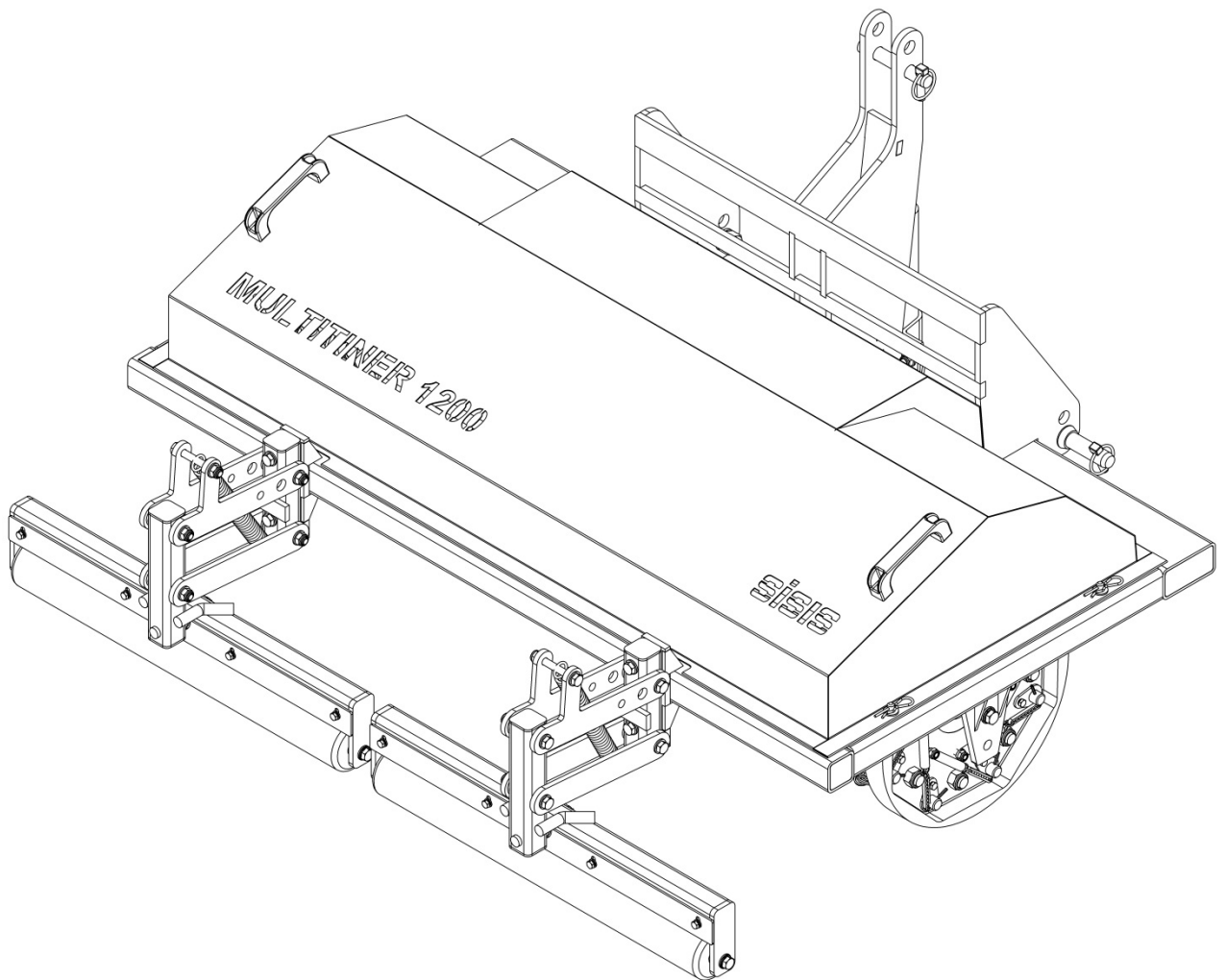


sisis®

MULTITINER 1.2

INSTRUCTION MANUAL



MULTITINER 1.2 CN Code: 84322910

Manufacturer:- Howardson Ltd, Howardson Works, Kirk Langley, Derby, DE6 4NJ. UK

Owner of Technical Document:- Mr I.D. Howard, Howardson Ltd, Howardson Works Kirk Langley, Derby, DE6 4NJ, UK

I the under signed Declare that these machines:-

Tested at:- Howardson Works test site September 2011

Complies with the applicable requirements of:-
- Machine Directive 2006/42/EC

Managing Director



Ian Howard

SERIAL NUMBERS



NOTE:-

MAKE A NOTE OF THE SERIAL NUMBER OF YOUR MACHINE AND ALWAYS QUOTE IT IN ANY COMMUNICATION WITH PERSONNEL AT DENNIS.

MACHINE SERIAL NUMBER

INTRODUCTION

The reliability and quality of performance of the **MULTITINER 1.2** depends upon some simple care maintenance carried out regularly. This manual has been prepared to allow the user to carry out all such work.

It is advisable to read the instructions carefully. Proper care and attention will enable the machine to give a continuous, satisfactory, and reliable service. Failure to carry out regular lubrication and maintenance as outlined in this manual may render any guarantee or warranty invalid.

In the case of any difficulty, or if further information or advice is required, our Service Department is always at your call. In the interests of speed and accuracy of information please quote the serial numbers of the machine and engine when making enquiries.

For the machine, this is to be found on a plate attached to the side frame. The engine number is stamped on either the crank case or the gear casing facing towards the front of the machine. We suggest you write the numbers on the front page of this book.

	Page
Declaration of Conformity.....	2
Serial Numbers.....	2
Introduction.....	2
Technical Data.....	3
Important Safety Instructions.....	3
Operating Instructions.....	4 - 5
Parts Listings.....	P0 – P4

TECHNICAL DATA

MODEL	MULTITINER 1.2
WIDTH (mm)	1345
LENGTH (mm)	1110
HEIGHT (mm)	890
WEIGHT (Kg)	253
WORKING WIDTH (mm)	1220
NUMBER OF TINES	96
RECOMMENDED TRACTOR	20hp minimum

IMPORTANT SAFETY INTRODUCTIONS



CAUTION:-

READ THE INSTRUCTIONS. We want you to obtain the best performances from this machine. If you have any difficulty in carrying out the following instructions please contact your local SISIS dealer.

NEVER

- Carry out adjustments whilst the machine is running.
- Allow any unauthorised person to handle machines in any way at any time.

ALWAYS

- Read the operating instructions carefully and understand the controls before commencing work.
- Before starting work always visually check machine for damage or wear to parts.
- Look behind before starting to reverse and watch out for children or pedestrians.
- Switch off the power before making adjustments or repairs and never lift or carry a machine whilst any parts are moving.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE USING THIS IMPLEMENT

We want you to obtain the best performance from this machine. If you have any difficulties after reading these operating instructions, please contact us or your local SISIS Territory Manager or SISIS Dealer.

The SISIS Multitiner is the successor to the popular fine turf aerator FTA/4, redesigned to give longer working life and ease of use, plus improvements such as a 3 point linkage, built in weight frame and removable pressure rollers. At 6.5kh (4mph) it is possible to aerate an area of 8092 sq.mtrs (9680 sq.yds) in one hour.

Design Features

The SISIS Multitiner consists of two drums which rotate independently on steel ball bearings. The drum side plates are made from cast iron while the tine bars and main shaft are of steel. Each sprung tine bar rotates on nylon bearings and the tines exit the ground at the correct angle, giving minimum surface disturbance.

The guard is easily removed by 4 quick release R clips, to give access for tine replacement.

Tines are easily fitted by means of quick release pins and clips.

The Multitiner is fitted with a sprung pressure roller which follows the contours of the land in both planes and ensures a clean surface finish with solid and slitting tines. The pressure roller **MUST** be removed when using hollow coring tines.

The frame is of robust construction and has a built in 3 point linkage and weight bar attachment. Weights may be added to increase tine penetration in hard ground conditions.

The SISIS variable pressure frame is also available to add tractor weight to the implement if necessary.

Safety

Always:

- Read the operating instructions carefully and understand the controls before commencing work.
- Before starting work visually check machines for damage or wear to working parts such as blades or tines.
- Use safety guards and make sure they are correctly in position. They are supplied for your protection.
- Watch out for children or pedestrians. Always look behind before starting to reverse.
- Switch off power before making adjustments or repairs and never lift or carry a machine whilst any parts are moving.

Do not – Allow any unauthorised person to handle machine in any way at any time.

Tractor Requirements

Ensure that the tractor has sufficient lift capabilities. Front weights may need to be fitted to some tractors.

Operating

If possible do a trial run on an adjoining grass area such as a fairway, to get a polish on the tines and to ensure the top link setting is correct for optimum results and to avoid damage to the tines. Use the low speed on the tractor gearbox and lower the implement to the surface. Adjust the forward speed to obtain the desired results.

Weights are available from SISIS. These have been designed to fit over the weight bar without the need to secure them to the frame. Each weight weighs 13.5 kilos (26.5lbs)

Assembly

Your SISIS Multitiner will be supplied **WITHOUT** tines fitted. Remove the guard, by removing the 4 'R' clips and washers on either side of the guard frame. The drilled ends of the tines should be inserted in the large holes in the tine bars and secured with the pins and clips provided. It is essential that the coring tines are fitted with the open side towards the rear of the implement for correct operation and clean ejection of the cores. When using coring tines, rear pressure rollers must be removed. This is done by removing the 4 bolts and nuts securing the rollers to the frame.

Tines

Coring Tines – Autumn

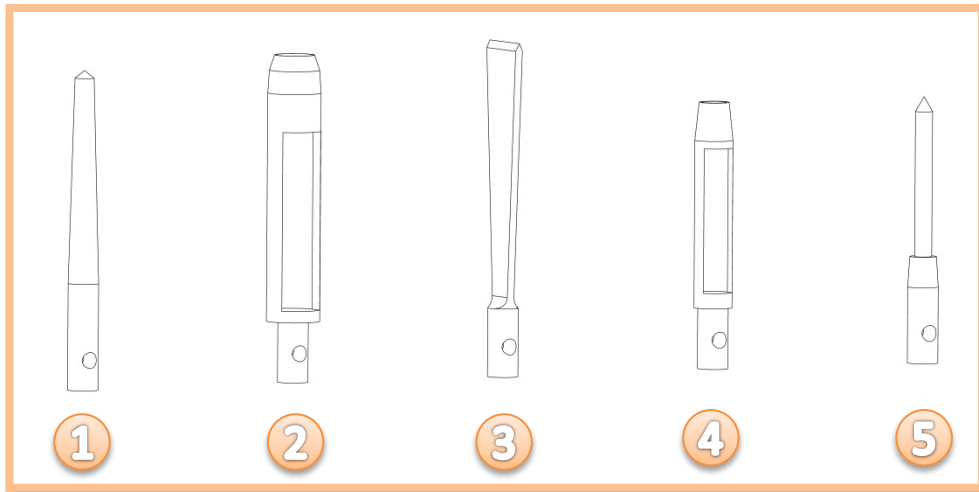
Remove cores of soil to relieve compaction caused by play and rolling or to make soil exchange

Slitting Tines – Autumn & Spring

Encourages new root growth and permits the entry of fertilisers and dressings.

Round Pointed Tines - Summer

Help moisture and air to get the grass roots during the growing season, particularly useful for hard conditions.



Tine types:

- 1.) 100mm Solid tine
- 2.) 115mm Jumbo hollow tine
- 3.) 100mm Chisel tine
- 4.) 76mm Hollow tine
- 5.) 76mm Pencil tine

- Set ordering code: SETX96-D6728
 Set ordering code: SETX96-F35967
 Set ordering code: SETX96-D2109
 Set ordering code: SETX96-D2048
 Set ordering code: SETX96-D2047

Important

Clean and oil all tines after use, making sure that hollow tines are cleaned inside. Lubricate the tine bar pivot bushes periodically with a few drops of oil at each end of the square section of each bar.

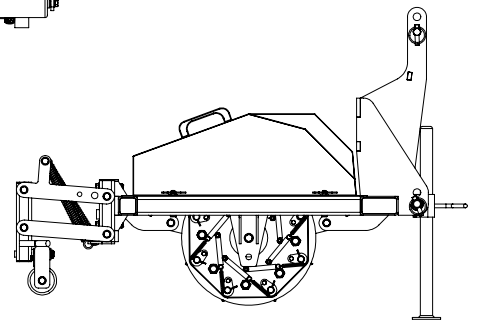
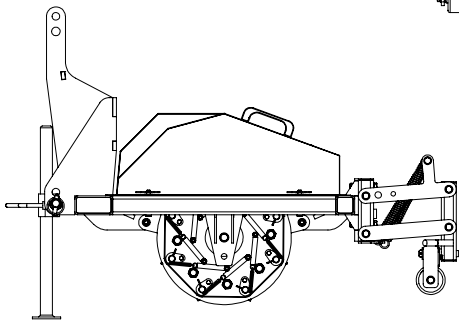
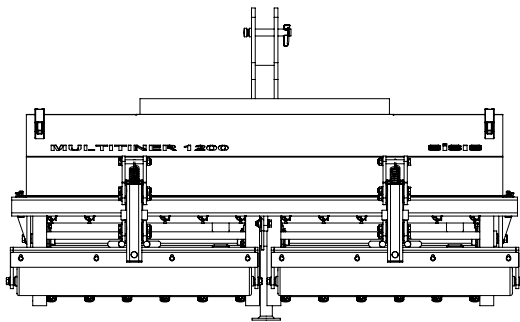
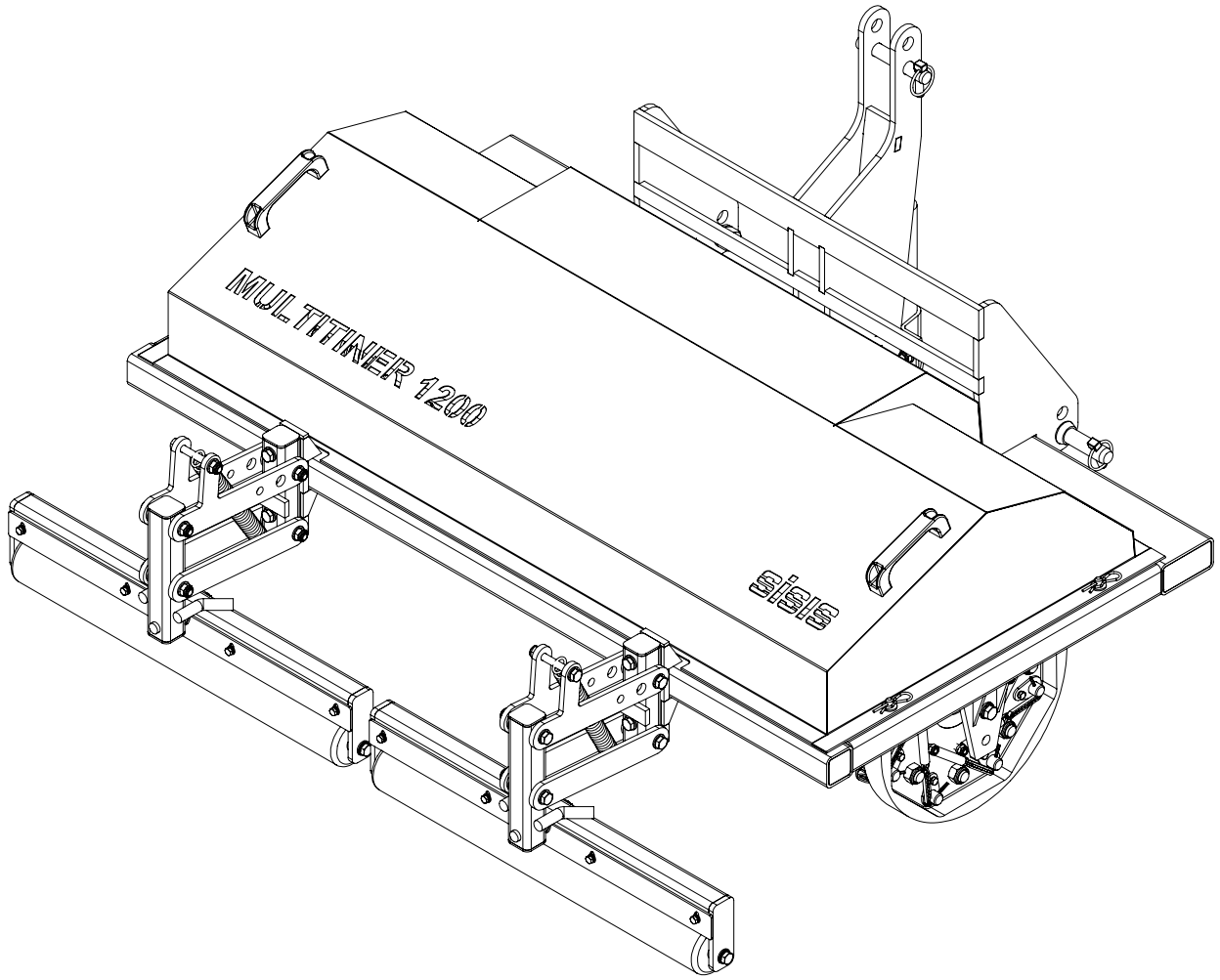
Connection to the Tractor

Mount the machine on the tractor 3 point linkage. Make sure stabilisers are fitted. Adjust the top link so that the implement frame is parallel to the ground. Raise the implement and retract the drop leg stand behind the implement. Make sure that the frame is horizontal to the ground so that an even depth is maintained across the tines width. Make sure that the implement can be lifted high enough to clear the ground in transport, particularly in undulating conditions.

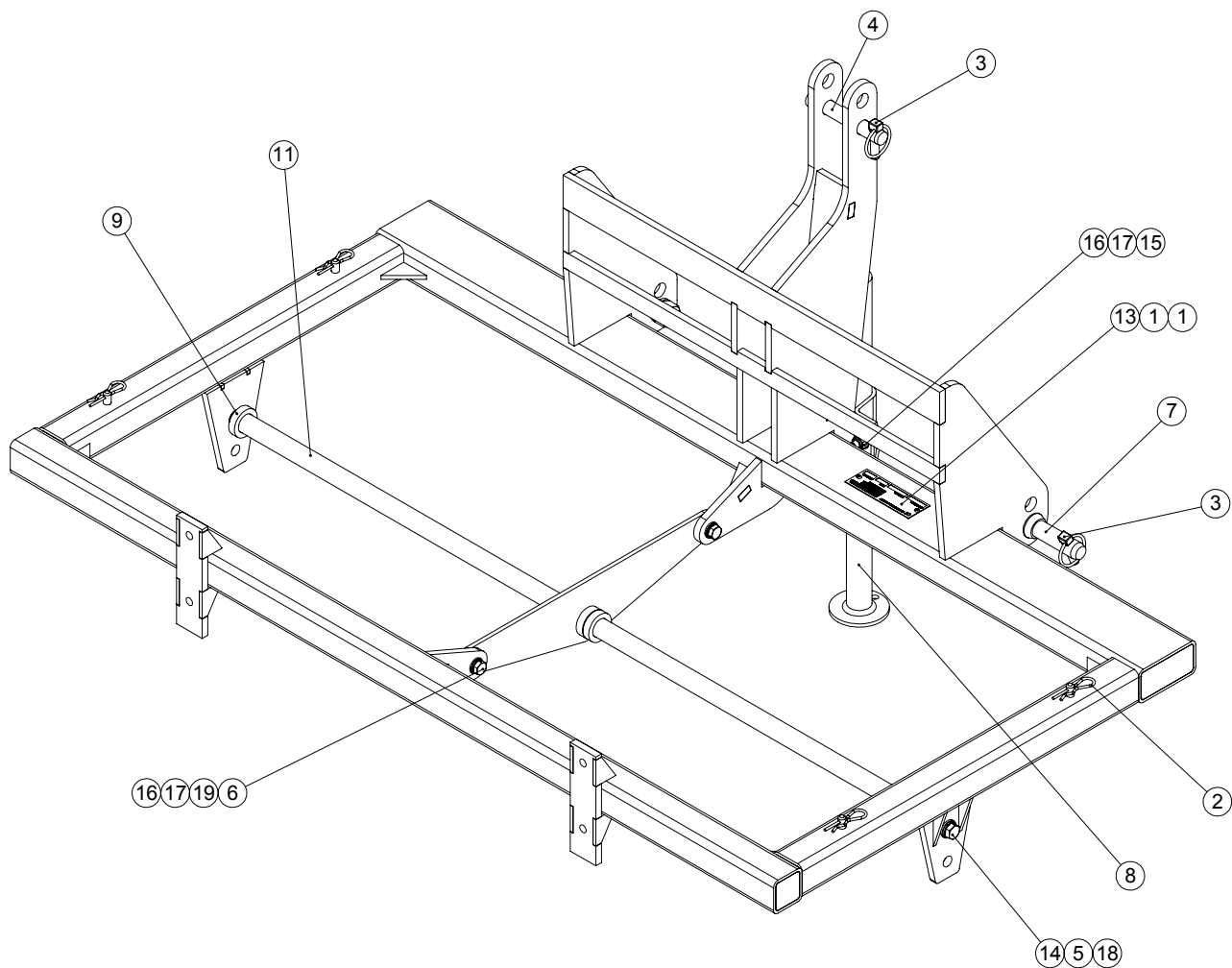
Transporting

Never roll the implement on a solid surface such as concrete. This will cause damage to the tines. Always ensure that you have enough ground clearance before driving up ramps or low loaders.

MULTITNER 1.2 - PARTS BOOK

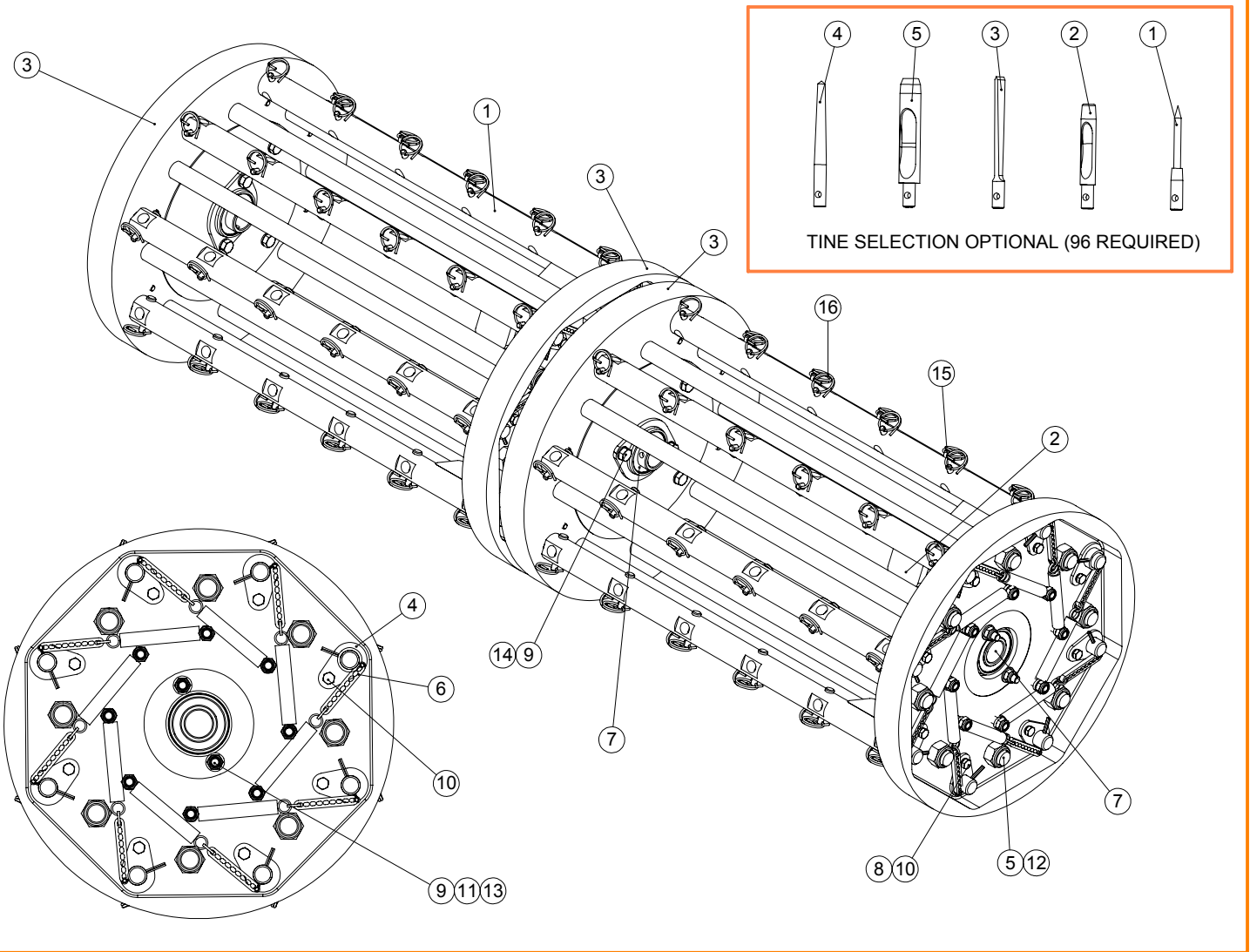


CHASSIS



ITEM NO.	PART NUMBER	DESCRIPTION	CHASSIS/QTY.
1	D1871_REV1	RIVET 3.2 X 6	2
2	D1900_REV0	CLIP R (SPAREX REF S9)	4
3	D8326_REV1	PIN LINCH 7/16"	3
4	D8617_REV1	TOP LINK PIN 3/4"	1
5	E1-1065_REV0	SPRING WASHER M12 SQUARE SECTION	2
6	E1-1119_REV0	HEX SET SCREW M10 X 35	2
7	F20327_REV0	IMPLEMENT MOUNTING PIN	2
8	F20723_REV1	DROP LEG ASSEMBLY 20"	1
9	F31150_REV1	SPACER	3
10	F33092_REV4	FRAME ASSY	1
11	F33154_REV2	SHAFT MULTITINER 1200	1
12	F33155_REV1	SUPPORT PLATE ASSY	1
13	F36000_REV2	SERIAL NO PLATE (SISIS)	1
14	SP01065_REV0	HEX SET SCREW M12 X 30	2
15	SP01105_REV0	HEX SET SCREW M10 X 30	2
16	SP02008_REV0	NUT M10 NYLOC (T)	8
17	SP03011_REV0	WASHER M10 FORM A	12
18	SP03012_REV0	WASHER M12 FORM A	2
19	SP03034_REV0	WASHER M10 SPRING LOCK	2

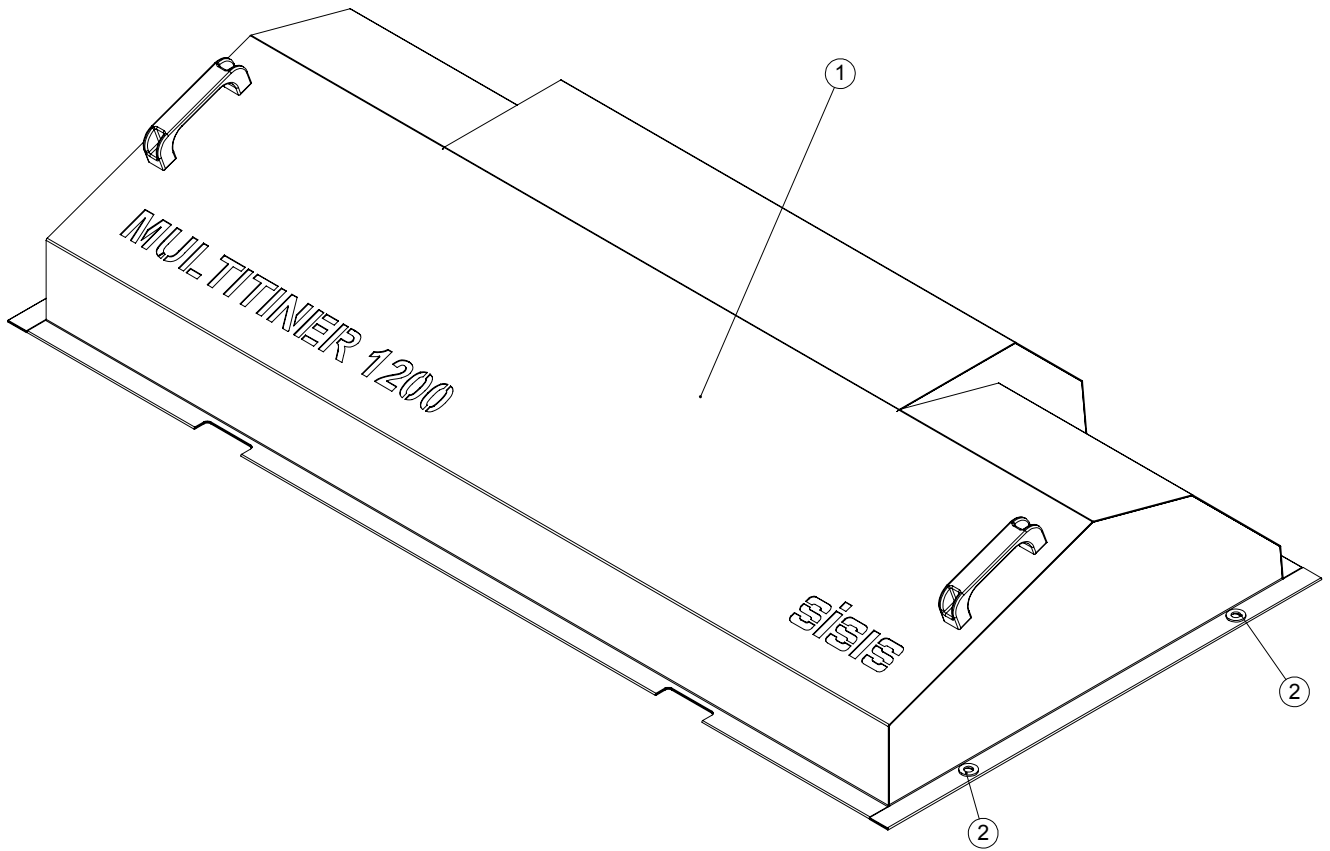
DRUMS



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	401794_REV0	TINE BAR (MULTI TINER 1200)	16
2	401795_REV0	TINE BAR PLATE	16
3	C052_REV2	SIDE PLATE	4
4	D1511_REV3	TINE BAR BEARING	32
5	D6907_REV2	PIERCING UNIT STAYBAR	16
6	D7086_REV1	SPRING & CHAIN ASSY	32
7	D8032_REV0	BEARING BPFL5-25	4
8	E1-1061_REV0	WASHER M6 SPRING	32
9	SP01005_REV0	HEX SET SCREW M8 X 30	40
10	SP01008_REV0	HEX SET SCREW M6 X 16	32
11	SP02006_REV0	NUT M8 NYLOC (T)	40
12	SP02028_REV0	NUT M16 NYLOC (T)	32
13	SP03008_REV0	WASHER M8 FORM A	8
14	SP03029_REV0	WASHER M8 SPRING LOCK	40
15	SP05015_REV0	CLEVIS PIN 1/4" X 1 1/2"	96
16	SP05016_REV0	COTTER RING 23 X 2	96

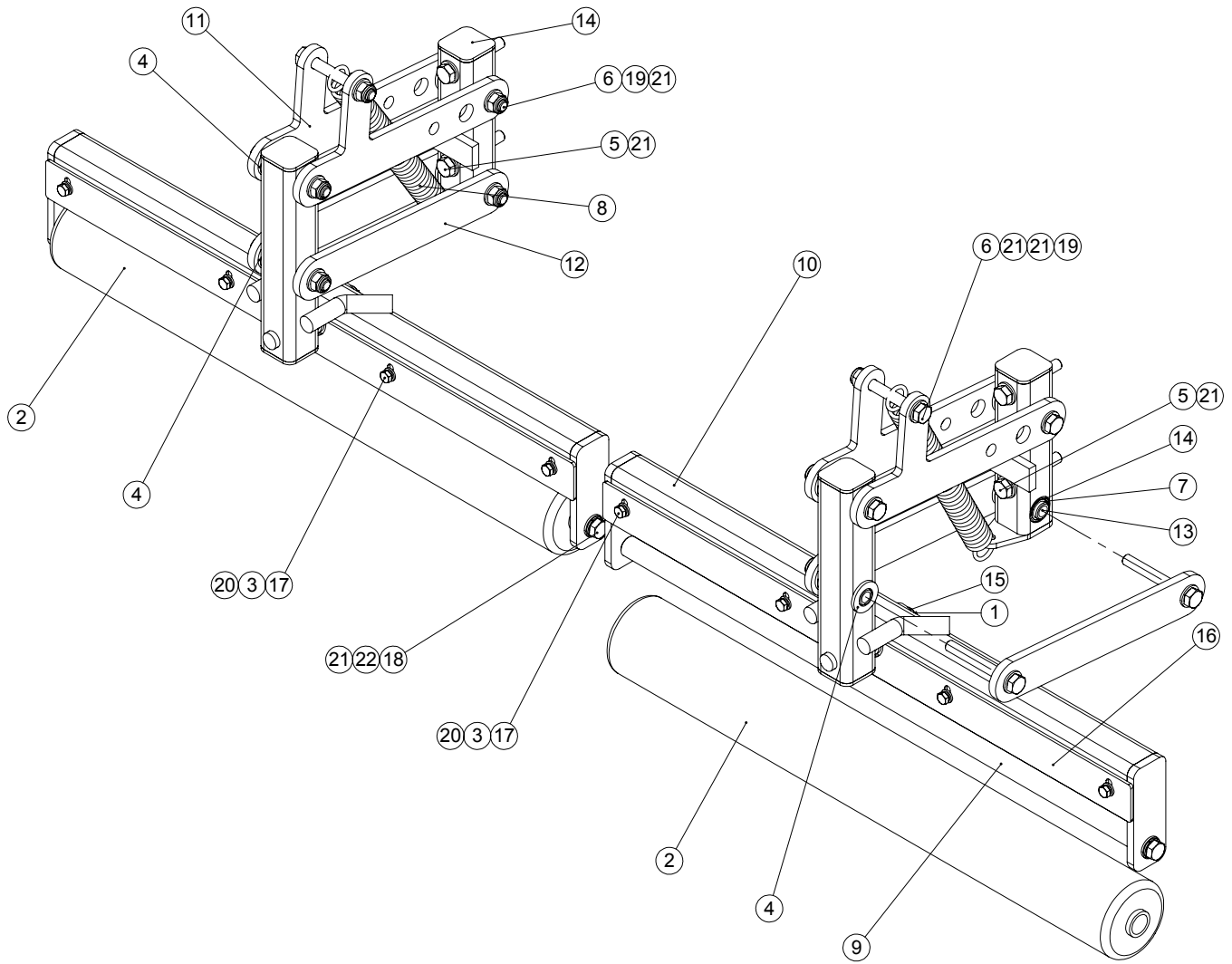
ITEM NO.	PART NUMBER	DESCRIPTION	Tine dispaly/QTY.
1	D2047_REV2	SL. TINE	1
2	D2048_REV1	HOLLOW TINE	1
3	D2109_REV1	CHISEL TINE	1
4	D6728_REV1	SOLID TINE	1
5	F35967_REV1	JUMBO HOLLOW TINE	1

GUARD



ITEM NO.	PART NUMBER	DESCRIPTION	GUARD/QTY.
1	F33174_REV1	GUARD MULTITINER 1200 ASSY	1
2	SP03011_REV0	WASHER M10 FORM A	4

PRESSURE ROLLERS



ITEM NO.	PART NUMBER	DESCRIPTION	PRESSURE ROLLERS/QTY.
1	D1044_REV0	SPLIT PIN 1/8" X 1 1/4"	2
2	D7226_REV3	ROLLER	2
3	E1-1061_REV0	WASHER M6 SPRING	8
4	E1-1080_REV0	WASHER M16 FORM A	20
5	E1-1130_REV0	HEX BOLT M10 X 65	4
6	E1-1134_REV0	HEX SET SCREW M10 X 80	10
7	F20606_REV0	BUSH AM1620 - 20	20
8	F20692_REV1	SPRING	2
9	F32457_REV2	ROLLER SHAFT	2
10	F32458_REV1	ROLLER FRAME	2
11	F32459_REV5	TOP LINK ARM	4
12	F32460_REV3	BOTTOM LINK ARM	4
13	F32461_REV3	PIVOT PIN	8
14	F32462_REV4	PIVOT BRACKET	2
15	F32463_REV2	ROLLER PIVOT BRACKET	2
16	F32464_REV4	SCRAPER BLADE	2
17	SP01028_REV0	HEX SET SCREW M6 X 20	8
18	SP01105_REV0	HEX SET SCREW M10 X 30	4
19	SP02008_REV0	NUT M10 NYLOC (T)	10
20	SP03010_REV0	WASHER M6 FORM A	8
21	SP03011_REV0	WASHER M10 FORM A	28
22	SP03034_REV0	WASHER M10 SPRING LOCK	4



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