CONVEY-ALL®

1635

AIR SEEDER CONVEYOR

PATENT PROTECTED

This product is covered by one or more U.S., Canadian, Foreign patents and/or pending patent applications. For details, see:

convey-all.com/patents

3610000080

OPERATOR'S MANUAL

SIGN-OFF FORM

Meridian Manufacturing Inc. 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 using or maintaining this fuel trailer must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Review this information annually, before the season start-up.

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

This form is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand this manual. Copy this page to continue record.

Date	Employee's Signature	Employer's Signature

PRODUCT REGISTRATION FORM
and INSPECTION REPORT

CONVEY-ALL®

The Dealer must fill out this form, and be signed by both the Dealer and Buyer at the time of delivery. Scan or photograph the completed form (must be legible), email: register@convey-all.com
A copy of this form may also be mailed to: Box 760, 275 Hespler Ave, Winkler Manitoba R6W 4A8.

Buyer's Name _____
Address _____
City _____
Province/State _____
Postal/Zip Code _____
Country _____
Phone Number _____

Dealer's Name _____
Address _____
City _____
Province/State _____
Postal/Zip Code _____
Country _____
Phone Number _____

Model Number _____
Delivery Date _____

Serial Number _____
General Purpose: ☐ Private ☐ Commercial

UNIT INSPECTION

- ☐ All Fasteners Tight
- ☐ Hydraulic Hoses Good, Fittings Tight
- ☐ Machine and All Bearings Lubricated
- ☐ Conveyor Belt Aligned and Tensioned
- ☐ Conveyor Belt Moves Freely

SAFETY INSPECTION

- ☐ All Guards/Shields Installed and Secured
- ☐ All Safety Decals Clear and Legible
- ☐ Reflectors, Slow Moving Vehicle Sign are Clean
- ☐ All Lights are Clean and Working
- ☐ Reviewed Operating and Safety Instructions

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

Thank you for choosing a Convey-All® conveyor.

Convey-All® products are built by Meridian Manufacturing Inc. The equipment we design and manufacture meet the exacting standards of the agriculture industry.

Keep this manual for future reference. Call your dealer, distributor or Meridian if you need assistance, information, additional/replacement copies, or a digital copy of this document.

Information provided herein is of a descriptive nature. Meridian Manufacturing Inc. reserves the right to modify the machinery design and specifications without any preliminary notice.

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

OPERATOR ORIENTATION

The directions; left, right, front and rear, as mentioned throughout this manual, presume that the hopper is the front and discharge is the rear of the conveyor.

SERIAL NUMBER LOCATION

Always give your dealer the serial number when ordering parts, requesting service or asking for other information. The conveyor's serial number is located above the hopper.

Use the space provided for easy reference:

Conveyor Model No: _____

Conveyor Serial No: _____

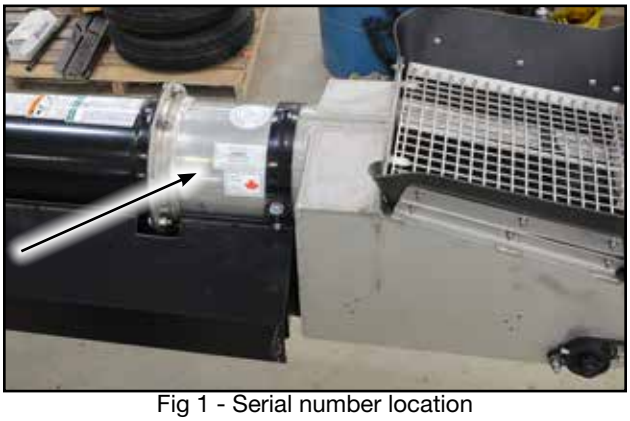


Fig 1 - Serial number location

Meridian Manufacturing Inc. continuously enhances its product offering through product improvements and new product innovations. Marketplace feedback, technological innovation, new materials and manufacturing methods, and a philosophy of continuous improvement constantly challenge the company to develop new and better ways of addressing market needs. Meridian is committed to innovation and reinvestment and as a result, the company maintains a portfolio of patents and intellectual property. For more information on our patents, see our website:

www.convey-all.com/patents

Section 2: SAFETY

3 Big Reasons why safety is important to you:

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

The Safety Alert Symbol means:

ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!

The Safety Alert Symbol identifies important safety messages on the conveyor 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.

SAFETY INSTRUCTIONS — Safety instructions (or equivalent) signs indicate specific safety-related instructions or procedures.

2.1 SAFETY ORIENTATION

YOU are responsible for the SAFE operation and maintenance of your Convey-All® Air Seeder Conveyor. Be sure that everyone who will operate, maintain or work 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 conveyor.

Remember, you are the key to safety. Good safety practices not only protect you but also the people around you. Make these practices a regular part of your safety program. Be certain that everyone who will work with this equipment follows these procedures.

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

- Conveyor owners must give operating instructions to operators and 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 operator must be responsible, properly trained and physically able. They should be familiar with farm machinery in general.

- Think SAFETY! Work SAFELY!

2.2 GENERAL SAFETY

- Read and understand the Operator's Manual and all safety decals before operating, maintaining, adjusting or unplugging the conveyor.

- Only trained, competent persons shall operate the conveyor. An untrained person is not qualified to operate the machine.

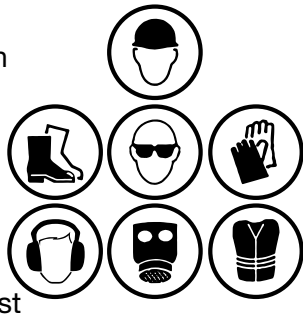
- Have a first-aid kit available for use should the need arise.

- 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 around the machine.

- Wear personal protective equipment (PPE). This list may include but is not limited to:
  - Hard hat
  - Protective shoes with slip resistant soles
  - Eye protection
  - Work 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 conveyor.

2.3 EQUIPMENT SAFETY GUIDELINES

Safety of the operator and bystanders is one of the main concerns when designing and developing this conveyor. 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.

- In order to provide a better view, certain images in this manual may show an assembly with safety guards removed.
  - Equipment should never be operated in this condition. All guards must be 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.
- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - DO NOT 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 safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible.
- Replaced parts must display the same decal(s) as the original parts.
- 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 Meridian Manufacturing Inc.

2.4.1 Applying Decals:

1. Be sure the application area is clean and dry. Ensure the surrounding temperature is above 10°C (50°F).
   a. Remove all dirt, grease, wax from surface.
   b. Clean the area with a non-ammonia based cleaner.
   c. Wipe the clean surface with isopropyl alcohol on paper towel, and allow to dry.
2. Determine the exact position before you remove the backing paper.
3. Peel a small portion of the split backing paper.
4. Align the decal over the specified area. Use a squeegee to carefully press the small portion, with the exposed adhesive backing, into place.
5. Slowly peel back the remaining paper and carefully smooth the rest of the decal into place.
6. Small air pockets can be pierced with a pin and smoothed out using the squeegee, or a piece of sign backing paper.

2.5 DECAL LOCATION

The following illustration show the general location of decals on this conveyor.
The position of decals may vary depending on the machine's options.
Decals are not shown at actual size.

- Convey-All logo on sides of tube near the discharge.
- Red reflector: on the end of the discharge spout.
- Amber reflectors: on sides of hopper, discharge, and less than 15 ft intervals along the tube.

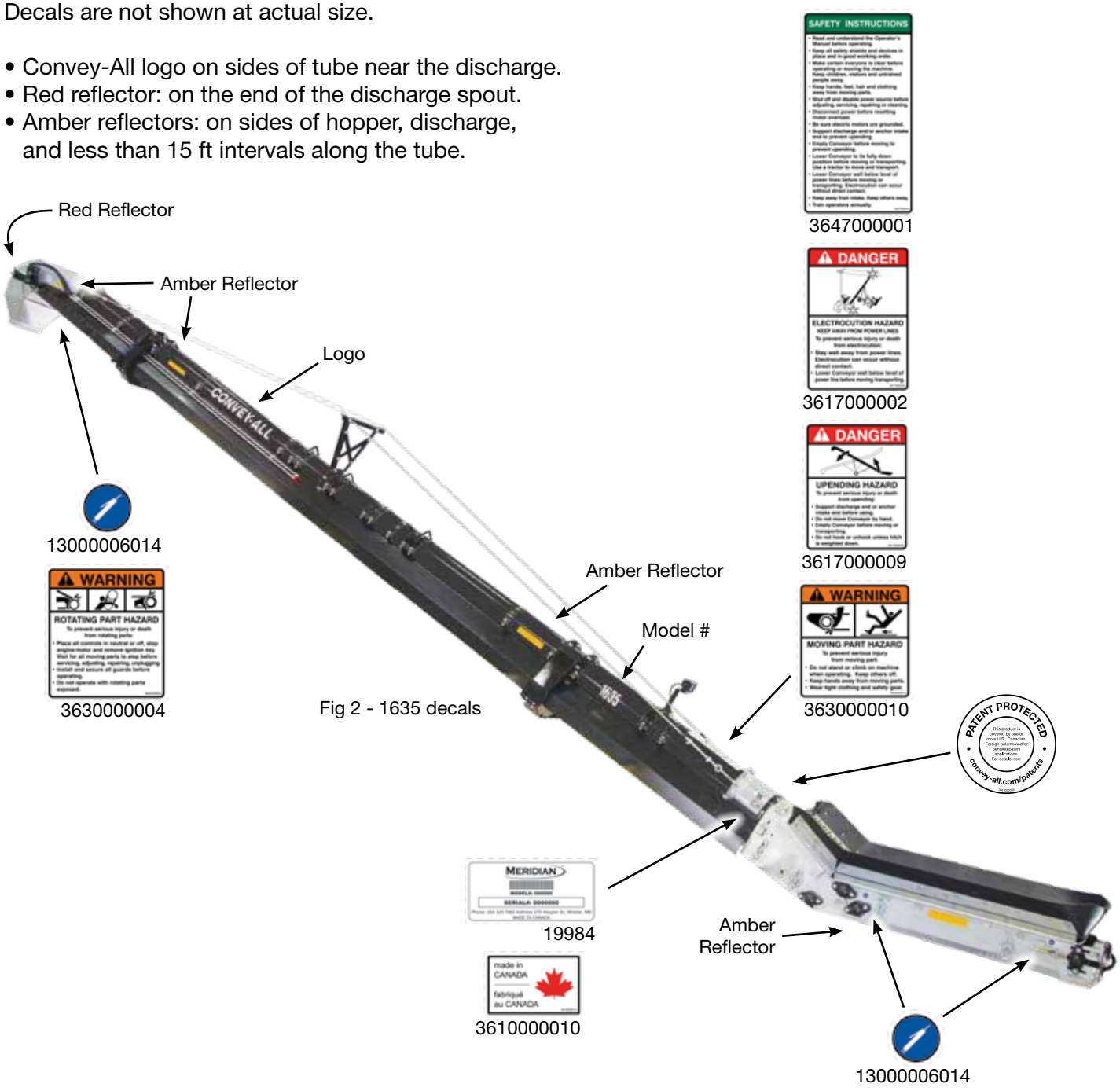


Fig 2 - 1635 decals

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

2.6 WORK PREPARATION

- Never operate the conveyor until you have read this manual, and understand the information.

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

- Personal protective equipment (PPE) include:
  - Hard hat
  - Eye protection
  - Protective shoes
  - Work gloves

They are recommended during installation, placement, operation, maintenance and removal of the equipment.

- 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 you wear hearing protection on a full-time basis if the noise in the Operator's position exceeds 80 db.

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

Noise over 90 db 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 guards and safety decals are properly installed and in good condition.

- Before starting, inspect the unit for any loose bolts, worn parts, cracks, leaks or frayed belts. Make the necessary repairs.
  - Always follow the maintenance instructions.

2.7 PLACEMENT SAFETY

- Stay away from overhead power lines when operating or moving the conveyor. Electrocution can occur without direct contact.

- Keep conveyor as low as possible.

2.8 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 area.

- Provide tags on the machine and a sign-up sheet to record tag-out details.

2.9 MAINTENANCE SAFETY

- Review Section 4: Service and Maintenance, before 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. Wait for all moving parts to stop before servicing, adjusting, repairing.

- Relieve pressure from hydraulic circuit before servicing.

- Before applying pressure to a hydraulic system, ensure all components are tight and that hoses and couplings are in good condition.

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

- Replace parts with genuine factory replacements parts to restore your equipment to original specifications.
  - Meridian Manufacturing Inc. will not be responsible for injuries or damages caused by using unapproved parts and/or accessories.

- 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.

- Replace damaged or not clearly visible decals.

2.10 OPERATING SAFETY

- Anyone who will be operating this conveyor, or working around it, must read this manual. They must know operating, maintenance, safety info.
  - Review the manual annually.

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

- Place all controls in neutral. Wait for all moving parts to stop before adjusting, repairing or unplugging.

- Keep all bystanders, especially children, away from the machine when running.
  - Also, when authorized personnel are carrying out maintenance work.

- Establish a Lock-Out, Tag-Out policy for the work site. Be sure all personnel are trained in and follow all procedures.
  - Lock-out, tag-out all power sources before servicing or working around equipment.

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

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

- Do not allow riders on the conveyor when moving or transporting it.

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

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

- Do not operate the conveyor when any guards are removed.

- Be sure that conveyor tube is empty before raising or lowering.

2.11 HYDRAULIC SAFETY

- Always place hydraulic controls in neutral. Then relieve pressure in hydraulic system before maintaining or working on machine.
- Be sure that all components in the hydraulic system are kept in good condition and are clean.
- Replace any worn, cut, abraded, flattened or crimped hoses.
- Do not attempt any makeshift repairs to the hydraulic fittings or hoses by using tape, clamps or cements. The hydraulic system operates under extremely high-pressure. Such repairs will fail suddenly and create a hazardous and unsafe condition.
- Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as backstop instead of hand to isolate/identify a leak.

- If injured by a concentrated high-pressure stream of hydraulic fluid, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

2.12 STORAGE SAFETY

- 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 machinery.

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Section 3: OPERATION

⚠ WARNING

- Read and understand the Operator's Manual, and all safety decals, before using.
- Place all controls in neutral. Wait for all moving parts to stop before servicing, adjusting, or repairing or unplugging.
- Clear the area of bystanders, especially children, before starting.
- Keep working area clean and free of debris to prevent slipping or tripping.
- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
- Do not allow riders on the conveyor.
- Stay away from overhead obstructions and power lines during operation. Electrocution can occur without direct contact.
- Do not operate conveyor with guards removed.
- Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear area before restarting.
- Establish a lock-out, tag-out policy for the work site. Be sure all personnel are trained in and follow all procedures. Lock-out tag-out all power sources before servicing the unit.

The Convey-All® conveyor has many features incorporated into it as a result of suggestions made by customers like you.

Hazard controls and accident prevention are dependent upon the personnel operating and maintaining it. Their awareness, concern, prudence and proper training are crucial.

It is the responsibility of the owner and operators to read this manual and to train all personnel before they start working with the machine. By following recommended procedure, a safe working environment is provided for the operator, co-workers and bystanders in the area around the work site.

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

3.1 MACHINE COMPONENTS

This Air Seeder Conveyor is built to be attached to the side of an air seeder.

A hydraulic motor supplies power to operate the conveyor belt. The hydraulics must be provided by an external source.

Components may vary, and their positions may change depending on the options contained on the conveyor.

The main components are listed below:

a. Conveyor Tube
b. Intake Hopper
c. Containment Assembly
d. Discharge Spout
e. Conveyor Belt Hydraulic Drive
f. Drip Pan
g. Pivot Mount Bracket
h. Cradle Pad
i. Work Light

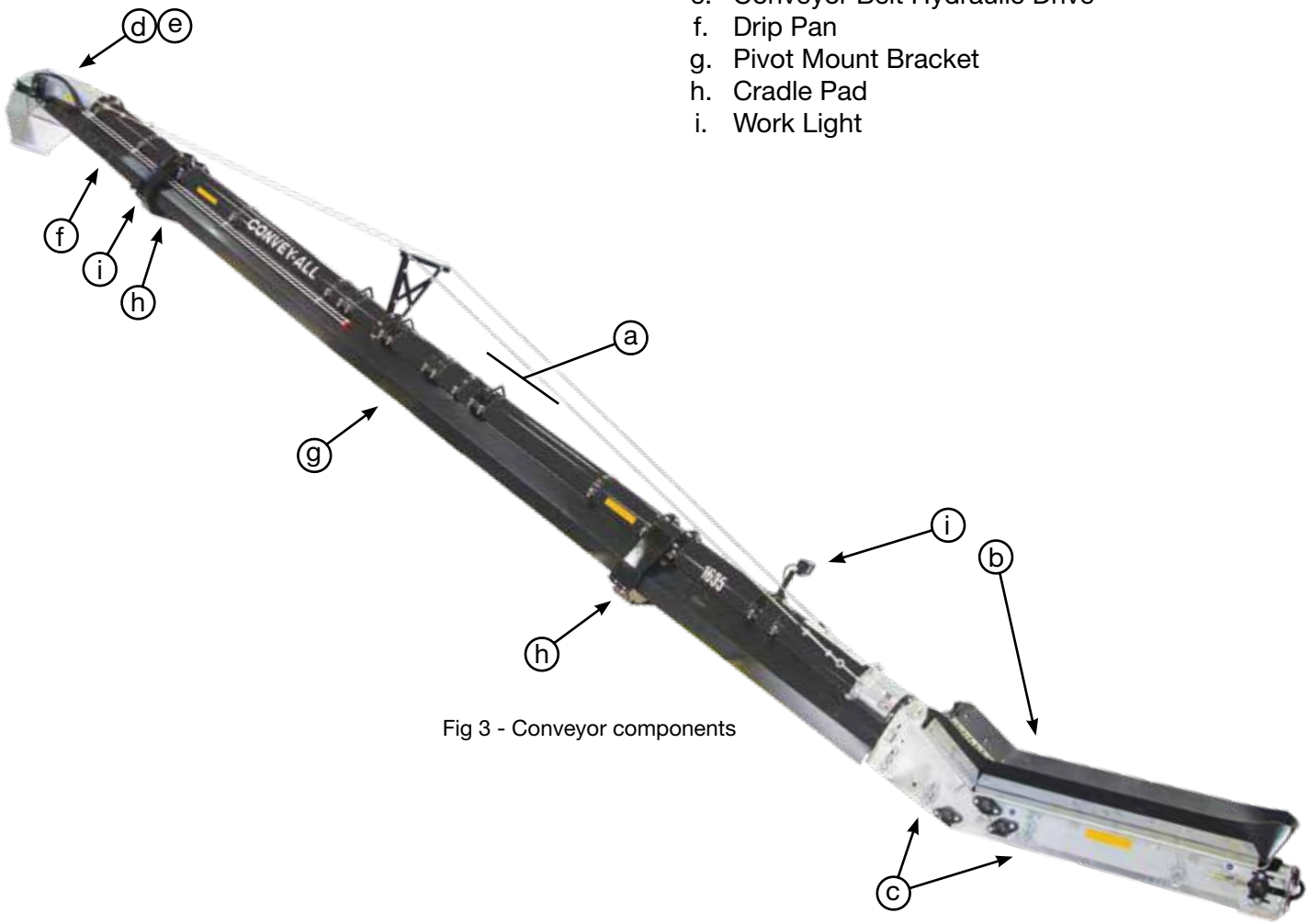

Fig 3 - Conveyor components

3.2 COMPONENTS AND CONTROLS

Before starting to work, all operators must familiarize themselves with the location and function of the components and controls of their specific unit.


Fig 4 - Discharge with hydraulic motor

Discharge Spout:
The discharge spout is designed with six settings to allow it to be angled.
- Angle the spout back if product needs to be directed further out, rather than straight down.
- Remove the brackets and flip the spout back to throw the product as far as possible. This works well when making piles or working inside buildings.

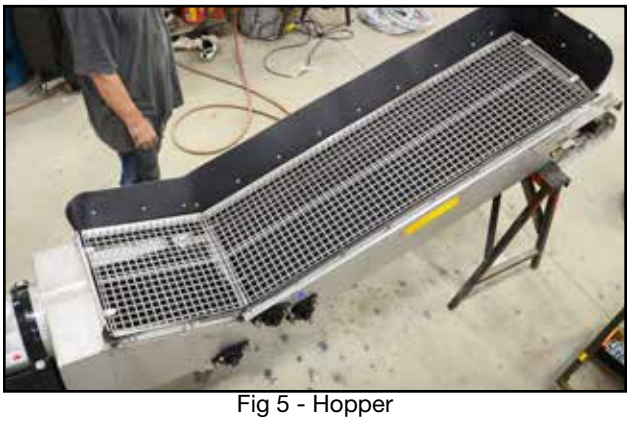
Fig 5 - Hopper

Hydraulic Belt Drive:
A Hydraulic motor is position at the discharge to power the drive roller.

Hopper:
The Open Transition Hopper includes a rubber guard around the outside to keep product in.
- Rubber flashing seals the junction between the conveyor belt and the sides of the hopper.
- The hopper is designed with containment plates to seal the bottom.
- A screen kit covers the open intake hopper.

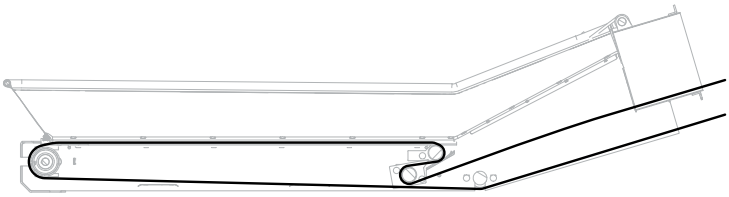
Fig 6 - Hopper S-Neck transition

Hopper S-Neck Transition:
The conveyor belt is threaded through an "S" pattern to transition between the hopper and incline portion of the unit.

Chevron Belt with Alligator® Lacing:
A 16 inch wide, skived, 2 ply, 150 weight, chevron belt with Alligator® Lacing is used.


Fig 7 - Skived chevron belt with Alligator® lacing

Pivot Mount Bracket:
The conveyor is attached to the air seeder at this point.

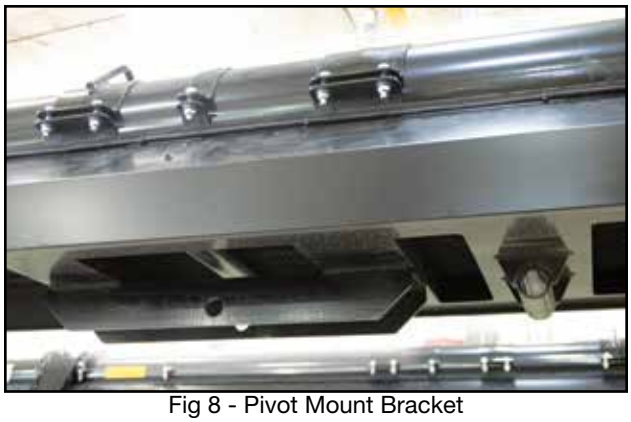
Fig 8 - Pivot Mount Bracket

Cradle Pads:
There are two pads to rest the conveyor on the side of the air seeder for transport.

Fig 9 - Hopper-end Cradle Pad

Cable Bridging:
The cable bridging needs to be adjusted periodically to ensure tube is straight vertically and horizontally.


Fig 10 - Cable bridging tower

Work Lights (Optional):
The conveyor may be equipped with working lights. They are positioned to illuminate the hopper and discharge ends of the machine.


Fig 11 - Discharge work light

Discharge Drip Pan:
Between the discharge and the work light bracket, the belt is covered by a Drip Pan.

- The drip pan sits on the inside edges of the windguards, and clamps hold it in place while sitting on top of the work light mount.


Fig 12 - Discharge Drip Pan

Hopper Containment Assemblies:
Two containment assemblies seal the bottom of the hopper.

- They are held to the hopper by latches.


Fig 13 - Hopper Containment Assemblies

3.3 MACHINE BREAK-IN

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

The conveyor belt alignment is set at the factory, to track correctly without carrying a load.

Before Starting Work:

1. Read this operator's manual.

2. Run the unit for half an hour to seat the conveyor belt and hopper flashing. It is normal for rubber from the flashing to be expelled out the discharge and form a pattern on the belt.

After Operating or Transporting for 1/2 hour:

3. During the conveyors first few minutes of operation, check belt tension and alignment to ensure the factory preset does not vary under loaded conditions.

4. Check the flashing seal on the hopper. If any product comes out of the hopper around the flashing; stop the belt, loosen flashing mounting screws and adjust. Retighten anchor screws and try again. Repeat until no product is lost.

5. Check the condition of all hydraulic lines, hoses, connections and electrical cables. Repair or replace any damaged system components.

6. Check that all guards are installed and function as intended.

After Operating For 5 Hours and 10 Hours:
Repeat steps 1 through 6 above.

Service and maintain the conveyor as defined in Section 4: Service and Maintenance.

3.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the conveyor requires that each operator knows the operating procedures.

It is important for both the personal safety and maintaining the good mechanical condition of the machine that this checklist is followed.

Before operating the conveyor, and each time thereafter, the following areas should be checked.

1. Check worksite. Clean up working area to prevent slipping or tripping.

2. Lubricate and service the machine as per the schedule outlined in the Section 4.2.

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

4. Check that the conveyor belt is properly tensioned and aligned. Ensure it is not frayed or damaged.
   Refer to the Maintenance Section.

5. Check that the discharge and intake hopper areas are free of obstructions.

3.5 OPERATING ON SITE

When operating the conveyor, follow this procedure:

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

2. Review the Pre-Operation Checklist before starting. Refer to Section 3.4.

3. Keep all spectators and bystanders out of this work hazard area.
   - Should anyone enter the hazard area, stop the machine immediately.

4. Check that all guards are in place and working as intended.

3.5.1 Starting Conveyor:

5. Attach the hydraulic hoses from the external power supply.

6. Start the hydraulic flow to rotate the conveyor belt.

7. To start the flow of product and unload into the conveyor hopper. Feed the sir seeder.

3.5.2 Stopping Conveyor:

1. Stop unloading.
   - Wait for the conveyor belt to empty.

2. Stop the hydraulics to the conveyor belt motor.

3.5.3 Emergency Stopping:

Although it is recommended that the conveyor tube be emptied before stopping, in an emergency situation, stop the motor immediately.

- See to the emergency.
- Correct the situation before resuming work.

3.5.4 Restarting after Emergency Stop:

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

Remove as much product from the hopper as possible, before restarting the motor. Start-up torque loads are much higher than normal when belt is full.

When the belt is empty, product can again be unloaded into the conveyor hopper.

3.5.5 Unplugging:

In unusual moisture, crop or product conditions, the machine can become plugged. When unplugging, follow this procedure:

1. Stop the hydraulics to the conveyor belt motor.

2. Lock-out, tag-out the controls.

3. Remove product from the discharge and hopper area.

4. Reposition the conveyor if discharge area plugs due to lack of clearance.

5. Restart using the same procedure as if after an emergency stop.

3.6 OPERATING HINTS

- Keep the hopper full for maximum capacity. Most efficient results will be obtained when flow of incoming product is directed at the top of the hopper (closer to the tube).

- 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.

- Do not run the machine for long periods of time with no product on the belting. This will increase the wear. Try to run only when moving product.

- Do not support discharge end directly on the air seeder.

- The 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 product from "leaking" out of the hopper. Replace flashing if leakage occurs.

- Belt Speed:
  The best results are obtained when the drive is set to provide a belt speed of 600 ft./min.

  Count the number of belt revolutions per unit time to determine belt speed. Use the belt lacing as a reference when counting belt revolutions.

  Contact your dealer or the factory for the appropriate drive components to give the recommended belt speed.

- Belt Tension:
  There may be a rapid decrease in belt tension during the first few hours of operation until the belt has worn in.
  - The correct operating tension is the lowest tension at which the belt will not slip under peak load conditions.

- Operating Angle:
  The hydraulic lift can set the tube angle at any position between 12° and 30° when operating. Because the belt does not have roll-back barriers, the product will roll-back if the angle is too steep. Do not position at more than 30°.

Note:
The lower the angle,
the greater the capacity.

3.7 STORAGE

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

Repair or replace any worn or damaged components to prevent unnecessary down-time next season.

For a long, trouble-free life, this procedure should be followed when preparing the machine for storage:

1. Remove all left over product or residue from the hopper and inside tube.

2. Inspect all moving or rotating parts and remove anything which has become entangled.

3. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
   - Wash on top and under the belt.
   - Clean inside the tube.

4. Inspect all hydraulic hoses, fittings, lines, couplers and valves.
   - Tighten any loose fittings.
   - Replace any hose that is badly cut, nicked or abraded or is separating from the crimped end of the fitting.

5. Lubricate all grease fittings.
   Refer to Section 4.2
   - Ensure all grease cavities have been filled with grease to remove any water residue from having been washing.

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

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

8. Do not allow children to play on or around the conveyor.

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Section 4: SERVICE AND MAINTENANCE

⚠ WARNING

- Review the Operator's Manual and all safety items before maintaining the conveyor.
- Clear the area of bystanders, especially children, before repairing or adjusting.
- Before servicing, repairing or unplugging; place controls in neutral, and wait for moving parts to stop.
- 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.
- Relieve pressure from the hydraulic circuit before servicing.
- Before applying pressure to a hydraulic system, make sure all components are tight, hoses and couplings are in good condition.
- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
- When maintenance is complete, before resuming work, install and secure all guards.
- Keep decals clean, replace if not readable.

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

4.1 FLUIDS AND LUBRICANTS

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:

NOTICE

GREASING HAZARD

- Too much grease causes excessive overheating.
- Under-greasing accelerates equipment wear.
- No grease should be seen around bearings. If there is, too much grease was applied and the seal has ruptured!

IMPORTANT:
Grease bearings only one pump per month under normal usage conditions.

Bearing greasing frequency should be determined by usage and conditions.

1. Use a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
3. All bearings are greasable, but require only minimal grease.
   - Recommended greasing is one small stroke every month. 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.

4.2 SERVICING INTERVALS

Use the Service Record provided on page 4-11, to keep a record of all scheduled maintenance.

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 periods 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 the motor contained on your equipment.

4.2.1 Every 10 Hours or Daily:

1. Inspect conveyor belt lacing for wear.
2. Check the conveyor belt tension daily while breaking-in the conveyor.
   - Refer to Section 4.3.1
3. Check the conveyor belt alignment frequently during the first 10 hours of operation until it seats itself.
   - Refer to Section 4.3.2
4. Inspect all rollers and bearings:
   - Check for play and wear.
   - Replace if necessary.

4.2.2 Every 50 Hours or Weekly:

5. Check the conveyor belt tension.
   - Watch the tension more often while breaking-in the conveyor, because the belt may stretch. Refer to Section 4.3.1
   - **Note:** A properly tensioned belt will not slip when in operation.

6. Check the conveyor belt tracking.
   - How the belt is aligned to the rollers must be checked at the hopper, transition, and the discharge.
   - Watch the alignment more frequently during the first 10 hours of operation. It usually seats itself and can be checked weekly after that. Refer to Section 4.3.2

7. Check the condition of the rubber, hopper flashing. The open transition hopper has a patent pending flashing. Be sure it seals the hopper to prevent leaking.
   - If any product comes out of the hopper around the flashing, loosen flashing mounting screws and adjust the stainless steel Hold-Down Strip Plate.
   - Lower the plates using the slotted bolt holes until it presses the flashing against the belt.
   - Adjust 1/4" at a time, then test run belt.
   - **Note:** Too much pressure will cause excess friction and belt wear.
   - Retighten anchor screws and try running the conveyor again.
   - Repeat until no product is lost.

   If the flashing is stuck to the belt, manually peel the flashing up and off the hopper.
   - Replace it if necessary.

4.2.3 Every 100 Hours or Monthly:

Note:
Recommended greasing is one small stroke every month. Be careful not to over-grease as this may push the seal out.

8. Grease hopper roller bearings.

9. Grease transition roller bearings.

10. Grease discharge roller bearings.

4.2.4 Every 200 hours or Annually:

11. Check the tube's straightness, horizontally and vertically.

    If adjustment is necessary:
    a. Take tension off the cables by lifting the tube by the lift brackets.
    b. Adjust eyebolts at the hopper-end.
    c. Remove support from the tube to view the result of the adjustment.
    d. Repeat process until the tube is straight.

12. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
    - Wash the outside.
    - Wash around the hopper.
    - Leave the belt running while washing inside the tube and around the belt.

4.3 MAINTENANCE PROCEDURES

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

⚠ WARNING

ROTATING BELT HAZARD
Turn off engine, lock-out power and wait for all components to stop moving before adjusting the belt.

To check belt position, idle the engine, then rotate the belt slowly.

4.3.1 Conveyor Belt Tension:

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

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

1. Loosen the tail roller bearing housing bolts.
2. Move the adjustment bolts to correct the belt's tension.
3. Tighten the roller bearing housing.
4. Adjust equally on the other side to maintain alignment.

Note:
To measure the belt tension, push on the underside of the belt. It should move up to 4 inches (10 cm). Any more than that and the belt needs more tension.

4.3.2 Conveyor Belt Tracking:

NOTICE

BELT DAMAGE HAZARD
Alignment of the belt must be checked at the hopper, transition and discharge. Inspect weekly. Unaligned belt will cause damage and void warranty.

NOTICE

BEARING FAILURE
If a roller is replaced, ensure both ends are evenly aligned with the frame before running. If not, bearing failure may occur.

The belt is properly aligned when it runs in the centre of all rollers.

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

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

⚠ WARNING

ROTATING BELT HAZARD
Idle the engine,
then rotate the belt slowly when checking the alignment.

Turn off engine when adjusting rollers.

Belt Alignment at Hopper Idler Roller and Transition Roller:

1. Rotate the conveyor belt slowly, and check the position of the belt on the idler roller.

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

2. Adjust one side of roller at a time.
   - Loosen bearing housing, then adjust bolt.
3. Tighten the idler roller bearing housing.
4. Rotate the conveyor belt slowly, and check the position of the belt on the hopper roller.
   - Repeat steps until the belt is centred.
5. Replace housing guard.

Belt Alignment at Discharge Roller:

6. If necessary, remove the discharge spout to view the roller.

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

7. Adjust one side of roller at a time.
   - Loosen the bearing housing, then adjust.
8. Tighten the discharge roller bearing housing.
9. Run the belt a couple of revolutions and check the alignment.
   - Repeat steps until the belt runs centred.
10. Replace the bearing housing guard.

4.3.3 Conveyor Belt Replacement:

1. Rotate the conveyor belt until the Alligator® lacing is positioned under the tube, inside the wind guard, and is accessible.

2. Loosen the adjustment bolts, on the sides of the hopper.

3. Pull all the slack to the lacing area.

4. Remove the lacing pin and open the belt.

Fig 14 - Conveyor belt lacing

5. Loosen the belt from below the transition.

6. Remove the containment plate from underneath the transition rollers.
   - This will help when threading the new belt.

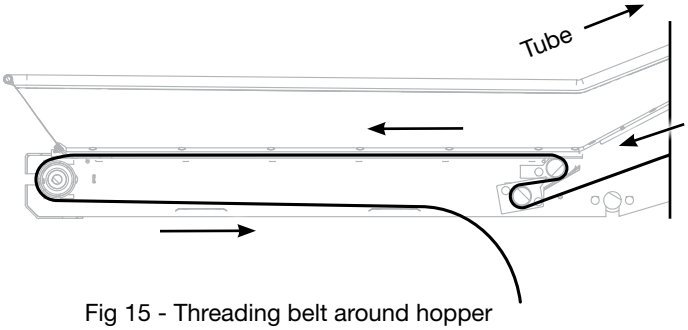

Fig 15 - Threading belt around hopper

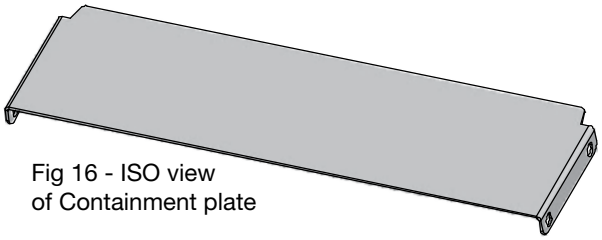

Fig 16 - ISO view
of Containment plate

Fig 17 - Containment plate in place

7. Attach the new belt to the end of the old belt which is hanging closest to the hopper.

8. 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.

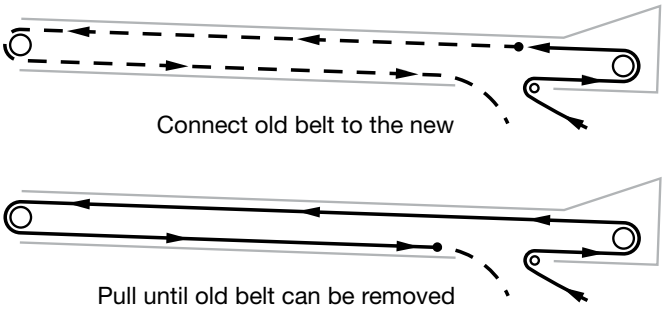

Fig 18 - Thread belt through conveyor

9. **IMPORTANT:** Reinstall the containment plate once the new belt is through the transition and around tail roller.
   - Leave the belt hanging below transition.
   - Do not fasten the belt lacing yet.

10. The Containment Plate will fit between the two weldments below the second transition roller.
    - **Note:** The tongue of the plate will sit on top of the angle iron.

11. Insert the bolts from inside.
    - The washers and nuts are fastened from the outside of the hopper.

12. Link the ends of the new belt lacing.

13. Push the lacing cable through the lacing to fasten belt.

Note:
Cordless drill can be used to thread cable.
Proceed slowly.

14. Cut off excess cable.

15. Crimp the lacing on both ends to lock cable in place.

16. Cut and taper the corners of the trailing end of the belt.

IMPORTANT:
- Taper the trailing belt corners, so they doesn't catch when rotating.
- Taper the trailing corners only, to reduce the size of the open space by half.

17. Set belt tension. Refer to Sections 4.3.1

18. Set the belt alignment. Refer to Section 4.3.2


Fig 19 - Reinstall the containment plate

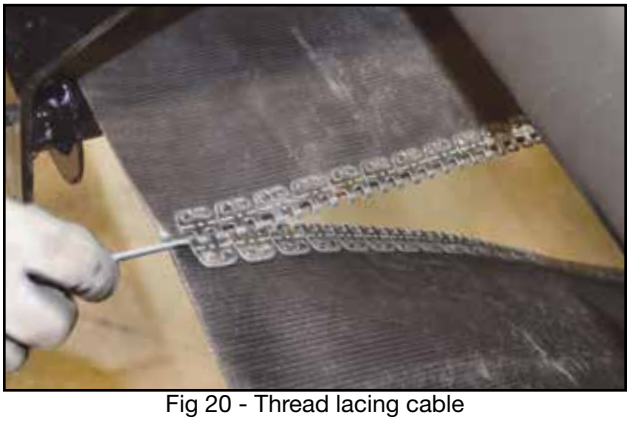
Fig 20 - Thread lacing cable

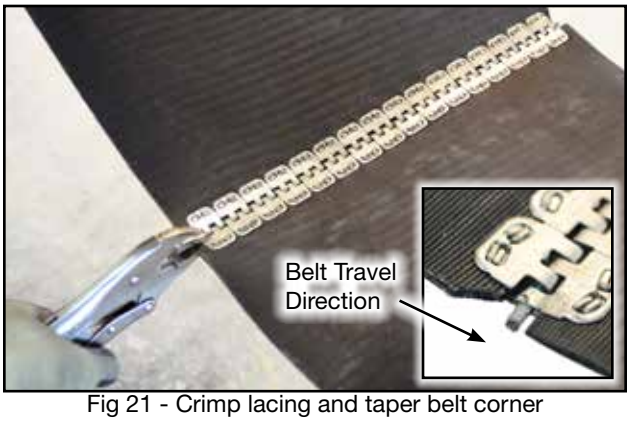

Fig 21 - Crimp lacing and taper belt corner

4.3.4 Hopper Flashing Kit Replacement:

Flashing Kit Part #650506196
- Patent pending

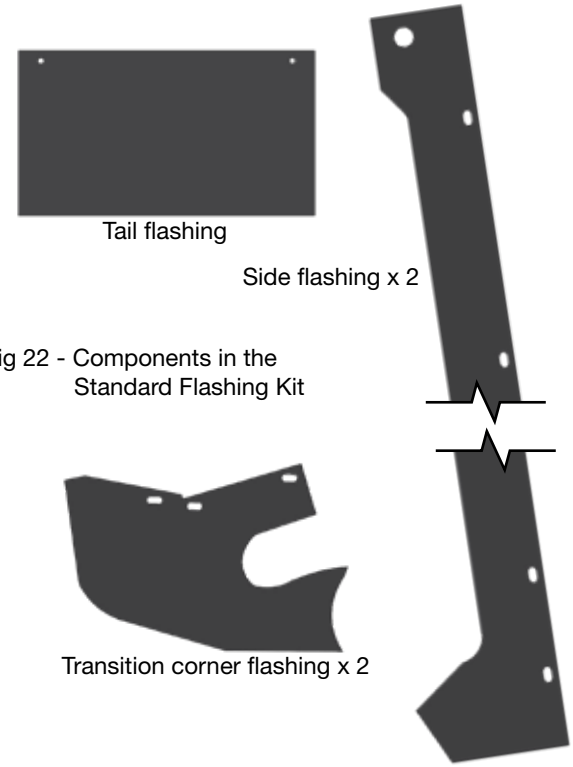

Fig 22 - Components in the Standard Flashing Kit

1. Remove both screens from the hopper.
   - Then, remove the three screen holder brackets.

2. Remove the rubber belting from around the hopper.
   - Set aside to be reinstalled at the end.

3. Remove the stainless steel panels that cover the rubber flashing around the hopper.
   - Set aside to be reinstalled.

4. Remove the Flashing Hold-Down Strip Plate, which was sandwiched behind the panels and rubber flashing.
   - Set aside to reuse.

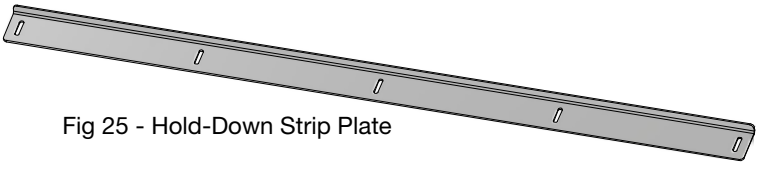

Fig 25 - Hold-Down Strip Plate

5. Remove the existing rubber flashing from the hopper and transition.

Fig 23 - Hopper screen holder bracket

Fig 24 - Stainless steel panels

6. Lay the new rubber side flashing down on the angled side bracket of the hopper.
   - The end with the large hole, will lay under the tail flashing.

7. Position tail flashing over the side flashing.

8. Fasten the 5 x 19" stainless steel panel over the tail flashing at the top of the hopper.
   - Do not tighten the bolts yet.

9. Lay the transition, corner flashing above the hopper transition, underneath the side flashing.
   - Add the 4 x 16" stainless steel transition panel over top.
   - Insert the bolts to fasten the flashing and panel in place.
   - Do not tighten yet.

10. Lay the 4 x 60" side panel on top of the side flashing.
    - Insert one bolt to fasten the transition flashing, side flashing, and side panel in place.
    - Do not tighten yet.

11. Reuse the stainless steel Hold-Down Strip Plates, inserting them from outside hopper.
    - The bend in the plates stay outside, to grab for easier adjusting.

12. Slide the Hold-Down Strip Plate in behind the panel, and on top of the flashing.
    - Align the bolt holes with the flashing.
    - Start at the centre, inserting bolts and fastening them to the hopper frame.
    - Do not tighten yet.

13. **Note:** The side flashing should lay flush along their metal brackets.

14. Pull the Hold-Down Strip Plate up, so the bolts are at the bottom of the slots.
    - **Note:** As the side flashing wears from use, lower the Plate a 1/4" at a time, so it continues to push the flashing tight against the belt.


Fig 26 - Rubber flashing

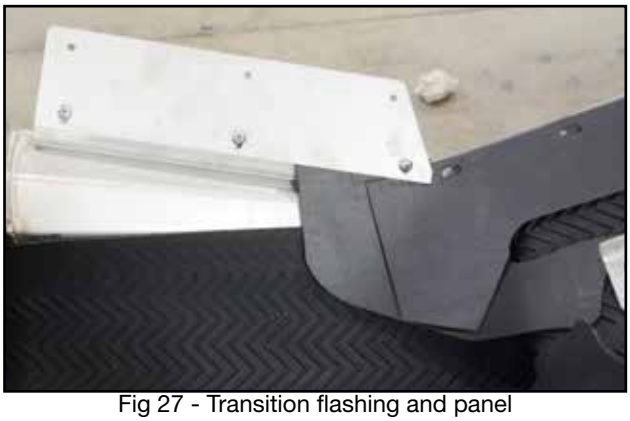
Fig 27 - Transition flashing and panel


Fig 28 - Side panel and hold-down plate

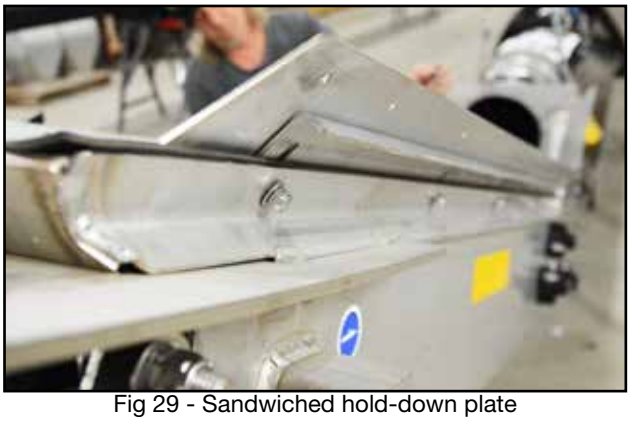
Fig 29 - Sandwiched hold-down plate

15. **IMPORTANT:** Work the transition, corner flashing around the roller to cup it well.
    - Be sure the flashing fits tightly around the roller and into the transition.

Fig 30 - Corner flashing must fit tight around the belt

16. Reuse the Flashing Clamps to hold corner flashing in place.
    - Use self-tapping screws to fasten them.

17. Tighten all the bolts and nuts holding the panels and flashing to the hopper frame.
    - Besure the Hold-Down Strip Plate are pulled up as high as they go.

Fig 31 - Fasten flashing clamp

18. Reinstall the rubber belting around the hopper panels.

19. Fasten the three screen holder brackets inside the hopper.

Fig 32 - Rubber belting installed

20. Add the two screens to cover the belt.
    - Insert the hair pin clips, to secure them.

Fig 34 - Screen clip

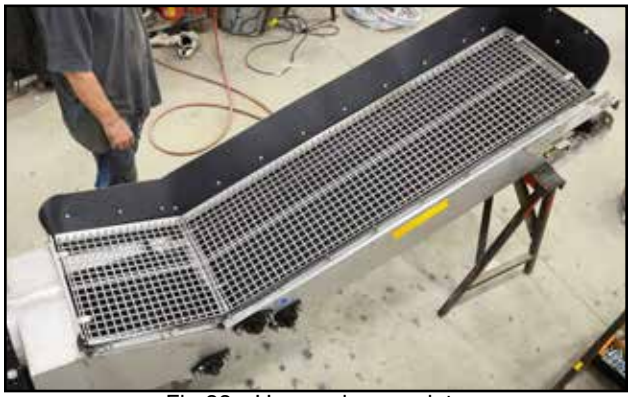

Fig 33 - Hopper is complete

4.4 SERVICE RECORD

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

Copy this page to continue record.

Maintenance / Hours														
Maintenance / Serviced By														
10 Hours or Daily														
Inspect Conveyor Belt Lacing														
Inspect Rollers and Bearings														
50 Hours or Weekly														
Check Conveyor Belt Tension														
Check Conveyor Belt Alignment														
Check Hopper Flashing														
100 Hours or Monthly														
Grease Hopper Roller Bearings														
Grease Transition Roller Bearings														
Grease Discharge Roller Bearings														
200 Hours or Annually														
Check Tube Straightness														
Wash Conveyor														

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 contains a list of common problems, causes and offers quick solutions to those issues.

If problems are confronted which are difficult to solve, even after having read through this section, please contact your authorized dealer, distributor or Meridian Manufacturing Inc. Before you call, please have this Operator's Manual and the unit's serial number ready.

Problem

Possible Cause	Possible Solution
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
Conveyor belt is loose	Tighten and align
	The belt has stretched. Shorten belt
Conveyor belt frozen to tube from operating in high humidity conditions in extreme cold	Remove conveyor from area of high humidity and continue to run empty so the belt dries prior to freezing
Hydraulic motor is malfunctioning	Check the hydraulic pressure. Test the flow from external source. Check for oil leaks under motor. Replace what is needed.
Hydraulic pressure may be low, check gauge. It should be in 2000lbs range	Check hydraulic pump. Replace if necessary
Set screw (relief valve) on Dtent control valve on belt drive valve isn't set correctly	**IMPORTANT:** Do not run hydraulic motor during this adjustment. Turn the set screw all the way in, then turn back out 1-1/2 turns. **Note:** Turning out increases volume of flow, turning in increases pressure.
Seized bearing	Check all bearings, Replace any that are rough or seized
Hydraulic motor may be damaged	Hydraulic motor may need to be replaced
Belt/roller is jammed	Check for sticks, stones, other objects jammed in belt drive area and remove

continued on next page

Low conveying capacity

Conveyor belt not tight enough	Tighten conveyor belt
Roller lagging is worn out	Replace roller or have it relagged
Conveyor angle exceeds 30 degrees	Reposition with a lower tube slope

No hydraulic oil flow

Hydraulic valve closed or plugged	Open hydraulic valve
	Check hydraulic pressures
	Clean or replace hydraulic valve
Hydraulic pressure may be low, check gauge. It should be 1000 - 1200 lb when empty, and in 2000 lb range when loaded.	Check hydraulic pump. Replace if necessary
Hydraulic motor may be damaged	Hydraulic motor may need to be replaced

Conveyor belt won't align

Roller lagging may be worn	Replace roller or have it re-lagged

Conveyor Belt Fraying

Belt not aligned	Align and adjust tension the belt

Product leakage

	
Corner Flashing may not be cupping the roller tight enough	Loosen the Flashing Clamp, then adjust the rubber flashing so it is tight around the roller
Product may be getting under the belt at the hopper, traveling up inside the belt and leaking off discharge end	Replace hopper flashing

Section 6: REFERENCE

For information not included here, or for a digital copy of this manual, please call your dealer, or Meridian Manufacturing Inc. directly for assistance: (800) 665-7259.

6.1 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.

Table 1 - English Torque Specifications

BOLT DIA. "A"	BOLT TORQUE*					
	SAE 2 (Nm)	(ft-lb)	SAE 5 (Nm)	(ft-lb)	SAE 8 (Nm)	(ft-lb)
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 - Metric Torque Specifications

BOLT DIA. "A"	BOLT TORQUE*			
	8.8 (Nm)	(ft-lb)	10.9 (Nm)	(ft-lb)
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

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.

LIMITED WARRANTY

for Convey-All Conveyors and Tenders

Meridian Manufacturing Inc, hereafter referred to as Meridian®, warrants each new product (the "Goods") to be free from defects in material and workmanship under normal use and service for a period of one (1) year or six (6) months in the case of commercial use, from the shipment date, from the Meridian dealer (FCA).

1. This warranty does not apply to:
   a. To any merchandise or components thereof, which in the sole and unfettered opinion of Meridian, have been subject to misuse, unauthorized modifications, alteration, accident, negligence, product abuse or lack of required maintenance.
   b. If repairs have been made with parts or by persons other than those parts or persons approved by Meridian.
   c. To parts and accessories not manufactured by Meridian including, but not limited to, engines, batteries, tires, belts, PTO shafts or other trade accessories. Such parts shall be covered by the warranty given by the actual manufacturer, if any.
   d. To failure of parts; or failure of parts to perform due to wear under normal or excessive service conditions; or to failure due to use by the Purchaser for purposes other than originally intended at time of manufacture, including without limitation using the Goods for mixing fertilizer, etc.; or used in excess of the built specifications.
   e. To Goods used in areas exposed to corrosive or aggressive conditions including, but not limited to, salt water from either inside or outside the Goods.
   f. To failures or defects arising out of damage during shipment or during storage.
   g. To materials replaced or repaired under this warranty, except to the extent of the remainder of the applicable warranty.

2. The obligation of Meridian under this warranty shall not arise unless Meridian is notified and this warranty is presented together with a written statement specifying the claim or defect within thirty (30) days after the failure is first detected or made known to the Purchaser and within one (1) year, or six (6) months in the case of commercial use, from the shipment date, from the Meridian dealer (FCA). Meridian in its sole and unfettered discretion shall determine if the claim is valid and whether correction of the defect or failure shall be made by repair or replacement of the materials.

3. Title to any replaced materials Meridian wishes to have pass to it, shall pass to Meridian.

4. The obligation of Meridian hereunder extends only to the original Purchaser or Buyer to whom the Goods were initially sold. This warranty shall not be subject to any assignment or transfer without the written consent of Meridian.

5. The purchaser acknowledges that it has made its own independent decision to approve the use of the Goods and also the specific fabrication and construction procedures utilized to complete the Goods, and has satisfied itself as to the suitability of these products for its use.

6. This warranty is subject to the following limitations, provisions and conditions:
   a. Meridian shall have no liability hereunder for any claims, including field re-work.
   b. Meridian shall not be liable for any incidental loss or damage, however caused, including, without limitation, normal wear and tear.
   c. Meridian makes no express or implied warranties of any nature whatsoever except for such express warranties as set out herein. The warranty provided herein is in lieu of and excludes all other warranties, guarantees or conditions pertaining to the Goods, written or oral, statutory, express or implied, (except the warranty as to title) including any warranty as to the merchantability or fitness for any particular purpose. Meridian expressly disclaims all other representations, conditions or warranties, expressed or implied, statutory or otherwise and any representations, warranties or conditions that may arise from a course of dealing or usage of trade. The warranty provided herein shall constitute Meridian's sole obligation and liability and the Purchaser's sole remedy for breach of warranty. No other warranty has been made by any employee, agent, or representative of Meridian and any statements contained in any other printed material of Meridian is expressly excluded here from. Meridian shall not be responsible for any warranty offered by the Purchaser to its customers with respect to the Goods and the Purchaser shall indemnify Meridian with respect to same if any of those customers makes a claim against Meridian relating to any such warranty.
   d. Subject to Meridian's obligations contained in paragraph 1 herein, none of Meridian, its officers, directors, servants or agents shall be liable, or responsible for any loss or damage (including strict liability and liability for loss or damage due to items which the manufacturing processes are designed to identify) whether such loss or damage is caused by negligence in any manner whatsoever (including gross negligence, error, misrepresentation, misstatement, imprudence, lack of skill or lack of judgement).

7. The sole financial obligation of Meridian under this warranty shall be limited to the repair or replacement of the Goods as originally supplied and in no event shall they exceed the original cost of the Goods supplied.

8. Meridian shall not have any obligation under any warranty herein until all accounts have been paid in full by the Purchaser.

9. The construction and interpretation of this Warranty shall be governed by the laws of the Province of Manitoba.

Register your product at: www.meridianmfg.com
For warranty information send an email to: warranty@meridianmfg.com

WARRANTY REQUEST PROCEDURE

- The product must be registered with Meridian Manufacturing Inc.
- The purchaser must contact the dealer, from where the unit was purchased, immediately upon discovery of any defects.
- A completed Warranty Request (Claim) Form must be submitted by the dealer to Meridian’s warranty representative for review and any subsequent course of action.
  - Warranty requests must be completed with ALL required information in order it to be considered for approval.
  - Send photographs of the entire piece of equipment, and of the specific area of concern.
- Warranty repair work will only be performed by Meridian or an approved representative of Meridian. Warranty work completed prior to Meridian’s approval will NOT be honoured. Failure to follow this procedure may affect any or all of this warranty.
- All warranty requests will be adjudicated at the sole discretion of Meridian and in accordance with the terms and conditions of the warranty.

(03/2024)

CONVEY-ALL®

(800) 665-7259 | www.convey-all.com

Part No: 650122484-REV2