

**SWH 8 BALLAST ROLLER
SWR 10 BALLAST ROLLER**

**2.5 & 3.0M
WHEELED TYPE**

**INSTRUCTION MANUAL
WITH REPLACEMENT PARTS LISTING**

Publication No: 5293 01 06

IMPORTANT VERIFICATION OF WARRANTY REGISTRATION



DEALER WARRANTY INFORMATION & REGISTRATION VERIFICATION

It is imperative that the selling dealer registers this machine with Twose of Tiverton Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines go to the Twose web site at www.twose.com, log onto 'Dealer Inside' and select the 'Machine Registration button' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the Twose Office on 01884 253691.

Registration Verification

Dealer Name:
Dealer Address:
Customer Name:
Date of Warranty Registration:/...../..... Dealer Signature:

NOTE TO CUSTOMER / OWNER

Please ensure that the above section above has been completed and signed by the selling dealer to verify that your machine has been registered with Twose of Tiverton Limited.

IMPORTANT: During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – *refer to torque settings chart below*. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machines general maintenance procedure.

TORQUE SETTINGS FOR HYDRAULIC FITTINGS

HYDRAULIC HOSE ENDS		
BSP	Setting	Metric
1/4"	18 Nm	19 mm
3/8"	31 Nm	22 mm
1/2"	49 Nm	27 mm
5/8"	60 Nm	30 mm
3/4"	80 Nm	32 mm
1"	125 Nm	41 mm
1.1/4"	190 Nm	50 mm
1.1/2"	250 Nm	55 mm
2"	420 Nm	70 mm

PORT ADAPTORS WITH BONDED SEALS		
BSP	Setting	Metric
1/4"	34 Nm	19 mm
3/8"	47 Nm	22 mm
1/2"	102 Nm	27 mm
5/8"	122 Nm	30 mm
3/4"	149 Nm	32 mm
1"	203 Nm	41 mm
1.1/4"	305 Nm	50 mm
1.1/2"	305 Nm	55 mm
2"	400 Nm	70 mm

WARRANTY POLICY

WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with Twose of Tiverton Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

1. LIMITED WARRANTIES

- 1.01. *All machines supplied by Twose of Tiverton Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.*
- 1.02. *All spare parts supplied by Twose of Tiverton Ltd and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.*
- 1.03. *The warranty offered by Twose of Tiverton Ltd is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.*
- 1.04. *This warranty does not extend to any product from which Twose of Tiverton Ltd's serial number plate has been removed or altered.*
- 1.05. *This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.*
- 1.06. *Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.*
- 1.07. *Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.*
- 1.08. *Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which Twose of Tiverton Ltd cannot be held liable, and may have safety implications.*
- 1.09. *If in exceptional circumstances a non Twose of Tiverton Ltd part is used to effect a repair, warranty reimbursement will be at no more than Twose of Tiverton Ltd's standard dealer cost for the genuine part.*
- 1.10. *Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of Twose of Tiverton Ltd.*
- 1.11. *For machine warranty periods in excess of 12 months the following additional exclusions shall apply:*
 - 1.11.1. *Hoses, exposed pipes and hydraulic tank breathers.*
 - 1.11.2. *Filters.*
 - 1.11.3. *Rubber mountings.*
 - 1.11.4. *External electric wiring.*
 - 1.11.5. *Bearings and seals.*

- 1.12. All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.
- 1.13. Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.

NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. Twose of Tiverton Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.

2. REMEDIES AND PROCEDURES

- 2.01. The warranty is not effective unless the Selling Dealer registers the machine, via the Twose of Tiverton Ltd web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.
- 2.02. Any fault must be reported to an authorised Twose of Tiverton Ltd dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which Twose of Tiverton Ltd cannot be held liable.
- 2.03. Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by Twose of Tiverton Ltd. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.
- 2.04. All claims must be submitted, by an authorised Twose of Tiverton Ltd Service Dealer, within 30 days of the date of repair.
- 2.05. Following examination of the claim and parts, Twose of Tiverton Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by Twose of Tiverton Ltd and appropriate labour and mileage allowances if applicable.
- 2.06. The submission of a claim is not a guarantee of payment.
- 2.07. Any decision reached by Twose of Tiverton Ltd is final.

3. LIMITATION OF LIABILITY

- 3.01. Twose of Tiverton Ltd disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.
- 3.02. Twose of Tiverton Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.
- 3.03. Except as provided herein, Twose of Tiverton Ltd shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.
- 3.04. No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.

4. MISCELLANEOUS

- 4.01. Twose of Tiverton Ltd may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.
- 4.02. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.
- 4.03. Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.



DECLARATION OF CONFORMITY

Conforming to EU Machinery Directive 2006/42/EC

We,

TWOSE of TIVERTON LIMITED,
6 Chinon Court, Lower Moor Way,
Tiverton Business Park, Tiverton, Devon, EX16 6SS, UK

Hereby declare that:

The Product; *Tractor Trailed Roller(s)*

Product Code; *TWBR*

Serial No. & Date Type

Manufactured in; *United Kingdom*

Complies with the required provisions of the Machinery Directive 2006/42/EC
The machinery directive is supported by the following harmonized standards;

- BS EN ISO 12100 (2010) Safety of machinery – General principles for design – Risk assessment and risk reduction.
- BS EN 349 (1993) + A1 (2008) Safety of machinery - Minimum distances to avoid the entrapment with human body parts.
- BS EN 953 (1997) + A1 (2009) Safety of machinery - Guards general requirements for the design and construction of fixed and movable guards.
- BS EN 4413 (2010) Hydraulic fluid power. Safety requirements for systems and their components.

Signed *Responsible Person*
CHRISTIAN DAVIES on behalf of TWOSE OF TIVERTON LIMITED

Status: *General Manager*

Date: *September 2015*

**THIS MANUAL IS TO BE HANDED TO THE CUSTOMER BEFORE
THE MACHINE IS TO BE USED FOR THE FIRST TIME**



**TWOSE OF TIVERTON LIMITED
6 CHINON COURT
LOWER MOOR WAY
TIVERTON BUSINESS PARK
TIVERTON
DEVON
EX16 6SS**

**TEL: (01884) 253691
FAX: (01884) 255189
Email: sales@twose.com**

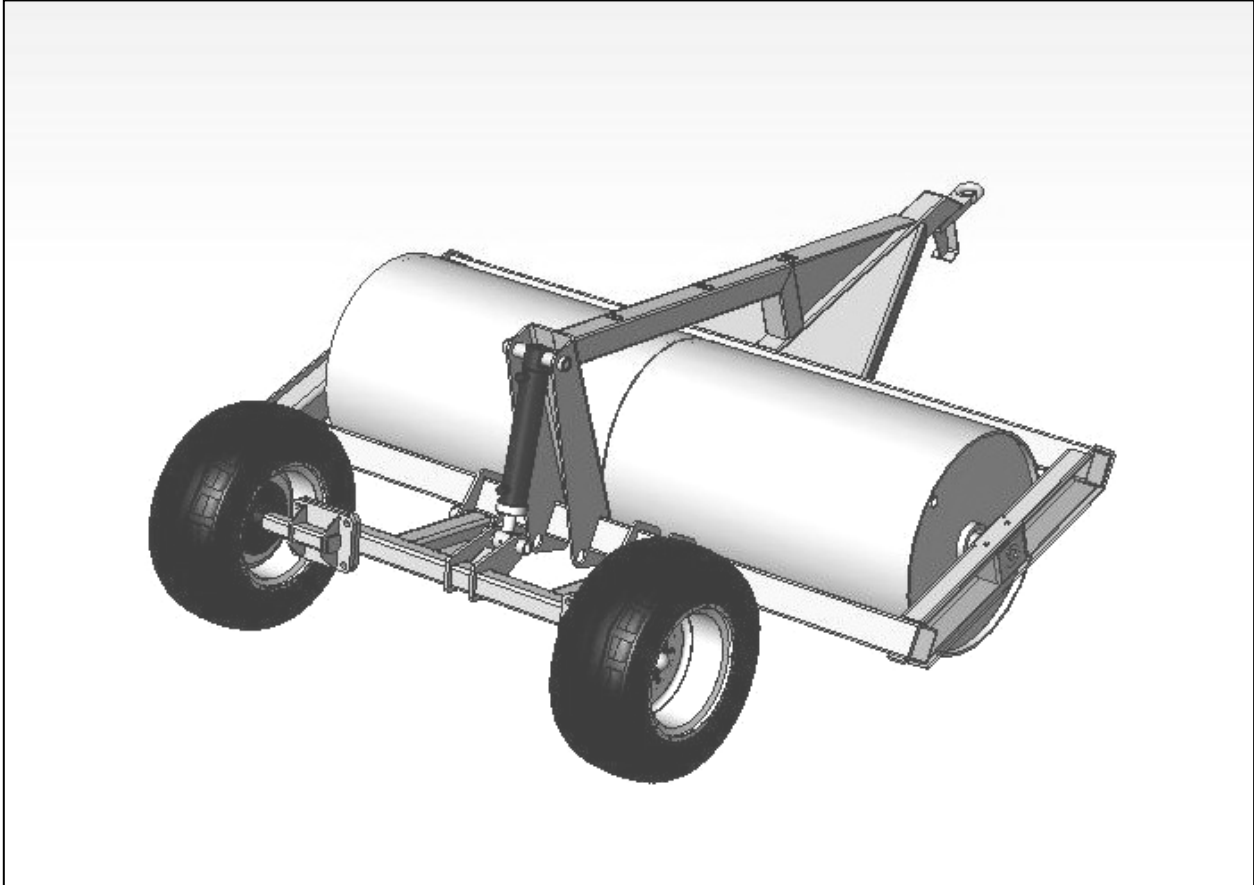
All dimensions and capacities mentioned in this book are approximate. In pursuance of the Companies policy of constant development, the right is reserved to depart, without notice, from any detail illustrated or specified in this book, without incurring the obligation to provide such modifications on machines previously delivered.

No responsibility will be accepted by Twose of Tiverton Limited for any injury, damage or loss arising from the improper use or lack of maintenance of any machinery supplied by them or from any failure of the user to comply with all instructions published by Tractor or Loader manufacturers, particularly with regard to maximum load capacities, tyre pressures and stability, or with instructions and regulations pertaining to Tractor Cabs.

INDEX

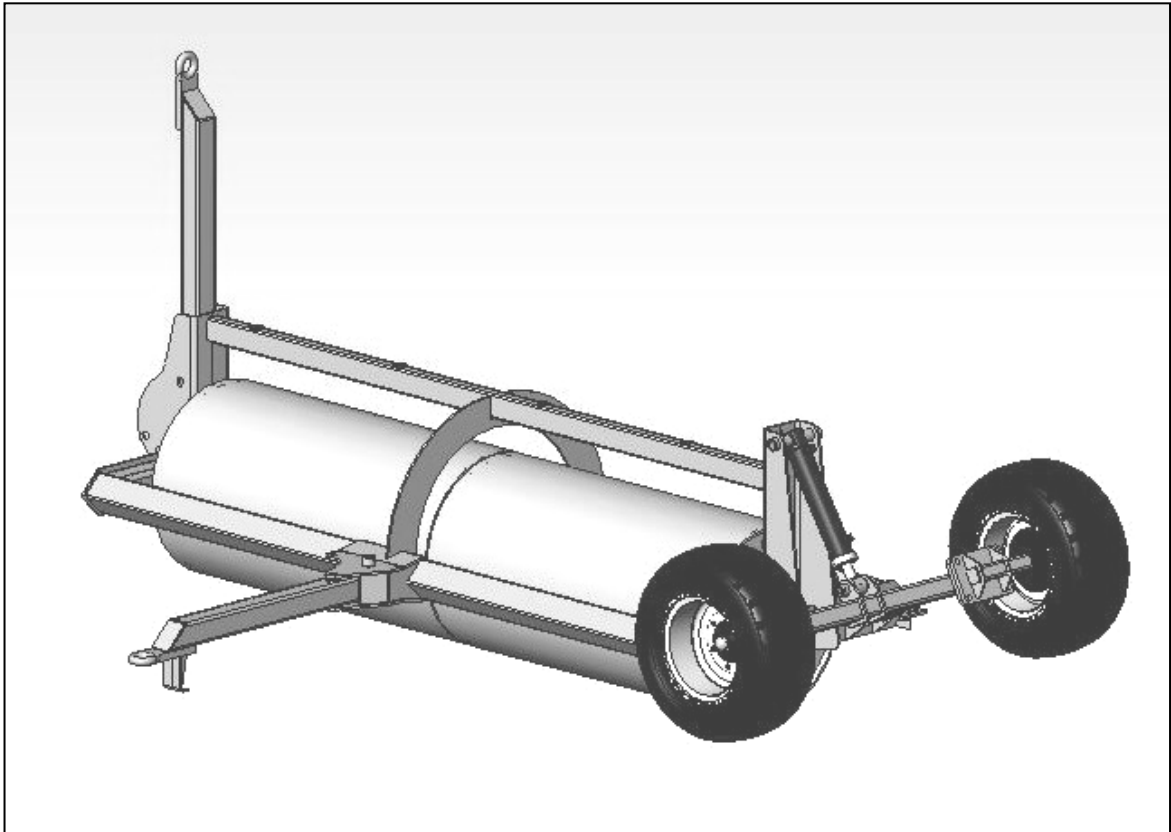
INDEX	3
GENERAL ARRANGEMENT	4
SPECIFICATION	6
GENERAL INFORMATION	7
SAFETY NOTES AND WARNINGS	8
HEALTH AND SAFETY	9
" " "	10
GENERAL INSTRUCTIONS	11
OPERATING INSTRUCTIONS	12
SAFETY WHEN ROLLING	13
ROUTINE MAINTENANCE AND LAYING-UP	14
" " " " "	15
NOTES	16
PARTS LIST - WARRANTY AND SPARE PARTS	17
MAINFRAME	18
" "	19
" "	20
" "	21
DRUM ASSEMBLY	22
" "	23
AXLE ASSEMBLY	24
" "	25
" "	26
" "	27
RAM ASSEMBLY	28
" "	29
TRANSFERS	30
" "	31

GENERAL ARRANGEMENT

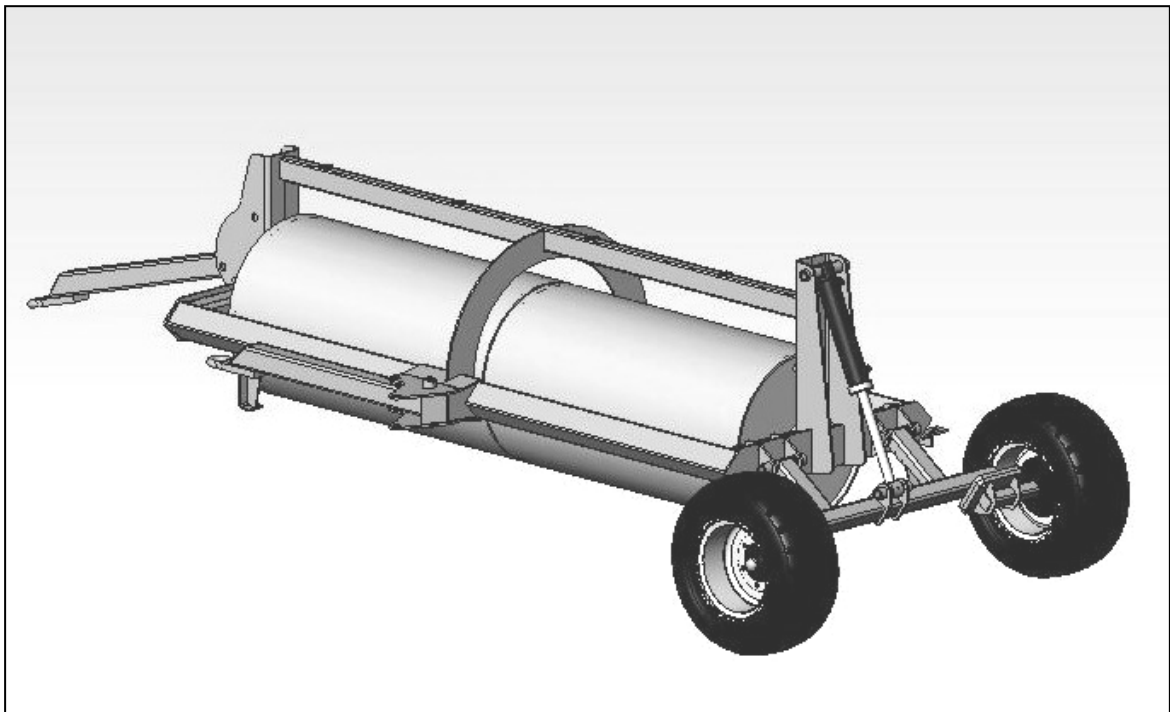


SWH 8 BALLAST ROLLER IN WORKING POSITION

GENERAL ARRANGEMENT



SWR 10 BALLAST ROLLER IN WORKING POSITION



SWR 10 BALLAST ROLLER IN TRANSPORT POSITION

SPECIFICATION

	SWH 8	SWR 10
Rolling Width	2.5M	3.0M
Drum Diameter	0.76M	0.76M
Number of Drums	2	2
Drum Capacity (Per Drum)	567 Litres	675 Litres
Machine Length		
Operating	3.5M	2.981M
Transport	3.5M	5.550M
Machine Width		
Operating	2.87M	4.42M
Transport	2.87M	2.03M
Machine Weight		
Without Ballast	1010 Kg	1470 Kg
With Ballast	2144 Kg	2820 Kg
Tyre Size	10/75 x 15.5	10/75 x 15.5
Tyre Pressure	60 PSI	60 PSI

TRACTOR REQUIREMENTS

Power	60hp (min)
Hydraulic Supply	Double Acting Spool Valve

ABOUT THIS MACHINE

The SWH 8 AND SWR 10 are ballast type rollers designed for agricultural use and feature two steel drums in a fabricated steel frame. The drums rotate on a steel shaft mounted in replaceable bearing blocks.

A replaceable scraper bar helps prevent a build-up of dirt on the rollers.

An axle frame and wheels with pneumatic tyres are provided for road transport.

The SWR 10 is designed for 'end on' transport and a separate drawbar is provided for this purpose. The SWH 8 is transported normally. The axle and wheels are raised and lowered hydraulically by a double acting ram. Hydraulic power is provided from the tractors double acting spool valve.

The hydraulic hoses are provided with quick release couplings complete with dust covers.

It is intended to be attached to a Agricultural vehicle by means of the "Drawbar-hitch" couple-up system.

The purpose for its production and its sole intention is to roll suitable pieces of land.

AT NO TIME must this machine be used for anything other than, or to do any job - other than that for which it has been designed (see note above).

GENERAL INFORMATION

NOTE:- This handbook has been designed to help the operator and service/mechanic to use and understand the machine fully, safely and efficiently

NOTE:- The handbook/manual will be supplied in a waterproof plastic outer cover to prevent damage from rain, condensation etc. The cover of the handbook will include its own part number, which includes information as to machine type and issue date of manual in question.

DANGER
NOTE:- It is very important that the handbook/manual has been read thoroughly - throughout, and is completely understood before attempting to attach or use machine in any way.

CAUTION: When ordering spares, please state clearly:-

- (a) Machine type and model No.
- (b) Part No. of component.
- (c) Description of component.
- (d) Quantity required.
- (e) Full address to which spares are to be sent.
- (f) Method of delivery required.

CAUTION:- Always insist on genuine and correct spare parts.

NOTE:- Further copies of this handbook/manual can be obtained from:-

TWOSE OF TIVERTON LIMITED
6 Chinon court
Lower Moor Way
Tiverton Business Park
Tiverton
DEVON
EX16 4JT

TEL: 01884 253691
FAX: 01884 255189
Email: sales@twose.com

SAFETY NOTES AND WARNINGS

Throughout the handbook the following sub headings are used to draw attention to various points of importance.



**DANGER
WARNING**

This is to draw attention to very important instructions which MUST be followed precisely to avoid injury or death.

CAUTION

This is used to draw attention to instructions which MUST be followed to avoid damage to operator, machine, process or the environment.

NOTE:-

This is used to highlight points used for supplementary information.

HEALTH AND SAFETY



**DANGER
WARNING**

Never attempt to assemble, couple up, or operate machinery until you understand fully the functions, controls and safety precautions required, as shown in the operators manual.



**DANGER
WARNING**

Always follow tractor safety operations and instructions VERY carefully.
NEVER TAKE RISKS

CAUTION.

Be aware of warning and instruction decals on machine as care must be taken and instructions obeyed.



**DANGER
WARNING**

Never drive machinery at speeds that could cause danger to other persons or properties, or in a manner that may cause accidents.



**DANGER
WARNING**

Never attempt to Service/adjust or work on any machinery in an unsupported state.

Always ensure that machinery is safely supported and propped in position.



**DANGER
WARNING**

Always ensure that the implement is 'chocked' firmly and it will not move, before attempting to 'service' or 'work on' in any way or form.

CAUTION

Always "SWITCH-OFF" tractor engine before attempting to carry out adjustment or service repairs and inspections, on machinery.



**DANGER
WARNING**

Always be aware of your surroundings - and operate machinery accordingly. Beware of confined-tight areas, low height restrictions, buildings and overhangs etc. Also drive and operate bearing in mind weather conditions such as sun, rain, ice, snow, wind etc. [Make allowances in all situations].

CAUTION

Never carry "passengers" on machinery or on tractor.
Ensure bystanders/onlookers are kept well away from operational area of apparatus.

CAUTION

'PARKING UP' MACHINE

When machine is being removed from tractor linkage and being 'parked up' it is essential that a good firm base and level site be found.

Always chock and prop machine to ensure a good firm position to leave parked. Ensure that stand legs of machine are correctly locked into position.

CAUTION

Never allow children to play on, or around, parked machinery.

CAUTION

Never wear loose fitting or ragged clothing which could get caught in machinery or controls.

CAUTION

Always dispose of discarded or worn out parts thoughtfully - by disposing of them in an approved and specified legal scrap site, bin or skip.

GENERAL INSTRUCTIONS



DANGER WARNING

1. Before attaching any machine to a tractor make sure that implement is still standing firmly on good solid - level site as it will be, providing unit was previously parked correctly.
-Check that any wheels are 'chocked' correctly and that supports/props are in position where necessary to prevent booms etc. dropping.

2. Before and during the manoeuvring of the tractor or vehicle in order to attach machinery/implements, - make sure that No other persons are in the vicinity.
Keep other persons well clear and make known your intentions, all the while keeping a sharp lookout whilst reversing and aligning machines for coupling up.

3. Always secure tractor into selected position by ensuring that brakes are applied correctly in order to prevent vehicle moving off on its own to cause injury and damage.

4. Check that the hitch on the tractor is in good condition and that the hitch pin used is of the correct size and type to suit the drawbar of the roller, and is properly secured when fitted.

5. Never attempt to work on, adjust or service repair machinery of any kind whilst it is still running or working. Always stop the machine and **STOP THE TRACTOR ENGINE** - before any service/repairs begin.
(**SWITCH OFF TRACTOR ENGINE BEFORE LEAVING TRACTOR SEAT**)

6. In transit always use transport stays or locking devices where provided.
If, as in the case of some longer machines, the unit is transported lengthways - make sure that the front of the tractor is suitably ballasted to maintain stability.
A method of achieving this would be to add suitable weights to a correctly specified and fitted front weight frame.

7. Always use machines in a sensible and reasonable manner and do not attempt to use them in work for which they are not intended. Avoid overloading and abusing them as this can cause damage to machine and tractor and can be very dangerous.

8. When detaching a machine from a tractor ensure that any stands or legs are securely positioned and that the machine is parked where it will not be a safety hazard or cause annoyance to others.
Make sure that chosen 'parking site' is a firm and level site.

9. Carry out regular periodic maintenance. - Always with safety in mind.

OPERATING INSTRUCTIONS

SWH 8 Machines

To Change The Roller From Transport To In Work Position

1. Set the tap on the ram to the 'open' position
2. Raise the axle by retracting the hydraulic ram fully
- 3, Close the tap on the ram

To Change The Roller From In Work To Transport Position

- 1 Open valve on ram and extend the ram fully to lower the axle and wheels and lift the roller.
- 2 Close the valve on the ram to lock the wheels in the lowered position.

SWR10 Machines

To Change The Roller From Transport To In Work Position

3. Set the tap on the ram to the 'open' position
4. Raise the axle by retracting the hydraulic ram fully
- 3, Close the tap on the ram
4. Disconnect hoses from tractor spool valve and fit dust covers,
5. Position and secure hoses to prevent damage.
6. Disconnect tractor, raise and stow transport drawbar.
7. Remove locking pin, unfold work drawbar to working position and refit pin.
8. Reattach tractor to work drawbar.

To Change The Roller From In Work To Transport Position

- 2 Disconnect from tractor and stow work drawbar.
- 3 Remove pin, lower transport drawbar and refit pin
- 4 Reposition tractor and connect transport drawbar
- 5 Remove protective caps from quick release couplings and connect hoses to tractor spool Valve
- 6 Open valve on ram and extend the ram fully to lower the axle and wheels and lift the roller.
- 6 Close the valve on the ram to lock the wheels in the lowered position.

SAFETY WHEN ROLLING



**DANGER
WARNING**

Before starting work with any roller ensure that the bearings are properly greased and that all bolts and nuts are tight.



**DANGER
WARNING**

Remember that a heavy roller will add to your momentum and will require a longer distance for stopping. Particular care will be needed on hilly or sidling ground.



**DANGER
WARNING**

Avoid turning so acutely that the tractors rear wheels foul the rollers drawbar.



**DANGER
WARNING**

Do not attempt to use rollers when the ground conditions are unsuitable ie:-

When ground is excessively wet or greasy.

When ground is frozen or thawing after a frost.



**DANGER
WARNING**

Do not attempt to use the rollers on very steep or sidling ground.

ROUTINE MAINTENANCE AND LAYING-UP

DAILY



**DANGER
WARNING**

Check end float and adjust if necessary.

WEEKLY



**DANGER
WARNING**

Grease pivot points thoroughly.



**DANGER
WARNING**

Check all bolts and nuts for tightness.

ANNUALLY AND LAYING-UP



**DANGER
WARNING**

Periodically (once a year should suffice) check the bearings or bushes, spacer and axle for wear; dismantling if necessary. Replace any parts that are appreciably worn.



**DANGER
WARNING**

Lubricate and use anti-corrosion measures when storing the roller



**DANGER
WARNING**

For Ballast Rollers some form of frost protection is strongly advised: be it draining the drum for winter, filling drums entirely with waste oil or the use of anti-freeze.(See below)

DRUM CAPACITIES:-

Capacity of each 760mm (30") Diameter drum:-

SWH 8	2.5M (8') Roller (2 Drums)	567 litres, (125 Gallons) per drum
SWR 10	3.0M (10') Roller (2 Drums)	675 litres, (148 Gallons) per drum

NOTES

PARTS LIST

Always order Twose genuine spares for your machine. They are correctly designed to give the best operational results.

When ordering spare parts, please specify:-

Type and Serial Number of machine
Part number, description and quantity of spares required.

Always make sure that you have ordered a sufficient quantity to complete the job.

Always make sure that you have ordered the correct parts. In some instances (eg Hydraulic Rams) parts or assemblies are, in the course of time, modified due to introduction of new materials, or improved design.

Always state by what means you wish the goods to be sent. In the absence of specific instructions consignments will be sent by post or carrier.

Always State the number of our Invoice or Sales Slip, and the reason for return should it become necessary to return any items for exchange or credit.

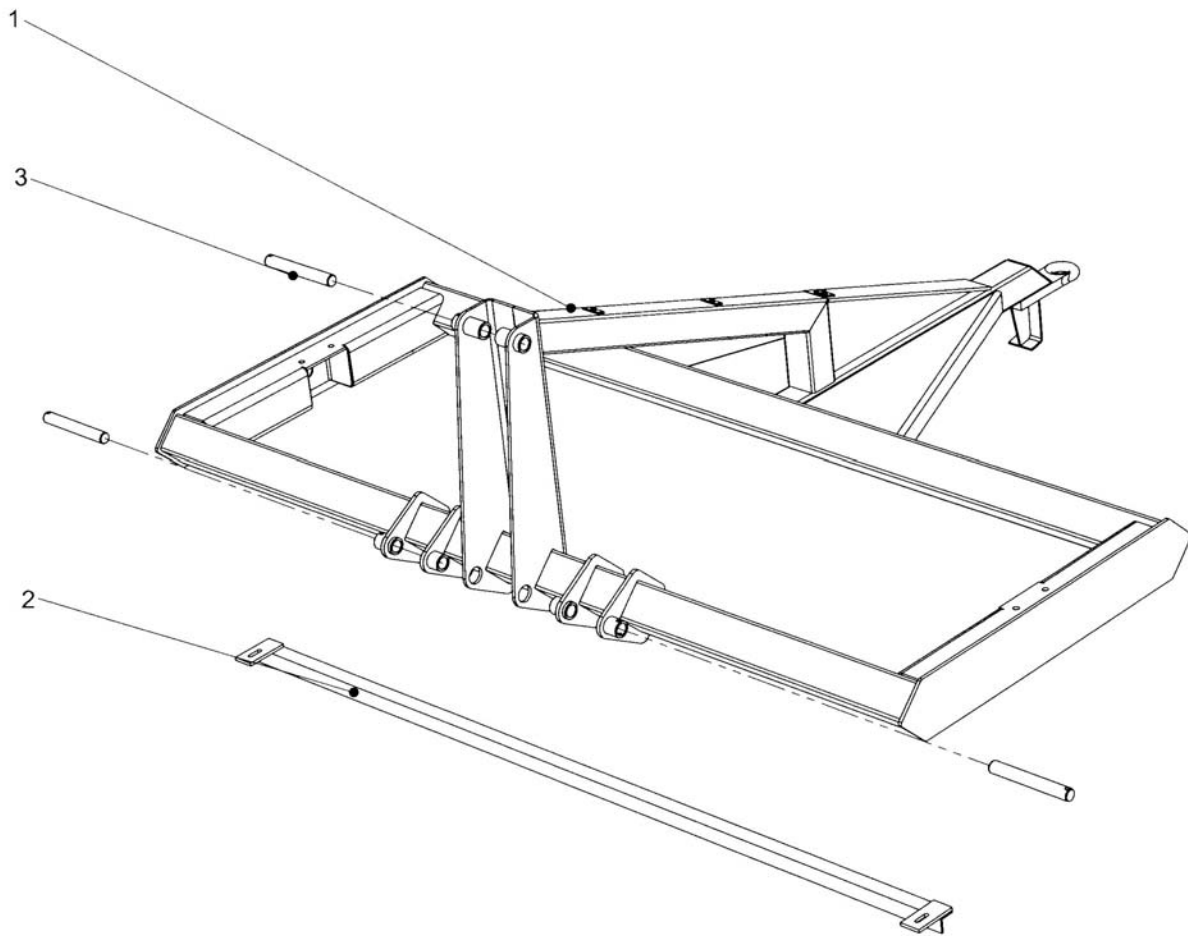
WARRANTY AND SPARE PARTS

all enquiries regarding these machines and orders for spare parts must be addressed to:-

TWOSE OF TIVERTON LIMITED
6 CHINON COURT
LOWER MOOR WAY
TIVERTON BUSINESS PARK
TIVERTON
DEVON
EX16 6SS

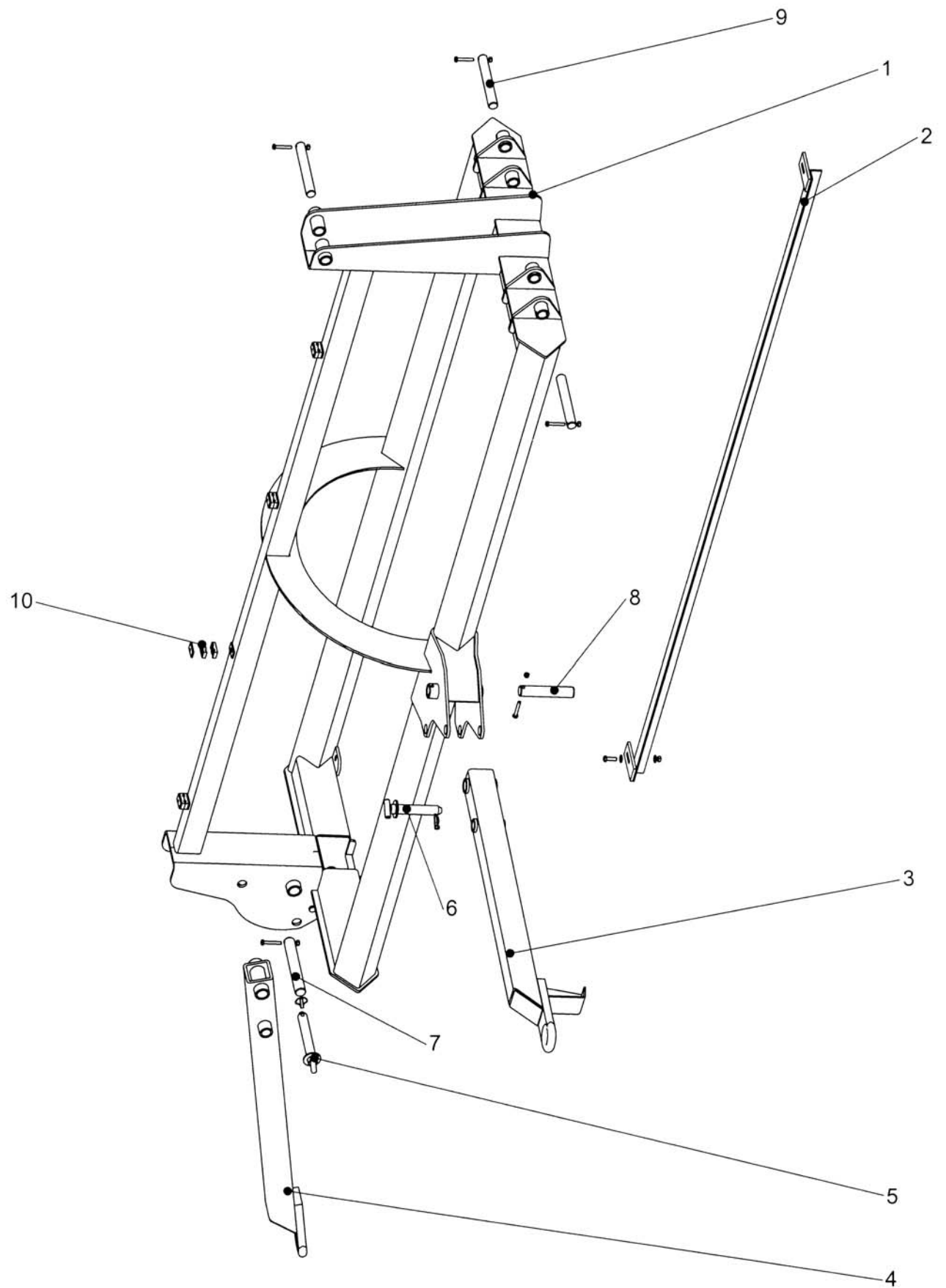
TELEPHONE (01884) 253691
FAX (01884) 255189
Email : sales@twose.com

SWH 8

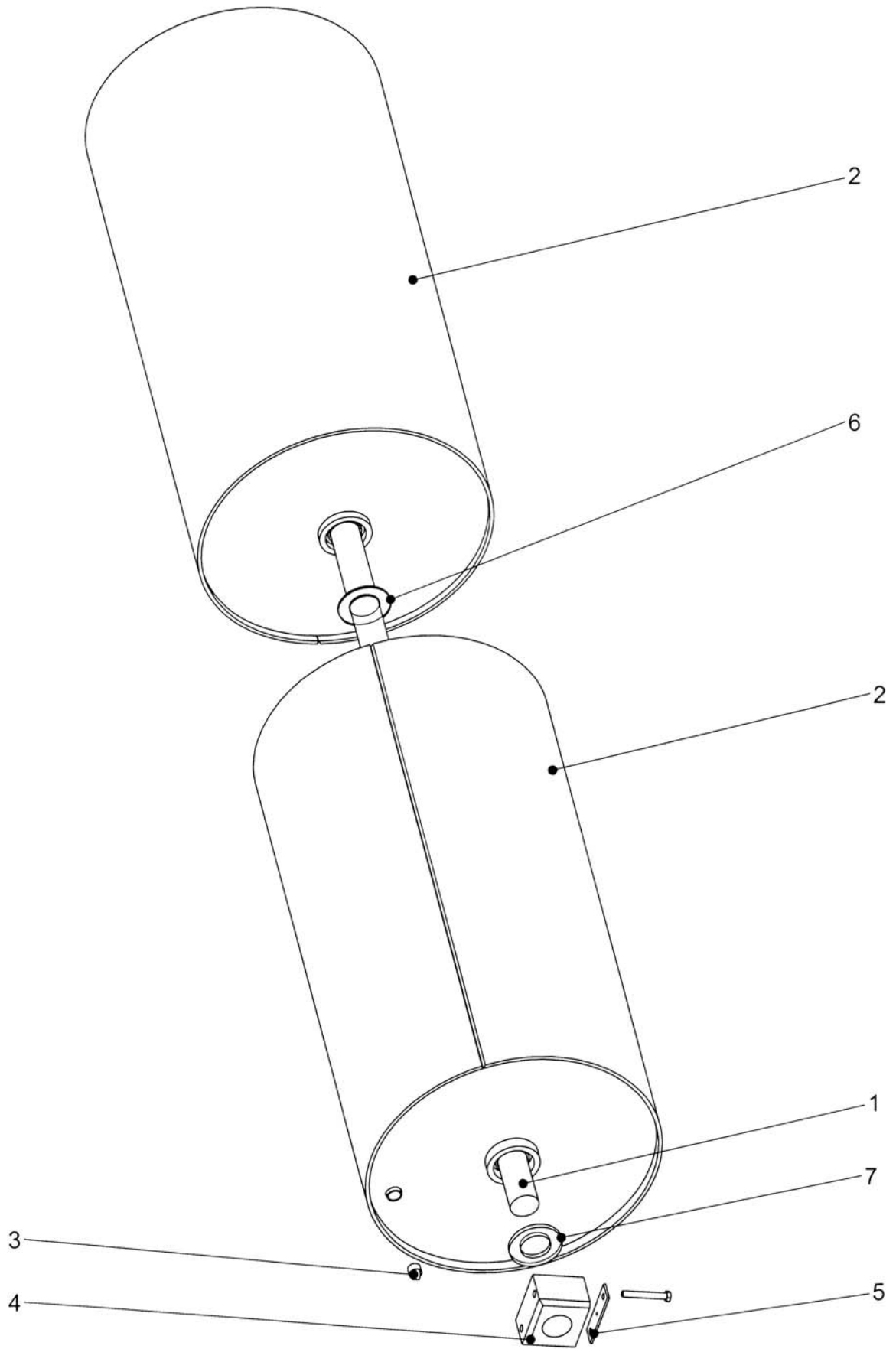


209.220		MAINFRAME MODULE - SWH 8	
1	209.070	MAINFRAME	1
1	45429.01	SERIAL NUMBER PLATE	1
1	05.227.01	HAMMER DRIVE SCREW	4
2	209.073	SCRAPER BAR	1
2	05.291.23	BOLT	2
2	05.287.03	SELF LOCKING NUT	2
2	05.281.03	FLAT WASHER	4
3	209.050	PIN	3
3	05.291.18	BOLT	3
3	05.287.02	SELF LOCKING NUT	3

SWR 10

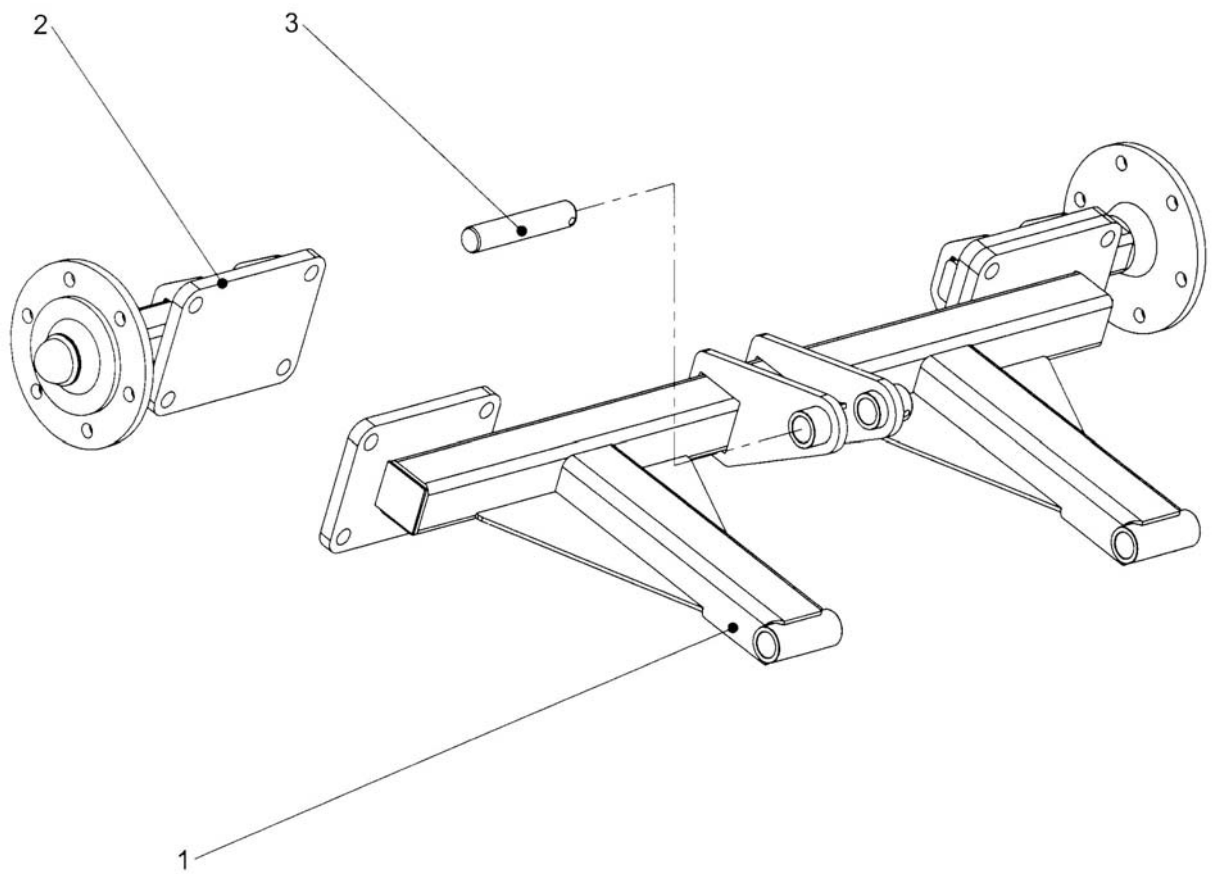


209.210		MAINFRAME MODULE - SWR 10	
1	209.031	MAINFRAME	1
1	45429.01	SERIAL NUMBER PLATE	1
1	05.227.01	HAMMER DRIVE SCREW	4
2	209.047	SCRAPER BLADE	1
2	05.281.05	FLAT WASHER	4
2	05.287.03	SELF LOCKING NUT	2
2	05.291.23	BOLT	2
3	209.041	MAIN DRAWBAR	1
4	209.046	DRAWBAR – TRANSPORT	1
5	209.051	PIN	1
5	00.372.01	LINCH PIN	1
6	209.052	PIN	1
6	00.372.01	LINCH PIN	1
7	209.048	PIN	1
7	05.287.02	SELF LOCKING NUT	1
7	05.291.19	BOLT	1
8	209.049	PIN	1
8	05.287.02	SELF LOCKING NUT	1
8	05.291.19	BOLT	1
9	209.050	PIN	3
9	05.287.02	SELF LOCKING NUT	3
9	05.291.19	BOLT	3
10	05.291.01	BOLT – HOSE CLAMPS	2
10	5351.1	TOP PLATE – HOSE CLAMPS	4
10	5351.2	CLAMP JAW	8



209.223		DRUM ASSEMBLY MODULE – SWH 8	
1	209.074	AXLE	1
2	209.071	DRUM	2
3	T1698	PLUG (HOLLOW)	2
4	088.001	BLOCK WOODEN – MACHINED	2
5	209.062	CLAMP PLATE	2
5	05.292.39	BOLT	4
5	05.287.04	SELF-LOCKING NUT	4
5	T7824	GREASE NIPPLE	2
6	088.023B	SPACER	1
7	088.023C	SPACER	4
209.214		DRUM ASSEMBLY MODULE - SWR 10	
1	209.040	AXLE	1
2	209.043	DRUM	2
3	T1698	PLUG 1 BSPT BLK HOLLOW	2
4	088.001	BLOCK WOODEN – MACHINED	2
5	209.062	CLAMP PLATE	2
5	05.292.39	BOLT	4
5	05.287.04	SELF-LOCKING NUT	4
5	T7824	GREASE NIPPLE	2
6	088.023B	SPACER	1
7	088.023C	SPACER	4

SWH 8



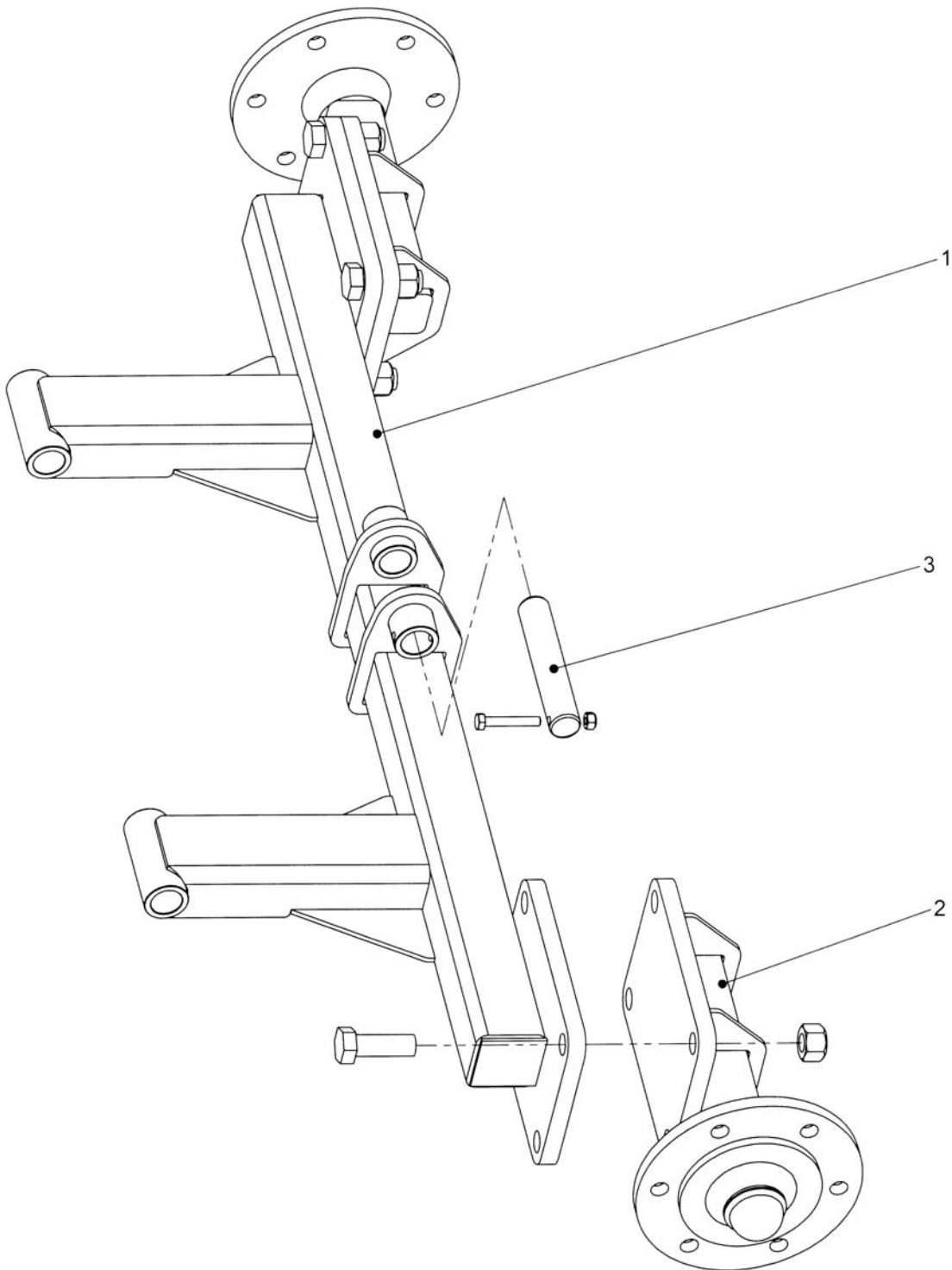
209.212 AXLE ASSEMBLY MODULE – SWH 8

1	209.072	AXLE PIVOT FRAME	1
2	207.058	STUB AXLE ASSY	2
2	05.285.01	BOLT	8
2	05.287.06	NUT SELF LOCKING	8
3	209.053	PIN	1
3	05.287.02	NUT SELF LOCKING	1
3	05.291.18	BOLT	1

207.228 WHEEL AND TYRE MODULE

10	T5718	WHEEL AND TYRE	2
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SWR 10

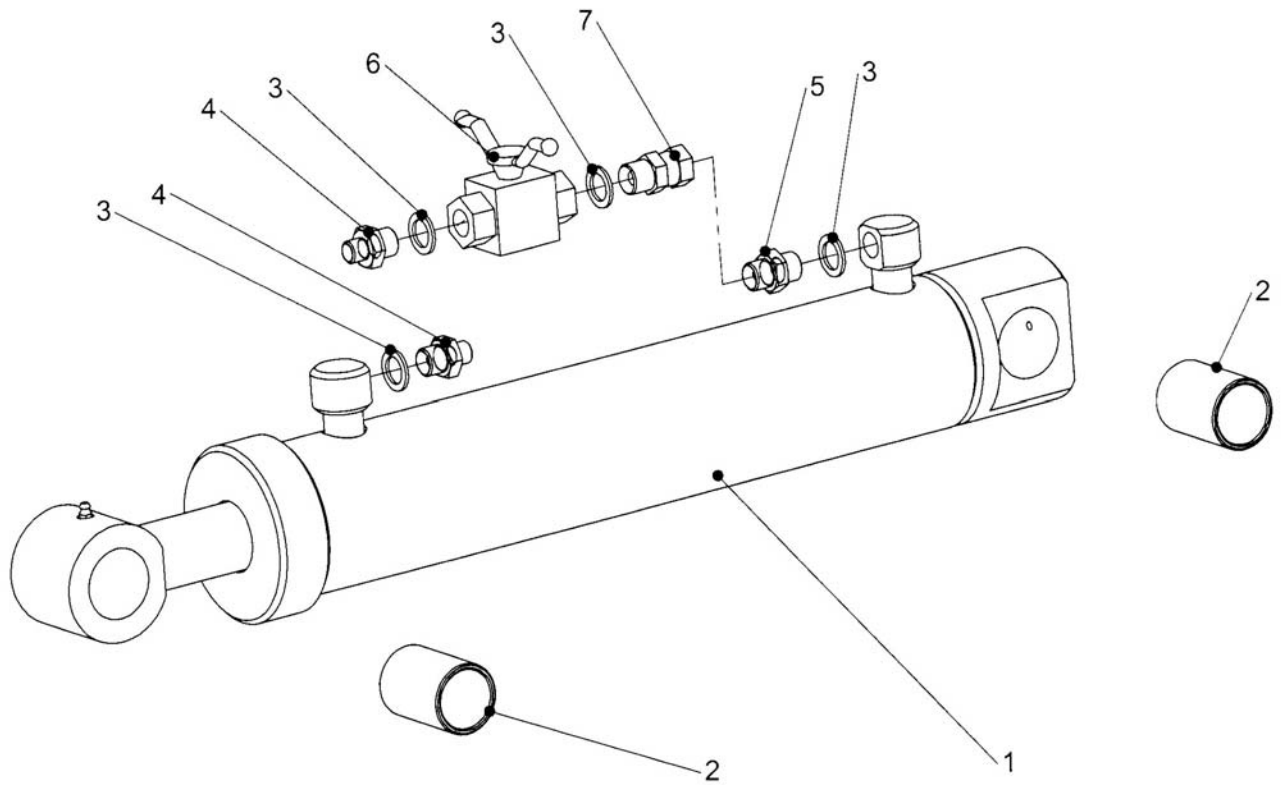


209.212 AXLE ASSEMBLY MODULE – SWR 10

1	209.042	AXLE PIVOT FRAME	1
2	207.058	STUB AXLE ASSY	2
2	05.285.01	BOLT	8
2	05.287.06	NUT SELF LOCKING	8
3	209.053	PIN	1
3	05.287.02	NUT SELF LOCKING	1
3	05.291.18	BOLT	1

207.229 WHEEL AND TYRE MODULE

10	T5718	WHEEL AND TYRE	2
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SEAL KIT 46673.25

209.211 RAM ASSEMBLY MODULE - SWH 8 & SWR 10

1	46673.01	RAM ASSEMBLY	1
1	05.953.01	GREASE NIPPLE	2
2	08.297.08	PLASTIC BUSH	2
3	03.290.04	BONDED SEAL	4
4	01.099.01	ADAPTOR	2
5	05.124.01	ADAPTOR	1
6	08.200.01	VALVE – ISOLATING	1
7	02.714.01	ADAPTOR BSP SWIVEL	1
	46673.25	SEAL KIT	

209.222 HYDRAULIC INSTALLATION MODULE – SWH 8

11	01.099.03	ADAPTOR	2
12	05.290.05	BONDED SEAL	2
13	T5386	DUST CAP	2
14	T5485	COUPLING – QUICK RELEASE MALE	2
15	5351.2	CLAMP JAW	6
15	5351.1	TOP PLATE	3
15	05.291.01	BOLT	3

209.213 HYDRAULIC INSTALLATION MODULE - SWR 10

16	01.099.03	ADAPTOR	2
17	05.290.05	BONDED SEAL	2
18	T5386	DUST CAP	2
19	T5485	COUPLING – QUICK RELEASE MALE	2

209.224 HYDRAULIC HOSE MODULE – SWH 8

21	10.001.49	HOSE ¼" BSP ST X ST 3900 LG	2
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209.215 HYDRAULIC HOSE MODULE - SWR 10

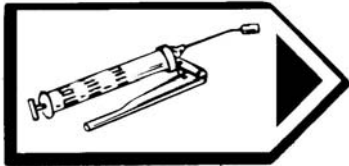
21	10.001.80	HOSE ¼" BSP ST X ST 7000 LG	2
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1. T410184



2. T410185



3. T410201

209.201 TRANSFER MODULE - SWH 8 & SWR 10

1	T410184	TRANSFER – HI-LIGHTER	2
2	T410185	TRANSFER – TWISE	2
3	T410201	TRANSFER – GREASE GUN	2