

WESTFIELD[®]

GRAIN AUGERS

MK 100 x 36'

ASSEMBLY & OPERATOR MANUAL

Read and understand these instructions before assembling or operating.



MK-03-07

WESTFIELD IND. LTD. subscribes to the general standards specified by ASAE. For this reason, we strongly recommend that all personnel associated with this equipment be trained in the correct operational and safety procedures required for this auger. Westfield also recommends that periodic reviews be standard practice. For your convenience, we include the sign-off sheet so you can record your periodic reviews.

SIGN-OFF FORM

[illegible]



Watch for this symbol. It identifies potential hazards to health or personal safety. It points out safety precautions. It means: **ATTENTION - Be alert. Your safety is involved.**

Failure to read this auger manual before operating the auger is a misuse of the equipment and a needless risk of life and limb.



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1. Introduction

Congratulations. As the new owner of a WESTFIELD MK Series Grain Auger, you will be working with equipment especially designed to complement and improve your farming operation. Before using this auger, we recommend that you read this manual and familiarize yourself with the various features of the machine and the necessary precautions for an efficient and safe operation.

In addition, we suggest that anyone using this auger be required as a matter of record to be familiar with all safety precautions. A sign-off form is supplied on the inside front cover to record your safety reviews.

Thank you.



2. Safety First

Safety First. Everyone knows about it. Most people practice it. Sadly, a few choose to ignore it. Safety should be a habit, something you practice every time you work with machinery. Safe working habits prevent needless injuries or deaths.

Whether you are the owner, a supervisor, or an operator, it is **your** responsibility to know the operational requirements, the safety precautions, and

the potential hazards of portable grain augers. Furthermore, you must ensure that anyone working with or around the auger, is familiar with them. Failure to read this manual and/or non-compliance with correct safety procedures is a misuse of the equipment. Remember, a lack of knowledge serves only to endanger yourself and those around you.

TAKE THE TIME - BE ALERT - BE SAFE.

2-1. OPERATIONAL SAFETY

Operational safety means using common sense and knowing and observing proper precautions. Always remember to:

- Keep children and untrained people away from auger work area (see **Figure No. 1**). The area around the auger is not safe for untrained personnel and especially not safe for children.
- Have another person nearby who can shut down the auger in case of accident. It is good practice to always work with a second person around augers.
- Inspect the lift cable before using auger. Replace if frayed or damaged.
- Make certain lift cable is properly seated in roller and cable clamps are secure.
- Ensure that auger is empty before raising or lowering.
- Augers are not insulated. Keep away from all electric lines. Electrocutation can occur without direct contact.
- Wear hearing protection when operating auger.
- Do not operate with **any** safety shield removed.
- **Never use a PTO driveline without a rotating shield in good working order. Also ensure shields on auger boot and tractor are in place.**
- **Be certain the PTO driveline is securely attached to the flying shaft and to the tractor before operating.**
- Before starting tractor, be certain that power to the PTO is in the off position.
- Keep body, hair and clothing away from moving parts.
- Operate auger on level ground. Even though the auger is connected to the tractor during operation, tipping can occur.
- Anchor or support discharge end to further stabilize auger and prevent tipping.
- Keep away from the intake hopper during operation.
- Do not operate auger with the service or cleanout doors open or unlatched.
- Shut off and lock out all power to auger before servicing, cleaning or adjusting.
- Lower auger at completion of operation, or when not in use.
- Do not get on or beneath auger when raising or lowering intake hitch jack, or when auger is supported by hitch jack.

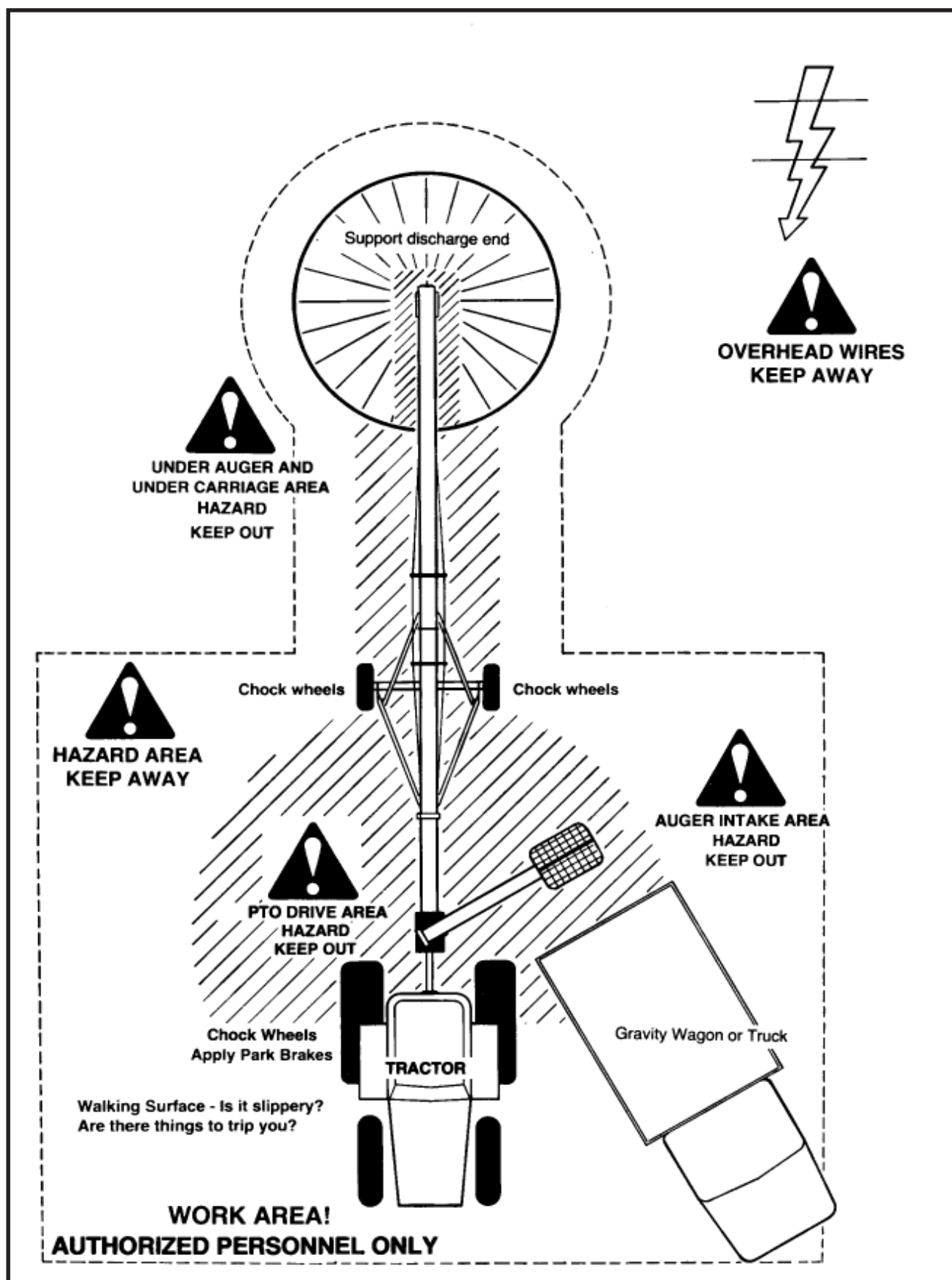


Figure No. 1

2-2. TRANSPORT AND PLACEMENT SAFETY.

The approach to transport and placement safety is no different from that of operational safety. Follow the basic rules of good sense and know the limitations of your machinery. While a few of the precautions are the same, they bear repeating. Remember to:

- Keep children and unauthorized personnel away from the hazard area surrounding the auger.
- Transport auger in the full down position with slight tension on the cable.
- Check the liftcable before each use and replace it if frayed or damaged. Also check cable clamps.
- Make certain that the hitch pin is in place and the safety chain is properly attached. Use a type of hitch pin that will not permit auger to separate from the tractor.
- Always attach a SMV (Slow Moving Vehicle) sign before transporting auger.
- Equip the auger with the necessary lights for transportation where required by law.
- Raise intake feed hopper into transport position and lock hopper lift winch before transporting or moving auger. Intake feed side of hopper must face away from main auger when in transport position (see **Figure No. 26, page 18**).
- Before moving auger, make sure the area around the auger is clear of obstructions and/or unauthorized personnel. (See **Figure No. 2**).
- Use extreme caution in turning and cornering.
- Do not raise or lower auger until hazard area is clear.
- Do not permit anyone to stand on or beneath auger when raising or lowering.
- Wheels must be free to move when raising or lowering auger.
- Do not use auger as a hoist.

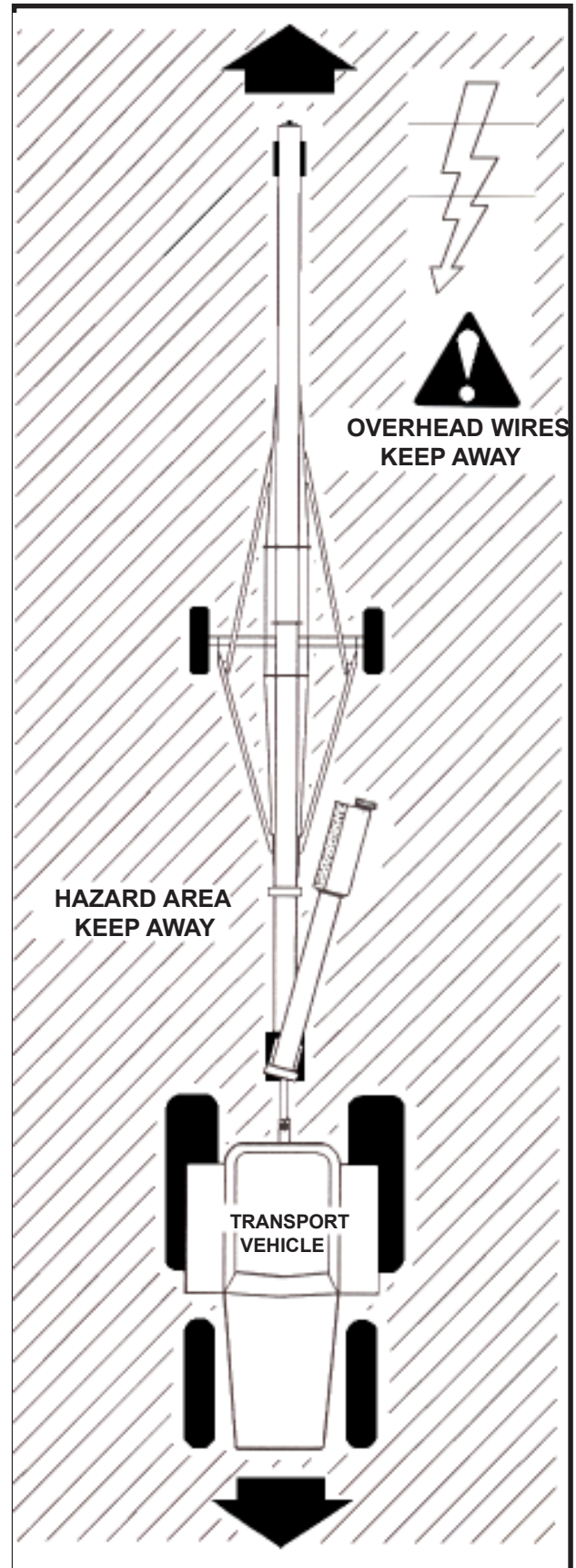


Figure No. 2

- Before moving auger, check and double check for overhead obstructions and/or electrical wires. Electrocutation can occur without direct contact.
- Do not transport auger faster than 15 mph (24 km/h).
- Do not operate auger with intake hopper in transport position. This will cause damage to u-joint.
- Do not transport auger on a slope greater than 20 degrees.
- Disconnect PTO driveline from tractor for transport or placement. Secure in transport saddle.

2-3. MAINTENANCE SAFETY

When performing maintenance on the MK auger, understand and observe the following precautions.

- Shut down and lock out all power before attempting maintenance of any kind. If lock-out is impossible, disconnect the PTO driveline from tractor (also hydraulic hoses on units with hydraulic drive hoppers).
- Support auger tube before attempting maintenance on the undercarriage. Auger should be in full down position for maintenance.
- After maintenance is completed, replace and secure all safety shields, safety devices, service doors and cleanout covers.
- Keep decals clean. Replace any decal that is damaged or not clearly visible.
- Use only genuine WESTFIELD replacement parts or equivalent. Replacement parts such as intake shields, pulley shields, PTO driveline shields, winches and lift cables MUST MEET ASAE Standards or serious injury may result. Use of unauthorized parts will void warranty. If in doubt, contact WESTFIELD or your WESTFIELD dealer. Do not modify any auger components.

⚠ CAUTION

1. Read and understand operator's manual before assembling or operating this auger.
2. Do not remove or modify any safety shield or device. Keep in good working order.
3. Clear work area of CHILDREN and untrained personnel before operating or moving auger.
4. Keep body, hair and clothing away from auger intake and all moving parts.
5. Stop auger and lockout power to adjust, service or clean.
6. Fully lower auger to move or service. Use safety chain to transport.
7. Stay clear of power lines when positioning or moving auger. Once positioned, check all wheels.
8. Trained personnel must be in attendance when auger is in operation.
9. Disassembling certain components will allow auger to collapse. Support auger tube to prevent this.
10. Electric motors must be grounded. Disconnect power before resetting overloads.
11. If the manual, safety shields or decals are missing or damaged, contact factory or your dealer for replacements.


MADE IN CANADA 17112

⚠ WARNING

ROTATING FLIGHTING INSIDE
Do not operate auger with assembly access plates on swing-hopper removed.
FAILURE TO HEED WILL RESULT IN SERIOUS INJURY.

MADE IN CANADA 17112

⚠ DANGER



ELECTROCUTION HAZARD
This auger is not insulated.
Keep auger away from overhead power lines and devices.
Electrocution can occur without direct contact.
Fully lower auger before moving.
FAILURE TO KEEP AWAY WILL RESULT IN SERIOUS INJURY OR DEATH.

MADE IN CANADA 17288

⚠ DANGER



ROTATING FLIGHTING HAZARD
Keep away from auger intake.
Keep intake shield in place and in good working order. Do not modify.
FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

MADE IN CANADA 17288

⚠ DANGER



UPENDING HAZARD
Anchor intake and and/or support discharge end to prevent upending.
Auger intake must always have downward weight. Do not release until attached to tow bar or resting on ground.
Do not raise auger intake above tow bar height.
Use a tow vehicle to move auger.
Empty auger and lower fully before moving.
FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

MADE IN CANADA 17287

⚠ DANGER



KEEP CHILDREN AWAY.
This auger is not a toy.
The work area is not a playground.
Do not allow children to play on or near this auger at any time.
FAILURE TO HEED WILL CAUSE SERIOUS INJURY OR DEATH.

MADE IN CANADA 17286

⚠ WARNING



DO NOT OPERATE THIS AUGER unless


1. You are trained to operate it safely.
2. You have read and understand the operator's manual.
3. You know and follow all safe operating procedures and work rules.
4. Children and untrained personnel are removed from work area.

FAILURE TO FOLLOW SAFETY INSTRUCTIONS IN MANUAL WILL SUBJECT OPERATOR AND OTHERS TO SERIOUS INJURY OR DEATH.

MADE IN CANADA 17286

Figure No. 3

! DANGER



ROTATING PTO DRIVELINE HAZARD

Keep your body, hair, clothing and others away from rotating PTO driveline.

Do not operate auger unless all driveline, tractor and equipment shields are in place and in good working order.

Make certain the driveline shields turn freely on driveline.

Make certain the driveline is securely attached at both ends.

Do not exceed operating speed of 540 RPM.

Keep u-joints angles small and equal. Do not exceed maximum recommended length.

FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

MADE IN CANADA 17103

! WARNING

ROTATING FLIGHTING INSIDE

Do not operate auger with safety discharge door not in place.

FAILURE TO HEED WILL RESULT IN SERIOUS INJURY

NOTE: Should grain overflow through safety discharge door, reduce volume of feed to hopper.

MADE IN CANADA 17111

! CAUTION

Do not exceed operating speed of 540 RPM.

MADE IN CANADA 17110

! DANGER



ROTATING FLIGHTING INSIDE

Do not operate auger unless swing-hopper is securely attached to boot.

FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

IMPORTANT: Do not operate auger with swing-hopper in transport position. This will damage the u-joint.

MADE IN CANADA 17094

! DANGER

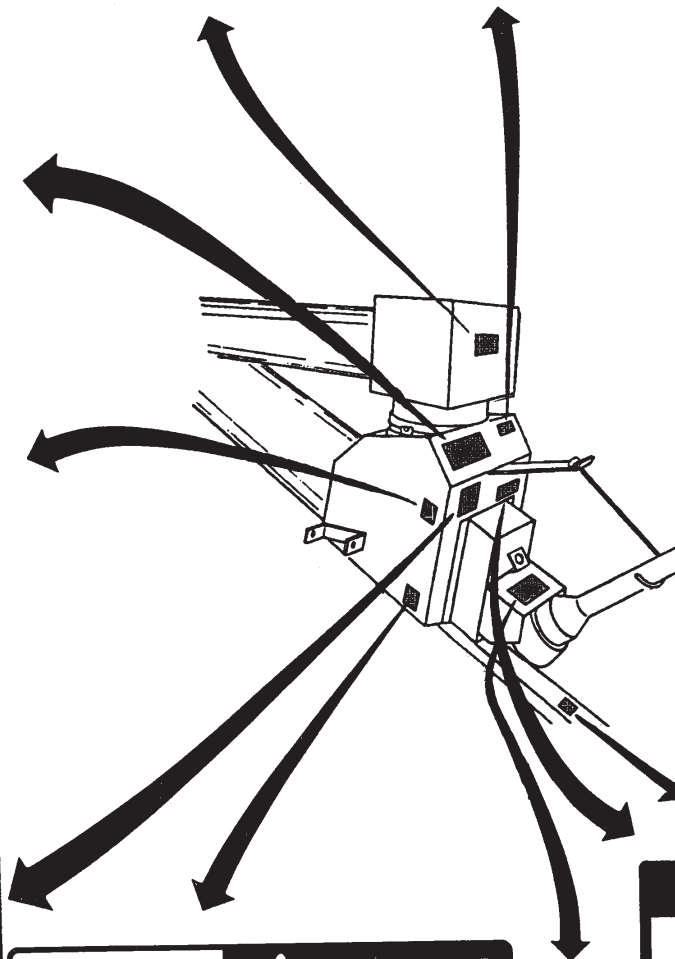


ROTATING DRIVE HAZARD

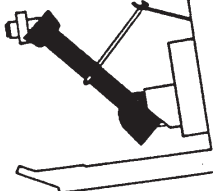
Do not operate auger with shield removed.

FAILURE TO HEED WILL CAUSE SERIOUS INJURY

MADE IN CANADA 17114



! IMPORTANT



Disconnect PTO driveline from tractor to position or transport auger OR driveline will bottom out severely damaging the CV u-joint and lower flight shaft.

See manual for maintenance.

MADE IN CANADA 16859

! IMPORTANT !

WHEELS MUST BE FREE TO MOVE WHEN RAISING OR LOWERING AUGER

MADE IN CANADA 16900

! DANGER



ROTATING FLIGHTING INSIDE

Do not operate auger with the service or cleanout door open or unlatched.

SHUT OFF and LOCKOUT power to adjust, service or clean.

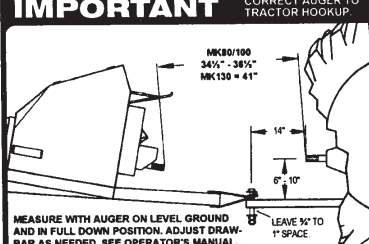
Use stick or other tool to clean out.

FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

MADE IN CANADA 17342

! IMPORTANT

CORRECT AUGER TO TRACTOR HOOKUP



MEASURE WITH AUGER ON LEVEL GROUND AND IN FULL DOWN POSITION. ADJUST DRAWBAR AS NEEDED, SEE OPERATOR'S MANUAL.

MADE IN CANADA 17531

Figure No. 4

3. Assembly

Before starting assembly of your new auger, please read the following instructions carefully and familiarize yourself with all the sub-assemblies and hardware making up the auger. Ensure that all parts are on hand, arranging them for easy access as required. Assembly should be carried out in a large open area with a level surface.

IMPORTANT

THESE INSTRUCTIONS ARE WRITTEN ON THE ASSUMPTION THAT TWO OR MORE PEOPLE WILL BE AVAILABLE FOR THE ASSEMBLY PROCEDURE. BECAUSE OF THE WEIGHT, IT IS UNWISE TO ATTEMPT ASSEMBLY OF AUGER ALONE.

3-1. TUBE AND FLIGHT ASSEMBLY

1. Align upper and lower tube sections on a flat surface or on a series of benches.
2. Slide lower flight shaft into upper flight shaft with flight ends butting together for continuous flow. Secure with two $1\frac{1}{2}$ " x $2\frac{3}{4}$ " grade 8 bolts and locknuts. (See **Figure No. 5**)
3. Slide tube sections together and insert the eight $\frac{7}{16}$ " x 1" bolts and locknuts and tighten.

CAUTION



BLOCK TUBE SECTIONS TO PREVENT ROLLING. DO NOT DROP. DAMAGE TO EQUIPMENT OR PERSONAL INJURY WILL RESULT.

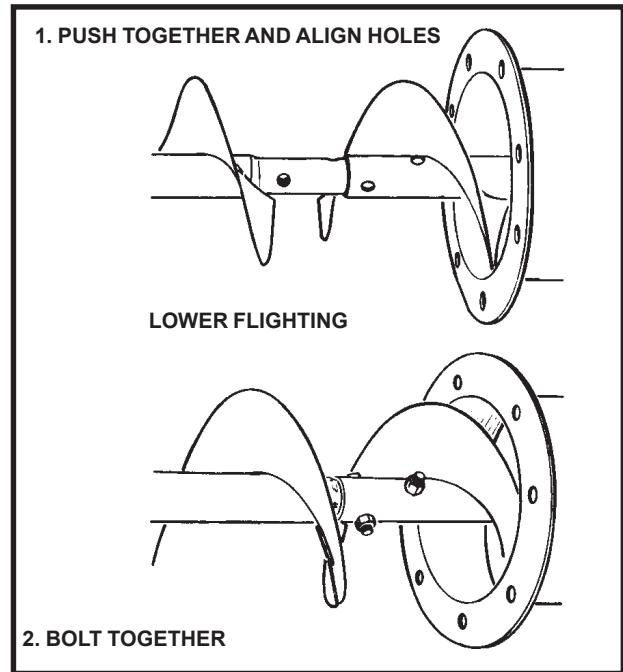


Figure No. 5

3-2. TRACKSHOE AND TRACKSTOP

1. Slide the roller trackshoe onto track, then attach the lower trackstop to the correct position on track as shown in **Figure No. 6**, using two $\frac{7}{16}$ " x $1\frac{1}{4}$ " bolts and locknuts.

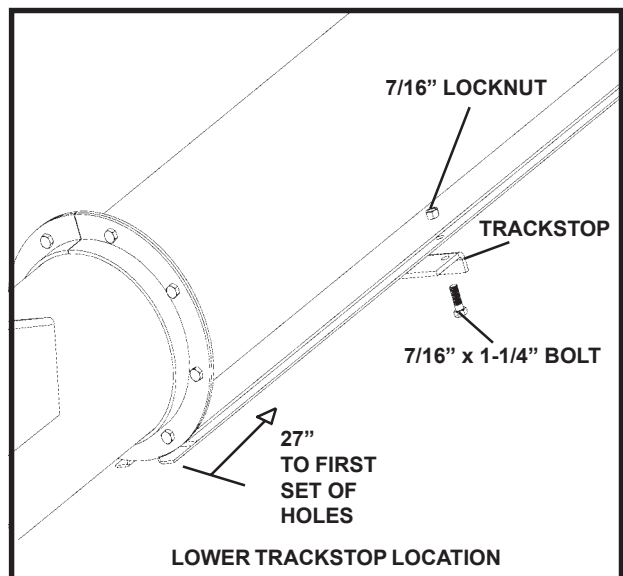


Figure No. 6

2. Attach the upper trackstop to correct position as shown in **Figure No. 7**, using two 7/16" x 1-1/4" bolts, locknuts and heavy flat washers. Make certain the washers are on top of track as shown in **Figure No. 8** and that the trackstop is centered on the track.
3. Slide trackshoe along full length of track to make certain there is no binding.

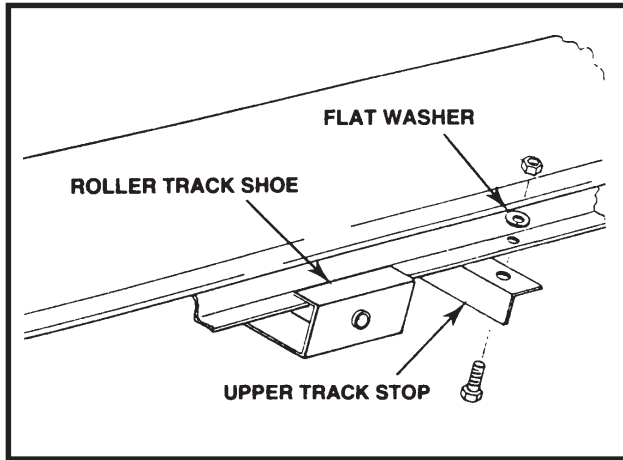


Figure No. 7

3-3. BOOT ASSEMBLY

NOTE: The gearbox has been filled at the factory (half full) with EP90 gear oil. Before further assembly, check oil level to make certain the gearbox is half full as required. Add oil if necessary. Do not use grease.

1. Slide short flighting section onto lower flight shaft and tighten with 7/16" x 3-1/2" bolt and locknut as shown in **Figure No. 9**. Make sure that flight ends butt together for continuous flow.
2. At upper end of auger tube, loosen setscrew and remove lock collar from upper bearing.
3. Slip boot over lower flighting shaft and attach to flange on lower tube with eight 7/16" x 1" bolts and locknuts. Tighten securely.
4. Slide wide rim 1-1/4" flat washer onto lower flight shaft.

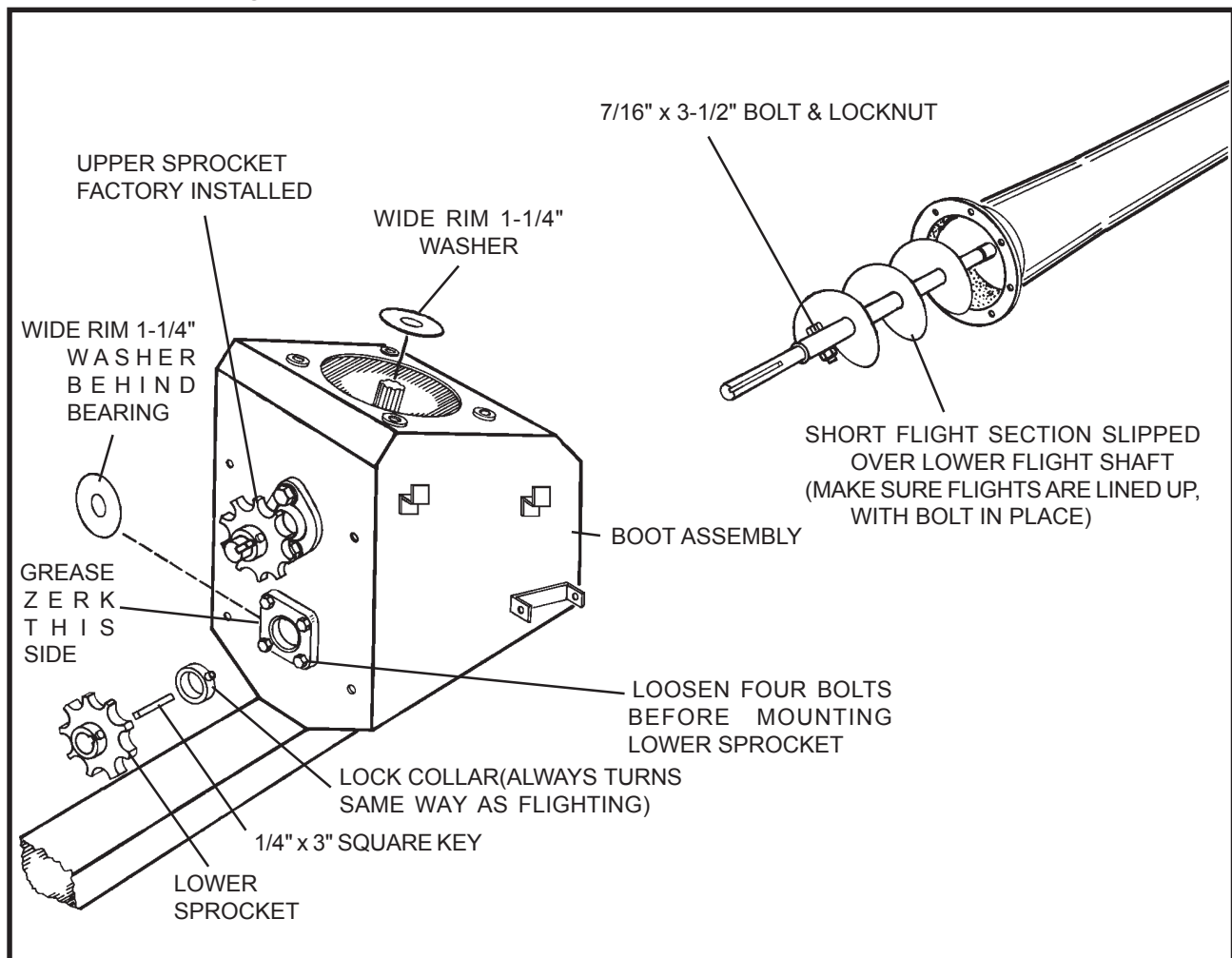


Figure No. 9

5. Install lower bearing using four, 1/2" x 1-1/2" bolts and locknuts. Ensure grease zerk is positioned to left (standing behind boot, facing auger discharge). Seat flight shaft shoulder against washer and lower bearing. Secure lock collar and tighten setscrew on lower bearing first and then on the upper bearing.
6. Install 1/4" x 3" square key and sprocket onto flighting shaft. Align lower sprocket with upper sprocket and tighten setscrews. This step applies to mechanical drive units only.

IMPORTANT

TO PREVENT PREMATURE FAILURE OF THE LOWER BEARING, ASSEMBLE IN CORRECT SEQUENCE, AS FOLLOWS:

1. Remove lock collar from upper bearing.
 2. Seat flight shaft shoulder against lower bearing.
 3. Secure lock collar on lower bearing.
 4. Then secure lock collar on upper bearing.
7. Loosen four bolts on lower bearing and install chain on sprockets. With chain in place and tensioned to about 1/4" deflection, retighten four bolts on bearing. Oil the chain lightly (see **Figure No. 10**). This step applies to mechanical drive units only.

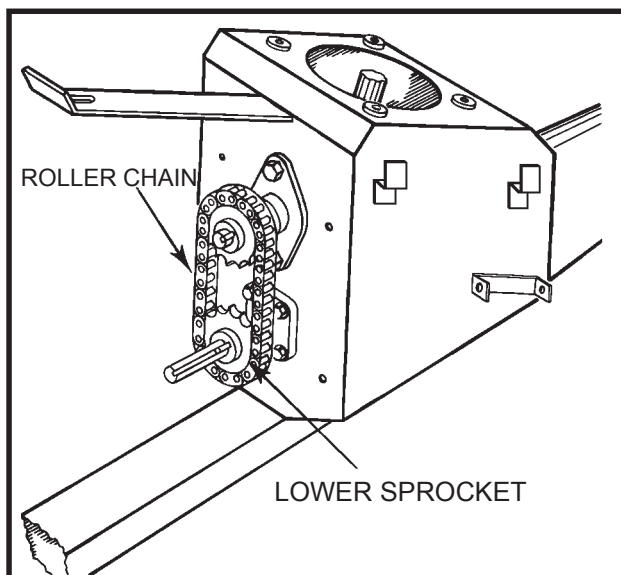


Figure No. 10

8. Secure lock collar and tighten setscrew on bearing at upper end of auger tube.

NOTE: Sprocket shield should be installed after **Section 3-7** on **page 15** for easier assembly of the CV-PTO driveline. See step 4 on page 15.

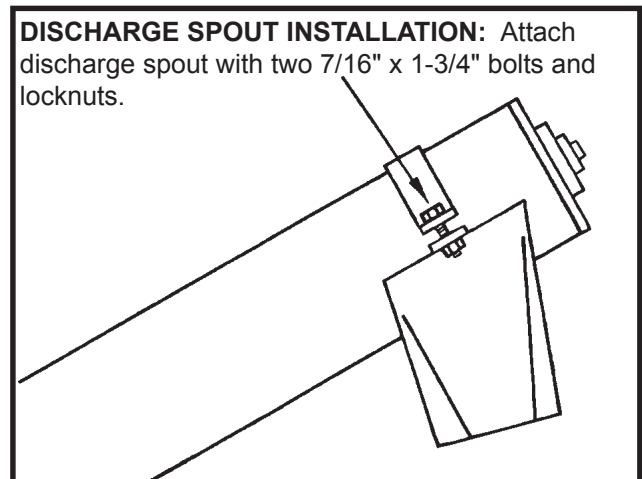


Figure No. 11

3-4. TRANSPORT UNDERCARRIAGE ASSEMBLY

(See Figure No. 12)

To assemble undercarriage:

1. Fasten the lower reach arms to the axle with three 1/2" x 1-1/4" bolts and locknuts on each side.
2. Attach long crossmember to bottom of large frame brackets as shown, with two 7/16" x 1" bolts and locknuts.
3. Attach short crossmember to small frame brackets loosely with two 1/2" x 1-1/2" bolts and locknuts, sandwiching the flatbraces (B) between short crossmember and small frame brackets on each side. Leave this way until step no. 8. (See Figure No. 15)
4. To assemble wheel hubs, first remove dirt and paint from spindle and hub. Thoroughly pack wheel bearings and cups with a good grade of bearing

grease. Place large bearing into hub, and carefully tap in seal. Slip hub onto spindle and insert small bearing.

Tighten slotted spindle nut until hub drags slightly. Back off nut about 1/4 turn until hub turns freely. Install cotter pin and dust cap. (See Figure No. 13)

5. Install tires and tubes on the wheels provided. Inflate to 18 to 24 PSI (124 to 165kPa). Wheels may be mounted on hubs at this time using four 1/2 x 1-1/4" wheel bolts.

NOTE: With tires installed there may be insufficient clearance once auger tube is raised, to position and attach undercarriage; if this is the case install the wheels after assembly is complete.

6. Fasten upper lift arms to lower reach arms with two 3/4" x 2" bolts and locknuts. **DO NOT OVERTIGHTEN.** Tighten snug only as these bolts act as pivot point.
7. Raise the discharge end of auger with a front end

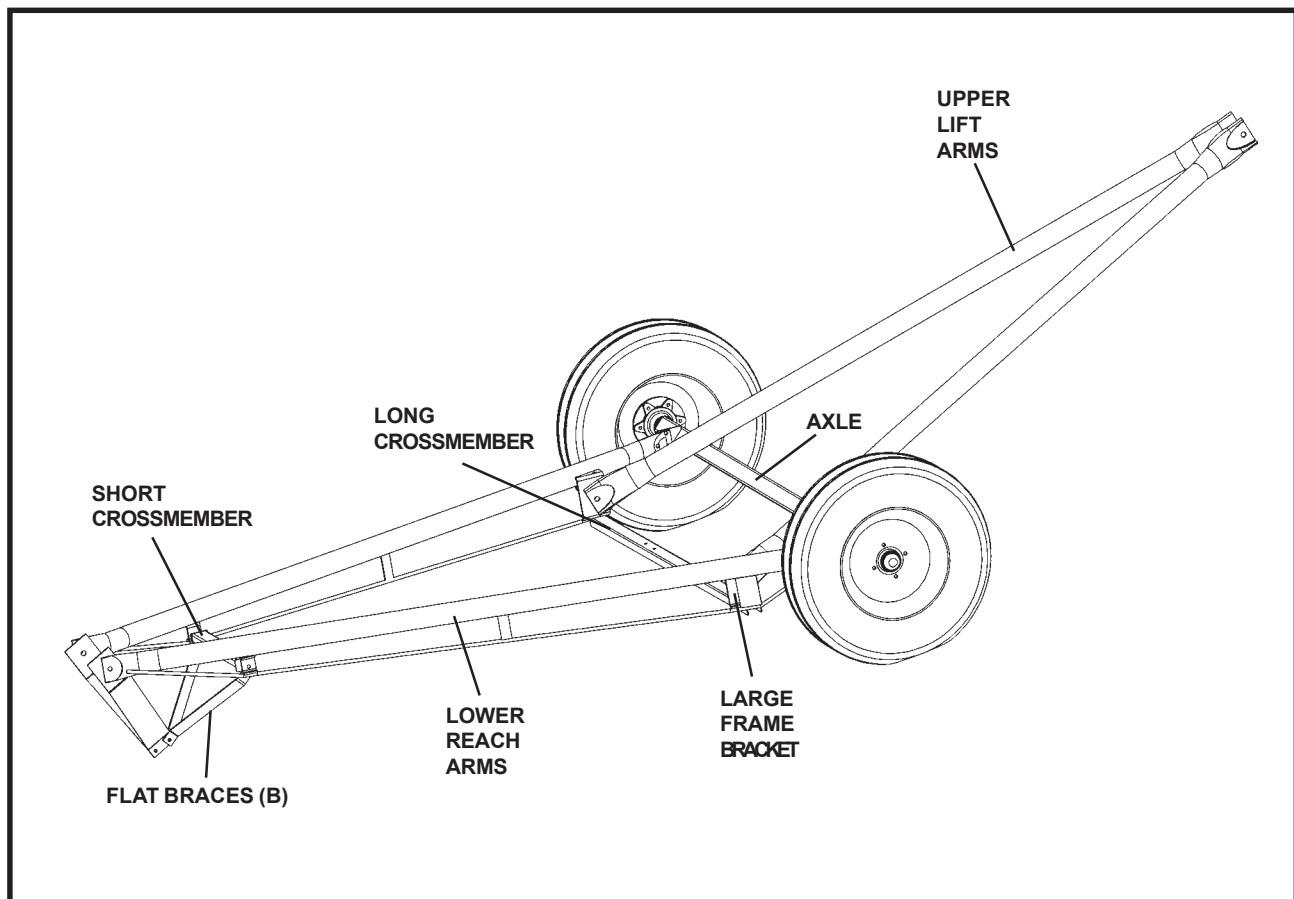


Figure No. 12

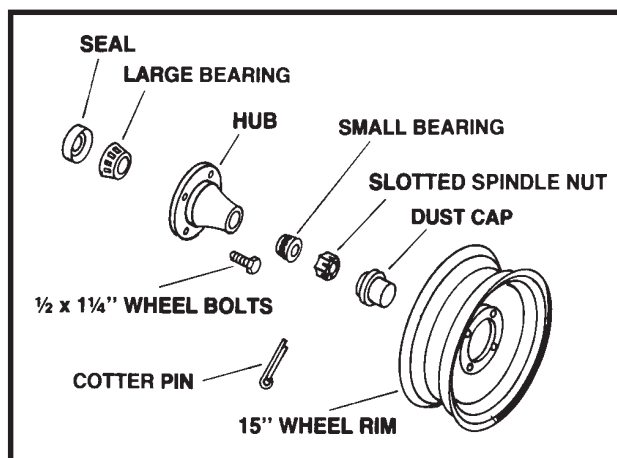


Figure No. 13

loader and a strong sling or chain, or block and tackle, as shown in **Figure No. 14**. Height should be sufficient to clear undercarriage assembly.

8. Place undercarriage beneath tube assembly, then position stabilizer braces (A) as shown in **Figure No. 15** and attach lower reach arms to bracket welded on lower end of auger tube with two $3/4"$ x $2"$ bolts and locknuts. **DO NOT OVERTIGHTEN**. Tighten snug only as these bolts act as pivot points.
9. Fasten flat braces (B) to first set of holes (furthest from intake) on stabilizer braces (A) with one

CAUTION



DO NOT REMOVE TUBE SUPPORT UNTIL ASSEMBLY AT END OF SECTION 3-4, PAGE 12 HAS BEEN COMPLETED.

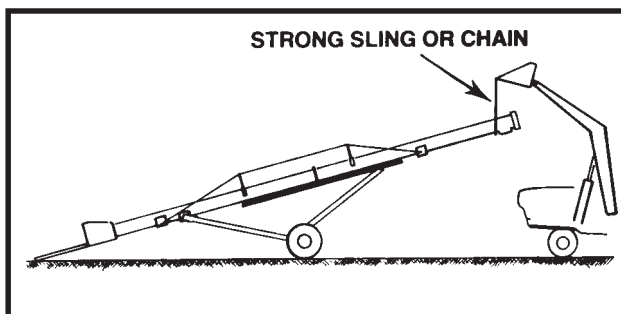


Figure No. 14

$7/16"$ x $1-3/4"$ bolt and locknut. Place one $7/16"$ x $1"$ bolt and locknut in other hole of stabilizer brace.

10. Attach upper lift arms to the roller trackshoe with one $3/4"$ x $6-1/2"$ bolt and locknut. **DO NOT OVERTIGHTEN**. Tighten snug only as this bolt acts as a pivot point.
11. Lower upper end of auger slowly until track shoe rests against upper trackstop.

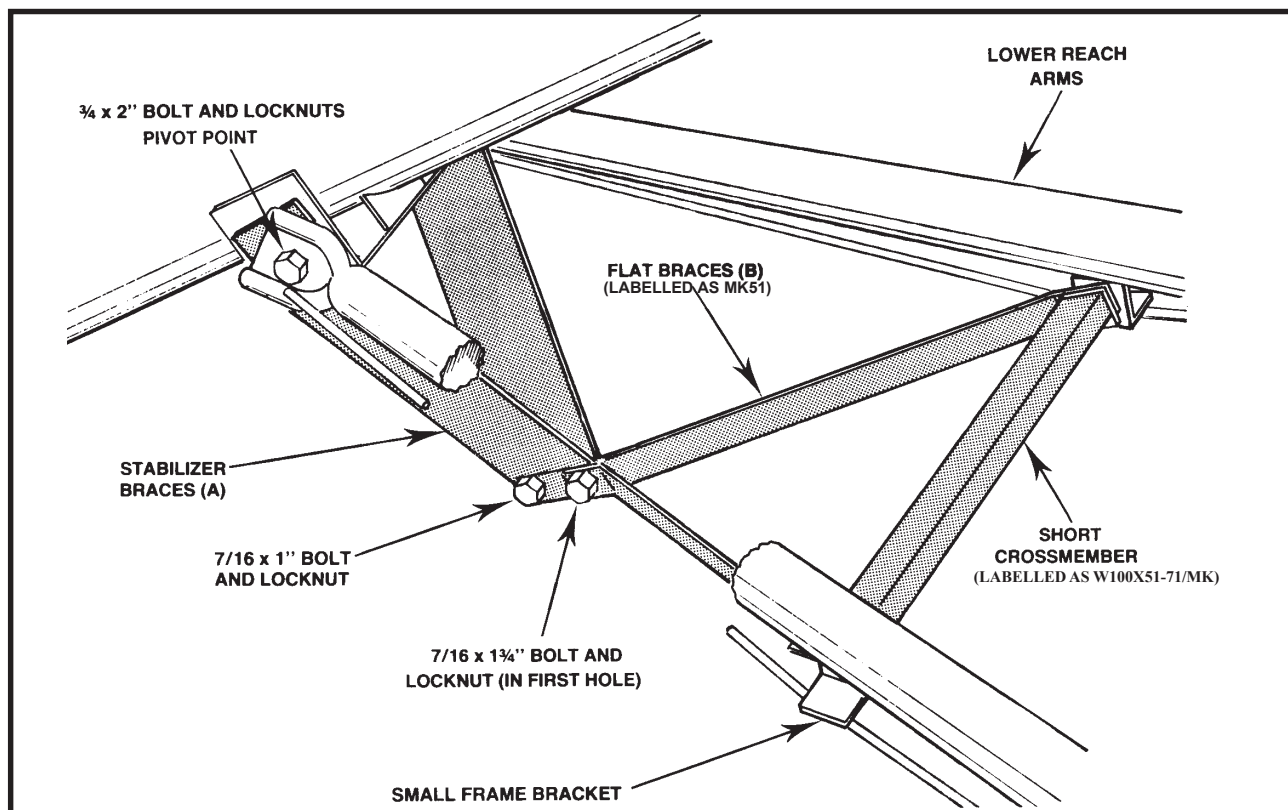


Figure No. 15

3-5. WINCH AND LIFT CABLE INSTALLATION

1. Attach cable to winch using one of the two methods shown, depending on winch supplied (see **Figure No. 16**). If Method 2 is used, the nut must be on the outside of the drum to prevent damaging cable. Have about one inch of cable extending past the clamp.

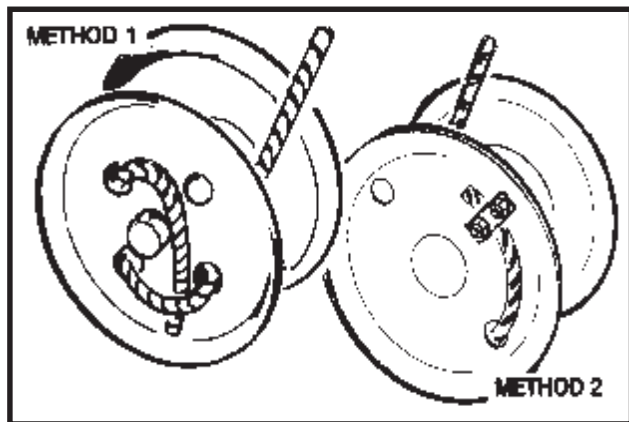


Figure No. 16

IMPORTANT

THE WINCH MUST HAVE A MINIMUM OF THREE WRAPS OF CABLE ON DRUM WHEN AUGER IS IN TRANSPORT POSITION.

2. Attach winch to winch mount with three 3/8" washer-locknuts (see **Figure No. 17**).

NOTE: Winch handle must be positioned to the left side of the auger as determined when standing at the intake end facing the discharge end.

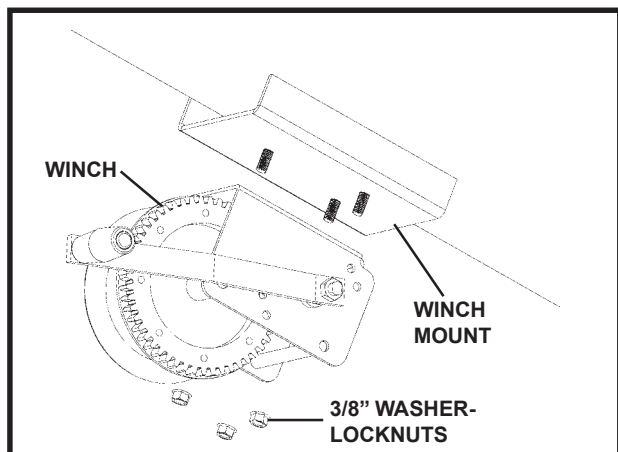


Figure No. 17

3. Attach lift cable anchor bracket to the mounting bracket on the lower tube with two 7/16" x 1" bolts and locknuts (see **Figure No. 19**).
4. Thread lift cable under and around roller on track shoe, then back to lift cable anchor bracket. The cable must be threaded between the lower trackstop and the auger tube.

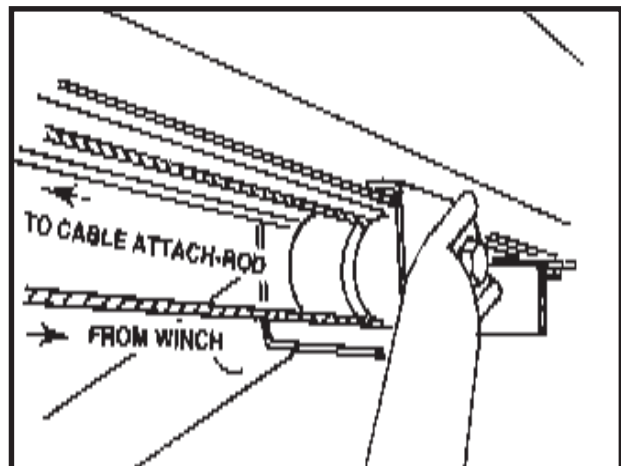


Figure No. 18

5. Wrap cable 1-1/2 times around the rod on the lift cable anchor bracket and secure with two 1/4" cable clamps. Position cable clamps as shown (see **Figures No. 19 and 20**). Tighten clamps **securely**.

NOTE: Make certain cable is properly seated in cable groove before raising auger.

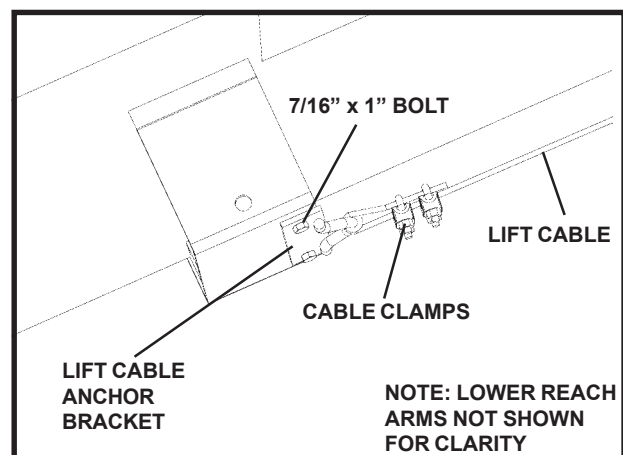


Figure No. 19

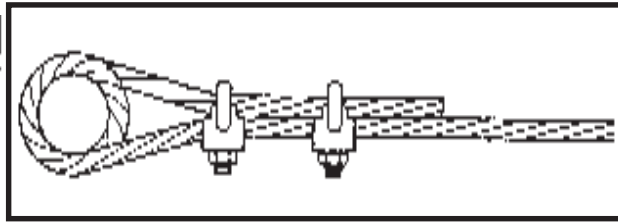


Figure No. 20

3-6. WINCH HANDLE ASSEMBLY

IMPORTANT

WINCH HANDLE MUST BE ASSEMBLED AS PER INSTRUCTIONS. FAILURE TO DO SO WILL RESULT IN SUDDEN WINCH FAILURE CAUSING DAMAGE TO EQUIPMENT AND/OR PERSONAL INJURY.

1. Slide handle over flat sides of input shaft.
2. Fasten with 1/2" - 13 Hex. locknut (see **Figure No. 21**).

NOTE: Do not remove or loosen the double locknut on input shaft as they are an important part of the brake system of the winch.

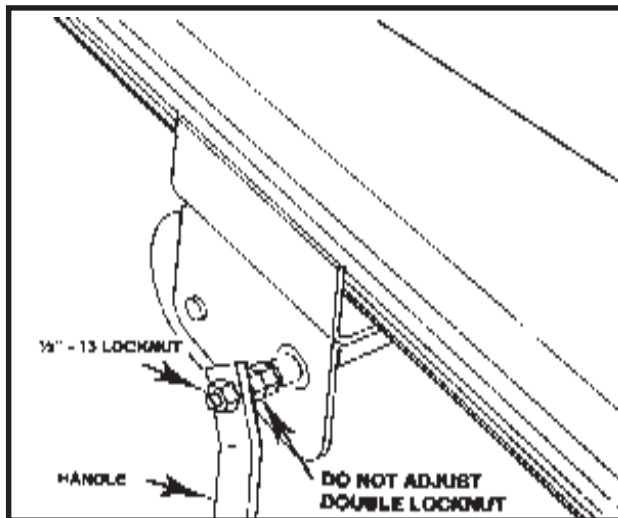


Figure No. 21

3-7. PTO (CV) DRIVELINE INSTALLATION

1. Clean PTO driveline and fighting shaft ends of any paint or dirt before assembly.
2. Slide plain end of PTO driveline onto fighting shaft. Make sure that the 5/16" dia. holes for the roll pin are lined up.

CAUTION



PROTECT YOUR EYES WHEN PERFORMING THIS OPERATION.

3. Carefully tap in 5/16" roll pin. Tighten setscrew.
4. Install sprocket shield on boot using four 5/16" x 3/4" bolts.
5. Slide PTO transport saddle through support strap on boot and rest PTO driveline in it until connected to tractor (see **Figure No. 22**).

CAUTION



NEVER USE A PTO DRIVELINE WITHOUT A ROTATING SHIELD IN GOOD WORKING ORDER.

DISCONNECT PTO DRIVELINE FROM TRACTOR DURING TRANSPORT AND PLACEMENT.

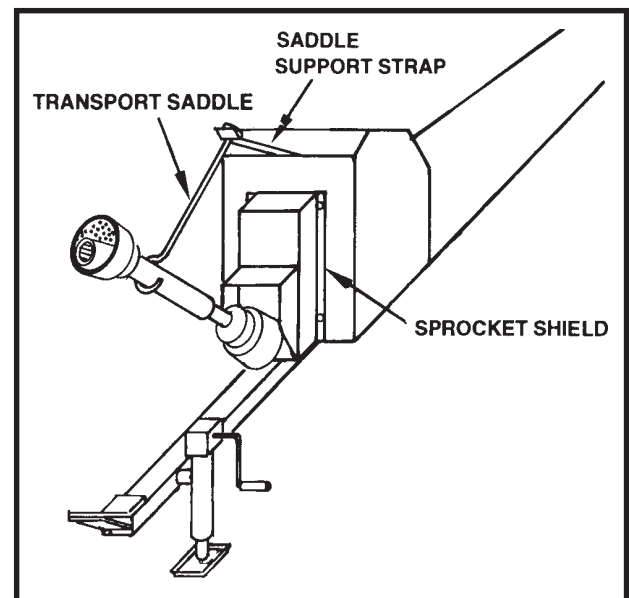


Figure No. 22

3-8. STANDARD INTAKE HOPPER ASSEMBLY

(See **Figure No. 23** and **24**)

NOTE: The gearbox has been filled at the factory (half full) with EP90 gear oil. Before further assembly, check oil level to make certain the gearbox is half full as required. Add oil if necessary. Do not use grease.

1. Remove access covers, then clean paint and dirt from flight shaft end. Insert Woodruff key into flight shaft end as shown in **Figure No. 23**.
2. Raise hopper tube to correct angle (22.5°), then bring hopper and tube section together, carefully sliding the flightshaft end with Woodruff key into the angle drive. Connect the hopper and tube section with eight, 7/16" x 1" bolts and locknuts.

IMPORTANT - TO PREVENT DAMAGE YOU MUST MAINTAIN CORRECT ANGLE WHEN INSERTING FLIGHT SHAFT END INTO ANGLE DRIVE UNTIL TUBE IS SECURED TO THE HOPPER SECTION. ALLOWING TUBE OR HOPPER TO DROP WILL BEND THE FLIGHT SHAFT END CAUSING IT TO BIND IN THE ANGLE DRIVE.

3. Thoroughly lubricate the angle drive, then replace access doors. Keep angle drive well lubricated. Use high temperature grease.

NOTE: After connecting the hopper and tube sections, check whether the angle drive is properly aligned. You should be able to rotate the hopper flight by hand if the angle drive is aligned. If it appears not to be aligned, see page 32 in the maintenance section for correct procedure. **THE ANGLE DRIVE WILL REQUIRE A BREAK-IN PERIOD OF AT LEAST 2 TO 3 LOADS.**

4. Clean wheel axles on hopper bottom of any paint and dirt.
5. Install the two wheels to hopper bottom with a washer and cotter pin each. (See **Figure No. 24**)
6. Install rubber extension on inside hopper lip with twenty 5/16" x 3/4" bolts and washer locknuts, eight long and two short flat iron straps with bow facing inward.

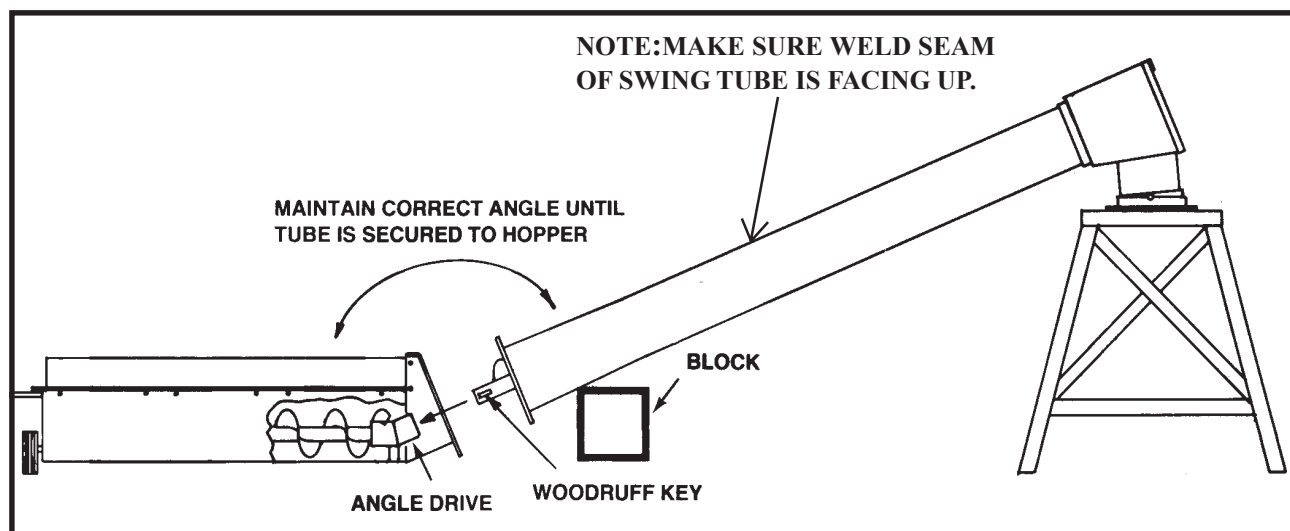


Figure No. 23

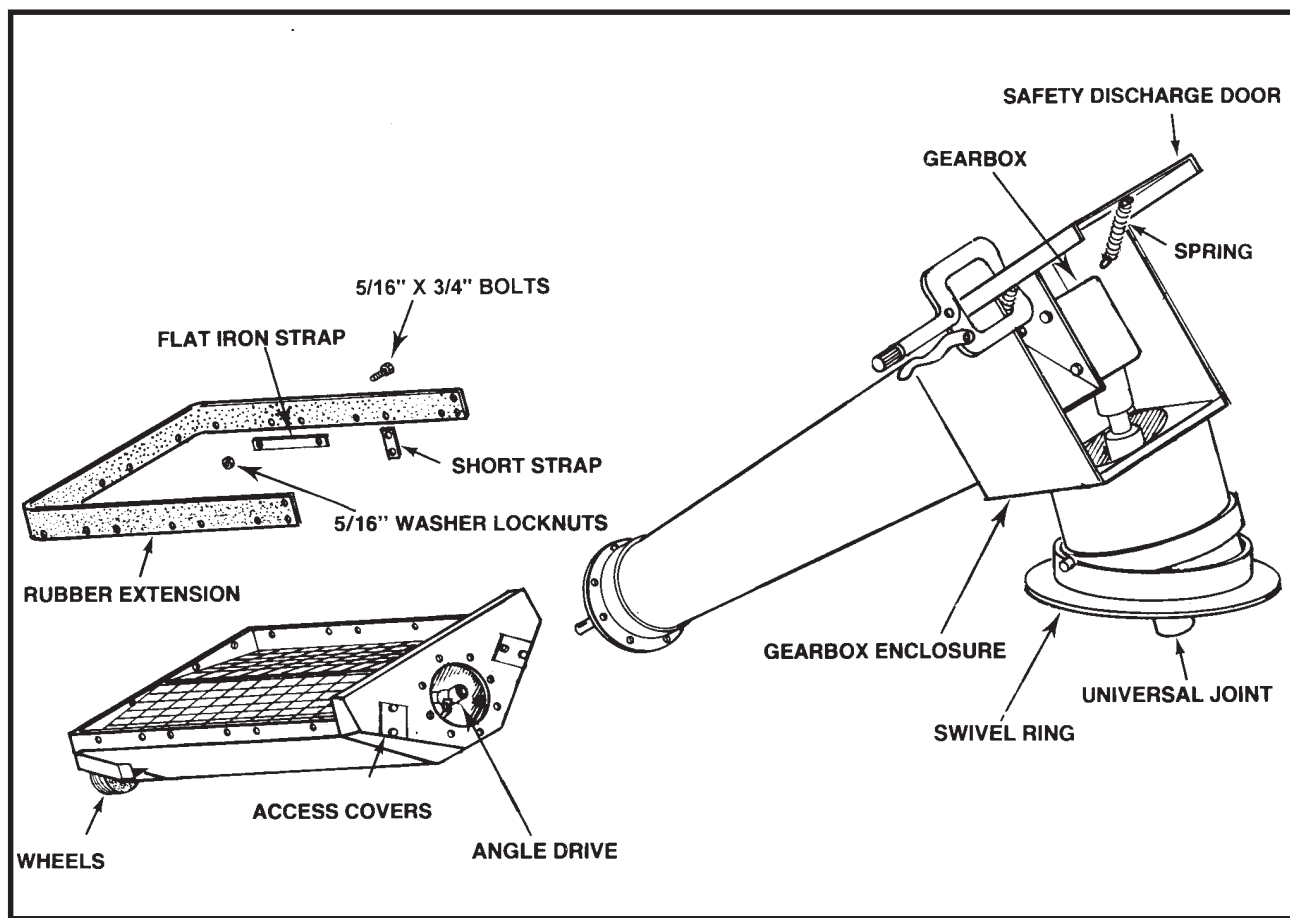


Figure No. 24

7. To connect the intake hopper to the auger boot, the safety discharge door must be opened. This door is held in place internally with two springs. To open, pull the door down and then up and over the gearbox enclosure. Hold open with a C-clamp vise grip.
8. Check that the u-joint spline and spline on lower gearbox are clean, then apply a light film of grease on splined shaft.
9. Slide wide rim 1-1/4" flat washer over splined shaft on lower gearbox as shown in **Figure No. 9, page 10**.
10. As the intake hopper is lowered onto the boot, the splined universal joint must be guided onto the splined shaft. Once positioned, swivel ring should be resting flat on the boot surface and inside the four spacer nuts.
11. Install four large washers with 3/8" x 3/4" bolts to keep the intake hopper in place on the boot (see

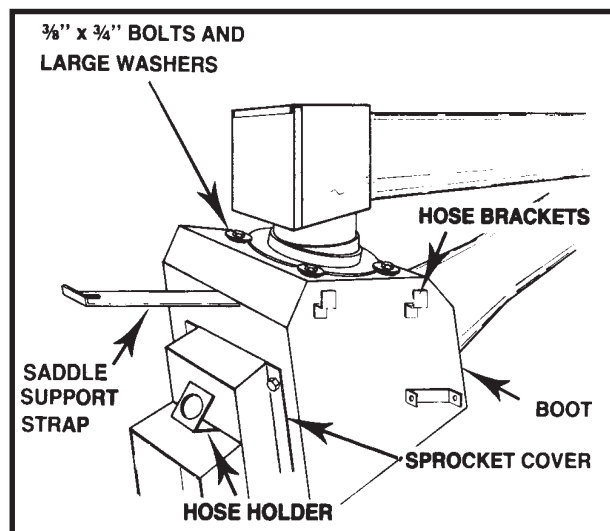


Figure No. 25

Figure No. 25).

12. Lubricate the universal joint and then close the safety discharge door.

KEEP IT CLOSED DURING OPERATION

3-9. HOPPER LIFT ARM/WINCH ASSEMBLY

1. After selecting side of hopper operation, secure the hopper lift arm assembly to mount bracket on top of lower auger tube as shown with two mount pins and hairpins.

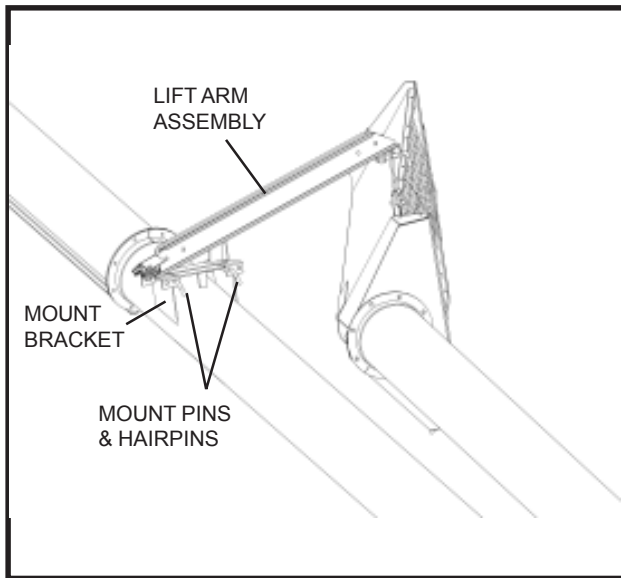


Figure No. 26

2. Thread cable through hopper lift arm assembly as shown and attach to winch (see **Figure No. 27**).

NOTE: Intake feed side of hopper must face away from main auger when in transport.

3. Install winch and winch bracket assembly to auger boot (opposite to side of hopper operation) with one saddle pin and a hair pin (see **Figure No. 28**).
4. To place hopper into transport, attach cable hook

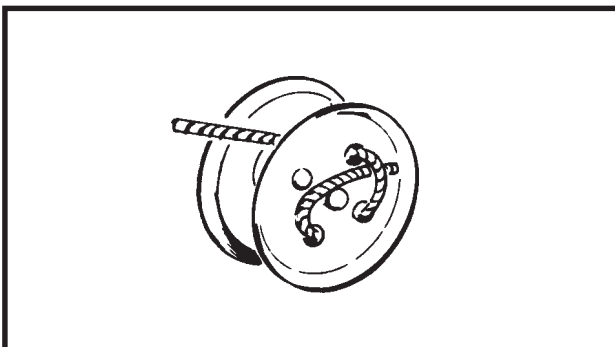


Figure No. 27

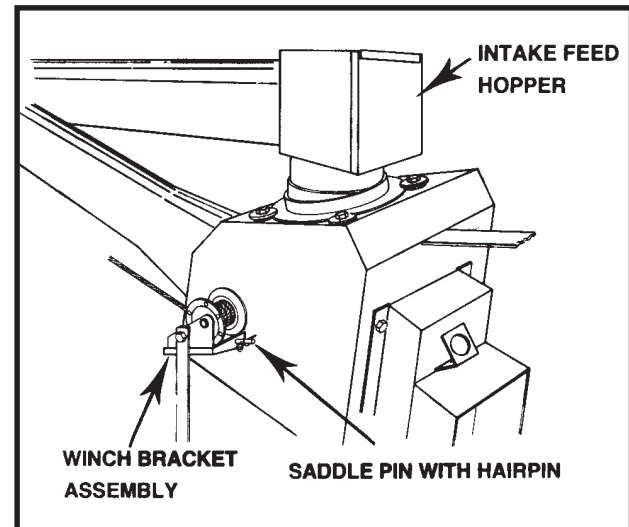


Figure No. 28

to the handle on the side of the hopper, then fully raise hopper with intake side facing away from the main auger as shown. Secure hopper to lift arm with the hopper lock and the saddle pins and hairpins provided (see **Figure No. 29**).

NOTE: To change side of intake feed hopper operation raise auger hitch with jack and disconnect tractor. Swing intake feed hopper to opposite side of auger. Reverse the position of the hopper lift arm assembly and move the winch to the other side of the boot (opposite intake feed hopper, see **Figure No. 26**). Reconnect to tractor.

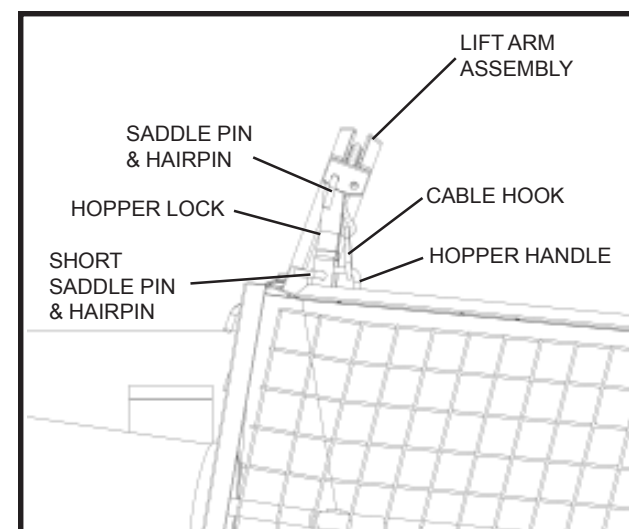


Figure No. 29

3-10. HITCH JACK INSTALLATION

Jack is attached to the auger by means of a pin at the pivot point. To install:

1. Elevate the auger boot (intake end) approximately 2 feet with a front-end loader and sling and install the jack in a vertical position and secure it with pin supplied.
2. Place a board beneath jack before setting it on the ground. Then lower auger until jack is seated. Remove front-end loader from auger.

NOTE: Jack can be rotated 90° for transport or operation.

CAUTION



JACK IS DESIGNED FOR RAISING OR LOWERING AUGER HITCH ONLY.

DO NOT GET ON OR BENEATH AUGER WHILE SUPPORTED BY OR WHILE JACK IS BEING OPERATED.

3-11. AUGER/TRACTOR HOOK UP

WARNING



AUGER MUST BE HOOKED UP TO TRACTOR FOR ALL OPERATIONS, INCLUDING TRANSPORT, RAISING, PLACEMENT AND AUGERING GRAIN.

DISCONNECT PTO DRIVELINE FROM TRACTOR FOR TRANSPORT AND PLACEMENT.

PTO DRIVELINE / DRAWBAR

The final stage of the MK assembly is attaching the auger to the tractor. Since the auger and tractor become an integral unit during transport, placement and operation, the configuration of and measurements between the tractor drawbar and the tractor PTO driveline become very important.

Figure No. 32 illustrates the ideal measurements. Most tractors fall into this range. Please note that dimension (B) may range from 6 to 10 inches with 8 inches being ideal. If dimensions (A) and (B) on your tractor are as shown, then dimension (C), which is critical, will be correct. Should (A) and (B) vary on your tractor from the recommended dimensions, consult Table I for potential problems and their solutions.

NOTE: Disconnect PTO driveline from tractor for transport and placement (See **Figure No. 30**).

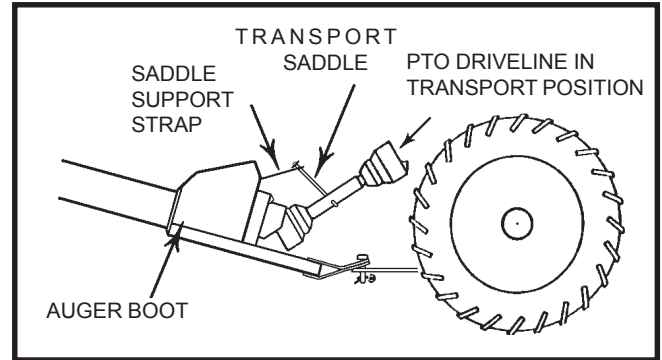


Figure No. 30

HITCH PIN

When attaching the MK auger to your tractor, you must leave space between the bottom of the tractor drawbar and the top of the securing device on the hitch pin.

Note that the securing device may be two nuts locked against each other or a washer and sturdy hair pin. The space should be about 3/4" to 1" as shown in **Figure No. 31**.

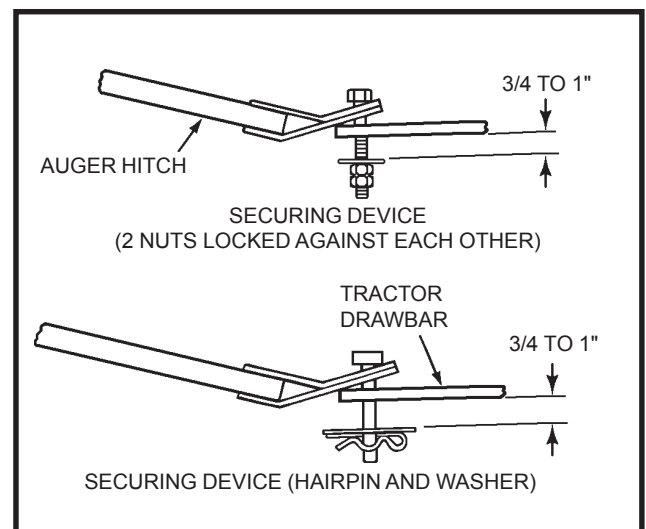
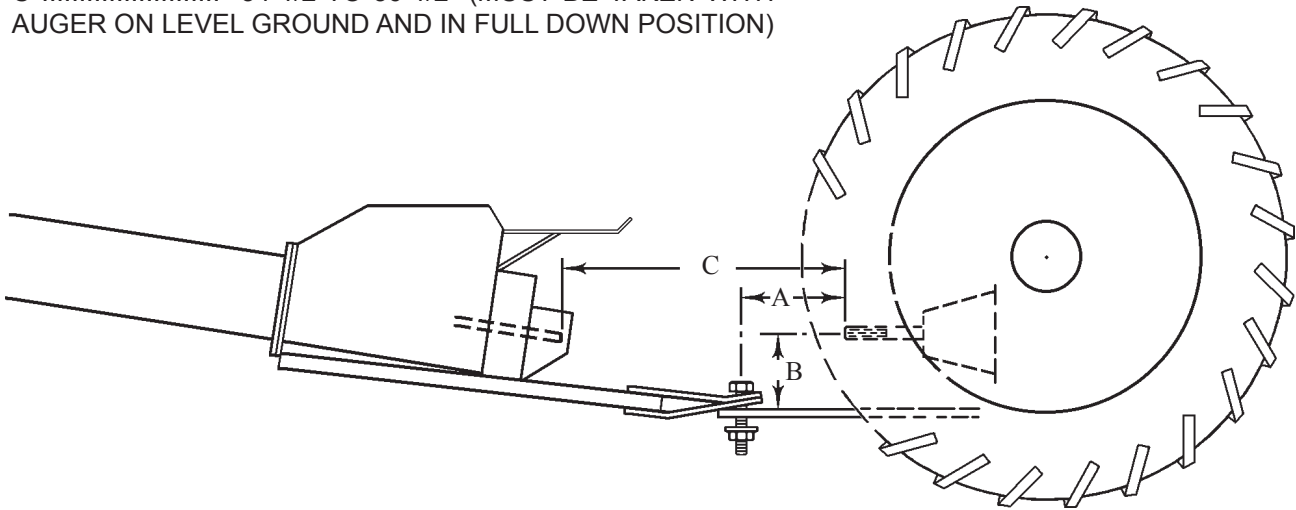


Figure No. 31

- A 14"
 B 6 TO 10"
 C 34-1/2 TO 36-1/2" (MUST BE TAKEN WITH
 AUGER ON LEVEL GROUND AND IN FULL DOWN POSITION)



RAISE TRACTOR DRAWBAR IF NECESSARY
 TO MAINTAIN (B) DIMENSION OF 6 TO 10".

Figure No. 32

NOTE: Disconnect PTO driveline from tractor for transport and placement.

TABLE I (See Figure No. 32)	
PROBLEM	SOLUTION
If (A) is shorter than 14 inches, dimension (C) will be less than the recommended 34-1/2" to 36-1/2". This will allow the PTO driveline to bottom out when auger is in raised position. This will cause damage to the PTO driveline, the bearing or the boot housing.	Pull out or lengthen the tractor drawbar as needed to make (C) the correct distance of 34-1/2 to 36-1/2 inches with auger in full down position.
If (A) is longer than 14 inches dimension (C) may be more than the recommended 34-1/2" to 36-1/2". This will allow the PTO driveline to separate from auger in lowered position. This will cause damage to equipment and/or injury to personnel.	Shorten the distance (C) to the recommended 34-1/2" to 36-1/2" by attaching hitch to the tractor drawbar at a point closer to the tractor PTO shaft.
If (B) is more than 10": The angle of the u-joints on the PTO driveline becomes too severe in the raised position. Distance (C) between the tractor PTO shaft and the auger input shaft shortens more quickly when the auger is being raised. This will allow the PTO driveline to bottom out before auger is fully raised and will cause damage to the PTO driveline, the flight shaft, the bearing and the boot.	Raise the tractor drawbar until dimension (B) is within the recommended 6" to 10".

3-12. OPTIONAL LOW PROFILE HOPPER ASSEMBLY

NOTE: The gearbox has been filled at the factory (half full) with EP90 gear oil. Before further assembly, check oil level to make certain the gearbox is half full as required. Add oil if necessary. Do not use grease.

1. Attach the pivot-connector to appropriate MK100 holes in hopper with two 5/8" x 1-1/2" bolts and locknuts (see **Figure No. 34**). DO NOT OVERTIGHTEN, tighten snug only as these bolts act as pivot points.
2. Loosely secure the service door with the two square latch-washers and 3/8" locknuts.

NOTE: These must be tightened securely after hopper assembly is completed.

3. Clean dirt and paint from inside u-joint and flight shaft end, then insert Woodruff key.
4. Raise and support hopper tube at about 50" under spout. Open service door on hopper, then bring tube and hopper together guiding flight shaft into u-joint. (See **Figure No. 33**)
5. Secure tube to pivot-connector on hopper with 7/16" x 1" bolts and locknuts.
6. Tighten setscrews on u-joints, then close and secure the service door.
7. Attach the two piece rubber extension to inside of hopper lip with 5/16" x 3/4" bolts and washer locknuts and flat iron straps provided plus the two piece extension connector plates. (See **Figure No. 34**)

NOTE: To attach the rubber extension to end of hopper, remove the two 5/16" washer locknuts that secure the chain drive shield.

8. Attach the four pneumatic wheels to the four hopper corners with the axle pins and hairpins. The offset portion of the wheel must rest against the hopper. You have a choice of three height settings. (See **Figure No. 34**)
9. To connect the intake hopper to the auger boot, the safety discharge door must be opened. This door is held in place internally with two springs. To open, pull the door down and then up and over the gearbox enclosure. Hold open with C-clamp vise grip.
10. Place wide rim 1-1/4" washer shield over splined shaft on lower gear box. Check that the u-joint spline and splined shaft on lower gear box are clean, then apply a light film of grease on this splined shaft.
11. As the intake hopper is lowered onto the boot, the splined universal joint must be guided onto the splined shaft. Once positioned, swivel ring should be resting flat on the boot surface and inside the four spacer nuts.
12. Install four large washers with 3/8" x 3/4" bolts to keep the intake hopper in place on the boot. (See **Figure No. 35**)
13. Lubricate the universal joint and then close the safety discharge door. **KEEP IT CLOSED DURING OPERATION.**

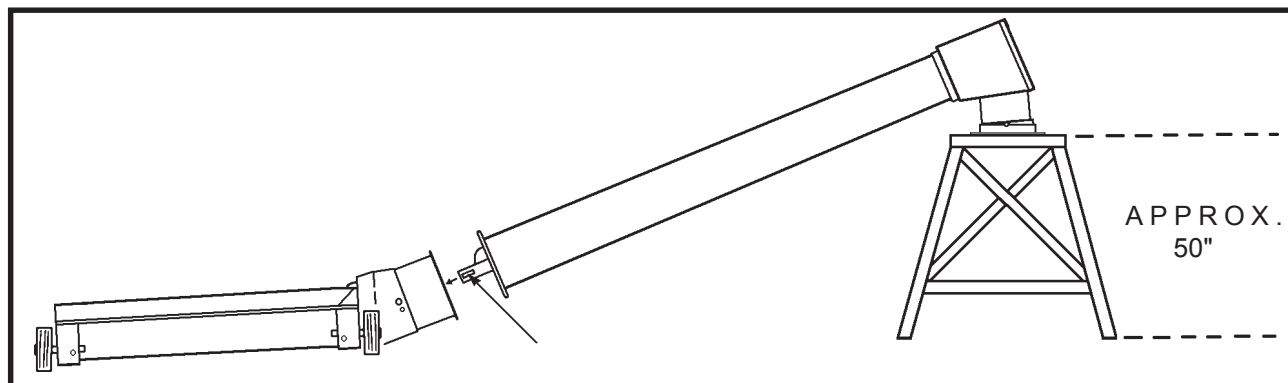


Figure No. 33

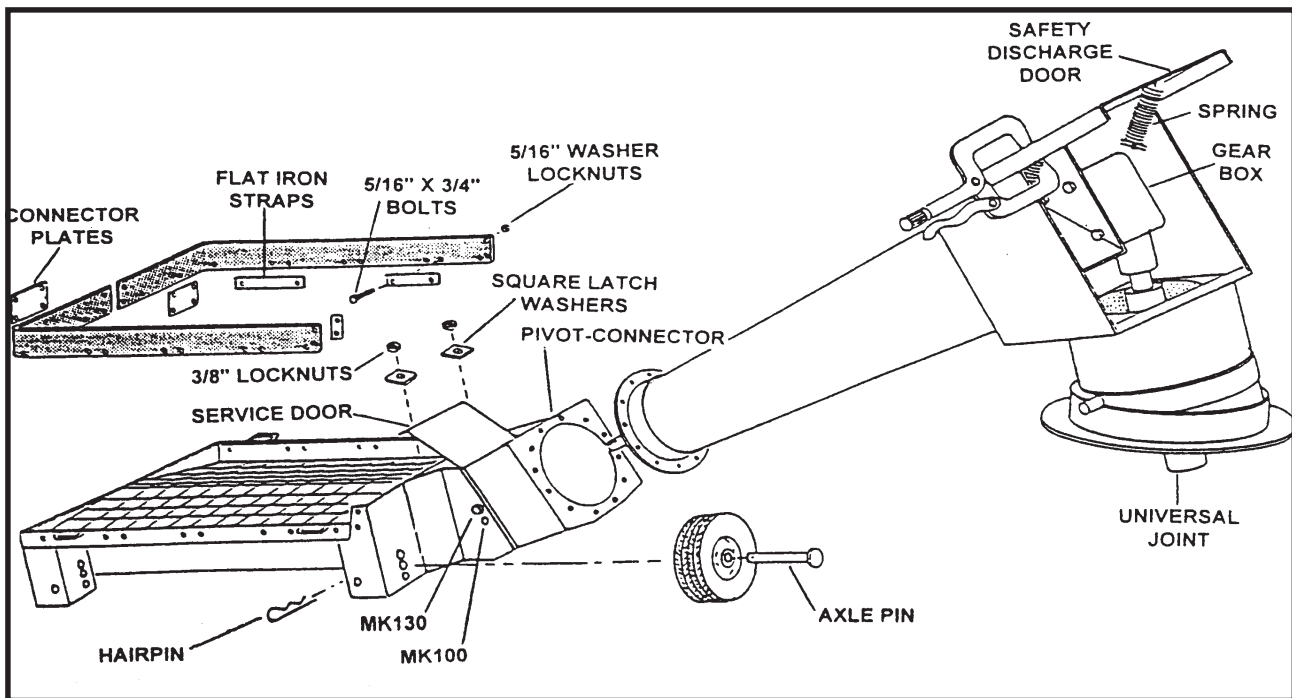


Figure No. 34

DANGER

ROTATING FLIGHTING INSIDE.

DO NOT OPERATE AUGER WITH THE SERVICE OR CLEANOUT DOOR OPEN OR UNLATCHED.



SHUT OFF AND LOCKOUT POWER TO ADJUST, SERVICE OR CLEAN.

USE STICK OR OTHER TOOL TO CLEAN OUT. FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

3-13. LOW PROFILE HOPPER LIFT ARM ASSEMBLY

NOTE: The low profile hopper requires a different lift arm mounting point. This is achieved by using a clamp-on mount on the upper tube.

1. Place the clamp-on hopper lift arm mount on the upper tube.
2. Attach the two bands to the lift arm mount using four 7/16" x 1-1/4" bolts and locknuts (see **Figure No. 36**).

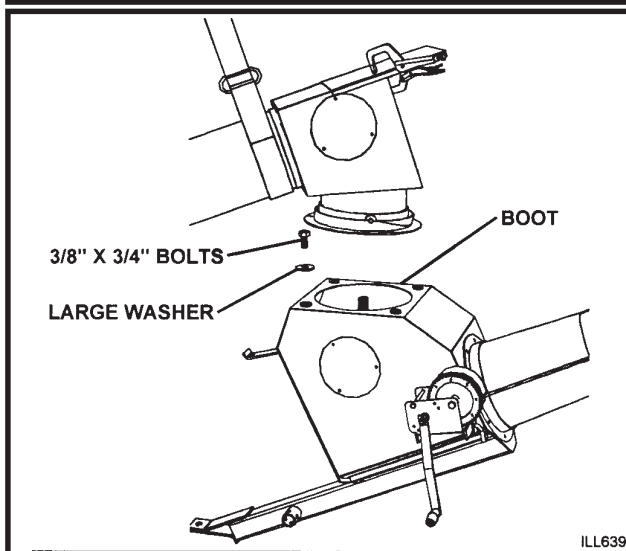


Figure No. 35

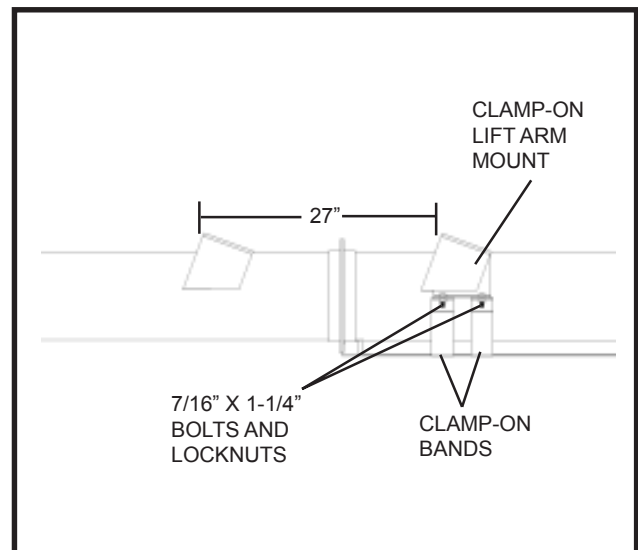


Figure No. 36

3. Position the clamp-on mount a distance of 27" from the standard hopper lift arm mount located on the lower tube and tighten all bolts (see **Figure No. 36**).
4. Attach the hopper lift arm to the clamp-on mount as described in **Section 3.9 on page 18**.

3-14. PLASTIC MANUAL HOLDER INSTALLATION

Before beginning this installation, ensure that all winch / auger lift controls are locked in place. Tractor should be shut down and locked out (where applicable).

1. Locate the best place on your auger for the installation of the manual holder. We suggest attaching the holder onto the lower frame arms, as shown in **Figure No. 37**. The manual holder should be accessible at all times, regardless of frame position (up or down).
2. Orient the manual holder so that the cap is facing up (towards the intake end), as shown. Using the plastic zip ties supplied, attach the manual holder onto the lower reach arms. Tighten the zip ties, securing the holder in place.

NOTE: Where possible, attach the zip ties around a frame brace tab, to prevent the manual holder from slipping down the lower frame arms.

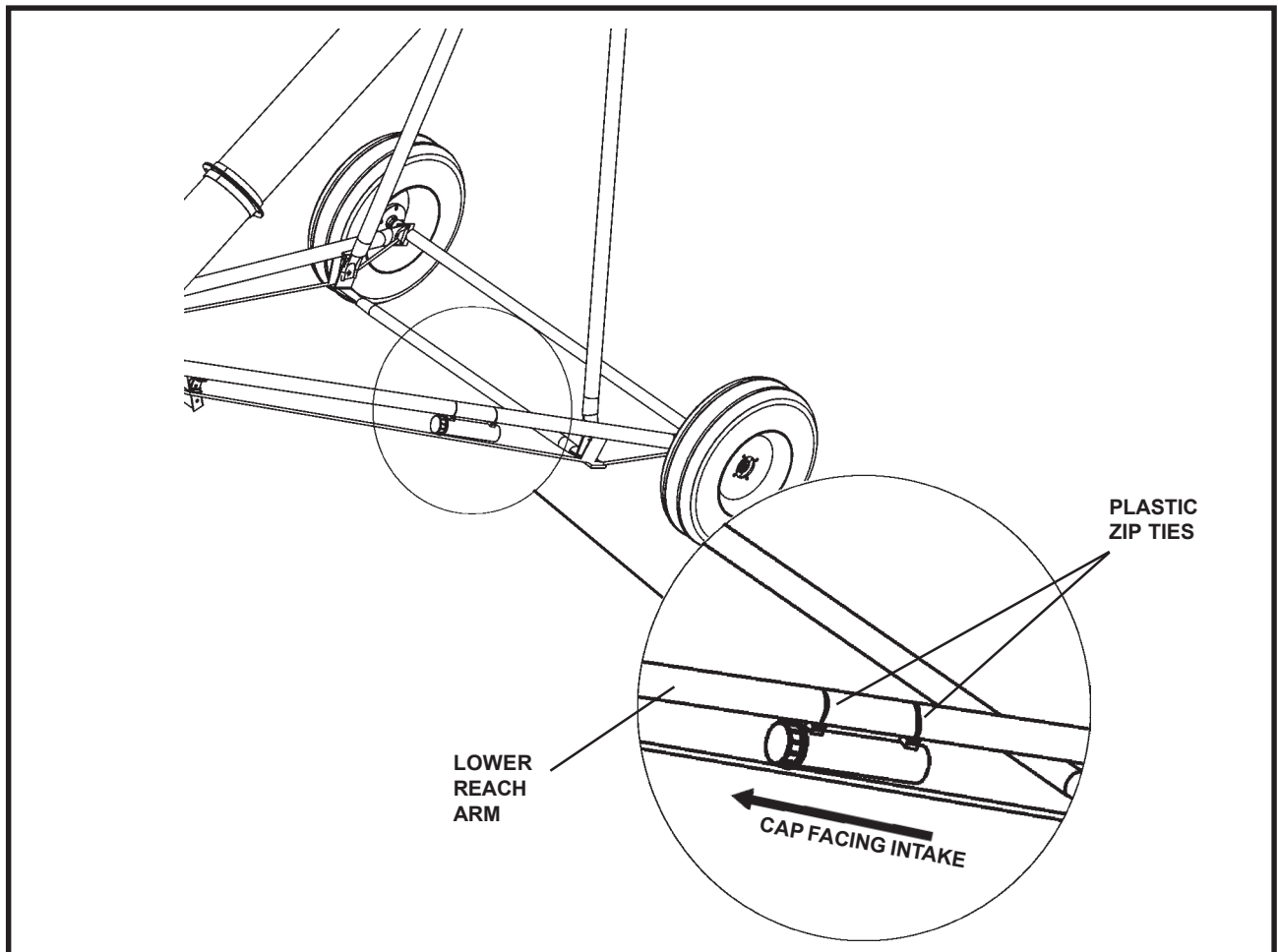


Figure No. 37

4. Transport

The MK100-36 Grain Auger is designed to be transported and/or operated without unhitching unit from tractor. We strongly advise that all safety precautions be observed before transporting auger.

CAUTION



KEEP CHILDREN AND ALL UNAUTHORIZED PERSONNEL AWAY.

ATTACH A SMV SIGN BEFORE TRANSPORTING AUGER ON A PUBLIC ROAD.

DO NOT TOW FASTER THAN 15 MPH (24KM/H).

USE EXTREME CAUTION IN TURNING AND CORNERING.

DO NOT TOW AUGER ON SLOPES GREATER THAN 20 DEGREES.

DO NOT ALLOW PERSONS TO RIDE ON THE AUGER WHEN IT IS BEING TRANSPORTED. (See Figure No. 2)

ALWAYS TOW AUGER IN THE LOWERED POSITION.

DISCONNECT PTO DRIVELINE FROM TRACTOR FOR TRANSPORT AND PLACEMENT.

2. Make certain that the hitch pin and safety chain are in place and secure. Place safety chain through clevis welded to auger hitch tube and bolt together before attaching to tractor (see **Figure No. 38**).

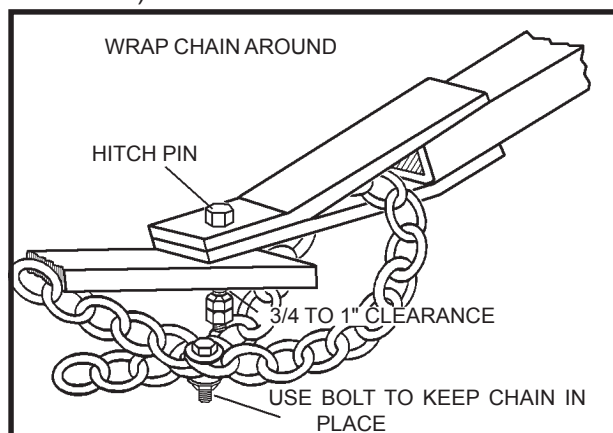


Figure No. 38

3. Ensure that the intake feed hopper is raised into transport position and secured with hopper lock in place with saddle pins and hairpins (see **Figures No. 39 and No. 29**). **DO NOT OPERATE AUGER WITH INTAKE HOPPER IN TRANSPORT POSITION. THIS WILL DAMAGE THE U-JOINT.**
4. Ensure that the swivel jack (on side of hitch) is in transport position and locked.

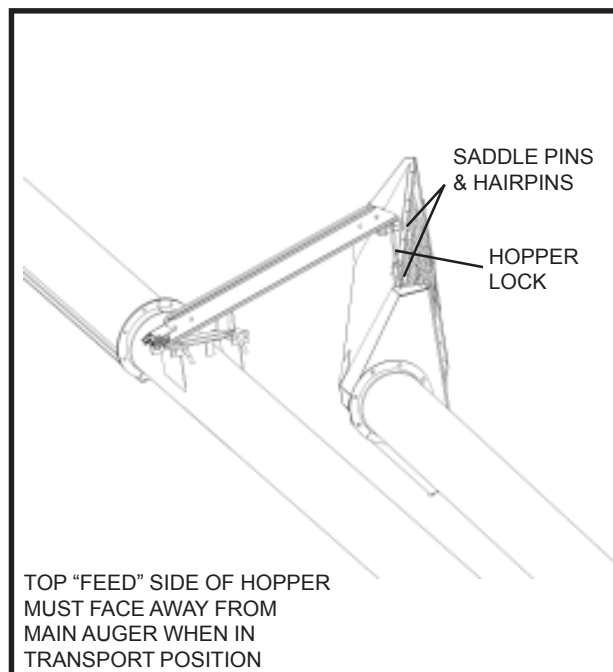


Figure No. 39

4-1. PRE-TRANSPORT CHECKLIST

Before transporting auger, ensure that:

1. Auger is in full down-position with PTO driveline disconnected from tractor. The roller trackshoe should be seated against the upper trackstop with slight tension on the lift cable.

IMPORTANT

WINCH MUST BE IN LOCKED POSITION. TO LOCK, TURN HANDLE CLOCKWISE UNTIL TWO CLICKS ARE HEARD. CHECK LIFT CABLE BEFORE EACH USE. REPLACE IF FRAYED OR DAMAGED.

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

INTAKE FEED SIDE OF HOPPER MUST FACE AWAY FROM MAIN AUGER WHEN IN TRANSPORT (see **Figure No. 39**).

4-2. TRANSPORT PROCEDURE

When transporting the auger, remember to:

1. Ensure that all unauthorized personnel are clear of transport zone. (See **Figure No. 2** on page 5)
2. Be alert to overhead obstructions and electrical wires and devices. The MK1036 auger has a minimum clearance of 12'0" (3.66 m), with auger

DANGER



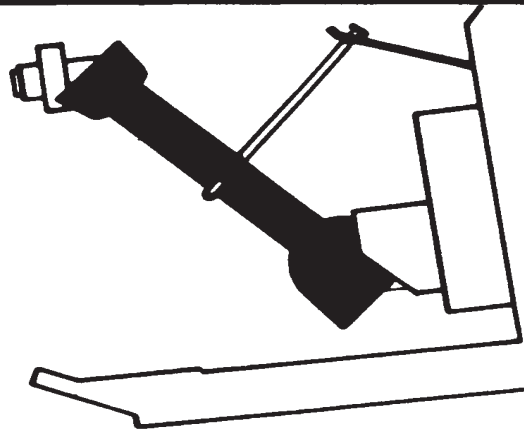
ELECTROCUTION HAZARD.

THIS MACHINE IS NOT INSULATED. KEEP AWAY FROM OVERHEAD WIRES AND DEVICES. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT.

FAILURE TO MAINTAIN PROPER CLEARANCE WILL RESULT IN SERIOUS INJURY OR DEATH.



IMPORTANT



Disconnect PTO driveline from tractor to position or transport auger OR driveline will bottom out severely damaging the CV u-joint and lower flight shaft.

See manual for maintenance.

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hitch at 16".

3. Do not transport auger at speeds greater than 15 mph (24 km/h).
4. Observe all regulations concerning marking, towing, and maximum width.
5. Equip the auger with the necessary lights where required by law.
6. Do not transport auger on slopes greater than 20 degrees.
7. Use extreme caution in turning and cornering when towing auger.

5. Placement

Before moving auger into position for operation, ensure that all safety precautions and placement procedures are observed.

CAUTION



KEEP CHILDREN AND ALL UN-AUTHORIZED PERSONNEL AWAY.

ENSURE THAT AREA IS CLEAR BEFORE RAISING OR LOWERING AUGER.

DO NOT ATTEMPT TO MOVE AUGER BY HAND.

ALWAYS CHOCK WHEELS AFTER POSITIONING AUGER FOR OPERATION.

5-1. PRE-PLACEMENT PROCEDURE

Before positioning the auger for operation, the following steps are recommended:

1. Ensure that the towing hitch is in place and secured.

PTO driveline must be disconnected from tractor for placement.

NOTE: *We recommend that a type of hitch pin be used that will not allow auger to separate from tractor (see Figure No. 31). Hitch pin must have proper clearance.*

2. Ensure that the auger is on reasonably level ground when raising or lowering or when positioning.

WARNING



AUGER MUST BE HOOKED UP TO TRACTOR FOR ALL OPERATIONS, INCLUDING TRANSPORT, RAISING, PLACEMENT, AND AUGERING GRAIN.

NEVER ATTEMPT TO MOVE AUGER MANUALLY. TO DO SO WILL RESULT IN SERIOUS INJURY.

IMPORTANT

AUGER COULD TOPPLE IF GROUND IS TOO UNEVEN, DAMAGING EQUIPMENT AND/OR CAUSING INJURY.

3. Before raising or positioning auger, make sure that entire area in line of travel, both on the ground and overhead, is clear of any obstructions or electrical wires.
4. Disconnect PTO driveline from tractor and secure in transport saddle.

If the auger must be raised for positioning, the procedure is as follows:

DANGER



WATCH FOR OVERHEAD ELECTRICAL WIRES. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. FAILURE TO HEED THIS WARNING WILL RESULT IN SERIOUS INJURY OR DEATH.

IMPORTANT

WHEELS MUST BE FREE TO MOVE WHEN RAISING OR LOWERING AUGER.

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.*

1. Check that the area above and around auger is clear.
2. Raise auger to the desired height by turning the winch handle clockwise.

IMPORTANT

DO NOT TURN WINCH HANDLE COUNTER-CLOCKWISE, EXCEPT WHEN LOWERING AUGER, OR SEVERE DAMAGE TO WINCH WILL OCCUR.

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

5-2. PLACEMENT PROCEDURE

1. Move the auger into working position slowly, making sure that all persons are clear of the hazard zone (see **Figure No. 1** on page 4). DO NOT UNHITCH AND ATTEMPT TO MOVE THE AUGER BY HAND.

IMPORTANT

WHEN POSITIONING THE MK AUGER, THE PTO DRIVELINE MUST BE DISCONNECTED FROM THE TRACTOR AND PLACED IN THE TRANSPORT SADDLE TO PREVENT DAMAGE TO AUGER AND PTO DRIVELINE. (See **Figure No. 29** on page 18)

2. Once auger is in position, wheels should be chocked on both sides as well as applying the park brake on tractor (or chocking it's wheels) to prevent movement during operation.
3. Fully lower hopper to the ground and remove lift cable from the hopper.
4. See **Section 6-7** for correct lowering procedure.

WARNING



NEVER ATTEMPT TO INCREASE HEIGHT OF AUGER BY POSITIONING WHEELS ON LUMBER, BLOCKS, OR BY ANY OTHER MEANS. TO DO SO WILL RESULT IN DAMAGE TO EQUIPMENT AND/OR 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.*

CAUTION



DO NOT USE AUGER AS A HOIST TO RAISE ANY OBJECT REGARDLESS OF WEIGHT. THIS WILL CREATE AN UNSAFE CONDITION AND WILL VOID WARRANTY.

6. Operation

The MK100-36 auger requires that operators follow the checklist before each start-up and that safety procedures are observed at all times. To do otherwise is endangering life and limb, and is a misuse of the equipment.

CAUTION

KEEP ALL CHILDREN AND UNAUTHORIZED PERSONNEL CLEAR OF WORK AREA. (See Figure No. 1)

DO NOT OPERATE AUGER WITH ANY SAFETY SHIELDS REMOVED.



DO NOT OPERATE AUGER WITH ANY SERVICE, CLEAN-OUT OR ACCESS DOOR OPEN OR UNLATCHED OR WITH SAFETY DISCHARGE DOOR OPEN.

ALWAYS HAVE ANOTHER PERSON NEARBY TO SHUT DOWN AUGER IN CASE OF ACCIDENT.

WEAR HEARING PROTECTION DURING OPERATION.

KEEP BODY, HAIR AND CLOTHING AWAY FROM ANY MOVING PARTS.

SHUT DOWN AND LOCK OUT ALL POWER BEFORE SERVICING, CLEANING, OR ADJUSTING AUGER.

- All safety shields are in place and secure.
- Tube alignment is reasonably straight.
- Intake hopper and discharge spout are free of obstructions.
- Auger wheels are chocked and tractor wheels are chocked or parking brake is applied.
- A second qualified person is present during operation.
- Operators are aware of safety precautions.
- Proper maintenance is performed.
- Tractor and auger are in line or as close to being in line as possible.

6-2. AUGER DRIVE AND LOCKOUT

A: PTO Driveline

1. Ensure that the PTO driveline is securely attached to the fighting shaft and to the tractor.
2. Do not use a PTO driveline without a rotating shield that is in good working order.
3. Be certain that safety shields are in place and secure on tractor and auger.
4. The maximum operating length of the PTO driveline from end to end is 40-5/8". Do not exceed this length.

NOTE: *If shearbolt in the PTO driveline fails, shutdown and lock out tractor to replace bolt.*

MK100 uses a 5/16" x 1" grade 8 bolt — through shank shear (as per drawing)



6-1. PRE-OPERATIONAL CHECKLIST

Before operating auger for the first time, and each time thereafter, the operator must follow the checklist, which should confirm the following:

- All fasteners are secured as per assembly instructions.
- Lift cable is not frayed or damaged.
- Lift cable is properly seated in track roller.
- Cable clamps are secure.
- PTO driveline is connected and secure.
- PTO driveline shield rotates freely.
- Clean-out and service doors and access covers are in place and secure and safety discharge door is closed.

5. Be sure the PTO drive on tractor is in the OFF position before starting the tractor.
6. Stay clear of the PTO hazard area. (See **Figure No. 1** on page 4)

Lockout and/or Shutdown

1. Shut off engine and remove ignition key or coil wire from tractor.
2. If step 1 is not possible, remove PTO driveline from tractor.

6-3. START UP AND BREAK IN

Start up and break in procedure for the MK100-36 auger is as follows:

NOTE: *The angle drive requires a break-in period of at least 2 or 3 loads of grain.*

1. Ensure that you have completed the pre-operational checklist in **Section 6-1**.
2. If everything is satisfactory, prepare for a 60 minute operation at half speed.
3. Ensure that the intake hopper is correctly positioned.
4. Ensure that the PTO drive on the tractor is in the OFF position.


IMPORTANT

WHEN STARTING AUGER FOR THE FIRST TIME, BE PREPARED FOR AN EMERGENCY SHUTDOWN IN CASE OF EXCESSIVE VIBRATION OR NOISE. NOTE THAT THE AUGER MAY RUN ROUGH UNTIL TUBE IS POLISHED.

5. Start tractor and **idle at low RPM**. Slowly engage PTO drive.
6. Gradually begin feeding grain into hopper bringing auger speed up to about 300 RPM. Do not overfeed the hopper on initial loads, keep feed of grain at about half capacity. After auger tube is polished and runs fairly smoothly, proceed to unload at full speed of 540 RPM.
7. Upon completion of initial run, **slow auger down** until empty of grain and stop.
8. Lock out tractor and conduct a complete inspection of auger following the checklist in **Section 6-1**.
9. After the initial start-up and inspection, auger should be shut down and inspected at least three more times during the first ten hours of operation.
10. Once auger is broken in, the checklist should be a part of the daily routine before operating the auger.
11. Do not run empty auger at high speed, as this results in excessive wear.

After Break-in: Maintain auger speed of 300 to 540 RPM under normal use for maximum efficiency and to reduce chance of plugging.

CAUTION



DO NOT START AUGER UNTIL AREA IS CLEAR OF ALL UNAUTHORIZED PERSONNEL. ALWAYS WORK WITH A SECOND PERSON DURING OPERATIONS.

BE ALERT

AUGER MUST BE HOOKED UP TO TRACTOR FOR ALL OPERATIONS, INCLUDING TRANSPORT, RAISING, PLACEMENT AND AUGERING OF GRAIN. DISCONNECT PTO DRIVELINE FROM TRACTOR FOR TRANSPORT AND PLACEMENT.

6-4. FULL LOAD PROCEDURES

For normal auger operations, the following procedure and safety precautions are strongly recommended.

1. Observe the work area hazard zone (see **Figure No. 1** on page 4).
2. When operating the auger, always work with a second person in a position to monitor the operation and initiate a shutdown in case of emergency.
3. Monitor the auger during the actual operation for abnormal noises or vibrations.
4. Shut off all power before making adjustments, servicing, or cleaning machine.

CAUTION

MAKE CERTAIN EVERYONE IS CLEAR BEFORE OPERATING MACHINE.

KEEP ALL SAFETY SHIELDS AND DEVICES IN PLACE AND SECURE.



BE ALERT

KEEP HANDS, FEET, HAIR AND CLOTHING AWAY FROM MOVING PARTS.

DO NOT EXCEED 540 RPM ON THE PTO

DO NOT REMOVE OR OPEN CLEANOUT DOORS WHILE AUGER IS IN OPERATION. DO NOT OPERATE IF CLEANOUT DOORS ARE REMOVED.

NOTE: Reduce volume of feed to intake hopper should grain overflow through safety discharge door. This indicates the main auger is loaded beyond its capacity. Auger capacity will decrease at steeper elevations.

NOTE: Engage and disengage PTO drive with tractor engine at idle speed. This will reduce stress on drive components and on shear bolts.

WARNING



BE ALERT

KEEP SAFETY DISCHARGE DOOR IN PLACE WHILE OPERATING AUGER. FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

6-5. NORMAL/EMERGENCY SHUTDOWN

The steps for a **normal shutdown** are:

1. Near the end of a load, **decrease** auger speed until all grain is clear of machine.
2. When auger is clear of grain, disengage PTO drive.
3. Shut down and lock out tractor.

In the event of an intermittent or **emergency shutdown**, restart as follows:

1. If auger is full of grain, do not restart at full speed. Engage PTO at low RPM, gradually increasing power until normal operating speed is reached.

IMPORTANT

STARTING THE AUGER UNDER LOAD MAY RESULT IN DAMAGE TO UNIT BE SURE THERE IS NO BLOCKAGE.

2. If the auger is shut down for an emergency, lock out tractor before correcting problem. If the problem is plugging, clear as much of the grain as possible, using a piece of wood, vacuum cleaner or other tool (not your hands), before restarting auger. **DO NOT REACH IN AND USE YOUR HANDS.** (See **Section 6-2** for lockout procedure)

IMPORTANT

IF CLEAN OUT COVERS OR SAFETY DOORS HAVE BEEN OPENED OR REMOVED, CLOSE OR REPLACE THEM BEFORE RESTARTING THE UNIT. OPERATING THE AUGER WITH COVERS REMOVED OR DOORS OPEN IS DANGEROUS.

DANGER

ROTATING FLIGHTING INSIDE.

DO NOT OPERATE AUGER WITH THE SERVICE OR CLEANOUT DOOR OPEN OR UNLATCHED.



BE ALERT

SHUT OFF AND LOCKOUT POWER TO ADJUST, SERVICE OR CLEAN.

USE STICK OR OTHER TOOL TO CLEAN OUT. FAILURE TO HEED WILL RESULT IN SERIOUS INJURY OR DEATH.

6-6. COMPLETION / CLEAN-UP

At the completion of an operation, the auger should be moved to the next work area or to a storage area.

The **recommended procedure** is:

1. Clean entire work area.
2. Remove all supports and chocks.
3. After ensuring that area is clear of all unauthorized personnel, move auger out of working position and lower fully. (See **Section 6-7** for lowering procedure)

The proper steps for **clean-out** of the auger are:

1. Disengage PTO, lower auger into transport position, shut off tractor engine and lock out power. **Disconnect PTO driveline from tractor before raising or lowering auger.**
2. If necessary open clean-out door on the boot and manually clean out grain, using piece of wood, vacuum cleaner or other tool. **DO NOT USE HANDS.** Replace clean-out cover.
3. Winch intake feed hopper into transport position and clean out grain, using piece of wood or other tool.

CAUTION



DO NOT LEAVE AUGER IN RAISED POSITION. AUGER COULD DROP RAPIDLY IN CASE OF CABLE BREAK. HIGH WINDS MAY ALSO UPSET AUGER.

WHEN LOWERING AUGER, NEVER CONTINUE TO TURN HANDLE COUNTER-CLOCKWISE IF THE CABLE DOES NOT KEEP MOVING OUT UNDER LOAD. THIS WILL CREATE AN UNSAFE CONDITION. WHEN THIS OCCURS, WINCH IN SLACK CABLE AND CORRECT PROBLEM.

6-7. LOWERING PROCEDURE

To lower auger you must:

1. Raise the intake feed hopper. **DO NOT ATTEMPT TO LIFT BY HAND.**
2. Disconnect PTO driveline from tractor before lowering.
3. Ensure that area beneath auger is clear.
4. Turn winch counter-clockwise to lower auger.

IMPORTANT

THERE WILL BE NO CLICKING SOUND WHEN LOWERING AUGER. AFTER LOWERING AUGER, TURN HANDLE CLOCKWISE UNTIL YOU HEAR TWO CLICKS TO LOCK BRAKE.

5. After auger is fully lowered, raise the intake feed hopper into full transport position.

IMPORTANT

DO NOT OPERATE AUGER WITH INTAKE FEED HOPPER IN TRANSPORT POSITION. THIS WILL DAMAGE THE UNIVERSAL JOINT.

IMPORTANT

WHEELS MUST BE FREE TO MOVE WHEN RAISING OR LOWERING AUGER.

DANGER




BEFORE MOVING AUGER OUT OF POSITION, LOOK OUT FOR ELECTRICAL WIRES AND OBSTRUCTIONS OVERHEAD. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. FAILURE TO HEED THIS WARNING WILL RESULT IN SERIOUS INJURY OR DEATH.

7. Maintenance & Storage

Proper maintenance on the MK100-36 auger means a longer life for the machine and a safer and more efficient operation.

CAUTION



KEEP CHILDREN AWAY WHEN PERFORMING MAINTENANCE.

BEFORE PERFORMING ANY MAINTENANCE, ENSURE THAT POWER IS SHUT DOWN AND LOCKED OUT.

WHERE POSSIBLE, PERFORM MAINTENANCE WITH AUGER IN FULL DOWN POSITION.

REPLACE ALL SHIELDS.

BE ALERT

7-1. GENERAL MAINTENANCE PROCEDURE

We recommend the following steps for the general maintenance of this auger:

1. Observe the checklist in **Section 6-1** on a daily basis when auger is in use.
2. Check all operating, lifting and transport components. Replace damaged or worn parts before using auger.

NOTE: To replace a damaged part, refer to assembly instructions in **Section 3**.

3. **Intake Hopper Angle Drive –**
Lubricate the angle-drive after every 8 hours of operation. **Use high temperature grease.**

NOTE: If the angle drive in hopper runs hot AFTER an appropriate break-in period, this may mean the angle drive is not properly aligned. To correct, first lock out power, then loosen bolts securing the angle drive and adjust or shim up until the flight can fairly easily be rotated by hand.

4. **Lift Cable –**
Check and replace if frayed or damaged. Make certain that cable clamps are secure.

5. **Wheel Hubs –**
Repack every two or three years with lithium based grease.

6. **Tire Pressure –**
Check with a pressure gauge monthly or when pressure seems low. We recommend that pressure be maintained at 18 to 24 PSI (124 - 165 kPa).

7. **Hopper Lift Cable –**
Check and replace if frayed or damaged.

8. **Hopper Lift Cable Pulleys –**
Oil lightly several times a year for easier raising of hopper.

9. **Winch –**
Keep a film of grease on gears. Occasionally oil the bushings, drum shaft and ratchet. Take care not to get oil or grease on brake discs. Replace brake discs if less than 1/16" thick. Service winch with auger in fully lowered position and cable slack

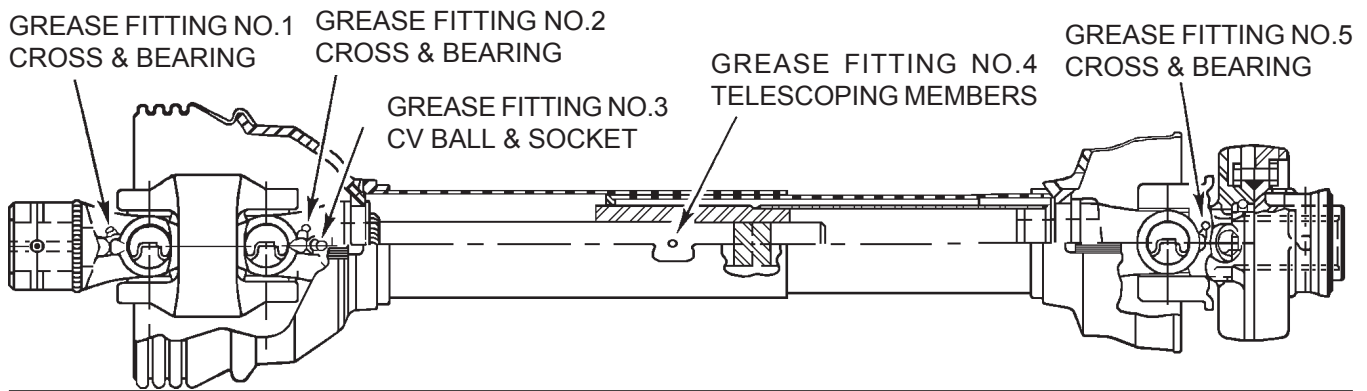
10. **PTO Driveline –**
Lubricate all FIVE grease fittings regularly with good quality LITHIUM SOAP BASE E.P. GREASE meeting the NLGI #2 specifications and containing no more than 1% molybdenum disulfide. (Example: SHELL SUPER DUTY or EQUIVALENT)

Grease fittings No. 2 and 3 can be reached through hole in implement end portion of the driveline shield.

Grease fitting No. 4 can be reached through hole in center portion of the driveline shield.

The first lube interval should be 16-24 hours of operation after initial start-up, then follow the schedule.

LUBE RECOMMENDATIONS		
INTERVAL	LOCATION	AMOUNT
8 HRS.**	CROSS & BEARING	1 PUMP
8 HRS.	TELESCOPING MEMBERS	4-8 PUMPS
8 HRS.**	CV BALL & SOCKET	1-2 PUMPS
** Constant angle applications must have lube interval of 4 hours.		



CAUTION!!

REPLACEMENT PARTS ARE NOT LUBRICATED

Replacement parts must be lubricated at time of assembly. Use amount listed above per location, then follow lube recommendations outlined above for lubing intervals.

Ensure that the setscrews and shear-bolt are tight.

How to service **Mechanical Drive System**:

1. Bottom Chain Drive:

Keep drive chain tension adjusted to about 1/4" deflection by loosening the four bolts on lower bearing, then retighten. Oil chain frequently enough to keep film of oil on chain (this can be done through hole in top of sprocket shield). REPLACE SPROCKET SHIELD AFTER MAINTENANCE.

2. Universal Joint:

Flip up safety discharge door and lubricate grease fitting in the u-joint every 8 hours of operation. Check setscrews and retighten if necessary.

3. Gearboxes:

Check oil levels in both gearboxes at least once a year, depending on use. Gearboxes should be half full with EP90 lube oil. Fill as needed, you may need a flexible funnel.

If you notice excessive loss of oil, check more frequently and repair problem. Each gearbox requires 355 ml or 12-1/2 fluid ounces. Do not overfill, half full only.

A. Upper Gearbox - flip up safety discharge door or open round service door and service gearbox as required.

B. Lower Gearbox - open round service door and service gearbox as required.

For more extensive servicing or repairs, remove hopper from boot assembly by removing the 3/8" x 3/4" bolts and large washers. Lift hopper with front-end loader or other secure method (see **Figure No. 40**).

At this time also check and retighten setscrews and connecting bolts. Clean and lightly grease the splined shaft. Reattach hopper to boot assembly as per instructions in **Section 3-8**.

WARNING



DO NOT OPERATE AUGER WITH INTAKE HOPPER NOT IN PLACE. REPLACE AND SECURE SERVICE DOORS BEFORE OPERATING AUGER.

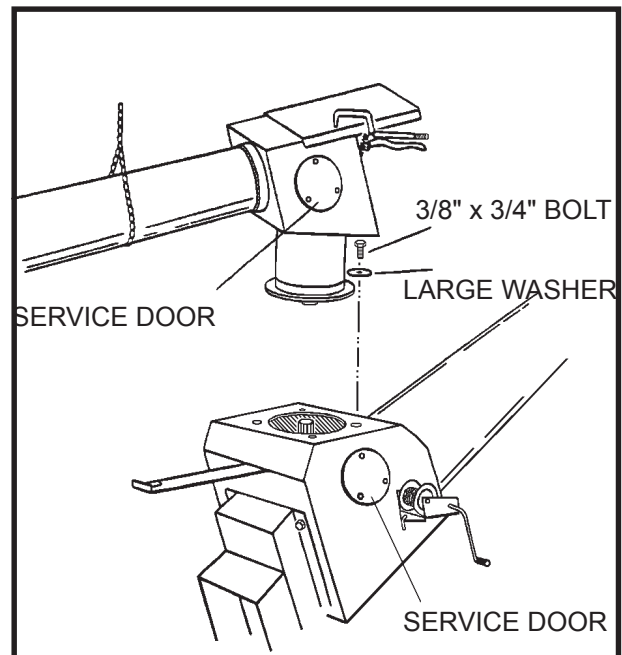


Figure No. 40

4. Bearing:

Lubricate grease fitting on lower flight bearing.
REPLACE SPROCKET SHIELD AFTER
MAINTENANCE.

7-2. GENERAL STORAGE PROCEDURE

To protect auger in storage during the off-season, we suggest the following:

1. Lower the auger to full down position with slight tension on the cable.
2. Lubricate all grease fittings per maintenance procedure.
3. Inspect auger for damage and note any repairs required. Order replacement parts from your dealer.
4. Check tire pressure and inflate to 24 PSI (165 kPa).
5. Clean and re-lubricate the spline on PTO driveline. Cover PTO driveline with a plastic bag to protect it from the weather and place it in the transport saddle.
6. Tow auger to storage area. Park and chock wheels.

To prepare auger for use after storage, we recommend the following:

1. Check tire pressure and inflate to 24 PSI (165 kPa) if necessary.
2. Tow auger to worksite, being mindful of electrical wires overhead.
(See chapter 4 on page 24 for correct procedure.)
3. Remove waterproofing from spline of PTO driveline and re-lubricate.
4. Replace any damaged parts and decals.
5. Conduct general maintenance procedure before using auger.
6. Before raising auger after storage, make certain cable is in good condition, replacing it if frayed or damaged. In addition, ensure that cable is properly seated in roller track and that cable clamps are secure.

Use only genuine WESTFIELD replacement parts or equivalent. Replacement parts such as intake shields, pulley shields, PTO driveline shields, winches and lift cables MUST MEET ASAE Standards or serious injury may result. Use of unauthorized parts will void warranty. If in doubt, contact WESTFIELD or your WESTFIELD dealer. Do not modify any auger components.

DANGER



WATCH FOR OVERHEAD ELECTRICAL WIRES. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. FAILURE TO HEED THIS WARNING WILL RESULT IN SERIOUS INJURY OR DEATH.

CAUTION



SUPPORT DISCHARGE END OF AUGER BEFORE REMOVING OR REPLACING ANY PARTS ON THE UNDERCARRIAGE.

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WARRANTY

Westfield Industries Ltd. warrants products of its manufacture against defects in materials or workmanship under normal and reasonable use for a period of one year after date of delivery to the original purchaser.

Our obligation under this warranty is limited to repairing, replacing, or refunding defective part or parts which shall be returned to a distributor or a dealer of our Company, or to our factory, with transportation charges prepaid. This warranty does not obligate Westfield Industries Ltd. to bear the cost of labor in replacing defective parts. Any defects must be reported to the Company before the end of the one year period.

This warranty shall not apply to equipment which has been altered, improperly assembled, improperly maintained, or improperly repaired so as to adversely affect its performance. Westfield Industries Ltd. makes no express warranty of any character with respect to parts not of its manufacture.

The foregoing is in lieu of all other warranties, expressed or implied, including any warranties that extend beyond the description of the product, and the IMPLIED WARRANTY of MERCHANTABILITY is expressly excluded.

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