Farm King

# OPERATOR AND PARTS MANUAL

## Backsaver Auger

13" Model

082011 FK325 Rev 5

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**Manufacturer's statement:** for technical reasons Buhler Industries Inc. reserves the right to modify machinery design and specifications provided herein without any preliminary notice.
Information provided herein is of descriptive nature. Performance quality may depend on soil fertility, applied agricultural techniques, weather conditions and other factors.

# Introduction

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 Farm King Dealer if you need assistance, information, or additional copies of the manual. Visit our website at www.buhlerindustries.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

## Safety Instructions

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 Farm King product as this could affect function or safety, and could affect the life of the equipment.
- Never start or operate the mower except from the operator's station on the power unit.
- 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.
- Do not operate Intake Auger when it is folded in transport position.
- Never raise the intake end 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 20 mph/h (32 km/h).
- Do not tow equipment that does not have brakes that, when fully loaded, has a mass (weight) over 3300 lb (1.5 t) 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

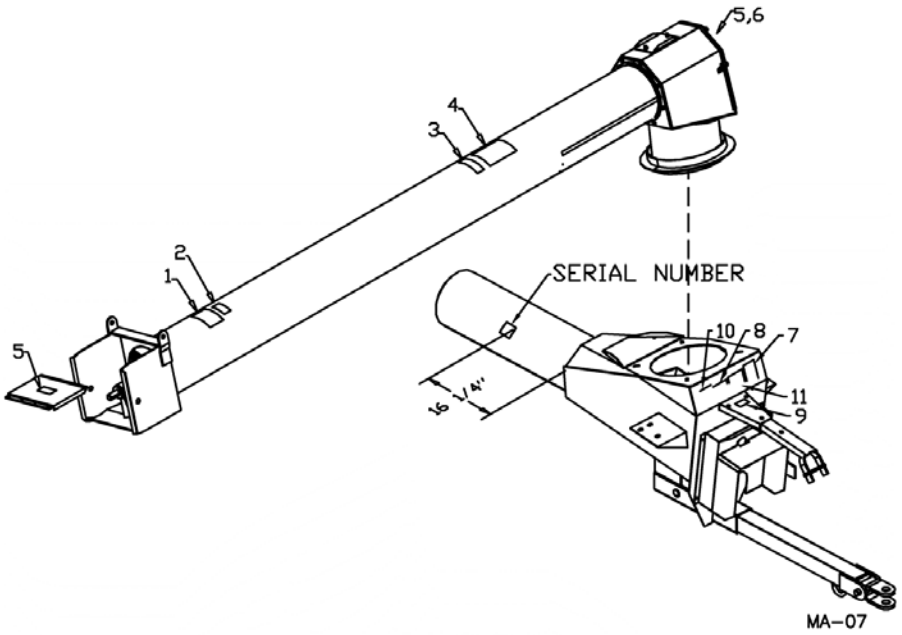
- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Support the frame on stands and blocks to provide a secure base.
- When storing an Auger, park it on level ground so that the bottom end will never be over its center of gravity.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

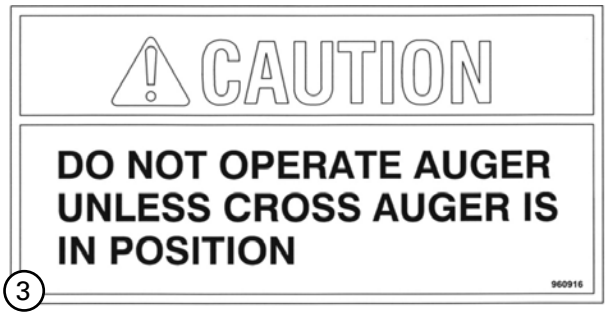
## Installation

- 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.



1

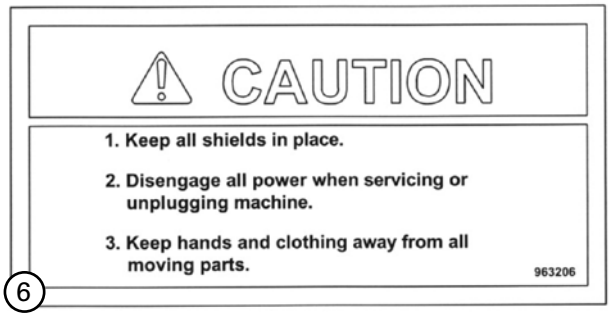
2


CAUTION
DO NOT OPERATE AUGER UNLESS CROSS AUGER IS IN POSITION
960916

3

IMPORTANT
ALIGN YOKE CENTER WITH PIVOT HOLES
960372

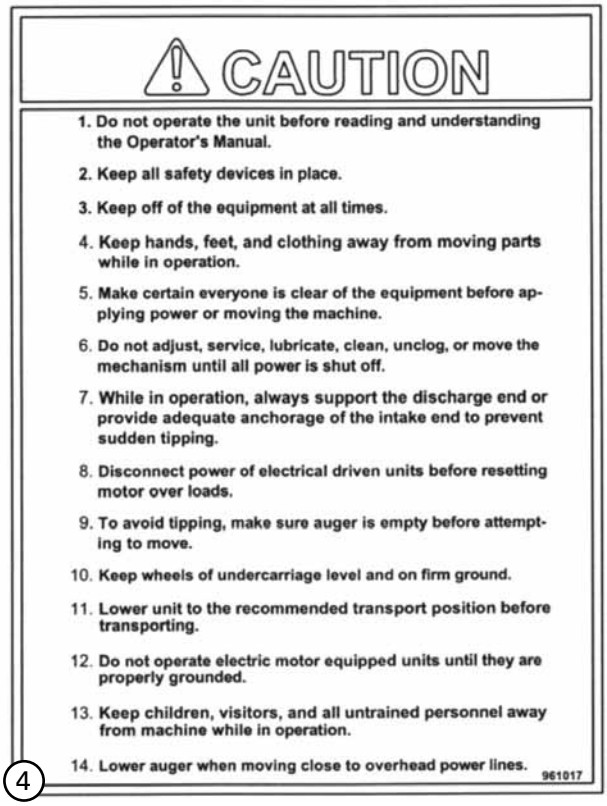
5


CAUTION
1. Keep all shields in place.
2. Disengage all power when servicing or unplugging machine.
3. Keep hands and clothing away from all moving parts.
963206

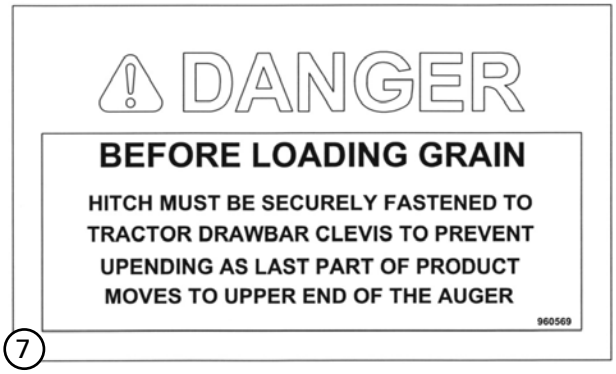
6

IMPORTANT
DISCONNECT PTO SHAFT FROM TRACTOR BEFORE MOVING TO PREVENT PTO DAMAGE
960371

8


CAUTION
1. Do not operate the unit before reading and understanding the Operator's Manual.
2. Keep all safety devices in place.
3. Keep off of the equipment at all times.
4. Keep hands, feet, and clothing away from moving parts while in operation.
5. Make certain everyone is clear of the equipment before applying power or moving the machine.
6. Do not adjust, service, lubricate, clean, unclog, or move the mechanism until all power is shut off.
7. While in operation, always support the discharge end or provide adequate anchorage of the intake end to prevent sudden tipping.
8. Disconnect power of electrical driven units before resetting motor over loads.
9. To avoid tipping, make sure auger is empty before attempting to move.
10. Keep wheels of undercarriage level and on firm ground.
11. Lower unit to the recommended transport position before transporting.
12. Do not operate electric motor equipped units until they are properly grounded.
13. Keep children, visitors, and all untrained personnel away from machine while in operation.
14. Lower auger when moving close to overhead power lines.
961017

4


DANGER
BEFORE LOADING GRAIN
HITCH MUST BE SECURELY FASTENED TO TRACTOR DRAWBAR CLEVIS TO PREVENT UPENDING AS LAST PART OF PRODUCT MOVES TO UPPER END OF THE AUGER
960569

7

9

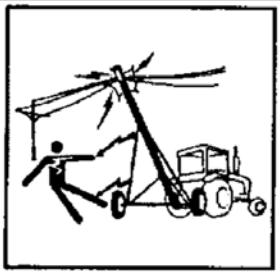
**WARNING**

CHECK PTO SHAFT LENGTH BEFORE RAISING OR LOWERING IMPLEMENT. SHAFT MUST NOT BOTTOM OR SEPERATE (SEE MANUAL)

108431

10

**DANGER**



**ELECTROCUTION HAZARD**
**KEEP AWAY FROM POWER LINES**

**TO PREVENT SERIOUS INJURY OR DEATH FROM ELECTROCUTION:**

1. STAY WELL AWAY FROM POWER LINES. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT.
2. LOWER UNIT WELL BELOW LEVEL OF POWER LINE BEFORE MOVING OR TRANSPORTING.

909743

11

**DANGER**

**ROTATING DRIVELINE HAZARD**

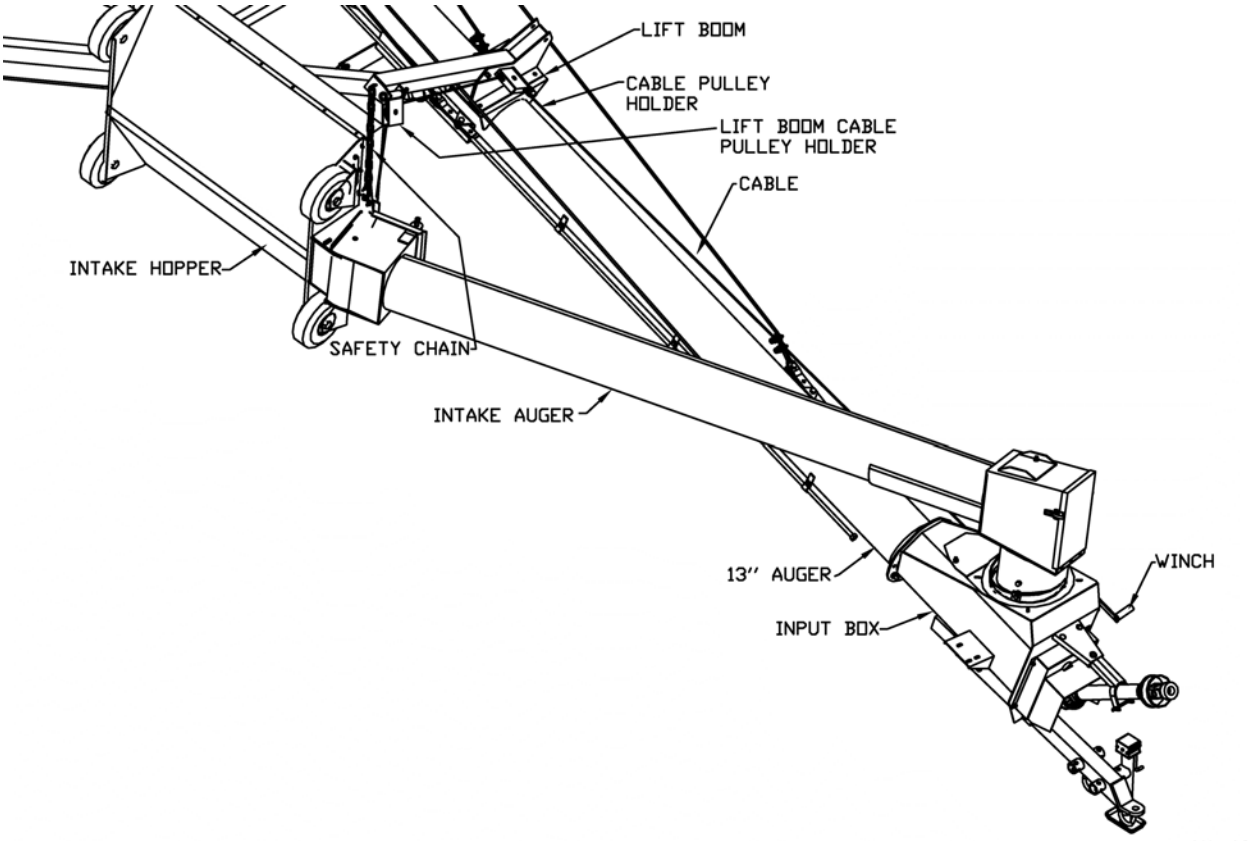
**To prevent serious injury or death from rotating driveline:**

1. Turn off driveline before reaching for two spool valve.
2. Keep hands, feet and clothing away from moving parts.

904585

# Assembly Instructions

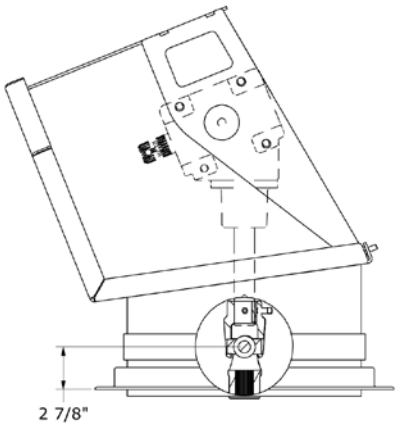
| | | |
|---|---|---|
| | ALERT | There are two holes on the top stub shaft for cotter pin installation on the top flighting, which should allow a wide range of adjustment. If the top flighting is too high, there could be a shortage of room to mount the collar on the bottom bearing in the input box. |
| | 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. |
| | 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. |
| | ALERT | Cylinder ports face down. |
| | ALERT | The flow control valve regulates the lowering of the auger to avoid damge 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 and approximately 3-1/2 turns before raising to full position or auger will not lower. |
| | 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. |
| | 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 towards 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. |




MA–10

| | | |
|---|---|---|
| | 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.




MA-16

# Operation Instructions

- All augers may be elevated up to 45°; however, for the best operating efficiency, 35° should not be exceeded. At angles over 35° 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 alot of weight and may cause damage to the underside of the auger to the bin. |

| | | |
|---|---|---|
| | ALERT | Never place blocks under the wheels to increase the elevation of auger. |

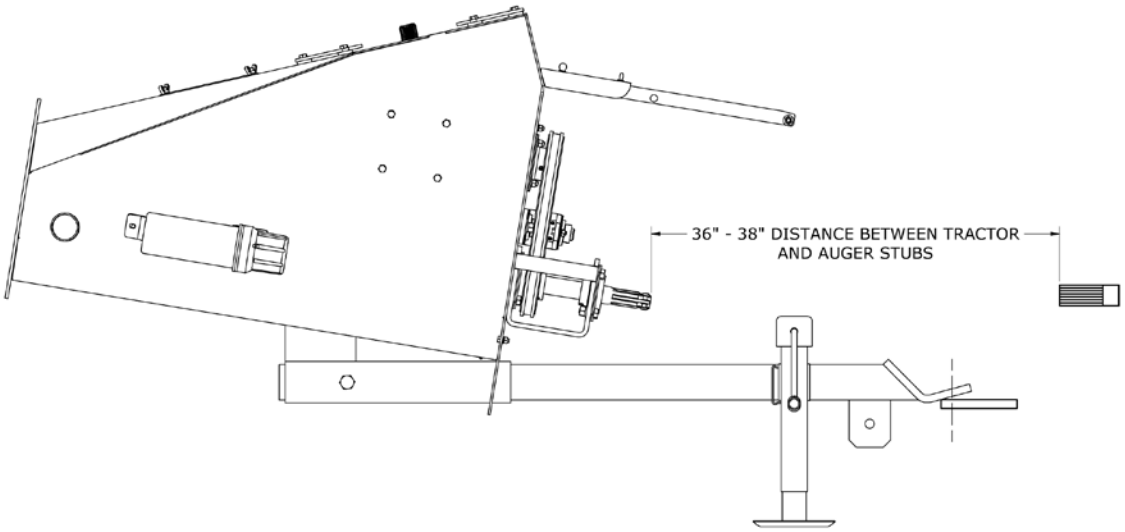
- Be sure the wheels are free to move and no one is standing close to the auger when raising or lowering. Never attempt to raise or lower the auger while it is in operation.

| | | |
|---|---|---|
| | 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 PTO rpm only. Maximum capacity will be attained while running the main auger between 450-500 PTO rpm. Use 1000 rpm speed on these augers. Only with F1078 Retrofit Kit. |

| | | |
|---|---|---|
| | ALERT | Always maintain at least a 4" over 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. |




MA-17

- 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 PTO, start tractor and idle engine. Engage PTO 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 PTO. 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. |

- One way flow control valve 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 when towing or maneuvering the auger. This will prevent possible damage to the PTO shaft during cornering.

ALERT

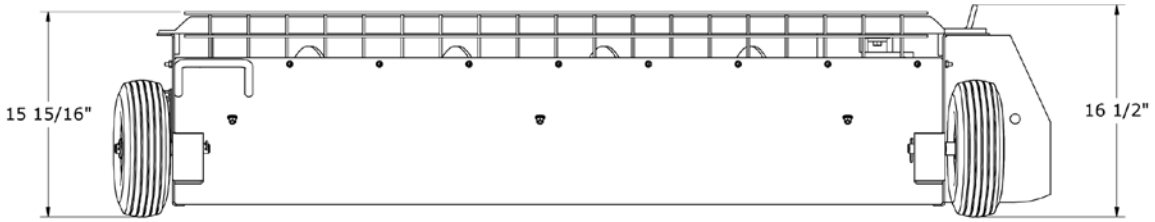
If the PTO shaft angle exceeds 50° during a tight turn, the constant velocity joints will be fractured and will likely failshortly thereafter during operation.

ALERT

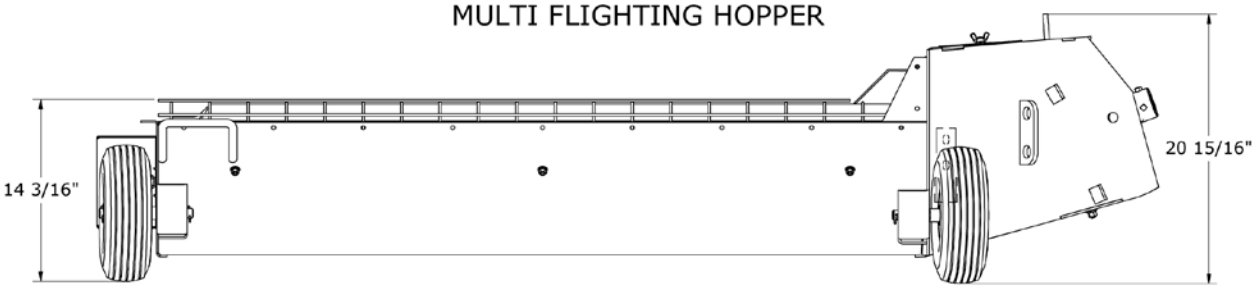
When towing the auger, never exceed 32 km/h (20 mph).

- 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.

SINGLE FLIGHTING HOPPER




MULTI FLIGHTING HOPPER

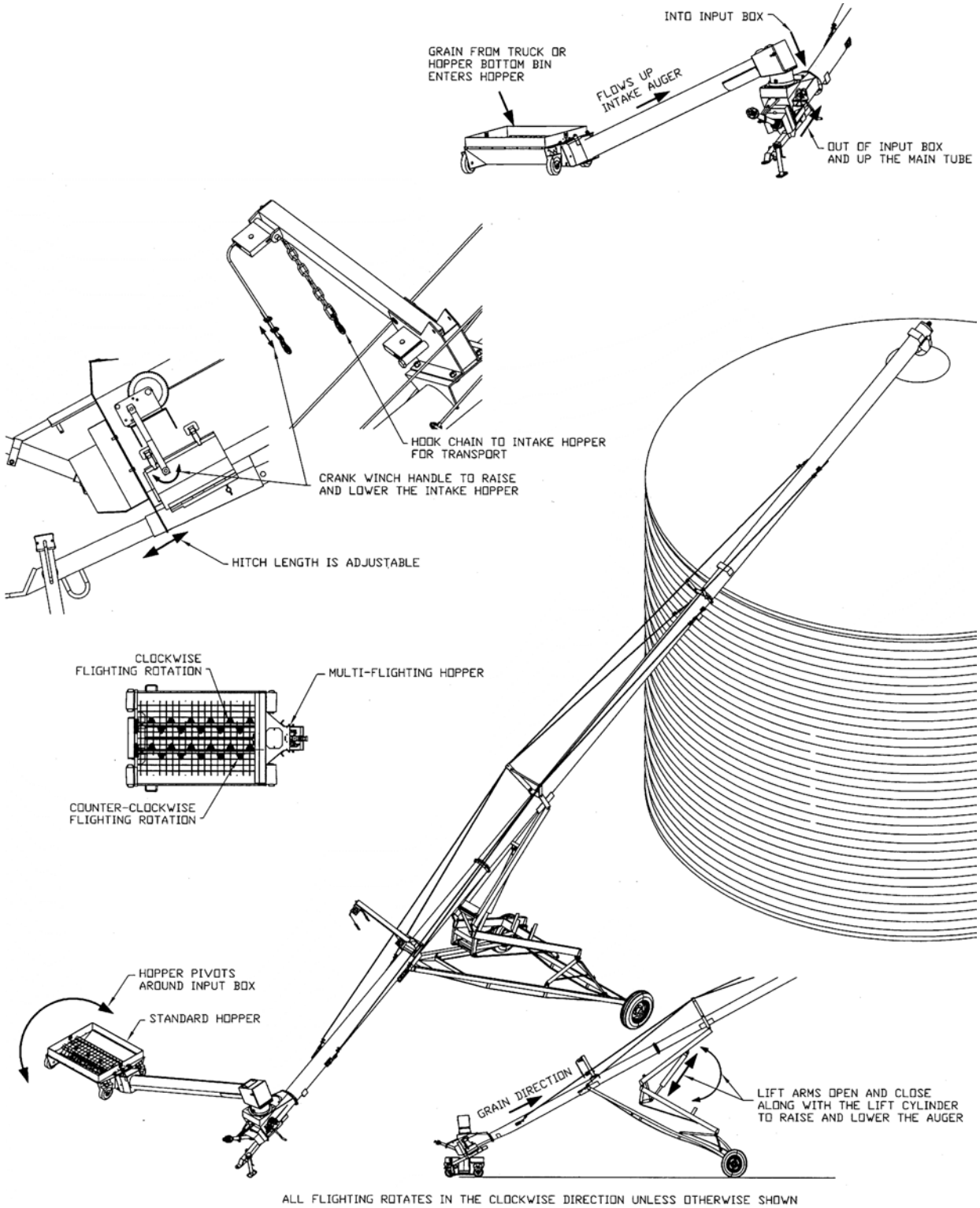



MA-18

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



# Maintenance

## Maintenance and Lubrication

- Check condition of winch cable occasionally. Be sure it is lubricated. Replace cable if you notice any broken strands.
- 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 u-joint in intake auger after 8 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.

- 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.

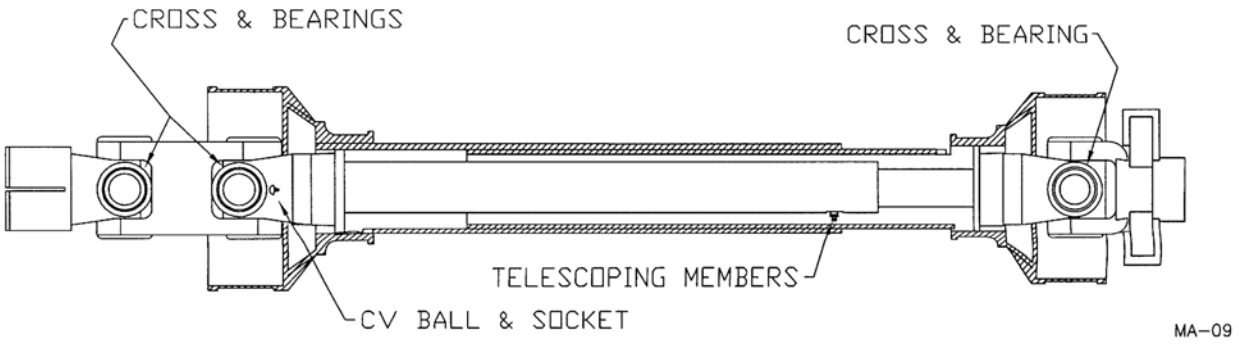
## Greasing Procedure - 50° for CV PTO

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 |

Grease containing various percentages of molybdenum disulfide 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:

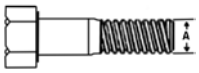
- Mobile Oil Company “Mobile Grease CMP”
- Shell Oil Company “Retinax AM”
- Texaco “Molytex EP #0 and #2”



# Bolt Torque

## Checking Bolt Torque

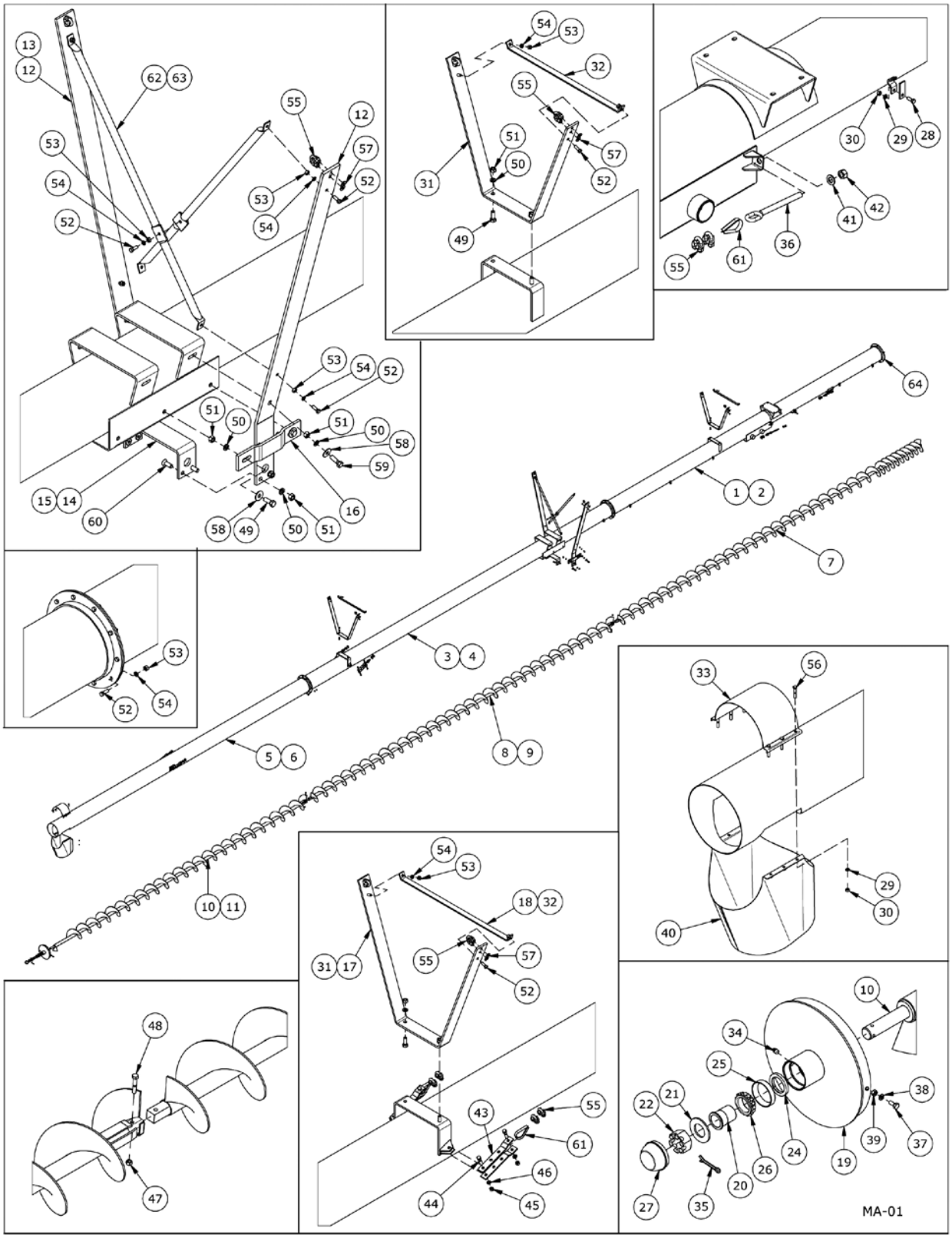
The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

| Bolt Torque* | | | | | | |
|---|---|---|---|---|---|---|
|  | | | | | | |
| Bolt Diameter | Grade 2 Bolts | | Grade 5 Bolts | | Grade 8 Bolts | |
| (inches) | SAE 2 | | SAE 5 | | SAE 8 | |
| "A" | (lb-ft) | (N.m) | (lb-ft) | (N.m) | (lb-ft) | (N.m) |
| 0.25 (1/4) | 6 | 8 | 9 | 12 | 12 | 17 |
| 0.313 (5/16) | 10 | 13 | 19 | 25 | 27 | 36 |
| 0.375 (3/8) | 20 | 27 | 33 | 45 | 45 | 63 |
| 0.438 (7/16) | 30 | 42 | 53 | 72 | 75 | 100 |
| 0.5 (1/2) | 45 | 61 | 80 | 110 | 115 | 155 |
| 0.563 (9/16) | 70 | 95 | 115 | 155 | 165 | 220 |
| 0.625 (5/8) | 95 | 128 | 160 | 215 | 220 | 305 |
| .75 (3/4) | 165 | 225 | 290 | 390 | 400 | 540 |
| 0.875 (7/8) | 170 | 230 | 420 | 570 | 650 | 880 |
| 1 | 225 | 345 | 630 | 850 | 970 | 1320 |

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

* Torque value for bolts and hex bolts are identified by their head markings.

## Auger Assembly Drawing



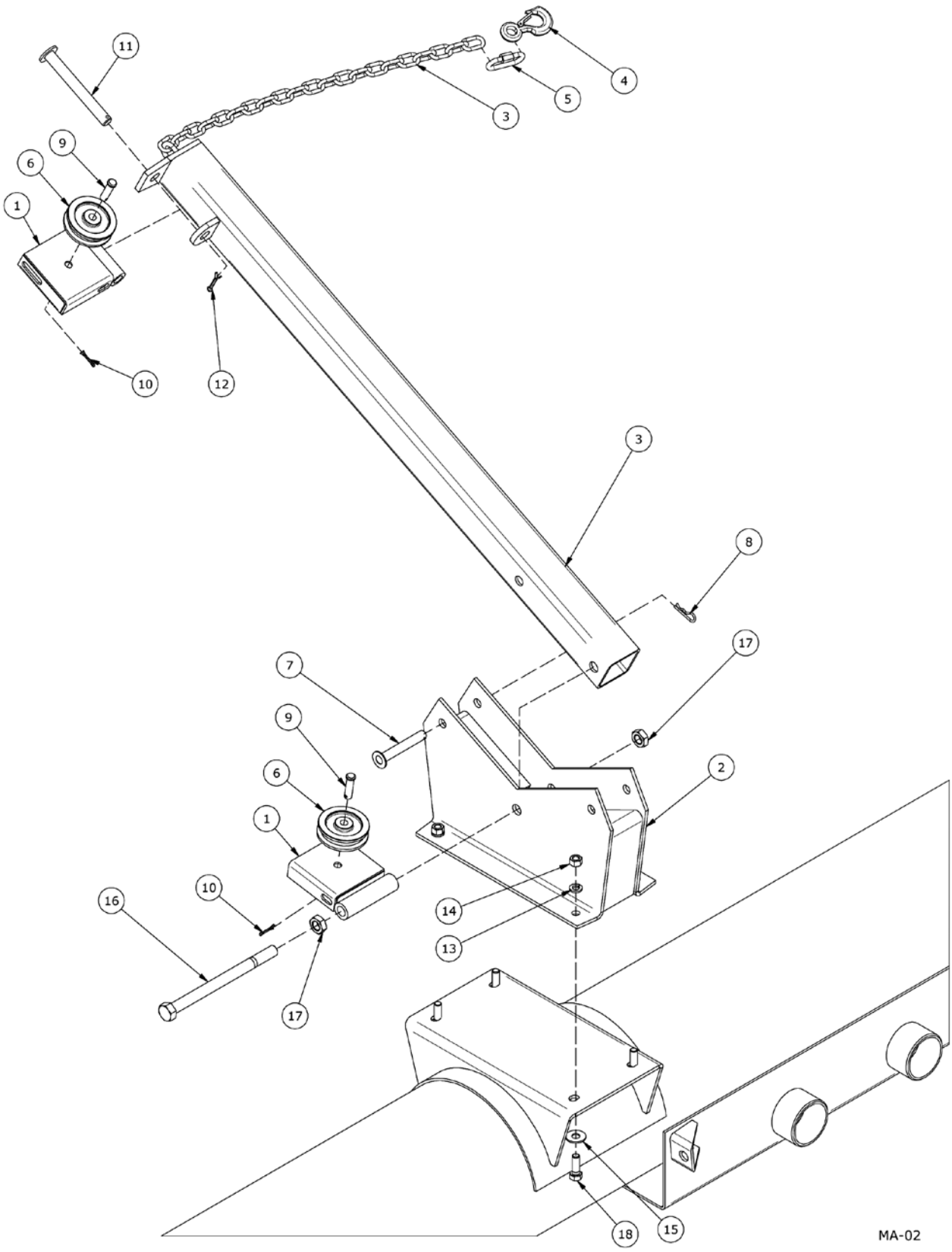
## When Ordering Parts

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.

| Item | Part Number | Description |
|---|---|---|
| 1 | 906116 | 26'- 9" Bottom Tube, 85' |
| 2 | 906115 | 26'- 9" Bottom Tube, 70' |
| 3 | 960949 | 20' Center Tube, 85' |
| 4 | 960602 | 20' Center Tube, 70' |
| 5 | 960669 | 20' Top Tube, 85' |
| 6 | 960603 | 20' Top Tube, 70' |
| 7 | 911048 | 30' Bottom Flighting, All Sizes |
| 8 | 960671 | 30' Center Flighting, 85' |
| 9 | 960605 | 30' Center Flighting, 70' |
| 10 | 960672 | 20' Top Flighting, 85' |
| 11 | 960606 | 20' Top Flighting, 70' |
| 12 | 960742 | Main Bridging Yoke, 85' |
| 13 | 960607 | Main Bridging Yoke, 70' |
| 14 | 960743 | Main Bridging Yoke Mount, 85' |
| 15 | 960615 | Main Bridging Yoke Mount, 70' |
| 16 | 960745 | Main Bridging Yoke Clamp |
| 17 | 960676 | Upper Bridging Yoke, 85' |
| 18 | 960678 | Upper Bridging Tie Bar, 85' |
| 19 | 960679 | Top End Plate |
| 20 | 960035 | End Bearing Sleeve |
| 21 | 9812442 | 1-1/4 x 10 ga Narrow Rim Washer |
| 22 | 960037 | Slotted Hex Nut 1-1/4" UNF |
| 23 | 960639 | Hydraulic Line Clamp |
| 24 | 960125 | Oil Seal (CR14939) |
| 25 | 967709 | Inner Bearing Cup (LM29710) |
| 26 | 967708 | Inner Bearing Cone (LM29749) |
| 27 | 967209 | Dust Cap (DC15) |
| 28 | 86170 | 3/8" x 1" Hex Bolt |
| 29 | 81593 | 3/8" Lock Washer |
| 30 | 81592 | 3/8" Hex Nut |
| 31 | 960675 | Lower Bridging Yoke, 85'/ Upper & Lower Bridging Yoke, 70' |
| 32 | 960677 | Lower Bridging Tie Bar, 85'/ Upper & Lower Bridging Tie Bar, 70' |
| 33 | 960612 | Spout Clamp |
| 34 | 967164 | Drive-In Grease Zerk |
| 35 | 81210 | 1/4" x 2" Cotter Pin |
| 36 | 960613 | Ø3/4" x 7-7/8" Cable Tightener |

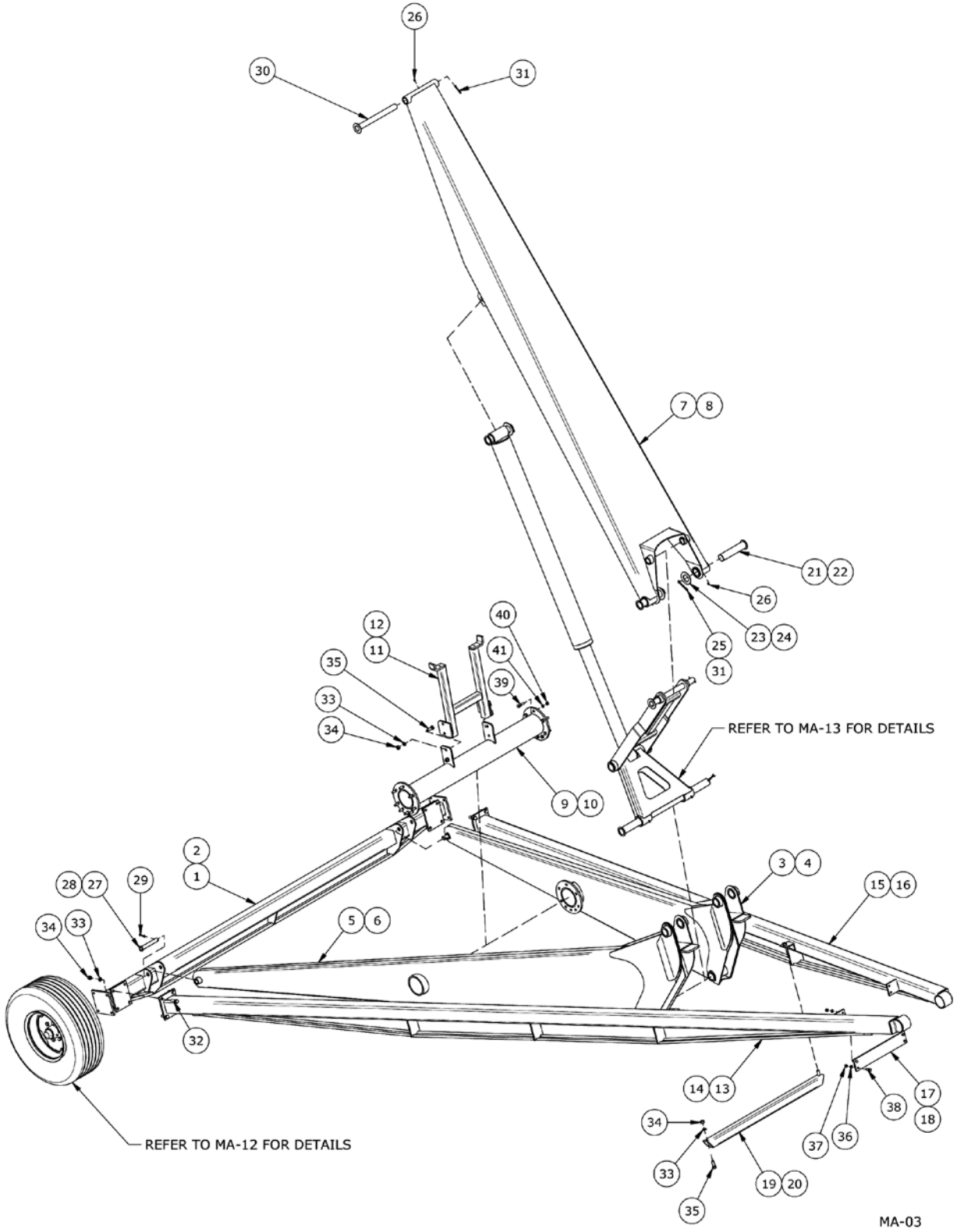
| Item | Part Number | Description |
|---|---|---|
| 37 | 81549 | 5/16" x 3/4" Hex Bolt |
| 38 | 81569 | 5/16" Lock Washer |
| 39 | 81568 | 5/16" Hex Nut |
| 40 | F9716 | 13" Discharge Spout |
| 41 | 84050 | 3/4" SAE Flat Washer |
| 42 | 81700 | 3/4" Hex Nut |
| 43 | 960244 | Cable Yoke |
| 44 | 811791 | 1/2" x 2" Hex Bolt |
| 45 | 81636 | 1/2" Hex Nut |
| 46 | 81637 | 1/2" Lock Washer |
| 47 | 812364 | 1/2" Lock Nut |
| 48 | 9812368 | 1/2" x 2-3/4" Gr8 Hex Bolt (Pl) |
| 49 | 84270 | 5/8" x 1-3/4" Hex Bolt |
| 50 | 81677 | 5/8" Lock Washer |
| 51 | 81676 | 5/8" Hex Nut |
| 52 | 81598 | 7/16" x 1-1/4" Hex Bolt |
| 53 | 81614 | 7/16" Hex Nut |
| 54 | 81615 | 7/16" Lock Washer |
| 55 | 964565 | 1/2" Cable Clamp |
| 56 | 967291 | 3/8" x 2" Full Thread Hex Bolt |
| 57 | 964001 | 1" x 7/16" x 10 ga Flat Washer |
| 58 | 81678 | 11/16" Flat Washer (PL) |
| 59 | 84299 | 5/8" x 2" Hex Bolt |
| 60 | 967284 | 5/8" x 1-3/4" Fl Hd Sckt Bolt |
| 61 | 964587 | 1/2" Cable Thimble |
| 62 | 960674 | Main Bridging Brace, 85' |
| 63 | 960608 | Main Bridging Brace, 70' |
| 64 | 960614 | 12-3/4" Pipe ring (2" Flange) |

## Lift Boom Arm Components Drawing



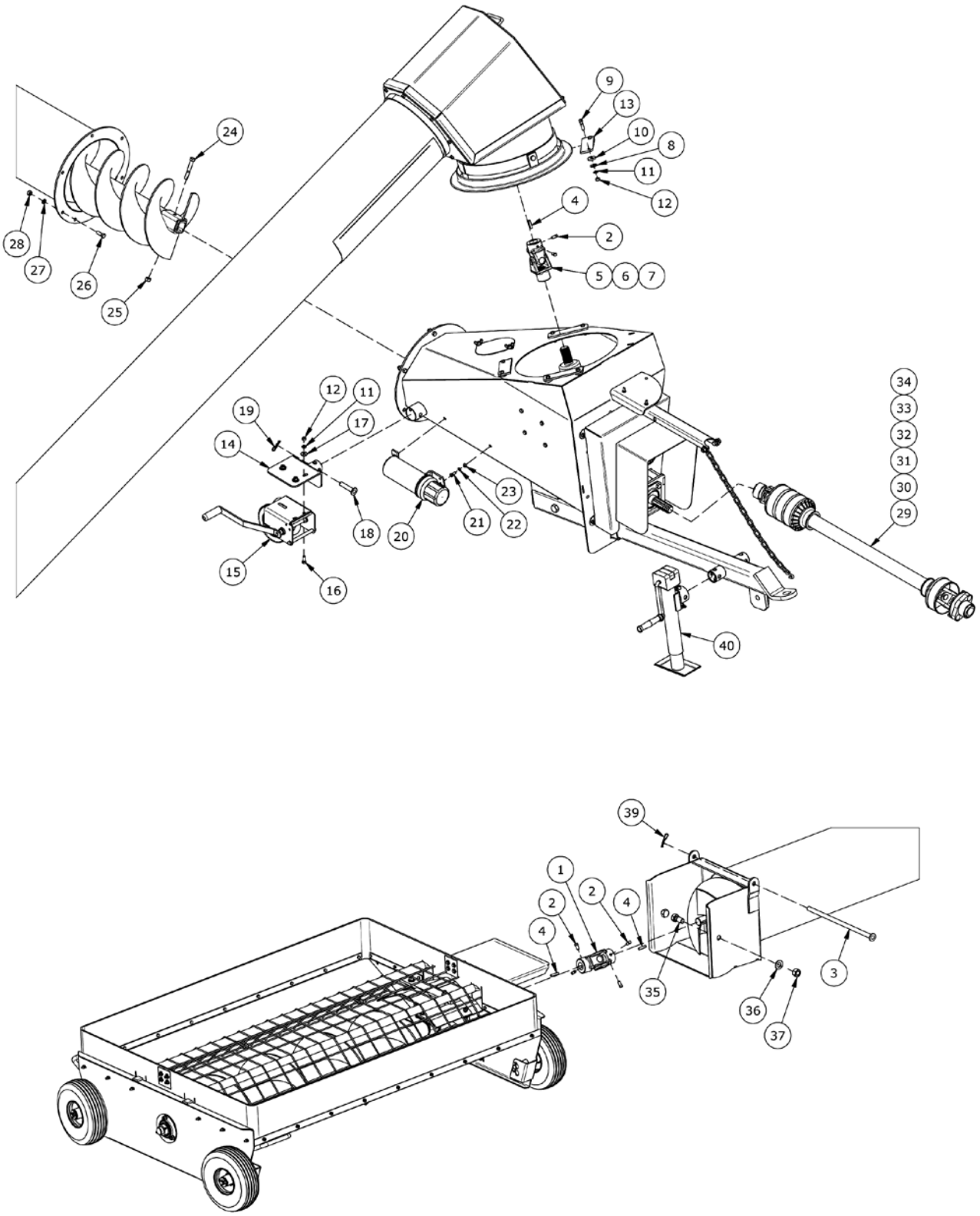
| Item | Part Number | Description |
|---|---|---|
| 1 | 905602 | Pulley Holder |
| 2 | 905601 | Lift Boom |
| 3 | 905604 | Lift Boom Arm |
| 4 | 960041 | Hook w/ Latch |
| 5 | 960167 | 5/16" Quick Link |
| 6 | 961846 | Cable Pulley, 1/2 Bore |
| 7 | 905568 | Pin 5/8" x 4-1/4" |
| 8 | 961012 | #16 Hair Pin Clip |
| 9 | 960913 | 1/2" x 1-13/16" Clevis Pin |
| 10 | 9812430 | 1/8" x 1" Cotter Pin |
| 11 | 905570 | 3/4" x 6-3/8" Pin |
| 12 | 9812433 | 3/16" x 1-1/2" Cotter Pin |
| 13 | 81637 | 1/2" Lock Washer |
| 14 | 81636 | 1/2" Hex Nut |
| 15 | 81638 | 1/2" Flat Washer |
| 16 | 811803 | 3/4" x 10" Hex Bolt |
| 17 | 86111 | 3/4" Jam Hex Nut |
| 18 | 84277 | 1/2" x 1-1/2" Hex Bolt |

## Intake Auger Drawing



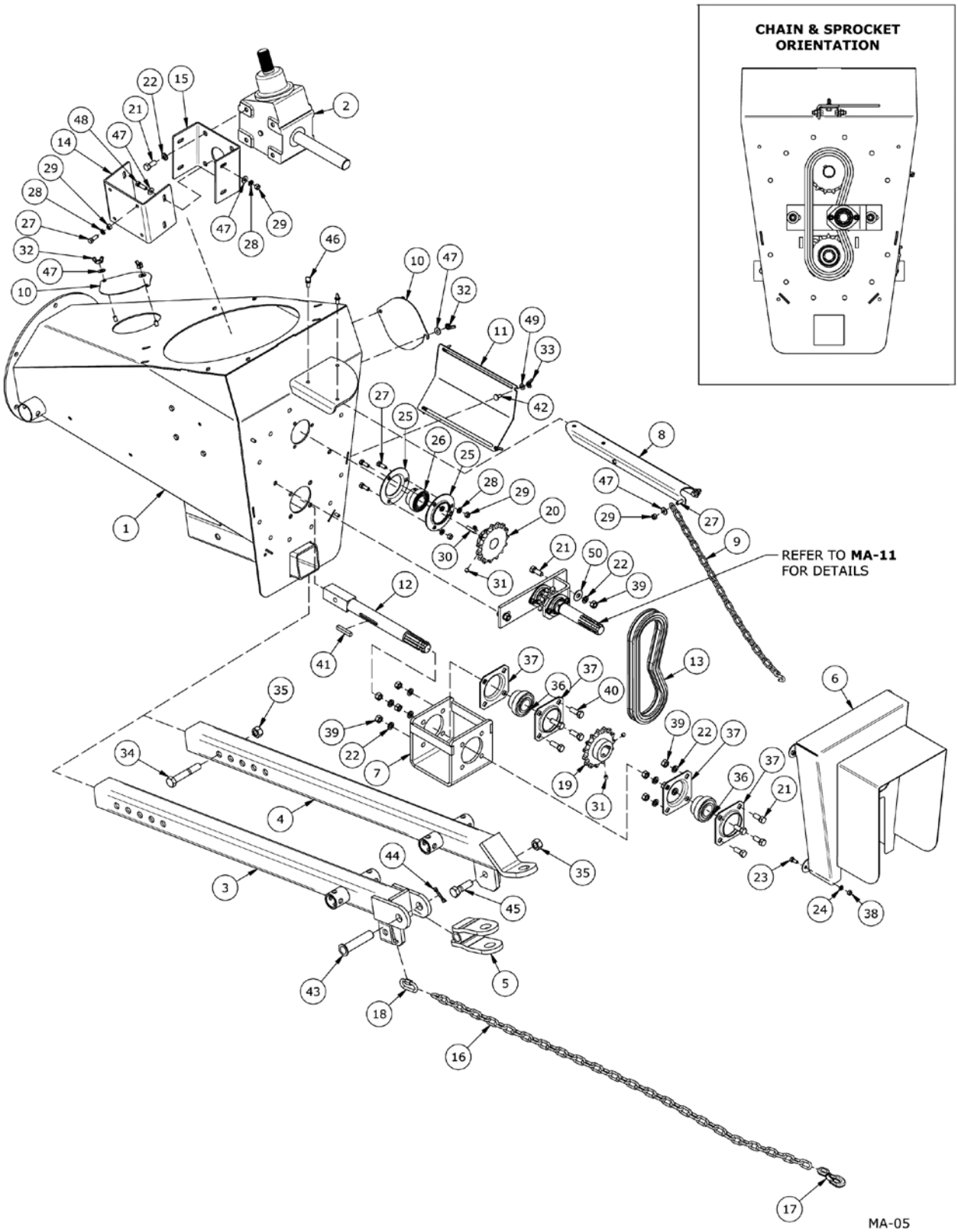
| Item | Part Number | Description |
|---|---|---|
| 1 | F0192 | Axle Tube, 85' |
| 2 | F0191 | Axle Tube, 70' |
| 3 | F0564 | Left Hand Lower Lift Arm, 85' |
| 4 | F0656 | Left Hand Lower Lift Arm, 70' |
| 5 | F0565 | Right Hand Lower Lift Arm, 85' |
| 6 | F0655 | Right Hand Lower Lift Arm, 70' |
| 7 | F0464 | Upper Lift Arm, 85' |
| 8 | F9707 | Upper Lift Arm, 70' |
| 9 | 907742 | Lift Arm Torque Tube 6" OD x 53", 85' |
| 10 | 908971 | Lift Arm Torgue Tube 6" OD x 42", 70' |
| 11 | 960744 | Upper Lift Arm Cradle, 85' |
| 12 | 960633 | Upper Lift Arm Cradle, 70' |
| 13 | F9734 | Right Hand Undercarriage Arm, 85' |
| 14 | F9722 | Right Hand Undercarriage Arm, 70' |
| 15 | F9735 | Left Hand Undercarriage Arm. 85' |
| 16 | F9723 | Left Hand Undercarriage Arm. 70' |
| 17 | 960699 | Tie Plate (3 1/2" x 20"), 85' |
| 18 | 960638 | Tie Plate (3 1/2" x 18 1/4"), 85' |
| 19 | 960697 | Lower Lift Cradle (46"), 85' |
| 20 | 960634 | Lower Lift Cradle (40"), 70' |
| 21 | 960692 | Ø2" x 9 1/16" Lower Lift Arm Pin, 85' |
| 22 | 960629 | Ø1 1/2" x 7 1/8" Lower Lift Arm Pin, 70' |
| 23 | 967153 | 2" x 10ga Narrow Rim Washer, 85' |
| 24 | 967135 | 1 1/2" x 10ga Narrow Rim Washer, 70' |
| 25 | 967162 | 5/16" x 3" Cotter Pin |
| 26 | 967164 | Drive-In Grease Zerk |
| 27 | 960695 | 1" x 6 3/8" Clevis Pin, 85' |
| 28 | 960631 | 1" x 5 5/8" Clevis Pin, 70' |
| 29 | 9812434 | 1/4" x 1 1/2" Cotter Pin |
| 30 | 960632 | 1-1/2" x 15-5/16" Lift Arm Pivot Pin |
| 31 | 81210 | 1/4" x 2" Cotter Pin |
| 32 | 84299 | 5/8" X 2" Hex Bolt |
| 33 | 81677 | 5/8" Lock Washer |
| 34 | 81676 | 5/8" Hex Nut |
| 35 | 84270 | 5/8" x 1 3/4" Hex Bolt |
| 36 | 81615 | 7/16" Lock Washer |
| 37 | 81614 | 7/16" Hex Nut |
| 38 | 81599 | 7/16" X 1 1/2" Hex Bolt |
| 39 | 811791 | 1/2" x 2" Hex Bolt |
| 40 | 81636 | 1/2" Hex Nut |
| 41 | 81637 | 1/2" Lock Washer |

## Hopper and Auger Assembly Drawing



| Item | Part Number | Description |
|---|---|---|
| 1 | 960547 | Universal Joint (1140 Series) 1-1/4" Ends w/ 5/16" Keyway |
| 2 | 9812378 | 3/8" x 3/4" Square Head Set Screw (Ser) |
| 3 | 960356 | Pivot Hopper Lid Rod |
| 4 | 960180 | 5/16" x 1-3/8 " U-Joint & Sprocket Key |
| 5 | 960784 | U-Joint (Ø1 3/8"ID) |
| 6 | 906547 | Repair Kit Extended Life (Standard) |
| 7 | 936079 | Repair Kit (Optional) |
| 8 | 964001 | 1" x 7/16" x 10 ga Flat Washer |
| 9 | 811792 | 3/8" x 1-1/2" Hex Bolt |
| 10 | 960494 | 13/32" x 1-1/4"OD Flat Washer |
| 11 | 81593 | 3/8" Lock Washer |
| 12 | 81592 | 3/8" Hex Nut |
| 13 | 960653 | Ring Clamp |
| 14 | 911000 | Winch Mount |
| 15 | 961888 | Winch (Fulton - K1550) |
| 16 | 86170 | 3/8" x 1" Hex Bolt |
| 17 | 84000 | 7/16" Flat Washer |
| 18 | 902486 | Skid Pin 5/8" x 3-1/8" |
| 19 | 961012 | #16 Hair Pin Clip |
| 20 | 909277 | Manual Holder |
| 21 | 81549 | 5/16" x 3/4" Hex Bolt |
| 22 | 81569 | 5/16" Lock Washer |
| 23 | 81568 | 5/16" Hex Nut |
| 24 | 81628 | 1/2" x 3-1/4" Hex Bolt (Pl) |
| 25 | 812364 | 1/2" Lock Nut |
| 26 | 81598 | 7/16" x 1-1/4" Hex Bolt |
| 27 | 81615 | 7/16" Lock Washer |
| 28 | 81614 | 7/16" Hex Nut |
| 29 | F0608 | PTO Shaft CV 55R Ser (2-6 Spline), 85' |
| 30 | 908721 | Tractor Half PTO, CV 55R Ser (6 Spline), 85' |
| 31 | 908722 | Auger Half PTO, 55R Ser (6 Spline), 85' |
| 32 | F9552 | PTO Shaft CV (2-6 Spline), 70' |
| 33 | 936566 | Tractor Half PTO, CV (6 Spline), 70' |
| 34 | 908720 | Auger Half PTO, (6 Spline), 70' |
| 35 | 967437 | 3/4" x 1-5/8" Hex Bolt |
| 36 | 84050 | 3/4" SAE Flat Washer |
| 37 | 812365 | 3/4" Lock Nut |
| 38 | 81678 | 11/16" Flat Washer (PL) |
| 39 | 12780 | #7 Hair Pin Clip |
| 40 | 905066 | Jack Side Crank |

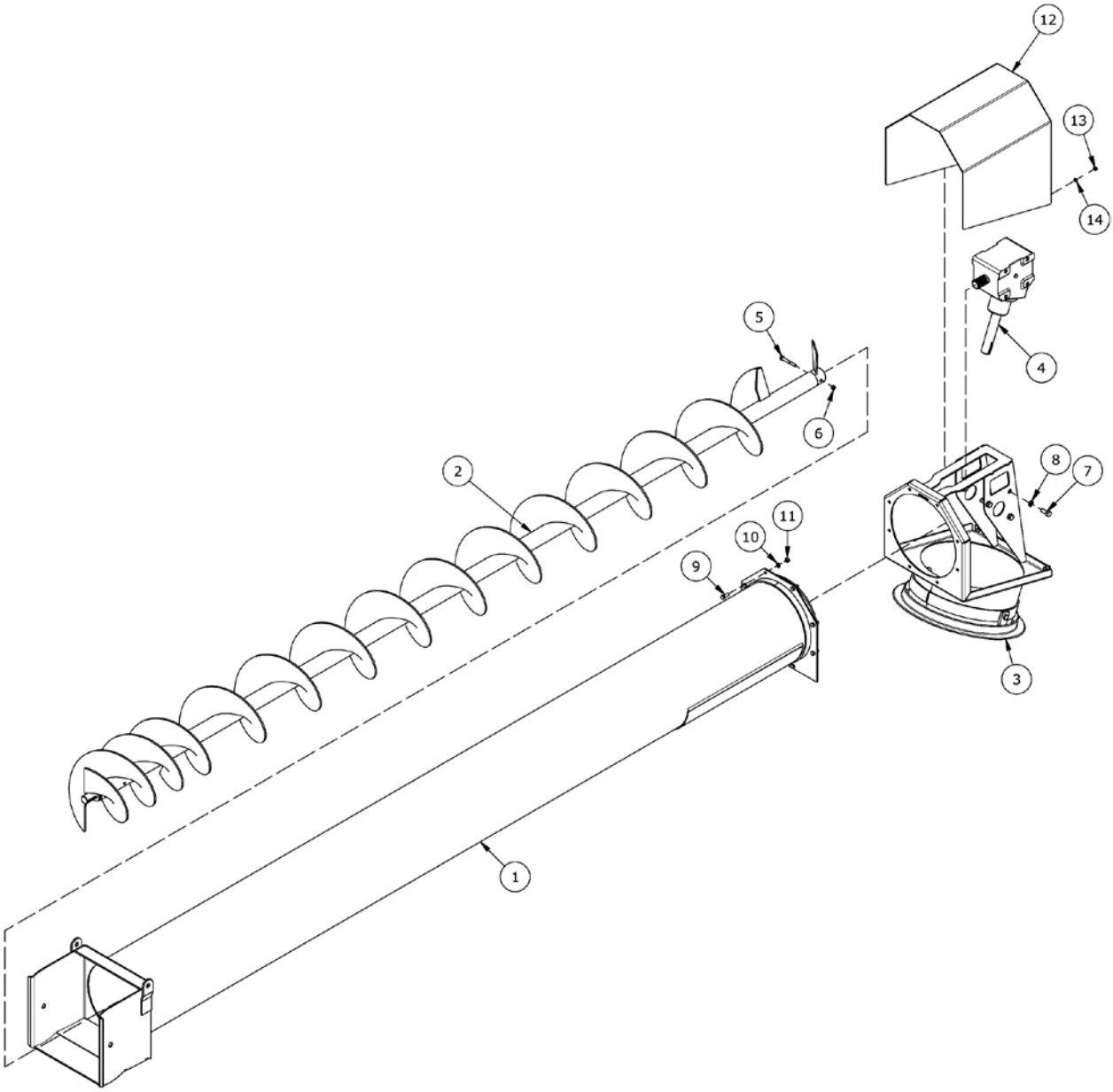
## Input Box Assembly Drawing



| Item | Part Number | Description |
|---|---|---|
| 1 | 910985 | Input Box |
| 2 | 960788 | 4168 Gearbox |
| 3 | 911396 | 3" Square x 51" Hitch (Option) |
| 4 | 911395 | 3" Square x 54" Hitch Tube |
| 5 | 960927 | Clevis (Option - Required w/ Hitch Option) |
| 6 | 911148 | Guard |
| 7 | 911141 | Reinforcement Bracket |
| 8 | 911111 | PTO Holder Arm |
| 9 | 909703 | PTO Holder Chain Assembly |
| 10 | 910892 | Lid |
| 11 | 911020 | Clean-Out Lid |
| 12 | 910991 | Drive Shaft (Chain Drive) |
| 13 | 910989 | #80 Chain - 36 Links |
| 14 | 910992 | Gearbox Mounting Plate (Outside) |
| 15 | 910994 | Gearbox Mounting Plate (Inside) |
| 16 | 910287 | Safety Chain (1/4") G70 |
| 17 | 960041 | Hook with Latch |
| 18 | 960167 | 5/16" Quick Link |
| 19 | 960719 | 80B15 Sprocket (1.5" Bore) |
| 20 | 961041 | 80B15 Sprocket (1.375" Bore) |
| 21 | 81620 | 1/2" x 1-1/4" Hex Bolt |
| 22 | 81637 | 1/2" Lock Washer |
| 23 | 81549 | 5/16" x 3/4" Hex Bolt |
| 24 | 81569 | 5/16" Lock Washer |
| 25 | 961675 | Bearing Flange 72MS |
| 26 | 965917 | 1-3/8" Bearing |
| 27 | 86170 | 3/8" x 1" Hex Bolt |
| 28 | 81593 | 3/8" Lock Washer |
| 29 | 81592 | 3/8" Hex Nut |
| 30 | 960180 | 5/16" x 1-3/8 " U-Joint & Sprocket Key |
| 31 | 988999 | 3/8" x 3/8" Socket Set Screw |
| 32 | 84217 | 3/8" Wing Nut |
| 33 | 968601 | 5/16" Wing Nut |
| 34 | 811790 | 3/4" x 4 /12" Grade 5 Hex Bolt |
| 35 | 812365 | 3/4" Lock Nut |
| 36 | 968627 | Bearing with Collar Ø1-1/2" ID (AEL208-108) |
| 37 | 902395 | Bearing Flange (80mm - 4sq.) |
| 38 | 81568 | 5/16" Hex Nut |
| 39 | 81636 | 1/2" Hex Nut |
| 40 | 812763 | 1/2" x 1-1/2" Hex Bolt |
| 41 | 911161 | Key 3/8" sq. x 58mm |

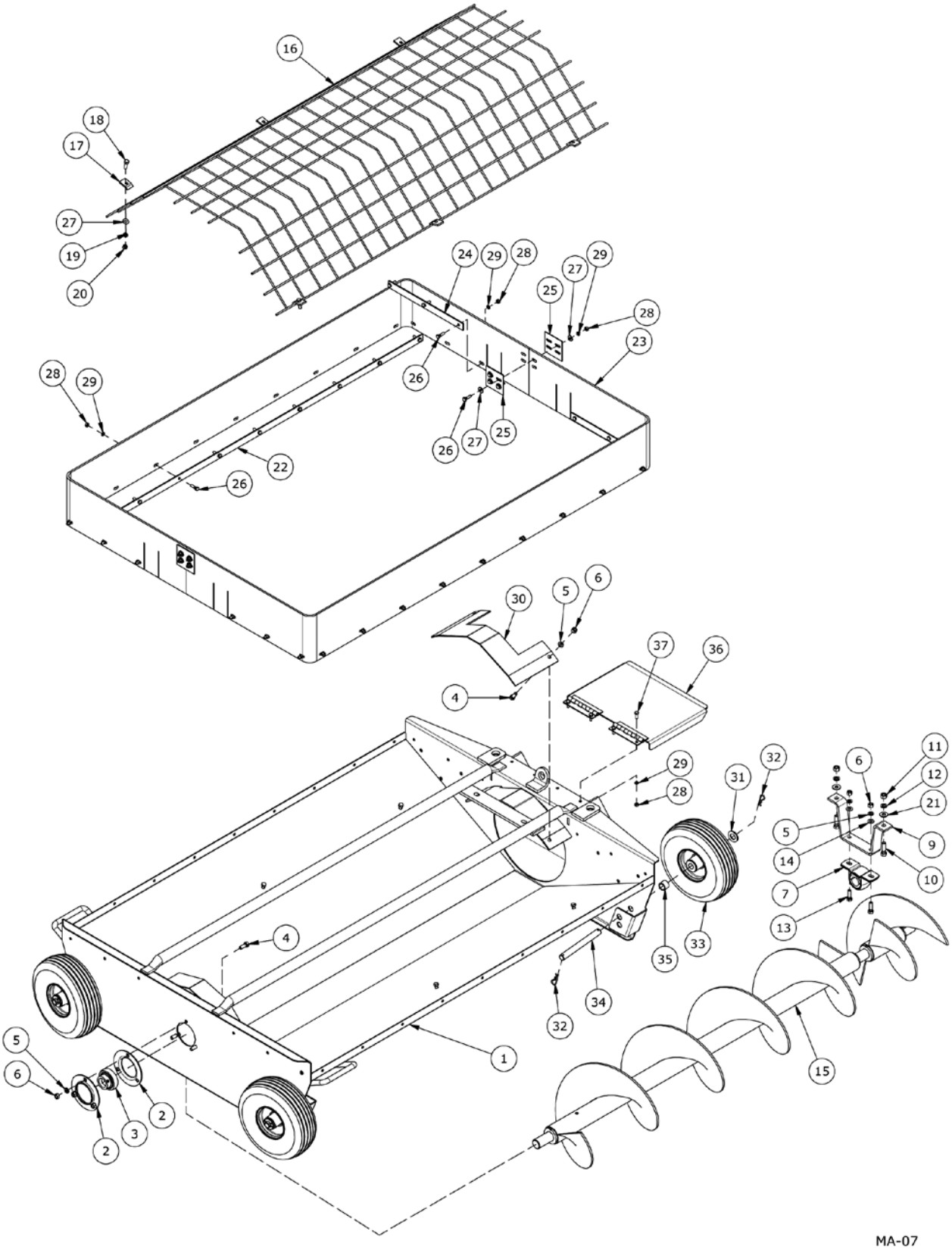
| Item | Part Number | Description |
|---|---|---|
| 42 | 81185 | 5/16" x 3/4" Carriage Bolt |
| 43 | 960928 | Clevis Pin 1" x 4-3/4" |
| 44 | 9812434 | 1/4" x 1-1/2" Cotter Pin |
| 45 | 84346 | 3/4" x 2-1/2" Hex Bolt |
| 46 | 911943 | 3/8" x 3/4" Thumb Screw |
| 47 | 81570 | 3/8" Std Flat Washer |
| 48 | 86171 | 3/8" x 1-1/4" Hex Bolt |
| 49 | 81546 | 5/16" Flat Washer |
| 50 | 81638 | 1/2" Flat Washer |

## Intake Auger Assembly Drawing



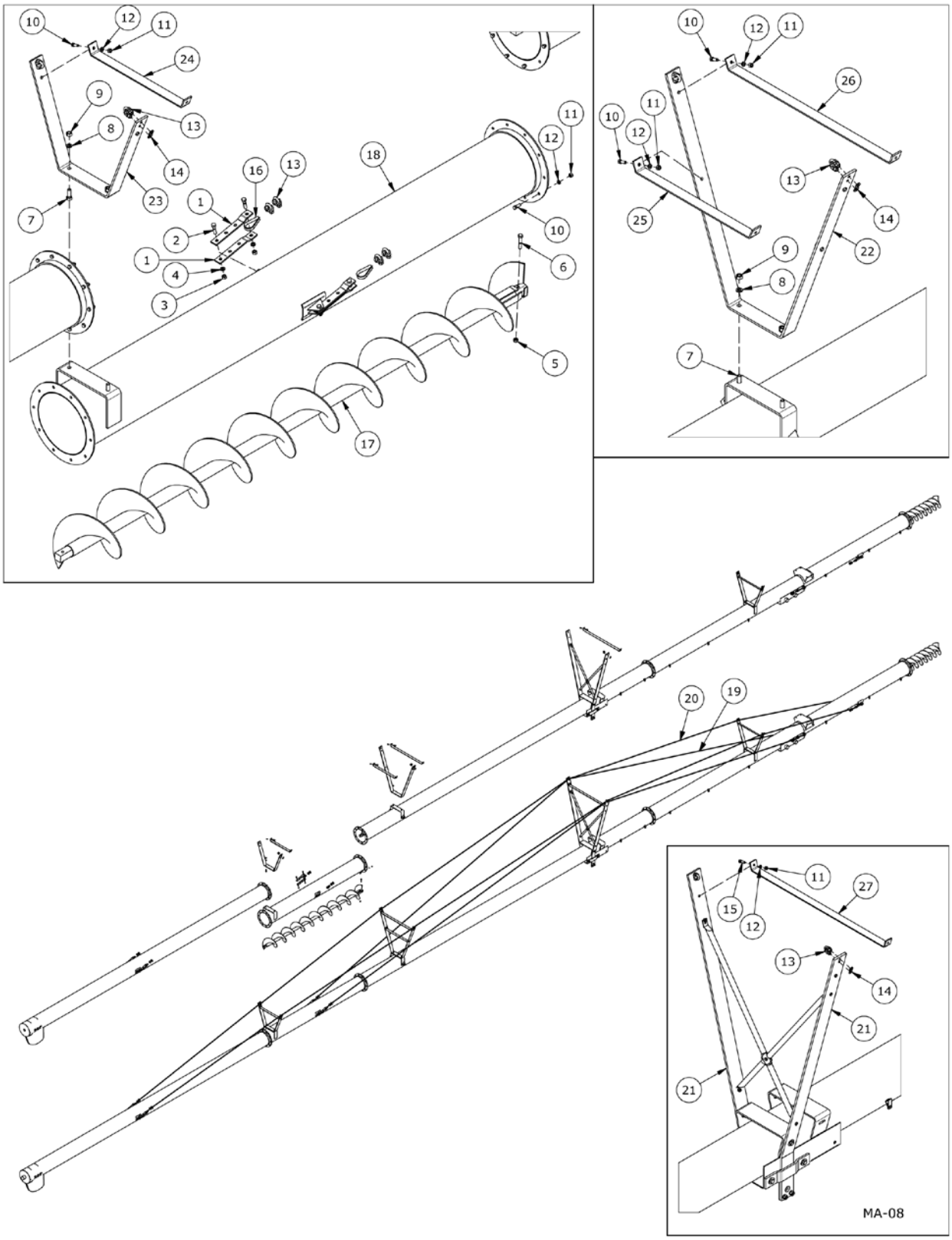
| Item | Part Number | Description |
|---|---|---|
| 1 | 911026 | Intake Auger Tube (13" BS) |
| 2 | 903217 | Intake Auger Flighting |
| 3 | 911019 | Intake Topbox |
| 4 | 960950 | 4168 Gearbox |
| 5 | 967906 | 3/8" x 2-3/4" Hex Bolt |
| 6 | 812363 | 3/8" Lock Nut |
| 7 | 81620 | 1/2" x 1-1/4" Hex Bolt |
| 8 | 81637 | 1/2" Lock Washer |
| 9 | 86170 | 3/8" x 1" Hex Bolt |
| 10 | 81593 | 3/8" Lock Washer |
| 11 | 81592 | 3/8" Hex Nut |
| 12 | 911006 | Intake Topbox Cover |
| 13 | 81568 | 5/16" Hex Nut |
| 14 | 81569 | 5/16" Lock Washer |

## Single Flighting Hopper Drawing



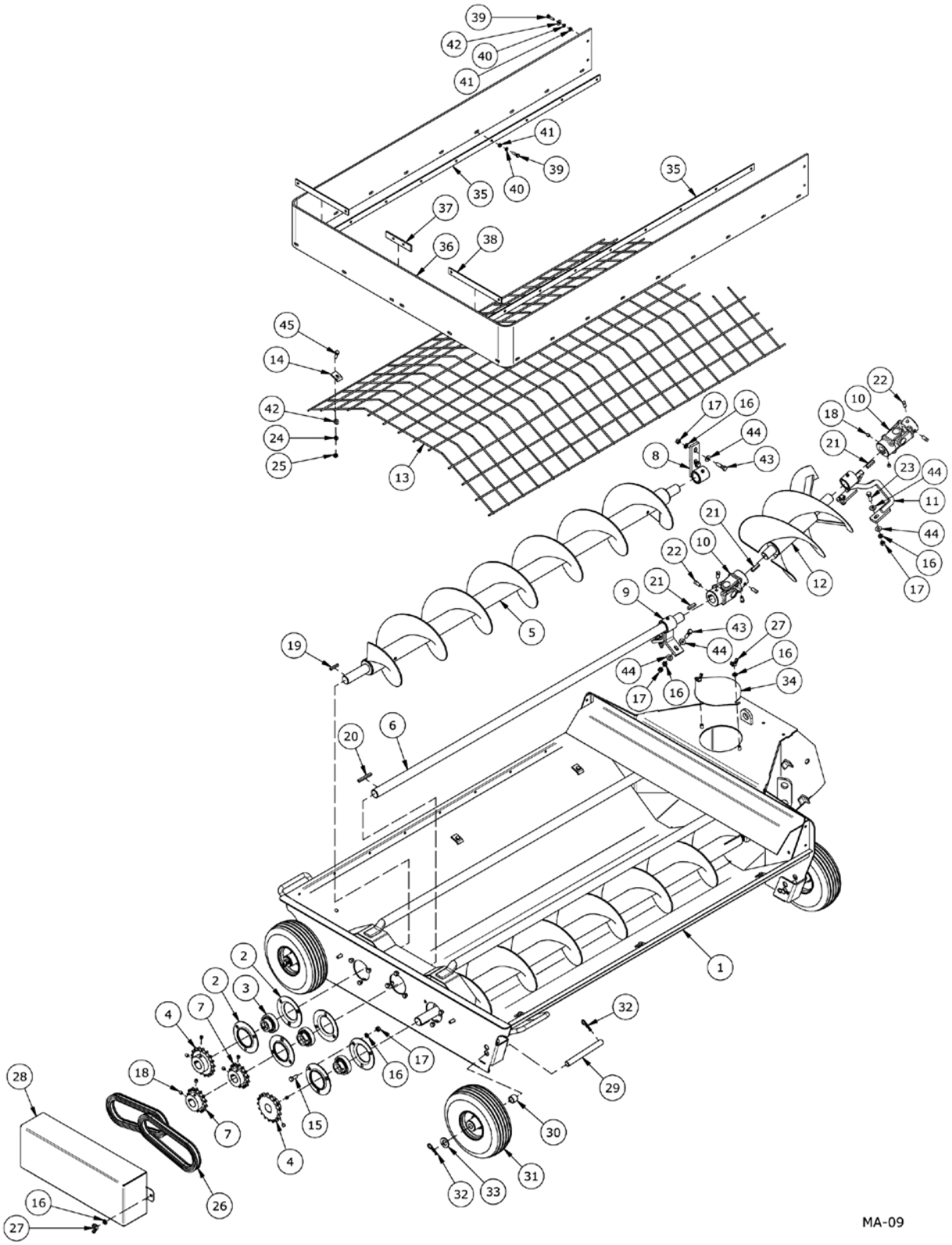
| Item | Part Number | Description |
|---|---|---|
| 1 | 911043 | Single Flighting Hopper |
| 2 | 961675 | Bearing Flange 72MS |
| 3 | 961676 | 1-1/4" Bearing AEL206-104 (RHP #1230) |
| 4 | 86170 | 3/8" x 1" Hex Bolt |
| 5 | 81593 | 3/8" Lock Washer |
| 6 | 81592 | 3/8" Hex Nut |
| 7 | 960658 | 1-1/4" Wooden Bearing & Flange Set |
| 8 | 960659 | 1-1/4" Wooden Bearing Only |
| 9 | 911123 | Bearing Holder |
| 10 | 81599 | 7/16" x 1-1/2" Hex Bolt |
| 11 | 81614 | 7/16" Hex Nut |
| 12 | 81615 | 7/16" Lock Washer |
| 13 | 86171 | 3/8" x 1-1/4" Hex Bolt |
| 14 | 84039 | 3/8" Flat Washer |
| 15 | 960359 | Intake Hopper Flighting |
| 16 | 911040 | Hopper Flighting Guard |
| 17 | 910898 | Cage Mounting Plate |
| 18 | 812026 | 5/16" x 1" Hex Bolt |
| 19 | 81569 | 5/16" Lock Washer |
| 20 | 81568 | 5/16" Hex Nut |
| 21 | 84000 | 7/16" Flat Washer |
| 22 | 960660 | Rubber Reinforcement 1" x 57.25" |
| 23 | 911399 | Rubber Standard Hopper Edging |
| 24 | 960661 | Reinforcement Rubber 1" x 13" |
| 25 | 903483 | 3" x 3" Rubber Connector Plate |
| 26 | 81527 | 1/4" x 1" Hex Bolt |
| 27 | 81546 | 5/16" Flat Washer |
| 28 | 81544 | 1/4" Hex Nut |
| 29 | 81545 | 1/4" Lock Washer |
| 30 | 960929 | Extension Deflector 7.5" x 16.25" |
| 31 | 84050 | 3/4" SAE Flat Washer |
| 32 | 961012 | #16 Hair Pin Clip |
| 33 | 960714 | Wheel with Tire 4.10/3.50 |
| 34 | 910916 | Pin Hopper Wheel 19 x 187 mm |
| 35 | 910917 | Spacer Wheel 25 mm OD x 19 mm |
| 36 | 911039 | Intake Lid |
| 37 | 81525 | 1/4" x 3/4" Hex Bolt |

## 13" x 10' Extension Drawing



| Item | Part Number | Description |
|---|---|---|
| 1 | 960244 | Cable Yoke |
| 2 | 811791 | 1/2" x 2" Hex Bolt |
| 3 | 81636 | 1/2" Hex Nut |
| 4 | 81637 | 1/2" Lock Washer |
| 5 | 812364 | 1/2" Lock Nut |
| 6 | 9812368 | 1/2" x 2-3/4" Gr8 Hex Bolt (Pl) |
| 7 | 84270 | 5/8" x 1-3/4" Hex Bolt |
| 8 | 81677 | 5/8" Lock Washer |
| 9 | 81676 | 5/8" Hex Nut |
| 10 | 81598 | 7/16" x 1-1/4" Hex Bolt |
| 11 | 81614 | 7/16" Hex Nut |
| 12 | 81615 | 7/16" Lock Washer |
| 13 | 964565 | 1/2" Cable Clamp |
| 14 | 964001 | 1" x 7/16" x 10 ga Flat Washer |
| 15 | 81599 | 7/16" x 1-1/2" Hex Bolt |
| 16 | 964587 | 1/2" Cable Thimble |
| 17 | 904533 | Extension Flighting 123" LG |
| 18 | 909941 | 10' Extension Tube |
| 19 | F0915 | Lower Cable Bundle |
| 20 | F9172 | Upper Cable Bundle |
| 21 | 909942 | Main Bridging Yoke |
| 22 | 909944 | Upper Bridging Yoke |
| 23 | 909947 | Extension Bridging Yoke Upper |
| 24 | 909948 | Extension Bridging Tie Bar |
| 25 | 909946 | Upper Bridging Bottom Tie Bar |
| 26 | 909945 | Upper Bridging Top Tie Bar |
| 27 | 909943 | Main Bridging Tie Bar |

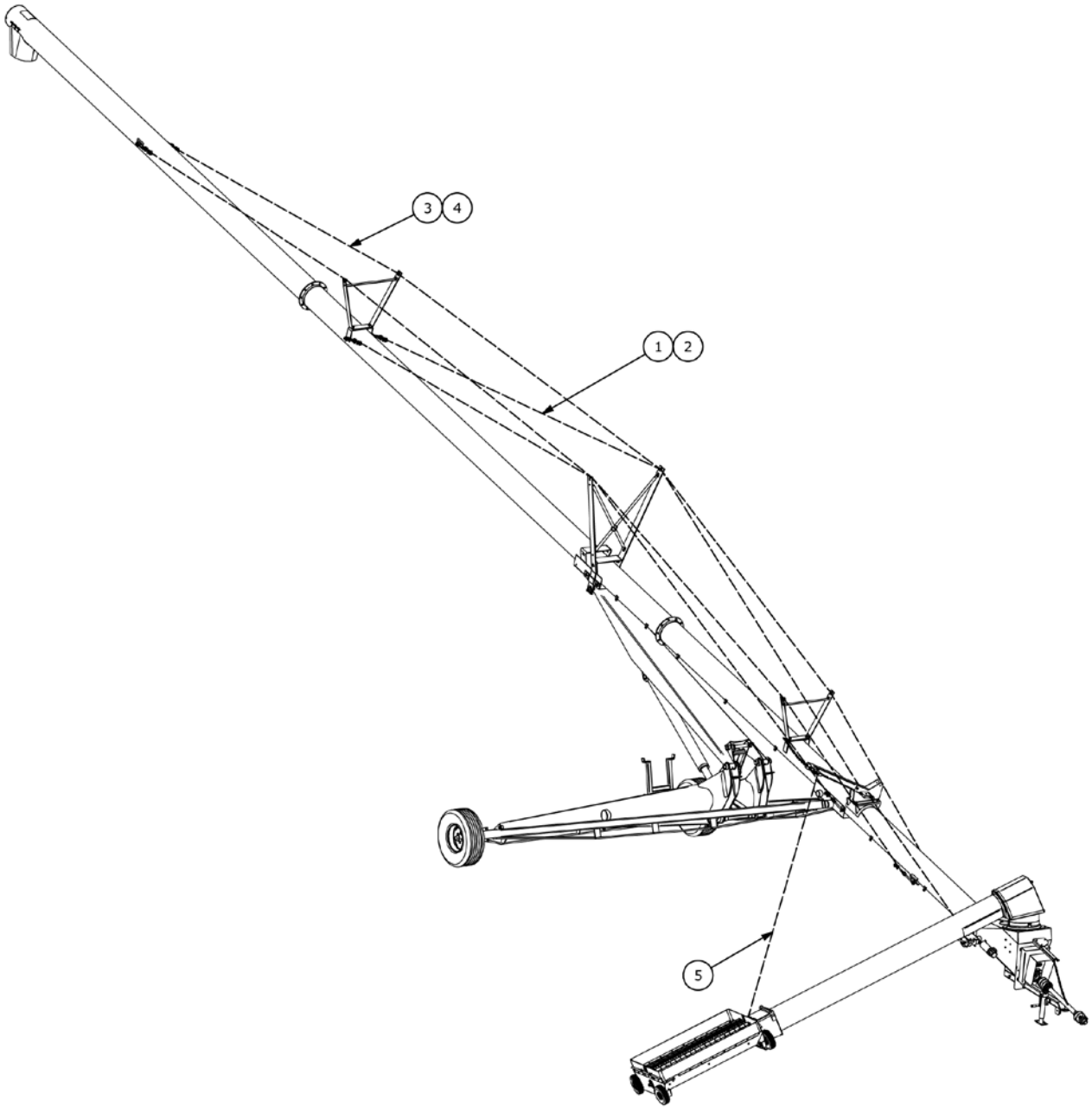
## Double Flighting Hopper Drawing



| Item | Part Number | Description |
|---|---|---|
| 1 | 910913 | Multi Flighting Hopper |
| 2 | 961675 | Bearing Flange 72MS |
| 3 | 961676 | 1-1/4" Bearing AEL206-104 (RHP #1230) |
| 4 | 960492 | 60B17 Sprocket |
| 5 | 905419 | Outside Flighting |
| 6 | 905434 | Center Flighting Rod |
| 7 | 905562 | 60B14 Sprocket |
| 8 | 905844 | Outside Flighting Holder |
| 9 | 905834 | Center Shaft Holder |
| 10 | 960547 | Universal Joint (1140 Series) 1-1/4" Ends w/ 5/16" Keyway |
| 11 | 905838 | Center Flighting Holder |
| 12 | 905972 | Center Flighting |
| 13 | 910912 | Intake Flighting Guard |
| 14 | 910898 | Cage Mounting Plate |
| 15 | 86170 | 3/8" x 1" Hex Bolt |
| 16 | 81593 | 3/8" Lock Washer |
| 17 | 81592 | 3/8" Hex Nut |
| 18 | 988999 | 3/8" x 3/8" Socket Set Screw |
| 19 | 963026 | 1/4" Sq. x 1-1/2" Key |
| 20 | 905369 | Key 1/4" Sq. x 2-1/2" |
| 21 | 960180 | 5/16" x 1-3/8 " U-Joint & Sprocket Key |
| 22 | 9812378 | 3/8" x 3/4" Square Head Set Screw (SER) |
| 23 | 86171 | 3/8" x 1-1/4" Hex Bolt |
| 24 | 81569 | 5/16" Lock Washer |
| 25 | 81568 | 5/16" Hex Nut |
| 26 | 906558 | Chain #60 x 35 Pitches incl. Connector |
| 27 | 84217 | 3/8" Wing Nut |
| 28 | 910900 | Chain Guard |
| 29 | 910916 | Pin Hopper Wheel 19 x 187 mm |
| 30 | 910917 | Spacer Wheel 25 mm OD x 19 mm |
| 31 | 960714 | Wheel w/Tire 4.10/3.50 |
| 32 | 961012 | #16 Hair Pin Clip |
| 33 | 84050 | 3/4" SAE Flat Washer |
| 34 | 910892 | Lid |
| 35 | 960660 | Rubber Reinforcement 1" x 57.25" |
| 36 | 911359 | Rubber Edging |
| 37 | 960834 | Rubber Reinforcement Plate |
| 38 | 960837 | Back Rubber Reinforcement Plate |
| 39 | 81527 | 1/4" x 1" Hex Bolt |
| 40 | 81545 | 1/4" Lock Washer |
| 41 | 81544 | 1/4" Hex Nut |

| Item | Part Number | Description |
|---|---|---|
| 42 | 81546 | 5/16" Flat Washer |
| 43 | 811792 | 3/8" x 1-1/2" Hex Bolt |
| 44 | 81570 | 3/8" Std Flat Washer |
| 45 | 812026 | 5/16" x 1" Hex Bolt |

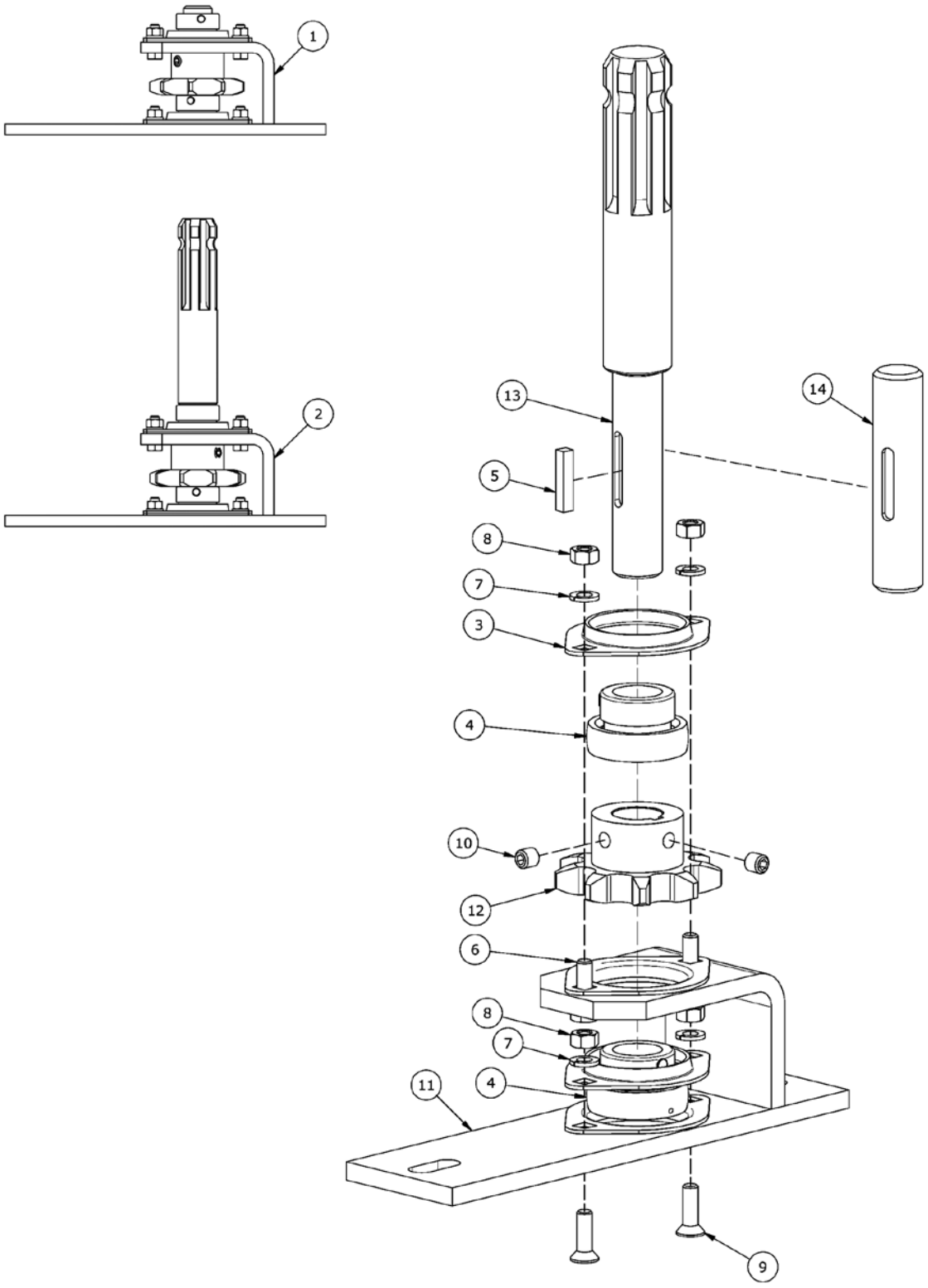
## Cables Drawing




MA-10

| Item | Part Number | Description |
|---|---|---|
| 1 | 907444 | Lower Cable Bundle, 85' |
| 2 | 907443 | Lower Cable Bundle, 70' |
| 3 | 907445 | Upper Cable Bundle, 85' |
| 4 | 907442 | Upper Cable Bundle, 70' |
| 5 | 910506 | Intake Lift Cable Assembly 1/4" x 32'- 3-3/4" |

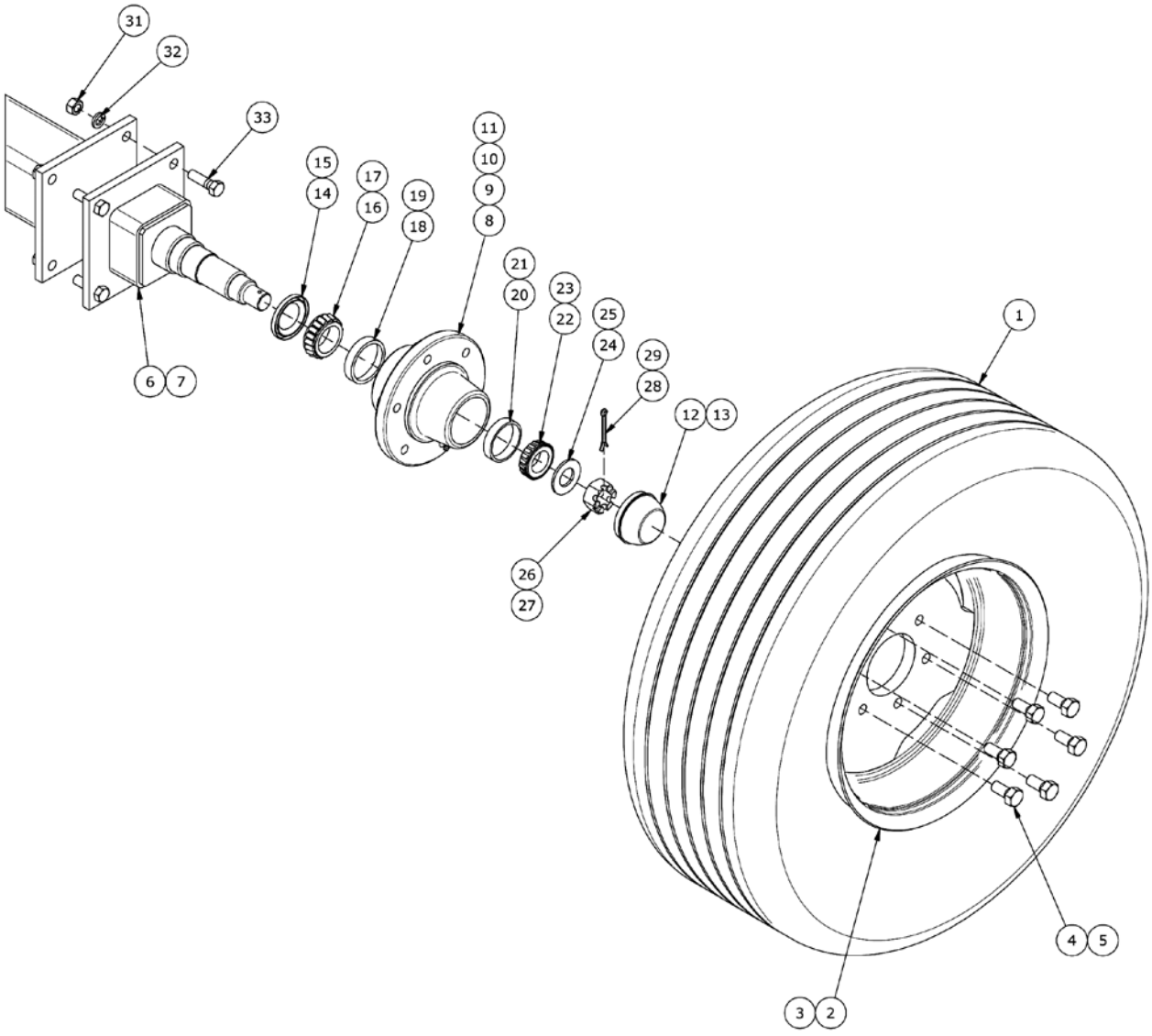
## Idler Assembly




MA-11

| Item | Part Number | Description |
|---|---|---|
| 1 | 910990 | Idler Assembly |
| 2 | 911142 | Idler Assembly w/ Reverse |
| 3 | 963009 | Bearing Flange (52 MST) |
| 4 | 961627 | 1" Bearing w/ Collar |
| 5 | 960177 | 1/4" Sq. x 1-1/4" Key |
| 6 | 812026 | 5/16" x 1" Hex Bolt |
| 7 | 81569 | 5/16" Lock Washer |
| 8 | 81568 | 5/16" Hex Nut |
| 9 | 967183 | 5/16" x 1" Flat Head Socket Bolt |
| 10 | 988999 | 3/8" x 3/8" Socket Set Screw |
| 11 | 960531 | Idler Frame |
| 12 | 960717 | Sprocket 9T-#80 (1" Bore) |
| 13 | 911143 | Reverse Idler Shaft |
| 14 | 960533 | Idler Shaft |

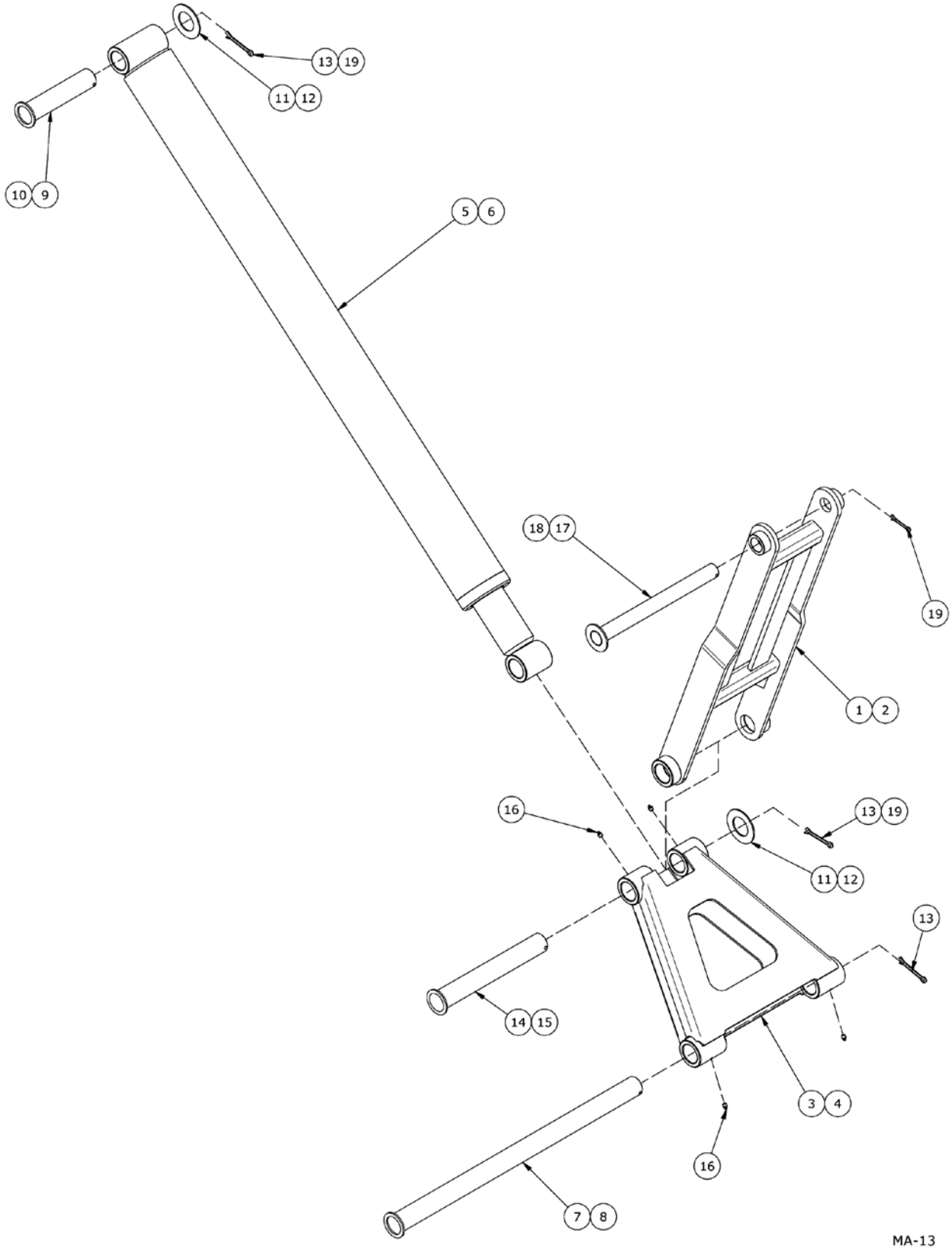
## Tire Assembly Drawing




MA-12

| Item | Part Number | Description |
|---|---|---|
| 1 | 959204 | Tire 11L x 15 x 8 Ply (Hiway) |
| 2 | F0211 | Wheel 15" x 8" x 6 Bolt Wheel, 85' |
| 3 | F0210 | Wheel 15" x 6" x 6 Bolt Wheel, 70' |
| 4 | 967210 | 9/16" Wheel Bolt, 85' |
| 5 | 968404 | 1/2" Wheel Bolt, 70' |
| 6 | 906467 | Stub Axle Weldment |
| 7 | 906466 | Stub Axle w/ 8-1/2" Shaft, 70' |
| 8 | 967207 | Hub with Bearing Cups (618), 85' |
| 9 | 967710 | Hub with Bearing Cups (611), 70' |
| 10 | 960586 | Hub CTD H618 Complete Assembly w/ Wheel Bolts, 85' |
| 11 | 967731 | Hub CTD H611 Complete Assembly w/ Wheel Bolts, 70' |
| 12 | 967209 | Dust Cap (DC15), 85' |
| 13 | 967716 | Dust Cap (DC13), 70' |
| 14 | 967204 | Oil Seal (SE30), 85' |
| 15 | 967707 | Oil Seal (SE13), 70' |
| 16 | 967205 | Inner Bearing Cone (25580), 85' |
| 17 | 967708 | Inner Bearing Cone (LM29749), 70' |
| 18 | 965252 | Inner Bearing Cup (25520), 85' |
| 19 | 967709 | Inner Bearing Cup (LM29710), 70' |
| 20 | 968412 | Outer Bearing Cup (LM48510), 85' |
| 21 | 967711 | Outer Bearing Cup (LM67010), 70' |
| 22 | 967208 | Outer Bearing Cone (LM48548), 85' |
| 23 | 967712 | Outer Bearing Cone (LM67048), 70' |
| 24 | 967218 | Flat Washer 1" (SAE), 85' |
| 25 | 967713 | Flat Washer 7/8" (SAE) |
| 26 | 967217 | 1" Slotted Hex Nut, 85' |
| 27 | 810010 | 7/8" Slotted Hex Nut, 85' |
| 28 | 81207 | 3/16" x 2" Cotter Pin, 85' |
| 29 | 9812486 | 1/8 x 1-1/2" Cotter Pin, 70' |
| 30 | 967900 | 1/4" Grease Fitting |
| 31 | 81636 | 1/2" Hex Nut |
| 32 | 81637 | 1/2" Lock Washer |
| 33 | 87553 | 1/2" x 1-3/4" Hex Bolt |

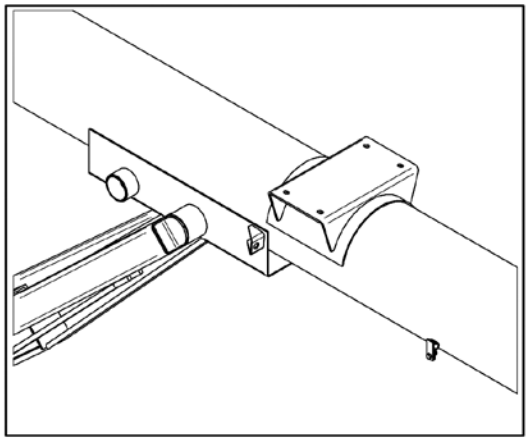
## Cylinder Mount Components Drawing



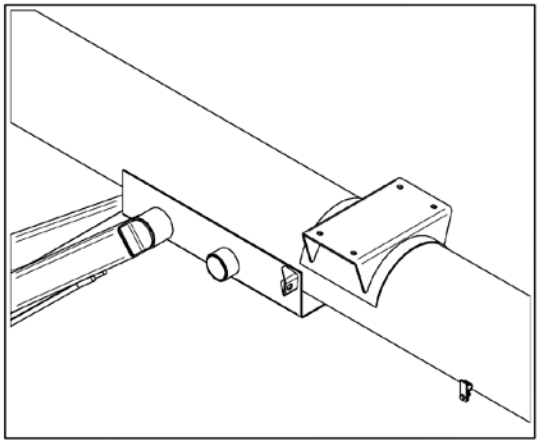
| Item | Part Number | Description |
|---|---|---|
| 1 | 907342 | Pivot Yoke, 85' |
| 2 | 960624 | Pivot Yoke, 70' |
| 3 | 960688 | Connecting Link, 85' |
| 4 | 960625 | Connecting Link, 70' |
| 5 | F0445 | Cylinder (5" x 52-3/8"), 85' |
| 6 | F9778 | Cylinder (4-1/2" x 42-1/2"), 70' |
| 7 | F0035 | Ø2" x 34-3/16" Connecting Link Pin, 85' |
| 8 | F0034 | Ø2" x 27-15/16" Connecting Link Pin, 70' |
| 9 | 960692 | Ø2" x 9" Lower Lift Arm, Top Cylinder Pin, 85' |
| 10 | 960691 | 1-1/2" x 8-11/16" Top Cylinder Pin, 70' |
| 11 | 967153 | 2" x 10 ga Narrow Rim Washer |
| 12 | 967135 | 1-1/2" x 10 ga Narrow Rim Washer, 70' |
| 13 | 967162 | 5/16" x 3" Cotter Pin |
| 14 | 960690 | 2" x 14-13/16" Bottom Cylinder Pin, 85' |
| 15 | 960628 | 1-1/2" x 12-3/8 Bottom Cylinder Pin, 70' |
| 16 | 967164 | Drive-In Grease Zerk |
| 17 | 960694 | 1-1/2" x 16-11/16" Top Yoke Pin, 85' |
| 18 | 960630 | 1-1/2" x 13-11/16" Top Yoke Pin, 70' |
| 19 | 81210 | 1/4" x 2" Cotter Pin |

## Undercarriage Pivot Ring Drawing

13" X 85'

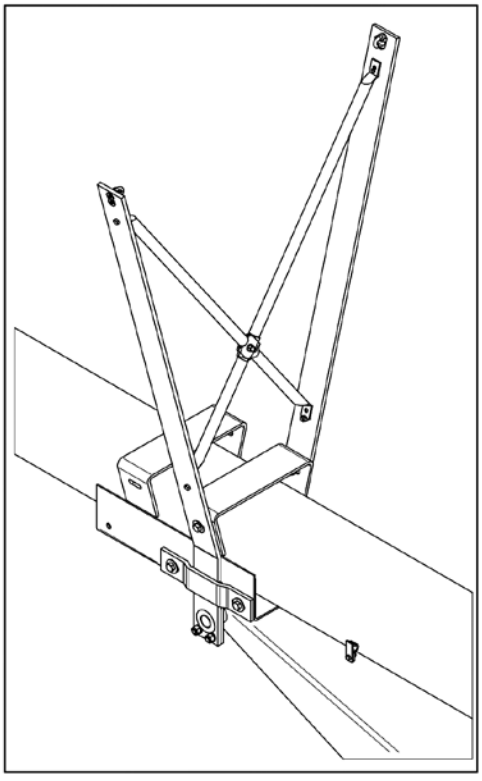


13" X 95'

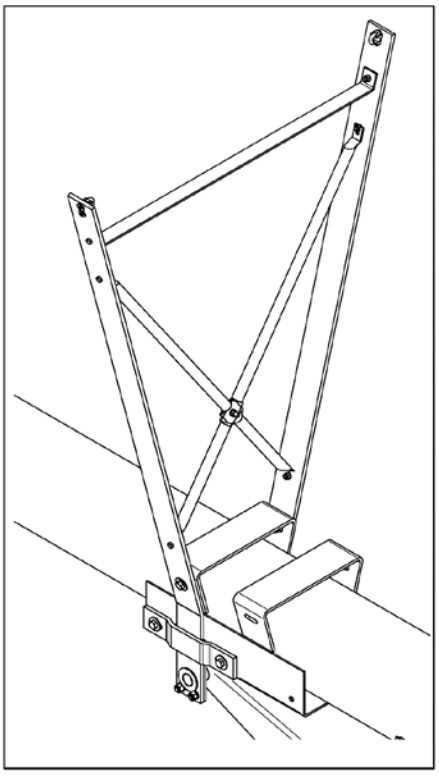


## Main Bridging Yoke Drawing

13" X 85'

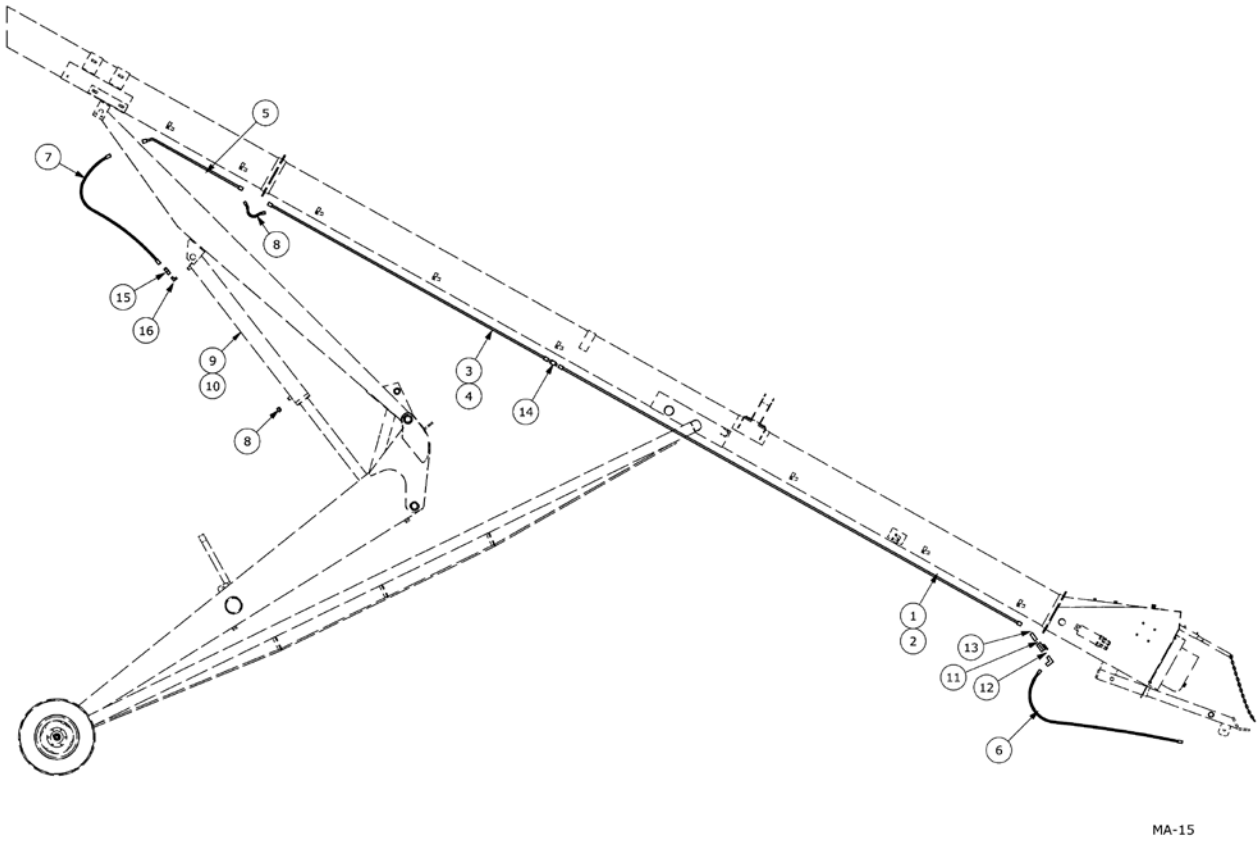


13" X 95'



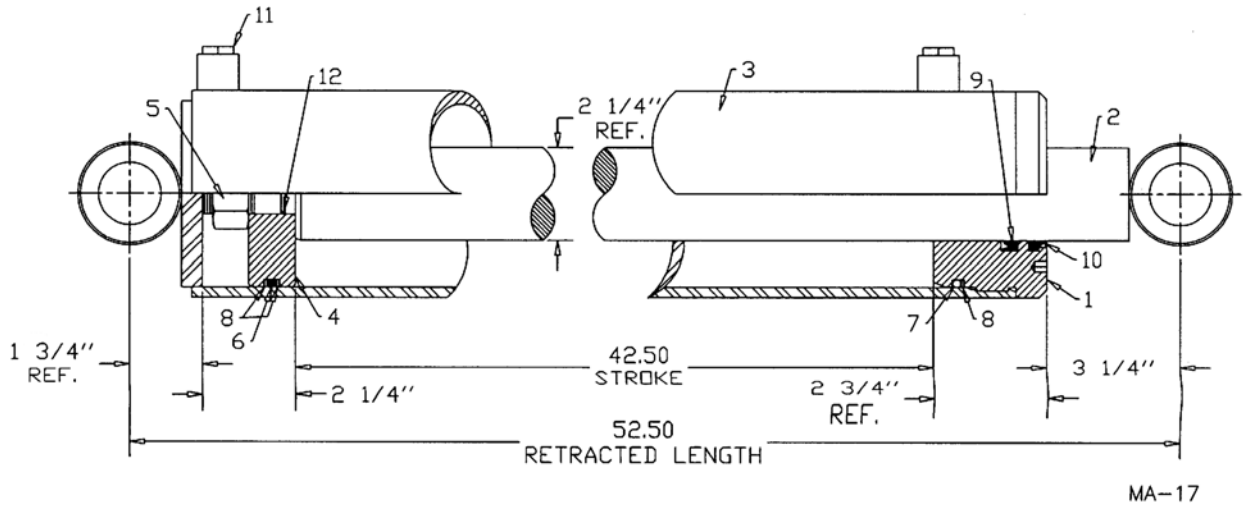
MA-14

## Hydraulics Drawing



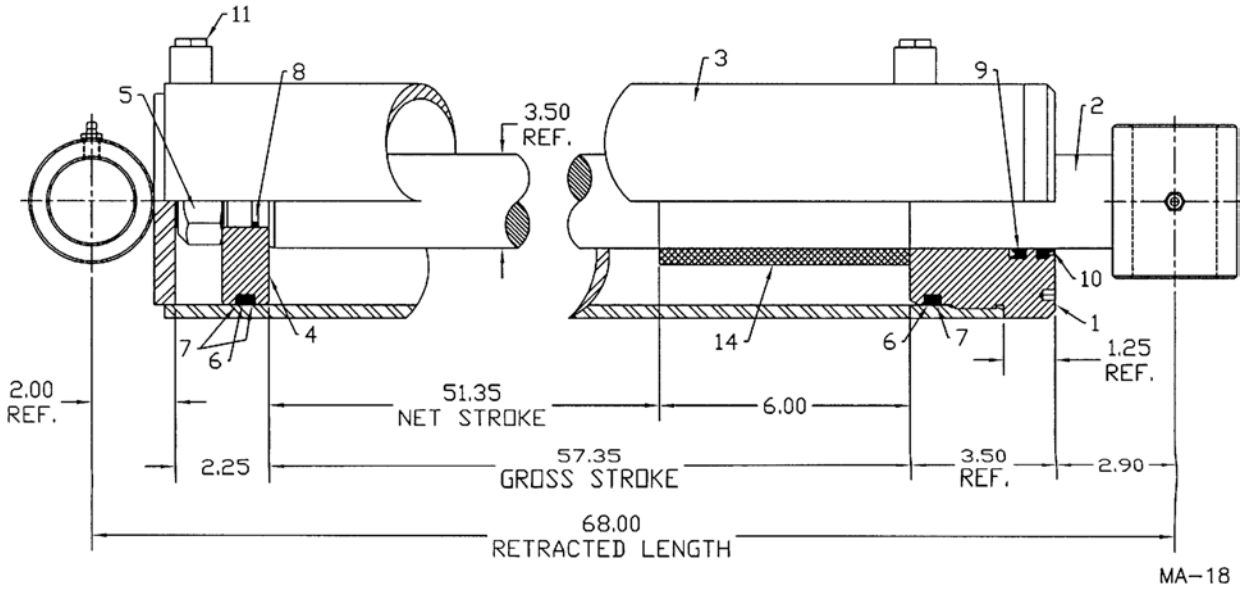
| Item | Part Number | Description |
|---|---|---|
| 1 | 960467 | 5/8" OD x 15'-10" Hydraulic Line - 85' |
| 2 | 960468 | 5/8" OD x 13'-4" Hydraulic Line - 70' |
| 3 | 960200 | 5/8" OD x 9'-7" Hydraulic Line - 85' |
| 4 | 960144 | 5/8" OD x 11' Hydraulic Line - 70' |
| 5 | 960143 | 5/8" OD x 36" Hydraulic Line - 85' |
| 6 | 960466 | 1/2" x 112" Hydraulic Hose (1/2" MNPT Both Ends) |
| 7 | 960710 | 1/2" x 72" Hydraulic Hose (1/2" MNPT x 7/8" MJIC) |
| 8 | 960162 | 1/2" x 18' Hydraulic Hose (7/8" MJIC Both Ends) - 85' |
| 9 | F0445 | Cylinder (5" x 52-3/8") - 85' |
| 10 | F9778 | Cylinder (4-1/2" x 42-1/2") - 70' |
| 11 | 960057 | 1/2" Ball Valve |
| 12 | 960585 | 1/2" x 90° Street Elbow (Stl.) |
| 13 | 960152 | Adaptor (7/8" MJIC to 1/2" NPT) |
| 14 | 812711 | Coupler, 7/8" MJIC Both Ends |
| 15 | 960118 | 1/2" One Way Control Valve |
| 16 | 906541 | Elbow 90° (3/4" MORB x 1/2" MNPT) |

## 4.5 x 42.50 Cylinder Assembly Drawing



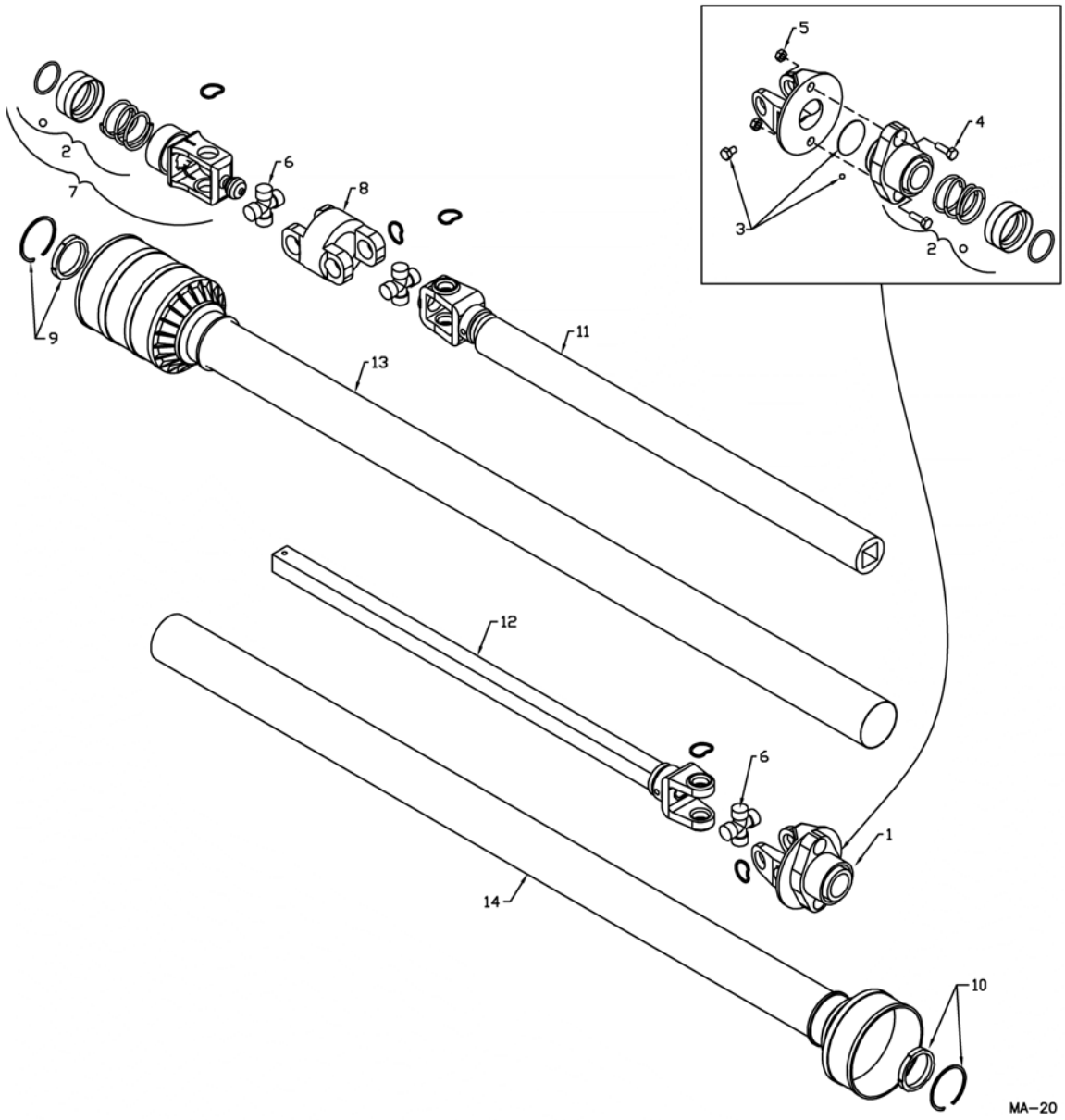

| Item | Part Number | Description |
|---|---|---|
| | F9778 | Cylinder Complete |
| 1 | 24888 | 4.5 Dia. Headplate |
| 2 | 112564 | Shaft Weldment 2.25 OD x 50.75 Lg |
| 3 | 24886 | 4.5 Dia. Tube Weldment |
| 4 | 112561 | 4.5 Dia. Piston |
| 5 | 813407 | Locknut 1.0 UNF |
| 6 | 85346 | O-Ring 4.125 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 x 51.35 Cylinder Assembly Drawing



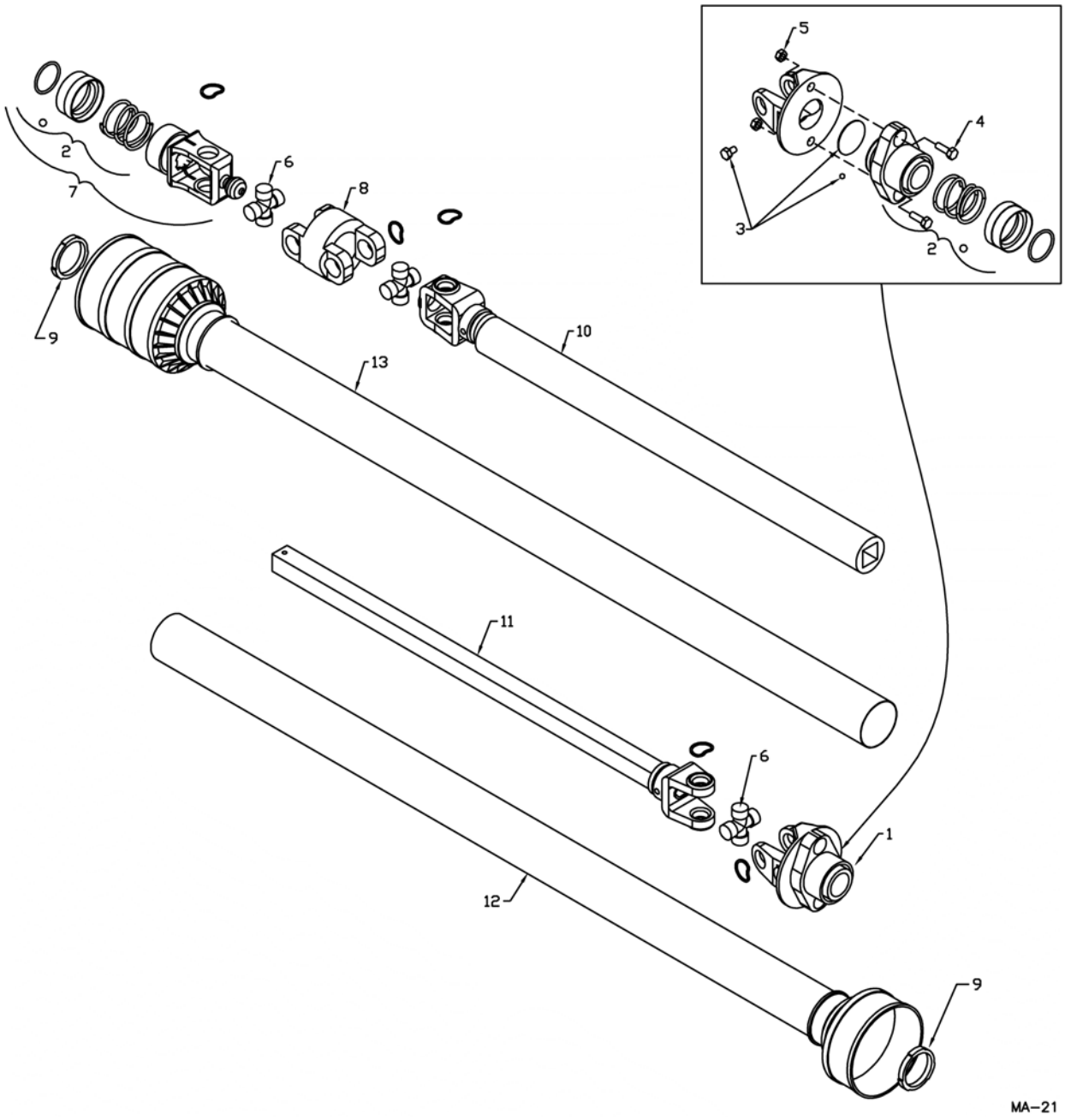

| Item | Part Number | Description |
|---|---|---|
| | F0445 | Cylinder Complete |
| 1 | 25123 | 5.0 Dia. Headplate |
| 2 | 116128 | Shaft Weld't 3.5 x 66 |
| 3 | 25122 | 5.0 Dia. Tube Weld't |
| 4 | 111299 | 5.0 Dia. Piston |
| 5 | 87557 | Locknut 1.25 UNF |
| 6 | 82425 | O-Ring 4.50 ID x 5.00 OD Buna |
| 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" x 70' PTO Drawing



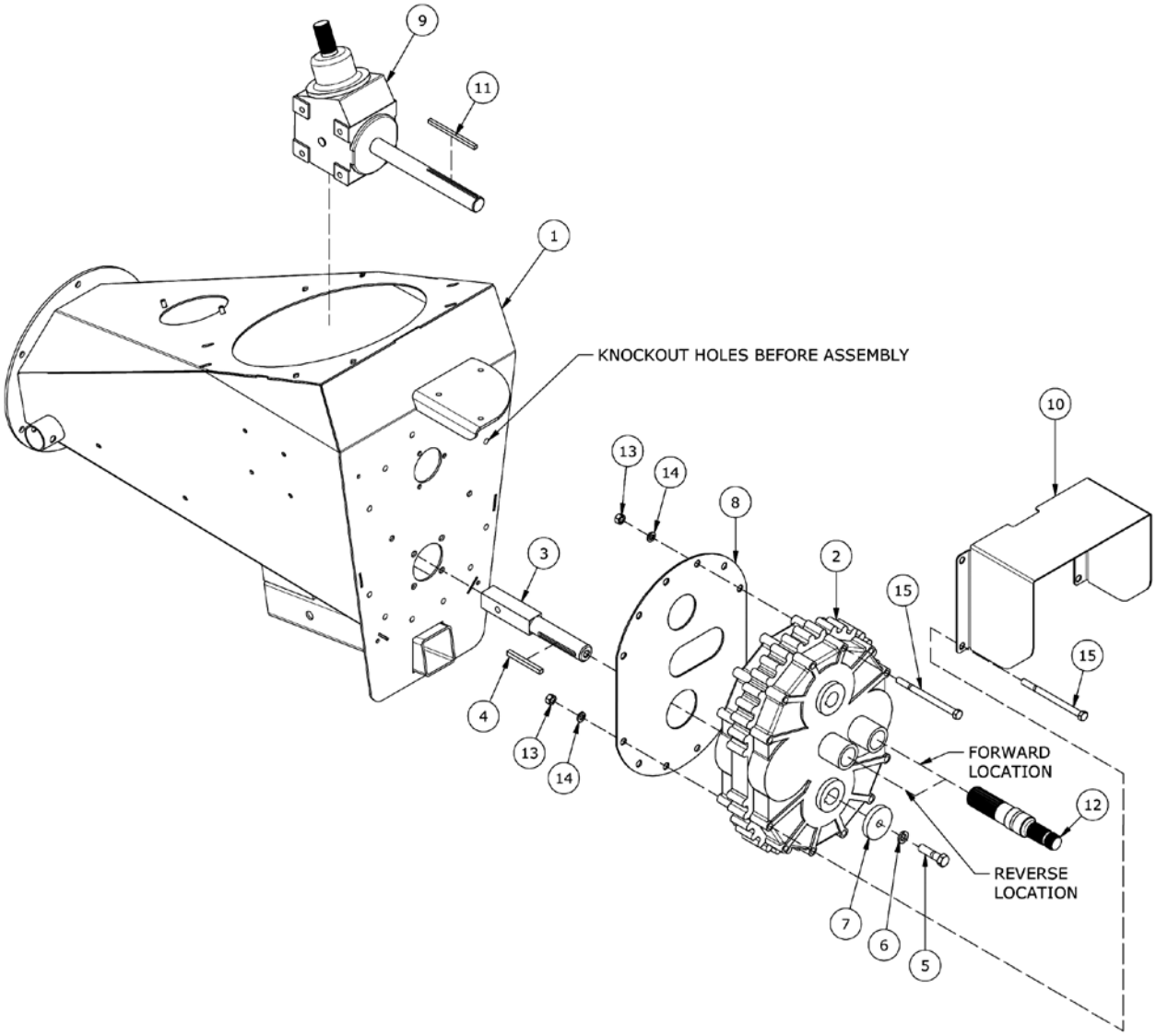
| Item | Part Number | Description |
|---|---|---|
| | F9552 | Shaft Complete |
| | 936566 | Outer Half Shaft - Tractor |
| | 908720 | Inner Half Shaft - Implement |
| 1 | 936277 | Ball Shear Assembly |
| 2 | 936433 | Safety Slide Lock Repair Kit |
| | | (Collar, Spring, Retainer Ring, 2-Pawls) |
| 3 | 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" (Gr8) 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' PTO Drawing



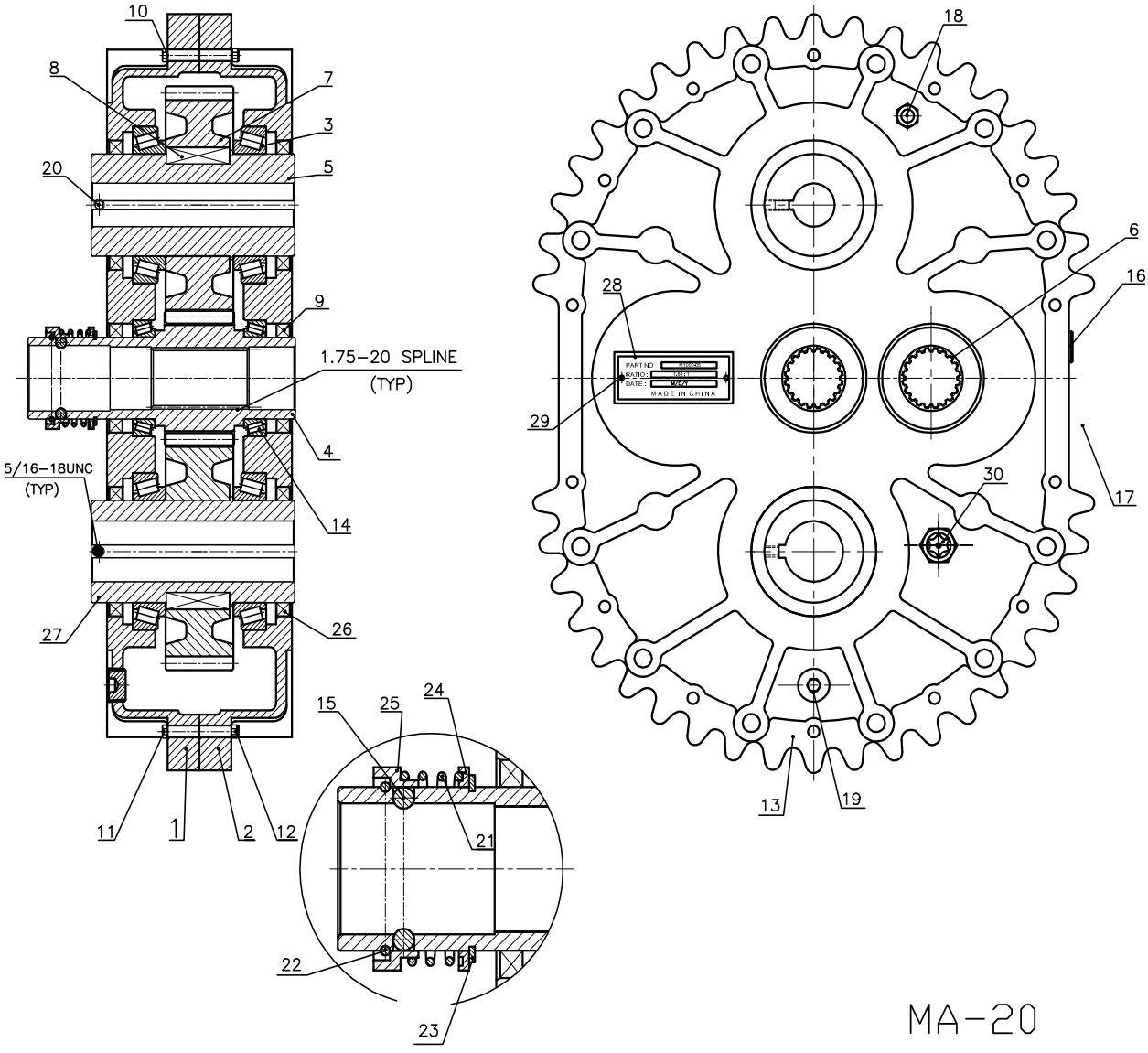
| Item | Part Number | Description |
|---|---|---|
| | F0608 | Shaft Complete |
| | 908721 | Outer Half Shaft - Tractor |
| | 908722 | Inner Half Shaft - Implement |
| 1 | 936432 | Ball Shear Assembly |
| 2 | 936199 | Safety Slide Lock Repair Kit - #26-15120 |
| | | (Collar, Spring, Retainer Ring, 2-Pawls) |
| 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" (Gr8) w/ Nuts |
| 5 | 812362 | 5/16" Lock Nut |
| 6 | 906505 | Repair Kit - Extended Life (standard) |
| 7 | 936431 | Inner Splined Yoke - #55241-1612 |
| 8 | 936436 | CV Center Housing |
| 9 | 908844 | Nylon Repair Kit - #19-15121 |
| 10 | 936438 | Yoke & Tube |
| 11 | 936437 | Yoke & Shaft |
| 12 | 908843 | Outer Shield - #97-21984 |
| 13 | 908842 | Inner Guard - #96-21984 |

# M1000 Gearbox Retrofit Drawing



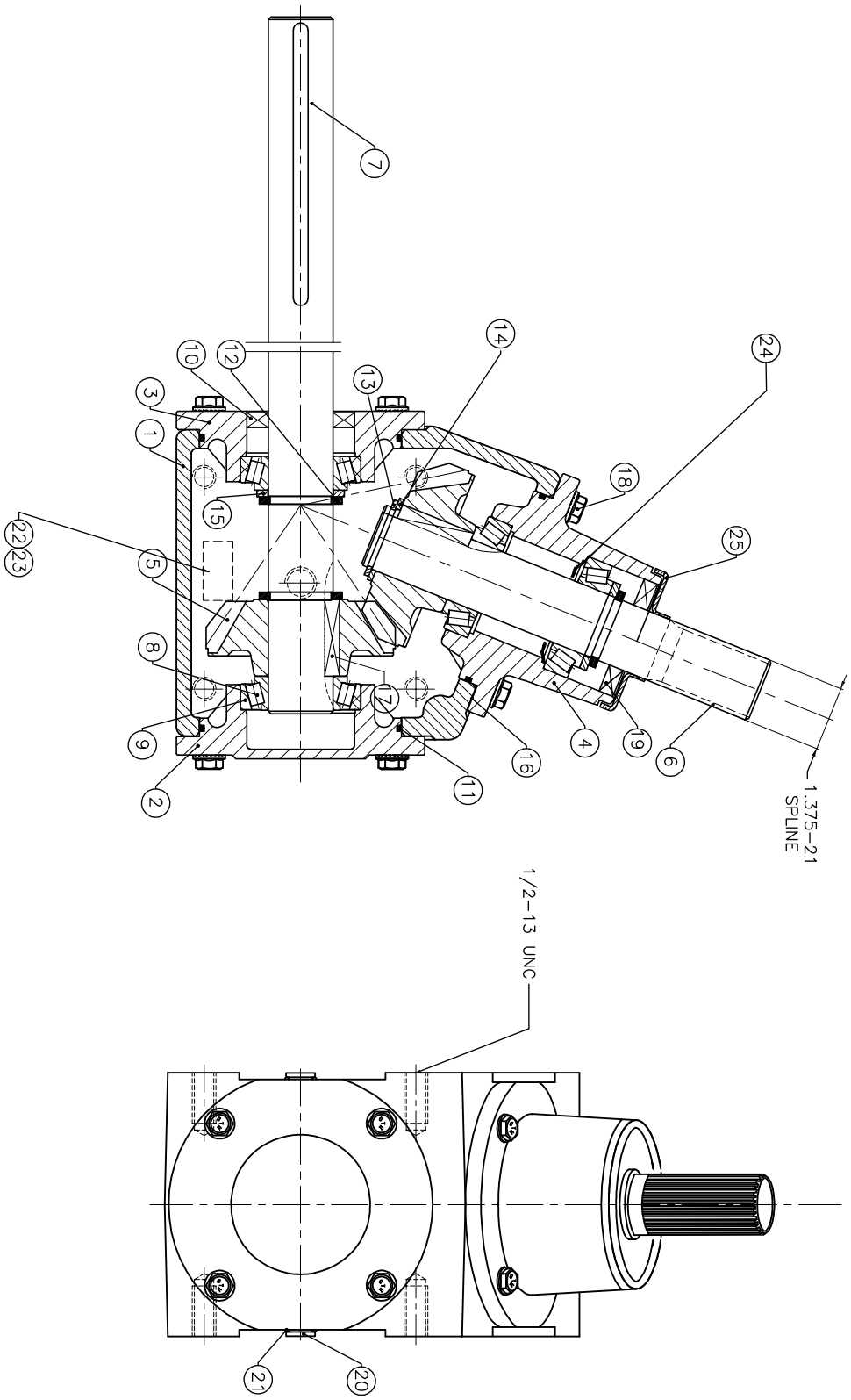
| Item | Part Number | Description |
|---|---|---|
| 1 | 910985 | Input Box |
| 2 | 910927 | M1000 Helical Gearbox |
| 3 | 911044 | M1000 Flighting Drive Shaft |
| 4 | 911130 | M1000 Stub Key |
| 5 | 84335 | 5/8" x 2-1/2" Hex Bolt |
| 6 | 81677 | 5/8" Lock Washer |
| 7 | 906073 | Washer Input Box 21/32" ID x 3" OD x 1/2" |
| 8 | 911001 | Helical Gearbox Plate |
| 9 | 911131 | 4168 Gearbox |
| 10 | 911083 | M1000 Gearbox Guard |
| 11 | 911163 | Key 5/16" SQ x 140 mm |
| 12 | 910947 | M1000 Spline Stub Shaft |
| 13 | 81636 | 1/2" Hex Nut |
| 14 | 81637 | 1/2" Lock Washer |
| 15 | 811829 | 1/2" 7" Hex Bolt |

## M1000 Gearbox 910927 Drawing



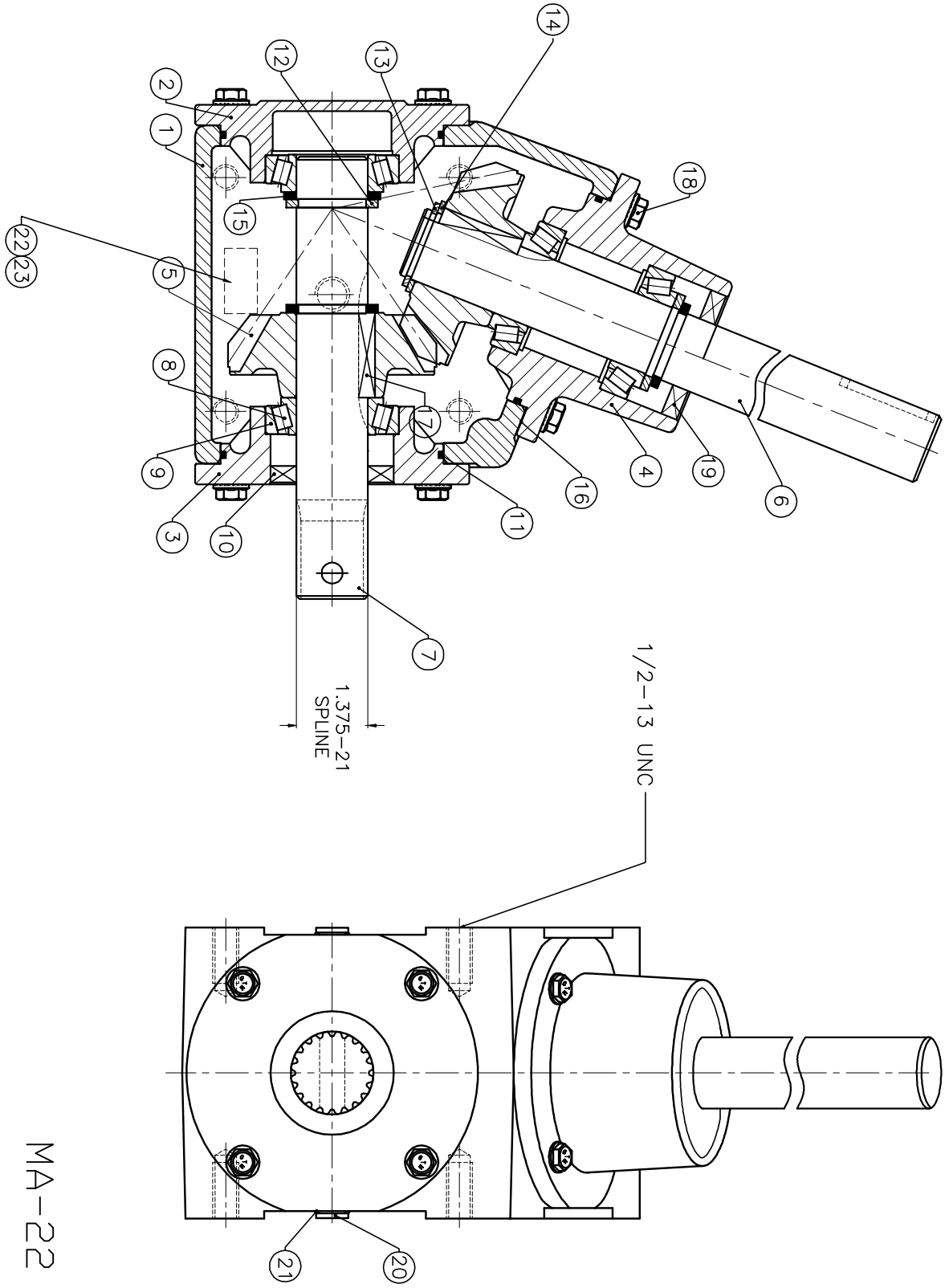
| Item | Part Number | Description |
|---|---|---|
| | 910927 | M1000 Gearbox Complete |
| 1 | | Housing |
| 2 | | Housing w/o Plug Hole |
| 3 | 909829 | Bearing 32015 Tapered Roller Bearings PEER |
| 4 | 911353 | Input Shaft Gear |
| 5 | 911354 | Output Shaft |
| 6 | 911355 | Mid Shaft Gear |
| 7 | 911356 | Output Gear |
| 8 | | A-Flat Key 12 x 20 x 50 |
| 9 | 909399 | Viton Seal 60 x 80 x 12 |
| 10 | | Spring Gasket 5/16" |
| 11 | | Bolt 5/16" - 18 UNC |
| 12 | | Nut 5/16" - 18 UNC |
| 13 | | Location Pin Ø5 x 30 |
| 14 | 909398 | Bearing 32912 Tapered Roller Bearings PEER |
| 15 | 911357 | Steel Ball Ø8 |
| 16 | | Internal Hex Plug Z 1/4 - 18 |
| 17 | | |
| 18 | 909833 | Steel Relief Plug Z 3/8 - 18 |
| 19 | 911358 | Drain Plug Z 3/4" |
| 20 | | Internal Hex Tighten Screw 5/16 - 18 UNC length 21 |
| 21 | 911357 | Spring |
| 22 | 911357 | Round Circlip |
| 23 | 911357 | Snap Ring Ø60 x 2 |
| 24 | 911357 | Spring Circlip |
| 25 | 911357 | Bushing |
| 26 | 909831 | Viton Seal 75 x 95 x 10 |
| 27 | 911364 | Output Shaft (2) |
| 28 | | Name Plate |
| 29 | 911934 | Rivet |
| 30 | 911365 | External Hex Oil Level Plug ZG 3/8" - 19 |
| 31 | 910510 | Poly-Aminoester Plug |

## Gearbox 911131 Drawing



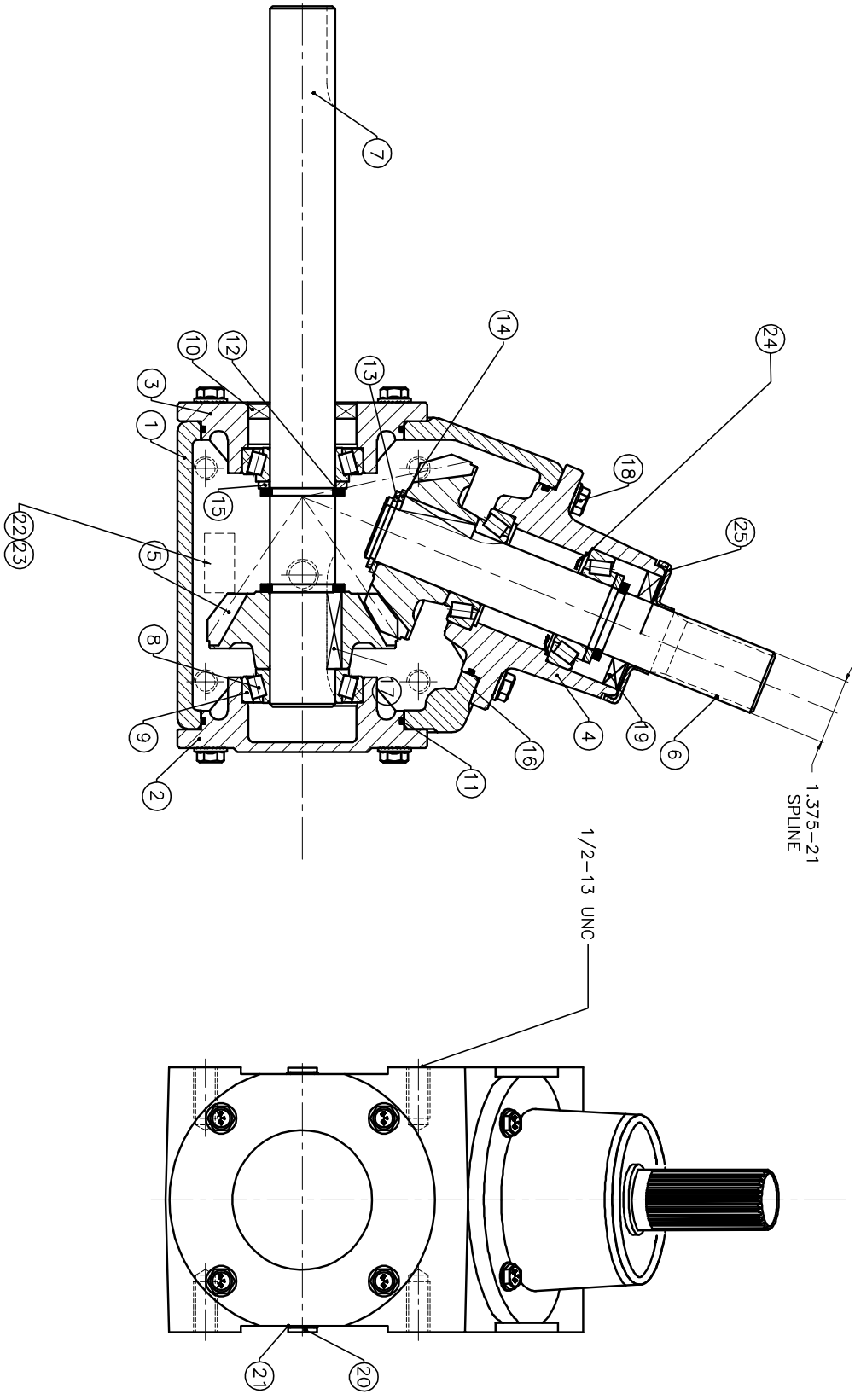
| Item | Part Number | Description |
|---|---|---|
| | 911131 | Gearbox Complete |
| 1 | 960803 | Housing |
| 2 | 960805 | End Cap |
| 3 | 960810 | End Cap |
| 4 | 960804 | Quill |
| 5 | 960812 | Gear, DP 4.23 Teeth 17 |
| 6 | 960822 | Shaft, Quill |
| 7 | 912026 | Shaft, Cross |
| 8 | 967208 | Bearing Cone LM48548 |
| 9 | 968412 | Bearing Cup LM48510 |
| 10 | 960817 | Seal, (1.374 x 2.374 x 0.374) |
| 11 | 908895 | O-Ring, 105mm x 3.1mm |
| 12 | 911936 | Retainer Ring Ø35 x 4 |
| 13 | 911937 | Snap Ring Ø35 x 2.5 |
| 14 | 911938 | Spacer |
| 15 | 911939 | Spacer |
| 16 | 960815 | Gasket |
| 17 | 960821 | Square Key, 5/16" x 1.61" |
| 18 | 960814 | Capscrew, 3/8" - 16 UNC x 1.0" |
| 19 | 960816 | Seal, (1.374 x 2.563 x 0.374) |
| 20 | 911940 | Pipe Plug 3/4 - 16 UNF |
| 21 | 911941 | O-Ring Ø18 x 2 |
| 22 | 911942 | Rivet |
| 23 | | Label |
| 24 | 960824 | Grease Washer |
| 25 | 960825 | Shield |

## Gearbox 960950 Drawing



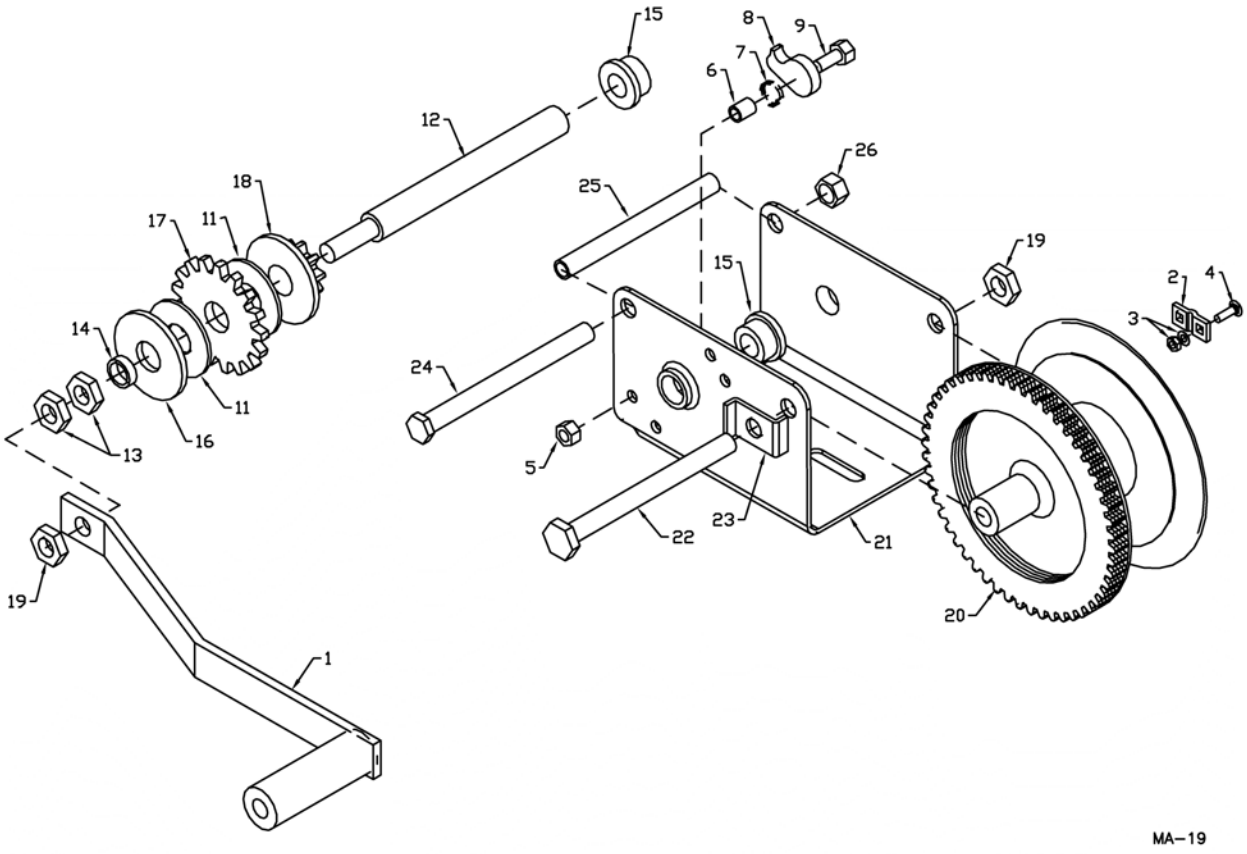
| Item | Part Number | Description |
|---|---|---|
| | 960950 | Gearbox Complete |
| 1 | 960803 | Housing |
| 2 | 960805 | End Cap |
| 3 | 960810 | End Cap |
| 4 | 960804 | Quill |
| 5 | 960812 | Gear, DP 4.23 Teeth 17 |
| 6 | 960822 | Shaft, Quill |
| 7 | 960823 | Shaft, Cross |
| 8 | 967208 | Bearing Cone LM48548 |
| 9 | 968412 | Bearing Cup LM48510 |
| 10 | 960817 | Seal, (1.374 x 2.374 x 0.374) |
| 11 | 908895 | O-Ring, 105mm x 3.1mm |
| 12 | 911936 | Retainer Ring Ø35 x 4 |
| 13 | 911937 | Snap Ring Ø35 x 2.5 |
| 14 | 911938 | Spacer |
| 15 | 911939 | Spacer |
| 16 | 960815 | Gasket |
| 17 | 960821 | Square Key, 5/16" x 1.61" |
| 18 | 960814 | Capscrew, 3/8" - 16 UNC x 1.0" |
| 19 | 960816 | Seal, (1.374 x 2.563 x 0.374) |
| 20 | 911940 | Pipe Plug 3/4 - 16 UNF |
| 21 | 911941 | O-Ring Ø18 x 2 |
| 22 | 911942 | Rivet |
| 23 | | Label |

## Gearbox 960788 Drawing



| Item | Part Number | Description |
|---|---|---|
| | 960788 | Gearbox Complete |
| 1 | 960803 | Housing |
| 2 | 960805 | End Cap |
| 3 | 960810 | End Cap |
| 4 | 960804 | Quill |
| 5 | 960812 | Gear, DP 4.23 Teeth 17 |
| 6 | 960822 | Shaft, Quill |
| 7 | 960823 | Shaft, Cross |
| 8 | 967208 | Bearing Cone LM48548 |
| 9 | 968412 | Bearing Cup LM48510 |
| 10 | 960817 | Seal, (1.374 x 2.374 x 0.374) |
| 11 | 908895 | O-Ring, 105mm x 3.1mm |
| 12 | 911936 | Retainer Ring Ø35 x 4 |
| 13 | 911937 | Snap Ring Ø35 x 2.5 |
| 14 | 911938 | Spacer |
| 15 | 911939 | Spacer |
| 16 | 960815 | Gasket |
| 17 | 960821 | Square Key, 5/16" x 1.61" |
| 18 | 960814 | Capscrew, 3/8" - 16 UNC x 1.0" |
| 19 | 960816 | Seal, (1.374 x 2.563 x 0.374) |
| 20 | 911940 | Pipe Plug 3/4 - 16 UNF |
| 21 | 911941 | O-Ring Ø18 x 2 |
| 22 | 911942 | Rivet |
| 23 | | Label |
| 24 | 960824 | Grease Washer |
| 25 | 960825 | Shield |

## Winch Drawing



| 21Item22 | Part Number | Description |
|---|---|---|
| 24125 | 2461S01 | Handle Assembly |
| | 5621S01 | Cable Keeper Kit |
| 2 | | Cable Clamp |
| 3 | | Lockwasher and 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.

| Quantity | Bundle Number | Description |
|---|---|---|
| Y1370TM - 13" x 70' Backsaver Auger | | |
| 1 | F9701 | Top Section |
| 1 | F9702 | Center Section |
| 1 | F1079 | 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 | F1071 | Intake Auger |
| 1 | F1072 | Intake Hopper |
| 1 | F1081 | Crate of Parts |
| 1 | F1074 | 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 | F1079 | 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 | F1071 | Intake Auger |
| 1 | F1072 | Intake Hopper |
| 1 | F1081 | Crate of Parts |
| 1 | F1073 | Input Box |
| 2 | F0210 | Wheels, 15" x 6" x 6 Bolt |
| 1 | F9180 | Carton of Parts (Hopper) |

| Quantity | Bundle Number | Description |
|---|---|---|
| Y1370TMM - 13" x 70' Backsaver Auger w/ Multi-flighting Intake Hopper | | |
| 1 | F9701 | Top Section |
| 1 | F9702 | Center Section |
| 1 | F1079 | 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 | F1071 | Intake Auger |
| 1 | F1007 | Multi-flighting Intake Hopper |
| 1 | F1081 | Crate of Parts |
| 1 | F1074 | 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 w/ Reverse Kit | | |
|---|---|---|
| 1 | F9701 | Top Section |
| 1 | F9702 | Center Section |
| 1 | F1079 | 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 | F1071 | Intake Auger |
| 1 | F1007 | Multi-flighting Intake Hopper |
| 1 | F1081 | Crate of Parts |
| 1 | F1073 | Input Box |
| 2 | F0210 | Wheels, 15" x 6" x 6 Bolt |
| 1 | F0091 | Carton of Parts (Hopper) |

| Quantity | Bundle Number | Description |
|---|---|---|
| Y1385TM - 13" x 85' Backsaver Auger | | |
| 1 | F9730 | Top Section |
| 1 | F9731 | Center Section |
| 1 | F1080 | 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 | F1071 | Intake Auger |
| 1 | F1072 | Intake Hopper |
| 1 | F1082 | Crate of Parts |
| 1 | F1074 | 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 | F1080 | 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 | F1071 | Intake Auger |
| 1 | F1072 | Intake Hopper |
| 1 | F1082 | Crate of Parts |
| 1 | F1073 | Input Box |
| 2 | F0211 | Wheels, 15" x 8" x 6 Bolt |
| 1 | F9180 | Carton of Parts (Hopper) |

| Quantity | Bundle Number | Description |
|---|---|---|
| Y1385TMM - 13" x 85' Backsaver Auger w/ Multi-flighting Intake Hopper | | |
| 1 | F9730 | Top Section |
| 1 | F9731 | Center Section |
| 1 | F1080 | 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 | F1071 | Intake Auger |
| 1 | F1007 | Multi-flighting Intake Hopper |
| 1 | F1082 | Crate of Parts |
| 1 | F1074 | 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 w/ Reverse Kit | | |
|---|---|---|
| 1 | F9730 | Top Section |
| 1 | F9731 | Center Section |
| 1 | F1080 | 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 | F1071 | Intake Auger |
| 1 | F1007 | Multi-flighting Intake Hopper |
| 1 | F1082 | Crate of Parts |
| 1 | F1073 | 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.

| Quantity | Bundle Number | Description |
|---|---|---|
| 1 | Y140 | 13" x 10' Extension Kit (13" x 85' only) |
| 1 | F3005 | Poly Spout (Oval) |
| 1 | Y209 | Set of 2 9.5L x 6 Ply Tires Mounted (Highway Rated) (13" x 70' only) |
| 1 | Y210 | Set of 2 11L x 8 Ply Tires Mounted (Highway Rated) (13" x 85' only) |
| 1 | 960182 | Reverse Idler Shaft |
| 1 | F9552 | PTO Shaft (13" x 70' only) |
| 1 | F0608 | PTO Shaft (13" x 85' only) |
| 1 | F0608 | PTO Shaft for Reverse Kit (13" x 85' only) |
| 1 | Y1305 | Multi-flighting Hopper Conversion Kit |
| 1 | Y1304 | Hopper Mover (Hydraulic) |
| 1 | F0062 | Dent Remover |
| 1 | F0018 | Safety Light Kit |
| 1 | 910287 | Safety Chain Assembly |
| 1 | F0014 | Reflective Safety Decal Kit |
| 1 | F1088 | Clevis Hitch |
| 1 | F0946 | Closed Centre Hopper Mover Valve Kit |
| 1 | Y1306 | 13" Backsaver Auger Hydraulic Winch Kit |
| 1 | Y1307 | Hydraulic Winch Kit & Auger Hopper Mover |
| 1 | F1078 | M1000 Gearbox Retro-Fit Kit |

# Farm King Limited Warranty

This document limits your warranty rights.

**Base Limited Warranty**

Buhler Industries Inc. provides this warranty only to original retail purchasers of its product. Buhler Industries Inc. warrants to such purchasers that all Buhler Industries Inc. manufactured parts and components used and serviced as provided for in the Operator's Manual shall be free from defects in materials and workmanship for a period following delivery to the original retail purchaser of 12 months (80 days for commercial applications). This limited warranty applies only to those parts and components manufactured by Buhler Industries Inc. Parts and components manufactured by others are subject to their manufacturer's warranties, if any.

Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Buhler Industries Inc. reserves the right to either inspect the product at the buyer's location or have it returned to the factory for inspection. Parts must be returned through the selling representative and the buyer must prepay transportation charges.

Buhler Industries Inc. will not be responsible for repairs or replacements that are necessitated, in whole or part, by the use of parts not manufactured by or obtained from Buhler Industries Inc. Under no circumstances are component parts warranted against normal wear and tear. There is no warranty on product pump seals, product pump bearings, rubber product hoses, pressure gauges, or other components that require replacement as part of normal maintenance. Also: 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. 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 Industries Inc. 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.

**Repair Parts Limited Warranty**

Buhler Industries Inc. warrants Farm King replacement parts purchased after the expiration of the Buhler Industries Inc. Limited Warranty, and used and serviced as provided for in the Operator's Manual, to be free from defects in materials or workmanship for a period of thirty (30) days from the invoice date for the parts. Buhler Industries Inc. will fulfill this limited warranty by, at its option, repairing or replacing any covered part that is defective or is the result of improper workmanship, provided that the part is returned to Buhler Industries Inc. within thirty (30) days of the date that such defect or improper workmanship is, or should have been, discovered. Such parts must be shipped to Buhler Industries Inc. at the purchaser's expense.

**What is Not Covered**

Under no circumstances does this limited warranty cover any components or parts that have been subject to the following: negligence; alteration or modification not approved by Buhler Industries Inc.; misuse; improper storage; lack of reasonable and proper maintenance, service, or repair; normal wear; damage from failure to follow operating instructions; accident; and/or repairs that have been made with parts other than those manufactured, supplied, and or authorized by Buhler Industries Inc.

**Authorized Dealer and Labor Costs**
Repairs eligible for labor under this limited warranty must be made by Buhler Industries Inc. or an authorized Farm King dealer. Buhler Industries Inc. retains the exclusive discretion to determine whether it will pay labor costs for warranty repairs or replacements, and the amount of such costs that it will pay and the time in which the repairs will be made. If Buhler Industries Inc. determines that it will pay labor costs for warranty work, it will do so by issuing a credit to the dealer's or distributor's account. Buhler Industries Inc. will not approve or pay invoices sent for repairs that Buhler Industries Inc. has not previously approved. Warranty service does not extend the original term of this limited warranty.

**Warranty Requirements**
To be covered by warranty, each Farm King new product must be registered with Buhler Industries Inc. within thirty (30) days of delivery to original retail purchaser. If the customer decides to purchase replacement components before the warranty disposition of such components is determined, Buhler Industries Inc. will bill the customer for such components and then credit the replacement invoice for those components later determined to be covered by this limited warranty. Any such replacement components that are determined not be covered by this limited warranty will be subject to the terms of the invoice and shall be paid for by the purchaser.

**Warranty Claims:**
Warranty requests must be prepared on Buhler Industries Inc. 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 Industries Inc. 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.

**Exclusive Effect of Warranty and Limitation of Liability**

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY WARRANTIES, REPRESENTATIONS, OR PROMISES, EXPRESS OR IMPLIED, AS TO THE QUALITY, PERFORMANCE, OR FREEDOM FROM DEFECT OF THE COMPONENTS AND PARTS COVERED BY THIS WARRANTY AND NOT SPECIFICALLY PROVIDED FOR HEREIN.

TO THE EXTENT PERMITTED BY LAW, BUHLER INDUSTRIES INC. DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ON ITS PRODUCTS COVERED HEREIN, AND DISCLAIMS ANY RELIANCE BY THE PURCHASER ON BUHLER INDUSTRIES INC.'S SKILL OR JUDGMENT TO SELECT OR FURNISH GOODS FOR ANY PARTICULAR PURPOSE. THE PURCHASER'S ONLY AND EXCLUSIVE REMEDIES IN CONNECTION WITH THE BREACH OR PERFORMANCE OF ANY WARRANTY ON PRODUCTS MANUFACTURED BY BUHLER INDUSTRIES INC. ARE THOSE SET FORTH HEREIN. IN NO EVENT SHALL BUHLER INDUSTRIES INC. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING, BY WAY OF EXAMPLE ONLY AND NOT LIMITATION, LOSS OF CROPS, LOSS OF PROFITS OR REVENUE, OTHER COMMERCIAL LOSSES, INCONVENIENCE, OR COST OF REPLACEMENT OF RENTAL EQUIPMENT). IN NO EVENT SHALL FARM KING'S CONTRACT OR WARRANTY LIABILITY EXCEED THE PURCHASE PRICE OF THE PRODUCT.

(Note that some provinces or states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.) This warranty gives you specific legal rights and you may also have other rights, which vary from province to province or state to state.

Buhler Industries Inc. neither assumes nor authorizes any person or entity, including its selling representatives, to assume any other obligations or liability in connections with the sale of covered equipment, or to make any other warranties, representations, or promises, express or implied, as to the quality, performance, or freedom from defect of the components and parts covered herein. No one is authorized to alter, modify, or enlarge this limited warranty, or its exclusions, limitations and reservations.

Corrections of defects and improper workmanship in the manner, and for the applicable time periods, provided for herein shall constitute fulfillment of all responsibilities of Buhler Industries Inc. to the purchaser, and Buhler Industries Inc. shall not be liable in negligence, contract, or on any other basis with respect to the subject equipment.

This limited warranty is subject to any existing conditions of supply which may directly affect Buhler Industries Inc.'s ability to obtain materials or manufacture replacement parts.

Buhler Industries Inc. reserves the right to make improvements in design or changes in specifications to its products at anytime, without incurring any obligation to owners of units previously sold.

**Government Legislation:**
Warranty terms and conditions are subject to provincial or state legislation.

**Important Note:** This warranty does not apply to rentals.

www.farm-king.com

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