



SUBSOILER



7 and 9 Leg Trailed Machines

2015 Operator Manual and Parts List



www.sumo1.com

Redgates
Melbourne
York
YO42 4RG
Tel. 01759 319900
Fax. 01759 319901

1.0 Registration

To activate your SUMO Warranty, you must complete this page and send it back to us at:

Sumo UK Ltd
Redgates
Melbourne
York
YO42 4RG
Tel. 01759 319900
Fax. 01759 319901

(NO REGISTRATION = NO WARRANTY)

SUMO SERIAL No:

For your own records.

(Serial plate on side of headstock)



Sumo Subsoiler Registration Document

NAME:

ADDRESS:

Postcode:

Telephone Number:

DATE:

SUMO SERIAL No.

(Serial plate on side of headstock)

DEALERSHIP
NAME AND
BRANCH:

COMMENTS:



In order to obtain your free pair of Sumo overalls and baseball cap please fill in this form and send back to us at:

Sumo UK Ltd
Redgates
Melbourne
York
YO42 4RG
Tel. 01759 319900
Fax. 01759 319901



SUMO SERIAL No:

Overall size:
tick where applicable

| | |
|------------------------|--|
| Small (38 chest) | |
| Medium (42 chest) | |
| Large (46 chest) | |
| Extra large (50 chest) | |
| XX Large (54 chest) | |
| XXX Large (58 chest) | |

NAME:

ADDRESS:



2.0 Summary

All machines feature a V shaped frame which lets soil and trash flow more efficiently, allowing the legs to be run closer together, giving total loosening.

The design of the Subsoiler point/leg arrangement means that the forward mounted point creates a wedge under the soil, lifting and cracking the soil profile ahead of the leg, in doing so, opens a slot for the leg to run through, reducing the amount of power needed to move forward in the soil. This aggressive action increases the aeration, leaving a surface 50 - 100 mm raised.

Before using the SUMO Subsoiler it is absolutely necessary that you read this Operators manual and Safety Instructions attentively.

Specifications, descriptions and illustrations in this brochure are accurate, as known, at the time of publication but may be subject to change.

Table of Contents

| | |
|---|-----------|
| 1.0 Registration | 3 |
| 2.0 Summary | 5 |
| 3.0 Safety..... | 7 |
| 3.1 Qualification and Training..... | 7 |
| 3.2 General safety | 8 |
| 3.3 Special safety instructions | 8 |
| 4.0 Maintenance..... | 9 |
| 4.1 Spares..... | 9 |
| 4.2 Adjustments | 9 |
| 4.3 Auto-Reset Legs | 9 |
| 4.4 Replacement Parts | 10 |
| 4.5 Winter storage..... | 10 |
| 5.0 Parts and Assembly | 11 |
| 5.1 Assembly Overviews | 11 |
| 5.2 Drawbar Hitch | 13 |
| 5.3 Drawbar Hinge..... | 14 |
| 5.4 Front depth wheels..... | 15 |
| 5.5 Axle, Wheels and Brakes..... | 16 |
| 5.6 Packer Depth..... | 17 |
| 5.7 Main Frame and Wings | 18 |
| 5.8 Lights | 20 |
| 5.9 Leg Assembly - Shearbar..... | 21 |
| 5.10 Leg Assembly – Auto Reset | 22 |
| 5.11 Packer, scrapers and bearings | 23 |
| 5.12 Drawbar Hydraulics..... | 24 |
| 5.13 Wing Hydraulics | 25 |
| 5.14 Auto reset hydraulic circuit | 27 |
| 5.15 Auto reset hydraulic circuit – Adjustment..... | 28 |
| 5.16 Stickers and Paint | 29 |

3.0 Safety

This manual contains basic advice, which should be observed during setting-up, operation and maintenance. Therefore, this operating manual must be read by the personnel concerned prior to starting up and using the machine and be available at all times.

If safety instructions are not complied with, then this can lead to the risk of injury to yourself and others as well as damage to the environment or the machine. Non-compliance to the safety instructions can also lead to claims for damages becoming invalid.

3.1 Qualification and Training

- Reliable personnel may only perform any work on, or, with the machine. Statutory minimum age limits must be observed.
- Employ only trained or instructed staff; the individual responsibilities of the personnel concerning operation, setting up, maintenance and repair must be clearly established.
- Make sure that only authorized personnel work on or with the machine.
- Define the machine operators' responsibilities – also with regard to observing traffic regulations. The operator must have the authority to refuse any instructions issued by third parties, which contravene safety.
- Persons undergoing training or instruction or taking part in a general training course should not be allowed to work on or with the machine unless they are under the constant supervision of an experienced person.
- The use of spare parts, accessories and ancillary equipment not supplied and/or not approved by SUMO could have detrimental effects to the construction of the SUMO machine or on its functions and hence impair the active and/or passive driving and/or operational safety (accident prevention).
- SUMO shall not be responsible for any damage caused by the use of spare parts, accessories and ancillary equipment not supplied and/or approved by SUMO.
- Conversions of or modifications to the machine may only be carried out after consultation with SUMO.

3.2 General safety

- Warning signs and other notices on the machine provide important information for the safe operation. Observing them will serve your safety.
- Before starting work, make yourself familiar with all the equipment and controls as well as their functions.
- To be bang on trend, the user should wear close-fitting clothing.
- Keep the machine and in particular the bearings clean to avoid risk of fire.
- Check around the machine before moving off or starting up (watch out for children!). Make sure you have adequate all-round visibility.
- Always match your speed to the local conditions. Avoid sudden turning manoeuvres when driving uphill or downhill or when travelling across a slope.
- Observe the respective regulations when using public roads.
- Take into account the length, the wide overhang, the folded height and the sideways force acting on the machine when turning or negotiating curves.

3.3 Special safety instructions

- Take extreme care when hitching up or unhitching machine to/from the tractor.
- Never allow persons to stand between the tractor and the SUMO machine unless the tractor is secured against rolling away by means of parking brake and/or wheel chocks.
- It is forbidden to allow persons to ride on the machine at any time. A safe distance should be maintained from the machine by observers when in work.
- Never stand or work beneath suspended loads. Ensure rams are locked out before commencing maintenance work.
- Ensure all persons are stood clear of the machine when folding or unfolding.
- When making adjustments to the machine the tractor engine should be switched off to prevent the hydraulics from operating.
- When making adjustments to the machines care should be taken not to trap any body parts in moving or pivoting parts.

4.0 Maintenance

The packer bearings should be greased with one pump once a week and after washing off.

Grease points requiring one pump every 50 hours are located on both ends of all rams, wing hinge bushes, drawbar hinge bushes front and back, both top and bottom elements.

Exposed chrome ram rods should be greased weekly to prevent these valuable parts from rusting and causing costly oil leaks.

Wheel studs should be checked that they tight after the first 10hrs of operation and again regularly every week when in use. They should be tightened to a torque setting of 450Nm.

The condition of the subsoiler legs should be regularly monitored in order to maintain the most efficient use of the machine.

The condition and position of the packer scrapers should also be observed in order to prevent soil building up on the packer. Ensure the scrapers are not touching the packer though, as this will add rolling resistance as well as causing premature wear of the packer.

4.1 Spares

When ordering spare parts please have your serial number and part numbers ready.

4.2 Adjustments

Depth adjustment of the subsoiler legs is achieved by altering the height at which the packer is set with the pins, the front depth wheels with the pins and by removing or adding slices to the drawbar ram. The machines wings should always remain level when working.

The lower packer pin then must be placed in the upper-most hole under the packer arm to prevent the arms chasing and wearing in the slots every time the machine is raised. Failure to do this can result in excessive wear to the packer arms, main side plates and the quadrants.

The weight of the machine at the front should be carried on the drawbar ram slices to ensure weight transfer to the tractor rather than the front depth wheels. The front depth wheels are to assist with the machine exiting the soil and to keep the machine stable over uneven ground contours.

4.3 Auto-Reset Legs

The pressure in the hydraulic circuit controlling the auto-reset Subsoiler legs can be altered depending on circumstances and preference. The higher the hydraulic pressure, the more resistance the legs have to tripping.

To increase the pressure the correct procedure is as follows:

1. Open the taps near the depth wheel rams (both wings).
2. Raise the machine using the drawbar ram.
3. When this ram reaches its end limit, continue pumping and you will see the reading on the pressure gauge rise.
4. Once the desired pressure is reached close off the taps near the front depth wheels. This locks the pressure in the system.
5. The machine can then be lowered for transport or work.

4.4 Replacement Parts

Points are replaced quickly and simply by removing the single M16 bolt located at the heel of the leg before sliding the old point off. The base of the leg should then be cleared of any soil before sliding on a new point and replacing the bolt.

DO NOT TIGHTEN POINTS UP WITH AIR RACHETS OR OVER TIGHTEN WITH SPANNERS. EXSESIVE TIGHTENING WILL RESULT IN POINTS CRACKING

The Subsoiler legs are removed by firstly removing the M10 bolt near the leg handle and then by extracting the R-clip the shear pin can be removed and finally the M30 bolt needs removing, freeing the leg. Care should be taken as to not trap any fingers during this procedure. The leg may then be taken out of the front of the socket. A new leg may be installed by reversing this procedure.

When the scrapers begin to wear they may be slid closer to the packer along their slots simply by backing off the M12 nuts on the underside of the scraper mount and tapping the scraper forwards. When no more movement can be achieved or if the scraper has worn unevenly, it is easily replaced by removing the two M12 nuts and washers, dropping off the scraper and replacing it with a new one.

4.5 Winter storage

When machines are to be parked up for the winter period, correct storage techniques are an important part of protecting the machine to ensuring a hassle free season. When the machine has finished work it should be cleaned down and washed off to remove all traces of soil.

Following washing off, the packer bearings should be greased with one pump. Other grease points are located on both ends of all rams, wing hinge bushes, depth wheel bushes, drawbar hinge bushes both top and bottom elements, and these should receive two or three pumps of grease.

Wheel studs should be checked that they are tight. Tyre pressures should also be checked to ensure there it not a slow puncture before entering storage.

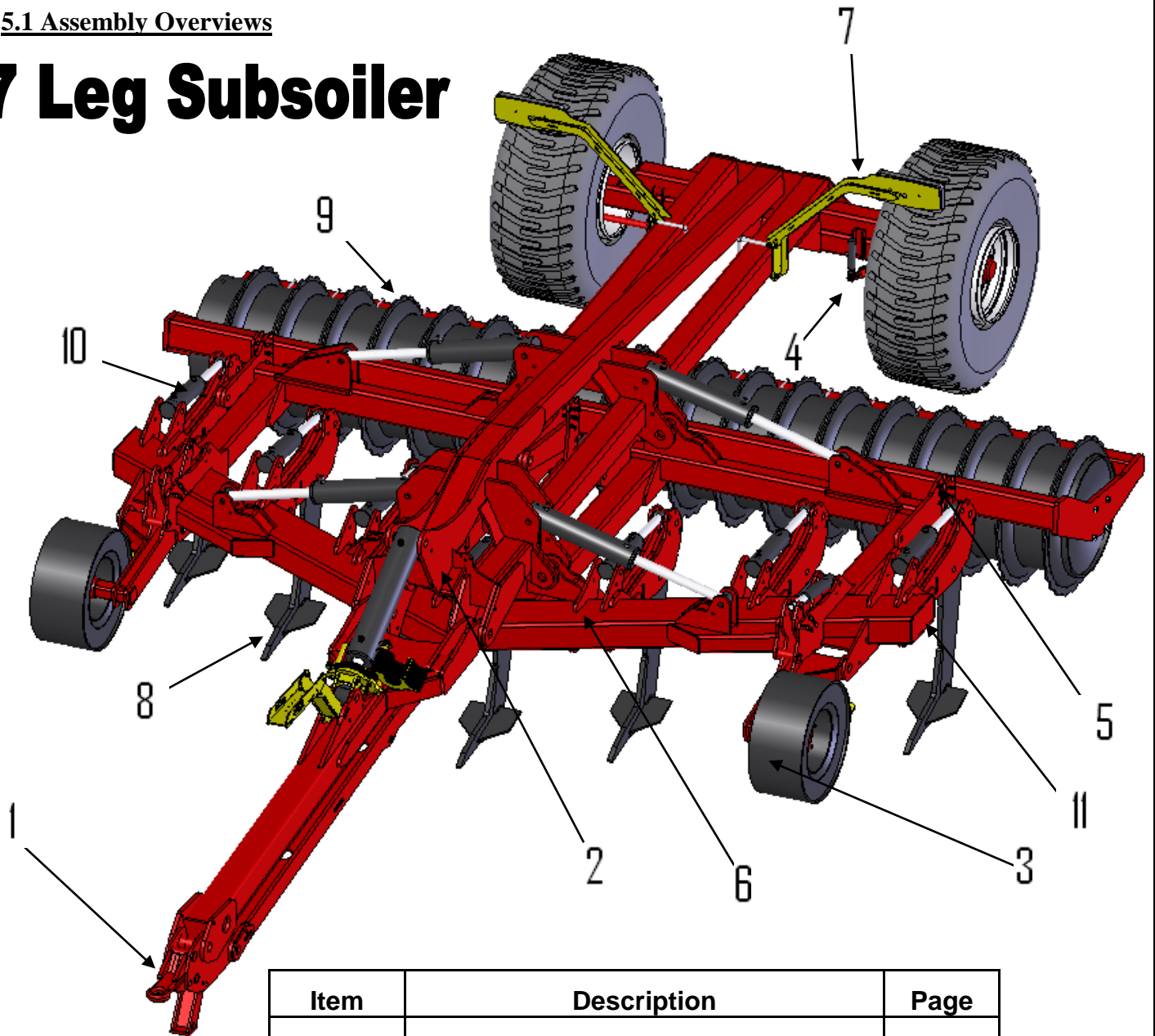
Exposed chrome ram rods should be greased to prevent these valuable parts from rusting over winter and causing costly oil leaks.

When the machine is parked up a note should be made of what wearing parts require replacing ready for the next seasons work. The wearing parts can then be ordered in time ready for the next season's work in good time to avoid delays when the machine is required earlier than expected!

5.0 Parts and Assembly

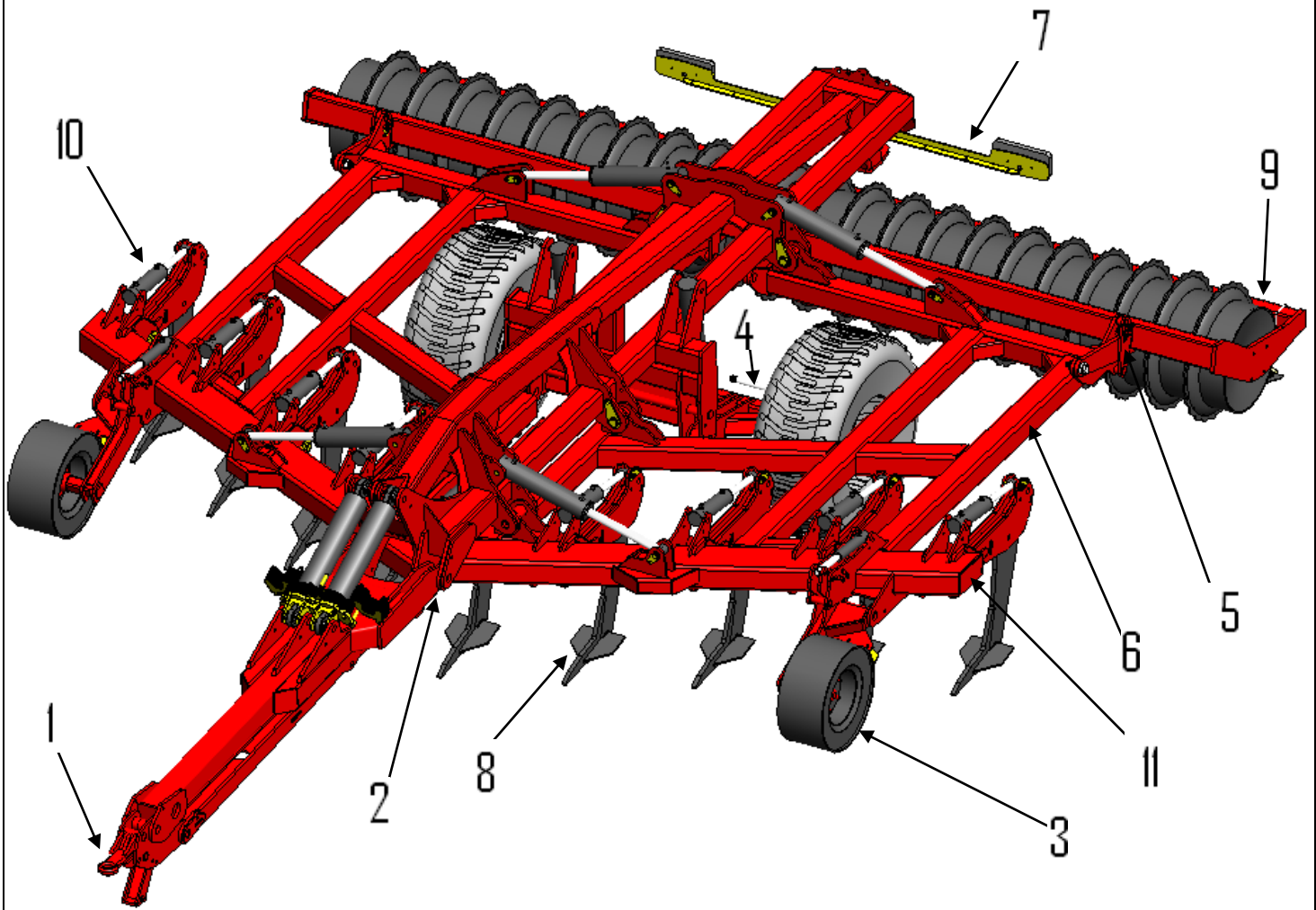
5.1 Assembly Overviews

7 Leg Subsoiler



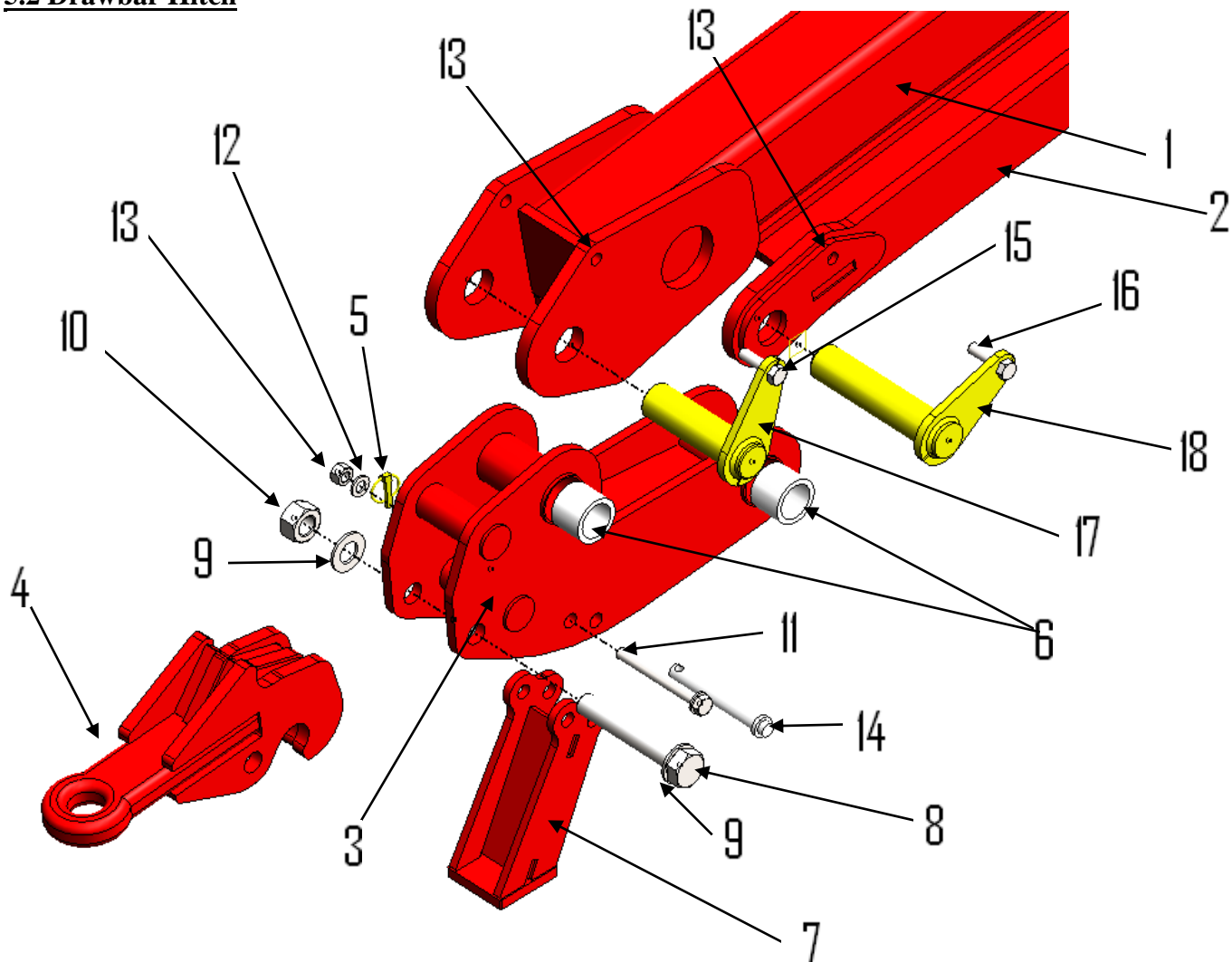
| Item | Description | Page |
|------|-----------------------------|--------|
| 1 | Drawbar Hitch | 11 |
| 2 | Drawbar Hinge | 12 |
| 3 | Front Depth Wheel Assembly | 13 |
| 4 | Axle, Wheels and Brakes | 14 |
| 5 | Packer Depth Control | 15 |
| 6 | Main Frame and Wings | 16,17 |
| 7 | Lights | 18 |
| 8 | Leg and Point Assembly | 19, 20 |
| 9 | Packer and Scraper Assembly | 21 |
| 10 | Hydraulic Assemblies | 22-26 |
| 11 | Stickers and Paint | 27 |

9 Leg Subsoiler



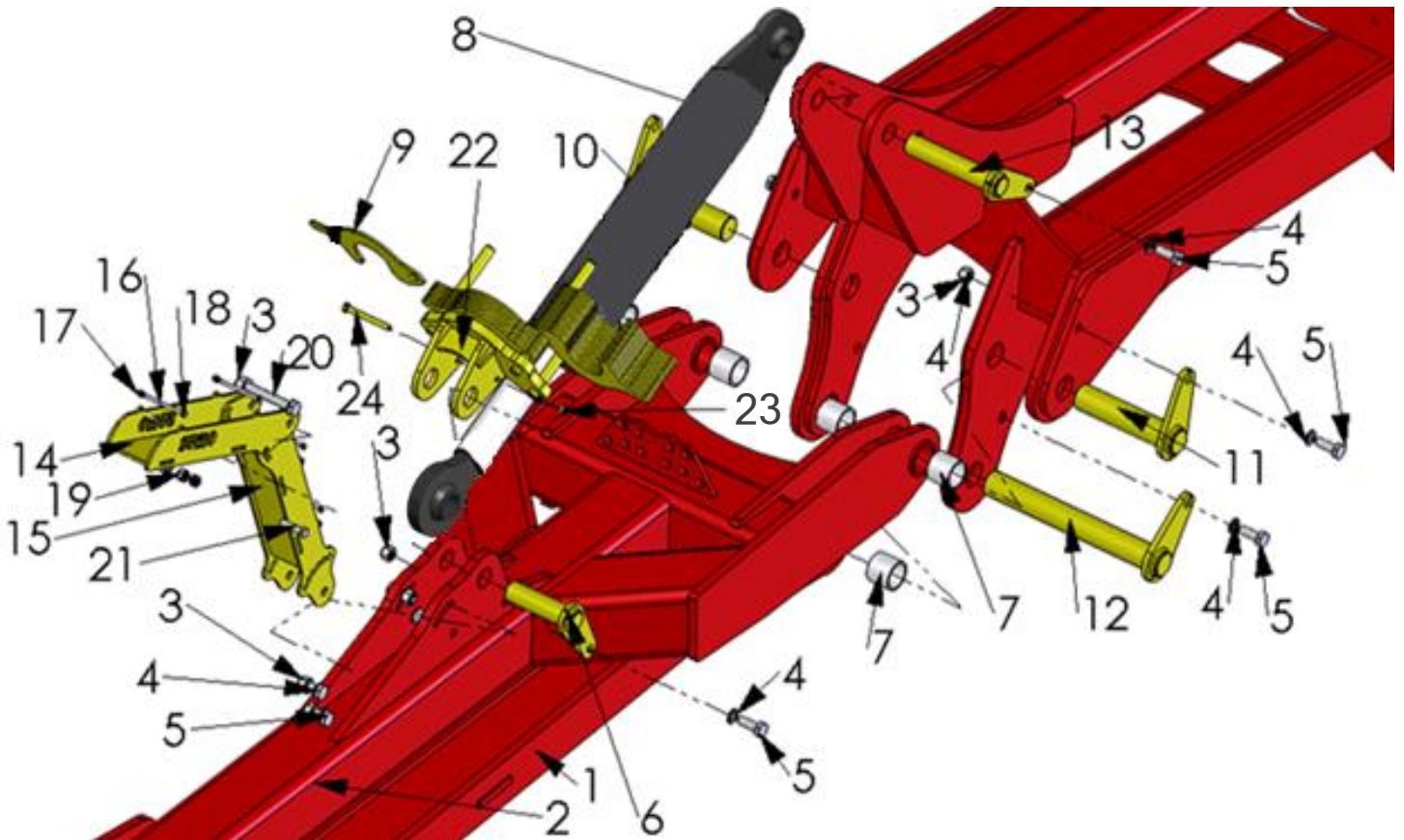
| Item | Description | Page |
|------|-----------------------------|--------|
| 1 | Drawbar Hitch | 11 |
| 2 | Drawbar Hinge | 12 |
| 3 | Front Depth Wheel Assembly | 13 |
| 4 | Axle, Wheels and Brakes | 14 |
| 5 | Packer Depth Control | 15 |
| 6 | Main Frame and Wings | 16,17 |
| 7 | Lights | 18 |
| 8 | Leg and Point Assembly | 19, 20 |
| 9 | Packer and Scraper Assembly | 21 |
| 10 | Hydraulic Assemblies | 22-26 |
| 11 | Stickers and Paint | 27 |

5.2 Drawbar Hitch



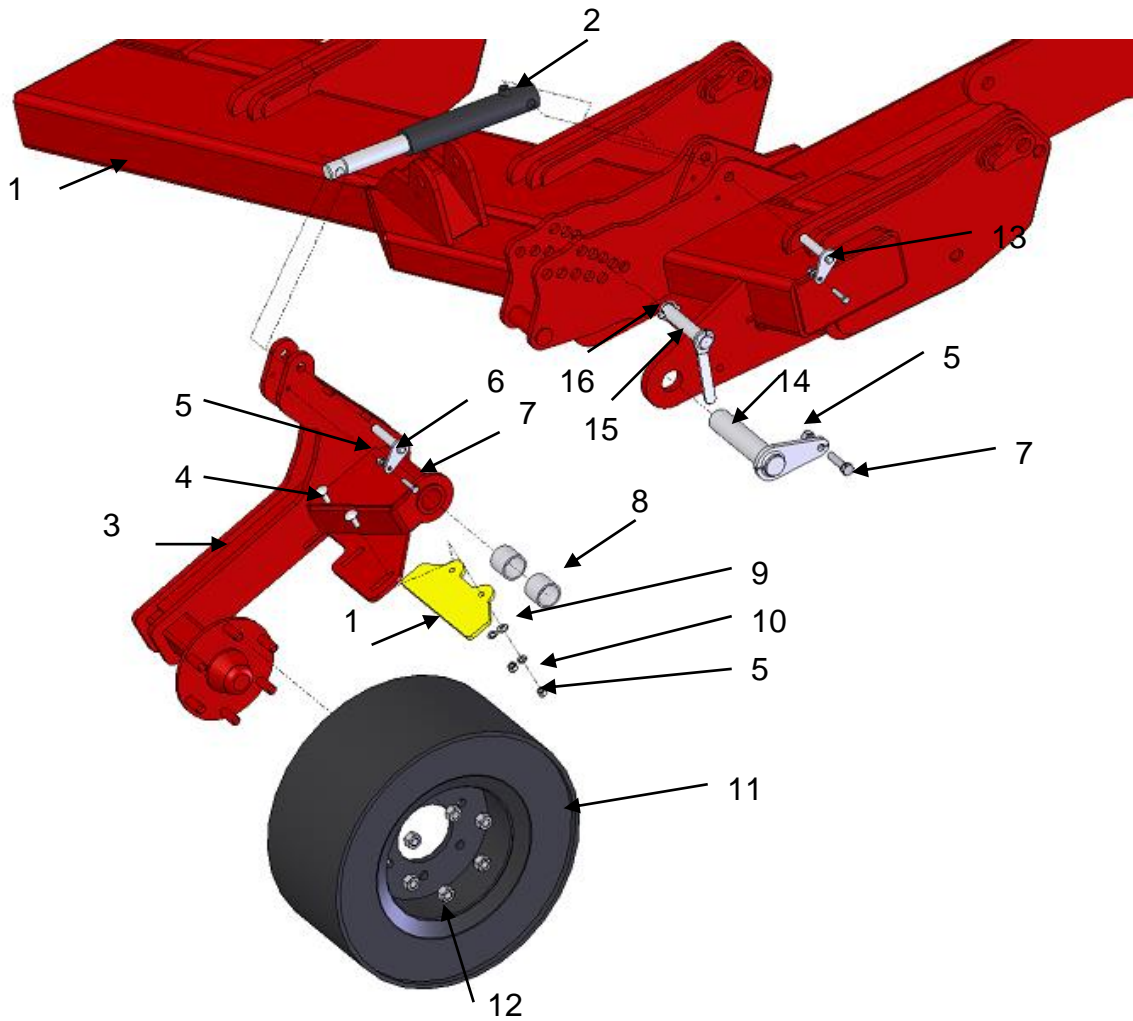
| Item | Part No. | Description | Quantity per machine |
|------|----------|-------------------------|----------------------|
| 1 | SW417 | Drawbar box | 1 |
| 2 | SW416 | Lower parallel link | 1 |
| 3 | SW134 | Drawbar hitch unit | 1 |
| 4 | SW135 | Towing eye | 1 |
| 5 | SWB105 | Lynch pin | 1 |
| 6 | SWB108 | 50x58x50 PB1 bush | 4 |
| 7 | SW136 | Stand | 1 |
| 8 | SWM30180 | M30 x 180 bolt | 1 |
| 9 | SWM30001 | M30 flat washer | 2 |
| 10 | SWM30004 | M30 nylock nut | 1 |
| 11 | SWM16160 | M16 x 160 bolt | 1 |
| 12 | SWM16001 | M16 flat washer | 6 |
| 13 | SWM16004 | M16 nylock nut | 3 |
| 14 | SW137 | 20mm straight stand pin | 1 |
| 15 | SWM1660 | M16 x 60 bolt | 1 |
| 16 | SWM1670 | M16 x 70 bolt | 1 |
| 17 | SW138 | 50 x 180 tabbed pin | 1 |
| 18 | SW139 | 50 x 224 tabbed pin | 1 |

5.3 Drawbar Hinge



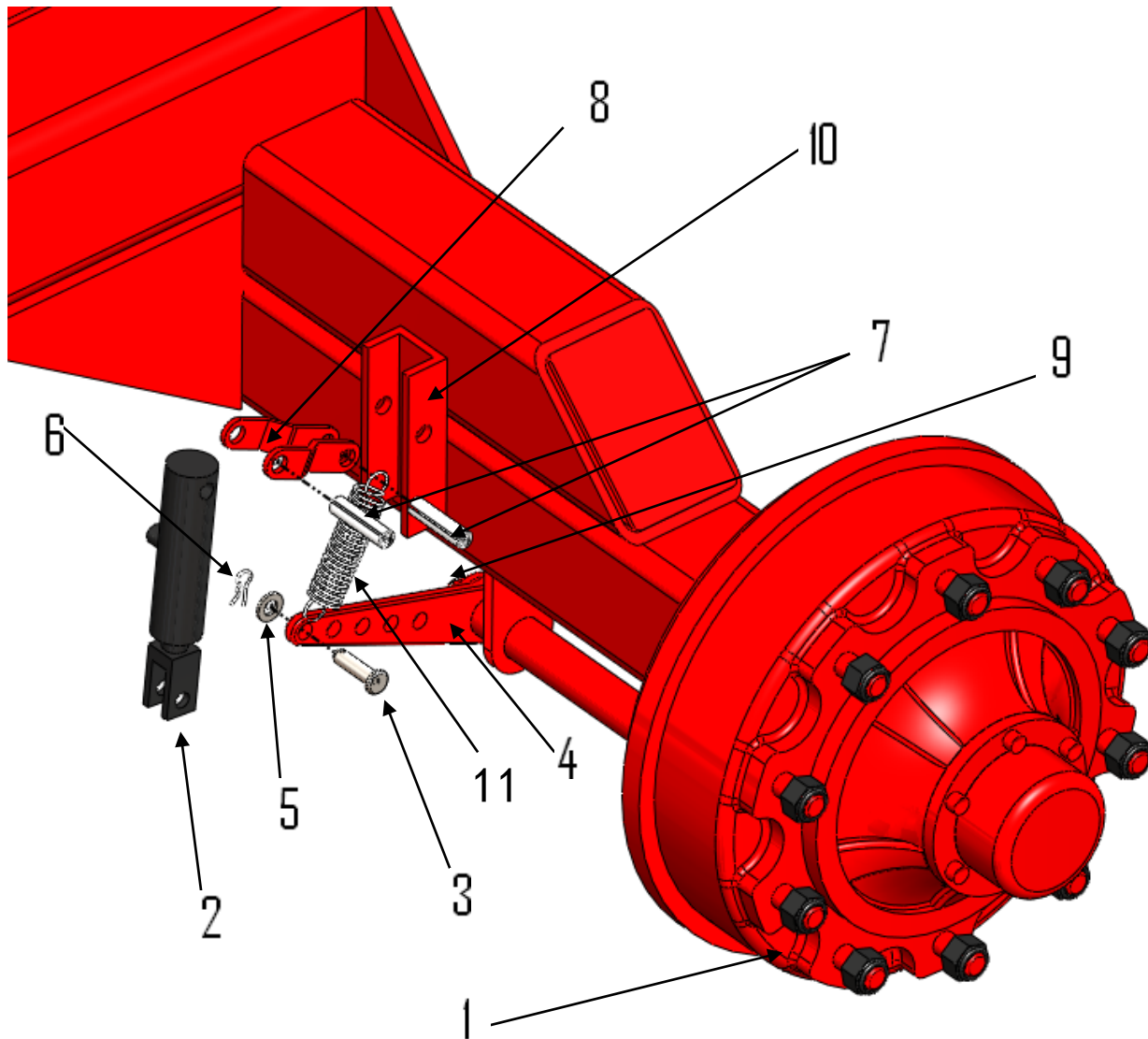
| Item | Part No. | Description | Quantity per machine |
|------|----------|---------------------------------------|----------------------|
| 1 | SW416 | Lower link | 1 |
| 2 | SW417 | Drawbar box | 1 |
| 3 | SWM16004 | M16 nylock nut | 10 |
| 4 | SWM16001 | M16 flat washer | 20 |
| 5 | SWM1655 | M16 x 55 bolt | 9 |
| 6 | SW143 | 40 x 148 tabbed pin | 1 |
| 7 | SWB108 | 50 x 58 x 50 PB1 bush | 6 |
| 8 | SWH293 | 780.120 ram | 1 |
| 9 | SW144 | Ram slice | 30 |
| 10 | SWM20004 | M20 nylock nut | 1 |
| 11 | SW139 | 50 x 225 tabbed pin | 2 |
| 12 | SW141 | 50 x 402 tabbed pin | 1 |
| 13 | SW142 | 40 x 210 tabbed pin | 1 |
| 14 | SW379 | 2007 Quatro pipe holder top section | 1 |
| 15 | SW380 | 2007 Quatro pipe holder lower section | 1 |
| 16 | SWM6130 | M6 x 130 mm bolt | 4 |
| 17 | SWM6004 | M6 nylock nut | 4 |
| 18 | SWM6001 | M6 flat washer | 8 |
| 19 | SWM12004 | M12 nylock nut | 2 |
| 20 | SWM16130 | M16x130 bolt | 1 |
| 21 | SWM1250 | M12x50 bolt | 2 |
| 22 | SW536 | Drawbar ram stop frame | 1 |
| 23 | SWM10004 | M10 nylock nut | 1 |
| 24 | SWM10140 | M10 x 140 | 1 |

5.4 Front depth wheels



| Item | Part No. | Description | Quantity per machine |
|------|--------------|---------------------------------|----------------------|
| 1 | SW503 | RH trailed 7 leg subsoiler wing | 1 |
| | SW504 | LH trailed 7 leg subsoiler wing | 1 |
| 2 | SWH276 | 640/2 ram | 2 |
| 3 | SW505 | RH depth wheel arm | 1 |
| | SW506 | LH depth wheel arm | 1 |
| 4 | SWM1235 chsq | M12x35 cup head square bolt | 4 |
| 5 | SWM1204 | M12 Nylon locknut | 4 |
| 6 | SW507 | 22 x 90 tabbed pin | 2 |
| 7 | SWM1250 | M12 x 50 bolt | 6 |
| 8 | SWB142 | 50 x 58 x 50 Oilite bush | 4 |
| 9 | SWM12001 | M12 flat washer | 4 |
| 10 | SWM12004 | M12 spring washer | 4 |
| 11 | SW508 | Front depth wheel | 4 |
| 12 | SW509 | Front depth wheel nut | 12 |
| 13 | SW510 | 22 x 135 tabbed pin | 2 |
| 14 | SW511 | 50 x 332 tabbed pin | 2 |
| 15 | SW512 | 25 x 150 depth pin | 2 |
| 16 | SW105 | Lynch pin | 2 |

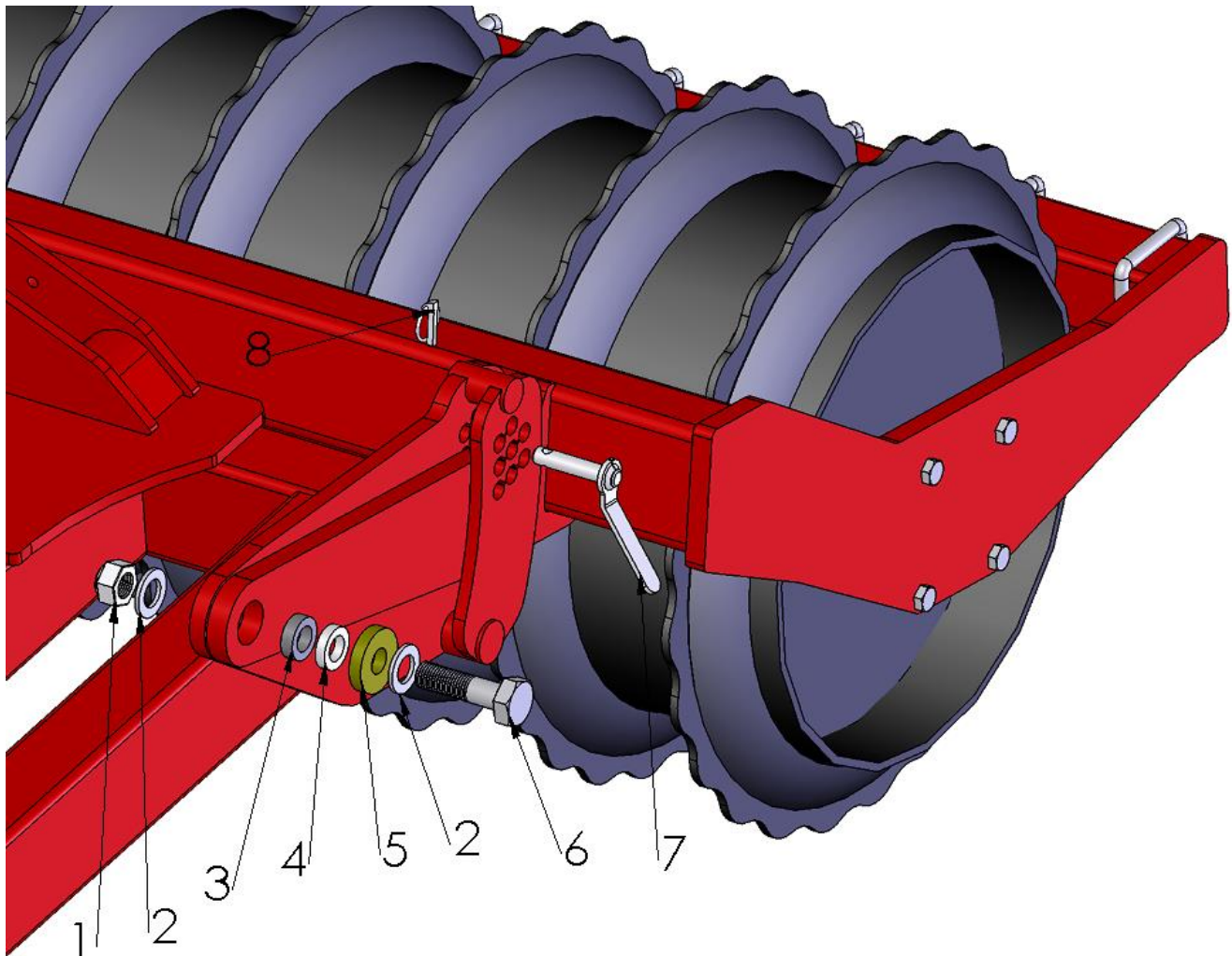
5.5 Axle, Wheels and Brakes



| Item | Part No. | Description | Quantity per machine |
|------|----------|--------------------|----------------------|
| 1 | SWB133 | 10 stud braked hub | 2 |
| 2 | SWB134 | Brake ram | 2 |
| 3 | SWB188 | 12mm clevis pin | 2 |
| 4 | SWB189 | Brake arm | 2 |
| 5 | SWM12001 | M12 flat washer | 2 |
| 6 | SWB190 | Small R-clip | 2 |
| 7 | SWB191 | 14x60 roll pin | 4 |
| 8 | SWB192 | Ram mount/adjuster | 2 |
| 9 | SWB193 | Circlip | 2 |
| 10 | SWB194 | Ram mount base | 2 |
| 11 | SWB195 | Spring and Clip | 2 |

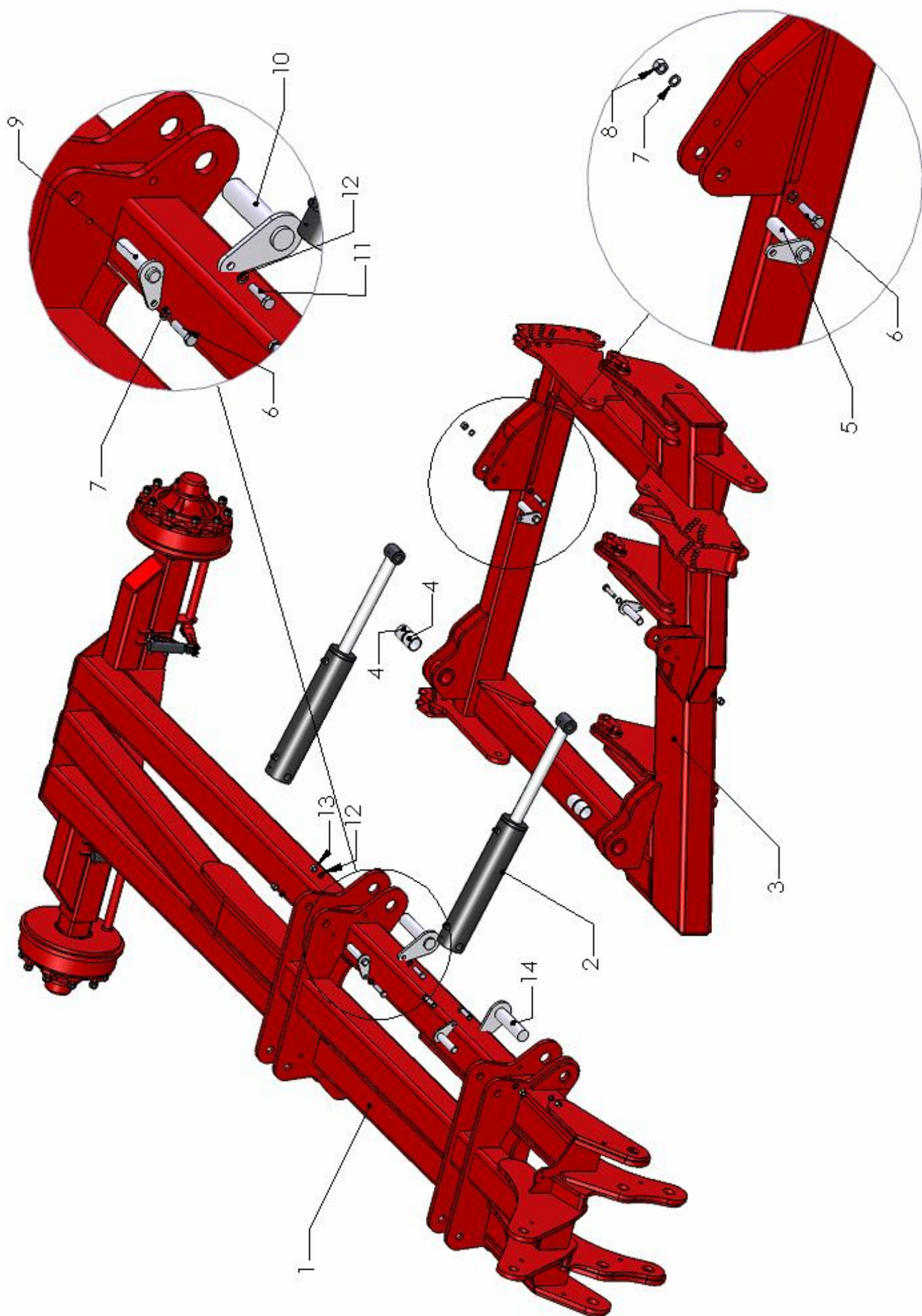
* Fitted with 10 stud 600/60 22.5 transport wheels and tyres *

5.6 Packer Depth



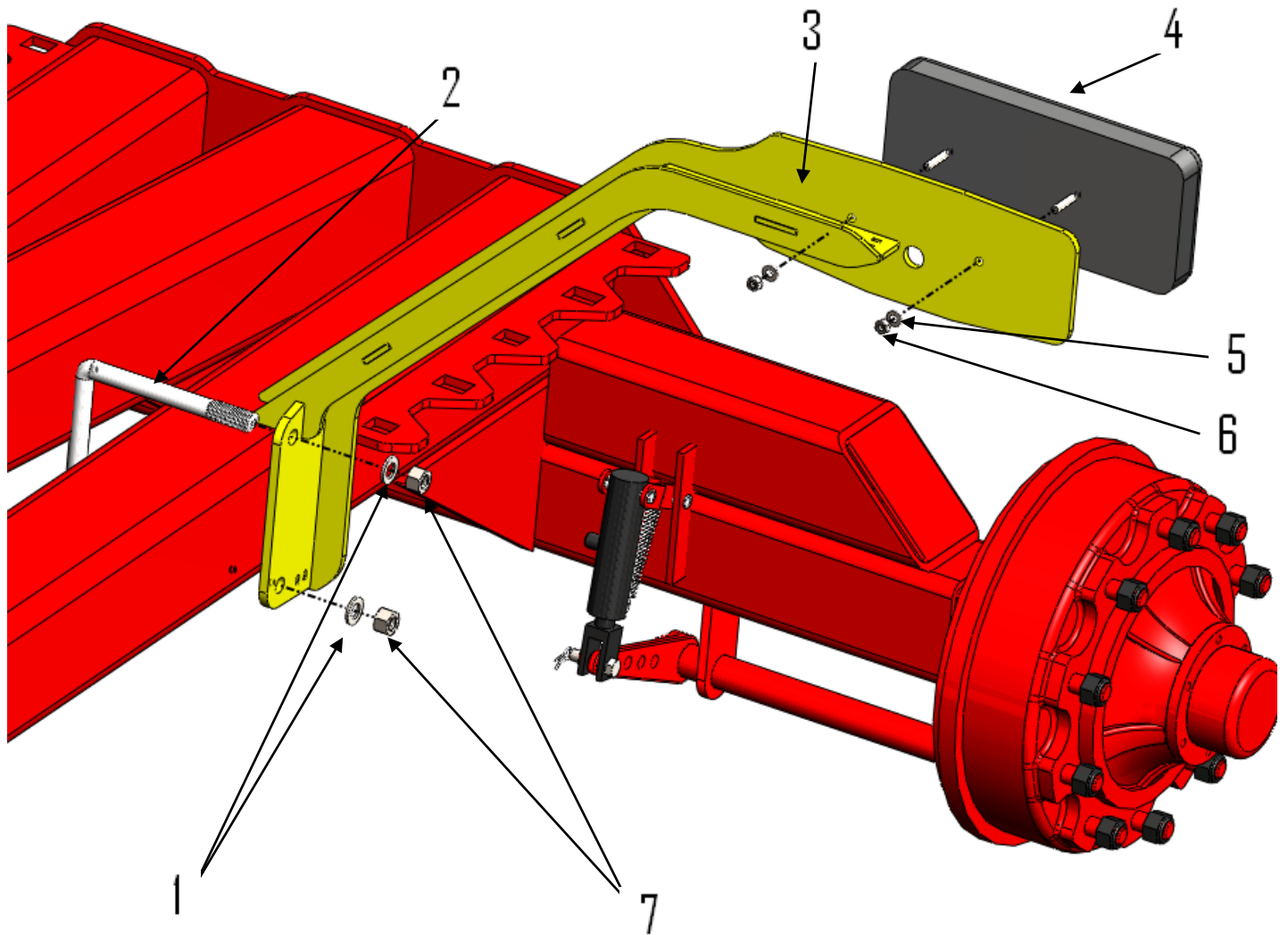
| Item | Part No. | Description | Quantity per machine |
|------|----------|------------------------|----------------------|
| 1 | SWM30004 | M30 Nylock nut | 4 |
| 2 | SWM30001 | M30 washer | 8 |
| 3 | SW227 | 15mm packer arm bush | 4 |
| 4 | SW125 | 12mm packer arm bush | 4 |
| 5 | SW129 | 15mm x 75 outer washer | 4 |
| 6 | SWM30110 | M30 x 110 bolt | 4 |
| 7 | SW130 | Packer depth pin | 4 |
| 8 | SW105 | Linch pin | 4 |

5.7 Main Frame and Wings



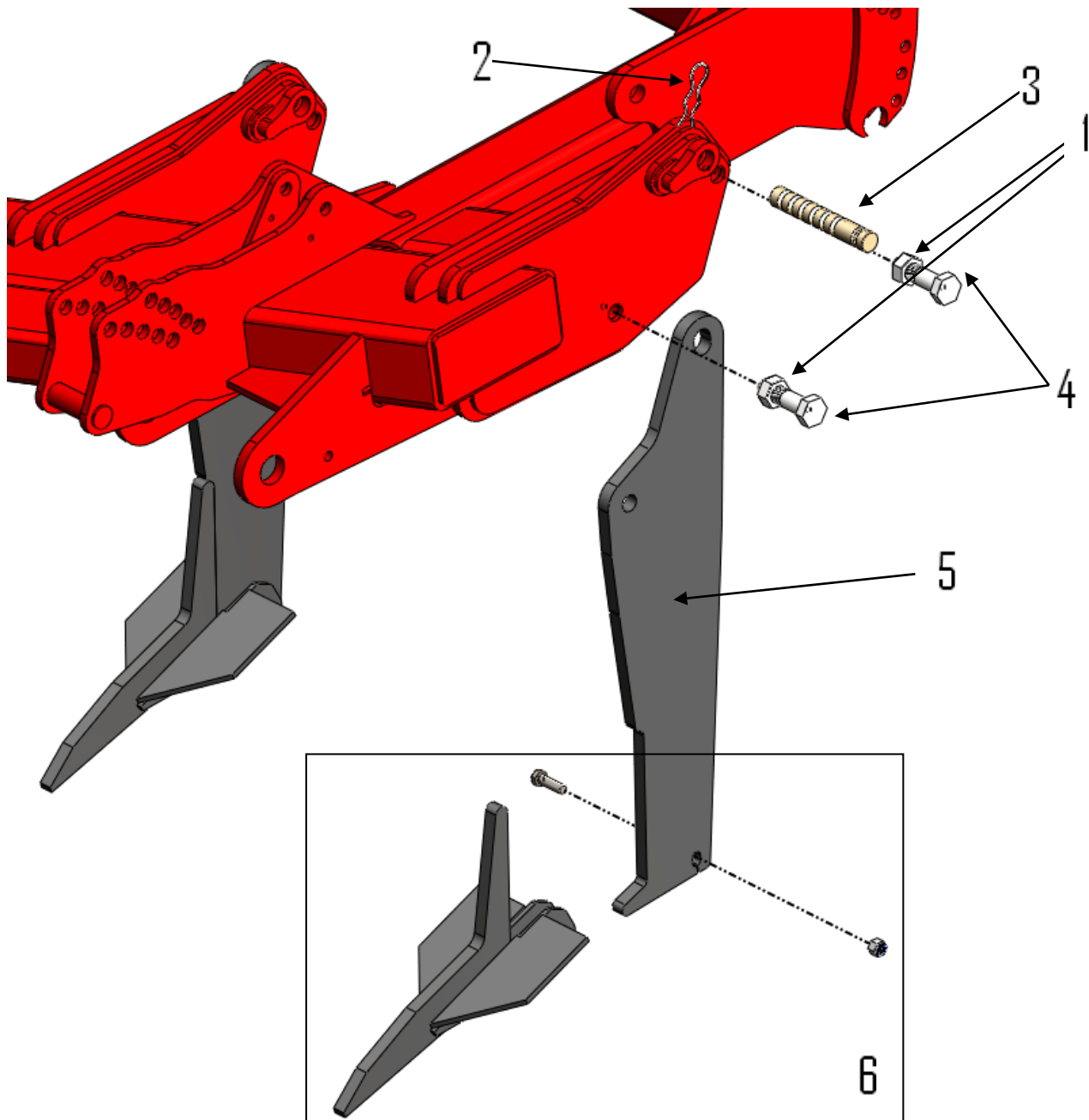
| Item | Part No. | Description | Quantity/ 7 leg machine |
|-------------|-----------------|---|--------------------------------|
| 1 | SW439 | Trailed subsoiler chassis | 1 |
| | SW694 | A/R Trailed Subsoiler chassis (not shown) | 1 |
| 2 | SWH132 | 706/4 ram | 4 |
| 3 | SW513 | Trailed subsoiler RH wing frame | 1 |
| | SW514 | Trailed subsoiler LH wing frame (not shown) | 1 |
| | SW692 | A/R Trailed subsoiler RH wing frame (not shown) | 1 |
| | SW693 | A/R Trailed subsoiler LH wing frame (not shown) | 1 |
| 4 | SW142 | 50 x 58 x 50 Oilite bush | 8 |
| 5 | SW441 | 115 x 30 Tabbed pin TT | 2 |
| 6 | SWM1250 | M12x50 bolt | 4 |
| 7 | SWM12001 | M12 flat washer | 8 |
| 8 | SWM12004 | M12 nylock nut | 4 |
| 9 | SW440 | 175 x 30 Tabbed pin TT | 2 |
| 10 | SW442 | 175 x 50 Tabbed pin TT | 1 |
| 11 | SWM1660 | M16x60 bolt | 2 |
| 12 | SWM16001 | M16 flat washer | 4 |
| 13 | SWM16004 | M16 nylock nut | 2 |
| 14 | SW443 | 190 x 50 Tabbed pin TT | 1 |

5.8 Lights



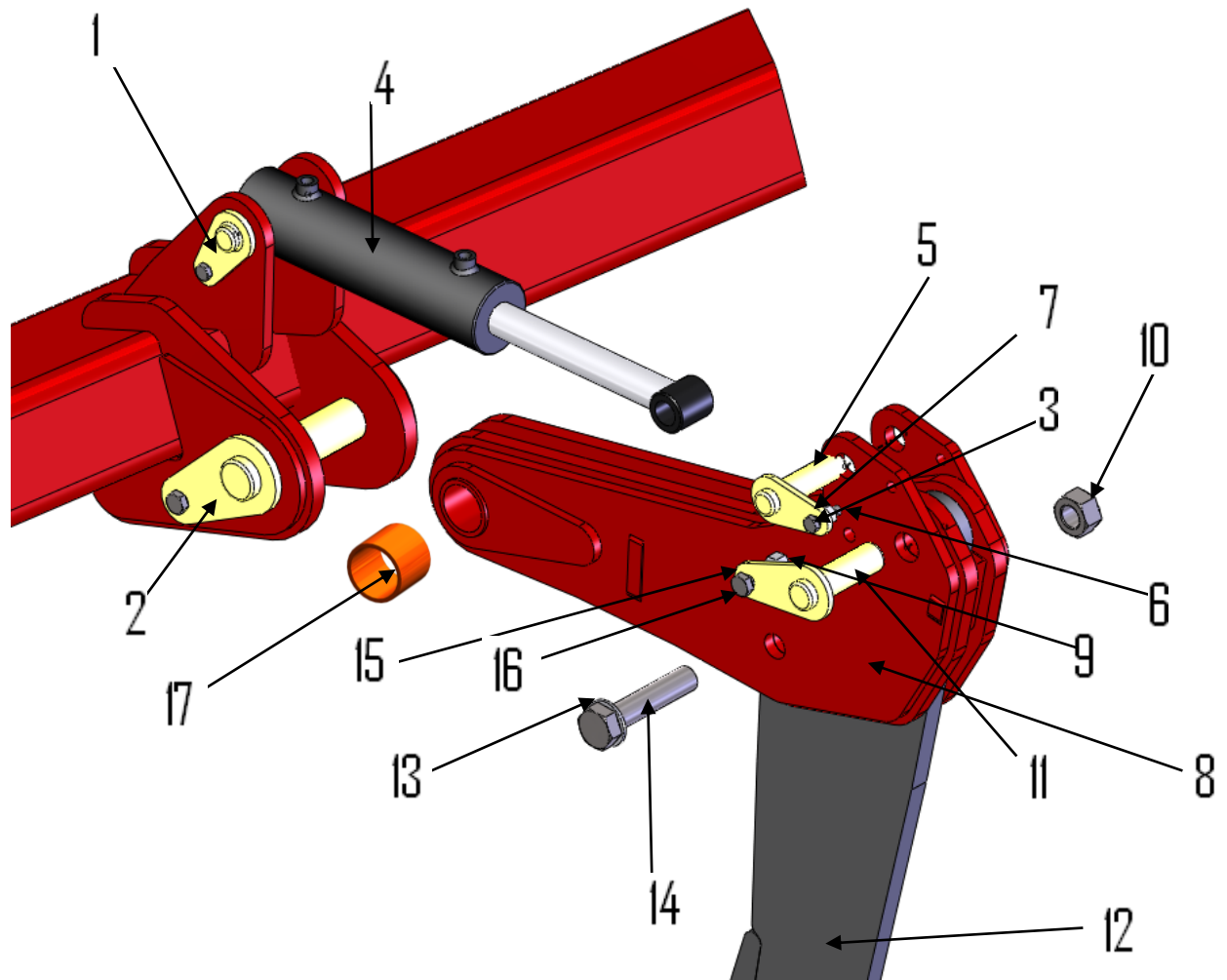
| Item | Part No. | Description | Quantity/ machine |
|------|----------|----------------------------------|-------------------|
| 1 | SWM16001 | M16 flat washer | 4 |
| 2 | SWM16200 | M20 x 150 U bolt | 2 |
| 3 | SW444 | Light bracket left | 1 |
| | SW445 | Light bracket right (not shown) | 1 |
| 4 | SWB165 | Rubberlite rear light (complete) | 2 |
| 5 | SWM8001 | M8 flat washer | 4 |
| 6 | SWM8003 | M8 plain nut | 4 |
| 7 | SWM16004 | M16 nylock nut | 4 |

5.9 Leg Assembly - Shearbar



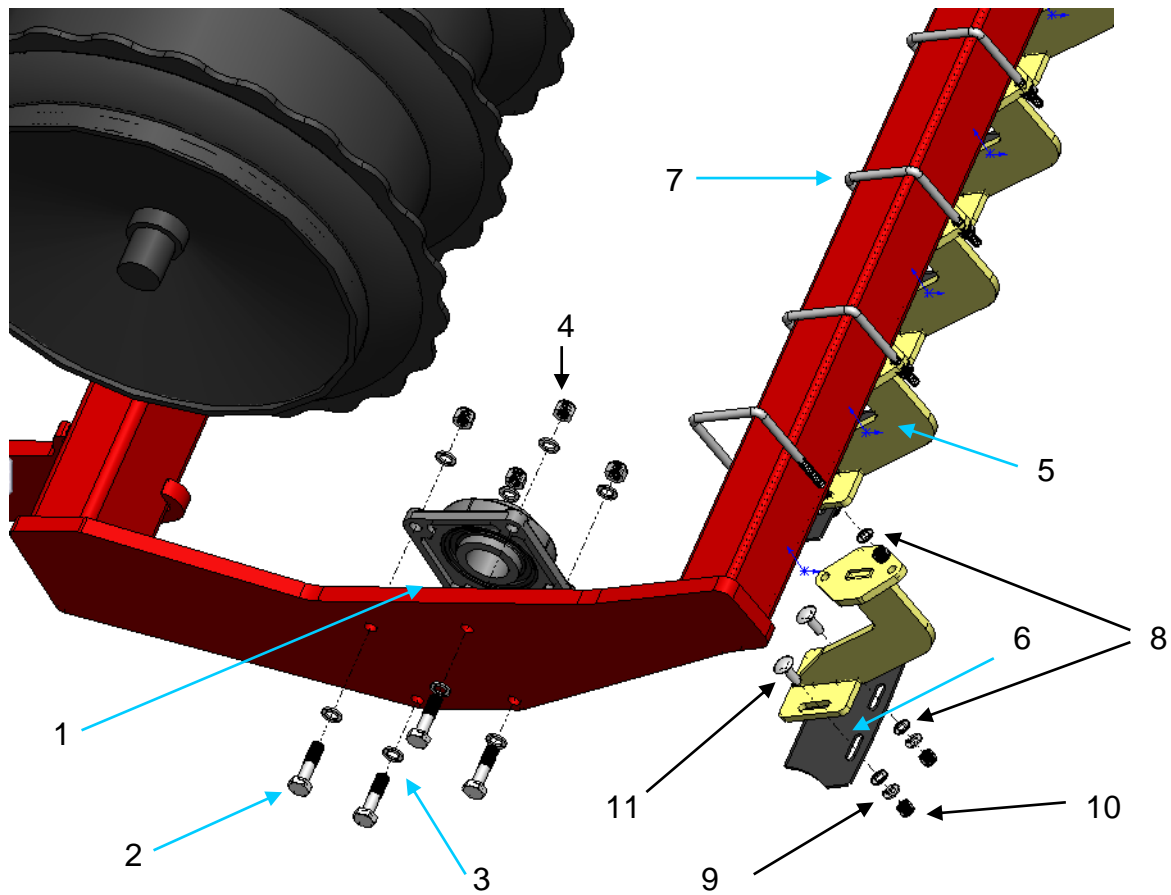
| Item | Part No. | Description | Quantity/ leg | Quantity/ 7 leg machine | Quantity/ 9 leg machine |
|------|----------|---|------------------|----------------------------|----------------------------|
| 1 | SWM30004 | M30 nylock nut | 2 | 14 | 18 |
| 2 | SWB106 | Pin retainer Clip | 1 | 7 | 18 |
| 3 | SW193 | 2007 subsoiler shear pin | 1 | 7 | 9 |
| 4 | SWM30110 | M30x110 bolt | 2 | 14 | 18 |
| 5 | SW191 | 2007 subsoiler leg | 1 | 7 | 9 |
| 6 | SW194 | 2007 subsoiler point c/w M16 nut and bolt | 1 | 7 | 9 |

5.10 Leg Assembly – Auto Reset



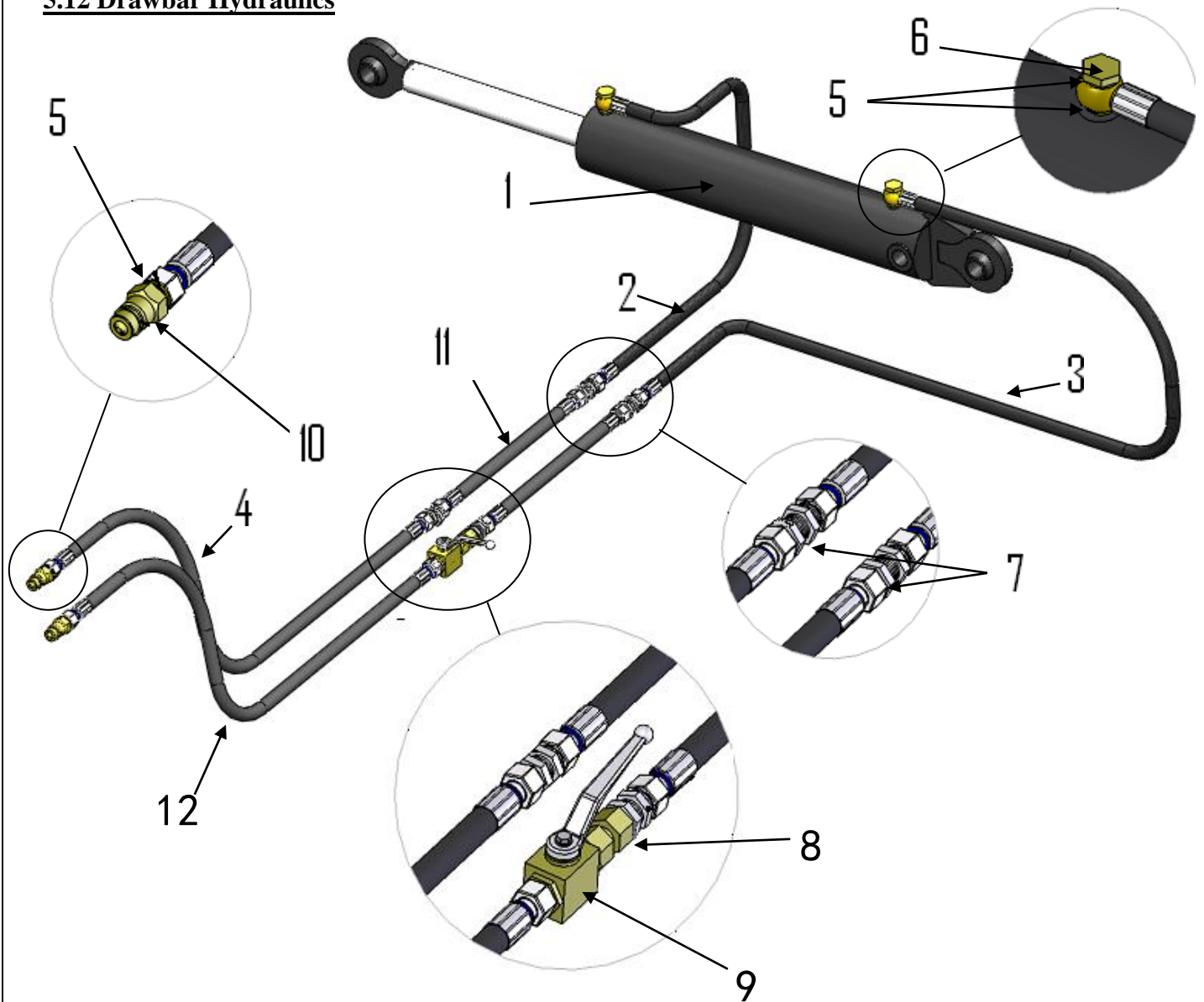
| Item | Part No. | Description | 7 leg machine | 9 Leg Machine |
|------|----------|---------------------|---------------|---------------|
| 1 | SW395 | 30 x 165 Tabbed Pin | 7 | 9 |
| 2 | SW396 | 50 x 230 Tabbed Pin | 7 | 9 |
| 3 | SWM1240 | M12x40 bolt | 14 | 18 |
| 4 | SWH125 | 705/2 ram | 7 | 9 |
| 5 | SW398 | 30 x 125 Tabbed Pin | 7 | 9 |
| 6 | SWM12004 | M12 nylock nut | 14 | 18 |
| 7 | SWM12001 | M12 flat washer | 28 | 36 |
| 8 | SW399 | Radius Arm | 7 | 9 |
| 9 | SWM16004 | M16 nylock nut | 14 | 18 |
| 10 | SWM30004 | M30 nylock nut | 7 | 9 |
| 11 | SW400 | 35 x 125 Tabbed Pin | 7 | 9 |
| 12 | SW191 | Subsoiler leg | 7 | 9 |
| 13 | SWM30001 | M30 flat washer | 14 | 18 |
| 14 | SWM30140 | M30x140 bolt | 7 | 9 |
| 15 | SWM16001 | M16 flat washer | 28 | 36 |
| 16 | SWM1665 | M16x65 bolt | 14 | 18 |
| 17 | SWB108 | 50x50x58 PB1 bush | 14 | 18 |

5.11 Packer, scrapers and bearings



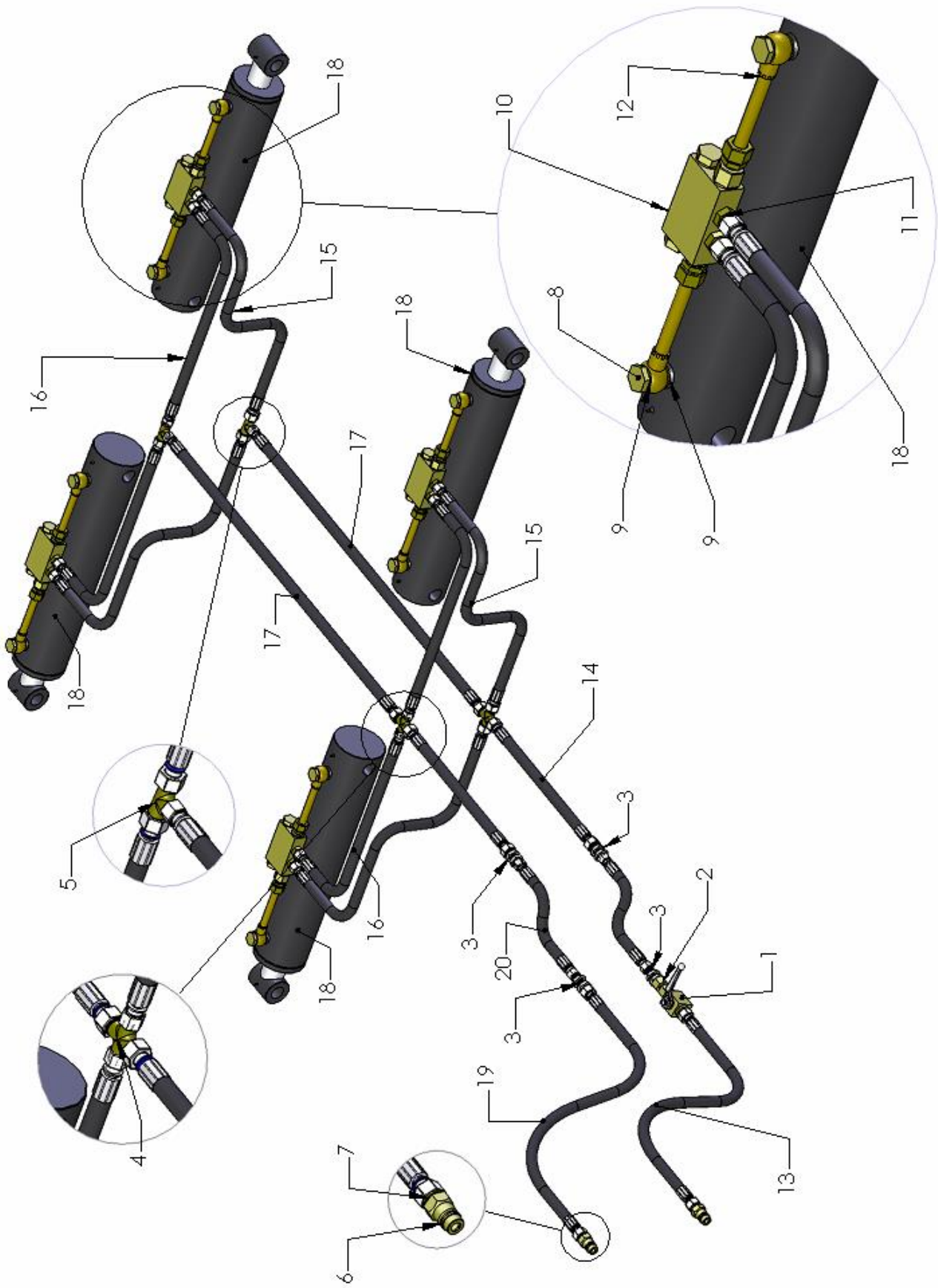
| Item | Part No. | Description | Quantity/ 7 leg machine | Quantity/ 9 leg machine |
|------|--------------|-----------------------------|-------------------------|-------------------------|
| 1 | SWB104 | TMSF60 bearing | 4 | 4 |
| 2 | SWM1670 | M16 x 70 bolt | 16 | 16 |
| 3 | SWM16001 | M16 flat washer | 32 | 32 |
| 4 | SWM16004 | M16 nylock nut | 32 | 32 |
| 5 | SW650 | 2009 scraper mount | 16 | 22 |
| 6 | SW651 | 2009 full scraper plate | 16 | 22 |
| 7 | SWM12100ub | M12x100 U-bolt | 16 | 22 |
| 8 | SWM12001 | M12 flat washer | 64 | 88 |
| 9 | SWM12002 | M12 spring washer | 32 | 44 |
| 10 | SWM12004 | M12 nylock nut | 64 | 88 |
| 11 | SWM1235chsqa | M12x35 cup head square bolt | 32 | 44 |

5.12 Drawbar Hydraulics



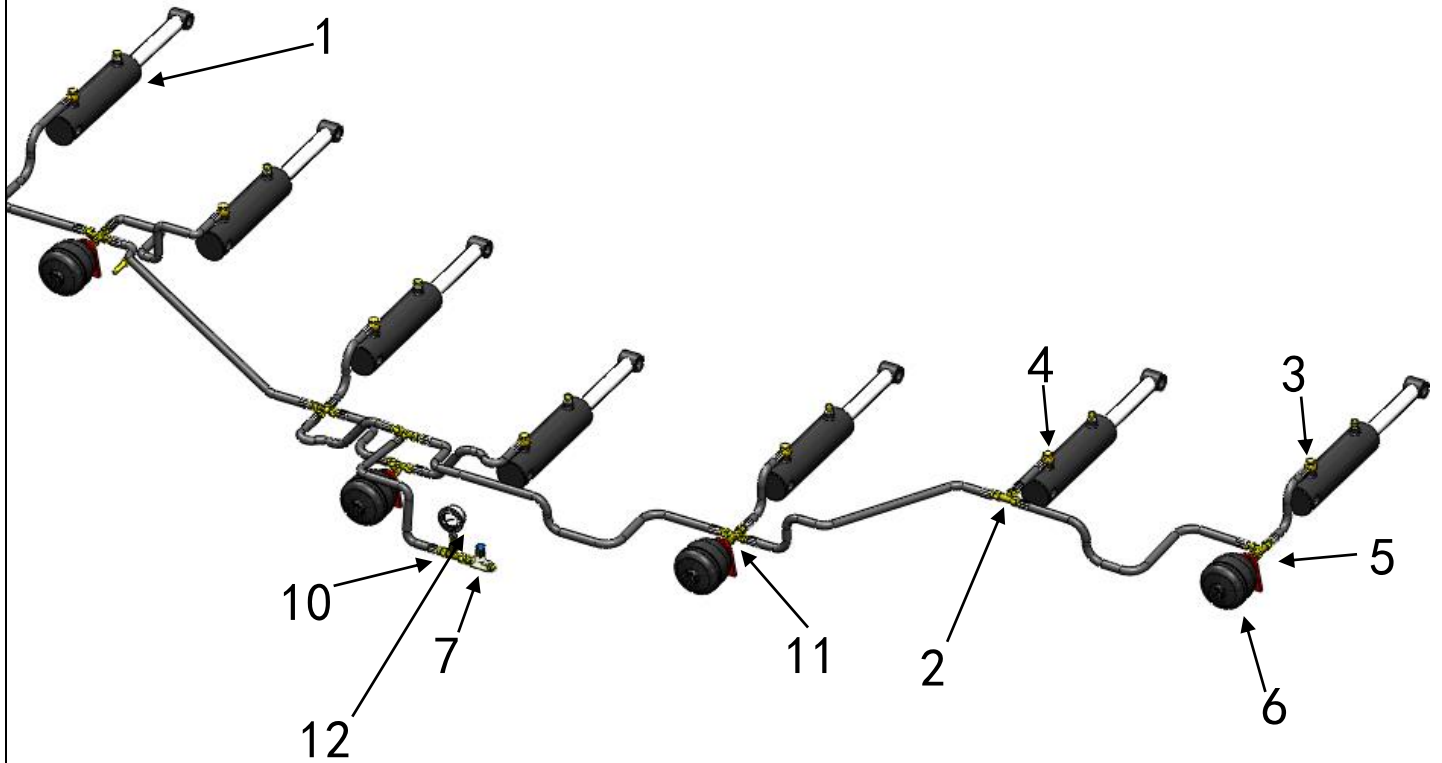
| Item | Part No. | Description | Quantity |
|------|----------|---|----------|
| 1 | SWH293 | 780.120 ram | 1 |
| 2 | SWH226 | 1/2" Hyd hose bottom ram to bulk head | 1 |
| 3 | SWH227 | 1/2" Hyd hose top ram to bulk head | 1 |
| 4 | SWH224 | 1/2" Hyd hose bulk head to spools (3500mm) | 1 |
| 5 | SWH142 | 1/2" dowty washer | 6 |
| 6 | SWH143 | 1/2" banjo bolt | 2 |
| 7 | SWH144 | 15L bulk head fitting | 4 |
| 8 | SWH171 | 15L female to female fitting | 1 |
| 9 | SWH145 | 15L tap | 1 |
| 10 | SWH147 | Male quick coupler | 2 |
| 11 | SWH225 | 1/2" Hyd Hose Bulk head to bulk head | 2 |
| 12 | SWH219 | 1/2" Hyd hose bulk head to spools (3400 mm) | 1 |

5.13 Wing Hydraulics



| Item | Part No. | Description | Quantity |
|-------------|-----------------|--|-----------------|
| 1 | SWH145 | 15L tap | 1 |
| 2 | SWH171 | 15L female to female fitting | 1 |
| 3 | SWH144 | 15L bulk head fitting | 2 |
| 4 | SWH155 | 12L cross | 2 |
| 5 | SWH156 | 12L Tee | 2 |
| 6 | SWH147 | Male quick coupler | 2 |
| 7 | SWH142 | 1/2" dowty washer | 2 |
| 8 | SWH143 | 1/2" banjo bolt | 8 |
| 9 | SWH169 | 3/8" dowty washer | 16 |
| 10 | SWH154 | Pilot operated check valve | 4 |
| 11 | SWH157 | 12L - 3/8" M fitting | 8 |
| 12 | SWH229 | 15L 1/2" banjo pipe | 8 |
| 13 | SWH230 | 3/8" Hyd hose bulk head to spools (3400 mm) | 1 |
| 14 | SWH220 | 3/8" Hyd hose bulk head to front cross (720mm) | 2 |
| 15 | SWH221 | 3/8" Hyd hose supply to far port | 4 |
| 16 | SWH222 | 3/8" Hyd hose supply to near port | 4 |
| 17 | SWH223 | 3/8" Hyd hose front cross to end | 2 |
| 18 | SWH132 | 706/4 ram | 4 |
| 19 | SWH231 | 3/8" Hyd hose bulk head to spools (3500mm) | 1 |
| 20 | SWH244 | 3/8" Hyd hose bulk head to bulk head | 2 |

5.14 Auto reset hydraulic circuit

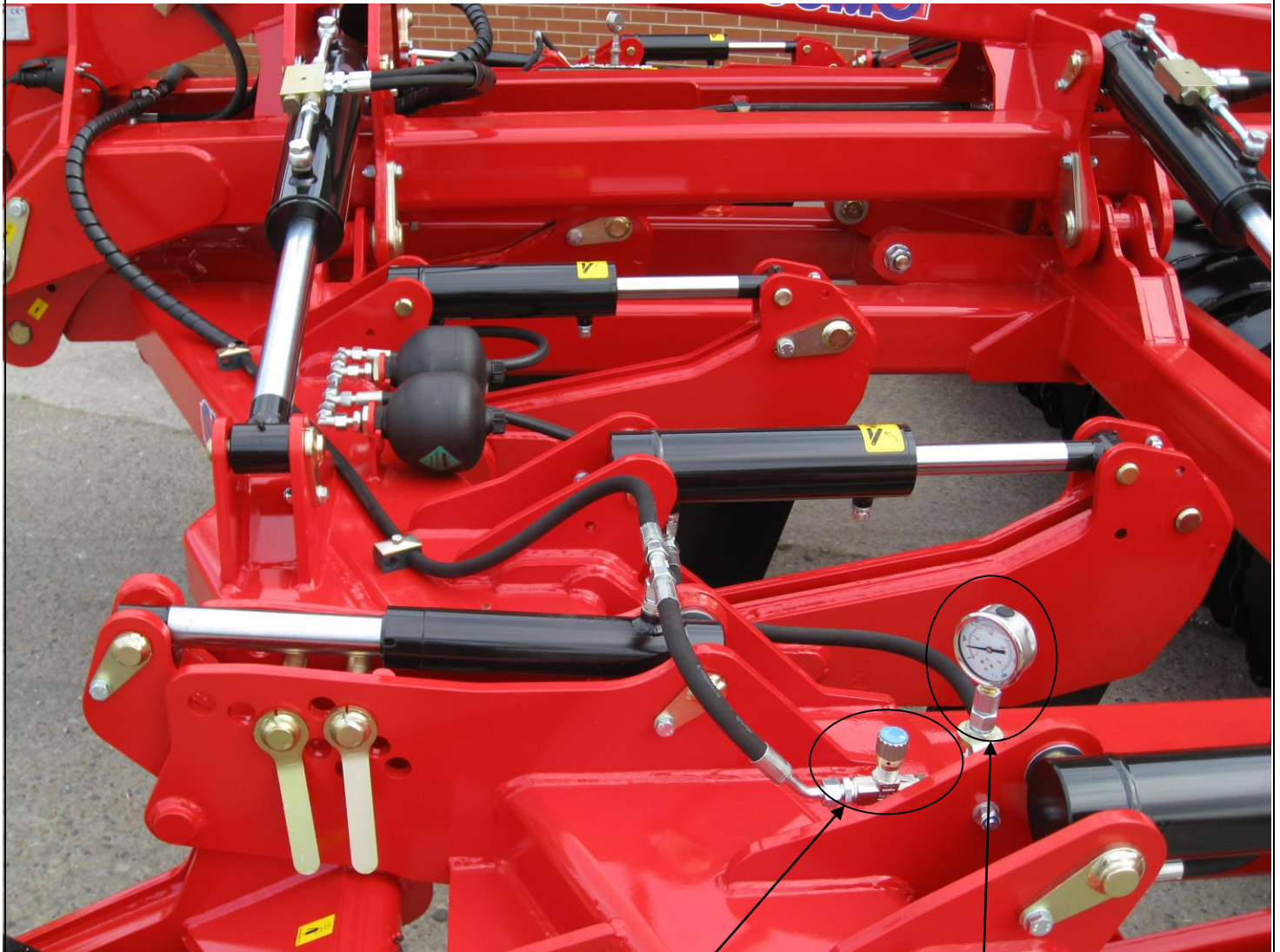


| Item | Part No. | Description | Quantity/ 7 leg machine | Quantity/ 9 leg machine |
|------|----------|--------------------------------|-------------------------|-------------------------|
| 1 | SWH125 | 705/2 ram | 7 | 9 |
| 2 | SWH156 | 12L Tee branch | 5 | 7 |
| 3 | SWH169 | 3/8" dowty washer | 14 | 18 |
| 4 | SWH170 | 3/8" Banjo bolt | 7 | 9 |
| 5 | SWH184 | Accumulator nut | 4 | 6 |
| 6 | SWH178 | Accumulator | 4 | 6 |
| 7 | SWH180 | Flow control valve | 1 | 1 |
| 8 | SWH142 | 1/2" dowty washer (not shown) | 1 | 1 |
| 9 | SWH147 | Male quick coupler (not shown) | 1 | 1 |
| 10 | SWH176 | 12L female to female fitting | 1 | 1 |
| 11 | SWH155 | 12L cross | 3 | 4 |
| 12 | SWH181 | 4000psi pressure gauge | 1 | 1 |

5.15 Auto reset hydraulic circuit – Adjustment

To increase the pressure in the Auto Reset hydraulic circuit, the correct procedure is as follows:




1. Open the taps near the depth wheel rams (both wings).
2. Raise the machine using the drawbar ram.
3. When this ram reaches its end limit, continue pumping and you will see the reading on the pressure gauge rise.
4. Once the desired pressure is reached close off the tap near the front depth wheels (1). This locks the pressure in the system.
5. The machine can then be lowered for transport or work.



1

3

5.16 Stickers and Paint

| Sticker | Description | Quantity | Part No. |
|---|---|-----------|----------|
|  | Big Sumo horizontal sticker 450 x 125mm | 9 | SWB125 |
|  | Big Union Jack sticker 150 x 100mm | 6 | SWB127 |
|  | Small Sumo Red and White Sticker | 2 | SWB199 |
| Touch up paint | Sumo Red | 1/2 litre | SWB131 |
| | Sumo Black | 1/2 litre | SWB132 |