

# MERIDIAN<sup>®</sup>

## 20-80 - 20-120

BIN FILL CONVEYOR  
with optional Swing



[meridianmfg.com/bin-fill-conveyor](http://meridianmfg.com/bin-fill-conveyor)

## 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 the bin must read and clearly understand ALL Safety 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 the information in this manual. Copy this page to continue record.

[illegible]

## PRODUCT REGISTRATION FORM



### Attention Dealers:

You can register products online through the Dealer Login: <http://dealers.meridianmfg.com/login/>

It is mandatory to register your product in order to qualify for future warranties that may arise. Knowingly falsifying information on this form will result in the voiding of the product warranty.

You may scan/photograph this completed form (must be legible), email it to: [register@meridianmfg.com](mailto:register@meridianmfg.com)

A copy of this form may also be mailed to Meridian Manufacturing Inc.

Buyer's Name \_\_\_\_\_ Dealer's Name \_\_\_\_\_

Address \_\_\_\_\_ Address \_\_\_\_\_

City, Prov/State \_\_\_\_\_ City, Prov/State \_\_\_\_\_

Postal Code/Zip Code \_\_\_\_\_ Postal Code/Zip Code \_\_\_\_\_

Phone Number \_\_\_\_\_ Phone Number \_\_\_\_\_

**Note:** Registering a product in multiple entry format is only allowed when the product has the same model number and the same dealer, however each serial number must be legibly listed for each unit. Delivery dates for a multiple entry must be within a one month time frame.

Product Information: \_\_\_\_\_

Model Number \_\_\_\_\_ Serial Number \_\_\_\_\_

Invoice Date \_\_\_\_\_

**Important:** Please send this form to the Meridian Manufacturing Inc. location which built this product being registered. If you require further assistance call you're dealer or the Meridian outlet nearest to your location.

We want to thank you for purchasing a Meridian manufactured product. Whether this is your first Meridian purchase or you have been a customer for years, you are now part of the Meridian community of customers and we appreciate your business.

It is important that you now complete the product registration information and this form indicating you have received delivery. This registration and information is necessary to ensure you have access to warranty and product updates in the event it be required in the future.

Registration can be completed by using this form or visiting your dealer who will complete the form online. You will be given access to the Meridian community and become eligible for updates, special offers and prizes.

Again thank you for choosing Meridian.

I have thoroughly instructed the buyer on the above described equipment. The review included the content of this manual, equipment care, adjustments, safe operation and warranty policy.

Date \_\_\_\_\_ Dealer's Signature \_\_\_\_\_

The above equipment and this 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 Meridian® Bin Fill Conveyor.

### DECLARATION OF CONFORMITY

We the Manufacturer:  
Meridian Manufacturing Inc.  
PO Box 1996, 2800 Pasqua Street North  
Regina SK, Canada S4P 3E1

Declare that the conveyors listed herewithin conform to the 2006/42/EC Machinery Directive.

The equipment we design and manufacture meet the exacting standards of the agricultural industry. This conveyor is designed for the movement of Grains and Cereals.

Keep this manual for future reference. Call your dealer, distributor or our office 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 product being handled, weather conditions and other factors.

### SERIAL NUMBER LOCATION

Always give your dealer the serial number when ordering parts, requesting service or asking for other information. The serial number is located on the tube above the hopper. The swing will have it's own.

- Use the space provided for easy reference:

Conveyor Model No: \_\_\_\_\_

Conveyor Serial No: \_\_\_\_\_

Aux. Equip. Model No: \_\_\_\_\_

Aux Equip. Serial No: \_\_\_\_\_



Fig 1 - Serial number location



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## 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.



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.



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.



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



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



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 Meridian® 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 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 operator must be responsible, properly trained and physically able. You 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. 

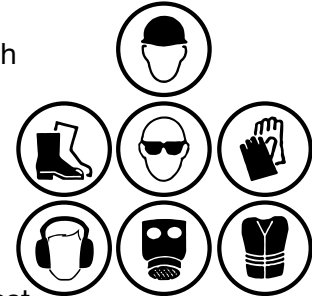
- Provide a fire extinguisher for use in case of an accident. Store in a highly visible place. 

- 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

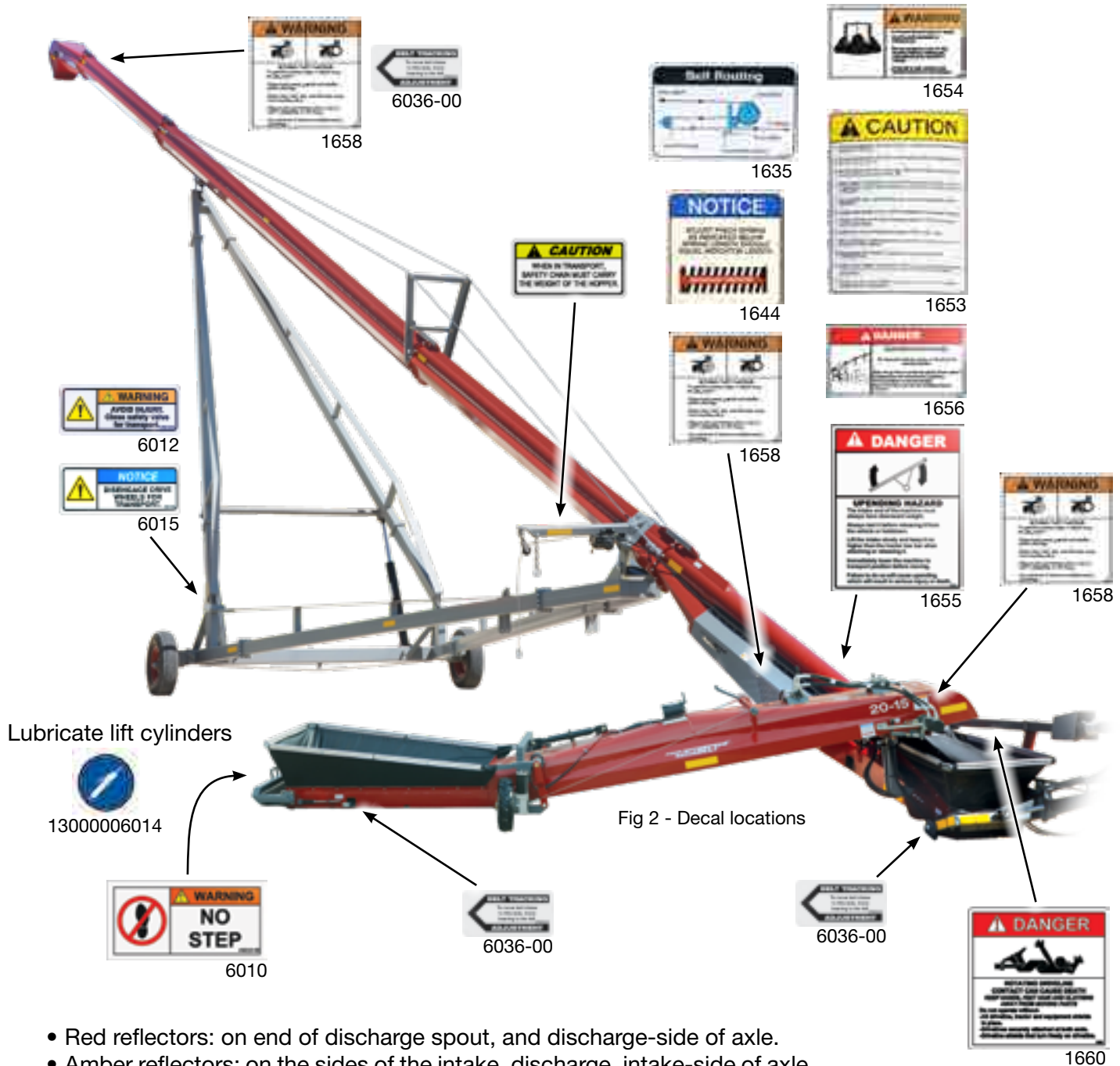
- Keep safety decals clean and legible at all times.
- Replace safety decals that are missing or have become illegible.
- Replaced parts must display the same decal(s) as the original parts.
- All safety decals have a part number in the lower right hand corner. Use this part number when ordering replacements.
- Safety 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 shows 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.



- Red reflectors: on end of discharge spout, and discharge-side of axle.
- Amber reflectors: on the sides of the intake, discharge, intake-side of axle, and at less than 15 ft intervals along the tube.

**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 and its engine 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.
- Chock conveyor wheels before operating.
- Position conveyor providing enough space for trucks to load or unload.
- Operate conveyor on level ground, free of debris.

## 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 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, and stop the engine. Remove the ignition key. 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 the unit 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.
- Chock wheels of conveyor before starting.



- Be sure that conveyor tube is empty before raising or lowering.
- High winds may overturn conveyor. To avoid damage to structures and equipment, do not raise conveyor fully in windy conditions.
  - Do not leave unit raised, when not in use.

## 2.10 MAINTENANCE SAFETY

- Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
- Follow good shop practices.
  - Keep service area clean and dry.
  - Be sure electrical outlets and tools are properly grounded.
  - Use adequate light for job at hand.
- Review safety related items annually with all personnel who will be operating, using or maintaining the equipment.
- Use personal protection devices such as eye, hand, breathing and hearing protection, when performing any services or maintenance work.
- A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.
- Periodically tighten all bolts, nuts and screws to ensure the unit is in safe condition.
- Disable the motor/engine before any service and maintenance, so the equipment can not be accidentally turned on.
- Establish a Lock-Out/Tag-Out procedure.
- When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

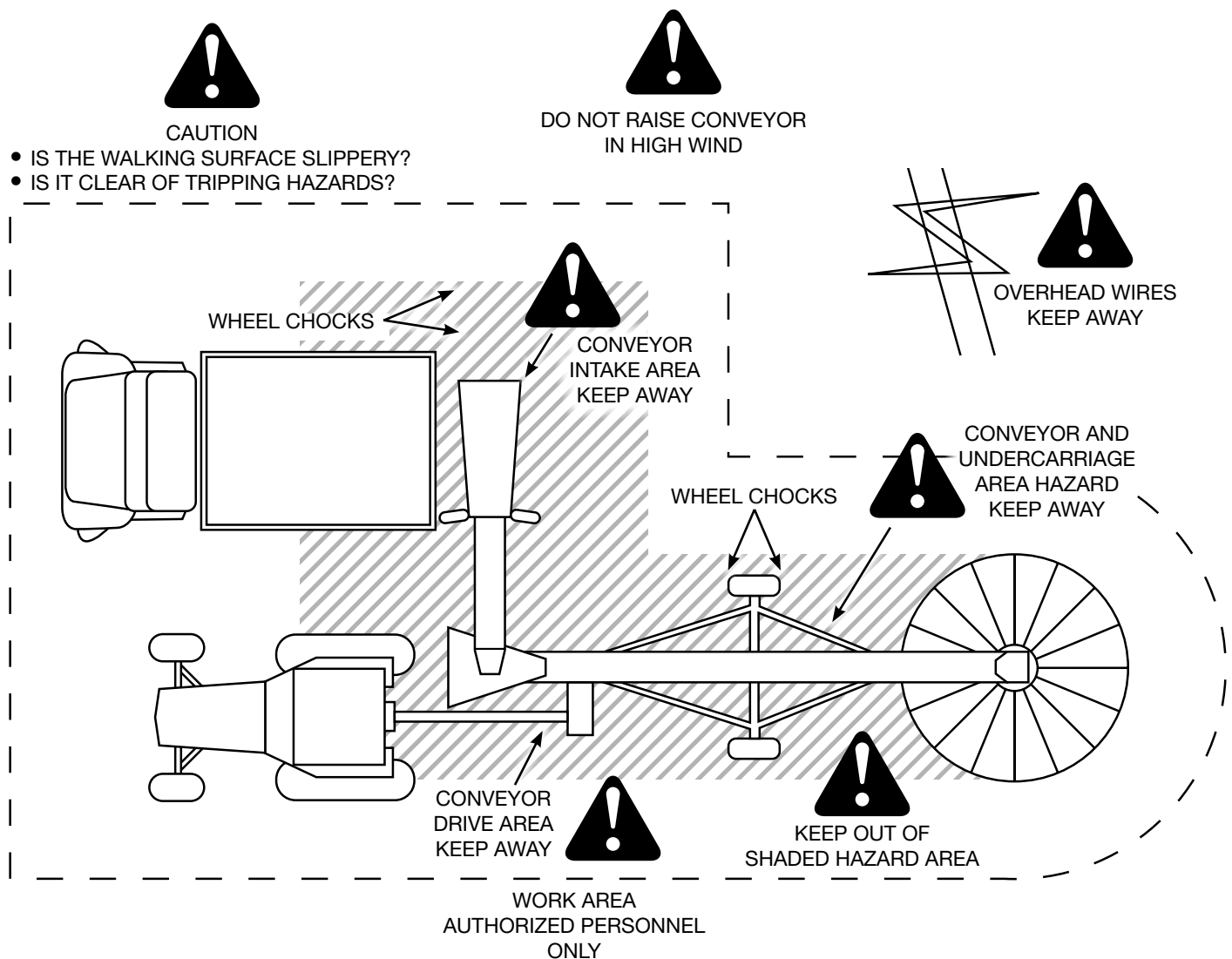




## 2.11 WORKPLACE HAZARD AREA

The following illustration shows the designated work areas. This area shall be marked off with coloured nylon or plastic rope hung by portable barriers to define the designated work areas.

- Under no circumstances should children and/or other persons not involved in the operation of the equipment be allowed to trespass into the work area.
- Trespass into the area by anyone not involved in the actual operation, or trespass into a hazard area by anyone shall result in a immediate shutdown by the operator.
- It is the responsibility of the operators to see that the work area has secure footing, is clean and free from all debris and tools which may cause accidental tripping and/or falling.



## 2.12 PTO SAFETY

- Never use a PTO driveline without a rotating shield in good working order.
- Ensure PTO shields turn freely on the driveline.
- PTO driveline must be securely attached at both ends before operating.
- Keep body, hair, and clothing away from rotating PTO driveline.
- Keep U-joint angles small and equal.
  - Do not exceed recommended operating length for PTO driveline.
- Before starting tractor, turn power to PTO to the off position (where applicable).



## 2.13 TIRE SAFETY

- Failure to follow procedure when mounting a tire on a wheel or rim can produce an explosion and may result in serious injury or death.
- Do not attempt to mount a tire unless you have the proper equipment and experience to do the job.
- Have a qualified tire dealer or repair service perform required tire maintenance.
- When replacing worn tires, make sure they meet the original tire specifications. Never undersize.



## 2.14 TRANSPORT SAFETY

- The conveyor must be empty before raising or lowering the tube.
- Always transport conveyor in collapsed position.
- Ensure all lights, reflectors, other lighting requirements are installed and in good condition.
- Never allow riders on the conveyor.
- Comply with all local laws governing safety and transporting equipment on public roads.
- Do not exceed a safe travel speed. Slow down for rough terrain and when cornering.
- Stay away from overhead power lines. Electrocutation can occur without direct contact.
- Plan your route to avoid heavy traffic.
- 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 driving near or crossing roadways.

## 2.15 STORAGE SAFETY

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



## Section 3: OPERATION

### WARNING

- Read and understand the Operator's Manual, and all safety decals, before using.
- Stop the engine/motor. Place all controls in neutral, remove ignition key and 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 remove or modify conveyor safety guards, keep in good working order.
- Do not operate the conveyor without all guards, doors, and covers in place.
- Do not allow riders on the conveyor.
- Stay away from overhead obstructions and power lines during operation. Electrocution can occur without direct contact.
- Chock wheels of conveyor before starting.
- 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 Meridian® 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 the equipment. 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

The swing conveyor is powered by either a 540 or 1000 rpm PTO drive.

- Components may vary, and their positions may change depending on the options which in the conveyor contains.
- Not all components appear on all conveyors.

Here is a list of the main components:

- a. Main Conveyor Tube with Truss System
- b. Discharge
- c. Undercarriage Frame
- d. Main Conveyor Intake Hopper
- e. Swing Hopper Lift Arm
- f. Swing Discharge
- g. Swing Intake Hopper
- h. Swing Electric Mover
- i. Electric Mover Control Box

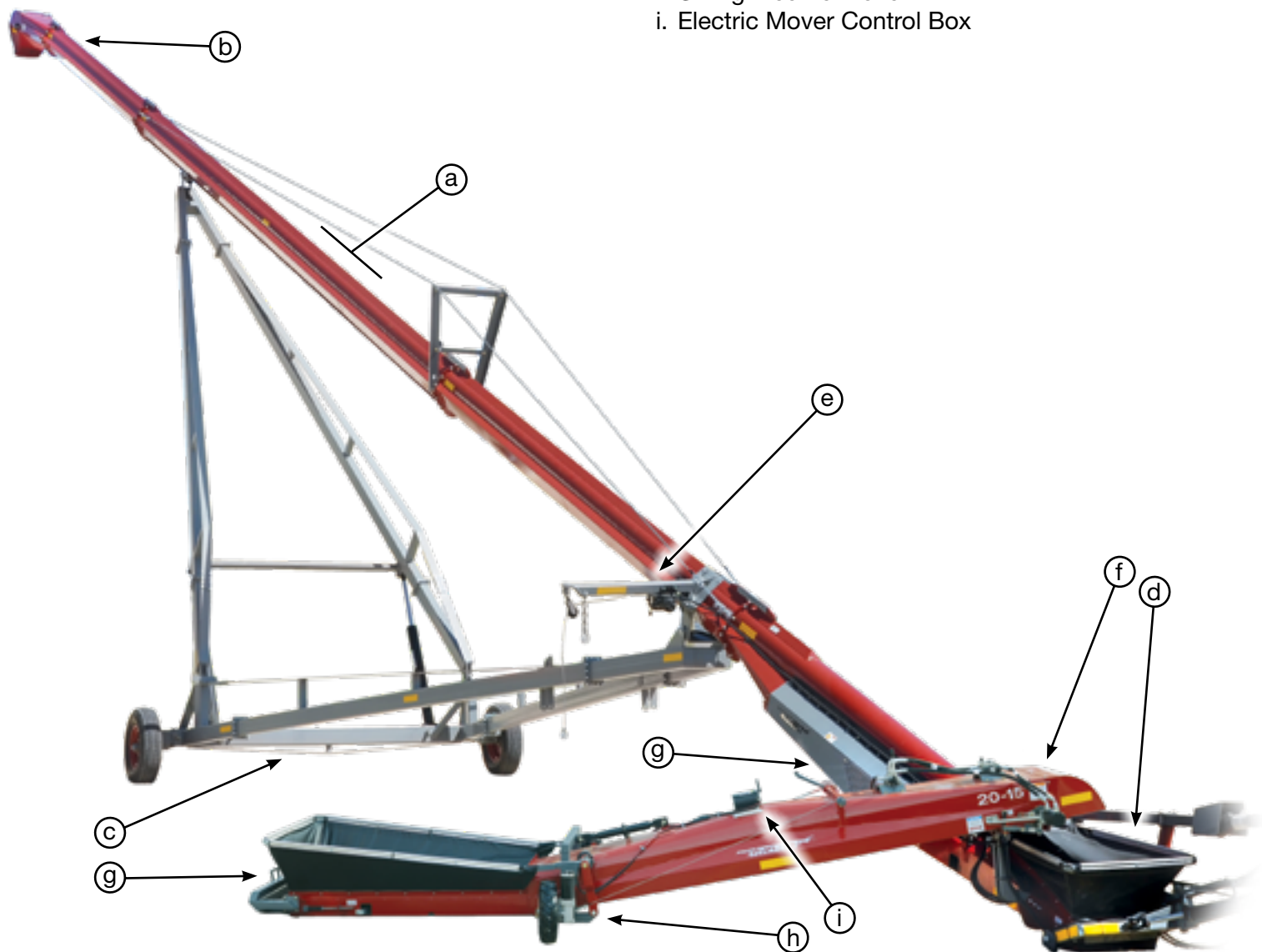


Fig 3 - Bin fill conveyor components

## 3.2 COMPONENTS AND CONTROLS

### Conveyor with PTO Drive:

The conveyor boot contains the PTO drive. There are two drive options which are not available on all conveyor models:

- 540 rpm PTO drive.
- 1000 rpm PTO with a speed reducing gearbox.



Fig 4 - Conveyor with PTO drive

### Mover Kit:

Comes with a joystick for driving the mover kit. The joystick sits on top of the engine and hydraulic control panel.



Fig 5 - Mover kit joystick

### Engine and Hydraulic Controls:

The control panel sits beside the engine and drive belt.



Fig 6 - Engine and hydraulic controls

### Heavy-Duty Undercarriage Frame:

All conveyors are built with durable undercarriage frames.



Fig 7 - Undercarriage with mover kit steering wheels

**Double Pilot-Operated (PO) Check Valve for Lift Cylinder:**

This check valve is located on the undercarriage arm close to the axle. It is connected to the lift cylinders, to prevent drifting, and to lock them in place when the tube is raised.



Fig 8 - Lift cylinder check valve

**Extendible Axle:**

The 100 to 120ft long conveyors include an extendible axle.



Fig 9 - Extendible axle

**Discharge:**

The discharge is equipped with a lever to angle the spout.

Release the rubber latches to flip the spout up and out of the way to throw the product when making piles or inside buildings.



Fig 10 - Discharge

**Swing Conveyor (Optional):**

- The swing includes a mover kit to drive it around the main conveyor intake hopper.
- The mover kit is available with a remote control.



Fig 11 - Swing conveyor

- Use the Lift Arm and winch to raise the swing hopper for transport or storage.



Fig 12 - Swing lift arm and winch

- The swing's conveyor belt is operated by a hydraulic lever on the tube.



Fig 13 - Swing belt control



### 3.3 TRANSPORTATION

#### **DANGER**

##### ELECTROCUTION HAZARD

- This conveyor is not insulated.
- Be alert to overhead obstructions and electrical wires. Electrocution can occur without direct contact.
- Do not raise or lower conveyor until hazardous area is cleared.
- Failure to maintain proper clearance can result in serious injury or death.

##### **IMPORTANT:**

If conveyor wheels are stuck in grain, mud, dirt, or snow, remove the restraining material before transport.

Failure to do so could damage the conveyor.

1. Remove wheel chocks, so wheels are free to move.
2. All Meridian conveyors have minimum clearance positions when in transport mode.
  - The conveyor must be fully lowered.
3. Put hitch pin in place, and ensure that the safety chain is properly attached.
  - Use a type of hitch pin that will not allow the conveyor to detach itself from the tractor.
4. Store PTO driveline and lock it into place.
5. Place the swing into transport position.
  - Lock it into place with the safety chains.
  - If swing hopper is not in transport position, the hopper will be damaged during transport.
6. After the conveyor is hitched to the vehicle, put jack in raised transport position and lock into place.
  - Use caution when working with hitch jack.
7. If the conveyor is equipped with a light package, make sure the connections are fastened securely and not dragging on the ground.
8. Do not allow riders on the conveyor.
9. Transport the conveyor no faster than 32 km (20 mph).
  - When roads are rough or surfaces are uneven, slow down to ensure safe travel.
10. DO NOT transport the conveyor on slopes greater than 20 degrees. This could cause conveyor to tip, resulting damage to it.
11. When visibility is reduced, use caution and add extra lights to the conveyor.
  - Consider using a pilot vehicle for safer travel.
12. Use extreme caution when turning or cornering with the conveyor in tow.
13. Check regulations with local authorities regarding conveyor transportation.
  - Follow all over-width regulations.
  - Equip the conveyor with all necessary lighting, and use hazard warning flashers on your tractor, when required by law.

### 3.4 NEW MACHINE BREAK-IN

Meridian Manufacturing Inc. recommends that before you start moving product with a new conveyor that you should do the following:

1. Read and follow the instructions in this operator's manual.
2. Double check that the intake hopper is properly positioned and the PTO drive on the tractor is in the off position.

#### NOTICE

When starting the conveyor for the first time, be prepared for an emergency shutdown in case of excessive vibration or noise.

3. Start the conveyor and check the controls. Be sure they function properly before adding product.
4. The operator should be attentive to any unusual vibrations or noises.
  - Find the source.
  - Turn off and LOCK-OUT the power source.
  - Adjust the conveyor until it runs smoothly.
5. Upon completion of initial run, run until the tube is empty of product, then stop the conveyor.
  - Lock out the power source and conduct a complete inspection of the conveyor, following the pre-operation checklist.

### 3.5 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 this machine that this checklist is followed

Before operating the conveyor, the following areas should be checked:

- All safety shields are in place, secure, and in good working order.
- All hardware and fasteners are secure.
- Check and fill all fluids. Grease all fittings.
- PTO driveline is securely attached to driveshaft and tractor.
  - PTO driveline rotates freely.
  - PTO driveline telescopes easily.
- Power to PTO and hydraulic system is in off position before starting tractor.
- Hydraulic system has been thoroughly checked and are free of leaks.
- Check V-belt tension to ensure that it applies enough force to keep the belts tight.
- Make sure the wheel bolt lug nuts are tight.
- Check the tires for proper pressure.
- Intake hopper and discharge spout are free of any obstructions.
- Visually inspect the conveyor belts, conveyor belt tube, and delivery spout for damage.
- Maintenance has been performed properly.

### 3.6 CONVEYOR PLACEMENT

Once the conveyor has been transported to the work site, it can be moved to its working position.

#### **DANGER**

##### ELECTROCUTION HAZARD

- This conveyor is not insulated.
- Be alert to overhead obstructions and electrical wires. Electrocution can occur without direct contact.
- Do not raise or lower conveyor until hazardous area is cleared.
- Failure to maintain proper clearance can result in serious injury or death.

1. Before raising or lowering your conveyor, check that the area is clear of obstructions, children and unauthorized personnel.
2. Ensure that your conveyor is on level ground that is free of debris.
  - If ground is very uneven, conveyor can tip and cause damage to the equipment.

#### **WARNING**

Never place risers under the wheels of the conveyor to increase height. This includes: wood, cement blocks, bricks, etc. Attempting this could result in damage to the equipment and personal injury or death.

3. Ensure the conveyor wheels are free to move before raising or lowering the conveyor.
  - Remove dirt, snow, grain, etc. which may obstruct the conveyor movement.
4. Be sure the hitch is secured to the tractor.
5. Use tractor hydraulics to raise the conveyor.
  - Open the hydraulic valve to the lift cylinder.
6. Raise conveyor to desired height.

7. Slowly back the conveyor into position until the spout is over the opening of the bin or storage facility.
8. Lower the spout into the opening.
9. When the conveyor is in position:
  - Close the hyd. valve to the lift cylinders.
  - Chock the conveyor wheels on both sides.

#### **CAUTION**

If valve remains open, a loss of hydraulic pressure within the tractor system will allow the conveyor to lower by itself. This could cause damage to the conveyor and injury to the operator.

#### **NOTICE**

Never use conveyor as a hoist or crane. This may damage the conveyor and void the warranty.

#### 3.6.1 Once work is complete:

10. Be sure conveyor tube is empty.
11. Raise the conveyor. Ensure that the discharge end is above the bin or storage facility.
12. Remove wheel chocks and ensure area is clear of personnel and obstructions.
13. Drive forward, pulling conveyor slowly away from the bin or storage facility.
14. Be sure that the wheels are free to move.
15. Lower the conveyor to its fully collapsed position before transporting.



### 3.7 OPERATING ON SITE

#### **WARNING**

##### OPERATION HAZARD

- Observe Workplace Hazard Area diagram in Section 2.11.
- Keep all safety guards in place.
- Keep hands, clothing, and other objects away from intake hopper, drive chains, and all moving parts to avoid personal injury.
- Never use your hands to clean out debris.

#### **CAUTION**

##### POWER TAKE-OFF SAFETY

- Maintain a minimum 4 inch overlap on the tumbler shields.
- Do not engage PTO until all personnel are clear of tractor, tumbler shaft and conveyor.
- Ensure ends are fastened securely to the conveyor and tractor.
- When installing PTO, ensure CV end goes to tractor.
- Do not move conveyor with PTO driveline attached to the tractor.

#### **NOTICE**

##### HIGH WIND HAZARD

Do not operate or leave conveyor fully raised, in high winds. It may blow over, damaging structures and equipment.

#### **3.7.1 Inspections after 1/2, 5, and 10 Hours:**

1. Recheck the tension and alignment of the conveyor belt.
2. Recheck hardware and fasteners; all fasteners, and wheel bolts. Tighten to their specified torque.

#### **3.7.2 Emergency Shut-Down:**

1. Should the conveyor be shut-down under load, lock-out the power source.
  - Disconnect the PTO shaft.

#### **IMPORTANT:**

Never use your hands to clean out product from the conveyor.  
use a small shovel or other tool.

2. Remove product from the hopper and conveyor tube using a small shovel or other tool.
  - **Note:** Starting the conveyor under load may result in damage to the conveyor.
3. Before restarting, make certain everyone is clear of the designated work area.
4. Start conveyor at a reduced speed.

#### **3.7.3 Normal Shut-Down:**

1. Be sure that the hopper and conveyor tube are empty before stopping the unit.
2. Lock-out power source and remove PTO shaft.

### 3.7.4 Operating an End PTO Bin Fill Conveyor:

**Note:**

Hydraulic Requirements: 2000 PSI / 12 GPM

1. Connect couplers to tractor hydraulics.
2. Set the swing motor flow control valve to "0".
3. Ensure selector valve is in neutral position.
4. Start tractor and force the hitch down to remove cylinder stop.
  - Then raise hitch and connect to tractor.
5. Raise the conveyor intake off the ground.
6. Adjust hitch from transport to operating position.
7. Activate the scissor lift cylinders to raise conveyor.
8. Position the conveyor over the bin.
9. Lower the conveyor hitch end to the ground.
10. Lower conveyor to respective position over the bin.
11. Connect PTO drive to the tractor.
12. Set flow control valve to the "5" position.
13. Adjust flow control valve as per product input.

**Note:**

If this is the first time raising the conveyor, it should be raised all the way up to completely purge the air from the lift cylinders prior to lowering down again.



Fig 16 - Hydraulic selector valve

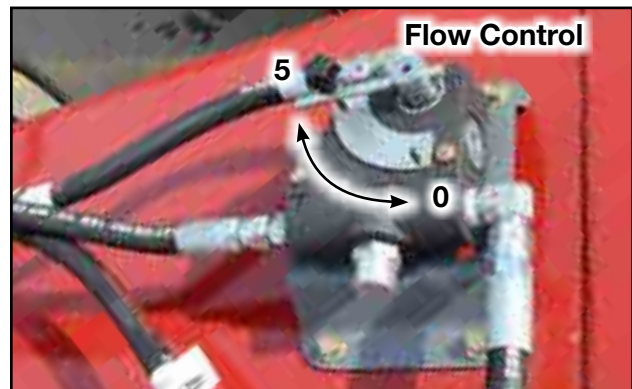


Fig 14 - Flow control valve



Fig 15 - Hitch cylinder stop

### 3.7.5 Raising and Lowering the Conveyor:

#### Non-Mover Conveyor

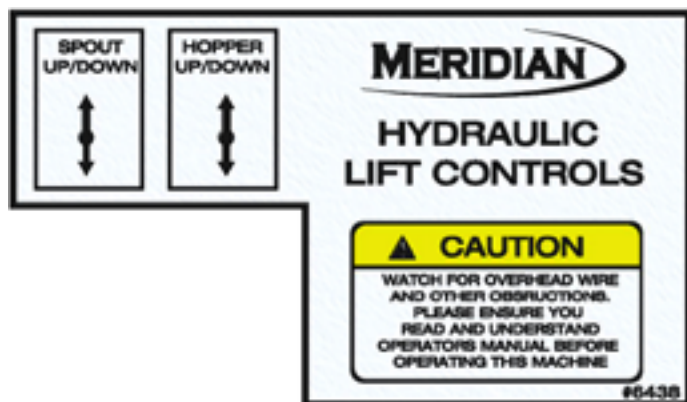
1. Check for overhead obstructions or electrical lines before raising the conveyor.
2. Use the tractor's controls to raise or lower the conveyor.
  - Refer to the tractor operator's manual.

#### With Mover Conveyor

1. Check for overhead obstructions or electrical lines before raising the conveyor.
2. Use the Control Valve joysticks to raise, lower or move the conveyor. See Figure 18 below.



#6439



#6438

Fig 17 - Mover kit controls

### 3.7.6 Conveyor Belt Operation:

Use the supplied control switch for clutch, lights and stop the conveyor belt.

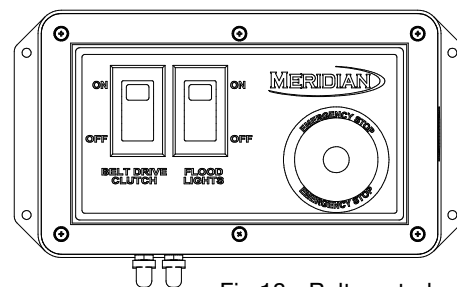


Fig 18 - Belt controls

### 3.7.7 Conveying Fertilizer:

Fertilizer may be conveyed using the conveyor when operated at a strictly reduced capacity.

- Additional care must be taken to thoroughly clean the conveyor after operation.

#### IMPORTANT:

- Warranty is void on all belt lacing used with fertilizer because it weakens the lacing.
- The belt lacing may need to be replaced more often if you move fertilizer.

#### • Operating Requirements:

To prevent problems that can be caused by conveying fertilizer:

1. Do not allow fertilizer to spill over the edge of the belt. Spilling will allow fertilizer to get under the belt and start building up.
2. Reduce the flow of fertilizer if the conveyor belt begins to slip.
  - Denser fertilizers will slow the conveyor belt down due to the weight of the product.
  - Too much product will cause the drive roller to slip and lead to additional wear on the roller.
3. Do not move fertilizer with your conveyor in humid, wet or rainy conditions.
  - This will cause buildup of fertilizer under your conveyor belt.

### 3.8 HYDRAULICS

#### **WARNING**

##### HYDRAULICS HAZARD

- Wear proper face and hand protection when searching for hydraulic leaks. Fluid can escape under pressure, causing infection or toxic reaction on skin.
  - See a doctor immediately if injured.
- If valve remains open, a loss of hydraulic pressure could allow the conveyor to lower unexpectedly, causing damage to the conveyor and personal injury.

#### **NOTICE**

- Dirt in the hydraulic system can damage the cylinder o-rings. This may cause leakage and possible system failure.
  - After valves are opened, the conveyor lowers by gravity. As the conveyor nears the full down position, the rate of descent will increase.
- 
- Be sure that all safety precautions and proper operation procedures are fully understood before connecting the conveyor hydraulic hoses.
    - Meridian strongly recommends doing a daily visual check for damage to the hoses and connectors.
    - Replace any damaged parts before operation.
  - Leaking hydraulic fluid can be nearly invisible under high pressure. Use some type of backdrop when searching for leaks.
    - Do not use your hand to search for leaks.
  - Meridian Conveyors have 1/16" restrictors in each end of the lift cylinder(s).
    - Also, a double pilot-operated (PO) check valve is used to prevent hydraulic drift in the lift cylinders.
  - There are various types of tractor hydraulic systems; the quick connect couplers are supplied by the owners.
    - Please consult your tractor manual for the proper couplers.
  - Before connecting the hydraulic hoses, check that the quick connect couplers on the conveyor and tractor are clean and free of dirt and debris.
    - Use a clean cloth to wipe them.
  - Do not disconnect the hydraulic coupler when the system is under pressure.
    - Relieve all pressure and then disconnect.
  - Be sure that the tractor has enough hydraulic capacity to run the conveyor:
    - 20-80 EPTO requires 50 HP
    - 20-90 EPTO requires 60 HP
    - 20-100 EPTO requires 60 HP
    - 20-110 EPTO requires 60 HP
    - 20-120 EPTO requires 70 HP

### 3.9 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 from the intake hopper and inside tube.
  - Wipe up any residue.
2. Remove barriers, anchors and wheel chocks.
3. Disengage the power source, and remove the PTO shaft.
4. Move conveyor slowly out of work area.
5. Lower the conveyor to transport position.
6. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
  - Clean inside the tube.
7. 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.

8. Lubricate all grease fittings.
  - Ensure all grease cavities have been filled with grease to remove any water residue from having been washed.
9. The conveyor should be stored in the transport
10. Do not attempt to pull conveyor out of snow bank in winter.
  - This will cause damage.
11. Ensure that there is no snow build up on the conveyor tube while in storage to prevent damage.

#### **⚠ WARNING**

##### **STORAGE HAZARD**

- Do not leave conveyor in raised position when not in use. Conveyor could drop rapidly in case of hydraulic failure.
- High winds may upset the conveyor.
- Because hydraulic scissor lift is faster than a hand crank system, use extra caution and clear area of personnel before raising or lowering the conveyor.



Fig 19 - Conveyor in transport position



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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, stop engine, remove ignition key 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.
- Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
- Place stands or blocks under frame before working beneath the unit.
- 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.



## 4.2 SERVICING INTERVALS

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 engine model contained in your equipment.

- After maintenance is completed, replace and secure all safety shields, safety devices, service doors and cleanout covers. Refer to Section 2.3 for safety guard locations.
- Refer to Section 3.8 for hydraulics information on maintenance of the hoses.
- Refer to Section 4.3 for Lubrication Locations.
- All bearings are pre-lubricated and do not require further lubrication.

### 4.2.1 Every 10 Hours or Daily:

1. Initially, check wheel bolt torque at 10, 25, and 50 hours of operation.
2. Check conveyor belt for proper tension and tracking.
3. Inspect the conveyor belt lacing for wear.
4. Check the fuel level (if equipped with a engine). Add as needed.
5. Check the oil level in the hydraulic reservoir.
  - Add as needed.
6. Remove PTO Driveline guard cover.
  - Grease universal joint.
  - Lubricate the centre portion of the driveline on a yearly basis.
  - The first lube maintenance should be done in the first 16 to 24 hours of operation. Then follow a regular schedule of lubing.
  - Check PTO universal joint retain bolt and retighten if necessary.
7. Inspect all rollers and bearings for play and wear.
  - Replace if necessary.

### 4.2.2 Every 50 Hours or Weekly:

8. Check the tension on the conveyor belt.
  - Adjust tension as needed.
9. Check the conveyor belt tracking.
  - Adjust its position as needed.
10. Check the tire pressure. Inflate the tires to the recommended pressure stated on the tire.
11. If equipped with a mover kit, inspect the sprockets on the drive wheels for sufficient tooth contact.



Fig 20 - Drive box belt adjustment



**4.2.3 Every 100 Hours or Monthly:**

12. Check tire pressure.

**4.2.4 Every 200 Hours or Annually:**

13. Lubricate PTO Driveline centre portion.

14. Change the hydraulic oil filter.

- Change the oil once a year.

15. Grease the Frame wheel hubs.

16. Grease the Frame pivot points.

17. Grease the Frame lift cylinders.

18. If equipped with a mover kit:

a. Check wheel drive motors for proper gear engagement.

- Check it more often if the unit is moved frequently.

- Use this QR to watch a video.



19. Check and repack wheel bearings with grease.

- Use this QR to watch a video.



20. Wash the entire machine thoroughly using a pressure washer, to remove all dirt, mud, debris and residue.

- **Note:** Granular fertilizer can cake onto components - clean well.

- Wash the outside.

- Wash around the hopper.

- Run the belt while washing inside the tube and around the belt.



Fig 21 - Swing belt adjustment



Fig 22 - Lift cylinder grease point



Fig 23 - Hydraulic oil filter



Fig 24 - Discharge bearing

### 4.3 MAINTENANCE PROCEDURES

- Always replace damaged or worn parts before using the conveyor.
- Use only replacement parts manufactured by Meridian.
  - Use of unauthorized parts will void the warranty of your conveyor.
  - Contact your Meridian dealer to order parts.
- Before performing maintenance on your conveyor, shut down and lock out all power.
- Disconnect the PTO driveline from the tractor.
- Meridian Conveyors are designed and tested for a safe, efficient operation.
  - Do not modify the equipment in any way.
  - Modifications to the conveyor can create an unsafe working condition, affect the life of the equipment, and will void your warranty.
- Support the conveyor tube before attempting maintenance on the undercarriage.
- The conveyor should be in its fully collapsed position before attempting maintenance.

#### 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.

- Adjust the pinch roller on the conveyor and swing.



Fig 25 - Main conveyor pinch roller belt adjustment



Fig 26 - Swing pinch roller belt adjustment

### 4.3.2 Conveyor Belt Tracking:

#### NOTICE

##### BELT DAMAGE HAZARD

Alignment of the belt must be checked at the hopper, drive box 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 alignment. Turn off engine when adjusting rollers.

1. Rotate the conveyor belt slowly, and check the position of the belt at the discharge, intake hopper, and drive box rollers.

#### 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.
  - Refer to the belt tracking decal located beside each bearing.
  - Loosen the bearing housing, then adjust.
3. Tighten the adjustment bolt against the housing.
4. Tighten the tail roller bearing housing.
5. Rotate the conveyor belt slowly, and check the position of the belt on the hopper roller.
  - Repeat steps until the belt is centred.
6. Replace housing guard.



Fig 27 - Conveyor belt adjustment



Fig 28 - Belt tracking decal

### 4.3.3 Conveyor Belt Replacement:

1. Chock the wheels to ensure they will not roll.
2. Open lower access cover (1) by removing fasteners (2) on both sides.
3. It may not be necessary to remove the upper discharge housing to replace the worn conveyor belt.
4. If the old belt is in place, attach the new belt to the old one at the splice (lacing). Pull the new conveyor belt into place using the old belt.
5. If the old belt is no longer inside the conveyor tube, follow the steps below:
  - a. Attach one end of the conveyor belt to 1/4" cable or rope to the loops of the belt connector.
    - Starting at the intake, pull it into the tube structure with the cable or rope until it comes out at the discharge.
  - b. Feed the belt around the discharge roller, back through the tube structure.
  - c. Remove the middle guards of the intake.
  - d. Loop the conveyor belt to the rollers as per the directions shown in Figure 31.
  - e. Pull the belt with the cable or rope until it comes out from the intake hopper.
6. Join the two ends of the new belt using the belt connectors.
7. Insert the belt lacing cable.
  - Cut off the excess cable.
8. Crimp the lacing to hold the cable in place.
9. Cut and taper the corners of the trailing end of the belt.
  - **Note:** Trimming only the trailing corner will prevent the lacing cable from getting snagged.
10. Re-place all guards and covers afterwards.

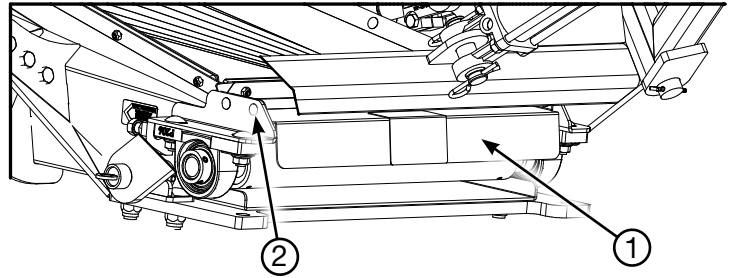


Fig 29 - #1-Drive box access cover. #2-Fasteners.

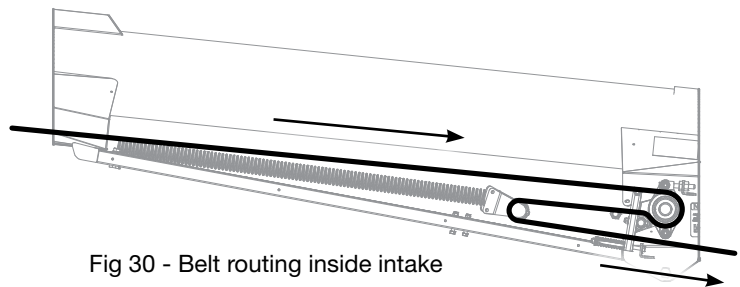


Fig 30 - Belt routing inside intake



Fig 31 - Thread lacing cable

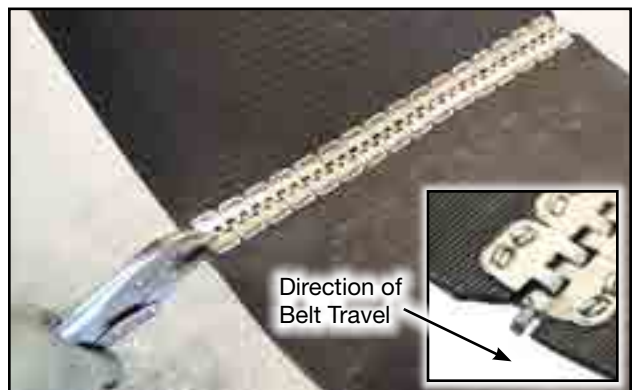


Fig 32 - Crimp lacing and taper belt corners



#### 4.3.4 Replacing the Drive Belts:

To replace the belts, remove the Guard and loosen the Belt Tensioner.

- Replace the belts with new ones, and tighten it using the Belt Tensioner handle.
- **Note:** These belts must be replaced as a matched set or the service life of the belts will be dramatically reduced.

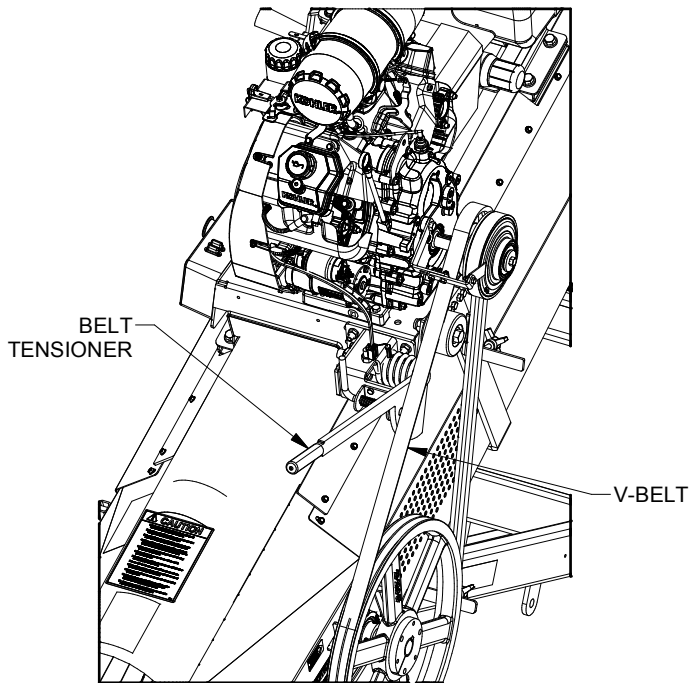


Fig 33 - Drive belt. Shown without guard for clarity

#### 4.3.5 Clean-Out Procedure:

Proper cleaning will help to ensure longer belt life and prevent excess rust formation.

1. Run the conveyor empty at full speed for 5-10 minutes.
  - This will help ensure that any product that may be under the belt will be cleaned out and prevent build up.
  - **DO NOT** attempt to manually remove build-up while conveyor is running.
2. Next, run the belt at low idle and inspect for damage on the belt and lacing.
  - Look for notches or cut-outs caused by mice and normal wear.
  - Any damage on the belt may result in getting the products under the belt creating buildup.
  - Consider replacing the conveyor belt if it is in poor condition.
3. If equipped with an electric motor:
  - inspect the belt return side, with the motor not running.
4. Turn on the conveyor to expose the belt that was previously in the tube.
  - Turn off the conveyor and inspect the belt on the belt return, along with the lacing.
5. Shutdown and lockout power to the conveyor and vacuum or sweep out any remaining products from the hopper.
6. Remove the S-drive bottom cover and remove any buildup from this area and clean cover. Replace the cover when complete.
7. If buildup is evident on or under the belt, remove the buildup to ensure proper operation of the conveyor. When necessary remove product buildup from under the belt by scraping and washing the belt.

#### **4.3.6 Tires:**

1. Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure.
2. Check tires for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts.
3. Do not exceed 20 mph (32 kph) or tire failure will occur.
4. Keep wheel lug nuts tight.

#### **4.3.8 Welding Repairs:**

Repair welding must be done with care and with procedures that may be beyond the capabilities of the ordinary welder.

- Before performing any type of welding repair to the conveyor, contact Meridian for approval.

#### **4.3.7 Wheel Bearings:**

Each tire hub has wheel bearings that are lubricated with grease. The wheel bearings should be checked and repacked annually.

1. Raise the axle enough to allow the wheel and tire to freely rotate.
2. Remove the dust cap.
3. Remove the cotter pin from the castle nut and turn the castle nut clockwise until no play exists in the wheel bearings.
4. Rotate the castle nut counterclockwise until the next available slot in the nut aligns with the hole in the axle shaft.
5. Install the cotter pin, bend over the ends of the cotter pin to retain it.
6. Install the dust cap.

#### **4.3.9 PTO Shaft and Attachment:**

The PTO shaft and attachment should be greased once a day with good quality grease.

## 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.

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

Copy this page to continue record.

Maintenance \ Hours Served By	Hours																		
<b>10 Hours or Daily</b>																			
Check Fuel and Hydraulic Oil Levels																			
Check Belt Tension and Tracking																			
Inspect Conveyor Belt Lacing																			
Inspect and Lubricate PTO Driveline																			
Inspect Rollers and Bearings																			
<b>50 Hours or Weekly</b>																			
Check Conveyor Belt Tension																			
Check Conveyor Belt Tracking																			
Check Tire Pressure																			
Inspect Drive Wheels Sprockets																			
Inspect Hydraulic Drive Motors																			
<b>100 Hours or Monthly</b>																			
Check Tire Pressure																			
<b>200 Hours or Annually</b>																			
Lubricate PTO Driveline Centre Portion																			
Change Hydraulic System Oil and Filter																			
Grease Wheel Hubs																			
Grease Frame Pivot Points																			
Grease Lift Cylinder																			
Check Wheel Drive Motor Engagement																			
Repack Wheel Bearings																			
Wash Conveyor																			



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## 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.

### ***Problem***

Possible Cause	Possible Solution
----------------	-------------------

### *New conveyor belt is crumbing with bits of rubber coming off*

Belt is new and soft and the tube and hopper have new paint	This crumbing is normal and will reduce quickly once product is put through which actually helps lubricate the belt, tube and hopper surfaces
---	---

### *Excessive product coming out of scraper port*

Flashing in hopper has kink at transition and will not seal properly against belt	<ul style="list-style-type: none"> <li>• Remove 3 - 4 carriage bolts from flashing going up towards tube on each side of hopper</li> <li>• Pull flashing to outside of hopper until the kink is flattened out to the belt</li> <li>• Drill new holes in flashing and reinstall carriage bolts</li> </ul>
Flashing in hopper is worn out or damaged	Remove and replace with new flashing in hopper
Uneven filling of product in hopper	Fill to center of hopper and not all on one side
Oily product being moved	If fertilizer or canola has been put through, then it must be cleaned otherwise it will stick to the belt and be brought back down to the scraper

### *Conveyor belt is tracking to side at the "S" drive*

Build up of material on drive roller	Clean drive roller off and try to avoid using to move fertilizer and or canola
Moving non-recommended product such as canola and or fertilizer which can stick to the belt	Prevent use of moving canola or fertilizer. If it is used for these products it is important to clean right away
Build up of material in tube causing belt to be pushed over to one side	Remove product that may be stuck on inside of tube
Not keeping up daily checks and belt tracking adjustments	Perform checks and belt adjustments of drive roller, intake roller and discharge roller

continued on next page

*Conveyor belt is tracking to side at the "S" drive, cont'd*

Bearing failure on drive roller or slack eliminator roller or pinch roller	Replace failed bearing(s) on roller(s)
Slack eliminator spring weaker on one side compared to the other	Check slack eliminator spring tension to be same on each side and replace weak spring or complete spring set
Pinch tube springs not adjusted correctly	Adjust pinch tube springs to end of pointer
Bent pinch tube on one side	Replace bent pinch tube
Conveyor belt stretched or worn more on one side than the other	Replace conveyor belt

*Conveyor belt slipping*

Pinch tube spring broken or come apart	Replace pinch tube spring and or adjust to end of pointer
Has been used to convey an oil grain or fertilizer product	Clean by running a non-oil product through to dry belt and drive roller
Cold weather operation during high humidity which can cause belt to freeze to the tube after shut down	Bring into warm area to thaw out belt and run to remove moisture
Belt has shrunk enough that the slack eliminator roller is contacting the pinch roller	Need to add piece of belt to regain correct length of conveyor belt
Bearing failure on drive roller or slack eliminator roller or pinch roller causing drag	Replace failed bearing(s) on roller(s)

*Conveyor belt flipped over*

Product build up in tube	Clean product out of tube
--------------------------	---------------------------

*Product build up in tube*

Not cleaning after putting oil product through	Must clean immediately after use of oil product such as fertilizer or canola
--	--

*Alligator clips pulling out from belt*

Clips catching in the three holes in tube just above the hopper transition into the tube	Remove the conveyor belt from above the area of the three holes. Bend the leading edge of the three holes down to prevent clips from catching
Clips catching in the three oval holes under the belt at bottom of hopper at the bend	Remove the conveyor belt from above the area of the three oval holes and bend the leading edge of the three holes down to prevent clips from catching

continued on next page

*Product rolling back down*

Too steep of angle being applied	Refer to operators manual for proper angle
Too much product being dropped into intake	Reduce product being fed into intake
Engine speed or tractor running too slow	Increase engine or tractor speed
Type of product being moved	Some products have to be moved at a lesser angle

*Tube seeping down*

Double pilot-operated check valve leaking internally	<ul style="list-style-type: none"> <li>• Call troubleshooting department at MMI for hydraulic test instructions</li> <li>• May require replacement of the double PO check valve</li> </ul>
Lift cylinder leaking	<ul style="list-style-type: none"> <li>• Call troubleshooting department at MMI for hydraulic test instructions</li> <li>• May require replacement of the lift cylinder</li> </ul>
External hydraulic leak from hose or fitting	Replace leaking hose or fitting

*Main frame lowering unevenly and starting to twist*

Plugged or blocked restrictor in one cylinder not allowing the cylinder to retract	<ul style="list-style-type: none"> <li>• You will need to partially back out the fitting on the base end of the cylinder that is not retracting</li> <li>• <b>CAUTION</b> - Only back it out enough to allow oil to slowly pass by the threads until the main frame is completely lowered and the pressure has become exhausted</li> <li>• Remove restrictor fitting and run a 1/16" drill bit through to unplug the restrictor</li> <li>• Once unplugged, apply thread sealant to fitting and reinstall</li> </ul>
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*Low capacity*

Angle of conveyor is too great	Lower the angle for type of product being moved
Drive belt may be slipping (Diesel Engine Conveyors)	Check drive belt tensioner spring
	Check tensioner pivot is free and lubricated
	Check tensioner bearing is free and not seizing
Conveyor belt may be slipping	Refer to problem... "Conveyor Belt Slipping"
Electric clutch disengaging (Diesel Engine Convs)	Refer to problem... "Electric Clutch not working"

*Electric clutch not working properly (Diesel Engine Conveyors)*

Bad connections at pin connectors	Check and repair pin connectors at harness to clutch
Low voltage to clutch	Check system voltage while running and should be above 13.5 volts
Bad clutch relay in instrument box	Test and or replace clutch relay
Failed clutch	Replace clutch

continued on next page

*Loss of mover drive (Diesel Engine Conveyors)*

A pinion gear came loose from drive motor	Reinstall pinion gear
Defective drive motor(s)	Replace drive motor(s)
Main relief valve stuck open in control valve	Remove, inspect and clean main relief valve
Hydraulic oil low	Top up hydraulic oil
Hydraulic pump belt loose or worn	Adjust drive belt tension, or replace
Hydraulic pump failing	Replace hydraulic pump

*Conveyor hitch will not raise up to tractor hitch (PTO Conveyors)*

Flow control valve not on correct setting	<ul style="list-style-type: none"> <li>• Adjust flow control valve to "0" for raising hitch</li> <li>• Once the hitch is raised and connected to tractor hitch, the flow control can be put to a higher setting to compensate for the product load</li> </ul>
Hydraulic hoses not connected correctly to the tractor couplers	Check hose layout and reconnect properly to tractor couplers
Restrictor plugged on hitch lift cylinder	Remove and replace restrictor fittings from the rod and base-ends of the hitch lift cylinder

*PTO drive vibration (PTO Conveyor)*

Failed U-joint	Remove and replace failed U-joint or PTO shaft
Failed steady bearing at lower end of PTO shaft	Remove and replace steady bearing
Gearbox failing	Replace gearbox

*Swing assembly wont run*

Hydraulic hoses not connected correctly to the tractor couplers	Check hose layout and reconnect properly to tractor couplers
Sprocket set screws & key missing or sheared on hydraulic drive motor	Replace sprocket set screws & key on hydraulic drive motor
Hydraulic drive motor failed	Replace hydraulic drive motor
Pinch roller spring broken	Replace broken pinch roller spring
Pinch roller bearing failed	Replace pinch roller bearing(s)
Drive roller bearing failure	Replace drive roller bearing(s)
Intake roller bearing failure	Replace intake roller bearing(s)
Discharge roller bearing failure	Replace discharge roller bearing

Remember to follow proper break-in procedures.

## 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: (833) 944-2345.

Specifications and measurements are subject to change without notice.

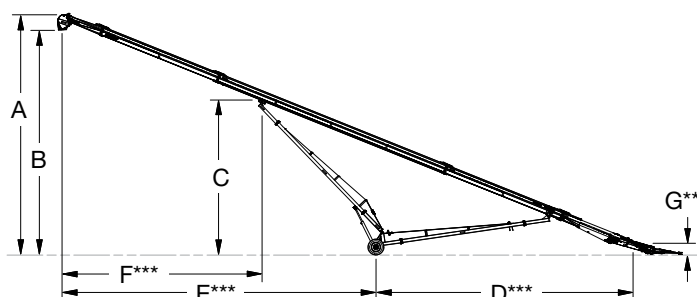


Table 1 - Bin Fill Conveyor Specifications

		20-80	20-90	20-100	20-110	20-120
Conveyor Length		81'-8"   24.9m	91'-8"   27.9m	100'-8"   30.7m	110'-8"   33.7m	120'-8"   36.8m
A	Transport-HD Hitch*	10'-6"   3.2m	11'-6"   3.5m	11'-0"   3.4m	10'-9"   3.3m	11'-3"   3.4m
	Transport*	11'-9"   3.6m	12'-6"   3.8m	12'-6"   3.8m	12'-0"   3.7m	12'-6"   3.8m
	25° Incline	34'-6"   10.5m	38'-6"   11.7m	43'-0"   13.1m	47'-0"   14.3m	51'-0"   15.5m
	Fully Raised	46'-0"   14.0m	51'-6"   15.7m	63'-0"   19.2m	61'-6"   18.7m	67'-6"   20.6m
B	Transport-HD Hitch*	7'-9"   2.6m	8'-9"   2.7m	8'-0"   2.4m	7'-10"   2.4m	8'-6"   2.6m
	Transport*	8'-9"   2.7m	10'-0"   3.0m	9'-6"   2.9m	9'-3"   2.8m	9'-9"   3.0m
	25° Incline	32'-0"   9.8m	36'-6"   11.2m	40'-6"   12.3m	44'-6"   13.6m	48'-6"   14.8m
	Fully Raised	43'-6"   13.3m	46'-0"   14.0m	60'-6"   18.4m	59'-0"   18.0m	65'-0"   19.8m
C	Transport-HD Hitch*	7'-6"   2.3m	7'-6"   2.3m	7'-3"   2.2m	7'-0"   2.1m	7'-9"   2.4m
	Transport*	8'-3"   2.5m	8'-0"   2.4m	8'-0"   2.4m	7'-9"   2.4m	8'-6"   2.6m
	25° Incline	23'-6"   7.2m	23'-6"   7.2m	26'-6"   8.1m	28'-0"   8.5m	32'-0"   9.8m
	Fully Raised	27'-0"   8.2m	27'-0"   8.2m	31'-6"   9.6m	31'-6"   9.6m	36'-6"   11.1m
D	Transport-HD Hitch*	41'-0"   12.5m	41'-0"   12.5m	45'-3"   13.8m	51'-6"   15.7m	59'-6"   18.1m
	Transport*	41'-0"   12.5m	41'-0"   12.5m	45'-3"   13.8m	51'-6"   15.7m	59'-6"   18.1m
	25° Incline	28'-6"   8.7m	38'-6"   11.7m	43'-0"   13.1m	48'-0"   14.6m	55'-6"   16.9m
	Fully Raised	36'-6"   11.2m	37'-0"   11.3m	40'-0"   12.2m	45'-0"   13.7m	51'-6"   15.7m
E	Transport-HD Hitch*	n/a	n/a	n/a	n/a	n/a
	Transport*	n/a	n/a	n/a	n/a	n/a
	25° Incline	37'-0"   11.3m	46'-0"   14.0m	48'-6"   14.8m	52'-9"   16.1m	52'-6"   16.0m
	Fully Raised	30'-3"   9.2m	38'-9"   11.8m	42'-6"   13.0m	48'-7"   14.8m	45'-6"   13.9m
F	Transport-HD Hitch*	16'-6"   5.0m	26'-6"   8.1m	28'-3"   8.6m	31'-10"   9.7m	29'-6"   9.0m
	Transport*	16'-6"   5.0m	26'-6"   8.1m	28'-3"   8.6m	31'-10"   9.7m	29'-6"   9.0m
	25° Incline	21'-6"   6.6m	30'-6"   9.3m	33'-0"   10.0m	39'-0"   11.9m	38'-0"   11.6m
	Fully Raised	26'-0"   7.9m	49'-0"   14.9m	38'-3"   11.7m	44'-0"   13.4m	44'-6"   13.6m
G	Raised**	23"-0"   58cm	23"-0"   58cm	23"-0"   58cm	23"-0"   58cm	23"-0"   58cm
	Lowered**	10"-0"   25cm	10"-0"   25cm	10"-0"   25cm	10"-0"   25cm	10"-0"   25cm
Transport Width		12'-6"   3.8m	12'-6"   3.8m	14'-0"   4.7m	14'-0"   4.7m	14'-0"   4.7m
Axle Extension Width		---	---	18'-0"   5.5m	18'-0"   5.5m	18'-0"   5.5m
Total Weight w/ SW20-15		7,822lb   3548kg	8,062lb   3657kg	9,582lb   4346kg	9,822lb   4455kg	11,342lb   5145kg
Hitch Weight w/ SW20-15		2,182lb   990kg	2,302lb   1044kg	2,582lb   1171kg	2,702lb   1226kg	2,982lb   1353kg

\* Transport height taken with top of hitch at 16" and cylinder stop in place.

\*\* With intake end on the ground, measured from top of grade to top of canvas.

\*\*\* Lengths are measured from centre of discharge and centre of intake hopper.

# LIMITED WARRANTY STATEMENT

1. Meridian Manufacturing Inc warrants each new Meridian Manufacturing Inc 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 ninety (90) days in the case of commercial use, from the shipment date from the Meridian dealer (FCA).
2. Meridian warrants replacement parts and components either manufactured or sold by, will be free from defects in materials or workmanship under normal use and service for thirty (30) days from the shipment date from the Meridian dealer (FCA), or the remainder of the original warranty period on the Goods, whichever is longer.
3. 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.
4. 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: (i) one (1) year, or ninety (90) days in the case of commercial use; or (ii) thirty (30) days in the case of replacement parts and components manufactured by Meridian; 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.
5. Title to any replaced materials Meridian wishes to have pass to it, shall pass to Meridian.
6. 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.
7. 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.
8. 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 herefrom. 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 paragraphs 1 and 2 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).
9. 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.
10. Meridian shall not have any obligation under any warranty herein until all accounts have been paid in full by the Purchaser.
11. The construction and interpretation of this Warranty shall be governed by the laws of the Province of Saskatchewan.

Register your product at: [www.meridianmfg.com](http://www.meridianmfg.com)  
For warranty information send an email to: [warranty@meridianmfg.com](mailto: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.





(833) 944-2345 | [www.meridianmfg.com](http://www.meridianmfg.com)