



# **SHEYENNE / WESTGO**

## **1235 Belt CONVEYOR**

### **Owner / Operator Manual & Parts Book**

701 Lenham Ave. - P.O. Box 647 – Cooperstown, ND 58425  
(701) 797-2700 – Fax (701) 797-2584 – [www.sheyennemfg.com](http://www.sheyennemfg.com)



**SERIAL NUMBER LOCATION**

Always give your dealer the serial number of your Sheyenne/Westgo Grain 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.



**Serial number location**

**Model #**  
\_\_\_\_\_

**Serial #**  
\_\_\_\_\_

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





Please enter information below and **SAVE FOR FUTURE REFERENCE**

## BELT CONVEYOR WARRANTY

SHEYENNE TOOLING & MANUFACTURING warrants each new product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the machine or components, not to exceed **twelve consecutive months** from the date of delivery of the new SHEYENNE TOOLING & MANUFACTURING product to the original purchaser.

Genuine SHEYENNE TOOLING & MANUFACTURING replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

Under no circumstances will it cover any merchandise or components thereof, which in the opinion of the company, has been subject to negligent handling, misuse, alteration, an accident, or if repairs have been made with parts other than those obtainable through SHEYENNE TOOLING & MANUFACTURING.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that in our judgment shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to SHEYENNE TOOLING & MANUFACTURING.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature to person or property.

Except as set forth above, **SHEYENNE TOOLING & MANUFACTURING shall have no obligation of liability of any kind on account of any of its equipment and shall not be liable for special or consequential damage. SHEYENNE TOOLING & MANUFACTURING makes no other warranty, express or implied, and, specifically, SHEYENNE TOOLING & MANUFACTURING disclaims any implied warranty of merchantability of fitness for a particular purpose. Some states or provinces do not permit limitations or exclusions of implied warranties of incidental or consequential damages, so the limitations or exclusions in this warranty may not apply.**

This warranty is subject to any existing conditions of supply, which may directly affect our ability to obtain materials or manufacture replacement parts.

SHEYENNE TOOLING & MANUFACTURING reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify or enlarge neither this warranty nor the exclusions, limitations and reservations.

I have read and understand the above instructions and warranty. **Warranty is invalid until all three copies are completed and signed. Customer copy retained, dealer copy in dealer's possession and manufacturer's copy returned.**

---

Date Purchased \_\_\_\_\_

Dealership \_\_\_\_\_

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

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

Customer Signature \_\_\_\_\_

Date \_\_\_\_\_

Dealer Signature \_\_\_\_\_

Date \_\_\_\_\_

**Customer Copy**

(Keep in this book)



Please enter information below and **SAVE FOR FUTURE REFERENCE**

## **BELT CONVEYOR WARRANTY**

SHEYENNE TOOLING & MANUFACTURING warrants each new product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the machine or components, not to exceed **twelve consecutive months** from the date of delivery of the new SHEYENNE TOOLING & MANUFACTURING product to the original purchaser.

Genuine SHEYENNE TOOLING & MANUFACTURING replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer.

Under no circumstances will it cover any merchandise or components thereof, which in the opinion of the company, has been subject to negligent handling, misuse, alteration, an accident, or if repairs have been made with parts other than those obtainable through SHEYENNE TOOLING & MANUFACTURING.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that in our judgment shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to SHEYENNE TOOLING & MANUFACTURING.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature to person or property.

Except as set forth above, **SHEYENNE TOOLING & MANUFACTURING shall have no obligation of liability of any kind on account of any of its equipment and shall not be liable for special or consequential damage. SHEYENNE TOOLING & MANUFACTURING makes no other warranty, express or implied, and, specifically, SHEYENNE TOOLING & MANUFACTURING disclaims any implied warranty of merchantability of fitness for a particular purpose. Some states or provinces do not permit limitations or exclusions of implied warranties of incidental or consequential damages, so the limitations or exclusions in this warranty may not apply.**

This warranty is subject to any existing conditions of supply, which may directly affect our ability to obtain materials or manufacture replacement parts.

SHEYENNE TOOLING & MANUFACTURING reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify or enlarge neither this warranty nor the exclusions, limitations and reservations.

I have read and understand the above instructions and warranty. **Warranty is invalid until all three copies are completed and signed. Customer copy retained, dealer copy in dealer's possession and manufacturer's copy returned.**

---

Date Purchased \_\_\_\_\_

Dealership \_\_\_\_\_

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

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

Customer Signature \_\_\_\_\_

Date \_\_\_\_\_

Dealer Signature \_\_\_\_\_

Date \_\_\_\_\_

**Dealer Copy**







**Manufacturer Copy**

**PLEASE ENTER INFORMATION BELOW AND RETURN TO SHEYENNE TOOLING AND MANUFACTURING**

## **BELT CONVEYOR WARRANTY**

**SHEYENNE TOOLING & MANUFACTURING warrants each new product to be free from defects in material and workmanship. This warranty is applicable only for the normal service life expectancy of the machine or components, not to exceed twelve consecutive months from the date of delivery of the new SHEYENNE TOOLING & MANUFACTURING product to the original purchaser.**

Genuine SHEYENNE TOOLING & MANUFACTURING replacement parts and components will be warranted for 90 days from date of purchase, or the remainder of the original equipment warranty period, whichever is longer. Warranty is not applicable for normal wear and usage.

Under no circumstances will it cover any merchandise or components thereof, which in the opinion of the company, has been subject to negligent handling, misuse, alteration, an accident, or if repairs have been made with parts other than those obtainable through SHEYENNE TOOLING & MANUFACTURING.

Our obligation under this warranty shall be limited to repairing or replacing, free of charge to the original purchaser, any part that in our judgement shall show evidence of such defect, provided further that such part shall be returned within thirty (30) days from date of failure to SHEYENNE TOOLING & MANUFACTURING.

This warranty shall not be interpreted to render us liable for injury or damages of any kind or nature to person or property.

Except as set forth above, SHEYENNE TOOLING & MANUFACTURING shall have no obligation of liability of any kind on account of any of its equipment and shall not be liable for special or consequential damage. SHEYENNE TOOLING & MANUFACTURING makes no other warranty, express or implied, and, specifically, SHEYENNE TOOLING & MANUFACTURING disclaims any implied warranty of merchantability of fitness for a particular purpose. Some states or provinces do not permit limitations or exclusions of implied warranties of incidental or consequential damages, so the limitations or exclusions in this warranty may not apply.

This warranty is subject to any existing conditions of supply, which may directly affect our ability to obtain materials or manufacture replacement parts.

SHEYENNE TOOLING & MANUFACTURING reserves the right to make improvements in design or changes in specifications at any time, without incurring any obligations to owners of units previously sold.

No one is authorized to alter, modify or enlarge neither this warranty nor the exclusions, limitations and reservations.

I have read and understand the above instructions and warranty. I have also read the owner's manual and understand all safety precautions. **Warranty is invalid until all three copies are completed and signed. Customer copy retained, dealer copy in the dealer's possession and the manufacturer's copy returned.**

Date Purchased \_\_\_\_\_ Dealership \_\_\_\_\_

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

Customer Information: Name (Please Print) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_, State \_\_\_\_\_, Zip Code \_\_\_\_\_

E-Mail (If Applicable) \_\_\_\_\_

Signature \_\_\_\_\_, Date \_\_\_\_\_

Dealer Signature \_\_\_\_\_

Date \_\_\_\_\_

*Please return via; fax, regular mail or e-mail; to:*  
*fax number – (701) 797-2584*  
*address --*  
**Sheyenne Tooling and Manufacturing**  
**PO Box 647**  
**Cooperstown, ND 58425**  
*e-mail – [warranty@sheyennemfg.com](mailto:warranty@sheyennemfg.com)*



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## 1 INTRODUCTION

Congratulations on your choice of a Sheyenne/Westgo Portable Conveyor to compliment your farming operation. This equipment has been designed and manufactured to meet the needs of the discerning farmer for the efficient moving of grain.

Safe, efficient and trouble free operation of your Sheyenne/Westgo Portable 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 within the Operator` s Manual.



**Figure 1.** Sheyenne/Westgo Conveyor

This manual covers the **Model 1235 Conveyor** made by Sheyenne Tooling & Mfg.

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

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

## SAFETY ALERT SYMBOL



Why is SAFETY so important to you?

### 3 Big Reasons

Accidents Can Be Avoided

Accidents Disable and Kill

Accidents Are Costly

This safety alert symbol appears in this manual and on decals on the portable conveyor. It is used to draw your attention to the possibility of personal injury or loss of life. We **urge** you to follow all safety instructions. Be alert to safety issues at **all** times!

In addition you will see the use of **signal words** with the safety messages. The appropriate signal word for each message has been selected using the following guide-lines:



**DANGER:** Indicates an immediate hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

**IMPORTANT:** Indicates that equipment or property damage could result if instructions are not followed.

**NOTE:** Gives helpful information.

The conveyor is designed to give safe, dependable service if operated and maintained according to instructions. Read and understand this manual before operating. It is the owner's responsibility to be certain anyone operating this product reads this manual, and all other applicable manuals, to become familiar with this equipment and all safety precautions. Failure to do so could result in serious personal injury or equipment damage. If you have any questions, consult your dealer.

## SAFETY

YOU are responsible for the safe operation and maintenance of your Sheyenne/Westgo Portable Conveyor. YOU must ensure that you and anyone else who is going to operate, maintain or work around the 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 days 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 Conveyor, and at least annually thereafter 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 read and understand all Safety and Operating instructions in the manual and to follow them. All 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 before operating, maintaining or adjusting the Conveyor.
2. Only trained competent persons shall operate the Conveyor. An untrained operator is not qualified to operate this machine.
3. Have a first-aid kit available for use should the need arise and know how to use it.



4. Do not allow children, spectators or bystanders within hazard area of machine.
5. 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,
- Respiration or filter mask.



6. 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. Review safety related items annually with all personnel who will be operating or maintaining the Conveyor.
8. Have another person nearby who can shut down the Conveyor in case of an accident. It is good practice to always work with a second person around conveyors.

## 2.2 OPERATING SAFETY

1. Read and understand the Operator`s Manual and all safety signs before using.
2. Electric motor drives: Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Clear the area of all bystanders, especially children, before starting.
4. Be familiar with machine hazard area. If anyone enters hazard area, shut down machine immediately. Clear the area before restarting.
5. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
6. Do not allow riders on the Conveyor or tractor when transporting.
7. Stay away from overhead obstructions and power lines during operation and transporting. Electrocutation can occur without direct contact.
8. Do not operate machine when any guards are removed.
9. Set park brake on tractor before starting.
10. Lower conveyor to its lowest position when transporting or when not in use.
11. Have another person nearby you who can shut down the conveyor in case of an accident. It is good practice to always work with a second person around conveyors.
12. Inspect lift cable before using conveyor. Replace if frayed or damaged.
13. Make certain lift cable is properly seated in cable pulleys.
14. Ensure that conveyor is empty before raising or lowering.
2. Stay away from overhead power lines when moving conveyor. Electrocutation can occur without direct contact.
3. Chock Conveyor and tractor wheels front and rear before operating.
4. Keep Conveyor as low as possible.
5. Locate Conveyor to provide ample space for grain vehicles to unload.
6. Keep Conveyor as low as possible when moving. Raise only when it is next to storage facility.
7. Be familiar with the machine hazard area. If anyone enters hazard area, shut down machine immediately. Clear the area before restarting.
8. Operate the conveyor on level ground free of debris. If ground is uneven, anchor the conveyor to prevent tipping or upending.

### **IMPORTANT**

BEFORE RAISING OR PLACEMENT OF CONVEYOR ENSURE THAT GROUND IS REASONABLY LEVEL. CONVEYOR COULD TOPPLE IF GROUND IS TOO UNEVEN, DAMAGING EQUIPMENT AND/OR CAUSING PERSONAL INJURY.

**NOTE:** If conveyor wheels are partially or fully buried in snow or grain, do not attempt to move conveyor until snow or grain has been cleared away from conveyor wheels. Failure to heed may cause damage to conveyor and/or serious injury.

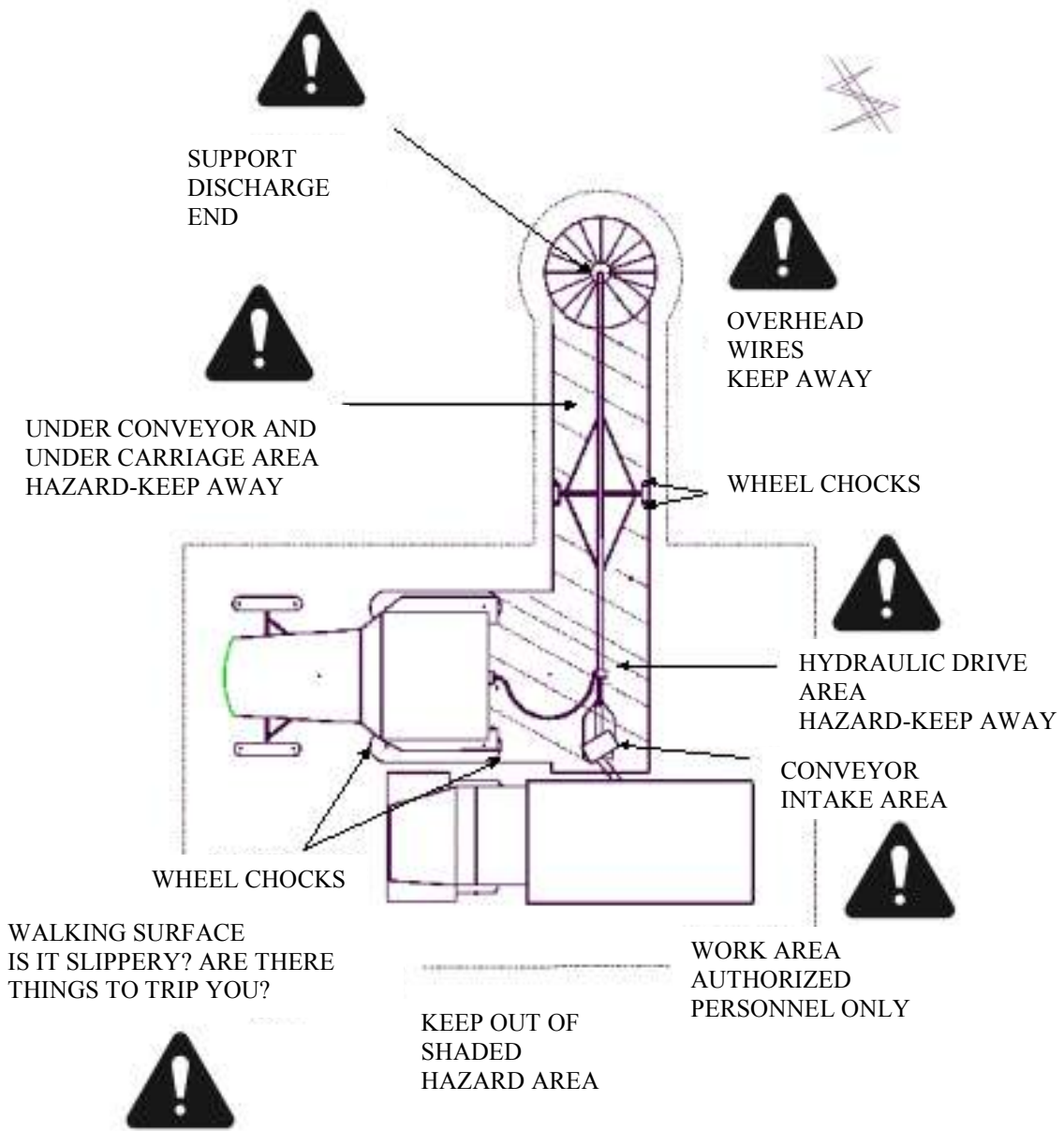
### **IMPORTANT**

WHEN RELEASING CONVEYOR FROM TOWING VEHICLE, TEST THE INTAKE END DOWNWARD WEIGHT. DO NOT RAISE THE INTAKE END ABOVE DRAW BAR HEIGHT. WHEN THE INTAKE END IS ELEVATED TOO HIGH WITH CONVEYOR IN RAISED POSITION, THE BALANCE OF WEIGHT QUICKLY TRANSFERS TO THE DISCHARGE END, CAUSING THE CONVEYOR TO UPEND.

**NOTE:** Winch must have clicking sound when raising conveyor. If clicking sound stops, retain grip on handle, lower conveyor fully, and repair ratchet.

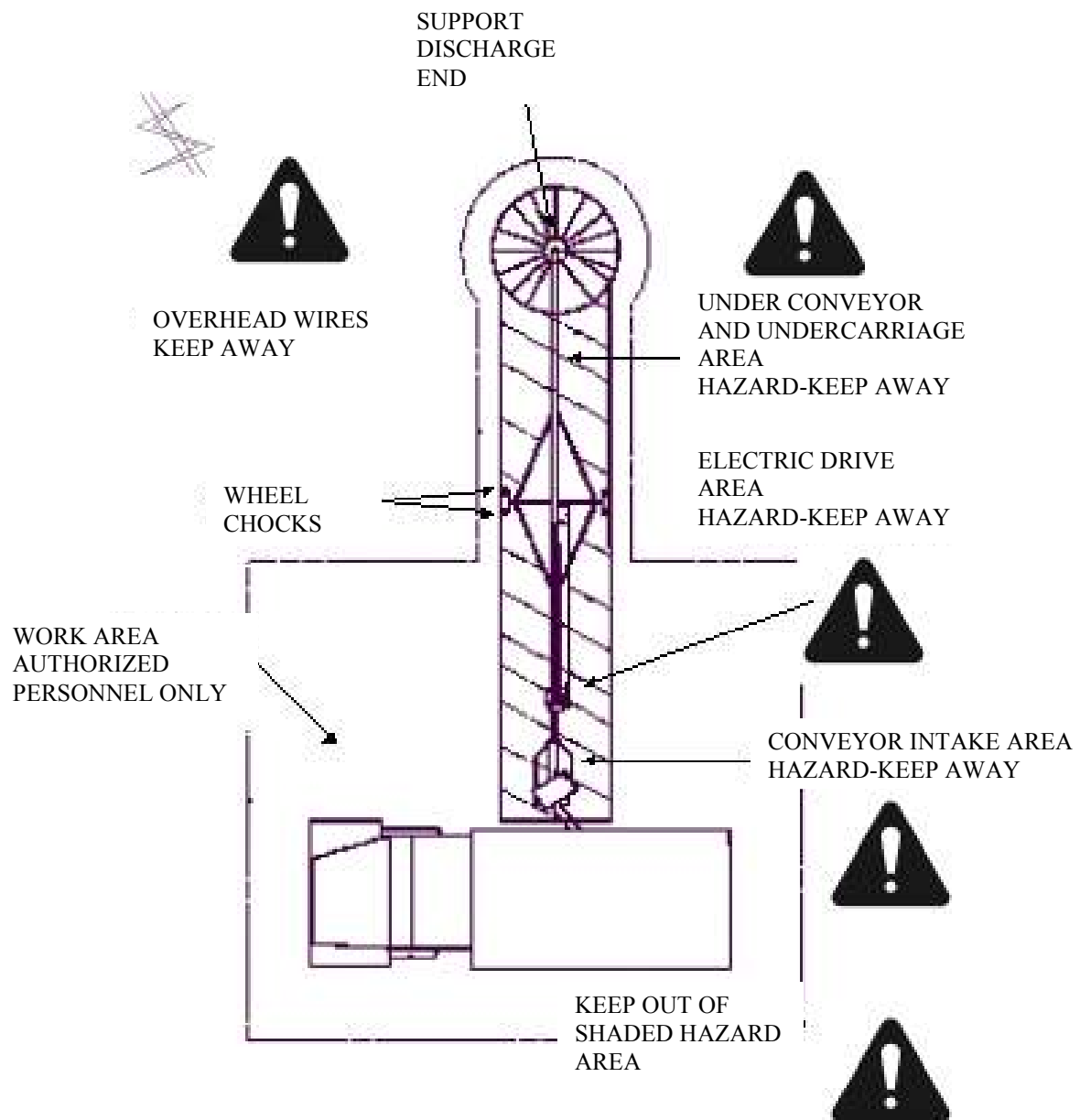
## 2.3 PLACEMENT SAFETY

1. Move only with a tractor. Never move by hand.



**Figure 2.** Workplace hazard area (Hydraulic Drive)





**Figure 3.** Workplace hazard area (Electric Drive)

## 2.4 MAINTENANCE SAFETY

1. Review the Operator`s Manual and all safety items before working with, maintaining or operating the Conveyor.
2. 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.



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 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. Support conveyor tube before attempting maintenance on the under carriage assembly. Where possible conveyor should be in the full down position.
11. Keep decals clean. Replace any decal that is damage or not clearly visible.

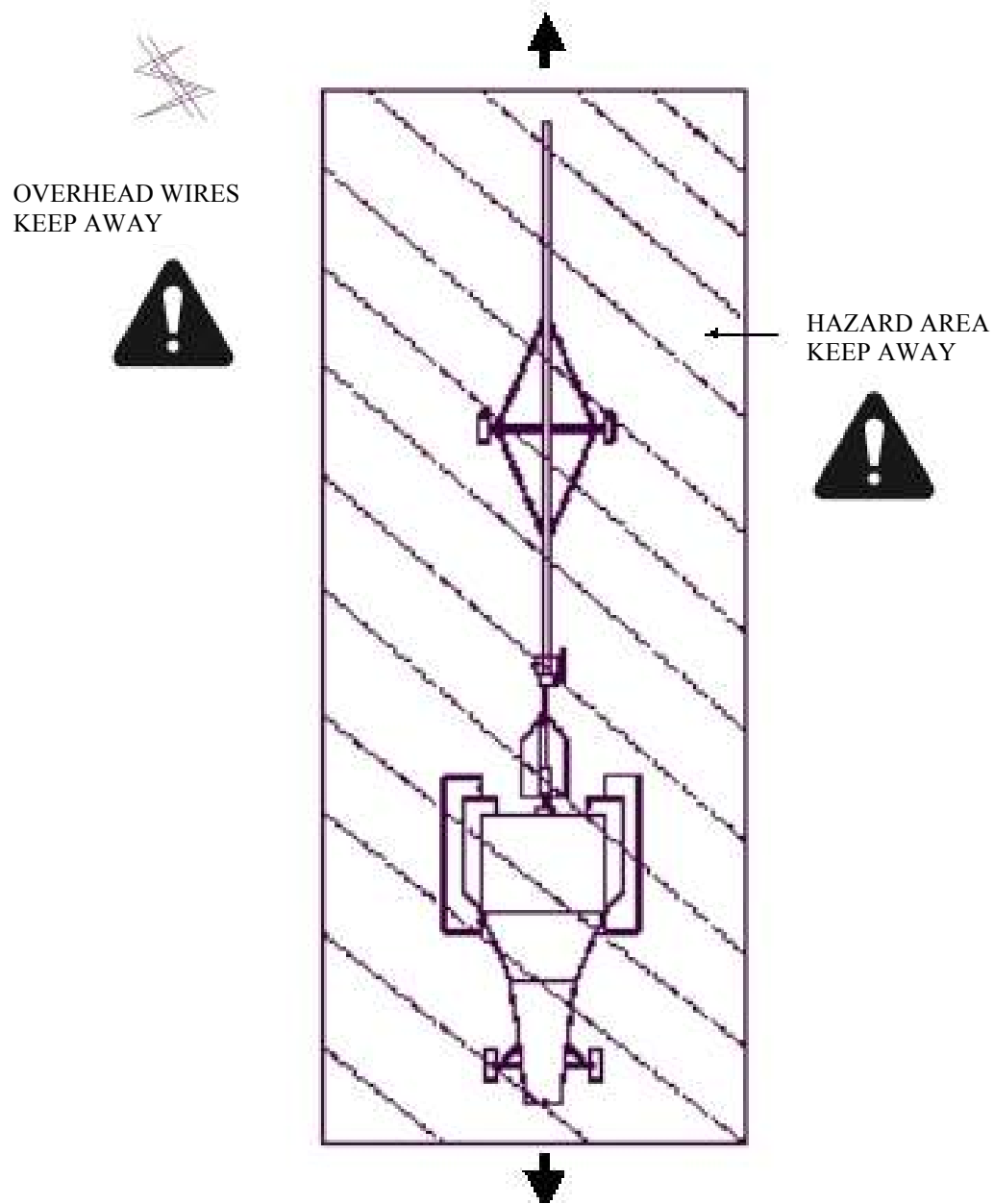
## 2.5 HYDRAULIC SAFETY

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 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, seek medical attention immediately. Serious infection or toxic reaction can develop from hydraulic fluid piercing the skin surface.

## 2.6 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 light 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 bolt, washer and double nut. Always attach the safety chain.
7. Lower Conveyor to its lowest position for transporting.
8. Keep to the right and yield the right- off-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. Electrocutation can occur without direct contact.
11. Always use hazard warning flashers on tractor when transporting unless prohibited by law.

*Note: If conveyor wheels are partially or fully buried in snow or grain, do not attempt to move conveyor until snow or grain has been cleared away from conveyor wheels. Failure to heed may cause damage to conveyor and/or serious injury.*



**Figure 4.** Transporting hazard area

## 2.7 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. Lower Conveyor to its lowest position for storage unless placed in its operating position.

\* Remove the smallest portion of the split backing paper.

\* Align the decal 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 decal in place.

## 2.8 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.

\* Small air pockets can be pierced with a pin and smoothed out using the piece of decal backing paper.

## 2.9 SAFETY DECALS

1. Keep safety decals and signs clean and legible at all times.
2. Replace safety decals that displayed a safety sign that are missing or have become illegible.
3. Replaced parts that displayed a safety sign should also display the current sign.
4. Safety decals or signs are available from your Dealers Parts Department or the factory.

### How to Install Safety Decals:

\* Be sure that the installation area is clean and dry

\* Decide on the exact position before you remove the backing paper



### 3. OPERATION

#### 3.1 SAFETY

1. Read and understand the Operator` s Manual and all safety signs before using.
2. Hydraulic drives: Stop the engine, place all controls in neutral, set brake, remove ignition key and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Electric motor drives: Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
4. Clear the area of bystanders, especially children, before starting.
5. Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
6. Keep hands, feet, hair, and clothing away from all moving and/or rotating parts.
7. Do not allow riders on the conveyor or the tractor when transporting.
8. Stay away from overhead obstructions and power line during operation and transportation. Electrocution can occur without direct contact.
9. Do not operate machine when any guards are removed.
10. Set park brake on tractor before starting.
11. Lower the conveyor to its lowest position before moving or transporting or when not in use.
12. Inspect lift cable before using conveyor. Replace if frayed or damaged.
13. Make certain lift cable is properly seated in cable pulleys.
14. Be sure that conveyor is empty before raising or lowering.

#### 3.2 OWNER/OPERATOR RESPONSIBILITY

The Portable Conveyor is designed to efficiently move grain from a truck, trailer, or wagon into a storage facility. 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 machine. Follow all safety instructions exactly. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the work site. 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.

### 3.3 MACHINE COMPONENTS

The Sheyenne/Westgo Conveyor is an endless belt that travels through a tube for moving grain or any granular product. The machine is portable and can be raised or lowered as required for loading and unloading of trucks and storage facilities.

An electric motor or hydraulic motor can supply power to the top-drive located beside the tube. Material enters the system through a hopper or intake on the bottom end and exits through the spout or outlet on the top end. A winch is used to raise or lower the conveyor.

#### Main parts:

- a. Main Tube
- b. Spout or Outlet
- c. Electric/Hydraulic Motor Drive
- d. Frame
- e. Hopper or Intake
- f. Winch



Figure . Hopper

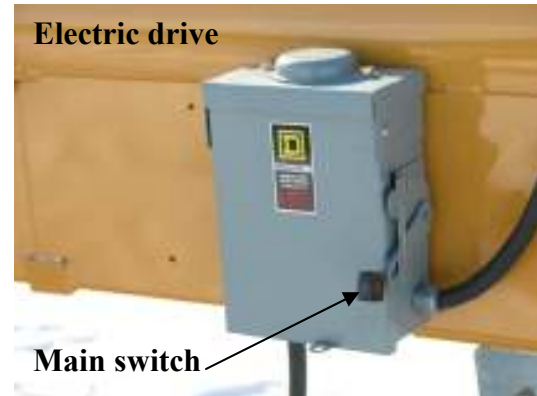


Figure . Electric drive

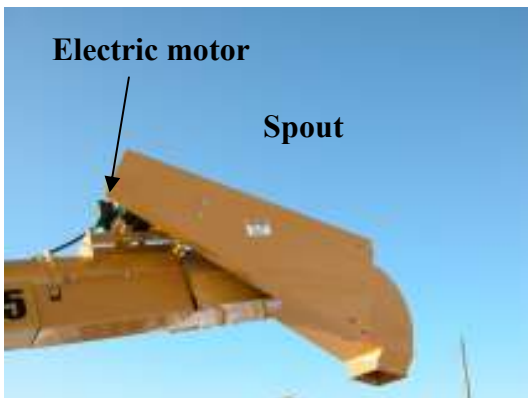


Figure . Spout

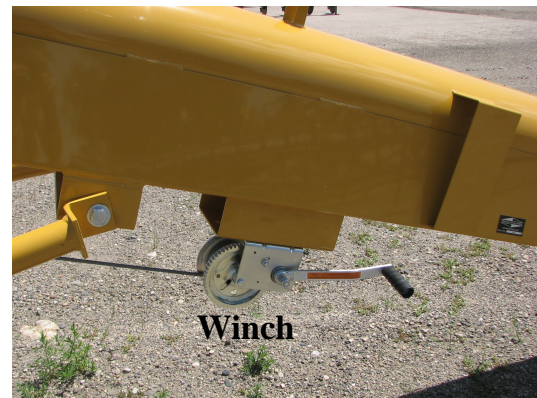
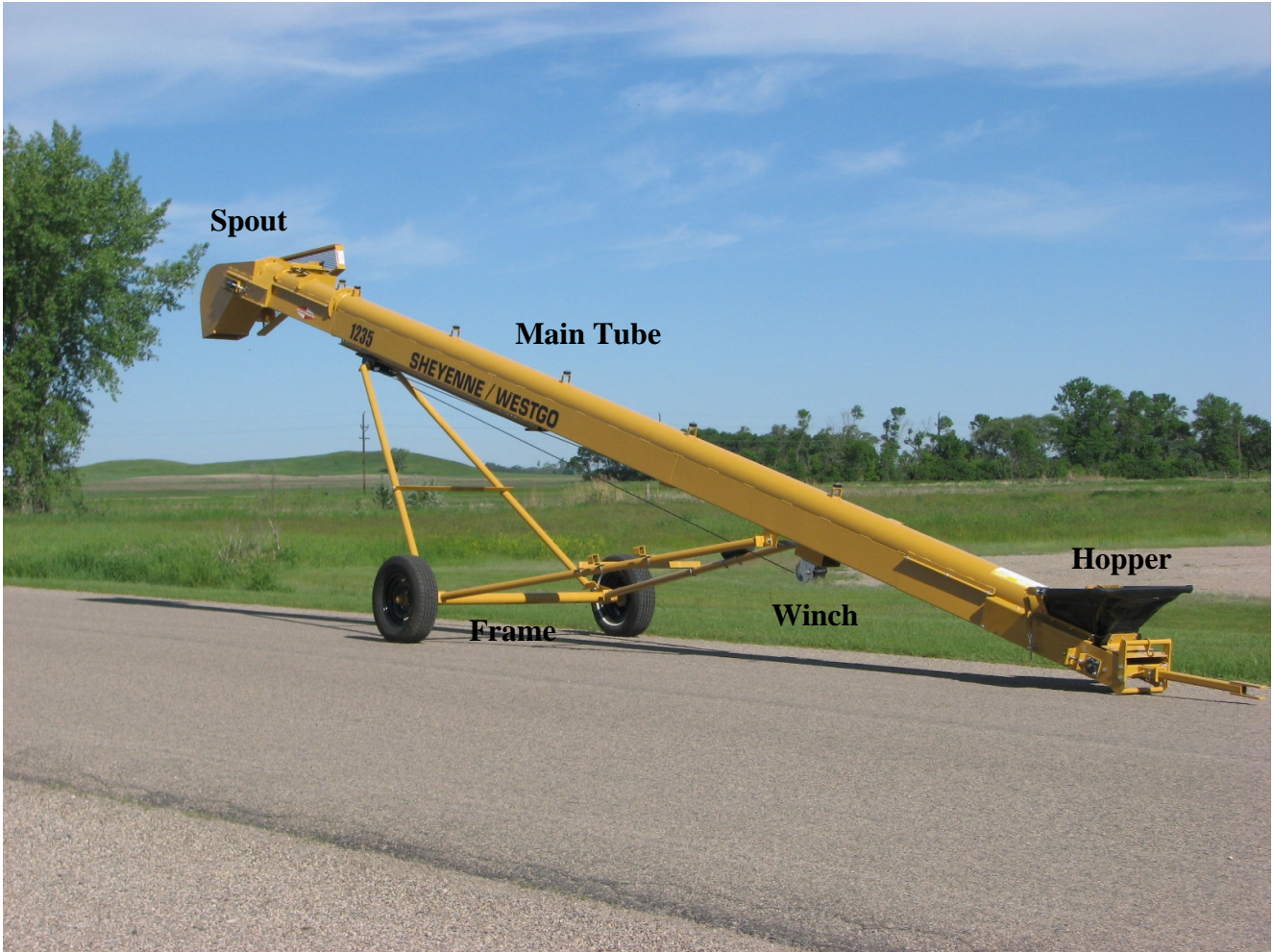


Figure . Winch





**Figure . Main parts**

### 3.4 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. After operating or transporting for ½ hour:
  - 1. Re-torque all the wheel bolts.
  - 2. Re-torque fasteners and hardware.
  - 3. Check that all safety decals are installed and legible. Apply new decals if required.
  - 4. Check that all guards are installed and working as intended.
  - 5. Lubricate all grease fittings.
- B. After operating for 5 hours and 10 hours:
  - 1. Retorque all wheel bolts, fasteners and hardware.
  - 2. Check that guards are installed and working properly.
  - 3. Check safety decals. Install new ones if required.
  - 4. Then go to the normal servicing and maintenance schedule as defined in the Maintenance Section.
- C. Do not run conveyor at full capacity until several hundred bushels have been transported.

**IMPORTANT**  
ANCHORING AND/OR SUPPORT OF CONVEYOR DURING OPERATION IS NECESSARY. WHEN LOWER HALF OF CONVEYOR EMPTIES OF GRAIN, THE WEIGHT BALANCE TRANSFERS TO THE UPPER END OF CONVEYOR, WHICH CAN CAUSE UPENDING.

### 3.5 PRE-OPERATION CHECKLIST

Efficient and safe operation of the Portable 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 area should be checked off:

- 1. Lubricate the machine per the schedule outlined in section Service and Maintenance.
- 2. Ensure that the Conveyor is properly attached to the tractor. Always use a retainer or hitch pin.
- 3. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.
- 4. Check work site. Clean up working area to prevent slipping or tripping.
- 5. Check winch and cable for security and operation. There should be at least 3 complete wraps of cable around winch drum in full down position. Cable anchor on winch drum must be tight.
- 6. Cable clamps are secure.
- 7. Drive belts are not frayed or damaged.
- 8. Drive belts are properly adjusted and aligned.
- 9. Conveyor wheels are chocked.
- 10. Discharge spout and intake area are free of obstructions.

### 3.6 CONTROLS

All controls are conveniently positioned next to the Operator's station to allow easy operation. Review this section to familiarize yourself with the location and function of each control. Each is shown and explained.

#### 1. Winch (Raising and Lowering)

A winch is located on the front lower end of the machine and is used to raise or lower the Conveyor. Turn the handle clockwise to raise and counter clockwise to lower.

#### **IMPORTANT**

Do not lower the Conveyor so far that the cable becomes slack. If the cable goes slack, it can be taken up in the wrong direction on the spool.



Figure . Winch

#### 2. Engine (Electric Engine Model)

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



Figure . Electric switch

### 3.7 ATTACHING/UNHOOKING

It is recommended that the Conveyor be attached to a tractor whenever it is moved. Follow this procedure when attaching to or unhooking from a tractor:

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 draw bar of the tractor with the hitch of the Conveyor while backing up.
4. Set the park brake before dismounting.
5. The hitch is normally removed from the intake end for operation. As a result, it must be installed on the intake end prior to attaching to the tractor.

#### **IMPORTANT**

The machine is closely balanced. Do not remove the hopper unless there is downward weight on the intake end, otherwise the Conveyor will upend.

Raise only high enough to install the hitch.

6. To install the hitch, raise the intake a few inches above the ground.

7. Slide the hitch assembly into the hitch receiver. Install the anchor pin and retaining hardware.
  8. If the Conveyor is in its working position next to a bin and resting on the bin, it will have to be raised slightly to allow the intake end to come up.
  9. Raise the intake end to the draw bar height and install the pin with its retainer.
  10. Secure the safety chain around the draw bar cage to prevent unexpected separation.
  11. Remove the chock from Conveyor wheels.
  12. If Conveyor is next to a storage facility, move until the outlet end clears the facility. Then lower Conveyor to the lowest position before moving.
  13. Move to new location.
  14. Refer to section Transporting before moving the machine.
  15. Reverse the above procedure when unhooking.
7. Slowly back the Conveyor until the outlet is over the opening in the storage facility.
  8. Use the winch to slowly lower the outlet end of the Conveyor until it is resting on the storage facility.
  9. Place chocks in the front and rear of wheel.
  10. Unhook the Conveyor from the tractor or towing vehicle and lower to the ground.
  11. Remove the hitch from the Conveyor.
  12. Lower the Conveyor again so the outlet end is resting on the storage facility.
  13. If the Conveyor is not being used with a storage facility, it will be necessary to stake or weight the intake end to prevent upending when the Conveyor is emptying.
  14. Review the Workplace Safety Diagram for your model prior to starting work. Follow all set-up instructions and do not allow any unauthorized people into the working area.
  15. For the Electric Motor Models:
    - a. Have a certified 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 when transporting in extremely dusty conditions. Be sure electric motor is properly grounded.
  16. Reverse the above procedure when removing the Conveyor from its working position.

### **3.8 MACHINE PLACEMENT**

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

1. Clear area of bystanders, especially small children, before starting.
2. Be sure there is enough clearance from overhead obstructions and power lines or other equipment to move the Conveyor into its working position.
3. Attach the Conveyor to the tractor (See section 4.7).
4. Back the Conveyor up to the storage facility while it is in lowered configuration.
5. Set the park brake on the tractor before dismounting.
6. Use the winch to raise the Conveyor so it clears the storage facility. Stay away from power lines.

### 3.9 OPERATING

When using the Conveyor, follow this procedure:

1. Clear the area of bystanders, especially small children, before starting.
2. Review the Pre-Operation Checklist.
3. Review the Workplace Hazards drawing 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 the machine is placed properly. (*See section Machine Placement*)
5. On the electric drive models, be sure a certified electrician is used to provide power and shut-down switches are conveniently positioned for the operator.
6. Check that all guards are in place and working as intended.
7. Check drive and conveying 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 load conditions.
8. Drive or back the truck into position for unloading.

9. Starting:

**A. Electric Motor Models:**

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

**B. Hydraulic Drive Models:**

- a. Place all controls in neutral.
- b. Start tractor and run at low idle.
- c. Place hydraulic control lever in detent. See Specifications Section for maximum recommended speed.

- d. Increase engine speed to rated RPM.
- e. Start the flow of material and unload.

**NOTE:**

The correct operation of hydraulic systems is directly linked to the pump's ability to supply the correct oil flow and pressure. If you cannot obtain the correct belt speed, check the dealer to ensure the power unit is delivering the correct oil volume and pressure.

10. Stopping:

**A. Electric Motor Models:**

- a. Run until the belting is empty.
- b. Turn OFF motor and lock out power source.

**B. Hydraulic Drive Models:**

- a. Run until the belting is empty.
- b. Place hydraulic control lever in neutral.
- c. Shut off engine and remove ignition key.

11. 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. Lock out all power and ensure the machine components come to stop before inspecting. Correct the emergency before resuming work.

12. Restarting (full tube):

When the machine is shut down inadvertently, or for an emergency, the belting will still be filled with material. It may be necessary to tighten the drive belts slightly to handle the heavier than normal loads before restarting.

### 13. Transfer

The best results are obtained, when a transfer conveyor is used to move the grain from a truck or storage bin outlet into the hopper of a standard conveyor (*refer to transfer conveyor operator` s manual*)

### 14. Operating angle

The manual lift can set the tube angle at any position between 13° and 30° when operating. Because the belt does not have roll back barriers, the material 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.

### 15. Power requirements:

Refer to *section Specifications*, as a guide in selecting an appropriate power source for the conveyor.

### 16. Belt speed:

The standard conveyor is setup to run at 800 ft/min for general take out. Count the number of belt revolutions per minute to determine belt speed. Belt length is double the length of your machine plus 2 feet. 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.

### 17. Operating hints:

- a. Direct the flow of material into the input hopper when moving material. Best results will be obtained when flow of incoming materials are directed to the front (upper) area of the hopper and material being dumped is central in hopper.
- b. 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.
- c. Never allow anyone into the workplace hazard area. If anyone enters, stop

immediately. Do not resume work until hazard area is clear.

- d. Do not run the machine for long periods of time without material on belting. It increases the wear. Try to run only when moving material.
- e. Do not move the machine by hand. Always use a tractor.
- f. Do not support outlet end directly on the storage facility. Tie down the intake (hopper) or weight it down to prevent upending.
- g. Keep intake end completely covered with material for maximum capacity.
- h. The best capacity is obtained when the material is loaded into the hopper as close to the tube as possible.
- i. Use a transfer conveyor to move grain from the bin outlet into the grain conveyor when emptying units.

### 3.10 TRANSPORTING

#### 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 in 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. Electrocutation can occur without direct contact.
11. Always use hazard-warning flashers on tractor when transporting, unless prohibited by law.

Sheyenne/Westgo Grain Conveyors are designed to be easily and conveniently moved from place to place. When transporting, follow these procedures:

1. Be sure all bystanders are clear of the machine.
2. On electric motor drive units, unplug the power cord, wrap around frame and secure to prevent dragging.
3. On hydraulic powered units, disconnect hydraulic hoses, remove power source and wrap hose around frame to prevent dragging.
4. Attach to a tractor or truck using a hitch pin with a retainer and a safety chain.
5. Remove chocks from wheels.
6. Slowly pull away from the storage facility and stop as soon as the outlet end clears the storage facility.
7. Stop and lower the conveyor into its fully down position and the tube is resting on the undercarriage.
8. Lower the machine if required. Transport only when machine is in its lowest position.
9. Stay away from overhead power lines. Electrocutation can occur without direct contact.
10. Never go across slopes of more than 11°. It is better to go straight up or straight down.
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.
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. It is not recommended that the machine be transported faster than 20 mph (32 km/h). *Table 1* references the acceptable transport speed as per the ratio of tractor weight versus conveyor weight.

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

**Table 1.** Speed -Weight Ratio

### 3.11 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. Lower the conveyor to its lowest position for 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 the next season. To ensure a long, trouble free life, this procedure should be followed when preparing the unit for storage.

1. Remove all residual material from the hopper and tubes.
2. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
3. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
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 to remove any moisture in the bearings.

6. Touch up all paint nicks and scratches to prevent rusting.
7. Select an area that is dry, level and free of debris.
8. If the conveyor is not being left at a storage facility, it should be placed in its lowest position.
9. Follow the procedure given in *Attaching and Unhooking* when unhooking.
10. Rotate conveyor belt so that lacing is inside the tube. This helps reduce weathering on the lacing and lacing pin.
11. On the electric motor model, cover the motor with plastic to protect against the elements.



## 4. SERVICE AND MAINTENANCE

1. Review the Operator`s Manual and all safety items before working with, maintaining or operating the Conveyor.
2. 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.
3. 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
  - Respiration or filter mask
4. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
5. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making adjustments.
6. Place stands or blocks under the frame before working beneath the machine.
7. Before resuming work, install and secure all guards when maintenance work is completed.
8. Support discharge end of Conveyor before removing or replacing any parts on the undercarriage.
9. Keep decals clean. Replace any that are damaged or not clearly visible.

### 4.1 SERVICE

#### 1. Fluids and Lubricants

- a. **Grease:**  
Use SAE multi-purpose high temperature grease with extreme pressure (EP) performance. Also acceptable is SAE multi-purpose lithium based grease.
- b. **Storing Lubricants:**  
Your machine can operate at top efficiency only if clean lubricants are used. Use clean

container to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

#### 2. Greasing

Use the Maintenance Checklist provided to keep a record of all scheduled maintenance.

- a. Use a hand-held grease gun for all greasing.
- b. Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
- c. Replace and repair broken fittings immediately.
- d. If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

#### 3. Servicing Intervals

Initial start up servicing: As 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 (*See Maintenance section for more details*).

#### 40 Hours or Weekly

- a. Check the conveying belt tension and alignment (*See Maintenance section*).
- b. Check condition of hopper flashing. Be sure it seals the hopper and prevents leaking.
- c. Check the conveying belt tracking (*See Maintenance section*). Ensure that the belt remains centered.

#### Electric drive models

- a. Check drive-belt tension and alignment.

## **200 Hours or Annually**

### **Grain Conveyor**

- a. Re-pack wheel bearings./ Grease wheels with 5 shots of grease (2 locations).
- b. For increased winch life, grease gears and hub shaft and apply a drop of oil on drive shaft bearings. Inspect shafts and bearings for wear.
- c. Wash machine

4. Service Record

See *Lubrication and Maintenance sections* for details of service. Copy this page to continue record keeping.

ACTION CODES:      ✓      -Check      CL      -Clean      R      -Re-pack  
                          L      -Lubricate      C      -Change

<b>HOURS:</b>												
<b>SERVICED BY:</b>												
<b>Maintenance Schedule</b>												
<b>40 HOURS OR WEEKLY</b>												
<b>Grain Conveyor</b>												
Belting Tension & Alignment ✓												
Conveyor Belt Tracking ✓												
Condition of Hopper Flashing ✓												
Grease Roller Bearing L												
<b>Electric Drive Models</b>												
Drive Belt Tens. & Align. ✓												
<b>200 HOURS OR ANNUALLY</b>												
<b>Grain Conveyor</b>												
Tube Straightness ✓												
Wheel Bearings R												
Machine CL												
<b>Hydraulic Drive Models</b>												
Roller Chain-Input Coupler L												

## 4.2 MAINTENANCE

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

### 1. Conveyor Belt Tension

Adjusting your conveyor belt for proper tension helps to ensure trouble-free operation and long belt life. A conveyor belt only needs to be tight enough to not to slip on the drive roller. If the belt is too loose, it will slip on the drive roller making a noticeable sound, slowing the belt down. To correct belt slippage and set proper tension in the belt follow the steps below.

1. Clear area bystanders.
2. Remove ignition or lockout power source.
3. Remove guards if necessary.
4. Loosen jam nut at upper take-up frame (*see Figure 1*).
5. Tighten adjustment bolts equally, use tape to verify (*see Figure 1*). Belt should deflect 1-2" when pushed down with a 5lb. force or be difficult to pull from sides of hopper transition.
6. Tighten jam nut.
7. Check belt tension by running conveyor for one minute. If belt is not slipping, then proceed to next step, otherwise repeat from step 4.
8. If belt is not slipping, but now running to one side, the tensioned roller needs to be realigned, *see Belt Alignment section* that follows.
9. Replace guards if removed.

#### Helpful Tips:

- If belt is still slipping and adjustment bolts are fully tightened, then belt must be shortened due to stretch over long time usage or replaced depending on wear.

- Belt should not be easy to pull from the hopper transition sides, otherwise the belt will require tensioning.

**IMPORTANT:** Failure to stop using a conveyor that is slipping will damage it and/or the drive roller lagging. In extreme cases, sections of burnt belt will have to be replaced. This type of damage is not covered by warranty.

**NOTE:** Some belts may have uneven edges, appearing misaligned. Wait until the belt makes a complete revolution before adjusting rollers.

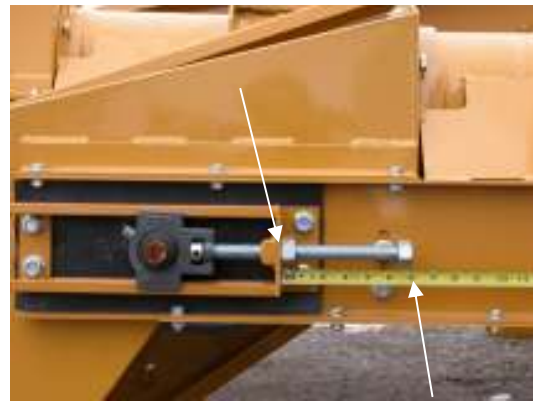


Figure 1

## 2. Conveyor Belt Alignment

Conveyor belt should be checked weekly to ensure it does not run to one side. If your belt is tracking to one side, use **Table 2** below, following the steps listed to center it. Follow the steps in the table in order for the problem area identified at the right. If you are unsure where the problem is, start in Problem area A, working your way to Problem area B, following only the steps noted for each. Skip problem area columns

that do not apply. The process can be lengthy but will help ensure trouble free operation and long belt life. See the tips that follow for helpful instructions for extreme cases where the belt still will not properly track.

Note: Refer to <i>Figures</i> for illustrations	Problem Area	
	A	B
	Hopper roller	Spout roller
Clear bystanders	1	1
Remove ignition key or lockout power source	2	2
Remove guards if necessary	3	3
Loosen bearing bolts and jam nut (if equipped)	4	4
*** Rotate adjustment bolt ½ turn	5	5
Restart conveyor and run empty for one minute	6	6
Stop conveyor, remove ignition key or lockout power source	7	7
If belt has centered, then move to next step below, otherwise repeat from ***	8	8
Tighten bearing bolts and jam nut (if equipped)	9	9
Replace guards if removed	10	10

**Table 2.** Belt Alignment Instructions

### **3. Conveyor Belt Replacement**

1. Rotate the belting until the seam is above the hopper or easily accessible.
2. Move the drive roller to its loosest position.
3. Pull all the slack to the sea area.
4. Remove the lacing pin and open the belt
5. Attach one end of the replacement belt to the belt end being removed.
6. Pull the old belt out and the new belt will be threaded into place.
7. Disconnect the old belt.
8. Connect the ends of the new belt together and secure.
9. Set the belting tension (*see Belt Tension section*).
10. Check and set belting alignment (*see Belt Alignment section*).

### **4. Drive Belt Tension and Alignment (Electric Drive)**

Power to the conveyor 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:

- a. Turn motor OFF and unplug power cord or turn OFF power at the master panel before starting on drive belt systems.
- b. Belt Tension (Electric Drive):
  1. Push on the center of the belt span with a force of approximately 5 lbs.
  2. The belts will deflect approximately  $\frac{1}{4}$ " to  $\frac{1}{2}$ " when properly tensioned.
  3. Move the motor base to set drive belt tension.
- c. Alignment:
  1. Lay a straight edge across the pulley faces to check the alignment.
  2. Use the pulley hub to move the pulley to the required position for alignment.
  3. Tighten hub bolts to secure pulley on shaft.
  4. Check belt tension.
  5. Close and secure guards.

d. Belt Replacement:

1. Move motor base to its loosest position.
2. Remove old and replace with new one.
3. Check pulley alignment. Adjust if required.
4. Move motor base to adjust to proper tension.
5. Close and secure guards.

## 5. TROUBLE SHOOTING

The Sheyenne/Westgo Grain 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 Sheyenne dealer. Before you call, please have this Operator`s Manual and the serial number from your machine ready.

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTIONS</b>
Conveyor will not run	Conveying belting loose  Drive belts loose  Belt frozen to tube from operating in high humidity id extreme cold conditions  Check valve installed incorrectly.	-Tighten & align ( <i>See Maintenance Section</i> )  -Tighten & align ( <i>See Maintenance Section</i> )  -Remove conveyor from area of high humidity and continue to run so the belt dries prior to freezing.  -Change orientation of valve
Excessive Belt Edge Fraying	Belting not aligned  Guide roller out of adjustment	-Align and tension belting ( <i>See Maintenance Section</i> ) Adjust guide roller to keep belt away from tube edge.
Low conveying capacity	Conveyor angle exceeds 30°  Incorrect belt speed  Conveyor belt slipping  Drive belt slipping	-Reposition with lower tube slope angle  -Adjust belt speed to correct range ( <i>See General Operating Instruction</i> )  -Tighten & align ( <i>See Maintenance Section</i> )  -Replace if worn or glazed ( <i>See Maintenance Section</i> )  -Set correct tension and alignment ( <i>See Maintenance Section</i> )
Belt loose	Belt stretches over time	-Tighten take-up roller, ensure that each take-up bolt is tightened the same amount (use measuring tape to check) ( <i>See Maintenance Section</i> )
Low Capacity for some grains	Smaller and/or smoother grains will slide down belting more than rougher grains	-Lower angle of conveyor



<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTIONS</b>
Grain leaking from conveyor hopper	Belt not tracked (centered)	-Track belt ( <i>See Maintenance section</i> )
	Flashing installed incorrectly or worn	-Inspect flashing for wear and replace if required
Grain leaking from conveyor spout	Belt not tracked	-Track belt ( <i>See Maintenance section</i> )
	Belt speed is too fast, hood plugging	-Decrease belt speed

**Table 3.** Trouble Shooting

## 6. SPECIFICATIONS

### 6.1 MECHANICAL

SPECS	MODEL
<b>Length:</b>	
Tube:	35 ft 4 in
Transport position:	40 ft 6 in
<b>Height:</b>	
Transport:	10 feet
Raised:	16 ft 9in
<b>Width:</b>	8 feet
<b>Max operating angle:</b>	30 °
<b>Weight:</b>	1400 lb.
<b>Power options:</b>	
Electric/hp:	5/7.5
Hydraulic displacement:	8.0 cu. In.
<b>Rims:</b>	15 inches

**Table 4.** Specifications

### 6.2 BOLT TORQUE

#### Checking Bolt Torque

The table shown below gives correct torque values for various bolts and cap screws. Tighten all bolts to the torque specified in the chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as your guide. Replace hardware with the same strength bolt.

Bolt Diameter "A"	SAE 2	SAE 2	SAE 5	SAE 5	SAE 8	SAE 8
	(N.m)	(lb-ft)	(N.m)	(lb-ft)	(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 5.** Bolt Torque

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

\* Torque value for bolts and cap screws are identified by their head markings.

### 6.3 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 until snug.
4. To prevent twisting the tube, use two wrenches. Place one wrench on the connector body and with the second tighten tighten the swivel nut to the torque shown.

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

Tube size OD (in.)	Nut size across Flats (in.)	Torque value * (N.m)	Torque value * (lb-ft)	# of turns to tighten (flats)	(After finger tightening) (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
3/8"	11/16	24	18	1	1/6
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

**Table 6.** Hydraulic Fitting Torque

#### 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.

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

Tube size OD (in.)	Nut size across Flats (in.)	Torque value * (N.m)	Torque value * (lb-ft)	# of turns to tighten (flats)	(After finger tightening) (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
7/8"	2-1/8	217	160	1/2	1/12

**Table 7.** Tightening "O" Ring Fittings

## 6.5 MAXIMUM MOTOR CONTINUOUS FLOW FOR HYDRAULIC MOTORS

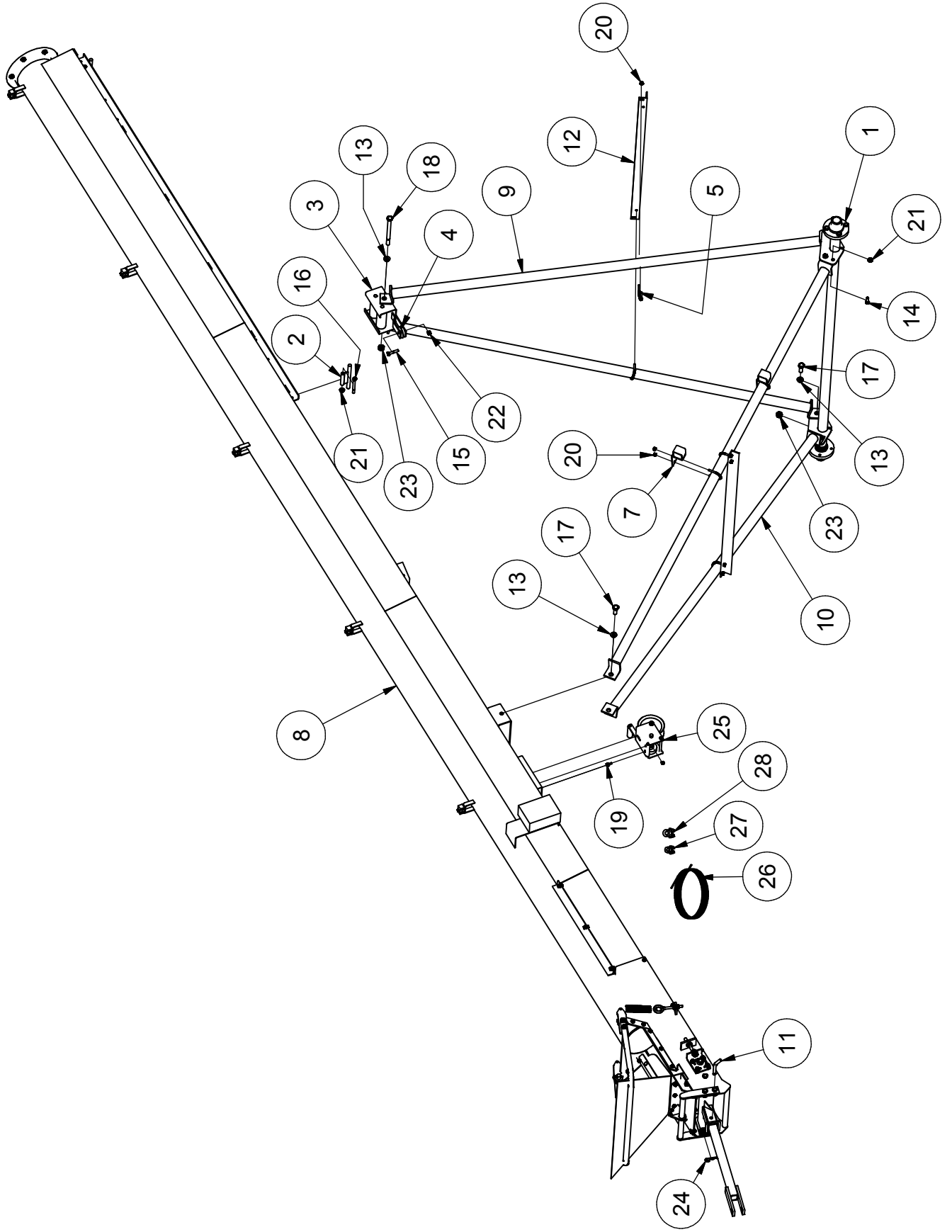
The following table indicates maximum continuous flow that a hydraulic motor can withstand. These limits should never be exceeded.

Motor Displacement	(in <sup>3</sup> /rev)	8.0.
Input Pressure	(psi)	3000
Input Flow	(GPM)	20
Torque	(in-lb)	3280
Speed	(rpm)	524
Brand		Char-Lynn
Part Number		104-1024

**Table 8.** Hydraulic Motor Specs

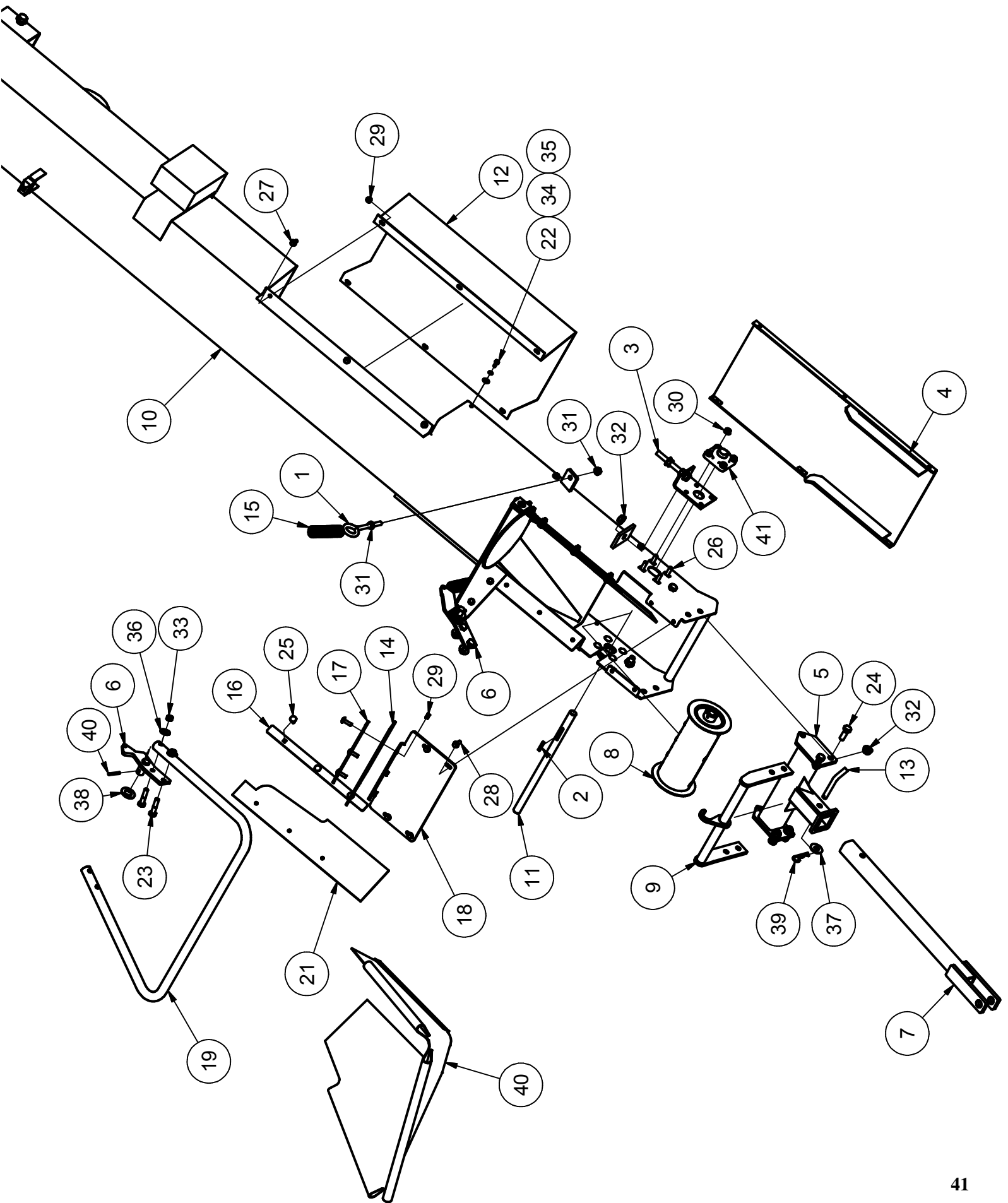
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## Transport

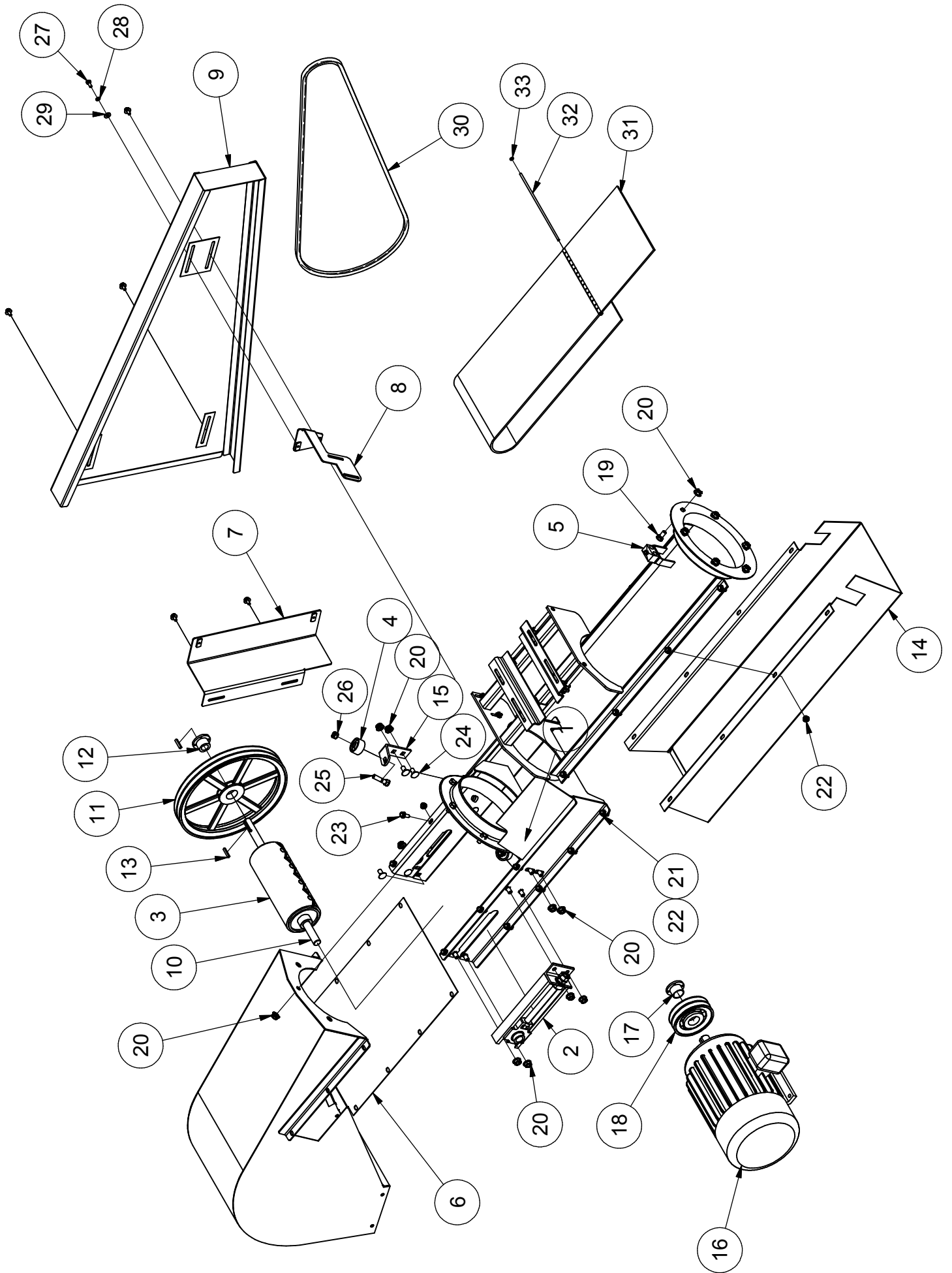
ITEM	PART NUMBER	DESCRIPTION	QTY
1	100-2-2145	AXLE W/A, 40' --2-3/8 OD	1
2	100-2-2171	TRACK STOP	2
3	100-2-2172	TRAVELER, TRACK	1
4	100-3-0067	3" CABLE PULLEY ASSY	1
5	100-3-2896	3/8 RND U-BOLT, 2-3/8 ID	6
6	120-2-0059	HITCH TUBE W/A	1
7	120-2-0063	HITCH STORAGE MOUNT W/A	2
8	120-2-0074	LOWER TUBE W/A	1
9	120-2-0081	LIFT ARM W/A, 107.5	2
10	120-2-0082	REACH ARM W/A, 122.13	2
11	120-3-0164	PIN, HITCH	1
12	120-3-0241	ANGLE, BRACE	2
13	120-3-0255	FLANGED BUSHING	6
14	900-01225	1/2NC X 1-1/2 HEX BOLT G5	4
15	900-01233	1/2-13 X 2-1/2 GR 5 HHCS ZP	1
16	900-01249	1/2-13 X 5 GR 5 HHCS ZP	2
17	900-01403	3/4NC X 2 HEX BOLT GR5	4
18	900-01441	3/4 NC X 9-1/2 HEX BOLT	1
19	900-03438	3/8 X 1 SERR. FLANGE BOLT	3
20	900-06139	3/8 NC SERR FLANGE NUT	15
21	900-06143	1/2 NC SERR FLANGE NUT	6
22	900-06504	1/2" NC TOPLOCK NUT	1
23	900-06510	3/4 - 10 TOP LOCK HEX NUT	5
24	900-25005	R HITCH PIN #9	1
25	905-12083	WINCH, FULTON---K-1550	1
26	120-3-0202	WINCH CABLE	1
27	900-31003	1/4" CABLE CLAMP	2
28	900-31005	3/8" CABLE CLAMP	1





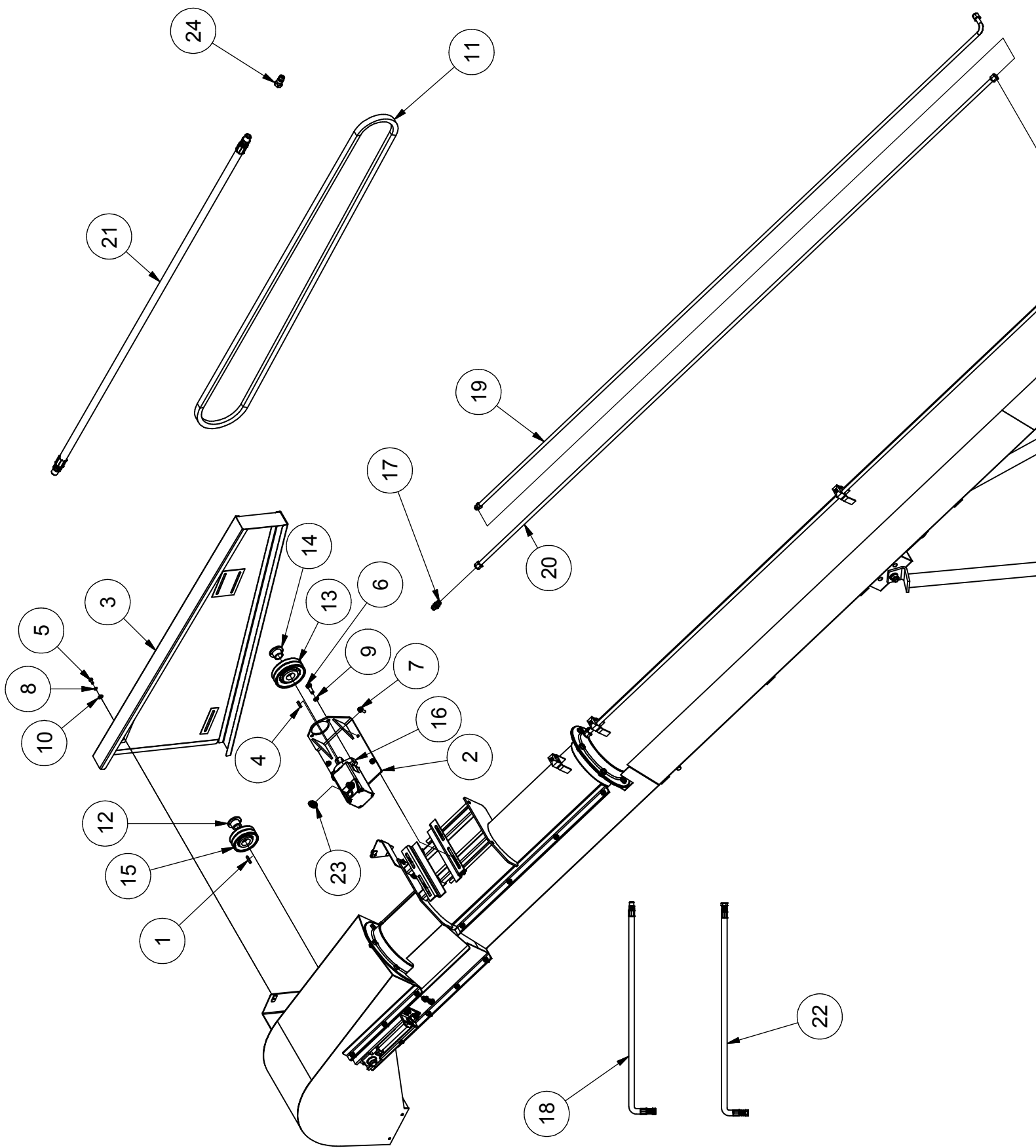
## INTAKE ASSEMBLY

ITEM	PART NUMBER	DESCRIPTION	QTY
1	100-3-0148	1/2 X 6 Eyebolt	2
2	106-3-0529	KEY, 1/4 SQ X 1-1/2	3
3	120-2-0008	TENSIONING BOLT W/A	2
4	120-2-0052	INTAKE PAN W/A	1
5	120-2-0053	HITCH MOUNT W/A	1
6	120-2-0056	HOPPER HINGE W/A	2
7	120-2-0059	HITCH TUBE W/A	1
8	120-2-0065	BTTM ROLLER ASSY	1
9	120-2-0073	HANDLE W/A	1
10	120-2-0074	LOWER TUBE W/A	1
11	120-3-0103	SHAFT, ROLLER	1
12	120-3-0110	PAN, LWR BOLT ON	1
13	120-3-0164	PIN, HITCH	1
14	120-3-0166	RUBBER FLAP	1
15	120-3-0194	SPRING, 1.5 OD X 8.81 FL	2
16	120-3-0196	BAR, HOPPER STIFFENER	2
17	120-3-0198	BAR, HOPPER STIFFENER-BTTM	1
18	120-3-0225	COVER PLATE, INTAKE	1
19	120-3-0226	TUBE, HOPPER	1
20	120-3-0253	VINYL HOPPER	1
21	120-3-0254	RUBBER FLAP	2
22	900-01055	5/16NC X 3/4 HEX BOLT G5	6
23	900-01231	1/2 - 13 X 2-1/4 HHCS GR 5	4
24	900-01343	5/8-11 X 1-3/4 GR 5 HHCS	6
25	900-01696	3/8 NC X 1-1/4 CARR BOLT GR5	9
26	900-01726	7/16NC X 1-1/2 CARR BOLT	8
27	900-03436	3/8 X 3/4 SERR FLANGE BOLT GR5	6
28	900-03438	3/8-16 x 1 SERR FLG BOLT	8
29	900-06139	3/8 NC SERR FLANGE NUT	23
30	900-06141	7/16 NC SERR FLANGE NUT	8
31	900-06143	1/2 NC SERR FLANGE NUT	4
32	900-06145	5/8NC SERR FLANGE NUT	12
33	900-06504	1/2" NC TOPLOCK NUT	4
34	900-11010	5/16 LOCK WASHER	6
35	900-11032	5/16 USS FLAT WASHER	6
36	900-11035	1/2" USS FLAT WASHER	4
37	900-11037	5/8 USS FLATWASHER ZP	1
38	900-11188	1" SAE FLAT WASHER	2
39	900-25005	R HITCH PIN #9	1
40	900-29182	1/4 X 2 ROLL PIN	2
41	901-01004	1" 4 BOLT FLANGE BRG	2



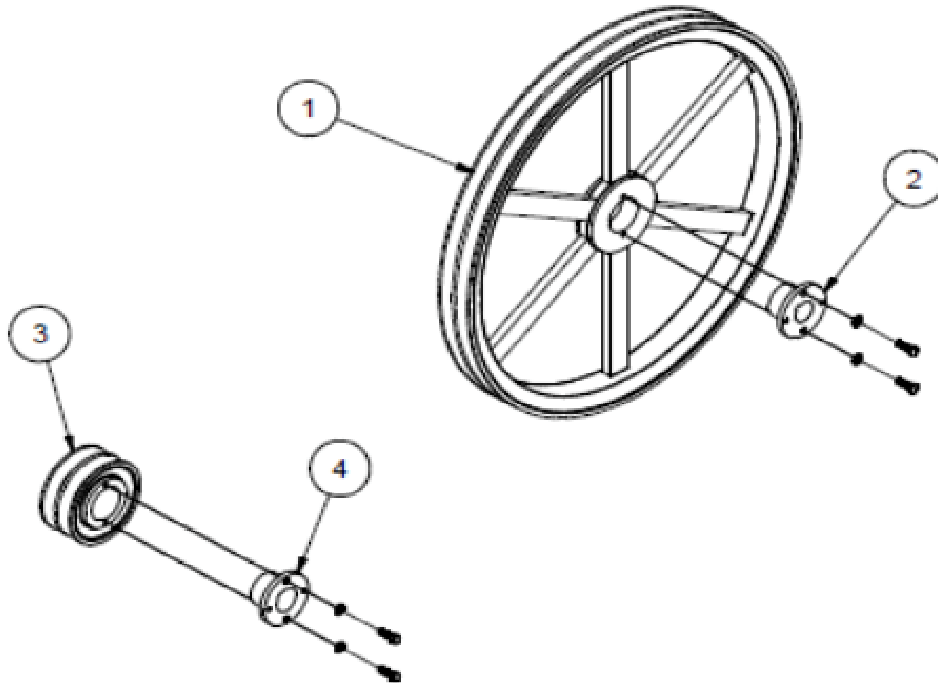
## TOP TUBE ASSY 1235

ITEM	PART NUMBER	DESCRIPTION	QTY
1	120-2-0049	TOP TUBE W/A	1
2	120-2-0038	TAKE-UP BRG ASSY	2
3	120-2-0002	TOP ROLLER ASSY	1
4	903-08383	ROLLER, 2" OD	2
5	603-2-0283	5/8 DOUBLE TUBE CLAMP	1
6	120-2-0068	SPOUT WELDMENT	1
7	120-2-0069	TOP SHIELD BRACKET WELDMENT	1
8	120-2-0070	SHIELD MID BRACKET WELDMENT	1
9	120-2-0080	SHIELD W/A, SHEAVE	1
10	120-3-0029	SHAFT, TOP ROLLER	1
11	903-08376	16"DBL B PULLEY W/H BUSHING	1
12	903-08377	H BUSHING 1" BORE	1
13	106-3-0529	KEY, 1/4SQ X 1-1/2	2
14	120-3-0175	PAN, UPPER BOLT ON	1
15	120-3-0190	BRACKET, ROLLER	2
16		ELEC. MOTOR & KEY (NOT SUPPLIED)	1
		MOUNTING HARDWARE (NOT SUPPLIED)	
17	903-08382	H BUSHING 1-3/8B (NOT SUPPLIED)	1
	903-08380	H BUSHING 1-1/8B (NOT SUPPLIED)	1
18	903-08379	5.75"OD DBL B PULLEY (NOT SUPPLIED)	1
19	900-01221	1/2NC X 1 HEX BOLT GR5	9
20	900-06143	1/2 NC SERR FLANGE NUT	19
21	900-03436	3/8 X 3/4 SERR FLANGE BOLT GR5	16
22	900-06139	3/8 NC SERR FLANGE NUT	24
23	900-03438	3/8-16 x 1 SERR FLG BOLT	8
24	900-01749	1/2-13 X 1 GR 5 CARRIAGE BOLT	12
25	900-01229	1/2NC X 2 HEX BOLT GR5	2
26	900-06504	1/2" NC TOPLOCK NUT	2
27	900-01055	5/16NC X 3/4 HEX BOLT G5	6
28	900-11010	5/16 LOCK WASHER	6
29	900-11032	5/16 USS FLATWASHER	6
30	903-01343	BX-108 V-BELT	2
31	120-3-0170	12" CHEVRON TOP BELTING	1
32	120-3-0257	SPLICE CABLE	1
33	120-3-0258	WASHER, SPLICE RETAINING	2



## HYDRAULIC COMPONENTS

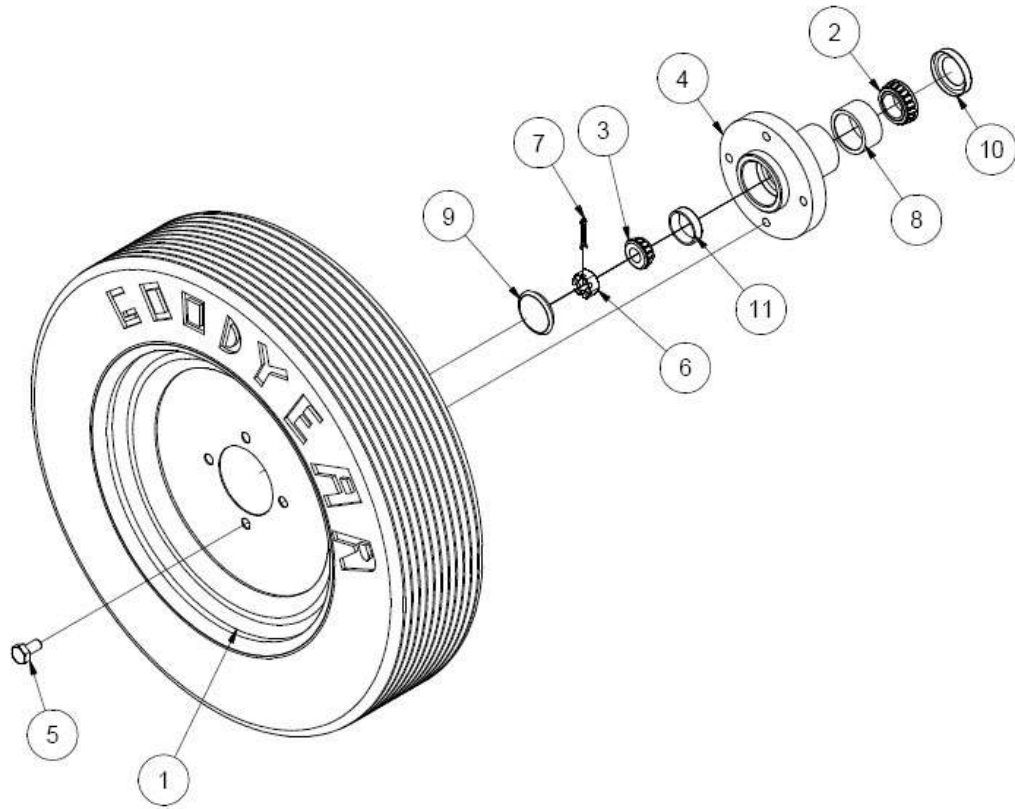
ITEM	PART NUMBER	DESCRIPTION	QTY
1	106-3-0529	KEY, 1/4 SQ X 1-1/2	1
2	120-2-0064	MOUNT W/A, HYD. MOTOR	1
3	120-2-0080	SHIELD W/A	1
4	120-3-0199	STEPKEY, 1/4 X 5/16	1
5	900-01055	5/16NC X 3/4 HEX BOLT	4
6	900-01225	1/2NC X 1-1/2 HEX BOLT G5	2
7	900-03439	3/8NC X 1-1/4 SERR FLANGE BOLT	4
8	900-11010	5/16 LOCK WASHER	4
9	900-11013	1/2" SPLIT LOCK WASHER	2
10	900-11032	5/16 USS FLAT WASHER	4
11	903-01341	BX-94 V-BELT	2
	903-01342	BX-98 V-BELT (450 SLOW DOWN KIT)	2
12	903-08377	H BUSHING 1" BORE	1
13	903-08379	5.75"OD DBL B PULLEY	1
14	903-08384	H BUSHING 1.375" BORE	1
15	903-08385	4.75"OD DBL B PULLEY	1
	903-08386	8.75" OD DBL B PULLEY (450 SLOW DOWN KIT)	1
16	904-05179	HYD. MOTOR 8.0 CHARLYNN 104-1024	1
17	904-05541	CHECK VALVE, VONBERG 1910	1
18	904-06075	5/8 HOSE, 10FJX90-10MJ-43"	1
19	904-06076	5/8 HYD. TUBE, 10FJX90-10MJ-129"	2
20	904-06077	5/8 HYD. TUBE, 10FJX-10FJX-132"	2
21	904-06078	5/8 HOSE, 10MJ-8MB	2
22	904-06081	5/8 HOSE, 10FJX90-10FJX-43"	1
23	904-08040	ADAPTER, 10MJ-10MB Straight	2
24	905-19007	PIONEER QUICK COUPLER, 3/4 ORB	2



## SLOW DOWN KIT 450 FPM

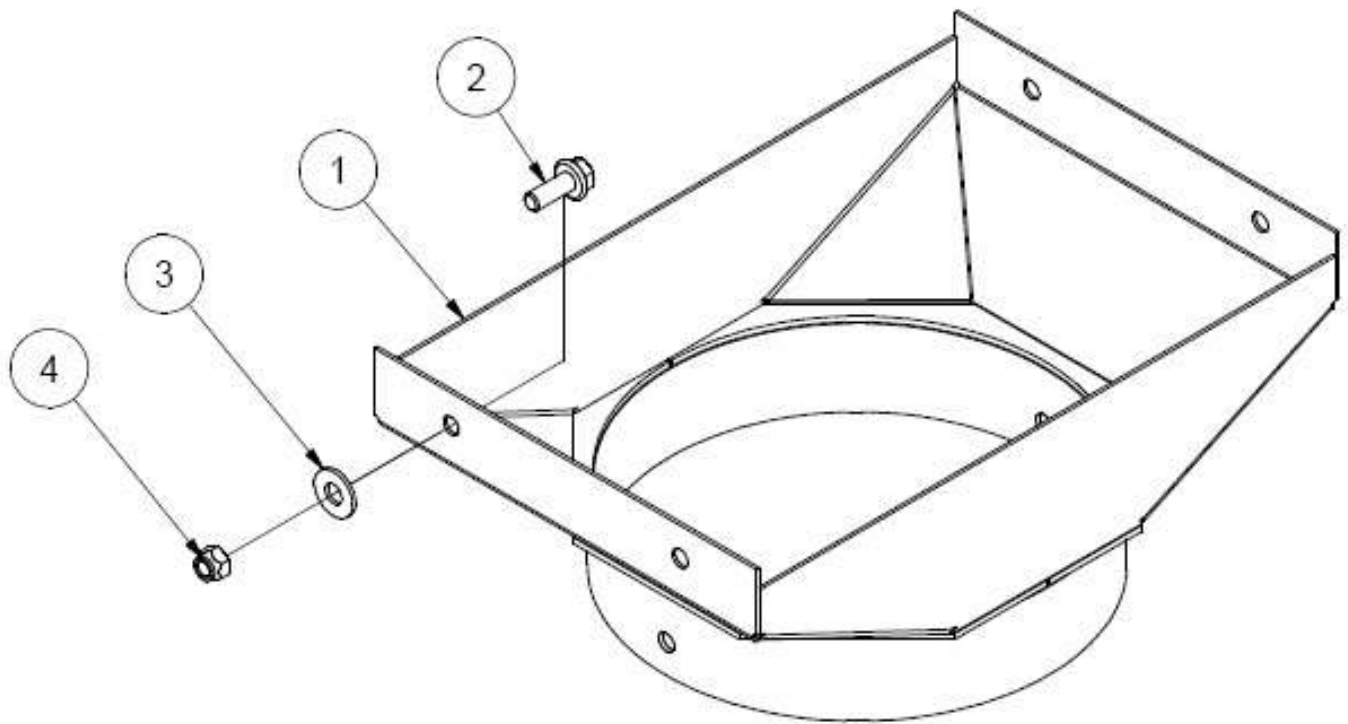
<u>ITEM</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>QTY</u>
1	903-08381	18.75" DOUBLE B PULLEY WITH H BUSHING	1
2	903-08377	H BUSHING, 1" BORE	1
3	*	4" OD DOUBLE GROOVE PULLEY RECOMMENDED PULLEY, BROWNING 2BK40H	1
4	*	H BUSHING - SIZE DEPENDES ON MOTOR SHAFT SIZE	1

\* These parts are customers choice to fit individual motor shaft sizes.



## WHEEL COMPONENTS

ITEM	PART NO.	DESCRIPTION	QTY
1	905-09015	RIM, 15 X 4.5 KB 4 BOLT	1
2	901-01015	BEARING CONE	1
3	901-01026	BEARING CONE	1
4	905-09002	4 BOLT HUB WITH CUPS	1
5	905-09010	WHEEL BOLT 1/2NF X 1-1/16	4
6	900-06058	3/4NF SLTTED HEX NUT	1
7	900-23034	5/32 X 1-1/4 COTTER PIN	1
8	901-01016	BEARING CUP	1
9	905-09008	DUST CAP	1
10	901-09001	SEAL	1
11	901-01027	BEARING CUP	1
	100-2-0859	4 BOLT HUB ASSEMBLY (REF 2-4, 8-11)	1
	905-09137	TIRE, 215-75R15	1



## ROUND TRANSITION KIT

ITEM	PART NO,	DESCRIPTION	QTY
1	120-2-0072	TRANSITION W/A	1
2	900-03438	3/8NC X 1 SERR FLANGE BOLT GR5	4
3	900-11033	3/8 USS FLAT WASHER	4
4	900-06500	3/8NC TOP LOCK NUT	4
	120-1-0108	TRANSITION KIT	1



# 1235 SHEYENNE WESTGO



## DECALS

REF	PART NO.	DESCRIPTION	QTY
1	120-3-0193	DECAL, 1235	2
2	100-3-4462	DECAL, SHEYENNE	2
3	100-3-4466	DECAL, WESTGO	2
4	100-3-1367	DECAL, SAFETY GUARD	1
5	100-3-3342	DECAL, AUGER CAUTION	1
6	300-3-1102	DECAL, SHEYENNE LOGO	2
7	100-3-1372	DECAL, SERIAL #	1
8	505-3-0315	DECAL, HIGH PRESSURE FLUID HAZARD	1

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