



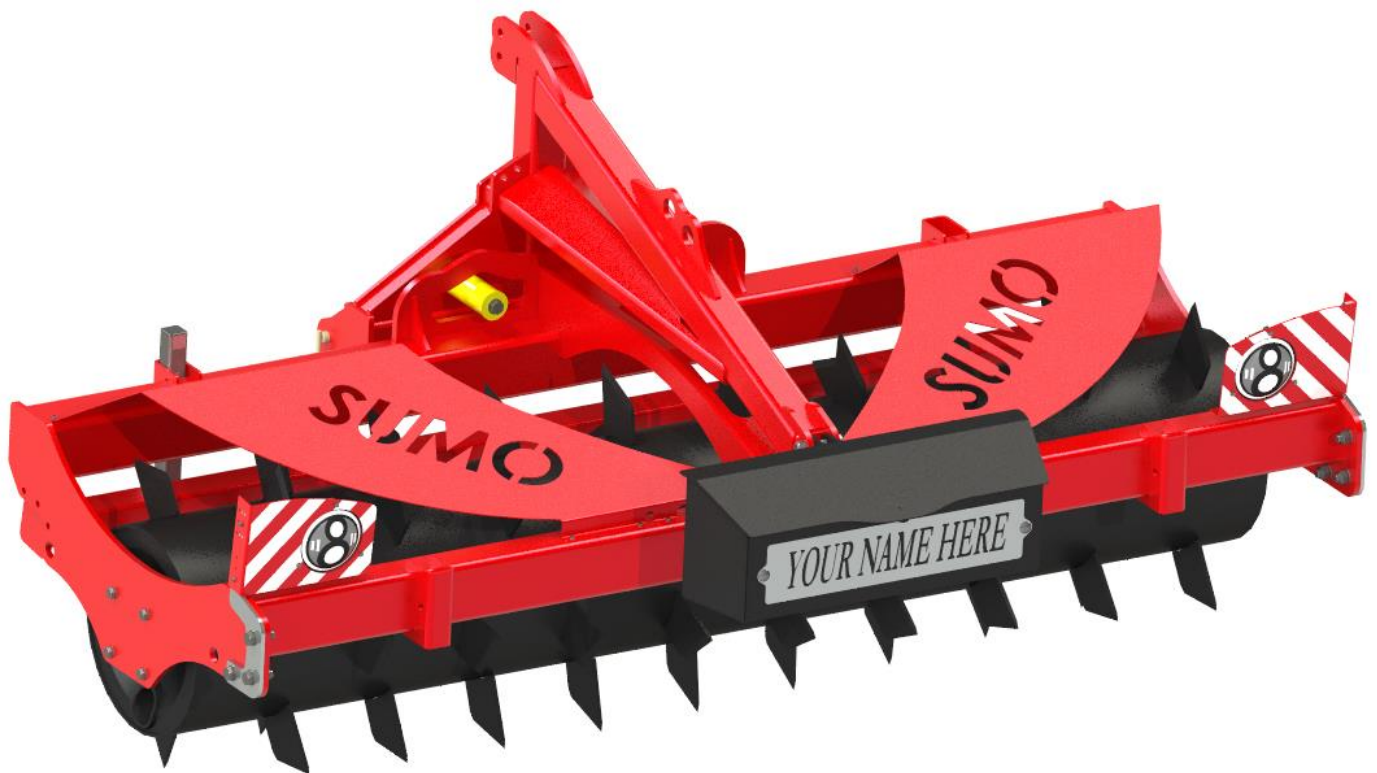
GROWING WITH YOU

FRONT PRESS

2023 Mounted Range (FP)

Machine Manual & Parts Book

@Copyright 2023



Sumo UK LTD, Redgates,
Melbourne, York YO42 4RG

info@sumo1.com
01759 319 900



USE YOUR CAMERA PHONE TO SCAN
THIS CODE AND DOWNLOAD A DIGITAL
VERSION OF THIS DOCUMENT, IN CASE
YOU NEED IT ON THE GO.

Introduction

Before reading this Machine Manual & Parts Book, please read the Cultivators Operator Manual in Full. This manual contains information specific to the machine/range but does not include all the general safety guidelines and practices necessary to understand and correctly use the machine. It is required that both manuals be read and understood before using any Sumo machine. For more information contact your local dealership/Sumo directly.

Please note, specifications, descriptions and illustrations in this manual are accurate, as known, at the time of publication but may be subject to change. If you notice any discrepancy and are in need of clarification, please contact us on the details given previously.

Contents

1.	Machine Range Summary	4
2.	Product Specifications	5
3.	Transport Positions & Dimensions	6
4.	Danger Zone	7
5.	Risk Assessments.....	8
6.	Parts Book Index.....	10
6.1	FP3 Base Machine	10
6.2	Standard Assemblies	11
6.2.1	Three Point Linkage Pins	11
6.2.2	Stand Assembly	12
6.2.3	Packer Bearings Assembly	13
6.2.4	Steering Roller Assembly.....	14
6.3	Optional Extras/Attachments	15
6.3.1	Multipacker.....	15
6.3.2	Crop Roller.....	17
6.3.3	Aerator	18
6.3.4	Front Tine Assembly.....	19
6.3.5	Front Paddle Assembly	21
6.3.6	Headlights & Hazard Boards.....	24
6.3.7	Toolbox & Nameplate	26
7.	Hydraulic Function Diagrams.....	28
7.1	FP3 Front Paddles - Hydraulic Function Schematic.....	29
8.	Electrical Schematics.....	30
9.	Standard Torque Values.....	31

1. Machine Range Summary

The Front Press is a versatile, multi implement machine that is easily adapted to the end user's specific requirements with the simple change of the packer/roller.

The machine features a steering headstock, water ballast if extra weight needed, optional toolbox, front and rear lights, and nameplate.

The Multipacker Option

The patented Multipacker fulfils a number of criteria, comprising of a round tube mounted on heavy duty quality bearings fitted with notched cutting/ drive rings to keep turning in arduous conditions. The ring shoulders feature a convex shape adjacent to the barrel, creating consolidation and cracking even on the top of the ridge. Further to this is the ability to unbolt every individual packer quadrant for replacement without having to use any heat or cutting equipment. All these features make a packer which presses and firms to a higher quality with a lower power requirement than any other packer available.

The Aerator Option

Improves grassland environment to the benefit of animals. The Grassland Aerator opens up the soil profile and alleviates compaction, allowing air to flow to the grass rooting zone, let nutrients enter the soil and aid drainage. Soil compaction caused by heavy machinery and livestock leads to poor root growth because nutrients and water aren't reaching the rooting area. The Grassland Aerator will puncture the soil and shatter the hard pan resulting in more nutritious, thicker and better rooted grass.

The Crop Crimper Option

This machine helps zero-till and organic growers with preparing a field ahead of the drill, and reducing reliance of herbicides, by rolling and breaking cover crops and ensuring excellent seed to soil contact when direct drilling.

Note: This stage description is based on our standard offerings but will change depending on the packer selection. Consult the Cultivation Operators manual for more information.

2. Product Specifications

For standard machine dimensions and weight, see Cultivator Operators Manual. Note: Weights is described as the maximum laden mass but will increase with optional extras and attachments.

Front Press Mounted Range

Spec	Front Press 3m
Code	FP3
Machine Type	Rigid

Available Options

Code	Option Code	Description	Specifications
FP3	FP3.MP	Multipacker 250	Rings: 12 – Spacing 250mm
	FP3.AER	Aerator	Rows: 19 – Spacing 146mm – Depth 175mm
	FP3.CRO	Crop Crimper	Rows: 10
	FP3.TI	Front Tines	Tines: 12 – Shear Bolt
	FP3.PA	Front Paddles	Paddles: 12 – Hydraulic
	FP3.TB	Toolbox & Nameplate	Toolbox Dimensions: 900 W, 200 L, 300 D
	FP3.HB	Headlights & Hazard Boards	-

Other options may be available – See Sumo website / Contact your local dealer.

3. Transport Positions & Dimensions

The following transport positions must be followed before taking the specified Sumo machine on any public road. Failure to do so may mean the machine is no longer considered road legal. It is the sole responsibility of the owner/operator to ensure the machine is correctly positioned prior to transport and complies with all local laws and regulations.

For all Sumo guidelines and safety protocols, read the related Sumo Cultivator Operators Manual thoroughly.

Transport Dimensions (Approximate)

Note: Due to the fabricated and assembled construction of Sumo machines dimensions may vary and should only be used for reference.

Shown dimensions are of maximum extremities (Excluding assembly/fabrication tolerances) but can be reduced/increased by adjusting implement positions, chassis/axle height/angle, and reversing pins with handles. It is solely the owner/operator's responsibility to ensure they transport the machine within local legislation & laws.

Machines (Excluding Options)

Code	Length	Width	Height
FP3	1540	3015	1480

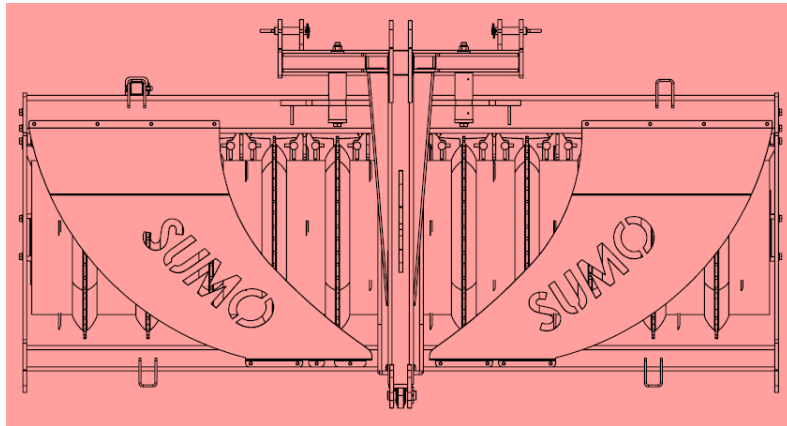
Machines (Including Options)

Code	Length	Width	Height
FP3.MP	-	-	-
FP3.AER	-	-	-
FP3.CRO	-	-	-
FP3.TI	1570	-	-
FP3.PA	1760	-	-
FP3.TB	1890	-	-
FP3.HB	-	-	-

4. Danger Zone

The area marked red indicates the Danger Zone of the machine.

Mounted Front Press



The danger zone around the machine poses the following endangerments:

- Accidental operation of the hydraulic system can trigger dangerous movements of the machine.
- Defective or not correctly fastened electric lines can cause electric shocks.
- With the drive still running, machine parts may rotate or swing out.
- Hydraulically raised machine parts can lower slowly and unnoticed.

Failing to pay attention to the danger zone can result in severe or even fatal physical injuries.

- Do not stand under lifted loads. Lower such loads to the ground first.
- Instruct persons to leave the danger zone around the machine and tractor.
- Before working in the danger zone of the machine or between machine and tractor: Shut down the tractor! This also applies for short-term inspection work. Many accidents happen because of carelessness and running machines!
- Follow all safety guidelines and procedures as outlined within the Cultivator Operators Manual.



GROWING WITH YOU

5. Risk Assessments

Model: Front Press

Notes: Ensure the Cultivator Operators Manual, & Machine Manual are read and fully understood.

Purpose of machine: Versatile Machine primarily used for Consolidation, Aeration, &/or Crop Crimping

Description of machine: A three-point-linkage mounted farm implement consisting of variable elements, arranged in a rigid heavy-duty fabricated steel framework. The machine is designed to couple to a suitably powered tractor.

Hazard Identified in Using Machine	Who Might Be Harmed	Risk Evaluation /Level (1-5)	Precautions In Place	Further Action Required
Machine collision while in transport.	Operator, Members of The Public	2 Low - Mid	Tail lights, Side Lights & Indicator, reflectors.	Take care when using in both field and road situations. Maintain good visibility at all times.
Trapped fingers during leg depth position change.	Operator	1 Low	Warning Stickers	Observe warning signs, maintain safe distance from moving parts, wear gloves. Ensure both of the stands are down. Clear excess soil (weight) from points before attempting to adjust legs.

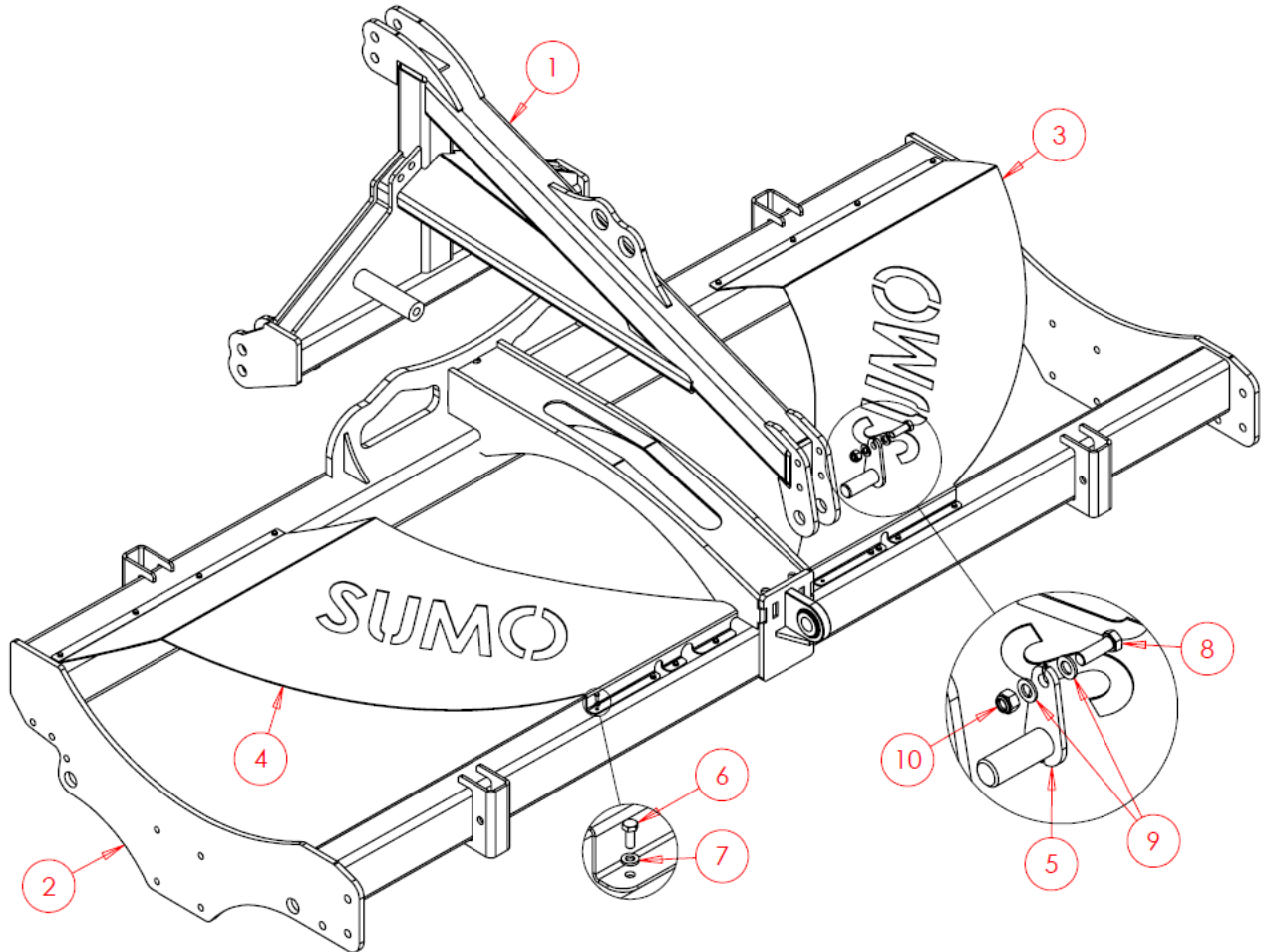
5 Risk Assessments - Continued

Hazard Identified in Using Machine	Who Might Be Harmed	Risk Evaluation /Level (1-5)	Precautions In Place	Further Action Required
<p>Risk of crushing:</p> <ul style="list-style-type: none"> - When coupling a tractor to the Sumo implements. - When changing points. - Rotating parts - When folding/unfolding - Machine tipping over 	Operator	4 Mid - High	Warnings, Maintenance Stands	Take extreme care when working on legs, changing depth, replacing points etc, make sure stands are down and the machine is on a suitable firm piece of land. Ensure tractor hydraulics are in good working order. Ensure tractor is safely positioned and the parking brake is engaged when coupling up to the Sumo implements. Stay clear of any folding/unfolding elements. Lower wings slow and evenly to ensure the machine does not tip over. Be mindful of environmental factors.
Falling from machine	Operator	2 Low - Mid	Most alterations and maintenance do not require the operator the climb on the machine. If a seeder is fitted, then steps and a handrail will also be fitted to allow access.	Lower the machine to the floor to allow access for greasing discs, checking bearings etc...
Pressurised oil/ Burst hoses	Operator	4 Mid - High	Warnings	Always wear appropriate PPE. Do not remove hoses whilst pressurised, do not feel for leaks. If contact is made, wash affected area immediately. Do not inhale or consume.
Risk of crush during machine roll back	Operator, Members of The Public	4 Mid - High	Warnings, Parking stands and Features.	Always park correctly on a solid stable land and firmly apply brakes, stands and any other parking features. If the machine still seems unstable use wooden chocks etc.

6. Parts Book Index

For older machines, see manuals & parts book available on the Sumo website.

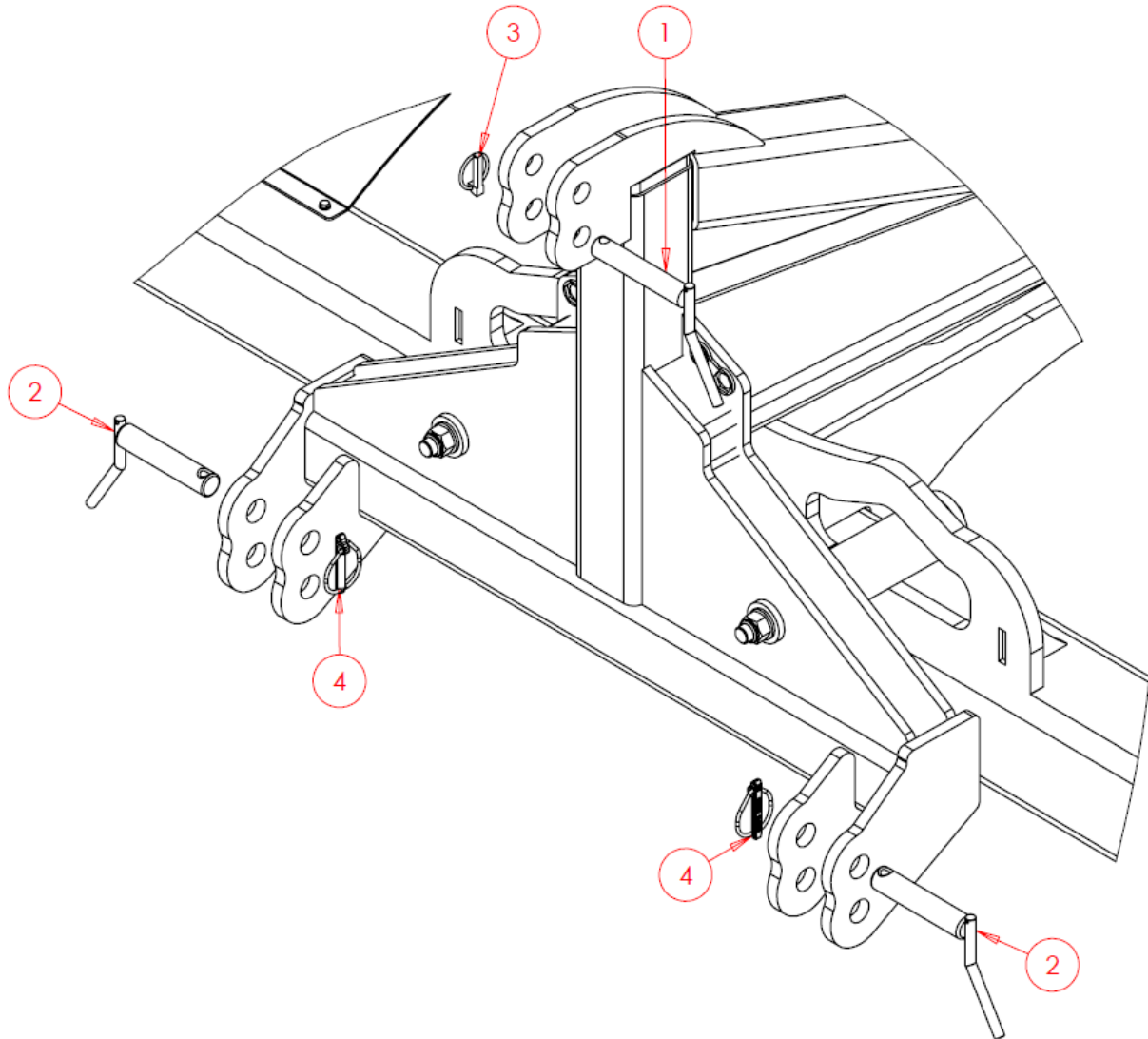
6.1 FP3 Base Machine



Item No.	Part Number	Description	Qty
1	SW2054	Headstock	1
2	SWA2763	Carrier	1
3	SWS24161	Branding LH	1
4	SWS24160	Branding RH	1
5	SWP36X95	Pin	1
6	SWM616	M6x16 Bolt	16
7	SWM6001	M6 Washer - Flat	32
8	SWM1650	M16x50 Bolt	1
9	SWM16001	M16 Washer - Flat	2
10	SWM16004	M16 Nut - Nylock	1

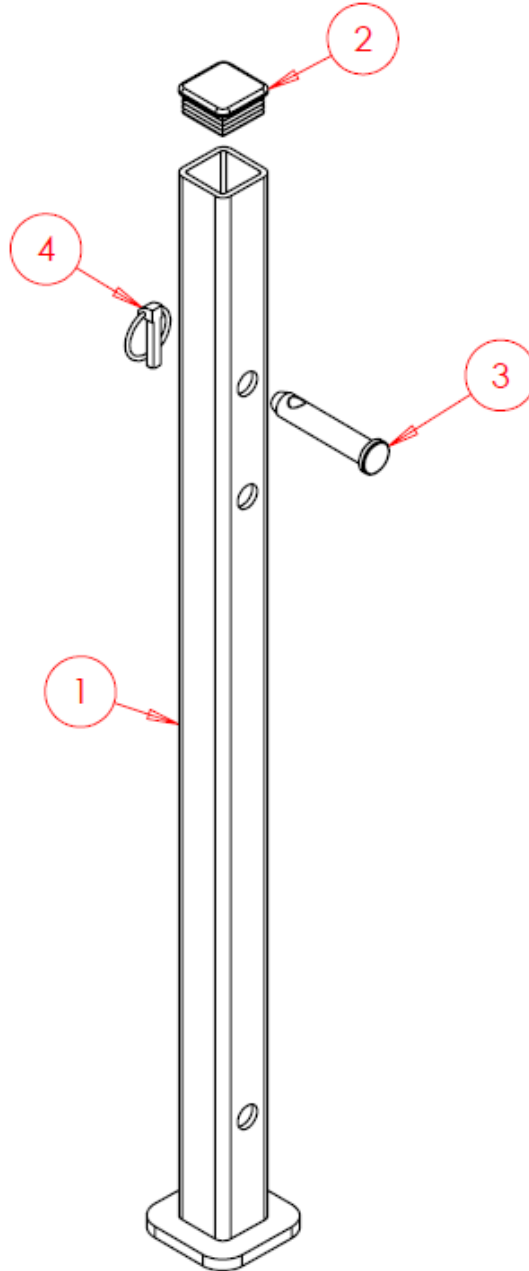
6.2 Standard Assemblies

6.2.1 Three Point Linkage Pins

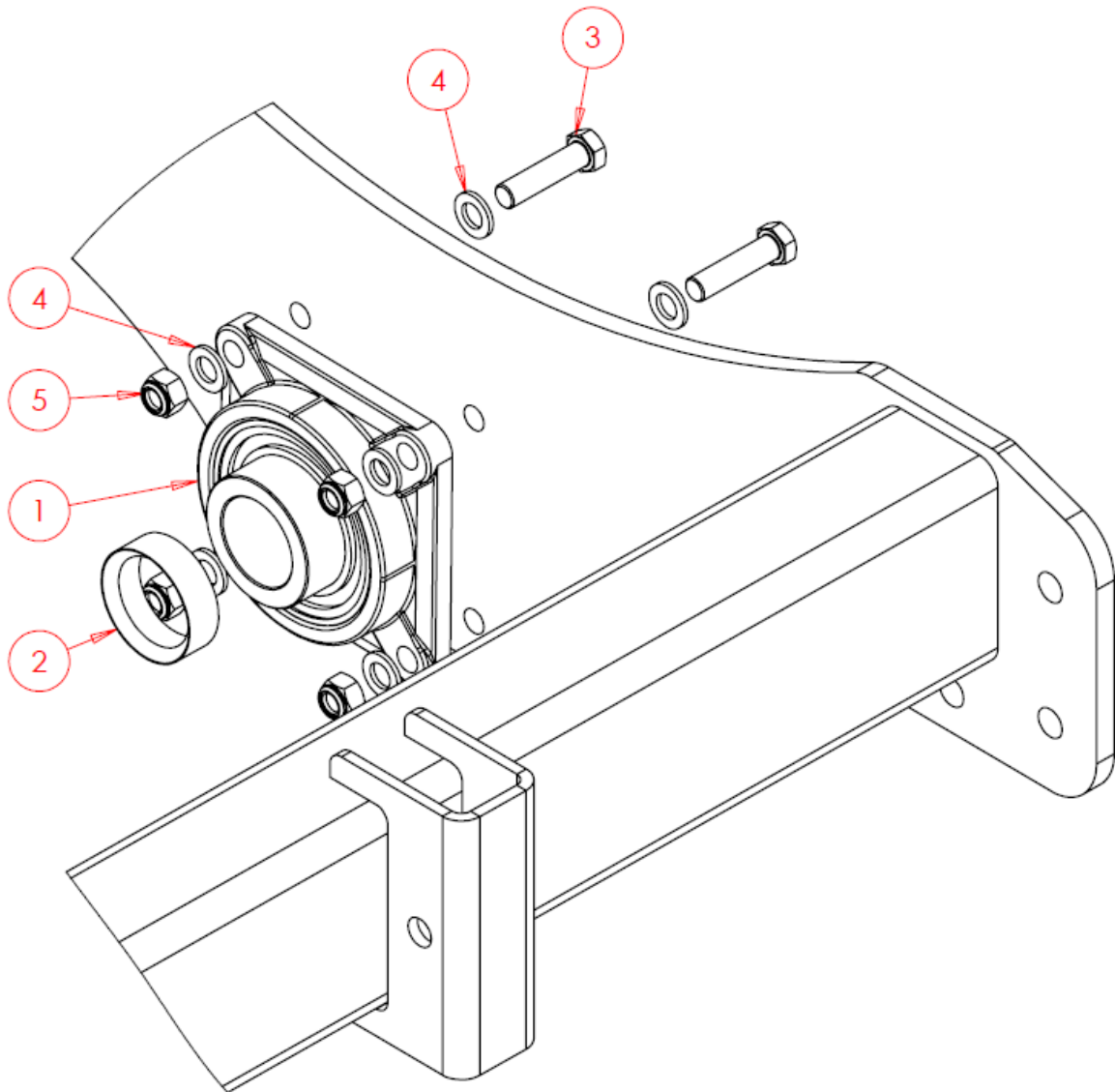


Item No.	Part Number	Description	Qty
1	SW268	Top Link Pin	1
2	SW267	Bottom Link Pin	2
3	SWB105	Lynch Pin	1
4	SWB107	Lynch Pin	2

6.2.2 Stand Assembly

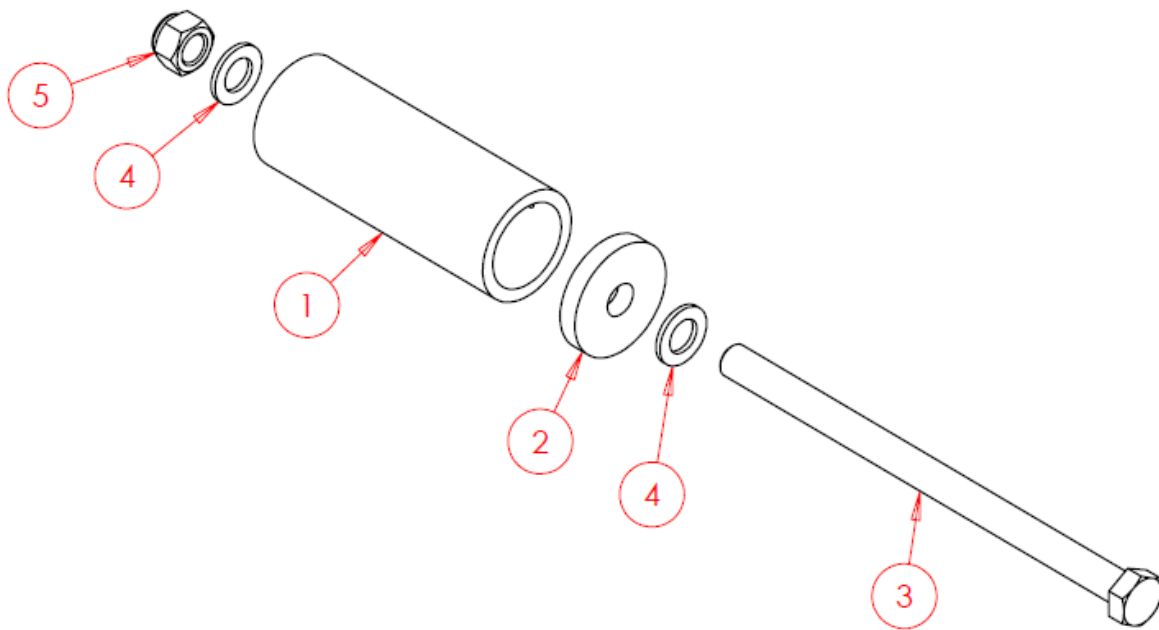


Item No.	Part Number	Description	Qty
1	SWA2765	Stand	1
2	SWB462	Plastic Bung	1
3	SW1256	Pin	1
4	SWB105	Lynch Pin	1

6.2.3 Packer Bearings Assembly

Item No.	Part Number	Description	Qty
1	SWB104	Bearing	2
2	SWS3272	Spacer Collar	2
3	SWM1665	M16x65 Bolt	8
4	SWM16001	M16 Washer - Flat	16
5	SWM16006	M16 Nut - Aerotight	8

6.2.4 Steering Roller Assembly

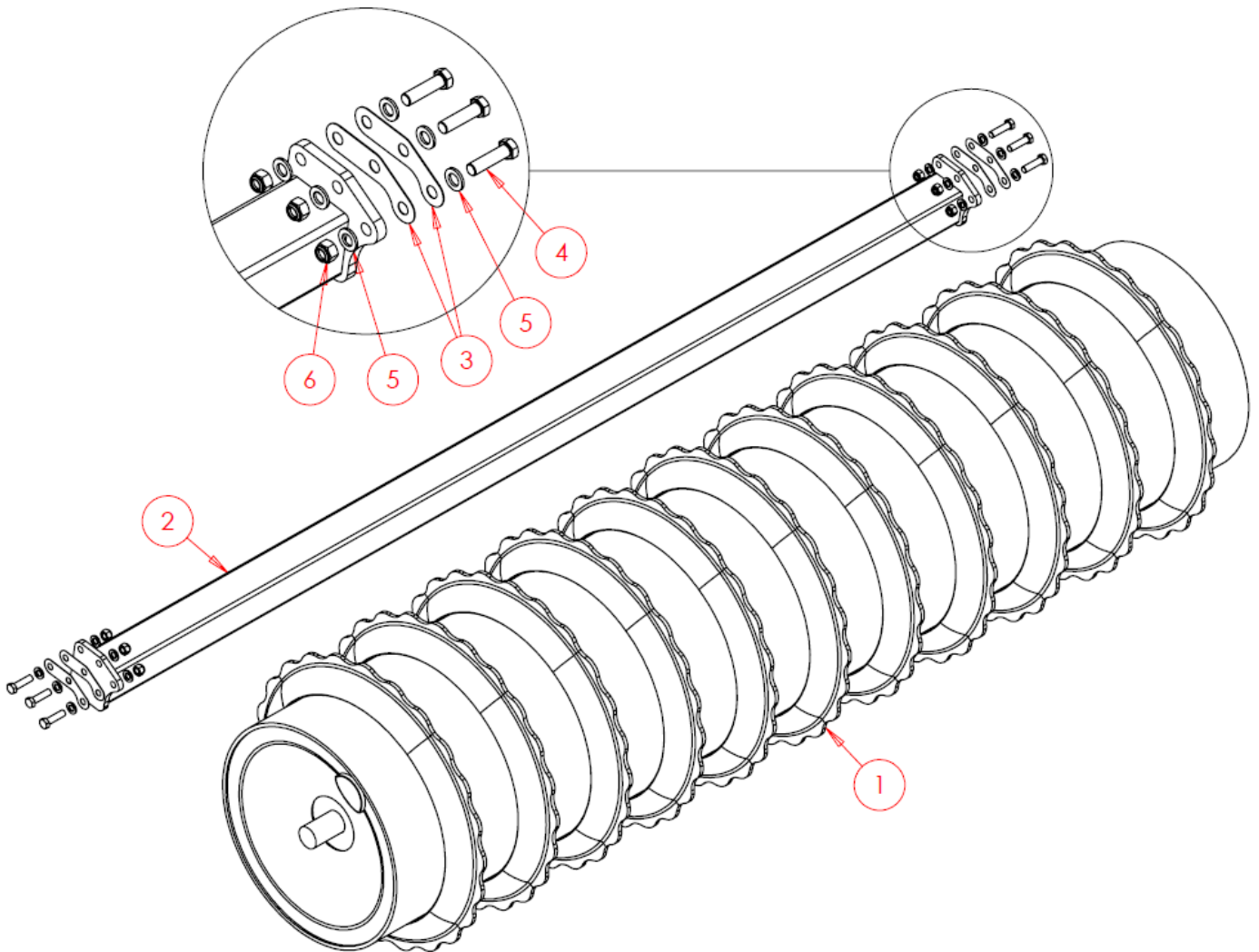


Item No.	Part Number	Description	Qty
1	SW2059	Steering Roller	1
2	SW2060	Roller End Cap	1
3	SWM20320	M20x320 Bolt	1
4	SWM20001	M20 Washer - Flat	2
5	SWM20004	M20 Nut - Nylock	1

6.3 Optional Extras/Attachments

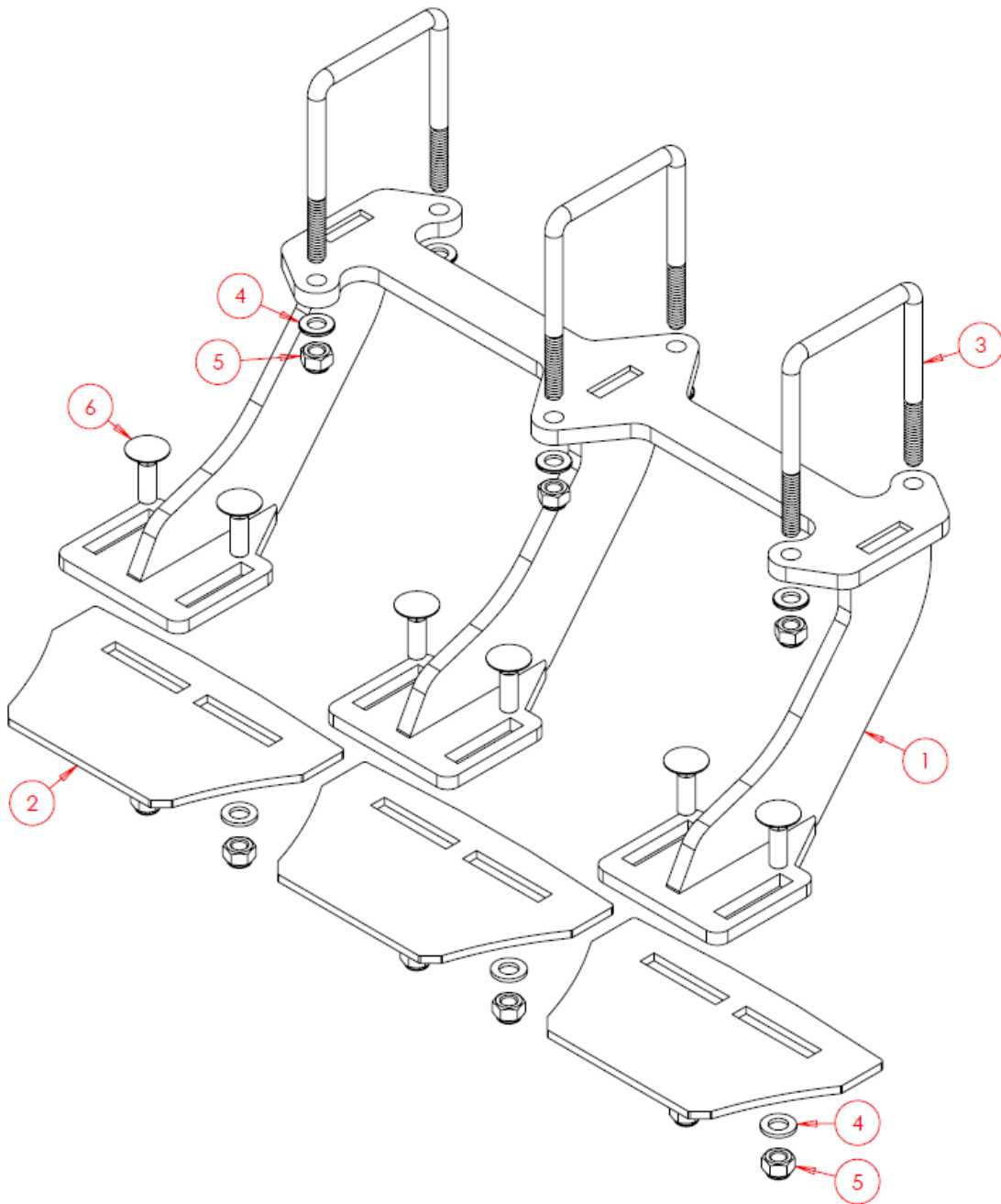
6.3.1 Multipacker

6.3.1.1 Multipacker & Scraper Bar



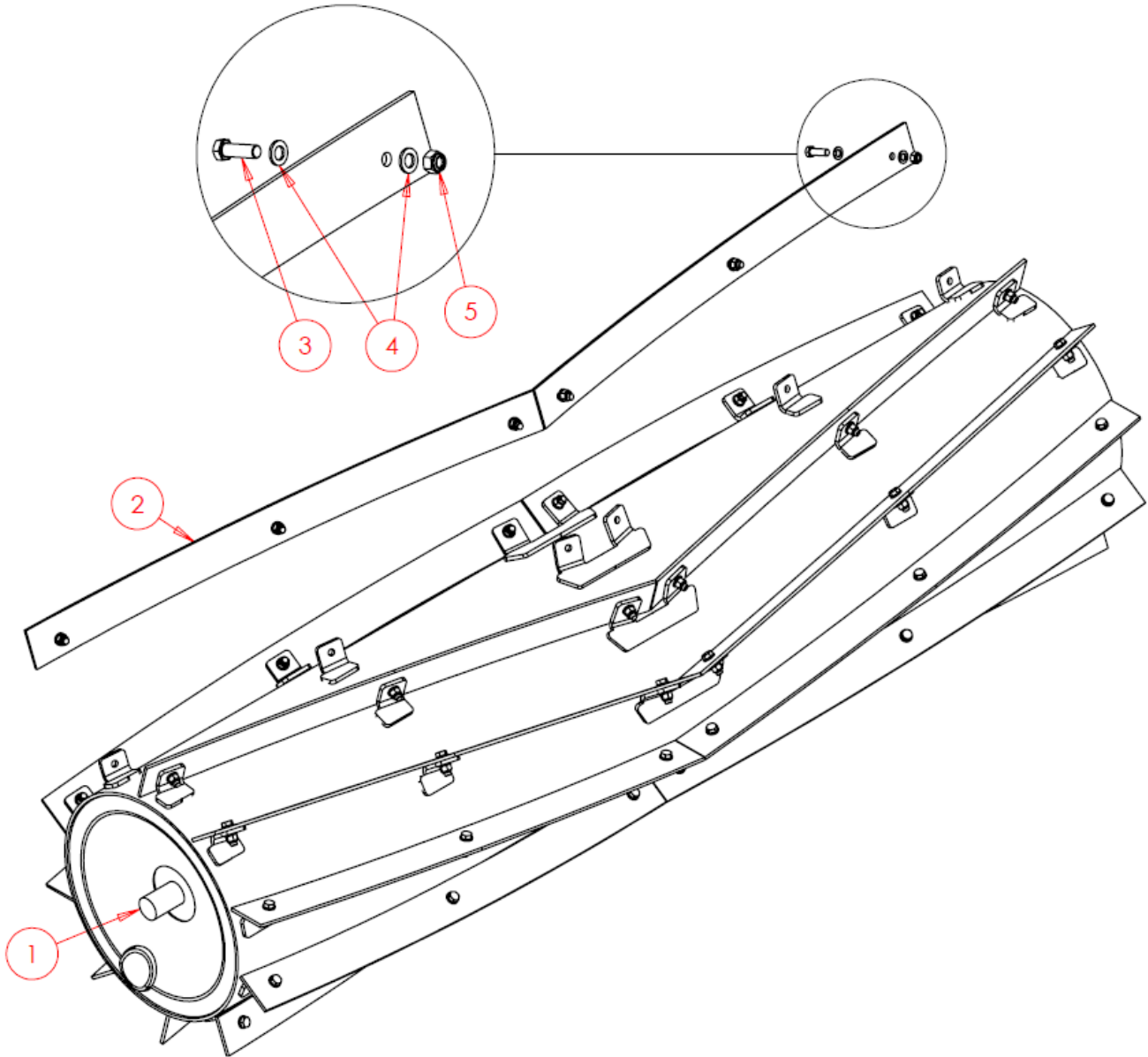
Item No.	Part Number	Description	Qty
1	SW2058	Multipacker	1
2	SW6537	Scraper Bar	1
3	SWS24155	Shims	-
4	SWM1660	M16x60 Bolt	6
5	SWM16001	M16 Washer - Flat	12
6	SWM16004	M16 Nut - Nylock	6

6.3.1.2 Multipacker - 250mm Spacing - Triple Scraper



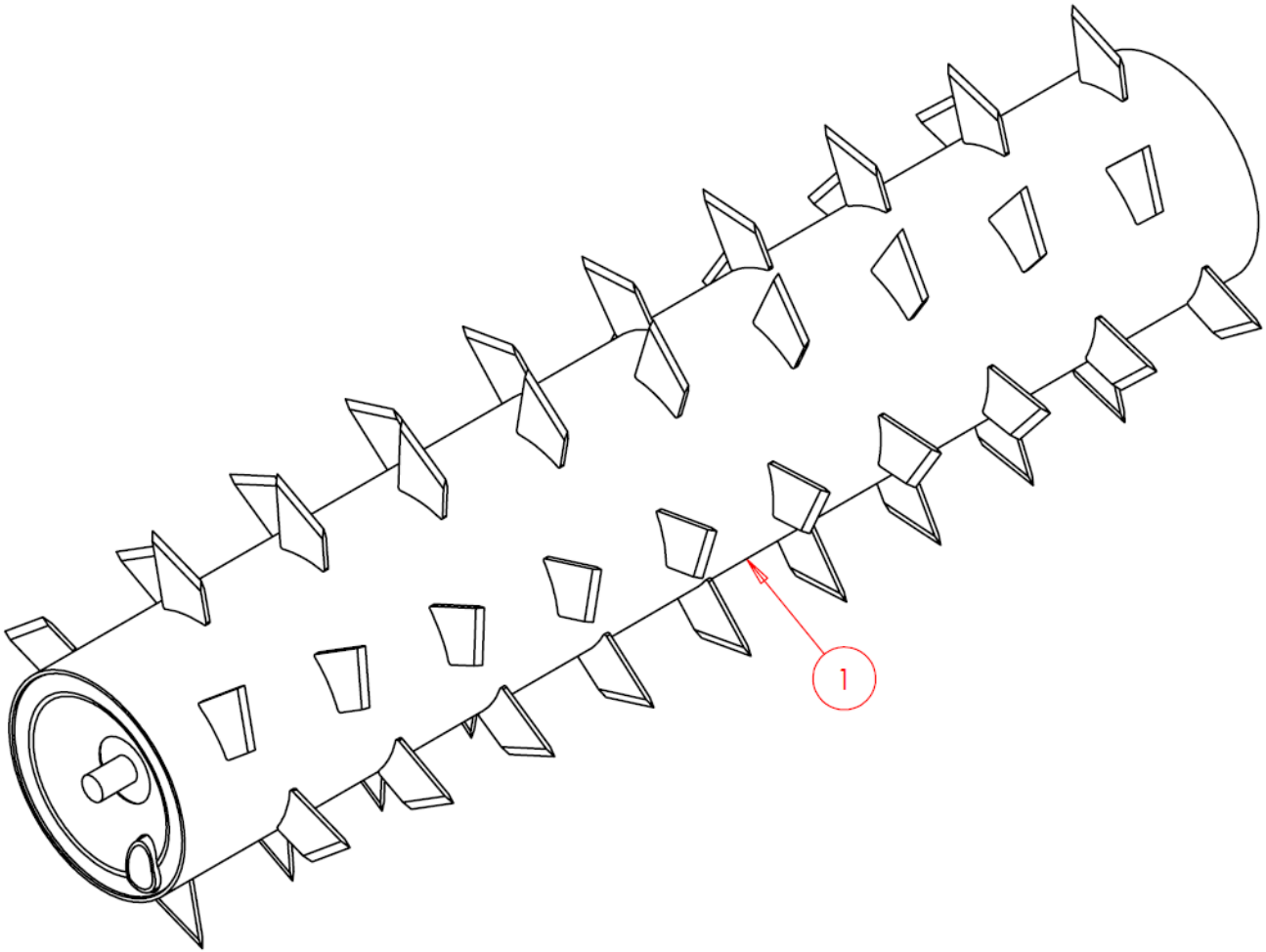
Item No.	Part Number	Description	Qty
1	SW1003	Hanger	1
2	SW651	Scraper	3
3	SWM12100UB	M12x100 U bolt	3
4	SWM12001	M12 Washer - Flat	12
5	SWM12004	M12 Nut - Nylock	12
6	SWM1240CHSQ	M12x40 Bolt - Cup Head Square Bolt	6

6.3.2 Crop Roller



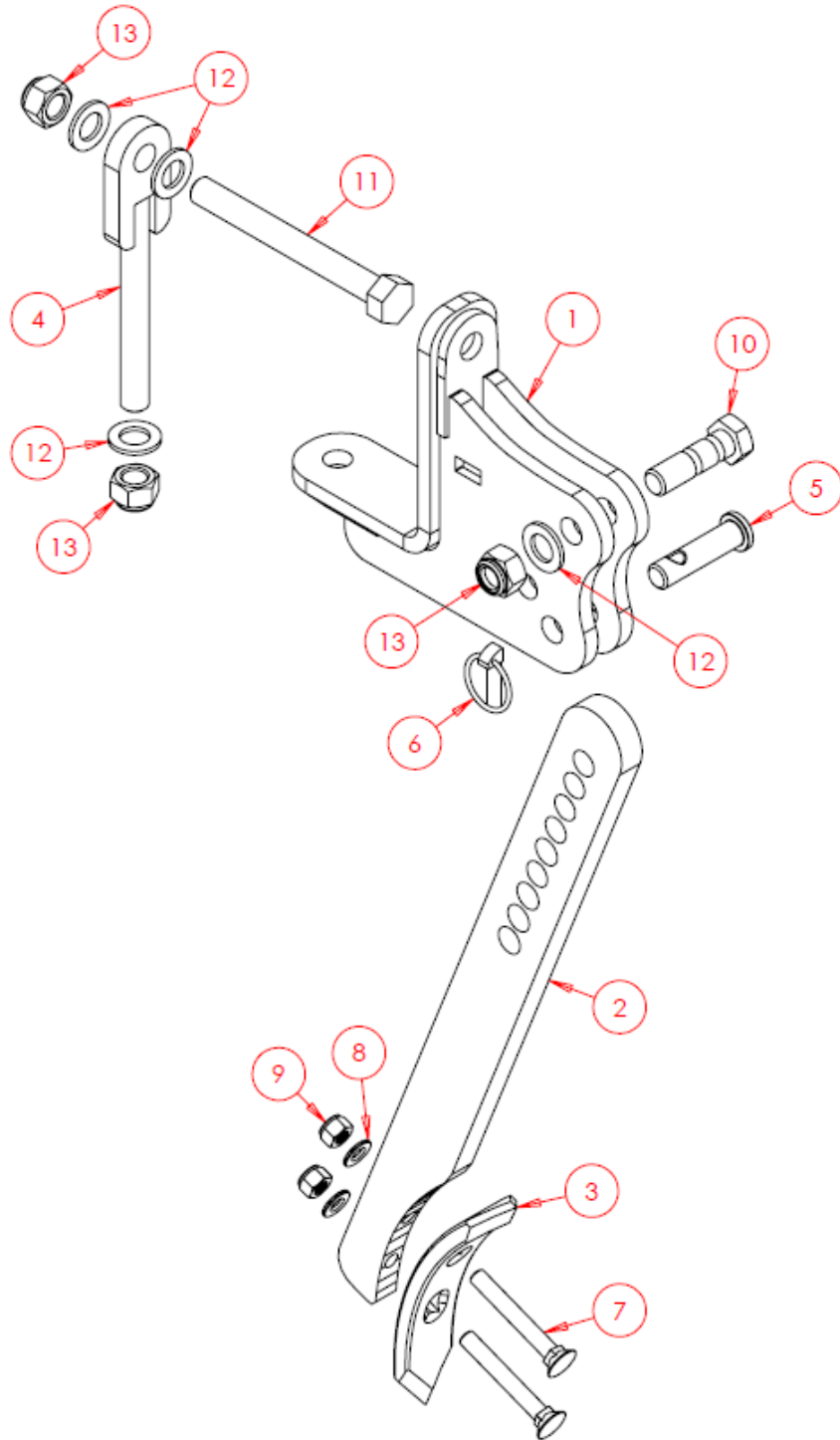
Item No.	Part Number	Description	Qty
1	SWA2759	Crop Roller (Complete)	1
2	SWS24145	Blade	20
3	SWM1650	M16x50 Bolt	60
4	SWM16001	M16 Washer - Flat	120
5	SWM16004	M16 Nut - Nylock	60

6.3.3 Aerator



Item No.	Part Number	Description	Qty
1	SWA2930	Aerator	1

6.3.4 Front Tine Assembly



Item No.	Part Number	Description	Qty
1	SW2057	Clamp	1
2	SW198	Tine	1
3	SW199	Point	1
4	SW2056	Eye Bolt	1

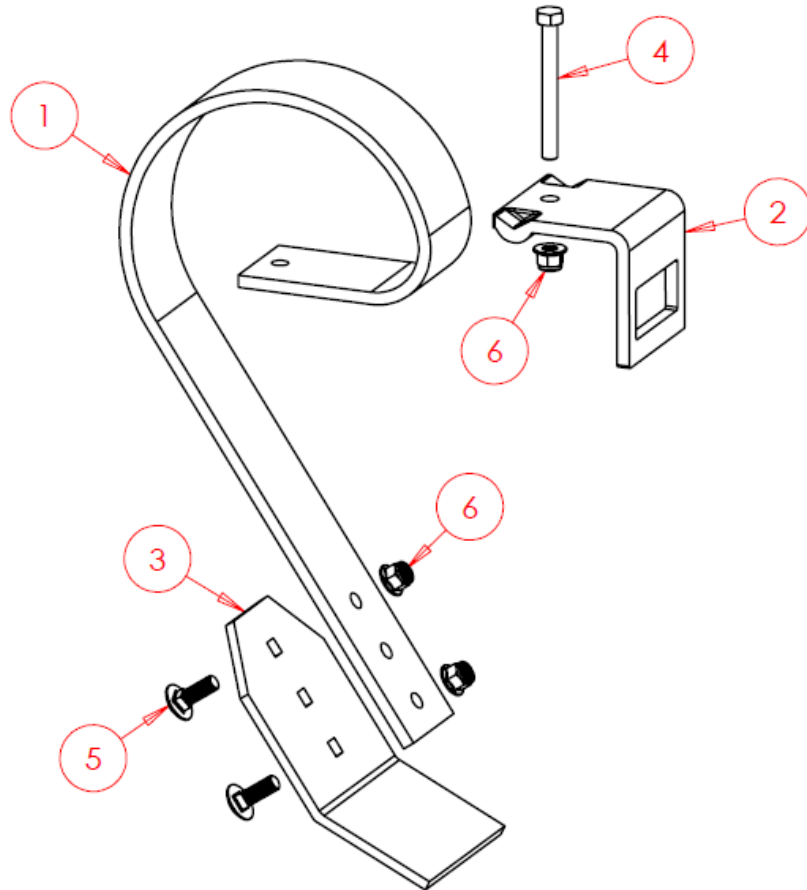


GROWING WITH YOU

5	SWB145	Pin	1
6	SWB105	Lynch Pin	1
7	SWM1280PB	M12x80 Plough Bolt	2
8	SWM12001	M12 Washer - Flat	2
9	SWM12004	M12 Nut - Nylock	2
10	SWM2070SB	M20x70 Shear Bolt	1
11	SWM20180	M20x180 Bolt	1
12	SWM20001	M20 Washer - Flat	4
13	SWM20004	M20 Nut - Nylock	3

6.3.5 Front Paddle Assembly

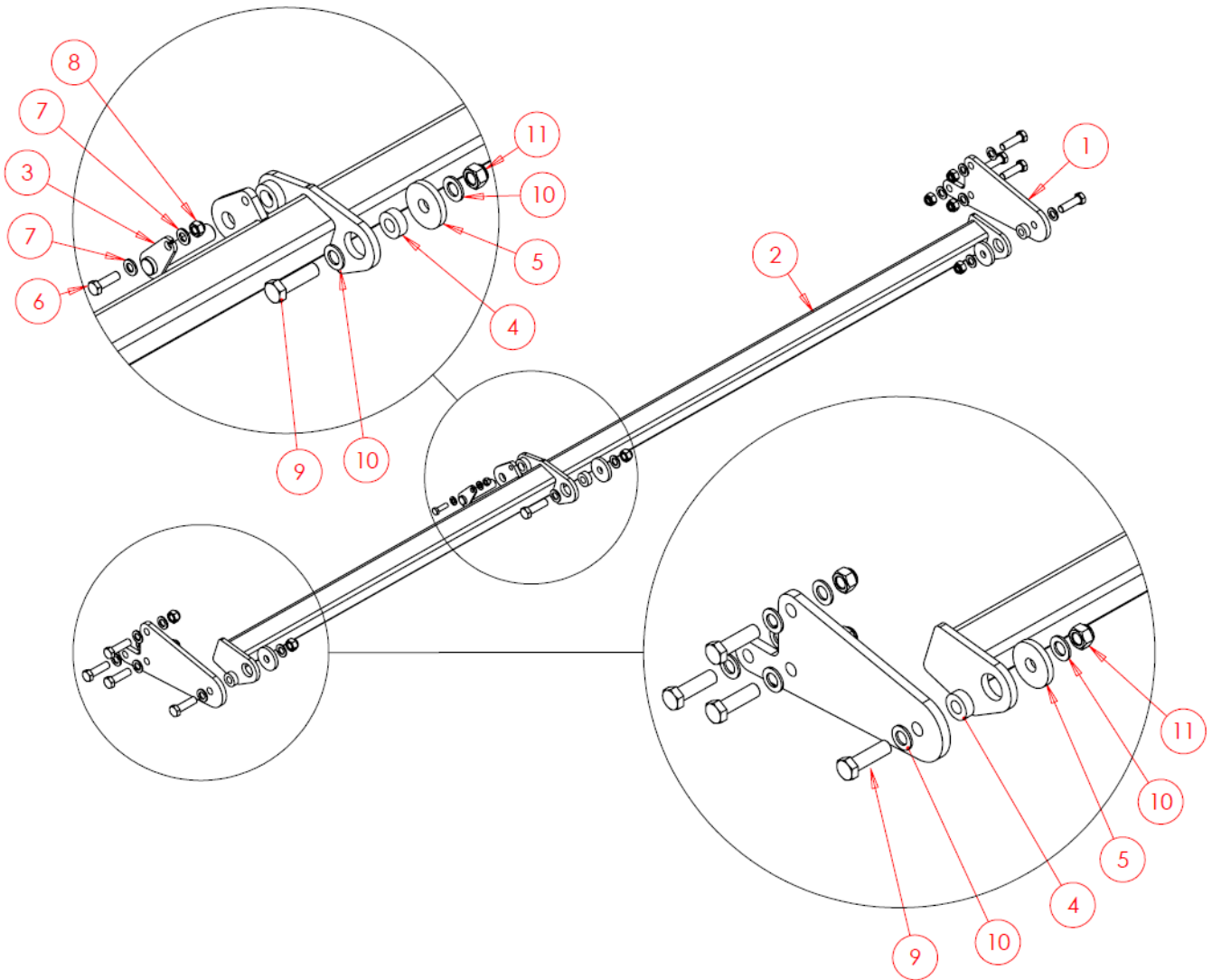
6.3.5.1 Standard Paddle Assembly



Quantities below are for individual paddles, not per machine.

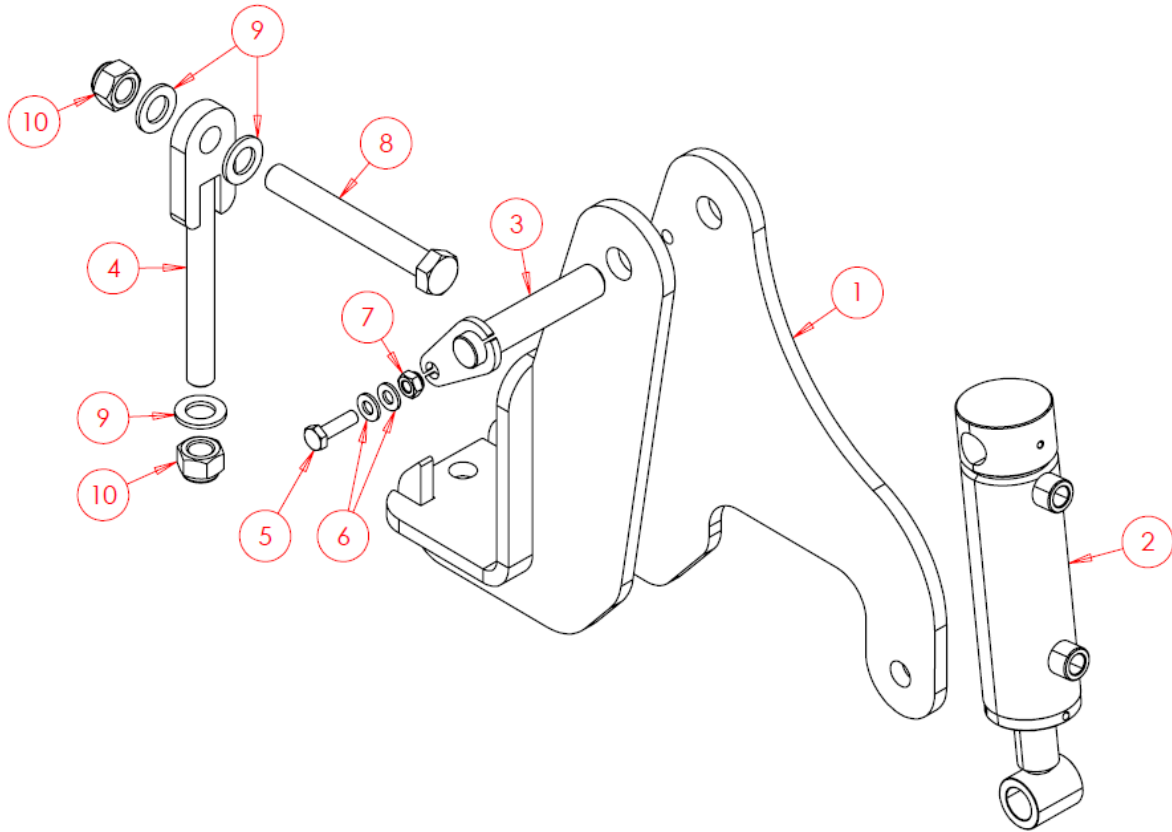
Item No.	Part Number	Description	Qty
1	SWB121	Spring	1
2	SWB123	Clamping Plate	1
3	SWB122	Paddle	1
4	SWM12110	M12x110 Bolt	1
5	SWM1235CHSQ	M12x35 Cup Head Square Bolt	2
6	SWM12005	M12 Nut - Flanged Nylock	3

6.3.5.2 Paddle Bar & Mounting



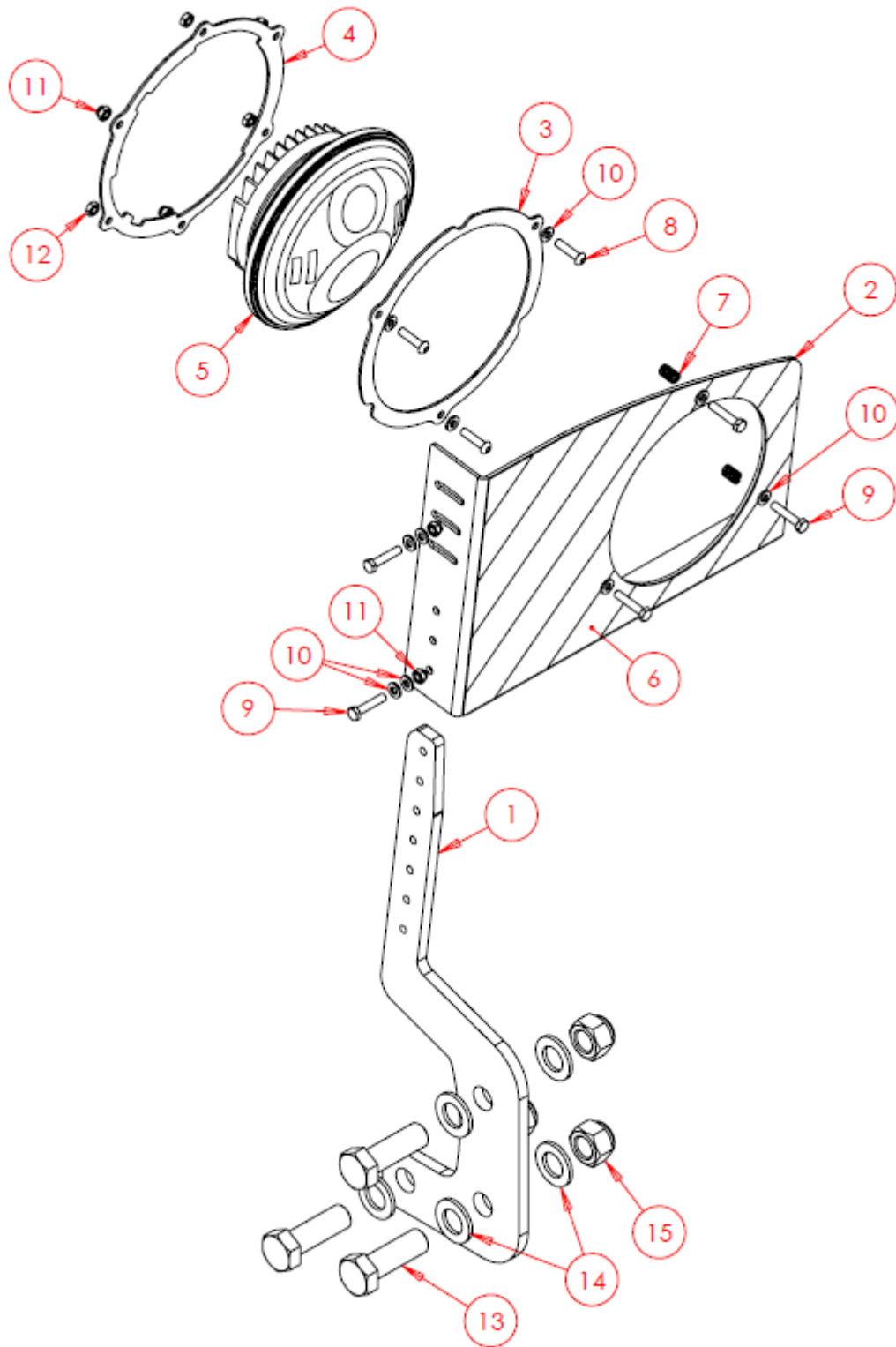
Item No.	Part Number	Description	Qty
1	SW2067	Outer Mounting Bracket	2
2	SW2078	Paddle Bar	1
3	SWP25X110	Pin	1
4	SW2081	Bearing Spacer	3
5	SW123	Ex Large Washer	3
6	SWM1240	M12x40 Bolt	1
7	SWM12001	M12 Washer - Flat	2
8	SWM12004	M12 Nut - Nylock	1
9	SWM2070	M20x70 Bolt	9
10	SWM20001	M20 Washer - Flat	18
11	SWM20004	M20 Nut - Nylock	9

6.3.5.3 Paddle Bar Hydraulics



Item No.	Part Number	Description	Qty
1	SW2071	Central Mounting Bracket	1
2	SWH113	Hydraulic Cylinder	1
3	SWP25X115	Pin	1
4	SW2056	Eye bolt	1
5	SWM1035	M10x35 Bolt	1
6	SWM10001	M10 Washer - Flat	2
7	SWM10004	M10 Nut - Nylock	1
8	SWM20160	M20x160 Bolt	1
9	SWM20001	M20 Washer - Flat	3
10	SWM20004	M20 Nut - Nylock	2

6.3.6 Headlights & Hazard Boards

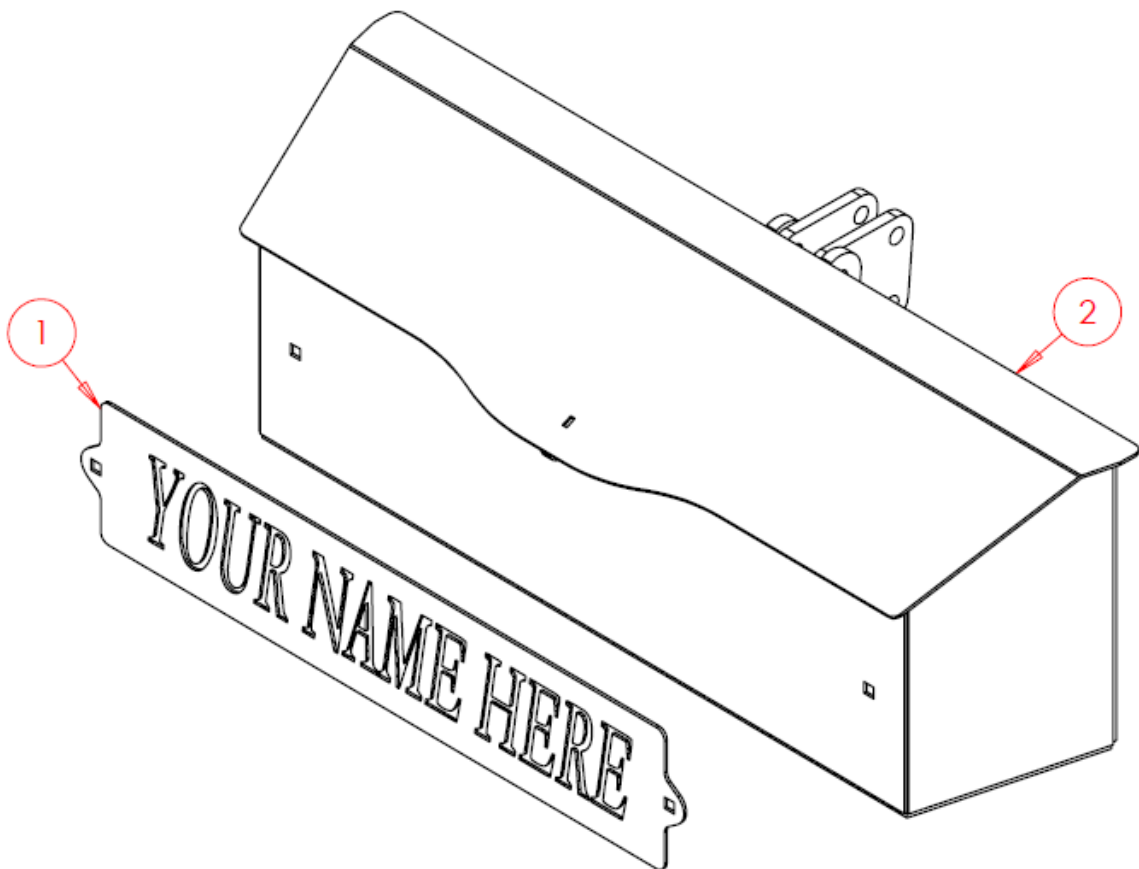




GROWING WITH YOU

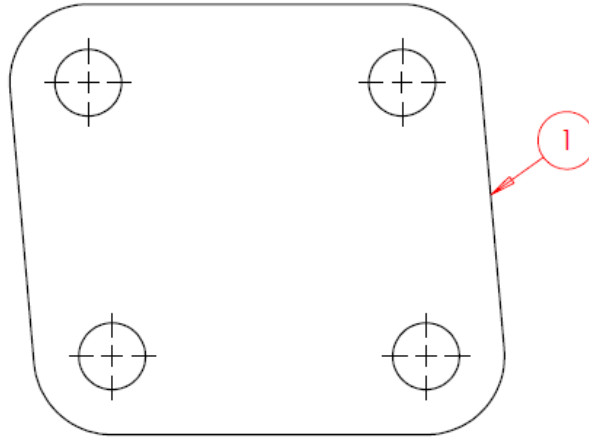
Left & Right-Hand versions required. Right-Hand version shown.

Item No.	Part Number	Description	Qty
1	SWS25175	Mounting Bracket	2
2	SWS25176-RH	Light Bracket RH	1
2	SWS25176-LH	Light Bracket LH (Not Shown)	1
3	SWS25177	Headlight Clamp Front	2
4	SWS25178	Headlight Clamp Rear	2
5	SWB1447	Headlight	2
6	SWB1449	Hazard Sticker	2
7	SWB1448	Spring	6
8	SWM625BTH	M6x25 Button Head Screw	6
9	SWM630	M6x30 Screw	6
10	SWM6001	M6 Washer - Flat	20
11	SWM6004	M6 Nut - Nylock	16
12	SWM6005	M6 Nut - Plain	12
13	SWM2060	M20x60 Screw	6
14	SWM20001	M20 Washer - Flat	12
15	SWM20004	M20 Nut - Nylock	6

6.3.7 Toolbox & Nameplate**6.3.7.1 Toolbox & Nameplate Assembly**

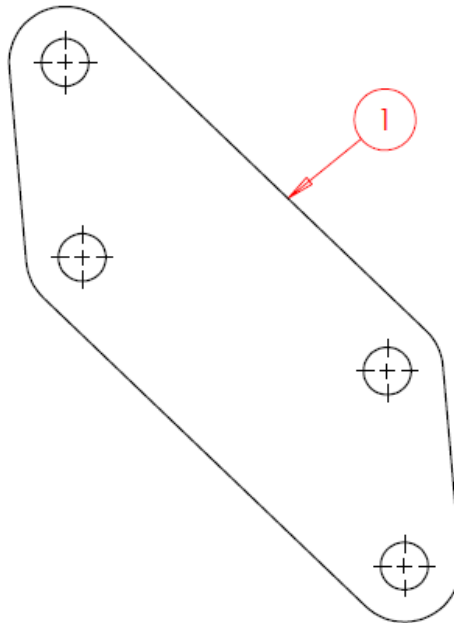
Item No.	Part Number	Description	Qty
1	N/A	Custom Nameplate	1
2	SWA2768	Toolbox	1

6.3.7.2 Toolbox Mounting Bracket - Standard



Item No.	Part Number	Description	Qty
1	SWS24162	Mounting Bracket (Standard)	2

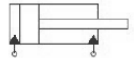

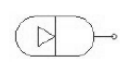
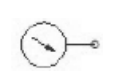

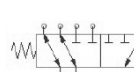

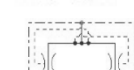
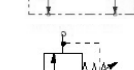
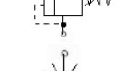
6.3.7.3 Toolbox Mounting Bracket - Paddles Option Only



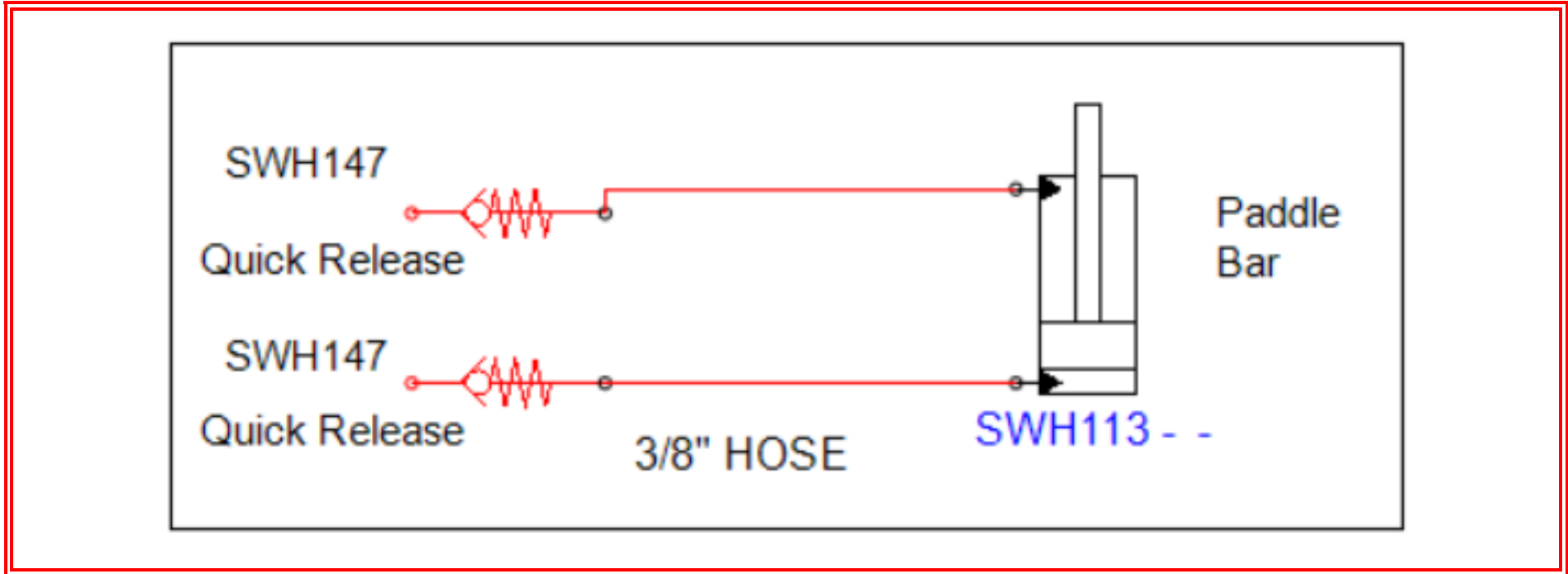
Item No.	Part Number	Description	Qty
1	SWS24191	Mounting Bracket (Paddle Option Only)	2

7. Hydraulic Function Diagrams

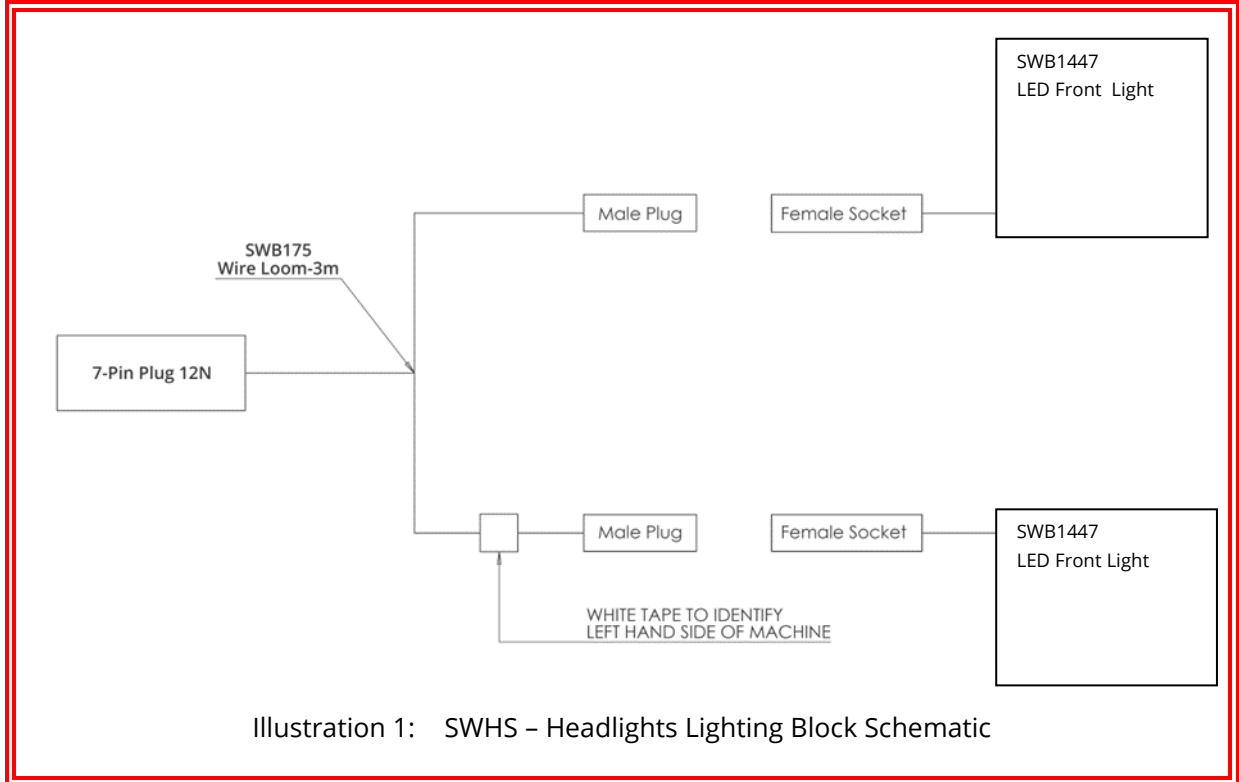
Standard Symbols Key:

	=	Double Acting Cylinder
	=	Single Acting Cylinder
	=	Accumulator
	=	Pressure Gauge
	=	Quick Release/Check Valve
	=	Six Way Changeover Valve
	=	Ball Valve
	=	Flow Divider/Combiner
	=	Pilot Operated Relief Valve
	=	Flow Restrictor

7.1 FP3 Front Paddles - Hydraulic Function Schematic



8. Electrical Schematics



9. Standard Torque Values

Non-Standard torque values will appear in the parts book section of this document.

Standard Toque Values (Nm) (Unless Otherwise Stated)			
Thread	Grade 8.8	Grade 10.9	Stainless Steel
M6	10	14	7
M8	25	36	17
M10	50	70	33
M12	86	121	57
M16	215	314	140
M20	410	580	273
M24	710	1000	472
M30	1400	1450	930

For any arrangement using Nord-Lock washers, see Nord-Lock website:

[Torque Guide for Nord-Lock Washers - Nord-Lock Group](#)