

CUB TORNADO SPREADERS



OWNERS MANUAL

CUB SPREADERS. Models S4000TA and S6000TA

Manufacture 2013 onwards from S/N 1309282



CUB TORNADO SPREADERS



DEAR CUSTOMER

We take this opportunity of welcoming you as the owner of a Cub Tornado Spreader. We want your spreader to be the most efficient and productive piece of equipment you have. This small manual will help you to achieve this objective.

The safe operation and maintenance of your spreader is very important to prevent any personal injury and/or equipment damage. Read and fully understood the following instructions before operating or carrying out maintenance.

WARRANTY

Agriquip warrants new products sold by it to be free from defects in material and workmanship for a period of twelve months (12) for farmers or six months (6) for contractors, after delivery to the initial user. This warranty is for the replacement or repair of any part found to be defective during the warranty period. This warranty excludes any transport freight costs incurred by Agriquip in giving effect to the warranty and specifically excludes all normal maintenance costs. Replacement parts provided under the terms of this warranty are covered for the remainder of the warranty period applicable to the product in which they are installed as if such parts were original components of that product.

CONTACT DETAILS

Phone: 06 759 8402
Address: 30 Hurlstone Drive, New Plymouth, New Zealand
Postal Address: P O Box 578, New Plymouth, New Zealand
Spare parts Contact: parts@agriquip.co.nz
Web site: www.agriquip.co.nz

DELIVERY

The machine is delivered fully assembled, however, before use carefully check the entire machine for transit damage and report any problems immediately.

CUB TORNADO SPREADERS



SPECIFICATIONS

	Model	
	S4000TA	S6000TA
Belt Width (mm)	300	650
Capacity (Cubic Metres)	3.2 m ³	4.6 m ³
Greedy Board (Option) , Increased Volume	1.15 m ³	N/A
Tonnes Urea	2.6	3.7
Tonnes Super	4	6
Tonnes Lime	4.5	6.4
Axles (Max Load) x 6 Stud	8,640 Kg	11,700 Kg
Tyres (Standard 9" Wide Rims)	11.5/80 - 15.3 x 14 Ply	11.5/80 - 15.3 x 14 Ply
Tyres (Option) AW or Traction, 13" Wide Rims	400/60-15.5	400/60-15.5
Tare Weight		
Overall Length (mm)	4370	4370
Overall Width (mm) (Standard Tyres)	2360	2360
Overall Height (Without Cover Bar) (mm)	2070	2300
Overall Height (With Cover Bar) (mm)	2240	2550
Spinner Bumper Ground Clearance (mm)	440	440
Ground to Spinner Height (mm)	550	550
Ground to Swivel Eye Height (Drawbar Level)	600	600
Swivel Eye Coupling	Standard	Standard
Screw Jack (Swivel)	Standard	Standard
Forward Skid Plate (Alternative to Jack)	Optional	Optional
Independent Engage Hose	Optional	Optional
Chain Guards	Optional	Optional
Cover (Standard Fixed)	Optional	Optional
Cover (Rollup)	Optional	Optional
High capacity Diverter	N/A	Optional
Brakes	Optional	Optional
Mud Guards	Optional	Optional
Lights	Optional	Optional

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MACHINE MODELS

1. This manual details the operating instructions for two: Cub S4000TA and S6000TA (Tandem Axle). Most parts are inter-changeable between the models, however, where parts are different; the model version will be clearly stated.

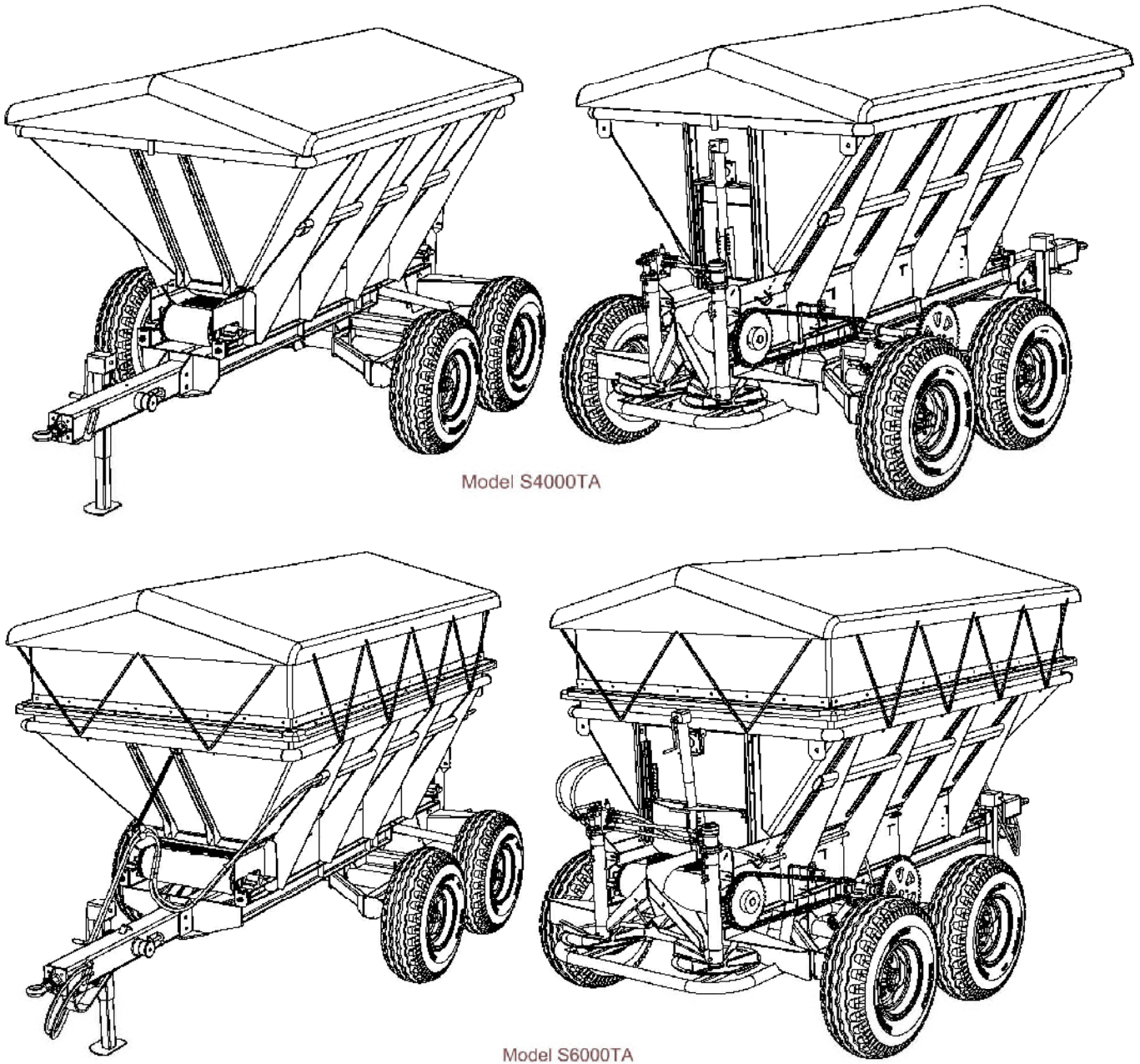


Figure 1 - Models



RULES FOR SAFE OPERATION



SAFETY REGULATION - take notice of this sign

Warning and Cautions

2. Throughout this manual, the word **WARNING** is used to alert the operator and others to the risk of personal injury during operation of the equipment. **CAUTION** indicates the possibility of damage to the machine.
3. Carefully read and take note for the following warnings before attempting to use the spreader.
 - WARNING.** Ensure the tow hitch is in good repair and fit for towing.
 - WARNING.** Ensure the tyres are correctly inflated for the load.
 - WARNING.** Never allow any person to ride on or in the spreader.

Pre Start Checks

4. Check the tyres for signs of wear, cuts and impact damage (1). Check the tyre pressure (Fig 2).
5. Check the torque on all wheel nuts (2) (Fig 2).
6. Check the machine has been greased. Refer to Fig 10 and 11 for the position of the grease points.
7. Check the condition of the towing eye (3), tow-bar frame (4), machine chassis (5), axle (6), bin (7) and cover (8) for damage and wear (Fig 2).
8. Check the jack (9) is fully raised when the spreader is connected to the tractor (Fig 2).
9. Do not exceed the payload of 4.5 tonne (4000 Model) or 6.4 tonne (6000 Model) regardless of the operating conditions e.g. normal working surfaces or rough terrain.

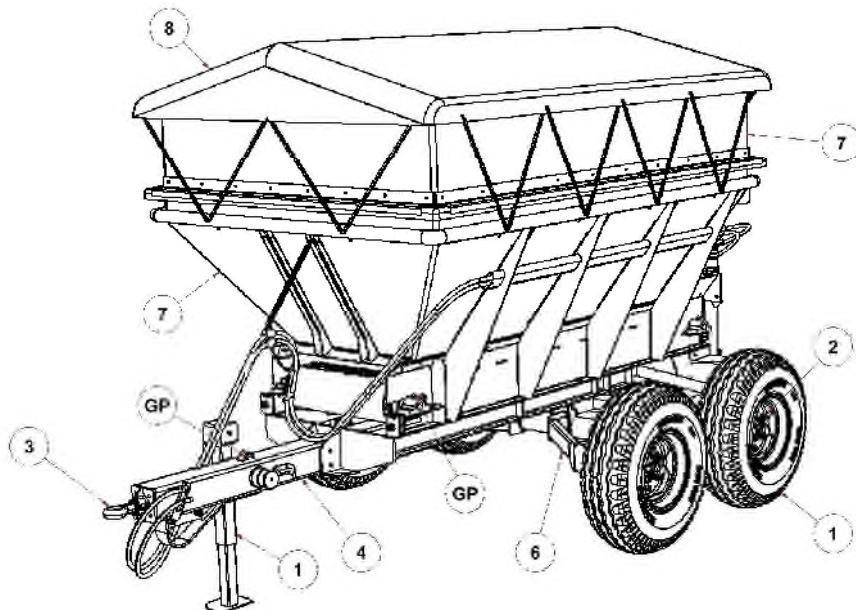


Figure 2 - Pre Start

CUB TORNADO SPREADERS



RULES FOR SAFE OPERATION (*continued*)

Pre Start Checks (*continued*)

10. Check the condition and operation of the drive gears (Large and Small) (1) the chain (2) Belt tensioner (3) and feed belt (4) (Fig 3).
11. Check hydraulic hoses (5) and hydraulic motors (6) for damage and hydraulic fluid leaks (Fig 3).
12. Check the operation of the fertiliser shutter (7) and handle mechanism (8) (Fig 3).
13. Check the operation of the hydraulic system control block (9) and check for leaks (Fig 3).
14. Check the condition and operation of the spinners (10) (Fig 3).
15. Check the conditions of the bearing blocks (11) (Fig 3).
16. Check main chain/belt tension by holding a straight-edge underneath spreader between front and rear sprockets. Chain should sag on slack side of chain no less than 20mm and no greater than 60mm. Insure chain tensioner (3) is applying some pressure to the chain. (Fig 3)

CAUTION: Do not over-tighten chain!

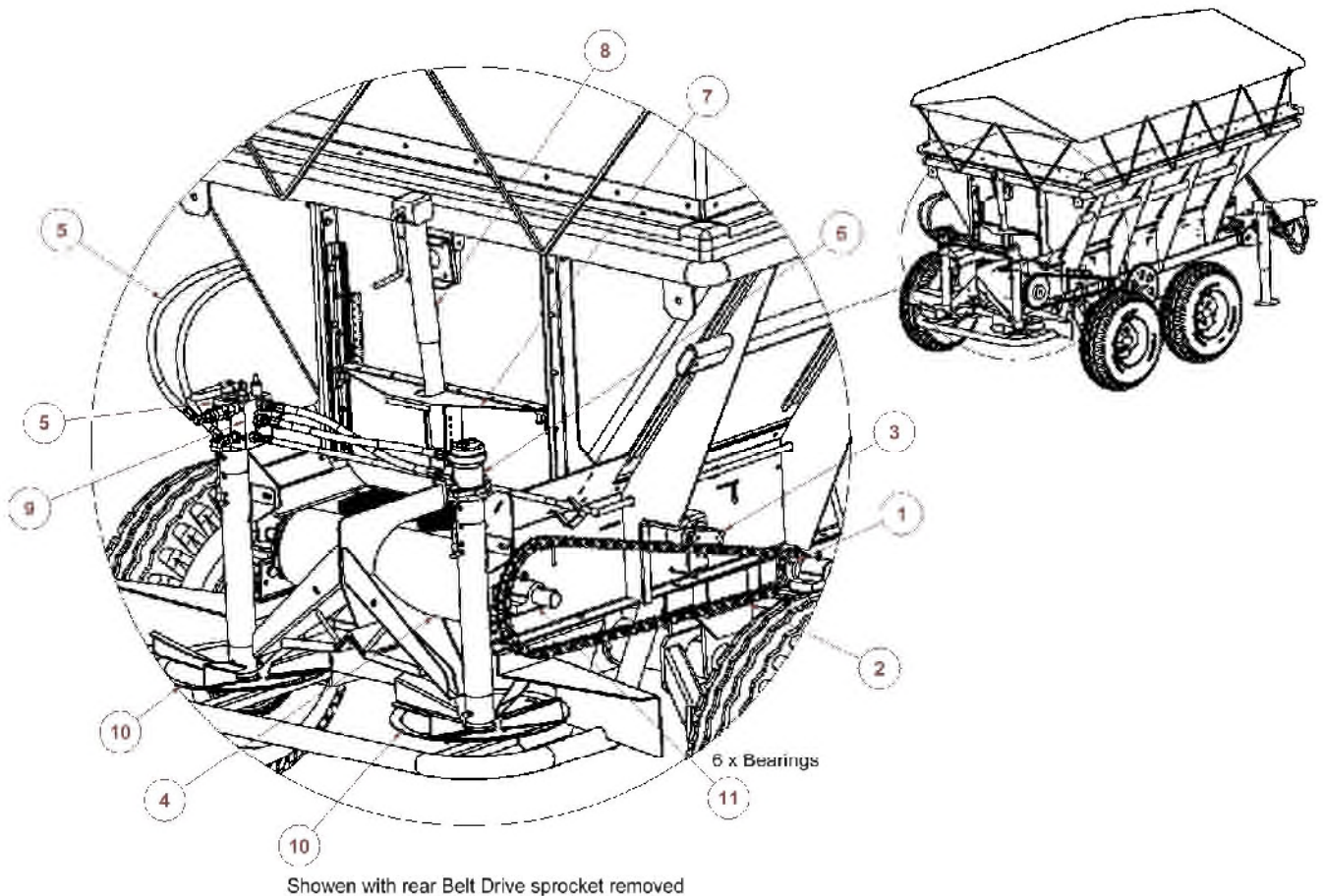


Figure 3 – Safe Operation



OPERATING

17. The spreader hydraulic system is powered from the tractor hydraulic system via two hydraulic hoses (1) (Fig 4). The functions and operation of the spreader are controlled from the tractor.
- The hoses are connected directly to the tractor hydraulic system (it is recommended to consult the tractor operator manual) which powers the two hydraulic spinner motors and the drive actuating cylinder.
 - a) As it was originally designed, the spreader must operate on a single-acting circuit with an open return to the tractor transmission. This allows the drive actuating cylinder to 'vent to tank' when single-acting control valve goes to neutral thus allowing the cylinder to collapse and disengage ground drive. This is a similar plumbing arrangement to a hydraulic post driver. The Cub Tornado Spreaders are designed to handle up to 50 litres/minute maximum flow from tractor, for tractors having higher flow rates than this (at expected spreader use engine rpm) there are two options:
 - i. Adjust flow controls on tractor auxiliary valve controls to regulate down to the above acceptable level.
 - ii. We can offer as an option a high flow control cartridge valve to replace the standard at an additional charge.
 - b) A double-acting circuit can be used only if there is a fourth position float, assuming back pressure caused by pump flow, etc. is low enough so spring can collapse ground drive engagement cylinder to release drive. In operation the only two lever positions used are the third for drive and fourth for disengage. In no case can a double-acting service without float be used as this will lock the fluid when valve is returned to neutral, which does not allow disengagement of the ground drive.
 - c) As an alternative to b), a double-acting circuit can be used, but with a separate single-acting circuit for the ground drive actuating cylinder. This arrangement allows continuous spinner operation and independent stop/start of feed belt. This requires a separate hydraulic hose direct from single-acting auxiliary valve on tractor to the cylinder on the spreader. This is an optional extra, and there will be a small charge for this.
 - d) If a spare single-acting circuit is not available on tractor to enable c) to be done, a double-acting cylinder can be offered as an optional extra. This is an optional double-acting cylinder and requires two hoses from the tractor auxiliary valve to this cylinder. At all times it should be pointed out that soft engagement/disengagement is desirable for best life.

IMPORTANT.

- The pressure hose (2) (or Main Delivery) is identified by label attached to the quick-release coupling end.
- That the return hose (3) (or Main Return) has no restriction.
- The hydraulic control valve at rear of spreader (4) is marked 'P' for pressure (ie. Main Delivery) and 'T' for tank (ie. Main Return).
- A Non Return Valve (NRV) is positioned on the control block to protect the system. The spinners and engagement ram will not function, if hose have been inadvertently connected to the tractor incorrectly.

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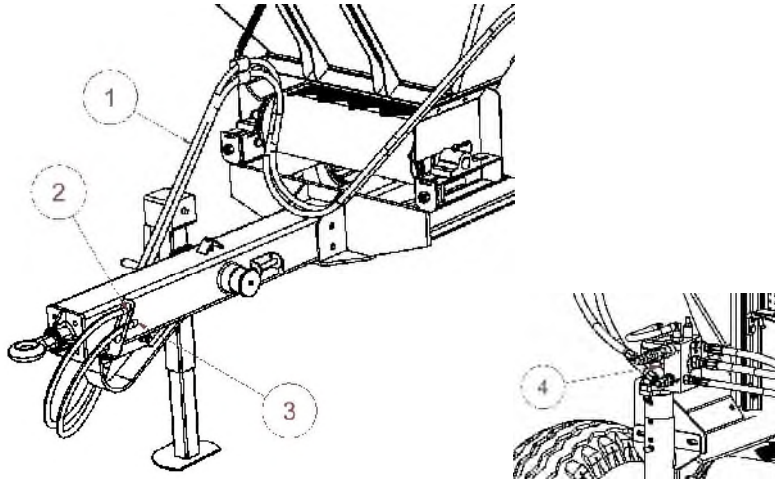


Figure 4 - Hoses

- Figure 5 details the drive assembly (8) in the disengaged position. The drive is held in the engage position by a hydraulic cylinder (1) (Fig 5).
- The right rear spreader wheel powers the feed belt via drive chain (10) driven from the wheel sprocket (2) to the idler sprocket (3) (Fig 5).
- When the spinners are engaged, the drive assembly (8) is lowered and meshes the large gear (4) with the small gear (3) that rotates on the idler shaft. When the spinners are disengaged, 2 x springs under the saddle lift the gear assembly to the position shown in Fig 5 allowing engagement cylinder (1) to vent oil back thru the main return line (3) (Fig 4).

IMPORTANT

The belt drive system is protected via 2 x special M8 shear bolt (7)

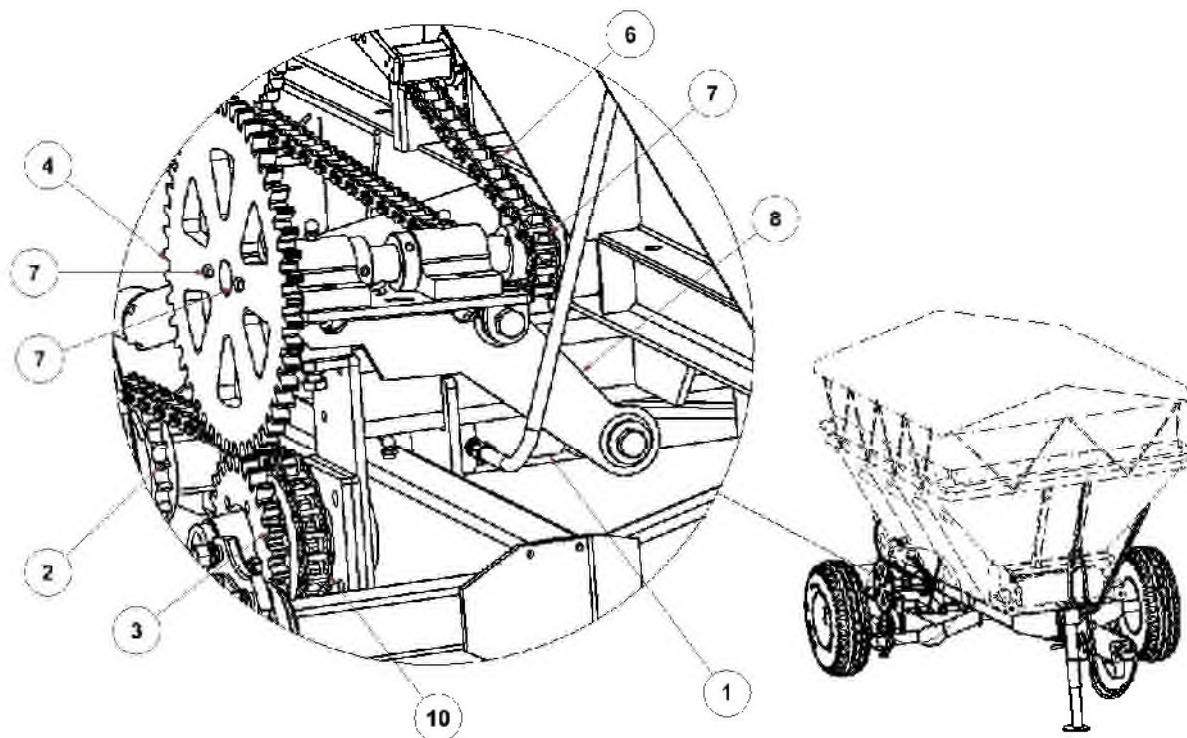


Figure 5 - Drive Assembly

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- If surging of the motors and spinners is experienced, the cause is an over supply of oil from the tractor hydraulic system.

IMPORTANT

To stop the surging, reduce the oil flow from the tractor. The spreader requires only 35 - 40 litres per minute (LPM).

- If the return line from the spreader is dumping back through the remote it must be connected to a bank with a dump or float facility.
- Chain tension (1) is maintained by a tension roller (2) (Fig 6).
- The ends of the chain are connected using a chain joining link (3) (Fig 6). Remove for chain service.

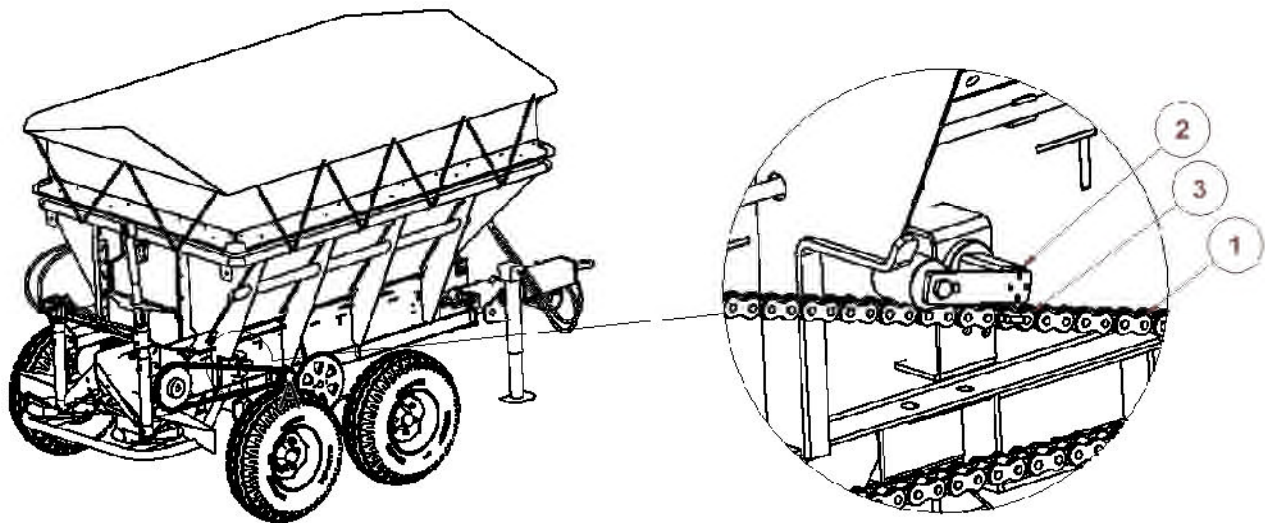


Figure 6 – Chain Tensioner

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- When the spinners (1) are engaged, hydraulic oil flows to the motors (1) via a control valve (2). Power from motors is transferred to the spinners via internal drive couplers within the spinner housings (Fig 7).

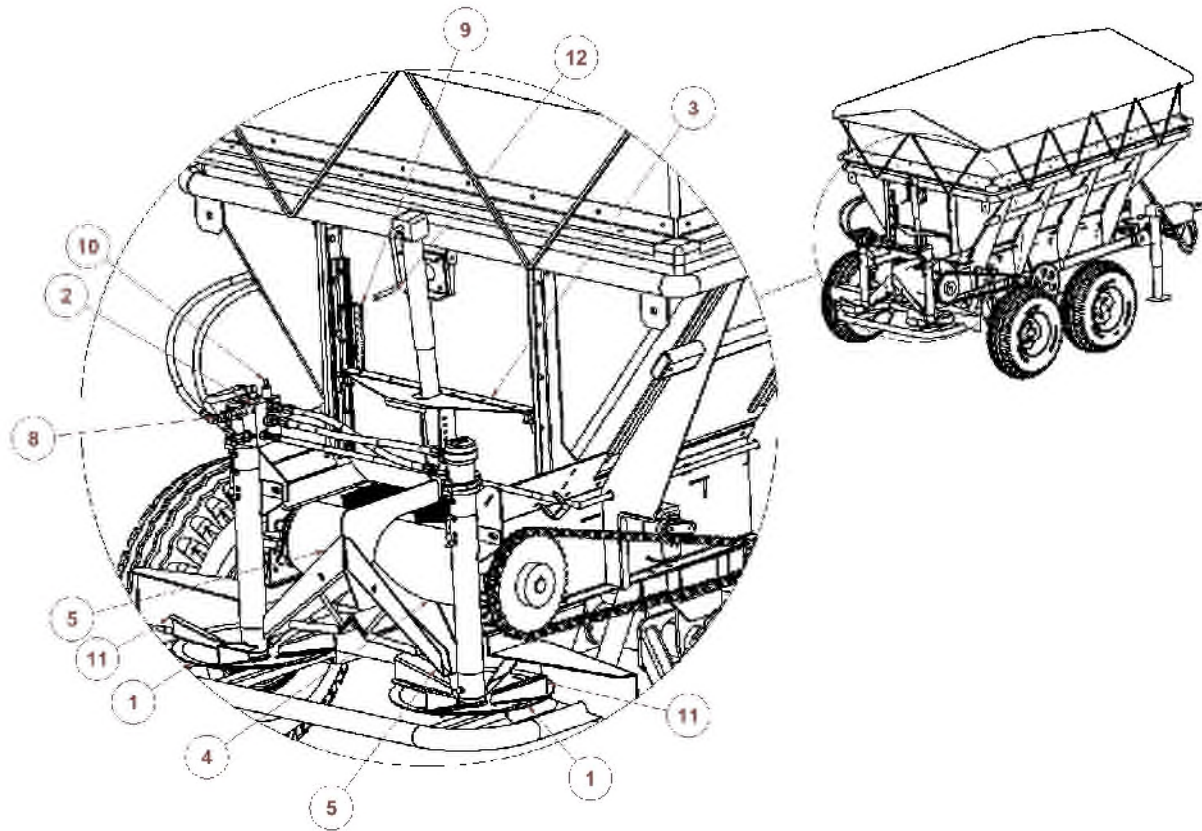


Figure 7 – Spreader Control

- The release of the fertiliser is controlled by vertical movement of the flow control shutter (3) (Fig 7). When engaged, fertiliser then falls from the belt (4) (fig 8) onto the two diverters (5) (Fig 7) directing fertiliser to the centre of two spinners (1) (Fig 7) which throws the fertiliser with the help of four directional flights (11) outwards to cover a span of at least 25 metres.
- The hydraulic system is both protected and controlled by the control valve assembly. Spinners speed and Pressure relief valve (10) (Fig 7) are factory set and should not need adjustment. A Non Return Valve (8) is installed to prevent inadvertent hose connection.
- The rear door shutter (3) is adjusted via the screw thread shutter control (12) and is manually operated by a handle (Fig 8).
- The volume allowed under the shutter (3) onto the belt (4) is indicated by a scale (9) on the end of the bin (Fig 8). Each segment on the scale indicates 100 Kgs per hectare (approx) or 1 cwt per acre (approx) relating to the spread rate for the 4000 spreader. The spread rate for the 6000 spreader is calculated at a multiple of 2.6 times that of the 4000 spreader rates.

CUB TORNADO SPREADERS

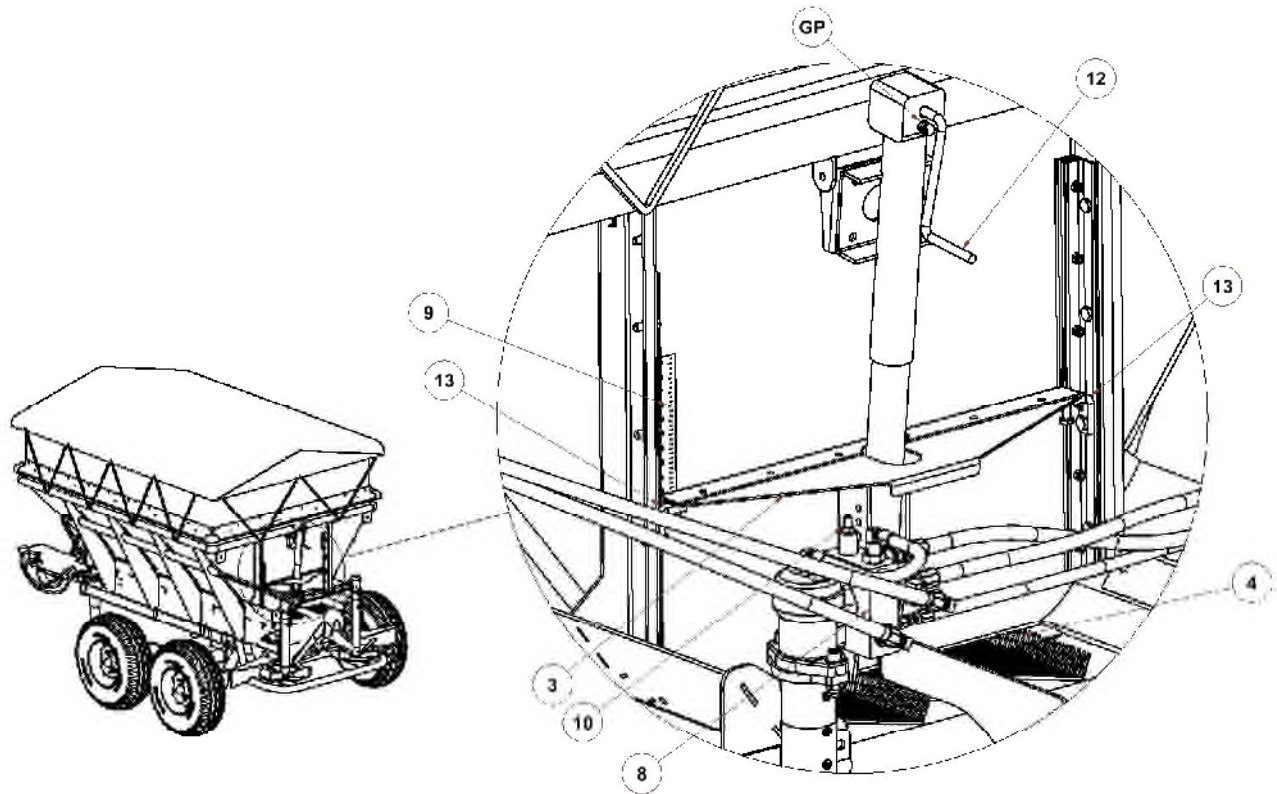


Figure 8 – Rear Shutter Control

- Stops (13) (fig 8) each side of the shutter are factory set to stop the shutter from contacting the belt. A minimum 2mm clearance between the belt (4) and lower edge of shutter (3) should be clearly visible throughout the entire belt rotation.

CAUTION

Decreasing or closing the shutter to belt clearance could seriously damage many of the spreaders mechanical components.

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Table 1 is a guide to the flow of fertiliser from the bin.

Table 1 - Fertiliser Settings Guide

Spread Rates Calculated based on belt width: (width between side skirts)

- S4000TA, 230mm wide belt
S6000TA, 600mm wide belt

IMPORTANT

Spinner Speeds set to 850 RPM

Scale	Urea @24 Meters (Kg/Ha)		Super @24 Meters (Kg/Ha)		Lime @10 Meters (Kg/Ha)	
	S4000TA	S6000TA	S4000TA	S6000TA	S4000TA	S6000TA
9			900	2340	2250	5850
8			800	2080	1900	4940
7			700	1820	1550	4030
6	360	940	600	1560	1200	3120
5	300	780	500	1300	850	2210
4	240	630	400	1040	500	1300
3	180	470	300	780		
2	120	300	200	520		
1	60	160	100	260		



MAINTENANCE

Maintenance should be undertaken regularly. Good maintenance will extend the life of the spreader and allow safe use.

WARNING

1. *Always disconnect the spreaders hydraulics from the tractor before servicing*
2. *Insure the spreader is on level ground and secured*
3. *Insure there is adequate lighting*

Maintenance Checks/Inspection

- Check the wheel bearings for play (by rocking wheel assemblies) and pack with grease every six months.
- Check Idler sprocket/ gear assembly for play, wear and damage.
- Inspect engagement clearance of gears is set 1mm – 5mm. Adjust stops as required
- Check the feed belt for cuts, wear and misalignment.
- Inspect condition and wear in side and front sealing skirts (Bin to Belt). Excessive leakage will occur if not sealing adequately.
- Check the drive chains for wear and damaged.

IMPORTANT. *Chains should be removed and cleaned at the end of the season. Both chains are fitted with joining links to facilitate this process.*

- Inspect hydraulic motors, control valve, engagement ram and hoses for leaks and loose fitting.
- Inspect condition of all chain guards (when fitted as an Option)
- Inspect spinners for excessive movement. Some moment should be felt.
- Check spinner bolts that secure 8 x spinner flights are secured.
- Check that all safety decals are in place and legible.
- Check the tyres for wear, cuts, bulging and correct

WARNING. *Always follow manufactures recommendations for tyre pressure. Recommended pressure 480 kPa, 4.8 Bar, 68 psi.*

- Check that the flow control shutter slide is true and is free to move and stops set to ensure shutter stops at lowers position clear of belt. Min 2mm
- Inspect cover for holes and connecting bungee retains the cover adequately.
- Figure 9, 10 and 11 indicates the Grease Points (GP) on the spreader. Oil is also recommended in a few area

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Maintenance (*continued*)

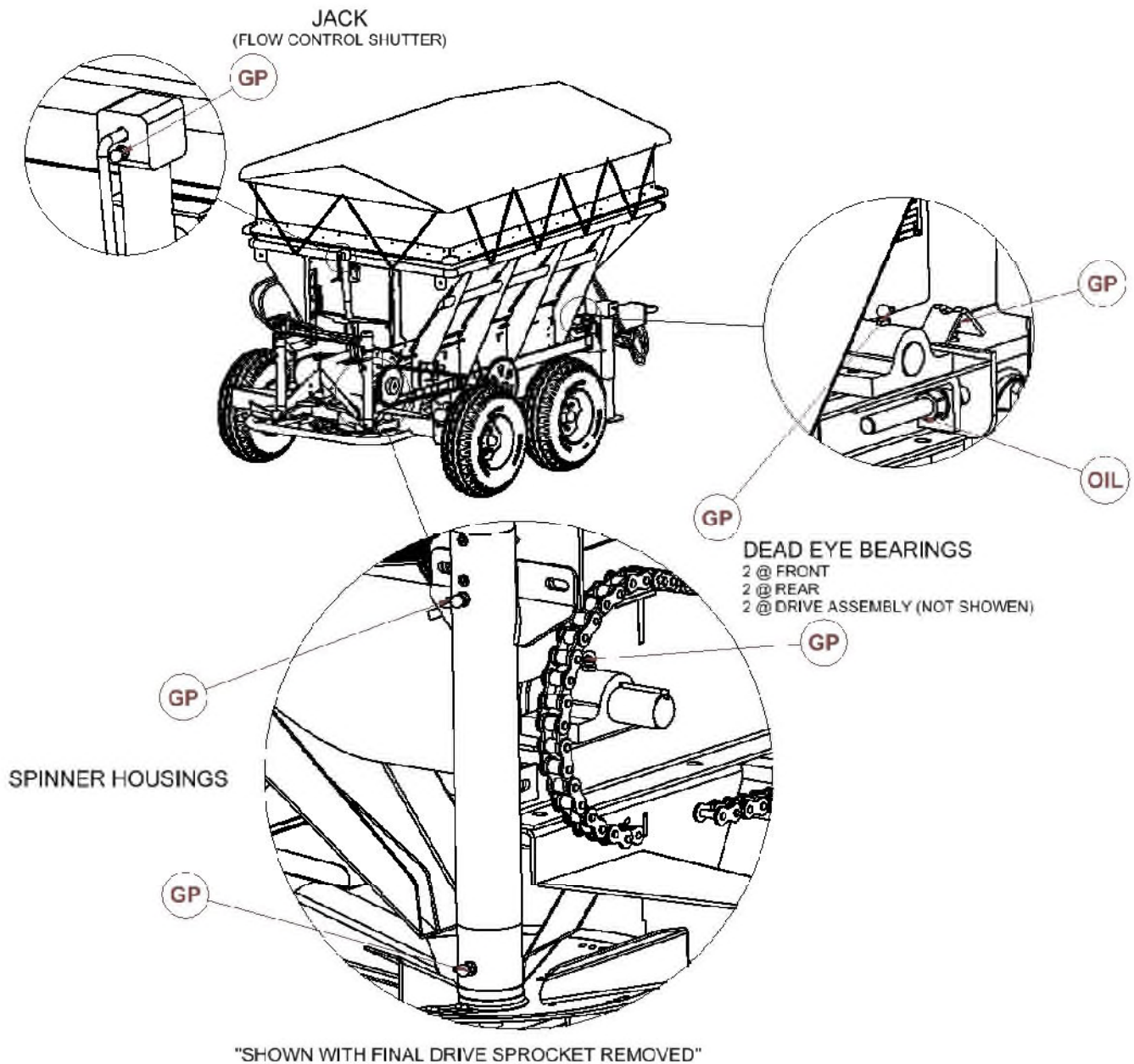


Figure 9 – Grease Points (GP)

IMPORTANT: Critical Greasing!!

Initial greasing of the six dead eye bearing blocks (Part N° SPU012) is very important for their life.

- *Grease at every load for the first ten loads to ensure block becomes impregnated with grease. Thereafter grease every day when bearing is warm*

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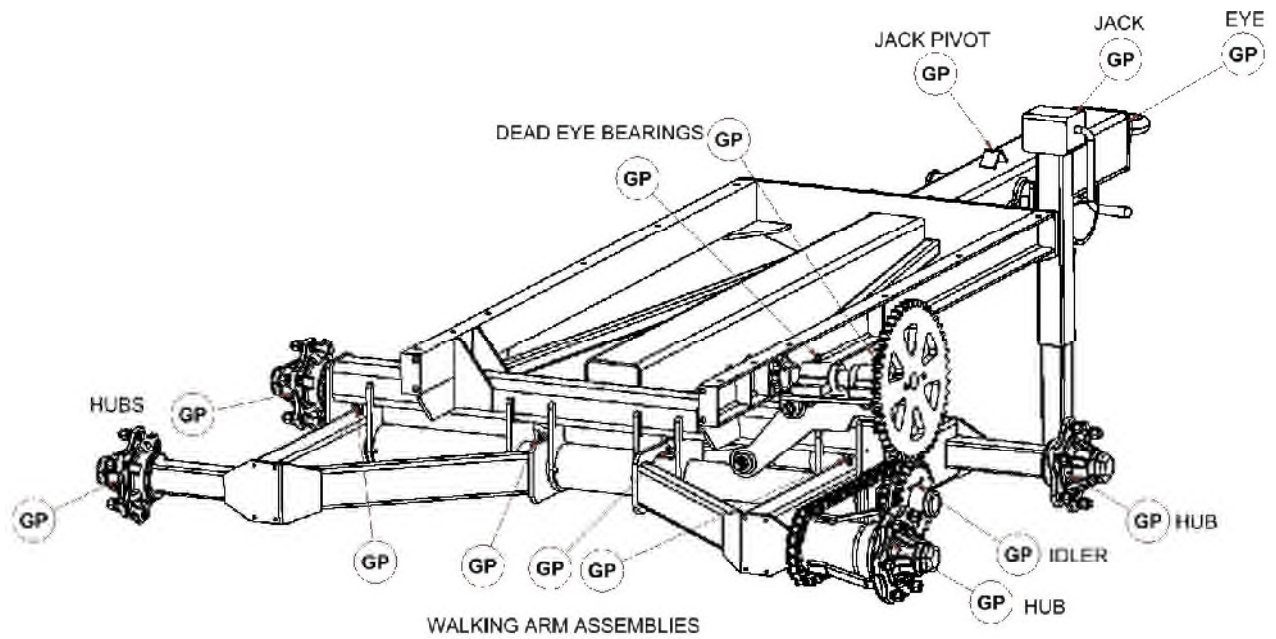


Figure 10 – Grease Points

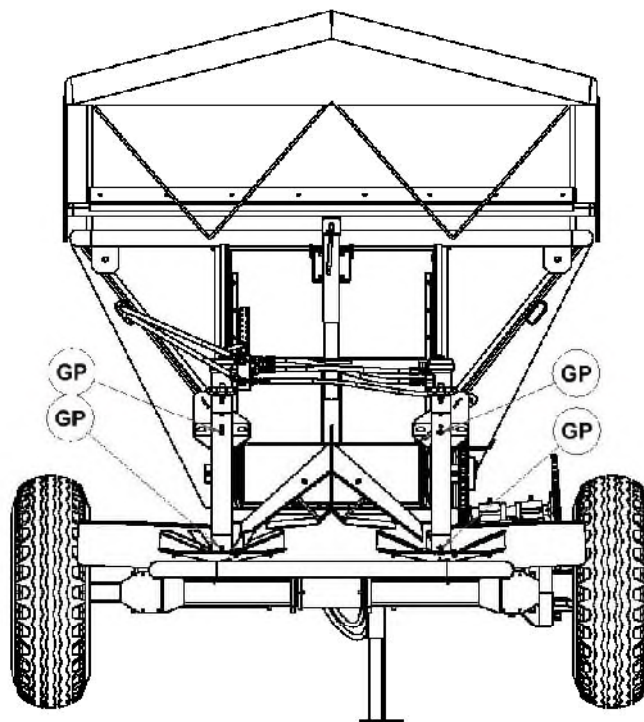


Figure 11 – Grease Points - Spinners

Lubrication Requirements: 1 pump per grease nipple per 10 hours operation

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REPLACEMENT PARTS

- To order replacement parts, Contact your local dealer and please quote the spreader type and serial number as detailed on the serial number plate. Please refer to the separate Illustrated Spare Parts Catalogue for in-depth information or contact parts@agriquip.co.nz

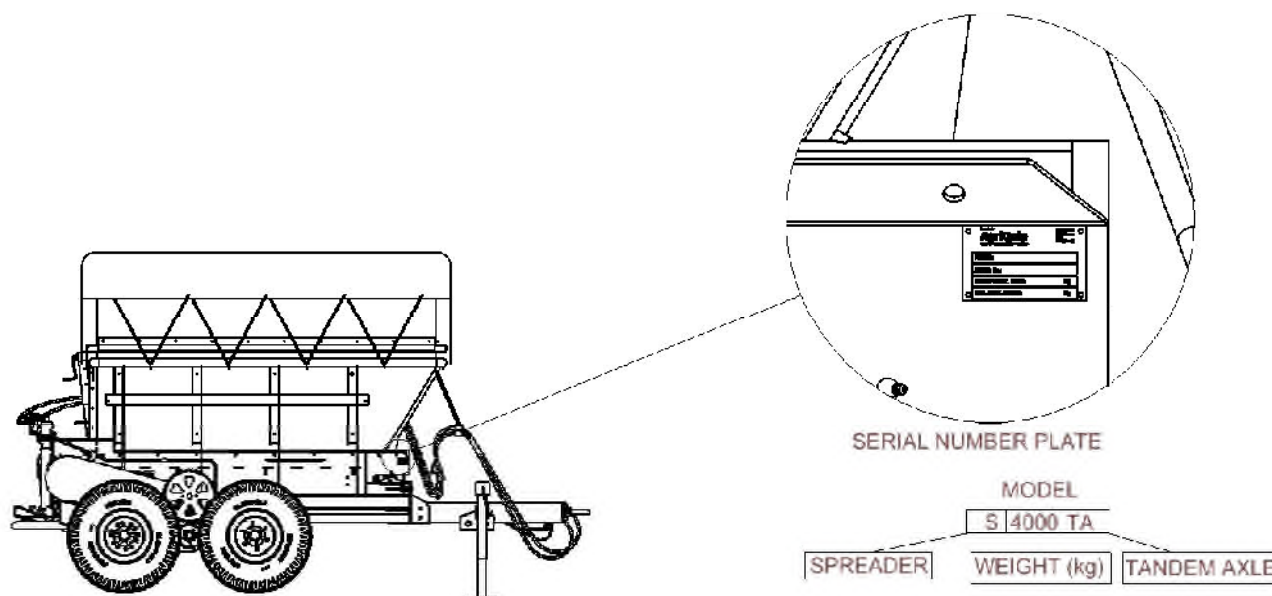


Figure 12 - Identification

Only use genuine AGRIQUIP replacement parts!

parts@agriquip.co.nz

Due to AgriQuip's on-going commitment to product improvement, we reserve the right to change at any time, product specifications and configurations of this product without prior notice.

Every care has been taken to compile the contents of this document and it is expected some errors may exist at the time of publication that AgriQuip cannot be held responsible for. Please contact AgriQuip if you have any concerns relating to the accuracy of information detailed in this manual and for any assistance relating to information not listed for this product.



TORNADO CUB SPREADERS



ILLUSTRATED SPARE PARTS CATALOGUE

CUB
Tornado

CUB TORNADO

SPREADERS 4000/6000

"PROUD TO BE NEW ZEALAND MADE"

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Replacement Parts
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QUICK PARTS SEARCH - SUPPLIED BY AGRIQUIP

TORNADO SPREADERS: 4000, 6000

Effective Date: Nov 2013

	Qty	S4000TA	S6000TA					Ref Pages
Chassis								
Wheel Hub (Qty per Hub)								
Hub	1	SP4520	SP6520					
Inner Bearing (Large)	1	SP4521	SP6521					
Outer Bearing (Small)	1	SP4522	SP6522					
Seal	1	SP4523	SP6525					
Wheel Nut	24	SPU319	SPU319					
Wheel Assembly (Qty per spreader)								
Wheel Assy (Standard)	4	SPU320	SPU320					
Tyre Only - (Standard)	4	SPU040	SPU040					
Tyre - Only 4W (Option)	4	SP6431	SP6431					
Tyre - Only Traction (Option)	4	SP6432	SP6432					
Tube	A/R							
Rim - 9"	4	SPU156	SPU156					
Rim - 13"	4	SP6430	SP6430					
Idler Hub								
Hub	1	SPU349	SPU340					
Inner Bearing (Large)	1	SPU343	SPU343					
Outer Bearing (Small)	1	SPU344	SPU344					
Seal	1	SPU345	SPU345					
Belt Assembly								
Feed Belt, Chain, Joiner Assy (Complete)	1		SP6303					
Feed Belt Only	1	SP4055J	SP6304					
Chain Feed Bar Assy	1	SP4101	SP6326					
Joiner - Hinge - Belt	1	SP4055J	SP6423					
Joiner - Hinge Rod - belt	1	SP4055JR	SP6424					
Rivet	A/R	SPU055R	SPU055R					
Washer - 5/5	A/R	SPU055W	SPU055W					
Skirts (Rubber Bin Seals)								
Side	2	SP4082	SP6390					
Forward	1	SP4029	SP6380					
Towing Eye (12000Kg, 44mm Dia)								
Tow Eye (Inner Swivle Eye Only)	1	SP4385	SP4385					
Outer Housing - Bolted (inc replacement eye)	1	SP4370	SP4370					
Jack Assy (inc Jack Tube Assy)	1	SP4360	SP4360					
Drive System								
Gears								
Gear - 48T	1	SPU016-48	SPU016-48					
Share Bolt - 48T Sprocket	2	SPU322	SPU322					
Gear - 24T	1	SP4480	SP4480					
Sprocket								
Sprocket - 11T	1	SP4085B	SP4085B					
Sprocket - 23T Drive Hub	1	SP4481	SP4481					
Wheel Drive Sprocket Assy	1	SP4308	SP4308					
Sprocket - 36T	1	SPU011	SPU011					
Dead Eye (Shaft Journal Bearings)	6	SPU012	SPU012					
Chain								
Sprocket Drive (Wheels)	1	SPU326	SPU326					
Mat Drive	1	SPU315	SPU315					
Joining Link	2	SPU325	SPU325					

QUICK PARTS SEARCH - SUPPLIED BY AGRIQUIP

Effective Date: Nov 2013

TORNADO SPREADERS: 4000, 6000

Qty	S4000TA	S6000TA				Ref Pages
Tensioner (Chain)						
Tensioner	1	SP4070	SP4070R			
Tensioner Roller	1	SP4070R	SP4070R			
Hydraulics						
Hydraulic Motor	1	SPU003	SPU003			
Hyd Motor - Seal Kit Only	A/R	SPU003SK	SPU003SK			
Control Valve	1	SPU004	SPU004			
Engage Ram						
Ram	1	SPU057	SPU057			
Seal Kit	A/R	SPU125	SPU125			
Hoses						
Hose Kit (all below inc fittings)	1		270813			
Main Delivery	1	SP4500	SP6500			
Main Return	1	SP4501	SP6501			
R/H Spinner feed	1	SP4502	SP6502			
R/H Spinner Return	1	SP4503	SP6503			
Engagement Hose	1	SP4404	SP6404			
R/H Drain	1	SP4505	SP6505			
Engage Hose inc QC (option)	1		SP6506			
Slides						
Rear Door						
Horizontal Door Slide	1		SP6346			
Vertical Door Slides	4	SP4410	SP4410			
Spinners (Qty per Spinner)						
Spinner Assy (Less coupler, motor, flights)						
Spinner Assy (Spares)	2	SPU321	SPU321			
Individual Parts						
Outer Tube Assy	1	SPU307	SPU307			
Spinner Shaft - Disc assembly	1	SPU306	SPU306			
Drive Coupler (2 x Halves & Element)	1	SPU005	SPU005			
Coupler Element (Rubber)	1	SPU073	SPU073			
Bearing	2	SPU182	SPU182			
Oil Seal	1	SPU181	SPU181			
Trust Bush	1	SPU305	SPU305			
Flights						
Flights - LH	4		SP6486			
Flights - RH	4		SP6487			
Fixings						
Cover (Standard)	1	SP4C	SP6C			
Cover Rail - Fixed (Standard)	1	SP6420	SP6420			
Cover Assy Kit - Rolling (Option)	A/R		SPU361			
Spreader Bar Assy	1	SP6417	SP6417			
Light kit (option)	1	SPU360	SPU360			

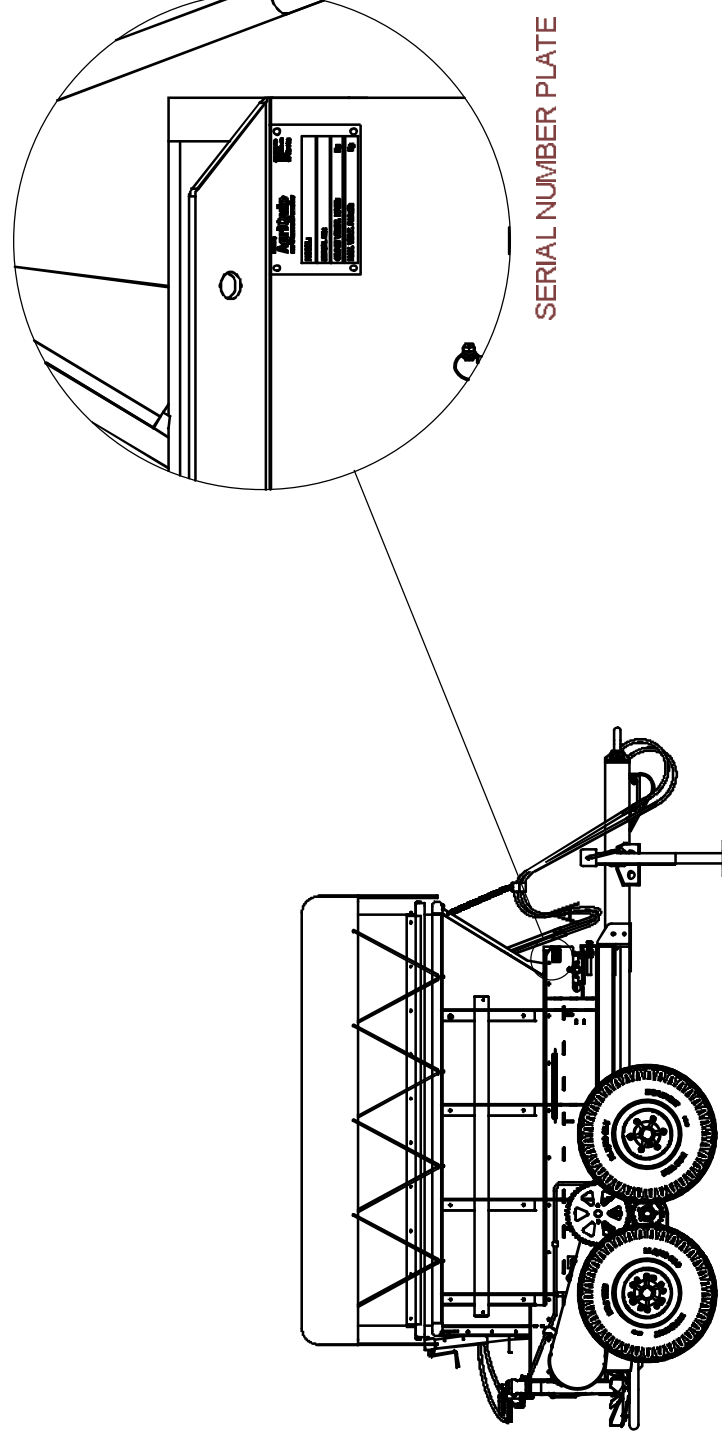
IDENTIFICATION

ASSEMBLY SPREADER IDENTIFICATION

Effective Date: 11/10/2013

MODELS EFFECTED: ALL SPREADERS SIN1309287 ONWARDS

INCLUDES MODELS: **S4000TA & S6000TA TORNADO**



IDENTIFICATION

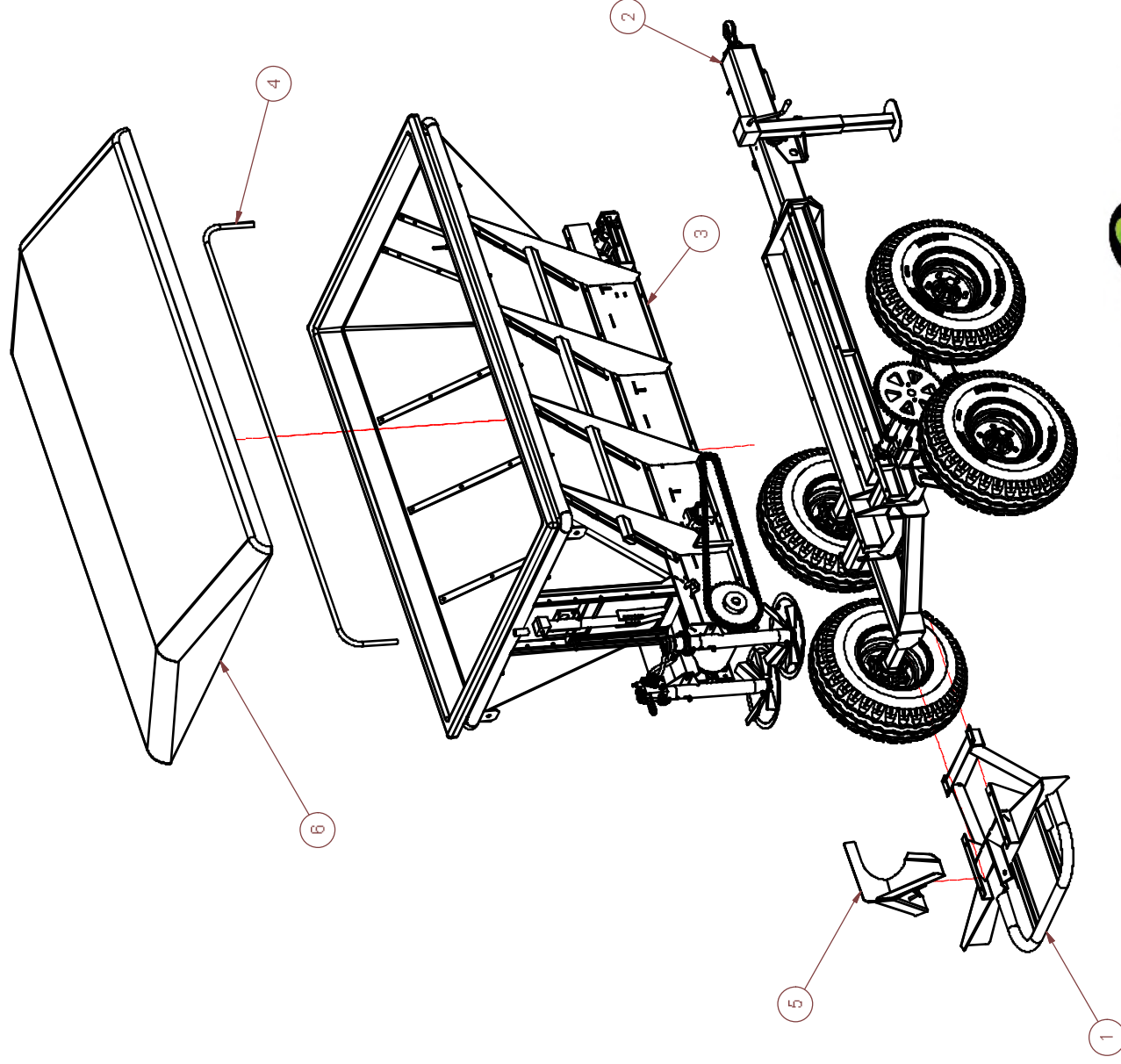
FINAL ASSEMBLIES 4000

ASSEMBLY SP4300

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S4000TA SPREADERS SN1308282 ONWARDS

INCLUDES MODELS: **S4000TA TORNADO**



FINAL ASSEMBLIES 4000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP4390	REAR DEFLECTOR - WELDED ASSY
2	1	SP4349	DRAWBAR ASSEMBLY INC RUNNING GEAR
3	1	SP4307	TOP FRAME INSTALLATION, INC RUNNING GEAR
4	1	SP4317	COVER RAIL - CUB TORNADO 4000
5	1	SP4513	DVERTER ASSY - 4T
6	1	SP4C	COVER ASSEMBLY - FIXED

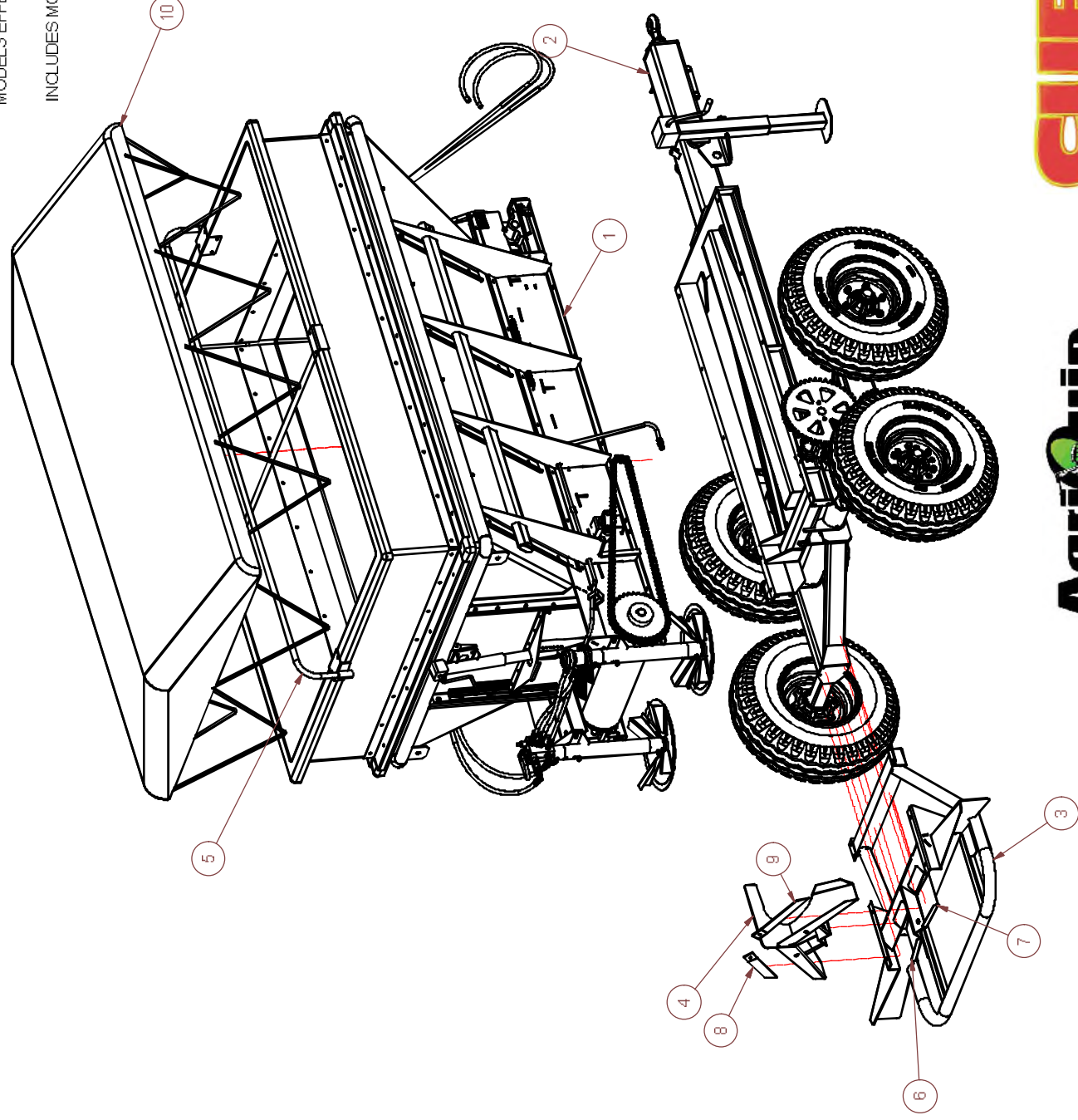
FINAL ASSEMBLIES 6000

ASSEMBLY SP6300

Effective Date: 11/10/2013

MODELS EFFECTED: ALL 8000T SPREADERS SN1309287 ONWARDS

INCLUDES MODELS: **S6000TA TORNADO**



AgriQuip

AgriQuip

Use Only Genuine AgriQuip Replacement Parts

FINAL ASSEMBLIES 6000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP6306	TOP FRAME INSTALLATION, INC RUNNING GEAR
2	1	SP6314	DRAWBAR ASSEMBLY INC RUNNING GEAR
3	1	SP6316	BUMPER FRAME - WELDED ASSEMBLY
4	1	SP6370	DIVERTER ASSY - 6T
5	1	SP6420	COVER RAIL - 6T
6	1	SP6476	DEFLECTOR - LOWER CHUTE WELD ASSY-LH
7	1	SP6479	DEFLECTOR - LOWER CHUTE WELD ASSY-RH
8	1	SP6482	VEIN - LH- DEFLECTOR
9	1	SP6483	VEIN - RH- DEFLECTOR
10	1	CUB4/6CC2	COVER ASSEMBLY - FIXED

UPPER BIN ASSEMBLY 4000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	2	SPU362	BUNG - HOSE RAIL
2	1	SPU325	LINK - CONNECTOR - DRIVE CHAIN
4	4	SPU012	BEARING - DEAD EYE (75mm)
5	1	SPU011	SPROCKET - 36T X 1" X 40mm SHAFT
6	4	SP4487	FLIGHT - RH - 4T - MII
7	4	SP4486	FLIGHT - LH - 4T - MII
8	2	SP4424	DOUBLER - INTERNAL - FRONT STAUNCHION
9	1	SP4400	REAR DOOR - ASSEMBLY
10	2	SP4387	BRACKET - WELDED ASSY - CHAIN TENTIONER
11	8	SP4345	DOUBLER - INTERNAL HOPPER
12	1	SP4341	FRAME ASSEMBLY - WELDED - GALV
13	2	SP4337	CHAIN ADJUSTER - WELDED ASSY
14	1	SP4311	SPINNER ASSY - RH
15	1	SP4302	BIN - 4T
16	1	SP4100	SHAFT - IDLER - FRONT
17	1	SP4074	BELT & CHAIN ASSY
18	1	SP4072	KEY - 10mm X 10mm X 65mm
19	1	SP4070R	ROLLER - CHAIN TENSIONER
20	1	SP4070	CHAIN TENSIONER ASSEMBLY
21	1	SP4013	SHAFT - DRIVEN - REAR
22	1	041212	HOSE KIT - 4000

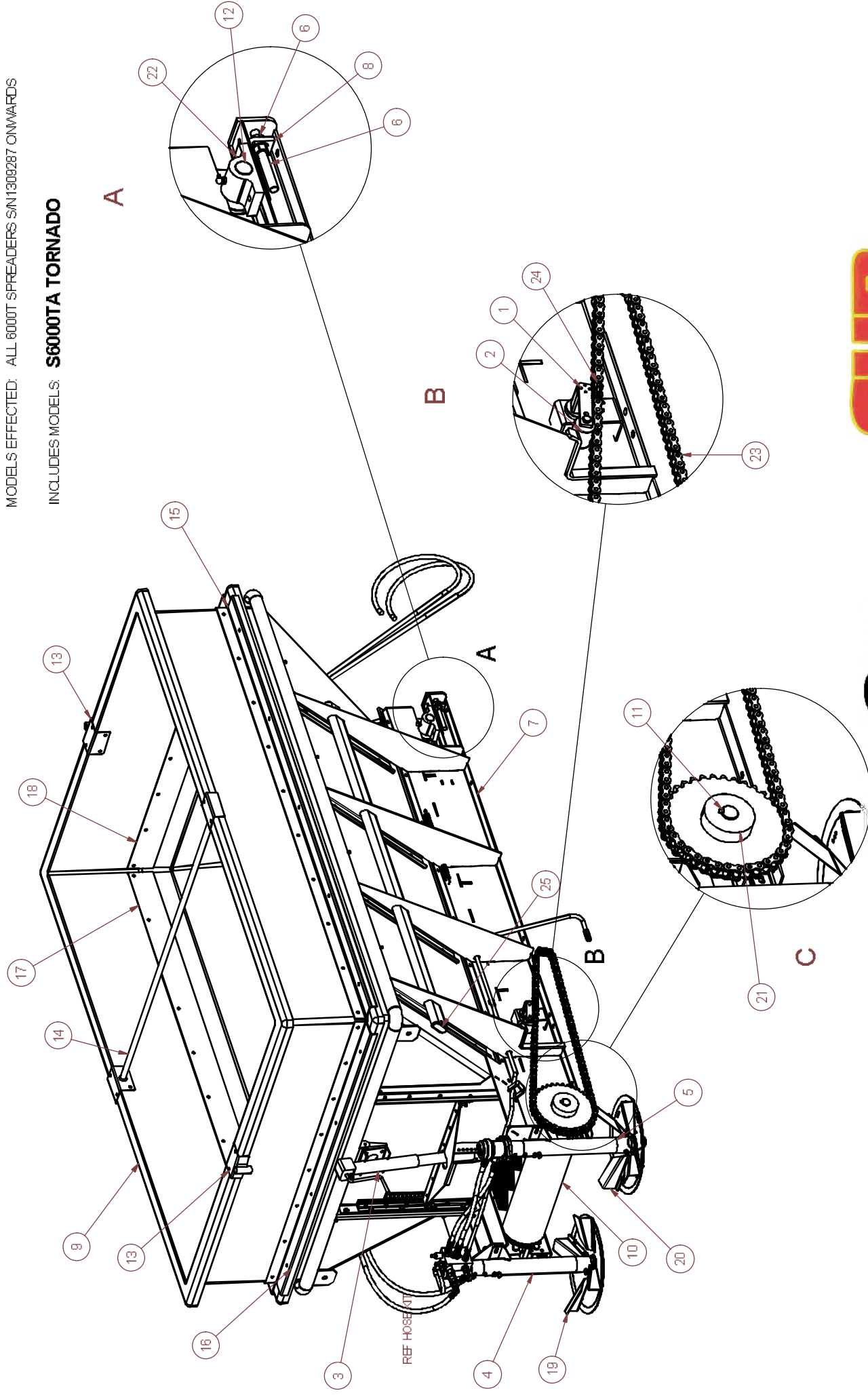
UPPER BIN SECTION 6000

ASSEMBLY SP6306

Effective Date: 11/10/2013

MODELS EFFECTED: ALL 8000T SPREADERS SN1308287 ONWARDS

INCLUDES MODELS: **S6000TA TORNADO**



Use Only Genuine AgriQuip Replacement Parts

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP4070	CHAIN TENSIONER ASSEMBLY
2	1	SP4070R	ROLLER - CHAIN TENSIONER
3	1	SP4306	REAR DOOR JACK ASSEMBLY
4	1	SP4310	SPINNER ASSY - LH
5	1	SP4311	SPINNER ASSY - RH
6	2	SP4337	CHAIN ADJUSTER - WELDED ASSY
7	1	SP4341	FRAME ASSEMBLY - WELDED - GALV
8	2	SP4387	BRACKET - WELDED ASSY - CHAIN TENTIONER
9	1	SP6302	BIN EXT - 6T
10	1	SP6303	FLOOR MAT & CHAIN ASSY - 6T
11	1	SP6362	DRIVEN SHAFT ASSY
12	1	SP6365	SHAFT ASSY - IDLER - FRONT 6T
13	2	SP6414	COVER CHANNEL ASSY - BIN 6T
14	1	SP6417	SPREADER BAR ASSY - BIN 6T
15	2	SP6470	DOUBLER - SIDE - BIN EXT
16	2	SP6471	DOUBLER - SIDE - BIN EXT
17	2	SP6472	DOUBLER - SIDE - BIN EXT
18	2	SP6473	DOUBLER - SIDE - BIN EXT
19	4	SP6486	FLIGHT - LH - 6T - MII
20	4	SP6487	FLIGHT - RH - 6T - MII
21	1	SPU011	SPROCKET - 36T X 1" X 40mm SHAFT
22	4	SPU012	BEARING - DEAD EYE (75mm)
23	1	SPU315	CHAIN - SPROCKET MAT DRIVE - 98 LINK
24	1	SPU325	LINK - CONNECTOR - DRIVE CHAIN
25	2	SPU362	BUNG - HOSE RAIL

P/N 270813 HOSE KIT			
ITE	QTY	PART NUMBER	DESCRIPTION
1A	1	SP6500	MAIN DELIVERY
1B	1	SP6501	MAIN RETURN
1C	1	SP6502	R/H SPINNER FEED
1D	1	SP6503	R/H SPINNER RETURN
1E	1	SP6404	ENGAGEMENT HOSE
1F	1	SP6505	R/H DRAIN
83	1	SP6404R2	
84	4	SPU300	GREASE NIPPLE - M10 X 90DEG S/S
85	1	Door decal	

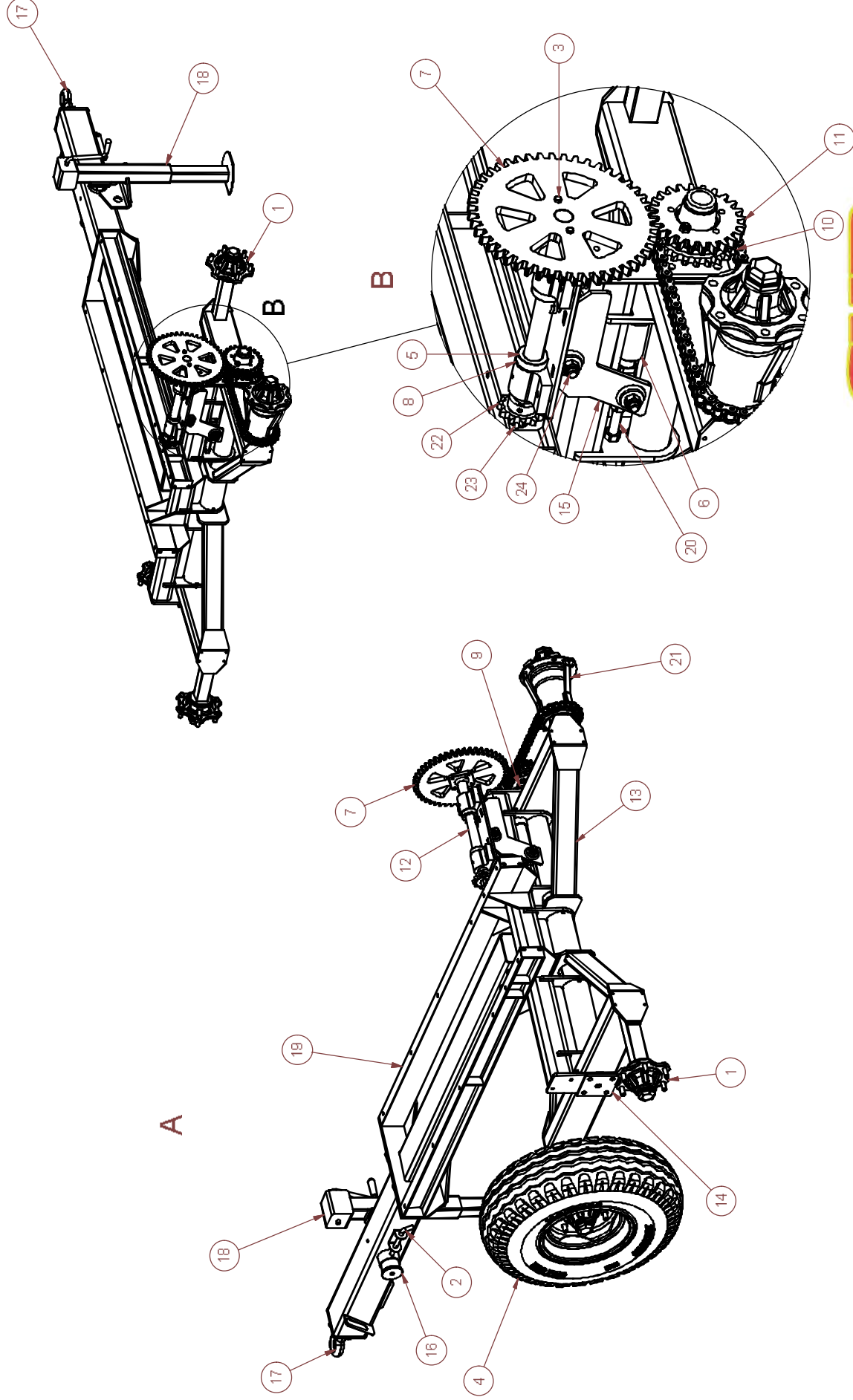
LOWER CHASSIS ASSEMBLY 4000

ASSEMBLY SP4349

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S4000TA SPREADERS SN1308282 ONWARDS

INCLUDES MODELS: S4000TA TORNADO



AgriQuip

AgriQuip

Use Only Genuine AgriQuip Replacement Parts

LOWER CHASSIS ASSEMBLY 4000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	3	SPU331	HUB - 60mm
2	1	SPU323	SLIDE BOLT PIN
3	2	SPU322	BOLT - SHARE - M8 X 50 - 4.4
4	4	SPU320	RIM AND TIRE ASSEMBLY - 11.5 - 80 - 15.3
5	2	SPU059	COLLAR - 40MM SHAFT
6	1	SPU057	ENGAGE RAM - CUB
7	1	SPU016-48	GEAR 46T
8	2	SPU012	BEARING - DEAD EYE (75mm)
9	1	SP6385	MAIN AXLE - WALKING ARM
10	1	SP4481	SPROCKET 23T- DRIVE HUB
11	1	SP4480	GEAR 24T - IDLER
12	1	SP4477	TRANSFER SHAFT ASSY - ROCKER PLATE - 4T
13	2	SP4450	WALKING ARM - WELDED ASSEMBLY
14	1	SP4445	RETAINER FLANGE - AXLE
15	1	SP4440	PIVOT ASSEMBLY - BELT ENGAGE
16	1	SP4429	PIVOT TUBE STOP PLATE
17	1	SP4385	TOW EYE ASSEMBLY - PURCHASED
18	1	SP4360	MAIN JACK ASSEMBLY
19	1	SP4350	DRAWBAR- REMOVEABLE - WELDED ASSY
20	1	SP4346	RAM TEE - ENGAGE STOP
21	1	SP4308	WHEEL DRIVE SPROCKET ASSY
22	1	SP4085B	11 TOOTH SPROCKET (1" CHAIN)
23	1	SP4072	KEY - 10 X 10 X 65
24	2	M20x180	BOLT - HEX - GALV

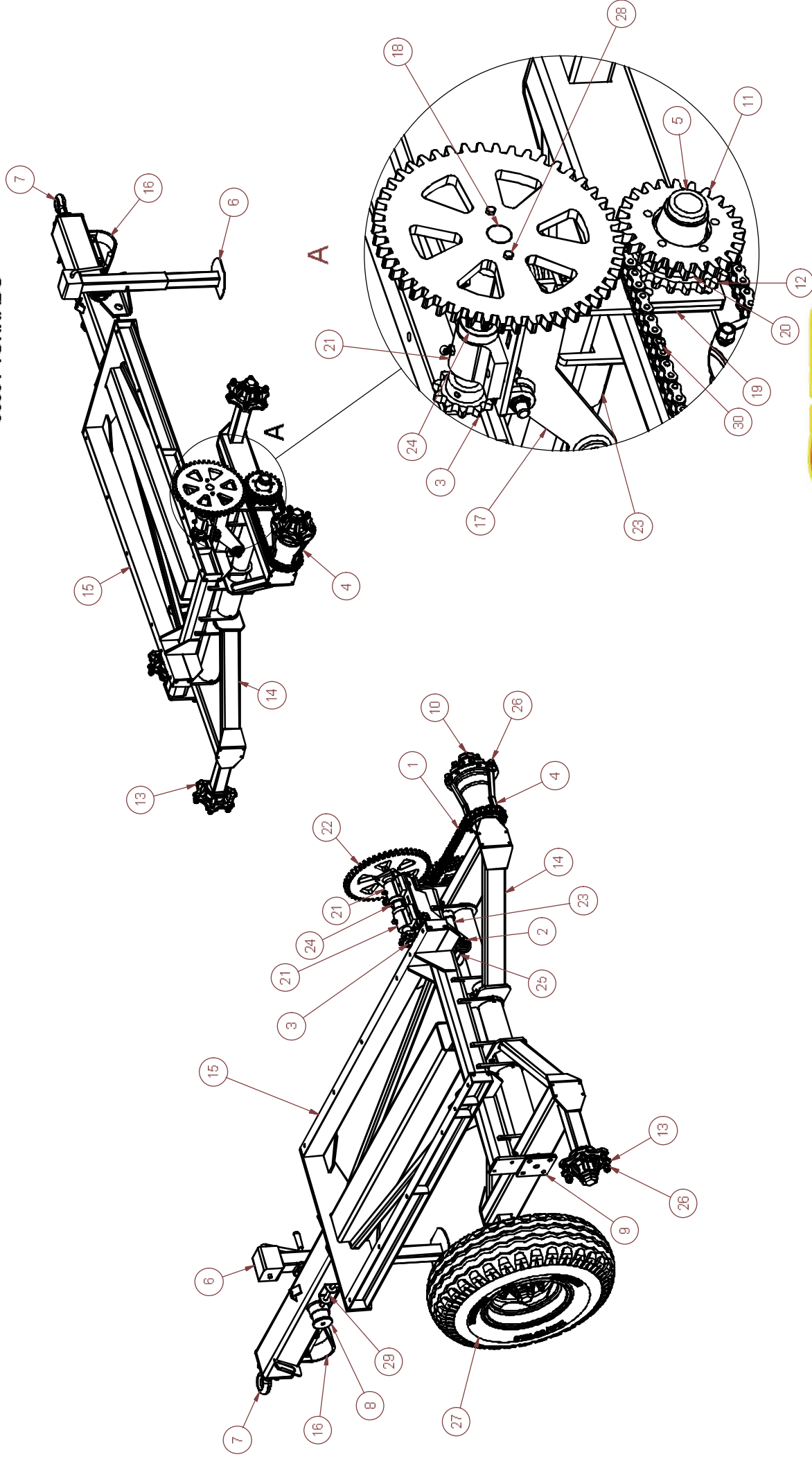
LOWER CHASSIS ASSEMBLY 6000

ASSEMBLY SP6314

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S6000TA SPREADERS SN1309287 ONWARDS

INCLUDES MODELS: 6000T TORNADO



AgriQuip

CUB
Tornado

LOWER CHASSIS ASSEMBLY 6000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	Chain2	
2	1	M20x180	BOLT - HEX - GALV
3	1	SP4085B	11 TOOTH SPROCKET (1" CHAIN)
4	1	SP4308	WHEEL DRIVE SPROCKET ASSY
5	1	SP4309	STUB AXLE ASSEMBLY - IDLER
6	1	SP4360	MAIN JACK ASSEMBLY
7	1	SP4370	TOW EYE ASSEMBLY - DRAW BAR
8	1	SP4429	PIVOT TUBE STOP PLATE
9	1	SP4445	RETAINER FLANGE - AXLE
10	1	SP4466	HUB - 60mm - MACHINED
11	1	SP4480	GEAR 24T - IDLER
12	1	SP4481	SPROCKET 23T- DRIVE HUB
13	3	SP4520	HUB - (60mm X 60mm AXLE)
14	2	SP6307	WALKING ARM - WELDED ASSEMBLY
15	1	SP6315	DRAWBAR- REMOVEABLE - WELDED ASSY
16	1	SP6323	QUICK HITCH STAND - (OPTION)
17	1	SP6350.R2	PIVOT ASSEMBLY - BELT ENGAGE
18	1	SP6360	TRANSFER SHAFT - ROCKER PLATE
19	1	SP6385	MAIN AXLE - WALKING ARM
20	1	SP6407	SPACER - 26T SPROCKET
21	2	SPU012	BEARING - DEAD EYE (75mm)
22	1	SPU016-48	GEAR 46T
23	1	SPU057	ENGAGE RAM - CUB
24	2	SPU059	COLLAR - 40MM SHAFT
25	1	SPU081	CYLINDER SPIGOT LOCATOR - RAM ENGAGE
26	24	SPU319	WHEEL NUT (COMES WITH HUBS)
27	4	SPU320	RIM AND TIRE ASSEMBLY - 11.5 - 80 - 15.3
28	2	SPU322	BOLT - SHARE - M8 X 50 - 4.4
29	1	SPU323	SLIDE BOLT PIN
30	1	SPU325	LINK - CONNECTOR - DRIVE CHAIN

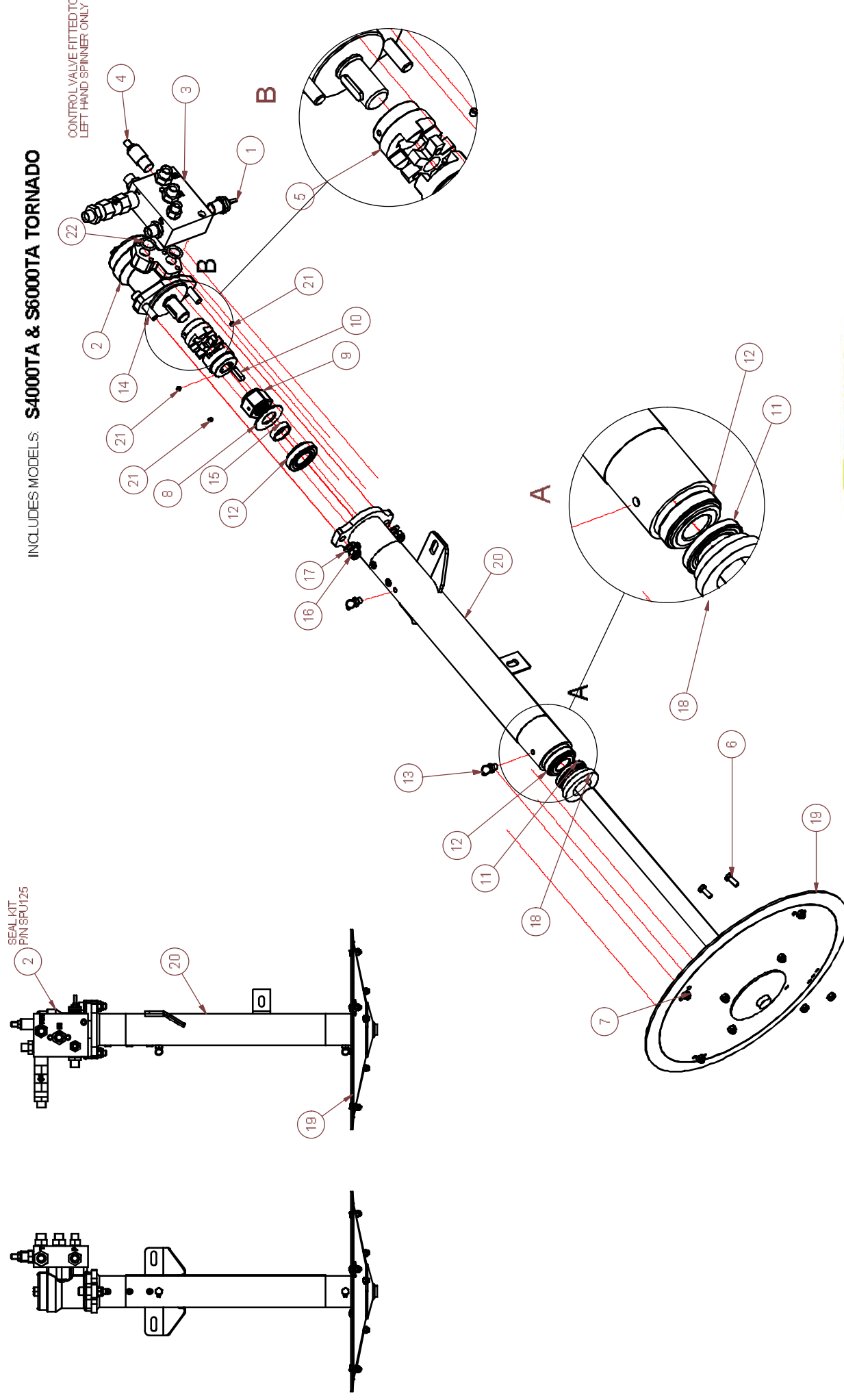
SPINNER ASSEMBLY 4000 & 6000

ASSEMBLY SP4310 / SP4311

Effective Date: 11/10/2013

MODELS EFFECTED: ALL SPREADERS S/N1309282 ONWARDS

INCLUDES MODELS: **S4000TA & S6000TA TORNADO**



CUB
Tornado

AgriQuip

Use Only Genuine AgriQuip Replacement Parts

SPINNER ASSEMBLY 4000 & 6000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP2119.01	FLOW CONTROL VALVE
2	1	SPU003	MOTOR - HYD
3	1	SPU004	HYDRAULIC VALVE ASSY
4	1	SPU004RV	RELIEF VALVE
5	1	SPU005	COUPLER INC 2 HALVES & ELEMENT
6	8	SPU05B	SET SCREW M8x20 S/S
7	8	SPU05N	NUT - NYLOCK - M8 S/S
8	1	SPU178	WASHER - FLAT
9	1	SPU179	NUT - NYLOCK - GRUB SCREW
10	1	SPU180	KEY - 8 X 30
11	1	SPU181	OIL SEAL 62 X 40 X 8
12	2	SPU182	BEARING - TAPER ROLLER
13	2	SPU300	GREASE NIPPLE - M10 X 90DEG S/S
14	2	SPU301	SOCKET HEAD SET SCREW - M12 x 50 S/S
15	1	SPU302	COLLAR - SPINNER
16	2	SPU303	NUT - NYLOCK -M12 S/S
17	4	SPU304	WASHER - FLAT - M12 S/S
18	1	SPU305	THRUST BUSH - SPINNER
19	1	SPU306	SPINNER SHAFT DISC ASSY
20	1	SPU307	SPINNER TUBE - WELDED ASSY
21	5	SPU308	GRUB SCREW M6
22	2	SPU309	O-RING - CONTROL BLOCK TO HYD MOTOR

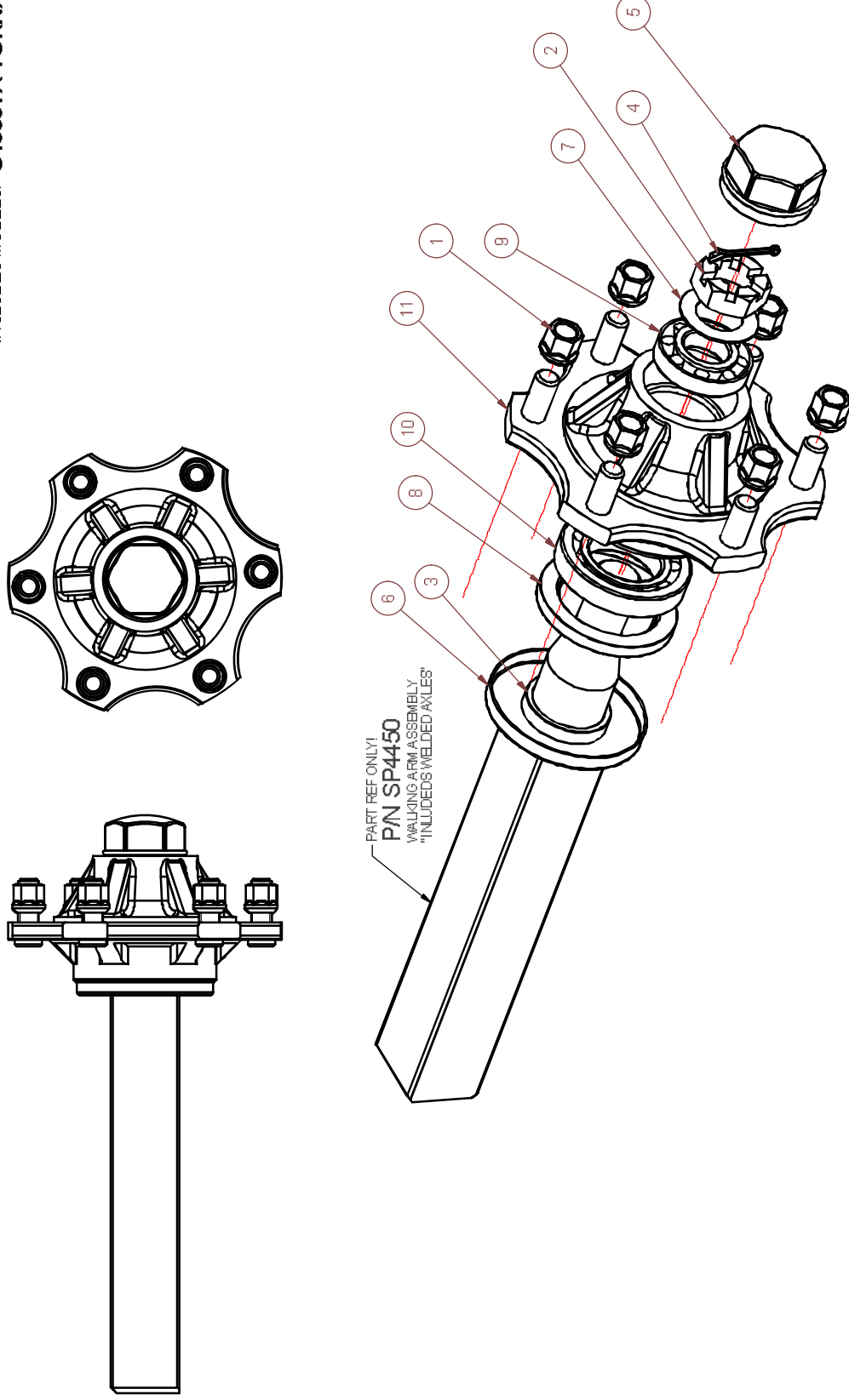
HUB ASSEMBLY 4000 (60 X 60 AXLE)

ASSEMBLY SP4519

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S4000TA SPREADERS SN1308282 ONWARDS

INCLUDES MODELS: **S4000TA TORNADO**



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	6	SPU319	WHEEL NUT (COMES WITH HUBS)
2	1	SP6524	NUT - CASTLE
3	1	SP4529	SPACER - SEAL INNER
4	1	SP4528	SPLIT PIN - 60mm AXLE
5	1	SP4527	BEARING CAP
6	1	SP4526	DUST CAP - REAR SEAL
7	1	SP4524	WASHER - OUTER BEARING
8	1	SP4523	SEAL - 72 X 105 X 10
9	1	SP4522	BEARING OUTER - 60mm AXLE
10	1	SP4521	BEARING INNER - 60mm AXLE
11	1	SP4520	HUB - (60mm X 60mm AXLE)

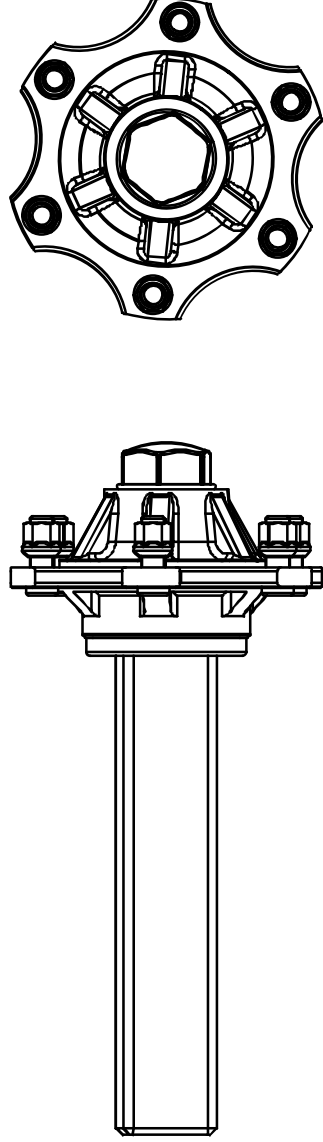
HUB ASSEMBLY 6000 (70mm X 70mm AXLE)

ASSEMBLY SP6619

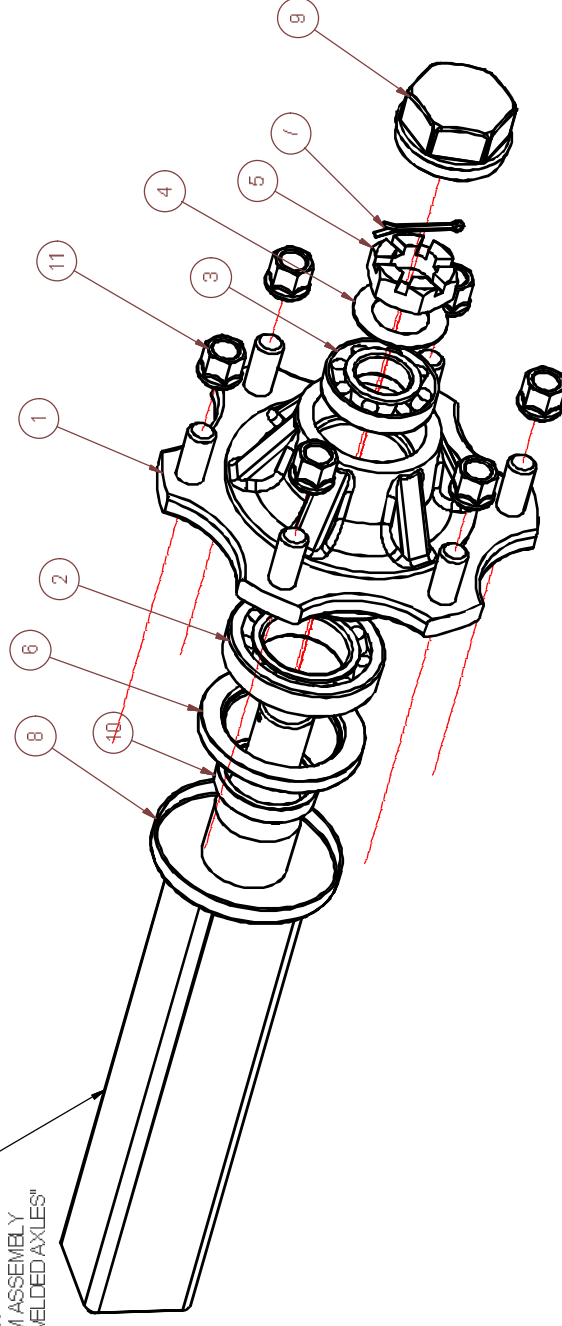
Effective Date: 11/10/2013

MODELS EFFECTED: ALL 8000T SPREADERS SN1309287 ONWARDS

INCLUDES MODELS: S6000TA TORNADO



PART REF ONLY!
P/N SP6307
WALKING ARM ASSEMBLY
"INCLUDES WELDED AXLES"



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP6520	HUB - (70mm X 70mm AXLE)
2	1	SP6521	BEARING INNER - 70mm AXLE
3	1	SP6522	BEARING OUTER - 70mm AXLE
4	1	SP6523	WASHER - OUTER BEARING
5	1	SP6524	NUT - CASTLE
6	1	SP6525	SEAL - 80 X 125 X 12
7	1	SP6526	SPLIT PIN - 70mm AXLE
8	1	SP6527	DUST CAP - REAR SEAL
9	1	SP6528	BEARING CAP
10	1	SP6529	SPACER - SEAL INNER
11	6	SPU319	WHEEL NUT (COMES WITH HUBS)

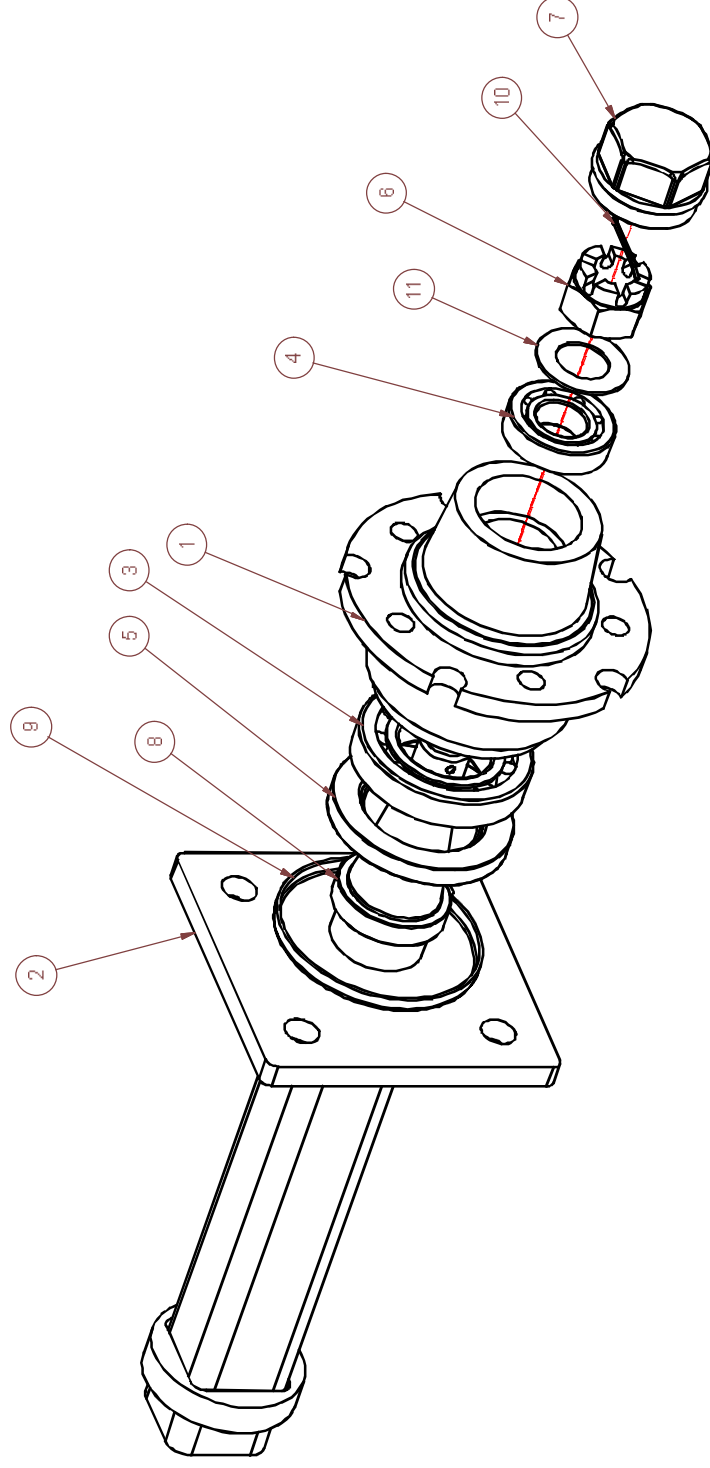
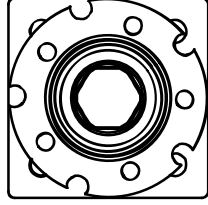
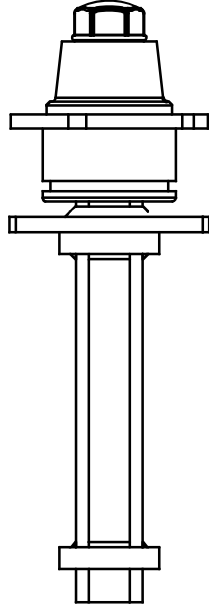
IDLER HUB ASSEMBLY 4000 & 6000

ASSEMBLY SP4309

Effective Date: 11/10/2013

MODELS EFFECTED: ALL SPREADERS S/N1309282 ONWARDS

INCLUDES MODELS: **S4000TA & S6000TA TORNADO**



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SPU340	HUB
2	1	SPU341	STUB AXLE ASSEMBLY - IDLER
3	1	SPU343	BEARING INNER - 30209
4	1	SPU344	BEARING OUTER - 30205
5	1	SPU345	SEAL - 55 X 88 X 10
6	1	SPU346	NUT - CASTLE
7	1	SPU347	BEARING CAP
8	1	SPU348	SPACER - SEAL INNER
9	1	SPU349	DUST CAP - REAR SEAL
10	1	SPU350	SPLIT PIN
11	1	SPU351	WASHER - OUTER BEARING

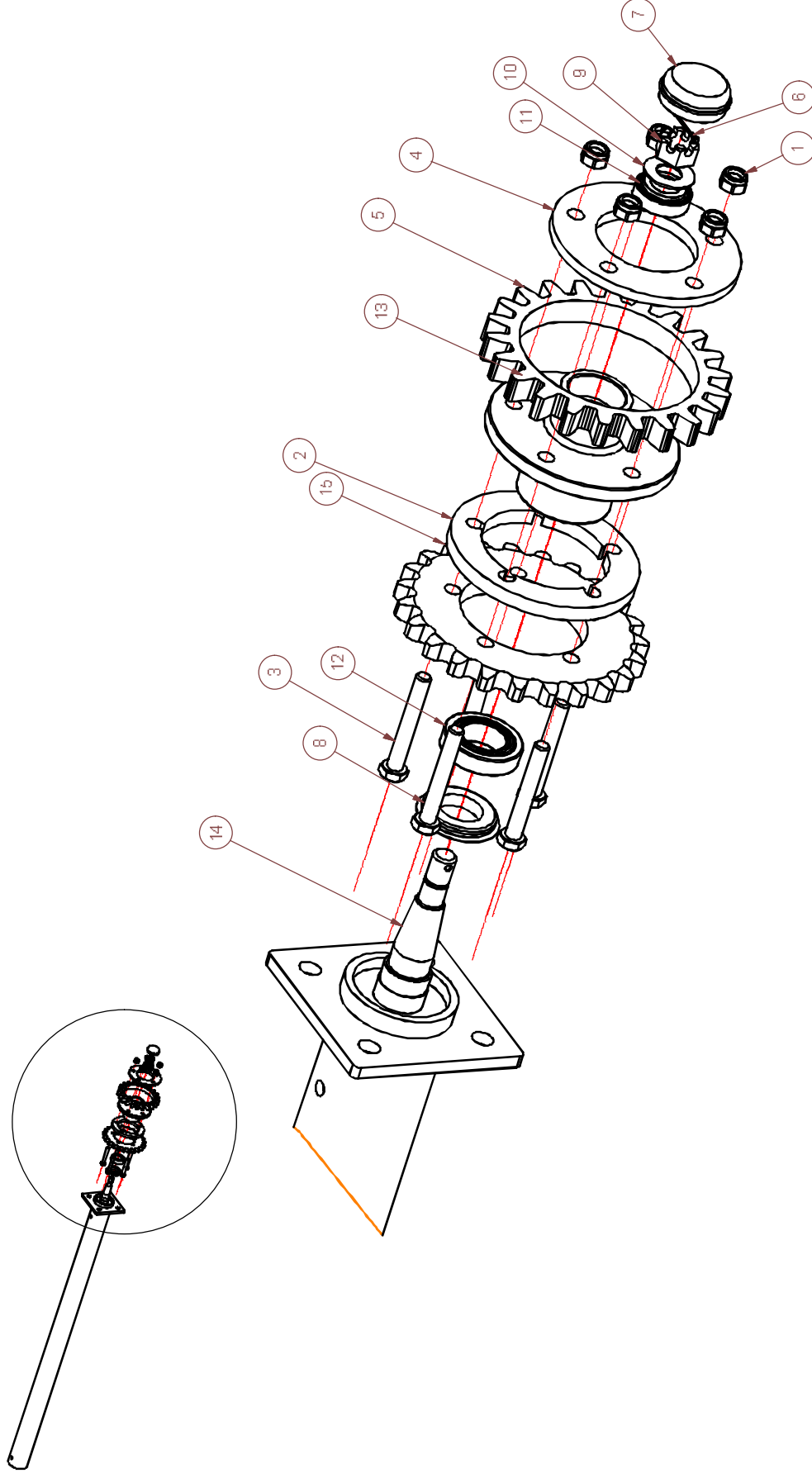
IDLER ASSY - S4000TA S/N 1210276 to 1210281 ONLY

ASSEMBLY IDLER ASSEMBLY

Effective Date: 11/10/2013

MODELS EFFECTED: S4000TA SPREADERS S/N 1210276 to 1210281

INCLUDES MODELS: S4000TA TORNADO



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	5	SPU316	NUT - NYLOCK -M12 GALV
2	1	SP6407	SPACER - 26T SPROCKET
3	5	SP4542	BOLT - HEX - M12 X 75 GALV
4	1	SP4541	CLAMP RING - IDLER GEAR
5	1	SP4540	GEAR 22T - IDLER
6	1	SP4539	SPLIT PIN
7	1	SP4538	GREASE CAP
8	1	SP4537	REAR DUST SEAL
9	1	SP4536	NUT - CASTLE
10	1	SP4535	WASHER - OUTER BEARING
11	1	SP4533	BEARING OUTER - S/N 1210276 to 1210281
12	1	SP4532	BEARING INNER - S/N 1210276 to 1210281
13	1	SP4531	HUB - S/N 1210276 to 1210281
14	1	SP4530	AXLE ASSEMBLY - S/N 1210276 to 1210281
15	1	SP4481	SPROCKET 23T- DRIVE HUB

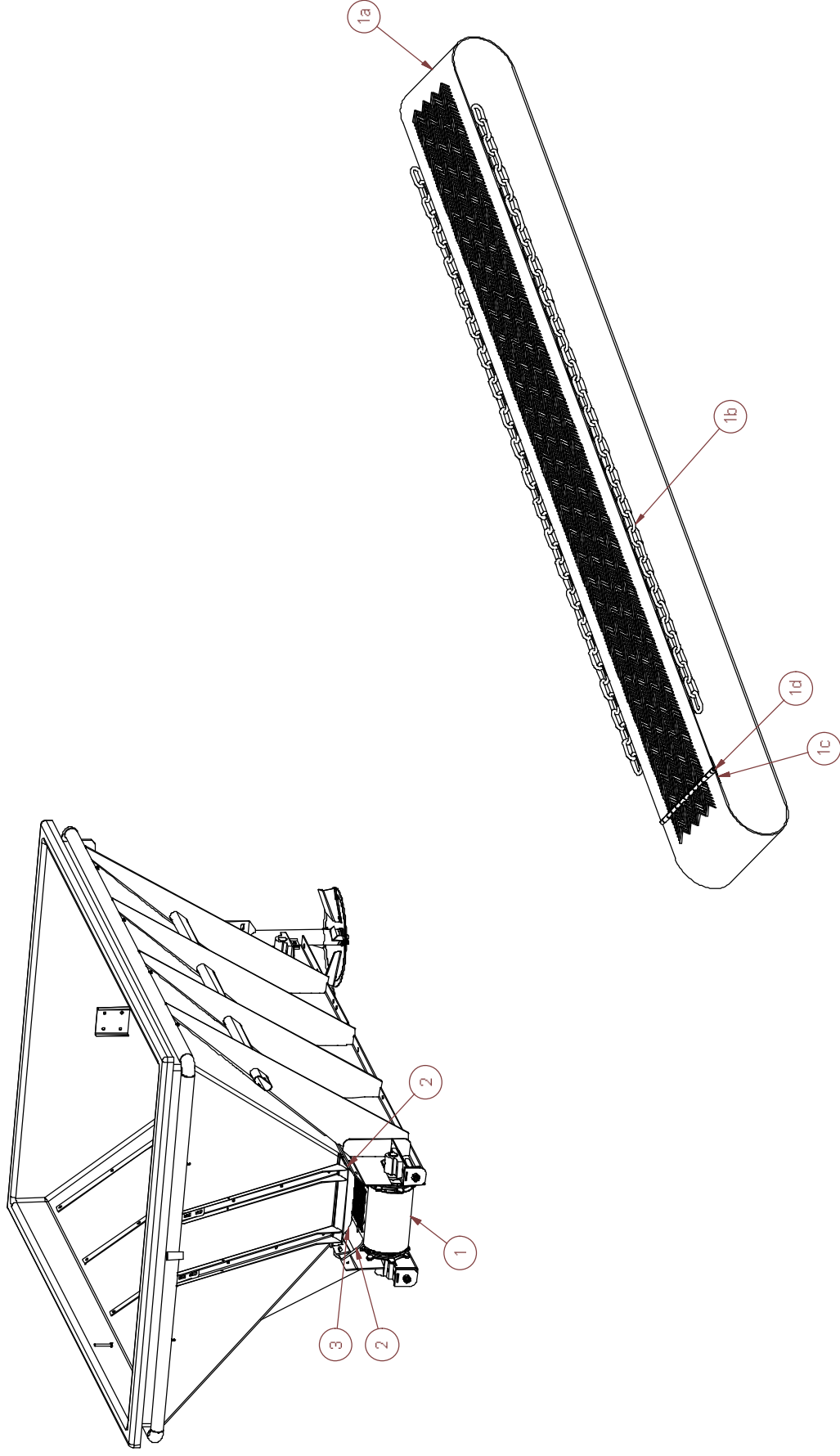
SEALS AND BELT ASSEMBLY 4000

ASSEMBLY
4T

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S4000TA SPREADERS SN1308282 ONWARDS

INCLUDES MODELS: **S4000TA TORNADO**



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP4074	BELT & CHAIN ASSY
2	2	SP4082	SKIRT - SIDE - 4T
3	1	SP4029	SKIRT - FRONT 4T

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1a	1	SP4055	MATT - CHEVRON - 4T
1b	1	SP4101	CHAIN SLAT ASSY ONLY
1c	1	SP4055J	JOINER - HINGE - BELT
1d	1	SP4055JR	JOINER - ROD - BELT HINGE

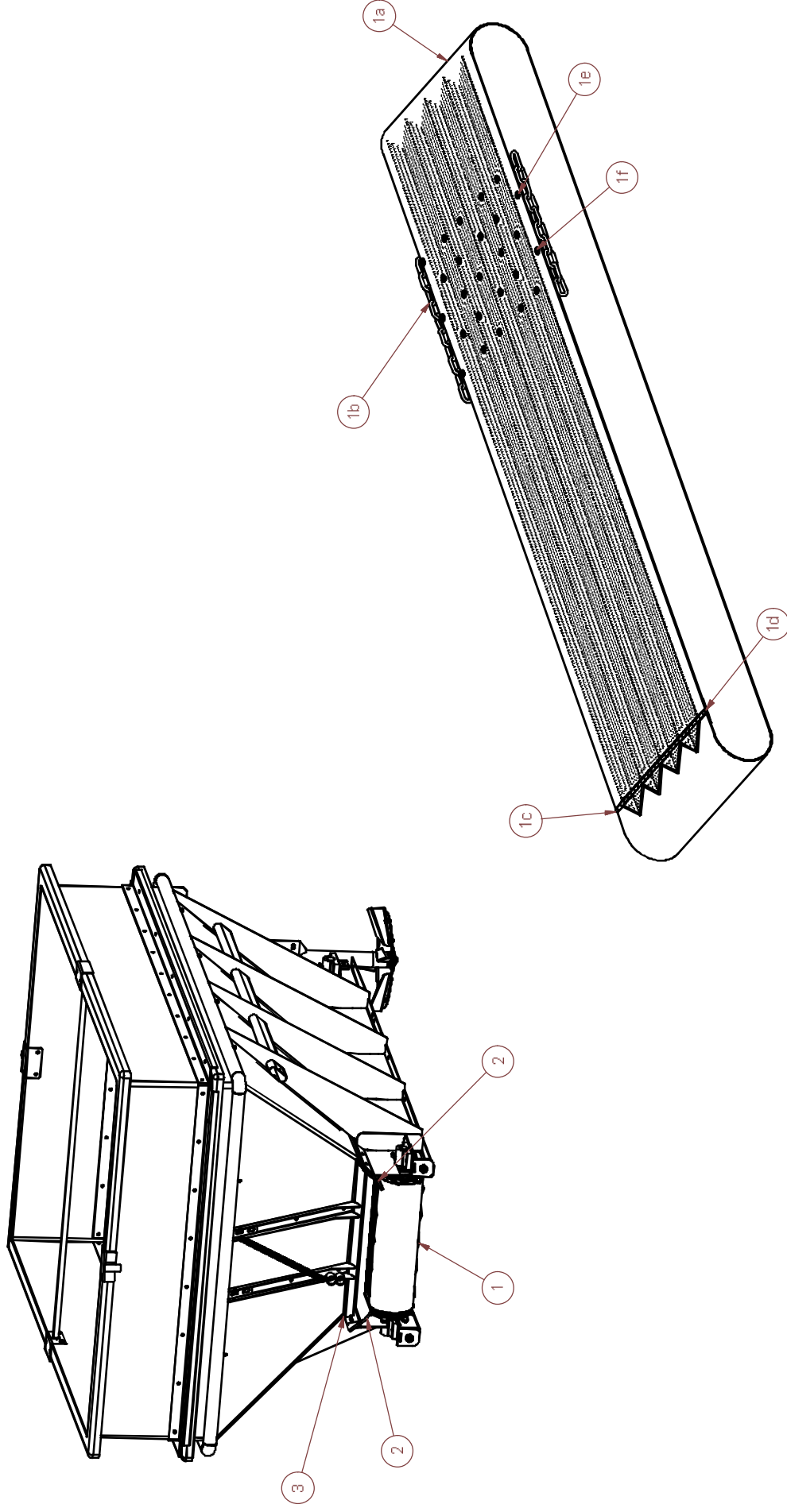
SEALS AND BELT ASSEMBLY 6000

ASSEMBLY SP6303

Effective Date: 11/10/2013

MODELS EFFECTED: ALL 8000T SPREADERS SN1309287 ONWARDS

INCLUDES MODELS: **S6000TA TORNADO**



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP6303	FLOOR MAT & CHAIN ASSY - 6T
2	2	SP6390	SKIRT - SIDE - 6T
3	1	SP6380	SKIRT - FRONT 6T

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1a	1	SP6304	FEED MAT - 650MM - 6T
1b	1	SP6326	CHAIN FEED BAR ASSY - 6T
1c	1	SP6423	JOINER - HINGE 6T - BELT
1d	1	SP6424	JOINER - ROD - 6T BELT HINGE
1e	A/R	SPU055W	WASHER - STAILLESS - BELT
1f	A/R	SPU055R	RIVET - CHAIN ASSEMBLY TO FEED BELT

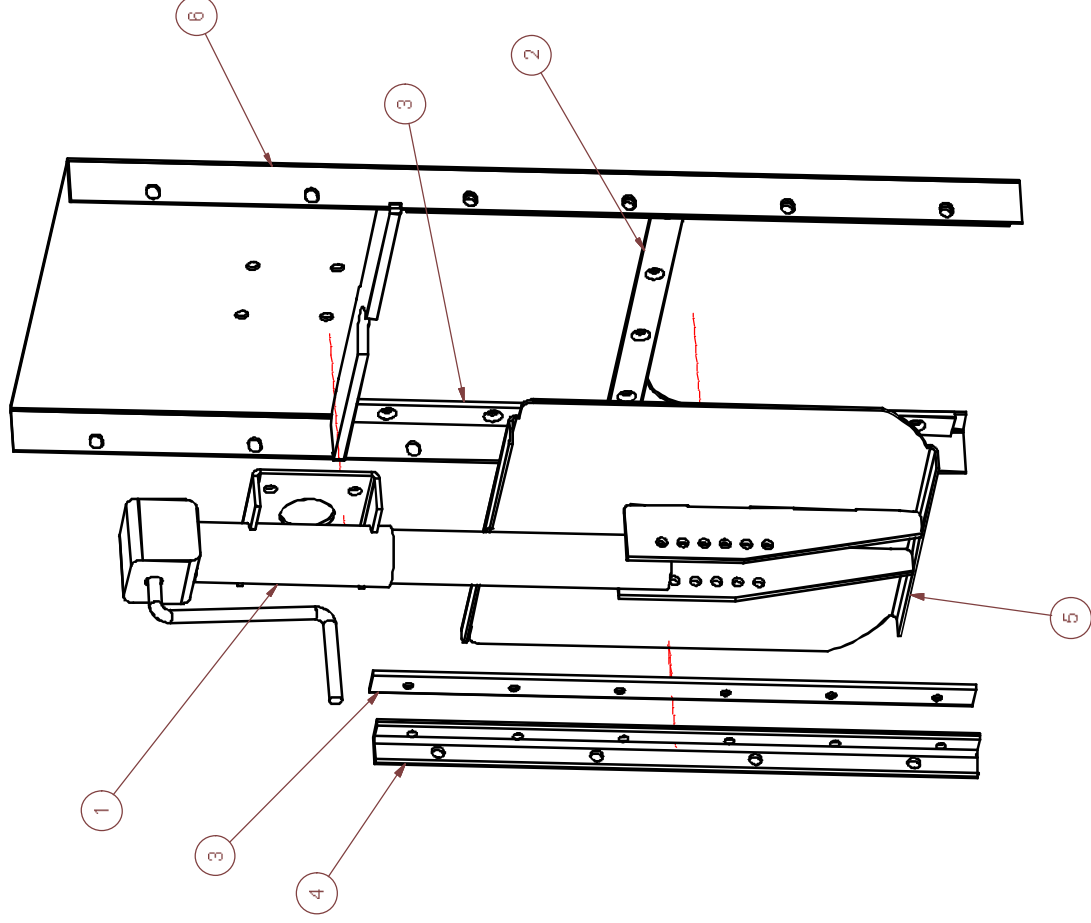
REAR DOOR 4000

ASSEMBLY SP4400

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S4000TA SPREADERS SN1308282 ONWARDS

INCLUDES MODELS: **S4000TA TORNADO**



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP6321	REAR DOOR JACK ASSEMBLY
2	1	SP4411	DOOR RUNNER - HORIZONTAL
3	4	SP4410	DOOR RUNNERS - VERTICAL
4	2	SP4408	ANGLE - SIDE RUNNER
5	1	SP4402	REAR DOOR - SLIDING - WELDED ASSEMBLY
6	1	SP4401	REAR DOOR - FIXED PLATE - WELDED ASSEMBLY

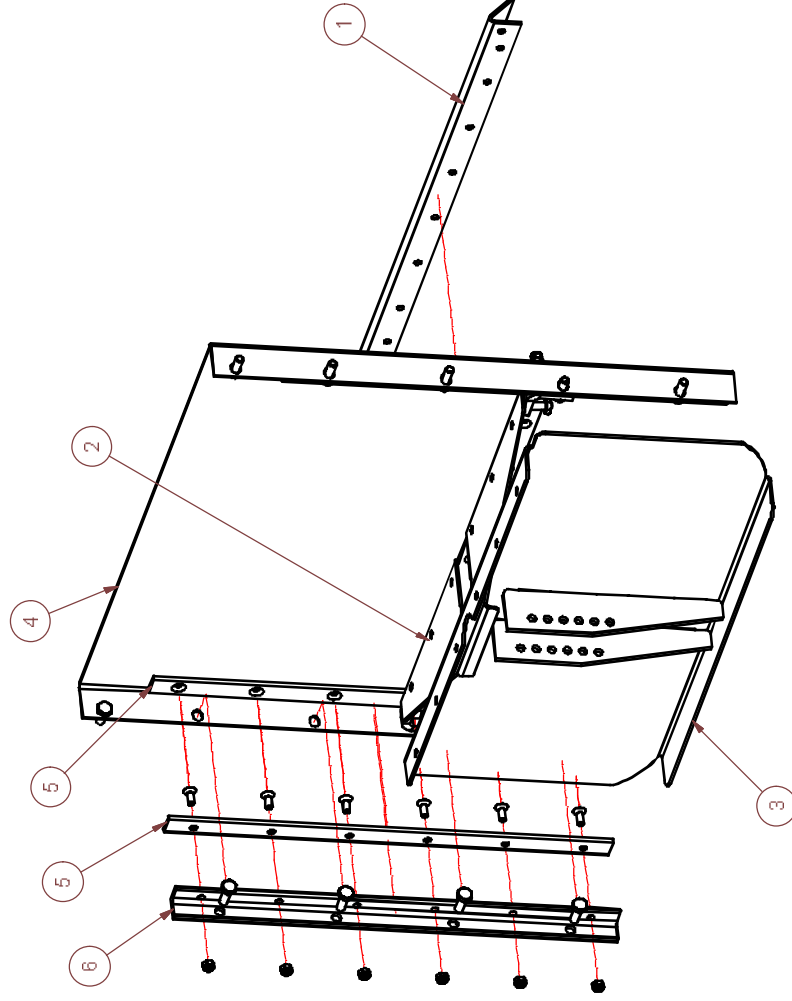
REAR DOOR 6000

ASSEMBLY SP6317

Effective Date: 11/10/2013

MODELS EFFECTED: ALL S6000TA SPREADERS SN1309287 ONWARDS

INCLUDES MODELS: **S6000TA TORNADO**



ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP6349	DOUBLER - INTERNAL BIN REAR
2	1	SP6346	HORIZONTAL DOOR SLIDE - REAR DOOR
3	1	SP6324.R2	REAR DOOR - SLIDING - WELDED ASSEMBLY
4	1	SP6318	REAR DOOR - FIXED PLATE - WELDED ASSEMBLY
5	4	SP4410	DOOR RUNNERS - VERTICAL
6	2	SP4408	ANGLE - SIDE RUNNER

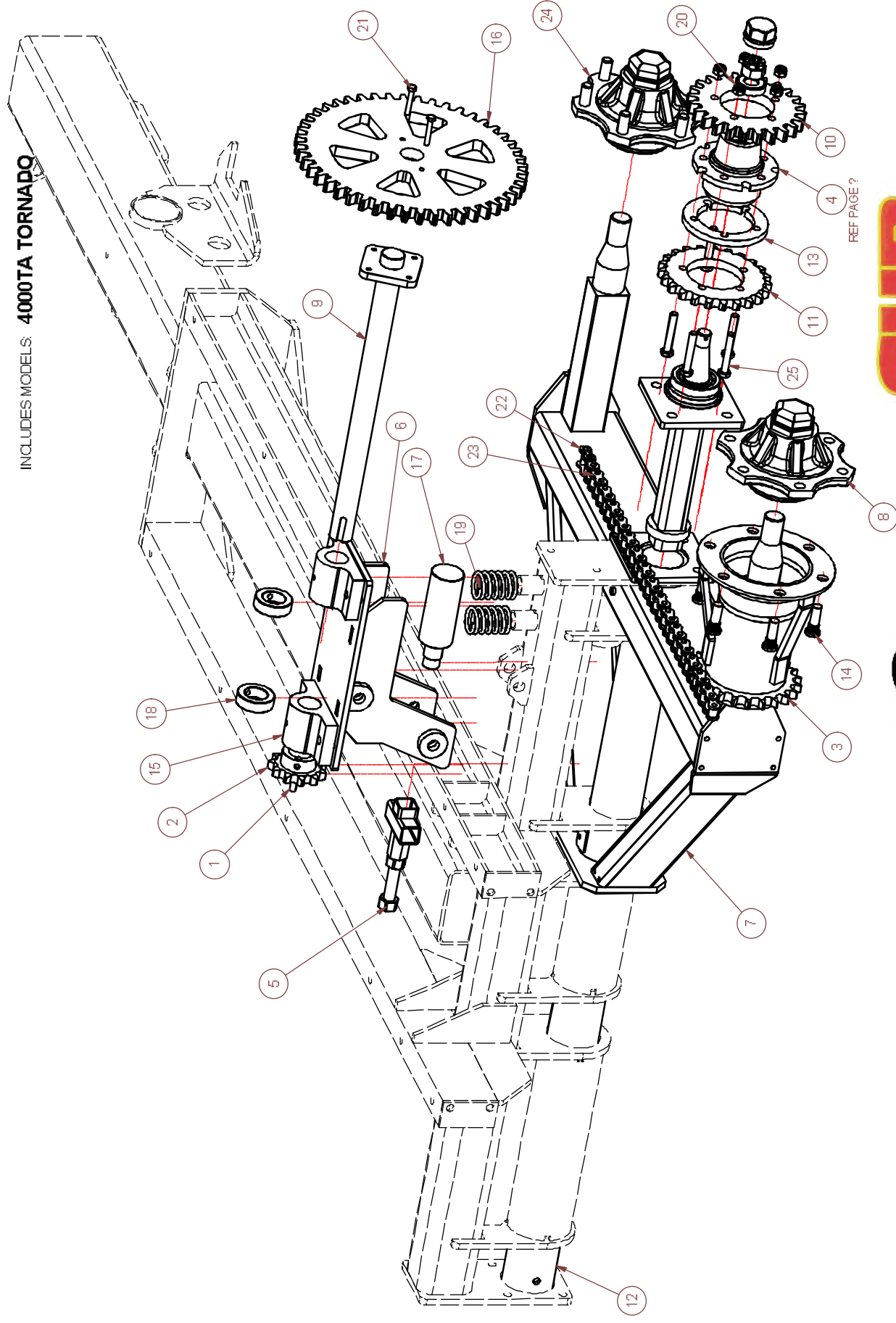
BELT DRIVE SYSTEM 4000

Effective Date: 11/10/2013

ASSEMBLY DRIVE SYSTEM 4T

MODELS EFFECTED: ALL S4000TA SPREADERS

INCLUDES MODELS: **4000TA TORNADO**



BELT DRIVE SYSTEM 4000

ILLUSTRATED PARTS LIST

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP4072	KEY - 10 X 10 X .65
2	1	SP4085B	11 TOOTH SPROCKET (1" CHAIN)
3	1	SP4308	WHEEL DRIVE SPROCKET ASSY
4	1	SP4309	STUB AXLE ASSEMBLY - IDLER
5	1	SP4346	RAM TEE - ENGAGE STOP
6	1	SP4440	PIVOT ASSEMBLY - BELT ENGAGE
7	2	SP4450	WALKING ARM - WELDED ASSEMBLY
8	1	SP4466	HUB - 60mm - MACHINED
9	1	SP4477	TRANSFER SHAFT ASSY - ROCKER PLATE - 4T
10	1	SP4480	GEAR 24T - IDLER
11	1	SP4481	SPROCKET 23T- DRIVE HUB
12	1	SP6385	MAIN AXLE - WALKING ARM
13	1	SP6407	SPACER - 26T SPROCKET
14	6	SP6530	WHEEL STUDS - 55MM (STD)
15	2	SPU012	BEARING - DEAD EYE (75mm)
16	1	SPU016-48	GEAR 46T
17	1	SPU057	ENGAGE RAM - CUB
18	2	SPU059	COLLAR - 40MM SHAFT
19	2	SPU062	SPRING - ROCKER PLATE RETURN
20	5	SPU316	NUT - NYLOCK -M12 GALV
21	2	SPU322	BOLT - SHARE - M8 X 50 - 4.4
22	1	SPU325	LINK - CONNECTOR - DRIVE CHAIN
23	1	SPU326	CHAIN - SPROCKET DRIVE - 62 LINK
24	3	SPU331	HUB - 60mm
25	5	SPU352	BOLT - HEX - M12 X 75 GALV

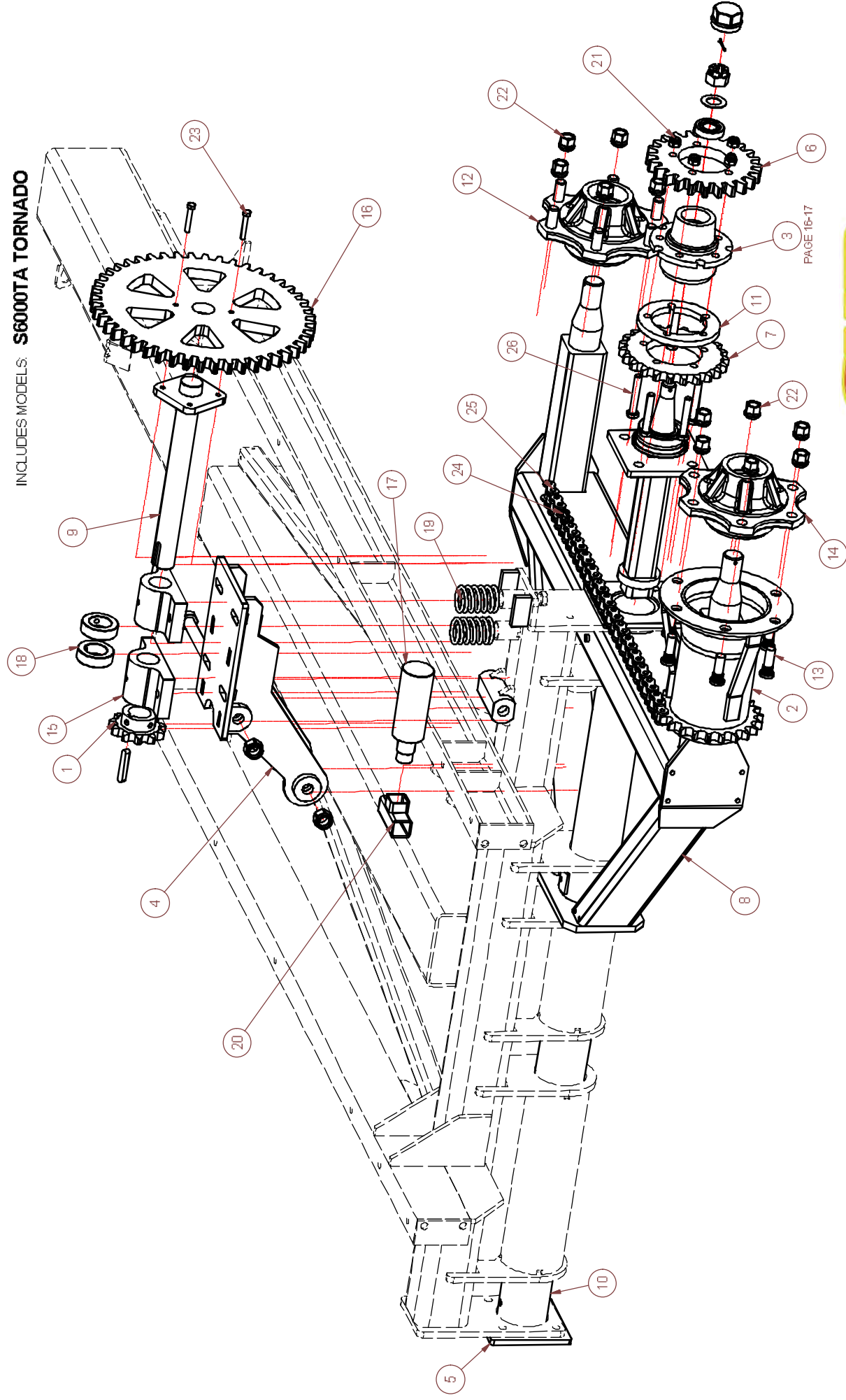
BELT DRIVE SYSTEM 6000

ASSEMBLY Drive System 6T

Effective Date: 11/10/2013

MODELS EFFECTED: ALL 8000T SPREADERS SN1309287 ONWARDS

INCLUDES MODELS: **S6000TA TORNADO**



AgriQuip

CUB
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Use Only Genuine AgriQuip Replacement Parts

BELT DRIVE SYSTEM 6000**ILLUSTRATED PARTS LIST**

ITEM No	No Req'd	PART No	DESCRIPTION
1	1	SP4085B	11 TOOTH SPROCKET (1" CHAIN)
2	1	SP4308	WHEEL DRIVE SPROCKET ASSY
3	1	SP4309	STUB AXLE ASSEMBLY - IDLER
4	1	SP4440	PIVOT ASSEMBLY - BELT ENGAGE
5	1	SP4445	RETAINER FLANGE - AXLE
6	1	SP4480	GEAR 24T - IDLER
7	1	SP4481	SPROCKET 23T- DRIVE HUB
8	2	SP6307	WALKING ARM - WELDED ASSEMBLY
9	1	SP6360	TRANSFER SHAFT - ROCKER PLATE
10	1	SP6385	MAIN AXLE - WALKING ARM
11	1	SP6407	SPACER - 26T SPROCKET
12	1	SP6520	HUB - (70mm X 70mm AXLE)
13	6	SP6530	WHEEL STUDS - 55MM (STD)
14	1	SP6533	HUB - (70mm X 70mm AXLE)
15	2	SPU012	BEARING - DEAD EYE (75mm)
16	1	SPU016-48	GEAR 46T
17	1	SPU057	ENGAGE RAM - CUB
18	3	SPU059	COLLAR - 40MM SHAFT
19	2	SPU062	SPRING - ROCKER PLATE RETURN
20	1	SPU081	CYLINDER SPIGOT LOCATOR - RAM ENGAGE
21	5	SPU316	NUT - NYLOCK -M12 GALV
22	12	SPU319	WHEEL NUT (COMES WITH HUBS)
23	2	SPU322	BOLT - SHARE - M8 X 50 - 4.4
24	1	SPU325	LINK - CONNECTOR - DRIVE CHAIN
25	1	SPU326	CHAIN - SPROCKET DRIVE - 62 LINK
26	5	SPU352	BOLT - HEX - M12 X 75 GALV

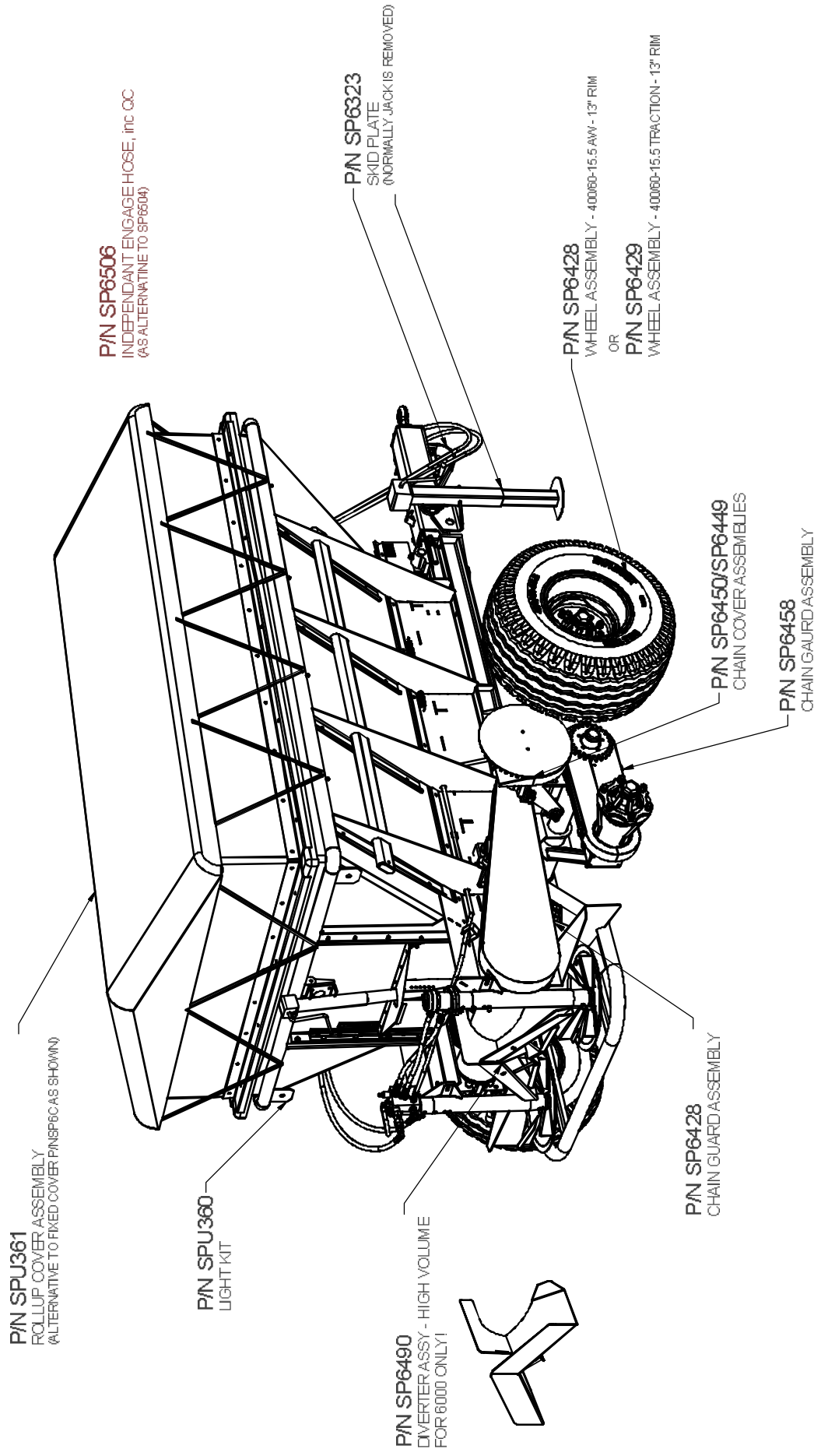
OPTIONS 4000/ 6000

Effective Date: 11/10/2013

ASSEMBLY OPTIONS

MODELS EFFECTED: ALL SPREADERS S/N1309287 ONWARDS

INCLUDES MODELS: **S4000TA & S6000TA TORNADO**



TORNADO CUB SPREADERS



NOTES:

A series of horizontal dotted lines for taking notes, starting from the line immediately following the 'NOTES:' label and extending to the bottom of the page.

TORNADO CUB SPREADERS



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