Farm King

OPERATOR AND PARTS MANUAL

Backsaver Auger

13" Model

052012 FK325

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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

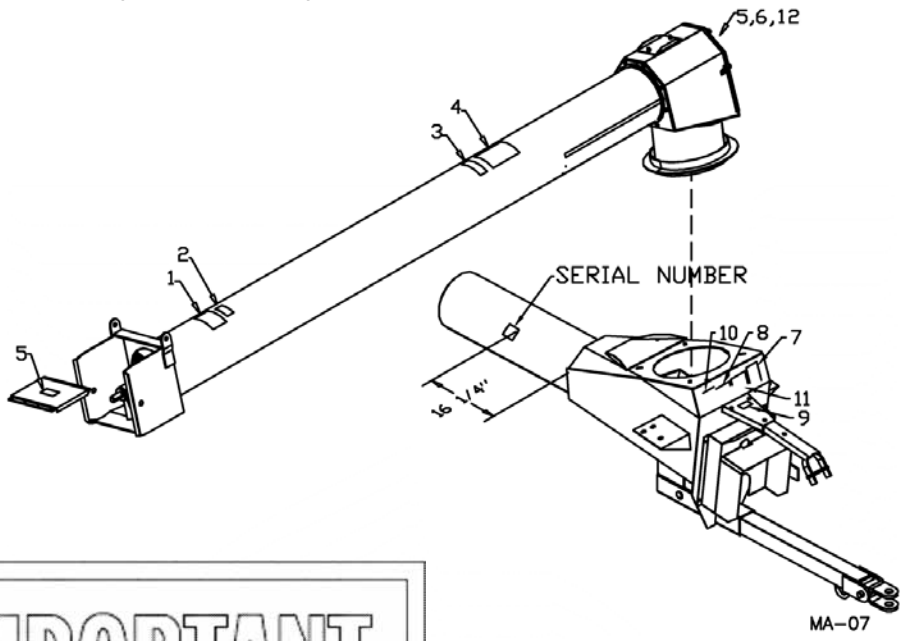
- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Support the frame on stands and blocks to provide a secure base.
- When storing an Auger, park it on level ground so that the bottom end will never be over its center of gravity.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



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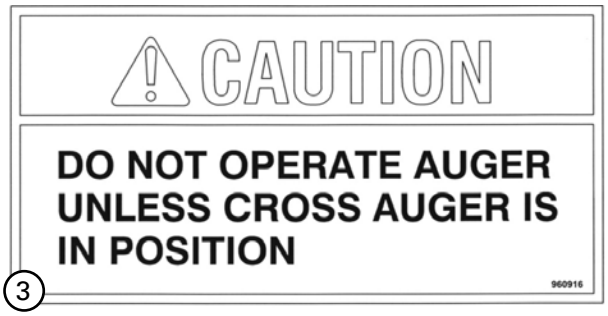
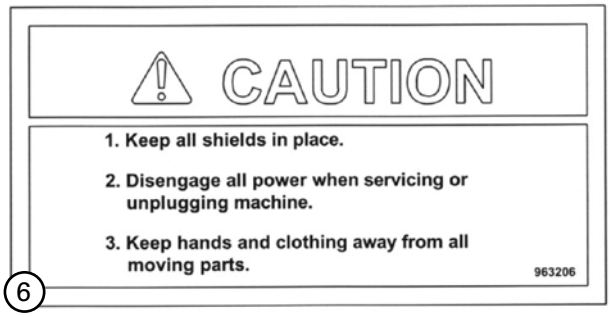

CAUTION
DO NOT OPERATE AUGER UNLESS CROSS AUGER IS IN POSITION
960916

3

IMPORTANT
ALIGN YOKE CENTER WITH PIVOT HOLES
960372

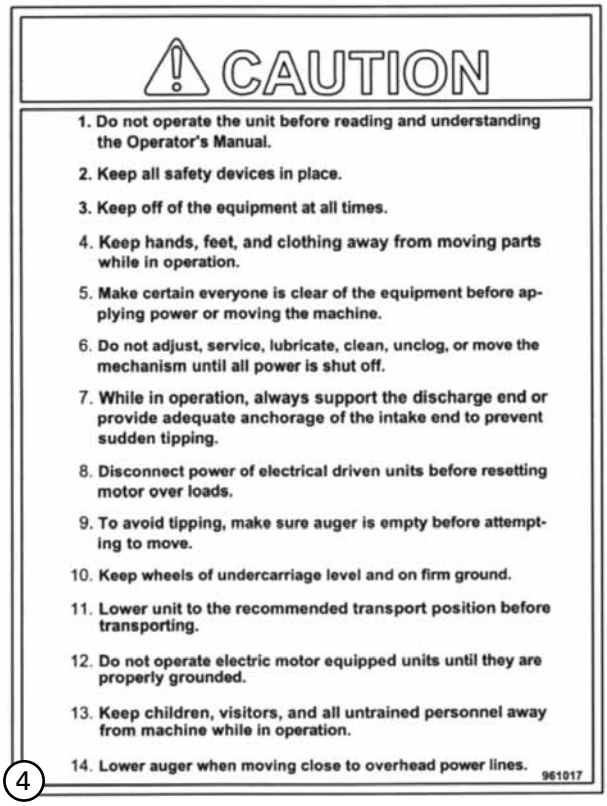
5


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

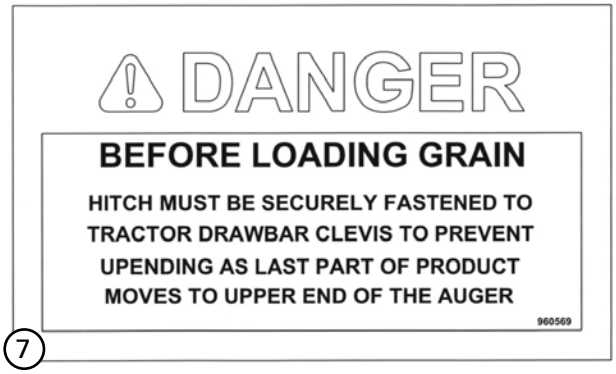
6

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

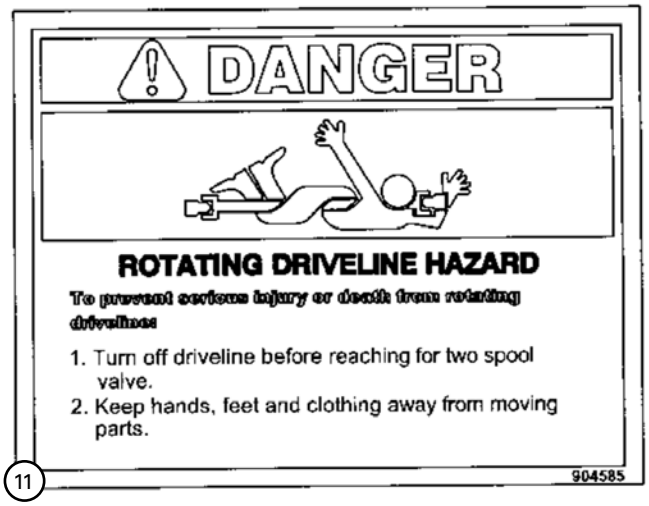

DANGER
BEFORE LOADING GRAIN
HITCH MUST BE SECURELY FASTENED TO TRACTOR DRAWBAR CLEVIS TO PREVENT UPENDING AS LAST PART OF PRODUCT MOVES TO UPPER END OF THE AUGER
960569

7

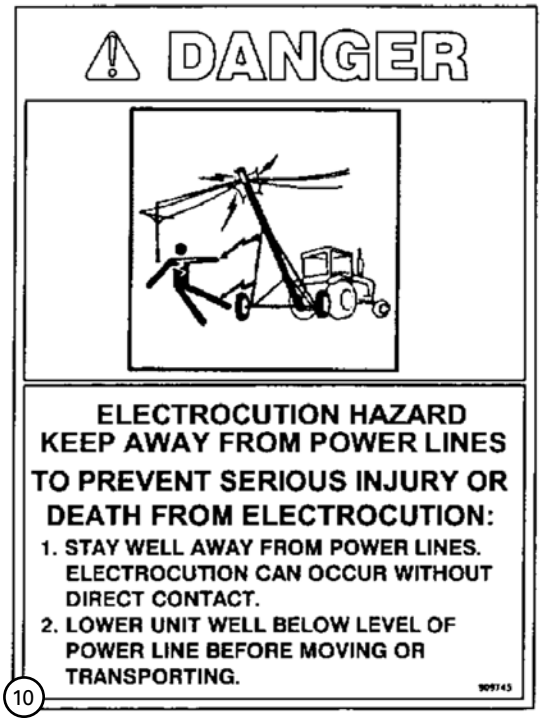
9

WARNING
CHECK PTO SHAFT LENGTH
BEFORE RAISING OR LOWERING
IMPLEMENT. SHAFT MUST NOT
BOTTOM OR SEPERATE (SEE MANUAL)
108431

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

10

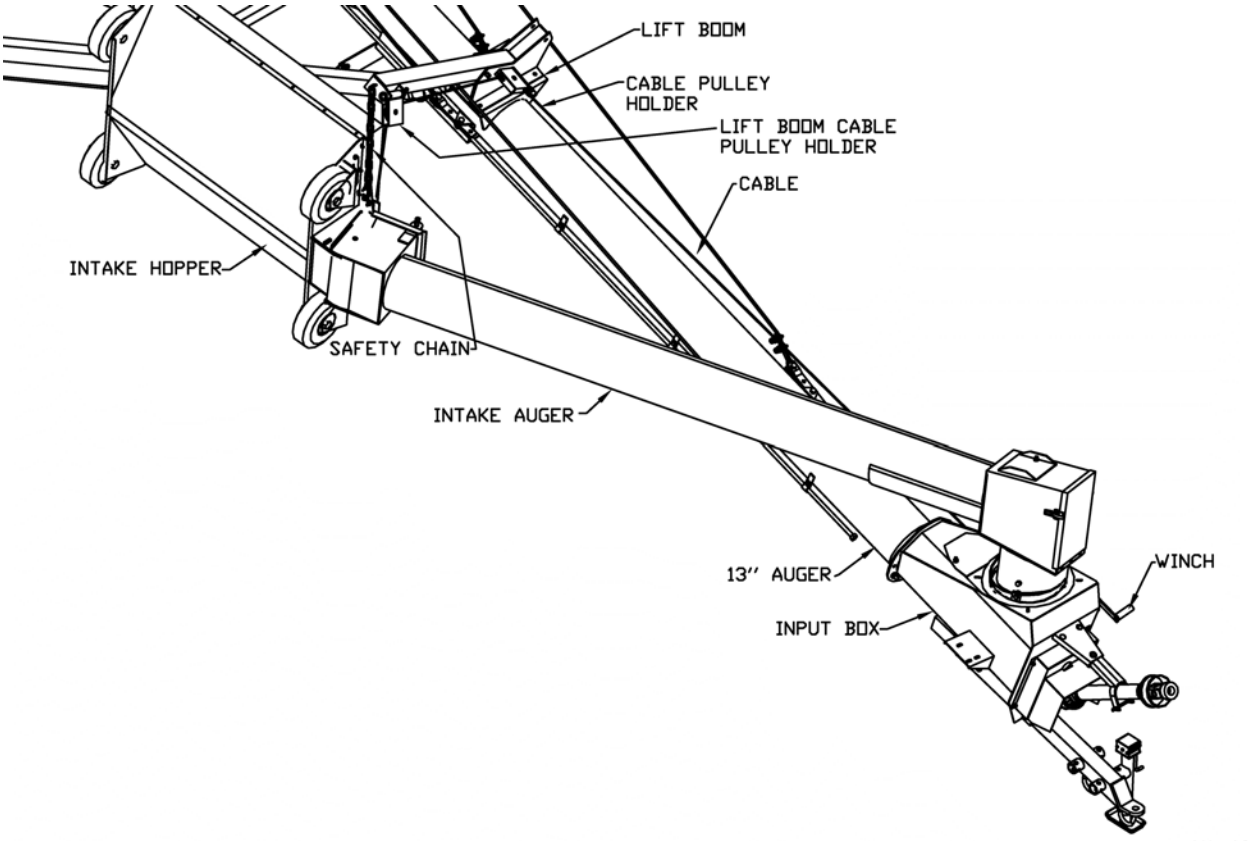

DANGER
ELECTROCUTION HAZARD
KEEP AWAY FROM POWER LINES
TO PREVENT SERIOUS INJURY OR
DEATH FROM ELECTROCUTION:
1. STAY WELL AWAY FROM POWER LINES.
ELECTROCUTION CAN OCCUR WITHOUT
DIRECT CONTACT.
2. LOWER UNIT WELL BELOW LEVEL OF
POWER LINE BEFORE MOVING OR
TRANSPORTING.

12

CHECK
OIL LEVEL
BEFORE
USING
967388

Assembly Instructions

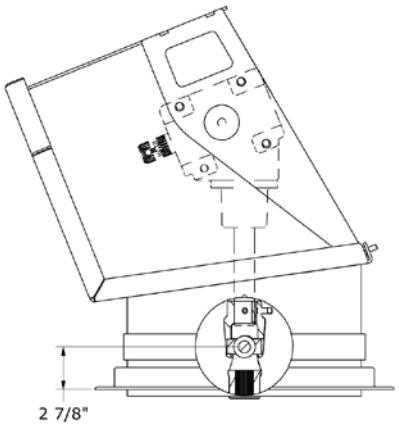
	ALERT	There are two holes on the top stub shaft for cotter pin installation on the top flighting, which should allow a wide range of adjustment. If the top flighting is too high, there could be a shortage of room to mount the collar on the bottom bearing in the input box.
	ALERT	The 13" x 85' auger has 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.

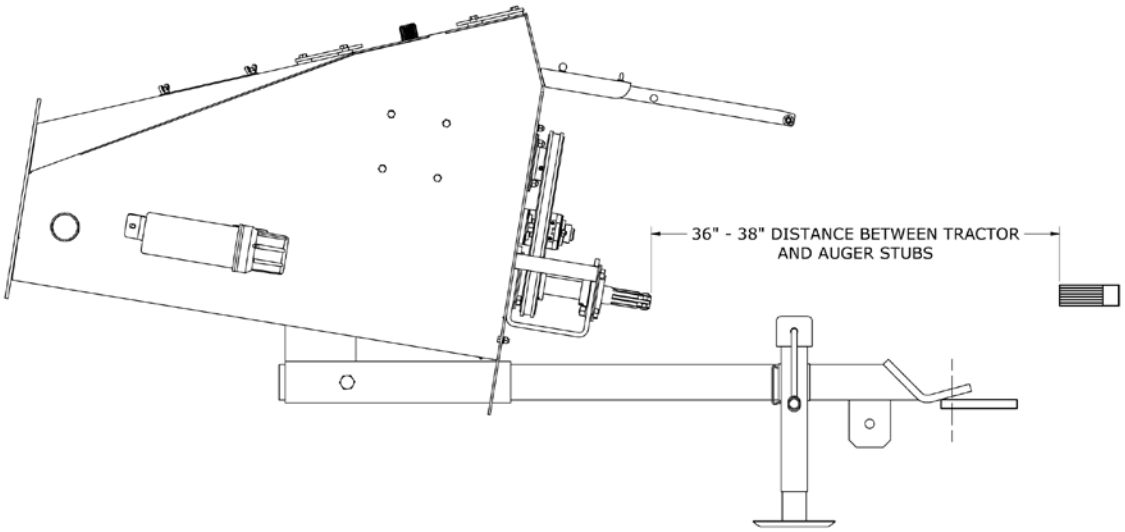
- Be sure the wheels are free to move and no one is standing close to the auger when raising or lowering. Never attempt to raise or lower the auger while it is in operation.

	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

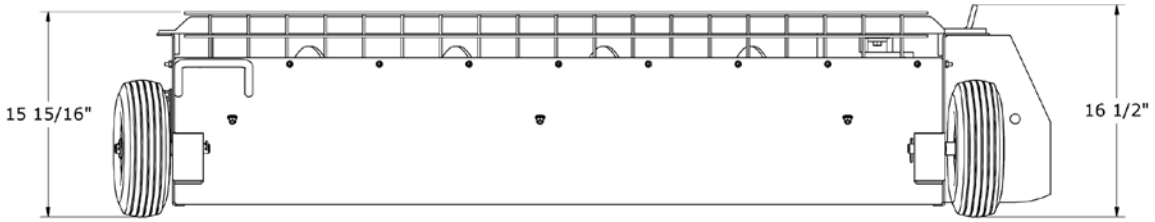
If the PTO shaft angle exceeds 50° during a tight turn, the constant velocity joints will be fractured and will likely failshortly thereafter during operation.

ALERT

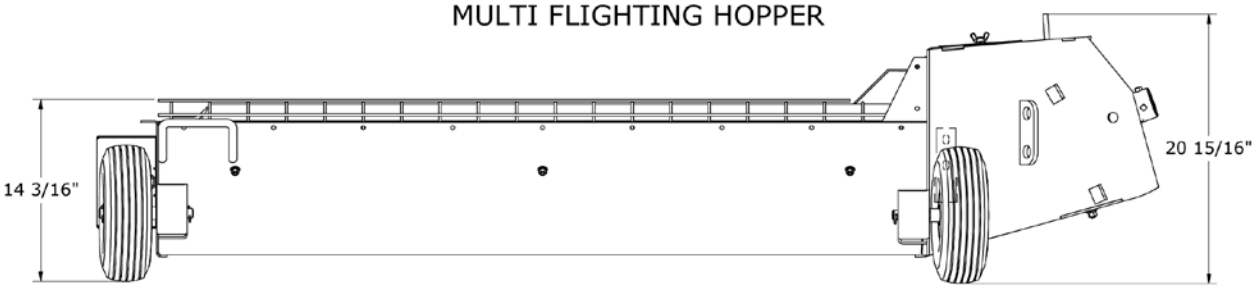
When towing the auger, never exceed 32 km/h (20 mph).

- 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

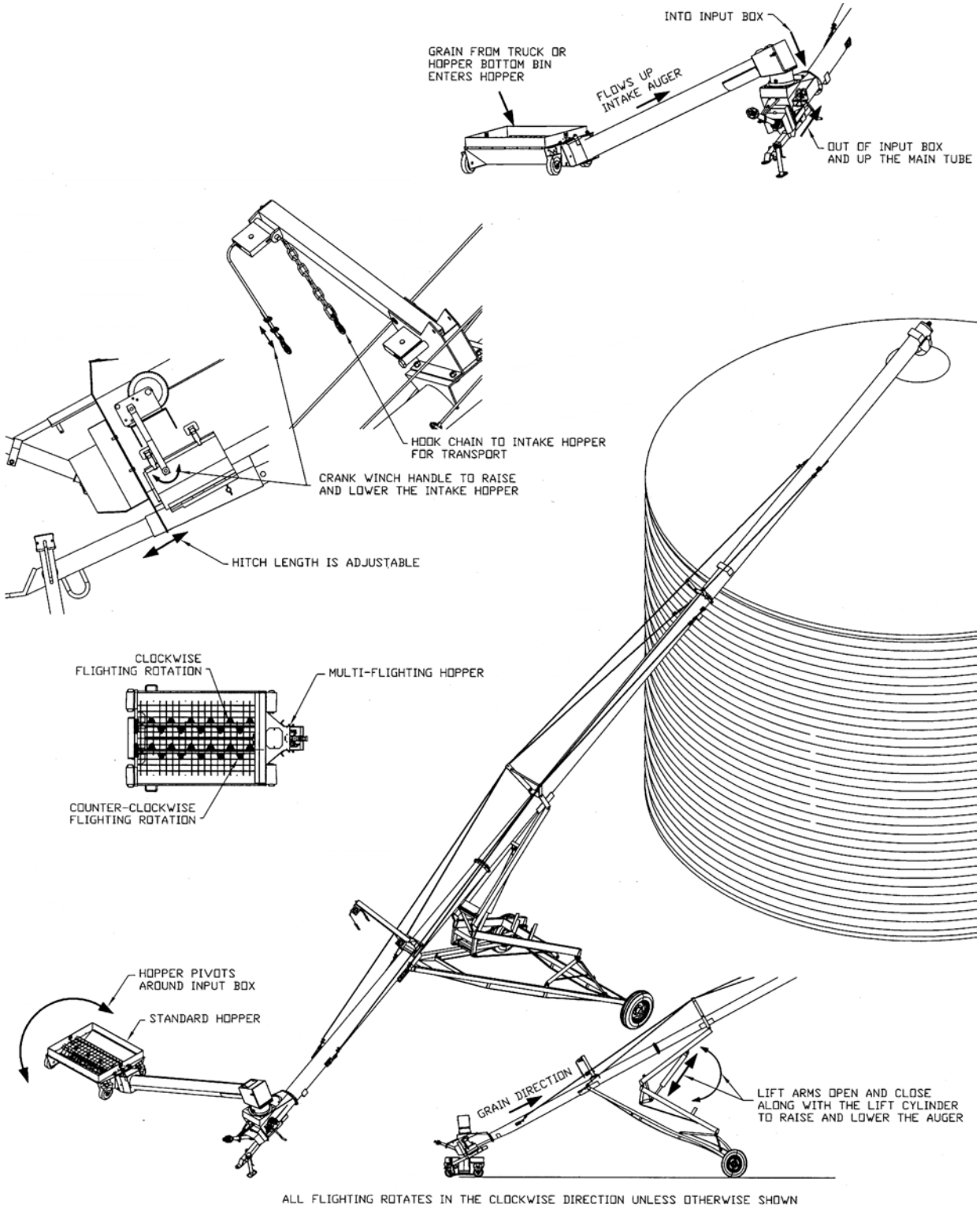


MA-18

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.

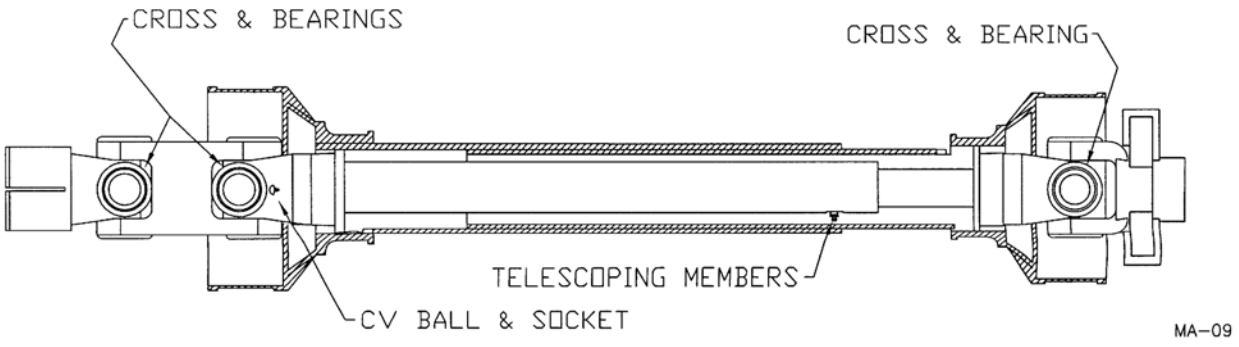
Greasing Procedure - 50° for CV PTO

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:

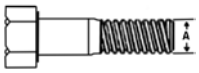
- Mobile Oil Company “Mobile Grease CMP”
- Shell Oil Company “Retinax AM”
- Texaco “Molytex EP #0 and #2”



Bolt Torque

Checking Bolt Torque

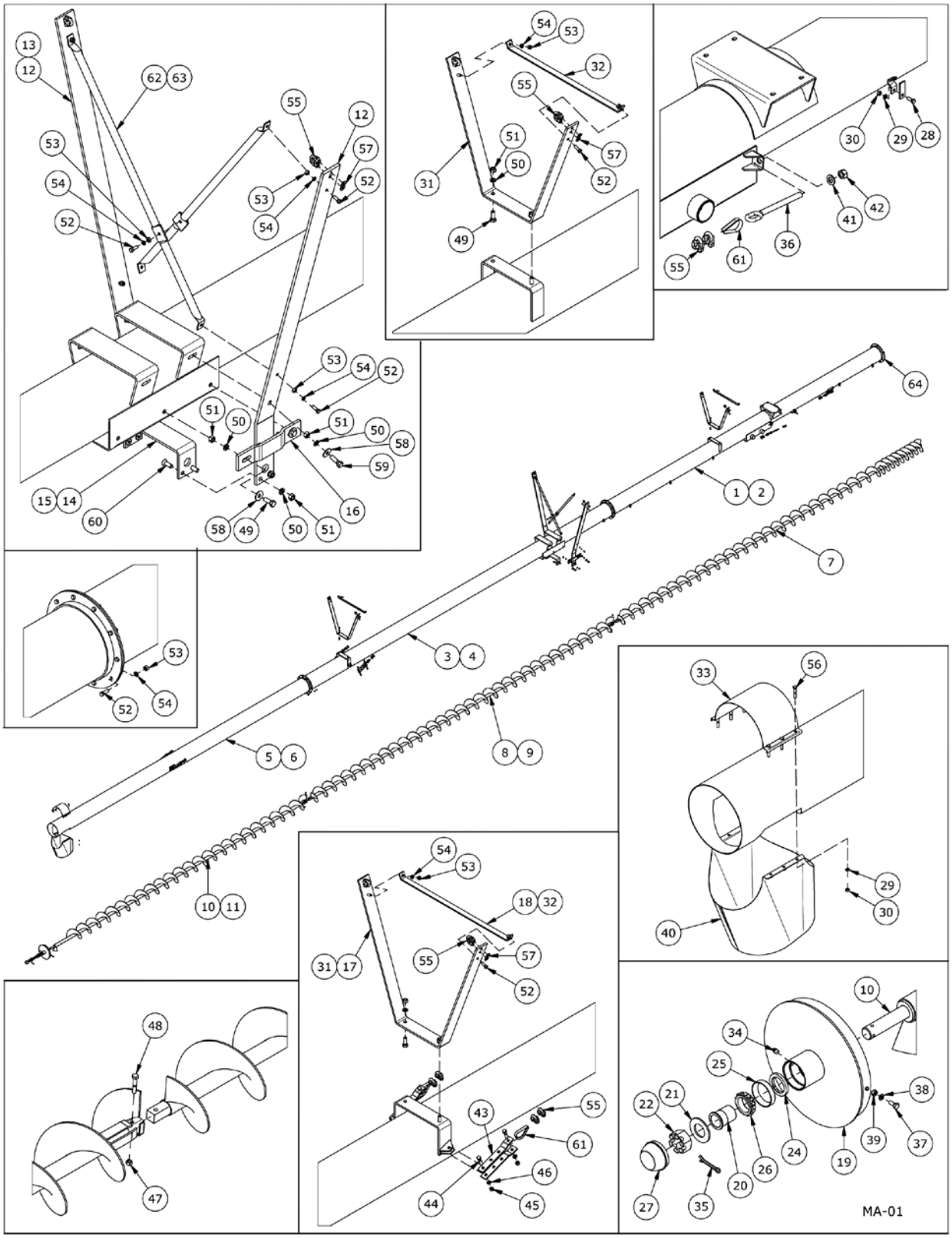
The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

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



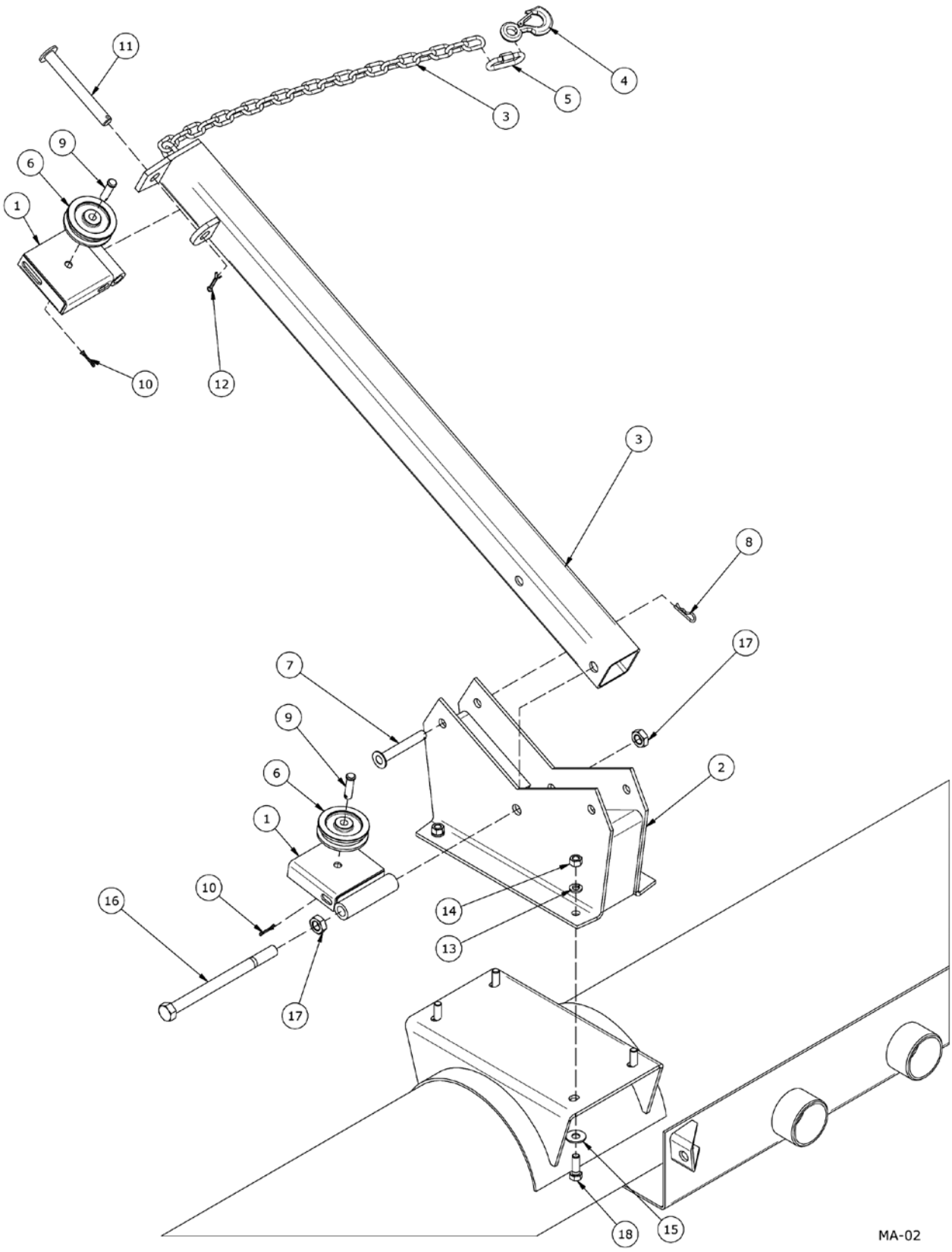
When Ordering Parts

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	25' 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

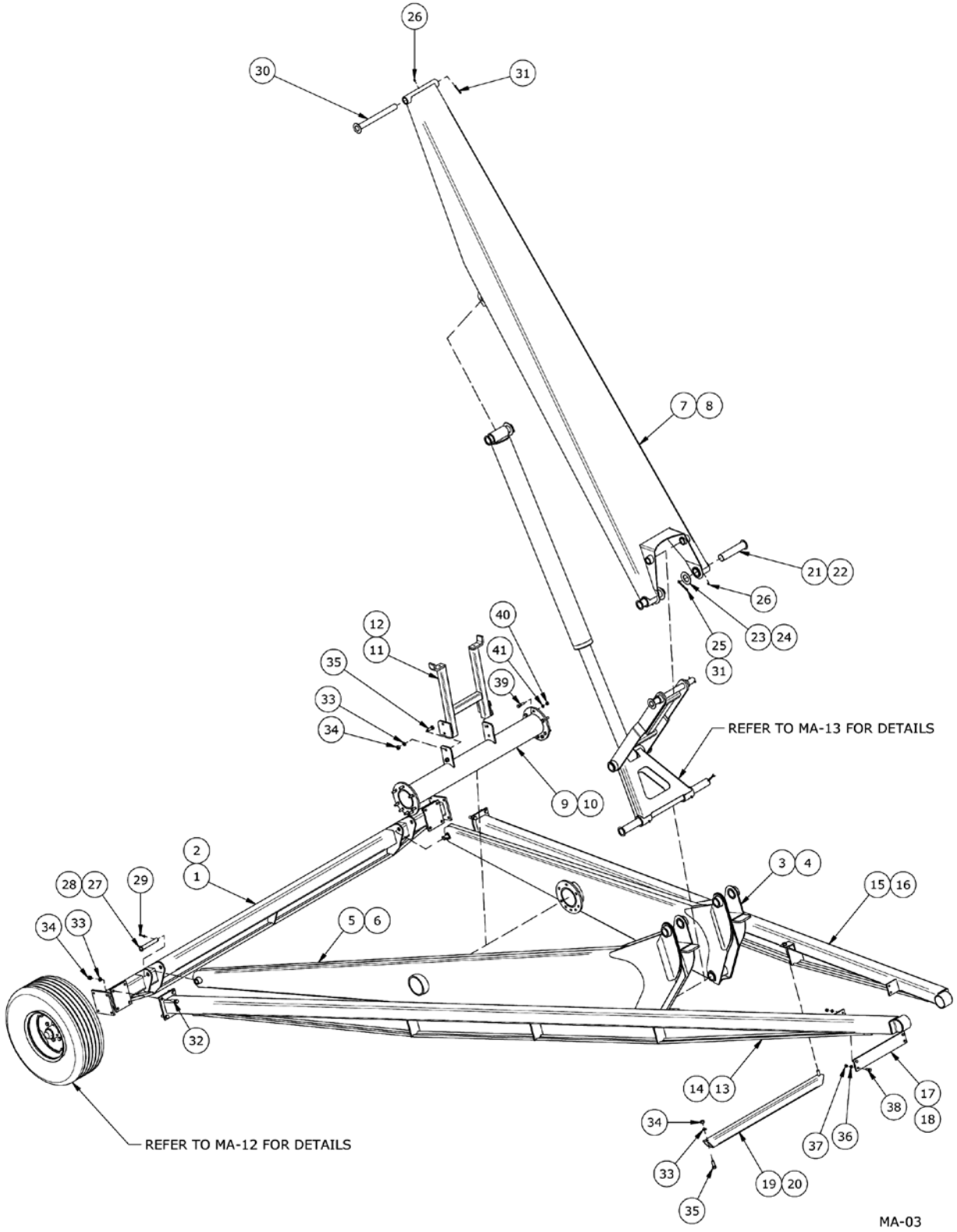
Item	Part Number	Description
37	81549	5/16" x 3/4" Hex Bolt
38	81569	5/16" Lock Washer
39	81568	5/16" Hex Nut
40	F9716	13" Discharge Spout
41	84050	3/4" SAE Flat Washer
42	81700	3/4" Hex Nut
43	960244	Cable Yoke
44	811791	1/2" x 2" Hex Bolt
45	81636	1/2" Hex Nut
46	81637	1/2" Lock Washer
47	812364	1/2" 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



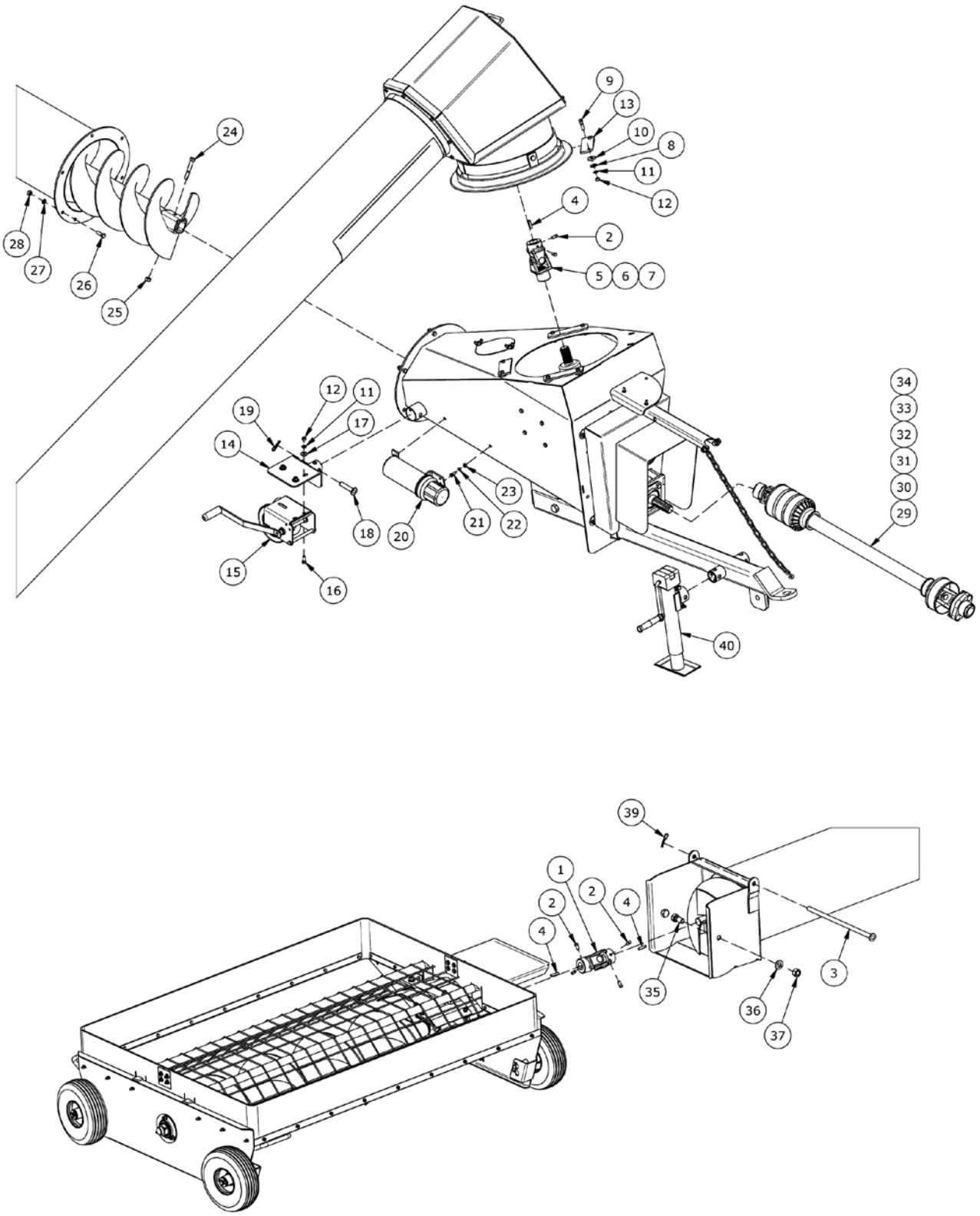
Item	Part Number	Description
1	905602	Pulley Holder
2	905601	Lift Boom
3	905604	Lift Boom Arm
4	960041	Hook w/ Latch
5	960167	5/16" Quick Link
6	961846	Cable Pulley, 1/2 Bore
7	905568	Pin 5/8" x 4-1/4"
8	961012	#16 Hair Pin Clip
9	960913	1/2" x 1-13/16" Clevis Pin
10	9812430	1/8" x 1" Cotter Pin
11	905570	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



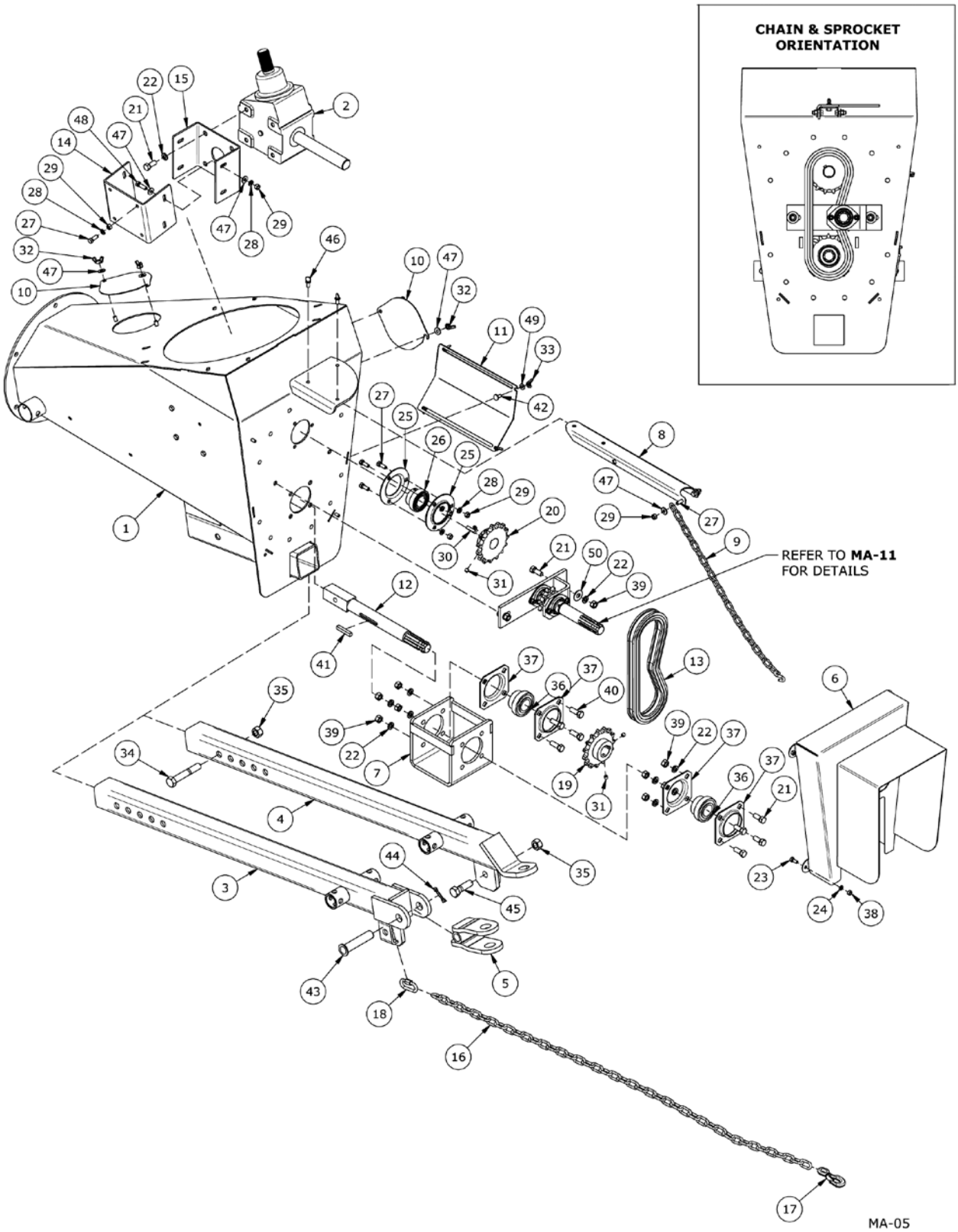
Item	Part Number	Description
1	F0192	Axle Tube, 85'
2	F0191	Axle Tube, 70'
3	F0564	Left Hand Lower Lift Arm, 85'
4	F0656	Left Hand Lower Lift Arm, 70'
5	F0565	Right Hand Lower Lift Arm, 85'
6	F0655	Right Hand Lower Lift Arm, 70'
7	F0464	Upper Lift Arm, 85'
8	F9707	Upper Lift Arm, 70'
9	907742	Lift Arm 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

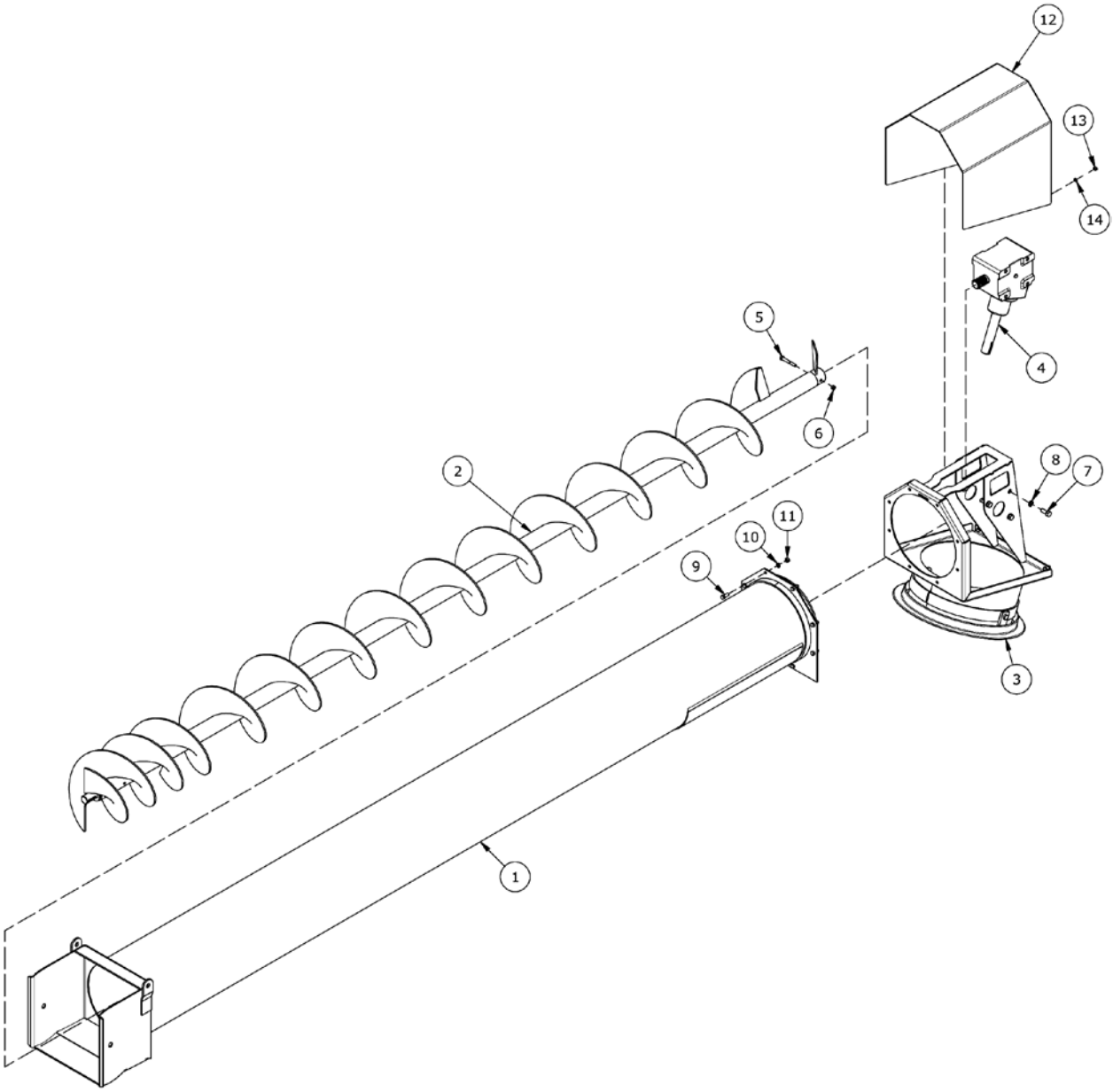
Input Box Assembly Drawing



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

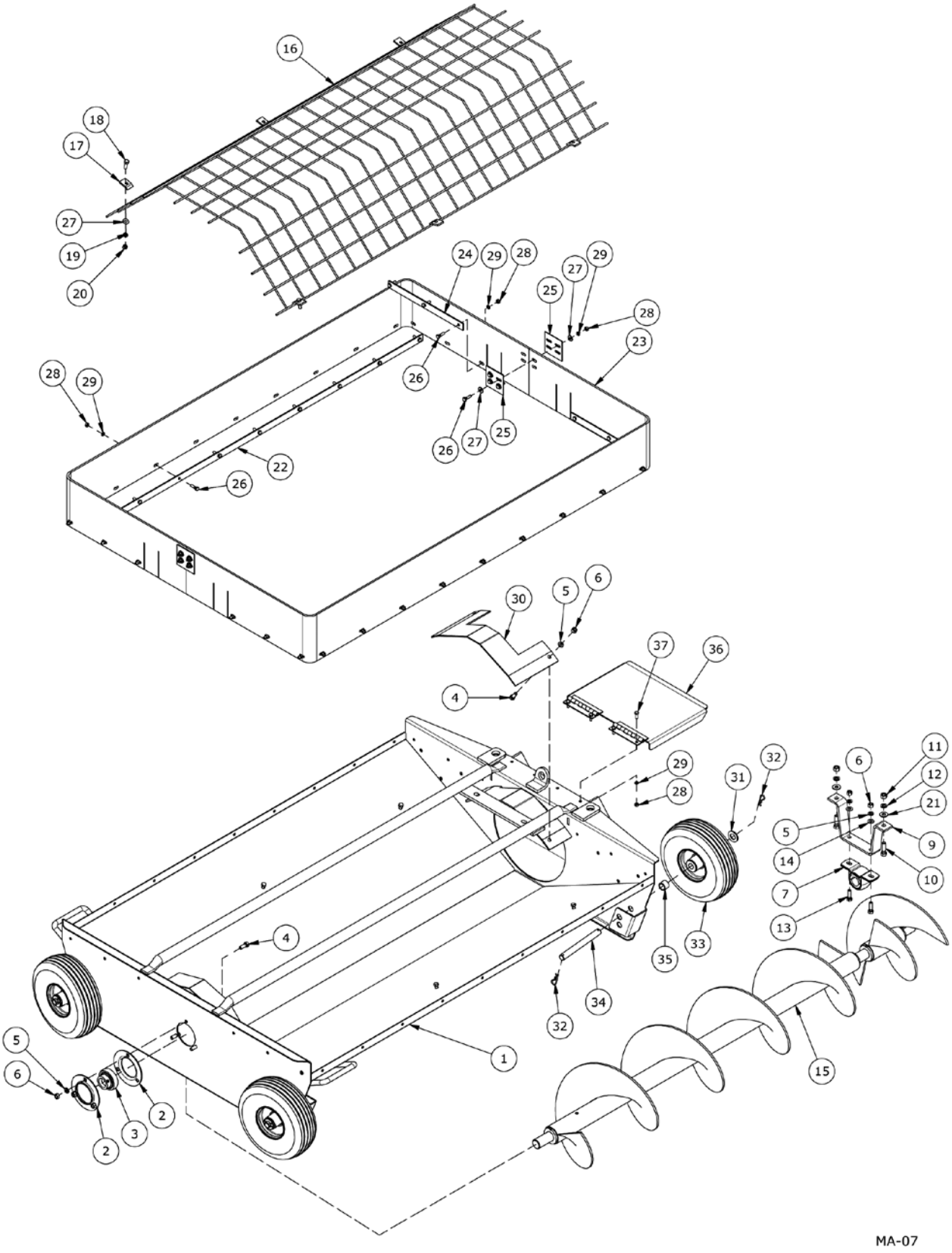
Item	Part Number	Description
42	81185	5/16" x 3/4" Carriage Bolt
43	960928	Clevis Pin 1" x 4-3/4"
44	9812434	1/4" x 1-1/2" Cotter Pin
45	84346	3/4" x 2-1/2" Hex Bolt
46	911943	3/8" x 3/4" Thumb Screw
47	81570	3/8" Std Flat Washer
48	86171	3/8" x 1-1/4" Hex Bolt
49	81546	5/16" Flat Washer
50	81638	1/2"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

Intake Auger Assembly Drawing



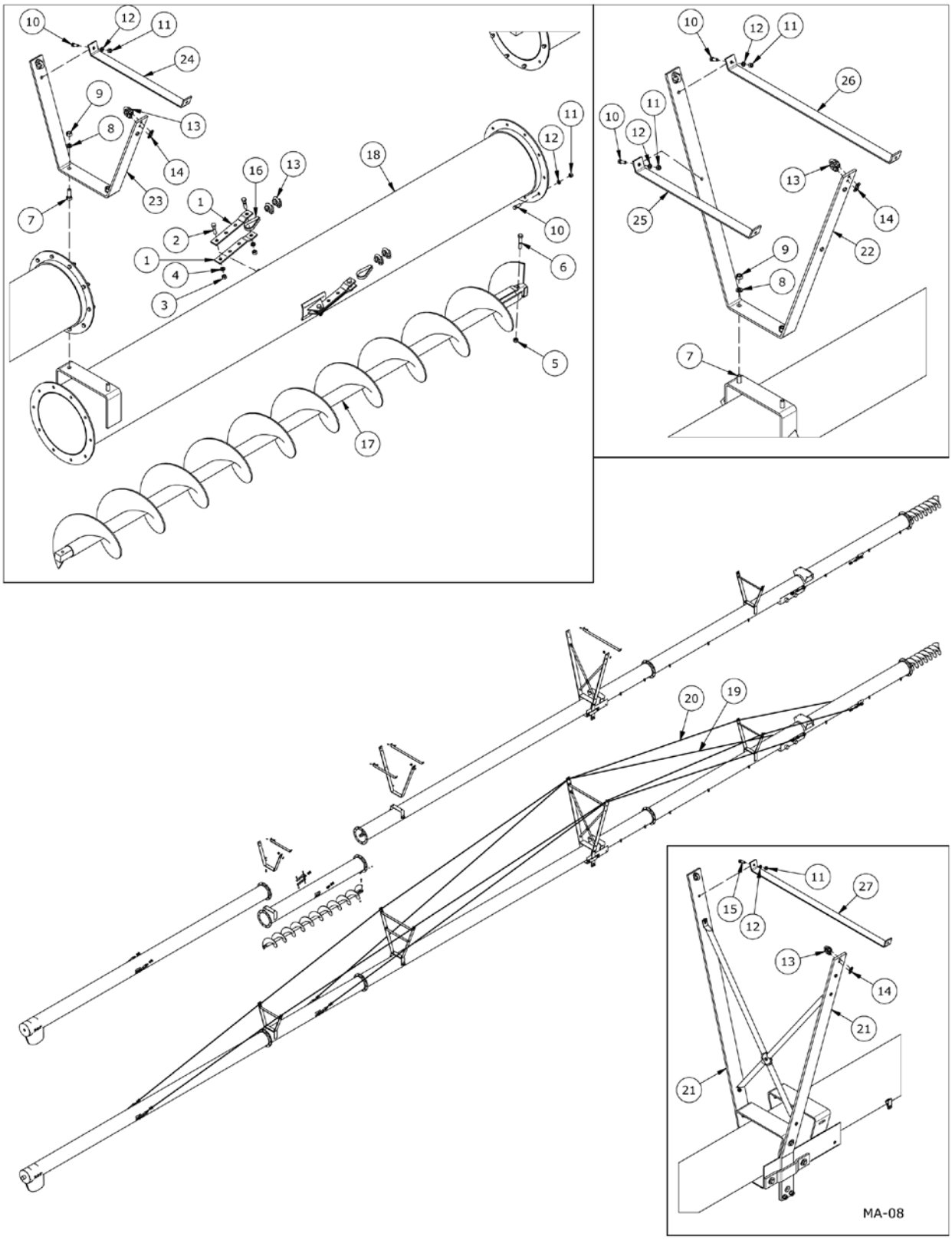
Item	Part Number	Description
1	911026	Intake Auger Tube (13" BS)
2	903217	Intake Auger Flighting
3	911019	Intake Topbox
4	960950	4168 Gearbox
5	967906	3/8" x 2-3/4" Hex Bolt
6	812363	3/8" Lock Nut
7	81620	1/2" x 1-1/4" Hex Bolt
8	81637	1/2" Lock Washer
9	86170	3/8" x 1" Hex Bolt
10	81593	3/8" Lock Washer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



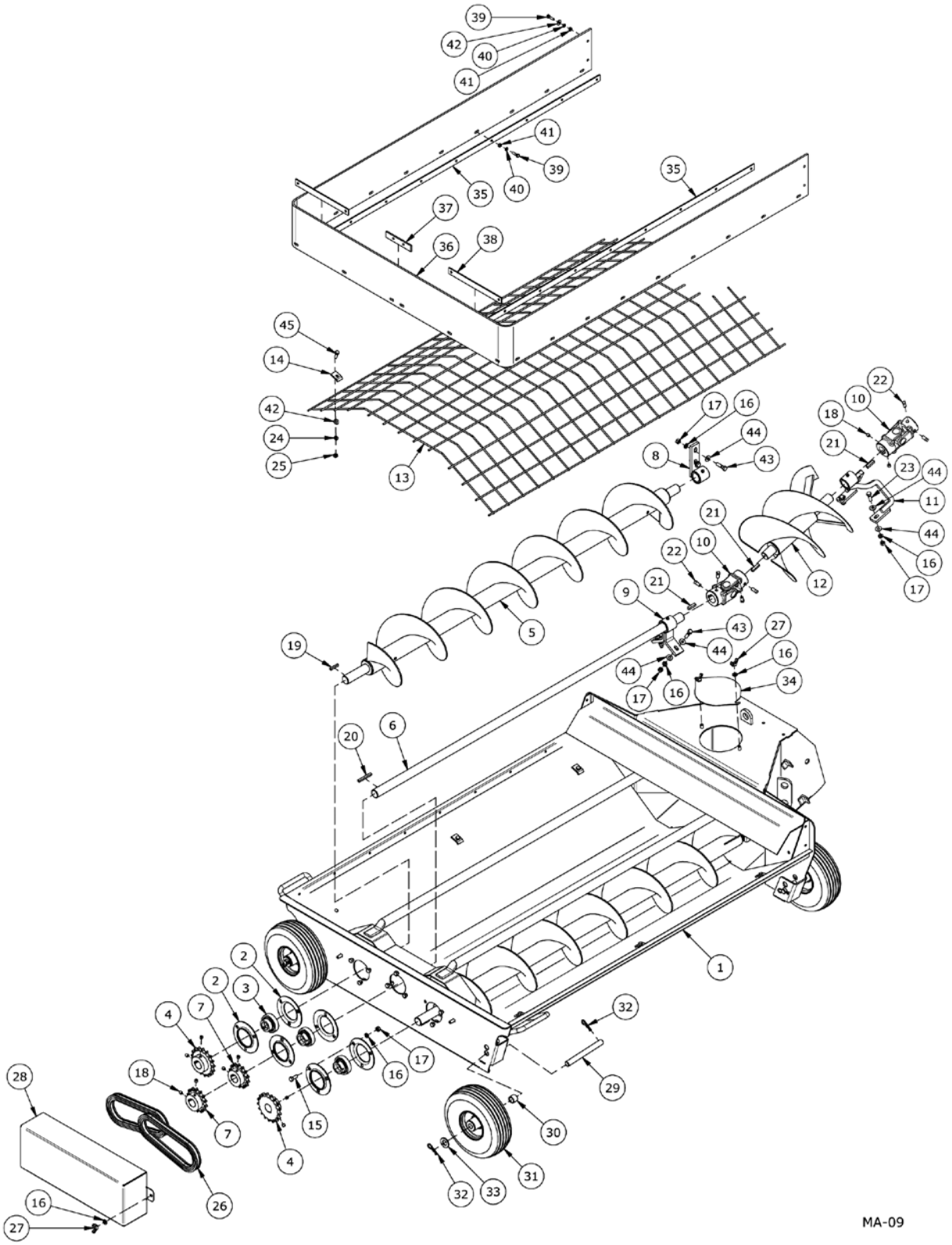
Item	Part Number	Description
1	911043	Single Flighting Hopper
2	961675	Bearing Flange 72MS
3	961676	1-1/4" Bearing AEL206-104 (RHP #1230)
4	86170	3/8" x 1" Hex Bolt
5	81593	3/8" Lock Washer
6	81592	3/8" Hex Nut
7	960658	1-1/4" Wooden Bearing & Flange Set
8	960659	1-1/4" Wooden Bearing Only
9	911123	Bearing 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

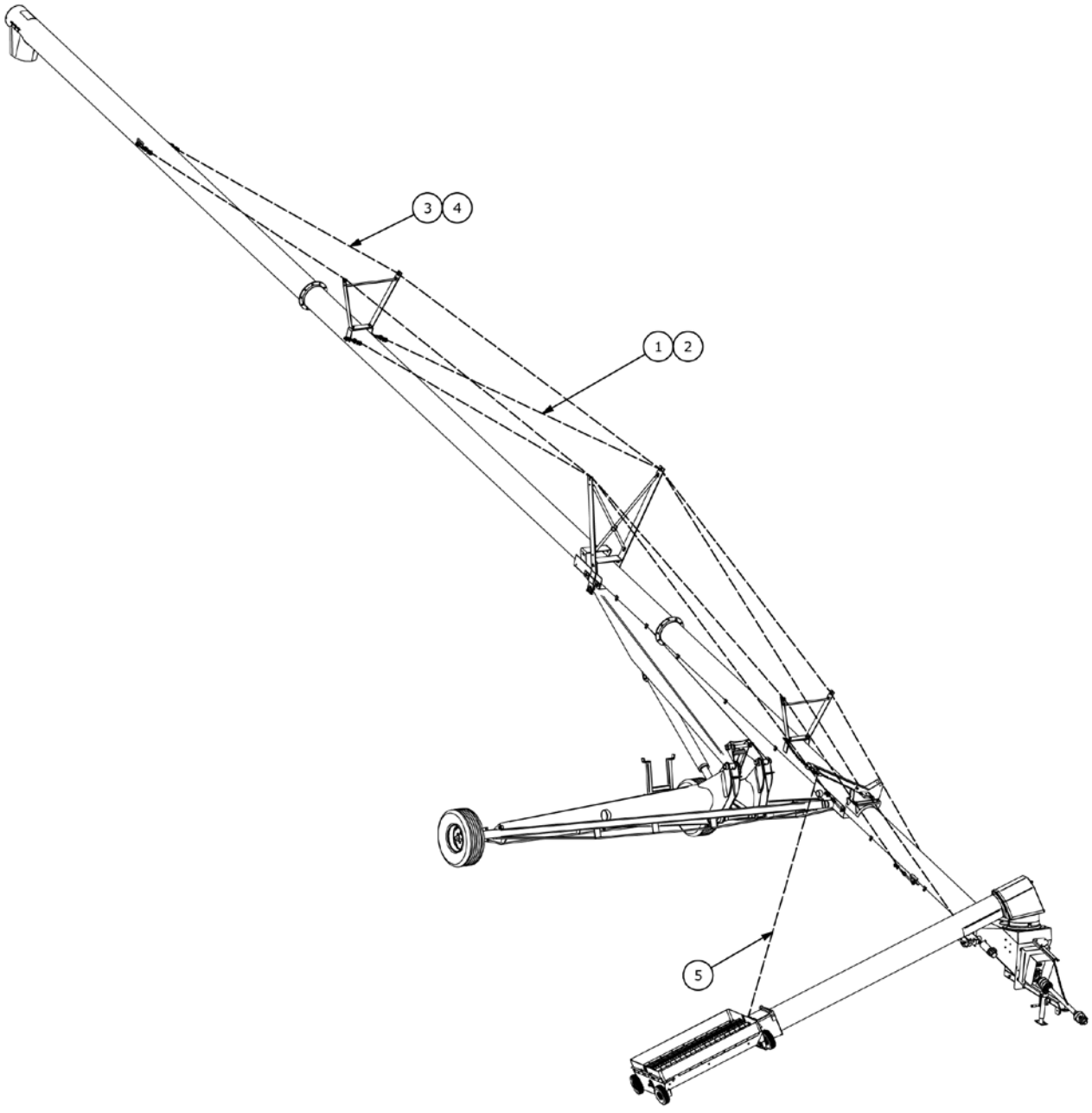
Double Flighting Hopper Drawing



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



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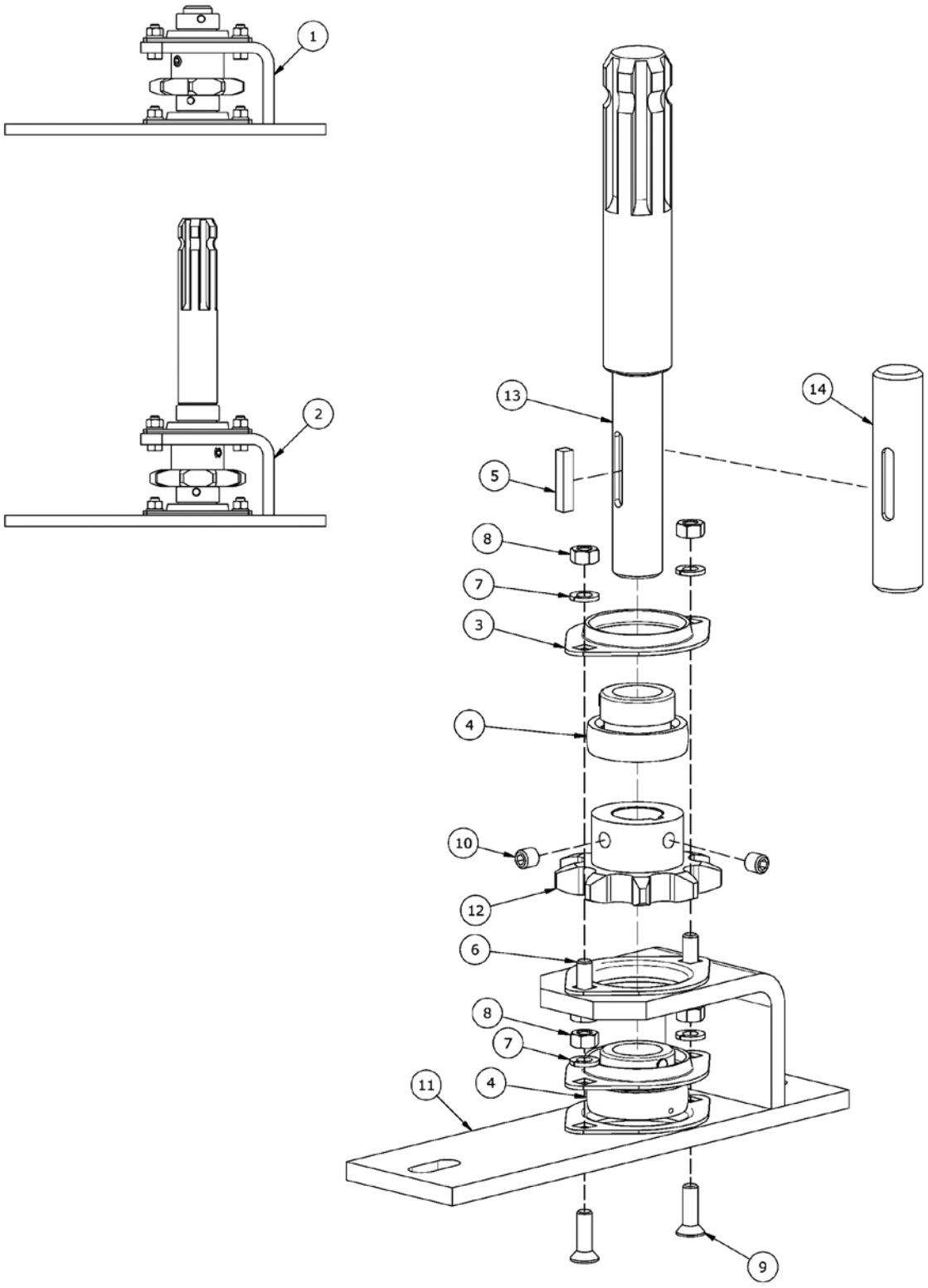
Item	Part Number	Description
1	907444	Lower Cable Bundle, 85'
2	907443	Lower Cable Bundle, 70'
3	907445	Upper Cable Bundle, 85'
4	907442	Upper Cable Bundle, 70'
5	910506	Intake Lift Cable Assembly 1/4" x 32'- 3-3/4"

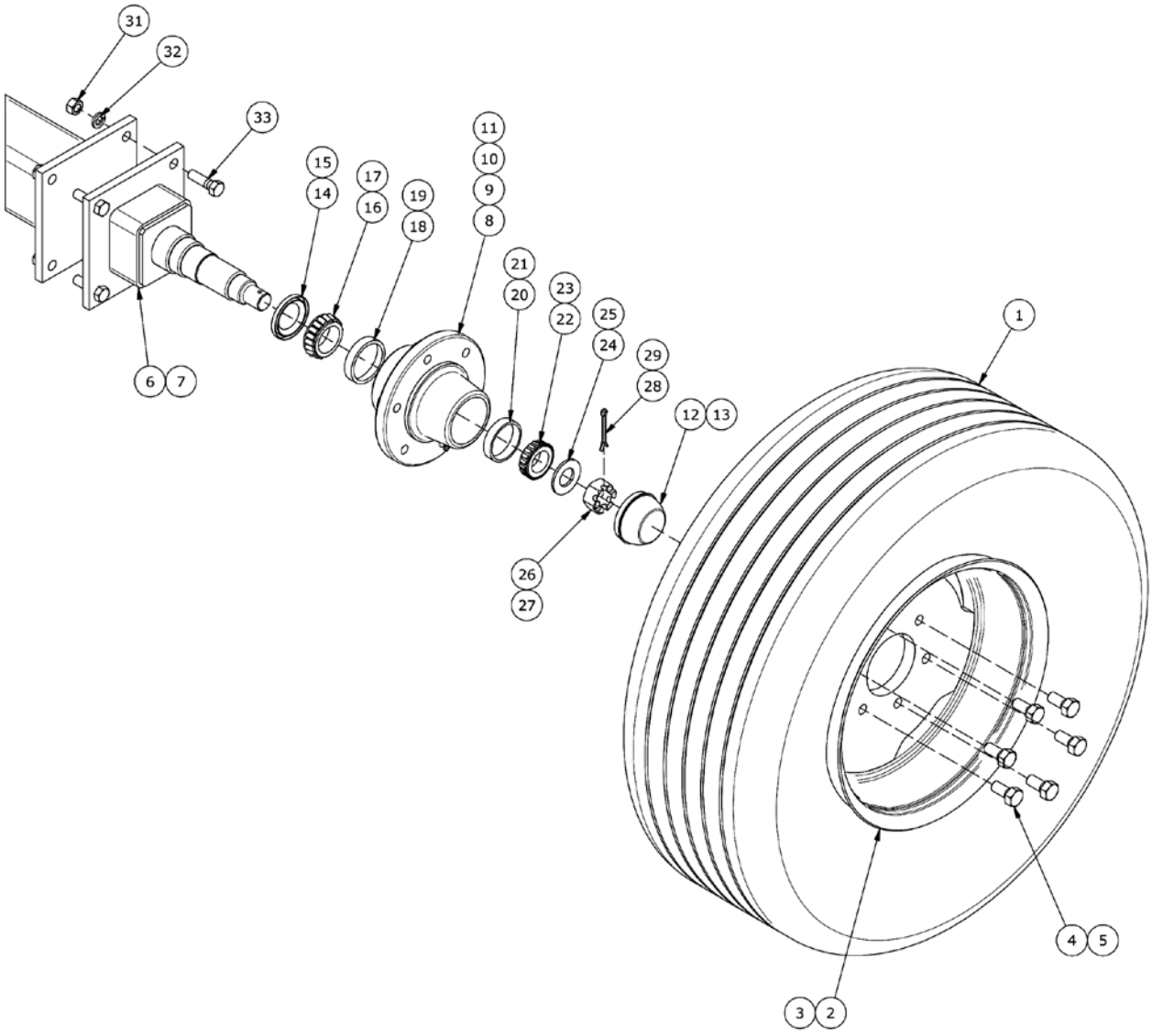
Idler Assembly



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

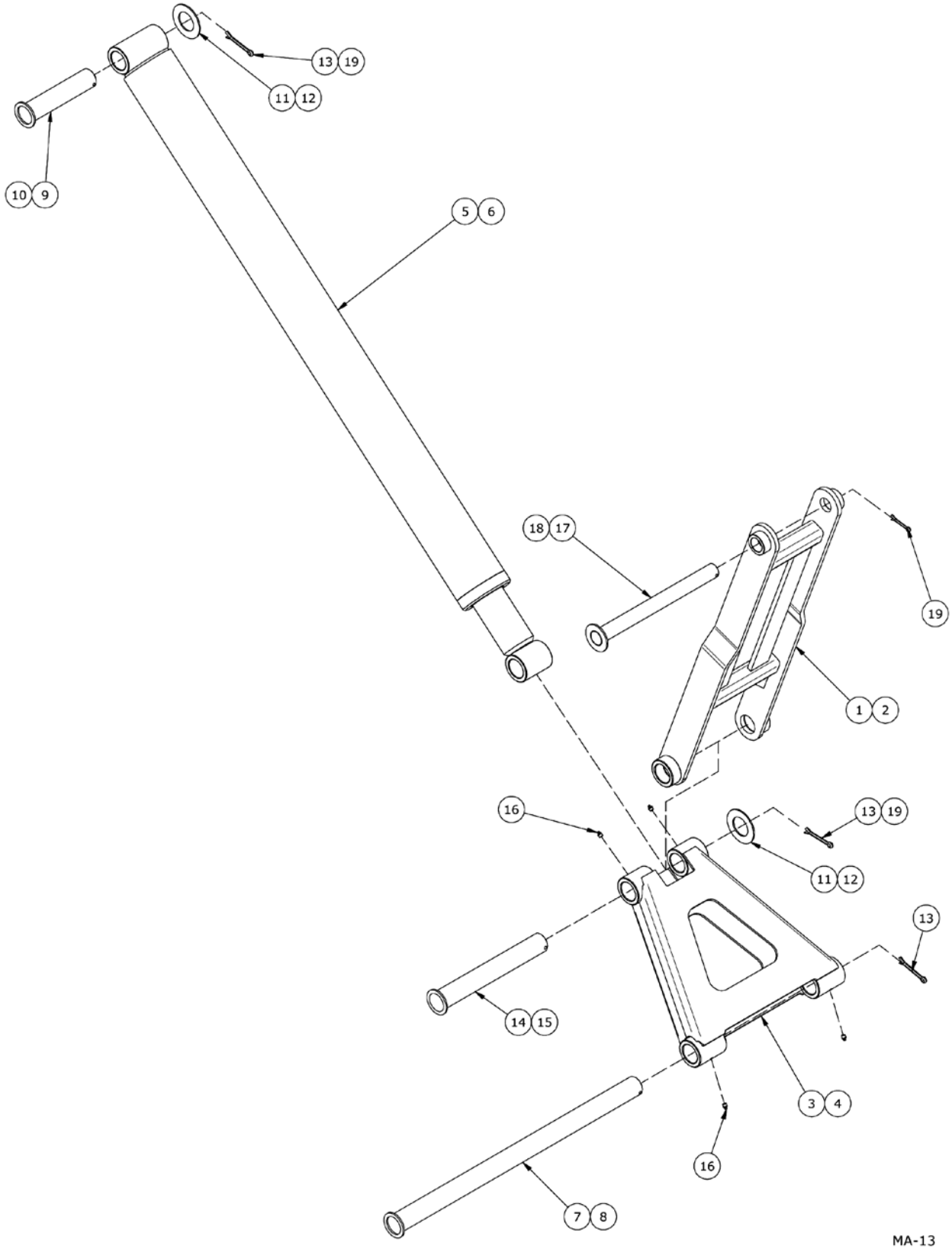
Tire Assembly Drawing



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

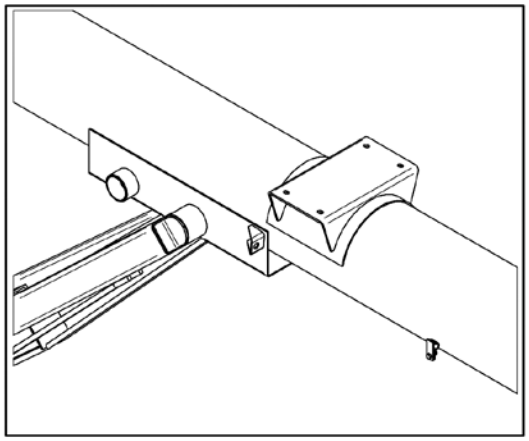
Cylinder Mount Components Drawing



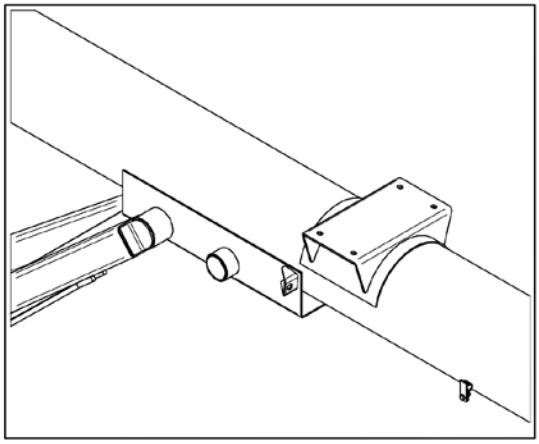
Item	Part Number	Description
1	907342	Pivot Yoke, 85'
2	960624	Pivot Yoke, 70'
3	960688	Connecting Link, 85'
4	960625	Connecting Link, 70'
5	F0445	Cylinder (5" x 52-3/8"), 85'
6	F9778	Cylinder (4-1/2" x 42-1/2"), 70'
7	F0035	Ø2" x 34-3/16" Connecting Link Pin, 85'
8	F0034	Ø2" x 27-15/16" Connecting Link 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'

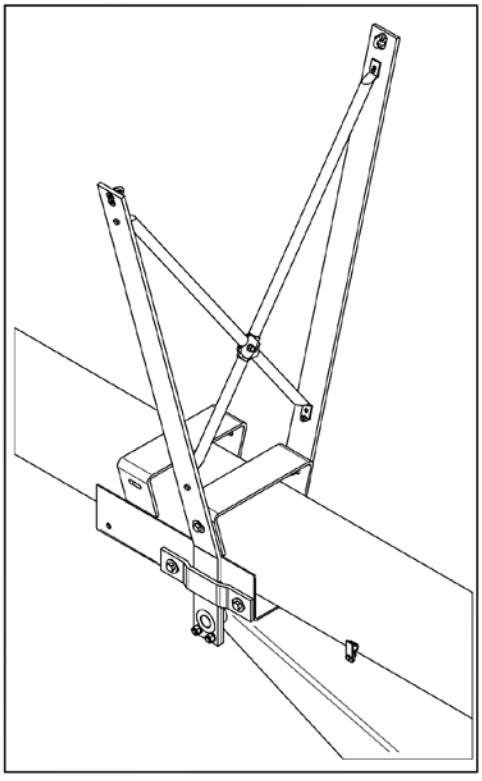


13" X 95'

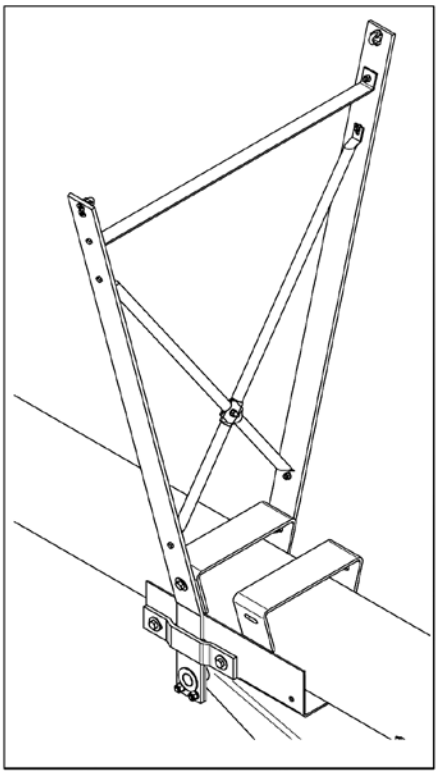


Main Bridging Yoke Drawing

13" X 85'

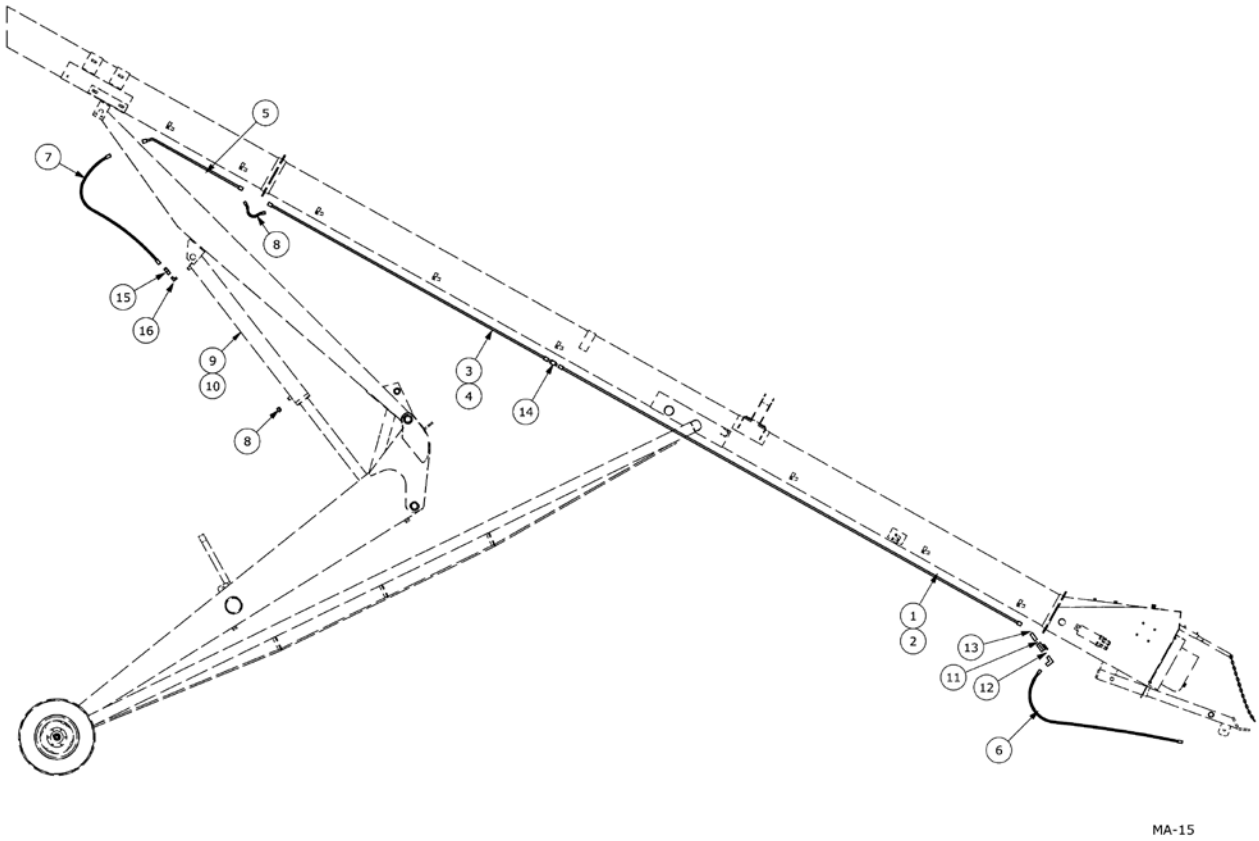


13" X 95'



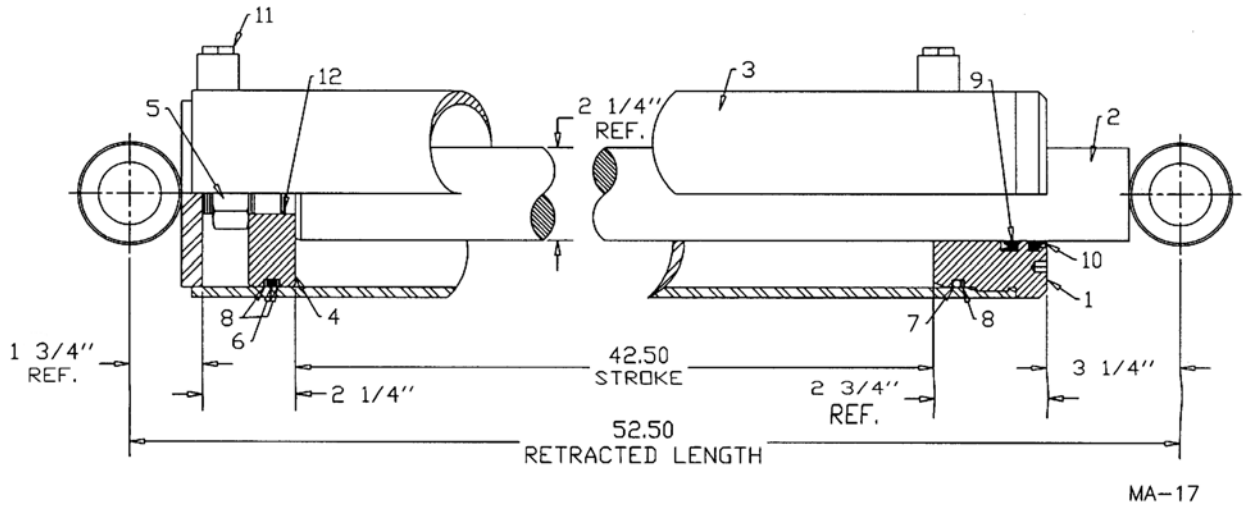
MA-14

Hydraulics Drawing



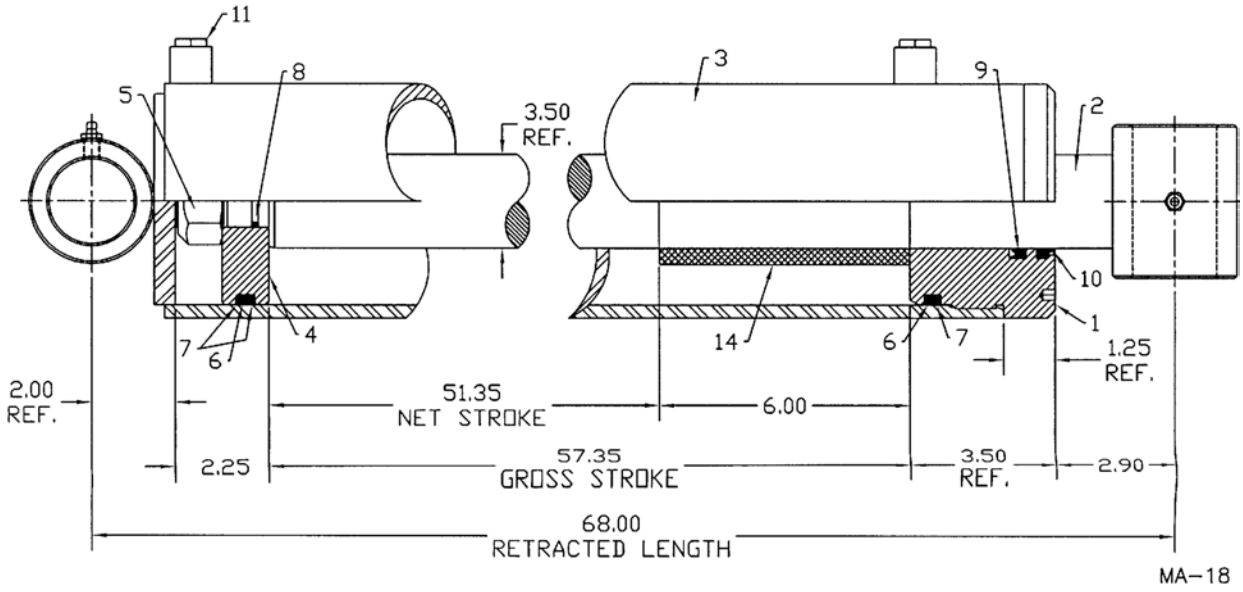
Item	Part Number	Description
1	960467	5/8" OD x 15'-10" Hydraulic Line - 85'
2	960468	5/8" OD x 13'-4" Hydraulic Line - 70'
3	960200	5/8" OD x 9'-7" Hydraulic Line - 85'
4	960144	5/8" OD x 11' Hydraulic Line - 70'
5	960143	5/8" OD x 36" Hydraulic Line - 85'
6	960466	1/2" x 112" Hydraulic Hose (1/2" MNPT 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



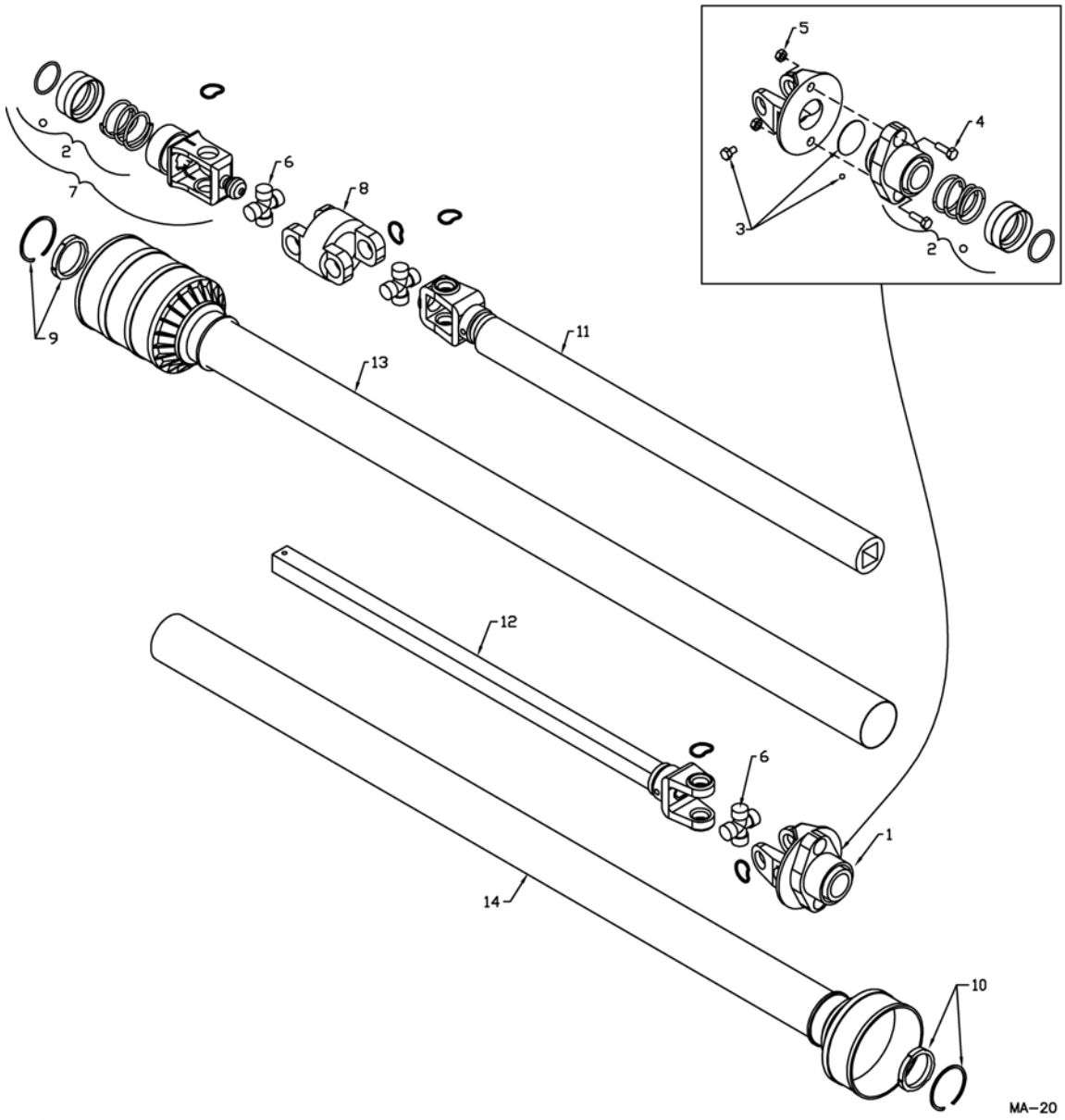
Item	Part Number	Description
	F9778	Cylinder Complete
1	24888	4.5 Dia. Headplate
2	112564	Shaft Weldment 2.25 OD x 50.75 Lg
3	24886	4.5 Dia. Tube Weldment
4	112561	4.5 Dia. Piston
5	813407	Locknut 1.0 UNF
6	85346	O-Ring 4.125 ID x 4.50 OD Poly
7	82346	O-Ring 4.125 ID x 4.50 OD Buna
8	83346	Backup 4.125 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



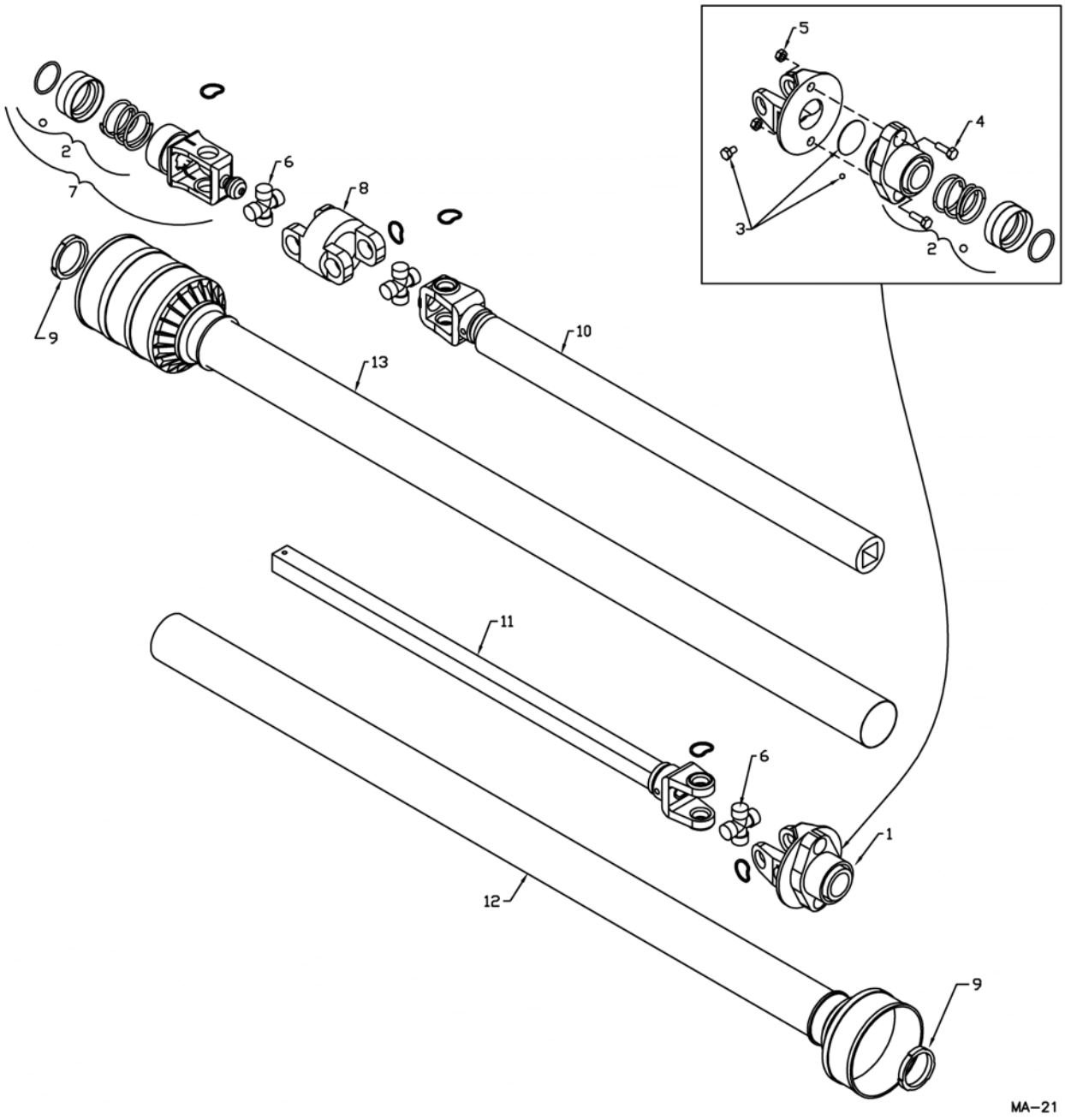
Item	Part Number	Description
	F0445	Cylinder Complete
1	25123	5.0 Dia. Headplate
2	116128	Shaft Weld't 3.5 x 66
3	25122	5.0 Dia. Tube Weld't
4	111299	5.0 Dia. Piston
5	87557	Locknut 1.25 UNF
6	82425	O-Ring 4.50 ID x 5.00 OD Buna
7	83425	Backup 4.50 ID x 5.00 OD x 0.085
8	82214	O-Ring 1.00 ID x 1.25 OD 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



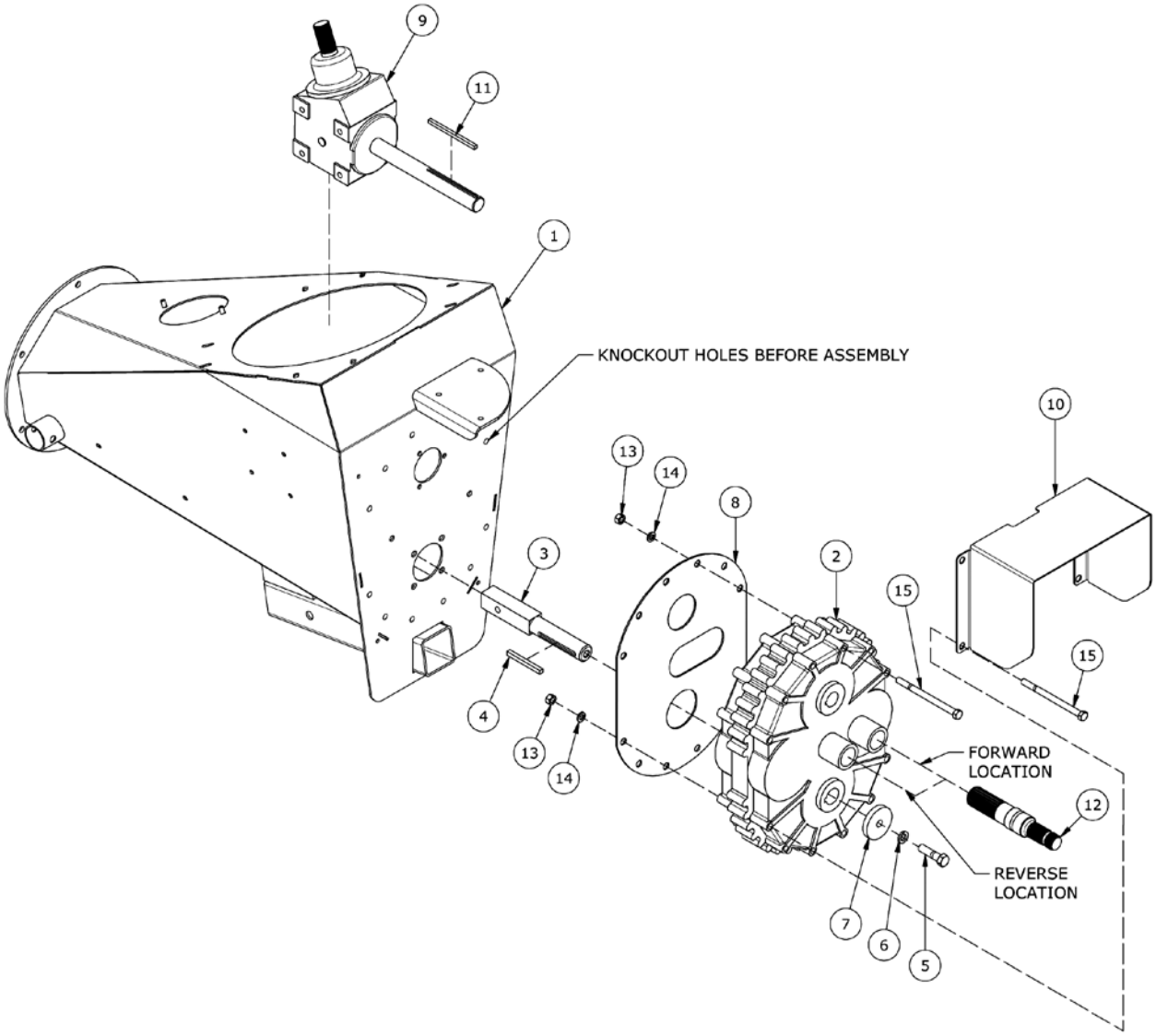
Item	Part Number	Description
	F9552	Shaft Complete
	936566	Outer Half Shaft - Tractor
	908720	Inner Half Shaft - Implement
1	936277	Ball Shear Assembly
2	936433	Safety Slide Lock Repair Kit
		(Collar, Spring, Retainer Ring, 2-Pawls)
3	936249	Shear Assembly Repair Kit
		(3/8" x 1/2" Bolt, Lube, Blank, 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



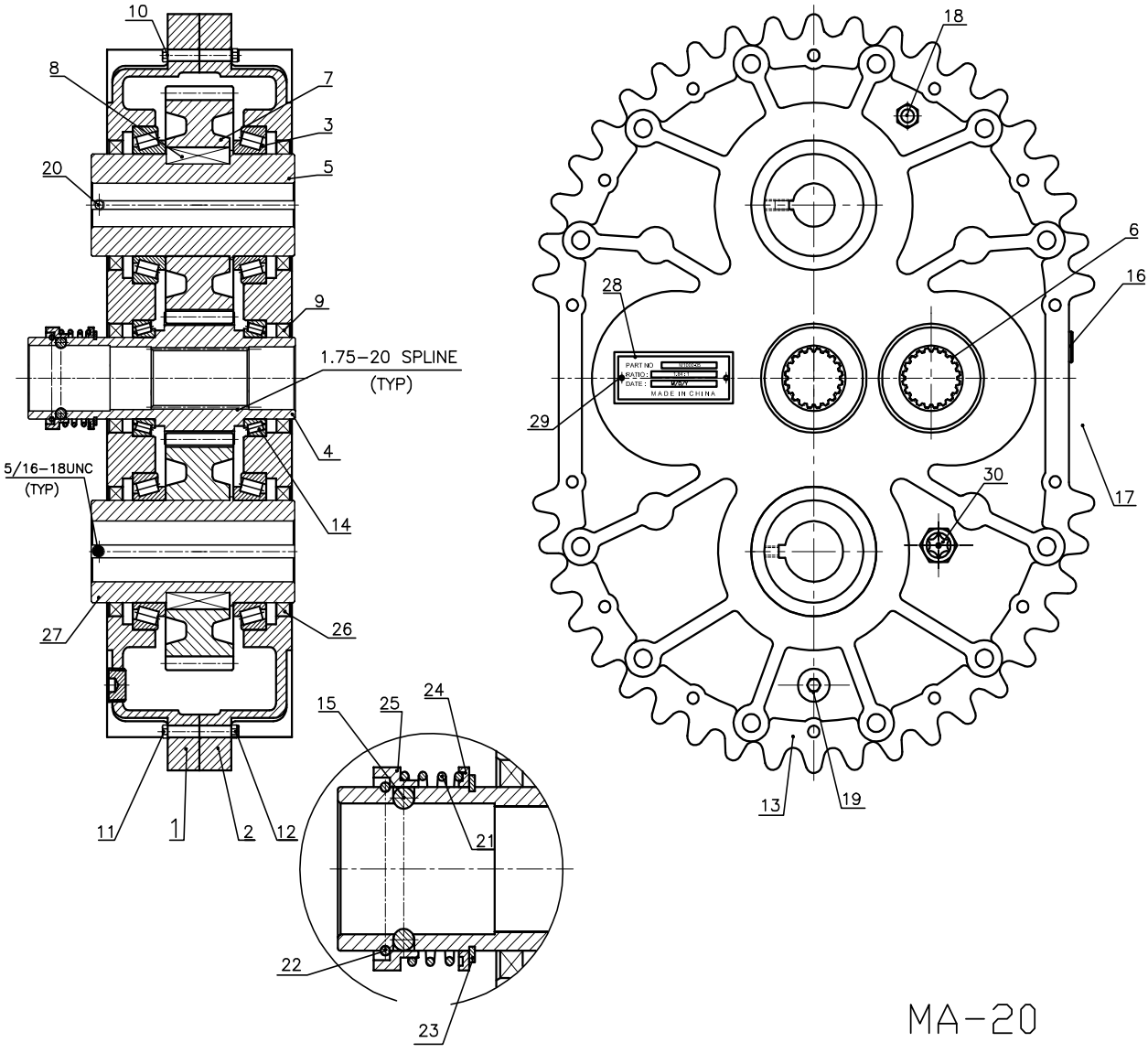
Item	Part Number	Description
	F0608	Shaft Complete
	908721	Outer Half Shaft - Tractor
	908722	Inner Half Shaft - Implement
1	936432	Ball Shear Assembly
2	936199	Safety Slide Lock Repair Kit - #26-15120
		(Collar, Spring, Retainer Ring, 2-Pawls)
3	936249	Shear Assembly Repair Kit
		(3/8" x 1/2" Bolt, 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



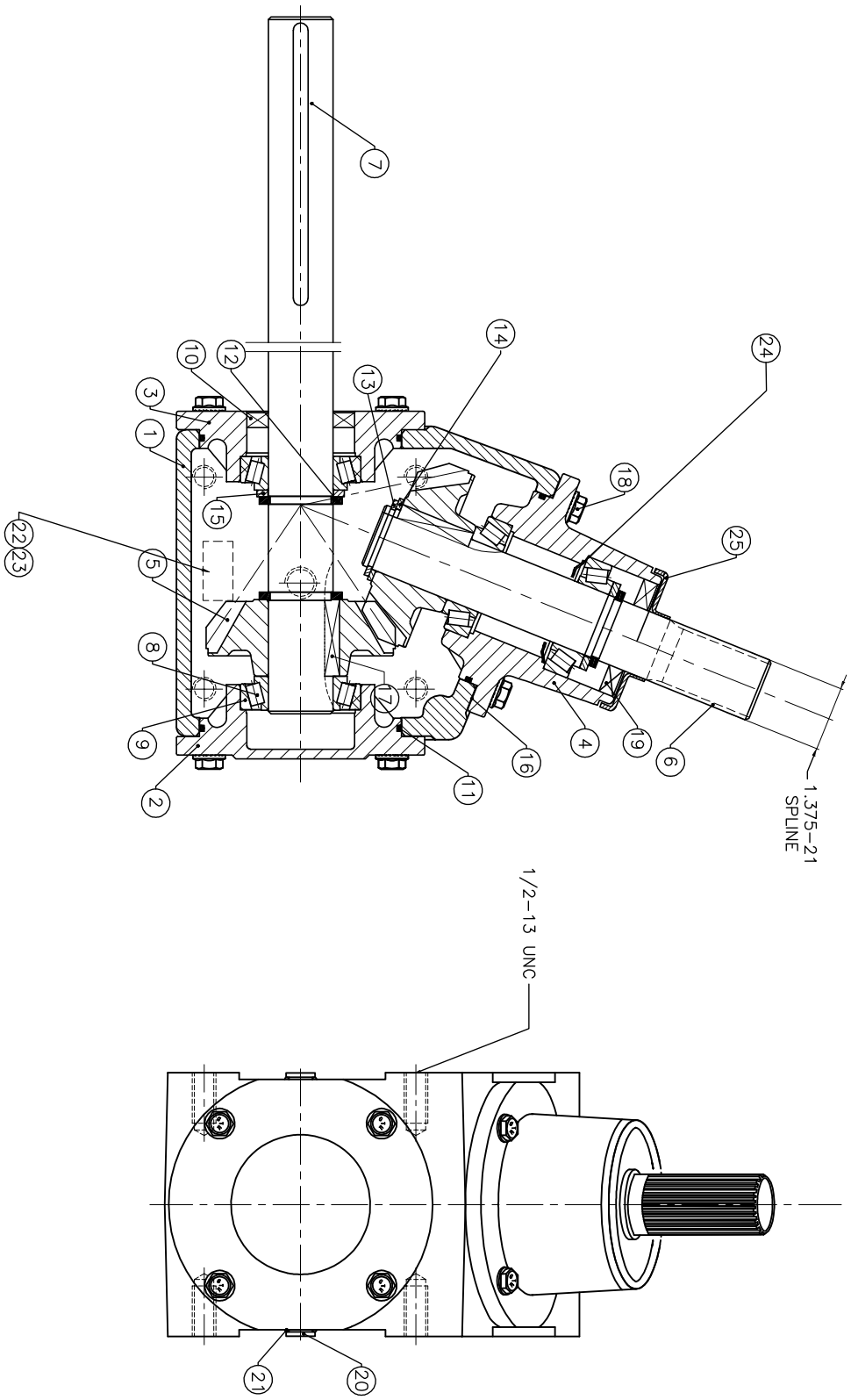
Item	Part Number	Description
1	910985	Input Box
2	910927	M1000 Helical Gearbox
3	911044	M1000 Flighting Drive Shaft
4	911130	M1000 Stub Key
5	84335	5/8" x 2-1/2" Hex Bolt
6	81677	5/8" Lock Washer
7	906073	Washer Input Box 21/32" ID x 3" OD x 1/2"
8	911001	Helical Gearbox Plate
9	911131	4168 Gearbox
10	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



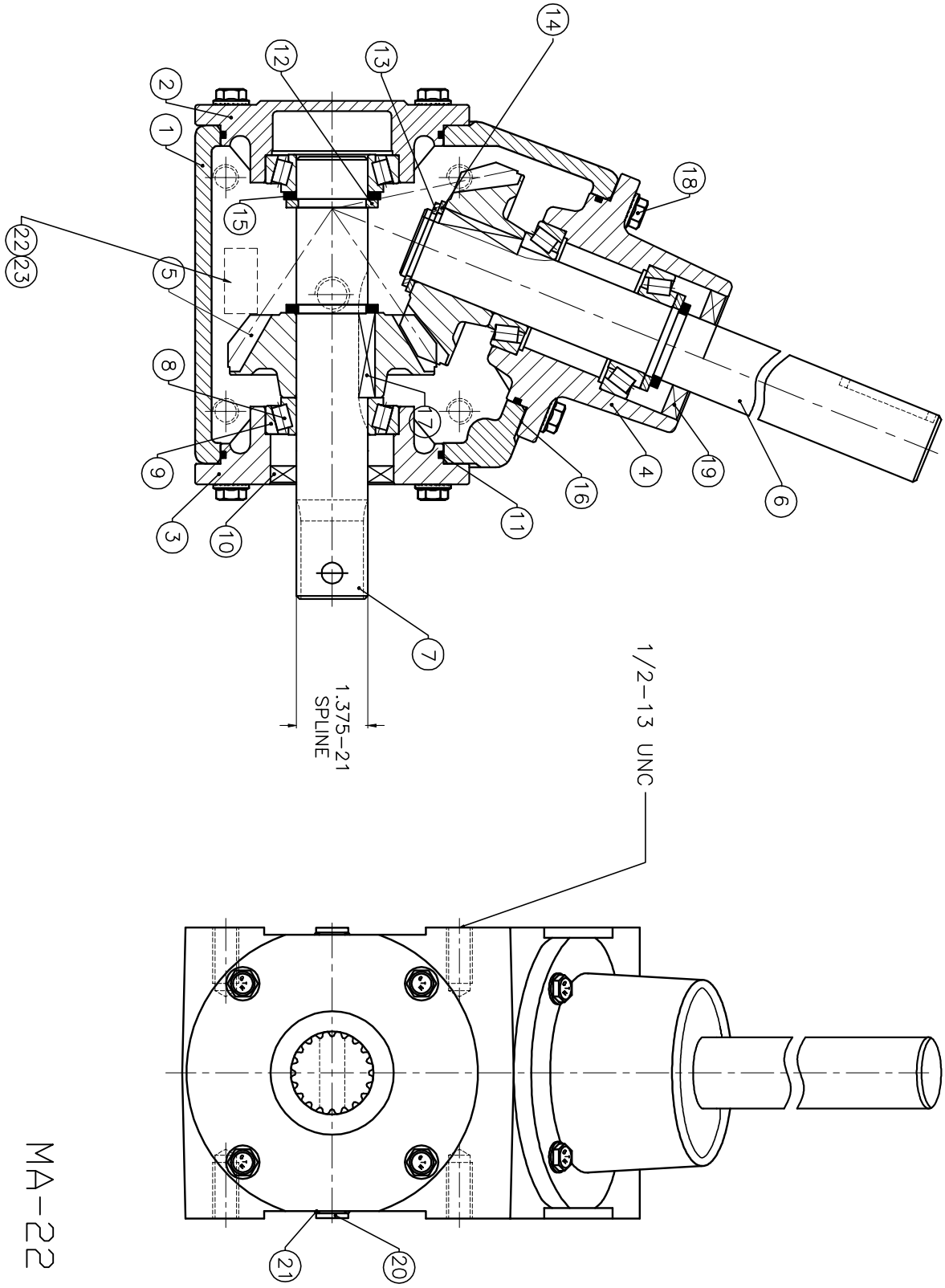
Item	Part Number	Description
	910927	M1000 Gearbox Complete
1		Housing
2		Housing w/o Plug Hole
3	909829	Bearing 32015 Tapered Roller Bearings PEER
4	911353	Input Shaft Gear
5	911354	Output Shaft
6	911355	Mid Shaft Gear
7	911356	Output Gear
8		A-Flat Key 12 x 20 x 50
9	909399	Viton Seal 60 x 80 x 12
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



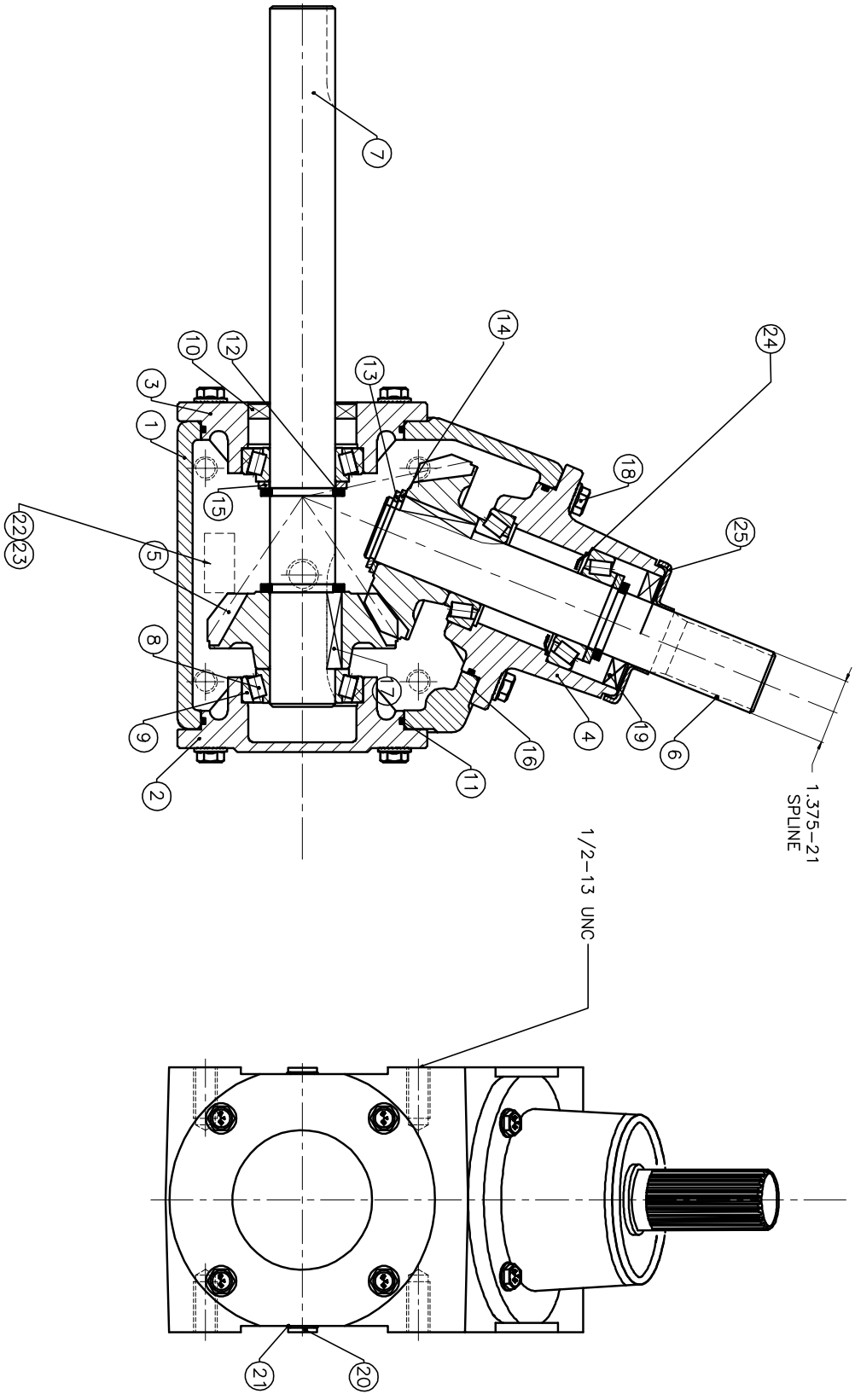
Item	Part Number	Description
	911131	Gearbox Complete
1	960803	Housing
2	960805	End Cap
3	960810	End Cap
4	960804	Quill
5	960812	Gear, DP 4.23 Teeth 17
6	960822	Shaft, Quill
7	912026	Shaft, Cross
8	967208	Bearing Cone LM48548
9	968412	Bearing Cup LM48510
10	960817	Seal, (1.374 x 2.374 x 0.374)
11	908895	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



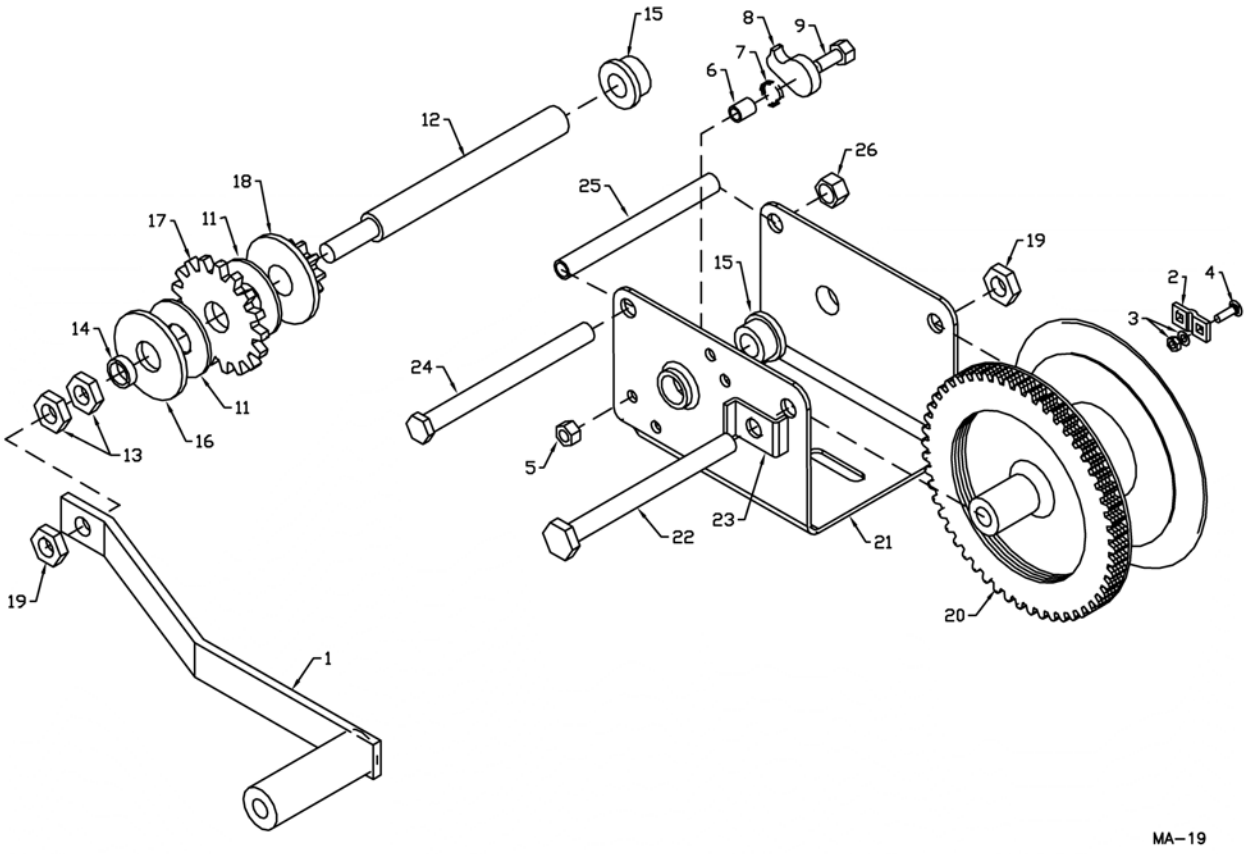
Item	Part Number	Description
	960950	Gearbox Complete
1	960803	Housing
2	960805	End Cap
3	960810	End Cap
4	960804	Quill
5	960812	Gear, DP 4.23 Teeth 17
6	960822	Shaft, Quill
7	960823	Shaft, Cross
8	967208	Bearing Cone LM48548
9	968412	Bearing Cup LM48510
10	960817	Seal, (1.374 x 2.374 x 0.374)
11	908895	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.

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.

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