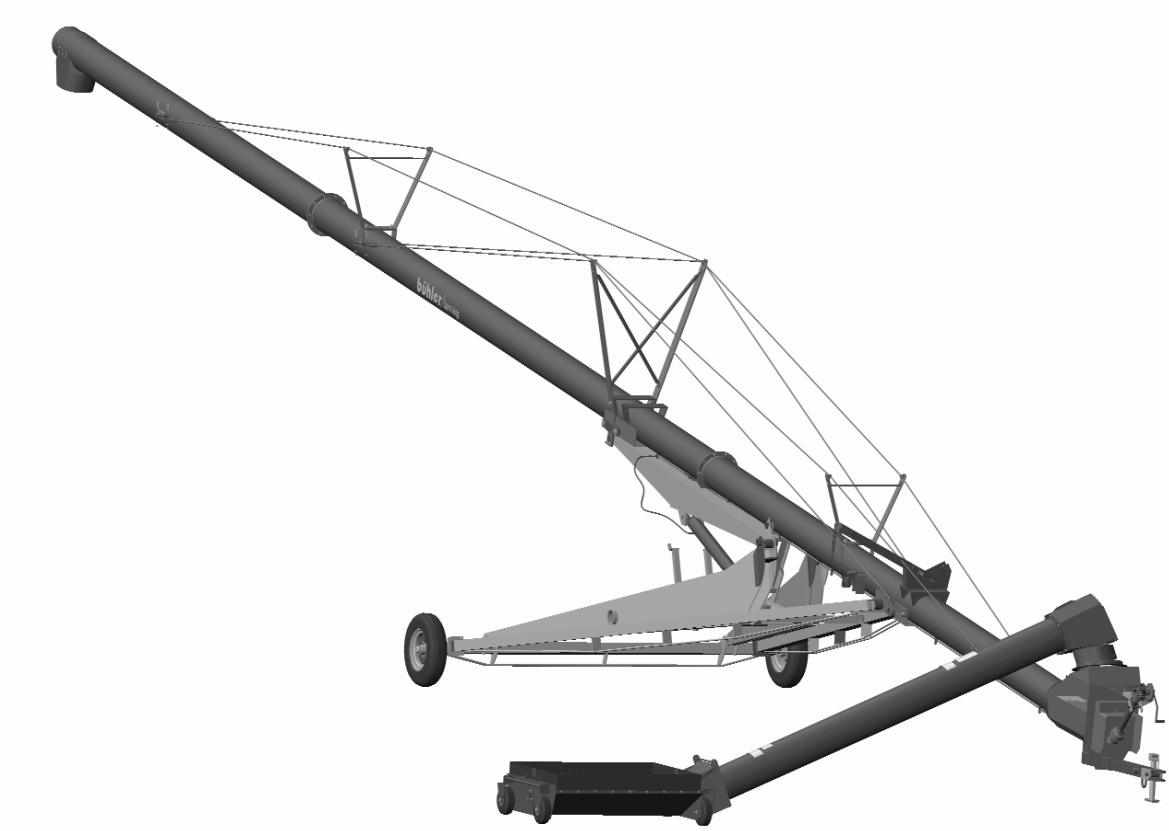
bühler

farm king



13" Backsaver Auger

Operator's and Parts Manual
FK325

2008-3

TABLE OF CONTENTS

DESCRIPTION **PAGE**

WARRANTY 1

INTRODUCTION 2

SAFETY 3
- Safety 3
- General Safety 4
- Start Up Safety 4
- Operation Safety 5
- Transport Safety 5
- Service and Maintenance Safety 6
- Storage Safety 6
- Safety Signs 6
- Safety Sign Installation 6

ASSEMBLY 10
- Assembly Instructions 10

OPERATION 16
- Operating Instructions 16
- Theory of Operation 19

MAINTENANCE 20
- Maintenance & Lubrication 20
- Storage 20
- Greasing Procedure 21
- Bolt Torque 22

PARTS DRAWINGS 23
Tube Assembly Drawing 23
Lift Arm & Undercarriage Drawing 24
Intake Auger Drawing 25
Undercarriage Pivot Ring Drawing 26
13” Backsaver Auger Parts List 27
13” x 10’ Extension – Assembly Instructions 34
Bridging & Extension Tube Drawing 35
Bridging & Extension Tube Parts List 36
Multi-Flighting Hopper Drawing & Parts List 37
Reverse Kit Drawing & Parts List 39
Cylinder Drawings and Parts Lists 40
PTO Shaft Drawing 42
PTO Shaft Parts Lists 43
13” x 70’ Reverse Option PTO Drawing 45
13” x 70’ Reverse Option PTO Parts List 46
13” x 85’ Reverse Option PTO Drawing 47
13” x 85’ Reverse Option PTO Parts List 48
Input Box Gearbox Drawing 49
Input Box Gearbox Parts List 50
Intake Auger Gearbox Drawing 51
Intake Auger Gearbox Parts List 52
Winch Drawing 53
Winch Parts List 54

SHIPPING KIT AND BUNDLE NUMBERS 55

WARRANTY POLICY

Buhler Manufacturing products are warranted for a period of twelve (12) months (90 days for commercial application) from original date of purchase, by original purchaser, to be free from defects in material and workmanship under correct, normal agricultural use and proper applications.

Buhler Manufacturing’s obligations under this warranty shall be limited to the repair or exchange, at Buhler Manufacturing’s option, of any Buhler Manufacturing product or part which proves to be defective as provided. Buhler Manufacturing reserves the right to either inspect the product at the buyer’s location or have it returned to the factory for inspection.

The above warranty does not extend to goods damaged or subject to accident, abuse or misuse after shipment from Buhler Manufacturing’s factory, nor to goods altered or repaired by anyone other than an authorized Buhler Manufacturing representative.

Buhler Manufacturing makes no Express Warranties other than those, which are specifically described. Any description of goods, including any references and specifications in catalogues, circulars and other written material published, is for the sole purpose of identifying goods and shall conform to such descriptions. Any sample or model is for illustrative purposes only and does not create an Express Warranty that the goods conform to sample or model shown.

The purchaser is solely responsible for determining suitability of goods sold. This warranty is expressly in lieu of all other warranties expressed or implied. Buhler Manufacturing will in no event be liable for any incidental or consequential damages whatsoever. Nor for any sum in excess of the price received for the goods for which liability is claimed.

WARRANTY CLAIMS:
Warranty requests must be prepared on Buhler Manufacturing Warranty Claim Forms with all requested information properly completed. Warranty Claims must be submitted within a thirty (30) day period from date of failure repair.

WARRANTY LABOR:
Any labor subject to warranty **must** be authorized by Buhler Manufacturing. The labor rate for replacing defective parts, where applicable, will be credited at 100% of the dealer’s posted shop rate. Defective parts will receive an extra 10% discount to assist with freight or other incidental costs.

GOVERNMENT LEGISLATION:
Warranty terms and conditions are subject to Provincial or State legislation.

IMPORTANT FACTS:
Buckets and Bucket Tines Carry No Warranty
Bent Spears Carry No Warranty
Snowblower Fan Shafts Carry No Warranty
Mower Blades Carry No Warranty
Portable Auger Parts Have Two (2) Year Warranty
Loader Parts Have Two (2) Year Warranty

IMPORTANT NOTE:
This warranty does not apply to rentals.

INTRODUCTION

Buhler Farm King gives you more choices to match your auger to your bins, power sources and operating convenience. The superior scissor lift system features a one way hydraulic cylinder with a restrictor valve to control the rate of descent in the event of hydraulic hose failure. This feature is safer than conventional cable systems. Also, note the extra wide undercarriage and wheel tread providing better stability at greater heights, particularly in windy conditions. This unique mechanical linkage is designed to use less hydraulic pressure to lift the auger, even when fully loaded.
The pivoting Hopper Lift arm may be flipped over for left or right transport position. Slip the PTO from the main shaft onto the optional reverse kit for complete cleanout. An adjustable arm holds the PTO shaft when not in use. The hitch is adjustable for various tractor hitch lengths.

The shut off valve is designed to keep your auger in the position you set it.
The cross auger and main auger are driven by two internal gearboxes, easily reached for service. Because of the large input and intake boxes, capacity is not restricted.
The standard self leveling hopper on all Back Saver augers stays flat on the ground, even when the auger is raised up to a high bin. The optional double auger hopper is 2.5" lower than the standard self-leveling hopper. An optional 2 wheel power mover allows you to move the hopper back and forth with finger tip control.
Other advanced features include a tapered thrust bearing at the top of the auger, torqued to remove pressure on the bottom end bearing.

Keep this manual handy for frequent reference. All new operators or owners must review the manual before using the equipment and at least annually thereafter. Contact your Buhler Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.buhler.com for a complete list of dealers in your area. The directions left, right, front and rear, as mentioned throughout this manual, are as seen facing in the direction of travel of the implement.

SAFETY

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that everyone operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

The alert symbol is used throughout this manual. It indicates attention is required and identifies hazards. Follow the recommended precautions.

The safety alert symbol means…

ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

CAUTION

The caution symbol indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

WARNING

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

DANGER

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

GENERAL SAFETY INSTRUCTIONS

Have a first-aid kit available for use and know how to use it.
Have a fire extinguisher available, stored in a highly visible location, and know how to use it.
Wear appropriate protective gear. This list may include but is not limited to:

- Hard hat
- Protective shoes with slip resistant soles
- Protective glasses or goggles
- Heavy gloves
- Wet weather gear
- Hearing protection
- Respirator or filter mask

Read and understand the Operator’s Manual and all safety signs before operating, servicing, adjusting, repairing, or unplugging the equipment.
Do not attempt any unauthorized modifications to your Buhler product as this could affect function or safety, and could affect the life of the equipment.
Inspect and clean the working area before operating.
Keep hands, feet, clothing, and hair away from moving parts.
Ensure bystanders are clear of the area before operating.

START-UP SAFETY

Do not let inexperienced operators or children run this equipment.
Place all tractor and machine controls in neutral before starting.
Operate only with ROPS and seatbelt equipped tractors.
Do not operate inside a building unless there is adequate ventilation.
Ensure all shields are in place and in good condition before operating.
Stay clear of PTO shaft and machine when engaging PTO.
The auger must be on a level surface and wheels free to move when raising or lowering. Everyone should be kept clear during these operations.

OPERATION SAFETY

Do not permit riders.
Do not wear loose fitting clothing during operation.
Empty the auger before moving, to prevent upending.
The Backsaver Auger should be attached to the drawbar of the tractor at all times during operations.
Do not allow anyone other than the operator close to the Auger when in operation.
Never stand under the auger while raising or lowering.
When filling tall bins, tanks, or granaries, it is advisable to anchor the auger to the bin or building to prevent it from being tipped over by the wind or a sudden movement. The upper end of the auger should rest on some support when in operation.
Do not operate Intake Auger when it is folded in transport position.
Never raise the intake end of the auger above waist high, as the balance shifts forward, and the auger will tip over.
Stay away from overhead obstructions and power lines during operation and transporting. Electrocution can occur without direct contact.

TRANSPORT SAFETY

Review Transport Safety instructions in tractor manual before moving.
Check with local authorities regarding transport on public roads. Obey all applicable laws and regulations.
Do not tow equipment that does not have brakes at speeds over 32km/h (20 mile/h).
Do not tow equipment that does not have brakes that, when fully loaded, has a mass (weight) over 1.5 t (3300 lb) and more than 1.5 times the mass (weight) of the towing unit.
Make sure the SMV (Slow Moving Vehicle) emblem and all the lights and reflectors that are required by the local highway and transport authorities are in place, are clean, and can be seen clearly by all overtaking and oncoming traffic.
Never have the equipment in operation during transport.
Always transport the Backsaver Auger in the down position, carrying the weight of the auger on the undercarriage itself, and not the hydraulic cylinder.
Take extreme caution in maneuvering on or around tight corners so as not to catch the end of the auger on trees, buildings, power lines, etc.
The equipment should never be towed without the safety chain securely attached to the auger and the towing vehicle.
When moving the auger on the road, always use a red flag, or if absolutely necessary to move at night, accessory lights for adequate warning to operators of other vehicles.
Always travel at a safe speed.
Inflate transport tires to recommended pressure.

SERVICE AND MAINTENANCE SAFETY

Stop engine, set brake, remove ignition key, and wait for all moving parts to stop before servicing, adjusting, repairing, or unplugging.
Support the equipment with blocks or safety stands before working beneath it.
Follow good shop practices including
- Keep service area clean and dry
- Be sure electrical outlets and tools are properly grounded
- Use adequate light for the job

Use only tools, jacks, and hoists of sufficient capacity for the job.
Replace and secure all shields removed during servicing before operating.
Use heavy leather gloves to handle sharp objects.
Check hydraulics regularly for leaks. Use cardboard to look for leaks, and use hand and eye protection.
Relieve pressure on hydraulic system before repairing or adjusting.
Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion, which may result in serious injury or death.

STORAGE SAFETY

Store the unit in an area away from human activity.
Do not permit children to play on or around the stored machine.
Support the frame on stands and blocks to provide a secure base.
When storing an auger, park it on level ground so that the bottom end will never be over its center of gravity.
Block the wheels of the auger so that the auger will not move and tear the jack from it’s mount.

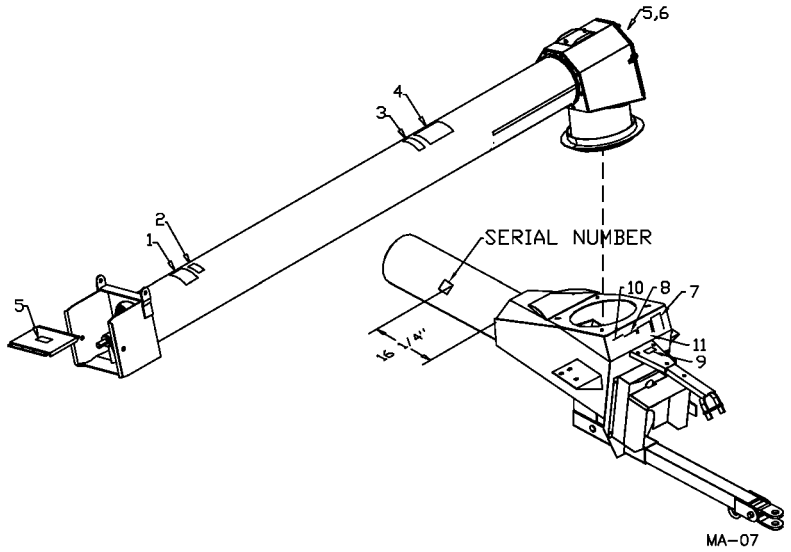
SAFETY SIGNS

The following illustration shows the approximate location and detail of safety signs.
Keep all safety signs clean and legible and replace any that are damaged or missing.
When original parts are replaced, any safety signs affixed to those parts should be replaced as well. Replacement safety signs are available from your local dealer.

INSTALLATION

To install safety signs, ensure the installation area is clean and dry. Decide on the exact position before you remove the backing paper. Remove the smallest portion of the split backing paper and align over the specified area. Carefully press in place. Slowly peel back the remaining paper and smooth the remaining portion in place. Small air pockets can be pierced with a pin and smoothed out.

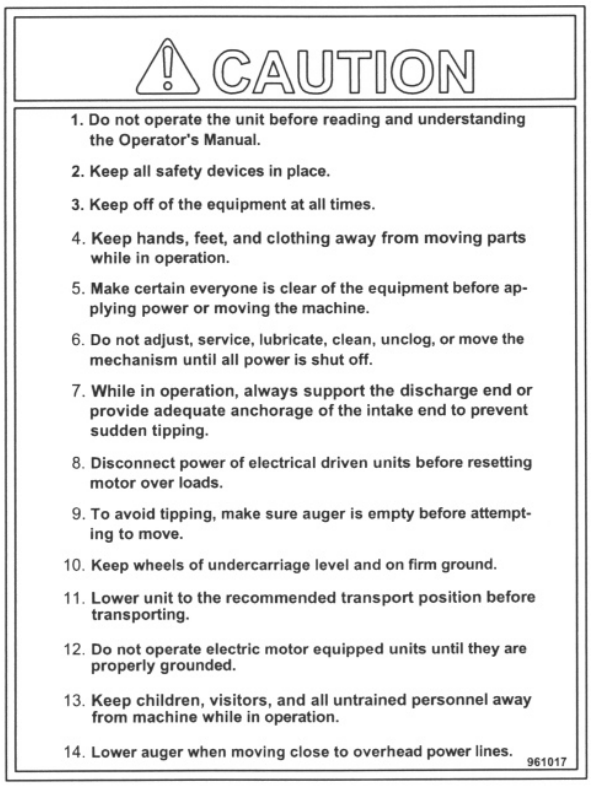
13” AUGER SAFETY SIGNS



Replace safety signs immediately should they become damaged, torn or illegible. Obtain replacements from your authorized dealer using the part numbers shown.

#1

#2



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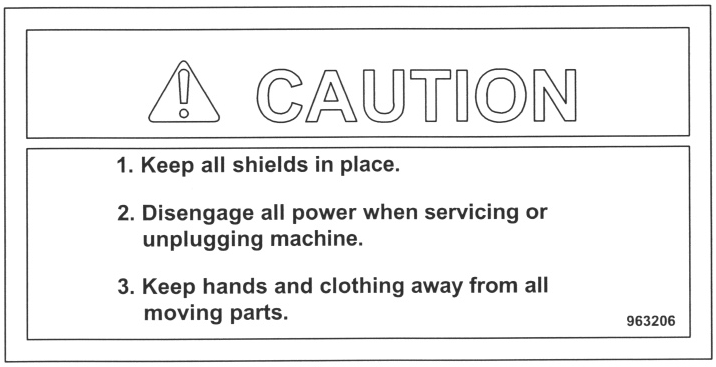
13” AUGER SAFETY SIGNS – cont’d.



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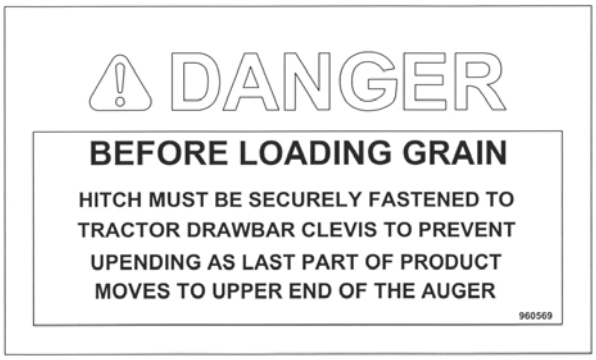

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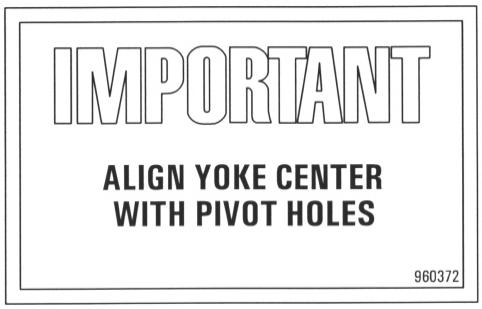

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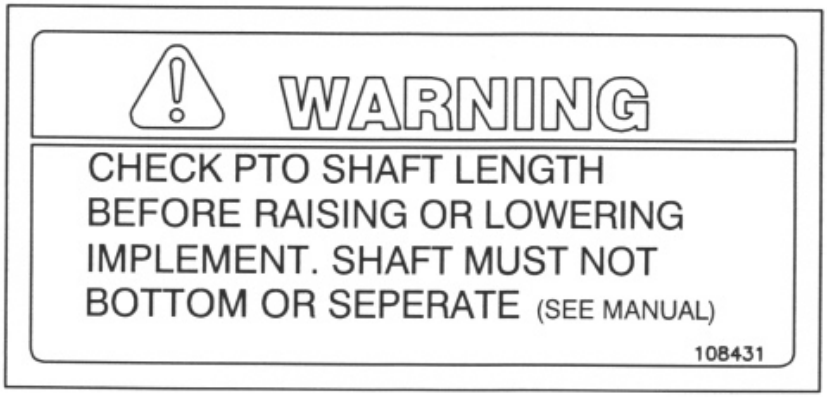
13” AUGER SAFETY SIGNS – cont’d.



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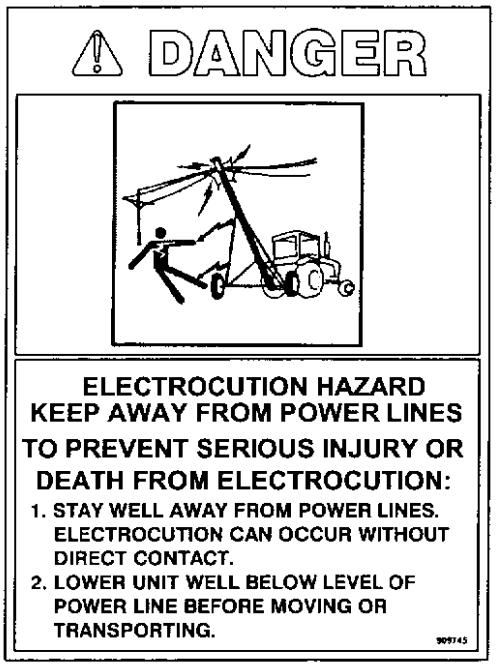

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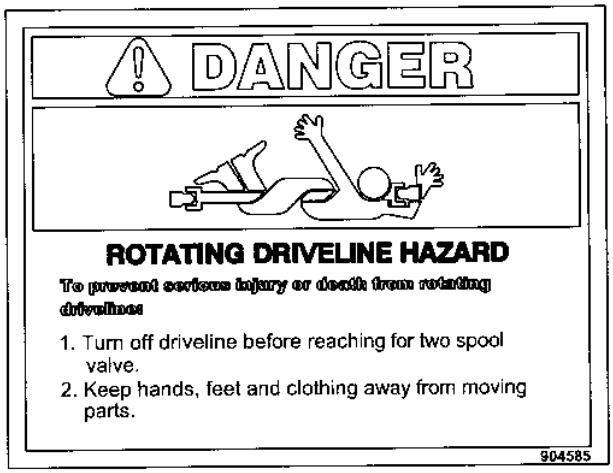


#11

ASSEMBLY INSTRUCTIONS

1. Assemble the top section (#3) to the center section (#2) making sure the flighting is aligned and locked with a ½” x 2 ¾” (gr. 8) hex bolt and lock nut. Similarly, assemble the bottom section (#1) to the center section using 7/16” x 1 ¼” hex bolts, lock washers and hex nuts to fasten the auger rings together. Fasten the input box (#121) to the bottom tube using 7/16” x 1 ¼” hex bolts, lock washers and hex nuts.

   ⚠ **ALERT:** There are two holes on the top stub shaft for cotter pin installation on the top flighting, which should allow a wide range of adjustment. If the top flighting is too high, there could be a shortage of room to mount the collar on the bottom bearing in the input box.

2. Bolt bearing flanges (#209) and mount bearing (#185) at the bottom (outside) of input box using ½” x 1 ¼” hex bolts, lock washers and hex nuts. Loosen cap at the top end of auger. The hex bolts should be turned so the hex nuts are on the inside of the input box. If this is not done, the tips of the hex bolts may rub on the chain in the input box. After locking the bottom bearing with the collar, tension the flighting by turning the 1 ¼” slotted hex nut at the top of the auger and replace top cap.

   Loosen the chain idler assembly on the input box and mount the 15T sprocket (#137) on the flighting bottom stub shaft. Assemble the chain (#138) and then slide the idler assembly into place and tighten. Attach the PTO shaft. The tractor end has a standard 6-spline end with a spring-loaded locking collar. The auger end has a clamp-style yoke with a 3/8” keyway. Slide the yoke onto the flighting stub shaft with a 3/8” key supplied. Lock the yoke in place with two ½” x 3” bolts and lock nuts fitted through the groove in the flighting stub shaft. After tightening the bolt, insert and tighten the 3/8” socket set screw. Bolt the chain guard (#124) back to the bottom of the input box.

3. The main bridging yoke (#7) is clamped to the welded plate near the top of the bottom section tube using two clamps (#189). The yokes fit between the welded stops on the clamps. Bolt on the clamps using 5/8" x 1 ¾” hex bolts, lock washers, flat washers and hex nuts.

   ⚠ **ALERT:** The 13” x 85’ auger has two positions to bolt on the main bridging yoke. The 85’ auger uses the lower position. The upper position is only used when adding a 10-foot extension to make a 95’ auger. Refer to the drawing included in this manual.

ASSEMBLY INSTRUCTIONS - CONT'D.

The yoke mount (#27) is bolted to the bottom end of the main yokes with the same size bolts. Attach the two braces (#8) to the main yokes using 7/16" x 1 ¼” hex bolts, lock washers and hex nuts. The smaller bridging yokes (#9) are bolted to the bottom and center sections with the same 5/8" bolts. Attach the tie rods (#10) to the bridging yokes using 7/16" x 1 ¼” hex bolts, lock washers and hex nuts. The 85' auger has two sizes of bridging yokes (#9). The 68 ½” long yoke is on the bottom section while the 78 ½” yoke is on the upper part of the center section. The 31 ½” tie rod fits on the lower yoke and the 34” tie rod fits on the upper yoke.

4. Mount both sets of cables (#62) and (#63). The longer cable goes from just above the input box, across all three bridging yokes, to about the center of the top section. The shorter cable goes from just behind the undercarriage pivot ring, across the main bridging yoke, down to the center tube just below the bridging yoke. Bolt the cable yokes (#13) to the top of each cable using ½” x 2" hex bolts, lock washers and hex nuts. Bolt the yokes to the cable brackets welded to the top tube with the same hardware. Use the bottom hole in the yoke if possible. The other holes can be used if the cable stretches after a few years. Be sure to tighten cables before lifting the auger. The main tubes must be straight or bowed up a few inches before lifting the auger. Any downward bow will result in very loud flighting noise. Tighten cable clamps (#16) on bridging yokes after cables are tight.

⚠ **ALERT:** On bridging yokes where the cable clamps hold two cables, DO NOT use the cast part of the cable clamp or it will be very difficult to get the nuts on the clamp. Use 3/8" I.D. (1O ga) flat washers on cable clamps.

5. Lift the auger at a point just above the main bridging yoke. After raising the top end of the auger, clamp on spout (#11) using 3/8” x 2” hex bolts, lock washers and hex nuts.

6. Mount the left hand undercarriage arm (#85) only to the pivot ring on the bottom section.

⚠ **ALERT:** The 13” x 85’ auger has two pivot rings. The 85’ auger uses the lower position. The upper position is only used when adding a 10-foot extension to make a 95’ auger. Refer to the drawing included in this manual.

7. Mount wheels (#94) and tires on axle using ½” wheel bolts for the 70’ auger and 9/16” wheel bolts for the 85’ auger. Torque bolts to 80 ft/lbs for ½” bolt and 140 ft/lbs for 9/16” bolt.

8. Bolt the arm to the axle (#83) using 5/8" x 2" hex bolts, lock washers and hex nuts. Do not mount the R.H. undercarriage arm (#84) until after assembling the lift arms. The reason for this is so you can get at the lift arms with a forklift (if available) to lift them into position.

ASSEMBLY INSTRUCTIONS - CONT'D.

9. **70' AUGERS:** Connect the L.H. lower lift arm (#65) to the axle with a 1” x 5 5/8” pin (#79) and ¼” x 1 ½” cotter pin. Assemble the pivot yoke (#66), the connecting link (#67) and the hydraulic cylinder (#68) using a 1 ½” x 12 3/8” pin (#75).

⚠ **ALERT:** Cylinder ports face DOWN.

Lift this assembly under the auger between the lift arm locations. Connect the R.H. lower lift arm (#64) to the axle. The 2" x 27 7/8" pin (#74) connects this assembly to the lower lift arms. Bolt the torque tube weldment (#208) to the flanges on the lift arms using ½” x 2” bolts, lock washers and hex nuts. Fasten the upper lift arm cradle (#81) to the welded brackets on the torque tube. Use 5/8” x 1 ¾” hex bolts, lock washers and hex nuts. The cradle must be turned offset to the bottom end as shown in drawing.

⚠ **ALERT:** Do not tighten any hardware assembled during this step.

85' AUGERS: Same assembly procedure as the 70’ except the 1” pins are 6 3/8" long; the pin joining the link, yoke and cylinder is 2" x 14 ¾” and the lower lift pin is 2" x 34 1/8".

10. **70' AUGERS:** Connect the upper lift arm (#180) to the lower lift arms using two 1 ½” x 7 1/8” pins (#77). In order to allow correct movement of the upper and lower lifts, this pin is to be installed from the inside out; with the head of the pin end facing the center of the auger and the cotter pin end facing out. Use washers on the outside of the pin if required to snug up the head of the pin on the inside of the lift arms. The 1 ½” x 13 5/8” upper yoke pin (#78) connects the yoke (#66) to the upper lift arm.

85' AUGERS: Same assembly procedure as the 70' except the pins joining the upper and lower lift arms (#77) are 2" x 9" and the upper yoke pin (#78) is 1 ½” x 16 5/8".

11. When the lift arms are assembled, bolt on the R.H. undercarriage arm (#84) and join the two arms with a tie plate (#86) using 7/16" x 1 ½” hex bolts, lock washers and hex nuts.

12. Bolt the lower lift arm cradle (#82) to the angle irons on the undercarriage using 5/8" x 1 ¾” hex bolts, lock washers and hex nuts. The 2" square tube bolts to the bottom of the angle irons on the 70' auger and to the top of the angle irons on the 85' auger. Ensure that the hooks on the lower lift arms rest on top of the lower lift arm cradle after assembly.

A 1 ½” x 15 ¼” pin (#80) joins the upper lift arm to the bottom section of the main tubing on both the 70’ and 85’ auger. A forklift is probably the best way to lift the arms as required to line up the bushings so the pins can be inserted.

ASSEMBLY INSTRUCTIONS - CONT'D.

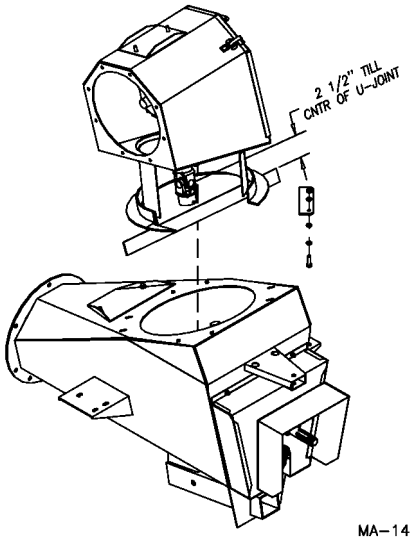
13. Mount the hydraulic cylinder (#68) to the upper lift arm using a 1 ½” x 8 5/8" cylinder pin (#76). Be sure the ports face down. Connect the six foot hydraulic hose (#72) with attached flow control (#71) and fittings from the base end of the cylinder to the hydraulic line on the main auger. For 85' auger the cylinder pin (#76) is 2" x 9".

⚠ **ALERT:** This pin is made of ground and polished high strength steel. Make sure you are not using one of the 2" x 9 1/8" lift arms pins (#77), which are only made of standard carbon steel.

⚠ **ALERT:** The flow control valve regulates the lowering of the auger to avoid damage which could be caused by lowering the auger too quickly. Arrow should be pointing away from the cylinder. Be sure that the valve is open approximately 3 ½ turns before raising to full position or auger will not lower.

14. Lift the auger up by the tubing so it rises out of the upper lift cradle about one foot. Center the upper lift on the cradle. Tighten all hardware while the auger is raised. Lower down into cradle after tightening hardware.

15. Using 3/8” sq. hd. set screws (#159) mount the u-joint (#123) on the intake auger gearbox. Position the u-joint by placing a straight edge along the bottom of the pipe ring on the intake auger top box (#112) and measuring exactly 2 ½” from the top of the straight edge to the center of the u-joint.



16. Lift the intake auger assembly onto the input box (#121). The splines on the u-joint must slide onto the splines on the input box gearbox shaft. This will probably require a hoist. Let the ring sit on the input box without forcing it to the exact center if it is not perfectly positioned. Remove one of the clean out covers from the input box and bolt on the ring using 3/8" x 1 ½” hex bolts. A 3/8" (10 gauge) flat washer (#51) goes under the input box top cover. The 1 ¼” o.d. flat washers (#174) should be 1/8” to 3/16” from touching the edge of the ring. This is done to prevent side pressure on the u-joint. Four 2” x 6 ½” plates (#130) act as a ring holder. Tighten using lock washers and hex nuts. The intake auger should turn freely around the input box.

⚠ **ALERT:** If the intake auger is removed for repair or replacement, the bolt coupling the flighting to the intake auger gearbox must be replaced when the flighting is replaced. Not replacing this bolt could cause failure of the hopper flighting.

ASSEMBLY INSTRUCTIONS - CONT'D.

17. Using a 5/16” x 1 3/8” key (#184) join the hopper (#110) and the intake auger (#111) at the universal joint. Join the hopper and intake auger using two ¾” x 1 5/8” bolts and lock nuts. A flat washer goes on the outside only. Parts must swivel freely after bolting together. Check that the cross on the u-joint is in line with the two pivot pins. The cover (#192) bolts to the front edge of the hopper using ¼” x 1” hex bolts, lock washers and hex nuts. The cover is held down by the cover rod (#193) which is pushed through the clevises welded to the intake auger and held in place by a washer and spring clip.
With the cover (#192) removed, tighten all set screws on the universal joint and be sure that it has grease.

⚠ **ALERT:** Never run the auger without this cover bolted on. **THE YOKE CENTER MUST ALIGN WITH PIVOT HOLES AFTER ASSEMBLY.**

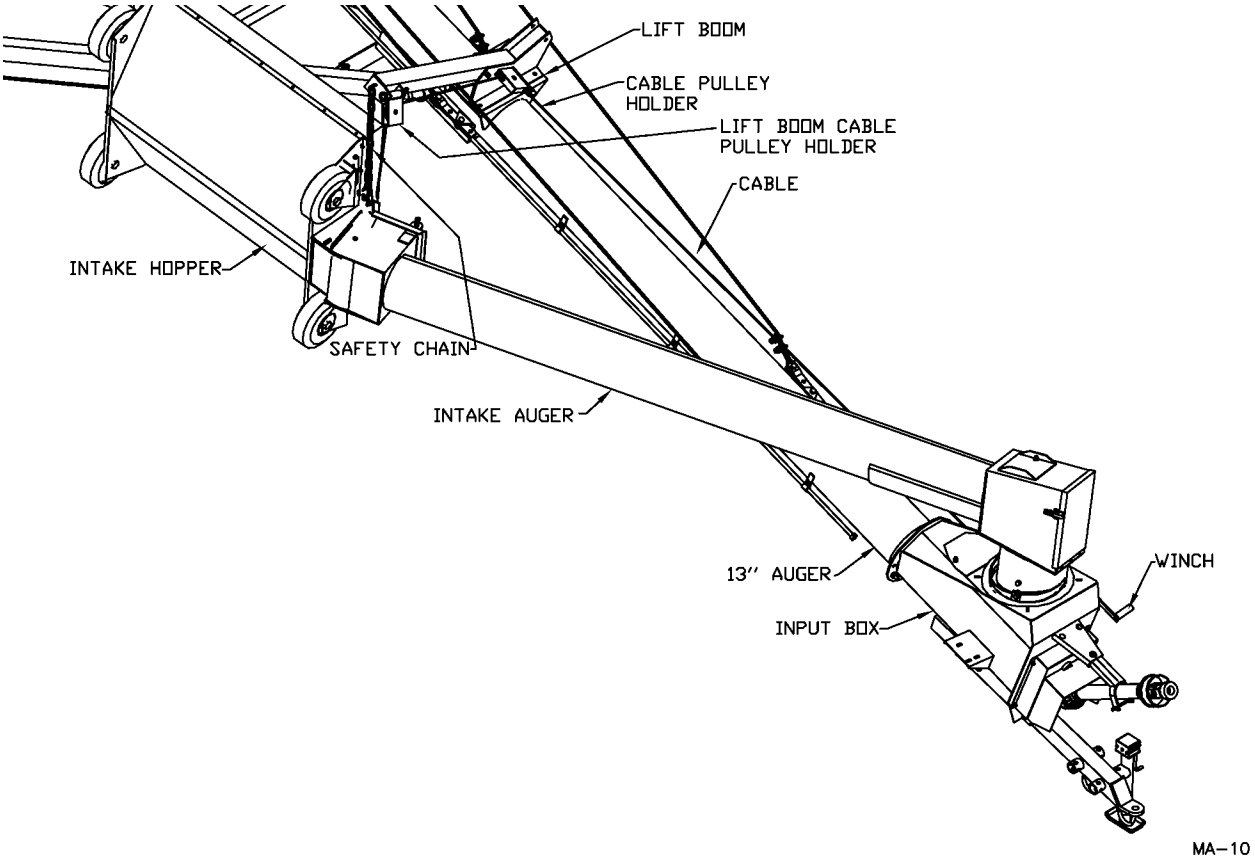
18. **Standard Hopper only:** Bolt the 7" wide rubber edging (#118) supplied to the top edge of the hopper on the inside using ¼” x 1” hex bolts, lock washers and hex nuts. The 1" wide strips supplied bolt to the rubber on the inside of the hopper and help keep the rubber from tearing. The ends of the rubber strips are joined using 2" x 3" plates with ¼” x 1” hex bolts, lock washers, flat washers and hex nuts.

Multi-flighting Hopper only: Bolt the rubber edging (#43) supplied to the top edge of the hopper on the inside using ¼” x 1” hex bolts, lock washers and hex nuts. One end of the rubber bolts to a welded bracket at the front of the hopper. The long 1” side strips (#39) bolt to the rubber on the inside of the hopper and help keep the rubber from tearing. Two 1” strips (#40) hold the rubber edging at both ends of the hopper. The ends of the two rubber strips are joined by two 3” x 3” connector plates (#42) at the top edge. All strips use the same hardware.

19. The lift boom (#29) is bolted to a bracket on top of the main tube about 127" from the bottom pipe ring using ½” x 1 ¼” hex bolts, lock washers and hex nuts. Thread the ¼” cable (#28) around the pulley at the end of the lift boom and then around a cable pulley in the bracket which swivels at the back of the lift boom. From there you go down to the winch. Clamp cable to winch before mounting. There are two flat iron hooks at the front edge of the hopper. Hook the lift cable in the hook furthest away from the auger so the hopper will turn open end toward the auger. The safety chain is attached to the welded loop at the bottom of the intake auger using the hook and quick link supplied. The boom can be used on either side of the auger but the winch must be moved to the opposite side. Fasten winch to the input box on the side opposite the lift boom using 3/8” x 1” hex bolts, lock washers and hex nuts (see page 25).

⚠ **ALERT:** When the intake auger is raised in transport position, the lift cable is hooked into the loop at the bottom of the intake auger. The open end of the hook **MUST BE TURNED TOWARD HOPPER.** The intake auger could detach and fall if the main auger is raised with the hook turned the other way. See diagram on next page.

ASSEMBLY INSTRUCTIONS - CONT'D.



20. Re-check and tighten all bolts.

21. Immediately after setting up the auger, hook it up to a tractor. Raise and lower the auger three or four times to purge all the air out of the hydraulic line to the lift cylinder. This will help to prevent the auger from settling when you have it in working position above a bin.

⚠ **ALERT:** Always check to see that both ends of the PTO shaft are securely attached every time the auger is used. This should always be done with the tractor engine shut off. When transporting the auger, disconnect the PTO shaft from the tractor. The PTO holder on top of the input box is used to hold the PTO during transport.

Do not run the auger with the intake auger in the transport position. Doing this will damage the u-joint between the intake auger and the input box.

OPERATING INSTRUCTIONS

All augers may be elevated up to 45 degrees; however, for the best operating efficiency 35° should not be exceeded. At angles over 35 degrees the capacity and life of the auger decreases. Use in some types of fertilizer may cause accelerated wear and corrosion as well as added stress on lift components due to additional load. Use in fertilizer can affect warranty.

Run auger partially full until flighting becomes polished.

Never operate an empty auger for over one minute as the flighting and housing will experience excessive wear.

To position the auger, always tow or move the auger in the down position to a point as close as possible to the bin or barn.

⚠ **ALERT:** Always keep the wheels level. Raise the auger to the desired height and back the auger into position. Do not support the auger on the bin. As the auger becomes full it carries a lot of weight and may cause damage to the underside of the auger or to the bin. The auger should be firmly attached to the drawbar of the tractor at all times during operation.

⚠ **ALERT:** Never place blocks under the wheels to increase the elevation of the auger.

Be sure the wheels are free to move and no one is standing close to the auger when raising or lowering. Never attempt to raise or lower the auger while it is in operation.

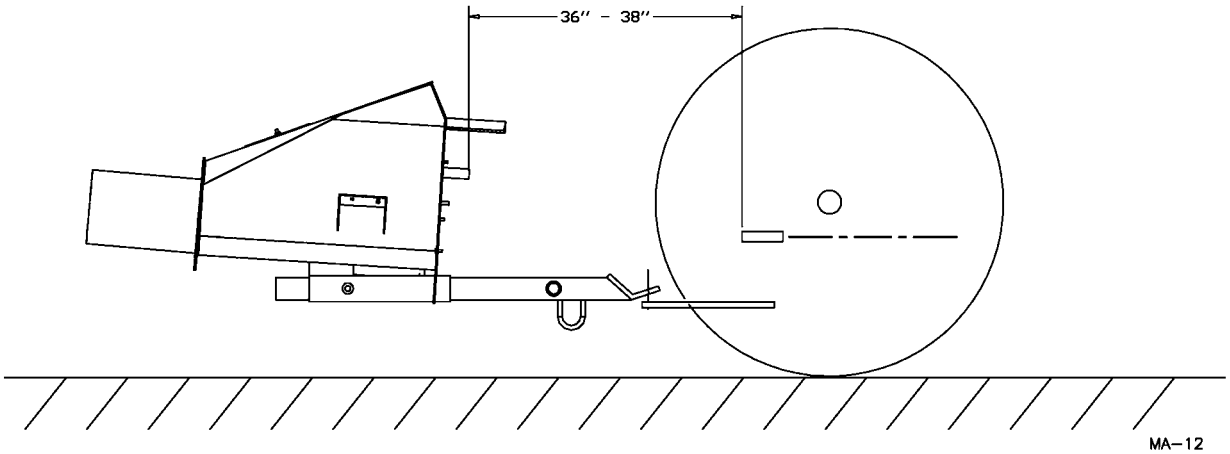
⚠ **ALERT:** Be sure winch brake is working properly before transporting. An arrow on the winch shows the proper direction of rotation. Improper rotation may cause winch failure. Never have less than three wraps of cable on the drum of the winch.

The intake auger swivels freely on the top of the input box. It can be positioned anywhere between the tractor and the side of the auger.

⚠ **ALERT:** 13" Augers are designed for PTO drive tractors with 540 rpm only. Maximum capacity will be attained while running the main auger between 450-500 rpm. (Do not use 1000 rpm PTO speed on these augers.)

OPERATING INSTRUCTIONS - CONT'D.

ALERT: Always maintain at least a 4” lap on the PTO shields. Be sure they turn freely and make certain everyone stands clear of the tractor, PTO shaft, and auger before engaging power take-off. Be sure ends are securely connected to the auger and tractor. An optional shaft is offered for extreme use.



The distance between the tractor and the auger stubs should be between 36” and 38” with the tractor and auger on level ground and the auger in full down position. This distance is obtained by either adjusting the tractor hitch, the auger hitch or both.

Before engaging power take-off, start tractor and idle engine. Engage power take-off slowly and bring PTO rpm up to recommended speed of 500 rpm for 13" augers.

Before stopping auger (except in an emergency) let all grain empty out of the auger, idle engine then disengage power take-off. Shut off tractor.

ALERT: Do not use the reverse kit to attempt to unplug the auger. The reverse kit is designed to be used for **CLEAN-OUT ONLY!**

ALERT: When auger is left in raised position over night, close the ball valve on the hydraulic line to the cylinder. This will prevent the auger from lowering, due to hydraulic leakage, and avoid possible damage.

OPERATING INSTRUCTIONS - CONT'D.

One way flow control valve (#71) can be adjusted by loosening the hex nut on the side, and turning on the screw with the machined end. Turning the screw in decreases the speed the auger lowers, while turning it out increases the speed. For the 13” x 70’ auger, the approximate initial setting should be three turns out from the tight position. For the 13” x 85’ auger, the approximate initial setting should be five turns out from the tight position. When set, re-tighten hex nut to set position. **NOTE**: Be sure that the valve is somewhat open before raising the first time or auger will not lower.

Be sure there is always some tension on the flighting by adjusting the end thrust bearing at the upper end of the auger.

ALERT: Always lower auger before transporting and allow the weight of the auger to rest on the undercarriage and not the hydraulic cylinder.

Be certain to turn jack sideways when towing auger.

ALERT: Disconnect the PTO shaft from the tractor and pin it in place in the PTO holder (#126) when towing or maneuvering the auger. This will prevent possible damage to the PTO shaft during cornering.

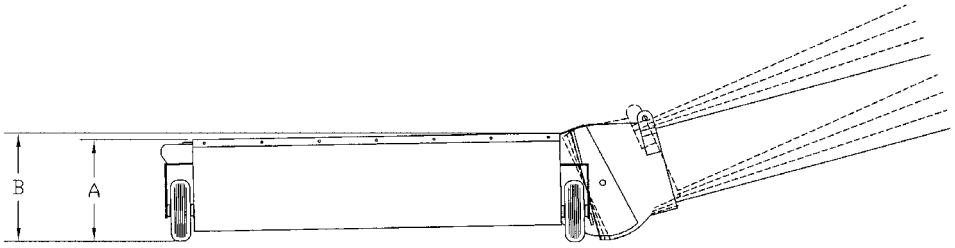
ALERT: If the PTO shaft angle exceeds 50 degrees during a tight turn, the constant velocity joints will be fractured and will likely fail shortly thereafter during operation.

PTO shear bolts (2 required) - 5/16" x 1" hex bolt (grade 8)

ALERT: When towing the auger, never exceed 32 kilometers per hour.

Always use a flag, or at night, a signal light when towing an auger on a road. Check your local regulations for further safety devices in this regard.

13" TOP FEED MECHANICAL DRIVE INTAKE AUGER PIVOT HOPPER

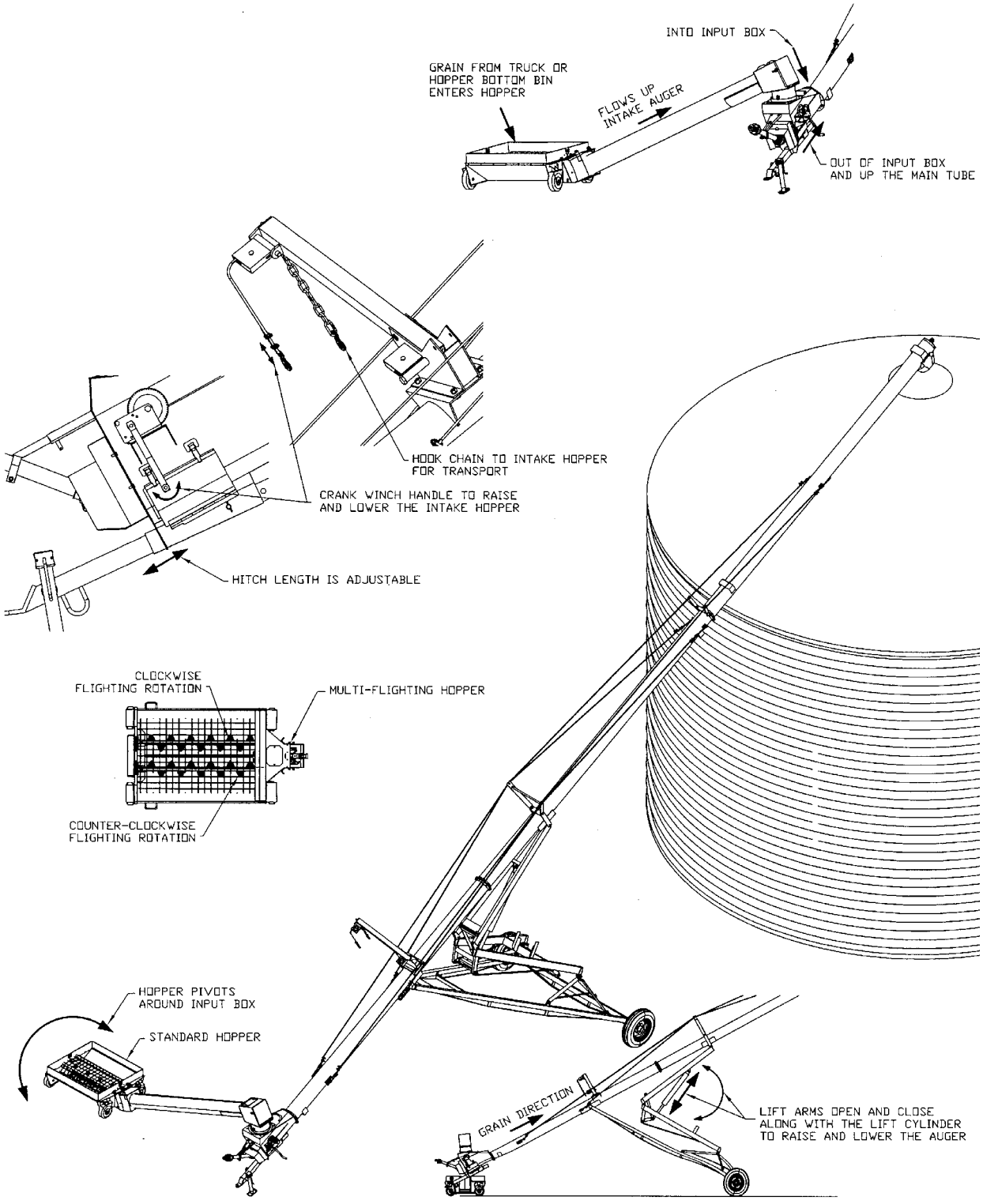


DIMENSION	10'' AUGER	13'' AUGER
A	13''	14 1/2''
B	14''	15 1/2''

MA-13

ALERT: All heights shown are for the welded hopper only. These heights remain the same at all auger working angles because of the pivot joint between the hopper and the intake auger.

THEORY OF OPERATION



ALL FLIGHTING ROTATES IN THE CLOCKWISE DIRECTION UNLESS OTHERWISE SHOWN

MAINTENANCE & LUBRICATION

Check condition of winch cable occasionally. Be sure it is lubricated.

Check to see that there is no downward bow in the main tubes at the start of every augering season. Re-tension cables if required as per step number four in the assembly instructions. This should also be checked immediately after hauling the auger for a long distance.

Use a high temperature grease for all lubrication.

Lubricate the PTO shaft as per instruction sheet.

Check grease on end thrust bearing to be sure it is running smoothly and freely. Remove cap and grease at the start of every season.

Check hydraulic lines frequently for leaks or damage.

Grease universal joint in intake auger after every eight hours of use.

Grease the U-joint connecting the two gearboxes about every 8 hours. Do regular checks on the oil level in the gearboxes. Fill if necessary to the height of the side plug using SAE 90 oil. Because the gearbox runs in the grain, it is difficult to see any oil leaks so regular checks should be done.

⚠ **ALERT:** When replacing bearings or tightening a loose bearing collar, always tighten collar in the direction of shaft rotation using a center punch or a similar tool.

Recommended tire pressure is 50 psi.

STORAGE

The auger should be stored in a dry place if possible. If stored outside, lower auger to its lowest position and block up the wheels so auger will not move.

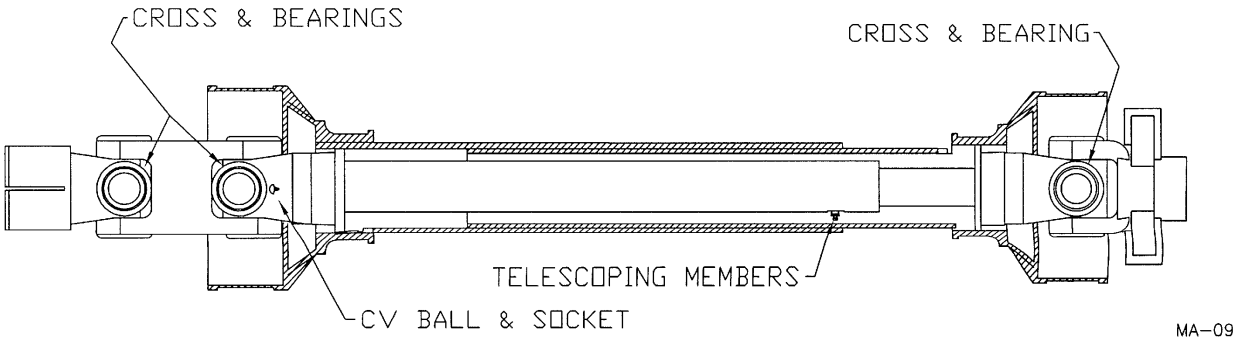
Clean auger thoroughly as dirt draws moisture and causes metal to rust. If the auger has been used to move fertilizer, clean thoroughly and apply oil or grease on entire flighting and inside the housing to stop and prevent further corrosion.

At this time check all moving parts for wear and order replacement parts from your nearest dealer.

When taking the auger out of storage, clean it thoroughly and check for obstructions at the inlet and outlet ends.

Check all bolts and set screws.

RECOMMENDED CUSTOMER GREASING PROCEDURE FOR 50 DEGREE C.V. PTO



A general purpose grease may be used. However, a grease containing 3% molybdenum disulfide will allow the lube intervals to be extended to twice as long as that listed. The first lube interval should be 16 – 24 hours of operation after initial start-up; then follow the schedule below. Constant angle applications must have a lube interval of 4 hours.

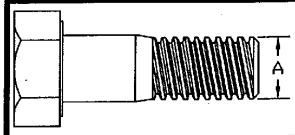
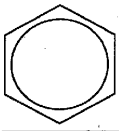
LUBE RECOMMENDATIONS

INTERVAL	LOCATION	AMOUNT
8 hrs.	Cross & Bearings	1 pump
8 hrs.	Telescoping Members	4-8 pumps (until grease comes out of end)
8 hrs.	CV Ball & Socket	1-2 pumps

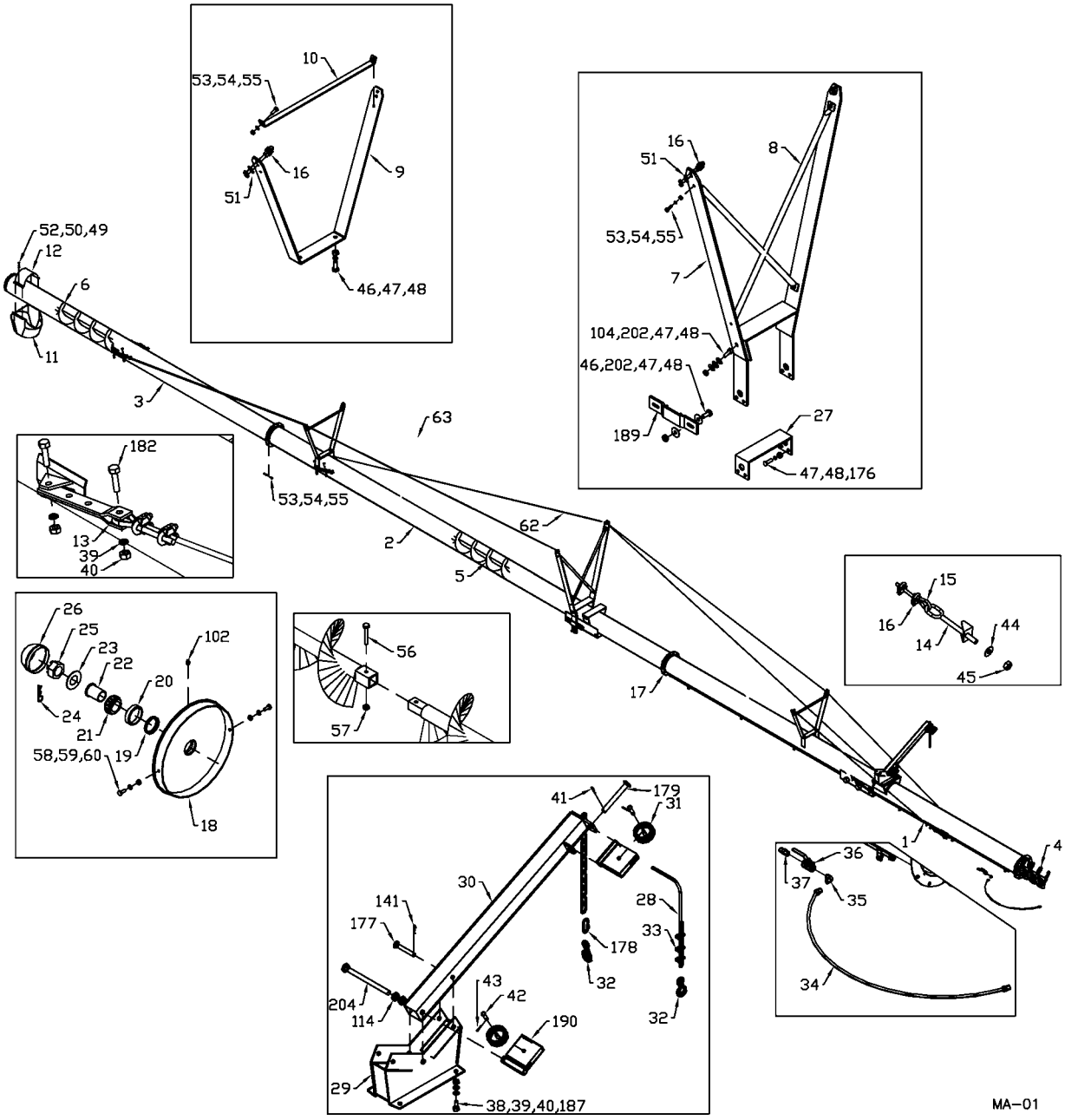
Greases containing various percentages of moly. are available as extreme pressure greases. Please note that all E.P. greases do not contain moly so some investigation may be necessary. The following greases all contain 3% moly: Mobile Oil Company, “Mobile Grease CMP”; Shell Oil Company, “Retinax AM”; and Texaco, “Molytex EP (#0) and (#2)”.

Regularly check the tightness of all cable clamps to avoid slipping. Inspect wire rope regularly for evidence of wear or corrosion. Such inspections should take place at progressively shorter intervals over the useful life of the rope, as wear tends to accelerate with use and/or age. Where wear is rapid, the outside of a wire rope will show flattened surfaces in a short time. A piece of cloth or rag, rubbed along the wire rope will help to reveal broken wires. The effects of corrosion are not easy to detect because the exterior wires may appear to be only slightly rusty, and the damaging effects of corrosion may be confined to the hidden inner wires where it cannot be seen. To prevent damage by corrosion, the rope should be kept well lubricated. Periodic cleaning of wire rope by using a stiff brush and kerosene or with compressed air or live steam and relubricating will help to lengthen rope life and reduce abrasion and wear on sheaves and drums.

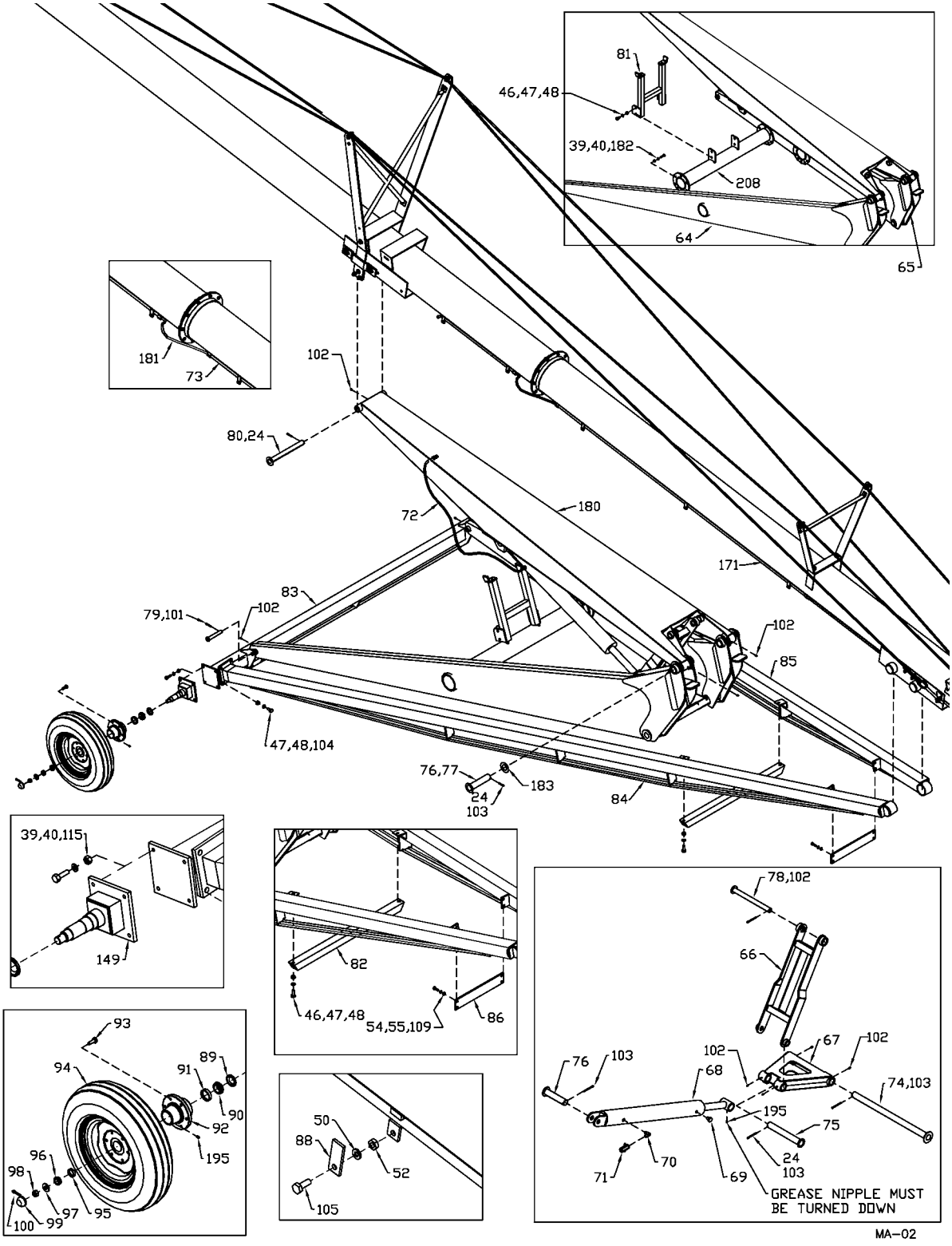
BOLT TORQUE

Bolt Torque						
						
Bolt Diameter	SAE2		SAE5		SAE8	
"A"	N.m	lb-ft	N.m	lb-ft	N.m	lb-ft
1/4"	8	6	12	9	17	12
5/16"	13	10	25	19	36	27
3/8"	27	20	45	33	63	45
7/16"	41	30	72	53	100	75
1/2"	61	45	110	80	155	115
9/16"	95	70	155	115	220	165
5/8"	128	95	215	160	305	220
3/4"	225	165	390	290	540	400
7/8"	230	170	570	420	880	650
1"	345	225	850	630	1320	970

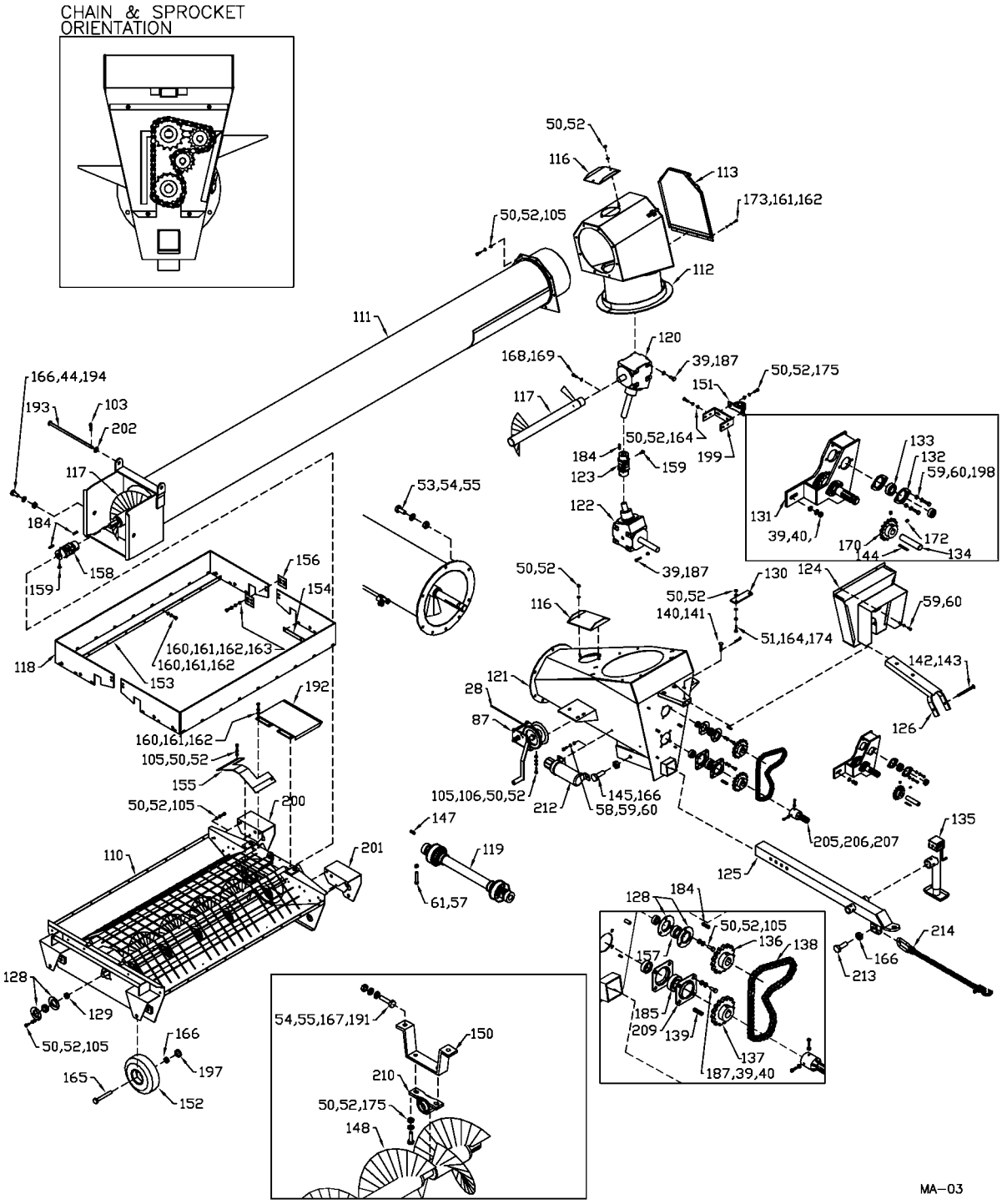
TUBE ASSEMBLY DRAWING



LIFT ARM & UNDERCARRIAGE DRAWING

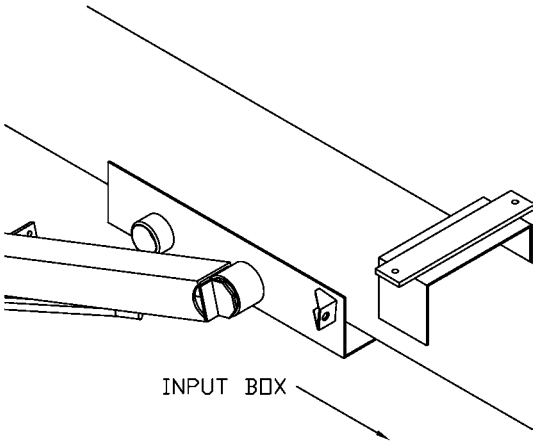


INTAKE AUGER DRAWING

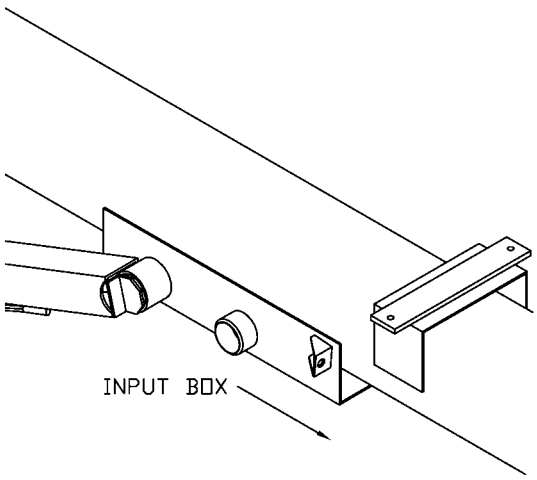


UNDERCARRIAGE PIVOT RING

13’’ X 85’

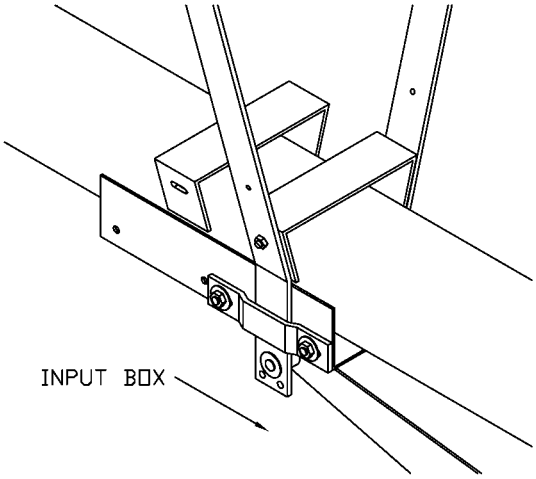


13’’ X 95’

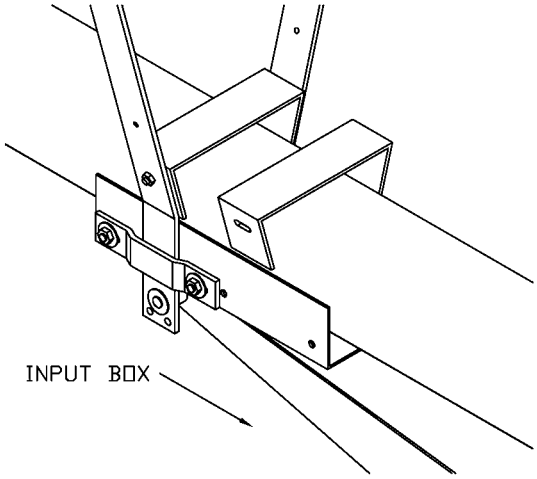


MAIN BRIDGING YOKE

13’’ X 85’



13’’ X 95’



MA–06

WHEN ORDERING PARTS

Always give your dealer the Model, Color and Serial Number of your machine to assist him in ordering and obtaining the correct parts. Use the exploded view and tabular listing of the area of interest to exactly identify the required part.

13" BACKSAVER AUGER PARTS LIST

Item #	Part #	Description
1	906115	26'-9" Bottom Tube, 70'
	906116	26'-9" Bottom Tube, 85'
2	960602	20' Center Tube, 70'
	960949	30' Center Tube, 85'
3	960603	20' Top Tube, 70'
	960669	25' Top Tube, 85'
4	960670	30' Bottom Flighting
5	960605	20' Center Flighting, 70'
	960671	30' Center Flighting, 85'
6	960606	20' Top Flighting, 70'
	960672	25' Top Flighting, 85'
7	960607	Main Bridging Yoke, 70'
	960742	Main Bridging Yoke, 85'
8	960608	Main Bridging Brace, 70'
	960674	Main Bridging Brace, 85'
9	960675	Lower Bridging Yoke (68 1/2")
	960676	Upper Bridging Yoke (781/2"), 85'
10	960677	Lower Bridging Tie Rod (31 1/2")
	960678	Upper Bridging Tie Rod (34"), 85'
11	F9716	Discharge Spout
12	960612	Discharge Spout Clamp
13	960244	Cable Yoke
14	960613	3/4" x 7 7/8" Cable Tightener
15	964587	1/2" Cable Thimble
16	964565	1/2" Cable Clamp
17	960614	12 3/4" Pipe Ring (2" Flange)
18	960679	Top End Plate
19	960125	Oil Seal (CR14939)
20	967709	Inner Bearing Cup (LM29710)
21	967708	Inner Bearing Cone (LM29749)
22	960035	Sleeve
23	9812442	Washer (1 9/32" ID, 2" OD)
24	81210	1/4" x 2" Cotter Pin
25	960037	1 1/4" UNF Slotted Hex Nut

26	967209	Dust Cap (DC-15)
27	960615	Main Bridging Yoke Mount, 70'
	960743	Main Bridging Yoke Mount, 85'
28	960616	Intake Lift Cable Assembly 5/16" x 32'-3 3/4"
29	905601	Lift Boom
30	905604	Lift Boom Arm
31	961846	Cable Pulley, 1/2" Bore
32	960041	Lift Cable Hook
33	961763	5/16" Cable Clamp
34	960466	1/2" x 112" Hyd. Hose (Both Ends Solid & 1/2" NPT)
35	960585	1/2" x 90° Street Elbow (Stl.)
36	960057	1/2" Ball Valve
37	960152	Adaptor (JIC to 1/2" NPT)
38	81638	1/2" Flat Washer (S.A.E.)
39	81637	1/2" Lock Washer
40	81636	1/2" Hex Nut
41	9812433	3/16" x 1 1/2" Cotter Pin
42	960913	1/2" x 1 13/16" Clevis Pin
43	9812430	1/8" x 1" Cotter Pin
44	84050	3/4" Flat Washer (S.A.E.)
45	81700	3/4" Hex Nut
46	84270	5/8" x 1 3/4" Hex Bolt
47	81677	5/8" Lock Washer
48	81676	5/8" Hex Nut
49	967291	3/8" x 2" Full Thread Hex Bolt
50	81593	3/8" Lock Washer
51	964001	3/8" Flat Washer (10 Ga.)
52	81592	3/8" Hex Nut
53	81598	7/16" x 1 1/4" Hex Bolt
54	81615	7/16" Lock Washer
55	81614	7/16" Hex Nut
56	9812368	1/2" x 2 3/4" (grade 8) Hex Bolt
57	812364	1/2" Lock Nut
58	81549	5/16" x 3/4" Hex Bolt
59	81569	5/16" Lock Washer
60	81568	5/16" Hex Nut
61	81627	1/2" x 3" Hex Bolt
62	960618	1/2" x 32'-5" Cable (Assembly), 70'
	960619	1/2" x 34'-1" Cable Only, 70'
	960681	1/2" x 42'-10" Cable (Assembly), 85'
	960682	1/2" x 43'-6" Cable Only, 85'
63	960620	1/2" x 53'-6" Cable (Assembly), 70'
	960621	1/2" x 55'-2" Cable Only, 70'
	960683	1/2" x 65'-4" Cable (Assembly), 85'
	960684	1/2" x 67'-0 1/2" Cable Only, 85'

64	F0655	Right Hand Lower Lift Arm, 70'
	F0565	Right Hand Lower Lift Arm, 85'
65	F0656	Left Hand Lower Lift Arm, 70'
	F0564	Left Hand Lower Lift Arm, 85'
66	960624	Pivot Yoke, 70'
	907342	Pivot Yoke, 85'
67	960625	Connecting Link, 70'
	960688	Connecting Link, 85'
68	F9778	Cylinder (4 1/2" x 42 1/2"), 70'
	F0445	Cylinder (5" x 52 3/8"), 85'
69	967908	Vented Plug (3/4 - 16 ORB)
70	906541	Elbow 90° 3/4" MORB x 1/2" MNPT
71	960118	1/2" One Way control Valve
72	960710	1/2" x 6' Hyd. Hose(One End 1/2" NPT;One End JIC)
73	960144	5/8" O.D. x 11' Hydraulic Line, 70'
	960468	5/8" O.D. x 13'-4" Hydraulic Line, 70'
	960467	5/8" O.D. x 15'-10" Hydraulic Line, 85'
	960200	5/8" O.D. x 9'-7" Hydraulic Line, 85'
	960143	5/8" O.D. x 36" Hydraulic Line, 85'
74	F0034	2" x 27 7/8" Connecting Link Pin, 70'
	F0035	2" x 34 1/8" Connecting Link Pin, 85'
75	960628	1 1/2" x 12 3/8" Bottom Cylinder Pin, 70'
	960690	2" x 14 3/4" Bottom Cylinder Pin, 85'
76	960691	1 1/2" x 8 11/16" Top Cylinder Pin, 70'
	960692	2" x 9" Top Cylinder Pin & Lower L.A., 85'
77	960629	1 1/2" x 7 1/8" Clevis Pin, 70'
78	960630	1 1/2" x 13 5/8" Top Yoke Pin, 70'
	960694	1 1/2" x 16 5/8" Top Yoke Pin, 85'
79	960631	1" x 5 5/8" Clevis Pin, 70'
	960695	1" x 6 3/8" Clevis Pin, 85'
80	960632	1 1/2" x 15 1/4" Pivot Pin
81	960633	Upper Lift Arm Cradle, 70'
	960744	Upper Lift Arm Cradle, 85'
82	960634	Lower Lift Cradle (40"), 70'
	960697	Lower Lift Cradle (46"), 85'
83	F0191	Axle Tube, 70'
	F0192	Axle Tube, 85'
84	F9722	Right Hand Undercarriage Arm, 70'
	F9734	Right Hand Undercarriage Arm, 85'
85	F9723	Left Hand Undercarriage Arm, 70'
	F9735	Left Hand Undercarriage Arm, 85'
86	960638	Tie Plate (3 1/2" x 18 1/4"), 70'
	960699	Tie Plate (3 1/2" x 20"), 85'
87	961888	Winch Assembly (K1550)

88	960639	Hydraulic Line Clamp
89	967707	Oil Seal (SE13), 70'
	967204	Oil Seal (SE30), 85'
90	967708	Inner Bearing Cone (LM29749), 70'
	967205	Inner Bearing Cone (25580), 85'
91	967709	Inner Bearing Cup (LM29710), 70'
	965252	Inner Bearing Cup (25520), 85'
92	967710	Hub with Bearing Cups (H611), 70'
	967207	Hub with Bearing Cups (H618), 85'
	967731	Hub CTD H611 Complete Assembly w/ Whl Bolts, 70'
	960586	Hub CTD H618 Complete Assembly w/ Whl Bolts, 85'
93	968404	1/2" Wheel Bolt, 70'
	967210	9/16" Wheel Bolt, 85'
94	F0210	15" x 6" x 6 Bolt Wheel, 70'
	F0211	15" x 8" x 6 Bolt Wheel, 85'
95	967711	Outer Bearing Cup (LM67010), 70'
	968412	Outer Bearing Cup (LM48510), 85'
96	967712	Outer Bearing Cone (LM67048), 70'
	967208	Outer Bearing Cone (LM48548), 85'
97	967713	Flat Washer (7/8" S.A.E.)
	967218	Flat Washer (1" S.A.E.)
98	810010	7/8" Slotted Hex Nut, 70'
	967217	1" Slotted Hex Nut, 85'
99	967716	Dust Cap (DC13), 70'
	967209	Dust Cap (DC15), 85'
100	9812486	1/8" x 1 1/2" Cotter Pin, 70'
	81207	3/16" x 2" Cotter Pin, 85'
101	9812434	1/4" x 1 1/2" Cotter Pin
102	967164	Drive-In Grease Zerk
103	967162	5/16" x 3" Cotter Pin
104	84299	5/8" x 2" Hex Bolt
105	86170	3/8" x 1" Hex Bolt
106	84000	3/8" Flat Washer
109	81599	7/16" x 1 1/2" Hex Bolt
110	960945	Intake Hopper
111	960757	Intake Auger Tube
112	909634	Intake Auger Top Box
113	905658	Door
114	86111	3/4" Jam Nut
115	87553	1/2" x 1 3/4" Hex Bolt
116	960483	Intake Auger & Input Box Clean Out Lid
117	903217	Intake Auger Flighting
	903216	Splined Coupler Only
118	960782	Rubber Edging (1/4" x 7" x 102")

119	F9551	PTO Shaft with CV, 70'
	936566	Tractor Half PTO, (6 Spline End), 70'
	936565	Auger Half PTO, CV, 70'
	F0607	PTO Shaft OPT 55R Ser. CV, 85'
	908721	Tractor Half PTO, 55R Ser. (6 Spline End), 85'
	908719	Auger Half PTO, CV 55R Ser., 85'
	F9552	PTO Shaft CV (2-6 Spline Ends), 70'
	936566	Tractor Half PTO, CV (6 Spline End), 70'
	908720	Auger Half PTO, (6 Spline End), 70'
	F0608	PTO Shaft, CV 55R Ser. (2-Spline), 85'
	908721	Tractor Half PTO, CV 55R Ser (6 Spline End), 85'
	908722	Auger Half PTO, 55R Ser. (6 Spline End), 85'
120	960950	Intake Auger Gearbox
121	909638	Input Box
	905667	Clean-Out Lid
122	960788	Input Box Gearbox
123	960784	U-Joint (1 3/8" I.D.)
	906547	Repair Kit Extended Life (Standard)
	936079	Repair Kit (Optional)
124	907421	Chain Cover
125	909955	3" Square x 48" Hitch Tube
	909957	3" Square x 45" Hitch (Option)
	960927	Clevis (Option - Req'd w/ 45" Hitch)
126	960796	PTO Holder (19")
	903494	PTO Holder (21 1/2") Rev.
128	961675	Bearing Retainer
129	961676	1 1/4" Bearing with Collar (AEL207-104)
130	960653	Ring Clamp (1/4" x 2" x 6 1/2")
131	907427	Idler Arm
	907428	Idler Assembly (Arm, Sprocket, Bearings, Shaft, etc.)
	907430	Idler Assembly with Reverse Shaft (8 1/4" long)
132	963009	1" Bearing Flange Set
133	961627	1" Bearing with Collar
134	960533	1" x 4 1/2" Idler Shaft
	960182	8 3/4" Reverse Idler Shaft with 6 Spline
135	905066	Jack
136	961041	15T Sprocket, #80, 1 3/8" Bore
137	960719	15T Sprocket, #80, 1 1/2" Bore
138	907429	#80 H Chain x 40 Pitch Unending with Conn.
139	960704	3/8" x 1 1/2" Key (Alloy)
140	961010	1/2" x 2 1/8" Clevis Pin
141	961012	#16 Hair Pin Clip
142	904445	3/8" x 5 1/4" PTO Holder Pin
143	12780	#7 Hair Pin Clip
144	960177	1/4" x 1 1/4" Key (Alloy)

145	811790	3/4" X 4 1/2" Hex Bolt
147	960705	PTO Key, 3/8" x 1 3/4" (Alloy)
148	960359	Intake Hopper Flighting
149	906466	Stub Axle with 8 1/2" Shaft, 70'
	906467	Stub Axle with 9 1/2" Shaft, 85'
150	960707	Bearing Hanger
151	960789	1 3/8" Wooden Bearing & Flange Set
	960790	1 3/8" Wooden Bearing Only
152	960714	Wheel & Tire (4.10-4 with 3/4" Bore) - 4 Ply
153	960660	Rubber Reinforcement (1" x 57 1/4")
154	960661	Rubber Reinforcement (1" x 13 1/2")
155	960929	Deflector Extension
156	903483	Connector Plate (3" x 3")
157	965917	1 3/8" Bearing with Collar (AEL207-106)
158	960547	Universal Joint (1140 Series)
159	9812378	3/8" x 3/4" Square Head Set Screw (ser)
160	81527	1/4" x 1" Hex Bolt
161	81545	1/4" Lock Washer
162	81544	1/4" Hex Nut
163	81546	1/4" Flat Washer
164	811792	3/8" x 1 1/2" Hex Bolt
165	812114	3/4" x 5 3/4" Bolt
166	812365	3/4" Lock Nut
167	81600	7/16" x 1 3/4" Hex Bolt
168	967906	3/8" x 2 3/4" Hex Bolt (Gr.8)
169	812363	3/8" Lock Nut
170	960717	9T Sprocket, #80, 1" Bore
171	812711	JIC, Male to Male Coupler
172	988999	3/8" x 3/8" Socket Set Screw
173	81525	1/4" x 3/4" Hex Bolt
174	960494	1 1/4" OD, 13/32" ID Washer
175	86171	3/8" x 1 1/4" Hex Bolt
176	967284	5/8" x 1 3/4" Flat Head Bolt Socket
177	905568	Pin 5/8" x 4 1/4" Long
178	960167	5/16" Quick Link
179	905570	Pin 3/4" x 6 3/8" Long
180	F9707	Upper Lift Arm, 70'
	F0464	Upper Lift Arm, 85'
181	960162	1/2" x 18" Hydraulic Hose (Both Ends JIC)
182	811791	1/2" x 2" Hex Bolt
183	967135	1 1/2" S.A.E. Flat Washer, 70'
	967153	2" Machined Bushing, 85'
184	960180	5/16" x 1 3/8" Key (Alloy

185	968627	1 1/2 Brg W/ Collar (Ael208-108)
187	81620	1/2" x 1 1/4" Hex Bolt
189	960745	Main Bridging Yoke Clamp
190	905602	Pulley Holder
191	981616	7/16" Flat Washer
192	960355	Hopper Lid
193	960356	Hopper Lid Rod (5/8" x 17")
194	967437	3/4" x 1 5/8" Bolt
195	967900	1/4" Grease Fitting
197	960839	Wheel Spacer
198	967183	5/16" x 1" Flat H.D.. Bolt
199	960933	Bearing Holder
200	960946	Wheel Bracket Right Hand
201	960947	Wheel Bracket Left Hand
202	81678	5/8" Flat Washer
204	811803	3/4" x 10" Hex Bolt
205	904411	1 1/2" ID - 6 Spline Pump Adaptor Assembly
206	81213	3/8" x 1" Square Head Set Screw
207	986045	3/8" Jam Nut Gr 2.
208	908971	LA Torque Tube 6"Od x 42" -1370
	907742	LA Torque Tube 6"Od x 53" -1385
209	902395	1 1/2" Bearing Flanges (208)(Square)
210	960658	1 1/4" Wooden Bearing & Flange Set
211	960659	1 1/4" Wooden Bearing Only
212	909277	Manual Holder
213	84346	3/4" x 2 1/2" Hex Bolt
214	F0420	1/4" Safety Chain

13” x 10’ EXTENSION – ASSEMBLY INSTRUCTIONS

⚠ **ALERT:** This extension can be used to extend the 85’ auger to 95’ only. It is not made to be used on any other size of auger.

1. The 13” backsaver manual should be used for assembly instructions. The extension tube (#14) is mounted between the center and the top sections of the 85’ augers. Align all four sections before tightening the pipe ring bolts. Tube is turned as shown in drawing.

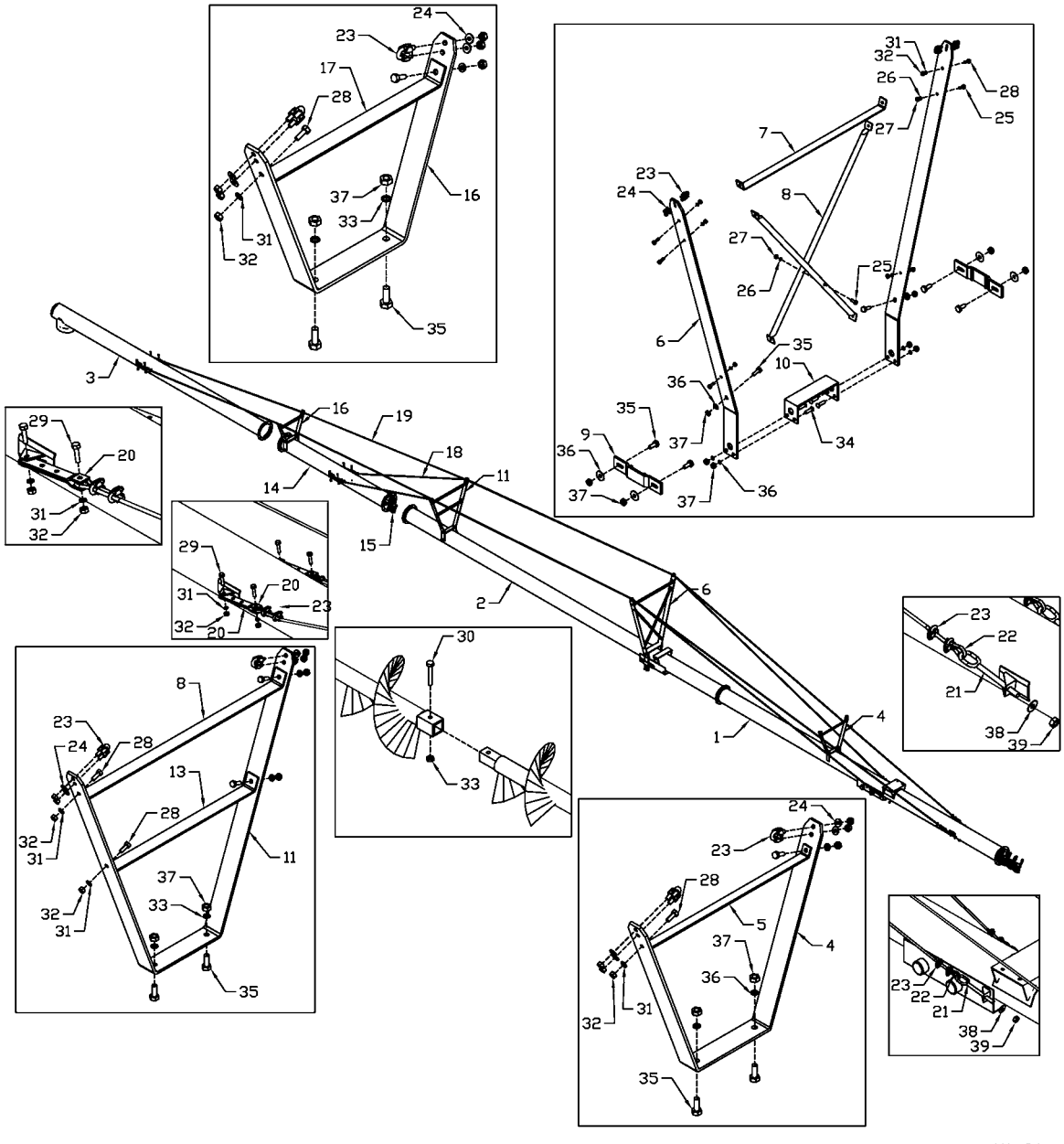
2. The cables must be removed and the main yoke (#6) must be re-positioned for a 95’ Auger. Use the higher of the two positions for the 95’ auger as shown on the illustration. The10’ extension has an additional bridging yoke (#16) and tie bar (#17).

3. The undercarriage pivot for the 95’ auger must also be moved when converting from a 85’. The 95’ auger (on page 26) uses the higher of the two pivot rings. See the illustration with the instructions. The shift in the main yoke and undercarriage pivot ring is done to increase the weight at the bottom end for the 95’ auger. This should prevent loosing all the weight at the bottom end when emptying the auger.

4. The inner cables do not change from the 85’ to the 95’ auger. The outer cables mount as per the 85’ except they are attached to the extra bridging yoke on the 10’ extension.

5. The rest of the assembly is exactly the same as for a standard 85’ auger as described in the 13” backsaver manual.

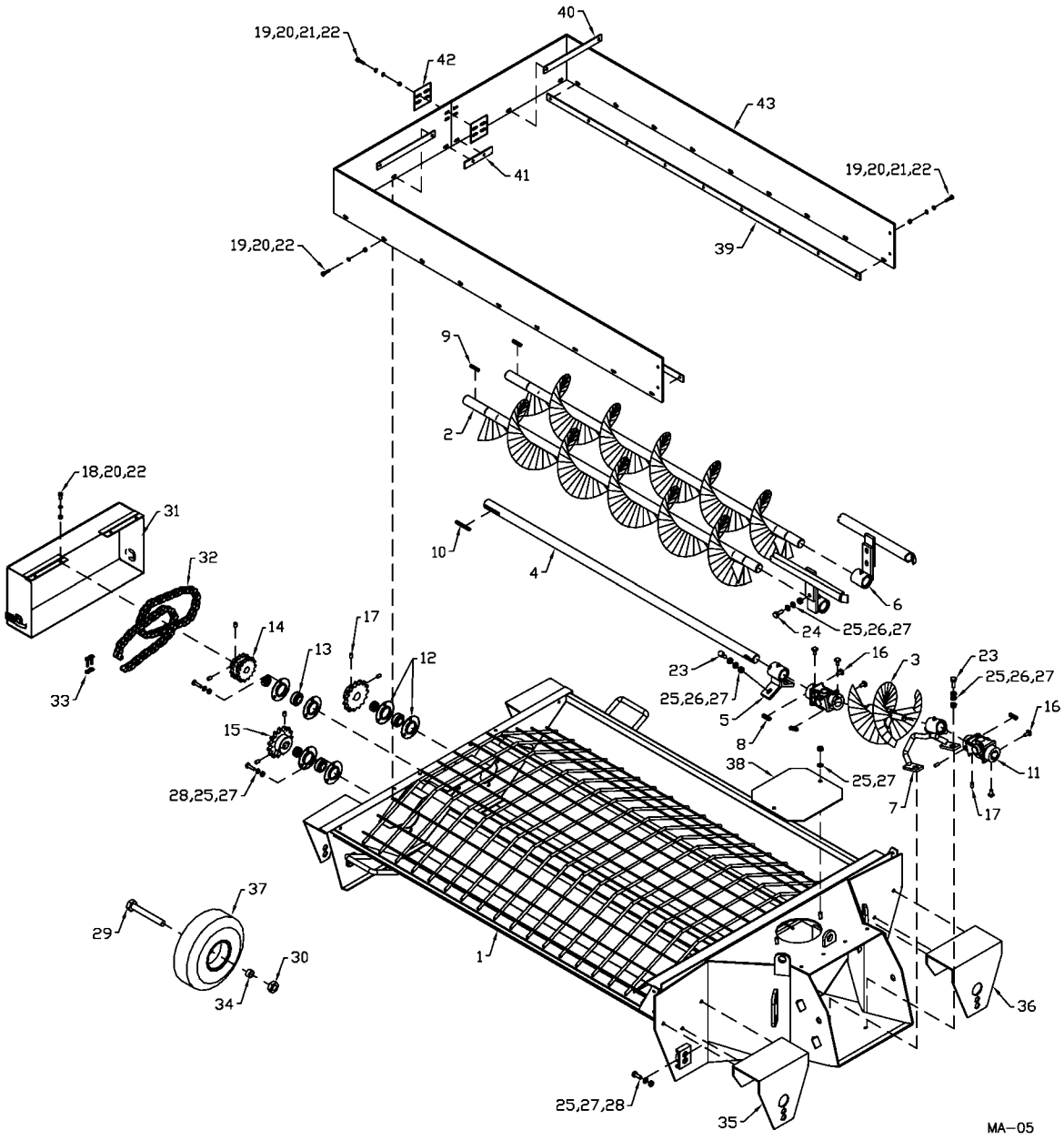
13” x 95’ MECHANICAL AUGER BRIDGING & EXTENSION TUBE



13" x 95' BRIDGING & EXTENSION TUBE

Item #	Part #	Description
1	906116	26'-9" Bottom Tube
2	960949	30' Center Tube
3	960669	25' Top Tube
4	960675	Lower Bridging Yoke 68 1/2"
5	960677	Lower Bridging Tie Bar 31 1/2"
6	909942	Main Bridging Yoke 82"
7	909943	Main Bridging Tie Bar 48 7/8"
8	960674	Main Bridging Brace
9	960745	Main Bridging Yoke Clamp
10	960743	Main Bridging Yoke Mount
11	909944	Upper Bridging Yoke 98 1/2"
12	909945	Upper Bridging Top Tie Bar 42 1/4"
13	909946	Upper Bridging Bottom Tie Bar 30 7/8"
14	909941	10' Extension Tube
15	904533	Extension Flighting 123" Long
16	909947	Extension Bridging Yoke 57"
17	909948	Extension Bridging Tie Bar 27 3/4"
18	909949	1/2" x 52'-6" Lower Cable Only
	960681	1/2" x 50'-10" Lower Cable Assembly
19	909950	1/2" x 77'-4" Upper Cable Only
	904537	1/2" x 75-8" Upper Cable Assembly
20	960244	Cable Yoke
21	960613	3/4" x 8" Cable Tightener
22	964587	1/2" Thimble
23	964565	1/2" Cable Clamp
24	964001	3/8" Flat Washer (10ga)
25	81598	7/16" x 1 1/4" Hex Bolt
26	81615	7/16" Lock Washer
27	81614	7/16" Hex Nut
28	81620	1/2" x 1 1/4" Hex Bolt
29	911791	1/2" x 2" Hex Bolt
30	9812368	1/2" x 2 3/4" Hex Bolt (Gr8)
31	81637	1/2" Lock Washer
32	81636	1/2" Hex Nut
33	812364	1/2" Lock Nut
34	967284	5/8" x 1 3/4" Flat Head Bolt
35	84270	5/8" x 1 3/4" Hex Bolt
36	81677	5/8" Lock Washer
37	81676	5/8" Hex Nut
38	84050	3/8" Flat Washer (SAE)
39	81700	3/4" Hex Nut

13” MULTI-FLIGHTING HOPPER

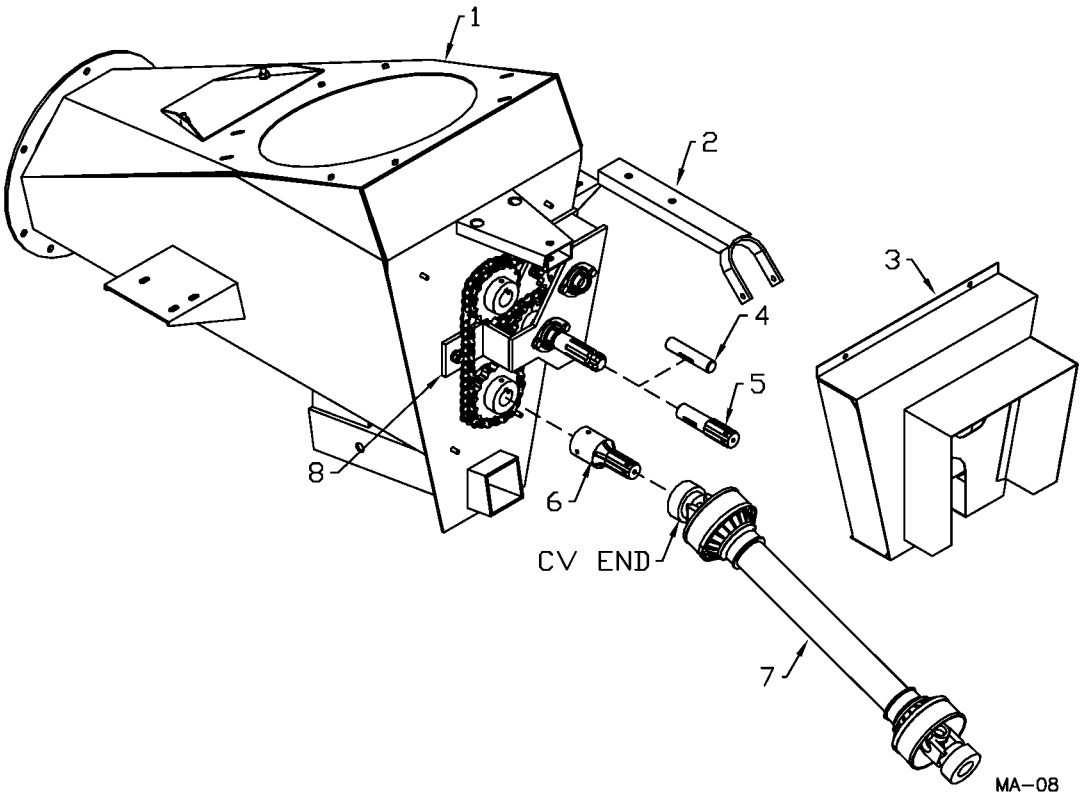


13" MULTI-FLIGHTING HOPPER

Item #	Part #	Description
1	905413	Hopper
2	905419	Outside Flighting
3	905431	Center Flighting

4	905434	Center Flighting Rod
5	905834	Center Shaft Holder
6	905836	Outside Flighting Holder
7	905838	Center Flighting Holder
8	960180	Hopper U-Joint Key 5/16" x 1 3/8"
9	963026	Outside Sprocket Key 1/4" x 1 1/2"
10	905369	Inside Sprocket Key 1/4" x 2 1/2"
11	960547	U-Joint 1 1/4" Both Ends with 5/16" Keyway
12	961675	Flange Bearing (72MS) Pair
13	961676	1 1/4" Bearing with Collar
14	905562	Sprocket 14T #60 1 1/4" Bore
15	960492	Sprocket 17T #60 1 1/4" Bore
16	9812378	3/8" x 3/4" Setscrew Square Shed (Br)
17	988999	3/8" x 3/8" Setscrew (Br)
18	81525	1/4" X 3/4" Hex Bolt
19	81527	1/4" x 1" Hex Bolt
20	81545	1/4" Lock Washer
21	81546	1/4" Flat Washer
22	81544	1/4" Hex Nut
23	86171	3/8" x 1 1/4" Hex Bolt
24	811792	3/8" x 1 1/2" Hex Bolt
25	81593	3/8" Lock Washer
26	84039	3/8" Flat Washer
27	81592	3/8" Hex Nut
28	86170	3/8" x 1" Hex Bolt
29	812114	3/4" x 5 1/2" Hex Bolt
30	812365	3/4" Lock Nut
31	905444	Chain Guard
32	906558	Chain Assy #60 x 35 Pitches Including Conn.
33	912300199	Chain Connector Link 60
34	960839	Spacer 1" OD x 1 1/2" long
35	902575	Standard Wheel Brkt 9" x 17 7/8" - Left Hand
36	902576	Standard Wheel Brkt 9" x 17 7/8" - Right Hand
37	960714	Wheel with Tire 4.10/3.50
38	905364	Cover Plate 7 1/2" x 9 1/2"
39	960660	Rubber Reinforcement 1" x 57 1/4" long
40	960837	Rubber Reinforcement 1" x 10 1/2"
41	960834	Rubber Reinforcement 1" x 5"
42	903483	Connector Plates 3" x 3" x 14 Ga
43	905608	1/4" x 7" x 81" Rubber Strips with Holes

13” MECHANICAL DRIVE AUGER REVERSE KIT



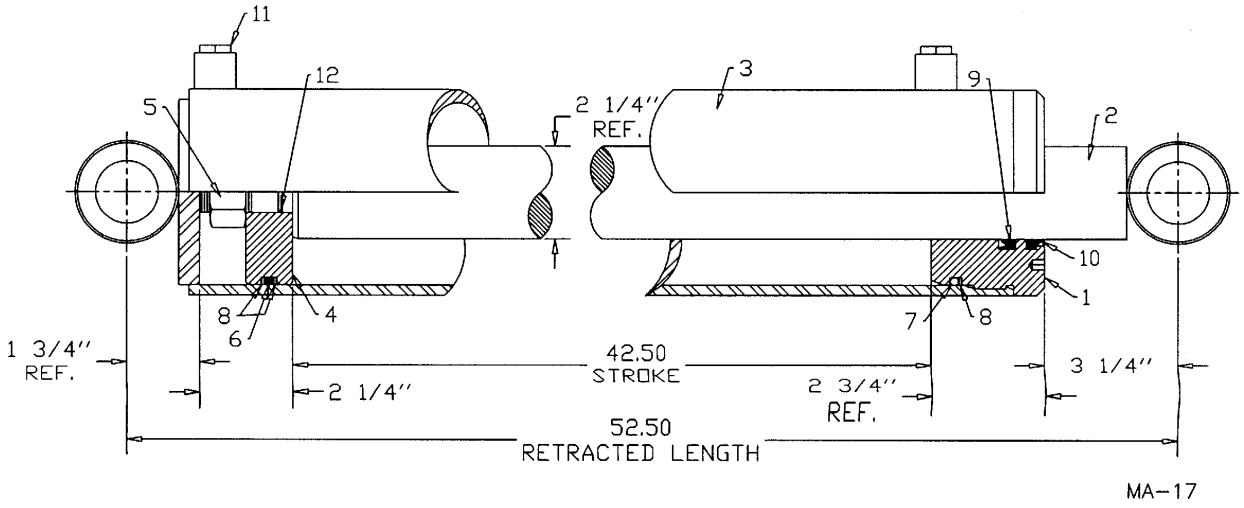
Reverse Kit Option – F7349 (for 13” x 70’ only)
Reverse Kit Option – F7449 (for 13” x 85’ only)

13" BACKSAVER AUGER REVERSE KIT

Item #	Part #	Description
1	909638	Input Box
2	903494	PTO holder (21 1/2" long)
3	907421	Chain Cover
4	960533	1" x 4 1/2" Idler Shaft
5	960182	6 Splined Shaft (8 3/4" long)
6	904411	1 1/2" I.D. Pump Adapter
7	936366	6 Spline End Yoke (70' only)
	F9552	PTO Shaft CV (2-6 Spline Ends) - 13" x 70'
	936566	Tractor Half PTO, CV (6 Spline End) - 1370
	908720	Auger Half PTO, CV (6 Spline End) - 1370
	936431	6 Spline End Yoke (85' only)
	F0608	PTO Shaft, CV 55R Ser. (2-Spline) - 13" x 85'
	908721	Tractor Half PTO, CV 55R Ser (6 Spline End) - 1385
	908722	Auger Half PTO, CV 55R Ser. (6 Spline End) - 1385
8	907430	Idler Assembly (arm, sprocket, bearings shaft, etc.)

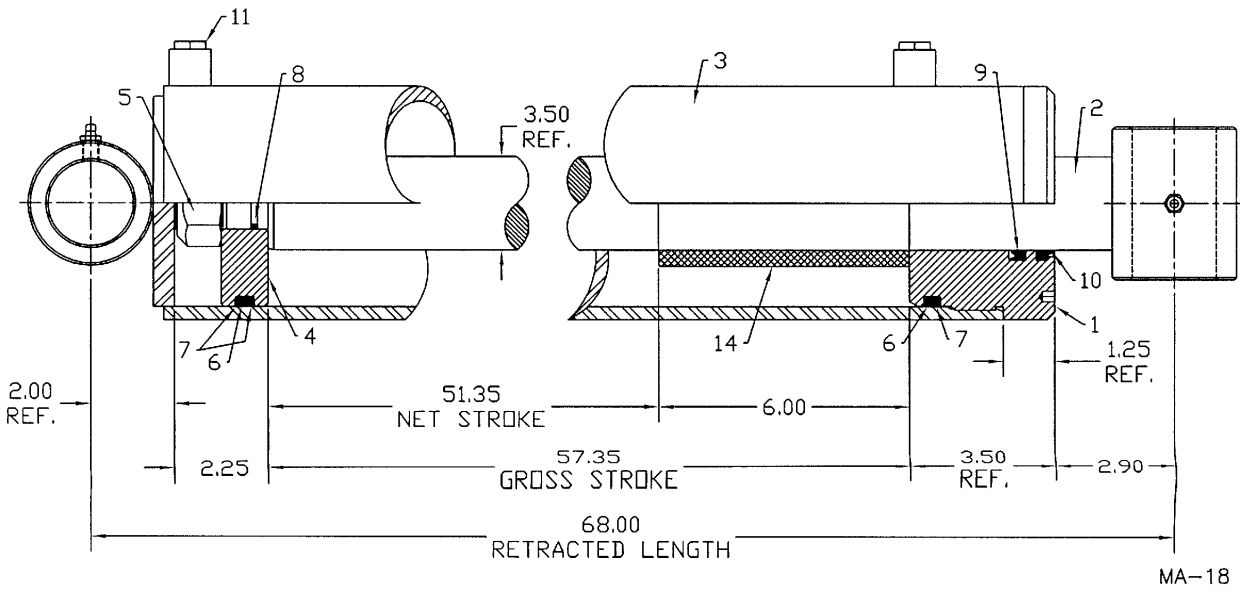
4.5 x 42.50 CYLINDER ASSEMBLY

Item #	Part #	Description
	F9778	Cylinder Complete
1	24888	4.5 Dia. Headplate
2	112564	Shaft Weld't 2.25 OD x 50.75 Lg
3	24886	4.5 Dia. Tube Weldment
4	112561	4.5 Dia. Piston
5	813407	Locknut 1.0 UNF
6	85346	O-Ring 4.125 ID x 4.50 OD Poly
7	82346	O-Ring 4.125 ID x 4.50 OD Buna
8	83346	Backup 4.125 ID x 4.50 OD x 0.06
9	812934	U-Cup 2.25 ID x 2.75 OD x 0.375
10	812979	Wiper Seal 2.25 ID x 2.75 OD x 0.25
11	812081	Plug s MORB Stl
12	82020	O-Ring 0.875 ID x 1.00 x 0.06
13	22370	Hydraulic Cylinder Decal
14	105420	Reference Plate JBI/FK Serial #

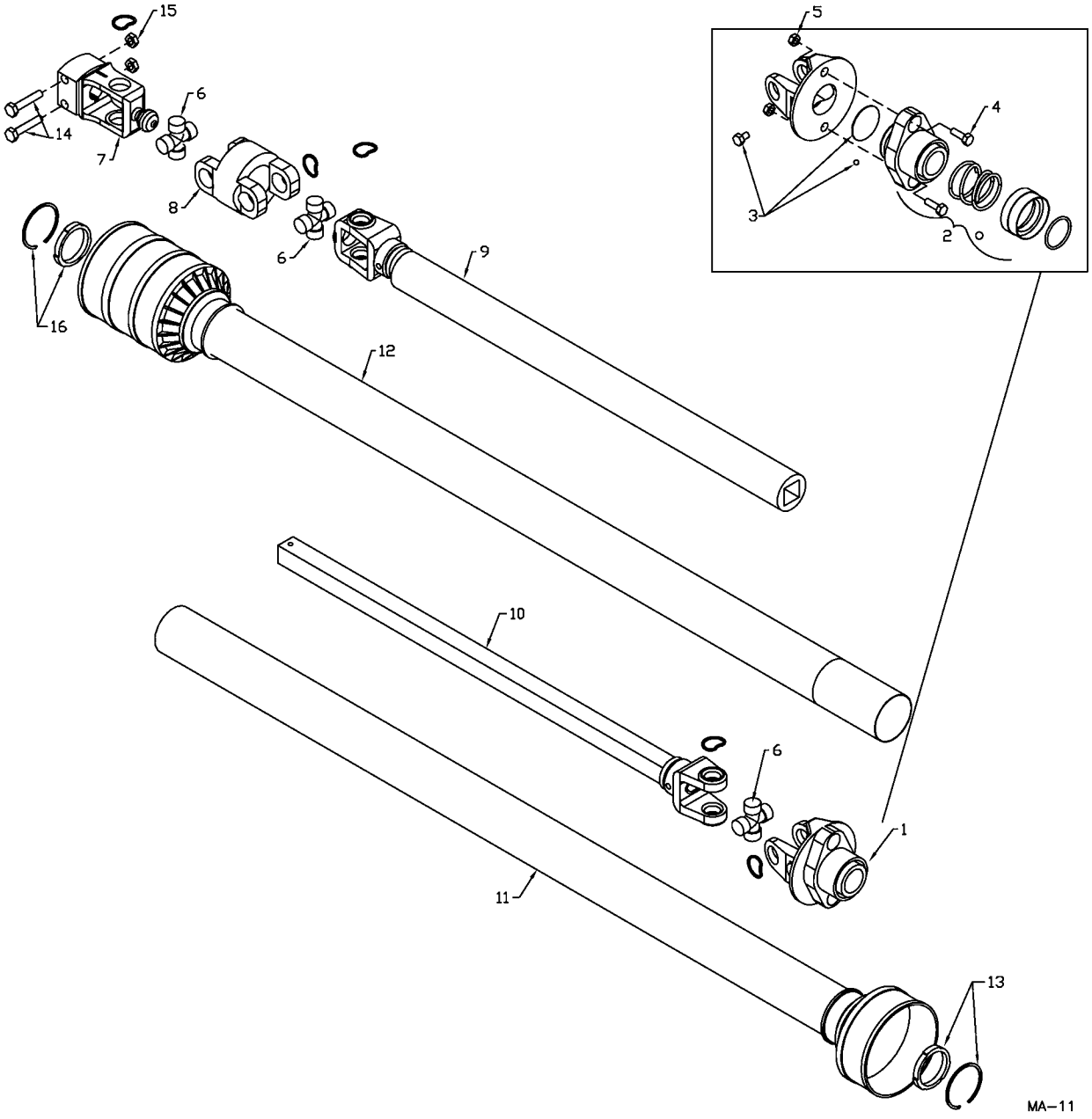


5.0 Dia. x 51.35 CYLINDER ASSEMBLY

Item #	Part #	Description
	F0445	Cylinder Complete
1	25123	5.0 Dia. Headplate
2	116128	Shaft Weld't 3.5 x 66
3	25122	5.0 Dia. Tube Weld't
4	111299	5.0 Dia. Piston
5	87557	Locknut 1.25 UNF
6	82425	O-Ring 4.50 ID x 5.00 OD Buna
7	83425	Backup 4.50 ID x 5.00 OD x 0.085
8	82214	O-Ring 1.00 ID x 1.25 OD Buna
9	115130	U-Cup 4.25 OD x 3.50 ID x 0.375
10	115129	Wiper Seal 3.50 ID x 4.00 OD x 0.25
11	812081	Plug 3/4 MORB Steel
12	22370	Hydraulic Cylinder Decal
13	105420	Reference Plate JBI/FK Serial #
14	116129	Stop Tube 6.00 Long



13” BACKSAVER AUGER PTO SHAFT



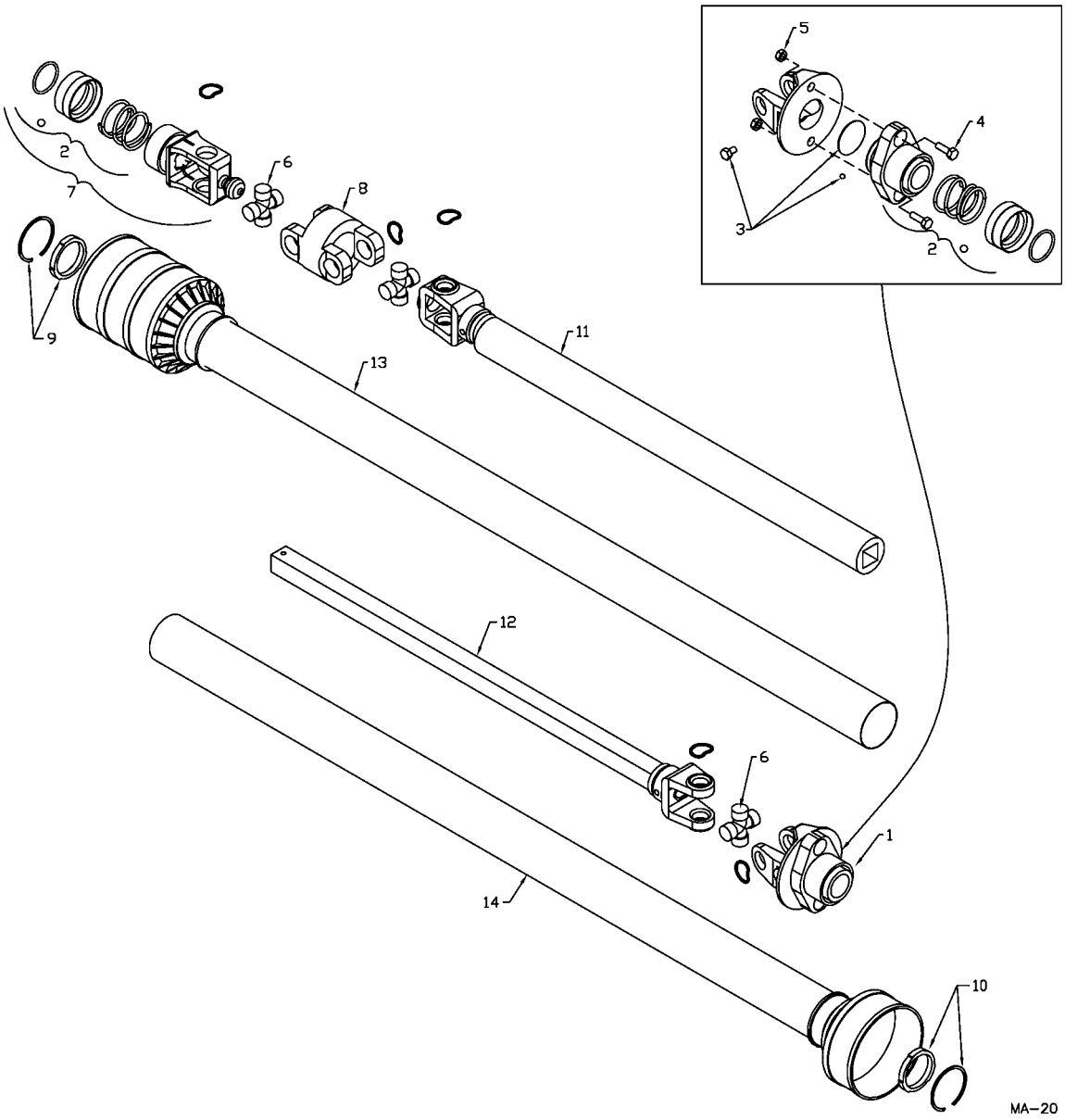
13" x 70' BACKSAVER AUGER PTO SHAFT PARTS LIST

Item #	Part #	Description
	F9551	Shaft Complete
	936565	Inner Half Shaft - Implement
	936566	Outer Half Shaft - Tractor
1	936277	Ball Shear Assembly
2	936199	Safety Slide Lock Repair Kit (Collar, Spring, Retainer Ring, 2-Pawls)
3	936249	Shear Assembly Repair Kit (3/8" x 1/2" Bolt, Lube, Blank, 31-1/4" Balls)
4	903297	Bag of 10 - Shear Bolts - 5/16" x 1" (gr. 8) w/ Nuts
5	812362	5/16" Lock Nut
6	906504	Repair Kit - Extended Life (std.)
	936025	Repair Kit - Optional
7	936360	Clamp Yoke
8	936361	CV Center Housing
9	936362	Yoke & Tube
10	936274	Yoke & Shaft
11	936273	Outer Guard
12	936363	Inner Guard
13	936319	Nylon Repair Kit (Bearing & Snap Ring)
14	81627	1/2" x 3" Hex Bolt
15	812364	1/2" Lock Nut
16	936364	Nylon Repair Kit (Bearing & Snap Ring)

13" x 85' BACKSAVER AUGER PTO SHAFT PARTS LIST

	F0607	Shaft Complete
	908719	Inner Half Shaft - Implement
	908721	Outer Half Shaft - Tractor
1	936432	Ball Shear Assembly
2	936199	Safety Slide Lock Repair Kit (Collar, Spring, Retainer Ring, 2-Pawls)
3	936249	Shear Assembly Repair Kit (3/8" x 1/2" Bolt, Lube, Blank, 31-1/4" Balls)
4	903297	Bag of 10 - Shear Bolts - 5/16" x 1" (gr. 8) with Nuts
5	812362	5/16" Lock Nut
6	906505	Repair Kit - Extended Life (standard)
	936434	Repair Kit - Optional
7	936435	Clamp Yoke
8	936436	CV Center Housing
9	936438	Yoke & Tube
10	936437	Yoke & Shaft
11	908843	Outer Guard
12	908842	Inner Guard
13	908844	Nylon Bearing
14	81627	1/2" x 3" Hex Bolt
15	812364	1/2" Lock Nut
16	908844	Nylon Bearing

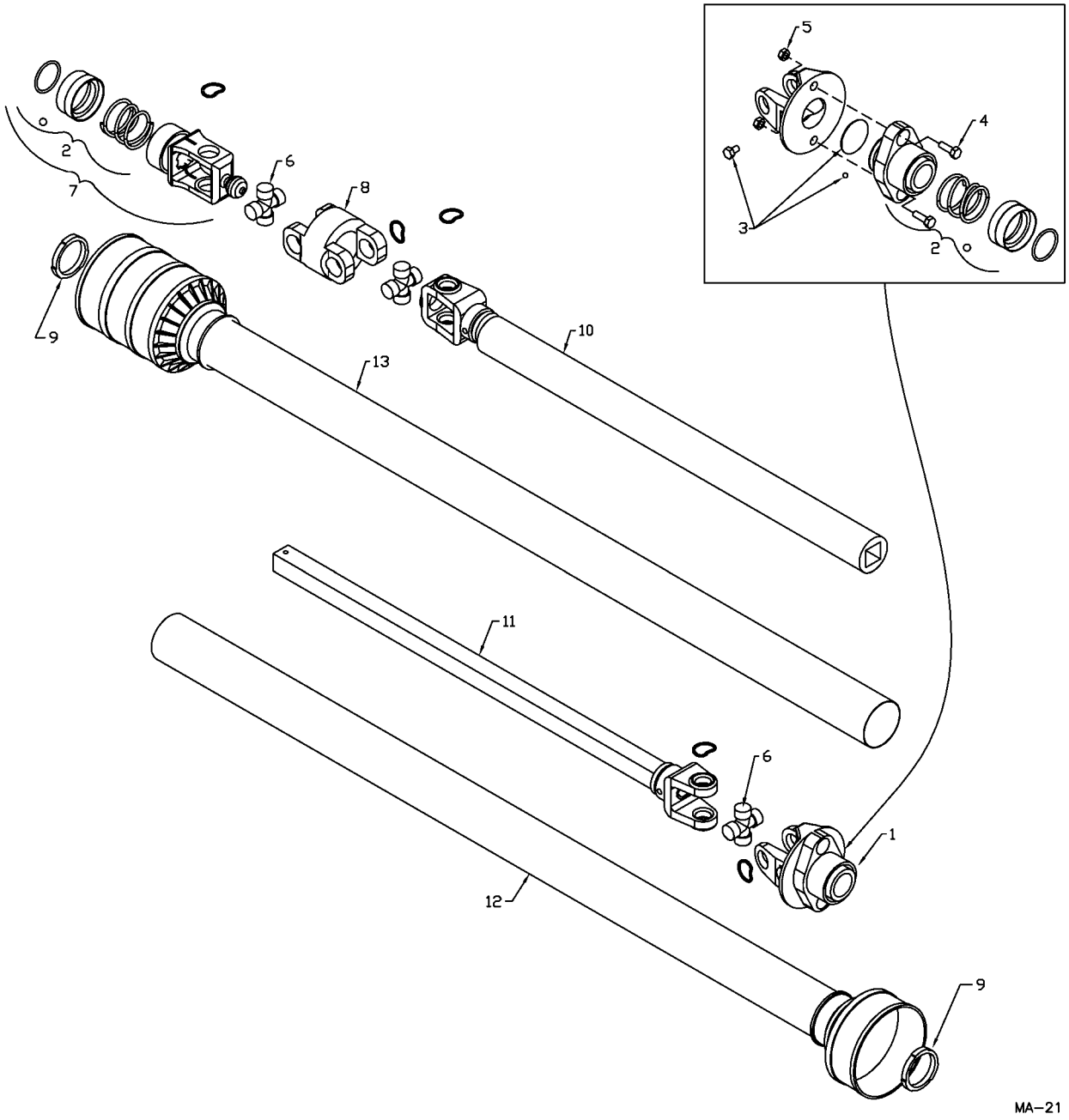
13” x 70’ REVERSE OPTION PTO



13" x 70' BACKSAVER AUGER REVERSE OPTION PTO SHAFT PARTS LIST

Item #	Part #	Description
	F9552	Shaft Complete
	936566	Outer Half Shaft - Tractor
	908720	Inner Half Shaft - Implement
1	936277	Ball Shear Assembly
2	936433	Safety Slide Lock Repair Kit (Collar, Spring, Retainer Ring, 2-Pawls)
3	936249	Shear Assembly Repair Kit (3/8" x 1/2" Bolt, Lube, Blank, 31-1/4" Balls)
4	903297	Bag of 10 - Shear Bolts - 5/16" x 1" (gr. 8) w/ Nuts
5	812362	5/16" Lock Nut
6	906504	Repair Kit - Extended Life (std.)
	936025	Repair Kit - Optional
7	936366	Inner Splined Yoke
8	936361	CV Center Housing
9	936364	Nylon Repair Kit 21 x 26 (Bearing & Snap Ring)
10	936319	Nylon Repair Kit 20 x 26 (Bearing & Snap Ring)
11	936362	Yoke & Tube
12	936274	Yoke & Shaft
13	936363	Inner Guard
14	936273	Outer Shield

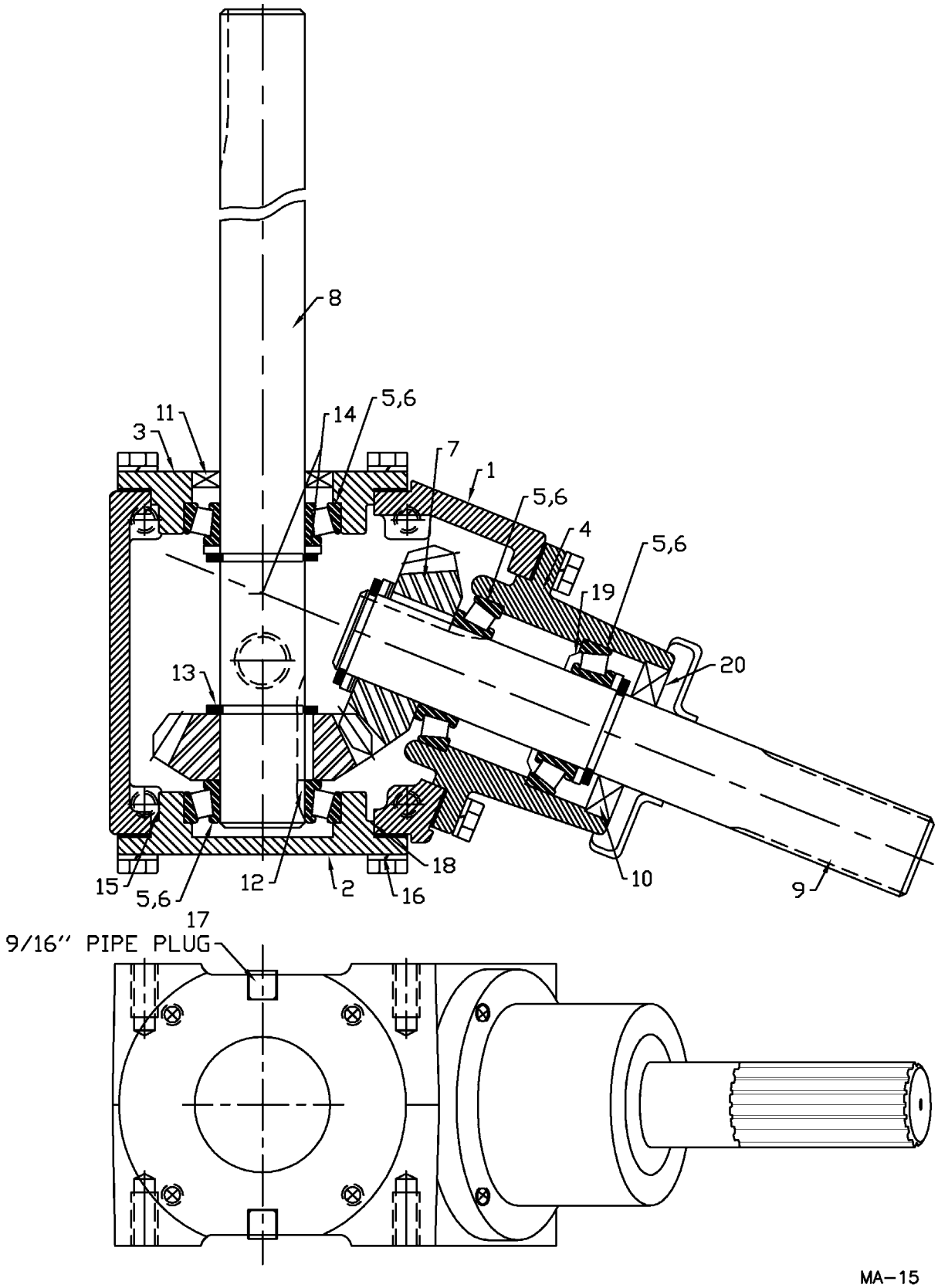
13” x 85’ REVERSE OPTION PTO



13" x 85' BACKSAVER AUGER REVERSE OPTION PTO SHAFT PARTS LIST

	F0608	Shaft Complete
	908721	Outer Half Shaft - Tractor
	908722	Inner Half Shaft - Implement
1	936432	Ball Shear Assembly
2	936433	Safety Slide Lock Repair Kit (Collar, Spring, Retainer Ring, 2-Pawls)
3	936249	Shear Assembly Repair Kit (3/8" x 1/2" Bolt, Lube, Blank 31 1/4" Balls)
4	903297	Bag of 10 - Shear Bolts - 5/16" x 1" (gr. 8) with Nuts
5	812362	5/16" Lock Nut
6	906505	Repair Kit - Extended Life (standard)
	936434	Repair Kit - Optional
7	936431	Inner Splined Yoke
8	936436	CV Center Housing
9	908844	Nylon Repair Kit
10	936438	Yoke & Tube
11	936437	Yoke & Shaft
12	908843	Outer Shield
13	908842	Inner Guard

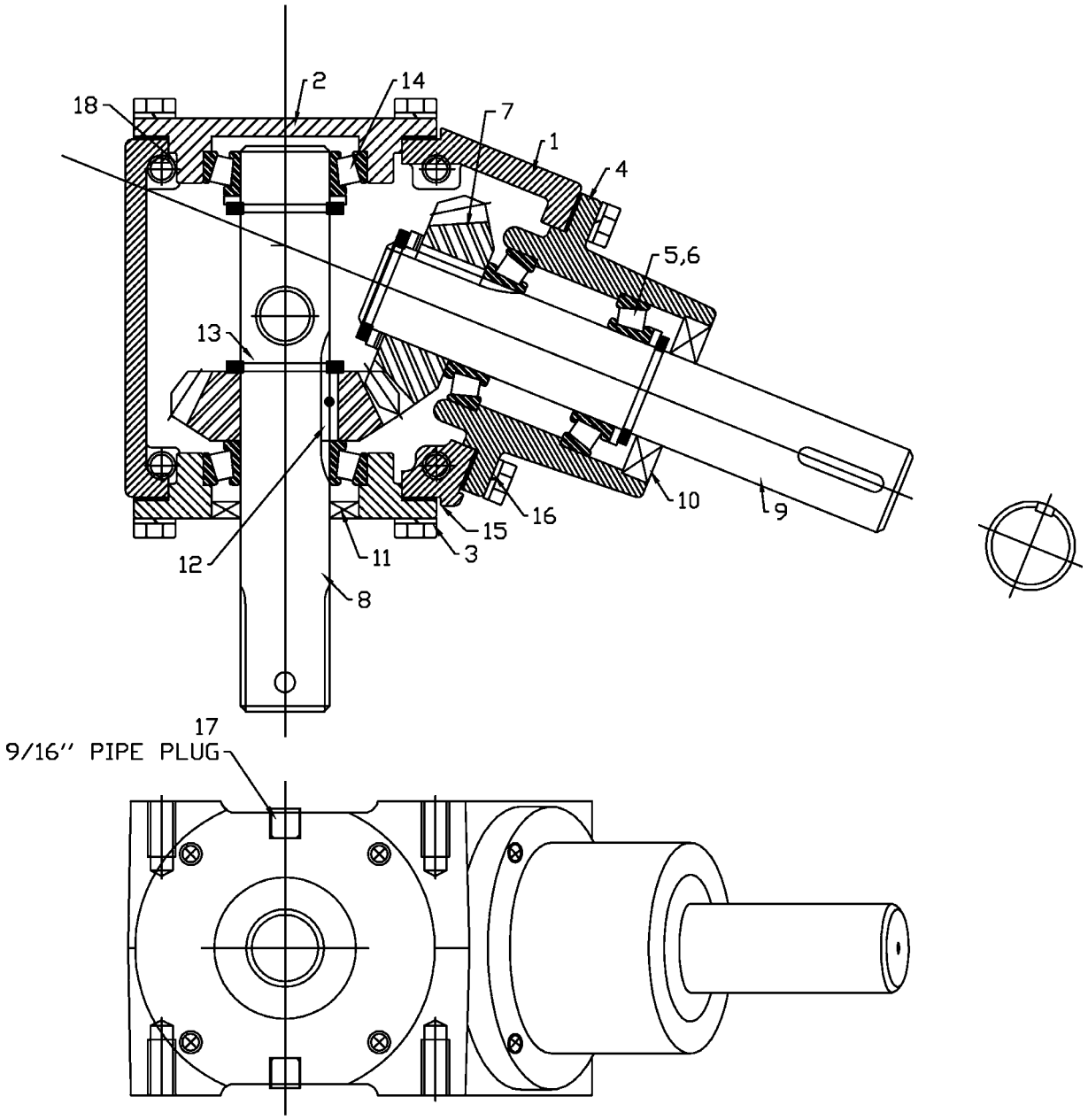
13” MECHANICAL DRIVE – INPUT BOX GEARBOX



13" BACKSAVER AUGER - INPUT BOX GEARBOX

Item #	Part #	Description
	960788	Gearbox Complete
1	960803	Housing
2	960805	End Cap
3	960810	End Cap
4	960804	Quill
5	967208	Bearing Cone LM48548
6	968412	Bearing Cup LM48510
7	960812	Gear, DP 4.23 Teeth 17
8	960823	Shaft, Cross
9	960822	Shaft, Quill
10	960816	Seal, (1.374x2.563x0.374)
11	960817	Seal, (1.374x2.374x0.374)
12	960821	Square Key, 5/16" x 1.61"
13	960809	Snap Ring
14	960808	Spacer
15	960815	Gasket
16	960814	Capscrew, 3/8" - 16UNC x 1.00"
17	960818	9/16" Pipe Plug with O-Ring
18	908895	O-Ring, 105mmx3.1
19	960824	Grease Washer
20	960825	Shield

13” MECHANICAL DRIVE – INTAKE AUGER GEARBOX

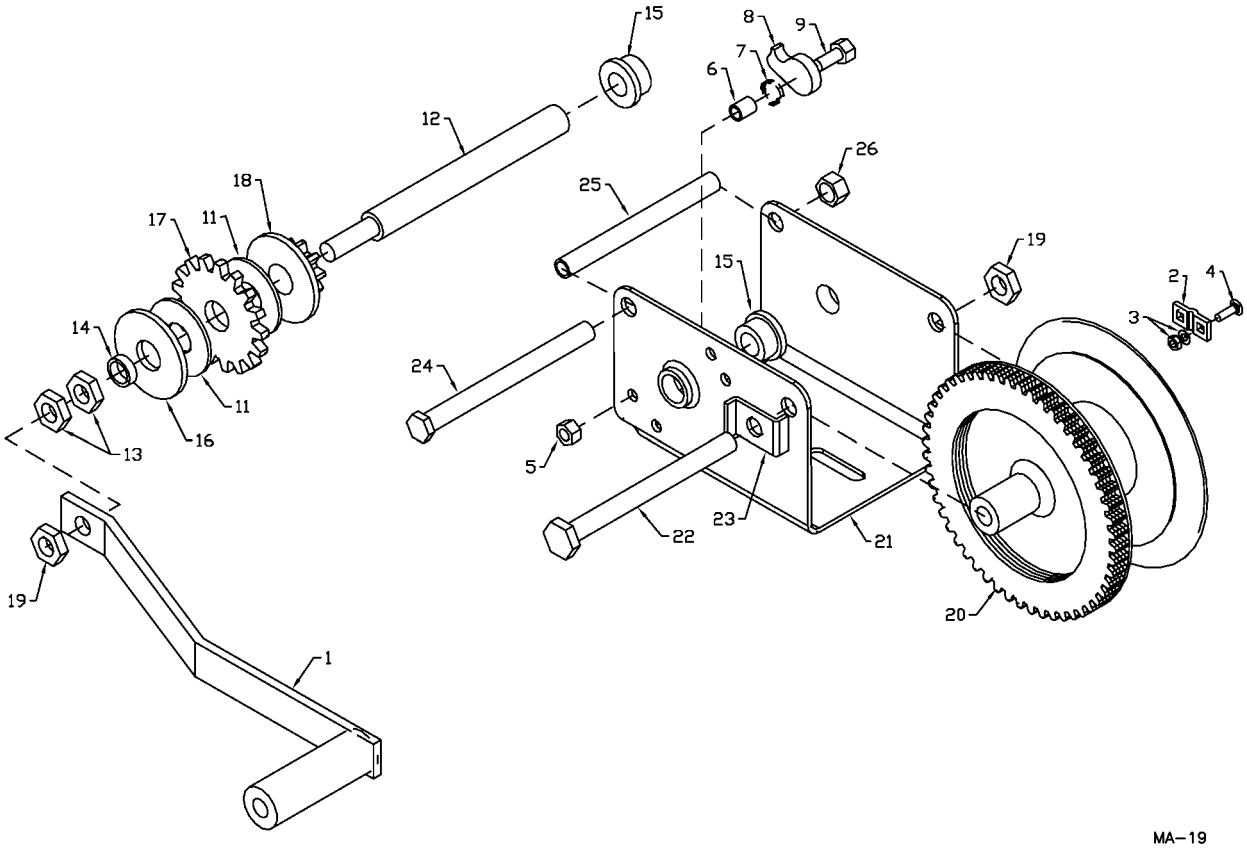


MA–16

13" BACKSAVER AUGER - INTAKE AUGER GEARBOX

Item #	Part #	Description
	960950	Gearbox Complete
1	960803	Housing
2	960805	End Cap
3	960810	End Cap
4	960804	Quill
5	967208	Bearing Cone LM48548
6	968412	Bearing Cup LM48510
7	960812	Gear, DP 4.23 Teeth 17
8	960951	Shaft, Cross
9	960819	Shaft, Quill
10	960816	Seal, (1.374x2.563x0.374)
11	960817	Seal, (1.374x2.374x0.374)
12	960821	Square Key, 5/16" x 1.61"
13	960809	Snap Ring
14	960808	Spacer
15	960815	Gasket
16	960814	Cap Screw, 3/8" -16UNC x 1.00"
17	960818	9/16" Pipe Plug with O-Ring
18	908895	O-Ring, 105mmx3.1

NO. 1550 WINCH - #961888



No. 1550 WINCH PARTS LIST - 961888

Item #	Part #	Description
1	2461S01	Handle Assembly
	5621S01	CABLE KEEPER KIT
2		Cable Clamp
3		Lockwasher & Nut
4		Carriage Bolt
	6730S00	RATCHET KIT
5		Lock Nut - 5/16
6		Ratchet Spacer
7		Ratchet Spring
8		Ratchet Pawl
9		Shoulder Bolt
11		Bushing
	1563S01	INPUT SHAFT KIT
12		Input Shaft
13		1/2" Lock Nut
14		Spacer
15		Bushing
16		Shaft Brake Disc
17		Ratchet Gear
18		Pinion & Disc Assembly
19	*	19" Lock Nut
20	*	Drum Assembly
21	*	Frame
22	*	1/2" x 5 3/4" Hex Bolt
23	*	Drum Spacer
24	*	3/8" x 5 3/4" Hex Bolt
25	*	Frame Spacer
26	*	3/8" Lock Nut
		* Not Available

SHIPPING KIT AND BUNDLE NUMBERS

The following is a list of Kit Numbers for this product and the Bundle Numbers, Descriptions, and Quantities for each Kit.

Y1370TM 13" x 70' BACKSAVER AUGER

QUANTITY	BUNDLE NO.	DESCRIPTION
1	F9701	top section
1	F9702	center section
1	F0132	bottom section
1	F9551	PTO shaft
1	F0191	axle
1	F9722	r.h. undercarriage arm
1	F9723	l.h. undercarriage arm
1	F9707	upper lift arm
1	F0655	r.h. lower lift arm
1	F0656	l.h. lower lift arm
1	F0804	intake auger
1	F9776	intake hopper
1	F0936	crate of parts
1	F0921	input box
2	F0210	wheels, 15" x 6" x 6 bolt
1	F9180	carton of parts (hopper)

Y1370TMR 13" x 70' BACKSAVER AUGER W/REVERSE KIT

1	F9701	top section
1	F9702	center section
1	F0132	bottom section
1	F9552	PTO shaft
1	F0191	axle
1	F9722	r.h. undercarriage arm
1	F9723	l.h. undercarriage arm
1	F9707	upper lift arm
1	F0655	r.h. lower lift arm
1	F0656	l.h. lower lift arm
1	F0804	intake auger
1	F9776	intake hopper
1	F0936	crate of parts
1	F0922	input box
2	F0210	wheels, 15" x 6" x 6 bolt
1	F9180	carton of parts (hopper)

Y1370TMM 13" x 70' BACKSAVER AUGER W/MULTI-FLIGHTING INTAKE HOPPER

1	F9701	top section
1	F9702	center section
1	F0132	bottom section
1	F9551	PTO shaft
1	F0191	axle
1	F9722	r.h. undercarriage arm
1	F9723	l.h. undercarriage arm
1	F9707	upper lift arm
1	F0655	r.h. lower lift arm
1	F0656	l.h. lower lift arm
1	F0804	intake auger
1	F0312	multi-flighting intake hopper
1	F0936	crate of parts
1	F0921	input box
2	F0210	wheels, 15" x 6" x 6 bolt
1	F0091	carton of parts (hopper)

Y1370TMMR 13" x 70' BACKSAVER AUGER W/ MULTI-FLIGHTING INTAKE HOPPER AND REVERSE KIT

1	F9701	top section
1	F9702	center section
1	F0132	bottom section
1	F9552	PTO shaft
1	F0191	axle
1	F9722	r.h. undercarriage arm
1	F9723	l.h. undercarriage arm
1	F9707	upper lift arm
1	F0655	r.h. lower lift arm
1	F0656	l.h. lower lift arm
1	F0804	intake auger
1	F0312	multi-flighting intake hopper
1	F0936	crate of parts
1	F0922	input box
2	F0210	wheels, 15" x 6" x 6 bolt
1	F0091	carton of parts

Y1385TM 13" x 85' BACKSAVER AUGER

1	F9730	top section
1	F9731	center section
1	F0133	bottom section
1	F0607	PTO shaft
1	F0192	axle
1	F9734	r.h. undercarriage arm
1	F9735	l.h. undercarriage arm
1	F0464	upper lift arm
1	F0565	r.h. lower lift arm
1	F0564	l.h. lower lift arm
1	F0804	intake auger
1	F9776	intake hopper
1	F0937	crate of parts
1	F0921	input box
2	F0211	wheels, 15" x 8" x 6 bolt
1	F9180	carton of parts (hopper)

Y1385TMR 13" x 85' BACKSAVER AUGER W/REVERSE KIT

1	F9730	top section
1	F9731	center section
1	F0133	bottom section
1	F0608	PTO shaft
1	F0192	axle
1	F9734	r.h. undercarriage arm
1	F9735	l.h. undercarriage arm
1	F0464	upper lift arm
1	F0565	r.h. lower lift arm
1	F0564	l.h. lower lift arm
1	F0804	intake auger
1	F9776	intake hopper
1	F0937	crate of parts
1	F0922	input box
2	F0211	wheels, 15" x 8" x 6 bolt
1	F9180	carton of parts (hopper)

Y1385TMM 13" x 85' BACKSAVER AUGER W/MULTI-FLIGHTING INTAKE HOPPER

1	F9730	top section
1	F9731	center section
1	F0133	bottom section
1	F0607	PTO shaft
1	F0192	axle
1	F9734	r.h. undercarriage arm
1	F9735	l.h. undercarriage arm
1	F0464	upper lift arm
1	F0565	r.h. lower lift arm
1	F0564	l.h. lower lift arm
1	F0804	intake auger
1	F0312	multi-flighting intake hopper
1	F0937	crate of parts
1	F0921	input box
2	F0211	wheels, 15" x 8" x 6 bolt
1	F0091	carton of parts (hopper)

Y1385TMMR 13" x 85' BACKSAVER AUGER W/MULTI-FLIGHTING INTAKE HOPPER AND REVERSE KIT

1	F9730	top section
1	F9731	center section
1	F0133	bottom section
1	F0608	PTO shaft
1	F0192	axle
1	F9734	r.h. undercarriage arm
1	F9735	l.h. undercarriage arm
1	F0464	upper lift arm
1	F0565	r.h. lower lift arm
1	F0564	l.h. lower lift arm
1	F0804	intake auger
1	F0312	multi-flighting intake hopper
1	F0937	crate of parts
1	F0922	input box
2	F0211	wheels, 15" x 8" x 6 bolt
1	F0091	carton of parts (hopper)

OPTIONAL BUNDLE NUMBERS

The following is a list of options available for the Kits listed above.

Y140	13” x 10’ Extension Kit (13” x 85’ only)
F3005	Poly Spout (oval)
Y209	Set of 2 9.5L x 6 ply tires mounted (highway rated) (13” x 70’ only)
Y210	Set of 2 11L x 8 ply tires mounted (highway rated) (13” x 85’ only)
F7349	Reverse Kit (13” x 70’ only)
F7449	Reverse Kit (13” x 85’ only)
F9551	PTO Shaft (13” x 70’ only)
F9552	PTO Shaft for Reverse Kit (13” x 70’ only)
F0607	PTO Shaft (13” x 85’ only)
F0608	PTO Shaft for Reverse Kit (13” x 85’ only)
F0332	CE Approved CV PTO Shaft (13” x 70’ only)
Y1305	Multi-flighting Hopper Conversion Kit
Y1304	Hopper Mover (hydraulic)
F0062	Dent Remover
F0018	Safety Light Kit
F0420	Safety Chain Assembly
F0014	Reflective Safety Decal Kit
F0389	Clevis Hitch
909681	Closed Centre Hopper Mover Valve Kit

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DIVISION LOCATIONS

Farm King Division
301 Mountain Street S.
Morden, MB R6M 1X7
Ph.: (204) 822-4467
Fax: (204) 822-6348

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Fax: (204) 477-2325

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Skovde, Sweden
011-46-500-452651

Naestved, Denmark
011-45-557-29511

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