Farm King

OPERATOR AND PARTS MANUAL

Backsaver Auger

16" x 104' Model

052012 FK370

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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 two one way hydraulic cylinders with restrictor valves 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. 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. A two wheel power mover allows you to move the hopper back and forth with finger tip control. Other advanced features include a light kit, heavy duty 1000 rpm gearbox and hydraulic winch.

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 (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

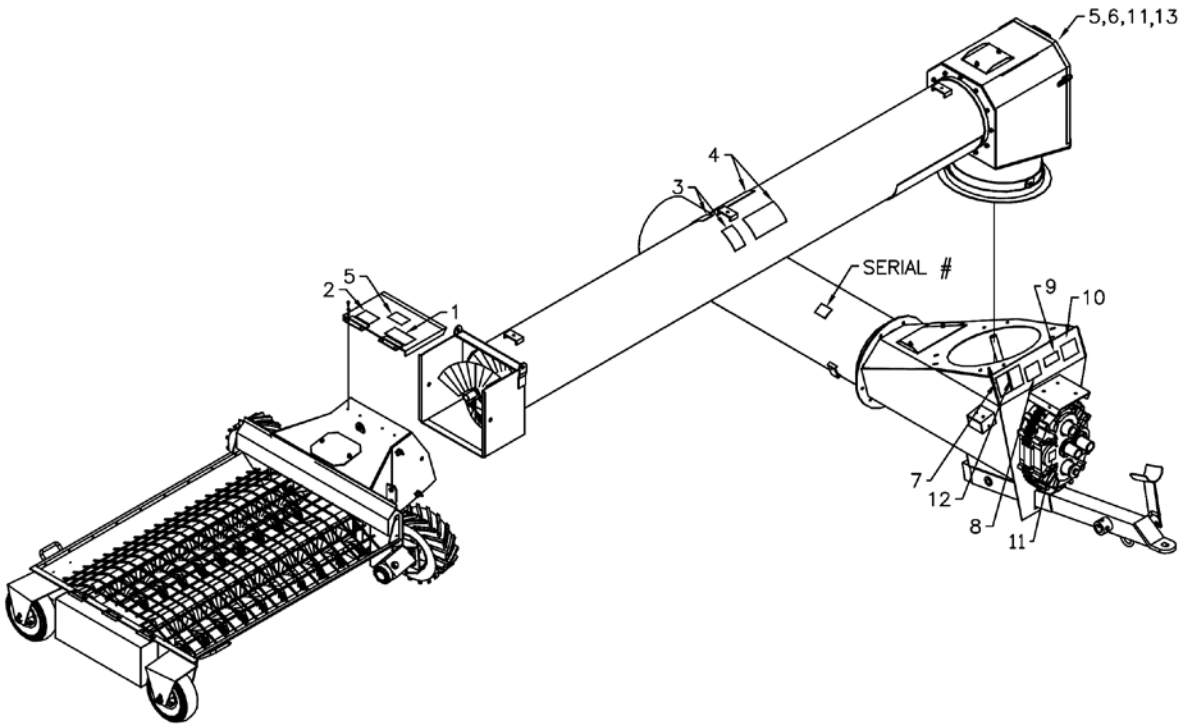
- Store the unit in an area away from human activity.
- Do not permit children to play on or around the stored machine.
- Support the frame on stands and blocks to provide a secure base.
- When storing an Auger, park it on level ground so that the bottom end will never be over its center of gravity.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



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

1

2

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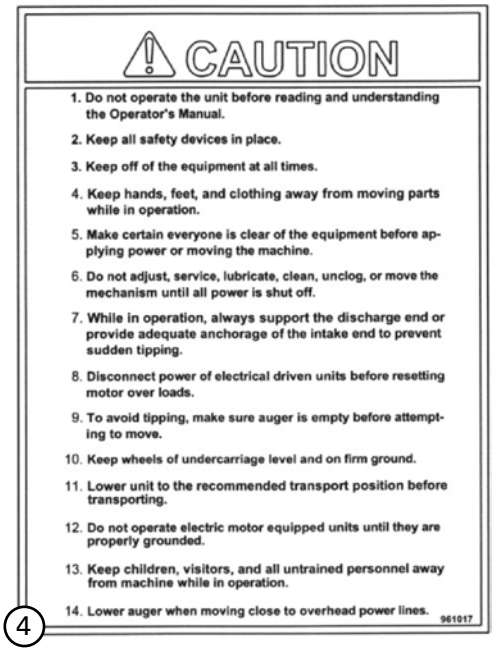

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⚠ CAUTION

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.

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⚠ 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

8

IMPORTANT

DISCONNECT PTO SHAFT FROM TRACTOR BEFORE MOVING TO PREVENT PTO DAMAGE

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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.

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CHECK
OIL LEVEL
BEFORE
USING

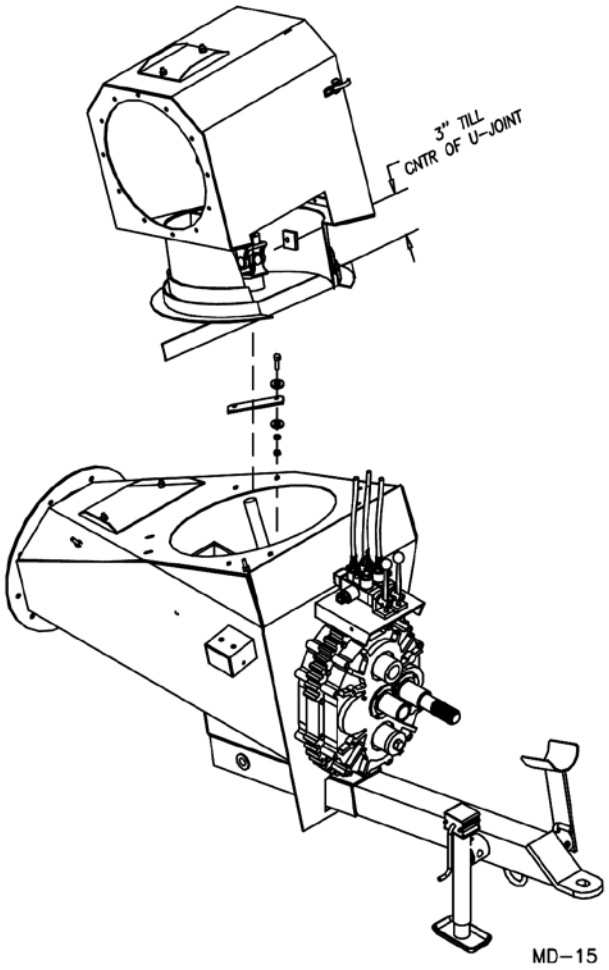
967388

Assembly Instructions

	ALERT	Cylinder ports should be facing down.
	ALERT	On yokes where cable clamps hold two cables, do not use the cast part of the clamp.
	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	Never run the auger without this cover bolted on. The yoke center must align with the pivot holes after assembly.
	ALERT	When the intake auger is raised from working position, the lift cable is hooked into the loop at the top of the hopper. The open end of the hook must be turned toward the hopper. The intake auger could detach and fall if the main auger is raised with the hook turned the other way.
	ALERT	The flow control valve regulates the lowering of the auger to avoid damage which could be caused by lowering the auger too quickly. Arrow on the flow control should be pointing toward the 6' hose. Be sure that the valve is open approximately 3-1/2 turns before raising the auger to full height or the auger will not lower.
	ALERT	The hopper mover may move quite quickly with some tractors. Be sure everyone is clear of the area when using the mover.

	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 at the end of the hitch is used to hold the PTO during transport.

	ALERT	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.



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.
- 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

16" Augers are designed for PTO drive tractors with 1000 rpm only. Maximum capacity will be attained while running the main auger at or near 1000 rpm.

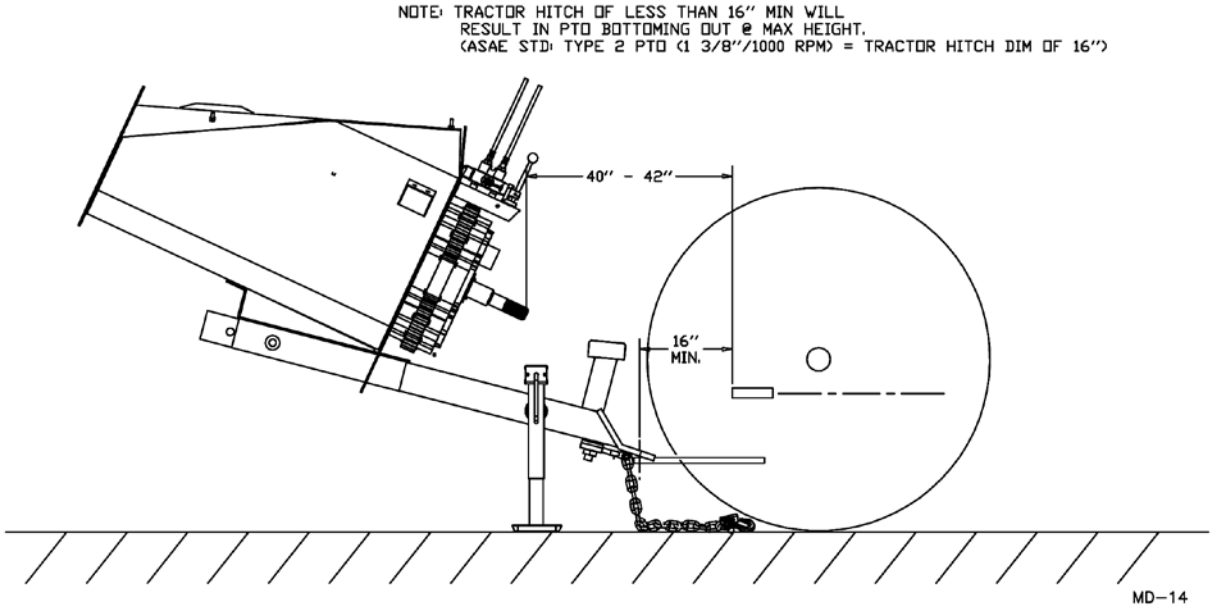
- **NOTE:** The weight of the intake auger and hopper assembly must be supported by the transport chain, whenever the auger is moved. If the weight of the intake auger is on the winch, the winch may be damaged during transport.
- The auger uses a hydraulic winch to lift the intake auger. Never have less than three wraps of cable on the drum of the winch.

ALERT

Never operate the hydraulic winch or the hopper mover when the PTO shaft is engaged.

- A two-spool valve assembly on the back of the input box controls both the hopper mover and the hydraulic winch. See drawing for proper hose plumbing.

	ALERT	Always maintain at least a 4" overlap 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.



- The distance between the tractor and the auger stubs should be between 40" and 42" with the tractor and auger on level ground and the auger in full down position. This distance is obtained by either adjusting the tractor hitch, the auger hitch or both.
- Before engaging power take-off, start tractor and idle engine. Engage power take-off slowly and bring PTO rpm up to recommended speed of 1000 rpm for 16" augers.
- Before stopping auger (except in an emergency) let all grain empty out of the auger, idle engine then disengage power take-off. Shut off tractor.

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

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

- The hydraulic winch is designed to lift an empty intake auger only. Clean out hopper before attempting to lift with the winch. Do not lift the main auger any higher than 35° before lowering the intake auger. There will be interference between the intake auger and the input box if you go any higher.
- 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. The approximate initial setting should be 3-1/2 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 fail shortly thereafter during operation.

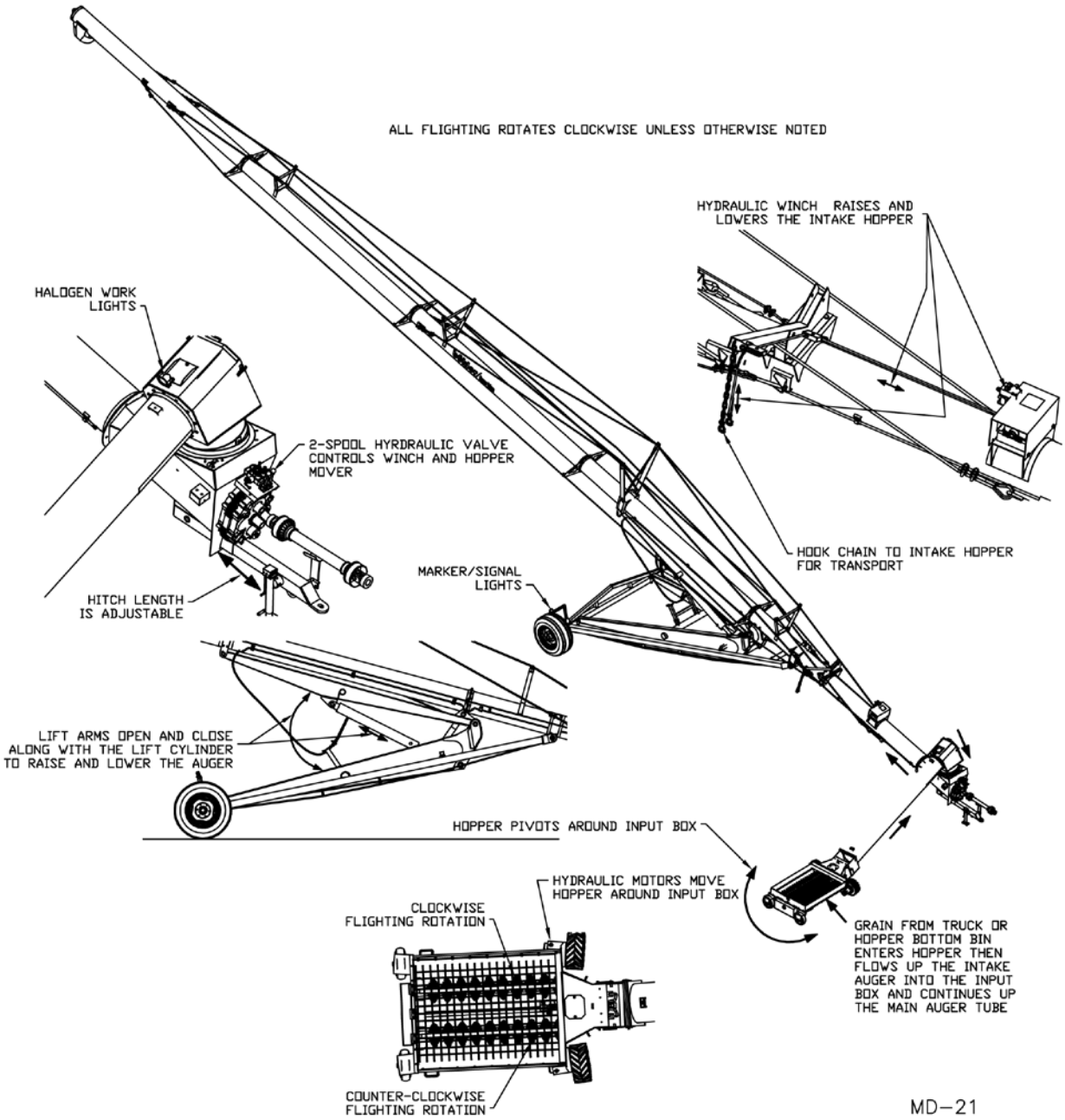
- PTO shear bolts (2 required) – 3/8" x 1" hex bolt (grade 8)

ALERT

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

- This 16" auger has a total weight of about 13,000 lb (5,900 kg) and a hitch weight of about 2,700 lb (1,225 kg). You must have a vehicle rated for this amount of weight to transport this 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. The reducer gearbox requires 2.5 litres of 75W–90 synthetic oil. Reducer gearbox should be serviced every year or every 1000 hours. The hydraulic winch gearbox requires 2.5 litres of 80w-90 gear oil.

ALERT

When replacing bearings or tightening a loose bearing collar, always tighten collar in the direction of shaft rotation using a centre punch or a similar tool.

- Recommended tire pressure is 45 to 50 psi (max. 60 psi). 310 – 345 kPa (max. 415 kPa)

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 wire 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 wire 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 wire rope life and reduce abrasion and wear on sheaves and drums.

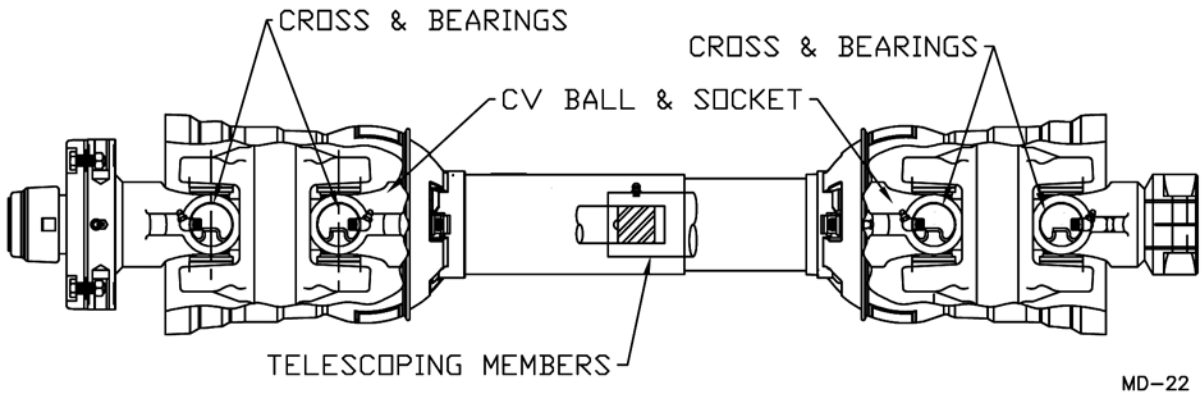
Greasing Procedure

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:

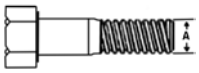
- Mobile Oil Company “Mobile Grease CMP”
- Shell Oil Company “Retinax AM”
- Texaco “Molytex EP #0 and #2”



Bolt Torque

Checking Bolt Torque

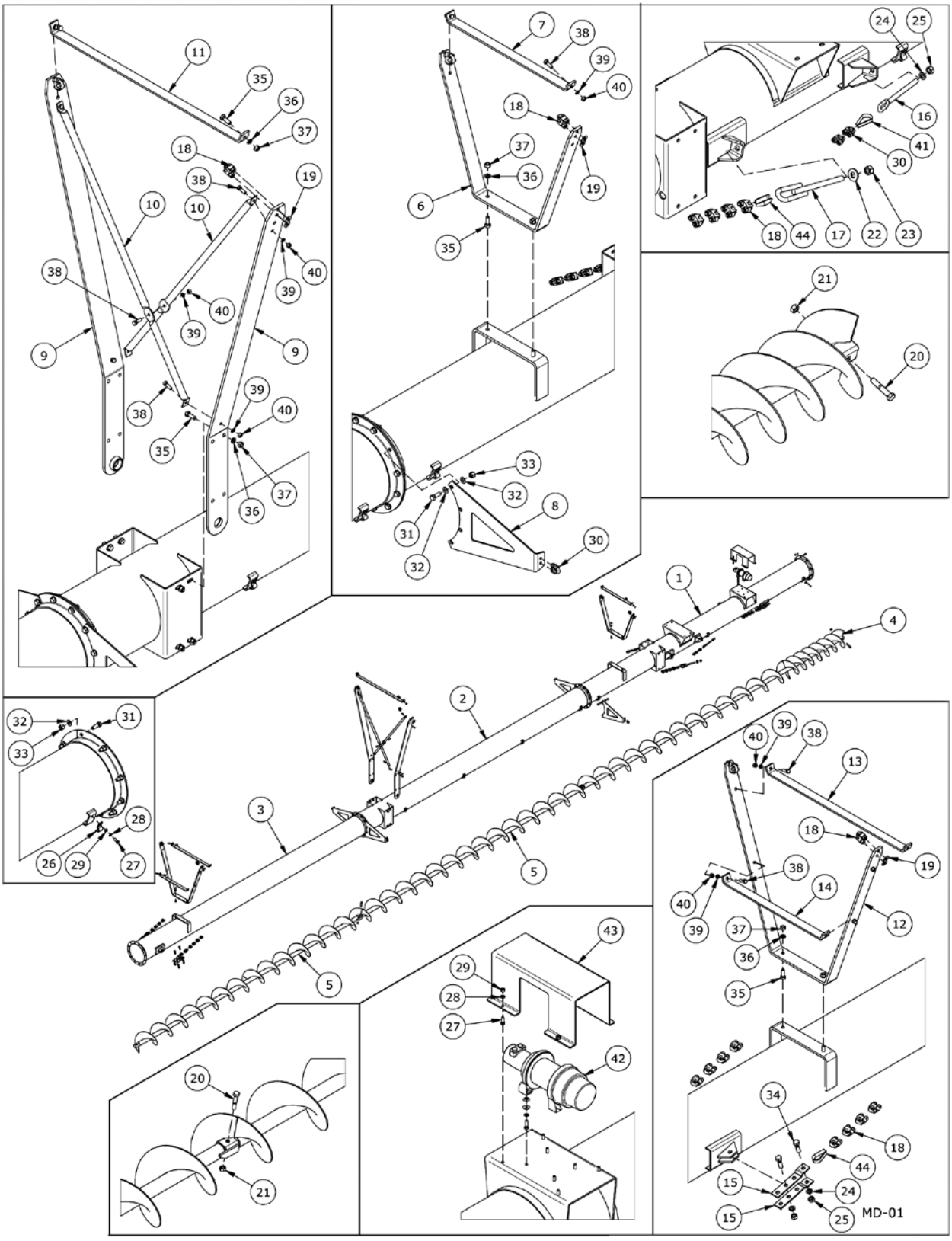
The tables shown below give correct torque values for various bolts and hex bolts. Tighten all bolts to the torques specified in chart unless otherwise noted. Check tightness of bolts periodically, using bolt torque chart as a guide. Replace hardware with the same strength bolt.

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.

Bottom Tube Assembly Drawing



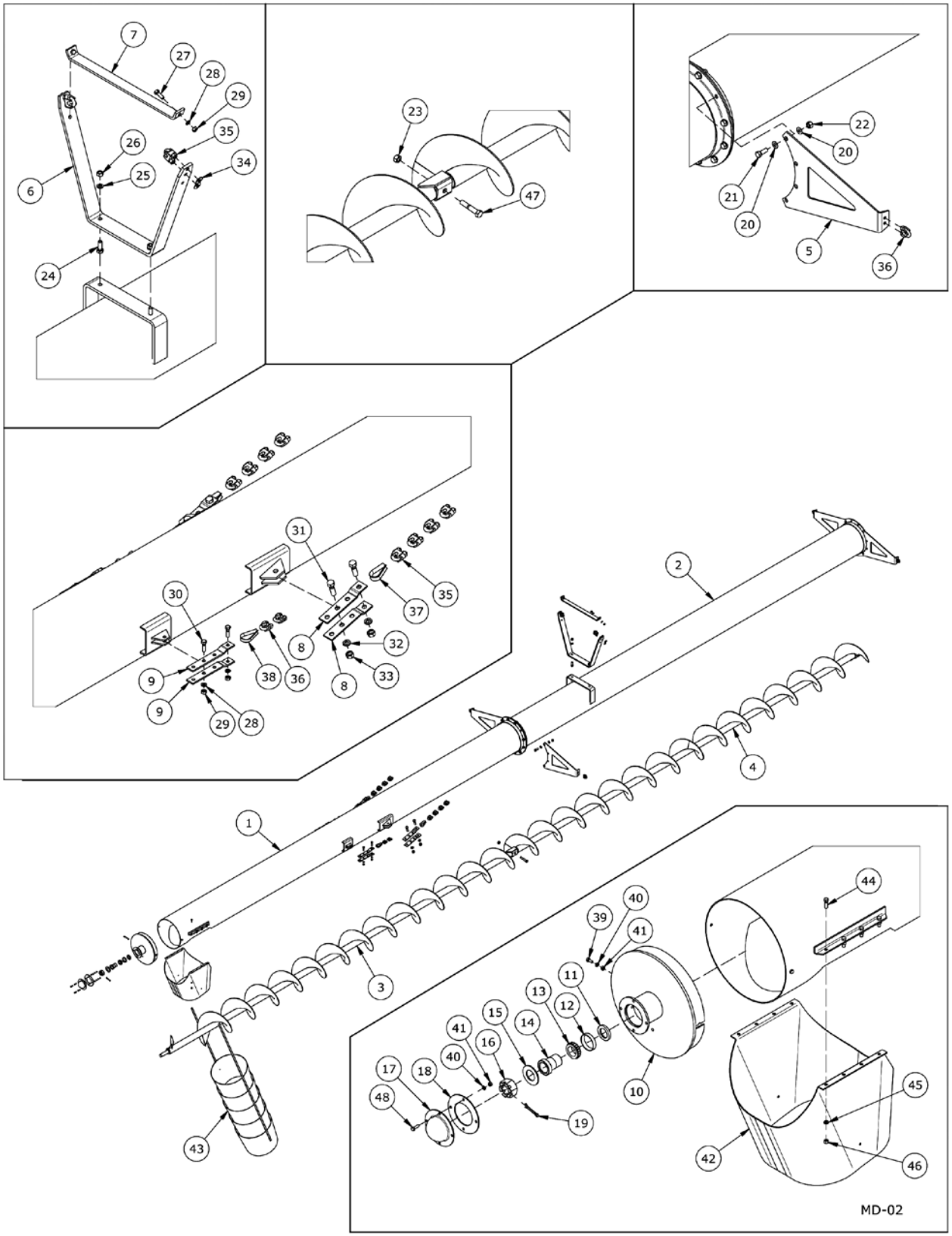
When Ordering Parts

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	910498	Tube #1
2	909705	Tube #2
3	909706	Tube #3
4	905760	Bottom Flighting
5	905763	Center Flighting
6	905816	Bridging Yoke
7	905817	Bridging Brace
8	906076	Side Bridging Bracket
9	905826	Bridging Plate
10	905827	Bridging Cross Brace
11	909783	Bridging Brace
12	905828	Bridging Yoke
13	905829	Bridging Brace
14	905830	Bridging Brace
15	905853	Cable Yoke Bracket
16	960613	Ø3/4" x 7-7/8" Cable Tightener
17	906043	Cable Tightener Loop
18	909194	3/4" Cable Clamp
19	81638	1/2" Flat Washer
20	84336	3/4" x 4" Hex Bolt
21	812365	3/4" Lock Nut
22	81972	7/8" Sae Washer
23	81722	7/8" Hex Nut
24	81701	3/4" Lock Washer
25	81700	3/4" Hex Nut
26	960140	Hydraulic Line Clamp
27	86170	3/8" x 1" Hex Bolt
28	81593	3/8" Lock Washer
29	81592	3/8" Hex Nut
30	964565	1/2" Cable Clamp
31	967285	5/8" x 1-3/4" Hex Bolt Gr.8
32	812639	5/8" Sae Flat Washer
33	812482	5/8" Lock Nut
34	84346	3/4" x 2-1/2" Hex Bolt
35	84270	5/8" x 1-3/4" Hex Bolt
36	81677	5/8" Lock Washer

Item	Part Number	Description
37	81676	5/8" Hex Nut Gr.2
38	84277	1/2" x 1-1/2" Hex Bolt
39	81637	1/2" Lock Washer
40	81636	1/2" Hex Nut
41	964587	1/2" Cable Thimble
42	910483	Hydraulic Winch (Hardware Included)
43	910490	Hydraulic Winch Shield
44	909199	3/4" Cable Thimble

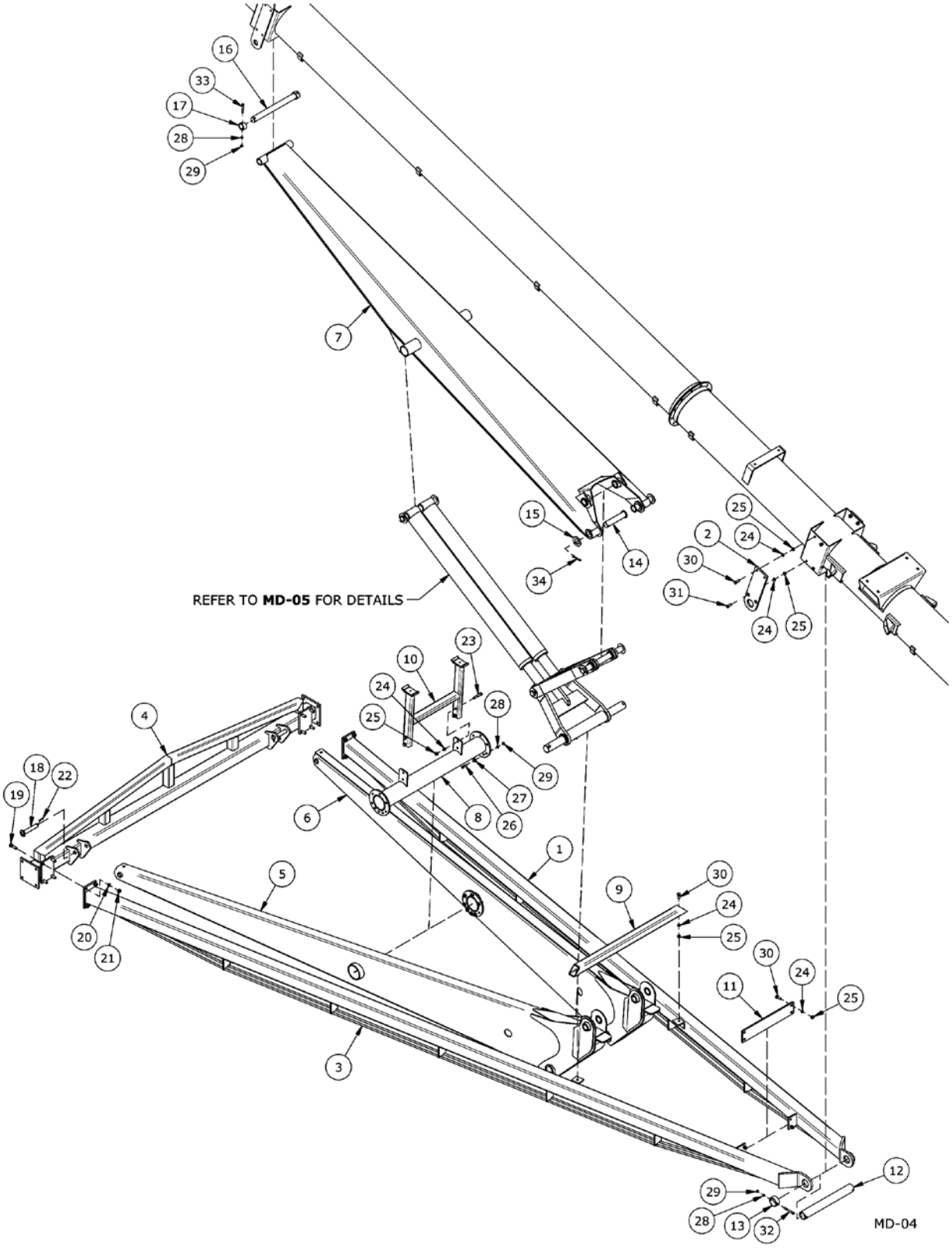
Top Tube Assembly Drawing



Item	Part Number	Description
1	909708	Tube #5
2	909707	Tube #4
3	905766	Top Flighting
4	905763	Center Flighting
5	906076	Side Bridging Bracket
6	905831	Bridging Yoke
7	905832	Bridging Brace
8	905853	Cable Yoke Bracket
9	960244	Cable Yoke
10	906101	Top End Plate
11	907052	Oil Seal (CR17617)
12	965252	Inner Bearing Cup (25520)
13	967205	Inner Bearing Cone (25580), 85'
14	905906	End Bearing Sleeve
15	9812445	1-1/2" x 10Ga Narrow Rim Washer
16	907053	1-1/2" Slotted Hex Nut Nf Gr.2
17	907312	Dust Cap (DC27)
18	907642	Rubber Gasket (CTD#SE49)
19	81210	1/4" x 2" Cotter Pin
20	812639	5/8" SAE Flat Washer
21	967285	5/8" x 1-3/4" Hex Bolt Gr.8
22	812482	5/8" Lock Nut
23	812365	3/4" Lock Nut
24	84270	5/8" x 1-3/4" Hex Bolt
25	81677	5/8" Lock Washer
26	81676	5/8" Hex Nut Gr.2
27	84277	1/2" x 1-1/2" Hex Bolt
28	81637	1/2" Lock Washer
29	81636	1/2" Hex Nut
30	87553	1/2" x 1-3/4" Hex Bolt
31	84346	3/4" x 2-1/2" Hex Bolt
32	81701	3/4" Lock Washer
33	81700	3/4" Hex Nut
34	81638	1/2" Flat Washer
35	909194	3/4" Cable Clamp
36	964565	1/2" Cable Clamp
37	909199	3/4" Cable Thimble
38	964587	1/2" Cable Thimble
39	81549	5/16" x 3/4" Hex Bolt
40	81569	5/16" Lock Washer

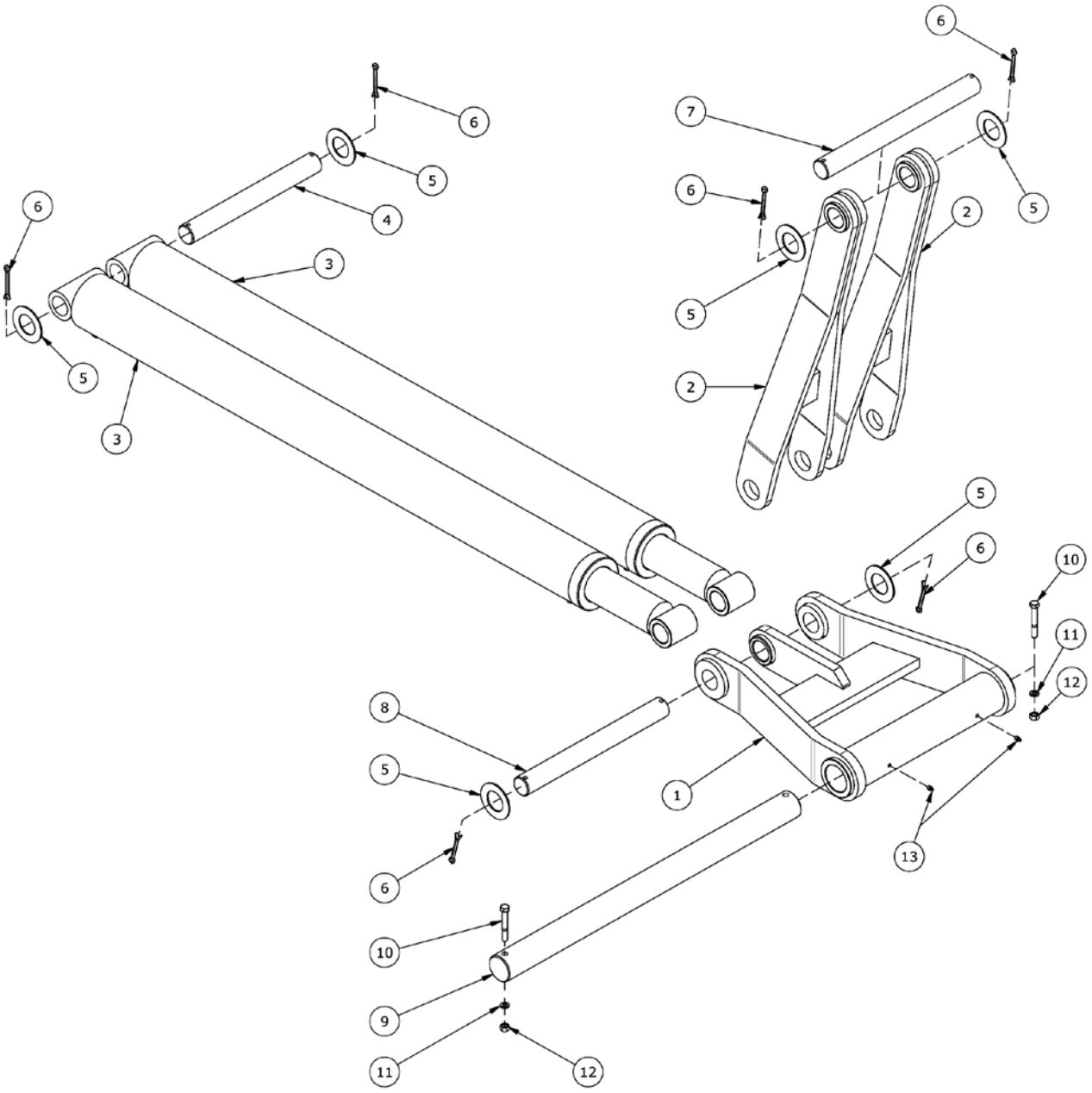
Item	Part Number	Description
41	81568	5/16" Hex Nut
42	906130	Discharge Spout
43	F0678	Flex Spout
44	86171	3/8" x 1-1/4" Hex Bolt
45	81593	3/8" Lock Washer
46	81592	3/8" Hex Nut
47	84336	3/4" x 4" Hex Bolt
48	812026	5/16" x 1" Hex Bolt

Undercarriage Assembly Drawing



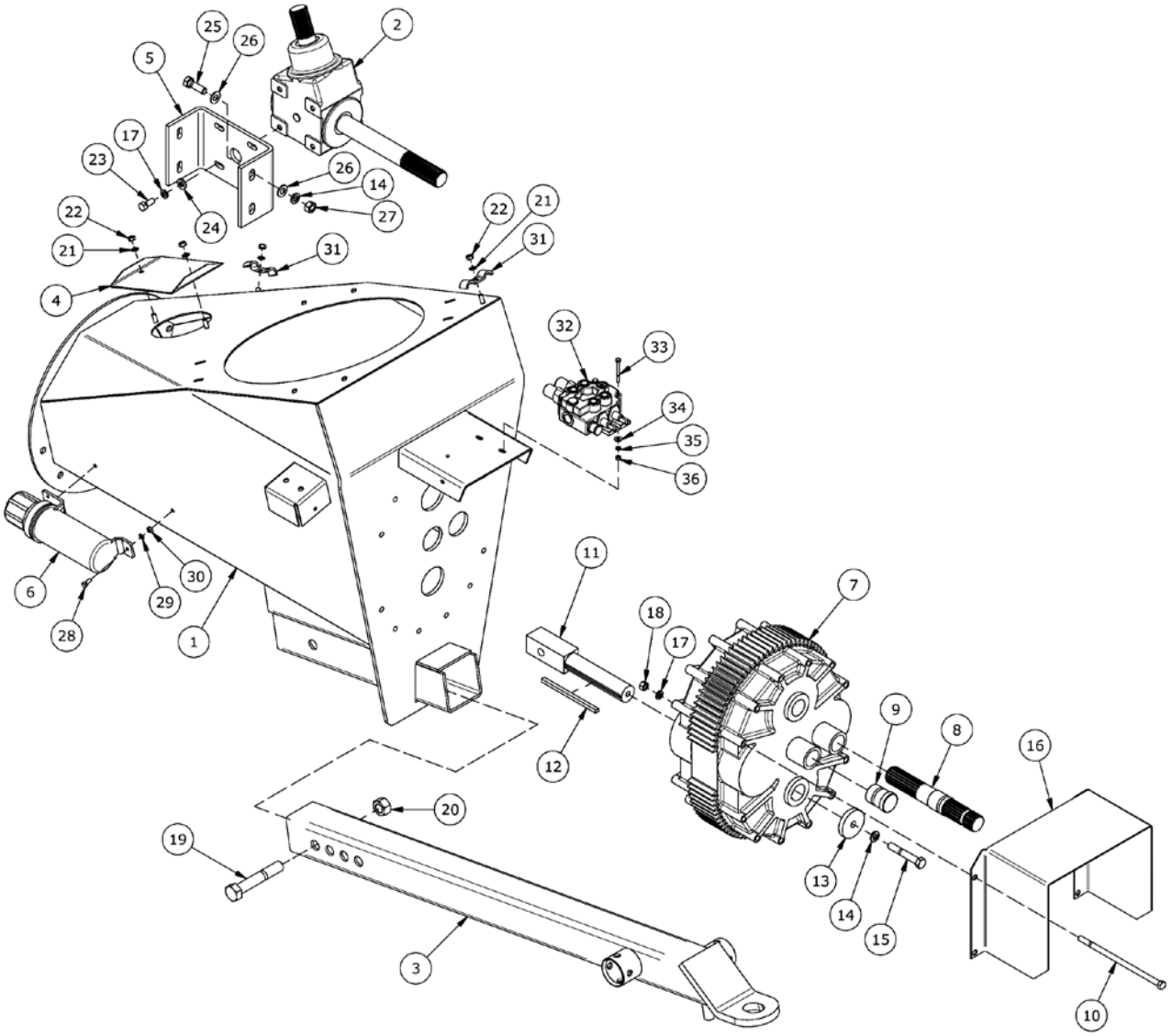
Item	Part Number	Description
1	905732	Undercarriage Arm - Left
2	904736	Undercarriage Connector Plate
3	905733	Undercarriage Arm - Right
4	905745	Axle
5	F0611	Lower Lift Arm - Right
6	F0612	Lower Lift Arm - Left
7	908445	Upper Lift Arm
8	907741	Lift Arm Torque Tube
9	905738	Lift Arm Rest Tube
10	905786	Cradle Rest
11	905737	Brace Plate
12	905735	Undecarriage Lift Arm Pin
13	905736	Undercarriage Lift Arm Pin Collar
14	908476	Lift Arm Pin
15	967153	2" x 10ga Narrow Rim Washer
16	905806	Upper Lift Arm Pin
17	905807	Upper Lift Arm Pin Collar
18	905779	Axle Pin
19	84346	3/4" x 2-1/2" Hex Bolt
20	81701	3/4" Lock Washer
21	81700	3/4" Hex Nut
22	81210	1/4" x 2" Cotter Pin
23	81669	5/8" x 3-1/2" Hex Bolt
24	81677	5/8" Lock Washer
25	81676	5/8" Hex Nut Gr2
26	811791	1/2" x 2" Hex Bolt
27	81638	1/2" Flat Washer
28	81637	1/2" Lock Washer
29	81636	1/2" Hex Nut
30	84270	5/8" x 1-3/4" Hex Bolt
31	967284	5/8" x 1-3/4" Fl Hd Sckt Bolt
32	811691	1/2" x 4-1/2" Hex Bolt
33	81629	1/2" x 3- 1/2" Hex Bolt
34	967162	5/16" x 3" Cotter Pin

Cylinder Mount Components Drawing



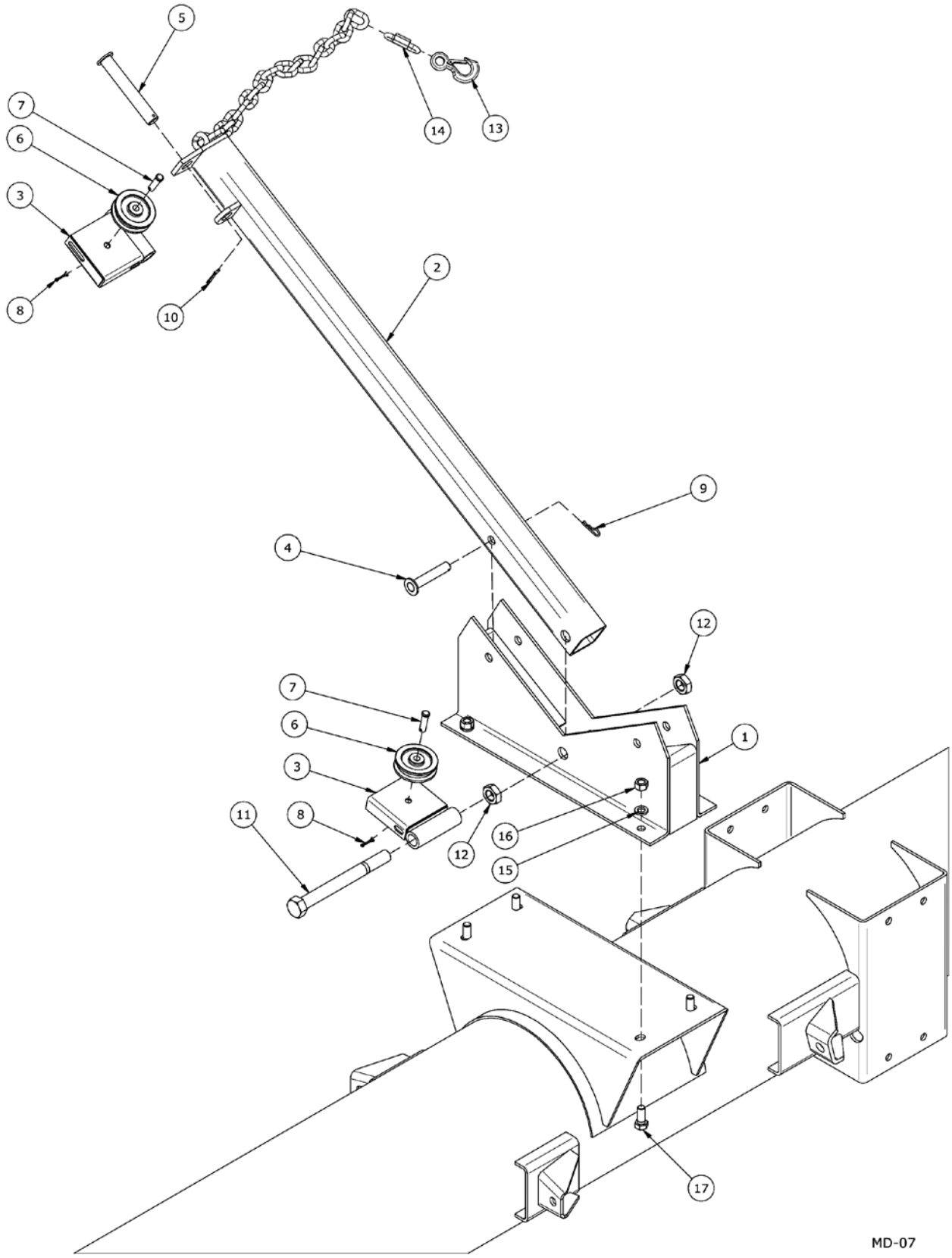
Item	Part Number	Description
1	908472	Link
2	908464	Yoke Arm
3	F0664	Cylinder 5.00 x 55.35 w/ 3-1/2" Shaft
4	908478	Upper Cylinder Pin 2" Rd x 17-1/4" Lg
5	967153	2" x 10 ga Narrow Rim Washer
6	967162	5/16" x 3" Cotter Pin
7	908480	Upper Lift Arm Pin 2" Rd x 20-1/2"
8	908490	Lift System Link Pin 2" Rd x 18-7/8"
9	908474	Connecting Link Pin 2-3/4" Rd x 39" Lg
10	81629	1/2" x 3-1/2" Hex Bolt
11	81637	1/2" Lock Washer
12	81636	1/2" Hex Nut
13	967164	Drive-In Grease Zerk

Input Box Assembly Drawing



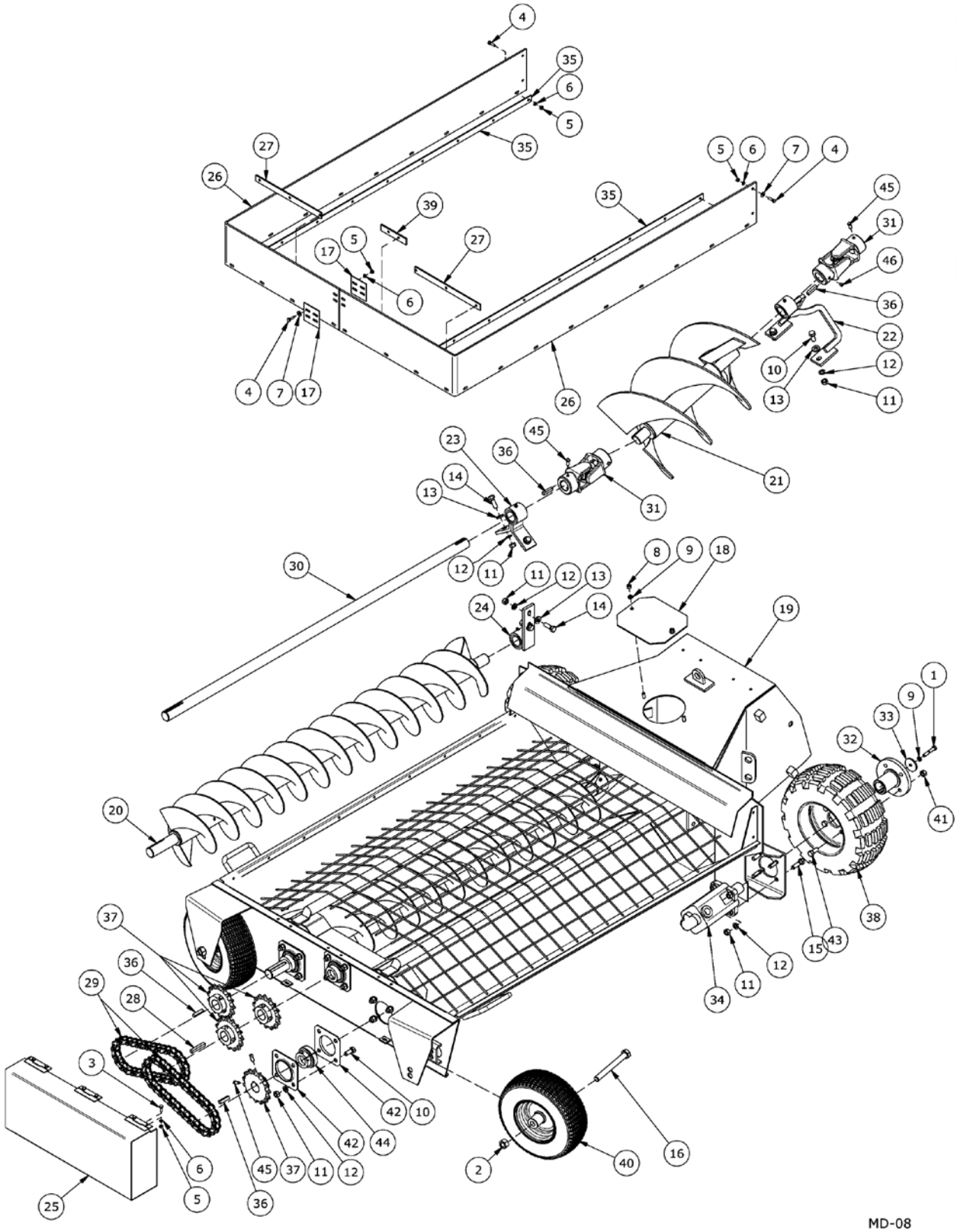
Item	Part Number	Description
1	909641	Input Box
2	905882	Gearbox
3	905887	Hitch
4	960483	Clean-out Lid
5	909837	Gearbox Mount Plate
6	909277	Manual Holder
7	910502	M2000 Helical Gearbox
8	910503	M2000 Splined Stub Shaft
9	910510	Plug
10	910458	1/2" x 11" Hex Bolt
11	905900	Drive Shaft
12	906061	Key 3/8" x 3/8" x 7-3/8"
13	906073	Washer Input Box
14	81677	5/8" Lock Washer
15	81671	5/8" x 4" Hex Bolt
16	909454	Pto Guard
17	81637	1/2" Lock Washer
18	81636	1/2" Hex Nut
19	967229	1" x 6" Hex Bolt
20	967148	1" Lock Nut
21	81593	3/8" Lock Washer
22	81592	3/8" Hex Nut
23	81620	1/2" x 1-1/4" Hex Bolt
24	84048	1/2" SAE Flat Washer
25	84299	5/8" x 2" Hex Bolt
26	812639	5/8" SAE Flat Washer
27	81676	5/8" Hex Nut Gr2
28	81549	5/16" x 3/4" Hex Bolt
29	81569	5/16" Lock Washer
30	81568	5/16" Hex Nut
31	964638	Hose Holder Clamp
32	909983	Valve 2 Spool Monoblock
33	967193	1/4" x 2-1/2" Hex Bolt
34	81546	5/16" Flat Washer
35	81545	1/4" Lock Washer
36	81544	1/4" Hex Nut

Lift Boom Arm Components Drawing



Item	Part Number	Description
1	905811	Lift Boom
2	905815	Lift Boom Arm
3	905819	Pulley Holder
4	905821	Pin 3/4" x 4-1/2"
5	960111	Pin 1" x 6-1/2"
6	961846	Cable Pulley, 1/2 Bore
7	960913	1/2" x 1-13/16" Clevis Pin
8	9812430	1/8" x 1" Cotter Pin
9	961012	#16 Hair Pin Clip
10	9812433	3/16" x 1-1/2" Cotter Pin
11	967233	1" x 10" Hex Bolt Gr.5
12	84051	1" Hex Jam Nut Gr.2
13	909171	Hook with Latch (1 Ton)
14	909172	3/8" Quick Link
15	81677	5/8" Lock Washer
16	81676	5/8" Hex Nut Gr.2
17	84268	5/8" x 1-1/2" Hex Bolt Gr.5

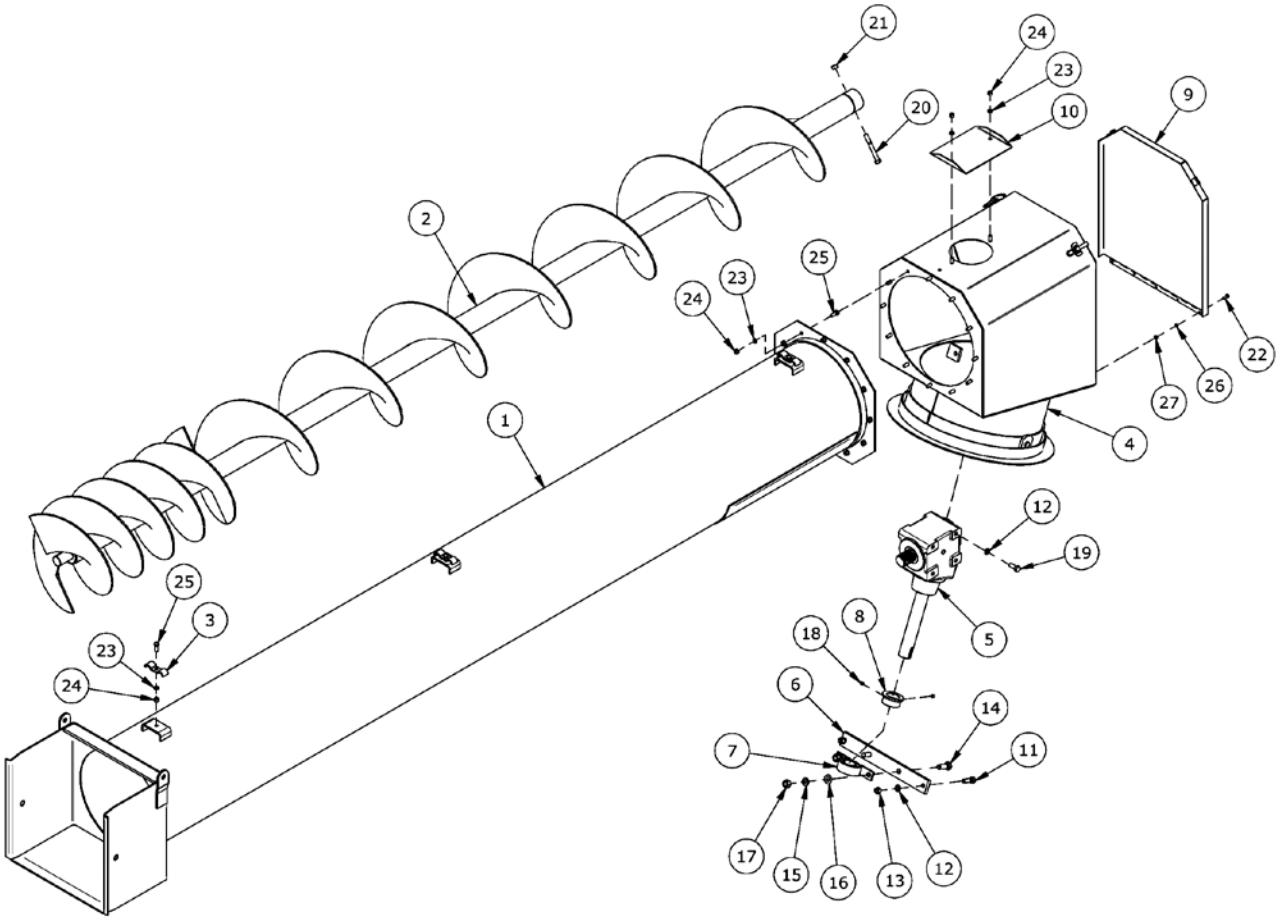
Multi Flighting Hopper Drawing



Item	Part Number	Description
1	810958	3/8" x 2-1/4" Hex Bolt
2	812365	3/4" Lock Nut
3	81525	1/4" x 3/4" Hex Bolt
4	81527	1/4" x 1" Hex Bolt
5	81544	1/4" Hex Nut
6	81545	1/4" Lock Washer
7	81546	5/16" Flat Washer
8	81592	3/8" Hex Nut
9	81593	3/8" Lock Washer
10	81620	1/2" x 1-1/4" Hex Bolt
11	81636	1/2" Hex Nut
12	81637	1/2" Lock Washer
13	84048	1/2" SAE Flat Washer
14	84277	1/2" x 1-1/2" Hex Bolt
15	87553	1/2" x 1-3/4" Hex Bolt
16	902615	3/4" x 7" Bolt Axle Gr5 (PL)
17	903483	3" x 3" Rubber Connector Plate
18	905364	Top Clean Out Cover
19	905973	Hopper
20	905980	Outer Flighting
21	905988	Center Flighting Shaft
22	905999	Center Flighting Holder
23	906003	Rear Center Flighting Holder
24	906007	Outer Flighting Holder
25	906011	Hopper Chain Guard Cover
26	906018	1/4' Rubber Edge 7" x 82-1/2"
27	906019	Back Rubber Reinforcement 1" x 13"
28	906021	Key 3/8" Sq x 2-5/8" Lg
29	906042	Chain #80 x 34 Pitches Includes Connector
30	906063	Center Drive Shaft 1-1/2" x 59-7/8" Lg
31	907282	U-Joint 1-1/2" Both Ends with 3/8" Keyway
32	909179	Power Mover Wheel Hub
33	909180	Flat Washer 2" OD x 13/32" ID x 7 Ga
34	909193	Hydraulic Motor 169-0093-001
35	960660	Rubber Reinforcement 1" x 57.25"
36	960705	Key 3/8" Sq x 1-3/4" Lg
37	960719	80B15 Sprocket (1.5" Bore)
38	960800	Tire with Wheel 13/500x6 4PL (7')
39	960834	Rubber Reinforcement Plate

Item	Part Number	Description
40	966851	Tire with Wheel 13/500x6 4PL (7')
41	967105	1/2" Lock Nut (NF)
42	967260	Bearing Flange (80mm-SQ)
43	968404	1/2" Wheel Bolt
44	968627	Bearing with Collar Ø1 1/2"ID (AEL208-108)
45	9812378	3/8" x 3/4" Square Head Set Screw (SER)
46	988999	3/8" x 3/8" Socket Set Screw

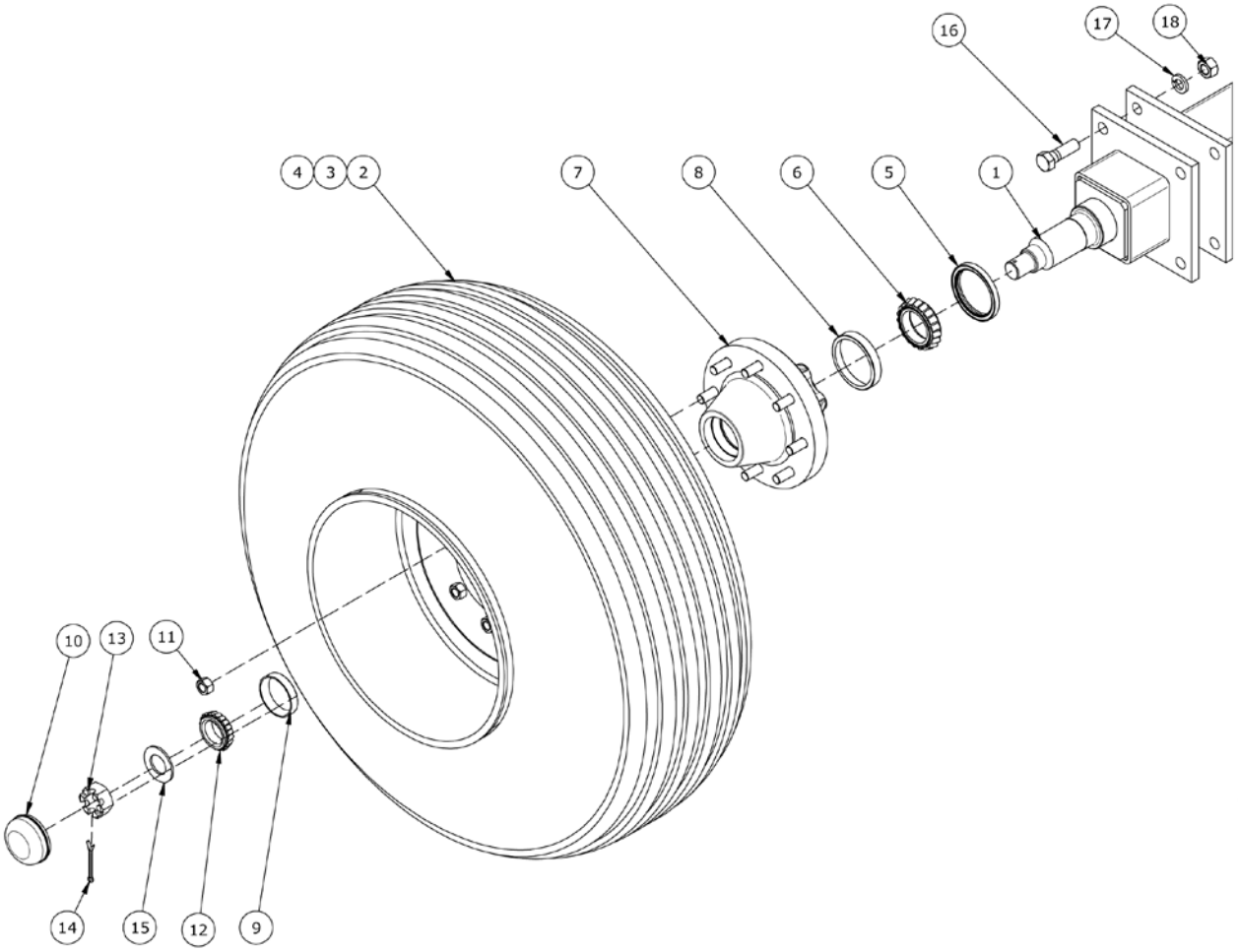
Intake Auger Assembly Drawing



MD-09

Item	Part Number	Description
1	905919	Intake Auger Tube
2	905949	Intake Auger Flighting
3	964638	Hose Holder Clamp
4	909644	Intake Auger Top Box
5	905881	4168 Gearbox
6	905928	Bearing Holder Plate
7	905951	Wooden Bearing & Flange Set 1-3/4"
8	909466	Intake Auger Gearbox Hub
9	905937	Top Box Door
10	960483	Clean-out Lid
11	87553	1/2" x 1-3/4" Hex Bolt
12	81637	1/2" Lock Washer
13	81636	1/2" Hex Nut
14	84270	5/8" x 1-3/4" Hex Bolt
15	81677	5/8" Lock Washer
16	812639	5/8" SAE Flat Washer
17	81676	5/8" Hex Nut Gr2
18	988999	3/8" x 3/8" Socket Set Screw
19	81620	1/2" x 1-1/4" Hex Bolt
20	910025	1/2" x 4" Hex Bolt Gr.8
21	812364	1/2" Lock Nut
22	81525	1/4" x 3/4" Hex Bolt
23	81593	3/8" Lock Washer
24	81592	3/8" Hex Nut
25	86170	3/8" x 1" Hex Bolt
26	81545	1/4" Lock Washer
27	81544	1/4" Hex Nut

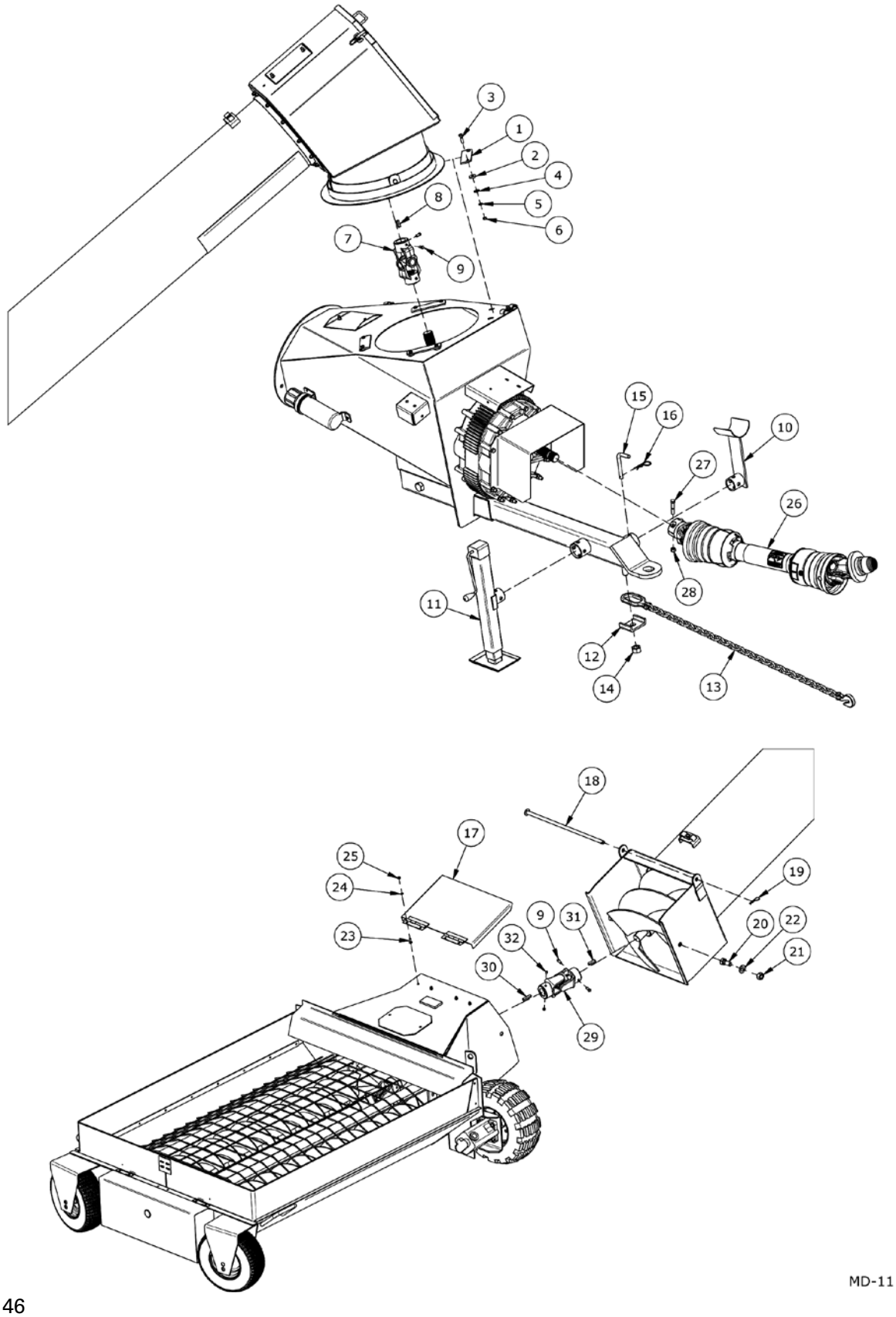
Tire Assembly Drawing



MD-10

Item	Part Number	Description
1	906109	Bolt On Stub Axle (8-Bolt)
2	909181	Tire - 16.5L - 16.1Fi
3	909182	Wheel 14" x 16.1" x 8
4	F0679	Wheel & Tire Assembly
5	909184	Oil Seal (SE42)
6	909185	Inner Bearing Cone (387AS)
7	909186	Hub w/ Bearing Cups (H817)
8	909188	Inner Bearing Cup (382A)
9	909189	Outer Bearing Cup (LM501310)
10	909192	Dust Cap (DC12)
11	909779	5/8" Wheel Nut NF
12	91024	Outer Bearing Cone (LM501349)
13	960037	Slotted Hex Nut 1-1/4" UNF
14	967252	3/16" x 2-1/2" Cotter Pin
15	9812442	1-1/4 x 10 ga Narrow Rim Washer
16	84346	3/4" x 2-1/2" Hex Bolt
17	81701	3/4" Lock Washer
18	81700	3/4" Hex Nut

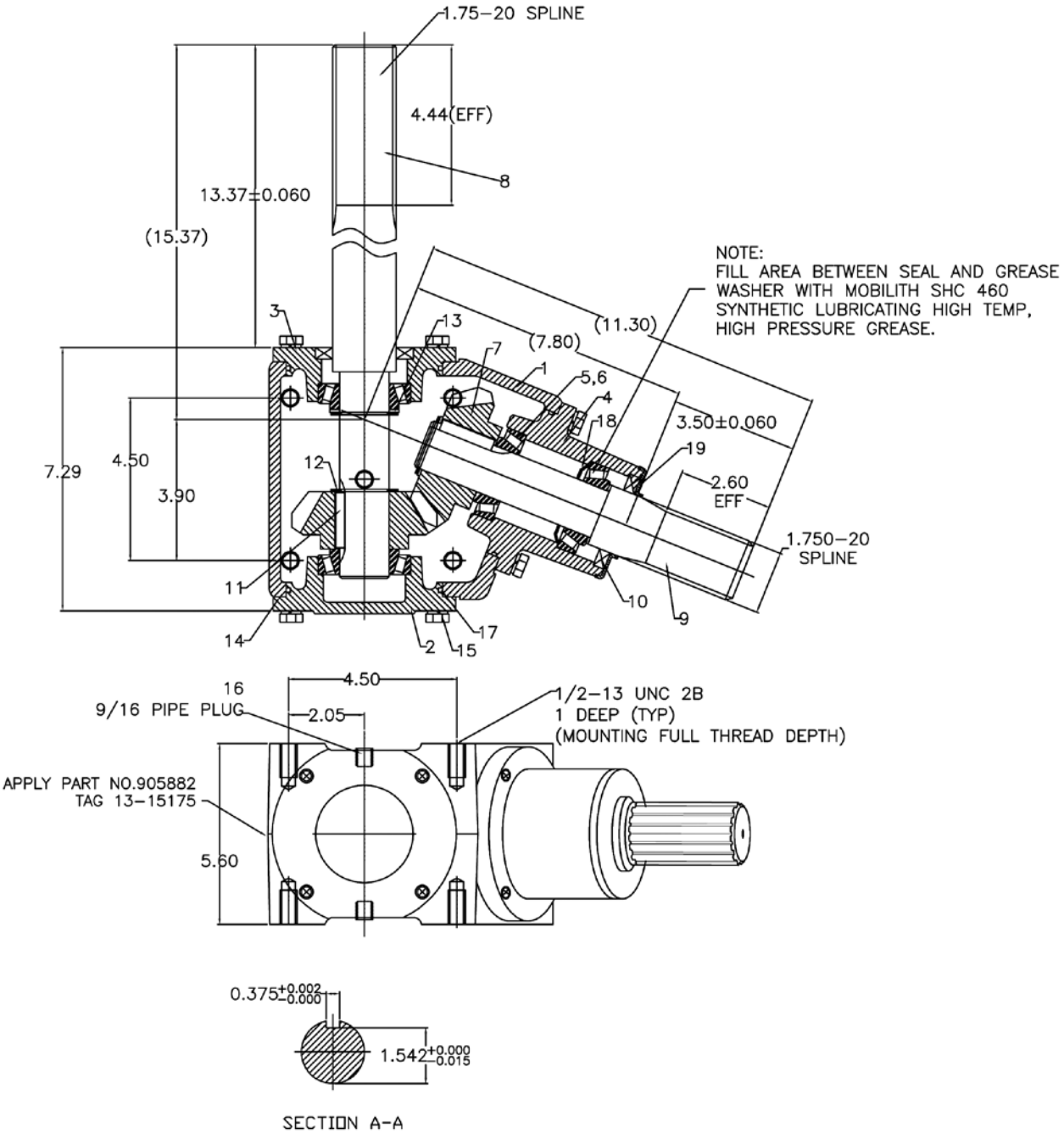
Hopper and Auger Assembly Drawing



MD-11

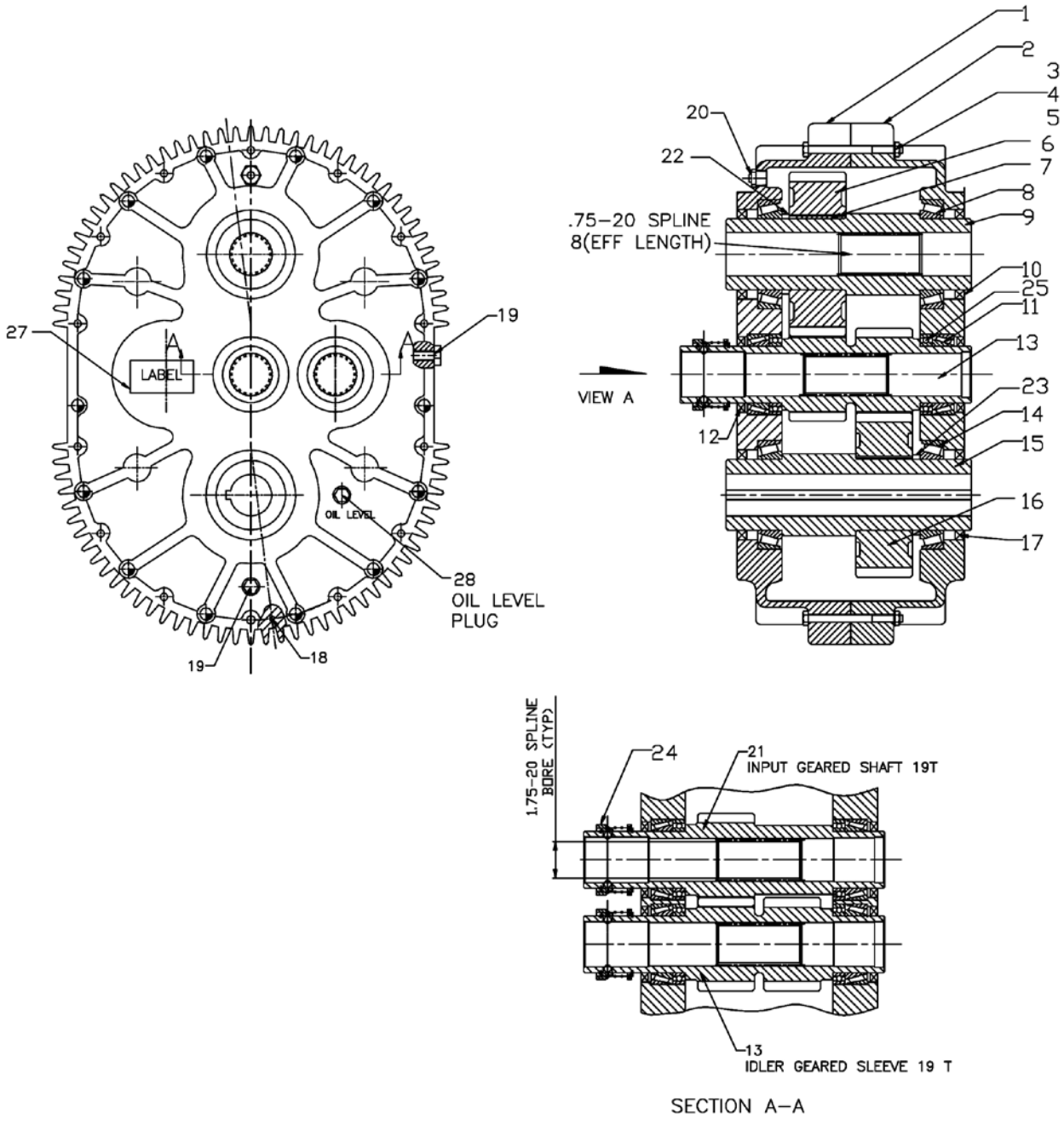
Item	Part Number	Description
1	960653	Ring Clamp
2	960494	13/32" x 1-1/4"OD Flat Washer
3	811792	3/8" x 1-1/2" Hex Bolt
4	964001	1" x 7/16" x 10GA Flat Washer
5	81593	3/8" Lock Washer
6	81592	3/8" Hex Nut
7	905788	U-Joint
8	909294	Key 3/8" x 3/8" x 1-1/4"
9	9812378	3/8" x 3/4" Square Head Set Screw (SER)
10	905879	PTO Holder
11	909195	Jack
12	904580	Safety Chain Bracket
13	906284	Hook & Safety Chain Assembly
14	967148	1" Lock Nut
15	9108493	Locking Pin
16	12779	#9 Hair Pin Clip
17	906015	Pivot Cover
18	906017	Pivot Cover Pin
19	12780	#7 Hair Pin Clip
20	967437	3/4" x 1-5/8" Hex Bolt
21	812365	3/4" Lock Nut
22	84050	3/4" SAE Flat Washer
23	81525	1/4" x 3/4" Hex Bolt
24	81545	1/4" Lock Washer
25	81544	1/4" Hex Nut
26	F0680	PTO Shaft CV 20/21 Spline
27	81626	1/2" x 2 3/4" Hex Bolt
28	812364	1/2" Lock Nut
29	907282	U-Joint 1-1/2" Both Ends with 3/8" Keyway
30	960705	Key 3/8" Sq x 1-3/4" Lg
31	905769	Key 3/8" x 3/8" x 1-1/2"
32	988999	3/8" x 3/8" Socket Set Screw

Input Box Gearbox Drawing



Item	Part Number	Description
905882		
1	960803	Housing
2	960805	End Cap
3	909366	End Cap
4	909367	Quill
5	967208	Bearing Cone LM48548
6	968412	Bearing Cup LM48510
7	960812	Gear, DP 4.23 Teeth 17
8	909371	Shaft, Cross
9	909372	Shaft, Quill
10	909370	Seal, (1.75 x 2.717 x 0.315)
11	960821	Square Key, 5/16" x 1.61"
12	960809	Snap Ring
13	960808	Spacer
14	960815	Gasket
15	960814	Capscrew, 3/8" - 16UNC x 1.00"
16	960818	9/16" Pipe Plug w/ O-Ring
17	908895	O-Ring, 105mm x 3.1
18	960824	Grease Washer
19	909373	Shield

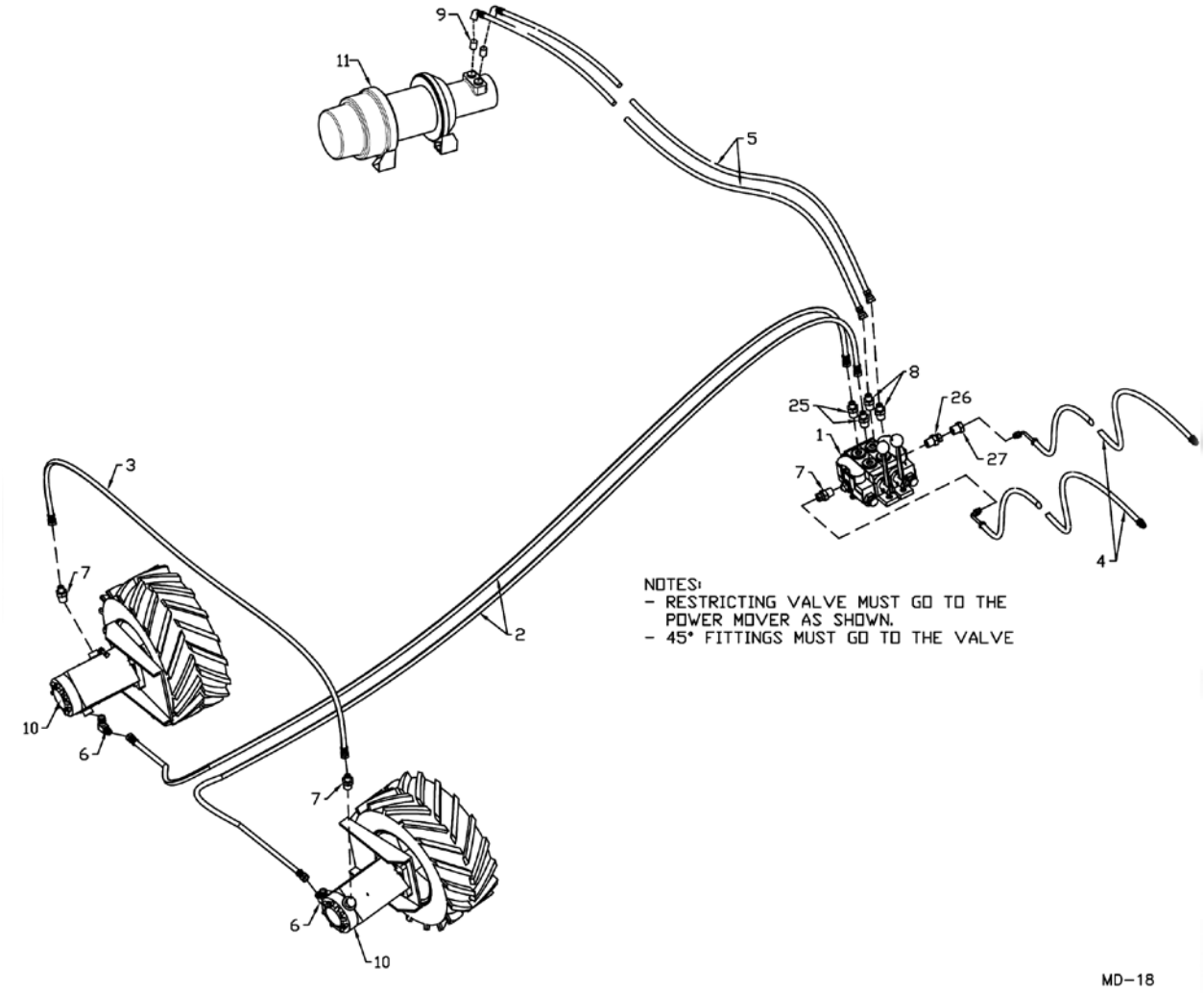
1000 RPM Gearbox Drawing

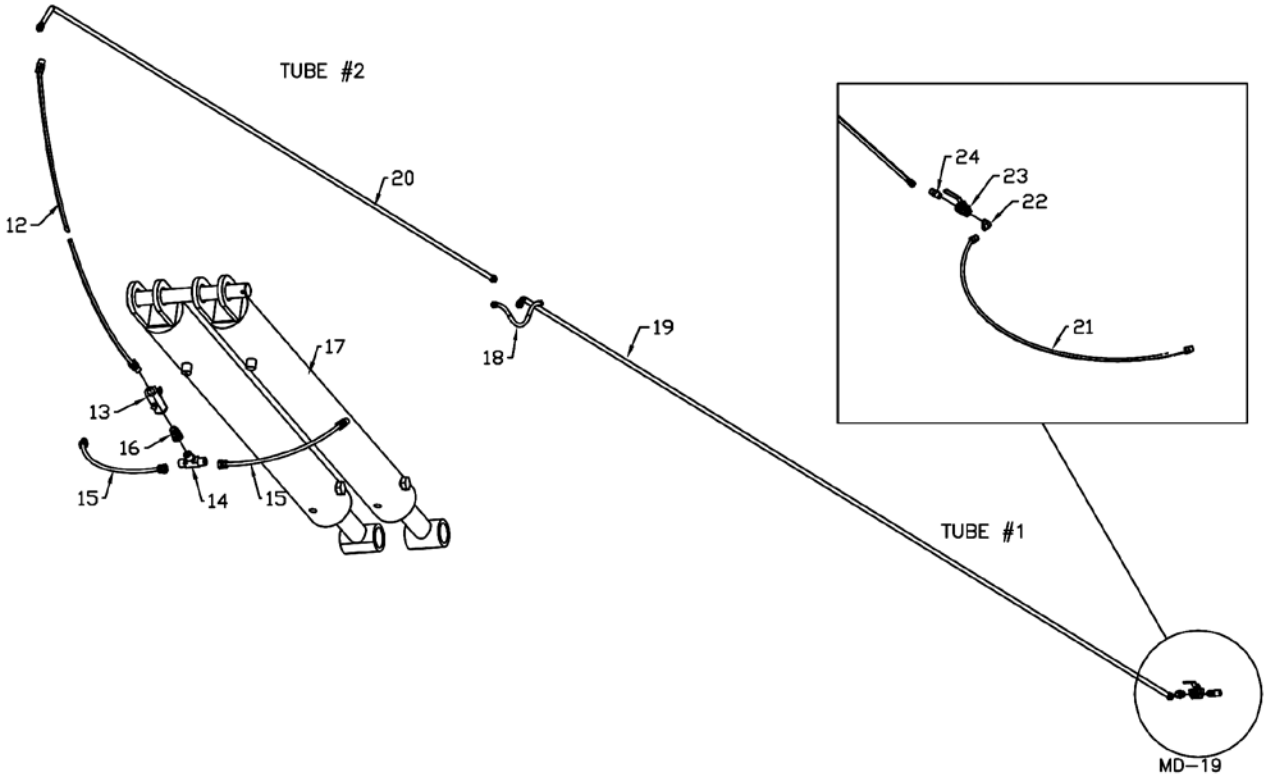


MD-12

Item	Part Number	Description
1	-	Housing (1)
2	-	Housing (2)
3	911932	Internal hex bolt 5/16" -18 UNC x 110 mm
4	81569	Spring washer 5/16"
5	81568	Nut 5/16" - 18 UNC
6	911370	Output Gear Shaft LH M2000
7	911931	Flat Key 12 x 20 x 50
8	909829	Bearing 32015
9	911367	Output shaft (2)
10	909831	Seal 75x95x10
11	909398	Bearing 32912
12	909399	Seal 60x80x10
13	911368	Mid Gear Shaft RH M2000
14	909829	Bearing 32015
15	911366	Output shaft (1)
16	911370	Output Gear Shaft LH M2000
17	909831	Seal 75x95x10
18	911933	Locate pin Ø5 x 30
19	911358	Internal Hex Plug Z3/4" - 14
20	909833	Plug relief 3/8"
21	911369	Input Gear Shaft LH M2000
22	909407	Shim 75.5x90x4
23	909407	Shim 75.5x90x4
24	911357	Locking System Kit
25	910799	Bearing 61912
26	-	3/8" NPT Pipe Plug
27	911935	Name Plate M2000
28	911365	External Hex Oil Level Plug ZG 3/8" - 19

Hydraulics Drawings




TUBE #2
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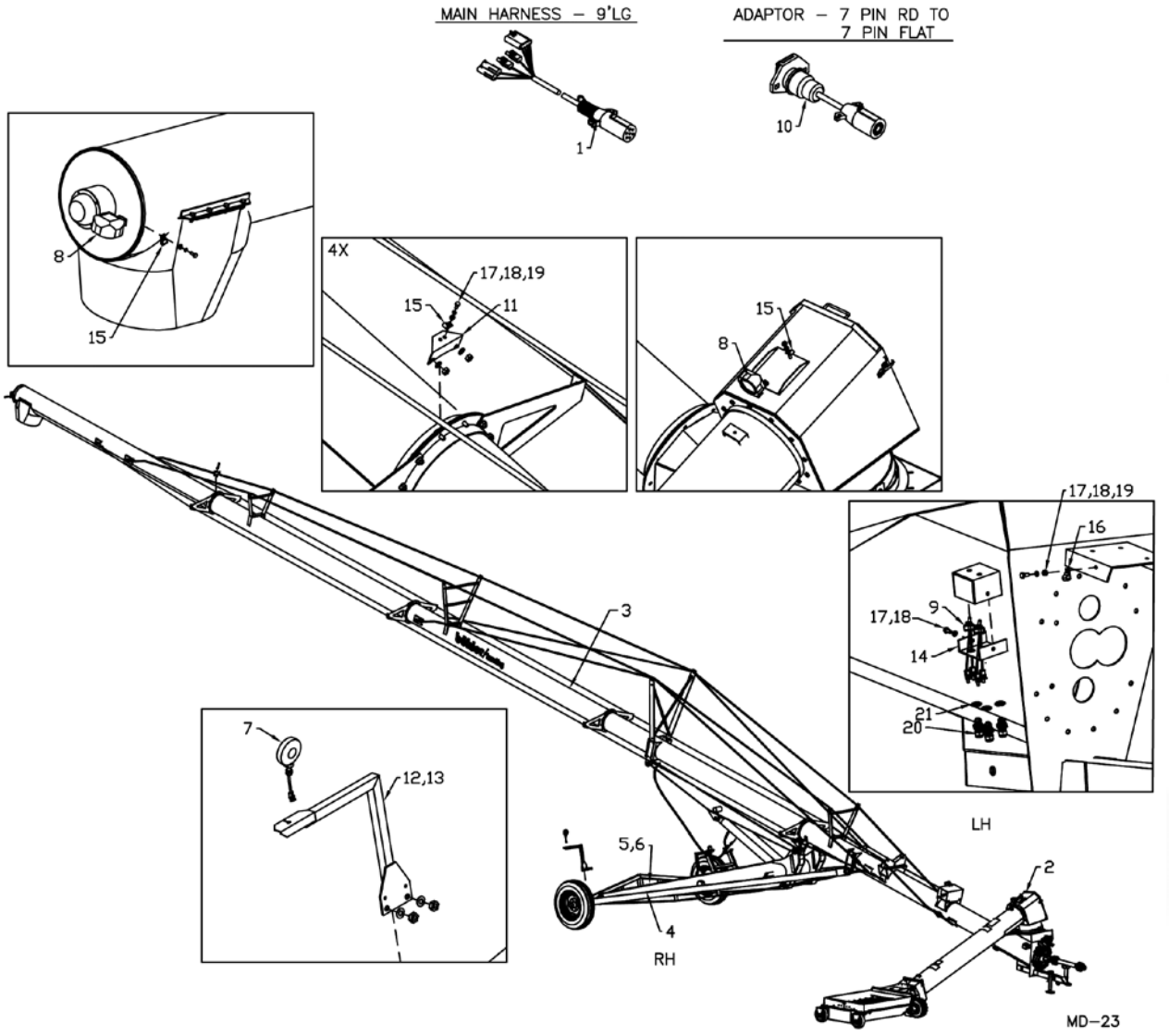
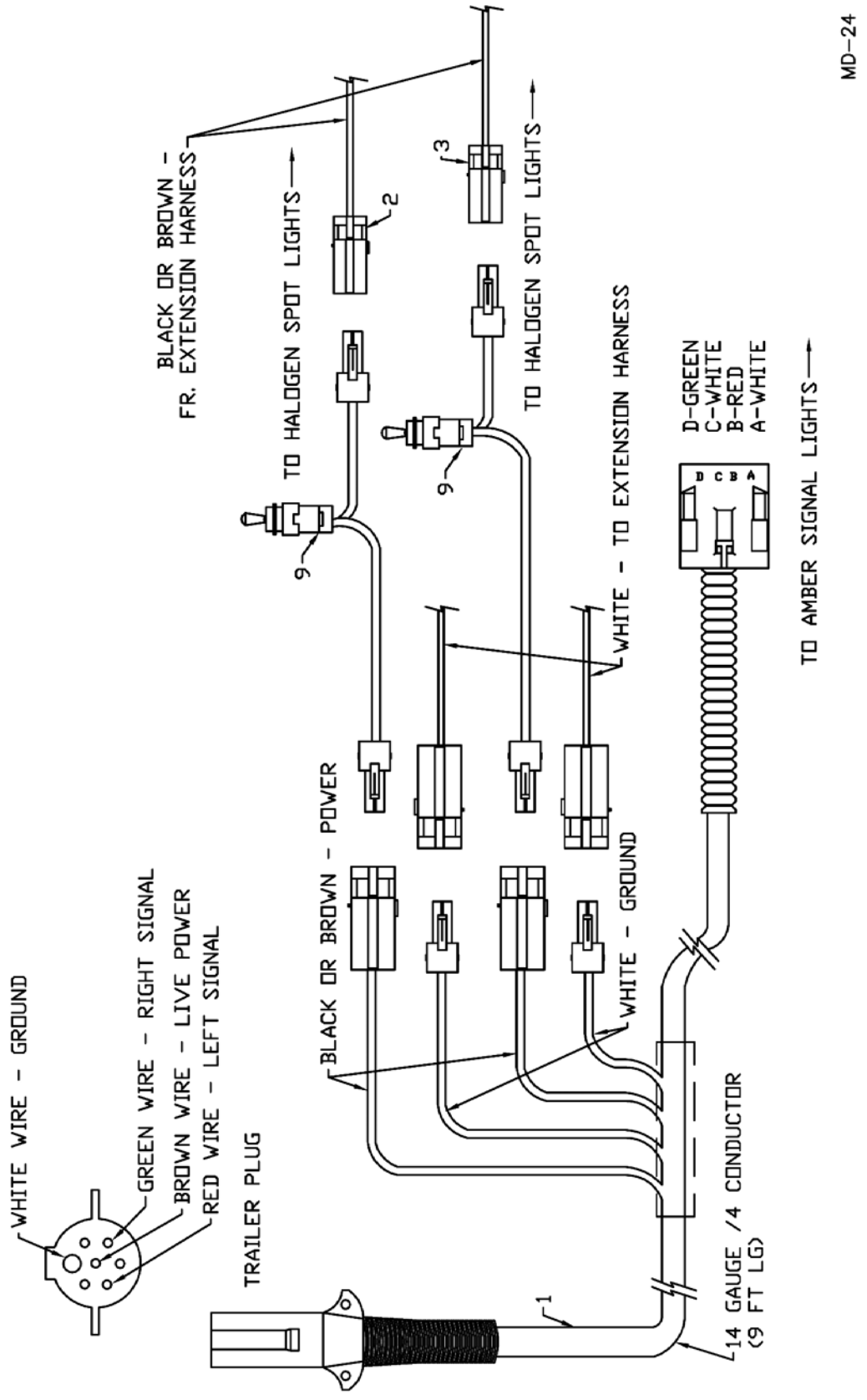
15
TUBE #1
MD-19

Item	Part Number	Description
1	909983	Hydraulic Valve Assembly - 2 Spool
2	116850	Hydraulic Hose 1/2" x 21' - 0" (3/4" FJIC x 45° 3/4" FJIC)
3	116851	Hydraulic Hose 1/2" x 79" (3/4" FJIC Both Ends)
4	116848	Hydraulic Hose 1/2" x 79" (1/2" MNPT x 90° 3/4" MJIC)
5	910494	Hydraulic Hose 1/2" x 139" (3/4" SWFJIC-90° Both Ends)
6	811960	Elbow 90° (1-1/16" MORB to 3/4" MJIC)
7	811748	Adaptor Str. (1-1/16" MORB to 3/4" MJIC)
8	886897	Adaptor Str. (7/8" MORB to 3/4" FJIC)
		(Top Of Valve - To Hydraulic Winch)
9	886897	Adaptor Str. (7/8" MORB x 3/4" MJIC)
10	909193	Hydraulic Motor 169-0093-001 - Power Mover
13	910483	Hydraulic Winch
12	116938	1/2" x 8' - 6" Hydraulic Hose (1/2" NPT; JIC)
13	960118	Flow Control Valve
14	865341	Tee 7/8" SWFJIC x 7/8" MJIC
15	906103	1/2" x 12" Hyd Hose (3/4" MORB; 1/2" FNPT)
16	960152	Adaptor str. 1/2" MNPT x 7/8" MJIC
17	F0664	Cylinder 5.00 x 55.35 w/ 3-1/2" Shaft
18	960162	1/2" x 18" Hydraulic Hose (Both Ends JIC)
19	906104	Hyd Tube 5/8" x 230" Lg w/ MJIC Both Ends
20	906105	Hyd Tube 5/8" OD x 162" Lg w/ MJIC Both Ends
21	967463	1/2" x 120" Hd. Hose (Both Ends Solids & 1/2" NPT)
22	960585	1/2" x 90° Street Elbow (Stl.)
23	960057	1/2" Ball Valve
24	960152	Adaptor (JIC to 1/2" NPT)
25	909460	Adaptor Str. Restricting (7/8" MORB to 3/4" MJIC) (Top of Valve - To Power Mover)
26	909936	Adaptor Str. (#12 MORB to #8 FORB)
27	909935	Check Valve (Flow #8 MORB to #8 MJIC)

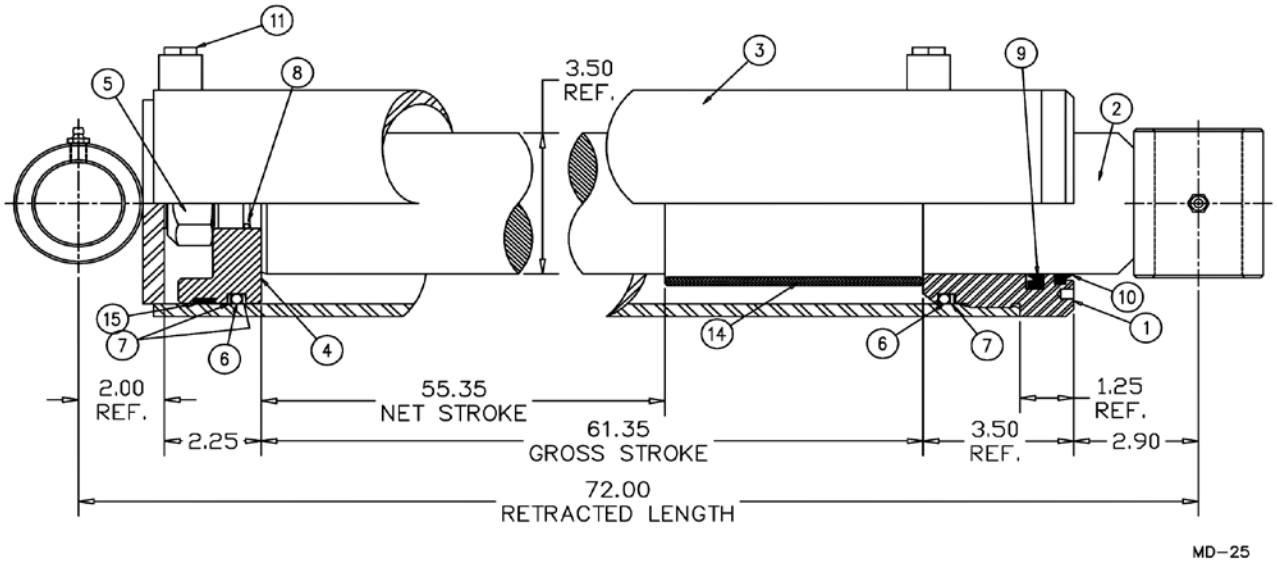
Light Kit Drawings




WHITE WIRE - GROUND
GREEN WIRE - RIGHT SIGNAL
BROWN WIRE - LIVE POWER
RED WIRE - LEFT SIGNAL
TRAILER PLUG
BLACK OR BROWN - FR. EXTENSION HARNESS
TO HALOGEN SPOT LIGHTS
TO HALOGEN SPOT LIGHTS
BLACK OR BROWN - POWER
WHITE - TO EXTENSION HARNESS
WHITE - GROUND
D-GREEN
C-WHITE
B-RED
A-WHITE
TO AMBER SIGNAL LIGHTS
14 GAUGE /4 CONDUCTOR (9 FT LG)
MD-24

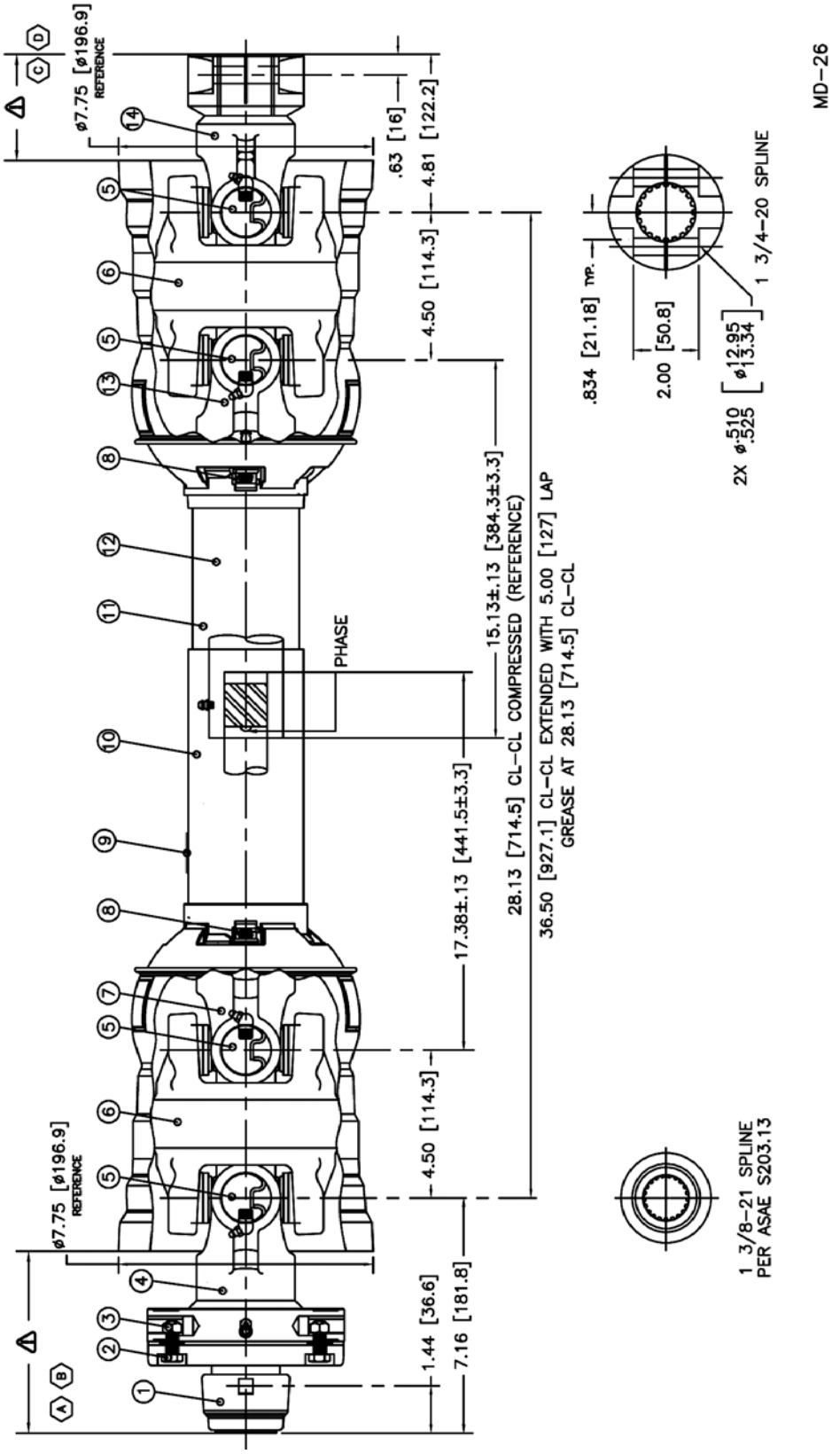
Item	Part Number	Description
Light & Harness Kit (909209)		
1	909414	Main Harness, 9' - 0" Lg
2	909415	Ext. Harness to Halogen Lamp, 5' - 6" Lg
3	909416	Ext. Harness to Halogen Lamp, 107' - 0" Lg
4	909417	Main Extention Harness To Amber Lamps, 45' - 0" Lg
5	909418	Ext. Harness #1 to Amber Lamp - 13' - 0"
6	909419	Ext. Harness #2 to Amber Lamp, 2' - 6" Lg
7	909420	Amber Lamp
8	909421	Halogen Lamp
9	909422	Switch - Weather Proof
10	909423	Adaptor, 7 Pin Rd to 7 Pin Flat
Brackets & Mounts		
11	909219	Cable Bracket 4-25/32" x 6"
12	909226	Blinker Mount Weld't - Rh
13	909227	Blinker Mount Weld't - Lh
14	909231	Light Switch Box Btm Pl 4" x 7-1/2"
15	JDCAH89557	Clip
16	JDCAH78237	Clip, Plastisol
17	81549	5/16" x 3/4" Hex Bolt (pl)
18	81569	5/16" Lock Washer (pl)
19	81568	5/16" Hex Nut (pl)
20	908916	1/2" Strain Relief Connector
21	909427	Lock Nut, Strain Relief Connector

5.00 x 55.35 Cylinder Assembly



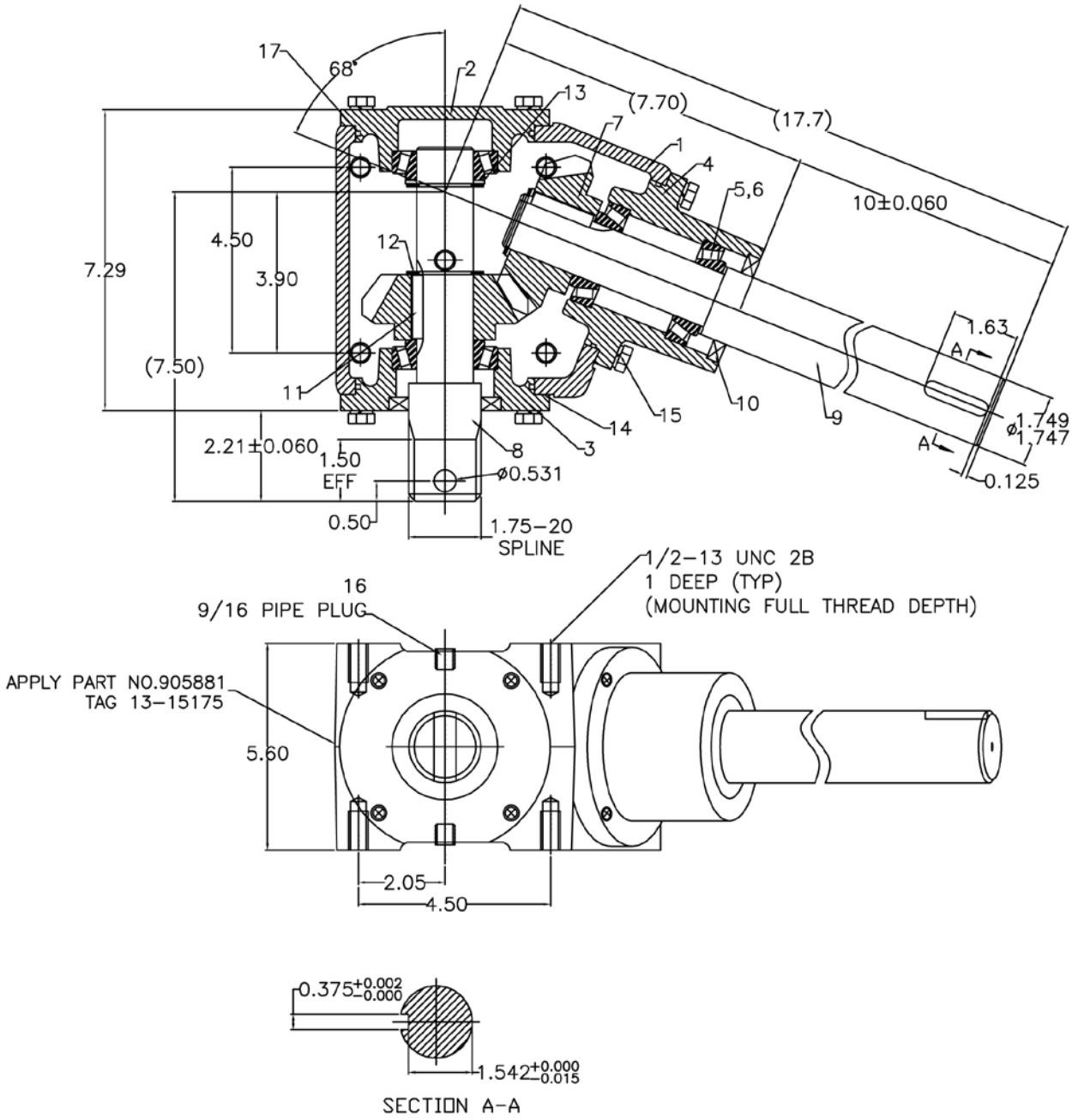
Item	Part Number	Description
F0664		
1	25123	5.0 Dia. Head plate
2	116817	Shaft Weldment 3.5 OD x 70.00 Lg
3	25329	5.0 Dia. Tube Weld't
4	116818	5.0 Dia. Piston
5	87557	Locknut 1.25 UNF
6	82425	O-Ring 4.50 ID x 5.00 OD x 0.085
7	83425	Backup 4.50 ID x 5.00 OD x 0.085
8	82214	O-Ring 1.00 ID x 1.25 OD 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 Lg
15	814406	Wear Ring 5.00 OD x 4.75 ID x 0.500 W

PTO Drawing


MD-26
ø7.75 [ø196.9] REFERENCE
.63 [16]
4.81 [122.2]
4.50 [114.3]
15.13±.13 [384.3±3.3]
28.13 [714.5] CL-CL COMPRESSED (REFERENCE)
36.50 [927.1] CL-CL EXTENDED WITH 5.00 [127] LAP
GREASE AT 28.13 [714.5] CL-CL
PHASE
17.38±.13 [441.5±3.3]
4.50 [114.3]
ø7.75 [ø196.9] REFERENCE
1.44 [36.6]
7.16 [181.8]
.834 [21.18] TYP.
2.00 [50.8]
2X ø.510/.525 [ø12.95/13.34]
1 3/4-20 SPLINE
1 3/8-21 SPLINE PER ASAE S203.13

Item	Part Number	Description
F0680		
	909354	Joint & Shaft Half - Tractor
	909355	Joint & Tube Half - Implement
1	936433	SSL/Auto-Lock Repair Kit
2	967270	Bolt, .375-16 x 1.00 Lg., Gr. 8
3	812363	Lock Nut, .375-16
4	909358	Ball Shear ASM.
5	906505	55E Cross & Bearing Kit
6	936436	Center Housing
7	909359	Yoke & Shaft (1.31 Square)
8	908844	Guard Repair Kit
9	909360	Safety Sign
10	909361	Outer Guard
11	909362	Inner Guard
12	909363	Safety Sign (Not Shown)
13	909364	Yoke, Tube & Slip Sleeve
14	909365	Yoke

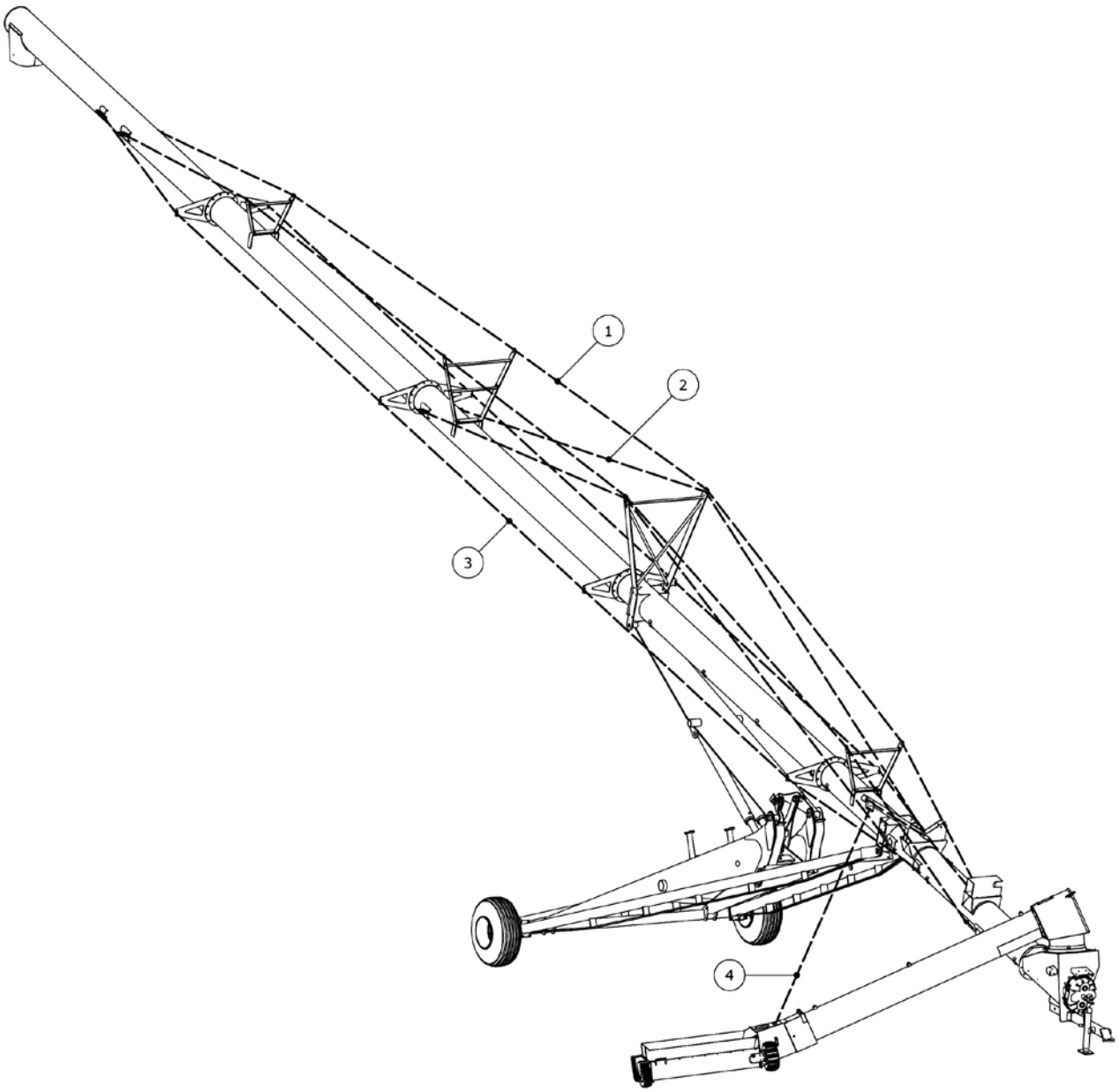
Intake Auger Gearbox Drawing



MD–27

Item	Part Number	Description
	905881	Complete Gearbox
1	960803	Housing
2	960805	End Cap
3	909366	End Cap
4	909367	Quill
5	967208	Bearing Cone LM48548
6	968412	Bearing Cup LM48510
7	960812	Gear, DP 4.23Teeth 17
8	909368	Shaft, Cross
9	909369	Shaft, Quill
10	909370	Seal, (1.75 x 2.717 x 0.315)
11	960821	Square Key, 5/16" x 1.61"
12	960809	Snap Ring
13	960808	Spacer
14	960815	Gasket
15	960814	Capscrew, 3/8" - 16UNC x 1.00"
16	960818	9/16" Pipe Plug w/ O-Ring
17	908895	O-Ring, 105mm x 3.1

Cables Drawing



Item	Part Number	Description
1	906059	Upper Bridging Cable Assembled 85' - 4"
	906058	Upper Bridging Cable Only 87' - 0"
2	906057	Lower Bridging Cable Assembled 48' - 0"
	906056	Lower Bridging Cable Only 49' - 8"
3	906045	Side Bridging Cable Assembled 79' - 0"
	906044	Side Bridging Cable Only 80' - 8"
4	906066	Winch Cable Assembly 3/8" x 40' - 0"

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
Y16104 - 16" x 104' Backsaver Auger		
1	F0808	Intake Auger Assembly
1	F0109	Multi-flighting Hopper Assembly
1	F0807	Input Box
1	F0934	Crate of Parts
1	F0846	Tube #1 Assembly
1	F0847	Tube #2 Assembly
1	F0848	Tube #3 Assembly
1	F0849	Tube #4 Assembly
1	F0850	Tube #5 Assembly
1	F0611	Lower Lift Right
1	F0612	Lower Lift Left
2	F0679	Wheel and Tire Assembly
1	905732	Undercarriage Left
1	905733	Undercarriage Right
1	905745	Axle
1	908445	Upper Lift Arm

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.

www.farm-king.com

Farm King

301 Mountain Street South
Morden, Manitoba Canada R6M 1X7
Ph.: 204.822.4467 | Fax: 204.822.6348
Toll Free: 888.524.1004
E-mail: info@buhler.com
www.farm-king.com

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