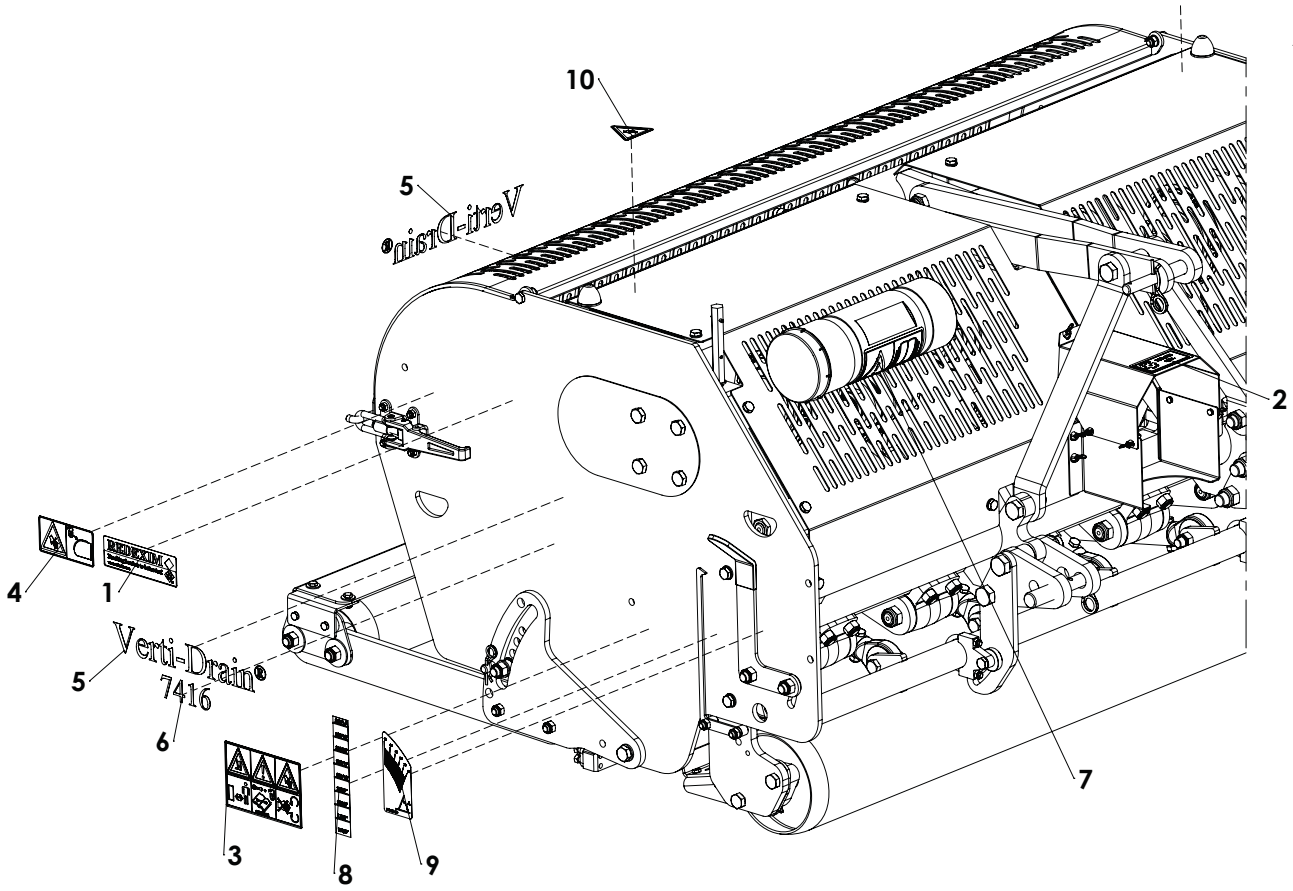
Version: 2136



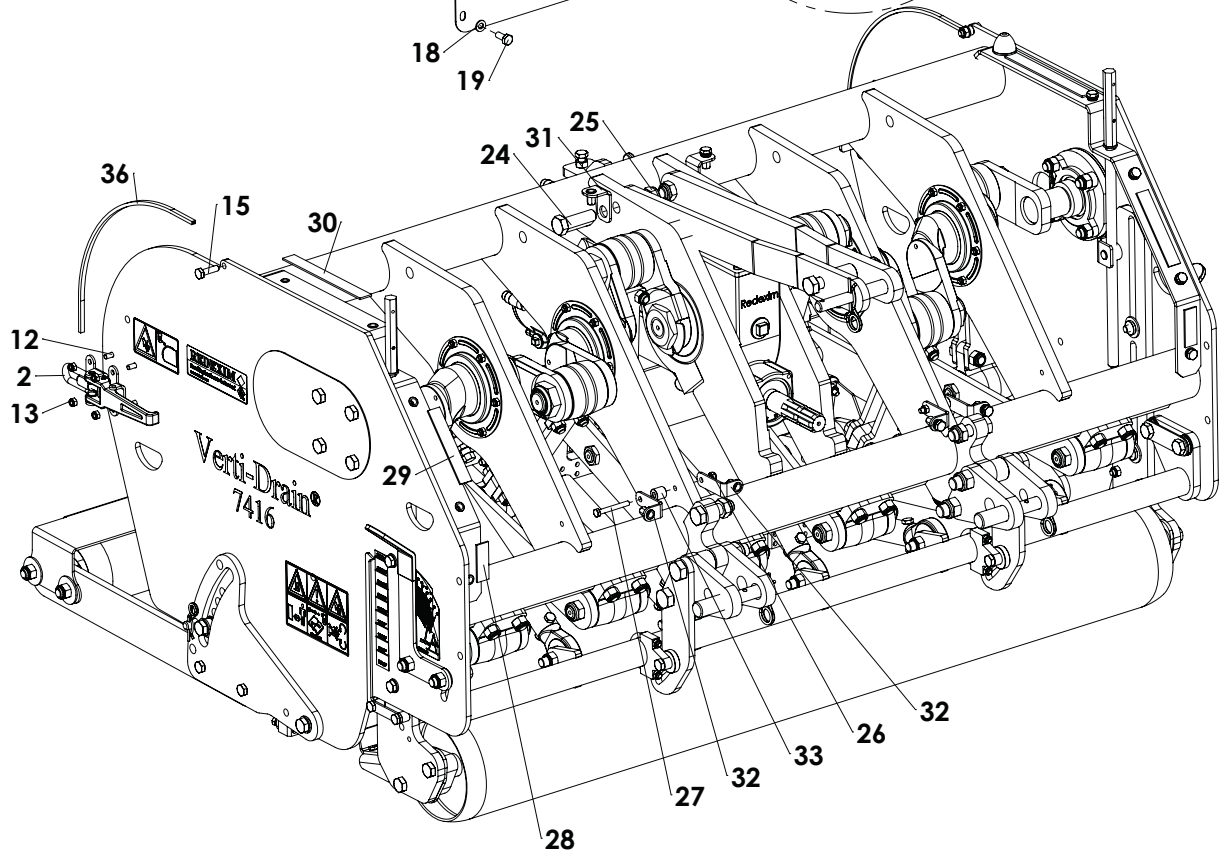
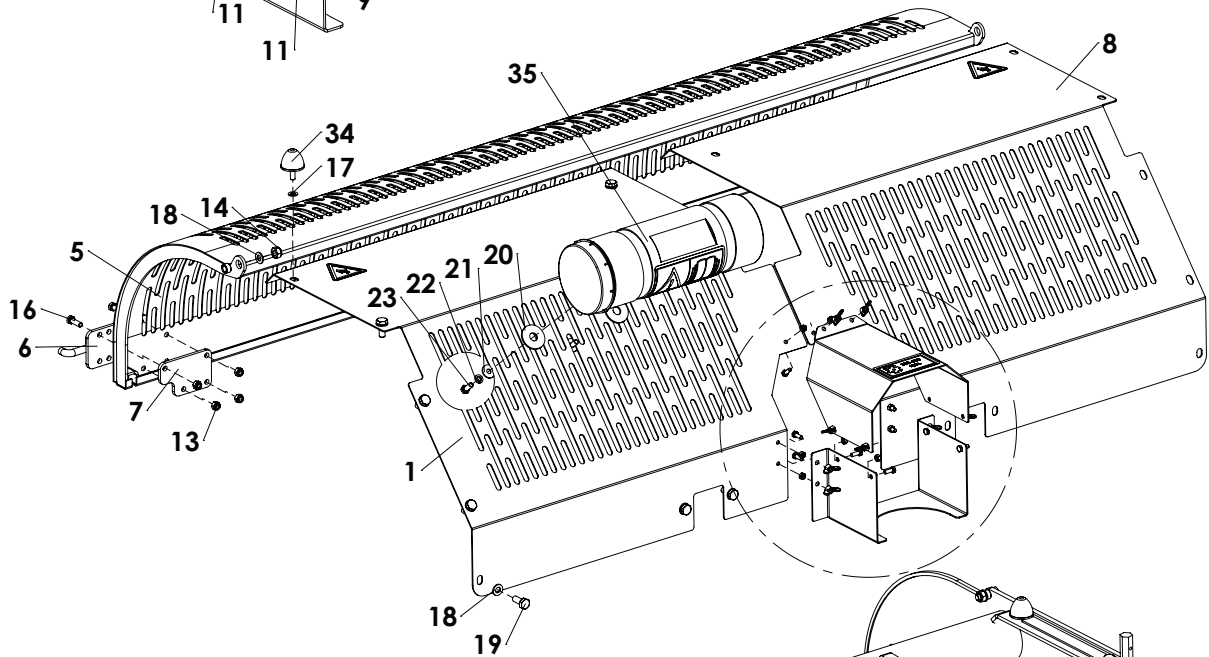
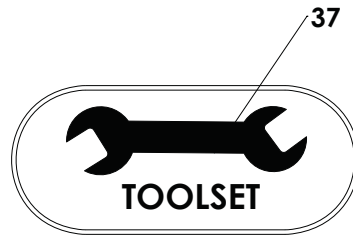
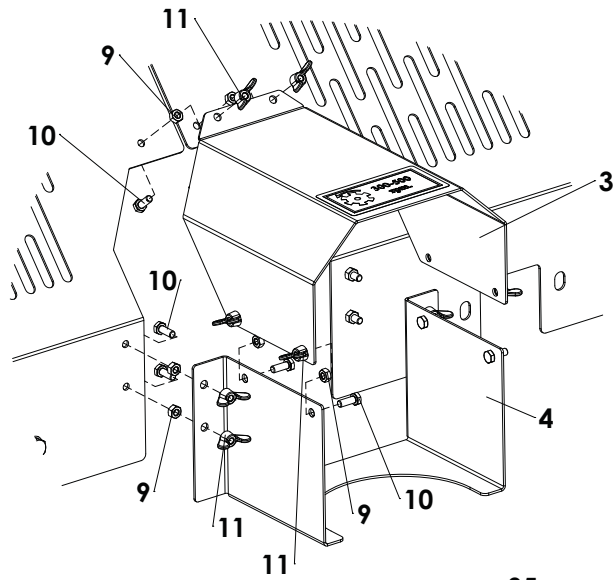
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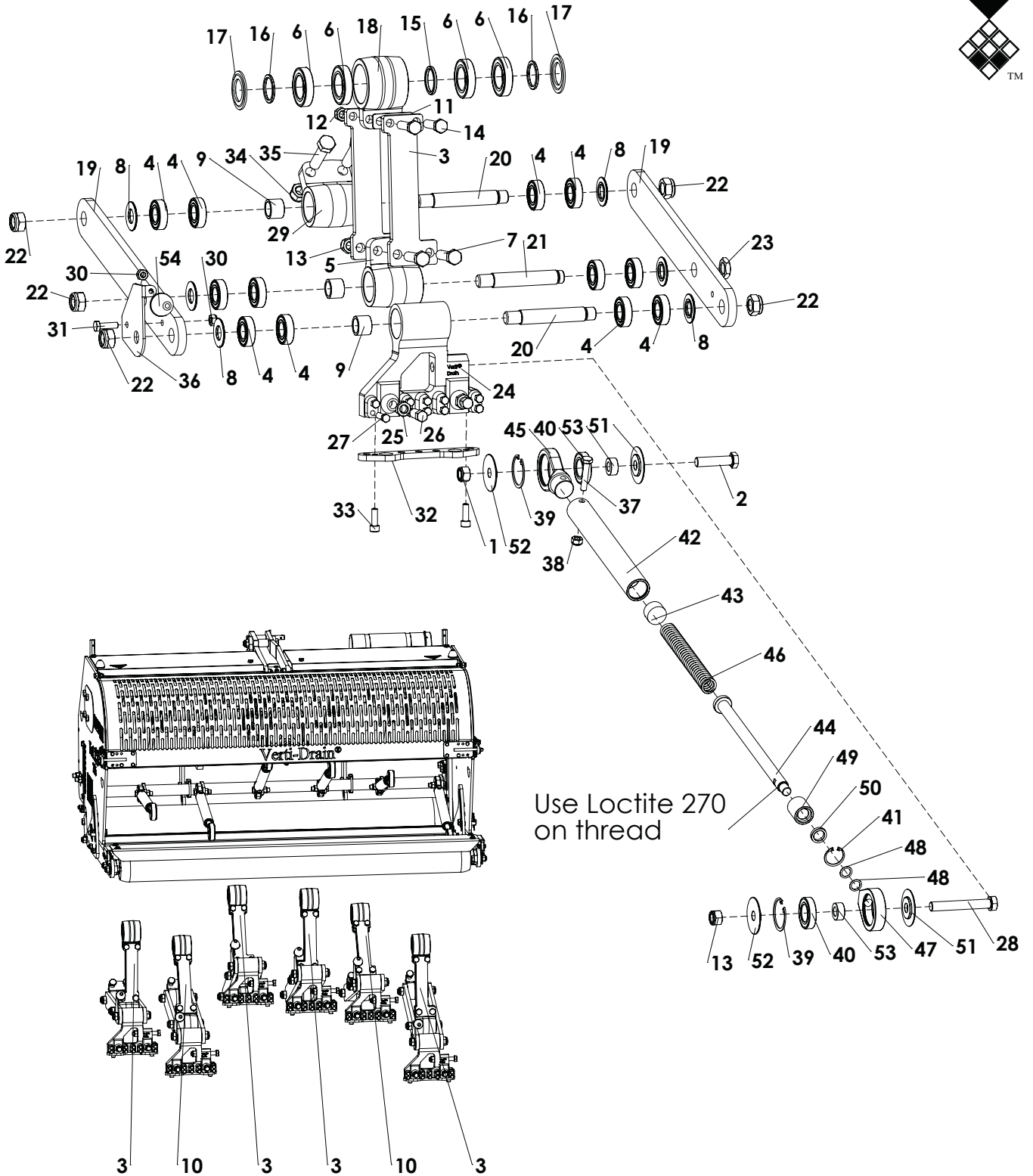
- Page 11: PTO
- Page 12: Tines, adapters and turf hold down kits
- Page 13: Optional core collector
- Page 14: Optional windrow kit
- Page 15: Optional hydraulic height adjustment kit



ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	900.260.403	Logo Label		2
2	900.260.420	Decall PTO 300 500		1
3	911.280.402	Safety Decall Verti-Drain		2
4	911.280.404	Decall close cover		2
5	911.260.402	Decall Verti-drain		3
6	911.260.411	Label 7416		2
7	900.280.402	Safety decall manual		1
8	900.260.411	Heigth label 150-350		2
9	911.260.450	Angle setting label VD		1
10	900.280.404	Decall cut off fingers		2

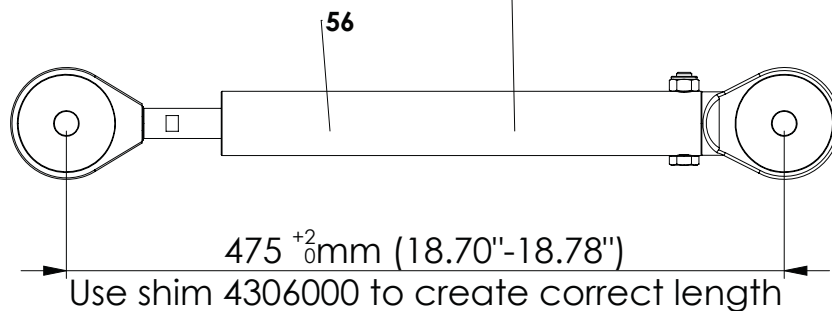


ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	456.079.072	Front cover 7416 Left		1
2	590.342.700	Clamp		2
3	2281782	TOP PTO protection cover		1
4	2282183	Bottem PTO Protection		1
5	456.161.037	Rear cover 7316/7416		1
6	470.061.710	Lock plate		2
7	468.061.100	Rear plate		2
8	456.079.074	Front cover 7416 right		1
9	826.060.060	Nut M6 - DIN 934		10
10	804.060.160	Bolt M6 x 16 - ISO 4017		10
11	844.060.060	Winged nut		10
12	816.080.250	Bolt M8x25 DIN 7991		8
13	830.080.080	Self Lock Nut M8 - ISO 10511		16
14	830.100.100	Self Lock Nut M10 - ISO 10511		2
15	804.100.350	Bolt M10 x 35 - ISO 4017		2
16	804.080.250	Bolt M8 x 25 - ISO 4017		8
17	864.080.030	Washer M8 - ISO 7089		2
18	864.100.030	Washer M10 - ISO 7089		16
19	804.100.250	Bolt M10 x 25 - ISO 4017		14
20	864.140.031	Large washer M14 - DIN 9021		2
21	864.080.024	Large washer M8 - DIN 9021		2
22	866.080.020	Spring Washer M8 - DIN 127		2
23	804.080.200	Bolt M8 x 20 - ISO 4017		2
24	802.200.650	Bolt M20 x 65 - ISO 4014		2
25	830.200.200	Self Lock Nut M20 Din 985 h=17		2
26	830.080.080	Self Lock Nut M8 - ISO 10511		2
27	802.080.650	Bolt M8 x 65 - ISO 4014		2
28	599.030.700	Foam rubber L=70		2
29	599.031.400	Foam rubber L=140		2
30	599.032.200	Foam rubber L=220		2
31	464.040.640	Bracket		2
32	464.040.760	Bracket		4
33	402.080.220	Bush Ø20/Ø8.5 L=20		2
34	446.080.550	Rubber stop		2
35	444.803.100	Toolbox Complete		1
36	9500006	Rubber U-seal		2
37	468.083.060	Set of tools		

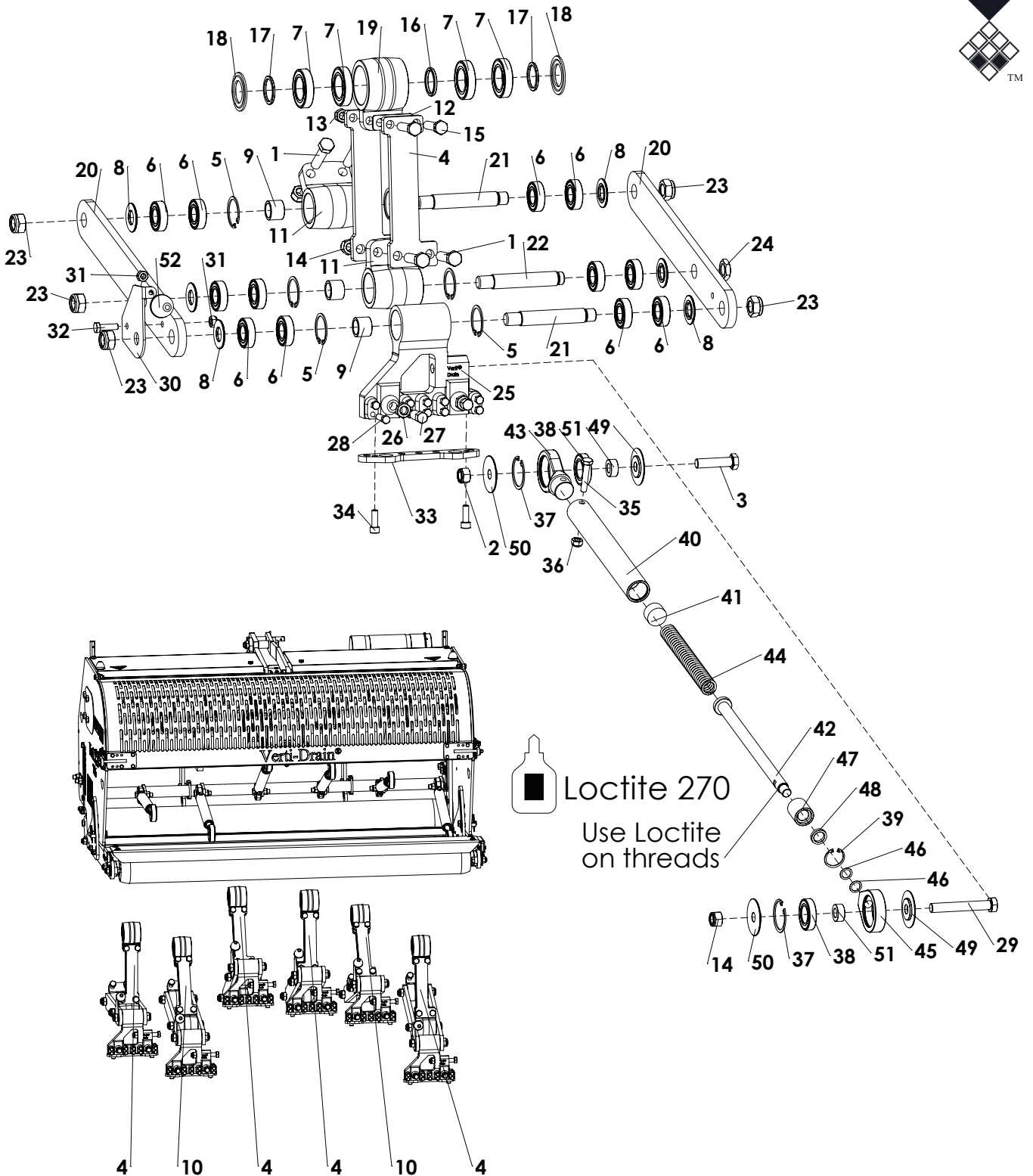


Use Loctite 270 on thread

Apply 40ml grease inside drawrod

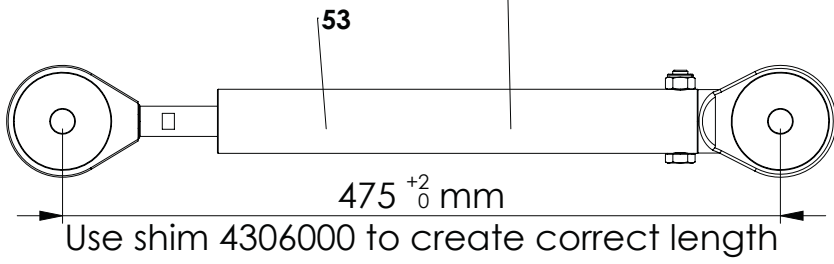


ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	831.160.160	Self Lock Nut M16x1.5 - ISO 10511		1
2	416.160.700	Special bolt M16		1
3	464.122.650	Connecting plate outer/center		1
4	713.250.150	Bearing 6205-LLU		12
5	2432102	Bearing support house empty 75	Replaces version with circlip 872.052.200	1
6	713.400.150	Bearing 6008 LLU		4
7	802.160.650	Bolt M16 x 65 - ISO 4014 - 10.9		2
8	2661700	Distance washer		6
9	2602452	Inner bush		3
10	464.122.652	Connecting plate middle		4
11	468.040.750	Spacer		1
12	830.140.140	Self Lock Nut M14-ISO 10511 Class 10		2
13	830.160.160	Self Lock Nut M16-ISO 10511 Class 10		3
14	802.140.650	Bolt M14 x 65 - ISO 4014 - 10.9		2
15	406.400.050	Distance bush Ø50/Ø40.3 L=5.1		1
16	2661406	Distance washer		2
17	2661422	Dust cover		2
18	448.125.075	Big end empty		1
19	464.155.350	Arm strip		2
20	2490452	Support axis 75		2
21	474.251.600	Support axis middle		1
22	4125800	Self Lock Nut M22 - ISO 10511		5
23	826.220.110	Low nut M22x2.5, L9.8		1
24	492.742.180	Tine holder empty 75		6
25	826.160.080	Low Nut M16 - DIN 439		2
26	4002315	Tine holder Bolt M16 x 40		2
27	4001675	Tine holder bolt M10x35		10
28	802.161.100	Bolt M16 x 110 - ISO 4014		1
29	448.088.122	Bearing support house empty 75	Check mounting holes Ø18.2mm(0.72")	1
	2432102	Bearing support house empty 75	Check mounting holes Ø16.2mm(0.64")	1
30	830.100.100	Self Lock Nut M10 - ISO 10511		2
31	804.100.350	Bolt M10 x 35 - ISO 4017		1
32	468.102.230	Additional tine plate holder		1
33	814.100.300	Bolt M10 x 30 - DIN 912		2
34	830.180.180	Self Lock Nut M18 - ISO 10511 - 10.9	Check diameter 18mm (0.71")	2
	830.160.160	Self Lock Nut M16 - ISO 10511 - 10.9	Check diameter 16mm(0.63")	2
35	802.180.700	Bolt M18 x 70 - ISO 4014 Class 10.9	Check diameter 18mm (0.71")	2
	802.160.650	Bolt M16 x 65 - ISO 4014 Class 10.9	Check diameter 16mm(0.63")	2
36	468.041.280	Lock plate for tineholder		1
37	802.100.550	Bolt M10 x 55 - ISO 4014		1
38	830.100.100	Self Lock Nut M10 - ISO 10511		1
39	872.055.200	Circlip D=55 - DIN 472		2
40	713.300.130	Bearing 6006 LLU		2
41	872.035.150	Circlip D=35 - DIN 472		1
42	476.423.180	Tube for drawrod 75		1
43	2891110	Rubber stop		1
44	426.203.460	Draw rod 7416	Use loctite 270 on thread	1
45	448.421.150	Draw rod head with stud		1
46	4781802	Compression spring		1
47	2991102	Draw rod head		1
48	4306000	Shim	Use as many to calibrate	2
49	2602454	Bush		1
50	4480015	Seal		1
51	404.160.050	Dust washer Ø65/Ø38/Ø16 L=5.25		2
52	404.160.070	Dust washer Ø65/Ø38/Ø16 L=7.25		2
53	406.160.130	Distance bush		2
54	446.080.550	Rubber stop		1
55	490.344.752	Draw rod complete 7416	total needed	6



 **Loctite 270**
Use Loctite on threads

Apply 40ml grease inside drawrod



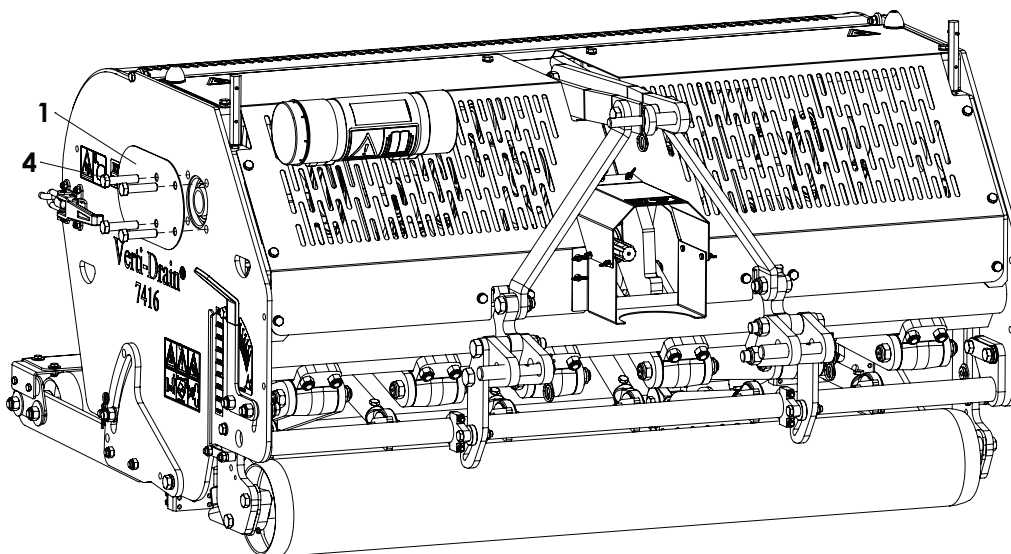
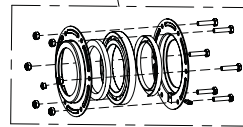
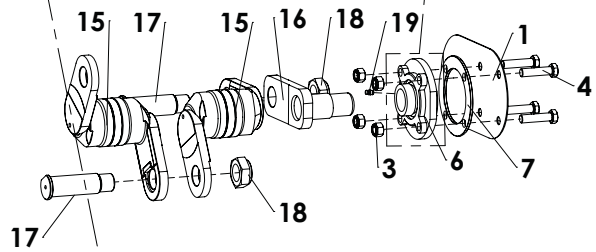
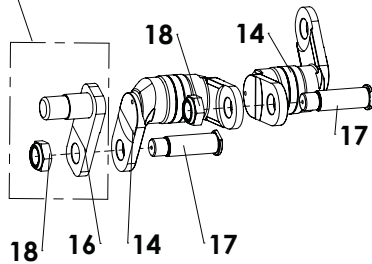
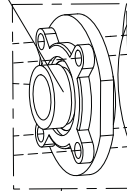
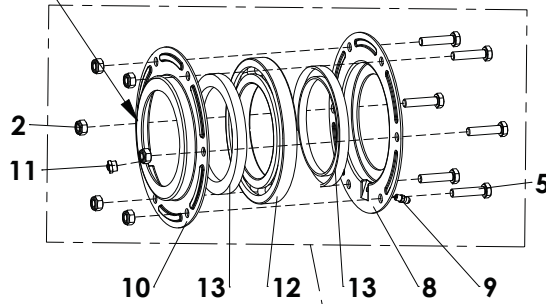
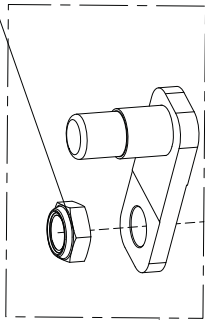
ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	802.160.650	Bolt M16 x 65 - ISO 4014 - 10.9		32
2	831.160.160	Self Lock Nut M16x1.5 - ISO 10511		6
3	416.160.700	Special bolt M16		6
4	464.122.650	Connecting plate outer/center		8
5	872.052.200	Circlip D=52 - DIN 472		36
6	713.250.150	Bearing 6205-LLU		72
7	713.400.150	Bearing 6008 LLU		4
8	2661700	Distance washer		36
9	2602452	Inner bush		18
10	464.122.652	Connecting plate middle		4
11	2432102	Bearing support house empty 75		12
12	468.040.750	Spacer		6
13	830.140.140	Self Lock Nut M14 10.9 - ISO 10511		12
14	830.160.160	Self Lock Nut M16 10.9 - ISO 10511		50
15	802.140.650	Bolt M14 x 65 - ISO 4014 - 10.9		12
16	406.400.050	Distance bush Ø50/Ø40.3 L=5.1		6
17	2661406	Distance washer		12
18	2661422	Dust cover		12
19	448.125.075	Big end empty		6
20	464.155.350	Arm strip		2
21	2490452	Support axis 75		2
22	474.251.600	Support axis middle		1
23	4125800	Self Lock Nut M22 - ISO 10511		5
24	826.220.110	Low nut M22x2.5, L9.8		1
25	492.742.180	Tine holder empty 75		1
26	826.160.080	Low Nut M16 - DIN 439		2
27	4002315	Tine holder Bolt M16 x 40		2
28	4001675	Tine holder bolt M10x35		10
29	802.161.100	Bolt M16 x 110 - ISO 4014		1
30	468.041.280	Lock plate for tineholder		1
31	830.100.100	Self Lock Nut M10 - ISO 10511		2
32	804.100.350	Bolt M10 x 35 - ISO 4017		1
33	468.102.230	Additional tine plate holder		1
34	814.100.300	Bolt M10 x 30 - DIN 912		2
35	802.100.550	Bolt M10 x 55 - ISO 4014		1
36	830.100.100	Self Lock Nut M10 - ISO 10511		1
37	872.055.200	Circlip D=55 - DIN 472		2
38	713.300.130	Bearing 6006 LLU		2
39	872.035.150	Circlip D=35 - DIN 472		1
40	476.423.180	Tube for drawrod 75		1
41	2891110	Rubber stop		1
42	426.203.460	Draw rod 7416	Use loctite 270 on threads	1
43	448.421.150	Draw rod head with stud		1
44	4781802	Compression spring		1
45	2991102	Draw rod head		1
46	4306000	Shim		2
47	2602454	Bush		1
48	4480015	Seal		1
49	404.160.050	Dust washer Ø65/Ø38/Ø16 L=5.25		2
50	404.160.070	Dust washer Ø65/Ø38/Ø16 L=7.25		2
51	406.160.130	Distance bush		2
52	446.080.550	Rubber stop		••
53	490.344.752	Draw rod complete 7416		



Apply loctite 270 to every M35 nut

Create seal with loctite 5970 around edges on both plates

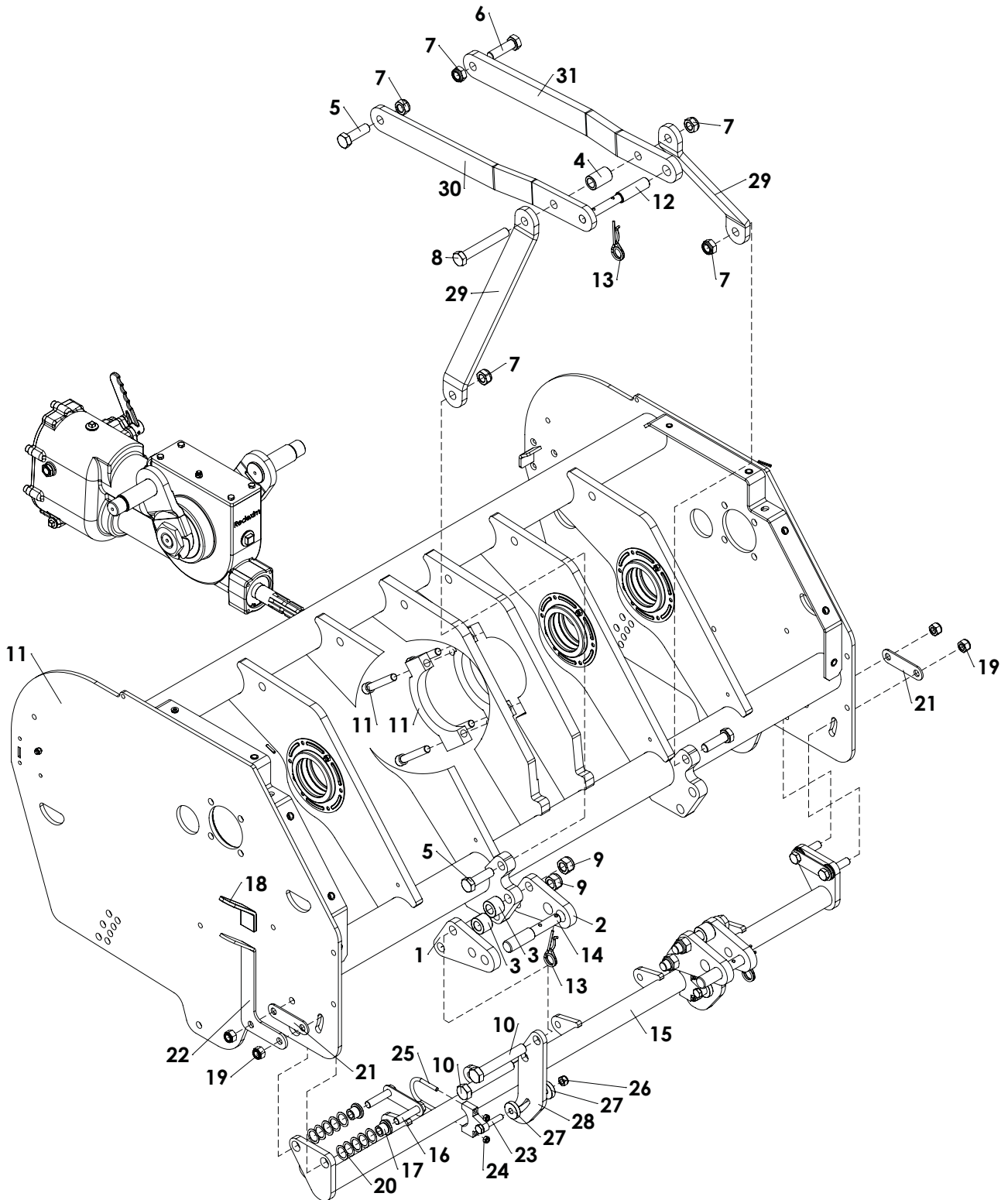
Apply loctite 243 to set screw



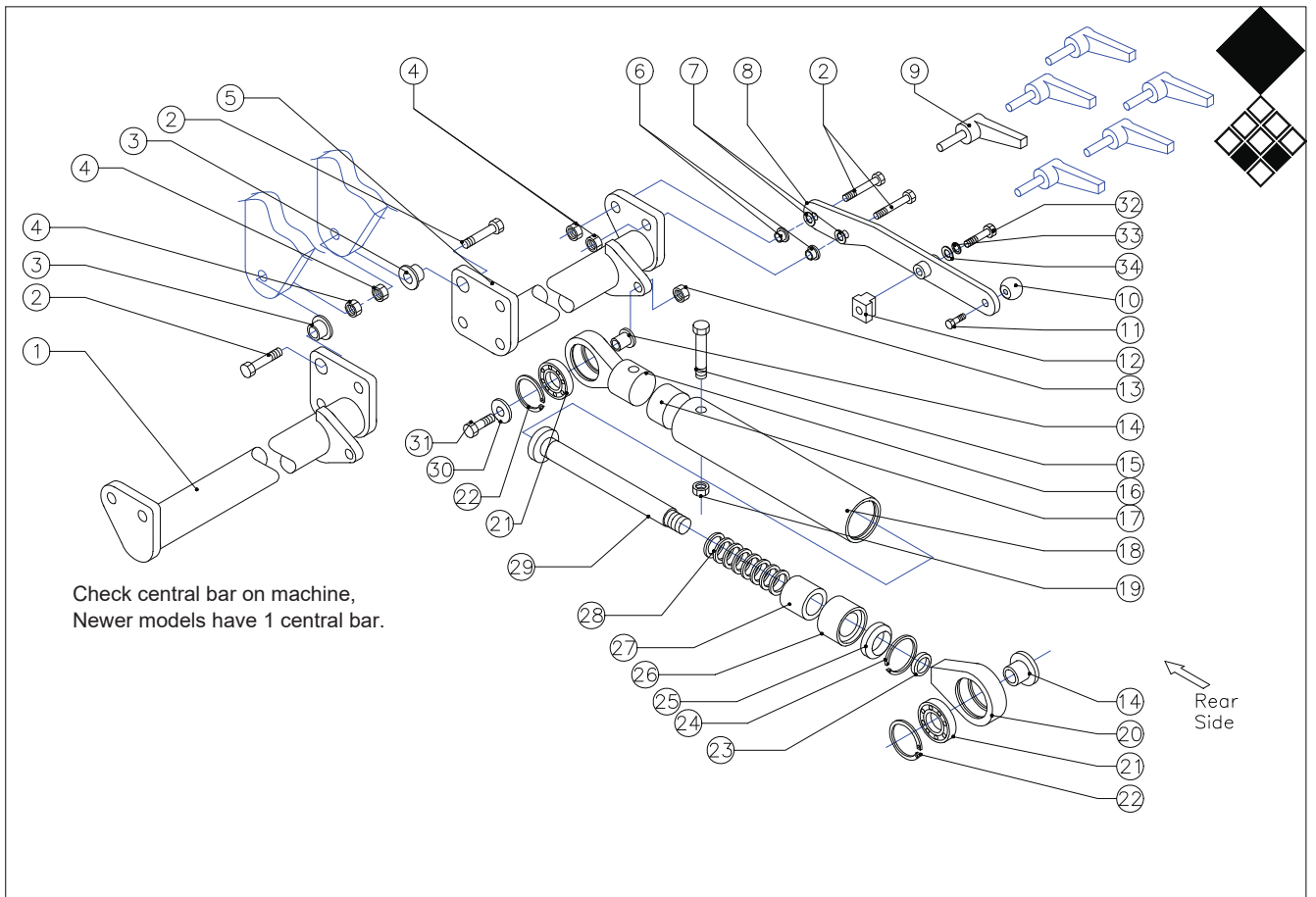
ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	468.023.310	Side cover plate		2
2	830.080.080	Self Lock Nut M8 - ISO 10511		24
3	830.160.160	Self Lock Nut M16 - ISO 10511		8
4	802.160.650	Bolt M16 x 65 - ISO 4014		8
5	802.080.350	Bolt M8 x 35 - ISO 4014		24
6	741.450.590	Bearing UELFC 209	Apply Loctite 243 to set screw	2
7	468.051.606	Spacer ring		2
8	468.021.800	Plate	Create seal with loctite 5970	4
9	880.060.100	Grease nipple M6 DIN 71412A		4
10	468.021.802	Breather plate	Create seal with loctite 5970	4
11	4067000	Breather M10x1		4
12	4805830	Bearing 16019		4
13	4410310	Oil Seal 95x120x10 RP		8
14	2441220	Left crank handle		2
15	2441218	Right crank handle		2
16	492.871.952	Crank handle		2
17	2490142	Big end pin		4
18	4129210	Nut M35x1.5	Apply loctite 270 to every nut	4
19	880.040.100	Grease nipple Rp 1/4 straight		2



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	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	468.201.540	3-point bottom strip with hole 22mm		2
2	468.201.542	3-point bottom strip with hole 28mm		2
3	406.400.280	Distance bush 3-point bottom plate		4
4	2611930	Distance bush toplink		1
5	802.200.650	Bolt M20 x 65 - ISO 4014		3
6	802.200.700	Bolt M20 x 70 - ISO 4014		1
7	830.200.200	Self Lock Nut M20 Din 985 h=17		5
8	802.201.400	Bolt M20 x 140 - ISO 4014		1
9	830.220.220	Self Lock Nut M22 - ISO 10511		4
10	802.221.400	Bolt M22 x 140 - ISO 4014		4
11	494.162.103	Frame VD7416		1
12	521.191.600	Top link pin OS		1
13	523.051.000	R-clip Round 5, DIN 11024		3
14	2490860	3-Point pin Ø28/Ø22 L=160		2
15	494.159.032	Central bar 7416		1
16	2283222	Bolt assembly central bar		2
17	2611922	Bush for central bar		4
18	446.401.250	Cover for lever 75 serie		1
19	830.160.160	Self Lock Nut M16 - ISO 10511		4
20	4306050	Shim		20
21	2611924	Distance plate		2
22	468.063.280	Right Handle for adjusting angle 7416		1
23	2282186	Support bolt assembly central bar 7117/7316		2
24	830.080.080	Self Lock Nut M8 - ISO 10511		4
25	2691018	U-bolt		2
26	830.120.120	Self Lock Nut M12 - ISO 10511		2
27	402.130.100	Distance bush Ø12.5/Ø40 L=10		4
28	468.122.680	Bracket plate		2
29	464.154.270	Top linkage support		2
30	2251850	3-point arm 19mm hole		1
31	2251852	3-point arm 25mm hole		1

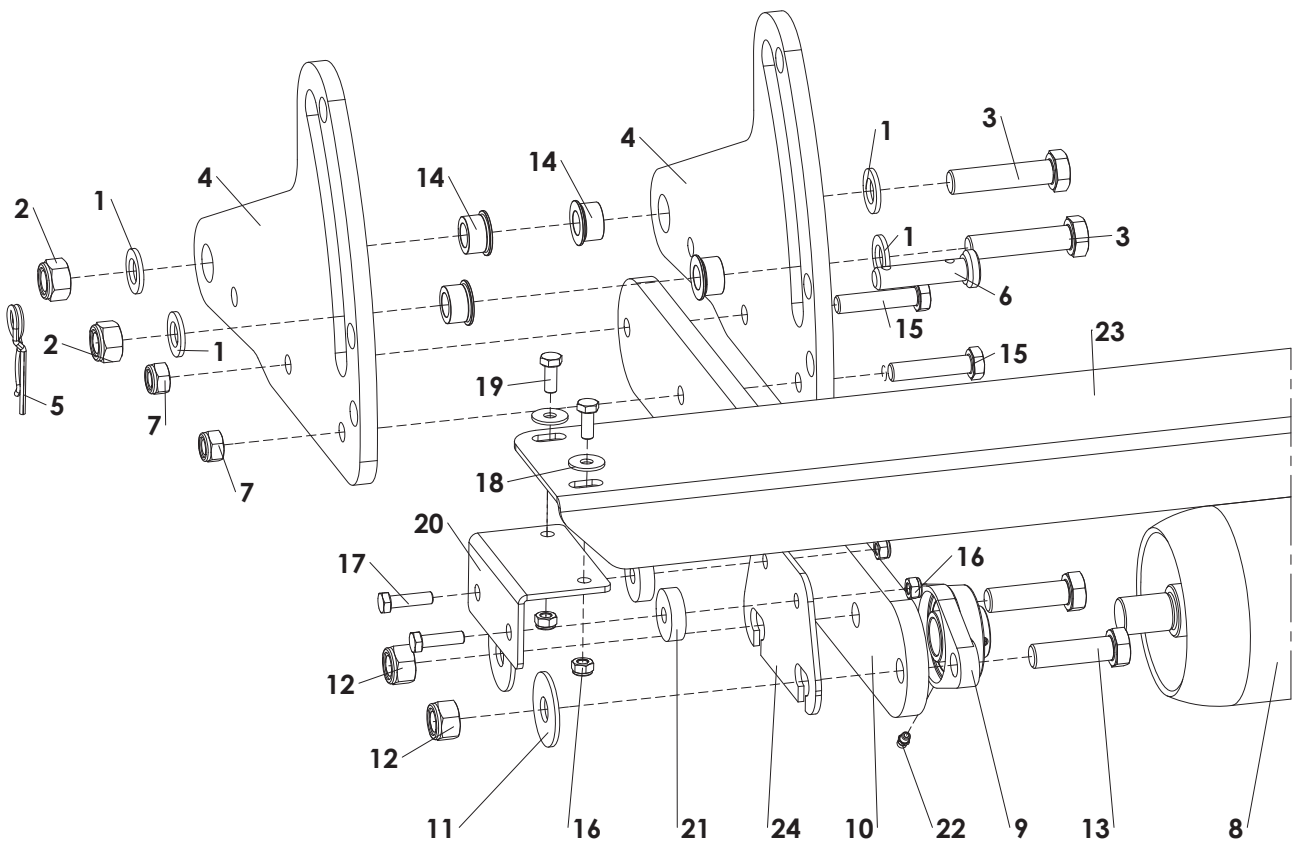
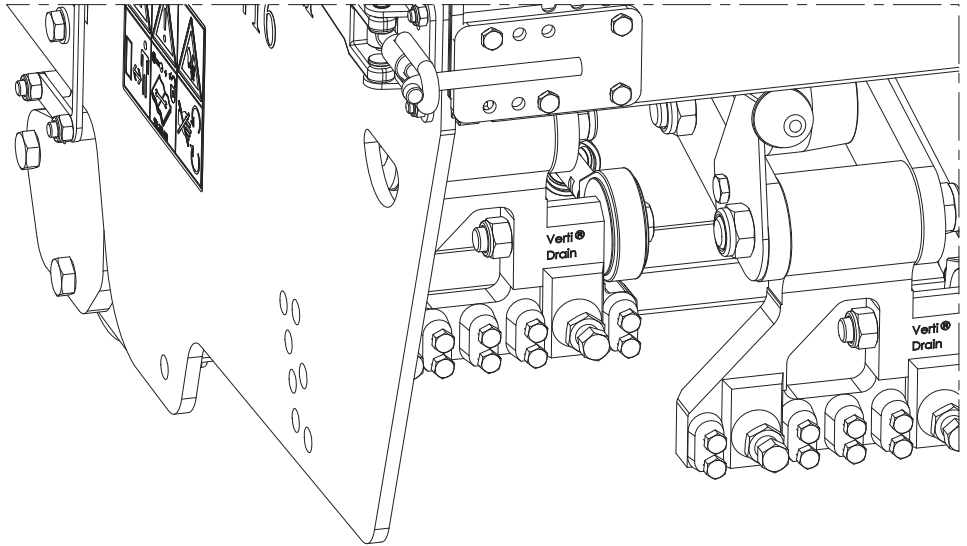


Redexim-Charterhouse Verti-Drain 7416 pag 06 code 0603

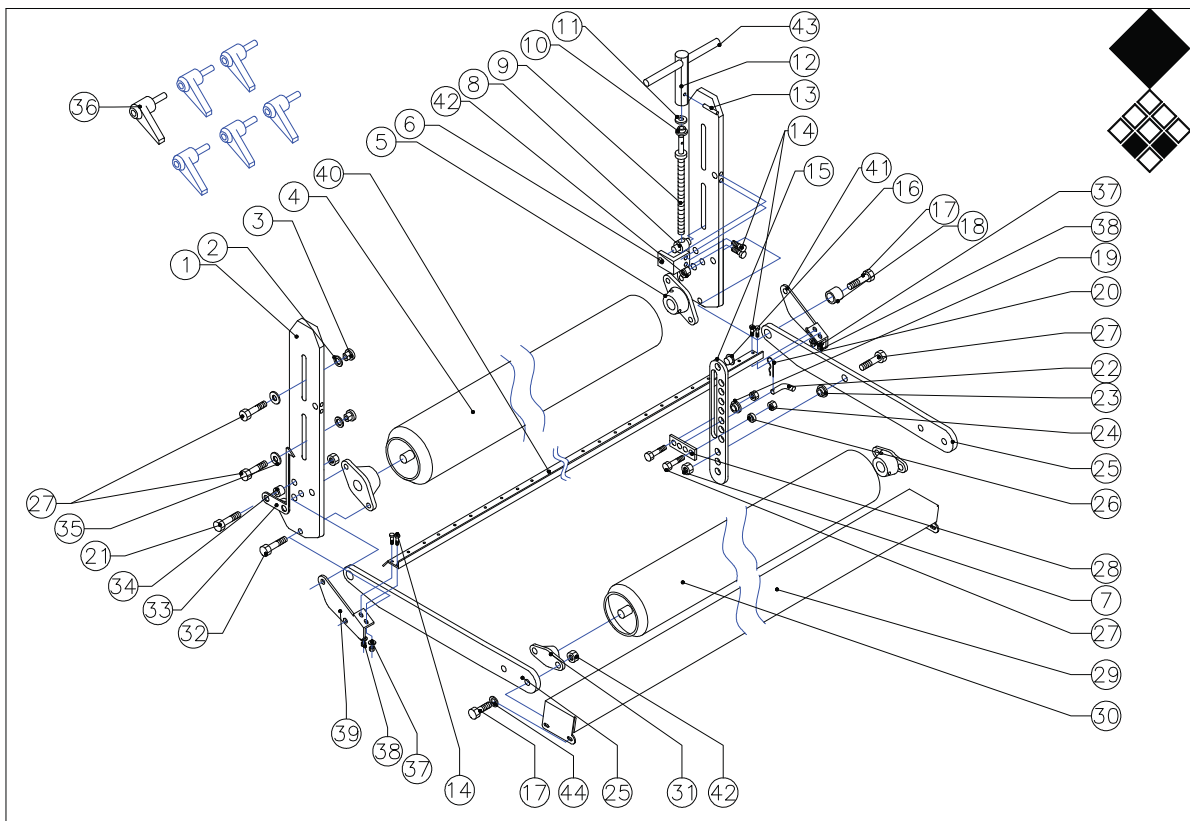
	PART #	DESCRIPTION	REMARKS	QUA
1	494.789.130	Central bar Left		001
2	802.160.500	Bolt M16x50		006
3	404.160.190	Pivot bush central bar		002
4	830.160.160	Self lock nut M16		002
5	494.551.130	Central bar right		001
6	404.160.170	Pivot bush		004
7	864.160.030	Washer M16		004
8	466.054.310	Tine angle lever		002
9	899.121.000	Clamp lever		002
	211.721.010	Option set clamp levers	(Contains 6 clamp levers 899.121.000)	001
10	892.060.300	Plastic knob		002
11	804.080.160	Bolt M8x16		002
12	844.120.140	T-Nut M12		002
13	830.160.160	Self lock nut M16		001
14	2611920	Plastic bush		002
15	802.100.550	Bolt M10x55		001
16	448.421.150	Draw rod head bottom		001
17	2891110	Rubber stop		001
18	2382686	Tube for draw rod		001
19	830.100.100	Self lock nut M10		001
20	2991102	Draw rod head top		001
21	713.300.130	Bearing 60062RS		002
22	872.055.200	Cir clip d55		002
23	4306000	Washer thickness 1mm		001
24	872.035.150	Cir clip d35		001
25	4480015	Seal for draw rod		001
26	2602454	Bearing bush		001
27	406.200.200	Distance bush		001
28	4781802	Compression spring		001
29	426.203.460	Draw rod		001
30	864.160.030	Washer M16		001
31	802.160.550	Bolt M16x50		001
32	802.120.550	Bolt M12x55		002
33	866.120.020	Spring washer M12		002
34	864.120.024	Washer M12		002
			Quantity described of nr 13 till nr 31 are for 1 draw rod.	
			On the 7416 there are 6 draw rods.	
	490.344.750	Complete draw rod 7416	13.14.15.16.17.18.19.20.21.22.23.24.25.26.27.28.29.30.31.32	006



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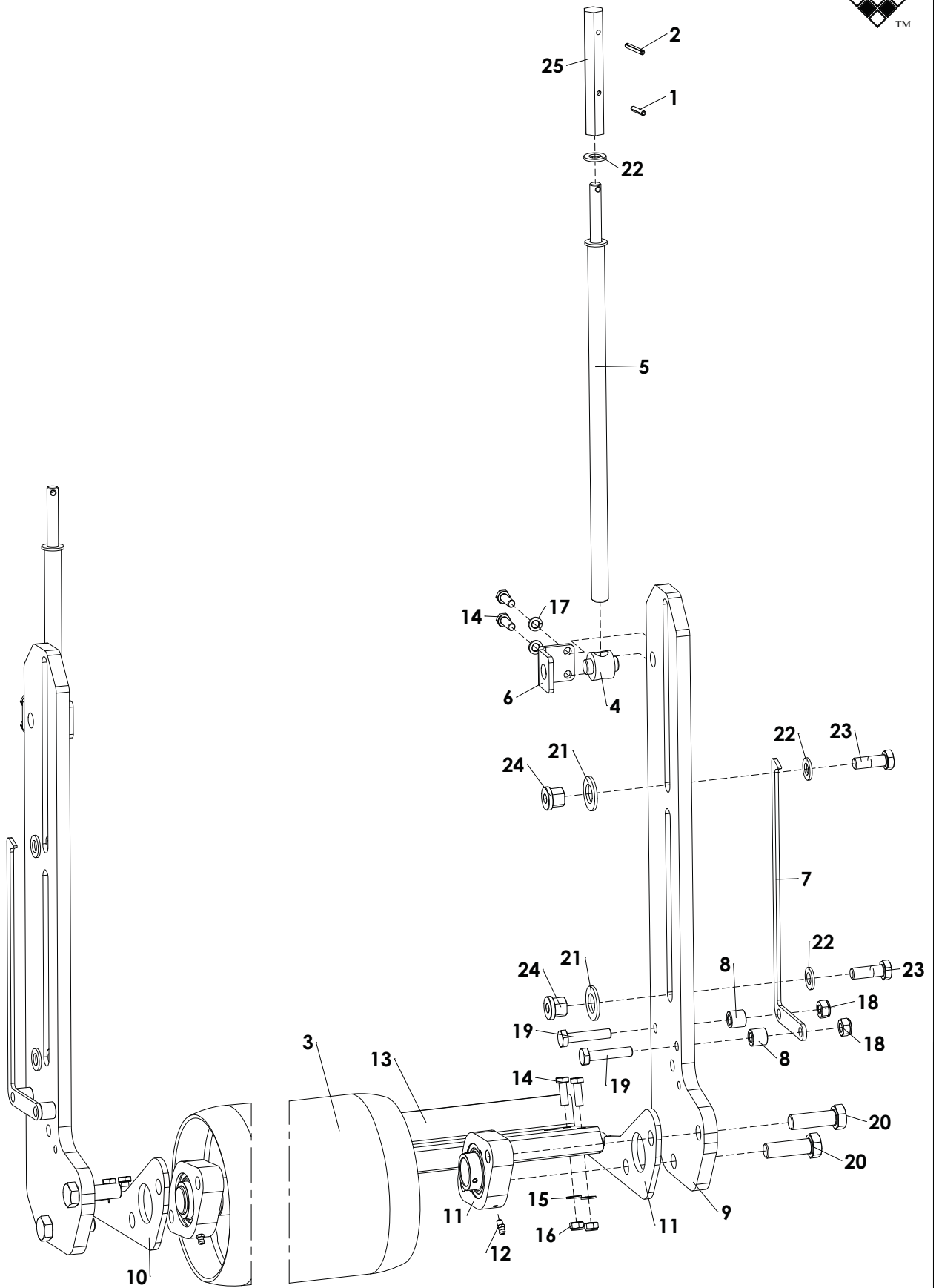
	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	864.160.030	Washer M16 - ISO 7089		8
2	830.160.160	Self Lock Nut M16 - ISO 10511		4
3	802.160.700	Bolt M16 x 70 - ISO 4014		4
4	468.123.700	Main Rear Roller support		4
5	523.030.750	R-Clip Round 3, DIN 11024		2
6	521.160.510	Lock pin rear roller		2
7	830.120.120	Self Lock Nut M12 - ISO 10511		4
8	2344004	Rear roller 7316		1
9	742.250.360	Bearing UCFL 205		2
10	464.156.410	Second rear roller support		2
11	864.160.031	Large washer M16 - DIN 9021		4
12	830.160.160	Self Lock Nut M16 - ISO 10511		4
13	802.160.550	Bolt M16 x 55 - ISO 4014		4
14	404.160.160	Pivot bush		8
15	804.120.550	Bolt M12 x 55 - ISO 4017		4
16	830.080.080	Self Lock Nut M8 - ISO 10511		8
17	804.080.300	Bolt M8 x 30 - ISO 4017		4
18	864.080.024	Large washer M8 - DIN 9021		4
19	804.080.200	Bolt M8 x 20 - ISO 4017		4
20	468.041.110	Bracket		2
21	446.100.100	Rubber ring		4
22	880.060.100	Grease nipple M6 DIN 71412A		2
23	468.049.166	Rear roller scraper		1
24	468.081.600	Bearing plate		2



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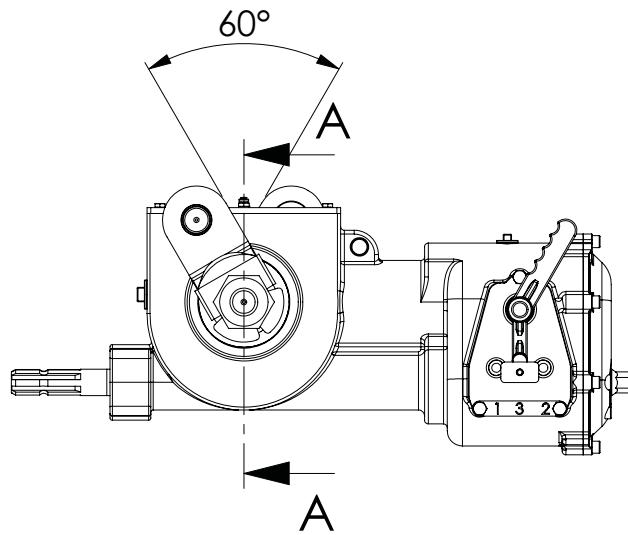
Check on your machine which front roller scraper and rear roller supports you have see page 07-1

	PART #	DESCRIPTION	REMARKS	QUA
1	464.156.520	Front roller support 7416		002
2	864.200.041	Washer M20x37		004
3	410.250.210	Sleeve bearing bush		004
4	488.194.157	Front roller 7416		001
5	742.302.400	Front roller bearing		002
6	2282096	Spindle nut bracket		002
7	830.120.120	Self lock nut M12		002
8	2282098	Spindle nut		002
9	2692101	Spindle		002
10	404.120.070	Bearing bush spindle		002
11	864.120.030	Washer M12		002
12	474.191.382	Spindle head 7416		002
13	878.050.250	Roll pin Ø5x25		002
14	802.080.250	Bolt M8x25		008
15	2283208	Rear roller support guide strip		002
16	4972550	Plastic stop		002
17	802.120.500	Bolt M12x50		006
18	2611514	Pivot bush rear roller support		002
19	2611510	Guide bush		002
20	523.030.750	Slotted spring pin		002
21	802.100.450	Bolt M10x45		008
22	2499114	Lock pin rear roller support guide		002
23	2611926	Distance bush		002
24	830.100.100	Self lock nut M10		008
25	464.159.010	Rear roller support		002
26	2611510	Distance bush		002
27	802.120.450	Bolt M12x45		004
28	2281744	Plate		002
29	468.049.170	Rear roller scraper 7416		001
30	2344004	Rear roller		001
31	4833995	Rear roller bearing		002
32	802.160.500	Bolt M16x50		004
33	468.043.720	Height indicator		002
34	406.180.170	Distance bush		004
35	864.120.031	Washer M12		004
36	899.121.000	Clamp lever		004
	211.721.010	Option set Clamp levers	(Contains 6 clamp levers 899.121.000)	001
37	864.080.030	Washer M8		004
38	830.080.080	Self lock nut M8		004
39	464.062.510	Scraper support left		001
40	468.059.010	Scraper and turfholddown beam		001
41	464.062.512	Scraper support right		001
42	830.160.160	Self lock nut M16		006
43	416.101.100	Spindle lever		004
44	864.160.030	Washer M16		004



	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	878.050.220	Roll Pin 5 x 22 - ISO 8752		2
2	878.050.320	Roll pin Ø5x32		2
3	488.194.157	Front roller		1
4	2282098	Spindle nut TR18x4		2
5	2692101	Spindle		2
6	2282096	Spindle nut bracket		2
7	468.043.722	Height indicator		2
8	406.180.170	Distance bush Ø18/Ø10.2 L=16.5		4
9	464.156.520	Front roller support 7416		2
10	464.062.512	Scraper support right		1
11	464.062.510	Scraper support left		1
12	742.302.400	Front roller bearing		2
13	468.059.010	Scraper and turf hold down beam		1
14	804.080.250	Bolt M8 x 25 - ISO 4017		8
15	864.080.030	Washer M8 - ISO 7089		4
16	830.080.080	Self Lock Nut M8 - ISO 10511		4
17	866.080.020	Spring Washer M8 - DIN 127		4
18	830.100.100	Self Lock Nut M10 - ISO 10511		4
19	802.100.500	Bolt M10 x 50 - ISO 4014		4
20	804.160.500	Bolt M16 x 50 - ISO 4017		4
21	864.200.030	Washer M20 - ISO 7089		4
22	864.120.030	Washer M12 - ISO 7089		8
23	804.120.350	Bolt M12 x 35 - ISO 4017		4
24	410.250.210	Sleeve bearing bush		4
25	474.191.382	Spindle head		2

ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	2401408	Gearbox	Use loctite 5970 to seal	1
2	2471418	Top cover gearbox	Use loctite 5970 to seal	1
3	2471431	Cover lever	Use loctite 5970 to seal	1
4	2471856	Gearbox backcover	Use loctite 5970 to seal	1
5	1994002	Gear lever complete		1
6	2469210	Lever with pin		1
7	4752012	Seeger RS12		1
8	878.060.350	Roll Pin 6 x 35 - ISO 8752		1
9	804.080.250	Bolt M8 x 25 - ISO 4017		4
10	804.100.350	Bolt M10 x 35 - ISO 4017		3
11	814.100.300	Bolt M10 x 30 - DIN 912		6
12	2779970	Fork		1
13	2611521	Distance plate		1
14	4422075	O-ring D18.77x1.78		1
15	2894040	Plastic washer 22.2x34x1.5		2
16	4561000	Tap 1/2"		1
17	4561100	Tap 1"		1
18	820.210.180	Level / fill glass		1
19	4067008	Breather gearbox		1
20	856.240.240	Gas cap 3/4"		1
21	2282125	Gear indicator VD7316 / 7416		1
		Use liquid silicon paste to seal parts		
		Use oil 80W90	5 Liter / 1.32 Gallon	
	490.557.000-60	Gearbox complete		



Tooth face play
between +0.2/+0.3mm

Torque 1250Nm
Use loctite 270

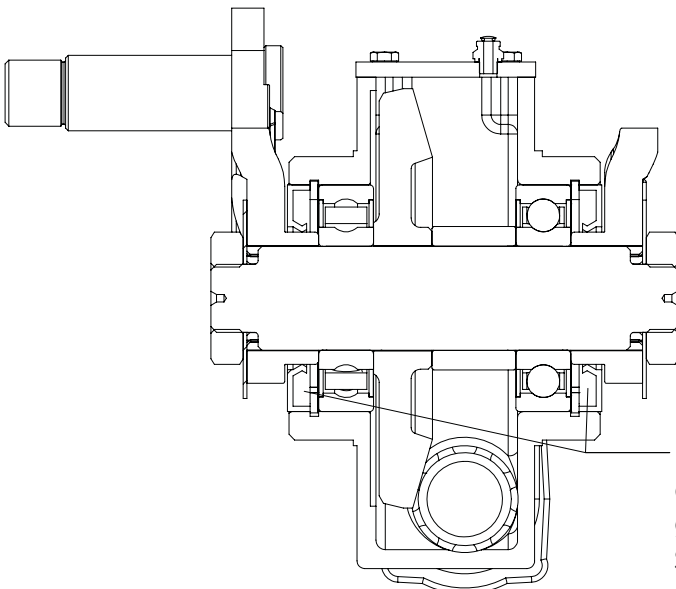
Loctite 5970 on splines

Axial play between
+0.02 and +0.1mm

Loctite 5970 on splines

Torque 1250Nm
Use loctite 270

SECTION A-A



Fill area between seal and bearing
complete with a NLGI 2-3 bearing
grease. Also apply grease between
shaft and seal before assembly.

ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	472.458.100	Input shaft 7416		1
2	2462100	Splined shaft		1
3	4816910	Bearing 6307		3
4	4815270	Bearing 6209		1
5	713.550.290	Bearing 6311-2RS		2
6	4810490	Bearing 32210		1
7	4811170	Bearing 33210		1
8	4406460	Oil seal 35x80x12		1
9	4409540	Oil seal 70x120x12		2
10	2611418	Distance bush		1
11	2447400	Splined arm		2
12	2282200	Lock plate		2
13	4109300	Nut M36x3		2
14	2611404	Distance bush		1
15	872.120.400	Circlip D=120 - DIN 472		2
16	872.080.250	Circlip D=80 - DIN 472		1
17	872.090.300	Circlip D=90 - DIN 472		1
18	870.045.180	Circlip DIN 471 - 45 x 1.75		2
19	4317460	Cotter Pin 4 x 56 - DIN 94		1
20	2661490	Washer		1
21	2611412	Distance bush		1
22	4135200	Castle Nut		1
23	2504473	Gear Z22-m4.25		1
24	2504533	Gear Z28-m4.25		1
25	2612800	Distance bush		2
26	2504431	Gear Z18-m4.25		1
27	2504572	Gear Z32-m4.25		1
28	2504450	Gear Z20-m4.25		1
29	2504551	Gearwheel Z=30		1
30	4406260	Oil Seal 35x56x10		1
31	2490142	Big end pin		2
32	869.120.001	Set of shims 100x120 3x0.1 2x0.3		1
33	2527402	Crownwheel and pignon		

Solid tines							7416
Mountig Ø (mm)	Tine Size (mm)	Tine Size (inch)	Part #	Adapter			Qua
5	5 x 125	3/16 x 5	311.105.125	J or multi-tine block mini			24+J
8	8 x 150	5/16 x 6	311.108.150	K or multi-tine block			24+K or 48+N+U+W
8	8 x 175	5/16 x 7	9990056	K or multi-tine block			24+K or 48+N+U+W
8	8 x 250	5/16 x 10	9990059	K - Don't use in MTH. Will bend			24+K
12	12 x 150	1/2 x 6	311.112.150				24
12	12 x 200	1/2 x 8	311.112.200				24
12	12 x 225	1/2 x 9	311.112.225				24
12	12 x 250	1/2 x 10	2381837				24
12	12 x 300	1/2 x 12	2381838				24
18	18 x 200	3/4 x 8	311.118.200	L or non needed			12+L
18	18 x 225	3/4 x 9	311.118.225	L or non needed			12+L
18	18 x 250	3/4 x 10	2381841	L or non needed			12+L
18	18 x 300	3/4 x 12	2382638	L or non needed			12+L
18	18 x 350	3/4 x 14	311.118.350	L or non needed			12+L
18	18 x 400	3/4 x 16	2382639	L or non needed			12+L
24	24 x 225	1 x 9	311.124.225				12
24	24 x 350	1 x 14	311.124.350				12
24	24 x 400	1 x 16	2382640				12
Tines for verti-core							7416
19	10x100	3/8 x 4	39200-447	Tines for verti-core that also fit Verti-drain			Qua
8	8x95	5/16 x 3 13/16	311.108.095	Tines for verti-core that also fit Verti-drain			Qua






Hollow tines							7416
Mountig Ø (mm)	Tine Size (mm)	Tine Size (inch)	Part #	Adapter			Qua
8	10 x 6 x 80	3/8 x 1/4 x 3	311.210.080	K or multi-tine block			24+K or 48+N+U+W
8	10 x 6 x 125	3/8 x 1/4 x 5	311.210.127	K or multi-tine block			24+K or 48+N+U+W
12	16 x 10 x 150	5/8 x 3/8 x 6	311.216.150				24
12	16 x 10 x 175	5/8 x 3/8 x 7	9990022				24
12	19 x 12 x 150	3/4 x 1/2 x 6	311.219.150				24
18	19 x 12 x 200	3/4 x 1/2 x 8	311.219.200	L or non needed			12+L
12	19 x 12 x 200	3/4 x 1/2 x 8	311.219.201				24
18	19 x 12 x 225	3/4 x 1/2 x 9	311.219.225	L or non needed			12+L
12	19 x 12 x 225	3/4 x 1/2 x 9	311.219.226				24
12	19 x 12 x 250	3/4 x 1/2 x 10	9990040				24
18	19 x 12 x 250	3/4 x 1/2 x 10	9990023	L or non needed			12+L
18	25 x 16 x 200	1 x 5/8 x 8	311.225.200	L or non needed			12+L
18	25 x 16 x 225	1 x 5/8 x 9	311.225.225	L or non needed			12+L
18	25 x 17 x 250	1 x 5/8 x 10	9990024	L or non needed			12+L
18	29 x 19 x 250	1 1/8 x 3/4 x 10	9990066	L or non needed			12+L
24	32 x 21 x 300	1 1/4 x 13/16 x 12	9990034				12
18	32 x 21 x 300	1 1/4 x 13/16 x 12	9990041	L or non needed			12+L
Tines for verti-core that also fit Verti-drain 15x							7416
Mountig Ø (mm)	Tine Size (mm)	Tine Size (inch)	Part #	Ejecting from			Qua
19	21x12x125	13/16 x 1/2 x 5	9990075	Side			n/a
19	19x10x125	3/4 x 3/8 x 5	311.219.159	Side			n/a
19	19x10x110	3/4 x 3/8 x 4 3/8	311.219.158	Top			n/a
19	16x7x110	5/8 x 1/4 x 4 3/8	311.219.158	Top			n/a

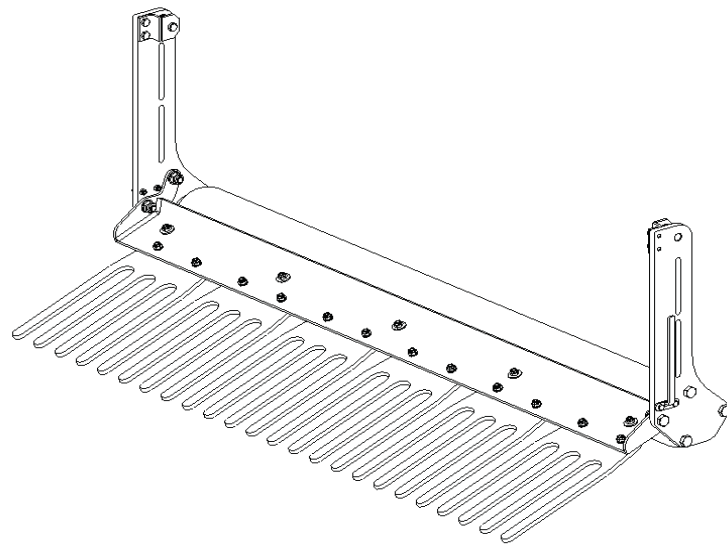
Replacement tubes							7416
Mountig Ø (mm)	Tine Size (mm)	Tine Size (inch)	Part #	Combine with rollpin			Qua
12	16 x 10 x 150	5/8 x 3/8 x 6	311.716.150	9990010			24
12	16 x 10 x 175	5/8 x 3/8 x 7	9990036	9990010			24
12	19 x 12 x 150	3/4 x 1/2 x 6	311.719.150	9990012			24
18	19 x 12 x 200	3/4 x 1/2 x 8	311.719.200	9990012			24
12	19 x 12 x 200	3/4 x 1/2 x 8	311.719.200	9990012			12
18	19 x 12 x 225	3/4 x 1/2 x 9	311.719.225	9990012			12
12	19 x 12 x 225	3/4 x 1/2 x 9	311.719.225	9990012			12
12	19 x 12 x 250	3/4 x 1/2 x 10	9990037	9990012			12
18	19 x 12 x 250	3/4 x 1/2 x 10	9990037	9990012			12
18	25 x 16 x 200	1 x 5/8 x 8	311.725.200	9990014			12
18	25 x 16 x 225	1 x 5/8 x 9	311.725.225	9990014			12
18	25 x 17 x 250	1 x 5/8 x 10	9990038	9990014			12
18	29 x 19 x 250	1 1/8 x 3/4 x 10	9990067	9990016			12
24	32 x 21 x 300	1 1/4 x 13/16 x 12	9990039	9990016			12
18	32 x 21 x 300	1 1/4 x 13/16 x 12	9990039	9990016			12

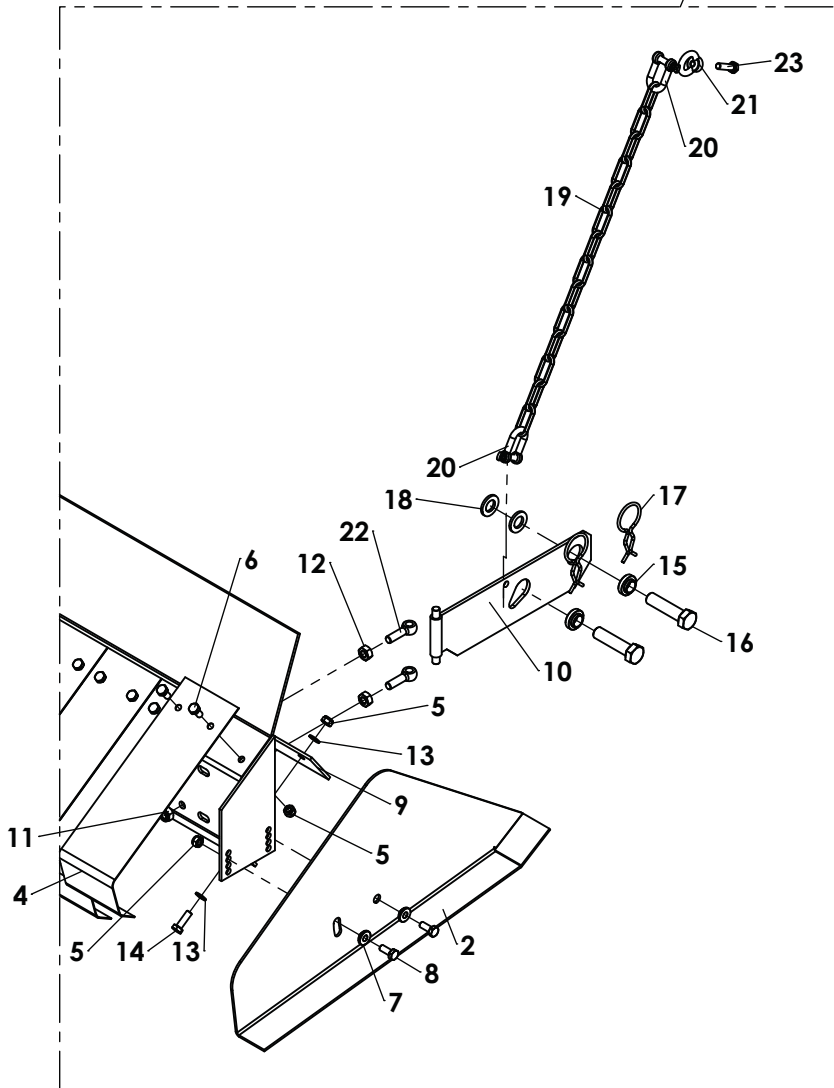
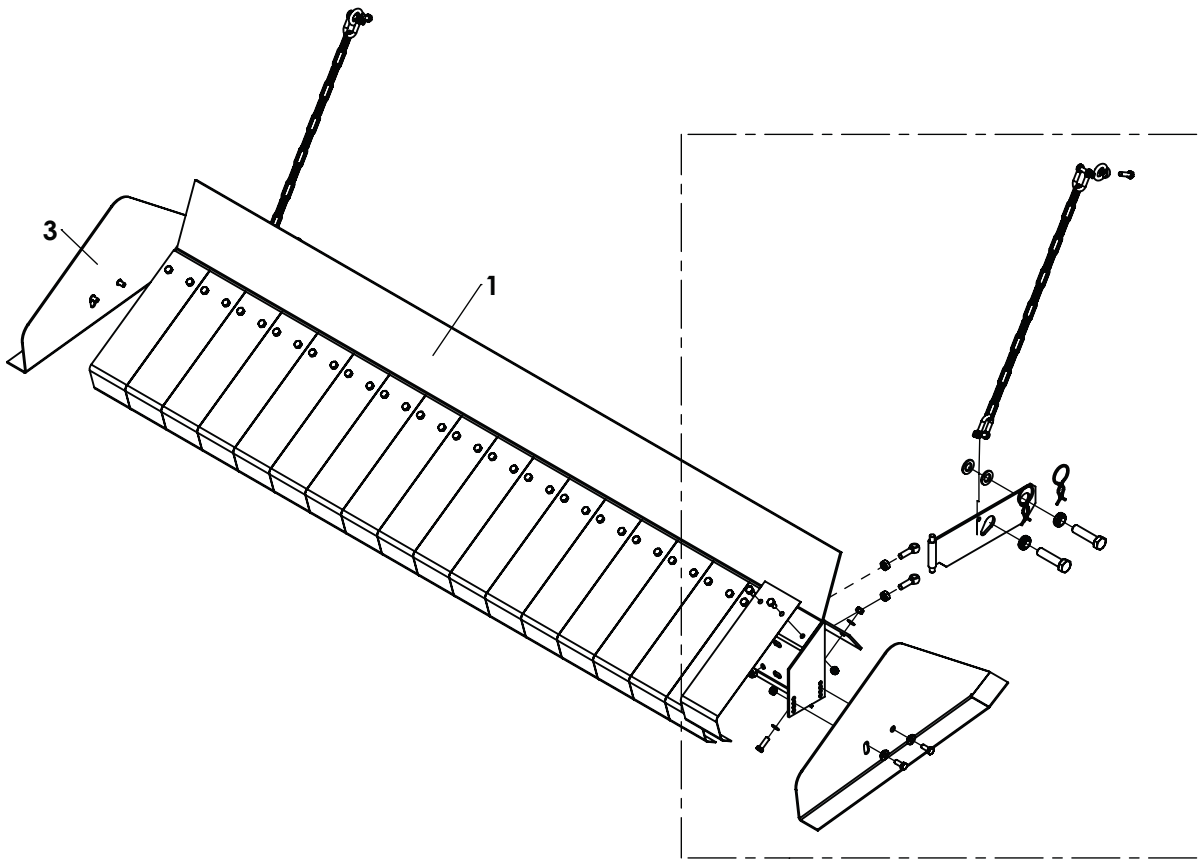
Cross tines							7416
Mountig Ø (mm)	Tine Size (mm)	Tine Size (inch)	Part #	Adapter			Qua
8	12 x 90	1/2 x 3 1/2	9990020	K or multi-tine block			24 + K
12	12 x 90	1/2 x 3 1/2	311.812.090				24
12	19 x 120	3/4 x 5	9990021				24

Chisel tines							7416
Mountig Ø (mm)	Tine Size (mm)	Tine Size (inch)	Part #				Qua
12	4.8 x 19 x 175	3/16 x 3/4 x 7	311.619.175				24
12	4.8 x 19 x 120	3/16 x 3/4 x 4 3/4	311.619.120				24
Tines for verti-core							7416
19	5 x 30 x 90	3/16 x 1 3/16 x 3 1/2	311.619.127	Tines for verti-core			Qua

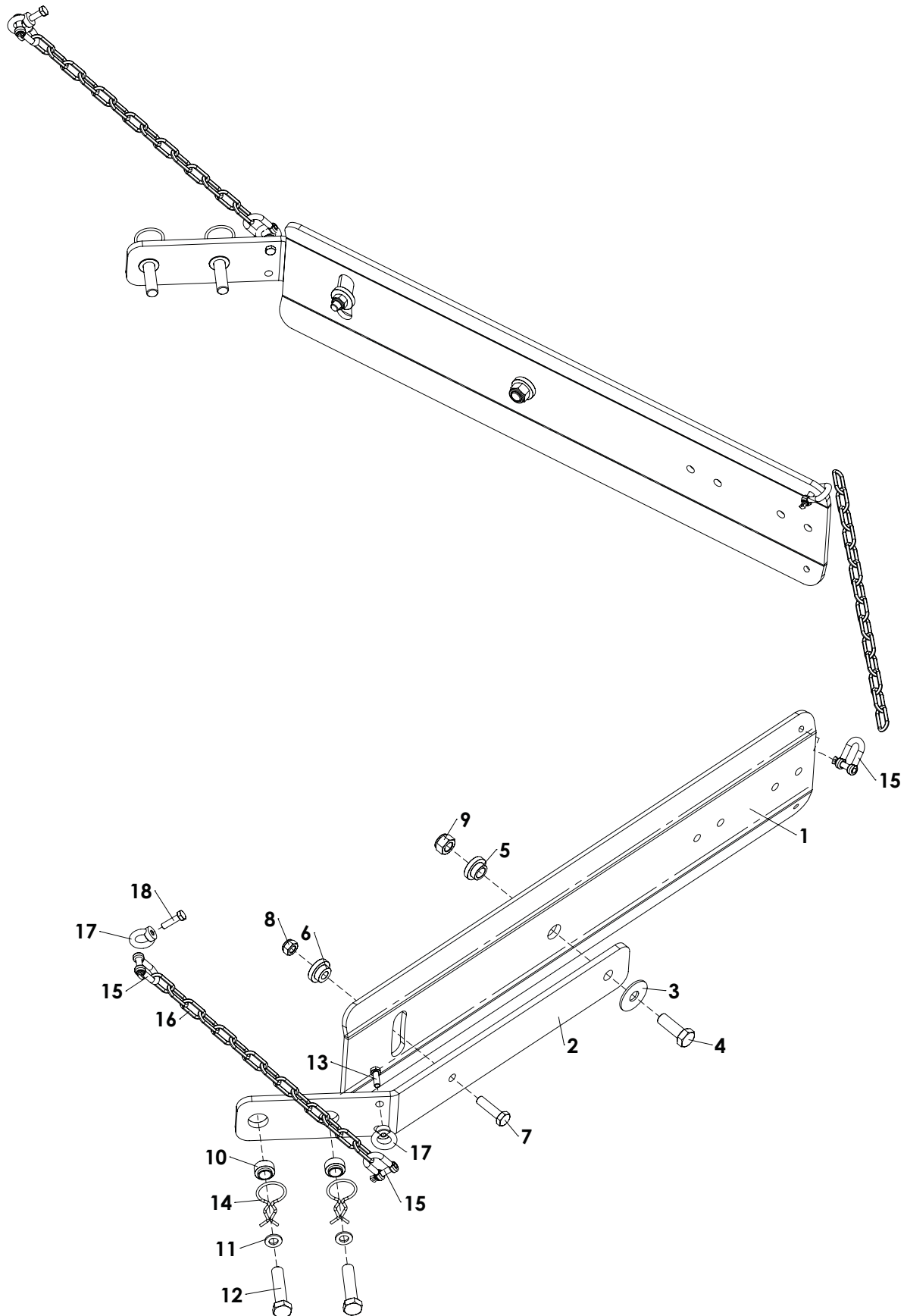
Composed hollow tines							7416
Shank							7416
A	Size (mm)	Size (inch)	Part #				Qua
A	12	1/2	311.120.690	(Straight)			24
B	18	3/4	311.180.782	(Straight)			12
C	12	1/2	311.180.780				24
D	24	1	311.240.862	(Straight)			12
E	18	3/4	311.240.860				12
Clip							7416
F	Size (mm)	Size (inch)	Part #				Qua
F	16	5/8	438.160.160				24
G	22	7/8	438.220.220				24 / 12
H	30	1 3/16	438.300.300				12
Hollow tine tube (folded)							7416
Tine Size (mm)	Tine Size (inch)	Part #					Qua
16 x 150	5/8 x 6	317.316.150	Combine with:	A and F			24A+24F
16 x 200	5/8 x 8	317.316.200	Combine with:	A and F			24A+24F
22 x 150	7/8 x 6	317.322.150	Combine with:	B or C and G			24B+24G+24L
							24C+24G
22 x 250	7/8 x 10	317.322.250	Combine with:	B or C and G			24B+24G+24L
							24C+24G
22 x 150	7/8 x 6	317.322.150	Combine with:	B or C and G			12B+12G+12L
							12C+12G
22 x 250	7/8 x 10	317.322.250	Combine with:	B or C and G			12B+12G+12L
							12C+12G
30 x 150	1 3/16 x 6	317.330.150	Combine with:	E and H			12D+12H
							12E+12H+12L
30 x 225	1 3/16 x 9	317.330.220	Combine with:	E and H			12D+12H
							12E+12H+12L
30 x 300	1 3/16 x 12	317.330.300	Combine with:	E and H			12D+12H

Adapter								7416
		Tine Size (mm)	Tine Size (inch)	Part #				Qua
	J	5	3/16	314.205.043				24
	K	8	5/16	314.208.043				24
Adapter								7416
		Tine Size (mm)	Tine Size (inch)	Part #				Qua
	L	18	3/4	2451800				12
Multi-tine block complete WO tines								7416
		Tine Size (mm)	Tine Size (inch)	Part #			Tines:	Qua
		8mm (5 tines)	5/16	211.700.016	Combination of:	T-O-U-Y-Z	A1-A3-A4-A5	
		8mm (6 tines)	5/16	9990206	Combination of:	M-U	A1-A2-A3-A4-A5	
		8mm (8 tines)	5/16	9990208	Combination of:	N-U	A1-A2-A3-A4-A5	
		8mm (8 tines)	5/16	9990211	Combination of:	N-U-W	A1-A2-A3-A4-A5	6 (48 tines)
		8mm (8 tines)	5/16	314.430.209	Combination of:	P-U	A1-A2-A3-A4-A5	
		Tines:						
	A1	8 x 150	5/16 x 6	311.108.150	Solid tine			
	A2	8 x 175	5/16 x 7	9990056	Solid tine			
	A3	10 x 6 x 80	3/8 x 1/4 x 3	311.210.080	Hollow tine			
A4	10 x 6 x 125	3/8 x 1/4 x 5	311.210.127	Hollow tine				
A5	12 x 90	1/2 x 3 1/2	9990020	Cross tine				
Multi-tine block empty								7416
		Tine Size (mm)	Tine Size (inch)	Part #				Qua
	M	8mm (6 tines)	5/16	9990201				
	N	8mm (8 tines)	5/16	314.430.240				6
	O	8mm (5 tines)	5/16	480.301.430				
	P	8mm (8 tines)	5/16	211.215.002				
Tine lock bolt								7416
		Size (mm)		Part #				Qua
	U	10x40		812.100.401				
		10x35		4001675				48
Stud								7416
		Size (mm)		Part #				Qua
	W	23.2x50		408.230.500				12
	X	12x60		9990212D				
Turf hold down fingers								7416
		Part name					Part #	Qua
		Turf hold down finger						
		Turf hold down finger MTH						
		Turf hold down finger 12mm end						
		Turf hold down finger 12mm					311.508.380	6
		Turf hold down finger 18mm						
		Turf hold down finger 24mm end						
	Turf hold down finger 24mm					311.508.382	6	
Turf hold down kit								7416
		Part name					Part #	Qua
		THD kit complete						
		THD kit complete MTH						
		THD kit complete 12mm					211.741.002	1
		THD kit complete 18mm						
	THD kit complete 24mm					211.741.004	1	

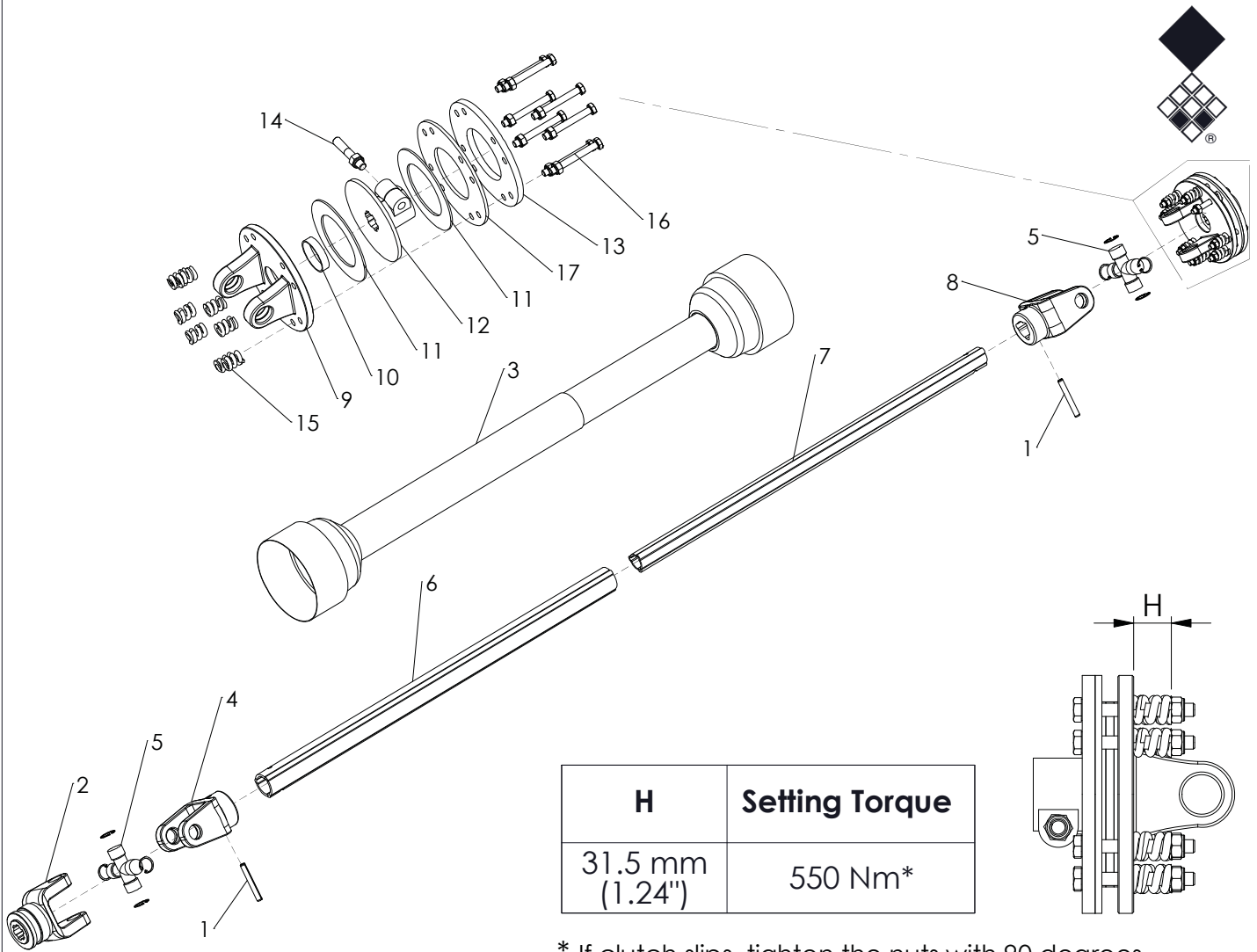




ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	470.049.182	Frame beam		1
2	468.035.420	Right side plate		1
3	468.035.422	Left side plate		1
4	468.013.100	Blade spring		18
5	830.080.080	Self Lock Nut M8 - ISO 10511		49
6	804.080.160	Bolt M8 x 16 - ISO 4017		36
7	404.080.700	Distance bush		4
8	804.080.200	Bolt M8 x 20 - ISO 4017		4
9	446.049.181	Rubber strip		1
10	470.052.950	Support arm		2
11	830.100.100	Self Lock Nut M10 - ISO 10511		4
12	826.100.100	Nut M10 - DIN 934		4
13	864.080.030	Washer M8 - ISO 7089		18
14	804.080.250	Bolt M8 x 25 - ISO 4017		9
15	404.160.100	Distance bush		4
16	802.160.650	Bolt M16 x 65 - ISO 4014		4
17	523.030.752	Special R-clip d3		4
18	864.160.030	Washer M16 - ISO 7089		4
19	846.064.300	Chain d=5mm l=0.5m		2
20	846.080.241	D-Shackle D8		4
21	822.080.360	Lifting Eye Nut M8 - DIN 582		2
22	822.100.400	Eye bolt M10 x 40 DIN 444 - B		4
23	804.080.300	Bolt M8 x 30 - ISO 4017		2
	9200080	Core collector complete		



ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	468.089.000	Windrow plate		2
2	464.106.350	Windrow support		2
3	864.160.031	Large washer M16 - DIN 9021		2
4	804.160.450	Bolt M16 x 45 - ISO 4017		2
5	406.160.150	Distance bush		2
6	406.130.150	Distance bush		2
7	804.120.450	Bolt M12 x 45 - ISO 4017		2
8	830.120.120	Self Lock Nut M12 - ISO 10511		2
9	830.160.160	Self Lock Nut M16 - ISO 10511		2
10	406.170.150	Distance bush		4
11	864.120.030	Washer M12 - ISO 7089		4
12	802.160.700	Bolt M16 x 70 - ISO 4014		4
13	804.080.250	Bolt M8 x 25 - ISO 4017		2
14	523.030.752	Special R-clip d3		4
15	846.080.241	D-Shackle D8		6
16	846.064.300	Chain d=5mm l=0.5m		3
17	822.080.360	Lifting Eye Nut M8 - DIN 582		4
18	804.080.300	Bolt M8 x 30 - ISO 4017		2
	211.731.010	Windrow kit complete		

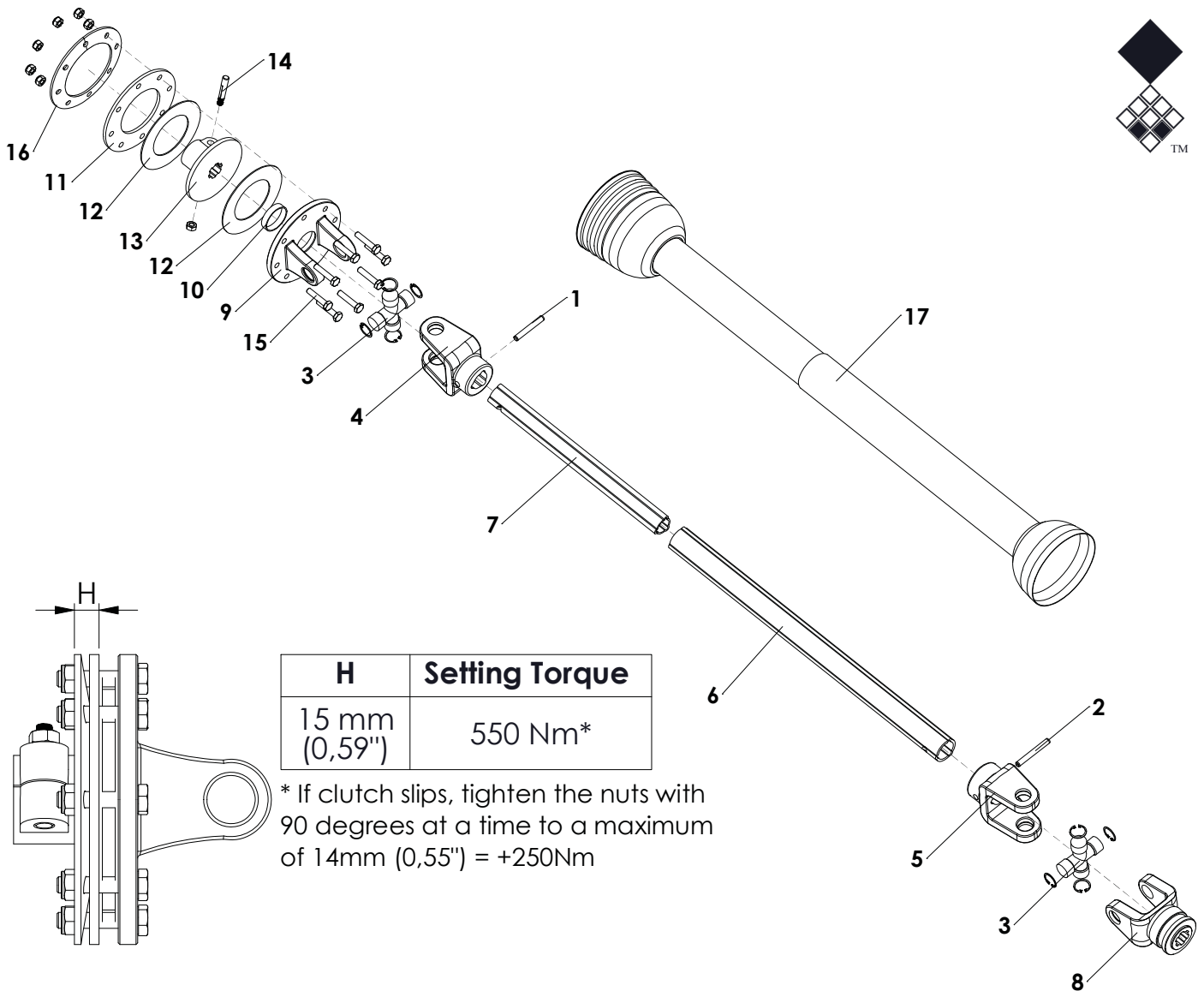


H	Setting Torque
31.5 mm (1.24")	550 Nm*

* If clutch slips, tighten the nuts with 90 degrees at a time to a maximum of 30.5mm (1.20") = +200Nm

ALWAYS deburr parts when cut
MEASURE correct length of PTO first
MAINTAIN slipclutch every month
NEVER USE PTO over 30 degrees
SLIPCLUTCH always on machine side

ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	19000018	Outer roll pin		2
2	BEN PT140119	End yoke with quick lock		1
3	BEN PT143249	Safety guard group	Cut to correct length	1
4	BEN PT143666	Outer tube yoke		1
5	BEN PT151242	Universal joint assembled		2
6	BEN PT154926	Tubing cut to size	Cut to correct length	1
7	BEN PT157727	Tubing cut to size	Cut to correct length	1
8	BEN PT158836	Inner tube yoke		1
9	BEN F1B06	Flange yoke		1
10	BEN F060	Bush		1
11	BEN F030/S	Lining ring		2
12	BEN F138	Hub		1
13	BEN F1180	Pressure plate		1
14	BEN 90938	Conic bolt and nut		1
15	BEN F0110	Spring		8
16	BEN F10085	Bolt and nut		8
17	BEN F070	Inner plate		1
	611.601.200	PTO shaft type T-60 tl 1200		
	611.606.100	PTO shaft type T-60 tl 610		

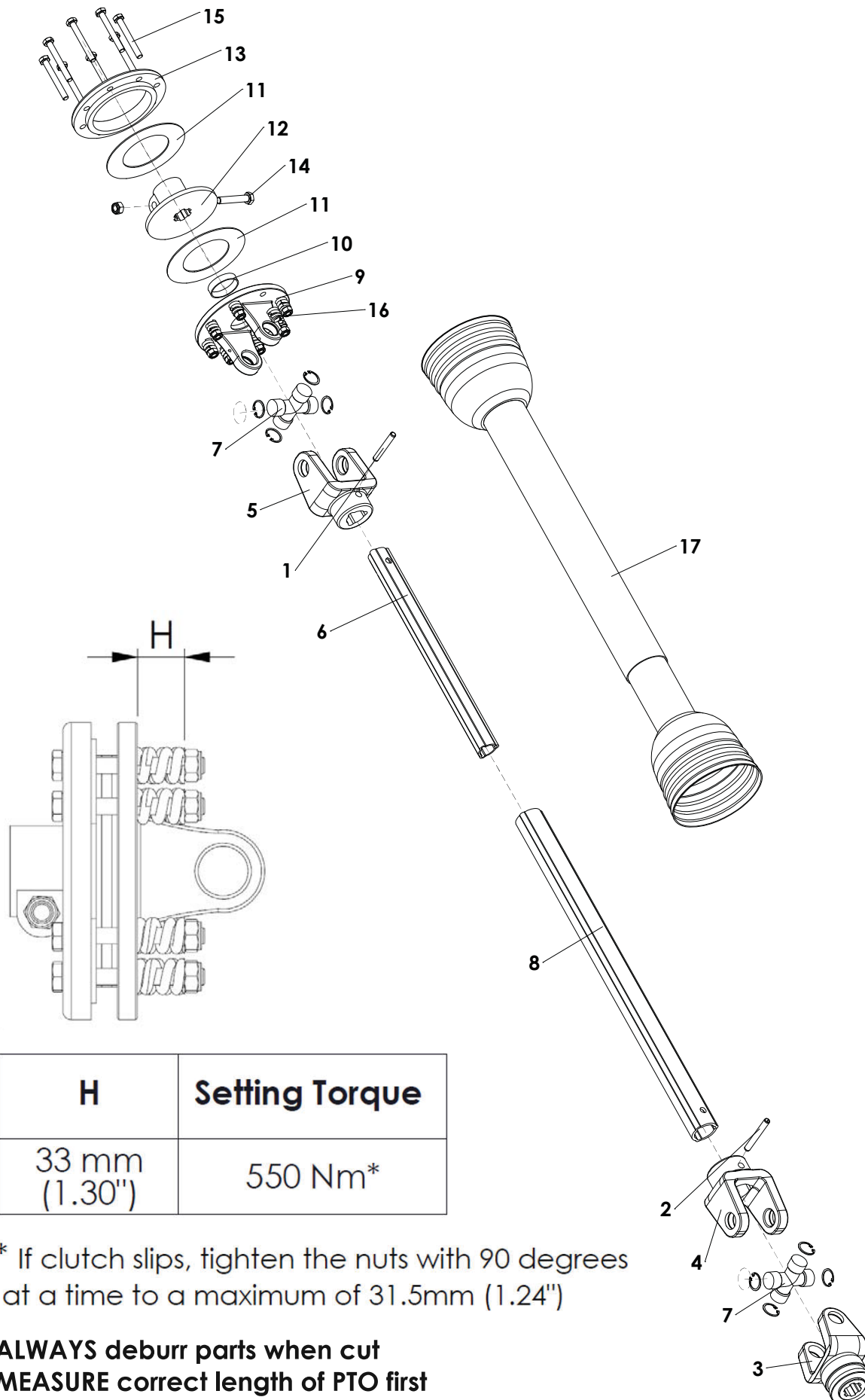


H	Setting Torque
15 mm (0,59")	550 Nm*

* If clutch slips, tighten the nuts with 90 degrees at a time to a maximum of 14mm (0,55") = +250Nm

ALWAYS deburr parts when cut
MEASURE correct length of PTO first
MAINTAIN slipclutch every month
NEVER USE PTO over 30 degrees
SLIPCLUTCH always on machine side

ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	19000016	Inner roll pin		1
2	19000018	Outer roll pin		1
3	180016130	Cross and 4x circlip kit		2
4	1510160291	Inner tube yoke type 60		1
5	1510160281	Outer tube yoke type 60		1
6	1521604610700	T60-series Outer tube	Cut to correct length	1
7	153150334	T60-series Inner tube	Cut to correct length	1
8	1410265441	Complete collar yoke type 60		1
9	1510168091	Flanged yoke T60		1
10	180015020	Bush		1
11	180017569	Pressure plate		1
12	180015019	Lining ring		2
13	1510169321	Hub T60		1
14	165000588	Tapered Pin 1 3/8" kit	Retighten every 40 hours	1
15	165000858	Bolt & nut M10 x 1,5 x 50		8
16	180017426	Belleville spring		1
17	1423600167651	Complete guard 60-series	Cut to correct length	1
	600610	Complete PTO T60		
	601010	Complete PTO T60		



H	Setting Torque
33 mm (1.30")	550 Nm*

* If clutch slips, tighten the nuts with 90 degrees at a time to a maximum of 31.5mm (1.24")

ALWAYS deburr parts when cut
MEASURE correct length of PTO first
MAINTAIN slipclutch every month
NEVER USE PTO over 30 degrees
SLIPCLUTCH always on machine side

ITEM	PART NUMBER	DESCRIPTION	REMARKS	QUA
1	190000016	Inner roll pin		1
2	190000018	Outer roll pin		1
3	141026108	Complete collar yoke type 60		1
4	151016028	Outer tube yoke type 60		1
5	151016029	Inner tube yoke type 60		1
6	153160150	T60-series Inner tube		1
7	180016130	Cross and 4x circlip kit		2
8	152160475	T60-series Outer tube		1
9	151016039	Flanged yoke T60		1
10	180015020	Bush		1
11	180015019	Lining ring		2
12	151015018	Hub T60		1
13	180015021	Pressure plate		1
14	165000502	Bolt and Nut	Retighten every 40 hours	1
15	165000501	Bolt and nut		8
16	180014022	Spring		8
17	1422602987630	Complete guard 60-series	Cut to correct length	1
	600610	Complete PTO		
		ALWAYS deburr parts when cut		
		MEASURE correct length of PTO first		
		MAINTAIN slipclutch every month		
		NEVER USE PTO over 30 degrees angle		
		SLIPCLUTCH always on machine side		