12" SWING AWAY
PORTABLE AUGER
INTERNAL GEAR DRIVE MODEL

OWNER'S & OPERATOR'S
MANUAL

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THIS MANUAL IS FOR UNITS WITH SERIAL NUMBERS OF 200306 OR HIGHER.

Hutchinson/Mayrath/TerraTrack
A Division of GLOBAL Industries, Inc.

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(1) Improper assembly, including failure to properly install all safety equipment.
(2) Improper installation (power & wiring included).
(3) Unauthorized alterations of goods.
(4) Goods operated when obviously in need of repair.
(5) Use of unauthorized repair parts.
(6) Irresponsible operation.
(7) Use of handle materials other than free flowing, non-abrasive and dry materials, as intended.
(8) Damaged through abusive use or accident.

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GENERAL SAFETY STATEMENT

This manual was written with the safety of the operator and others who work with the equipment as our prime concern. The instructions presented will help the reader learn SAFE day to day work practices. We want you as our partner in safety.

It is your responsibility as an owner, operator or supervisor to know what specific safety requirements and precautions exist and to make these known to all other personnel working with the equipment or in the area, so that they too may safely perform their duties and avoid any potentially hazardous situations.

Please remember safety equipment provides important protection for persons around a grain handling system that is in operation. Be sure that ALL safety shields and protection devices are installed and properly maintained. If any shields or guards are damaged or missing, contact your dealer to obtain the correct items.

Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur.

SAFETY ALERT SYMBOL

The symbol shown below is used to call your attention to instructions concerning your personal safety. Watch this symbol - it points out important safety precautions. It means "ATTENTION! Become alert! Your personal safety is involved!" Read the message that follows and be alert to the possibility of personal injury or death.

BE ALERT! YOUR SAFETY IS INVOLVED.

WARNING

Anyone who will operate or work around this machine shall first read this manual. This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.
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SERIAL NUMBER
To ensure efficient and prompt service, please furnish us with the model and serial number of your auger in all correspondence or other contact. The serial plate is located on the right side of the lower undercarriage mount.

RIGHT AND LEFT DESIGNATION
When determining which is the left or right hand side of the unit, it is as if a person were standing at the intake end and looking toward the discharge end.

MACHINE INSPECTION
After delivery of your new auger and/or completion of assembly and before each use, inspection of the machine is mandatory. Use the assembly instructions in this manual as a reference to determine that the auger is assembled properly. Inspection should include, but not be limited to:

1. Check to see that all guards listed in the assembly instructions are in place, secured and functional.
2. Check all safety signs and replace any that are worn, missing or illegible. The safety signs are listed in the back of this manual. Safety signs may be obtained from your dealer or ordered from the factory.
3. Check hopper winch and cable for security and operation.
4. Are all fasteners tight?
5. Check all hydraulic hoses, fittings and tubing to see if they are tight and not leaking hydraulic oil.
6. Check oil levels in gearboxes. See page 16 in the maintenance section for oil level information.
7. Be sure the clean out door is shut (in bottom of the iner hopper).
TRACTOR REQUIREMENTS

This 12" Swing Away Auger was designed to use a tractor with the following:
1. 540 RPM Power Take Off
2. Adjustable Drawbar
3. One hydraulic control circuit for lifting the main auger. (See chart for minimum pressure.)

<table>
<thead>
<tr>
<th>Tractor Hydraulic for Auger Lift</th>
<th>10&quot; x 92&quot;</th>
<th>10&quot; x 102&quot;</th>
<th>13&quot; x 102&quot;</th>
<th>13&quot; x 92&quot;</th>
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</thead>
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<tr>
<td>Approximate PTO Horsepower</td>
<td>1500 PSI</td>
<td>1500 PSI</td>
<td>1500 PSI</td>
<td>1500 PSI</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>90</td>
<td>100</td>
<td>120</td>
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</tbody>
</table>

TRACTOR DRAWBAR SETTINGS

Adjust the drawbar so there is 14" from the end of the tractor PTO output shaft and the center of the hitch pin. See Fig. 1.

**IMPORTANT:** If the distance from the end of the tractor PTO and hitch pin is shorter than the recommended distance, the auger should NOT be raised. Damage to the PTO drive line, auger hopper assembly, or tractor PTO may result when the input driveline bottoms out as it compresses.

FIG. 1
ROAD TRANSPORT - HITCHING TO TRACTOR

NOTE: Empty machine before moving to prevent up-ending.

Never stand between tractor and portable auger when hitching unless all controls are in neutral and the brakes locked.

Never raise the intake end higher than is necessary to attach to a towing vehicle. Weight transfers rapidly to the head end when the intake is raised, particularly when the auger is in the raised position.

Follow these steps when hitching the auger to the tractor:

1. Lift the auger intake with the jack to the tractor drawbar height.

2. Secure hitch clevis to tractor drawbar with hitch pin and keeper or a bolt with two nuts. See Fig. 1 on page 4.

3. Fasten hitch safety chain. (See instructions below.)

4. Connect hydraulic hose to tractor. (See page 6 for Hydraulic Information.) Be sure hydraulic shut off valve is closed (for the main auger lift circuit).

5. Use the jack to raise auger intake until the caster wheel end of the hitch pipe can be panned into the straps under the inlet hopper.

6. Remove the bolt that holds the caster wheel swivel bracket to the hitch pipe. Rotate the caster wheel and swivel bracket to transport position and replace the bolt, lockwasher and nut. See Fig. 1. Be sure the bolt is securely tightened to prevent bolt from falling out.

7. Retract hitch jack and rotate into transport position. (See Fig. 2 on page 6.)

8. DO NOT attach the PTO driveline to the tractor at this time. The driveline furnished with the auger is equipped with a "Spring-Lock" coupler at the tractor end. This type coupler is spring loaded and will fit the standard 1 3/8" x 6 spline PTO output shaft from a tractor. It will be attached to the tractor during placement of the auger. (See page 8.)

9. Place the swing-out hopper in transport position. (See "Swinging the Hopper", page 15.)

HITCH SAFETY CHAIN INSTALLATION

An auxiliary attachment system (safety chain) is required on public roads to retain the connection between towing and towed machines in the event of separation of the primary attachment system. The safety chain should be routed around the bar welded to end of hitch pipe. See Fig. 1. A clevis or intermediate chain support should be fastened to the tractor drawbar than 6” from the hitch pin.

AI005803
ROAD TRANSPORT - HITCHING TO TRACTOR

JACK

When using the jack to support the inlet end of the auger, connect to the jack mount and secure with the attached pin. When the auger is hitched to a tractor, rotate the jack 90° into transport position.

CAUTION: Before retracting or folding the jack, the hitch clevis should be secured to the tractor drawbar to prevent the hitch from falling to the ground.

FIG. 2

HYDRAULIC COMPONENTS

The hydraulic components received with your Swing-Away Auger were selected to deliver the most efficient and economical use. Any parts for replacement should be replaced with parts of the same type and size. Replace any hoses or fittings that develop leaks.

WARNING: Keep all hydraulic lines away from moving parts.

MAIN AUGER LIFT SYSTEM

Standard equipment for your Swing-Away Auger Lift System includes the hydraulic cylinder(s), shut-off valve, fittings and hydraulic line from the cylinder(s) to the tractor, with the exception of fittings required to attach hose to tractor. The hydraulic cylinder includes a restrictor that limits the speed of operation. A vent plug is located in the rod end of the hydraulic cylinder(s). A 1/2" female pipe thread tractor fitting is required to fit the shut-off valve (not furnished).

HYDRAULIC SHUT-OFF VALVE

A hydraulic shut-off valve is located at the end of the hydraulic hose that connects the tractor to the hydraulic line running to the lift cylinder(s).

This valve must be fully open before raising or lowering the auger. The valve must be closed at all other times to prevent possible leak-down or inadvertent hydraulic operation.

CAUTION: Do not connect or disconnect hydraulic components when there is pressure within the system. Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pinhole leak, can penetrate body tissues and cause serious injury. Use a piece of wood or cardboard when looking for leaks. Never use the hands or other parts of the body. When reassembling, make absolutely certain that all connections are tight. If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious infection or reaction may occur if medical attention is not received at once.

FIG. 3

0275A1 0190A1 A0105804
TRANSPORTING AUGER

Moving your portable auger requires careful planning. A route plan should be considered beforehand to avoid dangerous obstacles and loss of time.

**TRANSPORT:** Move the auger with a tractor to or from the work area. A pick-up truck or other suitable vehicle may be used for transporting the auger over greater distances.

Follow these steps when transporting the auger:
1. Always transport your auger in the full-down position. The swing-out hopper must be raised and in the transport position.
2. Hydraulic shut-off valve must be closed.
3. Hitch should be secured to tractor and jack stored in transport position. Fasten alternate hitch safety chain.
4. The swing-out hopper safety chain must be hooked over the hanger on the lift arm. [See Stowing the Hopper on page 15.]

**TRANSPORTING HEIGHT**

Know the transport height of your auger before moving the auger. Plan your route to avoid overhead obstructions and power lines.

<table>
<thead>
<tr>
<th>Size</th>
<th>12&quot; x 92&quot;</th>
<th>12&quot; x 72&quot;</th>
<th>12&quot; x 82&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Height</td>
<td>12'-3&quot;</td>
<td>13'-3&quot;</td>
<td>15'-0&quot;</td>
</tr>
</tbody>
</table>

**IMPORTANT:** Transport heights are figured with auger attached to towing vehicle with a drawbar height of 1'-6".

**FIG. 4**

**IMPORTANT:** AVOID SHARP TURNS. It is possible for the hopper to hit the tractor wheels or fenders.

**DANGER:** Be alert to overhead obstructions and electrical wires. Failure to do so may result in electrocution. Lower auger well below level of power lines before moving. Maintain at least ten (10) feet of clearance. See above chart showing the height of each portable auger in the lowered transport position. Check the chart to determine the height of your auger.

Never allow persons to stand underneath or ride on the auger when it is being transported.

Do not transport the auger at speeds in excess of 20 MPH and comply with your state and local regulations governing marking, towing and maximum width. Observe safe driving and operation practices.

**FIG. 5**
PLACEMENT OF AUGER

DANGER: Make certain everyone is clear of the area when moving the auger. To prevent tip-over when backing, avoid rolling over any obstruction. Also avoid moving the auger at right angles to a slope. If the auger is to set on a slope, approach the bin uphill. Make sure entire area above auger and in line of travel is clear of overhead obstructions and electrical wires. Failure to do so may result in electrocution. Maintain at least ten (10) feet of clearance. Electrocuttion can occur without direct contact.

Step 1 -

A. Using a towing vehicle, place the auger on a level surface, as close as possible to the bin or storage structure that is to be loaded. Be sure this area is clear of any obstructions. If not already hitched to tractor, do so at this time. (See pages 14 and 5.)

B. Open hydraulic shut-off valve.

C. Swing-out hopper should be in transport position.

D. Deploy the caster wheel, by using the jack to release the caster wheel from the transport position. Remove the bolt holding the caster wheel pivot bracket. Rotate the caster wheel so it is pointing toward the ground and replace the bolt, lockwasher and nut. Be sure the bolt is securely tightened.

E. Attach the PTO driveline to the tractor. To make attachment, start sliding the driveline end onto the tractor PTO output shaft. Compress the spring keeper on the PTO driveline and continue to slide onto the tractor PTO output shaft until the keeper seats in the groove on the tractor PTO output shaft. Then the spring keeper will return to its original position and the PTO driveline will be locked onto the tractor PTO output shaft. Attach chain for PTO driveline shield to tractor to prevent shield from rotating. Do not engage the PTO when swing-out hopper is in transport position.

Step 2 - The wheels must be allowed to roll freely when raising. Raise the auger only high enough to allow minimum clearance above the bin. NOTICE: Avoid sharp turns while moving the auger when the PTO driveline is attached to the tractor. Maneuvering with the PTO driveline attached will result in driveline damage not covered by warranty. Make sure the tractor is exactly in line with the auger during PTO operation.

Step 3 - Slowly back the auger over the storage structure. Lower the auger until the discharge spout is in or directly over the bin hole opening.* Place tractor in park, set brake and chock wheels. Close hydraulic shut-off valve to prevent lowering or accidental raising of auger.

It is a good practice to tie the discharge end of the auger to the bin or storage structure to prevent possible wind damage. Remember to untie the auger before attempting to move. Do not attempt to increase auger height by positioning wheels on lumber, blocks or by other means.

*NOTE: When discharging in a grain spreader, always maintain at least 12 inches space between the auger discharge and the spreader. The discharge end willower as auger fills with grain during operation.

5205241-A 08613A1 0405805
DEPLOY SWING-OUT HOPPER

1. Lower the swing-out hopper by grasping the handle firmly and releasing the ratchet lock on the winch. Turn the handle counter-clockwise.

⚠️ CAUTION: Maintain control of the winch handle at all times. The load will drop if the handle is released. Always turn handle clockwise after letting out the cable to activate brake in winch.

2. When the hopper reaches the ground, unhook cable from the hopper. Hang the cable hook on part of the auger housing so it is out of the way.

3. Swing the hopper out to an operating position.

IMPORTANT: The SWING-OUT HOPPER should not be moved while the auger is in operation. Always have the hopper in operating position before engaging the P.T.O.

FIG. 8

ALTERNATE OPERATING POSITION

GRAIN BIN

TRACTOR

GRAIN TRUCK

SWING-OUT HOPPER IN OPERATING POSITION

G040A1 A003907
DESIGNATED WORK AREA

Before starting the auger, a designated work area should be established and properly marked. The diagram below shows where to place the boundaries. These areas shall be marked off with colored nylon or plastic rope hung as portable barriers to define the designated work area.

RULES FOR SAFE WORK AREA

Under no circumstances should persons not involved in the operation be allowed to trespass into the work area.

It shall be the duty of all operators to see that children and/or other persons stay out of the work areas. Trespass into the work area by anyone not involved in the actual operation, or trespass into a hazard area by anyone, shall result in an immediate shut down by the operator.

It shall be the responsibility of all operators to see that the work area has secure footing, is clean and free of all tools and debris which might cause accidental tripping and/or falling.

NOTE: It is good practice to tie the discharge end of the auger to the bin or structure to avoid possible wind damage.

Walking Surface - Is it slippery? Are there things to trip you?

FIG. 9

WORK AREA
AUTHORIZED PERSONNEL ONLY
OPERATING PROCEDURES

GENERAL AUGER INFORMATION

Our augers are well made and we are proud of our line of equipment. We would like you, as our customer, to do your part in using caution and good judgement in using our equipment, as well as any other machinery.

It is important to be familiar with the following routine operation procedures before attempting start-up.

During the operation of your auger, one person shall be in a position to monitor the operation. Inspect the drive before adding power and know how to shut down in an emergency. (See page 12.) Visually inspect the auger periodically during operation. For efficient and safe operation, be aware of all the adjustments and checks which should be performed.

The operator shall have a full view of the auger work area and check that all personnel are clear of hazard areas before adding power.

- The operator shall be aware of any unusual vibrations, noises and the oozening of any fasteners.
- Keep all safety shields and devices in place.
- Keep hands, feet and clothing away from moving parts.

Only use an agricultural tractor with 540 RPM power take-off.

The 12' augers may be operated at speeds from 350 to 540 RPM. Auger flight speed in excess of recommended speed causes excessive wear. Do not attempt full load operation at speeds below 350 RPM as high torque requirements may damage the auger.

The swing-out hopper must be in working position and securely attached to the inlet hopper before start-up. Close all clean-out and inspection doors before operation.

IMPORTANT: The PTO driveline is equipped with a CV (constant velocity) joint, located at the auger end of the PTO driveline. The PTO driveline should be operated in a horizontal position for the CV joint to work properly. See Figure 10.

1. The hitch must be properly attached to the tractor drawbar.
2. The hitch caster wheel must be in the down position and setting on the ground.

NOTE: The PTO driveline is equipped with a shear bolt at the auger connection. The shear bolt protects the auger from damage if the auger becomes plugged or subjected to high loads.

FIG. 10

03613A1 A0035663
OPERATING PROCEDURES

START-UP

CHECK THE FOLLOWING BEFORE ADDING POWER:

Before starting the tractor, be certain power to PTO is off.

Be certain the PTO driveline is securely attached to the auger and the tractor.

⚠️ Check to see that the chain for the PTO driveline shield has been attached to the tractor.

Use recommended distance from end of tractor PTO to hitch pin. (See page 4.)

Stay out of designated hazard area of an operating PTO.

Observe work area restriction. (See work area diagram on page 10.)

Engage PTO at a slow RPM to minimize shock loads. Then work up RPM to recommended speed.

Never operate the auger empty for any length of time as excessive wear will result. If at all possible, do not stop or start the auger under load, especially before the flight and tube become well polished, as this may cause the auger to "freeze-up." (See "BREAK-IN INFORMATION" below.)

IMPORTANT: Regulate the grain flow into the main auger by controlling the amount of grain fed to the swing-out hopper. Overfeeding the swing-out hopper will plug the main auger.

BREAK-IN INFORMATION

Any screw conveyor when it is new or after it sets idle for a season should go through a "break-in" period. The auger should be run at partial capacity until several hundred bushels of grain have been augered to polish the flighting assembly and tube. Once this is accomplished, the auger can be run full.

SHUTDOWN

A. NORMAL SHUTDOWN

Make certain that the hopper and auger are empty before stopping the unit. Before the operator leaves the work area, the power source shall be locked out. (See LOCKOUT.)

B. INTERMITTENT OPERATION SHUTDOWN

When an auger is stopped and restarted under full load, it may result in damage to the auger. Therefore, if intermittent operation is to be carried out, it is advisable to reduce the load level. When kept from absolute filling, auger start-up is easier and operation is more efficient.

C. EMERGENCY SHUTDOWN

Should the auger be immediately shutdown under maid - disconnect and lockout the power source. Clear as much grain from hoppers and auger as you can. Never attempt to restart when full. Use clean-out door in the bottom of main auger inlet hopper.

NOTE: Starting the unit under load may result in damage to the auger. Such damage is considered abuse of the equipment. When as much grain as possible has been cleared, reconnect power source and clear auger gradually.

A0005810
OPERATING PROCEDURES

LOCKOUT

WARNING: If the operator must leave the work area, or whenever servicing or adjusting, the auger must be stopped and the power source turned off. Precaution should be made to prevent anyone from operating the auger when the operator is absent from the work area.

Remove ignition key or coil wire from power source. (If this is impossible, remove the PTO driveline from the work area.)

OPERATING CAPACITIES

The results or capacities of screw conveyors or augers can vary greatly under diverse conditions. Different materials, moisture content, amounts of foreign matter, angle of operation, methods of feeding and speed all play a role in performance of the auger. Roughly 7000 BPH will be achieved augering reasonably dry grain. Maximum possible capacity will be less with high moisture grain (above 15%) than with dry grain.

RELOCATION OF AUGER

When grain conveying operation is completed, the auger should be moved away from the bin and lowered. The auger then can be moved to a different bin for more conveying operations or cleaned up and stored. See Fig. 11.

FIG. 11

STEP 1
A. Empty the auger and clean up the area. The swing-out hopper must be raised before moving the main auger. See "Stowing the Hopper", page 15.
B. Unite any anchors and remove all supports.
C. Open the hydraulic shut-off valve.
D. Raise the auger so the discharge spout is clear of bin opening.
E. Remove wheel chocks.
F. Move auger slowly away from the bin with tractor.

NOTICE: Avoid turns while moving the auger when the PTO driveline is attached to the tractor. Maneuvering with the PTO driveline attached will result in driveline damage not covered by warranty.

STEP 2
A. Lower auger immediately after clear of bin or storage structure.
B. Disconnect the PTO driveline and place in storage position. Use storage hook to support the PTO driveline as shown in Fig. 12 on page 14.

STEP 3
A. Move the auger to next bin or storage area. If movement to next location involves road transport, follow instructions on page 5. We recommend that the auger be stored in the full down position.
B. Inspect the auger as outlined in the "Machine Inspection Section" on page 4.
UN-HITCHING INSTRUCTIONS

Follow these steps to unhitch the auger:

NOTE: When the tractor must be disconnected from the auger in the raised position, anchor the discharge end of the auger to the bin or structure to prevent possible wind damage.

A. The hydraulic shut-off valve must be closed.
B. Relieve tractor internal hydraulic pressure. Then disconnect the hydraulic hose from the tractor.
C. The auger wheels should be checked to prevent the auger from rolling.
D. Place jack into the lifting position and remove hitch weight from tractor drawbar. Be sure jack pin is properly set to prevent jack from rotating on mount.
E. Remove safety chain and hitch pin. Disconnect the tractor from the auger.
F. Open clean-out door in bottom of main inlet hopper to clean out excess grain and allow water to drain during storage.

NOTE: The caster wheel may be in either the UP or DOWN position for unhitching.

Never raise the intake end higher than necessary to attach to a towing vehicle. Weight is transferred rapidly to the head end when the intake is raised, particularly when the auger is in a raised position. Never stand between tractor and auger when hitching unless all controls are in neutral and the brakes locked.

PTO DRIVELINE STORAGE

The PTO driveline should be placed in the storage position when not attached to the tractor. Tilt the PTO driveline up and swing support hook under the driveline to support its weight. See Fig. 12.
STOWING THE HOPPER

To raise the swing-out hopper, allow all grain to discharge from the auger, disengage the PTO and lockout power sources.

1. Swing the hopper along side of the main auger.

2. Release ratchet lever on winch and put enough cable off winch to attach the cable hook to the front of the hopper.

3. Attach the hook to a hole in the hopper front plate. See Fig. 13. Use the hole closest to the auger tube, so when the hopper is lifted, the hopper will rotate and be facing away from the auger.

4. Engage the winch ratchet, by flipping the winch ratchet lever into a down position. There should be a clicking sound whenever the handle is turned. Turn the winch handle clockwise to raise the hopper.

5. Raise the hopper until the safety hook is within a few inches of the lift arm pulley and place the safety chain ring over the hanger welded to the lift arm and secure in place with a spring clip. See Fig. 14.

NOTE: Observe the cable as it is winding onto the winch drum. The cable should roll up on the drum evenly; avoid cable build-up on one side of the drum.

⚠️ CAUTION: Keep hands away from winch drum during operation.
LUBRICATION & MAINTENANCE

For economical and efficient operation of your auger, maintain regular and correct lubrication. Neglect leads to reduced efficiency, excessive wear and needless down time. Use the following schedule for best results.

⚠️ Keep all safety shields and devices in place.
Never clean, adjust or lubricate a machine that's in operation.

PTO DRIVELINE U-JOINT

The PTO driveline has five fittings that require lubrication. See Fig. 15 below for location of fittings. The first lube interval should be 16-24 hours of operation after initial start-up, then follow these recommendations.

CONSTANT ANGLE LUBE RECOMMENDATIONS

<table>
<thead>
<tr>
<th>INTERVAL</th>
<th>LOCATION</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 HRS.</td>
<td>U-CROSS &amp; BEARINGS</td>
<td>2-3 PUMPS</td>
</tr>
<tr>
<td>8 HRS.</td>
<td>TELESCOPING MEMBERS</td>
<td>6-10 PUMPS</td>
</tr>
<tr>
<td>8 HRS.</td>
<td>CV BALL &amp; SOCKET</td>
<td>8-10 PUMPS</td>
</tr>
<tr>
<td>8 HRS.</td>
<td>NON-ROTATING SHIELD</td>
<td>2 PUMPS</td>
</tr>
</tbody>
</table>

Lubricate all fittings with a good quality lithium soap base E.P. grease meeting the N.L.G.I. #2 specifications and containing no more than 1% molybdenum disulfide. (For example, Shell super duty or equivalent). An E.P. grease meeting the N.L.G.I. #2 specifications and containing 3% molybdenum disulfide may be substituted in the telescoping, and CV ball and socket members only. (Examples: Mobil Oil Company, “Mobil Grease CMP” Shell Oil Company, “Relinex AM”, Texaco, “Molytex SP #0 and #2”)

REPLACEMENT PARTS ARE NOT LUBRICATED

Replacement parts must be lubricated at time of assembly. Follow recommendations listed above.

⚠️ Before engaging PTO be sure PTO driveline shaft shields turn freely on shaft.

PTO DRIVELINE SHEAR BOLT

The PTO driveline is equipped with a shear bolt at the auger connection. The shear bolt protects the auger from damage if it becomes plugged or subjected to high loads. It is important to use the correct replacement bolt (of the proper size and strength) to ensure that the shear device will protect the auger and operator. For replacement shear bolt information, see pages P-11. Extra shear bolts are provided with the auger and are stored in the operator's manual container located on the main auger inlet hopper.

03020A1 AAC0814
LUBRICATION / MAINTENANCE

SWING-OUT HOPPER FLIGHT U-JOINT
A u-joint connects the hopper and the inclined flight at the hopper elbow. This should be lubricated at approximately (10) hour intervals with SAE multipurpose type grease. To access the u-joint, remove the cover strap and raise the hinged cover. Be sure to close cover and replace cover strap before operating unit.

FIG. 16

INLET HOPPER U-JOINT
A u-joint connects the incline lube gearbox and inlet hopper gearbox. This should be lubricated at approximately (10) hour intervals with SAE multipurpose type grease. Use the pop-open door to gain access to the u-joint grease zerk. See Fig. 17 on page 18.

HYDRAULIC CYLINDER
The hydraulic cylinder is equipped with an air breather in the rod end port. Oil leaking from the air breather indicates leaking rod seals. Replace damaged or leaking seals. See page P-9.

HYDRAULIC HOSE
Check all the hydraulic fittings and hose to see if they are tight and not leaking hydraulic oil. Replace any hydraulic hose that may be cut or damaged.

CAUTION: Do not connect or disconnect hydraulic components when there is pressure within the system. Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pin hole leak, can penetrate body tissues and cause serious injury. Use a piece of wood or cardboard when looking for leaks. Never use the hands or other parts of the body. When reassembling, make absolutely certain that all connections are tight. If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious infection or reaction may occur if medical attention is not received at once.

02576A1 01506A1 A0050615
LUBRICATION / MAINTENANCE

GEARBOX AND ENCLOSED DRIVE LUBRICATION

IMPORTANT: Under working conditions oil will dissipate. Check oil in enclosed drive and gearboxes periodically and maintain proper level.

FIG. 17
(CUT AWAY VIEW)

The gearboxes are shipped with oil. To check oil levels in the gearboxes, use access doors in the side of the spout and inlet hopper. See Fig. 17.

⚠️ DO NOT OPERATE UNIT WITH ACCESS DOORS OPEN.

The enclosed drive is shipped WITHOUT OIL. Approximately four pints of 90 EP (non-foaming) oil are to be added before operation. The level of the oil should reach the check port. See Fig. 18.

For lubrication in normal operating temperatures (between 40°F to 120°F), we recommend the use of non-foaming, multi-purpose gear oil, SAE 90 weight. For temperatures below 40°F, use SAE 80 weight oil. Use a grade commercially available for automotive differentials. Extra pressure additives may be of value in severe applications.

DO NOT ADD MORE OIL THAN RECOMMENDED. ADDITIONAL OIL MAY DAMAGE THE SEALS OR BE FORCED OUT THROUGH THE VENTED PLUG.
LUBRICATION / MAINTENANCE

RATCHET TYPE WINCH

The Swing-Out Hopper is lifted into transport position by a ratchet type winch. (See page P-15.)

This type of winch requires the following maintenance:

A. All gears should have a film of grease on them at all times.
B. The nut holding the handle assembly on should be kept tight.
C. The bushings located at the end of the drum shaft, the ratchet pawl and the bushing at the ends of the pinion shaft.
D. Check the ratchet lock for wear. Make sure it can hold the load.

See the winch manufacturer's information sheet that was shipped with this manual for additional instruction.

UNDERCARRIAGE AXLE SPINDLE BEARINGS

Tapered roller type bearings are standard and should be repacked with grease and adjusted annually or as needed, determined by usage.

Care must be used in dismantling wheel bearing assemblies. First remove the dust cap by prying around the edges. Remove the cotter pin, slotted nut and flat washer. Carefully remove the hub and bearings from the spindle. Inspect all parts for wear or damage and replace with new ones if necessary.

When reassembling the hub, repack both bearing cones with grease and fill the hub cavity 1/3 full. Place inner bearing assemblies into the hub, and then press seal into hub and carefully reinstall the hub on the spindle. When placing hub on spindle be careful not to damage the lip of the grease seal. Install outer bearing assembly into hub, and replace flat washer and slotted nut. Then tighten the slotted nut to seal the bearings until the hub binds as you rotate hub. Back off the slotted nut to the next slot and install a new 5/32" x 1 1/4" long collar pin. Replace dust cap.

BALL BEARING MAINTENANCE

The main auger head bearing is a self-aligning, sealed ball bearing, which has been packed at the factory and requires no further lubrication.

There is no adjustment to be made to the bearing, but check that it is firmly fastened. Also check that the set screws in the lock collar are tight against the shaft, securing the lock collar to the shaft.

BRONZE FLIGHT BEARING MAINTENANCE

The swing-out hopper flight is supported by bronze with graphite bearings which require no lubrication. If a bronze bearing spins inside the retainer, replace it by removing the old bearing and pressing in a new one. See page P-17.
TROUBLE SHOOTING

LOW CAPACITY
The main auger may not be getting enough grain. Check to see that the swing-out hopper intake has not bridged over, restricting flow. The exposed flighting at the swing-out hopper intake should be covered with grain to achieve maximum capacity. Check auger speed. (See page 11). A speed slower than recommended will result in low capacity.

The main auger may be getting too much grain causing “jamming” inside the housing. Reduce grain flow into swing-out hopper.

Is the auger free of any foreign material, such as sacks, tarp corners, etc? A plug of the discharge will cause an auger plug.

EXCESSIVE AUGER NOISE
Damage to the auger housing can occur, causing interference with rotating auger flighting.

Damage can occur to the auger flighting, thus causing noise. Damage usually occurs because of foreign material having been run through the auger. It may be necessary to remove the flighting for inspection.

AUGER LOWERING BY ITSELF
Check all hydraulic fittings, hose and connections for leaks. Check that the hydraulic shut-off valve is closed. (See page 6.)

AUGER WILL NOT RAISE OR LOWER
Check if hydraulic shut-off valve is open. See if the hydraulic coupler is properly attached to the tractor and the tractor reservoir is full of oil. The tractor pressure may be too low. (See page 4 & 6.)

IMPORTANT:
An auger should be frequently checked and serviced to operate smoothly. Keep all guards and shields in place. Replace any that are damaged or lost. Any parts for replacement should be replaced with parts of the same type and size. Do not modify or alter any of the auger components.
ASSEMBLY INSTRUCTIONS

HOUSING LAYOUT
Choose an area on open, level ground, accessible to chain hoist or other lifting devices, where the auger may be laid out full length. Arrange the tube sections in their approximate positions. See Fig. 1 below.

For ease of assembly, place the tubes on stands or saw horses. This will aid the assembly of the undercarriage. Be sure the supports can bear the weight of the auger tubes. A stand height of about 36” is recommended.

62’ MODEL

30'-0”
LOWER SECTION

281 1/4”
FLANGE RING

132”
INTAKE ElMK

38'-0”
HEAD SECTION

36” CONNECTING ROD

TRUSS CABLE ANCHOR

LOWER UNDERCARRIAGE ARM MOUNT

RESTING PLATE FOR UNDERCARRIAGE CROSS PIPE

RETRACTED END

72’ MODEL

26'-0”
LOWER SECTION

159 1/4”
FLANGE RING

30” CONNECTING ROD

67”
POSITIONING TAB

LOWER UNDERCARRIAGE ARM MOUNT

TRUSS MOUNT

TRUSS MOUNT

RESTING PLATE FOR UNDERCARRIAGE CROSS PIPE

DISCHARGE END

82’ MODEL

20'-0”
LOWER SECTION

186 3/4”
FLANGE RING

36” CONNECTING ROD

114 3/4”
POSITIONING TAB

LOWER UNDERCARRIAGE ARM MOUNT

TRUSS MOUNT

TRUSS MOUNT

RESTING PLATE FOR UNDERCARRIAGE CROSS PIPE

DISCHARGE END

FIG. 1

Align positioning tabs between connecting band bolts.

HOUSING AND FLIGHT ASSEMBLY

NOTE: Units with optional internal flight bearings, see instructions on the following page for auger housing and flight assembly.

Step 1. Slide connecting band(s) onto the end of the auger housing tubes(s) to be assembled.

Step 2. Bolt the head flight to the next flight section, using two 5/8” x 4” long black hex head cap screws (grade 8) and side depress locknuts. The lower section of flighting will overlap the upper section of flighting about one inch. See Fig. 2.

Step 3. On 72’ & 82’, connect the lower flight the same way.

FIG. 2

LOWER SECTION

BOTTOM FLIGHT

OVERLAP 1”

UPPER SECTION

DISCHARGE END

02577A2A
02577A2B
02577A2C
065A3
A005518
ASSEMBLY INSTRUCTIONS

AUGER HOUSING AND FLIGHT ASSEMBLY

Step 4. Slide auger sections together, be sure the auger housing tubes are tight together. Position the connecting band so half of the band is on each side of the joint. Secure the band using ten 3/8" x 1 1/2" long (grade 5) hex head cap screws and non-lock nuts.

NOTE: Positioning tabs are located on the lower and middle sections on 72" and 82" models. On these units the tabs must align with each other before tightening the connecting band bolts. Tabs fit between the connecting band bolts. See Fig. 3.

FIG. 3

HOUSING AND FLIGHT ASSEMBLY

FOR UNITS WITH OPTIONAL INTERNAL FLIGHT BEARINGS

Step 1. Slide a connecting band onto the lower end of the upper auger section (two places on 72" & 82" units). Bolt will be installed and tightened later. Position large slot toward intake end to allow for internal bearing access. (See Fig. 7.)

Step 2. Slide an internal bearing hanger onto the flight connecting stub. Then connect the flight sections using two 5/8"x 4" hex head cap screws (grade 8), and side depress locknuts. (See Fig. 4.) The bearing hanger can be allowed to rotate downward.

IMPORTANT:

Internal bearing flights are indexed to achieve timed connections. (A timed connection is where the flight pitch does not change across the connection.) When bolting timed flight sections together at the intermediate flight bearings, position the flight ends so they are open 90° to 180° to one another.

FIG. 4
Step 3. Slide the auger housing sections together so the tube ends are tight against each other. Locate the connecting band with half of the band on each auger housing section. NOTE: Positioning tabs are located on the lower and middle sections on 72" and 82" models. On these units the tabs must be aligned. Tighten the connecting band down by using eight 3/8" x 1 1/2" long (grade 5) hex head cap screws and nylon locknuts. (See Fig. 3.)

Step 4. Use the bearing positioning bar provided to grab the internal bearing hanger stem through the housing slot to rotate the bearing hanger into its upward position as follows:
A. Insert the double bended end of bearing positioning bar into slot and hook the internal bearing hanger stem. Rotate the stem upward as much as possible. See Fig. 5.
B. Remove the stem positioning bar and insert the single bent end into slot. Hook the internal bearing hanger stem and by pulling upward, rotate it completely upright. See Fig. 6.

C. Attach each internal bearing hanger to the auger housing using a mounting plate, a 3/4" x 1 1/2" long (grade 5) hex head cap screw and lockwasher as seen in Fig. 7. Before tightening the mounting bolts down, adjust the internal bearing hangers so they are centered between the ends of the auger flights. (See Fig. 8.) This can be done by sliding the hanger back and forth in the slot to determine the approximate center.

FIG. 5
FIG. 6
FIG. 7
FIG. 8
ASSEMBLY INSTRUCTIONS

INLET HOPPER ASSEMBLY

Step 1. Fasten the inlet hopper to the lower auger housing flange with (12) 3/8" x 1" hex head cap screws, flat washers and locknuts. See Fig. 10 below.

Step 2. Remove square head solid plug from gearbox neck and install vented plug.

Step 3. The enclosed drive is shipped without oil. Oil is to be added to the unit during field assembly of the auger. Refer to page 18 for filling instructions and oil specifications.

Step 4. Coat the flight stub (larger stub) of the enclosed drive with anti-seize compound. Then attach this stub to the lower flight using two 5/8" x 4" long (grade 8) black hex head cap screws and side depress type locknuts.

Step 5. Fasten hitch frame to inlet hopper using a 1" dia. x 18 3/4" long pin and two collars. Use 3/8" x 2 1/4" long hex head cap screws and nylon locknuts to hold collars to the pin.

Step 6. Secure hitch cage to hitch frame using a 3/4" x 5" long (grade 8) hex head cap screw with nylon locknut.
ASSEMBLY INSTRUCTIONS

HEAD BEARING AND COVER

Step 1. Bolt head stub (Ref. 1) to head flight (Ref. 2) using two 5/8" x 4" long grade 8 hex head cap screws with side depress lock nuts. See Fig. 11 below.

Step 2. Attach head plate (Ref. 3) to discharge end of housing (Ref. 4) with two 5/16" x 1 1/2" hex head cap screws with nylon lock nut.

Step 3. Clean and smooth the stub (Ref. 1). Slide bearing (Ref. 5) and flange tite (Ref. 6) on as shown, then bolt them to head plate using four 1/2" x 1 1/4" carriage bolts with nylon lock nuts. Secure the bearing with lock collar. (Ref. 7).

Step 4. Connect the head bearing cover (Ref. 8) to the head plate with two 5/16" x 3/4" long hex head cap screws with nylon lock nuts.

FIG. 4
ASSEMBLY INSTRUCTIONS

TOP TRUSS ASSEMBLY FOR 62’ MODEL AUGER

Step 1. Bolt center truss to mounting ears on auger using two 5/8" x 1 1/2" long (grade 5) hex head cap screws and nylon locknuts. See Fig. 12.

Step 2. Attach cables to cable anchors at discharge end with two 3/8" cable clamps on each cable. NOTE: Secure the clamp u-bolt against loose end of cable.

Step 3. Run the cables over the truss cross brace, then toward the intake end of auger. Attach cables to the top of the truss using a 3/8" cable clamp. DO NOT tighten cable clamps at this time. See Fig. 14.

Step 4. Install eyebolts through lower cable anchors at intake end, using two nuts. See Fig. 13.

Step 5. Attach cables to eyebolts using two cable clamps. The clamp u-bolt must be against the loose end of the cable.

Step 6. Using eyebolts, tighten cables until they are reasonably snug. Tighten cables equally. DO NOT over tighten. Sight down the tube to make sure all sections are straight. Tighten the 3/8" cable clamps assembled in Step 3. Some adjustment can be made after auger is set up on the undercarriage.

FIG. 12

FIG. 13

FIG. 14
ASSEMBLY INSTRUCTIONS

TOP TRUSS ASSEMBLY FOR 72' AND 82' MODEL AUGER

Step 1. Bolt the two truss frames to mounting ears on the auger using two 5/8" x 1 1/2" long (grade 5) hex head cap screws and nylon locknuts each. See Fig. 15.

Step 2. Attach cables to cable anchors at discharge end with two 3/8" cable clamps on each cable. 

NOTE: Secure the clamp u-bolt against loose end of cable.

Step 3. Run the cables over the truss frames, then toward the intake end of auger. Attach cables to the truss frames using 3/8" cable clamps. DO NOT tighten cable clamps at this time. See Fig. 17.

Step 4. Install eyebolts through lower cable anchors, using two nuts. See Fig. 16.

Step 5. Attach cables to eyebolts using two 3/8" cable clamps. The clamp u-bolt must be against the loose end of the cable.

Step 6. Using eyebolts, tighten cables until they are reasonably snug. Tighten cables equally. DO NOT over tighten. Sight down the tube to make sure all sections are straight. Tighten the cable clamps assembled in Step 3. Some adjustment can be made after auger is set up on the undercarriage.

(72' MODEL SHOWN) FIG. 15

FIG. 17

TRUSS CABLE TO
TRUSS FRAME

3/8" CABLE
CLAMP

TRUSS CABLE
ANCHOR

TRUSS MOUNT

SADDLE PORTION
OF CABLE CLAMP

EYEBOLT

LOWER
CABLE
ANCHOR

LOWER CABLE ANCHOR DETAIL FIG. 16

DISCHARGE

5/8" LONG
(GRADE 5)
HEX HEAD
CAPSCREW

TRUSS CABLE
ANCHOR

U-BOLT PORTION
OF CABLE CLAMP

CABLE

BASE PORTION
OF CABLE CLAMP

00590A1 02995A1 00590A2 0029822
ASSEMBLY INSTRUCTIONS
HUB AND SPINDLE TO AXLE

The hubs, bearings, seals and spindles are assembled at the factory and are pressure packed with grease at that time.

Slide the hub and spindle assembly into the undercarriage axle and secure with 1/2" dia. (grade 5) hex head cap screw and nylon locknut. See Fig. 18. Secure tire and rim to hub with lug bolts.

UNDERCARRIAGE TO AUGER HOUSING ASSEMBLY

NOTE: See Fig. 23 on page 30 for 82" models and Fig. 24 on page 31 for 72" and 82" models.

Step 1. Slip the 14" long bushing into the track pivot. Fasten the "H"-frame and upper frame to the pivot using a 1 1/4" dia. x 10" long 10HCSC through the bushing secured with a 1 1/4" nylon locknut. See Fig. 19.

Step 2. Bolt lower frame halves together using 5/8" x 2" long hex head capscrews and nylon locknuts. Then, fasten the upper frame to the lower frame using two 1 1/4" x 3 1/2" pins and 1/4" x 2" long cotter pins.

Step 3. Bolt the lower frame to the axle using three 1/2" x 1 1/2" long grade 5 hex head capscrews and nylon locknuts on each side.

Step 4. Fasten the "H"-frame tubes to the upper frame (near where the lower frame and upper frame connect). On 82" Models - the "H"-frame tube is fastened on the outside of the upper frame mounting plate with a 1" x 2 1/2" long (grade 5) hex head cap screw and a nylon locknut. On 72" and 82" Models - use a 1" x 3" long (grade 9) hex head cap screw and nylon locknut.

Step 5. Fasten the other end of the "H"-frame tube to the "H"-frame. (Use the lower hole in the "H"-frame plate.) On 82" Models - the "H"-frame tube is fastened on the outside of the "H"-frame with a 1" x 2 1/2" long (grade 5) hex head cap screw and a nylon locknut. On 72" and 82" Models - use a 1" x 3" long (grade 6) hex head capscrew and nylon locknut.

Step 6. Attach tube guides to the brackets welded on the upper frame using four 1/2" x 1 1/4" long (grade 5) hex head capscrews and nylon locknuts per each guide.

Step 7. Lay out the lower arm under the auger housing. The end with the angle and one 1 1/2" dia. hole must be located near the lower mount on the auger housing. On 82" and 72" models only, the end with three 17/32" dia. holes will fasten to the axle. (See Fig. 26 on page 29.) On 82" models, the end with a bushed hole in the angle will fasten to the axle. (See Fig. 21 on page 29.)
ASSEMBLY INSTRUCTIONS
UNDERCARRIAGE TO AUGER HOUSING ASSEMBLY - CONT.

Step 8. Fasten the lower arms to the axle ear brackets. On 62' and 72' models, use three 1/2" x 1 1/2" long (Grade 5) hex head cap screws and nylon locknuts for each leg. NOTE: The lower arm should be on the inside of the ear on the collar. See Fig. 20. On 82' models, use one 1" x 3" long (Grade 5) hex head cap screw, flat washer and nylon locknut for each leg. NOTE: The lower arm should be on the inside of the ear on the axle. See Fig. 21.

Step 9. On 72' & 82' models only, fasten angle crossbraces between the lower arms. Secure angles to ears on lower arm with four 1/2" x 1 1/4" long HHCS (Grade 9) and nylon locknuts. DO NOT tighten hardware until later. Bolt the middle of the angle crossbraces together using one 1/2" x 1" long HHCS (Grade 5) and nylon locknut. DO NOT tighten hardware until later.

Step 10. Wrap a chain or heavy duty strap around the auger tube and the undercarriage frame. See Fig. 22. The chain or strap must be TIGHT to keep the undercarriage from opening when the tube is raised.

Step 11. Lift the auger assembly with a hoist high enough to line up the lower arms with the lower arm mount. IMPORTANT: Only lift the auger at a point near the center of the auger with a chain hoist or other safe suitable means. DO NOT lift the entire weight of the auger from the extreme end.

Step 12. Slip 1/2" bushing into lower undercarriage motif. Fasten the lower arms to the motif using a 1 1/4" x 18" long HHCS through the bushing as shown, and a 1 1/4" nylon lock nut.

Step 13. Check to see that all undercarriage bolts and fasteners are tight, secure and assembled correctly. On 72' and 82' models, tighten all 1/2" hex head cap screws that fasten the angle crossbraces to the lower arms in Step 9. Lower the auger and release the hoist.

NOTE: Remove the chain or heavy strap that was installed in Step 10.
FIG. 23
ASSEMBLY INSTRUCTIONS
UNDERCARRIAGE TO HOUSING -
72' & 82' MODELS ONLY

(Please refer also to written instructions on pages 28 & 29.)

FIG. 24
ASSEMBLY INSTRUCTIONS

HYDRAULIC CYLINDER TO UNDERCARRIAGE INSTALLATION

Attach the hydraulic cylinder(s) to the "H"-frame using mounting pin and keeper cap furnished in box with cylinder(s). (62' Models use one cylinder. 72' and 82' Models use two cylinders.) **IMPORTANT:** The base end of the cylinder must be attached to the mount on the track. The rod end of the cylinder(s) will be attached to the mount on the "H"-frame. The cylinder ports must be facing the left side of the auger when viewing the auger from the intake end. **IMPORTANT:** The cylinder(s) furnished with your auger has a restrictor in the port at the base end. This restrictor limits the speed the auger is raised or lowered. Use only cylinder(s) provided with the auger. **DO NOT** use a cylinder that does not have the proper restrictor.

![Diagram of hydraulic cylinder installation](image)

**FIG. 25**

HYDRAULIC HOSE AND FITTING INSTALLATION FOR 62' MODELS

1. Thread the heavy duty street el into the upper cylinder port (at the base). Tighten and leave street el parallel with the auger tube and pointed toward intake. See Fig. 26.
2. Attach the swivel end of the hydraulic hose to the street el and tighten.
3. Thread the female end of the shut-off valve onto the hose. When installed, the arrow on the valve must point toward the auger and away from the tractor.
4. Check all fittings and connections to see if tight.

**CAUTION:** Refer to HYDRAULIC HOSE on page 17 before pressurizing the hydraulic system.

![Diagram of hydraulic hose and fitting installation](image)

**FIG. 26**

02580A2 02578A1 A0005830
ASSEMBLY INSTRUCTIONS

HYDRAULIC HOSE AND FITTING INSTALLATION FOR 72" AND 82" MODELS

Step 1. Install the "tee" fitting into the upper cylinder port (at the base) of the cylinder mounted on the left hand side of the auger (when viewing the auger from the intake end). Tighten the "tee" so it is parallel with the cylinder body. See Fig. 27.

Step 2. Install the non-swivel end of the 18" hydraulic hose into the upper cylinder port of the other cylinder.

Step 3. Then fasten the swivel end of the 18" long hose to the upper end of the "tee" fitting that is installed in the left hand cylinder.

Step 4. On 72" Models attach the swivel end of the 37"-6" long hose to the other end of the "tee" fitting. On 82" Models attach the swivel end of the 41"-6" long hose to the other end of the "tee" fitting.

Step 5. Thread the female end of the shut-off valve onto the end of the hose. When installed, the arrow on the valve must point towards the auger and away from the tractor.

Step 6. Check all fittings and connections to see if tight.

CAUTION: Refer to HYDRAULIC HOSE on page 17 before pressurizing the hydraulic system.

MODEL 72" & 82"
HYDRAULIC PLUMBING LAYOUT

FIG. 27

HYDRAULIC HOSE CLAMP INSTALLATION

Starting at the cylinder end of the hose, fasten the hydraulic hose to the track and tube housing using hose clamps and 5/16" x 3/4" hex head cap screws with lockwashers. Fig. 25 and 28.

FIG. 28
ASSEMBLY INSTRUCTIONS

SWING-OUT HOPPER LIFT ARM, CABLE AND WINCH ASSEMBLY

NOTE: The swing-out hopper can be sored either on the right or left side of the main auger.

Step 1. Determine from what side of the auger you wish to raise the swing-out hopper. Install the lift arm in the mounting tube from that side of the auger. Secure the lift arm to the mounting tube with a 1/2" x 4 1/2" long (grade 5) hex head capscrew, lockwasher and nut. See Fig. 29.

Step 2. Hook clevis plates over hanger loop on underside of the auger housing. Then assemble bushing, and cable pulley between the clevis plates using 1/2" x 2" long (grade 5) hex head capscrew and nylon locknut. IMPORTANT: Tighten all bushing will not turn against the clevis plates. Torque to 80 ft/lbs. Check to see that the clevis plates are captured on the hanger loop and cannot come off.

Step 3. Fasten winch plate to inlet hopper using four 3/8" x 1" long hex head capscrews and locknuts.

FIG. 29
ASSEMBLY INSTRUCTIONS

SWING-OUT HOPPER LIFT ARM, CABLE AND WINCH ASSEMBLY - CONT.

Step 4. Assemble handle to winch, aligning slot of handle with turned-down portion of pinion shaft. Use hex head nut to secure handle to winch. See Fig. 30. For additional winch information, follow the instructions and precautions listed in the material supplied by the winch manufacture.

Step 5. Attach 1/4" x 26'-0" long cable to winch drum so cable will wrap under drum when turning handle in a clockwise direction. See Fig. 31. From inside of drum, insert the cable through one round hole in the drum side until it extends 1" past the two square holes. Next clamp the cable to the outside of the cable keeper, using two 3/16" x 3/4" carriage bolts with heads inside the drum, as shown.

FIG. 30

FIG. 31

CAUTION: The cable keeper alone will not hold the weight of the hopper. There should be enough cable so that when the swing-away hopper is all the way down, there are at least 2 turns of cable on the winch drum. Never let the cable all the way out. Always keep a minimum of three (3) turns of cable on the winch drum. If there are not (3) turns of cable around the winch drum when the swing-away hopper is fully lowered, then the cable must be replaced with a longer cable.

![Warning symbol]

Step 6. Mount the winch to winch mount using three 3/8" x 1" long bolts with flat washers and nylon locknuts.

Step 7. Rig the lift cable from the winch through the pulley and clevis under the auger then through the pulley and clevis assembly at the end of the lift arm. (See Fig. 29).

Step 8. Attach cable hook to lift cable using two 1/4" cable clamps. Secure the clamp u-bolt against the loose end of the cable.

IMPORTANT: DO NOT ATTACH THE LIFT CABLE TO THE SAFETY CHAIN.

FIG. 32
ASSEMBLY INSTRUCTIONS

PTO DRIVELINE, SHIELD AND JACK ASSEMBLY

**FIG. 33**

Step 1. Fasten the PTO driveline to the enclosed drive input shaft using a 3/8" x 1 1/2" drive key and setscrews.

**IMPORTANT:** For the setscrews in the PTO driveline yoke to be properly engaged on the input shaft, slide the yoke on until one setscrew will sit on the flat portion of the enclosed drive input shaft and the other setscrew on the 3/8" x 1 1/2" key. DO NOT extend the input shaft beyond the inside end of yoke. See Fig. 34.

**FIG. 34**

**IMPORTANT NOTE:**

The PTO driveline is equipped with a shear bolt at the enclosed drive connection. The shear bolt protects the auger from damage if the auger becomes plugged or subjected to high loads. It is important to use the correct replacement bolt (of the proper size and strength) to ensure that the shear device will protect the auger and operator. Extra shear bolts are provided with the auger and are stored in the operator’s manual container located on the main auger inlet hopper.

03914A1 01928A1-A A6009634
ASSEMBLY INSTRUCTIONS

PTO DRIVELINE/SHIELD AND JACK ASSEMBLY - CONT.

Step 2. Slide shield over the PTO driveline, then bolt the shield to the mounting ring on the outside of the enclosed drive. Use four 3/8" x 1" long (grade 5) hex head cap screws and nylon locknuts. See Fig. 33.

Step 3. Fasten the storage hook to the strap on the shield with a 3/8" x 1 1/4" long (grade 5) hex head cap screw and nylon locknut.

Step 4. Place PTO driveline into storage position.

Step 5. Attach retaining chains for PTO driveline to the connection/shield bracket.

Step 6. Attach jack to hitch tube.

Step 7. Snap the operator's manual container into holder on bottom side of inlet hopper.

PTC DRIVELINE (STORAGE)

The PTO driveline should be placed in the storage position when not attached to the tractor.

Tilt the PTO driveline up and swing support hook under the driveline to support the weight of the driveline. See Fig. 35.

CASTER WHEEL ASSEMBLY

Step 1. Mount caster wheel to caster wheel swivel bracket using four 1/2" x 1 1/4" long (Grade 5) hex head cap screws and nylon locknuts. See Fig. 36.

Step 2. Slide the caster wheel swivel bracket over the hitch pipe and bolt it in the down position using a 1/2" x 5" long (Grade 5) hex head cap screw, lock washer and nut.

FIG. 35

FIG. 36
ASSEMBLY INSTRUCTIONS

SWING-OUT HOPPER AND INCLINE TUBE ASSEMBLY

Step 1. Temporarily remove the access door on the side of the spout. See Fig. 37.

Step 2. Remove square head solid plug from gearbox top and install vented plug.

Step 3. Remove the tape that is holding the #1210 woodruff key to the spout gearbox output shaft. Place the woodruff key into the keyseat, if it is not already in place.

Step 4. Attach swing-out hopper incline flight to gearbox output shaft, lining up the keyseat with the key in the shaft. Use a 1/2" x 3 3/4" long (pr. 5) hex head capscrew with side depress locknut to secure the connection.

Step 5. Attach the incline tube ring to the spout using studs welded to spout with 19/32" long spacer bushings, flat washers and 3/8" nylon locknuts as shown in Figs. 37 & 38.

IMPORTANT: Be sure to install the spacer bushings between the back of the spout and the incline tube ring because the spout MUST BE ABLE TO SWIVEL on the tube.

Step 6. Replace the spout access door removed in Step 1. Use three 5/16" x 3/4" long hex head capscrews with nylon locknuts.

FIG. 38

FIG. 37

5/16" X 3/4" HCS WITH LOCKNUT
1932" LONG Spacer Bushing
5/16" X 3/4" (6R. 5) HHC5
1/2" X 3/4" OUTPUT SHAFT
OPEN TOP RING WELDED TO INCLINE TUBE
INCLINE TUBE RING
FINISH BOX
STOP RING
INCLINE FLIGHT
INCLINE TUBE
INCLINE TUBE RING
SIDE DEPRESS LOCKNUT
REGION TUBE RING
1/2" X 3/4" WOODRUFF KEY
VENTED PLUG
3/8" CAPSCREW WELDED ON INSIDE OF SPOUT
FLAT WASHER
3/8" NYLON LOCKNUT
BACK OF SPOUT
SIDE ACCESS DOOR
5/16" X 3/4" HCS WITH LOCKNUT
3/8" NYLON LOCKNUT
A0095890
02591A3 02594A4
ASSEMBLY INSTRUCTIONS

SWING-OUT HOPPER AND INCLINE TUBE ASSEMBLY

NOTE: The hopper hanger bearing and bearing stub are preassembled to the swing-out hopper. In Fig. 40, those parts are shown disconnected from the hopper to better show the proper assembly of the other components.

Step 6. Fasten the rubber hopper wheel to the back of the swing-out hopper using two 5/8" flat washers and 3/16" x 2" cotter pin.

Step 7. Attach caster wheel to front of hopper using four 3/8" x 1 1/4" long (grade 5) hex head cap screws and nylon locknuts per each wheel.

Step 8. Bolt incline tell stab into the incline flight using four rubber sleeves, two 1/2" x 4" long (Grade 5) hex head cap screws, flat washers and nylon locknuts. Fig. 39.

IMPORTANT: Tighten locknuts so the flat washers are firmly against the rubber sleeves. DO NOT tighten so tight that the flat washers are against the flight tube. Leave about 1/16" gap.

Fig. 39

Fig. 40
**ASSEMBLY INSTRUCTIONS**

**SWING-OUT HOPPER AND INCLINE TUBE**

Step 9. Fasten u-joint to incline tall stub using one 3/8" x 3" long (grade 5) hex head cap screw and nylon lock nut. (See Fig. 40 on page 39.)

Step 10. Fasten u-joint to the bearing stub in the swing-out hopper using a 3/8" x 3" long (grade 5) hex head cap screw and nylon lock nut.

Step 11. Fasten the lower end of the incline tube to the front of the swing-away hopper. Use two 5/8" x 1 1/4" long (grade 5) hex head cap screws, flat washers and lock nuts.

Step 12. Bolt hinged cover to the front of the swing-out hopper using two 5/16" x 3/4" long (Gr. 5) hex head cap screws, flat washers and nylon lock nuts.


**INCLINE TUBE TO MAIN INLET HOPPER ASSEMBLY**

Step 1. Place the 1" O.D. x 1/4" thick flat washers on the 3/8" threaded studs on the top of the main inlet hopper. See Fig. 41.

Step 2. Lift the spout end of the incline tube assembly with a sling and position it directly over the opening in the main inlet hopper.

Lower carefully and align the u-joint with the spined gear box shaft in the main inlet hopper. Use the pop-open door to gain access to the u-joint when lowering the incline tube.

Completely lower until the spout flange sits flat on top of the main inlet hopper.

Step 3. Secure spout flange to top of main inlet hopper by using four 2" O.D. flat washers and lock nuts. IMPORTANT: The incline tube spout should be free to rotate on the top of the main inlet hopper.

**FIG. 41**
ASSEMBLY INSTRUCTIONS

SWING-OUT HOPPER RUBBER BELTING ASSEMBLY

Step 1. Install the two pieces of rubber belting to the inside of the swing-out hopper. See Fig. 42. Use (8) support straps and (2) 1/4" x 3/4" long (grade 5) hex head capscrews and nylon locknuts per each strap with bolt heads on the inside of the hopper.

NOTE: Both pieces of the swing-out hopper rubber belting have the same bolt hole pattern punched in them. There will be some holes that will not be used. The mounting holes in the front of the hopper are at a different height than the mounting holes in the back of the hopper. When installing the bolts to the hopper, use the lower set of holes when fastening to the back of the hopper and the upper set of holes when fastening to the front.

FIG. 42

Step 2. Fasten the belts together by overlapping the ends and using one 1/4" x 1" long (grade 5) hex head capscrew, two flat washers and nylon locknut for each connection. Place a flatwasher next to the bolt head and one flatwasher next to the nut, to prevent the bolt or nut from pulling through.

NOTICE: TO DEALER / ASSEMBLER

The assembly to the auger is complete if all the applicable assembly steps in this manual have been followed:

Before delivery to the owner it is a good practice to check the following:
A. Be sure all safety shields and devices are installed properly.
B. Check all safety decals to see if they are clean and readable. If any are missing, damaged, painted over, etc. replace them. (See pages P-1 thru P-4.) Decals may be obtained from your dealer, distributor or ordered from the factory.
C. Check all bolts and fasteners to see they are tightened and secured properly.
D. Check that the Operator’s Manual container (with Operator’s Manual inside) is installed in its holder on the main auger inlet hopper. (See Fig. 33 on page 36.)

Deliver this Assembly and Operator's Manual to the owner along with the auger.

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ASSEMBLY INSTRUCTIONS

OPTIONAL LOW PROFILE HOPPER

Use these instructions for installing the low profile hopper to your auger, instead of following the instructions listed in the manual.

SWING-OUT HOPPER AND INCLINE TUBE ASSEMBLY

Step 1. Install the hopper wheels with the four (4) 5/8" x 9 3/4" long pins, four (4) 15/16" spacer bushings and four (4) 2" hair pin cotter. Install the hopper wheels such that the front wheels are tilted in toward the incline tube and the rear wheels are tilted away from the hopper chain guard. Place the spacer bushings between the wheels and hopper body.

NOTE: There are two installation heights for the hopper wheels. For the shortest hopper profile, use the shorter set of holes.

Step 2. Bolt the incline tail stub into the incline flight using four rubber sleeves, two hex head capscrews, flat washers and locknuts. 10" Models use 7/16" x 3 1/2" long (grade 5) hex head capscrews. 12" Models use 1/2" x 4" long (grade 5) hex head capscrews. Refer to Fig. 56 in the 10" manual or Fig. 56 in the 12" manual for assembly detail of this step.

IMPORTANT: Tighten locknuts so the flat washers are firmly against the rubber sleeves. DO NOT tighten so tight that the flat washers are against the flight tube. Leave about 1/16" gap.

NOTE: The hopper power shaft is preassembled in the swing-out hopper. In the assembly drawing, this part is exploded away from the hopper to better show the proper assembly of the other components.
ASSEMBLY INSTRUCTIONS

SWING-OUT HOPPER AND INCLINE TUBE ASSEMBLY - CONT.

Step 3. Fasten the CV-joint to the incline tail stub using one 3/8" x 3" long (grade 6) hex head cap screw.

Step 4. Insert CV-joint onto the hopper power shaft with a 1/4" x 1" square key. Leave setscrew on this end of the CV joint loose.

Step 5. Fasten the lower end of the incline tube to the front of the swing-away hopper. Use two 1/2" x 1 1/2" long (grade 5) hex head capscrews, flat washers and nylon locknuts. NOTE: Install bolt heads onto the inside and DO NOT tighten completely. The coupler box must be allowed to pivot.

Step 6. Tighten CV-joint setscrew that was left loose in step 4.

Step 7. Bolt hinged cover to the front of the swing-out hopper using three (3) 5/16" x 3/4" long (grade 5) hex head capscrews, flat washers and nylon locknuts.

Step 8. Install cover strap over lid onto 3/8" stub (welded to box on lower end of the incline tube). Hold the strap on the stud with 3/8" nylon locknuts.

IMPORTANT: DO NOT tighten the nuts down. The hinged cover must be able to slide the strap when the incline tube is tilted at different angles.

SWING-OUT HOPPER RUBBER BELTING ASSEMBLY

Step 1. Install the rubber belting into the inside of the swing out hopper. Use ten (10) long and four (4) short attachment clips to install the belting. Two (2) 1/4" x 1" long hex head capscrews and nylon locknuts are used for each clip. Loosely attach each clip with points of clips up and with bolt heads inside the hopper. Use bolt holes positioned around upper edge of hopper.

Step 2. Set the belting inside the clips with the belting edge resting on the bolts. The belting does not go completely across the output end of the hopper. The belting is notched to accommodate the center guard support at the rear of the hopper. Begin installing the belting at this point and work each way toward the hopper discharge. Keep the belting end within 1 inch of the clip end. Position the belting evenly around the hopper and through the corners.

Step 3. Tighten the bolts and nuts to where the clip points draw into the belting and the smooth edge of the clips is in contact with the belting.

A0005841
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<td>1</td>
<td>1025077</td>
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<td>CAUTION - GENERAL (On Main Auger Housing)</td>
<td>88mm x 168mm</td>
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<td>2</td>
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<td>DANGER - POWER LINES (On Main Auger Housing)</td>
<td>88mm x 168mm</td>
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<tr>
<td>3</td>
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<td>DANGER - UPENDING HAZARD (On Main Auger Housing)</td>
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<td>4</td>
<td>DANGER - ROTATING AUGER (On Incline Tube) (One on both sides of Inlet Hopper) (One on side of Incline Tube Spout)</td>
<td>88mm x 168mm</td>
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<td>BEFORE TRANSPORTING (On Lift Arm for Low Profile Hopper)</td>
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<tr>
<td>10</td>
<td>1025089</td>
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<td>GREASE - PTO DRIVELINE (On back of Inlet Hopper)</td>
<td>57mm x 178mm</td>
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<td>NOTICE - DO NOT ATTACH PTO (On back of Inlet Hopper)</td>
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<tr>
<td>12</td>
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<td>1</td>
<td>OPERATOR'S MANUAL INSIDE</td>
<td>38mm x 193mm</td>
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A0050842
Check all safety signs and replace any that are worn, missing or illegible. The safety sign locations are shown below. Copies of the Safety Signs are shown on this page and the next two pages. Safety signs may be obtained from your dealer or ordered from the factory.
PARTS LIST

MAIN AUGER COMPONENTS
(Refer to Page P-6)

DETAILED A

DETAILED B

DETAILED C

REF. NO. PART NO. DESCRIPTION
1 1010505 Head Stub (2" to 1 1/2" dia. x 6 3/8" long)
2 40202 Bearing Flange
3 40207 Bearing with Locking Collar (1 1/2" bore)
4 1004300 Bearing Cover
4A 1015711 Head Plates
5 1019452 Truss Frame
6 3010L11 3/8" Cable Clamp

REF. NO. PART NO. DESCRIPTION
7 000915-1 Eyebolt (5/8" x 11" long)
8 D1170 5/8" Non-Lock Nut
9 1010811 3/8" Cable x 42.5" long
10 1010654 3/8" Cable x 52.0" long
11 1010634 3/8" Cable x 57.6" long
12 1011150 Connecting Band

02949A1 A0055845
### MAYRATH HOUSINGS

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<td>Upper Section - Tube Housing</td>
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<tr>
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<td>1/12 x 72 (29-5/8” long)</td>
</tr>
<tr>
<td>15-16</td>
<td>1019054-130</td>
<td>1/12 x 72 (29-5/8” long)</td>
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<tr>
<td>20</td>
<td>1019065-330</td>
<td>Middle Section - Tube Housing</td>
</tr>
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<td>20-17-19</td>
<td>1019063CE-130</td>
<td>Lower Section - Tube Housing</td>
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<td>1019034CE-130</td>
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### HUTCHINSON HOUSINGS

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### MAYRATH HOUSINGS FOR INTERNAL BEARINGS

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### FLIGHT SECTIONS FOR OPTIONAL INTERNAL BEARINGS

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### NOTES

- **AZ00547**
## UNDERCARRIAGE COMPONENTS - Drawing on Page P-7.

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<td>1014506</td>
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<td>1011152</td>
<td>Crossarm for 72' &amp; 62' only (116 7/8&quot; lg.)</td>
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<td>Hydraulic Cylinder (4&quot; Bore x 36&quot; Stroke) (See Page P-6 for part breakdown)</td>
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<tr>
<td>11</td>
<td>1014107</td>
<td>1 1/4&quot; Dia. x 16&quot; long HHCS</td>
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<td>11A</td>
<td>1014108</td>
<td>1 1/4&quot; Nylon Locknut</td>
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<td>1014003</td>
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<td>1010476</td>
<td>Washer Head Pins 1&quot; x 3 1/8&quot; long</td>
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<td>14</td>
<td>1005866</td>
<td>Hydraulic Ball Valve</td>
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<td>Hydraulic Hose</td>
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<td>1015056</td>
<td>61/2 x 62' - 3/8&quot; dia. x 24&quot;-6&quot; long</td>
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<td>1007566</td>
<td>61/2 x 72' - 3/8&quot; dia. x 27&quot;-6&quot; long</td>
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<td>1010533</td>
<td>61/2 x 62' - 3/8&quot; dia. x 43&quot;-6&quot; long</td>
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<td>1005732</td>
<td>Teal Fitting (61/2&quot; x 72&quot; &amp; 62&quot;)</td>
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PARTS LIST
SPINDLE & HUB ASSEMBLIES

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<th>5-BOLT (3 3/8&quot; O.D. x 14&quot;)</th>
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* Furnished with Cups and Lug Nuts.
** Furnished with Caps Only.

HYDRAULIC CYLINDER

COMPLETE NO. 1004359

REF. NO. DESCRIPTION                  PART NO.         
1    Cylinder Body                  42899           
2    Piston Rod                    042013          
3    Clevis                        14980           
4    Gland                        42899           
5    Pinion                        1004910        
6    Selector 5/16" x 3/8" long   49649           
7    Nylon Plug                    49649           
8    Nut - Lock 1"                 042221          
9    Snap Ring                     1004910        
10   Retaining Plate               042004          
11   Breather Plug (1/2" NPT)      042016          
12   Bolt 5/16" - 3/4" long       47611           
13   Lock Washer 5/16"             33144           
14   Cylinder Pin 1" - 3/16"      1005212         
15   Clip - Hardal 3/16" x 11"     096711          
16   "O" Ring Large                Seal Kit 042015  
17   "O" Ring Seal                 Seal Kit 042015  
18   "O" Ring Small                Seal Kit 042015  
19   "Back-Up Washer               Seal Kit 042015  
20   Piston Rod Wiper              Seal Kit 042015  
21   "Back-Up Washer               Seal Kit 042015  

04969A1      02095A!      A0005890
## MAIN AUGER INLET HOPPER COMPONENTS

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NOTES:

Repair parts for PTO drivelines can also be purchased directly from:

Hutchinson/Mayrath
569 Ridge Rd.
Huntington, IN 46750
414-306-2161

Weasler End 1
1420 E. 11th St.
Fort Wayne, IN 46802
219-428-3580

NOTE: Shear Bolt Kit includes (6) 3/8"- 16 x 1" long Grade 8 hex head bolts and locknuts.

SPECIFICATIONS:

U-JOINT TYPE - SR
AUGER END 1 1/2" BORE
WITH 3/8" KEYSEAT
TRACTOR END 1 3/8" - 66 SPLINE
CATEGORY 1 - 50 CV

HUTCHINSON/ WEASLER
MAYRATH
PART NO.
1024162
93-21370
1015227
10-10050
10-15120
10-15093
13-10021
13-15139
92-21370
96-21370
13-10022
1015232
35-15345
13-14891
40-10041
1015239
33170
10-15090
33170

REF.
NO.
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20

DESCRIPTION
PTO Driveline, Complete
Safety Side Lock Repair Kit
End Yoke
U-Joint Cross Repair Kit
Non-Rotating Guard Repair Kit
Chain Kit
Outer Safety Sign
Decal
Guard
Joint & Shaft Half Assembly
Inner Guard
Inner Safety Sign
5" CV Center Housing
C.V. Bolt Extension
Warning Decal
Ball Shear Assembly
Shear Bolt and Nut Kit
.375 - 16 x .38 long Setscrew
Non-Rotating Guard Repair Kit
.375 - 16 x .5 long Setscrew
## PARTS LIST

**GEARBOX**

**COMPLETE PART NO. 1005353**
**LOWER GEARBOX MOUNTED INSIDE MAIN INLET HOPPER**

**SPECIFICATIONS:**
- **RATIO:** 1 to 1
- **INPUT SHAFT:** 1 1/4" Dia. with 1/4" KEYWAY with 3/8" PIN HOLE
- **OUTPUT SHAFT:** 1 1/4" Dia. with 14 TOOTH SPLINE END

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<td>Cover</td>
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<td>Brg. Cone</td>
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<td>5</td>
<td>Brg. Cup</td>
<td>314891</td>
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<td>6</td>
<td>Washer</td>
<td>1005456</td>
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<tr>
<td>7</td>
<td>Snap Ring</td>
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<td>8</td>
<td>Cap</td>
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<td>1/8&quot; NPT Solid Plug</td>
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<td>5/16&quot; x 1/8&quot; NC CapscREW w/SEM</td>
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<td>Shaft Output w/14 Tooth Spline</td>
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<td>Shaft Input 1 1/4&quot; Dia.</td>
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<td>1/8&quot; NPT Vented Plug</td>
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*NOTE:* Not part of the complete assembly. Order separately.
## PARTS LIST
### SWING-OUT HOPPER
#### LIFT COMPONENTS

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<td>'203819</td>
<td>Hopper Lift Cable 1/4&quot; x 28' lng</td>
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<td>3</td>
<td>1003905</td>
<td>Hopper Hook w/Chain</td>
</tr>
<tr>
<td>4</td>
<td>6386C</td>
<td>1/4&quot; Cable Clamp</td>
</tr>
<tr>
<td>5</td>
<td>1022302</td>
<td>Winch Mounting Plate</td>
</tr>
<tr>
<td>6</td>
<td>1025904</td>
<td>Complete K1500 Winch (with handle)</td>
</tr>
<tr>
<td></td>
<td>41595</td>
<td>Winch Handle</td>
</tr>
<tr>
<td>7</td>
<td>41600</td>
<td>Cable to Winch Keeper Kt.</td>
</tr>
<tr>
<td>8</td>
<td>33384</td>
<td>Bolt 1/2&quot; x 4 1/2&quot; HHCS (grizzle 5) plated</td>
</tr>
<tr>
<td>9</td>
<td>1027990</td>
<td>Pulley Clevis Plate</td>
</tr>
<tr>
<td>10</td>
<td>1008195</td>
<td>Cable Pulley 3&quot; O.D. x 1&quot; I.D.</td>
</tr>
<tr>
<td>11</td>
<td>1008197</td>
<td>Pulley Bushing 1&quot; O.D.</td>
</tr>
</tbody>
</table>
## PARTS LIST
### SWING-OUT HOPPER COMPONENTS

<table>
<thead>
<tr>
<th>REF.</th>
<th>PART</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1012568</td>
<td>Hopper</td>
</tr>
<tr>
<td>2</td>
<td>1011522</td>
<td>Hopper Flange (5 1/8&quot; long)</td>
</tr>
<tr>
<td>3</td>
<td>1010790</td>
<td>with 1/4&quot; Flangeing</td>
</tr>
<tr>
<td>2A</td>
<td>40208</td>
<td>Flangeing for 1 1/2&quot; bearing</td>
</tr>
<tr>
<td>2B</td>
<td>1022507</td>
<td>Bearing - 1 1/2&quot; bore (Ball bearing)</td>
</tr>
<tr>
<td>3</td>
<td>1010382</td>
<td>Lid with Hinge</td>
</tr>
<tr>
<td>4</td>
<td>1010384</td>
<td>Bearing Hub (8 1/4&quot; snap)</td>
</tr>
<tr>
<td>5</td>
<td>1010396</td>
<td>Bearing Hanger w/ 1/2&quot; bore Bearing</td>
</tr>
<tr>
<td></td>
<td>10131D</td>
<td>1/2&quot; Bonnet Flangeing only</td>
</tr>
<tr>
<td>6</td>
<td>1010392</td>
<td>Rubber Nut</td>
</tr>
<tr>
<td>7</td>
<td>1000398</td>
<td>Rubber Mat Strip</td>
</tr>
<tr>
<td>8</td>
<td>1004356</td>
<td>Rubber Wheel (8 1/4&quot; O.D. x 5/8&quot; bore)</td>
</tr>
<tr>
<td>9</td>
<td>10142</td>
<td>U-Joint (1 1/4&quot; bore x 7&quot; long) (120)</td>
</tr>
<tr>
<td></td>
<td>40515</td>
<td>U-Joint Cross Repair Kit (120)</td>
</tr>
<tr>
<td>10</td>
<td>1010388</td>
<td>1/2&quot; U-Joint Flange</td>
</tr>
</tbody>
</table>

### TAIL HOPPER BEARING DETAIL

<table>
<thead>
<tr>
<th>REF.</th>
<th>PART</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>1010730</td>
<td>Cover Band</td>
</tr>
<tr>
<td>15</td>
<td>101081C</td>
<td>Swivel Spout Weights</td>
</tr>
<tr>
<td>16</td>
<td>1010380.1</td>
<td>Upper Gearbox</td>
</tr>
<tr>
<td>17</td>
<td>1000305</td>
<td>U-Joint w/Swivel End</td>
</tr>
<tr>
<td>18</td>
<td>1000390</td>
<td>Rubber Sheave</td>
</tr>
<tr>
<td>19</td>
<td>607045</td>
<td>Woodruff Key # 800</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Connect U-joint to gearbox shaft)</td>
</tr>
<tr>
<td>20</td>
<td>1010734</td>
<td>Lid Cover Stray</td>
</tr>
</tbody>
</table>
| 21   | 4913   | Incline Flight to Tail Slot Bolt (1/2"
                  |       | x 3 4/5" long Grade 5)                         |
| 22   | 4913   | Incline Flight to Gearbox Bolt (1/2" x 3 4/5" long
                  |       | Grade 5)                                        |
| 23   | 030891 | Woodruff Key # 1210                            |
|      |       | (Connect Incline Flight to Gearbox)             |
| 24   | 10040  | Spout Door Spring Clip                         |
| 25   | 1010383 | Spout Piece for Spout to Incline Tube Flange (17/32" long) |
| 26   | 1001690 | 8" Caster Wheel                                |
| 27   | 1000959 | Side Access Door Finishing Spout                |

| D3568ATP | D3571A | A005966 |
## PARTS LIST

**OPTIONAL LOW PROFILE HOPPER COMPONENTS**

*12" AGERS ONLY*

<table>
<thead>
<tr>
<th>REF. NO.</th>
<th>DESCRIPTION</th>
<th>REF. NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hopper Belting (6&quot; x 161&quot;)</td>
<td>14</td>
<td>Cover Band</td>
</tr>
<tr>
<td>2</td>
<td>Chain Guard</td>
<td>15</td>
<td>Belt Retainer Clip</td>
</tr>
<tr>
<td>3</td>
<td>Tire 410/350 x 4 x 2 PLY</td>
<td>16</td>
<td>Belt Retainer Clip 5&quot;</td>
</tr>
<tr>
<td>4</td>
<td>Low Profile Hopper</td>
<td>17</td>
<td>Pin Clevis .825 x 9.25</td>
</tr>
<tr>
<td>5</td>
<td>Corn Screen Cover</td>
<td>18</td>
<td>Hair Pin .364 Dia. 2&quot; lg.</td>
</tr>
<tr>
<td>6</td>
<td>Coupler Box 1/4&quot;</td>
<td>19</td>
<td>Key 250 x 1&quot; lg.</td>
</tr>
<tr>
<td>7</td>
<td>Stub Shaft Flight</td>
<td>20</td>
<td>Sprocket 508 15-1.00 Bore</td>
</tr>
<tr>
<td>8</td>
<td>Flight 7&quot; O.D. 1.97&quot; x 44&quot; lg. - 1-1/4&quot;</td>
<td>21</td>
<td>Sprocket 508 15-1.25 Bore</td>
</tr>
<tr>
<td>9</td>
<td>Power Shaft</td>
<td>22</td>
<td>Bearing 1.25&quot; 2-Hole Flange</td>
</tr>
<tr>
<td>10</td>
<td>Joint Lnv. Cap 50&quot; C.V.</td>
<td>23</td>
<td>Bearing 1.0&quot; 2-Hole Flange</td>
</tr>
<tr>
<td>11</td>
<td>Flight Support Bearing</td>
<td>24</td>
<td>Chain RC-50 41 Pitch w/ Links</td>
</tr>
<tr>
<td>-</td>
<td>1&quot; Bronze bushing</td>
<td>25</td>
<td>Incline Flight Stub</td>
</tr>
<tr>
<td>12</td>
<td>Lid Strap</td>
<td>26</td>
<td>Incline Flight to Tall Stub Bolt Kit</td>
</tr>
<tr>
<td>13</td>
<td>Incline Tube</td>
<td>27</td>
<td>Incline Flight (133 1/4&quot; lg.) - 14&quot;</td>
</tr>
<tr>
<td>1016741CE</td>
<td>Standard</td>
<td>28</td>
<td>Rubber Sleeve</td>
</tr>
<tr>
<td>1016743CE</td>
<td>w/ Corn Screen</td>
<td>29</td>
<td>Speaker Bushing</td>
</tr>
</tbody>
</table>

---

`0304A3 A0009857`
# PARTS LIST

## GEARBOX

**COMPLETE PART NO. 1018899**
**LOWER GEARBOX MOUNTED**
**INSIDE MAIN INLET HOPPER**

### SPECIFICATIONS:
- **RATIO:** 1 TO 1
- **INPUT SHAFT:** 1 1/8" DIA. WITH 1/4" KEYWAY
- **OUTPUT SHAFT:** 1 1/4" DIA. WITH 14 TOOTH SPLINE END

---

![Diagram of Gearbox](image)

---

<table>
<thead>
<tr>
<th>REF. NO.</th>
<th>DESCRIPTION</th>
<th>PART NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Case</td>
<td>1005451</td>
</tr>
<tr>
<td>2</td>
<td>Cap</td>
<td>1005452</td>
</tr>
<tr>
<td>3</td>
<td>Cover</td>
<td>1005453</td>
</tr>
<tr>
<td>4</td>
<td>Brg. Cone</td>
<td>1005454</td>
</tr>
<tr>
<td>5</td>
<td>Brg. Cup</td>
<td>3149891</td>
</tr>
<tr>
<td>6</td>
<td>Washer</td>
<td>1005456</td>
</tr>
<tr>
<td>7</td>
<td>Snap Ring</td>
<td>1005457</td>
</tr>
<tr>
<td>8</td>
<td>Cap</td>
<td>1005458</td>
</tr>
<tr>
<td>9</td>
<td>Shrm .007 x 1.25 I.D.</td>
<td>1005449</td>
</tr>
<tr>
<td>10</td>
<td>Gear 60° Cut</td>
<td>1005440</td>
</tr>
<tr>
<td>11</td>
<td>1/8&quot; NPT Solid Plug</td>
<td>035913</td>
</tr>
<tr>
<td>12</td>
<td>5/16&quot; x 7/8&quot; NC Cap screw w/SEM</td>
<td>023003</td>
</tr>
<tr>
<td>13</td>
<td>Shrm .003</td>
<td>40232</td>
</tr>
<tr>
<td>14</td>
<td>Gromm .005</td>
<td>40281</td>
</tr>
<tr>
<td>15</td>
<td>Shrm .014</td>
<td>40280</td>
</tr>
<tr>
<td>16</td>
<td>Seal</td>
<td>1005454</td>
</tr>
<tr>
<td>17</td>
<td>Seal</td>
<td>1005445</td>
</tr>
<tr>
<td>18</td>
<td>Shaft Output w/14 Tooth Spline</td>
<td>1005468</td>
</tr>
<tr>
<td>19</td>
<td>Shaft Input 1 1/4&quot; Dia.</td>
<td>1018088</td>
</tr>
<tr>
<td>20</td>
<td>Key</td>
<td>1005446</td>
</tr>
<tr>
<td>21</td>
<td>Washer - Grease</td>
<td>1005472</td>
</tr>
<tr>
<td>22</td>
<td>1/8&quot; NPT Vented Plug</td>
<td>1015290</td>
</tr>
</tbody>
</table>

*NOTE: Not part of the complete assembly. Order separately.*

---

02183AS A0005685t