Grainline

Operators Manual

Swing Away Auger

GSA1280 & GSA1295 Models

Document Revision: REV05.012025

Contents

1. Introduction

Thank you for purchasing a Grainline Swing Away Auger. Every effort has been made to provide you with a reliable grain auger, specifically designed to complement and improve your farming operation.

Please read this manual thoroughly before operating your grain auger. The information included in this manual is crucial for the proper installation, operation, and maintenance of your grain auger.

All information in this publication is based on the latest product information available at the time of printing. Grainline is continually improving the design and performance of their products. They reserve the right to make any changes at any time without notice and without incurring any obligation. No part of this publication may be reproduced without written permission.

1.1 Serial Number Location

The serial number location for your auger is shown in the figure below. Please have the serial and model number ready when ordering parts, requesting service or other information. Record your auger details below for easy reference.

Your Auger Details:

Model:	G	S	A	1	2			**Serial Number:**			-				

Disclaimer

Grainline, their employees, distributors, and agents cannot be held responsible for any faulty electrical parts, installation, connections, insulation, leads, plugs, wiring or any other part used for the operation of the grain auger. Full responsibility rests solely and completely on the end user for the correct and legal installation thereof. Intended use of the auger, handling grain, pulse crops, treated seeds or similar materials. Use in any other way is considered as contrary to the intended use and is not covered by warranty.

1.2 Induction Sheet for Operators

Grainline augers have been designed and manufactured to meet the general engineering and safety standards of Australia. Various state regulations regarding safety, transport and operation may apply and must be followed by the operator. All personnel must be trained in the correct operation and safety procedures for the auger. Please refer to information within this manual for details and use the sign off sheet below to record initial and periodic reviews of the operator's manual with all personnel.

Date	Employee Name & Signature	Employer Name & Signature

1.3 Grainline Warranty Registration

Please ensure that you complete the warranty registration for your swing away auger as directed below. This will ensure that your details as the owner are accurate and allow a faster response time to any issues that may arise.

To complete your warranty registration please scan the QR code or go to:

www.grainline.com.au/warranty-registration

1.4 Grainline Warranty Conditions

Limited 2 year warranty for all products manufactured by Grainline.

What this warranty will cover.

- Grainline will at its own discretion, repair or replace without charge any part of our products which may be found defective in material and/or workmanship within 24 months of the original purchase date.
- At Grainline's request the customer will make the defective part available for inspection by Grainline or a dealer of Grainline products so cause of the faulty / defective part can be identified for accurate repair.
- It is the owner's responsibility to transport defective parts and/or units to their local service dealer who can negotiate a call-out fee at the owner's expense.
- A warranty form must be completed and sent to Grainline and authorisation is needed before a service dealer is able to commence any repairs on Grainline products.

What this warranty will not cover.

- Defects caused by depreciation or damage caused by normal wear, accidents, improper maintenance, improper use and abuse of the product, alterations, or failure to follow the instructions contained in the owner's manual for operation and maintenance.

- Transport cost for making Grainline products available for inspection and/or repair to and from the place where the warranty work is performed.

How to obtain service under this warranty.

Warranty service can be arranged by contacting either your Grainline Dealer or Grainline direct on 1800 810 498. Please have the auger model and serial number available as this will be required by the service technician.

2. Safety Information

The owner is responsible for the safe operation and maintenance of this equipment. Please note that information of special importance has been highlighted in this manual using the below signal words.

2.1 Hazard Labels

DANGER	Indicates an imminently hazardous situation that, if not avoided, will result in serious injury or death.
WARNING	Indicates a hazardous situation that, if not avoided, could result in serious injury or death.
CAUTION	Indicates a hazardous situation that, if not avoided may result in minor or moderate injury.
NOTICE	Indicates a potentially hazardous situation that, if not avoided, may result in property damage

2.2 General Safety

The Grainline grain auger must not be used when the operator is:

- Taking medication that causes drowsiness.
- Under the influence of alcohol or drugs
- Incompetent
- Not aware of the operating procedures

Manufacturers, retailers, owners, and operators all have responsibilities with regards to safety. Be aware of your responsibilities and carry them out. The owner or designated officer is responsible for the safe operation and maintenance of this equipment. The most important part of safe operation is a safety conscious operator who always remembers to:

- Keep children away from grain auger work area.
- Be aware of overhead electrical lines. Electrocution can occur without direct contact.
- Do not operate grain auger with any safety shield, cover or guard removed.
- Keep body, hair, and clothing away from all moving parts.
- Inspect drive belts, drivelines, cables, bolts and nuts and intake area before operating grain auger.
- Replace, repair, tighten and clean out any parts or areas that need attention.
- Keep well away from grain auger intake during operation.
- Petrol engines to be operated in an adequately ventilated area.

2.3 Intended Use

The Grainline Swing Away Auger has been designed and manufactured, to assist in the safe and effective transfer of various grain types. Use of the auger in any other way is considered as misuse and is not covered by the warranty.

2.4 Correct Usage

The Grainline auger must be used in accordance with the safety instructions contained within this manual. Only competent personnel who have received proper training and are familiar with the machine should operate and perform any service work on the auger. When the auger is being used hearing protection must be worn, and it is the owner's responsibility to provide the appropriate hearing protection to all others involved in the operation of the auger. When the auger is not in use, it must be immobilized – i.e., turned off and key removed from the power source. Please note, where guards and safety features are removed in this manual it is for illustration purposes only.

2.5 Incorrect Usage

The Grainline auger must not be used for anything other than the intended purpose set out by Grainline.

Incorrect use of the auger includes:

- Using the auger as a hoist or crane.
- Using the auger to transfer grains or materials other than dry, free-flowing food grains.

WARNING: Any modification to the Grainline auger without the approval of Grainline will void all warranty and could result in death or serious injury.

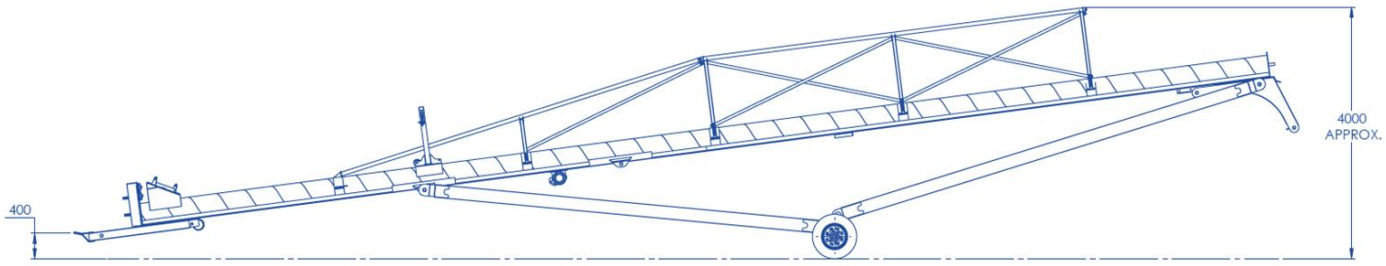
2.6 Transportation Safety

- Check applicable state or territory laws and regulations before transporting.
- Always travel at a safe speed and never exceed 50 kph.
- Never transport the swing away during heavy fog, snow, or heavy rain.
- Fully lower the auger before transporting and only raise when next to a storage facility.
- When towing always attach safety chains and use a suitable towing vehicle with a pin and retainer.
- Empty all grain out of the auger prior to transporting.
- Ensure axles are fully retracted and secured prior to towing.

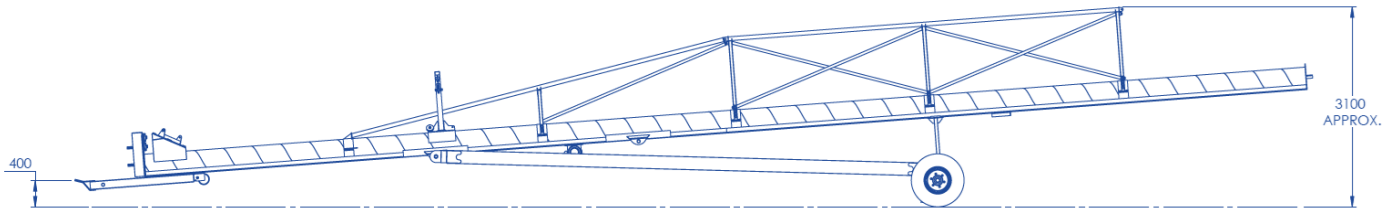
Towing

Depending on location and laws in your state or territory the swing away auger may require partial disassembly prior to towing as illustrated below. This is to reduce the auger barrel overhang past the axle.

Please refer to Section 5 of this manual for instructions.



GSA1280 - Transport Position with last section of barrel and truss removed.

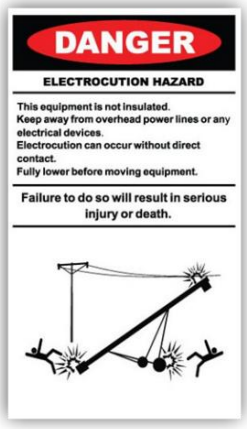


GSA1295 - Transport Position with front arms, slide runner, kicker and last section of barrel and truss removed.

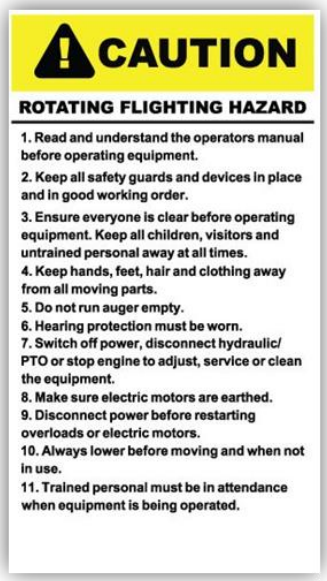
2.7 Safety Decals

Samples of the safety decals here are those used on the Grainline transportable augers.

WARNING: Regularly read all safety decals that appear on your Grainline auger and replace them if damaged. Failure to do so could result in serious injury or death.

Decal No.	Decal Description	Decal Detail
Decal 1.	**WINCH CABLE HAZARD** - Frequently inspect the entire length of the cable. - Stay clear of cable when equipment is being raised or lowered. - Ensure there is always a minimum of four revolutions of cable around the winch drum.	
Decal 2.	**HIGH PRESSURE HYDRAULIC OIL HAZARD** - Warns of the hazards associated with high pressure hydraulic systems. - Frequently inspect all hoses and replace immediately if damaged. - Ensure pressure is released before disconnecting hoses.	
Decal 3.	**ROTATING PTO DRIVE HAZARD** - Do NOT operate machine unless guards and shields are in place and in good working order. - Keep body parts, hair, and clothing away from rotating PTO drive shaft.	
Decal 4.	**ELECTROCUTION HAZARD** - When operating or moving keep auger away from overhead power lines and devices. - Fully lower auger before moving. - Electrocution can occur without direct contact.	

Decal 5.	**UPENDING HAZARD** - Anchor intake end and/or support discharge end to prevent upending. - Intake end must always have downward weight. Do not release until attached to tow bar or resting on ground. - Do not raise intake end above tow bar height.	
Decal 6.	**DO NOT RUN AUGER EMPTY** - Hearing protection must be worn. - Keep electric motor and leads protected against moisture.	
Decal 7.	**EXPOSED ROTATING FLIGHTING** - Keep hands, feet, and clothing away from intake. - Keep guarding in place.	

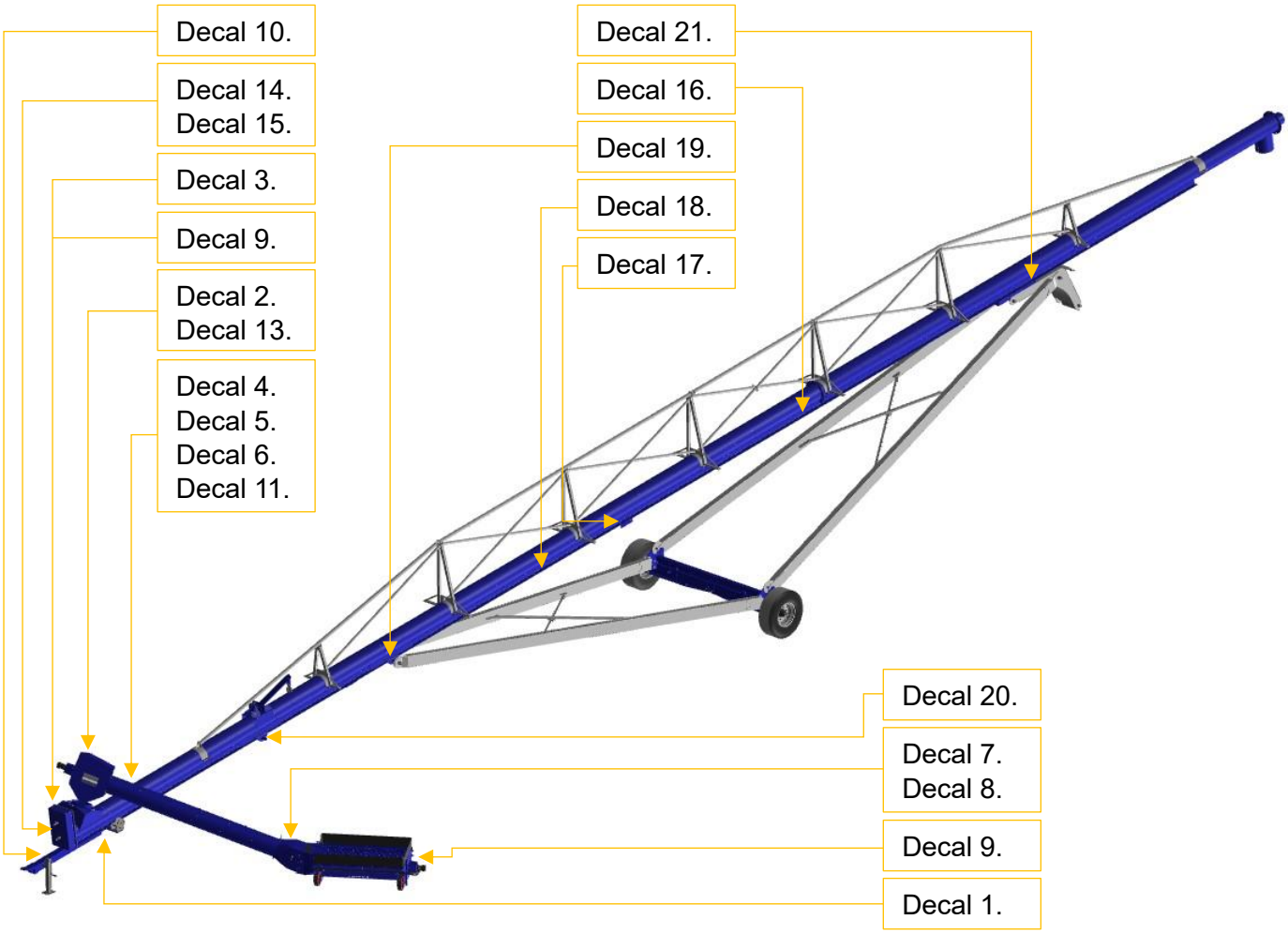
Decal 8.	**ROTATING FLIGHTING HAZARD** - Warns of rotating flighting hazard on the intake of the grain auger. - Sets out the steps to follow for the safe operation of the grain auger.	
Decal 9.	**ROTATING DRIVE HAZARD** - Keep guarding in place and in good working order. - Do NOT operate if guarding has been removed.	
Decal 10.	**TRANSPORTING** - Check state authority regulations before towing on public roads. - Always attach safety chains before towing. - Ensure auger is lowered to transport position. - Maintain tension on winch cable when towing.	
Decal 11.	**READ AND UNDERSTAND OPERATORS' MANUAL** - Make sure you understand and follow safe operating procedures. - Manual must be always kept with equipment.	

Decal 12.	- Fully extend axle before raising auger tube. - Retract axles before transporting.	
Decal 13.	- Hopper speed / flow adjustment - Turn knob right to reduce speed. - Turn knob left to increase speed.	
Decal 14.	- Indicates PTO connection to reverse auger flight. - Do not exceed 300RPM	
Decal 15.	- Indicates PTO connection for forward flight operation. - Max 540 RPM	
Decal 16.	- Indicates rest stop position for 80ft auger model	
Decal 17.	- Indicates raise stop position for 95ft auger model	
Decal 18.	- Indicates raise stop position for 80ft auger model	
Decal 19.	- Indicates rear arm position for 95ft auger model	

Decal 20.	- Indicates transport position for 80ft auger model and rear arm position for 95ft auger model	
Decal 21.	- Indicates rest stop position for 95ft auger model	

2.8 Diagram of Decal Placement

Figure 1. Decal Positions



3. Operational Safety

WARNING: Please ensure you have read and understand all relevant safety information contained within this manual. Safety information is provided to help prevent serious injury, death, or property damage.

3.1 Operators Responsibility

In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness and correct training of personnel involved in the operation, transport, maintenance, and storage of equipment.

The following pre-operations check must be completed before operating this machinery.

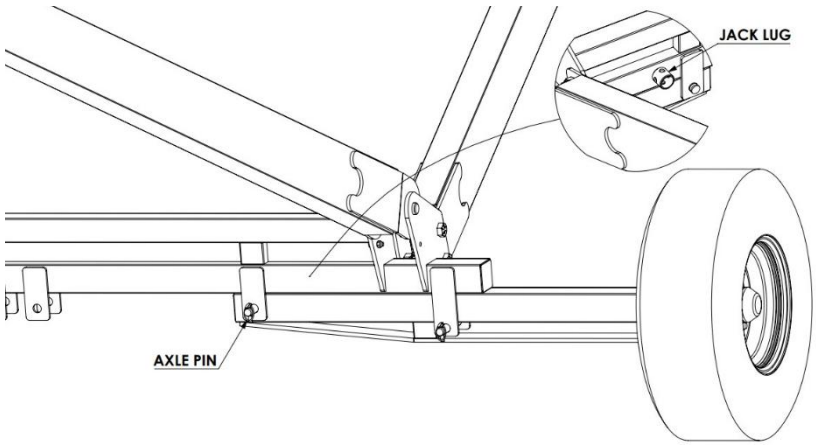
1. Read and follow the instructions in this manual and the tractors operator's manual.
2. Read and follow all safety signs/decals on the machine.
3. Ensure the auger is properly secured to the draw bar of the tractor.
4. Inspect the auger to ensure all nuts and bolt are securely fastened.
5. Ensure all guarding is secured and in place and check that the intake is free from obstructions.
6. Inspect all cables for damage.
7. Check all hydraulic components/lines for damage/leaks.
8. Ensure all maintenance has been performed and is up to date.

3.2 Positioning of Auger

1. Ensure the auger is properly secured to the hitch of the tractor.
2. Verify the auger is positioned on level ground and stable.
3. Using the supplied implement jack, insert the jack into one of the jack lugs welded to the auger axle. Secure jack with pin supplied.
4. Raise one side at a time, ensuring the jack is vertical.
5. Remove axle pins and extend axle. Axle pins must be re-fitted before lowering the axle.
6. Repeat above steps for the other side.
7. Using the manual hand winch positioned on the main auger, lower the swing hopper down. Disconnect cable from swing hopper.
8. Connect all hydraulic hoses, ensuring connections are tight. Check hydraulic lines for any damage or leaks.
9. Raise the main auger to the required height.
10. Move the auger into the final working position.

CAUTION: Never try to move the auger without being connected to the tractor hitch.

Figure 2. Extendable Axle



3.3 PTO Drive Line

Due to variations in distances between tractor PTO shafts and implement input shafts, drivelines may need to be shortened or a longer shaft may be required. When fitting the implement to the tractor, the PTO driveline with telescopic sections must be inspected. At the PTO's shortest length there must be at least 50mm of clearance between each section end. When the PTO driveline is at the most extended position, there must be enough engagement between the sections. At its farthest operating extension, a minimum section engagement of 33% of shaft length must be maintained.

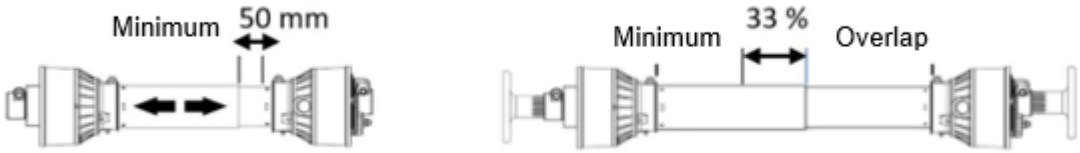
Safe operating procedure:

- Do not exceed the rated implement PTO speed.
- Stay clear of rotating driveline.
- Keep bystanders away.
- Keep hands, feet, clothing, and long hair away.
- Keep PTO shields and all guards in place.

How to disengage PTO drive shaft

1. Move the tractor controls to the neutral position, stop the engine, engage park brake, and make sure all rotating components are stopped before leaving the operator's position.
2. Ensure tractor is isolated and PTO is disconnected before servicing the tractor or implement.
3. Disengage PTO when in transport mode.

Figure 3. PTO Drive Shaft



3.4 Connecting Hydraulic Hoses

DANGER: To prevent serious injury or death from high pressure fluid, ensure all hydraulic pressure has been relieved before removing quick connector couplers.

- Relieve pressure on system before repairing or adjusting.
- Wear correct PPE when inspecting hydraulics for leaks/damage.
- Keep all components in good repair.
- Make sure the quick couplers are fully engaged. If the quick couplers do not fully engage, check to see that the couplers are the same size and type.

To Connect:

- Connect case drain line to tractor.

WARNING: Ensure case drain line is properly connected to the tractor before operating the auger. This is critical for correct and safe functionality of the hydraulic system.

- Install the swing hopper quick coupler hydraulic hoses.
- Install the Superwinch quick coupler hydraulic hoses.
- Once all lines are connected run the auger to ensure all connections are working, then check tractor hydraulic fluid level and top up hydraulic oil tank back to full on tractor.

4. Initial Running Procedure

Safe operating procedure

- Ensure the grain auger wheels are always on level ground.
- Move the auger to its working position and extend axles out.
- Raise auger to required height and chock auger and tractor wheels.
- Ensure the PTO shaft is free from obstruction and all hydraulic lines are properly secured away from the rotating shaft.
- Ensure PTO shields and guards are in place. Replace any damaged or missing guards.
- Do not wear loose or bulky clothing around the PTO or other moving parts.
- Keep bystanders away from PTO driven equipment and never allow children near the machine.

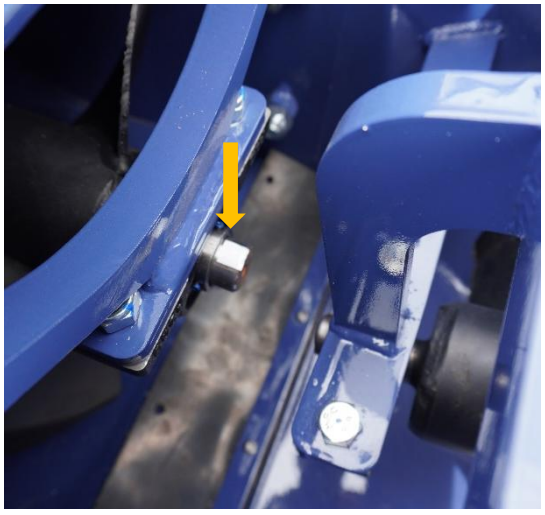
4.1 Run in Phase

Initial run-in of your auger should last for approximately 60 minutes. During this time the operator should listen for any unusual noises or vibrations and be prepared for an emergency shutdown if excessive vibrations or noises occur.

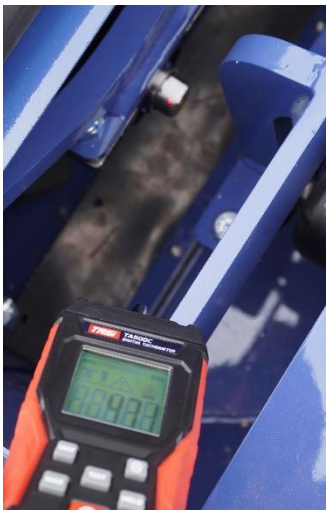
1. Ensure that the checklist in section 2 has been completed.
2. Ensure that the swing hopper is in the correct position.
3. Engage tractor hydraulics to initiate hopper flight and ensure hopper flight is rotating in the correct direction.
4. Engage the PTO with the tractor idling to prevent unneeded stress on the drive components.
5. Gradually increase the PTO rpm until operating at the maximum PTO speed of 540 RPM.
6. If the hopper speed does not match the speed of the main auger use the flow control valve to adjust the speed of the hopper flighting. Do not exceed 540 RPM. Use the supplied digital tachometer to verify flighting speed. See following steps for instructions on Tachometer use.
7. Remove key from tractor to immobilise. Find the reflective sticker strip supplied with the tachometer and cut a small square. Remove backing from sticker and stick to shaft as shown below.
8. Ensure area is clear and bystanders are aware of the open inspection hatch. Start tractor and engage hopper hydraulics. Turn tachometer on, press TEST button and direct laser at the silver sticker on the shaft to verify flighting speed.

1.Lift hatch to expose shaft

2.Place sticker on shaft



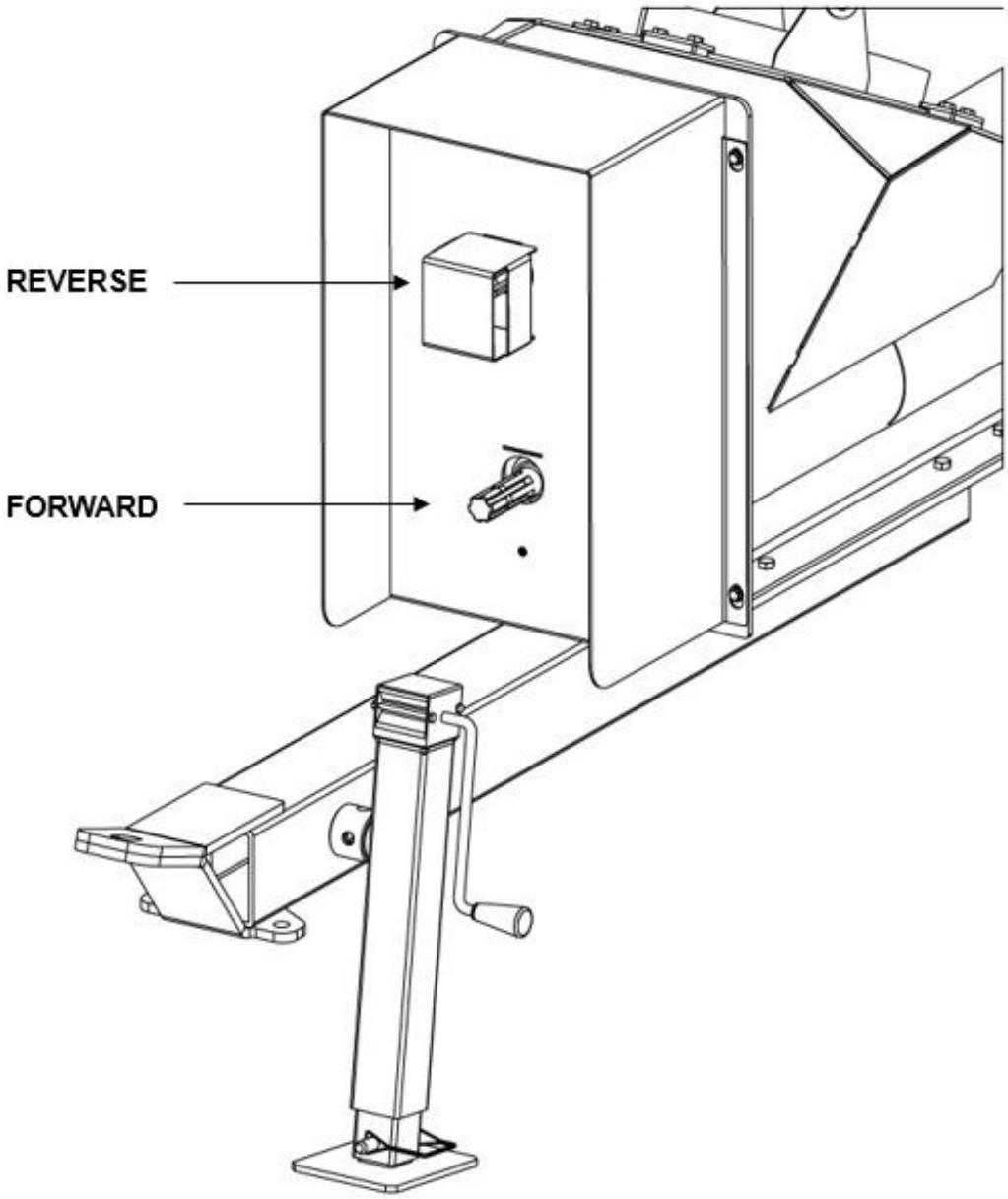
3.Point laser at sticker



9. Once speed has been set, engage PTO and you are ready to start moving grain.
10. Gradually begin feeding grain into the hopper, keep the feed of grain at about half capacity. Do not overfeed the hopper on initial loads.
11. Once the load has been completed, slow the swing hopper down using the tractor hydraulics and continue running the main auger flighting until the barrel has emptied.
12. Stop the auger when it is empty of grain and lock out the tractor.
13. Inspect the auger and complete the checklist detailed in section 2.

NOTICE: Initial run-in will ensure the auger tube and flight become polished which is required for the smooth operation of the machine

Figure 4. Auger Drive & Reverse Shafts



4.2 Normal Operation

1. Complete checklist detailed in section 2.
2. Ensure swing hopper is in the correct position.
3. Before starting the tractor ensure that the PTO drive is in the off position.
4. Engage tractor hydraulics to initiate hopper flight and ensure hopper flight is rotating in the correct direction.
5. Engage the PTO with the tractor idling to prevent unneeded stress on the drive components.
6. Gradually increase the PTO rpm until operating at the maximum recommended PTO Speed.
7. Monitor the operation of the auger for abnormal noises or vibrations.

NOTICE: If Grain overflows out of swing hopper overflow hatch, then the auger has been loaded beyond its capacity. Reduce the volume of grain going into the intake hopper.

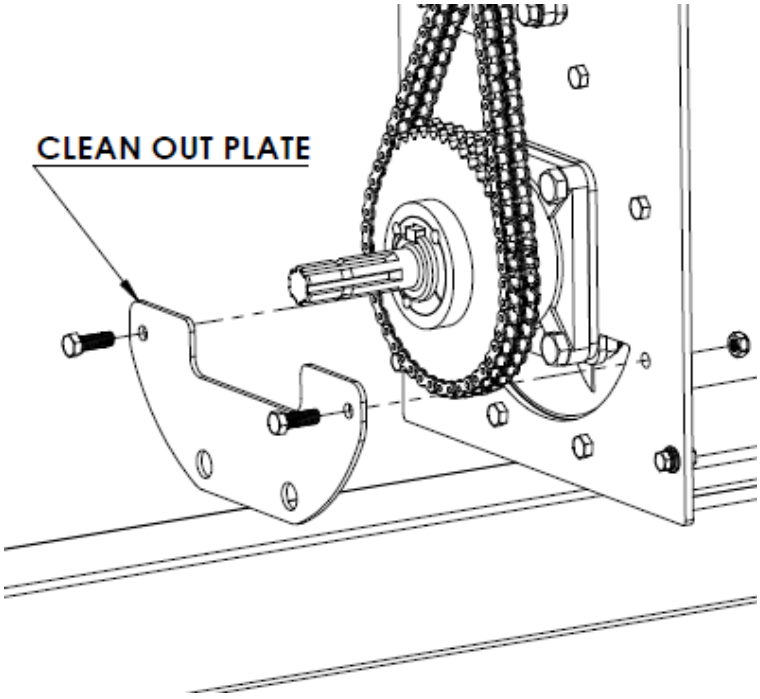
4.3 Operating in Reverse

The auger is fitted with a reverse drive 6-Spline to enable the auger to be operated in reverse for short periods of time.

NOTICE: Do not exceed 300RPM when operating the auger in reverse.

1. Remove driveline guard and unbolt cleanout plate from below main spline drive shaft.
2. Fit the PTO shaft to the upper splined shaft, ensuring that it is securely locked in place.
3. Engage the PTO with the tractor idling to prevent unneeded stress on the drive components.
4. Once the Auger has been emptied, shut off the tractor and lock out.
5. A shovel, vacuum or other tool should be used to clean out the Swing Hopper. Do **NOT** use your hands.

Figure 5. Clean Out Plate



4.4 Operator Controls

The below table details the various controls the operator is responsible for.

Table 1.

Auger Function	Control Type	Location
Main auger speed	PTO Controls (RPM)	Tractor
Forward/reverse main auger rotation	PTO position on drivetrain box	Auger
Swing hopper speed	Hydraulic supply control valve	Tractor
Raise or lower main auger	Hydraulic supply control valve	Tractor

5. Assembly

5.1 Barrel & Truss Assembly

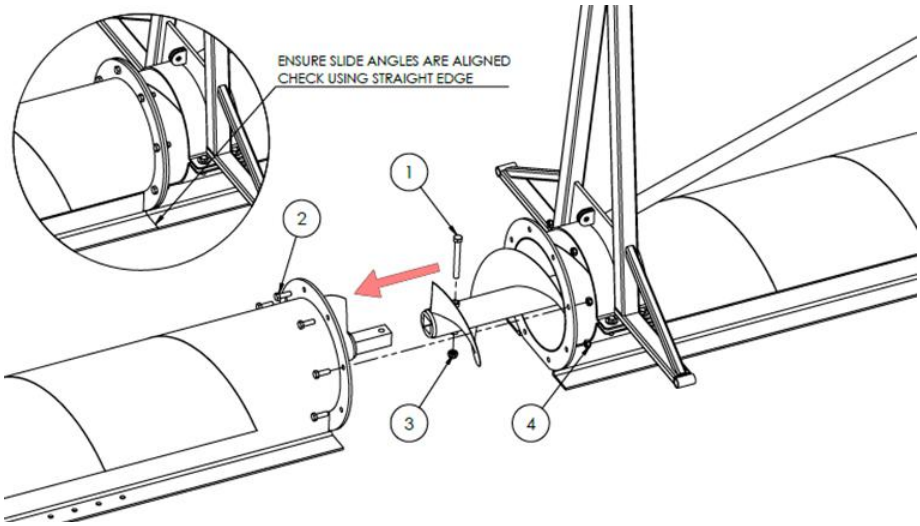
Safe Operating Procedure

- Assemble grain auger on a level surface.
- Use approved slings with a working load limit of at least 5 tonnes to raise the auger barrel.
- Use correct tools.
- Assembly should be performed with 2 or more persons.
- Correct PPE to be worn.

Assembly

1. Securely support the base barrel section so that it is horizontal.
2. With the nose section of barrel supported align the 2 x barrel sections. With the nose flighting protruding from the barrel join flighting together using M14x120mm bolt and nyloc nut. Ensure that the flight aligns to form a continuous spiral.
3. Once flights are securely joined, slide nose barrel section up to the base barrel and join using M12x35mm bolts and nyloc nuts.
4. Mount base truss section using M12x45mm bolts and nyloc nuts. Loosely tighten all truss mounting bolts evenly working down the barrel ensuring the truss remains straight.
5. Mount nose truss section using M12X45mm bolts. Loosely tighten all truss mounting bolts evenly working down the barrel ensuring the truss remains straight.

Figure 6. Barrel & Flighting Join



Item #	Part #	Description	Qty
1	6-2114	M14 x 120mm Bolt	1
2	6-2051	M12 x 35mm Bolt	8
3	6-3028	M14 Nyloc Nut	1
4	6-3006	M12 Nyloc Nut	8

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6. Fit smaller truss cross members using M12x45mm bolts and locknuts. Fit large truss joining member using M16x50mm bolts and nyloc nuts.
7. Alternating sides work down the barrel tightening all truss mounting bolts ensuring that the truss remains straight along the barrel.

NOTICE: Truss saddle plates should have a gap of between 5-10mm after tightening.

Figure 7. Truss Assembly

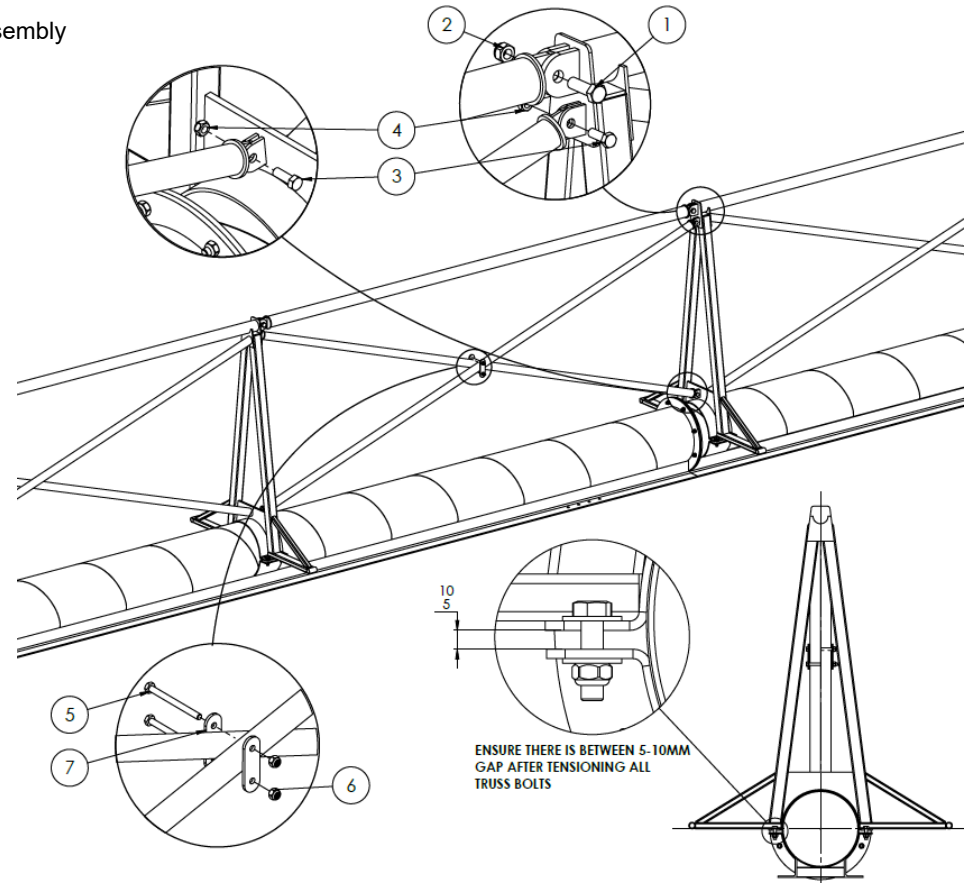


Table 3.

Item #	Part #	Description	Qty
1	6-2069	M16x50mm Bolt	2
2	6-3029	M16 Nyloc Nut	2
3	6-2051	M12x45mm Bolt	4
4	6-3006	M12 Nyloc Nut	4
5	6-2115	M10x120mm	2
6	6-3007	M10 Nyloc But	2
7	2-0291	Truss Bracing Clamp	2

8. Use M10x120mm and 2 x truss clamp plates to secure the two cross truss members together.

GSA1280 – ONLY

9. Bolt 6m truss section straight to lower truss upright using M16x50mm bolt to secure large truss member and M12x45mm bolt to secure smaller cross member.

Figure 8. GSA1280 Truss Assembly

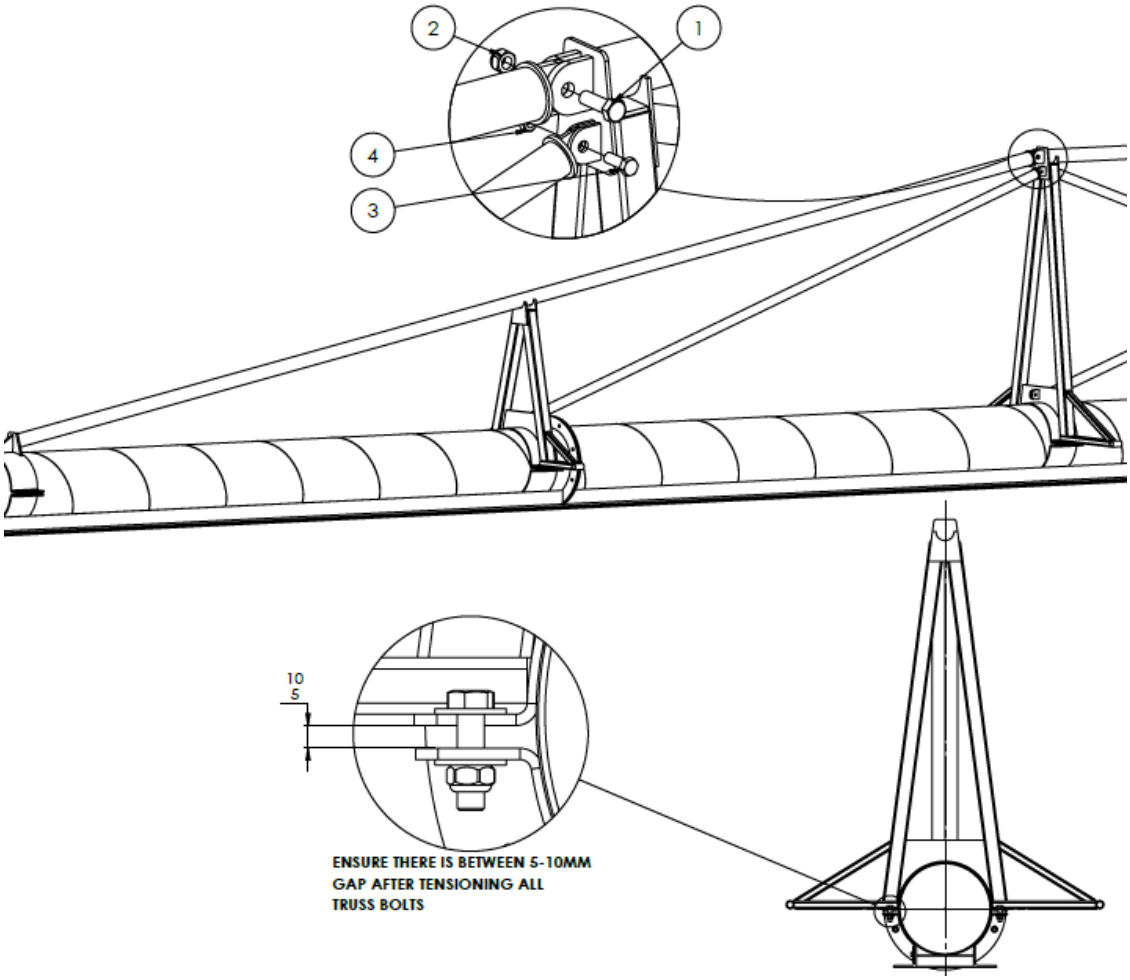


Table 4.

Item #	Part #	Description	Qty
1	6-2069	M16x50mm Bolt	1
2	6-3029	M16 Nyloc Nut	1
3	6-2051	M12x45mm Bolt	1
4	6-3006	M12 Nyloc Nut	1

10. Slide top flight bearing plate with bearing housing mounted over threaded flight shaft and secure to barrel flange using M12X35mm bolts and nyloc nuts.
11. Thread 1 ½" UNC nuts onto threaded shaft ensuring tab washer is fitted between the two nuts and located in slot on shaft. Tighten nuts and lock off by folding tab washer over.
12. Fit top hat cover using M10X30mm bolts and spring washers.

Figure 9. Top Flight Bearing

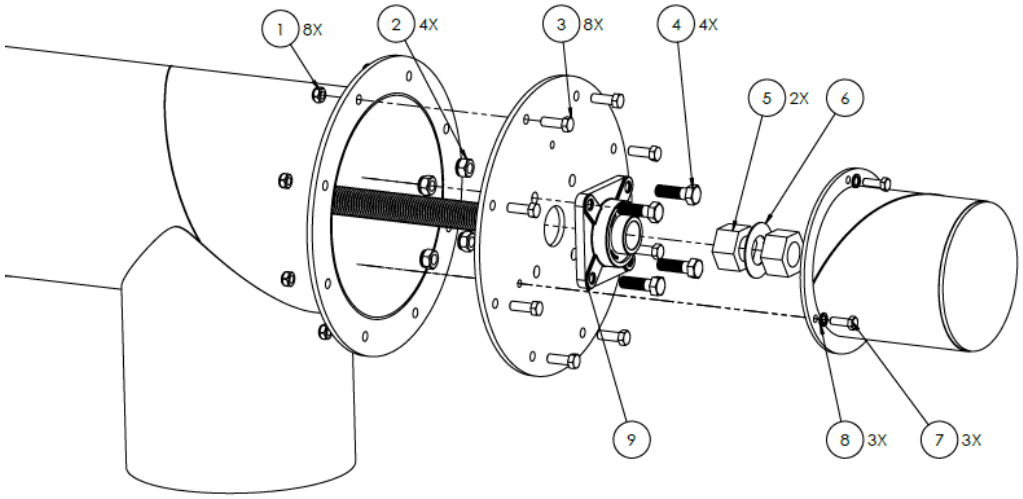


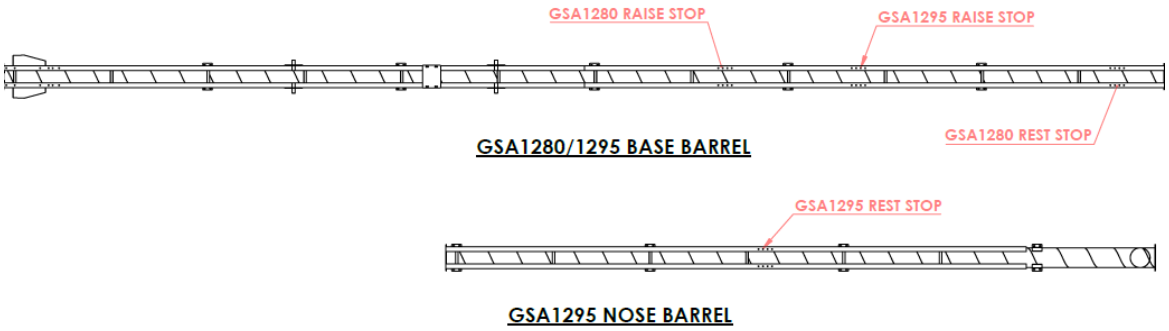
Table 5.

Item #	Part #	Description	Qty
1	6-3006	M12 Nyloc Nut	8
2	6-3029	M16 Nyloc Nut	4
3	6-2051	M12x35mm Bolt	8
4	6-2069	M16x50mm Bolt	4
5	6-3023	1 ½" UNC Nut	2
6	1-0412	Tab Washer 1 ½"	1
7	6-2055	M10x30mm Bolt	3
8	6-4029	M10 Spring Washer	3
9	5-0873	F208/UC208-24 Bearing	1

5.2 Raise & Stop Assembly

1. Fit raise slide stop to main barrel slide using M12X45mm bolts and nyloc nuts. (For correct mounting positions refer to Figure 10)
2. Fitment of the rest stop will need to be completed after auger undercarriage has been assembled and fitted. The nose of the auger is to be raised using appropriately rated lifting gear allowing the rest stop to be fitted using M12X45mm bolts and nyloc nuts.

Figure 10. Raise & Rest Stop Assembly



5.3 Swing Away Hopper Crane Assembly

1. Assemble top crane pulley and fit to crane arm using 19mm D-shackle.
2. Mount crane arm to crane base using ¾” x 4 ½” UNC bolts and nyloc nuts. Please note that the orientation of crane arm will depend on which side you wish the hopper to rest on.
3. Assemble crane cable pulley and mount to Intake side of crane base, on the opposite side to which the crane arm is mounted using ¾” x 2 ¼” bolt.
4. Bolt manual winch plate onto barrel slide using m12x45mm bolts and nyloc nuts. winch plate should be positioned on the opposite side of the crane arm.
5. Mount manual hand winch using m10x35mm bolts, spring washers and nuts.
6. Feed 6mm winch cable through the top crane pulley and down through the second crane cable pulley and feed through and onto the winch drum.

Figure 11. Hopper Crane Assembly

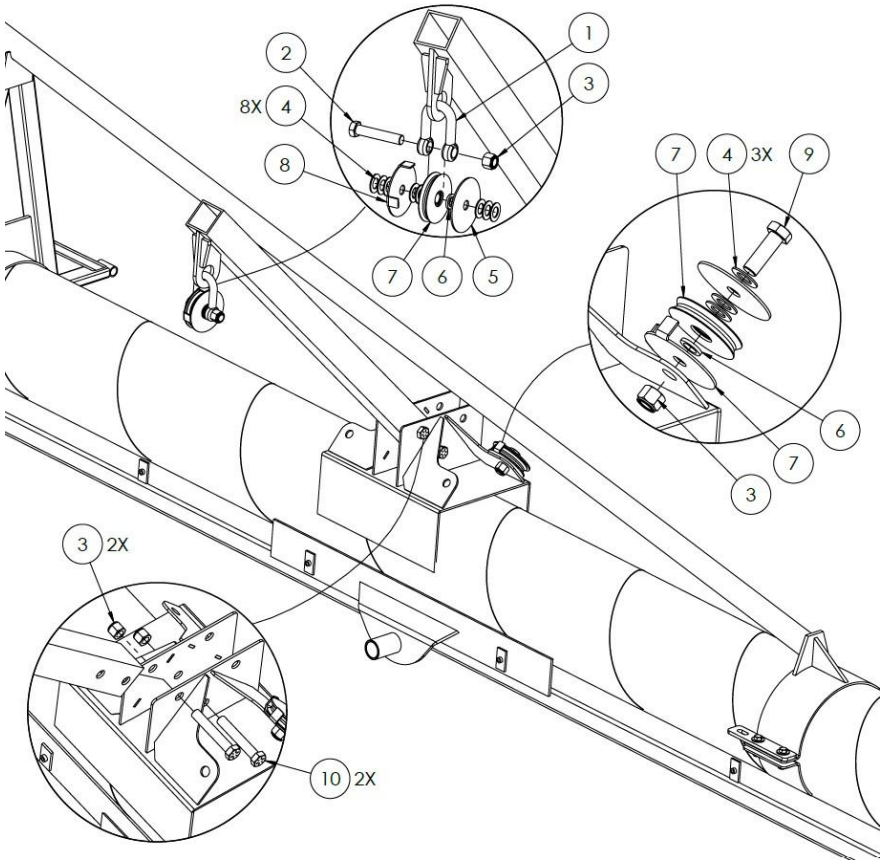


Table 6.

Item #	Part #	Description	Qty
1	6-0022	19mm D-Shackle	1
2	6-2031	¾” X 4” UNC BOLT	1
3	6-3021	¾” UNC Nyloc Nut	4
4	6-4012	¾” Washer	11
5	2-2018	Hopper Cable Washer	2
6	2-2019	Hopper Winch Pulley Spacer	2
7	4-0027	Pulley With Bearing	2
8	2-2033	Washer With Keeper Tabs	2
9	6-2030	¾” X 2 ½” UNC BOLT	1
10	6-2040	¾” X 4 ½” UNC BOLT	2

7. Bolt manual winch plate onto barrel slide using M12x45mm bolts and nyloc nuts. winch plate should be positioned on the opposite side of the crane arm.
8. Mount manual hand winch using M10X35mm bolts, spring washers and nuts.
9. Feed 6MM winch cable through the top crane pulley and down through the second crane cable pulley and feed through and onto the winch drum.

Figure 12. Manual Winch

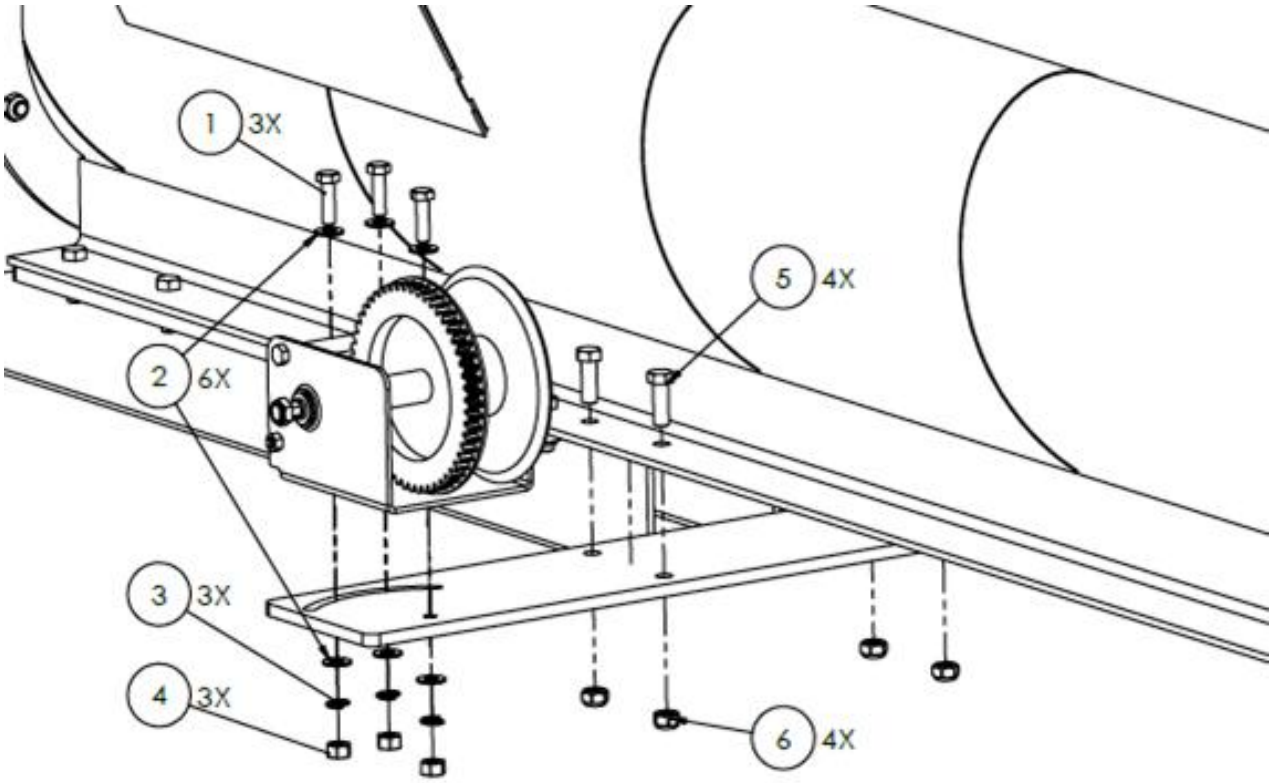


Table 7.

Item #	Part #	Description	Qty
1	6-2090	M10x35mm Bolt	3
2	6-4021	M10 Washer	6
3	6-4029	M10 Spring Washer	3
4	6-3036	M10 Nut	3
5	6-2051	M12x45mm Bolt	4
6	6-3006	M12 Nyloc Nut	4

5.4 Drivetrain

1. Fit 10B-duplex chain around main flight drive sprocket and up over reverse shaft sprocket. Join chain using 1 x half link and 1 X joining link.
2. With idler shaft bearing bolts loose, loosen tension wedge plate bolt and firmly apply pressure downward on wedge to tension 10B-chain. Re-tighten all Idler shaft bearing bolts and re-tighten tension wedge plate bolt.
3. Before running ensure chain is well lubricated and all bolts are tightened.
4. Fit drivetrain guard and secure using M10X25mm bolts and lock washers.

Figure 13. Drivetrain

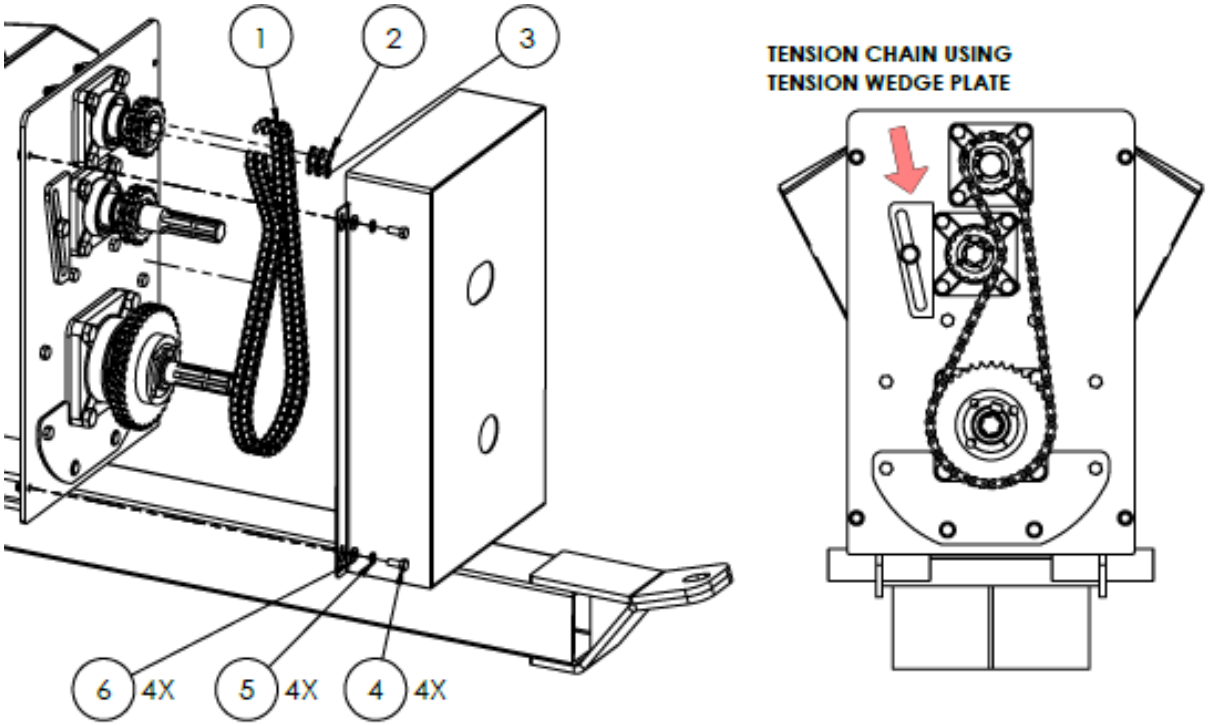


Table 8.

Item #	Part #	Description	Qty
1	2-1663	10B-Duplex Chain	39.5 LINK
2	5-0528	10B-Joining Link	1
3	5-0530	10B-Half Link	1
4	6-2095	M10x25mm Bolt	4
5	6-4029	M10 Spring Washer	4
6	6-4021	M10 Washer	4

5.5 Undercarriage

1. Secure rear arms to the axle using 1” x 1.5 UNC bolts and nyloc nuts.
2. Install rear arm cross braces with M12X45mm bolts and nyloc nuts. Leave loose until rear arms are fitted to lower barrel section.

Figure 14. Rear Arms

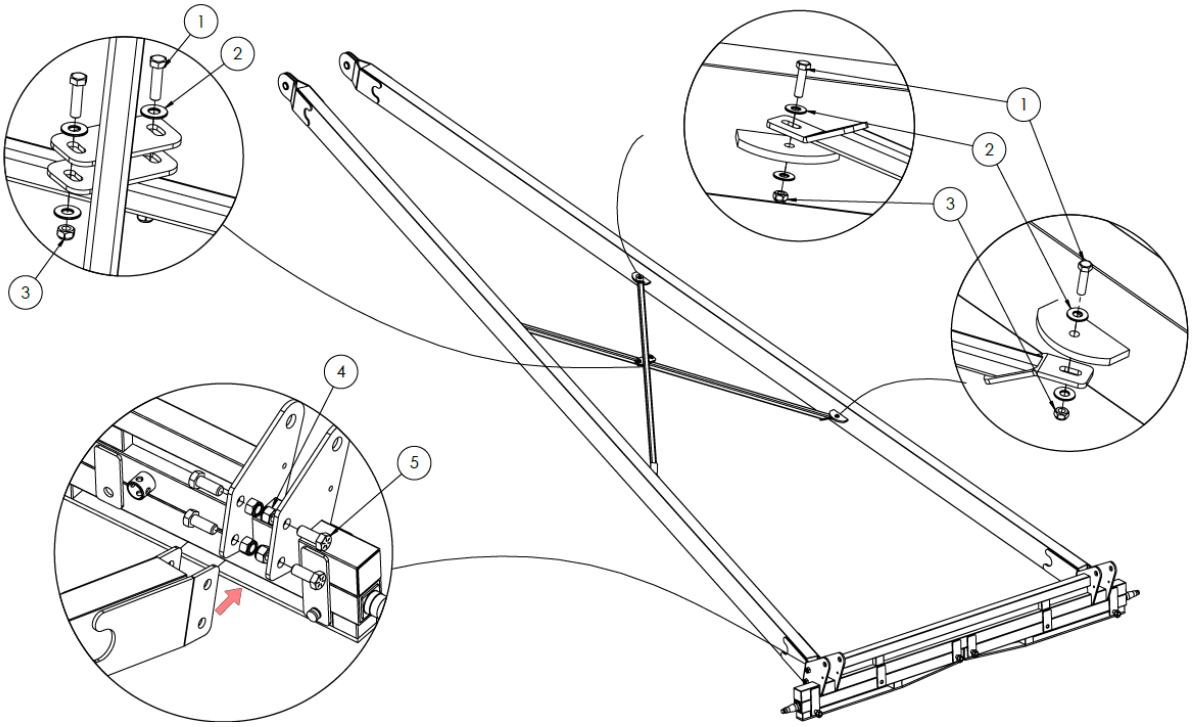


Table 9.

Item #	Part #	Description	Qty
1	6-2074	M12x45mm Bolt	6
2	6-4013	M12 Washer	12
3	6-3006	M12 Nyloc Nut	6
4	6-3020	1” UNC Nyloc Nut	8
5	6-2110	1”X1.5 UNC BOLT	8

3. Wipe down stub axles to remove any dirt and debris.
4. Carefully slide the hub assembly onto the stub axle, avoid any contact between the seal and the stub axle that may damage the seal.
5. Tap the hub with a light hammer and drift to ensure that the inner taper roller bearing is home. Slide the outer taper bearing onto the stub axle and seat it into the hub cone/ fit the flat washer and slotted spindle nut, finger tighten only.
6. To set the correct bearing load, slowly rotate hub and tighten the slotted spindle nut until the hub binds slightly, then back off the nut one slot.
7. Check to ensure the hub rotates freely, and then fit the split pin and dust cover.
8. Fit the wheels to the hub assemblies and torque wheel nuts to 344Nm**.**
9. Using 5t rated sling, lift the barrel from the upper section so that the barrel spigot is approximately 2m off the ground.
10. Manoeuvre the axle and rear arms underneath the raised barrel and secure rear arms using M36 nyloc nuts.
11. Position the front arms either side of the barrel and fit to the axle using front arm pins and M12X35mm bolt and nyloc nut.
12. With the barrel still raised position the slide runner and raise lever assembly onto the barrel slide.

13. Lift one of the front arms and secure to the raise lever using trunnion bolt and M36 nyloc nuts. Repeat this for the other side.
14. Loosely fit front arm cross braces using M12X45mm and nyloc.

Figure 15. Undercarriage

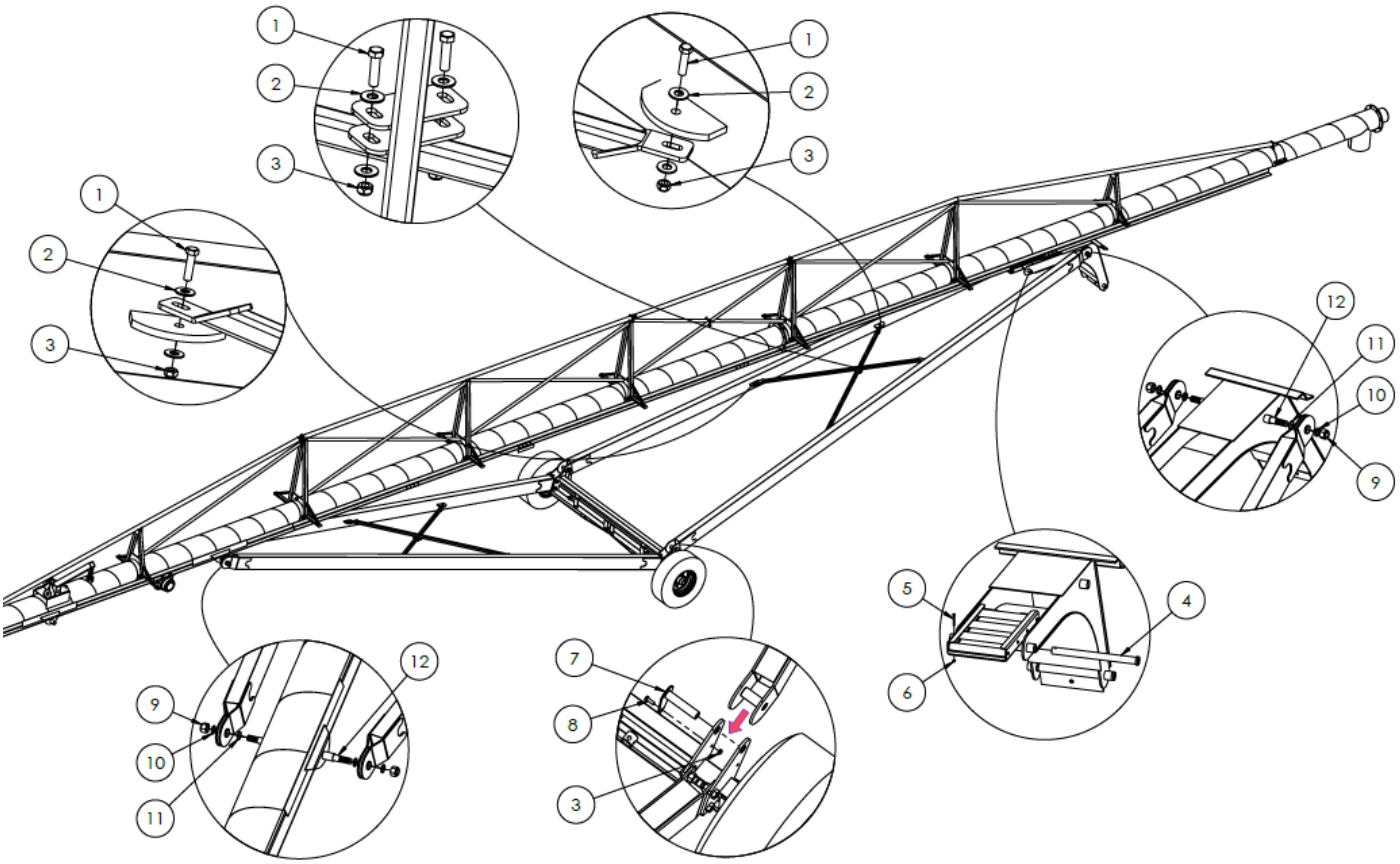


Table 10.

Item #	Part #	Description	Qty
1	6-2074	M12x45mm Bolt	6
2	6-4013	M12 Washer	12
3	6-3006	M12 Nyloc Nut	8
4	2-1611	Slide Pin	1
5	6-2113	M8x65mm Bolt	1
6	6-3031	M8 Nyloc Nut	1
7	2-1616	Front Arm Pin	2
8	6-2051	M12x35mm Bolt	2
9	6-3049	M36 Nyloc Nut	4
10	1-0308	Washer	4
11	1-0307	Spacer	4
12	3-0151	GSA Trunion Bolt	4

5.6 Top End Assembly Steps (After Transporting)

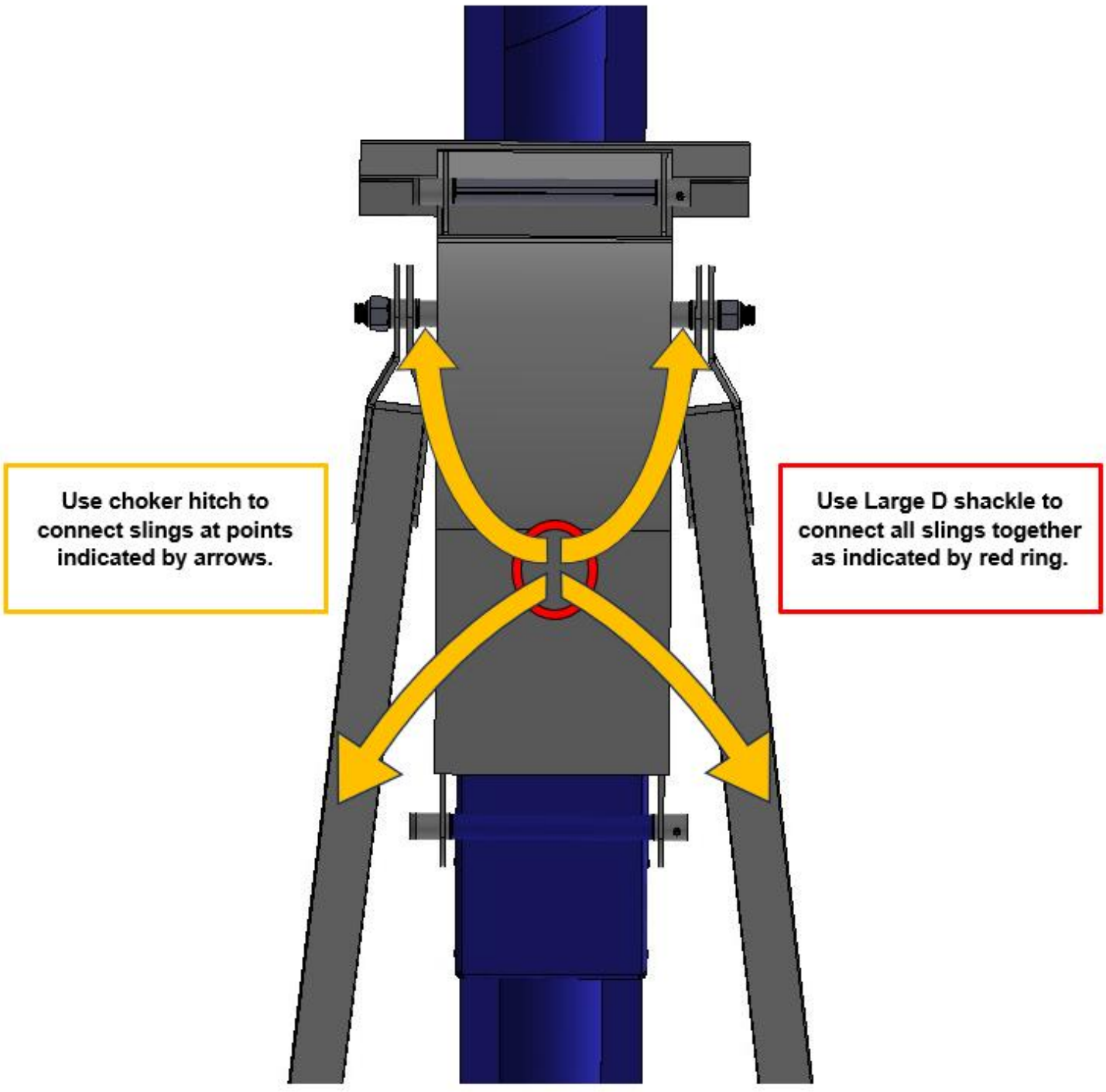
GSA1280

1. Raise intake end of auger until base of lift kicker is approximately 100mm from the ground.
2. Lift barrel section into place and align with main auger. Refer pages 17, 19 and 20 for detailed instructions for the following steps 3 to 7.
3. Connect flighting to main auger flighting and ensure bolt and nyloc nut fully tightened.
4. Slide barrel up so that joining flanges are together and connect using supplied bolts with nyloc nuts.
5. Tighten locknuts on shaft at end of auger and install safety cover.
6. Attach top truss section to barrel.
7. Connect the top truss section to the main truss using 2 x bolts & nyloc nuts.
8. Connect truss cables to the top section of auger barrel and run through locators down the side of truss.
9. Lower intake end of auger.
10. Connect and tension truss cables to lower connection points.
11. Lift hopper assembly into place and attach. Refer page 28 for details.
12. Complete final checks and ensure all fasteners are correctly installed and correctly tightened.

GSA1295

1. Raise intake end of auger until outlet end of barrel is in a suitable position to connect the last barrel and truss section.
2. Lift barrel section into place and align with main auger. Refer pages 17, 18 and 20 for detailed instructions for the following steps 3 to 7.
3. Connect flighting to main auger flighting and ensure bolt and nyloc nut fully tightened.
4. Slide barrel up so that joining flanges are together and connect using supplied bolts with nyloc nuts.
5. Tighten locknuts on shaft at end of auger and install safety cover.
6. Attach top truss section to barrel.
7. Connect the top truss section to the main truss using 2 x bolts & nyloc nuts.
8. Connect truss cables to the top section of auger barrel and run through locators down the side of truss.
9. Lower intake end of auger until there is sufficient space to slide the lift kicker onto slide track below auger barrel.
10. Align lift kicker and slide onto track. Refer pages 24 and 25 for detailed information for the following steps 11 to 14.
11. Connect undercarriage reach arms to axle and ensure pins are secured with locking bolts.
12. Connect undercarriage reach arms to slide runner/kicker and secure with nyloc nuts.
13. Install cross braces and secure with bolts and nyloc nuts.
14. Using 4 x rated lifting slings or similar, secure kicker as shown in image number 2 to prevent it from dropping when the auger is raised. See figure 1 on page 27.
15. Lower intake end of auger.
16. Raise the outlet end of auger until at a suitable height to install the slide stopper.
17. Once the slide stopper is installed and secured, lower auger and remove all slings and restraints.
18. Install winch cable and ensure properly secure both ends. Please ensure D shackle on slide is fully tightened. Ensure cable is spooled from the motor side of winch drum and ensure feeding from underneath the winch drum for correct functioning of cable tensioner.
19. Lift hopper assembly into place and attach. Refer page 28 for details.
20. Complete final checks and ensure all fasteners are correctly installed and correctly tightened.

Figure 16. Securing Slide Runner/Kicker to Prevent Pivoting while Lifting.



5.7 Swing Hopper Mounting

1. Position swing auger transfer box over main auger barrel intake.
2. Align swivel mounting plate so that locating tabs are parallel with the transfer box.
3. Slowly lower the swing hopper down, ensuring that the two notches in the transfer box locate onto the swivel mount tabs.
4. Fasten the two retaining plates on either side of the transfer box using M8x20mm bolts and nyloc nuts.
5. Fit flexible tube around spigot on swivel mount and around spigot on transfer box.

Figure 17. Swing Away Hopper Connection

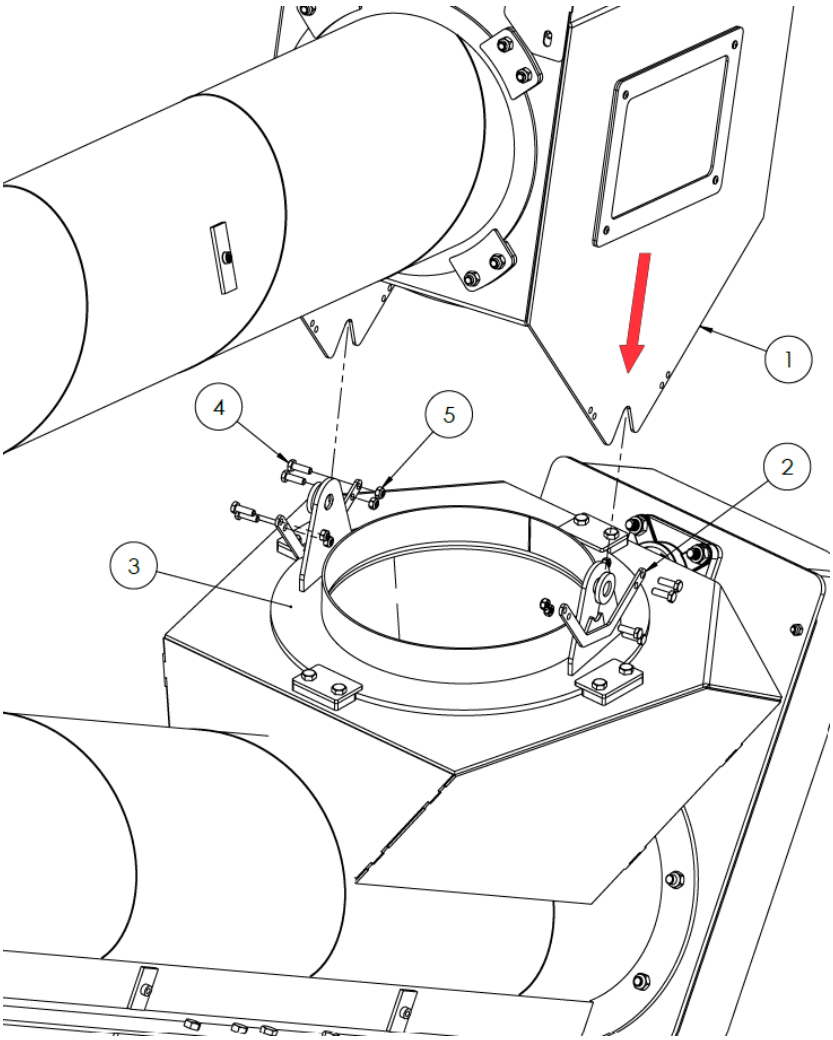


Table 11.

Item #	Part #	Description	Qty
1	4-0182	Swing Away Hopper	1
2	2-1647	Swing Hopper Retaining Plate	2
3	2-1617	Swing Away Swivel Mount	1
4	6-2082	M8 x 20mm Bolt	8
5	6-3031	M8 Nyloc Nut	8

6. Maintenance

The auger must be inspected regularly to ensure it is functioning correctly. All problems identified must be rectified prior to use. All safety features must be maintained to ensure they are functioning as intended. Where parts or components require replacing, replacements must be identical or equivalent to the original parts and components.
Proper maintenance on the grain auger means a longer life for the machine and a more efficient and safer operation.

Before performing any maintenance on the grain auger, visually inspect the overall machine and check the following areas:

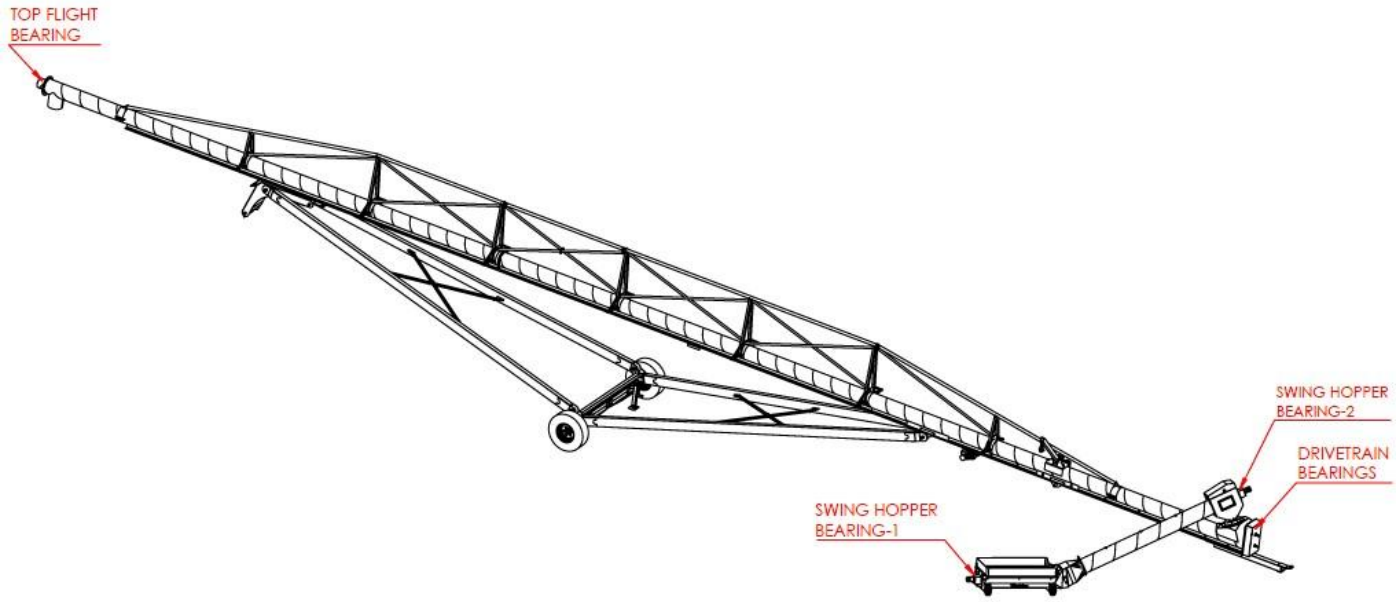
- The service area is dry, clean and has sufficient lighting.
- All power sources have been shut down and isolated.
- Ensure all guards are free from damage and functioning correctly.
- Check the hydraulics for signs of leaks.
- Check truss cables are tight and free from damage.
- Inspect main winch cable for any damage/wear.
- Check all safety decals are in place and legible.
- Support tube if performing maintenance on the undercarriage assembly.
- Check all hydraulic hoses and couplings for leaks and damage.

6.1 Maintenance Schedule

SERVICE ITEM	DAILY	16 HOURS	32 HOURS	YEARLY
Inspect Winch				
Inspect Winch Cable				
Inspect Hopper Winch Cable				
Inspect Slide Track Stop				
Inspect Hoses & Fittings				
Grease PTO Unit Universal Joints				
Check Tyre Pressure				
Grease Bearings				
Service Truss Cables				
Service Drive Train				
Grease Wheel Hub Bearings				

6.2 Grease Point Locations

Figure 18. Grease Locations



6.3 Grease Points

Top Flight Bearing	Drivetrain Bearing 1 & 2
	
Drivetrain Bearing 3 & 4	**Drivetrain Bearing 5**
	
Swing Hopper Bearing 1	**Swing Hopper Bearing 2**
	

6.4 Winch Cable Maintenance

Inadequate lubrication of the main winch cable used to raise and lower the auger barrel can result in premature cable failure. The winch cable is a critical component that operates under significant tension and friction. Without proper lubrication, the cable can experience excessive wear, causing the individual wires to fatigue and ultimately leading to breakage.

WARNING: Insufficient lubrication increases friction, causing cable to wear prematurely resulting in cable failure. A broken cable can cause sudden and uncontrolled movement of the auger, which could result in serious injury or death.

1. Lubricate the cable daily or after operating the winch 5 times to ensure proper function and prevent premature wear.
2. Inspect the cable prior to use for signs of excessive wear, fraying, or corrosion.
3. Operate the winch and listen/look for any abnormal changes in movement or noise during operation, which may indicate an issue.
4. Ensure the cable is correctly spooled on the winch drum. Excessive slack can cause the cable to "bird's nest," leading to potential damage and premature wear if left unaddressed.

Example Images

- Figure 1. Correctly spooled cable on winch drum
- Figure 2. Adequately coated cable using foam type penetrating lube. (Recommended).
- Figure 3. Adequately coated cable using grease lube.

Figure 1.

Figure 2.

Figure 3.

7.Storage

Before storing the auger away for extended periods of time the following procedure should be followed:

1. Fully lower the auger
2. Before moving to storage location, fully retract telescopic wheel axles into transport position.
3. Remove all remnants of grain and/or seed from the hopper and barrel.
4. Clear any blockages away from rotating flight.
5. Raise hopper into transport position and attach safety chain.
6. Move auger to a flat stable area and chock wheels. (Storage in an undercover area is desirable)
7. Visually inspect the auger for any signs of damage/wear.
8. Check hydraulic hoses are stored away neatly and that they are free from damage.
9. Lubricate all grease points.

If this is not possible and the auger is exposed to high winds, there are some steps that must be taken to ensure the complete safety in the storage of the auger.

1. The grain auger may need to be anchored down to prevent it from being blown over or rolling away. Ways in which this can be done is by securing the axle of the auger to two heavy objects at each end of the axle, as close as possible to the wheels. I.e., large concrete blocks, large, sealed drums filled with water or anchored to the ground with large pins or stakes.
2. Place two objects at the front and back of each wheel to prevent the auger from rolling away. I.e., bricks or wooden chocks.

WARNING: Failure to follow these steps may result in serious injury to persons or damage to the grain auger and other property.

8. Troubleshooting

Problem	Cause	Solution
Main auger flight does not turn.	PTO shear bolt has failed	Replace shear bolt
	Bearing has seized	Replace bearing
	Auger flight is plugged or obstructed	Clear the obstruction
Hopper flight does not rotate.	Auger is obstructed	Clear the obstruction
	Hydraulic system leak	Locate the leak and repair
	Flight coupler bolt is missing or has broken	Replace bolt
Main auger flight is noisy.	Auger is obstructed	Clear the obstruction
	Main auger is not running full	Adjust flow control on hopper hydraulics
Low auger capacity/flow.	Input speed is too slow	Increase engine RPM
	Hopper flighting running too slowly	Adjust flow control valve
	Inadequate hydraulic flow	Ensure tractor supply is minimum 90L/min
	Flighting worn	Replace flight
	Material is too wet or heavy	Unloading capacities are for dry grain
Main auger will not raise or lower.	Inadequate hydraulic pressure	Increase hydraulic pressure or use an alternative hydraulic supply
	Hydraulic system leak	Locate leak and repair
	Closed hydraulic valve	Open valve
	Auger movement is obstructed	Identify and clear the obstruction
Auger will not stay in the raised position.	Faulty hydraulic winch	Replace winch

9. Specifications

		GSA1280	GSA1295
Performance	Capacity (Ton Per Hour)	220	220
	Tractor PTO Speed	540	540
	Tractor Hydraulic Flow	65Lpm	65Lpm
	Recommended Horsepower	150	150
GSA Dimensions	Auger Length	80’ (24m)	95’ (29m)
	Auger Tube Dia.	12” (305mm)	12” (305mm)
	Auger Tube Thickness	3mm Heavy Duty	3mm Heavy Duty
	Flighting - Main Barrel	12” x 4.8mm	12” x 4.8mm
	Flighting - Swing Arm	12” x 4.8mm (with 13” x 4.8mm Transition Pick up)	12” x 4.8mm (with 13” x 4.8mm Transition Pick up)
	Flighting - Hopper	12” x 4.8mm	12” x 4.8mm
	Rest Height	3.3m	4m
	Max Height (@40 Degrees)	16.2m	19.4m
	Horizontal Reach (@40 Degrees)	8.8m	10.5m
	Transport Height	3m	3m *Base section(18m) only
	Transport Length	19m	19m *Base section(18m) only
	Hopper Profile	1.5m x 1m x 0.59m	1.5m x 1m x 0.59m
	Axle Width	3.3m – 4.7m	3.3m – 4.7m
	Tyres	815mm x 317mm	815mm x 317mm
	Tyre Ply Rating	12PR	12PR
Features	Truss Design	Fully Welded	Fully Welded
	Hopper Design	Self-Leveling	Self-Leveling
	RPM Adjustment on Hopper	Yes	Yes
	Hopper Wheels	250mm Solid Tyres	250mm Solid Tyres
	Lift Mechanism	A-Frame Cable (Hydraulically Driven Raise Winch)	A-Frame Cable (Hydraulically Driven Raise Winch)
	Winch Cable	11mm x 13.7m Long	11mm x 20m Long
	Reversable Auger	Yes	Yes

Notes:

1 Hartog Place, East Wagga Wagga NSW 2650, Australia
Phone: 1800 810 498
Email: sales@grainline.com.au
Website: www.grainline.com.au

Scan to request replacement manuals & spare parts.