

CONVEY-ALL™



TRANSLOADING CONVEYOR

Models:

1635-TL, 1645-TL, 1652.5-TL

OPERATOR'S MANUAL

LIMITED WARRANTY

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

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

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

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

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

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

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

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

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

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

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

WARRANTY VOID IF NOT REGISTERED



WARRANTY REGISTRATION FORM and INSPECTION REPORT

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

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

Buyer's Name _____	Dealer's Name _____
Address _____	Address _____
City _____	City _____
Province/State _____	Province/State _____
Postal Code/Zip Code _____	Postal Code/Zip Code _____
Country _____	Country _____
Phone Number _____	Phone Number _____
Unit's Model Number _____	Unit's Serial Number _____
Delivery Date _____	General Purpose: <input type="checkbox"/> Private <input type="checkbox"/> Commercial

UNIT INSPECTION

- ☐ All Fasteners Tight
- ☐ Engine/Hydraulic Fluid Levels Checked
- ☐ Hydraulic Hoses Good, Fittings Tight
- ☐ Machine and All Bearings Lubricated
- ☐ Conveyor Belt Aligned and Tensioned
- ☐ Conveyor Belt Moves Freely
- ☐ Conveyor Tube Raises and Lowers Smoothly
- ☐ Unit Steers and Drives Smoothly
- ☐ Tire Pressure Checked

SAFETY INSPECTION

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

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

Date _____ Dealer's Signature _____

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

Date _____ Buyer's Signature _____

This page intentionally left blank

TABLE OF CONTENTS

DESCRIPTION	PAGE
Section 1: INTRODUCTION	1-1
1.1 Operator Orientation.	1-1
1.2 Serial Number.	1-1
Section 2: SAFETY	2-1
2.1 Safety Orientation.	2-2
2.2 General Safety	2-2
2.3 Equipment Safety Guidelines.	2-3
2.5 Safety Decals	2-3
2.5.1 How to Install Safety Decals	2-3
2.6 Work Preparation	2-4
2.7 Maintenance Safety	2-5
2.8 Tire Safety.	2-5
2.9 Battery Safety.	2-5
2.10 Engine Safety	2-6
2.11 Operating Safety.	2-7
2.12 Lock-Out Tag-Out Safety	2-7
2.13 Workplace Hazard Area	2-8
2.14 Transport Safety	2-9
2.15 Storage Safety	2-9
2.16 Safety Symbol Identification.	2-10
Section 3: OPERATION.	3-1
3.1 Machine Components	3-2
3.2 Components and Controls	3-3
3.3 Machine Break-In	3-10
3.4 Pre-Operation Checklist.	3-10
3.5 Attaching to Tow Vehicle	3-11
3.6 Conveyor Placement	3-12
3.7 Operating on Site	3-14
3.7.1 Starting Conveyor	3-14
3.7.2 Stopping Conveyor	3-15
3.7.3 Emergency Stopping	3-15
3.7.4 Restarting After Emergency Stop.	3-15
3.7.5 Unplugging.	3-15
3.8 Operating Hints	3-16
3.9 Transportation.	3-17
3.10 Storage.	3-19

continue on next page

TABLE OF CONTENTS cont'd

DESCRIPTION	PAGE
Section 4: SERVICE AND MAINTENANCE.....	4-1
4.1 Fluids and Lubricants.....	4-1
4.1.1 Greasing.....	4-2
4.2 Servicing Intervals.....	4-2
4.2.1 After 10 Hours or Daily.....	4-3
4.2.2 After 50 Hours or Weekly.....	4-5
4.2.3 After 200 Hours or Annually.....	4-6
4.3 Maintenance Procedures.....	4-8
4.3.1 Conveyor Belt Tension.....	4-8
4.3.2 Conveyor Belt Alignment.....	4-9
4.3.3 Conveyor Belt Replacement.....	4-10
4.3.4 Change Engine Oil and Filter.....	4-11
4.3.5 Change In-Line Fuel Filter.....	4-12
4.3.6 Clean/Change Air Filter.....	4-12
4.3.7 Changing Hydraulic Oil and Filter.....	4-13
4.4 Service Record.....	4-15
4.5 Ordering Parts.....	4-16
Section 5: TROUBLESHOOTING.....	5-1
Section 6: SIGN-OFF FORM.....	6-1
Section 7: REFERENCE.....	7-1
7.1 Specifications.....	7-1
7.2 Working Measurements.....	7-1
7.3 Bolt Torque.....	7-2

Section 1: INTRODUCTION

Congratulations on your choice of a Convey-All™ Transloading Conveyor. It is designed to efficiently move grain, pulse crops or granular material between a storage facility and a truck and trailer.

This equipment has been designed and manufactured to meet the exacting standards for such equipment in the agricultural industry and will keep your seed delivery operation working at optimum efficiency.

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

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

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

1.1 OPERATOR ORIENTATION

The directions; left, right, front and rear, as mentioned throughout this manual, are as seen from the tow vehicle driver's seat, facing the direction of travel. The hopper is the front of the conveyor.

1.2 SERIAL NUMBER

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

Please mark the identifying numbers in the space provided for easy reference.

Conveyor Model No: _____

Conveyor Serial No: _____

Engine Model No: _____

Engine Serial No: _____



Fig 1 - Serial Number Location

This page intentionally left blank

Section 2: SAFETY



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

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

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

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

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

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

2.1 SAFETY ORIENTATION

YOU are responsible for the SAFE operation and maintenance of your Convey-All™ Transloading 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.

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

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

- 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 most important safety device on this equipment is a SAFE operator. It is the operator's responsibility to understand all safety and operating instructions in this document, and to follow them.
- An untrained operator exposes himself and bystanders to possible serious injury or death.
- Think SAFETY! Work SAFELY!

2.2 GENERAL SAFETY

- Read and understand the Operator's Manual and all safety 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. Know how to use it.



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

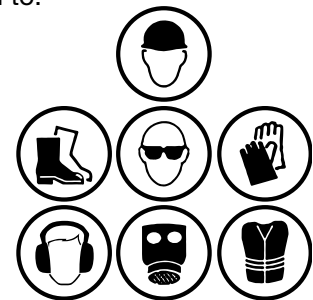


- Do not allow riders.

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

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

Review the safety instructions with all users annually.

- In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety guard removed. Equipment should never be operated in this condition. Keep all guards in place. If removal becomes necessary for repairs, replace the guard prior to use.



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

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

- Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - 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 that displayed a safety decal should also display the current decal.
- 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 Convey-All Industries Inc.

2.4.1 How to Install Safety Decals:

1. Be sure that the installation area is clean and dry.
2. Ensure temperature is above 50°F (10°C).
3. Determine exact position before you remove the backing paper.
4. Remove the smallest portion of the split backing paper.
5. Align the decal over the specified area and carefully press the small portion with the exposed sticky backing in place.
6. Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
7. Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

2.5 WORK PREPARATION

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

Also, read the engine operator's manual.

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

- Personal protection equipment including:

- Hard Hat
- Eye protection
- Protective shoes
- Heavy gloves

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



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

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

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



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

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

Note:

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

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

- Operate only in daylight or good artificial light.

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

- Ensure that all safety 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.

2.6 MAINTENANCE SAFETY

- Review the Section 4: Service and Maintenance of this Manual before working with, maintaining or operating the conveyor.
- Follow good shop practices:
 - Keep service area clean and dry.
 - Be sure electrical outlets and tools are properly grounded.
 - Use adequate light for the job.
- Place all controls in neutral or off, stop the engine, and remove ignition key. Wait for all moving parts to stop before servicing, adjusting, repairing.



- Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.



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

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



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

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

- Make sure there is plenty of ventilation. Never operate the engine in a closed building. The exhaust fumes may cause asphyxiation.
- Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
- Place stands or blocks under the frame before working beneath the machine.
- Before resuming work, install and secure all guards when maintenance work is completed.
- Keep safety decals clean. Replace any decal that is damaged or not clearly visible.

2.7 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.

- Reference the tire side wall for information on the maximum cold tire pressure (PSI). Keep the tires inflated to this setting.

2.8 BATTERY SAFETY

- Keep all sparks and flames away from batteries, as gas given off by electrolyte is explosive.
- Avoid contact with battery electrolyte: wash off any spilled electrolyte immediately.
- Wear safety glasses when working near batteries.
- Do not tip batteries more than 45 degrees, to avoid electrolyte loss.
- To avoid injury from spark or short circuit, disconnect battery ground cable before servicing any part of electrical system.
- When storing the conveyor for an extended period:
 - Remove the battery
 - Be sure it is fully charged
 - Store it inside
 - Do not sit the battery on a cold, concrete floor
- Before using the battery, after it has been in storage, be sure it is charged.



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 an open flame.

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



- 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 tamper with governor springs, governor links or other parts which may increase the governed engine speed.
- Do not strike flywheel with a hard object or metal tool. This may cause it to shatter in operation.

- Keep cylinder fins and governor parts free of grass and other debris which can affect engine speed.
- Do not operate engine with grass, leaves, dirt or other combustible materials in muffler area.
- Do not operate engine without muffler.



WARNING: Hot Equipment

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 the muffler. The arrester must be maintained in effective working order by the operator.



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

- Inspect muffler periodically. Replace if 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 air filter's cover removed.



WARNING: Possible Engine Damage

Decelerate engine slowly to stop. Avoid choking the carburetor to stop engine. Choke only for an emergency stop.

2.10 OPERATING SAFETY

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



Review the manual annually.

- Clean 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 and/or 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 or tripping.



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



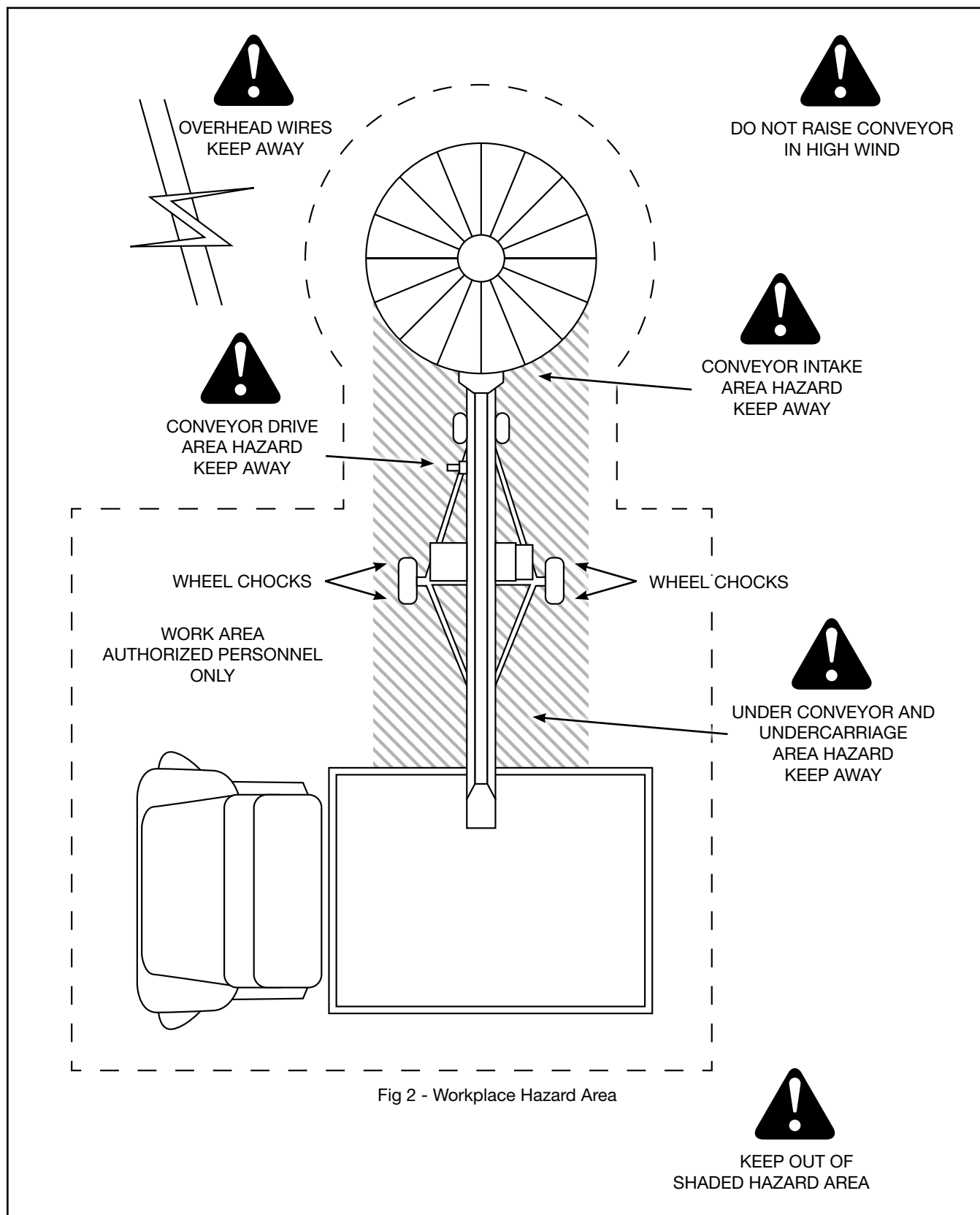
- Do not operate machine when any guards are removed.
- Chock wheels of conveyor before starting.
- Be sure that conveyor tube is empty before raising or lowering.
- Close valves in hydraulic line when machine is in position or before transporting.
- High winds may overturn conveyor. To avoid damage to structures and equipment, do not raise conveyor fully in windy conditions.

Also, do not leave the conveyor raised, when it is not in use.



2.11 LOCK-OUT TAG-OUT SAFETY

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

2.12 WORKPLACE HAZARD AREA



2.13 TRANSPORT SAFETY

- The conveyor belt must be empty before raising or lowering the tube.
- Always transport conveyor in collapsed position.
- Check that all the lights, reflectors and other lighting requirements are installed and in good working condition. 
- Never allow riders on the conveyor.
- Comply with all local laws governing safety and transporting of 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 operating near or crossing roadways.

2.14 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 machine.

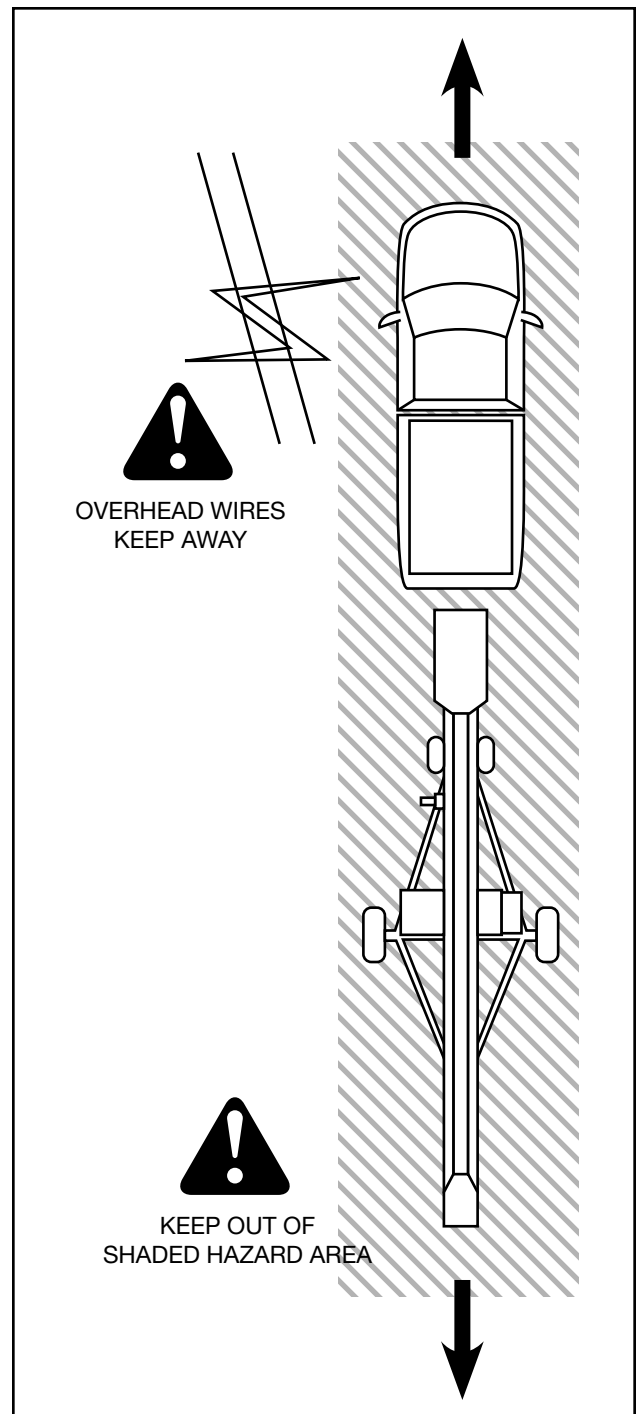


Fig 3 - Transporting Hazard Area

2.15 SAFETY SYMBOL IDENTIFICATION

There are many types of safety symbols on decals placed in various locations on the conveyor. Good safety practices include being familiar with these signs, the type of warning, the area, and the particular function related to that area.

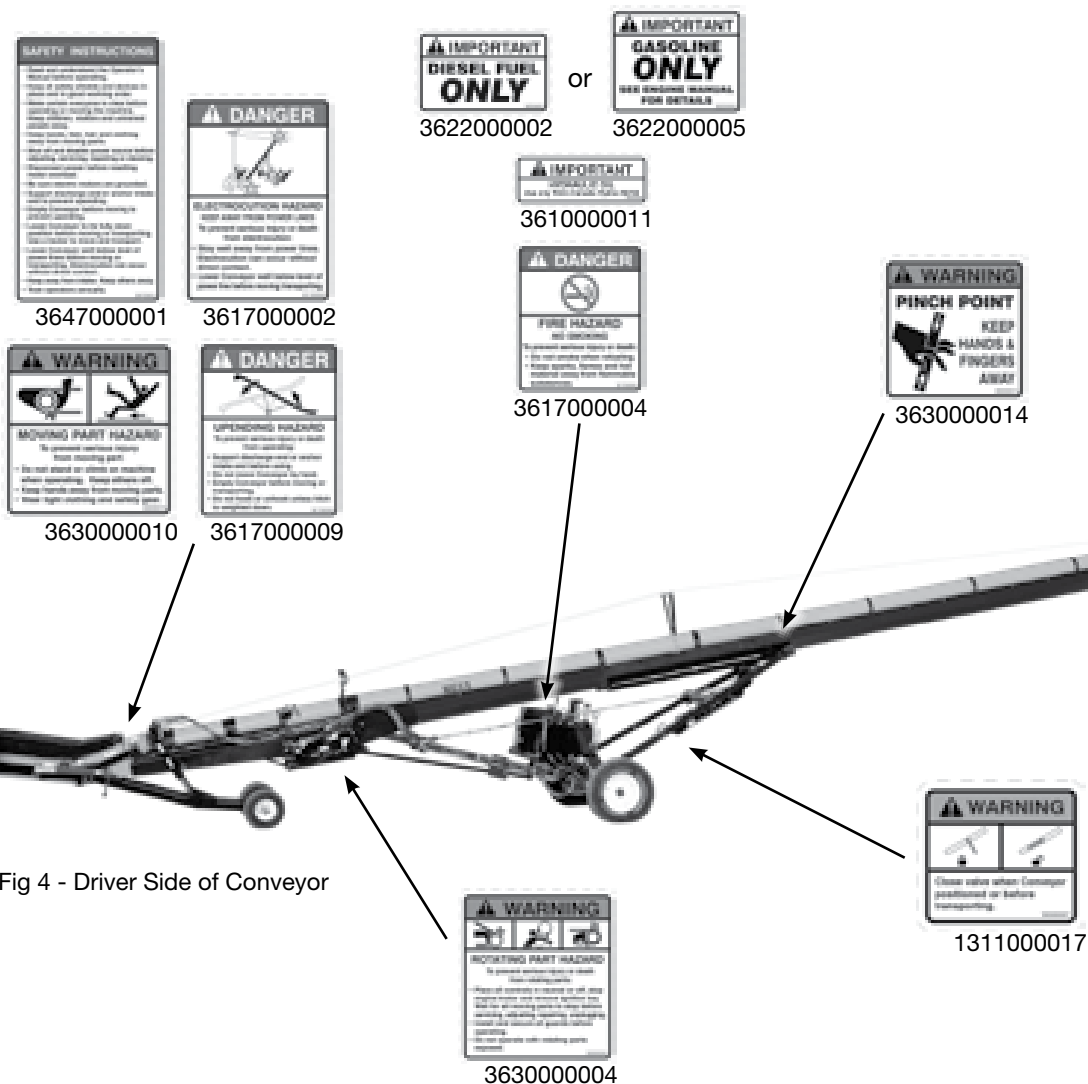


Fig 4 - Driver Side of Conveyor

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.

Section 3: OPERATION



Operating Safety

- Read and understand the Operator's Manual, and all safety decals, before using.
- Place all controls in neutral, stop the engine and remove ignition key. Wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Clear the area of bystanders, especially children, before starting.
- Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
- Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
- Do not allow riders on the conveyor when transporting.
- Stay away from overhead obstructions and power lines during operation. Electrocution can occur without direct contact.
- Do not operate machine when any guards are removed.
- Chock wheels of conveyor before starting.
- Keep working area clean and free of debris to prevent slipping or tripping.
- 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 loading/unloading equipment.
- Do not operate, fully raised, in high winds.

The Convey-All™ Transloading Conveyor is designed to efficiently move grain, pulse crops, or granular material between a storage facility and a truck and trailer. Power is provided by a gas or diesel engine. Be familiar with the conveyor and engine before starting.

It is the responsibility of the owner and operator to read this manual and to train all other operators before they start working with the machine. Follow all safety instructions exactly. It is everyone's business. By following recommended procedure, a safe working environment is provided for the operator, bystanders and the area around the work site.

The design and configuration of this conveyor includes safety decals and equipment. Hazard controls and accident prevention are dependent upon the personnel operating and maintaining it. Their awareness, concern, prudence and proper training are crucial.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the machine safely. There are instructions on how to set it, to provide maximum efficiency. By following the operating instructions, in conjunction with a good maintenance program, your Transloading Conveyor will provide many years of trouble free service.

3.1 MACHINE COMPONENTS

The Transloader is available in three lengths and is designed for the most demanding needs.

A gas or diesel engine supplies power to run the hydraulics. That makes this conveyor a self-contained, self-propelled unit.

A hydraulic cylinder is used to lower the steering wheels when driving the unit. Another cylinder raises and lowers the tube.

The main components are listed below:

- a. Main Tube
- b. Hopper
- c. Discharge Spout
- d. Discharge Spout Electric Actuator
- e. Undercarriage
- f. Hopper Winch
- g. Conveyor Belt Wind Guard
- h. Drive Box with Tension Springs
- i. Engine
- j. Hydraulic Reservoir and Fuel Tank
- k. Drive Wheels
- l. Steering Wheels
- m. Working Lights
- n. Hitch
- o. Jack

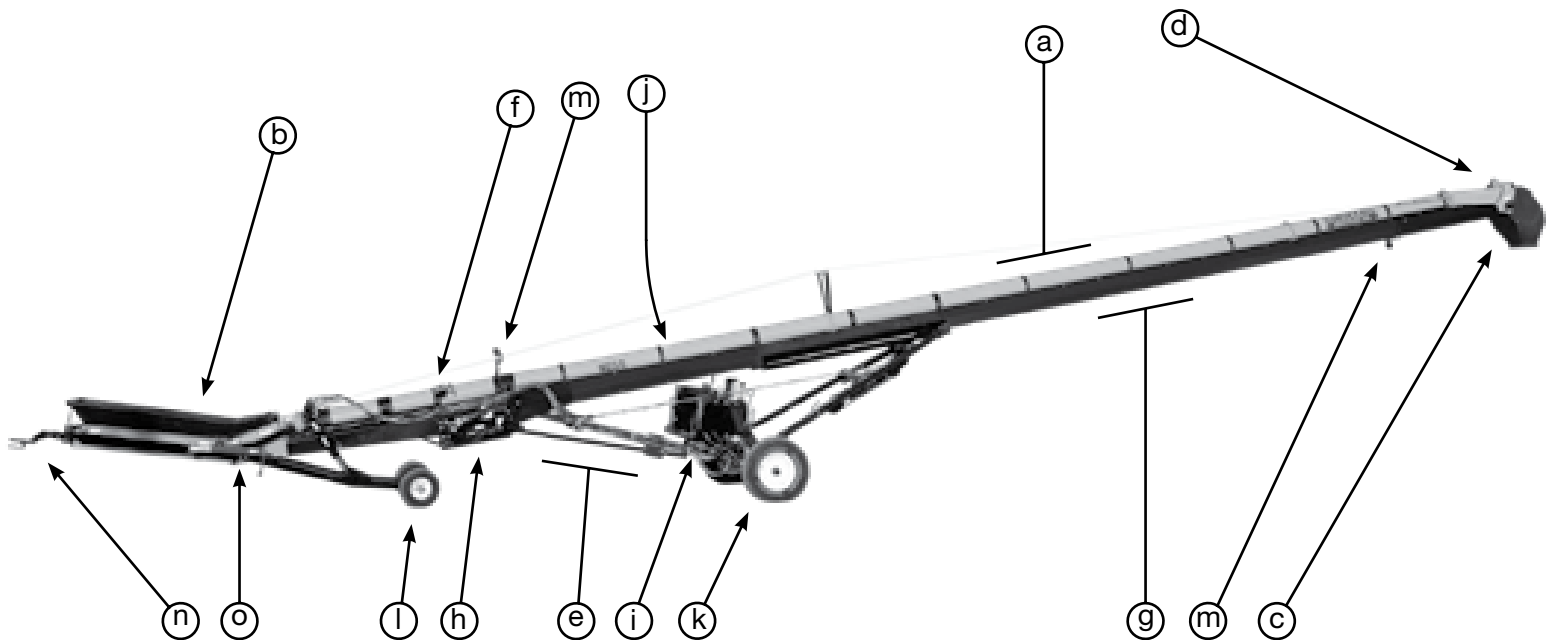


Fig 5 - 1652.5-TL Conveyor

3.2 COMPONENTS AND CONTROLS

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

Refer to the engine operator's manual for more detailed information.

Gas Engine:

The engine location and controls may vary depending on the engine model.

- a. Ignition Switch:
This switch controls the electrical power to the engine ignition system. Insert the key, turn clockwise to start. Turn counterclockwise to turn OFF.
- b. Choke:
This lever controls the position of the choke. Slide the lever to the right to close the choke valve for starting when the engine is cold. Slide to the left to open the choke as the engine warms.

Always open the choke fully when operating the conveyor.

- c. Throttle:
This lever controls the engine RPM. Move the lever right to increase the engine speed and left to decrease.

Always run at the maximum engine speed, which is 3600 RPM, when operating the conveyor belt.

Cold Weather Package for Gas Engine (Optional):

Features a muffler shroud ducted into the air intake of the engine feeding warm air to keep the carburetor from icing up.

125 Watt Heater for Engine (Optional):

This heater is attached to the bottom of the engine, and contains an electrical cord.

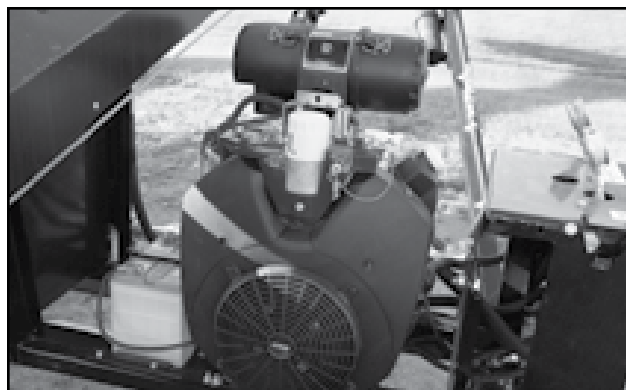


Fig 6 - Kohler Gas Engine

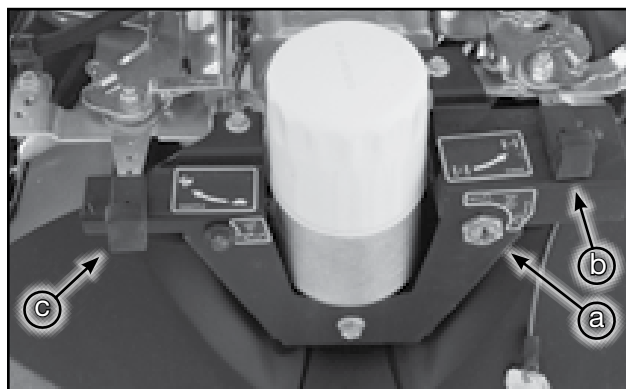


Fig 7 - Engine Controls

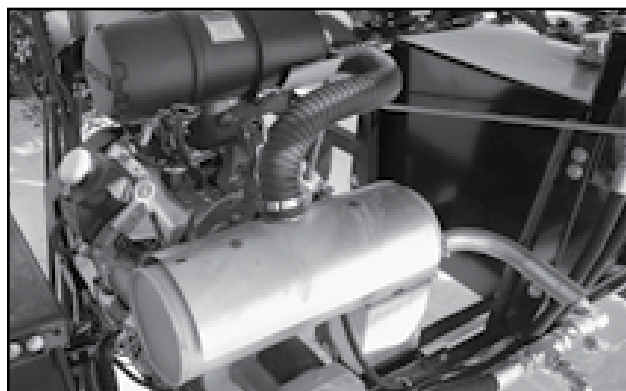


Fig 8 - Cold Weather Package



Fig 9 - 125 Watt Heater for Engine

Diesel Engine (Optional):

Below are descriptions of the controls. The engine location and controls may vary depending on the model.

- a. Ignition Switch:
This switch controls the electrical power to the engine ignition system. Turn clockwise to start. It will spring back to the Run position.
Turn the key counterclockwise to turn OFF.
- b. Throttle:
The red dial, between the hydraulic valve levers, control the engine RPM. Rotate to increase or decrease the engine speed.

Always run at maximum engine speed, which is 3000 RPM, when operating the conveyor belt.



Fig 10 - Isuzu Diesel Engine



Fig 11 - Engine Controls

Fuel Tank:

The tank has a capacity of 57 Litres (15 US Gallons).

Hydraulic Oil Reservoir:

The reservoir holds 95 Litres (25 US Gallons).

Oil Tank Heater (Optional):

This is an electric heater patch, which is attached to the bottom of the Hydraulic Reservoir.

Block Heater (Optional):

This is an electric heater patch, which is glued to the bottom of the engine block.

Oil Cooler (Optional):

This is a fan which is mounted in front of the hydraulic reservoir.

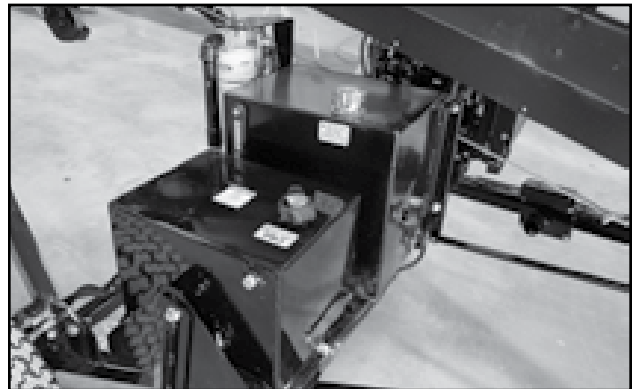


Fig 12 - Fuel Tank and Hydraulic Reservoir

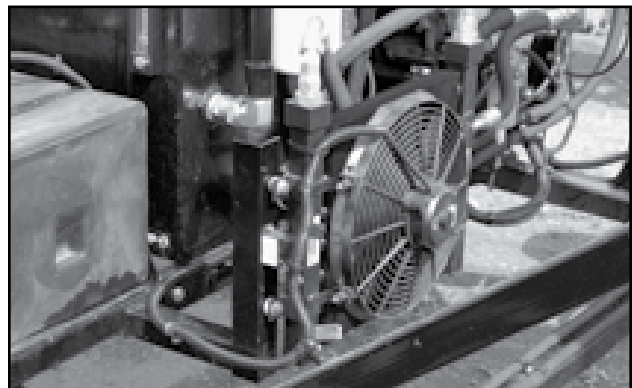


Fig 13 - Oil Cooler

Hydraulic Controls:

The hydraulic valve bank is beside the engine.

- a. Hopper Lift:
This lever controls the height of the steering wheels below the hopper.
 - Push the lever forward and hold, to lower the wheels for driving the unit.
 - Pull and hold, to raise the wheels, lowering the hopper into position for unloading.
- b. Conveyor Lift:
This lever raises/lowers the conveyor tube to the working height.
- c. Mover Kit Lever:
This 4 position, spring-loaded lever controls the movement of the conveyor. It drives the wheels forward and reverse, and also turns the steering wheels left or right.
- d. Conveyor Belt Control:
Conveyor belt is turned on and off with this lever.

Note:

A ball valve is located on the lift arm.
Open, to raise or lower conveyor.
Close, to lock in position. See Figure 16

Hydraulic Pressure Gauges:

There are two gauges on the hydraulic valve bank. The one on the left displays the hydraulic pressure in the moving and lifting circuit. The one on the right is for the conveyor belt circuit. See Figure 15

Hydraulic Valve to Conveyor Tube Lift Cylinder:

This valve allows oil into or out of the hydraulic cylinder that raises/lowers the tube.

IMPORTANT:

Hydraulic valve must be fully opened
prior to raising/lowering conveyor.

Always close valve fully when conveyor is to remain in fixed position. This will prevent the ram from creeping downward during operation.

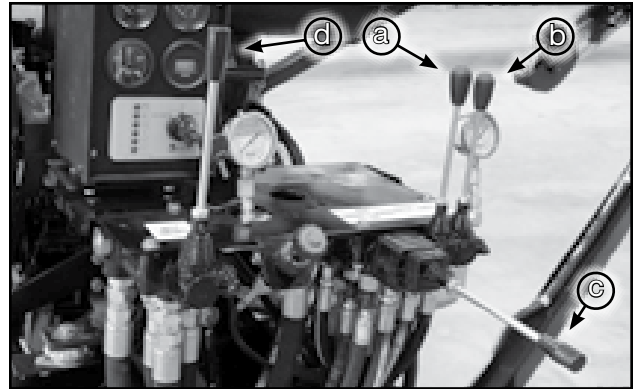


Fig 14 - Valve Bank

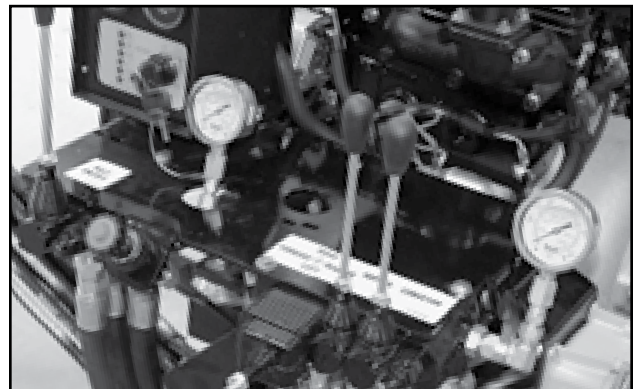


Fig 15 - Hydraulic Pressure Gauges

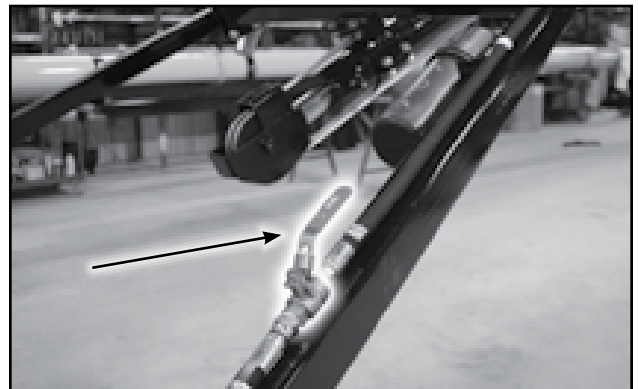


Fig 16 - Hydraulic Valve to the Lift Cylinder



WARNING: Moving Belt Hazard
Never stand on belt or climb into hopper.
Conveyor belt may inadvertently be turn on.

Hopper:

Hoppers are designed with spring loaded frames. This will allow the truck box to push the hopper frame down.

All hoppers have rubber flashing to seal the junction between the belt and the sides of the hopper.



Fig 17 - Hopper



WARNING: Unexpected Movement
Do not release Hopper Winch handle when ratchet lever is in unlocked position with load on winch. Handle could spin violently causing serious injury.

Hopper Winch:

This winch is located on the side of the tube just above the hopper. It is used to lower the hopper frame.

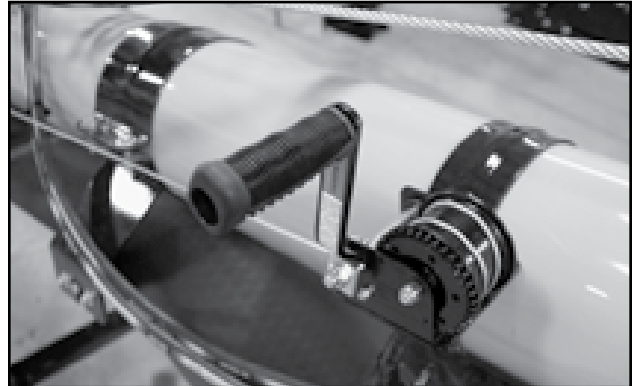


Fig 18 - Hopper Winch



WARNING: Moving Belt Hazard
Never stand on hopper and/or belt.
Conveyor belt may inadvertently be turn on.

Rail Car Hopper (Optional):

This hopper has a very low profile to allow for positioning under a rail car hopper.

A manual winch is used to raise and lower the hopper sides.

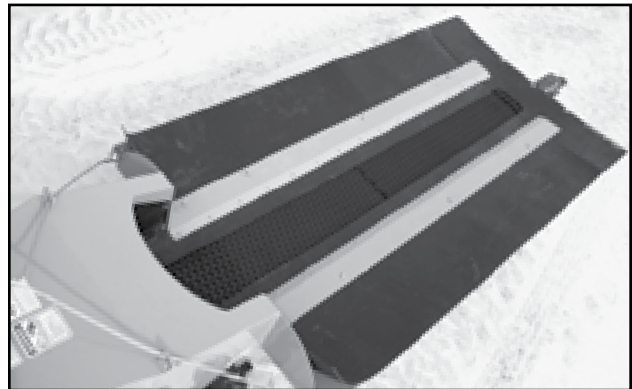


Fig 19 - Rail Car Hopper

Discharge Spout:

The standard discharge spout can be manually swiveled. Material can be directed further out rather than straight down.

Remove the spout to throw the material as far as possible. This configuration works well when making piles or working inside buildings.

It is also available in stainless steel.



Fig 20 - Discharge Spout

Electric Actuator on Discharge Spout:

The discharge spout comes with a 12 volt DC electric actuator. This repositions the spout, tilting it for precise control over product output.

It is controlled by a switch on the junction box next to the hydraulic valves.



Fig 21 - Electric Actuator

Quad-Swivel Discharge Spout (Optional):

This is an extension to the standard spout, which hangs down from it. An electric actuator is attached to the extension to swing it sideways.

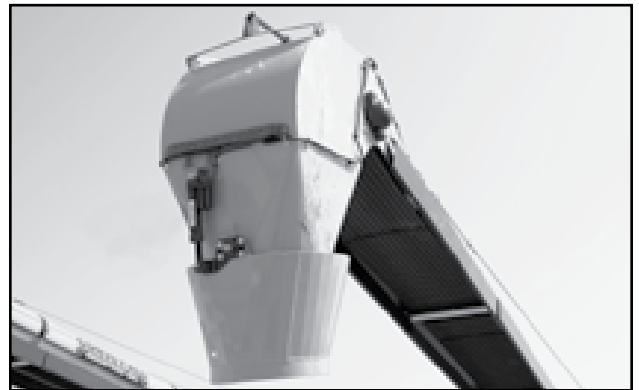


Fig 22 - Quad-Swivel Discharge Spout

Working Lights:

Working lights are installed to illuminate the hopper and discharge ends of the machine. The 12 volt DC working lights make operating the conveyor at any time safe and convenient.

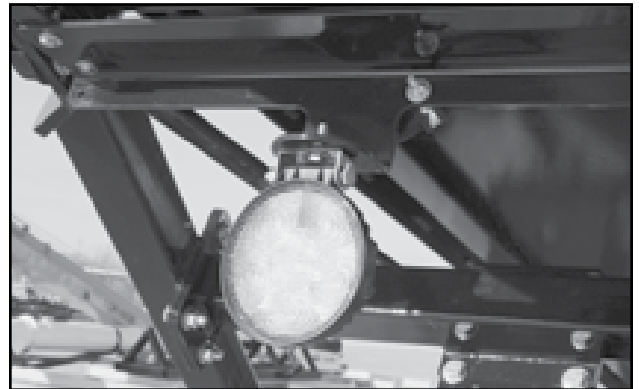


Fig 23 - Working Light

Transport Light Package (Optional):

On certain models, a 12 volt DC transport light package is available. The wiring harness would plug into a truck.

Electric Switches:

On the side of the valve bank, is a junction box with switches. They work the lights, and the discharge actuator.

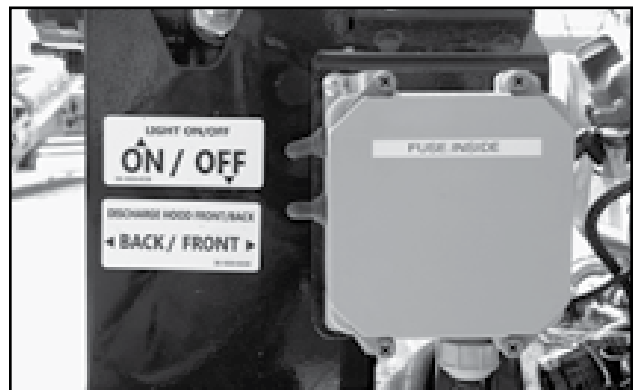


Fig 24 - Electric Switches

NOTICE: Equipment Damage Likely
Always disengage both drive wheels before towing. Hydraulic motors will be damaged if driven at highway speeds.

Drive Wheels:

The hydraulically driven wheels have a lever to manually engage or disengage the drive mechanism. When disengaged, insert the retaining clip to secure.

IMPORTANT:

As a default, for better maneuverability, engage one drive wheel. Only engage both wheels when driving conditions require.

ENGAGE ONLY WHEN STUCK

Driving with both motors engaged may cause failure

Hopper Steering Wheels:

The wheels at the hopper turn the unit. Use the specified lever on the hydraulic valve bank to operate.

Hydraulic cylinders raise and lower the wheels. Check valves lock the wheels, when they are raised.

IMPORTANT:

Do not extend the wheel cylinders fully.
Raising the hopper too high
may cause conveyor to upend.

Hydraulic Motor on Drive Box:

The conveyor belt is driven by hydraulics.



Fig 25 - Disengaged Drive Wheel



Fig 26 - Steering Wheels

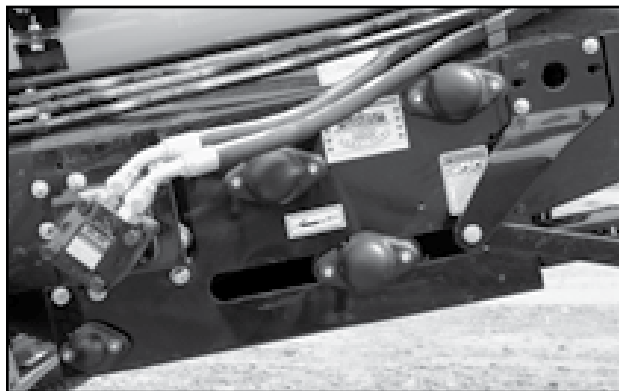


Fig 27 - Drive Box

Angle of Operation Indicator:

On the drive box, is a decal to assist in calculation of the operating angle.

Hold the end of a weighted string against the red arrow (above the Convey-All™ logo). Reference the graph and read where the string lies.



3618000004

Fig 30 - Angle of Operation Decal

2-5/16 Inch Ball Hitch (Optional):

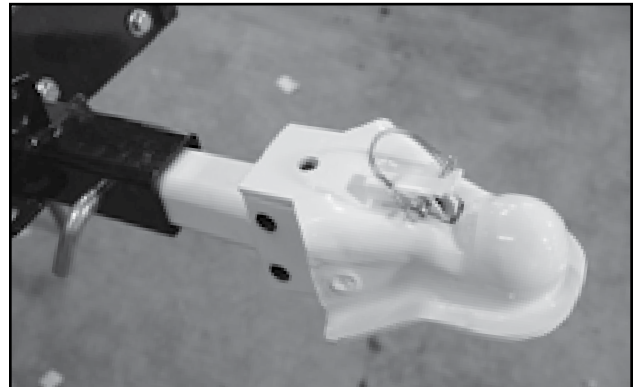


Fig 28 - 2-5/16 Ball Hitch

Hitch and Jack Storage Plate:

There is a plate mounted to the conveyor's undercarriage. This is where the Hitch and Jack may be stored, when not in use.



Fig 29 - Storage Plate

3.3 MACHINE BREAK-IN

There are no operational restrictions on the conveyor when used for the first time. Even though, it is recommended that the following mechanical items be checked:

Before Starting Work:

1. Read the conveyor and power unit operator's manuals.
2. Run the unit for half an hour to seat the conveyor belt and flashing around the hopper. It is normal for rubber from the flashing to be expelled out the discharge and form a pattern on the belt.

After Operating or Transporting for 1/2 hour:

3. Re-torque all the wheel bolts fasteners and hardware.
4. Check the conveyor belt tension and alignment. Adjust as required.
5. During the conveyors first few minutes of operation, check belt alignment to ensure preset alignment and tension does not vary under loaded conditions.
6. Check the flashing seal on the hopper. If any product comes out of the hopper around the flashing; stop the belt, loosen flashing mounting screws and adjust. Retighten anchor screws and try again. Repeat until no product is lost.
7. Check condition of all hydraulic lines, hoses and connections. Repair or replace any damaged system components.
8. Check that all guards are installed and working as intended.

After Operating For 5 Hours and 10 Hours:

Repeat steps 1 through 8 above.

Go to the normal servicing and maintenance schedule as defined in the Section 4: Service and Maintenance.

3.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the conveyor requires that each operator reads and understands the operating procedures and all related safety precautions. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining the good mechanical condition of the conveyor that this checklist is followed.

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

1. Check worksite. Clean up working area to prevent slipping or tripping.
2. Be sure that the battery has optimal charge.
3. Lubricate and service the machine as per the schedule outlined in the Section 4.2.
4. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.
5. Check that the conveyor belt is properly tensioned and aligned. Ensure it is not frayed or damaged.
Refer to Section 4.3.1 and 4.3.2
6. Be sure conveyor wheels are chocked.
7. Check that the discharge and hopper areas are free of obstructions.

NOTICE: Upending Hazard

Anchor or support conveyor during operation. When lower half of conveyor empties of material, weight balance transfers to the upper end of machine, which can cause upending.

3.5 ATTACHING TO TOW VEHICLE

The conveyor may be towed by a truck when transporting over long distances.



WARNING: Electrocution Hazard
Ensure enough clearance from overhead obstructions, power lines or other equipment.

1. Clear the working area of bystanders, especially small children.
2. If the conveyor is above a storage facility:
 - Raise the conveyor tube so the discharge spout clears the structure.
 - Use the mover kit, to drive the conveyor away.
 - Lower the tube to it's collapsed position.
3. Ensure that there is sufficient room and clearance to back up to the conveyor.

NOTICE: Upending Hazard

The machine is closely balanced. Do not lift unless there is downward weight on the hopper end to prevent upending.

4. The hitch and jack are removable. Install the jack.
5. Raise the hopper end of conveyor high enough to install the hitch.

Secure hitch with the anchor pin. Place the retainer before using hitch.

6. Align the tow vehicle's drawbar with the hitch of the conveyor while backing up.
7. Set the park brake before dismounting vehicle.
8. Raise the steering wheels, putting all the weight on the hitch.
9. Install the pin with its retainer clip, to connect the tow vehicle.
10. Secure the safety chain.

Reverse the above procedure when detaching.

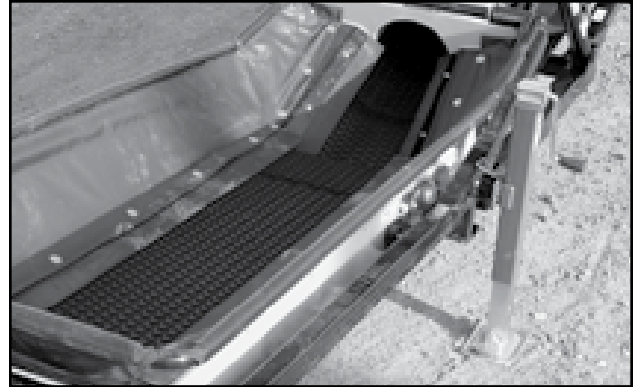


Fig 31 - Jack



Fig 32 - Hitch



Fig 33 - Ball Hitch (Optional)



Fig 34 - Attached to Tow Vehicle

3.6 CONVEYOR PLACEMENT

Follow this procedure when placing the conveyor into its working position:

1. Clear the area of bystanders, especially small children, before starting.
2. Transport the conveyor to the working area.
Refer to Section 3.9
3. Attach the jack. Use it to raise and support the hopper.
4. Detach the conveyor from the tow vehicle.



CAUTION: Safety Hazard
Remove hitch from conveyor to prevent interference and clear a tripping hazard.

5. Use the jack to lower the hopper to the ground.



WARNING: Electrocution Hazard
Ensure enough clearance from overhead obstructions, power lines or other equipment.

6. Remove the retainer clip, and manually engage one drive wheel on the conveyor's mover kit.
7. Start the conveyor's engine.
8. Lower the steering wheels.
9. Retract the jack, and store it.
10. Drive the conveyor into working position while it is in its lowered configuration.

NOTICE: High Wind Hazard

Do not operate or leave conveyor, fully raised, in high winds. Avoid damage to structures and equipment, by always lowering conveyor.



Fig 35 - Start Engine



Fig 36 - Steering Wheels



Fig 37 - Engage Drive Wheel

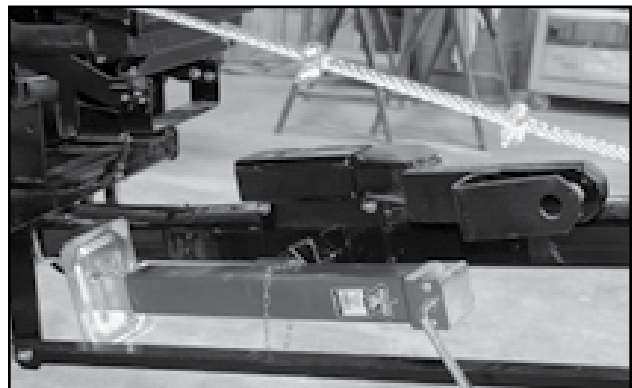


Fig 38 - Hitch and Jack Storage



WARNING: Pinch Point Hazard
As A-frame undercarriage raises or lowers,
pinching can occur.
Keep away from moving parts.

11. Use the hydraulics to raise the conveyor tube to working height.
12. Advance until the conveyor is in position:
 - the discharge spout is above the storage bin,
or
 - the hopper is in position for unloading.

IMPORTANT:

To prevent damage
to the conveyor tube and belt,
be sure it does not rest on any structure.

13. Raise the steering wheels, to lower the hopper to the ground.

NOTICE: Upending Hazard
Always check the weight of the hopper
end to prevent upending.

14. Stake or weigh down the hopper end to prevent upending when the machine is emptying.
15. Close valve (if equipped). to lock unit in position.
16. Chock the drive wheels

Note:

Chocks are not included with conveyor.

Reverse above procedure to remove from location.

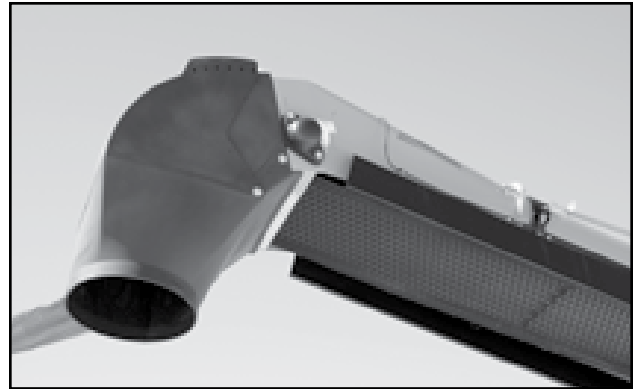


Fig 39 - Discharge Spout



Fig 40 - Hydraulic Valve to Lift Cylinder



Fig 41 - Chocked Wheels, Not Included with Conveyor

3.7 OPERATING ON SITE

When operating the conveyor, follow this procedure:

1. Clear the area of bystanders, especially small children, before starting.
2. Review the Pre-Operation Checklist before starting. Refer to Section 3.3
3. Review the Workplace Hazards schematic and use extra care when inside the hazard area. Keep all spectators and bystanders out of this area.

Should anyone enter this area, stop the machine immediately.

4. Check that all guards are in place and working as intended.
5. Back the truck/tender into position for loading or unloading.

NOTICE: High Wind Hazard

Do not operate or leave conveyor, fully raised, in high winds. Avoid damage to structures and equipment, by always lowering conveyor.



Fig 42 - Filling the Hopper

3.7.1 Starting Conveyor:

6. Move throttle to its idle position.
7. Close the choke if the engine is cold or if the unit has not been run for a while.
8. Turn the ignition key clockwise to start the engine. Release the key when the engine starts.
9. Run for 2-3 minutes to allow the engine to warm.
10. Increase engine speed to full throttle.
11. Turn on the conveyor belt using the hydraulic valve lever.
12. Start the flow of material and unload into hopper.

3.7.2 Stopping Conveyor:

1. Stop unloading. Wait for conveyor belt to empty.
2. Stop the conveyor belt.
3. Move the throttle to idle position.
4. Turn off engine and remove ignition key.

3.7.3 Emergency Stopping:

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

See to the emergency. Correct before resuming work.

3.7.4 Restarting after Emergency Stop:

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

Since start-up torque loads are much higher than normal when belt is full, restart at a low engine speed.

Remove as much product from the hopper as possible.

3.7.5 Unplugging:

In unusual moisture, crop or material conditions, the machine can plug. When unplugging, follow this procedure:

1. Stop the conveyor belt.
2. Stop the engine.
3. Lock-out, tag-out the controls.
4. Remove material from discharge and hopper area.
5. Reposition unit if discharge area plugs due to lack of clearance.



Fig 43 - Filling CST on Site

3.8 OPERATING HINTS:

- Keep the hopper full for maximum capacity. Most efficient results will be obtained when flow of incoming material is directed to the front (closer to the tube) of the hopper.
- Always listen for any unusual sounds or noises. If any are heard, stop the machine and determine the source. Correct the problem before resuming work.
- Do not run the machine for long periods of time with no material on the belting. This increases the wear. Try to run only when moving material.
- Do not support discharge end directly on the storage facility.
- Stake the hopper or weigh it down to prevent up ending.
- For better performance, use a transfer conveyor or drive over conveyor, to move product from the storage facility/truck to conveyor hopper.
- The hopper is designed with flashing to seal the junction of the belt with the sides of the hopper. It must be kept in good condition to prevent the material from "leaking" out of the hopper. Replace flashing if "leakage" occurs.
- Belt Speed:
The best results are obtained when the drive is set to provide a belt speed of 600 ft./min.

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

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

- Belt Tension:
There may be a rapid decrease in belt tension during the first few hours of operation until the belt has worn in.

The correct operating tension is the lowest tension at which the belt will not slip under peak load conditions.

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

Note:

The lower the angle,
the greater the capacity.



Fig 44 - Full Hopper

3.9 TRANSPORTATION

Convey-All™ Transloading Conveyors are designed to be easily and conveniently moved from place to place.

When transporting the unit, follow this procedure:

1. Refer to Section 3.5 to attach conveyor to tow vehicle.

NOTICE: Equipment Damage Likely
Always disengage drive wheels before transport. Hydraulic motors will be damage if driven at highway speeds.

2. Ensure the conveyor unit is ready for transport:
 - It is in its fully collapsed position.
 - Drive wheels are disengaged, and retainer clip is fastened in place.
 - Hydraulic lines are closed.
 - Hitch is attached using anchor pin, retainer and safety chain.
3. Be sure all bystanders are clear of the machine.
4. Hitch the conveyor to the tow vehicle. Secure the safety chain
5. If equipped with transport lights, connect the wiring harness across the hitch.

Secure with clips, zip ties or tape. Provide slack for turning.

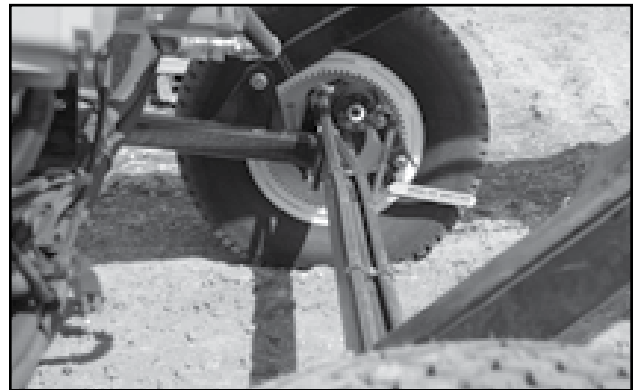


Fig 45 - Disengage Drive Wheels

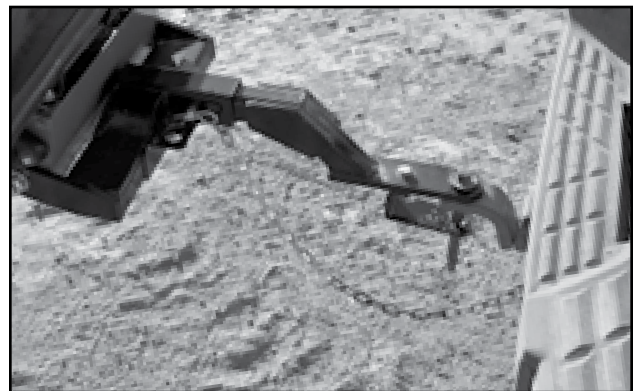


Fig 46 - Hitch Attached to Tow Vehicle

6. Raise the jack, remove it and store.
7. Remove chocks from around conveyor wheels.
8. Ensure the SMV (Slow Moving Vehicle) emblem, all lights and reflectors required by local highway and transport authorities are in place. They must be clean and clearly visible by all overtaking and oncoming traffic.
9. Do not allow riders on the conveyor.
10. Slowly pull away from the working area. Be sure everything is connected and nothing is hanging.
11. Keep to the right and yield the right-of-way to allow faster traffic to pass. Drive on the road shoulder, if permitted by law.
12. Never travel across slopes of more than 20°. It is better to go straight up and down.
13. It is not recommended that the machine be transported faster than 32km/h (20mph).

Road Speed	Weight of fully equipped or loaded implement(s) relative to weight of towing machine
up to 32km/h (20mph)	1 to 1, or less
up to 16km/h (10mph)	2 to 1, or less
Do not tow	More than 2 to 1

Table 1 - Road Speed

14. During periods of limited visibility, use pilot vehicles or add extra lights to the machine.
15. Always use hazard flashers on the tow vehicle when transporting unless prohibited by law.



Fig 47 - Hitch and Jack Storage Plate



Fig 48 - Remove Chocks, not included with conveyor

3.10 STORAGE

After the season's use, the conveyor should be thoroughly inspected and prepared for storage.

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

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

1. Remove all residual material from hopper and tube.
 2. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
 3. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
 4. Inspect all hydraulic hoses, fittings, lines, couplers and valves.
 - Tighten any loose fittings.
 - Replace any hose that is badly cut, nicked or abraded or is separating from the crimped end of the fitting.
 5. Lubricate all grease fittings. Refer to Section 4.2
 6. Check the condition of the conveyor belt. Replace if necessary.
 7. Remove the battery.
 - Be sure it is fully charged.
 - Store it inside.
 - Do not sit the battery on a cold, concrete floor.
 8. Touch up all paint nicks and scratches to prevent rusting.
 9. Select an area that is dry, level and free of debris.
- If the machine cannot be placed inside, cover the engine with a waterproof tarpaulin and tie securely in place.
10. Do not allow children to play on or around unit.

IMPORTANT:

If conveyor has been stored for over 6 months, run engine for 2-3 minutes. Then, change oil, while still warm, to remove any condensation.



Fig 49 - Collapsed Position

This page intentionally left blank

Section 4: SERVICE AND MAINTENANCE



Servicing Safety

- Review the Operator's Manual and all safety items before working with, maintaining or operating the machine.
- Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
- Place all controls in neutral. Stop engine. Wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- 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 hydraulic circuit before servicing or disconnecting from tractor.
- Before applying pressure to a hydraulic system, make sure all components are tight and that 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.
- Before resuming work, install and secure all guards when maintenance work is completed.
- Keep safety decals clean. Replace any decal that is damaged or not clearly visible.

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

4.1 FLUIDS AND LUBRICANTS

Fuel and Engine Oil:

Refer to the engine manual for specific information.
The fuel tank capacity is 57 Litres (15 US Gal.)

Grease:

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

Hydraulic Oil:

Use an ISO grade 36 hydraulic oil for all operating conditions (Hydrex MV36 or comparable).
The oil reservoir capacity is: 95 Litres (25 US Gal.)



3622000003

Storing Lubricants:

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants.

Store them in an area protected from dust, moisture and other contaminants.

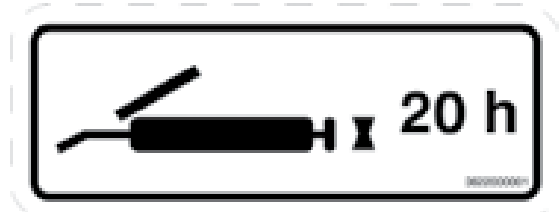
4.1.1 Greasing:

Use the Service Record provided on page 4-15, to keep a record of all scheduled maintenance.

1. Use a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing, to avoid injecting dirt and grit.
3. All bearings are sealed and greasable. They require minimal grease.

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

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



3622000001

4.2 SERVICING INTERVALS

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

Check bearings for wear daily.

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

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

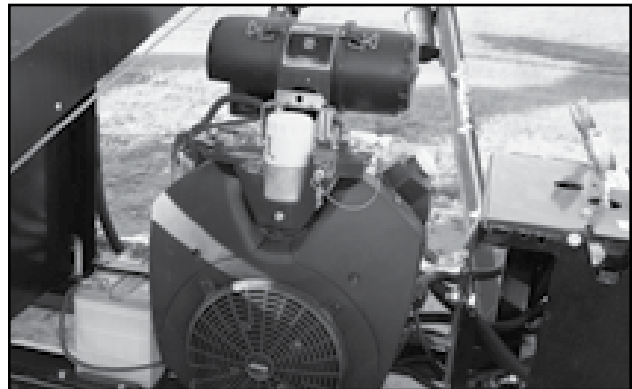


Fig 50 - Kohler Gas Engine

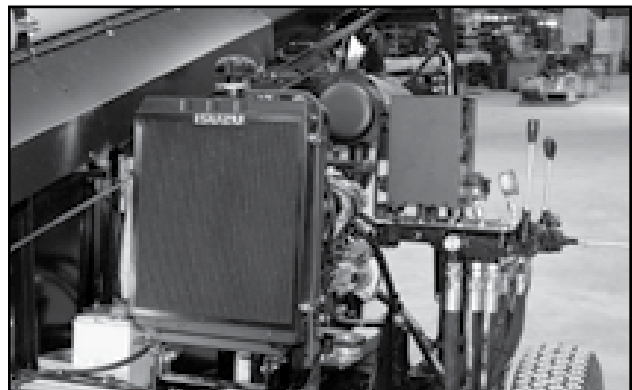


Fig 51 - Diesel Engine

4.2.1 After 10 Hours or Daily:

1. Check fuel level. Add as required.
2. Check engine oil level. Add as required.
3. Check air filter.

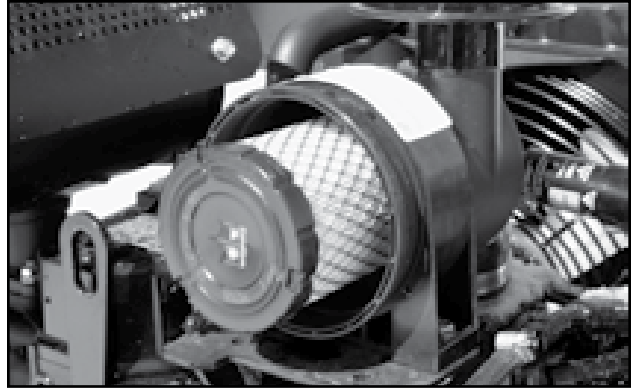


Fig 52 - Donaldson Air Filter

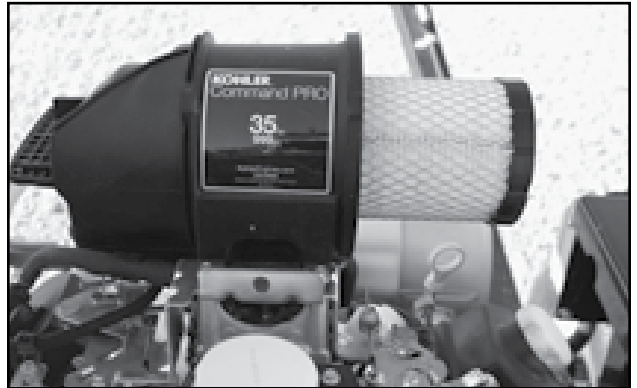


Fig 53 - Kohler Air Filter, Cover Removed

4. Check oil level in hydraulic reservoir.
Add as required.



Fig 54 - Fuel Tank and Hydraulic Oil Reservoir

5. Grease hopper roller bearings.



Fig 55 - Hopper Roller Bearings

6. Grease transition roller bearings



Fig 56 - Transition Roller Bearings

7. Grease drive box assembly bearings.

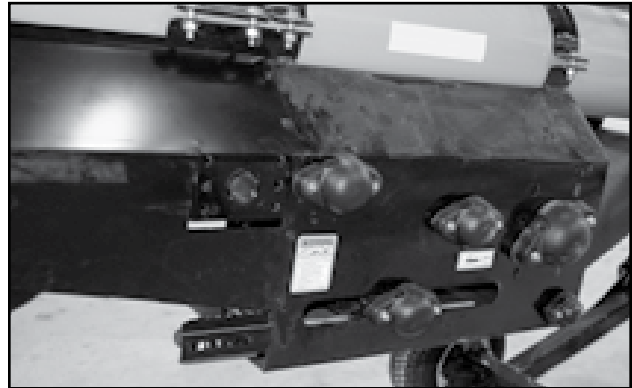


Fig 57 - Drive Box Roller Bearings

8. Grease discharge roller bearings.

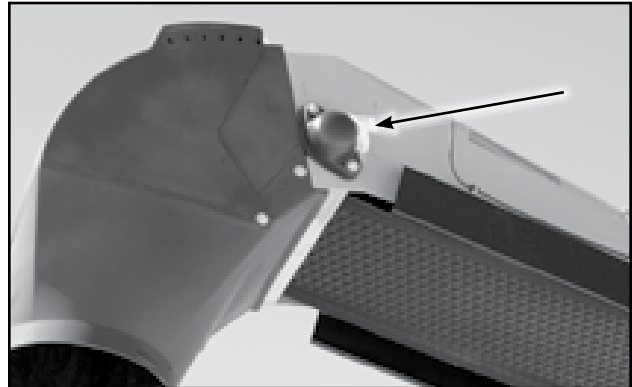


Fig 58 - Discharge Roller Bearings

4.2.2 After 50 Hours or Weekly:**9. Check the conveyor belt tension.**

Watch the tension more often while breaking-in the conveyor, because the belt may stretch. Refer to Section 4.3.1

Note:

A properly tensioned belt will not slip when in operation.

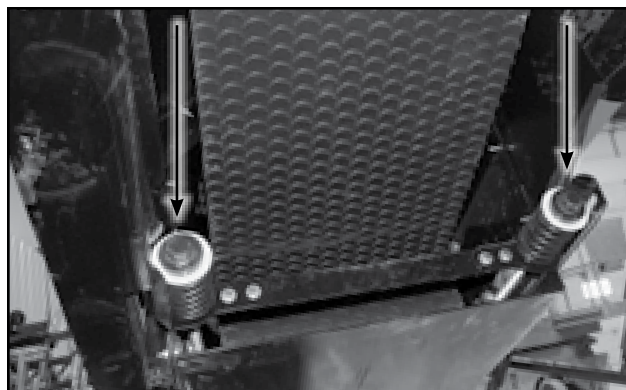


Fig 59 - Tension Bolts, Below Drive Box

10. Check conveyor belt alignment.

Watch the alignment more frequently during the first 10 hours of operation. It usually seats itself and can be checked weekly after that. Refer to Section 4.3.2

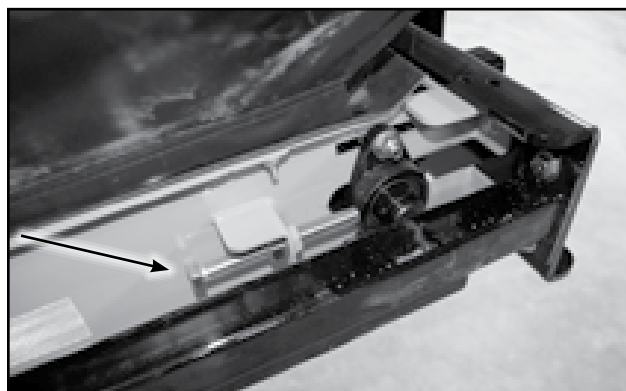


Fig 60 - Adjustment Bolts

11. Check the condition of the rubber, hopper flashing. Be sure it still seals the hopper to prevent leaking.

If any product comes out of the hopper around the flashing, loosen flashing mounting screws and adjust. Retighten anchor screws and try running the conveyor again. Repeat until no grain is lost.

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

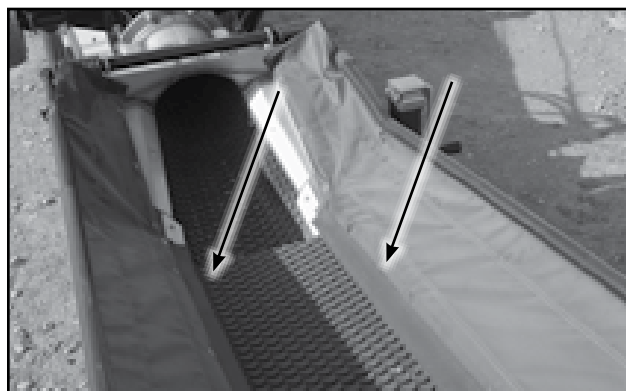


Fig 61 - Hopper Flashing

12. Check for wearing teeth on the sprockets of the drive wheels.**13. Oil hydraulic drive coupler.**

Fig 62 - Conveyor Belt Drive Motor

4.2.3 After 200 hours or Annually:

14. Change engine oil and filter.
 - a. Dipstick
 - b. Fill Plug
 - c. Oil Filter
15. Check radiator fluid level.
(if equipped with diesel engine)

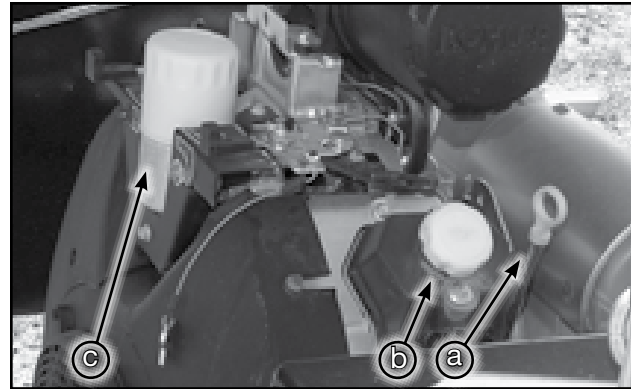


Fig 63 - Gas Engine

16. Change in-line fuel filter.
17. Change engine air filter.

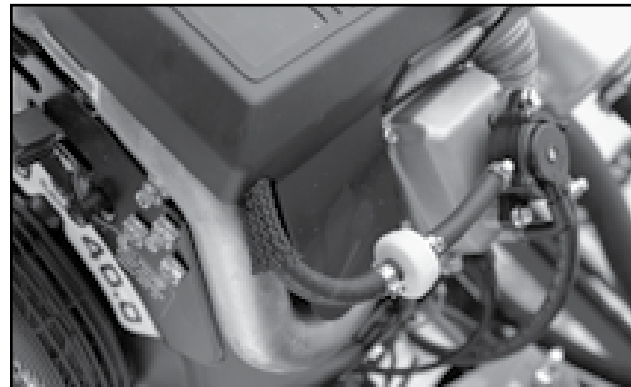


Fig 64 - In-line Fuel Filter

18. Change hydraulic system oil and filter.

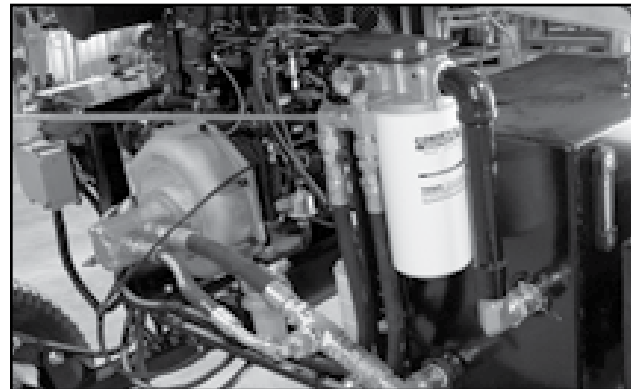


Fig 65 - Hydraulic Filter

19. Grease steering wheel axle bushings and cylinder.



Fig 66 - Steering Wheel Axle Bushings

20. Grease steering wheel lift cylinders.



Fig 67 - Steering Wheel Lift Cylinder

21. Grease conveyor lift cylinder.

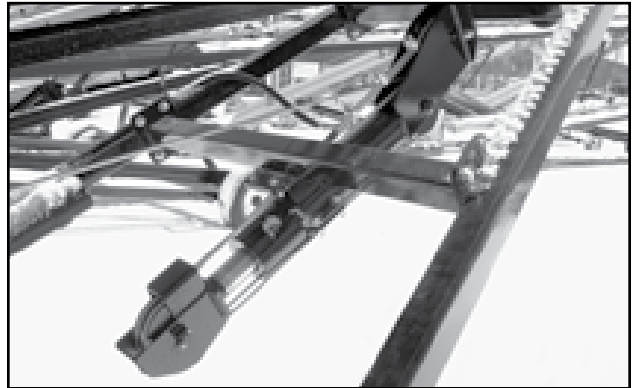


Fig 68 - Conveyor Lift Cylinder

22. Grease upper lift bearings.



Fig 69 - Upper Lift Bearings

23. Check for tube straightness.
Adjust eyebolt if required.

24. Repack wheel bearings.

25. Wash the machine



Fig 70 - Straight Conveyor Tube

4.3 MAINTENANCE PROCEDURES

This section contains more detailed information regarding the conveyor belt and engine care.

Refer to the engine manual for specifics on your particular model.

4.3.1 Conveyor Belt Tension:



WARNING: Rotating Belt Hazard
If tension is adjusted while belt is moving, avoid contact with belt and rollers.

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

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

Use the drive box tension bolts to adjust the belt.

The tension bolts have yellow washers sandwiched between the bolt and spring.

Reference the tension indicator on the outside of each spring. Line up the yellow washer with the points inside the indicator window. Using these points, the springs will measure 3-3/4" (95 mm).

Note:

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

IMPORTANT:

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

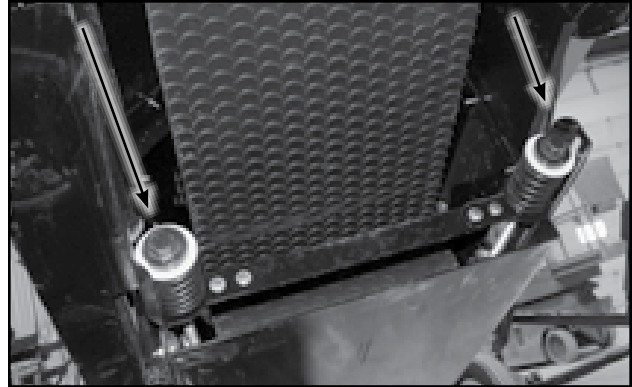


Fig 71 - Spring Tension Bolt

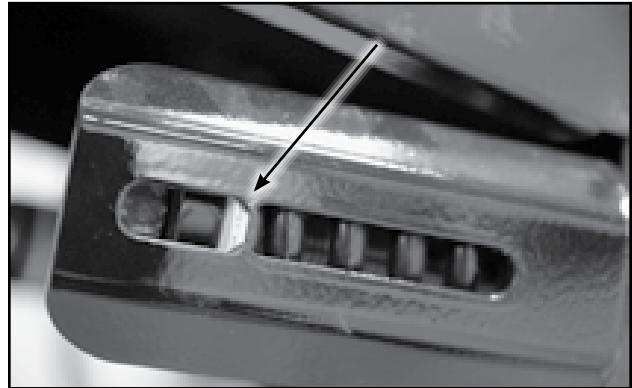


Fig 72 - Tension Indicator

4.3.2 Conveyor Belt Alignment:

The belt is properly aligned when it rotates in the centre of the rollers on both ends and in the drive box housing. As with tensioning, the alignment should be checked daily, or as required.

1. Rotate the conveyor belt a half revolution when the belt is new and check the position of the belt on the drive, discharge and hopper rollers.

Note:

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

2. Loosen the hopper roller bearing housing bolts.
3. Loosen the lock nut, on the adjustment bolt.
4. Tighten or loosen the adjustment bolt by a 1/4 turn to 2 turns.
5. Tighten the housing bolts.
6. Run a couple of revolutions and check again.
7. Repeat steps 2 to 5, until the belt is centred.

Check frequently during the first few minutes of operation and then several times during the first 10 hours.

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



Fig 73 - Adjustment Bolt on Open Transition Hopper

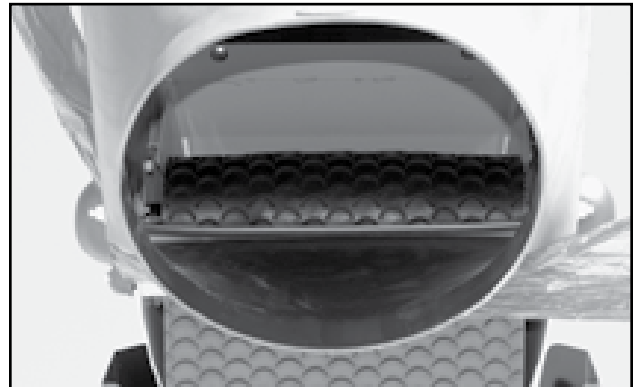


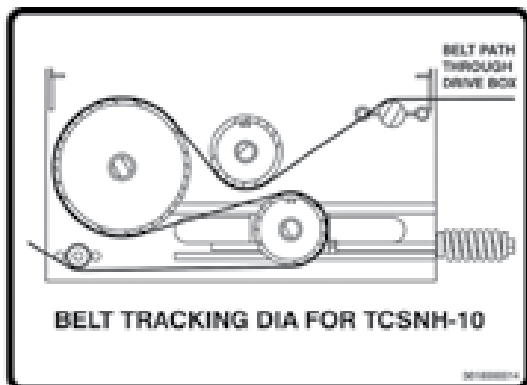
Fig 74 - Inside Discharge Spout

4.3.3 Conveyor Belt Replacement:

1. Rotate the conveyor belt until the Alligator Lacing is positioned under the tube, inside the wind guard, and is accessible.
2. Rotate the tension bolt in the drive box to their loosest position.
3. Pull all the slack to the lacing area.
4. Remove the lacing pin and open the belt.
5. Attach one end of the replacement belt to the end of the old belt which is hanging closest to the hopper.
6. Pull the end of the old belt which is coming from the discharge spout. The new belt will follow and be threaded into place.

Note:

This is how the belt is threaded through the drive box:



3618000014

7. Disconnect the old belt.
8. Connect the ends of the new belt.
 - Place the pin in the Alligator Lacing.
 - Crimp the ends of the pin.
9. Set the belt tension. Refer to Section 4.3.1
10. Set the belt alignment. Refer to Section 4.3.2.

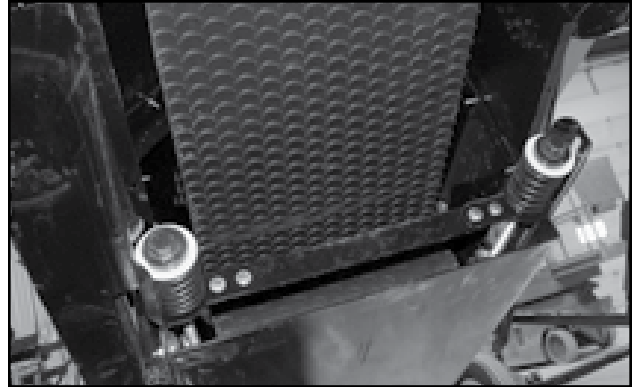


Fig 75 - Spring Tension Bolts

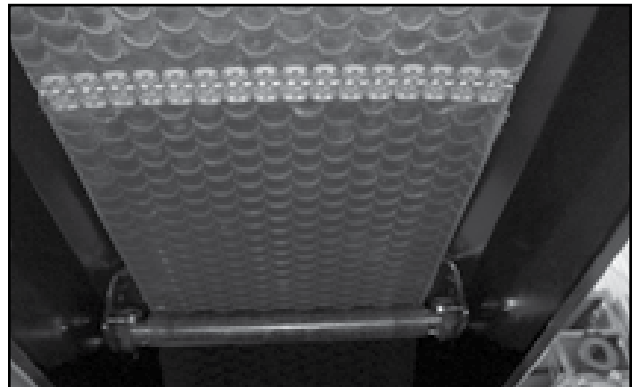
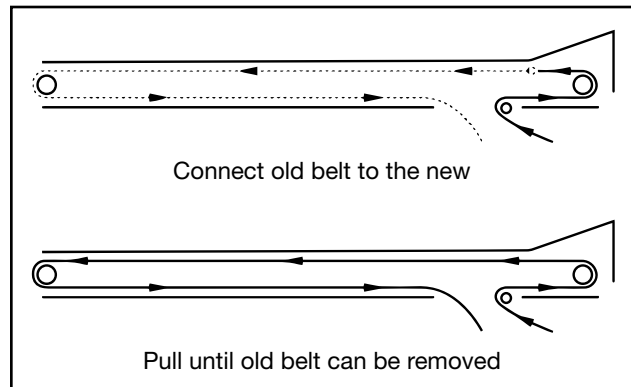


Fig 76 - Conveyor Belt Seam, as Seen in Hopper



Connect old belt to the new

Pull until old belt can be removed

Fig 77 - Threading the Belt

4.3.4 Change Engine Oil and Filter

1. Review the Operator's Manual for the engine.



WARNING: Rotating Part Hazard
Turn off engine. Lock out power and wait for belts to stop moving.



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

Note:

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

2. Place a pan under the drain plug.

The capacity of the tank is 57 Litres (15 US Gal.)

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

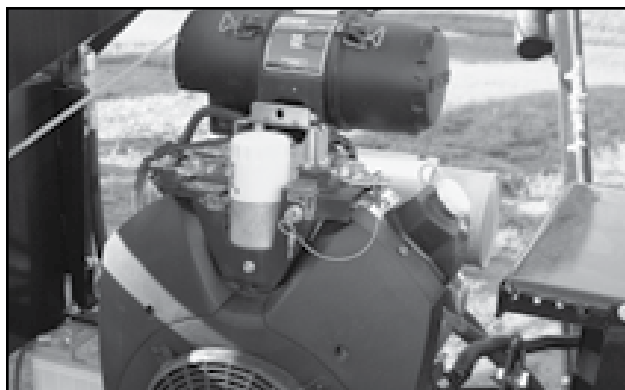


Fig 78 - Kohler Gas Engine

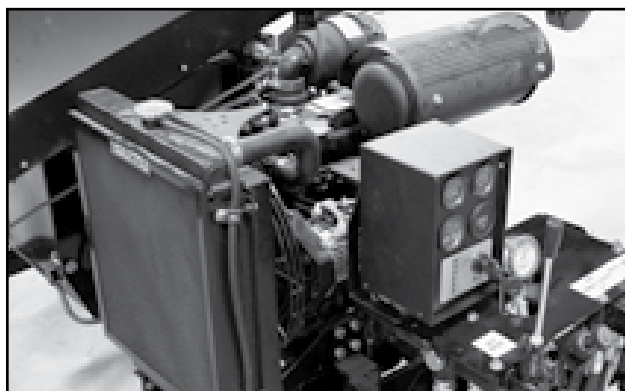


Fig 79 - Isuzu Diesel Engine

4.3.5 Change In-Line Fuel Filter:

1. Review the operator's manual for the engine. Specific instructions may vary between engine models.



WARNING: Rotating Part Hazard
Turn off engine/motor. Disconnect power source and wait for belts to stop moving.



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

2. Place a pan under the filter to catch any spilled fuel.
3. Clamp off the line on each side of the filter to prevent the loss of any fuel.
4. Loosen the hose clamps on either side of the fuel filter.
5. Remove old fuel filter.
6. Install new filter and tighten hose clamps to their specified torque.
7. Remove catch pan and dispose of any spilled fuel in an environmentally safe manner.
8. Start engine and run for 1 to 2 minutes to check for leaks at the fuel filter. Re-tighten hose clamps if any leakage occurs.

4.3.6 Clean/Change Air Filter

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

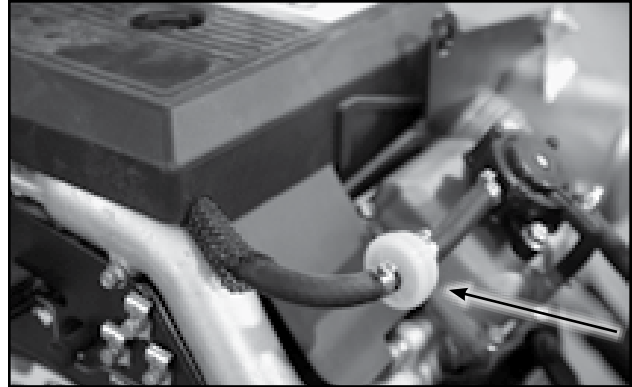


Fig 80 - In-Line Fuel Filter, Gas Engine



Fig 81 - In-Line Fuel Filter, Diesel Engine

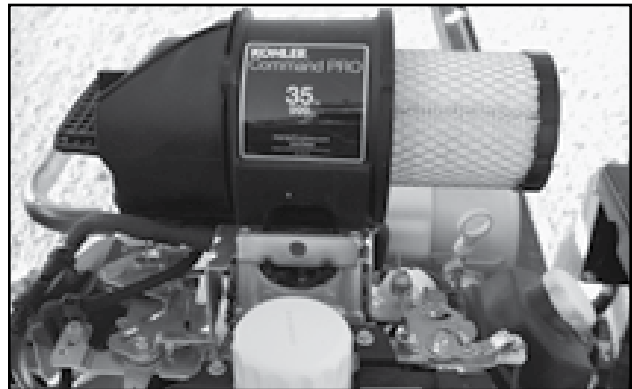


Fig 82 - Kohler Air Filter, Cover Removed

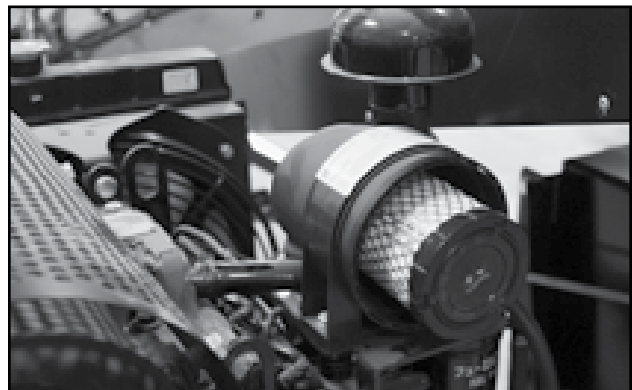


Fig 83 - Donaldson Air Filter, Cover Removed

4.3.7 Changing Hydraulic Oil and Filter:

1. Review the Operator's Manual for the engine.
2. Place all controls in neutral, stop engine and remove ignition key before maintaining.



WARNING: Hot Liquid
Engine and hydraulics must to cool before changing the oil. Hot oil can cause burns if it contacts exposed skin.

3. Allow the engine to cool before changing the oil.

Note:

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

4. Place a large pan, pail or tank under the drain plug.

The reservoir capacity is: 95 Litres (25 US Gal.)

5. Remove the drain plug and allow the oil to drain for 10 minutes.
6. Install and tighten the drain plug.
7. Dispose of the used oil in an approved container and manner.
8. Place a pan under the filter to catch any spilled oil.
9. Remove hydraulic oil filter.
10. Apply a light coat of oil to the O-ring and install the replacement filter. Snug up by hand and then tighten another 1/2 turn.
11. Fill the reservoir with specified oil.
12. Run the engine for 1-2 minutes and check for oil leaks.
13. If leaks are found around the drain plug or filter, tighten slightly. Repeat Step 10.
14. Check oil level. Top up as required.



Fig 84 - Hydraulic Oil Filter

This page intentionally left blank

4.4 SERVICE RECORD

See Section 4.3 for service. The Servicing Intervals 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.

Print this page to continue record.

<div style="display: flex; justify-content: space-between;"> <div style="transform: rotate(-45deg); transform-origin: left top; white-space: nowrap;">Maintenance</div> <div>Hours</div> </div>													
		Served By											
10 Hours or Daily													
Check Fuel Level													
Check Engine Oil Level													
Clean Air Filter													
Check Hydraulic Oil Level													
Grease Hopper & Transition Roller Bearings													
Grease Drive Box Roller Bearings													
Grease Discharge Roller Bearings													
50 Hours or Weekly													
Check Conveyor Belt Tension													
Check Conveyor Belt Alignment													
Check Hopper Flashing													
Check For Wearing Teeth on Drive Wheels													
Oil Hydraulic Drive Coupler													
200 Hours or Annually													
Change Engine Oil and Filter													
Check Radiator Fluid Level (Diesel Engine)													
Change In-Line Fuel Filter and Air Filter													
Change Hydraulic System Oil and Filter													
Grease Steering Wheel Axle Bushings													
Grease Steering Wheel Lift Cylinder													
Grease Conveyor Tube Lift Cylinder													
Grease Upper Lift Bearings													
Check Tube Straightness													
Repack Wheel Bearings													
Wash Machine													

4.5 ORDERING PARTS

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

To get your parts promptly the following information will be required:

- The part name and number
- Your Name, Address, Town, Province/State, Country
- Complete information for shipping

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

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

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

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

Section 5: TROUBLESHOOTING

In this section, is a list of common problems which may be encounter. Their causes and quick solutions are also listed.

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

Problem

Possible Cause	Possible Solution
<i>Engine won't start</i>	
Low battery	Recharge or replace
No fuel	Refuel
Cold engine	Open choke
Air filter dirty	Clean or replace the air filter
<i>The engine bogs down or is labouring</i>	
not enough power	Open the gate to unload more product. This allows the governor to torque and engage.
Hopper flashing too tight	Adjust to loosen the flashing
<i>Conveyor belt doesn't turn or is slipping</i>	
Hopper flashing may be stuck to belt, because it is running dry and rubber is heating up	Turn off unit! Manually peel flashing up and off hopper. Then run dry product through to create barrier between flashing and belt
Conveyor belt loose	Tighten and align
Conveyor belt loose because it has stretched	Shorten belt
Conveyor belt frozen to tube from operating in high humidity conditions in extreme cold	Remove conveyor from area of high humidity and continue to run empty so the belt dries prior to freezing
No power	Start engine, increase speed to maximum RPM
Seized bearing	Check all bearings, Replace any that are rough or seized
Belt/roller is jammed	Check for sticks, stones, other objects jammed in belt drive area and remove
Set screw (relief valve) on Dtent on control valve on belt drive valve isn't set correctly	Sweet spot is to turn the set screw all the way in, then turn back 1-1/2 turns. Turning back/out increases volume of flow, turning in increases pressure.

Problem - cont'd

Possible Cause	Possible Solution
<i>Conveyor belt doesn't turn or is slipping, cont'd</i>	
Hydraulic motor on drive roller may be damaged	Hydraulic motor may need to be replaced
<i>Conveyor belt won't align</i>	
Roller lagging may be worn	Replace roller or have it re-lagged
<i>Conveyor Belt Fraying</i>	
Belt not aligned	Align and adjust tension
<i>Product leakage</i>	
Product may be getting under the belt at the hopper, traveling up inside the belt and leaking off delivery end	Replace hopper flashing
<i>Low capacity</i>	
Conveyor belt not tight enough	Tighten conveyor belt
Conveyor belt not pinched enough	Inside drive box there is a drive roller and pinch roller. Be sure the belt is snug between both rollers.
Conveyor angle exceeds 30 degrees	Reposition with a lower tube slope
<i>Belt is slowing down</i>	
Problem with 2 stage pump	Check flow of the pumps. Replacement of entire pump may be needed
<i>No hydraulic flow</i>	
Hydraulic valve closed or plugged	Open hydraulic valve
	Clean or replace hydraulic valve
Hydraulic pump may be damaged	Check hydraulic pump. Replace if necessary
Hydraulic pressure may be low, check gauge. It should be in 2000 lb range	Check hydraulic pump. Replace if necessary
<i>Drive wheels don't work</i>	
Wheels may not be engaged	Remove retainer clip and engage drive mechanism
<i>Steering axle keeps sinking to the ground</i>	
Leak in check valve or cylinder	Replace cartridge in check valve, or replace seals in cylinder

Section 6: SIGN-OFF FORM

Convey-All™ follows the general Safety Standards specified by the American Society of Agricultural Engineers (ASAE), and the Occupational Safety and Health Administration (OSHA). Anyone who will be operating and/or maintaining the unit must read and clearly understand all Safety, Operating and Maintenance information presented in this manual.

Do not operate, or allow anyone else to operate, this equipment until this document has been read. Review this information annually, before the season start-up.

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

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

[illegible]

This page intentionally left blank

Section 7: REFERENCE

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

Specifications and measurements are subject to change without notice.

7.1 SPECIFICATIONS

Model	Type of Under-Carriage	Tube Diameter	Belt Width	Axle Width	Transport Height	Transport Length	Gas Power	Diesel Power
1635-TL	A-Frame	10"	16"	8' 4"	9' 7"	43' 9"	40hp	38.9hp
1645-TL	A-Frame	10"	16"	8' 4"	11' 5"	53' 7"	40hp	38.9hp
1652.5-TL	A-Frame	10"	16"	8' 4"	12' 10"	60' 8"	40hp	38.9hp

Table 2 - Specifications

7.2 WORKING MEASUREMENTS

Model	20°		25°		30°	
	Discharge Height	Length	Discharge Height	Length	Discharge Height	Length
1635-TL	10' 7"	40' 9"	14'	39' 10"	17' 4"	38' 4"
1645-TL	14' 5"	46'	18' 8"	44' 8"	22' 10"	43'
1652.5-TL	17'	53'	21' 10"	51' 6"	26' 7"	49' 6"

Table 3 - Working Measurements

7.3 BOLT TORQUE

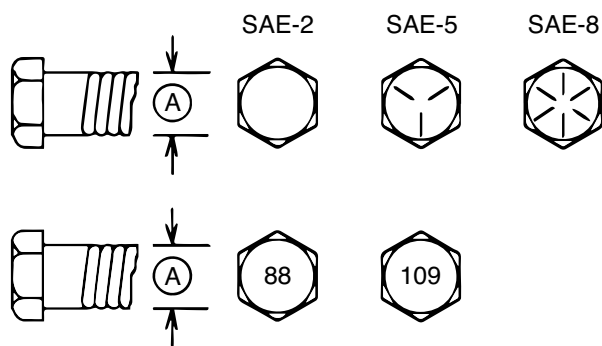
The tables shown below give correct torque values for various bolts and capscrews. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

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

Table 4 - English Torque

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

Table 5 - Metric Torque



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

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

This page intentionally left blank

CONVEY-ALL™

CONVEY-ALL INDUSTRIES INC.
130 CANADA STREET
WINKLER, MANITOBA R6W 0J3
CANADA

www.convey-all.com
conveyors@convey-all.com

TF: (800) 418-9461
PH: (204) 325-4195
FX: (204) 325-8116