HIVE

MOTHERBIN

2025

OPERATOR'S MANUAL

Elmer's MANUFACTURING

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WARRANTY

Elmer's Manufacturing warrants against defects in materials or construction of their products for ONE year from purchase date. Elmer's Manufacturing reserves the right to inspect and decide whether material or construction was faulty or whether abuse or accident voids the warranty.

Warranty service must be performed by a dealer or service center authorized by Elmer's Manufacturing to sell and/or service the product. Only new or re-manufactured parts or components furnished by Elmer's Manufacturing will be used. Warranty service will be performed without charge to the purchaser for parts or labor as outlined in the Warranty Labor Times schedule. Under no circumstance will allowable labor times extend beyond the maximum hours indicated in the Warranty Labor Times schedule for each warranty procedure. The purchaser will be responsible for any service call and/or transportation of the product to and from the dealer or service center's place of business, as well as any premium charged for overtime labour requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranty. Costs associated with equipment rental, product downtime, or product disposal are not warrantable and will not be accepted under any circumstance.

Each warranty term begins on the date of purchase. Under no circumstance will the warranty be approved unless the product warranty registration has been properly completed. This warranty is effective only if the warranty registration is submitted within 30 days of purchase. Please note that some countries (example, USA) require these warranty cards to be filled out to prove the machine is, in fact, within the warranty period before allowing Elmer's Manufacturing to perform any warranty work.

This warranty does not cover a component that fails, malfunctions or is damaged as a result of, (i) improper modification or repair, (ii) accident, abuse or improper use, (iii) improper or insufficient maintenance, or (iv) normal wear or tear. This warranty does not cover products that are previously owned and extends solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this warranty does not transfer to the third party purchaser in any way. Elmer's Manufacturing makes no warranty, express or implied, with respect to tires or other parts or accessories not manufactured by Elmer's Manufacturing. Warranties for these items, if any, are provided separately by their respective manufacturers. **THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.**

In no event shall Elmer's Manufacturing be liable for special, direct, incidental, or consequential damages of any kind. The exclusive remedy under this warranty shall be repair or replacement of the defective component at Elmer's Manufacturing's discretion. This is the entire agreement between Elmer's Manufacturing and the Owner about warranty and no Elmer's Manufacturing employee or dealer is authorized to make any additional warranty on behalf of Elmer's Manufacturing.

Elmer's manufacturing reserves the right to make product design and material changes at any time without notice. Elmer's Manufacturing shall not incur any obligation or liability to incorporate such changes and improvements in products previously sold to any customer, nor shall they be obligated or liable for the replacement of previously sold products with products or parts incorporating such changes.

Contact your local Elmer's Manufacturing dealer for any warranty assistance. Claims will be denied if the warranty registration has not been completed. Warranty registration is available on the Elmer's Manufacturing website at https://www.elmersmfg.com/warranty.

Elmer's MANUFACTURING

1 PRODUCT IDENTIFICATION

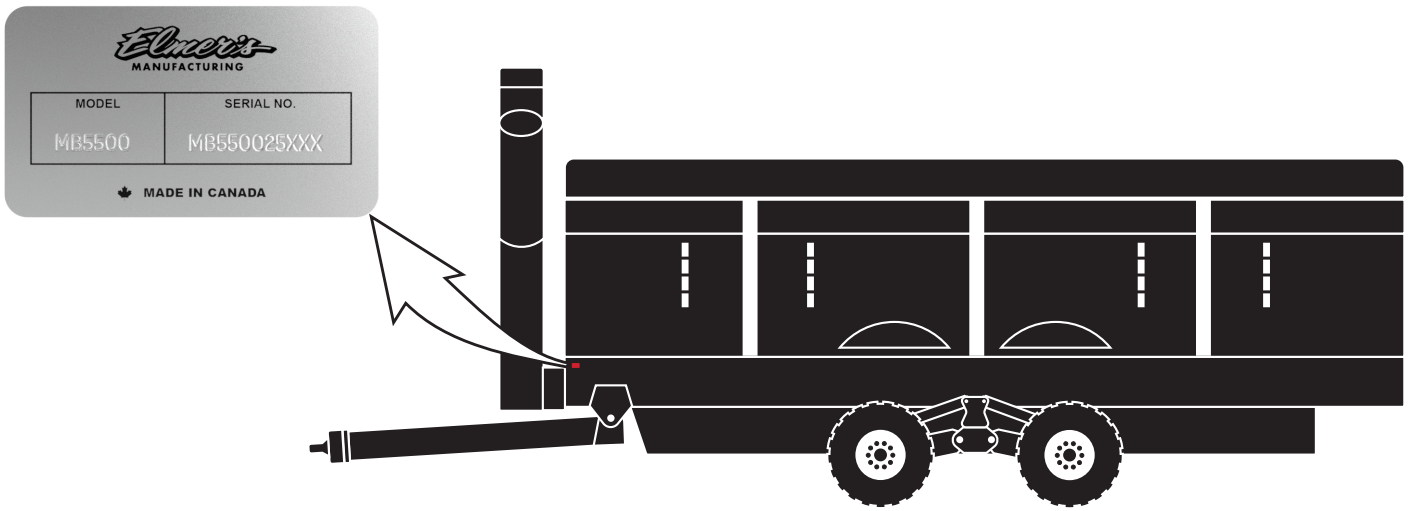
Fill out and retain this portion for your records. The serial number is located as shown below. Your dealer will need these numbers when you order parts. File identification numbers in a secure place. When ordering parts or requesting assistance, please have the following information ready; **Product Name, Product Model and Serial Number**.
All products manufactured by Elmer's Manufacturing Ltd are warranted to be free from material and workmanship defects for 1 (one) full year from time of retail delivery. Contact your local dealer for assistance with any warranty questions.

Purchase Date: _____ Dealer: _____

Dealer City: _____ Phone #: _____

Model #: _____ Serial #: _____

Note: Information within this manual was published with the most recent information available. Due to continual progress, specifications and information is subject to change. Always obtain the most recent information before using the equipment.



2 INTRODUCTION

Congratulations on the purchase of an Elmer's Manufacturing Hive motherbin! Read this manual carefully to learn how to operate and service this machine correctly. Failure to do so could result in equipment damage, personal inury, or death.

This manual should be considered to be a permanent part of the machine and should remain with the machine when it is sold.

Warranty is provided by Elmer's Manufacturing to operators who maintain this machine in the prescribed method outlined in this manual. Warranty is only valid if the registration form is filled out within 30 days of purchase of the machine. Elmer's Manufacturing Hive motherbins carry a one year limited warranty protecting against defects and workmanship. Please contact your dealer for any warranty or product support issues. If your dealer is not available, contact Elmer's Product Support at 204-324-1872.
This warranty assures you, the customer, that Elmer's Manufacturing stands behind it's products should defects appear within the specified warranty period. Should equipment be abused, or modified to change its performance beyond original factory specifications, warranty will become void and field improvements may be denied.

2.1 Glossary

Operator Orientation - Throughout this manual, the directions left, right, front, and rear are given from the perspective of the tractor operator, seated, and facing the direction of travel.

Case Drain – A low pressure return line connected to the tractors hydraulic reservoir, typically using a flat faced coupler.

7-Pin Connector – Sometimes referred to as the 7-Way Trailer Connector, this is the connector and heavy-duty wiring responsible for controlling lighting and other functions on the towed trailer or implement.

ISObus – ISObus is a standardized connector, communication, and power delivery system for agricultural equipment.

SCV – Selective Control Valves are the hydraulic valves on the tractor or truck used to control the flow in most hydraulic circuits.

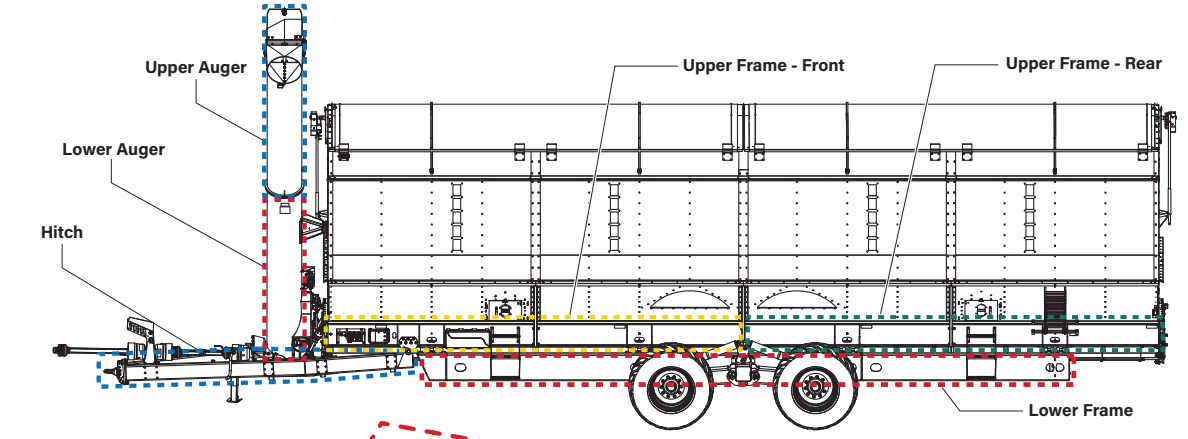
Power Beyond – Pressure & Return hydraulic connections on the tractor which allow for a direct connection to the hydraulic supply. Flow is always available at these ports, but the pressure is dependent on the Load Sense signal & tractor settings. Note, that unlike an SCV, these ports are not controllable directly.

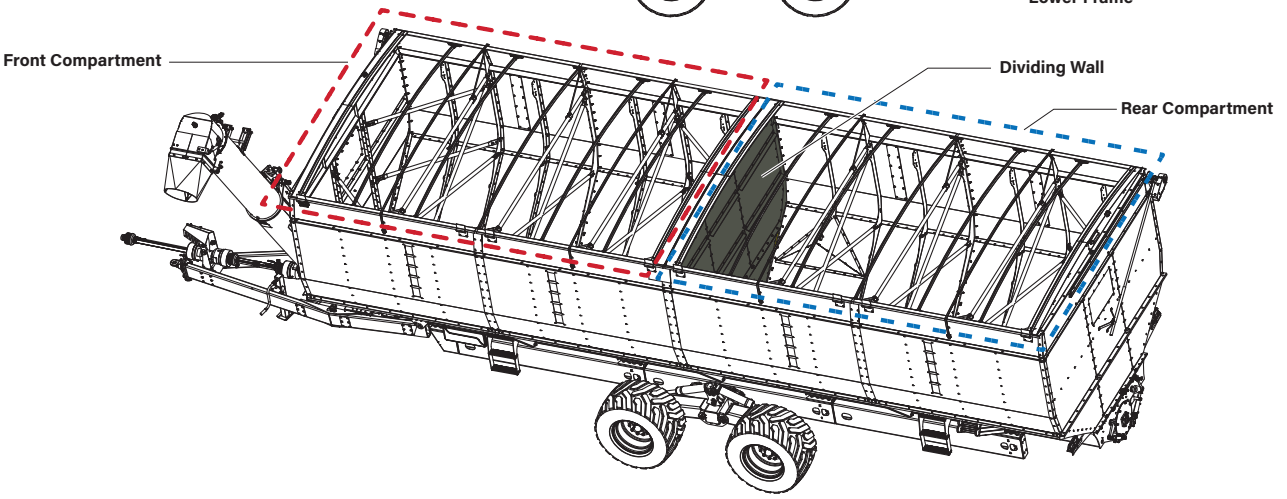
Load Sense - The load sense line allows the HIVE to signal when hydraulic pressure is required from the tractor when used in conjunction with the Power Beyond ports.

PTO – The PTO or Power Take Off shaft on the tractor allows for large amounts of HP to be transferred from the tractor to the connected implement.

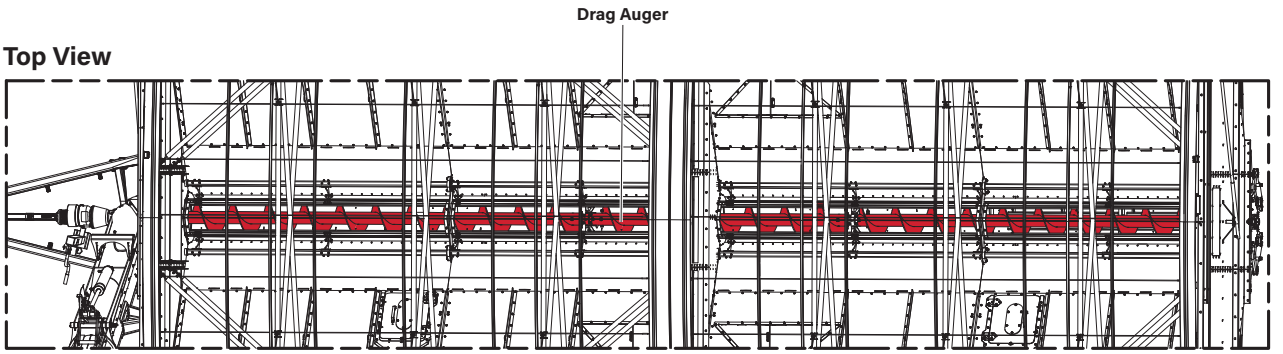
PTO Driveshaft - PTO driveshafts are rotating components that provide a flexible connection between a tractor's PTO and an implement, enabling the transfer of power.

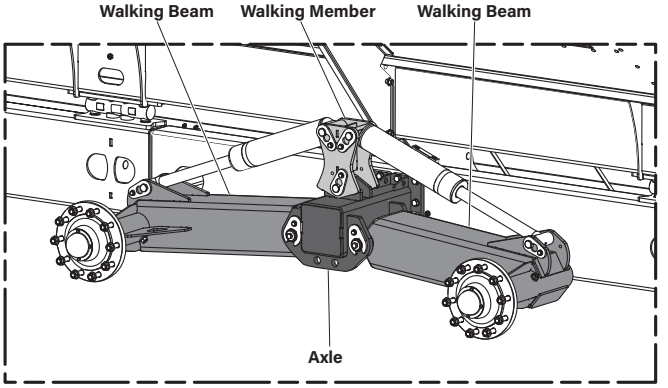
2.2 Machine Components

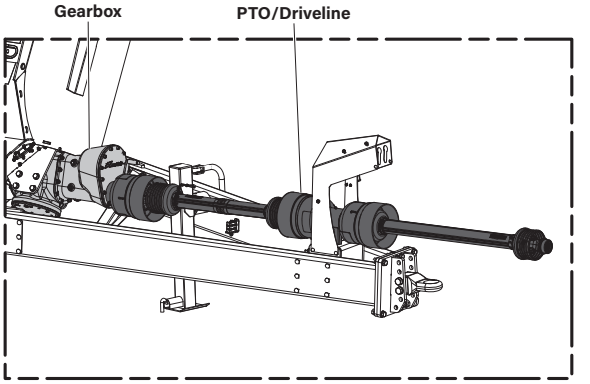




Top View







3 SAFETY

You are responsible for the safe operation and maintenance of your Elmer's Hive motherbin. You must ensure that you and anyone else that is going to operate, maintain or work around the equipment will be familiar with the operating and maintenance procedures and related safety information. This manual will take you step-by-step through all alerts and safety practices that should be adhered to while operating or working with this equipment.

Remember, most accidents involving product operation, maintenance and repair are caused by failure to observe safety rules or precautions. An accident can often be avoided by recognizing potentially hazardous situations in addition to having the necessary training, skills and tools to perform these functions properly.

3.1 Safety Alert Symbol

The presences of the safety alert symbol will advise you of important safety and operation information. Always be on the lookout for this symbol and the information that it will alert you to.

ATTENTION!

BE ALERT!

YOUR SAFETY IS INVOLVED!

REMEMBER!
Accidents can disable and kill.
Accidents cost.
Accidents can be avoided.

3.2 Signal Words and Colours

DANGER

INDICATES AN EXTREMELY HAZARDOUS SITUATION OR ACTION THAT WILL RESULT IN SERIOUS INJURY OR DEATH.

WARNING

INDICATES A HAZARDOUS SITUATION OR ACTION THAT COULD RESULT IN SERIOUS INJURY OR DEATH.

CAUTION

INDICATES AN UNSAFE SITUATION OR ACTION THAT MAY RESULT IN PERSONAL INJURY.

IMPORTANT

USED FOR INSTRUCTIONS ON OPERATING, ADJUSTING OR SERVICING THE MACHINE.

The "Read Operators Manual" symbol can be found on safety instructions and decals. It indicates that more information can be found in the manual and that the information should be read.

3.3 Safety and Maintenance Decals

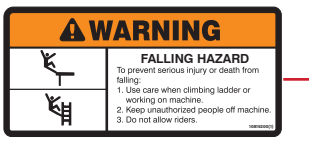
The following pages indicate placement of safety and maintenance decals. All operators should be familiar with the information on these decals. Damage to equipment and serious injury or death could result from failure to follow information on these decals. Always replace damaged or missing decals.

13572200 - Decal, Tool Box

13570800 - Decal, Overhead Hazard

11816000 - Decal, Warning, Pinch Point

14515800 - Decal, Tarp Controller, Hive
(Note positioning over switches)

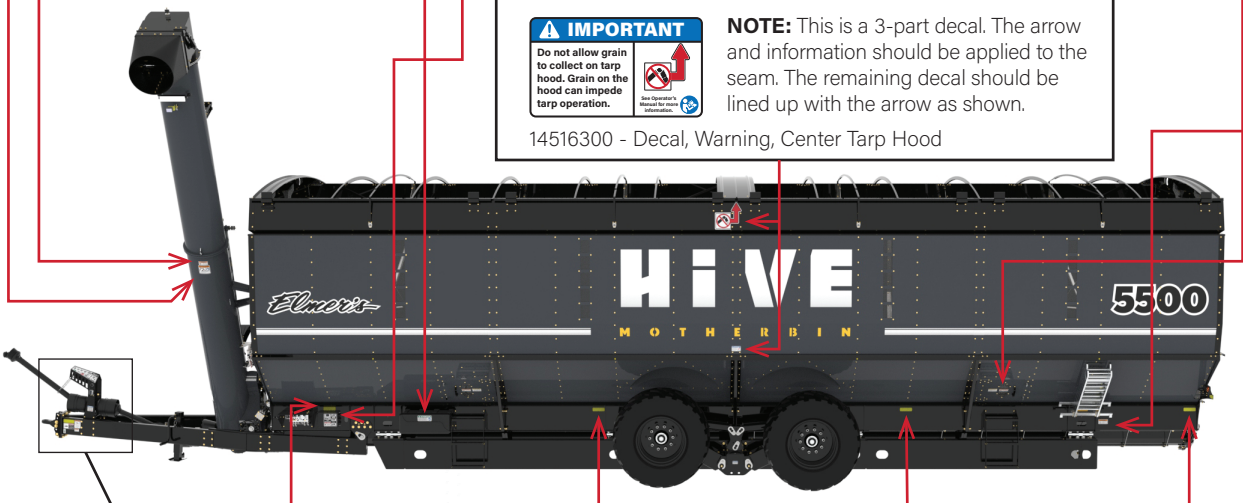


10815200 - Decal, Falling Hazard

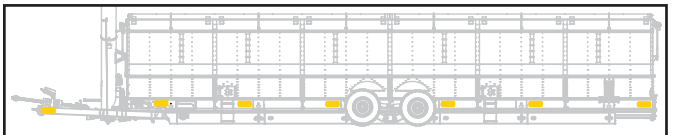
11816000 - Decal, Warning, Pinch Point
13894000 - Decal, Caution, Tank Entry
(Apply to both doors)

NOTE: This is a 3-part decal. The arrow and information should be applied to the seam. The remaining decal should be lined up with the arrow as shown.

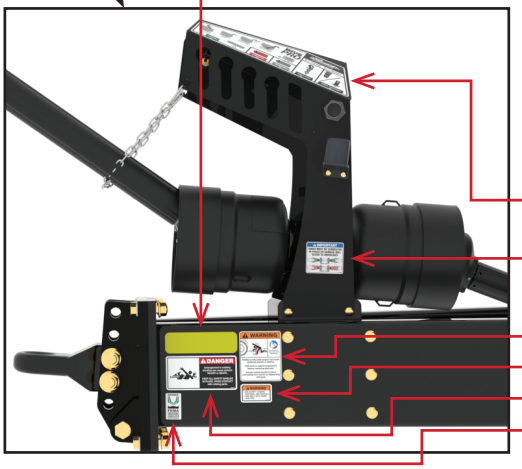
14516300 - Decal, Warning, Center Tarp Hood



11895200 - Decal, Reflective, Amber



8250 Model - amber decal placement.



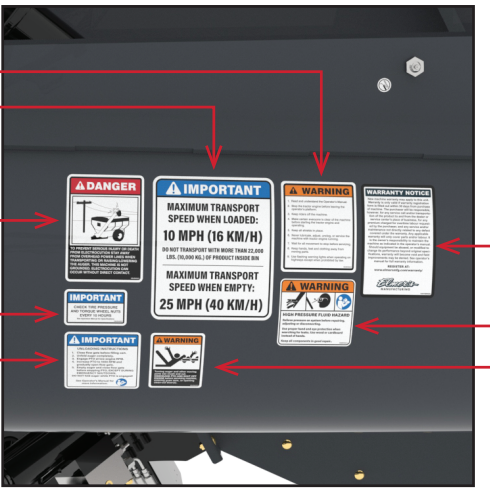
14508900 - Decal, Hose Holder, Base
or
14509000 - Decal, Hose Holder, Pro

13676600 - Decal, Important, Yokes Phase Connections

11846100 - Decal, Warning, Falling Tongue
11845200 - Decal, Warning, Safety Chains
11845800 - Decal, Danger, PTO Entanglement
11848100 - Decal, FEMA Member

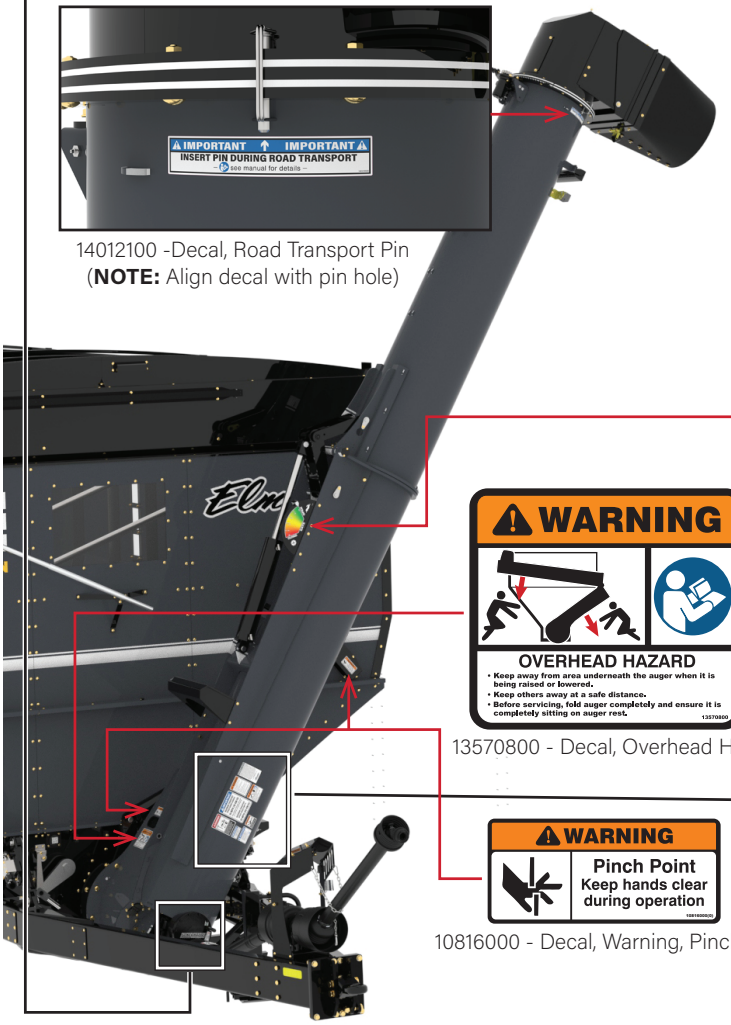
13550500 - Decal, Disengage Drag Auger
13879400 - Decal, Drag Auger Engaged
11845300 - Decal, Danger, Rotating Driveline

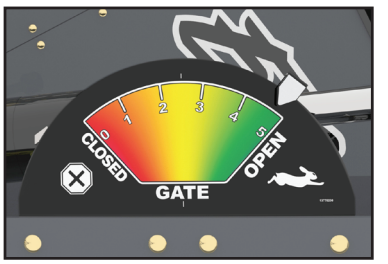
11845300 - Decal, Danger, Rotating Driveline

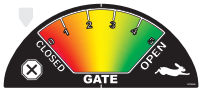


11845700 - Decal, Important, Unloading Cart
11845400 - Decal, Important, Tire and Wheels
11845900 - Decal, Danger, Electrocution
14516700 - Decal, Transport Speed/Weight Motherbin
11845100 - Decal, Warnings, General
11845500 - Decal, Warning, Turning Parts
10885100 - Decal, Warning, High Pressure Fluid
13070800 - Decal, Warranty

14012100 -Decal, Road Transport Pin
(**NOTE:** Align decal with pin hole)



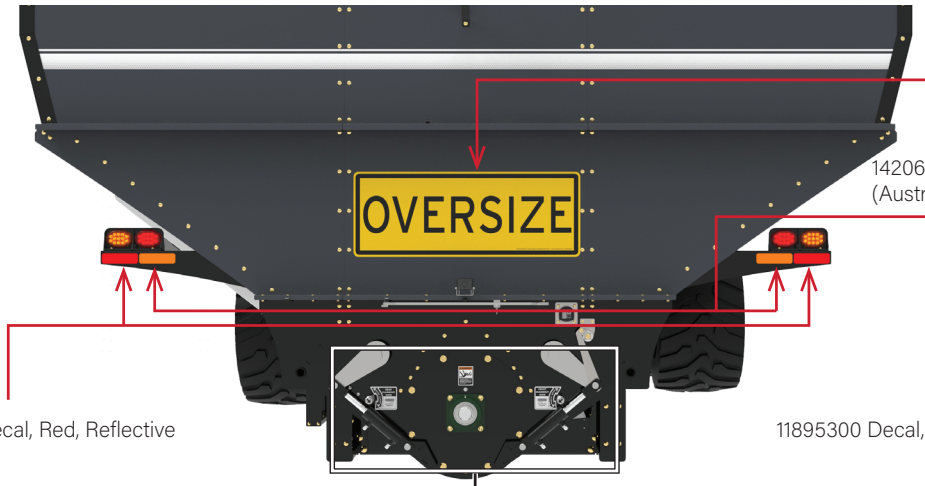




13779200 - Decal, Gate Indicator, LH
(NOTE: This is a 2 part decal. The grey triangle is applied to the indicator arm.)

13570800 - Decal, Overhead Hazard

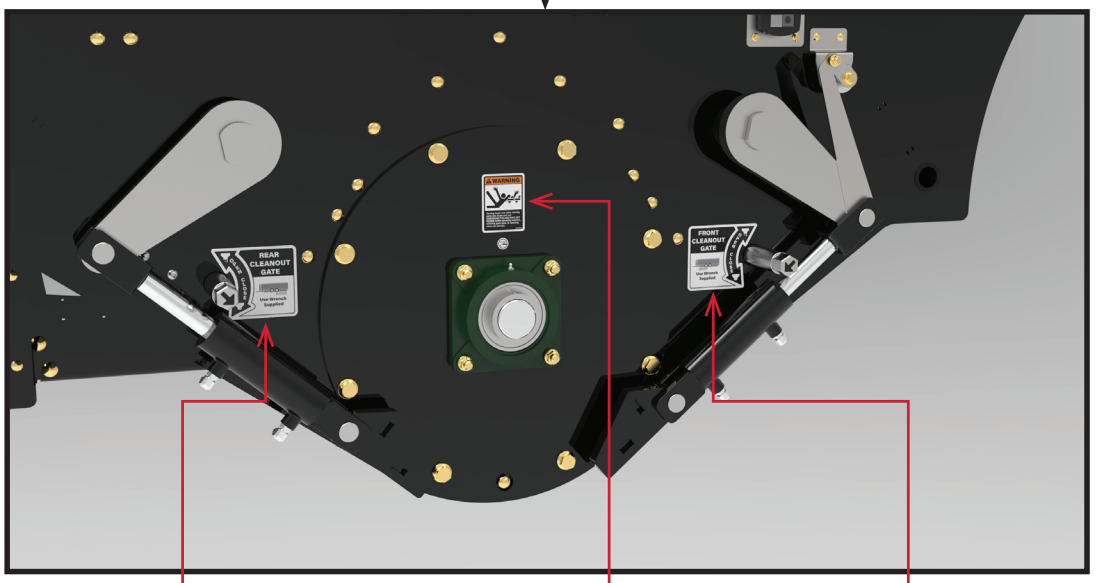
10816000 - Decal, Warning, Pinch Point



14206800 Decal, Oversize (Australia only)

13646100 Decal, Red, Reflective

11895300 Decal, Orange, Reflective

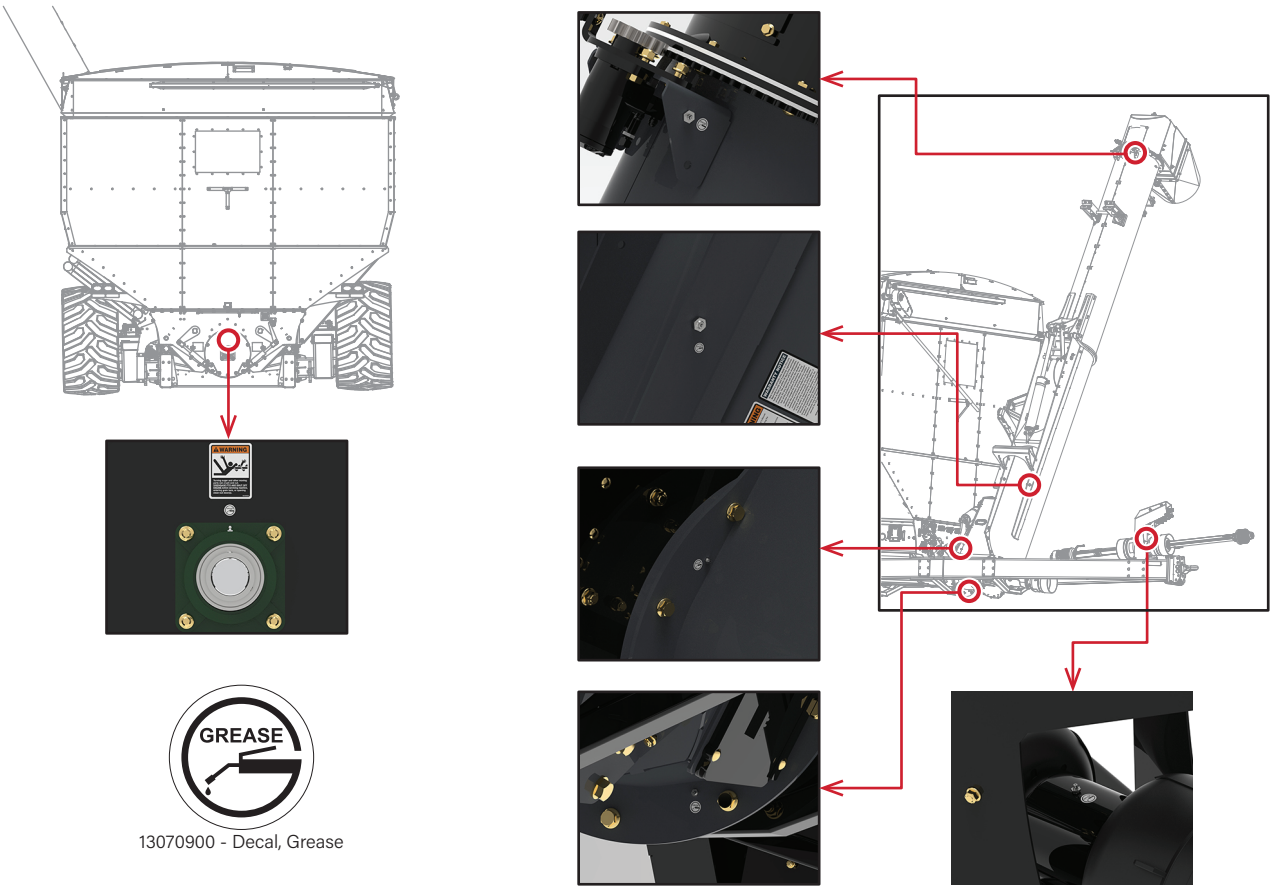


11845500 - Decal, Warning, Turning Parts

14516200 - Decal, Rear Cleanout Gate

14516100 - Decal, Front Cleanout Gate

NOTE: These are 2 part decals. The black arrow should be applied pointing in the direction that properly indicates the current position of the appropriate gate.



13070900 - Decal, Grease

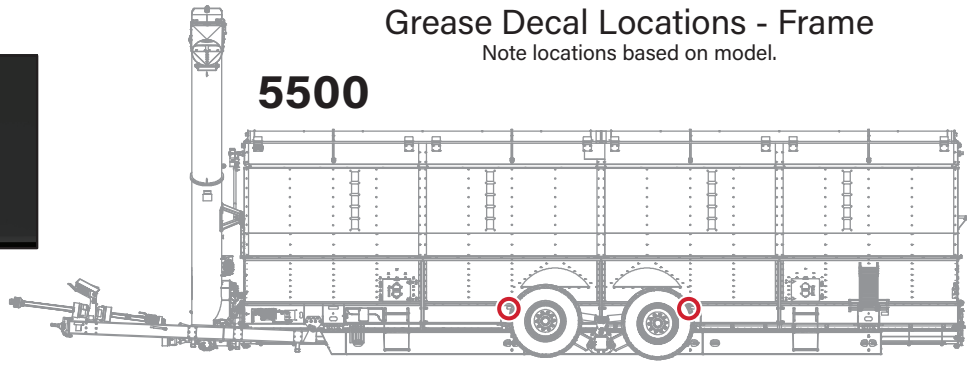
Grease Decal Locations

Typical

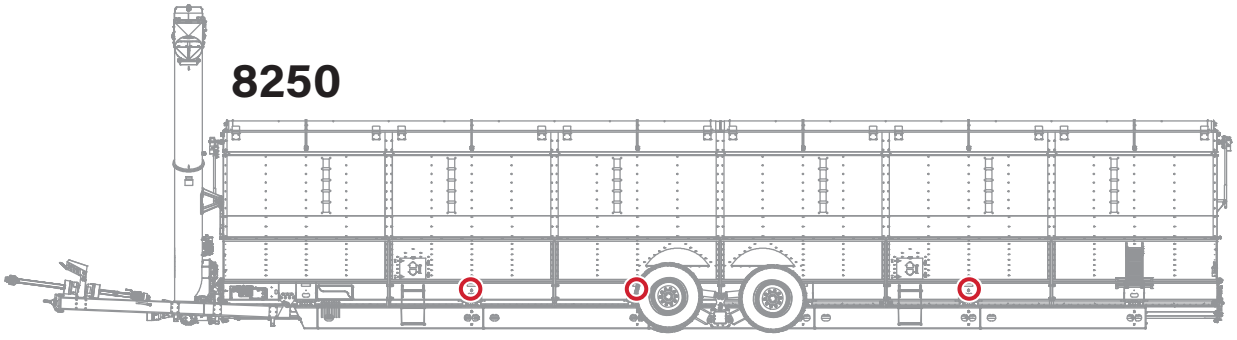
Grease Decal Locations - Frame

Note locations based on model.

5500



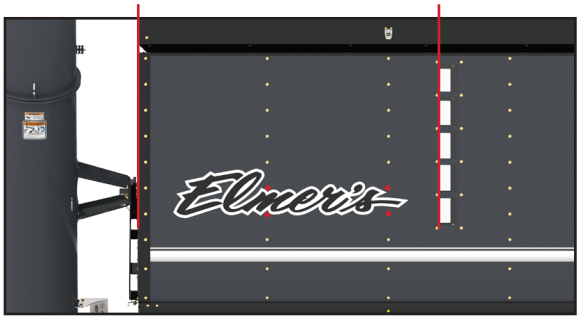
8250



14493600 - Decal, Hive Logo, Side
- Center horizontally over Motherbin logo.
- Center vertically between top and bottom of windows.

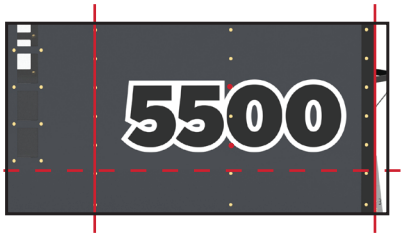
14494100 - Decal, Hive MB Logo, Side
- Center letter E on center seam.
- Center vertically between first 2 rows of bolts underneath panel bend (dashed line).

14493100 - Decal, Hive, Side Stripe (5500, 150T)
14493200 - Decal, Hive, Side Stripe Long (8250, 225T)
- Line up one end with window, cut other end at corner seam.
- Center vertically between first 2 rows of bolts underneath panel bend (dashed line).

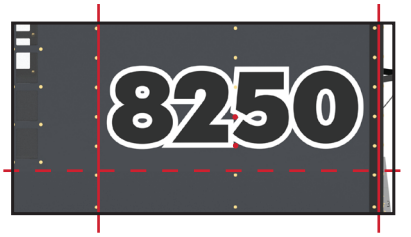


14493400 - Decal, Elmer's, Hive, Side
- Center between corner and front window at front on both sides.
- Center vertically as shown to avoid bolts (red dots).
- Right side will require some bolts to be covered. Trim and remove decal material covering bolts.

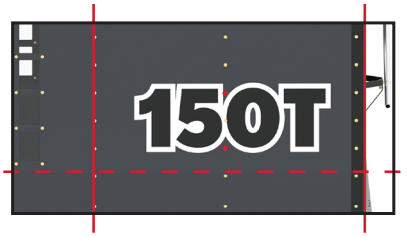
- Center between rear outer seam and second set of panel bolts.
- Position vertically to match Elmer's logo at front, roughly even with the first bolt above the bend (dashed line) while avoiding bolts (red dots). Some bolts cannot be avoided. Trim and remove decal material over bolts.



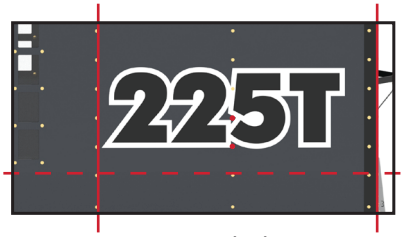
14493900 - Decal, Hive, 5500



14494000 - Decal, Hive, 8250

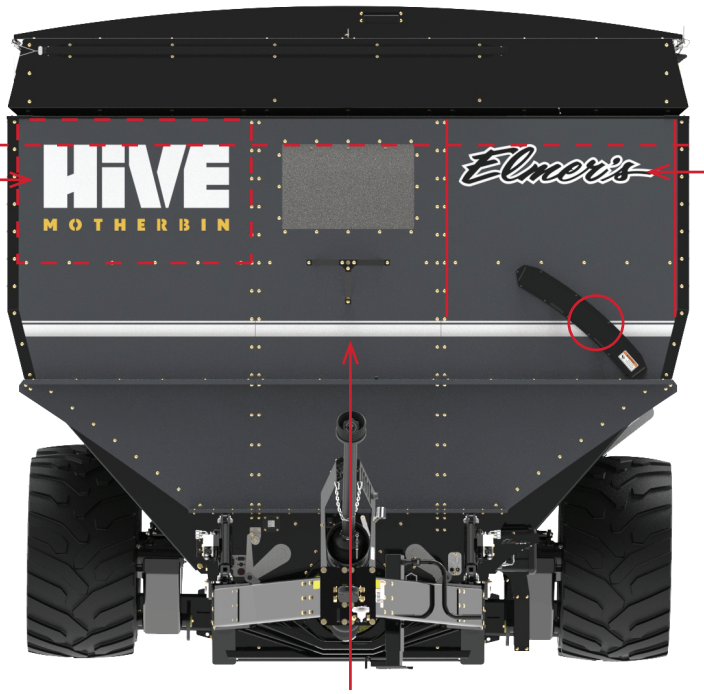


14493700 - Decal, Hive, 150T



14493800 - Decal, Hive, 225T

FRONT
(auger removed for clarity)



14493000 Decal, Hive, Stripe, Front and Back
Place with top of decal butting to bolts as shown.
Stripes should line up with stripes on the side.
Decal should be run underneath auger guide (red circle).
If applying after guide is installed, cut stripe to butt
on both sides of guide.

REAR

14493500 Decal, Hive, Logo, Front and Back
Center horizontally and vertically in red square.

14493300 Decal, Hive, Elmer's Logo, Front and Back
Center horizontally between red lines. Line up vertically with Hive Logo

3.4 Safety Sign-Off Form

Elmer's Manufacturing follows the general safety standards specified by the American Society of Agricultural and Biological Engineers (ASABE) and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the Hive must read and clearly understand ALL safety, operating and maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information before the season starts.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all your equipment. We feel that an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for your record-keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

Name	Employees Signature	Employers Signature

3.5 Operational Safety

3.5.1 Transport Safety

- Safety Chain
  - Use of a safety chain is required to attach hitch to the tractor. All tractors must be equipped with an intermediate chain support ahead of the hitch pin.
- Overhead hazards
  - Be aware of overhead wires and other hazards during transport. Always KNOW the transport width and height of the machine. Proper adjustment of the hitch is critical for safe transport; improper adjustment can increase transport height. See the Operation section for additional details.
- Keep SMV (slow moving vehicle) emblem (Oversize decal in Australia) and all reflective decals clean and fully visible.
- Always ensure tractor drawbar is locked in the centered position. Never transport with the drawbar in an offset configuration.
- When transporting on roads or highways, day or night, use appropriate lights and warning devices to alert other drivers. Comply with all applicable local regulations.
- Stopping distances increase with speed, weight, and downhill travel. Overloading—especially when towing—can cause loss of control. Always ensure total load stays within the tractor's rated tow capacity and legal limits.
- Do not tow this implement faster than 25 MPH (40 KPH). Always check and obey local laws for speed limits.
- Lockouts
  - This implement is equipped with cylinder mounted automatic hydraulic lockouts for transport functions. Always check for leaks and other damage and repair before transporting.
- Minimum recommended tractor weight should be 2/3rds of the total implement weight

3.5.2 Parking Safety

- Park machine on a level surface and chock wheels.
- Always ensure the HIVE is lowered to the ground or the hitch jack is well supported before disconnecting.
- See operations section for additional instructions on lifting, lowering & disconnecting.

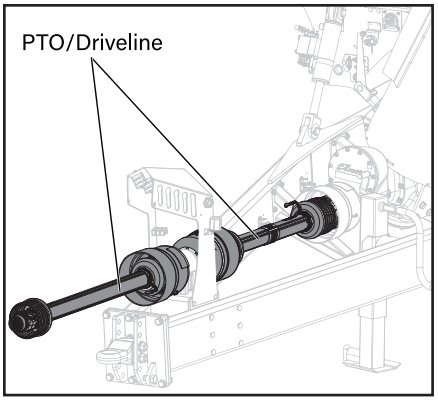
3.5.3 Maintenance Safety

- Shut tractor off before making any adjustments or lubricating the machine.
- Block machine securely to prevent any movement during servicing.
  - DO NOT WORK UNDER THE HIVE WITHOUT BLOCKING.
- Wear close-fitting clothing and appropriate safety equipment for the job
- Do not modify the machine in any unauthorized way.

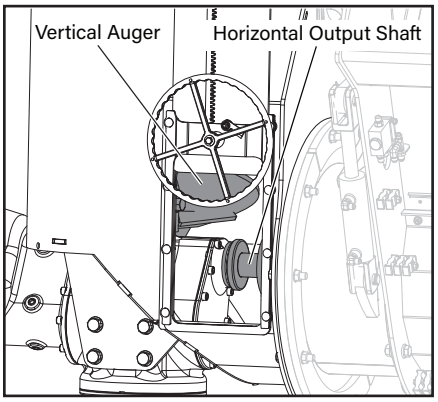
3.5.4 Rotating Components

- NEVER allow children near equipment that is running or engaged.
- Do not wear loose clothing. Tie back long hair. Shoestrings, pant cuffs, drawstrings, long hair and loose clothing can become entangled in rotating components.
- Only use equipment that is in good repair. Make sure that all guards or shields are in place and operational.
  - Guards around the PTO shafts, gear box and other rotating/spinning equipment are very important and should be in place during operation.
  - Do not remove shields from the PTO shaft.
  - Make sure that the PTO spinner/integral shields rotate freely.
  - Inspect regularly.
- Before disconnecting or servicing:
  - Apply tractor parking brake.
  - Ensure PTO and Hydraulics are disengaged.
  - Shut off the tractor engine.

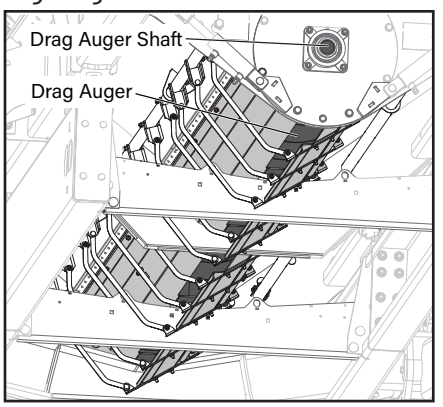
- Stand away from moving or rotating equipment. Where possible, operate from the tractor seat, and have bystanders be at least 20ft (6m) away.
- Never step over a rotating shaft. Even PTO shafts with guards are dangerous. Walk around the equipment.
- Know how to stop the tractor, engine and attachment quickly in case of emergency.
- Follow shutdown procedures and wait for all moving parts to stop before getting off the tractor or approaching the attachment.
- Ensure that universal joints are in the correct phase when connecting the shaft.
- Never exceed 1000 RPM PTO Speed.
- Proper extended and collapsed lengths of the PTO shaft must be verified on every tractor. Improper lengths may cause equipment damage, severe injury or death.
- Rotating components on the HIVE...
  - PTO/Driveline



  - Vertical Auger Cleanout



  - Drag Auger Cleanout



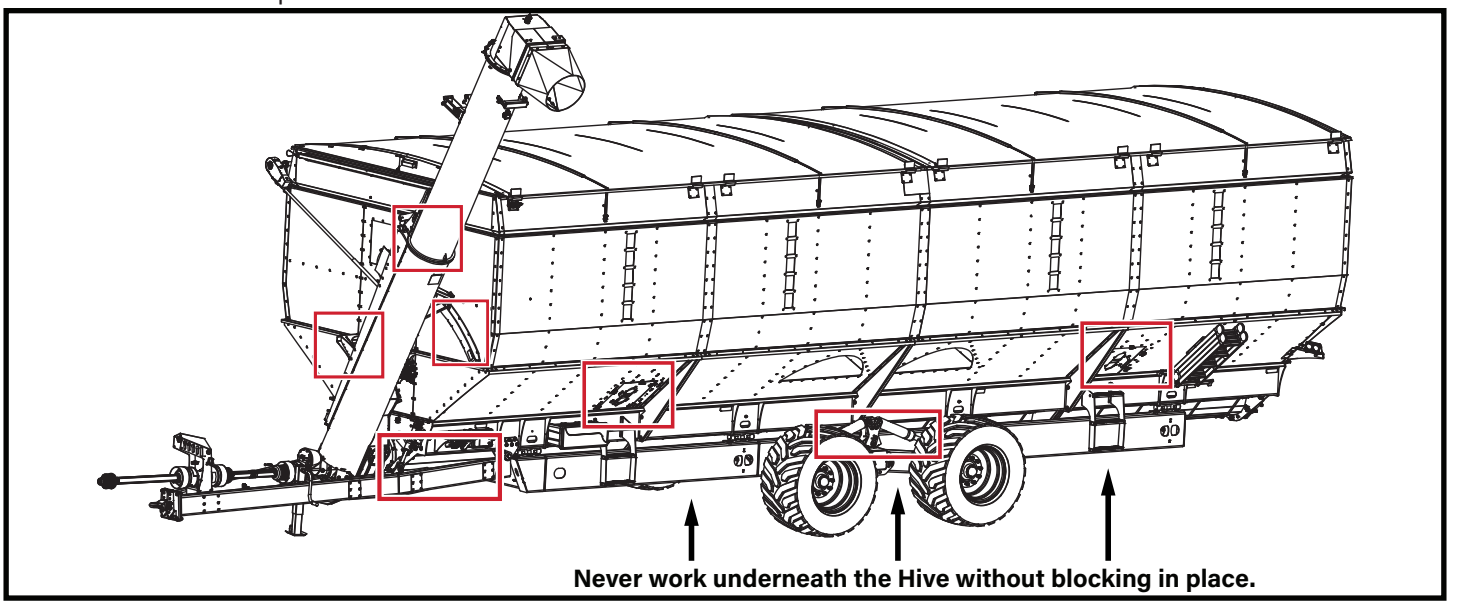
3.5.5 Bin Entry

- The inside of the HIVE should only be accessed for maintenance purposes and should be treated as an enclosed workspace with limited egress.
- When entering the bin either through the access doors or by using the portable ladder ensure the following:
  - The hydraulics and PTO are disengaged.
  - The tractor is in PARK.
  - The tractor engine has been shut off.
  - Other equipment operators in the area are aware of your presence and understand crop cannot be loaded into or out of the HIVE.
  - A second person is present outside the bin in case of emergency.
- **Risk of engulfment.**
  - Grain is inherently unstable and can shift without warning, creating a quicksand-like effect that can trap a person suddenly, potentially resulting in entrapment, suffocation, or death.
  - Grain may commonly move due to...
    - ▶ slope collapse
    - ▶ collapse of bridged crop
    - ▶ unloading

- **Risk of fall.**
  - Place ladder on a firm level surface and hook the top of ladder to the HIVE.
    - ▶ Avoid using the ladder on soft ground, especially after rainfall which may make the soil unstable.
    - ▶ Ensure the ladders locking mechanisms are fully engaged before climbing.
  - DO NOT
    - ▶ Use near power lines.
    - ▶ In inclement weather.
    - ▶ Leave unattended in a raised position.
  - Follow all local workplaces laws and regulations when using ladders.
- **Risk of respiratory intoxication.**
  - Inhalation of grain dust and other contaminants which may accumulate in the enclosed space of the HIVE may lead to mild symptoms such as headaches and dizziness, or severe consequences such as respiratory distress, or in severe cases death.
  - To mitigate these risks...
    - ▶ Check the air quality inside the HIVE before entering.
    - ▶ Wear appropriate respiratory equipment as required.
    - ▶ Ventilating before entry by opening the tarp.
- **Risk of fire & explosion.**
  - Grain dust accumulation on surfaces or suspended in the air can be highly flammable & explosive.
  - Caution should be exercised when introducing possible ignition sources such as power tools, or compressed air which can introduce static.

3.5.6 Pinch points/crush risk.

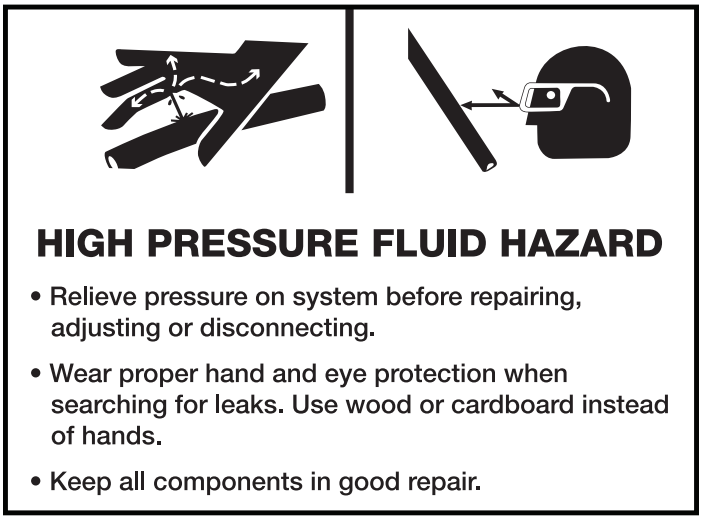
- The HIVE uses automatic hydraulic cylinder locks to prevent unwanted movement of the transport functions (hitch & axle).
- Although this system greatly reduces the risk of sudden failure, operators must never go beneath the HIVE or its hitch without safety blocks in place, as a failure could result in crushing.
- See diagram below for pinch points and crush point areas.



Never work underneath the Hive without blocking in place.

3.5.7 High Pressure Fluid Safety

- Use a piece of cardboard or wood to detect leaks of hydraulic fluid under pressure.
  - High pressure flids can penetrate the skin causing serious injury or death. Seek immediate medical treatment if injured by high pressure fluids.
- Always wear appropriate protective clothing and eye wear when working on or around high-pressure fluids.



4.1 Preparing for Operation

4.1.1 Preparing the Hive

Before operating the Hive, and each time thereafter, the following items should be checked off:

1. **General**
   a. Check that the PTO driveline shield turns freely and that the driveline can telescope easily.
   b. Check the tire pressure as per the specifications outlined on page 35. Bring to the specified level.
   c. Inspect for loose hardware, loose hydraulics, abnormal wear and other damage. Repair before transport or use.
   d. Install and secure all guards, doors and covers before starting.
2. **Lubrication**
   a. Lubricate the machine as per the schedule outlined in the Service and Maintenance section on page 28.
3. **Break-in**
   a. Gearbox Oil
      ▶ Change after first 50 hours of operation.
      ▶ Refer to maintenance section on page 31 for additional information.
   b. Wheel Bolts
      ▶ Retorque after the first ½ hour and again after the first 5 hours of operation. First 18 miles (30km) and again after first 180 miles (300km). See page 30 for information.
      ▶ Repeat procedure any time the wheels are removed and reinstalled.

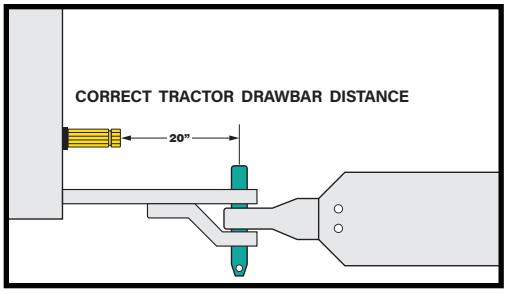
4.1.2 Tractor Specifications & Preparation

To ensure safe and reliable operation of the Hive, use a tractor that meets the required specifications. The following list serves as a guide for selecting a suitable tractor.

- **Tractor Weight**
  – A minimum of 33,000 lbs (15,000 kg), or at least two-thirds of the implement's weight, is recommended.
  – Consult your tractors operator's manual and follow all recommendations.
  – Ensure tractor is properly ballasted and tires are properly inflated.
  – Ensure tractor is rated to tow the weight of the HIVE.
- **Tractor Horsepower**
  – Minimum 175 HP (130 kW).
  – Recommended 375 HP (280 kW).
    ▶ Note: Unload performance is dependent on the available PTO HP.
- **Hydraulics**
  – Minimum 2500 PSI (172 bar)
  – Recommended 2800 PSI (193 bar)
  – Minimum 15 GPM (56.8 L/min)
  – Standard Models
    ▶ 4 SCV's
  – PRO (if equipped)
    ▶ Case Drain
    ▶ 1 SCV
    ▶ If optional Power Beyond is used then no SCV is required.

Note: The Load Sense line coupler is tractor specific. Contact your dealer for additional information.

- **PTO Requirements**
  – 1000rpm - 20 spline, 1-3/4" diameter
  – Drawbar
    ▶ A CAT IV (2" or 52mm) hitch pin is required.
    ▶ The tractor drawbar must be set to provide 20 inches (508mm) between the PTO shaft's end and the drawbar pin's center. See diagram below. Refer to your tractor manual for the adjustment procedure. If this cannot

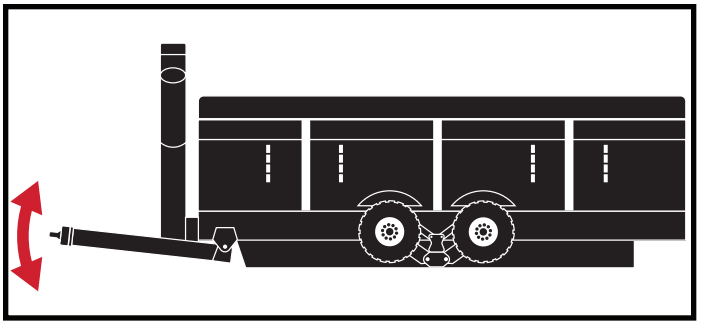


be achieved, please contact Elmer's Product Support (see page 5) for information regarding PTO specifications and procedures.

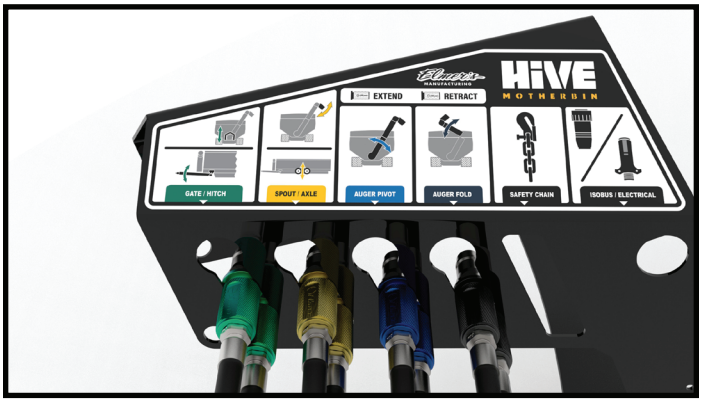
4.1.3 Connecting & Disconnecting Tractor

Follow this procedure when attaching the motherbin to the tractor:

1. Aligning Hitch
   a. If bin is positioned on the ground, use the hitch hydraulic controls to raise or lower the hitch as needed.



   b. Use hitch jack to raise or lower the hitch as needed.
      i. Slowly back the tractor until the holes on the hitch and drawbar are aligned. Install the drawbar pin and the retainer (see "PTO Requirements" on page 20 for drawbar information).
      ii. Attach the safety chain securely around the tractor drawbar cage to prevent unexpected separation.
   c. Connecting the PTO driveline:
      i. Check that the driveline telescopes easily and the shield rotates freely.
      ii. Attach the driveline to the tractor by retracting the lock collar, sliding the yoke over the shaft and pushing on the yoke until the lock pin clicks into position. Be sure the yoke is locked in position. Connect anti-rotation chains on PTO cover.
   d. Connecting the Hydraulics:
      i. Hoses are color-coded in pairs to assist in selecting the appropriate circuit for each connection.



      ii. Make sure all the couplers are clean and connect each to the correct tractor circuit. Confirm that all couplers are securely attached.
      iii. **Note:**
         ▶ If the system is equipped with a case drain, it must be connected for safe HIVE operation.
         ▶ Load sense is required when using Power Beyond instead of SCV's.
   e. Connect the wiring harness.
      i. 7-Pin Connector
      ii. ISObus Connector
      iii. Joystick Connector (if PRO equipped)
   f. Raise the jack and rotate to storage position.
      i. This does not apply if HIVE is being connected while lowered to the ground.
   g. Review following sections for details on lifting and lowering the bin as required.
      i. Note: It's recommended to always store the HIVE in a lowered position.
   h. Reverse the above procedures when unhooking from tractor.

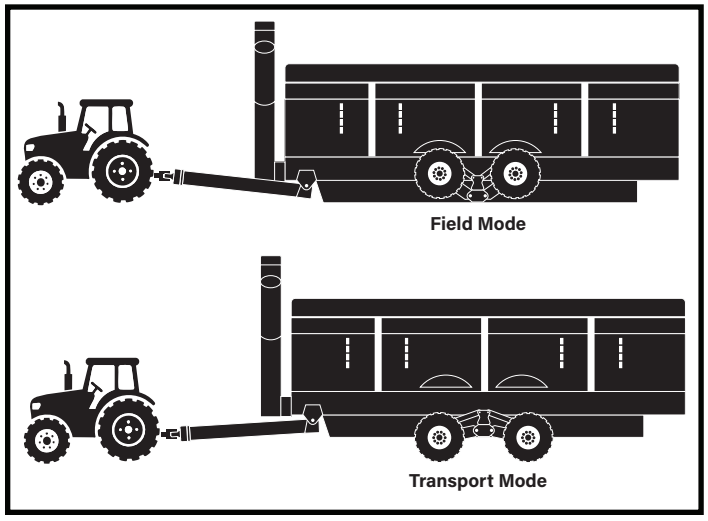
4.2 General Operation

4.2.1 Road Transport

- Review and follow all notes in the Transport safety section.
- Never transport the machine faster than 25 mph (40 kph) .
- Use flashers and beacons when travelling on roadways as equipped and allowed by local regulations.

4.2.2 Field vs Transport Modes

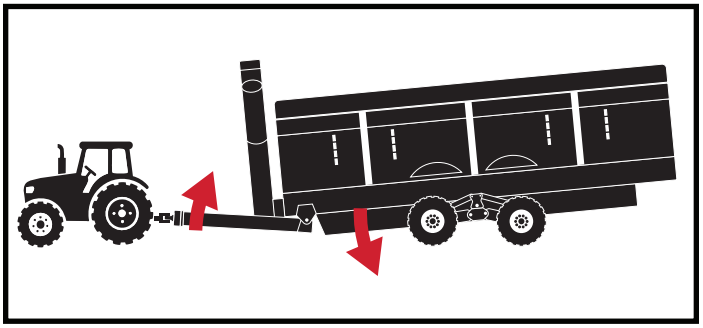
Note: These operations can be performed in multiple ways depending on the configuration of your HIVE.



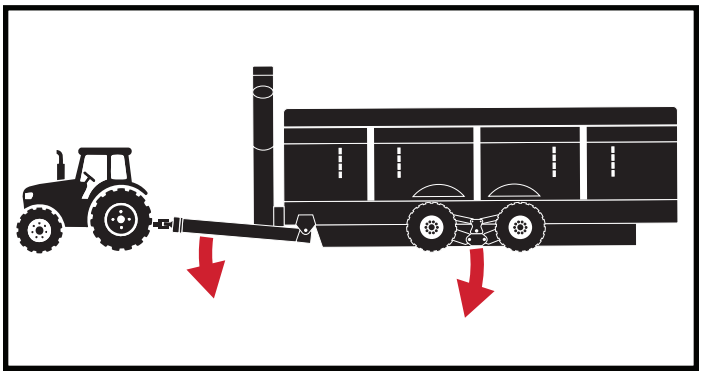
- Standard Models
  - Controlled from the tractor cab using the SCV's.
- PRO
  - Through the APP.
  - Using the joystick.
  - Using the manual manifold overrides.
- This manual refers to a tractor being used to transport the HIVE and operate the hydraulics. A suitable semi-truck equipped with hydraulics may also be used for some transport operations.

Lowering

1. Before lowering search for a suitable location.
   a. The ground must be predominantly level such that the full length of the frame on each side contacts the ground and can bear load.
   b. The ground must be firm, and capable of bearing the weight of the HIVE fully loaded with grain.
   c. Consider the weather when making this decision...
      i. Rain will affect both the grounds' ability to support the bin, along with your ability to access it for unloading.
      ii. If high winds are expected, park the bin such that the expected winds blow across the bin from the left to the right across the tarp.
2. Ensure HIVE is properly connected to the tractor.
3. Lower the front of the HIVE to within a few inches of the ground using the hitch circuit.



4. Lower the axle circuit while monitoring the front of the motherbin as well as the hitch connection to the tractor.
   a. Adjust the hitch circuit during the process of lowering the bin using the axle circuit such that the front and rear of the bin contact the ground around the same time or front first.

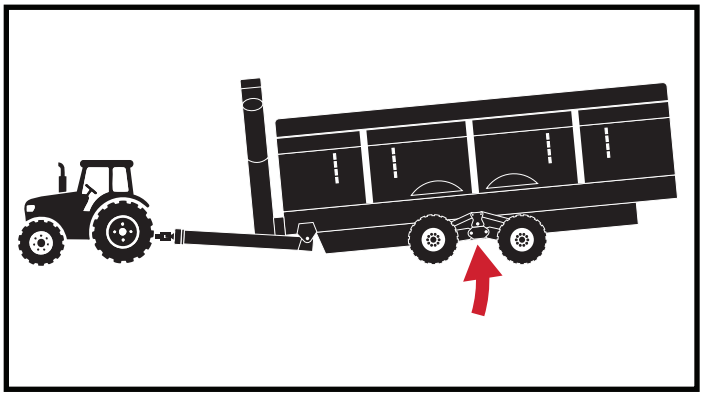


   b. **NOTE**: Lowering the axle first will result in hitch overload and may cause damage to the connected tractor or truck.
5. Once on the ground continue running the hydraulics in the direction required to lower the bin until the tires are fully lifted from the ground.

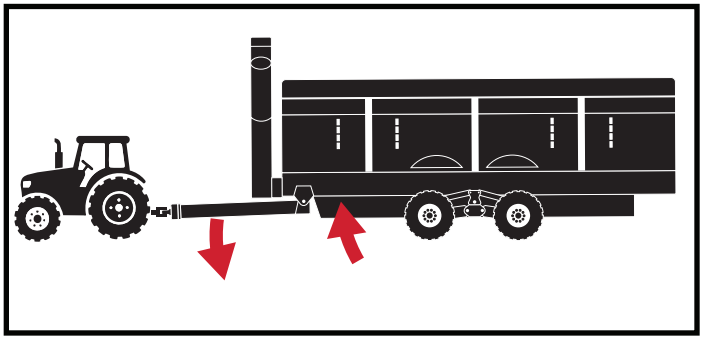
Raising

- Note:
  - Always inspect the transport height of the HIVE before moving.
  - The HIVE cannot be lifted with contents still in the bin.
  - Small errors in hitch adjustment may make the HIVE taller and potentially unsafe to transport.
  - Always be aware of overhead hazards when lifting and transporting the motherbin.

1. Ensure HIVE is properly connected to the tractor.
   a. The hitch position may need to be adjusted.
2. Lift the HIVE using the axle circuit until fully raised.
   a. Hold the flow in this direction for 30 seconds after the motion stops moving to ensure the cylinders are each fully extended.
   b. Do not transport the HIVE without being fully raised and ensure the cylinders are fully extended.



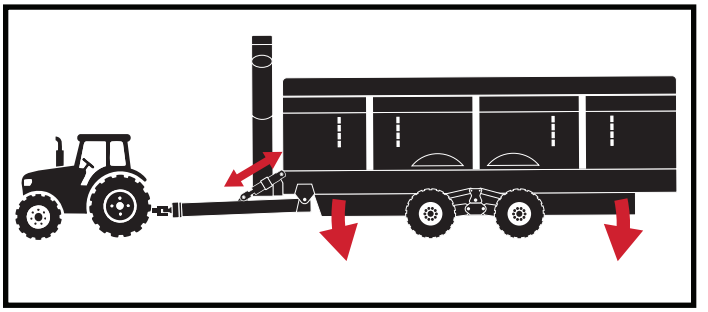
3. Lift the front of the HIVE using the hitch circuit until the bin is level.



Pitch in transport mode

- Operators must be cognizant of overhead hazards when operating the hitch cylinders. The bin may become significantly taller as operators work to avoid hazards on the ground.
- The hitch circuit must be used when traveling over challenging terrain such as hills and ditches where the front or rear of the bin may otherwise bottom out on the ground.

- This is done by extending or retracting the hitch cylinders using the tractor controls or through the PRO APP, if equipped, such that the bin tilts forward or back. Retracting the hitch cylinders will raise the back of the bin, while extending them will lower the rear of the bin.



Manual Selector Valves (Standard Models)

- The manual selector valves are used to transition hydraulic control between Transport and Field operation. This allows the operators to control the functions required for each mode without getting out of the cab.
- In field mode both levers must be pushed into the detent towards the bin. Controls available in field mode:
  - Gates
  - Spout
  - Auger Fold
  - Auger Pivot
- In transport mode both levers must be pulled into the detent away from the bin. Controls available in transport mode:
  - Hitch lift and lower
  - Axle lift and lower
  - Auger Fold
  - Auger Pivot

Limits of when the bin can be lifted.

- The HIVE cannot be lifted or transported with grain remaining inside.
  - If grain is inside the HIVE, the axle and hitch circuits will not lift the bin from the ground.
  - The HIVE does not require being fully cleaned out for transport; crop hung up or small amounts along the gates can be tolerated for transport.
  - Left over crop left all at the front or all at the back may cause instability or prevent lifting even if the weight is negligible.

4.2.3 Tarp Control

1. General information
   a. Never leave the tarp in a partially closed state unattended.
      i. Strong winds will damage the tarp if the tarp is not fully open, or fully closed.
   b. Each compartment is equipped with vents allowing grain to be unloaded while the tarps are closed.
   c. Do not use the tarp in winds.

i. Hurricane straps are present to reduce the likely hood of wind damage. DAMAGE will occur if the tarps are used in strong winds.
ii. If strong winds are expected, park the bin such that the expected prevailing wind pushes the tarp in the closed direction.

d. Avoid rolling the tarp over crop heaped above the tarp hoops and or crop piled on top of the tarp hoods. Crop accumulated in these scenarios may cause ...
i. The tarp to stall partially across.
ii. The tarp to become misaligned / roll unevenly.

2. The tarp controller can be operated in one of 3 modes:
a. Front tarp control
b. Rear tarp control
c. HIVE PRO Control (if equipped)

3. Tarp Control Box (All models)
a. Select which tarp you are going to control using the toggle.
b. Press the open or closed buttons to roll the tarp in the desired direction.
i. Note: When in PRO mode, only the STOP button on the tarp controller is functional.
c. The tarp stop button may be used to stop the tarp mid-way as needed for any reason.
i. The controller will stop automatically at each end, or if the tarp is blocked or overloaded.

4.2.4 Filling the Bin

- The HIVE can be filled from either the left or right hand side.
- Avoid piling grain above the tarp hoops. Piles can impede tarp operation and may cause the tarp to spin and become misaligned.
- Be aware of the center tarp hood. Grain piled on top of the hood can cause the tarp to operate poorly.
  - ▶ Turn off grain flow when passing over the center tarp hood.

4.2.5 General Auger and Unload control Gates

- Standard & PRO Joystick Control
  - The HIVE's front and rear gate systems are synchronized to open and close together. The indicator on the Auger is connected to the front gates but reflects the status of both compartments.
    - ▶ Note: Flow dividers help synchronize the gate cylinders, though some unevenness is normal. On motherbins without Pro, holding the control in the 'close' position for a few seconds after the indicator shows fully closed will help resynchronize the cylinders.
  - At low unload rates the HIVE will unload at about a 50/50 ratio between the front and rear compartments.
    - ▶ As the unload rate increases the ratio will shift in favor of the rear compartment. With the gates fully up almost, all crop unloaded will be coming from the rear compartment.
    - ▶ As compartment starts to empty the unload ratio will become unpredictable.
- PRO APP control
  - The HIVE PRO app provides access to the front and rear gate systems individually.
    - ▶ Note: The indicator on the auger only shows the position of the front gates when controlling though the HIVE PRO app.
    - ▶ See APP for additional information.

Fold

- Fold or unfold the vertical auger using the tractor SCVs, or with the joystick or app if equipped with PRO.
- Be aware of overhead lines or structures, and nearby people and equipment when folding or unfolding the auger.
- DO NOT fold or unfold the auger with the PTO engaged.
  - Ensure the auger has completely stopped after disengaging the PTO before folding or unfolding.
  - Should the HIVE experience an electrical failure and is equipped with PRO, the auger can be folded using the manual overrides on the hydraulic manifold on the back side of the vertical auger.

Pivot

- Pivot the vertical auger up or down using the tractor SCV, or with the joystick or app if equipped with PRO.
- Be aware of overhead lines or structures, and nearby people and equipment when pivoting the auger.
- Should the HIVE experience an electrical failure, and is equipped with PRO, the auger can be pivoted using the manual overrides on the hydraulic manifold on the back side of the vertical auger

Spout

- The auger spout can be moved to direct the flow of grain and aid unloading.
  - IF not equipped with PRO, the spout can move in the left/right direction (X direction)
  - If equipped with PRO, the spout can be moved in the left/right direction (X Direction) and the forward/backward direction (Z Direction)
- Control spout motion using the tractor SCVs, or with the joystick or app if equipped with PRO.
- Should the HIVE experience an electrical failure and is equippped with PRO, spout motion can be controlled using the manual overrides on the hydraulic manifold on the back side of the vertical auger.

4.2.6 Starting / unloading

- Ensure auger is completely unfolded before beginning an unload.
- Ensure gearbox handle is in the “engage” position (Figure A).

Figure A - Gearbox Engaged

- With tractor at idle, engage PTO.
- Increase tractor RPM to achieve PTO rpm of 1000.
  - Operating at lower rpm increases torque requirement and my result in plugging the auger or tripping the PTO clutch.
- Open HIVE gates to begin crop flow. Set to desired unload rate.
  - Heavy or wet crops take more power to unload, and may plug the auger or trip PTO clutch. Be aware of crop conditions when unloading.
- When done unloading, close gates to stop crop flow.
  - Due to the length the HIVE, up to 150 bushels can be in the auger after the gates are closed. Be aware of this when unloading.
- If the HIVE completely empties, be sure to close gates before disengaging the PTO. Failure to do so can make reengaging the PTO difficult.
- Slow tractor to idle and disengage PTO.

4.2.7 Unplugging

1. Disengage PTO.
2. Idle tractor.
3. Glose gates.
4. Pull gearbox handle to disengage drag auger.
5. If able, set tractor PTO engagement to soft.
6. Engage PTO to clear out vertical auger.
7. If vertical auger does not clear after several attempts:
   a. Disengage PTO.
   b. Open cleanout door at bottom of vertical auger to remove grain from auger.
   c. Close and secure cleanout door.
   d. Engage PTO to fully clear out vertical auger.
8. Disengage PTO.
9. Push gearbox handle to “engage” position.
10. Engage PTO to clear out horizontal auger.
11. Run auger until grain stops coming out.
12. Open gates to resume unloading.

4.2.8 Cleaning out

- It is recommended to raise the bin before opening the clean out doors.
  - Opening the cleanout doors when the bin is lowered to the ground may cause damage to the cleanout system.
- The front and rear compartments are cleaned out using separate shafts (Figure B).

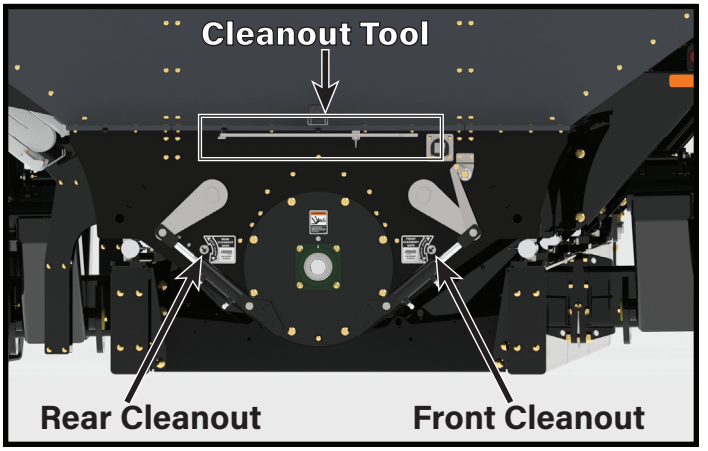


Figure B - Cleanout Gates

- Note: The clean out doors must be closed during transport. Failure to do so may result in damage to the clean out system.

4.3 Storage

4.3.1 After Use

When storing at the end of the day or in between uses:

1. Inspect all hydraulic hoses, lines, couplers, and fittings. Tighten any loose fittings. Replace any hose that is badly cut, nicked, abraded or is separating from the crimped end of a fitting.
2. Any other things to be aware of specific to this equipment.

4.3.2 End of Season

To extend the life of your Hive motherbin and keep it running smoothly, thoroughly inspect and prepare the machine for storage after each season, following the procedure below.

1. Store the unit in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the jack frame with planks if required.
4. Park machine on a level surface, and chock implement wheels.

5 MAINTENANCE

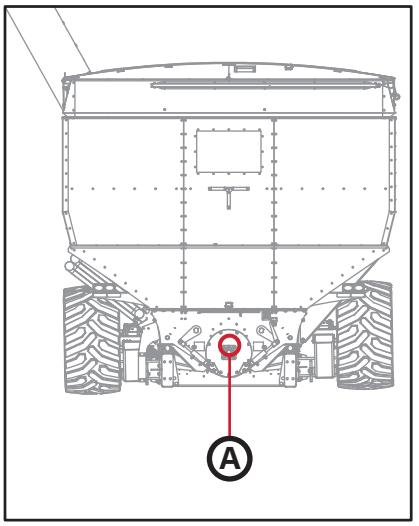
5.1 Service Schedule

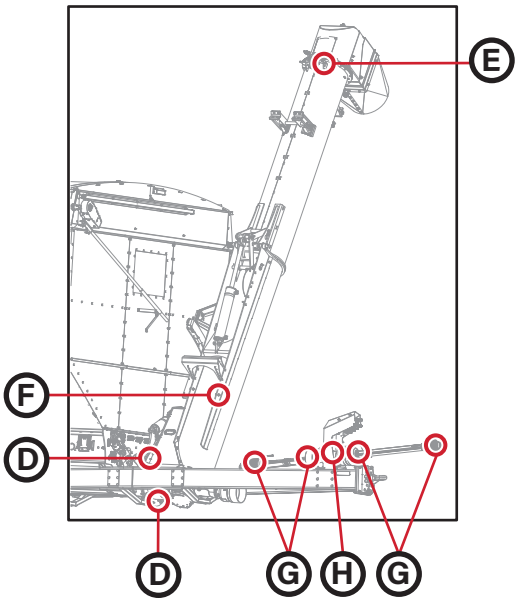
Below is the service schedule for the Hive motherbin. Use it to perform and document the service to the motherbin to ensure function and longevity. The following pages will provide details of the items below.

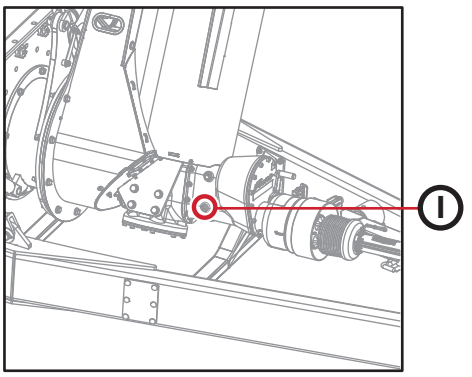
Date									
Serviced by:									
50 Hours		CK=Check G=Grease CH=Change							
A) Rear auger bearing (x1)	G								
Drag Auger bearings									
B) 5500 Model (x2)	G								
C) 8250 Model (x3)	G								
D) Auger Pivot (x2)	G								
E) Vertical auger top bearing (x1)	G								
F) Vertical auger mid bearing (x1)	G								
Daily									
G) PTO	G								
H) PTO Shaft Coupler	G								
Monthly									
I) Gearbox Oil Level (see page 31)	CK								
Yearly									
Lug Nut Torque (see page 30)	CK								
2 Years									
Wheel Hub Grease (repack wheel bearings)	CH								

5.2 Lubrication

SAE Multipurpose high temperature grease.
Gearbox oil – SAE 80W90 gear oil.



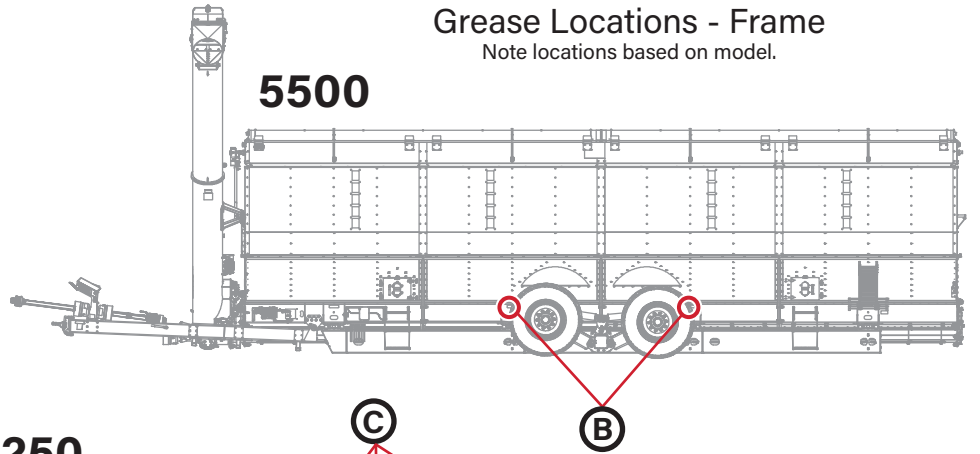




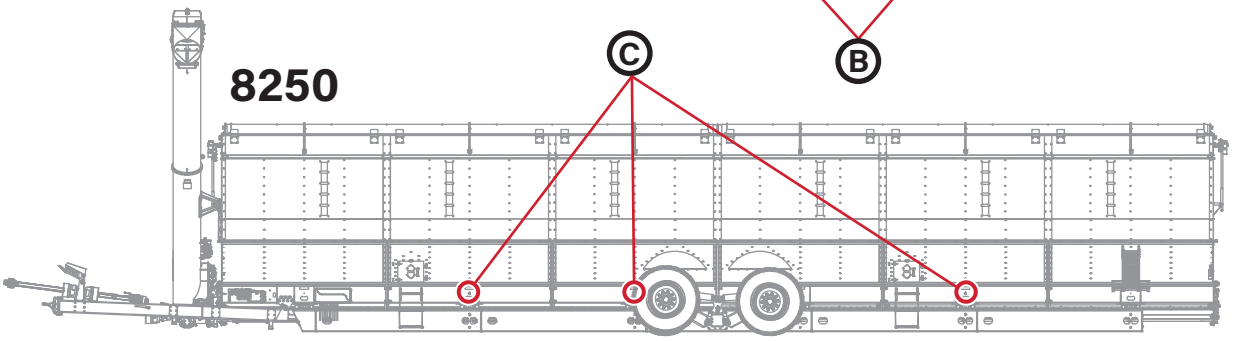
Grease Locations - Frame

Note locations based on model.

5500



8250



5.3 Wear Parts

Check pivot points for excessive bushing wear or damage. Figures A, B, and C. (Note: some parts transparent for visibility)

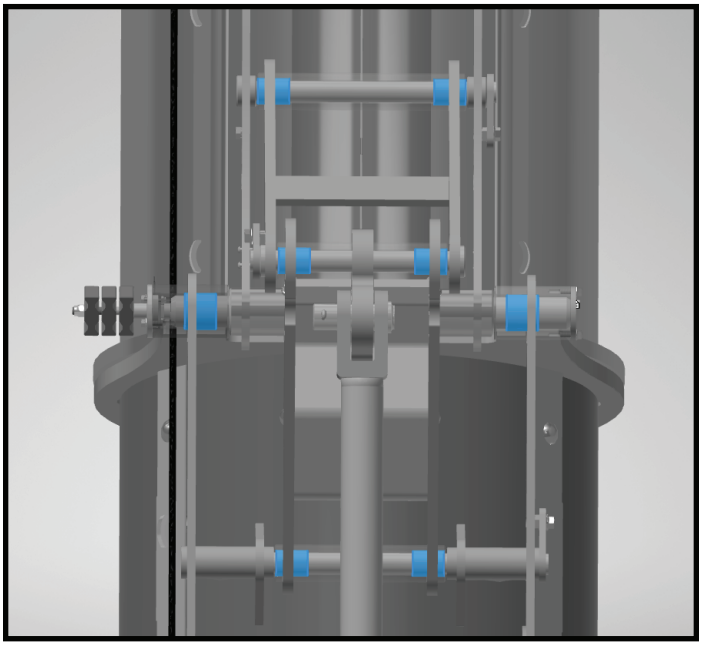


Figure A - Auger Fold Bushings

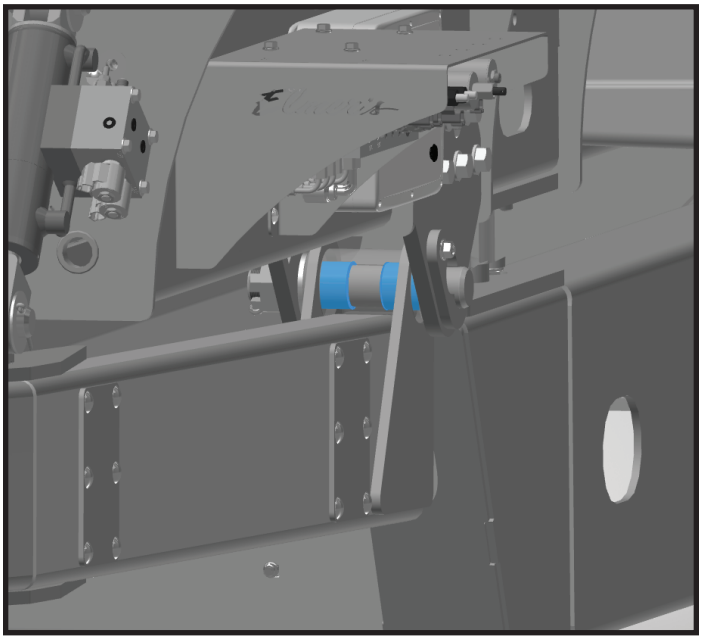


Figure B - Hitch Pivot Bushings

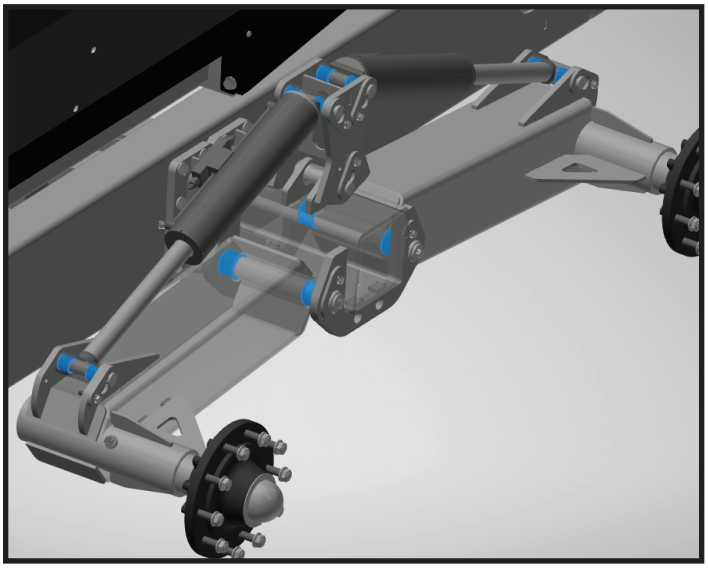
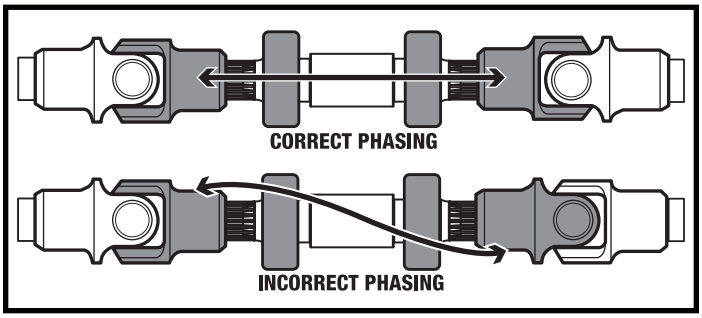


Figure C - Undercarriage Bushings

5.4 PTO Alignment/Phasing

To avoid vibration, the primary and secondary PTO shafts need to be lined up yoke to yoke.



5.5 Tires

When tightening bolts on hubs, it is important to torque them correctly and evenly in order to avoid damage resulting from uneven stress, loose or tight parts.

- Always make sure parts and bolts are seated completely prior to tightening.
- Tighten bolts in the pattern as shown in Figure D.
- Use torque specs as indicated on page 35.
- IMPORTANT: Check torque after 100 hours of use.

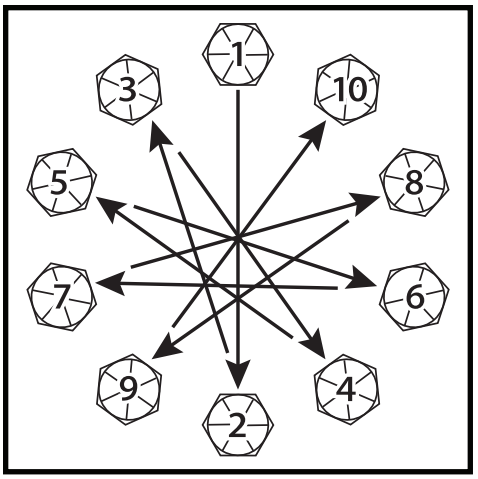


Figure D - Torque Pattern

5.6 Gearbox

5.6.1 Check/Change Gearbox Oil

The gearbox is equipped with a drain, level and fill plug plus a sightglass to check oil level (Figures D and E.

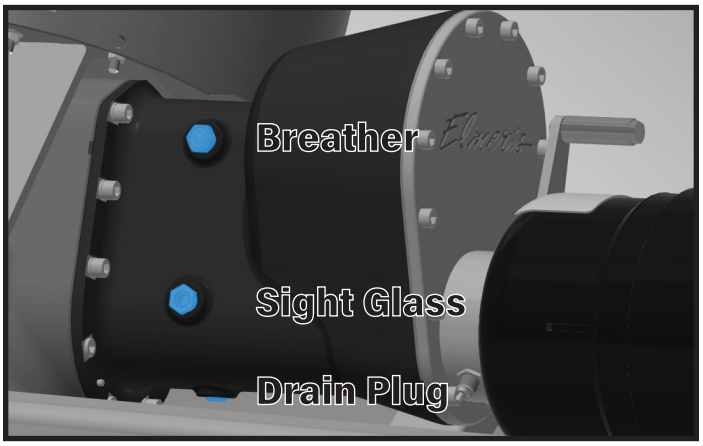


Figure E - Gearbox Plugs

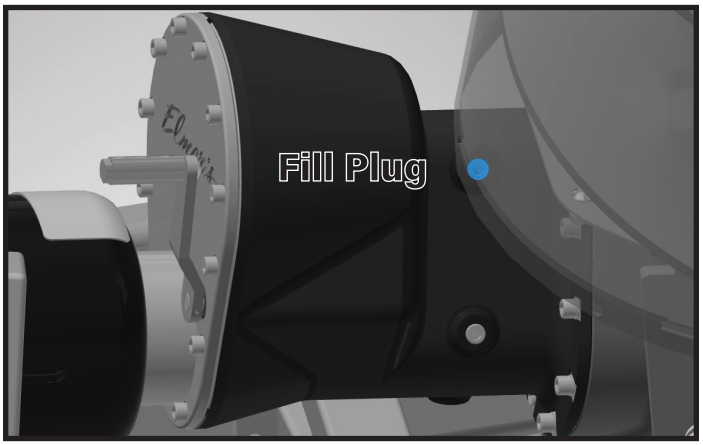


Figure F - Gearbox Fill Plug

Check and change the oil as indicated on the service schedule on page 28. Check gearbox oil more frequently if there are leaks around any of the plugs or shaft seals. When checking oil level or changing oil, use the following procedure:

1. Park motherbin on level ground and ensure mainframe is level.
2. Orient auger to 45 degrees for accurate oil level reading.
3. Oil level should be to the middle of the sight glass. Use Fill Plug (Figure F) to add oil if needed.
4. If changing oil, use Drain Plug (Figure E) to drain oil and refill using Fill Plug (Figure F).

5.6.2 Gearbox Breather

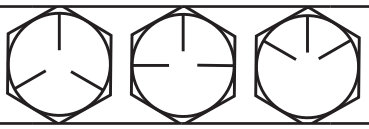
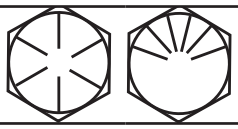
The gearbox breather prevents pressure build up during operation which may cause leaks and or seal failure. Complete the following procedure if any oil is noticed weeping or leaking from shaft seals:

1. Remove breather (see Figure D).
2. Confirm breather is plugged. **NOTE:** If breather is not plugged, reinstall and contact product support if gearbox continues to leak.
3. Soak in solvent overnight or use an ultrasonic cleaner to loosen and remove contamination.
4. If needed use compressed air or a probe to aid in the removal of contamination. **NOTE:** Extreme caution should be used when using compressed air. Use appopriate personal protective equipment to prevent injury from high pressure air or blowback.
5. Repeat step 4 as needed.
6. Once breather is clear, reinstall.
7. Clean oil from around seals and monitor for fresh leakage.

5.7 Parts

For information on parts, refer to the included Parts Manual or contact your Elmer's authorized dealer.

5.8 Unified Inch Bolt and Screw Torque Values

								
Bolt Screw	SAE Grade 5, 5.1, 5.2				SAE Grade 8 or 8.2			
	Lubricated*		Dry**		Lubricated*		Dry**	
Size	N•m	lb-in	N•m	lb-in	N•m	lb-in	N•m	lb-in
1/4	9.5	84	12	106	13.5	120	17	150
					N•m	lb-ft	N•m	lb-ft
5/16	19.5	172	25	221	28	20.5	35	26
	N•m	lb-ft	N•m	lb-ft				
3/8	35	26	44	32.5	49	36	63	46
7/16	56	41	70	52	80	59	100	74
1/2	85	63	110	80	120	88	155	115
9/16	125	92	155	115	175	130	220	165
5/8	170	125	215	160	240	175	305	225
3/4	300	220	380	280	425	315	540	400
7/8	490	360	615	455	690	510	870	640
1	730	540	920	680	1030	760	1300	960
1-1/8	910	670	1150	850	1450	1075	1850	1350
1-1/4	1280	945	1630	1200	2050	1500	2600	1920
1-3/8	1700	1250	2140	1580	2700	2000	3400	2500
1-1/2	2250	1650	2850	2100	3600	2650	4550	3350

Torque values listed are for general use only, based on the strength of the bolt or screw. DO NOT use these values if a different torque value or tightening procedure is given for a specific application. For plastic insert or crimped steel type lock nuts, for stainless steel fasteners, or for nuts on U-bolts, see the tightening instructions for the specific application. Shear bolts are designed to fail under predetermined loads. Always replace shear bolts with identical grade.

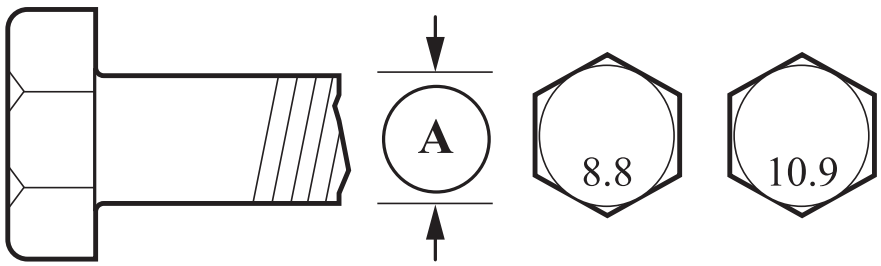
Replace fasteners with the same grade. Make sure fastener threads are clean and that you properly start thread engagement.

* “Lubricated” means coated with a lubricant such as engine oil, fasteners with phosphate and oil coatings.

**“Dry” means plain or zinc plated without any lubrication.

5.9 Metric Torque Values

Bolt Diameter "A"	Bolt Torque*			
	8.8		10.9	
	(N.m)	(lb-ft)	(N.m)	(lb-ft)
M3	.5	.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specifies. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

** Torque value for bolts and capscrews are identified by their head markings.*

5.10 Hydraulic Fitting Torque

TIGHTENING FLARE TYPE (JIC) FITTING*

Check flare and flare seat for detects that might cause leakage.

Align tube with fitting before tightening. Lubricate connection and hand tighten swivel nut until snug.

To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.

** The torque values shown are based on lubricated connections as in reassembly.*

Tube Size O.D. (in.)	Nut Size Across Flats (in.)	Torque Value* (N.m)	(lb-ft)	Recommended Turns to Tighten (After Finger Tightening) (Flats)	(Turn)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
3/8	11/16	24	18	1	1/6
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

TIGHTENING O-RING (ORB) FITTING*

Inspect O-Ring and seat for dirt or obvious defects.

On angle fittings, back the lock nut off until washer bottoms out at top of groove.

Hand tighten fitting until back-up washer or washer face (if straight fitting) bottoms on face and O-Ring is seated.

Position angle fittings by unscrewing no more than one turn.

Tighten straight fittings to torque shown. Tighten while holding body of fitting with a wrench.

* The torque values shown are based on lubricated connections as in reassembly.

Tube Size O.D. (in.)	Nut Size Across Flats (in.)	Torque Value* (N.m)	(lb-ft)	Recommended Turns to Tighten (After Finger Tightening) (Flats)	(Turn)
3/8	1/2	8	6	2	1/3
7/16	9/16	12	9	2	1/3
1/2	5/8	16	12	2	1/3
9/16	11/16	24	18	2	1/3
3/4	7/8	46	34	2	1/3
7/8	1	62	46	1-1/2	1/4
1-1/16	1-1/4	102	75	1	1/6
1-3/16	1-3/8	122	90	1	1/6
1-5/16	1-1/2	142	105	3/4	1/8
1-5/8	1-7/8	190	140	3/4	1/8
1-7/8	2-1/8	217	160	1/2	1/12

6 SPECIFICATIONS

Specifications	8250 BU	(225 T)	5500 BU	(150 T)
Tank Length	66′ 11″	(20.4 m)	44′ 8″	(13.6 m)
Overall Length	78′ 3″	(23.84 m)	56′	(17.04 m)
Empty Weight	49,850 lbs	(22,610 kg)	40,700 lbs	(18,460 kg)
Field Height	14′ (4.28 m)			
Load In Height	13′ 4″ (4.06 m)			
Transport Height	15′ 10″ (4.82 m)			
Width	14′ 6″ (4.41 m)			
Auger Height	11′ 1″ – 16′ 1″ (3.38 m – 4.92 m)			
Auger Reach	2′ 10″ – 7′ 9″ (0.88 m – 2.36 m)			
Tongue Weight	4,670 lbs (2,100 kg)			
Unloading Auger	22″ (56 cm)			
Horizontal Auger	19″ (48 cm)			
Hydraulic SCV's (with PRO)	4 (1)			
Tires	710/50R26.5, Inflate to 58 PSI (4 bar), Torque to 450 ft/lbs (610 Nm)			

7 TROUBLESHOOTING

Issue	Possible Problem	Solution
AUGER WILL NOT FULLY UNFOLD	Upper flighting and lower flighting locked together.	Adjust auger flighting depth on top bearing as required. There should be approx. 1/8" gap between bearing and plate.
	Auger drive lug misaligned.	Rotate auger slightly before fully unfolding auger.
	Hydraulic cylinder leaking.	Repair or replace cylinder.
EXCESSIVE VIBRATION	Auger Flighting or shaft is bent or excessively worn.	Straighten or replace auger flighting.
	Drive shaft is bent.	Replace or straighten drive shaft.
	Auger balancing weights fell off.	Re-balance auger flighting.
GRAIN FLOW STOPPAGE	PTO shaft clutch engaged.	Stop PTO and restart.
	Auger is plugged.	See Overloading Procedure in Operating Section.
	Bolt sheared in connector shafts.	There are several connecting bolts on the vertical auger, inspect to see if sheared.
GRAIN LEAKING FROM CLEANOUT	Foam tape missing, damaged or compressed.	Replace/ Add foam tape.
	Debris in door.	Clean out debris to ensure a good seal.
PIVOT AUGER NOISY	Low grease.	Add grease.

8 PRE-DELIVERY INSPECTION

8.1 Dealer Pre-Delivery Inspection - Hive

Dealer: Submit this information on the Elmer's Dealer Login immediately after delivery to the dealership to ensure product is ready for retail. Keep a copy of this information for your records.
To login to the dealer portal, go to https://elmersmanufacturing.my.site.com/dealers/s/login/ and go to the "PDI" tab.

In order to activate warranty for this product, the following information must be submitted to Elmer's MFG. **Failure to do so will result in denial of all warranty claims.** Pre-delivery service includes assembly, lubrication, adjustment & testing. This service ensures that the Motherbin is delivered to the customer ready for field use.

Date Received:_____**Model**:_____**Serial #**:_____

Dealer:_____**Dealer City**:_____**Phone #**:_____

SETUP CHECKLIST

After the motherbin has been completely assembled, use the following checklist and inspect the bin. Check off each item as it is found satisfactory or after proper adjustment is made.

- □ Check option list to ensure all requested options are installed
- □ Torque wheel nuts to settings noted in Operators Manual.
- □ Check torque on nuts holding scale heads/blocks
- □ Tires are inflated to specified PSI air pressure.
- □ Roll & unroll tarp to ensure proper operation.
- □ All grease fittings have been lubricated
- □ Check oil level in gearbox & inspect for leakage.
- □ Check functionality of gearbox drag auger disengage
- □ Check to be sure all safety decals are correctly located and legible. Replace if damaged.
- □ Check to be sure all reflective decals are correctly located.
- □ Check to be sure SMV sign is in place. SMV sign is installed in reverse, sign needs be installed correctly upon delivery to customer.
- □ Check to be sure safety/warning lights are working properly.
- □ Test run the augers. See "OPERATION" section.
- □ Check driveline. See "Driveline Inspection" in Operation section.
- □ Safety chain is properly installed and hardware is torqued to specification.
- □ Paint all parts scratched in shipment.
- □ Check spout, auger fold, auger pivot and gate hydraulic functions
- □ Switch manual valves over from Field to Transport position
  - Check front & rear transport & field positions (hydraulic functions)
- □ If equipped with Hive Pro, complete the Hive Pro PDI Checklist

_____

(***Signature of Inspection Tech/Dealer Name/Date***)

This motherbin has been thoroughly checked and to the best of my knowledge is ready for delivery to the customer.

Email: info@elmersmfg.com Web: www.elmersmfg.com

8.2 Dealer Pre-Delivery Inspection - Hive Pro

Dealer: Submit this information on the Elmer's Dealer Login immediately after delivery to the dealership to ensure product is ready for retail. Keep a copy of this information for your records.
To login to the dealer portal, go to https://elmersmanufacturing.my.site.com/dealers/s/login/ and go to the "PDI" tab.

In order to activate warranty for this product, the following information must be submitted to Elmer's MFG. **Failure to do so will result in denial of all warranty claims.** Pre-delivery service includes assembly, adjustment and testing. This service ensures that the Hive Pro system is delivered to the customer ready for field use.

Date Received:_____ **Model**:_____ **Serial #**:_____

Dealer:_____ **Dealer City**:_____ **Phone #**:_____

SETUP CHECKLIST

After the Hive Pro system has been completely assembled, use the following checklist and inspect the system. Check off each item as it is found satisfactory or after proper adjustment is made.

- □ Remove rotation locking pin from auger spout.
- □ Tablet connects to Hive Pro with no errors.
- □ All scales are connected and reading.
- □ PTO Sensor recognizes PTO movement.
- □ App functions:
  - Opens & closes both front & rear gates
  - Auger fold & unfold
  - Auger pivot
  - Spout moves in X & Y directions
  - Transport to field position
- □ Joystick functions:
  - Opens & closes both front & rear gates
  - Auger fold & unfold (on double tap)
    - Spout moves home on double tap fold
  - Auger Pivot
  - Spout moves in X & Y directions
  - Transport to field position
- □ Check manual functions on hydraulic block on auger:
  - Spout moves in X & Y directions
  - Auger fold & unfold
  - Auger pivot
- □ Check manual functions on hydraulic block on frame
  - Front gate & rear gates independently
  - Hitch
  - Wheeled undercarriage
- □ Test tarp function through the app
- □ Check camera function in the app (if installed)

*Please note: this PDI refers only to the functions specifically relating to the Hive Pro package. A separate PDI is required for the actual Hive motherbin

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(***Signature of Inspection Tech/Dealer Name/Date***)

This Hive Pro system has been thoroughly checked and to the best of my knowledge is ready for delivery to the customer. Email: info@elmersmfg.com Web: www.elmersmfg.com