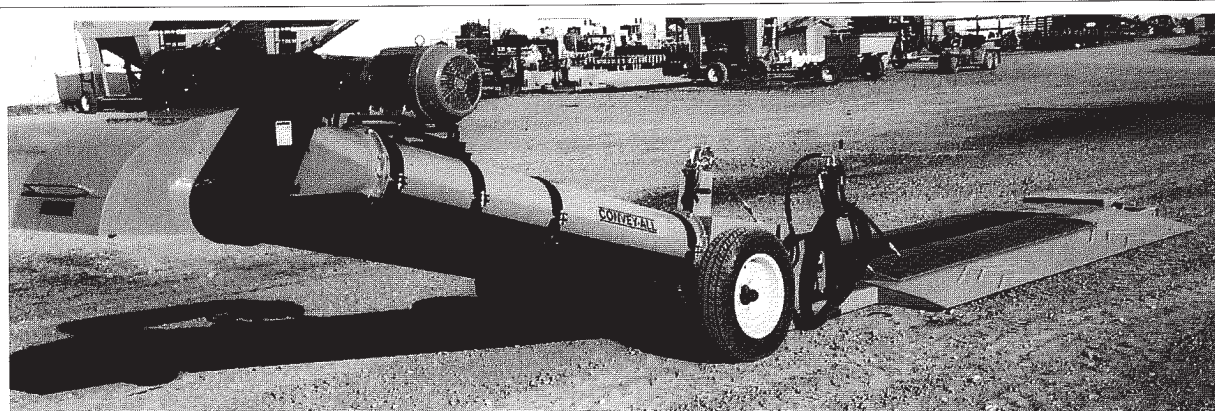
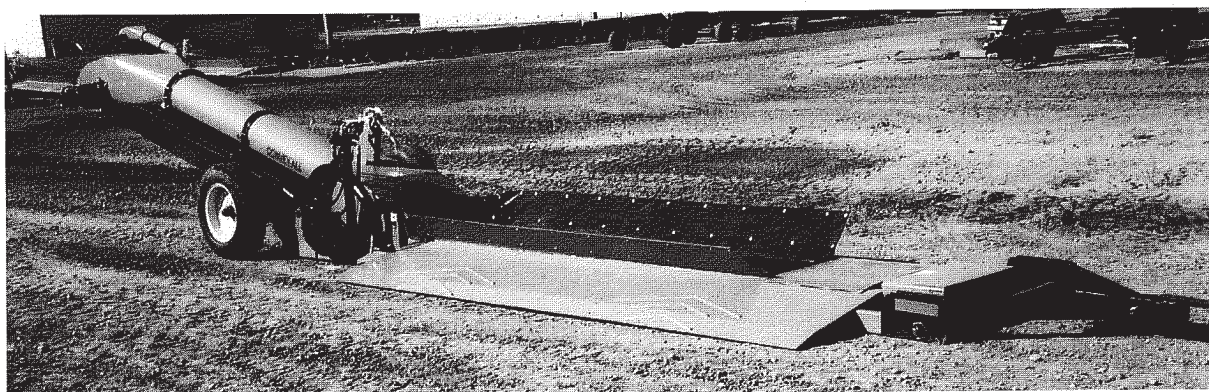


# CONVEY-ALL®



Electric



Hydraulic

## DRIVE OVER CONVEYOR OPERATOR'S MANUAL

### HYDRAULIC AND ELECTRIC MODEL DOSNH 1426

## 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., Box 2008, 130 Canada St., Winkler, Manitoba, R6W 4B7.**

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**

# CONVEY-ALL DRIVE OVER CONVEYOR

## WARRANTY REGISTRATION FORM & INSPECTION REPORT

### WARRANTY REGISTRATION

This form must be filled out by the dealer and signed by both the dealer and the customer at the time of delivery.

Customer's Name \_\_\_\_\_

Dealer Name \_\_\_\_\_

Address \_\_\_\_\_

Address \_\_\_\_\_

City, State/Prov., Code \_\_\_\_\_

City, State/Prov., Code \_\_\_\_\_

Phone Number ( \_\_\_\_ ) \_\_\_\_\_

Conveyor Model \_\_\_\_\_

Application

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

☐ Private  
☐ Commercial

Delivery Date \_\_\_\_\_

### DEALER INSPECTION REPORT

- \_\_\_\_\_ Licensed Electrician Provides Power
- \_\_\_\_\_ All Fasteners Tight
- \_\_\_\_\_ Drive System Rotates Freely
- \_\_\_\_\_ Drives Aligned and Tensioned
- \_\_\_\_\_ Belting Moves Freely
- \_\_\_\_\_ Check Belting Tension and Alignment
- \_\_\_\_\_ Lubricate Machine
- \_\_\_\_\_ Check Tire Pressure

### SAFETY

- \_\_\_\_\_ All Guards and Shields Installed and Secured
- \_\_\_\_\_ All Safety Signs Installed and Legible
- \_\_\_\_\_ Reflectors and SMV Clean
- \_\_\_\_\_ Review Operating and
- \_\_\_\_\_ Safety Instructions

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

Date \_\_\_\_\_

Dealer's Rep. Signature \_\_\_\_\_

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

Date \_\_\_\_\_

Owner's Signature \_\_\_\_\_

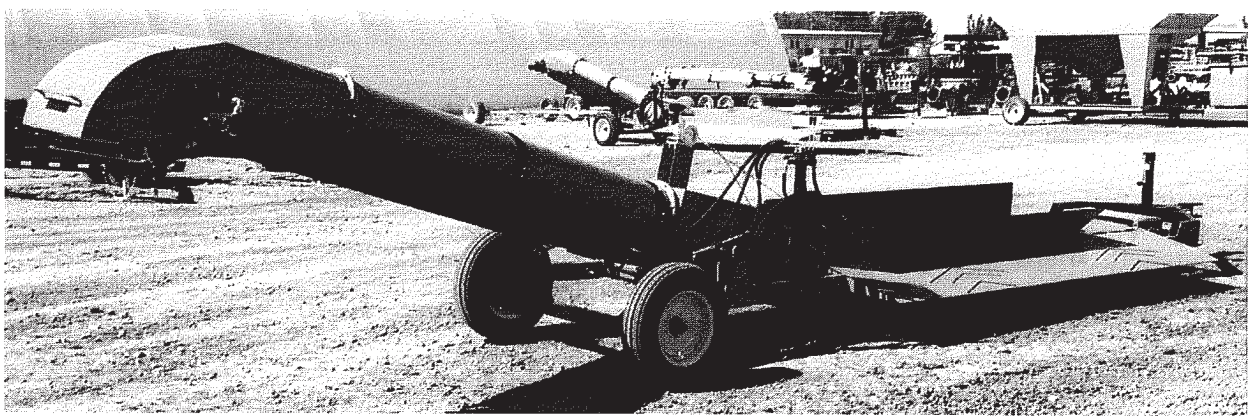
WHITE	YELLOW	PINK
CONVEY-ALL	DEALER	CUSTOMER



# SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Convey-All Drive Over Conveyor when ordering parts or requesting service or other information.

The serial number plate is located where indicated. Please mark the number in the space provided for easy reference.



**Hydraulic**



**Electric**

## SERIAL NUMBER LOCATIONS (TYPICAL)

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

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

Production Year \_\_\_\_\_



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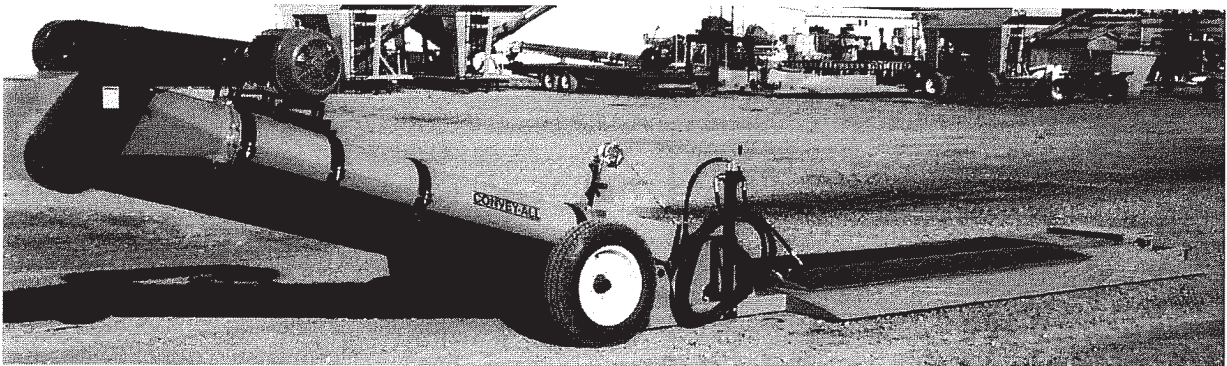
# 1 INTRODUCTION

Congratulations on your choice of a Convey-All Drive Over Conveyor to complement your agricultural operation. This equipment has been designed and manufactured to meet the needs of the discriminating buyer for the efficient moving of grain, pulse crops, fertilizer or any other granular material.

Safe, efficient and trouble free operation of your Drive Over Conveyor requires that you and anyone else who will be operating or maintaining the Conveyor, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.



Hydraulic



Electric

MODEL DOSNH 1426

This manual covers all the Drive Over Conveyors made by Convey-All. Use the Index or Table of Contents as a guide when searching for specific information.

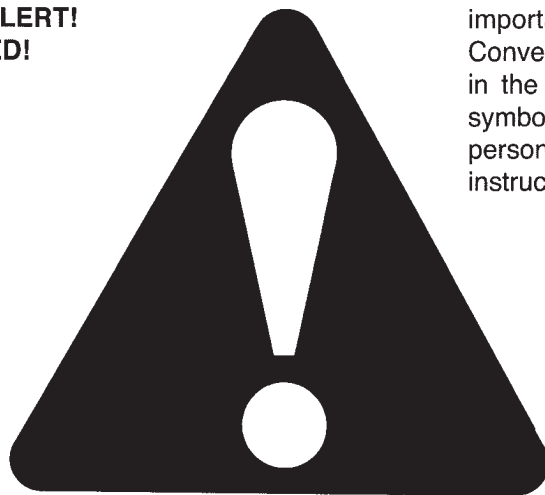
Keep this manual handy for frequent reference and to pass on to new operators or owners. Call your Convey-All distributor or dealer if you need assistance, information or additional copies of the manual.

**OPERATOR ORIENTATION** - The directions left, right, front and rear, as mentioned throughout the manual, are as seen from the tractor driver's seat and facing in the direction of travel when the unit is being towed.

## 2 SAFETY

### SAFETY ALERT SYMBOL

This Safety Alert symbol means  
**ATTENTION! BECOME ALERT!**  
**YOUR SAFETY IS INVOLVED!**



The Safety Alert symbol identifies important safety messages on the Convey-All Drive Over Conveyor and in the manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

#### 3 Big Reasons

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

#### SIGNAL WORDS:

Note the use of the signal words **DANGER**, **WARNING** and **CAUTION** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:

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

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

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

If you have any questions not answered in this manual or require additional copies of the manual or the manual is damaged, please contact your dealer or Convey-All Industries Inc., Box 2008, 130 Canada St., Winkler Manitoba, R6W 4B7. 1-800-418-9461 • ph: 204-325-4195 • fax: 204-325-8116



# SAFETY

**YOU** are responsible for the **SAFE** operation and maintenance of your Convey-All Drive Over Conveyor. **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the Drive Over Conveyor be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alerts you to all good safety 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 working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. 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, and at least annually thereafter.
- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow them. Most accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think **SAFETY!** Work **SAFELY!**

## 2.1 GENERAL SAFETY

1. Read and understand the Operator's Manual and all safety signs before operating, maintaining, adjusting or unplugging the Conveyor.



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

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



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



5. Do not allow riders.

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

7. Wear appropriate protective gear. This list includes but is not limited to:

- A hard hat
- Protective shoes with slip resistant soles
- Protective goggles
- Heavy gloves
- Hearing protection
- Respirator or filter mask




8. Place all controls in neutral or off, stop engine or motor, remove ignition key or disable power source and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.
9. Establish a formal Lock-Out, Tag-Out program for your operation.
10. Review safety related items annually with all personnel who will be operating or maintaining the Conveyor.

## 2.2 EQUIPMENT SAFETY GUIDELINES

1. Safety of the operator and bystanders is one of the main concerns in designing and developing equipment. 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. You, the operator, can avoid many accidents by observing the following precautions in this section. To avoid personal injury or death, study the following precautions and insist those working with you, or for you to follow them.
2. In order to provide a better view, certain photographs or illustrations in this manual may show an assembly with a safety shield removed. However, equipment should never be used in this condition. Keep all shields in place. If shield removal becomes necessary for repairs, replace the shield prior to use.
3. Replace any safety sign or instruction sign that is not readable or is missing. Location of such safety signs is indicated in this manual.
4. Never use alcoholic beverages or drugs which can hinder alertness or coordination while using this equipment. Consult your doctor about using this machine while taking prescription medications.
5. **Under no circumstances should young children be allowed to work with this equipment. Do not allow persons to use or assemble this unit until they have read this manual and have developed a thorough understanding of the safety precautions and of how it works.** Review the safety instructions with all users annually.
6. This equipment is dangerous to children and persons unfamiliar with its operation. The operator should be a responsible, properly trained and physically able person familiar with machinery and trained in this equipment's operations. If the elderly are assisting with work, their physical limitations need to be recognized and accommodated.
7. Never exceed the limits of a piece of machinery. If its ability to do a job, or to do so safely, is in question - **DON'T TRY IT.**
8. Do not modify the equipment in any way. Unauthorized modification may result in serious injury or death and may impair the function and life of the equipment.
9. In addition to the design and configuration of this implement, including Safety Signs and Safety Equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of personnel involved in the operation, transport, maintenance, and storage of the machine. Refer also to Safety Messages and operation instruction in each of the appropriate sections of the power or tow vehicle and machine manuals. Pay close attention to the Safety Signs affixed to the power or tow vehicle and the machine.

## 2.3 SAFETY TRAINING

1. Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be wiped out by a single careless act of an operator or bystander.
2. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of this equipment.
3. It has been said, "The best safety feature is an informed, careful operator." We ask you to be that kind of an operator. It is the operator's responsibility to read and understand ALL Safety and Using instructions in the manual and to follow these. Accidents can be avoided.
4. **Working with unfamiliar equipment can lead to careless injuries. Read this manual before assembly or using, to acquaint yourself with the machine. If this machine is used by any person other than yourself, or is loaned or rented, it is the machine owner's responsibility to make certain that the operator, prior to using:**
  - a. **Reads and understands the operator's manuals.**
  - b. **Is instructed in safe and proper use.**
5. Know your controls and how to stop power or tow vehicle and machine quickly in an emergency. Read this manual and the one provided with tractor.
6. Train all new personnel and review instructions frequently with existing workers. Be certain only a properly trained and physically able person will use the machinery. A person who has not read and understood all using and safety instructions is not qualified to use the machine. An untrained operator exposes himself and bystanders to possible serious injury or death. If the elderly are assisting with the work, their physical limitations need to be recognized and accommodated.

## 2.4 SAFETY SIGNS

1. Keep safety signs clean and legible at all times.
2. Replace safety signs that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety signs displayed in Section 3 each have a part number in the lower right hand corner. Use this part number when ordering replacement parts.
5. Safety signs are available from your authorized Distributor or Dealer Parts Department or the factory.

### How to Install Safety Signs:

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



## 2.5 PREPARATION

1. Never use the machine until you have read and completely understand this manual, the power or tow vehicle Operator's Manual and each of the Safety Messages found on the safety signs on the power unit or motor and machine.

2. Personal protection equipment including hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, cleaning, or moving the unit. Do not allow long hair, loose fitting clothing or jewellery to be around equipment.



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

Power equipment with or without equipment attached 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 (from tractors, chain saws, radios, and other such sources close to the ear) is cumulative over a lifetime without hope of natural recovery.



4. Clear working area of stones, branches or hidden obstacles that might be hooked or snagged, causing injury or damage.
5. Use only in daylight or good artificial light.
6. Be sure machine is properly mounted, adjusted and in good operating condition.
7. Ensure that all safety shielding and safety signs are properly installed and in good condition.

## 2.6 MAINTENANCE SAFETY

1. Good maintenance is your responsibility. Poor maintenance is an invitation to trouble.
2. 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.



3. Make sure there is plenty of ventilation. Never operate the engine of the towing vehicle in a closed building. The exhaust fumes may cause asphyxiation.
4. Before working on this machine, shut off the engine, remove the ignition key and wait for all moving parts to stop.
5. Before applying pressure to a hydraulic system, make sure all components are tight and that hoses and couplings are in good condition.
6. Relieve pressure from hydraulic circuit before servicing or disconnecting from power unit.
7. Always use personal protection devices such as eye, hand and hearing protectors, when performing any service or maintenance work. Use heavy or leather gloves when handling components.
8. Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for injuries or damages caused by use of unapproved parts and/or accessories.
9. A fire extinguisher and first aid kit should be kept readily accessible while performing maintenance on this equipment.



10. Periodically tighten all bolts, nuts and screws and check that all electrical and fuel connections are properly secured to ensure unit is in a safe condition.
11. When completing a maintenance or service function, make sure all safety shields and devices are installed before placing unit in service.

## 2.7 OPERATING SAFETY

1. Please remember it is important that you read and heed the safety signs on the Drive Over Conveyor. Clean or replace all safety signs if they cannot be clearly read and understood. They are there for your safety, as well as the safety of others. The safe use of this machine is strictly up to you, the operator.
2. All things with moving parts are potentially hazardous. There is no substitute for a cautious, safe-minded operator who recognizes potential hazards and follows reasonable safety practices. The manufacturer has designed this Drive Over Conveyor to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.
3. If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated.
4. When the use of hand tools is required to perform any part of assembly, installation, adjustment, maintaining, repairing, removal, or moving, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.
5. Personal protection equipment including hearing protection, hard hat, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustment, maintaining, repairing, removal, or moving. Do not allow long hair, loose fitting clothing, or jewelry to be around moving parts.
6. Hydraulic drives: Stop the engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
7. Electric motor drives: Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
8. Establish a formal Lock-Out Tag-Out program for your operation.
9. Do not stand or climb on machine when operating. Keep others off.
10. 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.
11. Before you operate the machine, check over all pins, bolts, and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.
12. Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.
13. Do not smoke when refueling.
14. Never allow children to operate or be around this machine.
15. Be familiar with machine hazard areas. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
16. Clear the work area of objects which might be picked up and snagged or entangled in the machine.
17. Keep hands, feet, hair, jewelry, and clothing away from all moving and/or rotating parts.
18. Do not run engine in an enclosed area. Exhaust fumes contain carbon monoxide, an odorless and deadly poison.

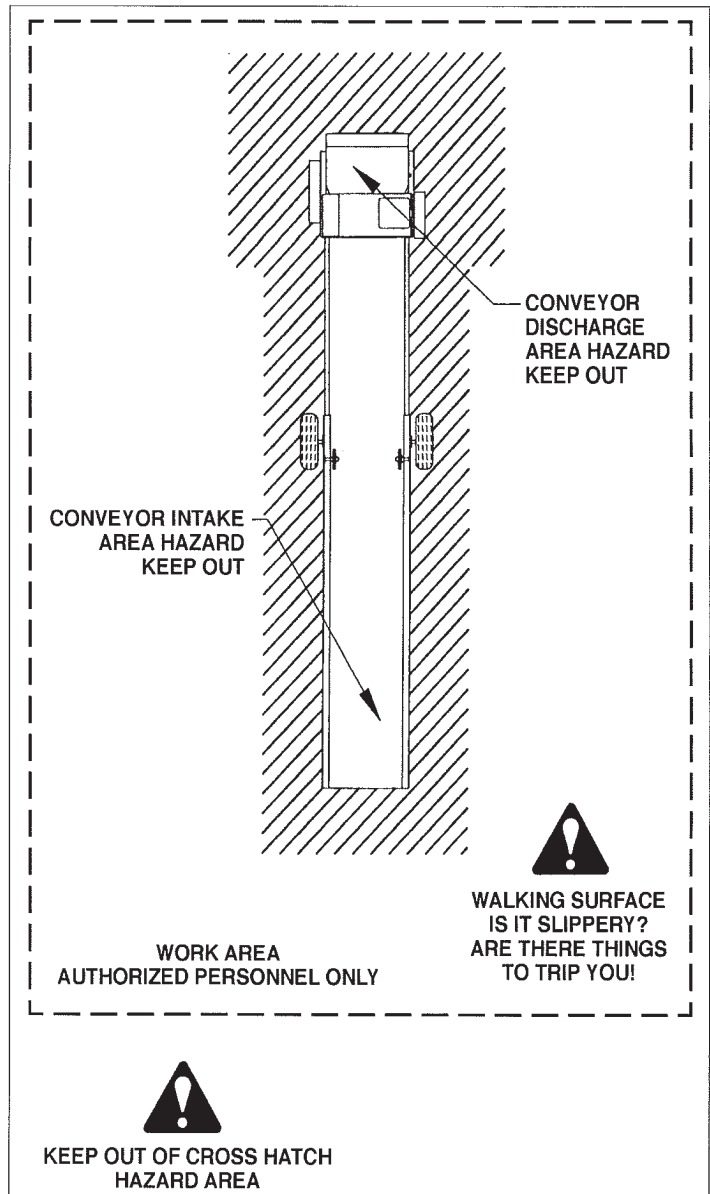
## 2.8 LOCK-OUT TAG SAFETY

1. Establish a formal Lock-Out Tag Out program for your operation.
2. Train all operators and service personnel before allowing them to work around the conveyor.
3. Provide tags at the worksite and a sign-up sheet to record tag-out details.
4. Do not service or maintain the conveyor unless motors are OFF and the power locked out at the master panel. Keep others away.

## 2.9 HYDRAULIC SAFETY

1. Always place all tractor hydraulic controls in neutral before disconnecting from tractor or working on hydraulic system.
2. Make sure that all components in the hydraulic system are kept in good condition and are clean.
3. Replace any worn, cut, abraded, flattened or crimped hoses.
4. 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.
5. Wear proper hand and eye protection when searching for a high-pressure hydraulic leak. Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.
6. 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.
7. Relieve pressure in hydraulic system before maintaining or working on machine.

## 2.10 WORKPLACE HAZARD AREA



### WORKPLACE HAZARD AREA



## 2.11 TIRE SAFETY

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

## 2.12 STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the frame with planks if required.
4. Lock out power by turning off master control panel or junction box and padlocking the door shut to prevent electrocution or unauthorized start-up of the Drive Over Conveyor.

## 2.13 TRANSPORT SAFETY

1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when moving or transporting the Conveyor.
2. Check with local authorities regarding Conveyor transport on public roads. Obey all applicable laws and regulations.
3. Always travel at a safe speed. Use caution when making corners or meeting traffic.
4. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.
5. Do not allow riders on the Conveyor or the tractor when transporting.
6. Attach Conveyor to towing vehicle with a pin and retainer. Always attach the safety chain.
7. Lower Conveyor to its lowest position for transporting.
8. 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.
9. Do not exceed 20 mph (32 km/h). Reduce speed on rough roads and surfaces.
10. Stay away from overhead obstructions and power lines when transporting. Electrocution can occur without direct contact.
11. Always use hazard warning flashers on tractor when transporting unless prohibited by law.

## 2.14 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 Drive Over Conveyor must read and clearly understand ALL Safety, Operating and Maintenance information presented in this manual.

Do not operate or allow anyone else to operate this equipment until such information has been reviewed. Annually review this information before the season start-up.

Make these periodic reviews of SAFETY and OPERATION a standard practice for all of your equipment. We feel that an untrained operator is unqualified to operate this machine.

A sign-off sheet is provided for your record keeping to show that all personnel who will be working with the equipment have read and understand the information in the Operator's Manual and have been instructed in the operation of the equipment.

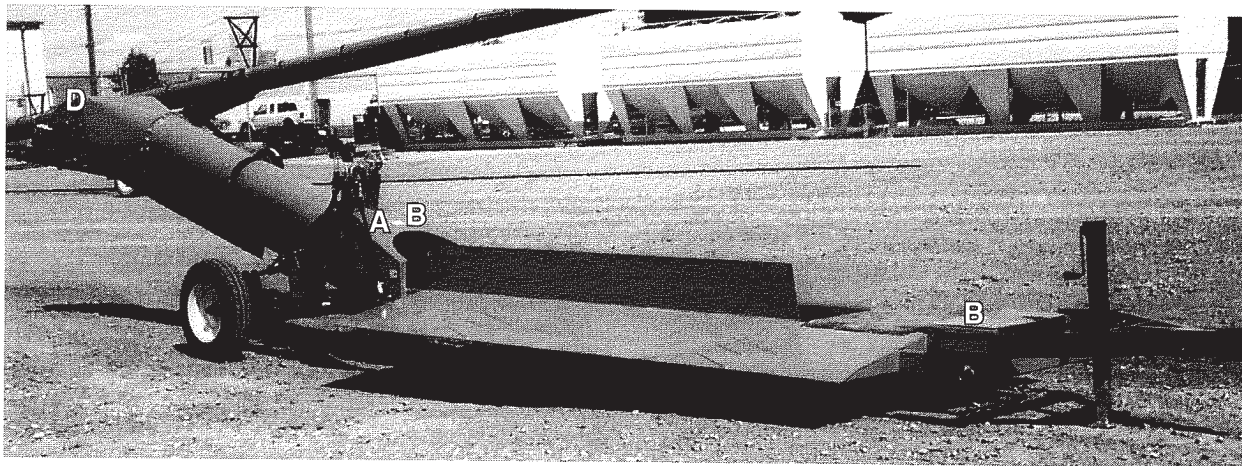
## SIGN-OFF FORM

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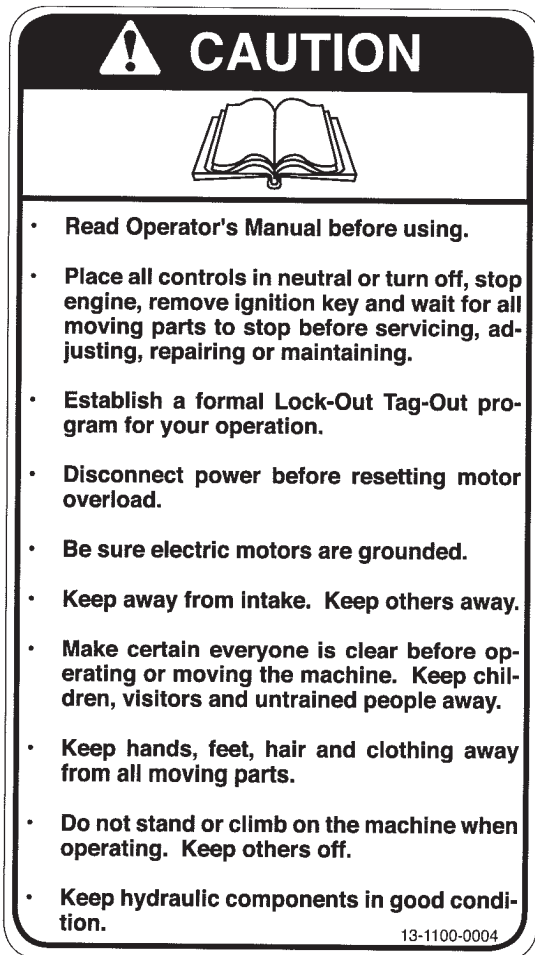
### 3 SAFETY SIGN LOCATIONS

The types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various Safety Signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

- Think SAFETY! Work SAFELY!



A



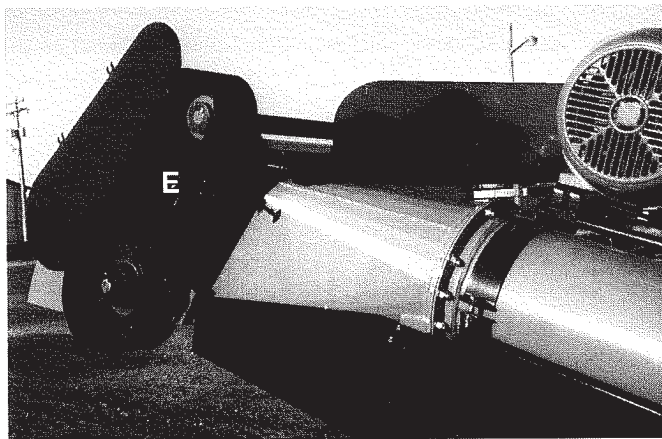
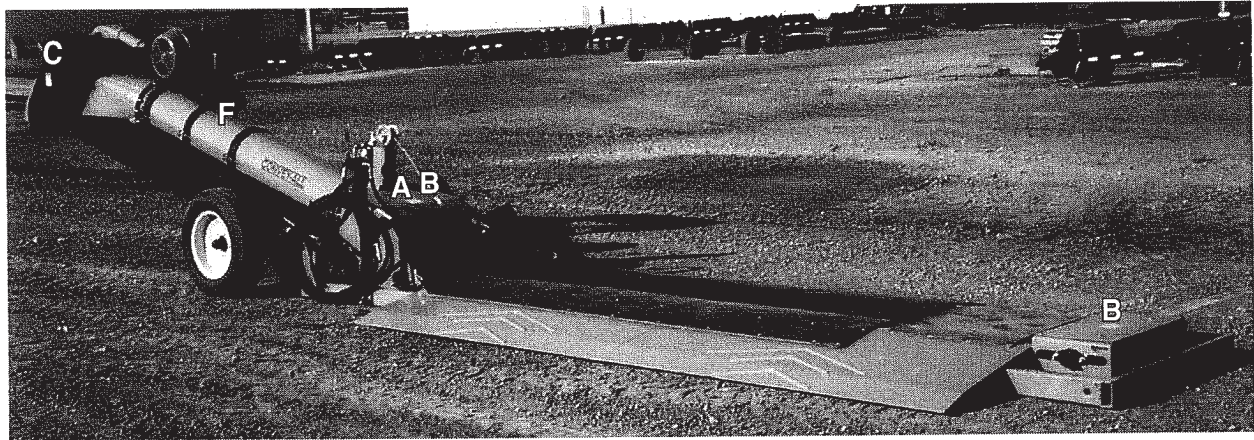
**REMEMBER** - If Safety Signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.



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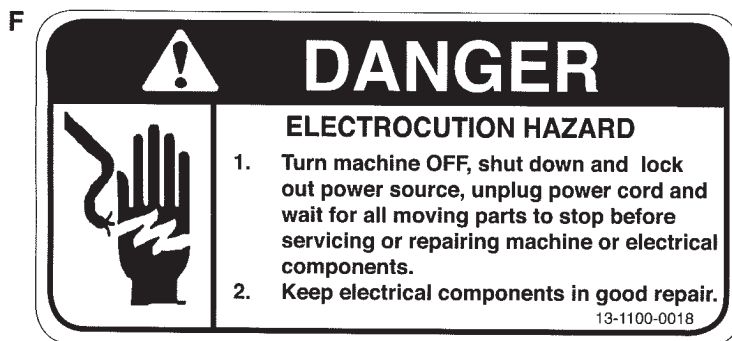
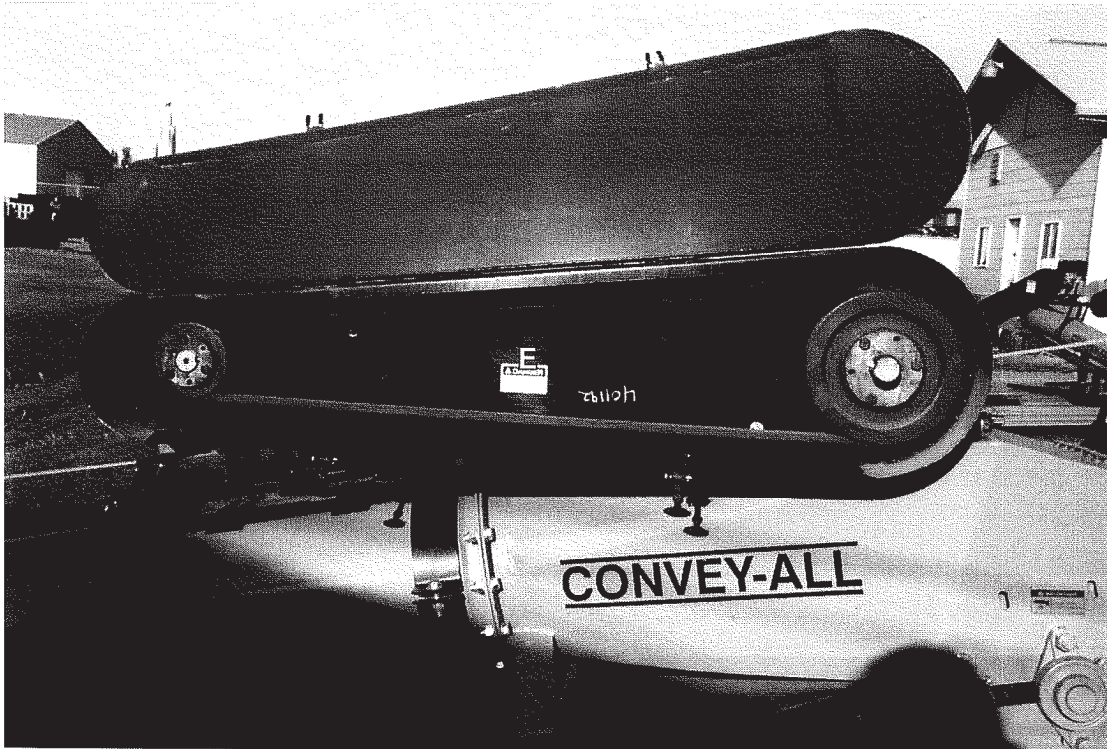
REMEMBER - If Safety Signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.



### 3 SAFETY SIGN LOCATIONS

The types of safety signs and locations on the equipment are shown in the illustration below. Good safety requires that you familiarize yourself with the various Safety Signs, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

- Think SAFETY! Work SAFELY!



REMEMBER - If Safety Signs have been damaged, removed, become illegible or parts replaced without safety signs, new signs must be applied. New safety signs are available from your authorized dealer.

## 4 OPERATION



### OPERATING SAFETY

- Read and understand the Operator's Manual and all safety signs before using.
- The manufacturer has designed this Drive Over Conveyor to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.
- If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated.
- **Hydraulic drives:** Stop the engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- **Electric motor drives:** Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Establish a formal Lock-Out Tag-Out program for your operation.
- Do not stand or climb on machine when operating. Keep others off.
- Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.
- Never allow children to operate or be around this machine.
- Be familiar with machine hazard areas. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
- Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Keep hands, feet, hair, jewelry, and clothing away from all moving and/or rotating parts.
- Do not run engine in an enclosed area. Exhaust fumes contain carbon monoxide, an odorless and deadly poison.

### 4.1 TO THE NEW OPERATOR OR OWNER

The Convey-All Drive Over Conveyor is designed to efficiently move grain, pulse crops, or granular material between a truck, a storage facility and another conveyor. Power is provided by an electric or hydraulic motor. Be familiar with the machine before starting.

**It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, and prudence of personnel involved in the operation, transport, maintenance and storage of equipment or in the use and maintenance of facilities.**

**Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.**

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 and how to set it to provide maximum efficiency. By following the operating instructions in conjunction with a good maintenance program, your Conveyor will provide many years of trouble-free service.



## 4.2 MACHINE COMPONENTS

The Drive Over Conveyor is an endless belt that travels through a tube for moving grain or any granular product. The machine is portable and folds low enough for trucks to drive over and unload. Normally the discharge is directed into another conveyor or conveying system.

An electric or hydraulic motor can supply power to the belt drive located at the discharge end. Material enters the system through an intake on the bottom end and exits through the discharge on the top end.

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

- A Incline Tube
- B Horizontal Frame
- C Hopper
- D Hopper Sides
- E Discharge
- F Electric Motor
- G Hydraulic Motor
- H Conveying Belt
- J Tow Hitch
- K Hydraulic Controls
- L Winch

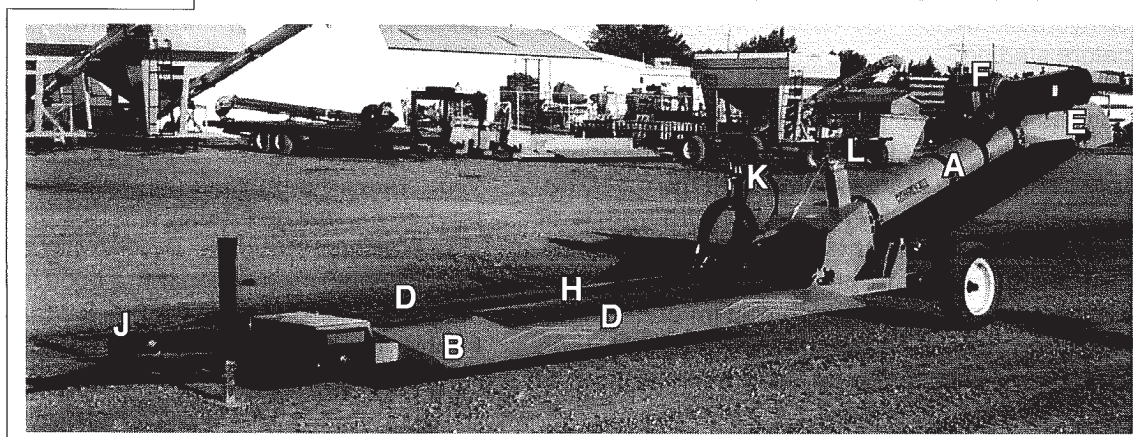
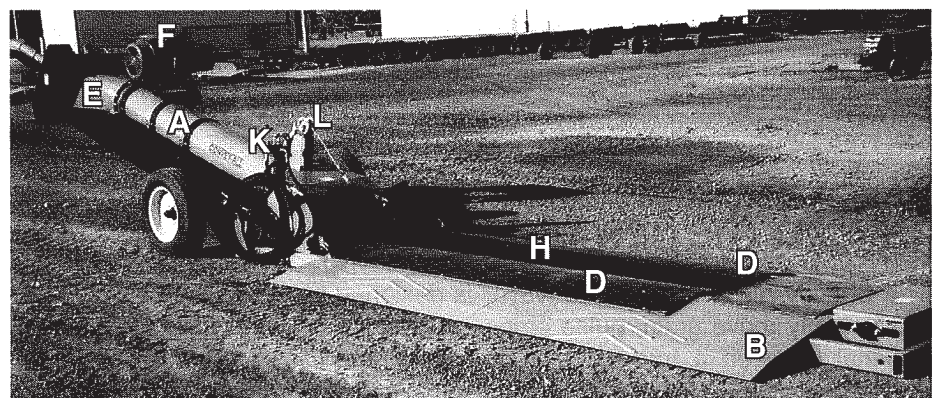
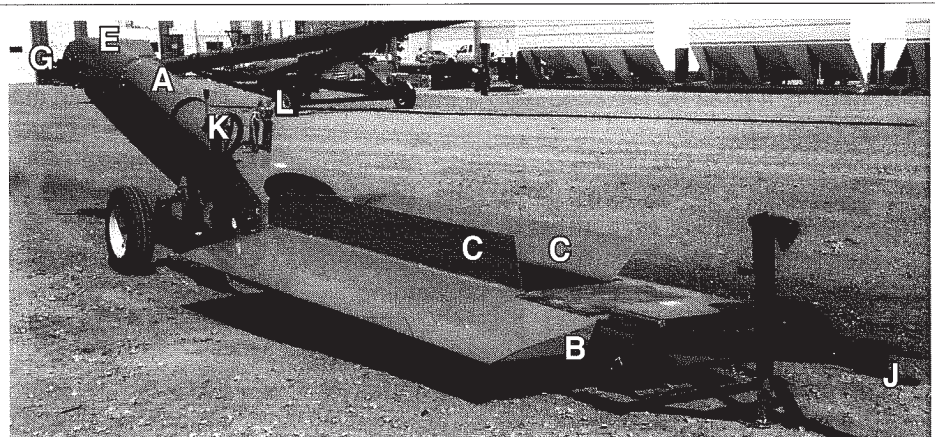


Fig. 1 MACHINE COMPONENTS

### 4.3 MACHINE BREAK-IN

Although there are no operational restrictions on the Conveyor when used for the first time, it is recommended that the following mechanical items be checked:

#### A. Before starting work:

1. Read the Conveyor and power unit Operator's Manuals.
2. Run the unit for an hour to seat the belting and flashing around the intake hopper. It is normal for rubber from the flashing to be expelled out the discharge and form a pattern on the belt.

#### B. After operating or transporting for 1/2 hour:

1. Re-torque all the wheel bolts fasteners and hardware.
2. Check the drive belt tension and alignment. Tension or align as required.
3. During the conveyors first few minutes of operation, check belt alignment to ensure preset alignment and tension does not vary under loaded conditions.
4. Check the flashing seal on the input hopper. If any grain comes out of the hopper around the flashing, stop, loosen flashing mounting screws and adjust. Retighten anchor screws and try again. Repeat until no grain is lost.
5. Check that all guards are installed and working as intended.

#### C. After operating for 5 hours and 10 hours:

1. Repeat items 1 through 5 above.
2. Then go to the normal servicing and maintenance schedule as defined in the Maintenance Section.

### 4.4 PRE-OPERATION CHECKLIST

Efficient and safe operation of the Drive Over Conveyor requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. 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. Service the machine per the schedule outlined in Section 5 Service and Maintenance.
2. Use only a hydraulic or electric motor of adequate power to operate the machine.
3. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.
4. Check worksite. Clean up working area to prevent slipping or tripping.
5. Check that drive and conveying belts are not frayed or damaged and that they are properly adjusted and aligned.
6. Check that discharge and intake areas are free of obstructions.



## 4.5 CONTROLS

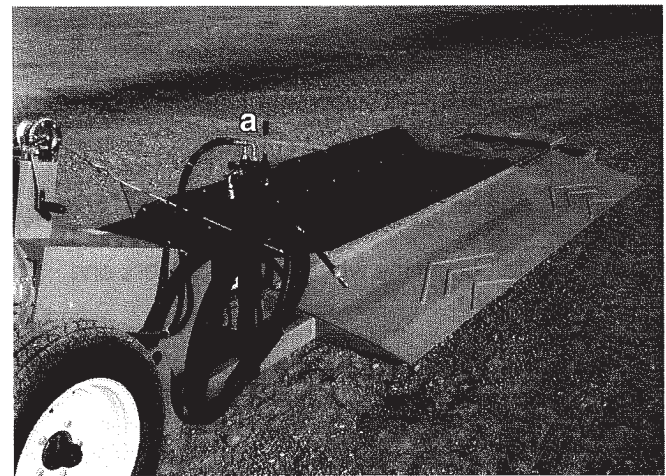
Before starting to work, all operators should familiarize themselves with the location and function of the controls.

### 1. Hydraulic Controls:

Each machine is designed with a hydraulic system to raise and lower the frame or engage the hydraulic drive circuit.

#### a. Raise and lower frame:

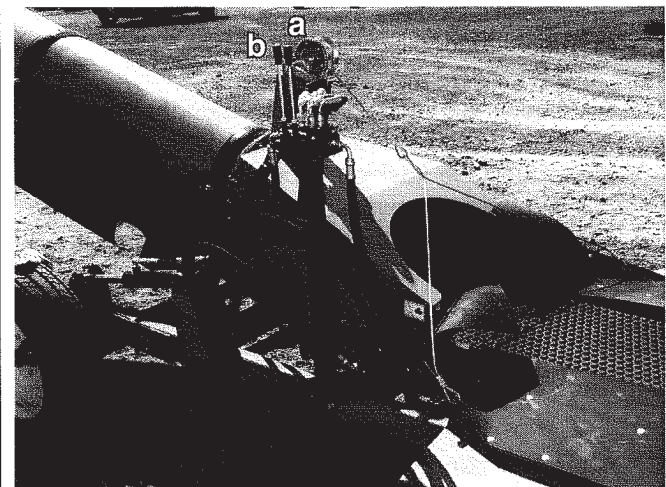
This spring-loaded-to-centre-neutral valve controls the flow of oil to the wheel position cylinders. Push the lever in and hold to raise the wheels and lower the frame. Pull on the lever and hold to lower the wheels and raise the frame. Release the lever and the wheels/frame will stop moving.



Electric - Single

#### b. Hydraulic Motor:

This 2-position valve controls the flow of oil to the hydraulic motor powering the conveying belting. Push the lever in to run the conveyor. Pull the lever out to stop the conveyor.



Hydraulic - Double

Fig. 2 HYDRAULIC CONTROLS

2. **Electric Drive:**

Use a licensed electrician to provide power to the machine per the National Electrical Code ANSI/NFPA 70 and local codes. Install an ON/OFF switch next to the motor for the convenience of the operator.

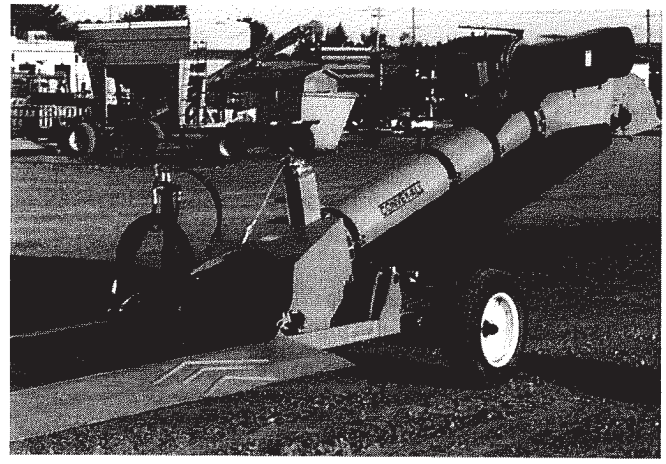


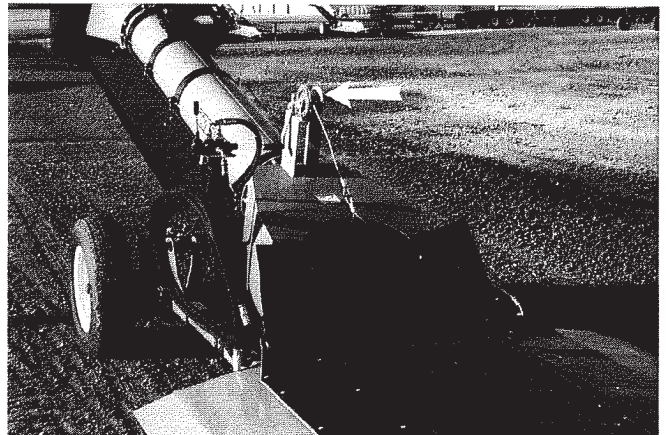
Fig. 3 ELECTRIC SWITCH (TYPICAL)

3. **Winch:**

A winch is located on the top of tube and is used to raise and lower the hopper sides. Turn the handle clockwise to raise and counterclockwise to lower.



Raised



Lowered

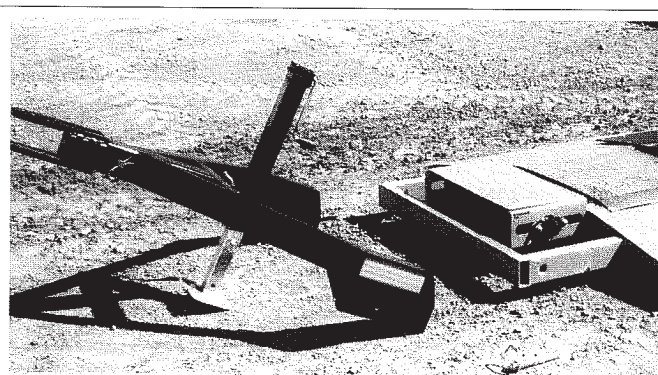
Fig. 4 WINCH



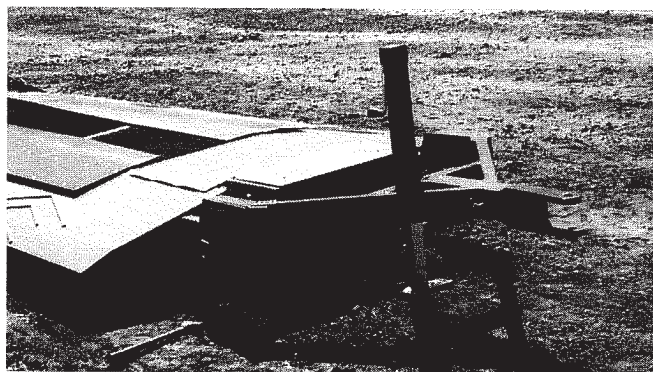
## 4.6 ATTACHING/UNHOOKING

The Conveyor can be attached to a tractor or truck whenever it is moved. Follow this procedure when attaching to or unhooking from a tow unit:

1. Make sure that bystanders, especially small children, are clear of the working area.
2. Be sure that there is sufficient room and clearance to back up to the machine.
3. Align the drawbar with the hitch of the Conveyor while backing up.
4. Set the park brake before dismounting.
5. The hitch is removeable. Install hitch and secure with the anchor pin and retainer before using hitch.



Removed



Attached

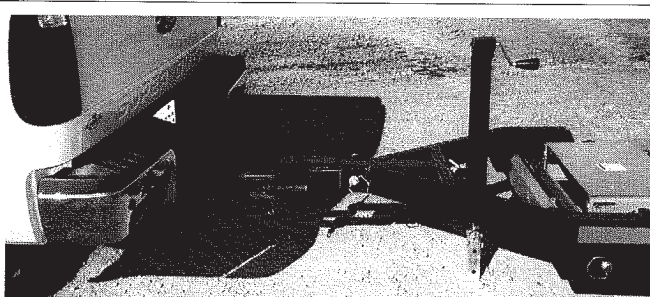
Fig. 5 HITCH ASSEMBLY

6. Move the machine out of its working or storage position.
7. Lift the intake end to the drawbar height and install the pin with its retainer.
8. Secure the safety chain around the drawbar cage to prevent unexpected separation.
9. Raise the jack and place in the storage position or remove and store in a secure location.

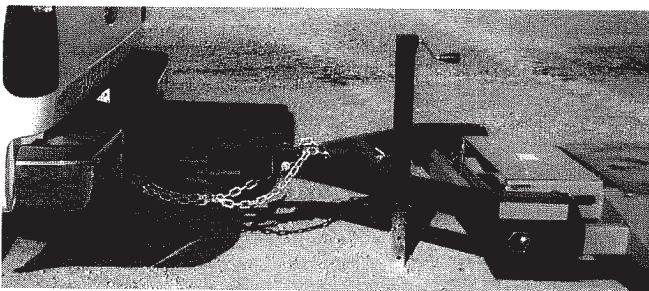
### NOTE

Cross the safety chains under the hitch when attaching to a truck.

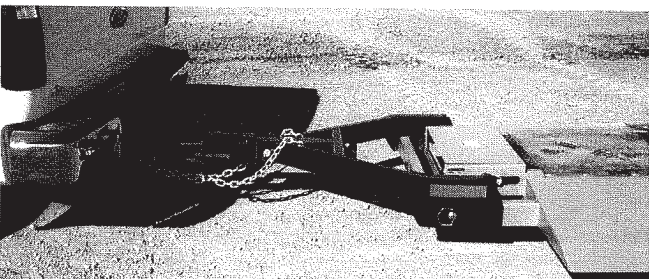
10. Reverse the above procedure when unhooking.



Pin



Safety Chain



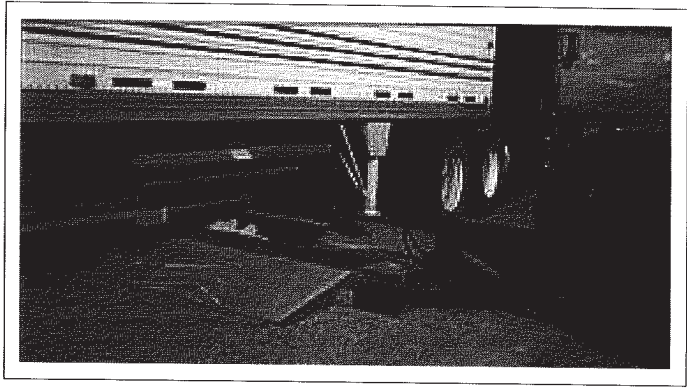
Jack

Fig. 6 ATTACHING

## 4.7 MACHINE PLACEMENT

Follow this procedure when placing the Drive Over Conveyor into its working position:

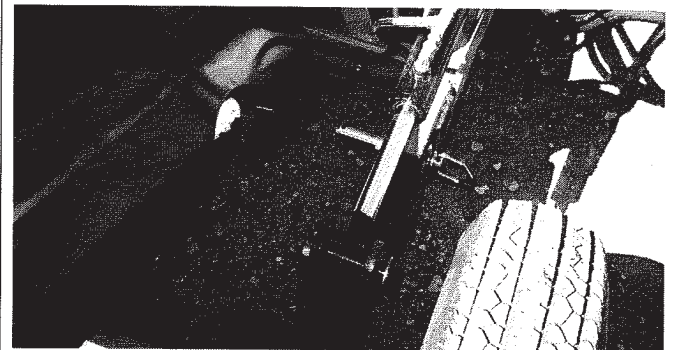
1. Clear the area of bystanders, especially small children, before starting.
2. Be sure there is enough clearance from other equipment to move the machine into its working position.
3. Move the machine into position where there is easy access for loaded trucks to drive over and where the discharge will move the material into the next conveyor.
4. Unhook from tow unit.
5. Position the next conveyor or conveying system under the discharge and secure.
6. Bring a power unit with remote hydraulic power capability and connect to wheel cylinder circuit.
7. Use hydraulic system to remove pins from wheel linkage.
8. Lower frame to the ground.



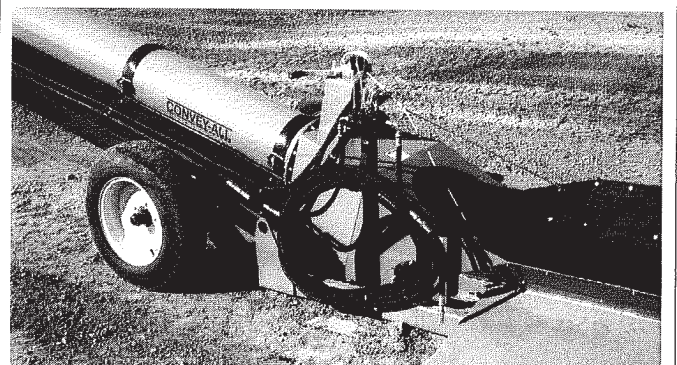
**Fig. 7 UNDER TRUNK**



**Up**



**Pins**

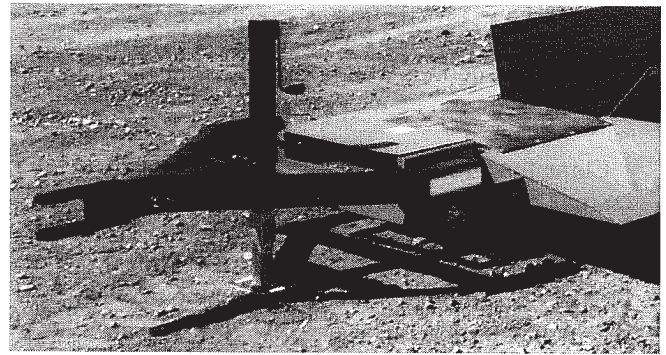


**Down**

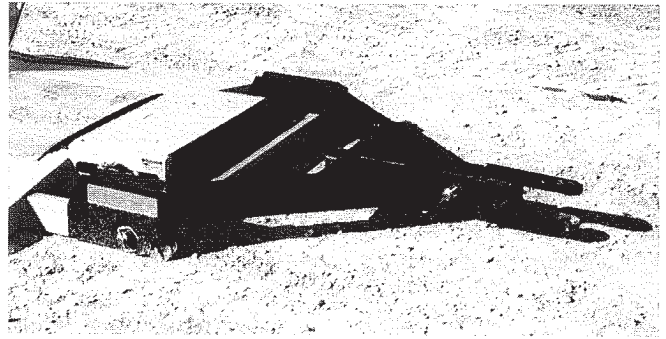
**Fig. 8 WHEELS**



9. Remove jack:
  - a. Support front frame.
  - b. Retract jack.
  - c. Unpin and remove jack.
  - d. Store in a secure location.



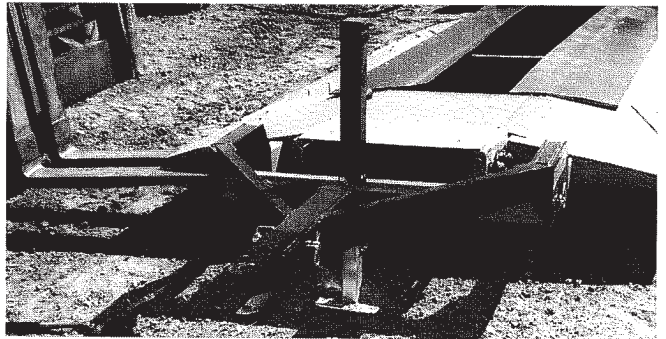
**Up**



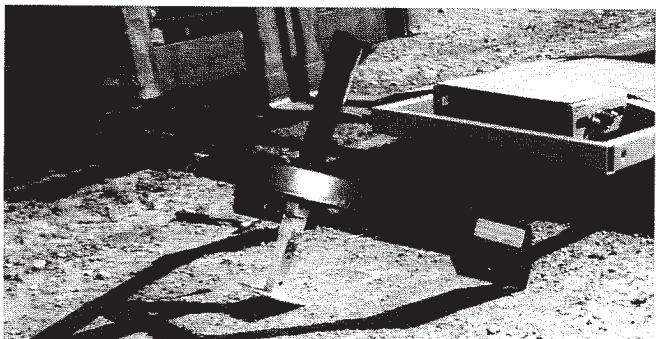
**Removed**

**Fig. 10 JACK**

10. Remove hitch:
  - a. Support front frame.
  - b. Retract jack.
  - c. Unpin and remove hitch.
  - d. Store in a secure location.



**Up**



**Removed**

**Fig. 10 HITCH**

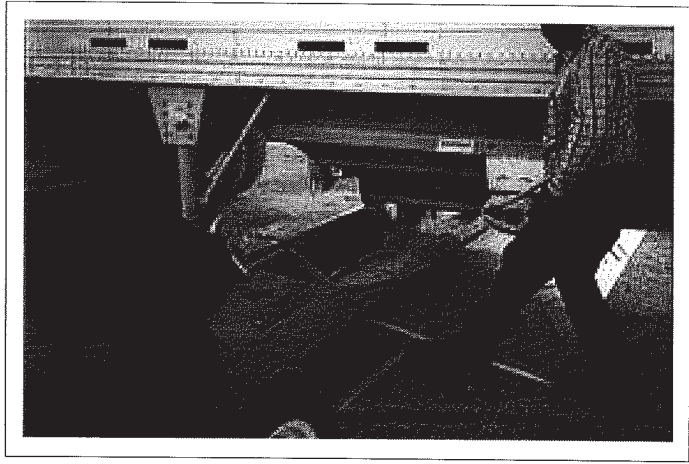
**11. For the Electric Motor Model:**

- a. Have a licensed electrician provide power to the machine.
- b. Provide convenient shut-down switches and comply with local electrical codes.
- c. Use a totally enclosed electric motor. Be sure electric motor is properly grounded.

**12. For the Hydraulic Drive Model:**

- a. Position the power unit next to the conveyor.
- b. Place chocks in the front and rear of each wheel of the power unit.
- c. Connect hydraulic hoses to the couplers.

13. Reverse the above procedure when removing the machine from its working position.



**Fig. 11 POSITIONED**



## 4.8 OPERATING



### OPERATING SAFETY

- Read and understand the Operator's Manual and all safety signs before using.
- The manufacturer has designed this Drive Over Conveyor to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all safety equipment attached.
- If a safety shield or guard is removed for any reason, it must be replaced before the machine is again operated.
- **Hydraulic drives:** Stop the engine, place all controls in neutral, set park brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- **Electric motor drives:** Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
- Establish a formal Lock-Out Tag-Out program for your operation.
- Do not stand or climb on machine when operating. Keep others off.
- Do not allow anyone who is not familiar with the safety rules and operation instructions to use this machine.
- Never allow children to operate or be around this machine.
- Be familiar with machine hazard areas. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
- Clear the work area of objects which might be picked up and snagged or entangled in the machine.
- Keep hands, feet, hair, jewelry, and clothing away from all moving and/or rotating parts.
- Do not run engine in an enclosed area. Exhaust fumes contain carbon monoxide, an odorless and deadly poison.

When using the Drive Over Conveyor, follow this procedure:

1. Clear the area of bystanders, especially small children, before starting.
2. Review the Pre-Operation Checklist (Section 4.4) before starting.
3. Review the Workplace Hazards schematics and use care when inside the hazard area. Keep all spectators and bystanders out of the working and machine area. Should anyone enter this area, stop the machine immediately.

4. Check that the machine is placed per Section 4.7.
5. On the electric drive models, be sure a licensed electrician is used to provide power and shut-down switches are conveniently positioned for the operator.
6. On the hydraulic drive models, be sure the tractor tires are chocked and the hoses are routed out of the way.
7. Check that all guards are in place and working as intended.
8. Check conveying belt tension and alignment. There may be rapid decrease in belt tension during the first few hours of operation until the belts have run in. The correct operating tension is the lowest tension at which the belts will not slip under peak load conditions.
9. Drive the truck into position for loading or unloading.
10. Start the system that removes material from the Drive Over Conveyor.

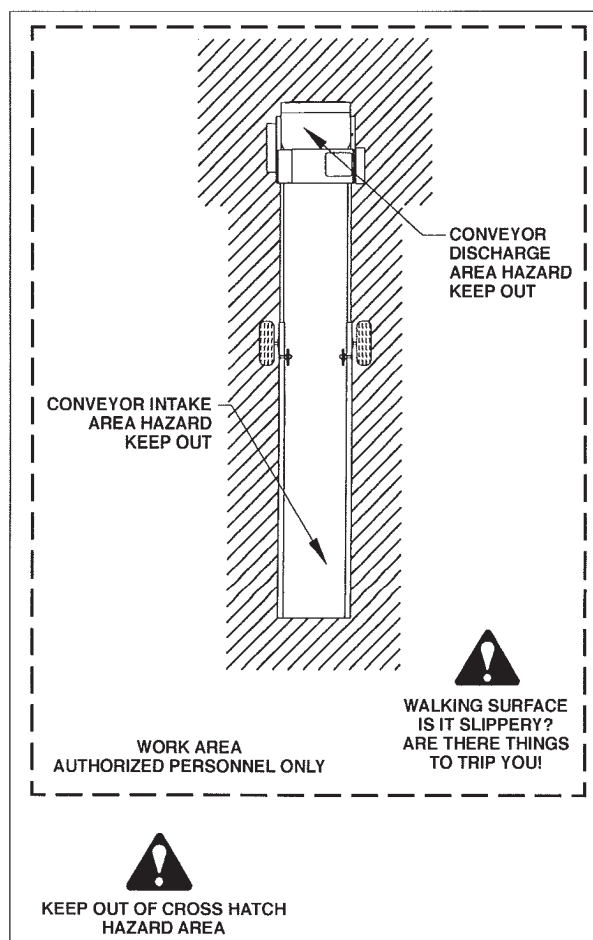


Fig. 12 WORKPLACE HAZARD AREA

**11. Starting:**

**A. Electric Motor Models:**

- a. Turn the electric motor ON.
- b. Start the flow of material and unload.

**B. Hydraulic Drive Models:**

- a. Place all controls in neutral.
- b. Start tractor engine and run at low idle.
- c. Place hydraulic lever on tractor in detent.
- d. Increase engine speed to rated RPM.
- e. Engage drive motor hydraulic lever.

**12. Stopping:**

**A. Electric Motor Models:**

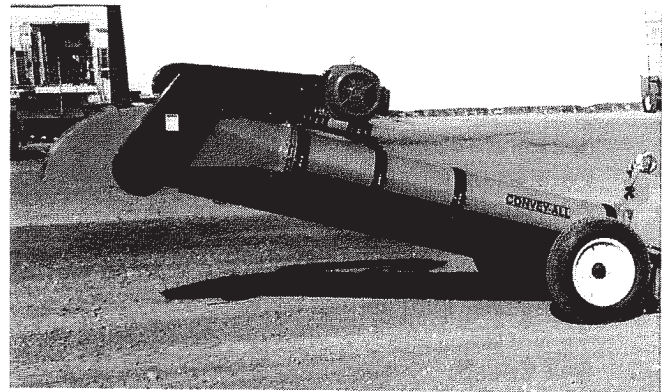
- a. Run until the conveying belt is empty.
- b. Turn off motor and lock out power source.

**B. Hydraulic Drive Models:**

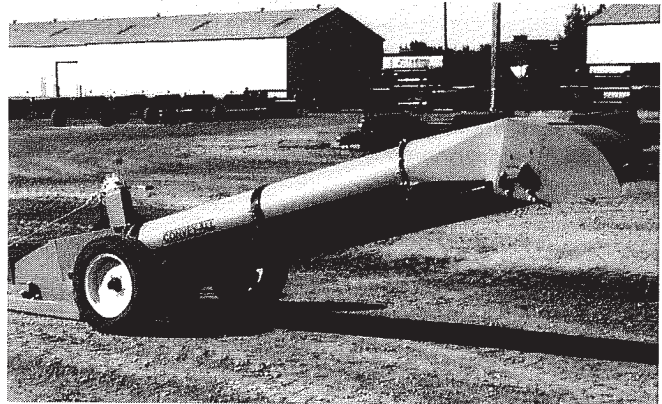
- a. Run until conveying belt is empty.
- b. Disengage hydraulic circuit control lever.
- c. Reduce engine speed to low idle
- d. Place hydraulic lever on tractor in neutral.
- e. Shut off engine.

**13. Emergency Stopping:**

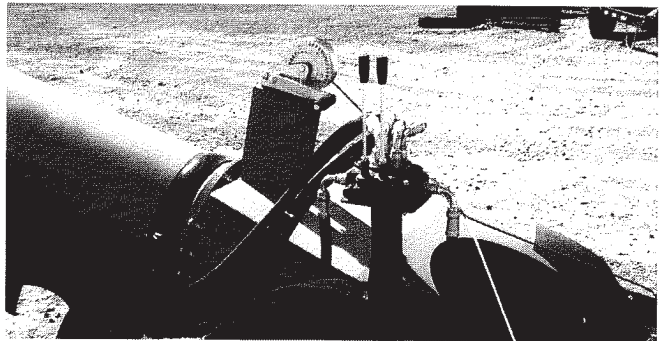
Although it is recommended that the conveying belt be emptied before stopping, in an emergency situation, stop or shut-down the power source immediately. Correct the emergency before resuming work.



**Electric**



**Hydraulic**



**Control Lever**

**Fig. 13 STARTING/STOPPING**

14. **Restarting:**

When the machine is shut down inadvertently or for an emergency, the conveying belt will still be covered with material. Since the start-up torque loads are much higher than normal when the belt is covered, restart at a low speed. It may be necessary to tighten the drive belt slightly to handle the heavier than normal loads.

15. **Belt Speed:**

The best results are obtained when the input drives are set to provide a belt speed of 400 to 500 ft./min. Count the number of belt revolutions per unit time to determine belt speed. Belt length is double the length of your machine. 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.

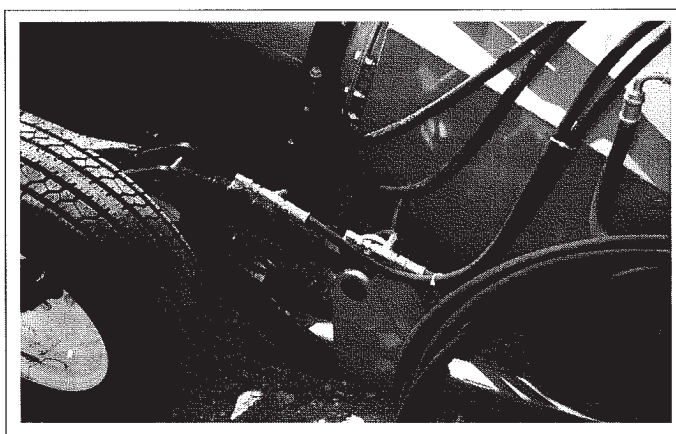


Fig. 14 CONNECTOR LINK

16. **Unplugging:**

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

- a. Place all controls in neutral or off, stop engine or motors and disable power source.
- b. Remove the material from the discharge and the intake area.
- c. Reposition unit if discharge area plugs due to lack of clearance.
- d. Restart unit.

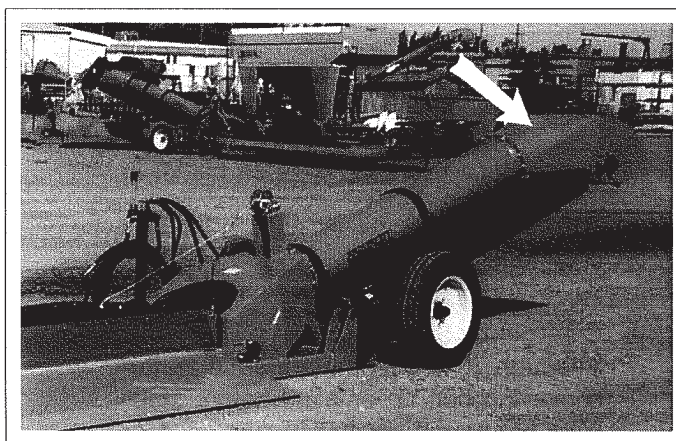
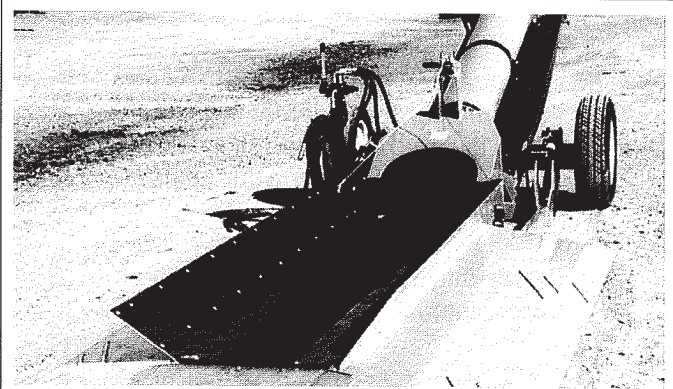


Fig. 15 DISCHARGE

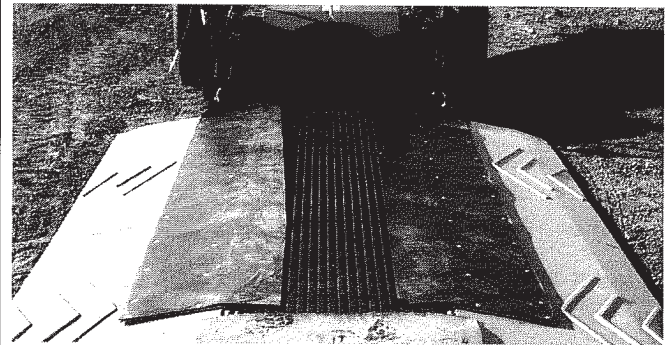


**17. Hopper Sides:**

The machine is designed with a collapsible intake hopper that can be raised or lowered with the winch appropriate for your application. When the hopper sides are raised, the maximum conveying capacity is obtained.



**Up**

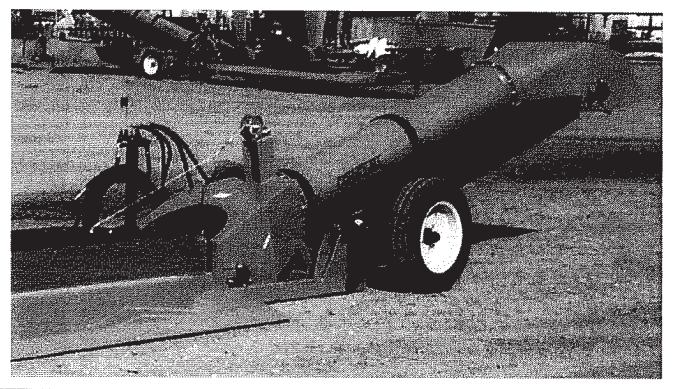


**Down**

**Fig. 16 INTAKE HOPPER**

**18. Operating Hints:**

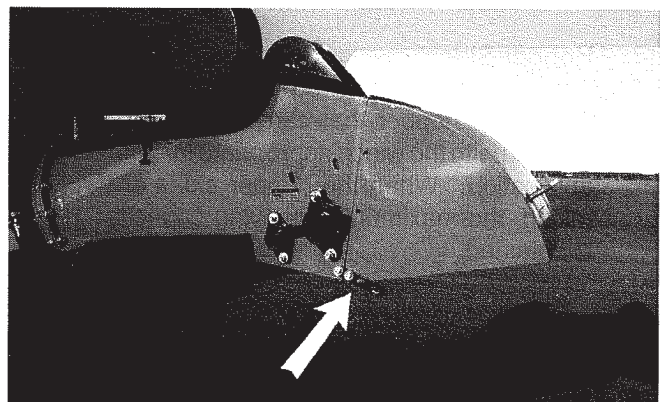
- a. Always listen for any unusual sounds or noises. If any are heard, stop the machine and determine the source. Correct the problem before resuming work.
- b. Never allow anyone into the work-place hazard area. If anyone enters, stop immediately. Make them LEAVE before resuming work.



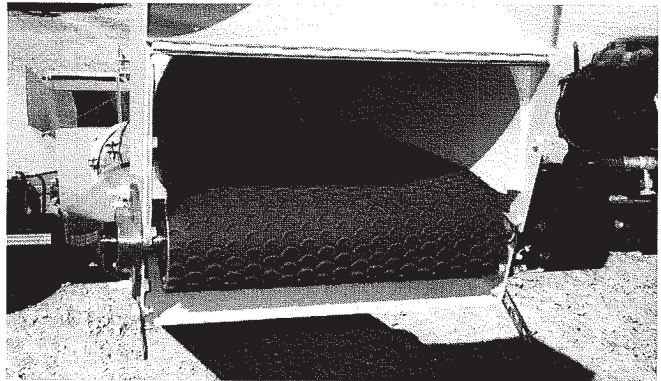
**Fig. 17 TUBE SIZE (14 inch)**



- c. The discharge hood is designed with brackets that allow the hood to extend and project the material a distance from the end of the machine. Set the hood appropriate for your application.
- d. Keep intake end completely covered with material for maximum capacity.
- e. The best capacity is obtained when the material is loaded into the hopper as close to the tube as possible.



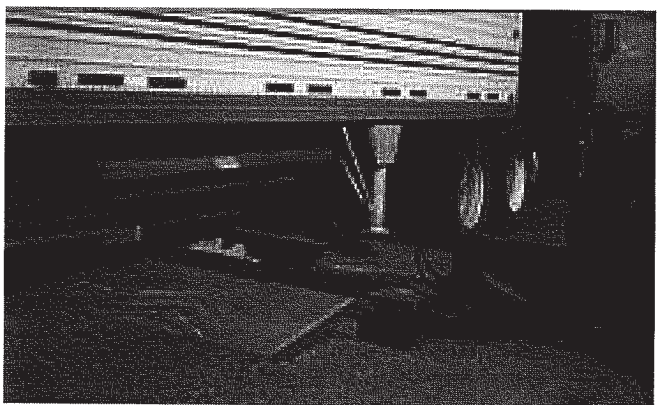
**Bracket**



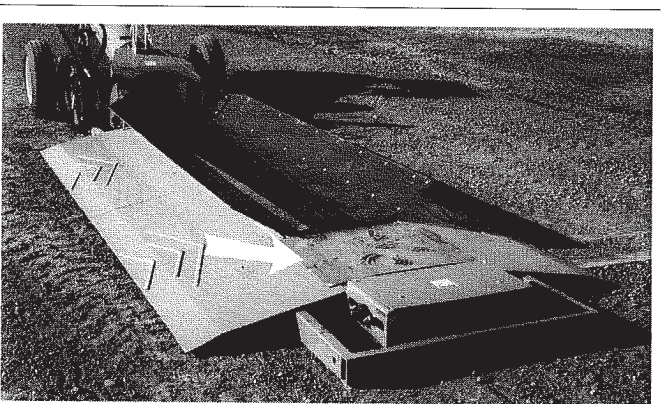
**Hinged Up**

**Fig. 18 HOOD BRACKET**

- f. Use a Drive Over conveyor to move grain from the bin or truck discharge into the grain conveyor when emptying units.
- g. The conveyor is designed with a cross-over pad to prevent stepping on the moving belt. Keep it in good condition at all times when operating.



**Fig. 19 EMPTYING**



**Fig. 20 CROSS-OVER PAD**

## 4.9 TRANSPORTING



# TRANSPORT SAFETY

- Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when moving or transporting the Conveyor.
- Check with local authorities regarding Conveyor transport on public roads. Obey all applicable laws and regulations.
- Always travel at a safe speed. Use caution when making corners or meeting traffic.
- Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.
- Do not allow riders on the Conveyor or the tractor when transporting.
- Attach Conveyor to towing vehicle with a pin and retainer. Always attach the safety chain.
- Lower Conveyor to its lowest position for transporting.
- 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.
- Do not exceed 20 mph (32 km/h). Reduce speed on rough roads and surfaces.
- Stay away from overhead obstructions and power lines when transporting. Electrocution can occur without direct contact.
- Always use hazard warning flashers on tractor when transporting unless prohibited by law.

Convey-All Drive Over Conveyors are designed to be easily and conveniently moved from place to place. When transporting, follow this procedure:

1. Review the Transport Safety Schematic before starting.
2. Be sure all bystanders are clear of the machine.
3. On electric motor drive units, unplug the power cord, wrap around frame and secure to prevent dragging.
4. On hydraulic powered units, disconnect hydraulic hoses, remove power source, wrap hose around frame and secure to prevent dragging.
5. Install the hitch if it was removed.

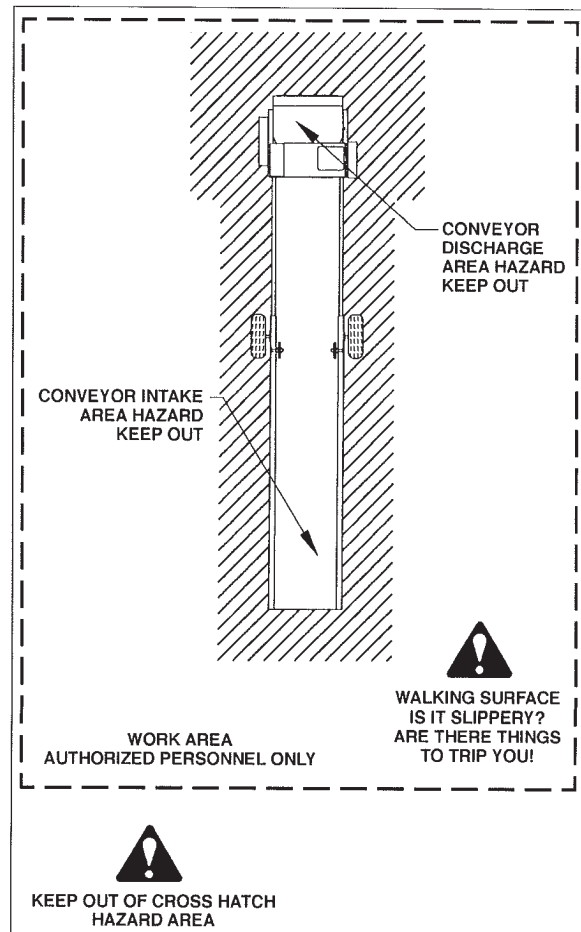
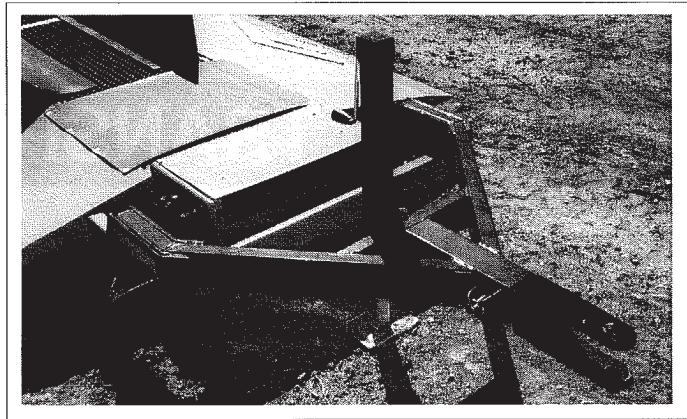


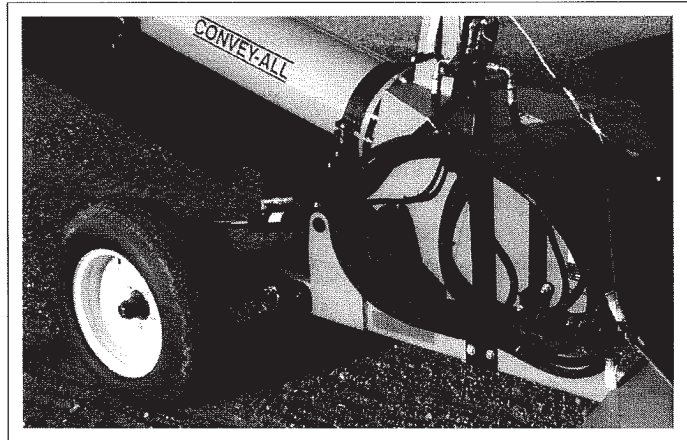
Fig. 21 TRANSPORT HAZARD AREA

6. Attach jack and raise front frame.



**Fig. 22 HITCH - JACK ATTACHED**

7. Attach hydraulic circuit and use wheels to raise center frame.



**Fig. 23 WHEELS**

8. Attach to a tractor or truck using a hitch pin with a retainer and a safety chain.

9. If equipped with an optional lighting package, connect wiring harness to the towing vehicle and secure across the hitch. Do not allow the harness to hang or drag on the ground.

10. Slowly pull away from the working area.

11. Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean and can be seen clearly by all overtaking and oncoming traffic.



**Fig. 24 ATTACHED**

12. 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.

13. Do not allow riders on the machine or tractor.

14. During periods of limited visibility, use pilot vehicles or add extra lights to the machine.

18. Always use hazard flashers on the tractor when transporting unless prohibited by law.



## 4.10 STORAGE



### STORAGE SAFETY

1. Store the unit in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Store the unit in a dry, level area. Support the frame with planks if required.
4. Lock out power by turning off master control panel or junction box and padlocking the door shut to prevent electrocution or unauthorized start-up of the Drive Over Conveyor.

### 4.10.1 PLACING IN STORAGE

After the season's use, the machine should be thoroughly inspected and prepared for storage. Repair or replace any worn or damaged components to prevent any unnecessary down time at the start of next season. To insure a long, trouble free life, this procedure should be followed when preparing the unit for storage:

1. Clear the area of bystanders, especially small children.
2. Thoroughly wash the entire machine using a pressure washer to remove all dirt, mud, debris or residue.
3. Disconnect and tie up hydraulic hoses and electrical cords.
4. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
5. Inspect all hydraulic hoses, fittings, lines, couplers and fittings. Tighten any loose fittings. Replace any hose that is badly cut, nicked or abraded or is separating from the crimped end of the fitting.
6. Apply a light coat of oil to the roller chain coupler to prevent rusting.

7. Lubricate all grease fittings. Make sure that all grease cavities have been filled with grease to remove any water residue from the washing. This also protects the bearing seals.
8. Touch up all paint nicks and scratches to prevent rusting.
9. Move to storage area.
10. Select an area that is dry, level and free of debris.
11. If the machine cannot be placed inside, cover the gas engine or electric motor with a water proof tarpaulin and tie securely in place.
12. Store machine in an area away from human activity.
13. Do not allow children to play on or around the stored machine.

### 4.10.2 REMOVING FROM STORAGE

When removing this machine from storage, follow this procedure:

1. Remove the tarpaulin if covered.
2. Review and follow the pre-operation checklist.

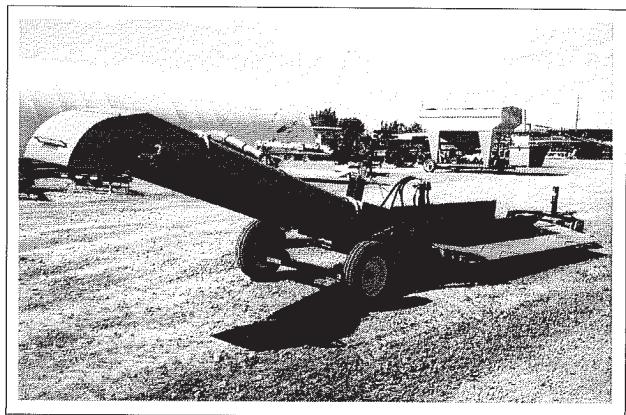


Fig. 25 STORAGE (Typical)

## 5 SERVICE AND MAINTENANCE



### MAINTENANCE SAFETY

1. Review the Operator's Manual and all safety items before working with, maintaining or operating the Conveyor.
2. Place all controls in neutral or off, stop engine or motor, remove ignition key or disable power source and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. 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.
4. Before applying pressure to a hydraulic system, make sure all components are tight and that hoses and couplings are in good condition.
5. Relieve pressure from hydraulic circuit before servicing or disconnecting from tractor.
6. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
7. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
8. Place stands or blocks under the frame before working beneath the machine.
9. Before resuming work, install and secure all guards when maintenance work is completed.
10. Keep safety signs clean. Replace any sign that is damaged or not clearly visible.

## 5.1 SERVICE

### 5.1.1 FLUIDS AND LUBRICANTS

1. Grease:  
Use an SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multi-purpose lithium based grease.
2. 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.

### 5.1.2 GREASING

Use the Maintenance Checklist provided 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. Replace and repair broken fittings immediately.
4. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

### 5.1.3 SERVICING INTERVALS

**Initial Start Up Servicing:** As the 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.

#### 10 Hours or Daily

##### A. Electric Drive Models:

1. Grease cross shaft bearings.
2. Grease the roller bearings.
  - a. Bottom idler roller (1 location each side).
  - b. Dogleg rollers ( 2 locations each side).
  - c. Drive rollers (2 locations each side).



## WARNING

Guards are opened or removed for illustrative purposes only. Do not operate machine with guards opened or removed.

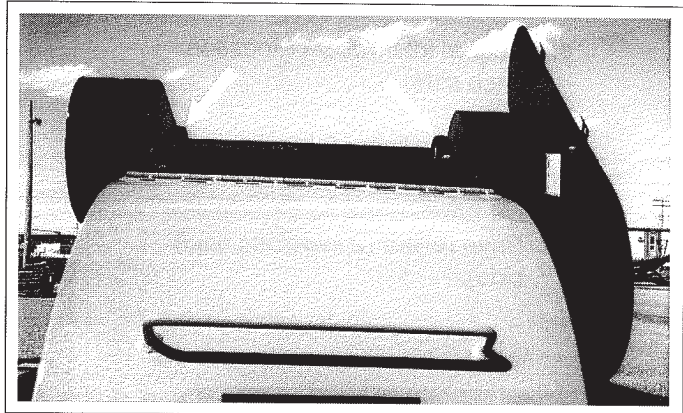
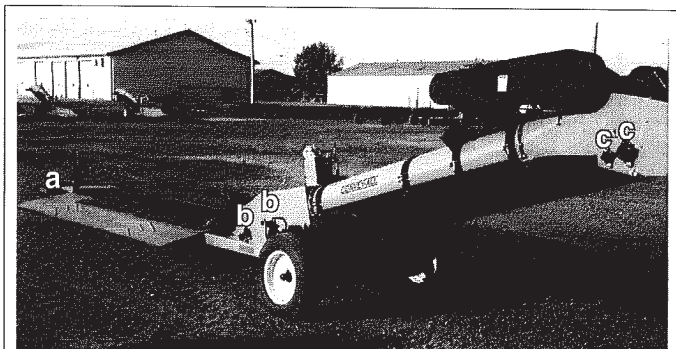
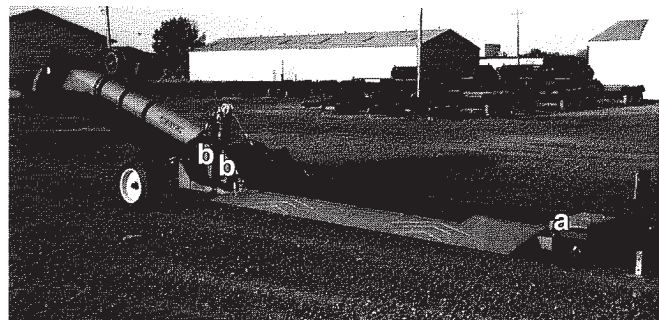


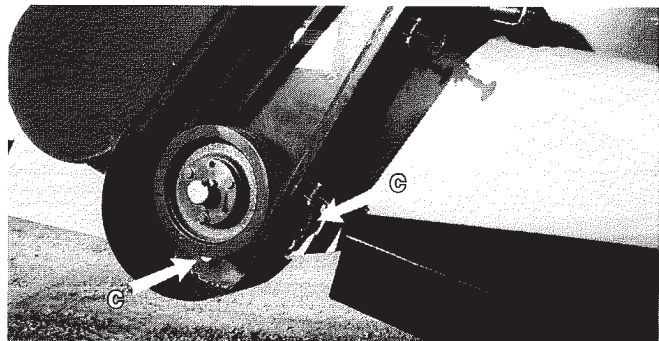
Fig. 26 CROSS SHAFT



Left Side



Right Side



Top Secondary

Fig. 27 ROLLER BEARINGS



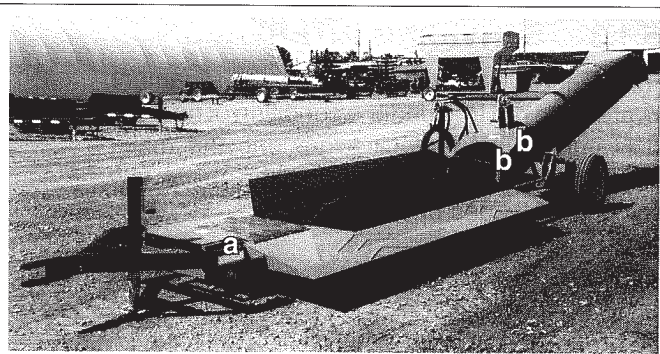
## B. Hydraulic Drive Models:

1. Grease cross shaft bearings.
2. Grease the roller bearings.
  - a. Bottom idler roller (1 location each side).
  - b. Dogleg rollers ( 2 locations each side).
  - c. Drive rollers (2 locations each side).

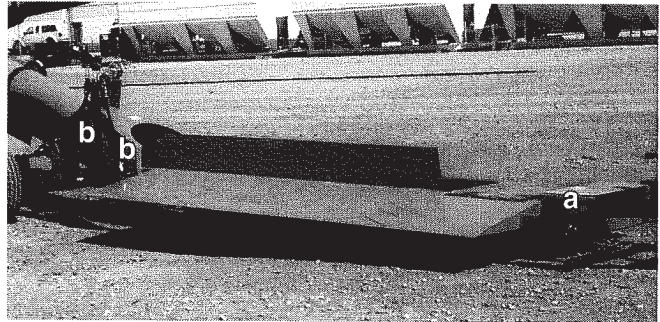


### WARNING

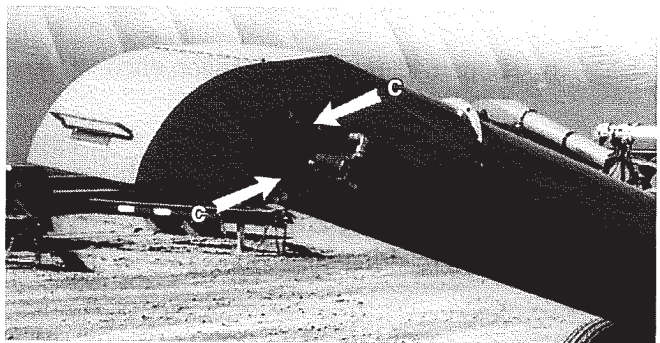
Guards are opened or removed for illustrative purposes only. Do not operate machine with guards opened or removed.



Left Side



Right Side - Bottom



Right Side - Top

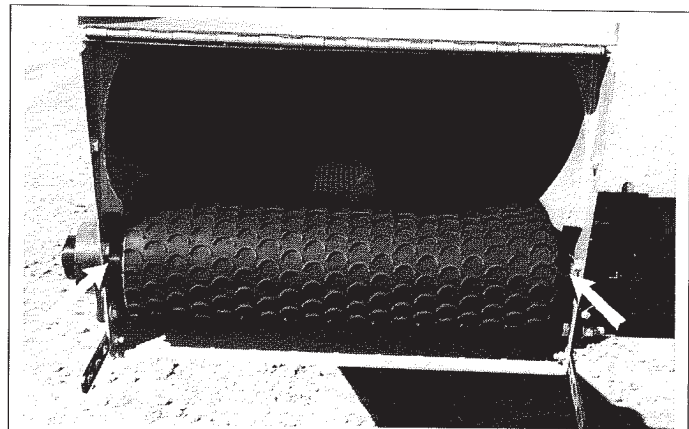
Fig. 28 ROLLER BEARINGS

## 40 Hours or Weekly

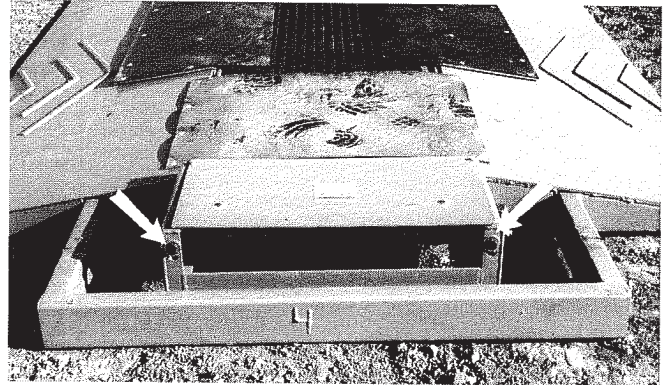
### Conveyor Belting

1. Check the conveying belt tension. The conveying belt should not slip on its drive roller during operation.

Use the bottom end to check and set the alignment and set the tension.



Discharge



Intake

Fig. 29 TENSION/ALIGNMENT

2. Check condition of hopper seals. Be sure it seals the hopper and prevents leaking.

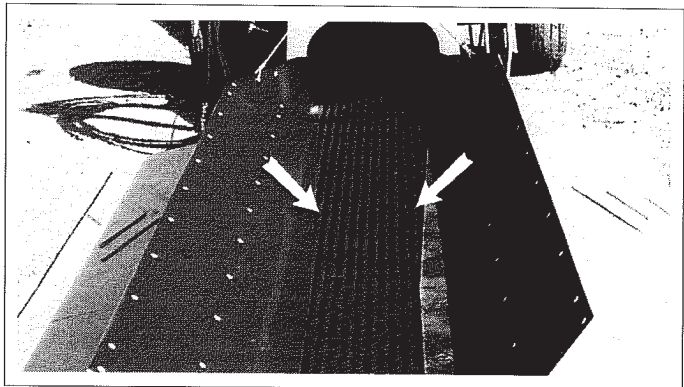


Fig. 30 HOPPER SEAL

## Electric Drive Models

1. Check drive belt tension.

**WARNING**

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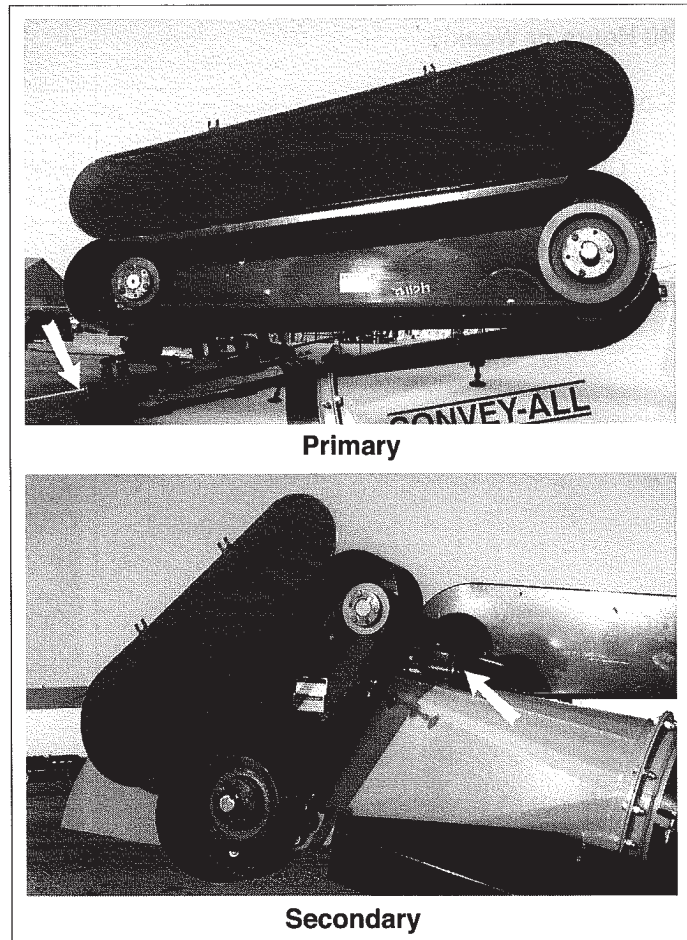


Fig. 31 ADJUSTERS

2. Check drive belt alignment.

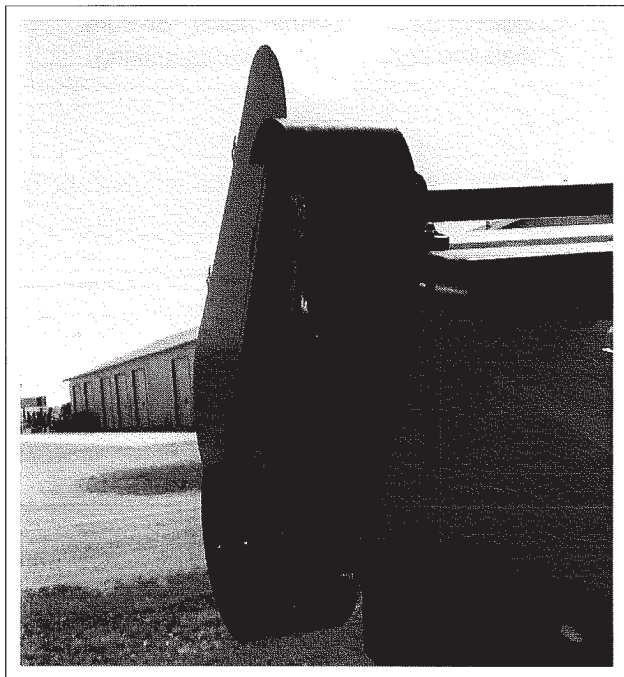
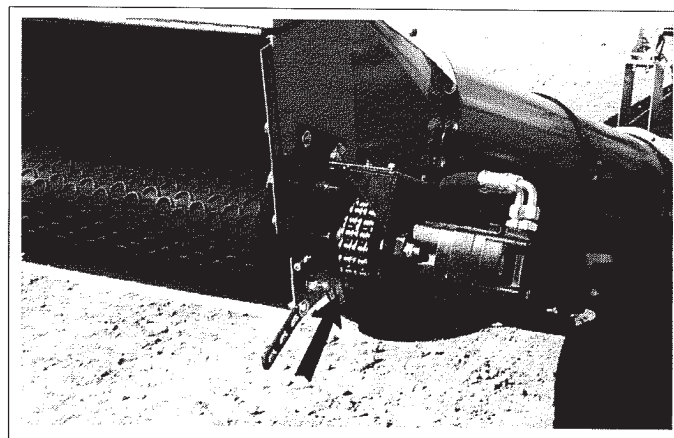
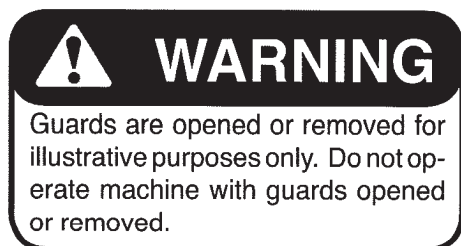


Fig. 32 ALIGNMENT (TYPICAL)



## Hydraulic Drive Models

1. Oil input drive coupler.

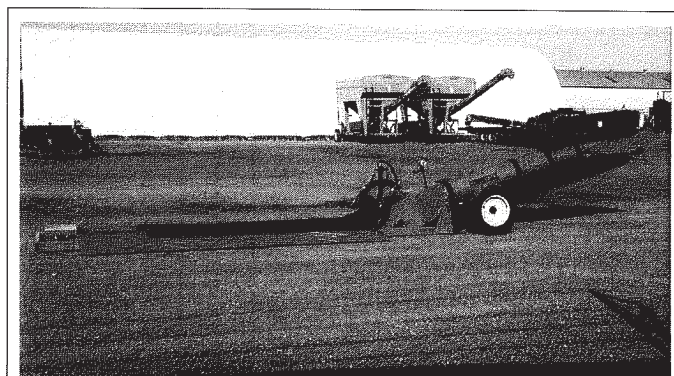


**Fig. 33 INPUT DRIVE COUPLER**

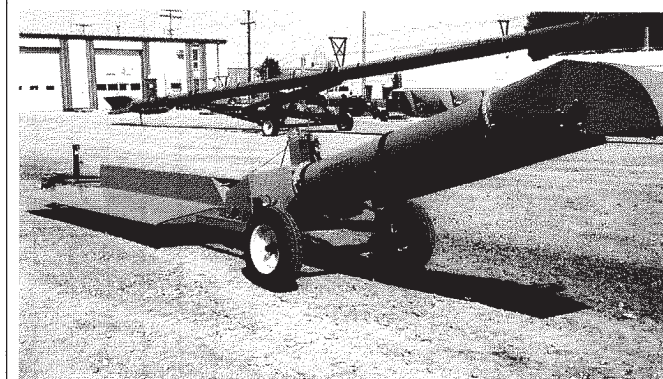
## 200 Hours or Annually

### Conveyor

1. Re-pack wheel bearings.
2. Clean machine.



**Electric**



**Hydraulic**

**Fig. 34 MACHINE**

ACTION CODE:	CK	CHECK	CL	CLEAN	G	GREASE
	RP	RE-PACK	H	HYDRAULIC	E	ELECTRIC
	B	BOTH				

[illegible]

## 5.2 MAINTENANCE

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

### 5.2.1 CONVEYING BELT TENSION AND ALIGNMENT

A flat belt is used to convey material through the tube. The tension and alignment of the belt should be checked weekly, or more often if required, to be sure that it does not slip or run to one side. To maintain the belt, follow this procedure:

1. Place all controls in neutral or off, stop engines or motors and disable power source before working on belt.
2. **Tension:**
  - a. Use the bottom end roller position bolts to set the tension of the belting.
  - b. A properly tensioned belt will not slip when it is operating.
3. **Alignment:**

The belting is properly aligned when the belt runs in the center of the rollers on the bottom and top end.

  - a. **Checking alignment:**

Use the bottom end roller to set the tension and alignment. The belt should be centered.

Turn the belt 1/2 revolution when the belt is new and check the bottom end roller. If out of alignment, the belt will move to the loose side. The belt can be adjusted at the hopper end depending on the model. Loosen the roller bearing assembly mounting bolts and use the bearing position bolts to set the position. Tighten mounting bolts. Run a couple of revolutions and check again. 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.

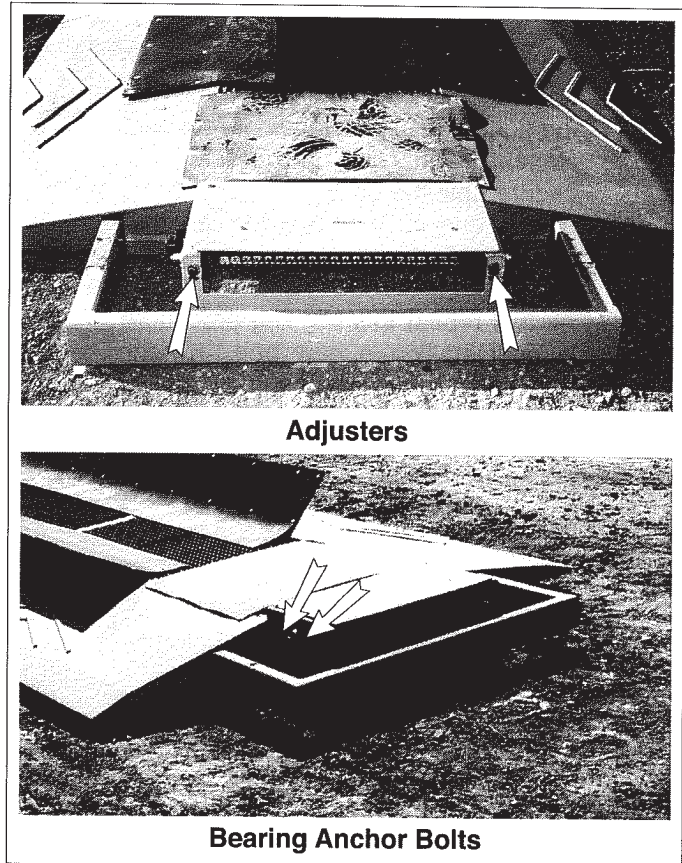


Fig. 35 BELTING TENSION (HOPPER END - TYPICAL)

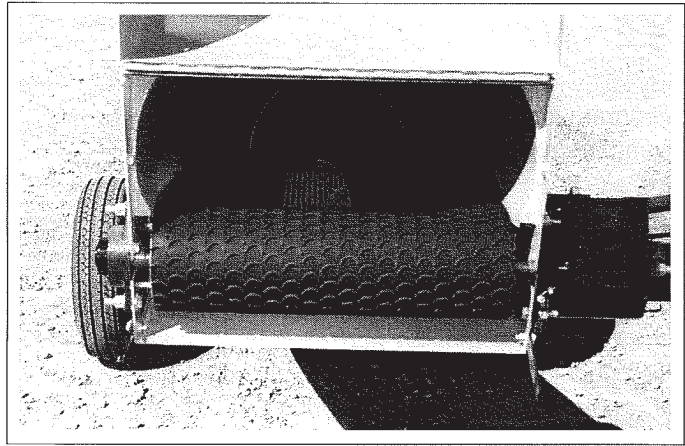


b. **Adjusting tracking:**

A misaligned belt will track toward the loose side. Set the tracking by loosening the bearing mounts on the tight side and using the bearing position bolt to move the end of the roller into the required position. Tighten the bearing mount.

Move the belting another revolution and check the tracking again. Loosen the tight side slightly again if required. Repeat the adjusting and checking procedure until the belting centers on the bottom end roller and stays centered when running.

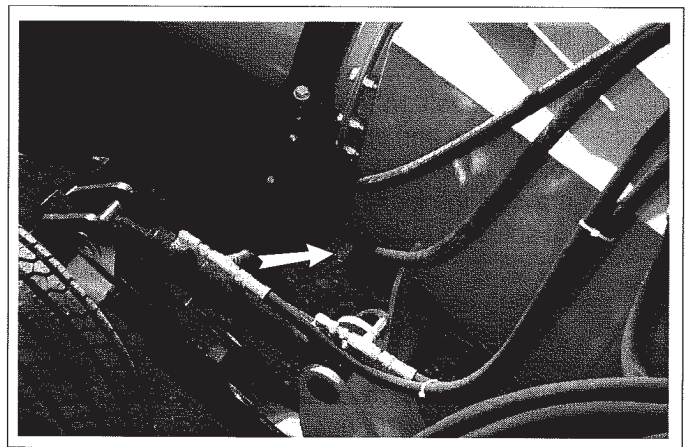
Always repeat this aligning procedure when installing a new belt. Check frequently during the first 10 hours of operation. After 10 hours, the belt is normally seated and checking the alignment can be done less frequently.



**Fig. 36 TRACKING**

4. **Belt Replacement:**

- a. Rotate the belting until the seam is between the drive housing and the transition.
- b. Move the bottom end roller to its loosest position.
- c. Pull all the slack to the seam area.
- d. Remove the wire connector and open the belt.
- e. Attach one end of the replacement belt to the belt end being removed.
- f. Pull the old belt out and the new belt will be threaded into place.
- g. Disconnect the old.
- h. Connect the ends of the new belt together and secure.
- i. Set the belting tension.
- j. Check and set the belting alignment.



**Fig. 37 CONNECTOR WIRE**

## 5.2.2 DRIVE BELT TENSION AND ALIGNMENT (ELECTRIC DRIVE)

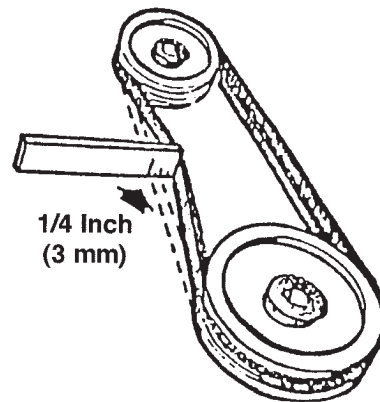
Power to the Conveying Belt is transmitted through a set of V belts. The drive system must be maintained at the proper belt tension and pulley alignment to obtain the desired performance and life. When maintaining the belt drive system for the electric drive model, follow this procedure:

1. Turn motor off and unplug power cord or turn off power at the master panel before starting on drive belt systems.
2. **Belt tension:**
  - a. Push on the center of the belt span with a force of approximately 5 lbs.
  - b. The belts will deflect approximately 1/4 to 1/2 inch when properly tensioned.
  - c. The secondary and primary drive belts must be adjusted as a set.
  - d. Move the cross shaft base to set the secondary drive belt tension.
  - e. Then move the motor base to set the primary drive belt tension.
  - f. Install and secure guards.

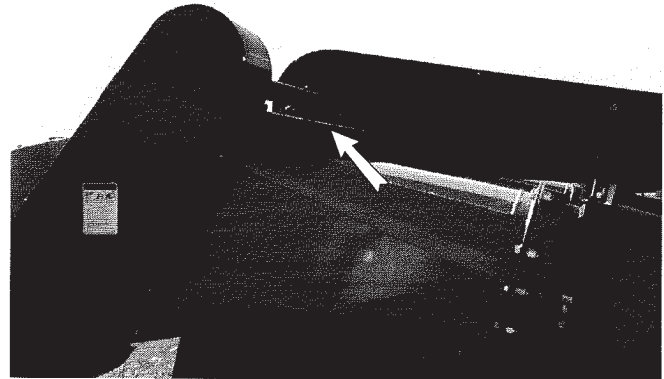


### WARNING

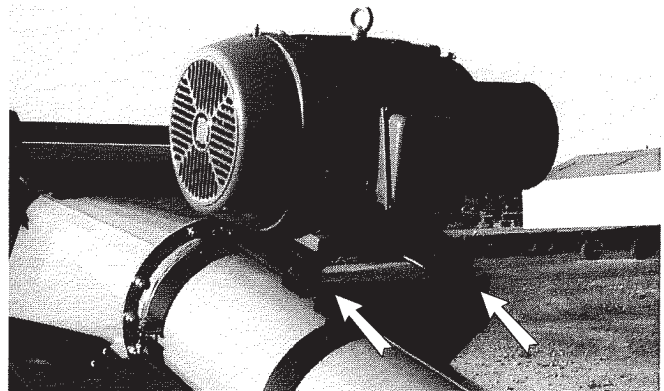
Guards are opened or removed for illustrative purposes only. Do not operate machine with guards opened or removed.



Schematic



Cross Shaft Base Adjustment



Motor Base Adjustment

Fig. 38 BELT TENSION

### 3. Alignment:

- a. Lay a straight-edge across the pulley faces to check the alignment.
- b. Use the pulley hub to move the pulley to the required position for alignment.
- c. Tighten hub bolts to secure pulley on shaft.
- d. Check belt tension.
- e. Install and secure guards.

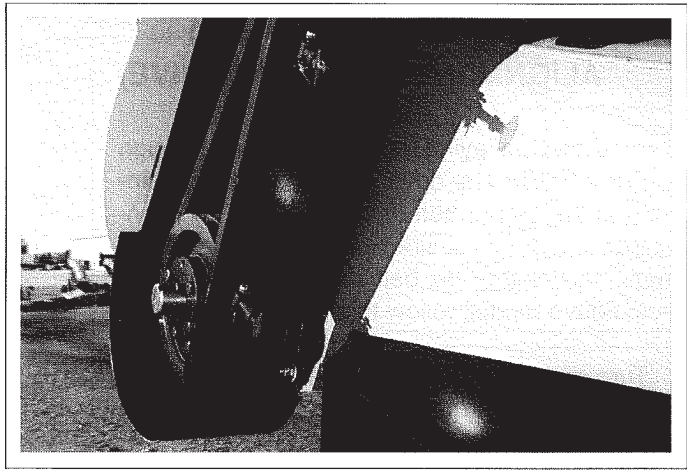


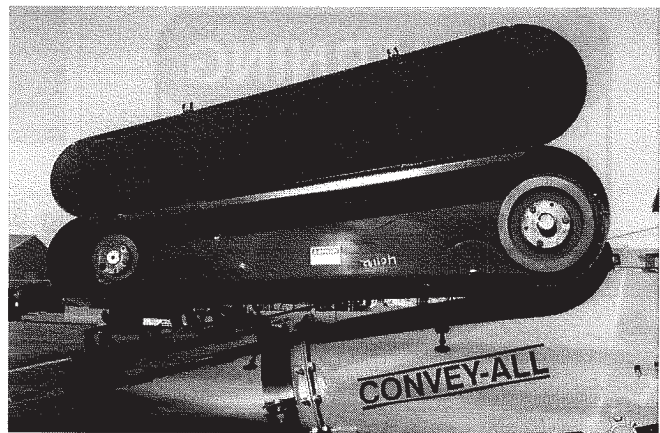
Fig. 39 ALIGNMENT (TYPICAL)

### 4. Belt replacement:

- a. Move motor base or cross shaft to its loosest position.
- b. Remove old belts and replace with new one.
- c. Move motor base or cross shaft to set the belt tension.
- d. Check pulley alignment. Adjust if required.
- e. Install and secure guards.



Primary



Secondary

Fig. 40 BELT REPLACEMENT (TYPICAL)



## WARNING

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## 6 TROUBLE SHOOTING

The Convey-All Drive Over Conveyor uses an endless flat belt moving through a tube to convey material from one location to another. It is a simple and reliable system that requires minimal maintenance.

In the following section, we have listed many of the problems, causes and solutions to the problems that you may encounter.

If you encounter a problem that is difficult to solve, even after having read through this trouble shooting section, please call your local Convey-All dealer or distributor. Before you call, please have this Operator's Manual and the serial number from your machine ready.

PROBLEM	CAUSE	SOLUTION
Conveyor will not run.	Belting loose.	Tighten and align.
	Drive belts loose.	Tighten and align drive belts.
	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.
	Belting not aligned.	Align belting.
<hr/>		
Belt edge fraying.	Belting not aligned.	Align and tension belting.
<hr/>		
Low conveying capacity.	Incorrect belt speed.	Adjust belt speed to correct range.
	Conveyor belting slipping.	Tighten and align.
	Drive belt slipping.	Replace if worn or glazed.
		Set correct tension and alignment.

**7 SPECIFICATIONS**  
**7.1 MECHANICAL**

Model	DOSNH 1426
Length	29' 5"
Discharge Height	44.5"
Hopper Width	25"

**SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

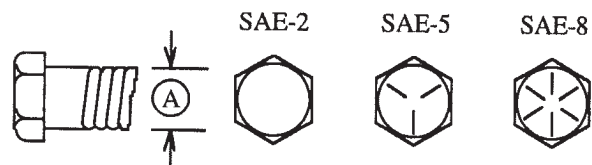
## 7.2 BOLT TORQUE

### CHECKING 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.

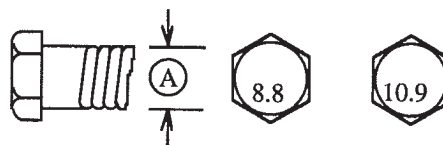
#### ENGLISH TORQUE SPECIFICATIONS

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



#### METRIC TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*			
	8.8 (N.m) (lb-ft)		10.9 (N.m) (lb-ft)	
M3	.5	.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.



## 7.3 HYDRAULIC FITTING TORQUE

### TIGHTENING FLARE TYPE TUBE FITTINGS \*

1. Check flare and flare seat for defects that might cause leakage.
  2. Align tube with fitting before tightening.
  3. Lubricate connection and hand tighten swivel nut until snug.
  4. To prevent twisting the tube(s), use two wrenches. Place one wrench on the connector body and with the second tighten the swivel nut to the torque shown.
- \* The torque values shown are based on lubricated connections as in reassembly.

Tube Size OD	Nut Size Across Flats	Torque Value*		Recommended Turns To Tighten (After Finger Tightening)	
		(N.m)	(lb-ft)	(Flats)	(Turn)
3/16	7/16	8	6	1	1/6
1/4	9/16	12	9	1	1/6
5/16	5/8	16	12	1	1/6
<b>3/8</b>	<b>11/16</b>	<b>24</b>	<b>18</b>	<b>1</b>	<b>1/6</b>
1/2	7/8	46	34	1	1/6
5/8	1	62	46	1	1/6
3/4	1-1/4	102	75	3/4	1/8
7/8	1-3/8	122	90	3/4	1/8

### TIGHTENING O-RING FITTINGS \*

1. Inspect O-ring and seat for dirt or obvious defects.
2. On angle fittings, back the lock nut off until washer bottoms out at top of groove.
3. Hand tighten fitting until back-up washer or washer face (if straight fitting) bottoms on face and O-ring is seated.
4. Position angle fittings by unscrewing no more than one turn.
5. Tighten straight fittings to torque shown.
6. Tighten while holding body of fitting with a wrench.

Tube Size OD	Nut Size Across Flats	Torque Value*		Recommended Turns To Tighten (After Finger Tightening)	
		(N.m)	(lb-ft)	(Flats)	(Turn)
3/8	1/2	8	6	2	1/3
7/16	9/16	12	9	2	1/3
1/2	5/8	16	12	2	1/3
9/16	11/16	24	18	2	1/3
3/4	7/8	46	34	2	1/3
7/8	1	62	46	1-1/2	1/4
1-1/16	1-1/4	102	75	1	1/6
1-3/16	1-3/8	122	90	1	1/6
1-5/16	1-1/2	142	105	3/4	1/8
1-5/8	1-7/8	190	140	3/4	1/8
1-7/8	2-1/8	217	160	1/2	1/12

- \* The torque values shown are based on lubricated connections as in reassembly.

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