



12X

KELLY 12X  
**ASSEMBLY MANUAL**

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REVISION E – MARCH 2021

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sales@kellytillage.com



Kelly 



# 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 the Kelly team 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

### **Australia**

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**Adair Sales & Marketing Company Inc**

**Swift Current SK**

**Phone:** +1 306 773 0996

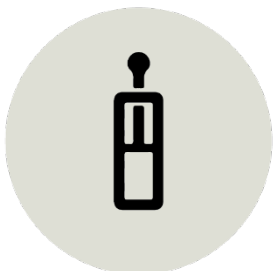
**Email:** [parts@adairreps.com](mailto:parts@adairreps.com)

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This symbol indicates which bag the relevant fasteners are in



This symbol indicates which bag the relevant hydraulics are in



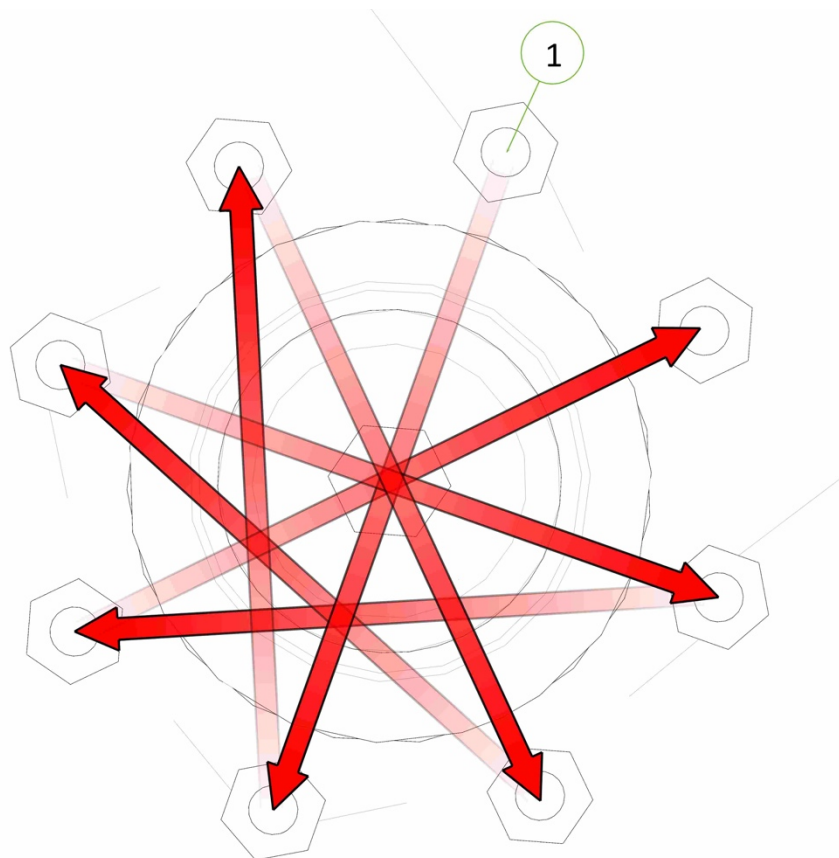
This symbol indicates which way the machine is travelling

## Bolt Torque Settings

Bolt Type	Wheel nut				U Bolt			Class 8.8 Bolt					Class 10.9 Bolt		Grade 8 Bolt
<b>Bolt Size</b>	M18	M20	1/2"	9/16"	M10	M12	M16	M10	M12	M16	M20	M24	M20	M24	1" UNF
<b>Ft lb</b>	255	265	90	100	22	36	55	32	48	140	190	270	300	350	849
<b>Nm</b>	345	360	125	140	30	50	75	44	65	190	260	370	406	475	1151

[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**  
UNPACKING

## SECTION 1 UNPACKING



### CAUTION

Before cutting straps attach slings or chains and take the weight of the frames to avoid them slipping or falling and causing injury.



### CAUTION

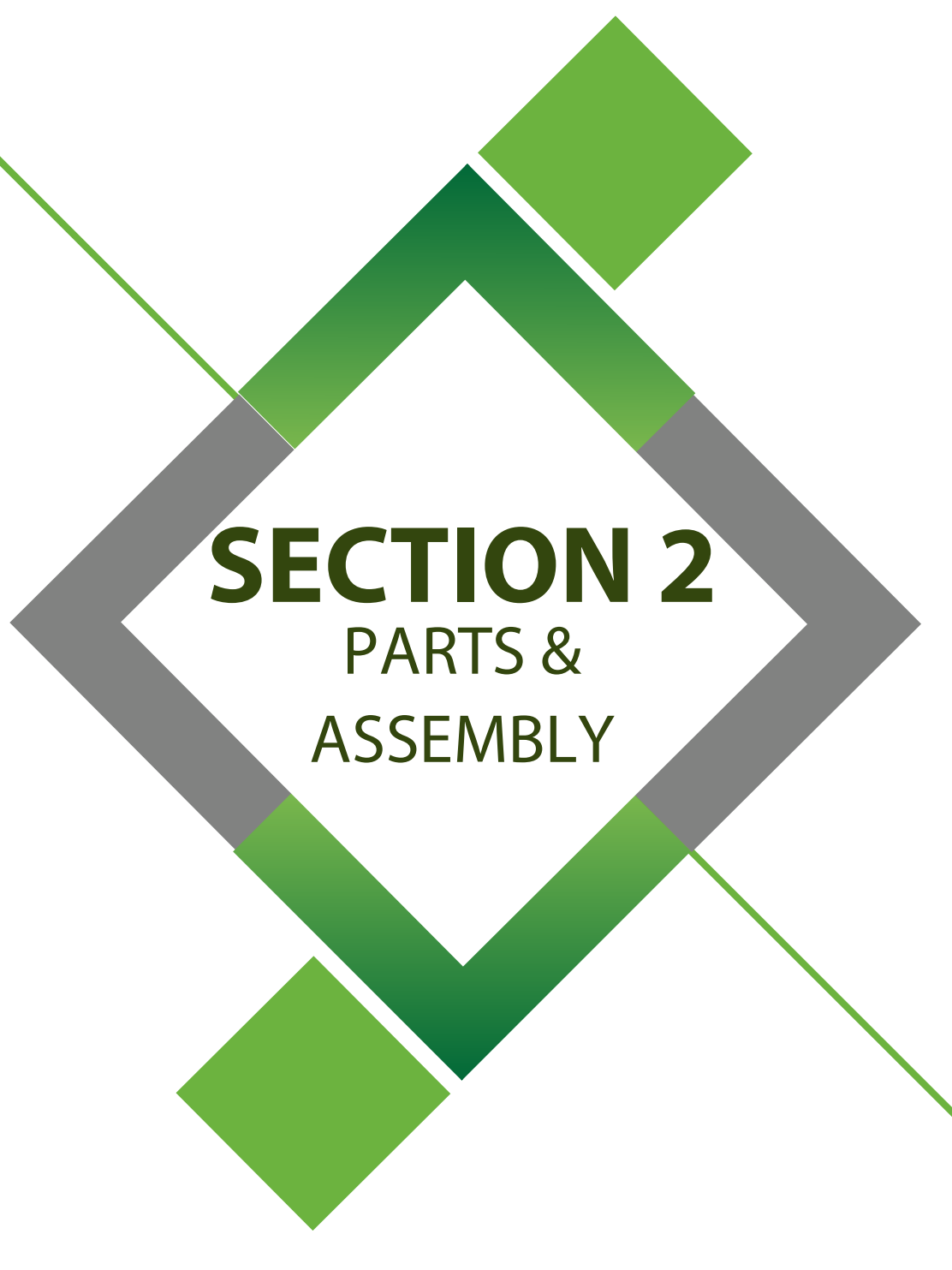
Wear eye and hand protection when cutting straps. Sharp edges are exposed as straps separate and may cause injury.



### CAUTION

To avoid falling or moving components, before cutting straps attach slings or chains to individual pieces and only cut the straps holding the piece to be lifted.

- Cut straps holding bundles and separate parts and place in assembly area
- Identify parts for each machine by serial no. or description and separate. Open parts box and check that all parts are accounted for against checklist
- Once all parts have been identified machines are ready for assembly
- Read assembly instructions before proceeding



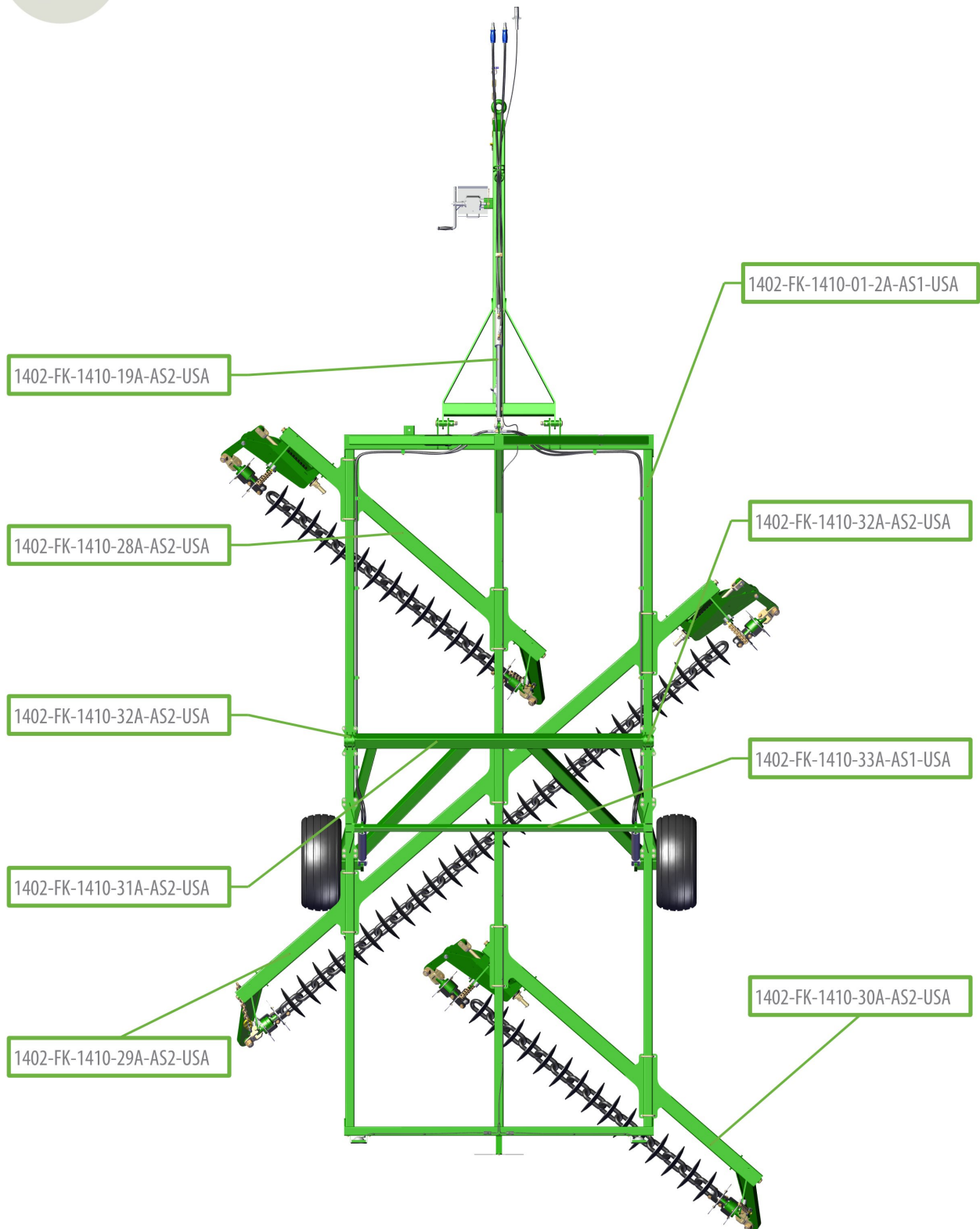
**SECTION 2**  
PARTS &  
ASSEMBLY



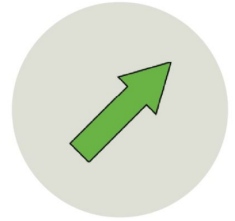
## SECTION 2 PARTS AND ASSEMBLY



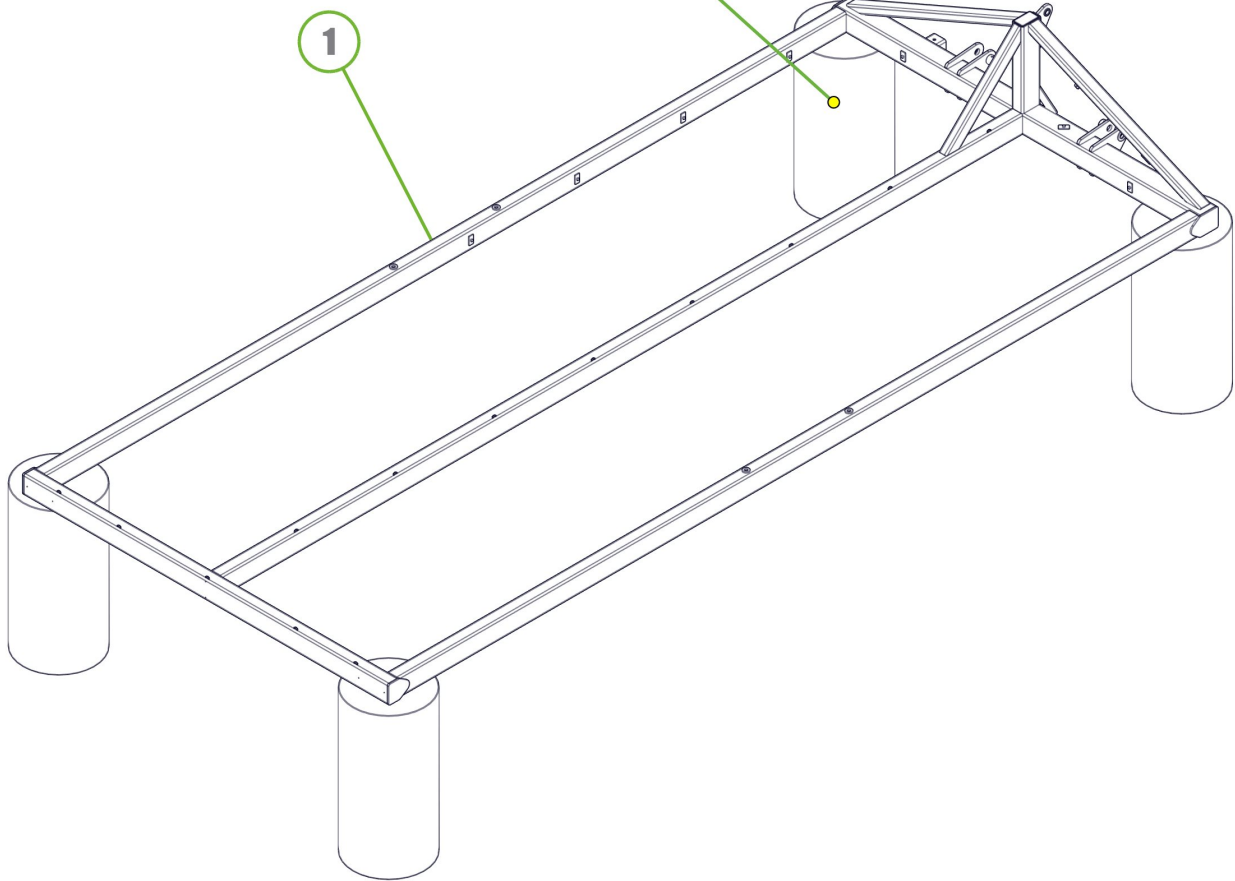
### Fastener Kits Bags Location



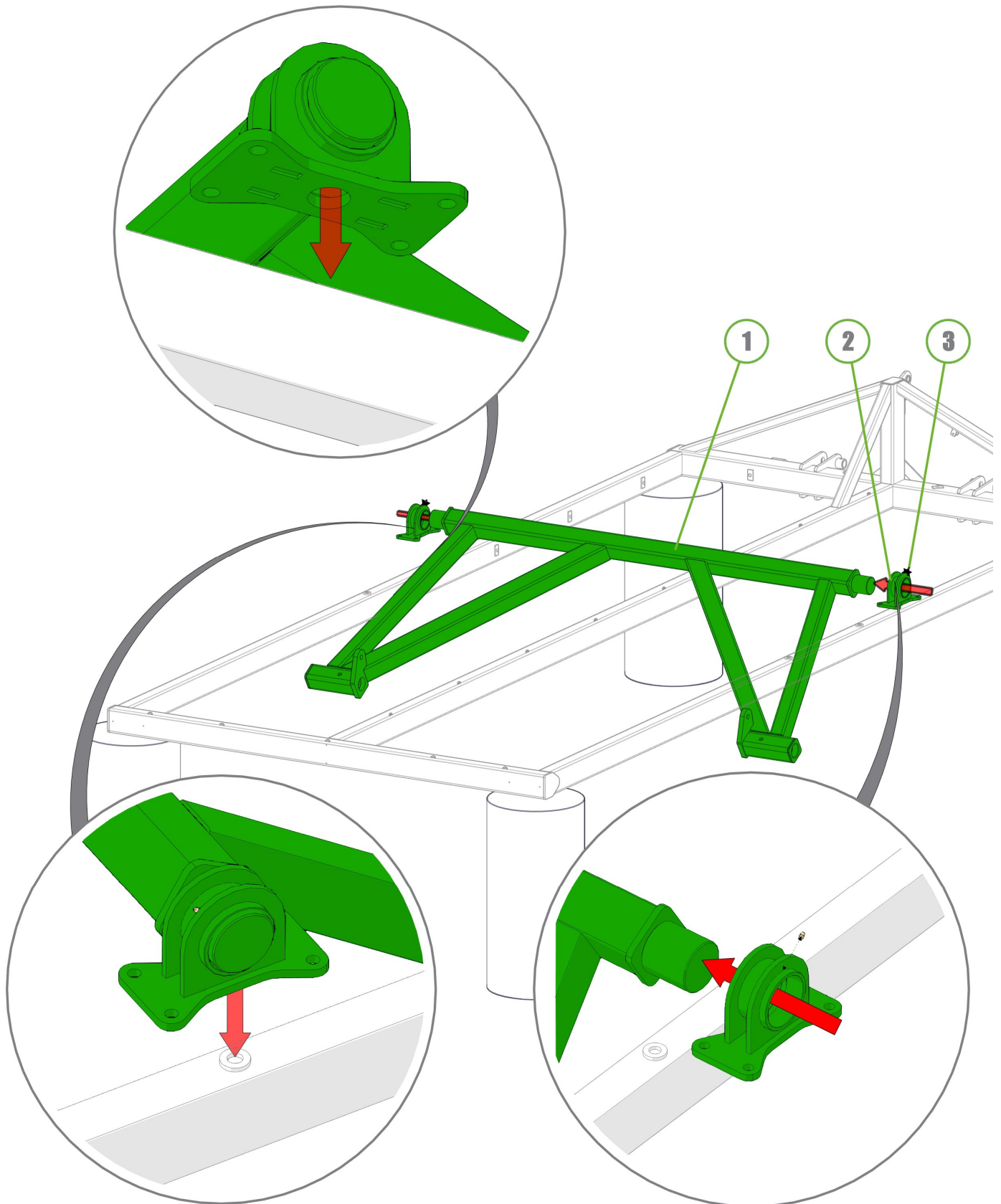
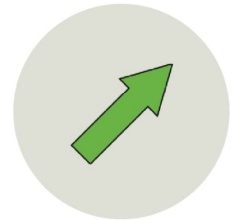
Item No.	Description	Number	Qty
1	Centre Frame	1410-01-2	1



Support frame with blocks or stands during initial assembly



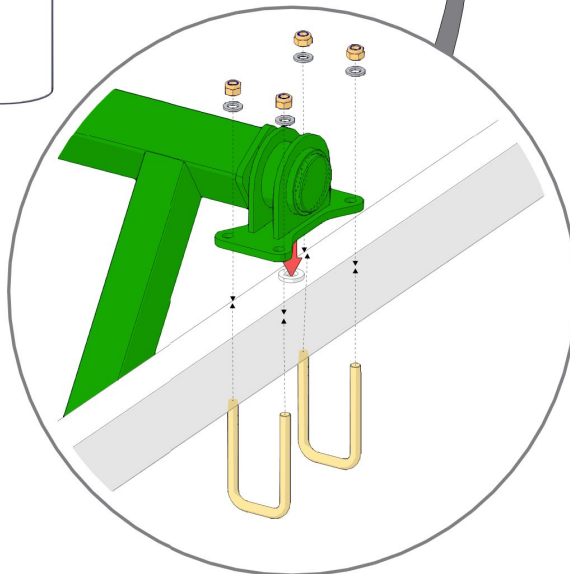
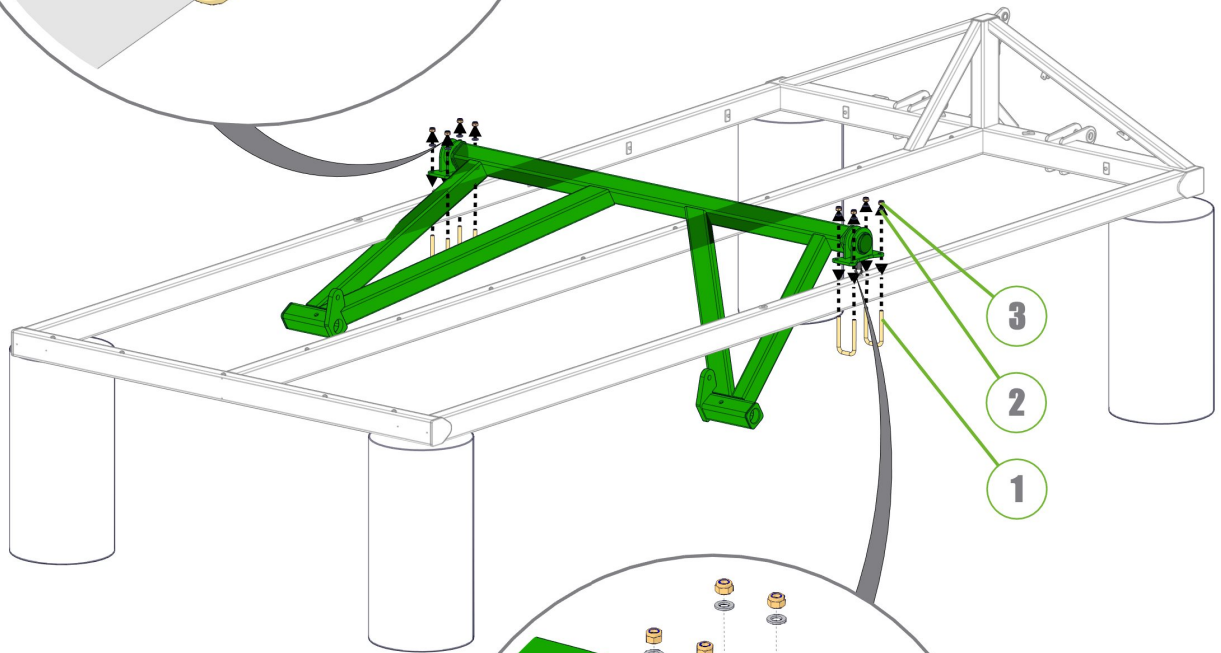
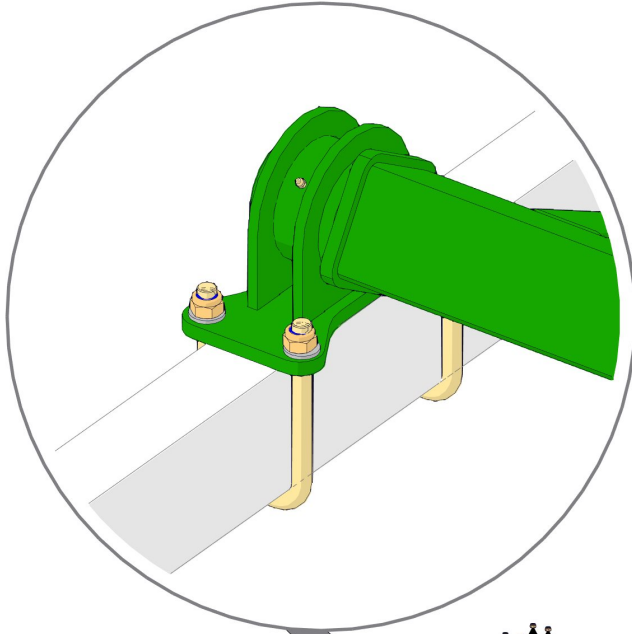
Item No.	Description	Number	Qty
1	Wheel Arm Frame	1410-31	1
2	Wheel Arm Bearing	1410-32	2
3	Grease Nipple 1/4" UNF	0181-GN1-4	2



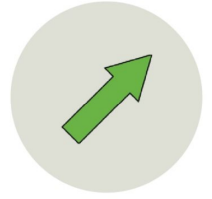
Item No.	Description	Number	Qty
1	U-Bolt M16 x 167 Deep X 79 Wide	0271-1616779U	4
2	Washer Flat M16	0231-F16	8
3	Nyloc Nut M16	0221-NYL16	8



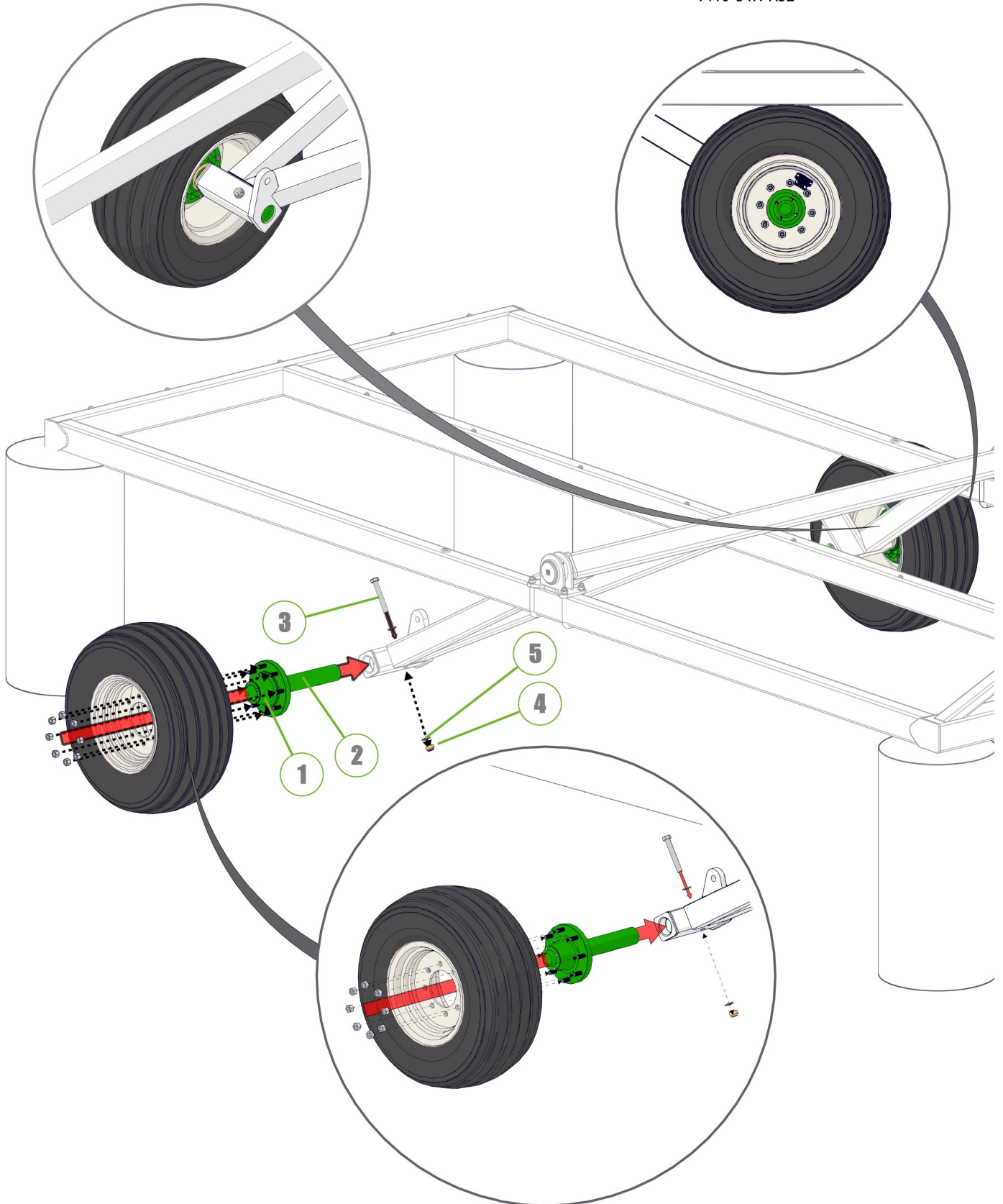
1410-32A-AS2



Item No.	Description	Number	Qty
1	31/13.5-15 Tire and Rim Assembly	0751-31-13.5-15	2
2	2.75"R C/W 6 tonne 8 on 8" PCD Complete Assembly inc GS	0733-LG6080067	2
3	M20 x 140 Grade 8.8 ZP Bolt	0211-20140	2
4	Nyloc Nut M20	0221-NYL20	2
5	Washer Flat M20	0231-F20	4



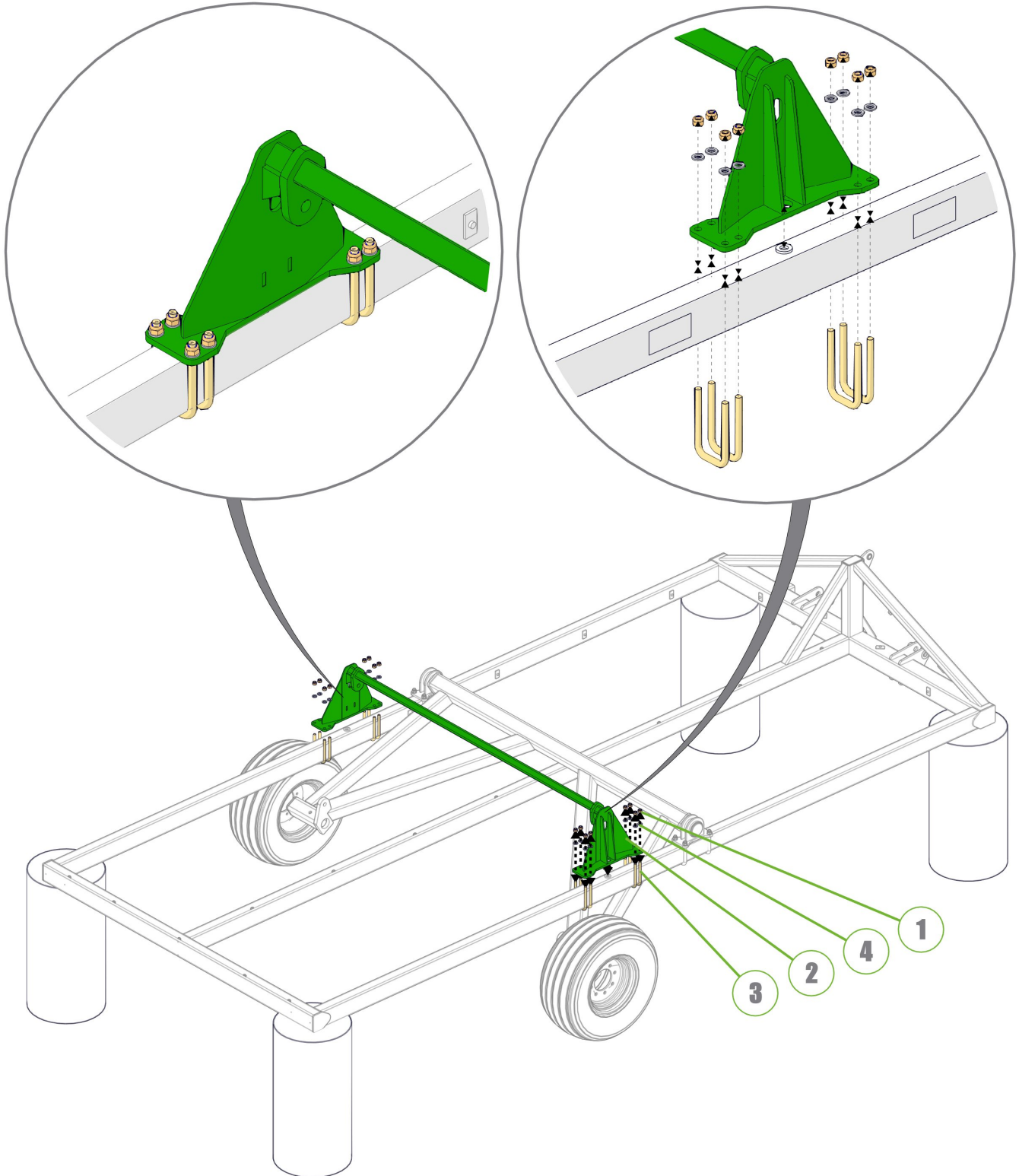
1410-31A-AS2



Item No.	Description	Number	Qty
1	Nyloc Nut M16	0221-NYL16	16
2	Ram Mount Frame	1410-33	1
3	U-Bolt M16 x 167 Deep x 79 Wide	0271-1616077	8
4	Washer Flat M16	0231-F16	16

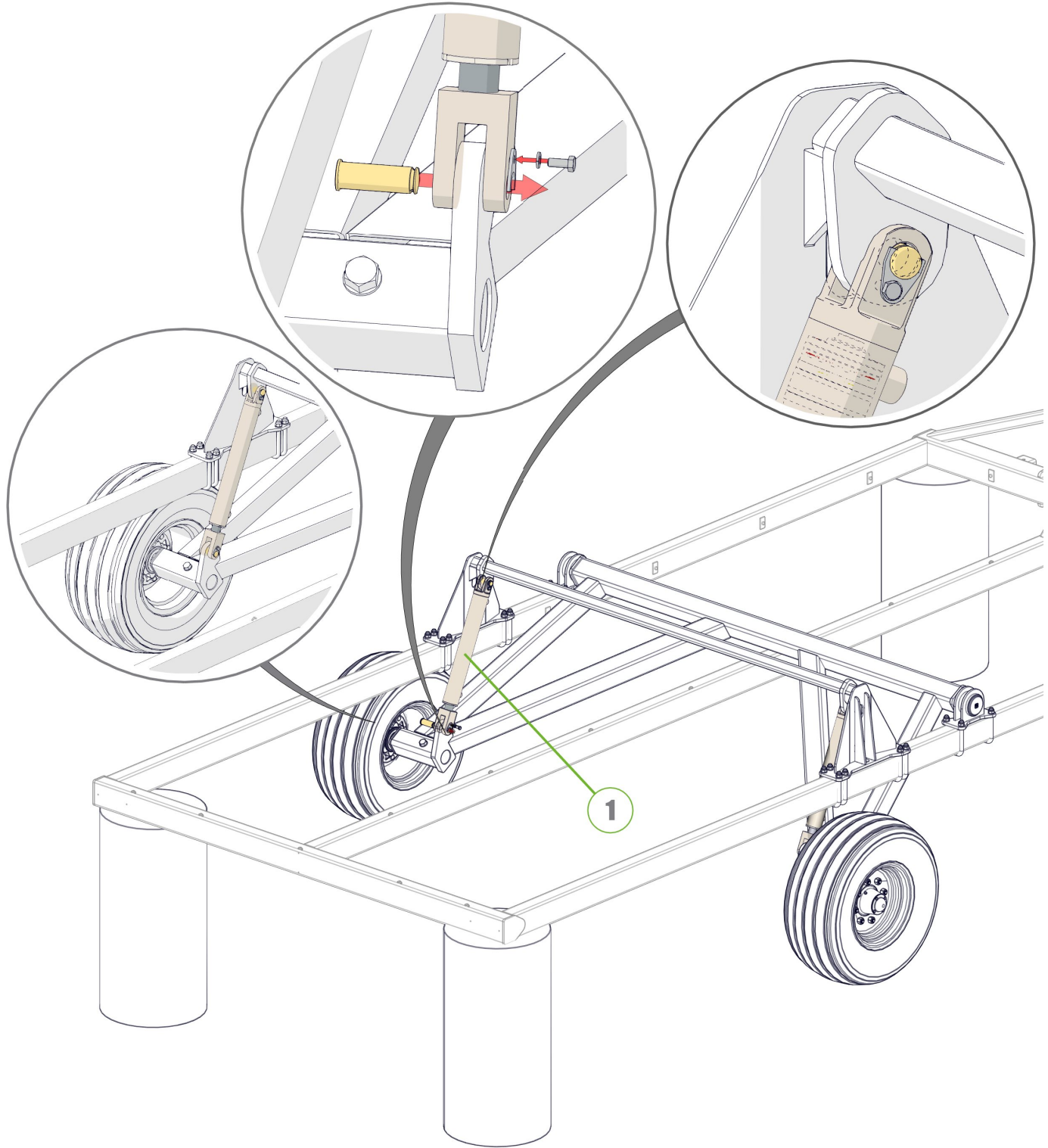


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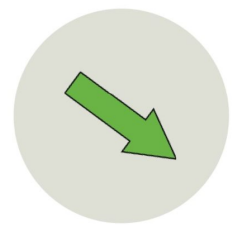




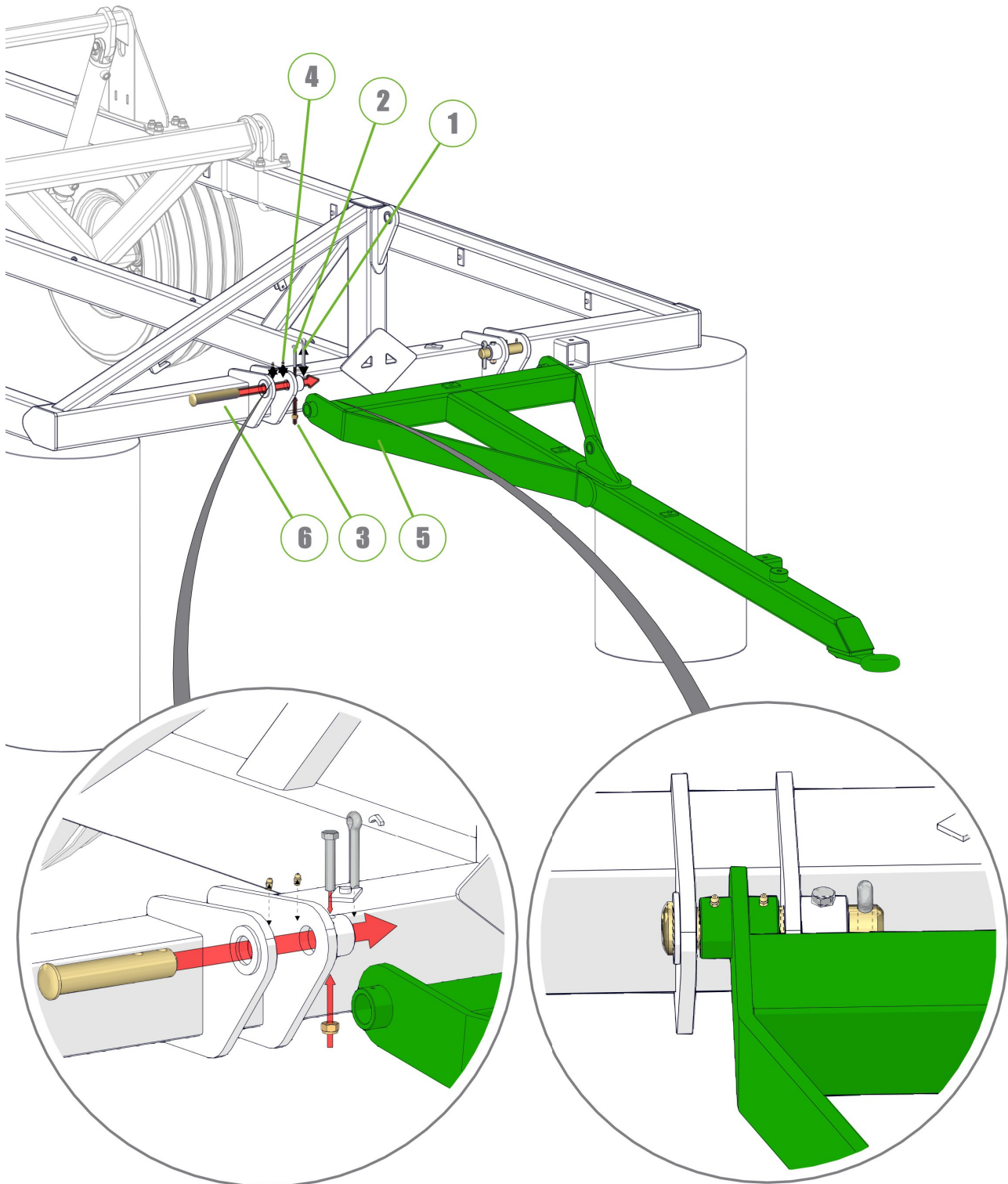
Item No.	Description	Number	Qty
1	2.5" Bore x 16" Stroke Hydraulic Cylinder	0311-2516	2



Item No.	Description	Number	Qty
1	Cotter Pin M13 x 63	0261-PINC1363	2
2	M12 x 65 Grade 8.8 ZP Bolt	0211-1265	2
3	Nyloc Nut M12	0221-NYL12	2
4	Grease Nipple 1/4" UNF	0181-GN1-4	4
5	Drawbar	1410-19	1
6	Tail Frame Pivot pin	0801-10-08-175	2

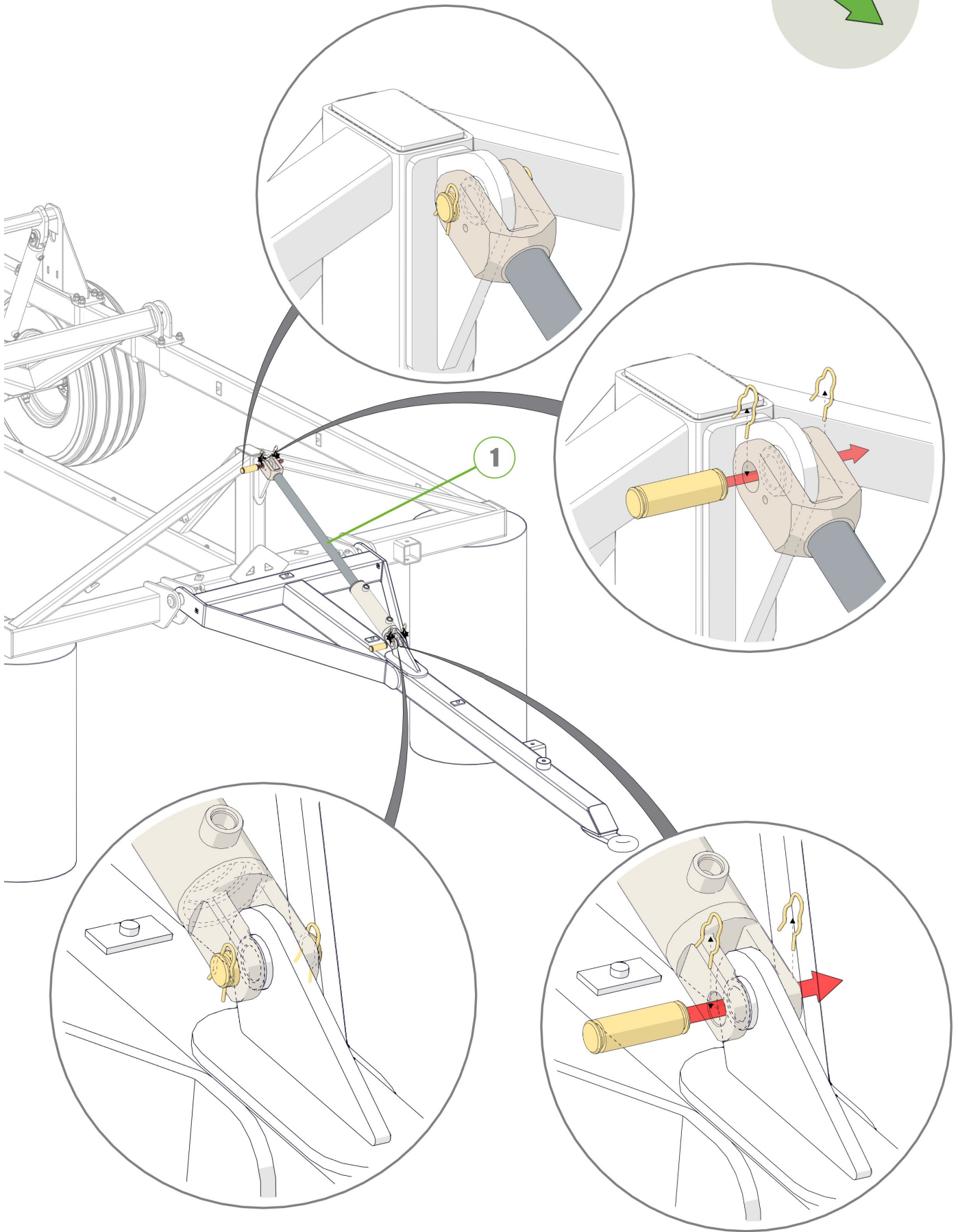
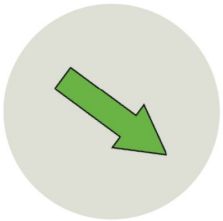


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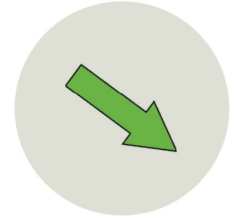




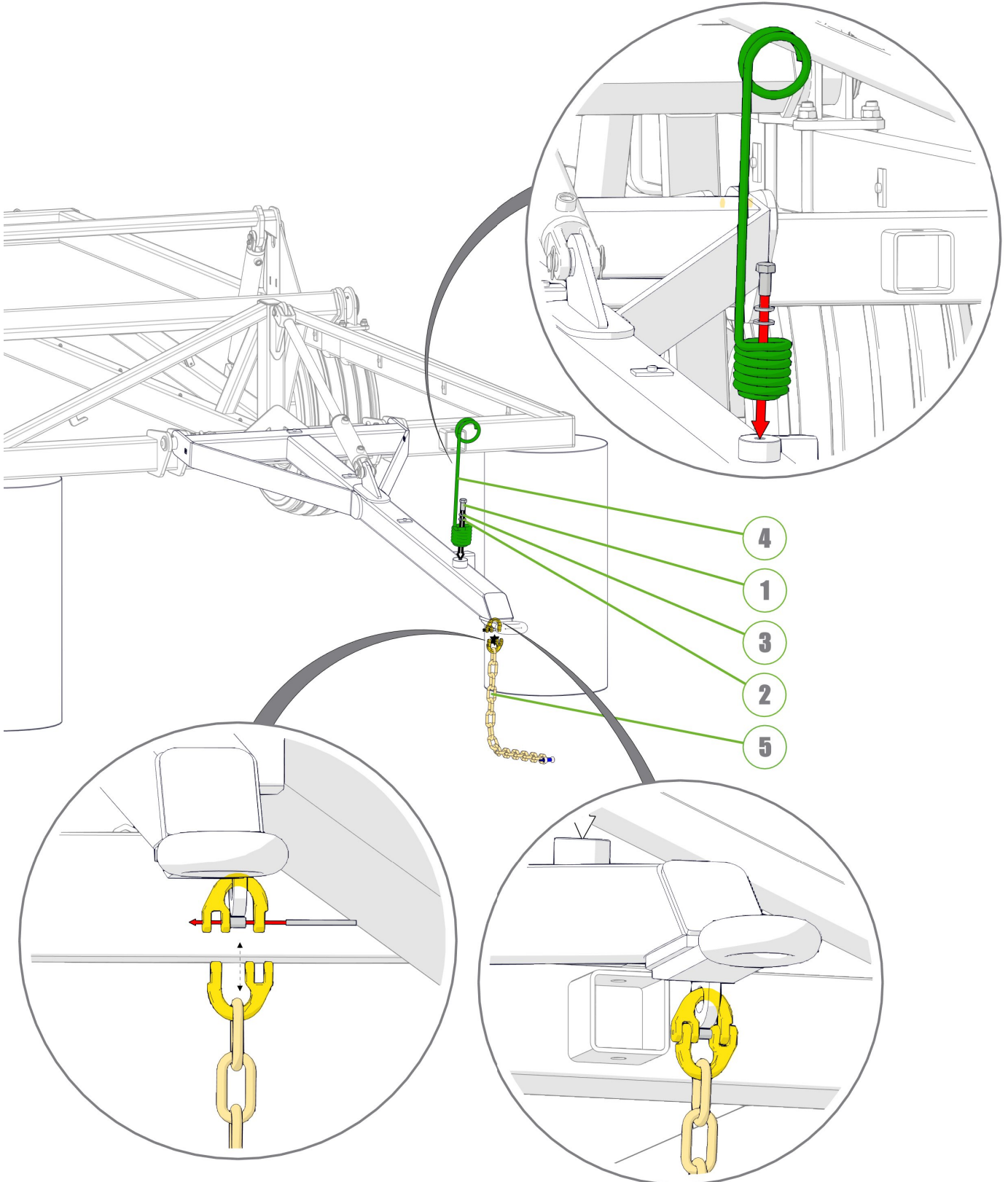
Item No.	Description	Number	Qty
1	2.5" Bore x 6" Stroke Extended Cylinder	0311-2506EXT	1



Item No.	Description	Number	Qty
1	M16 x 35 Grade 8.8 ZP Bolt	0211-1635	1
2	Washer Flat M16	0231-F16	1
3	Washer Spring M16	0231-S16	1
4	Hose Post Spring	1601-CDB-00-0012	1
5	Safety Chain Assembly	1402-16	1

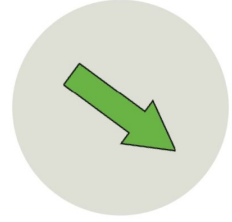


1410-19A-AS2

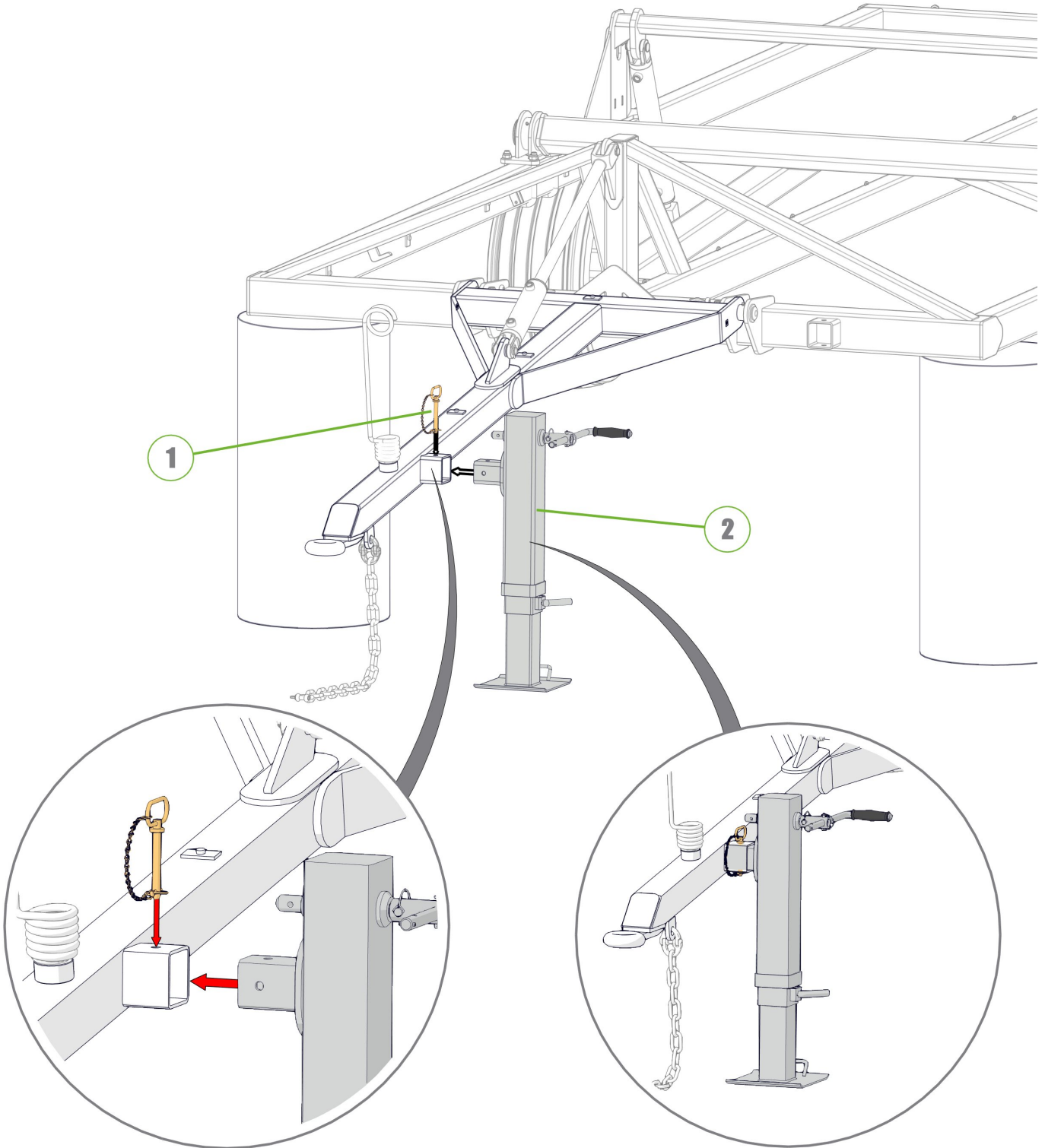


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Item No.	Description	Number	Qty
1	Jack Pin	0801-B3077	1
2	Parking Jack 4500kg	0801-SAK45B	1

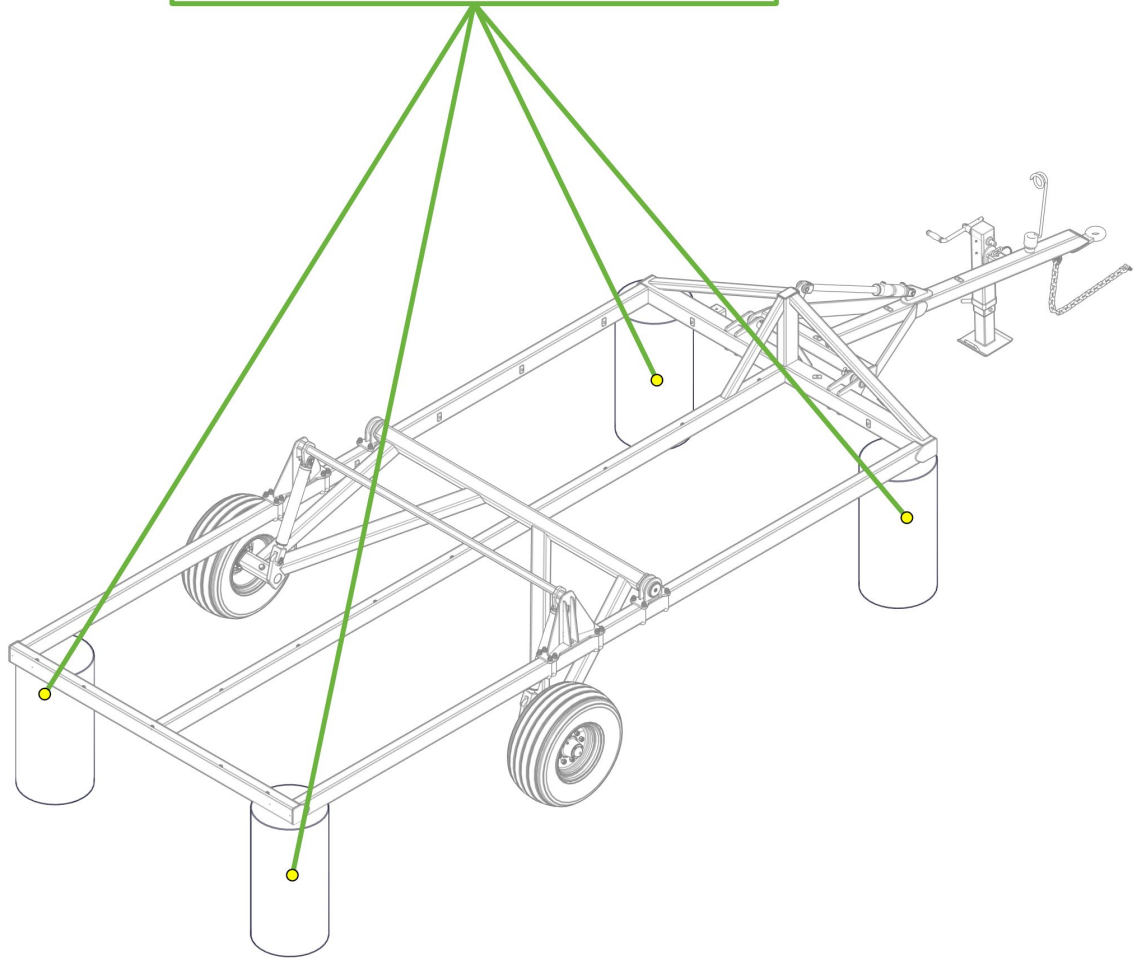


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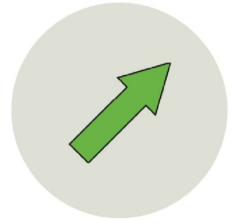




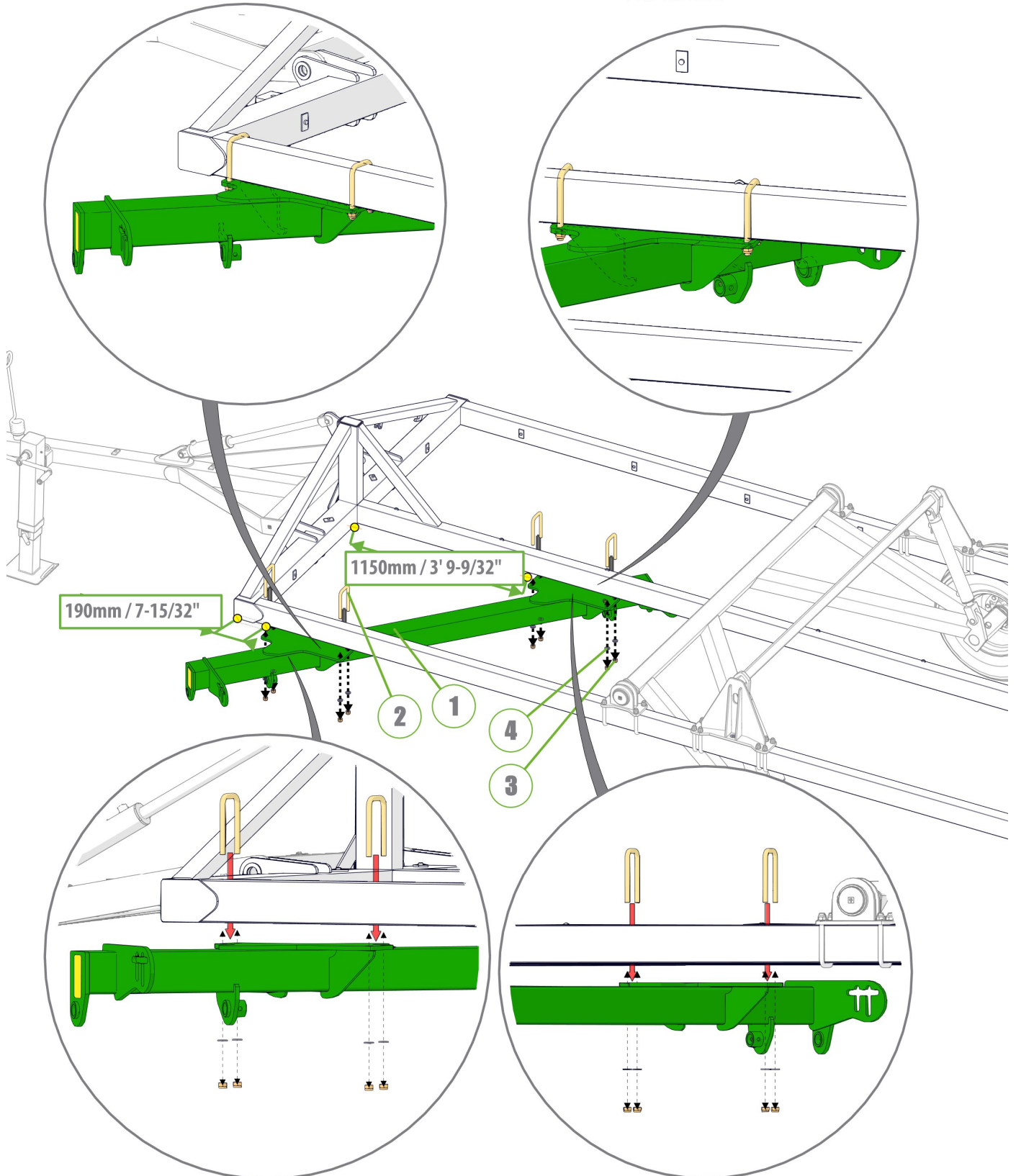
Remove stands, sit on wheels and support jack.



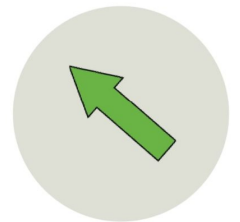
Item No.	Description	Number	Qty
1	Front Module	1410-28	1
2	U-Bolt M16 x 167 Deep X 79 Wide	0271-1616779U	4
3	Nyloc Nut M16	0221-NYL16	8
4	Washer Flat M16	0231-F16	8



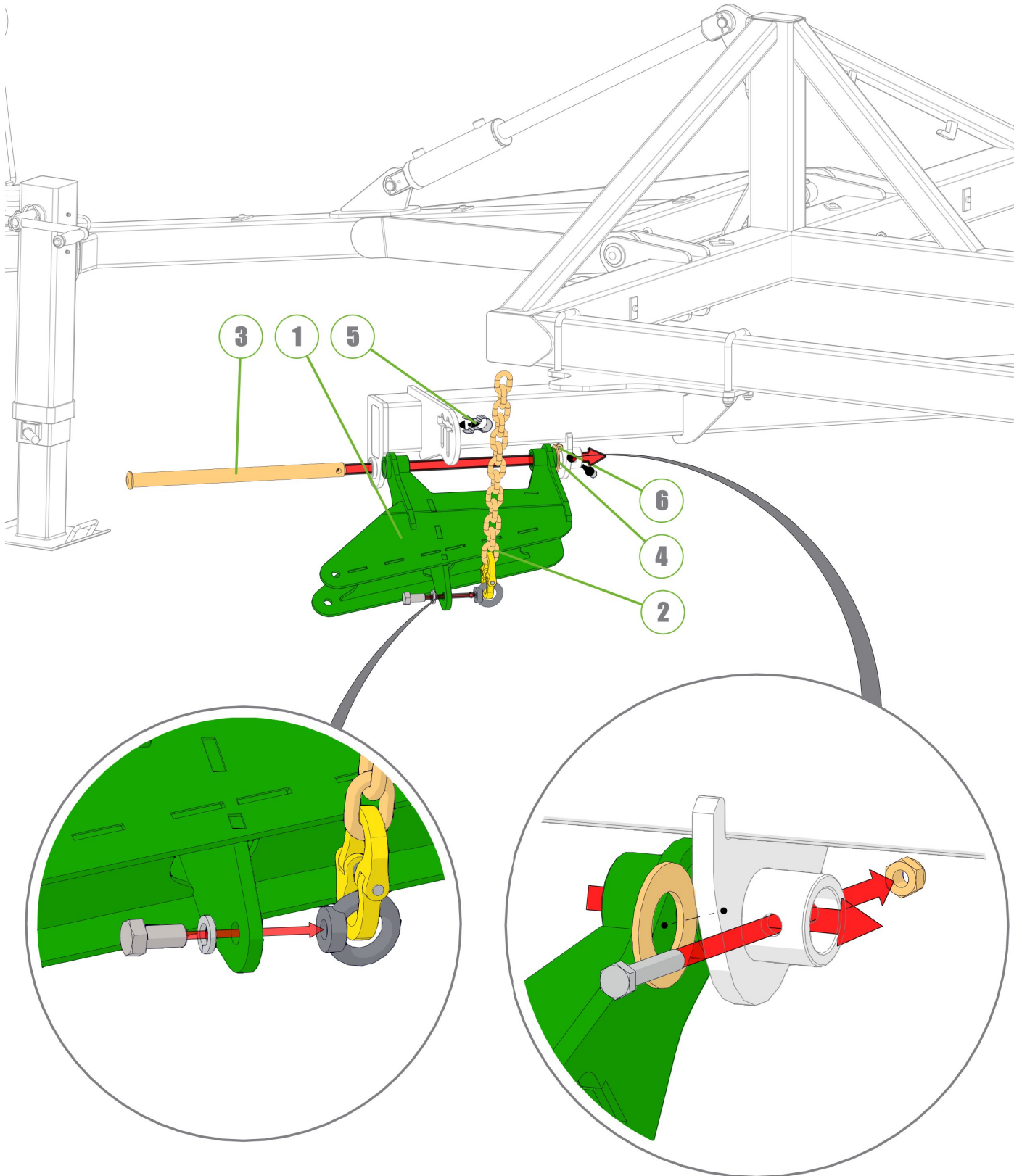
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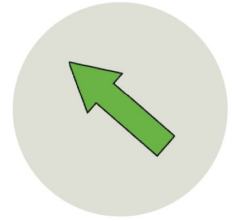
Item No.	Description	Number	Qty
1	Tension Box	0810-57	1
2	Height Adjusting Chain Assembly 13 Link	0801-20MCA	1
3	Chain Mount Pivot Pin	0801-10-51	1
4	Washer High Tensile 1 3/8"	0232-HT13-8	1
5	Height Adjustor Retaining Clip	0801-KE014	1
6	Nyloc Nut M12	0221-NYL12	1



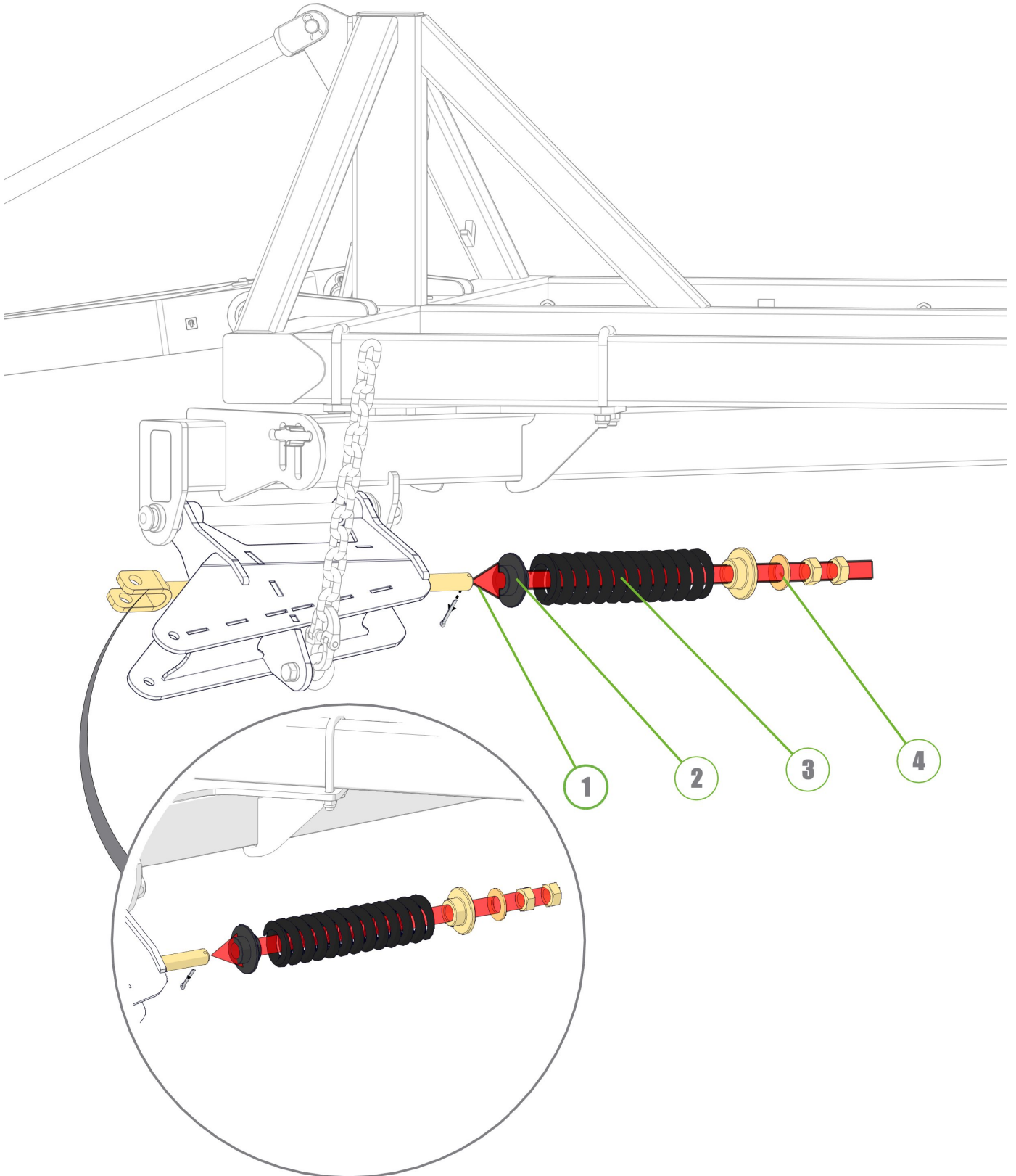
1410-28A-AS2



Item No.	Description	Number	Qty
1	Module Tension Rod Assembly	0810-105A	1
2	Rigid Spring Locator	0801-10-S2L	1
3	20mm Compression Spring	0801-XK9261S	1
4	Washer High Tensile 1 1/4"	0232-HT11-4	1



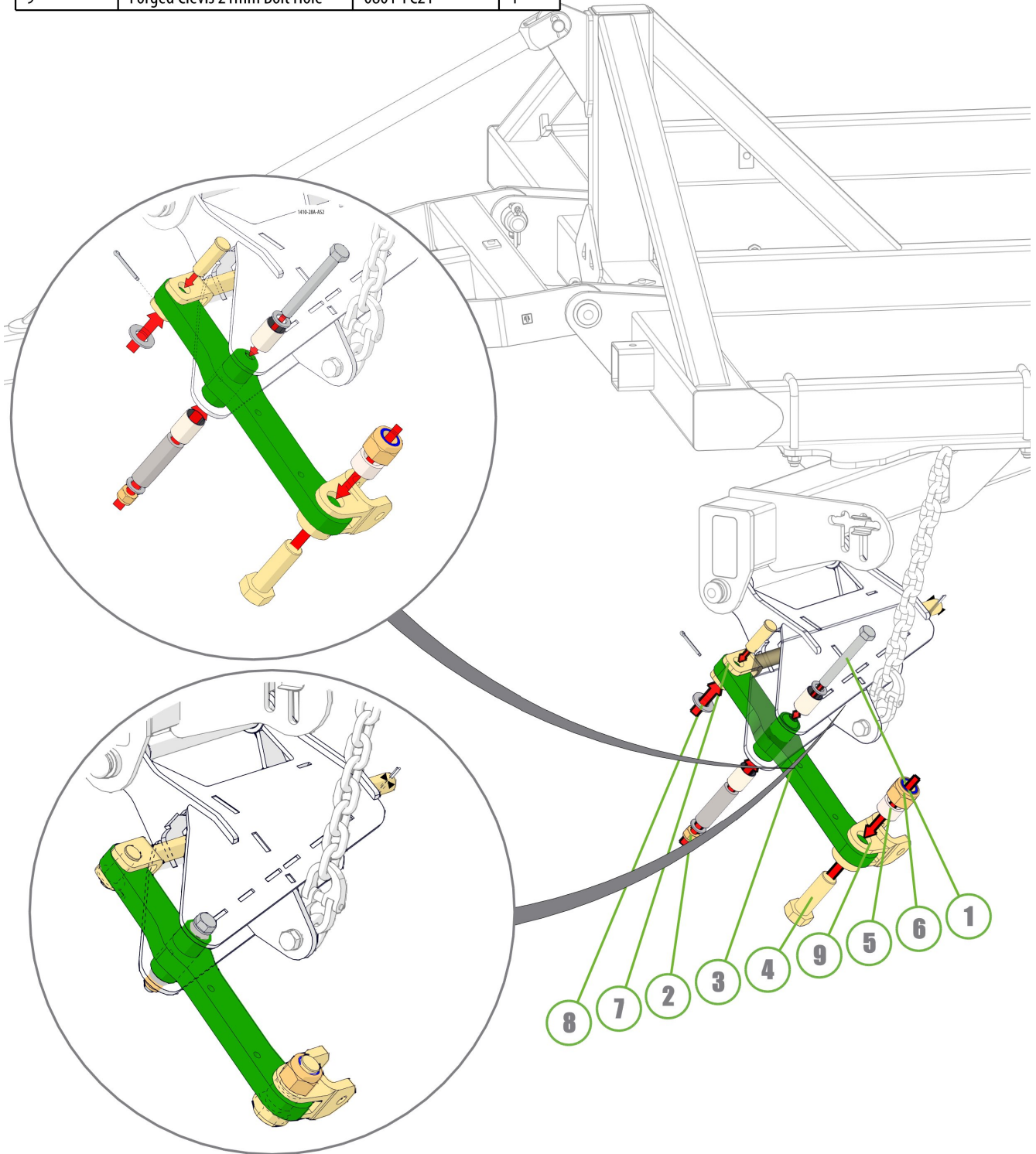
1410-28A-AS2



Item No.	Description	Number	Qty
1	M20 x 160 Grade 8.8 ZP Bolt	0211-20160	1
2	Nyloc Nut M20	0221-NYL20	1
3	Chain Tension Arm	0810-104-3.5	1
4	M36 x 105 grade 8.8 ZP Bolt	0211-36105	1
5	Wear Bush	1501-365033-SS	1
6	Nyloc Nut M36	0221-NYL36	1
7	Module Tension Rod Assembly	0810-105A	1
8	Washer Flat 1"	0232-F1	1
9	Forged Clevis 21mm Bolt Hole	0801-FC21	1

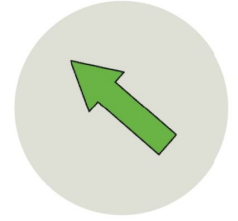


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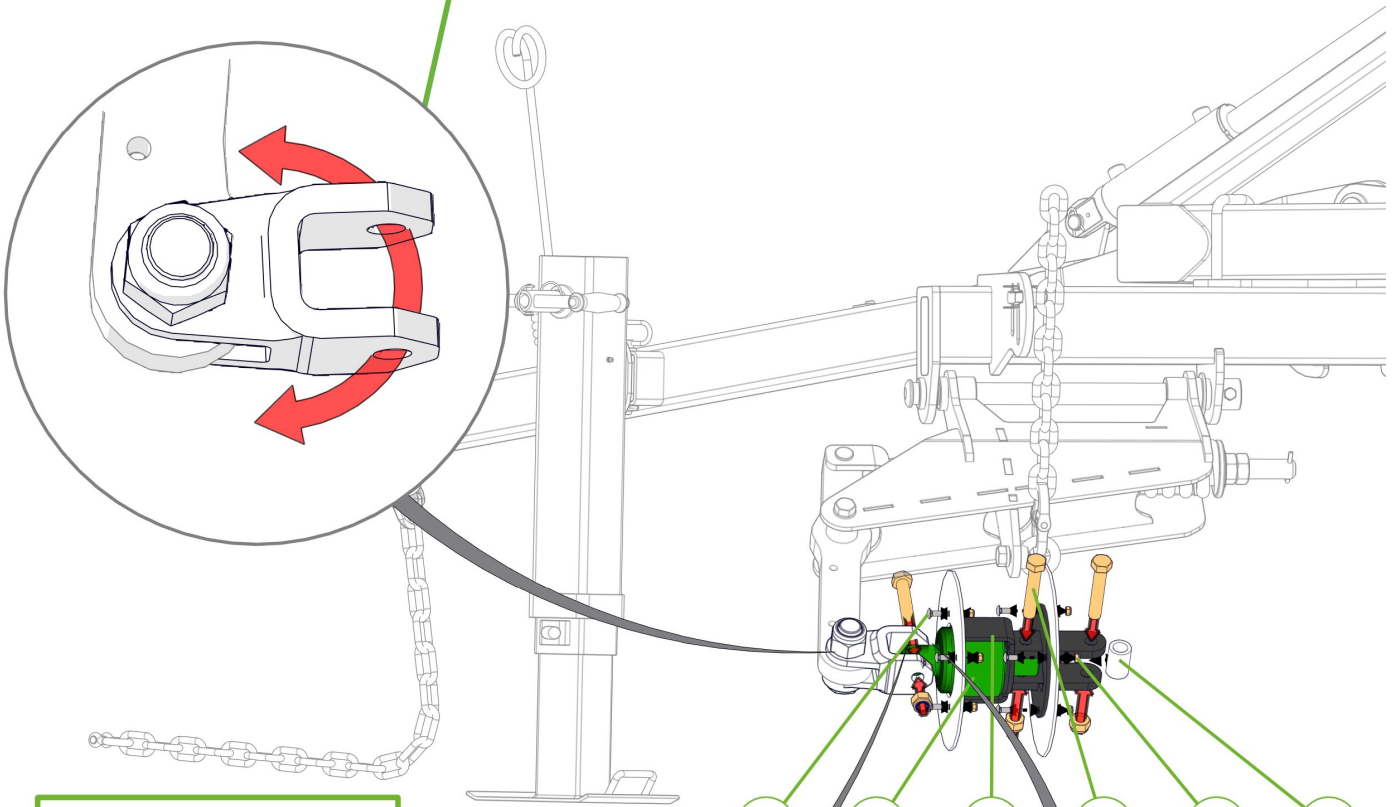


Item No.	Description	Number	Qty
1	Nyloc Nut M8	0221-NYL8	8
2	M8 x 20 Coach Head Bolt	0215-CH0820	8
3	20mm Bolt Swivel Unit	0802-PCHB55	1
4	M20 x 110 Grade 10.9 ZP Short Thread Bolt	0211-20110ST	3
5	Tapered Chain End Hub	0810-45-2	1
6	Disc Chain Spacer	0801-PCDCS55	1



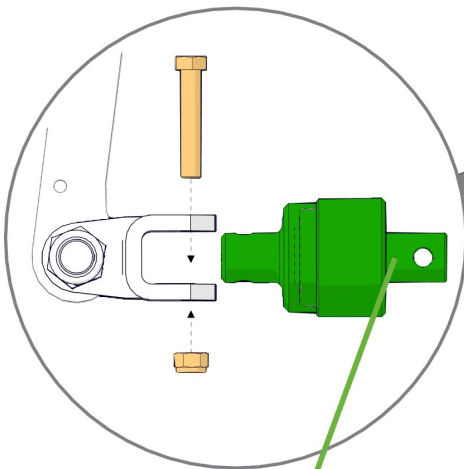
1410-28A-AS2

**Note: Ensure ALL clevis can pivot after installation**

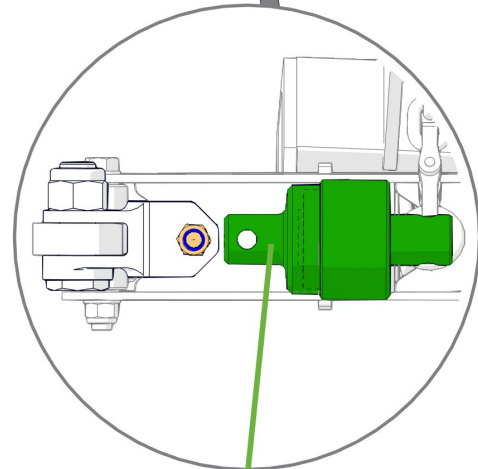


**Note: Ensure ALL bearings are correctly orientated.**

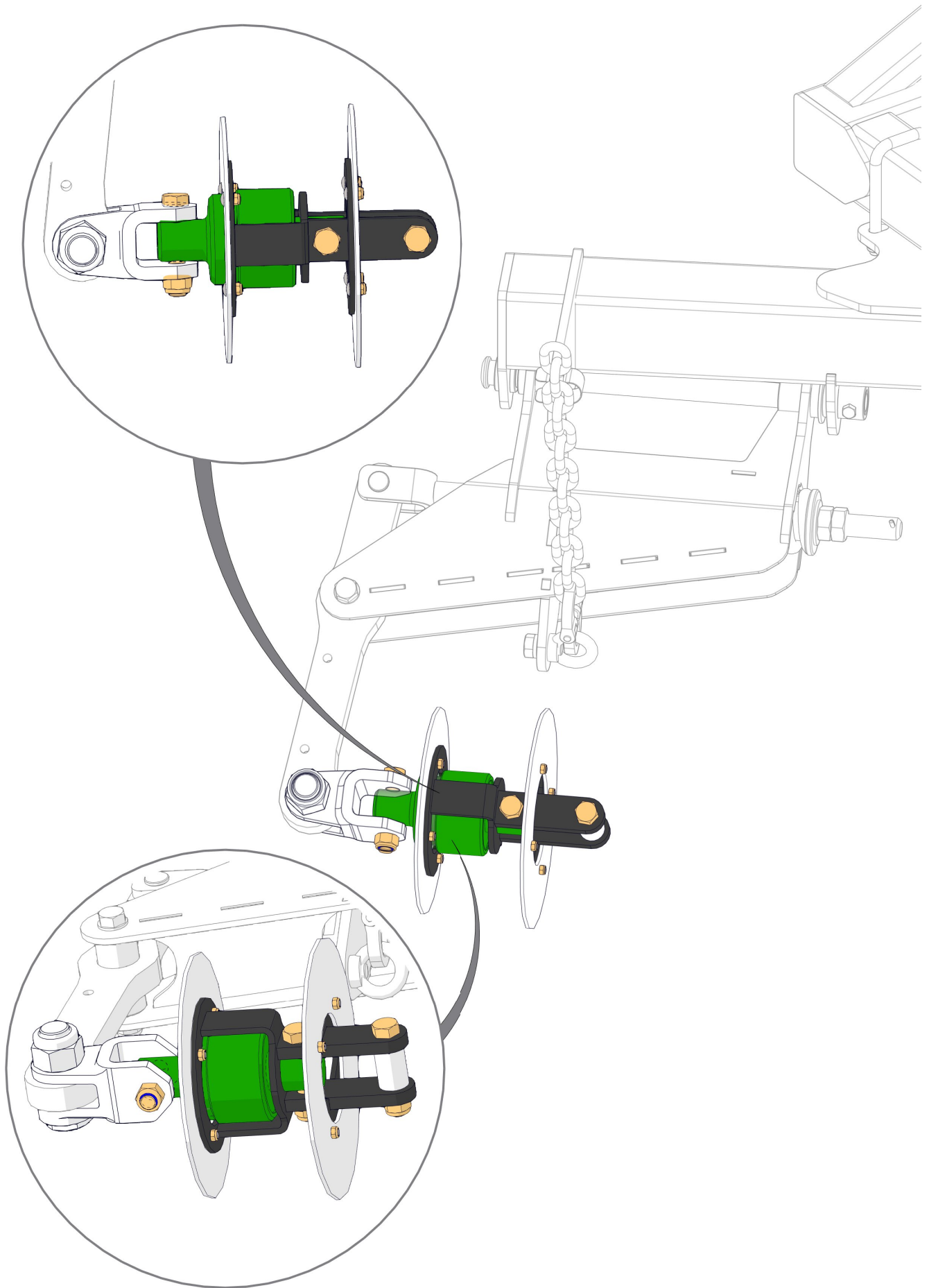
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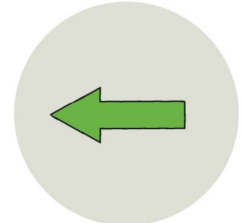
**Rotating seal end of swivel should always face rearward**



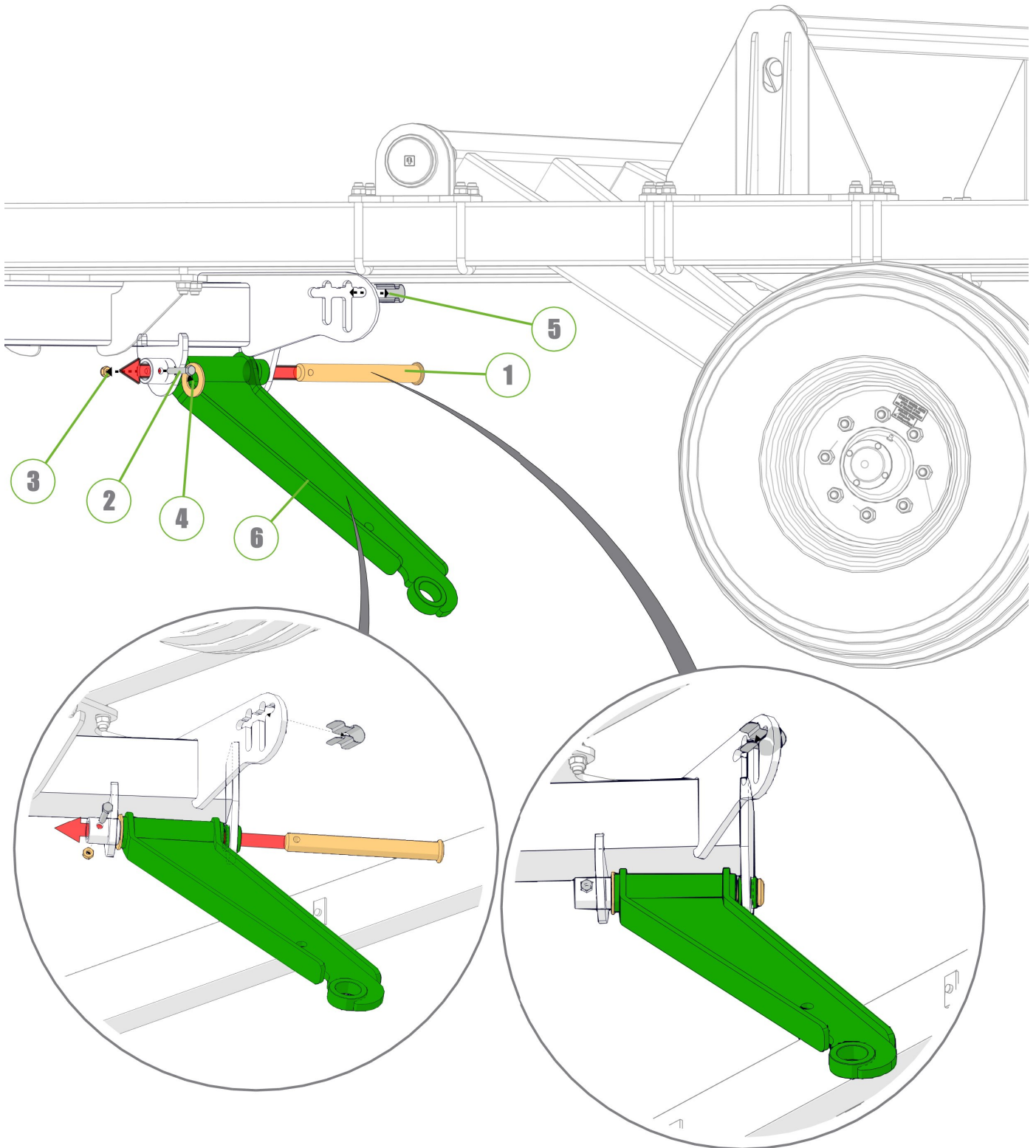
**Fixed housing end of swivel should always face forward**



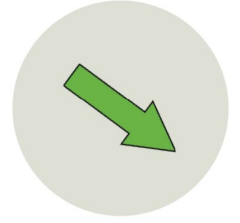
Item No.	Description	Number	Qty
1	Chain Mount Pivot Pin 301mm	1401-16	1
2	M12 x 65 Grade 8.8 ZP Bolt	0211-1265	1
3	Nyloc Nut M12	0221-NYL12	1
4	Washer High Tensile 1 3/8"	0232-HT13-8	1
5	Height Adjustor Retaining Clip	0801-KE014	1
6	Chain Mount Plate	1510-20	1



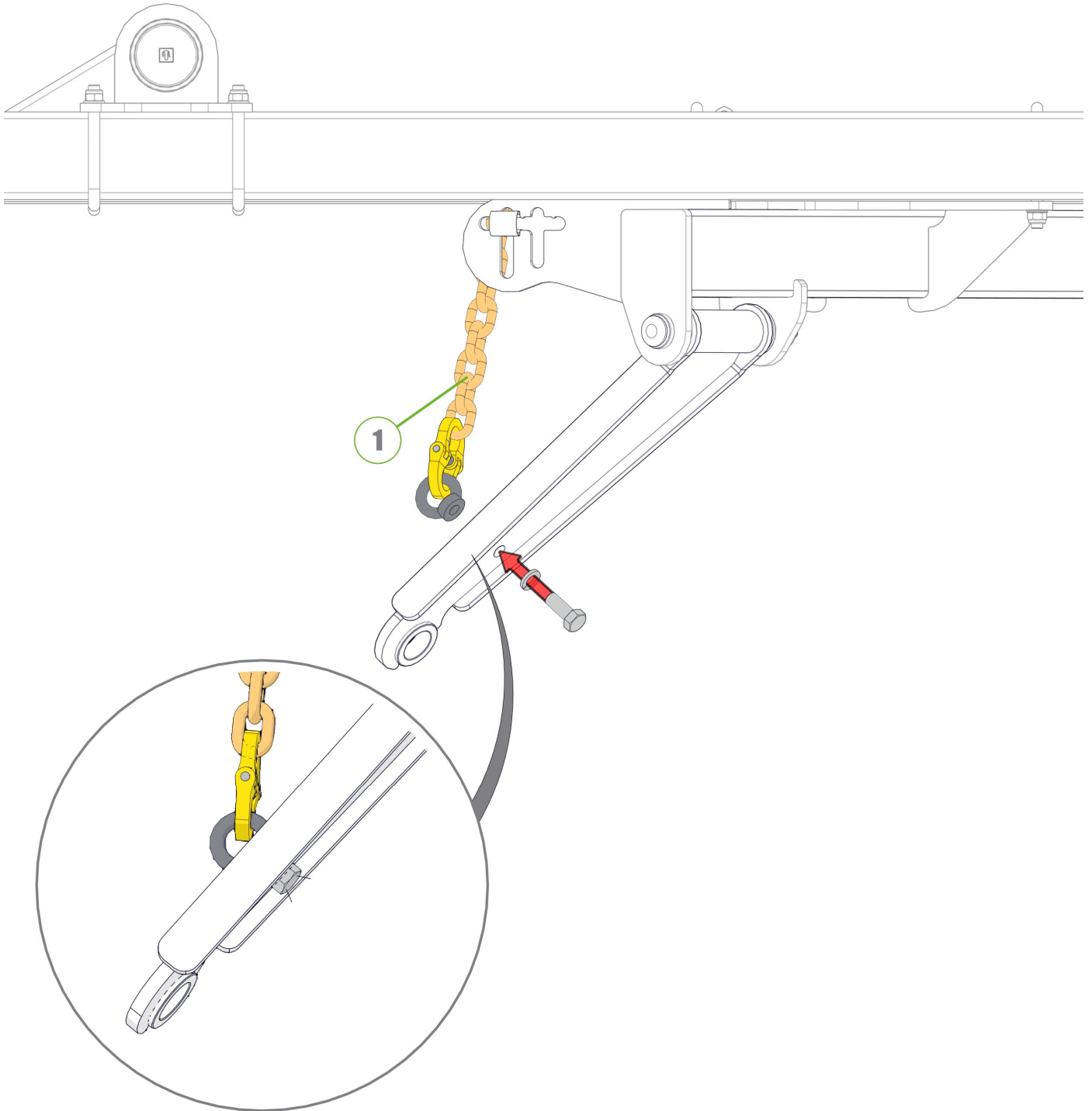
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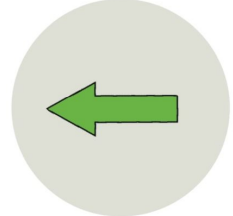
Item No.	Description	Number	Qty
1	Height Adjusting Chain Assembly 13 Link	0801-20MCA	1



1410-28A-AS2

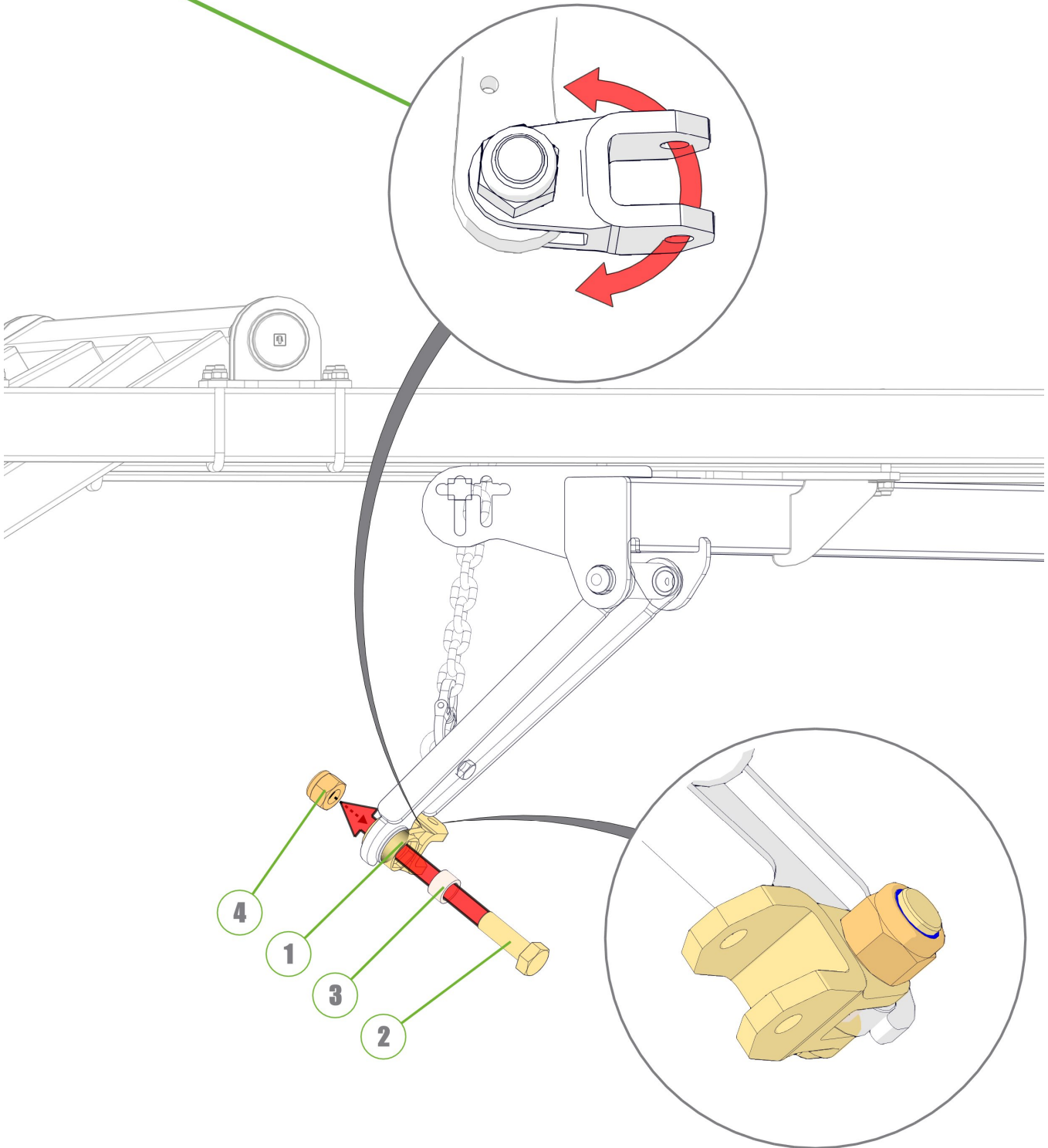


Item No.	Description	Number	Qty
1	Forged Clevis 21mm Bolt Hole	0801-FC21	1
2	M36 x 105 grade 8.8 ZP Bolt	0211-36105	1
3	Wear Bush	1501-365033-SS	1
4	Nyloc Nut M36	0221-NYL36	1

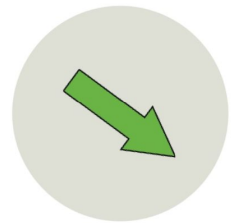


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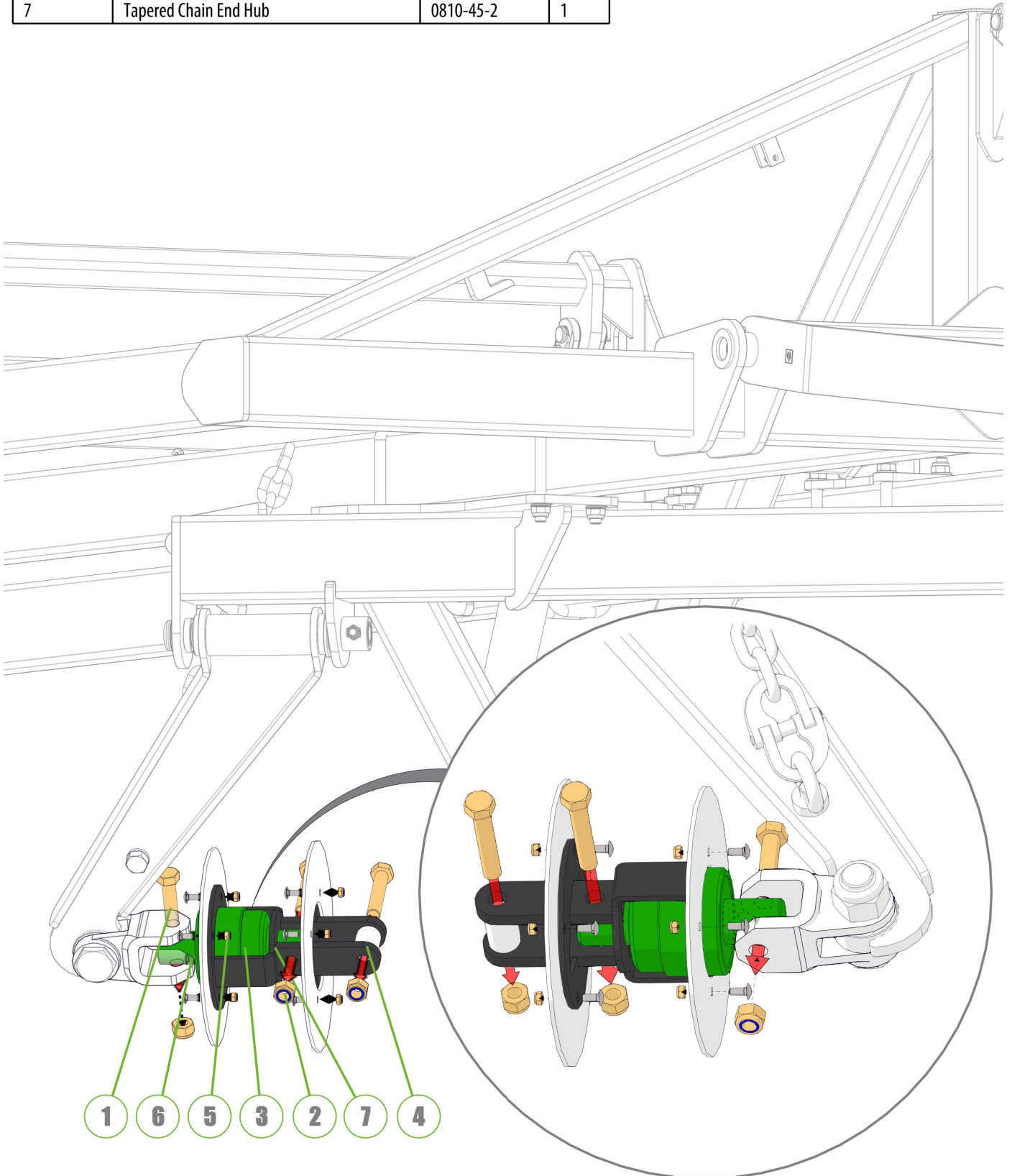
**Note: Ensure ALL clevis can pivot after installation**



Item No.	Description	Number	Qty
1	M20 x 110 Grade 10.9 ZP Short Thread Bolt	0211-20110ST	3
2	Nyloc Nut M20	0221-NYL20	3
3	20mm Bolt Swivel Unit	0802-PCHB55	1
4	Disc Chain Spacer	0801-PCDCS55	1
5	Nyloc Nut M8	0221-NYL8	8
6	M8 x 20 Coach Head Bolt	0215-CH0820	8
7	Tapered Chain End Hub	0810-45-2	1



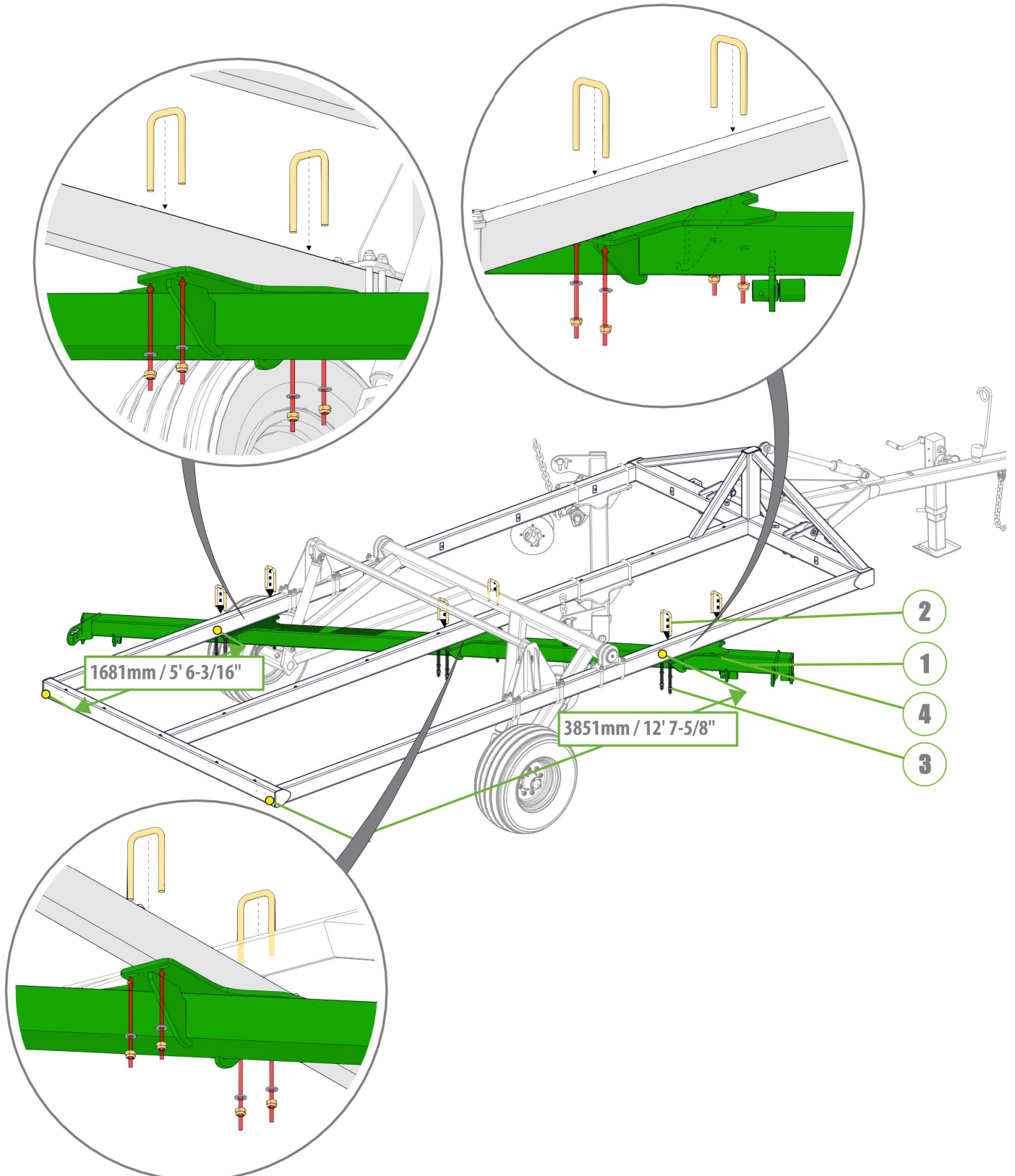
1410-28A-AS2



Item No.	Description	Number	Qty
1	Centre Module	1410-29	1
2	U-Bolt M16 x 167 Deep x 79 Wide	0271-1616779U	6
3	Nyloc Nut M16	0221-NYL16	12
4	Washer Flat M16	0231-F16	12

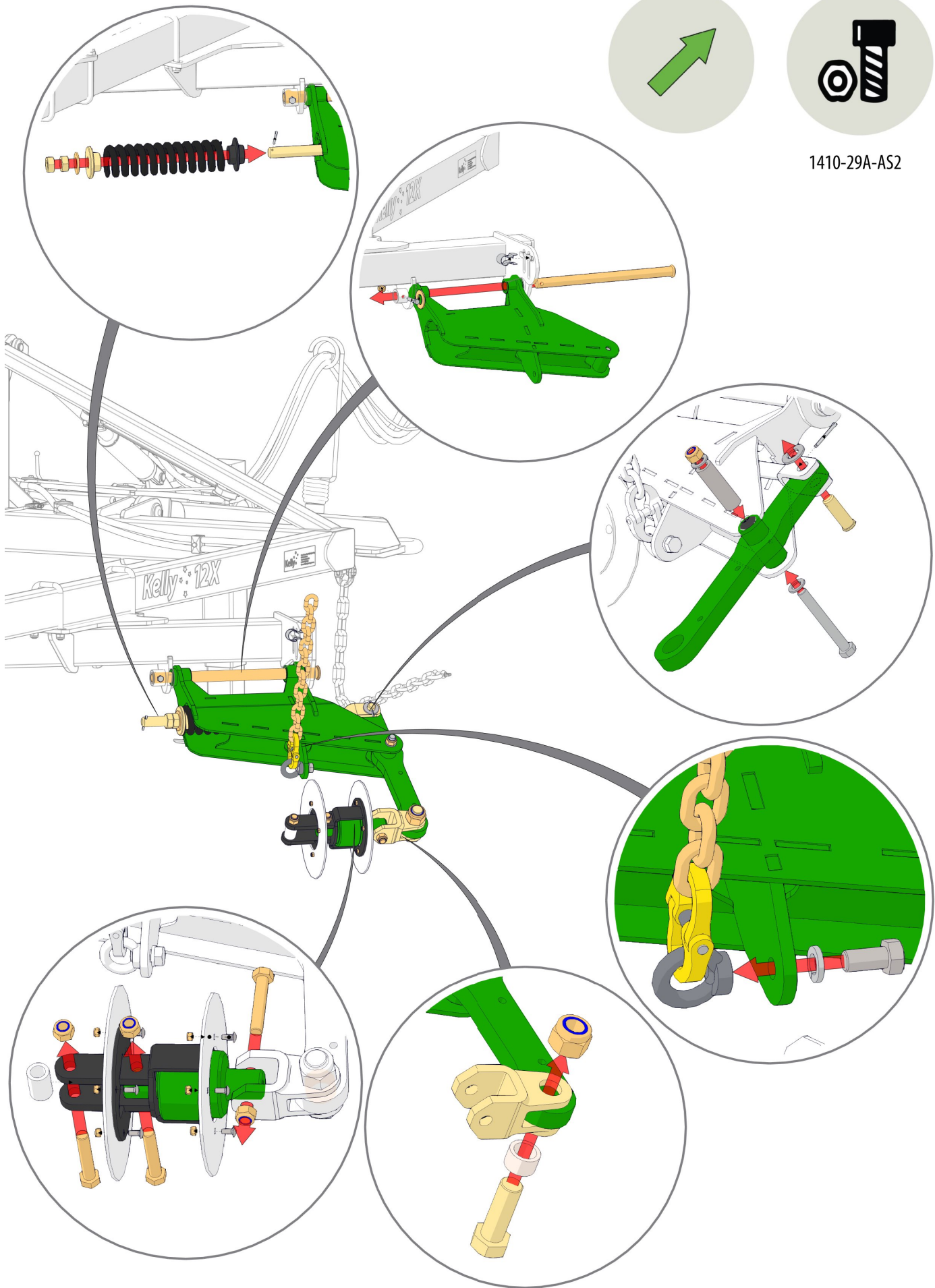


1410-29A-AS2

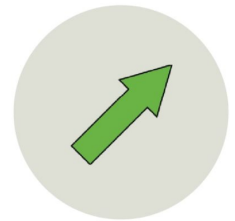
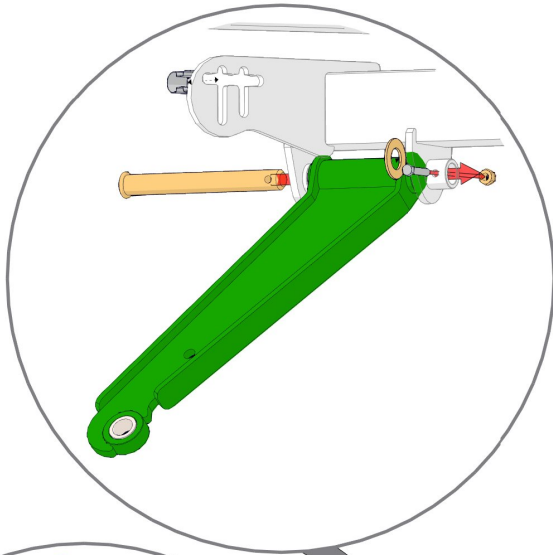




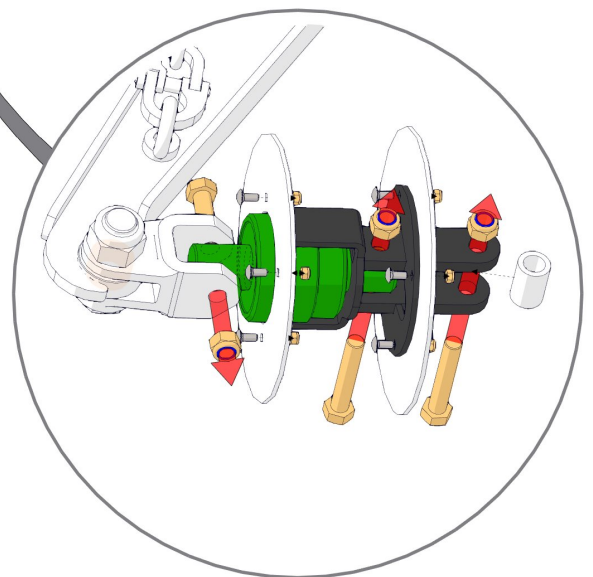
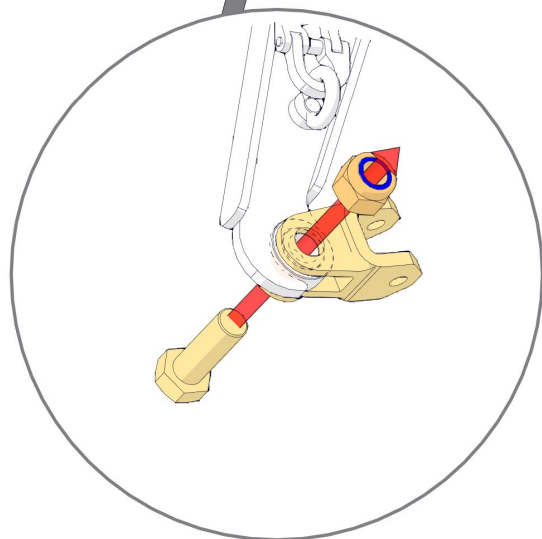
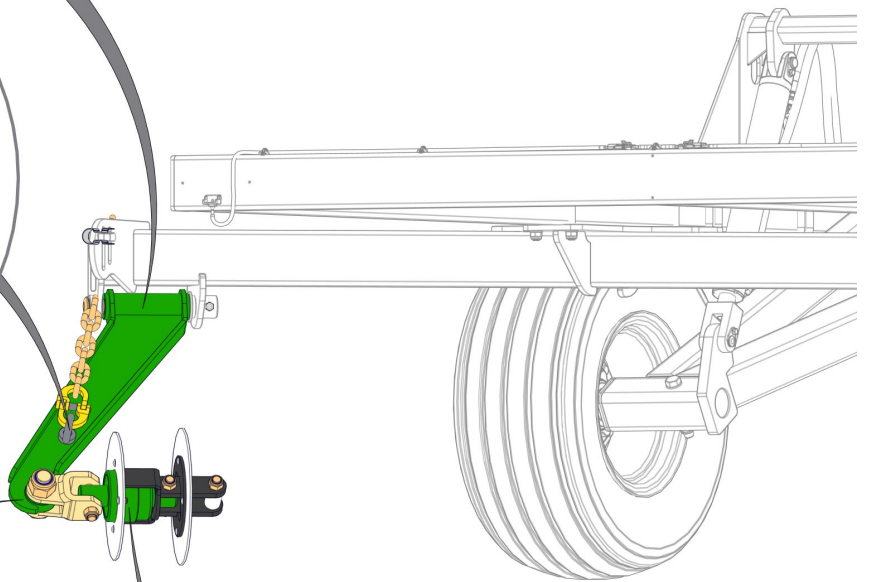
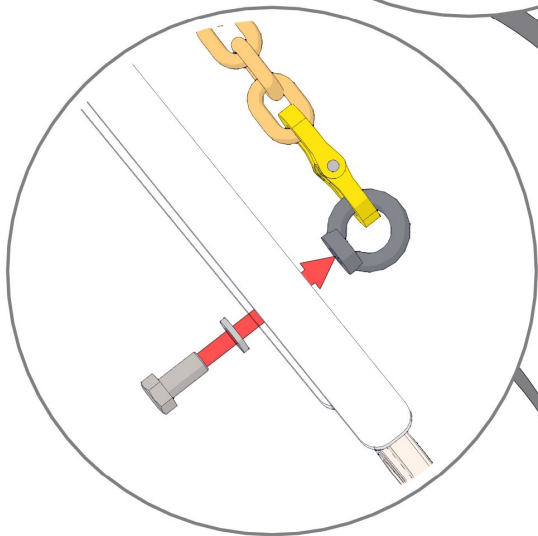
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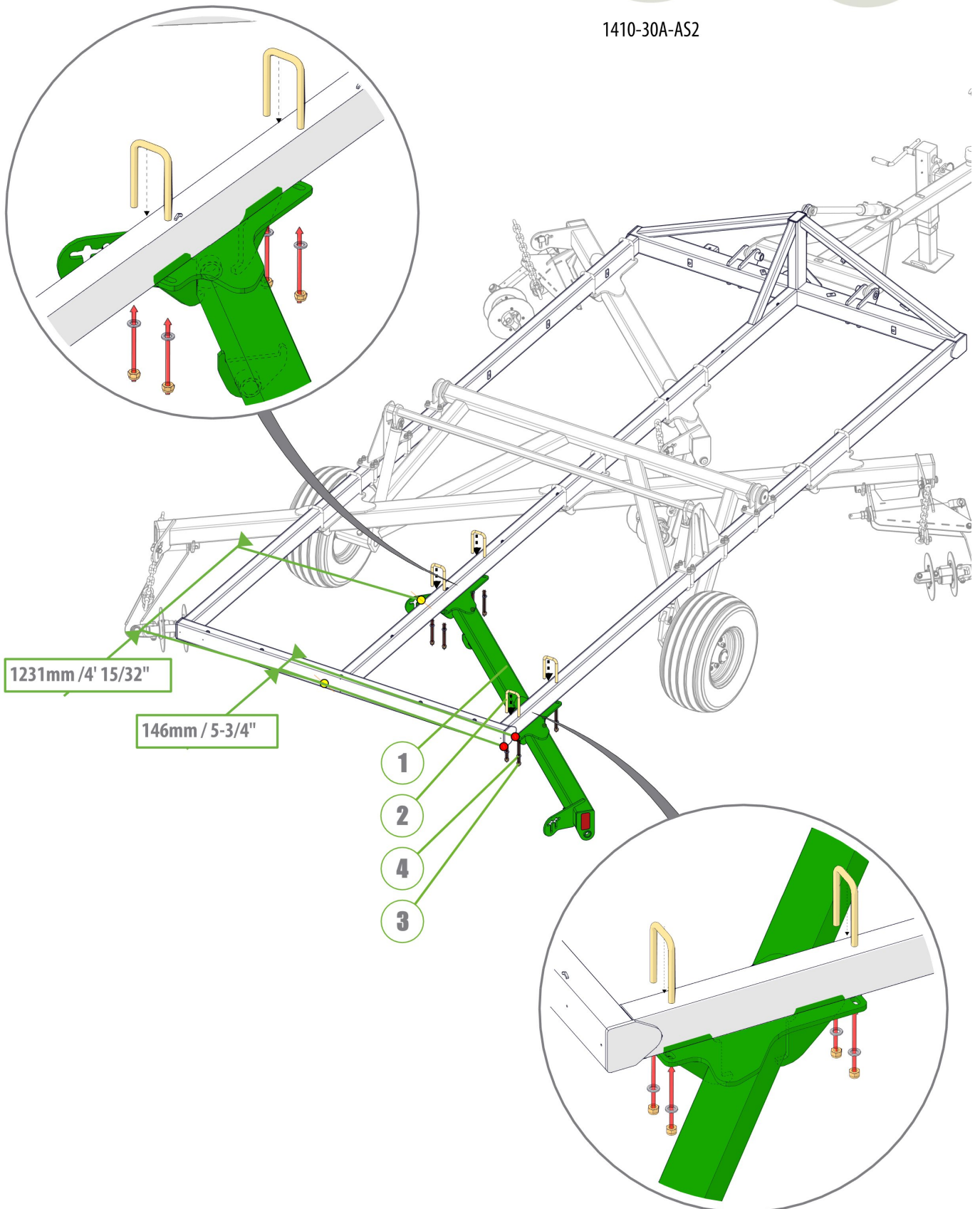
1410-29A-AS2



Item No.	Description	Number	Qty
1	Rear Module	1410-30	1
2	U-Bolt M16 x 167 Deep X 79 Wide	0271-1616779U	4
3	Nyloc Nut M16	0221-NYL16	8
4	Washer Flat M16	0231-F16	8



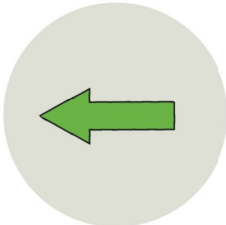
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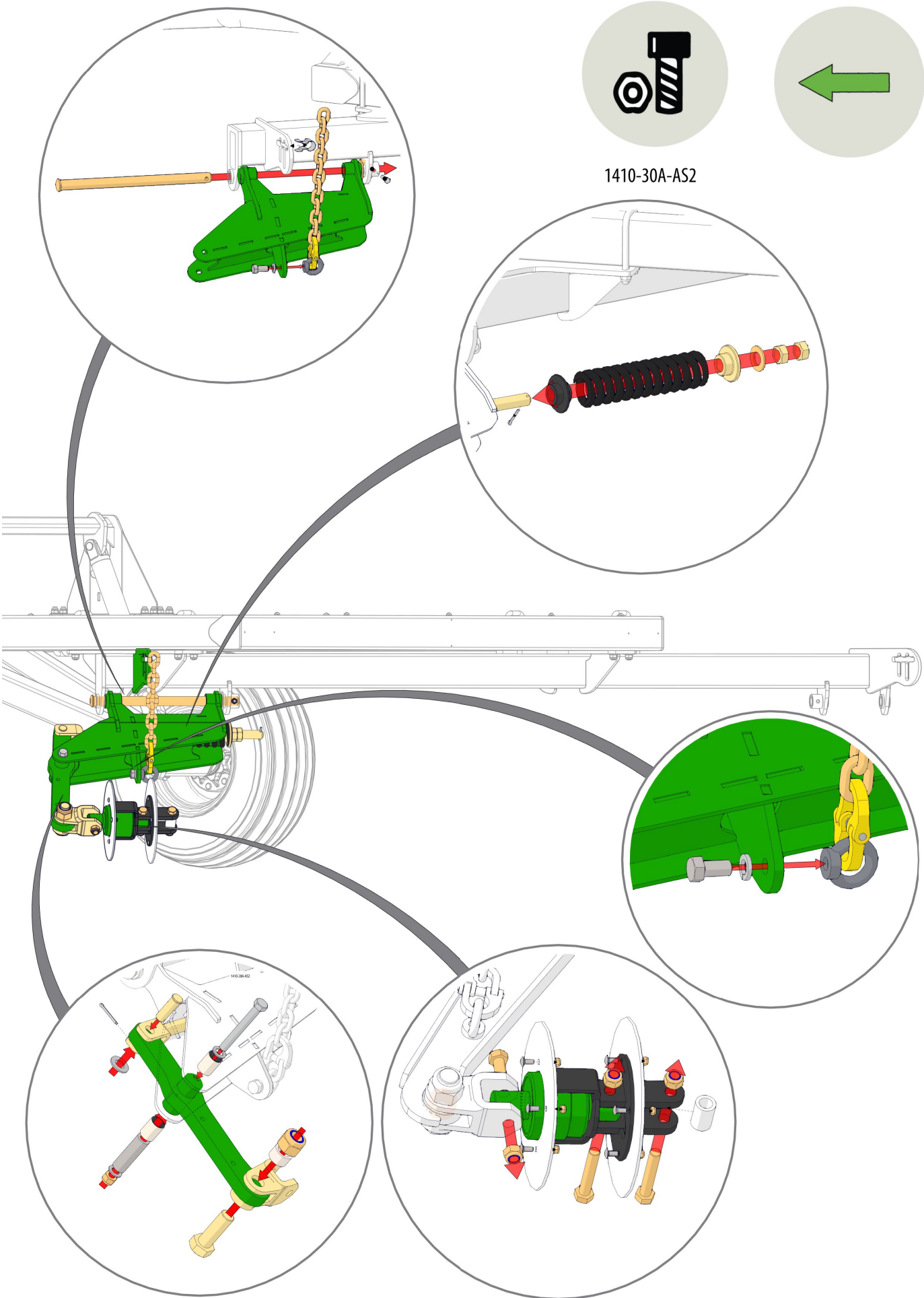
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- 2
- 4
- 3

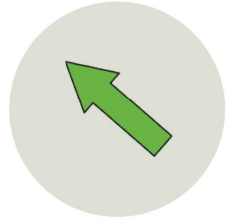
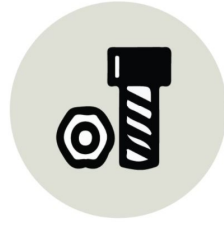
1231mm / 4' 15/32"

146mm / 5-3/4"

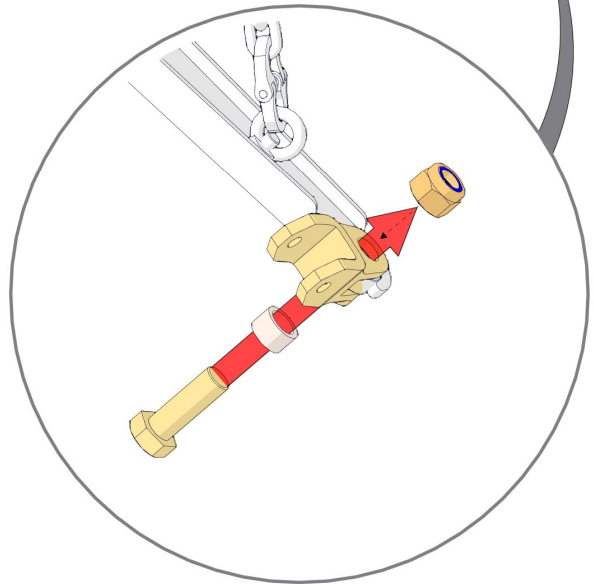
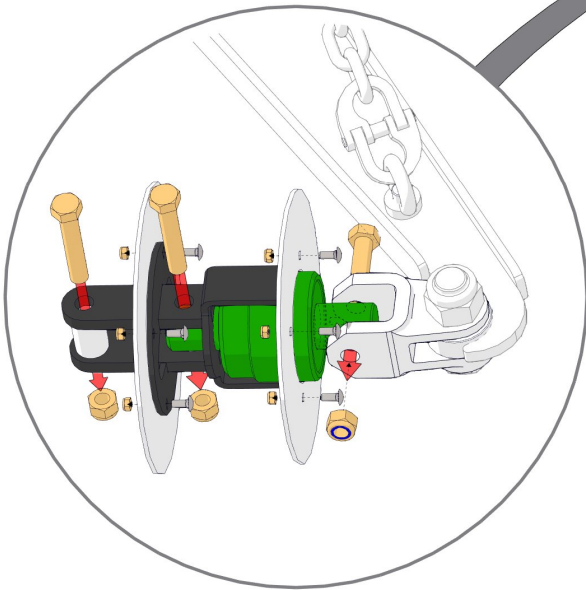
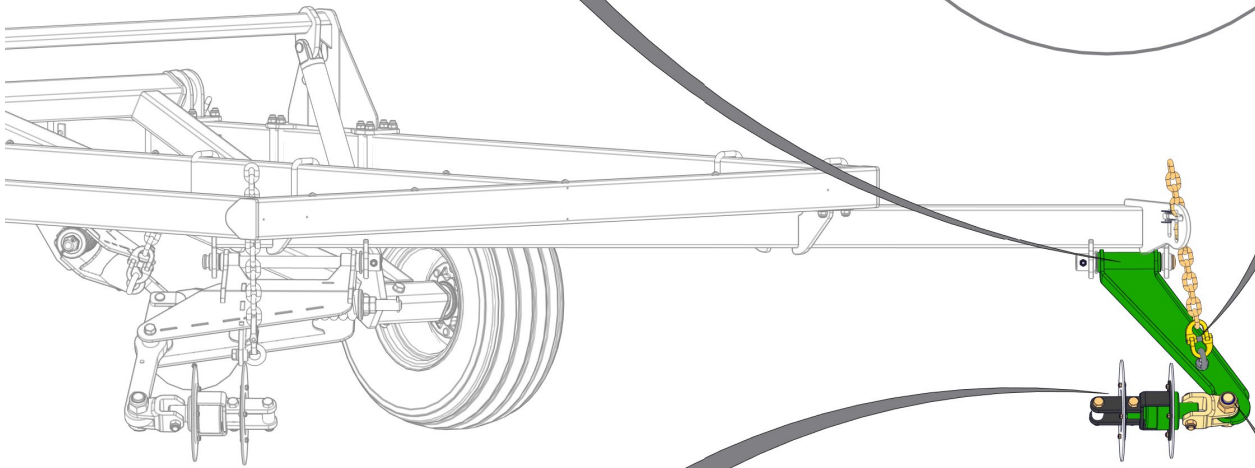
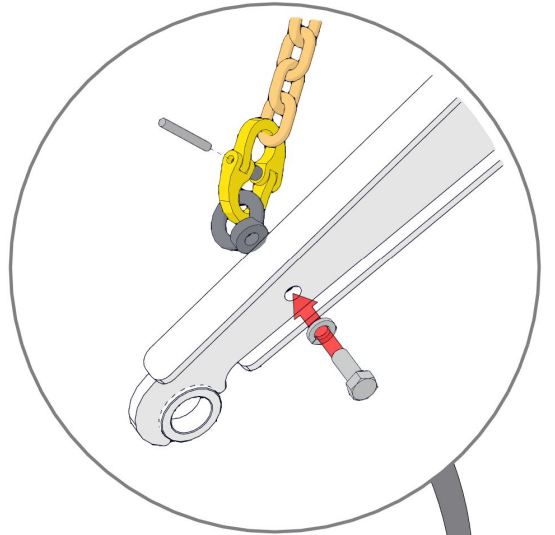
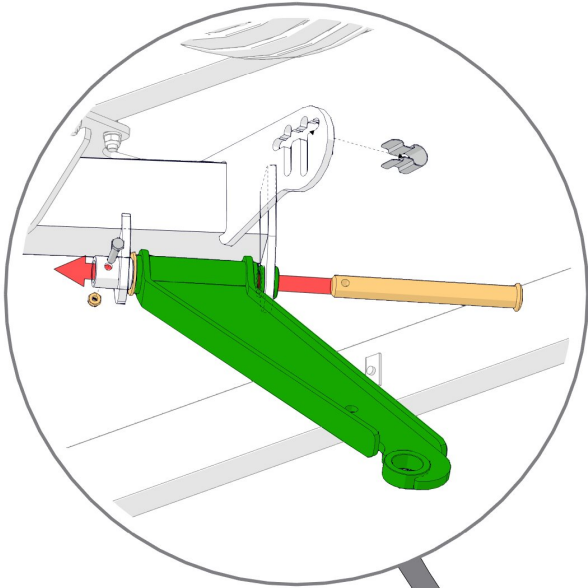


1410-30A-AS2





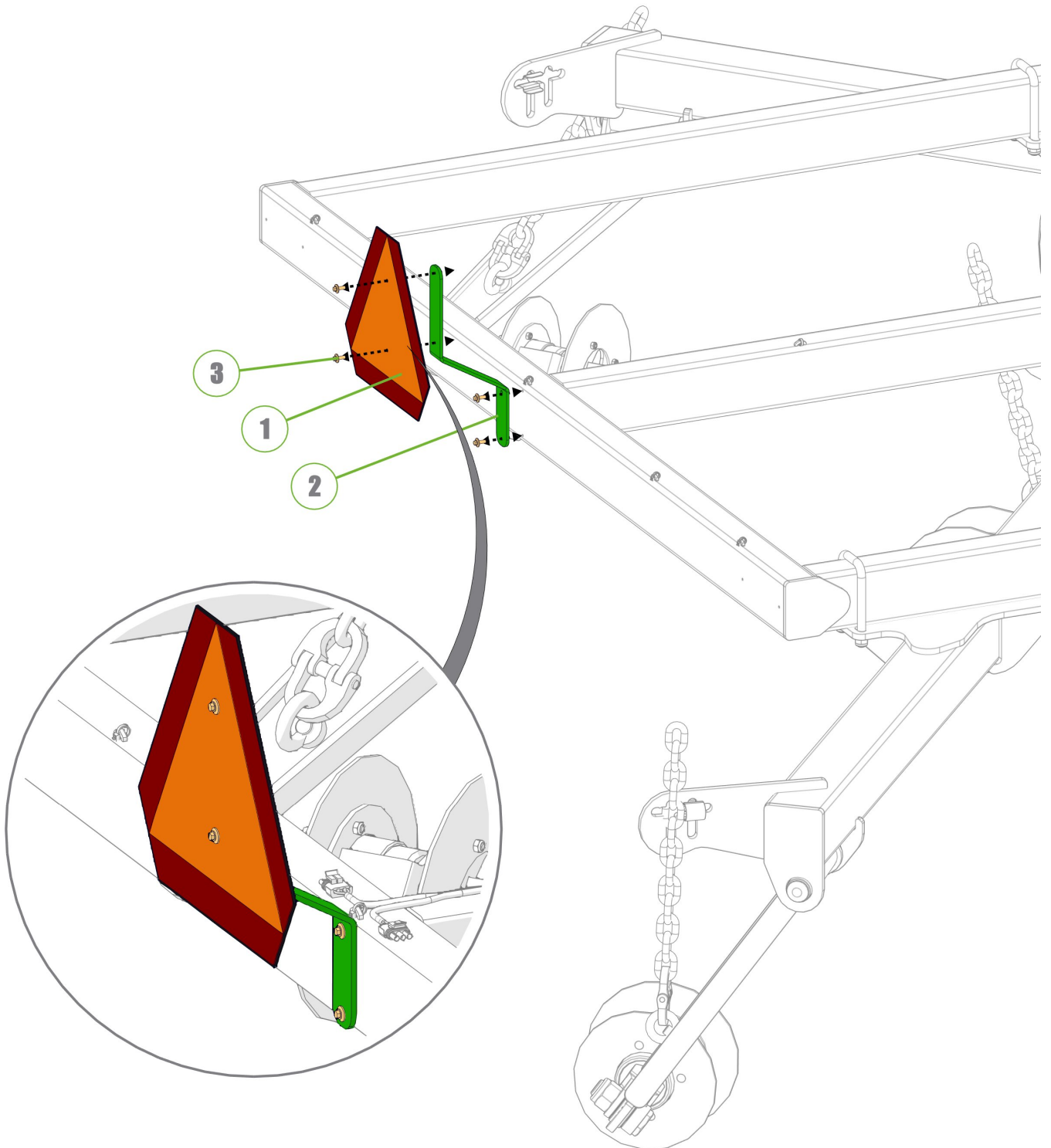
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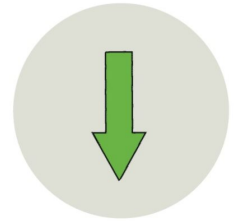
Item No.	Description	Number	Qty
1	Slow Moving Vehical Sign	0801-FBSMVTUF	1
2	SMV Sign Bracket	0800-195.1	1
3	M6 x 20mm Trilobe Screw	0211-M620MZPHTF	4



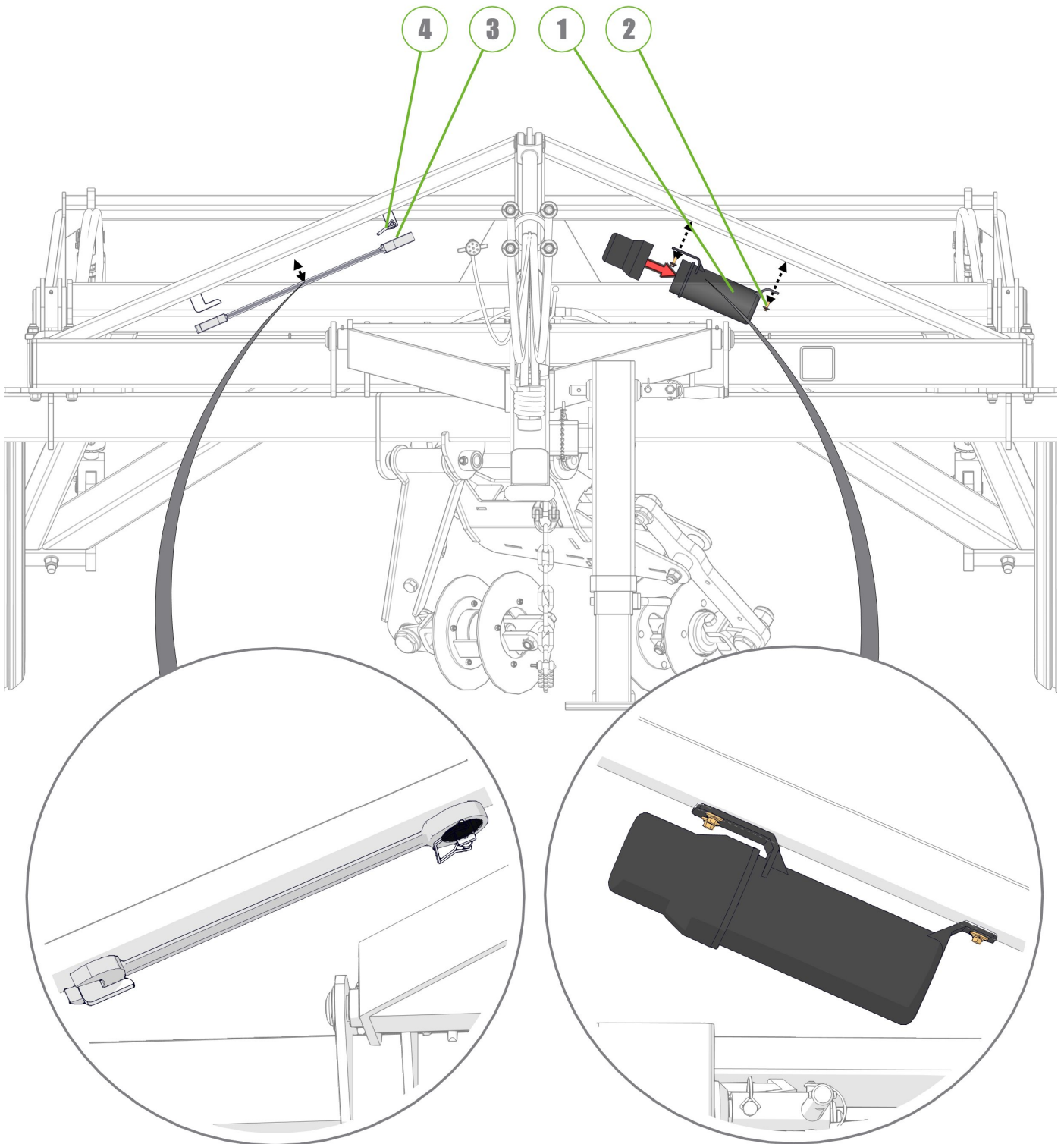
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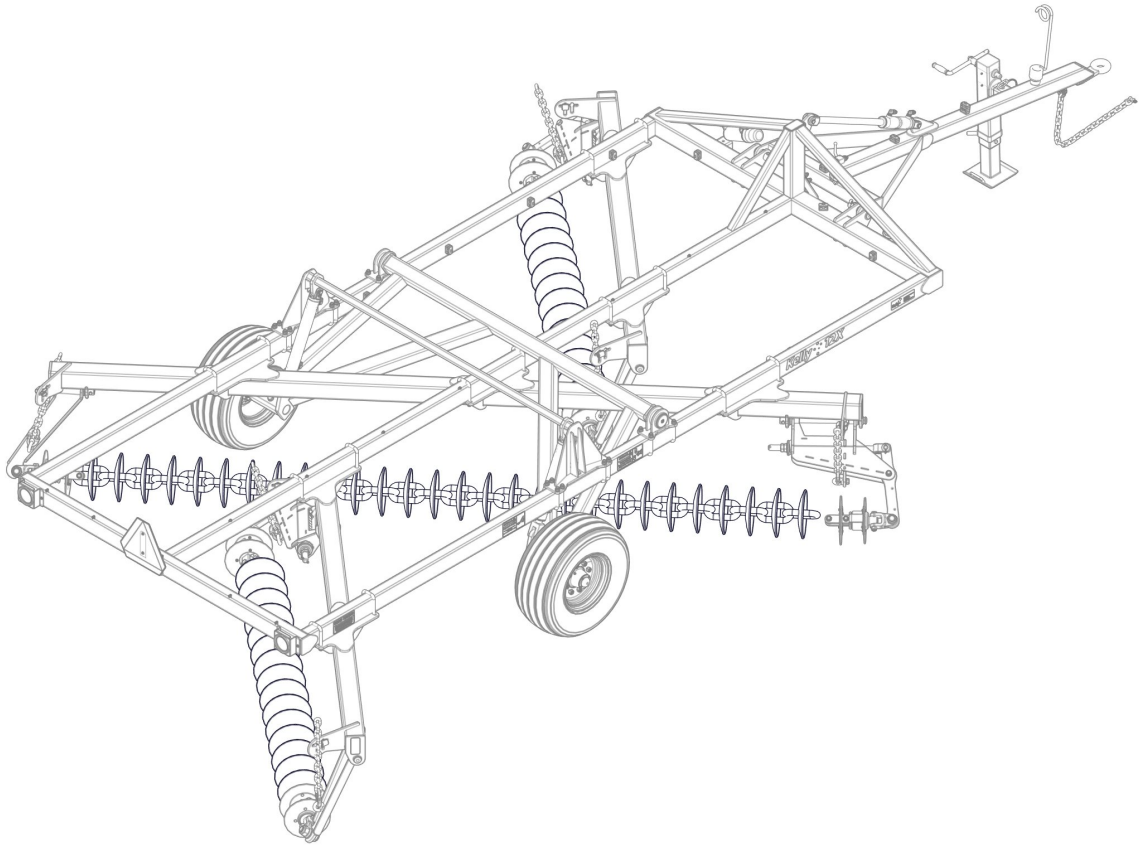


Item No.	Description	Number	Qty
1	Operator Manual Cannister	0801-OMC-1	1
2	M6 x 20mm Trilobe Screw	0211-M620MZPHTF	3
3	Ratcheting Gear Wrench 1 3/4"	0802-GW1 3-4	1
4	Square Loop Pin M8 x 63	0511-PINLOOPSQ863	1



1410-01-2A-AS1





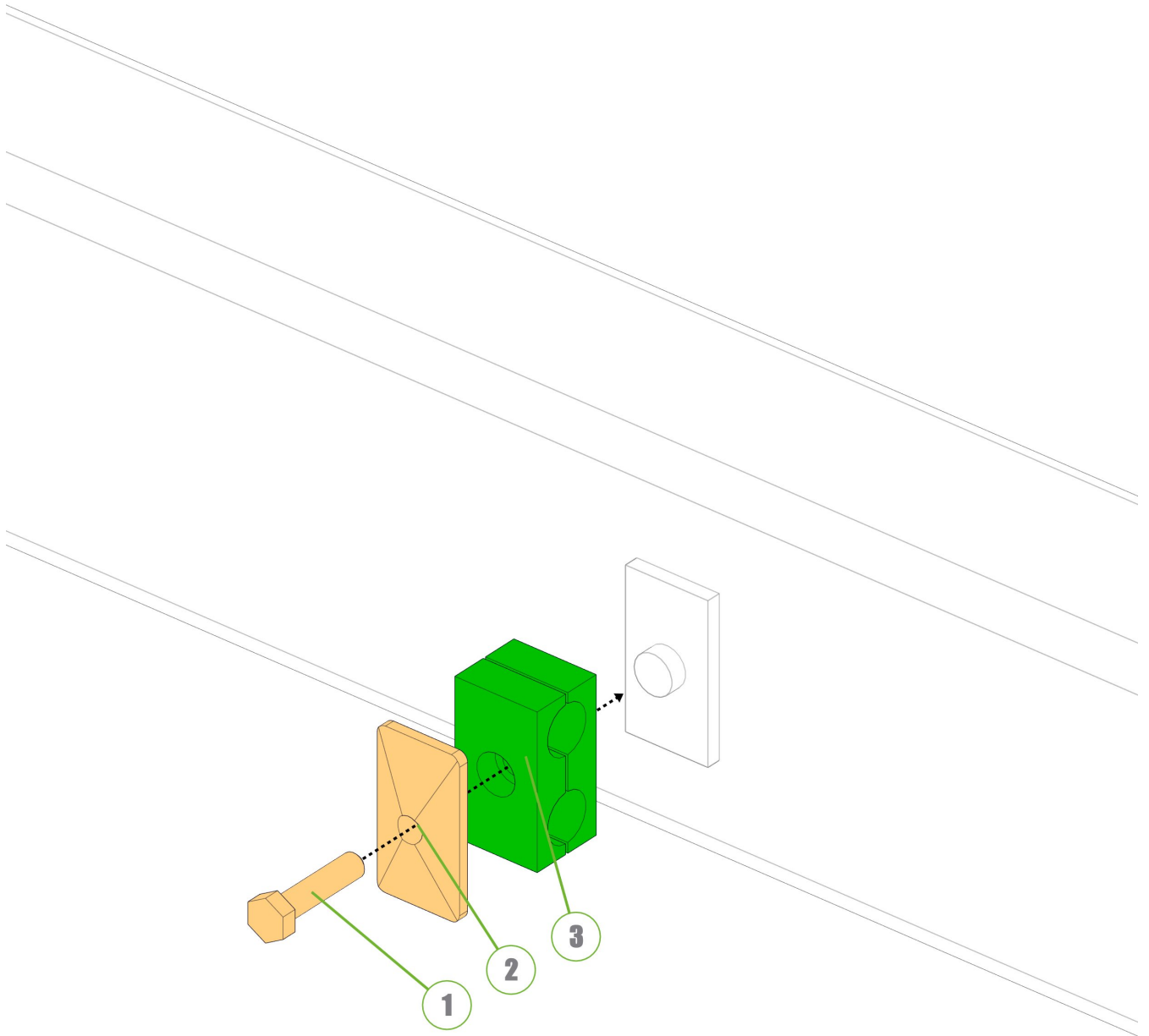


**SECTION 3**  
HYDRAULICS

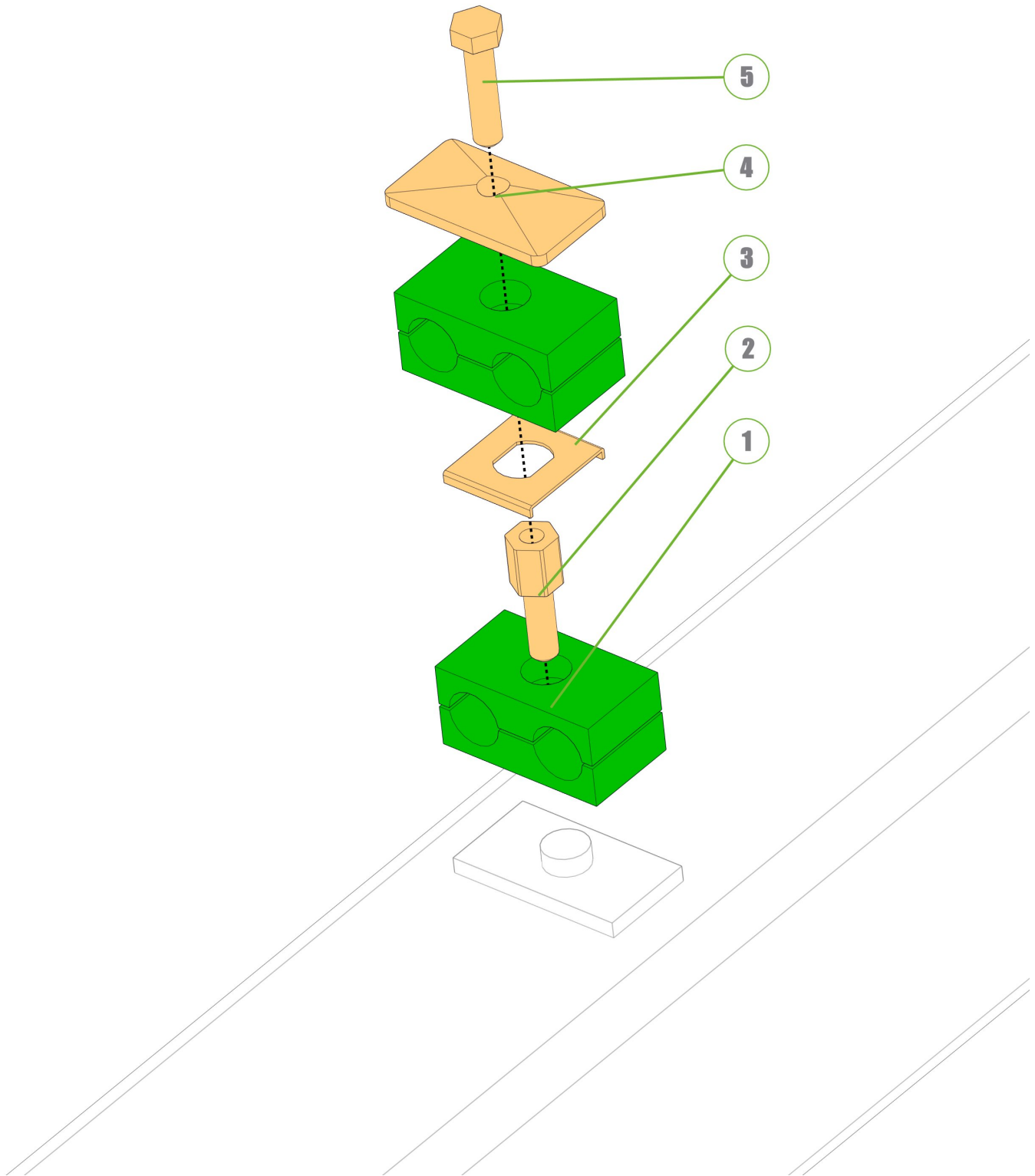


## SECTION 3 HYDRAULICS

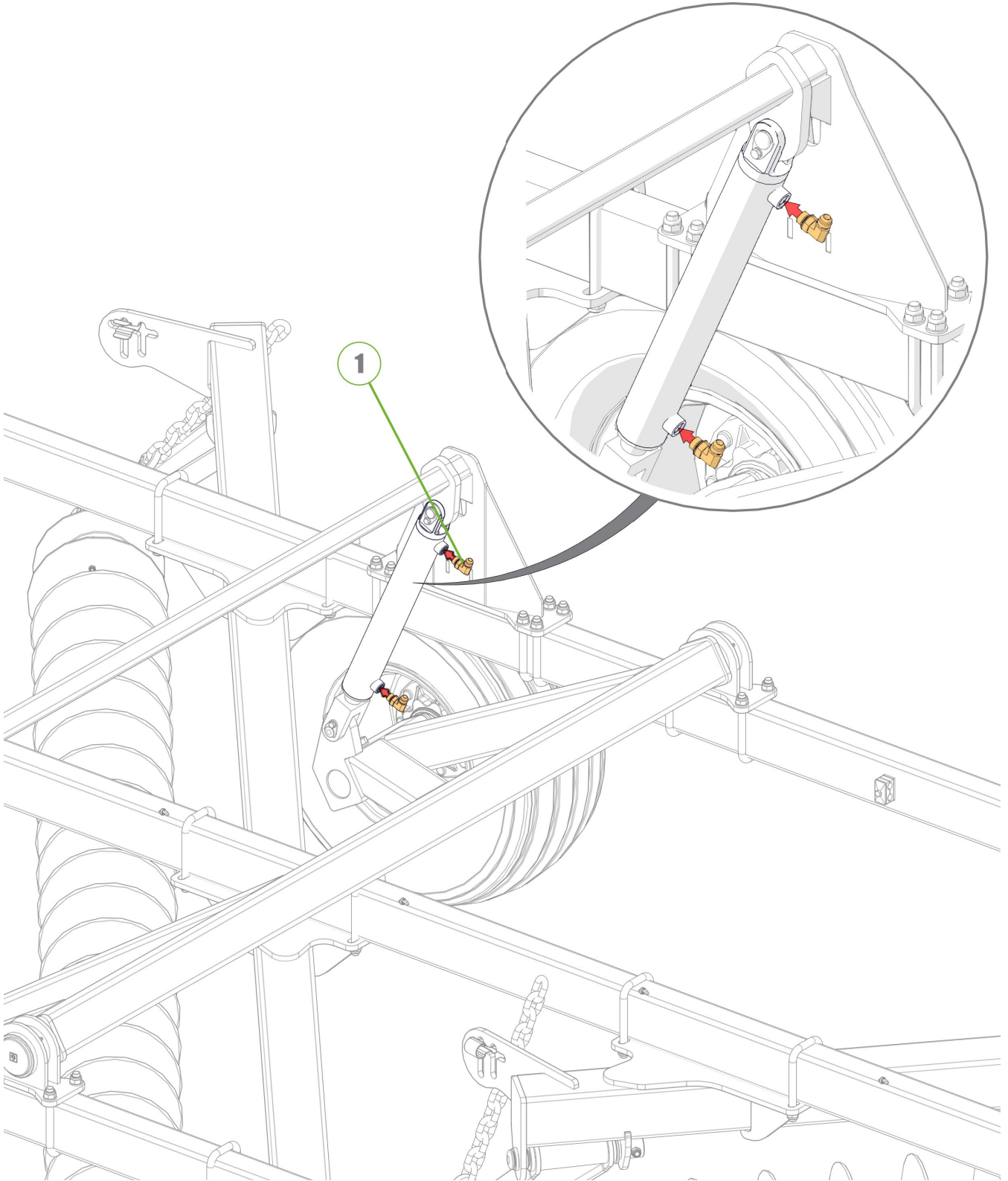
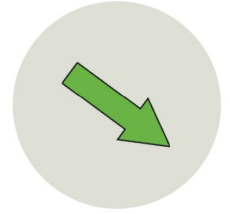
Item No.	Description	Number	Qty
1	RCD Double Clamp Bolt No 2	0325-RCD-2BH	1
2	RCD Double Clamp Top Plate No 2	0325-RCD-2PT	1
3	RCD Double Clamp Jaws 17mm	0325-RCD-17J	1



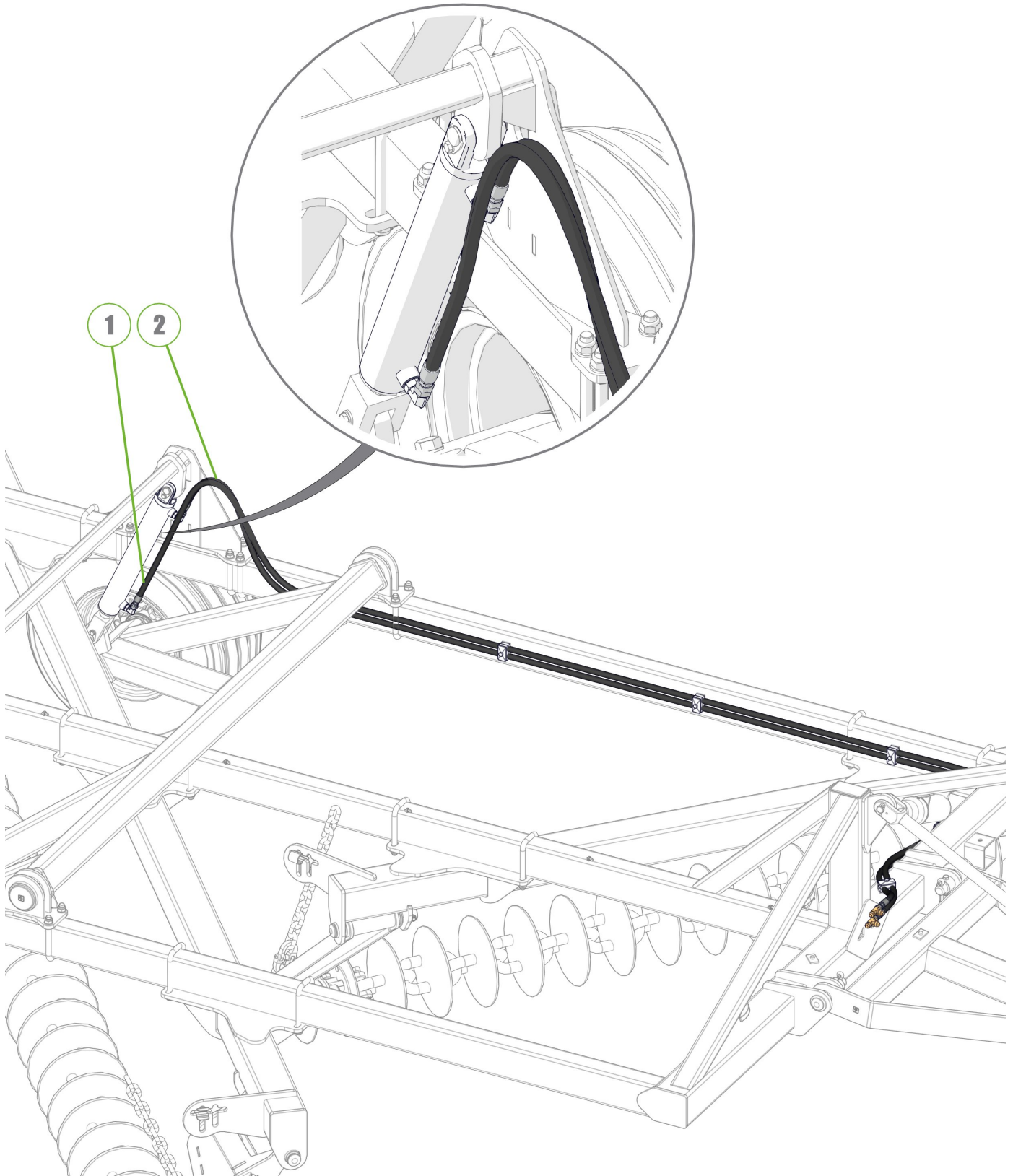
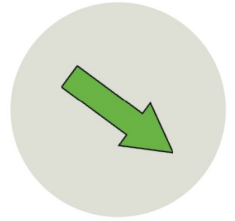
Item No.	Description	Number	Qty
1	RCD Double Clamp Jaws 17mm	0325-RCD-17J	2
2	RCD Double Clamp Stacking Bolt No 2	0325-RCD-2BS	1
3	Double Clamp Stacking Plate (Non Ryco)	0325-SI-2-5D-W3	1
4	RCD Double Clamp Top Plate No 2	0325-RCD-2PT	1
5	RCD Double Clamp Bolt No 2	0325-RCD-2BH	1

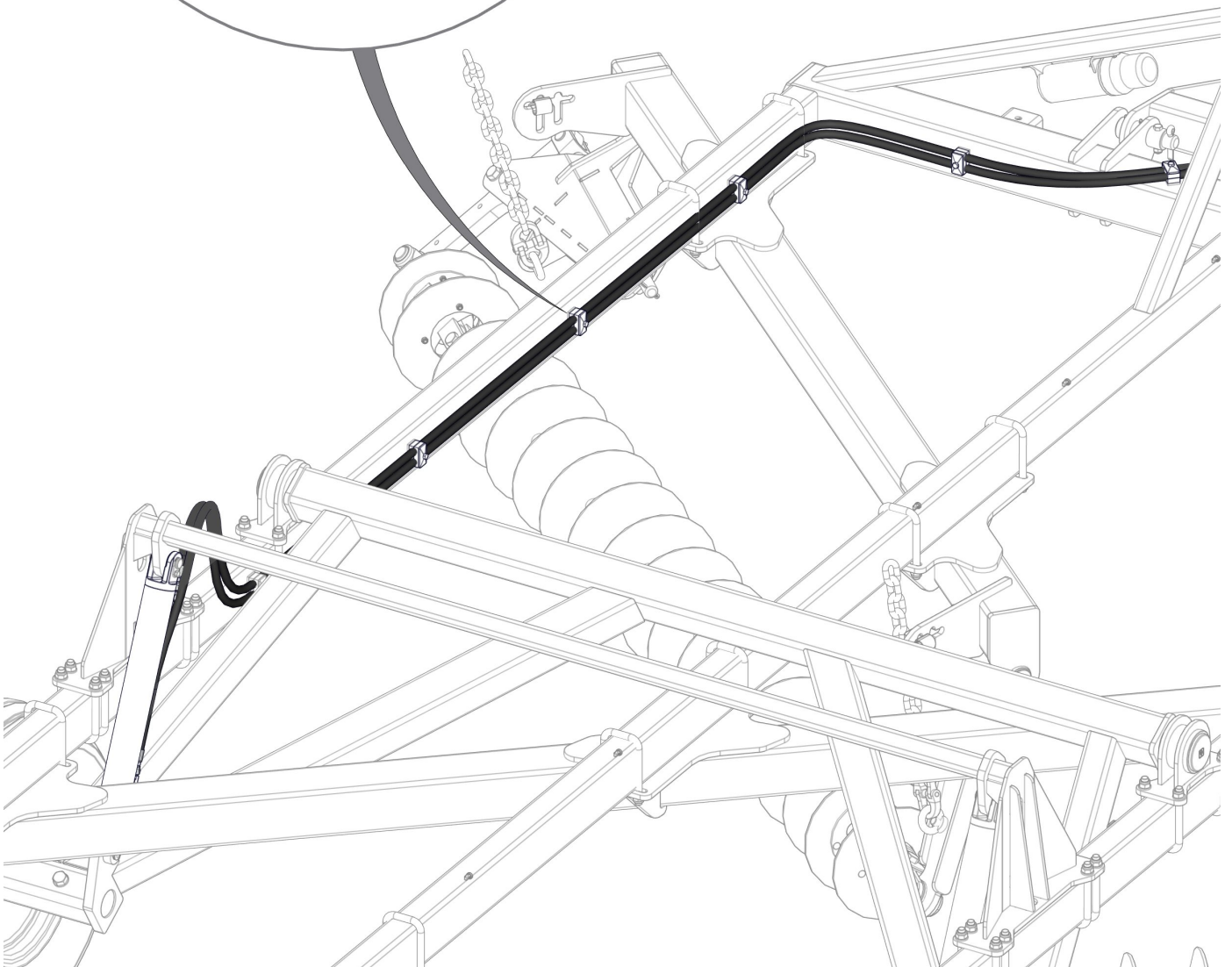
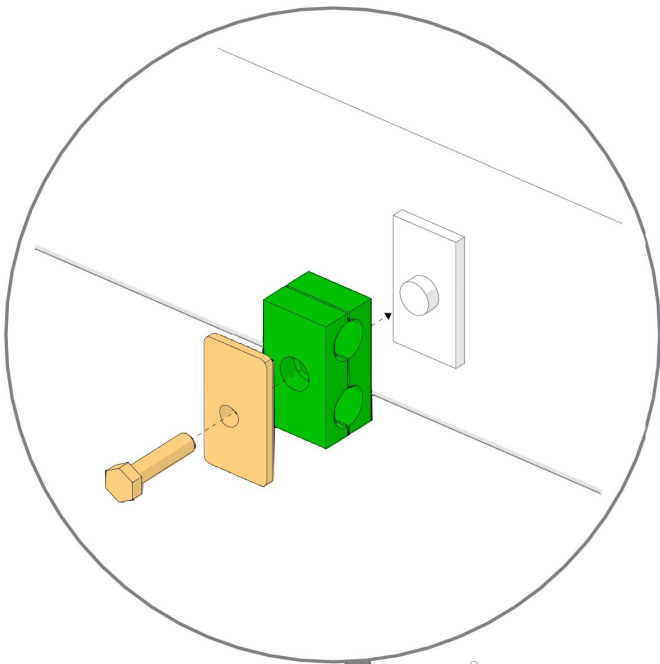


Item No.	Description	Number	Qty
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	0323-S91-1212	2

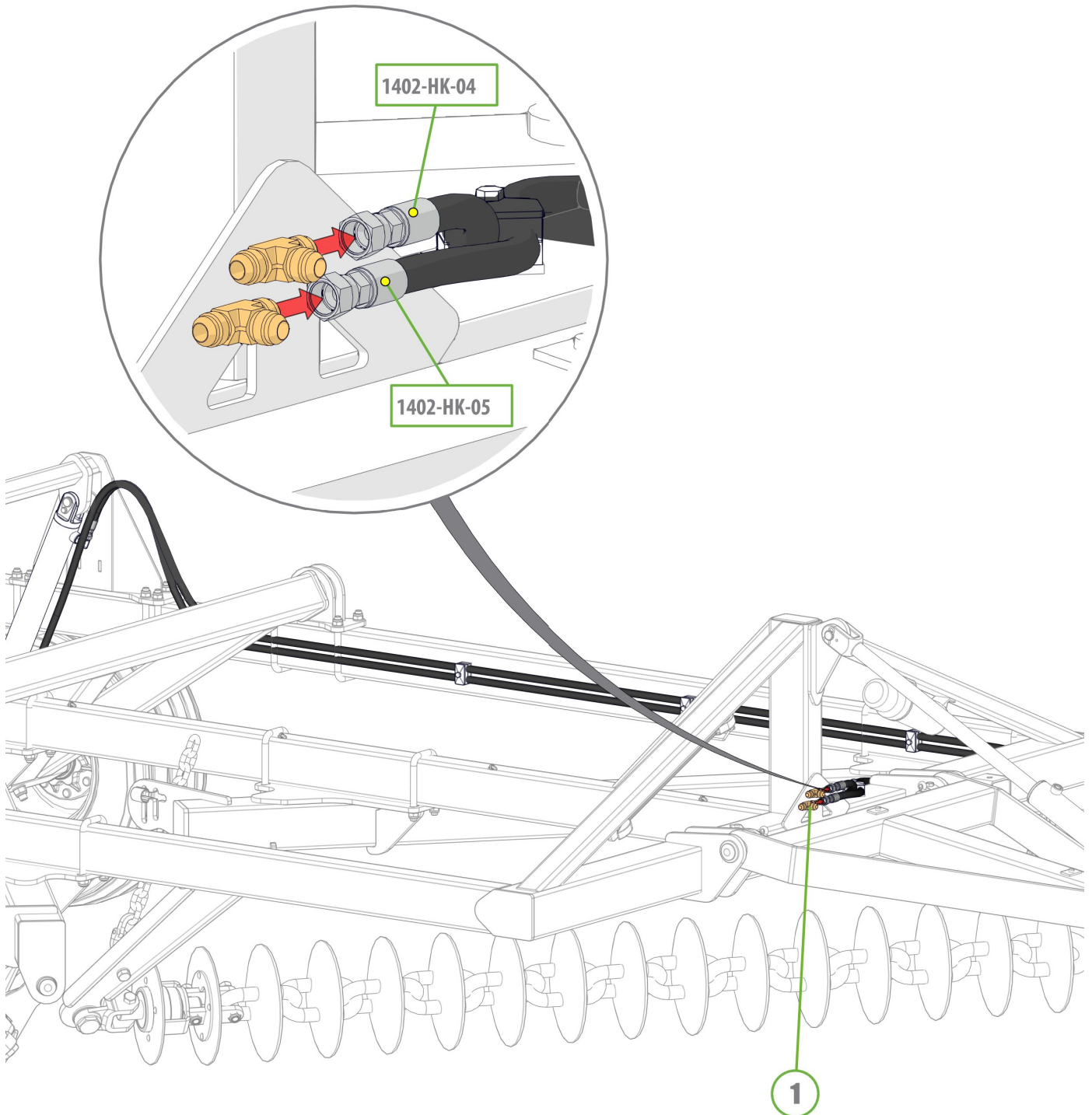
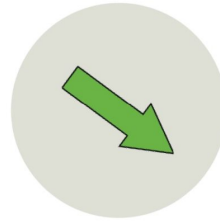


Item No.	Description	Number	Qty
1	Retract Tee To Retract Port of LH Lift Cylinder Hose	1402-HK-05	1
2	Extend Tee To Extend Port of LH Lift Cylinder Hose	1402-HK-04	1

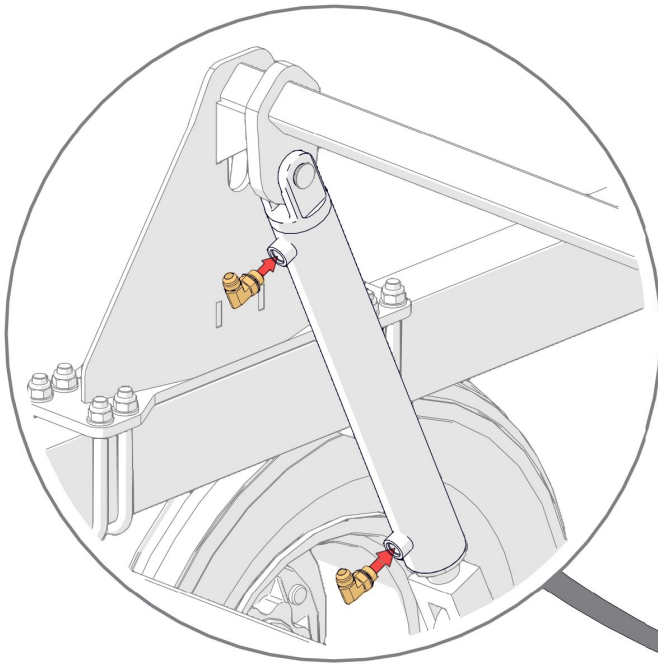




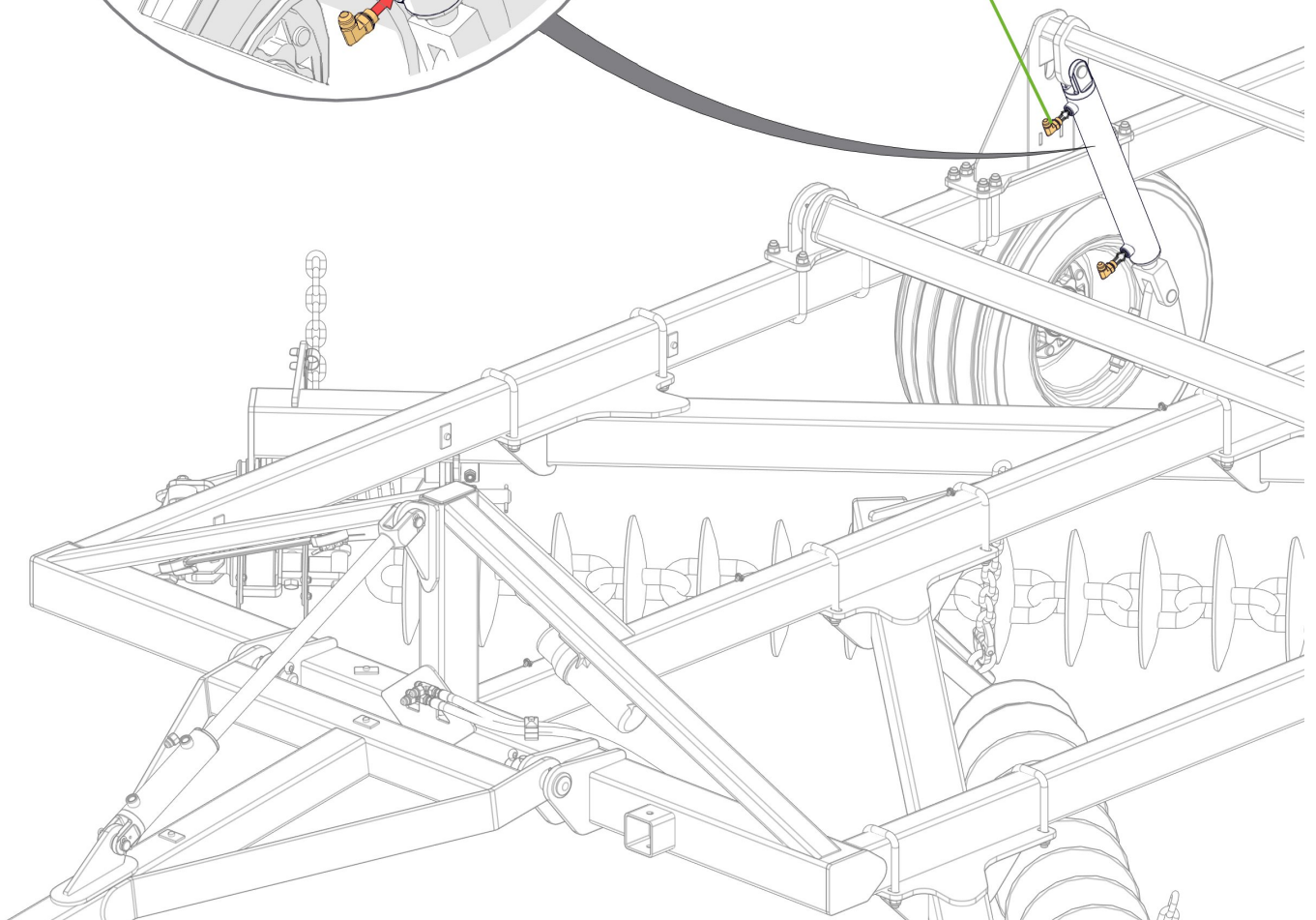
Item No.	Description	Number	Qty
1	3/4" JIC Male Tee 3/4" JIC Male Tee 3/4" JIC Male Tee	0324-S19-121212	2

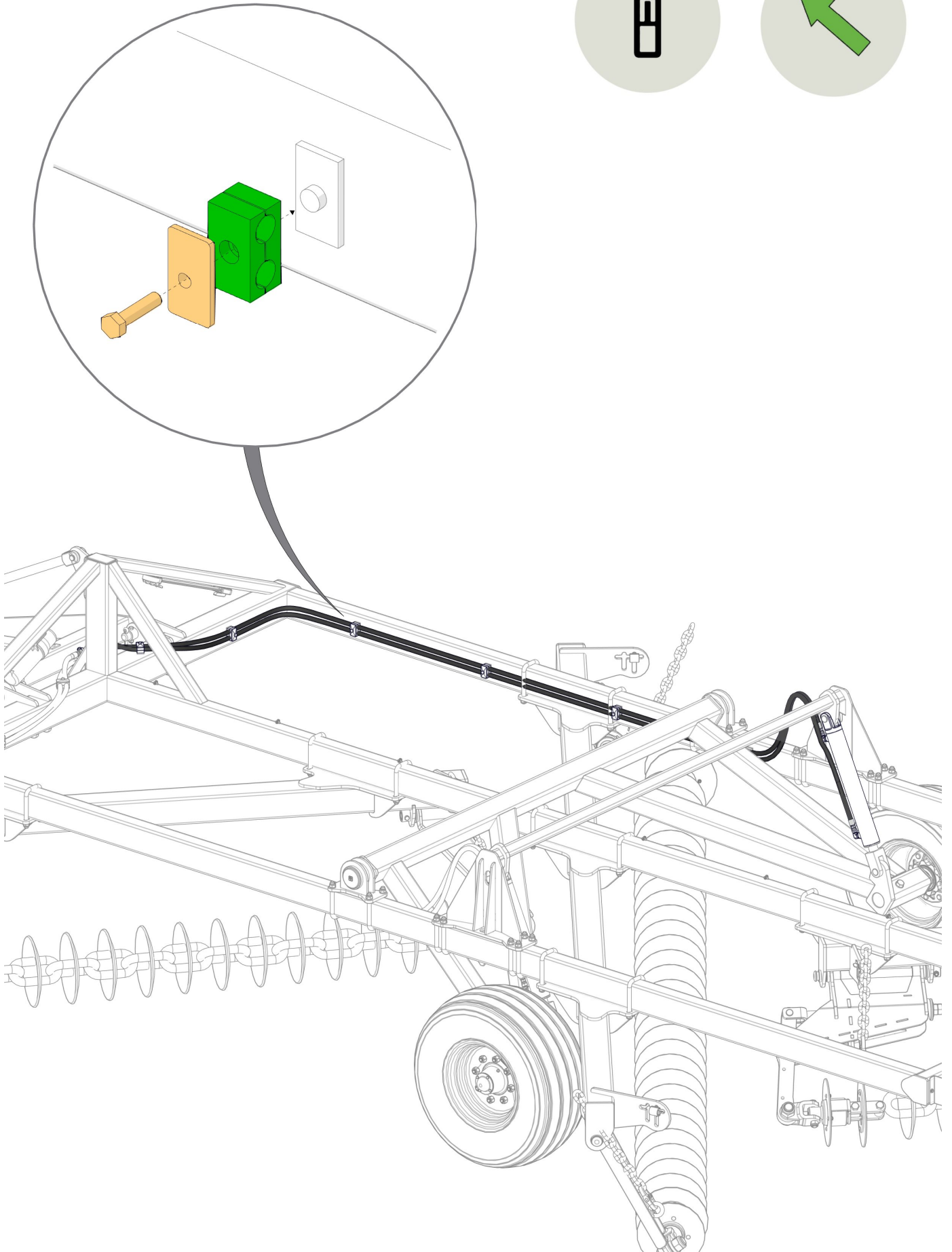
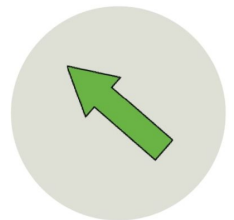


Item No.	Description	Number	Qty
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	0323-S91-1212	2



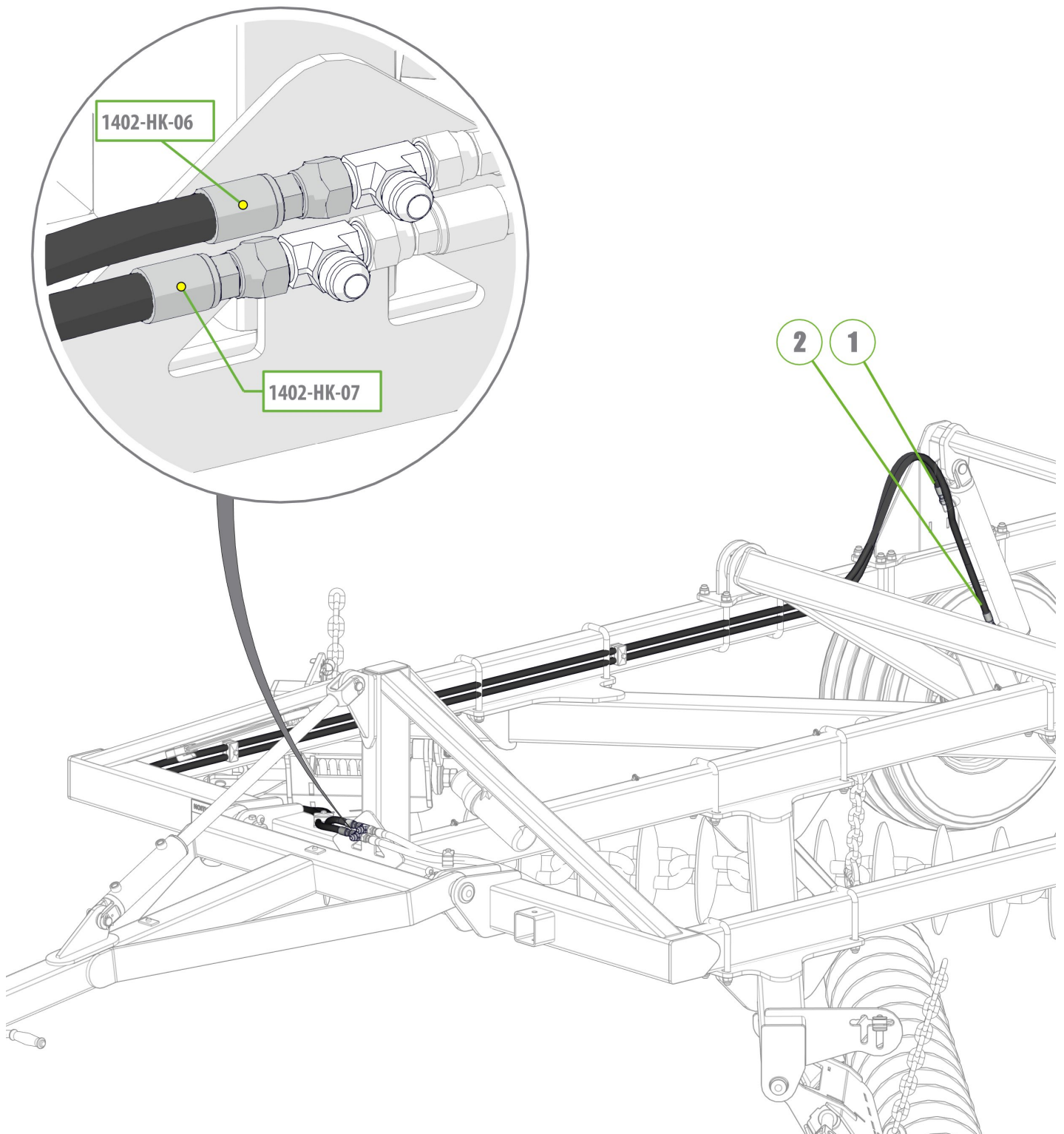
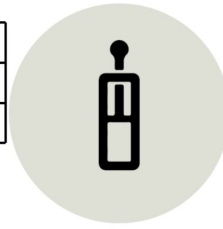
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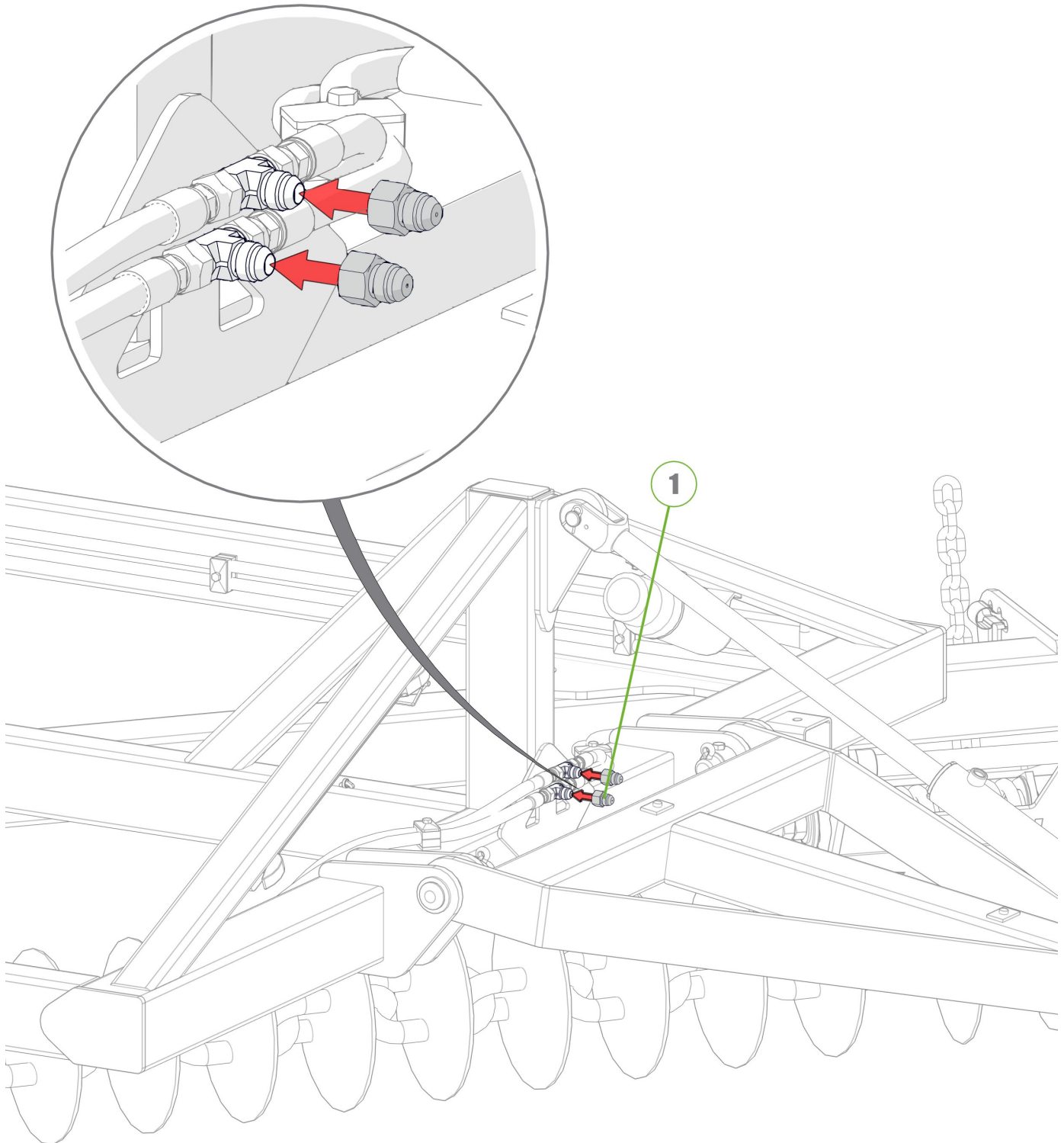
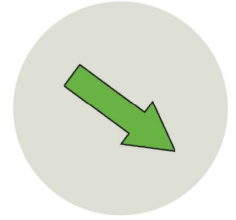




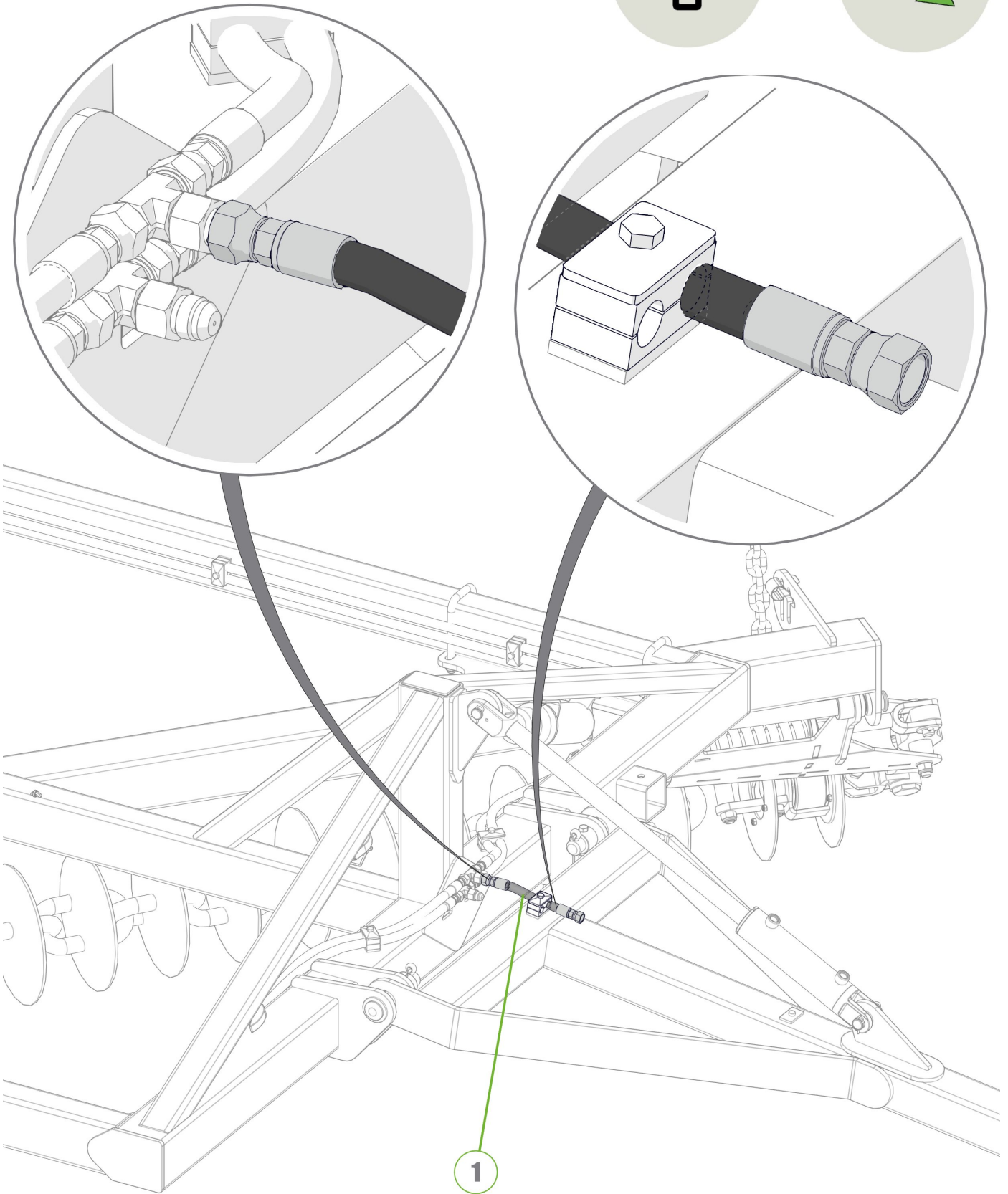
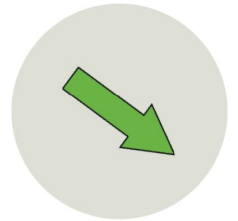
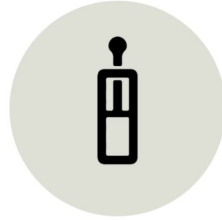
Item No.	Description	Number	Qty
1	Extend Tee To Extend Port of RH Lift Cylinder Hose	1402-HK-06	1
2	Retract Tee To Retract Port of RH Lift Cylinder Hose	1402-HK-07	1



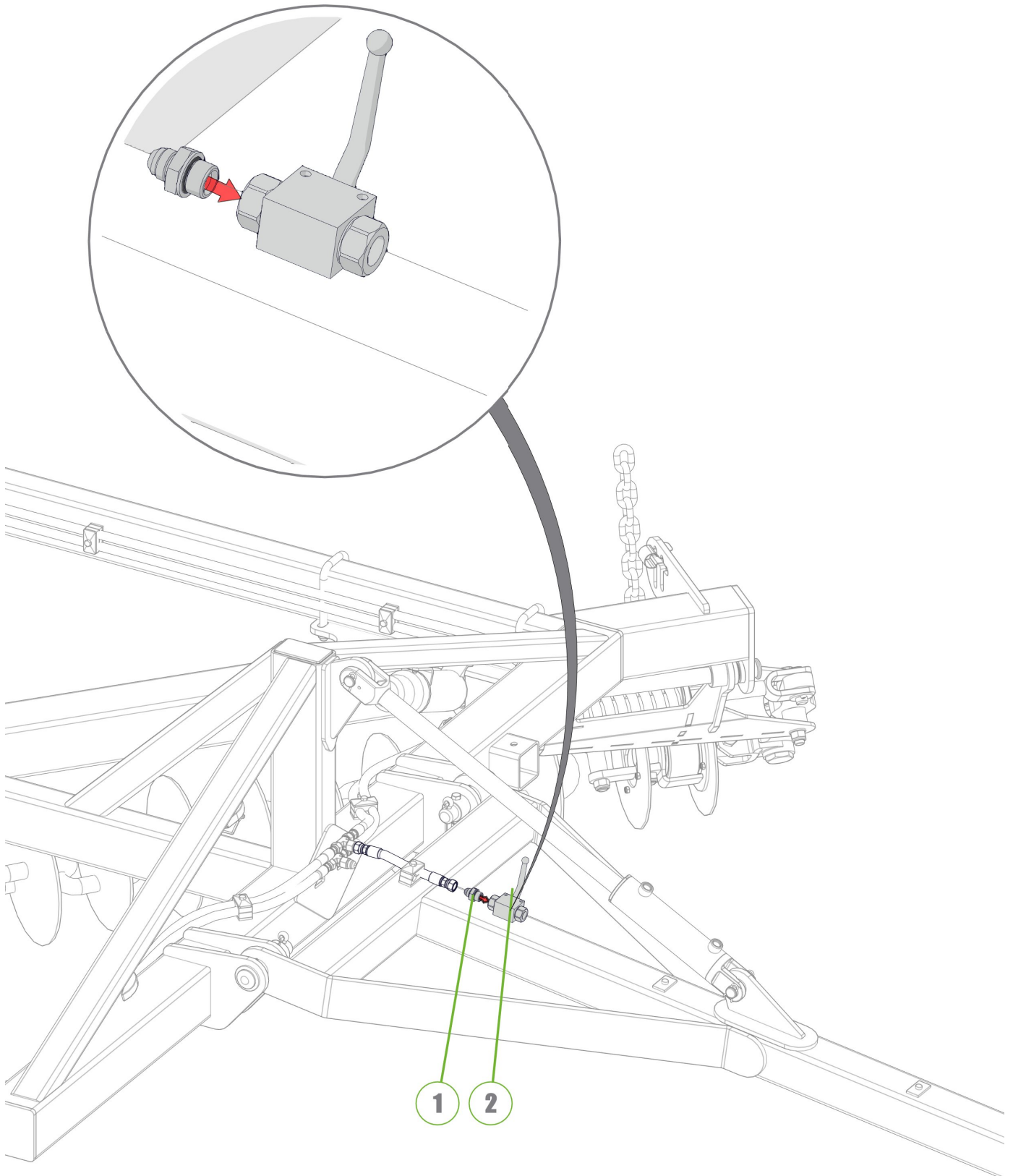
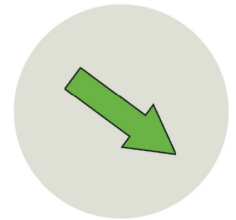
Item No.	Description	Number	Qty
1	3/4" JIC Male to 3/4" JIC Female 2mm Orifice Adaptor	0323-1212R2.0	2

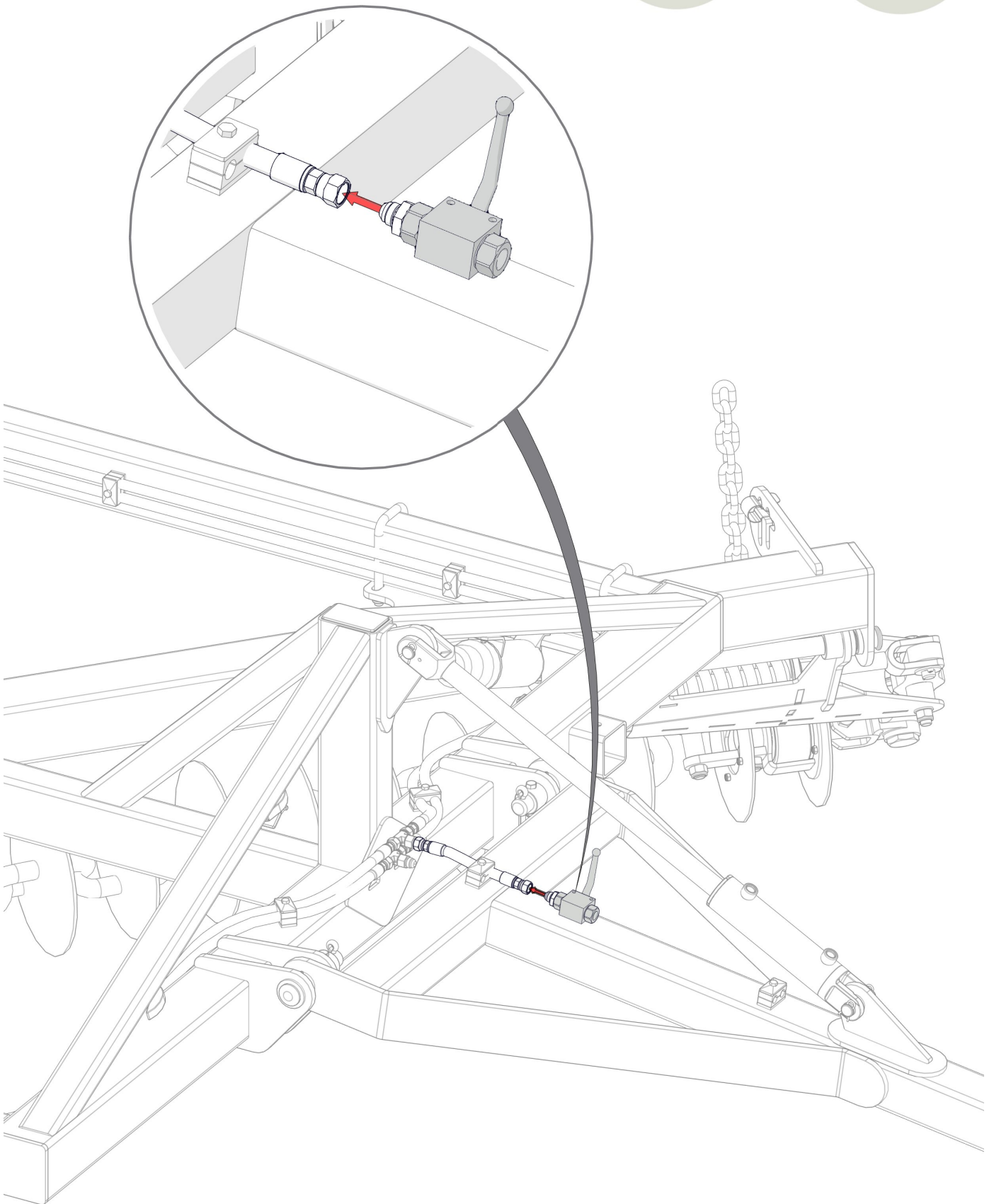
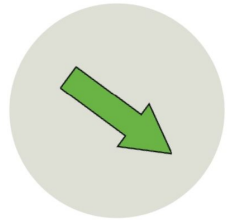


Item No.	Description	Number	Qty
1	Ball Valve to Extend Orifice Fitting	1402-HK-02	1

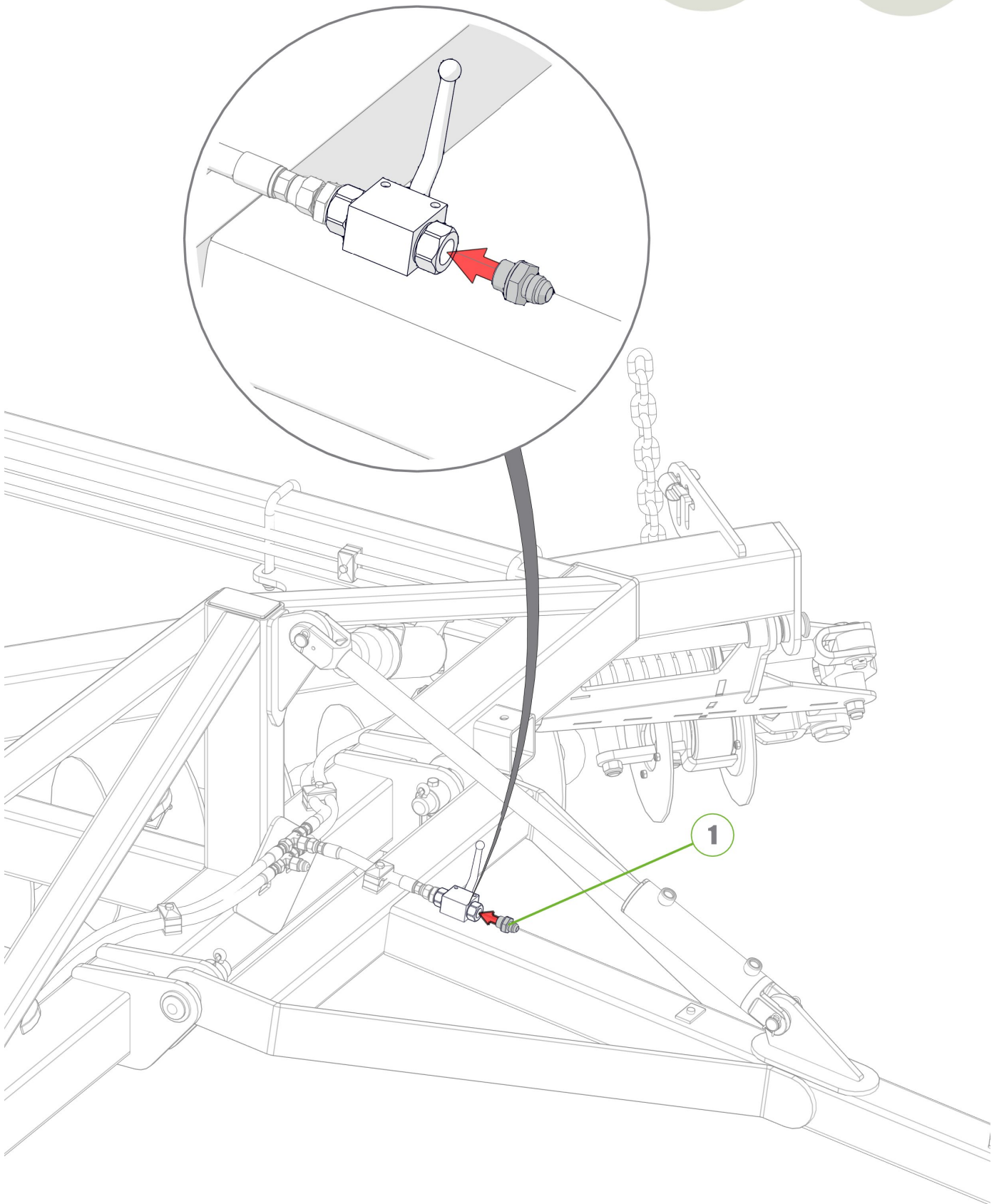
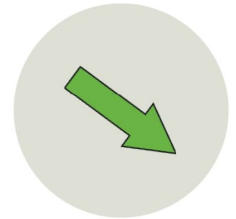


Item No.	Description	Number	Qty
1	1/2" BSPP Encapt Male 3/4" JIC Male Adaptor	0323-S74-0812	1
2	Ball Valve BSPP 1/2"	0341-RL20SH-0808	1

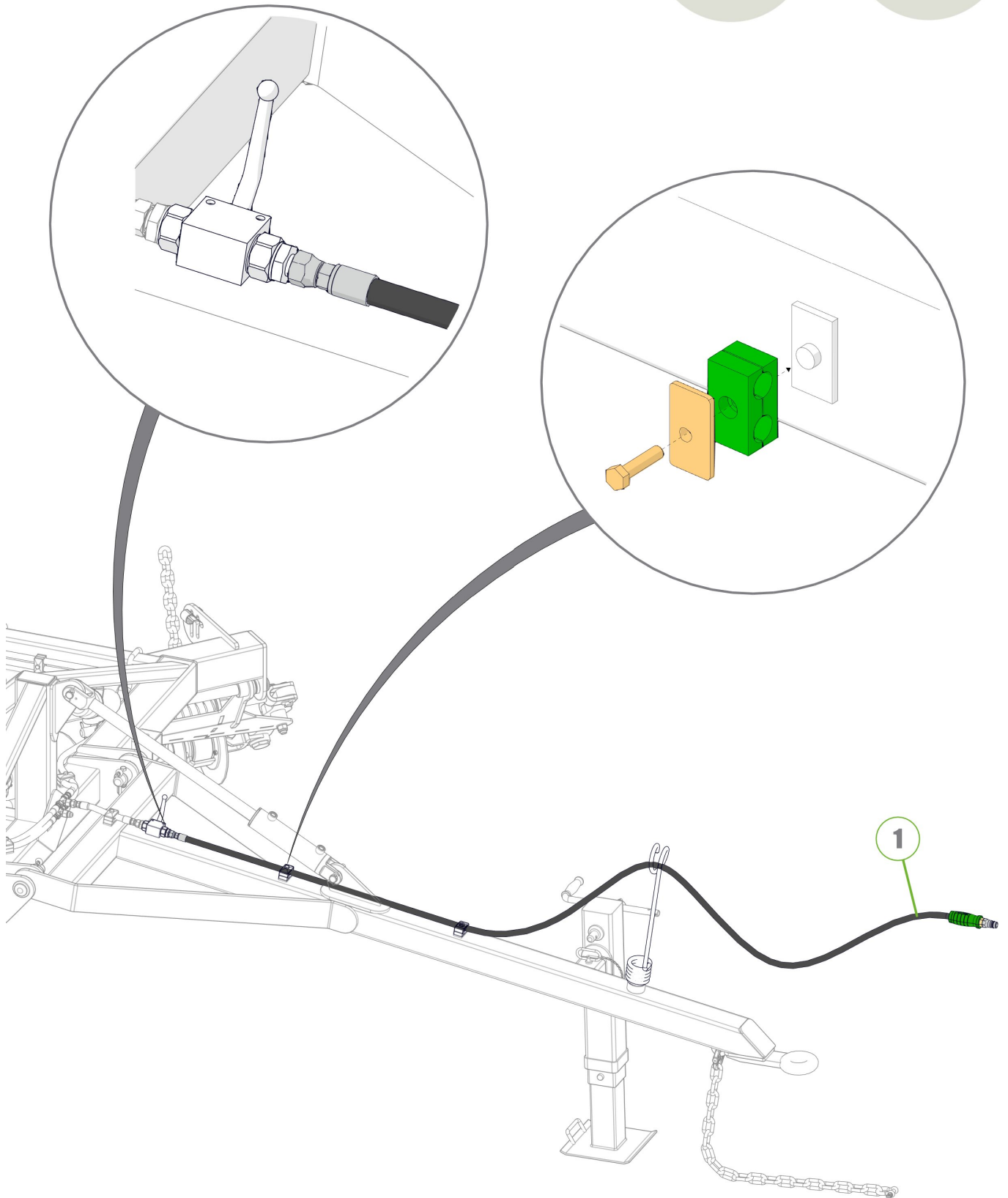
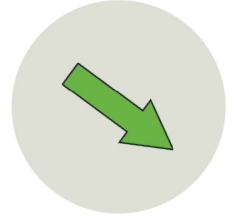


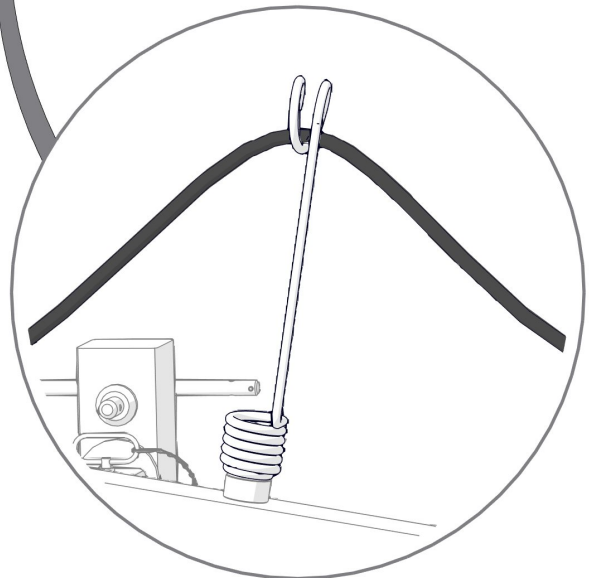
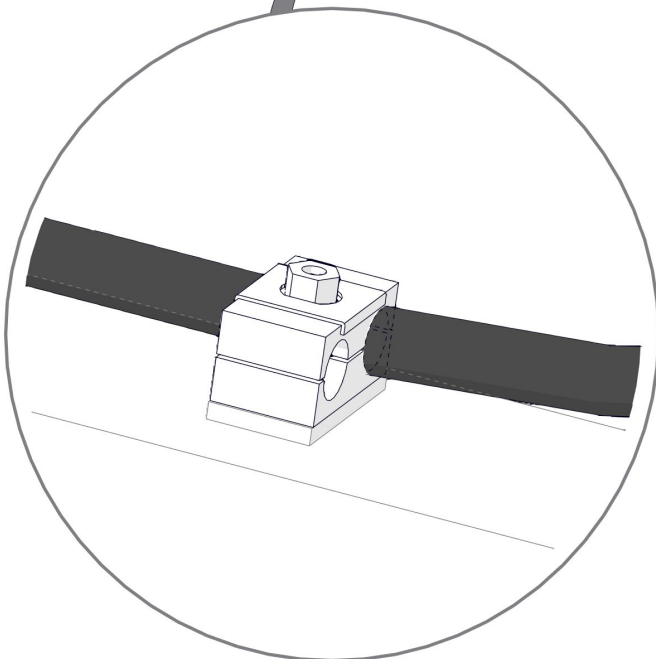
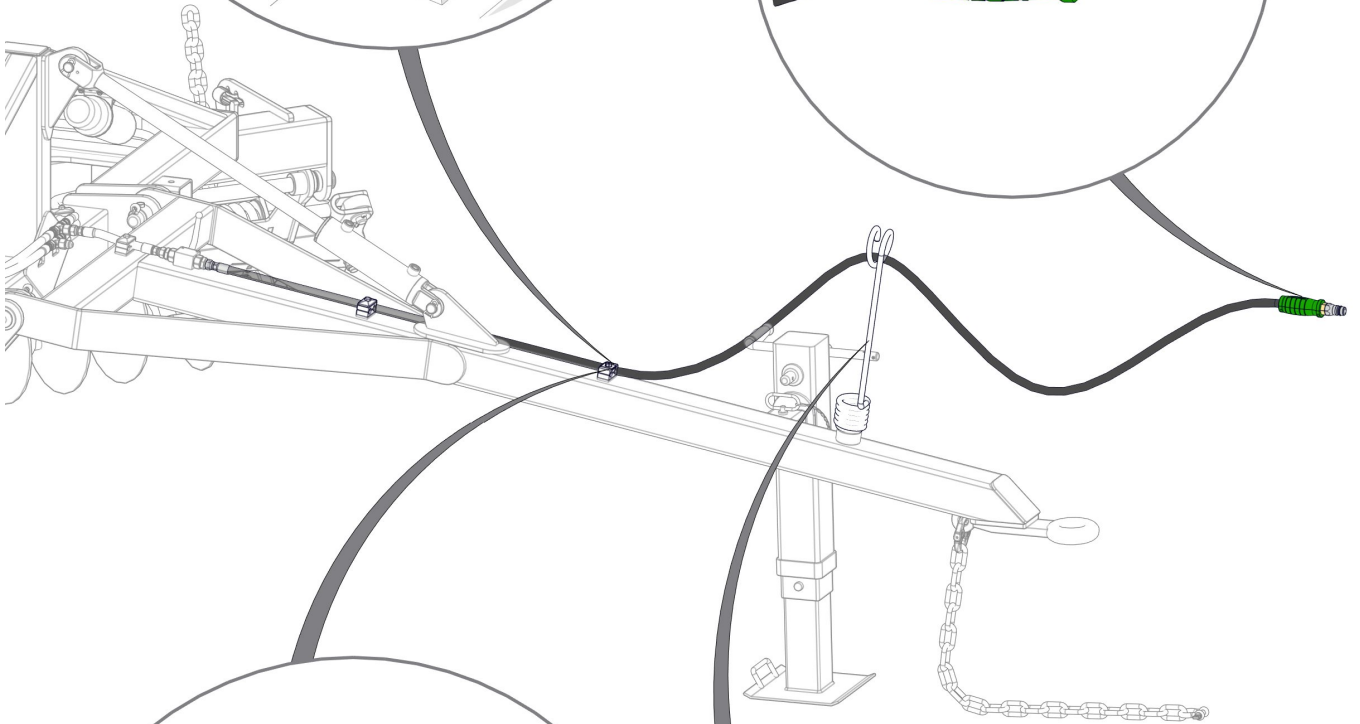
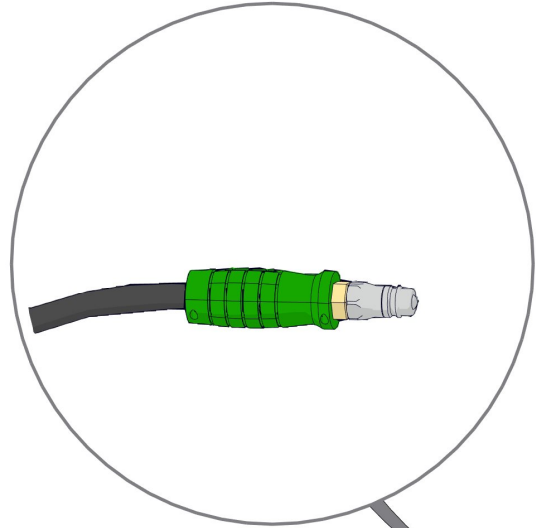
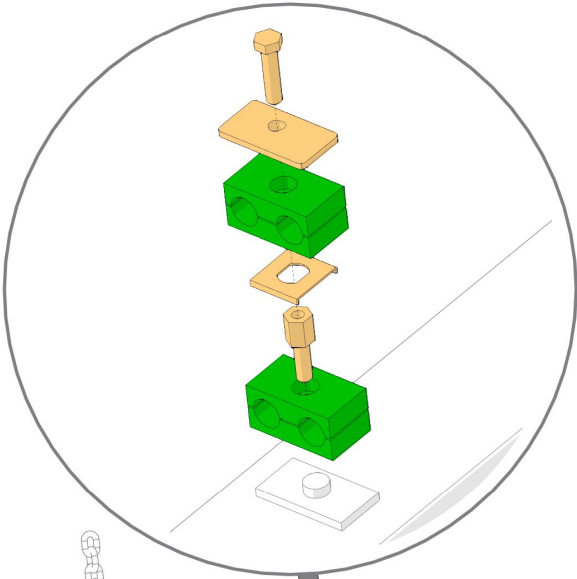
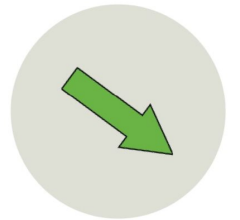


Item No.	Description	Number	Qty
1	1/2" BSPP Encapt Male 3/4" JIC Male Adaptor	0323-S74-0812	1



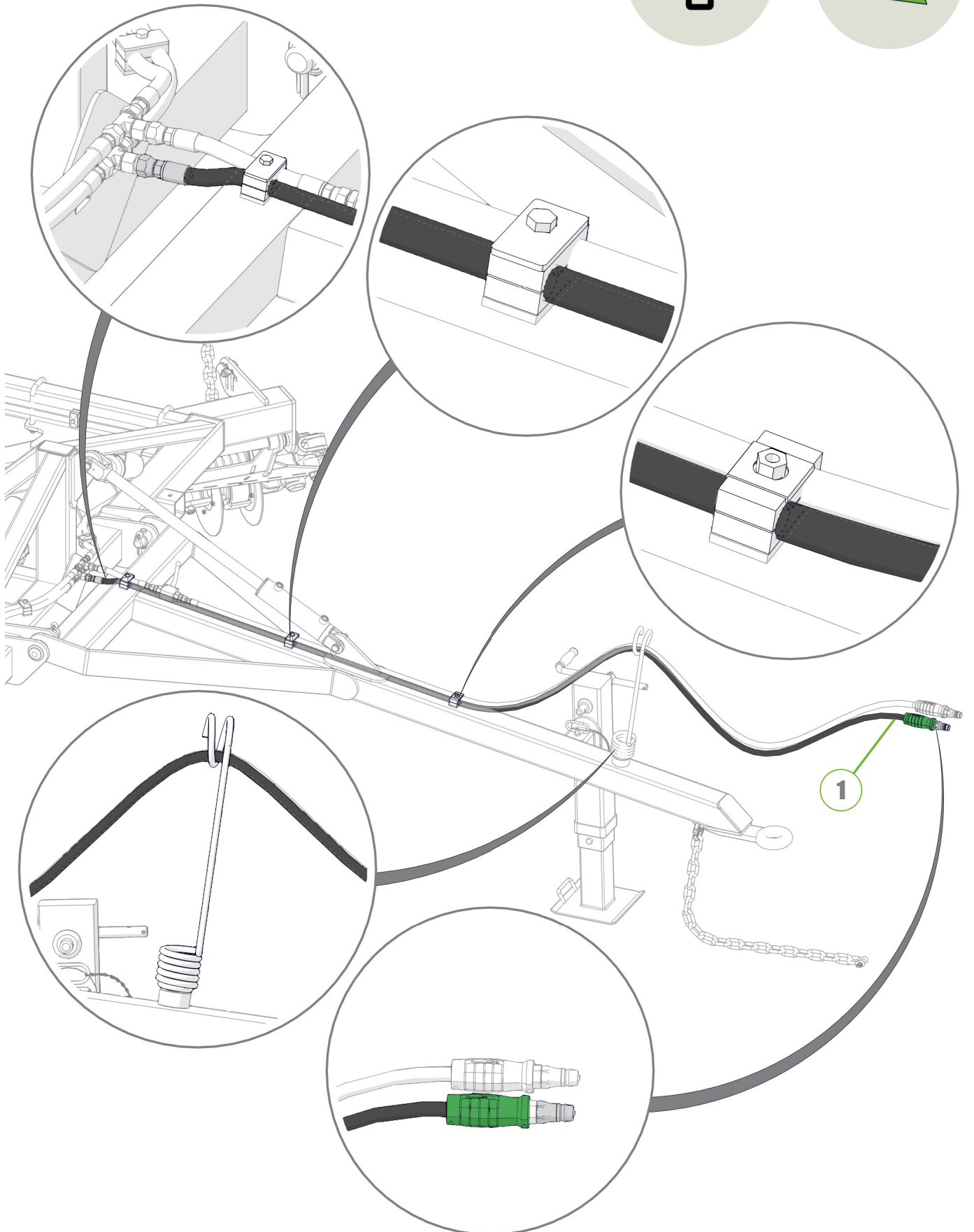
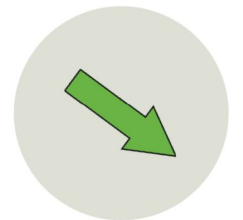
Item No.	Description	Number	Qty
1	Tractor to Ball Valve Fitted with Green Extend Grip	1402-HK-01	1



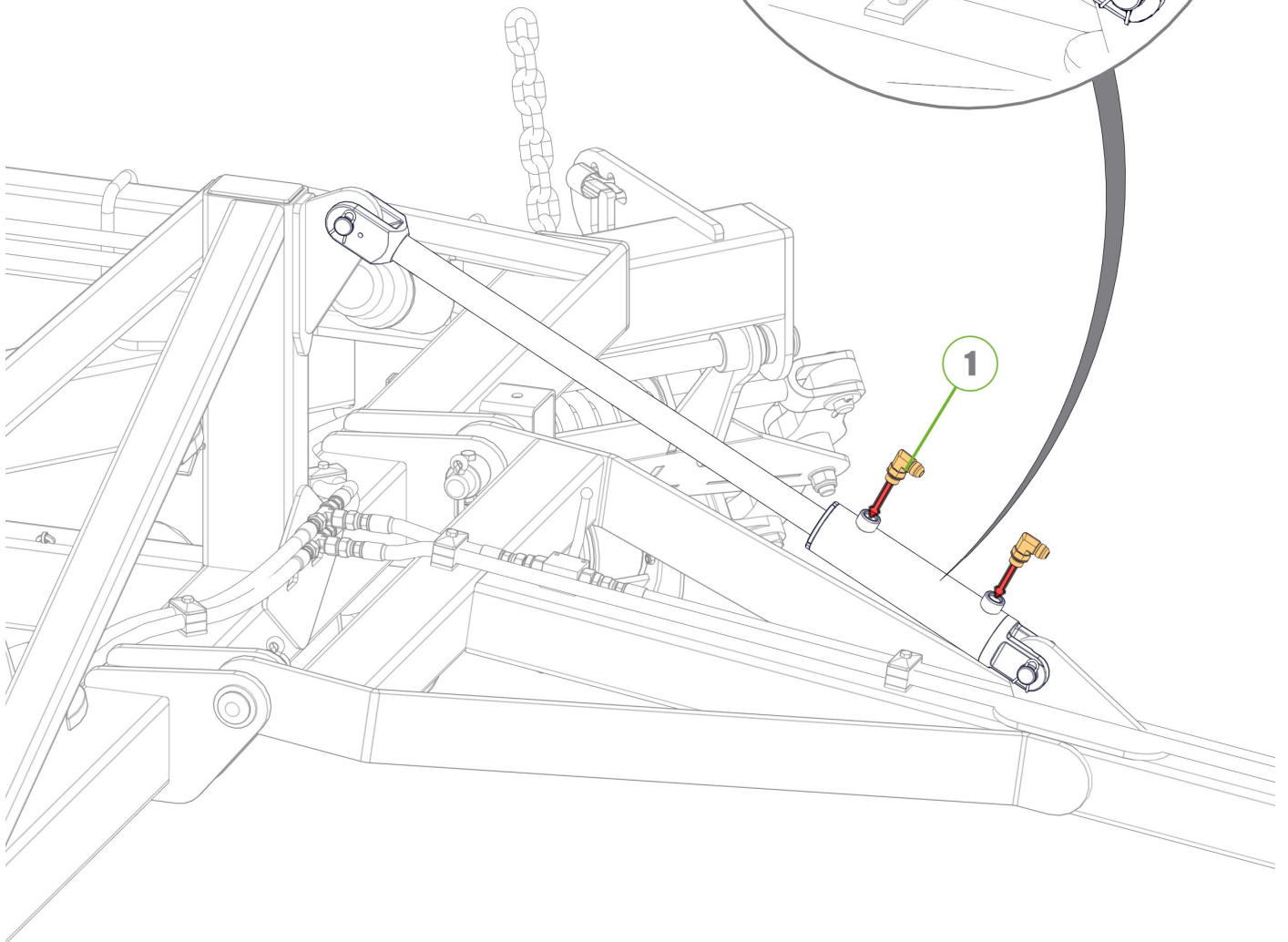
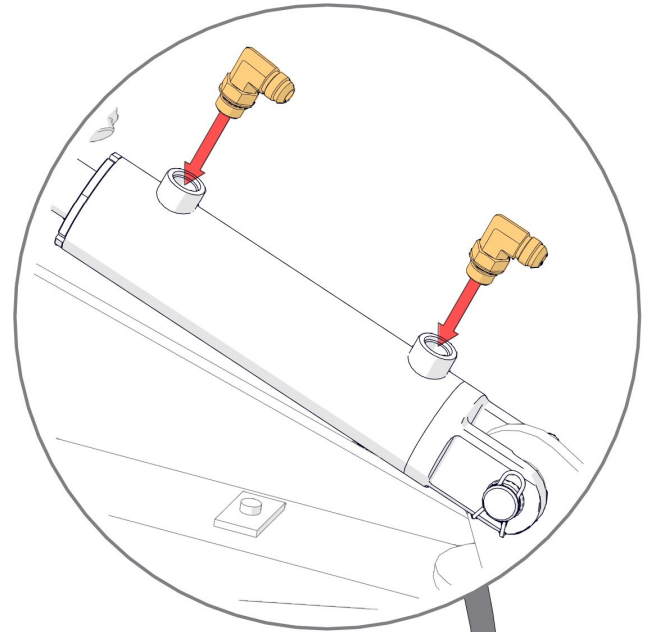
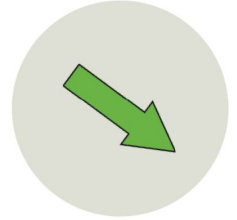




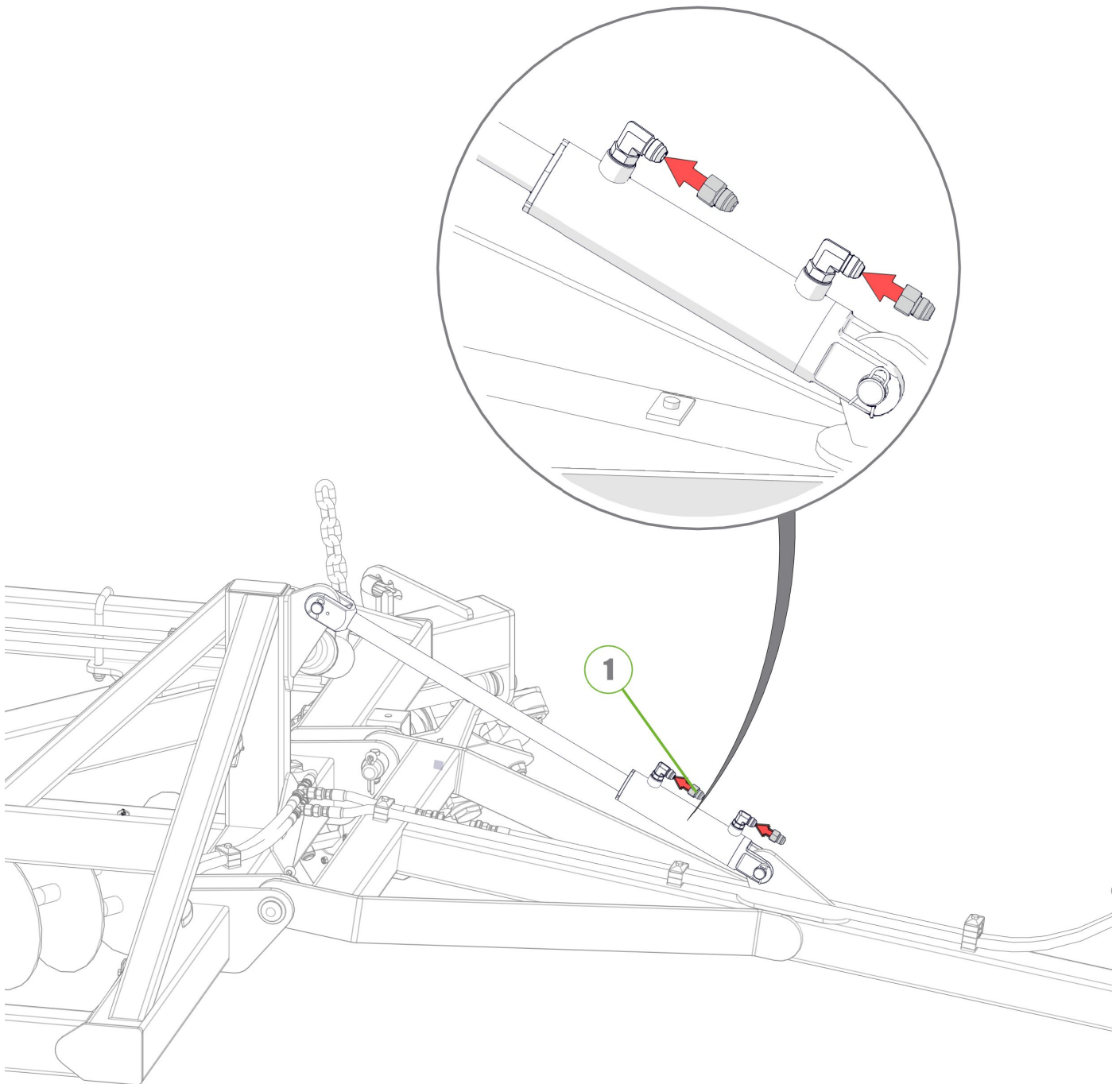
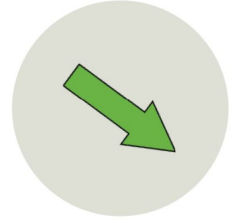
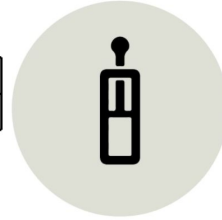
Item No.	Description	Number	Qty
1	Tractor To Retract Orifice Fitting Fitted with Green Retract Grip	1402-HK-03	1



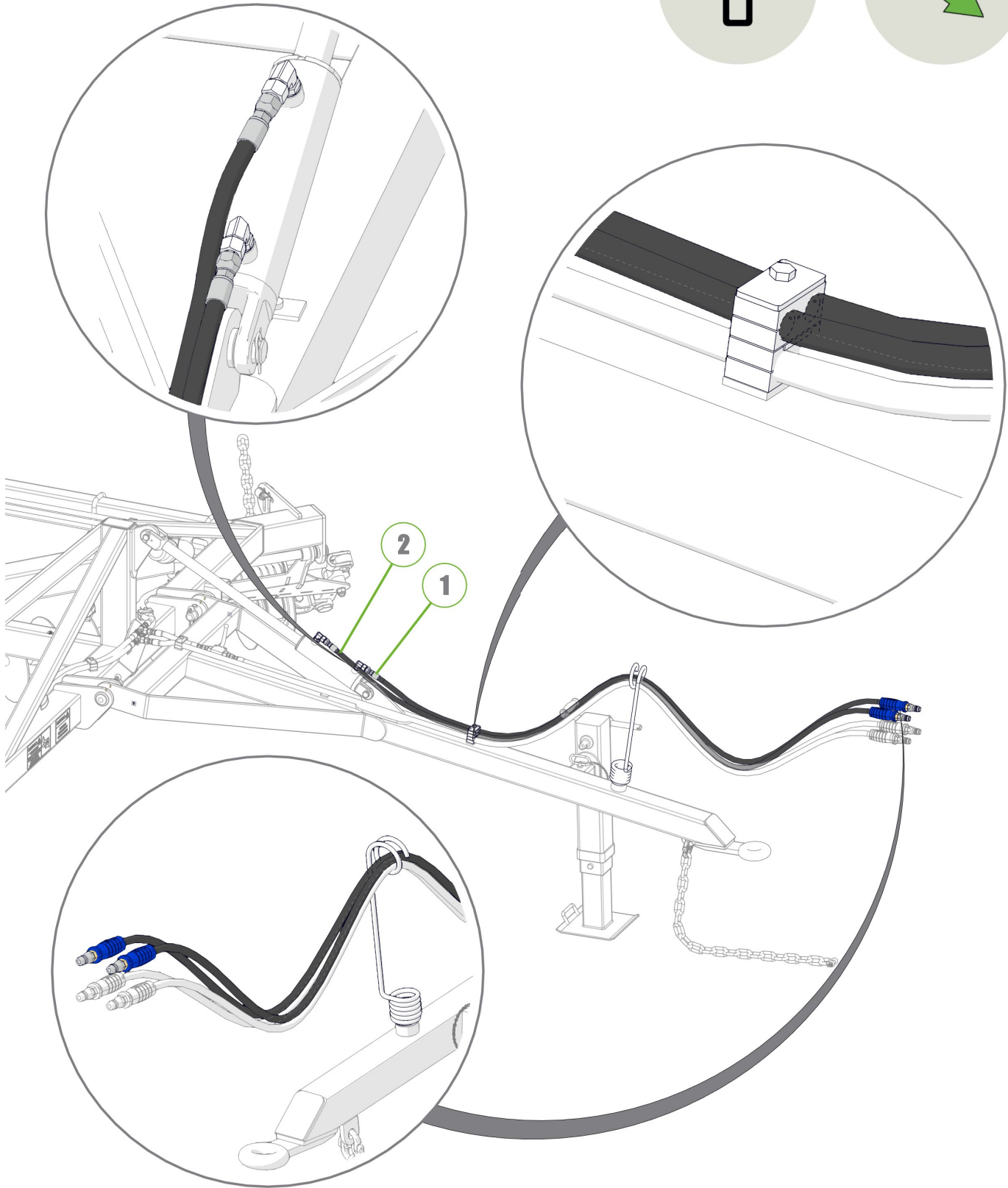
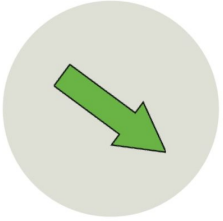
Item No.	Description	Number	Qty
1	3/4" JIC Male 3/4" UN O Ring Male 90° Elbow	0323-591-1212	2



Item No.	Description	Number	Qty
1	3/4" JIC Male to 3/4" JIC Female 2mm Orifice Adaptor	0323-1212R2.0	2



Item No.	Description	Number	Qty
1	Tractor To Extend Port Of Front Cylinder Fitted with Blue Extend Grip Hose	1402-HK-09	1
2	Tractor To Retract Port Of Front Cylinder Fitted with Blue Retract Grip Hose	1402-HK-08	1

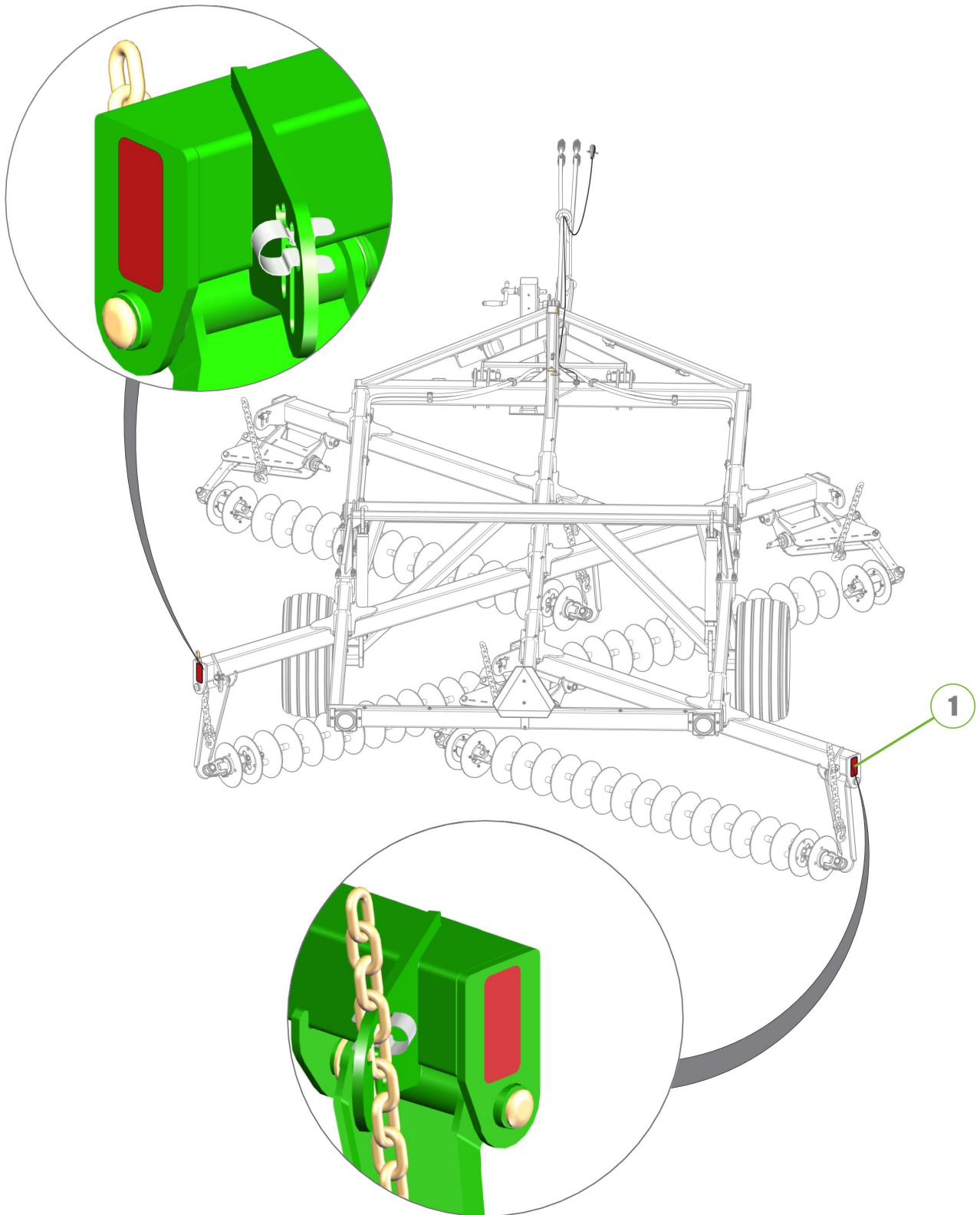
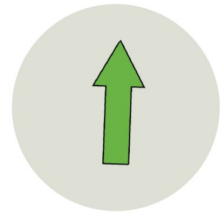




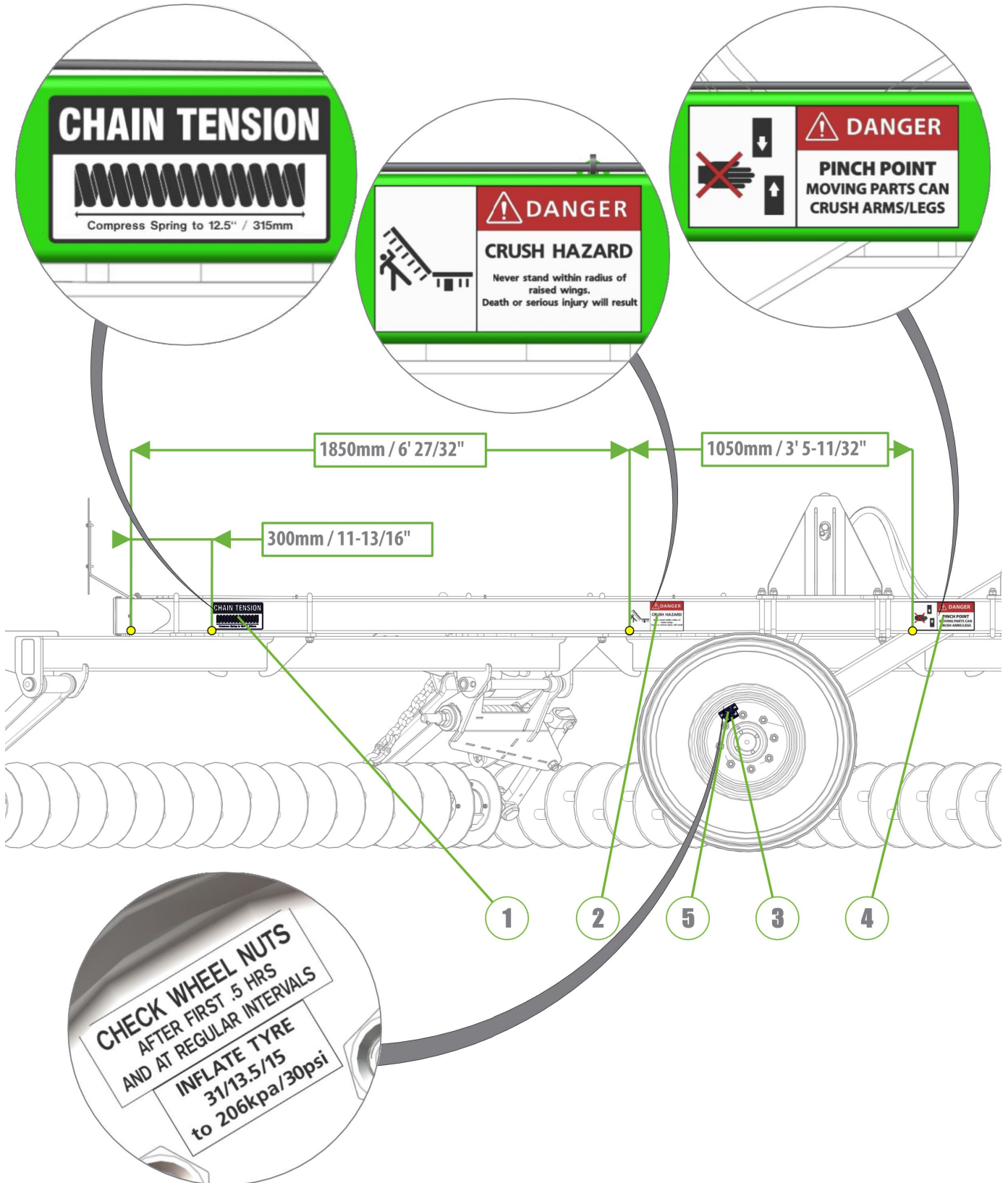
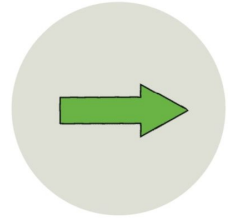
**SECTION 4**  
DECAL  
APPLICATION

## SECTION 4 DECAL APPLICATION

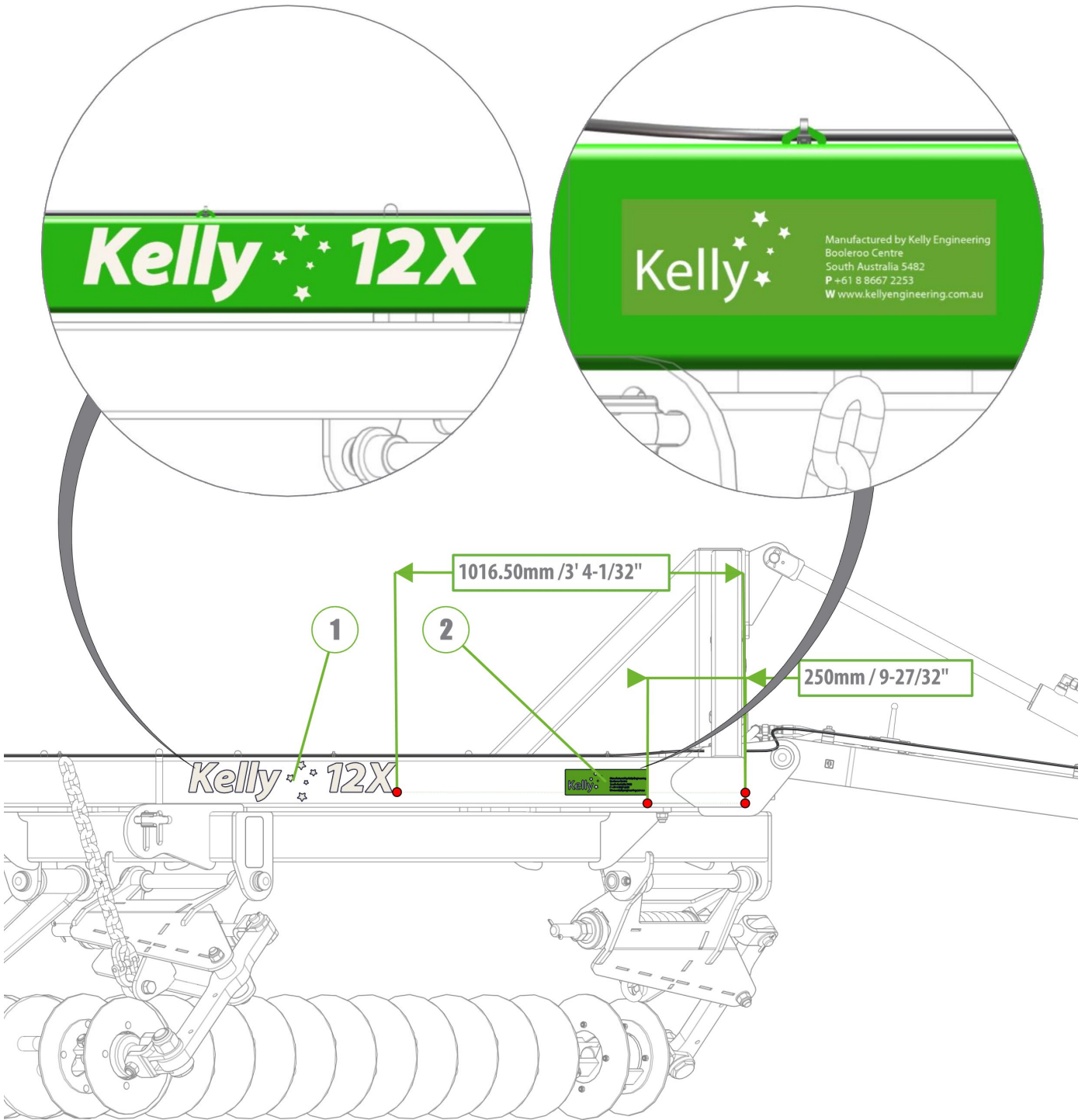
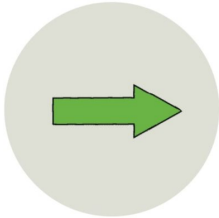
Item No.	Description	Number	Qty
1	Red Reflective Decal	0801-SRRF	2



Item No.	Description	Number	Qty
1	Chain Tension 315mm Decal	0801-S13	1
2	Danger Crush Hazard Decal	0801-S3	1
3	Decal, 31/13.5/15 Tyre Inflation	0801-S8-31-13.5-15	1
4	Pinch Point Decal	0801-S17	1
5	Wheel Nut Decal	0801-S9	1

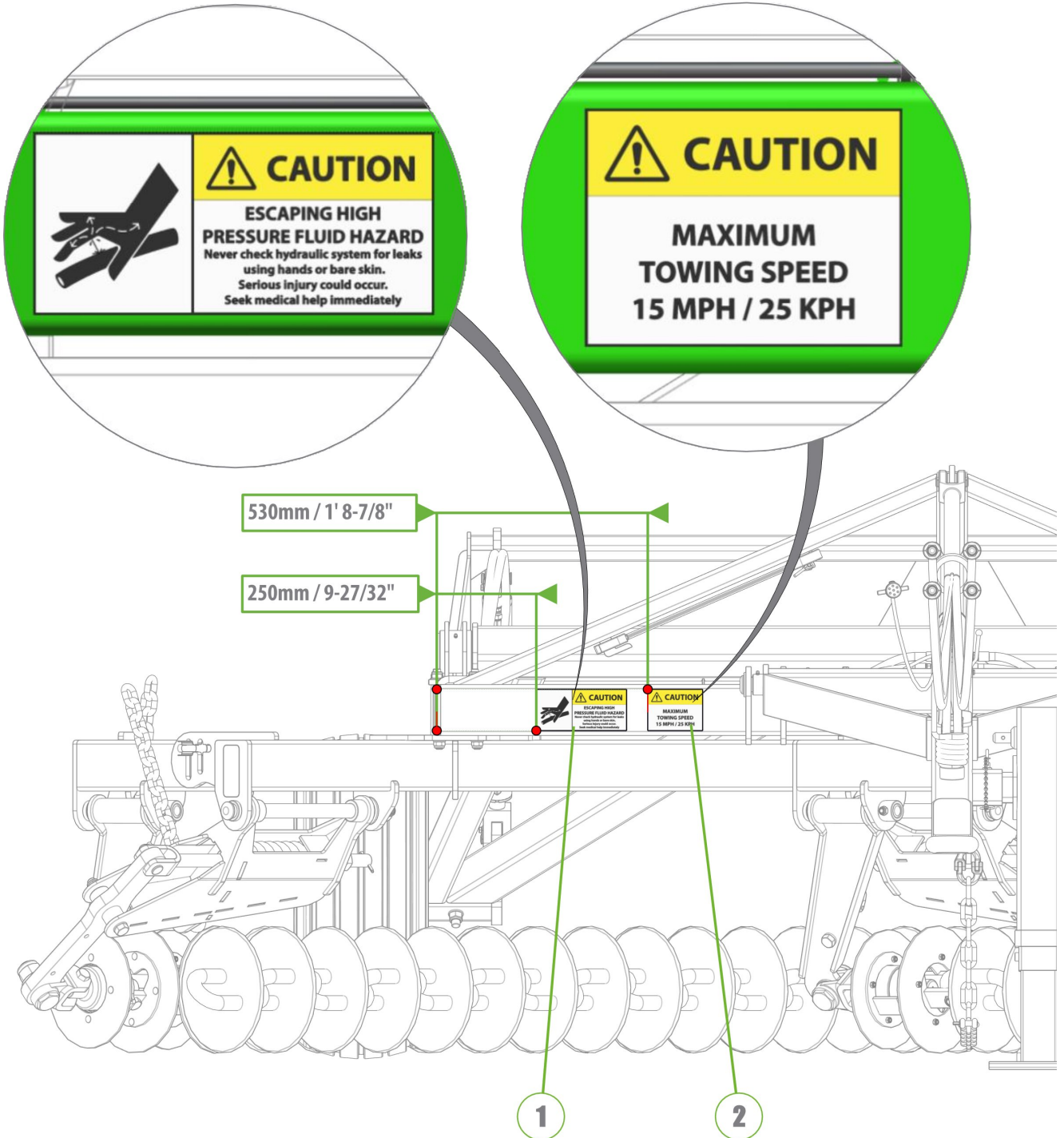
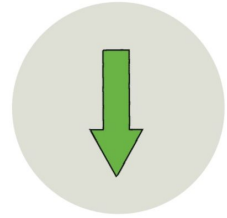


Item No.	Description	Number	Qty
1	Diamond Harrow 12X Decal	0801-SKDH12X	1
2	Kelly Engineering Decal	0801-S12	1

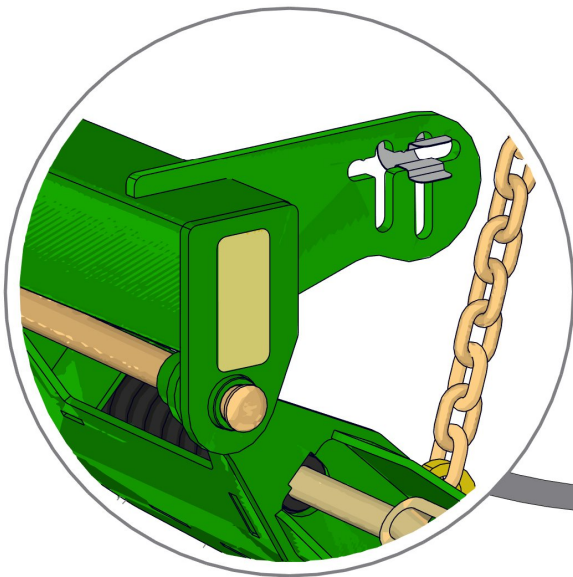
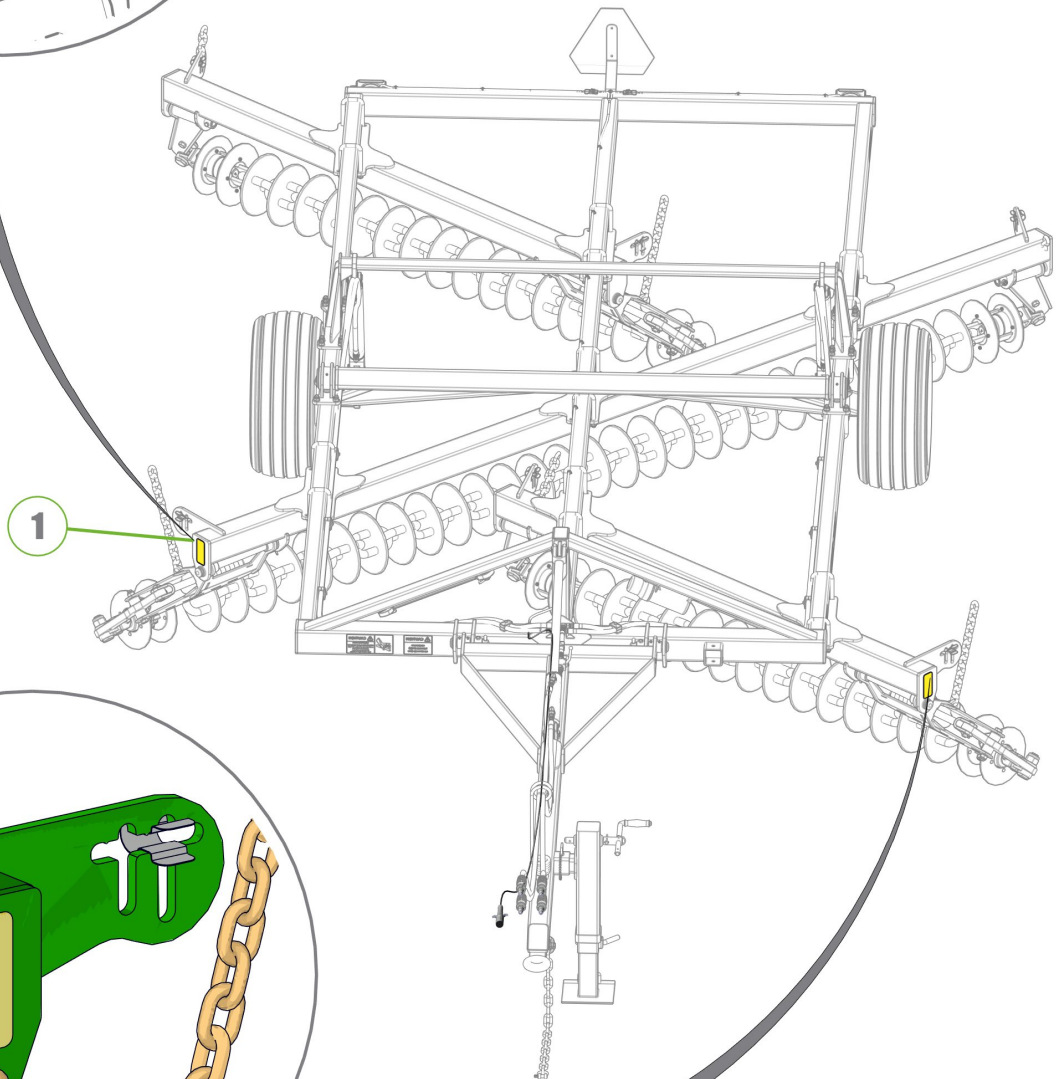
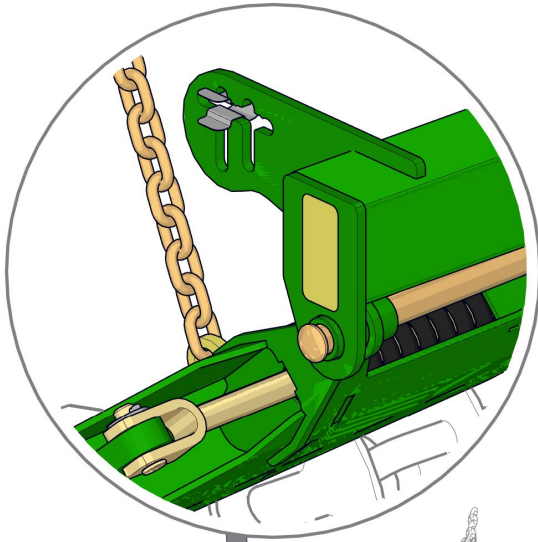
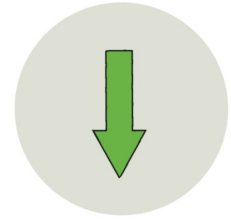




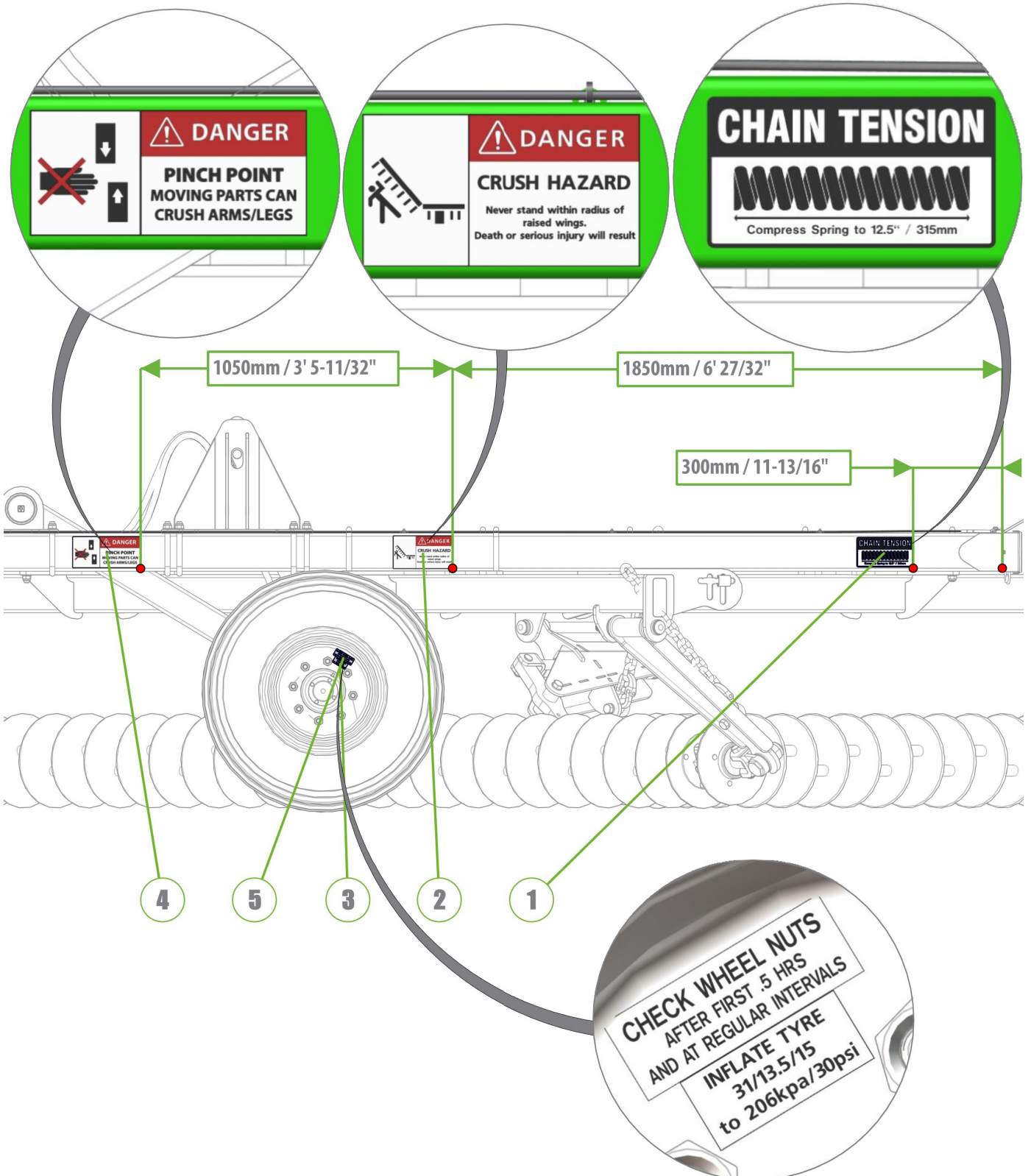
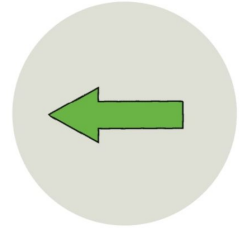
Item No.	Description	Number	Qty
1	Hydraulic Pressure Caution Decal	0801-S4	1
2	Towing Speed Decal	0801-S5	1



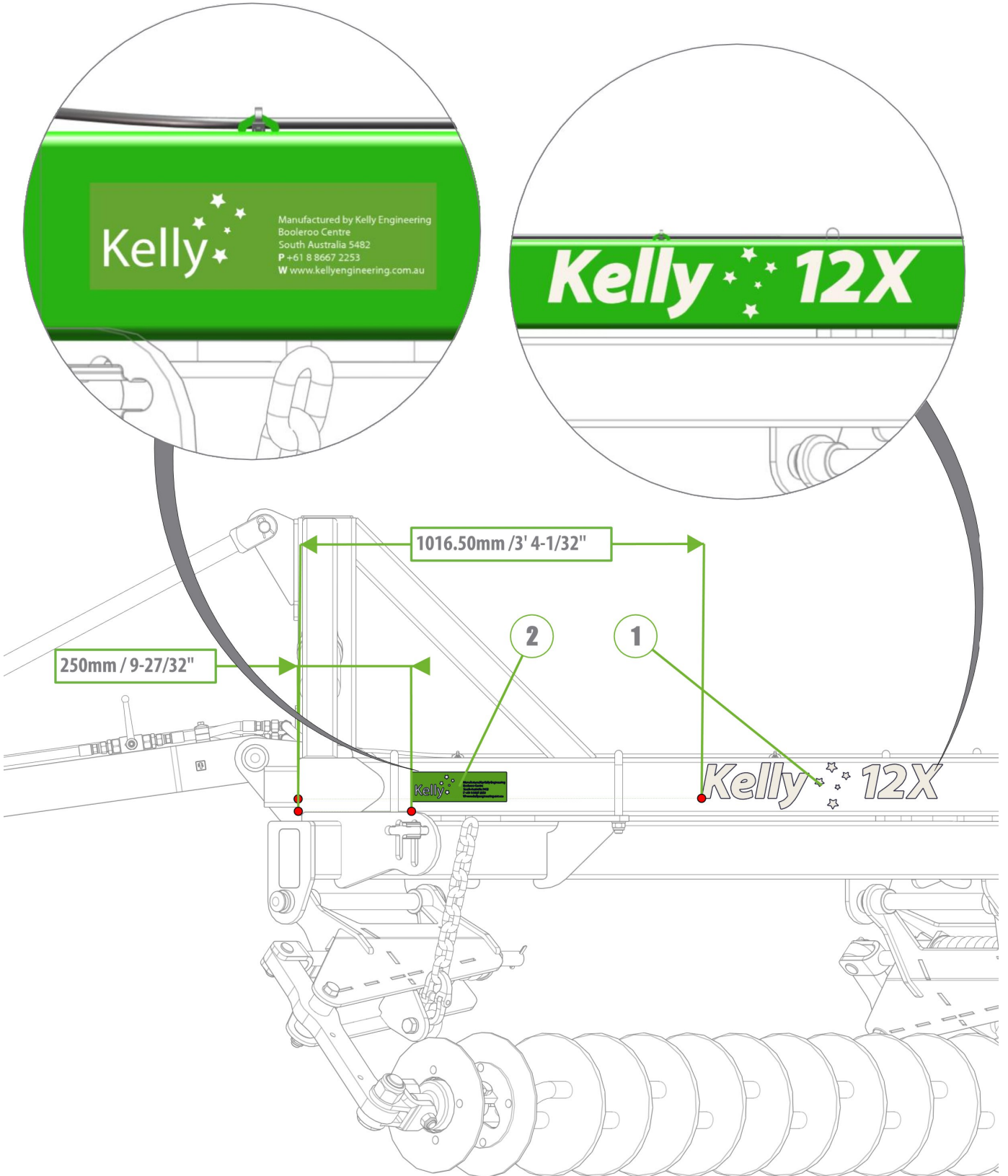
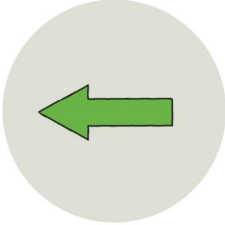
Item No.	Description	Number	Qty
1	Yellow Reflective Decal	0801-SYRF	2



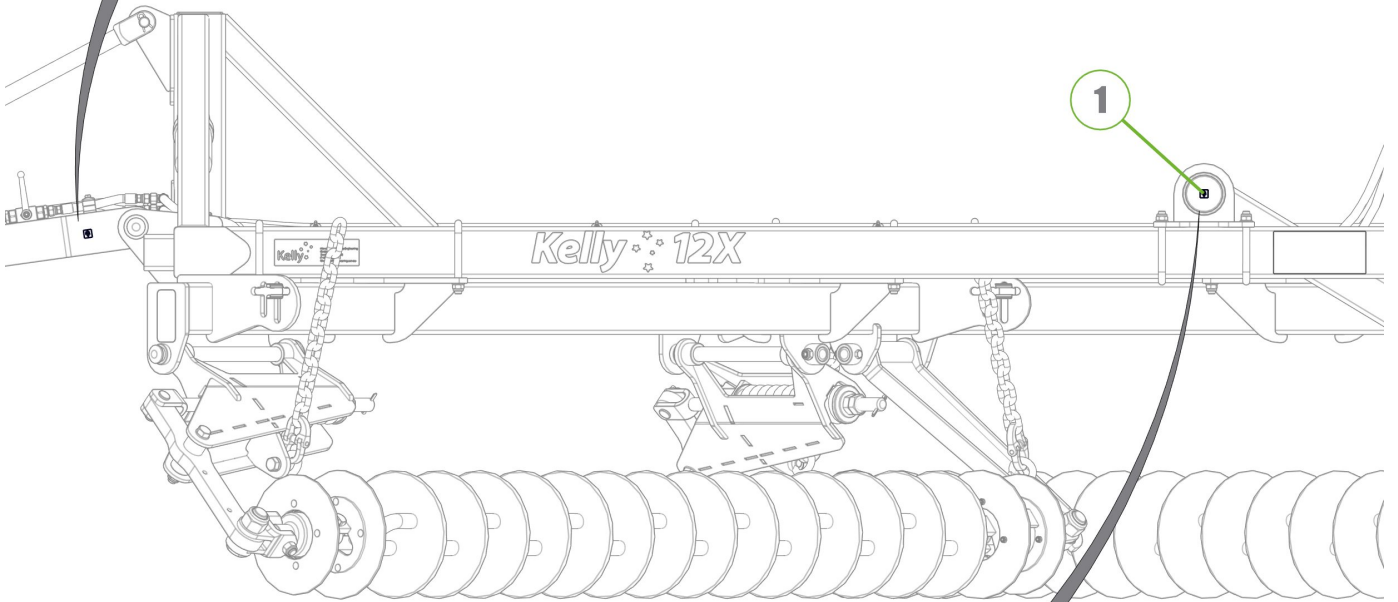
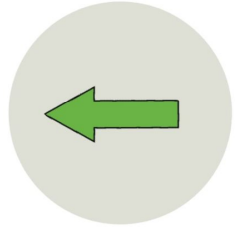
Item No.	Description	Number	Qty
1	Chain Tension 315mm Decal	0801-S13	1
2	Danger Crush Hazard Decal	0801-S3	1
3	Decal, 31/13.5/15 Tyre Inflation	0801-S8-31-13.5-15	1
4	Pinch Point Decal	0801-S17	1
5	Wheel Nut Decal	0801-S9	1



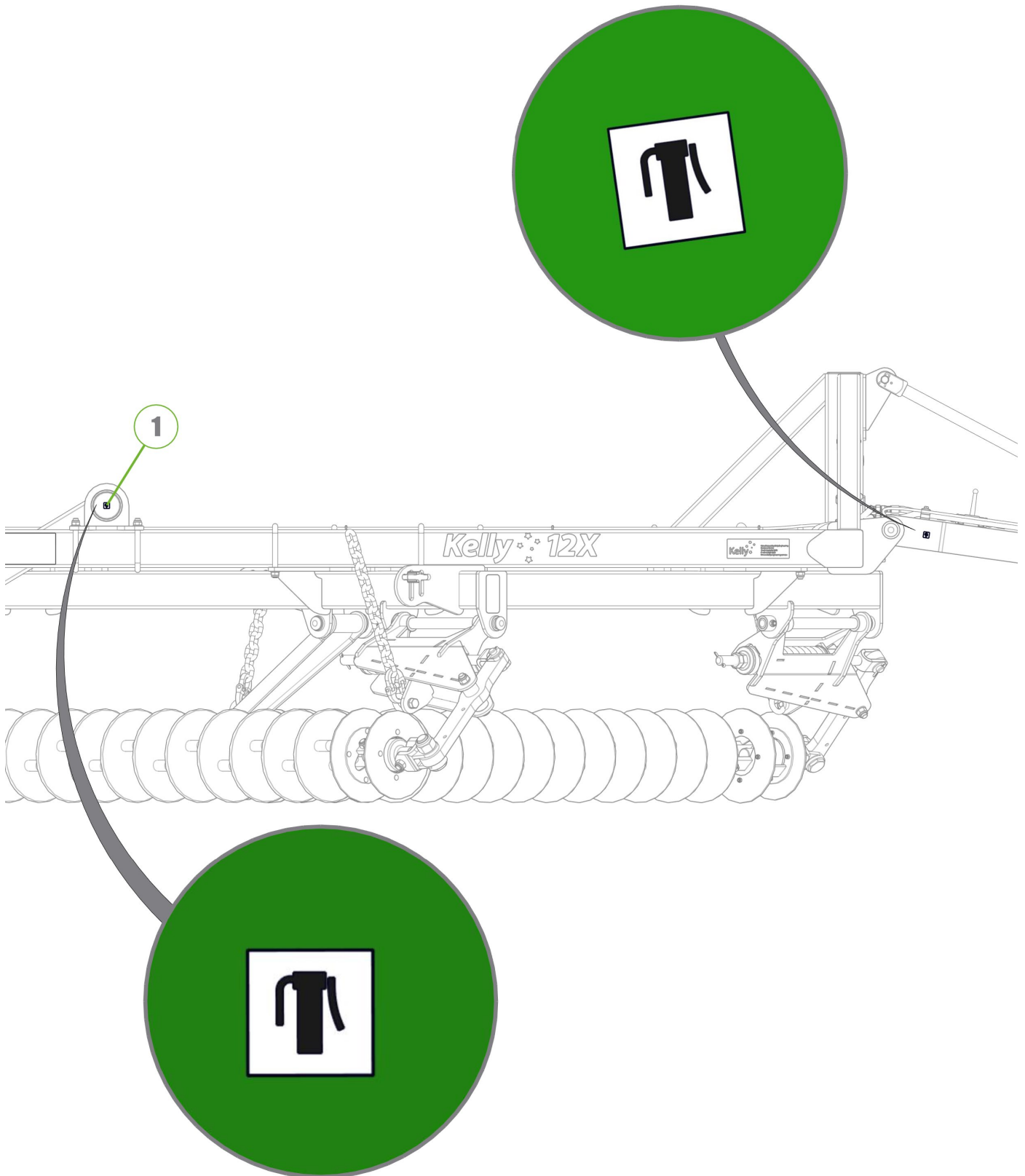
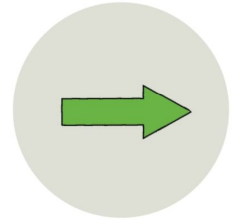
Item No.	Description	Number	Qty
1	Diamond Harrow 12X Decal	0801-SKDH12X	1
2	Kelly Engineering Decal	0801-S12	1



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



Item No.	Description	Number	Qty
1	Grease Decal	0801-510	2

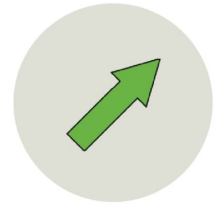




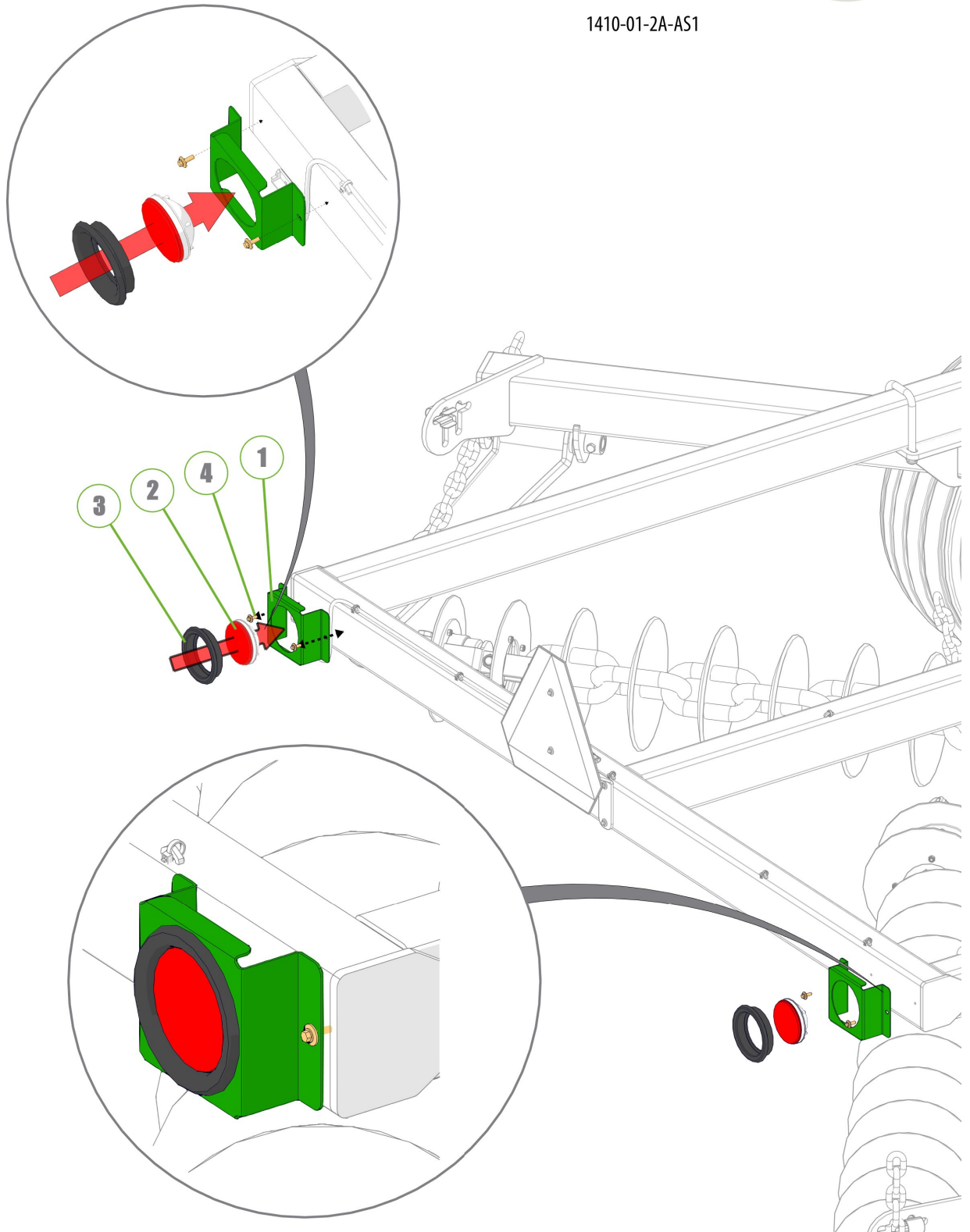
**SECTION 5**  
LIGHT KIT

## SECTION 5 LIGHT KIT

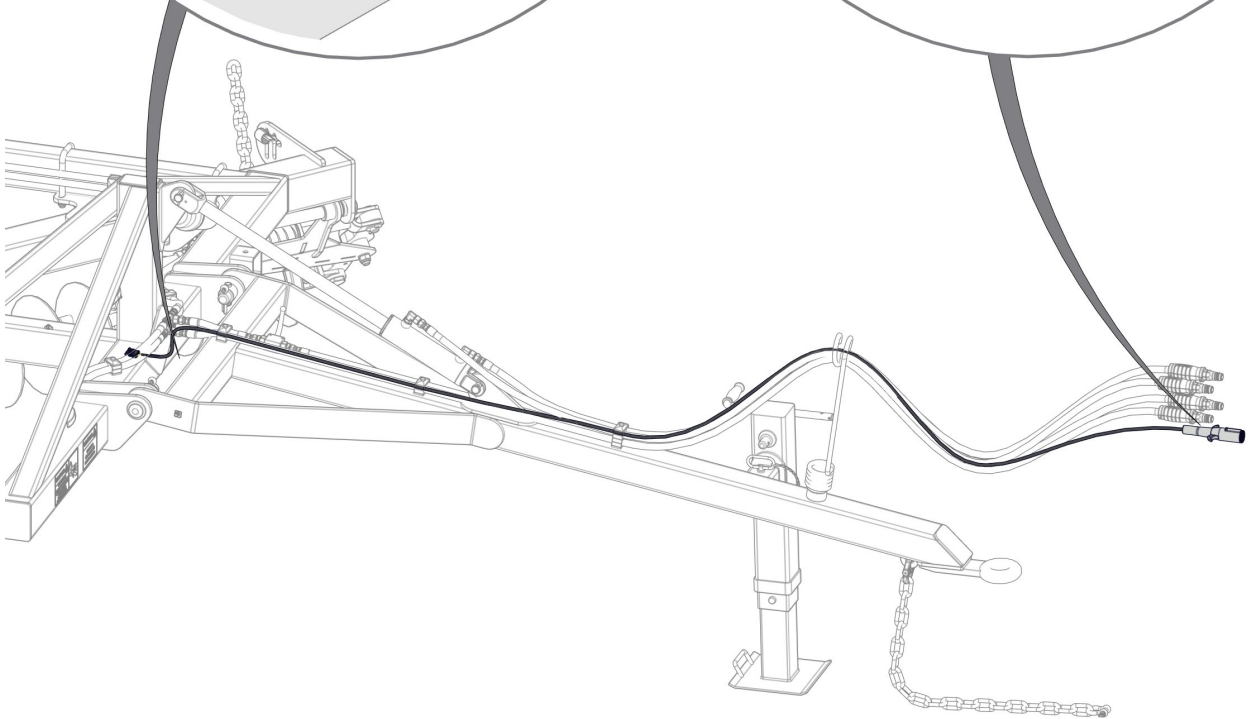
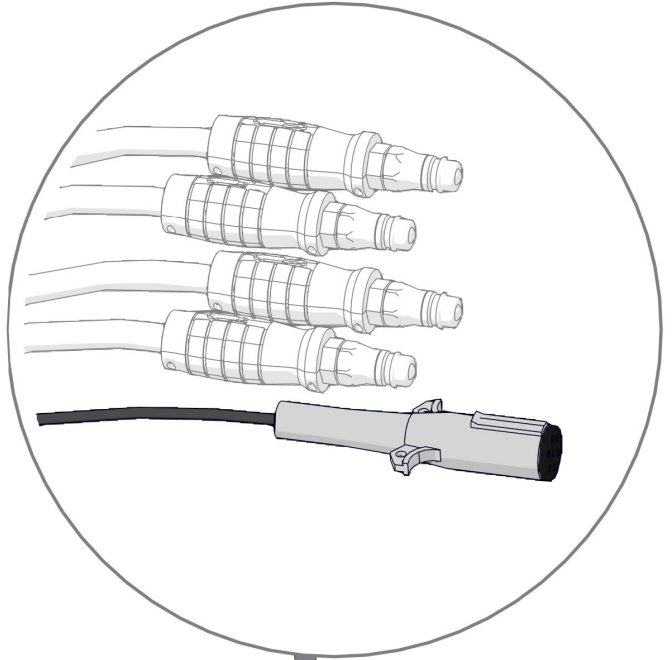
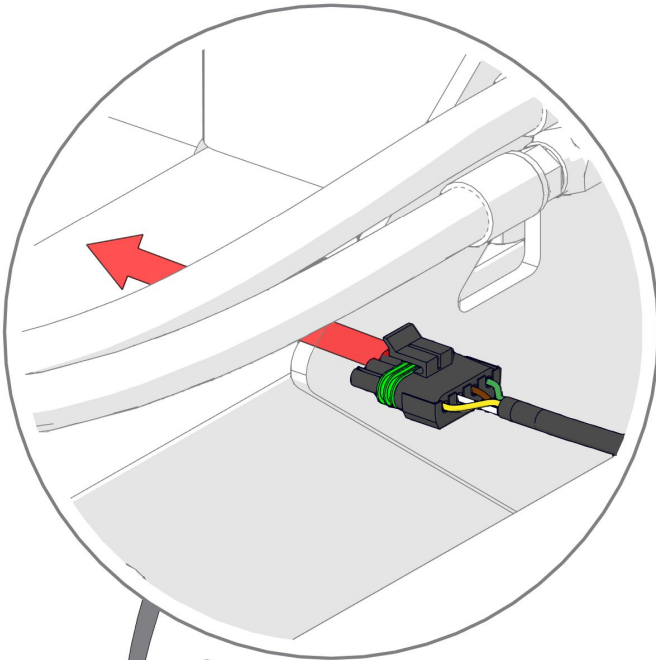
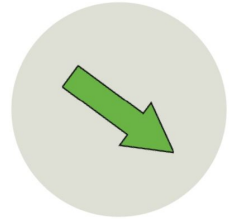
Item No.	Description	Number	Qty
1	US Tail Light Bracket	0800-194.1	2
2	LED Stop Tail Lamp	0412-LED110RM	2
3	110RM Rubber Grommet	0412-53101RG	2
4	M6 x 20mm Trilobe Screw	0211-M620MZPHTF	4

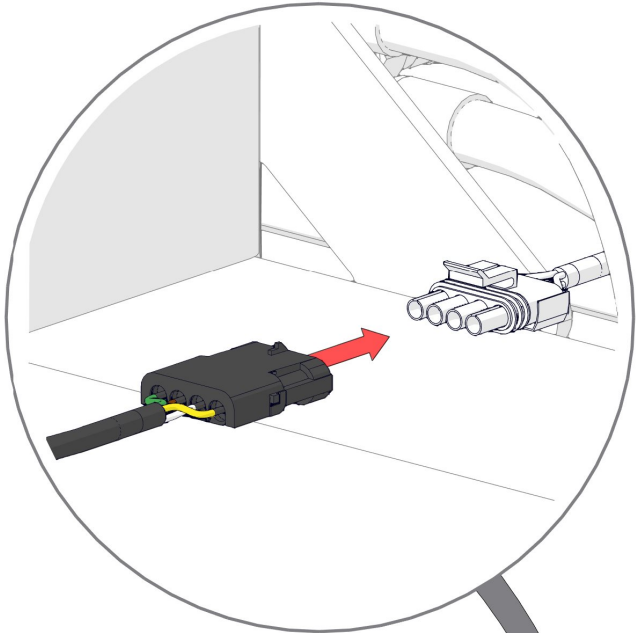
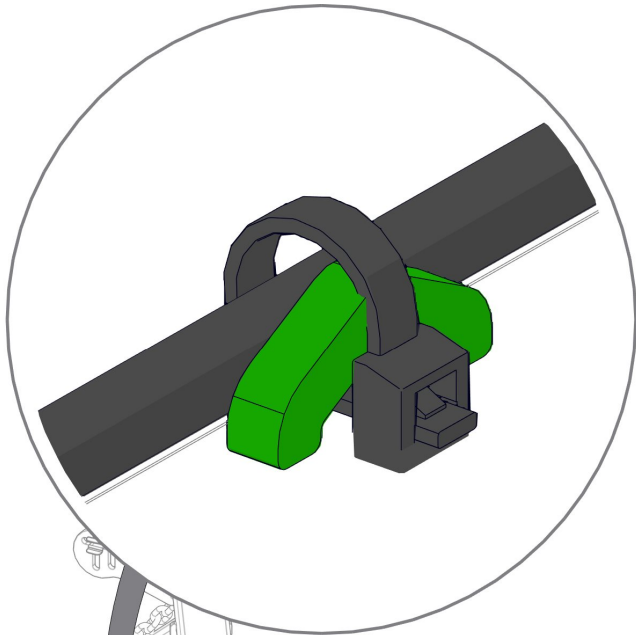
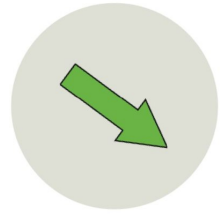


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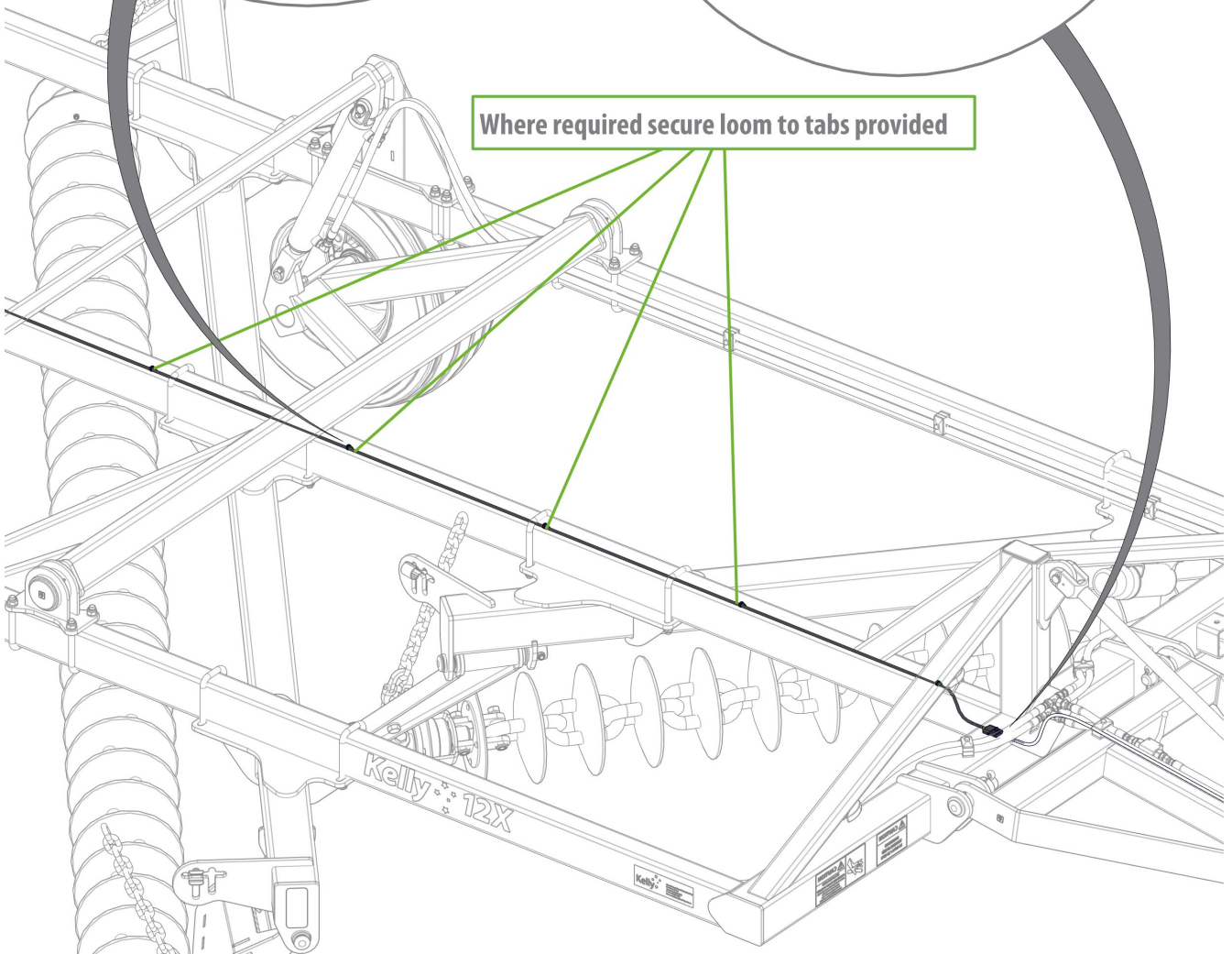


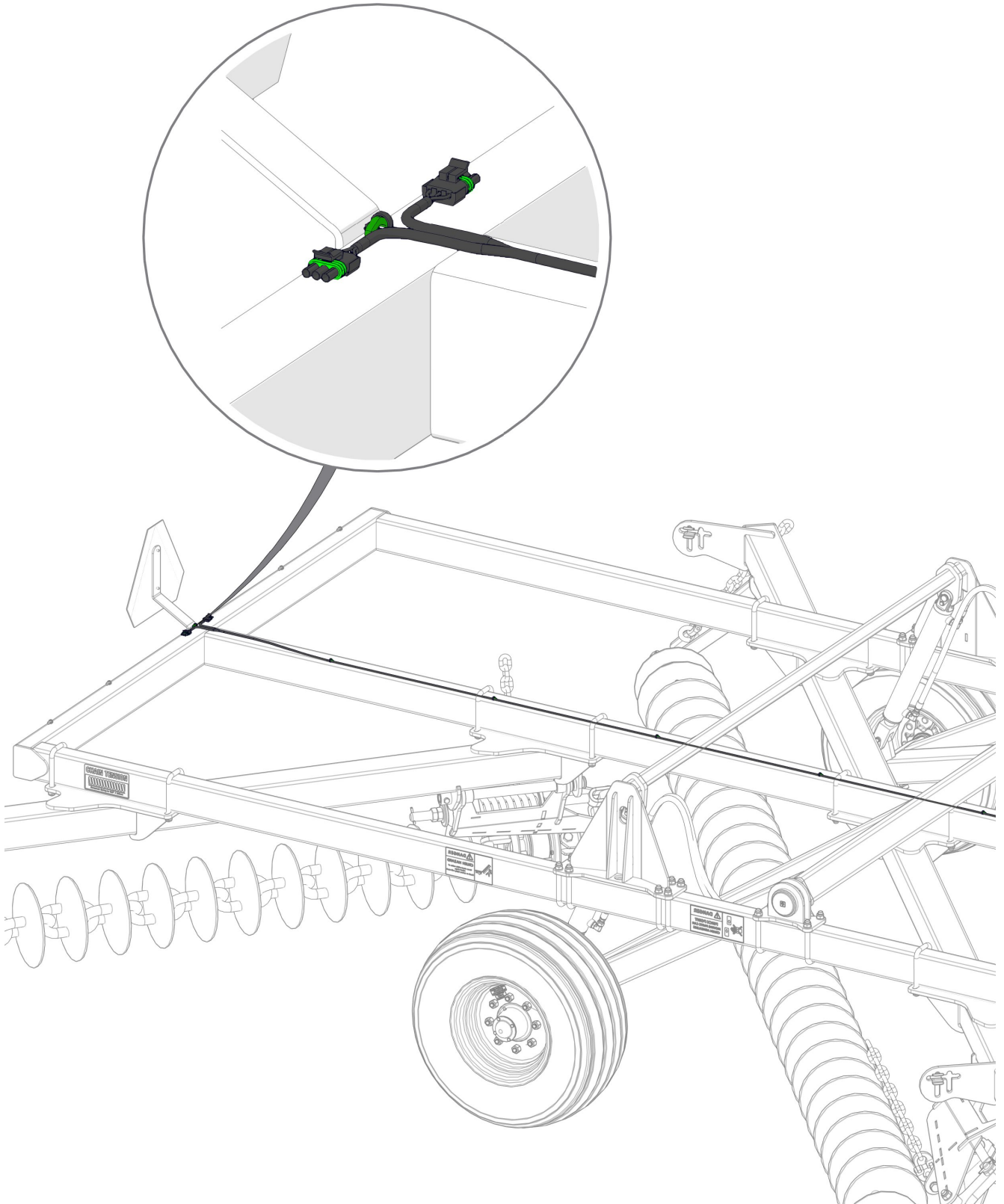
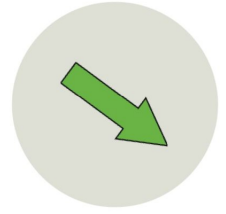


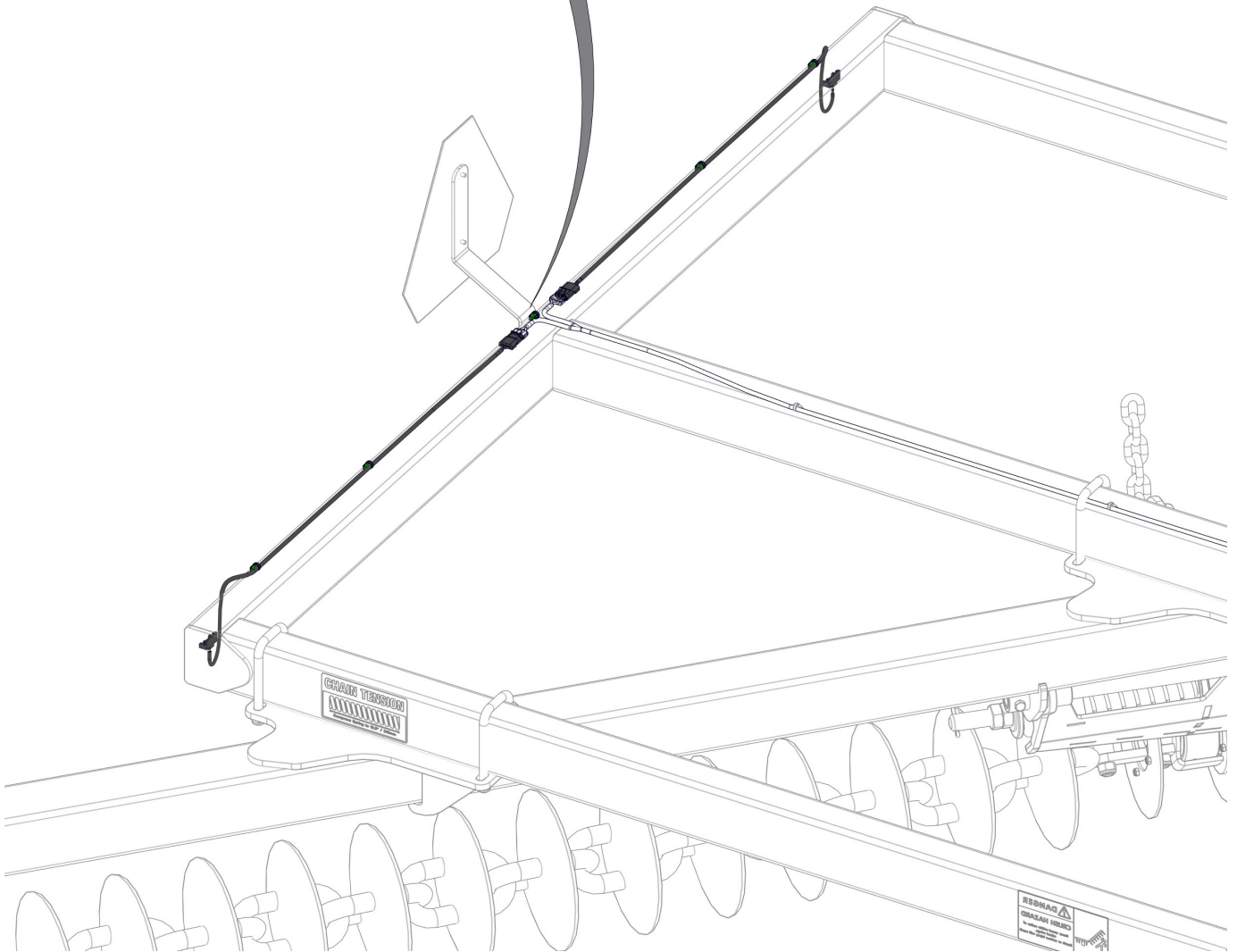
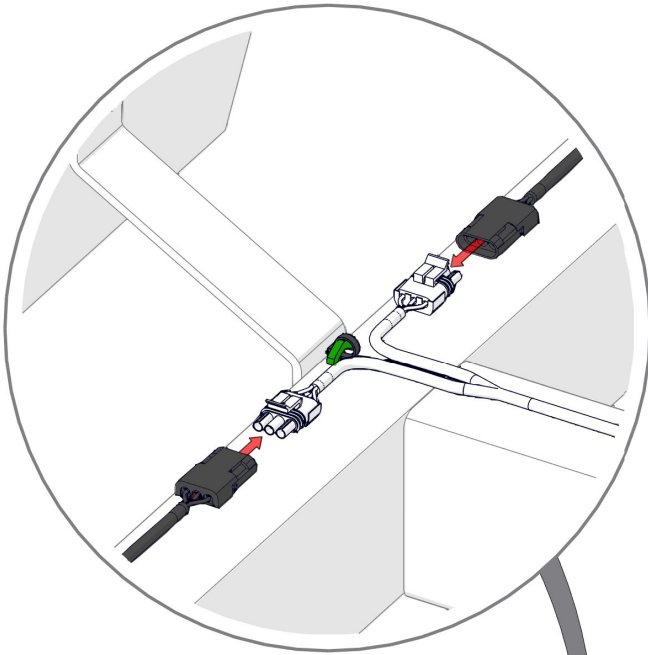
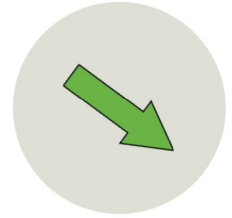


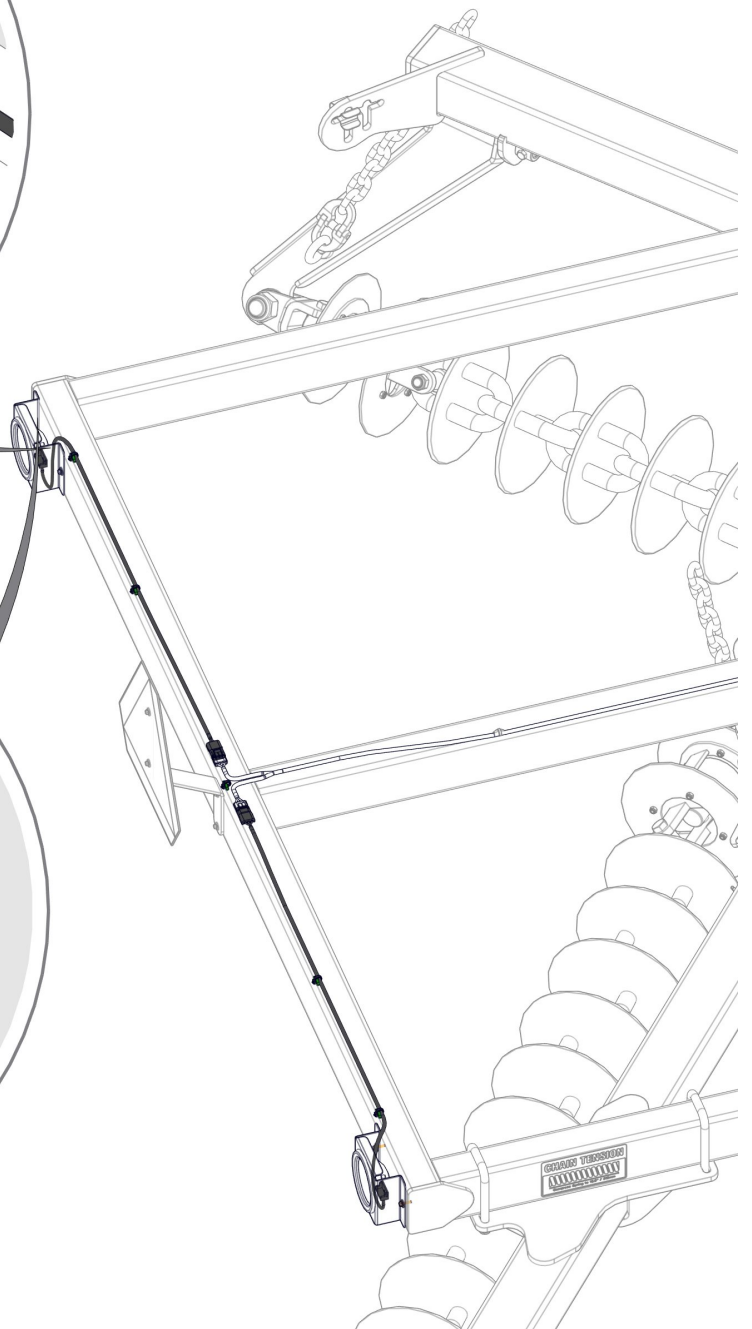
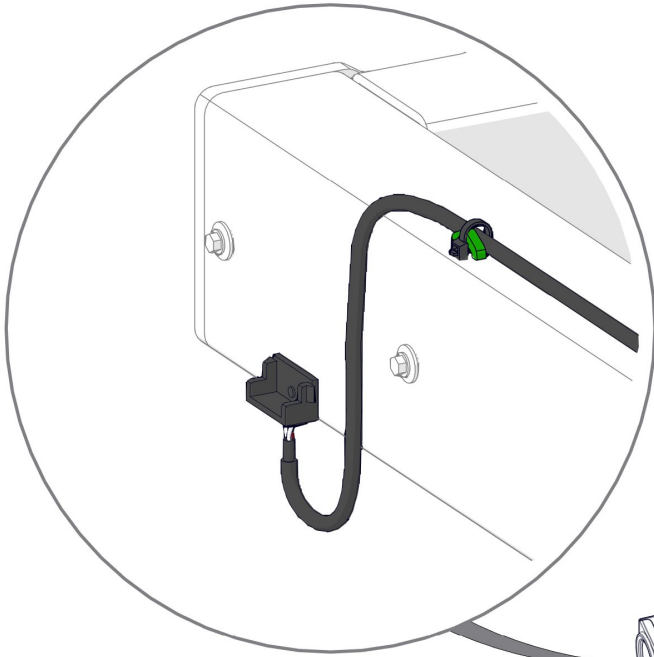


Where required secure loom to tabs provided







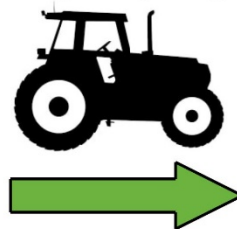
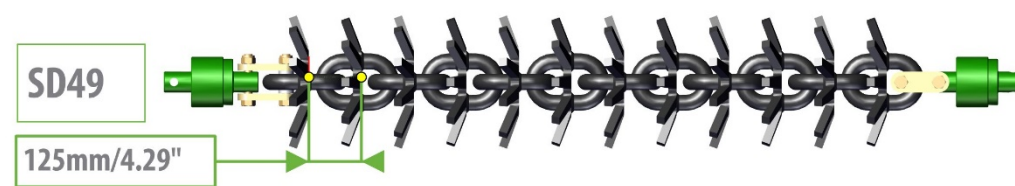
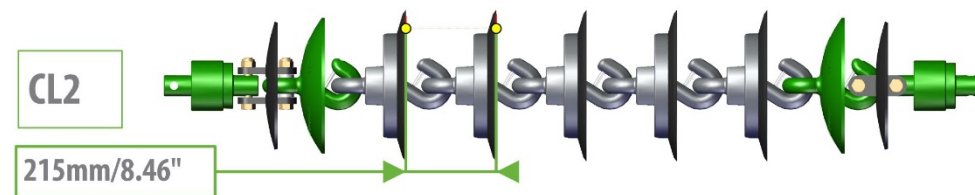




**SECTION 6**  
CHAIN  
ASSEMBLY

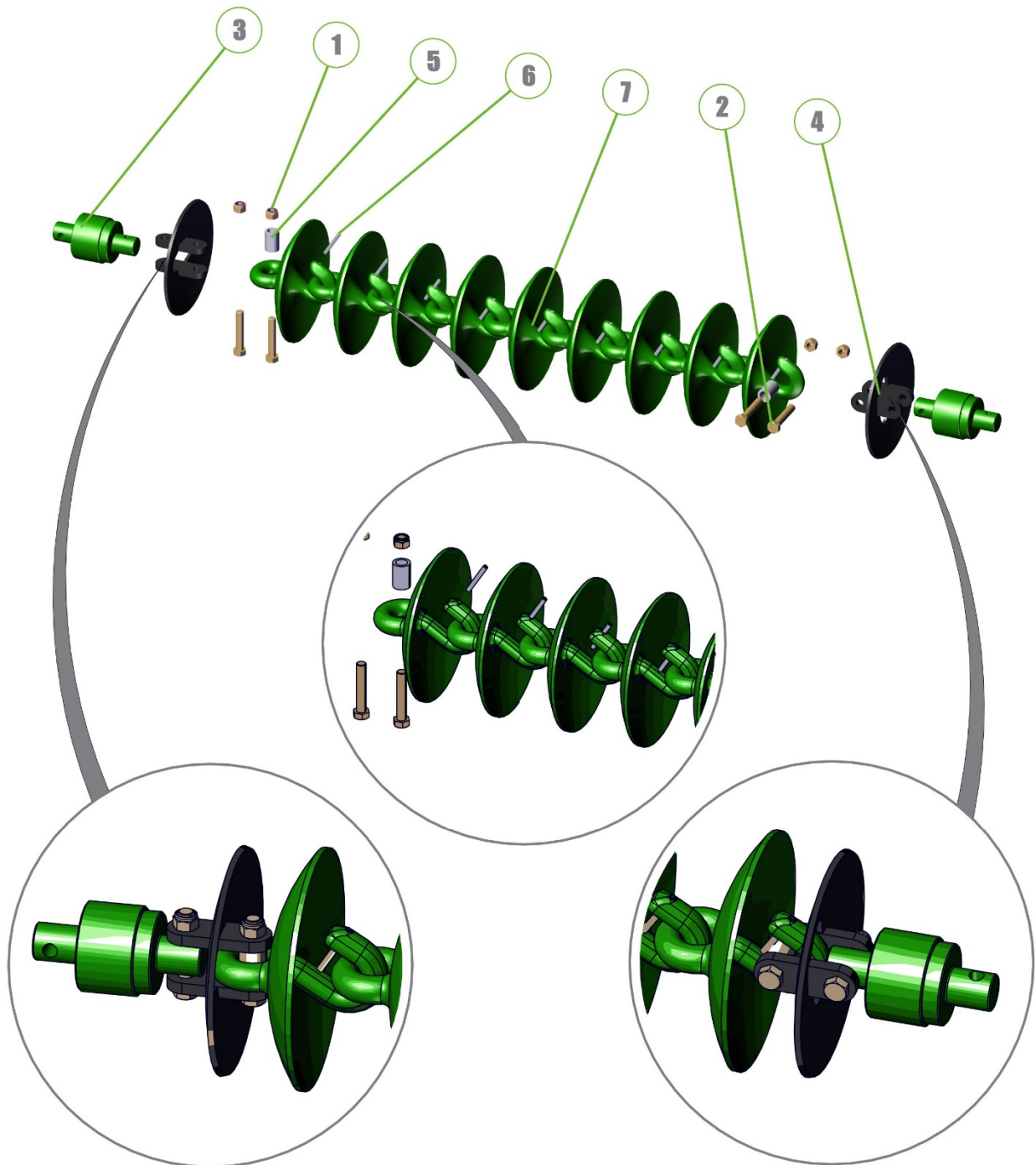
## SECTION 6 CHAIN ASSEMBLY

### Chains



## CL1 Chain

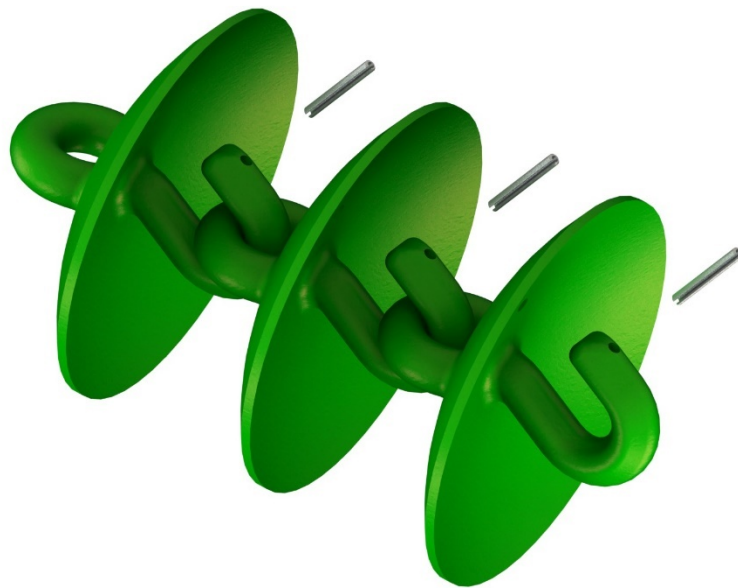
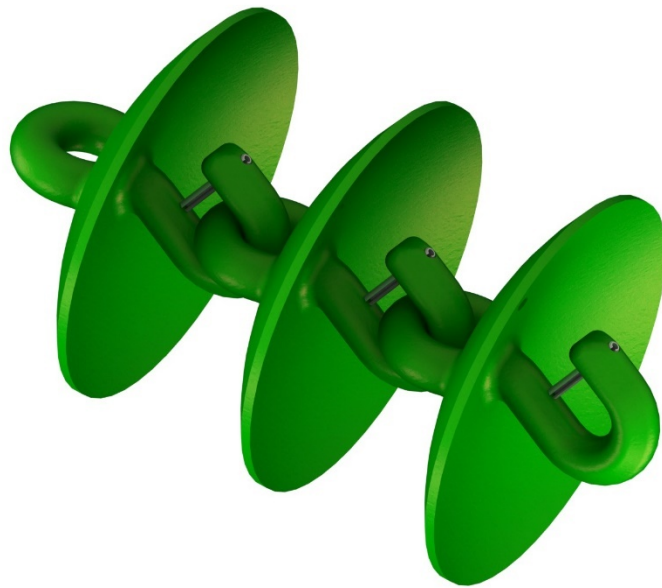
Item No.	Description	Number	Qty
1	Nyloc Nut M20/24	0221-NYL20/24	4
2	M20 x 110 / M24 x 120 grade 10.9 ZP Short Thread Bolt	0211-20110ST/0211-24120ST	4
3	20/24mm Bolt Swivel Unit	0802-PCHB55 / 0802-PCHB553	2
4	Disc Chain Tie Plate Link 20mm / 24mm	0802-DCTP-20 / 0802-DCTP-24	2
5	Tie Plate Bush	0801-PCDCS55	2
6	Roll Pin Zinc Plated 3/8" x 3"	0262-3-8X3	1
7	CL1-B Chain Disc Link	0803-CL1	1





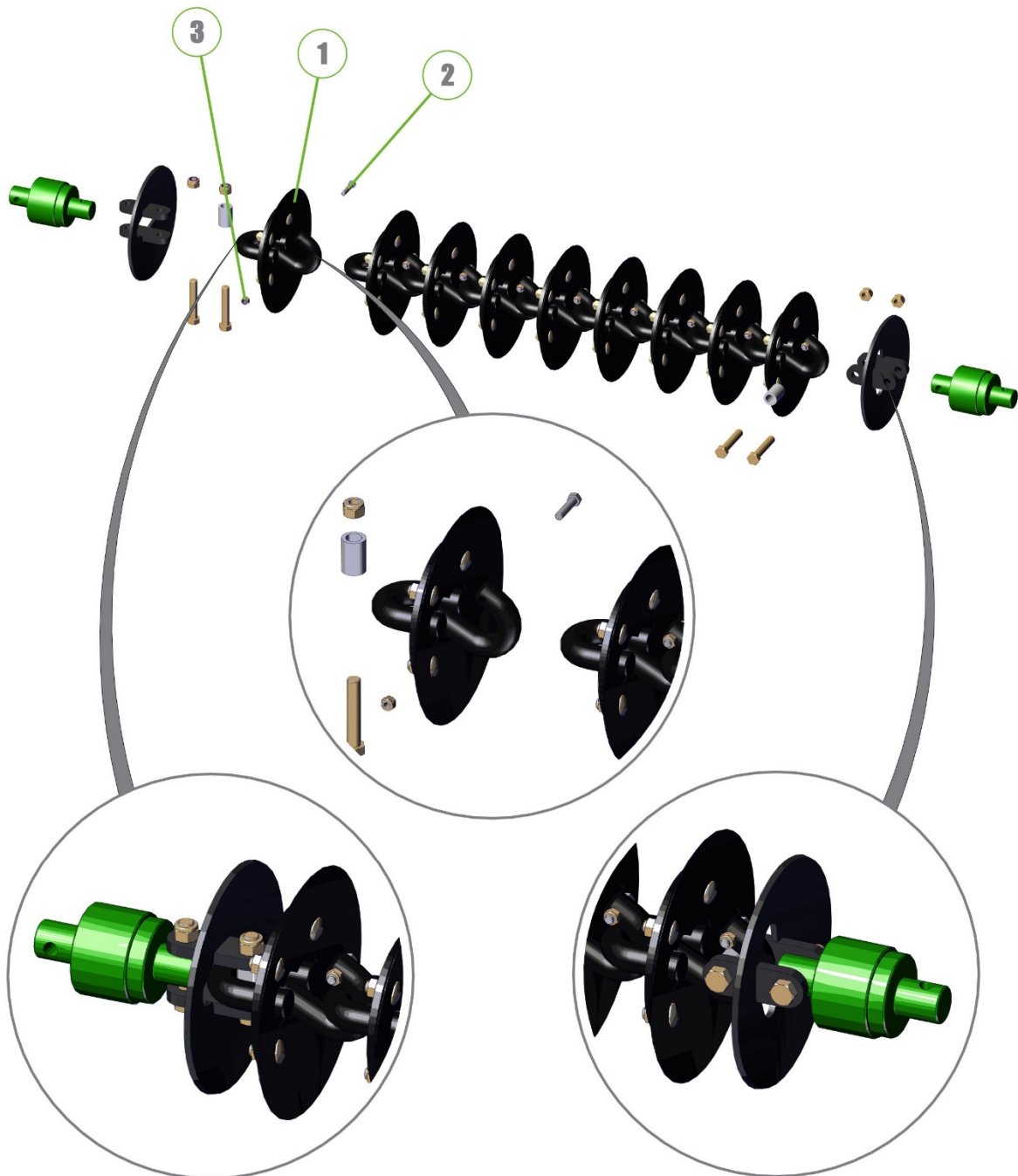
## Fitting Cast Link Pins

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.



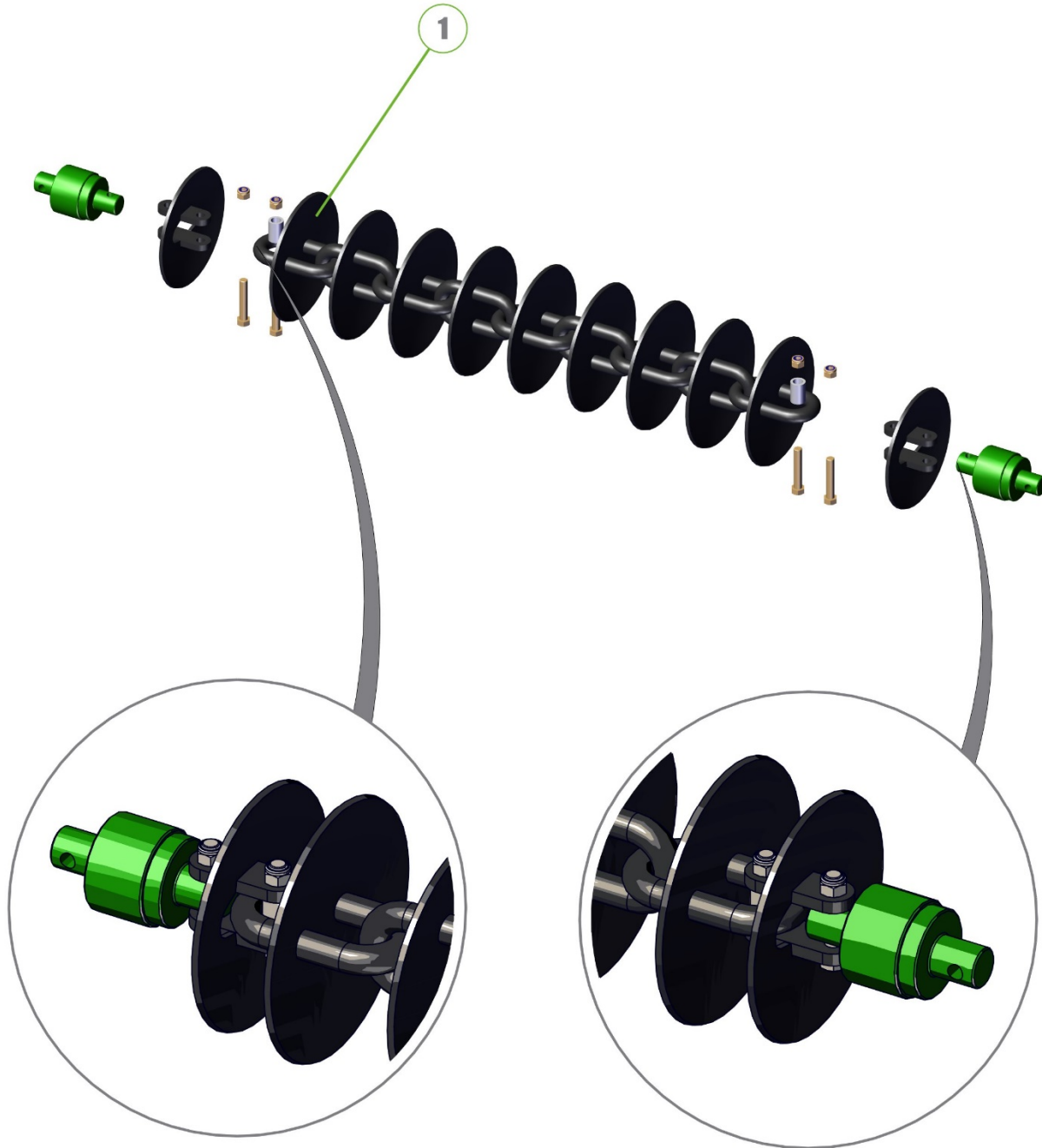
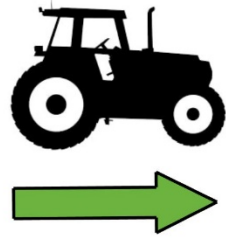
## K4 Chain

Item No.	Description	Number	Qty
1	K4 Disc Assembly	0803-K4	1
2	M12 x 55 grade 8.8 ZP Bolt	0211-1255	1
3	Nyloc Nut M12	0221-NYL12	1



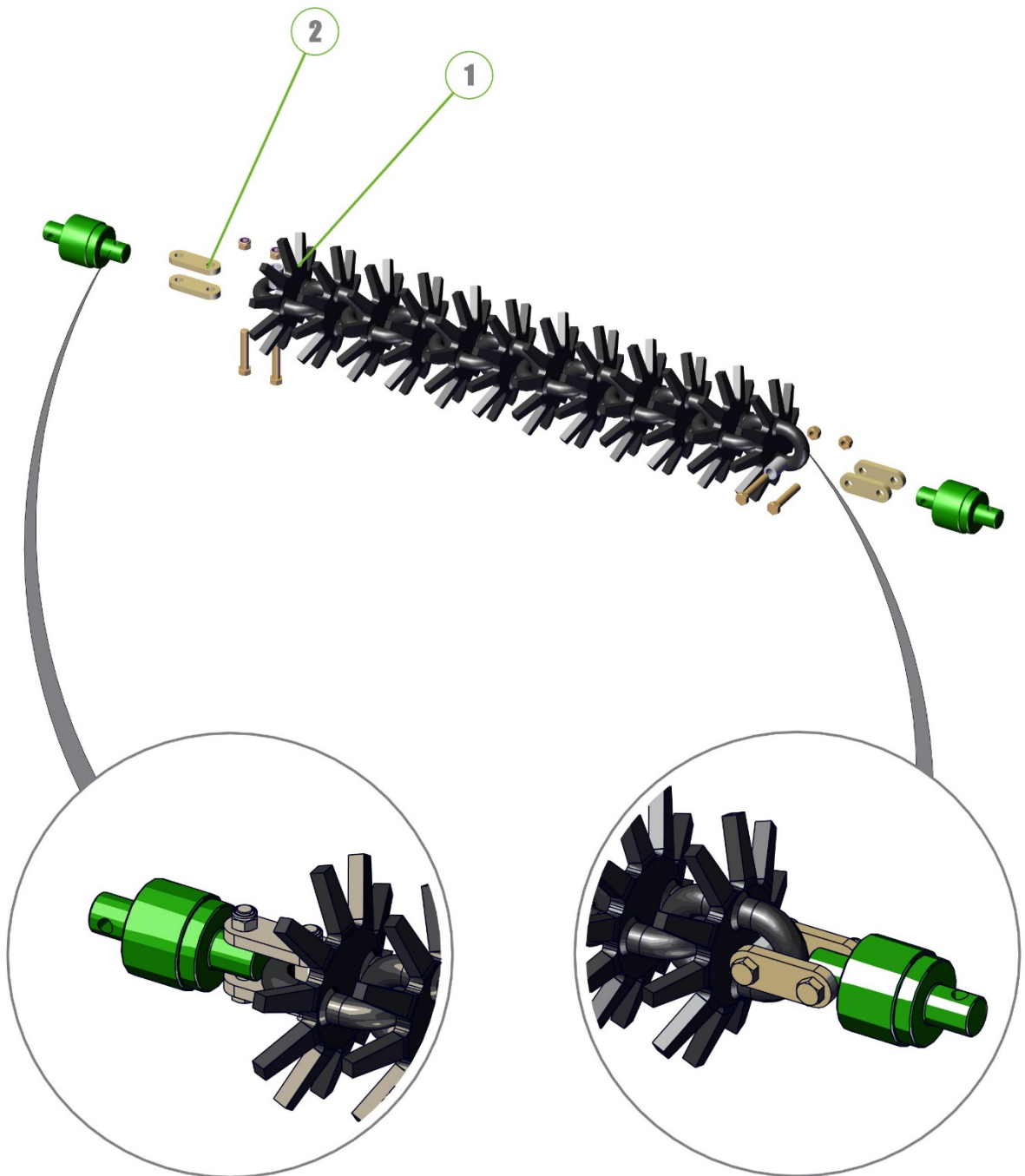
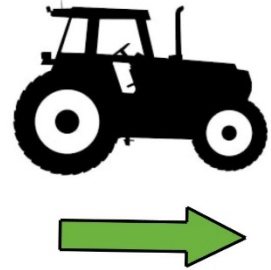
W36 Chain

Item No.	Description	Number	Qty
1	W36/25 Chain Link	0803-W36	1



## Spike Disc (SD49) Chain

Item No.	Description	Number	Qty
1	10 Spike Disc Chain 49/27/5	0803-SD49	1
2	Tie Plate For 20mm Bolt/ Tie Plate For 24mm Bolt	0800-83.2 / 0800-83.3	4



## Disc Chain Lengths and Quantities

<b>12X Model</b>	<b>Length</b>	<b>CL1/W36</b>	<b>CL1</b>	<b>W36</b>	<b>SD49</b>	<b>K4</b>
Front Left	8' $\frac{1}{4}$ " / 2.445m	CL1 - 15	15	13	19	15
Centre	15' 10- $\frac{5}{32}$ " / 4.830m	CL1 - 16 W36 - 13	30	27	39	23
Rear Right	8' 4- $\frac{15}{16}$ " / 2.564m	W36 - 14	16	14	20	16

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

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

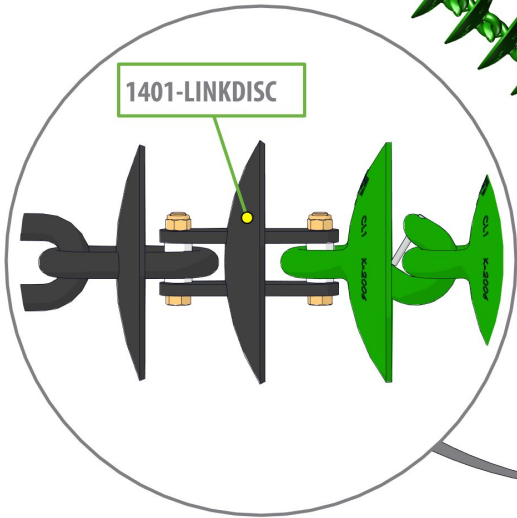
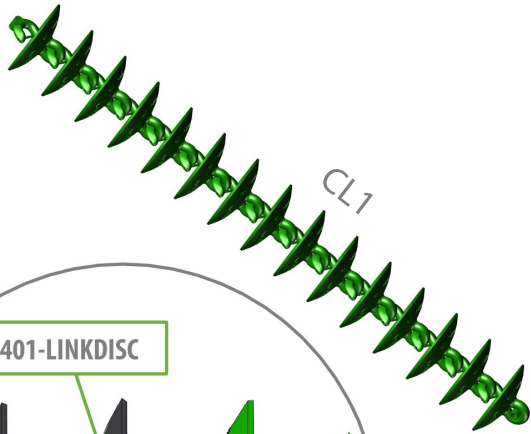
W36 Disc Chain - cut a disc chain link from the end of the disc chain

K4 Disc Chain - unhook disc chain link/s from end of the disc chain

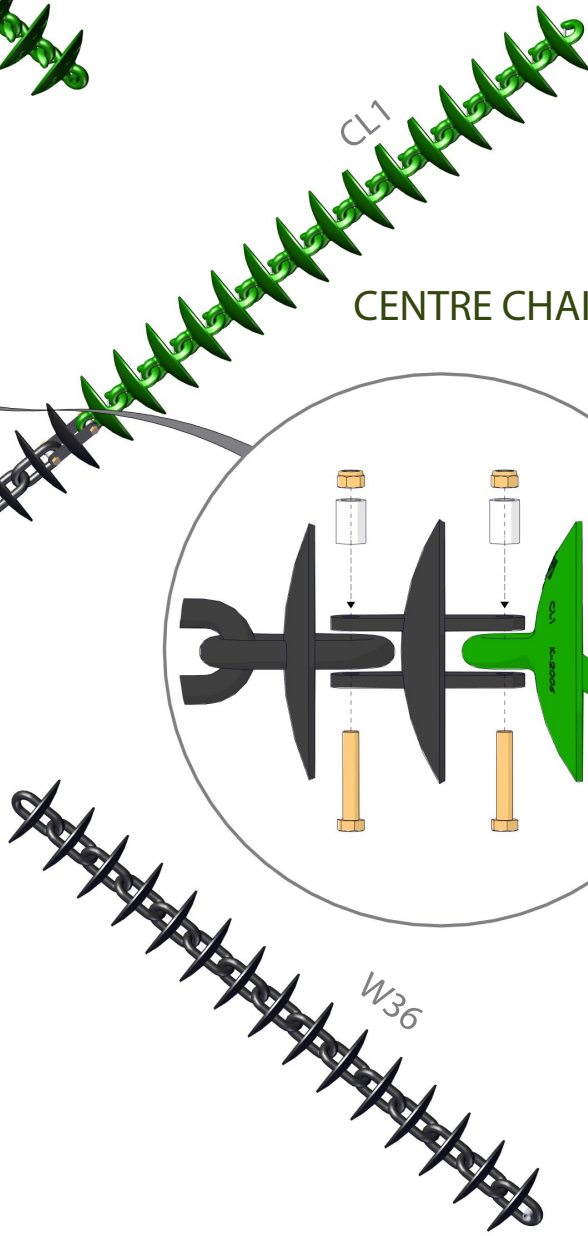
Scan the following QR code to open the removing a welded disc chain video.



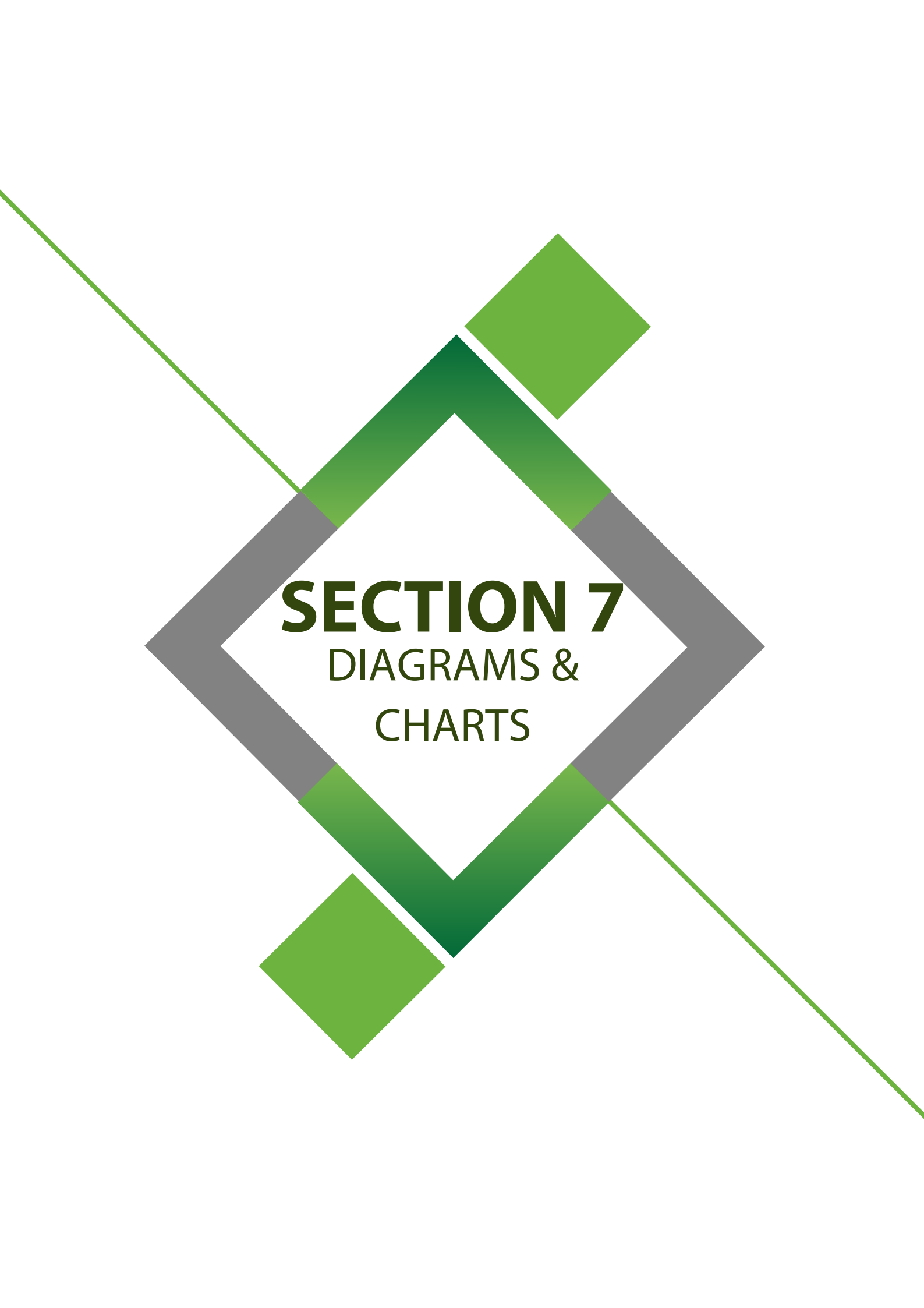
FRONT CHAINSET



CENTRE CHAINSET



REAR CHAINSET

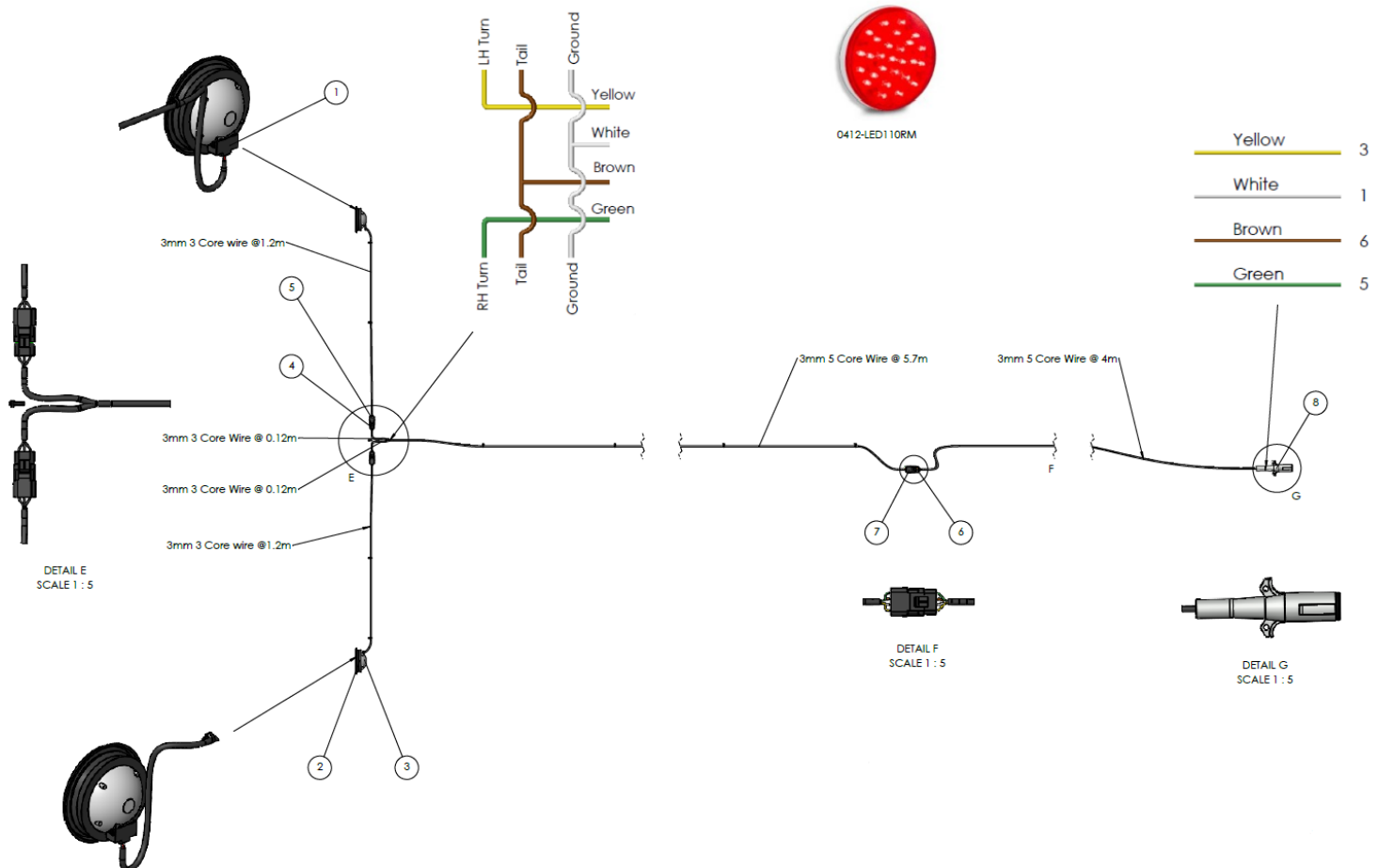


**SECTION 7**  
DIAGRAMS &  
CHARTS

## SECTION 7 DIAGRAMS & CHARTS

### Wiring Diagram

Item No.	Part Number	Description	Qty.
1	0412-110RMLP	LED110RM Loom Plug (53102)	2
2	0412-53101RG	110RM Rubber Grommet	2
3	0412-LED110RM	LED Stop Tail Lamp	2
4	0413-2C3CW-F	3 Pin Connector Female	2
5	0413-2C3CW-M	3 Pin Connecto Male	2
6	0413-2C4CW-F	4 Pin Connector Female	1
7	0413-2C4CW-M	4 Pin Connector Male	1
8	0413-82194	Heavy Duty Metal 7 Pin Plug	1





# Specifications

## Operating speeds

<b>Recommended operating speeds in normal conditions with all chain types</b>	
Operating / working speed	(6-8 mph) / (10-12 km/h)
Transporting / towing speed	(15 mph) / (25 km/h)

## Tire pressure

<b>Tire size</b>	<b>Ply</b>	<b>KPA</b>	<b>PSI</b>
31/13.5-15	12	206	30

## 12X specifications

<b>Model</b>	<b>12X</b>
Operating width	14' 6- <sup>1</sup> / <sub>32</sub> " / 4.42m
Transport width	14' 6- <sup>1</sup> / <sub>32</sub> " / 4.42m
Transport height	6' 3- <sup>3</sup> / <sub>16</sub> " / 1.91m
Transport length	30' 4- <sup>9</sup> / <sub>16</sub> " / 9.26m



**SECTION 8**  
CHAIN SETTINGS

## SECTION 8 CHAIN FIELD SETTINGS

### Chain Tension

#### 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
- Uneven field surface with ridges and furrows being created.

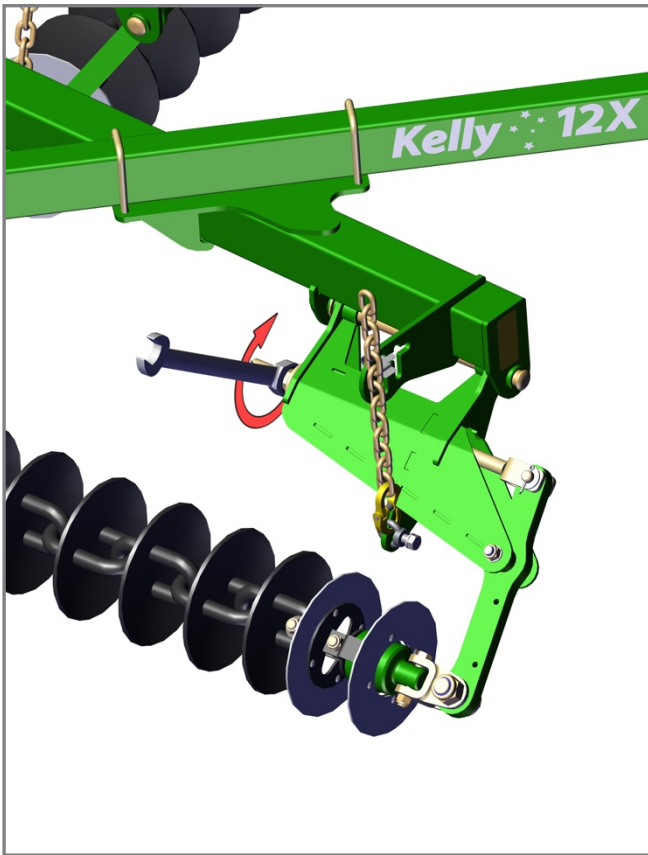
The leading 1/3rd of a loose chain is much more aggressive than the trailing 1/3rd and the centre. This will mean that the middle of the machine's front pair of chains will aggressively move soil outwards. The machine's rear pair of chains, if loose, have their aggressive 1/3rd near the wing extremity. 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 will not be evident in one pass but is possible if care is not taken over time.

**A correctly adjusted machine will not have this problem.**

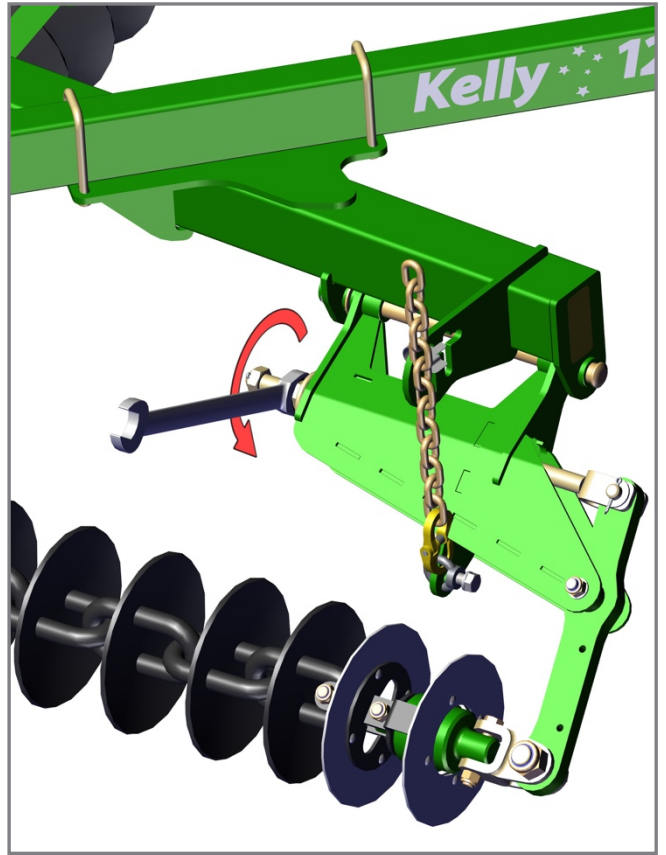
#### Chain Tension

1. Loosen the lock nut on the draw bolt.
2. Tighten the adjusting nut clockwise until the outer face of the spring retaining washer is pushed with the body of the module tensioning unit.
3. When 7-7/8" / 200mm or more of tensioner thread is visible then one link must be removed from the chain set to maintain correct tension adjustment. Spring length of 330mm / 1' 1"
4. Retighten the lock nut.

1



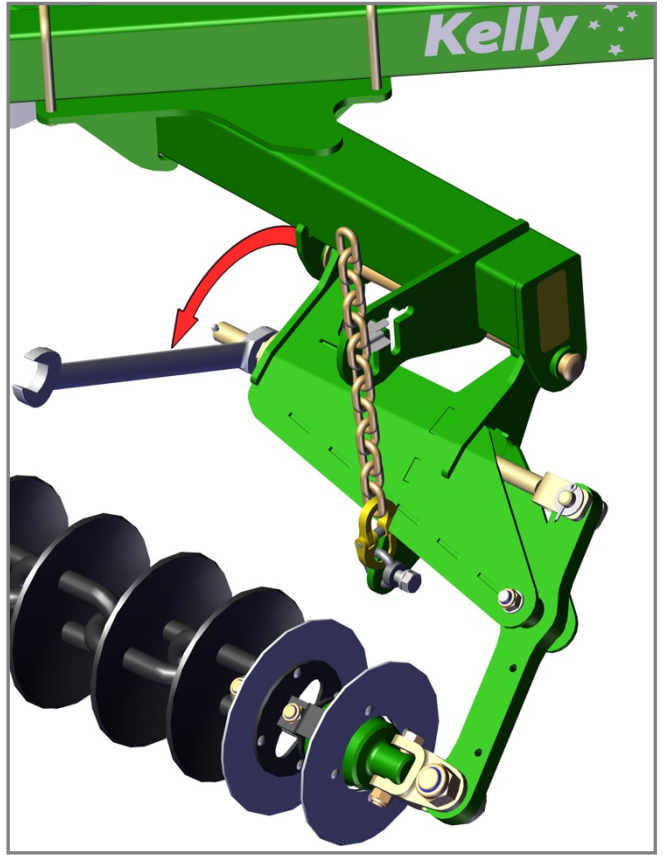
2



3



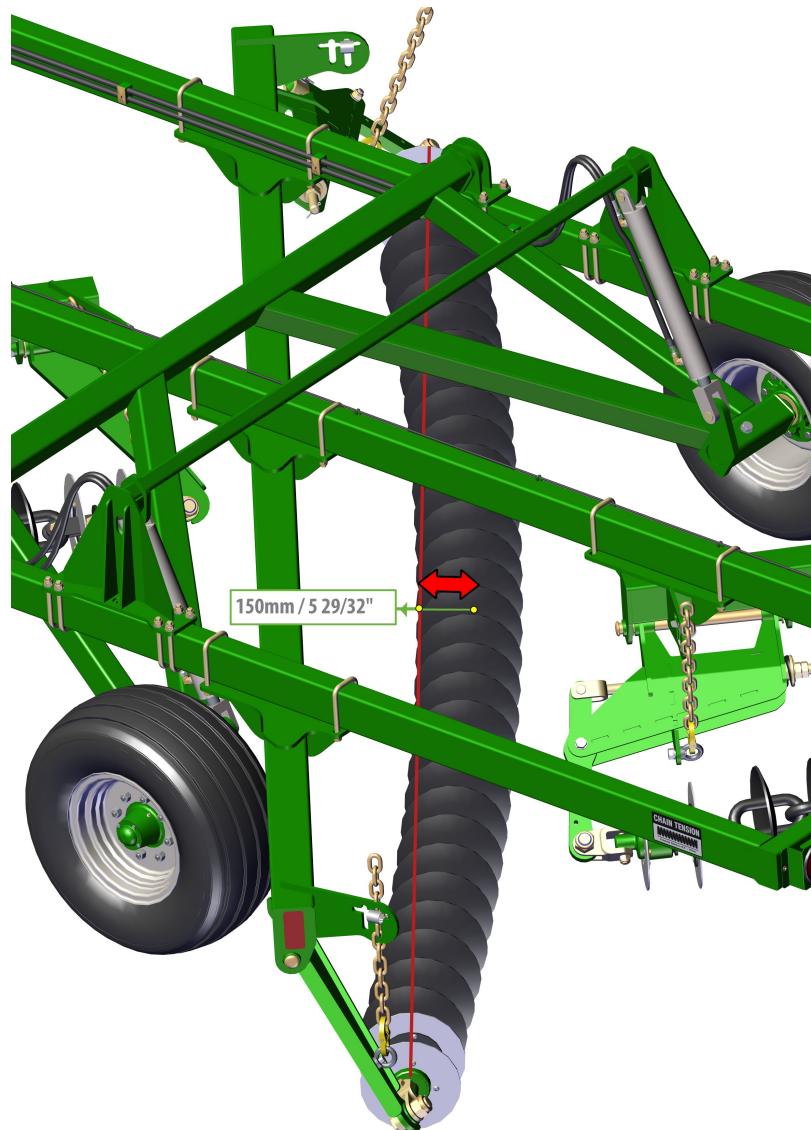
4



Chain Curve

Correct chain tension will ensure that the entire length of discs will roll as one. This minimises the movement between each link. If a chain is not adjusted and runs loose, each link acts as a universal joint as the curved chain rolls along. The wear rate between each link is greatly accelerated and can lead to premature failure. The chain should not wear out before the discs are worn down.

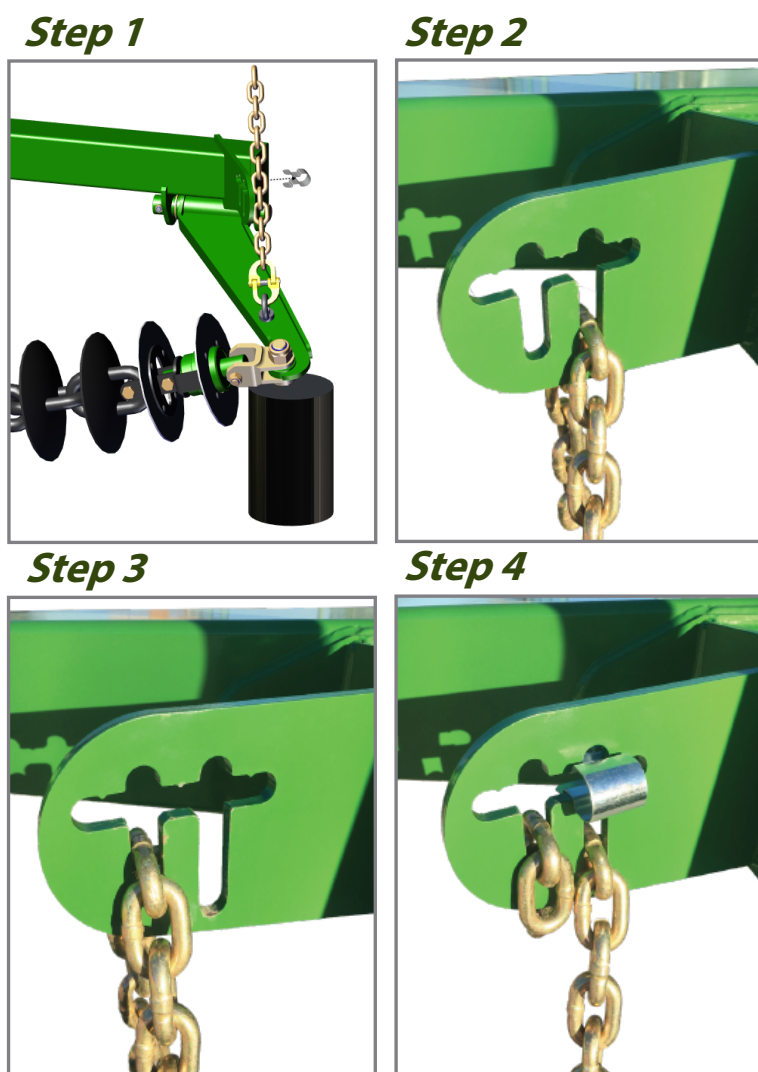
### ONLY POOR ADJUSTMENT CAUSES PREMATURE WEAR



Indicator line shows acceptable curvature when operating.

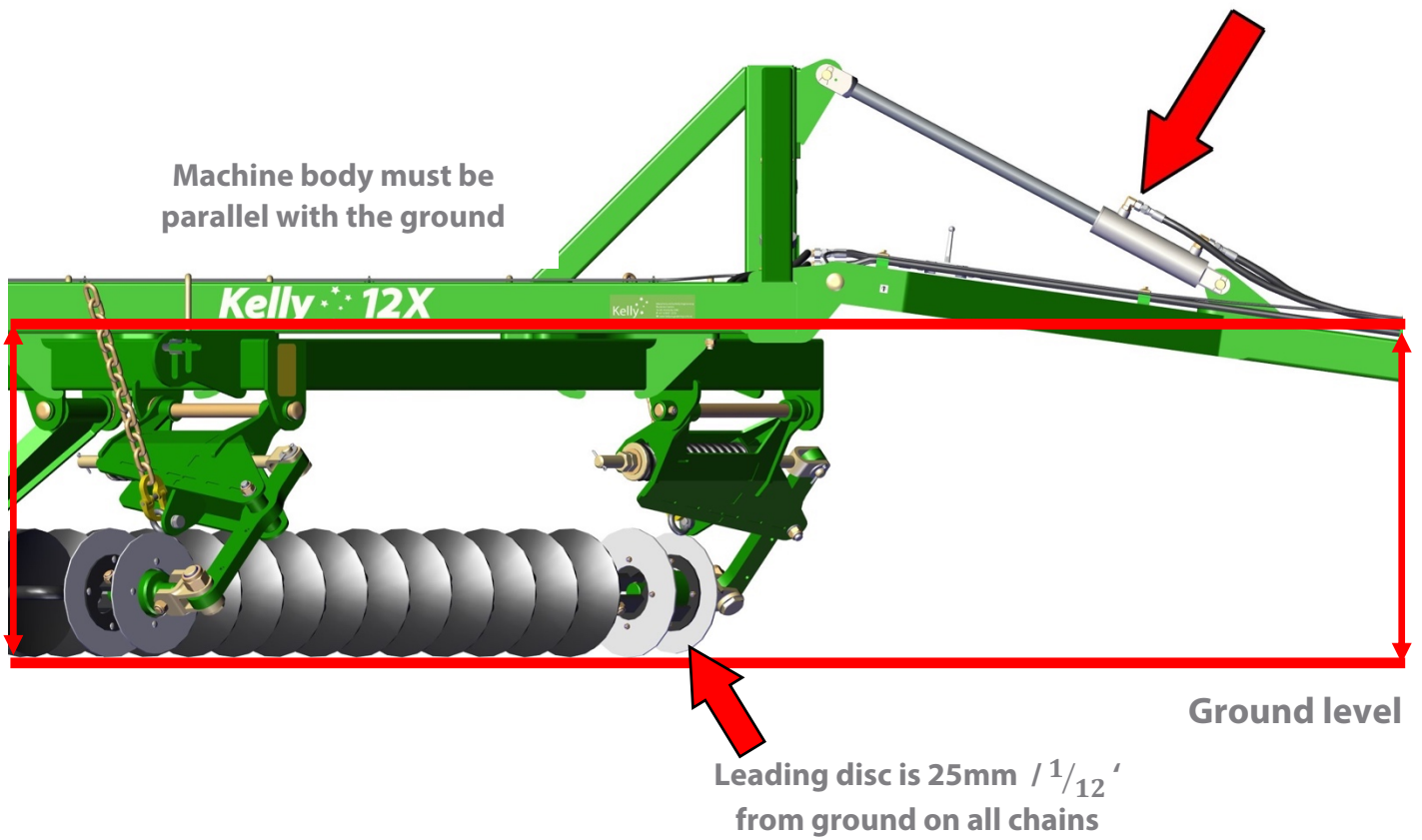
### Chain Mount Arm Height Adjustment

1. Use tractor hydraulics to raise the module chain or chain mount plate that requires adjustment. Position a suitable block or stand to support the arm. Using the tractor hydraulics, lower the machine until the height adjusting chains are loose.
2. Remove spring retaining clip. Slide chain up to the top of the slot in lifting arm to pass the chain through the cross at top of plate.
3. Slide chain back down to the bottom when the desired position is reached. To achieve "one link" of adjustment, lift chain to the top of the slot, pass one link through the slot and rotate 90 degrees to allow the next link in the adjusting chain to lower into the same slot. To achieve "half link" of adjustment lift the chain to the top of the slot and slide chain horizontally and lower the same link into the second slot. This will raise or lower the chain mount plate by half a link depending on which slot the chain started in. Any excess chain can be fed back through the second slot.
4. Install retaining clip. Remove stand.



Frame

height adjustment



Check the length of the height adjusting chains on the two front chain mount plates. There should be no slack in the chain and about 25-51mm /  $\frac{1}{12}' - \frac{1}{6}'$  of gap between the ground and the bottom of the first disc machine near the centre line.

## NOTES



## NOTES

