



Operators Manual

Pencil Augers



Contents

Introduction	3
Disclaimer	3
Induction Sheet for Operators.....	4
Grainline Warranty Conditions.....	5

Section 1: Safety Information

1.1 Hazard Labels	5
1.2 General Safety	6
1.3 Intended Use	6
1.4 Correct Usage	6
1.5 Incorrect Usage	6
1.6 Safety Decals	6
1.7 Diagram of Decal Placement	8

Section 2: Installation

2.1 Motor Assembly	8
2.2 Assembling undercarriage kit	11
2.2 Assembling winch kit	13

Section 3: Auger Operation

3.1 Pre Operation checklist	14
3.2 Checklist for 240 volt drive system	14
3.3 Operating procedure	14
3.4 Shut down procedure	14

Introduction

Thank you for purchasing a Grainline Pencil 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.



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.

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 that the 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.

1. 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.

1.1 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

1.2 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. Electrocutation 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.

1.3 Intended Use

The Grainline Pencil 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.

1.4 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.

1.5 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.

1.7 Safety Decals

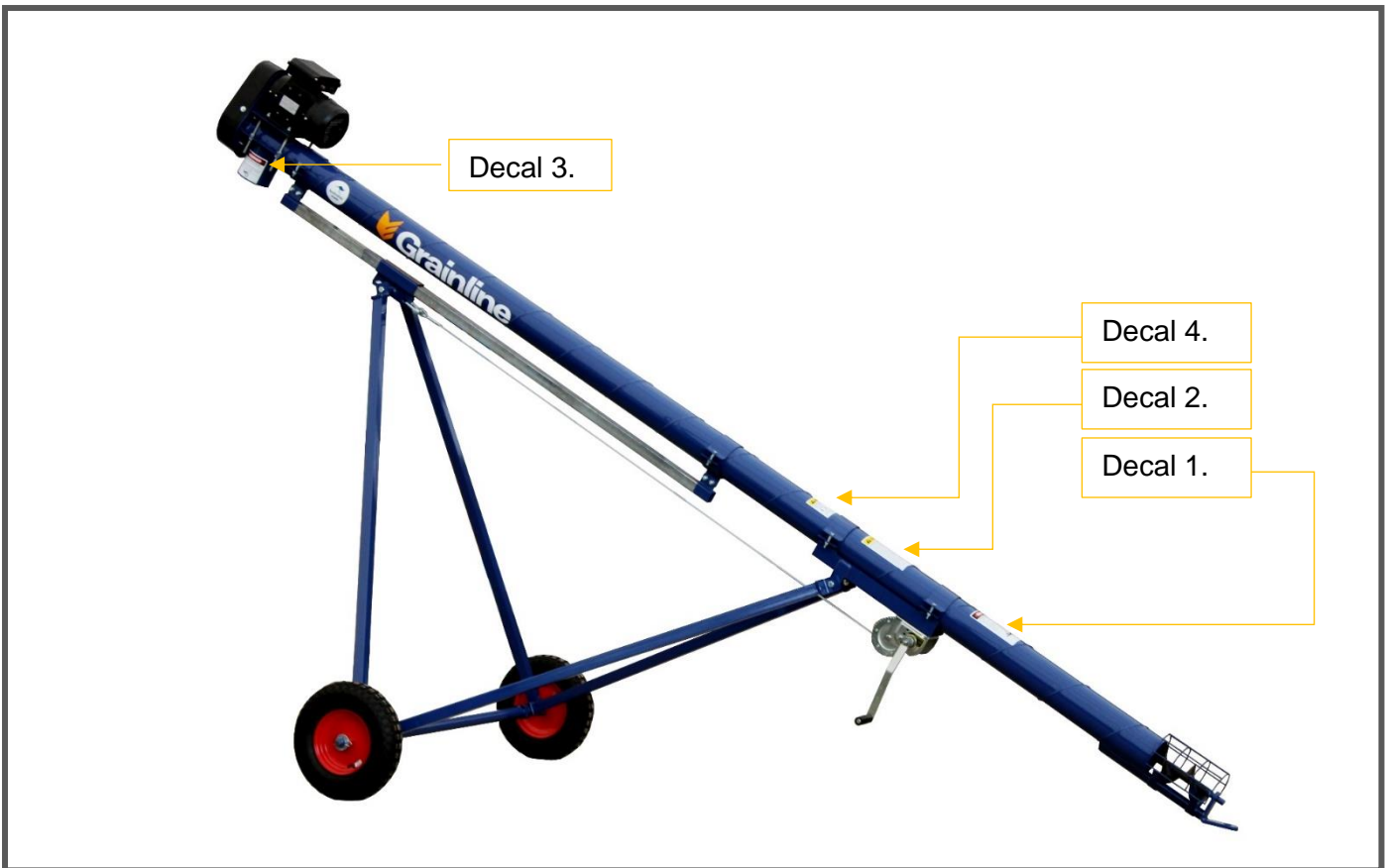
Samples of the safety decals here are those used on the Grainline transportable augers.

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 Explanation	Decal Detail
Decal 1.	<p style="text-align: center;">EXPOSED ROTATING FLIGHTING</p> <ul style="list-style-type: none"> - Keep hands, feet, and clothing away from intake. - Keep guarding in place. 	
Decal 2.	<p style="text-align: center;">ROTATING FLIGHTING HAZARD</p> <ul style="list-style-type: none"> - 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 3.	<p style="text-align: center;">ROTATING DRIVE HAZARD</p> <ul style="list-style-type: none"> - Keep guarding in place and in good working order. - Do NOT operate if guarding has been removed. 	

<p>Decal 4.</p>	<p style="text-align: center;">DO NOT RUN AUGER EMPTY</p> <ul style="list-style-type: none"> - Hearing protection must be worn. - Keep electric motor and leads protected against moisture. 	 <p>The decal features a yellow warning triangle with an exclamation mark at the top. Below it, the text reads 'DO NOT RUN AUGER EMPTY'. The decal is split into two columns. The left column says 'Hearing protection must be worn.' and includes an illustration of earplugs. The right column says 'Keep electric motor and leads protected against damage and moisture.' and includes an illustration of a hand holding a wire. At the bottom, it states 'Failure to do so may result in serious injury or death.'</p>
------------------------	--	---

1.8 Diagram of Decal Placement



Section 2: Installation

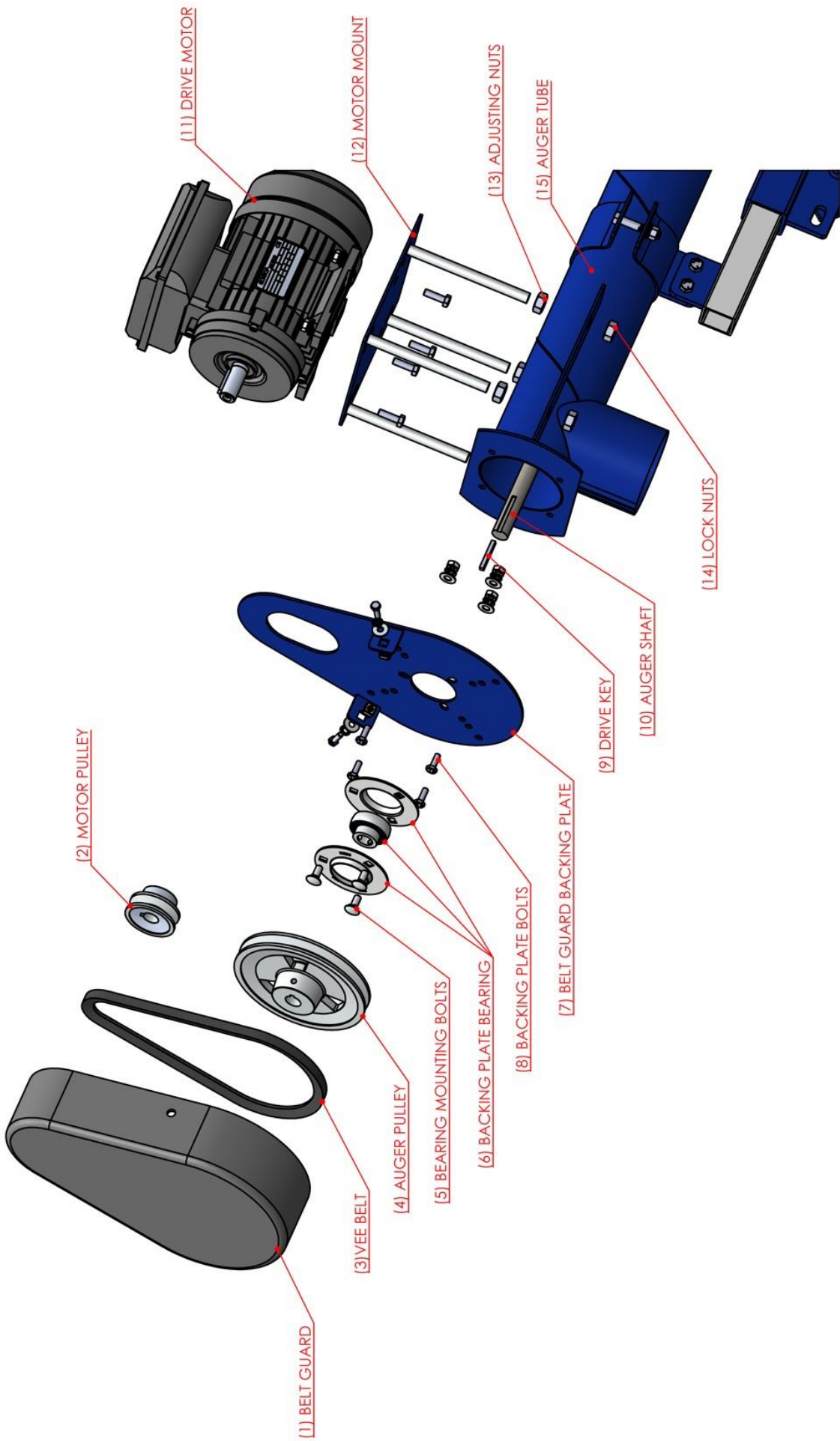
2.1 Motor Assembly

Safe operating procedure

- Assemble the grain auger on a level surface.
- Use approved slings with a working load limit of at least 1 tonne to raise the augers.
- Use the correct tools.
- Assembly only to be done by competent persons.

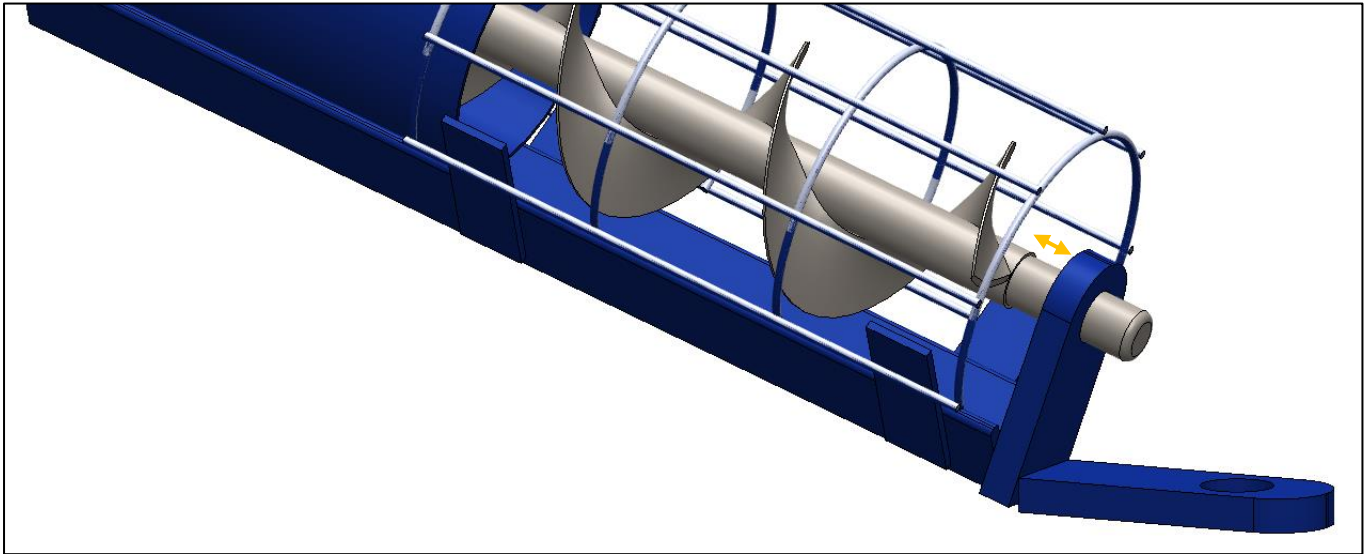
Diagram of Motor & Drive assembly

Please use the following diagram to reference parts when ready through the assembly steps for the motor and pulleys.



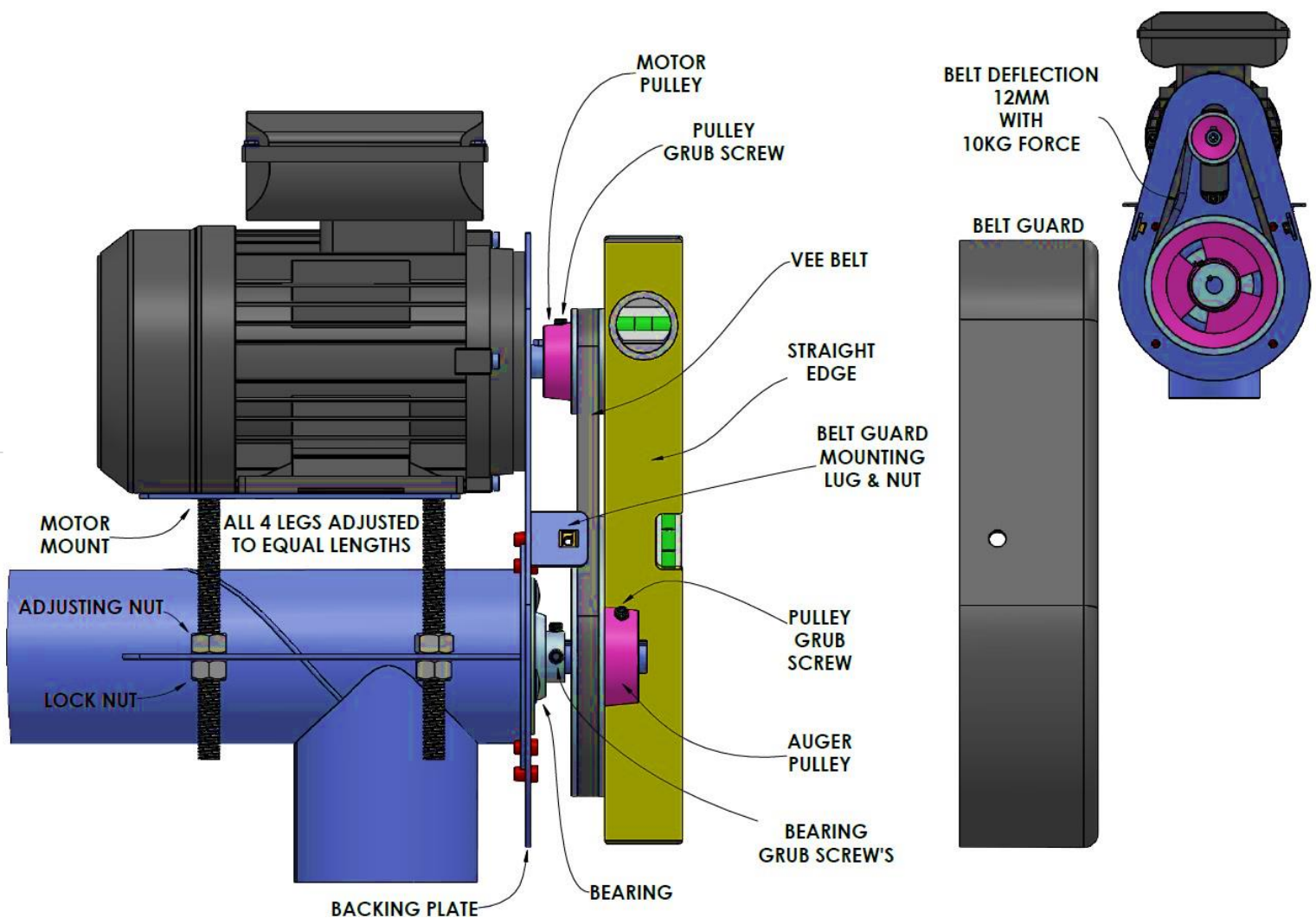
Assembly Instructions

1. Place auger on trestles at a suitable working height with outlet spigot facing down. Secure auger barrel to prevent it from rolling sideways.
2. Ensure flighting stub shaft on intake end is correctly located in bush and allow 5-10mm space between locator bush and welded area of stub shaft. See image below.



3. Get belt guard backing plate (7) which will have the bearing pre fitted. Ensure the bearing grub screws are wound out and the guard mounting lugs are facing out and slide the belt guard backing plate onto the auger drive shaft. Using the $\frac{1}{4}$ x $\frac{3}{4}$ inch backing plate bolts, nuts and spring washers (8) secure the belt guard backing plate to the auger flange. Using the correct size allan key tighten the bearing grub screws.
4. Get auger pulley (4), ensure grub screws are wound out, then slide onto auger drive shaft and push up against bearing collar.
5. Align keyway on pulley and auger shaft, then insert $\frac{3}{16}$ " key steel (9) into keyway. Rotate pulley to ensure free movement then proceed to tighten grub screws on pulley.
6. Using 8 x $\frac{1}{2}$ inch nuts (13), fit motor mount (12) to auger and set in lowest position leaving nuts loose.
7. Using $\frac{5}{16}$ " x 1" bolts, fit motor to motor mount and hand tighten bolts. This will allow small adjustments when aligning pulleys.
8. Get motor pulley (2) ensure grub screws are wound out, then slide onto motor shaft with pulley boss facing towards motor. Leave grub screws loose.
9. Get vee belt (3) and place on pulleys. Start tensioning belt by adjusting the motor mount nuts. When the belt starts to tighten use a straight edge to verify pulley alignment. Make adjustments as required then proceed to fully tighten motor bolts and pulley grubs screws.
10. Finish tensioning drive belt ensuring that it is not over tightened and tighten motor mount lock nuts. The belt tension should be set to have a deflection of 12mm with 10kg of inward force.

NOTICE: Ensure motor mount adjusting rods are equally tensioned to maintain correct pulley alignment. Ensure belts are correctly tensioned as over tightening of the drive belt will cause excessive load on the bearings and shafts. A loose drive belt will result in slippage causing loss of drive, heat build up and premature wear.



DANGER: Ensure belt guard is fitted prior to using grain auger. Failure to do so can result in serious injury.

2.2 Assembling undercarriage kit

1. Open parts bundles and spread parts out on a flat and clean floor. Referring to diagram 3, identify and familiarize yourself with each part before beginning assembly.
2. Lay axle (8) flat on the ground and attach two arms (3 & 4) to each end of the axle.
3. Fit 1" washers (6) and wheel (7) to each end of the axle, and secure both wheels with supplied linchpin (5).
4. Position and secure two tube clamps (1), with lugs facing down, to the auger tube, use the chart Table 'A' in positioning the clamps to obtain the desired grain auger outlet height. Dimensions are in approximate.
5. Support and lift top end (outlet) of grain auger using a suitable lifting device. Attach arms to the tube clamp lugs using supplied ½" X 1 ½" bolts, spring washers and nuts.
6. Ensure inlet end (toe) is resting on the ground then lower grain auger until wheels touch the ground.

Diagram 3 - Undercarriage Assembly

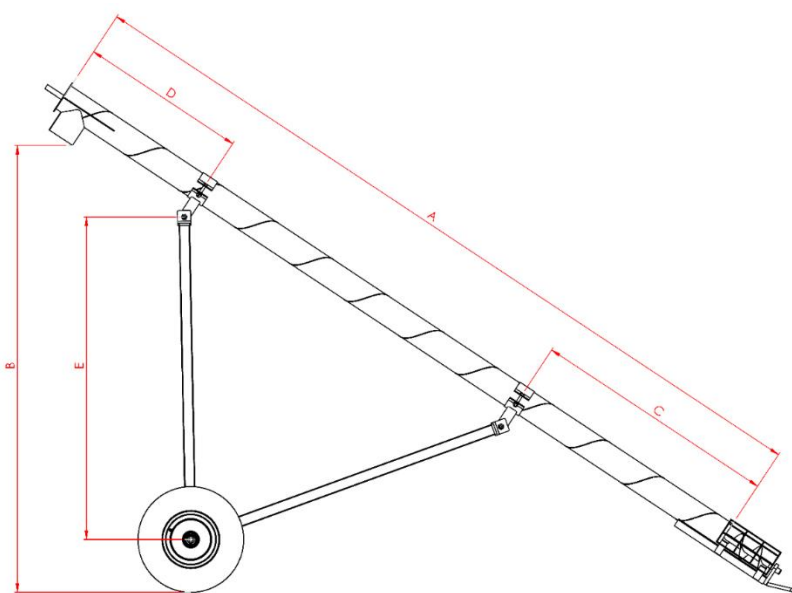
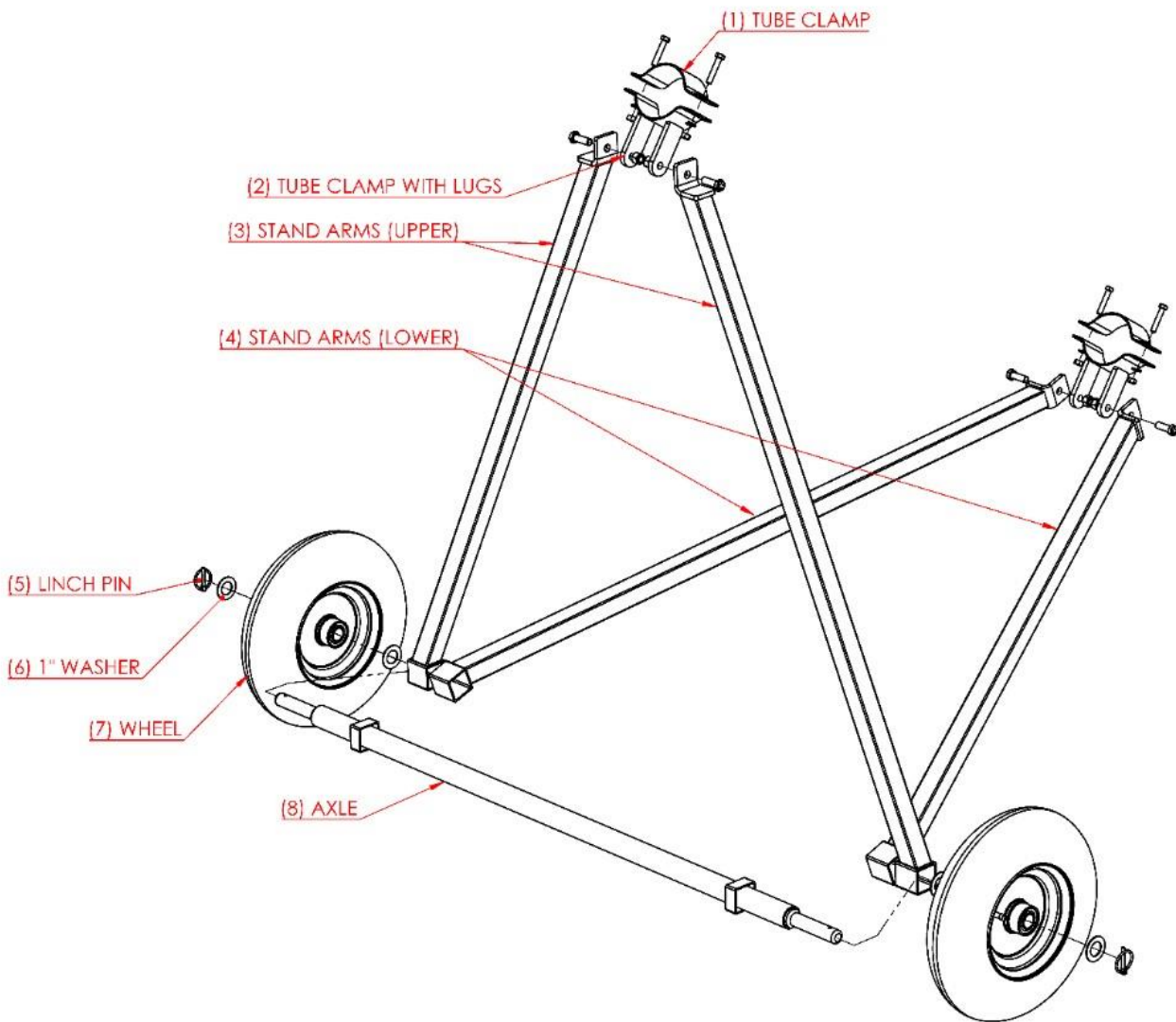


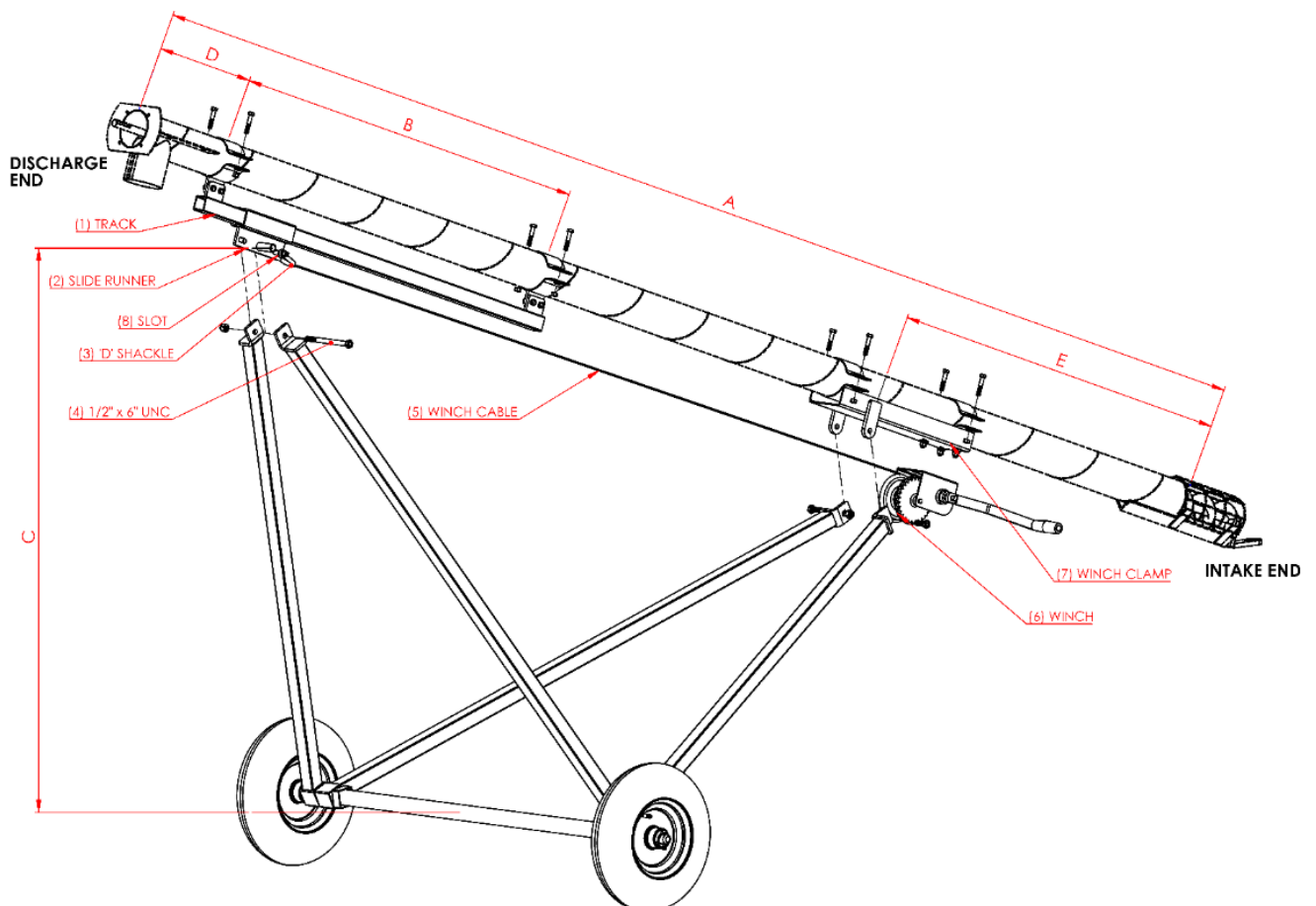
TABLE A				
A	B	C	D	E
3.0	2.2	0.9	1.6	1.3
3.0	1.8	0.9	0.9	1.3
3.0	1.3	0.9	0.3	1.3
4.0	2.8	1.2	2.2	1.6
4.0	2.2	1.2	1.2	1.6
4.0	1.5	1.2	0.3	1.6
5.0	3.6	1.5	2.5	2.1
5.0	2.7	1.5	1.2	2.1
5.0	1.9	1.5	0.3	2.1
6.0	4.2	1.8	0.3	2.4
6.0	3.3	1.8	1.5	2.4
6.0	2.2	1.8	0.3	2.4
8.0	3.9	3.5	1.5	3.0
8.0	3.3	3.2	0.7	3.0
8.0	2.6	2.9	3.0	3.0

2.3 Assembling winch kit

1. Assemble auger stand, axle and wheels as previously, but do not attach to auger tube.
2. Mount Winch Clamp (7) to auger tube referring to Table 'B' column 'E' for the desired position.
3. Fit winch (6) to mount clamp using supplied 3/8" X 1" bolts, spring washers and nuts.
4. Fit track (1) and slide bracket (2) assembly to auger tube. Refer to Table 'B' columns 'D' and 'B' for correct height and balance dimensions. Ensure slot (8) in slide bracket faces grain auger intake.
5. Support and lift grain auger intake end using suitable lifting equipment. Attach lower arms to winch cable lugs using supplied 1/2" X 1 1/2" bolts, washers and nyloc nuts. Next attach upper arms to Slide Bracket using supplied 1/2" X 6" bolt, washer and nyloc nut (4). Do not over tighten lower and upper arm bolts, arms must be allowed to pivot but without excessive play.
6. Unwind winch cable and attach end to 'D' shackle (3) then secure shackle to slot in slide bracket, take up any remaining cable slack.
7. Ensure all bolts and nuts are tight and all parts are correctly secured, then place grain auger into working position and remove lifting device.
8. Carefully wind grain auger up and down several times to ensure all parts are operating properly.

TABLE B				
A	B	C	D	E
3.0	1.3	1.3	0.3	0.9
4.0	2.0	1.6	0.3	1.2
5.0	2.0	2.1	0.3	1.5
6.0	2.6	2.4	0.3	1.8
8.0	2.6	3.0	0.2	2.9

Diagram 3 - Winch installation



Auger Operation

Efficient operation of the grain auger requires that competent operator's follow a checklist before each start up and demands that safety precautions be observed at all times. To do otherwise is endangering life and is a misuse of equipment.

3.1 Pre-operation checklist

Before operating the grain auger for the first time and each subsequent time, the operator must follow a checklist and be familiar with all facets of moving material on an auger.

1. All safety guards and shields are in place and secure.
2. Winch cable is not frayed or damaged and clamps are secure.
3. Drive belts are not frayed.
4. Drive pulleys and belt are in line and correctly tensioned.
5. All fasteners are tight or properly adjusted.
6. If fitted, winch is in suitable working order.
7. Auger is clear of any overhead power lines.

3.2 Checklist for 240 volt drive system

1. Electrical lead and plugs are in good order.
2. Electrical lead is raised and supported off the ground.
3. Lead is well clear of moving parts and sharp edges.
4. Clear pathway and quick access to emergency stop switch.
5. Pulleys are aligned and secure.
6. Belt guard is in place and secure

3.3 Operating procedure

Ensure you have completed the pre-operating check list and checked to ensure the area around the grain auger is clear of people and animals.

If you are using a portable hopper ensure it is correctly positioned and straps are tight.

CAUTION: Be ready to switch off motor in case of an emergency.

1. After completion of the initial 30 minute run in period, run grain auger empty, stop motor and conduct an inspection.
2. The grain auger should be shut down and inspected 3 times during the first 10 hours of operation.
3. When the grain auger is running listen for abnormal noise, vibration or vee belt slippage and always be prepared to switch off the motor.
4. When operating the grain auger always work with a second person in a position to monitor the operation and initiate a shutdown in case of an emergency.

DANGER: Under no circumstances allow grain auger to be operated with the intake or belt guards removed or incorrectly fitted. Failure to do so will result in serious injury or death.

WARNING: In case of a blockage or stoppage of material flow, do not attempt to clean the blockages or investigate stoppage while the motor is running. Stop motor prior to any entry to any part of the auger.

3.4 Shut down procedure

1. Run completely empty then turn off motor.
2. Disconnect power by unplugging lead on 240 volt motor and clean grain auger before storing away.

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.
