

12m



Kelly 

Tillage System 12m Assembly Manual

Revision E - November 2020

Serial Number:

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Thank you for choosing a Kelly Tillage product

We trust that you find the following manual clear and easy to follow. If you should require additional customer support or assistance, please do not hesitate to contact us.

Spare parts can be purchased, as required, through your local dealer or by contacting Kelly Tillage directly.

Kelly welcomes feedback. Should you have any difficulties that you wish to raise, suggestions for improvement or modifications that you feel would enhance our products we look forward to hearing from you.

Contact Information

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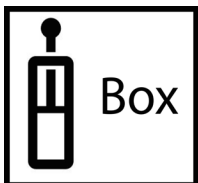
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This symbol indicates which bag the relevant fasteners are in



This symbol indicates which bag the relevant hydraulics are in



This symbol indicates the hydraulics are in a box



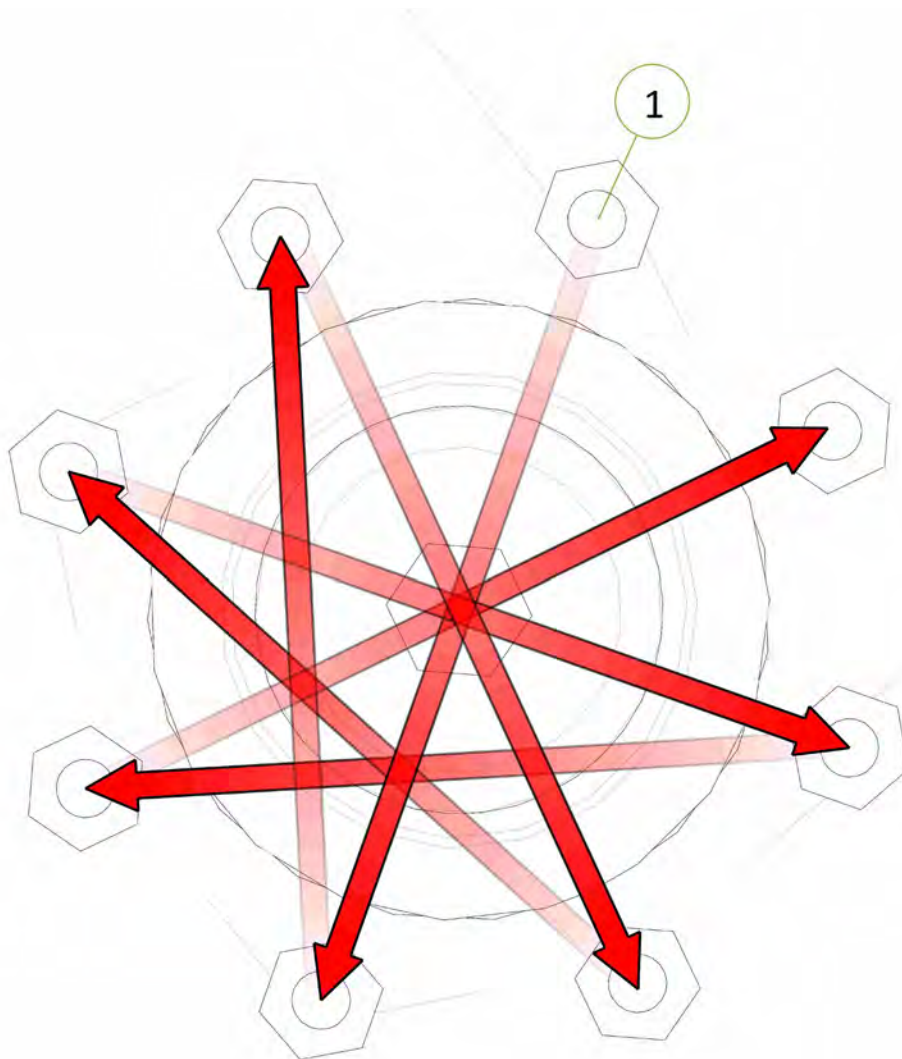
This symbol indicates which way the machine is travelling

Bolt Torque Settings

Bolt Type	Wheel nut	U Bolt			Class 8.8 Bolt							Class 10.9 Bolt
Bolt Size	M18	M12	M16	M20	M6	M8	M10	M12	M16	M20	M24	M20
Spanner	27	19	24	30	10	13	17	19	24	30	36	30
Nm (max)	270	50	75	260	9.9	18.1	28.8	41.9	78.8	127	183	181

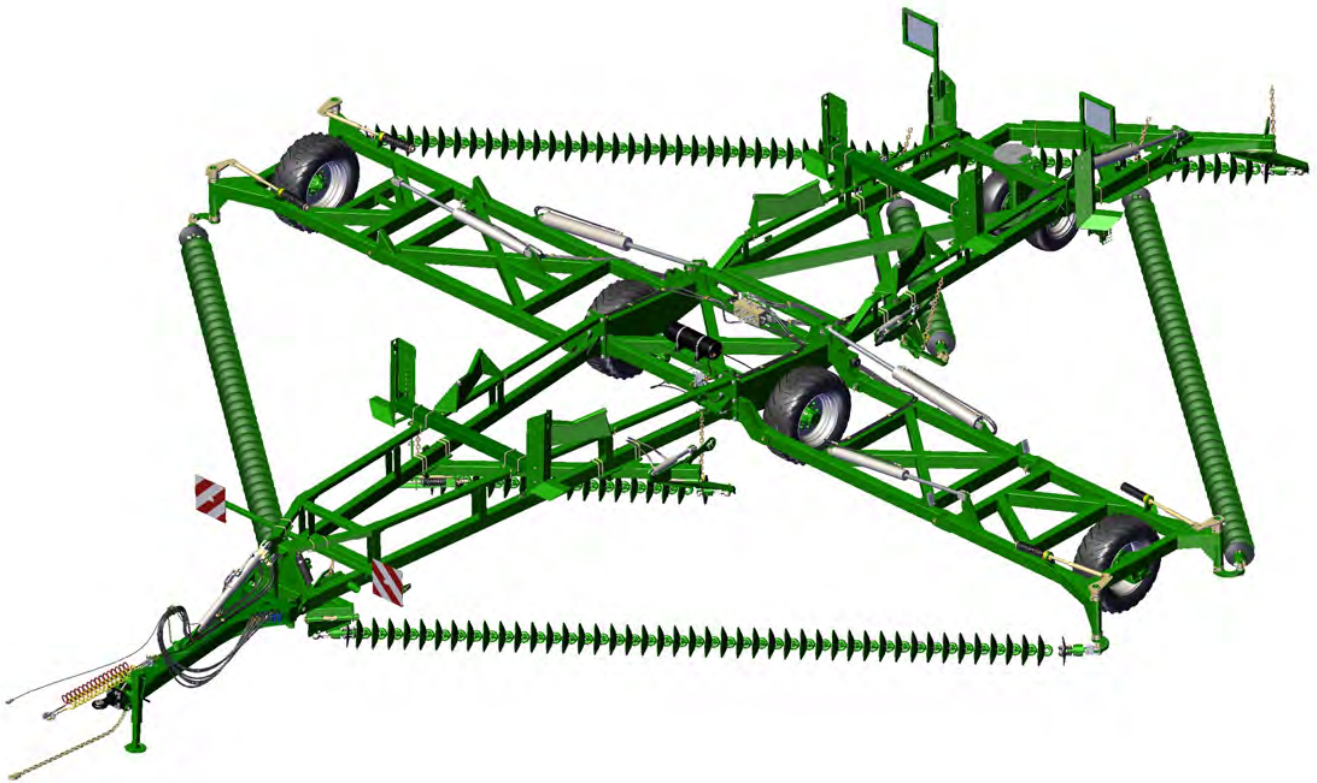
[1] When fitting a wheel & tire to a hub, tighten the wheel nuts in a star pattern to the correct tension. To achieve this choose a wheel nut & tighten, then proceed to the opposite side of the hub to the next wheel nut & tighten & so on until all wheel nuts are tight. Then repeat the procedure to check that all nuts are tight. Do not use impact tools to tighten wheel nuts. For a guide to the correct tension of the wheel nuts please use the appropriate tension for your size wheel nuts from the Bolt Torque Settings table.

Torque values are for dry threads and surfaces however it is permissible to apply a small amount of anti corrosive oil to the threads.

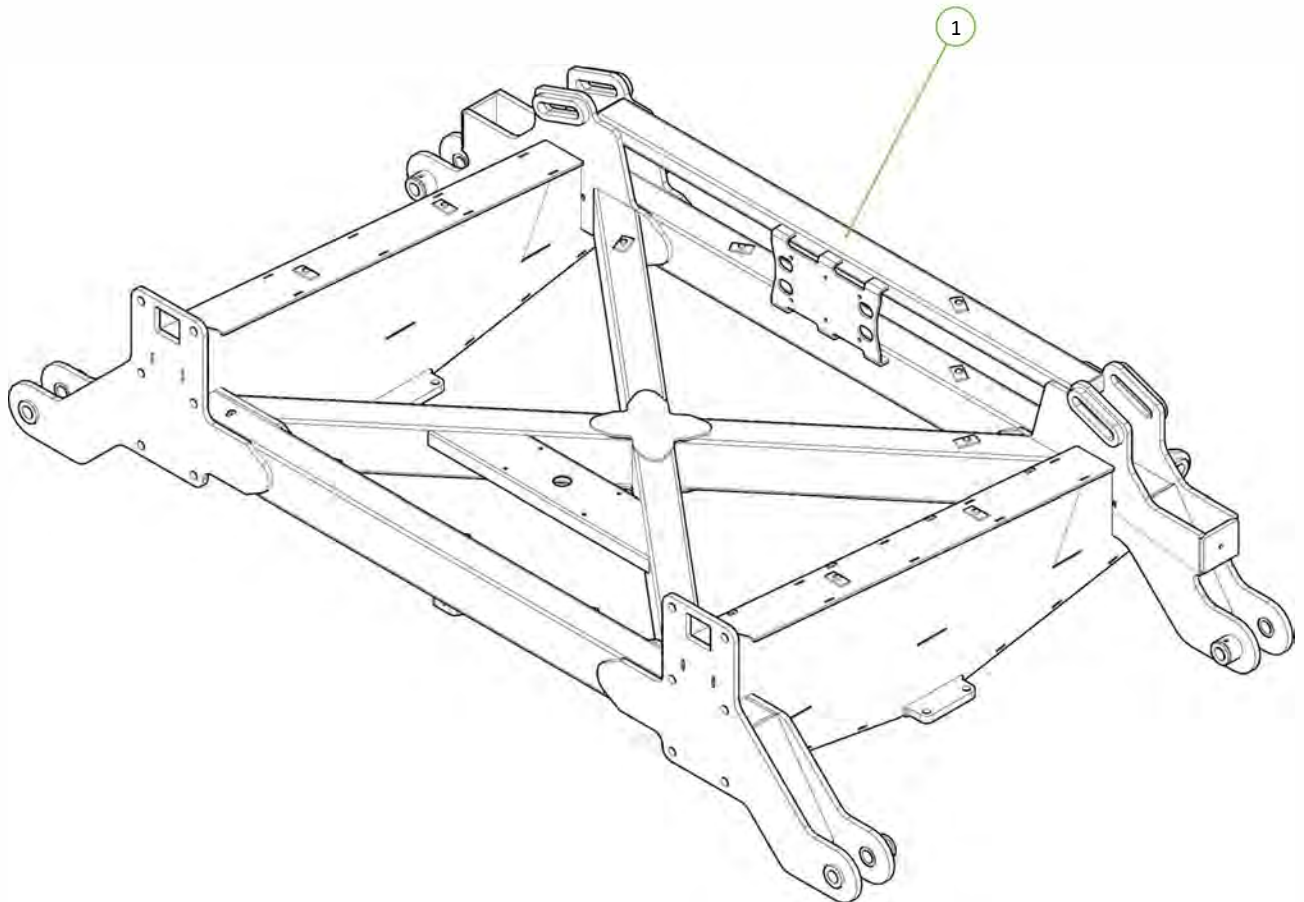


Section 1

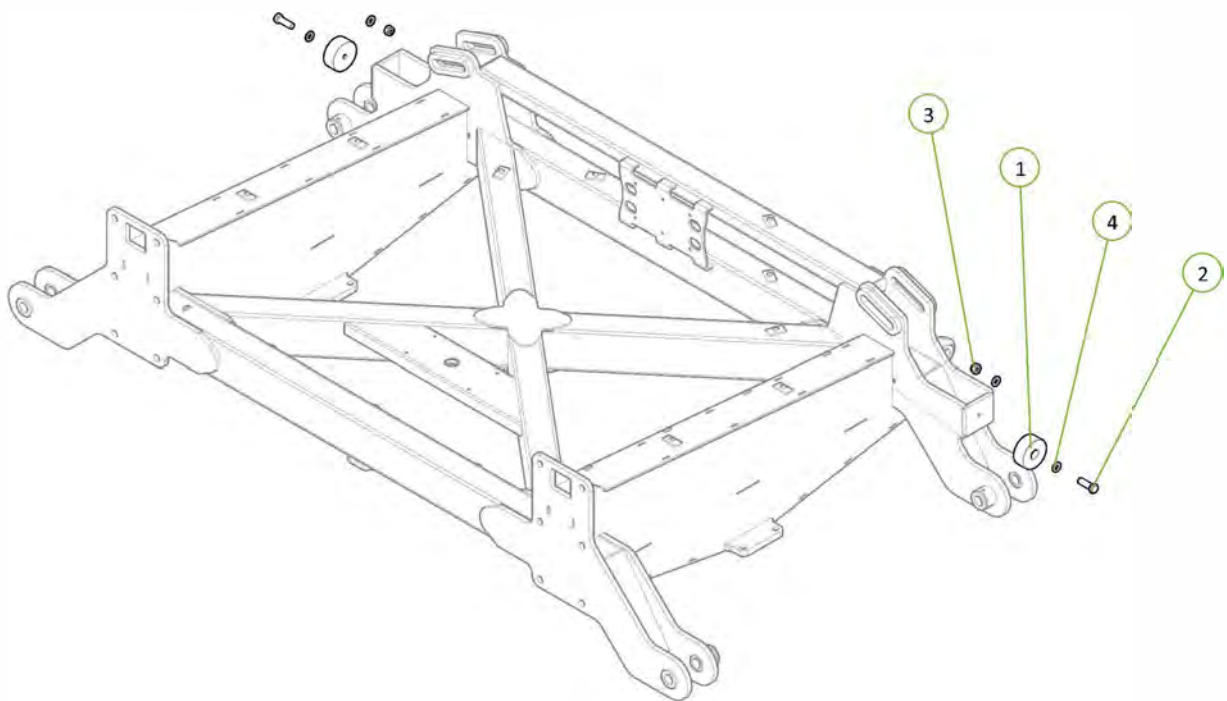
Assembly



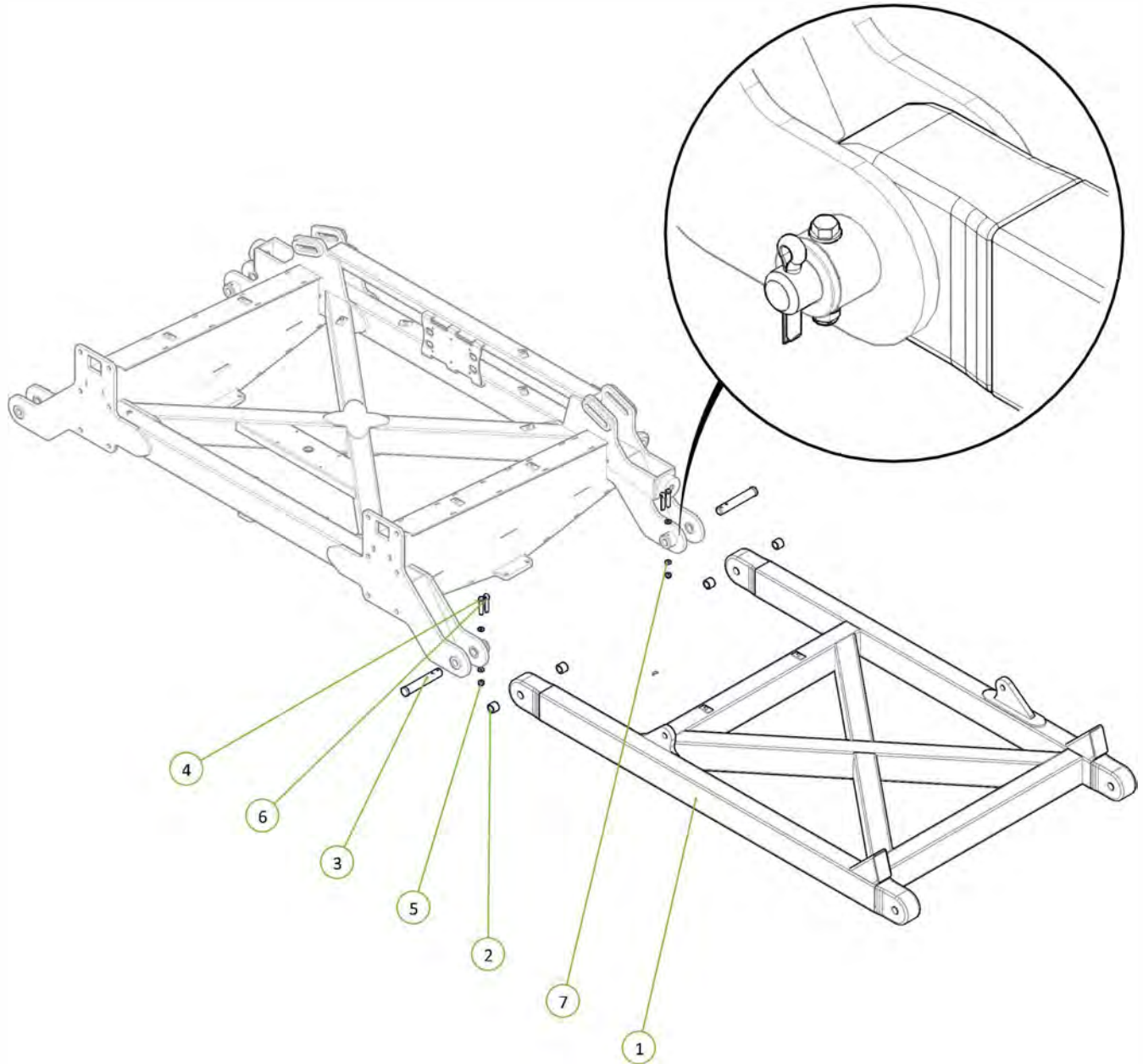
Item No.	Description	Qty	Number
1	Centre Frame	1	1540-01-1E



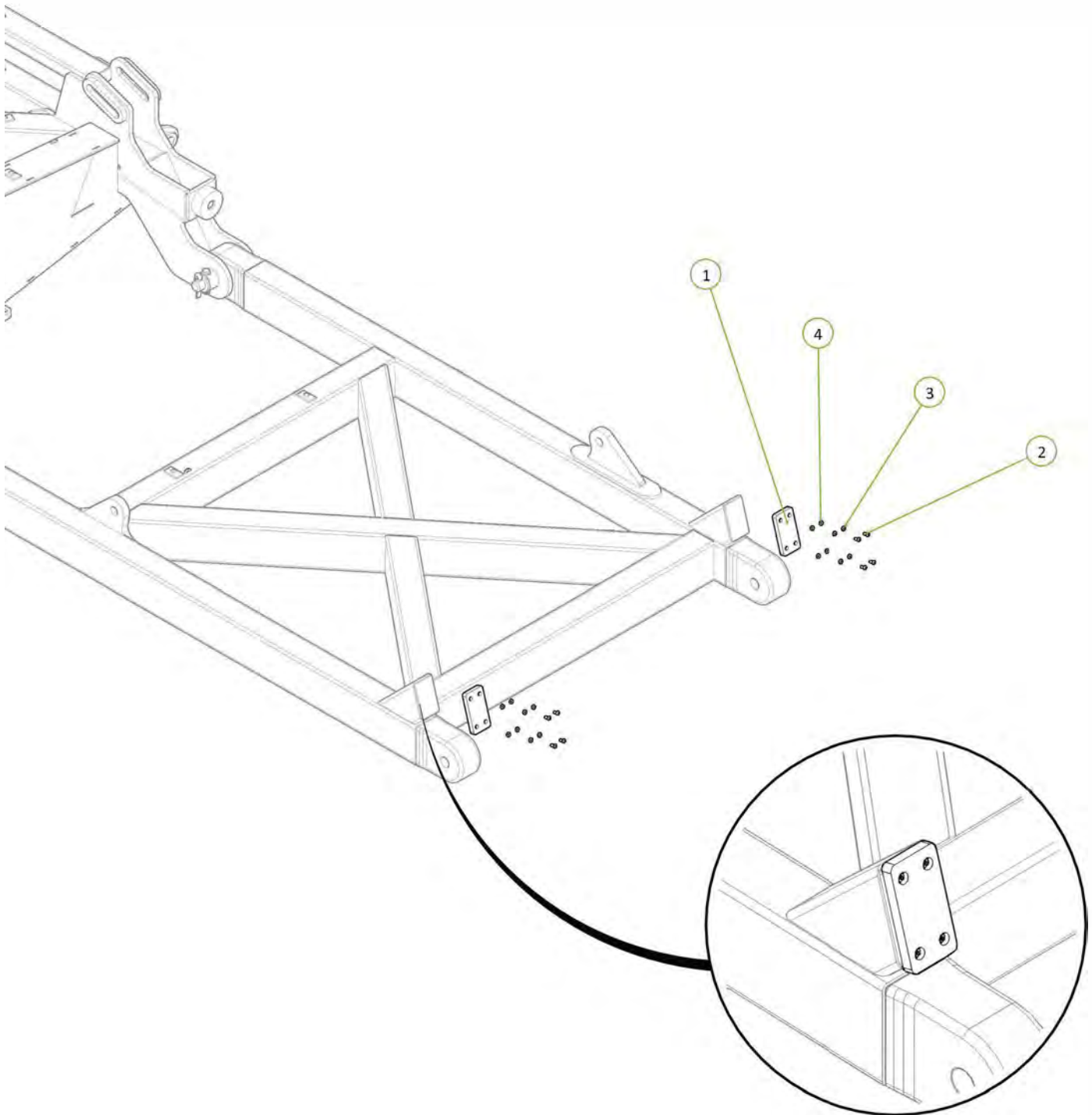
Item No.	Description	Qty	Number
1	Wing Folding Buffer	2	1201-12
2	M16 x 55 Grade 8.8 ZP Bolt	2	0211-1655
3	Nyloc Nut M16	2	0221-NYL16
4	Washer Flat M16	4	0231-F16



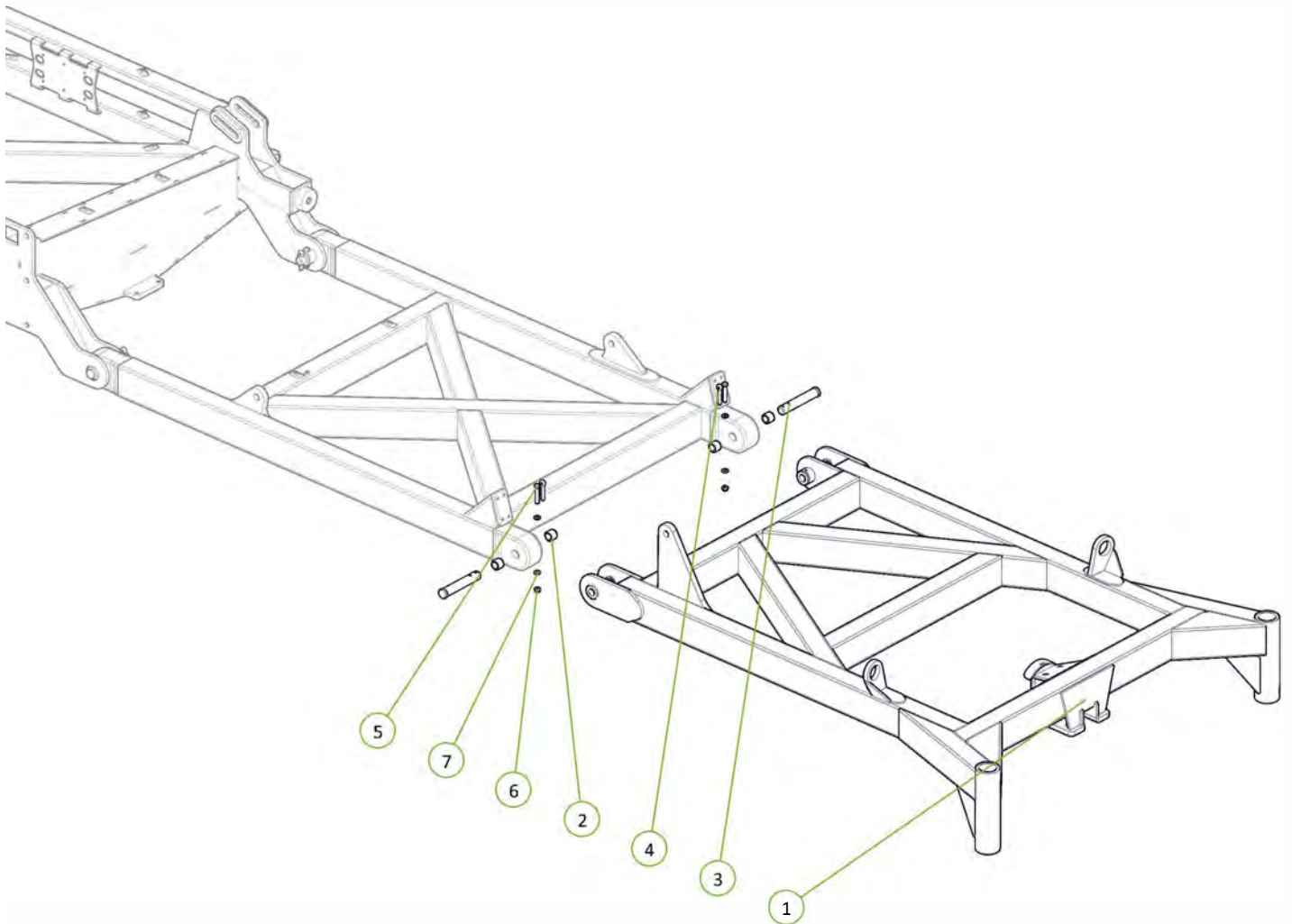
Item No.	Description	Qty	Number
1	Left Hand Inner Wing	1	1540-05-3E
2	35 ID x 30mm DX Bush	4	0113-530DX
3	Wing Pivot Pin	2	0801-10-08-235
4	M12 x 80 Grade 8.8 ZP	2	0211-1280
5	Bolt Nyloc Nut M12	2	0221-NYL12
6	Cotter Pin M13 x 63	2	0261-PINC1363
7	Washer Flat M12	4	0231-F12



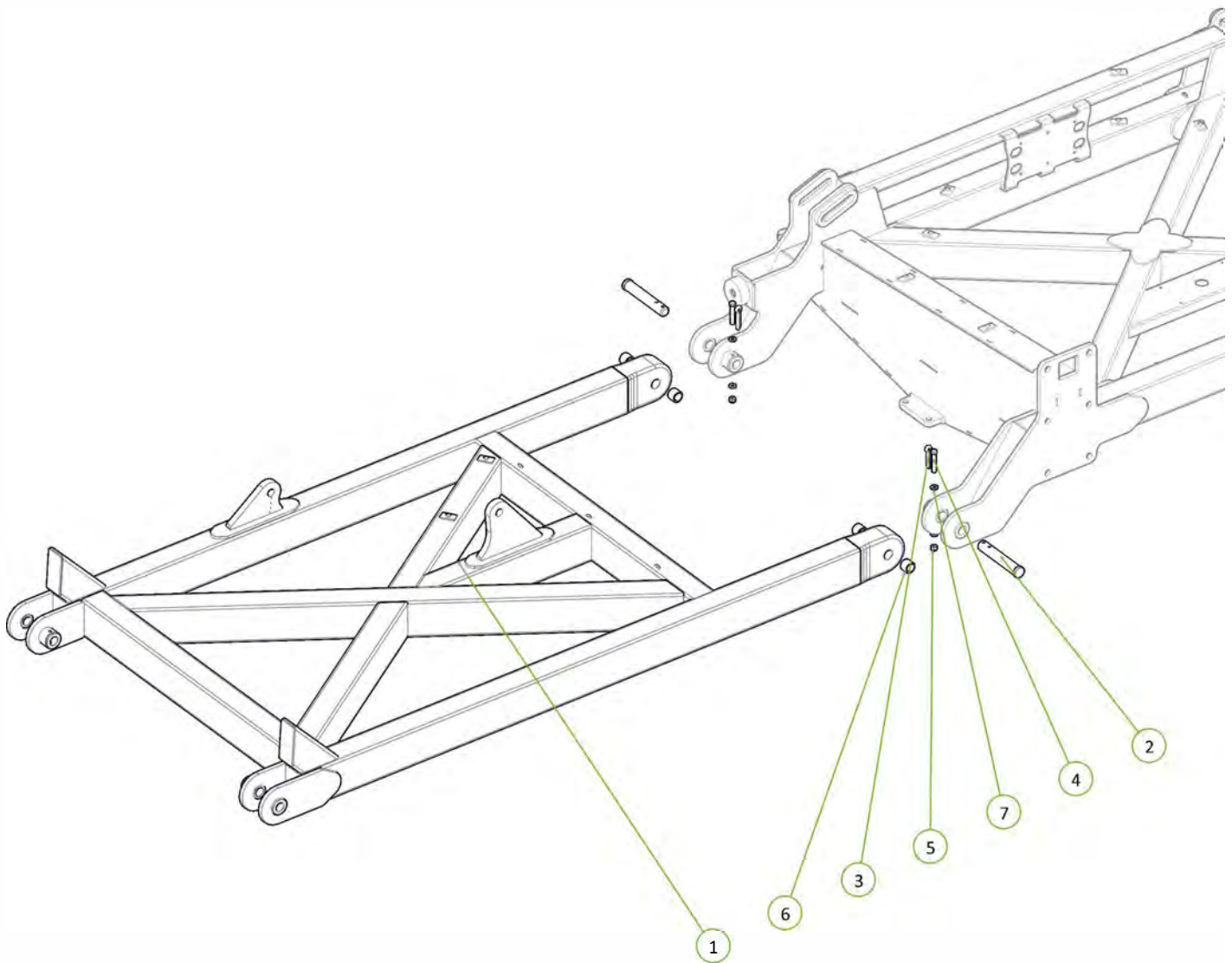
Item No.	Description	Qty	Number
1	Wing Buffer Pad	2	1501-27
2	Button Head Screw M6 x 16mm ZP	8	0211-0616BH
3	Washer Spring M6	8	0231-S6
4	Washer Flat M6	8	0231-F6



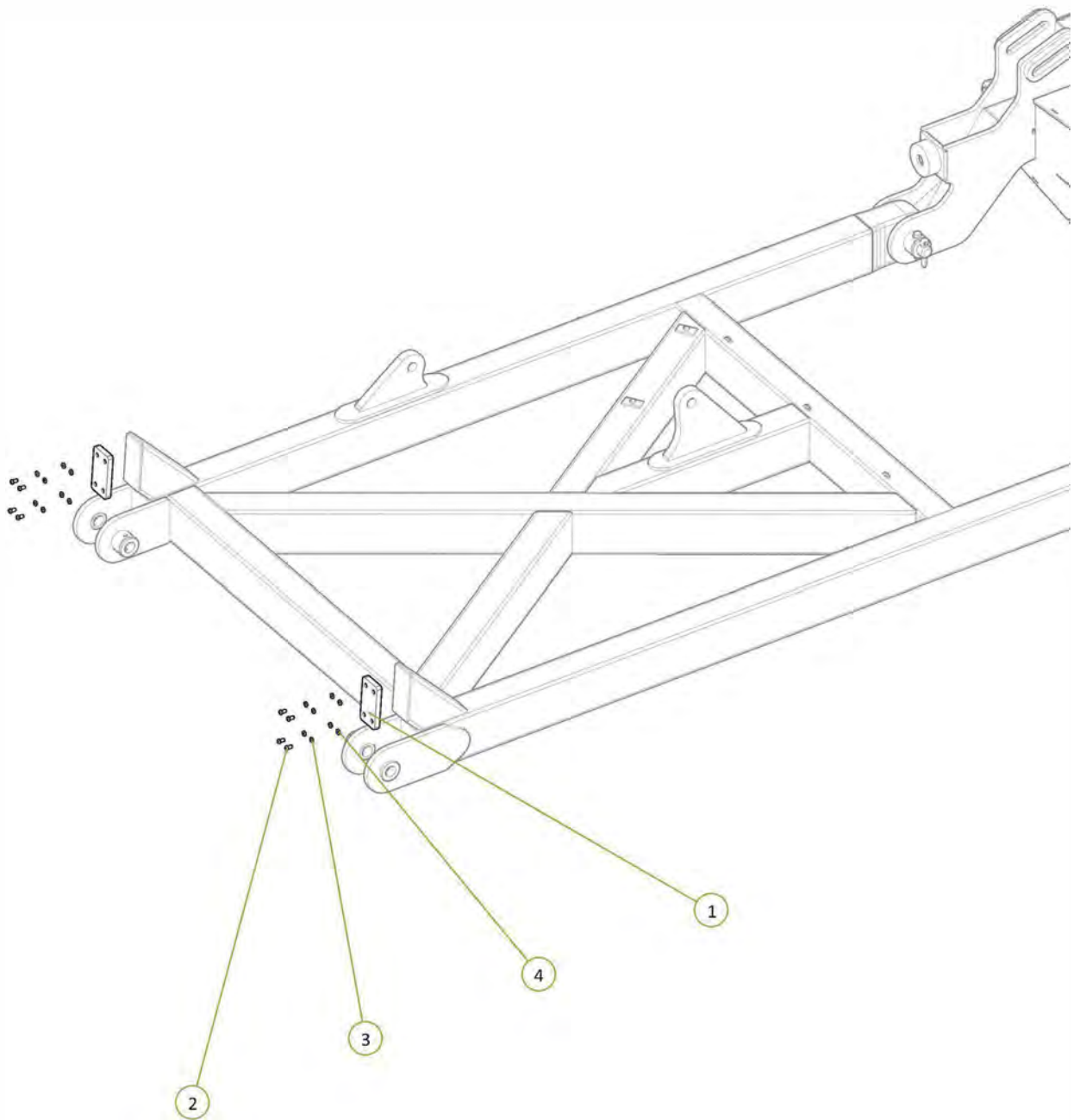
Item No.	Description	Qty	Number
1	Left Hand Outer Wing	1	1540-07-2E
2	35 ID x 30mm DX Bush	4	0113-3530DX
3	Wing Pivot Pin	2	0801-10-08-235
4	Cotter Pin M13 x 63	2	0261-PINC1363
5	M12 x 80 Grade 8.8 ZP Bolt	2	0211-1280
6	Nyloc Nut M12	2	0221-NYL12
7	Washer Flat M12	4	0231-F12



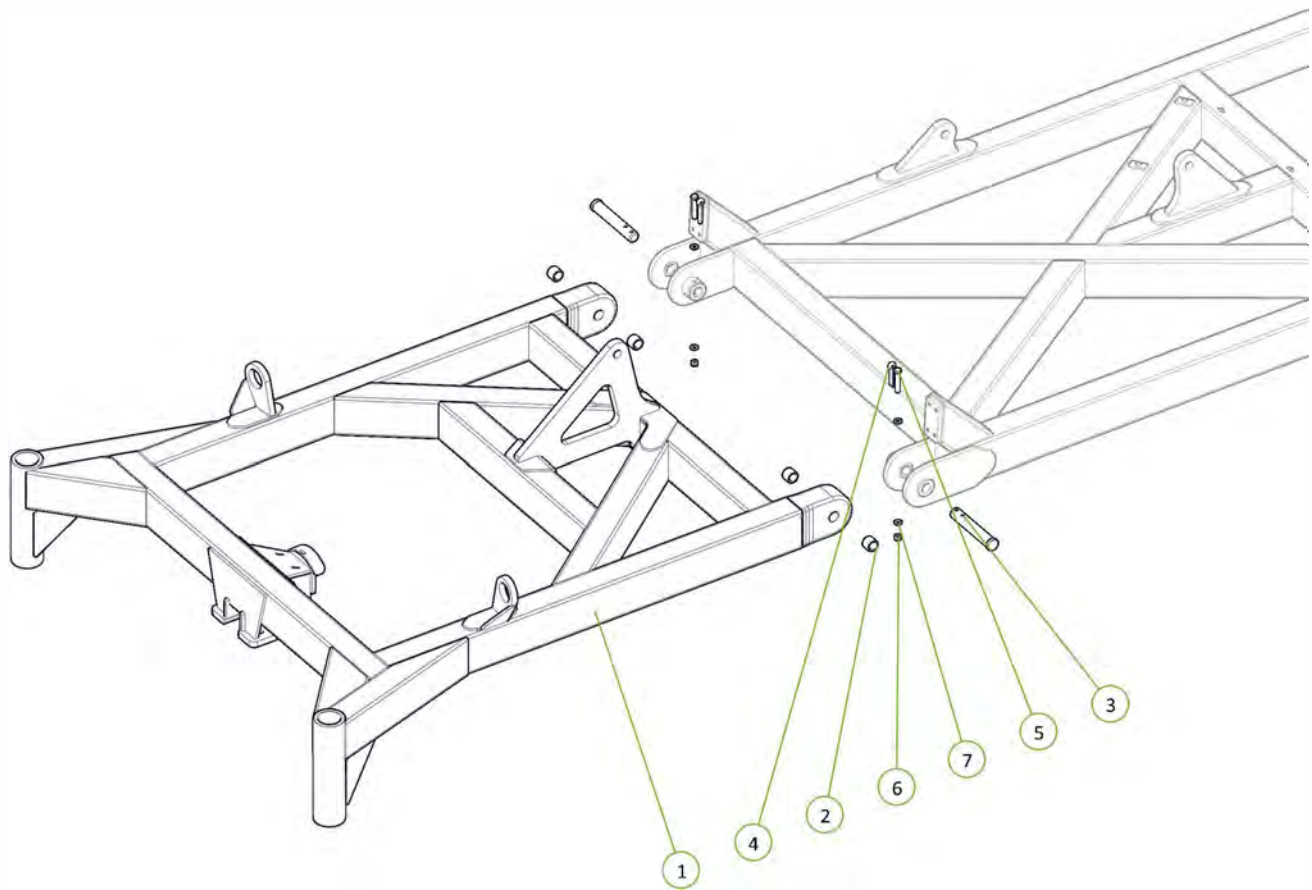
Item No.	Description	Qty	Number
1	Right Hand Inner Wing	1	1540-04-3E
2	Wing Pivot Pin	2	0801-10-08-235
3	Cotter Pin M13 x 63	2	0261-PINC1363
4	M12 x 80 Grade 8.8 ZP Bolt	2	0211-1280
5	Nyloc Nut M12	2	0221-NYL12
6	35 ID x 30mm DX Bush	4	0113-3530DX
7	Washer Flat M12	4	0231-F12



Item No.	Description	Qty	Number
1	Wing Buffer Pad	2	1501-27
2	Button Head Screw M6 x 16mm ZP	8	0211-0616BH
3	Washer Spring M6	8	0231-S6
4	Washer Flat M6	8	0231-F6



Item No.	Description	Qty	Number
1	Right Hand Outer Wing	1	1540-06-2E
2	35 ID x 30mm DX Bush	4	0113-3530DX
3	Wing Pivot Pin	2	0801-10-08-235
4	Cotter Pin M13 x 63	2	0261-PINC1363
5	M12 x 80 Grade 8.8 ZP Bolt	2	0211-1280
6	Nyloc Nut M12	2	0221-NYL12
7	Washer Flat M12	4	0231-F12

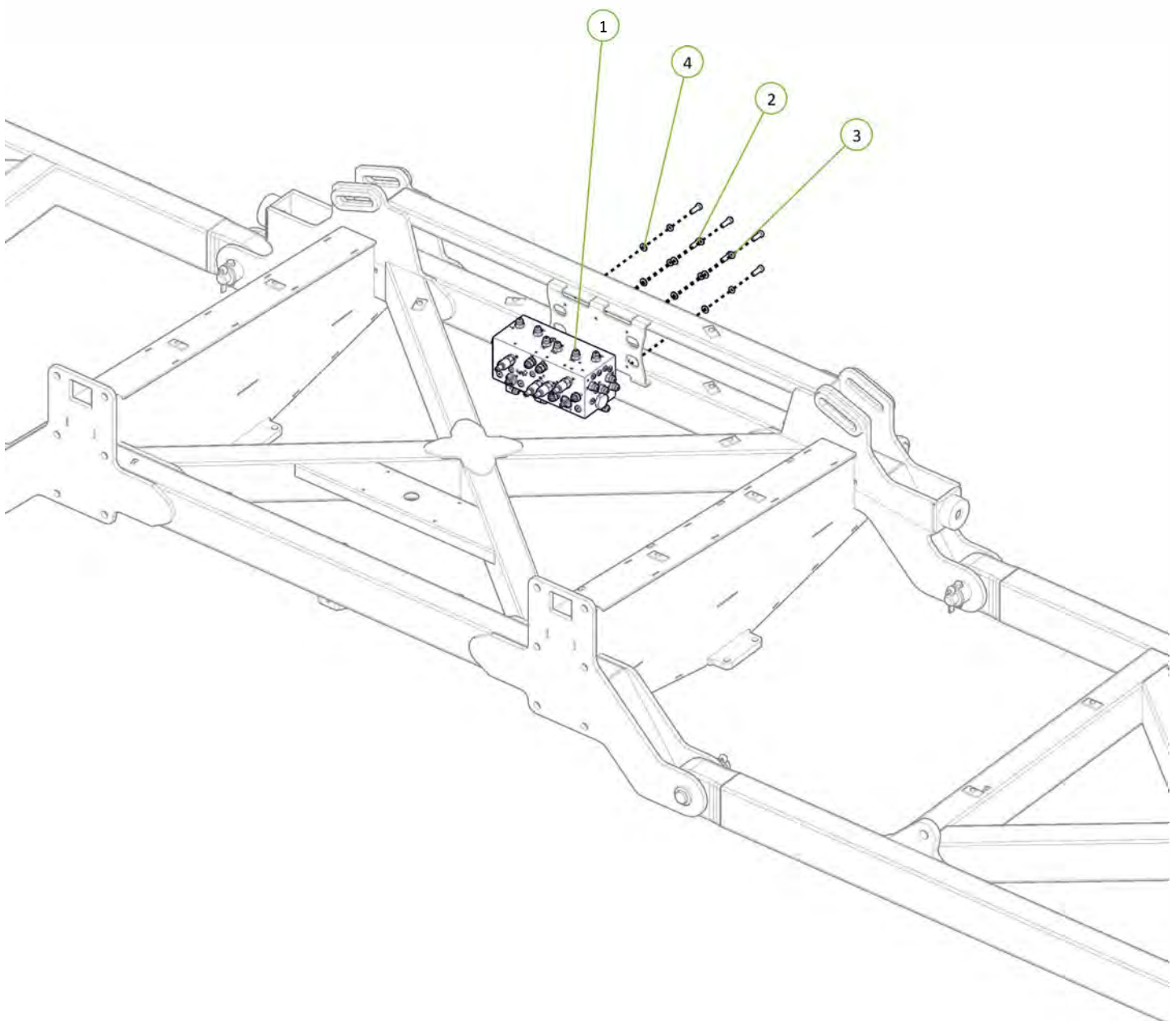


All wing pivot bolts tightened and cotter pins installed

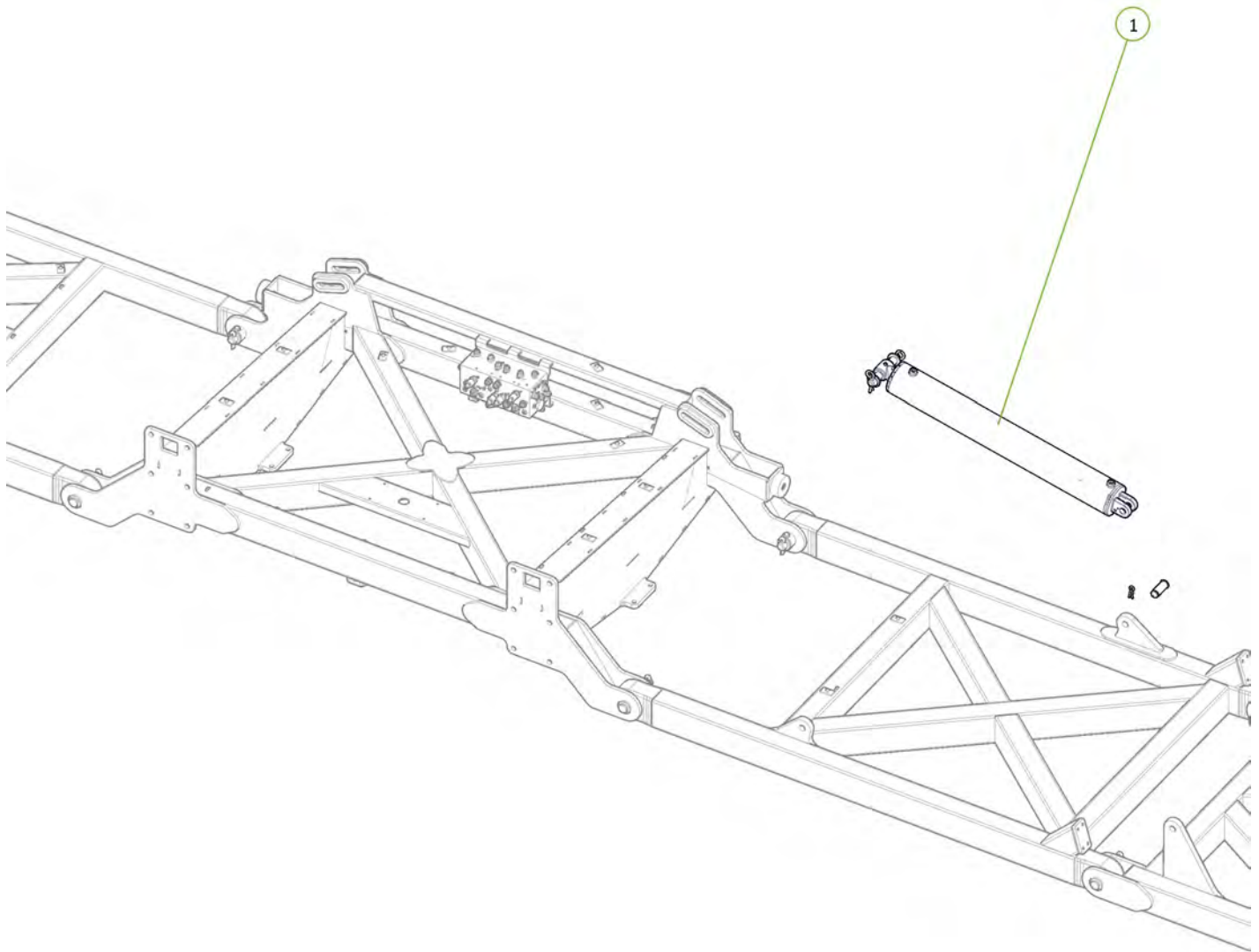


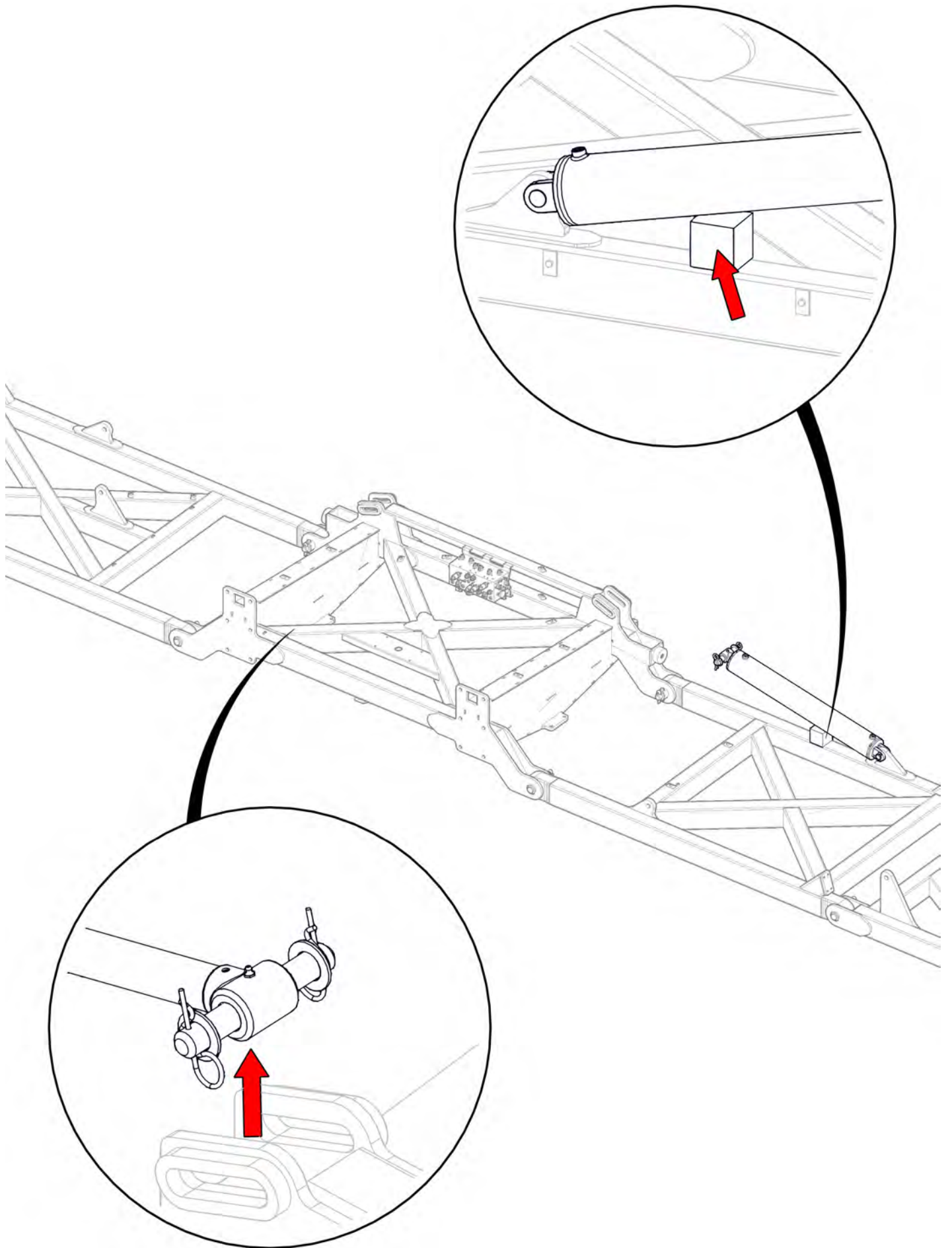
Signed _____ Date __/__/__
 Unit Serial Number _____

Item No.	Description	Qty	Number
1	Dual Circuit 3 Stage Sequence Manifold V12	1	0802-691033
2	M10 x 30 Grade 8.8 ZP Bolt	6	0211-1035
3	Washer Spring M10	6	0231-S10
4	Washer Flat M10	6	0231-F10

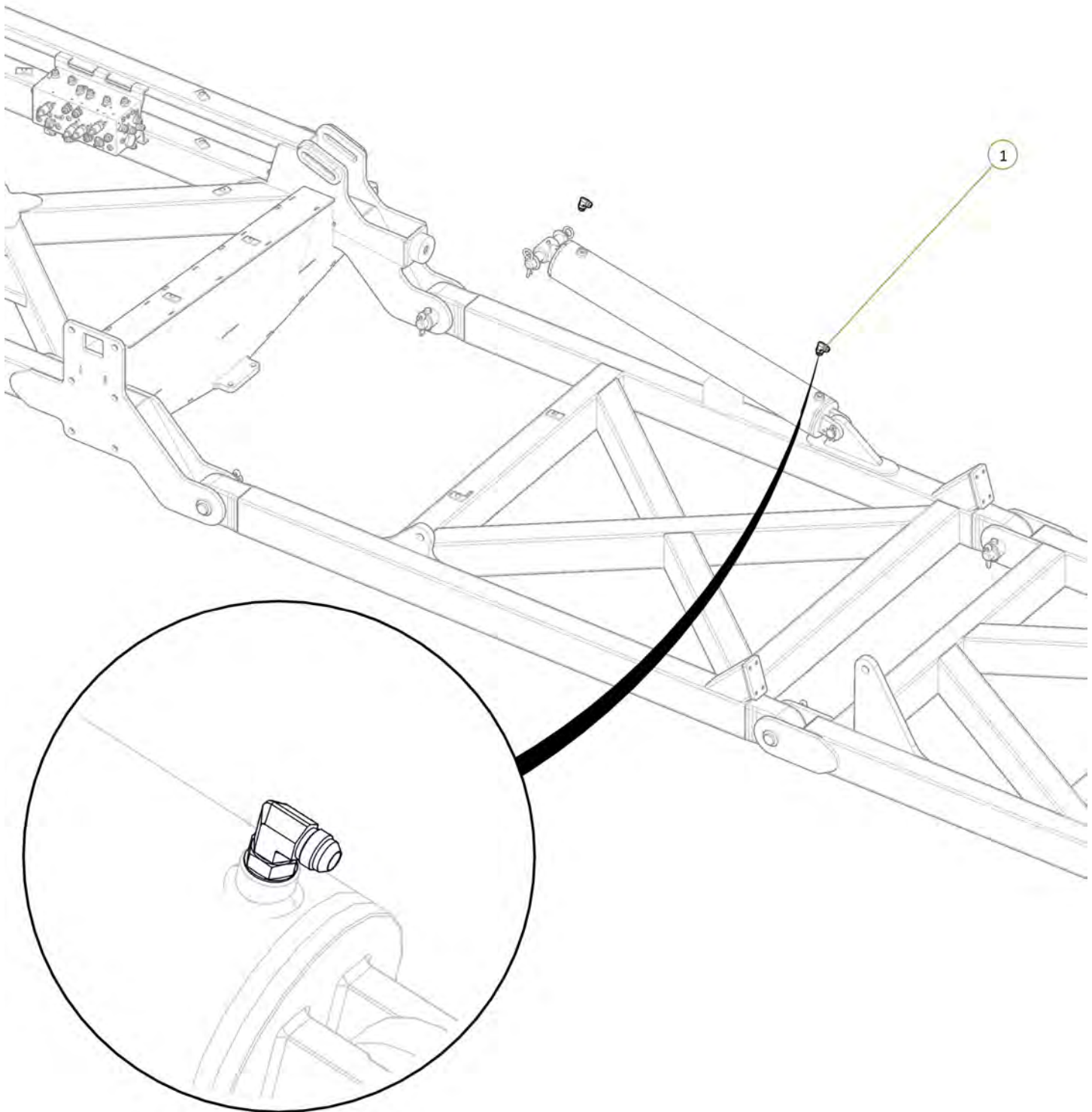


Item No.	Description	Qty	Number
1	5" Bore 36" Stroke 3 1/8" S/Tube 2" Rod Hydraulic Cylinder	1	0311-536ST

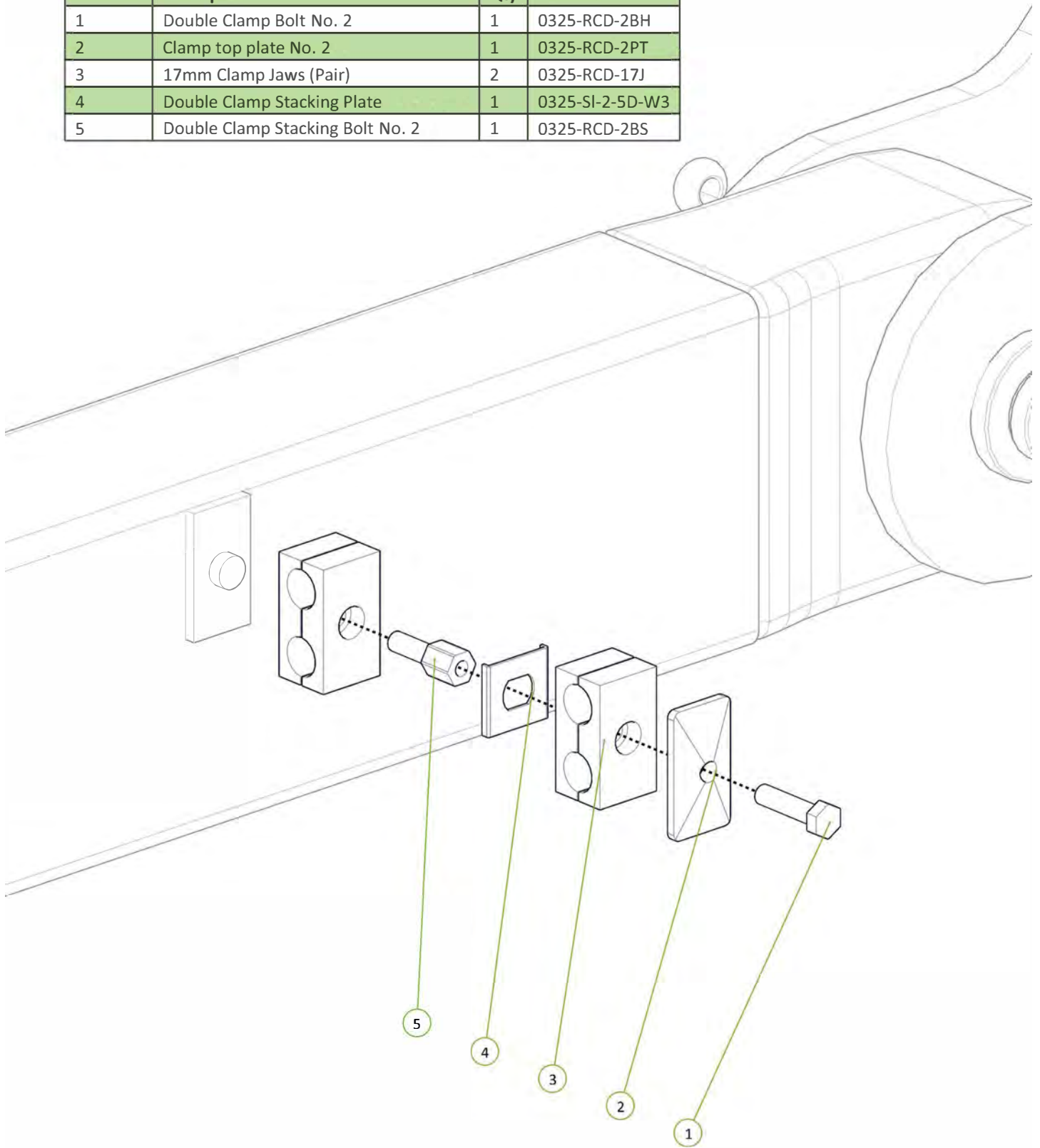




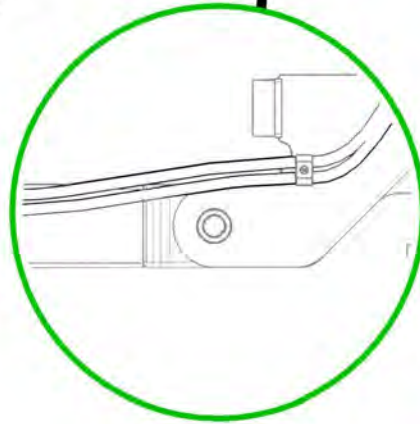
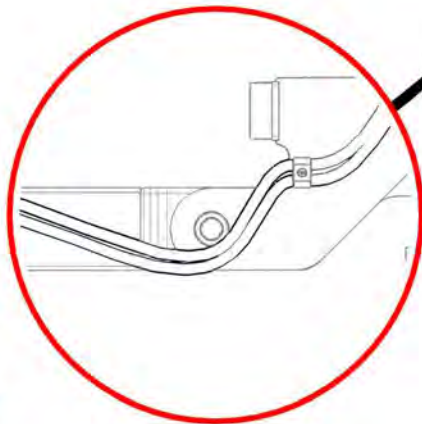
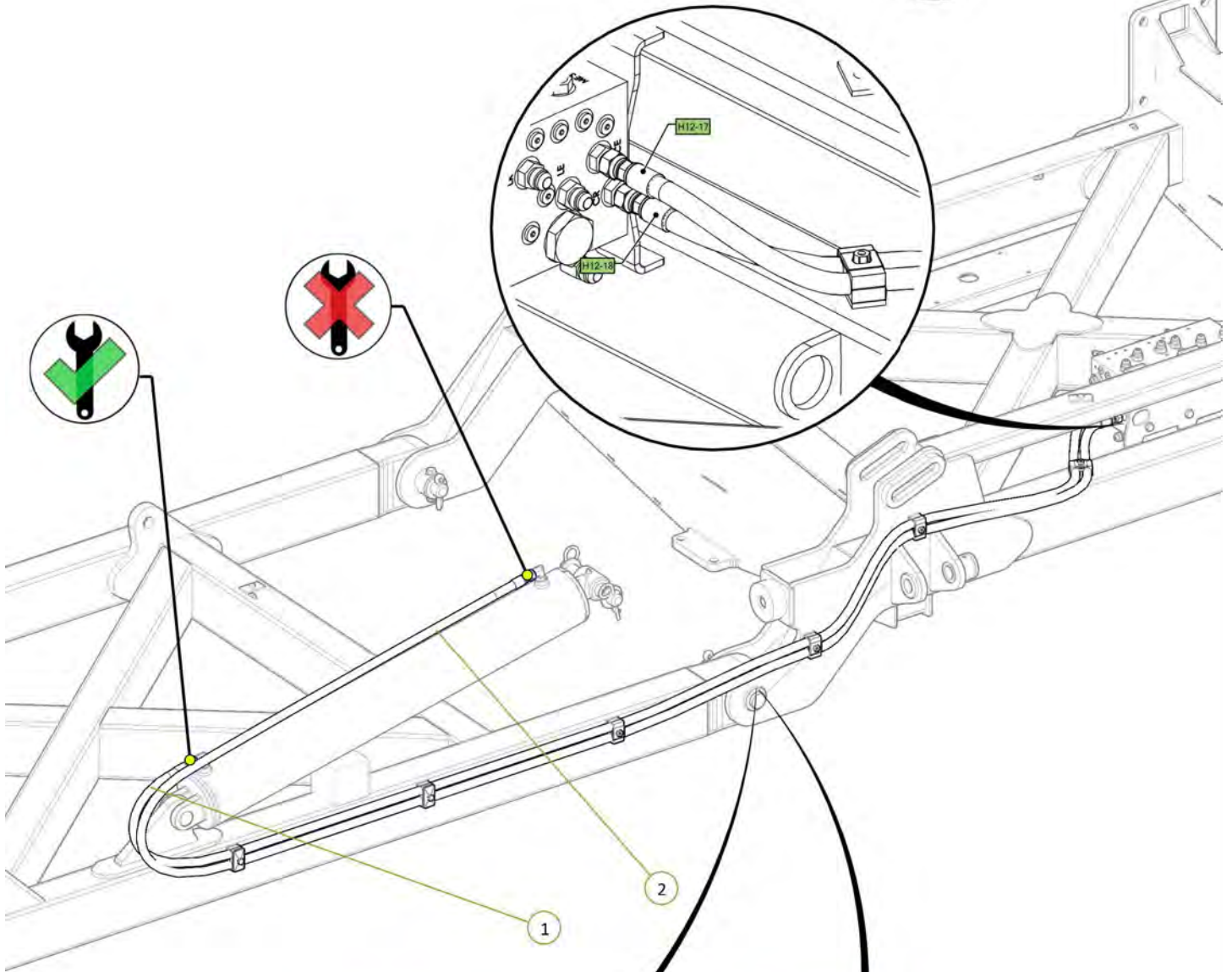
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212



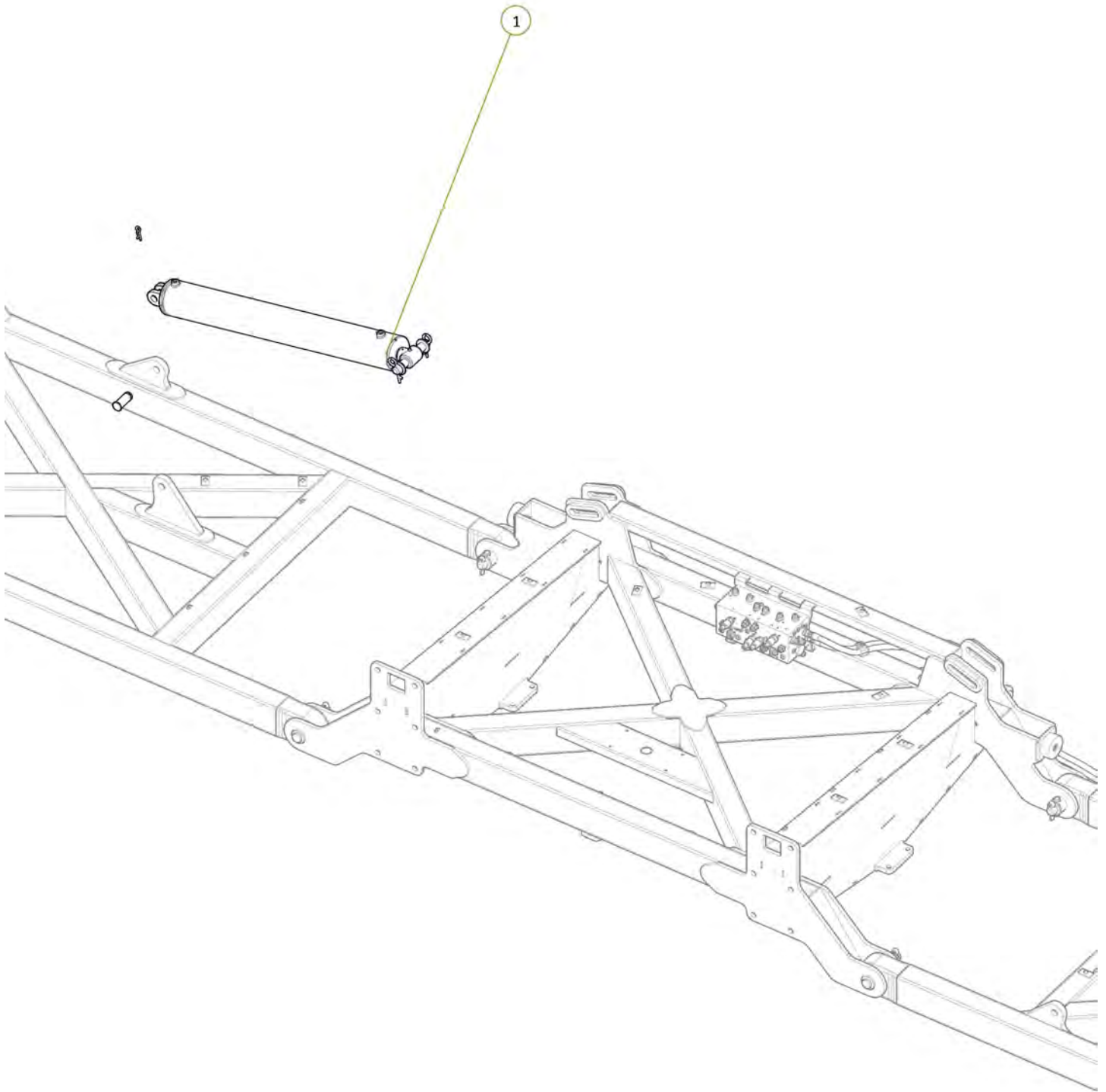
Item No.	Description	Qty	Number
1	Double Clamp Bolt No. 2	1	0325-RCD-2BH
2	Clamp top plate No. 2	1	0325-RCD-2PT
3	17mm Clamp Jaws (Pair)	2	0325-RCD-17J
4	Double Clamp Stacking Plate	1	0325-SI-2-5D-W3
5	Double Clamp Stacking Bolt No. 2	1	0325-RCD-2BS

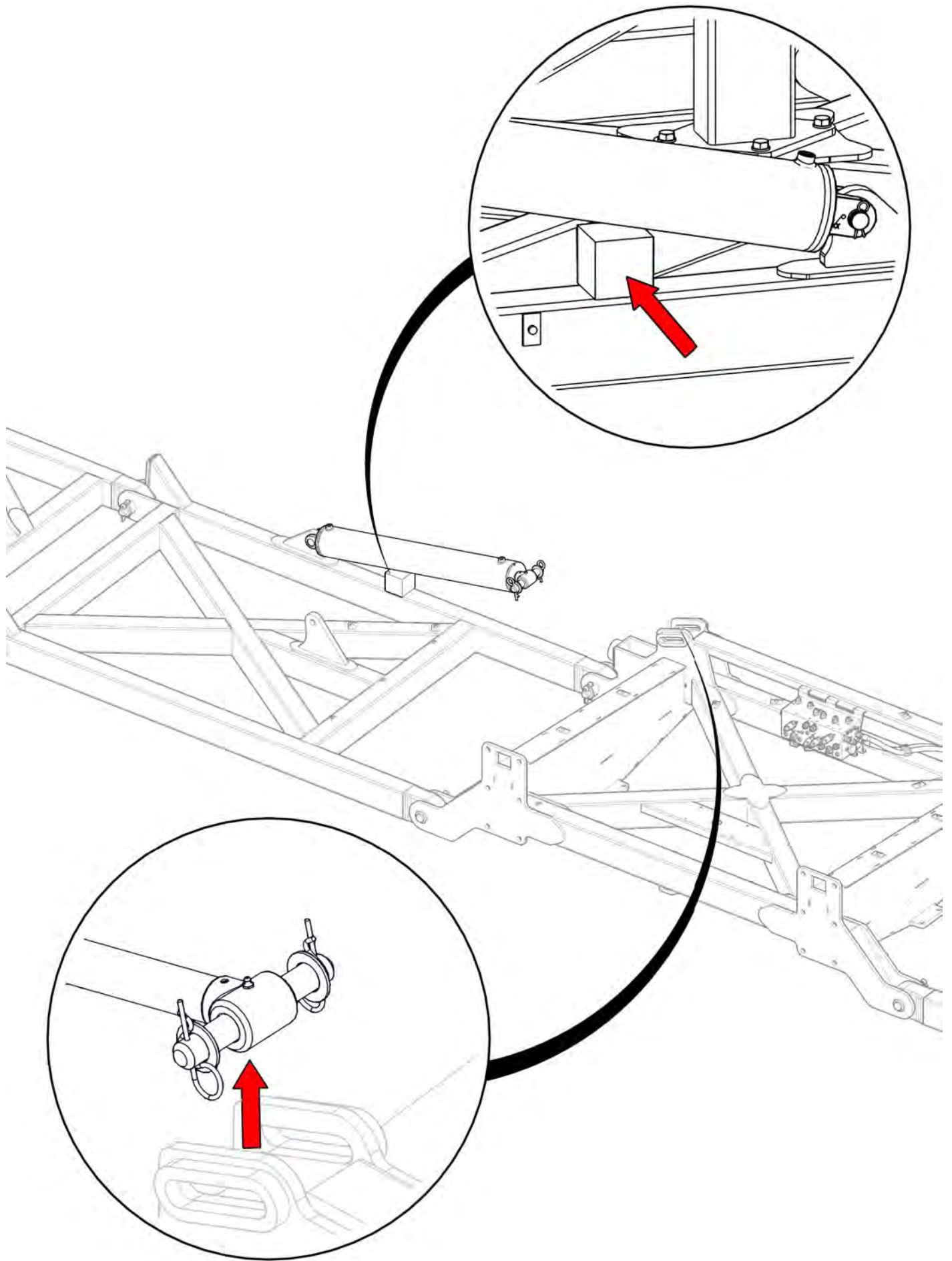


Item No.	Description	Qty	Number
1	Left CE Port to Left Hand Main Wing Cylinder Extend Port	1	H12-17
2	Left CR Port to Left Hand Main Wing Cylinder Retract Port	1	H12-18

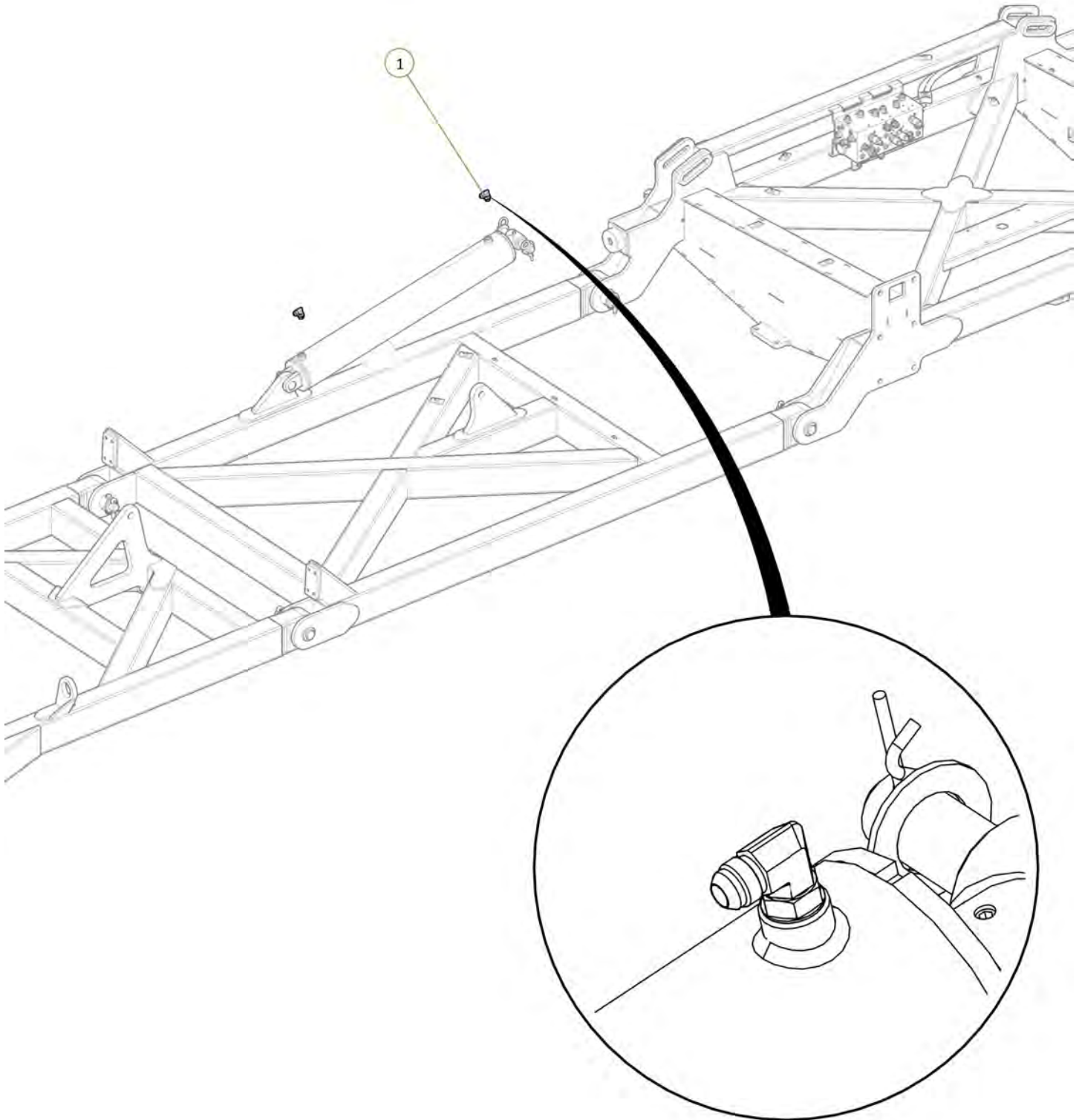


Item No.	Description	Qty	Number
1	5" Bore 36" Stroke 3 1/8" S/Tube 2" Rod Hydraulic Cylinder	1	0311-536ST

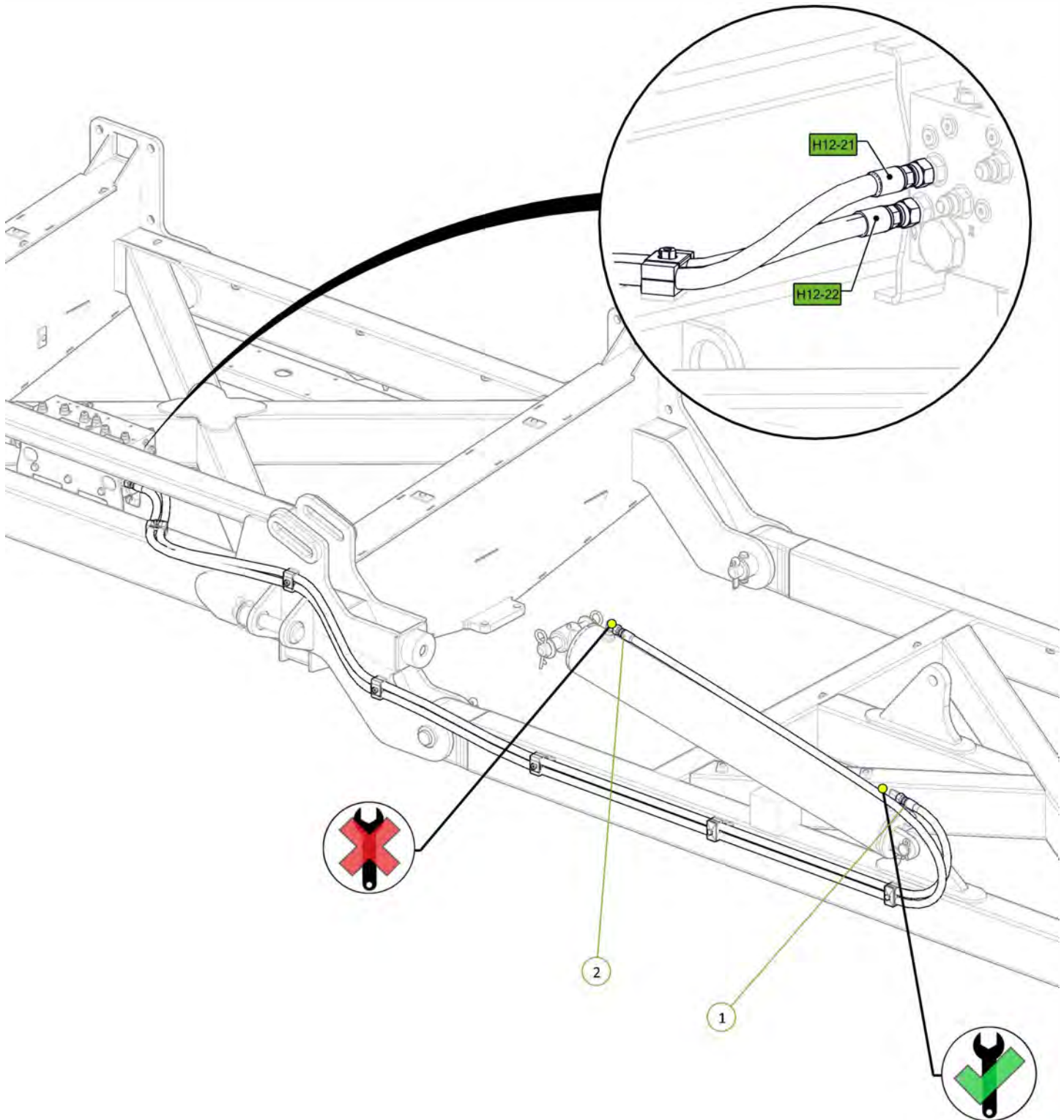




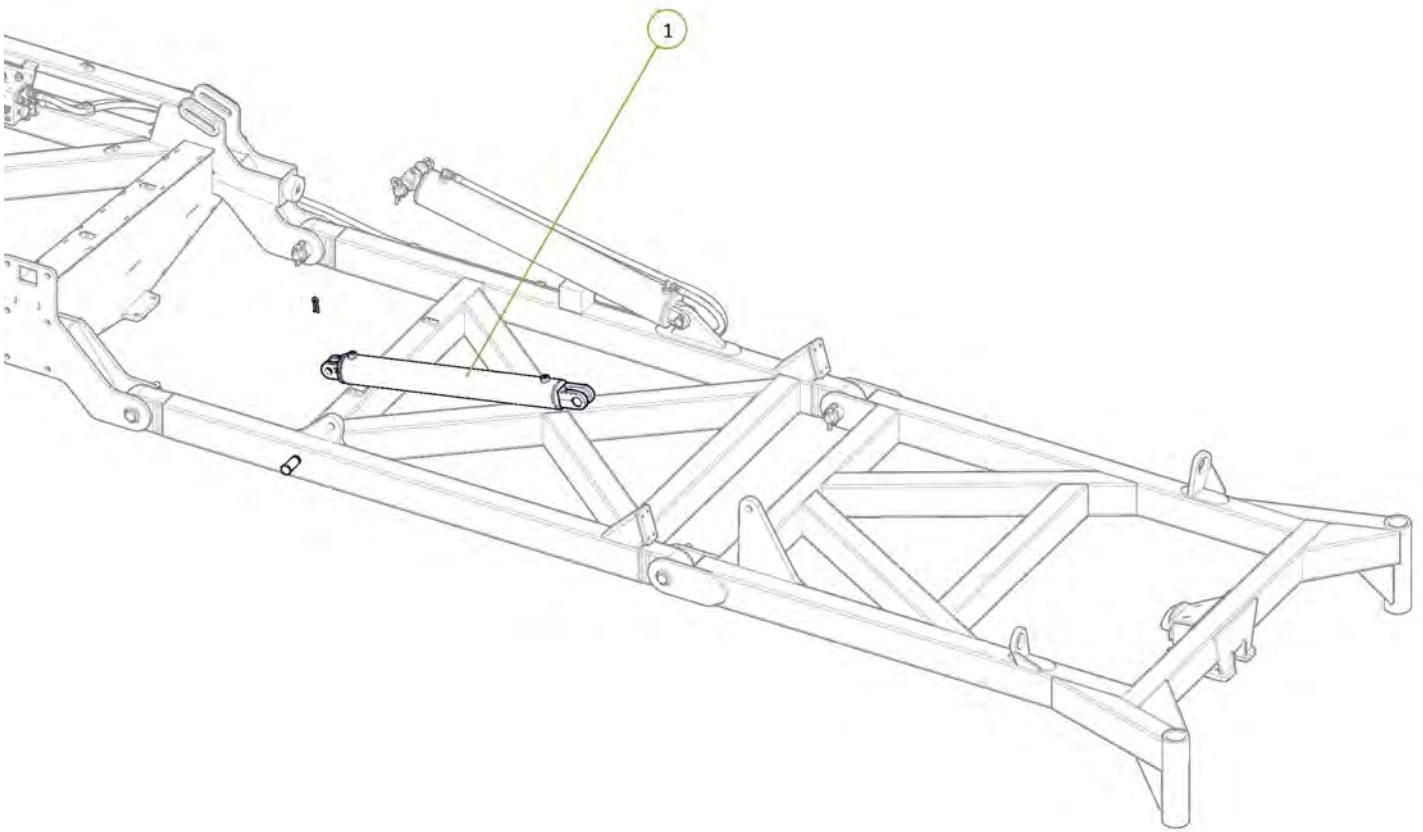
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212

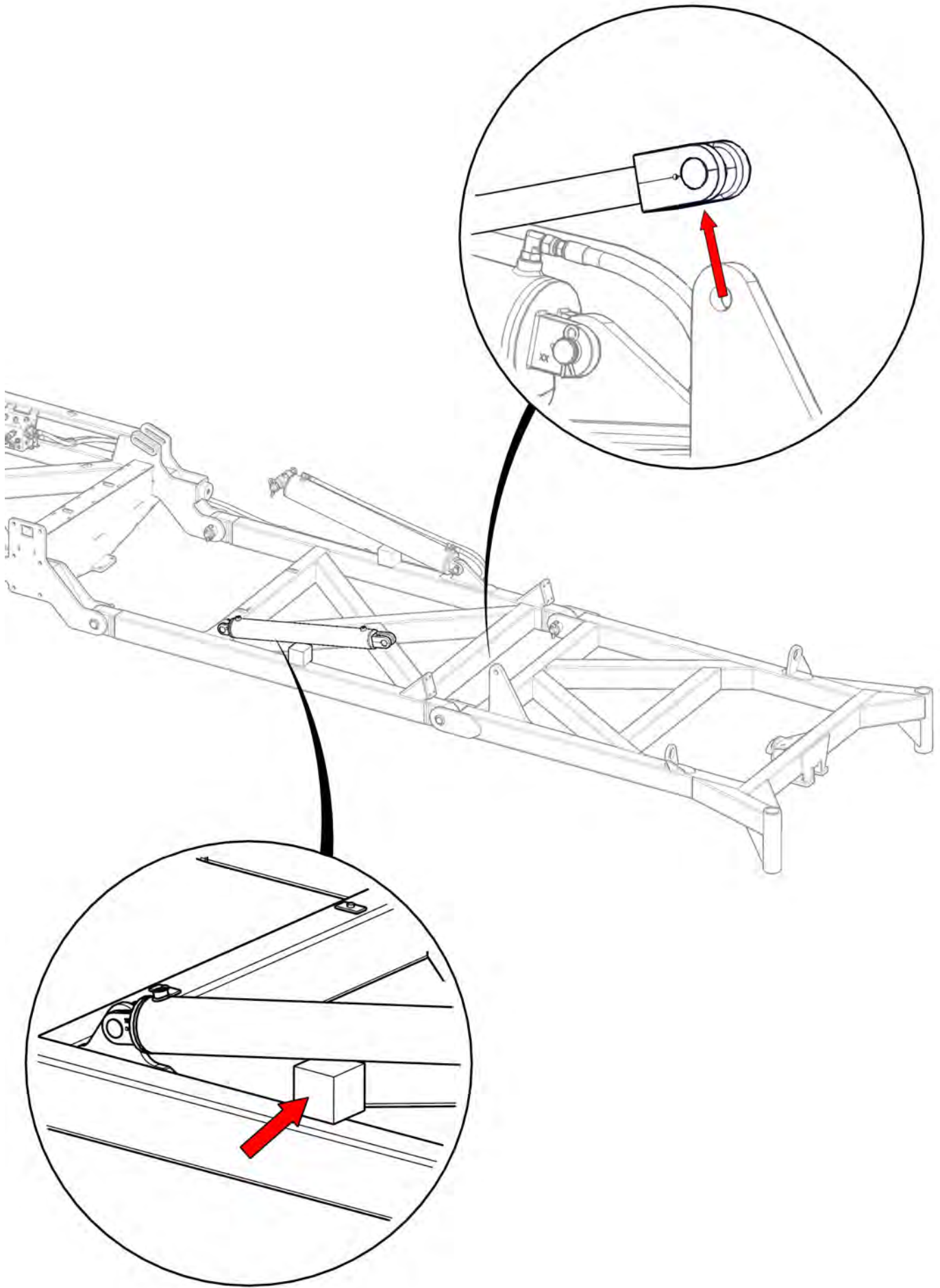


Item No.	Description	Qty	Number
1	Right CE Port to Right Hand Main Wing Cylinder Extend Port	1	H12-21
2	Right CR Port to Right Hand Main Wing Cylinder Retract Port	1	H12-22

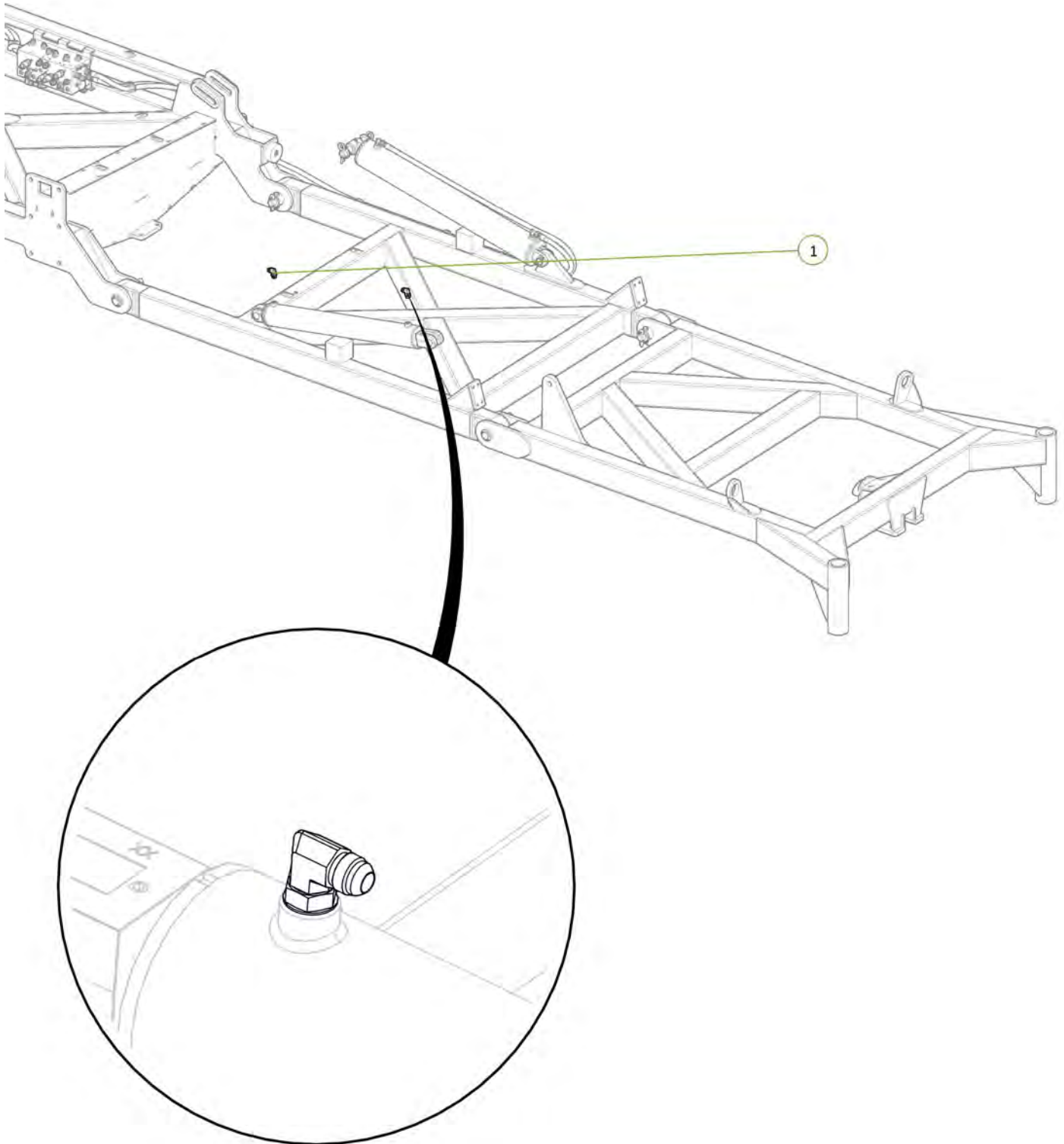


Item No.	Description	Qty	Number
1	4" Bore 30" Stroke 3" S/Tube 1.75" Rod Hydraulic Cylinder with Stop Tube & Clevis	1	0311-430ST-C2

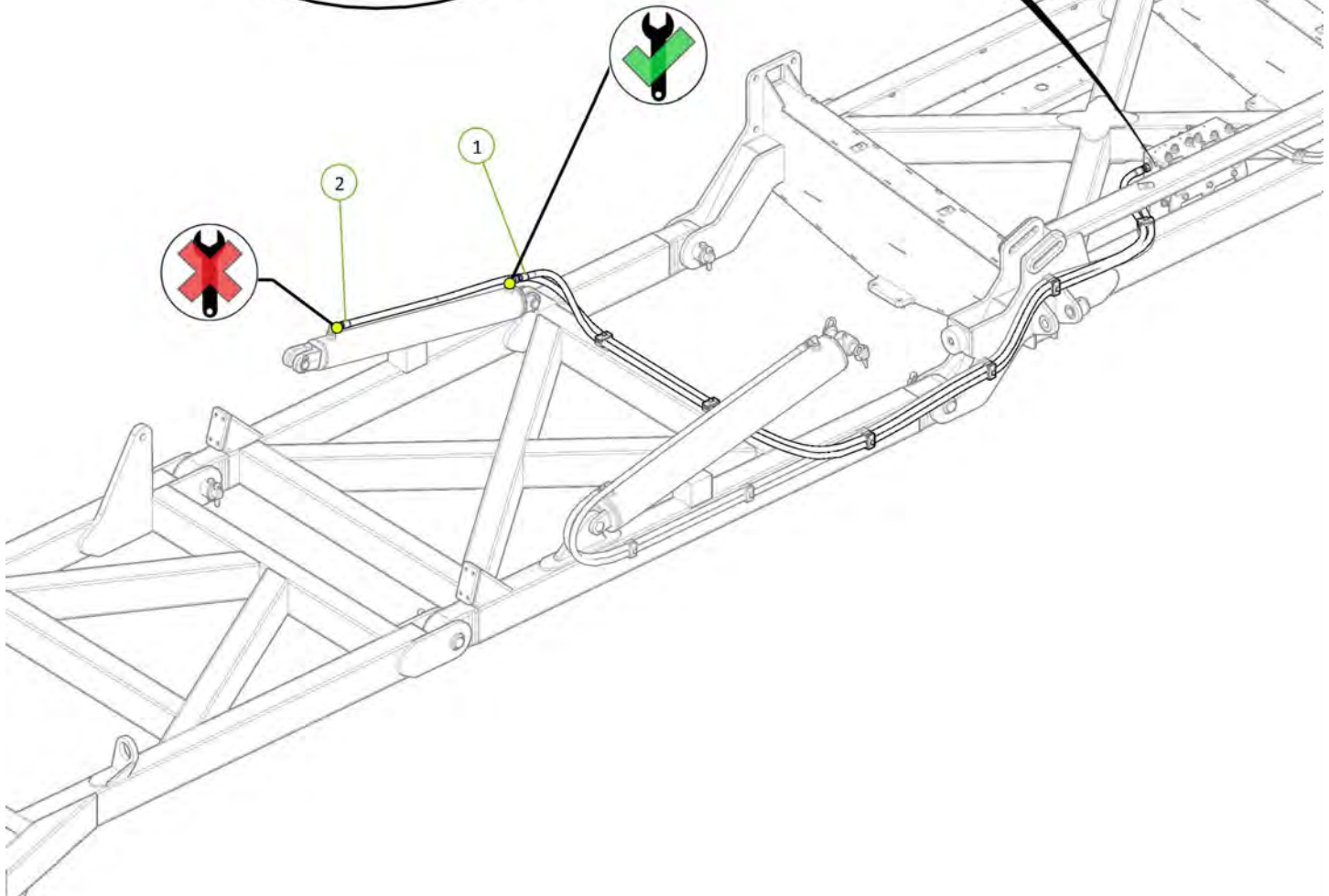
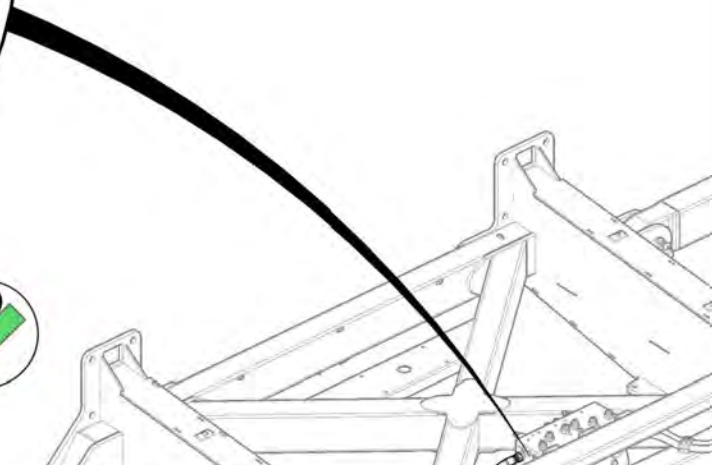
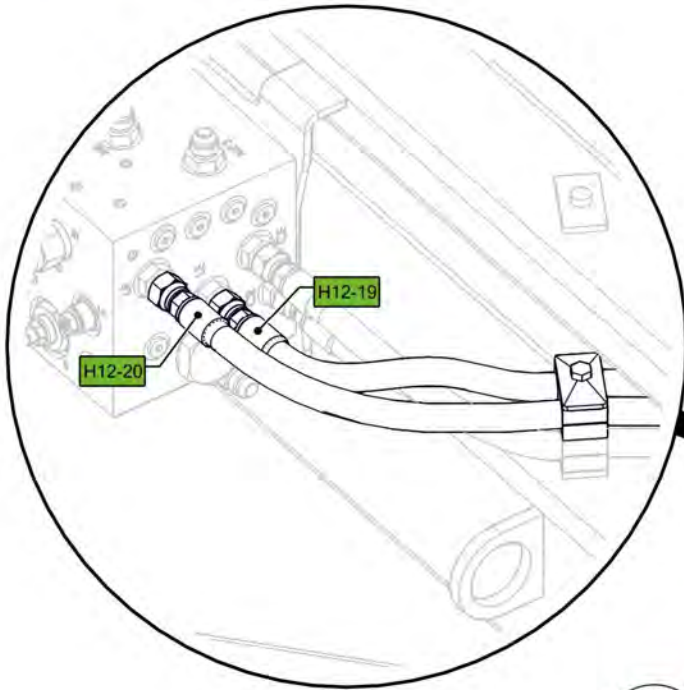




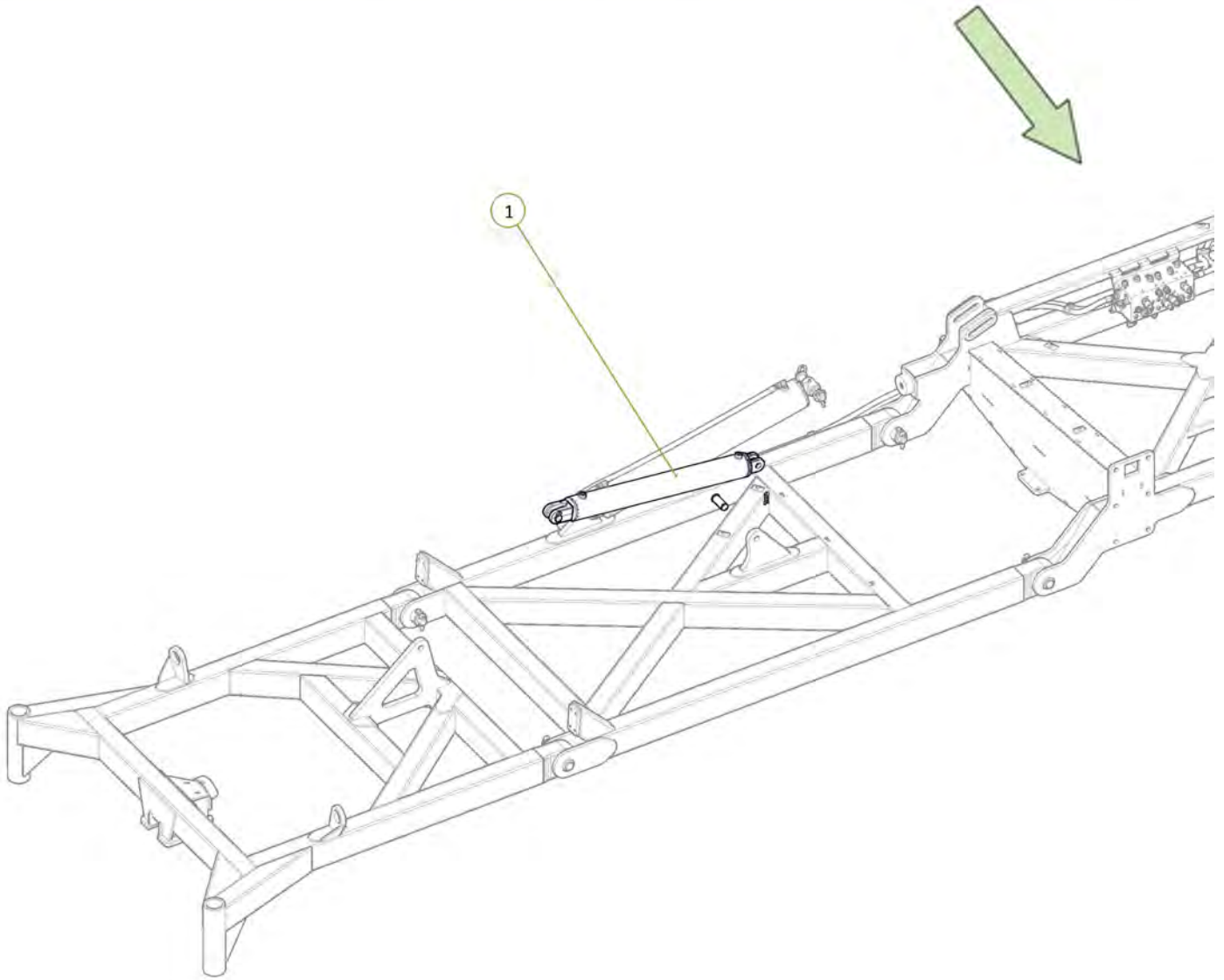
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212

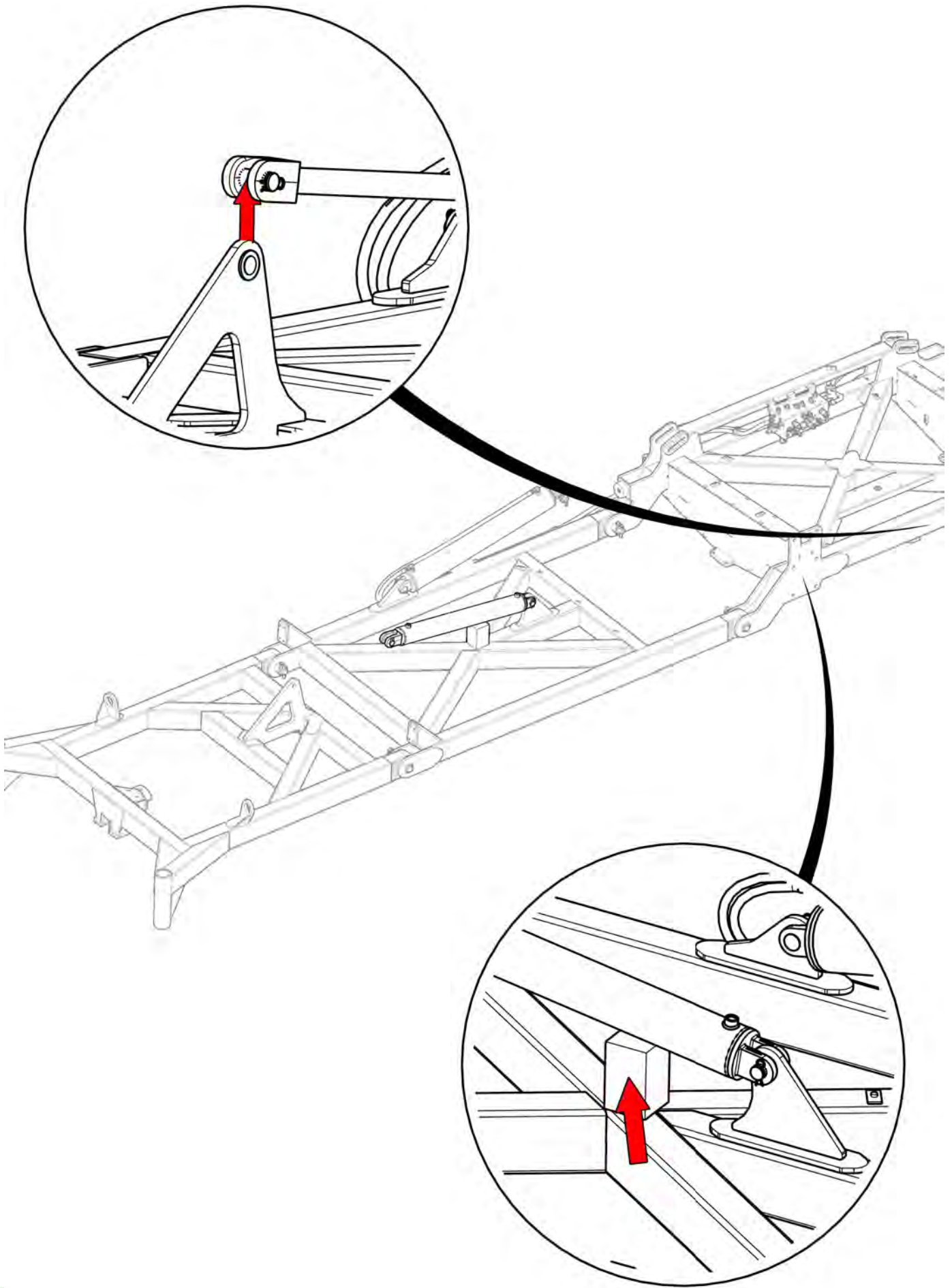


Item No.	Description	Qty	Number
1	LE Port to Left Hand Outer Wing Cylinder Extend Port	1	H12-19
2	LR Port to Left Hand Outer Wing Cylinder Retract Port	1	H12-20

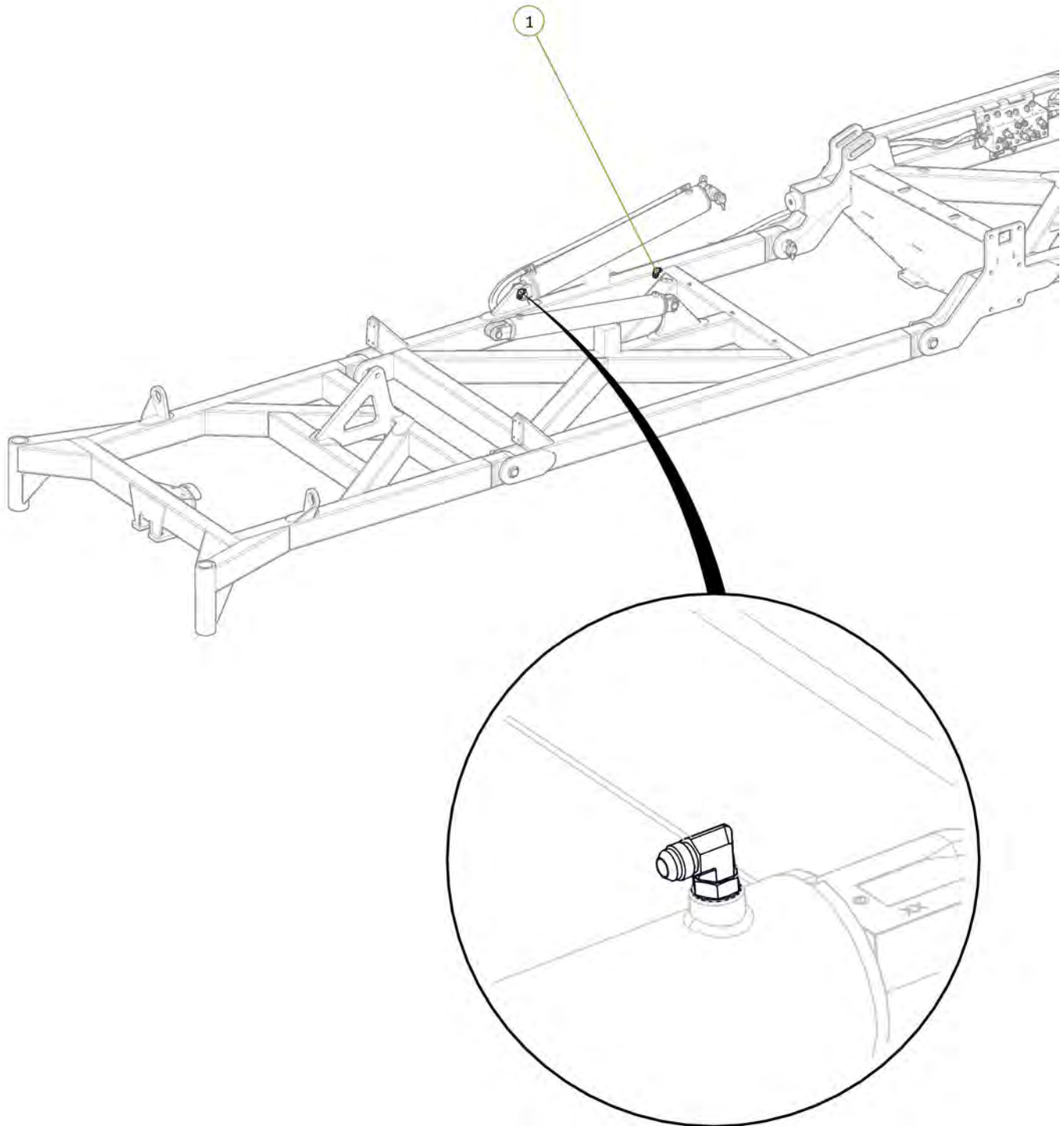


Item No.	Description	Qty	Number
1	4" Bore 30" Stroke 3" S/Tube 1.75" Rod Hydraulic Cylinder with Stop Tube & Clevis	1	0311-430ST-C2

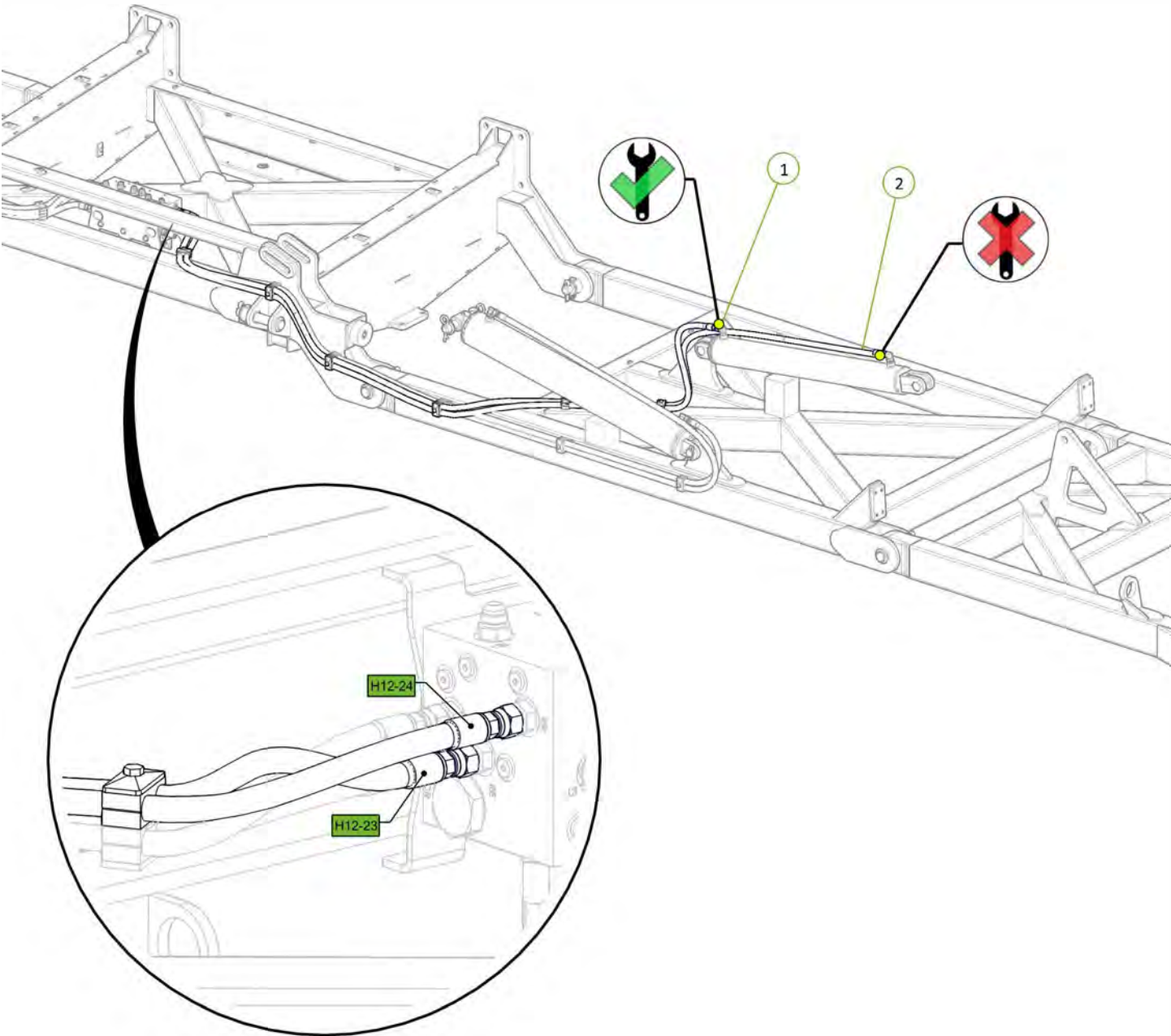




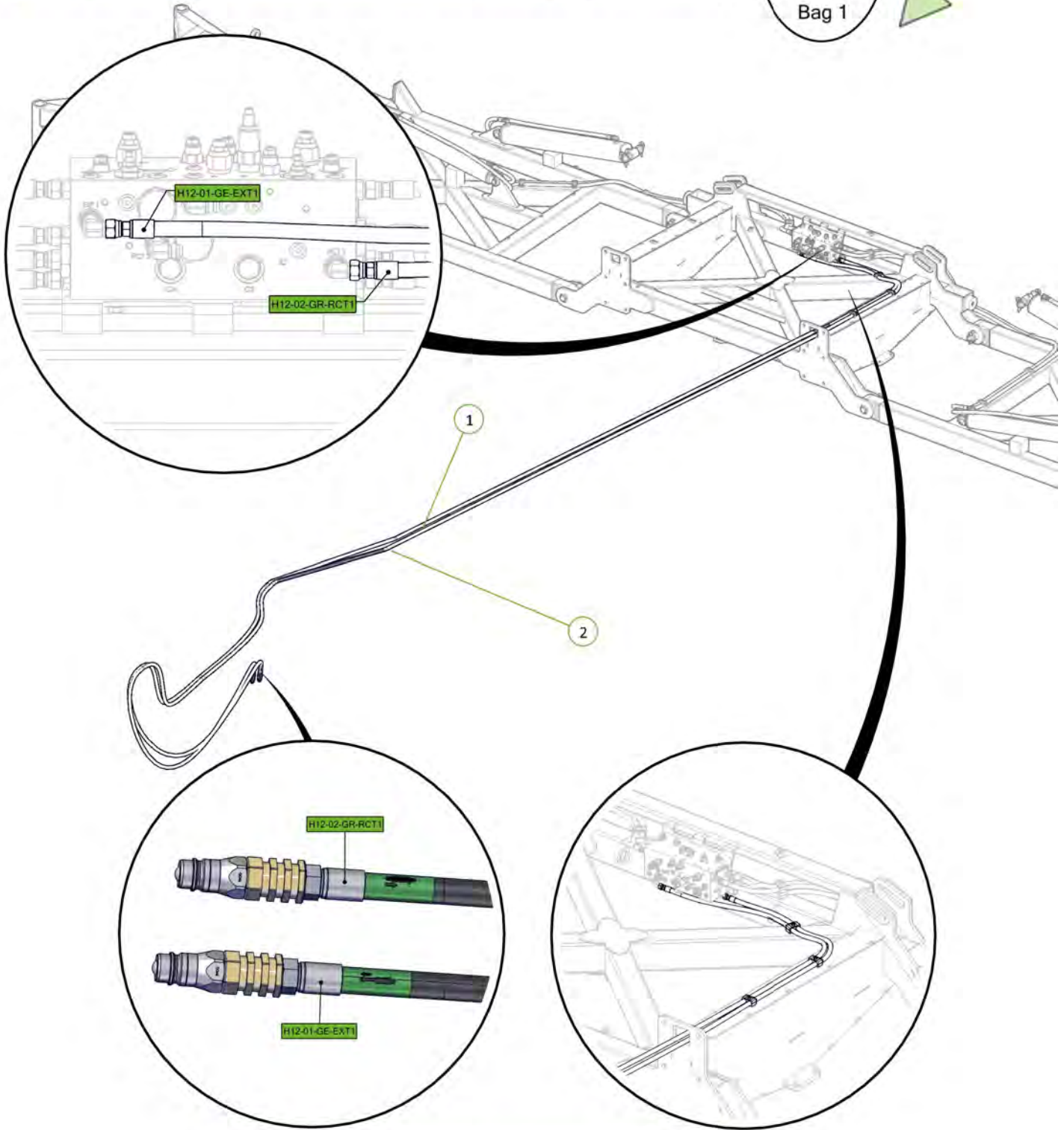
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212



Item No.	Description	Qty	Number
1	RE Port to Right Hand Outer Wing Cylinder Extend Port	1	H12-23
2	RR Port to Right Hand Outer Wing Cylinder Retract Port	1	H12-24



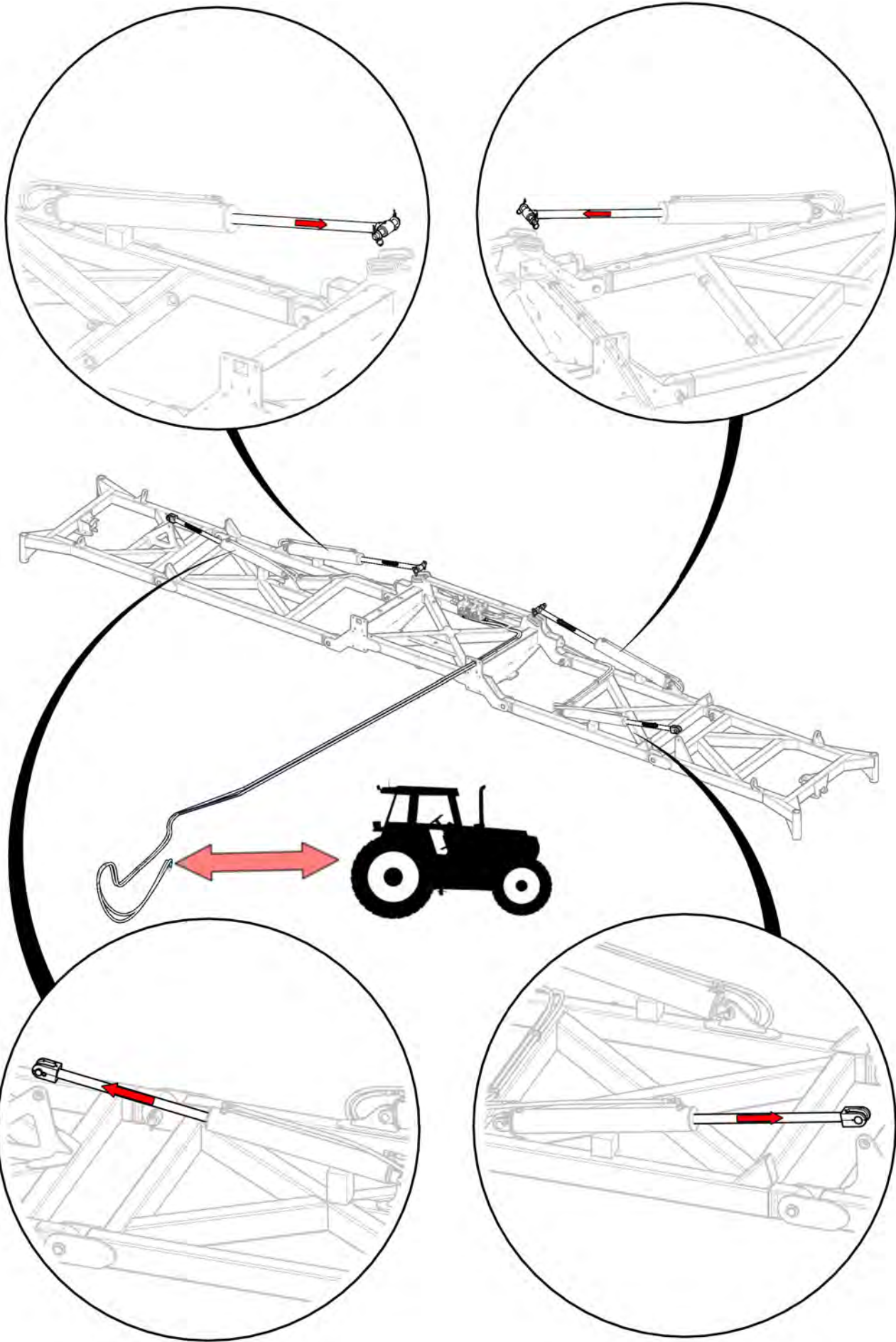
Item No.	Description	Qty	Number
1	Tractor to Sequence Valve EXT1 Port Fitted With Green EXT Decal	1	H12-01-GE-EXT1
2	Tractor to Sequence Valve RCT1 Port Fitted With Green RET Decal	1	H12-02-GR-RCT1

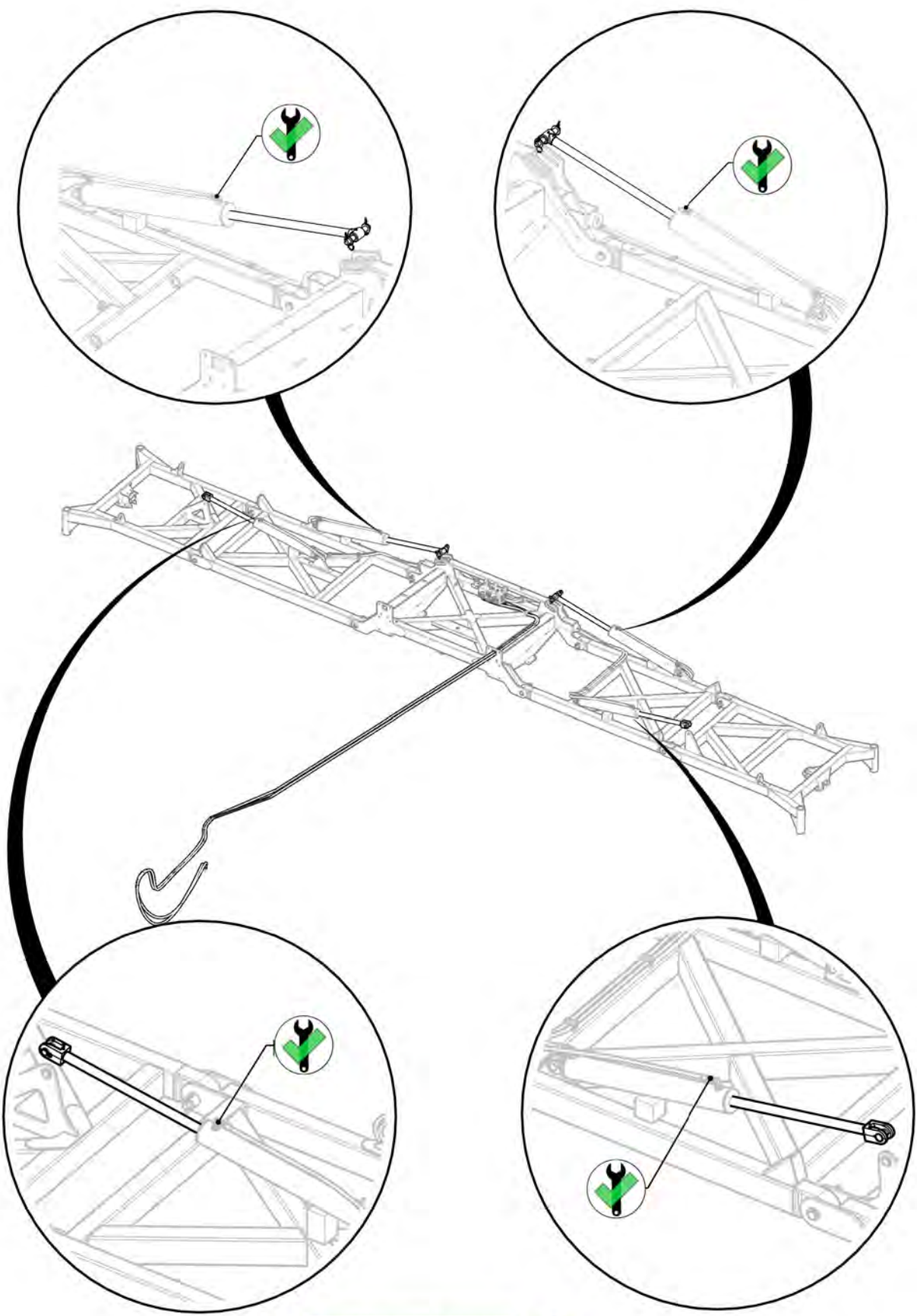



All retract hose fittings loose to allow air to escape

All cylinders chocked up to prevent clash during extend

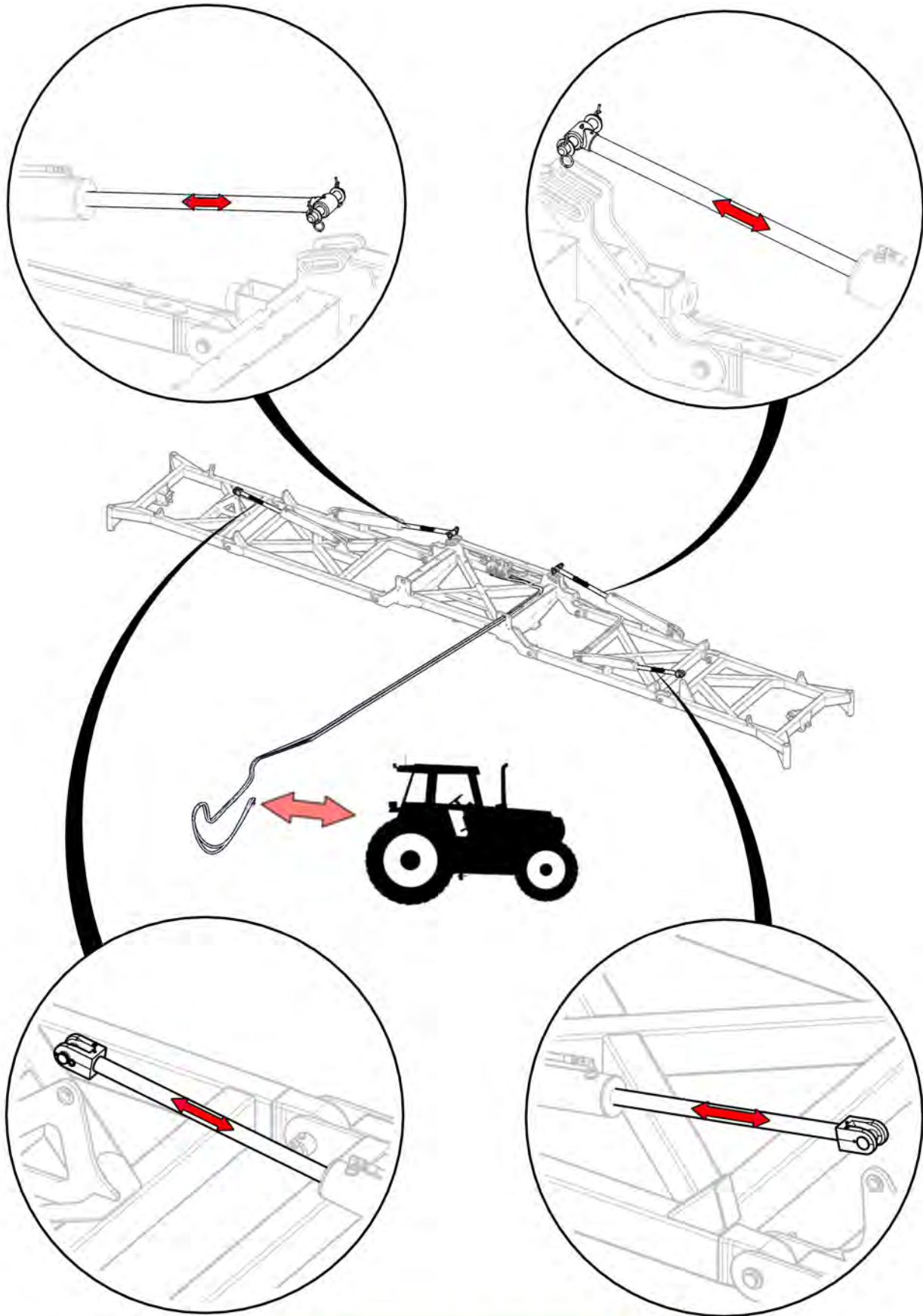
Signed _____ Date ____/____/____
 Unit Serial Number _____





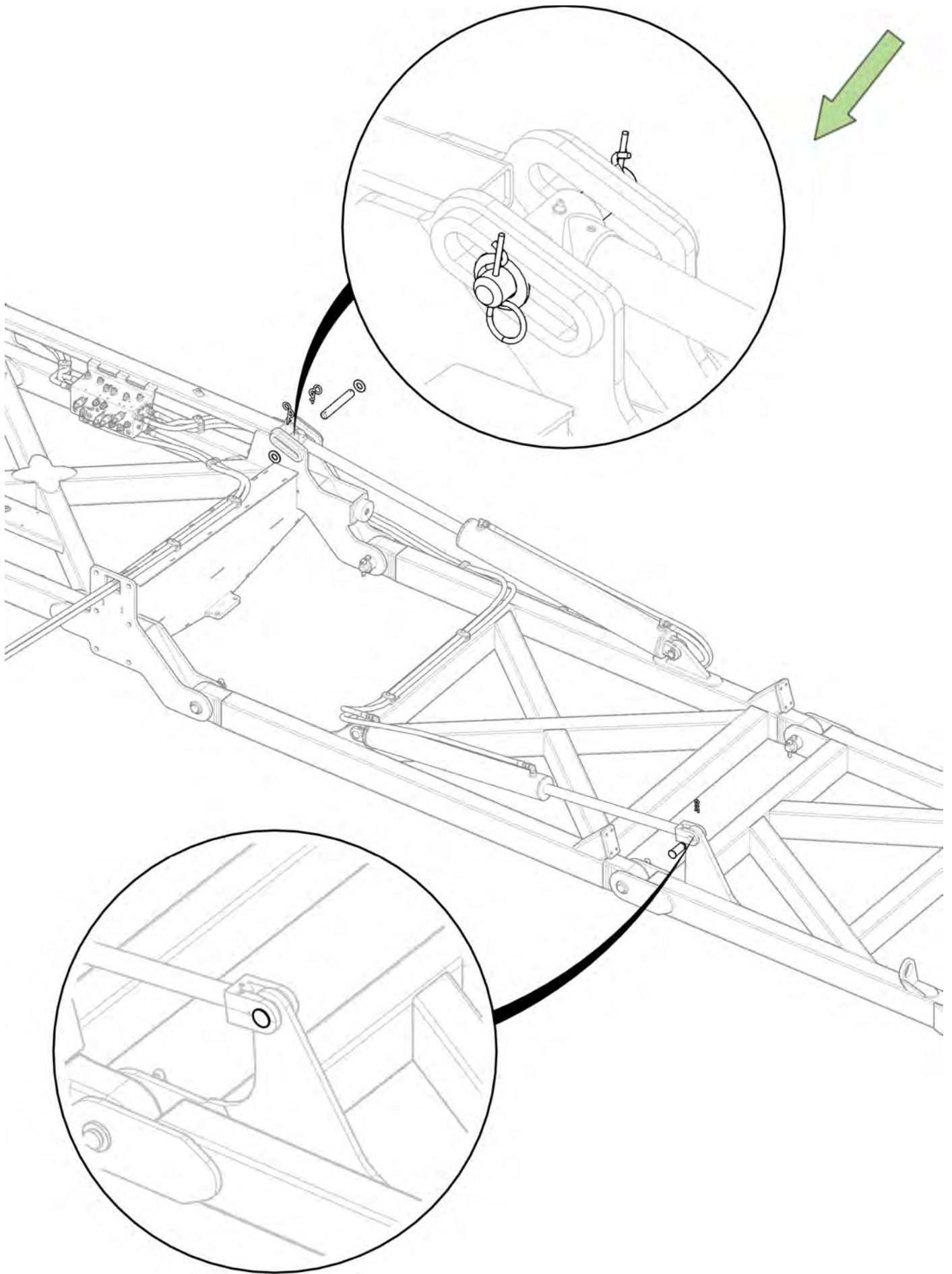
Retract fittings tightened 

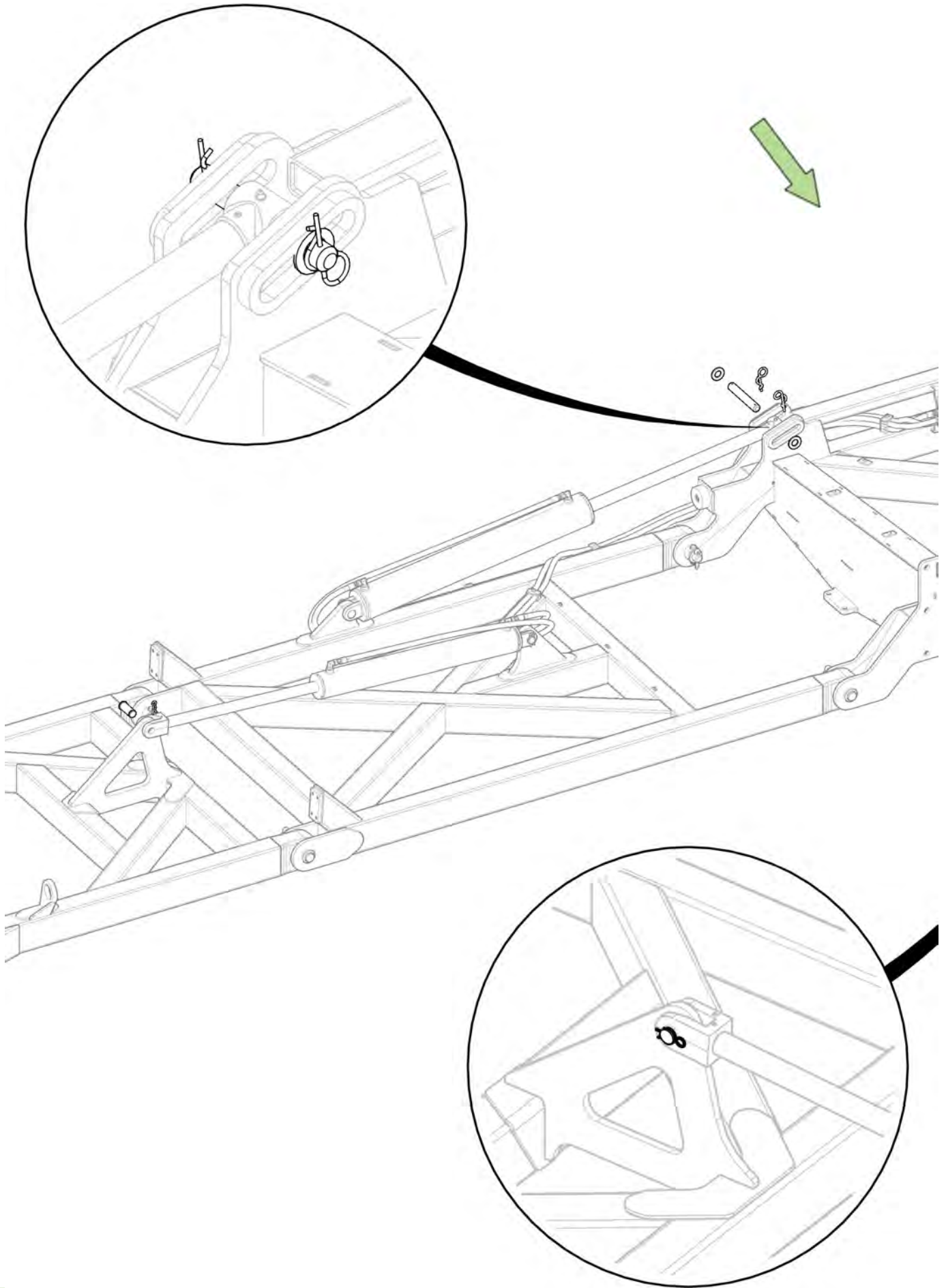
Signed _____ Date ____/____/____
 Unit Serial Number _____



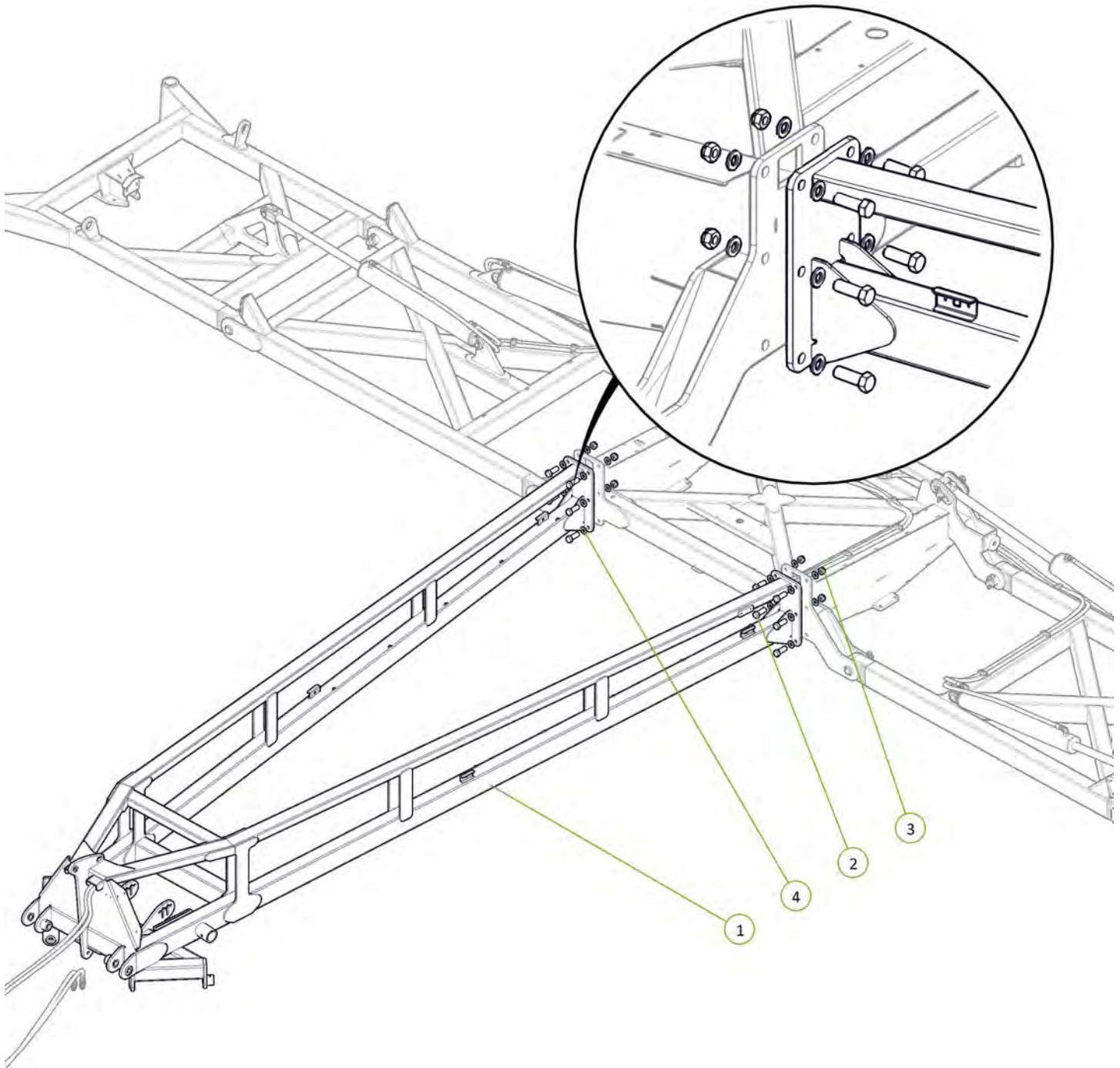
Cylinders cycled to expel air from system ○

Signed _____ Date __/__/__
 Unit Serial Number _____

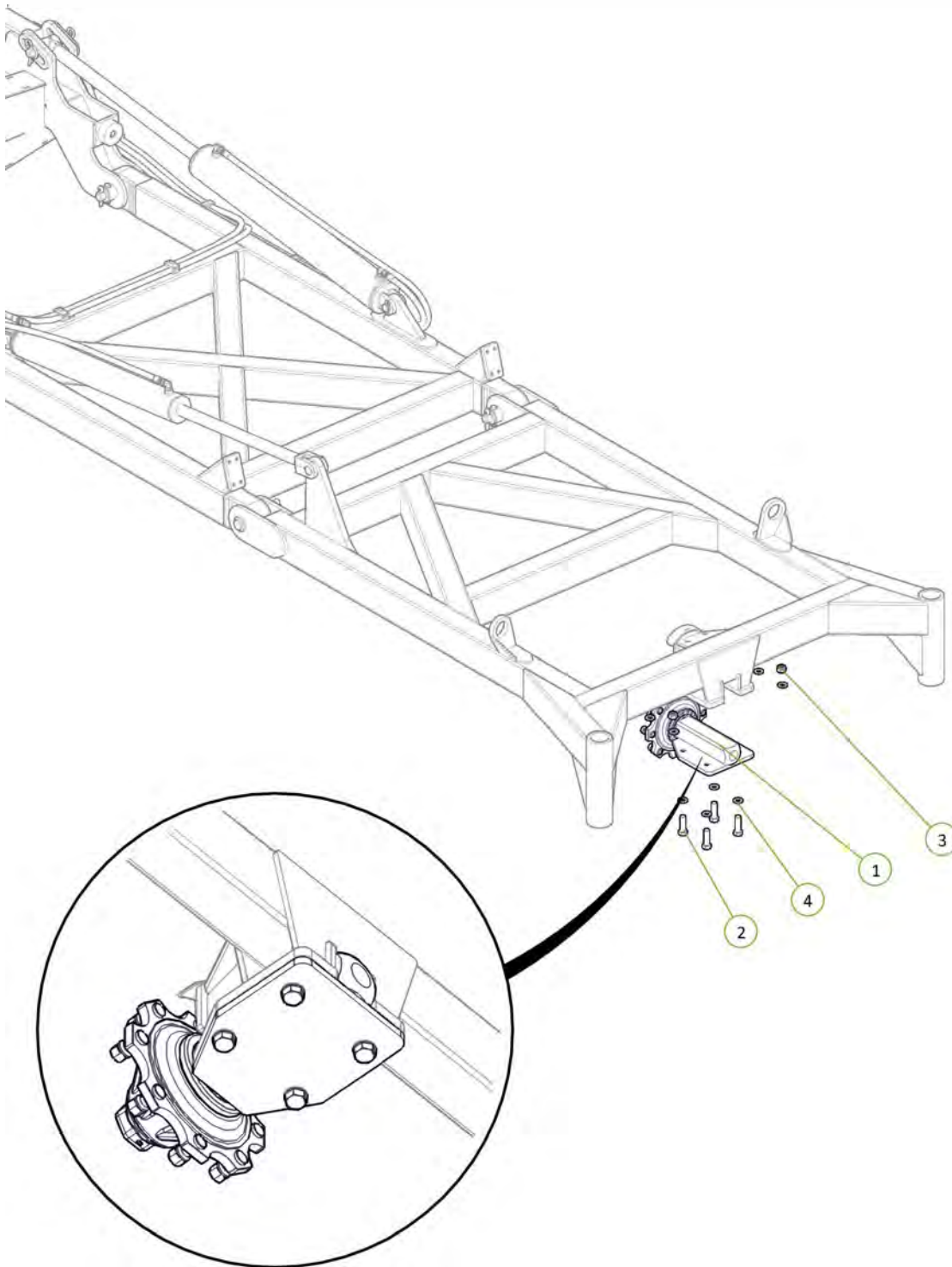




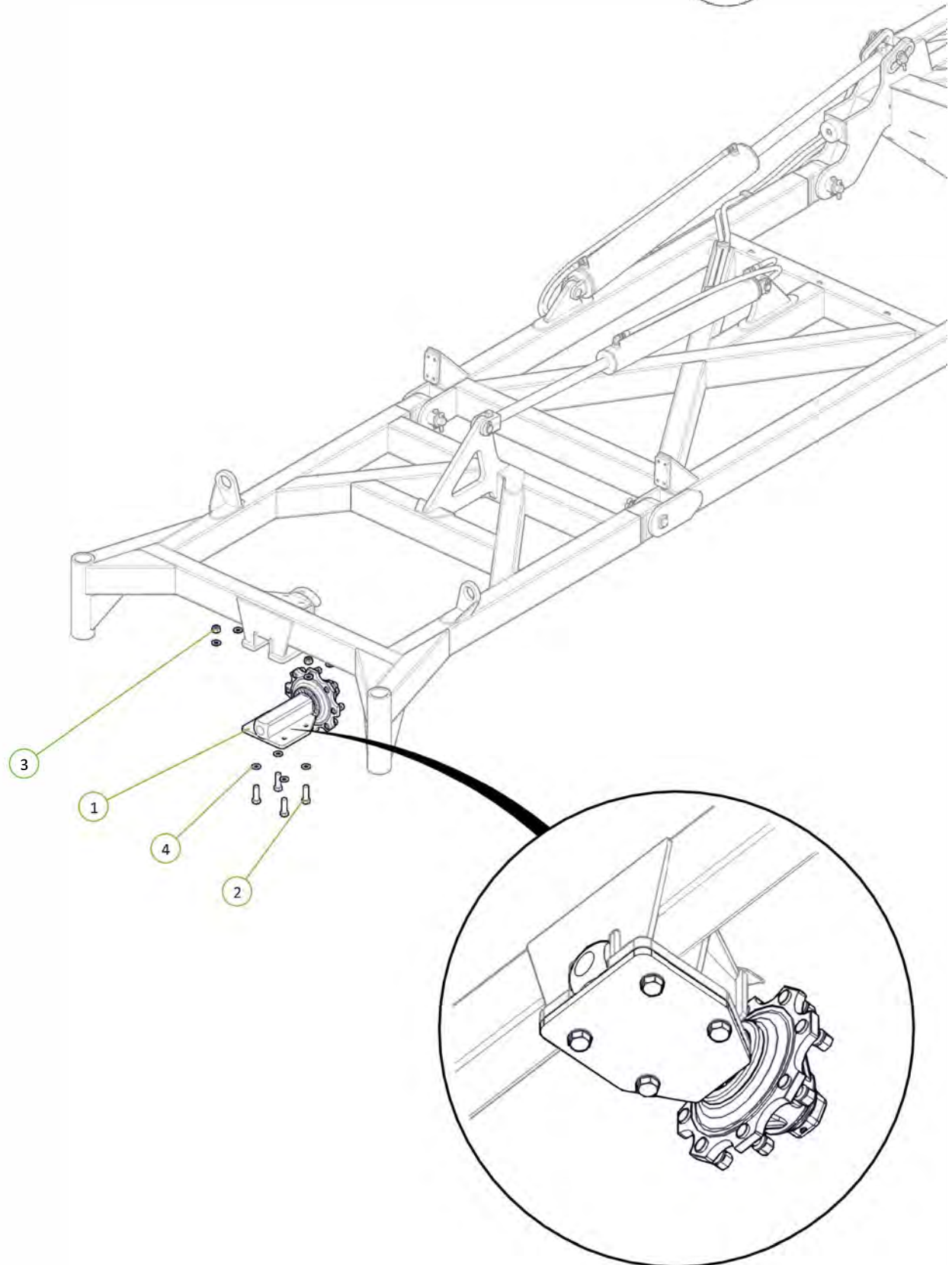
Item No.	Description	Qty	Number
1	Front A Frame	1	1540-02E
2	M24 x 65 grade 8.8 zp Bolt	12	0211-2465
3	Nyloc Nut M24	12	0221-NYL24
4	Washer Flat M24	24	0231-F24



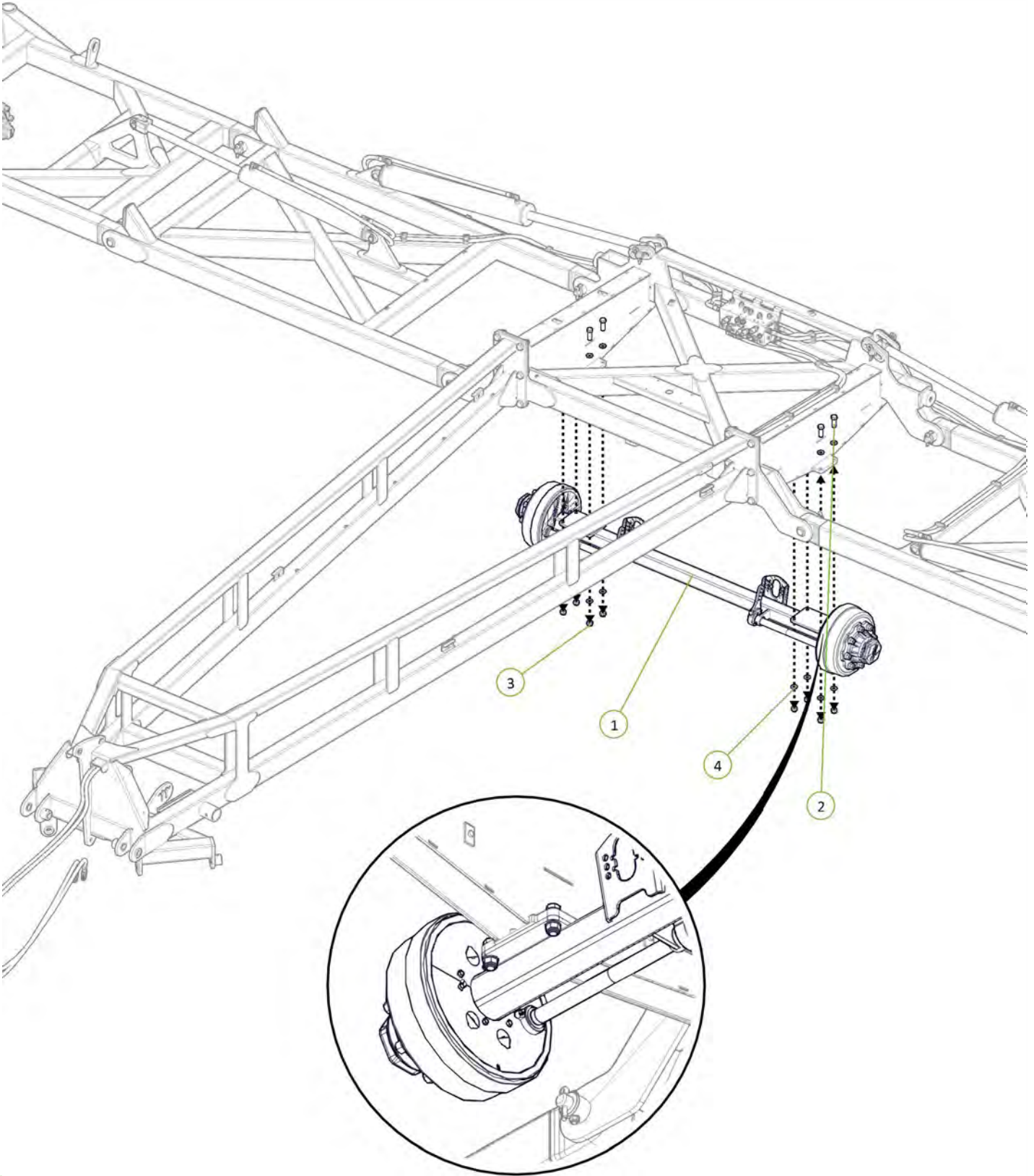
Item No.	Description	Qty	Number
1	Monroc 808X 80mm Square Stub Axle 315mm 8 on 275 PCD	1	0733-808X-315
2	M20 x 70 Grade 8.8 ZP Bolt	4	0211-2070
3	Nyloc Nut M20	4	0221-NYL20
4	Washer Flat M20	8	0231-F20



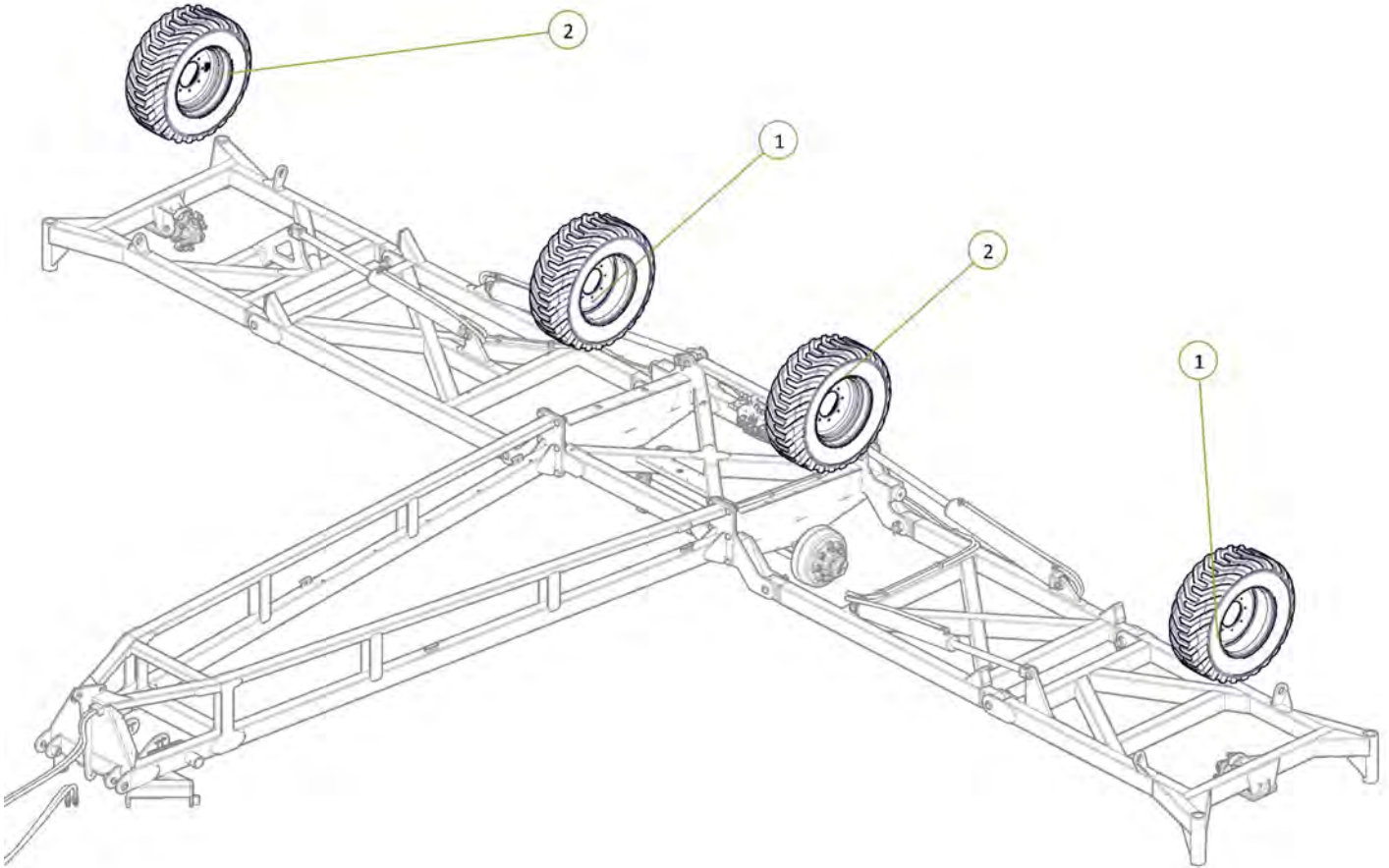
Item No.	Description	Qty	Number
1	Monroc 808X 80mm Square Stub Axle 315mm 8 on 275 PCD	1	0733-808X-315
2	M20 x 70 grade 8.8 ZP Bolt	4	0211-2070
3	Nyloc Nut M20	4	0221-NYL20
4	Washer Flat M20	8	0231-F20



Item No.	Description	Qty	Number
1	Monroc Beam Axle	1	0733-908XFR406X120-V2570J
2	M20 x 65 Grade 8.8 ZP Bolt	8	0211-2065
3	Nyloc Nut M20	8	0221-NYL20
4	Washer Flat M20	16	0231-F20



Item No.	Description	Qty	Number
1	400/55-22.5 Tyre on 8 on 275mm PCD Zero Offset Rim (Left Hand)	2	0751-400-55-22.5-8-275-0-L
2	400/55-22.5 Tyre on 8 on 275mm PCD Zero Offset Rim (Right Hand)	2	0751-400-55-22.5-8-275-0-R

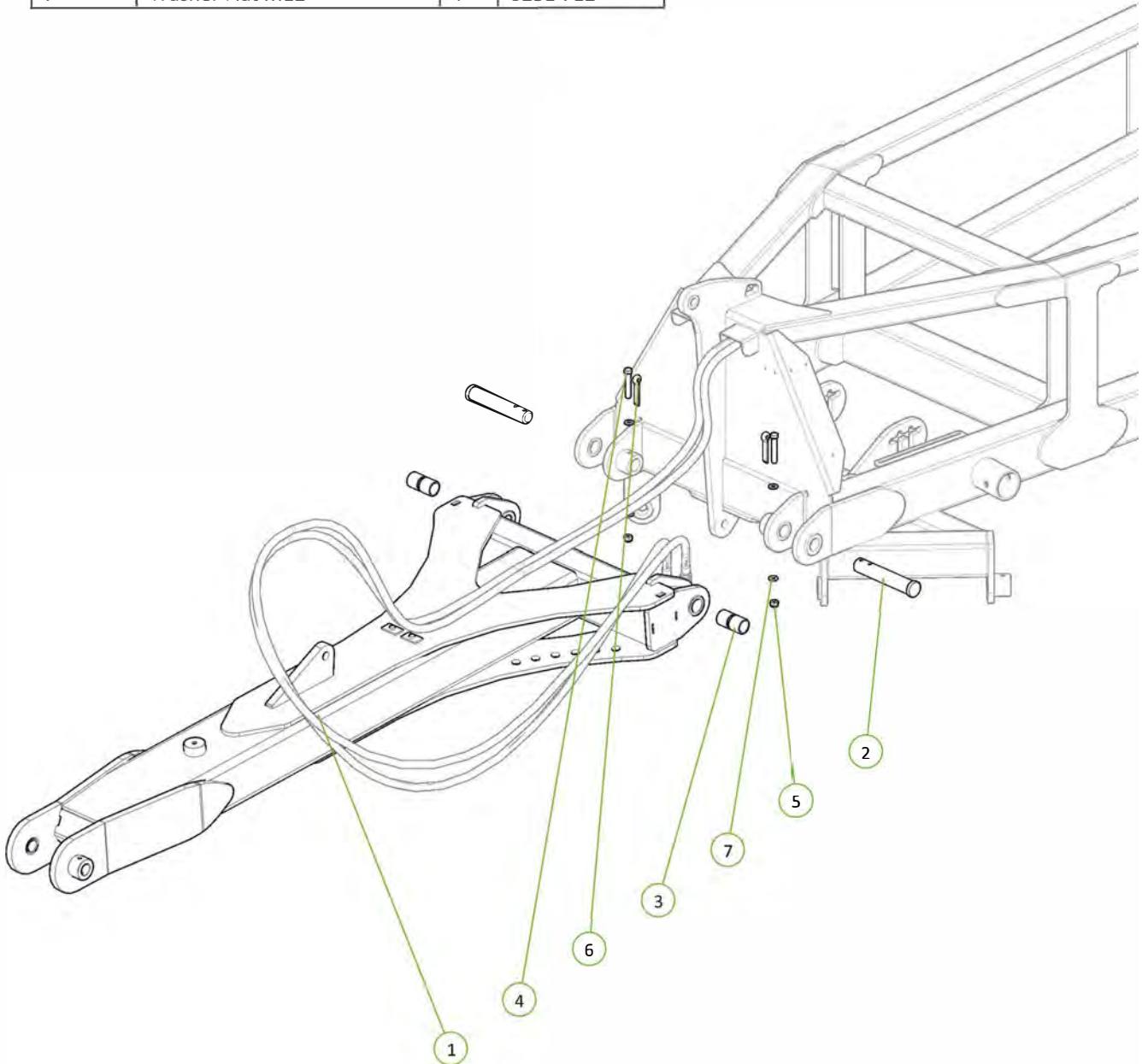


All wheel nuts tightened to 100ft-lb / 140Nm

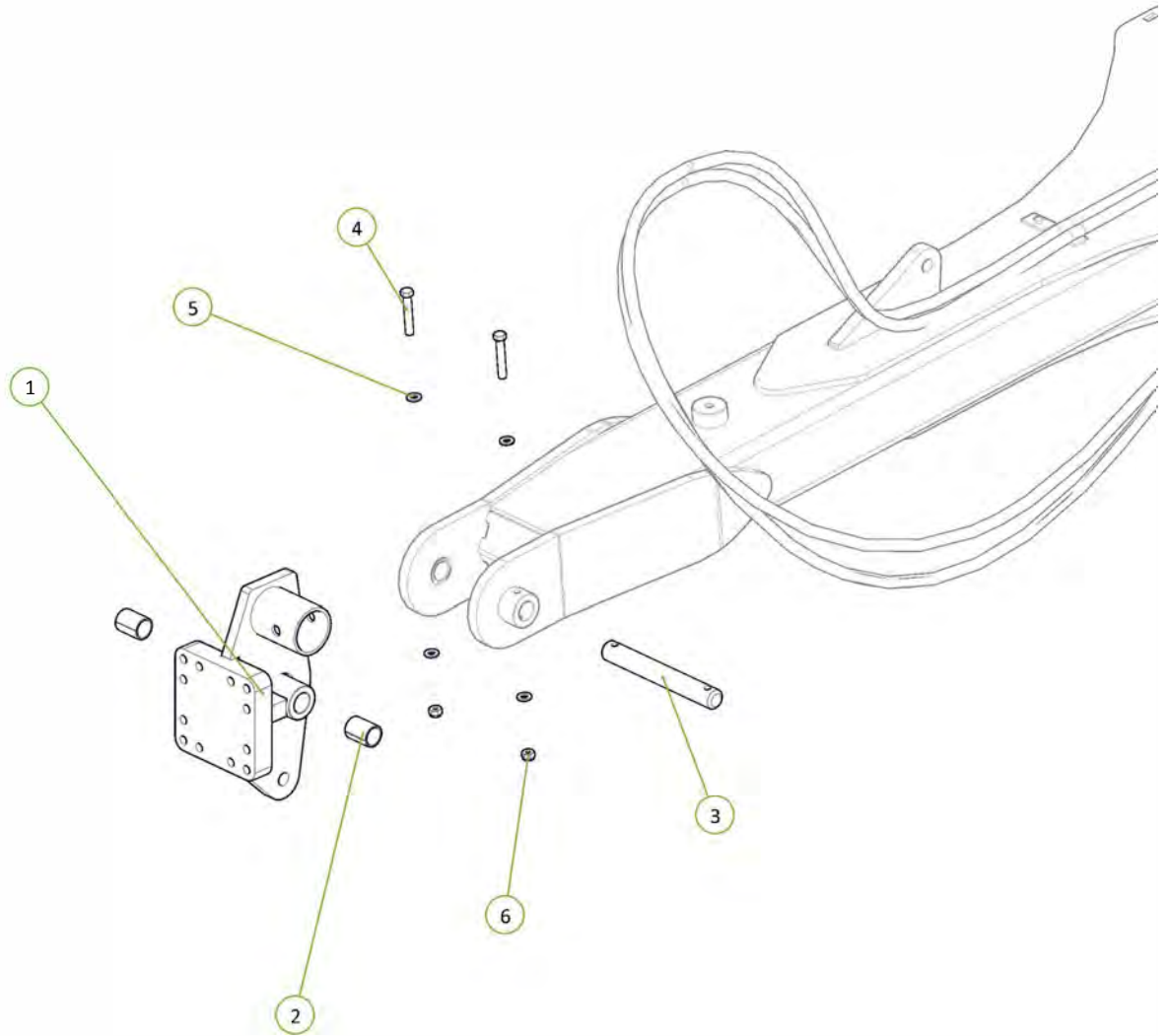
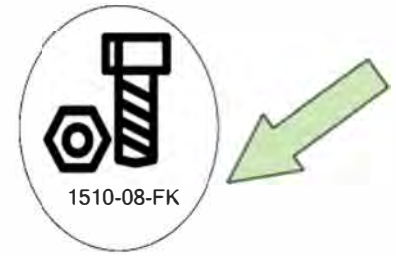


Signed _____ Date ___/___/___
 Unit Serial Number _____

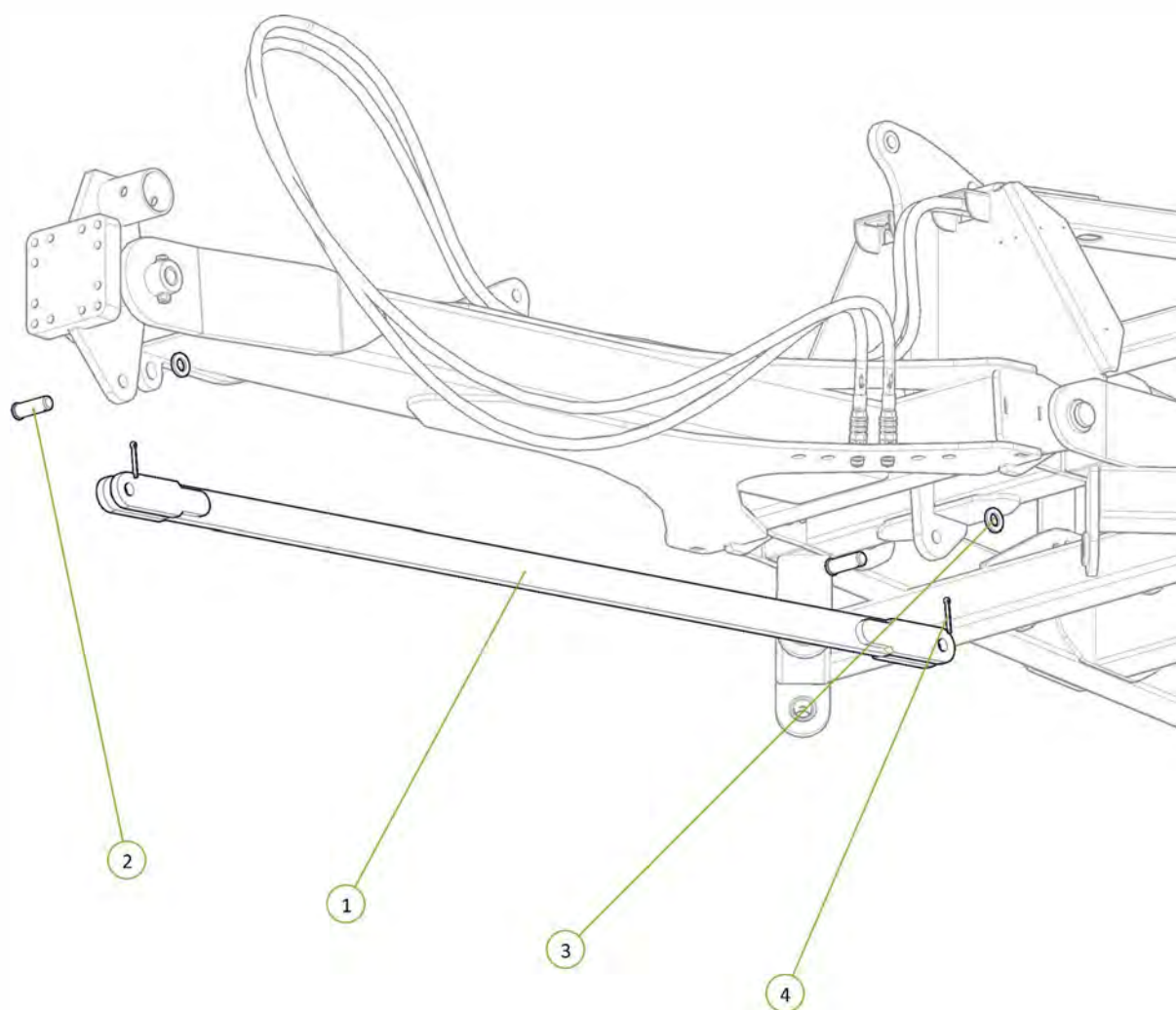
Item No.	Description	Qty	Number
1	Tapered T-Bar Drawbar	1	1510-08-2E
2	Walking Axle Linkage Pivot Pin	2	1601-P38-220
3	Drawbar Pivot Bush	4	0801-B423838
4	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
5	Nyloc Nut M12	2	0221-NYL12
6	Cotter Pin M13 x 63	2	0261-PINC1363
7	Washer Flat M12	4	0231-F12



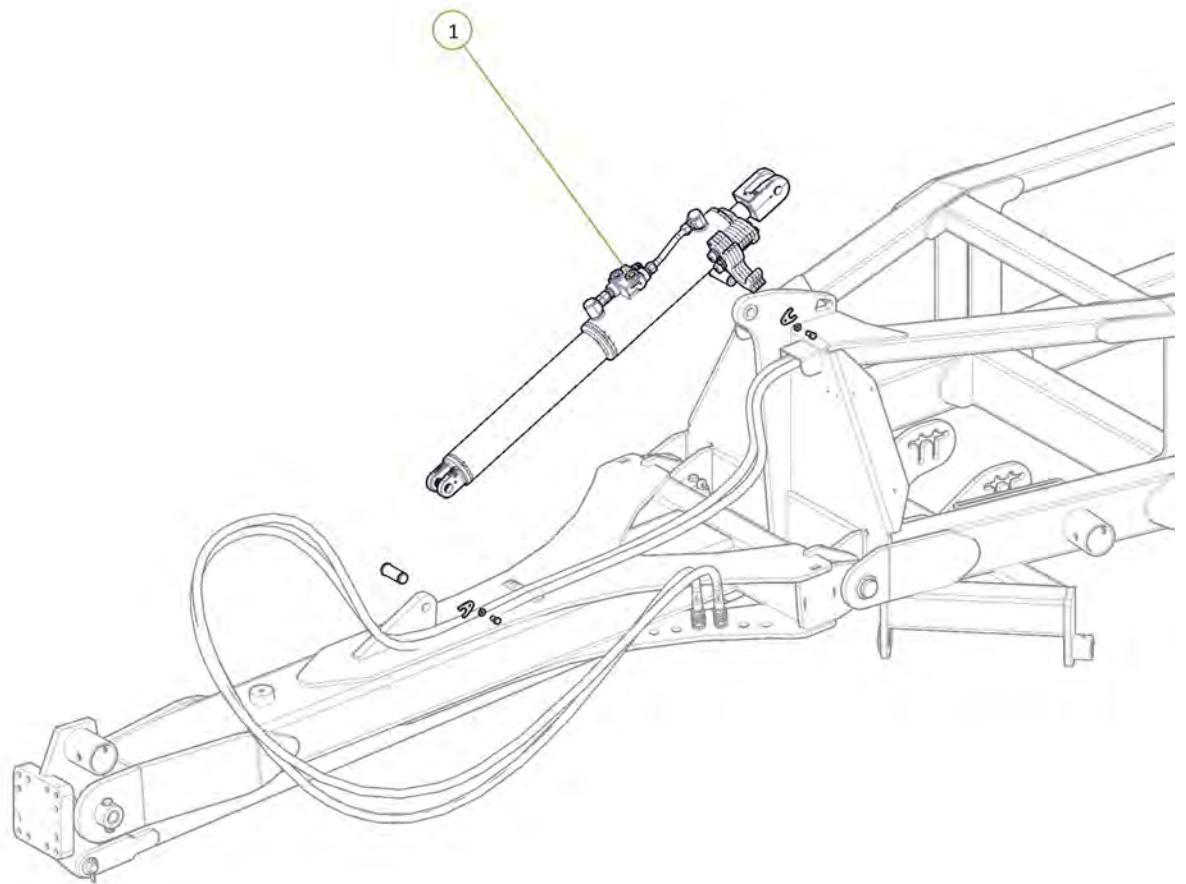
Item No.	Description	Qty	Number
1	Flange Mount Tow Hitch	1	1510-09E
2	35 ID x 50mm DU Bush	2	0113-MB 3550DU
3	Tow Hitch Pivot Pin	1	0801-10-14
4	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
5	Washer Flat M12	4	0231-F12
6	Nyloc Nut M12	2	0221-NYL12



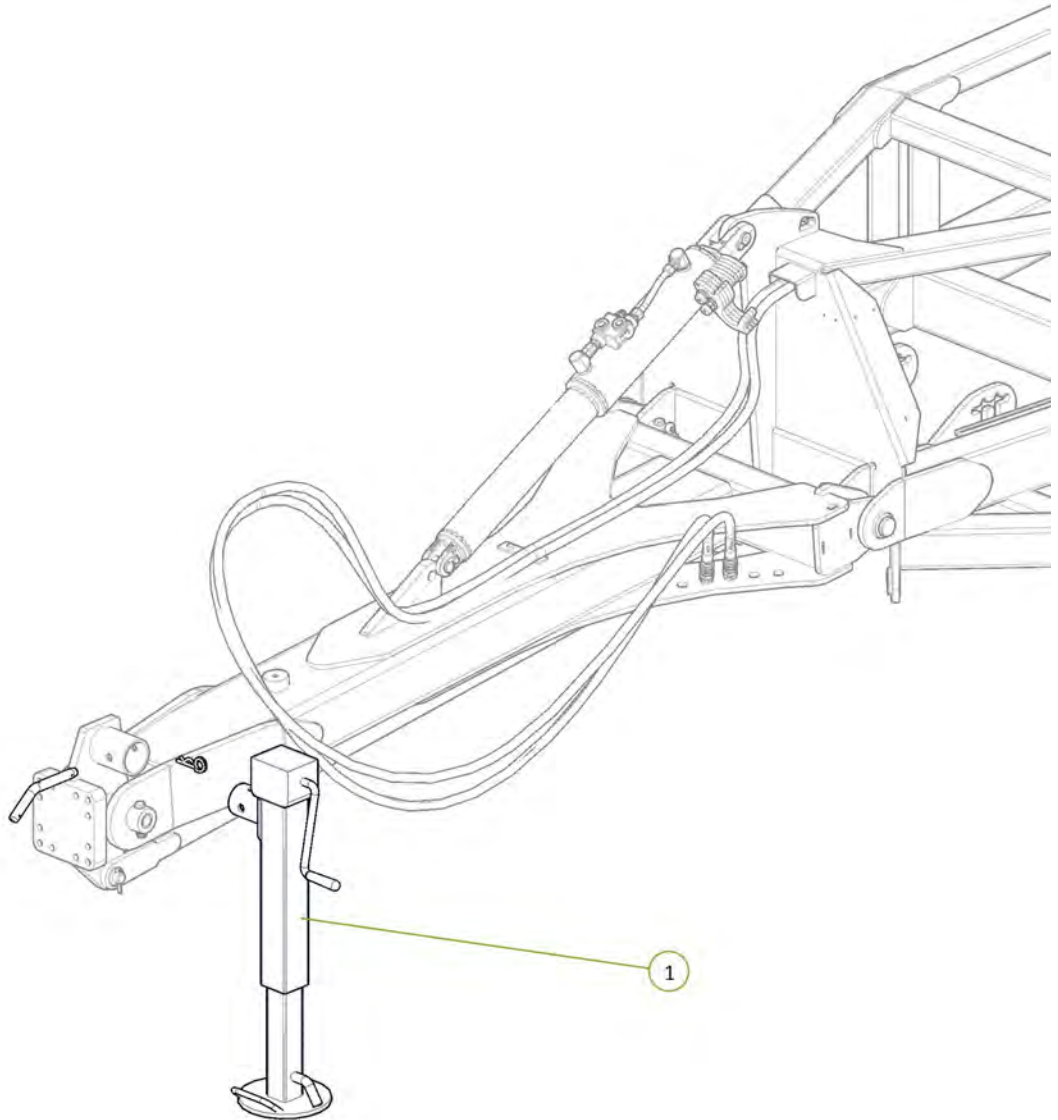
Item No.	Description	Qty	Number
1	Parallel Arm	1	0810-22E
2	Clevis Pin 25mm x 75mm	2	0801-KE0307-1
3	Washer Flat M24	2	0231-F24
4	Cotter Pin M6 x 50mm	2	0261-PINC650



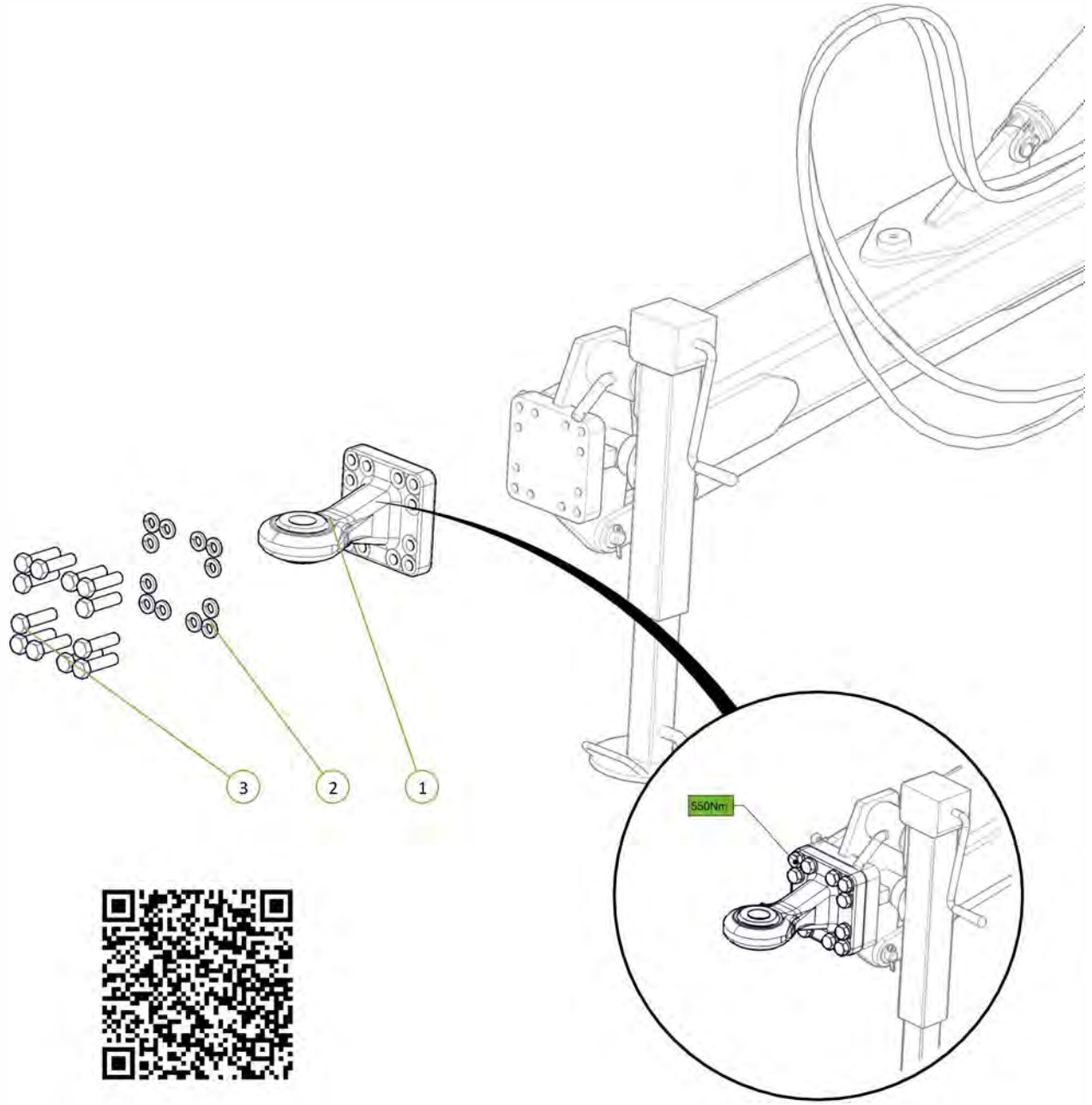
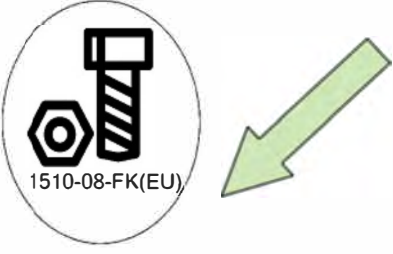
Item No.	Description	Qty	Number
1	4" Bore 12" Stroke 1.75" Rod Extended Hydraulic Cylinder	1	0311-412EXT



Item No.	Description	Qty	Number
1	Jack Assembly EU	1	0810-31AE





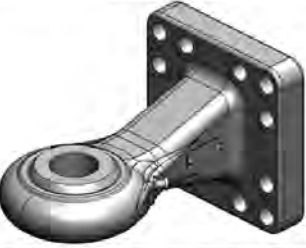
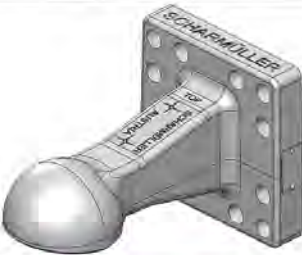


Item No.	Description	Qty	Number
1	Scharm Mueller CAT 4 51mm Flange Mount Tow Eye	1	1501-00.665.17.1
2	Washer Spring M20	12	0231-S20
3	M20 x 80 grade 10.9 ZP Bolt	12	0211-2080HT



All hitch options are fitted with the same process.

Hitch is fastened as per manufacturer specifications

Signed _____ Date __/__/__
 Unit Serial Number _____

<p>0801-00-665-15-0-A02 Ball Joint Flanged Eye CAT 2 Scharmüller</p>	<p>Flange Hole Pattern (mm): 160x160 Connection: Ball Joint Towing Eye Cat. 2 DØ33mm Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 250 Max. Permissible D-Value (kN): 120 Max. Permissible Vertical Load (kg): 3000</p>	
<p>0801-00-665-16-0-A02 Ball Joint Flanged CAT 3 Scharmüller</p>	<p>Flange Hole Pattern (mm): 160x160 Connection: Ball Joint Towing Eye Cat. 3 DØ42mm Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 250 Max. Permissible D-Value (kN): 120 Max. Permissible Vertical Load (kg): 3000</p>	
<p>0801-00-665-17-1-A02 Ball Joint Flange- Tensioned Scharmüller CAT 4</p>	<p>Flange Hole Pattern (mm): 160x160 Connection: Ball Joint Towing Eye Cat 4 DØ51mm Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 246 Max. Permissible D-Value (kN): 120,2 Max. Permissible Vertical Load (kg): 3000</p>	
<p>0801-00-665-90-1-A02 Ball Coupling K80 with Flange Scharmüller</p>	<p>Flange Hole Pattern (mm): 160x160 Connection: K80® Towing Eye Ball Coupling System Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 250 Max. Permissible D-Value (kN): 120 Max. Permissible Vertical Load (kg): 4000</p>	
<p>1510-54A 2 Point Hitch Cat 3</p>	<p>Flange Hole Pattern (mm): 160x160 Connection: Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 285</p>	
<p>1510-55A 2 Point Hitch Cat 4</p>	<p>Flange Hole Pattern (mm): 160x160 Connection: Thread: M20 Hole Pattern Holes: 12 Working Length (mm): 276</p>	



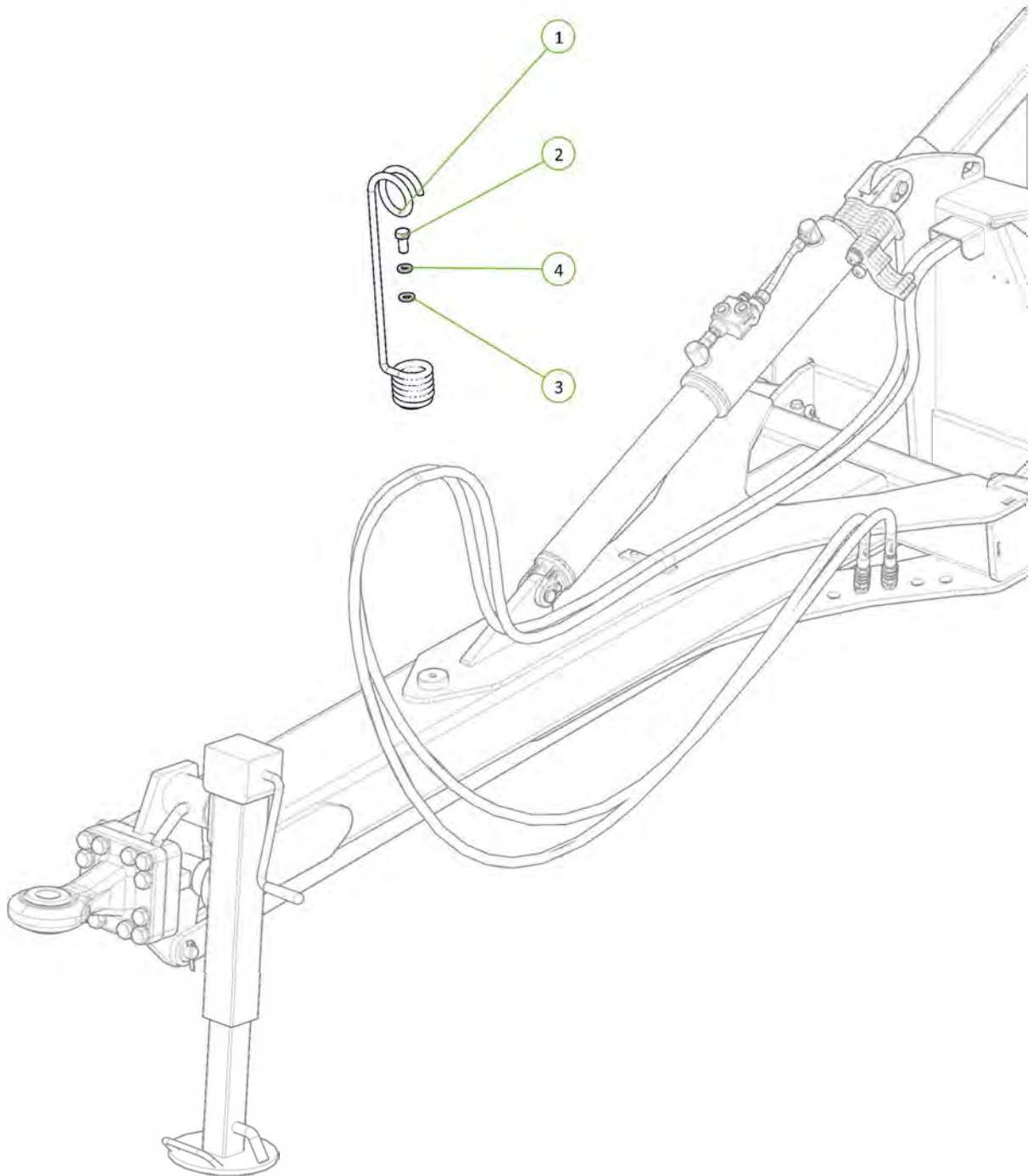
All hitch options are fitted with the same process.

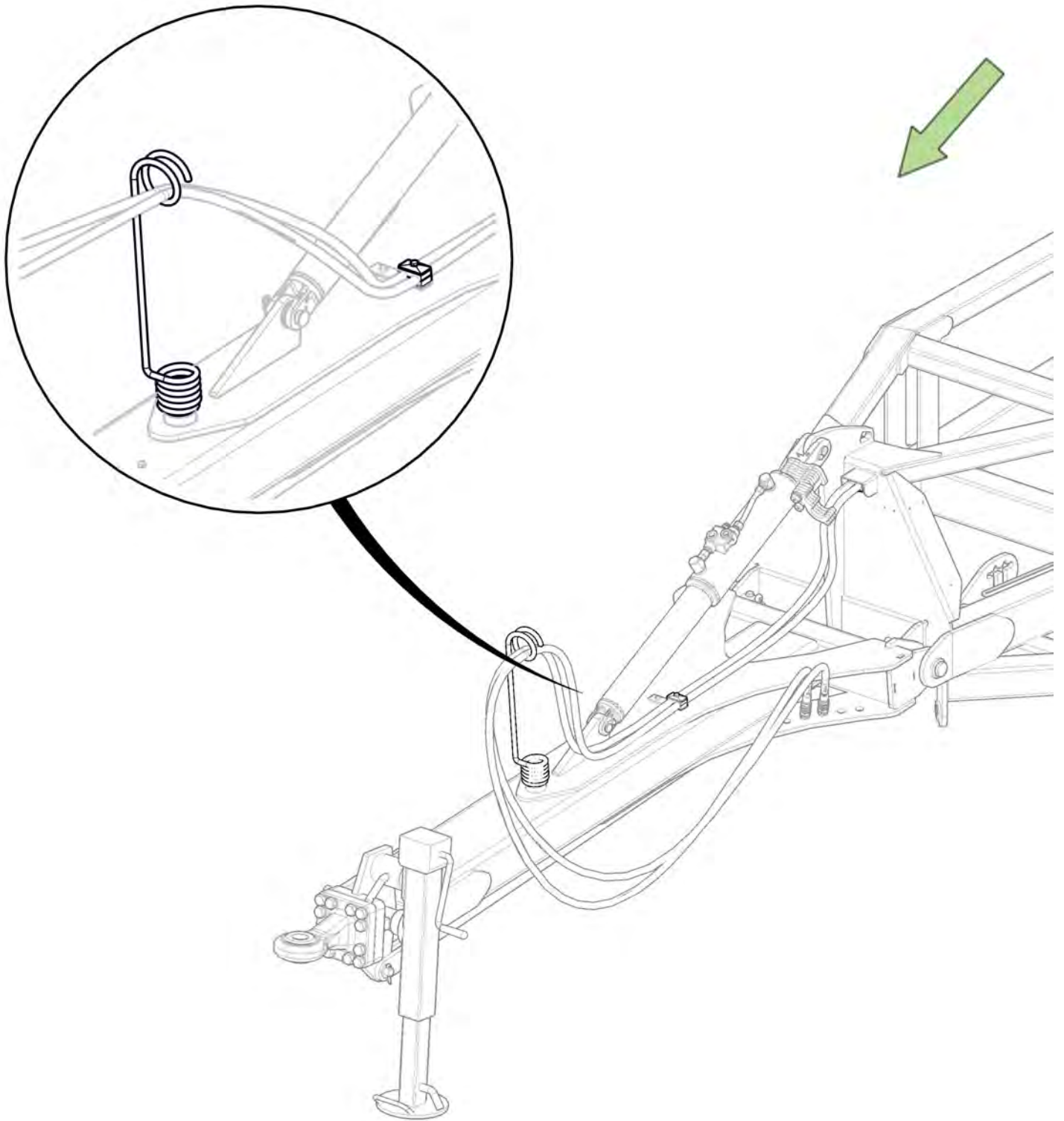
Hitch is fastened as per manufacturer specifications



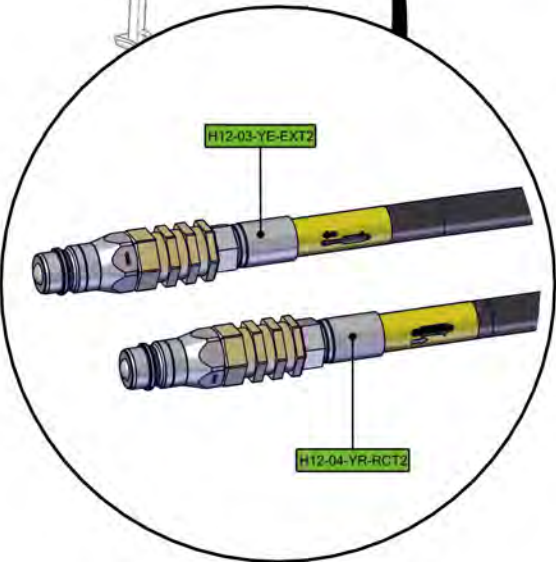
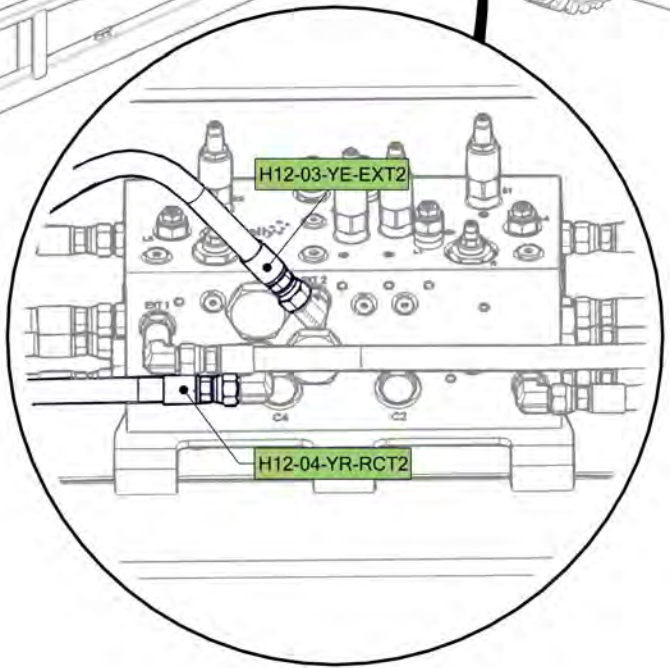
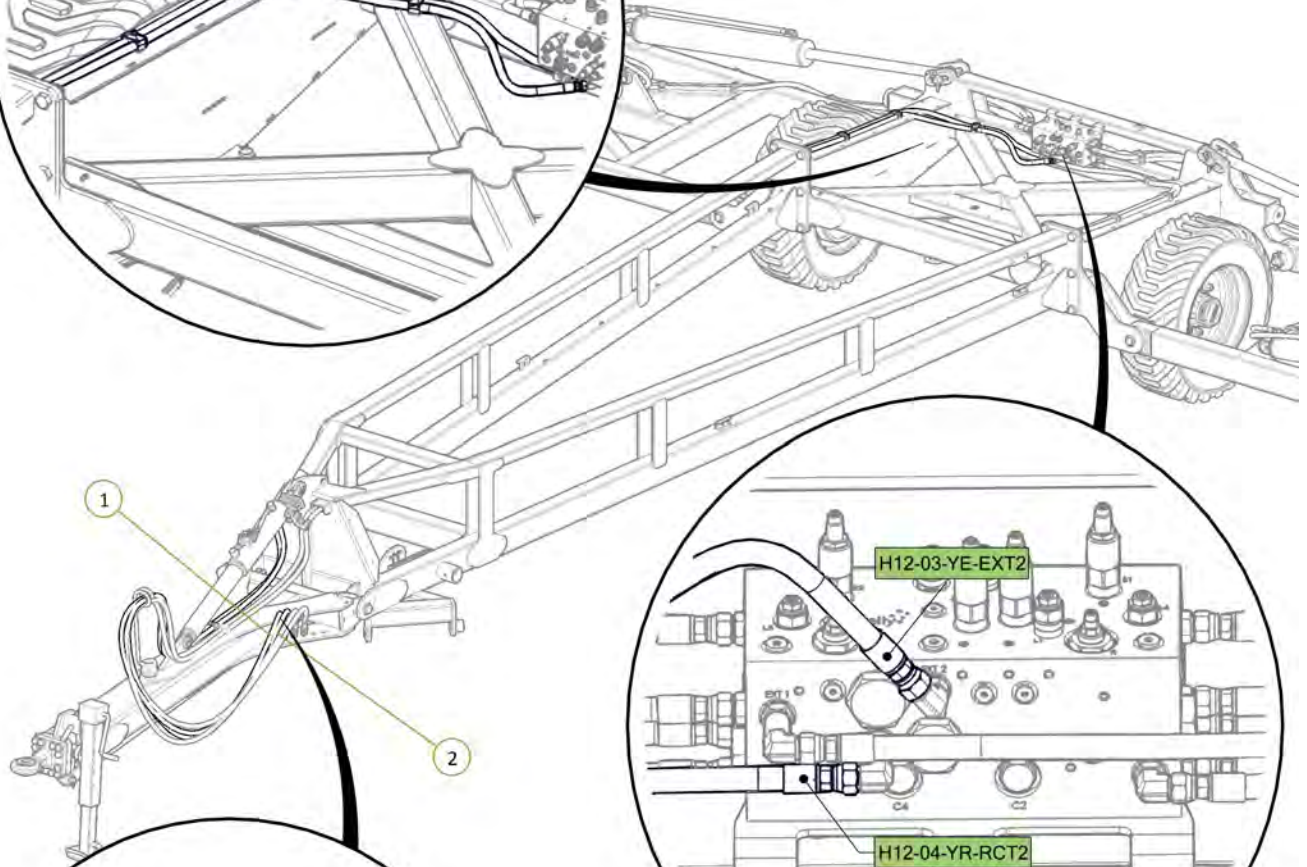
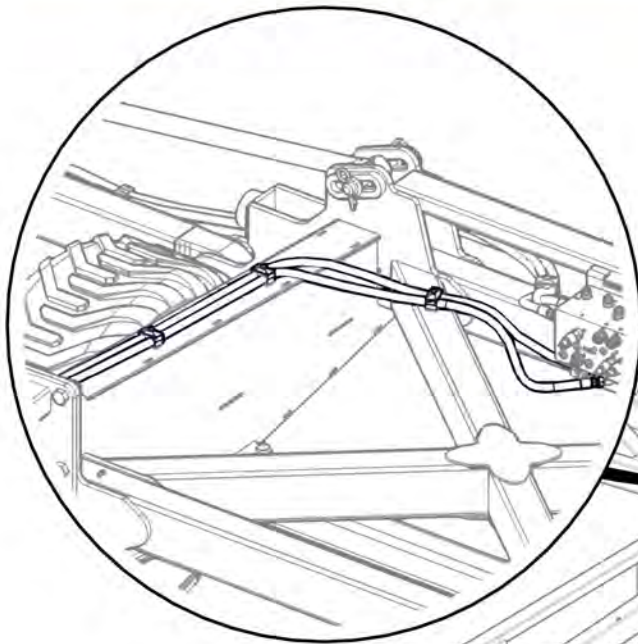
Signed _____ Date __/__/__
Unit Serial Number _____

Item No.	Description	Qty	Number
1	Hose Post Spring	1	1601-CDB-00-0012
2	M16 x 35 Grade 8.8 ZP Bolt	1	0211-1635
3	Washer Flat M16	1	0231-F16
4	Washer Spring M16	1	0231-S16

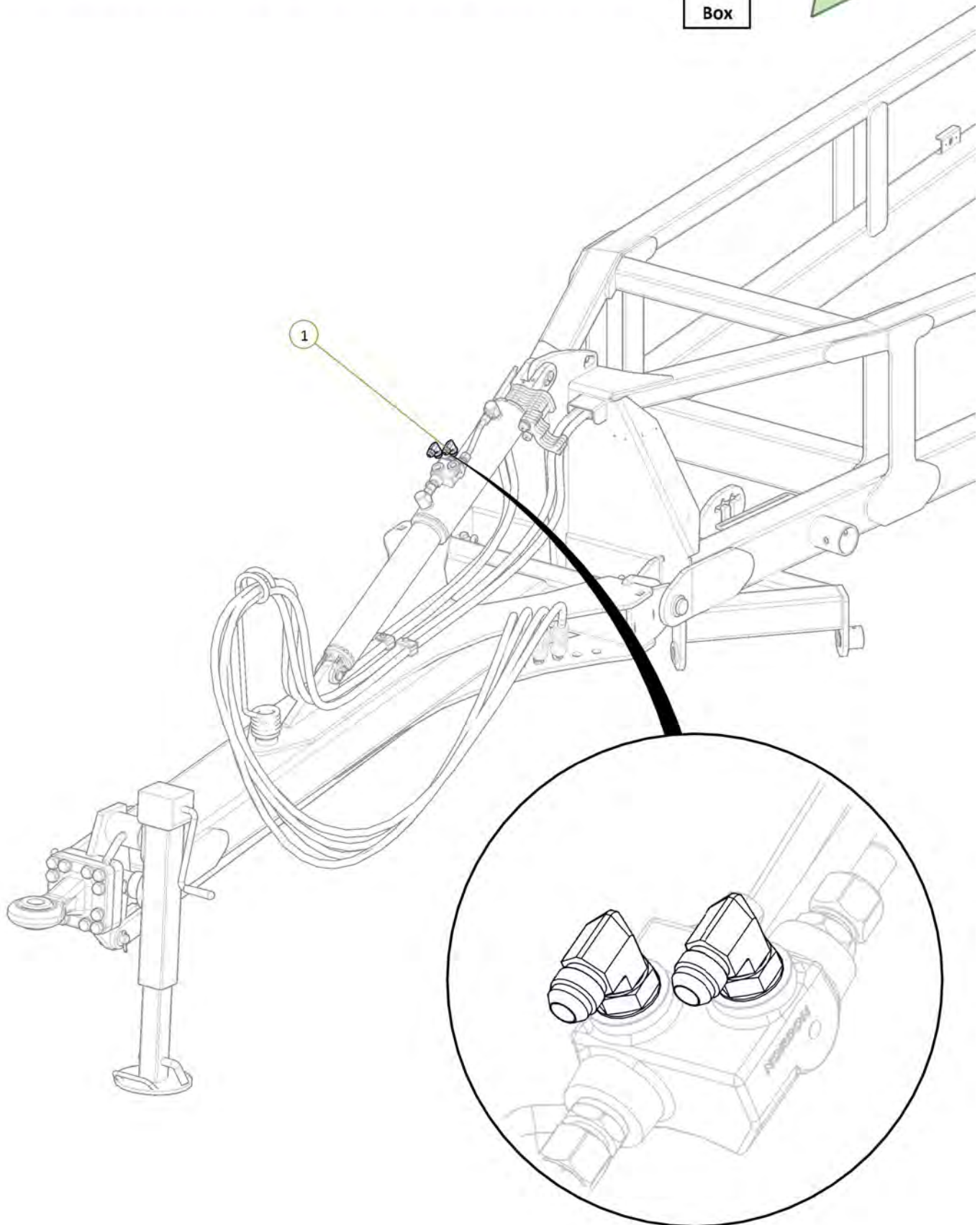




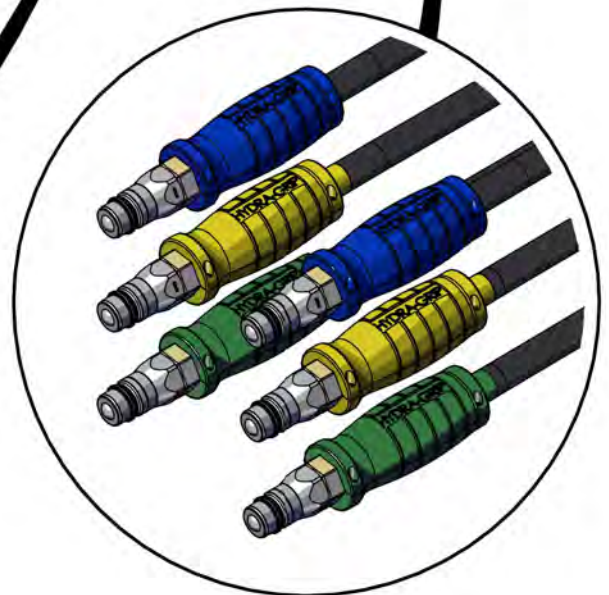
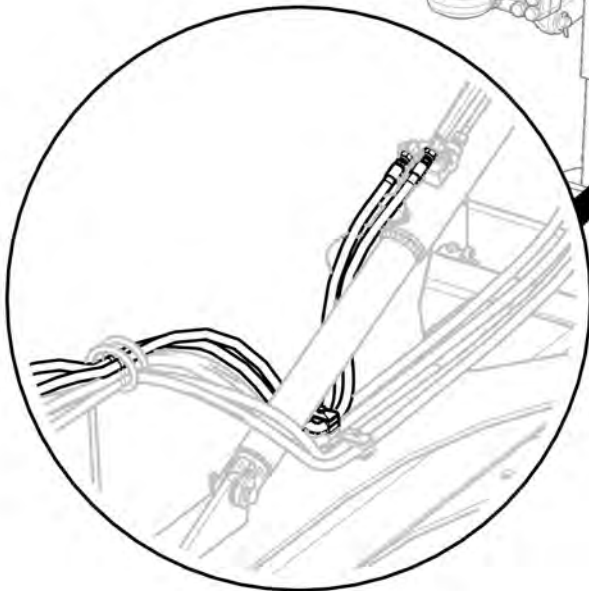
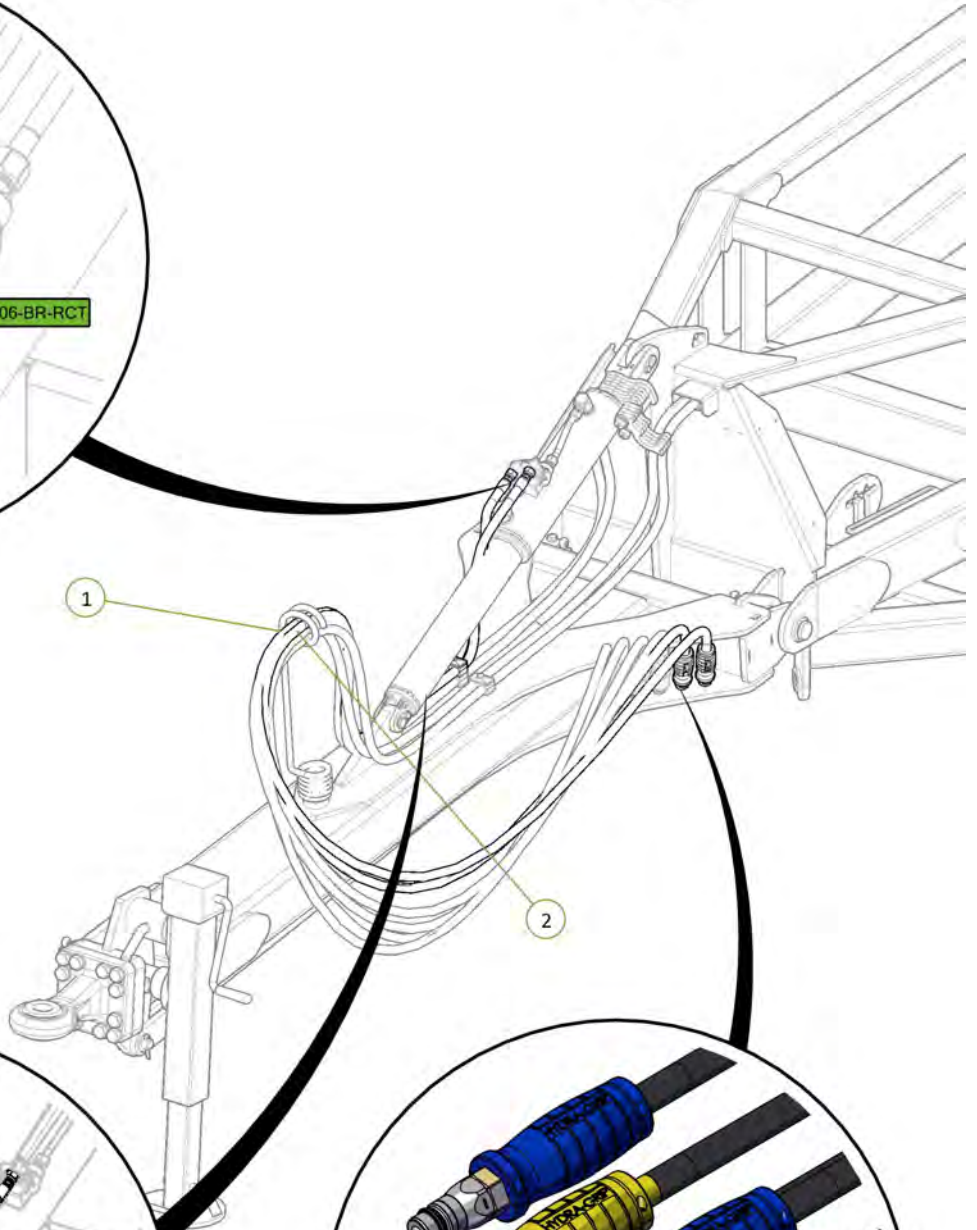
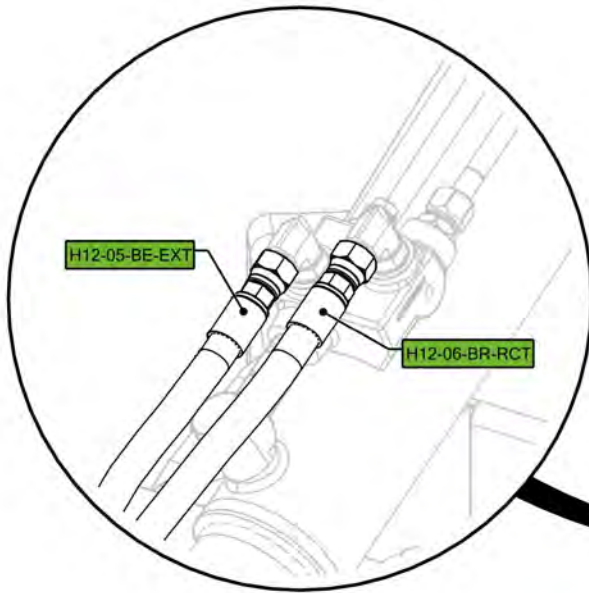
Item No.	Description	Qty	Number
1	Tractor to Sequence Valve EXT2 Port Fitted With Yellow EXT Decal	1	H12-03-YE-EXT2
2	Tractor to Sequence Valve RTC2 Port Fitted With Yellow RTC Decal	1	H12-04-YR-RCT2



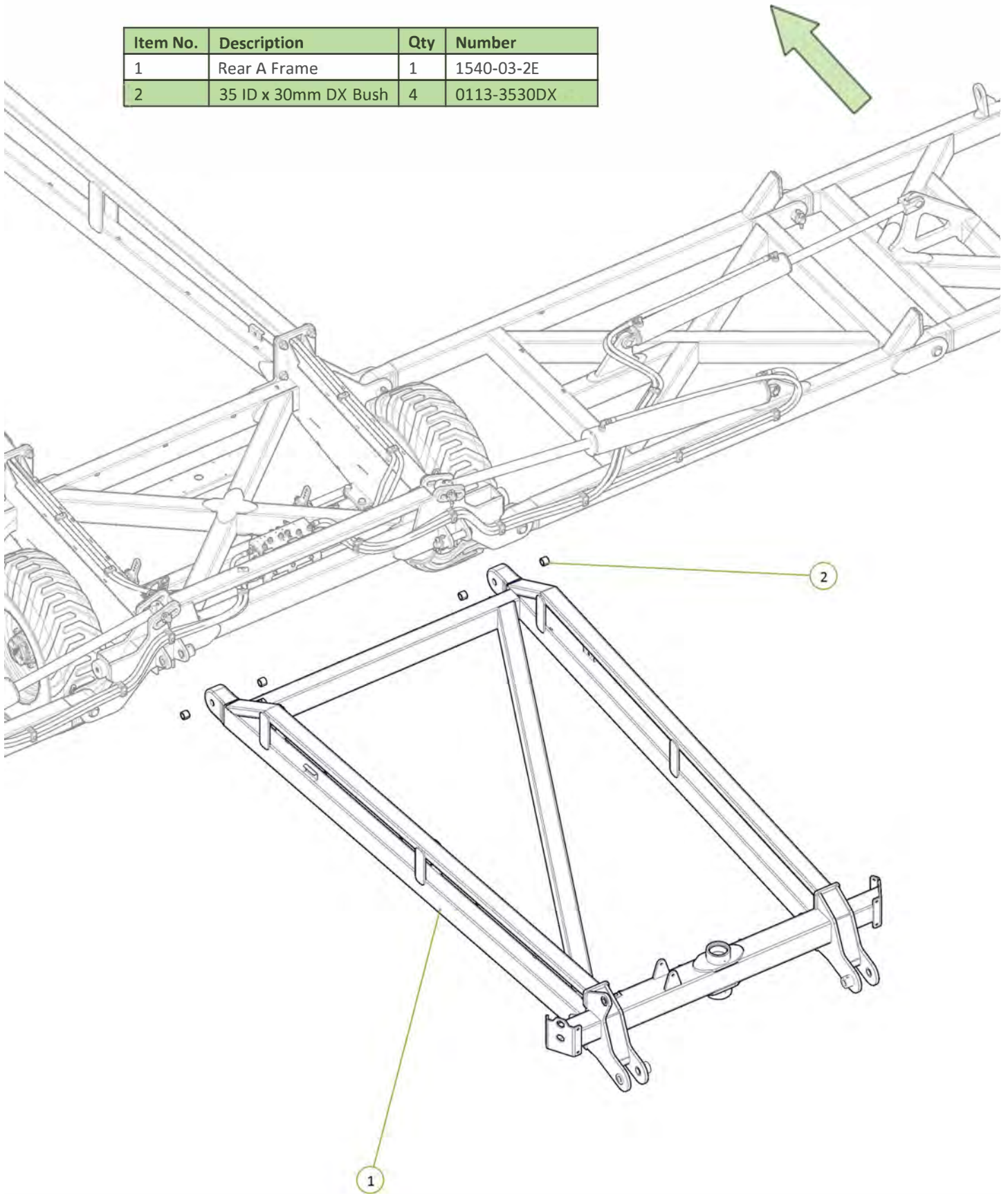
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212



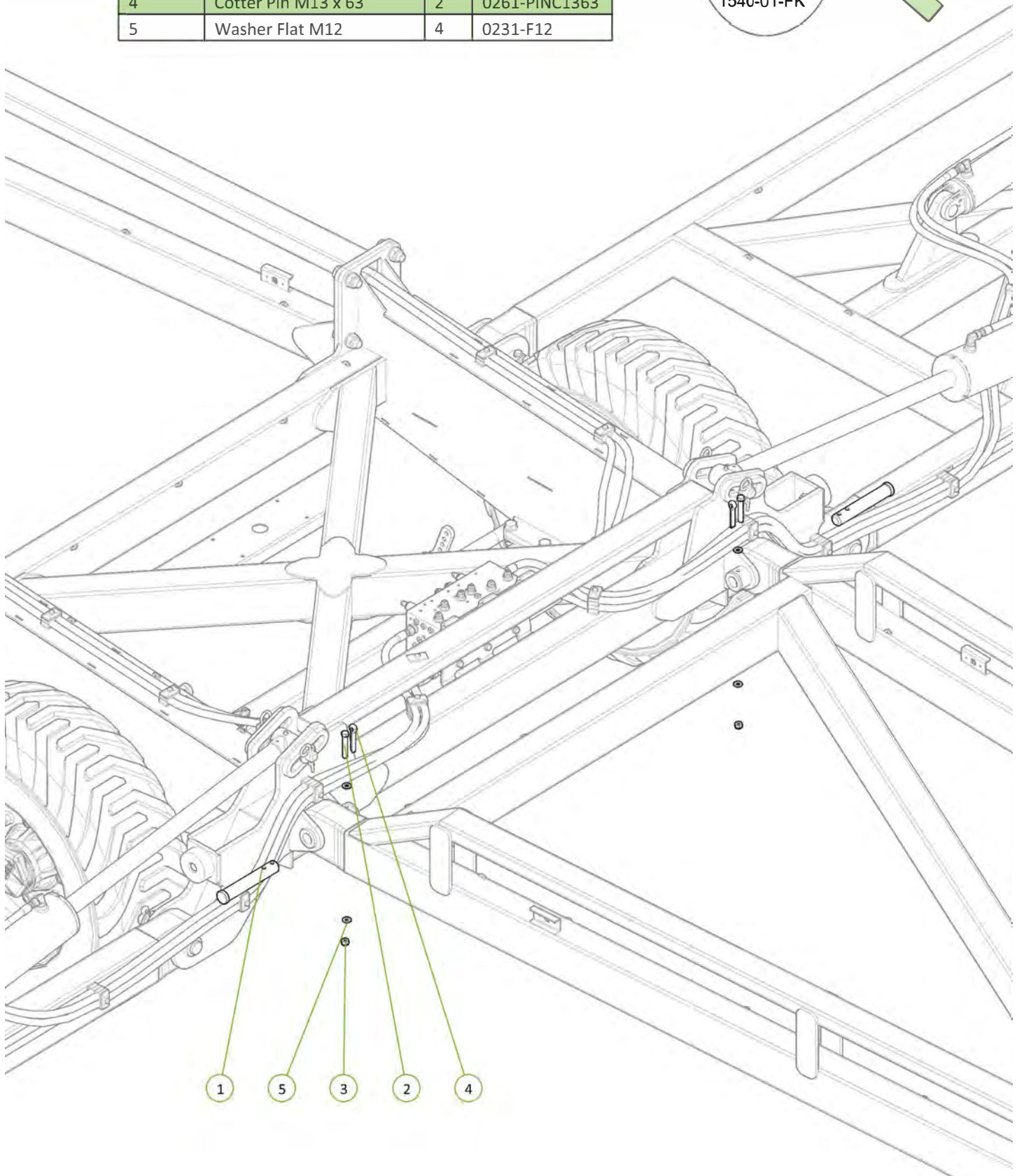
Item No.	Description	Qty	Number
1	Tractor to Front Lift Cylinder Extend Port Fitted With Blue EXT Grip	1	H12-05-BE-EXT
2	Tractor to Front Lift Cylinder Extend Port Fitted With Blue RTC Grip	1	H12-06-BR-RCT



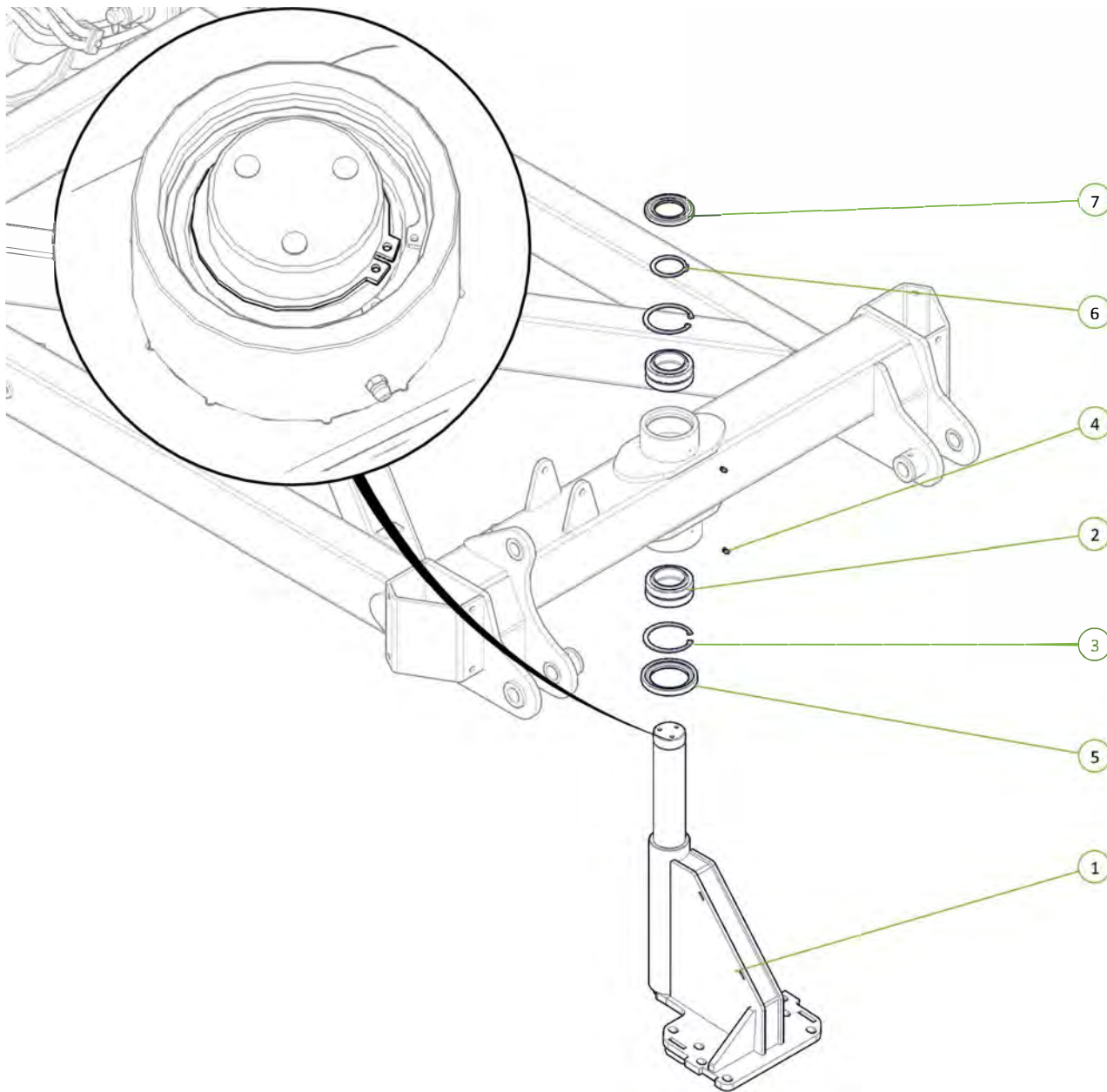
Item No.	Description	Qty	Number
1	Rear A Frame	1	1540-03-2E
2	35 ID x 30mm DX Bush	4	0113-3530DX



Item No.	Description	Qty	Number
1	Wing Pivot Pin	2	0801-10-08-235
2	M12 x 80 Grade 8.8 ZP Bolt	2	0211-1280
3	Nyloc Nut M12	2	0221-NYL12
4	Cotter Pin M13 x 63	2	0261-PINC1363
5	Washer Flat M12	4	0231-F12



- 1
- 5
- 3
- 2
- 4



Item No.	Description	Qty	Number
1	Jockey Wheel	1	1610-12-70E
2	Plain Spherical Bearing 70mm	2	0113-GE70DO-2RS
3	Circlip Internal 105mm	2	0171-J105
4	Grease Nipple 1/4" UNF	2	0181-GN1/4
5	TC Seal 90mm x 125mm x 13mm	1	0121-TC12681
6	Circlip External 70mm	1	0172-D1400-0700APP
7	TC Seal 70mm x 110mm x 10mm	1	0121-TC12654

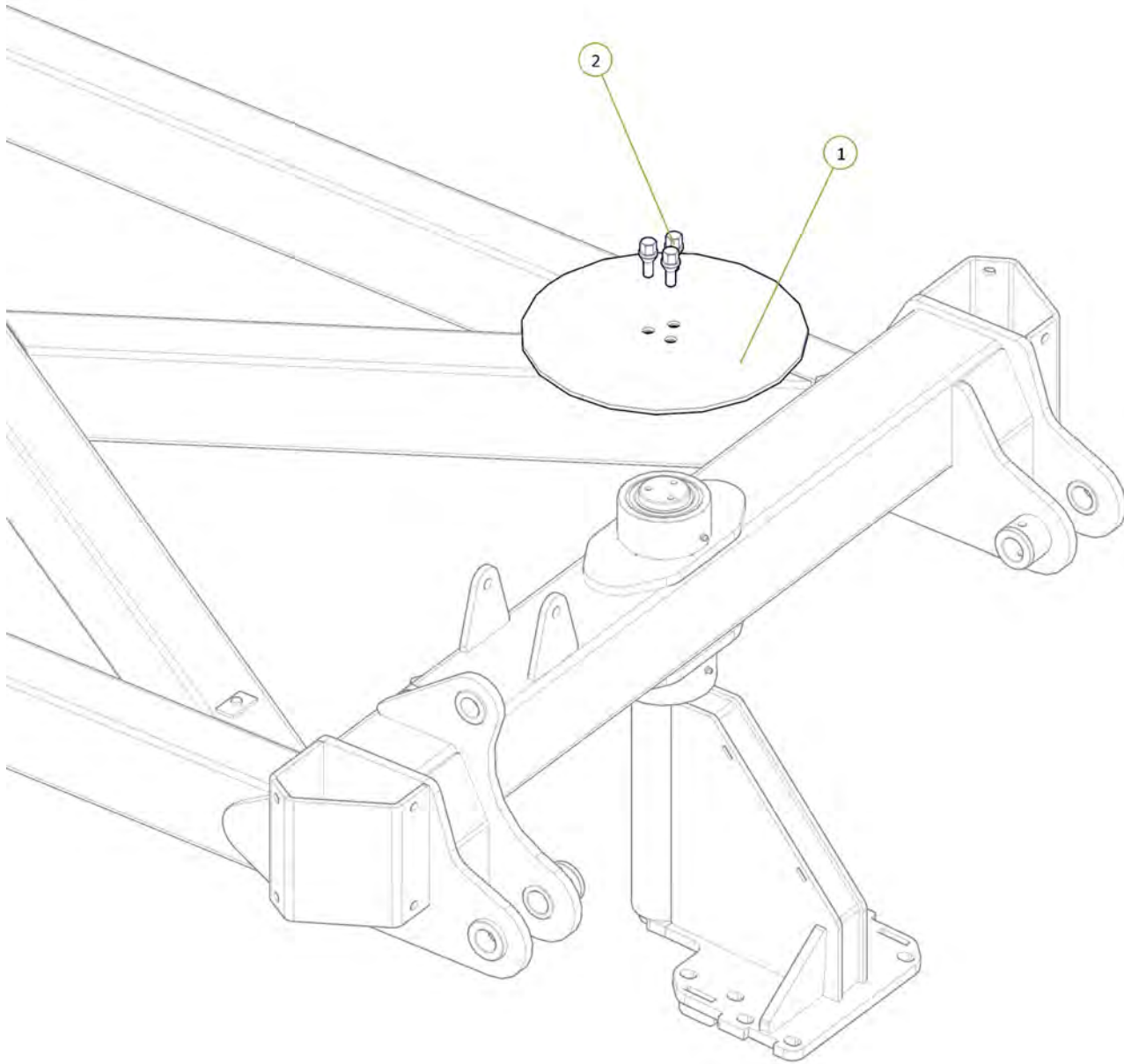


Circlip fitted to Jockey Wheel shaft



Signed _____ Date ___/___/___
 Unit Serial Number _____

Item No.	Description	Qty	Number
1	Brake Disc	1	1600-405
2	M12 x 24 Wheel Bolt	3	0216-WB1224

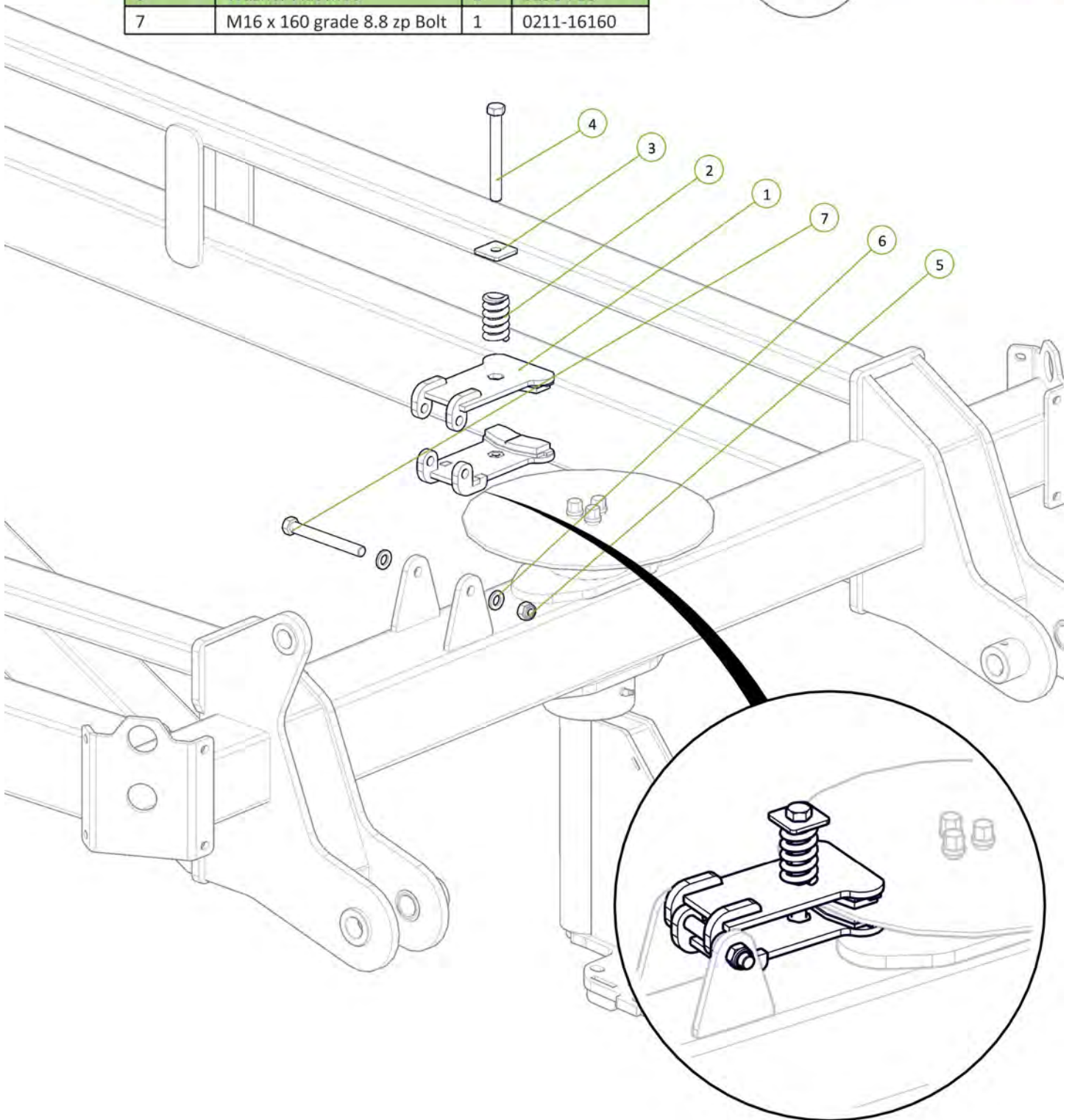


Wheel bolts torqued to 88Nm

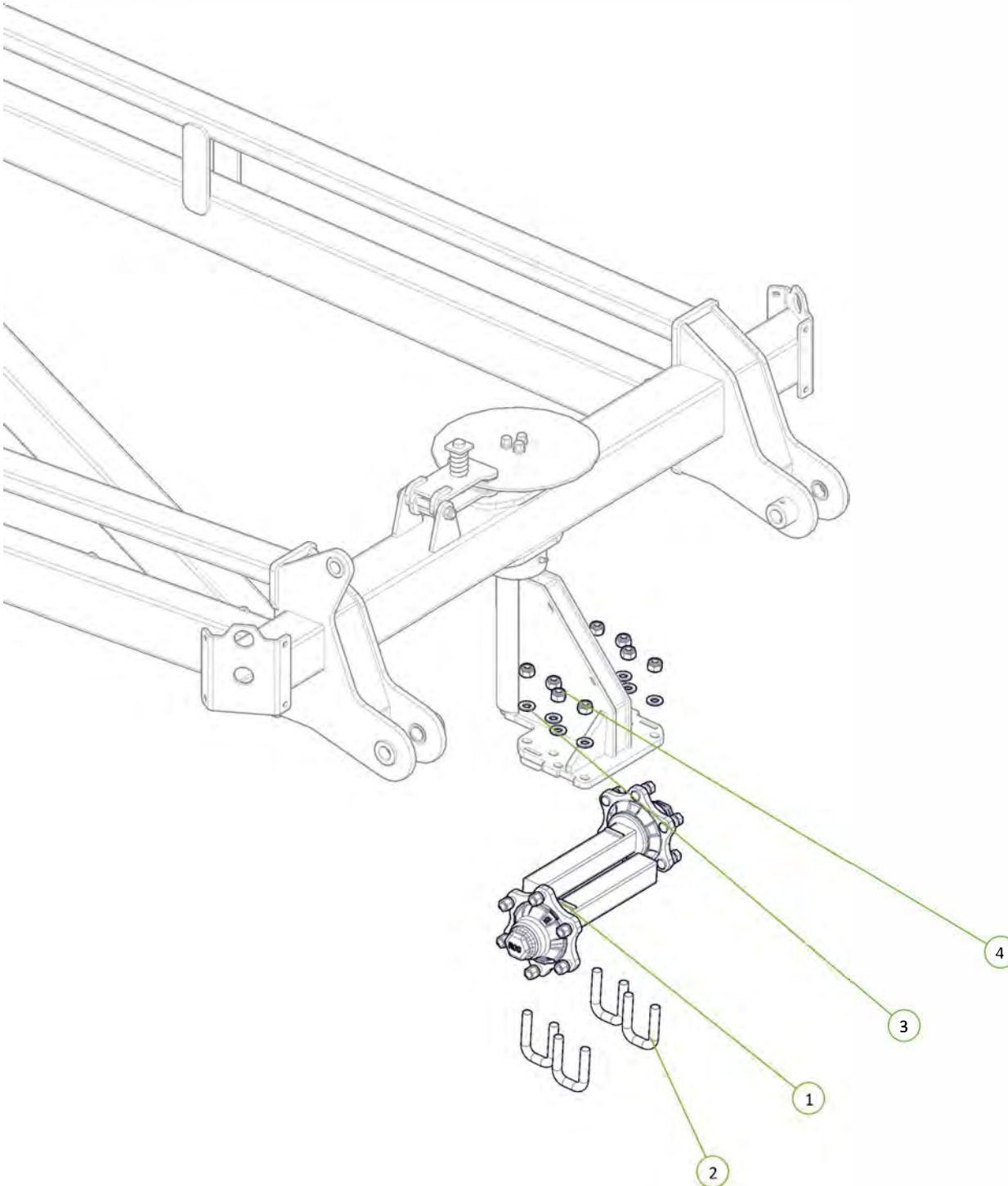


Signed _____ Date ___/___/___
 Unit Serial Number _____

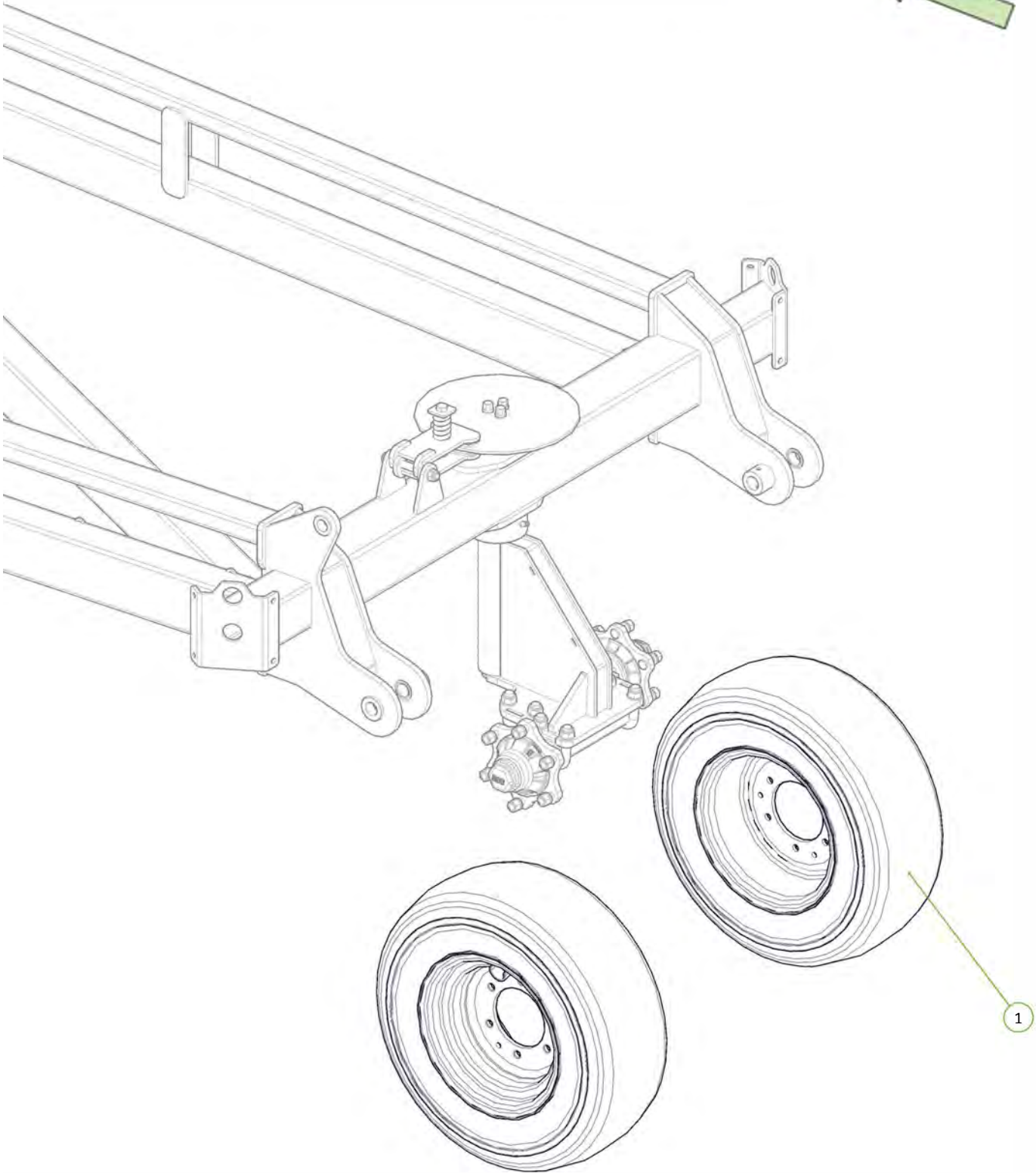
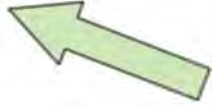
Item No.	Description	Qty	Number
1	Jockey Wheel Brake Caliper	1	0810-12CAL
2	Brake Compression Spring	1	0801-KE009
3	Washer Square M16 x 50 x 5	1	0231-SQ16505
4	M16 x 150 grade 8.8 zp Bolt	1	0211-16150
5	Nyloc Nut M16	1	0221-NYL16
6	Washer Flat M16	2	0231-F16
7	M16 x 160 grade 8.8 zp Bolt	1	0211-16160



Item No.	Description	Qty	Number
1	Monroc 606XR Stub Axle (VAR)	2	0733-606XRVAR
2	U-Bolt M20 x 105 Deep x 62 Wide	4	0271-2010562
3	Washer Flat M20	8	0231-F20
4	Nyloc Nut M20	8	0221-NYL20



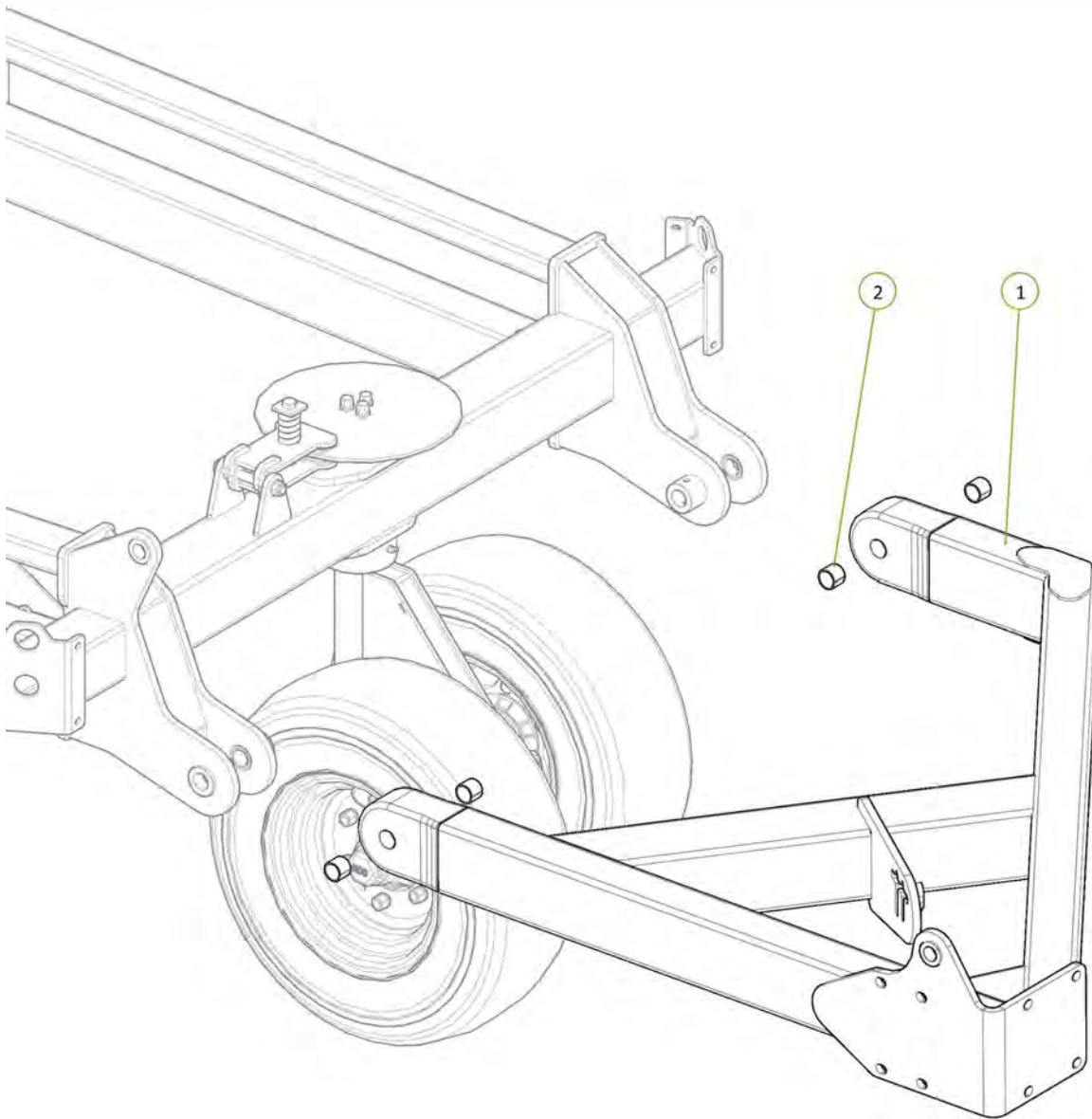
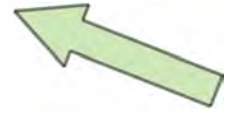
Item No.	Description	Qty	Number
1	10.0/75-15.3 Tyre on 6 on 205 0 offset	2	0751-10.0-75-15.3



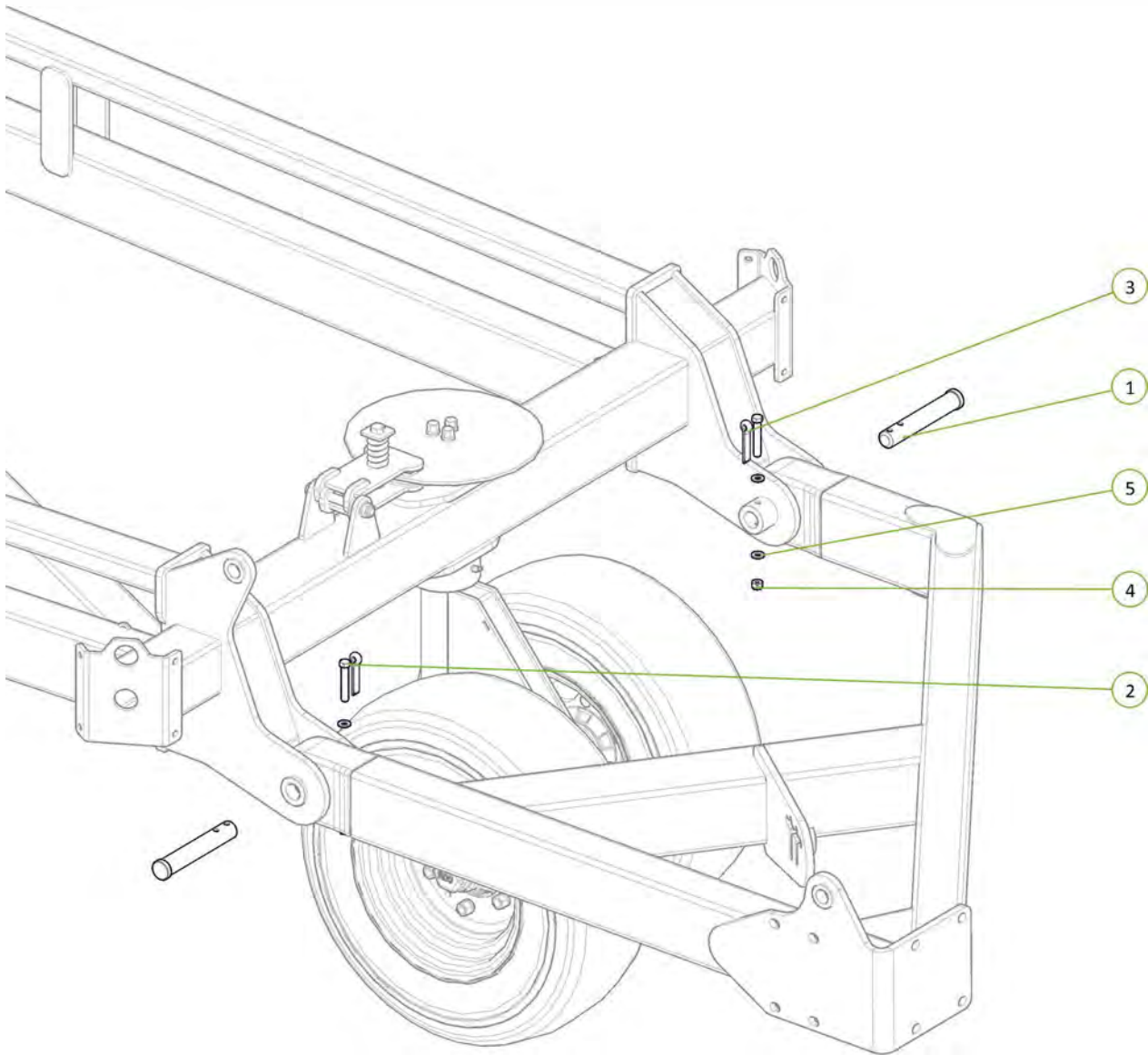
All wheel nuts tightened to 125Nm 

Signed _____ Date ___/___/___
 Unit Serial Number _____

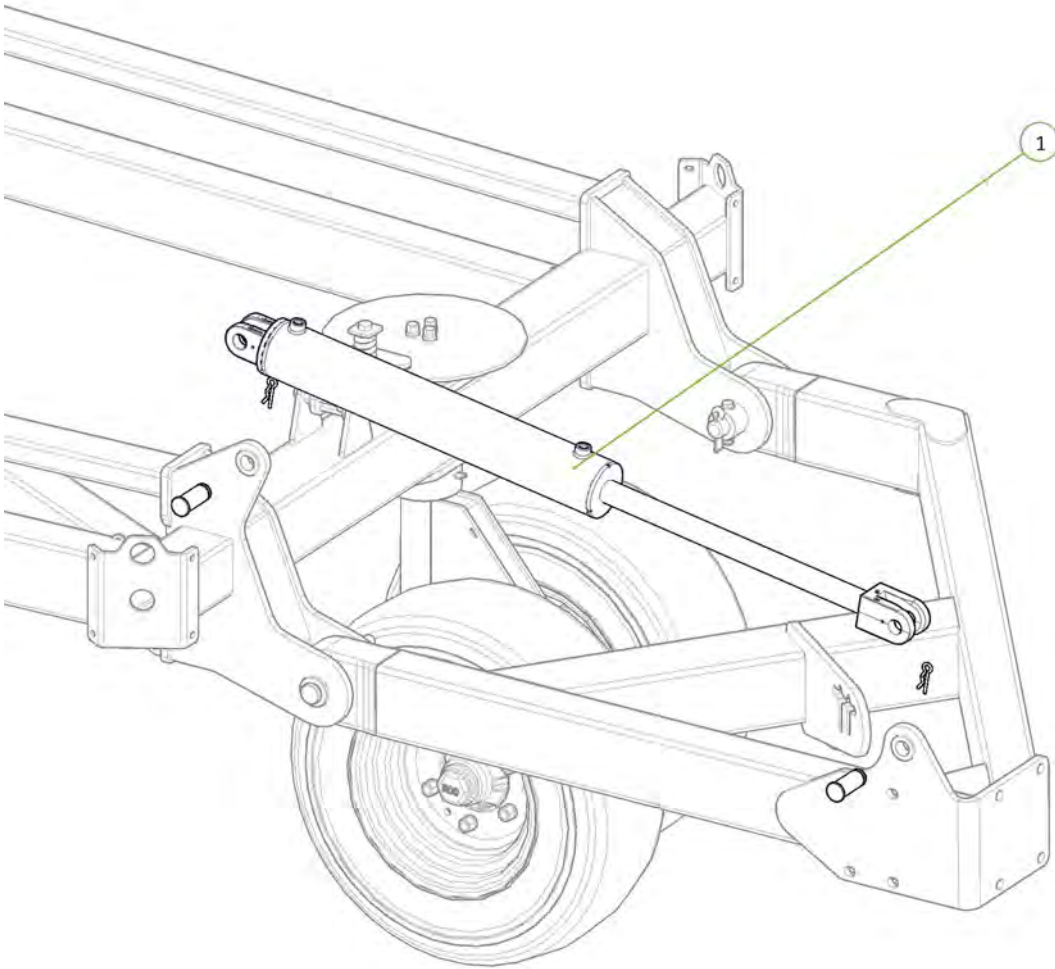
Item No.	Description	Qty	Number
1	Rear Tail	1	1510-40SE
2	35 ID x 30mm DX Bush	4	0113-3530DX



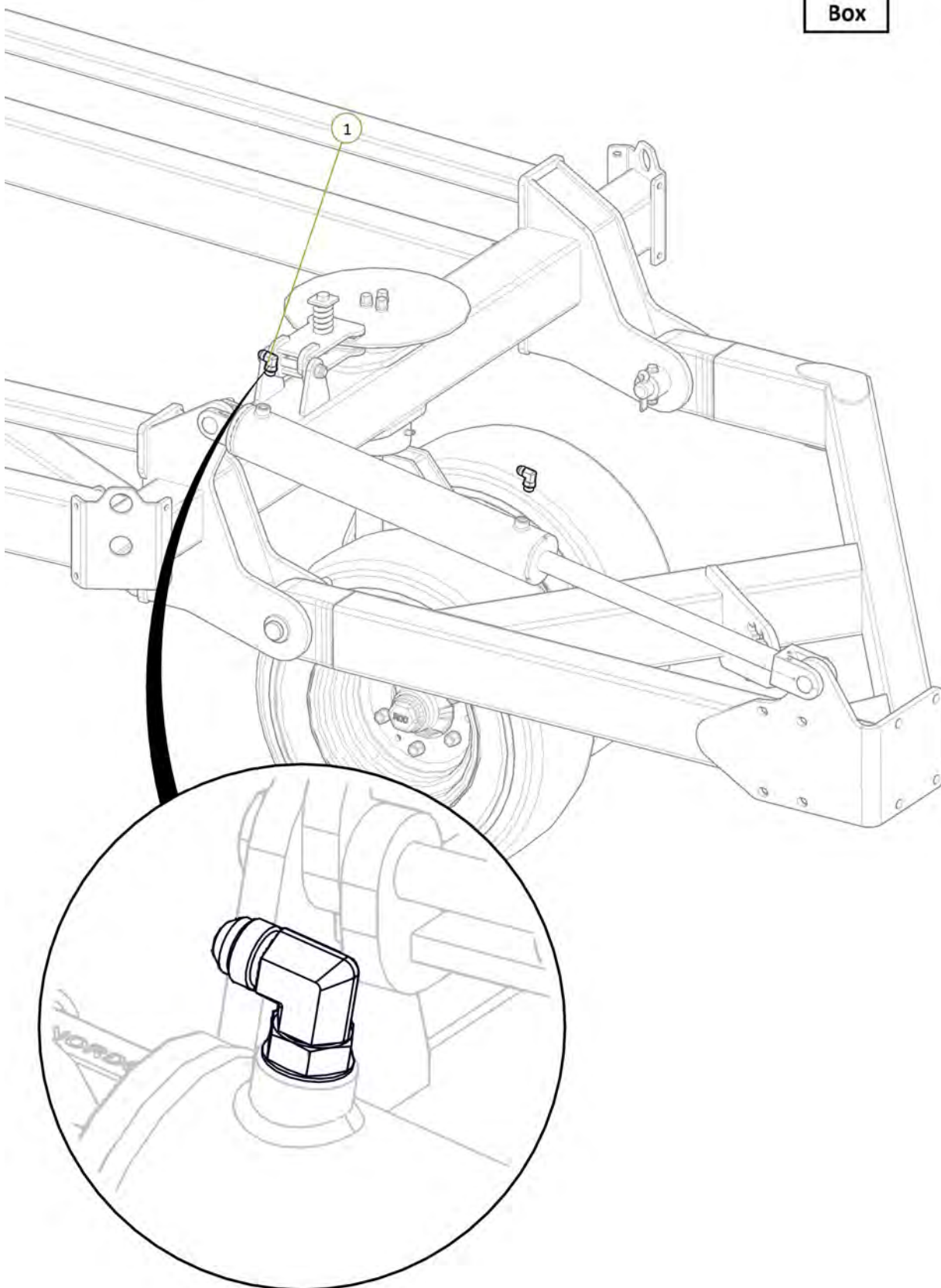
Item No.	Description	Qty	Number
1	Wing Pivot Pin	2	0801-10-08-235
2	M12 x 80 grade 8.8 ZP Bolt	2	0211-1280
3	Cotter Pin M13 x 63	2	0261-PINC1363
4	Nyloc Nut M12	2	0221-NYL12
5	Washer Flat M12	4	0231-F12



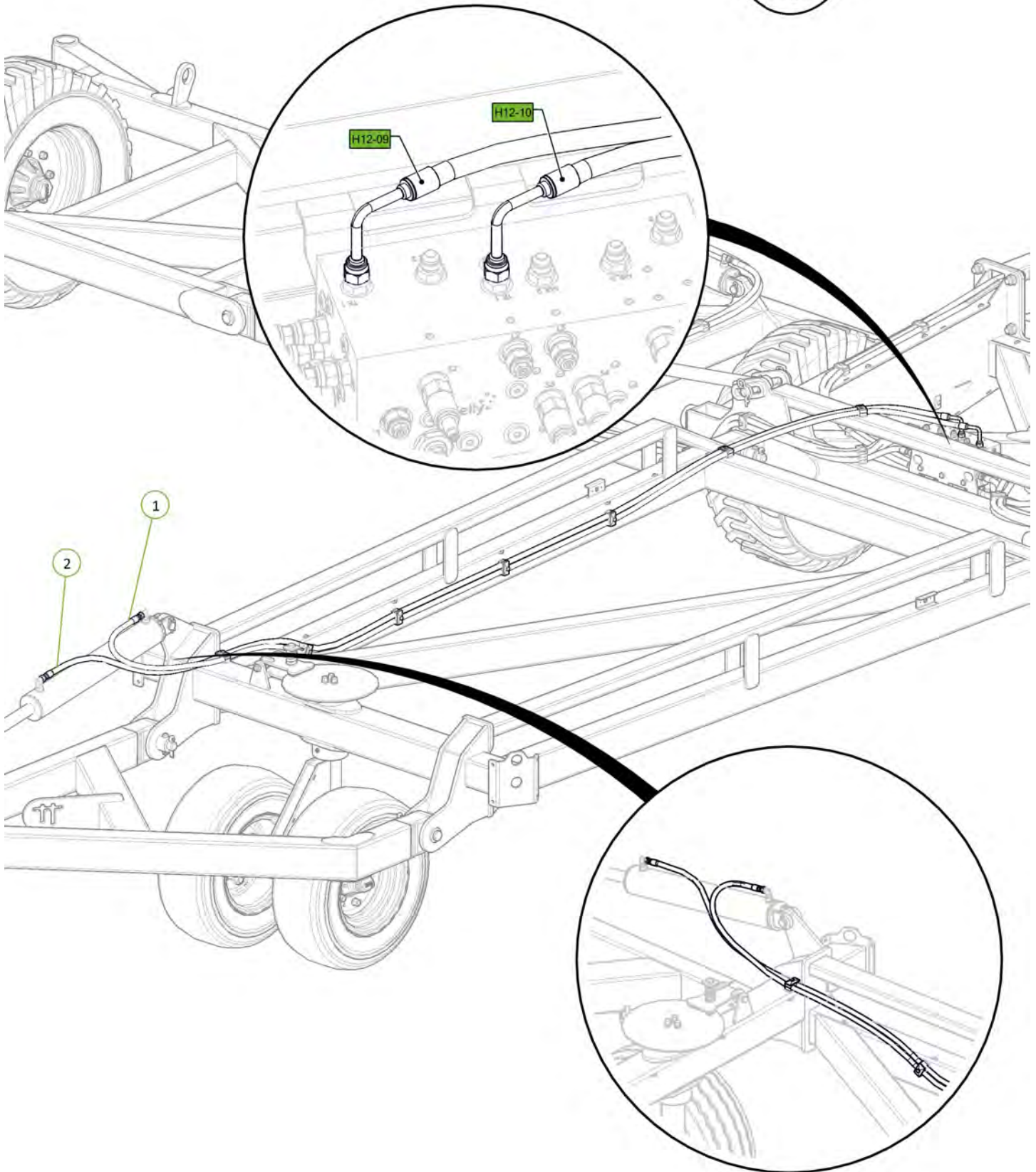
Item No.	Description	Qty	Number
1	4" Bore 24" Stroke 1.75" Rod Hydraulic Cylinder	1	0311-424



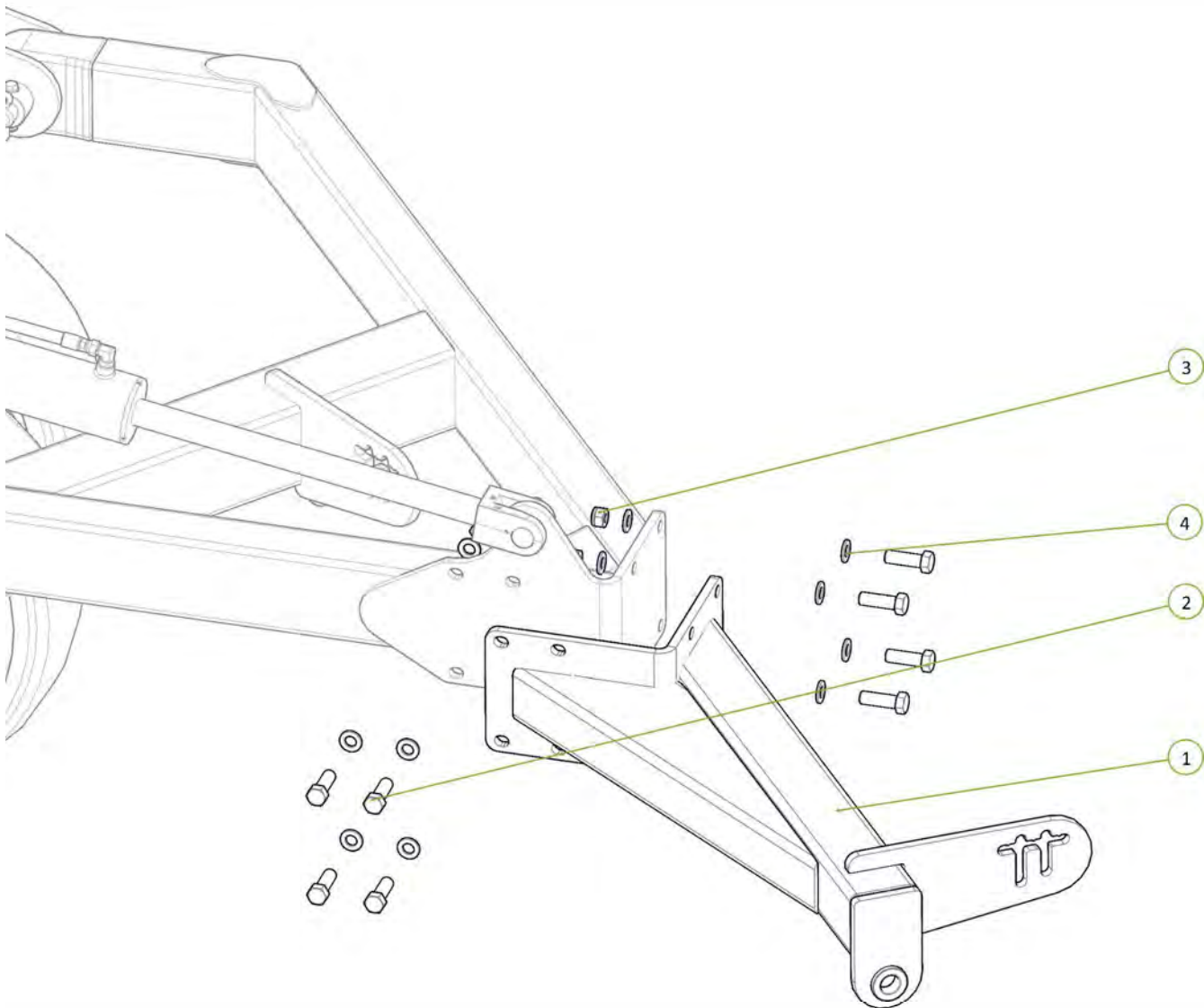
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212



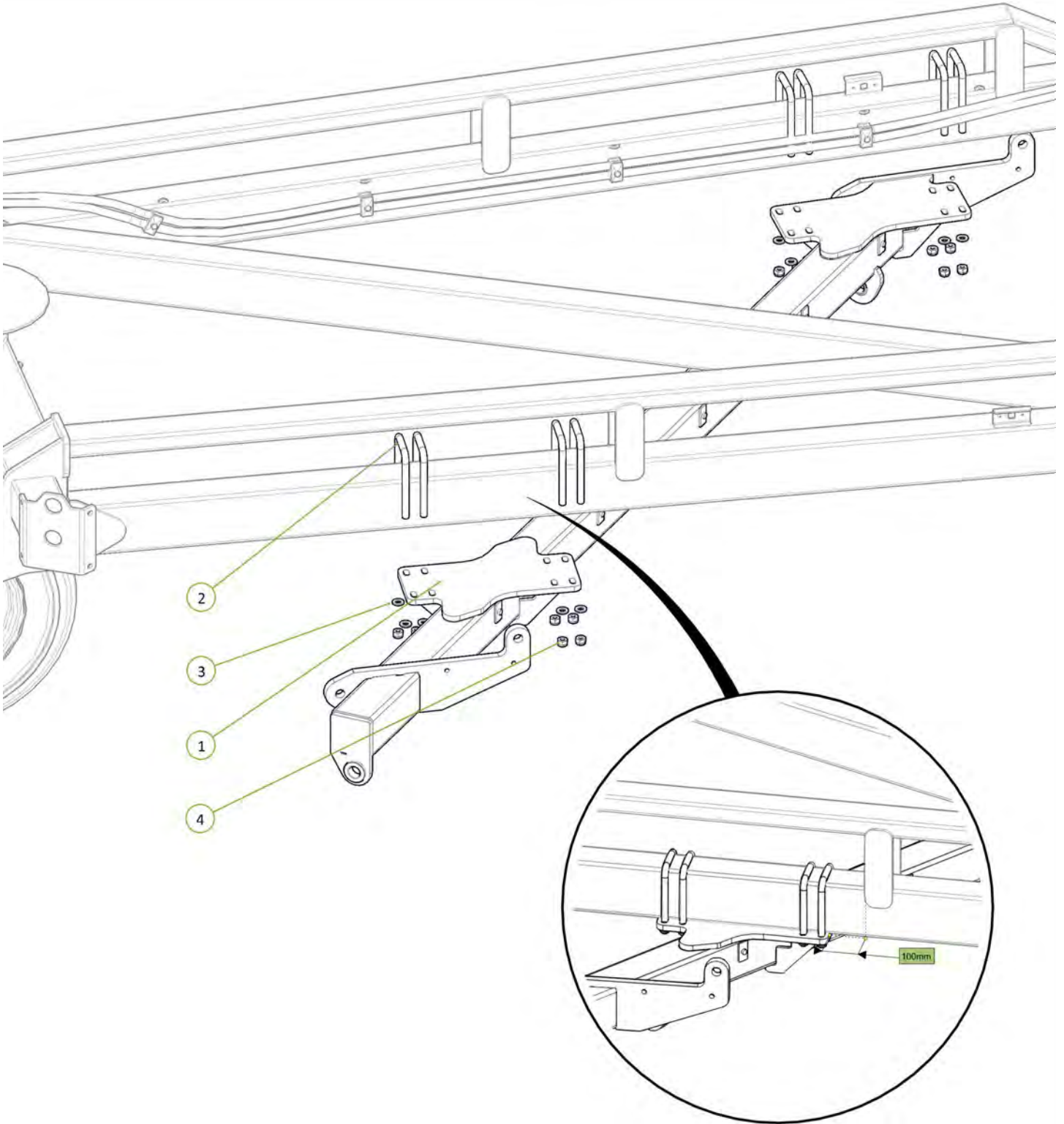
Item No.	Description	Qty	Number
1	TE1 Port to Tail Lift Cylinder Extend Port	1	H12-09
2	TR1 Port to Tail Lift Cylinder Retract Port	1	H12-10



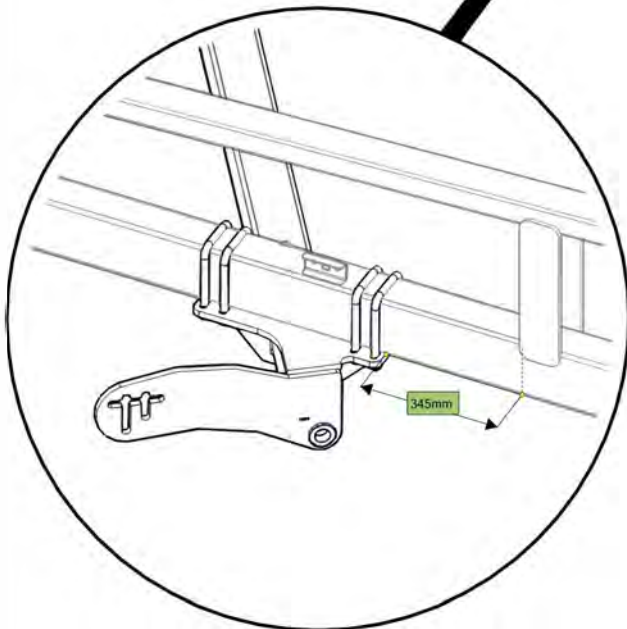
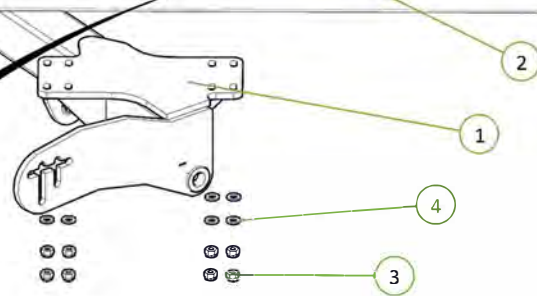
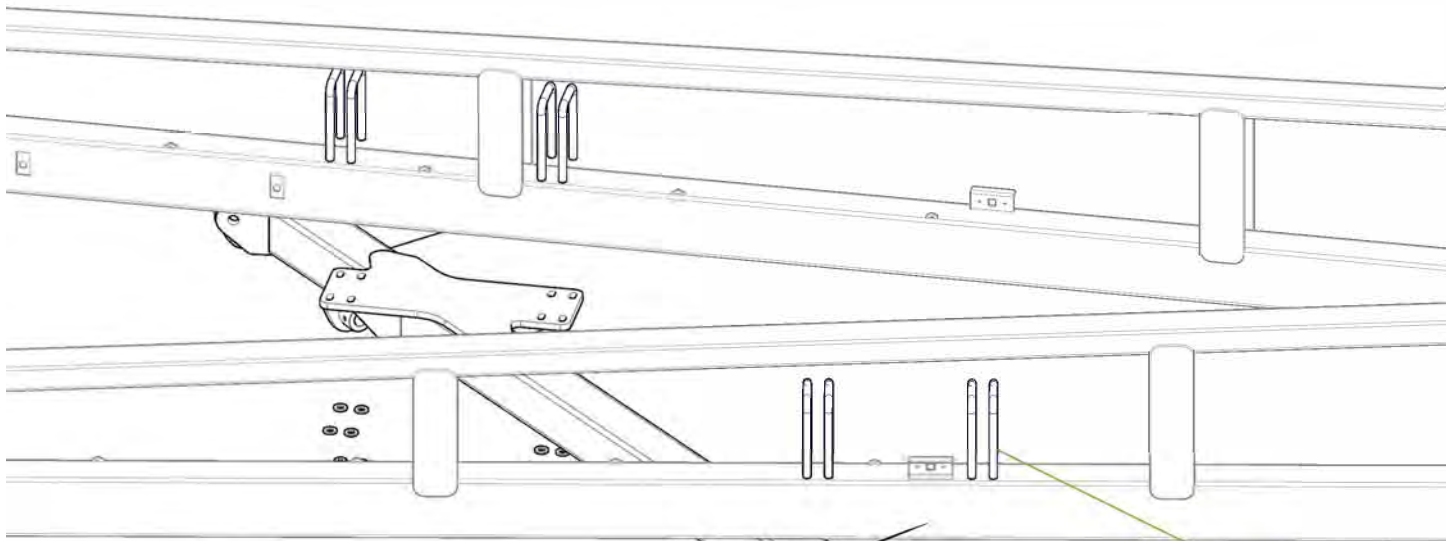
Item No.	Description	Qty	Number
1	Tail Extension	1	1510-40STE
2	M20 x 65 grade 8.8 ZP Bolt	8	0211-2065
3	Nyloc Nut M20	8	0221-NYL20
4	Washer Flat M20	16	0231-F20



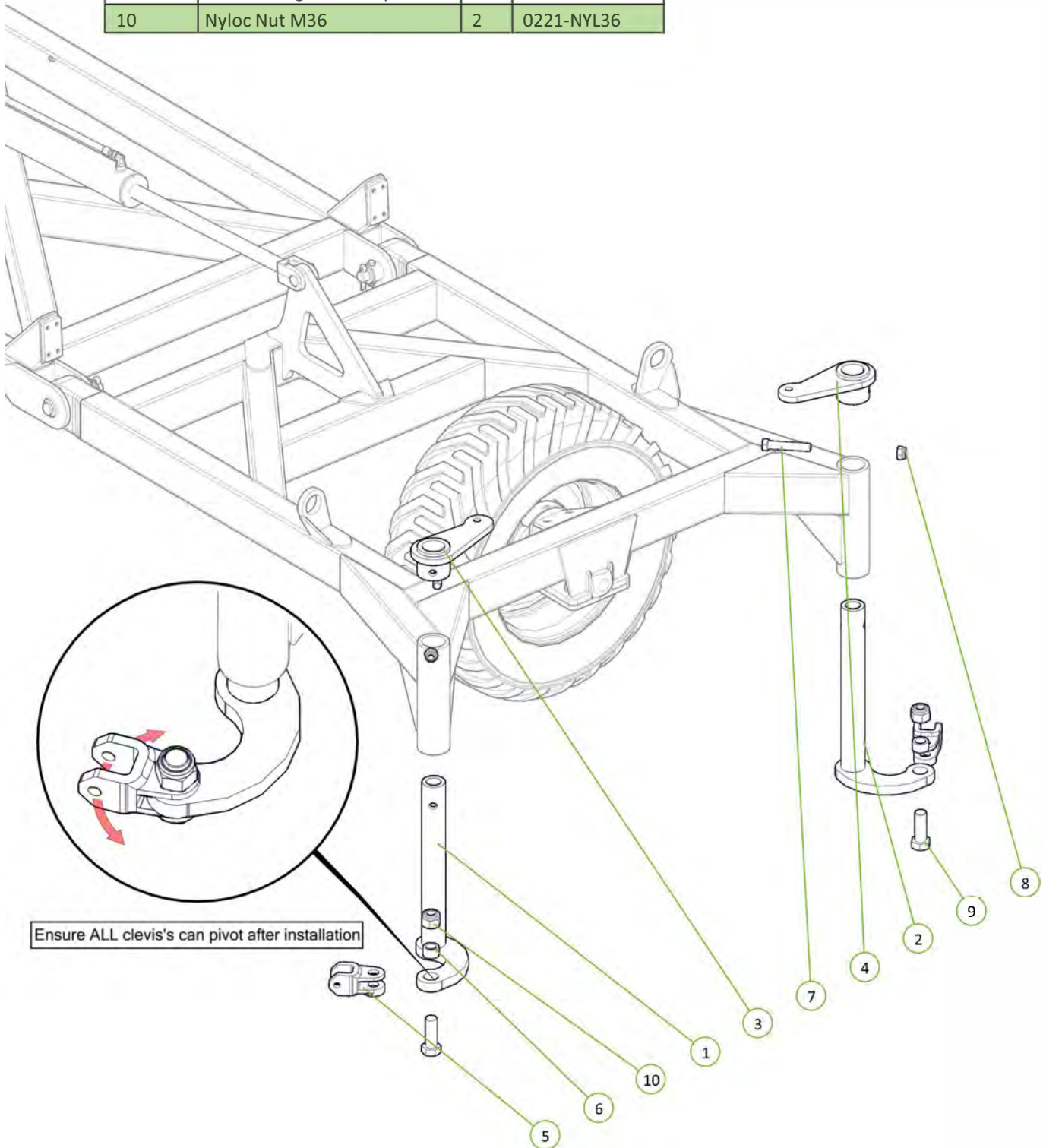
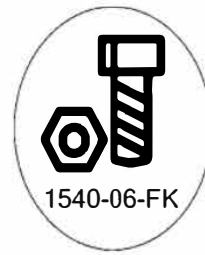
Item No.	Description	Qty	Number
1	Rear Module	1	1510-29-12-2E
2	U-Bolt M16 x 185 Deep x 104 Wide	8	0271-16185104
3	Washer Flat M16	16	0231-F16
4	Nyloc Nut M16	16	0221-NYL16



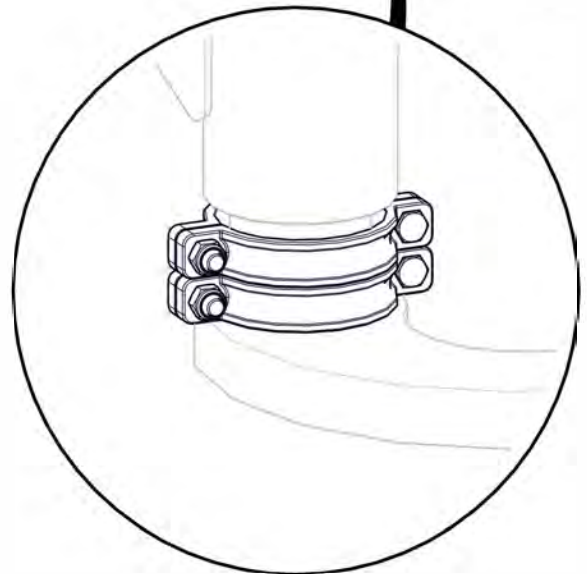
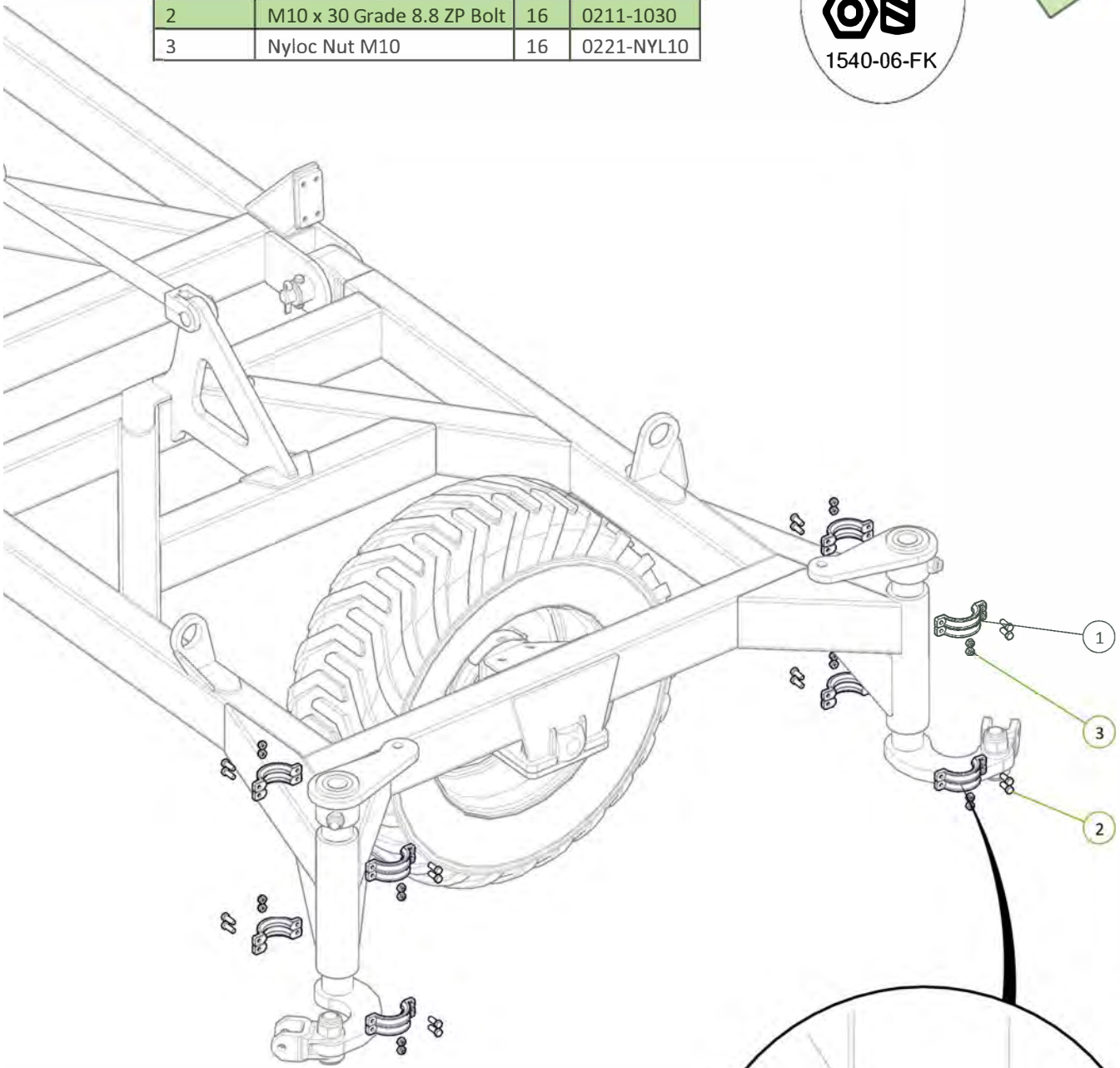
Item No.	Description	Qty	Number
1	Front Module	1	1510-28-12E
2	U-Bolt M16 x 185 Deep x 104 Wide	8	0271-16185104
3	Nyloc Nut M16	16	0221-NYL16
4	Washer Flat M16	16	0231-F16



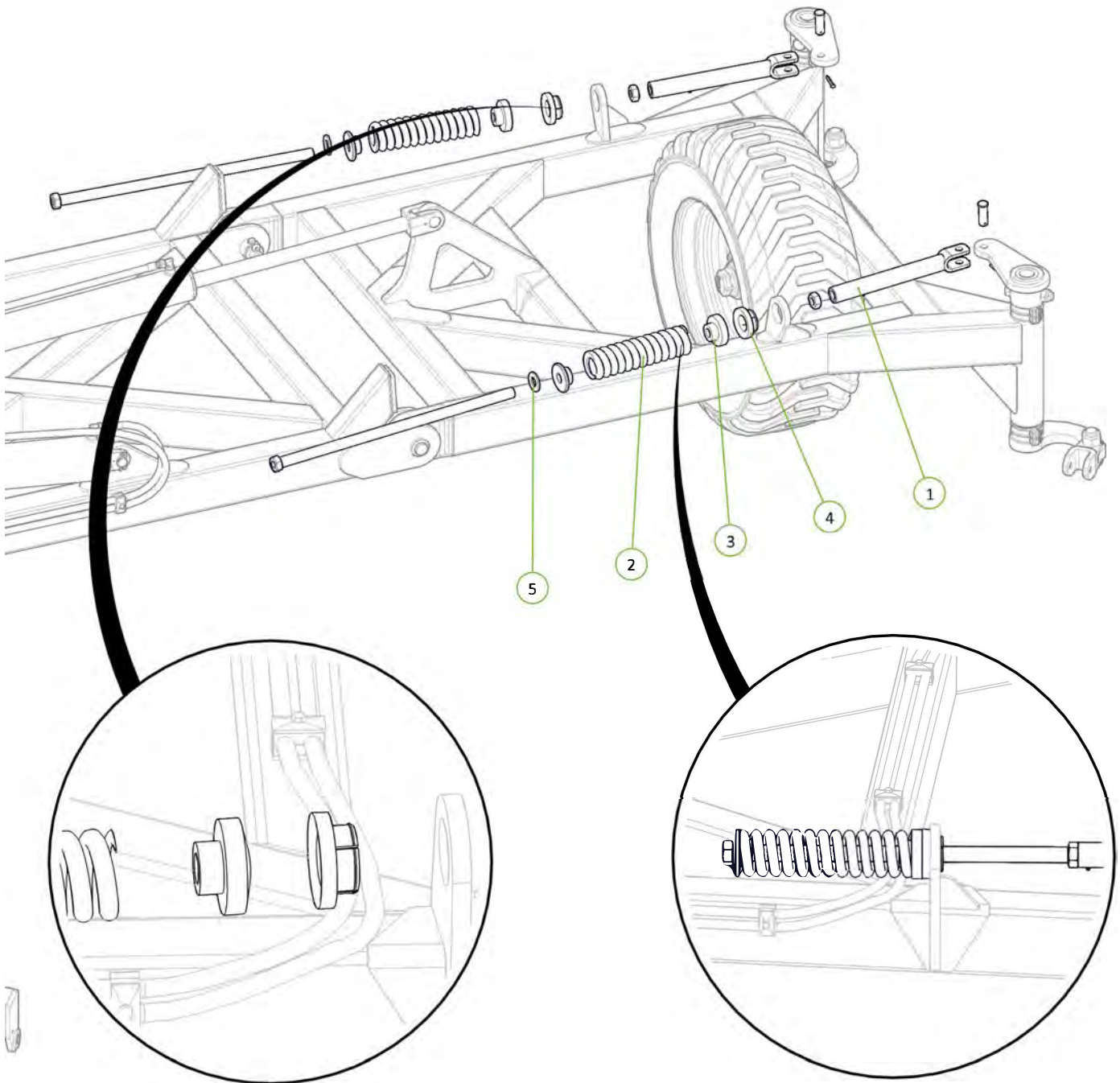
Item No.	Description	Qty	Number
1	Left Hand Dropleg No Clevis	1	0810-24FE
2	Right Hand Dropleg No Clevis	1	0810-25FE
3	Left Hand Chain Adjusting Lug	1	0810-26
4	Right Hand Chain Adjusting Lug	1	0810-27
5	Forged Clevis 21mm Bolt Hole	2	0801-FC21
6	Wear Bush	2	1501-365033-SS
7	M24 x 140 grade 8.8 zp Bolt	2	0211-24140
8	Nyloc Nut M24	2	0221-NYL24
9	M36 x 105 grade 8.8 zp Bolt	2	0211-36105
10	Nyloc Nut M36	2	0221-NYL36



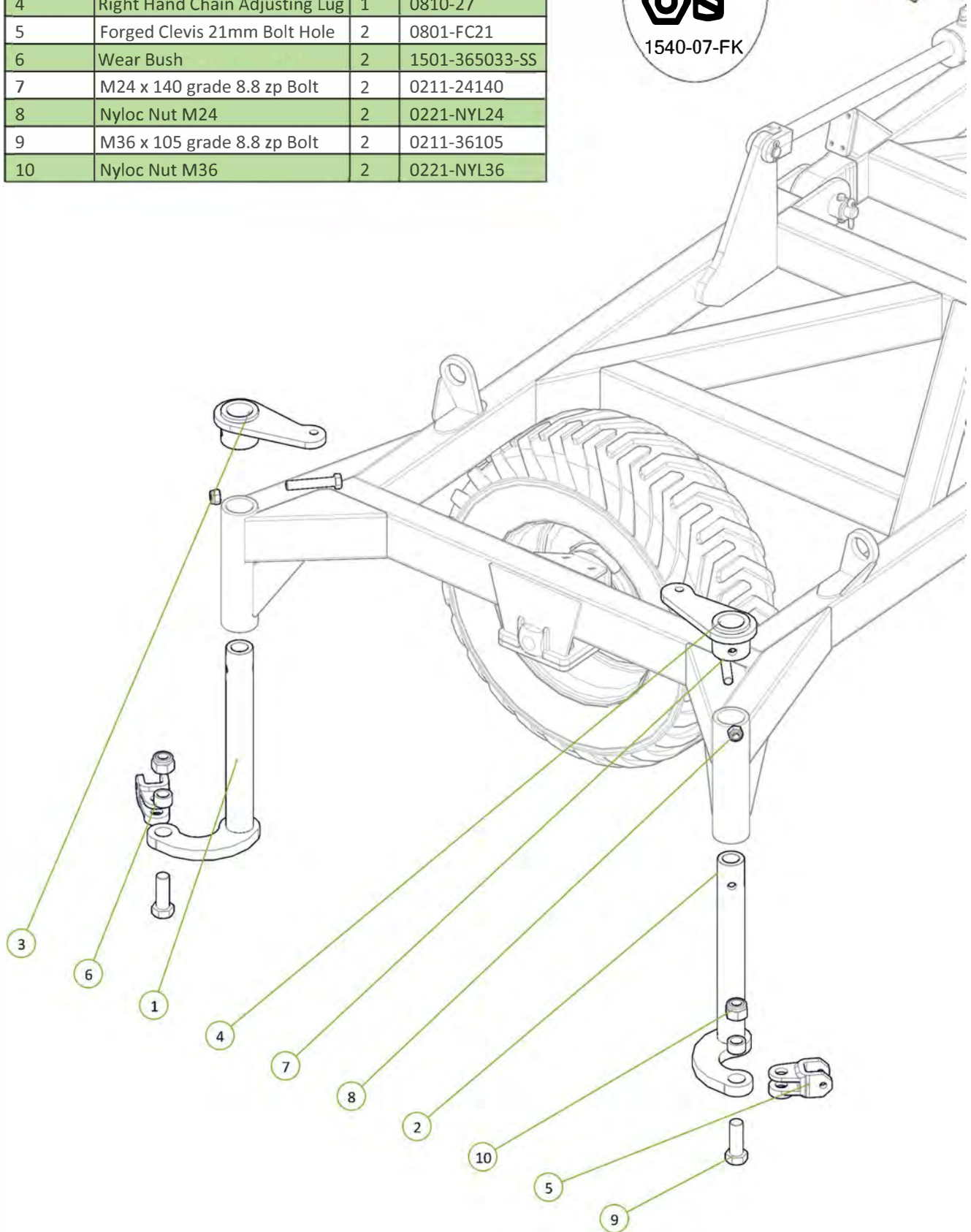
Item No.	Description	Qty	Number
1	Cast Spacer 25mm	16	0801-CS25
2	M10 x 30 Grade 8.8 ZP Bolt	16	0211-1030
3	Nyloc Nut M10	16	0221-NYL10



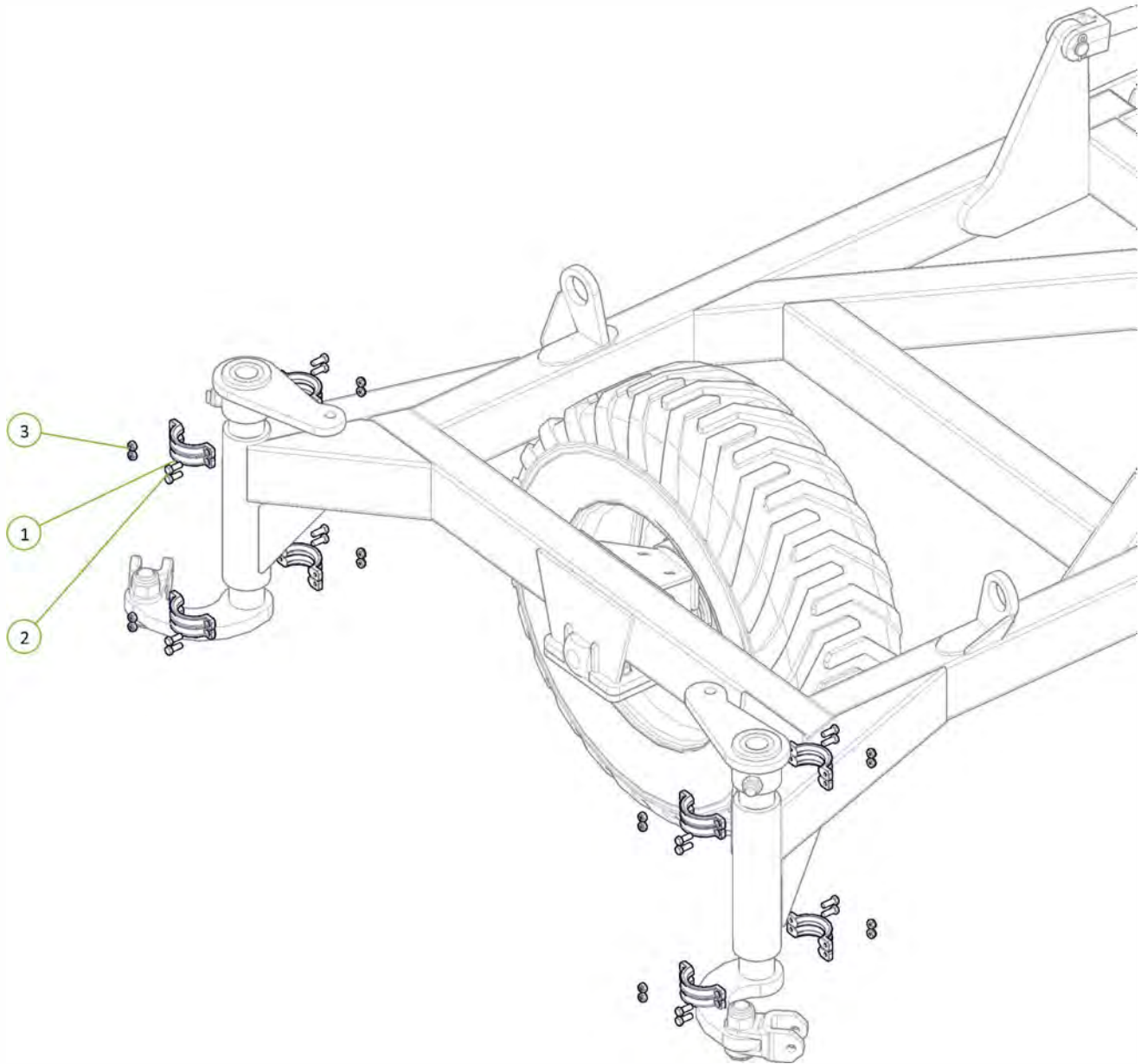
Item No.	Description	Qty	Number
1	Chain Tension Adjustor	2	0802-PCHTA
2	20mm Compression Spring	2	0801-XK9261S
3	Tensioner Cup - Male	2	0801-KE0805-3
4	Tensioner Cup - Female	2	0801-KE0805-4
5	Washer High Tensile 1 1/4"	2	0232-HT11/4



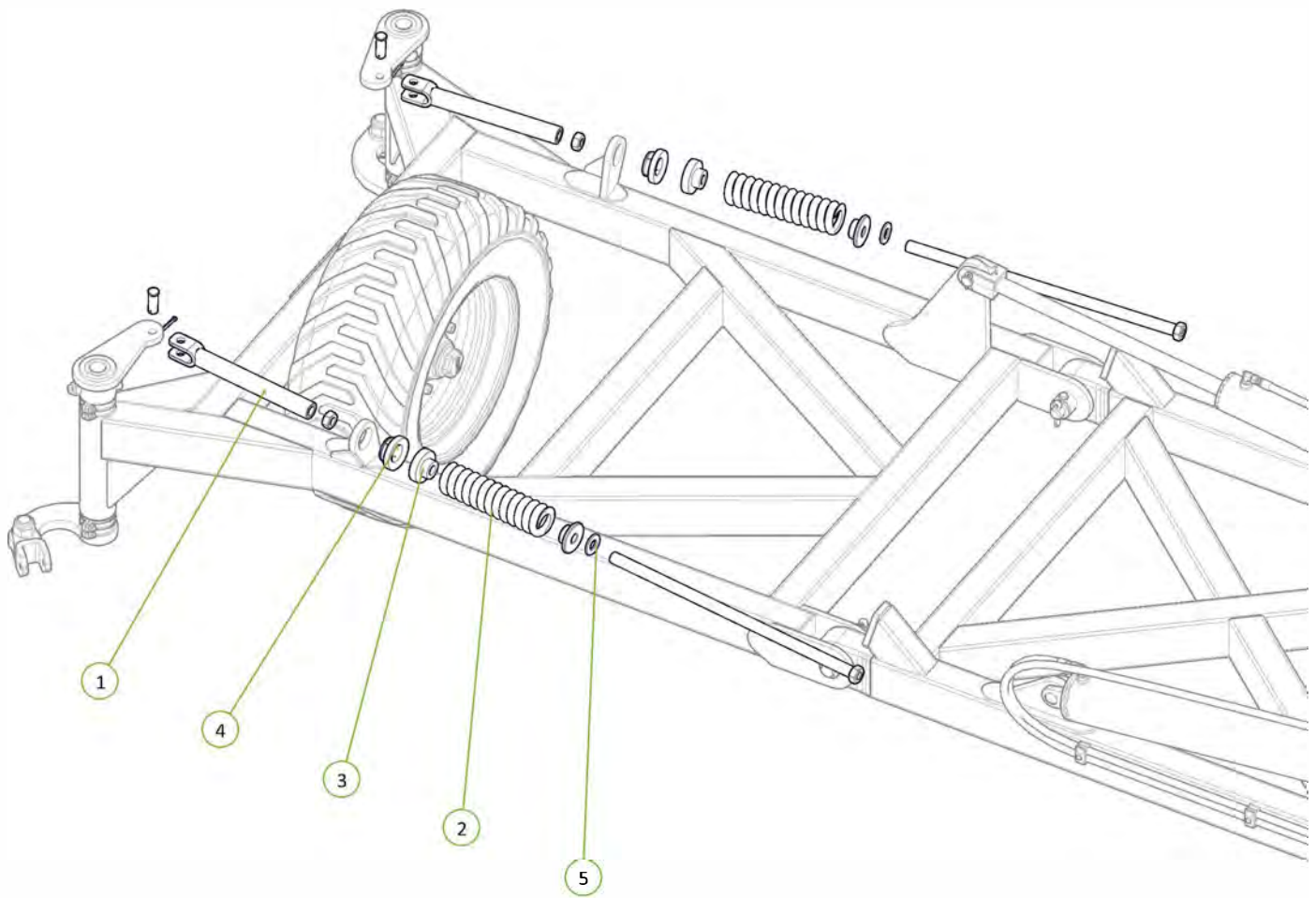
Item No.	Description	Qty	Number
1	Left Hand Dropleg No Clevis	1	0810-24FE
2	Right Hand Dropleg No Clevis	1	0810-25FE
3	Left Hand Chain Adjusting Lug	1	0810-26
4	Right Hand Chain Adjusting Lug	1	0810-27
5	Forged Clevis 21mm Bolt Hole	2	0801-FC21
6	Wear Bush	2	1501-365033-SS
7	M24 x 140 grade 8.8 zp Bolt	2	0211-24140
8	Nyloc Nut M24	2	0221-NYL24
9	M36 x 105 grade 8.8 zp Bolt	2	0211-36105
10	Nyloc Nut M36	2	0221-NYL36

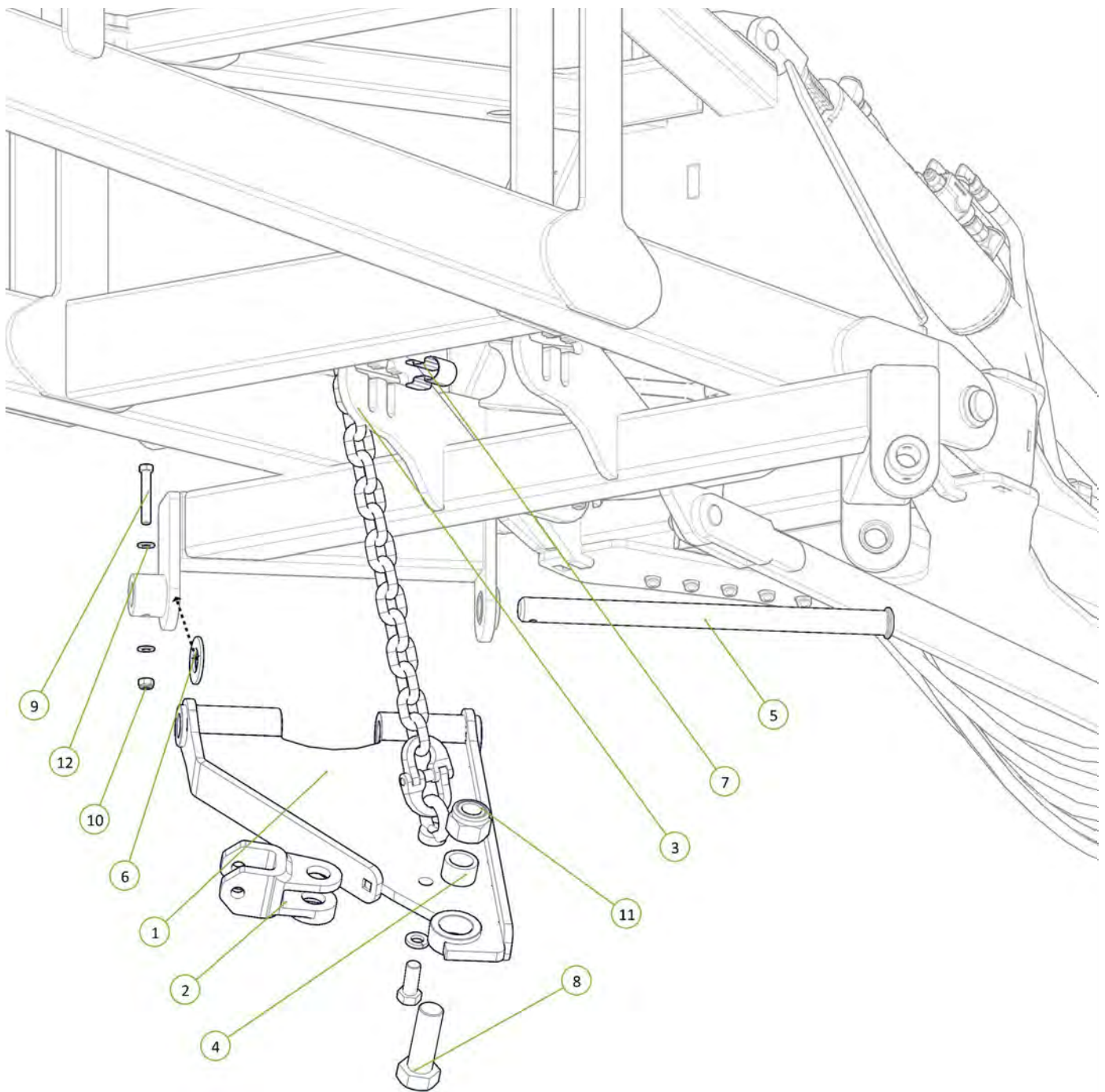


Item No.	Description	Qty	Number
1	Cast Spacer 25mm	16	0801-CS25
2	M10 x 30 Grade 8.8 ZP Bolt	16	0211-1030
3	Nyloc Nut M10	16	0221-NYL10



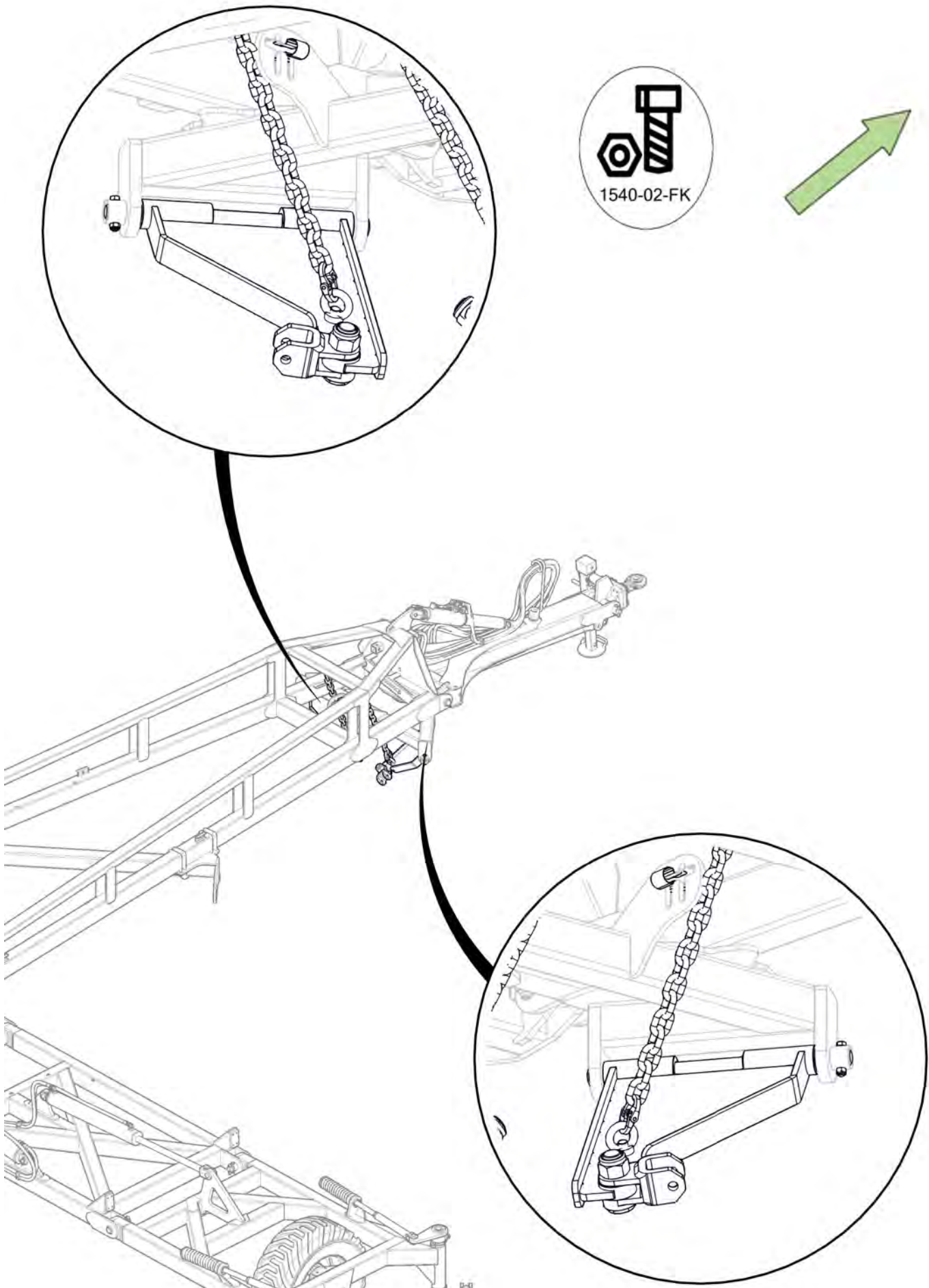
Item No.	Description	Qty	Number
1	Chain Tension Adjustor	2	0802-PCHTA
2	20mm Compression Spring	2	0801-XK92615
3	Tensioner Cup - Male	2	0801-KE0805-3
4	Tensioner Cup - Female	2	0801-KE0805-4
5	Washer High Tensile 1 1/4"	2	0232-HT11/4



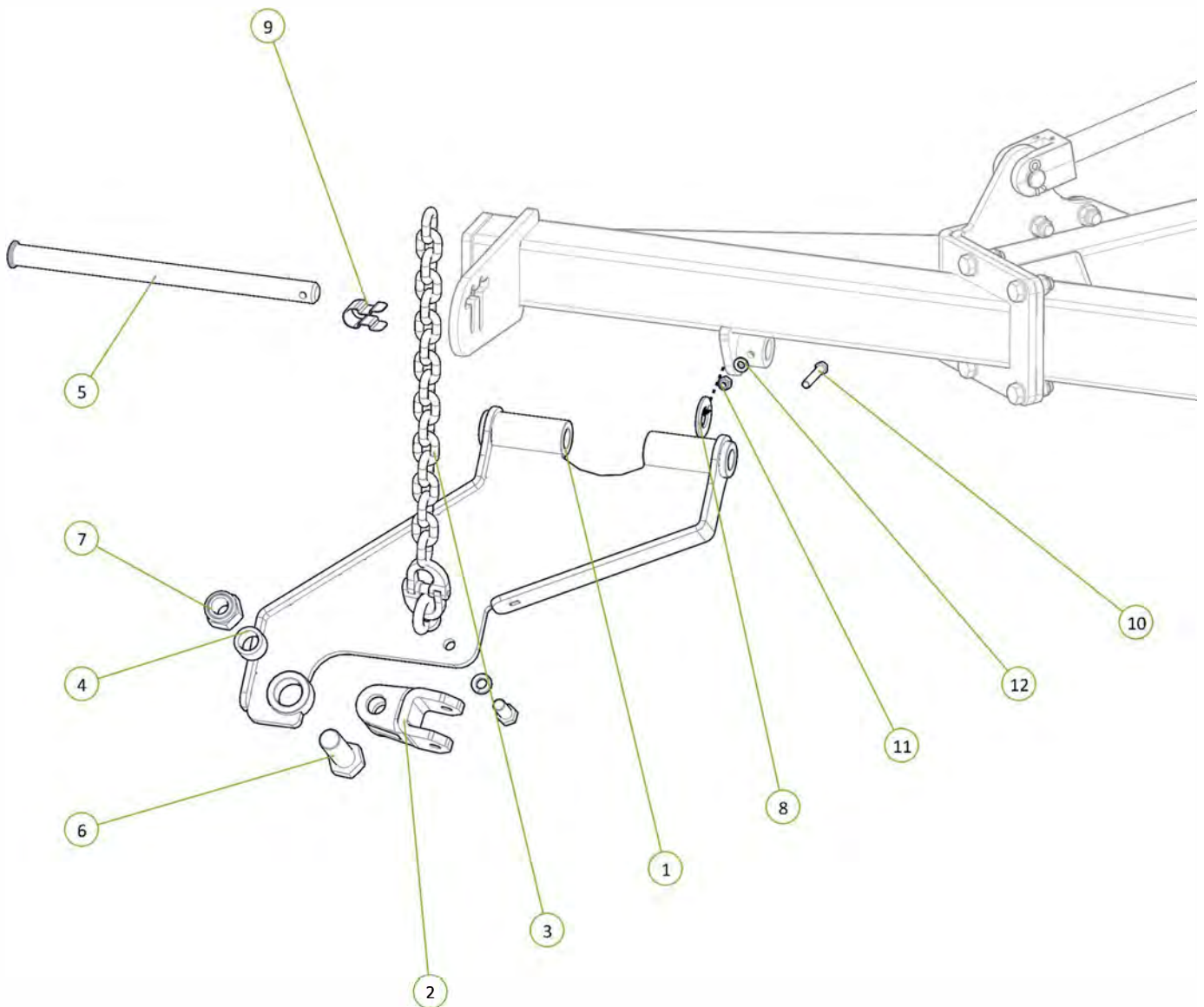
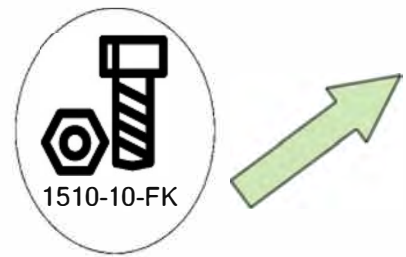


Item No.	Description	Qty	Number
1	Standard Chain Mount Plate	1	0810-20E
2	Forged Clevis 21mm Bolt Hole	1	0801-FC21
3	Height Adjusting Chain Assembly 17 Link	1	0801-20MCA-17
4	Wear Bush	1	1501-365033-SS
5	Chain Mount Pivot Pin	1	0801-10-51
6	Washer High Tensile 1 3/8"	1	0232-HT13/8
7	Height Adjustor Retaining Clip	1	0801-KE014
8	M36 Grade 8.8 ZP Bolt	1	0211-36105
9	M12 x 80 Grade 8.8 ZP Bolt	1	0211-1280
10	Nyloc Nut M12	1	0221-NYL12
11	Nyloc Nut M36	1	0221-NYL36
12	Washer Flat M12	2	0231-F12

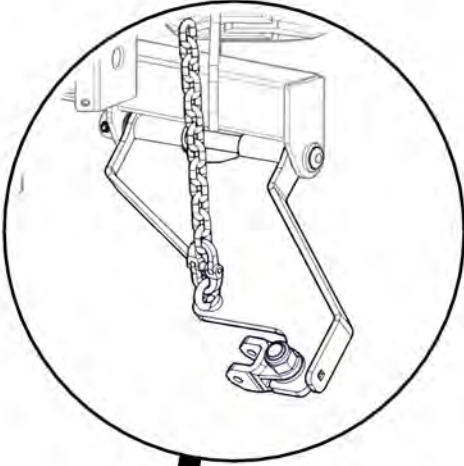




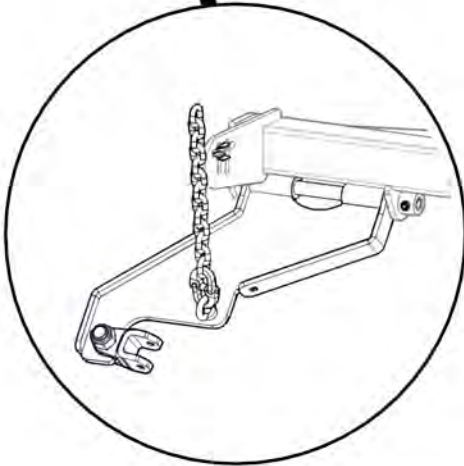
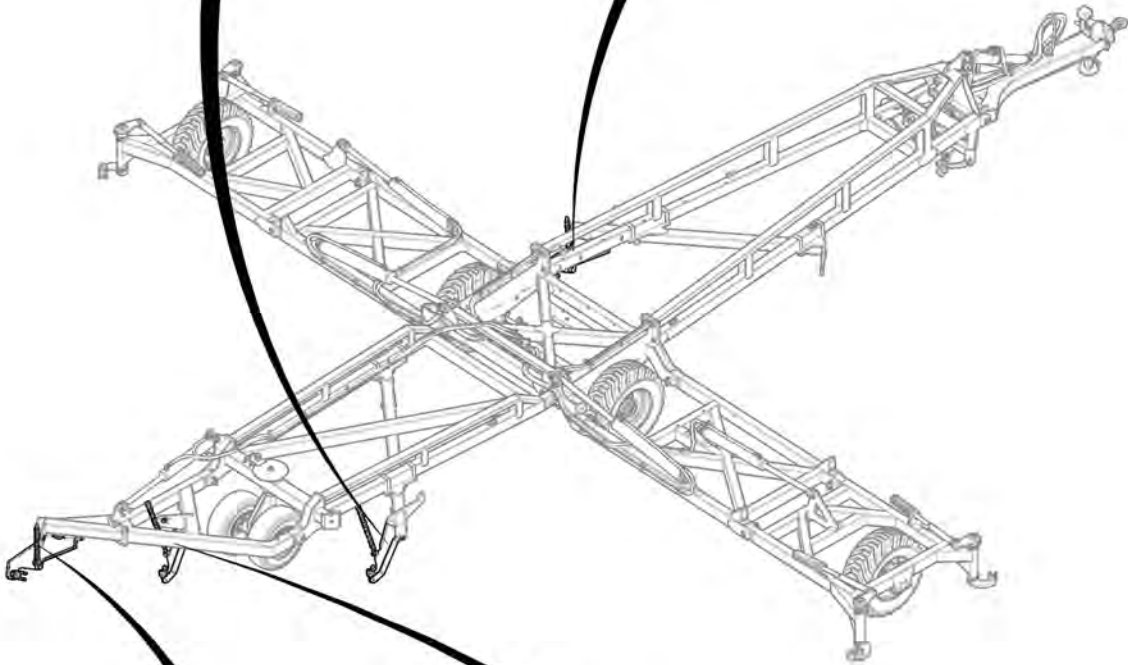
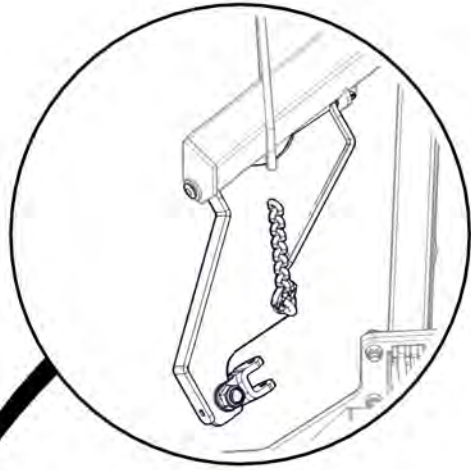
Item No.	Description	Qty	Number
1	Extended Chain Mount Plate	1	0810-21E
2	Forged Clevis 21mm Bolt Hole	1	0801-FC21
3	Height Adjusting Chain Assembly 17 Link	1	0801-20MCA-17
4	Wear Bush	1	1501-365033-SS
5	Chain Mount Pivot Pin	1	0801-10-51
6	M36 x 105 Grade 8.8 ZP Bolt	1	0211-36105
7	Nyloc Nut M36	1	0221-NYL36
8	Washer High Tensile 1 3/8"	1	0232-HT13/8
9	Height Adjustor Retaining Clip	1	0801-KE014
10	M12 x 80 Grade 8.8 ZP Bolt	1	0211-1280
11	Nyloc Nut M12	1	0221-NYL12
12	Washer Flat M12	2	0231-F12



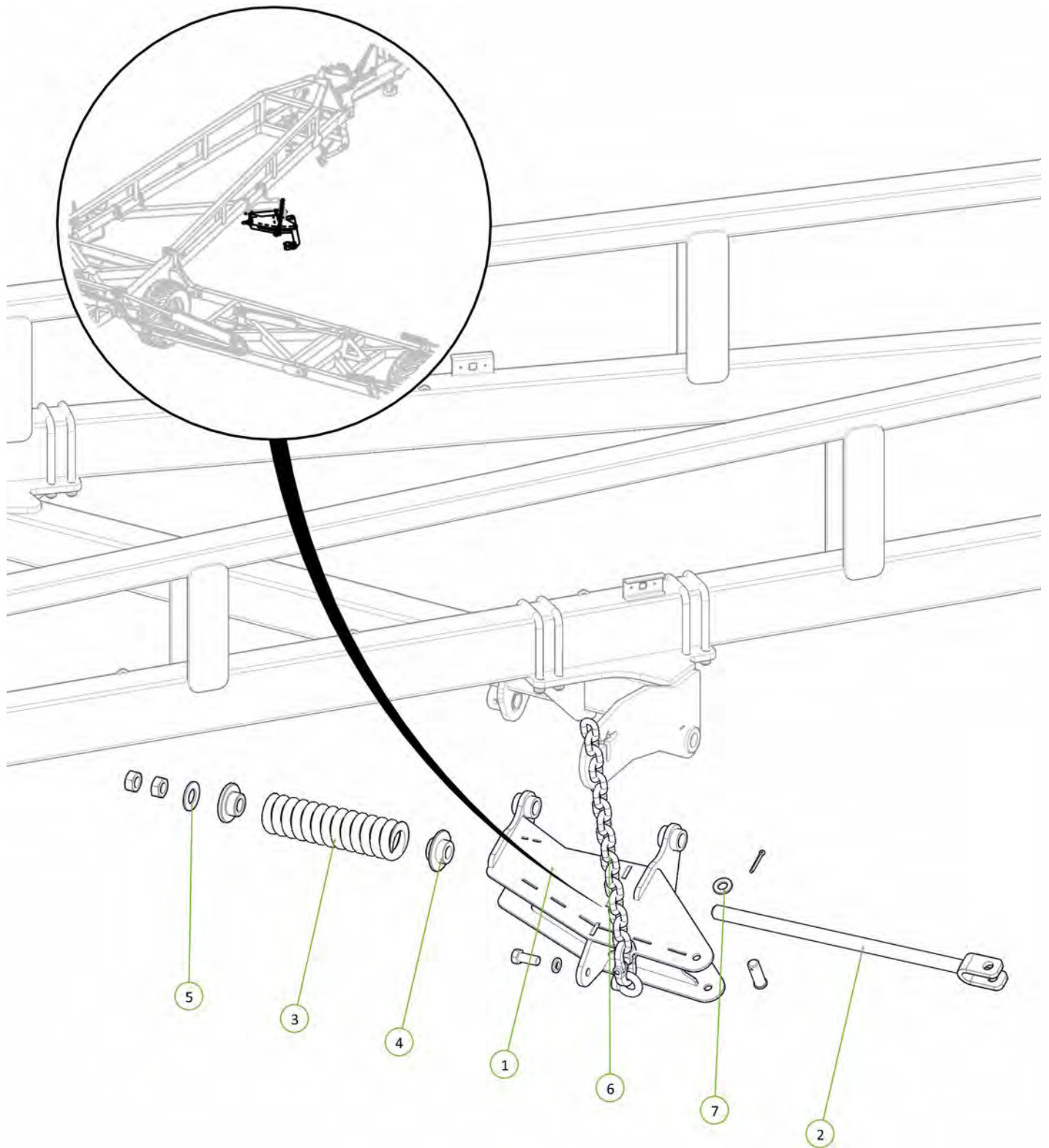
1510-29-12-FK



1510-28-12-FK

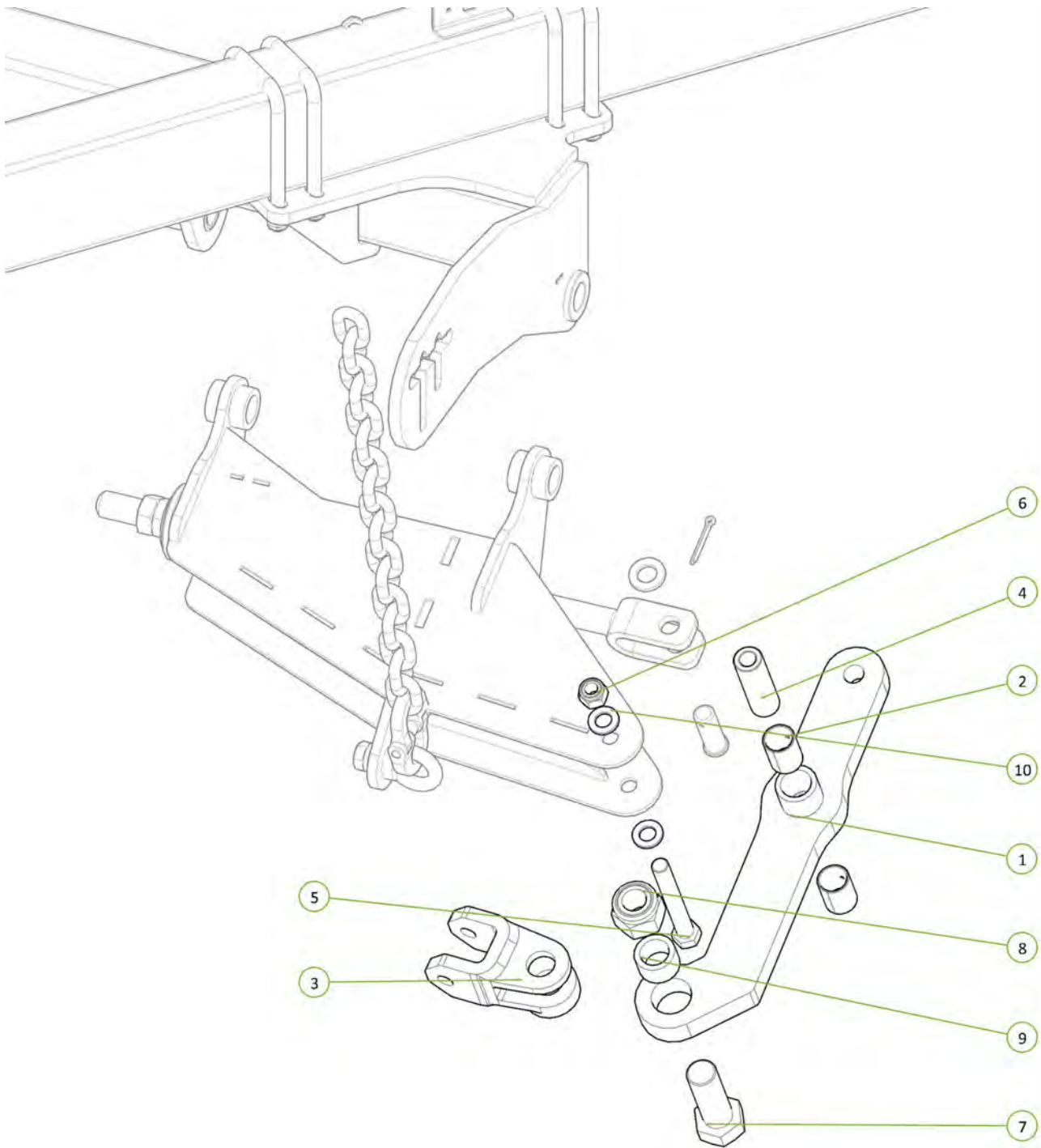


1510-40-FK



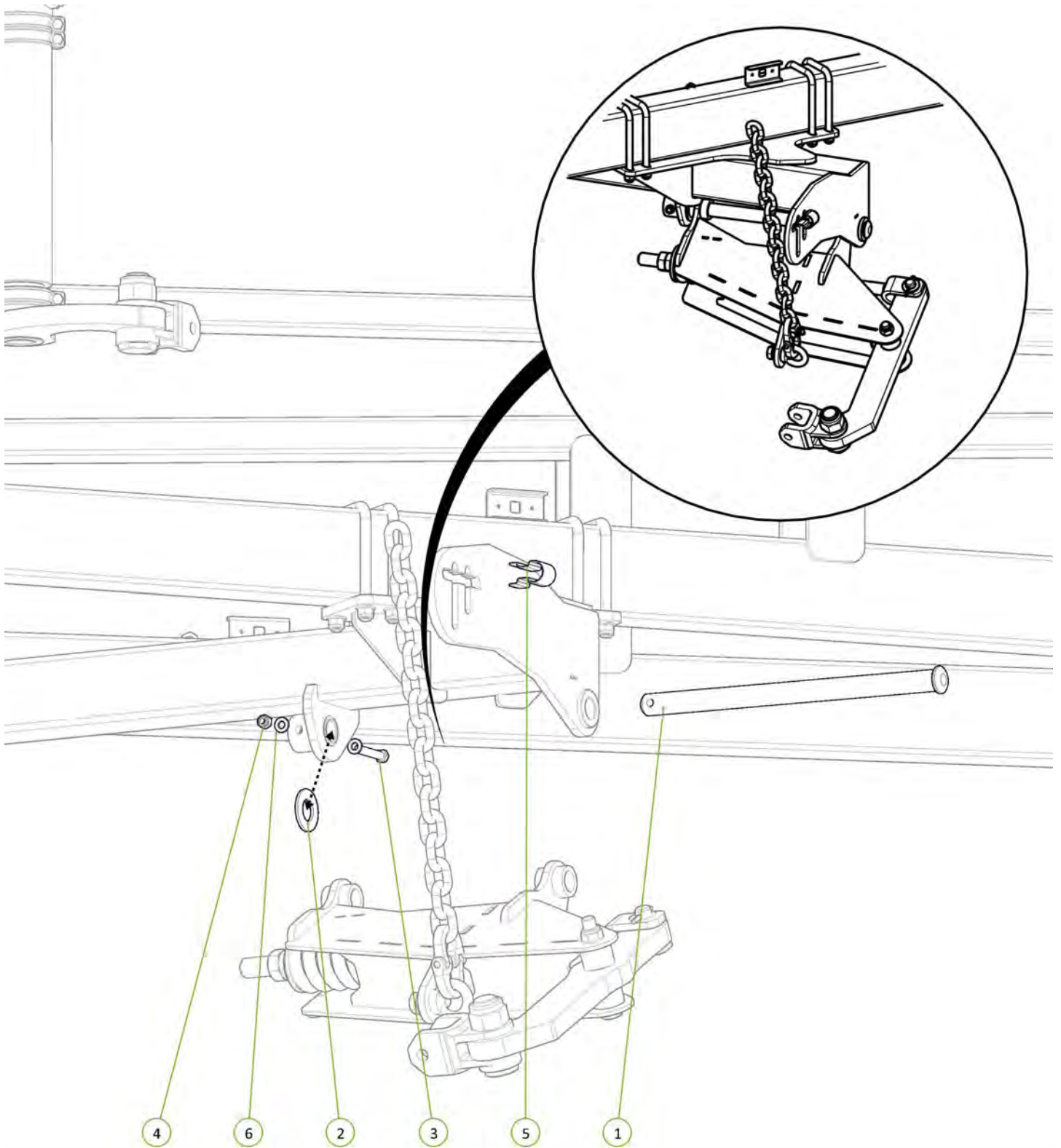
Item No.	Description	Qty	Number
1	Rear Module Tension Body	1	0810-103R
2	Module Tension Rod Assembly	1	0810-105A
3	20mm Compression Spring	1	0801-XK9261S
4	Rigid Spring Locator	1	0801-10-S2L
5	Washer High Tensile 1 3/8"	1	0232-HT13/8
6	Height Adjusting Chain Assembly 17 Link	1	0801-20MCA-17
7	Washer Flat M24	1	0231-F24





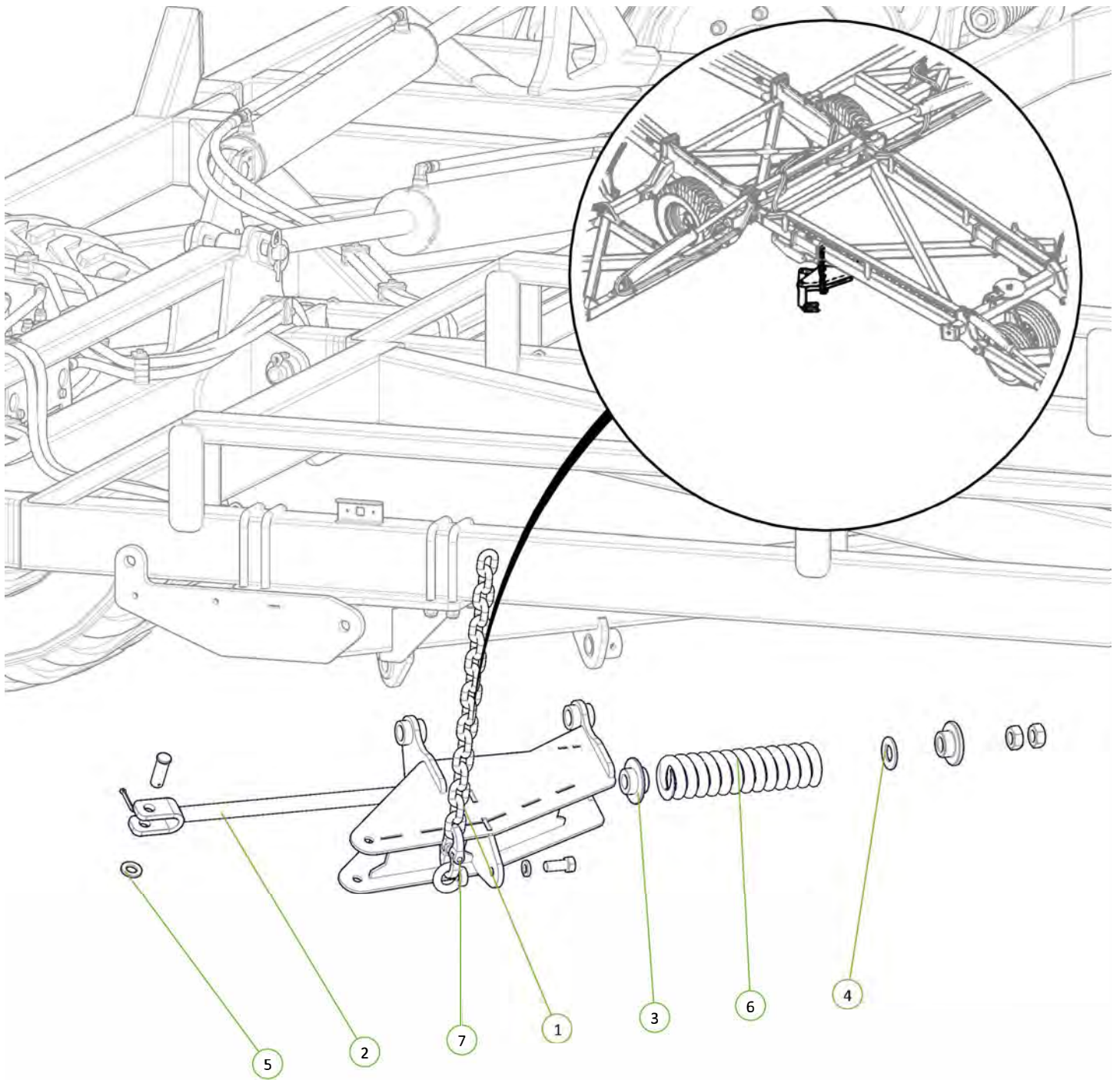
Item No.	Description	Qty	Number
1	Module Tension Arm No Clevis	1	0810-104F
2	35 ID x 50mm DU Bush	2	0113-3550DU
3	Forged Clevis 21mm Bolt Hole	1	0801-FC21
4	Module Pivot Arm Bush	1	0801-10-110
5	M20 x 160 Grade 8.8 ZP Bolt	1	0211-20160
6	Nyloc Nut M20	1	0221-NYL20
7	M36 x 105 Grade 8.8 zp Bolt	1	0211-36105
8	Nyloc Nut M36	1	0221-NYL36
9	Wear Bush	1	1501-365033-SS
10	Washer Flat M20	2	0231-F20





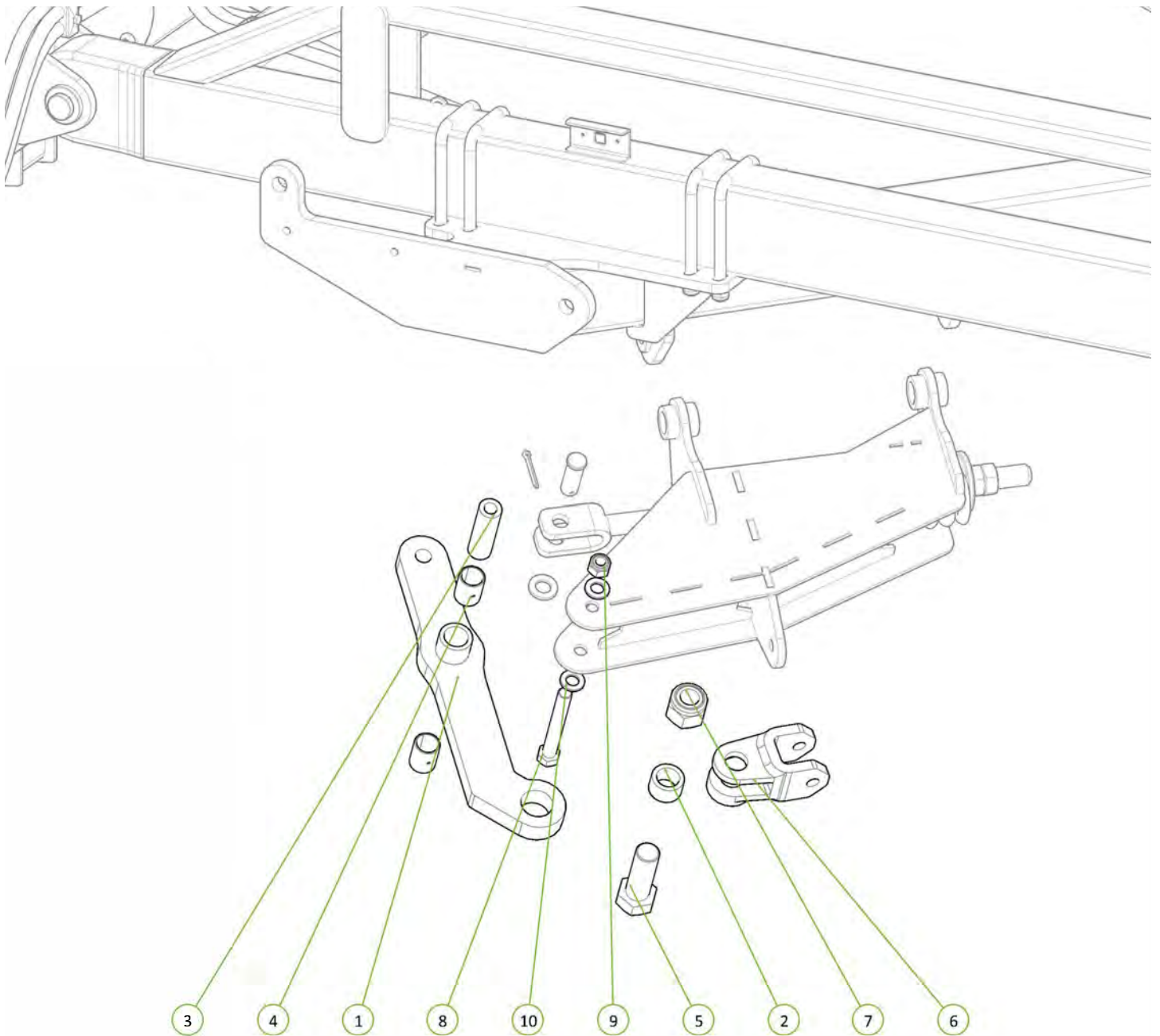
Item No.	Description	Qty	Number
1	Chain Mount Pivot Pin	1	0801-10-51
2	Washer High Tensile 1 3/8"	1	0232-HT13/8
3	M12 x 80 grade 8.8 ZP Bolt	1	0211-1280
4	Nyloc Nut M12	1	0221-NYL12
5	Height Adjustor Retaining Clip	1	0801-KE014
6	Washer Flat M12	2	0231-F12





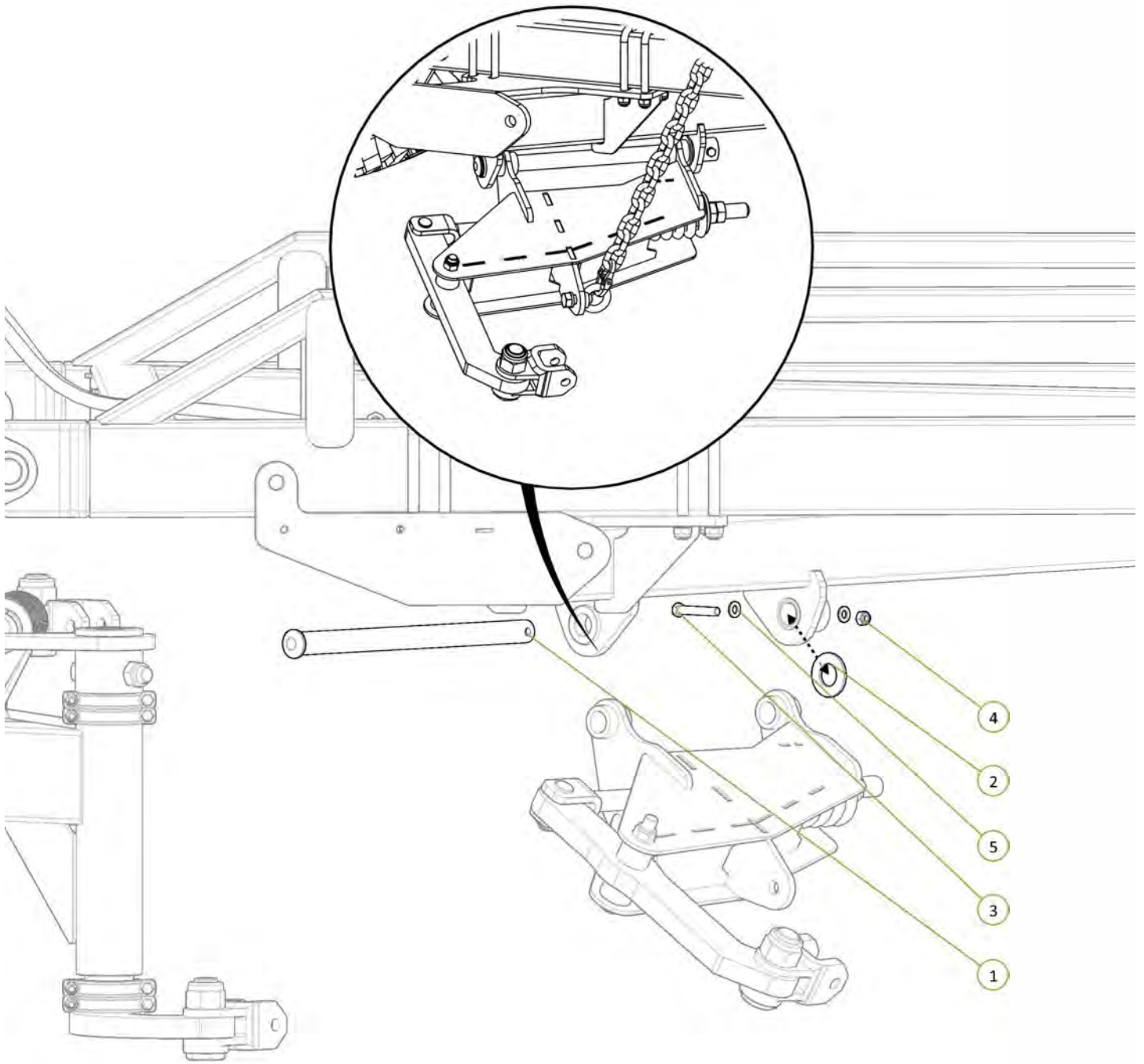
Item No.	Description	Qty	Number
1	Front Module Tension Body	1	0810-103F
2	Module Tension Rod Assembly	1	0810-105A
3	Rigid Spring Locator	1	0801-10-S2L
4	Washer High Tensile 1 3/8"	1	0232-HT13/8
5	Washer Flat M24	1	0231-F24
6	20mm Compression Spring	1	0801-XK92615
7	Height Adjusting Chain Assembly 17 Link	1	0801-20MCA-17





Item No.	Description	Qty	Number
1	Module Tension Arm	1	0810-104 F
2	Wear Bush	1	1501-365033-SS
3	Module Pivot Arm Bush	1	0801-10-110
4	35 ID x 50mm DU Bush	2	0113-3550DU
5	M36 x 105 Grade 8.8 ZP Bolt	1	0211-36105
6	Forged Clevis 21mm Bolt Hole	1	0801-FC21
7	Nyloc Nut M36	1	0221-NYL36
8	M20 x 160 Grade 8.8 ZP Bolt	1	0211-20160
9	Nyloc Nut M20	1	0221-NYL20
10	Washer Flat M20	2	0231-F20

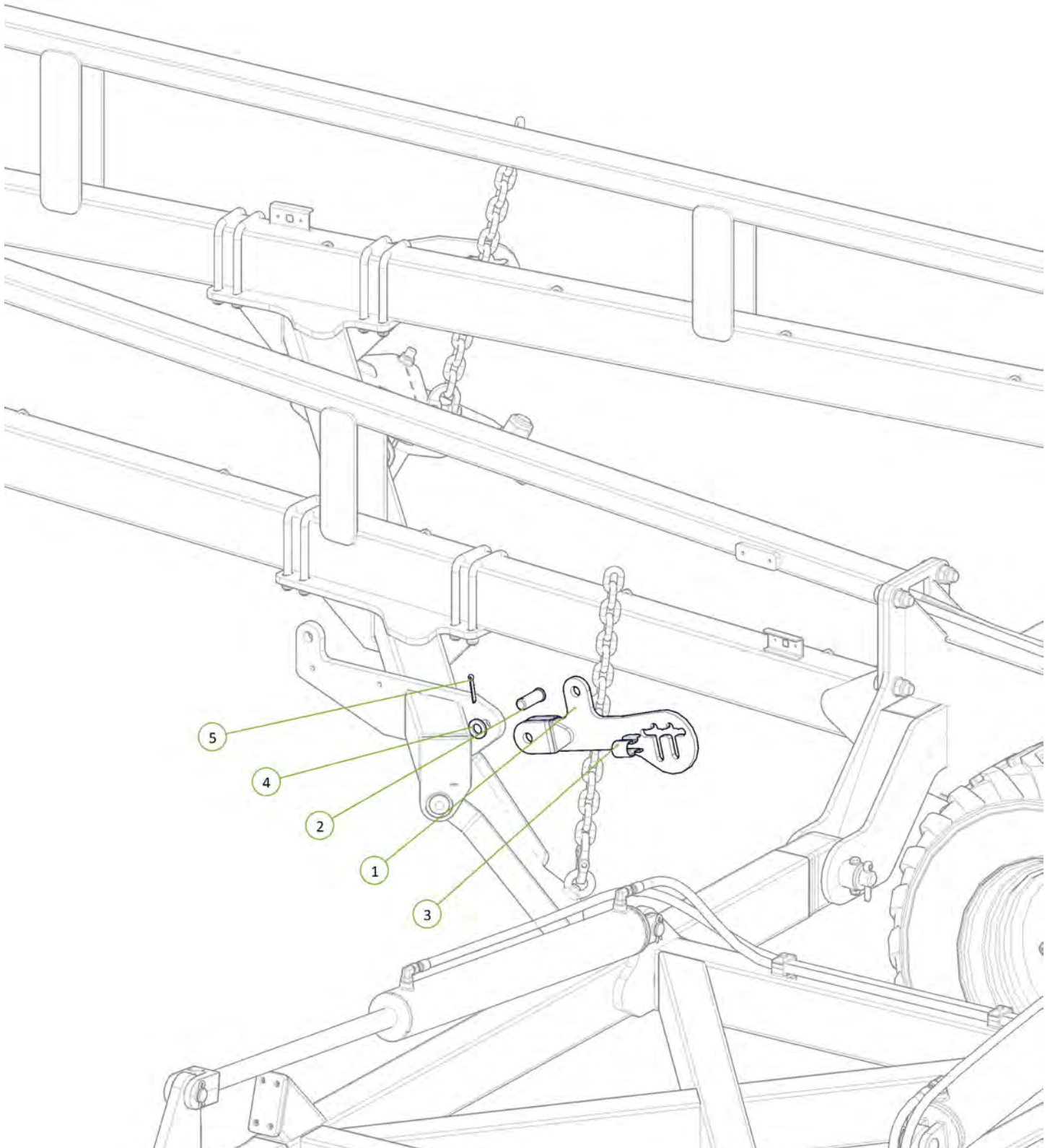




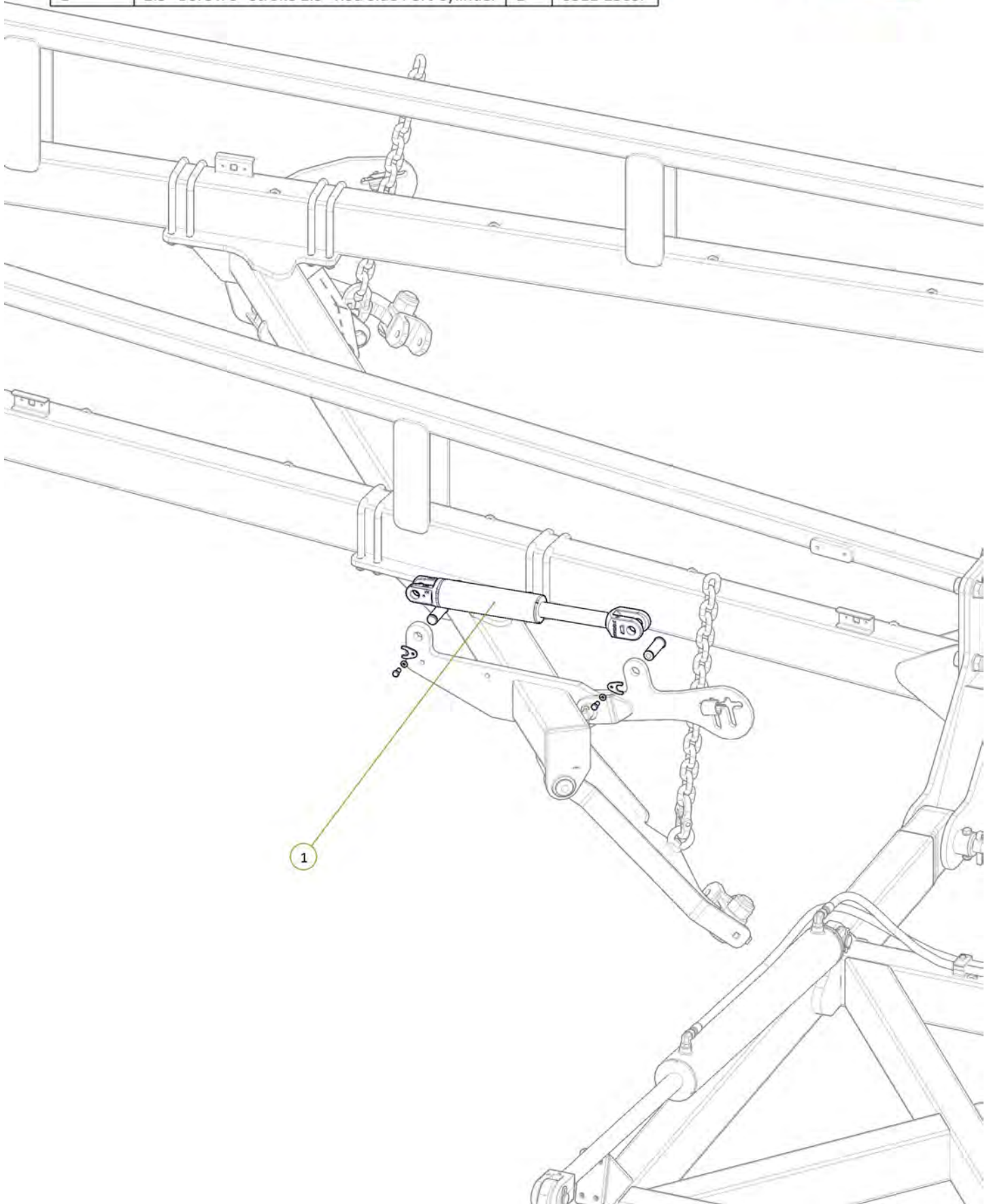
Item No.	Description	Qty	Number
1	Chain Mount Pivot Pin	1	0801-10-51
2	Washer High Tensile 1 3/8"	1	0232-HT13/8
3	M12 x 80 Grade 8.8 ZP Bolt	1	0211-1280
4	Nyloc Nut M12	1	0221-NYL12
5	Washer Flat M12	2	0231-F12



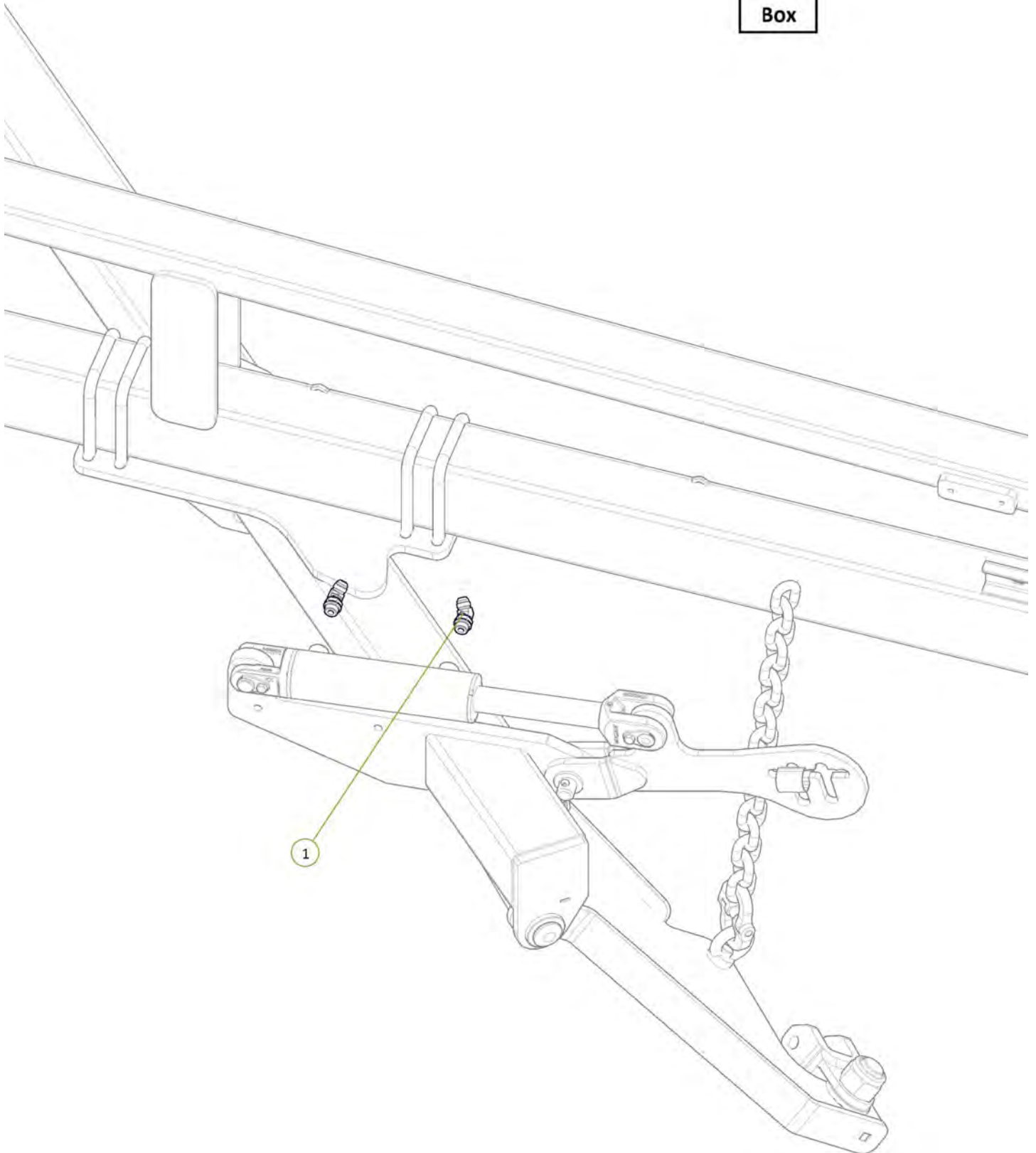
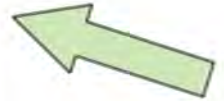
Item No.	Description	Qty	Number
1	Long Module Lift Arm	1	1610-106
2	Clevis Pin 25mm x 75mm	1	0801-KE0307-1
3	Height Adjustor Retaining Clip	1	0801-KE014
4	Washer Flat M24	1	0231-F24
5	Cotter Pin M5 x 50	1	0261-PINC550



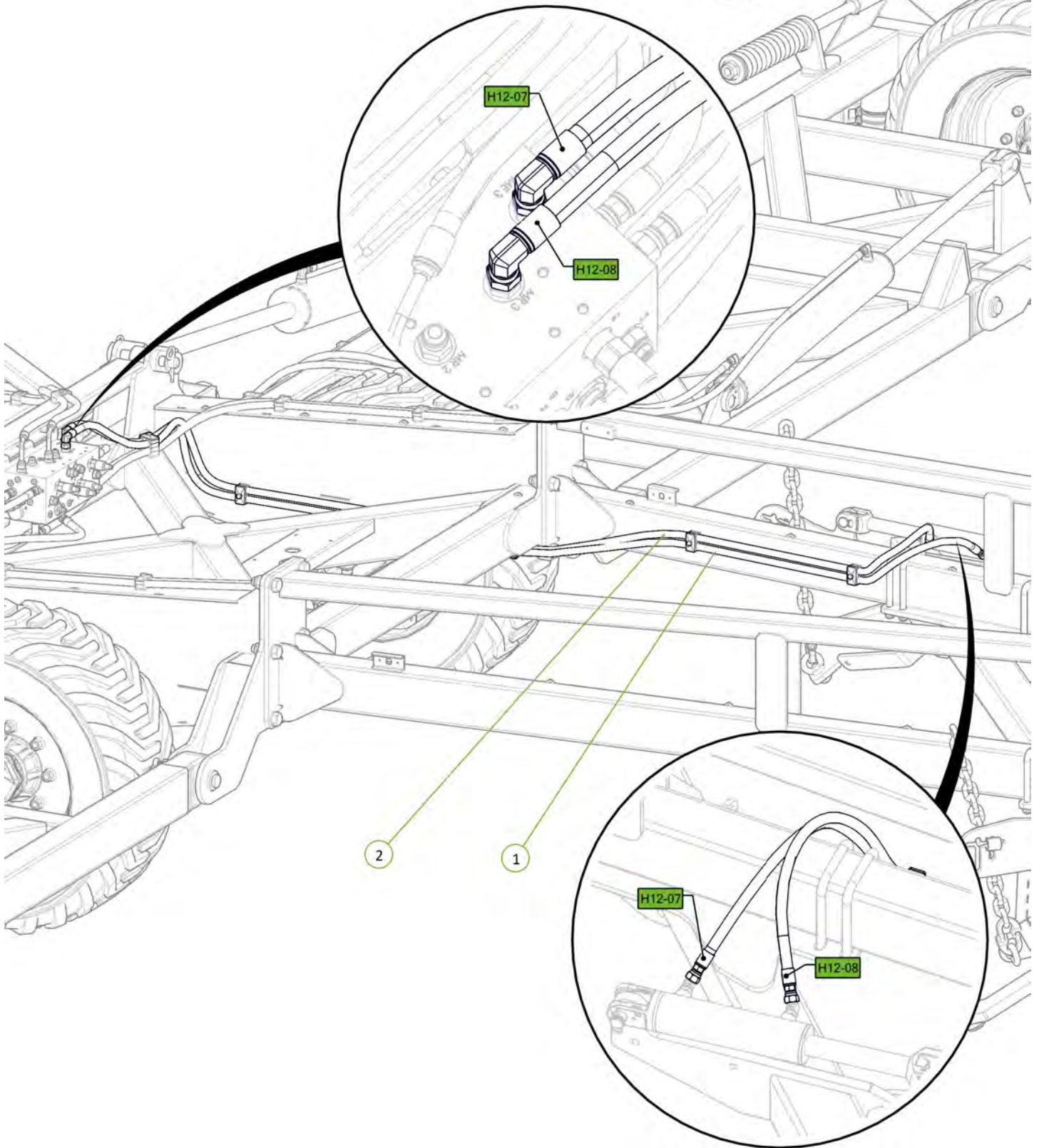
Item No.	Description	Qty	Number
1	2.5" Bore x 6" Stroke 1.5" Rod Side Port Cylinder	1	0311-256SP



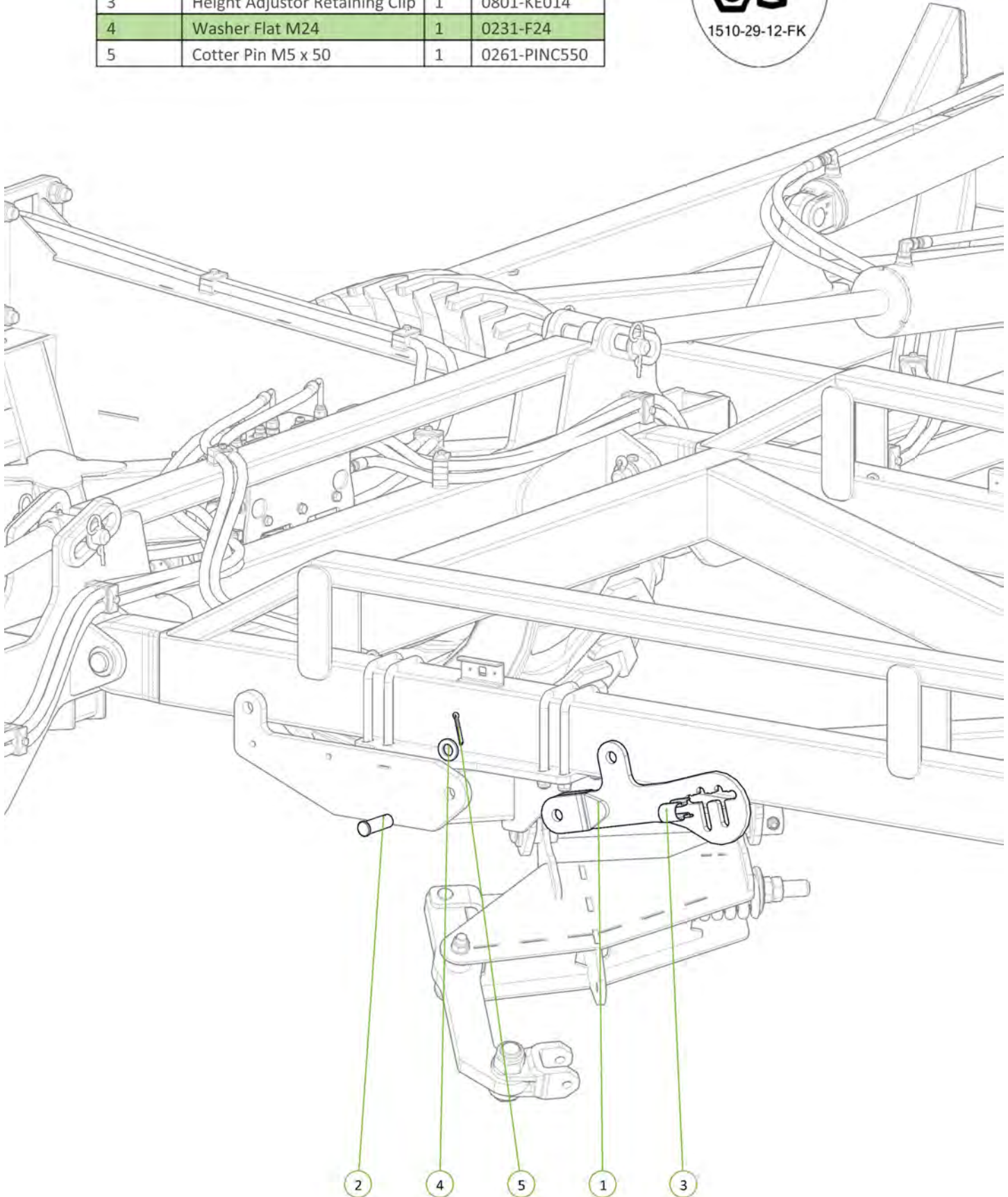
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 45° Elbow	2	0323-S88-1212



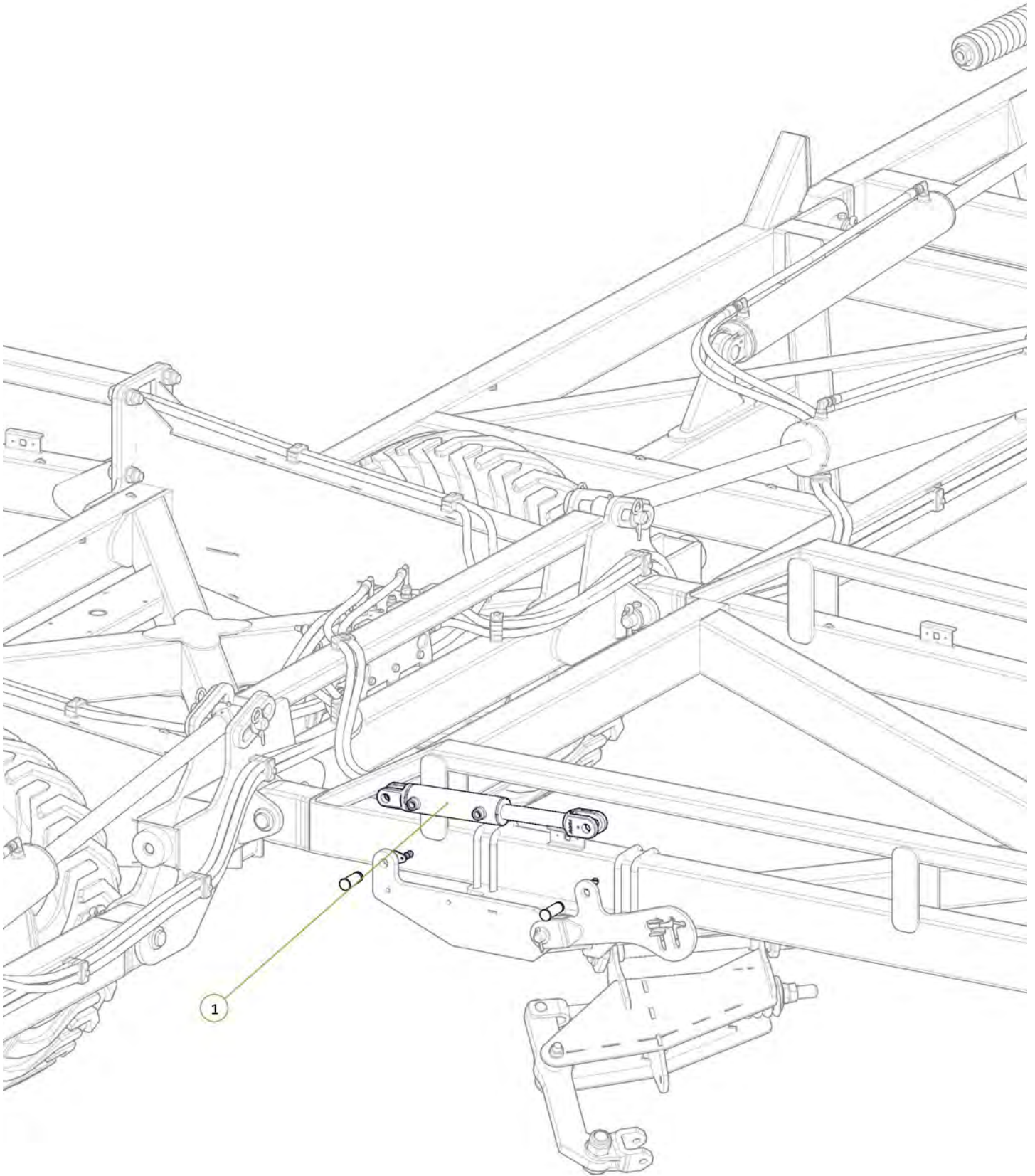
Item No.	Description	Qty	Number
1	ME3 to Front Cylinder Extend Port	1	H12-07
2	MR3 to Front Module Retract Port	1	H12-08

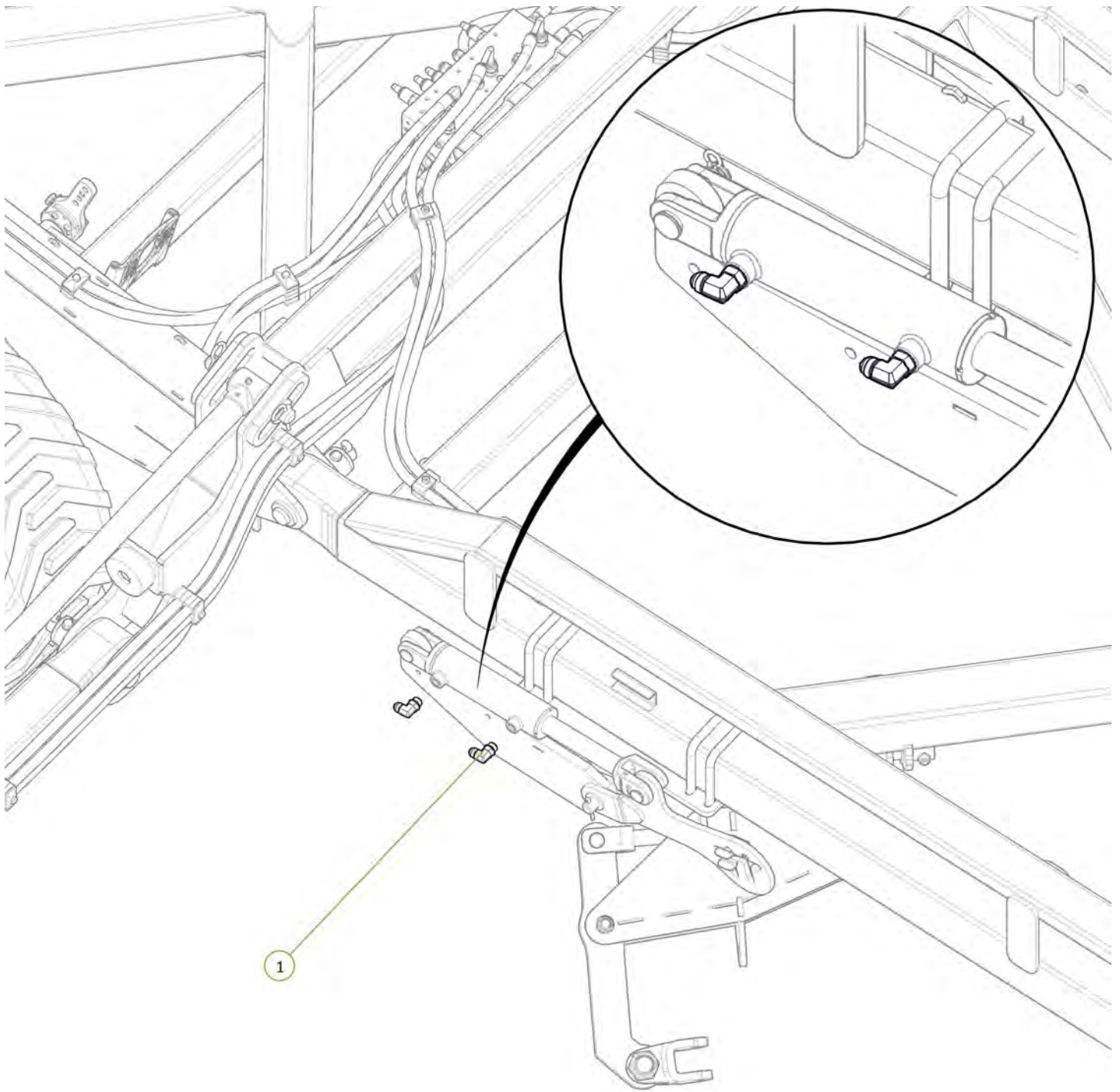


Item No.	Description	Qty	Number
1	Long Module Lift Arm	1	1610-106
2	Clevis Pin 25mm x 75mm	1	0801-KE0307-1
3	Height Adjustor Retaining Clip	1	0801-KE014
4	Washer Flat M24	1	0231-F24
5	Cotter Pin M5 x 50	1	0261-PINC550



Item No.	Description	Qty	Number
1	2.5" Bore x 6" Stroke 1.5" Rod Side Port Cylinder	1	0311-256SP

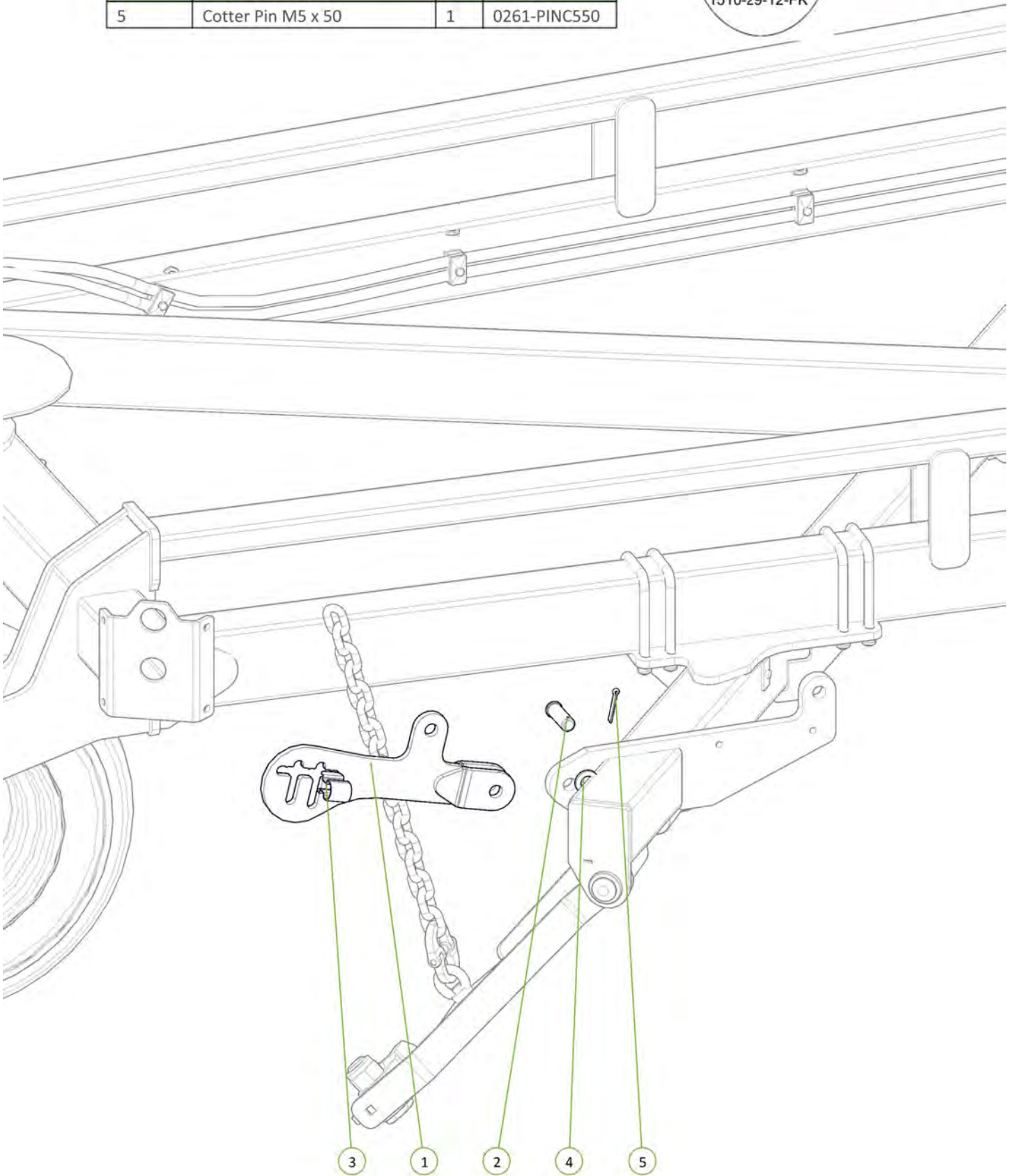




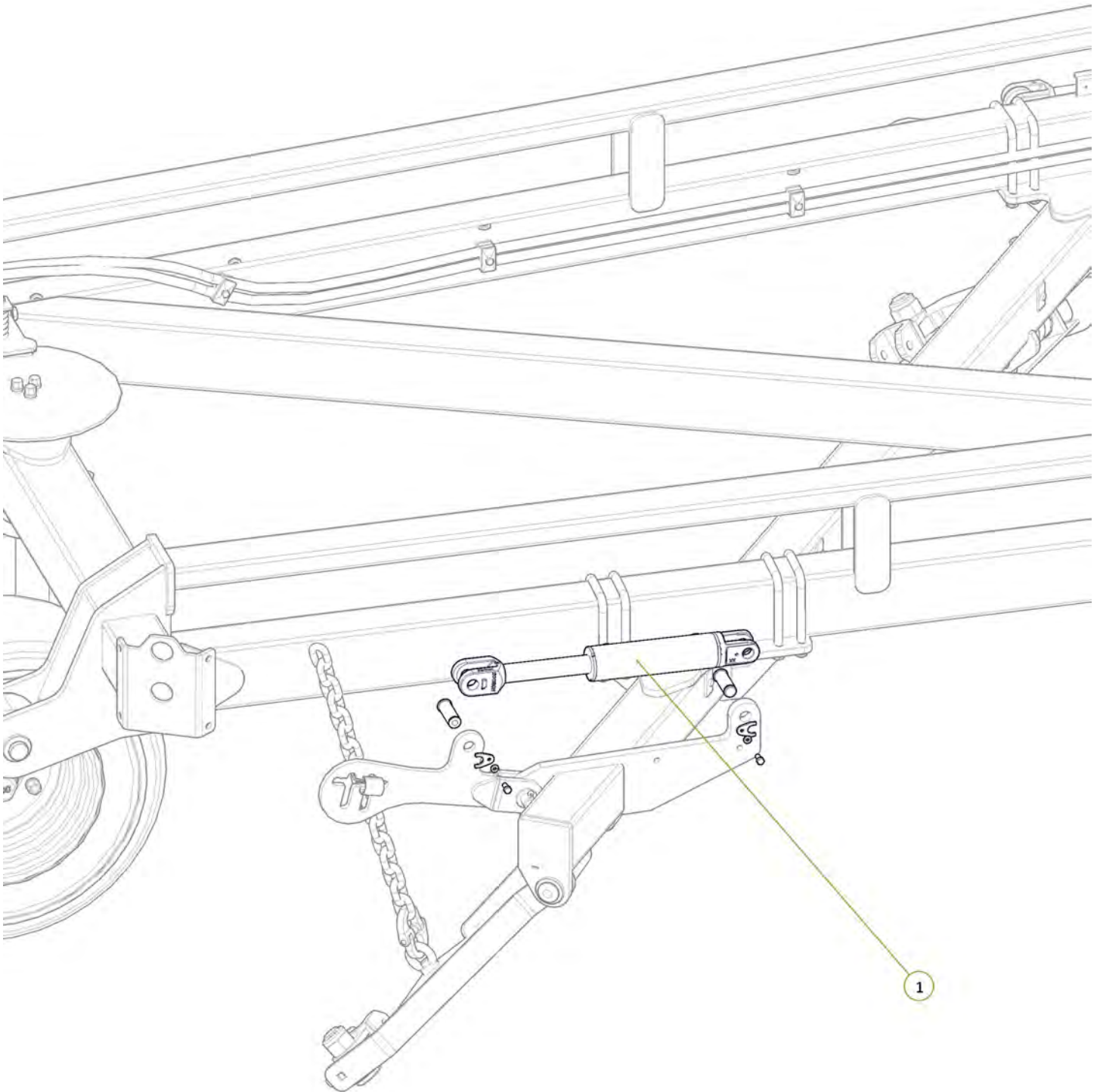
Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212



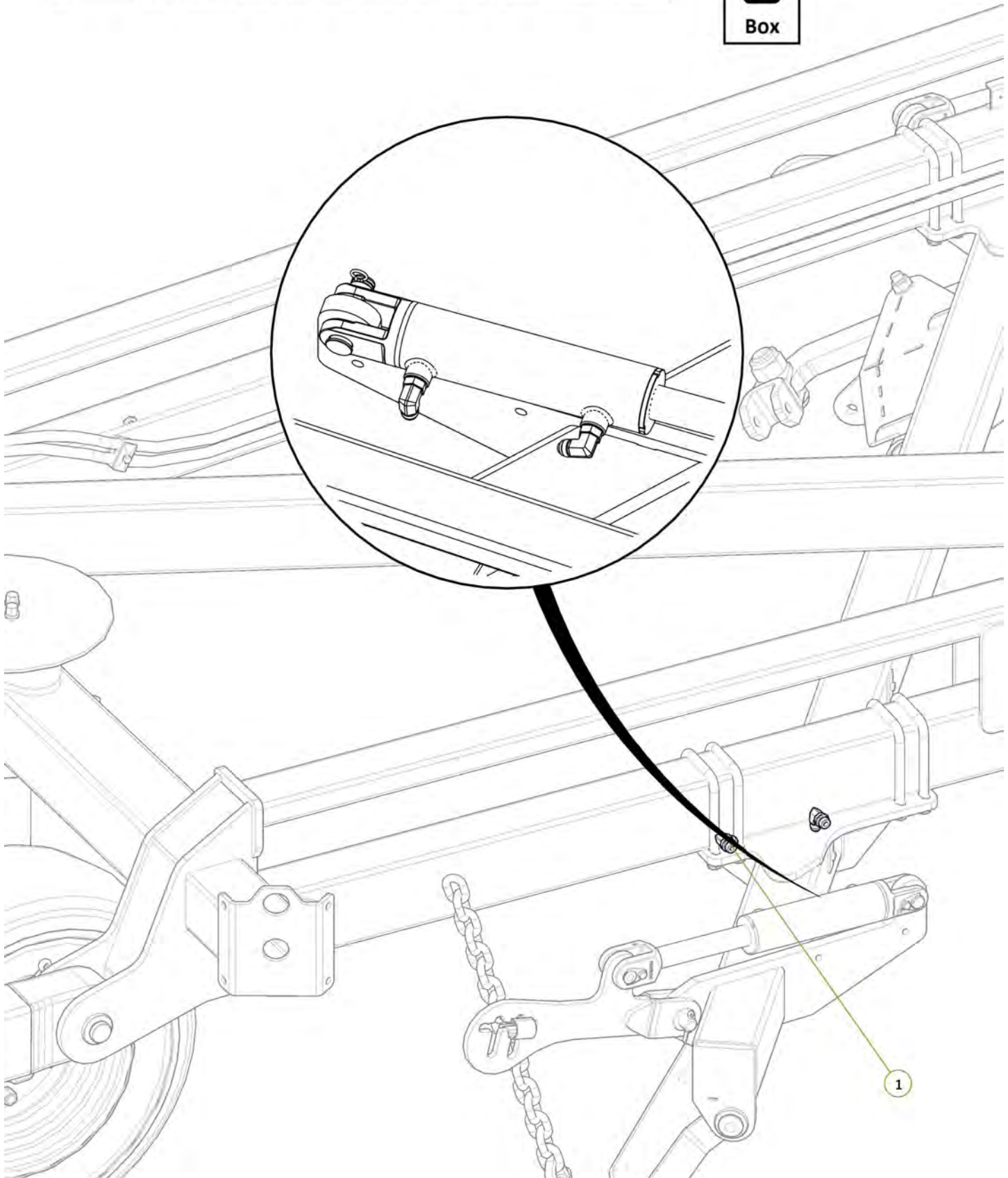
Item No.	Description	Qty	Number
1	Long Module Lift Arm	1	1610-106
2	Clevis Pin 25mm x 75mm	1	0801-KE0307-1
3	Height Adjustor Retaining Clip	1	0801-KE014
4	Washer Flat M24	1	0231-F24
5	Cotter Pin M5 x 50	1	0261-PINC550



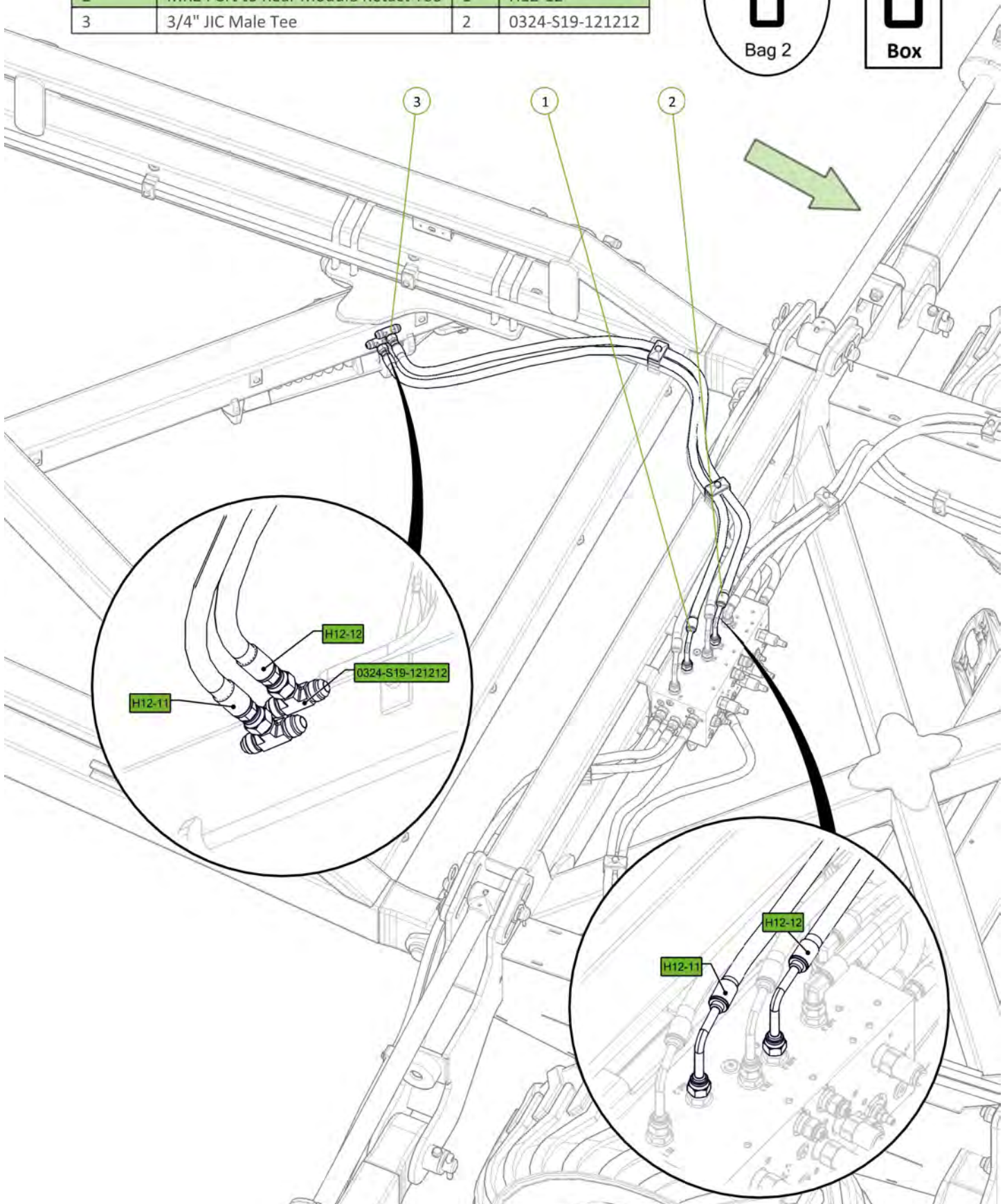
Item No.	Description	Qty	Number
1	2.5" Bore x 6" Stroke 1.5" Rod Side Port Cylinder	1	0311-256SP

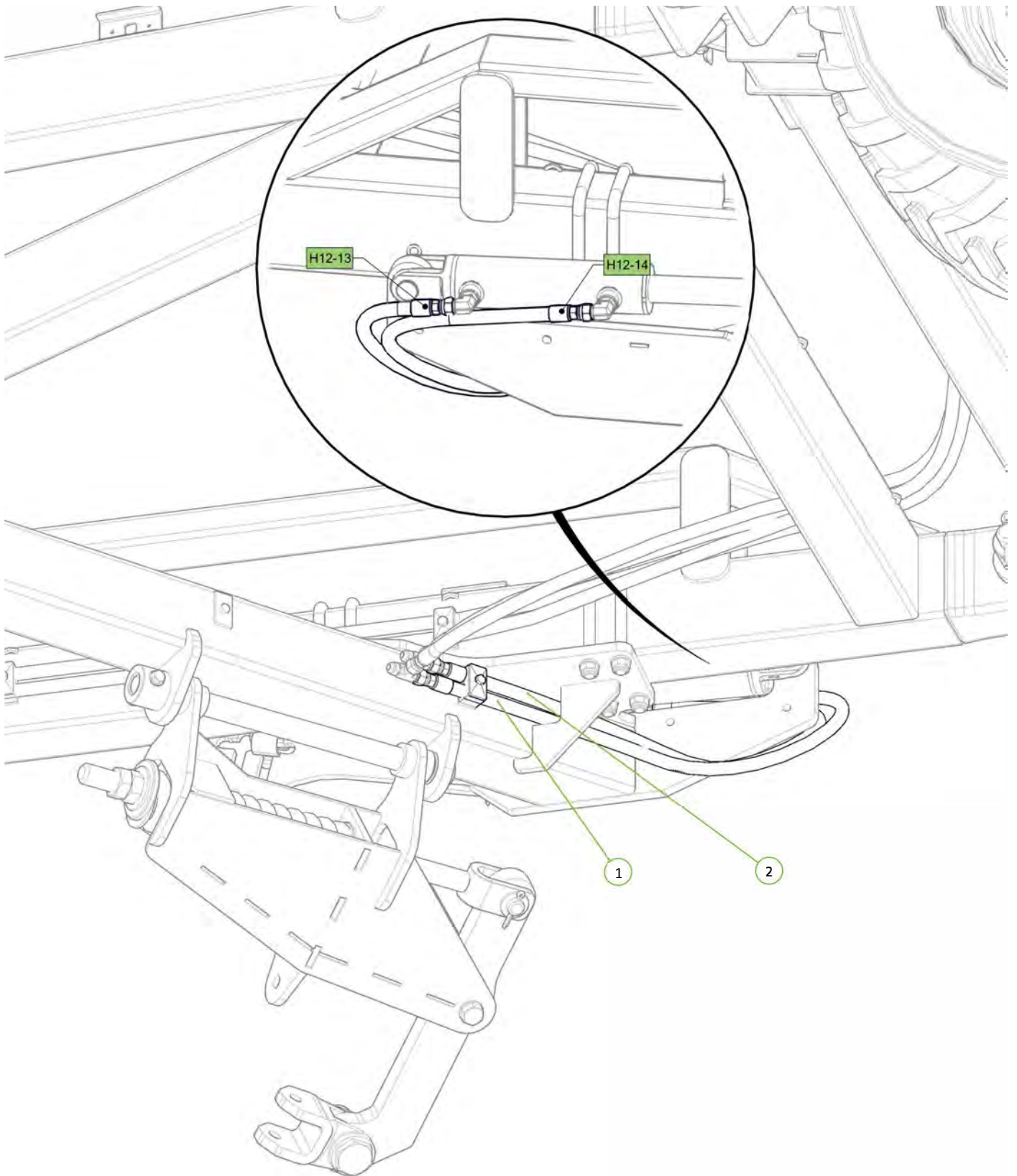


Item No.	Description	Qty	Number
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	2	0323-S91-1212



Item No.	Description	Qty	Number
1	ME2 Port to Rear Module Extend Tee	1	H12-11
2	MR2 Port to Rear Module Retract Tee	1	H12-12
3	3/4" JIC Male Tee	2	0324-S19-121212

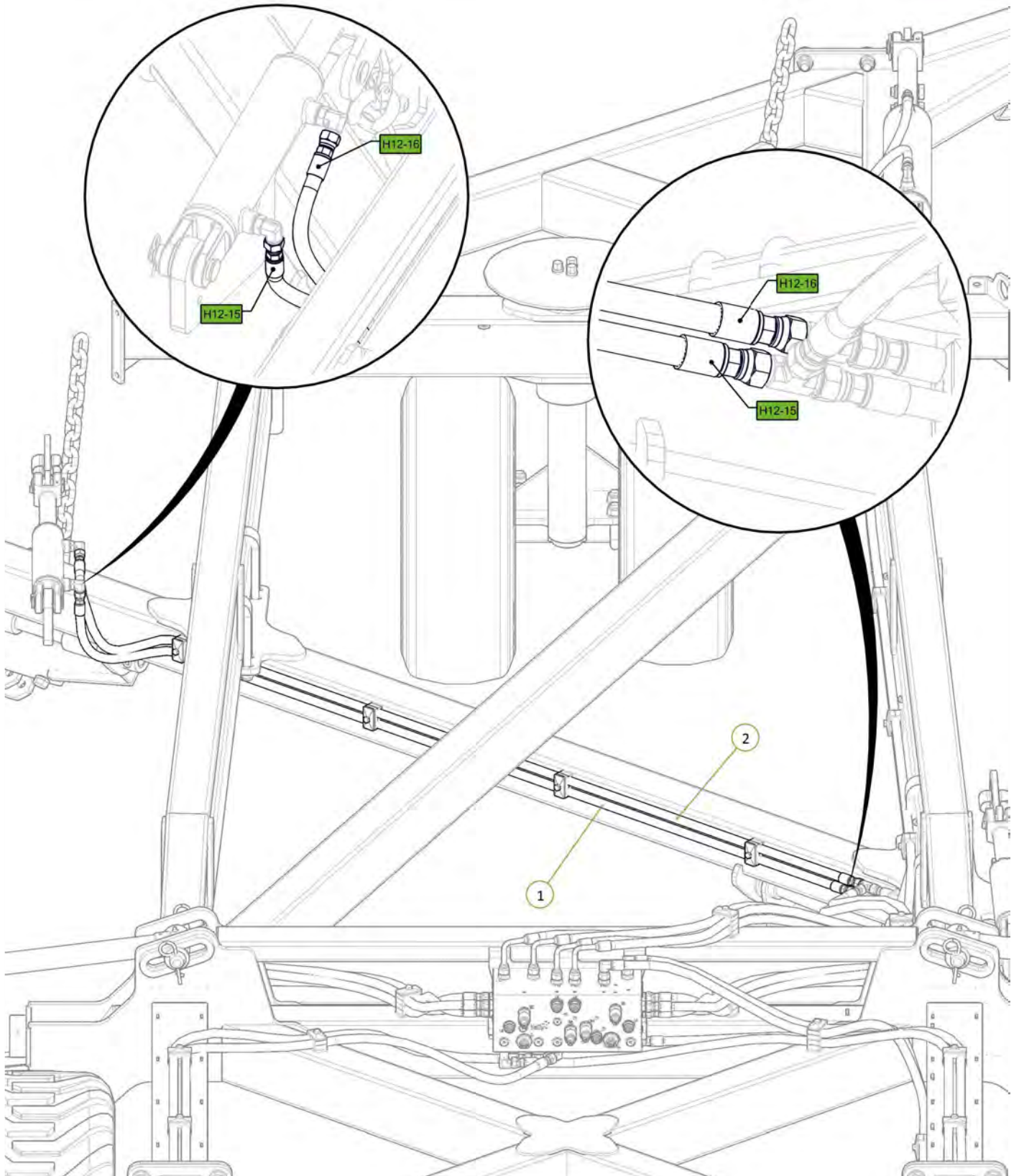




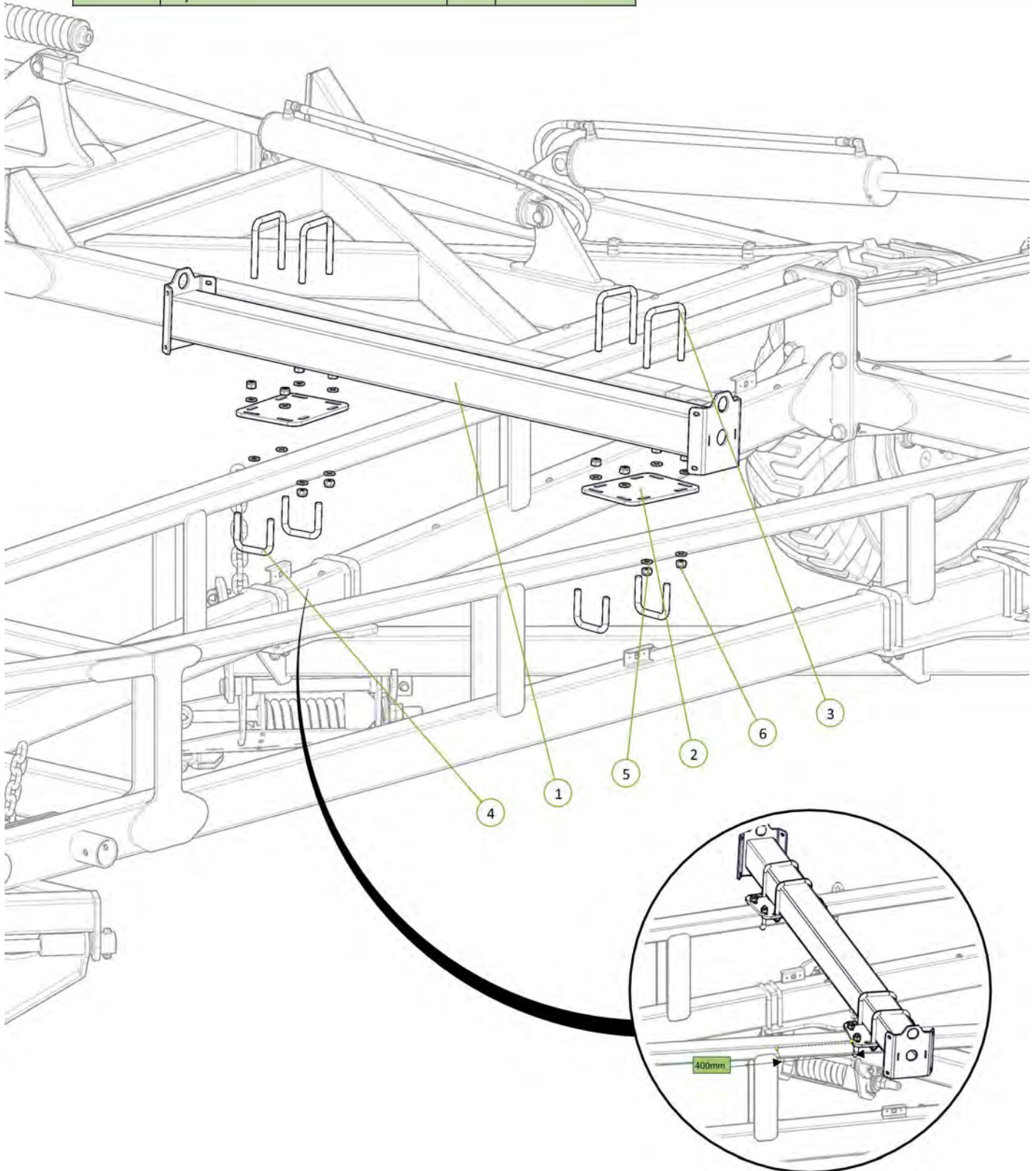
Item No.	Description	Qty	Number
1	Rear Module Extend Tee to Left Hand Rear Module Cyl Extend Port	1	H12-13
2	Rear Module Retract Tee to Left Hand Rear Module Cyl Retract Port	1	H12-14



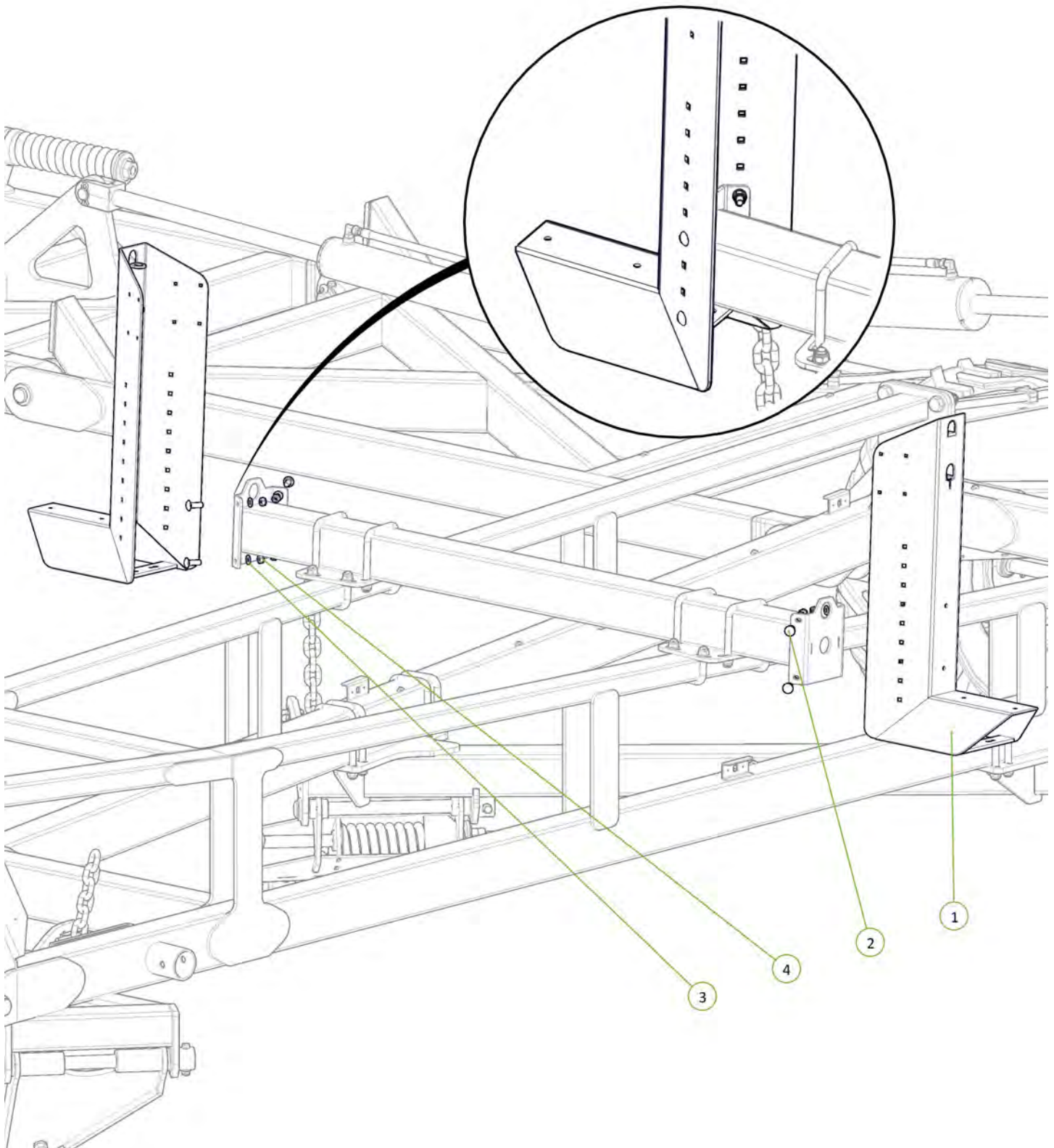
Item No.	Description	Qty	Number
1	Rear Module Extend Tee to Right Hand Rear Module Cyl Extend Port	1	H12-15
2	Rear Module Retract Tee to Right Hand Rear Module Cyl Retract Port	1	H12-16



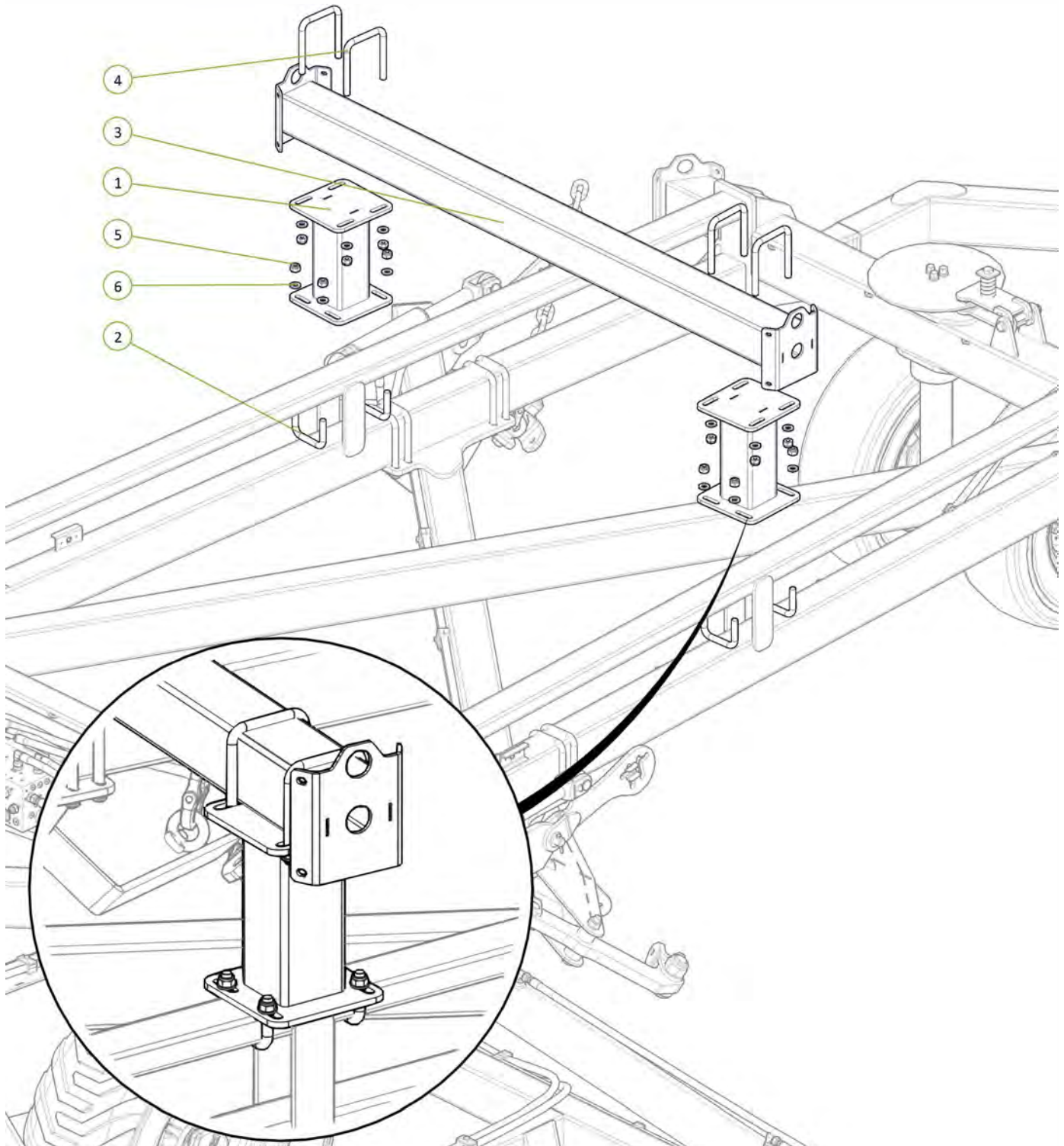
Item No.	Description	Qty	Number
1	Chain Carrier Beam	1	1610-17-12E
2	Chain Carrier Mount Plate	2	0800-139.1
3	U-Bolt M16 x 160 Deep x 127 Wide	4	0271-16160127
4	U-Bolt M16 x 95 Deep x 102 Wide	4	0271-1695102
5	Washer Flat M16	16	0231-F16
6	Nyloc Nut M16	16	0221-NYL16



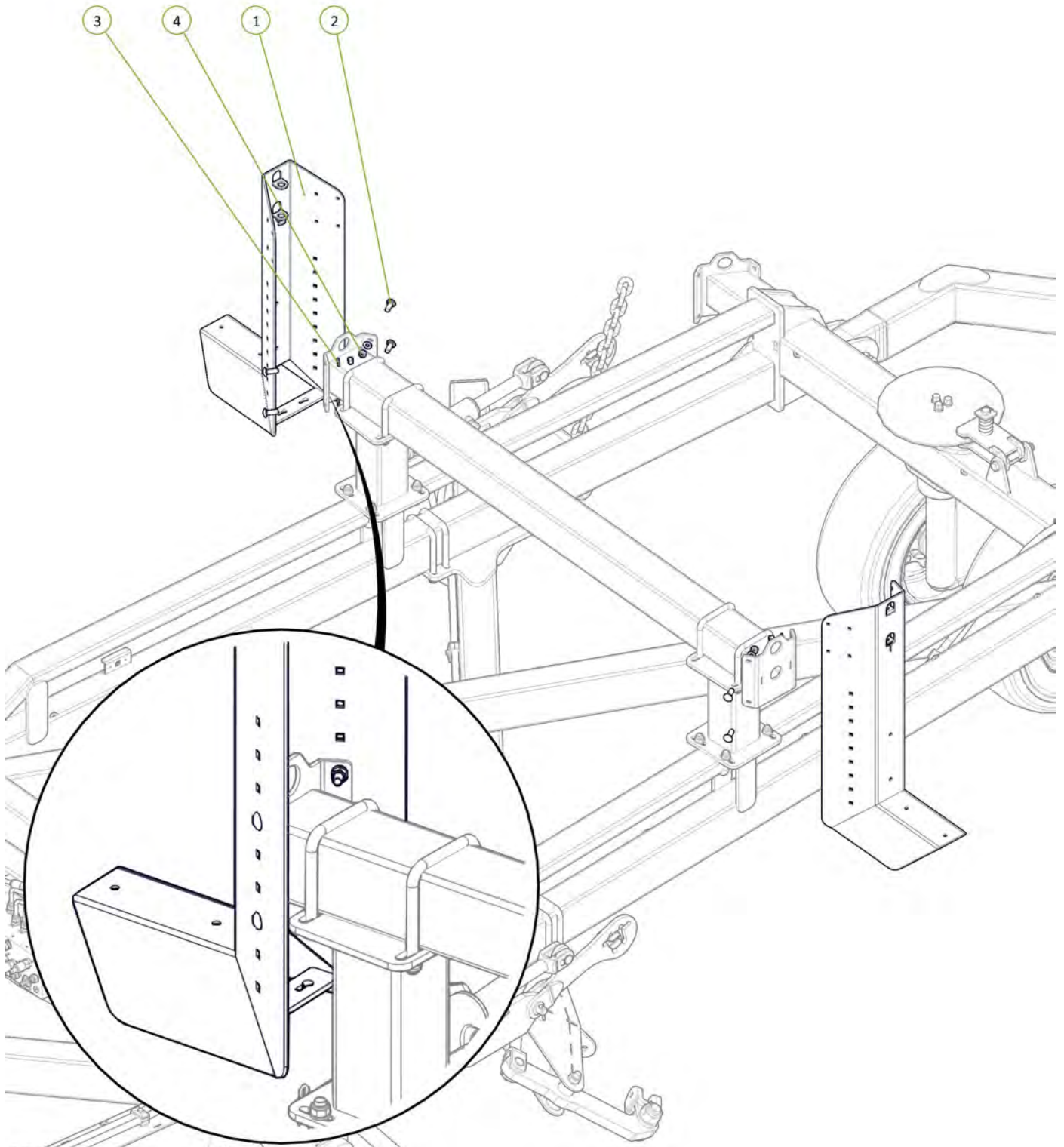
Item No.	Description	Qty	Number
1	Extended Chain Carrier Bolt on End	2	0810-17L_SD
2	M12 x 40 Coach Head Bolt	8	0215-CH1240
3	Washer Flat M12	8	0231-F12
4	Nyloc Nut M12	8	0221-NYL12



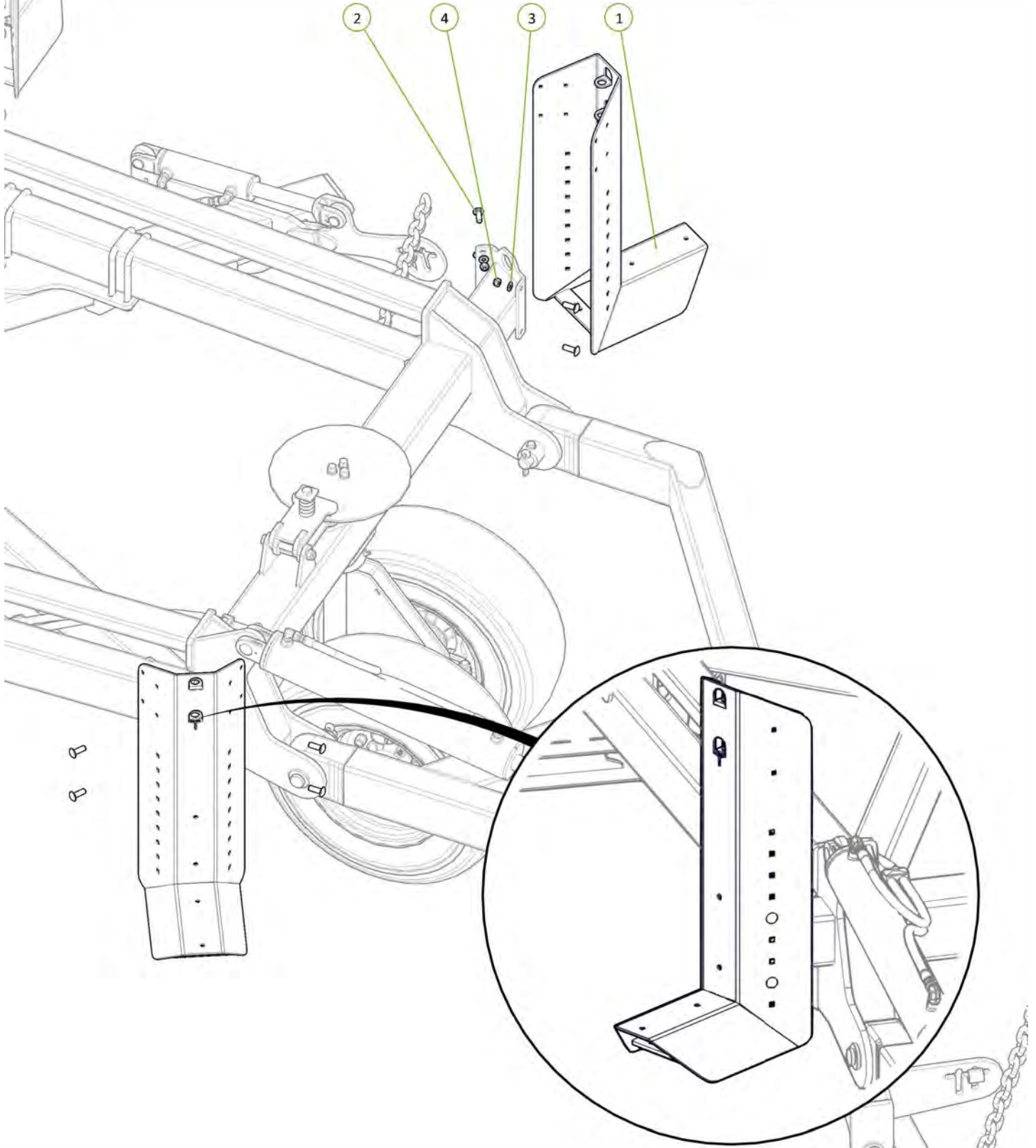
Item No.	Description	Qty	Number
1	Chain Carrier Pedestal 300mm	2	1510-43E
2	U-Bolt M16 x 104 Wide x 85 Deep	4	0271-1610485
3	Chain Carrier Beam	1	1610-17-12E
4	U-Bolt M16 x 160 Deep x 127 Wide	4	0271-16160127
5	Nyloc Nut M16	16	0221-NYL16
6	Washer Flat M16	16	0231-F16



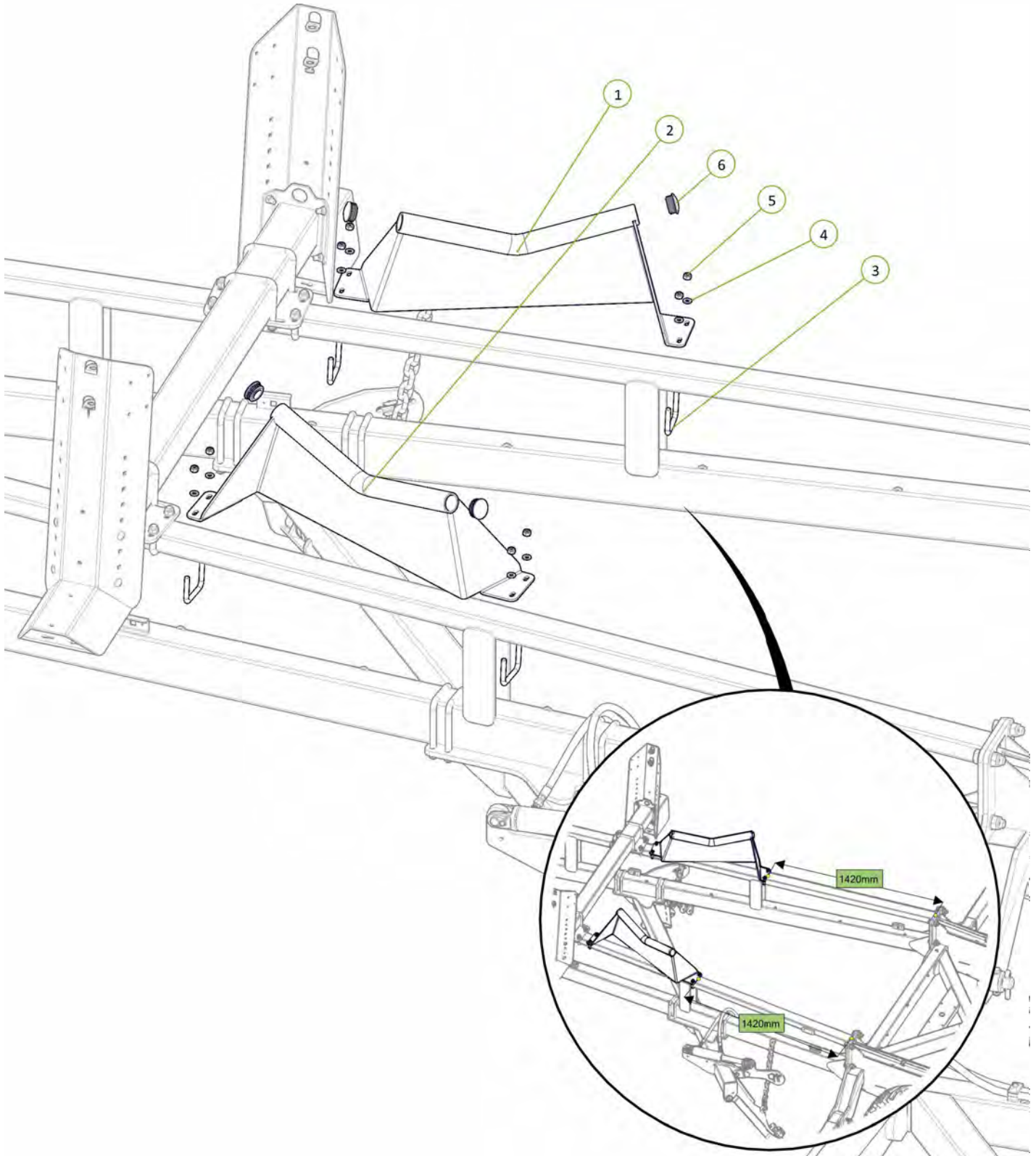
Item No.	Description	Qty	Number
1	Extended Chain Carrier Bolt on End	2	0810-17L_SD
2	M12 x 40 Coach Head Bolt	8	0215-CH1240
3	Washer Flat M12	8	0231-F12
4	Nyloc Nut M12	8	0221-NYL12



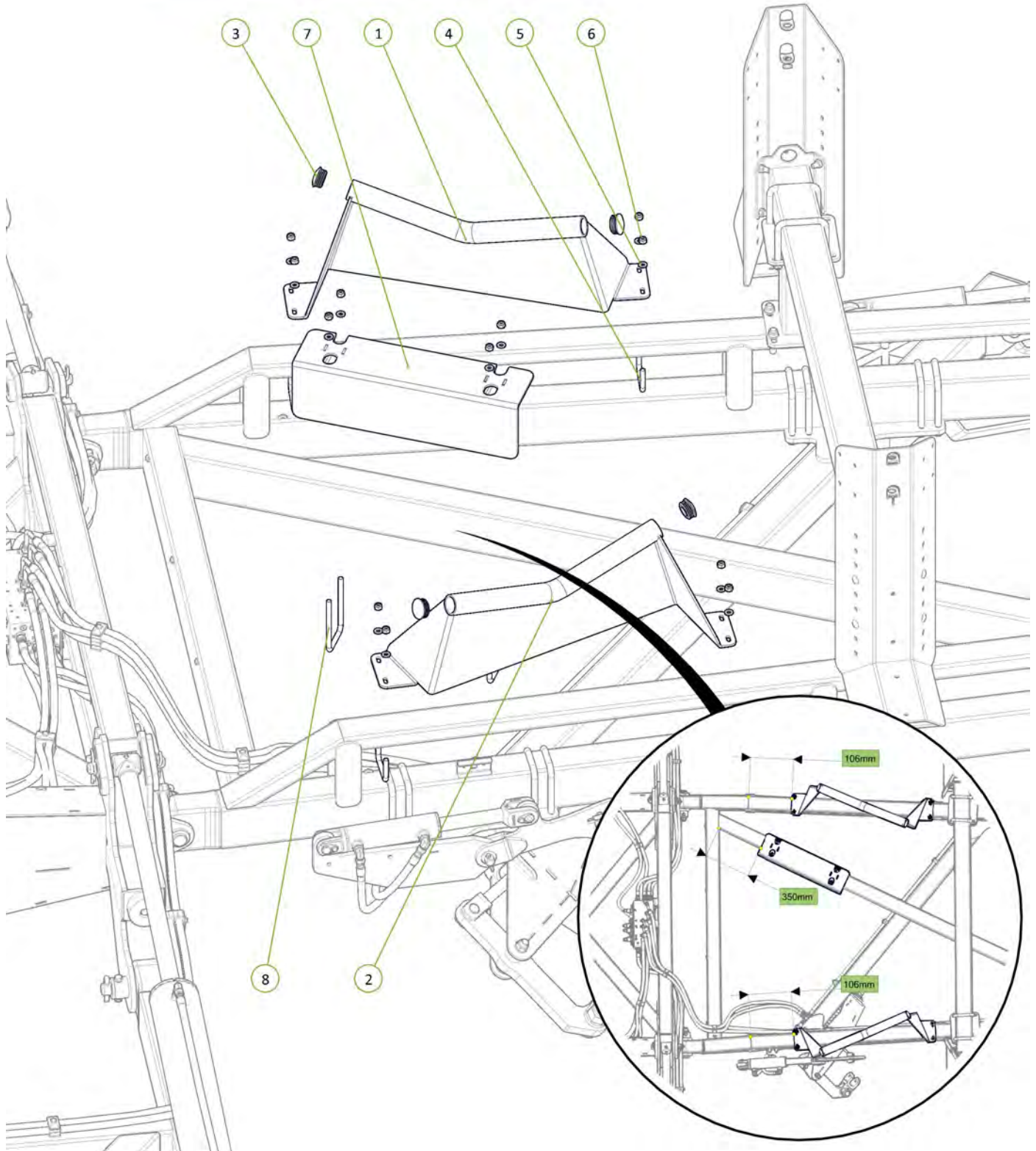
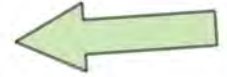
Item No.	Description	Qty	Number
1	Extended Chain Carrier Bolt on End	2	0810-17L_SD
2	M12 x 40 Coach Head Bolt	8	0215-CH12140
3	Washer Flat M12	8	0231-F12
4	Nyloc Nut M12	8	0221-NYL12



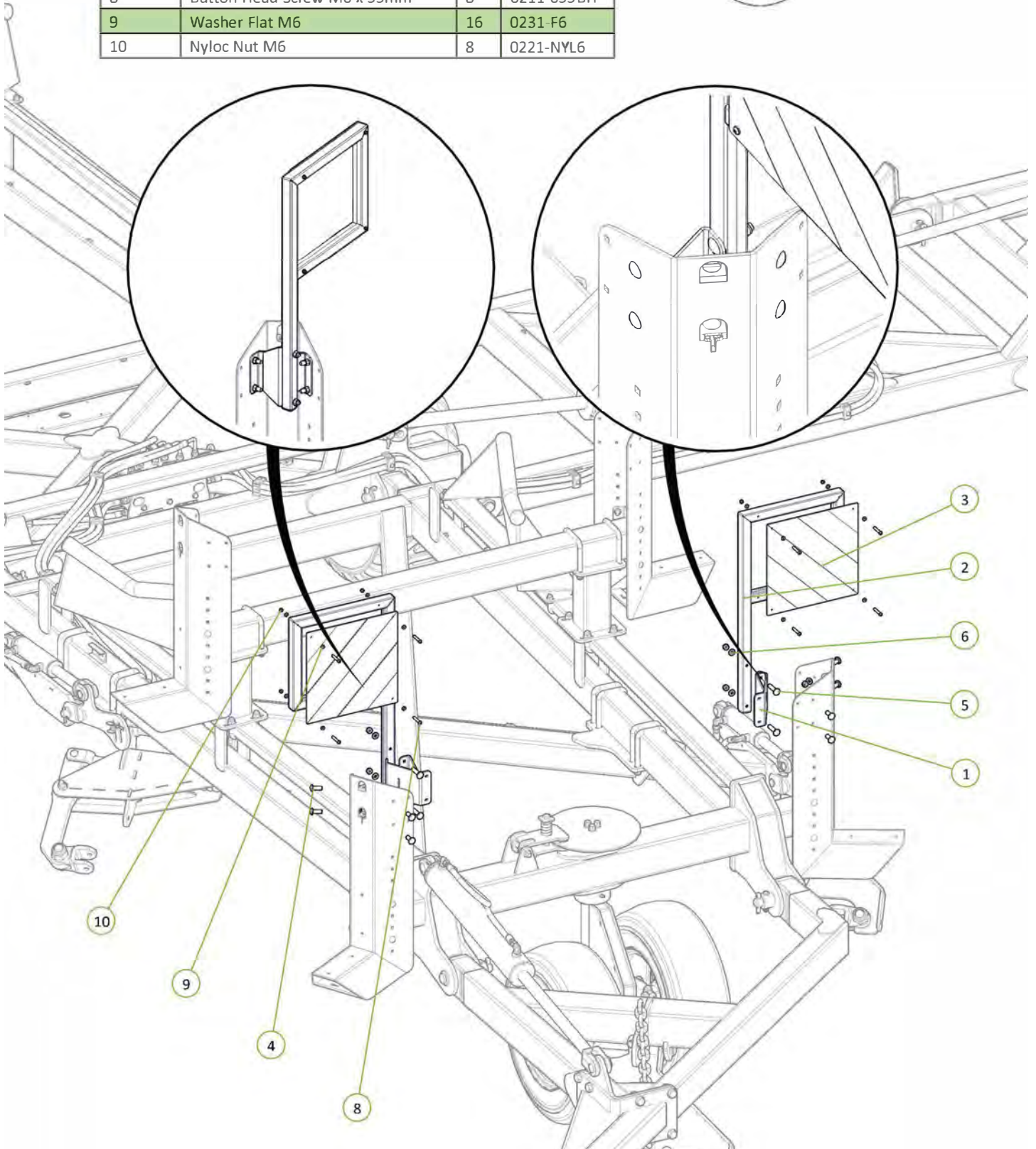
Item No.	Description	Qty	Number
1	Right Hand M	1	0810-18R
2	Left Hand M	1	0810-19L
3	U-Bolt M12 x 85 Deep x 102 Wide	4	0271-1285102
4	Washer Flat M12	8	0231-F12
5	Nyloc Nut M12	8	0221-NYL12
6	Round Tube Insert 60.3 x 3.2-5mm	4	0264-RTRi-5584



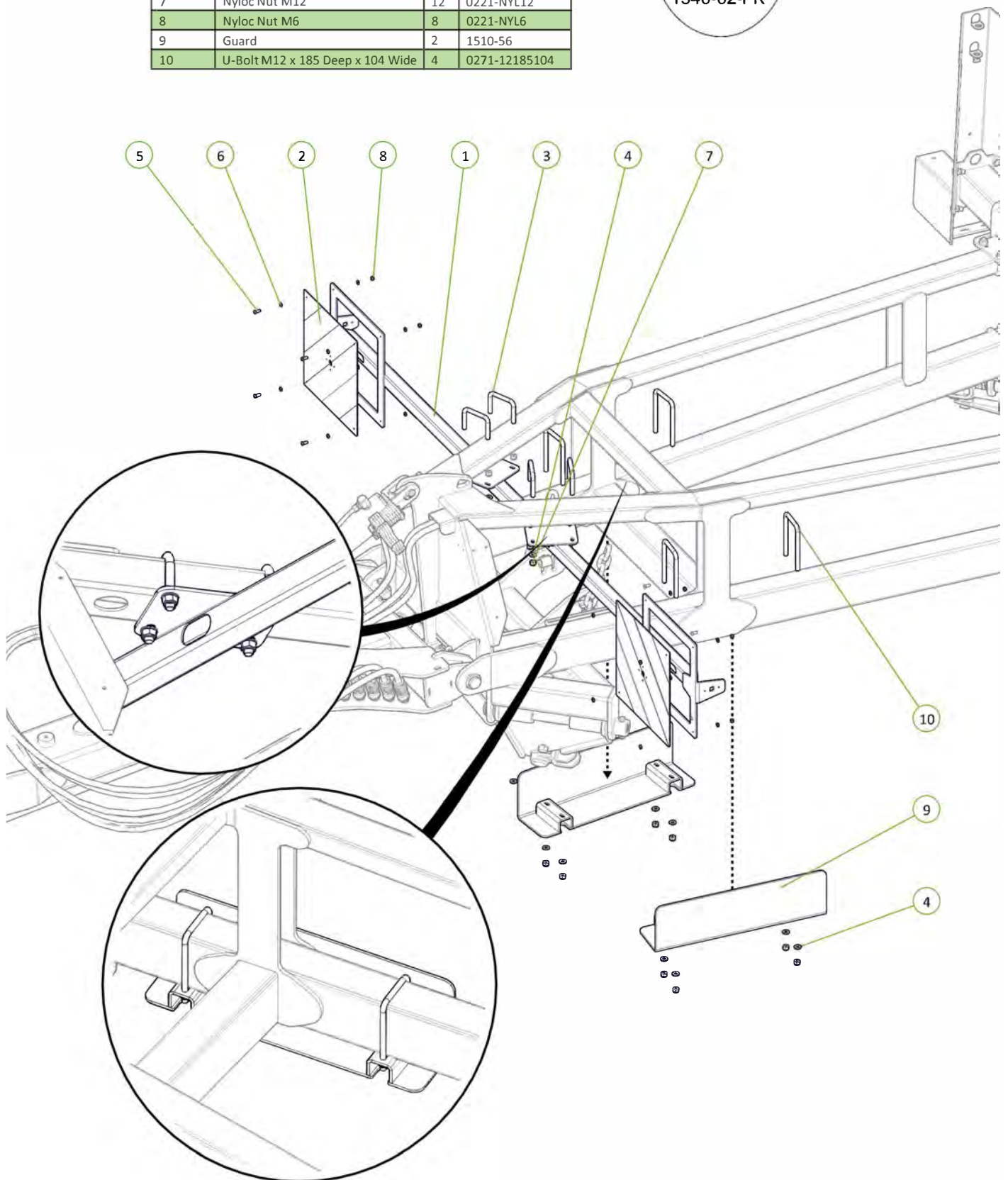
Item No.	Description	Qty	Number
1	Left Hand Off Set M	1	0810-19L
2	Right Hand Off Set M	1	0810-18R
3	Round Tube Insert 60.3 x 3.2-5mm	4	0264-RTRI-5584
4	U-Bolt M12 x 104 Wide x 77 Deep	4	0271-1210477
5	Washer Flat M12	12	0231-F12
6	Nyloc Nut M12	12	0221-NYL12
7	Guard	1	1510-56
8	U-Bolt M12 x 185 Deep x 104 Wide	2	0271-12185104

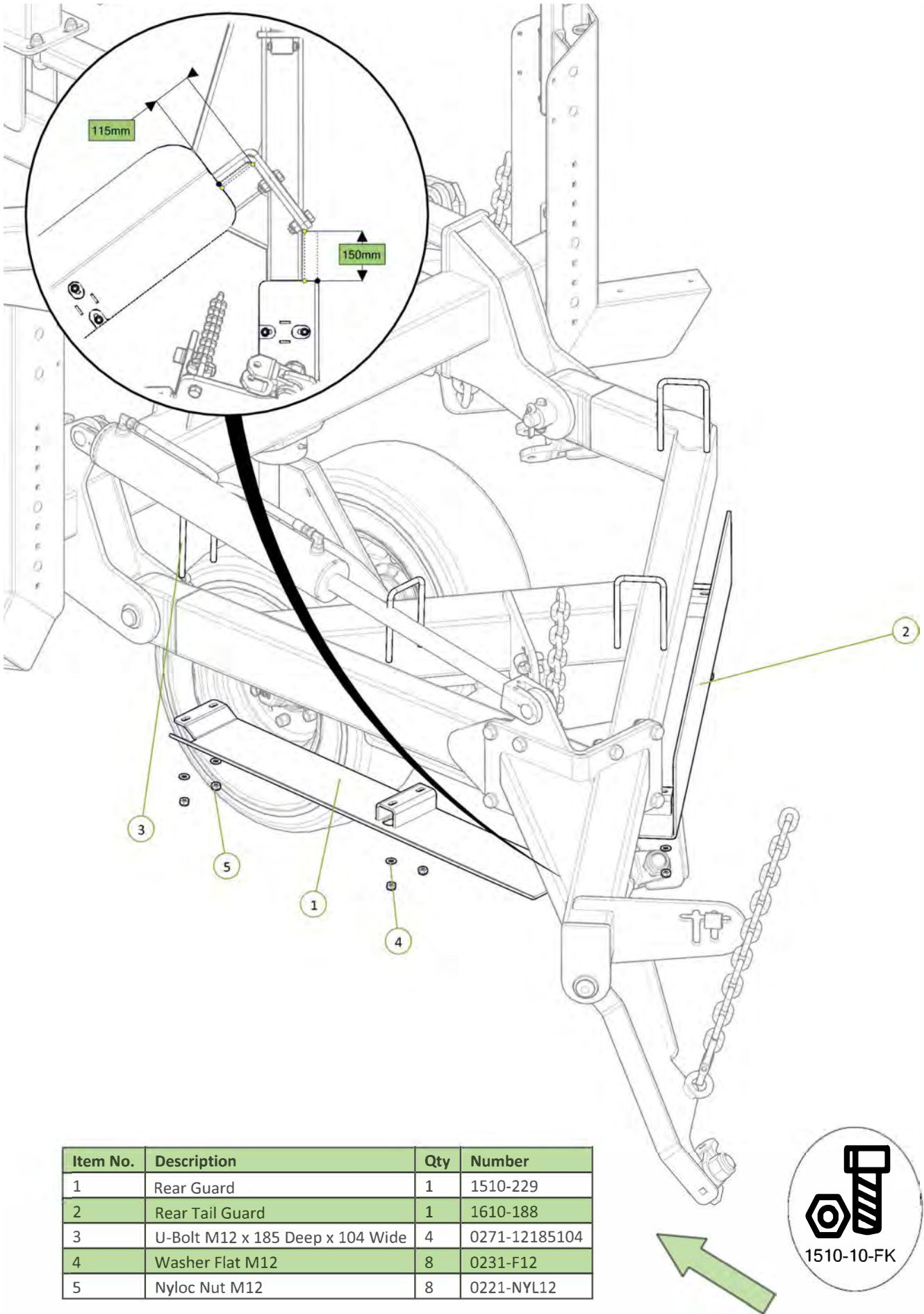


Item No.	Description	Qty	Number
1	Oversize Sign Mounting Bracket	2	1510-45E
2	Rear Oversize Sign	2	1510-44E
3	Oversize Sign 2	2	1501-EUOS2
4	M12 x 40 Coach Head ZP Bolt	8	0215-CH1240
5	M12 x 65 Coach Head ZP Bolt	4	0215-CH1265
6	Washer Flat M12	12	0231-F12
8	Button Head Screw M6 x 55mm	8	0211-655BH
9	Washer Flat M6	16	0231-F6
10	Nyloc Nut M6	8	0221-NYL6



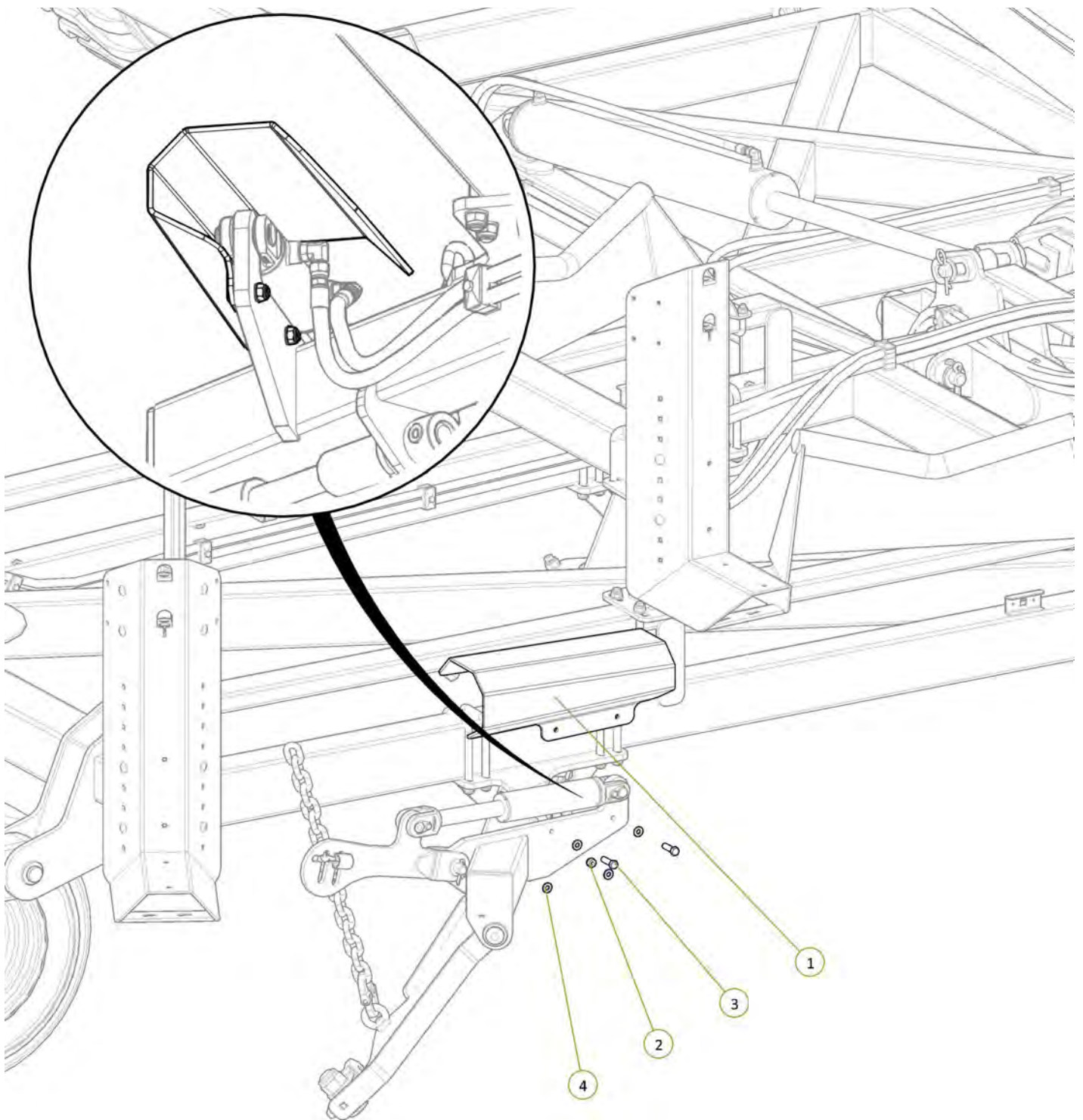
Item No.	Description	Qty	Number
1	EU Front Oversize Sign	1	1510-42E
2	European Oversize Sign 3	2	1501-EUOS3
3	U-Bolt M12 x 85 Deep x 102 Wide	4	0271-1285102
4	Washer Flat M12	16	0231-F12
5	Button Head Screw M6 x 20mm	4	0211-620_button
6	Washer Flat M6	16	0231-F6
7	Nyloc Nut M12	12	0221-NYL12
8	Nyloc Nut M6	8	0221-NYL6
9	Guard	2	1510-56
10	U-Bolt M12 x 185 Deep x 104 Wide	4	0271-12185104





Item No.	Description	Qty	Number
1	Rear Guard	1	1510-229
2	Rear Tail Guard	1	1610-188
3	U-Bolt M12 x 185 Deep x 104 Wide	4	0271-12185104
4	Washer Flat M12	8	0231-F12
5	Nyloc Nut M12	8	0221-NYL12

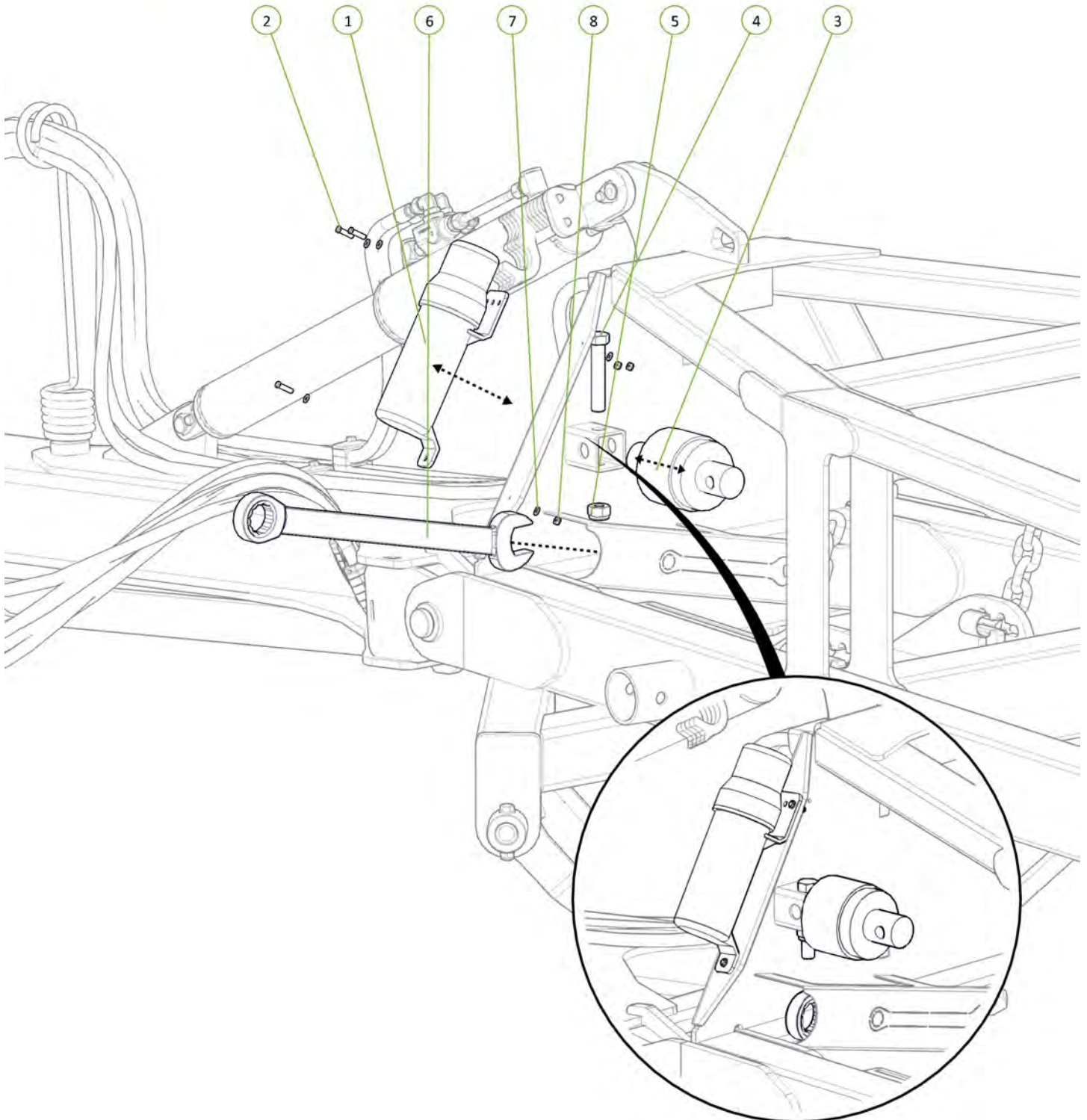




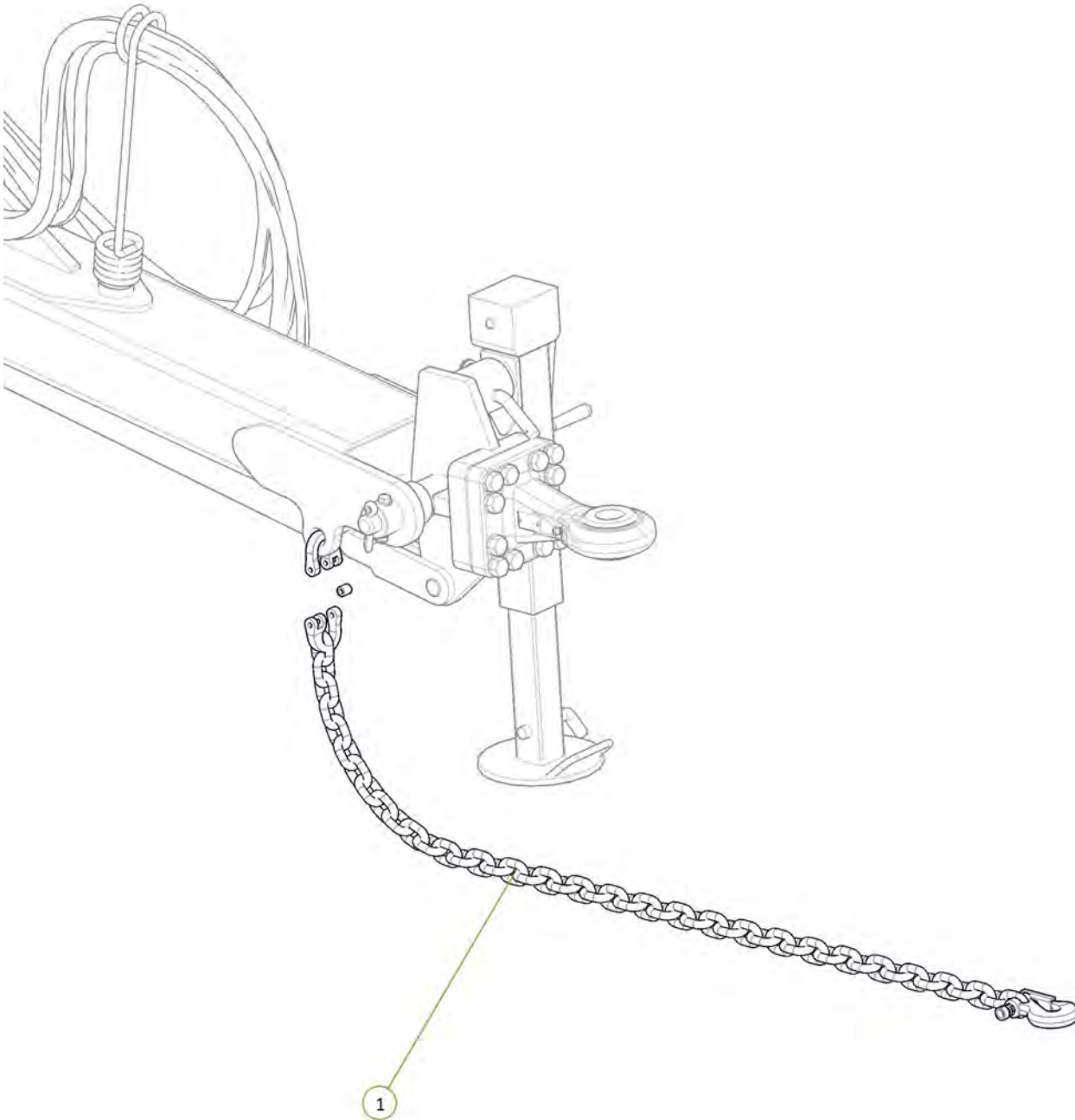
Item No.	Description	Qty	Number
1	Module Cylinder Guard	1	0800-167.3
2	Nyloc Nut M12	2	0221-NYL12
3	M12 x 45 Grade 8.8 ZP Bolt	2	0211-1245
4	Washer Flat M12	4	0231-F12



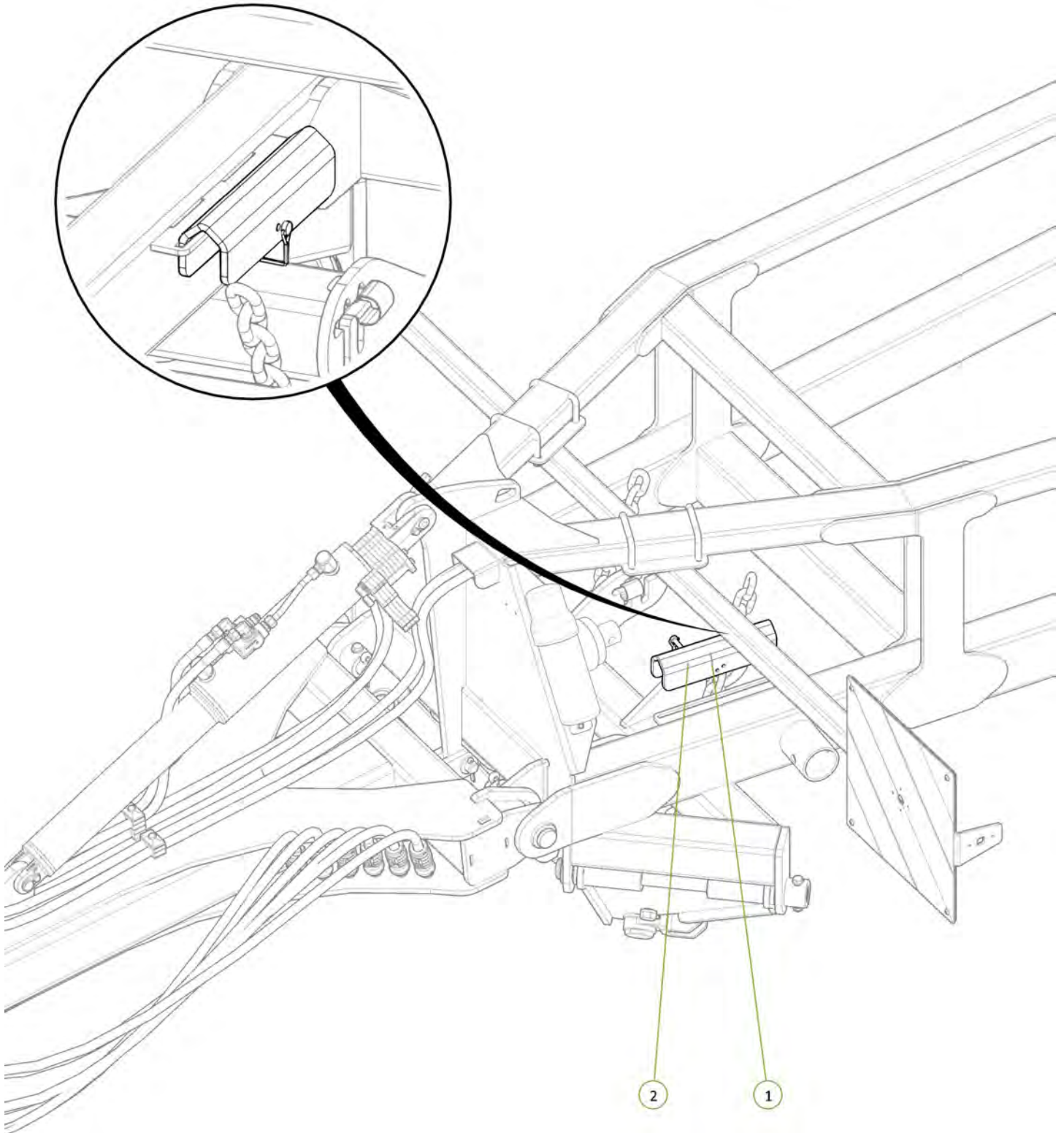
Item No.	Description	Qty	Number
1	Operator Manual Cannister	1	0801-OMC-1
2	M6 x 1 x 25mm Grade 4.6 ZP Bolt	3	0211-625
3	20mm Bolt Swivel Unit	1	0802-PCHB55
4	M20 x 110 grade 10.9 ZP Short Thread Bolt	1	0211-20110 ST
5	Nyloc Nut M20	1	0221-NYL20
6	Ratcheting Gear Wrench 1 3/4"	1	0802-GW1 3-4
7	Washer Flat M6	6	0231-F6
8	Nyloc Nut M6	3	0221-NYL6

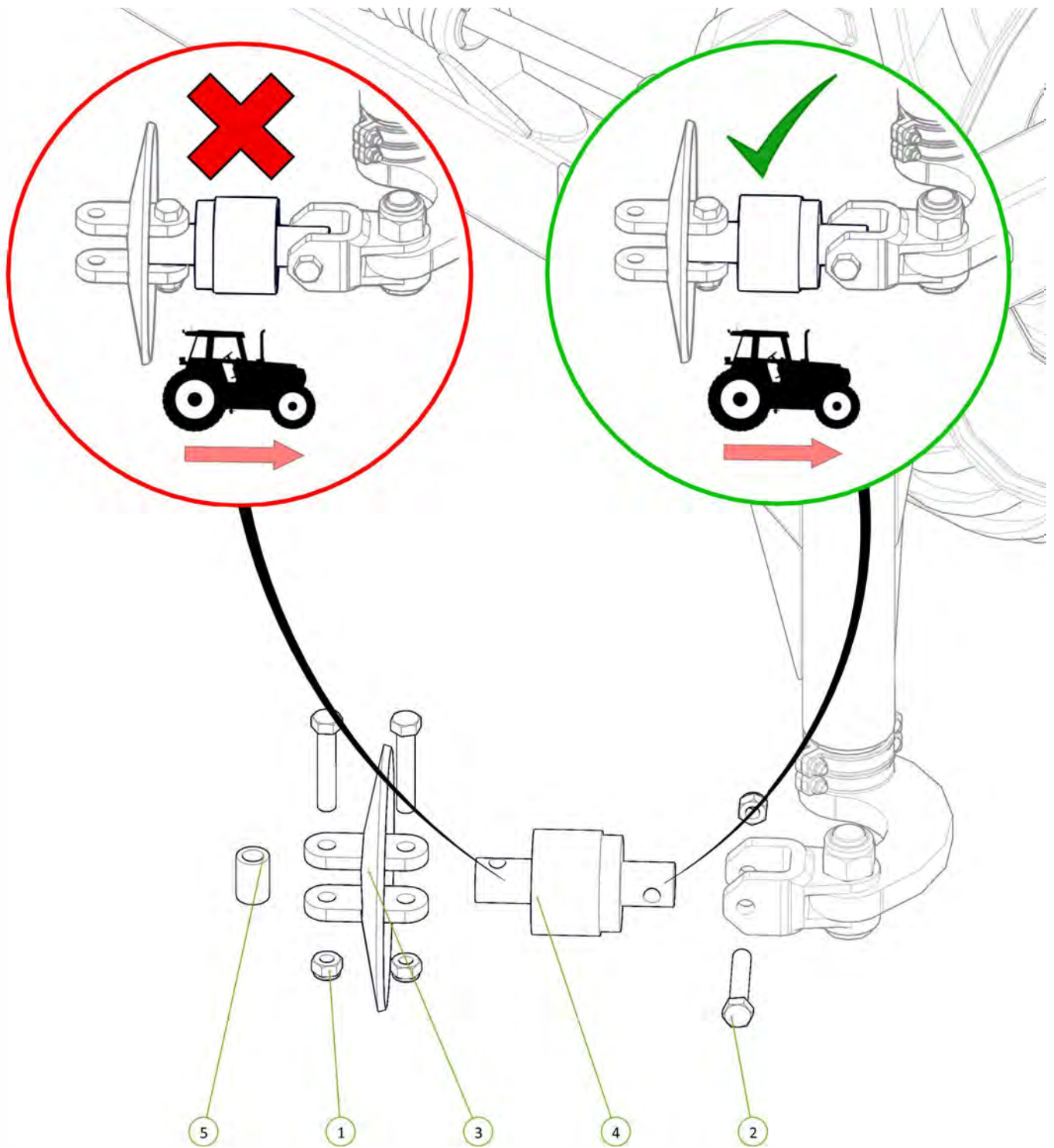


Item No.	Description	Qty	Number
1	Safety Chain Assembly	1	0810-16

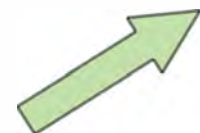


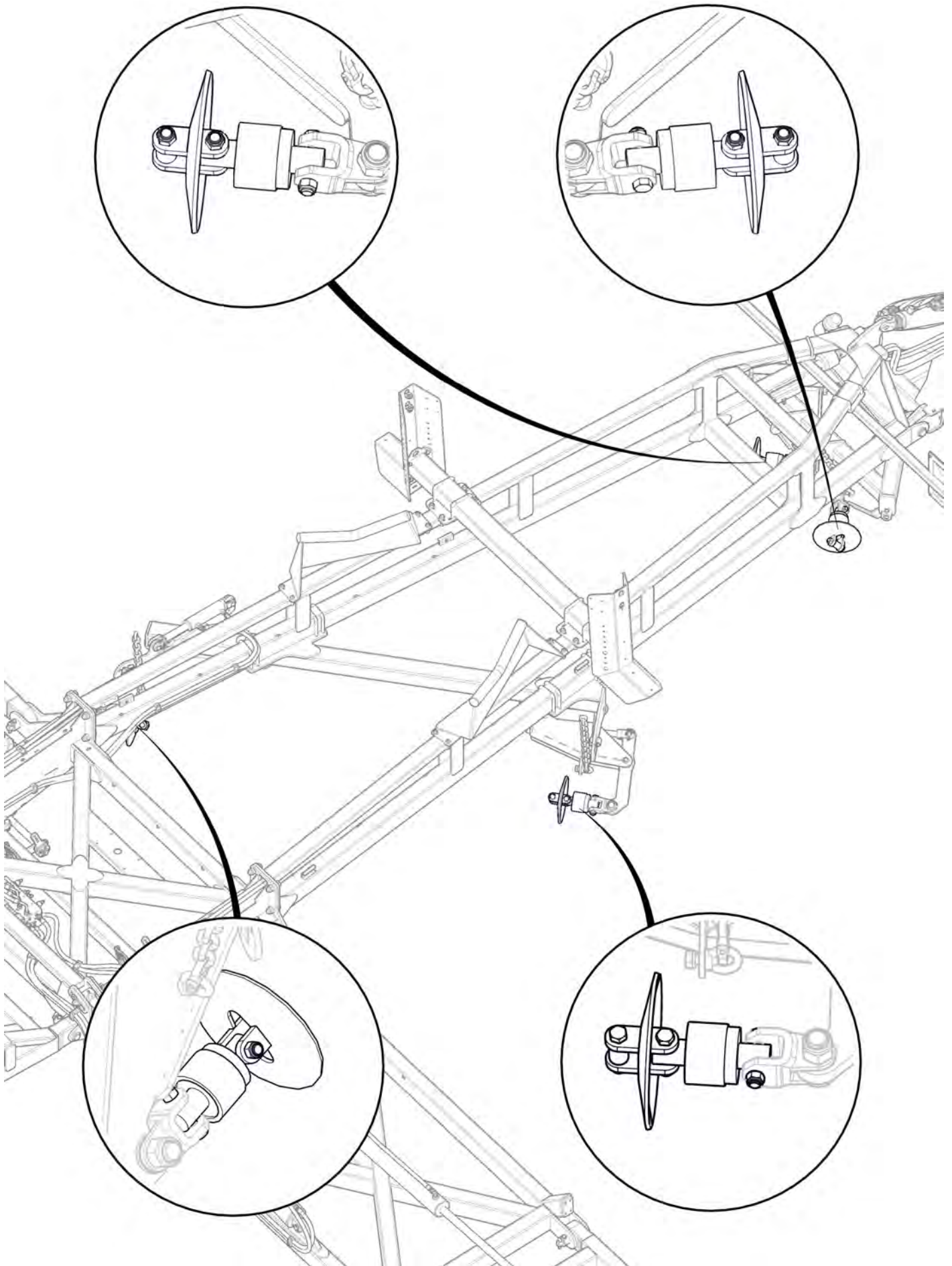
Item No.	Description	Qty	Number
1	Cylinder Safety Stop	1	0800-212.1
2	Square Loop Pin M8 x 63	1	0511-PINLOOPSQ863

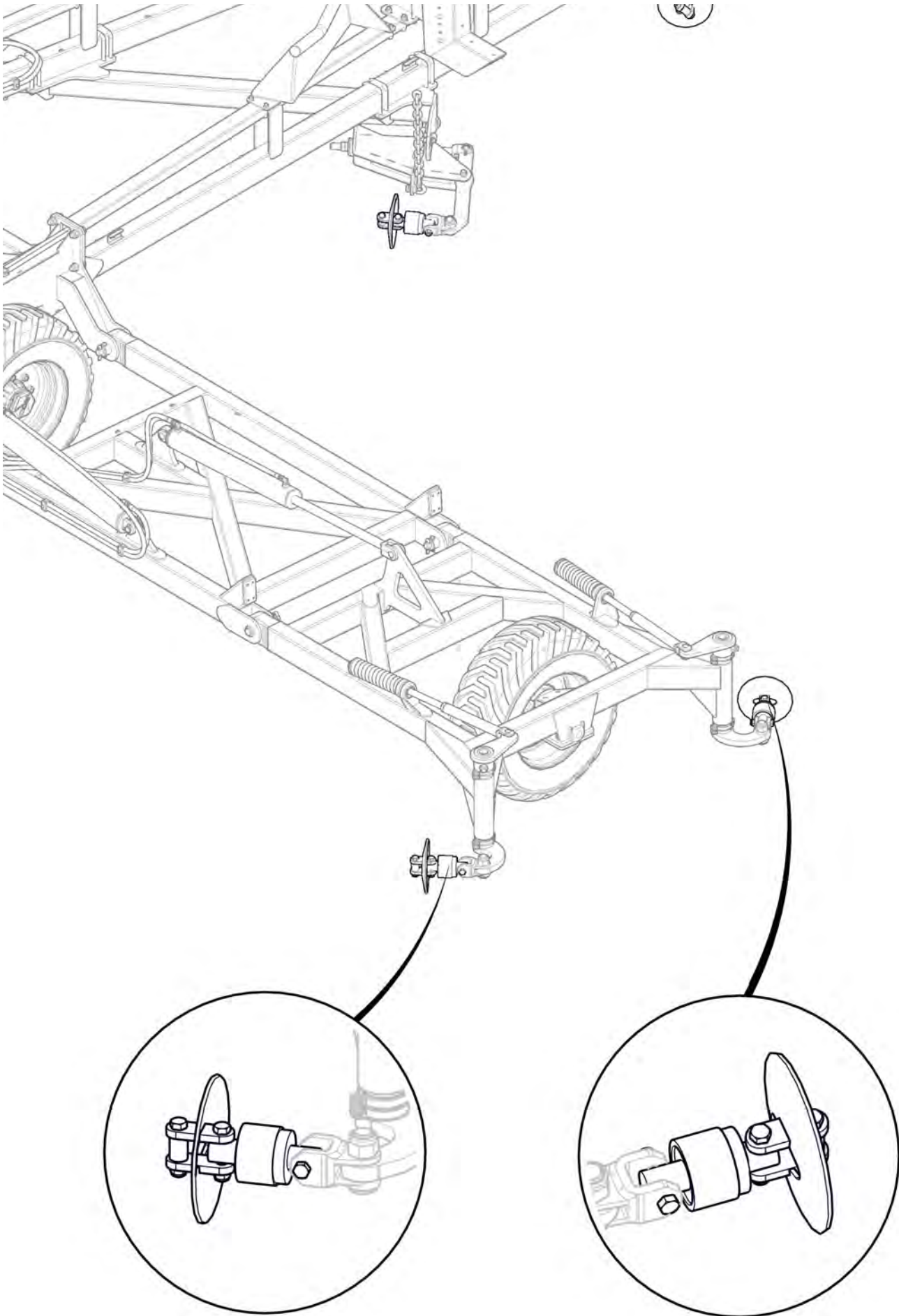


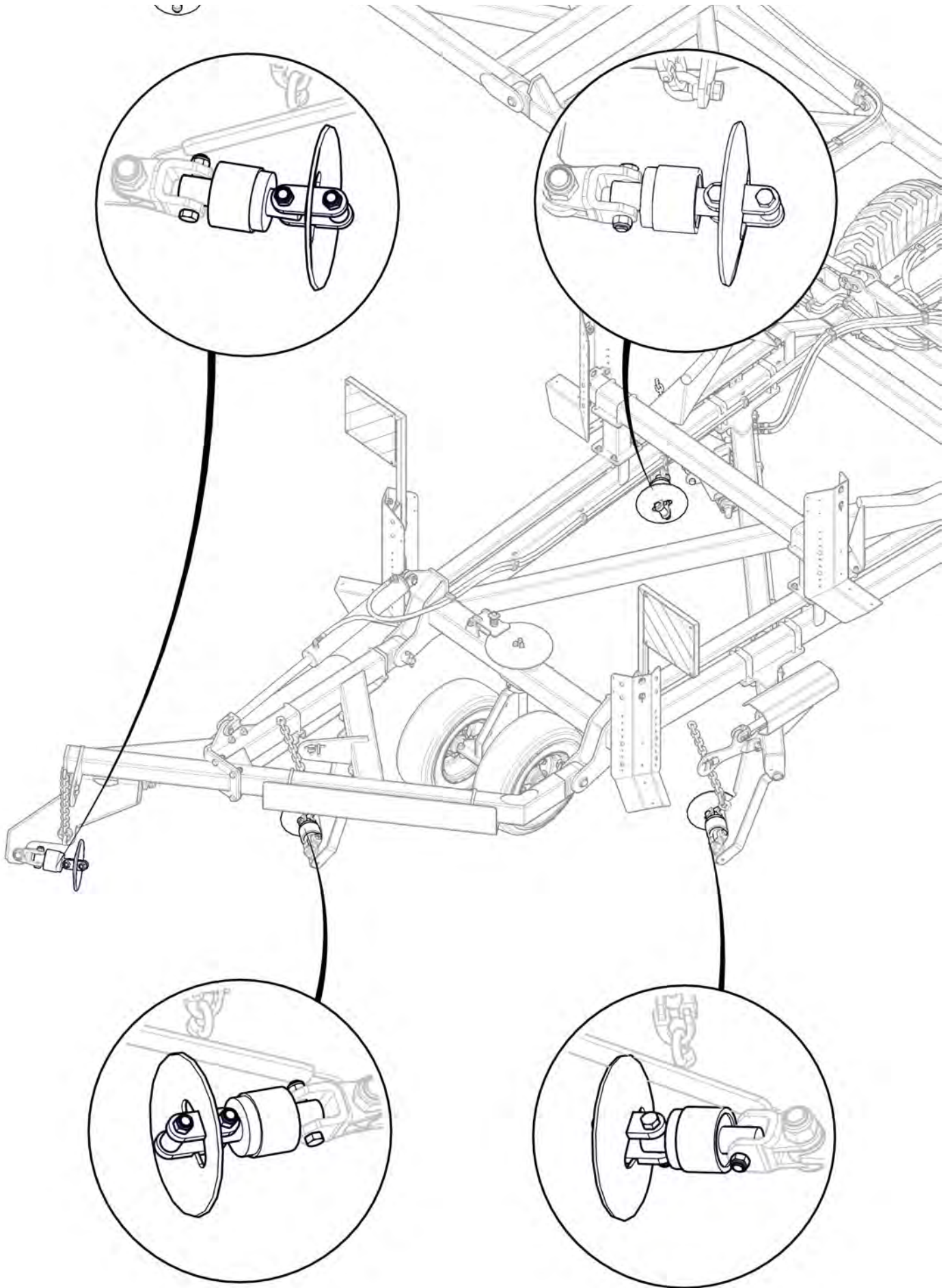


Item No.	Description	Qty	Number
1	Nyloc Nut M20	3	0221-NYL20
2	M20 x 110 grade 10.9 ZP Short Thread Bolt	3	0211-20110ST
3	Tie Plate Link 20mm	1	0802-DCTP-20
4	20mm Bolt Swivel Unit	1	0802-PCHB55
5	Disc Chain Spacer	1	0801-PCDCS55





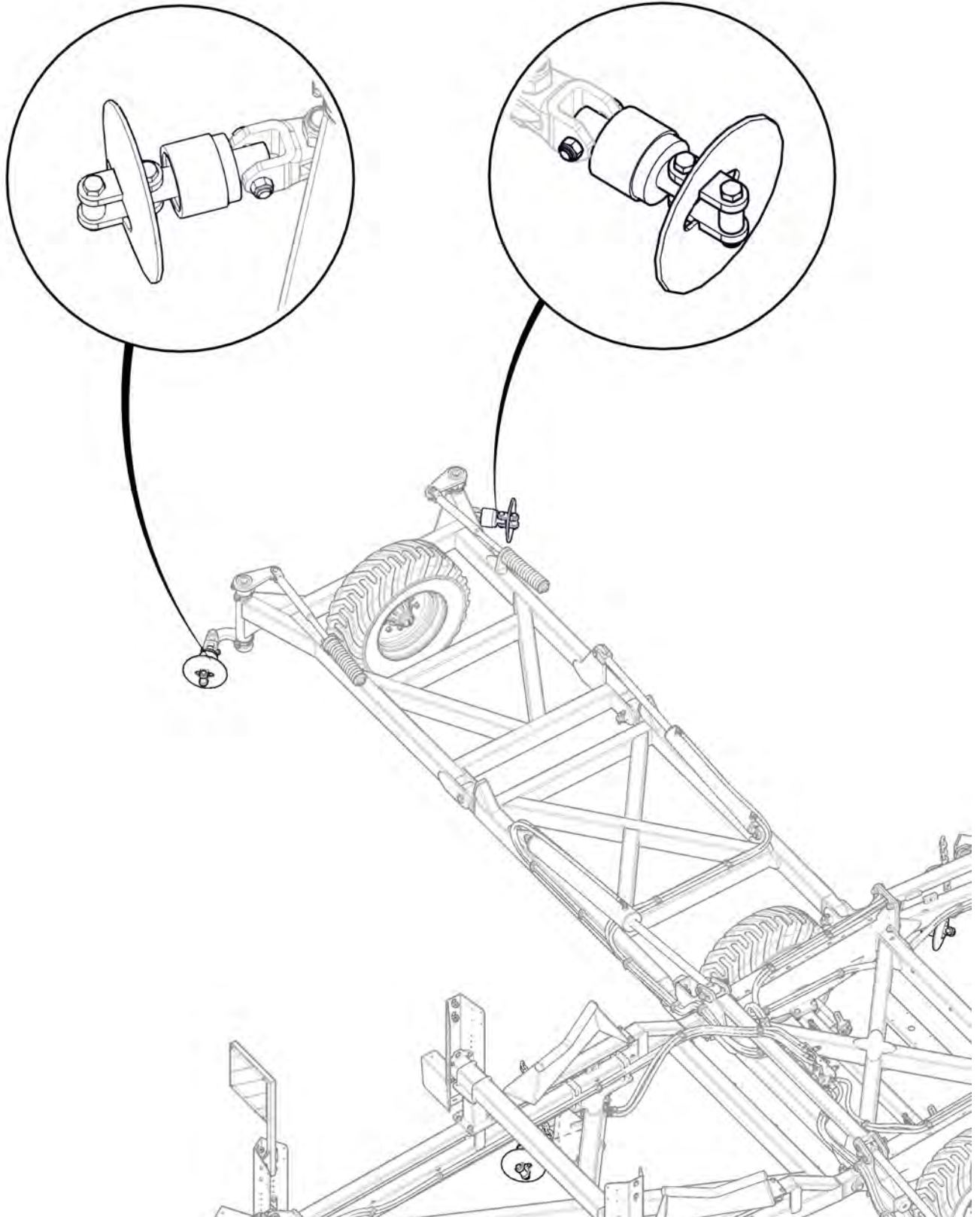


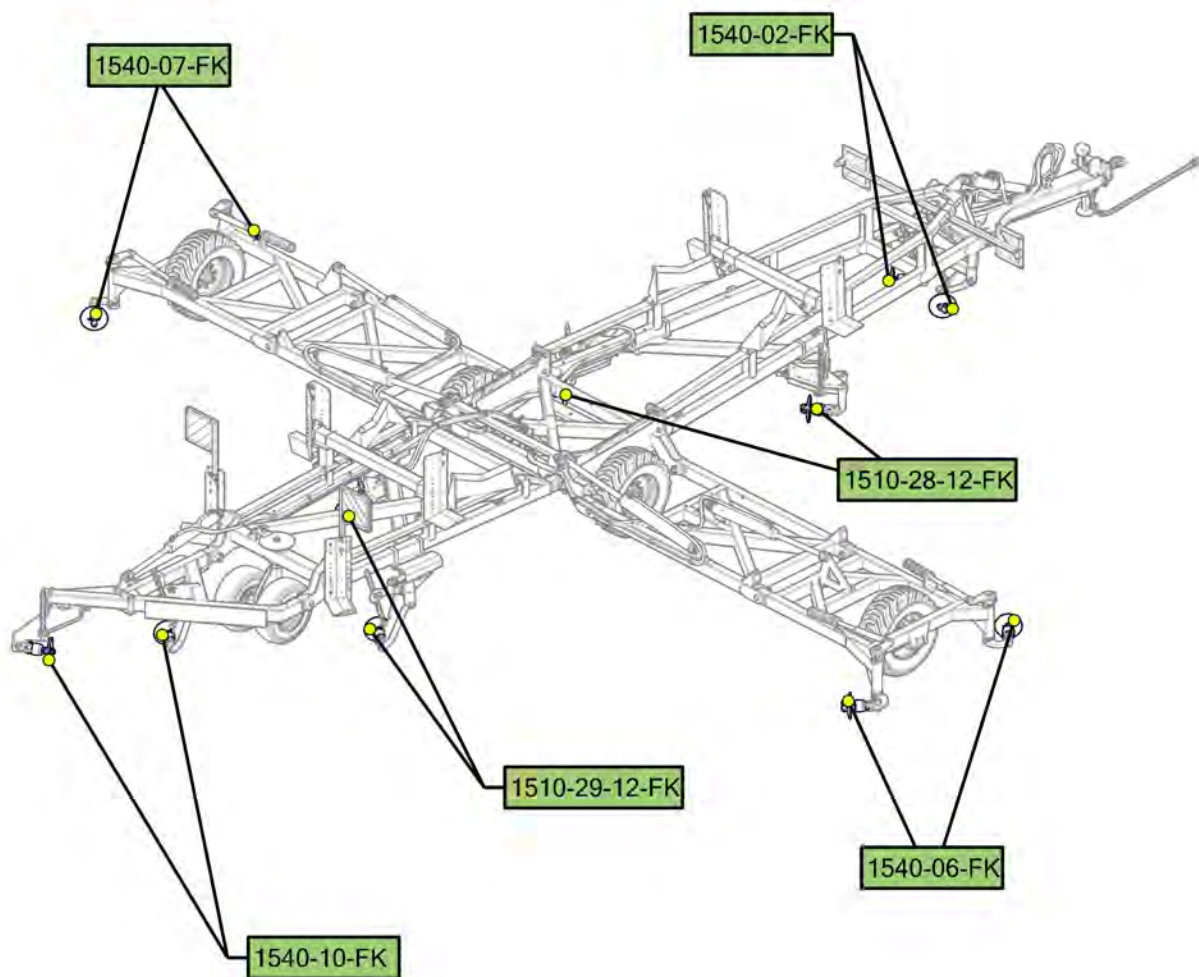


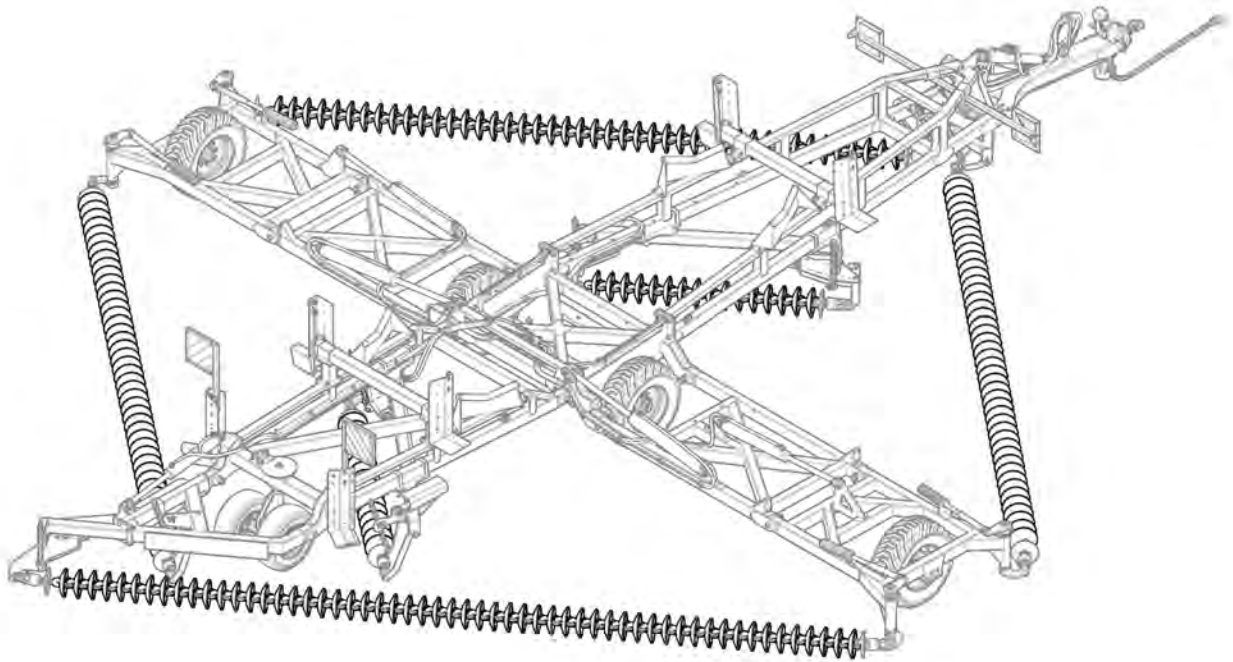
All bearings correctly orientated with seal facing the rear of the machine



Signed _____ Date ____ / ____ / ____
Unit Serial Number _____

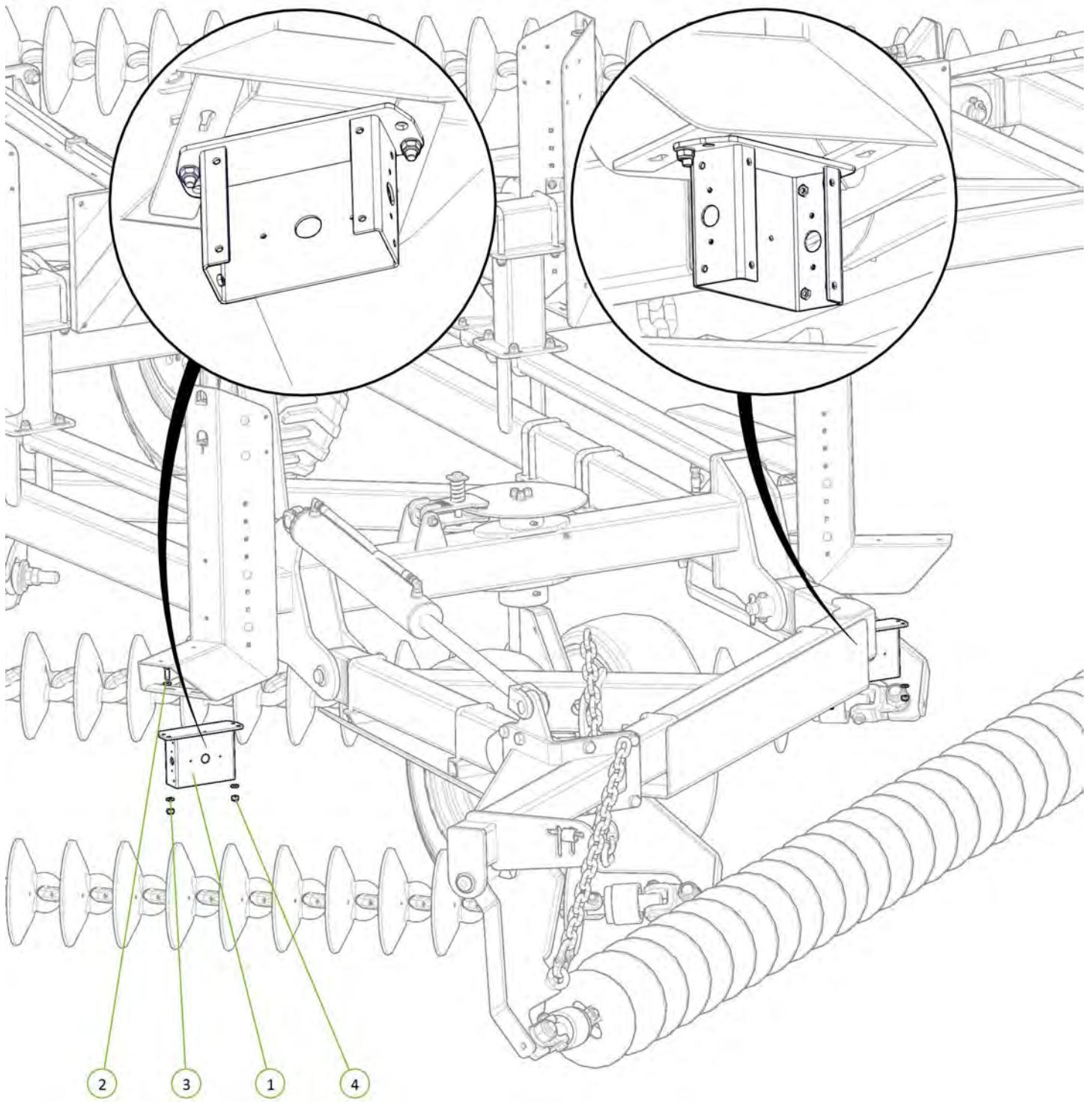






Section 2

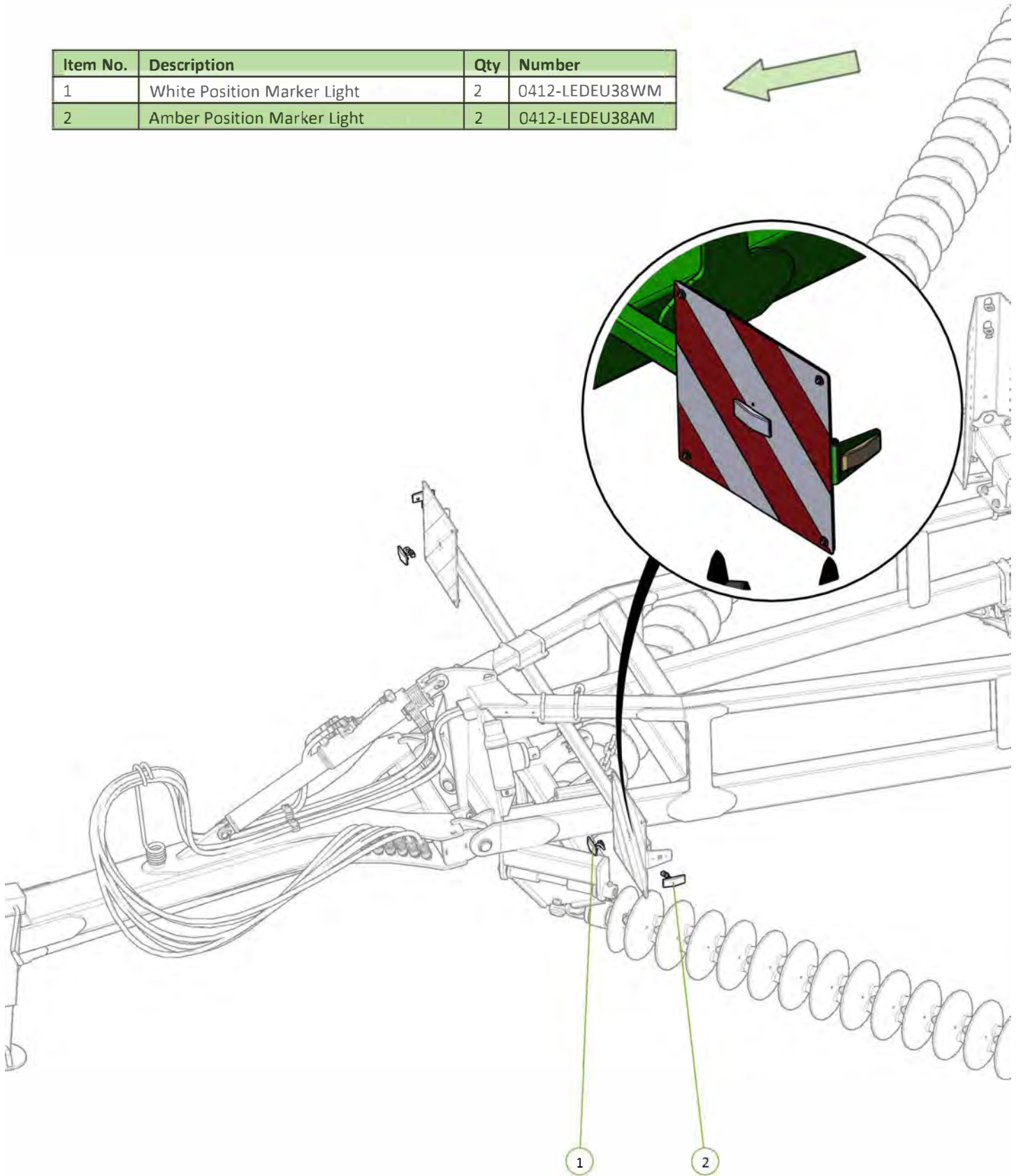
Light Kits

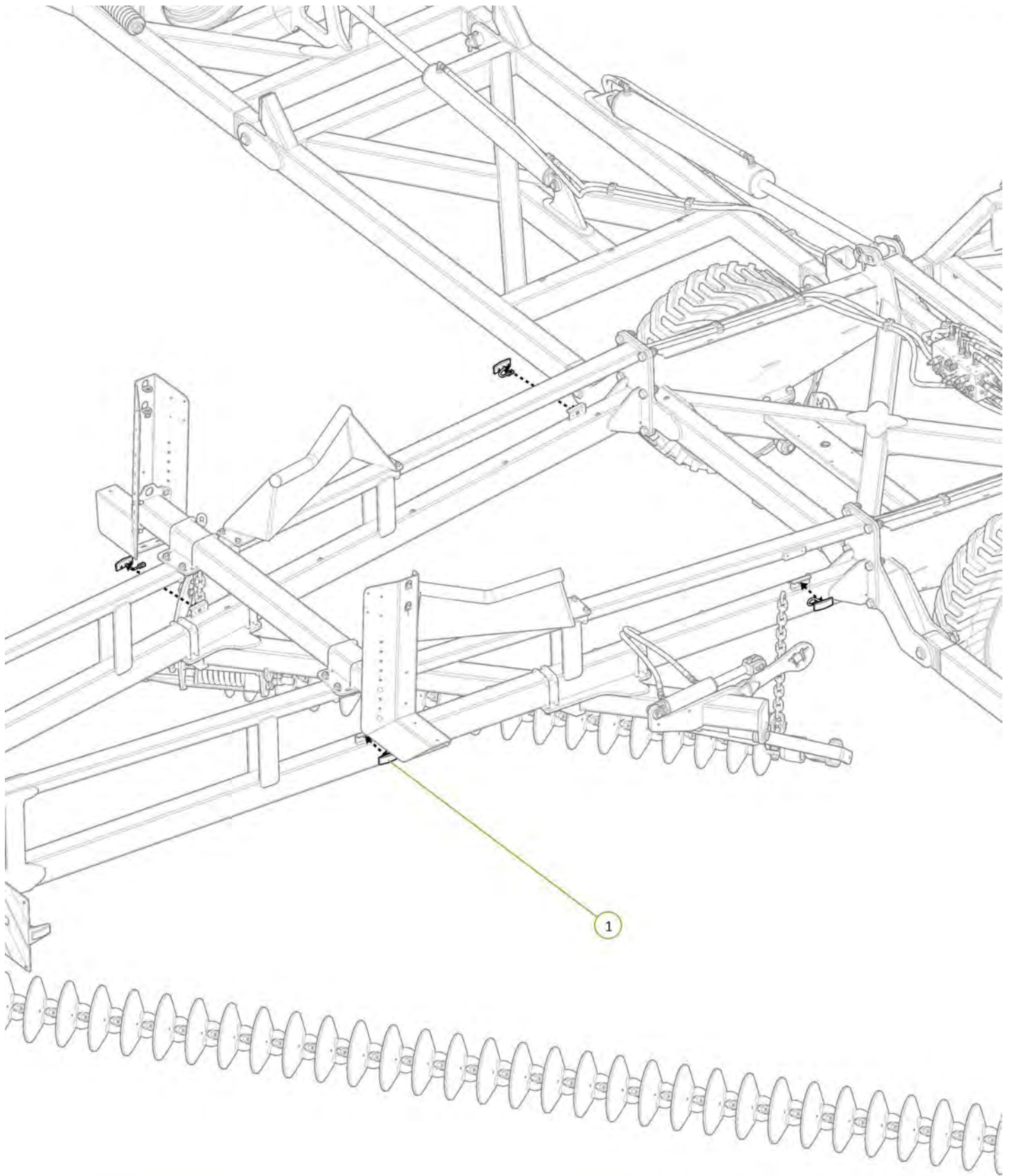


Item No.	Description	Qty	Number
1	Rear Light Bracket	2	1510-238
2	M10 x 35 grade 8.8 ZP Bolt	4	0211-1035
3	Washer Flat M10	8	0231-F1
4	Nyloc Nut M10	4	0221-NYL10



Item No.	Description	Qty	Number
1	White Position Marker Light	2	0412-LEDEU38WM
2	Amber Position Marker Light	2	0412-LEDEU38AM

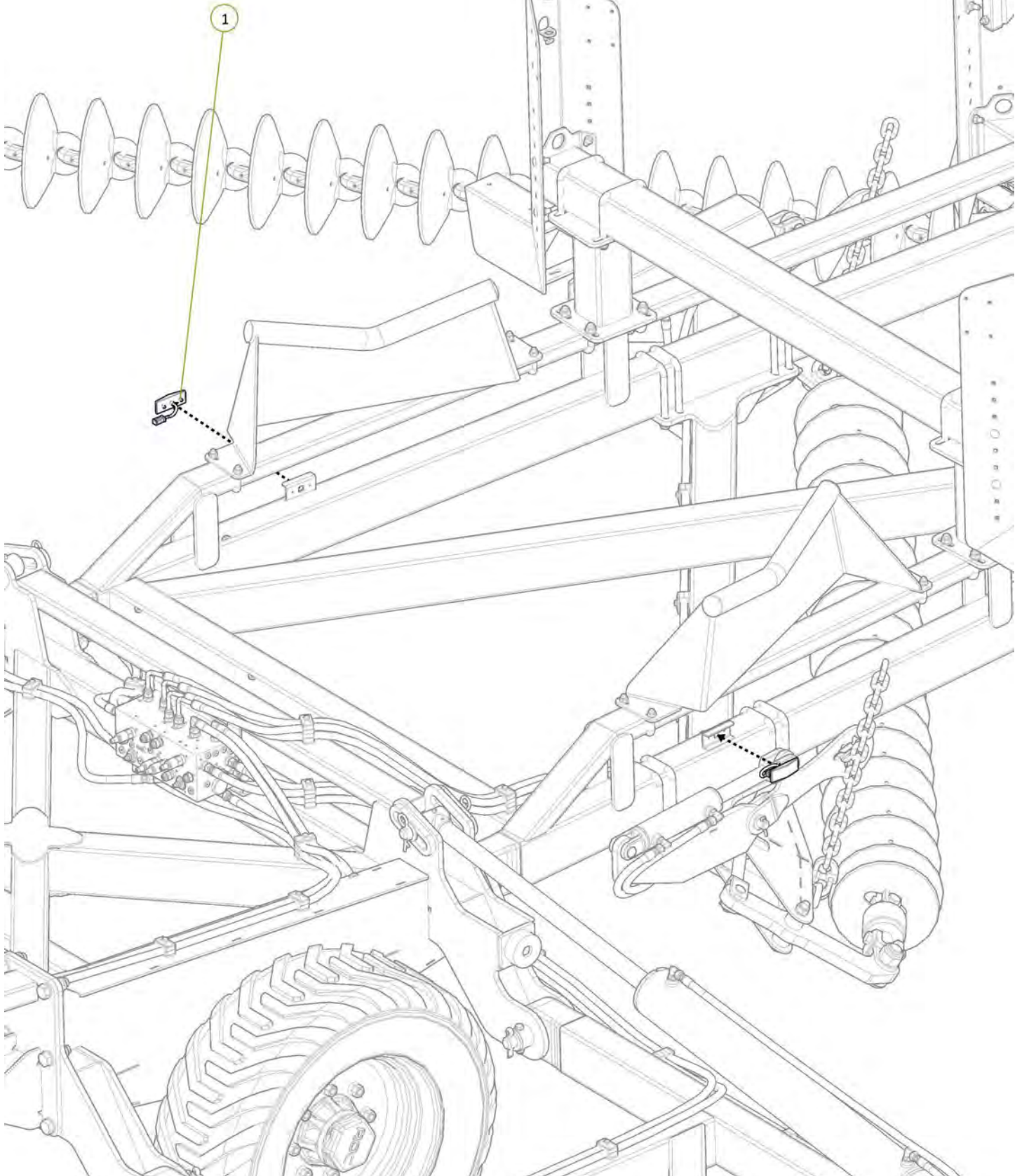


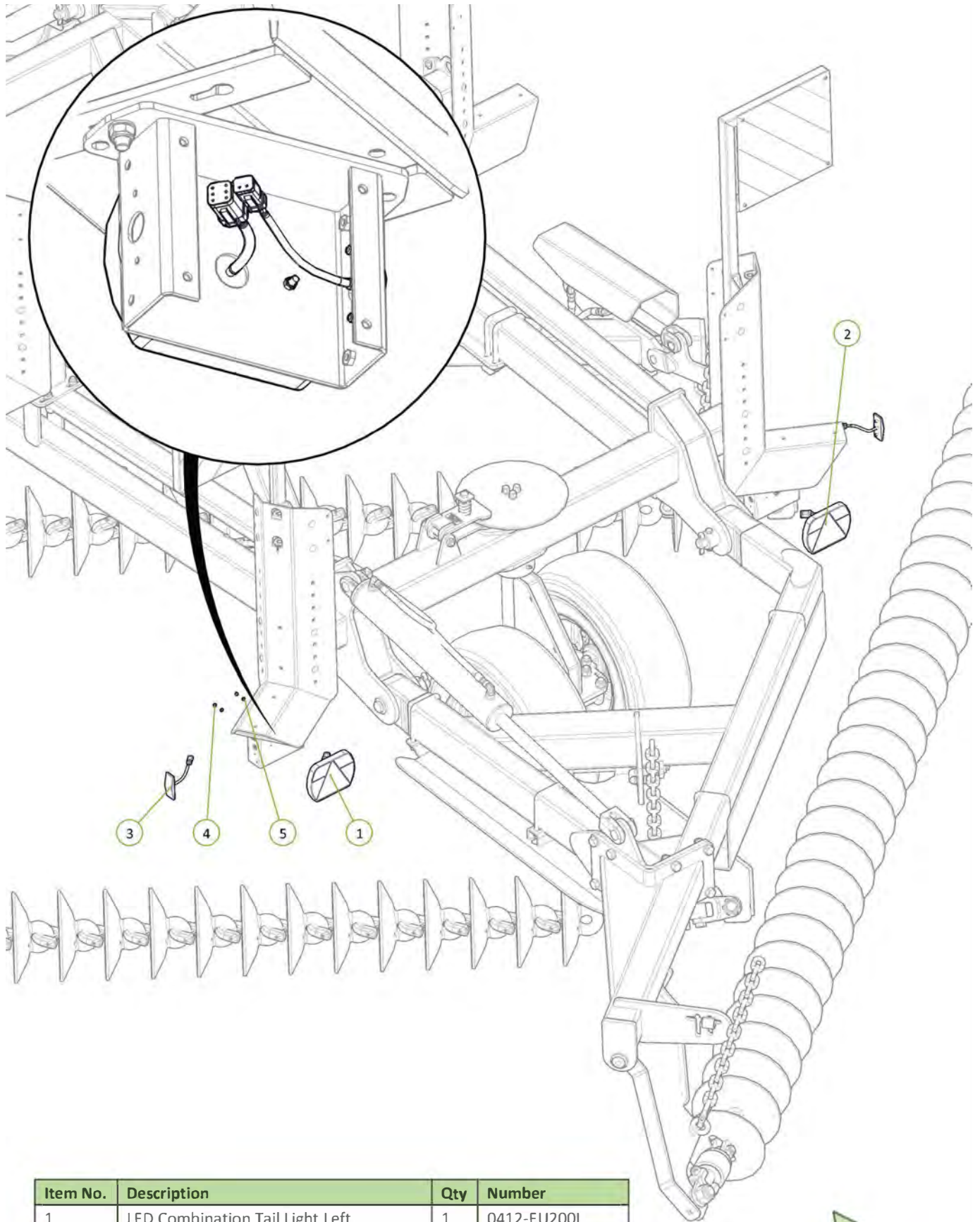


Item No.	Description	Qty	Number
1	Amber Position Marker Light	4	0412-LEDEU38AM

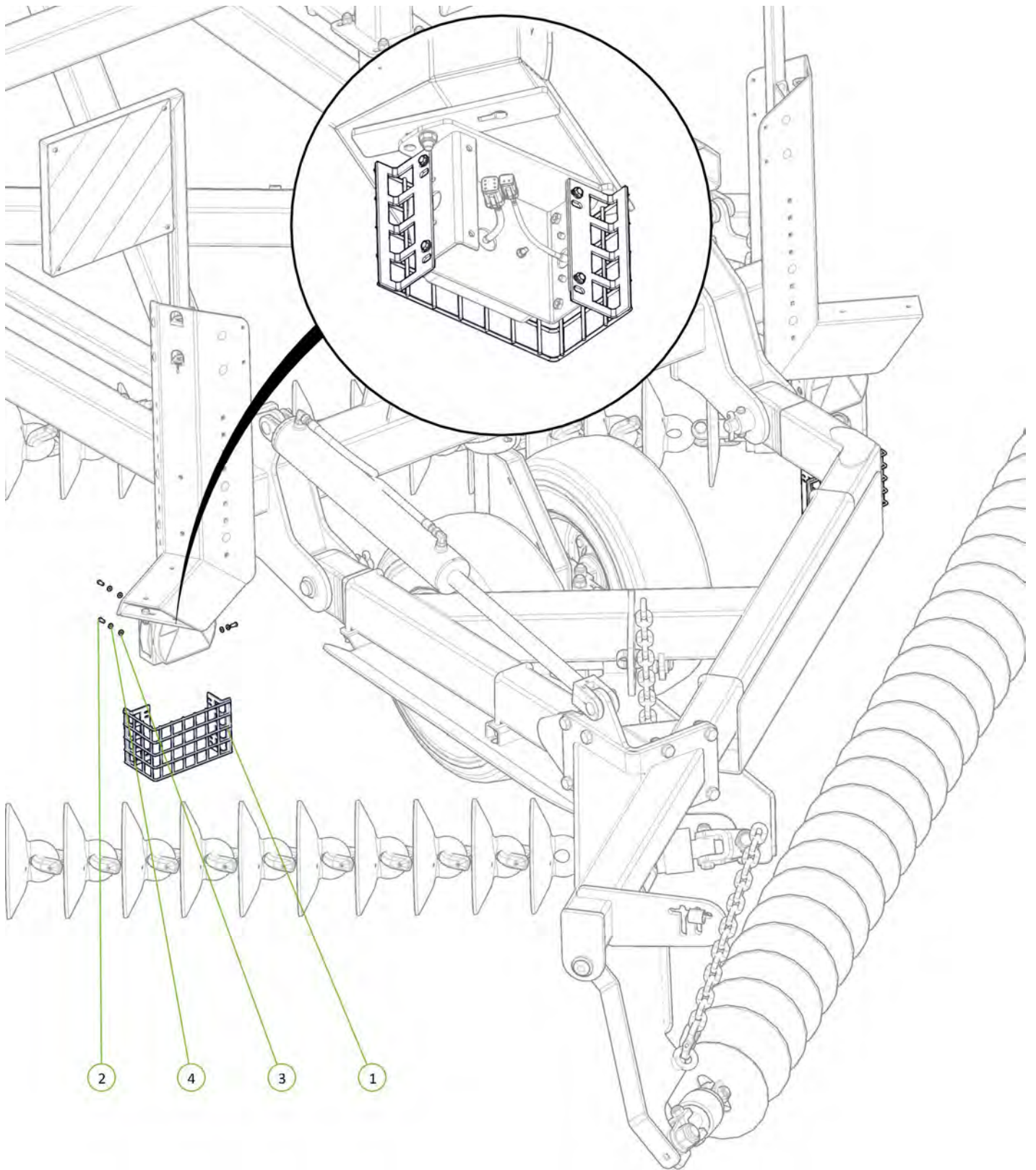


Item No.	Description	Qty	Number
1	Amber Position Marker Light	2	0412-LEDEU38AM



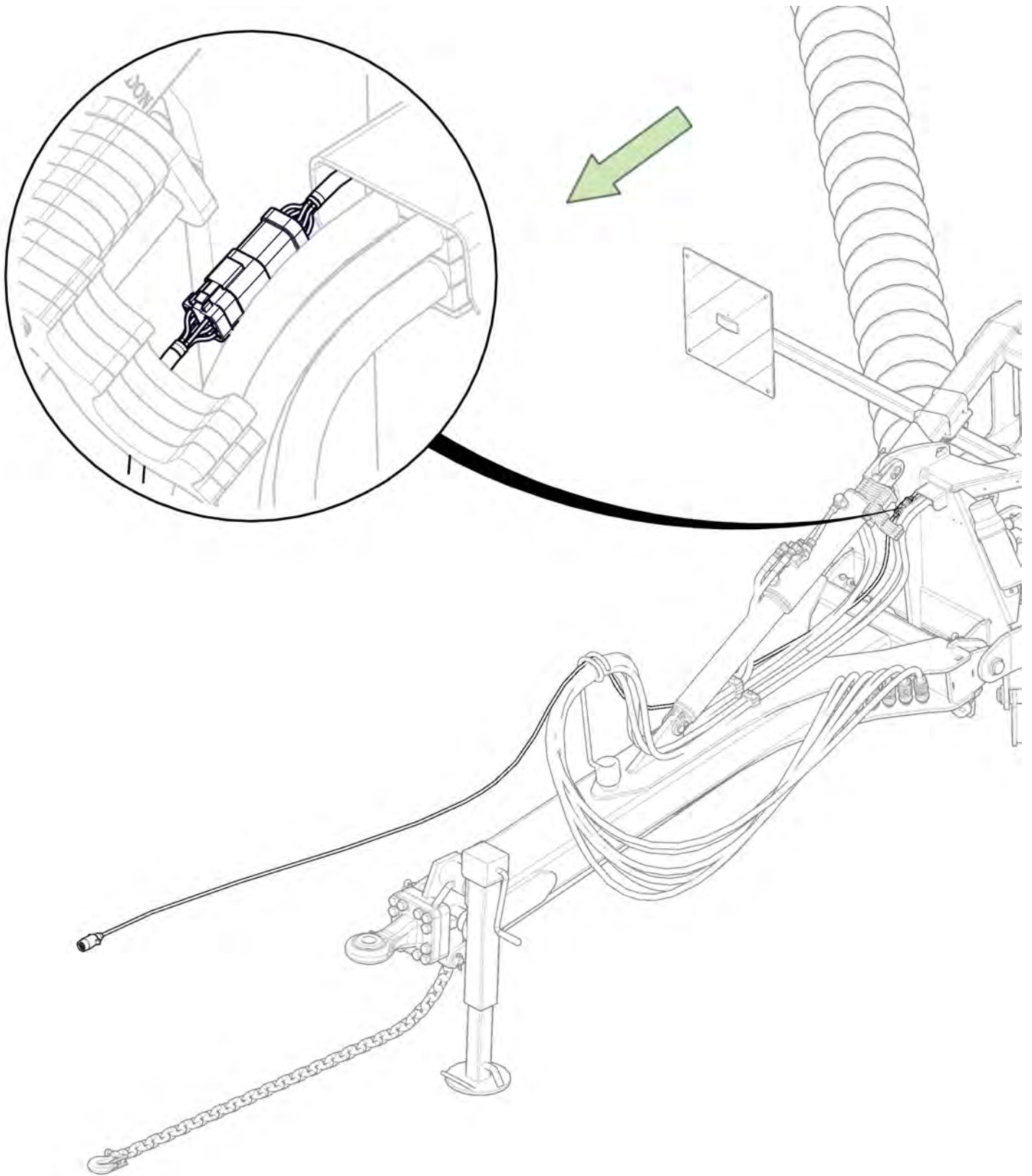


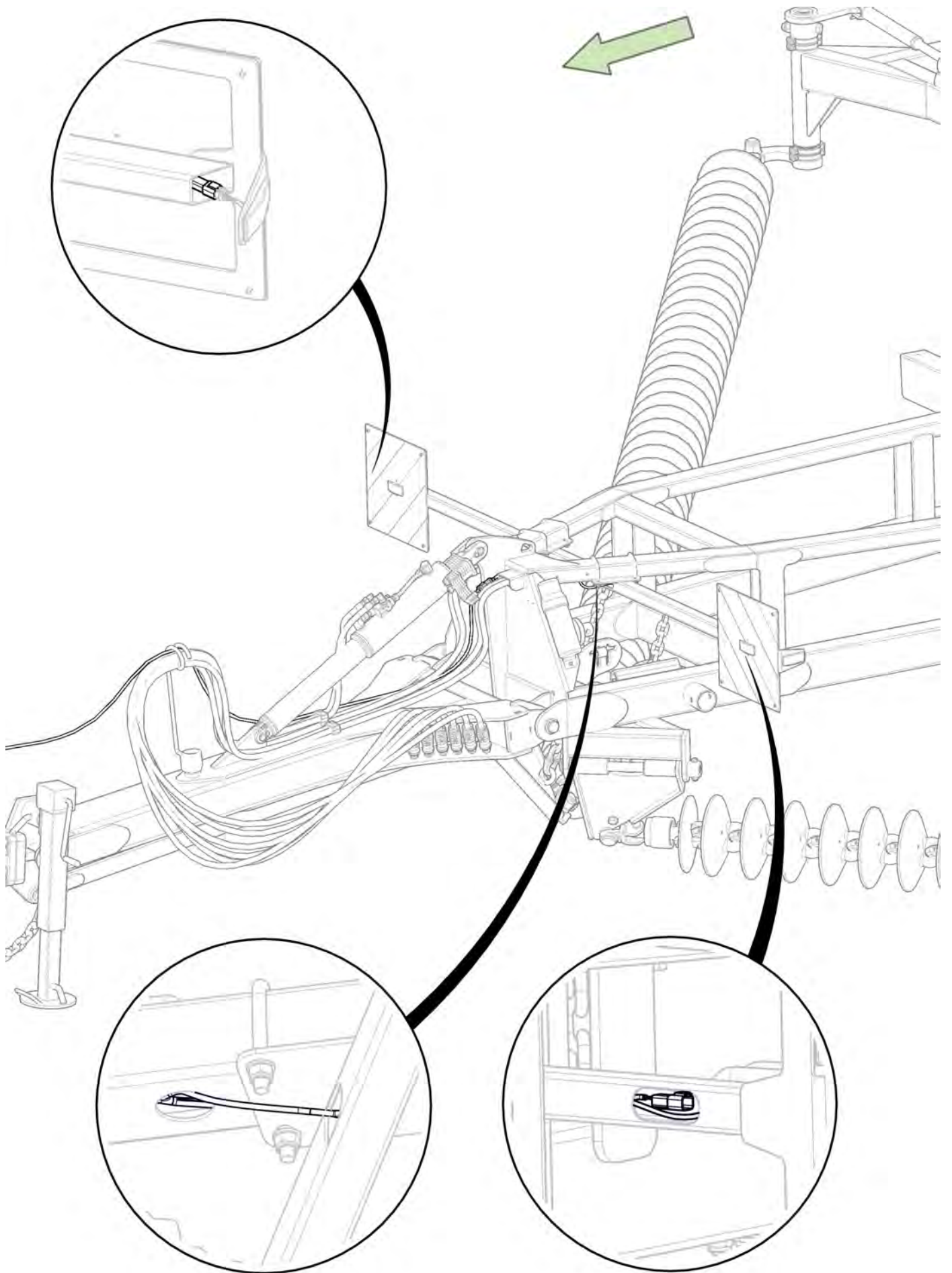
Item No.	Description	Qty	Number
1	LED Combination Tail Light Left	1	0412-EU200L
2	LED Combination Tail Light Right	1	0412-EU200R
3	Amber Position Marker Light	2	0412-LEDEU38AM
4	Nyloc Nut M5	4	0221-NYL5
5	Washer Flat M5	4	0231-F5

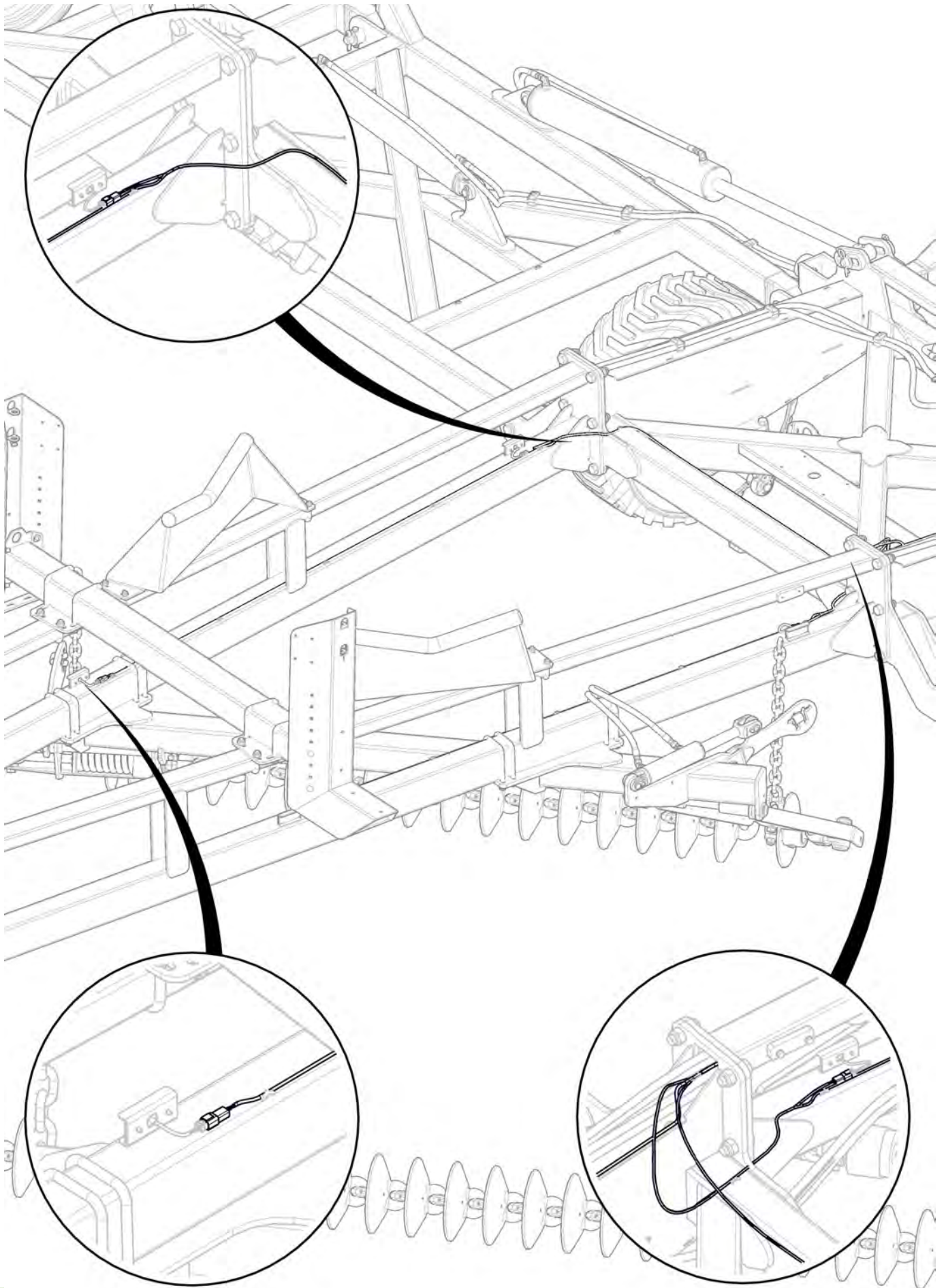


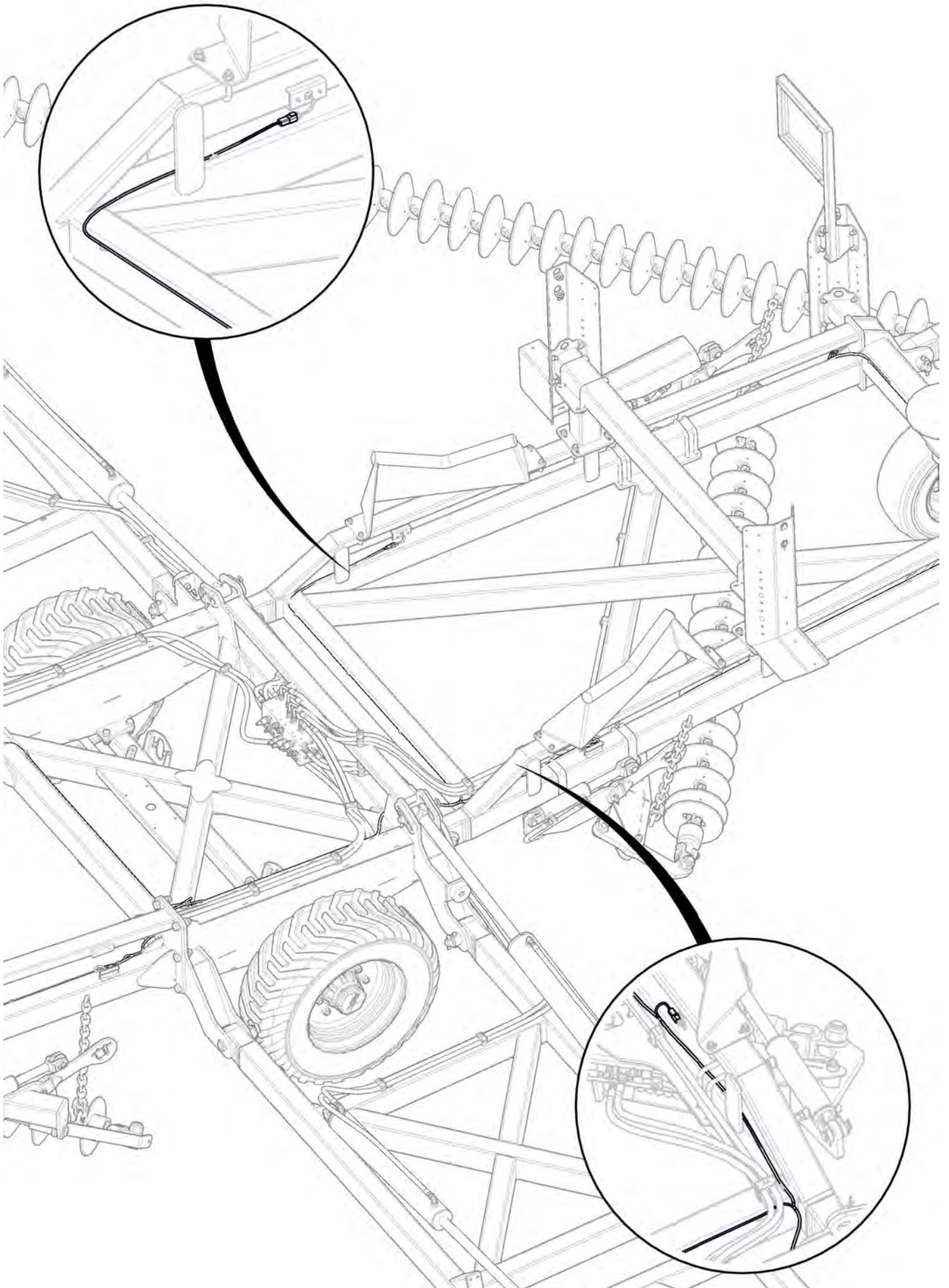
Item No.	Description	Qty	Number
1	Rear Light Bracket Guard	2	1510-239
2	M6 x 1 x 15mm Grade 4.6 ZP Bolt	8	0211-615
3	Washer Flat M6	8	0231-F6
4	Washer Spring M6	8	0231-S6

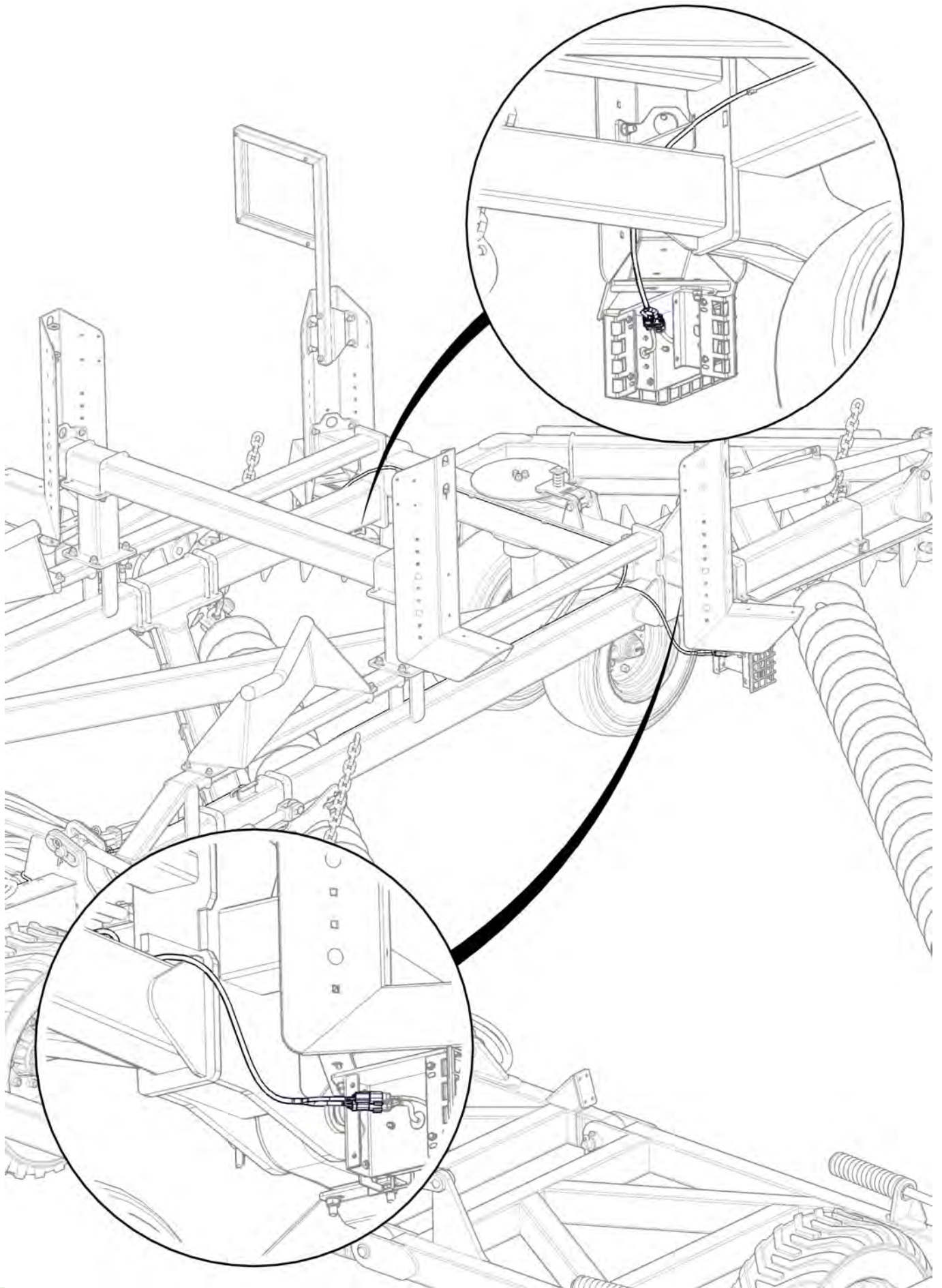








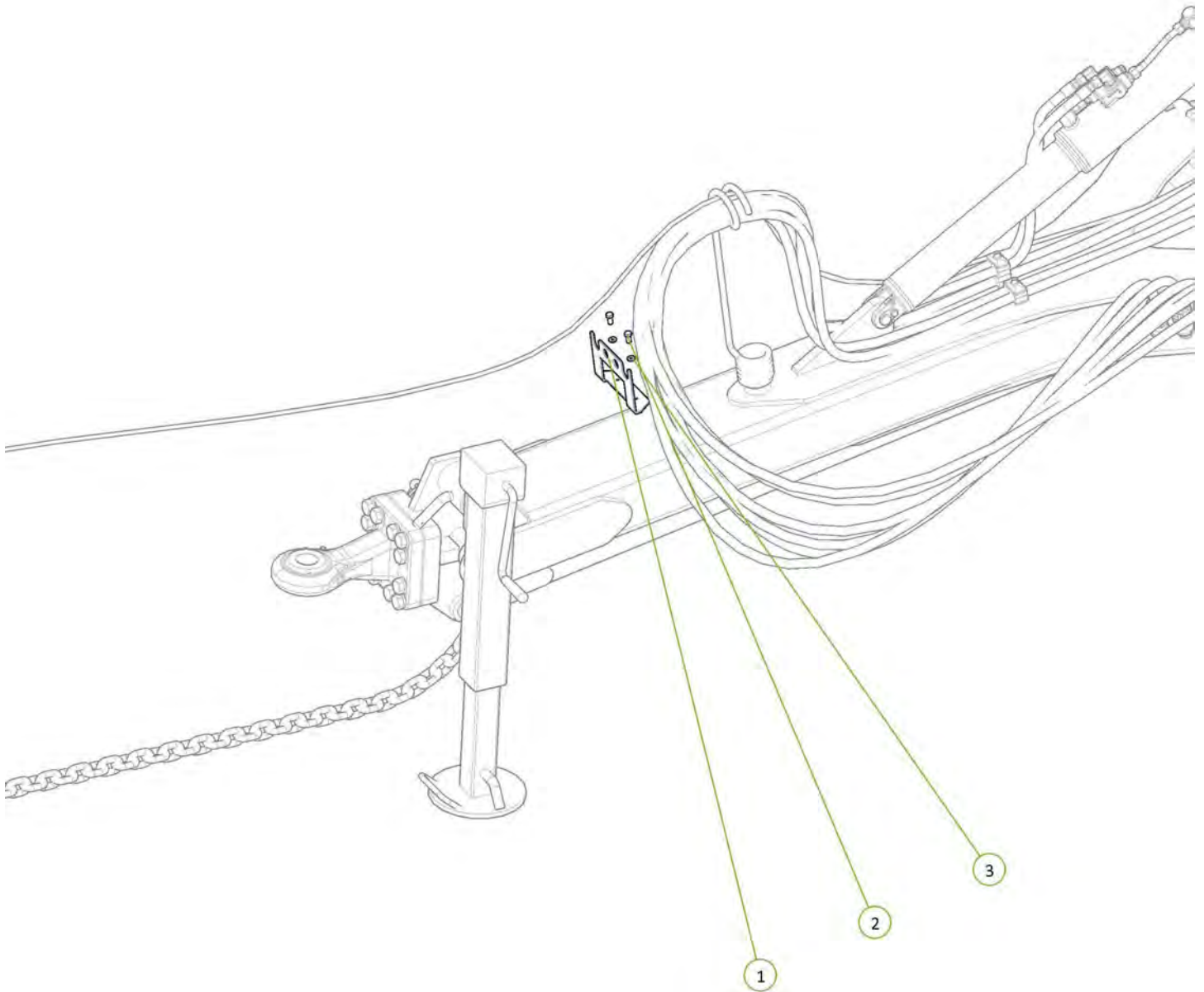




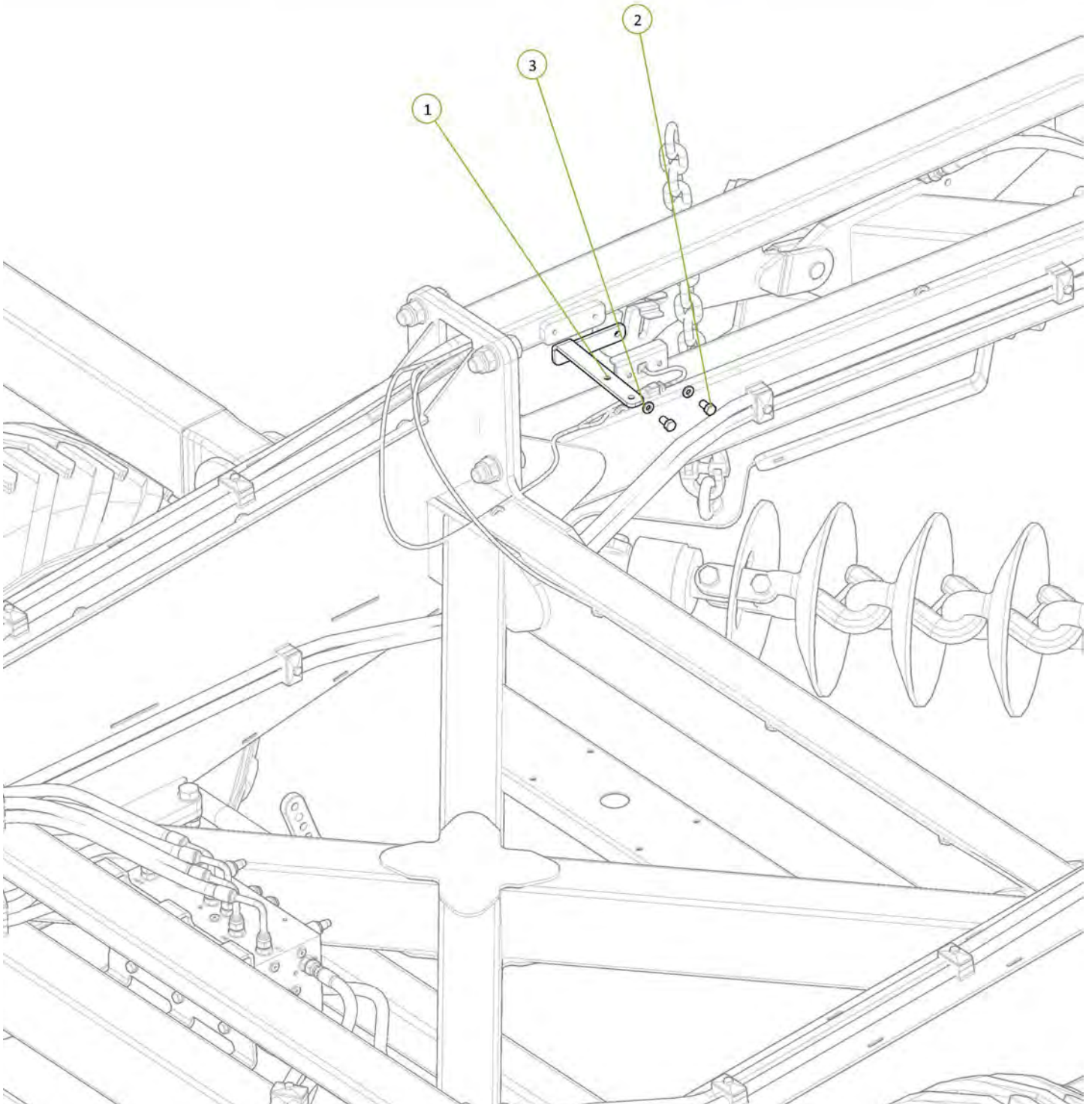
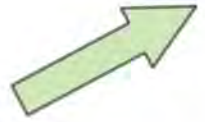
Section 3

Braking Components

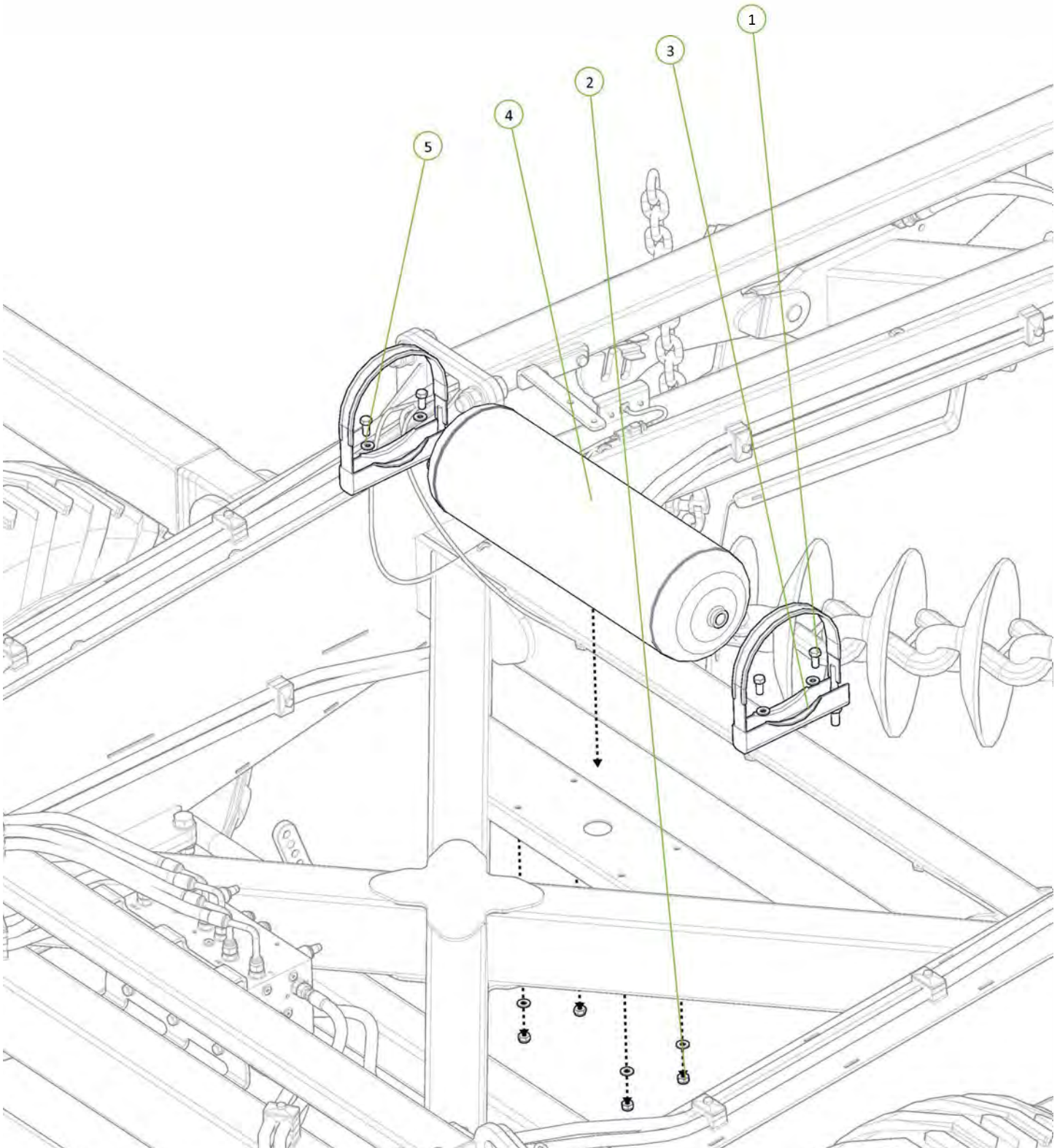
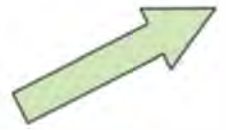
Item No.	Description	Qty	Number
1	Air Coupling Storage Bracket	1	1500-402
2	M8 x 20 Grade 8.8 ZP	2	0211-820
3	Bolt Washer Spring M8	2	0231-58



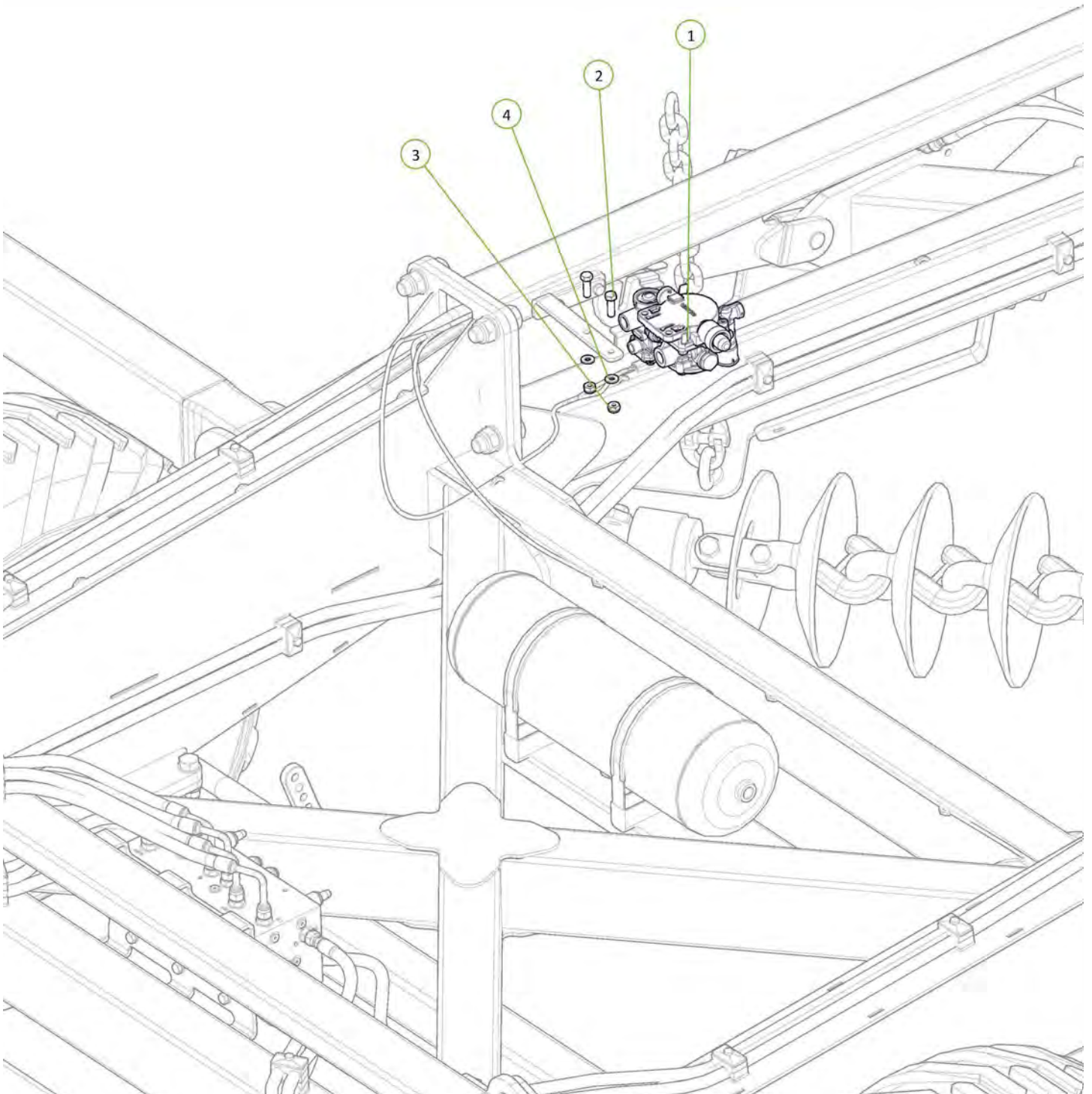
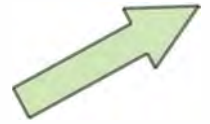
Item No.	Description	Qty	Number
1	Air Valve Bracket	1	1500-401
2	M10 x 20 Grade 8.8 ZP Bolt	2	0211-1020
3	Washer Spring M10	2	0231-S10



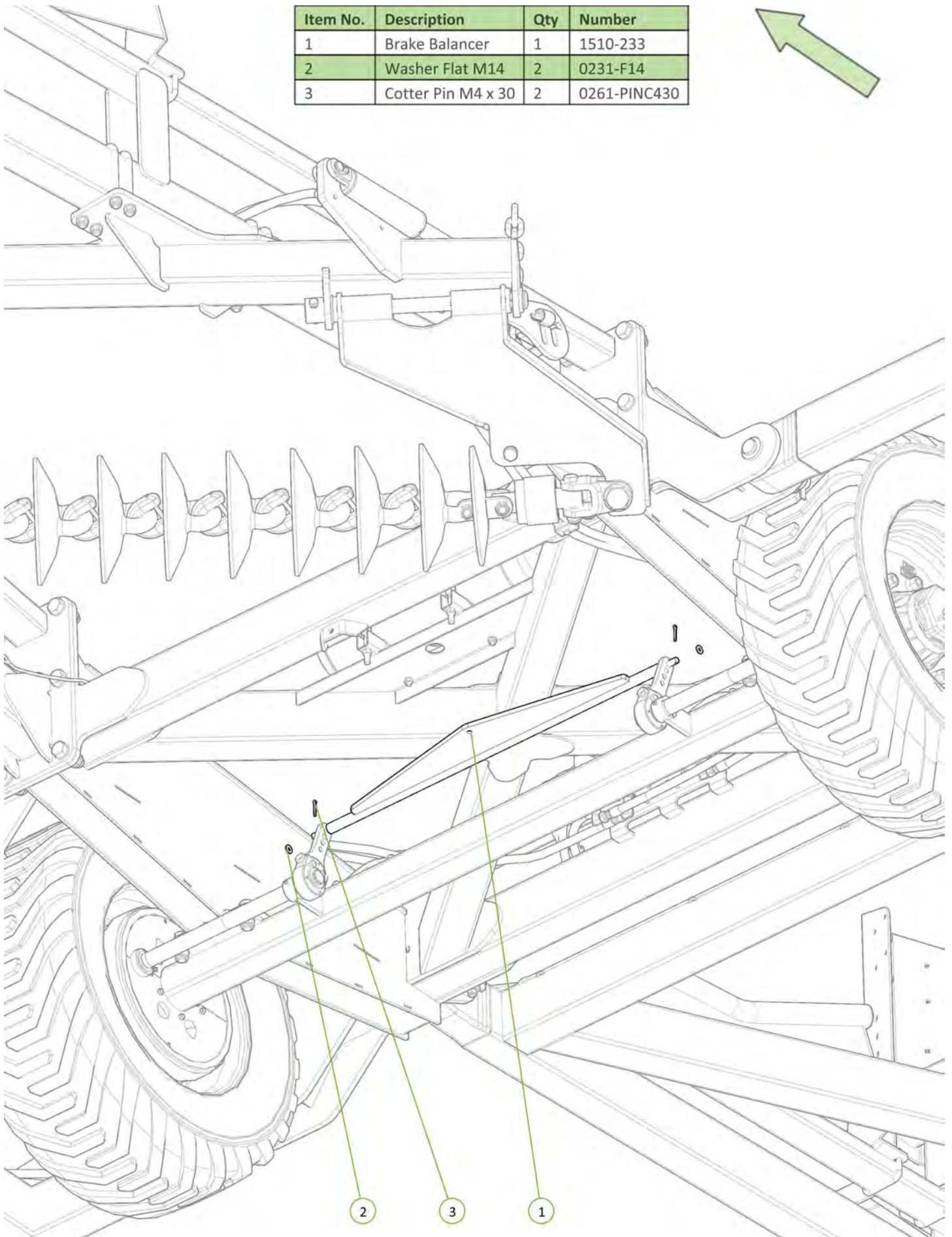
Item No.	Description	Qty	Number
1	M10 x 25 Grade 8.8 ZP Bolt	4	0211-1025
2	Nyloc Nut M10	4	0221-NYL10
3	20L Air Reservoir Bracket	2	0761-9504053512
4	Air Reservoir 20L	1	0761-9504200030
5	Washer Flat M10	8	0231-F10

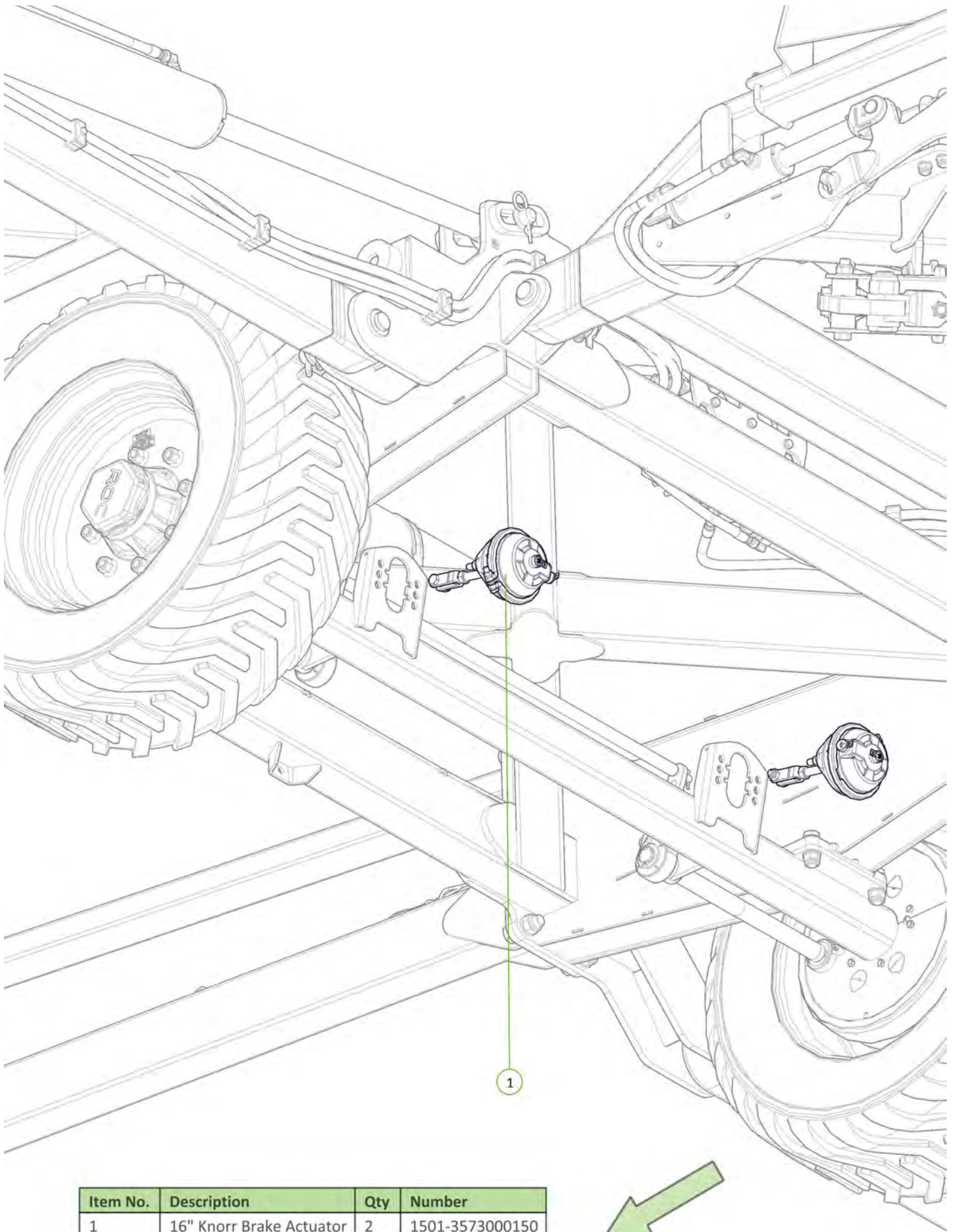


Item No.	Description	Qty	Number
1	Relay Emergency Valve	1	0761-9710026200
2	M10 x 30 Grade 8.8 ZP Bolt	2	0211-1030
3	Nyloc Nut M10	2	0221-NYL10
4	Washer Flat M10	2	0231-F10



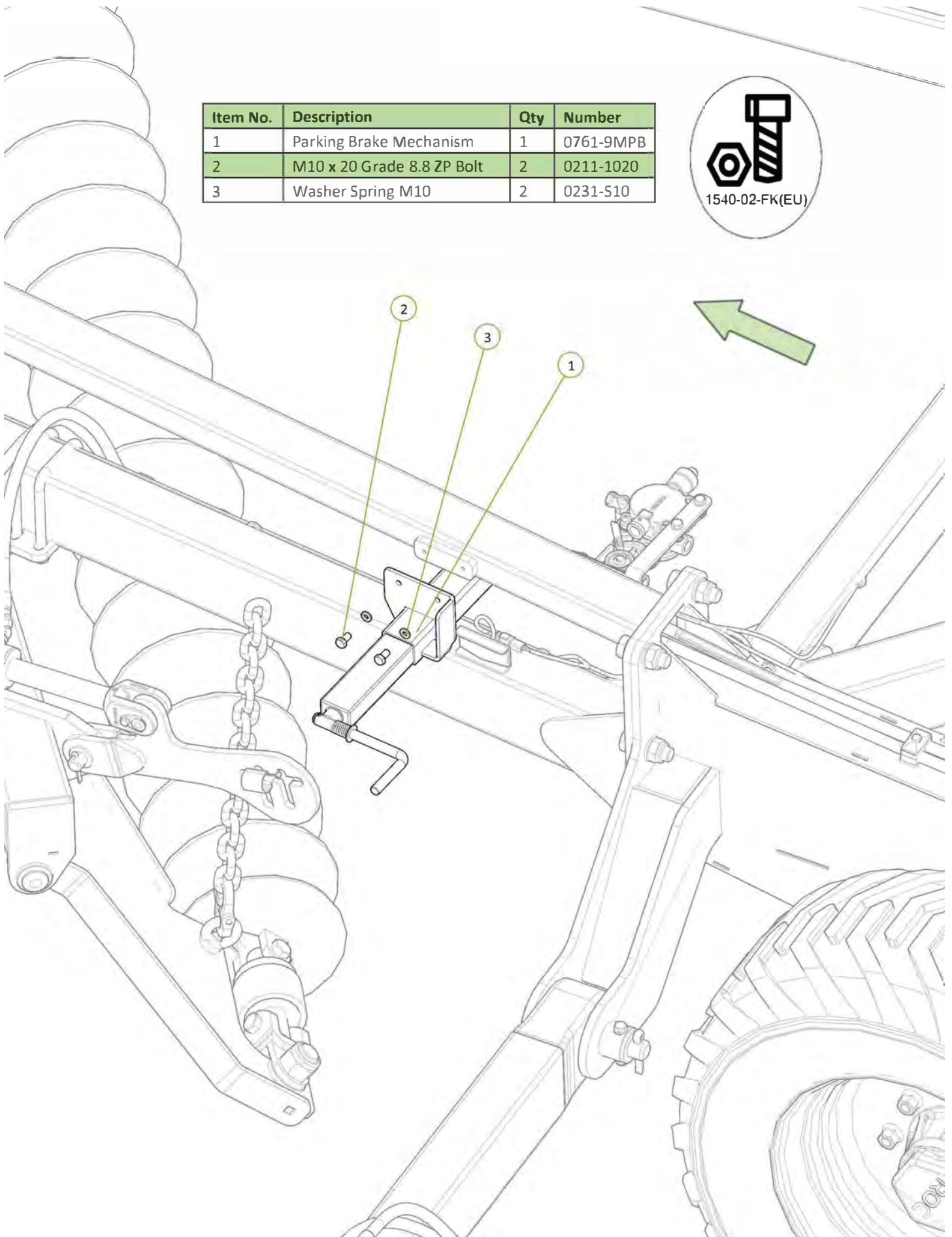
Item No.	Description	Qty	Number
1	Brake Balancer	1	1510-233
2	Washer Flat M14	2	0231-F14
3	Cotter Pin M4 x 30	2	0261-PINC430



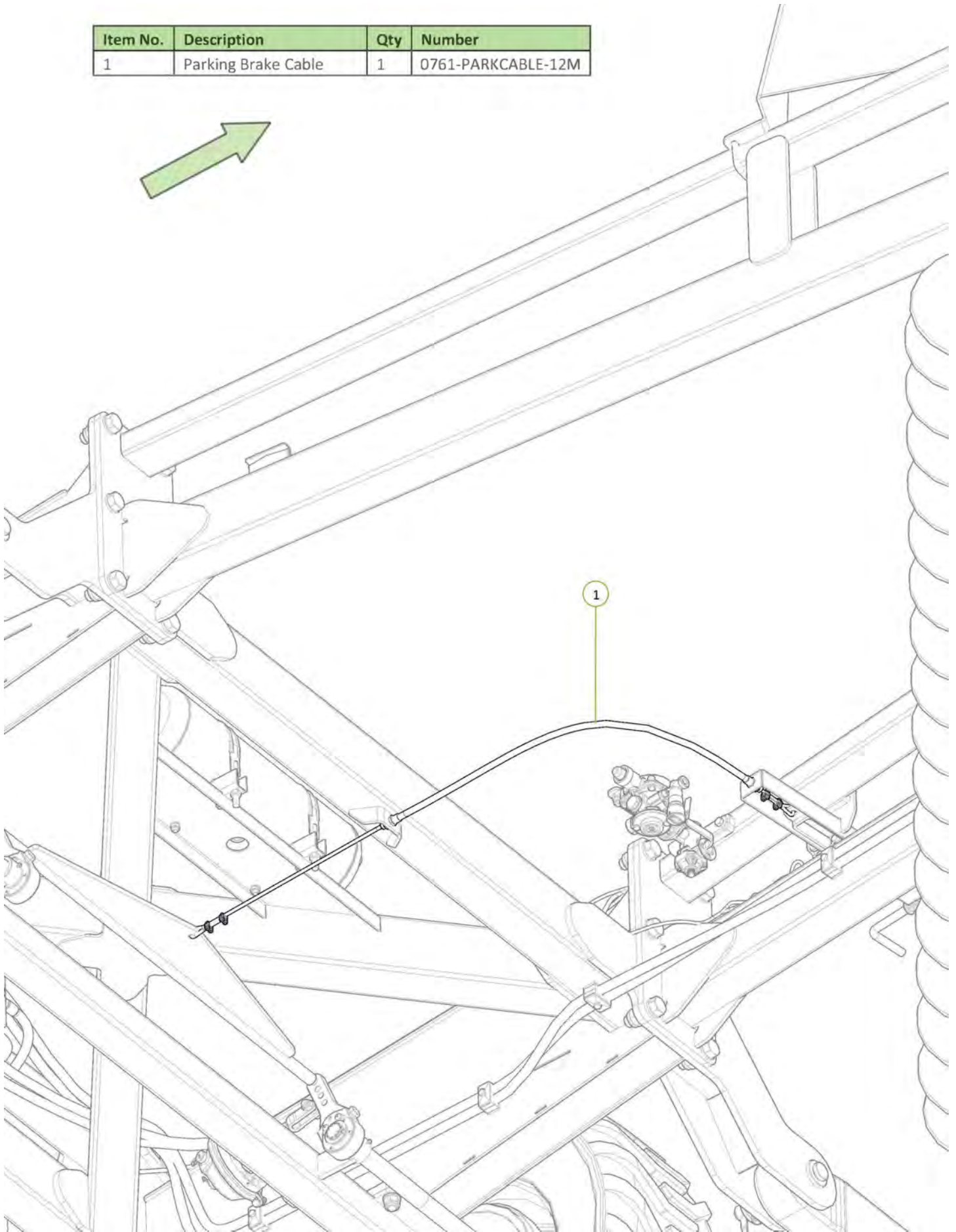
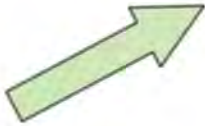


Item No.	Description	Qty	Number
1	16" Knorr Brake Actuator	2	1501-3573000150

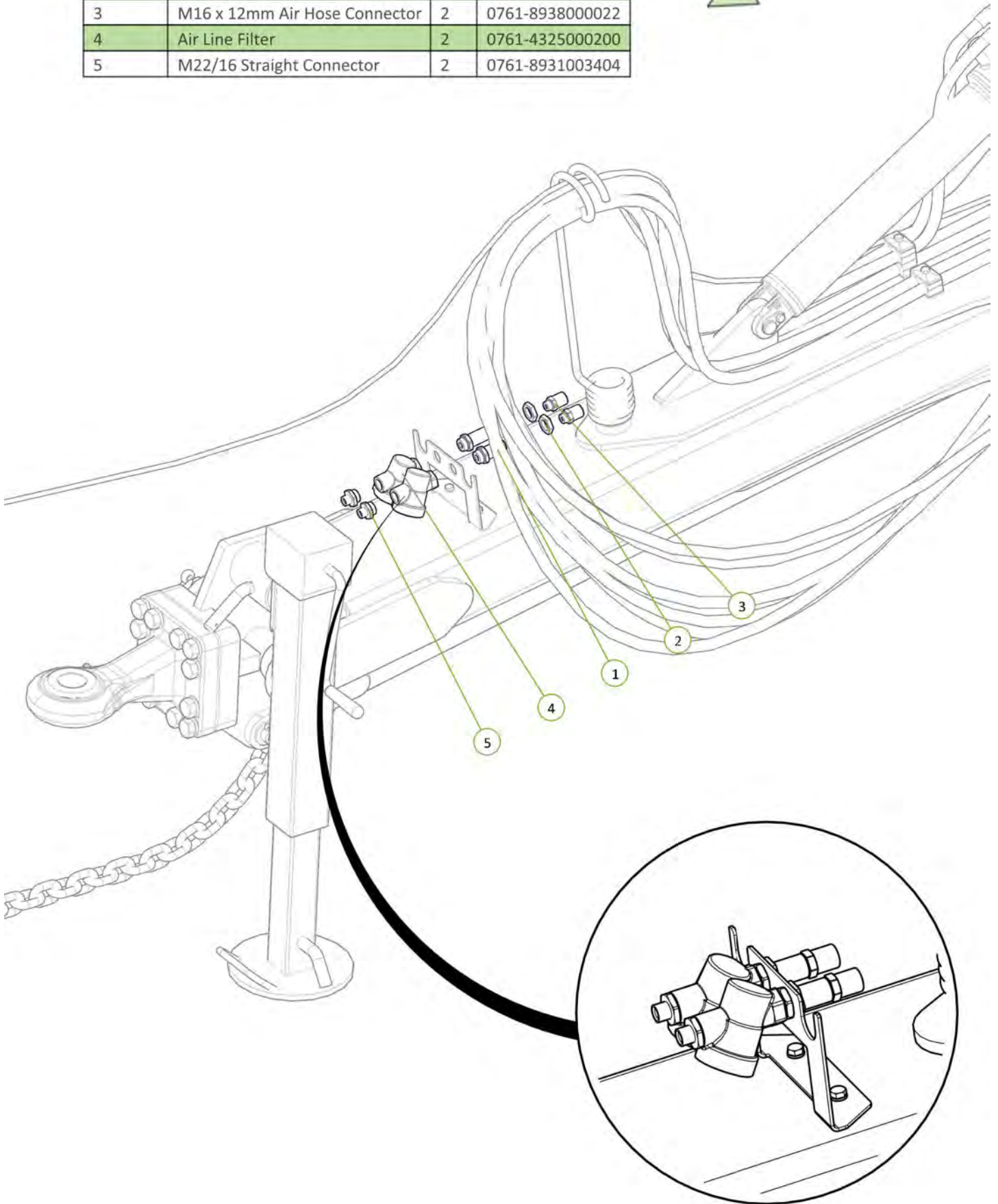
Item No.	Description	Qty	Number
1	Parking Brake Mechanism	1	0761-9MPB
2	M10 x 20 Grade 8.8 ZP Bolt	2	0211-1020
3	Washer Spring M10	2	0231-510



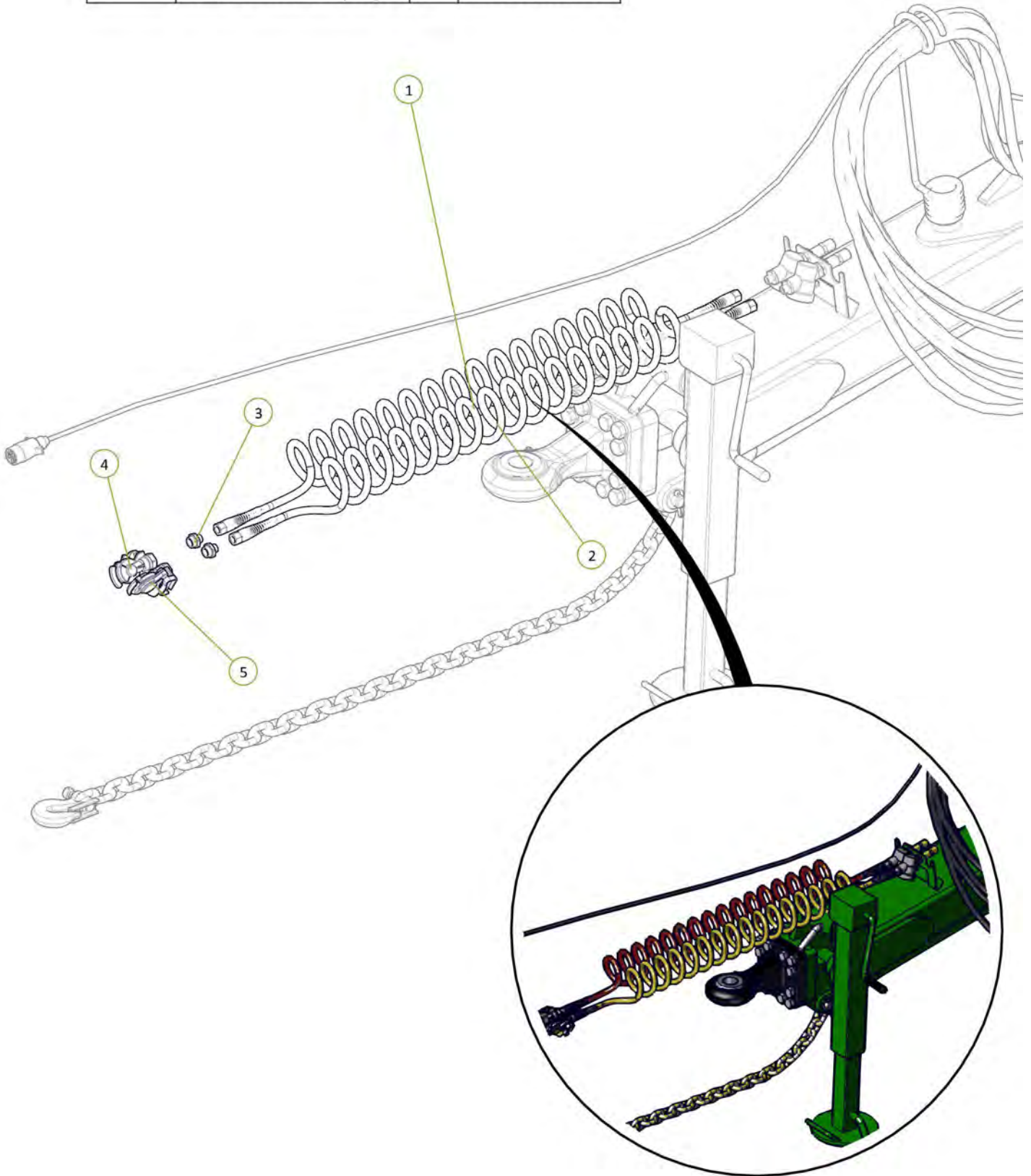
Item No.	Description	Qty	Number
1	Parking Brake Cable	1	0761-PARKCABLE-12M



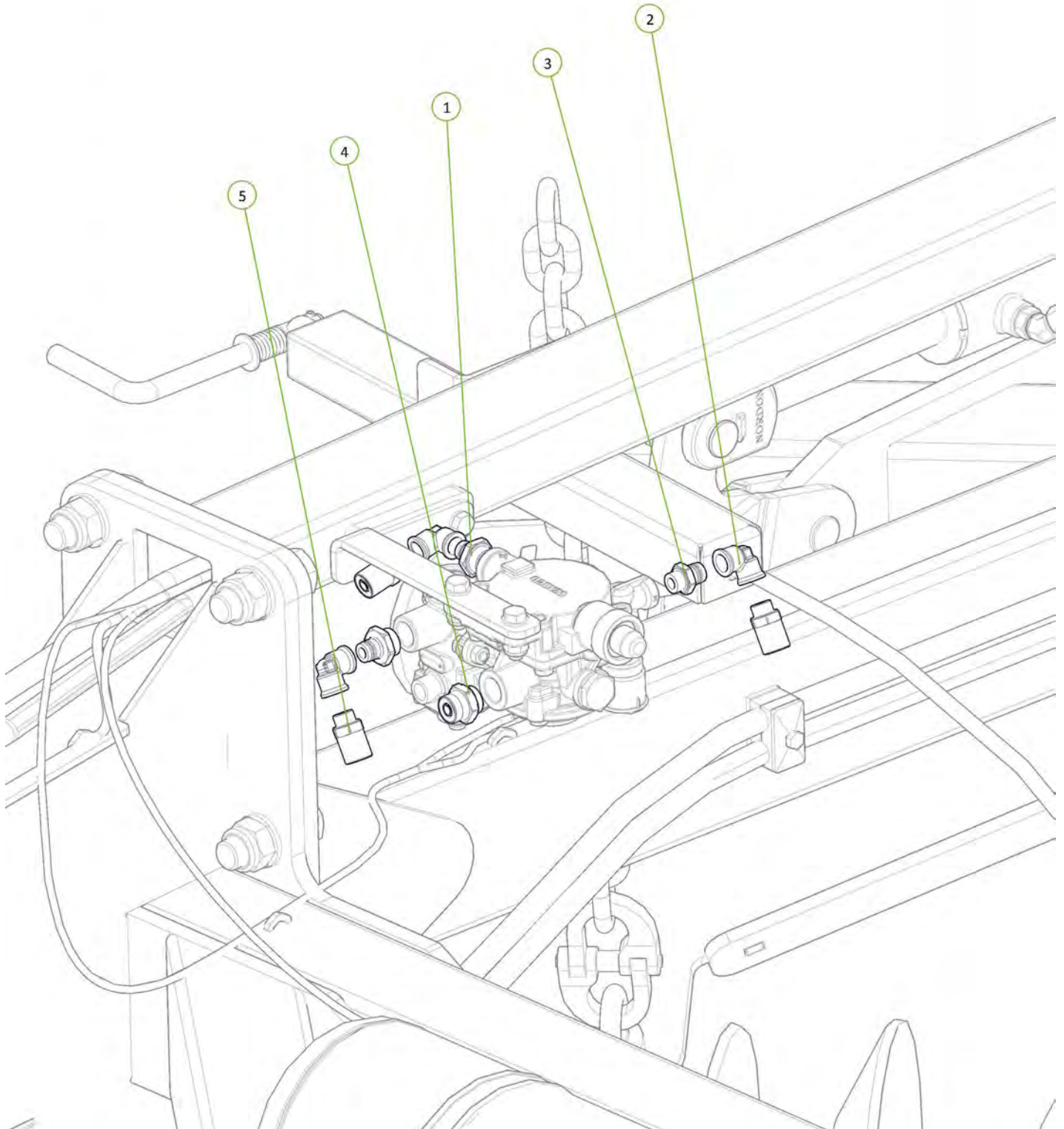
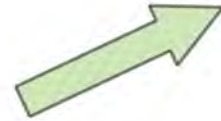
Item No.	Description	Qty	Number
1	Bulkhead Fitting	2	0761-8931042922
2	M22 Bulkhead Nut	2	0761-8915004544
3	M16 x 12mm Air Hose Connector	2	0761-8938000022
4	Air Line Filter	2	0761-4325000200
5	M22/16 Straight Connector	2	0761-8931003404

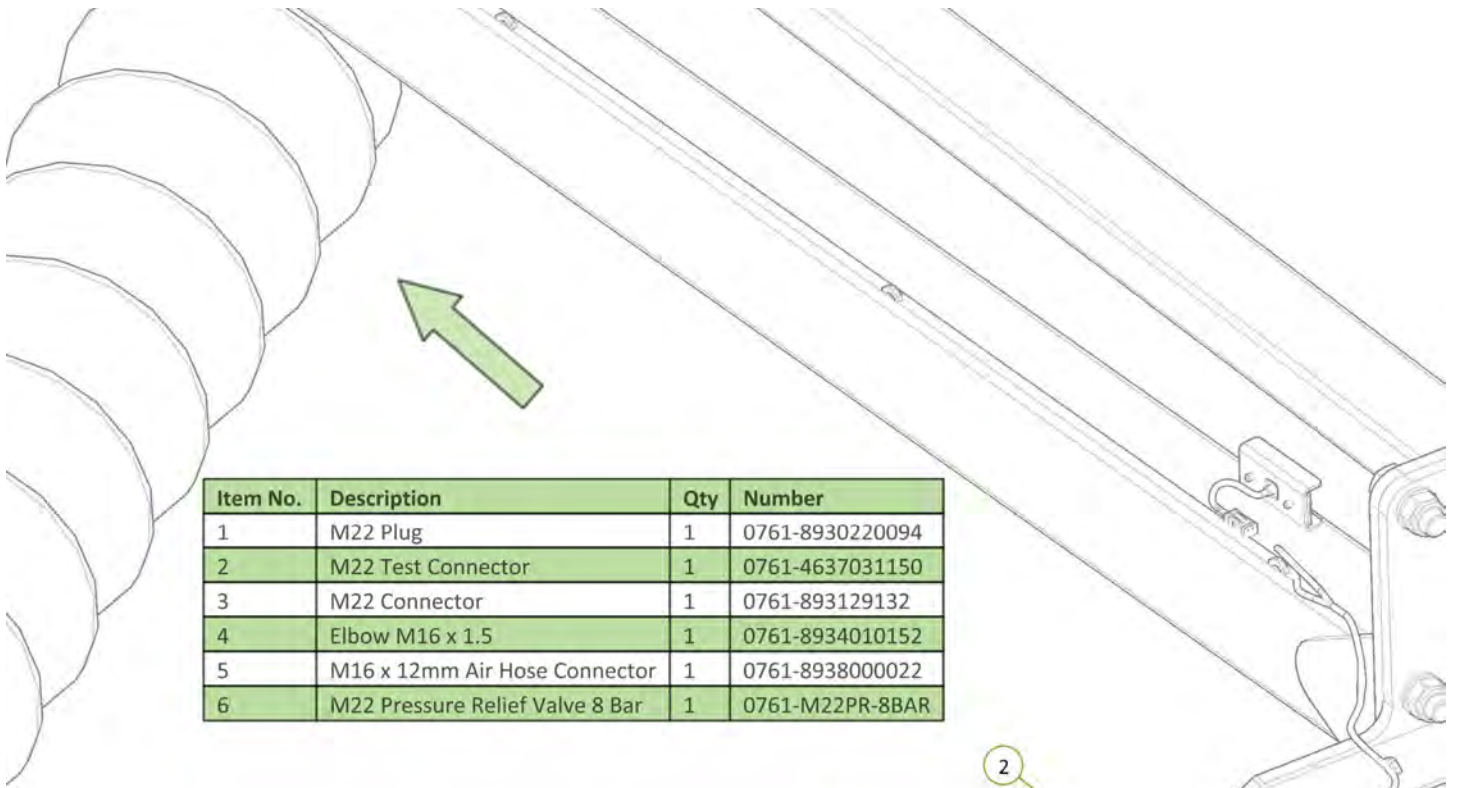


Item No.	Description	Qty	Number
1	Red Flexi Air Hose	1	0761-1555-033
2	Yellow Flexi Air Hose	1	0761-1555-032
3	M22/16 Straight Connector	2	0761-8931003404
4	Red Air Hose Coupling	1	0761-9528970070
5	Yellow Air Hose Coupling	1	0761-9528970060

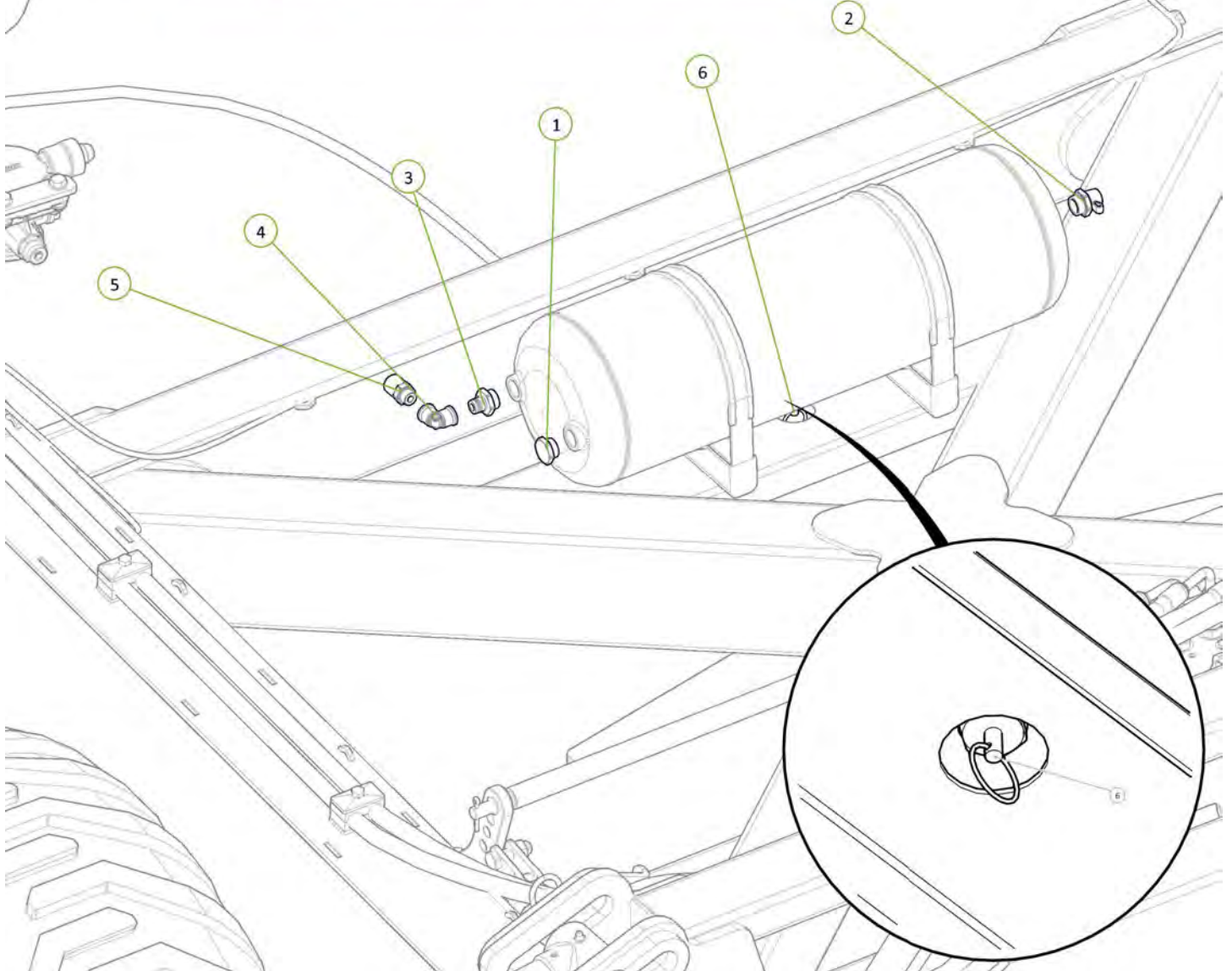


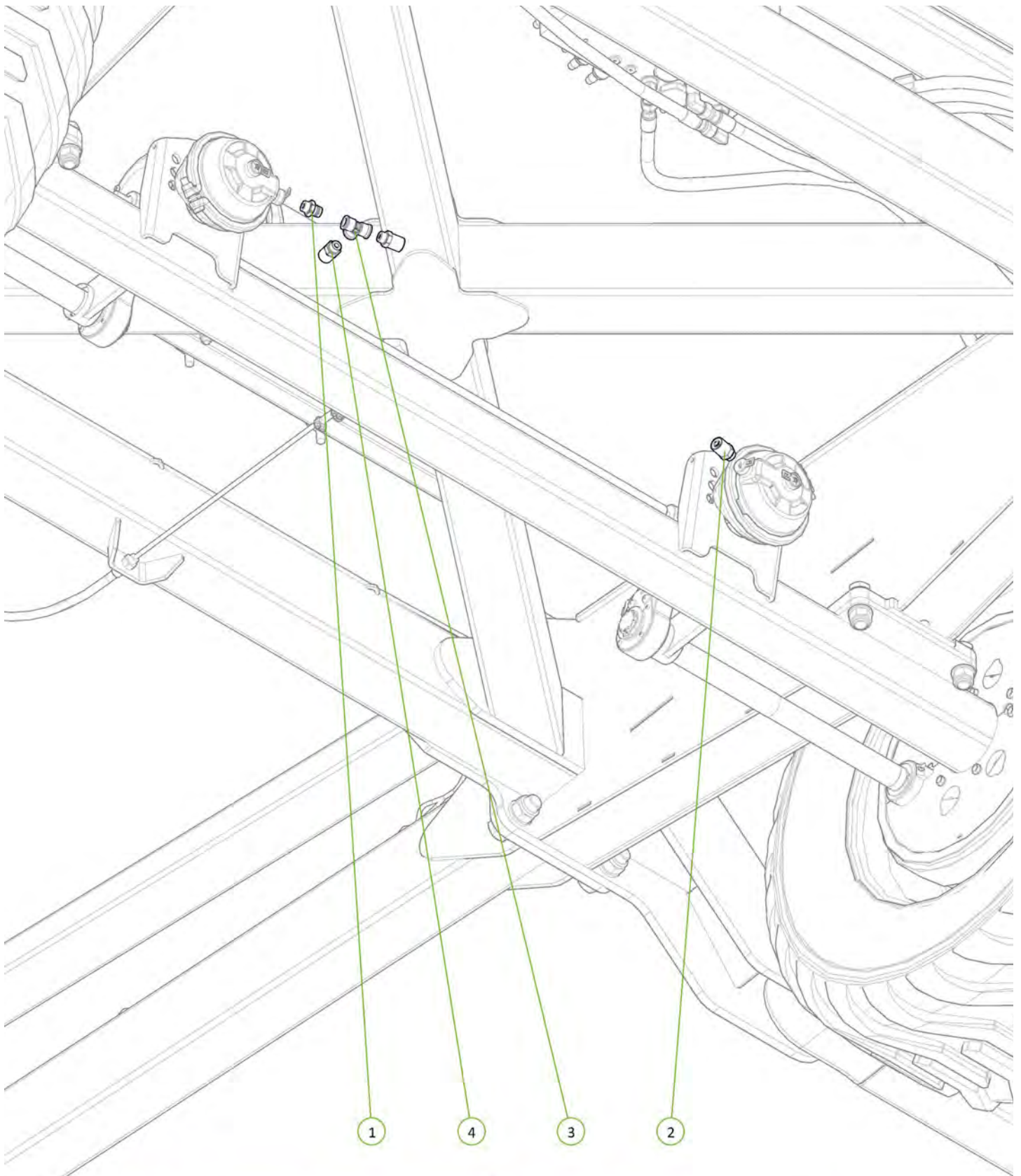
Item No.	Description	Qty	Number
1	M22 Connector	2	0761-893129132
2	Elbow M16 x 1.5	3	0761-8934010152
3	M16 Connector	1	0761-8931291922
4	M22 x 12mm Air Hose Connector	1	0761-8938000082
5	M16 x 12mm Air Hose Connector	3	0761-8938000022





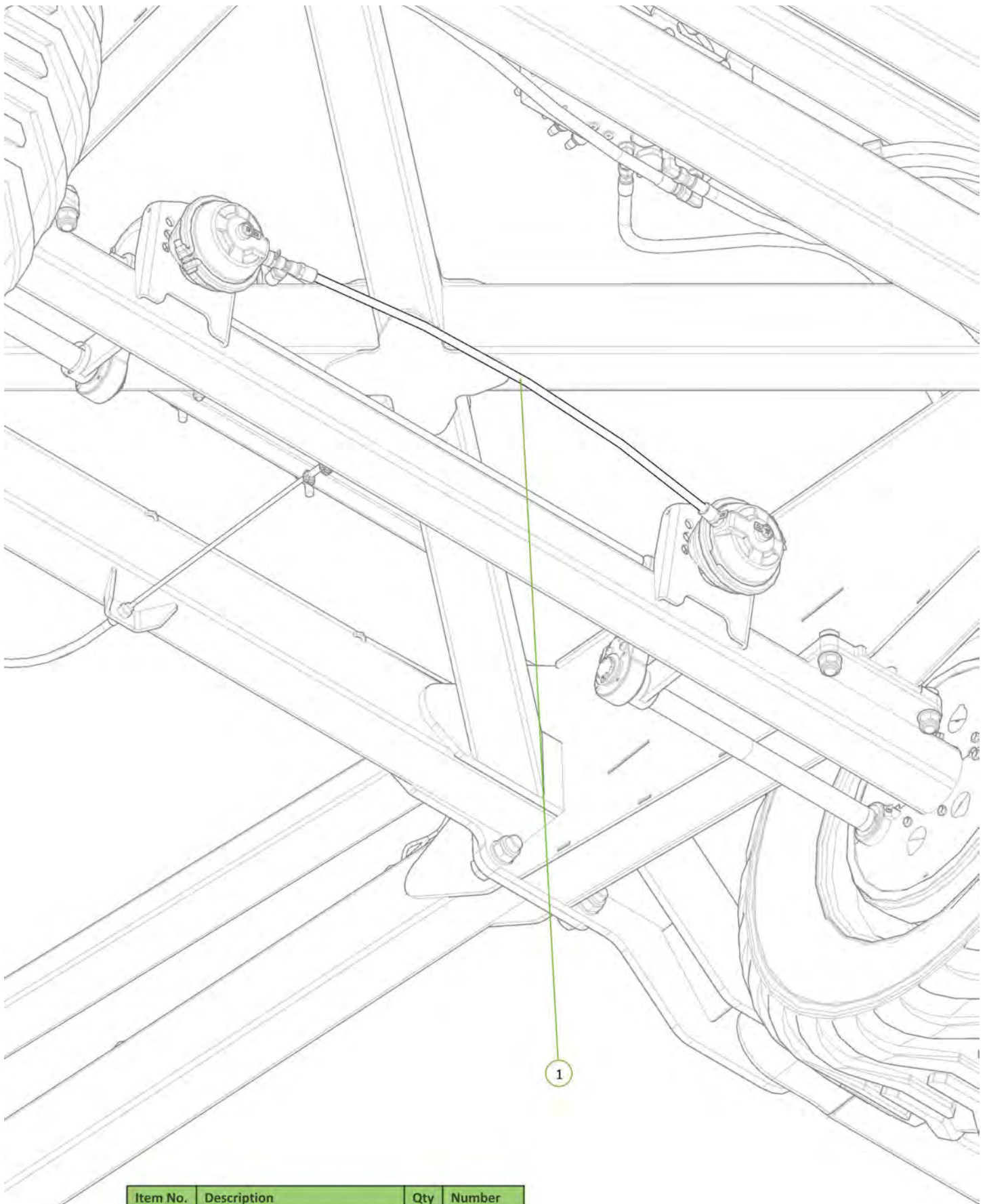
Item No.	Description	Qty	Number
1	M22 Plug	1	0761-8930220094
2	M22 Test Connector	1	0761-4637031150
3	M22 Connector	1	0761-893129132
4	Elbow M16 x 1.5	1	0761-8934010152
5	M16 x 12mm Air Hose Connector	1	0761-8938000022
6	M22 Pressure Relief Valve 8 Bar	1	0761-M22PR-8BAR





Item No.	Description	Qty	Number
1	M16 Connector	1	0761-8931291922
2	M16 x 12mm Air Hose Connector	1	0761-8938000022
3	T-Piece M16 x 1.5	1	0761-8935011944
4	M16 x 12mm Air Hose Connector	2	0761-8938000022



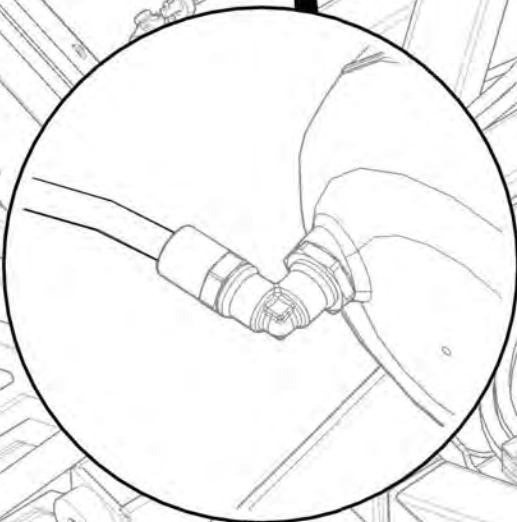
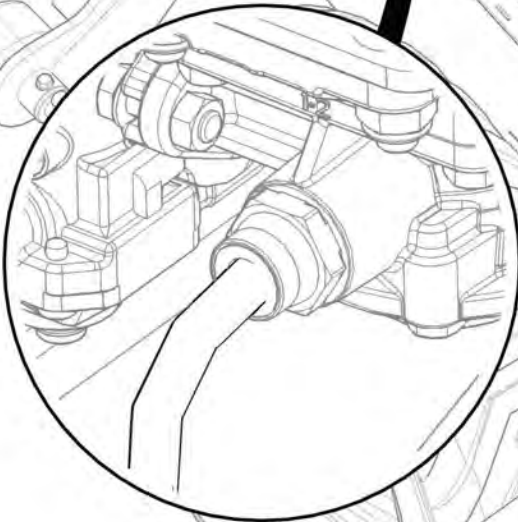


Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12

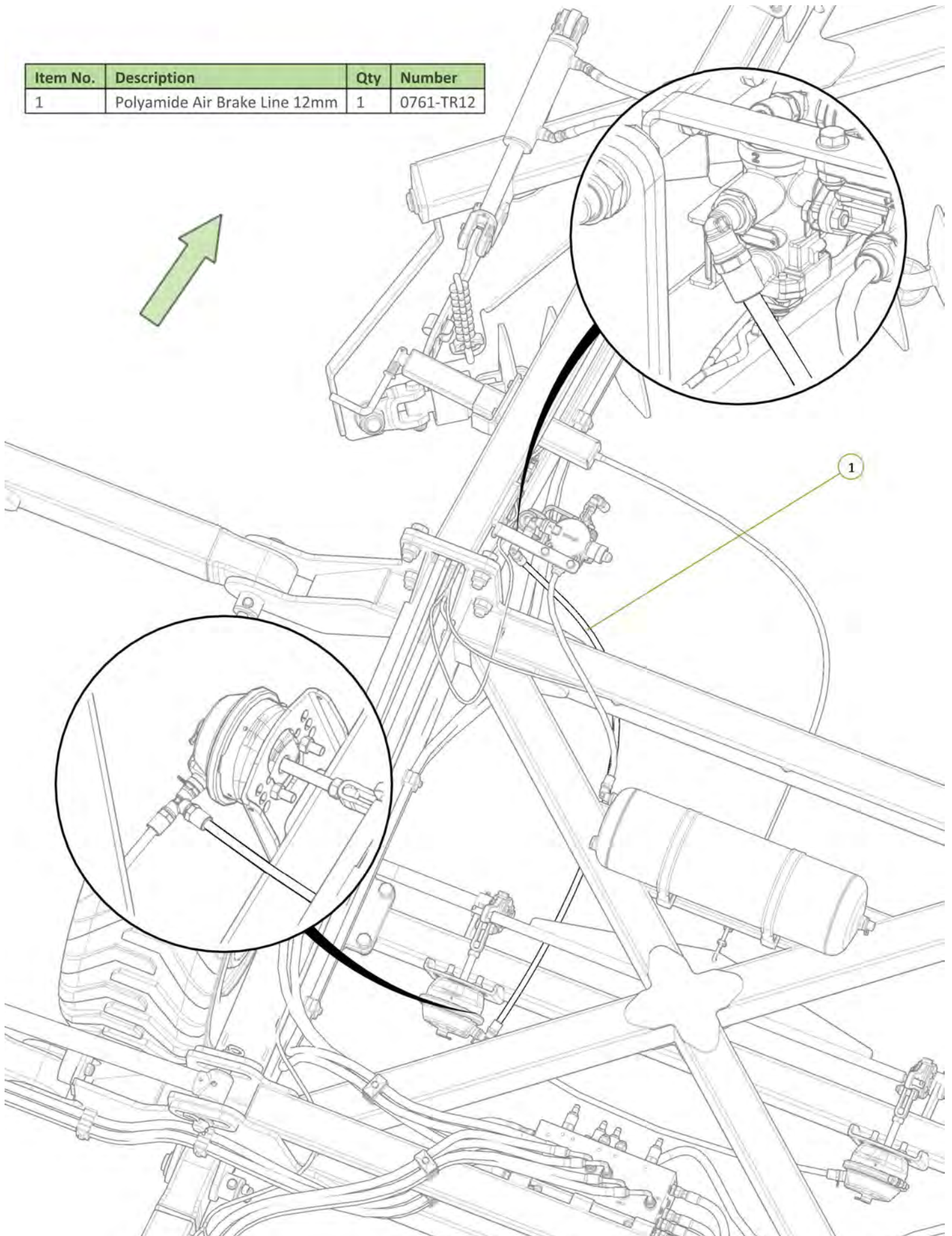


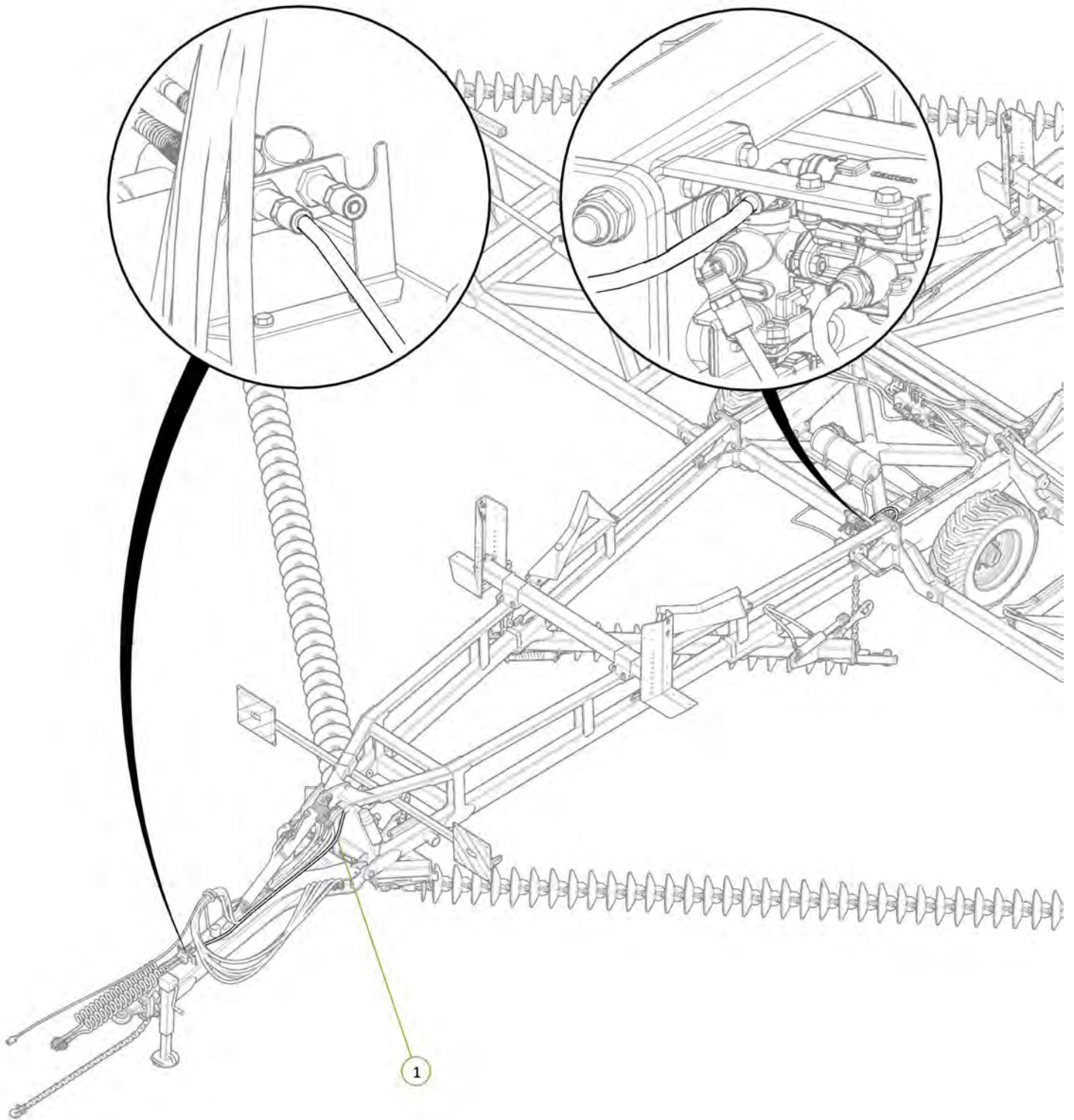
Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12

1



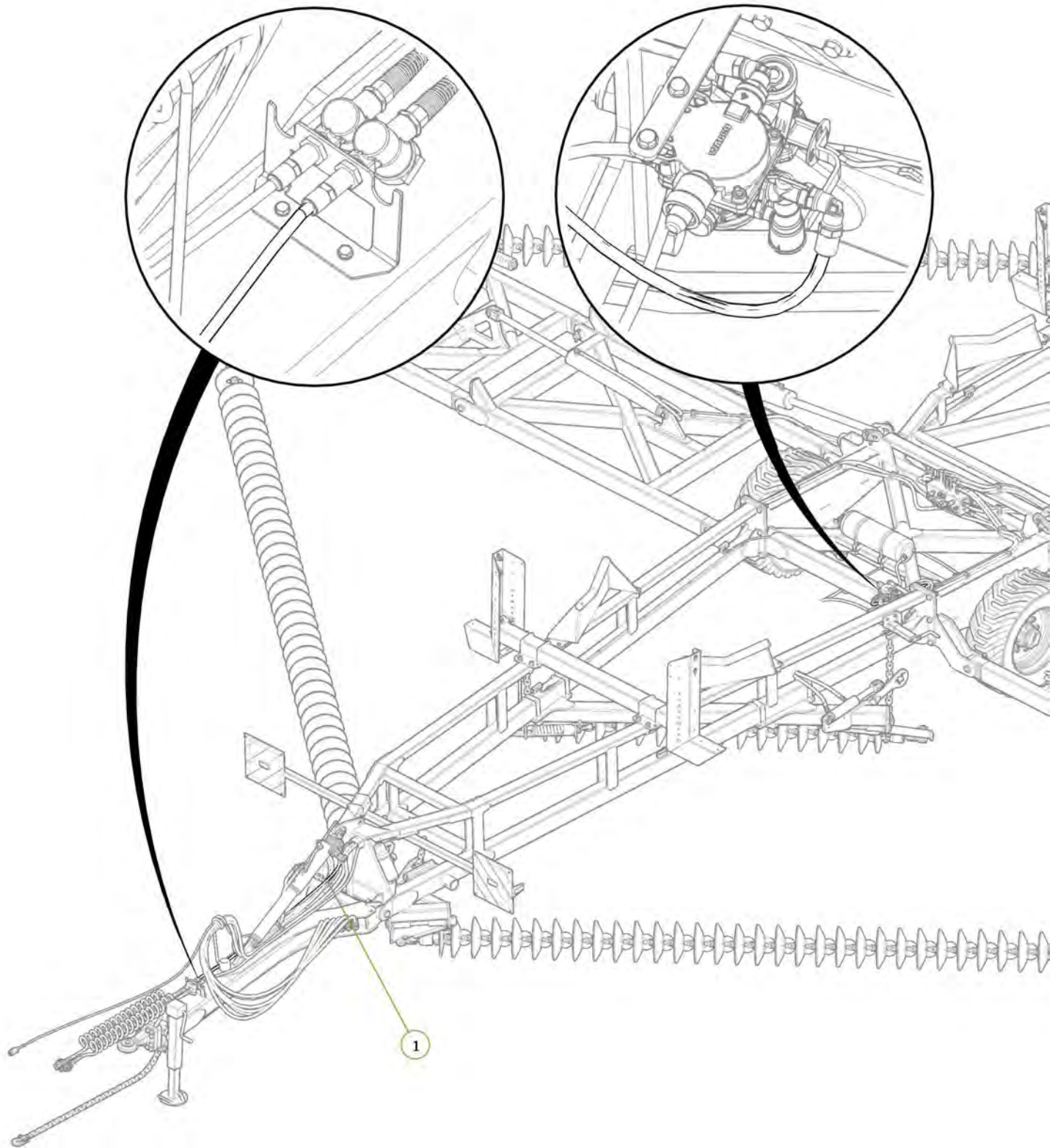
Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12



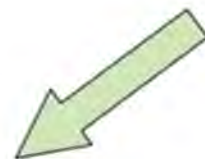


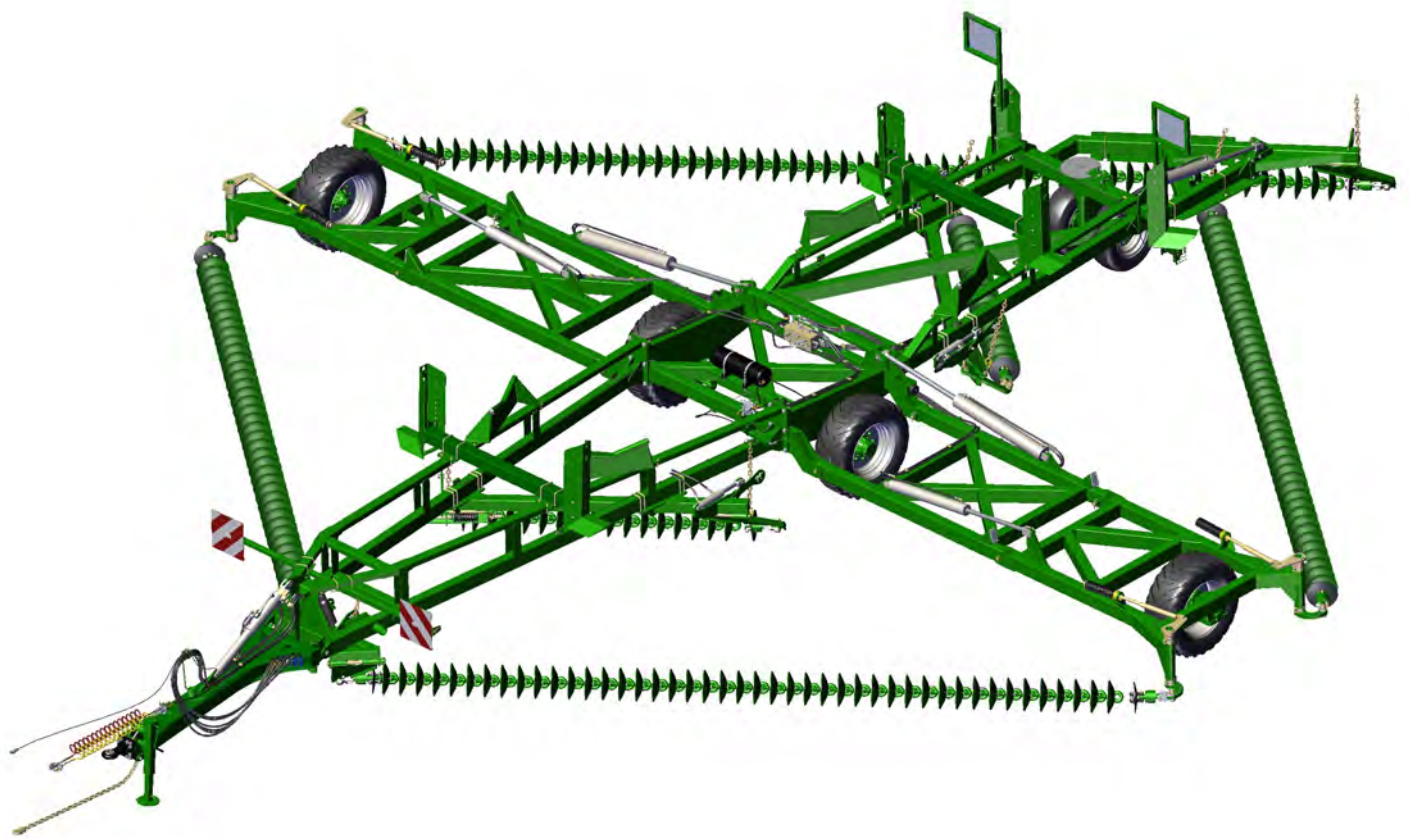
Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12





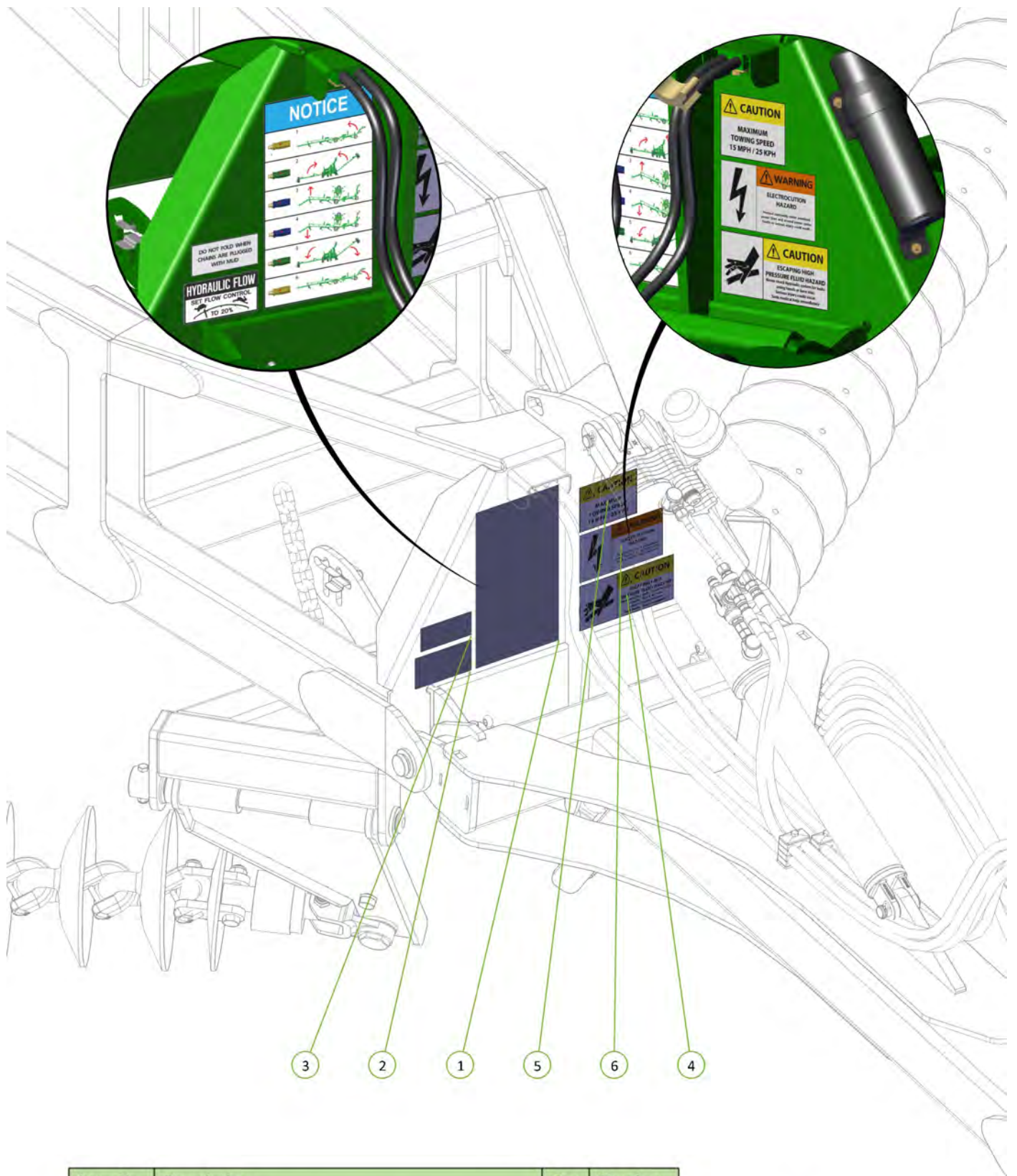
Item No.	Description	Qty	Number
1	Polyamide Air Brake Line 12mm	1	0761-TR12





Section 4

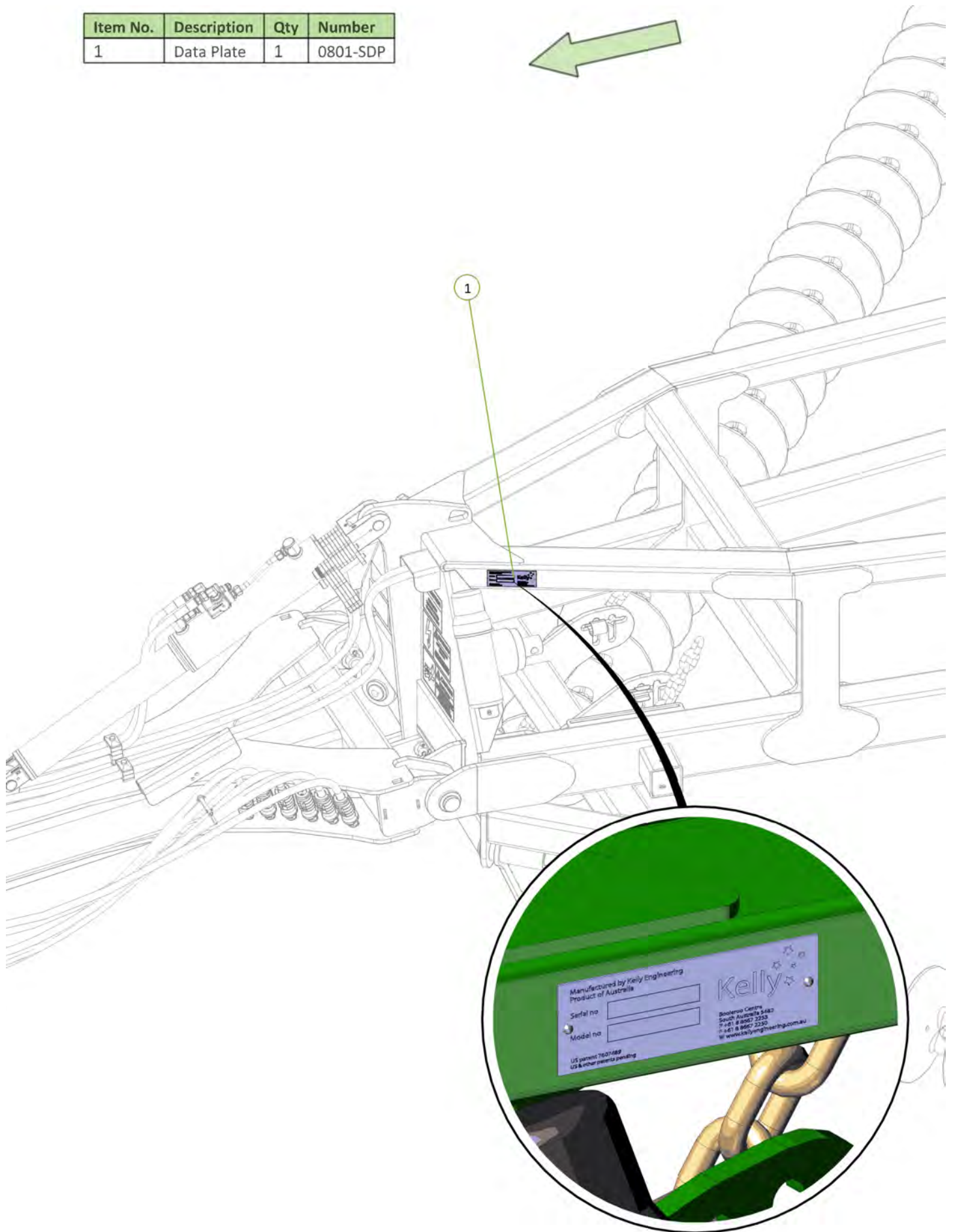
Decal Application



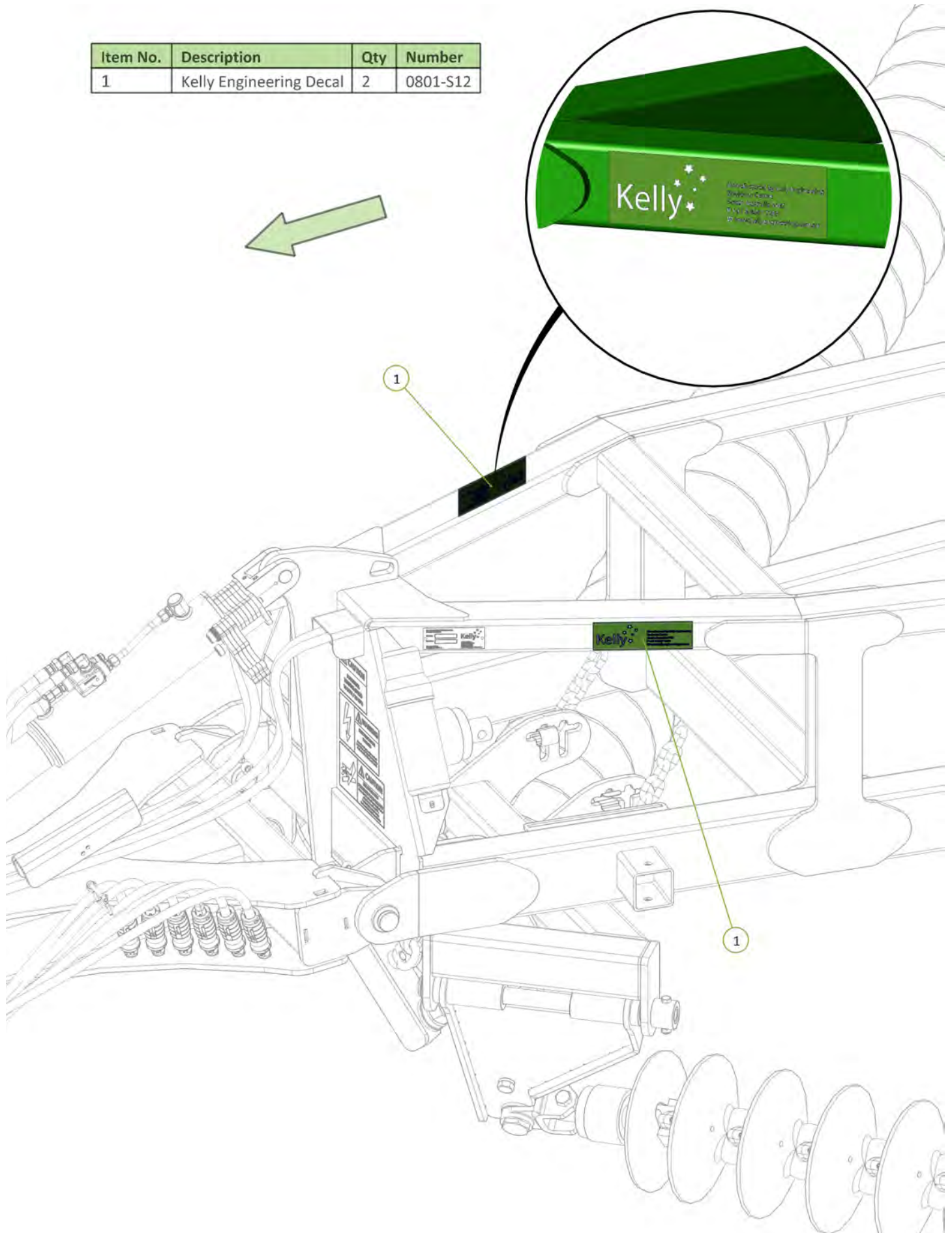
Item No.	Description	Qty	Number
1	'NOTICE' Hydra Grip Sequence Decal 200x360mm	1	0801-S20
2	Hydraulic Flow Decal	1	0801-S21
3	Mud Folding Warning Decal	1	0801-S22
4	Hydraulic Pressure Caution Decal	1	0801-S4
5	Towing Speed Decal	1	0801-S5
6	Electrocution Hazard Decal	1	0801-S6

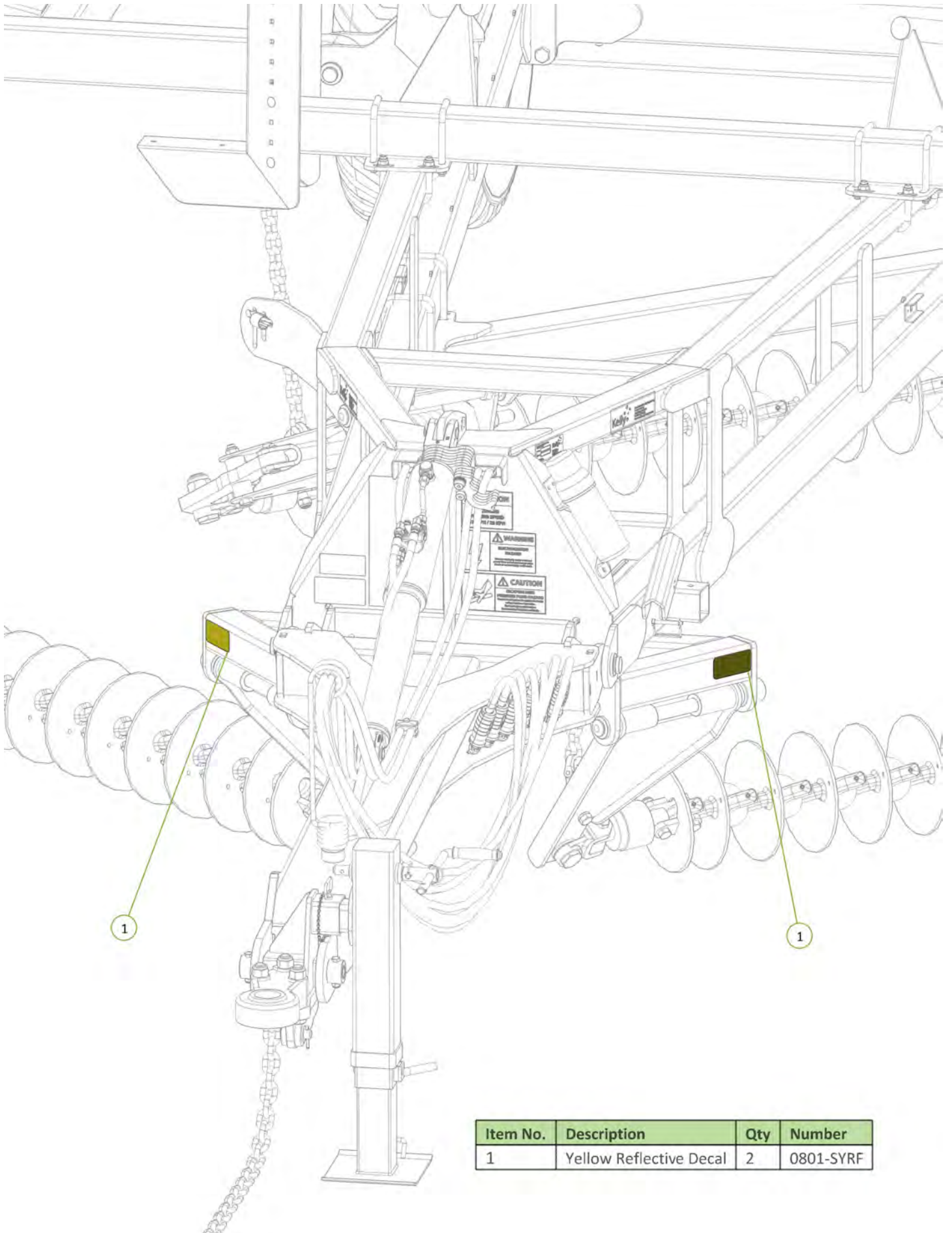


Item No.	Description	Qty	Number
1	Data Plate	1	0801-SDP

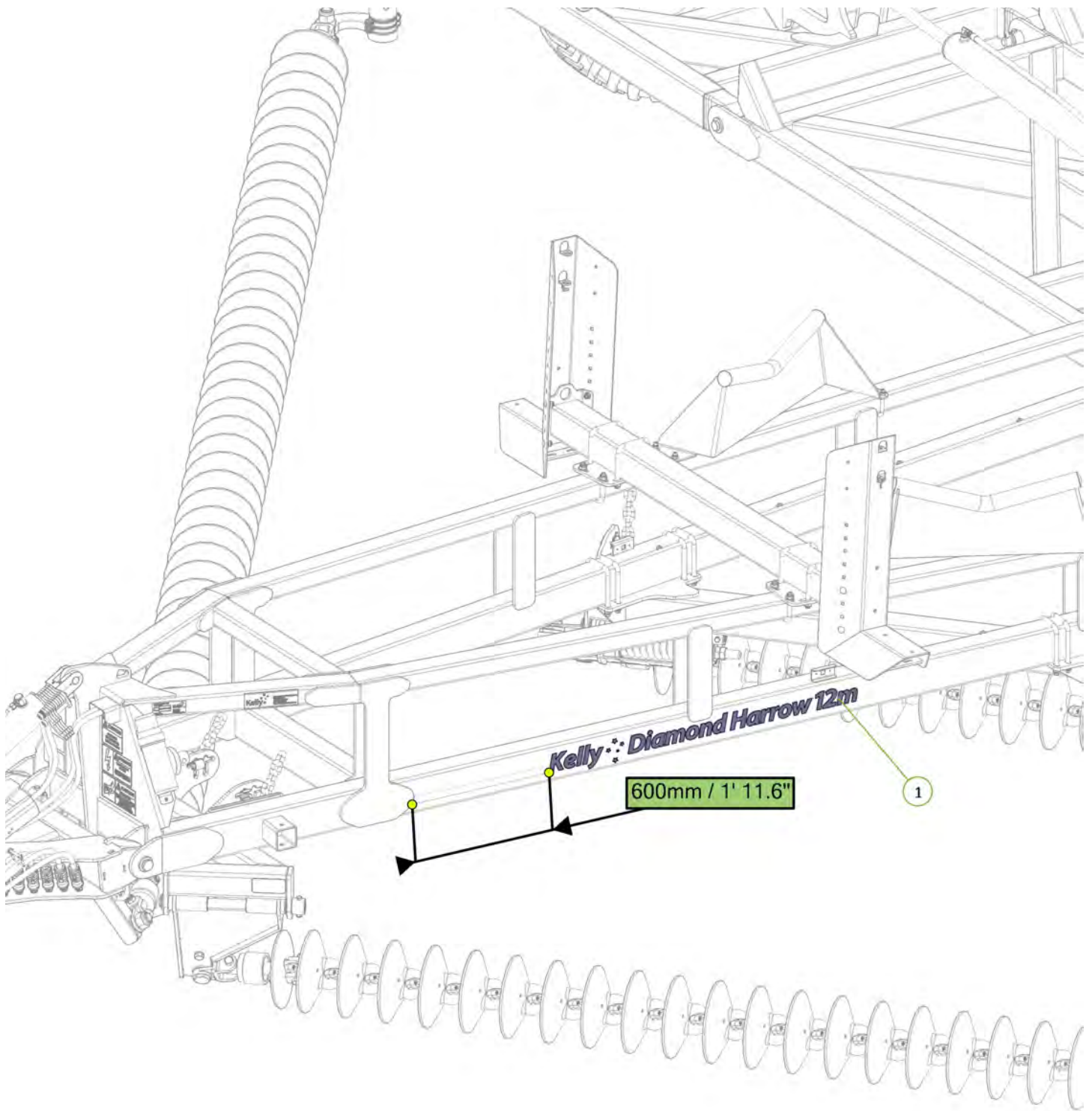


Item No.	Description	Qty	Number
1	Kelly Engineering Decal	2	0801-S12



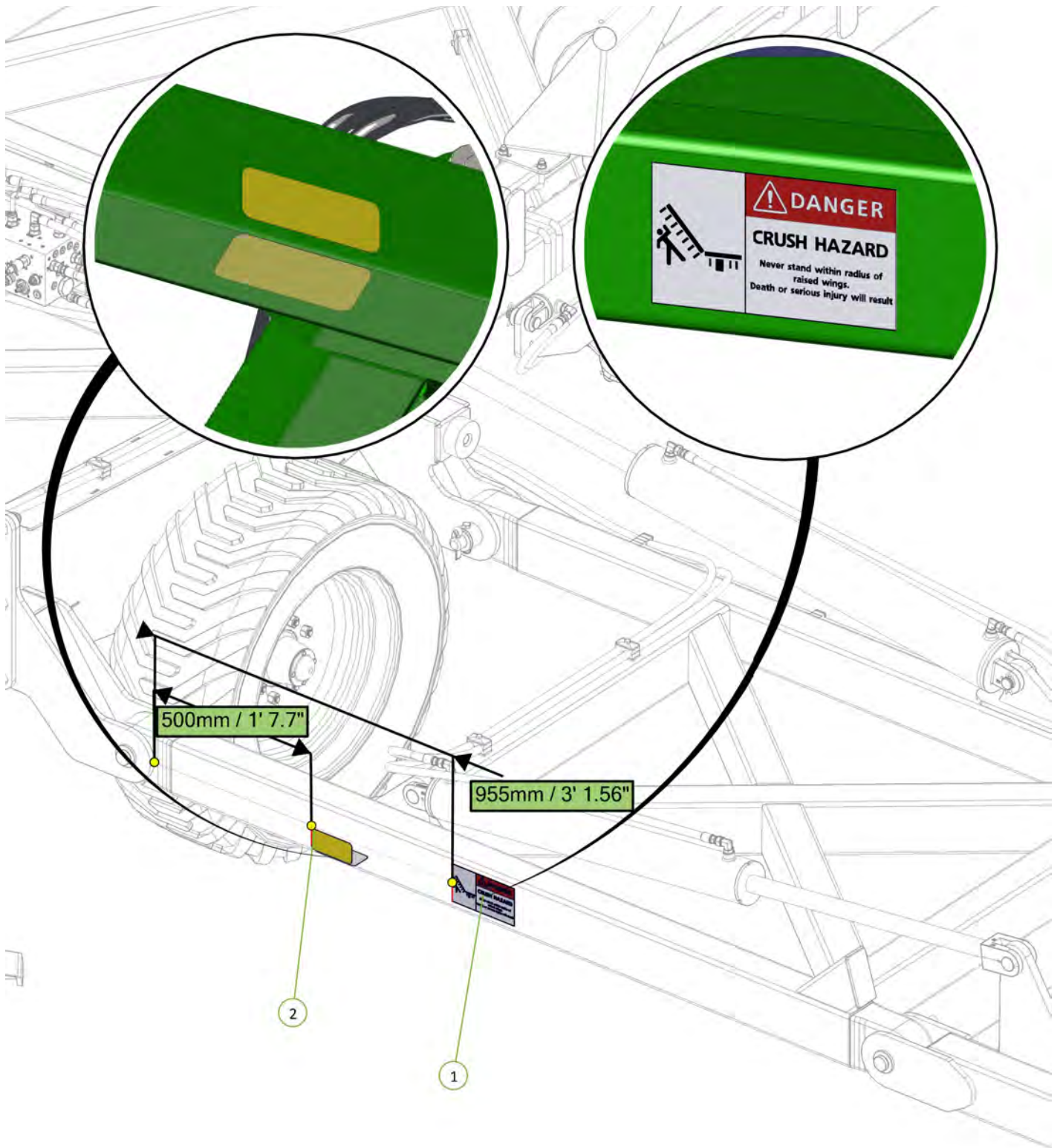


Item No.	Description	Qty	Number
1	Yellow Reflective Decal	2	0801-SYRF



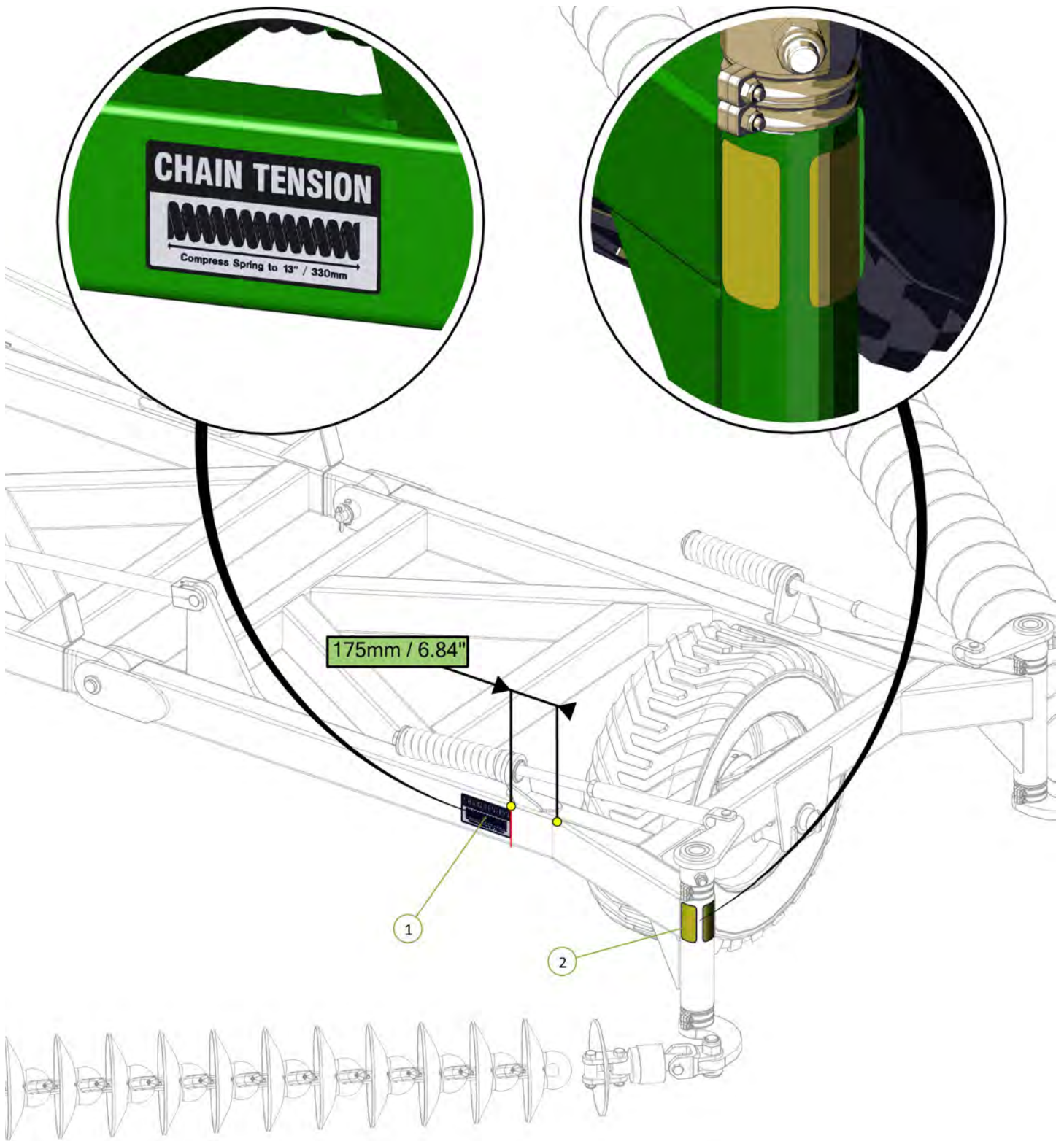
Item No.	Description	Qty	Number
1	Diamond Harrow 12m Decal	1	0801-SKDH12





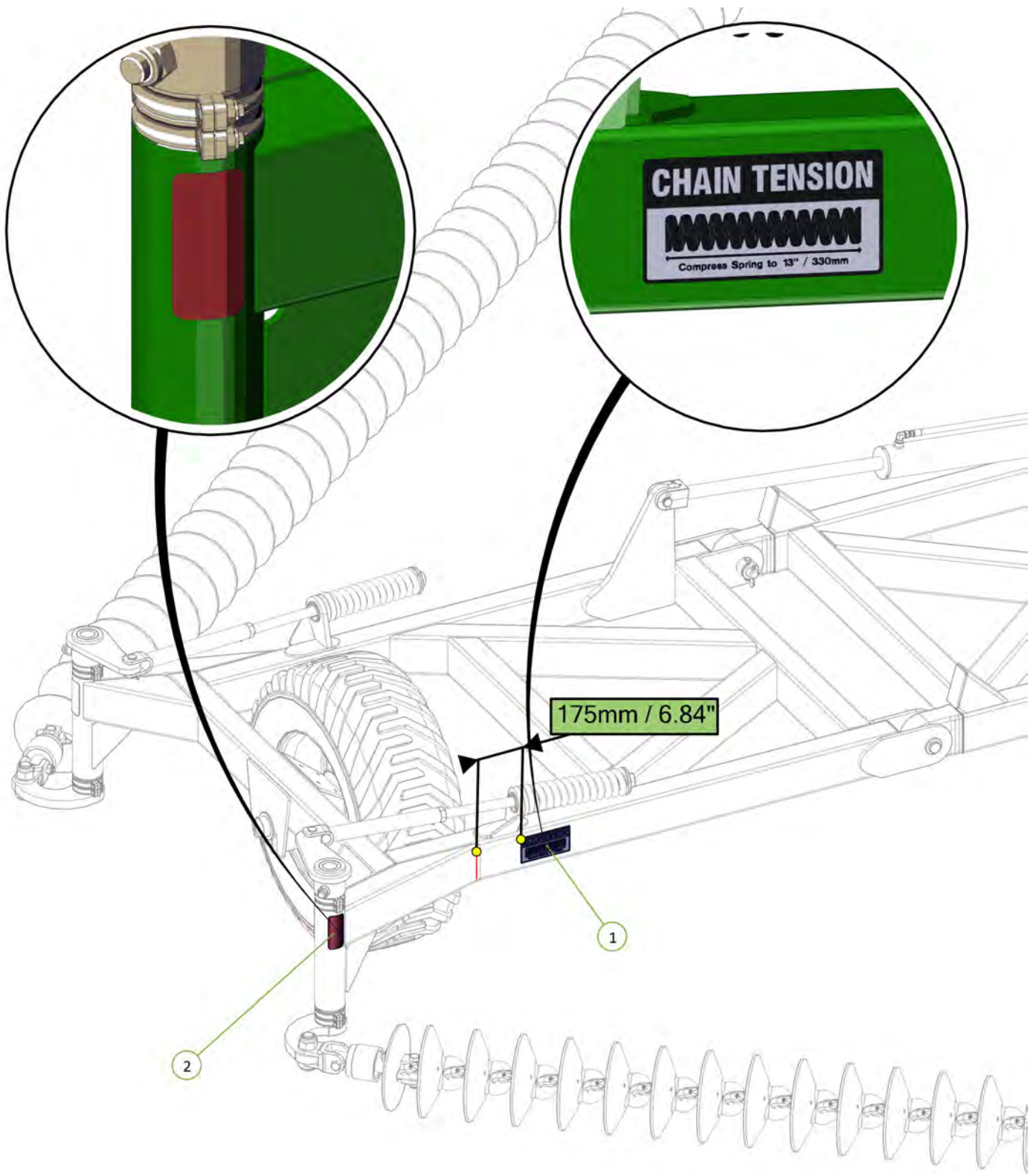
Item No.	Description	Qty	Number
1	Danger Crush Hazard Decal	1	0801-S3
2	Yellow Reflective Decal	2	0801-SYRF





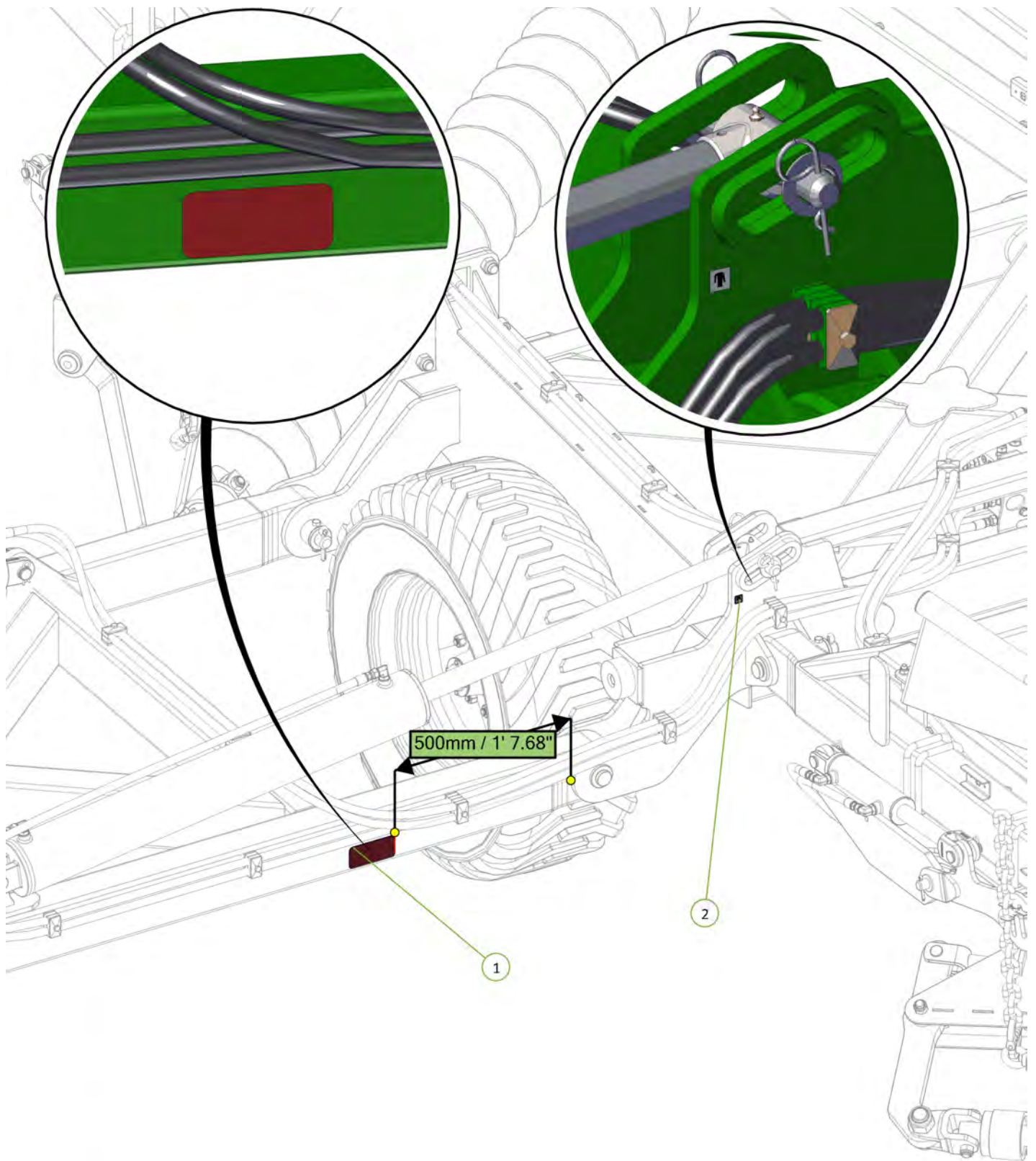
Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Yellow Reflective Decal	2	0801-SYRF



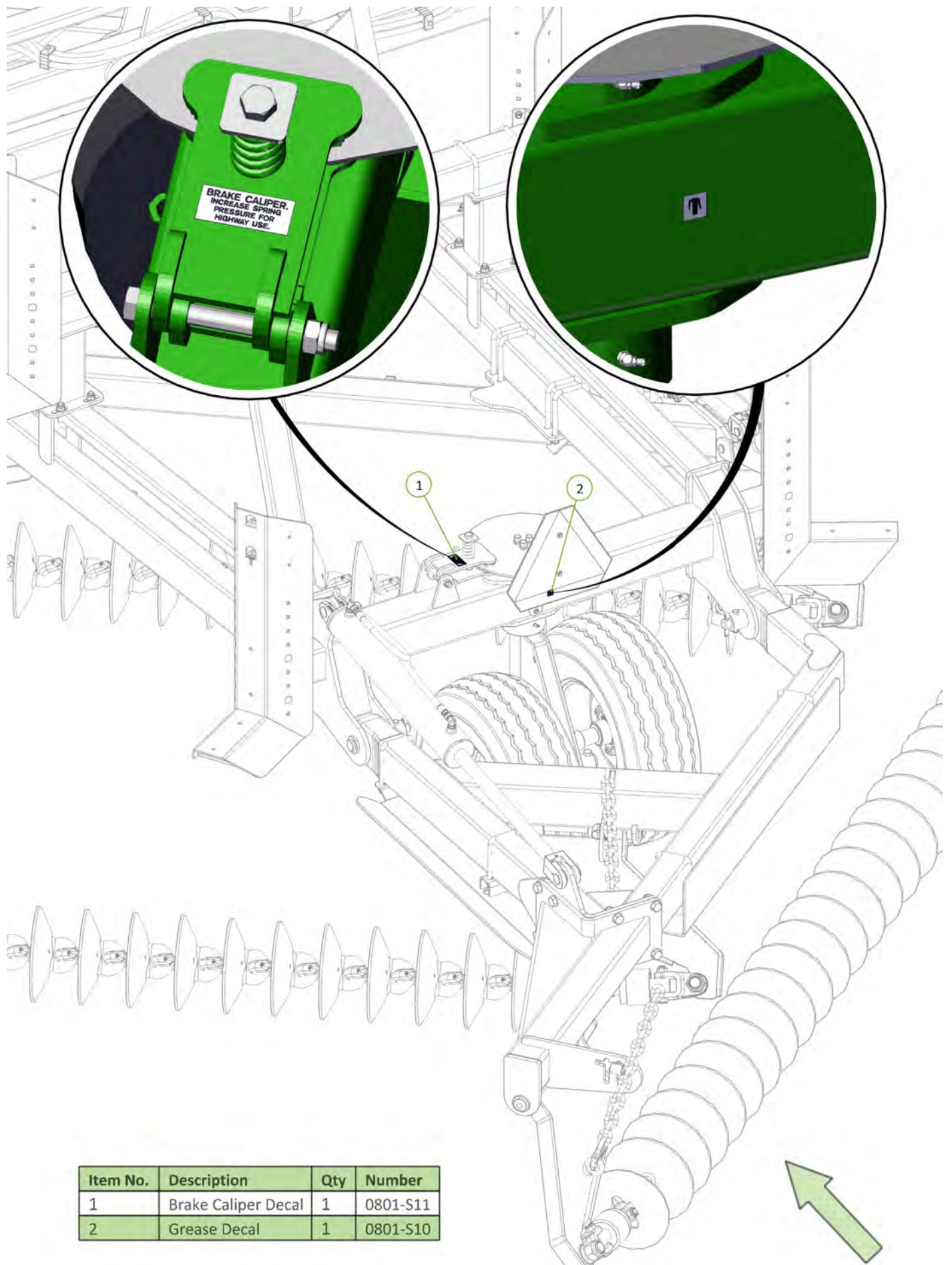


Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Red Reflective Decal	1	0801-SRRF



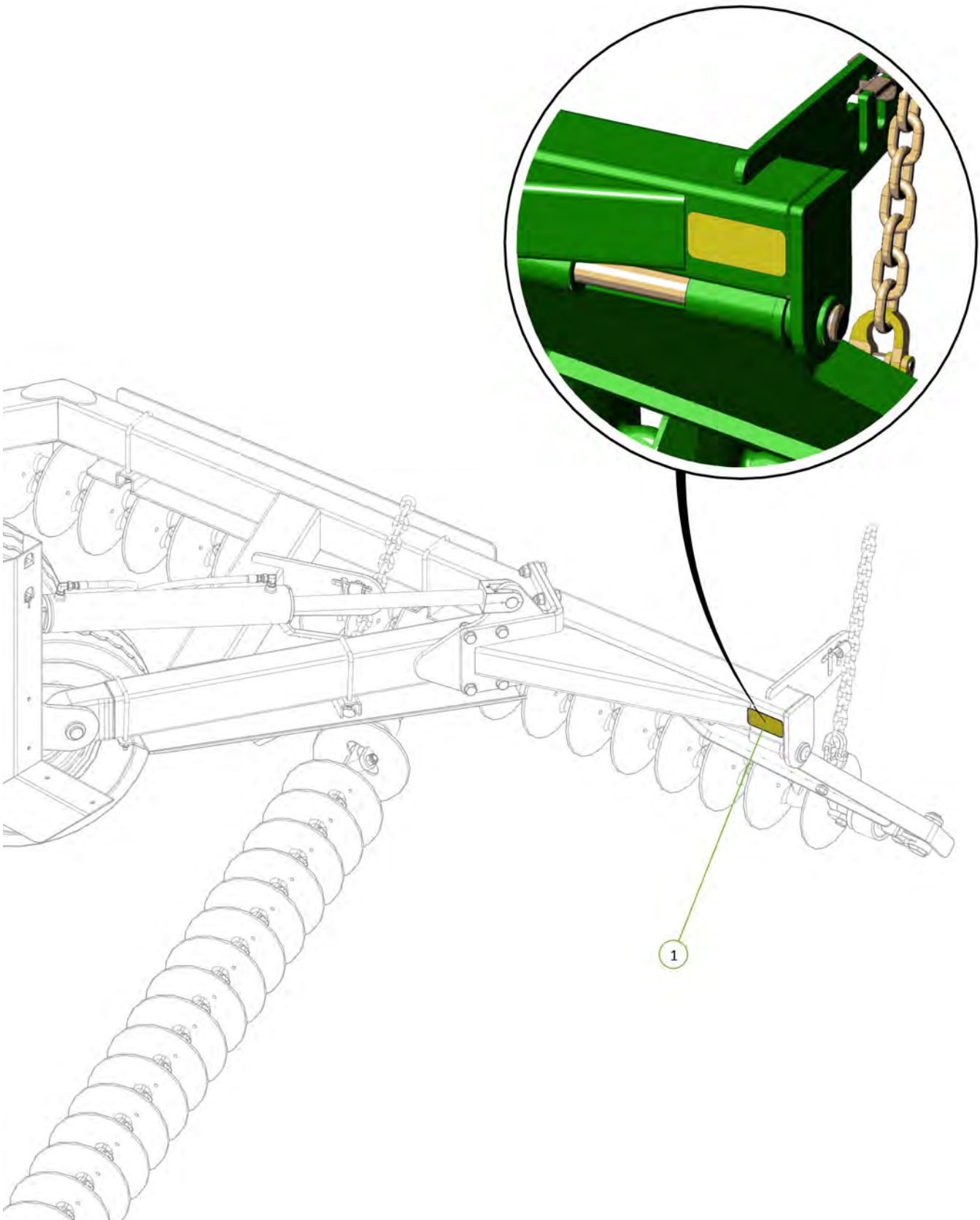


Item No.	Description	Qty	Number
1	Red Reflective Decal	1	0801-SRRF
2	Grease Decal	1	0801-S10

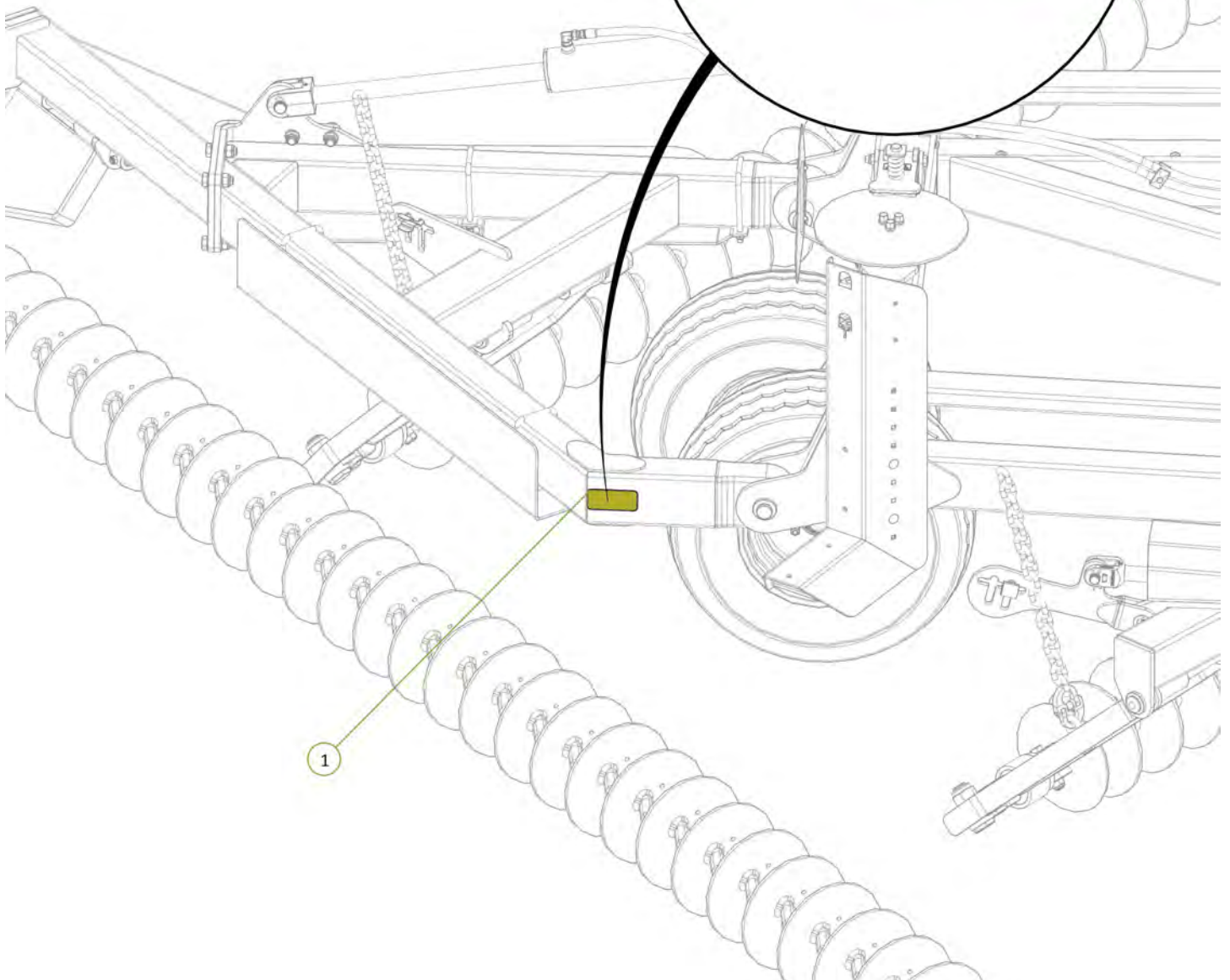
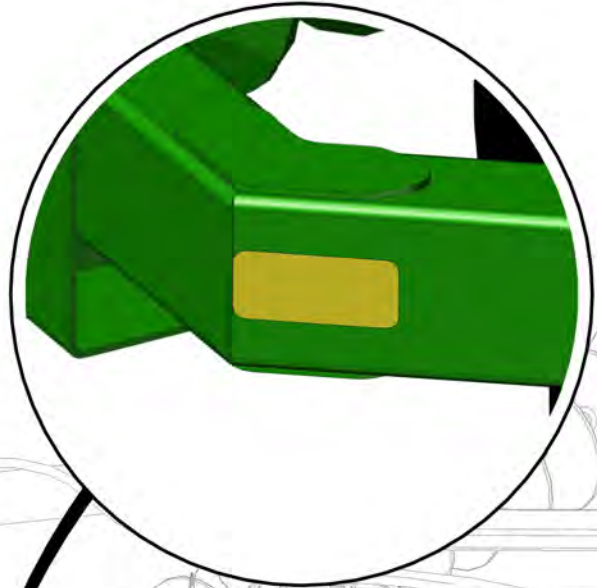


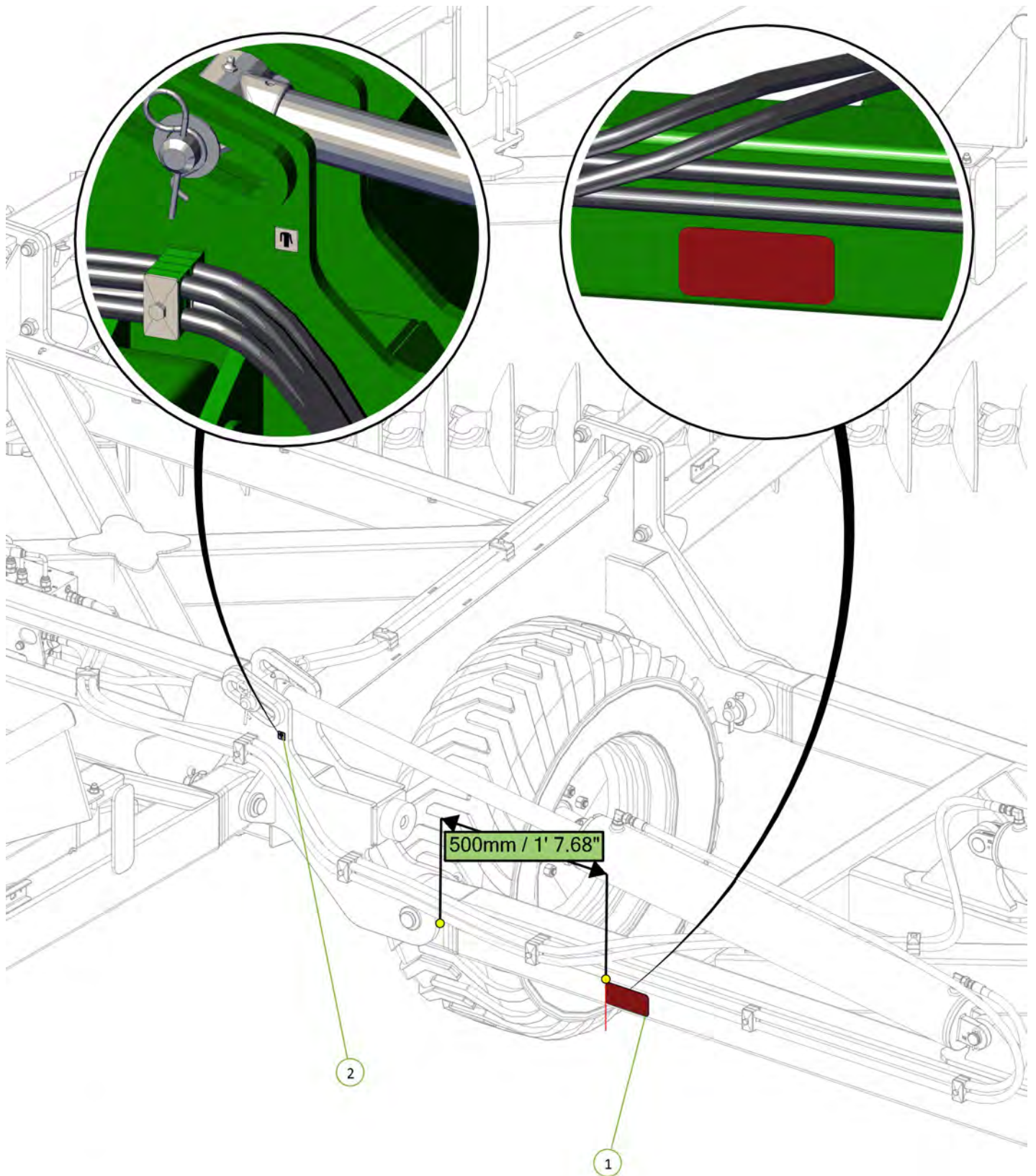
Item No.	Description	Qty	Number
1	Brake Caliper Decal	1	0801-S11
2	Grease Decal	1	0801-S10

Item No.	Description	Qty	Number
1	Yellow Reflective Decal	1	0801-SYRF



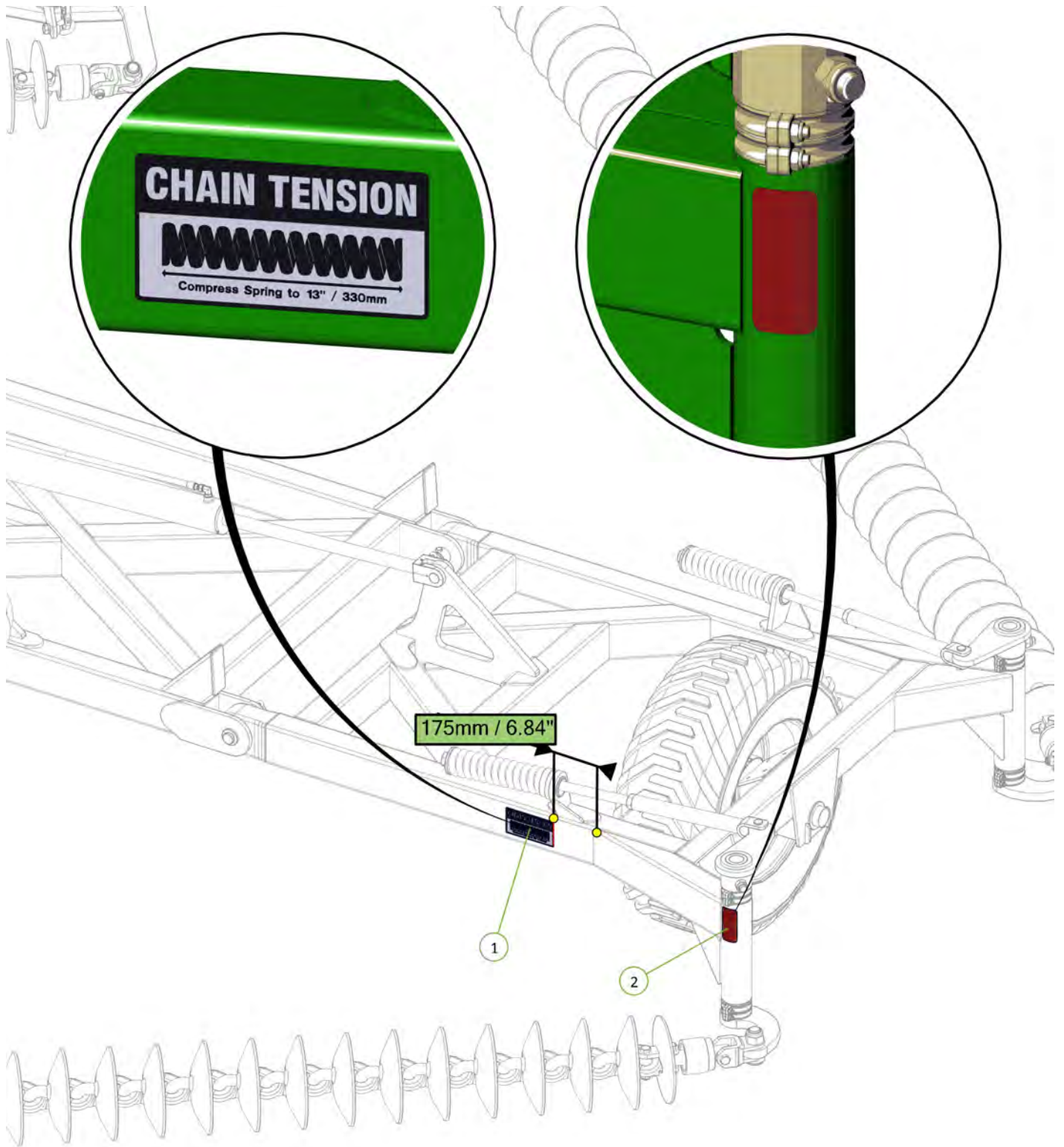
Item No.	Description	Qty	Number
1	Yellow Reflective Decal	1	0801-SYRF





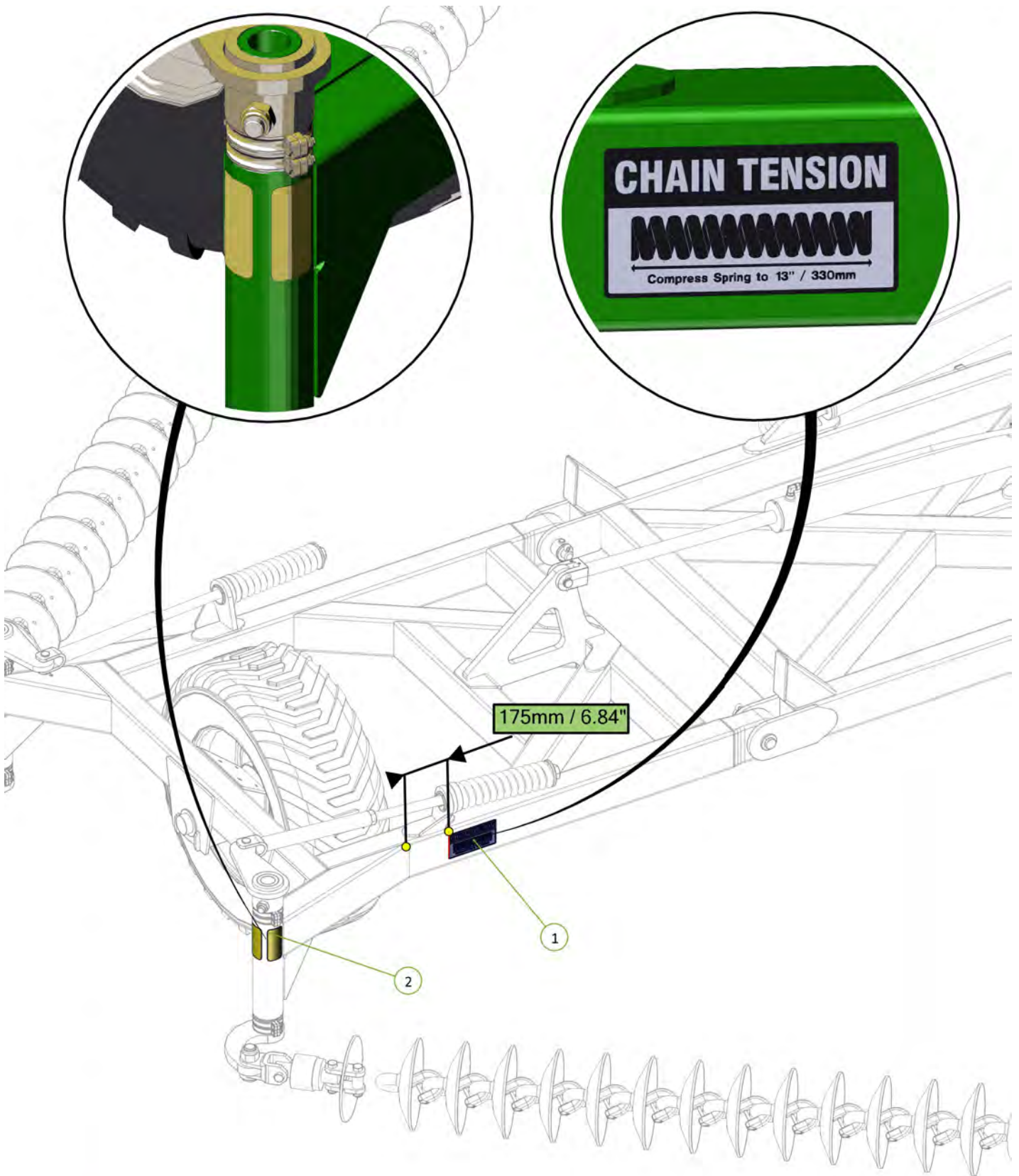
Item No.	Description	Qty	Number
1	Red Reflective Decal	1	0801-SRRF
2	Grease Decal	1	0801-S10





Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Red Reflective Decal	1	0801-SRRF





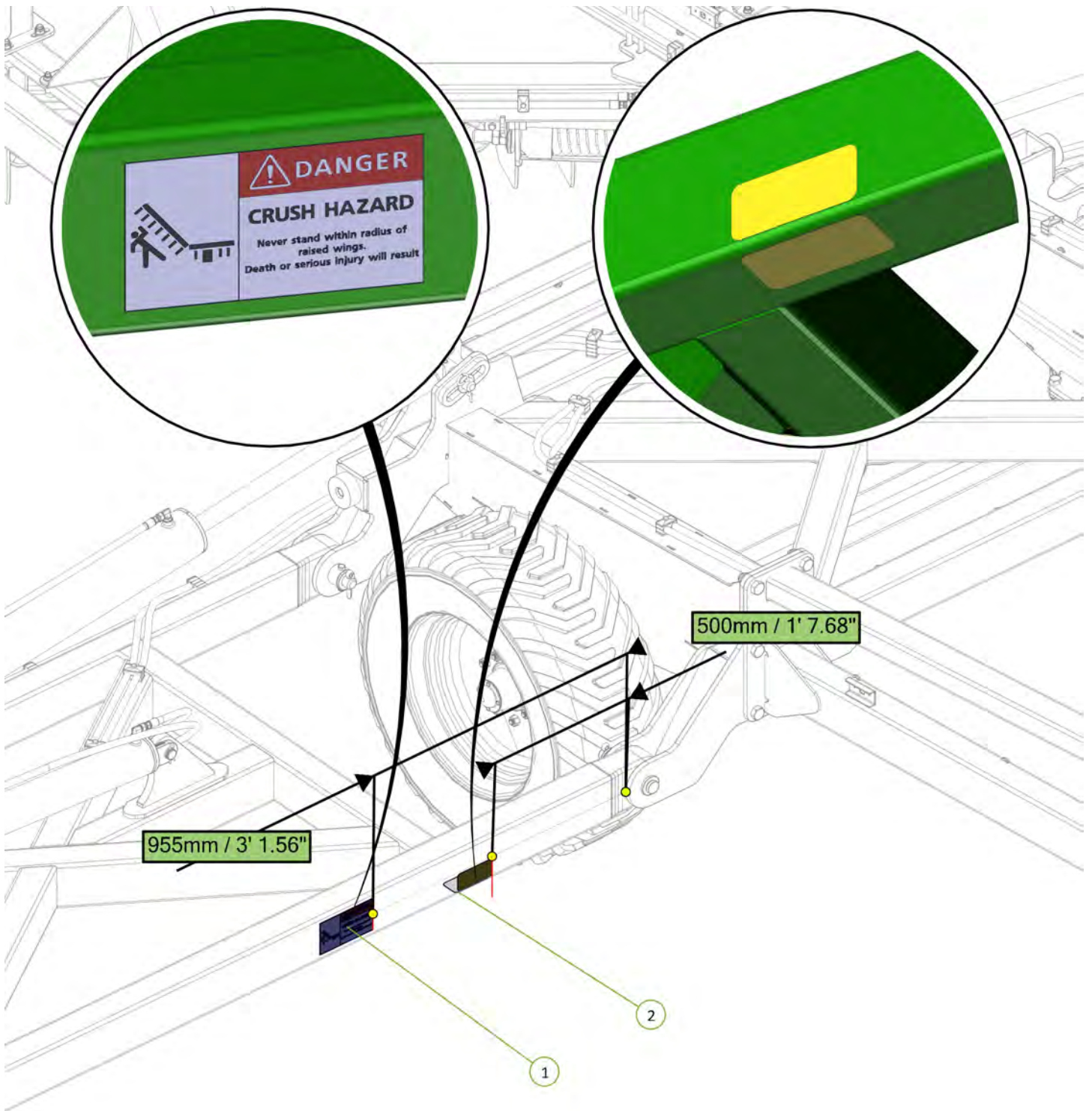
175mm / 6.84"

1

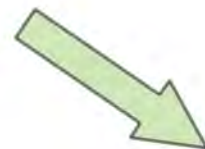
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Item No.	Description	Qty	Number
1	Chain Tension 330mm Decal	1	0801-S15
2	Yellow Reflective Decal	2	0801-SYRF

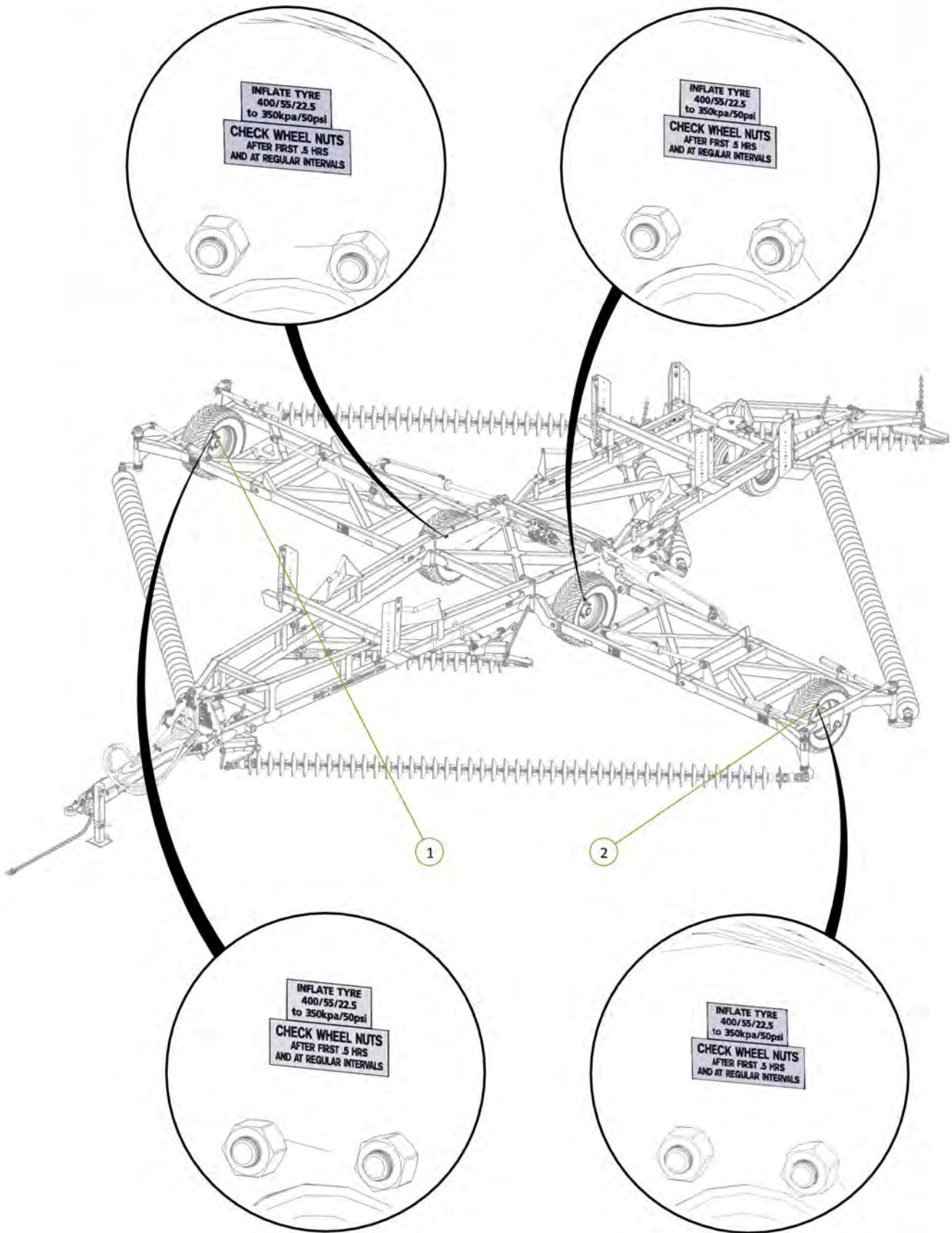




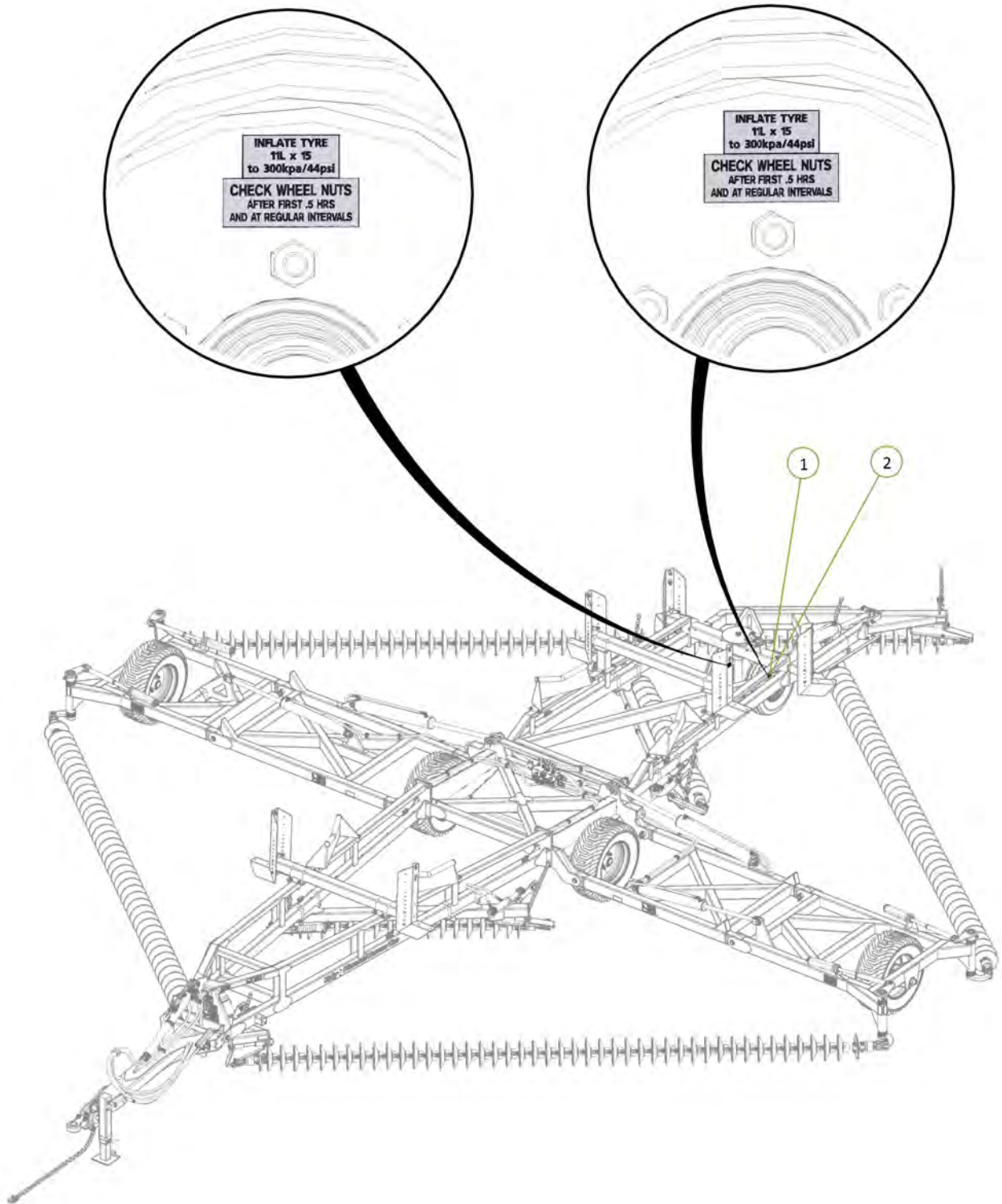
Item No.	Description	Qty	Number
1	Danger Crush Hazard Decal	1	0801-S3
2	Yellow Reflective Decal	2	0801-SYRF

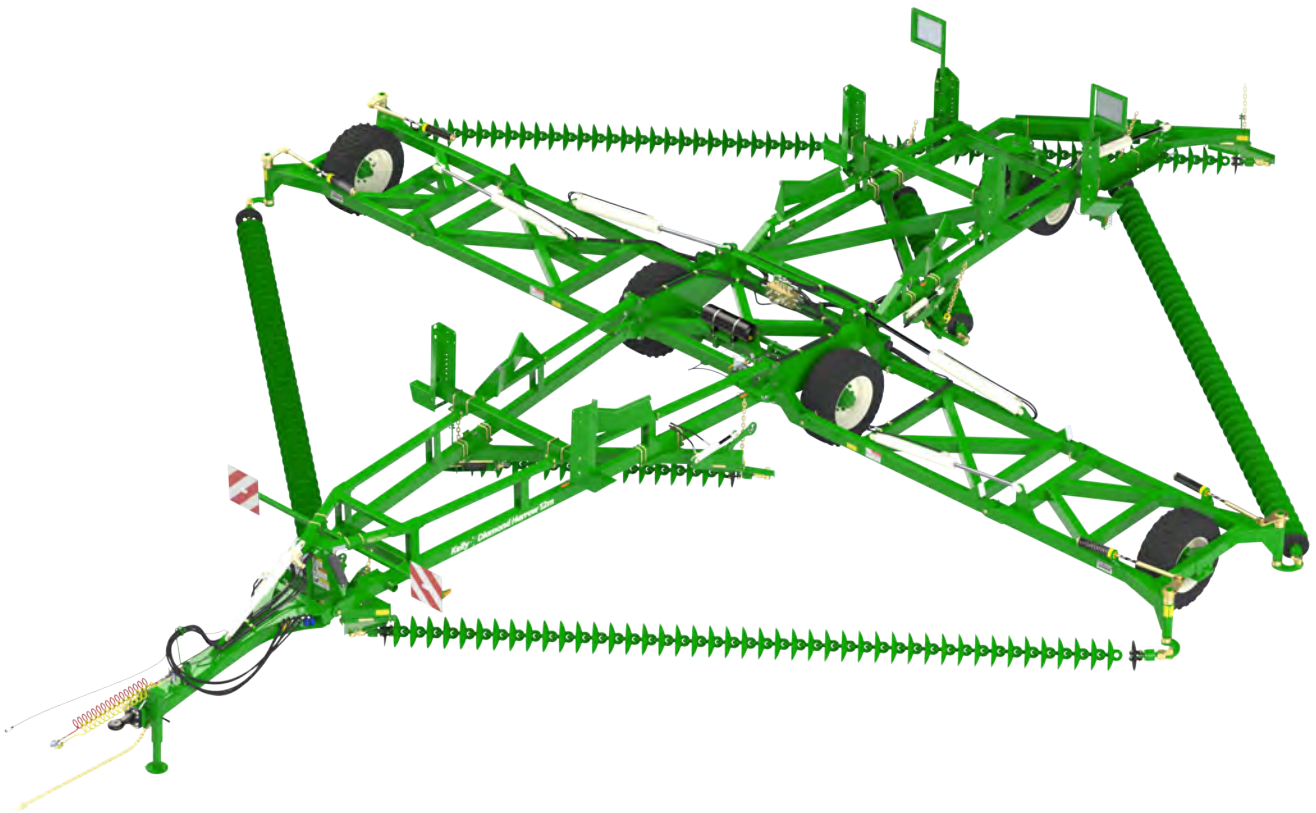


Item No.	Description	Qty	Number
1	Decal, 400/55/22.5 Tyre Inflation	4	0801-S8-400-55-22.5
2	Wheel Nut Decal	4	0801-S9



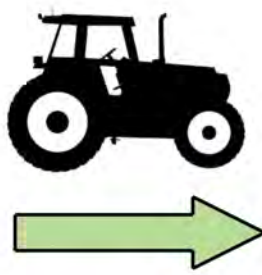
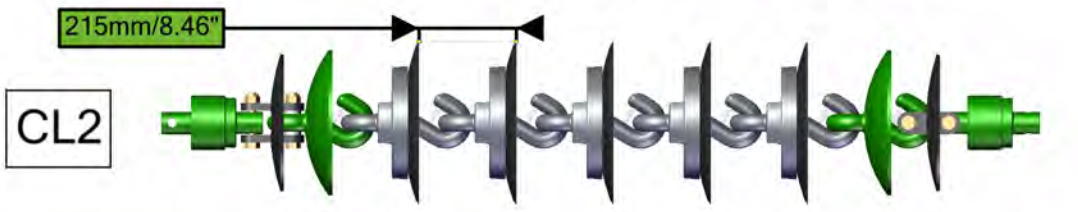
Item No.	Description	Qty	Number
1	Decal, 11L-15 Tyre Inflation	2	0801-S8-11L-15
2	Wheel Nut Decal	2	0801-S9





Section 5

Chain Assembly

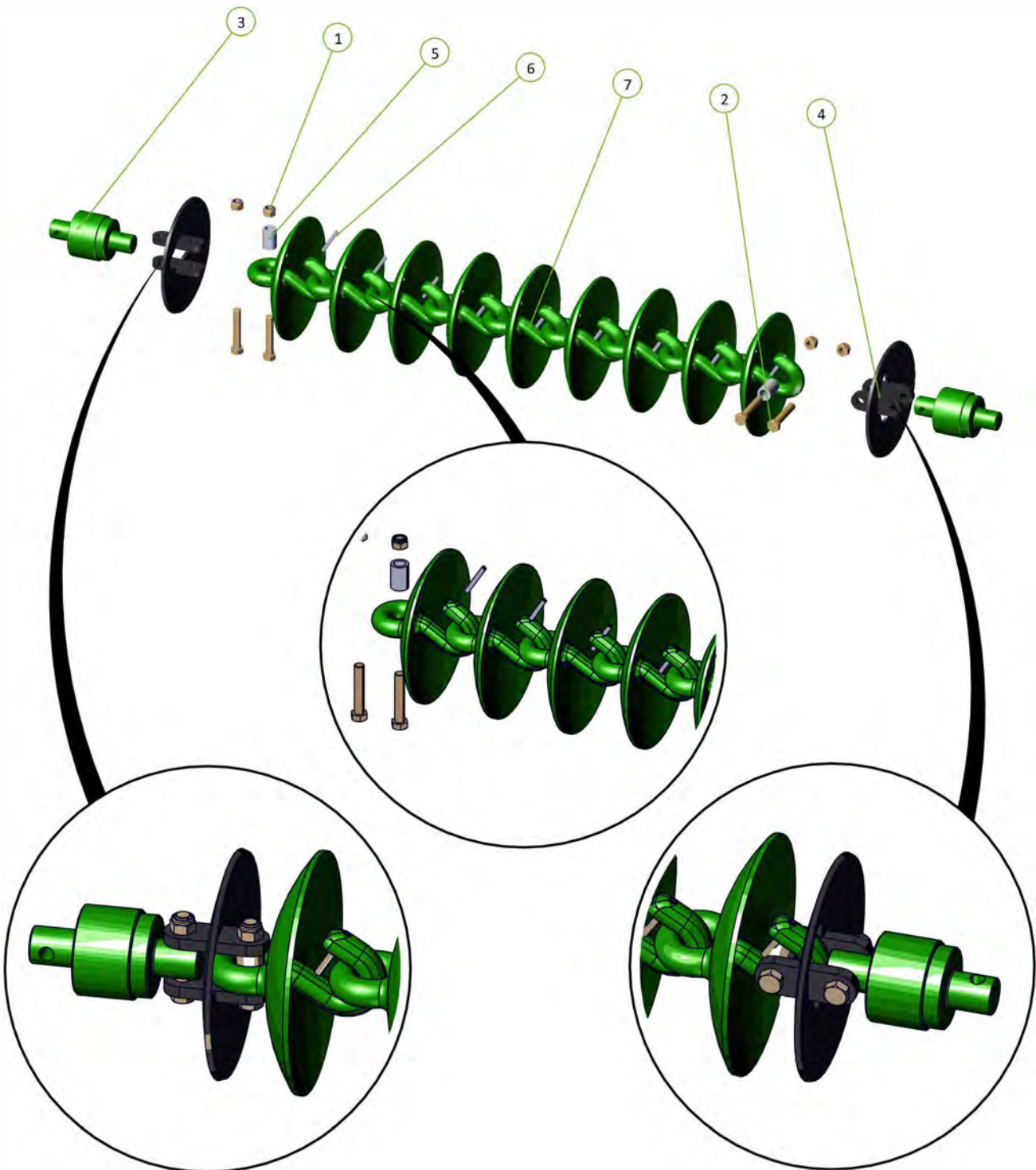


Item No.	Description	Qty	Number
1	Nyloc Nut M20	4	0221-NYL20
2	M20 x 110 grade 10.9 ZP Short Thread Bolt	4	0211-20110ST
3	20mm Bolt Swivel Unit	2	0802-PCHB55
4	Tie Plate Link 20mm	2	0802-DCTP-20
5	Disc Chain Spacer	2	0801-PCDCS55
6	Roll Pin Zinc Plated 3/8" x 3"	1	0262-3-8X3
7	CL1-B Chain Disc Link	1	0803-CL1



For correct chain tension, chain links may need to be removed from the end of the chain as follows:

CL1 Disc Chain - unhook disc chain link/s from end of the disc chain

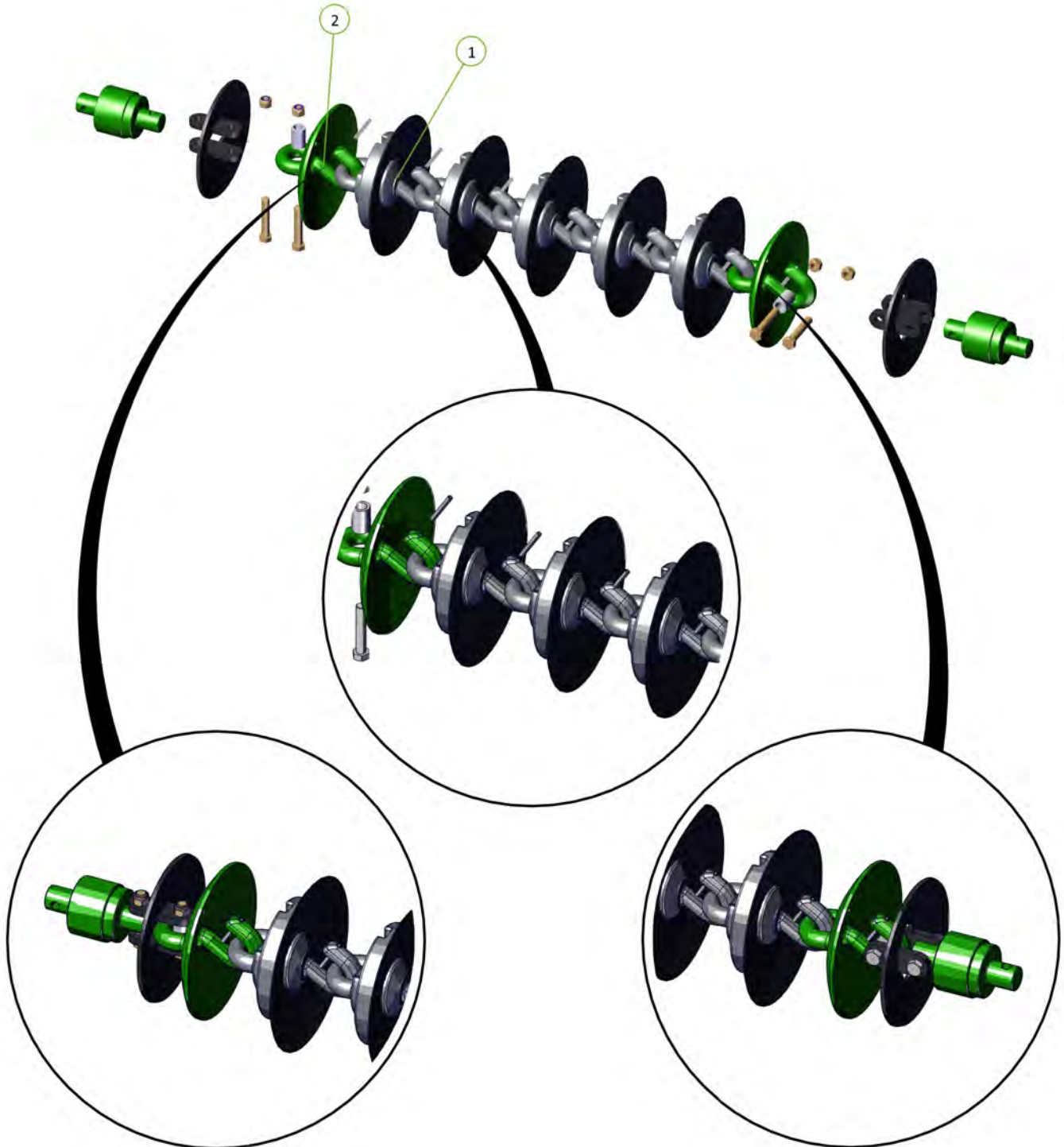


Item No.	Description	Qty	Number
1	0803-CL2-Link Assembly	1	0803-CL2
2	CL1-B Chain Disc Link	1	0803-CL1



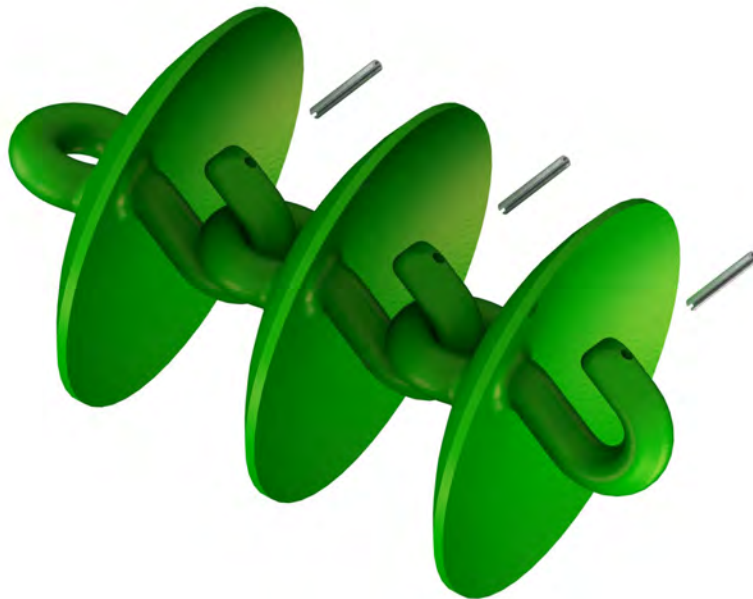
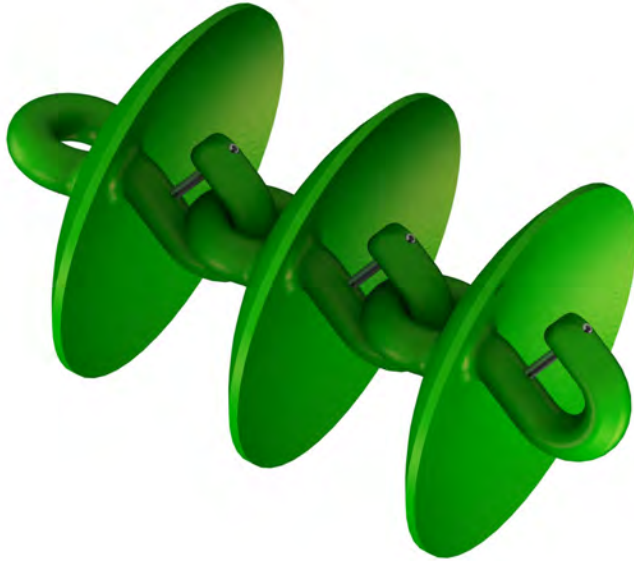
For correct chain tension, chain links may need to be removed from the end of the chain as follows:

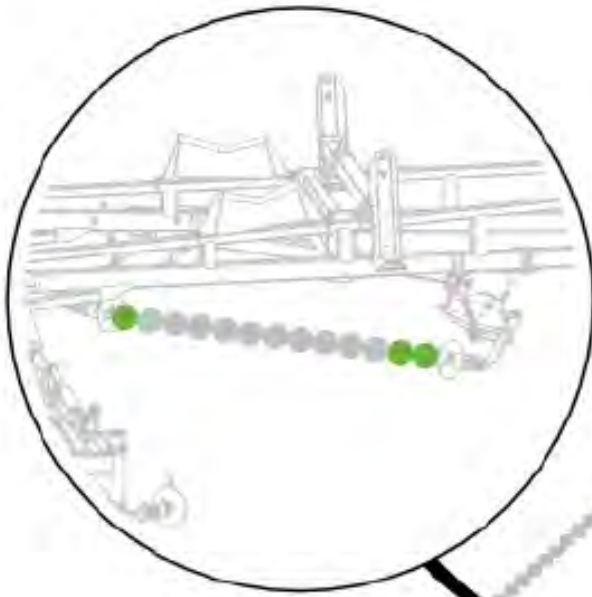
CL2 Disc Chain - unhook disc chain link/s from end of the disc chain



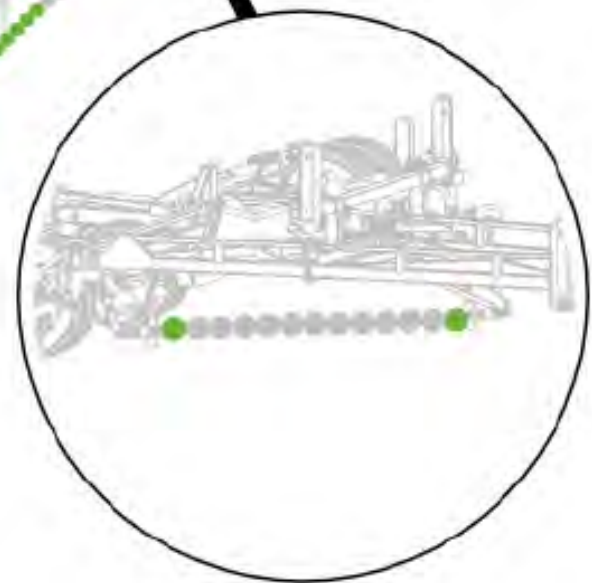
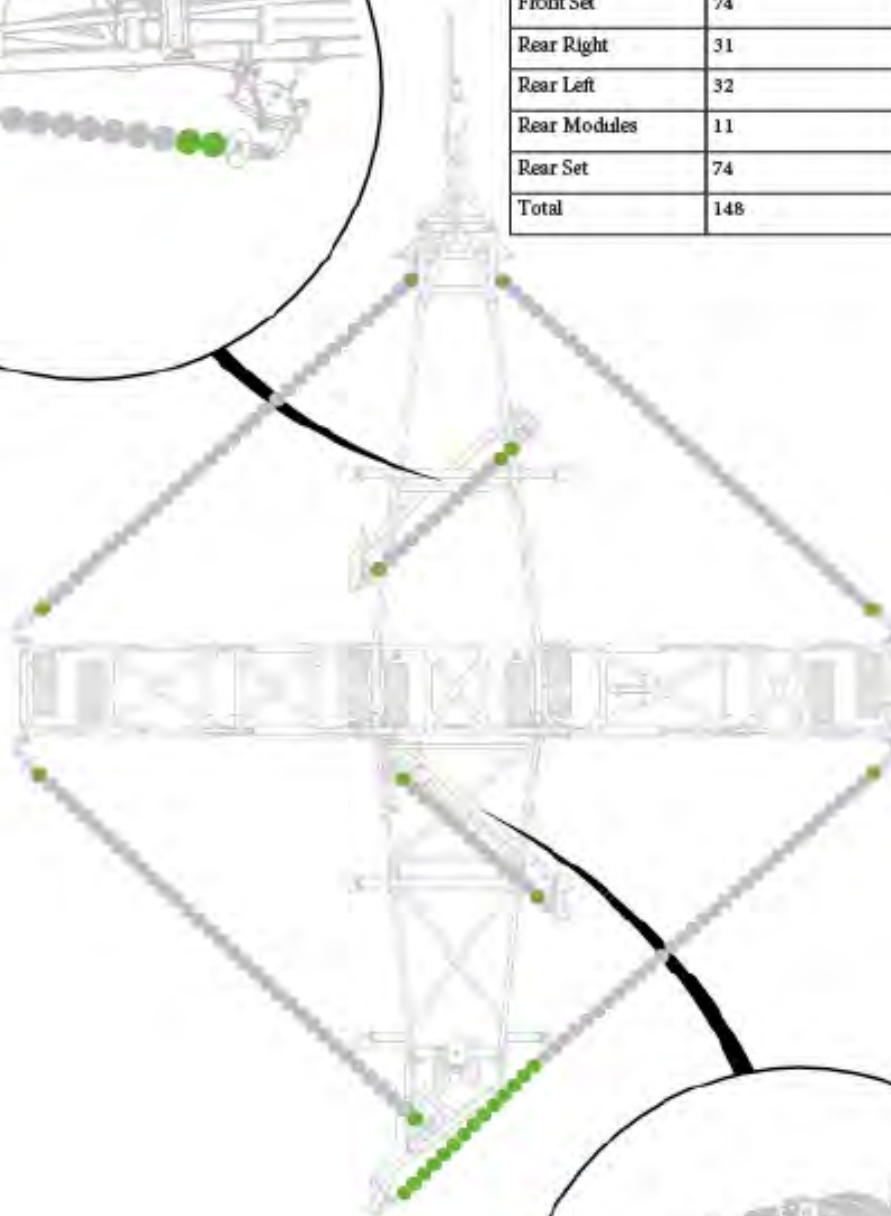
Fitting Cast Link Pins

Please install cast link retaining Pins (3/8" x 3" Roll Pin, part number 0262-3-8X3) on all cast disc links. Failure to do this could lead to the discs becoming dislodged during transport causing severe damage or injury.





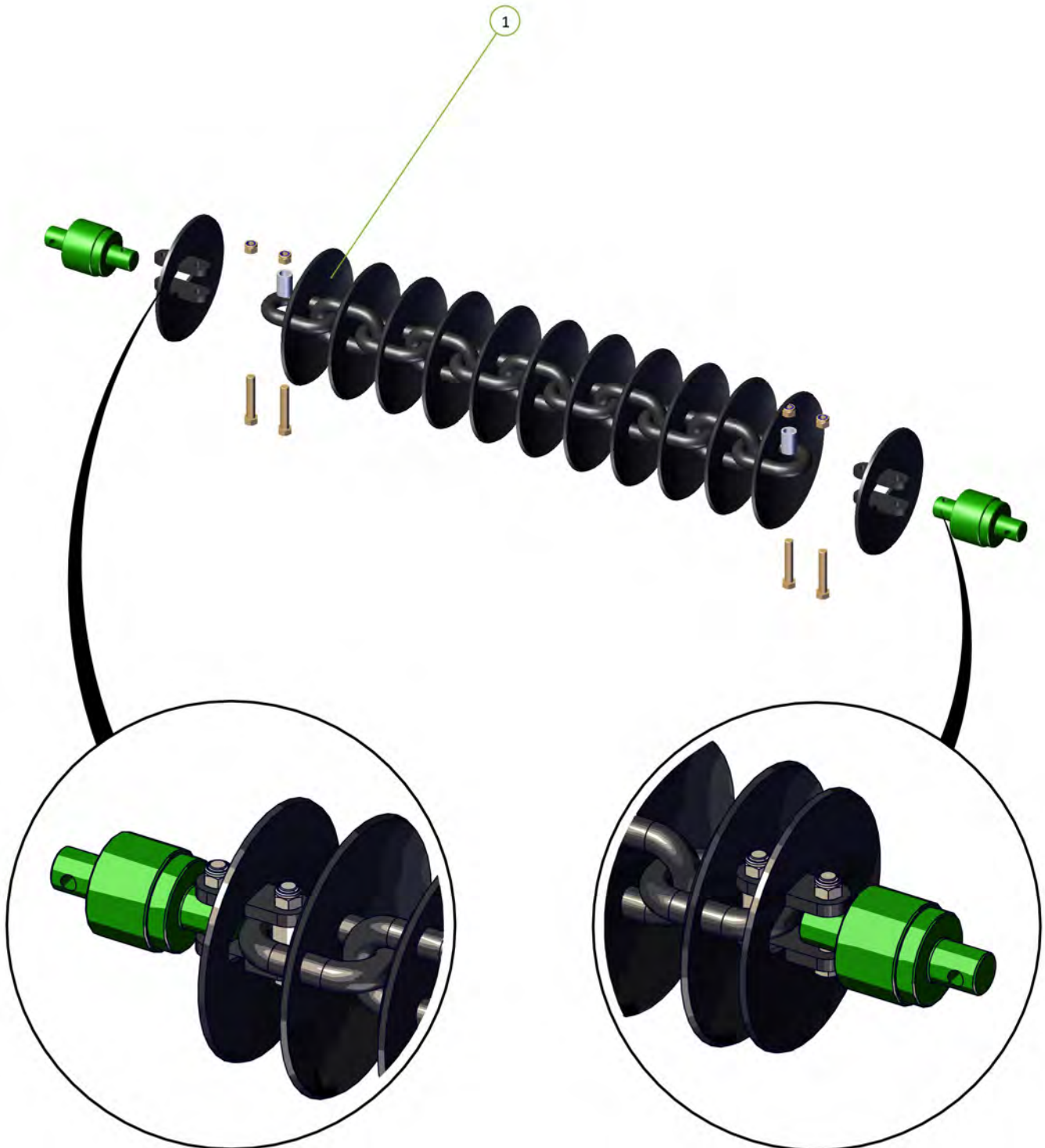
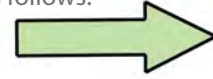
Set	CL2	CL1
Front Left	32	2
Front Right	32	2
Front Modules	10	3
Front Set	74	7
Rear Right	31	15
Rear Left	32	2
Rear Modules	11	2
Rear Set	74	19
Total	148	26



Item No.	Description	Qty	Number
1	R300 Chain Link	1	0803-R300



For correct chain tension, chain links may need to be removed from the end of the chain as follows:
 R300 Disc Chain - cut a disc chain link from the end of the disc chain

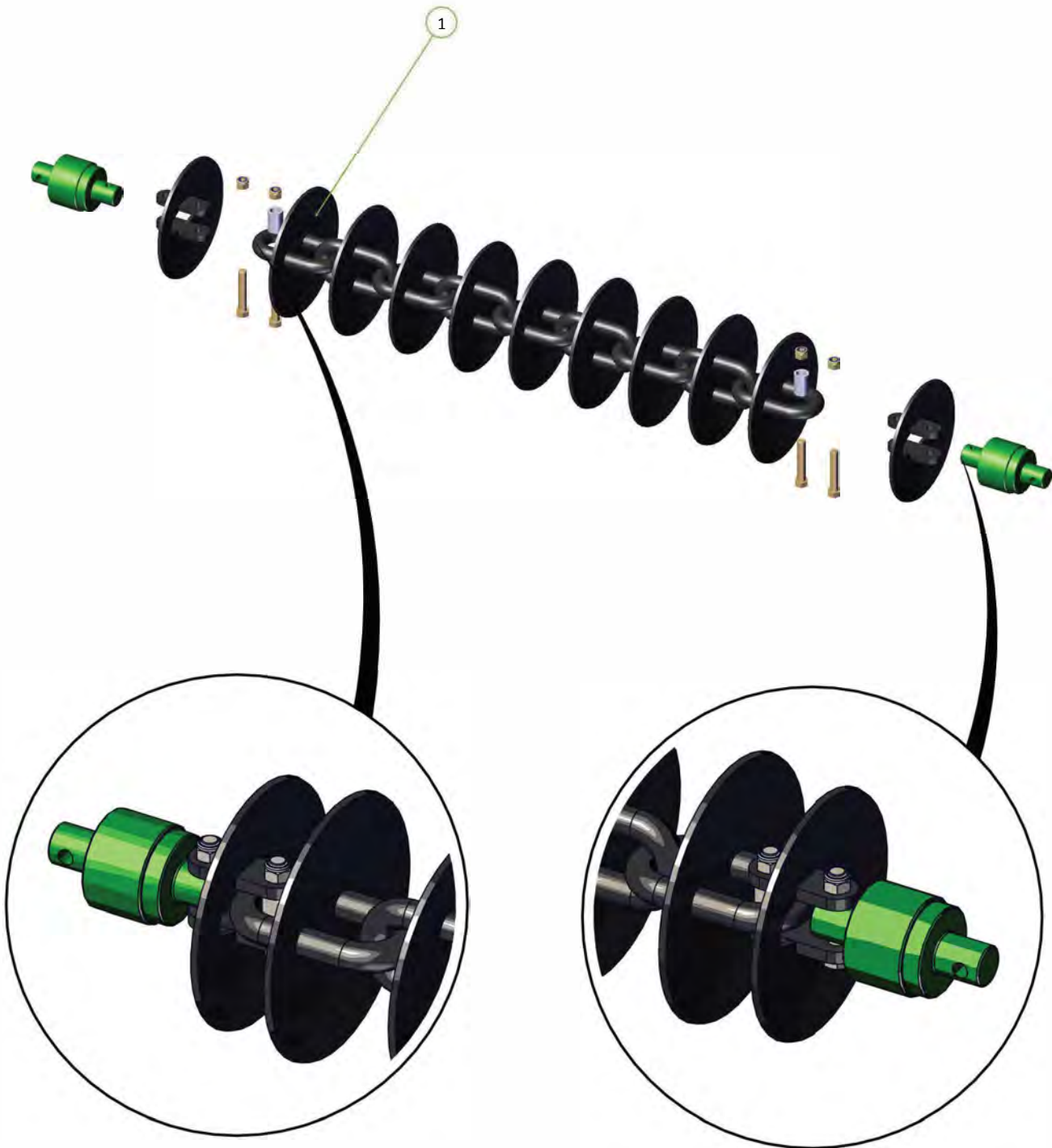


Item No.	Description	Qty	Number
1	36mm Welded Disc Chain	1	0803-W36



For correct chain tension, chain links may need to be removed from the end of the chain as follows:

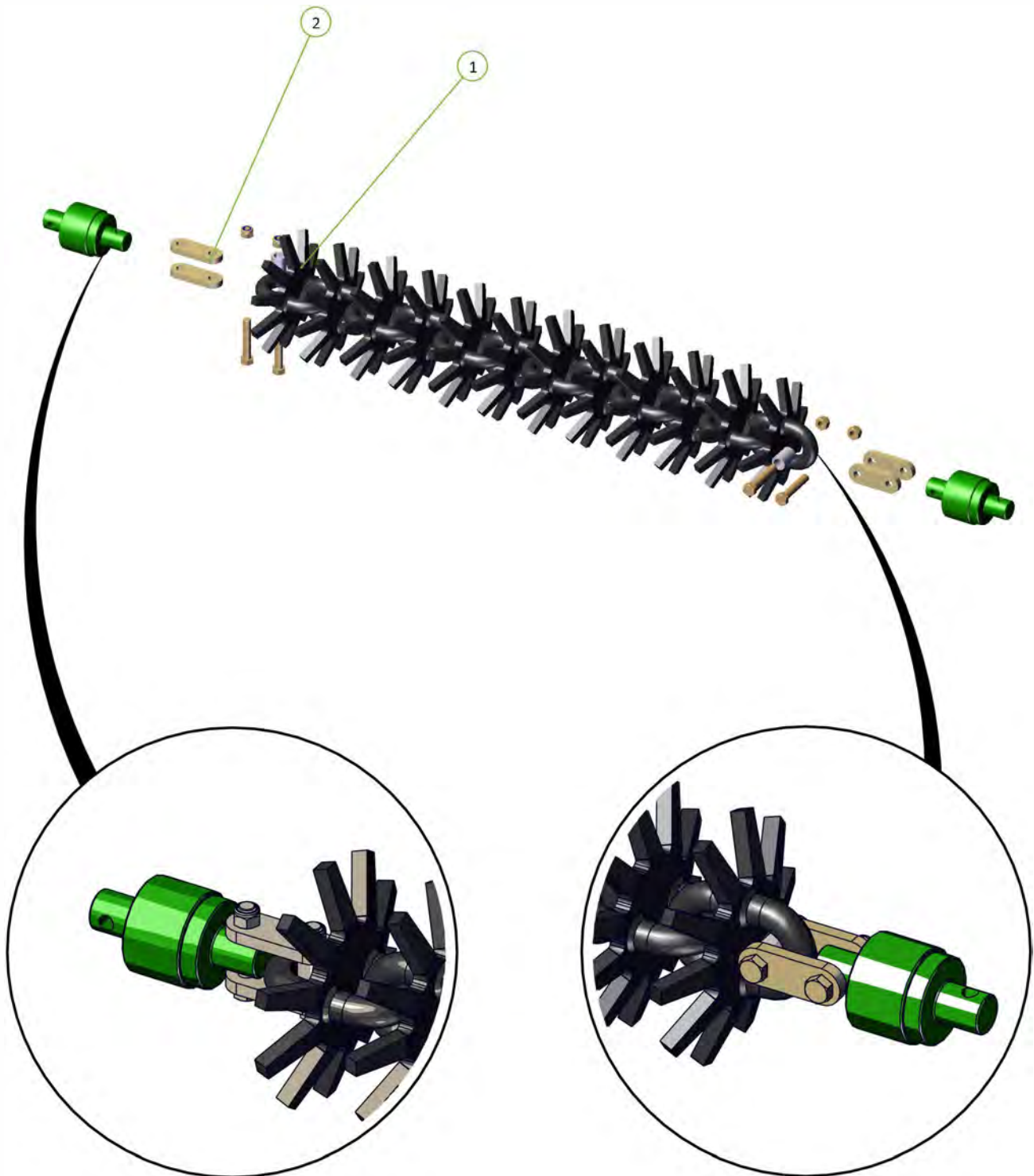
W36 Disc Chain - cut a disc chain link from the end of the disc chain



Item No.	Description	Qty	Number
1	10 Spike Disc Chain 49/27/5	1	0803-SD49
2	Tie Plate For 20mm Bolt	4	0800-83.2



For correct chain tension, chain links may need to be removed from the end of the chain as follows:
 Spiked Disc Chain - cut a disc chain link from the end of the disc chain

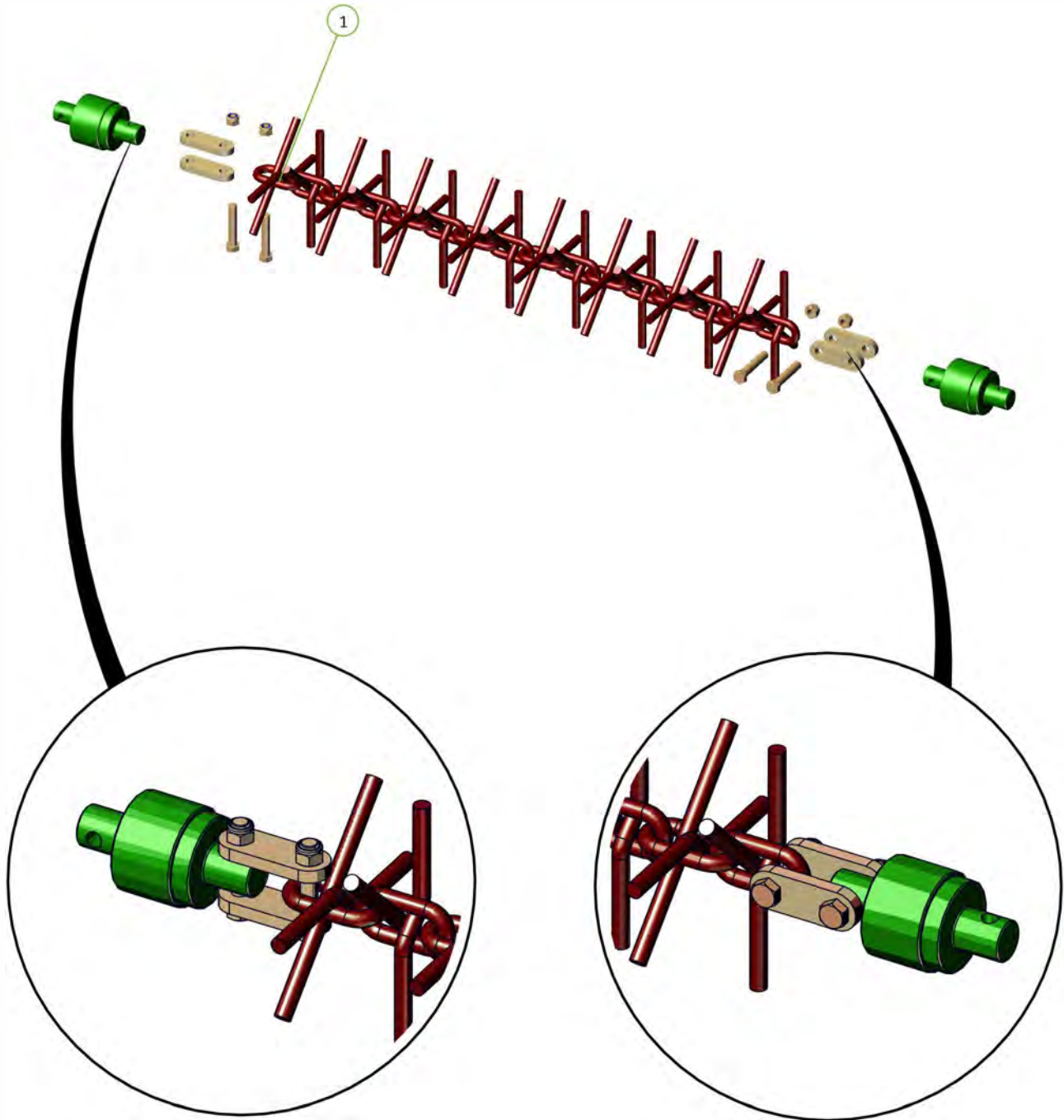


Item No.	Description	Qty	Number
1	Prickle Chain	1	0803-PCH



For correct chain tension, chain links may need to be removed from the end of the chain as follows:

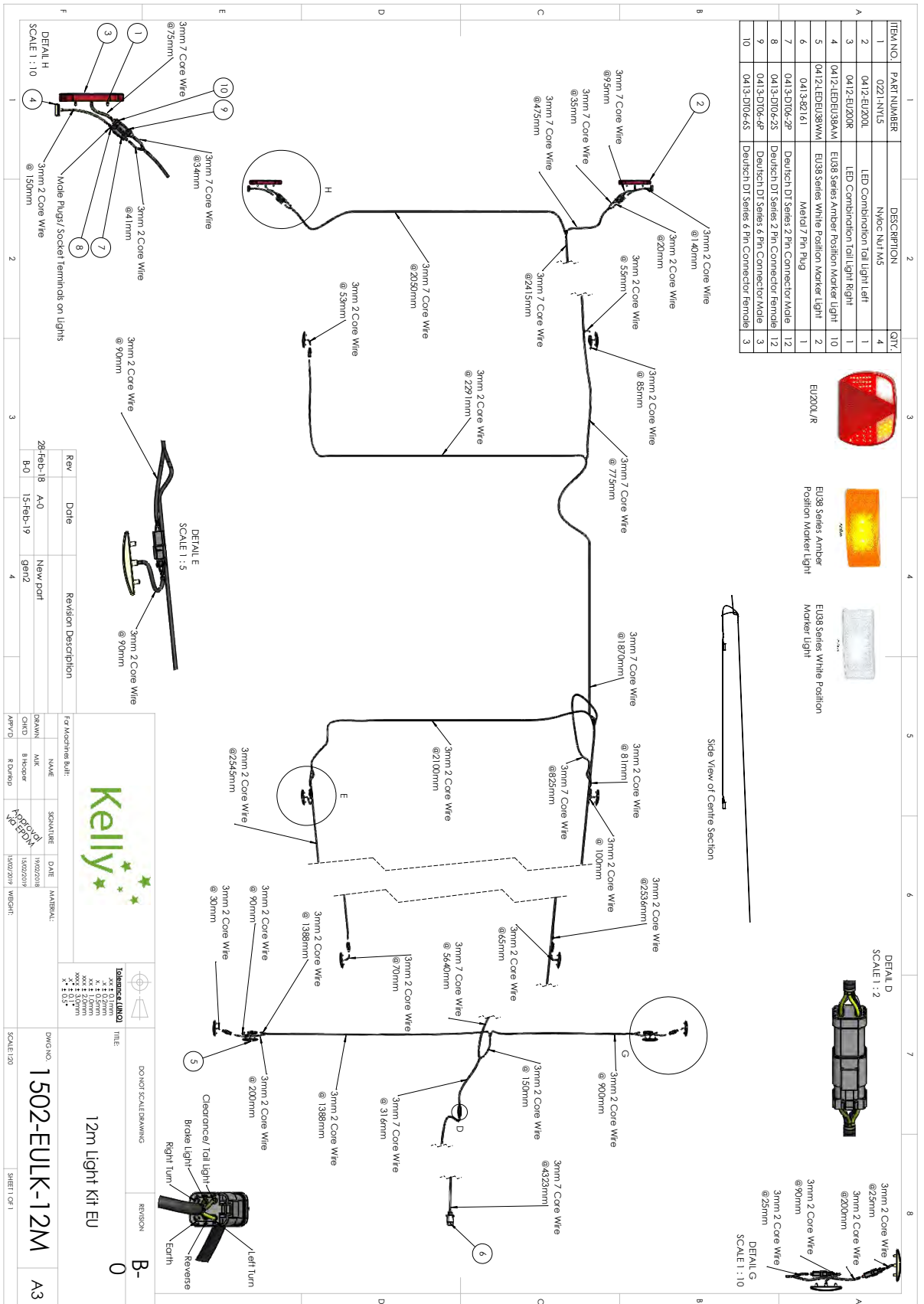
Prickle Chain - cut a prickle chain link from the end of the prickle chain



Section 6

Diagrams & Specifications

Wiring Diagram



Operating speeds

Operating speeds for normal conditions	
Chain type	Speed
Prickle Chain	6-10 Mph / 10-16 kmph
Disc Chain	6-8 Mph / 10-12 kmph
Transport / towing on roads	15 Mph / 25 kmph

Tyre pressure

Tyre size	Ply	KPA	PSI
400/55-22.5	18	350	50
10.0/75-15.3	14	300	44

Chain Harrow specifications

Model	12m
Working width	11.98m
Transport width	2.98m
Transport height	3.89m
Transport length	14.30m

Chain Quantities

Model		Length	CL2	CL1	W36	R300	SD49	Prickle chain
			CL2 disc chain also requires CL1 disc chain					
12m	Front right	7.3m	CL2 - 32 CL1 - 2	45	43	58	58	81
	Front left	7.3m	CL2 - 32 CL1 - 2	45	43	58	58	81
	Rear right	9.2m	CL2 - 31 CL1 - 15	56	54	74	74	102
	Rear left	7.1m	CL2 - 32 CL1 - 2	44	42	57	57	79
	Front module	2.6m	CL2 - 10 CL1 - 3	16	15	21	21	29
	Rear module	2.6m	CL2 - 11 CL1 - 2	16	15	21	21	29

For correct chain tension, chain links may need to be removed from the end of the chain as follows:

- CL2 Disc Chain - unhook disc chain link/s from end of the disc chain
- CL1 Disc Chain - unhook disc chain link/s from end of the disc chain
- K4 Disc Chain - unhook disc chain link/s from end of the disc chain
- Spiked Disc Chain - cut a disc chain link from the end of the disc chain
- R300 Disc Chain - cut a disc chain link from the end of the disc chain
- W36 Disc Chain - cut a disc chain link from the end of the disc chain
- Prickle Chain - cut a prickle chain link from the end of the prickle chain

Section 7

Operation

Basic Operation

Unfolding:

1. Remove transport safety stop from drawbar cylinder shaft. Ensure front cylinder depth stop plates are fully engaged on cylinder shaft.
2. Walk around and inspect the machine.
 - a. Check that chains are not hooked on framework
 - b. Check swivel bolts at end of each chain are in place and not broken
 - c. Check that height adjusting chains have not fallen out of their slotted plates during transport.
3. Lower front A Frame to working height.
4. Unfold wings, holding the hydraulic lever until the main center cylinder pins have centered in their slots.
5. Lower rear tail by holding hydraulic lever until tail and modules are completely lowered to working position and the wing de-tensioning cylinders are fully retracted, tensioning the chain.
6. Walk around machine and check that all chain links are straight and that working height of all swivels are correct for field conditions. Adjust if necessary.
7. Move off with all chains in working position. If necessary it is acceptable to raise Front A Frame and drawbar to transport height. This will lift the front chains off the ground and reduce the load on the tractor. Lower the front A Frame once operating speed is reached.

Folding:

1. Lower the front A Frame to working height. It's important to ensure that all chains locate correctly in their transport rests.
2. Raise the Rear Tail and Modules by holding the hydraulic lever until they come to a complete stop.
3. Fold the wings. They should move as follows:
 - Main center cylinders will retract, one or both, until the wings stand vertically.
 - The left outer wing then the right outer wing will fold down.
4. Raise front A Frame to transport height.
5. Walk around and check that chains have located correctly in transport rests.
6. Install transport safety stop on drawbar cylinder shaft.

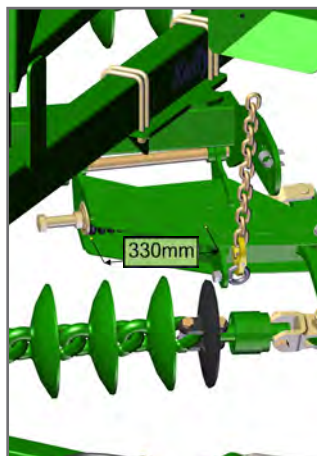
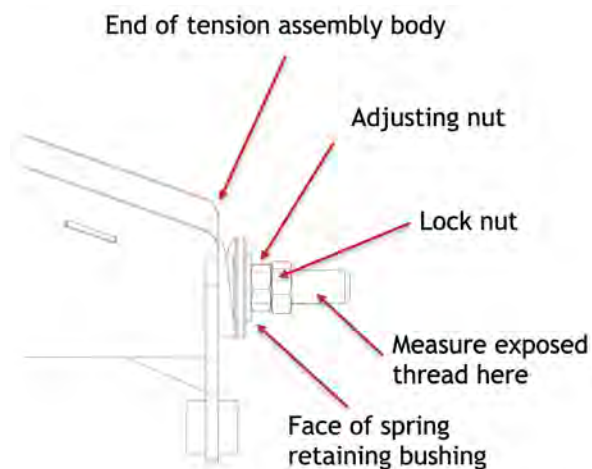
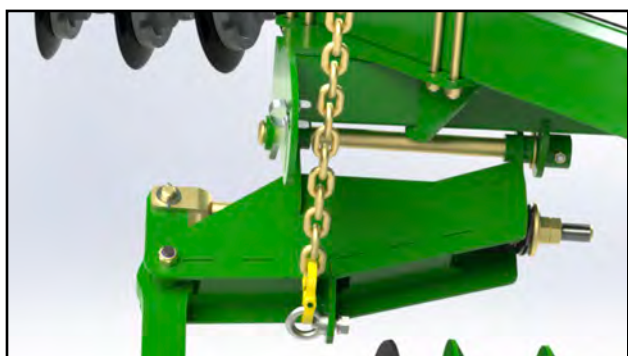
Setting for correct chain tension

Wings

- Use the spanner supplied. Loosen the lock nut adjacent to the tensioner assembly body.
- Turn the tension bolt clockwise to compress the coil spring to 330mm. Correct tension is achieved when spring retains its set length when operator rolls the chain fore and aft on the ground.
Retighten the lock nut.
- When less than 25mm of thread remains visible on the adjuster bolt then a link must be removed from the chain.

Modules

- Loosen the lock nut on the draw bolt.
- Tighten the adjusting nut clockwise until the outer face of the spring retaining washer is flushed with the body of the module tensioning unit.
- Retighten the lock nut.
- After setting the tension assemblies to have the recommended thread showing (less than 200mm), move out to the wings of the machine and use the PCHTA adjusters to tension the gang of discs.



Correct Working Height

Importance of chain tension

Operational

It is imperative that the correct adjustment be maintained. Only through correct adjustment can a smooth and level finish be achieved in field working.

Loose chains lead to :

- Uneven performance across the width of the machine
- Uneven weed control
- Unsatisfactory incorporation
- Ineffective levelling
- Accelerated or premature chain wear
- Chains failing to engage with transport locators when folded
- Machine damage when folding or unfolding
- Uneven field surface with ridges and furrows being created. The leading 1/3rd of a loose chain is much more aggressive than the trailing 1/3rd and the centre. This will mean that the middle of the machine's front pair of chains will aggressively move soil outwards. The machine's rear pair of chains, if loose, have their aggressive 1/3rd near the wing extremity. It follows then that as the front discs push soil outwards, the least aggressive portion of the rear chain follows them and does not balance the soil movement. This is exacerbated at the wings, effectively creating a broad ridge about halfway out each wing. It won't be evident in one pass, but is possible if care is not taken over time.

A correctly adjusted machine will not have this problem.

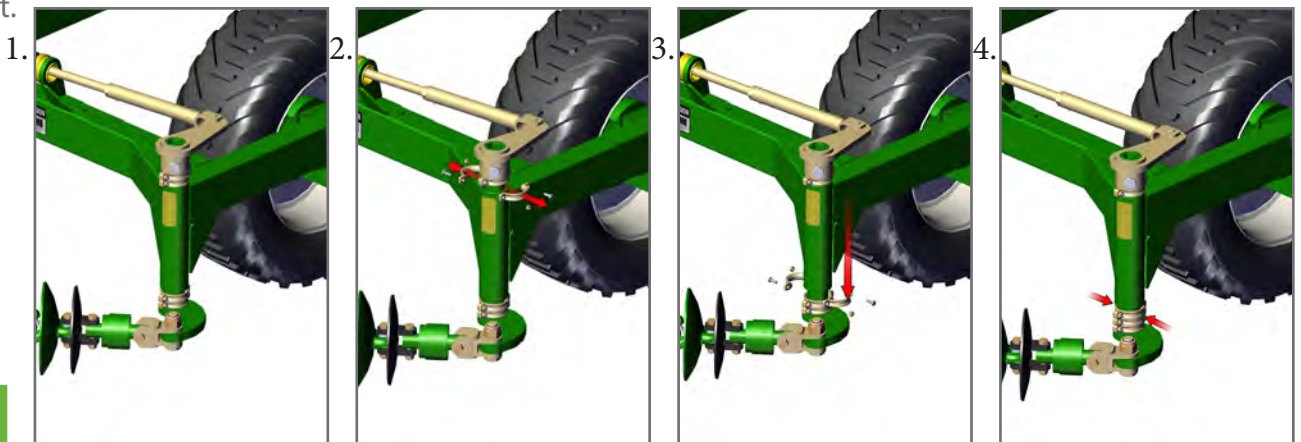
Correct chain height adjustment

To adjust the swivel height at the wings, relocate one of the spacers either above or below the fixed mounting tube. Each Dropleg has four pairs of 25mm cast spacers. The most common set up is to have two pairs of cast spacers on the bottom and two pairs of cast spacers on the top.

Below is the process to adjust the Dropleg height.

1. Loosen chain tension completely.
2. Undo 2 x M10 bolts from corresponding spacer set and take the two halves off of the drop leg tube .
3. Replace it in the selected position after raising or lowering the drop leg.
4. Reinstall the M10 bolts and re-tension the chain.

It is possible to install all spacers either above or below the mounting tube giving a maximum of 100mm of adjustment.



Section 8

Pre-Delivery Checklist

Name _____ Date _____ Location _____

Check Item:	Checked by Initial
Tyres are fitted correctly	
Check wheel nuts are tightened to the correct torque and marked	
Check tyres are inflated to correct pressure	
Tow Hitch is fitted correctly with bolts tightened to correct torque and marked.	
All bolts and nuts are tightened to the correct torque values and marked.	
All retaining pins are inserted and engaged	
All hoses are correctly routed through holders	
Air brake hoses are sound with no leaks	
Air brake relay valve is correctly set for the load	
Hydraulic rams and hoses are sound	
Hydraulic Accumulator is charged correctly	
Drop legs are correctly orientated	
Swivel Units are correctly orientated	
Chains are resting correctly on their transport supports (chain carriers)	
Check the chain tension as per assembly manual	
All points are greased on the machine	
Roll pins are installed in the discs (CL1 and CL2)	
All safety decals are on the machine in the correct locations are per the Assembly/Operator's manual	
All safety signs are present and lights are working	
Machine is registered for warranty	
Customer has been shown the website and how to access parts information	
Operator's manual has been provided with the machine	

Signature _____

