CONVEY-ALL™

BEAN TENDER

Models:
BTS-295, BTS-410, WT-295

OPERATOR'S MANUAL

LIMITED WARRANTY

Convey-All™ warrants to the buyer that the new machinery is free from defects in material and workmanship.

This warranty is only effective as to any new machinery which has not been altered, changed, repaired or treated since its delivery to the buyer, other than by Convey-All™ or its authorized dealers or employees, and does not apply to accessories, attachments, tools or parts, sold or operated with new machinery, if they have not been manufactured by Convey-All™.

Convey-All™ shall only be liable for defects in the materials or workmanship attributable to faulty material or bad workmanship that can be proved by the buyer, and specifically excludes liability for repairs arising as a result of normal wear and tear of the new machinery or in any other manner whatsoever, and without limiting the generality of the foregoing, excludes application or installation of parts not completed in accordance with Convey-All™ operator's manual, specifications, or printed instructions.

Written notice shall be given by registered mail, to Convey-All™ within seven (7) days after the defect shall have become apparent or the repairs shall have become necessary, addressed as follows:

Convey-All Industries Inc.
130 Canada Street
Winkler, Manitoba R6W 0J3
Canada

This warranty shall expire one (1) year after the date of delivery of the new machinery.

If these conditions are fulfilled, Convey-All™ shall at its own cost and at its own option either repair or replace any defective parts provided that the buyer shall be responsible for all expenses incurred as a result of repairs, labor, parts, transportation or any other work, unless Convey-All™ has authorized such expenses in advance.

The warranty shall not extend to any repairs, changes, alterations, or replacements made to the new equipment other than by Convey-All™ or its authorized dealers or employees.

This warranty extents only to the original owner of the new equipment.

This warranty is limited to the terms stated herein and is in lieu of any other warranties whether expressed or implied, and without limiting the generality of the foregoing, excluded all warranties, expressed or implied or conditions whether statutory or otherwise as to quality and fitness for any purpose of the new equipment. Convey-All™ disclaims all liability for incidental or consequential damages.

This machine is subject to design changes and Convey-All™ shall not be required to retrofit or exchange items on previously sold units except at its own option.

WARRANTY VOID IF NOT REGISTERED

CONVEY-ALL™

WARRANTY REGISTRATION FORM and INSPECTION REPORT

CONVEY-ALL INDUSTRIES INC.
130 CANADA STREET
WINKLER, MANITOBA R6W 0B3
TF: (800) 418-9461 FX: (204) 325-8116
www.convey-all.com

The Dealer must fill out this form. It is to be signed by both the Dealer and Buyer at the time of delivery. Scan or photograph the completed form (be sure it is legible). Email it to: register@convey-all.com
A copy of this form may also be mailed to Convey-All Industries Inc, at the above address.

Buyer's Name _____ Dealer's Name _____

Address _____ Address _____

City _____ City _____

Province/State _____ Province/State _____

Postal Code/Zip Code _____ Postal Code/Zip Code _____

Country _____ Country _____

Phone Number _____ Phone Number _____

Unit's Model Number _____ Unit's Serial Number _____

Delivery Date _____ General Purpose: ☐ Private ☐ Commercial

UNIT INSPECTION

- ☐ All Fasteners Tight
- ☐ Engine Fluid Levels Checked
- ☐ Driveline Secured to Machine
- ☐ Drive Belts Aligned and Tensioned
- ☐ Machine and All Bearings Lubricated
- ☐ Conveyor Belt Aligned and Tensioned
- ☐ Tire Pressure Checked (If trailer equipped)

SAFETY INSPECTION

- ☐ All Guards/Shields Installed and Secured
- ☐ All Safety Decals Clear and Legible
- ☐ Reflectors, Slow Moving Vehicle (SMV) Sign Clean
- ☐ All Lights Clean and Working (if trailer equipped)
- ☐ Safety Chain on Hitch (if trailer equipped)
- ☐ Reviewed Operating and Safety Instructions

I have thoroughly instructed the buyer on the above described equipment. The review included the content of the Operator's Manual, equipment care, adjustments, safe operation and the applicable warranty policy.

Date _____ Dealer's Signature _____

The above equipment and Operator's Manual have been received by me. I have been thoroughly instructed as to care, adjustments, safe operation and applicable warranty policy.

Date _____ Buyer's Signature _____

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Section 1: INTRODUCTION

Congratulations on your choice of a Convey-All™ Bean Tender to complement your seed delivery system in your agricultural operation. This equipment has been designed and manufactured to exceed the exacting standards for such equipment in the agricultural industry and will keep your seed delivery operation working at optimum efficiency.

The tender may be shown mounted on a trailer. The tender and trailer are separate equipment.

Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Convey-All Industries Inc, dealer or distributor if you need assistance, information or additional/replacement copies, or a digital copy of this manual.

Information provided herein is of a descriptive nature. Convey-All Industries Inc. reserves the right to modify the machinery design and specifications provided herein without any preliminary notice.

Performance quality may depend on the material being handled, weather conditions and other factors.

1.1 OPERATOR ORIENTATION

The directions left, right, front and rear, as mentioned throughout this manual, are as seen from the tow vehicle drivers' seat and facing the direction of travel. The Conveyor faces forward with the pivot railing on the left-hand side, during transportation.

1.2 SERIAL NUMBER LOCATION

Always give your dealer the serial number of your bean tender when ordering parts or requesting service or other information. The tender's serial number is located on the rear leg of the tender.

Please mark the number in the space provided for easy reference.

Bean Tender Model No: _____

Bean Tender Serial No: _____

Engine Model No: _____

Engine Serial No: _____

Fig 1 - Serial Number Location

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Section 2: SAFETY

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

3 Big Reasons why safety is important to you:

- Accidents Disable and Kill
- Accidents Cost
- Accidents Can Be Avoided

The Safety Alert Symbol identifies important safety messages on the Bean Tender and in this manual.

The following signal words are used in this manual to express the degree of hazard for areas of personal safety.

When you see the symbol and/or the signal words described below, obey the accompanying message to avoid possible injury or death.

DANGER - Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations. Typically for machine components which, for functional purposes, cannot be guarded.

WARNING - Indicates a hazardous situation, if not avoided, could result in death or serious injury. This word identifies hazards that are exposed when guards are removed. It may be used to alert against unsafe practices.

CAUTION - Indicates a hazardous situation, if not avoided, could result in minor or moderate injury. It may be used to alert against unsafe practices.

NOTICE - Indicates practices or situations which may result in the malfunction of, or damage to equipment.

2.1 SAFETY ORIENTATION

YOU are responsible for the SAFE operation and maintenance of your Convey-All™ Bean Tender. Be sure that everyone who will be operate, maintain or working around it, is familiar with the safety, operating and maintenance procedures.

This manual will take you step-by-step through your working day. It will alert you to all the safe practices that should be adhered to while operating the tender.

It has been said, "The best safety feature is an informed, careful operator." Good safety practices not only protect you but also the people around you. Make these practices a dynamic part of your workday.

Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Bean tender owners must give operating instructions to operators or employees before allowing them to operate the machine.

  Procedures must be reviewed annually thereafter, as per OSHA (Occupational Safety and Health Administration) regulation 1928.57.

- The most important safety device on this equipment is a SAFE operator. It is the their responsibility to understand all safety and operating instructions in this document, and to follow them.

- An untrained operator exposes himself and bystanders to possible serious injury or death.

- Think SAFETY! Work SAFELY!

2.2 GENERAL SAFETY

- Read and understand the Operator's Manual and all safety messages before operating, maintaining or adjusting the equipment.

- Only trained competent persons shall operate the tender. An untrained operator is not qualified to operate the machine.

- Have a first-aid kit available for use should the need arise and know how to use it.

- Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.

- Do not allow riders.

- Do not allow children, spectators or bystanders within hazard area of machine.

- Wear appropriate protective gear. This list includes but is not limited to:
  - Hard hat
  - Protective shoes with slip resistant soles
  - Eye protection
  - Heavy gloves
  - Hearing protection
  - Respirator or filter mask
  - Hi-Visibility safety vest

- Never use alcoholic beverages or drugs which can hinder alertness or coordination while operating this equipment.

  Consult your doctor about operating this machine while taking prescription medications.

- If the elderly are assisting with farm work, their physical limitations need to be recognized and accommodated.

- Review safety related items annually with all personnel who will be operating or maintaining the tender.

2.3 EQUIPMENT SAFETY GUIDELINES

- Safety of the operator and bystanders is one of the main concerns in designing and developing this tender. However, every year many accidents occur which could have been avoided by a few seconds of thought and a more careful approach to handling equipment.

- Do not allow personnel to operate this unit until they have read this manual. They should have a thorough understanding of the safety precautions

  Review the safety instructions with all users annually.

- In order to provide a better view, some images in this manual may show an assembly with a safety guards removed.

  

  Equipment should never be operated in this condition. Keep all guards in place. If removal becomes necessary for repairs, replace the guard prior to use.

- This equipment is dangerous to children and persons unfamiliar with its operation.

  The operator must be responsible, properly trained and physically able. You should be familiar with farm machinery in general.

- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DON'T TRY IT.

- Do not modify the equipment in any way. Unauthorized modification result in serious injury or death and may impair the function and life of the equipment.

- The design and configuration of this conveyor includes safety decals and equipment. They need to be clean, readable and in good condition.

2.4 SAFETY DECALS

- Keep signage clean and legible at all times.

- Replace safety decals that are missing or have become illegible.

- If an original part which contained a safety decal, has been replaced by a new part; it should also display the decal.

- All safety decals have a part number in the lower right hand corner. Use this part number when ordering replacements.

- Decals are available from your authorized distributor, dealer's parts department or from Convey-All Industries Inc.

2.4.1 How to Install Safety Decals:

1. Be sure that the area is clean and dry. Preferably, apply the decals inside.

2. Ensure temperature is above 10°C (50°F).

3. Remove all dirt, grease, wax from the surface.

4. Clean with a non-ammonia based cleaner.

5. Wipe the clean surface with isopropyl alcohol on paper towel, and allow to dry.

6. Determine exact position before you remove the backing paper.

7. Peel the smallest portion of the split backing paper.

8. Align the decal over the specified area. Use a squeegee to carefully press the small portion, with the exposed adhesive backing, into place.

9. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal into place.

10. Small air pockets can be pierced with a pin and smoothed out using the squeegee, or a piece of sign backing paper.

2.5 WORK PREPARATION

- Never operate the tender and its engine until you have read this manual, and understand the information.

  Also, read the engine operator's manual.

- Be familiar with the safety messages found on the decals around this unit.

- Personal protective equipment including;
  - Hard hat
  - Safety glasses
  - Safety shoes
  - Work gloves

  are recommended during operation, adjustment, maintaining, repairing, or moving the implement.

- Do not allow long hair, loose fitting clothing or jewelry to be around equipment.

- PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS!

  Agricultural equipment can often be noisy enough to cause permanent, partial hearing loss. We recommend that hearing protection be worn on a full-time basis if the noise in the operator's position exceeds 80db.

  Noise over 85db on a long-term basis can cause severe hearing loss.

  Noise over 90db adjacent to the operator over a long-term basis may cause permanent, total hearing loss.

Note:
Hearing loss from loud noise
(tractors, chain saws, radios, etc.)
is cumulative over a lifetime
without hope of natural recovery.

- Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.

- Operate only in daylight or good artificial light.

- Be sure machine is in a stable position, is adjusted and in good operating condition.

- Ensure that all safety shielding and safety decals are properly installed and in good condition.

- Before starting, inspect the unit for any loose bolts, worn parts, cracks, leaks and/or frayed belts. Make the necessary repairs.

  Always follow maintenance instructions.

2.6 ENGINE SAFETY

- Read and understand the operating manual provided with the engine.
- Use proper tools to service the engine.
- Do not run engine in an enclosed area. Exhaust gases contain carbon monoxide, an odourless and deadly poison.
- Store fuel in approved safety containers.
- Do not store fuel near an open flame.

  Appliances such as a stove, furnace, or water heater use a pilot light which can create a spark.

- No smoking while filling fuel tank.
- Do not remove fuel cap while engine is running.
- Do not refuel indoors where area is not well ventilated. Outdoor refuelling is preferred.
- Do not refuel while engine is running. Allow engine to cool for 5 minutes before refuelling.
- Use fresh fuel. Stale fuel can gum carburetor and cause leakage.
- Check fuel lines and fittings frequently for cracks or leaks. Replace if necessary
- Do not operate engine if fuel is spilled. Move machine away. Avoid creating any ignition until the fuel has evaporated.
- Do not run engine above rated speeds. This may result in damage and injury.
- Do not tamper with the engine speed selected by the original equipment manufacturer.
- Do not tamper with governor springs, governor links or other parts which may increase the governed engine speed.
- Do not strike flywheel with a hard object or metal tool. This may cause it to shatter in operation.
- Keep cylinder fins and governor parts free of grass and other debris which can affect engine speed.
- Do not operate engine with grass, leaves, dirt or other combustible materials in the muffler area.
- Do not operate engine without a muffler.

WARNING: Hot Equipment
Do not touch hot muffler, cylinder or fins. Contact may cause burns.

- Do not use this engine on any forest covered, brush covered, or grass covered, unimproved land unless a spark arrester is installed on the muffler. The arrester must be maintained in effective working order by the operator.

  In the State of California the above is required by law (section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.

- Inspect muffler periodically. Replaced if necessary.

  If engine is equipped with a muffler deflector, inspect periodically. Replace with correct part.

- Do not check for spark, or crank the engine while the spark plug or spark plug wire removed.
- Do not run engine with air cleaner or air cleaner cover removed.

NOTICE: Possible Engine Damage
Decelerate engine slowly to stop. Avoid choking the carburetor to stop engine. Choke only for an emergency stop.

2.7 MAINTENANCE SAFETY

- Review the Section 4: Service and Maintenance of this Manual before working with, maintaining or operating the conveyor.

- Follow good shop practices:
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for the job.

- Place all controls in neutral or off, stop the engine and remove ignition key. Wait for all moving parts to stop before servicing, adjusting, unplugging or repairing.

- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.

- Replace parts with genuine factory replacements parts to restore your equipment to original specifications.

  Convey-All Industries Inc. will not be responsible for injuries or damages caused by the use of unapproved parts and/or accessories.

- Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.

- Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.

- Before resuming work, install and secure all guards when maintenance work is completed.

- Keep safety decals clean. Replace any decal that is damaged or not clearly visible.

2.8 OPERATING SAFETY

- Be sure that anyone who will be operating the machine or working on or around the unit reads and understands the operating, maintenance and safety information in this operator's manual.

  Review the manual annually.

- Clean and replace all safety decals if they cannot be clearly read and understood.

- Place all controls in neutral, stop the engine. Remove the ignition key. Wait for all moving parts to stop before servicing, repairing or unplugging.

- Keep all bystanders, especially children, away from the machine when loading or unloading. Only authorized personnel should be in the work area.

- Establish a lock-out tag-out policy for the work site. Be sure all personnel are trained in and follow these procedures.

  Lock-out tag-out all power sources before servicing the unit or working around accompanying equipment.

- Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.

- Do not place hands, arms or body between moving parts to prevent pinching or crushing. Components can move unexpectedly.

- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.

- Do not allow riders on the tender.

- Keep working area clean and free of debris to prevent slipping or tripping.

- Stay away from overhead obstructions and power lines during operation and transporting. Electrocution can occur without direct contact.

- Do not operate machine when any guards are removed.

2.9 WORKPLACE HAZARD AREA

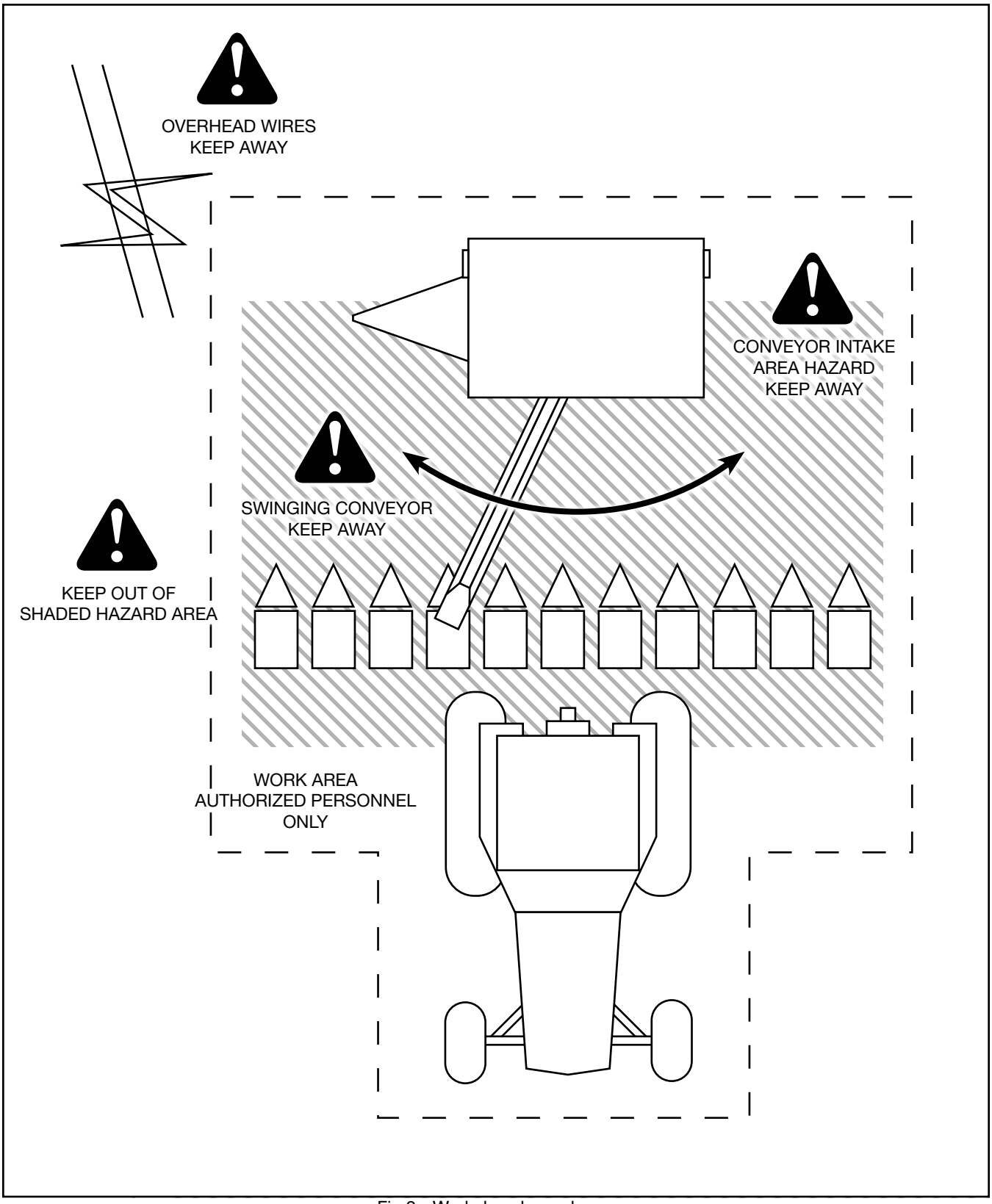

Fig 2 - Workplace hazard area

2.10 BATTERY SAFETY

- Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive.
- Avoid contact with battery electrolyte: wash off any spilled electrolyte immediately.

- Wear safety glasses when working near batteries.
- Do not tip batteries more than 45 degrees, to avoid electrolyte loss.
- To avoid injury from spark or short circuit, disconnect battery ground cable before servicing any part of electrical system.
- Remove the battery before storing the tender.
  - Be sure it is fully charged, check monthly.
  - Store the battery inside.
  - Do not sit the battery on a cold, concrete floor.
- Before using the battery, after it has been in storage, be sure it has the optimal charge.

2.11 PLACEMENT SAFETY

- Move only with a tractor or truck. Never move by hand.
- Locate tender to provide ample space for loading or unloading.
- Be familiar with the machine hazard area. If anyone enters hazard area, shut down machine immediately. Clear the area before restarting.

2.12 LOCK-OUT TAG-OUT SAFETY

- Establish a formal Lock-Out Tag-Out program for your operation.
- Train all operators and service personnel before allowing them to work around the unloading system.
- Provide tags on the machine and a sign-up sheet to record tag out details.

2.13 TRANSPORT SAFETY

- Always engage conveyor's transport lock before transporting.
- Never allow riders on the tender.
- Check that all the lights, reflectors and other lighting requirements are installed and in good working condition.
- Be sure that the trailer is equipped with brakes that are in good working order. Be familiar with their operation.

- Stay away from overhead power lines. Electrocution can occur without direct contact.

- Plan your route to avoid heavy traffic.
- Comply with all local laws governing safety and transporting of equipment on public roads.
- Do not drink and drive.
- Be a safe and courteous driver. Always yield to oncoming traffic in all situations, including narrow bridges, intersections, etc. Watch for traffic when operating near or crossing roadways.

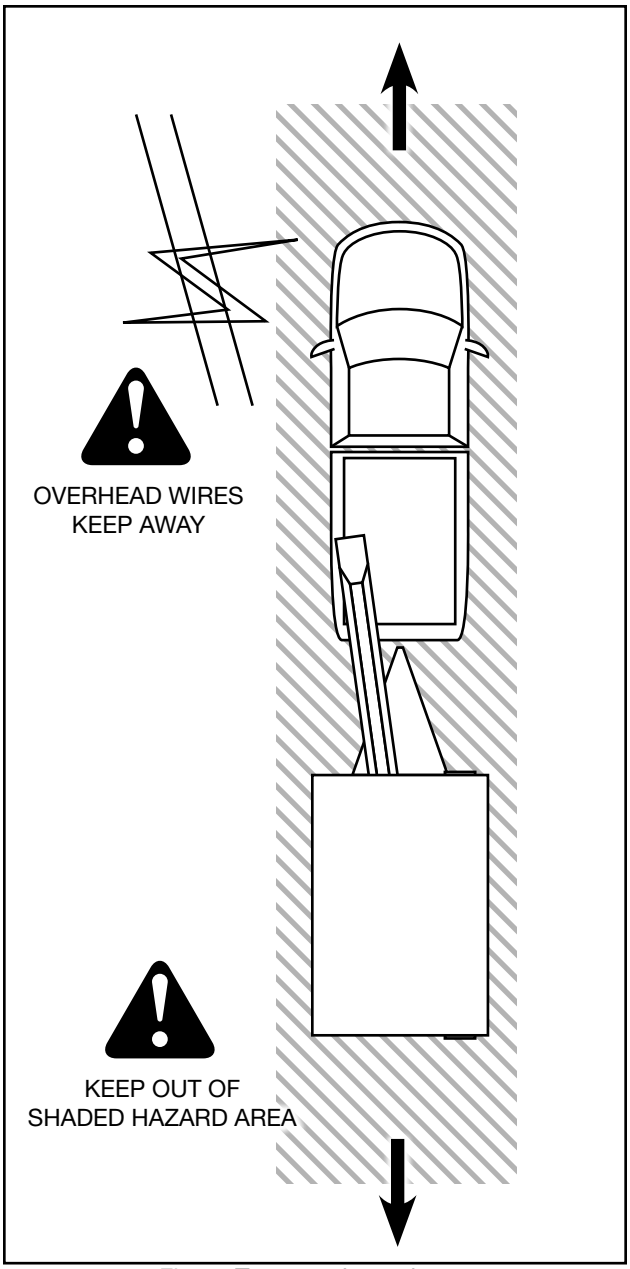

Fig 3 - Transport hazard area

2.14 STORAGE SAFETY

- Store the tender on a firm, level surface.
- Store in an area away from human activity.
- If required, make sure the unit is solidly blocked up.
- Make certain all mechanical locks are safely and positively connected before storing.
- Do not permit children to play on or around the stored machine.
- Remove the battery before storing tender.
  - Be sure it is fully charged.
  - Store the battery inside.
  - Do not sit the battery on a cold, concrete floor.

2.15 SAFETY DECAL LOCATION

The following illustration shows the general location of decals on this tender. Good safety practices include being familiar with these signs, the type of warning, the area and particular function related to that area.

The location of decals may vary depending on the model and its options. Decals are not shown at actual size.

Fig 4 - BTS-410 Bean tender

REMEMBER - If safety decals have been damaged, removed, become illegible, or parts were replaced without signage, new decals must be applied. Decals are available from your authorized dealer.

Section 3: OPERATION

Operating Safety

- Read and understand the Operator's Manual, and all safety messages, before using.
- Place all controls in neutral, stop the engine and remove the ignition key. Wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Clear the area of bystanders, especially children, before starting.
- Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
- Install and secure all guards before starting. Do not operate machine when any guards are removed.
- Use care when climbing on frame or ladder to prevent slipping or falling.
- Do not allow riders on tender, when transporting.
- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
- Do not place hands, arms or body between frame and swivelling conveyor to prevent pinching or crushing. Components can move unexpectedly.
- Set park brake on tractor/truck. Keep vehicle attached to bean tender while working.
- Keep working area clean and free of debris to prevent slipping or tripping.
- Establish a lock-out, tag-out policy for the work site. Train all personnel in, and follow all procedures. Lock-out, tag-out all power sources before servicing the unit or working around loading/unloading equipment.

The Convey-All™ bean tender is designed to efficiently deliver product to floaters, fertilizer spreaders and air seeders, commodity carts and more.

It is the responsibility of the owner and operators to become familiar with the operating procedures in ths section. Follow the instructions safely. It is everyone's business to provide a safe working environment for their co-workers.

The design and configuration of this tender includes safety decals and equipment. Hazard controls and accident prevention depend on the personnel operating and maintaining the equipment. Their concern, attentiveness and proper training are crucial.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully for instructions on how to set it, to provide maximum efficiency.

By following these procedures, in conjunction with a good maintenance program, your bean tender will provide many years of trouble free service.

3.1 LOCATION OF COMPONENTS

The Convey-All™ Bean Tenders are designed as bulk product transfer units to feed large amounts of seed or fertilizer into a planter or drill.

Material is loaded into the compartments. A conveyor belt pivots along the left side of the frame and transfers the product into planters or drills as appropriate. Slide gates control the flow onto the conveyor belt.

A gas engine mounted on the pivoting frame powers the unloading conveyor. A centrifugal clutch on the engine output shaft engages when the engine speed reaches 1400 RPM. A belt drive system transmits power from the engine to the conveyor.

The conveyor and drive is mounted on a pivoting platform that allows for swivelling along the left side of the frame.

The main components are listed below, their locations may vary depending on the model:

a. Compartments
b. Gas Engine
c. Conveyor
d. Discharge Spout
e. 3-Stage Downspout
f. Pivot Rail
g. Roll-Top Tarp
h. Gate Levers
i. Transport Lock
j. Ladders
k. Document Holder
l. 2-Button Remote Ctrl
m. Remote Control (Opt)
n. Trailer (Optional)
o. Trailer Break-Away

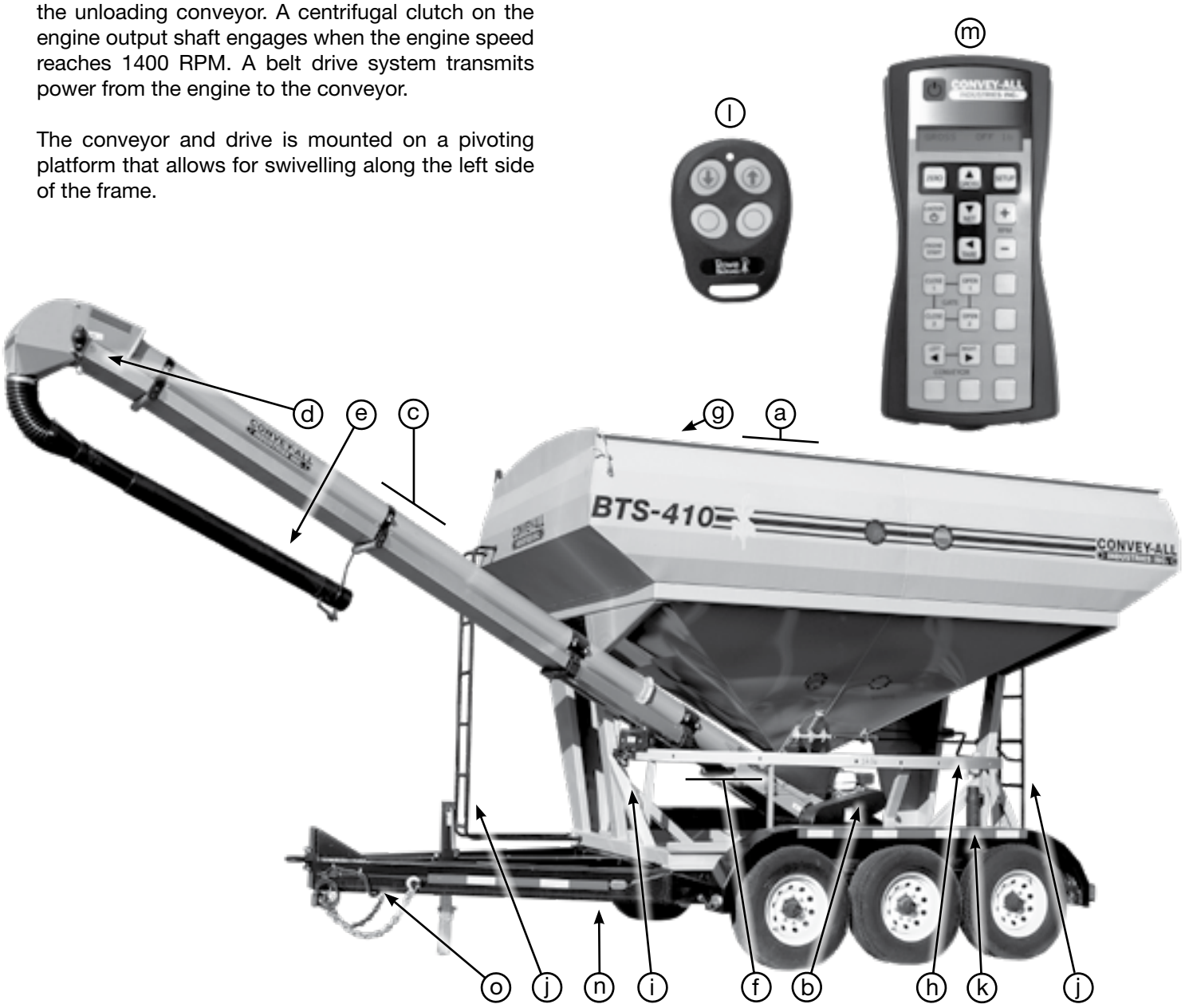

Fig 5 - BTS-295 and remote control handsets

3.2 COMPONENTS AND CONTROLS

Before starting to work, all operators should familiarize themselves with the location and function of the controls.

Options and location may vary depending on model.

Gas Engine:
Read the engine manufacturer's manual for more detailed instructions.

a. Ignition Switch:
This switch controls the electrical power to the engine electrical system.

b. Circuit Protector:
This protector monitors the engine electrical circuit. Its LED will illuminate when the circuit exceeds its preset value and trip the breaker. Depress indicator to reset the breaker.

c. Choke:
This lever controls the position of the choke. Always open the choke fully when operating the machine.

d. Throttle:
This lever controls the engine RPM. Always run at maximum engine RPM when operating the conveyor.

e. Fuel Shut-Off Switch:
This switch controls the flow of fuel to the engine. Move the switch to the right to open the valve and start the flow of fuel. Move the switch left to close the valve and the engine will run.

f. Starting Rope:
This retracting rope and T-bar is used to turn the engine over for starting. Grasp the T-bar firmly and pull the rope sharply to start the engine. Close the choke if the engine is cold.

g. Choke Solenoid:
On units equipped with a full remote control, the solenoid automatically chokes engine on ignition.

h. Centrifugal Clutch:
This clutch engages when the engine speed exceeds 1400 RPM to drive the conveyor.

Increasing the engine speed will increase the unloading rate.

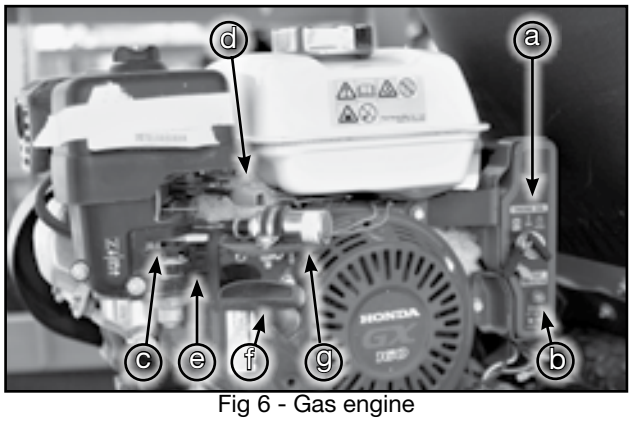

Fig 6 - Gas engine

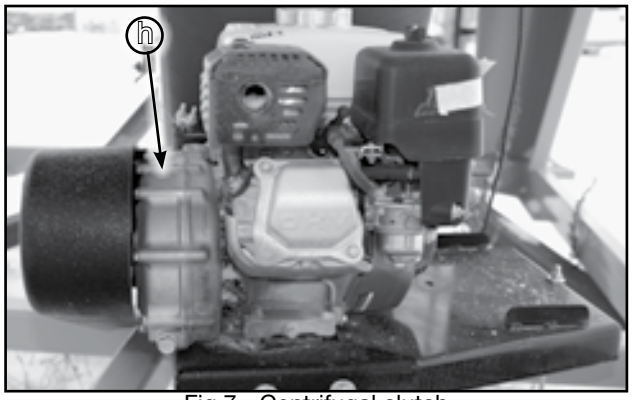

Fig 7 - Centrifugal clutch

Engine Mount:
The bolts on the engine mount, set the position of the engine base. Loosen the bolts to move the engine base away from the drive pulley, disengaging the belt. Tighten bolts to engage drive belt.

Always disengage belt when starting or stopping engine. Set the belt tension so the belt does not slip during operation.

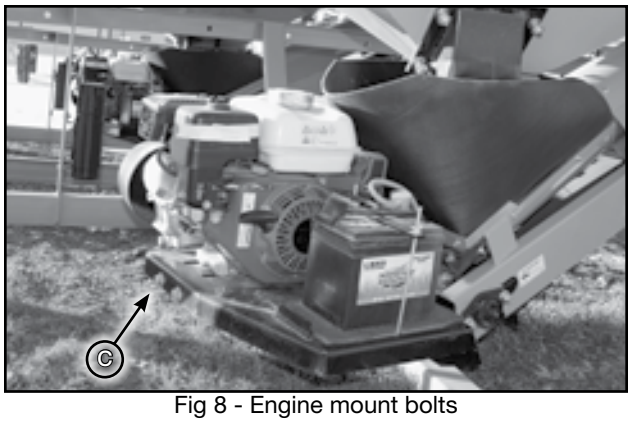

Fig 8 - Engine mount bolts

Conveyor Swing:
The Conveyor can swing through a plus or minus 140° arc. This allows it to fill more than one compartment, without having to move the equipment.

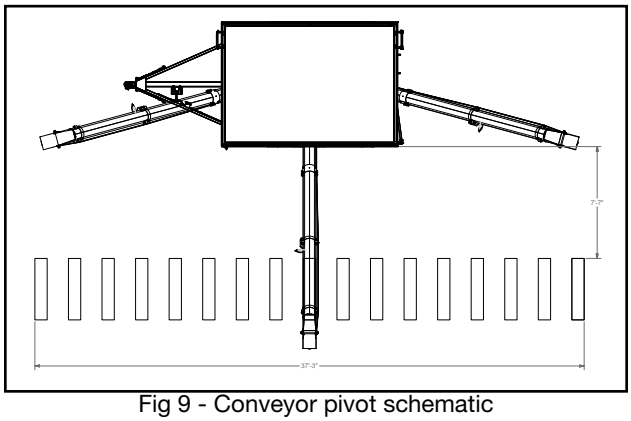
Fig 9 - Conveyor pivot schematic

Pivot Roller Bracket (Truck):
The conveyor sits on a roller bracket which can be moved around the railing. It can be positioned at 9 different angles.

Always use the manual locking pin (a) to secure the conveyor prior to starting the engine for unloading.

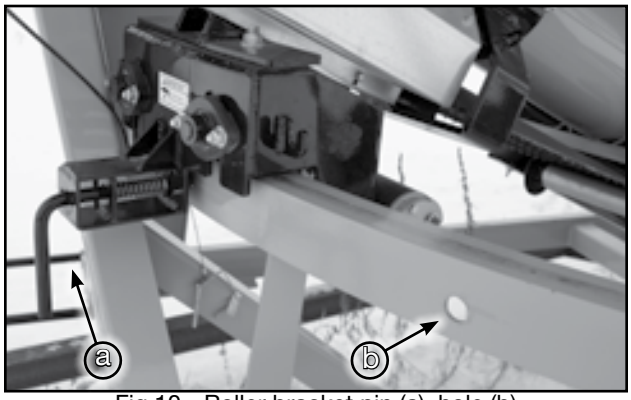

Fig 10 - Roller bracket pin (a), hole (b)

Transport Lock:
A transport lock is at each end of the pivot railing. It is used to anchor the conveyor to the tender platform during transportation.

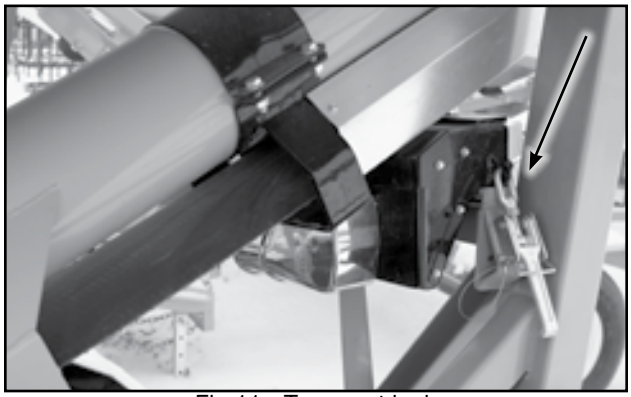
Fig 11 - Transport lock

Compartment Gates:
Each tender is designed with a moveable slide on the bottom of the compartment to control the flow of material.

NOTICE: Upending Hazard
Always Load the front seed compartment first to prevent the tender from upending.

Always Unload the rear compartment first to maintain weight on the trailer hitch.

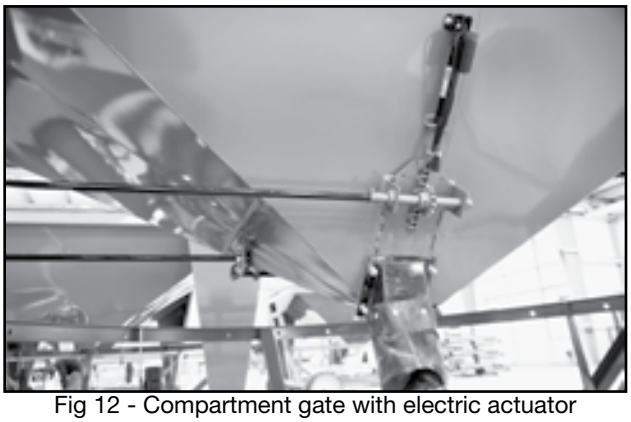
Fig 12 - Compartment gate with electric actuator

The Gates can be opened using the levers attached to the frame. They can also be opened using the optional remote control.


Fig 13 - Compartment gate with manual lever

Two-Button Remote Control:
It controls the speed of the conveyor belt.

This remote control is turned on at the receiver box, on the side, at the bottom of the conveyor.

Fig 14 - 2-Button remote control

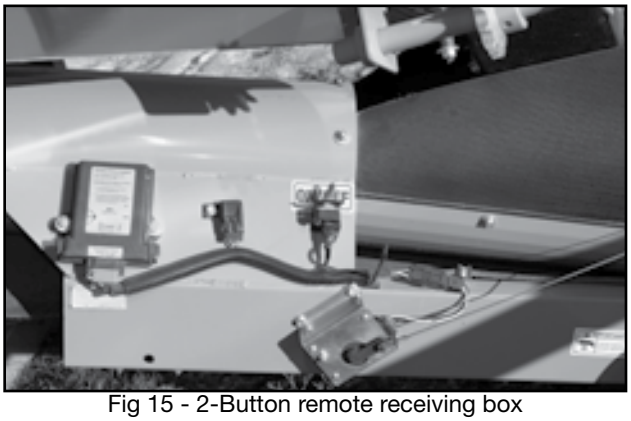
Fig 15 - 2-Button remote receiving box

Remote Control (Optional):
This remote control controls a majority of the functions of the tender.

The remote control comes with a lanyard, equipped with a safety quick release.

The remote control receiver is mounted on the right side of the conveyor frame, beside the engine.

Refer to the remote control`s instruction manual for more detailed instructions.

⏻ ON/OFF Button (Red):
Turns the remote control on and off.

ZERO Button:
Zeros the weigh scale reading, when no load applied.

▲ GROSS Button:
Press to view Gross weight for the entire unit.
Refer to Remote Control`s manual for ▲ function.

SETUP Button:
Refer to Remote Control`s manual for Setup function.

▼ NET Button:
Shows Net weight for the entire unit.
Refer to Remote Control`s manual for ▼ function.

◀ TARE Button:
Press to enter TARE weight.
Refer to Remote Control`s manual for ◀ function.

IGNITION ⏻ Button:
Press this button first when wanting to start engine.

ENGINE START Button:
Starts engine.

+ RPM − Buttons:
Adjusts the engine RPM.

GATE Buttons:
"Close 1" and "Open 1" operates gate number 1.
"Close 2" and "Open 2" operates gate number 2.

◀ LEFT, ▶ RIGHT, CONVEYOR Buttons:
Pivots the conveyor side to side.
If the remote control cables are connected to pivot motor, on the roller bracket correctly, the Left button will pivot the conveyor to the left. If they are switched, the conveyor will move to the opposite direction.

Fig 16 - Remote control


Fig 17 - Remote control receiver

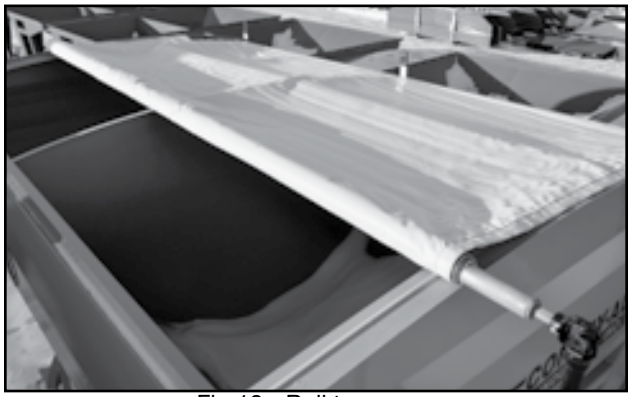
Fig 18 - Roll top cover

Roll Top Cover:
A roll top tarp is used to cover the unit. See Figure 16

Always turn the handle to put pressure on the tarp when covering the bins. Be sure there is a slight bend in the handle rod when placed in storage brackets.

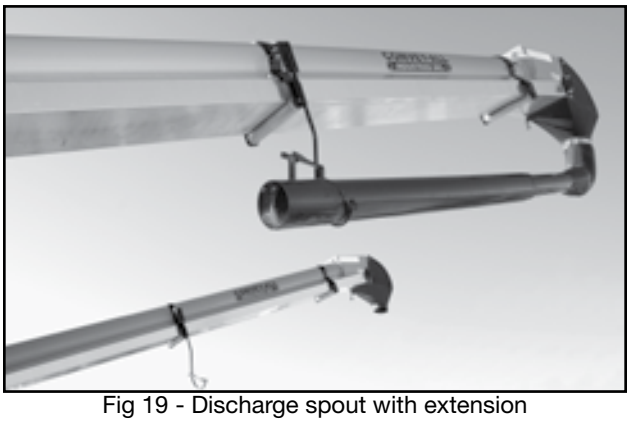

Fig 19 - Discharge spout with extension

Discharge with 3-Stage Downspout:
The tender is shipped from the factory with the 3-Stage Downspout not attached to the discharge. Refer to Machine Preparation, Section 3.5.2

Sight Glass:
Each bin in the tender is designed with a sight glass on the upper and lower side panels. This allows the operator to monitor the amount of material in the bin.

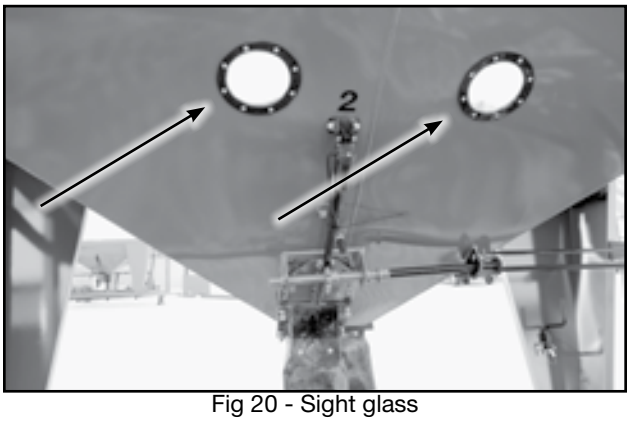

Fig 20 - Sight glass

Weigh Scale (Optional):
A Weigh Scale system is available. The Receiving Box is mounted on the side of the conveyor, up from the engine. Load Cells are sandwiched between the trailer frame and the tender. One cell in each corner.

Review the instruction manual supplied with the unit for operational details.

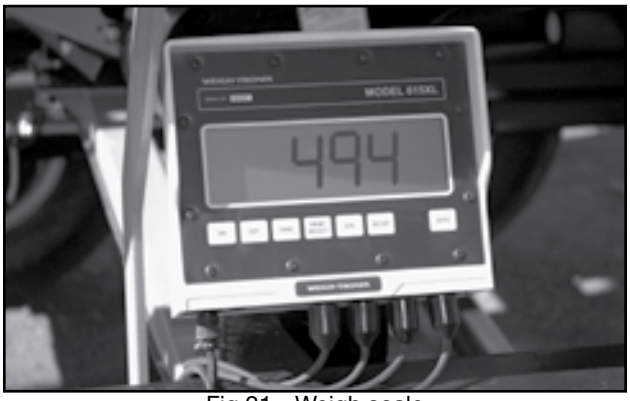

Fig 21 - Weigh scale

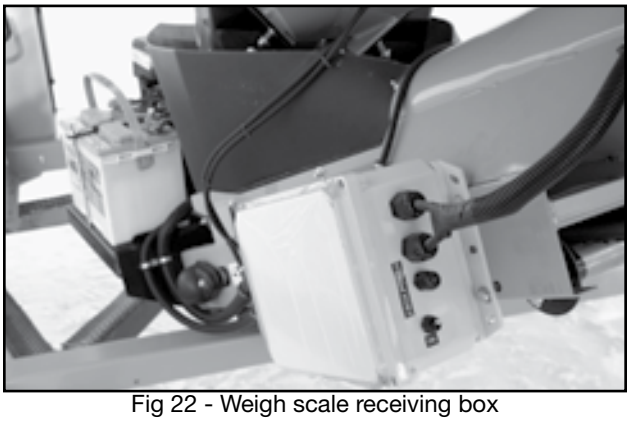

Fig 22 - Weigh scale receiving box

3.2.1 Tender Trailer (Optional):

Trailer:
A trailer is available, to mount the tender onto.

Trailer features may vary depending on its model, and the size of the tender.

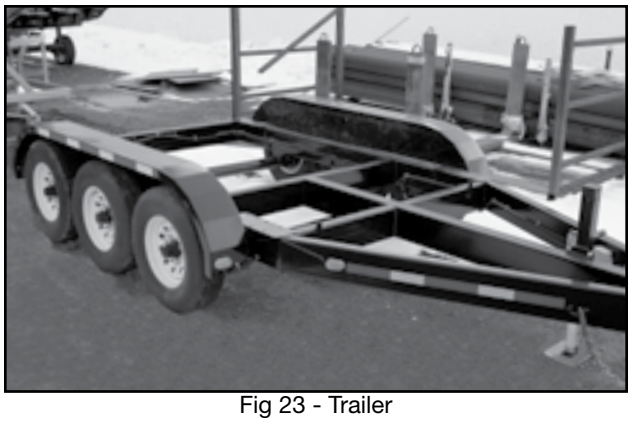
Fig 23 - Trailer

VIN and Serial Number:
There is specific information for the trailer included on its VIN number plaque.

The trailer also has its own serial number.

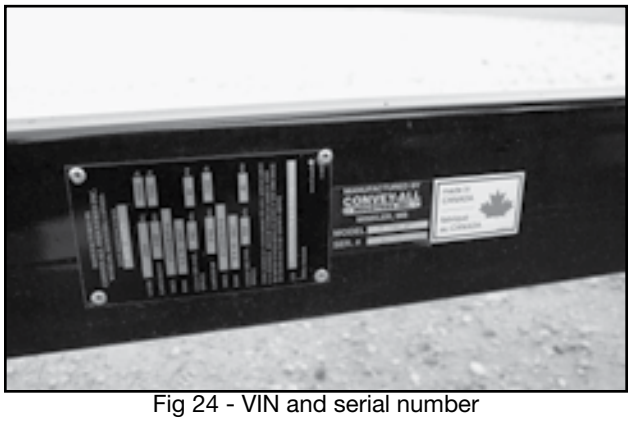
Fig 24 - VIN and serial number

Break-Away Switch:
A Break-Away Switch is installed on all trailers built by Convey-All Industries.

The control box contains LEDs to show the condition of enclosed battery. There is a Test button to check the battery level.

IMPORTANT:
Test the Break-Away Switch periodically.
Removing the pin, then pull the trailer
to feel if the brakes have engaged.

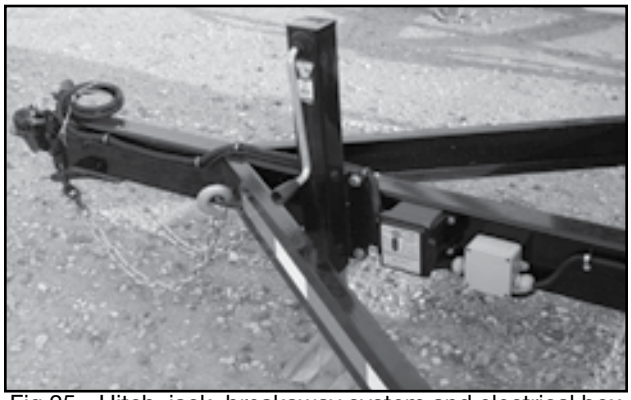
Fig 25 - Hitch, jack, breakaway system and electrical box

The cable attached to the Break-Away Switch pin, must go around the ball before coupling the trailer to the tow vehicle.

During transportation, if the trailer should detach from the transport vehicle, the pin will be pulled out engaging the trailer's brakes.

NOTICE: Transport Hazard
Always secure the safety chains to the tow vehicle, in addition to the Break-Away Switch.

Fig 26 - Breakaway switch control box

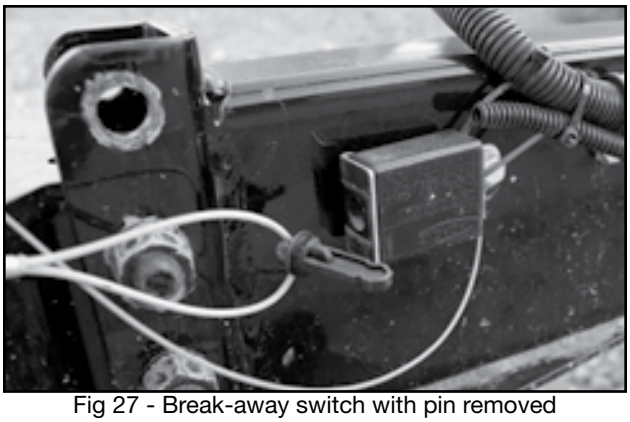

Fig 27 - Break-away switch with pin removed

Trailer Wheels:
Periodically check the tires air pressure.

At the same time ensure the wheels are torqued to 100 lb.

Fig 28 - Trailer wheels

Trailer Lights:
For your safety, and for the other drivers, always keep the lights in working order. Replace if necessary.

Fig 29 - Trailer lights

3.3 MACHINE BREAK-IN

There is no operational restrictions on the tender when used for the first time.

The conveyor belt's alignment is set at the factory, to track correctly without carrying a load. It is important to check alignment and make adjustments, if required, during the first few minutes of operation.

It is recommended that the following procedural and mechanical items be checked:

Before Starting Work:

1. Read the tender, and engine operator manuals.

2. Review and the Pre-Operation Checklist before starting machine.

After Operating or Transporting for 1/2 hour:

3. Check engine fluid levels; fuel and engine oil.

4. Lubricate the points defined in the Section 4.2.

5. Check the tension and alignment of the conveyor belt.

6. Check the drive belt's tension and alignment.

7. Check hardware and fasteners; tie-downs, all fasteners and wheel bolts. Tighten bolts to their specified torque.

8. Check the remote control. Be sure that it functions properly.

9. Check that the trailer brakes function.

10. Check that the trailer's Break-Away Switch functions, and its battery is at full charge.

After 10 Hours:

11. Go to the service schedule in the Servicing Intervals section.

    Refer to the engine manual for more specific instructions.

3.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the tender requires that each operator reads and understands the operating procedures.

It is important for both the personal safety and maintaining the good mechanical condition of the tender and its conveyor that the following checklist is followed.

Before operating the tender and each time thereafter, the following List should be checked:

1. Check work site. Clean up the area to prevent slipping or tripping.

2. Check engine fluid levels.

3. Be sure the battery is fully charged. If needed, charge the battery before connecting it with the battery cables.

4. Lubricate and service the unit as per the schedule outlined in the Service and Maintenance Section.

5. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.

6. Check the drive and conveyor belts. Tension and align as required.

7. Check that the belts are not frayed or damaged.

8. Check that discharge and hopper areas are free of obstructions.

3.5 MACHINE PREPARATION

3.5.1 Install on a Truck or Trailer:
The bean tender may be shipped from the factory as an individual unit, or mounted on a custom built trailer.

If the tender is to be installed onto a truck or trailer after leaving the factory; that vehicle must have sufficient load capacity and be equipped with electric brakes.

To install the tender onto a vehicle:

1. Clear the area of bystanders, especially small children.

2. Use a forklift, crane or hoist with adequate capacity to lift the machine.

3. Use the centre cross-frame when lifting. Be sure to keep the frame balanced.

   or, use the fork lift pockets if available.

4. Lift frame and move over truck/trailer frame.

5. Set down on deck.

6. Install the anchor bolts at each corner of the frame.

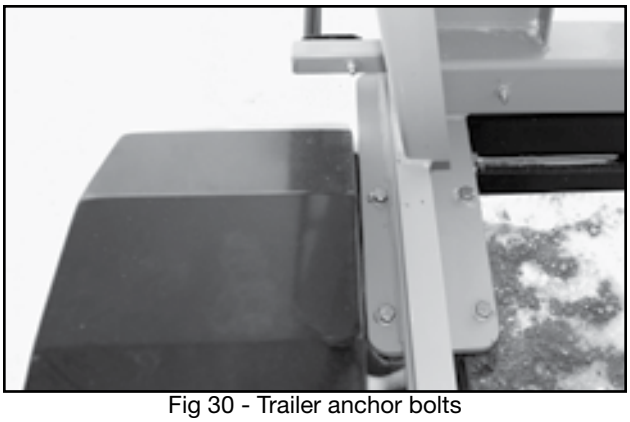
Fig 30 - Trailer anchor bolts

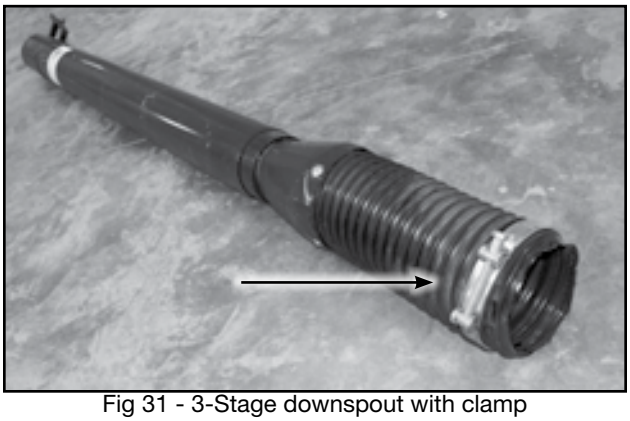
Fig 31 - 3-Stage downspout with clamp

3.5.2 Install 3-Stage Downspout:
1. Clear the area of bystanders, especially small children.

2. Remove the clamp. Cut 4 slits into the end of the corrugated section. This will allow it to slide over the discharge.

3. Slide a clamp over the corrugated end of the tube.

4. Slide the tube, with clamp, over the discharge until it is seated firmly.

5. Tightening the clamp.

6. Install the storage cradle hook on the second return roller from the top end of the conveyor.

7. Stow the Downspout in the storage cradle.

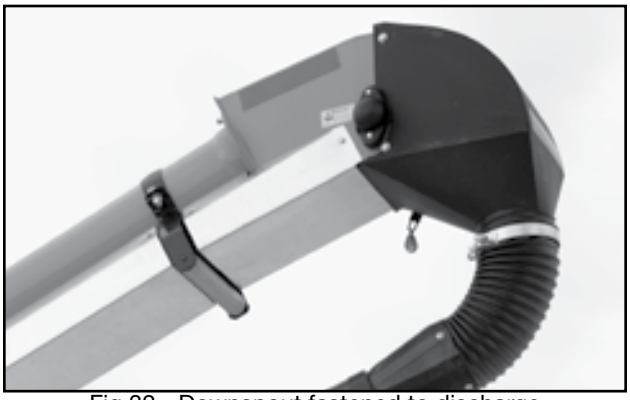
Fig 32 - Downspout fastened to discharge

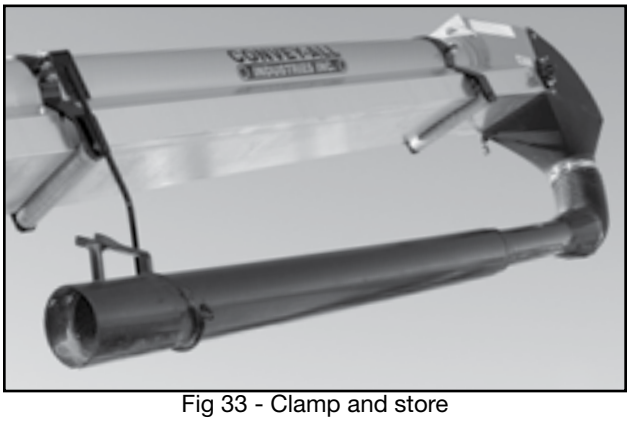
Fig 33 - Clamp and store

3.6 FIELD OPERATION

The Convey-All™ Seed Tender is designed to handle any kind of granular product, transport it and transfer it to planters and drills as required. Inspect the machine at the start of each day to be sure it is in good mechanical condition.

1. Attach trailer to the tow vehicle. Always secure the safety chains, and Break-Away Switch.

2. Review and follow the Pre-Operation Checklist. Refer to Section 3.4

3. Open roll top cover.

   NOTICE: Upending Hazard
   Always load the front seed compartment first to prevent the tender from upending.

4. Fill the compartments with product.

5. Close the roll top cover.

6. Be sure the conveyor is pointing forward on its pivoting rollers.

7. Secure the transport lock between tender frame and the conveyor's roller bracket.

8. Transport to the working area.

9. Drive up to the planter or drill.

10. Shut off engine on tow vehicle, remove ignition key, set park brake.

    Keep the vehicle attached to the tender's trailer to provide counter balance.

11. Disconnect the transport lock.

12. Pivot the conveyor to position discharge spout over the receiving equipment.

13. Engage the roller bracket pin to secure the conveyor in position.

14. Start the tender's engine.

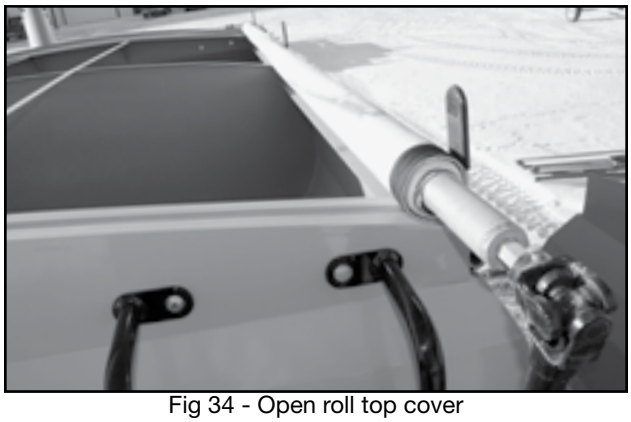

Fig 34 - Open roll top cover

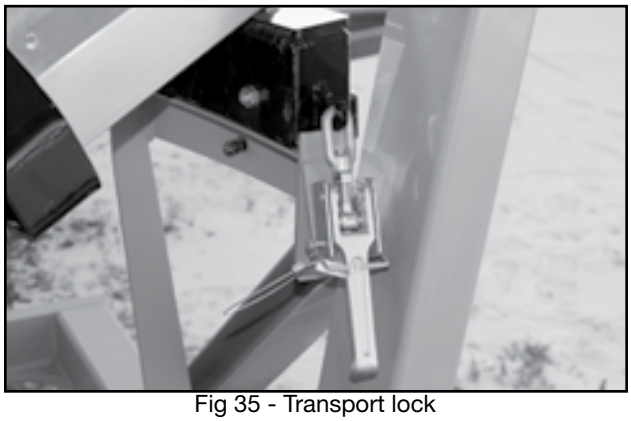

Fig 35 - Transport lock

Fig 36 - Pivot roller bracket

Fig 37 - Gas engine

15. Remove 3-Stage Downspout from storage hook.

16. Extend the downspout into position.

NOTICE: Upending Hazard
Always unload the rear compartment first to prevent the tender from upending.

17. Increase the engine speed until the centrifugal clutch engages, starting the conveyor belt.

18. Open the rear gate.

19. Fill the box or bin.

20. Reduce engine RPM to low idle, stopping the conveyor.

21. Move the downspout over next box or bin.

22. Increase engine RPM.

23. Repeat with the remaining boxes or bins.

When the job is finished...

24. Stop engine and remove ignition key.

25. Stow the downspout in cradle.

26. Pivot conveyor to the front and attach the transport lock.

27. Transport to the next location.

IMPORTANT:
Always fill and unload tender in correct order;
fill front compartment first,
unload rear compartment first.
Keep the weight on the hitch
to prevent upending.

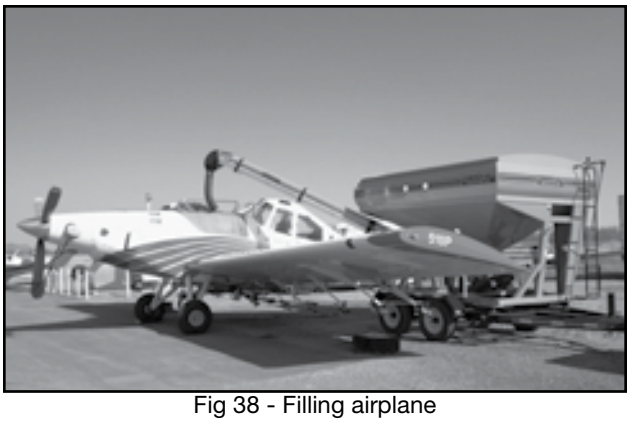
Fig 38 - Filling airplane

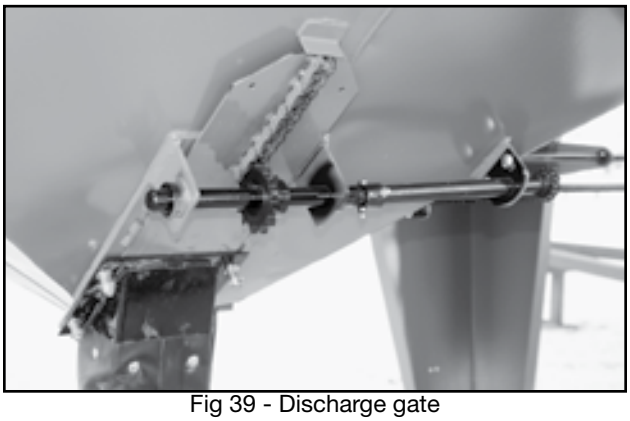
Fig 39 - Discharge gate

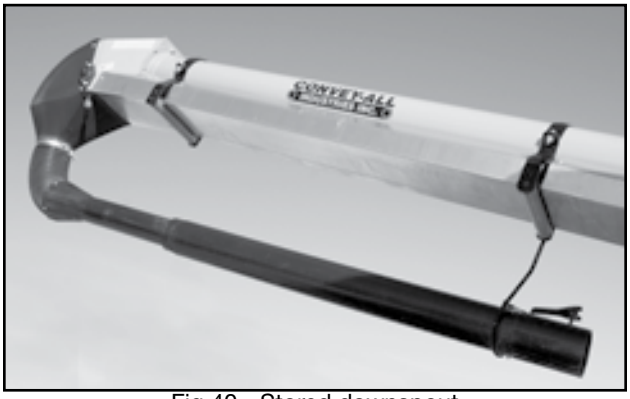

Fig 40 - Stored downspout

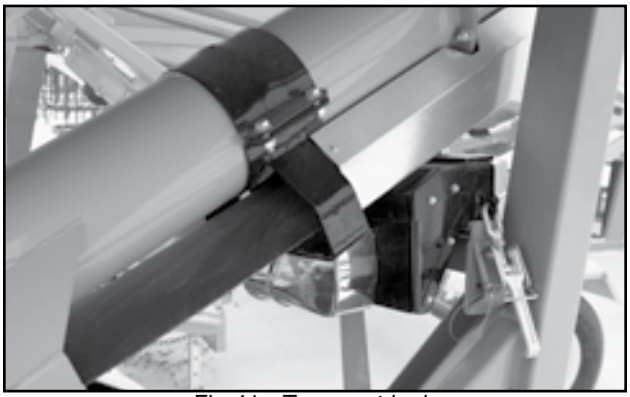
Fig 41 - Transport lock

3.6.1 Stopping Conveyor:

1. Run until conveyor belt is empty.
2. Reduce speed to low idle.
3. Move engine assembly to disengage drive belt.
4. Shut off engine

3.6.2 Emergency Stopping:

Although it is recommended that the conveyor belt be emptied before stopping, in an emergency situation, stop or shut-down the power source immediately.

Correct the emergency before resuming work.

3.6.3 Restarting after Emergency Stop:

When the machine is shut down inadvertently or in an emergency, the conveyor belt will still be covered with material.

Since the start-up torque loads are much higher than normal when the belt is covered. Restart at a low speed. It may be necessary to tighten the drive belt slightly to handle the heavier than normal loads.

3.6.4 Unplugging:

If conveyor becomes plugged, follow this procedure:

1. Stop engine and remove ignition key.
2. Remove the 3-Stage Downspout.
3. Remove product from the discharge spout.
4. Close the compartment gate.
5. Remove any obstruction from between the gate and conveyor.
6. Reattach the 3-Stage Downspout.
7. Restart engine.

   If the conveyor belt is full, torque loads will be much higher than normal. Restart at a low speed. It may be necessary to tighten the drive belt slightly to handle heavier than normal loads.

Fig 42 - Discharge spout

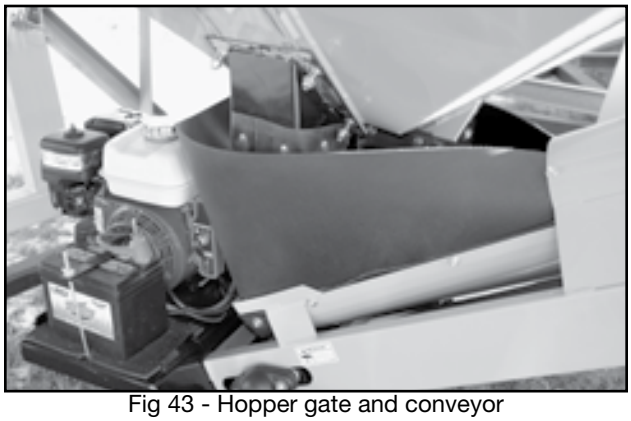

Fig 43 - Hopper gate and conveyor

3.7 OPERATING HINTS

- Be sure the trailer is always securely attached to the towing vehicle. Use a mechanical retainer through the hitch. Ensure the safety chain, lighting harness and Break-Away emergency cable are all securely connected.
- Always maintain weight on the hitch to prevent upending. Load the front compartment first. Unload the rear compartment first.
- Swing the conveyor into the best possible position for convenient and easy unloading.
- Always listen for any unusual sounds or noises. If any are heard, stop the machine and determine the source. Correct the problem before resuming work.
- Never allow anyone into the workplace hazard area. If anyone enters, stop immediately. The visitor must leave before resuming work.
- For best results, conveyor belt should rotate at a speed of 400 to 500 ft/min.
- Do not run the machine for long periods of time with no material on the belting. This increases the wear. Try to run only when moving material.
- The conveyor hopper is designed with flashing to seal the junction of the belt with the sides of the hopper. It must be kept in good condition to prevent the material from "leaking" out of the hopper. Replace flashing if "leakage" occurs.

Fig 44 - BTS-295

3.8 TRANSPORTING

Convey-All™ Bean Tenders are designed to be easily and conveniently moved from place to place.

When transporting, follow this procedure:

1. Be sure all bystanders are clear of the machine.
2. Align the drawbar of the truck with tender's hitch.
3. Set the park brake before dismounting.
4. Place the Break Away Switch cable around the ball.
5. Lower the jack. Place the hitch over the ball, and secure with a retainer. Attach the safety chain around the drawbar cage.
6. Ensure the SMV (Slow Moving Vehicle) emblem, all lights and reflectors required by local highway and transport authorities are in place.

   They must be clean and clearly visible by all overtaking and oncoming traffic.
7. Remove chocks from the wheels.
8. Do not allow riders on the tender.
9. Slowly pull away from the working area.
10. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.
11. During periods of limited visibility, use pilot vehicles or add extra lights to the machine.

Fig 45 - Transporting the tender

3.9 STORAGE

After the season's use or when the unit will not be used for an extended period of time, the tender should be thoroughly inspected and prepared for storage.

Repair or replace any worn or damaged components. This will prevent any unnecessary down time at the start of next season.

To have a long, trouble free life, this procedure should be followed when preparing the unit for storage:

1. Remove all residual material from compartments and tube.

2. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.

3. Thoroughly wash the tender to remove all dirt, mud, debris and residue.
   - Wash inside the compartments and around the gates.
   - Clean inside the conveyor tube.
   - Wash the top and under the belts.

4. Lubricate all grease fittings and bearings. Refer to Section 4.2

   Make sure that all grease cavities have been filled with grease to remove any water residue from the washing. This also protects the bearing seals.

5. Check condition of drive belt and pulleys. Adjust or replace as required.

6. Check condition of conveyor belt. Replace if necessary.

7. Touch up all paint nicks and scratches to prevent rusting.

8. Remove ignition key and store it in a secure location.

9. Remove the battery, before storing the tender.
   - Be sure it is fully charged, check monthly.
   - Store it inside.
   - Do not sit the battery on a cold, concrete floor.

10. Select a storage area that is dry, level and free of debris.

    If the machine cannot be placed inside, cover the gas engine with a water proof tarpaulin and tie securely in place.

11. Store machine in an area away from human activity.

12. Do not allow children to play on or around the stored machine.

IMPORTANT:

If the tender has been stored for more than 6 months, run the engine for 2-3 minutes. This warms the oil, then change it while still warm to remove any condensation.

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Section 4: SERVICE AND MAINTENANCE

Servicing Safety

- Review the Operator's Manual and all safety items before working with, maintaining or operating the machine.
- Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
- Follow good shop practices:
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for the job at hand.
- Always use personal protective devices such as safety glasses, gloves and hearing protection, when performing any service or maintenance.
- Place all controls in neutral. Stop engine. Wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
- Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
- Place stands or blocks under frame before working beneath the unit.
- Before resuming work, install and secure all guards when maintenance work is completed.
- Keep safety decals clean. Replace any decal that is damaged or not clearly visible.

By following the operating instructions, in conjunction with a good maintenance program, your tube conveyor will provide many years of trouble free service.

4.1 FLUIDS AND LUBRICANTS

Fuel and Engine Oil:
Refer to the engine manual for specific information:
- crankcase capacity
- type of fuel to use, and quantity

Grease:
Use an SAE multipurpose high temperature grease with extreme pressure (EP) performance. Also acceptable, SAE multipurpose lithium based grease.

Storing Lubricants:
Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

4.1.1 Greasing:

Use the Service Record provided on page 4-13, to keep a record of all scheduled maintenance.

1. Use only a hand-held grease gun for all greasing. An air-powered greasing system can damage the seals on bearings and lead to early failures.

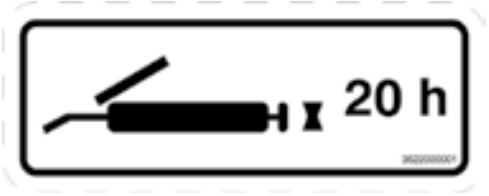
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.

3. All bearings are sealed and greasable. They require minimal lubricant.

   Recommended greasing is 1 small stroke every 2 weeks. Be careful not to over-grease, as this may push the seal out.

4. Replace and repair broken fittings immediately.

5. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.



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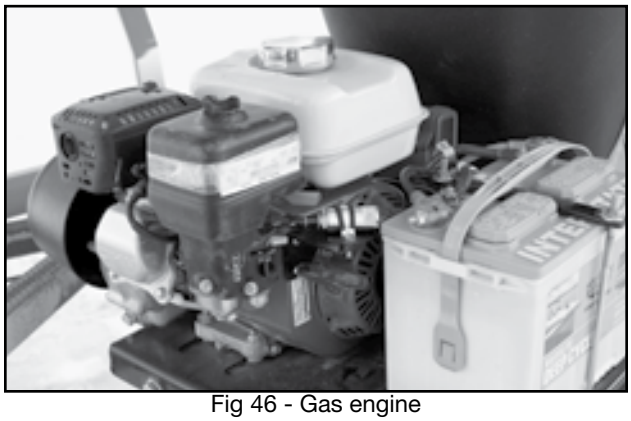

Fig 46 - Gas engine

The conveyor belt alignment is preset to run true under a condition of no load. It is important to check alignment and make adjustments, if required, during the initial few minutes of loaded operation.

Check bearings for wear daily.

The following recommended servicing intervals are based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication and oil changes.

Schedules may vary depending on options and engine model contained in the present unit.

IMPORTANT:
For engine servicing and maintenance, refer to its manual for complete details.

4.2 SERVICING INTERVALS

The conveyor belt alignment is preset to run true under a condition of no load. It is important to check alignment and make adjustments, if required, during the initial few minutes of loaded operation.

Check bearings for wear daily.

The following recommended servicing intervals are based on normal operating conditions. Severe or unusual conditions may require more frequent lubrication and oil changes.

Schedules may vary depending on options and engine model contained in the present unit.

IMPORTANT:
For engine servicing and maintenance, refer to its manual for complete details.

4.2.1 Every 10 Hours or Daily:

1. Check fuel level.
2. Check engine oil level.
3. Clean air filter
4. Check oil level in the centrifugal clutch reservoir.

4.2.2 After 50 Hours or Weekly:

5. Grease conveyor's hopper roller bearings, on both sides.
6. Grease discharge roller bearings, on both sides.

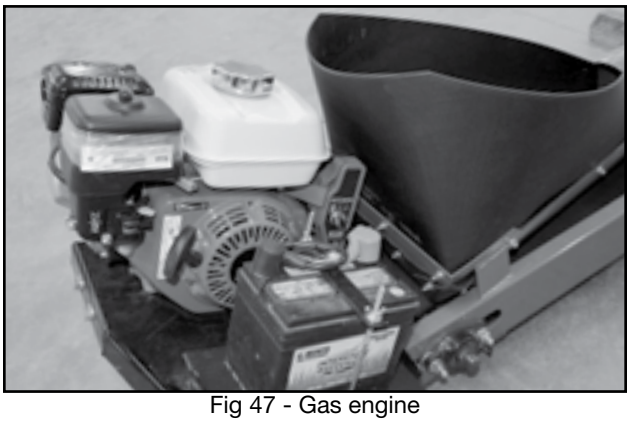
Fig 47 - Gas engine

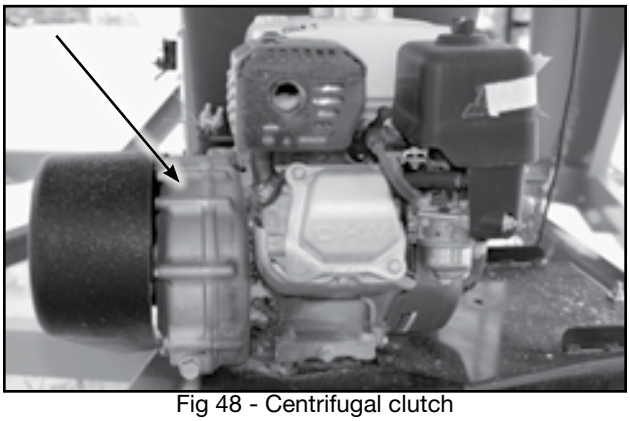
Fig 48 - Centrifugal clutch

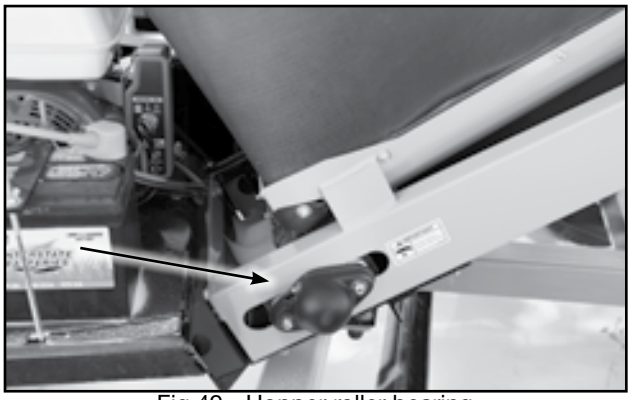
Fig 49 - Hopper roller bearing

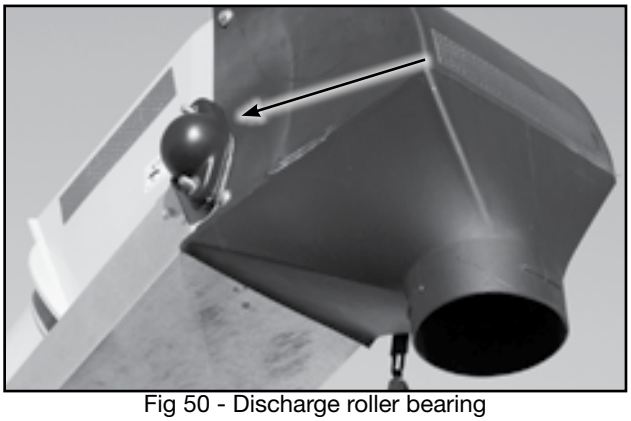
Fig 50 - Discharge roller bearing

7. Grease Pivot Roller Bracket Bearings.

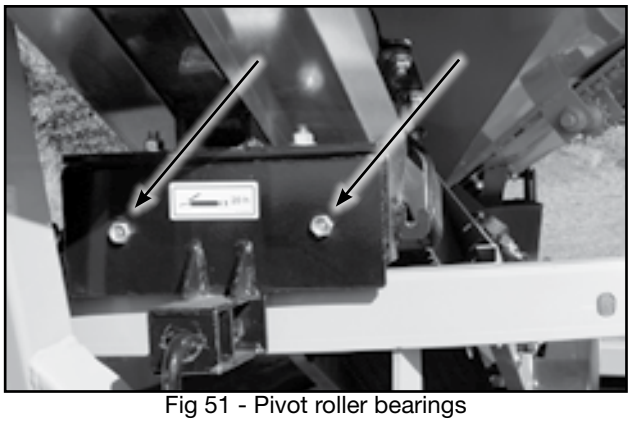

Fig 51 - Pivot roller bearings

8. Check conveyor belt tension and alignment. Refer to Section 4.3.1 and 4.3.2

Note:
A properly tensioned belt will not slip when in operation.

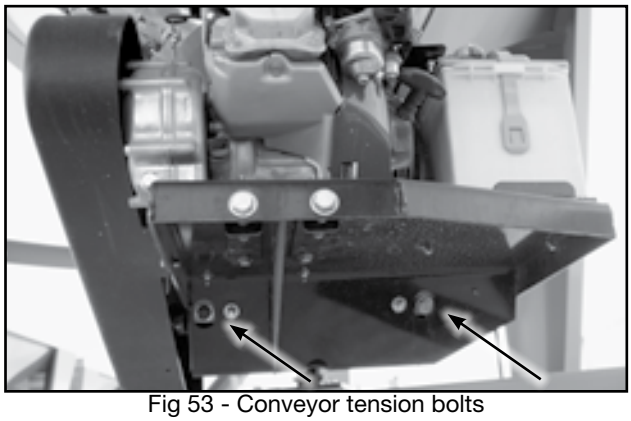

Fig 53 - Conveyor tension bolts

WARNING: Guards Removed
Machine is shown with guards removed for illustrative purposes only. Never operate machine with access guards opened or removed.

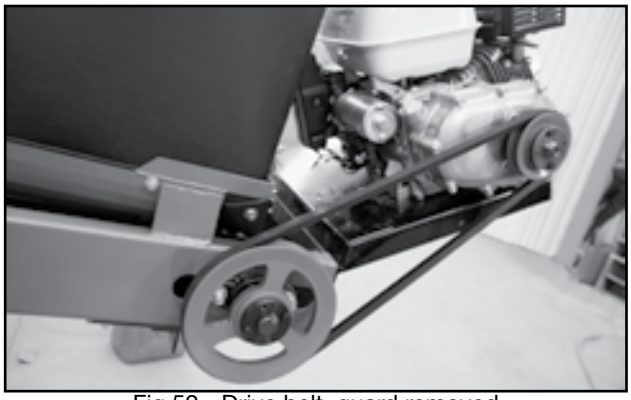

Fig 52 - Drive belt, guard removed

9. Check drive belt tension and alignment. Refer to Section 4.3.4 and 4.3.5

10. Check condition of conveyor's rubber hopper flashing. Be sure it still seals the hopper to prevent leaking.

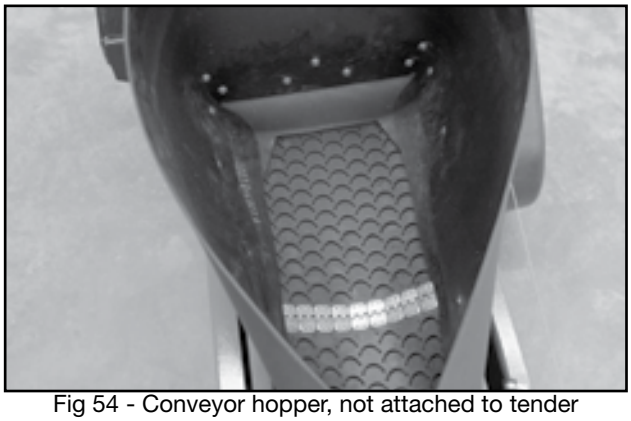

Fig 54 - Conveyor hopper, not attached to tender

4.2.3 Tender Trailer (if equipped):

11. Test Break-Away System battery level.

Fig 55 - Break-away system

12. Test the Break-Away Switch.
    - Removing the pin
    - Then pull the trailer, to feel if the brakes have engaged.

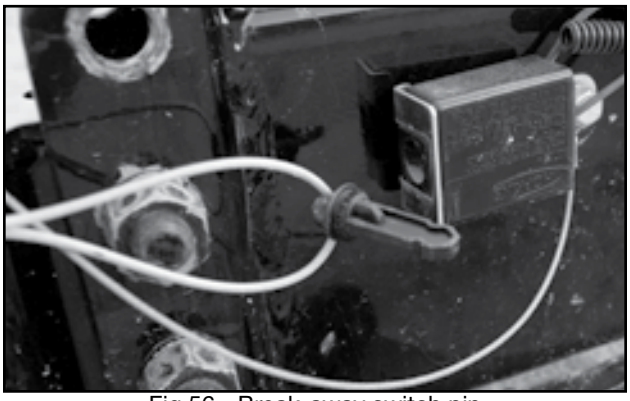

Fig 56 - Break-away switch pin

13. Check that lights are in working order.
    - Replace if needed.

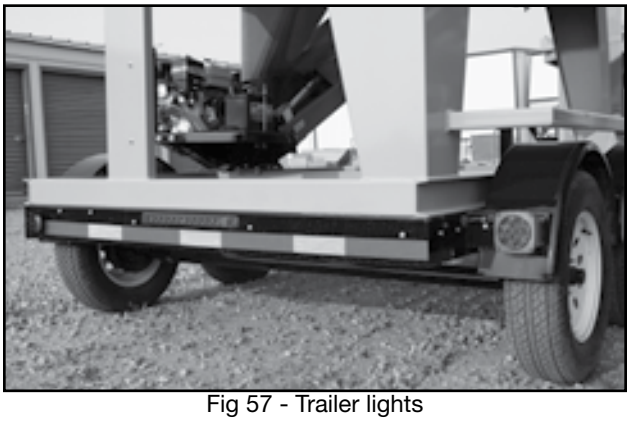

Fig 57 - Trailer lights

14. Check tire air pressure.

15. Torque wheel bolts to 100 lb.

Fig 58 - Trailer wheels

4.2.4 After 200 hours or Annually:

16. Change engine oil and filter.
    Refer to Section 4.3.7

17. Change air filter. Refer to Section 4.3.8


Fig 59 - Air filter, cover removed

18. Change oil in the centrifugal clutch gear box.
    Refer to Section 4.3.9

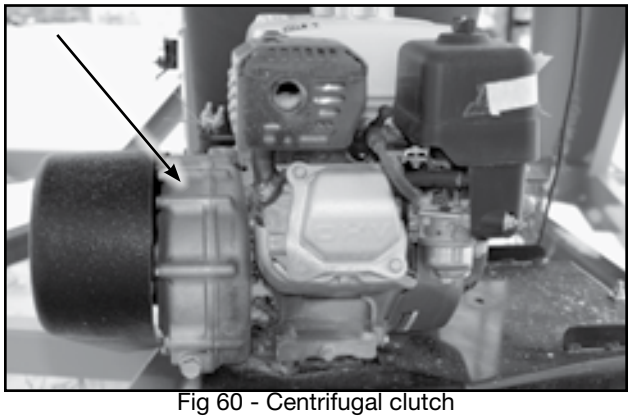
Fig 60 - Centrifugal clutch

19. Wash the tender to remove all dirt, mud, debris and residue.
    - Wash inside the compartments and around the gates.
    - Clean inside the conveyor tube.
    - Wash the top and under the belts.


Fig 61 - Centrifugal clutch

4.3 MAINTENANCE PROCEDURES

By following a careful service and maintenance program for your tender, you will enjoy many years of trouble-free service.

Note:
Refer to the engine manual for complete details on your particular model.

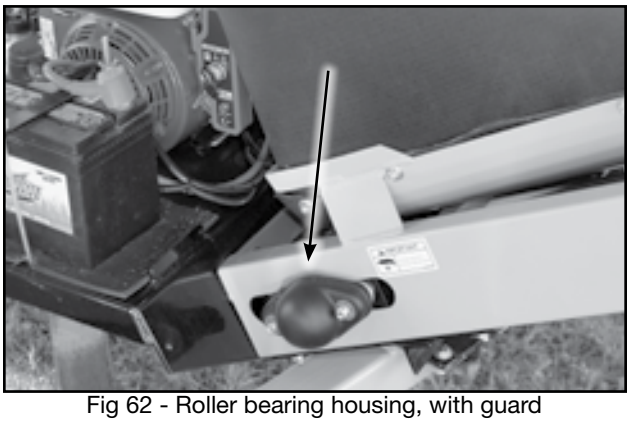
Fig 62 - Roller bearing housing, with guard

4.3.1 Conveyor Belt Tension:

WARNING: Rotating Part Hazard
Turn off engine and wait for all belts to stop rotating.

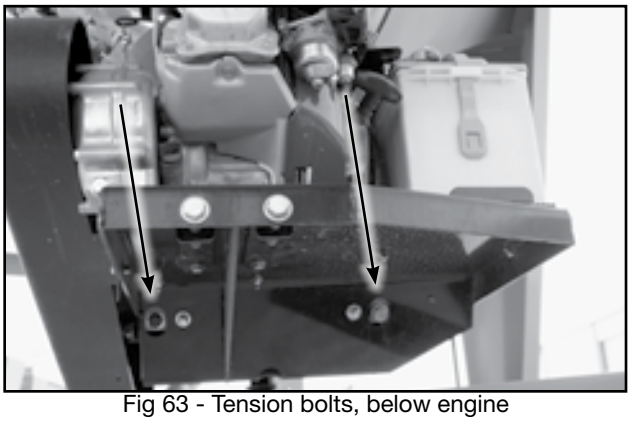
Fig 63 - Tension bolts, below engine

Belt tension is pre-set at the factory, under no load. Check the tension often while breaking-in the conveyor, because the belt may stretch.

The conveyor belt should not slip on the hopper and discharge rollers during operation.

The tension of the belt should be checked daily, or more often if required, to be sure that it does not slip under load.

To maintain the belt, follow this procedure:
1. Loosen the hopper roller bearing on both sides.

2. Adjust both tension bolts to set the tension of the belt.

3. Tighten bearing housings.

Note:
If belt needs more, or less slack,
stop belt, and turn off engine.
Move hopper roller 1/4 to 1/2 inch.
Tension the belt.

IMPORTANT:
If tensioning the belt while it is running,
Adjust in small incriminates,
alternating between the two bolts often.
This will keep the belt aligned.

4.3.2 Conveyor Belt Alignment:
The belt is properly aligned when it runs in the centre of the rollers on both ends.

As with tensioning, the alignment should be checked weekly, or as required.

1. Rotate the conveyor belt one revolution when the belt is new. Check it's position on the drive and discharge rollers.

Note:
If belt is out of alignment,
it will move to the loose side.
Tighten loose side or loosen tight side.

2. Loosen the drive roller bearing housing anchor bolts.

3. Use the tension bolts to set the position.

4. Rotate the belt another revolution and check the alignment. Adjust as needed.

Check frequently during the first few minutes of operating with a new belt and then several times during the first 10 hours.

The belt normally seats itself during the first 10 hours of operation and can be checked weekly after that.

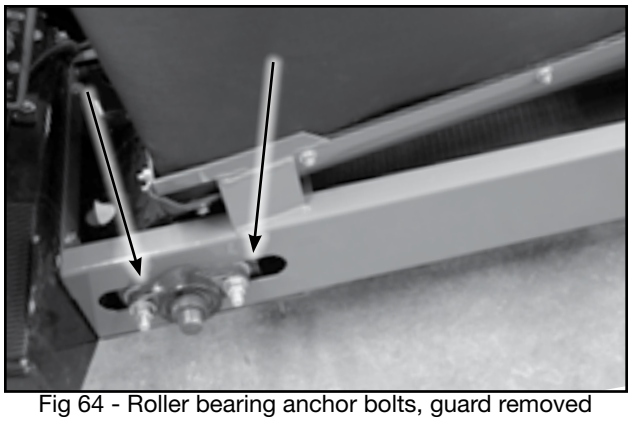
Fig 64 - Roller bearing anchor bolts, guard removed

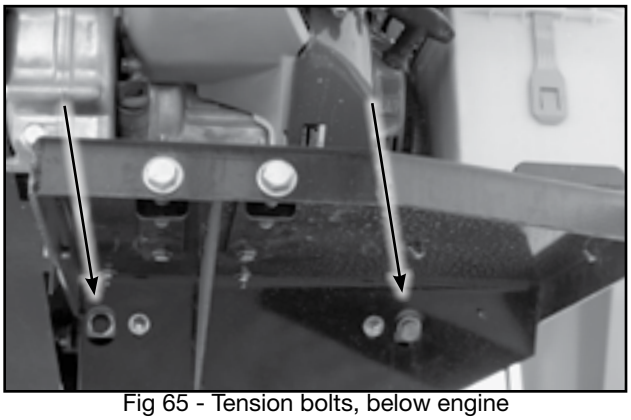
Fig 65 - Tension bolts, below engine

4.3.3 Conveyor Belt Replacement:

1. Rotate the conveyor belt until the Alligator Lacing is positioned in the middle of the opening in the wind guard.
2. Loosen the hopper roller bearing housing anchor bolts.
3. Loosen the tension bolts under engine mount. See Figure 65
4. Pull the slack to the lace area.
5. Remove the lacing pin and open the belt.
6. Attach one end of the new, replacement belt to the end of the existing belt (to be removed) which is hanging closest to the hopper.
7. Pull the end of the old belt which is coming from the direction of the discharge spout. The new belt will follow and be threaded into place.
8. Disconnect the old belt.
9. Connect the ends of the new belt.
10. Push the lacing rod through the lacing.
11. Cut off the excess rod.
    - Taper and trim both ends of the belt corners.
12. Crimp the lacing at the end to lock the rod in place.
13. Set the belt tension. Refer to Section 4.3.1
14. Set the belt alignment. Refer to Section 4.3.2.

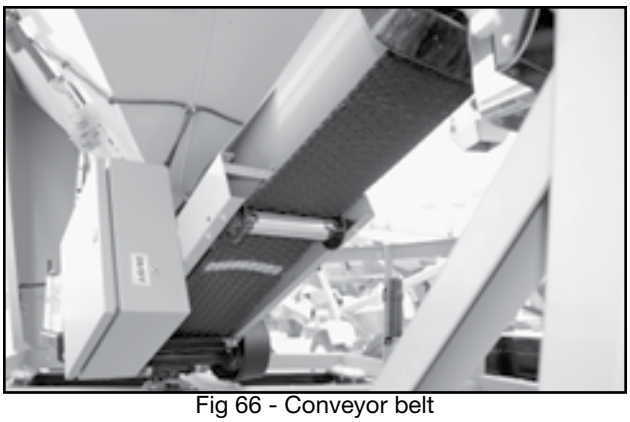

Fig 66 - Conveyor belt

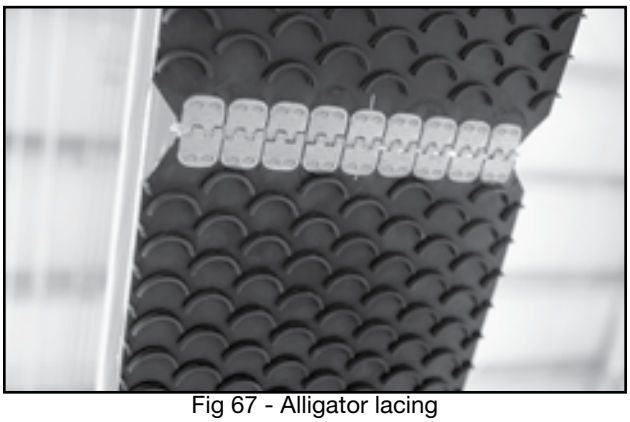

Fig 67 - Alligator lacing

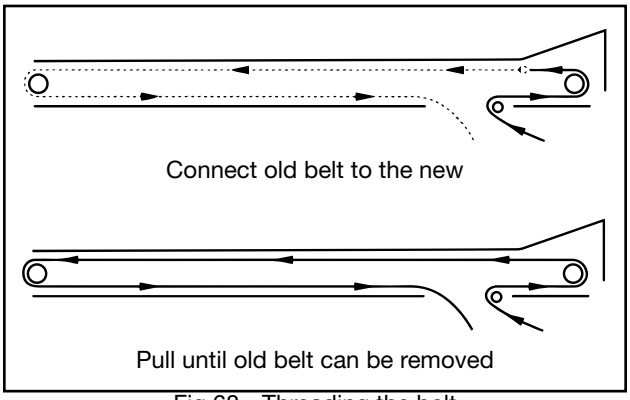

Fig 68 - Threading the belt

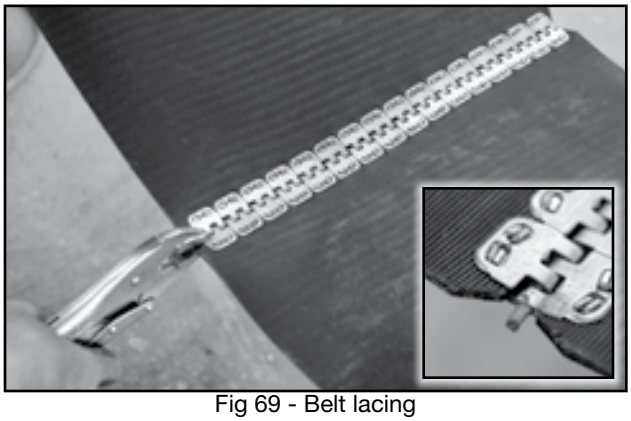

Fig 69 - Belt lacing

4.3.4 Drive Belt Tension:
The drive belt is tightened by moving the engine base with the mount positioning bolts.

WARNING: Rotating Part Hazard
Turn off engine and wait for all belts to stop rotating.

1. Open the guard over the V-belt drive system.
2. Loosen the jam nuts on the engine mount positioning bolts.
3. Use the nut on the position bolt to move the motor mount to the required position to set belt tension.
4. Check the belt tension.
5. Calculate the tension. See Figure 73:
   - Measure the length of span between pulleys.
   - Allow 1/64" of deflection per inch of span.
6. Tighten the jam nuts to their specified torque.
7. Place guard over the belt and bolt to secure.

WARNING: Rotating Part Hazard
Always install and secure guards before starting engine and resuming work.

4.3.5 Check Pulley Alignment:
1. Use a straight edge across both drive and driven pulleys to check alignment.
2. Use the tapered lock hub in the center of the pulley to adjust the position of a pulley if required.
3. Move a pulley to align if there is more than a 1/32 inch gap between the edge of the pulley and the straight edge.

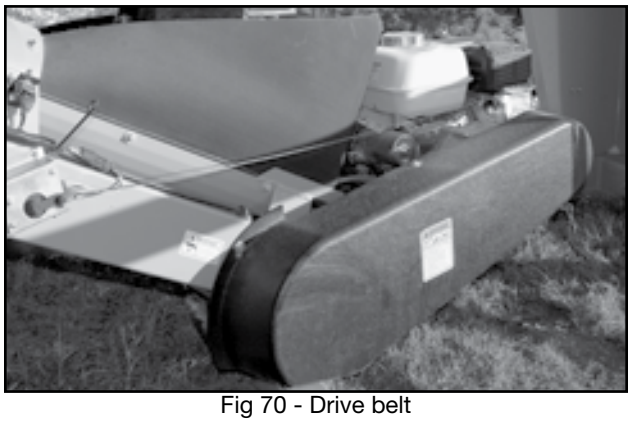
Fig 70 - Drive belt

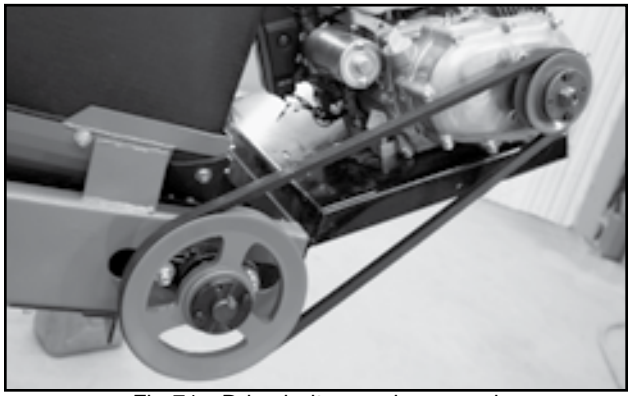
Fig 71 - Drive belt, guard removed

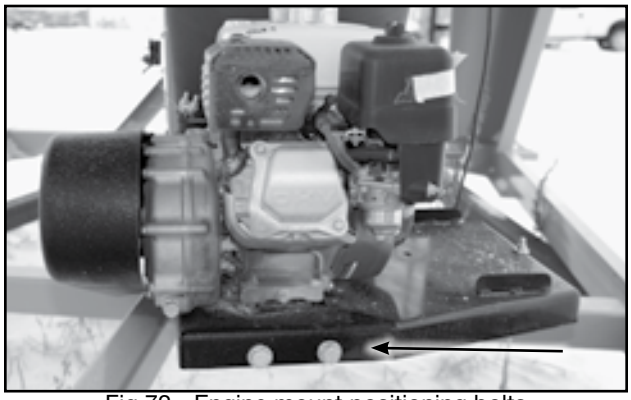
Fig 72 - Engine mount positioning bolts

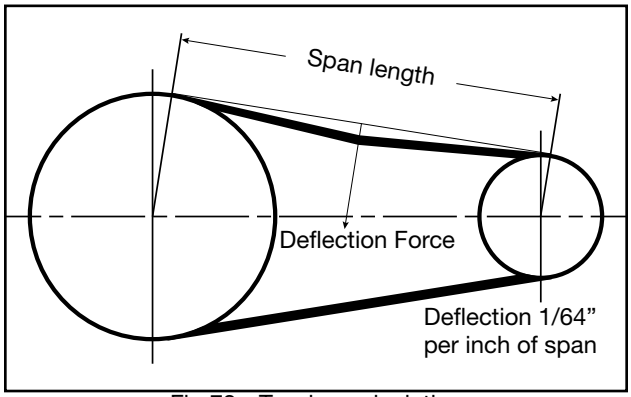

Fig 73 - Tension calculation

4.3.6 Drive Belt Replacement:

1. Use the positioning bolts to move the engine mount to its loosest position. See Figure 72
2. Remove old belt.
3. Install replacement belt.
4. Set belt tension.
   Refer to instructions in Section 4.3.4.
   See Figure 73
5. Check pulley alignment. Refer to Section 4.3.5

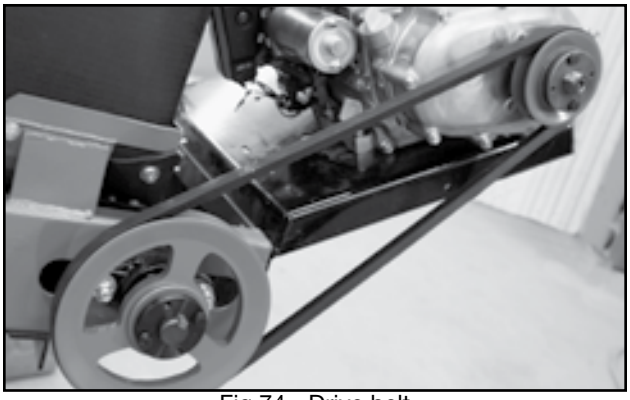

Fig 74 - Drive belt

Cross Section	Smallest Sheave Diameter Range	RPM Range	Belt Deflection (Force Pounds)			
			Uncogged Hy-T® Belts and Uncogged Hy-T® Torque Team®		Cogged Torque Flex® and Machined Edge Torque Team® Belts	
			Used Belt	New Belt	Used Belt	New Belt
A, AX	3.0 - 3.6	1000-2500 2501-4000	3.7 2.8	5.5 4.2	4.1 3.4	6.1 5.0
	3.8 - 4.8	1000-2500 2501-4000	4.5 3.8	6.8 5.7	5.0 4.3	7.4 6.4
	5.0 - 7.0	1000-2500 2501-4000	5.4 4.7	8.0 7.0	5.7 5.1	9.4 7.6
B, BX	3.4 - 4.2	860-2500 2501-4000	n/a	n/a	4.9 4.2	7.2 6.2
	4.4 - 5.6	860-2500 2501-4000	5.3 4.5	7.9 6.7	7.1 6.2	10.5 9.1
	5.8 - 8.6	860-2500 2501-4000	6.3 6.0	9.4 8.9	8.5 7.3	12.6 10.9
C, CX	7.0 - 9.0	500-1740 1741-3000	11.5 9.4	17.0 13.8	14.7 11.9	21.8 17.5
	9.5 - 16.0	500-1740 1741-3000	14.1 12.5	21.0 18.5	15.9 14.6	23.5 21.6
D	12.0 - 16.0	200-850 851-1500	24.9 21.2	37.0 31.3	n/a	n/a
	18.0 - 20.0	200-850 851-1500	30.4 25.6	45.2 38.0	n/a	n/a
			Uncogged Hy-T® Wedge Belts and Uncogged Hy-T® Wedge Torque Team®		Cogged Hy-T® Wedge Belts and Hy-T® Wedge Machine Edge Torque Team®	
			Used Belt	New Belt	Used Belt	New Belt
5V	4.4 - 6.7	500-1749 1750-3000 3001-4000	n/a	n/a	10.2 8.8 5.6	15.2 13.2 8.5
	7.1 - 10.9	500-1740 1741-3000	12.7 11.2	18.9 16.7	14.8 13.7	22.1 20.1
	11.8 - 16.0	500-1740 1741-3000	15.5 14.6	23.4 21.8	17.1 16.8	25.5 25.0

Table 1 - Belt deflection force

4.3.7 Changing Engine Oil And Filter:
Review the Operator's Manual for the engine. Specific procedures may vary depending on engine model.

WARNING: Hot Components
Allow the engine to cool before changing the oil. Hot oil can cause burns if it contacts exposed skin.

Note:
It is best to change oil while engine is warm to keep contaminants in suspension.

1. Place a pan under the drain plug.
2. Remove the drain plug and allow the oil to drain for 10 minutes.
3. Install and tighten the drain plug.
4. Remove engine oil filter.
5. Dispose of the filter and used oil in an approved container.
6. Apply a light coat of oil to the O-ring of the new filter and install. Snug up by hand, then tighten another half turn.
7. Fill the crankcase with specified oil.
   Refer to engine manual
8. Run the engine for 1-2 minutes and check for oil leaks.
9. If leaks are found, tighten drain plug slightly.
10. Check engine oil level. Top up as required.

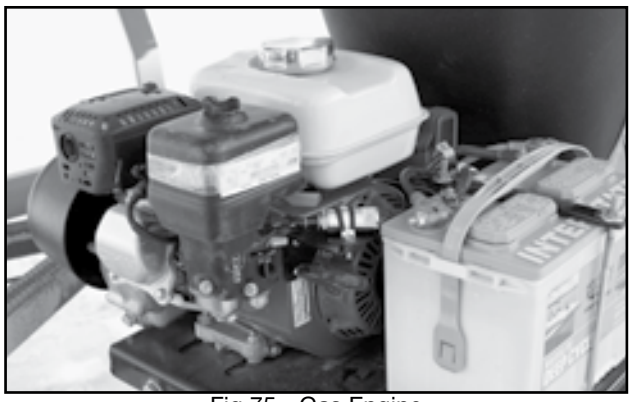
Fig 75 - Gas Engine

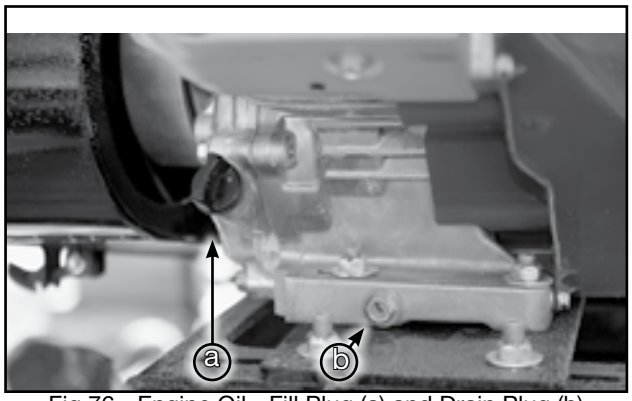

Fig 76 - Engine Oil - Fill Plug (a) and Drain Plug (b)

4.3.8 Clean/Change Air Filter:

WARNING: Hot Components
Allow engine to cool before working with Air Filter.

1. Remove the cover over the air filter.
2. Remove the foam from the engine.
3. Use an air hose to blow the dust and debris out of the foam.
4. Reinstall or replace foam
5. Secure the cover.

Fig 77 - Air Filter with Cover Removed

4.3.9 Change Centrifugal Clutch Oil:

1. Remove drain plug and drain for 10 minutes.
2. Fill with clutch case with oil.
3. Tighten plug and check for leaks.

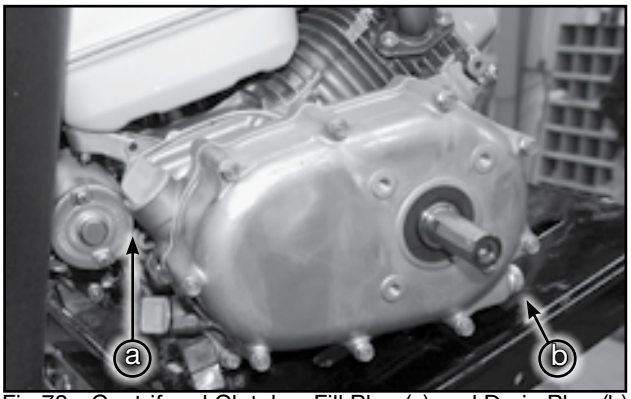

Fig 78 - Centrifugal Clutch - Fill Plug (a) and Drain Plug (b)

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4.4 SERVICE RECORD

See Section 4.2 for Servicing Intervals. That section is only a general guide under good conditions. Under extreme, or unusual circumstances adjust service timing accordingly.

For more detailed schedule pertaining to the specific engine model, consult its Operator Manual.

Copy this page to continue record.

Maintenance / Hours														
Serviced By														
10 Hours or Daily														
Check Fuel Level														
Check Engine Oil Level														
Clean Air Filter														
Check Oil Level in Centrifugal Clutch Reservoir														
50 Hours or Weekly														
Grease Hopper Roller Bearings														
Grease Discharge Roller Bearings														
Grease Pivot Roller Bracket Bearings														
Check Conveyor Belt Tension and Alignment														
Check Drive Belt Tension and Alignment														
Check Hopper Flashing														
If Equipped with Trailer														
Test Break-Away System Battery Level														
Test Break-Away Switch														
Check Trailer Lights														
Check Tire Pressure														
Torque Wheel Bolts														
200 Hours or Annually														
Change Engine Oil and Filter														
Change Air Filter														
Change Centrifugal Clutch Oil														
Wash Tender														

4.5 ORDERING PARTS

Always give the Model Number and Serial Number when ordering parts.

To get your parts promptly the following information will be required:
- The part name and number
- Your Name, Address, Town, Province/State, Country
- Complete information for shipping

Confirm all phoned in orders in writing. If Purchase Orders are required please note the number on the written order.

Unless claims for shortages or errors are made immediately upon receipt of goods, they will not be considered.

Inspect all goods received immediately upon receipt. When damaged goods are received, insist that a full description of the damage is made with the carrier against the freight bill. If this is insisted upon, full damage can be collected from the transport company.

No responsibility is assumed for delay or damage to merchandise while in transit. Dealers responsibility ceases upon delivery or pickup of shipment from or to the transportation company. Any freight damage claims must be made with the transportation company, not with the dealer.

Section 5: TROUBLESHOOTING

This section lists many of the problems, causes and solutions which may be encounter.

If problems are encountered which are difficult to solve, even after having read through this section, please contact your authorized dealer, distributor or Convey-All Industries Inc. Before you call, please have this operator's manual and the serial number from your machine ready.

Problem

Possible Cause	**Possible Solution**

Engine won't start

No fuel	Refuel
Low battery	Recharge or replace
Cold engine	Open choke
Air cleaner dirty	Clean the air cleaner, and/or replace the air filter

Engine labouring

Belt is sticky on the back side, because of oily product or wet/snowy conditions	Clean the belt
Hopper flashing too tight	Adjust to loosen the flashing

Movements are jerky, when operating with the remote control

Low battery power	Recharge battery or replace

Conveyor swings the wrong way when using remote control

Cables are connected to the pivot motor in opposite polarity.	Disconnect cables. Then reattach opposite to how they were.

Conveyor belt doesn't turn or is slipping

Hopper flashing may be stuck to belt, because it is running dry and rubber is heating up	Turn off unit! Manually peel flashing up and off hopper. Then run dry product through to create barrier between flashing and belt
Belt loose	Tighten and align
Conveyor belt loose because it has stretched	Shorten belt
Belt frozen to tube from operating in high humidity conditions in extreme cold	Remove tender from area of high humidity and continue to run empty so the belt dries prior to freezing.

continued on next page

Problem

Possible Cause	**Possible Solution**
Conveyor belt doesn't turn or is slipping, continued	
Drive belt loose	Tighten drive belt
No power	Start engine, increase speed to maximum RPM
Drive roller is slipping	Replace V-belt
Seized bearing	Check all bearings, Replace any that are rough or seized
Belt/roller is jammed	Check for sticks, stones, other objects jammed in belt drive area and remove.
Failed centrifugal clutch	Replace clutch
Conveyor belt doesn't align correctly	
Roller lagging may be worn	Replace roller or have it relagged
Conveyor Belt Fraying	
Belt not aligned	Adjust alignment and tension
Product leakage	
Product may be getting under the belt at the hopper, traveling up, inside the belt and leaking off discharge end	Replace hopper flashing
Low conveying capacity	
Drive roller is slipping	Replace V-belt
Conveyor belt slipping	Tighten and align

Section 6: SIGN-OFF FORM

Convey-All™ follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE), and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the bean tender 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. Review this information, annually, before the season start-up.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment.

The following Sign-Off Form is provided for your record keeping. Use it to show that all personnel who will be working with the equipment have read and understand the provided information.
Copy this page to continue the record.

DATE	EMPLOYEE'S SIGNATURE	EMPLOYER'S SIGNATURE

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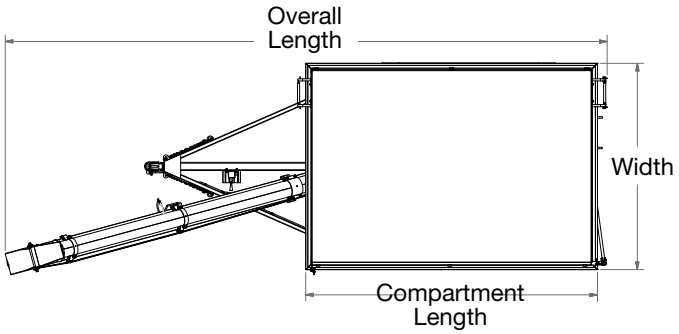
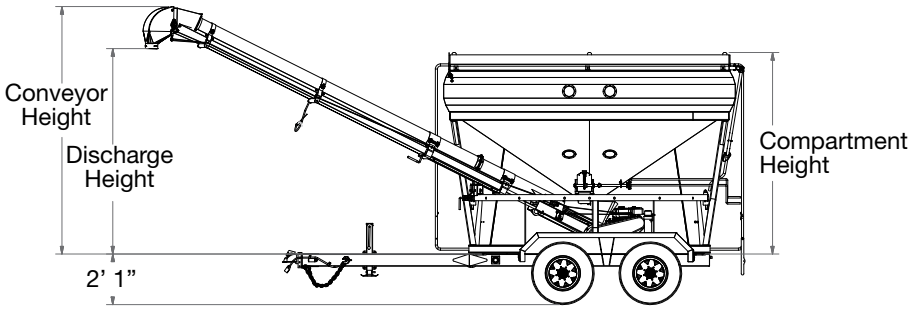
Section 7: REFERENCE

For information not included here, or for a digital copy of this manual, please call your dealer or Convey-All Industries Inc. directly for assistance (1-800-418-9461).

7.1 SPECIFICATIONS

Model	Total Cubic Feet (Bushels)	Conveyor Size	Overall Length	Comp. Length	Comp. Height	Comp. Width	Discharge Height	Conveyor Height (plus Trailer)	Weight (empty)
BTS-295	295 (240)	8" Tube 10" Belt	24' 7"	11' 11"	8' 3"	8' 5"	8' 5"	10' 2" (+ 2' 1")	3516 lb
BTS-410	410 (330)	8" Tube 10" Belt	26' 1"	14' 6"	9' 3"	8' 5"	8' 5"	10' 2" (+ 2' 1")	3860 lb
WT-295	295 (240)	10" Tube 16" Belt	25' 3"	11' 11"	8' 7"	8' 5"	9' 7"	10' 6" (+ 2' 1")	4491 lb





7.2 BOLT TORQUE

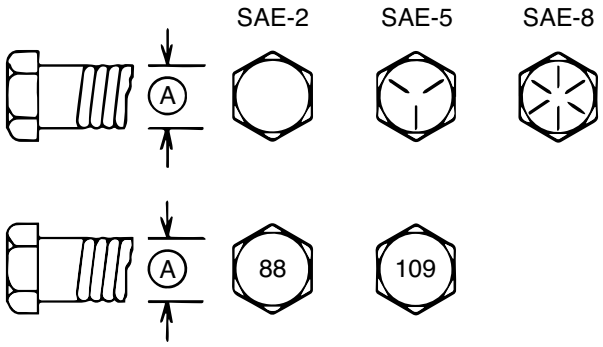
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS						
Bolt Diameter "A"	Bolt Torque*					
	SAE 2 (N.m)	(lb-ft)	SAE 5 (N.m)	(lb-ft)	SAE 8 (N.m)	(lb-ft)
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	60	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970

Table 2 - English Torque

METRIC TORQUE SPECIFICATIONS				
Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m)	(lb-ft)	10.9 (N.m)	(lb-ft)
M3	0.5	0.4	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

Table 3 - Metric Torque



Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. 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.

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