



Operators Manual

Drive Over Hopper

Diesel Engine Drive



Contents

1. Introduction	
1.1 Serial Number Location	3
1.2 Induction Sheet for Operators	4
1.3 Grainline Warranty Registration	5
1.4 Grainline Warranty Conditions	5
2. Safety Information	
2.1 Hazard Labels	6
2.2 General Safety	6
2.3 Operation Safety	6
2.4 Transportation	7
2.5 Fire Prevention	7
2.6 Intended Use	7
2.7 Correct Usage	7
2.8 Incorrect Usage	8
2.9 Safety Decals	8
2.10 Diagram of Decal Placement	12
3. Operation	
3.1 Pre-Operation	13
3.2 Break-in Phase	13
3.3 Drive Over Hopper Operation	13
3.4 Operation Movement	14
3.5 Transport Format	15
3.6 Storage	17
4. Lubrication and Maintenance	
4.1 Cleaning	18
4.2 Inspections	19
4.3 Maintenance Intervals	19
4.4 Lubrication	19
4.5 Maintenance Point Locations	20
4.6 Maintenance Point Descriptions	21
5. Specifications	
5.1 Drive Over Hopper Specifications	22

1. Introduction

Thank you for purchasing a Grainline Drive Over Hopper. Every effort has been made to provide you with a reliable product, specifically designed to complement and improve your grain handling operation.

Please read this manual thoroughly before operating the Drive Over Hopper. The information included in this manual is crucial for proper operation, and maintenance.

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

Your Auger Details:

Model:	D	O	H							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 Drive Over Hopper. Full responsibility rests solely and completely on the end user for the correct and legal installation thereof. Intended use is for 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.

1.3 Grainline Warranty Registration

Please ensure that you complete the warranty registration for your Drive Over Hopper 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 12 month warranty

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 12 months of the original purchase date.

At Grainline's request the customer will make the defective part available for inspection by Grainline so that cause of the faulty / defective part can be identified for accurate repair.

All parts used and manufactured on Grainline products are covered by this warranty except for the following components, which are covered by their respective manufacturer's warranty.

- Kohler Diesel Engines – EPG Engines 1800 122 770
- Yanmar Diesel Engines – Power Equipment 1800 069 469
- 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

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. All operators must have read the instructions in this manual before operating the machine. Untrained operators can cause injury or death.

A Qualified Operator:

- Does not use drugs or alcohol which will impair alertness or coordination. An operator who is taking prescription drugs must seek medical advice to determine if they can safely operate a machine and the equipment.
- Has completed training including a demonstration and verbal instruction by the owner/manager prior to operation.
- Initially operates the Drive Over Hopper in an area without bystanders and uses all the controls until they can operate the machine safely under all working conditions.
- Understands all written instructions, rules, and regulations.
- Wears close fitting clothing, including safety glasses and hearing protection.
- Does not modify the equipment in any way. Unauthorized modification may impair the function or safety and could affect the life of the machine.
- Does not complete any adjustments or repairs on the equipment while the machine is running.

2.3 Operation Safety

- Maintain a 20m exclusion around the machine while the truck is unloading and when in storage. A temporary barrier fence may be required. Two trained operators' may be in this area. Training is to include reading and signing of a Safe Work Method Statement.
- The machine is only to operate on a well compacted gravel hard stand with an allowable bearing capacity of 150kPa.
- The truck is to remain on the hopper until the auger is completely empty.

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 most important part of safe operation is a safety conscious operator who always:

- Follows all safety signs/decals on machine and replaces damaged or missing signs/decals.
- Keeps children away from the work area.
- Ensures all unauthorized personal are clear of the area before operating.
- Lowers the hydraulic ramps and raises the hydraulic transport wheels, ensuring that the Auger base is supported on level ground before operating.
- Stands clear of the machine or ramps when raising and lowering.
- Makes sure all shields and guards are in correct position before operating and replaces them if damaged.
- Wears appropriate PPE. Safety glasses are to be worn when fluids are under pressure, there is flying debris or loose material, engine is running or when tools are being used.

2.4 Transportation

The Grainline Drive Over Hopper has been designed so it can be easily transported. The following steps must be completed prior to transportation.

- Review Transport Safety instructions in the Tractor Manual before moving.
- Empty hopper and auger before moving to prevent machine damage.
- Inflate tyres to recommended pressure.
- Always install transport locks, pins, or brackets before transporting.
- Do not tow equipment at speeds over 5 kilometres per Hour.
- Take extreme caution when manoeuvring around tight corners not to entangle the end of the auger.
- Never allow riders on the machine or equipment, falling off can result in serious injury or death.

2.5 Fire Prevention

- Flammable debris (leaves, straw, etc) must be removed regularly. If flammable debris accumulates, it can cause a fire hazard, clean often to avoid this accumulation. Flammable debris in the engine compartment is a potential fire hazard.
- The operator's area, engine compartment and engine cooling system must be inspected every day, cleaned if necessary, to prevent fire hazards and overheating.
- Check all electrical wiring and connections for damage, keep the battery terminals clean and tight. Repair or replace any damaged part or wires that are loose or frayed.
- Stop engine and allow to cool down before adding fuel, No Smoking! Do not refuel near open flames or sparks, fill the tank in well-ventilated areas.
- Do not use the machine where exhaust, arcs, sparks, or hot components can contact flammable material, explosive dust or gases.
- Check hydraulic hoses and fittings for damage or leakage, never use open flame or bare skin to check for leaks. Hydraulic hoses must be correctly routed, have adequate support and secure clamps, tighten, or replace any parts that show leakage.
- Know where fire extinguishers and first aid kits are located including how to use them, inspect the fire extinguisher and service the fire extinguisher regularly. Obey the recommendations on the instructions plate.

2.6 Intended Use

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

2.7 Correct Usage

The Grainline Drive Over Hopper 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. When the drive over hopper 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. When 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.

2.8 Incorrect Usage

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

Incorrect use of the auger includes:



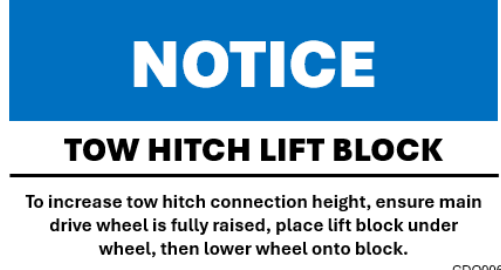
- Using the auger to transfer grains or materials other than dry, free-flowing food grains.




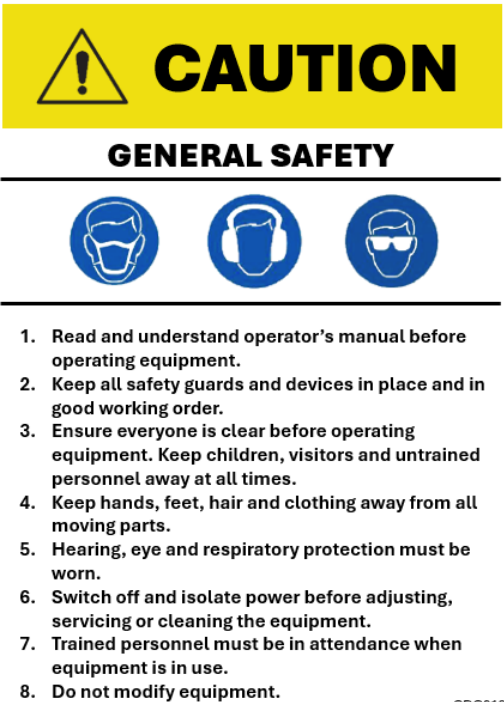
WARNING: Any modification to the Grainline auger without the approval of Grainline will void all warranty and could result in death or serious injury.








2.9 Safety Decals






Samples of the safety decals here are those used on the Grainline Drive Over Hopper.

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.

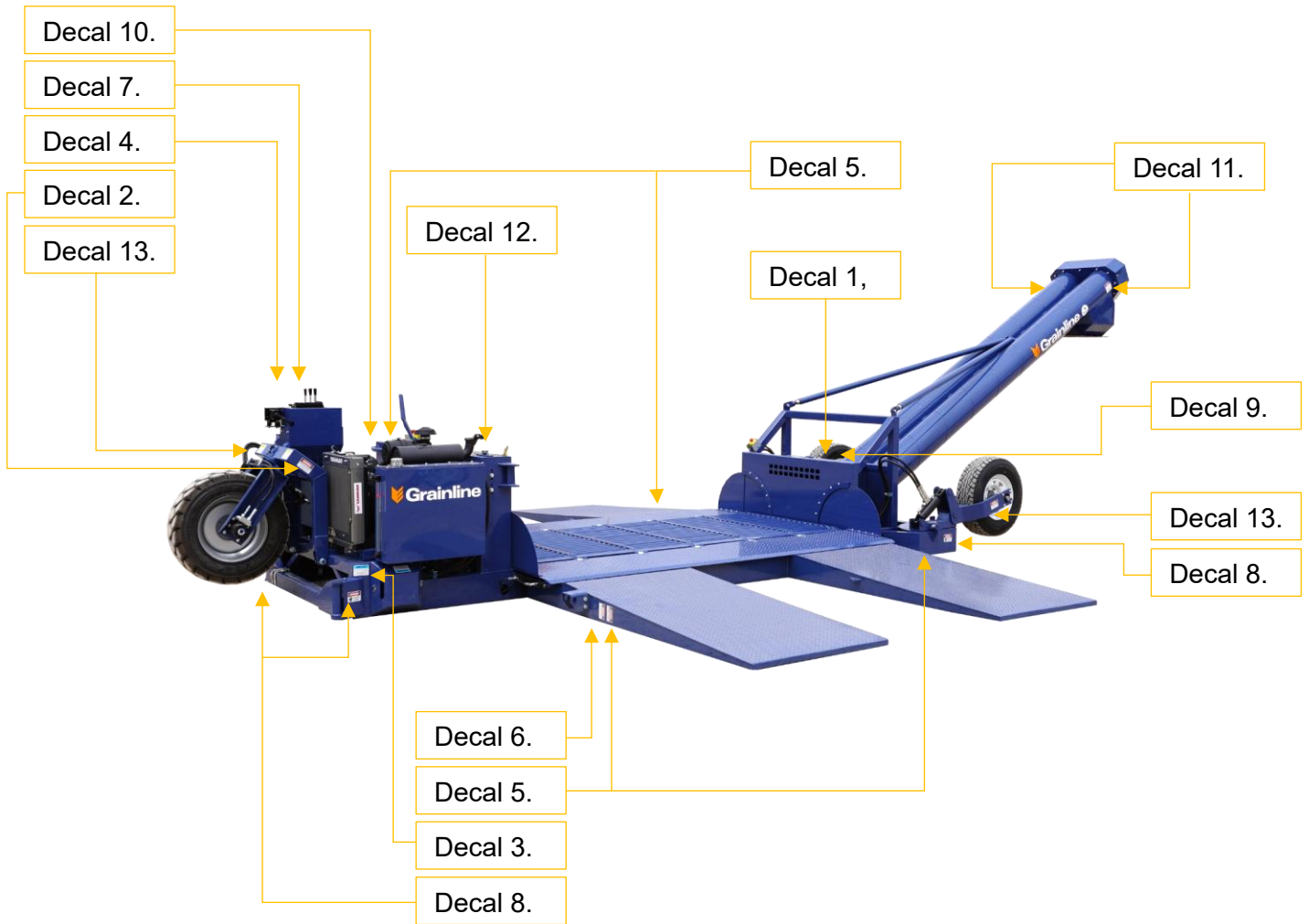
Decal No.	Decal Description	Decal Detail
Decal 1.	<p>DISENGAGE MOTOR DRIVE COUPLING WHEN NOT IN USE</p> <ul style="list-style-type: none"> - Ensure coupling is disengaged prior to towing hopper. This will allow wheel to rotate freely. 	 <p>CAUTION</p> <p>DISENGAGE MOTOR DRIVE COUPLING WHEN NOT IN USE</p> <p>FAILURE TO DO SO WILL VOID WARRANTY <small>GDO007</small></p>
Decal 2.	<p>MUST NOT EXCEED 10KM/H WHEN TOWING</p> <ul style="list-style-type: none"> - Towing at excessive speed may result in damage to equipment. 	 <p>CAUTION</p> <p>MUST NOT EXCEED 10KM/H WHEN TOWING</p> <p>FAILURE TO FOLLOW SAFE TOWING PRACTICES COULD CAUSE MACHINE DAMAGE AND WILL VOID WARRANTY <small>GDO008</small></p>
Decal 3.	<p>TOW HITCH LIFT BLOCK</p> <ul style="list-style-type: none"> - Informs operator of location and intended use of lift block. 	 <p>NOTICE</p> <p>TOW HITCH LIFT BLOCK</p> <p>To increase tow hitch connection height, ensure main drive wheel is fully raised, place lift block under wheel, then lower wheel onto block. <small>GDO006</small></p>

<p>Decal 4.</p>	<p style="text-align: center;">SPARE PARTS STORAGE</p> <ul style="list-style-type: none"> - Identifies spare parts storage location. 	 <p style="text-align: right;"><small>GDO010</small></p>
<p>Decal 5.</p>	<p style="text-align: center;">KEEP CLEAR</p> <ul style="list-style-type: none"> - Bystanders must be at least 6 metres clear of ramps when they are being folded 	 <p style="text-align: right;"><small>GDO011</small></p>
<p>Decal 6.</p>	<p style="text-align: center;">ENSURE LOCKING PIN IS IN PLACE WHEN RAMPS ARE FOLDED IN THE UPRIGHT POSITION</p> <ul style="list-style-type: none"> - Locking pins are for safety in the instance of hydraulics failure. 	 <p style="text-align: right;"><small>GDO012</small></p>
<p>Decal 7.</p>	<p style="text-align: center;">GENERAL SAFETY</p> <ul style="list-style-type: none"> - Provides information on general safety guidance. 	 <p style="text-align: right;"><small>GDO019</small></p>

<p>Decal 8.</p>	<p style="text-align: center;">CRUSH HAZARD</p> <ul style="list-style-type: none"> - Keep hands and feet clear at all times to prevent risk of crush injury. 	<div style="text-align: center;">  <p>DANGER</p> <p>CRUSH HAZARD</p> <hr/>  <hr/> <p>Keep hands and feet clear at all times FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH</p> <p style="text-align: right;"><small>GDO013</small></p> </div>
<p>Decal 9.</p>	<p style="text-align: center;">ROTATING FLIGHTING HAZARD</p> <ul style="list-style-type: none"> - Do not operate equipment when hopper lid is open. - Keep all guarding in place and in good working order. 	<div style="text-align: center;">  <p>DANGER</p> <p>ROTATING FLIGHTING HAZARD</p> <hr/>  <hr/> <ul style="list-style-type: none"> - Do not operate when hopper lid is open. - Keep all guarding in place and in good working order. <p>FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH</p> <p style="text-align: right;"><small>GDO015</small></p> </div>
<p>Decal 10.</p>	<p style="text-align: center;">HIGH PRESSURE FLUID HAZARD</p> <ul style="list-style-type: none"> - Provides warnings and guidance on hydraulic system and maintenance. 	<div style="text-align: center;">  <p>WARNING</p> <p>HIGH PRESSURE FLUID HAZARD</p> <hr/> <div style="display: flex; justify-content: space-around;">   </div> <hr/> <ul style="list-style-type: none"> - Hydraulic fluid can cause serious injury if it penetrates the skin. If it does, seek medical help immediately. - Frequently inspect all hydraulic hoses and fittings for leaks. Wear proper hand and eye protection when searching for leaks. - Replace any leaking hoses or fittings immediately. - Relieve system pressure before repairing, adjusting or disconnecting. <p>FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY</p> <p style="text-align: right;"><small>GDO017</small></p> </div>

<p>Decal 11.</p>	<p style="text-align: center;">ROTATING DRIVE HAZARD</p> <ul style="list-style-type: none"> - Warns of risks around rotating drives and maintenance of guarding 	<div style="text-align: center;">  <p>DANGER</p> <p>ROTATING DRIVE HAZARD</p>  </div> <hr/> <ul style="list-style-type: none"> - Keep hands, feet hair and clothing away from moving parts. - Keep guarding in place and in good working order. Do not operate if guarding has been removed. - Isolate and lockout power source before adjusting and servicing. <p>FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH</p> <p style="text-align: right;"><small>GDO016</small></p>
<p>Decal 12.</p>	<p style="text-align: center;">READ AND UNDERSTAND OPERATOR'S MANUAL BEFORE OPERATING EQUIPMENT</p> <ul style="list-style-type: none"> - Provides guidance on importance of reading and maintaining operator's manual. 	<div style="text-align: center;">  <p>WARNING</p> <p>READ AND UNDERSTAND OPERATOR'S MANUAL BEFORE OPERATING EQUIPMENT</p>  </div> <hr/> <ul style="list-style-type: none"> - Read and understand operator's manual before assembling, operating, or maintaining equipment. - Operator's manual must be kept with equipment at all times. - If manual is damaged or missing, contact Grainline for replacement. <p>FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY</p> <p style="text-align: right;"><small>GDO018</small></p>
<p>Decal 13.</p>	<p style="text-align: center;">RAISE WHEELS AND LOWER RAMPS BEFORE USE</p> <ul style="list-style-type: none"> - Do not operate with wheels in transport position. - Ensure ramps are fully lowered and in complete contact with ground before use. 	<div style="text-align: center;">  <p>CAUTION</p> <p>RAISE WHEELS AND LOWER RAMPS BEFORE USE</p> </div> <hr/> <ul style="list-style-type: none"> - Do not operate with wheels in transport position. - Ensure ramps are fully lowered and in complete contact with ground before use. <p>FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND DAMAGE TO MACHINE</p> <p style="text-align: right;"><small>GDO014</small></p>

2.10 Diagram of Decal Placement



3. Operation

3.1 Pre-Operation

The following pre-operation checklist must be completed every time the Drive Over Hopper is used.

1. Lubricate the equipment per the schedule outline in the Maintenance Section.
2. Check tyre pressure and inflate per manufacturer's specification.
3. Check wheel nuts for tightness.
4. Check that all bearings turn freely, replace as required.
5. Make sure all guards and shields are in place, secured and functioning as designed.
6. Check conditions of all hydraulic components for leaks, repair as required.

WARNING: High pressure fluid hazard. Leaking fluids under pressure can enter the skin and cause serious injury or death. Wear eye safety goggles and do not use hands to check for leaks. Do not operate with hydraulic leaks.

3.2 Break-In Phase

The Drive Over Hopper must have a break-in period for all operating conditions. The tube and flighting must get a polished surface through use. Once the auger has a polished surface it will run smoothly at the recommended speed.

During the break-in-period:

1. Run the engine at a slow idle until grain begins to flow from the discharge end, for the first approximately 15 Tonnes, operate at a slow speed and restrict the flow of grain through the Hopper.
2. Gradually increase RPM until operating at maximum recommended speed.

NOTICE: Running the auger empty for extended periods of time will result in excessive wear to the barrel and flighting.

3.3 Drive Over Hopper Operation

1. Remove transport safety locking pins from access ramps.



2. Start the engine. Using the wheel height adjustment controls, lower the hopper base on to a level surface. Ensure all wheels are completely raised.



WARNING: Do not stand under or beside access ramps when removing locking pins.

3. Using the hydraulic controls, lower the ramps until resting on the ground.



4. Allow the unloading vehicle to move into position, raise the anti-spill gates into position. For best results unload grain into the centre of hopper.



WARNING: Remain at a safe distance from any moving or unloading vehicles.

- With engine running at low idle, engage the belt tensioning lever. Increase engine RPM and monitor tail gate flow to prevent overflowing of the hopper.
- When the unloading vehicle is empty, lower the tractor engine RPM until no more material is being discharged from auger outlet.
- Lower anti-spill gates, if there are more unloading vehicles repeat previous steps, otherwise, allow engine to cool down by idling for 2 minutes before shutting down.

3.4 Operation Movement

Safe Operating Procedure:

- Do not operate this unit before reading and understanding the Operator's Manual.
- Make sure everyone is clear of the equipment before applying power or moving the machine.
- Make sure auger is empty before attempting to move.
- Keep wheels on level and firm ground.
- Never Exceed 10 Km/h when Transporting.

DANGER: Be aware of overhead powerlines. Keep away from powerlines when transporting as electrocution can occur without direct contact.

3.5 Transport Format

1. Fold ramps to vertical position for transport.



2. Insert transport safety locking pins and secure with attached lynch pin.



3. Unlock quick release pins and turn wheels until parallel with auger. Ensure quick release pins are reengaged prior to moving auger.



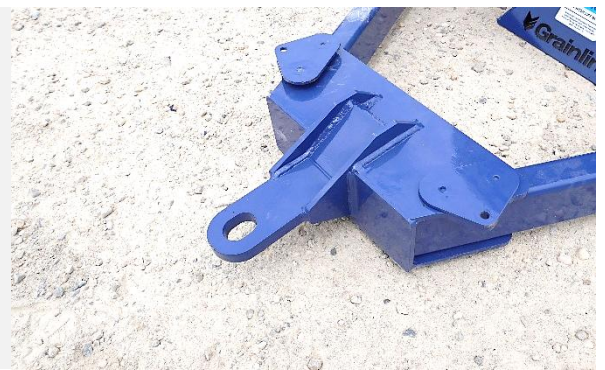
4. Disengage motor drive coupling and pin into place.



5. Ensure drive wheel is raised, then fold out tow arms.



6. Connect tow hitch to tow arms and secure with pins.



7. Place tow hitch lift block below drive wheel.



8. Using the hydraulic controls lower the rear wheels onto the ground, then lower the drive wheel onto the lifting block. The tow hitch will now be in the correct position to connect to the tow vehicle.



3.6 Storage

Long term storage

1. Using the hydraulic controls, lower the hopper onto a level surface and ensure wheels are completely retracted.



2. Remove ramp safety pins and using the hydraulic controls, lower the ramps until flat on the ground.



3. Isolate engine and remove key from ignition



Storage Checklist

1. Ensure hopper is thoroughly cleaned and all residual grain/debris is removed from hopper.
2. Lubricate all drives and grease points.
3. Inspect auger for damage and signs of wear. Conduct repairs or replace parts as necessary.
4. Check all fasteners and pins.
5. Ensure all guards are in place and safety decals are readable. Replace if necessary.
6. Ensure base and ramps are flat on the ground and wheels are fully raised.

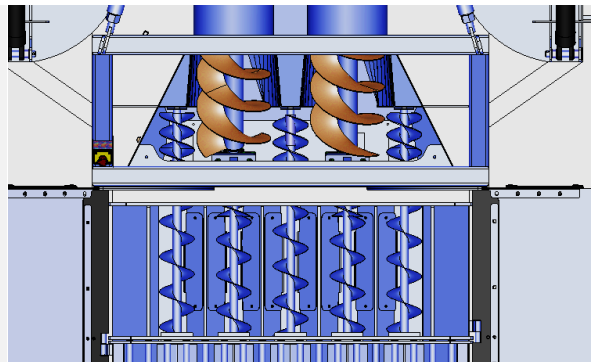
4. Lubrication and Maintenance

4.1 Cleaning

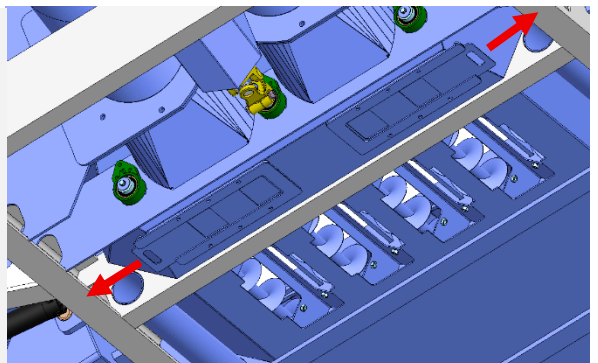
1. Ensure hopper is on a level surface. Using the hydraulic controls, raise hopper to maximum height. Stop engine and isolate. Place safety chocks under main beams of hopper.



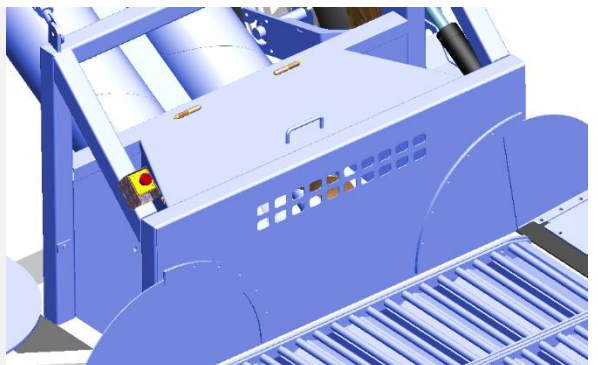
2. Open transfer box lid and remove hopper grate to expose clean out hatches as shown.



3. Loosen and remove bolts on clean out hatches, remove hatch plates and slide open gates on base of transfer box. See image of underside of hopper. Ensure you are wearing correct PPE. Using compressed air or water, clean out hopper and let all residue fall out of hatches.



4. Once cleaning is complete, close clean out gates on transfer hopper and install clean out hatches on hopper. Secure hatches with bolts and ensure tightened. Replace hopper grates and secure in place with bolts.



4.2 Inspections

The machine should be inspected on a 12-monthly basis by a mechanic. During this inspection the following should be completed.

1. Bolts should be retightened.
2. Inspect welds.
3. Inspect plates.
4. Inspect members.
5. Careful checking should pay particular attention to any signs of fatigue or over stressing.

4.3 Maintenance Intervals

Maintenance work must be done at regular intervals. Failure to do so will result in excessive wear and premature failure of equipment.

Safe operating Procedure

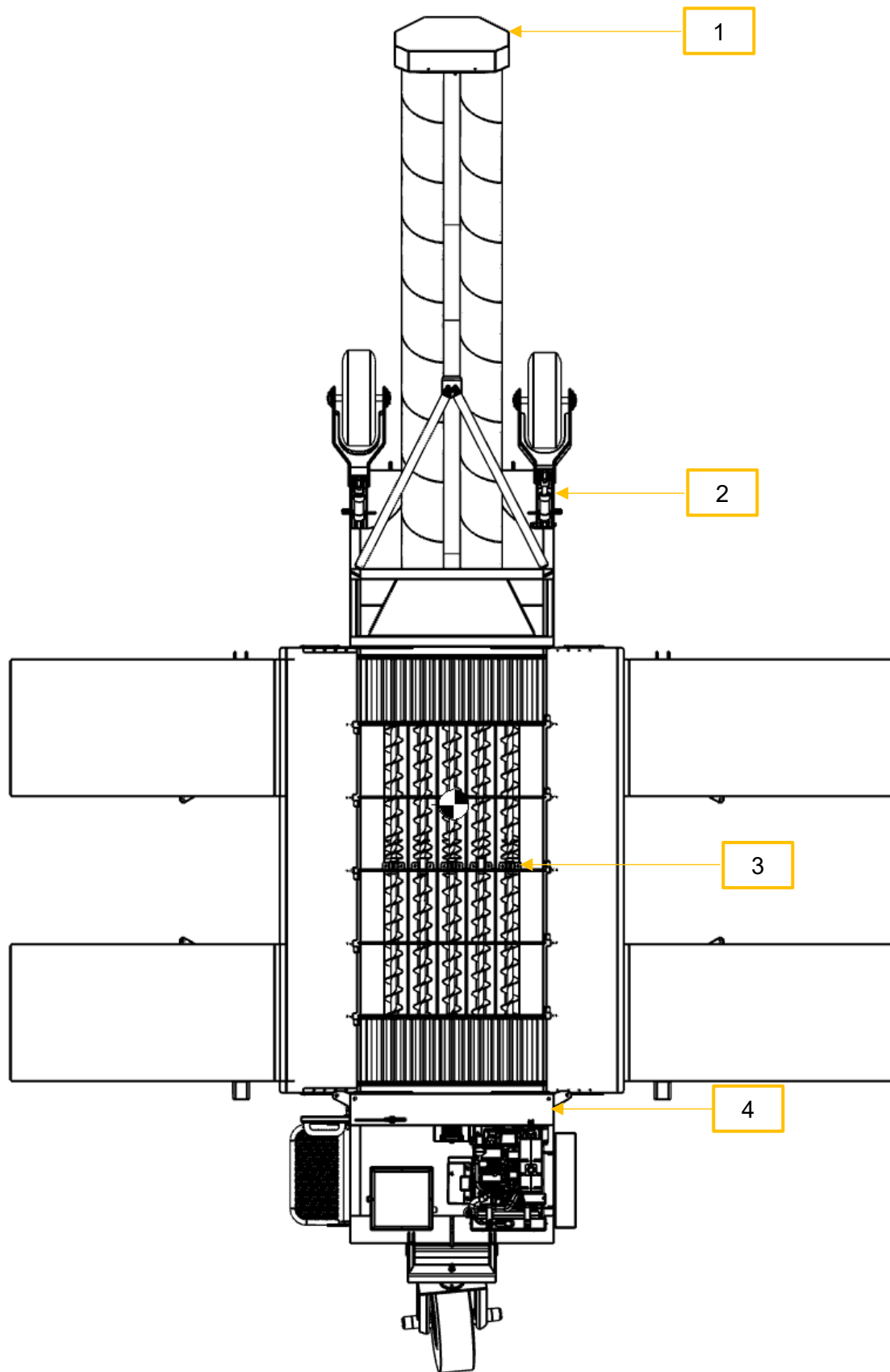
1. Stop engine, remove key from ignition and wait for all moving parts to stop before servicing, adjusting, and repairing the machine.
2. Wear appropriate safety gear.
3. Use tools, jacks and lifting equipment with appropriate capacity.
4. Relieve Hydraulic pressure on hydraulic system before repairing or adjusting.
5. Replace and secure all shields and guards removed during servicing before operating equipment.

CAUTION: Operating instructions must be read before operating or servicing equipment. Read and understand this operator's manual including safety decals on equipment. Follow warnings and instructions in the manuals when completing repairs, adjustments, or servicing. Check for correct function after adjustments, repairs, or service. Untrained operators and failure to follow instructions can cause injury or death.

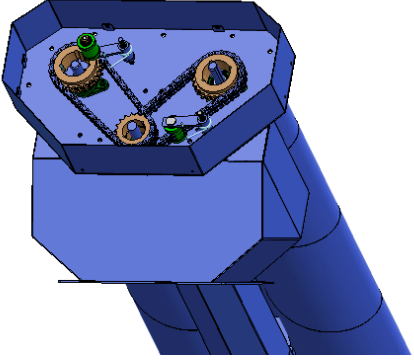

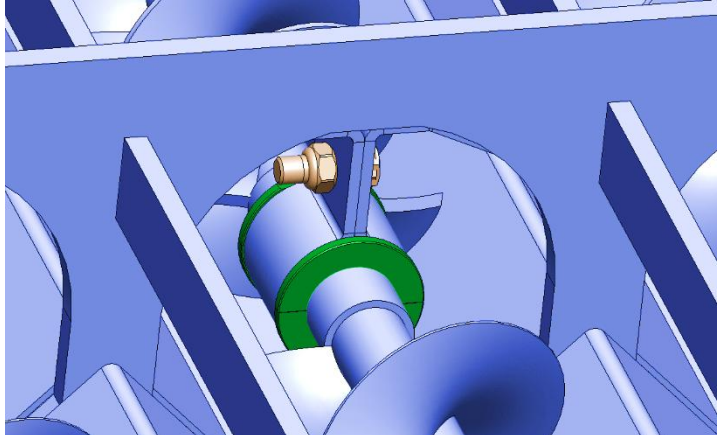

4.4 Lubrication

- Always use a good quality multi-purpose or lithium-based grease when lubricating the equipment.
- Always use a hand-held grease gun.
- Clean grease points before greasing, to avoid injecting dirt and grit.
- Replace and repair broken grease points immediately.
- If grease points will not take grease, remove, and clean thoroughly. Replace if necessary.

4.5 Maintenance Point Locations



4.6 Maintenance Point Descriptions

Location	Description	Image
1	Drive chain and chain tensioner rollers. Oil every 8 hours and check for excessive wear and ensure free movement.	
2	Wheel turn tables & wheel nuts. Check wheel nut tension every 50 hours & grease turn tables	
3	Centre hopper hanger bearing bushes. Check every 50 hours.	
4	Oil Hopper flight drive chains every 8 hours and check tensioners and belts.	

5. Specifications

5.1 Drive Over Hopper Specifications

Product Code	GDO
Auger Size	2 X 12 Inch barrels
Engine	46Hp Yanmar Diesel Engine
Finish	2 Pac polyurethane paint with powder coated ramps
Warranty	24 months

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.