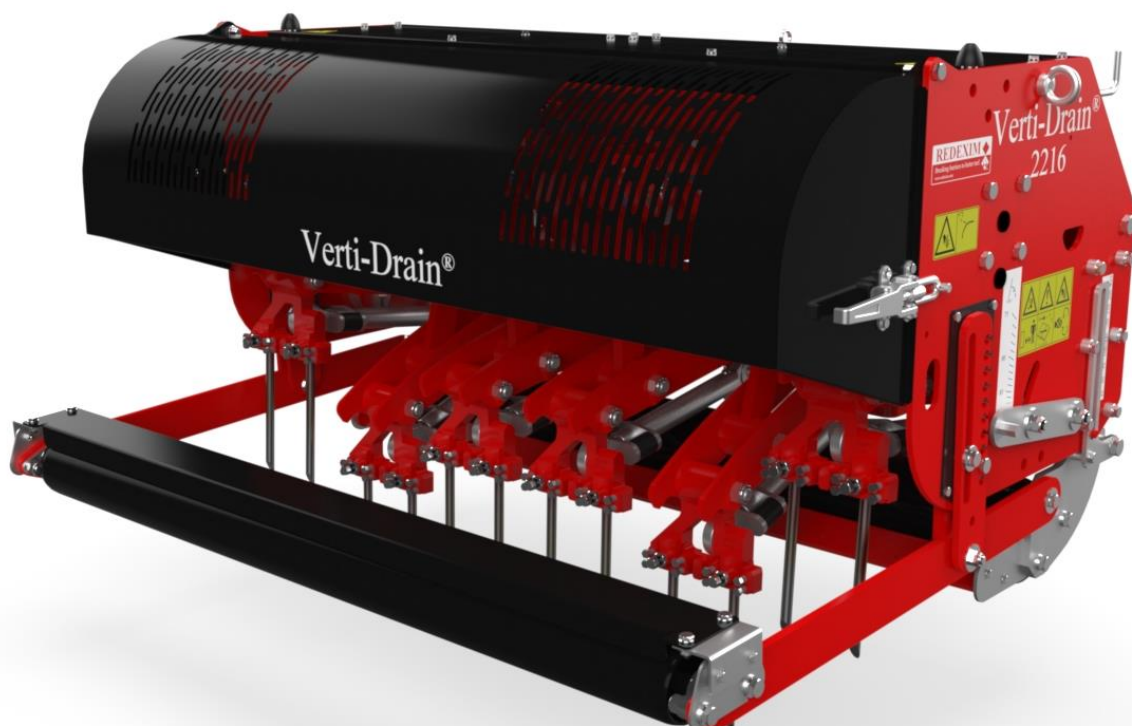
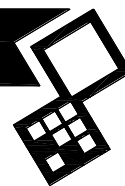


# **VERTI-DRAIN 2216-2220**



Version: 2338

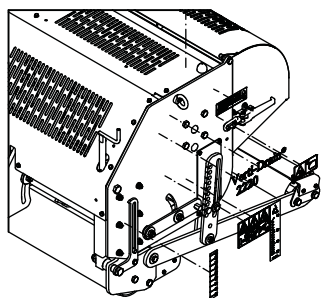


Kwekerijweg 8 | 3709JA | Zeist | The Netherlands |

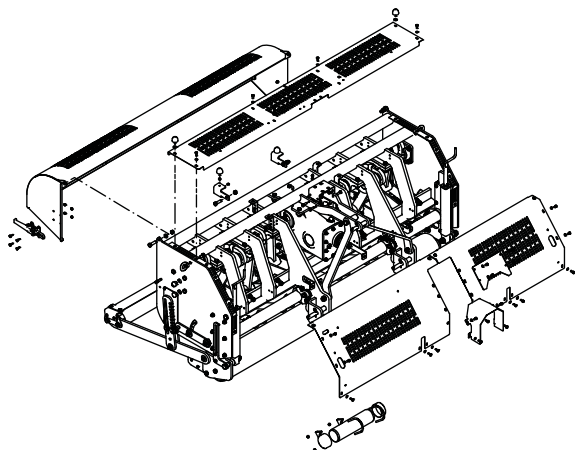
T: +31 (0)306 933 227

E: [redexim@redexim.com](mailto:redexim@redexim.com)

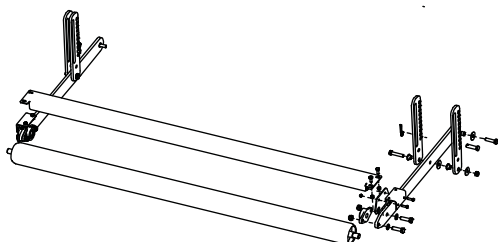
W: [www.redexim.com](http://www.redexim.com)



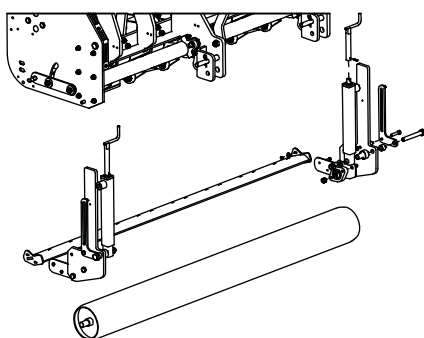
Page 02: Decalls



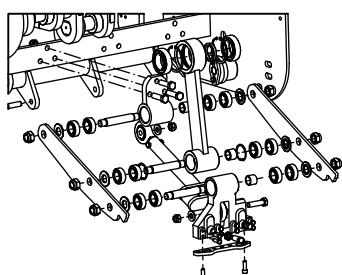
Page 03: Covers



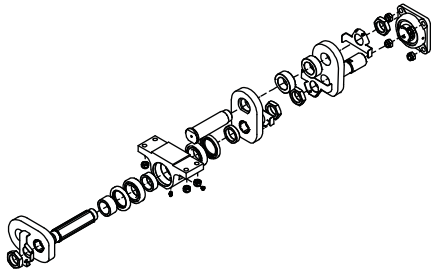
Page 04: Rear roller



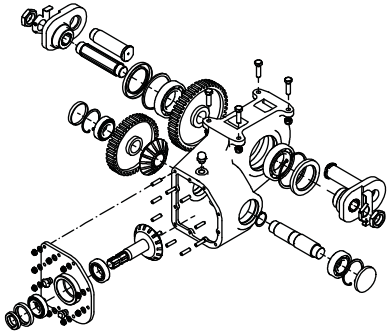
Page 05: Front roller



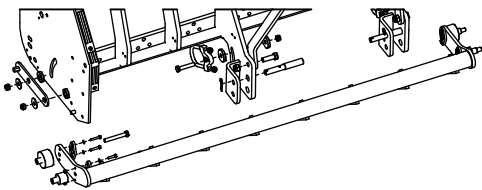
Page 06: Element



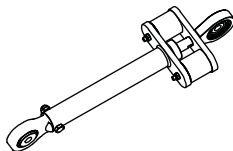
Page 07: Crankshaft



Page 08: Gearbox



Page 09: Central Bar



Page 10: Drawrod

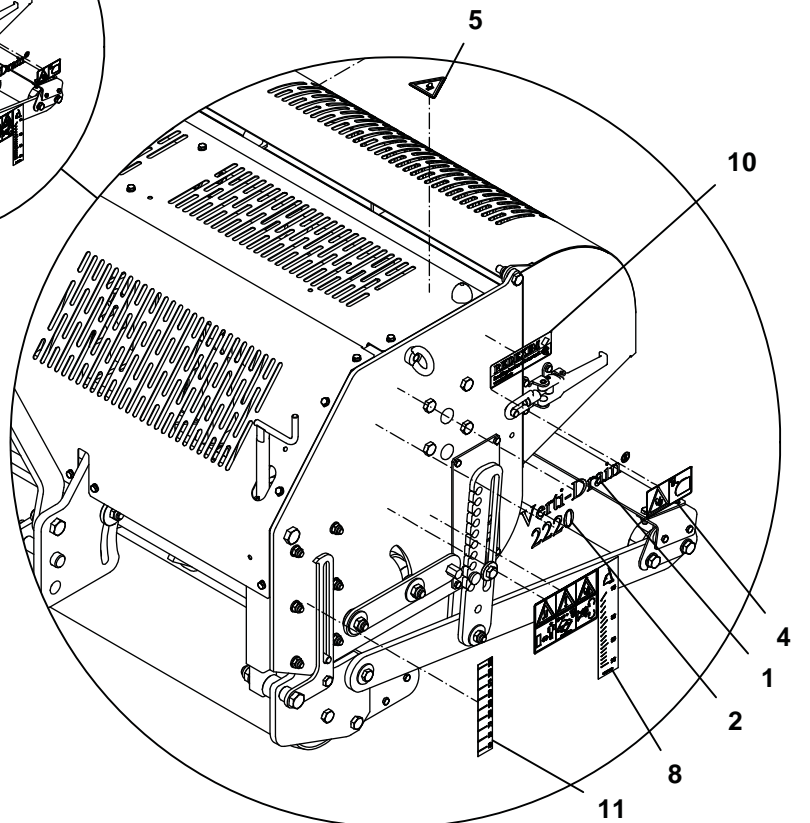
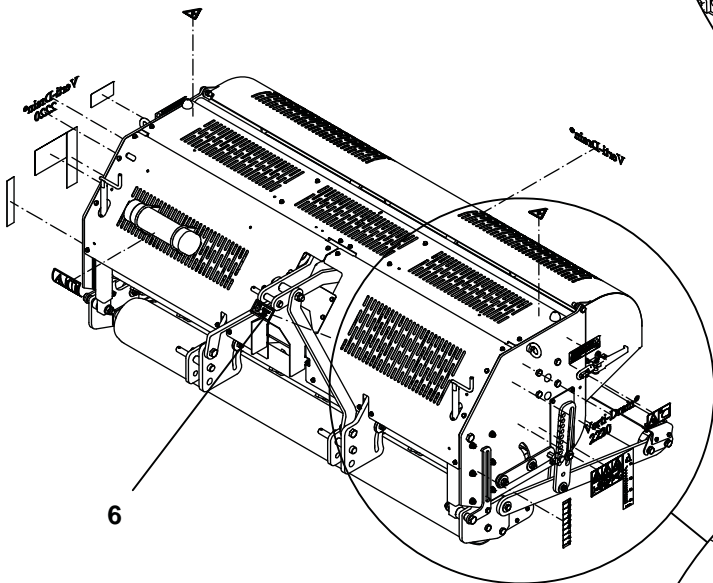
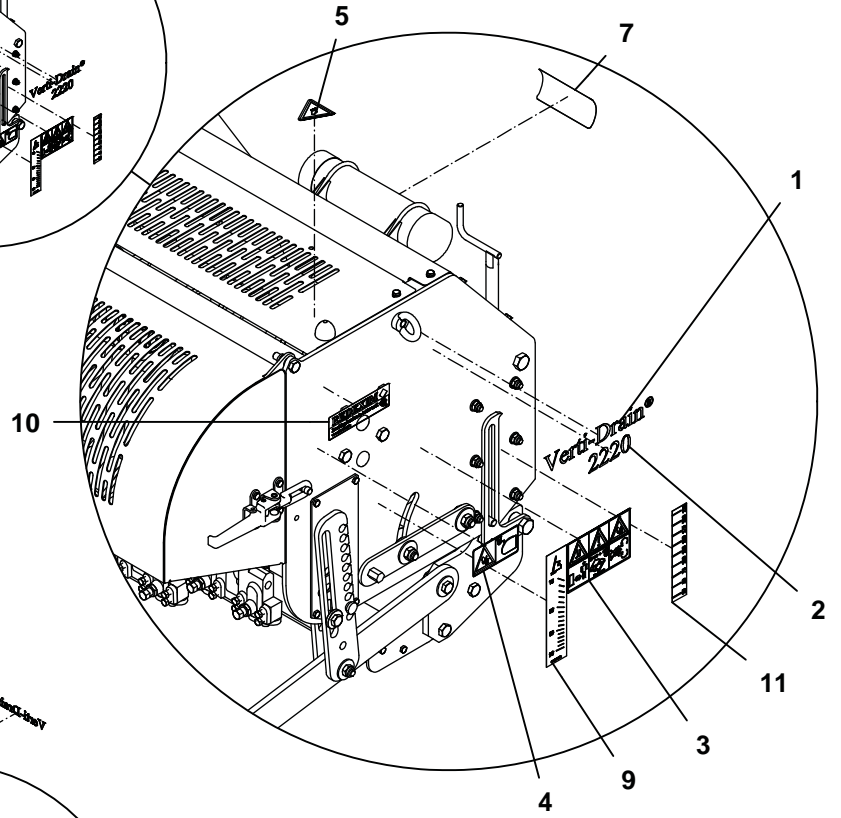
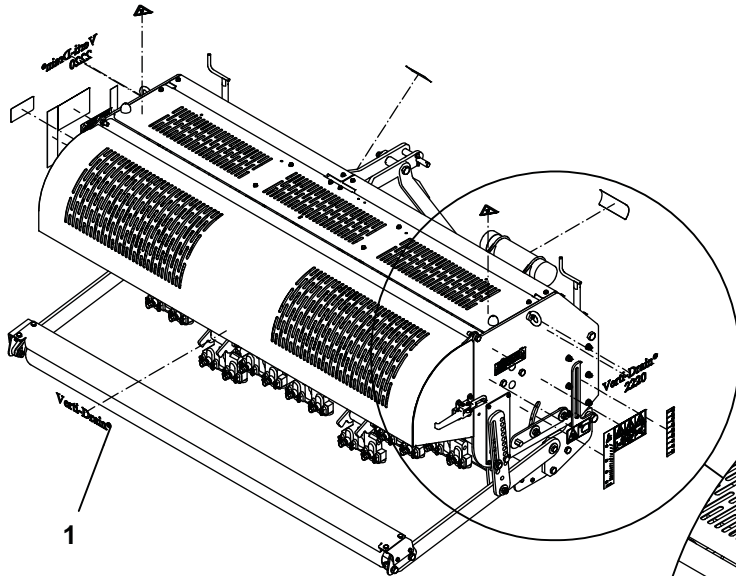
Page 11: Option Hydraulic height adjustment

Page 12: Option Windrow kit

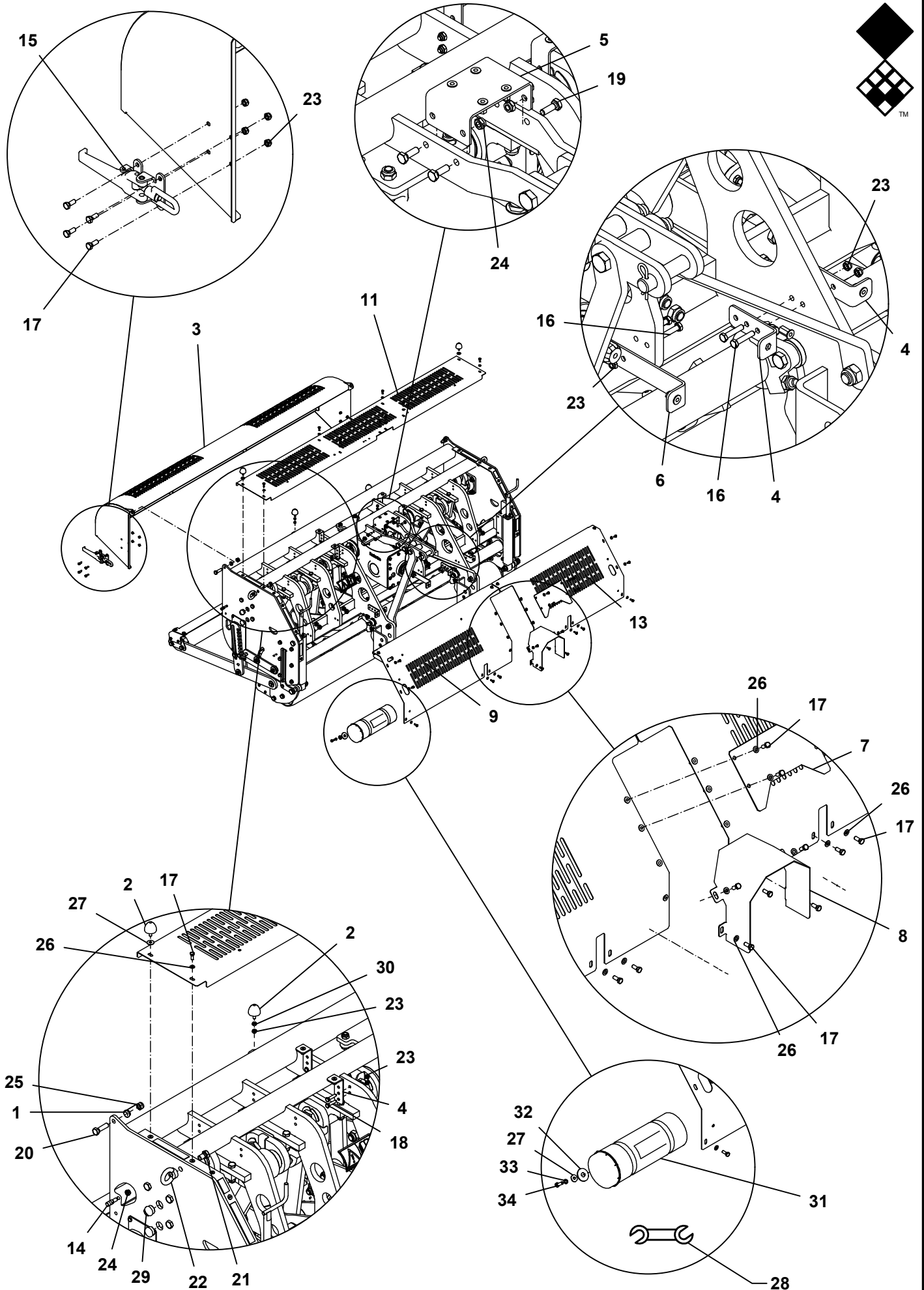
Page 13: Tines

Page 14: Adapters and turf hold down kits

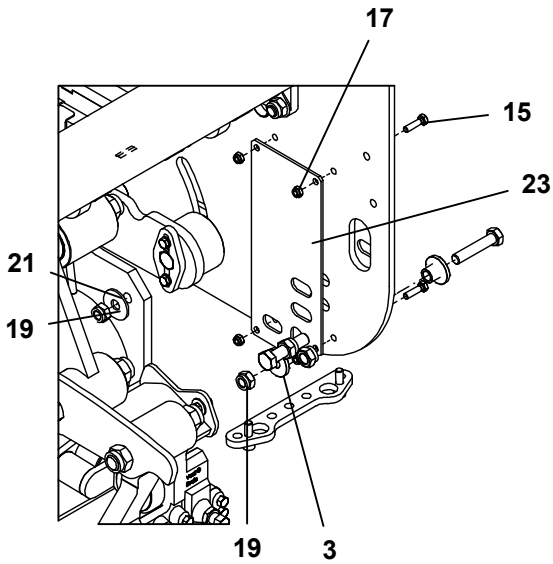
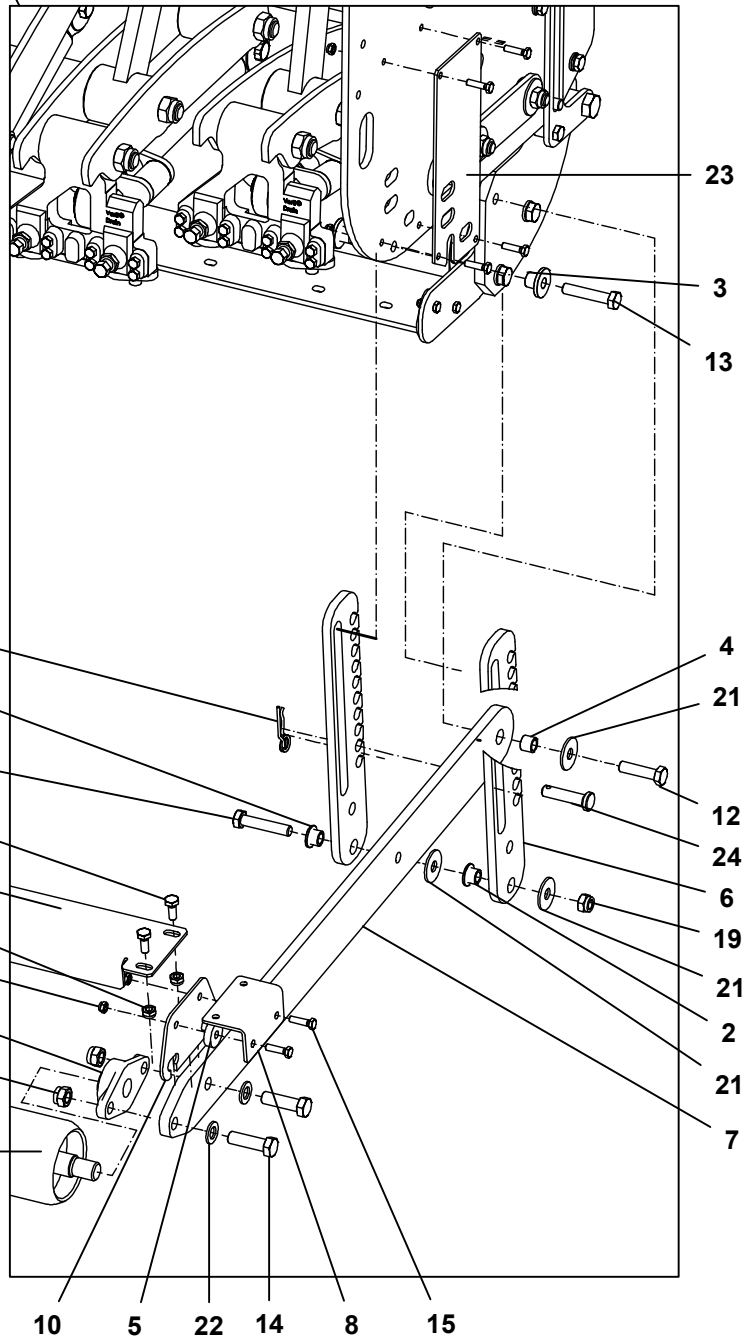
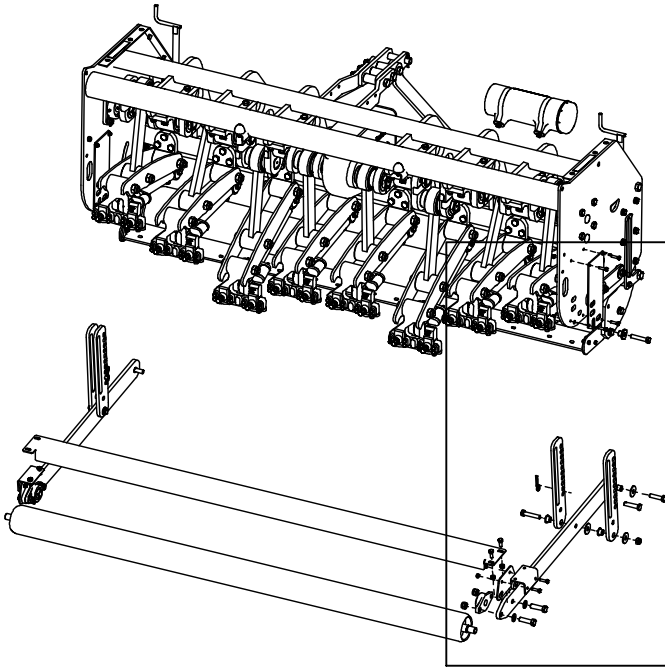
Page P1: PTO



|    | PART #      | DESCRIPTION                          | REMARKS | QUA 2216 | QUA 2220 |
|----|-------------|--------------------------------------|---------|----------|----------|
| 1  | 911.260.402 | Label Verti-Drain                    |         | 3        | 3        |
| 2  | 911.260.200 | Label 2220                           |         | 0        | 2        |
|    | 911.260.202 | Label 2216                           |         | 2        | 0        |
| 3  | 911.280.402 | Safety decall VD                     |         | 2        | 2        |
| 4  | 911.280.404 | Close Cover                          |         | 2        | 2        |
| 5  | 900.280.404 | Cut off fingers                      |         | 2        | 2        |
| 6  | 900.260.422 | Decall PTO 350 540                   |         | 1        | 1        |
| 7  | 900.280.402 | Safety decall manual                 |         | 1        | 1        |
| 8  | 911.340.420 | Decall angle setting HSVD-7120 left  |         | 1        | 1        |
| 9  | 911.340.418 | Decall angle setting HSVD-7120 right |         | 1        | 1        |
| 10 | 900.260.403 | Label logo                           |         | 2        | 2        |
| 11 | 911.340.000 | Decall height indicator 225          |         | 2        | 2        |

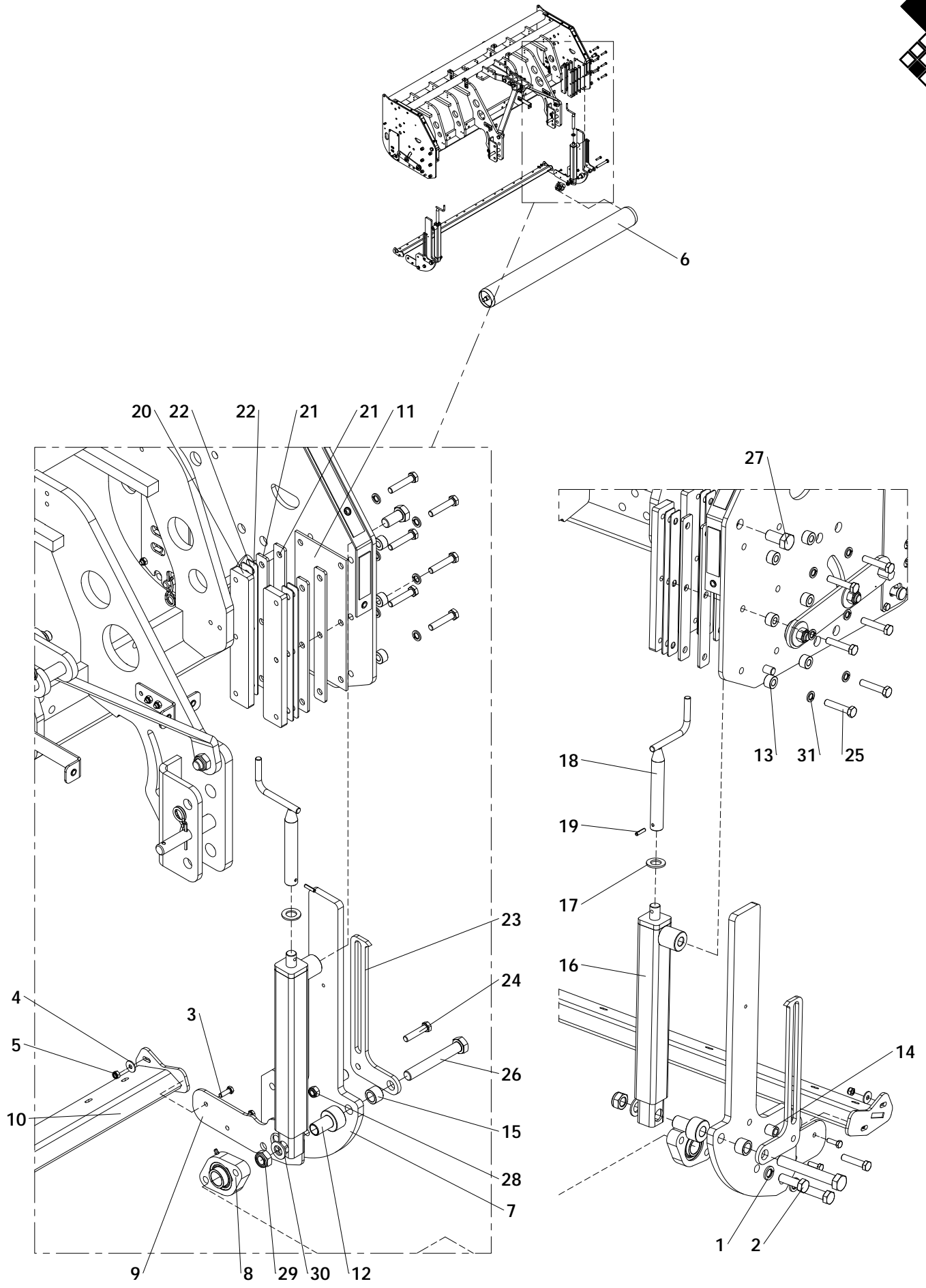
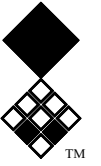


|    | PART #      | DESCRIPTION                 | REMARKS | QUA 2216 | QUA 2220 |
|----|-------------|-----------------------------|---------|----------|----------|
| 1  | 404.140.100 | Distance Bush               |         | 2        | 2        |
| 2  | 446.080.550 | Rubber stop                 |         | 4        | 4        |
| 3  | 456.213.033 | Weld Assy Cover             |         | 0        | 1        |
|    | 456.158.037 | Weld Assy Cover             |         | 1        | 0        |
| 4  | 464.040.850 | Cover bracket               |         | 8        | 8        |
| 5  | 464.041.450 | Bracket cover               |         | 1        | 1        |
| 6  | 464.041.800 | Cover bracket               |         | 1        | 1        |
| 7  | 468.022.602 | Protection cover            |         | 1        | 1        |
| 8  | 468.025.700 | Cover plate PTO             |         | 1        | 1        |
| 9  | 468.029.112 | Front cover right           |         | 0        | 1        |
| 10 | 468.028.700 | Front cover right           |         | 1        | 0        |
| 11 | 468.029.214 | Top cover                   |         | 0        | 1        |
| 12 | 468.029.151 | Top cover                   |         | 1        | 0        |
| 13 | 468.029.700 | Front cover left            |         | 0        | 1        |
|    | 468.027.100 | Front cover left            |         | 1        | 0        |
| 14 | 472.140.450 | Clamp part                  |         | 2        | 2        |
| 15 | 590.342.700 | Clamp                       |         | 2        | 2        |
| 16 | 802.080.400 | Bolt DIN 931-1 - M8 x 40    |         | 6        | 6        |
| 17 | 804.080.200 | Bolt DIN 933 - M8 x 20      |         | 24       | 24       |
| 18 | 804.080.350 | Bolt DIN 933 - M8 x 35      |         | 8        | 8        |
| 19 | 804.100.300 | Bolt DIN 933 - M10 x 30     |         | 4        | 4        |
| 20 | 804.140.500 | Bolt DIN 933 - M14 x 50     |         | 2        | 2        |
| 21 | 804.160.250 | Bolt DIN 933 - M16 x 25     |         | 2        | 2        |
| 22 | 822.160.360 | Eye Nut DIN 582 - M16       |         | 2        | 2        |
| 23 | 830.080.080 | SL Nut DIN 985 - M8         |         | 20       | 20       |
| 24 | 830.100.100 | SL Nut DIN 985 - M10        |         | 6        | 6        |
| 25 | 830.140.140 | SL Nut DIN 985 - M14        |         | 2        | 2        |
| 26 | 864.080.030 | Washer DIN 125 - M8         |         | 32       | 32       |
| 27 | 864.080.031 | Large Washer DIN 9021 - 8,4 |         | 4        | 4        |
| 28 | 468.083.060 | Toolset                     |         | 1        | 1        |
| 29 | 892.300.170 | Plastic stop Ø30            |         | 4        | 4        |
| 30 | 826.080.080 | Nut DIN 934 - M8            |         | 2        | 2        |
| 31 | 444.803.100 | Toolbox complete            |         | 1        | 1        |
| 32 | 864.140.031 | Large Washer DIN 9021 - 15  |         | 2        | 2        |
| 33 | 866.080.020 | Spring washer DIN 127 - A 8 |         | 2        | 2        |
| 34 | 804.080.300 | Bolt DIN 933 - M8 x 30      |         | 2        | 2        |

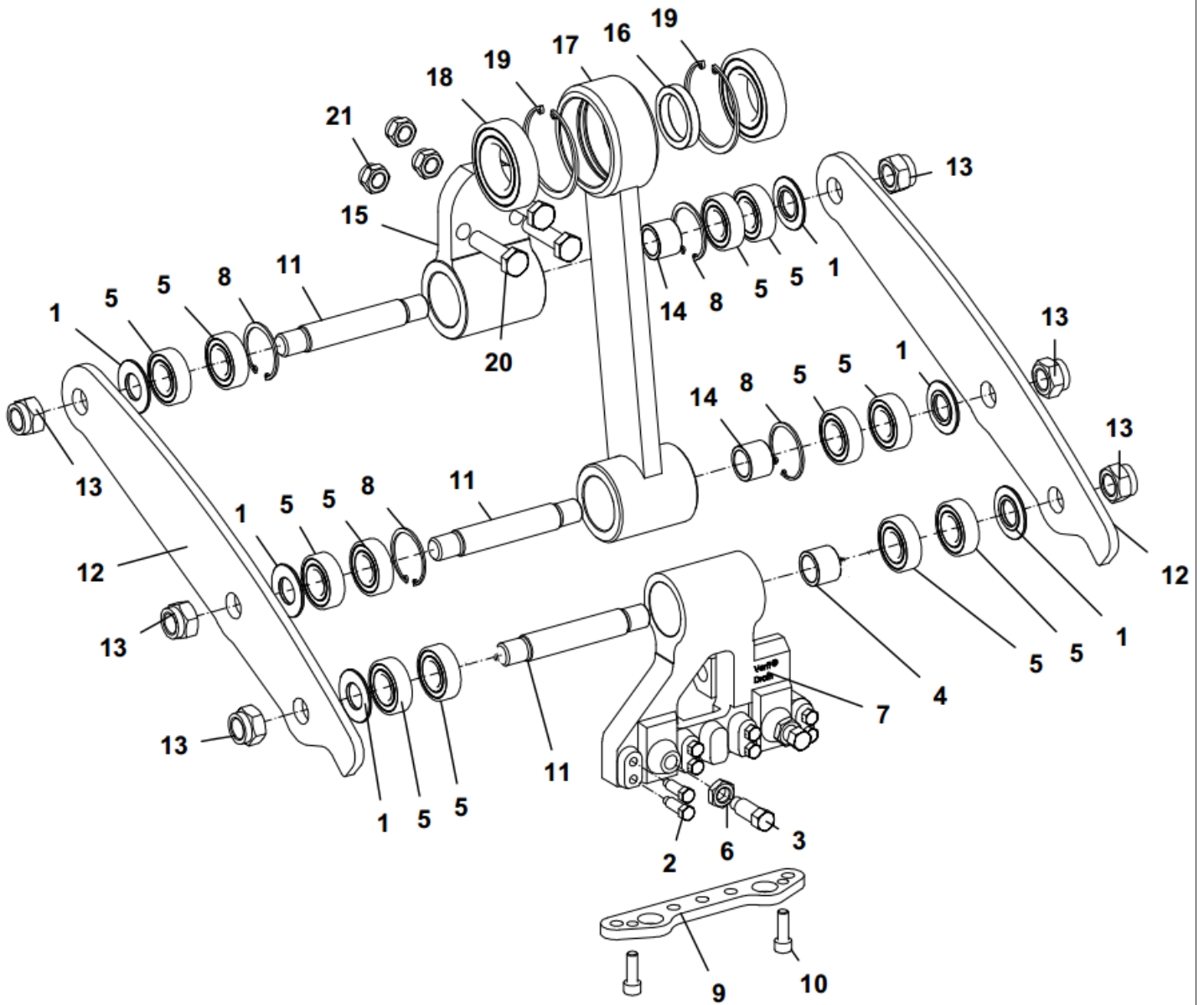




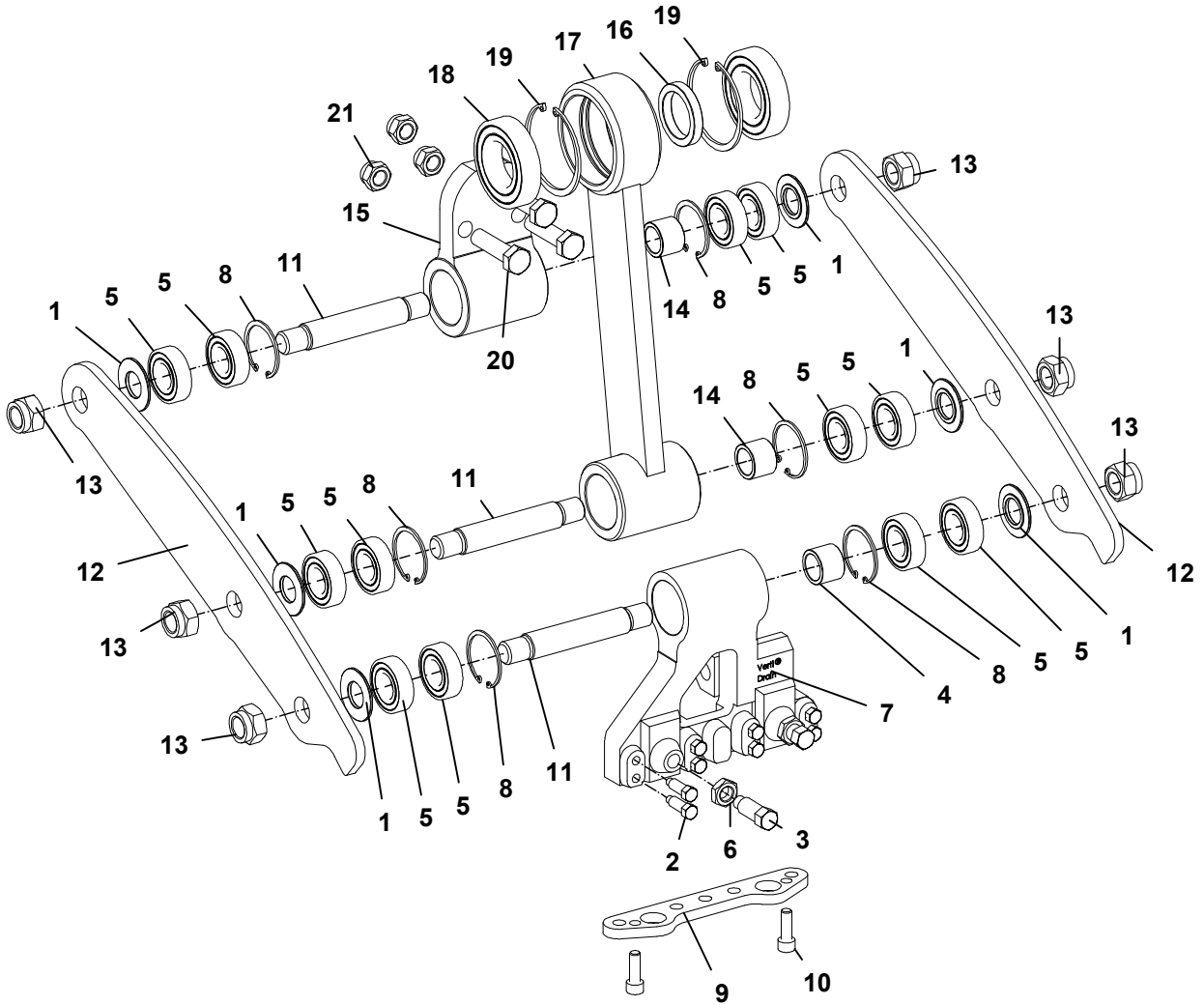
|    | PART #      | DESCRIPTION                    | REMARKS             | QUA 2216 | QUA 2220 |
|----|-------------|--------------------------------|---------------------|----------|----------|
| 1  | 742.250.360 | Bearing UCFL 205               |                     | 2        | 2        |
| 2  | 404.140.150 | Distance Bush Ø20/Ø14, L= 15   |                     | 4        | 4        |
| 3  | 404.140.160 | Distance Bush Ø20/Ø14, L= 16   |                     | 4        | 4        |
| 4  | 406.150.320 | Distance Bush Ø20/Ø14.5, L= 32 |                     | 2        | 2        |
| 5  | 446.100.100 | Rubber ring                    |                     | 4        | 4        |
| 6  | 464.123.752 | Rear Roller Support            |                     | 4        | 4        |
| 7  | 464.159.110 | Arm Rear Roller                | Length=1015mm (40") | 2        | 2        |
|    | 464.159.250 | Arm Rear Roller                | Length=965mm (38")  | 2        | 2        |
| 8  | 468.041.110 | Bracket                        |                     | 2        | 2        |
| 9  | 468.049.210 | Rear Roller Scraper            |                     | 0        | 1        |
|    | 468.049.157 | Rear roller scraper            |                     | 1        | 0        |
| 10 | 468.081.600 | Bearing plate                  |                     | 2        | 2        |
| 11 | 488.114.209 | Weld Assy Rear Roller          |                     | 0        | 1        |
|    | 488.114.156 | Weld Assy Rear roller          |                     | 1        | 0        |
| 12 | 802.140.550 | Bolt DIN 931-1 - M14 x 55      |                     | 2        | 2        |
| 13 | 802.140.700 | Bolt DIN 931-1 - M14 x 70      |                     | 4        | 4        |
| 14 | 802.160.550 | Bolt DIN 931-1 - M16 x 55      |                     | 4        | 4        |
| 15 | 804.080.300 | Bolt DIN 933 - M8 x 30         |                     | 12       | 12       |
| 16 | 804.100.250 | Bolt DIN 933 - M10 x 25        |                     | 4        | 4        |
| 17 | 830.080.080 | SL Nut DIN 985 - M8            |                     | 12       | 12       |
| 18 | 830.100.100 | SL Nut DIN 985 - M10           |                     | 4        | 4        |
| 19 | 830.140.140 | SL Nut DIN 985 - M14           |                     | 6        | 6        |
| 20 | 830.160.160 | SL Nut DIN 985 - M16           |                     | 4        | 4        |
| 21 | 864.140.031 | Large Washer DIN 9021 - 15     |                     | 8        | 8        |
| 22 | 864.160.030 | Washer DIN 125 - M16           |                     | 4        | 4        |
| 23 | 444.042.000 | Slide plate                    |                     | 4        | 4        |
| 24 | 521.160.510 | Lock pin CAT 0 WTS             |                     | 2        | 2        |
| 25 | 523.030.750 | R-Clip Round 3, DIN 11024      |                     | 2        | 2        |



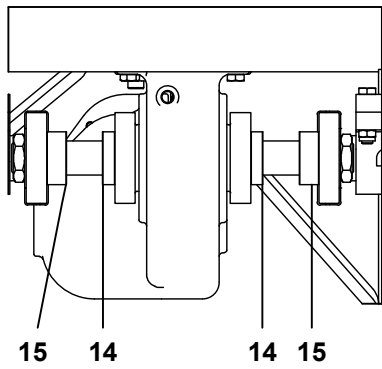
| ITEM | PART NUMBER | DESCRIPTION                     | REMARKS | QUA 2216 | QUA 2220 |
|------|-------------|---------------------------------|---------|----------|----------|
| 1    | 866.160.020 | Spring Washer M16 - DIN 127     |         | 4        | 4        |
| 2    | 804.160.500 | Bolt M16 x 50 - ISO 4017        |         | 4        | 4        |
| 3    | 804.080.250 | Bolt M8 x 25 - ISO 4017         |         | 4        | 4        |
| 4    | 864.080.024 | Large washer M8 - DIN 9021      |         | 4        | 4        |
| 5    | 830.080.080 | Self Lock Nut M8 - ISO 10511    |         | 4        | 4        |
| 6    | 488.194.207 | Front roller                    | VD2220  | 0        | 1        |
|      | 488.194.154 | Front roller                    | VD2216  | 1        | 0        |
| 7    | 464.156.250 | Front roller support            |         | 2        | 2        |
| 8    | 742.302.400 | Front roller bearing            |         | 2        | 2        |
| 9    | 468.063.040 | Mounting strip THD Beam         |         | 2        | 2        |
| 10   | 470.109.205 | THD Beam                        | VD2220  | 0        | 1        |
|      | 470.109.153 | THD Beam                        | VD2216  | 1        | 0        |
| 11   | 311.505.320 | Skid plate height adjustment    |         | 2        | 2        |
| 12   | 404.200.660 | Collar bush                     |         | 2        | 2        |
| 13   | 406.120.154 | Distance bush Ø25/Ø12.5 h=15    |         | 12       | 12       |
| 14   | 406.120.200 | Distance bush                   |         | 2        | 2        |
| 15   | 406.200.200 | Distance bush                   |         | 2        | 2        |
| 16   | 460.504.804 | Jack VD2216-VD2220              |         | 2        | 2        |
| 17   | 864.200.030 | Washer M20 - ISO 7089           |         | 2        | 2        |
| 18   | 474.252.500 | Spindle head long               |         | 2        | 2        |
| 19   | 878.060.260 | Roll Pin 6 x 26 - ISO 8752      |         | 2        | 2        |
| 20   | 464.053.400 | Strip                           |         | 4        | 4        |
| 21   | 464.203.400 | Strip                           |         | 8        | 8        |
| 22   | 468.013.400 | Shim plate                      |         | 8        | 8        |
| 23   | 468.053.050 | Pointer                         |         | 2        | 2        |
| 24   | 802.120.550 | Bolt M12 x 55 - ISO 4014 - 10.9 |         | 2        | 2        |
| 25   | 802.120.600 | Bolt M12 x 60 - ISO 4014        |         | 12       | 12       |
| 26   | 802.201.400 | Bolt M20 x 140 - ISO 4014       |         | 2        | 2        |
| 27   | 804.200.400 | Bolt M20 x 40 - ISO 4017        |         | 2        | 2        |
| 28   | 830.120.120 | Self Lock Nut M12 - ISO 10511   |         | 2        | 2        |
| 29   | 830.200.200 | Self Lock Nut M20 Din 985 h=17  |         | 2        | 2        |
| 30   | 864.200.030 | Washer M20 - ISO 7089           |         | 2        | 2        |
| 31   | 866.120.020 | Spring Washer M12 - DIN 127     |         | 12       | 12       |



|    | PART #      | DESCRIPTION                            | REMARKS           | QUA 2216 | QUA 2220 |
|----|-------------|--|-------------------|----------|----------|
| 1  | 2661700     | Distance washer                        | Qua for 1 element | 6        | 6        |
| 2  | 4001675     | Tine holder bolt                       | Qua for 1 element | 8        | 8        |
| 3  | 4002315     | Tine holder bolt M16                   | Qua for 1 element | 2        | 2        |
| 4  | 406.250.250 | Distance bush                          | Qua for 1 element | 1        | 1        |
| 5  | 713.250.150 | Bearing 6205-LLU                       | Qua for 1 element | 12       | 12       |
| 6  | 826.160.080 | Low Nut Din 439-2 M16                  | Qua for 1 element | 2        | 2        |
| 7  | 492.218.090 | Tine holder empty (no circlips needed) | Qua for 1 element | 1        | 1        |
| 8  | 872.052.200 | Cir Clip DIN 472 - 52x2                | Qua for 1 element | 4        | 4        |
| 9  | 468.102.230 | Additional plate Tineholder 75         | Qua for 1 element | 1        | 1        |
| 10 | 814.100.300 | Bolt DIN 912 - M10 x 30                | Qua for 1 element | 2        | 2        |
| 11 | 416.251.550 | Support axis                           | Qua for 1 element | 3        | 3        |
| 12 | 468.104.750 | Element strip                          | Qua for 1 element | 2        | 2        |
| 13 | 830.220.220 | SL Nut DIN 985 - M22                   | Qua for 1 element | 6        | 6        |
| 14 | 2602452     | Inner bush                             | Qua for 1 element | 2        | 2        |
| 15 | 448.760.164 | Bearing support house                  | Qua for 1 element | 1        | 1        |
| 16 | 402.450.100 | Distance bush Ø45,2/Ø60 L=10           | Qua for 1 element | 1        | 1        |
| 17 | 466.110.442 | Connecting rod                         | Qua for 1 element | 1        | 1        |
| 18 | 713.450.190 | Bearing 6209 LLU                       | Qua for 1 element | 2        | 2        |
| 19 | 872.085.300 | Cir Clip DIN 472 - 85x3                | Qua for 1 element | 2        | 2        |
| 20 | 802.160.600 | Bolt DIN 931-1 - M16 x 60              | Qua for 1 element | 3        | 3        |
| 21 | 830.160.160 | SL Nut DIN 985 - M16                   | Qua for 1 element | 3        | 3        |

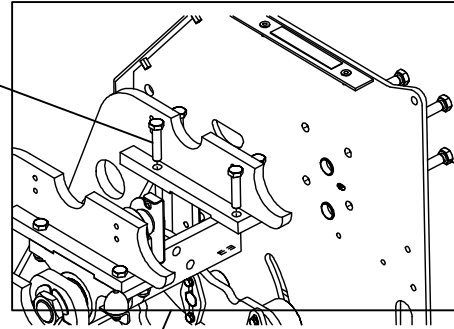


|    | PART #      | DESCRIPTION                    | REMARKS           | QUA 2216 | QUA 2220 |
|----|-------------|--------------------------------|-------------------|----------|----------|
| 1  | 2661700     | Distance washer                | Qua for 1 element | 6        | 6        |
| 2  | 4001675     | Tine holder bolt               | Qua for 1 element | 8        | 8        |
| 3  | 4002315     | Tine holder bolt M16           | Qua for 1 element | 2        | 2        |
| 4  | 406.250.250 | Distance bush                  | Qua for 1 element | 1        | 1        |
| 5  | 713.250.150 | Bearing 6205-LLU               | Qua for 1 element | 12       | 12       |
| 6  | 826.160.080 | Low Nut Din 439-2 M16          | Qua for 1 element | 2        | 2        |
| 7  | 492.218.090 | Tine holder empty              | Qua for 1 element | 1        | 1        |
| 8  | 872.052.200 | Cir Clip DIN 472 - 52x2        | Qua for 1 element | 6        | 6        |
| 9  | 468.102.230 | Additional plate Tineholder 75 | Qua for 1 element | 1        | 1        |
| 10 | 814.100.300 | Bolt DIN 912 - M10 x 30        | Qua for 1 element | 2        | 2        |
| 11 | 416.251.550 | Support axis                   | Qua for 1 element | 3        | 3        |
| 12 | 468.104.750 | Element strip                  | Qua for 1 element | 2        | 2        |
| 13 | 830.220.220 | SL Nut DIN 985 - M22           | Qua for 1 element | 6        | 6        |
| 14 | 2602452     | Inner bush                     | Qua for 1 element | 2        | 2        |
| 15 | 448.760.164 | Bearing support house          | Qua for 1 element | 1        | 1        |
| 16 | 402.450.100 | Distance bush Ø45,2/Ø60 L=10   | Qua for 1 element | 1        | 1        |
| 17 | 466.110.442 | Connecting rod                 | Qua for 1 element | 1        | 1        |
| 18 | 713.450.190 | Bearing 6209 LLU               | Qua for 1 element | 2        | 2        |
| 19 | 872.085.300 | Cir Clip DIN 472 - 85x3        | Qua for 1 element | 2        | 2        |
| 20 | 802.160.600 | Bolt DIN 931-1 - M16 x 60      | Qua for 1 element | 3        | 3        |
| 21 | 830.160.160 | SL Nut DIN 985 - M16           | Qua for 1 element | 3        | 3        |

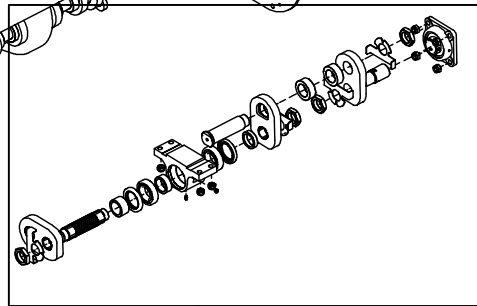
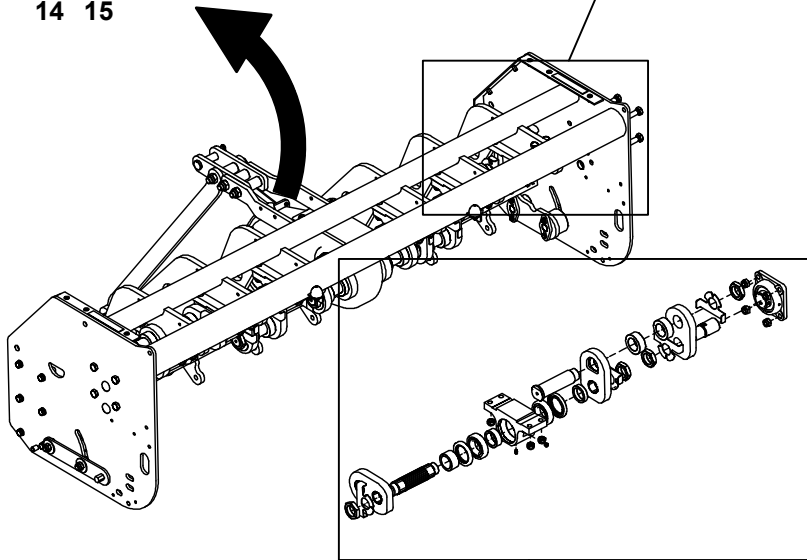


15 14 14 15

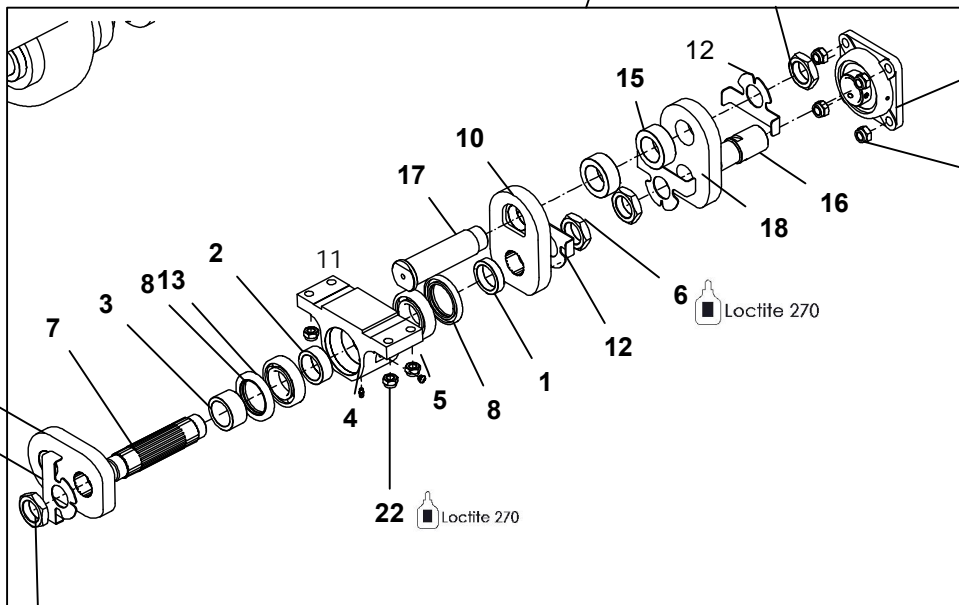
Loctite 270 20



21 Loctite 270



6 Loctite 270



19 Loctite 243 (Set screw)

23 Loctite 270

6 Loctite 270

22 Loctite 270

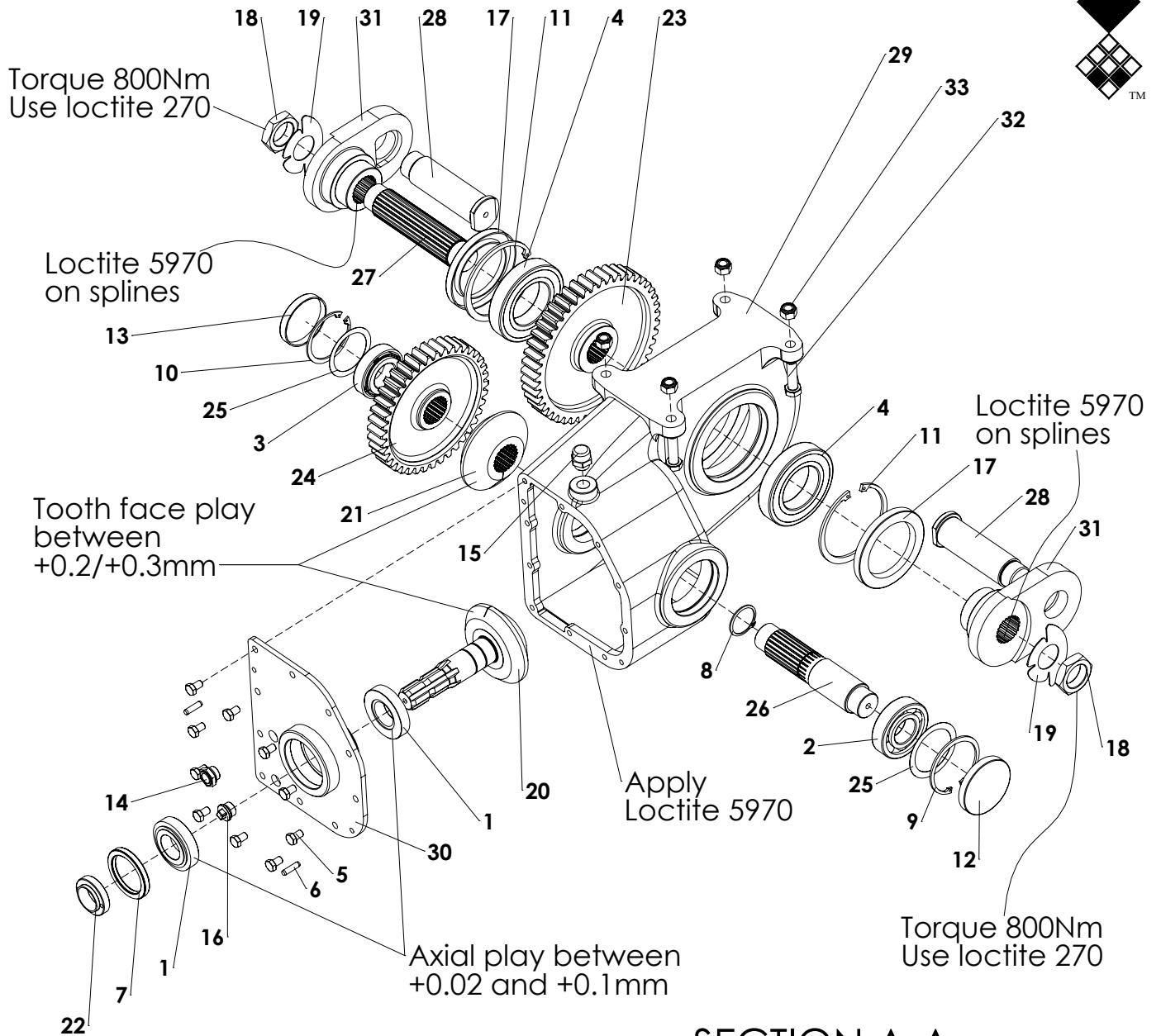
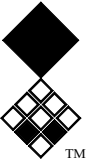
6 Loctite 270

VD2216 120° angle between crank

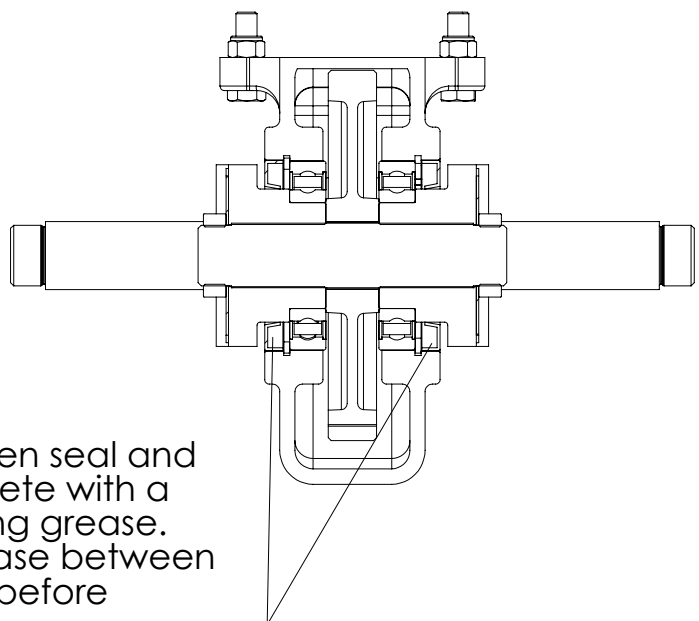
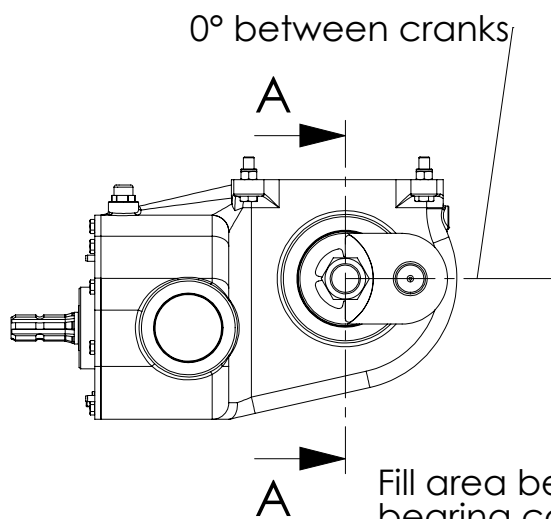
VD2216 90° angle between crank (shown), more details see chapter 14 users manual.



|    | PART #      | DESCRIPTION                              | REMARKS | QUA 2216 | QUA 2220 |
|----|-------------|--|---------|----------|----------|
| 1  | 406.450.140 | Distance Bush Ø60/Ø45,2 L=14             |         | 4        | 6        |
| 2  | 406.460.222 | Distance Bush Ø60/Ø45,2 L= 22            |         | 4        | 6        |
| 3  | 406.460.320 | Distance Bush Ø60/Ø45,2 L=32             |         | 4        | 6        |
| 4  | 880.080.100 | Grease nipple M8 DIN 71412A              |         | 4        | 6        |
| 5  | 4067000     | Breather for bearing support<br>M10x1x11 |         | 4        | 6        |
| 6  | 4109600     | Crank shaft nut M40 x 1.75               |         | 16       | 22       |
| 7  | 420.451.980 | Splined Shaft                            |         | 4        | 6        |
| 8  | 4408967     | Oil Seal 60-85-10                        |         | 8        | 12       |
| 9  | 464.271.890 | Splined crank big end nut side           |         | 0        | 6        |
|    | 464.271.891 | Splined crank big end nut side<br>VD2216 |         | 4        | 0        |
| 10 | 464.271.892 | Splined crank big end head side          |         | 4        | 6        |
| 11 | 472.802.250 | Crankshaft bearing block                 |         | 4        | 6        |
| 12 | 5001718     | Lock plate                               |         | 16       | 22       |
| 13 | 711.450.190 | Bearing 6209                             |         | 8        | 12       |
| 14 | 406.400.160 | Distance bush Ø70/Ø45,1 L=16             |         | 2        | 2        |
| 15 | 406.400.260 | Distance bush Ø70/Ø45,1 L=26             |         | 10       | 14       |
| 16 | 416.451.090 | End shaft                                |         | 2        | 2        |
| 17 | 416.451.730 | Big end pin                              |         | 4        | 6        |
| 18 | 464.271.894 | Crank handle                             |         | 2        | 2        |
| 19 | 741.450.490 | Flanged Bearing Unit UCF 209             |         | 2        | 2        |
| 20 | 802.140.650 | Bolt DIN 931-1 - M14 x 65                |         | 16       | 24       |
| 21 | 804.160.450 | Bolt DIN 933 - M16 x 45                  |         | 8        | 8        |
| 22 | 830.140.140 | SL Nut DIN 985 - M14                     |         | 16       | 24       |
| 23 | 830.160.160 | SL Nut DIN 985 - M16                     |         | 8        | 8        |



SECTION A-A

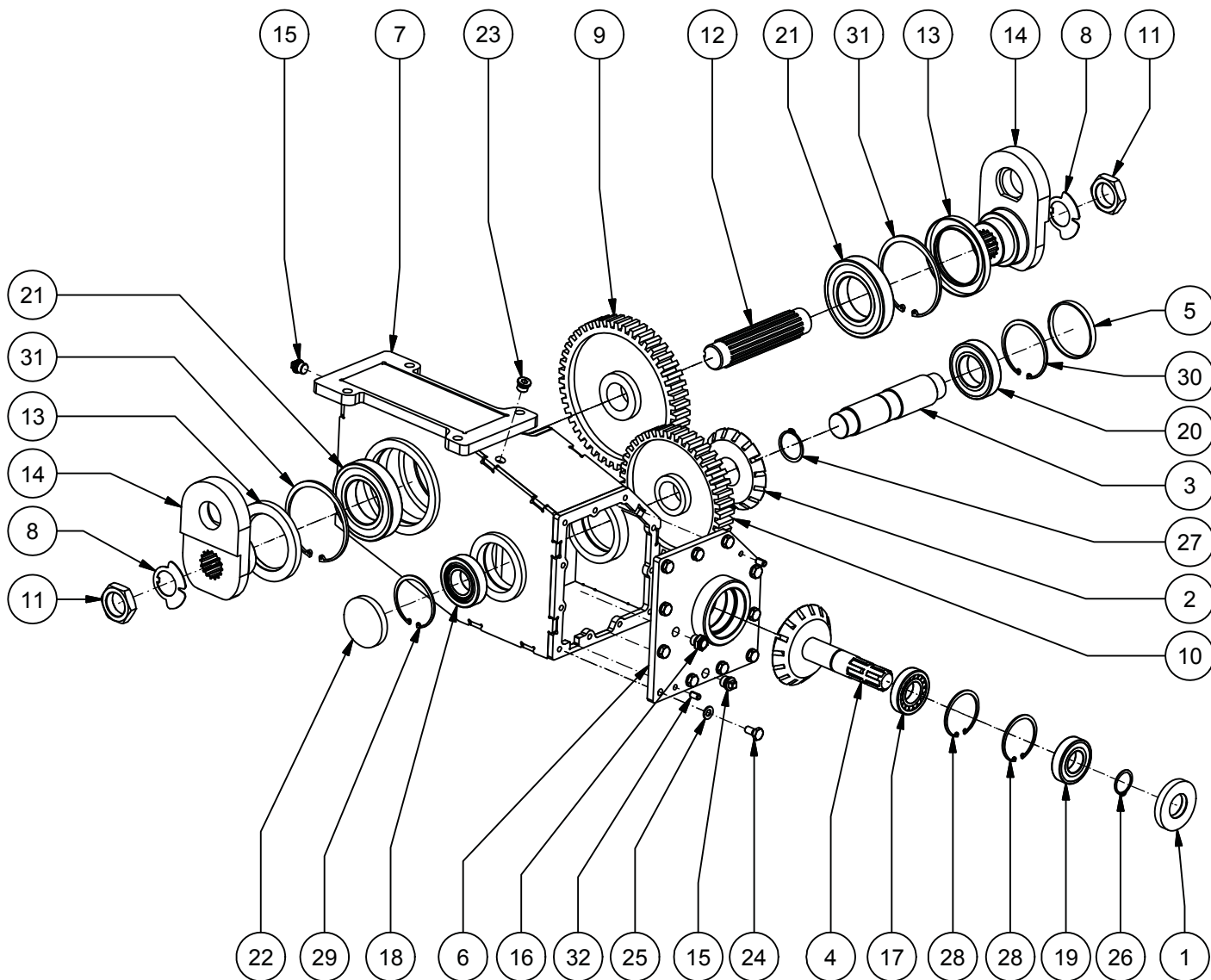


Fill area between seal and bearing complete with a NLGI 2-3 bearing grease. Also apply grease between shaft and seal before assembly.

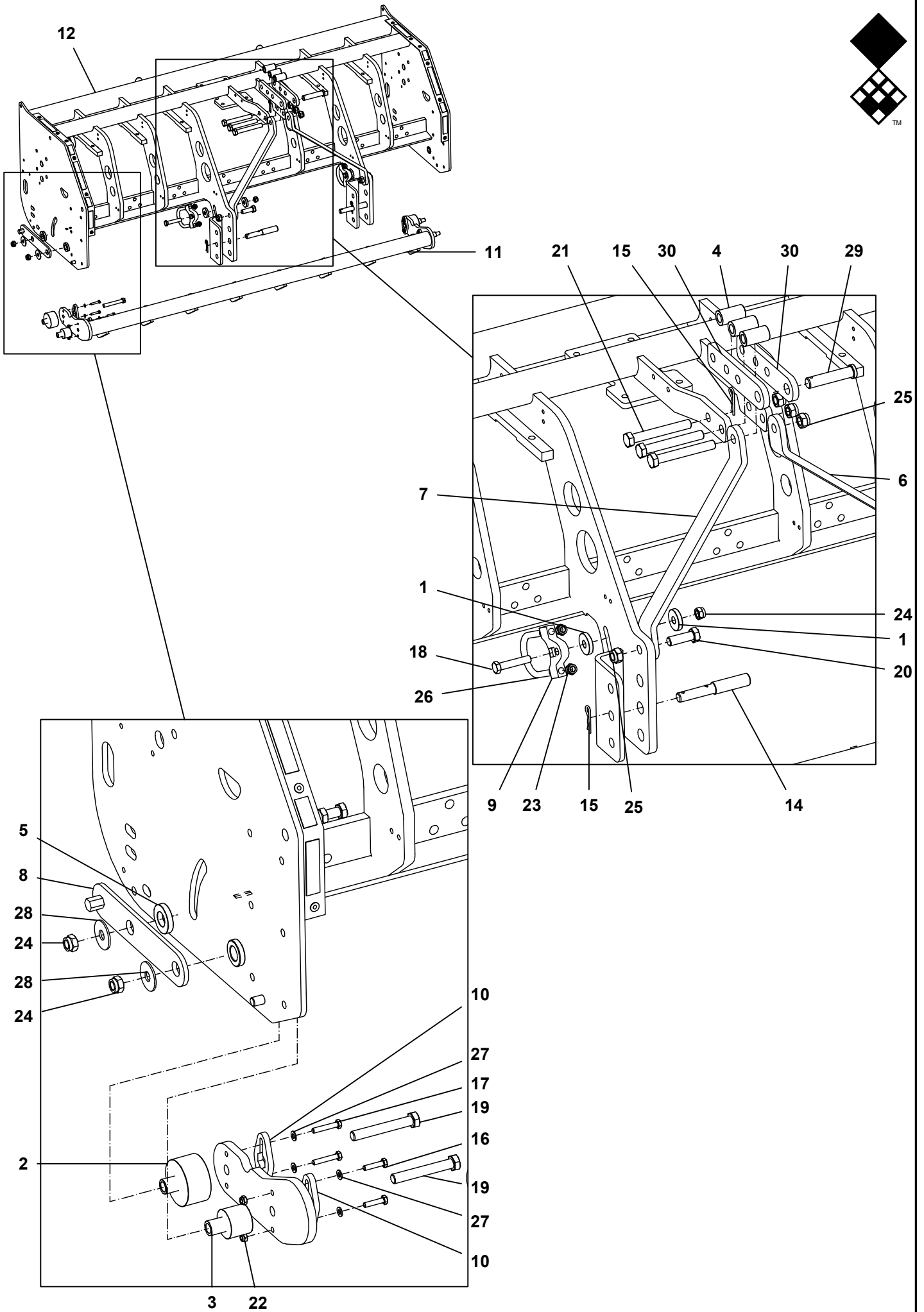
| ITEM | PART NUMBER | DESCRIPTION                          | REMARKS                                 | QUA        |
|------|-------------|--------------------------------------|---|------------|
| 1    | 725.400.200 | Bearing 30208                        |   | 2          |
| 2    | 4816980     | Bearing 6308                         |   | 1          |
| 3    | 4810470     | Bearing 32208                        |   | 1          |
| 4    | 713.700.240 | Bearing 6214-2RSR                    |   | 2          |
| 5    | 804.100.160 | Bolt M10 x 16 - ISO 4017             |   | 10         |
| 6    | 876.080.300 | Parallel Pin 8x30                    |   | 2          |
| 7    | 4408930     | Seal 60x80x10                        |   | 1          |
| 8    | 870.045.180 | Circlip DIN 471 - 45 x 1.75          |   | 1          |
| 9    | 872.090.300 | Circlip D=90 - DIN 472               |   | 1          |
| 10   | 872.080.250 | Circlip D=80 - DIN 472               |   | 1          |
| 11   | 872.125.400 | Circlip D=129 - DIN 472              |   | 2          |
| 12   | 4480008     | End cap 90x12                        |   | 1          |
| 13   | 4972580     | End cap 80x12                        |   | 1          |
| 14   | 820.210.180 | Level / fill glass                   |   | 1          |
| 15   | 537.120.300 | Breather 1/2"                        |   | 1          |
| 16   | 4561000     | Tap 1/2"                             |   | 1          |
| 17   | 4410150     | Oil Seal 88x126x12 RP                |   | 2          |
| 18   | 4109600     | Crank shaft nut M40x1.75             |   | 2          |
| 19   | 5002865     | Lockplate gearbox side               |   | 2          |
| 20   | 2544500     | Pignon wheel with shaft              | Replace together with crown wheel       | 1          |
| 21   | 5002100     | Crown wheel                          | Replace together with pignon wheel      | 1          |
| 22   | 5001181     | Lock nut M40x1.5                     |   | 1          |
| 23   | 2505477     | Side gear Z=47                       |   | 1          |
| 24   | 2506825     | Side gear Z=40                       |   | 1          |
| 25   | 869.090.001 | Set of shims                         | Ø70xØ90 2x0.1 1x0.3 Ø63xØ80 2x0.1 1x0.3 | 1          |
| 26   | 5002101     | Crown wheel shaft                    |   | 1          |
| 27   | 420.452.040 | Splined shaft                        |   | 1          |
| 28   | 416.451.630 | Big end pin                          |   | 2          |
| 29   | 5002097     | Gearbox casing                       |   | 1          |
| 30   | 2471109     | Cover gearbox                        |   | 1          |
| 31   | 448.189.072 | Splined crank handle gearbox         |   | 2          |
| 32   | 804.140.500 | Bolt M14 x 50 - ISO 4017             |   | 4          |
| 33   | 830.140.140 | Self Lock Nut M14-ISO 10511 Class 10 |   | 4          |
|      |             | Use Oil 80W90                        |   | 5.8<br>Ltr |
|      | 490.556.120 | Gearbox VD2216/2220 complete         |   |            |



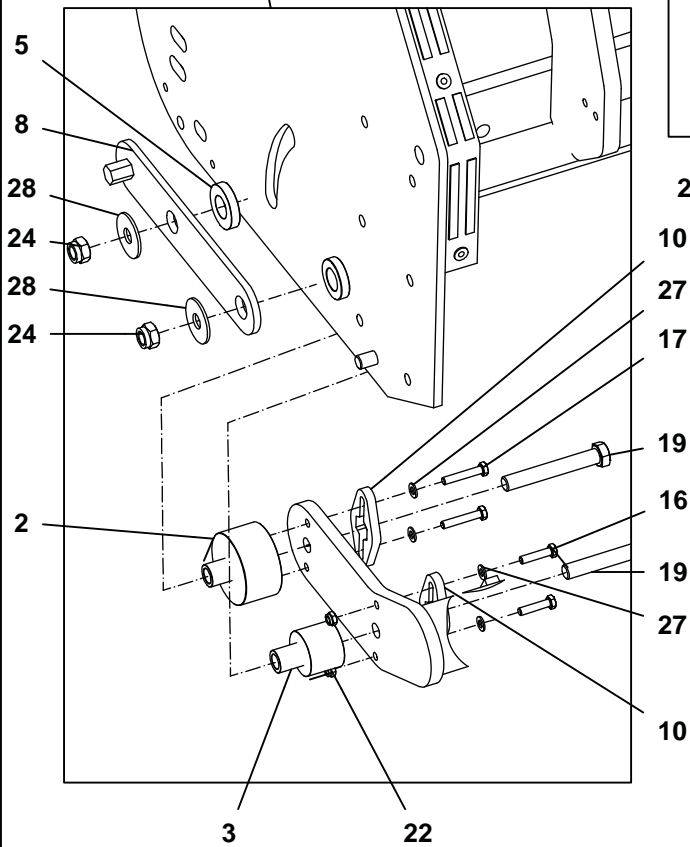
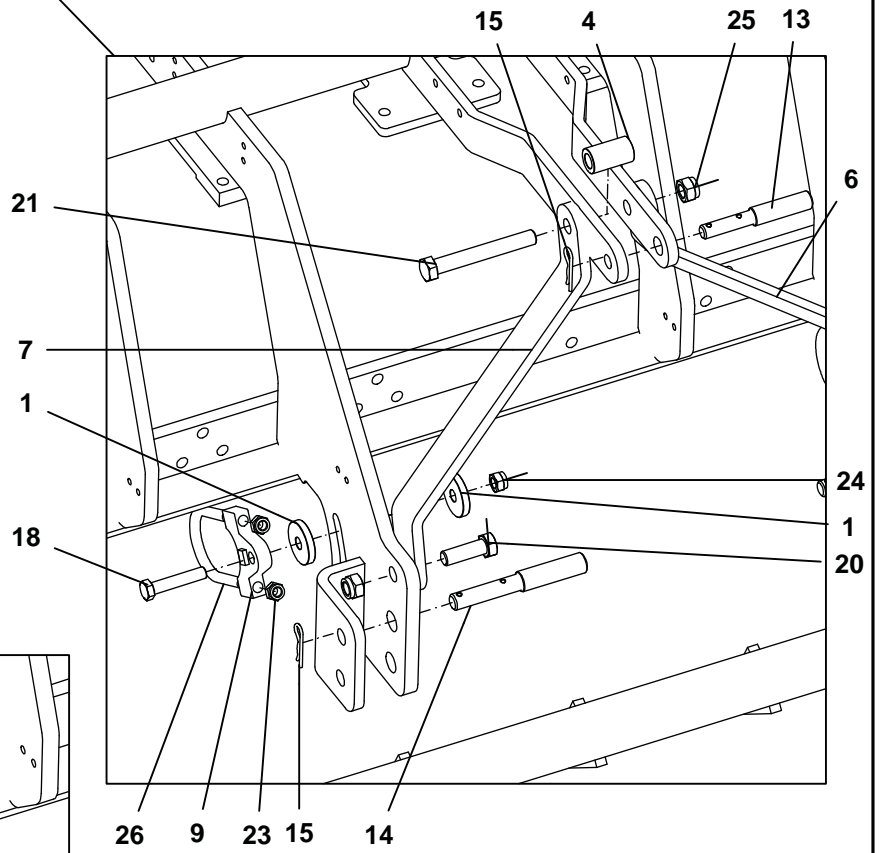
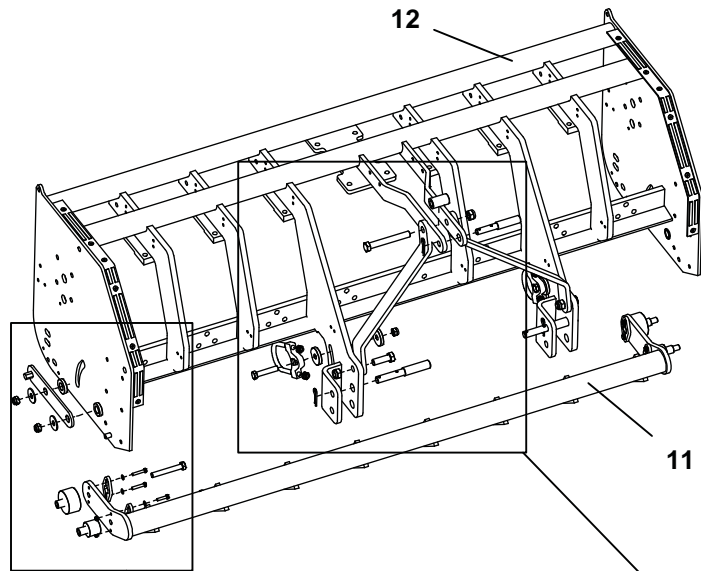
Welded gear housing !!!



|    | PART VD2216 | PART VD2220 | DESCRIPTION                     | REMARKS | QUA | QUA |
|----|-------------|-------------|---------------------------------|---------|-----|-----|
| 1  | 4406460     | Same        | Seal ring                       |         | 1   | 1   |
| 2  | 5002100     | Same        | pignon wheel                    |         | 1   | 1   |
| 3  | 5002101     | Same        | Crown wheel shaft               |         | 1   | 1   |
| 4  | 5002099     | Same        | Pignon wheel with shaft         |         | 1   | 1   |
| 5  | 4480008     | Same        | Seal, D=90                      |         | 1   | 1   |
| 6  | 5002098     | Same        | Cover gearbox                   |         | 1   | 1   |
| 7  | 5002097     | Same        | Weldment gearbox                |         | 1   | 1   |
| 8  | 2281539     | Same        | Lock plate                      |         | 2   | 2   |
| 9  | 2505477     | Same        | Side gear                       |         | 1   | 1   |
| 10 | 2506825     | Same        | Side gear                       |         | 1   | 1   |
| 11 | 4109600     | Same        | Crank shaft nut M40 x 1.75      |         | 2   | 2   |
| 12 | 420.452.040 | Same        | Splined Shaft                   |         | 1   | 1   |
| 13 | 4410150     | Same        | Seal ring                       |         | 2   | 2   |
| 14 | 448.189.072 | Same        | Splined crank handle gearbox    |         | 2   | 2   |
| 15 | 4561050     | Same        | Plug 3/8"                       |         | 2   | 2   |
| 16 | 4569896     | Same        | Level cap 3/8"                  |         | 1   | 1   |
| 17 | 4809400     | Same        | Tapered roller bearings 30207-A |         | 1   | 1   |
| 18 | 4810470     | Same        | Tapered roller bearings 32208-A |         | 1   | 1   |
| 19 | 4815110     | Same        | Radial ball bearing 6207-2Z     |         | 1   | 1   |
| 20 | 4815340     | Same        | Radial ball bearing 6210-2Z     |         | 1   | 1   |
| 21 | 4815590     | Same        | Radial ball bearing 6214-2Z     |         | 2   | 2   |
| 22 | 4972580     | Same        | Seal, D=80                      |         | 1   | 1   |
| 23 | 549.170.160 | Same        | Blind PLug 3/8"                 |         | 1   | 1   |
| 24 | 804.100.200 | Same        | Bolt DIN 933 - M10 x 20         |         | 11  | 11  |
| 25 | 864.100.030 | Same        | Washer DIN 125 - M10            |         | 11  | 11  |
| 26 | 870.035.150 | Same        | Cir Clip DIN 471 - 35x1,5       |         | 1   | 1   |
| 27 | 870.045.175 | Same        | Cir Clip DIN 471 - 45x1,75      |         | 1   | 1   |
| 28 | 872.072.250 | Same        | Cir Clip DIN 472 - 72x2,5       |         | 2   | 2   |
| 29 | 872.080.250 | Same        | Cir Clip DIN 472 - 80x2,5       |         | 1   | 1   |
| 30 | 872.090.300 | Same        | Cir Clip DIN 472 - 90x3         |         | 1   | 1   |
| 31 | 872.125.400 | Same        | Cir Clip DIN 472 - 125x4        |         | 2   | 2   |
| 32 | 878.080.160 | Same        | Roll Pin ISO 8752 - 8 x 16      |         | 2   | 2   |
|    | 490.556.120 | Same        | Gearbox complete                |         | 1   | 1   |
|    |             |             | 80W90 5.5 liter                 |         | 1   | 1   |



|    | PART #      | DESCRIPTION                    | REMARKS | QUA 2216 | QUA 2220 |
|----|-------------|--------------------------------|---------|----------|----------|
| 1  | 402.160.100 | Distance bush Ø16.5/Ø50 L=10   |         | 4        | 4        |
| 2  | 404.170.692 | Distance Bush Ø17, L= 69       |         | 2        | 2        |
| 3  | 404.170.700 | Distance Bush Ø17, L= 70       |         | 2        | 2        |
| 4  | 406.210.600 | Distance Bush Ø35/Ø20.5, L= 60 |         | 3        | 3        |
| 5  | 406.260.100 | Distance Bush Ø50/Ø25.5, L= 10 |         | 2        | 2        |
| 6  | 464.153.940 | Top Link Support Strip Large   |         | 1        | 1        |
| 7  | 464.153.942 | Top Link Support Strip Small   |         | 1        | 1        |
| 8  | 466.080.335 | Handle                         |         | 2        | 2        |
| 9  | 466.279.000 | Support Bolt Assy Central Bar  |         | 2        | 2        |
| 10 | 468.101.002 | Lock plate                     |         | 4        | 4        |
| 11 | 494.206.202 | Central bar                    |         | 0        | 1        |
|    | 494.206.150 | Central bar                    |         | 1        | 0        |
| 12 | 494.212.820 | Frame Verti-drain 2220         |         | 0        | 1        |
|    | 494.160.820 | Frame Verti-drain 2216         |         | 1        | 0        |
| 14 | 521.221.600 | 3-Point Pin                    |         | 2        | 2        |
| 15 | 523.051.000 | R-Pin Ø5, DIN 11024            |         | 3        | 3        |
| 16 | 802.080.350 | Bolt DIN 931-1 - M8 x 35       |         | 4        | 4        |
| 17 | 802.080.450 | Bolt DIN 931-1 - M8 x 45       |         | 4        | 4        |
| 18 | 802.160.800 | Bolt DIN 931-1 - M16 x 80      |         | 2        | 2        |
| 19 | 802.161.100 | Bolt DIN 931-1 - M16 x 110     |         | 4        | 4        |
| 20 | 802.200.600 | Bolt DIN 931-1 - M20 x 60      |         | 2        | 2        |
| 21 | 802.201.500 | Bolt DIN 931-1 - M20 x 150     |         | 3        | 3        |
| 22 | 830.080.080 | SL Nut DIN 985 - M8            |         | 4        | 4        |
| 23 | 830.140.140 | SL Nut DIN 985 - M14           |         | 4        | 4        |
| 24 | 830.160.160 | SL Nut DIN 985 - M16           |         | 6        | 6        |
| 25 | 830.200.200 | SL Nut DIN 985 - M20           |         | 5        | 5        |
| 26 | 848.791.360 | U-Bolt M14x80                  |         | 2        | 2        |
| 27 | 864.080.030 | Washer DIN 125 - M8            |         | 8        | 8        |
| 28 | 864.160.031 | Large Washer DIN 9021 - 17     |         | 4        | 4        |
| 29 | 521.251.380 | Top link pin CAT 2             |         | 1        | 1        |
| 30 | 464.152.700 | Top link strip                 |         | 2        | 2        |

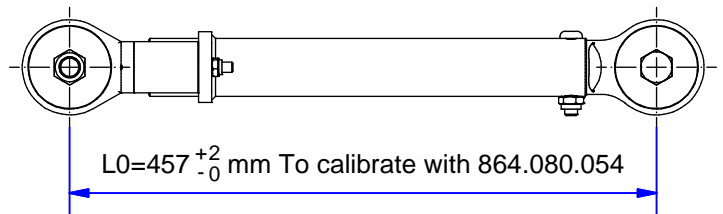
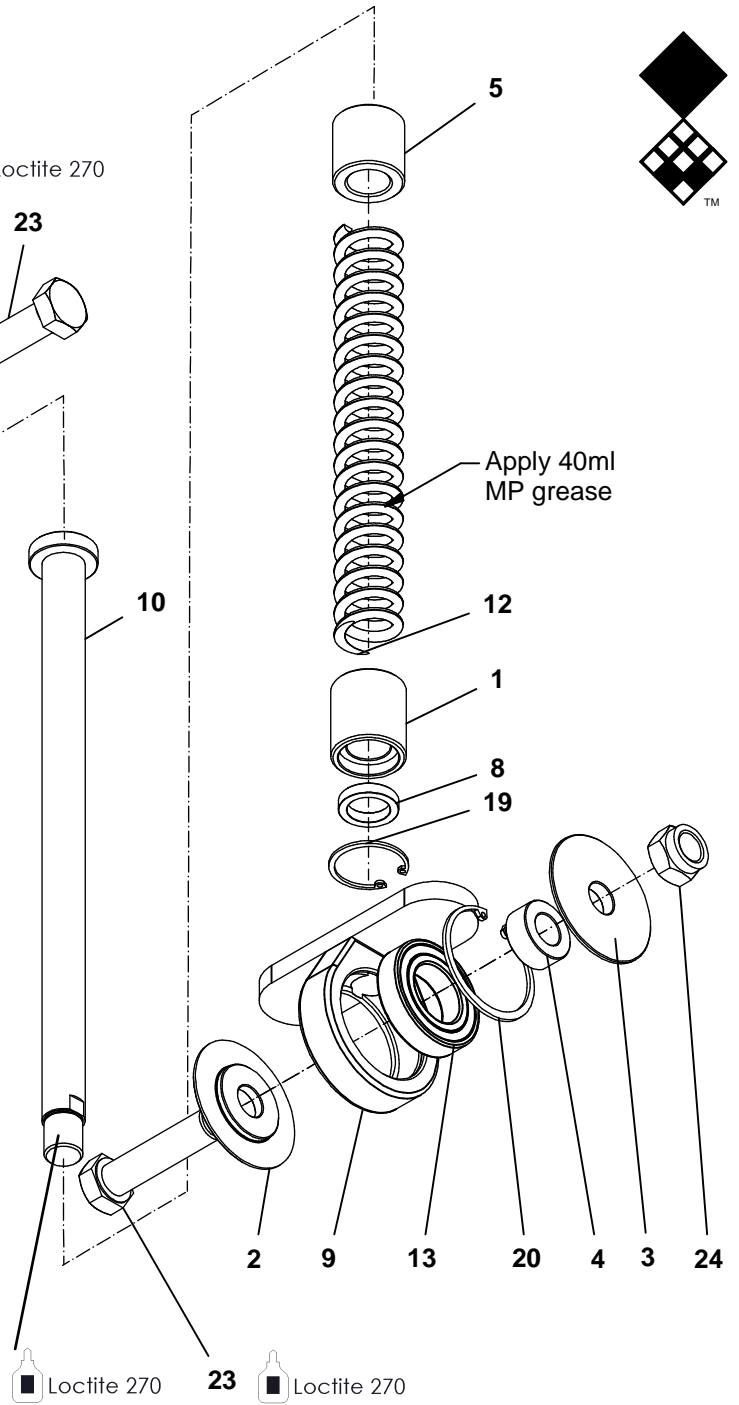
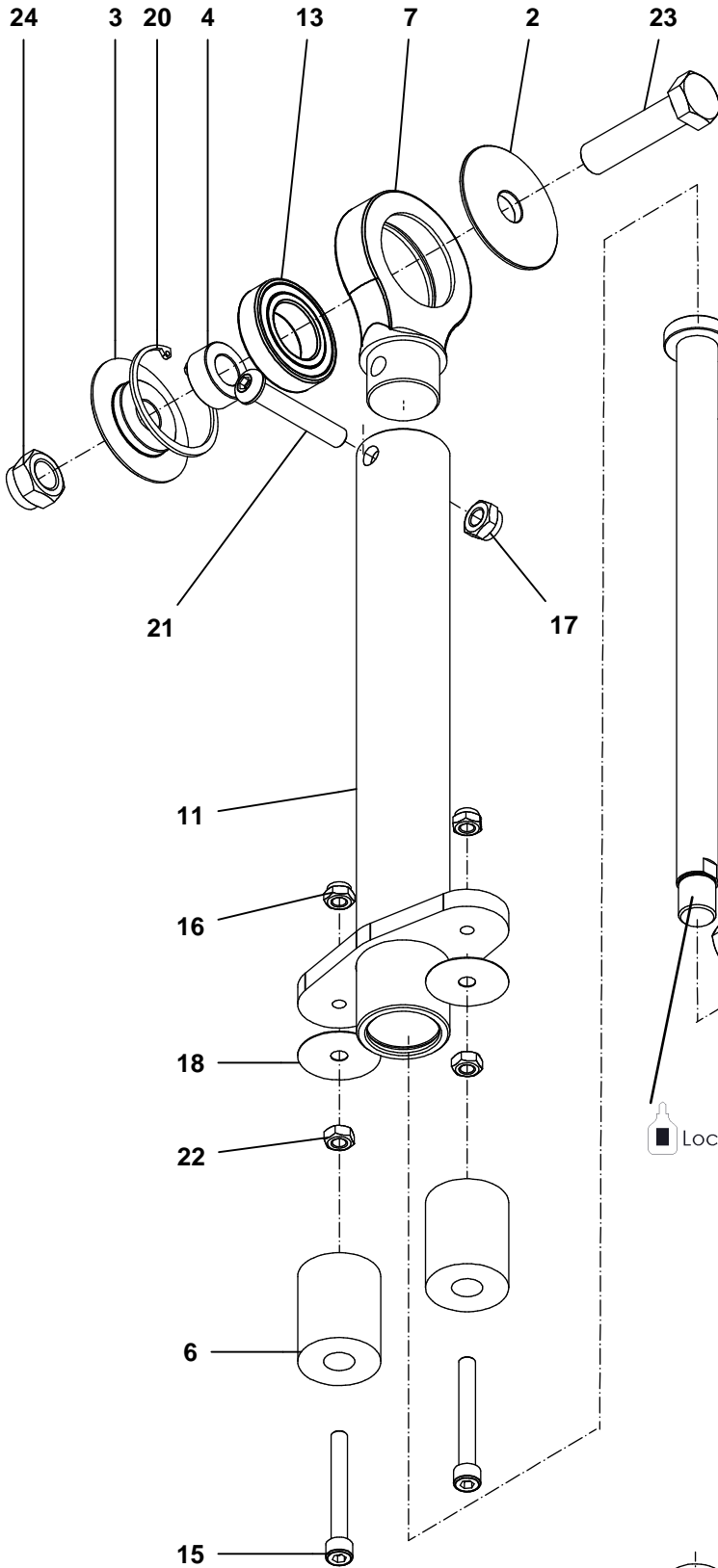




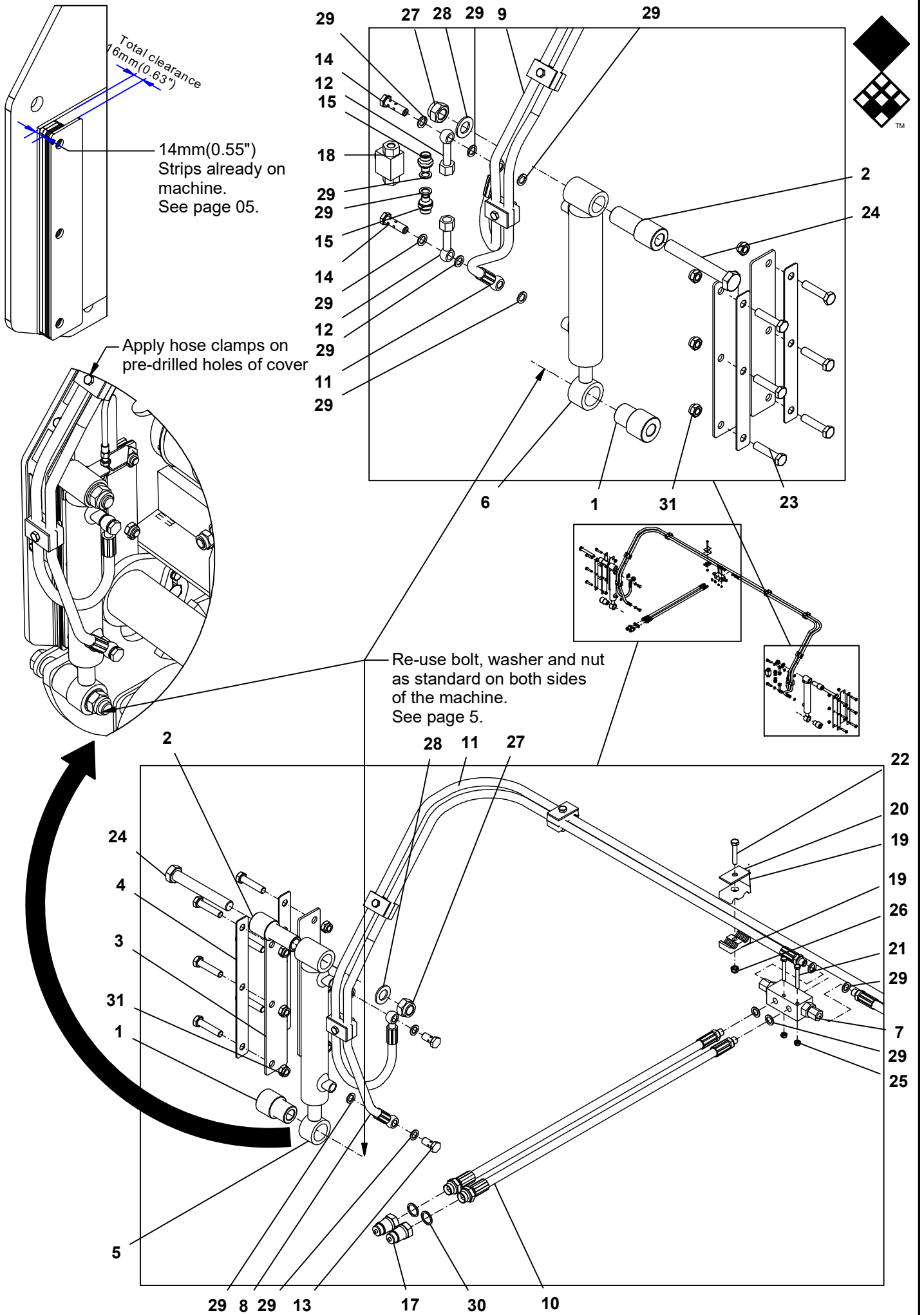
|    | PART #      | DESCRIPTION                    | REMARKS         | QUA 2216 | QUA 2220 |
|----|-------------|--------------------------------|-----------------|----------|----------|
| 1  | 402.160.100 | Distance bush Ø16.5/Ø60 L=10   |                 | 4        | 4        |
| 2  | 404.170.692 | Distance Bush Ø17, L= 69       |                 | 2        | 2        |
| 3  | 404.170.700 | Distance Bush Ø17, L= 70       |                 | 2        | 2        |
| 4  | 406.210.600 | Distance Bush Ø35/Ø20.5, L= 60 |                 | 1        | 1        |
| 5  | 406.260.100 | Distance Bush Ø50/Ø25.5, L= 10 |                 | 2        | 2        |
| 6  | 464.153.940 | Top Link Support Strip Large   |                 | 1        | 1        |
| 7  | 464.153.942 | Top Link Support Strip Small   |                 | 1        | 1        |
| 8  | 466.080.335 | Handle                         |                 | 2        | 2        |
| 9  | 466.279.000 | Support Bolt Assy Central Bar  |                 | 2        | 2        |
| 10 | 468.101.002 | Lock plate                     | From serial no: | 4        | 4        |
| 11 | 494.206.202 | Central bar                    |                 | 0        | 1        |
|    | 494.206.150 | Central bar                    |                 | 1        | 0        |
| 12 | 494.212.820 | Frame Verti-drain 2220         |                 | 0        | 1        |
|    | 494.160.820 | Frame Verti-drain 2216         |                 | 1        | 0        |
| 13 | 521.191.600 | Top Link Pin                   |                 | 1        | 1        |
| 14 | 521.221.600 | 3-Point Pin                    |                 | 2        | 2        |
| 15 | 523.040.700 | R-Pin Ø4, DIN 11024            |                 | 3        | 3        |
| 16 | 802.080.350 | Bolt DIN 931-1 - M8 x 35       |                 | 4        | 4        |
| 17 | 802.080.450 | Bolt DIN 931-1 - M8 x 45       | From serial no: | 4        | 4        |
| 18 | 802.160.800 | Bolt DIN 931-1 - M16 x 80      |                 | 2        | 2        |
| 19 | 802.161.100 | Bolt DIN 931-1 - M16 x 110     | From serial no: | 4        | 4        |
|    | 820.161.100 | MH head bolt DIN 603 - M16x110 | Till serial no: | 4        | 4        |
| 20 | 802.200.600 | Bolt DIN 931-1 - M20 x 60      |                 | 2        | 2        |
| 21 | 802.201.500 | Bolt DIN 931-1 - M20 x 150     |                 | 1        | 1        |
| 22 | 830.080.080 | SL Nut DIN 985 - M8            |                 | 4        | 4        |
| 23 | 830.140.140 | SL Nut DIN 985 - M14           |                 | 4        | 4        |
| 24 | 830.160.160 | SL Nut DIN 985 - M16           |                 | 6        | 6        |
| 25 | 830.200.200 | SL Nut DIN 985 - M20           |                 | 3        | 3        |
| 26 | 848.791.360 | U-Bolt M14x80                  |                 | 2        | 2        |
| 27 | 864.080.030 | Washer DIN 125 - M8            | From serial no: | 8        | 8        |
| 28 | 864.160.031 | Large Washer DIN 9021 - 17     |                 | 4        | 4        |



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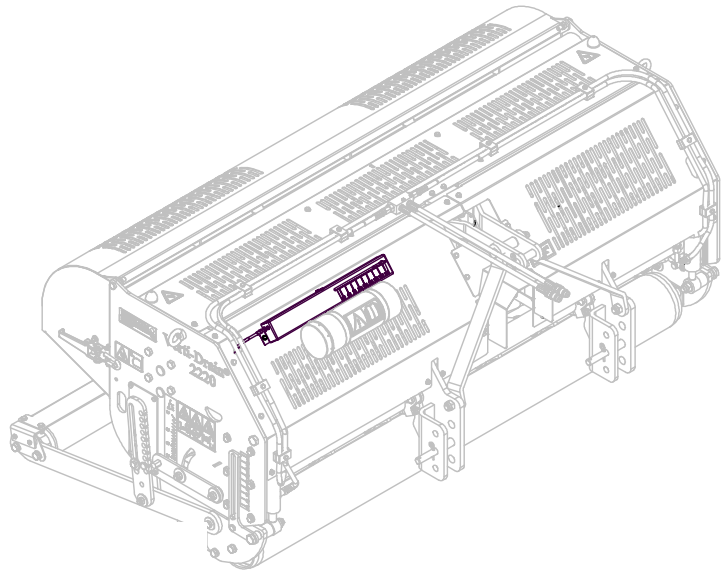
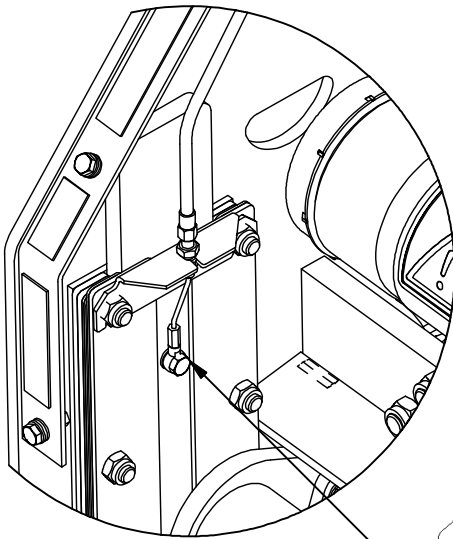


|    | PART #      | DESCRIPTION                             | REMARKS                                     | QUA |
|----|-------------|---|---|-----|
| 1  | 2602454     | Plastic Guide Bush                      |   | 1   |
| 2  | 404.160.050 | Distance bush Ø65/Ø38/Ø16 L=5.25        |   | 2   |
| 3  | 404.160.070 | Distance bush Ø65/Ø38/Ø16 L=7.25        |   | 2   |
| 4  | 406.160.130 | Distance bush Ø30/Ø16 L=13              |   | 2   |
| 5  | 444.350.350 | Slider bush                             |   | 1   |
| 6  | 446.400.500 | Rubber stop                             |   | 2   |
| 7  | 448.421.150 | Draw Rod Head With Stud                 |   | 1   |
| 8  | 4480015     | Seal For Draw Rod                       |   | 1   |
| 9  | 466.121.554 | Draw rod head                           |   | 1   |
| 10 | 474.203.446 | Draw Rod                                |   | 1   |
| 11 | 478.503.410 | Tube draw rod                           |   | 1   |
| 12 | 576.202.580 | Spring draw rod VD 2216-2220            |   | 1   |
| 13 | 713.300.130 | Bearing 6006 LLU                        |   | 2   |
| 15 | 814.080.650 | Bolt DIN 912 - M8 x 65                  |   | 2   |
| 16 | 830.080.080 | SL Nut DIN 985 - M8                     |   | 2   |
| 17 | 830.100.100 | SL Nut DIN 985 - M10                    |   | 1   |
| 18 | 864.080.054 | Shim Ø40/Ø8.5 L=0.5                     | Exact quantity is determined by L0 distance | 2   |
| 19 | 872.035.150 | Cir Clip DIN 472 - 35x1,5               |   | 1   |
| 20 | 872.055.200 | Cir Clip DIN 472 - 55x2                 |   | 2   |
| 21 | 815.100.600 | Round Head Hex Bolt ISO 7380 - M10 x 60 |   | 1   |
| 22 | 826.080.080 | Nut DIN 934 - M8                        |   | 2   |
| 23 | 806.160.650 | Bolt DIN 931-1 - M16 x 65 MF1.5         |   | 2   |
| 24 | 831.160.160 | SL Nut DIN 985 - M16x1.5                |   | 2   |
|    |             |   |   |     |
|    | 490.424.578 | Drawrod complete                        | Contains parts 1-22                         |     |



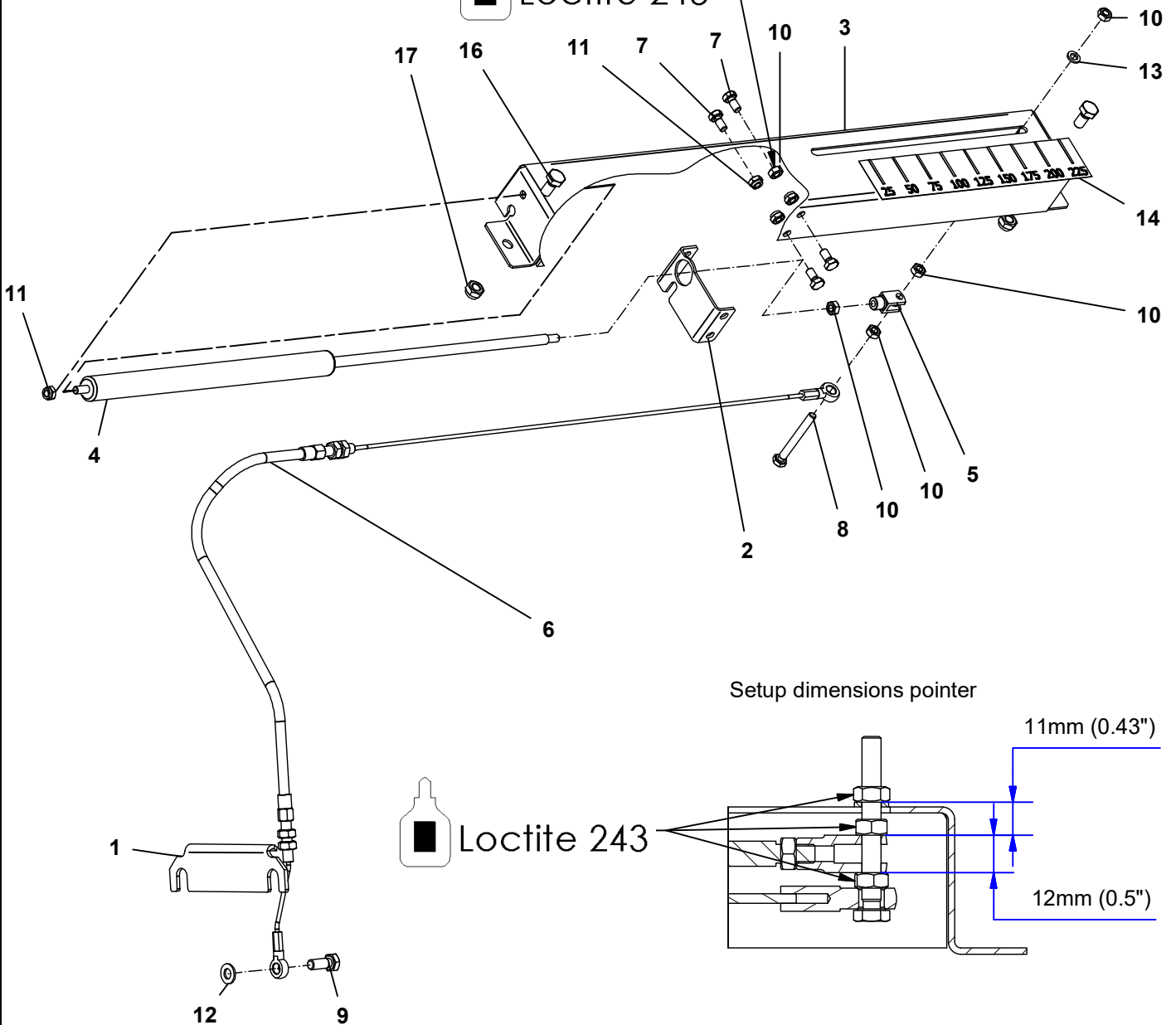
|    | PART #      | DESCRIPTION                              | REMARKS                              | QUA 2216 | QUA 2220 |
|----|-------------|--|--------------------------------------|----------|----------|
| 1  | 404.170.690 | Distance Bush Support                    |                                      | 2        | 2        |
| 2  | 404.201.020 | Bush                                     |                                      | 2        | 2        |
| 3  | 464.043.100 | Guide strip                              |                                      | 4        | 4        |
| 4  | 468.013.400 | Shim plate                               |                                      | 4        | 4        |
| 5  | 534.252.002 | Hydraulic cylinder 40 x 25, Stroke 200mm |                                      | 1        | 1        |
| 6  | 534.252.004 | Hydraulic cylinder 50 x 30, Stroke 200mm |                                      | 1        | 1        |
| 7  | 535.401.000 | Pressure controlled one way valve        |                                      | 1        | 1        |
| 8  | 541.131.700 | Hose                                     |                                      | 0        | 1        |
|    | 541.131.800 | Hose on right cylinder                   |                                      | 1        | 0        |
| 9  | 541.131.800 | Hose                                     |                                      | 0        | 1        |
|    | 541.131.280 | Hose on left cylinder                    |                                      | 1        | 0        |
| 10 | 541.131.950 | Hose NSK6 1/4" TL=1950 PN64 PN68         |                                      | 2        | 2        |
| 11 | 541.133.450 | Hose between cylinders                   |                                      | 0        | 1        |
|    | 541.133.680 | Hose between cylinders                   |                                      | 1        | 0        |
| 12 | 542.100.700 | Bottom tube                              | Shorten to correct size              | 2        | 2        |
| 13 | 543.130.250 | Hollow bolt G 1/4 x 25                   |                                      | 2        | 2        |
| 14 | 543.130.430 | Hollow bolt G 1/4 x 43                   |                                      | 2        | 2        |
| 15 | 544.130.120 | Straight Nipple 1/4" - Ø12mm             |                                      | 2        | 2        |
| 17 | 545.210.800 | Quick Connector Male 1/2"                |                                      | 2        | 2        |
| 18 | 546.250.750 | Ball Valve                               |                                      | 1        | 1        |
| 19 | 547.150.150 | Hose Clamp 2x Ø15                        |                                      | 16       | 16       |
| 20 | 547.300.510 | Deck Plate                               |                                      | 8        | 8        |
| 21 | 802.060.450 | Bolt DIN 931-1 - M6 x 45                 |                                      | 2        | 2        |
| 22 | 802.080.450 | Bolt DIN 931-1 - M8 x 45                 |                                      | 8        | 8        |
| 23 | 802.120.550 | Bolt DIN 931-1 - M12 x 55                |                                      | 12       | 12       |
| 24 | 802.201.400 | Bolt DIN 931-1 - M20 x 140               |                                      | 2        | 2        |
| 25 | 830.060.060 | SL Nut DIN 985 - M6                      |                                      | 2        | 2        |
| 26 | 830.080.080 | SL Nut DIN 985 - M8                      |                                      | 8        | 8        |
| 27 | 830.200.200 | SL Nut DIN 985 - M20                     |                                      | 2        | 2        |
| 28 | 864.200.030 | Washer DIN 125 - M20                     |                                      | 2        | 2        |
| 29 | 874.130.020 | Copper washer 1/4"                       |                                      | 16       | 16       |
| 30 | 874.210.020 | Copper washer 1/2"                       |                                      | 2        | 2        |
| 31 | 830.120.120 | SL Nut DIN 985 - M12                     |                                      | 12       | 12       |
|    | 211.116.006 | Hydraulic height adjustment VD2216       | Complete kit, items on page 11 + 11a |          |          |
|    | 211.122.006 | Hydraulic height adjustment VD2220       | Complete kit, items on page 11 + 11a |          |          |

Placement of bracket 468.031.402  
(Cover, Cylinder and hoses hidden)



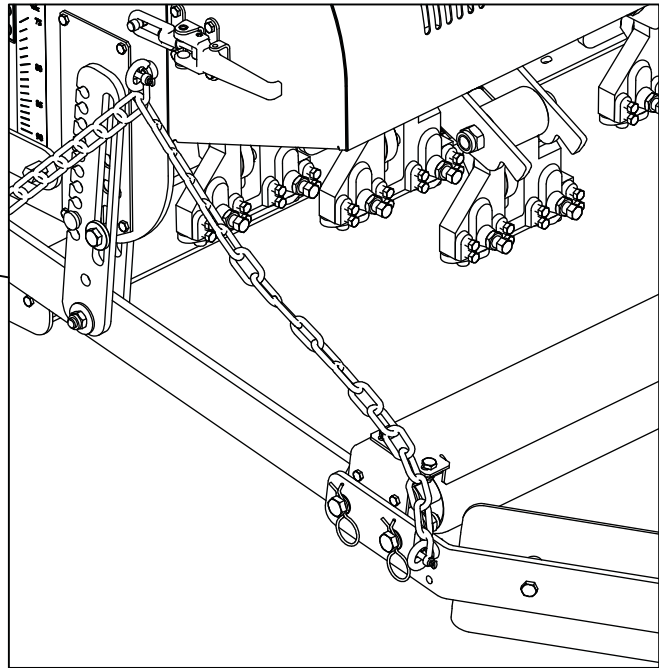
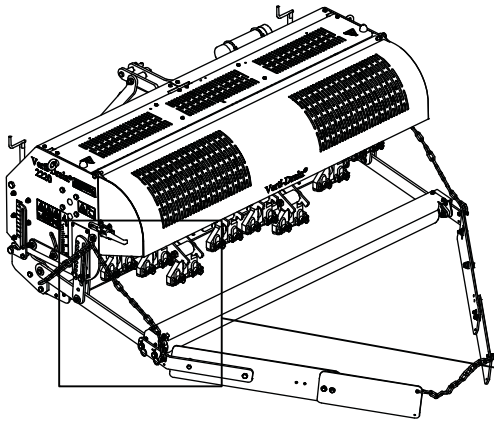
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 Loctite 243

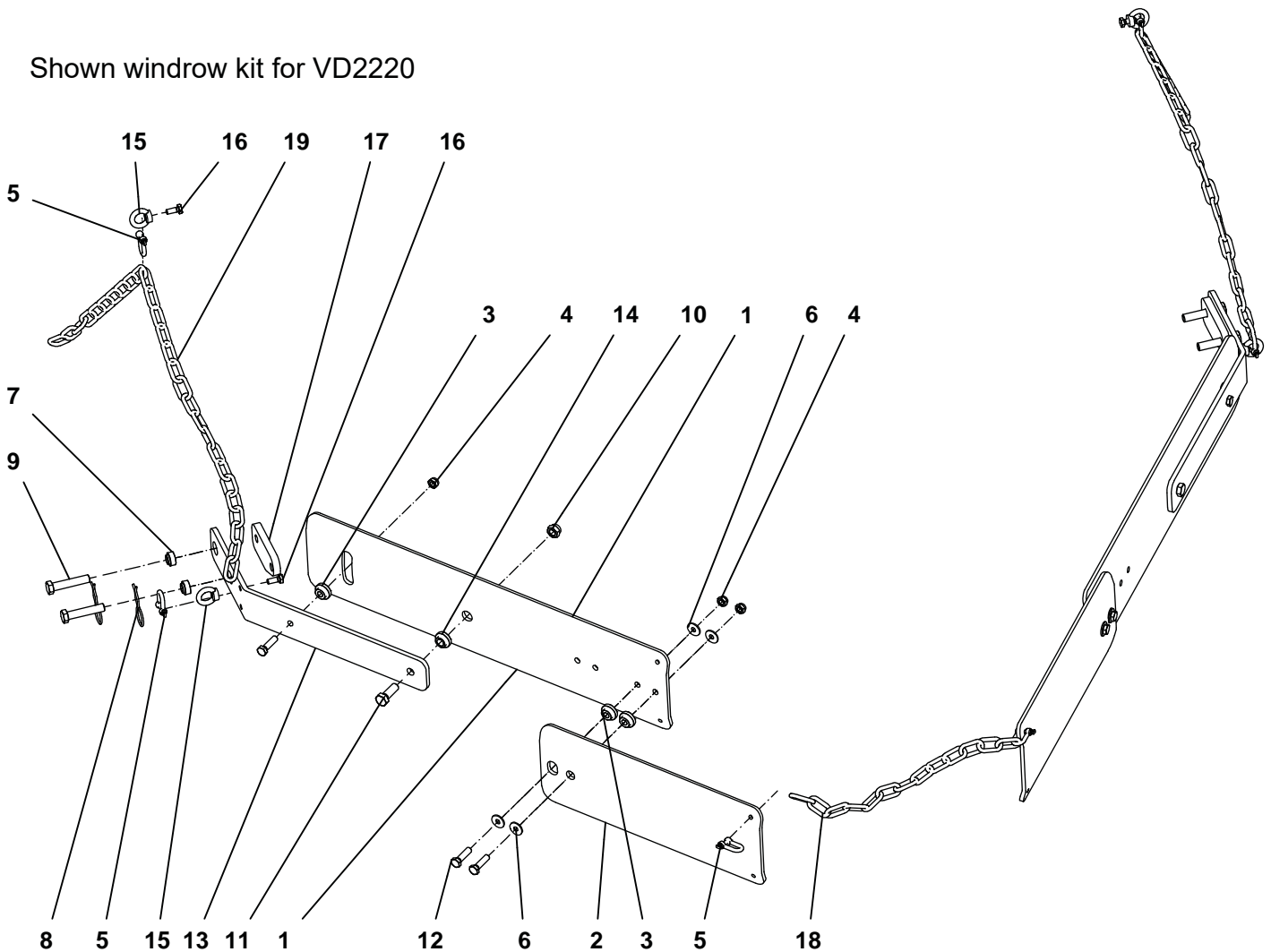


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|    | PART #      | DESCRIPTION                        | REMARKS                             | QUA 2216 | QUA 2220 |
|----|-------------|------------------------------------|-------------------------------------|----------|----------|
| 1  | 468.031.402 | Bracket                            |                                     | 1        | 1        |
| 2  | 468.020.990 | Support strip damper               |                                     | 1        | 1        |
| 3  | 468.026.740 | Height indicator box               |                                     | 1        | 1        |
| 4  | 571.204.850 | Damper, stroke 220mm               |                                     | 1        | 1        |
| 5  | 850.060.360 | Fork                               |                                     | 1        | 1        |
| 6  | 591.089.100 | Cable height indicator             |                                     | 1        | 1        |
| 7  | 804.060.120 | Bolt DIN 933 - M6 x 12             |                                     | 4        | 4        |
| 8  | 804.060.550 | Bolt DIN 933 - M6 x 55             |                                     | 1        | 1        |
| 9  | 804.080.200 | Bolt DIN 933 - M8 x 20             |                                     | 1        | 1        |
| 10 | 826.060.060 | Nut DIN 934 - M6                   |                                     | 5        | 5        |
| 11 | 830.060.060 | SL Nut DIN 985 - M6                |                                     | 4        | 4        |
| 12 | 864.080.030 | Washer DIN 125 - M8                |                                     | 1        | 1        |
| 13 | 874.011.150 | Washer                             |                                     | 1        | 1        |
| 14 | 911.340.000 | Decall height indicator 225        |                                     | 1        | 1        |
| 16 | 804.080.160 | Bolt DIN 933 - M8 x 16             |                                     | 2        | 2        |
| 17 | 830.080.080 | SL Nut DIN 985 - M8                |                                     | 2        | 2        |
|    |             |                                    |                                     |          |          |
|    | 211.116.006 | Hydraulic height adjustment VD2216 | Complete kit,items on page 11 + 11a |          |          |
|    | 211.122.006 | Hydraulic height adjustment VD2220 | Complete kit,items on page 11 + 11a |          |          |






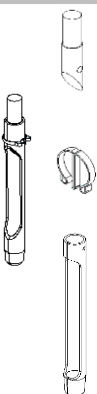


Shown window kit for VD2220



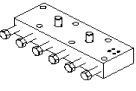
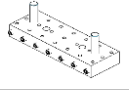
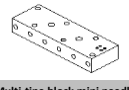
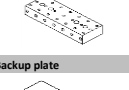





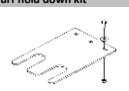


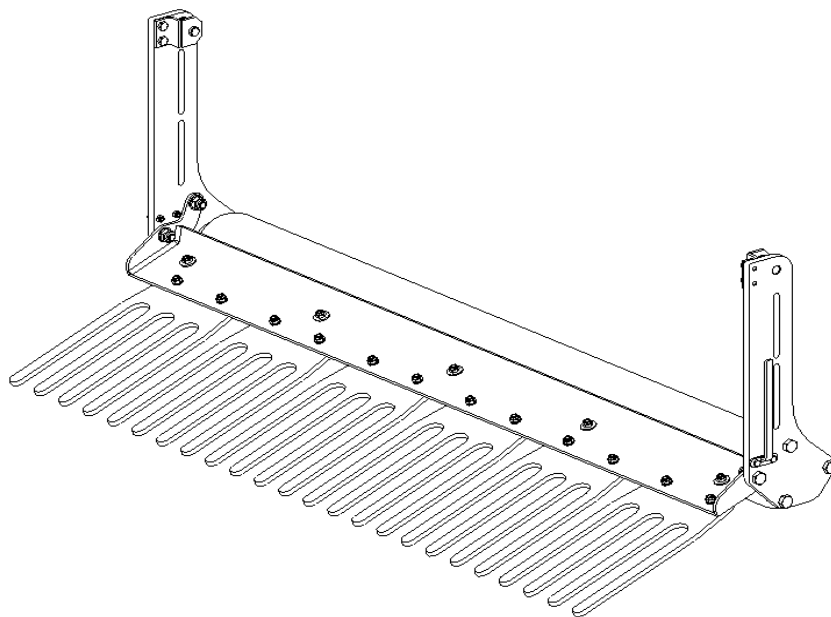


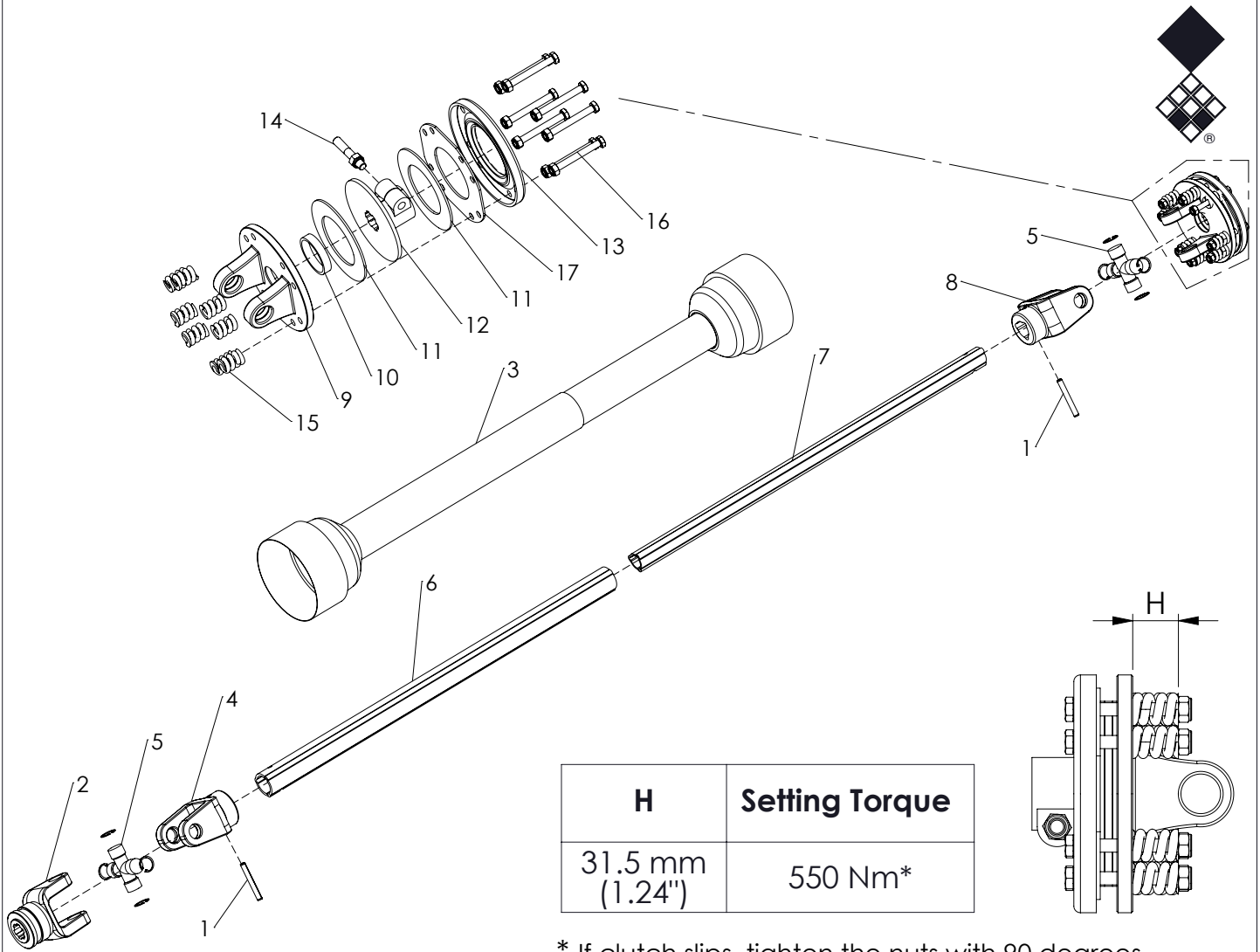
|    | PART #      | DESCRIPTION                                    | REMARKS | QUA 2216 | QUA 2220 |
|----|-------------|--|---------|----------|----------|
| 1  | 468.089.000 | Windrow Plate                                  |         | 2        | 2        |
| 2  | 468.085.500 | Windrow Plate extension                        |         | 0        | 2        |
| 3  | 406.130.150 | Distance bush                                  |         | 4        | 6        |
| 4  | 830.120.120 | SL Nut DIN 985 - M12                           |         | 2        | 6        |
| 5  | 846.080.241 | Dee (chain) shackle d8                         |         | 6        | 6        |
| 6  | 864.100.031 | Large Washer DIN 9021 - 10,5                   |         | 0        | 8        |
| 7  | 406.170.150 | Distance bush                                  |         | 4        | 4        |
| 8  | 523.030.752 | Special R-Clip d3                              |         | 4        | 4        |
| 9  | 802.160.800 | Bolt DIN 931-1 - M16 x 80                      |         | 4        | 4        |
| 10 | 830.160.160 | SL Nut DIN 985 - M16                           |         | 2        | 2        |
| 11 | 804.160.450 | Bolt DIN 933 - M16 x 45                        |         | 2        | 2        |
| 12 | 804.120.450 | Bolt DIN 933 - M12 x 45                        |         | 2        | 6        |
| 13 | 464.106.350 | Windrow support                                |         | 2        | 2        |
| 14 | 406.160.150 | Distance bush                                  |         | 2        | 2        |
| 15 | 822.100.360 | Eye Nut DIN 582 - M10                          |         | 4        | 4        |
| 16 | 804.100.250 | Bolt DIN 933 - M10 x 25                        |         | 4        | 4        |
| 17 | 464.151.450 | Spacer plate                                   |         | 2        | 2        |
| 18 | 846.060.490 | Chain 14 shackles L=490 (shackle<br>Ø6mmx35x9) |         | 1        | 1        |
| 19 | 846.069.800 | Chain 28 shackles L=980 (shackle<br>Ø6mmx35x9) |         | 2        | 2        |
|    |             |  |         |          |          |
|    | 211.116.008 | Windrow kit VD2216                             |         |          |          |
|    | 211.122.008 | Windrow kit VD2220                             |         |          |          |

|   |  |                       |                    |  |                                 | 2216             | 2220             |             |
|---|--|-----------------------|--------------------|--|---------------------------------|------------------|------------------|-------------|
| <b>Solid tines</b>  |  |                       |                    |  |                                 | <b>2216</b>      | <b>2220</b>      |             |
|    | Mounting Ø (mm)  | Tine Size (mm)        | Tine Size (inch)   | Part #   | Adapter                         | Qua              | Qua              |             |
|   | 5  | 5 x 125               | 3/16 x 5           | 311.105.125                                    | J or multi-tine block mini      |                  |                  |             |
|   | 8  | 8 x 150               | 5/16 x 6           | 311.108.150                                    | K or multi-tine block           | 24+K or 48+N+U+W | 32+K or 64+N+U+W |             |
|   | 8  | 8 x 175               | 5/16 x 7           | 9990056  | K or multi-tine block           | 24+K or 48+N+U+W | 32+K or 64+N+U+W |             |
|   | 8  | 8 x 250               | 5/16 x 10          | 9990059  | K - Don't use in MTH. Will bend | 24+K             | 32+K             |             |
|   | 12   | 12 x 150              | 1/2 x 6            | 311.112.150                                    |                                 | 24               | 32               |             |
|   | 12   | 12 x 200              | 1/2 x 8            | 311.112.200                                    |                                 | 24               | 32               |             |
|   | 12   | 12 x 225              | 1/2 x 9            | 311.112.225                                    |                                 |                  |                  |             |
|   | 12   | 12 x 250              | 1/2 x 10           | 2381837  |                                 |                  |                  |             |
|   | 12   | 12 x 300              | 1/2 x 12           | 2381838  |                                 |                  |                  |             |
|   | 18   | 18 x 200              | 3/4 x 8            | 311.118.200                                    | L or non needed                 | 12+L             | 16+L             |             |
|   | 18   | 18 x 225              | 3/4 x 9            | 311.118.225                                    | L or non needed                 | 12+L             | 16+L             |             |
|   | 18   | 18 x 250              | 3/4 x 10           | 2381841  | L or non needed                 |                  |                  |             |
|   | 18   | 18 x 300              | 3/4 x 12           | 2382638  | L or non needed                 |                  |                  |             |
|   | 18   | 18 x 350              | 3/4 x 14           | 311.118.350                                    | L or non needed                 |                  |                  |             |
|   | 18   | 18 x 400              | 3/4 x 16           | 2382639  | L or non needed                 |                  |                  |             |
|   | 24   | 24 x 225              | 1 x 9              | 311.124.225                                    |                                 | 12               | 16               |             |
|   | 24   | 24 x 350              | 1 x 14             | 311.124.350                                    |                                 |                  |                  |             |
|   | 24   | 24 x 400              | 1 x 16             | 2382640  |                                 |                  |                  |             |
|   | <b>Tines for verti-core</b>  |                       |                    |  |                                 |                  |                  |             |
| 19  | 10x100   | 3/8 x 4               | 39200-447          | Tines for verti-core that also fit Verti-drain |                                 |                  |                  |             |
| 8   | 8x95   | 5/16 x 3 13/16        | 311.108.095        | Tines for verti-core that also fit Verti-drain |                                 |                  |                  |             |
| <b>Hollow tines</b>   |  |                       |                    |  |                                 | <b>2216</b>      | <b>2220</b>      |             |
|    | Mounting Ø (mm)  | Tine Size (mm)        | Tine Size (inch)   | Part #   | Adapter                         | Qua              | 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 | 32+K or 64+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 | 32+K or 64+N+U+W |             |
|   | 12   | 16 x 10 x 150         | 5/8 x 3/8 x 6      | 311.216.150                                    |                                 | 24               | 32               |             |
|   | 12   | 16 x 10 x 175         | 5/8 x 3/8 x 7      | 9990022  |                                 | 24               | 32               |             |
|   | 12   | 19 x 12 x 150         | 3/4 x 1/2 x 6      | 311.219.150                                    |                                 | 24               | 32               |             |
|   | 18   | 19 x 12 x 200         | 3/4 x 1/2 x 8      | 311.219.200                                    | L or non needed                 | 12+L             | 16+L             |             |
|   | 12   | 19 x 12 x 200         | 3/4 x 1/2 x 8      | 311.219.201                                    |                                 | 24               | 32               |             |
|   | 18   | 19 x 12 x 225         | 3/4 x 1/2 x 9      | 311.219.225                                    | L or non needed                 | 12+L             | 16+L             |             |
|   | 12   | 19 x 12 x 225         | 3/4 x 1/2 x 9      | 311.219.226                                    |                                 | 24               | 32               |             |
|   | 12   | 19 x 12 x 250         | 3/4 x 1/2 x 10     | 9990040  |                                 |                  |                  |             |
|   | 18   | 19 x 12 x 250         | 3/4 x 1/2 x 10     | 9990023  | L or non needed                 |                  |                  |             |
|   | 18   | 25 x 16 x 200         | 1 x 5/8 x 8        | 311.225.200                                    | L or non needed                 | 12+L             | 16+L             |             |
|   | 18   | 25 x 16 x 225         | 1 x 5/8 x 9        | 311.225.225                                    | L or non needed                 | 12+L             | 16+L             |             |
|   | 18   | 25 x 17 x 250         | 1 x 5/8 x 10       | 9990024  | L or non needed                 |                  |                  |             |
|   | 18   | 29 x 19 x 250         | 1 1/8 x 3/4 x 10   | 9990066  | L or non needed                 |                  |                  |             |
|   | 24   | 32 x 21 x 300         | 1 1/4 x 13/16 x 12 | 9990034  |                                 |                  |                  |             |
|   | 18   | 32 x 21 x 300         | 1 1/4 x 13/16 x 12 | 9990041  | L or non needed                 |                  |                  |             |
|   | <b>Tines for verti-core that also fit Verti-drain 15x</b>                          |                       |                    |  |                                 |                  |                  |             |
|   | 19   | 21x12x125             | 13/16 x 1/2 x 5    | 9990075  | Ejecting from                   | Qua              | Qua              |             |
| 19  | 19x10x125  | 3/4 x 3/8 x 5         | 311.219.159        | Side   |                                 |                  |                  |             |
| 19  | 19x10x110  | 3/4 x 3/8 x 4 3/8     | 311.219.158        | Top  |                                 |                  |                  |             |
| 19  | 16x7x110   | 5/8 x 1/4 x 4 3/8     | 311.219.138        | Top  |                                 |                  |                  |             |
| <b>Replacement tubes</b>  |  |                       |                    |  |                                 | <b>2216</b>      | <b>2220</b>      |             |
|  | Mounting Ø (mm)  | Tine Size (mm)        | Tine Size (inch)   | Part #   | Combine with rollpin            | Qua              | Qua              |             |
|   | 12   | 16 x 10 x 150         | 5/8 x 3/8 x 6      | 311.716.150                                    | 9990010                         | 24               | 32               |             |
|   | 12   | 16 x 10 x 175         | 5/8 x 3/8 x 7      | 9990036  | 9990010                         | 24               | 32               |             |
|   | 12   | 19 x 12 x 150         | 3/4 x 1/2 x 6      | 311.719.150                                    | 9990012                         | 24               | 32               |             |
|   | 18   | 19 x 12 x 200         | 3/4 x 1/2 x 8      | 311.719.200                                    | 9990012                         | 12               | 16               |             |
|   | 12   | 19 x 12 x 200         | 3/4 x 1/2 x 8      | 311.719.200                                    | 9990012                         | 24               | 32               |             |
|   | 18   | 19 x 12 x 225         | 3/4 x 1/2 x 9      | 311.719.225                                    | 9990012                         | 12               | 16               |             |
|   | 12   | 19 x 12 x 225         | 3/4 x 1/2 x 9      | 311.719.225                                    | 9990012                         | 24               | 32               |             |
|   | 12   | 19 x 12 x 250         | 3/4 x 1/2 x 10     | 9990037  | 9990012                         |                  |                  |             |
|   | 18   | 19 x 12 x 250         | 3/4 x 1/2 x 10     | 9990037  | 9990012                         |                  |                  |             |
|   | 18   | 25 x 16 x 200         | 1 x 5/8 x 8        | 311.725.200                                    | 9990014                         | 12               | 16               |             |
|   | 18   | 25 x 16 x 225         | 1 x 5/8 x 9        | 311.725.225                                    | 9990014                         | 12               | 16               |             |
|   | 18   | 25 x 17 x 250         | 1 x 5/8 x 10       | 9990038  | 9990014                         |                  |                  |             |
|   | 18   | 29 x 19 x 250         | 1 1/8 x 3/4 x 10   | 9990067  | 9990016                         |                  |                  |             |
|   | 24   | 32 x 21 x 300         | 1 1/4 x 13/16 x 12 | 9990039  | 9990016                         |                  |                  |             |
|   | 18   | 32 x 21 x 300         | 1 1/4 x 13/16 x 12 | 9990039  | 9990016                         |                  |                  |             |
|   | <b>Cross tines</b>   |                       |                    |  |                                 |                  | <b>2216</b>      | <b>2220</b> |
|   |  | Mounting Ø (mm)       | Tine Size (mm)     | Tine Size (inch)                               | Part #                          | Adapter          | Qua              | Qua         |
| 8   |  | 12 x 90               | 1/2 x 3 1/2        | 9990020  | K or multi-tine block           |                  |                  |             |
| 12  |  | 12 x 90               | 1/2 x 3 1/2        | 311.812.090                                    |                                 |                  |                  |             |
| 12  | 19 x 120   | 3/4 x 5               | 9990021            |  |                                 |                  |                  |             |
| <b>Chisel tines</b>   |  |                       |                    |  |                                 | <b>2216</b>      | <b>2220</b>      |             |
|   | Mounting Ø (mm)  | Tine Size (mm)        | Tine Size (inch)   | Part #   |                                 | Qua              | Qua              |             |
|   | 12   | 4.8 x 19 x 175        | 3/16 x 3/4 x 7     | 311.619.175                                    |                                 |                  |                  |             |
|   | 12   | 4.8 x 19 x 120        | 3/16 x 3/4 x 4 3/4 | 311.619.120                                    |                                 |                  |                  |             |
| <b>Tines for verti-core</b>   |  |                       |                    |  |                                 |                  |                  |             |
| 19  | 5 x 30 x 90  | 3/16 x 1 3/16 x 3 1/2 | 311.619.127        | Tines for verti-core                           |                                 |                  |                  |             |
| <b>Composed hollow tines</b>  |  |                       |                    |  |                                 | <b>2216</b>      | <b>2220</b>      |             |
|   | Shank  |                       | Part #             |  |                                 | Qua              | Qua              |             |
|   | A  | Size (mm)             | Size (inch)        | 311.120.690                                    | (Straight)                      | 24               | 32               |             |
|   | B  | 18                    | 3/4                | 311.180.782                                    | (Straight)                      | 12               | 16               |             |
|   | C  | 12                    | 1/2                | 311.180.780                                    |                                 | 24               | 32               |             |
|   | D  | 24                    | 1                  | 311.240.862                                    | (Straight)                      | 12               | 16               |             |
|   | E  | 18                    | 3/4                | 311.240.860                                    |                                 |                  |                  |             |
|   | <b>Clip</b>  |                       |                    |  |                                 |                  | <b>2216</b>      | <b>2220</b> |
|   | F  | Size (mm)             | Size (inch)        | Part #   |                                 | Qua              | Qua              |             |
|   | G  | 16                    | 5/8                | 438.160.160                                    |                                 | 24               | 32               |             |
|   | H  | 22                    | 7/8                | 438.220.220                                    |                                 | 24               | 32               |             |
|   | H  | 30                    | 1 3/16             | 438.300.300                                    |                                 | 12               | 16               |             |
|   | <b>Hollow tine tube (folded)</b>   |                       |                    |  |                                 |                  | <b>2216</b>      | <b>2220</b> |
|   | Tine Size (mm)   | Tine Size (inch)      | Part #             |  |                                 | Qua              | Qua              |             |
|   | 16 x 150   | 5/8 x 6               | 317.316.150        | Combine with:                                  | A and F                         | 24A+24F          | 32A+32F          |             |
|   | 16 x 200   | 5/8 x 8               | 317.316.200        | Combine with:                                  | A and F                         | 24A+24F          | 32A+32F          |             |
|   | 22 x 150   | 7/8 x 6               | 317.322.150        | Combine with:                                  | B or C and G                    | 24B+24G          | 32B+32G          |             |
|   |  |                       |                    |  |                                 | 24C+24G          | 32C+32G          |             |
|   | 22 x 250   | 7/8 x 10              | 317.322.250        | Combine with:                                  | B or C and G                    |                  |                  |             |
|   | 22 x 150   | 7/8 x 6               | 317.322.150        | Combine with:                                  | B or C and G                    | 12B+12G          | 16B+16G          |             |
|   |  |                       |                    |  |                                 | 12C+12G          | 16C+16G          |             |
| 22 x 250  | 7/8 x 10   | 317.322.250           | Combine with:      | B or C and G                                   |                                 |                  |                  |             |
| 30 x 150  | 1 3/16 x 6   | 317.330.150           | Combine with:      | E and H  | 12D+12H                         | 16D+16H          |                  |             |
|   |  |                       |                    |  | 12E+12H                         | 16E+16H          |                  |             |
| 30 x 225  | 1 3/16 x 9   | 317.330.220           | Combine with:      | E and H  | 12D+12H                         | 16D+16H          |                  |             |
|   |  |                       |                    |  | 12E+12H                         | 16E+16H          |                  |             |
| 30 x 300  | 1 3/16 x 12  | 317.330.300           | Combine with:      | E and H  |                                 |                  |                  |             |

**Redexim Verbi-drain 2216 and 2220**

|  |                            |                                |                  |             |                           | 2216           | 2220         |   |
|--|----------------------------|--------------------------------|------------------|-------------|---------------------------|----------------|--------------|---|
| <b>Adapter</b>   |                            |                                |                  |             |                           | <b>Qua</b>     | <b>Qua</b>   |   |
|    | J                          | Tine Size (mm)                 | Tine Size (inch) | Part #      |                           |                |              |   |
|  | K                          | 5                              | 3/16             | 314.205.043 |                           |                |              |   |
|  |                            |                                |                  |             |                           | 24             | 32           |   |
| <b>Adapter</b>   |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    | L                          | Tine Size (mm)                 | Tine Size (inch) | Part #      |                           |                |              |   |
|  |                            | 18                             | 3/4              | 2451800     |                           |                |              |   |
|  |                            |                                |                  |             |                           | 12             | 16           |   |
| <b>Multi-tine block complete WO tines</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    |                            | Tine Size (mm)                 | Tine Size (inch) | Part #      |                           |                |              |   |
|  |                            | 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 | 8 (64 tines) |   |
|  |                            | 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  |                           |                |              |   |
| <b>Multi-tine block mini needles complete WO tines</b>                             |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    |                            | Tine Size (mm)                 | Tine Size (inch) | Part #      |                           |                |              |   |
|  |                            | 5                              | 3/16             | 211.700.017 | Combination off: R-V      | B1             |              |   |
|  |                            | 5                              | 3/16             | 314.425.170 | Combination off: Q-V-X    | B1             |              |   |
|  |                            | 5                              | 3/16             | 9990214     | Combination off: S-V-X    | B1             |              |   |
|  | B1                         | 5 x 125                        | 3/16 x 5         | 311.105.125 | Needle tine               |                |              |   |
| <b>Multi-tine block empty</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    |                            | Tine Size (mm)                 | Tine Size (inch) | Part #      |                           |                |              |   |
|  | M                          | 8mm (6 tines)                  | 5/16             | 9990201     |                           |                |              |   |
|  | N                          | 8mm (8 tines)                  | 5/16             | 314.430.240 |                           | 6              | 8            |   |
|  | O                          | 8mm (5 tines)                  | 5/16             | 480.301.430 |                           |                |              |   |
|  | P                          | 8mm (8 tines)                  | 5/16             | 211.215.002 |                           |                |              |   |
| <b>Multi-tine block mini needles empty</b>   |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    |                            | Tine Size (mm)                 | Tine Size (inch) | Part #      |                           |                |              |   |
|  | Q                          | 5 (21 tines)                   | 3/16             | 480.251.740 |                           |                |              |   |
|  | R                          | 5 (12 tines)                   | 3/16             | 314.425.140 |                           |                |              |   |
|  | S                          | 5 (24 tines)                   | 3/16             | 314.425.240 |                           |                |              |   |
| <b>Backup plate</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    | T                          | Size (mm)                      |                  | Part #      |                           |                |              |   |
|  |                            | 143x50x3                       |                  | 464.031.432 |                           |                |              |   |
| <b>Tine lock bolt</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    |                            | Size (mm)                      |                  | Part #      |                           |                |              |   |
|  | U                          | 10x40                          |                  | 812.100.401 |                           | 48             | 64           |   |
|  |                            | 10x35                          |                  | 4001675     |                           |                |              |   |
| <b>Set screw</b>   |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|    |                            | Size (mm)                      |                  | Part #      |                           |                |              |   |
|  | V                          | 8x8                            |                  | 818.080.080 |                           |                |              |   |
| <b>Stud</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|  |                            | Size (mm)                      |                  | Part #      |                           |                |              |   |
|  | W                          | 23.2x50                        |                  | 408.230.500 |                           | 12             | 16           |   |
|  | X                          | 12x60                          |                  | 9990212D    |                           |                |              |   |
| <b>Bolt</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|  |                            | Size (mm)                      |                  | Part #      |                           |                |              |   |
| Y  |                            | M10 x 80                       |                  | 802.100.800 |                           |                |              |   |
| <b>Nut</b>   |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|  |                            | Size (mm)                      |                  | Part #      |                           |                |              |   |
| Z  |                            | Sl nut M10                     |                  | 830.100.100 |                           |                |              |   |
| <b>Turf hold down fingers</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|  |                            | Part name                      |                  | Part #      | Qua                       | Part #         | Qua          |   |
|  |                            | Turf hold down finger          |                  |             |                           |                |              |   |
|  |                            | Turf hold down finger MTH      |                  |             |                           |                |              |   |
|  |                            | Turf hold down finger 12mm end |                  |             | 311.506.310               | 2              | 311.506.310  | 2 |
|  |                            | Turf hold down finger 12mm     |                  |             | 311.506.314               | 4              | 311.506.314  | 6 |
|  |                            | Turf hold down finger 18mm     |                  |             |                           |                |              |   |
|  |                            | Turf hold down finger 24mm end |                  |             | 311.506.312               | 2              | 311.506.312  | 2 |
|  | Turf hold down finger 24mm |                                |                  | 311.506.316 | 4                         | 311.506.316    | 6            |   |
| <b>Turf hold down kit</b>  |                            |                                |                  |             |                           | <b>2216</b>    | <b>2220</b>  |   |
|  |                            | Part name                      |                  | Part #      | Qua                       | Part #         | Qua          |   |
|  |                            | THD kit complete               |                  |             |                           |                |              |   |
|  |                            | THD kit complete MTH           |                  |             |                           |                |              |   |
|  |                            | THD kit complete 12mm          |                  |             | 211.116.004               | 1              | 211.122.004  | 1 |
|  |                            | THD kit complete 18mm          |                  |             |                           |                |              |   |
|  |                            | THD kit complete 24mm          |                  |             | 211.116.002               | 1              | 211.122.002  | 1 |



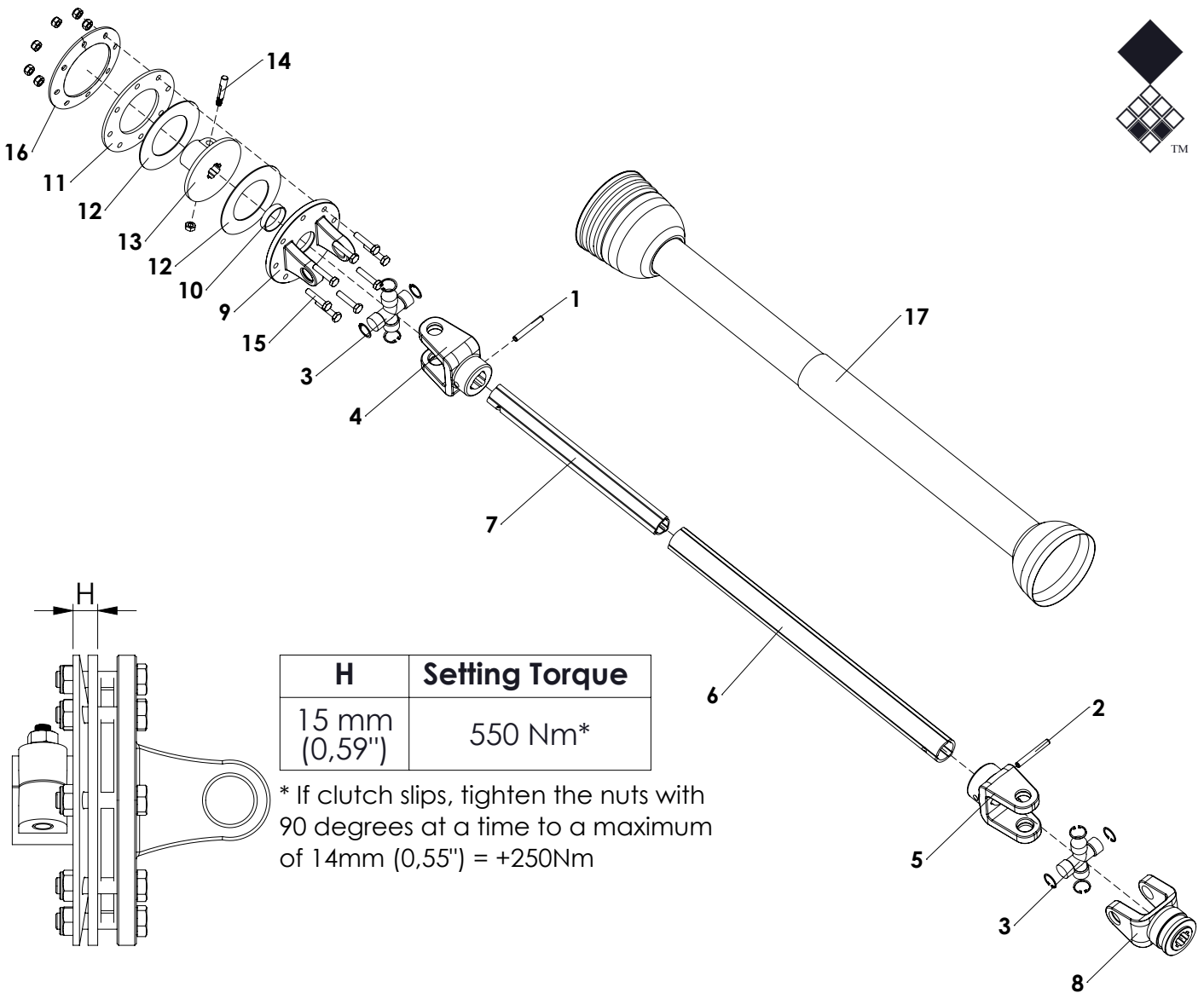


| H                  | Setting Torque |
|--------------------|----------------|
| 31.5 mm<br>(1.24") | 550 Nm*        |

\* 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 F0111    | 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 for boggy |                       |     |
|      | 611.606.100  | PTO shaft type T-60 tl 610            |                       |     |

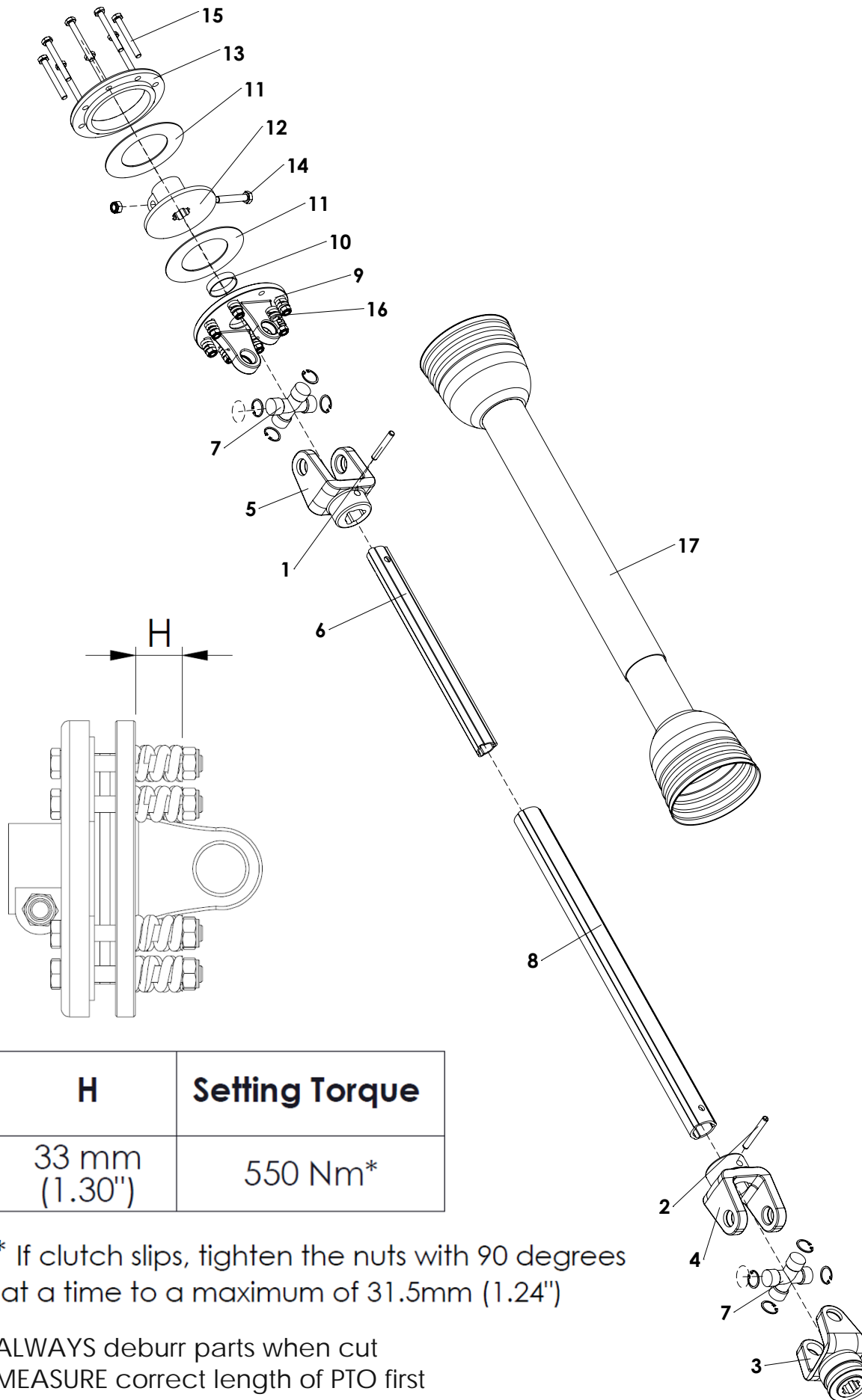


| H                | Setting Torque |
|------------------|----------------|
| 15 mm<br>(0,59") | 550 Nm*        |

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

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**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 for boggy   |                          |     |



| H                | Setting Torque |
|------------------|----------------|
| 33 mm<br>(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   |                          |     |