MERIDIAN®

20-45 • 20-55

TRUCK LOAD CONVEYOR
includes Canola Ready Series

meridianmfg.com/truck-load-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 this conveyor 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 the record.

Date	Employee's Signature	Employer's Signature

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
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® Truck Load 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.

Disclaimer:
Conveying potash, urea or other granular fertilizer in high-humidity situations requires more frequent cleaning. Doing so will void warranty and shorten product lifespan.

Standard conveyors are not rated to move canola or other oilseed products.

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.

• 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

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 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.

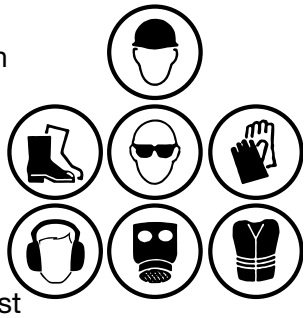
- Have a first-aid kit available for use should the need arise.

- 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.
- 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.

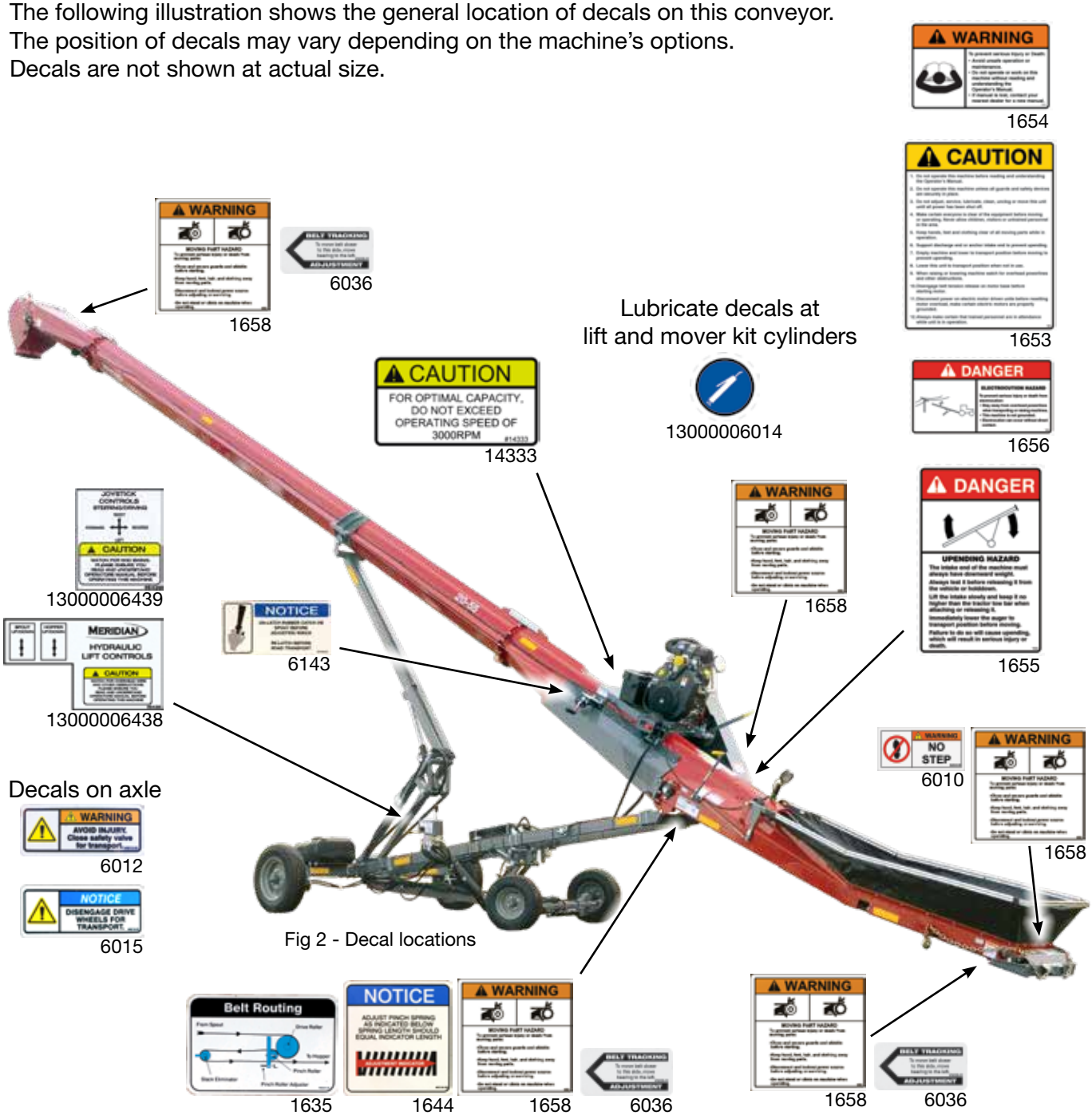


Fig 2 - Decal locations

- 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 ENGINE SAFETY

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

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

⚠ WARNING

HOT EQUIPMENT HAZARD
Do not touch muffler, cylinder or fins while engine is running. Contact will cause burns.

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

  In the State of California the above is required by law (Section 4442 of the California Public Resources Code). Other states may have similar laws. Federal laws apply on federal land.
- Inspect the muffler periodically. Replace it when necessary.
  - If engine is equipped with a muffler deflector, inspect periodically. Replace with correct part.
- Do not check for spark, or crank engine with spark plug or spark plug wire removed.
- Do not run engine with air filter or its cover removed.

NOTICE

POSSIBLE ENGINE DAMAGE
Decelerate engine slowly to stop.
Avoid choking carburetor to stop engine.
Choke only for an emergency stop.

2.10 ELECTRICAL SAFETY

- Have only a qualified electrician supply power. All wiring should comply with the ANSI/NFPA 70 electrical requirements.
- Make certain that the conveyor motor is properly grounded at the power source.
- Ensure that all electrical switches are in the OFF position before plugging the conveyor in.
- Turn machine OFF, shut down and lock out power supply (safety lock-out devices are available through your Convey-All dealer parts department) and wait for all moving parts to stop before assembling, servicing, adjusting, maintaining or repairing.
- Disconnect power before resetting any motor.
- Replace any damaged electrical plugs, cords, switches and components immediately.
- Do not work on the conveyor's electrical system unless the power cord is unplugged or the power supply is locked out.

2.11 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.

2.12 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.

2.13 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.

2.14 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 equip. such as eye, hand, breathing and hearing protection, when performing any service 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.

2.15 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.

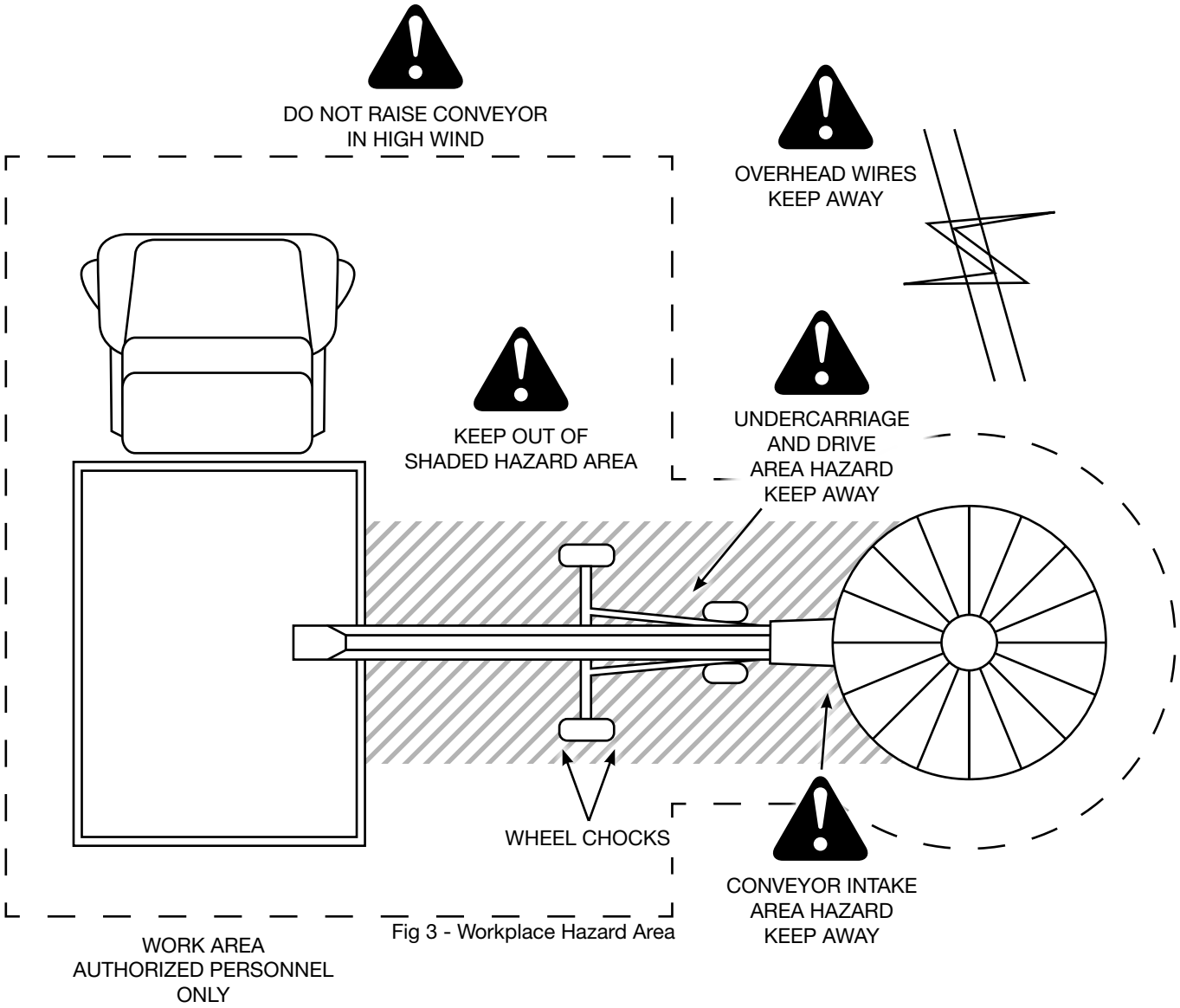


Fig 3 - Workplace Hazard Area

2.16 TRANSPORT SAFETY

- The conveyor must be empty before raising or lowering the tube.
- Always transport conveyor in lowered 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. Electrocution 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.

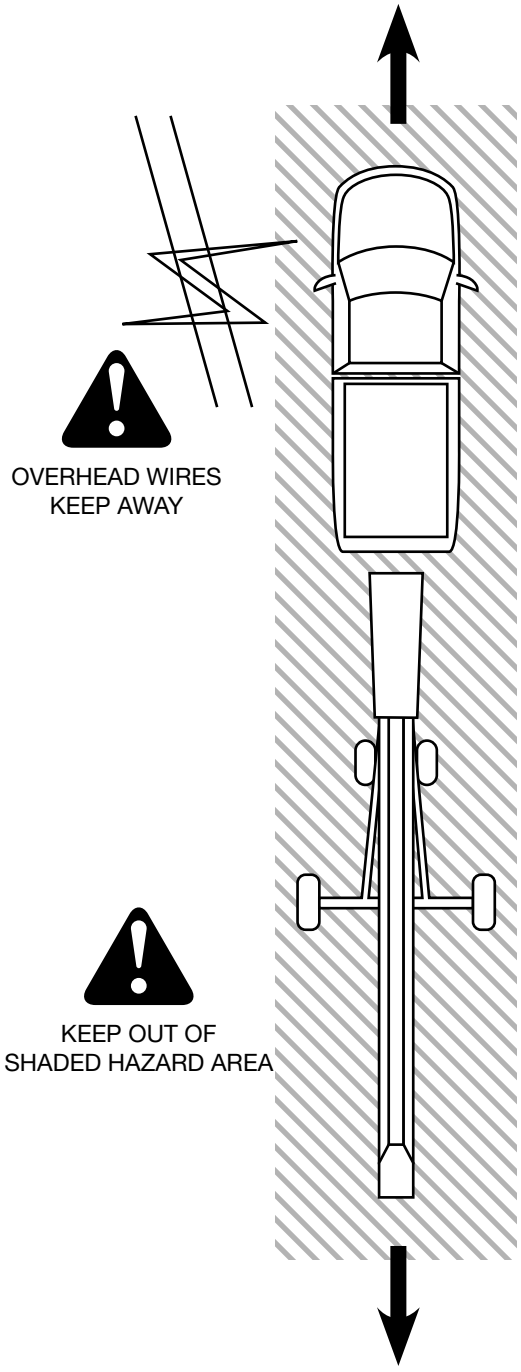


Fig 4 - Transporting Hazard Area

2.17 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 flighting 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 areas. If anyone enters the area, 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 truck load conveyor can be powered by a gas or diesel engine or electric motor.

- 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. Conveyor Tube
b. Discharge
c. Discharge Spout Hand Winch
d. Engine Control Box
e. Hydraulic Oil Reservoir
f. Fuel Tank
g. Mover Controls
h. Tube Lift Cylinder Check Valve
i. Mover Control Arm Transport Lock
j. Steering Axle Transport Lock
k. Hydraulic Pump Engagement Lever
l. Drive Pulley Lever
m. Collapsible Intake Hopper
n. Hopper Canvas Lever
o. Steering Axle Cylinder Flow Control Valve

Fig 5 - Truck load 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.

Options and locations may change without notice.

Refer to the engine manufacturer's manual for more detailed information.
- Engine controls may vary depending on model.

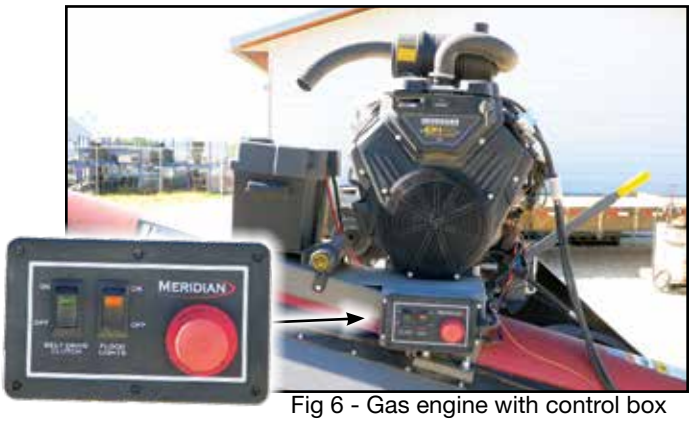


Fig 6 - Gas engine with control box

Gas Engine (if equipped):
Ignition Switch:
Insert the key and turn ON the engine.

Choke:
Close the choke valve for starting when the engine is cold. Slide, to open the choke as the engine warms.
- Always open the choke fully when operating the conveyor belt.

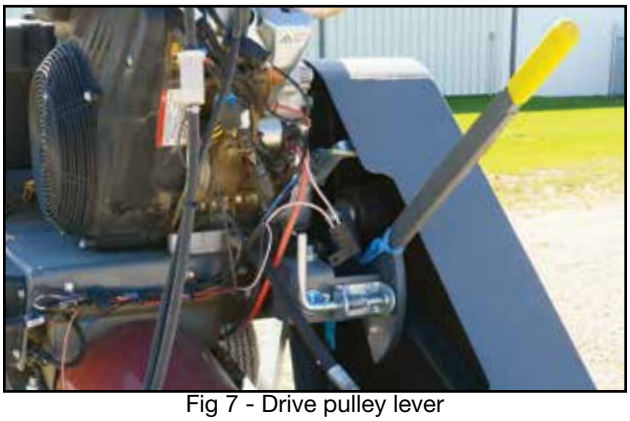


Fig 7 - Drive pulley lever

Throttle:
This lever controls the engine RPM.
Engine should run slightly more than idle when engaging the drive belt(s).

IMPORTANT:
- DO NOT engage clutch when at full RPM.
- For optimal capacity, do not exceed operating speed of 3000 RPM when running the conveyor belt.


Fig 8 - Lever to engage hydraulic pump

Drive Pulley Lever:
The lever has a locking pin which must be retracted.
- Move the lever down to disengage the drive belt.
- Raise the lever to engage the drive belt.
- The drive belt can stay engaged when starting and stopping the engine.
  - Set the drive belt tension so it does not slip during operation.

Control Box:
In front of the engine is a control box containing:
- Belt Drive Clutch
  - Engage the Clutch when the RPM is at idle.
- Flood Light switch
- Emergency Stop button

⚠ WARNING

MOVING BELT HAZARD
Never climb into the hopper.
The belt may inadvertently be turned on.

Intake Hopper:
The conveyor has a 5 foot long, low profile, spring-loaded, collapsible hopper intake.
- Use the lever to lower the canvas hopper frame.


Fig 9 - Intake hopper

Note:
The hooks on both sides of the hopper are for storing the safety chains.


Fig 10 - Safety chain storage hooks

Undercarriage:
The conveyor sits on a heavy-duty scissor lift undercarriage.

Lift Cylinder Double PO Check Valve:
- A double pilot-operated (PO) check valve is connected to the tube lift cylinder, to prevent drifting, and to secure it in place when the tube is raised.

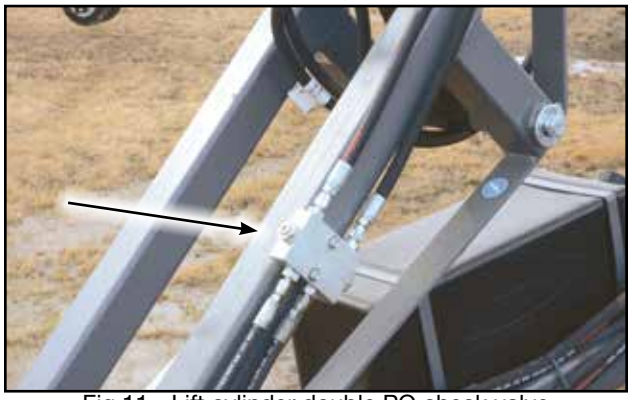


Fig 11 - Lift cylinder double PO check valve

Steering Axle Cylinder Flow Control Valve:
This valve controls the rate of hydraulic fluid flow to/from the lift cylinder, which directly affects:
- The speed of cylinder movement (raise or lower the conveyor axle) for smooth, safe operation.
- It prevents a sudden drop if load shifts or hydraulic pressure suddenly changes.

To adjust the valve:
- Turn the knob clockwise restricts flow, slows down cylinder movement.
- Turn it counter-clockwise allows more flow to speed up movement.


Fig 12 - Steering axle cylinder flow control valve

Mover Kit (Optional):
Use the controls to drive the conveyor on site.
- Refer to Section 3.8.5 for specific information about the mover.
- Use the joystick to drive the conveyor.
- Use the hydraulic levers to raise/lower the tube and steering wheels.
- There is a flow control valve on the steering lift cylinder. Use it to adjust the flow to the cylinder as well as to lock it, if needed, by screwing it all the way in.
- The Control Arm has a transport lock. Secure it in the vertical position with a pin and retaining clip before transportation.

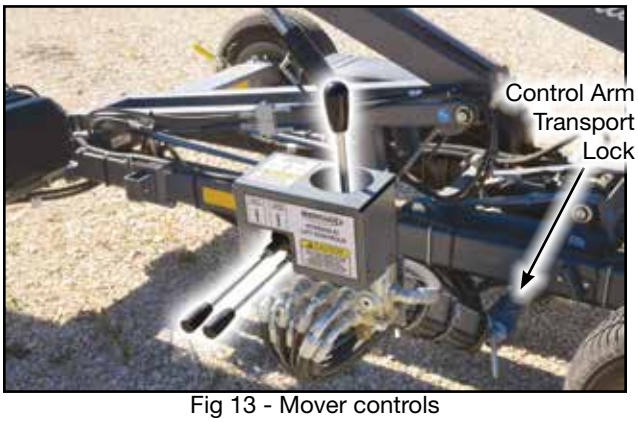


Fig 13 - Mover controls

Steering Wheels:
The steering wheel axle can be manually locked in its raised, transport position.
- Always secure the pin with a retaining clip


Fig 14 - Discharge

NOTICE

EQUIPMENT DAMAGE LIKELY
Always disengage drive wheels before transport. Hydraulic motors will be damaged if towed while engaged.

Drive Wheels:
The drive wheels have a lever to manually engage or disengage the drive gear assembly.
- Always disengage, and secure with the rubber latch, before transporting the conveyor.


Fig 15 - Drive wheel gear assembly and lever

LED Light Kit (Optional):
Lights may be installed to illuminate the hopper and discharge ends of the machine.
- The light switch is in the control box below the engine.


Fig 16 - LED kit

Discharge:
The discharge is equipped with a winch to manually angle the spout.

- **IMPORTANT:** Release the rubber latches holding the spout closed, before using the winch.
- The spout can also be flipped up and out of the way to throw the product when making piles or inside buildings.
- Reconnect the rubber latch before transporting the conveyor.

Fig 17 - Discharge

Fig 18 - Winch for discharge spout

Canola Ready Series (Optional):
This series of conveyors is equipped with:

- A larger, six inch drive roller.
- A larger drive-belt pulley and longer V-belt.
- The conveyor belt is skived, to remove the rubber cleats from along the edges for a tight seal between the belt and hopper flashing.
- Belt scrapers to remove canola residue.

Fig 19 - Canola ready conveyor

3.3 CANOLA READY SERIES

IMPORTANT:

- Standard conveyors are not rated to move canola or other oilseed products.
- Use only Canola Ready Series conveyors to handle these products.

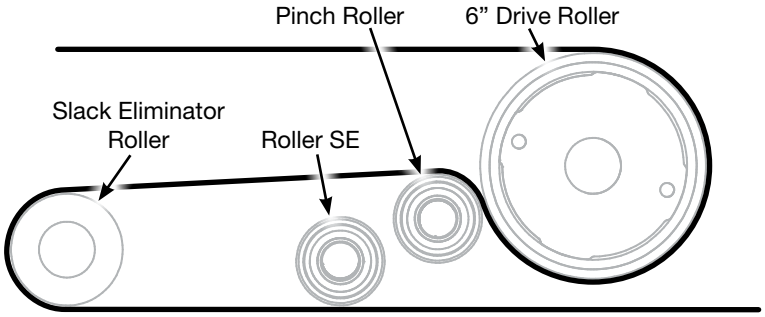


Fig 20 - Canola Ready drive

The Canola Ready conveyors feature:

- A larger, six inch drive roller.
- A larger drive-belt pulley for more surface area for traction to drive the belt
- A longer V-belt.
- The conveyor belt is skived, to remove the rubber cleats from along the edges for a tight seal between the belt and hopper flashing.
- Belt scrapers to remove canola residue from the underside of the belt. They are located:
  - At the discharge.
  - Inside the belt drive.
  - At the hopper.

Note: See the Service and Maintenance section for specific information on how to maintain your Canola Ready Series components.

Fig 21 - Larger drive-to-belt pulley, shown with guard removed

Fig 22 - Hopper flashing

Fig 23 - Hopper belt scraper

3.4 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.

NOTICE

EQUIPMENT DAMAGE LIKELY

Always disengage drive wheels before transport. Hydraulic motors will be damaged if towed while engaged.

1. Disengage the drive wheel gear assemblies using their levers.
   - Secure the lever with the rubber latch, before transporting the conveyor.

2. Lock the steering wheel axle in its raised, transport position using the pin.
   - Always secure with a retaining clip.

3. Lock the Mover Kit Control Arm in its vertical position with a pin and retaining clip.

4. **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.

5. Remove wheel chocks, so wheels are free to move.

6. All Meridian conveyors have minimum clearance positions when in transport mode.
   - The conveyor must be fully lowered.

7. Insert the hitch, and secure the pin in place
   - 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.

8. If the conveyor is equipped with a light package, make sure the connections are fastened securely and not dragging on the ground.

9. Do not allow riders on the conveyor.

10. Transport conveyor no faster than 24 km/h (15 mph).
    - When roads are rough or surfaces are uneven, slow down to ensure safe travel.

11. DO NOT transport the conveyor on slopes greater than 20 degrees. This could cause the conveyor to tip, resulting in damage.

12. When visibility is reduced, use caution and add extra lights to the conveyor.

13. Use extreme caution when turning or cornering with the conveyor in tow.

14. Check regulations with local authorities regarding conveyor transportation.
    - Equip the conveyor with all necessary lighting, and use hazard warning flashers on your pull-vehicle when required by law.

Fig 24 - Disengaged drive wheel

3.5 NEW MACHINE BREAK-IN

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

Before Starting Work:

1. Read conveyor and engine operator manuals.

2. Run the unit for 10 minutes at 1/4 to 1/2 throttle. During this time, check belt tracking and roller operation.
   - On new belts, it is normal to see what is called crumbing of the belt. This occurrence will stop once product is put through which coats the belt, flashing and tube assembly with a fine dust.

After Operating or Transporting for 1/2 hour:

3. Re-torque all the wheel bolts, and fasteners.

4. Check fuel, engine oil and hydraulic oil levels.

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

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

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

After Operating For 5 Hours and 10 Hours:
Repeat steps 1 through 8 above.

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

3.6 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:

1. Before positioning the conveyor, be sure all guards and shields are in place, securely fastened and fully operational.

2. Check and fill, if necessary, all lubricating fluids and grease all fittings.

3. Check hardware and fasteners; support frame, bolts, and all other fasteners. Tighten to their specified torque.

4. Make sure the wheel bolt lug nuts are tight.

5. Check the tires and ensure that they are inflated to their specified pressure.

6. Remove all entangled material.

7. Check that the conveyor belt is properly aligned.
   - Ensure it is not frayed or damaged.
   - Refer to Section 4.3.1 and 4.3.2

8. Check the tension of the V-belt and ensure that it applies enough force to keep the belts tight.

9. Visually inspect the conveyor tube, and delivery spout for damage.

3.7 CONVEYOR PLACEMENT

Once the conveyor has been transported to the work site, it can be moved to it's 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 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. Move the conveyor into place under a bin or trailer hopper.

5. When the conveyor is in position:
   - Chock the conveyor wheels on both sides.

NOTICE

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

3.7.1 Once work is complete:

6. Be sure conveyor tube is empty.

7. Remove wheel chocks and ensure area is clear of personnel and obstructions.

8. Be sure that the wheels are free to move.

9. Move the conveyor slowly away from under the bin or storage facility.

10. Lower the conveyor to it's fully lowered position before transporting.

3.8 OPERATING ON SITE

NOTICE

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

3.8.1 Conveyor Drive Systems and Lock-Out:

Proper operation of this conveyor requires that the operator pre-inspect the drive system, know how to shut down the system in an emergency, and generally monitor the system during operation.

- **Electric Motor:**
  - Electric motors and controls must be installed by a qualified electrician and must meet the standards set by the National Standards Electrical Code.
  - A magnetic starter should be used to protect the motor.
  - The motor must have a manual reset button.
  - Always disconnect power before resetting the motor.
  - Reset and motor controls must be located so the operator has full view of the entire operation.
  - Keep all guards and shields in place.

  Lock Out:
  - A main power disconnect switch capable of being locked only in the OFF position shall be provided.
  - It must be locked whenever work is being done on the conveyor.

- **Gasoline Engine:**
  - Never attempt to adjust or service engine while it is in operation.
  - Shut-down and allow engine to cool before filling it with fuel.
  - Keep all guards and shields in place.

  Lock Out:
  - Engines with ropes or crank start - remove spark plug wire or spark plug.
  - Engines with electric start - remove ignition key, spark plug wire or spark plug.

3.8.2 Emergency Shut-Down:

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

2. See to the emergency!

3. Correct the situation before resuming work.

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

4. Remove as much product from the hopper as possible.

5. Make sure the intake hopper and discharge are free of any blockages.

6. Since start-up torque loads are much higher than normal when belt is full, restart at a low engine speed. The engine speed can be increased to full throttle, when the belt is empty.

7. Product can again be unloaded into the conveyor hopper.

3.8.3 Normal Shut-Down:

1. Be sure that the intake hopper and tube are empty before stopping the unit.

2. Turn off engine or electric motor.

3. Remove ignition key from conveyor and tractor.

4. Lock-Out power source to adjust, service, clean the conveyor or when the operator intends to leave the area.

3.8.4 Everyday Operation:

1. Complete the pre-operation checklist.

2. Have another trained operator present to monitor the operation and help with a shutdown in case of an emergency.
   - Monitor the conveyor during operation for vibration and abnormal noises.
   - If anything out of the ordinary is noted, shut-down and lock-out the conveyor.
   - Determine the source, and correct before continuing operation.

3. Observe work area restrictions.
   - Refer to Workplace Hazard Area diagram.

4. Keep all safety guards and shields in place.

5. Keep hands, feet away from all moving parts.

6. Run at correct speed for maximum capacity.

7. Lock-Out power source to adjust, service or clean the conveyor.
   - Before the operator leaves the work area, the power source must be Locked-Out.

8. Make certain everyone is clear before operating or moving the machine.

Fig 25 - Conveyor filling trailer

3.8.5 Raising and Lowering the Conveyor:

Non-Mover Conveyor:

1. Check for overhead obstructions or electrical lines before raising the conveyor.

2. Use the tractor controls to raise or lower the conveyor
   - Refer to your tractor operator's manual.

With Mover Kit:

3. Check for overhead obstructions or electrical lines before raising the conveyor.

4. Use the mover kit levers and joystick to raise, lower and drive the conveyor.

Fig 26 - Mover kit controls

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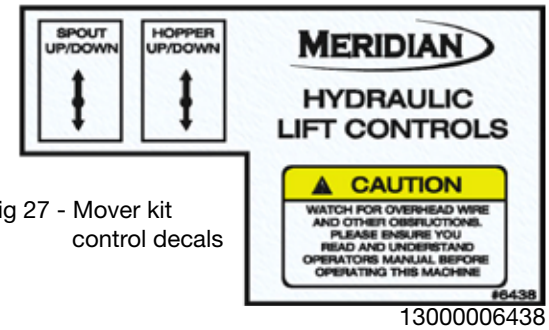

Fig 27 - Mover kit control decals

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3.8.6 Conveyor Belt Operation:

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

Fig 28 - Gas engine with control box

3.8.7 Conveying Fertilizer:

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

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

IMPORTANT: Fertilizer weakens the belt lacing. Therefore, the warranty is void on all lacing when used to convey fertilizer.

- Belt lacing may need to be replaced more often.

Operating requirements:

To prevent problems caused by conveying fertilizer:

1. Do not allow fertilizer to spill over the edge of the belt. This will allow fertilizer to get underneath and start building up.

2. Reduce the flow if the conveyor belt starts to slip. Denser fertilizers will slow the conveyor belt down due to the weight of the product. Too much material will cause the drive roller to slip and lead to additional wear on it.

3. Do not convey fertilizer in humid, wet or rainy conditions. This will cause buildup of fertilizer under your conveyor belt.

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 or residue from the intake hopper and inside tube.

2. Remove barriers, anchors and wheel chocks.

3. Disengage the engine or electric motor.

4. Move conveyor slowly out of work area.

5. Lower the conveyor to transport position.

6. Wash the entire machine thoroughly using a pressure washer to remove all dirt, mud, debris or residue.
   - Also, clean inside the tube.

7. Check the condition of the conveyor belt and delivery spout.
   - Replace or adjust, as required.

8. 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.

9. Touch up paint nicks and scratches to prevent rusting.

10. Lubricate the lift cylinders and mover kit cylinders.
    - Ensure all grease cavities have been filled with grease to remove any water residue from having been washed.

11. The conveyor should be stored in transport position.

12. Store conveyor in a dry, level area.
    - It is best to store the conveyor inside. If that is not possible, cover with a waterproof tarp and tie down securely.

13. Do not attempt to pull conveyor out of snow bank in winter.
    - This will cause damage.

14. Ensure that there is no snow build up on the conveyor 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.

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 engine in a closed building. 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

Fuel and Engine Oil (if equipped):
Refer to the engine's operator manual for specific information.

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

Hydraulic Oil:
The factory uses oil from BOSS Lubricants - industrial grade HVI 22 (viscosity index - HVI 22).
- If another brand is used, verify with the supplier that it is compatible.

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.

- 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 engine oil level (if equipped).
   - Servicing and changing oil should be followed according to the engine manual.

3. Check the oil level in the hydraulic reservoir (if equipped).
   - Add as needed.

4. Inspect the drive belt for frays, uneven wear and proper tension.

5. Check the conveyor belt tracking.

6. Inspect the conveyor belt lacing for wear.

7. Inspect all rollers and bearings for play and wear.
   - Replace if necessary.

4.2.2 Every 50 Hours or Weekly:

8. Check the conveyor belt tracking.
   - Adjust as needed.

9. Check the tire pressure.
   - Inflate the tires to the recommended pressure stated on the tire.

10. If equipped with a mover kit:
    - Inspect sprockets on the drive wheels for sufficient tooth contact.

11. If equipped with Canola Ready Series:
    a. Remove any buildup and wash the rollers.
       - Clean the belt scrapers.
       - Clean the belt using a pail of sand:
         - Remove one of the windguards.
         - While the belt is running, pour the sand on the underside of the belt.
         - Run until the buildup is decreased.

    b. Check the condition of the hopper flashing. Be sure it still seals the hopper to prevent leaking.

4.2.3 Every 100 Hours or Monthly:

12. Check tire pressure.

4.2.4 Every 200 Hours or Annually:

13. Change the hydraulic oil filter (if equipped).
    - Change the oil as well.

14. Grease the tube lift cylinder.

15. If equipped with a mover kit:
    a. Grease steering wheel axle bushings and lift cylinder.
    b. Check wheel drive motors for proper gear engagement.
       - Check it more often if the unit is driven frequently.

16. Check and repack wheel bearings with grease.
    - Use this QR to watch a video.

17. If equipped with Canola Ready Series:
    - Remove any buildup and wash the rollers.
    - Clean the belt scrapers.
    - Clean the belt using a pail of sand:
      - Remove one of the windguards.
      - While the belt is running, pour the sand on the underside of the belt.
      - Run until the buildup is decreased.

18. Wash entire machine thoroughly using a pressure washer to remove all dirt, mud, debris and residue.
    - **IMPORTANT:** Canola Ready Series - Clean scrapers.
    - **Note:** Granular fertilizer can cake onto components - clean well.
    - Wash on top and under the belt.
    - Clean inside the tube.

Fig 29 - Undercarriage mover kit wheels

Fig 30 - Drive wheel gear assembly

Fig 31 - Steering wheel axle

Fig 32 - Steeling wheel axle lift cylinder

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 is achieved by the pinch roller which pinches the belt against the drive roller for increased traction.

- Adjustments can be made to the pinch spring by rotating the nut on the bolt, indicated in Figure 34.

Fig 33 - 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 34 - Conveyor belt adjustment

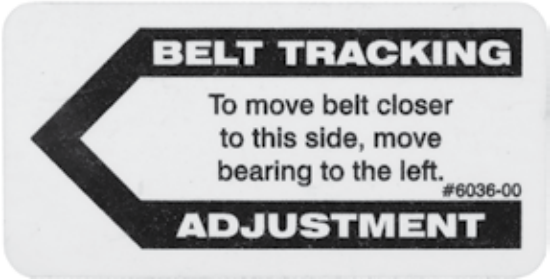

Fig 35 - Belt tracking decal

4.3.3 Conveyor Belt Replacement:

1. Chock wheels to ensure they will not roll.

2. Open access cover (1) at the hopper, 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 24.
   e. Pull the belt with the cable or rope until it comes out 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.
   - Trimming the trailing corners will prevent the lacing cable and belt corners, from snagging when the belt rotates.
   - Taper the trailing corners only, to reduce the size of the open space by half.

10. Re-place all guards and covers afterwards.

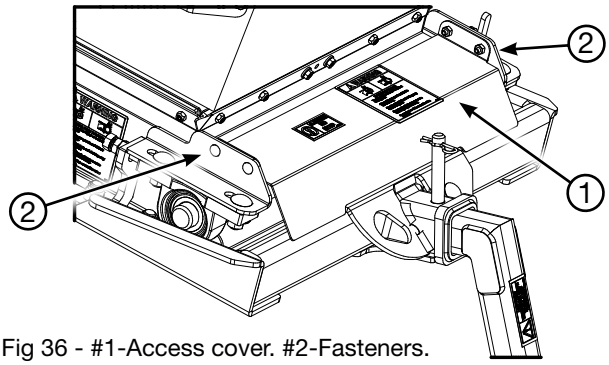

Fig 36 - #1-Access cover. #2-Fasteners.

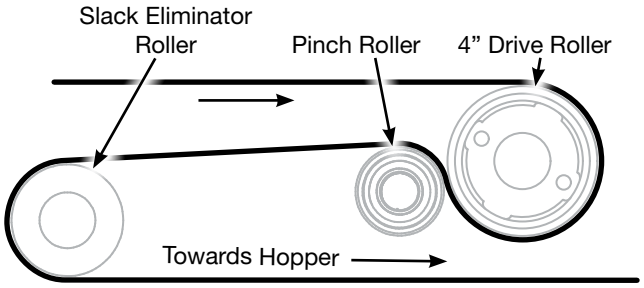

Fig 37 - Belt routing inside standard drive

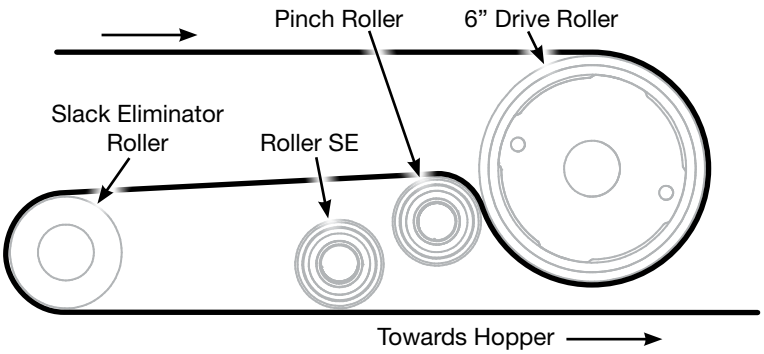

Fig 38 - Belt routing inside canola ready drive

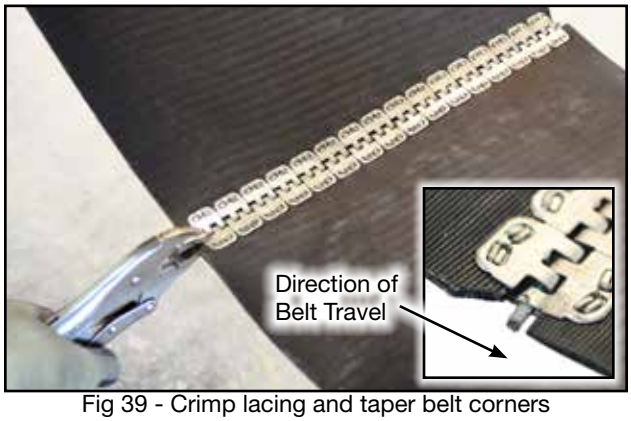

Fig 39 - Crimp lacing and taper belt corners

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.

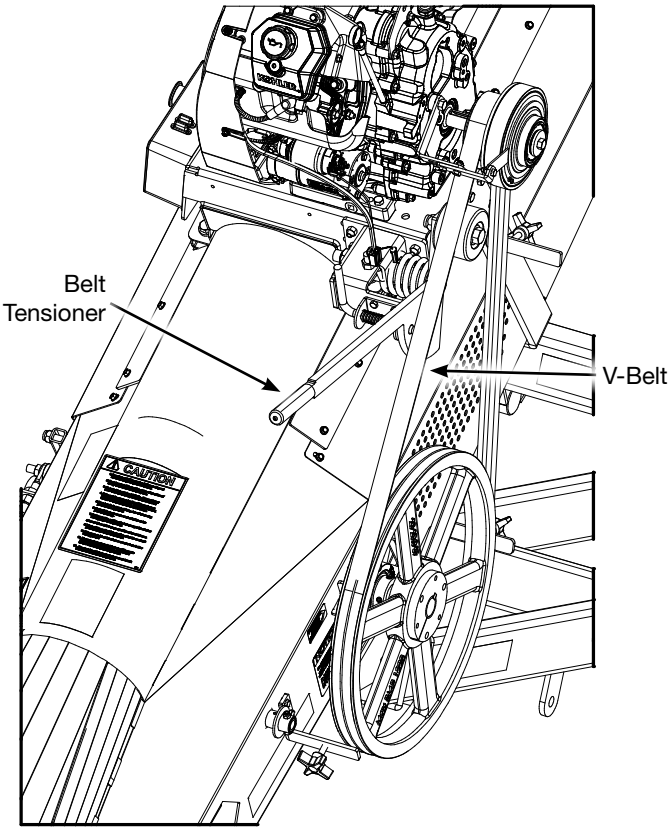

Fig 40 - Drive belt. Shown without guard for clarity

4.3.5 Replace Rubber Hopper Flashing:

1. Remove the old rubber flashing.

2. Insert the new rubber flashing into place underneath the hopper canvas on both sides.

3. Tighten all the elevator bolts and nuts.

4.3.6 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.

4.3.7 Repack Wheel Bearings:

⚠ WARNING

PREVENT ACCIDENTAL MOVEMENT
Always chock the conveyor wheel which is not being worked on.

1. Using a jack, lift the axle on the proper side to work on that wheel.
   - **Note:** If equipped with a mover, disengage the drive assembly.
2. Remove the 1/2 inch wheel bolts.
3. Remove the dust cap.
4. Remove the cotter pin, which holds the hex nut in place.
   - Twist off the hex nut.
5. Remove the roller bearing and then the hub.
6. Wipe the old grease and clean all the components well:
   - Spindle, hub, roller bearing, and hex nut.
7. Wash the components with brake cleaner or solvent.
8. Inspect the tapered roller bearing for damage. Replace if necessary.

IMPORTANT:
Always use SAE multipurpose lithium-based grease.

9. Add high-quality grease to inside of hub.
   - Work it around the inside, throughout the rear bearing and the seal.
10. Slide the hub onto the spindle.
11. Apply grease to the roller bearing.
    - Work it around, inside and out.
12. Slide roller bearing onto spindle, inside hub.
13. Twist the hex nut into place.
    a. Snug up the nut until a slight resistance is felt when turning the hub. This will seat the roller bearing.
    b. Then, carefully back off the nut to the point when the hub can be turned freely.
    c. Now, turn the nut back a little more until it's groove matches the closest hole, in the spindle, where the cotter pin will be inserted.
14. Insert a new cotter pin.
    - Bend the end of the pin to lock it in place.
15. Fill hub with new grease to cover bearings.
16. Clean dust cap and push it on to close hub.
17. Reinstall the wheel.
    - Fasten the bolts to a torque of 90 ft/lb.

Fig 41 - Fill hub with grease

Fig 42 - Wheel on hub

4.3.8 Mover Drive Assembly Gear Adjustment:

There must be firm engagement between the drive motor pinion gear and the wheel ring gear. Both should be parallel with each other and 90° to the conveyor axle.

- The pinion gear is 3/8" wider than the ring gear.
- When engaged, the ring gear should sit in the centre. The pinion gear should be offset by 3/16" on each side.

To bring the pinion gear more into engagement with the ring gear:

1. Disconnect the turnbuckle from bottom of the lever.
2. Lengthen the turnbuckle to bring pinion gear closer to the ring gear.
3. Reconnect the turnbuckle to the bottom of the lever.

Adjust the bolts around the assembly. They must be snug but not tight, the over-centre mechanism should be able to move.

Fig 43 - Mover drive assembly

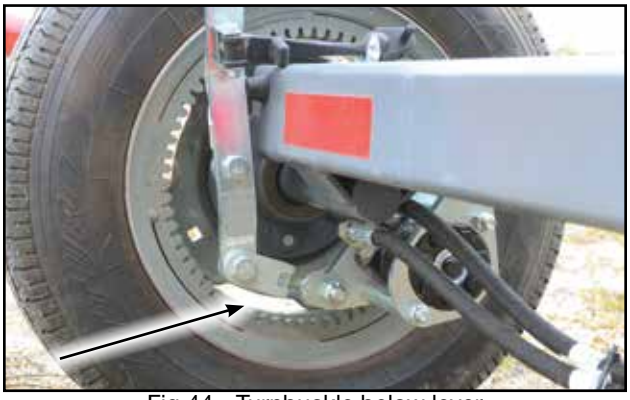

Fig 44 - Turnbuckle below lever

4.3.9 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.

4.3.10 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.

4.4 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														
Serviced By														
10 Hours or Daily														
Check Fuel and Hydraulic Oil Levels														
Check Drive Belt Tension and Tracking														
Check Conveyor Belt Tracking														
Inspect Conveyor Belt Lacing														
Inspect Rollers and Bearings														
50 Hours or Weekly														
Check Conveyor Belt Tracking														
Check Tire Pressure														
Inspect Drive Wheel Assembly														
Remove OilSeed Residue														
Check and Adjust Hopper Flashing														
100 Hours or Monthly														
Check Tire Pressure														
200 Hours or Annually														
Change Hydraulic System Oil and Filter														
Grease Lift Cylinder														
Grease Steering Wheel Axle														
Check Wheel Drive Motor Engagement														
Repack Wheel Bearings														
Wash Conveyor														

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	• Remove 3 - 4 carriage bolts from flashing going up towards tube on each side of hopper • Pull flashing to outside of hopper until the kink is flattened out to the belt • Drill new holes in flashing and reinstall carriage bolts
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	• Call troubleshooting department at MMI for hydraulic test instructions • May require replacement of the double PO check valve
Lift cylinder leaking	• Call troubleshooting department at MMI for hydraulic test instructions • May require replacement of the lift cylinder
External hydraulic leak from hose or fitting	Replace leaking hose or fitting

Low capacity

Angle of conveyor is too great	Lower the angle for type of product being moved
Conveyor belt may be slipping	Refer to problem… "Conveyor Belt Slipping"

Remember to follow proper break-in procedures. Refer to Section 3.5.

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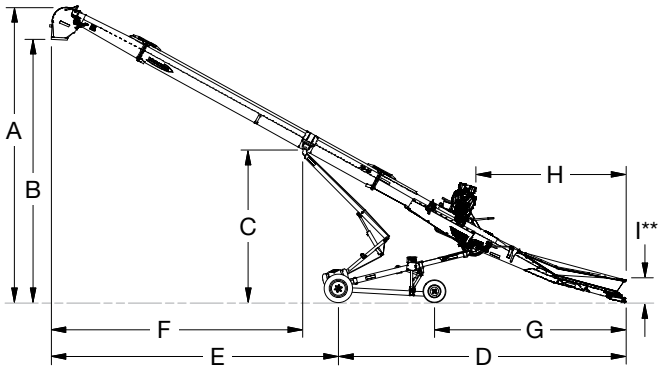
Section 6: REFERENCE

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 - Truck Load Conveyor Specifications

		20-45	20-55
Conveyor Length		47' 7"	57' 1"
Transport Length		42' | 12.8m	52' | 15.8m
A	Transport Height*	11' 9" | 3.6m	12' 6" | 3.8m
	25° Incline	19' 3" | 5.9m	23' 6" | 7.2m
	Fully Raised	24' 6" | 7.5m	26' 0" | 7.9m
B	Transport*	9' 0" | 2.7m	9' 9" | 3.0m
	25° Incline	16' 9" | 5.1m	21' 0" | 6.4m
	Fully Raised	22' 0" | 6.7m	23' 6" | 7.2m
C	Transport*	6' 3" | 1.9m	6' 3" | 1.9m
	25° Incline	9' 9" | 3.0m	11' 6" | 3.5m
	Fully Raised	12' 9" | 3.9m	12' 9" | 3.9m
D	Transport*	22' 0" | 6.7m	25' 9" | 7.8m
	25° Incline	21' 9" | 6.6m	25' 3" | 7.7m
	Fully Raised	20' 9" | 6.3m	25' 0" | 7.6m
E	Transport*	20' 0" | 6.1m	26' 3" | 8.0m
	25° Incline	18' 9" | 5.7m	24' 9" | 7.5m
	Fully Raised	18' 0" | 5.5m	24' 3" | 7.4m
F	Transport*	17' 0" | 5.2m	23' 3" | 7.1m
	25° Incline	15' 9" | 4.8m	21' 9" | 6.6m
	Fully Raised	15'0" | 4.6m	21' 3" | 6.5m
G	Transport*	14' 10" | 4.5m	18' 7" | 5.7m
	25° Incline	14' 7" | 4.4m	18' 1" | 5.5m
	Fully Raised	13' 7" | 4.1m	17' 10" | 5.4m
H	Transport*	12' 3" | 3.7m	12' 3" | 3.7m
	25° Incline	11' 8" | 3.6m	11' 8" | 3.6m
	Fully Raised	10' 7" | 3.2m	10' 7" | 3.2m
I**	Raised**	21" | 53cm	21" | 53cm
	Lowered**	10" | 25cm	10" | 25cm
Width		8' 0" | 2.4m	8' 0" | 2.4m



* Transport height taken with top of hitch at 16".
** With intake end on the ground, measured from top of grade to top of canvas.

6.1 BOLT TORQUE

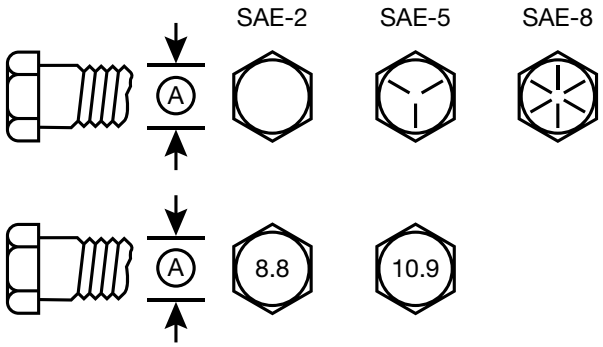
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

Table 2 - 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 3 - Metric Torque Specifications

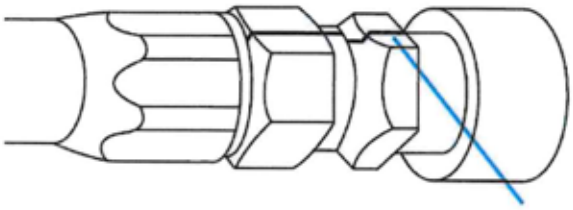
BOLT DIA. "A"	BOLT TORQUE*			
	8.8 (Nm) (ft-lb)		10.9 (Nm) (ft-lb)	
M3	0.5	0.4	1.8	1.3
M4	3	2.2	4.5	3.3
M5	6	4	9	7
M6	10	7	15	11
M8	25	18	35	26
M10	50	37	70	52
M12	90	66	125	92
M14	140	103	200	148
M16	225	166	310	229
M20	435	321	610	450
M24	750	553	1050	774
M30	1495	1103	2100	1550
M36	2600	1917	3675	2710



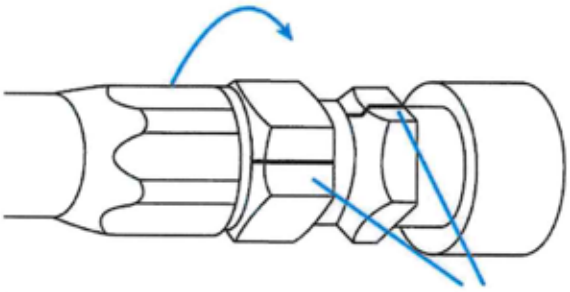
Torque figures indicated above are valid for non-greased or non-oiled threads and heads unless otherwise specified. Therefore, do not grease or oil bolts or capscrews unless otherwise specified in this manual. When using locking elements, increase torque values by 5%.

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

6.2 FLATS FROM WRENCH RESISTANCE (FFWR) OR "FLATS" METHOD



Mark a line on the nut and adapter before tightening.



Misalignment of the mark shows amount which the nut was tightened

3 STEPS TO IMPROVED SEALING OF JIC CONNECTIONS:

1. Tighten the nut by hand until it bottoms the seats.

2. Using a marker, draw a line lengthwise on the nut and extend it onto the adapter.

3. Using a wrench, rotate the nut to tighten.
   - Turn the nut the amount shown on the table.

Table 4 - Hex Flat Rotations

SIZE	# OF HEX FLAT ROTATIONS
-04	1-1/2 to 1-3/4
-06	1 to 1-1/2
-08	1-1/4 to 1-3/4
-10	1-1/4 to 1-3/4
-12	1 to 1-1/2
-16	3/4 to 1
-20	1/2 to 3/4
-24	1/2 to 3/4
-32	1/2

Note:
One of the most common causes of leaking JIC fittings is over-tightening. Over-tightening causes the mating seats to bind on each other resulting in a leak.

LIMITED WARRANTY

for Meridian Conveyors

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).

THIS WARRANTY IS SUBJECT TO THE FOLLOWING LIMITATIONS, PROVISIONS AND CONDITIONS:

1. 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.

2. 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 the failure of parts or their inability to perform due to wear under normal or excessive service conditions. It also does not cover failures resulting from use by the Purchaser for purposes other than those originally intended at the time of manufacture, including, without limitation, using the Goods to convey oil seeds or any other unauthorized materials, or operating the conveyor beyond its specified design limits.
      - This exclusion applies specifically to the standard TL-Series conveyors, not rated for canola, and does not apply to the Canola Ready Series conveyors.
   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.

3. 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.

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

5. 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.

6. 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.

7. 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).

8. 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.

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

10. 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
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.

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Part No: 130000013026-REV1