



SHEYENNE / WESTGO

1510

10”

**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

This manual includes the following model, tube size and lengths -
all with PTO drive and the heavy scissor lift.

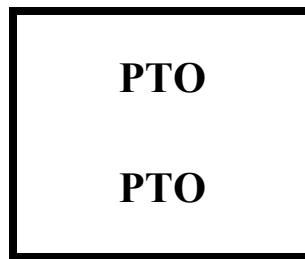
1510

10 Inch Dia

Lengths

90'

100"



Descriptions:

1510 - Auger model, with hanger bearings to support flighting

10" - Nominal auger diameter in inches

Lengths - Nominal auger length in feet

PTO - Power source - tractor power take off

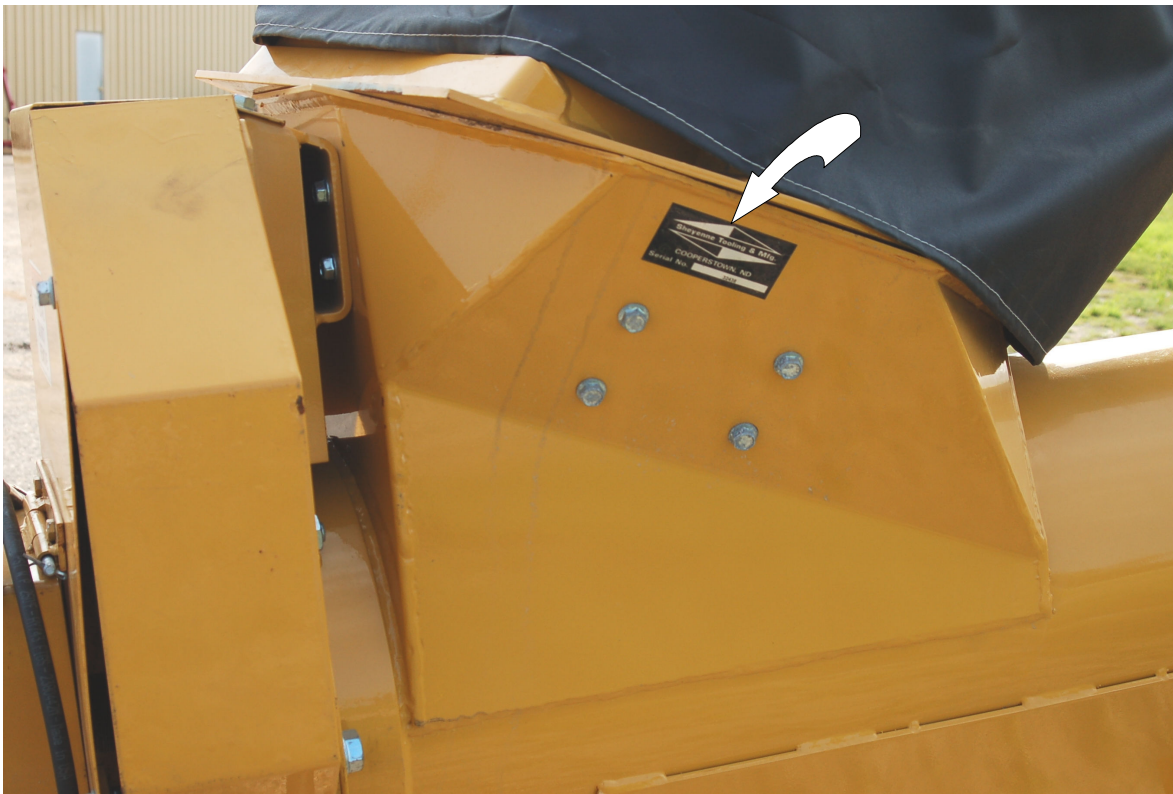
ATTENTION DEALER

Be sure the OWNERS MANUAL remains with the auger when sold. It contains important procedures for safe operation of the auger.

SERIAL NUMBER LOCATION

Always give your dealer the serial number of your Sheyenne/Wesgo portable auger when ordering parts, requesting service or for information.

The serial number plate is located where indicated. Please mark this number and other information in the spaces provided. It will be useful for future reference.



Model Number _____

Serial Number _____

Production Year _____

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

AUGER 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**

AUGER 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

AUGER 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

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1 INTRODUCTION

Congratulations on your choice of a Sheyenne/Westgo Portable Auger 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 Portable Auger requires that you and anyone else who will be operating or maintaining the Auger, read and understand the Safety, Operation, Maintenance and Trouble Shooting information contained within the Operator's Manual.



1510 10 x 90, PTO DRIVE w/ MECHANICAL DRIVE HOPPER

This manual covers the Model 1510 auger made by Sheyenne/Westgo. Included are lengths of 90' and 100', PTO drive and new design 1510 transport.

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

OPERATOR ORIENTATION - The directions left, right, front 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. The front is the intake end of the auger, rear is the spout.

**THE SYMBOL SHOWN BELOW IS USED TO
CALL YOUR ATTENTION TO INSTRUCTIONS
CONCERNING YOUR PERSONAL SAFETY**



BE ALERT!

Your Safety is involved

2 SAFETY

SAFETY ALERT SYMBOL



Why is **SAFETY** so important to you?

3 Big Reasons

Accidents Disable and Kill

Accidents Are Costly

Accidents Can Be Avoided

This safety alert symbol appears in this manual and on many of the decals on the auger. 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 – An immediate and specific hazard which **will** result in severe personal injury or death if the proper precautions are not taken.

WARNING – A specific hazard or unsafe practice which **could** result in severe personal injury or death if proper precautions are not taken.

CAUTION – Unsafe practices which **could** result in personal injury if proper practices are not taken, or as a reminder of good safety practices.

2 SAFETY

YOU are responsible for the safe operation and maintenance of your Sheyenne/Westgo Portable Auger. YOU must ensure that you and anyone else who is going to operate, maintain or work around the Auger 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 Auger.

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.

* Auger owners must give operating instructions to operators or employees before allowing them to operate the Auger, 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 operators 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.

2.1 GENERAL SAFETY

1. Read and understand the Operator's Manual before operating, maintaining or adjusting the Auger.



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

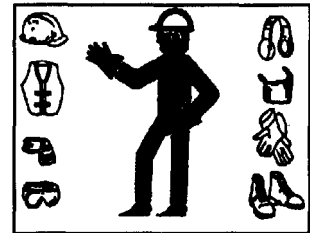
3. Have a first-aid kit available for use should the need arise and know how to use it.



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
- Respirator 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 Auger.

8. Have another person nearby who can shut down the auger in case of an accident. It is good practice to always work with a second person around augers.

Work Safely !

Think SAFETY !

2.2 OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.
2. Stop the tractor 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. 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 Auger 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 Auger to its lowest position when transporting or when not in use.
11. Have another person nearby who can shut down the auger in case of an accident. It is good practice to always work with a second person around augers.
12. Inspect lift cable before using auger. Replace if frayed or damaged.
13. Make certain the lift cable is properly seated in cable pulleys.
14. Ensure that auger is empty before raising or lowering.

2.3 PLACEMENT SAFETY

1. Move only with a tractor. Never move by hand.
2. Stay away from overhead power lines when moving Auger. Electrocutation can occur without direct contact.

3. Keep Auger as low as possible.
4. Chock Auger and tractor wheels front and rear before operating.
5. Locate Auger to provide ample space for grain vehicles to unload.
6. Keep Auger 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 auger on level ground free of debris. If ground is uneven, anchor the auger to prevent tipping or upending.

IMPORTANT

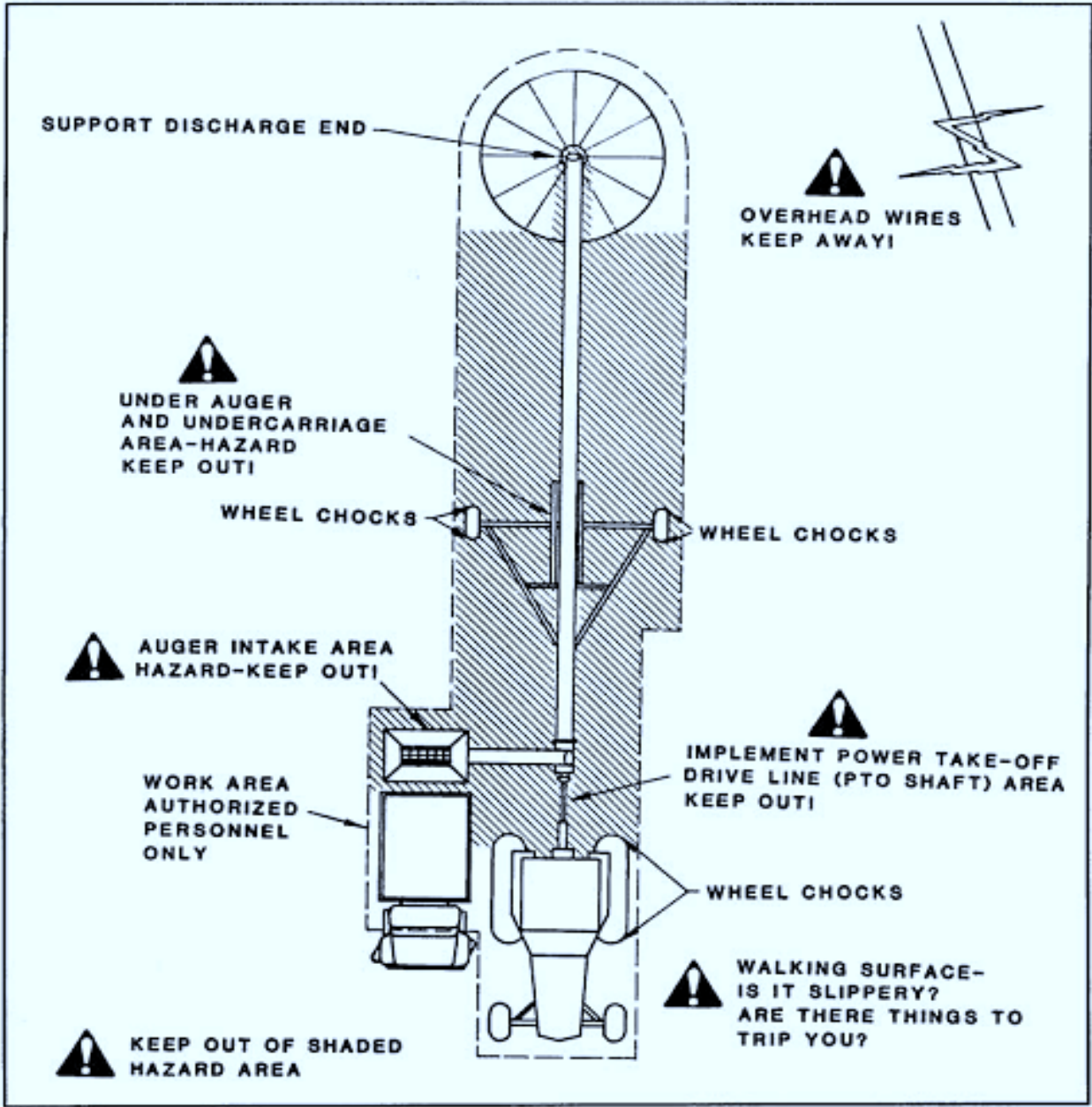
BEFORE RAISING OR PLACEMENT OF ENSURE THAT GROUND IS REASONABLY LEVEL. AUGER COULD TOPPLE IF GROUND IS TOO UNEVEN, DAMAGING EQUIPMENT AND/OR CAUSING PERSONAL INJURY.

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

IMPORTANT

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

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



WORKPLACE HAZAED AREA
TRACTOR PTO DRIVE

2.4 MAINTENANCE SAFETY

1. Review the Operator's Manual and all safety items before working with, maintaining or operating the Auger.

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 auger tube before attempting maintenance on the under carriage assembly. Where possible auger should be in the full down position.

11. Keep decals clean. Replace any decal that is damaged or not clearly visible.

2.5 HYDRAULIC SAFETY

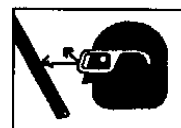
1. Always place all tractor hydraulic controls in neutral before disconnecting from tractor or working on hydraulic system.

2. Make sure that all components in the hydraulic system are kept in good condition and are clean.

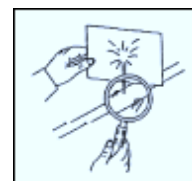
3. Replace any worn, cut, abraded, flattened or crimped hoses.

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.



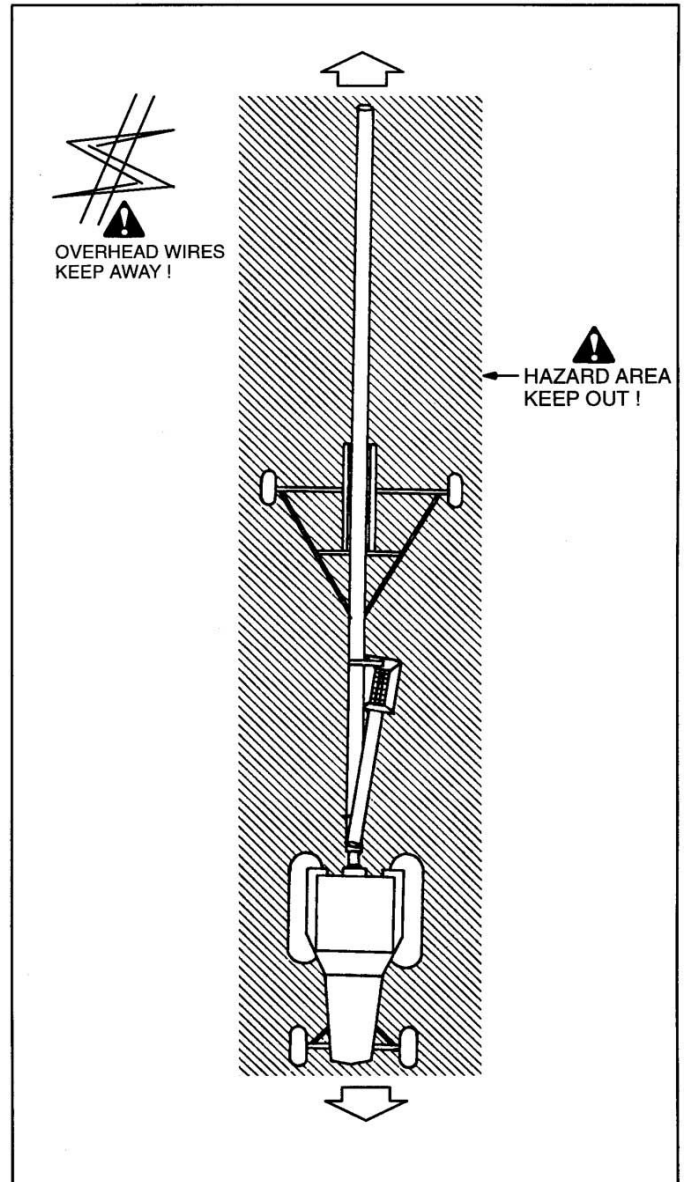
Use a piece of wood or cardboard as a backstop instead of hands to isolate and identify a leak.



6. If injured by a concentrated high-pressure stream of hydraulic oil, 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 Auger.
2. Check with local authorities regarding Auger 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 Auger or the tractor when transporting.
6. Attach Auger to towing vehicle with a bolt, washer and double nut. Always attach the safety chain.
7. Lower Auger 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. Electrocutation can occur without direct contact.
11. Always use hazard warning flashers on tractor when transporting unless prohibited by law.



TRANSPORTING HAZARD AREA

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

2.7 STORAGE SAFETY

1. Store the auger in an area away from human activity.
2. Do not permit children to play on or around the stored machine.
3. Lower the auger to its lowest position for storage unless placed in its operating position.

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 under-size.

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.

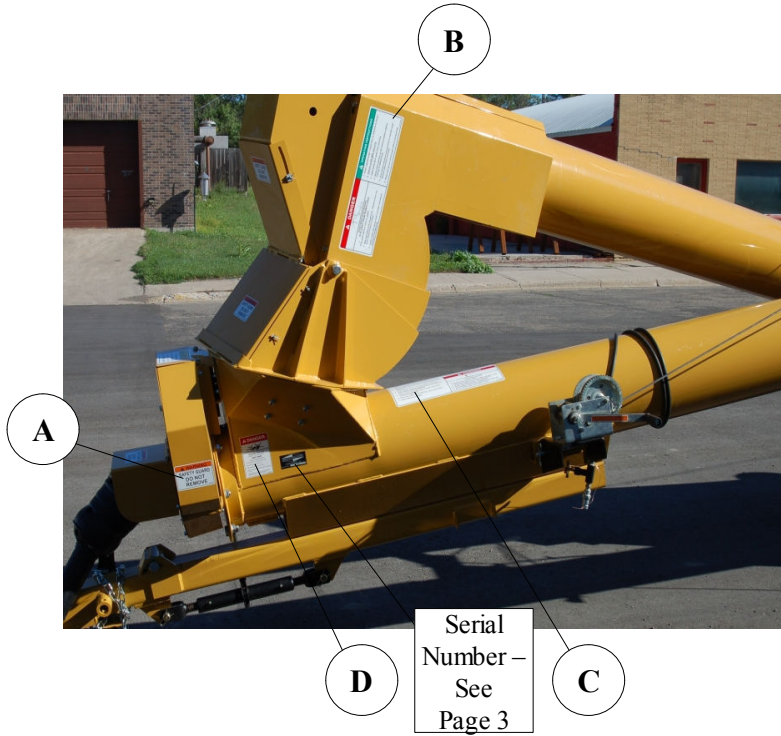
How to Install Safety Decals:

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

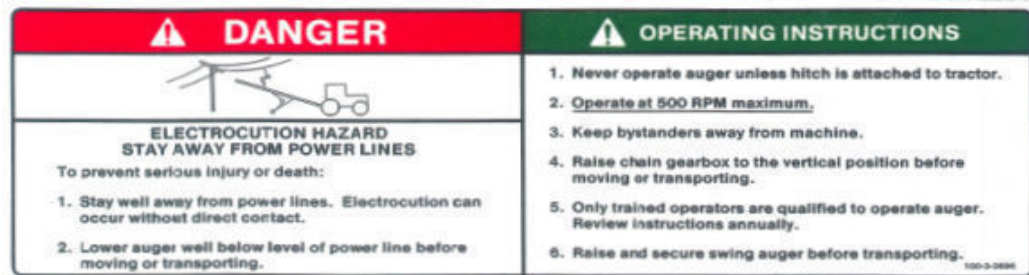
3. SAFETY DECAL LOCATIONS

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

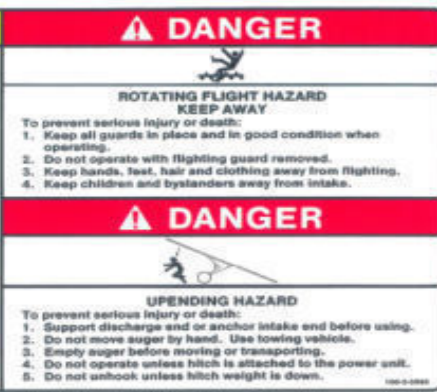
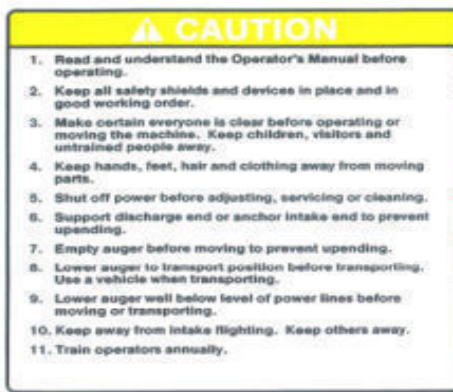
Think SAFETY! Work SAFELY!



B
(2)
Places



C



D

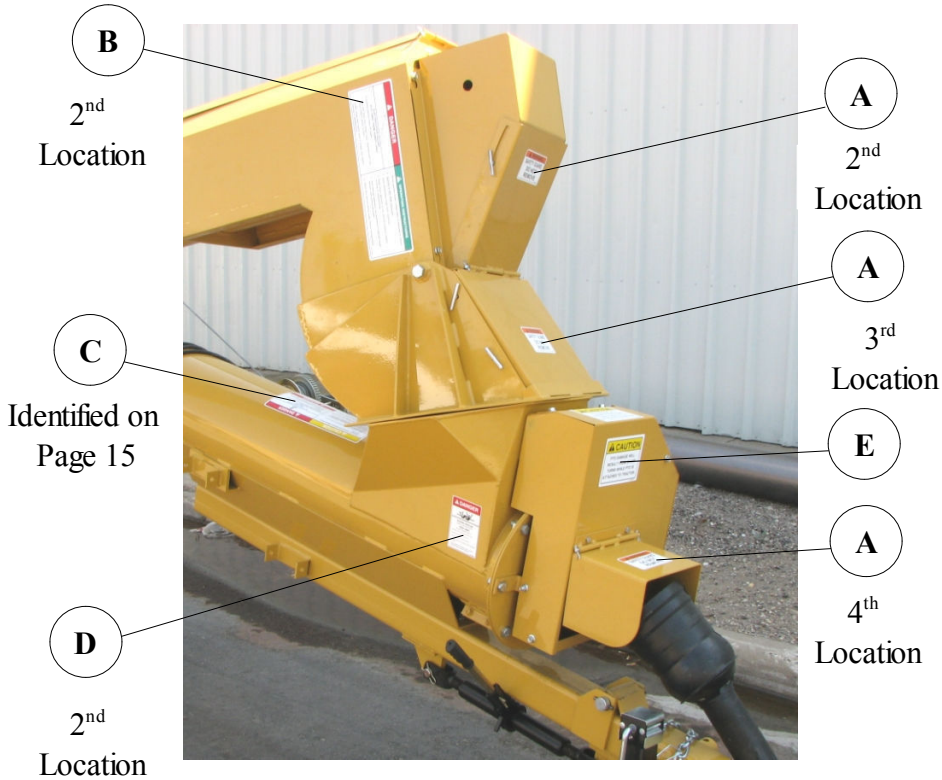


If Safety Decals have been damaged, removed, become illegible or parts replaced without decals; new decals must be applied. New decals are available from your authorized dealer.

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

Think SAFETY!

Work SAFETY!



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

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

Think SAFETY!

Work SAFETY!



I

Logo

J

K

L

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

4 OPERATION



OPERATING SAFETY

1. Read and understand the Operator's Manual and all safety signs before using.
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. 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 Auger 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. Do not operate unless the flighting guard is installed and secure.
10. Set park brake on tractor before starting.
11. Attach Auger to tractor drawbar before operating.
12. Lower Auger to its lowest position when transporting or when not in use.

4.1 TO THE NEW OPERATOR OR OWNER

The Sheyenne/Westgo Portable auger is designed to efficiently move grain from a truck, trailer, or wagon into a storage facility. Power is provided by a tractor PTO. Be familiar with the tractor controls 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. 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 work site. Untrained operators are not qualified to operate this 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 Auger will provide many years of trouble free service.

4.2 MACHINE COMPONENTS

The Portable Auger is a length of rotating flighting enclosed within a tube for moving grain. Grain enters the system through the swing away hopper. A winch lifts the swing away hopper for transport.

Power is provided from a tractor PTO that attaches to the lower end of the main auger. The swing hopper and inclined auger are driven by a chain drive and two gearboxes to an auxiliary drive line or an optional hydraulic motor. The movable drive system swings out to position for truck unloading.

The swing away hopper can be mounted on either the left or right hand sides. Two hydraulic cylinders in the frame raise and lower the machine. They use hydraulic power from the tractor.

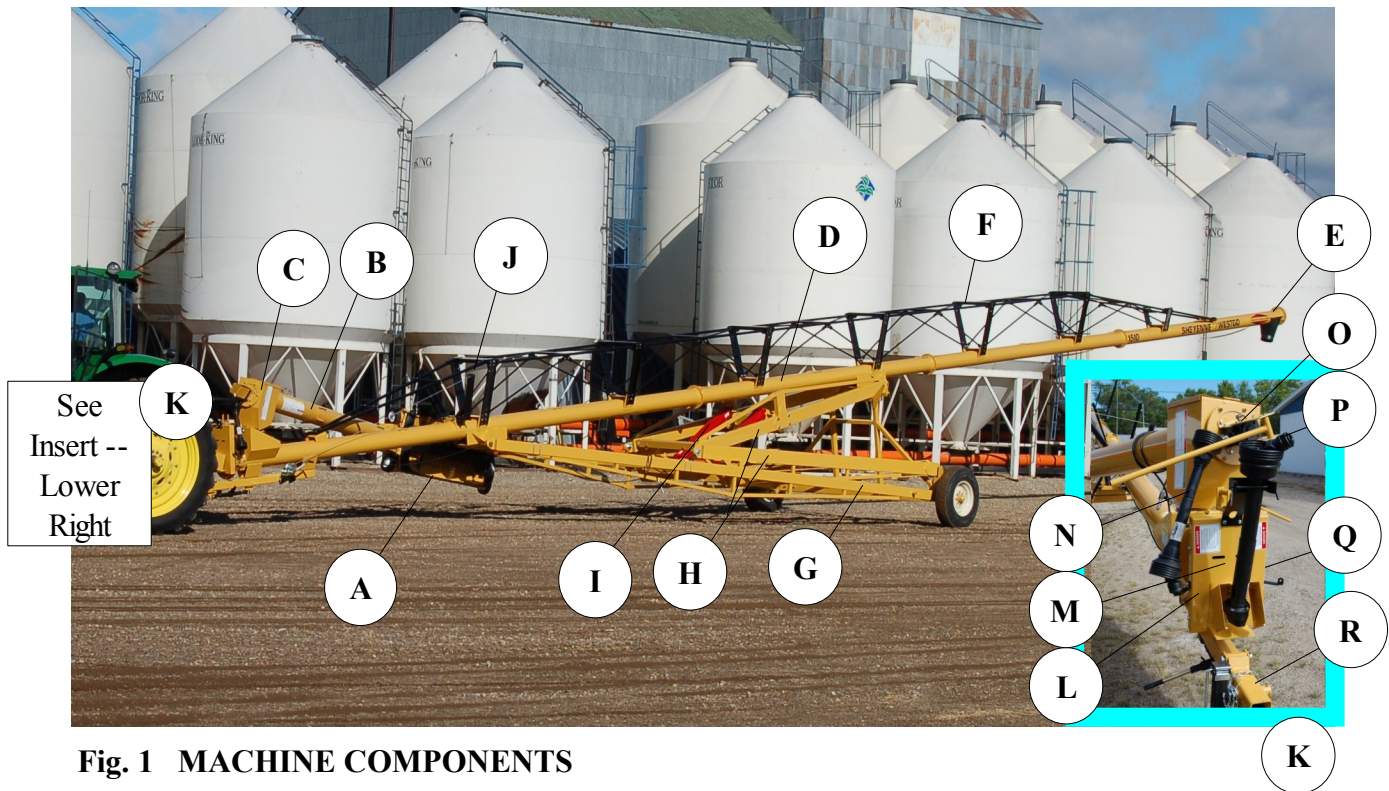


Fig. 1 MACHINE COMPONENTS

- | | |
|-------------------------------------|--|
| A SWING AWAY HOPPER - Intake | J HOPPER TRANSPORT SUPPORT |
| B INCLINED TUBE | K <i>INSERT</i> |
| C INCLINED SPOUT | L CHAIN DRIVE (Behind cover) |
| D MAIN TUBE | M 3 POSITION MECHANICAL DRIVE |
| E OUTLET – Main Auger Spout | N VERTICAL DRIVE LINE |
| F RIGID TRUSS | O UPPER GEARBOX |
| G AUGER TRANSPORT | P PTO DRIVE LINE – From Tractor |
| H SISSOR LIFT | Q LOWER GEARBOX (Other side) |
| I LIFT CYLINDERS | R HITCH |

4.3 MACHINE BREAK-IN

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

A. After operating or transporting for 1/2 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 no hoses are pinched or being crimped. Re-align as required.
5. Check that all guards are installed and working as intended.
6. Check oil level in gearboxes. Add as required.
7. Check drive chain and tension and alignment. Adjust as required.
8. Lubricate all grease fittings.

B. After operating for 5 hours and 10 hours:

1. Re-torque all wheel bolts, fasteners and hardware.
2. Check hose routing.
3. Check that all guards are installed and working properly.
4. Check safety decals. Install new ones if required.
5. Check gearbox oil level. Add as required.
6. Check drive chain tension and alignment.
7. 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 Sheyenne/Westgo Portable Auger 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 Auger that this checklist is followed.

Before operating the Auger and each time thereafter, the following area should be checked off:

1. Lubricate the machine per the schedule outlined in Section 5 Service and Maintenance.
2. Use only a tractor of adequate power to operate the Auger.
3. Ensure that the machine is properly attached to the tractor drawbar. Use a 5/8 inch bolt, washers and double nut.
4. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.
5. Check work-site. Clean up working area to prevent slipping or tripping.

4.5 ATTACHING / UNHOOKING

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

IMPORTANT !

Do not use a tractor that is equipped with a Quick Hitch! Remove the Quick Hitch before attaching. A Quick Hitch will hit the auger when making turns or it can contact the PTO drive-line if lowered during operation.

3. When moving auger on rough or uneven terrain adjust axle to widest position. **See Fig 2.**



Fig. 2 AXLE ADJUSTMENT

4. Align the draw-bar of the tractor with the hitch of the auger while backing up.
5. Set the park brake before dismounting.
6. Check the auger to tractor mounting dimensions per the drawing prior to attaching. **See Fig. 3.** The auger is designed to be attached to a tractor during any operation including transporting, moving, raising, lowering or working. Because the unit must operate throughout a wide range of geometry, each dimension must be within a specified range. Verify that these dimensions fall within the recommended ranges before attaching.

a. Dimension A: Must be within 34 and 36 inches. This works with the length of the PTO shaft supplied with the auger to allow telescoping and prevent bottoming out.

b. Dimension B: Must be within 6 to 10 inches. This will keep the angle of the universal joints equal and as small as possible. It also prevents bottoming out when the auger is raised.

c. Dimension C: Must be between 14 to 16 inches. This will prevent the PTO shaft from bottoming out when the auger is raised and prevent separation when the auger is lowered.

These dimensions are specified by Standards and most tractors comply. If your tractor does not comply, refer to your tractor manual and adjust to comply with these requirements.

7. Use the jack on the hitch to raise or lower the auger as required to match the draw-bar.

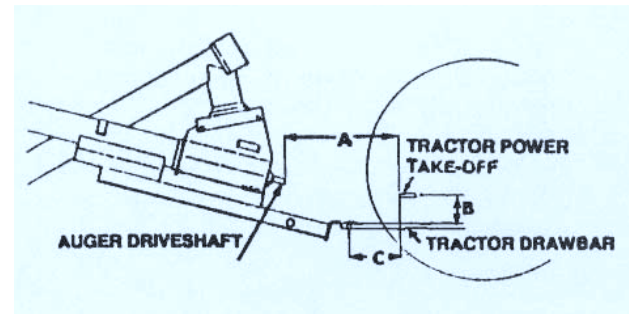


Fig. 3 ATTACHING DIMENSIONS

8. Use a 5/8 inch bolt as a hitch pin. Use large flat washers above and below the hitch and a nut and jam nut on the bolt. Do not tighten to draw-bar but jam the nuts together to hold. A bolt will allow free hitch movement whether the Auger is raised or lowered. **See Fig. 4a & 4b**

9. Attach the safety chain(s) to the draw-bar or draw-bar cage.



Fig. 4a BOLT AS HITCH PIN

10. Attach the PTO shaft:

- a. Clean the splines on the shaft and in the yoke if required.
- b. Check that the guard rotates freely and the drive-line telescopes easily. If not clean, lubricate or repair as required before installing.
- c. Retract collar on yoke and slide the yoke over the tractor shaft. Stop when the lock pin clicks into position in the groove.
- d. Pull on the yoke to make sure it is locked to the shaft.

IMPORTANT !

Never attach to tractor that is equipped with a PTO shaft adapter. It will change the required machine attaching dimensions and can lead to over speeding. Use only a tractor equipped with a 6 spline 540 RPM PTO shaft.

11. Attach the hydraulic lines:

- a. Use a clean rag or paper towel to clean dirt from around the couplers on the hose ends and on the tractor.
- b. Connect the hoses to the tractor couplers. Be sure the couplers are securely seated.
- c. Route the hoses to prevent pinching rubbing or binding and allow enough slack for raising and lowering. Keep the hoses away from moving parts.

12. Open the valve in the hydraulic circuit to allow oil to flow to the cylinder for lowering or raising if required.



DANGER

Stay away from overhead power-lines. Electrocutation can occur without direct contact.

13. Raise and pin swing auger if moving.

14. Unpin and lower swing auger if preparing to work.

15. Lower hitch and stow the jack into its horizontal position.

16. Reverse the above procedure when unhooking.



Fig. 4b ATTACHED

4.6 MACHINE PLACEMENT

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

1. Clear the 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 Auger into its working position.
3. Attach the Auger to the tractor (See Section 4.5).
4. Open the valve in the hydraulic circuit.
5. Back the Auger up to the storage facility while it is in its lowered configuration. See **Fig. 5**.
6. Remove the swing auger transport rod and stow on the support arm bracket. Install the retaining pins through the rod. See **Fig. 6**



Fig. 5 ALIGN AUGER WHILE IN LOWERED POSTION

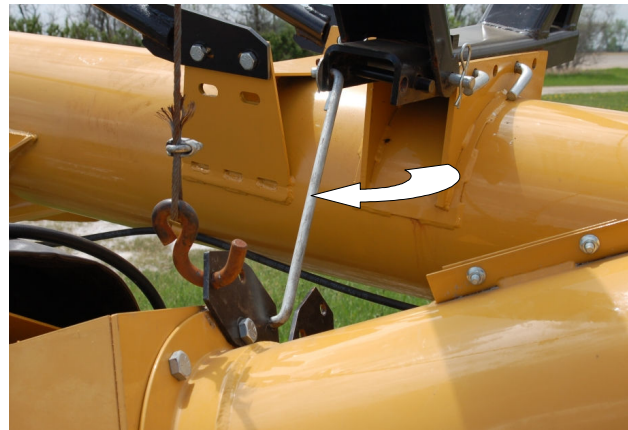


Fig. 6 TRANSPORT ROD

7. Use the tractor hydraulics to slowly raise the outlet end into position. Stay away from power lines. See fig. 7.



DANGER

**Stay away from overhead power-lines.
Electrocution can occur without direct contact.**

8. Slowly back the Auger until the outlet is over the opening in the storage facility. Leave the hitch attached to the tractor.



Fig. 7 RAISING AUGER

9. Slowly lower the outlet end until it is resting on the storage facility. Leave the hitch attached to the tractor.

10. Place chocks in the front and rear of each Auger and tractor wheel.

11. Remove vertical drive-line from transport holder.

12. Retract the lock pin holding the chain drive in the vertical position and rotate the assembly 90 degrees. Place the gearbox on the side opposite to where the swing auger will be located. Secure the lock pin on both sides.

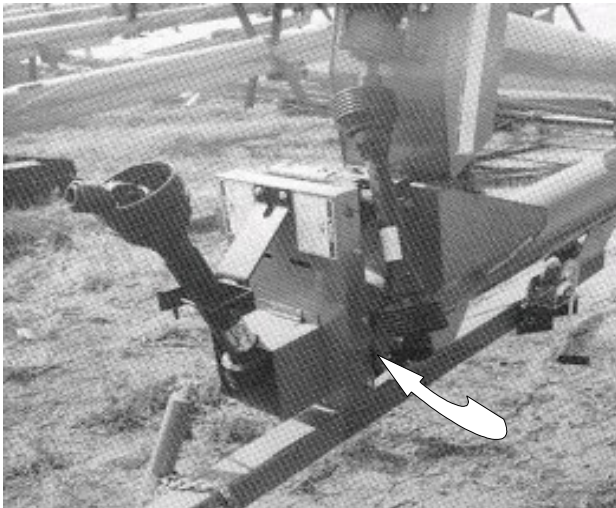


Fig. 8 LOCK PIN

13. Place the tubular plastic guard over the gearbox shaft that will not be used and tighten hose clamp.

14. Attach the vertical drive-line to the gearbox.



WARNING

Do not use bolts or square headed set screws in the yoke. They project from the yoke and create a safety hazard.

15. Lower the swing auger to the ground and unhook the cable.

16. Close the valve in hydraulic circuit.



Fig. 9 VERTICAL DRIVELINE



Fig. 10 RAISED POSITION

4.7 OPERATING

When using the Auger, 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 Hazard Area drawing and use extra care when inside the hazard area. See Fig. 11. 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 per Section 4.6.
5. Back a tractor up to the inlet end and attach with a bolt, washers and double nuts. Attach the PTO driveline. Align the tractor axis with the Auger so the universal joints are equal and as small as possible. Place chocks next to tractor tires and set the park brake.
6. Check that the driveline out of the gearbox is secured to the output shaft.
7. Check that all guards are in place and working as intended.

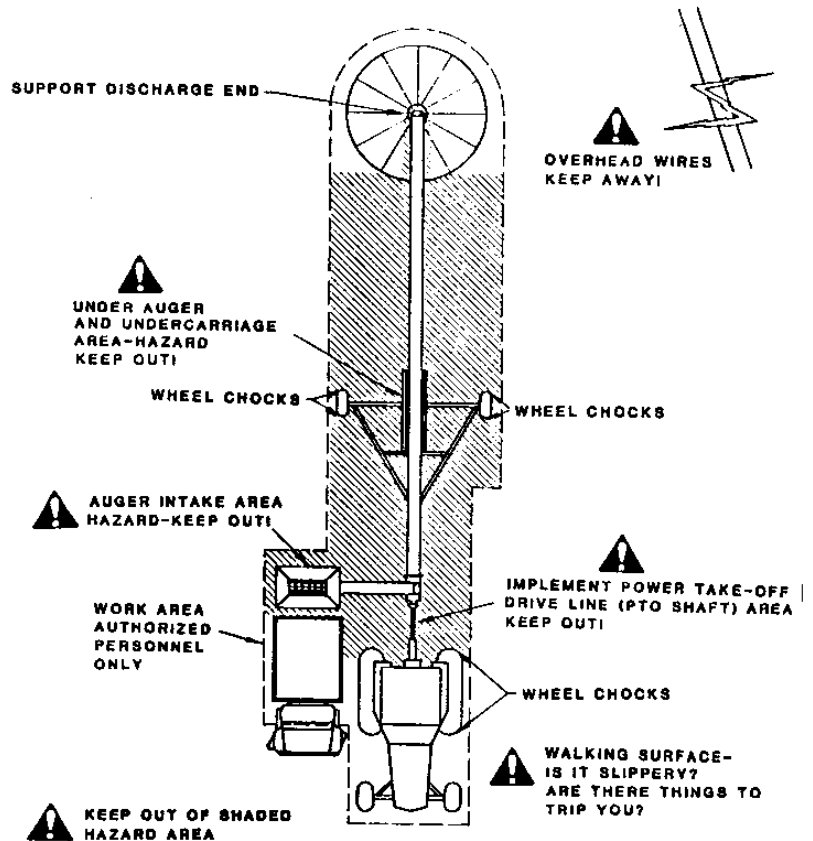


Fig. 11 WORKPLACE HAZARD AREA

NOTE: The photos on this page are of a 13” hopper. The power wheel option is available for a 10” hopper too.

8. Move the swing hopper out of the way. Normally this will be up against the frame.

9. Drive or back the truck into position for unloading.

10. Use the handle on the hopper to move the swing auger into position under the truck. See **Fig. 12a**.



12. Start the flow of grain and unload.

13. When the truck is unloaded and PTO is shut off, move the swing hopper out of the way and store the handle. See **Fig. 12b**.

14. Optional Power Wheel Drive system. Either single wheel or double wheel drive, shown below.

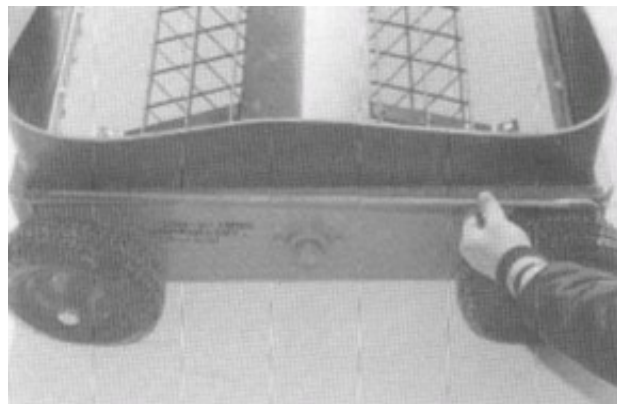


Fig. 12a Swinging Out



**Fig. 12b Store Handle
SWING AWAY HOPPER**

11. Starting:

a. Start the tractor engine and run at low idle.

b. Engage the PTO clutch.

c. Activate the circuit to the motor if equipped with the hydraulic drive option.

d. Increase engine speed to 500 RPM PTO speed.



14. Stopping:

- Run the auger until the swing hopper is empty.
- Slow the engine speed to low idle.
- Disengage PTO clutch.
- Shut off hydraulic motor if so equipped.
- Stop engine and remove ignition

15. Operating Hints:

- Run the unit at approximately 500 RPM to obtain the most consistent results.
- 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.
- Never allow anyone into the workplace hazard area. If anyone enters, stop immediately. Make them go before resuming work.
- Do not run the machine for long periods of time with no grain in the tube. It is noisy and increases the wear. Try to run only when moving grain.
- Do not move the machine by hand, Always use a tractor.
- Always locate the swing hopper within 20 degrees of a right angle to the main tube for optimum performance. **See Fig. 13.**
- When the auger is used to put grain in a pile, the grain can build up and cover the wheels. It is recommended that the operator attach a log chain to each axle when the auger is positioned. Before pulling the auger out of the pile, pull the chains tight and attach to the drawbar. This will prevent axle or frame bending.

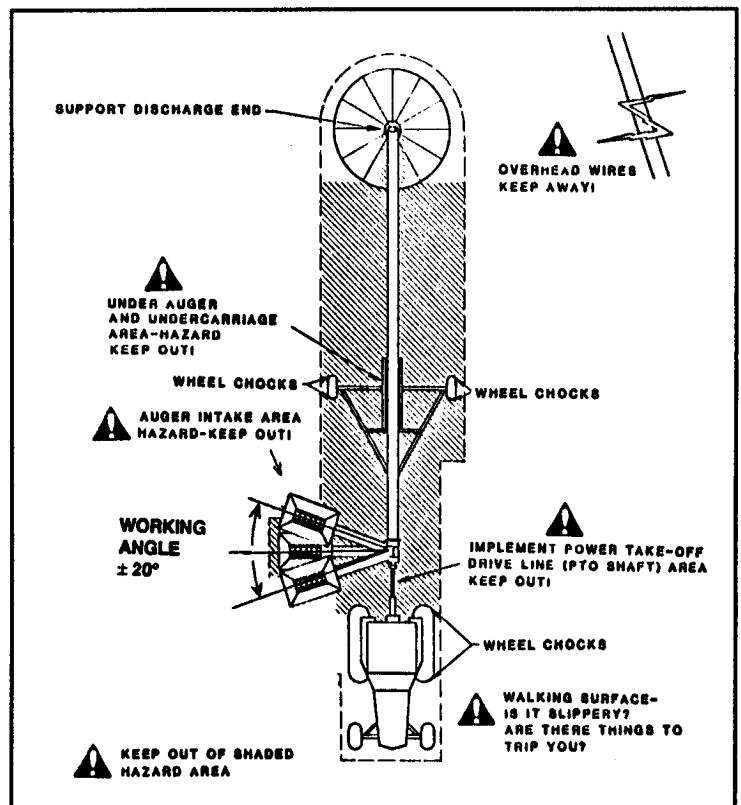


Fig. 13 SWING AWAY HOPPER POSITION

4.8 TRANSPORTING SAFETY



1. Read and understand ALL the information in the Operator's Manual regarding procedures and SAFETY when moving or transporting the Auger.
2. Check with local authorities regarding Auger 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 Auger or the tractor when transporting.
 6. Attach Auger to towing vehicle with a bolt, washer and double nut. Always attach the safety chain.
 7. Lower Auger 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.

Sheyenne/Westgo Portable Augers are designed to be easily and conveniently moved from place to place. When transporting, follow this procedure:

1. Be sure all bystanders are clear of the machine.
2. Attach loosely to the tractor using a bolt with washers, double nuts and a safety chain.
3. Disconnect the vertical driveline out of the gearbox and place the loose end in the transport holder. See fig. 14.
4. Move the chain drive front frame into its vertical position so it will not contact the towing vehicle when turning.

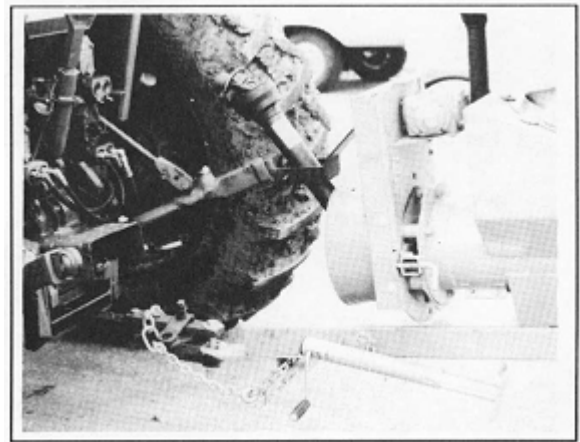


Fig. 14 HITCH

5. Use the winch to raise the swing auger or hopper off the ground. Attach the hook so the wire mesh and rubber belt are against the main tube.

6. Raise until the cable clamp (22 inches from the hook) contacts the support arm.



Fig. 15 NEW LIFT ARM MECHANISM

7. Keep raising the swing hopper until the support arm and it's link are in position to allow the lock to be engaged. See fig. 15.

8. Install the swing hopper safety cable. Tension on the winch cable can then be relieved.

9. Place the hitch jack into its transport position.

10. Attach the hydraulic line, open the valve and lower the machine if required. Transport only when auger is in its lowest position.

11. Stay away from overhead power lines.

DANGER



Stay away from overhead power-lines. Electrocutation can occur without direct contact.

12. Never go across slopes of more than 20 degrees. It is better to go straight up or straight down.

13. 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.

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

15. It is not recommended that the machine be transported faster than 20 mph (30 km/h). Table 1 gives the acceptable transport speed as the ratio of tractor weight to Auger weight.

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

17. 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.



Fig. 16 RAISED HOPPER

Table 1 Speed vs Weight Ratio

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

4.9 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. Lower Auger to its lowest position for storage unless placed in its operating position.

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

1. Wash the entire machine thoroughly using a water hose or pressure washer to remove all dirt, mud, debris or residue.
2. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
3. Lubricate all grease fittings to remove any moisture in the bearings.
4. Run the machine slowly for 1 minute to distribute lubricant to all surfaces.
5. Apply a light coat of oil to the roller chain while the unit is running to prevent rusting.
6. 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.
7. Touch up all paint nicks and scratches to prevent rusting.

8. Select an area that is dry, level and free of debris. For those in northern climates, storage areas where deep snow drifts occur should be avoided.

9. If the auger is not being left in a storage facility, it should be placed in its lowest position.

10. It is recommended that the swing auger hopper be lowered to rest on the ground for long term storage. This will release the twisting load on the frame from the swing auger support frame.

11. Follow the procedure given in Section 4.6 when unhooking.

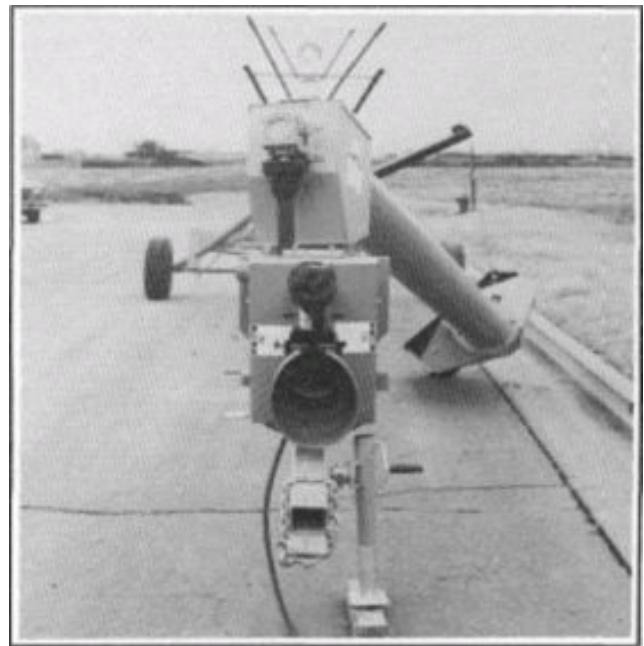


Fig. 17 STORAGE

5 MAINTENANCE AND SERVICE



MAINTENANCE SAFETY

1. Review the Operator's Manual and all safety items before working with, maintaining or operating the Auger.
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
 - Respirator or filter mask
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.

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. Lubricating oil

Use a standard automotive oil for all requirements.

3. Gearbox oil

Use an SAE 85W90 gear oil for all operating conditions.

Gearbox Capacity: 1 U.S. quart (0.85 liter)

4. 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.

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

8 HOURS OR DAILY

1. Grease PTO shaft (4 locations).

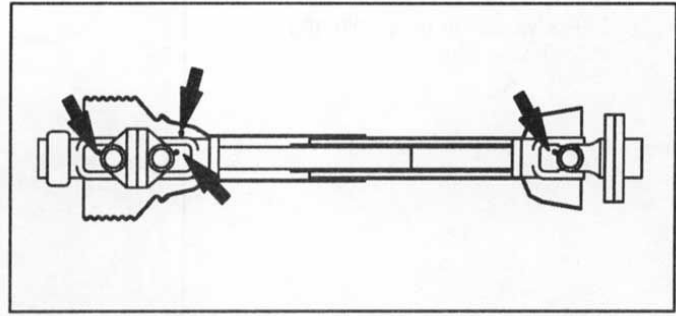


Fig. 18 PTO SHAFT (HORIZONTAL SHAFT)

2. Grease vertical drive shaft (6 locations).

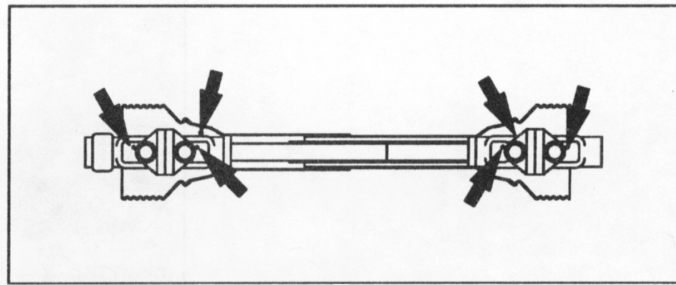


Fig. 19 DRIVE SHAFT (VERTICAL SHAFT)

3. Grease chain drive sprocket bearing (1 location).

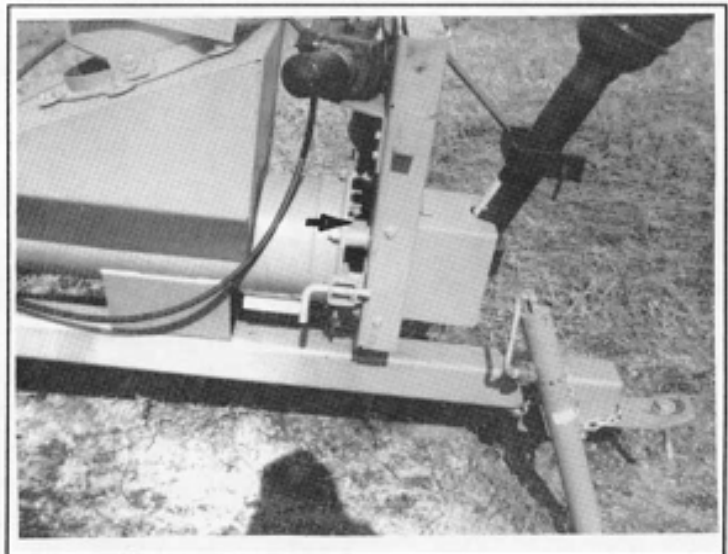


Fig. 20 SPROCKET BEARING

4. Check gearbox oil levels top and bottom (2 locations). Add as required. Fill to check plug level.

Note

Check when the oil is cold and the machine is level.

40 HOURS OR WEEKLY

1. Oil the roller chain with a light coat of oil.
2. Grease Tapered Bearings in bottom bearing plate. Shown on page 50.
3. Grease all three grease fittings of the double constant velocity joint in the grain hopper. Avoid over greasing. Part shown on page 37

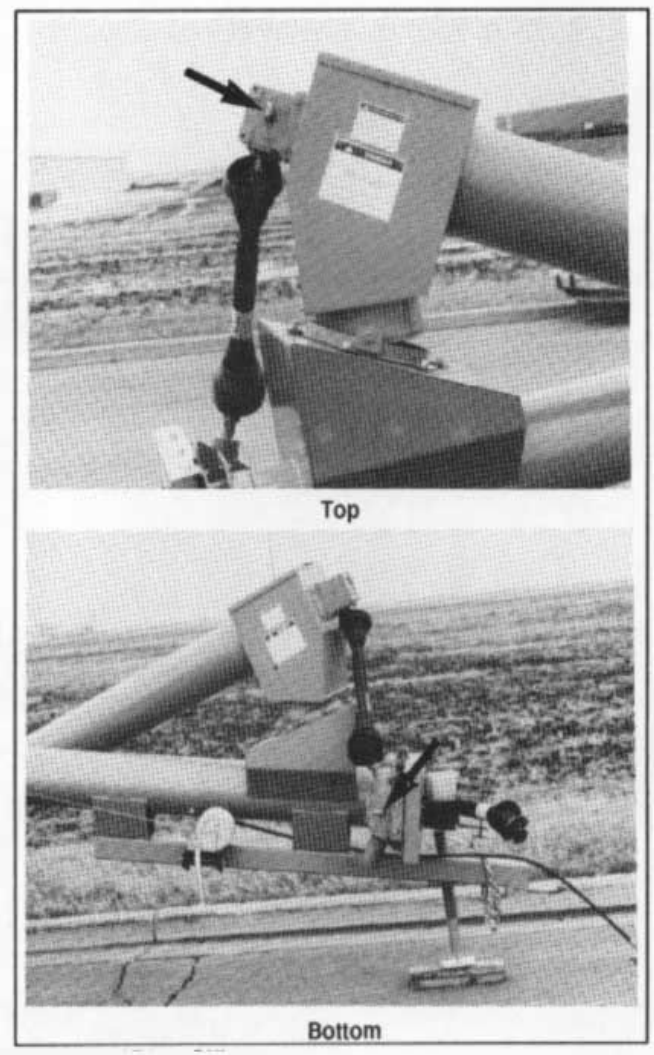


Fig. 21 GEARBOXES



Fig. 22 ROLLER CHAIN

200 Hours or Annually

1. Repack wheel bearings.



Fig. 23 Pack Wheel Bearings

2. Clean the gearbox breathers.



Fig. 24 BREATHER

5.1.4 SERVICE RECORD

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

ACTION CODE: ✓ CHECK CL CLEAN
 L LUBRICATE R REPACK

MAINTENANCE	HOURS												
	SERVICED BY												
8 Hours or Daily													
L PTO Shaft (3)													
L Drive Shaft (4)													
L Chain Drive Sprocket Bearing													
✓ Gearbox oil levels (2)													
40 Hours or Weekly													
L Roller Chain													
200 Hours or Annually													
R Wheel Bearings (2)													
CL Gearbox Breathers													

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 CHAIN TENSION

The roller chain on the input should always be adjusted so the chain is snug with only a slight amount of movement at the center of the span.

To adjust, follow this procedure:

1. Stop engine and remove ignition key.
2. Loosen the jam nuts on the adjusting bolts on both sides.
3. Turn the adjusting bolts to adjust the tension. Turn both the same amount to maintain sprocket alignment.
4. Check the tension by inserting a screw driver into the slot. The center of the span should be just snug.
5. Tighten the jam nuts.

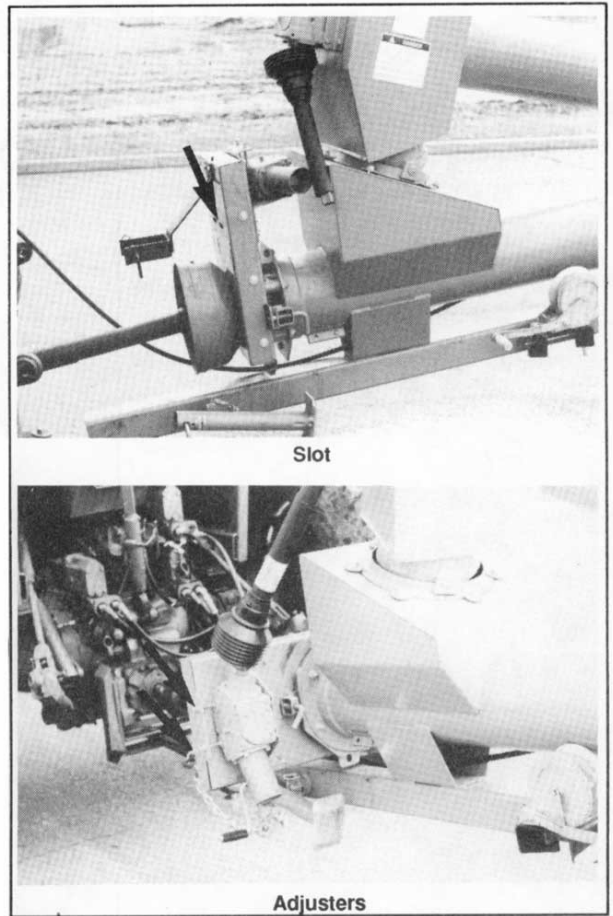


Fig. 25 CHAIN DRIVE

5.2.2 RIGID TRUSSING

Rigid trussing is assembled in the early steps of set-up. When all pieces are loosely assembled, the tube sections are aligned and assembled tighten bolts to specified torque. No further adjustment should be necessary.



Fig. 26 RIGID TRUSS

5.2.3 SHEAR PIN

The input driveline is equipped with a shear pin to protect against overloads.

To replace pins, follow this procedure:

1. Stop engine and remove ignition key.
2. Remove the pin parts remaining in the yoke.
3. Install a new pin using genuine Sheyenne/Westgo parts and tighten.

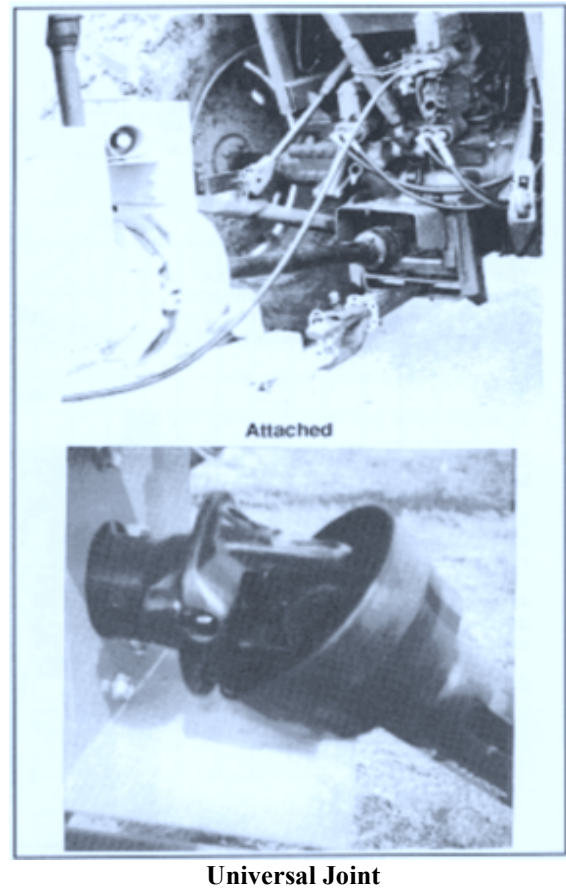


Fig. 27 SHEAR PIN

5.2.4 ACCESS DOOR

A small access door is located on the bottom of the tube at the lower end. Clean the tube by opening this access door. Stop engine and remove ignition key or remove PTO driveline before opening door.

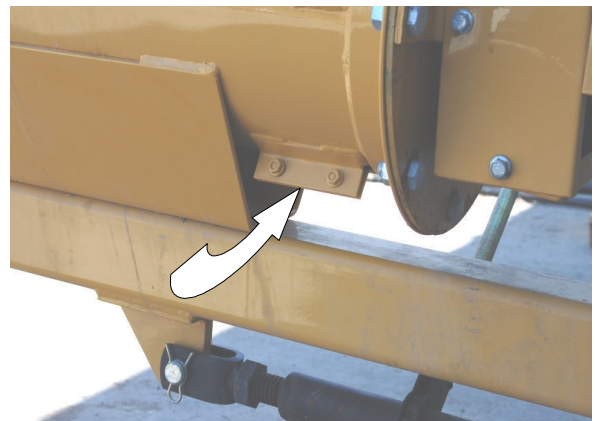


Fig. 28 ACCESS DOOR

Instructions for Replacing the Double Constant Velocity Joint

1. Check that the support cross rod is properly adjusted. The rod should be tightened so dimension "B" is equal to dimension "A". See figure 29.

2. Remove the safety mesh. Note: After installing the constant velocity (CV) joint, it is important that the safety mesh be reinstalled (only remove for installation). The mesh provides required structural support to the hopper. Remove the 5/16 bolts that hold the CV joint to the helicoids. (Models prior to 1997 may have a flex shaft. Flex shafts are no longer available.) Do not use a hammer to remove bolts; the helicoids will bend causing vibration.

3. Remove hopper from inclined tube assembly.

4. Grease the inside end of the hopper helicoid; insert the hex connector so the holes align. Guide a 5/16 x 2 bolt through the hole in the hopper helicoid and tighten with a locknut.

5. Bolt tube connector to CV joint using 5/16 x 2 1/2 bolt and lock nut.

6. Grease inside end of inclined tube helicoid; insert end of tube connector into the helicoid. Fasten with 5/16 x 2 bolt and locknut. Do not tighten until final adjustment (see step 8).

7. Guide the incline tube on to the hopper, the angle ring spacer (use only for augers sold prior to 1994) held in between them. At the same time, the CV joint must be guided onto the hex connector, only guide the CV joint on to the hex connector where the helicoids will not interfere with each other (rotate the hopper helicoid to the desired position).

Where the end of the hopper flighting ends, the inclined tube flighting should begin. Use 1/2 x 2 1/2 bolts for a 10" auger and 7/16 x 2 1/2 bolts for an 8" auger to assemble the hopper to the inclined tube.

8. Adjust CV joint so that it is approximately 1/4" from bottoming out on the hex connector. Tighten locknut at inclined tube connection.

9. Slowly rotate the hopper helicoid and visually check that the flighting ends are at least 1/4" away from the CV joint in all positions. Torch flighting to remove any interfering material. Be careful not to cut the CV joint or connectors.

10. REMEMBER TO RE-INSTALL THE SAFETY MESH. THIS IS VERY IMPORTANT.

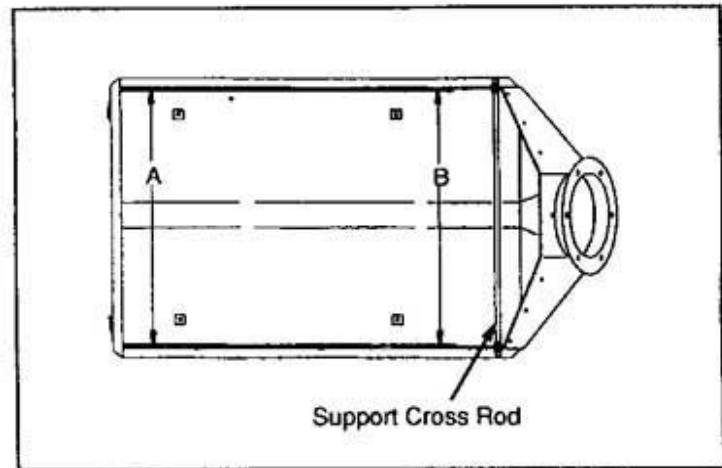


Fig. 29 HOPPER

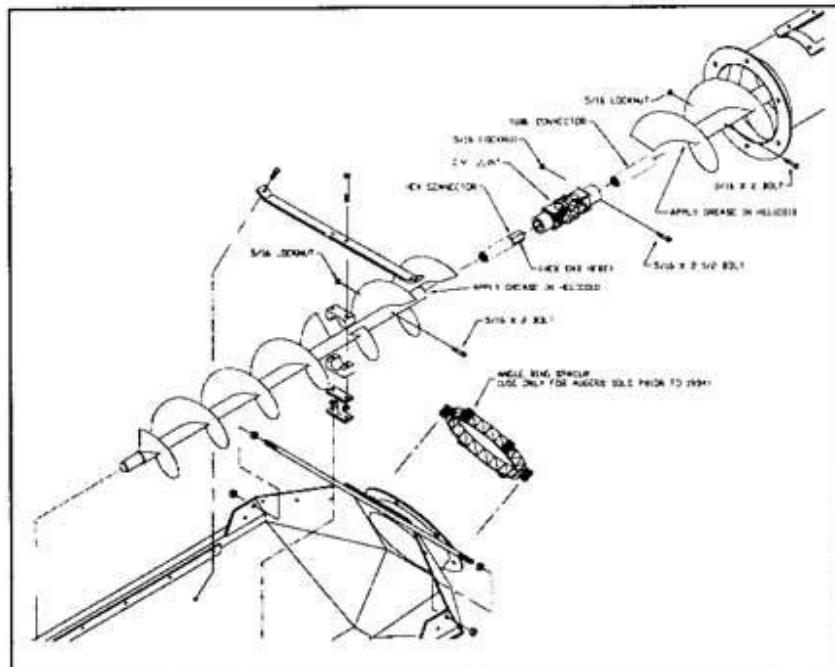


Fig. 30 DOUBLE CONSTANT VELOCITY JOINT

CURRENT MODEL HOPPER U-JOINTS

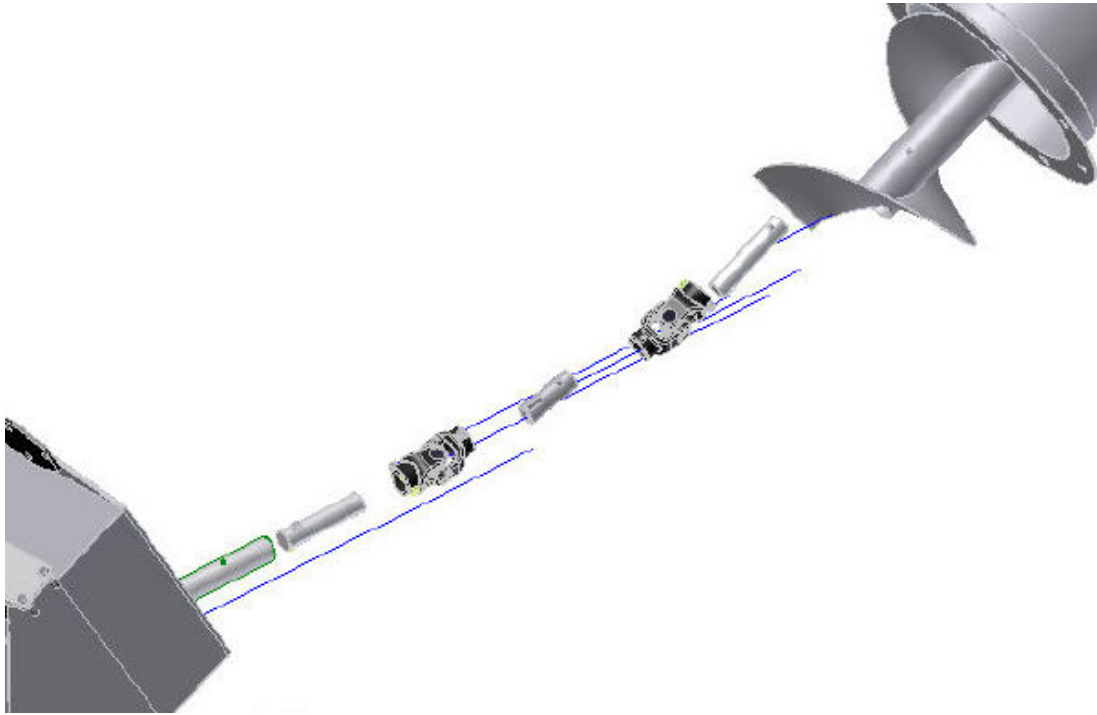


Fig. 30b Two U-Joint Hopper Drive

Figure 30b above shows the proper assembly sequence and orientation of parts to connect the inclined auger helicoid to the drive shaft in the hopper.

To replace any of these parts you should follow the steps for the double CV joint on the previous page (38). The part descriptions and part numbers are different, but the steps are the same.

5.2.6 BREATHER CLEANING

Annually clean the gearbox breather. Remove from the elbow and soak in solvent. Blow out with an air hose or use a wire to loosen the dirt.

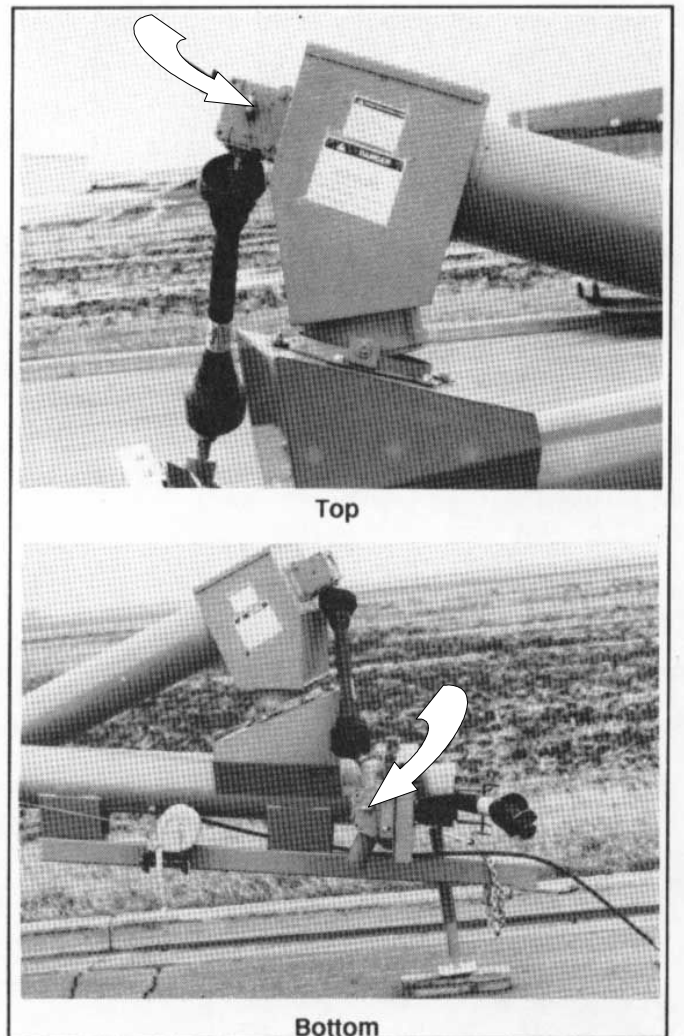


Fig. 31 GEARBOX BREATHER

5.2.7 SWING AUGER BEARING

An access door is located on the swing auger to allow bearing replacement. Stop engine and remove ignition key or remove the PTO driveline before opening access door. Install and secure the door before resuming work.



Fig. 32 SWING AUGER ACCESS DOOR

5.2.8 SWING AUGER AND HOPPER SUPPORT

The winch and support frame for lifting and holding the swing auger can be mounted on either side of the machine.

Remove and mount to the opposite side if required. Remove the mounting pins for each component when moving. Install the retainers in the pins before raising the swing auger.



Hopper On The Left



Hopper On The Right

Fig. 33 ALTERNATE SWING AUGER POSITION

6 TIMING THE FLIGHTING

6.1 HANGER BEARINGS, 1510 AUGER

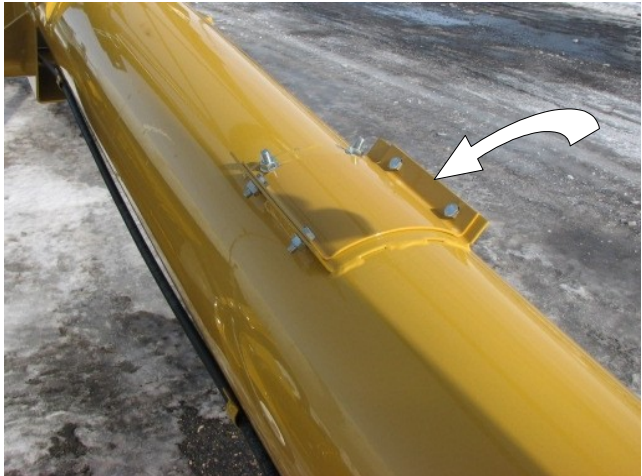
On the 1510 augers the flighting is supported by hanger bearings every 10 feet (3 m). Although they do not require lubrication, they can fail after extended periods of use. Normally failure will be accompanied by an increase in noise level. Access covers on the top of the tubing allow access for bearing replacement.

To replace bearing, follow this procedure:

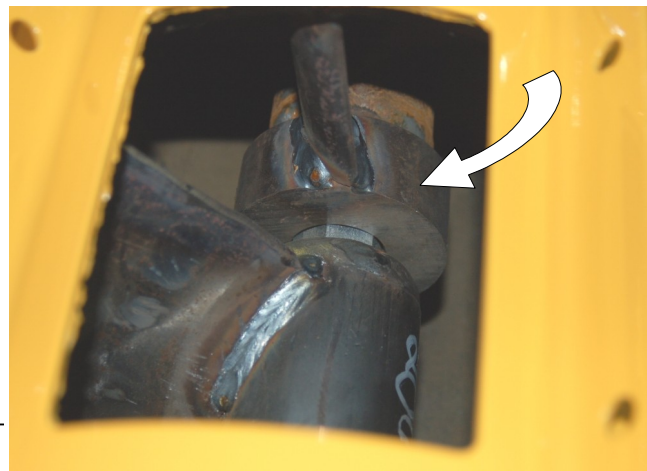
1. Clear the area of bystanders, especially small children.
2. Remove power as appropriate:
 - a. Disconnect PTO shaft from tractor.
 - b. Turn electric motor OFF and lock out power at master panel.
3. Remove access cover next to failed bearing and the access covers the rest of the way down the auger. See fig. 34.
4. Remove bolts from the hanger bearings next to the access cover holes.
5. Remove intake bearing assembly from the bottom of the auger.
6. Replace the hanger bearing that has failed. See fig. 35. **Use only genuine Sheyenne/Westgo replacement parts.**

IMPORTANT TIMING INFORMATION!

7. Slide flighting sections and bearing assemblies back into tube. The hex shafts and the flighting sockets to which they mate **“time”** the flighting. To do justice to this very important topic we direct you to page 39b.



**Fig. 34 BEARING REPLACEMENT
(Access Covers)**



**Fig. 35 BEARING REPLACEMENT
(Hanger Bearing)**

CORRECT TIMING

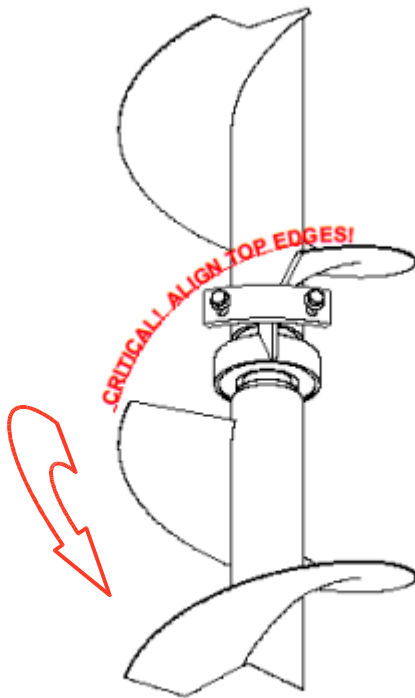


Fig. 36

The hex connecting shafts that engage adjacent flightings allow only six assembly options. Move the lower section all the way up to the hanger bearing and observe the alignment. It is likely that you will not be able to achieve the perfect “flow” shown above. If not, slide the section of flighting back down the tube enough to clear the hex shaft and rotate the outer edge left and down (as indicated by the arrow) until you can engage the next hex shaft corner. Move the flighting section back up to the hanger bearing and check again. If you have to be “advanced” a few degrees, that's OK.

We at Sheyenne/Westgo think it is worth your while to open all access covers and check for proper assembly. The auger capacity and life of the flighting are significantly affected.

INCORRECT TIMING

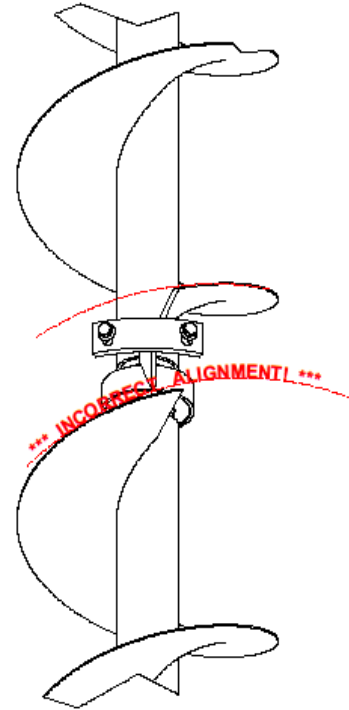


Fig. 37

When flighting sections are assembled as shown here, grain is brought up from below and “packed” in behind the next flighting section. Again, this reduces capacity and increases flighting wear.

If you are the person assembling auger flighting sections and the above alignment happens, correct it. If you open access covers and find this, correct it.

8. With all sections properly timed, reinstall access covers and tighten mounting bolts to their specified torque.

7 TROUBLE SHOOTING

The Sheyenne/Westgo Portable Auger uses rotating flighting to move grain. 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/Westgo dealer. Before you call, please have this Operator's Manual and the serial number from your machine ready.

PROBLEM	CAUSE	SOLUTION
Auger doesn't turn	Broken shear pin	Replace shear pin
Poor capacity	Flighting sections not timed properly.	Open access covers and check alignment. If incorrect, disassemble and correct per pages 42 and 43.
	Incorrect PTO speed	This auger should operate at 500 RPM. (Over speeding will reduce capacity as much as under speeding).
	Improper Feeding	Intake end should be completely covered with grain
	Worn flighting at intake end	Replace flighting
Auger will not raise	Lift needle valve closed	Open lift needle valve
	Restrictions in hydraulic line	Check hydraulic line for restriction. (This generally occurs at the restrictor valve located next to the hydraulic cylinder)
	Faulty quick couplers on tractor or auger	Replace quick couplers
Auger drops or settles after being positioned	Lift needle valve not closed	Close needle valve after positioning the auger.
	Tractor hydraulic valve faulty	Contact your tractor dealer.

8 SPECIFICATIONS

8.1 MECHANICAL

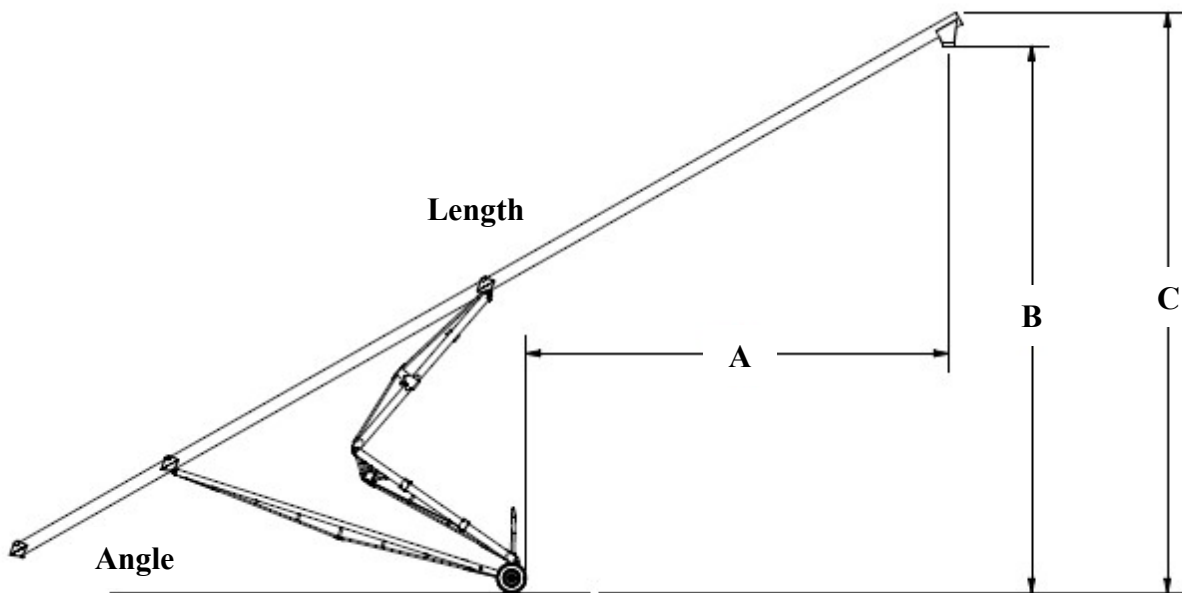
Feature	10" - Model 1510
Auger Tube	10 Inch Outside Diameter
Auger Tube Specifications	10 O.D. x 12 Ga Wall
Flighting	9" O.D x 2-3/8 I.D.
Wheel Size	16.5L -16.1 10 Ply
Tire Pressure	36 psi Max - (Verify w/ Tire Rating)
Reach Arm Tube	6" x 3" x 3/16" Rectangular Tube
Tread Width, Center to Center	157" Narrow / 197" Wide
Hydraulic Cylinder, Qty Two	5 x 48 Chief
Swing Hopper Tire Size	16.5L Drive Wheel, 10" x 2.75" End
Hopper Size	30" x 60" with Single Auger
Hopper Transport Winch	Fulton
Weight - 90 Foot Model	7,407 Lbs
Weight - 100 Foot Model	8,230 Lbs
Capacity	3,800 to 7,000 Bu / Hr
Power Requirements	1.15 HP / Ft of Length

Specifications subject to change without notice

8.2 DIMENSIONS

Length	Auger Angle	A	B	C
90 Foot	7 Degrees – (Transport / Storage)	42'	11.5'	13'
	30 Degrees	35'	46'	48.5'
	42 Degrees – (Fully Raised)	26'	62'	64.5'
100 Foot	7 Degrees – (Transport / Storage)	52'	13'	15'
	30 Degrees	43'	51'	53.5'
	42 Degrees – (Fully Raised)	33.5'	68'	71'

Axle Width Choices: Narrow for Transport = 157” Wide for All Other = 192”



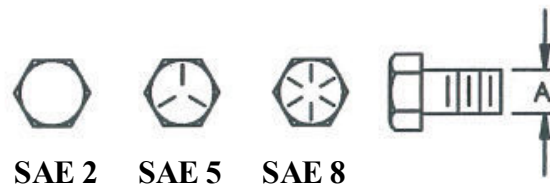
8.3 BOLT TORQUE

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 guide. Replace hardware with the same strength bolt.

ENGLISH TORQUE SPECIFICATIONS

Bolt Diameter "A"	Bolt Torque*					
	SAE 2		SAE 5		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	(70)	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)



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 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.

NOTES

This page for your use

PARTS & INDEX SECTION

TABLE OF CONTENTS

DESCRIPTION	PAGE
Information about the Model 1510 and this section of the manual	50
Hitch and drive systems	51 & 52
Hopper and inclined tube	53 & 54
Transport	55 & 56
Tubes, helicoids and rigid trussing	57 & 58
Power wheel option	59
Tractor PTO shaft components	60
Hardware	61
Index	62 - 65

Model 1510 Auger

These augers are very large in both diameter and length. A picture of a 1510, 13 x 100 is shown on page 5 of this manual. The auger bodies are assembled by sections.

- ▶ The 90 foot auger starts with a 30 foot section at the intake end, adds (2) 20 foot center sections and a 20 foot top section.
- ▶ The 100 foot auger also starts with the same 30 foot section at the intake end, then the (2) 20 foot center sections and a 30 foot top section.

Other features of the Model 1510 auger.

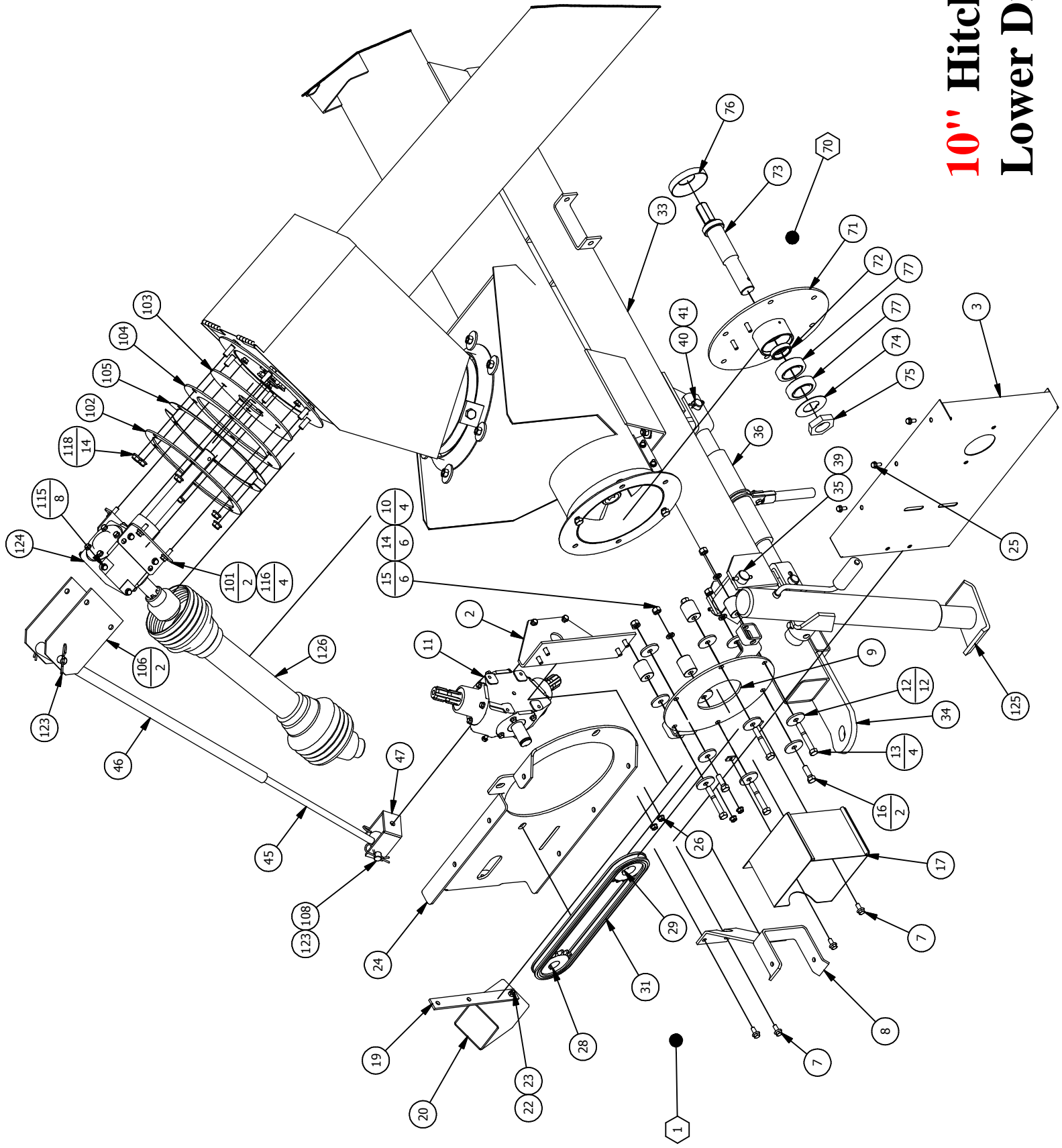
- ▶ Heavy duty transport
 - ▶ Twin lift cylinders
 - ▶ Rigid trussing
 - ▶ Mechanical drive for the hopper and inclined tube
-

About this portion of the manual

Producing exploded views of individual augers is a lengthy process. To get reasonable size and clarity we have divided the auger into four sections on eight pages. See 51 through 58.

Views on pages 51 and 53 are common to all Model 1510's and some 1410's. The view on page 55 is unique to all Model 1510. The view on page 57 is a 13 x 80. Page 58 distinguishes the parts and part numbers that make 90 and 100 foot augers.

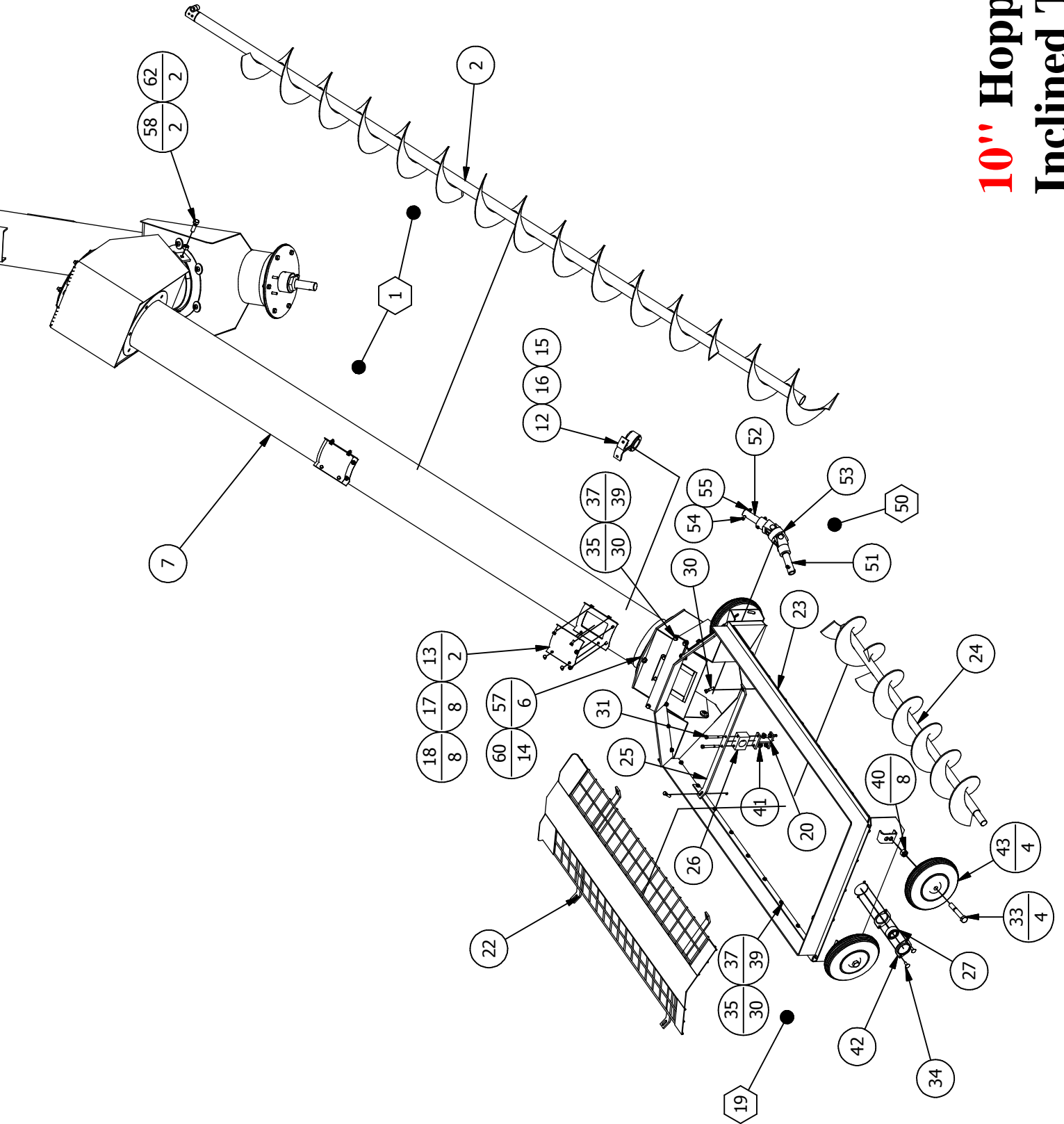
10' Hitch & Lower Drive



PARTS LIST				PARTS LIST				PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	10 IN MECH DRIVEB	DRIVE ASSY	46	1	100-2-3137	TELESCOPE ASSY, UPPR	92	2	100-2-3583	LOWER END TRUSS W/A
2	1	100-3-3582	GEARBOX MOUNT	47	1	100-2-3140	TELESCOPE BRACKET	93	4	100-3-5856	CROSS TUBE MOUNT TAB
3	1	100-2-2056	COVER WELDMNT	48	1	100-2-3561	TUBE & TRUSS ASSY 10X90 1510	94	20	100-2-3534	TRUSS WELD, 58.50 PIPE LENGTH
4	1	100-3-3594	COVER	49	12	100-3-4846	TRUSS STANDOFF CHANNEL	95	2	100-2-3535	TRUSS WELD, 54.85" PIPE LENGTH
5	1	100-3-3730	BACK PLATE	50	2	100-3-5214	TRUSS BRACE BAR	96	2	100-2-3564	TRUSS WELD, 55.27" PIPE LENGTH
6	4	900-06329	3/8NC WELD NUT	51	118	900-01341	5/8 NC X 1-1/2 HEX BOLT GR5	97	24	900-01343	5/8-11 X 1-3/4 GR 5 HHCS
7	4	900-03436	3/8 X 3/4 SERR FLANGE BOLT GR5	52	142	900-06145	5/8NC SERR FLANGE NUT	98	9	900-01247	1/2 X 4-1/2 HEX BOLT GR5
8	1	100-2-1360	PTO REST BRACKET WELDMNT	53	13	900-01221	1/2NC X 1 HEX BOLT GR5	99	8	900-01233	1/2-13 X 2-1/2 GR 5 HHCS ZP
9	1	100-2-1980	SLIP RING WMNT	54	38	900-06143	1/2 NC SERR FLANGE NUT	100	8	900-01237	1/2-13 X 3 GR 5 HHCS
10	4	100-3-3632	SPACER	55	1	100-3-2112	10" PLASTIC SPOUT	101	2	100-3-4099	ANGLE, GEARBOX MOUNT
11	1	903-15430	4268 GEARBOX ASSEMBLY	56	2	100-3-3864	BAR, SPOUT	102	1	100-3-4950	SLIP RING A
12	12	100-3-3648	WASHER-2" SPEC.	57	8	900-01113	3/8NC X 1-1/2 HEX BOLT G5	103	1	100-3-4951	SLIPRING B
13	4	900-01241	1/2-13 x 3-1/2 GR 5 HHCS	58	8	900-06139	3/8 NC SERR FLANGE NUT	104	1	100-3-4952	SLIP RING C
14	6	900-11013	1/2" SPLIT LOCK WASHER	59	2	100-2-3502	TRUSS WELD, 10" INSIDE	105	2	100-3-4953	SLIP RING D
15	6	900-06009	1/2-13 GR 5 HEX NUT ZP	60	3	100-2-3503	TRUSS WELD, OUTSIDE 10"	106	2	100-3-4954	SIDE PLATE, GEARBOX
16	2	900-01225	1/2NC X 1-1/2 HEX BOLT G5	61	1	100-2-3547	BTM TUBE ASSY 10" 1510	107	1	100-3-4960	PIN, TELESCOPE UPFR
17	1	100-2-2086	COVER WELDMNT	62	2	100-2-1311	10" HEX BEARING ASSY.	108	1	100-3-4961	TELESCOPE PIN, LWR
18	1	100-2-3351	GEARBOX GUARD ASSY 10" MECH DR	63	3	100-2-2002	INTERMEDIATE HELICOID, 10"	109	1	100-3-5909	SLIP RING LOCATOR WASHER
19	1	100-3-5375	GUARD MOUNT BAR, 10" MECH DR	64	2	100-3-2396	HEX SHAFT, 1-1/8"	110	1	100-5-0100	CV JOINT KIT
20	1	100-2-3350	GUARD WELDMNT, 10" MECH DRIVE	65	4	900-03439	3/8NC X 1-1/4 SERR FLANGE BOLT	111	1	900-01125	3/8NC X 3 HEX BOLT GR5
21	1	900-06005	3/8 - 16 HEX NUT	66	4	900-06139	3/8 NC SERR FLANGE NUT	112	6	900-01221	1/2NC X 1 HEX BOLT GR5
22	1	900-06500	3/8 TOPLOCK NUT- UNC	67	2	100-3-1113	ACCESS COVER	113	4	900-01249	1/2-13 X 5 GR 5 HHCS ZP
23	1	900-01111	3/8-16 X 1-1/4 GR 5 HHCS	68	8	900-01055	5/16NC X 3/4 HEX BOLT G5	114	2	900-01346	5/8NF X 2 GR 5 HHCS
24	1	100-2-1979	PLATE WELD	69	8	900-06137	5/16 NC SERR FLANGE NUT	115	8	900-03419	5/16-18 X 3/4 SERR FLG BOLT
25	10	900-03419	5/16-18 X 3/4 SERR FLNG BOLT	70	1	100-2-2825	BEARING PLATE ASSY, 10"	116	4	900-03438	3/8-16 x 1 SERR FLG BOLT
26	4	900-06139	3/8 NC SERR FLANGE NUT	71	1	100-2-2812	10" BEARING PLATE W/A	117	4	900-06139	3/8 NC SERR FLANGE NUT
27	4	900-03438	3/8-16 x 1 SERR FLG BOLT	72	1	100-3-4278	COLLAR, TAPERED BEARING	118	14	900-06143	1/2 NC SERR FLANGE NUT
28	1	100-3-3749	SPROCKET, 60B16 - 1.25	73	1	100-3-4280	1-1/2 HEX PTO DR SHAFT, 10"	119	1	900-06500	3/8 TOPLOCK NUT- UNC
29	1	100-3-3750	SPROCKET, 60B16 - 1.5"	74	1	100-3-4283	CAP, LOCKING DUST	120	4	900-06504	1/2" NC TOPLOCK NUT
30	2	900-01059	5/16NC X 1 HEX BOLT G5	75	1	100-3-4282	1-3/4-12 PLAIN HEX NUT	121	2	900-06508	5/8 - 11 TOP LOCK HEX NUT
31	1	903-03126	CHAIN, 60-1 X 56	76	1	100-3-4291	CAP, DUST	122	4	900-11035	1/2" USS FLATWASHER
32	1	100-2-2698	HITCH ASSEMBLY, 8" - 10"	77	2	901-01311	TAPER BEARING AND CONE, 1.75" ID	123	4	900-25005	R HITCH PIN #9
33	1	100-2-2657	TUBE, HITCH	78	6	900-01221	1/2NC X 1 HEX BOLT GR5	124	1	903-19084	Z777-2 GEARBOX
34	1	100-2-2658	HITCH W/A 8" - 10" FRONT	79	6	900-06143	1/2 NC SERR FLANGE NUT	125	1	905-23024	5000# POLE JACK WELDMNT
35	1	100-3-4047	PIN, HITCH PIVOT	80	1	100-2-3548	BOTTOM TUBE W/A 10 IN 1510	126	2	903-17741	WEASLER PTO, GR CV
36	1	200-2-0705	RATCHET JACK	81	1	100-2-3549	LOWER CENTER TUBE ASSY 10" 1510				
37	1	900-01111	3/8-16 X 1-1/4 GR 5 HHCS	82	1	100-2-3551	UPPER CENT TUBE ASSY 10" 1510				
38	1	900-06139	3/8 NC SERR FLANGE NUT	83	1	100-2-3237	END TRUSS CROSS BRACE W/A 10"				
39	2	900-29209	ROLL PIN, 5/16 X 2-1/2	84	2	100-3-4862	TRUSS STANDOFF, SHORT				
40	2	900-29222	PIN, 1" X 2.75"	85	2	100-2-3555	END TRUSS WELD, 68.52 PIPE L				
41	2	900-23043	3/16 X 1-1/2 COTTER PIN	86	1	100-2-3491	END TRUSS WELDMNT, 10"				
42	1	100-2-2721	10" INCLINE TUBE ASSY	87	1	100-2-3562	TOP TUBE ASSY 10X90 1510				
43	1	100-2-2791	10" HOPPER	88	1	100-2-3581	END CROSS CHANNEL W/A, 10"				
44	1	100-2-3026	PIVOT RING W/A	89	1	100-2-3579	CROSS BRACE W/A LONG				
45	1	100-2-3136	TELESCOPE ASSY, LWR	90	1	100-2-3580	CROSS BRACE W/A, SHORT				
				91	1	100-2-3236	CROSS CHANNEL W/A 10"				

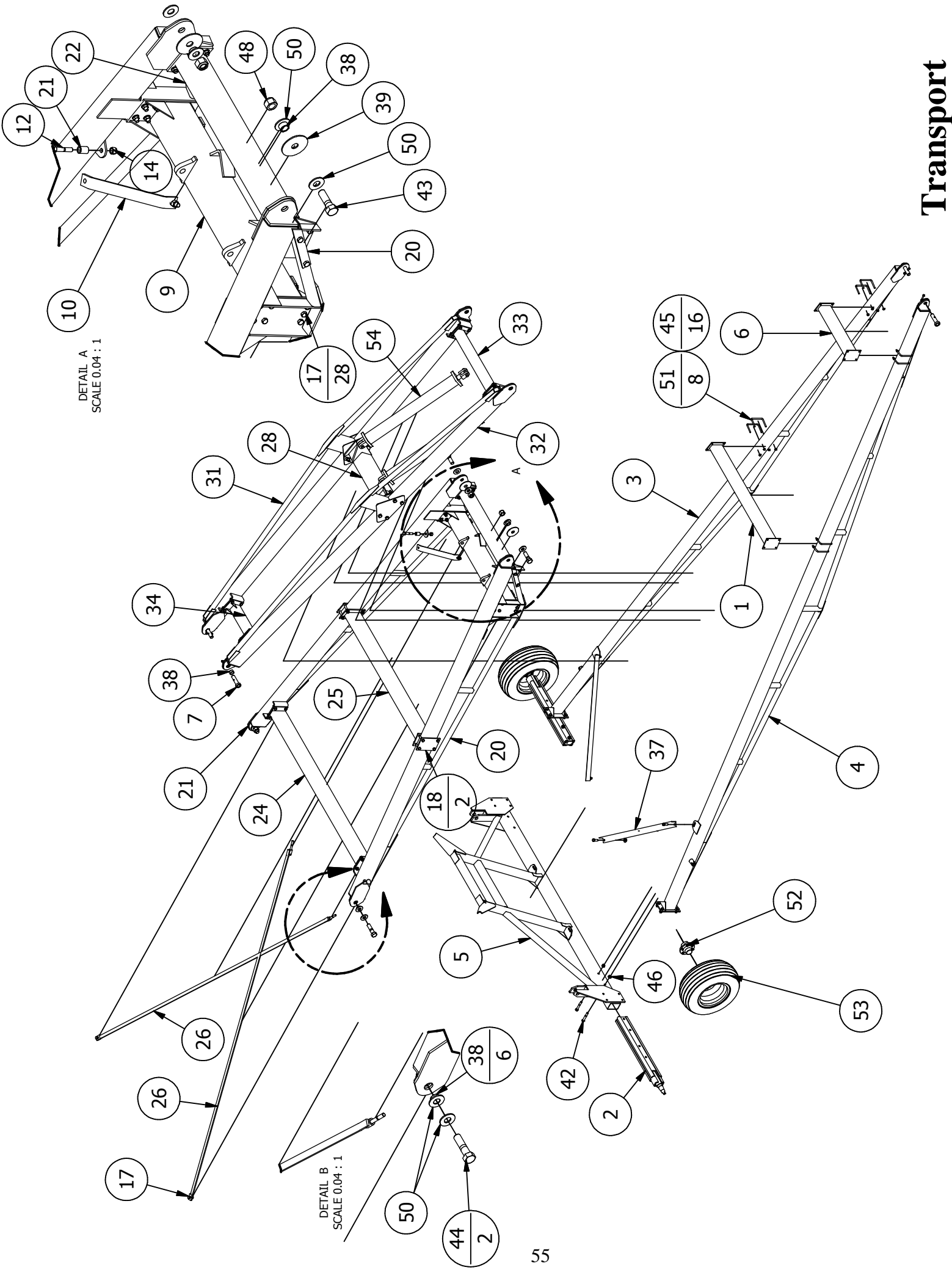
10" Hitch & Lower Drive

10" Hopper & Inclined Tube



PARTS LIST				PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	100-2-2721	10" INC. TUBE ASSY., 1410	32	2	900-01221	1/2NC X 1 HEX BOLT GR5
2	1	100-2-2720	HELICOID WELD, INCLINE - 10"	33	4	900-01423	3/4-10 X 5 GR 5 HHCS
3	1	900-01237	1/2-13 X 3 GR 5 HHCS	34	2	900-01695	3/8-16 X 1 GR 5 CRG BOLT
4	1	900-11033	3/8 USS FLATWASHER	35	30	900-03438	3/8-16 x 1 SERR FLG BOLT
5	1	900-11013	1/2" SPLIT LOCK WASHER	36	1	900-06137	5/16 NC SERR FLANGE NUT
6	1	900-06504	1/2" NC TOPLOCK NUT	37	39	900-06139	3/8 NC SERR FLANGE NUT
7	1	100-2-2718	TUBE WMNT, INCLINED	38	2	900-06500	3/8 TOPLOCK NUT- UNC
8	1	907-33640	INCLINE TUBE, 14 SERIES	39	2	900-06504	1/2" NC TOPLOCK NUT
9	3	106-3-0307	10" ANGLE RING	40	8	900-06510	3/4 - 10 TOP LOCK HEX NUT
10	1	100-2-2717	INCLINE TUBE HEAD W/A 10"	41	4	900-11033	3/8 USS FLATWASHER
11	2	100-3-1851	BASE, ACCESS COVER	42	2	901-01011	FLANGE, 2 HOLE
12	2	100-2-2085	2" SPLT HNGR BRG ASSY	43	4	905-09125	RUBBER WHEEL COMPLETE
13	2	100-3-1113	ACCESS COVER	44	1	100-2-3026	PIVOT RING W/A
14	6	900-01225	1/2NC X 1-1/2 HEX BOLT G5	45	1	100-2-3547	BTTM TUBE ASSY 10" 1510
15	4	900-03439	3/8NC X 1-1/4 SERR FLANGE BOLT	46	1	100-3-4950	SLIP RING A
16	4	900-06139	3/8 NC SERR FLANGE NUT	47	1	100-3-4951	SLIPRING B
17	8	900-01055	5/16NC X 3/4 HEX BOLT G5	48	1	100-3-4952	SLIP RING C
18	8	900-06137	5/16 NC SERR FLANGE NUT	49	2	100-3-4953	SLIP RING D
19	1	100-2-2791	10" HOPPER	50	1	100-5-0100	CV JOINT KIT
20	1	100-2-2709	BAR, SPACER	51	1	100-5-1100	HEX CONNECTOR W/A
21	1	100-2-2788	HINGE W/A	52	1	100-5-1202	TUBE, FIXED CONNECTOR
22	1	100-2-2789	10" HOPPER MESH W/A	53	1	903-18033	CV JOINT CAT1 6RBL
23	1	100-2-2790	HOPPER WELDMENT, 10"	54	3	900-01071	5/16-18 X 2-1/2 GR 5 HHCS
24	1	100-2-2794	HELICOID WLDMT., HOPPER	55	3	900-06498	5/16NC HEX TOPLOCK NUT
25	1	100-3-3669	STRAP, BEARING	56	1	900-01125	3/8NC X 3 HEX BOLT GR5
26	1	100-3-3675	1-1/2 SPLIT WOOD BEARING	57	6	900-01221	1/2NC X 1 HEX BOLT GR5
27	1	901-01002	1-1/4" INSERT BEARING	58	2	900-01346	5/8NF X 2 GR 5 HHCS
28	4	900-01059	5/16NC X 1 HEX BOLT G5	59	4	900-06139	3/8 NC SERR FLANGE NUT
29	2	900-01105	3/8-16 X 3/4 GR 5 HHCS	60	14	900-06143	1/2 NC SERR FLANGE NUT
30	4	900-01113	3/8NC X 1-1/2 HEX BOLT G5	61	1	900-06500	3/8 TOPLOCK NUT- UNC
31	2	900-01129	3/8NC X 3-1/2 HEX BOLT GR5	62	2	900-06508	5/8 - 11 TOP LOCK HEX NUT

10" Hopper & Inclined Tube



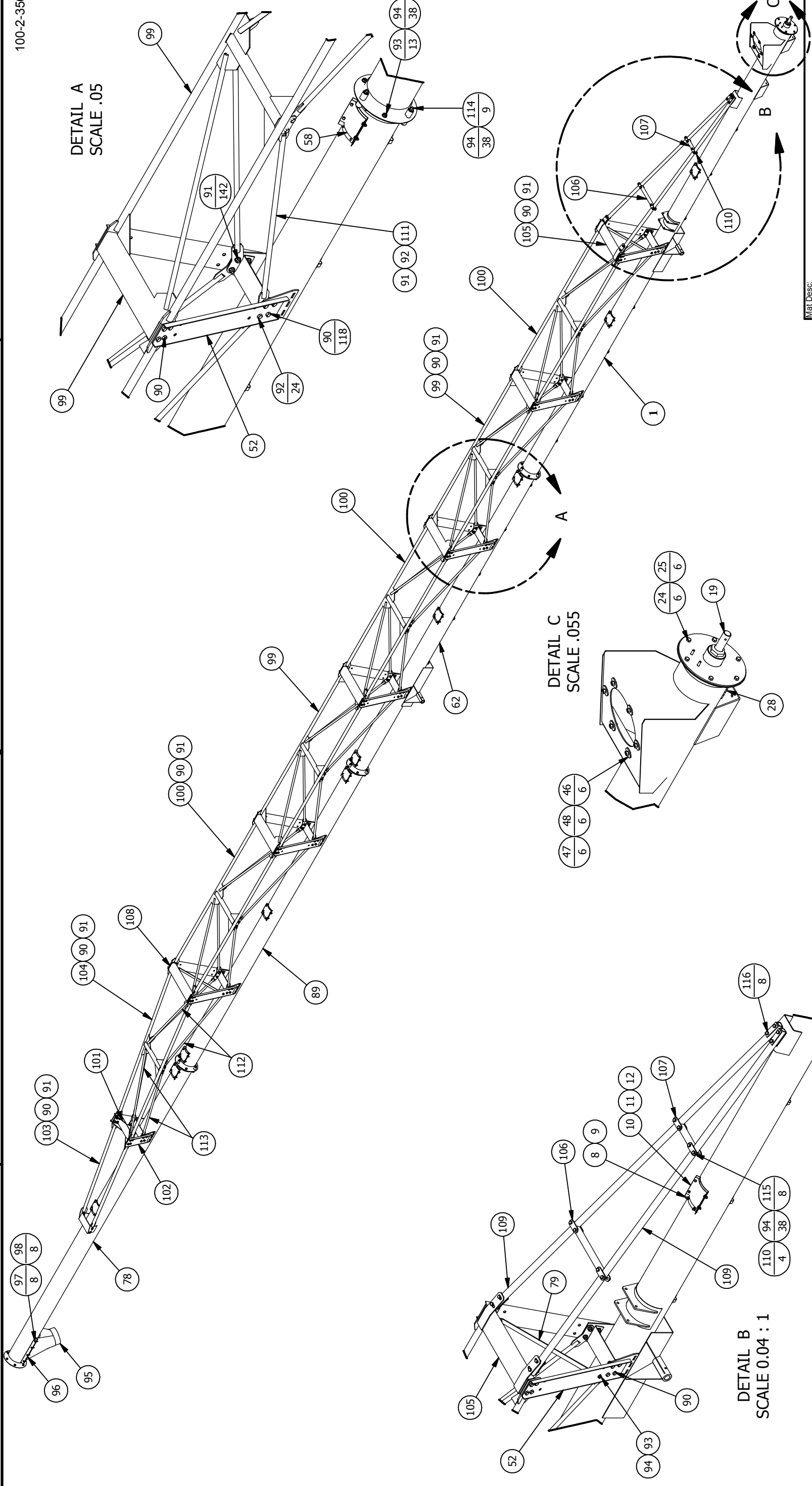
DETAIL A
SCALE 0.04 : 1

DETAIL B
SCALE 0.04 : 1

PARTS LIST				PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION	ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	100-2-3383	REACH ARM BRACE W/A	28	1	100-2-3517	UPPER CYL MOUNT W/A
2	2	100-2-3420	AXLE EXTENSION	29	8	900-01535	1"NC X 6 HEX BOLT G5
3	1	100-2-3512	REACH ARM WELD, RH	30	8	900-06598	1" NC NYLON LOCKNUT
4	1	100-2-3513	REACH ARM WELD, LH	31	1	100-2-3612	UPPER LIFT ARM W/A, LH
5	1	100-2-3525	AXLE WELDMENT	32	1	100-2-3613	UPPER LIFT ARM W/A, RH
6	1	100-2-3528	REACH ARM BRACE W/A	33	1	100-2-3615	CROSS BRACE W/A X 39.33 IN
7	4	100-2-3529	PIVOT PIN WELDMENT	34	1	100-2-3616	CROSS BRACE W/A X 20.36 IN
8	1	100-2-3608	LOWER LIFT ARM ASSY	35	16	900-06147	3/4 - 10 FLANGE NUT
9	1	100-2-3521	LOWER CYL MOUNT WELDMENT	36	16	900-01403	3/4NC X 2 HEX BOLT GR5
10	2	100-3-5754	BRACE BAR	37	2	100-3-5555	ANGLE BRACE
11	2	900-01475	7/8" x 3" NC GR5 BOLT	38	6	100-3-5744	PIVOT BUSHING, 1.06 IN
12	2	900-01481	7/8 NC X 4-1/2 HEX BOLT G5 ZP	39	2	100-3-5970	WASHER, 1/4 X 6 X 1.53
13	4	900-11039	7/8 USS FLAT WASHER ZP	40	4	900-01241	1/2-13 x 3-1/2 GR 5 HHCS
14	4	900-06596	7/8 Std NC Nylock Nut	41	12	900-01403	3/4NC X 2 HEX BOLT GR5
15	2	900-01429	3/4 X 6-1/2 HEX BOLT GR5 ZP	42	4	900-01423	3/4-10 X 5 GR 5 HHCS
16	42	900-06147	3/4 - 10 FLANGE NUT	43	2	900-01630	1-1/2 - 6 X 5 HHCS GR 5 ZP
17	28	900-01403	3/4NC X 2 HEX BOLT GR5	44	2	900-01632	1-1/2 - 6 X 6 HHCS GR 5 ZP
18	2	100-3-5903	CROSS BRACE MOUNT PLATE	45	16	900-06143	1/2 NC SERR FLANGE NUT
19	8	900-01423	3/4-10 X 5 GR 5 HHCS	46	16	900-06147	3/4 - 10 FLANGE NUT
20	1	100-2-3610	LOWER LIFT ARM W/A, RH	47	5	900-06504	1/2" NC TOPLOCK NUT
21	1	100-2-3611	LOWER LIFT ARM W/A, LH	48	4	900-06604	1 1/2 Std NC Nylock Nut
22	1	100-2-3614	CROSS BRACE W/A	49	4	900-11038	3/4 USS FLAT WASHER
23	4	900-01425	3/4-10 X 5-1/2 GR 5 HHCS	50	12	900-11044	1-1/2 USS FLAT WASHER
24	1	100-2-3617	CROSS BRACE W/A X 100.92"	51	8	900-31082	U-BOLT, 1/2NC X 6 X 4-1/2 LONG
25	1	100-2-3618	CROSS BRACE W/A	52	2	905-09004	HUB ASSEMBLY
26	2	100-2-3619	TRUSS BAR W/A	53	2	905-09079	WHEEL & TIRE ASSEMBLY
27	1	100-2-3609	UPPER LIFT ARM ASSY	54	2	905-21224	HYD. CYL. 5 X 48 PRINCE

100-2-3561

DETAIL A
SCALE .05



DETAIL C
SCALE .055

DETAIL B
SCALE 0.04 : 1

10" Tubes & Trussing



Mat Desc:
 All Dimensions are in inches and the tolerance applied is as follows unless otherwise noted.
 X.X = +/- .100
 X.XX = +/- .030
 X.XXX = +/- .010
 Angles = +/- 1°

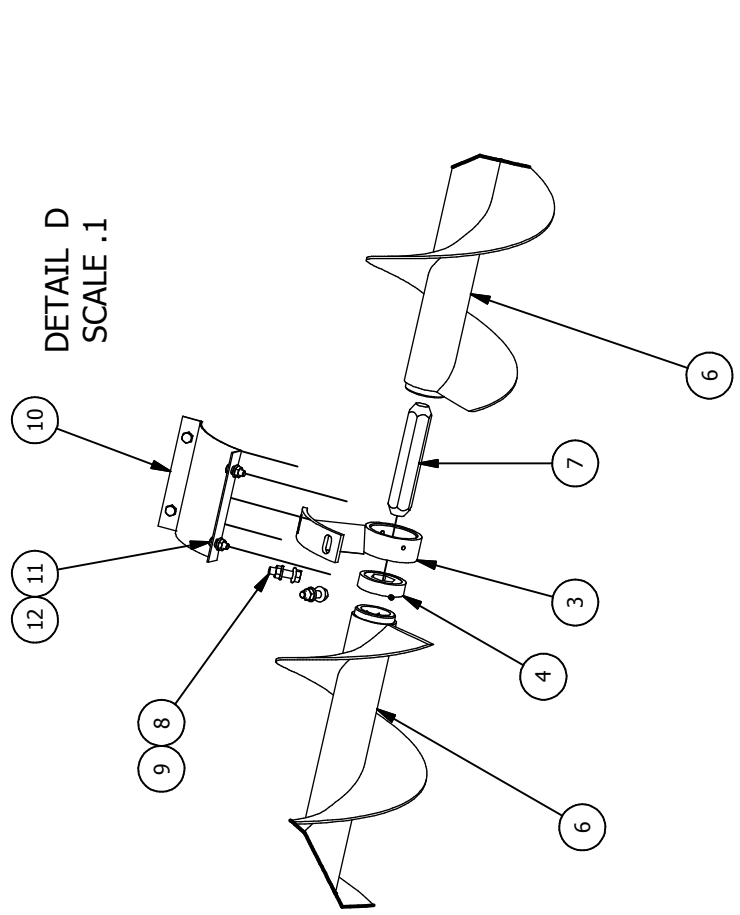
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DWG NO.	100-2-3561
DATE:	7/2/2010
DRAWN BY:	davidutke
REV	
SIZE	B
SHEET 1 OF 2	

10 x 90 Parts List

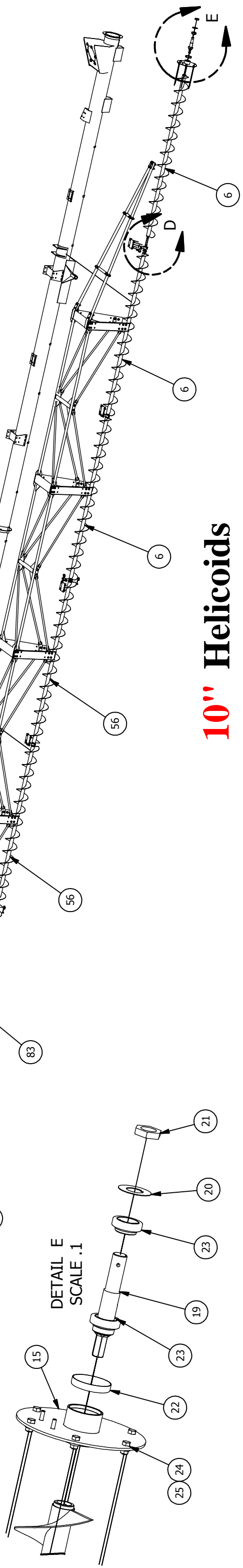
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1	1	100-2-3547	BTTM TUBE ASSY 10" 1510	63	1	100-2-3562	TOP TUBE ASSY 10X90 1510	97	8	900-01113	3/8NC X 1-1/2 HEX BOLT G5	101	1	100-2-3237	END TRUSS CROSS BRACE W/A 10"
2	2	100-2-1311	10" HEX BEARING ASSY.	64	2	100-2-1311	MOUNT, CLEANOUT DOOR	98	8	900-06139	3/8 NC SERR FLANGE NUT	102	2	100-3-4862	TRUSS STANDOFF, SHORT
3	1	100-2-2833	HANGER W/A, 10" HEX BRG	65	1	115-3-0059	HINGE	99	2	100-2-3502	TRUSS WELD, 10" INSIDE	103	2	100-2-3555	END TRUSS WELD, 68.52 PIPE L
4	1	901-01121	1-1/8" HEX BEARING	66	2	900-01059	5/16NC X 1 HEX BOLT G5	100	3	100-2-3503	TRUSS WELD, OUTSIDE 10"	104	1	100-2-3491	END TRUSS WELDMENT, 10"
5	2	900-17193	1/4 X 5/16 NC SET SCREW CONE	67	1	100-2-2002	5/16 NC SERR FLANGE NUT	101	1	100-2-3237	END TRUSS CROSS BRACE W/A 10"	105	1	100-2-3581	END CROSS CHANNEL W/A, 10"
6	3	100-2-2002	INTERMEDIATE HELICOID, 10"	68	1	100-3-3394	TRUSS MOUNT SUBWELD	102	2	100-3-4862	TRUSS STANDOFF, SHORT	106	1	100-2-3579	CROSS BRACE W/A LONG
7	2	100-3-2396	HEX SHAFT, 1-1/8"	69	1	100-3-5211	REACH ARM PAN	103	2	100-2-3555	END TRUSS WELD, 68.52 PIPE L	107	1	100-2-3580	CROSS BRACE W/A, SHORT
8	4	900-03439	3/8NC X 1-1/4 SERR FLANGE BOLT	70	2	900-01111	PIVOT TUBE	104	1	100-2-3491	END TRUSS WELDMENT, 10"	108	1	100-2-3236	CROSS CHANNEL W/A 10"
9	4	900-06139	3/8 NC SERR FLANGE NUT	71	6	900-06139	GUSSET	105	1	100-2-3581	END CROSS CHANNEL W/A, 10"	109	2	100-2-3583	LOWER END TRUSS W/A
10	2	100-3-1113	ACCESS COVER	72	6	900-01221	STRAP, HYD. HOSE MTG	106	1	100-2-3579	CROSS BRACE W/A LONG	110	4	100-3-5856	CROSS TUBE MOUNT TAB
11	8	900-01055	5/16NC X 3/4 HEX BOLT G5	73	6	900-06143	BOOT W/A	107	1	100-2-3580	CROSS BRACE W/A, SHORT	111	20	100-2-3534	TRUSS WELD, 58.50 PIPE LENGTH
12	8	900-06137	5/16 NC SERR FLANGE NUT	74	2	100-3-1113	TOP PLATE, FORMED	108	1	100-2-3236	CROSS CHANNEL W/A 10"	112	2	100-2-3535	TRUSS WELD, 54.85" PIPE LENGTH
13	1	100-2-2825	BEARING PLATE ASSY., 10"	75	8	900-01055	END PLATE, FORMED	109	2	100-2-3583	LOWER END TRUSS W/A	113	2	100-2-3564	TRUSS WELD, 55.27" PIPE LENGTH
14	1	100-2-2812	10" BEARING PLATE W/A	76	8	900-06137	END PLATE, RH	110	4	100-3-5856	CROSS TUBE MOUNT TAB	114	9	900-01247	1/2 X 4-1/2 HEX BOLT GR5
15	1	100-3-4354	BEARING PLATE, 10" BTTM	77	4	900-03439	SIDE PLATE, LH	111	20	100-2-3534	TRUSS WELD, 58.50 PIPE LENGTH	115	8	900-01233	1/2-13 X 2-1/2 GR 5 HHCS ZP
16	1	100-3-4281	SLEEVE, PTO DRIVE BEARING	78	1	100-2-3563	TOP TUBE WELD 10X90 1510	112	2	100-2-3535	TRUSS WELD, 54.85" PIPE LENGTH	116	8	900-01237	1/2-13 X 3 GR 5 HHCS
17	2	900-03439	3/8NC X 1-1/4 SERR FLANGE BOLT	79	2	100-3-5214	TRUSS BRACE BAR	113	2	100-2-3564	TRUSS WELD, 55.27" PIPE LENGTH				
18	1	100-3-4278	COLLAR, TAPERED BEARING	80	1	100-2-3551	UPPER CENT TUBE ASSY 10" 1510	114	9	900-01247	1/2 X 4-1/2 HEX BOLT GR5				
19	1	100-3-4280	1-1/2 HEX PTO DR SHAFT, 10"	81	2	100-2-1311	HOPPER LIFT ARM MNT W/A, 10"	115	8	900-01233	1/2-13 X 2-1/2 GR 5 HHCS ZP				
20	1	100-3-4283	CAP, LOCKING DUST	82	2	100-3-2396	END TRUSS MOUNT, 10"	116	8	900-01237	1/2-13 X 3 GR 5 HHCS				
21	1	100-3-4282	1-3/4-12 PLAIN HEX NUT	83	2	100-2-2002	BRACE TUBE, 10" ANGLE RING								
22	1	100-3-4291	CAP, DUST	84	3	100-3-1113	TRUSS STANDOFF CHANNEL								
23	2	901-01311	TAPER BEARING AND CONE, 1.75" ID	85	12	900-01055	LOWER CENTER TUBE ASSY 10" 1510								
24	6	900-01221	1/2NC X 1 HEX BOLT GR5	86	12	900-06137	10" HEX BEARING ASSY.								
25	6	900-06143	1/2 NC SERR FLANGE NUT	87	4	900-06139	HEX SHAFT, 1-1/8"								
26	1	100-2-3548	BOTTOM TUBE W/A 10 IN 1510	88	4	900-03439	INTERMEDIATE HELICOID, 10"								
27	1	907-25556	TUBE, 10"OD X 12G X 360"	89	1	100-2-3552	3/8 NC SERR FLANGE NUT								
28	2	100-3-3619	PAN, HITCH	90	118	900-01341	ACCESS COVER								
29	2	100-3-1851	BASE, ACCESS COVER	91	142	900-06145	5/8NC SERR FLANGE NUT								
30	2	106-3-0307	10" ANGLE RING	92	24	900-01343	5/8-11 X 1-3/4 GR 5 HHCS								
				93	13	900-01221	1/2NC X 1 HEX BOLT GR5								
				94	38	900-06143	1/2 NC SERR FLANGE NUT								
				95	1	100-3-2112	10" PLASTIC SPOUT								
				96	2	100-3-3864	BAR, SPOUT								
				67	2	100-2-2002	Intermediate helicoid, 10" (for 100 ft. auger)								
				78	1	100-2-3553	Top tube weld, 10x100 - 1510 (for 100 ft. auger)								

(Additional section plus hardware for 100 ft. auger)

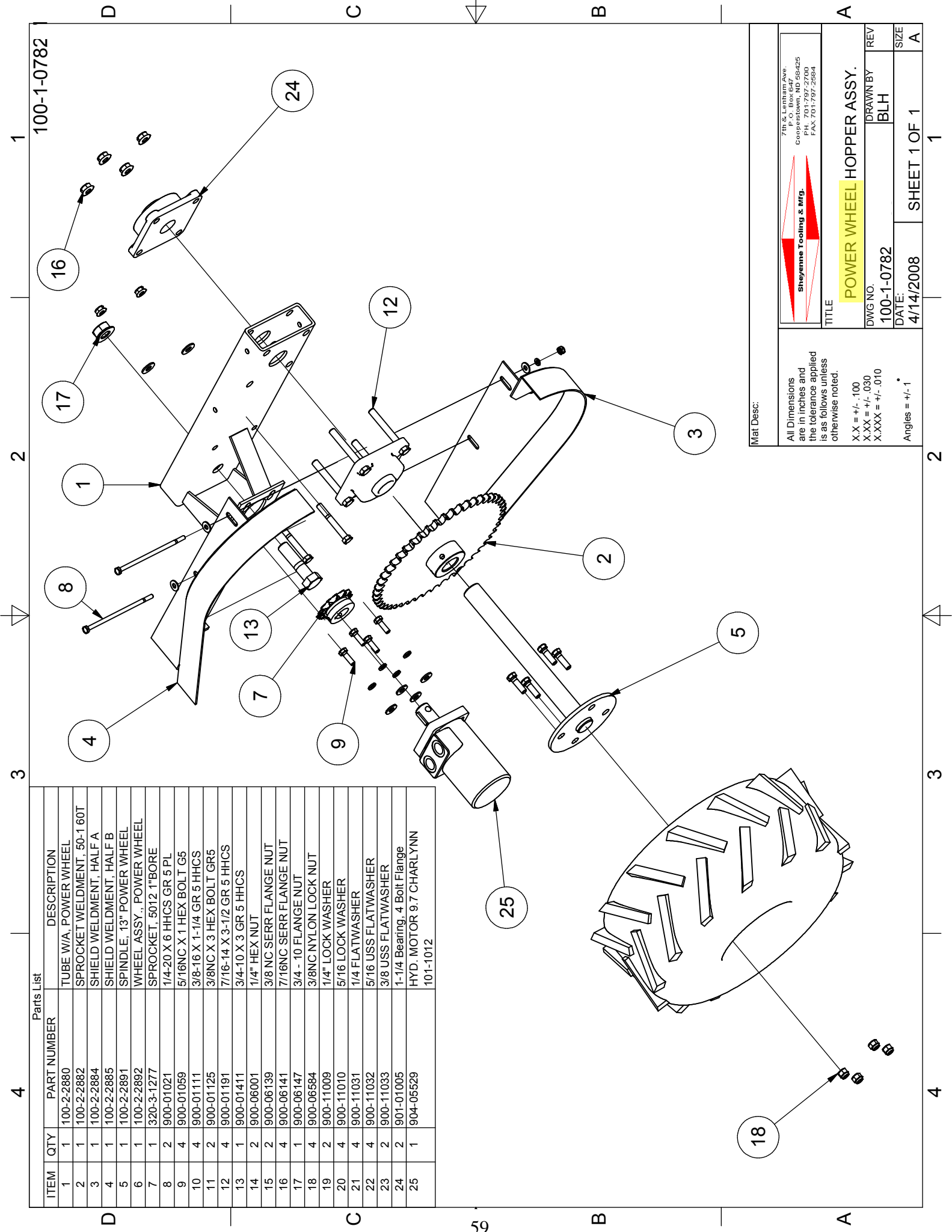
DETAIL D
SCALE .1



DETAIL E
SCALE .1



10' Helicoids



100-1-0782

Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	100-2-2880	TUBE W/A, POWER WHEEL
2	1	100-2-2882	SPROCKET WELDMENT, 50-1 60T
3	1	100-2-2884	SHIELD WELDMENT, HALF A
4	1	100-2-2885	SHIELD WELDMENT, HALF B
5	1	100-2-2891	SPINDLE, 13" POWER WHEEL
6	1	100-2-2892	WHEEL ASSY., POWER WHEEL
7	1	320-3-1277	SPROCKET, 5012, 1"BORE
8	2	900-01021	1/4-20 X 6 HHCS GR 5 PL
9	4	900-01059	5/16NC X 1 HEX BOLT G5
10	4	900-01111	3/8-16 X 1-1/4 GR 5 HHCS
11	2	900-01125	3/8NC X 3 HEX BOLT GR5
12	4	900-01191	7/16-14 X 3-1/2 GR 5 HHCS
13	1	900-01411	3/4-10 X 3 GR 5 HHCS
14	2	900-06001	1/4" HEX NUT
15	2	900-06139	3/8 NC SERR FLANGE NUT
16	4	900-06141	7/16NC SERR FLANGE NUT
17	1	900-06147	3/4 - 10 FLANGE NUT
18	4	900-06584	3/8NC NYLON LOCK NUT
19	2	900-11009	1/4" LOCK WASHER
20	4	900-11010	5/16 LOCK WASHER
21	4	900-11031	1/4 FLATWASHER
22	4	900-11032	5/16 USS FLATWASHER
23	2	900-11033	3/8 USS FLATWASHER
24	2	901-01005	1-1/4 Bearing, 4 Bolt Flange
25	1	904-05529	HYD. MOTOR 9.7 CHARLYNN 101-1012

Mat Desc:

All Dimensions are in inches and the tolerance applied is as follows unless otherwise noted.

X.X = +/- .100
 X.XX = +/- .030
 X.XXX = +/- .010
 Angles = +/- 1°

7th & Lehigh Ave.
 P. O. Box 637
 Cooperstown, ND 58425
 PH: 701-797-2700
 FAX: 701-797-2584



TITLE

POWER WHEEL HOPPER ASSY.

DWG NO.

100-1-0782

REV

BLH

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BLH

SIZE

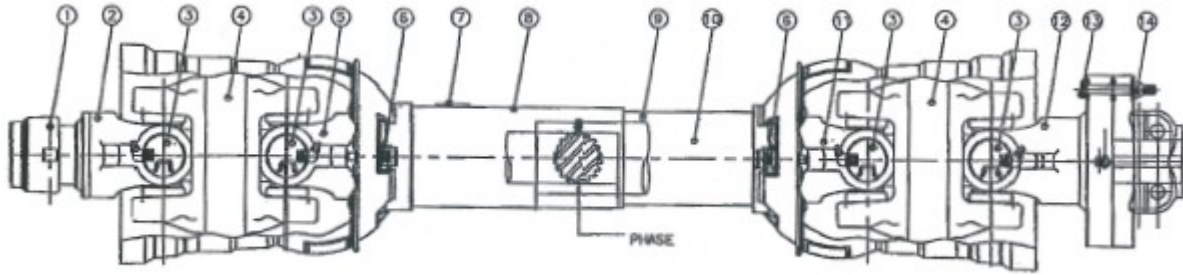
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4/14/2008

SHEET 1 OF 1

1



TRACTOR PTO SHAFT COMPONENTS

(Weasler 55R – Double, Cat. 6, 50 Degree
Constant Velocity Universal Joint)

Parts List			
Item	Part Number	Description	Qty
1	903-18007	Safety Slide Lock Repair Kit # 26-1520	1
2	903-18008	Safety Slide Lock Yoke Assembly # 55241-1612	1
3	903-18064	Cross and Bearing Kit # 03-10050	4
4	903-18065	Center Housing # 55251-1599	2
5	903-18012	Yoke and Shaft # 99-19545	1
6	903-18066	Nylon Repair Kit # 19-5121	2
7	903-18016	Safety Sing # 13-10021	1
8	903-18067	Outer Guard # 97-22164	1
9	903-18068	Inner Guard # 96-22164	1
10	903-18018	Safety Sign # 13-10022	1
11	903-18019	Yoke, Tube & Slip Sleeve # 98-19545	1
12	903-18023	Ball Shear Assembly # 40-10027	1
13	900-01071	5/16 UNC x 2-1/2 Hex Bolt Grade 5 # 11-10471	1
14	900-06498	5/16 UNC Lock Nut # 11-10044	1

903-18069 PTO Half, Tractor End # 93-22164 1

903-18070 PTO Half, Implement End # 92-22164 1

903-18048 PTO Shaft, Complete # 260-22164 1

HARDWARE

NUTS		WASHERS	
PART NO.	DESCRIPTION	PART NO.	DESCRIPTION
900-06194	3/16 NC Hex Nut	900-11007	3/16 Lock Washer
900-06001	1/4 NC Hex Nut	900-11009	1/4 Lock Washer
900-06003	5/16 NC Hex Nut	900-11010	5/16 Lock Washer
900-06005	3/8 NC Hex Nut	900-11011	3/8 Lock Washer
900-06007	7/16 NC Hex Nut	900-11012	7/16 Lock Washer
900-06009	1/2 NC Hex Nut	900-11013	1/2 Lock Washer
900-06010	1/2 NF Hex Nut	900-11014	9/16 Lock Washer
900-06011	9/16 NC Hex Nut	900-11015	5/8 Lock Washer
900-06013	5/8 NC Hex Nut	900-11017	3/4 Lock Washer
900-06015	3/4 NC Hex Nut	900-11019	7/8 Lock Washer
900-06017	7/8 NC Hex Nut	900-11021	1" Lock Washer
900-06019	1" NC Hex Nut	900-11023	1-1/8 Lock Washer
900-06023	1-1/4 NC Hex Nut	900-11025	1-1/4 Lock Washer
900-06025	1-3/8 NC Hex Nut	900-11029	1-1/2 Lock Washer
900-06027	1-1/2 NC Hex Nut		
900-06056	5/8 NF Slotted Hex Nut	900-11030	3/16 Flat Washer
900-06058	3/4 NF Slotted Hex Nut	900-11031	1/4 Flat Washer
900-06060	7/8 NF Slotted Hex Nut	900-11032	5/16 Flat Washer
900-06062	1" NF Slotted Hex Nut	900-11033	3/8 Flat Washer
900-06065	1-1/4 NC Slotted Hex Nut	900-11034	7/16 Flat Washer
900-06066	1-1/4 NF Slotted Hex Nut	900-11035	1/2 Flat Washer
900-06070	1-1/2 NF Slotted Hex Nut	900-11036	9/16 Flat Washer
		900-11037	5/8 Flat Washer
900-06135	1/4 NC Flanged Whiz Lock Nut	900-11038	3/4 Flat Washer
900-06137	5/16 NC Flanged Whiz Lock Nut	900-11039	7/8 Flat Washer
900-06139	3/8 NC Flanged Whiz Lock Nut	900-11040	1" Flat Washer
900-06141	7/16 NC Flanged Whiz Lock Nut	900-11041	1-1/8 Flat Washer
900-06143	1/2 NC Flanged Whiz Lock Nut	900-11042	1-1/4 Flat Washer
900-06145	5/8 NC Flanged Whiz Lock Nut	900-11044	1-1/2 Flat Washer
900-06270	3/8 NC Jam Nut		
900-06276	1/2 NC Jam Nut		
900-06280	5/8 NC Jam Nut		
900-06282	3/4 NC Jam Nut		
900-06284	7/8 NC Jam Nut		
900-06286	1" NC Jam Nut		
900-06288	1-1/8 NC Jam Nut		
900-06292	1-3/8 NC Jam Nut		
900-06496	1/4 NC Top Lock Nut		
900-06498	5/16 NC Top Lock Nut		
900-06500	3/8 NC Top Lock Nut		
900-06502	7/16 NC Top Lock Nut		
900-06504	1/2 NC Top Lock Nut		
900-06508	5/8 NC Top Lock Nut		
900-06510	3/4 NC Top Lock Nut		
900-06512	7/8 NC Top Lock Nut		
900-06514	1" NC Top Lock Nut		
900-06518	1-1/4 NC Top Lock Nut		

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