

SUMO sumo1.com **Mixidisc**



2016 Operator Manual and Parts List

SUMO
UK LIMITED
Agricultural Machinery Manufacturers

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.



Sumo Mixidisc 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

The SUMO Mixidisc is a mounted machine designed for high speed stubble cultivation to quickly incorporate and mulch large volumes of crop residues and create a micro tilth in the soil for fast germination of volunteers and weed seeds in one pass

It can also be used for seedbed preparation, straw harrowing or furrow levelling with low power requirement

Firstly

A double row of 500mm concave discs, mounted on independently suspended arms giving a shock-proof durable system with quality low maintenance triple sealed taper roller bearings. Double mounting gives unrivalled performance when working in adverse conditions.

Secondly

The patented Multipacka is uniquely designed to fulfil a number of criteria, comprising, 508mm x 10mm tube mounted on heavy duty quality bearings fitted with notched cutting/ drive rings to keep turning in arduous conditions, giving a total diameter of 660mm. 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.

Before using the SUMO Mixidisc 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

Contents

1.0 Registration	...Page 1
2.0 Summary	...Page 3
3.0 Safety	...Page 5
3.1 Qualification & Training	...Page 5
3.2 General Safety	...Page 6
3.3 Special Safety Instructions	...Page 6
4.0 Operation & Adjustment	...Page 7
4.1 Operation	...Page 7
4.2 Adjustment	...Page 7
5.0 Maintenance	...Page 8
5.1 Spares	...Page 8
5.2 Winter Storage	...Page 8
6.0 Parts & Assembly	...Page 9
6.1 Twin Disc Unit	...Page 9
6.2 Packer Bearing Assembly	...Page 10
6.3 Scraper Assembly	...Page 11
6.4 Packer Depth Adjustment	...Page 12
6.5 Soil Retainer	...Page 13
6.6 Light Bracket Assembly	...Page 14
6.7 Folding Rams	...Page 15
6.8 Linkage Pins	...Page 16
6.9 Stickers	...Page 17

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, 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

- Ensure that only reliable, authorized personnel 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.
- 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.
- 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 wide overhang and/or 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 machine unless the tractor is secured against rolling away by means of parking brake and/or wheel chocks.
- During transport, secure the packer (using both pins) to prevent shock loading when encountering road undulations. Ensure stands are raised to their transport position.
- 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.
- Driving, steering and braking characteristics are influenced by mounted machines and ballast weights. Therefore, ensure adequate steering and braking ability.
- If there is a requirement to lift the Sumo Mixidisc, appropriate lifting apparatus must be attached through the lifting eye in the centre of the machine. The 4m Mixidisc weighs approximately 3220kg.
- When making adjustments to the machines care should be taken not to trap any body parts in moving or pivoting parts.

Top Link Pin

Due to the physical nature and weight distribution of the Sumo Mixidisc a **category three enclosed ball top link** is highly recommended.

Due to the exaggerated loads experienced during normal working conditions, the top link pin is considered as a consumable part and should be checked for wear on a regular basis.

4.0 Operation and Adjustment

4.1 Operation

The top link should be as short as possible whilst remaining as close to horizontal as is achievable. It is important to ensure the machine is running level to allow the optimum level of soil disturbance as well as to prolong the life of the wearing parts.

Bearings should be greased (see 5.0 Maintenance); stands must be in the raised position and all relevant pins in the correct holes prior to commencing work.

Forward working speed should be governed by the local conditions as well as the finish produced by the Sumo Mixidisc

4.2 Adjustments

To adjust the disc working depth, the weight must first be taken off the packer arms before the lynch pins and depth pins are removed. A new depth position can then be selected by replacing the pins in higher or lower holes. The disc unit slices, mixes and cultivates the top 50 - 100mm of soil.

5.0 Maintenance

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

The disc bearings should be greased until old grease is forced out once a week when in normal use and after washing off.

The condition of the discs 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.

Hydraulic cylinders - Exposed chrome ram rods should also be lightly greased occasionally to prevent these valuable parts from rusting and causing costly oil leaks.

5.1 Spares

When ordering replacement parts please have your serial number, part numbers (listed in Section 6.0) and quantities at hand.

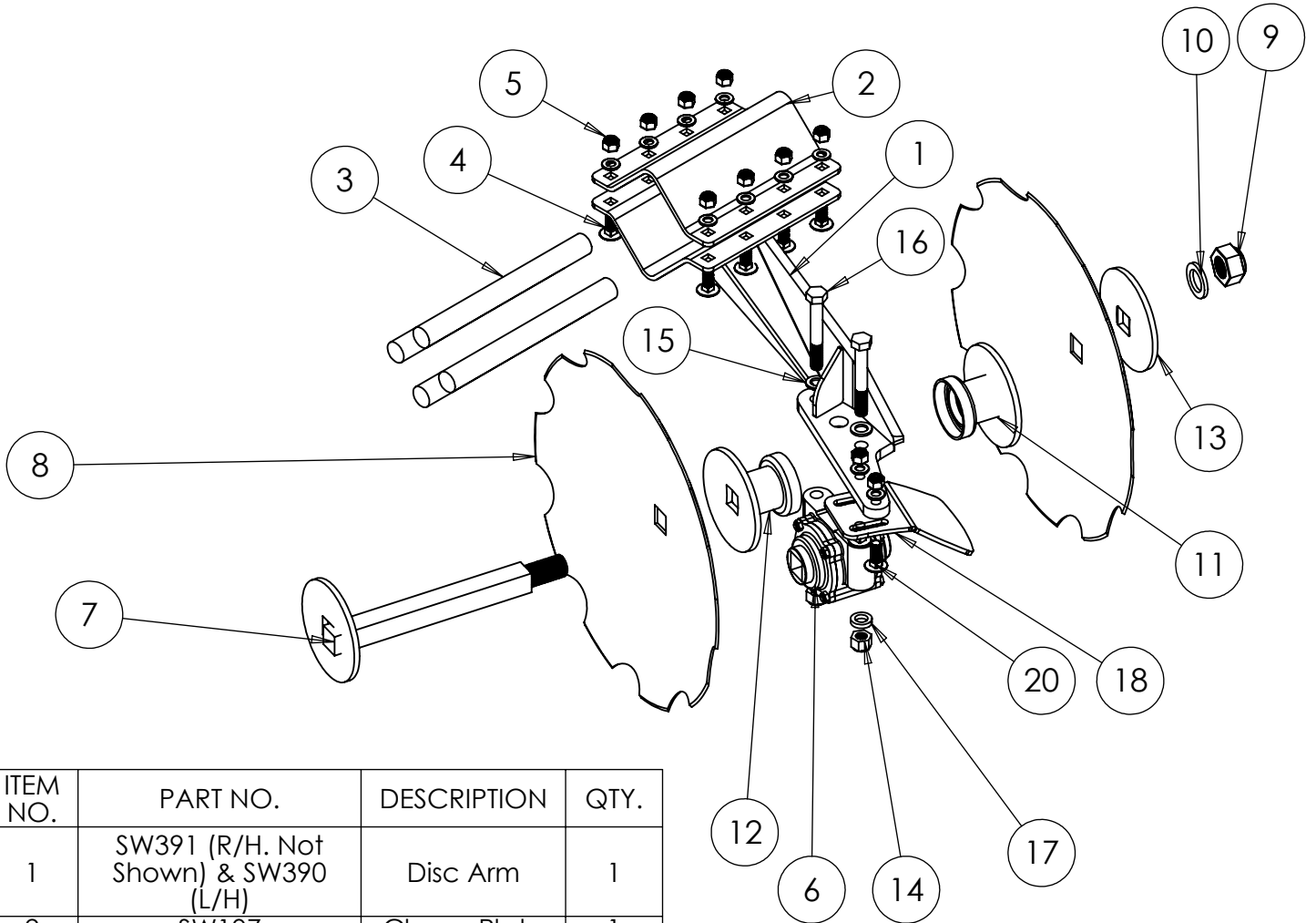
5.2 Winter storage

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 and the disc bearings should be greased until old grease is forced out.

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!

6.1 Twin Disc Unit



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SW391 (R/H. Not Shown) & SW390 (L/H)	Disc Arm	1
2	SW107	Clamp Plate	1
3	SWB103	Rubber	4
4	SWM1235CHSQ	M12 x 35 Cup Head Square	10
5	SWM12005	M12 Flanged Nut	10
6	SWB102	Bearing	1
7	SW101	Twin Disc Axle	1
8	SWB101	20" Scalloped Disc	2
9	SWM3004	M30 Nylock Nut	1
10	SWM30001	M30 Washer	1
11	SW103	Dust Cover and Convexed Disc	1
12	SW102	Dust Cover and Concaved Disc	1
13	SW108	Disc Axle Washer	1
14	SWM16006	M16 Locking Nut	2
15	SWM16001	M16 Washer	2
16	SWM16120	M16 x 120 Bolt	2
17	SW1153	M16 Washer (Thick)	2
18	SW646	Disc Scraper	1
19	SWB184	18" Scalloped Disc (end of disc row, Not Shown)	1
20	SWM1240CHSQ	M12 x 40 Cup Head Square	2

DO NOT SCALE DRAWING

MACHINE/COMPONENT:

Sumo Mixidisc

TITLE:

Twin Disc Unit Assembly



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

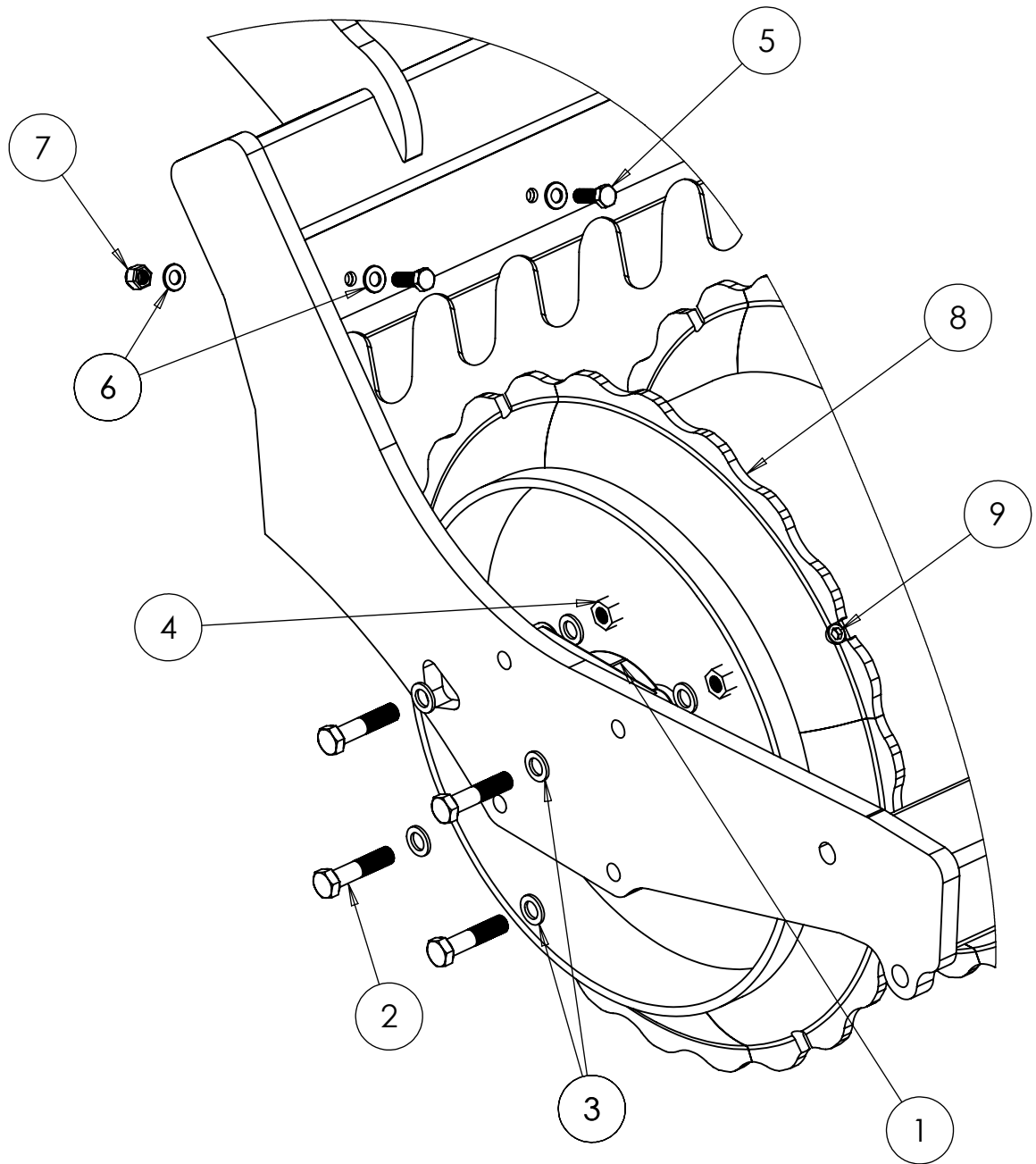
SCALE 1:20

REVISION:

DATE: 09/06/14

INITIAL: TW

6.2 Packer Bearing Assembly



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SWB104	Packer Bearing	1
2	SWM1670	M16 x 70 Bolt	4
3	SWM16001	M16 Flat Washer	8
4	SWM16004	M16 Nylock Nut	4
5	SWM1240	M12 x 40 Bolt	10
6	SWM12001	M12 Flat Washer	20
7	SWM12004	M12 Nylock Nut	10
8	SWB331	508 Packer Quadrant	36
9	SWM1240CH	M12 x 40 Cap Head Bolt	36
10	SWM1670CSK	M16 x 70 Countersunk Bolt (not shown)	4

DO NOT SCALE DRAWING

MACHINE/COMPONENT:

Sumo Mixidisc

TITLE:

Packer Bearing Assembly



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

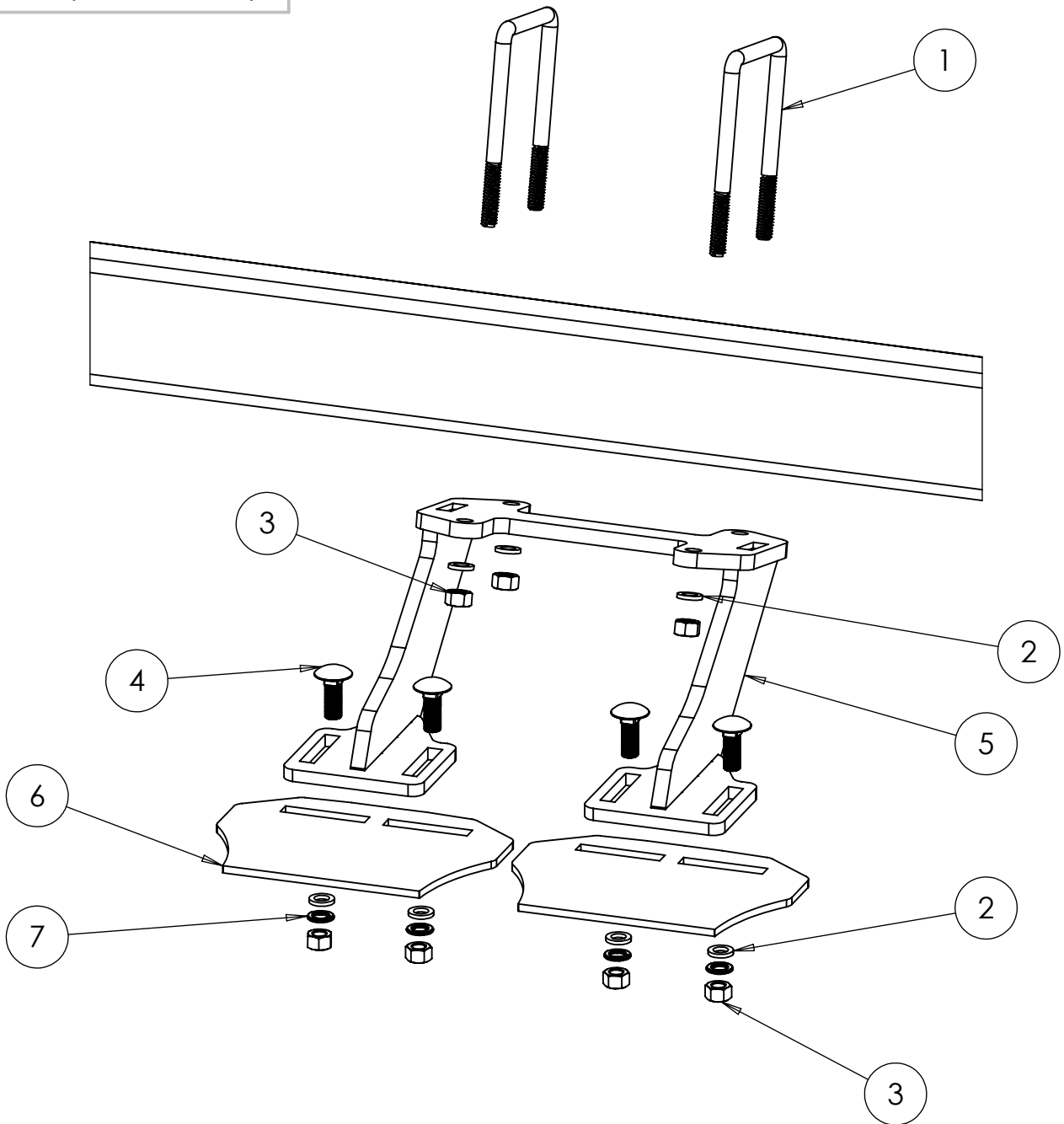
SCALE 1:10

REVISION:

DATE: 09/06/14

INITIAL: TW

6.3 Scraper Assembly



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SWM12100ub	M12 x 100 U-Bolt	2
2	SWM12001	M12 Washer	8
3	SWM12004	M12 Nylock Nut	8
4	SWM1235CHSQ	M12 x 35 Cup Head Square Bolt	4
5	SW1044	Double Scraper Hanger	1
6	SW1043	Scraper	2
7	SWM12002	M12 Spring Washer	4
8	SW1045	Triple Scraper Hanger (not shown)	1

DO NOT SCALE DRAWING

MACHINE/COMPONENT:

Sumo Mixidisc

TITLE:

Scraper Assembly



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

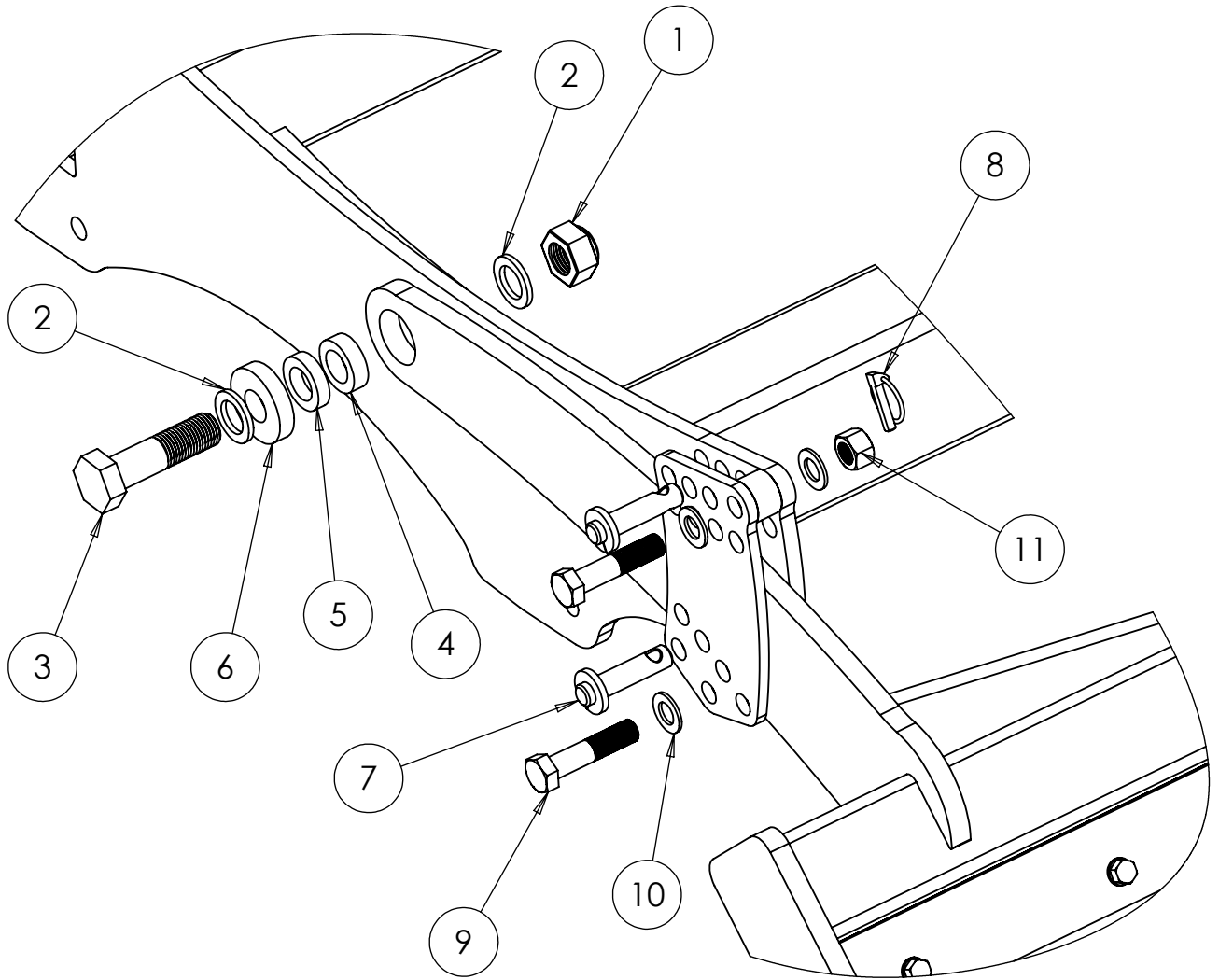
SCALE 1:5

REVISION:

DATE: 09/06/14

INITIAL: TW

6.4 Packer Depth Control



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SWM30004	M30 Nylock Nut	1
2	SWM30001	M30 Washer	2
3	SWM30110	M30 x 110 Bolt	1
4	SW723	12mm Small Spacer	1
5	SW722	10mm Small Spacer	1
6	SW129	15mm Large Washer	1
7	SW1367	Packer Depth Pin	2
8	SWB105	Lynch Pin	2
9	SWM2090	M20 x 90 Bolt	2
10	SWM20001	M20 Flat Washer	2
11	SWM20004	M20 Nylock Nut	2

DO NOT SCALE DRAWING

MACHINE/COMPONENT:

Sumo Mixidisc

TITLE:

Packer Depth Control



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

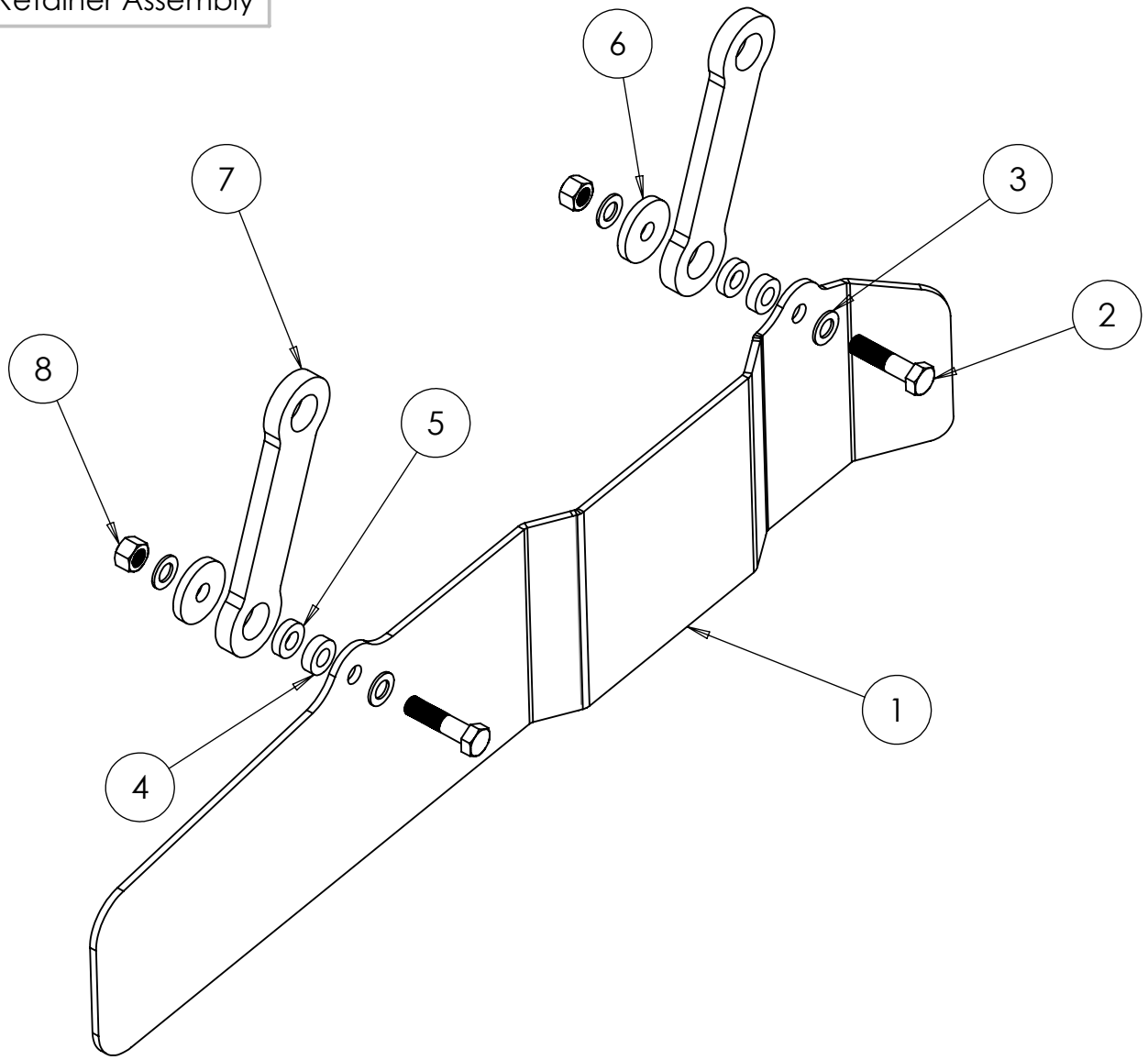
SCALE 1:5

REVISION:

DATE: 09/06/14

INITIAL: TW

6.5 Soil Retainer Assembly



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SW1984	R/H Soil Retainer	1
2	SWM2080	M20 x 80 Bolt	2
3	SWM20001	M20 Flat Washer	4
4	SW125	12mm Small Spacer	2
5	SW126	10mm Small Spacer	2
6	SW123	12mm Large Spacer	2
7	SW1049	Soil Retainer Hanger	2
8	SWM20004	M20 Nylock Nut	2
9	SW1983	L/H Soil Retainer (not shown)	1

DO NOT SCALE DRAWING

MACHINE/COMPONENT:

Mixidisc

TITLE:

Soil Retainer Assembly



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

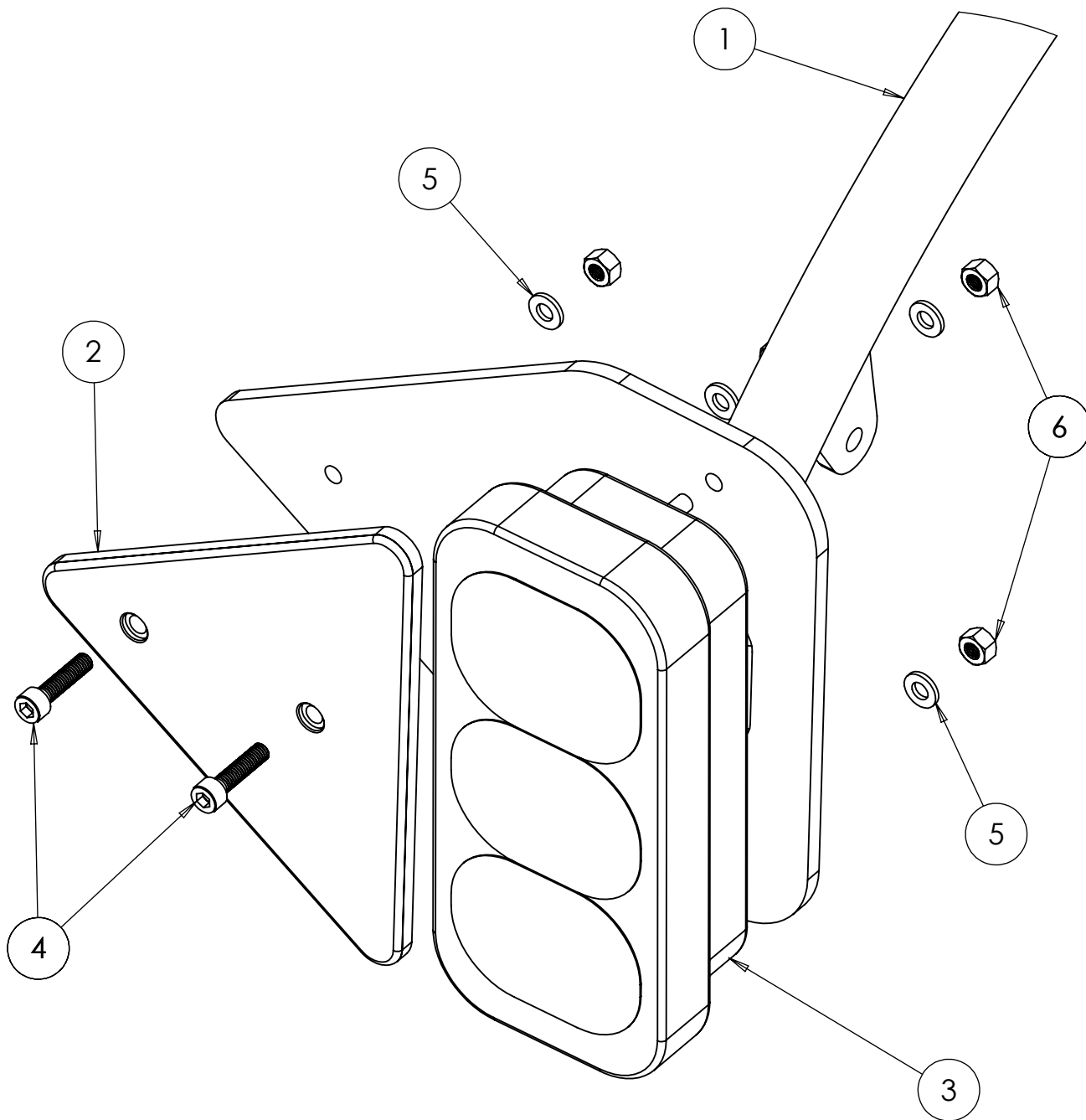
SCALE 1:7

REVISION:

DATE: 16/09/14

INITIAL: TW

6.6 Lights




ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SW1505	LH Mixidisc Light Bracket	1
	SW1506	RH Mixidisc Light Bracket (not shown)	1
2	SWB162	Warning Triangle	1
3	SWB174	Rear Light	4
4	SWM625AKH	M6 x 25 Allen Key Head Bolt	2
5	SWM6001	M6 Flat Washer	4
6	SWM6004	M6 Nylock Nut	4
7	SWB175	Light Wiring Loom (not shown)	1

DO NOT SCALE DRAWING

MACHINE/COMPONENT: **Sumo Mixidisc**

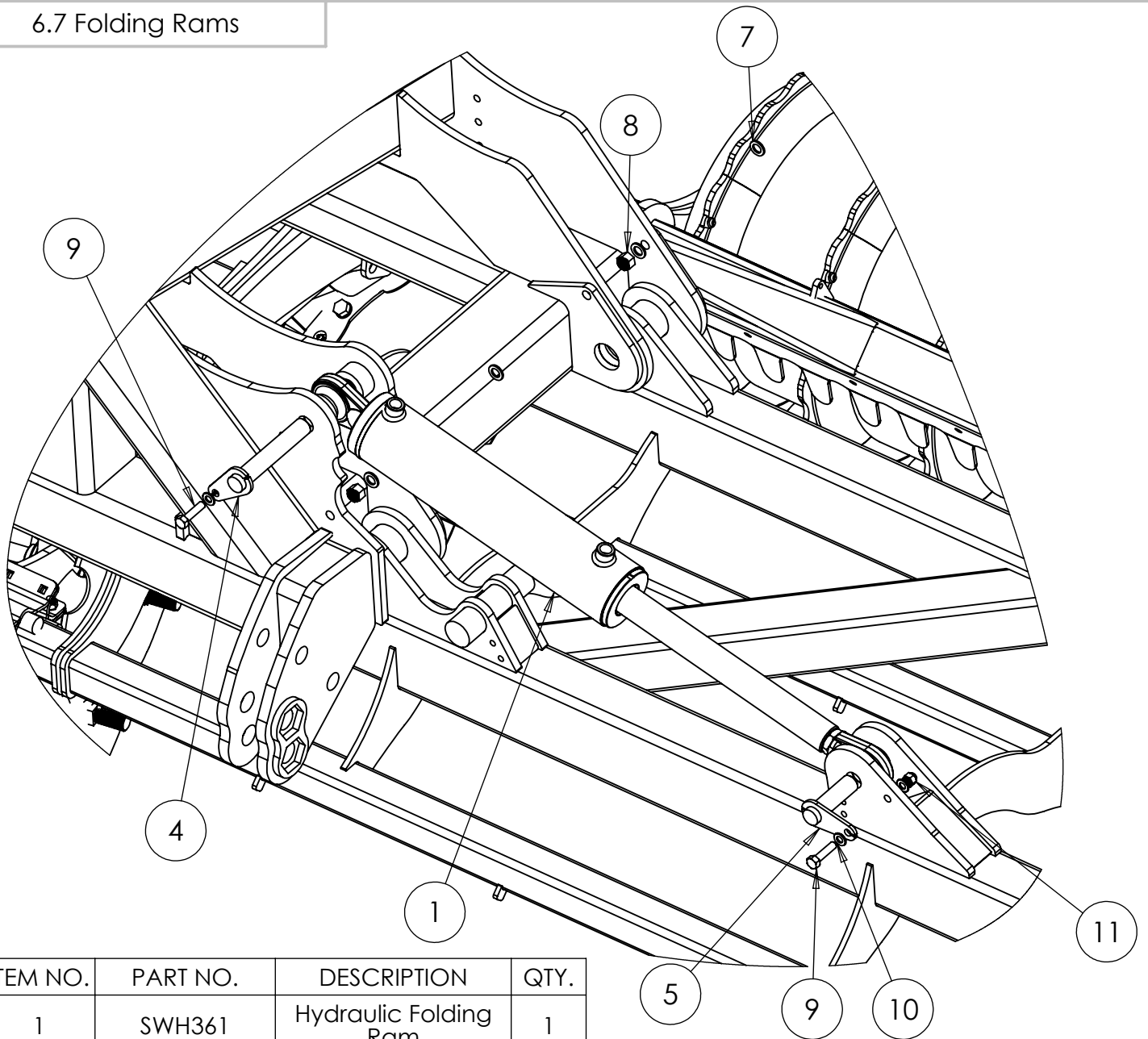
TITLE: **Light Bracket Assembly**



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

SCALE 1:10	REVISION:	DATE: 09/06/14	INITIAL: TW
------------	-----------	----------------	-------------

6.7 Folding Rams



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SWH361	Hydraulic Folding Ram	1
2	SWP50x190	50 x 190 Tabbed Pin (not shown)	1
3	SWP50x170	50 x 170 Tabbed Pin (not Shown)	1
4	SWP30x170	30 x 170 Tabbed Pin	1
5	SWP30x95	30 x 95 Tabbed Pin	1
6	SWM1670	M16 x 70 Bolt (not shown)	2
7	SWM16001	M16 Flat Washer	4
8	SWM16004	M16 Nylock Nut	2
9	SWM1250	M12 x 50 Bolt	2
10	SWM12001	M12 Flat Washer	4
11	SWM12004	M12 Nylock Nut	2
12	SWP30x170DB	30 x 170 Dog Bone Pin (not shown)	2
13	SW1998	Dog Bone (not shown)	2
14	SW1999	Dog Bone Holder (not shown)	1

DO NOT SCALE DRAWING

MACHINE/COMPONENT:

Sumo Mixidisc

TITLE:

Folding Rams



Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.

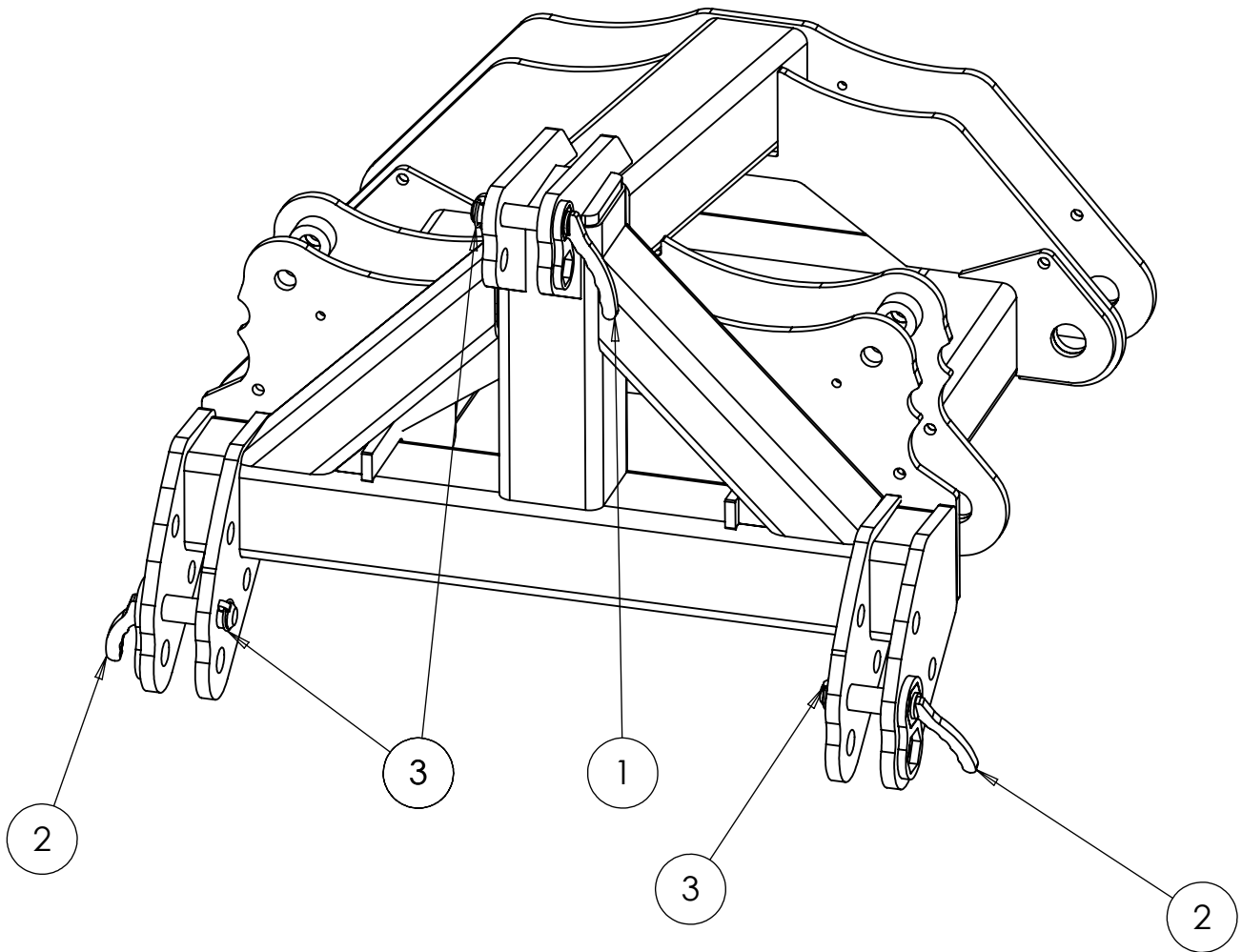
SCALE 1:5

REVISION:


DATE: 09/06/14

INITIAL: TW








6.8 Linkage Pins



ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	SW627	Cat III Top Link Pin	1
2	SW626	Cat III Bottom Link Pin	2
3	SWB105	Cat III Lynch Pin	3

DO NOT SCALE DRAWING	
MACHINE/COMPONENT:	Sumo Mixidisc
TITLE:	Linkage Pins
	
Drawings and design information found herein remain the sole property of Sumo UK Ltd. Reproductions may only be made with the permission of the owner.	
SCALE 1:10	REVISION:
DATE: 09/06/14	INITIAL: TW

6.9 Stickers and Paint

Sticker	Description	Quantity	Part No.
	Big Sumo horizontal sticker 450 x 125mm	2	SWB125
	Large Mixidisc sticker 320 x 125mm	4	SU095
	Small Mixidisc Sticker	4	SU096
	Big Union Jack sticker 150 x 100mm	2	SWB127
	Vertical Sumo sticker 80 x 295mm	2	SWB128
	Small Union Jack sticker	2	SWB129
	Small Sumo Horizontal Sticker	6	SWB130
Sumo touch up paint	Sumo Red	1/2 Litre	SWB131
	Sumo Black	1/2 Litre	SWB132