

SPRING 2017



# CHOPPERRR *Operator's Manual*

**MODERN**  
AG PRODUCTS, LTD.

YOU'RE ALWAYS AHEAD...WITH A MODERN BEHIND.

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*Go Galvanized!*

# **SAFETY SECTION**

# SAFETY SECTION

**The SAFETY ALERT SYMBOL**  indicates that there is a potential hazard to personal safety involved and extra safety precautions must be taken. When you see this symbol on your machine or in this manual, be alert and carefully read the message that follows it.

**DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.

**WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

## OPERATION

### **DANGER**

Driveline shields and gearbox shields should be used and maintained in good working condition.

Do not mount or dismount the spreader while the tractor is moving. Mount and dismount the tractor only when it is completely stopped.

Do not turn sharp enough to get severe "knocking" of the driveline which will cause accelerated wear and breakage of drive train components and possible injury from the separated driveline sections.

Never allow riders on either tractor or spreader. Falling can be fatal.

### **DANGER**

Never allow children to operate or ride on the tractor or spreader.

Never work under the spreader unless it is securely supported or blocked up. A sudden or inadvertent fall by any of these components could cause serious injury or death.

### **WARNING**

Before leaving the tractor seat, always engage the brake and or set the tractor transmission in parking gear. Disengage the PTO, stop the engine, remove the key, and wait for all moving parts to stop. Place the tractor shift lever into a low range or parking gear to prevent the tractor from rolling. Never mount or dismount a moving tractor. Operate the tractor controls from the tractor seat only.

The rotating parts of this machine continue to rotate even after the PTO has been turned off. The operator should remain in his seat for 60 seconds after the brake has been set, the PTO disengaged, the tractor turned off, and all evidence of rotation has ceased. "Wait a minute... Save a life!"

Remove hydraulic pressure, disengage the PTO and turn off engine prior to doing any maintenance.

Inspect the entire machine periodically. Look for loose fasteners, worn or broken parts. Make sure all pins have cotter pins and washers. Serious injury may occur from not maintaining this machine in good working order.

# SAFETY SECTION

## **WARNING**

Never operate the tractor and spreader until you have read and completely understood this manual, the tractor operator's manual, and each of the Safety Messages found on the decals on the tractor and spreader.

Always maintain the safety decals in good readable condition. If the decal become damaged or unreadable, order replacement decals immediately.

## **CAUTION**

It may be necessary to shorten PTO shaft before operation to prevent damage to gear-box, shaft or operator.

**PROLONGED EXPOSURE TO LOUD NOISE MAY CAUSE PERMANENT HEARING LOSS.**

Tractors with or without spreaders attached can often be noisy enough to cause permanent, partial hearing loss. We recommend that you wear hearing protection on a full time basis if the noise in the operator's position exceeds 80 db. Noise over 85 db on a long-term basis can cause severe hearing loss. Noise over 90 db adjacent to the operator over a long-term basis may cause permanent, total hearing loss. Note: hearing loss from loud noise is cumulative over a lifetime without hope of natural recovery.

## **WARNING**

### HYDRAULIC SYSTEM WARNINGS

ALWAYS release the pressure on the hydraulic system of the CHOPPERRR prior to removing the attachment from the skid steer loader or working on any part of the hydraulic system. Hydraulic hoses and components operate under extreme pressure and heat. A small stream of fluid from a pinhole leak in a hydraulic hose can penetrate the skin and/or cause burns. Whenever hydraulic

fluid is injected into the body, seek medical attention at once to reduce chances of a dangerous infection. ALWAYS wash skin with soap and water after contact with hydraulic fluid, as it is an irritant to skin and eyes.

## **WARNING**

CHOPPERRR rotary cutters have been designed to reduce the likelihood of hydraulic system leakage. Each and every hydraulic system is checked prior to shipment. However, over time, any hydraulic system may develop fluid leaks. Very small leaks may produce high-pressure discharge flows capable of causing injury should skin come in contact with such discharge. Leaking fluid can make the deck and ground surfaces very slippery, causing difficulty in using tools and also increasing the possibility of slips and falls. ALWAYS wipe away all fluid that may have leaked during maintenance.

## **WARNING**

NEVER operate a CHOPPERRR rotary cutter on a "high-flow" skid steer loader unless the cutter is equipped with a "high-flow" motor. Motor failure can occur if such use is performed. CHOPPERRR is NOT RESPONSIBLE for damage incurred to the hydraulic motor due to "high-flow" usage. Please refer to the front cover of the manual for the maximum allowable flow for your CHOPPERRR rotary cutter.

# SAFETY SECTION

## 490-9000 Decal Sheet contains:

- (1) Warning: To Prevent Injury
- (2) Rotating Blades Keep Away
- (1) Rotating Driveline Hazard
- (1) Danger: Read Operator Manual
- (1) Thrown Object Hazard
- (1) Lubricate Gearbox



490-EAGLE



490-1031

# **OPERATING INSTRUCTIONS**

# OPERATING INSTRUCTIONS

## **OPERATING INSTRUCTIONS** **ATTACHMENT OF MACHINE**

The installation of your CHOPPERRR rotary cutter is the same for any other powered attachment for your skid steer loader:

1. Pull up to the rotary cutter and connect it to your skid steer loader.
2. Secure the lock down lever or levers.
3. Connect the hydraulic hoses from the rotary cutter to your machine. The hoses provided are equipped with quick-disconnect fittings (both male and female) for ease of use.

## **CUTTING OPERATION**

The CHOPPERRR rotary cutter is capable of, and in fact intended to be utilized for, mulching trees and other vegetation of varying heights and diameters of up to 3" – 4". As a safety feature, when cutting large diameter vegetation, the CHOPPERRR rotary cutter is equipped with a hydraulic motor cushion valve for shut down of the blade system. This feature lessens the chance of damaging the cutter's hydraulic system or blade system when cutting larger diameter vegetation. Directions for use are as follows:

## **CUTTING GROUND LEVEL** **VEGETATION**

Raise the rear of the CHOPPERRR rotary cutter approximately 4" – 5" above ground level. The deck of the rotary cutter should be sloping downward and away from the operator. This is the optimum position for cutting materials that are close to the ground.

***Please note: If the operator can see the blade system in operation, the back of the rotary cutter is raised TOO HIGH!***

## **CUTTING ABOVE GROUND LEVEL** **VEGETATION**

Raise the front deck of the CHOPPERRR rotary cutter up approximately 1' – 2' above ground level. Do not lift the rear portion of the deck. Keep it approximately 4" – 5" above ground level. Slowly drive into the vegetation and use the hydraulic tilt (roll) the bend or push the vegetation over. As you bend the vegetation over and drive into it, the blades will cut it into. The vegetation can now be mulched by rotating the front of the rotary cutter and driving forward several feet. Then roll the back of the cutter down and back-drag atop the vegetation.

# **REPAIR AND MAINTENANCE INSTRUCTIONS**

# REPAIR AND MAINTENANCE INSTRUCTIONS



## **PRE-MAINTENANCE & REPAIR STEPS**

Prior to performing any repair or maintenance work on your CHOPPERRR, make sure that the following steps are ALWAYS followed:

1. Visually verify that the lock-down pins are fully engaged through the quick attach.
2. Release the pressure on the rotary cutter's hydraulic hoses.
3. Turn the skid steer loader engine off.
4. Disconnect the hydraulic hoses that connect to the skid steer loader.

## **BLADE REMOVAL**

1. Follow all steps in the "Pre-Maintenance & Repair Steps" at the top of this page.
2. SLOWLY rotate the blade carrier until the blade-attaching nut is aligned in the access hole.
3. From the top of the deck, insert a socket through the access hole onto the blade nut. Remove the nut and insure that the blade drops to the ground. Repeat the process for the remaining blades.
4. After the nuts have been removed and the blades have dropped, back up the skid steer loader and CHOPPERRR to retrieve the blades.
5. After retrieving the blades, lower the CHOPPERRR back to the ground and shut the skid steer loader engine down.
6. Inspect the blades for damage and determine if the blades need to be sharpened or replaced.



**Safety Note: When sharpening or replacing the cutting blades, all blades must be either sharpened or replaced to ensure proper blade balancing. NEVER mix sharpened blades with new blades.**

## **BLADE INSTALLATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps" at the top of this page.
2. Tilt the front of the CHOPPERRR up.
3. Securely position a 4" x 4" post, or equivalent strength strut, under the front of the CHOPPERRR and SLOWLY rotate the blade carrier until the blade-attaching nut is aligned in the access hole. In lieu of using a 4" x 4" post or other strut, the rotary cutter can be leaned against the trunk of a large tree and allowed to stay in such position until the blade holder is removed. If the latter method is chosen, remember to scotch or chock the skid steer loader's tires with a brick, log or other appropriate strength item.
4. Insert the bolt up through the hole in the blade and the blade holder. Insert the lock-washer and nut through the access hole and hand-tighten.
5. Use the socket to finish tightening the nut through the access hole that is located on top of the deck. The nut should be tightened with a torque wrench to 200 ft-lbs.
6. Carefully remove the 4" x 4" or other strut and lower the CHOPPERRR to the ground.

# REPAIR AND MAINTENANCE INSTRUCTIONS

## **BLADE HOLDER REMOVAL**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 5*
2. Tilt the CHOPPERRR deck at a near vertical angle. Carefully and securely position a 4" x 4" post, or equivalent strength strut, under the rear portion of the CHOPPERRR deck. In lieu of using a 4" x 4" post or other strut, the front portion of the rotary cutter's deck can be leaned against the trunk of a large tree and allowed to stay in such position until the blade holder is removed. If the latter method is chosen, remember to scotch or chock the skid steer loader's tires with a brick, log or other appropriate strength item.
3. Remove the cotter pin and castle nut that secures the blade holder to the gearbox. Be careful in performing this step, as it is possible that the blade holder will fall and cause bodily damage.
4. Restart the skid steer loader's engine and slowly but firmly strike (if required) the bottom portion of the rotary cutter's deck on the ground. Repeatedly strike the rotary cutter on the ground until the blade holder falls off.

## **BLADE HOLDER INSTALLATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 5*
2. Reposition the CHOPPERRR in a near vertical position. Position the strut back under the rear portion of the deck, or lean the front portion of the deck back against the tree.
3. Carefully place the blade holder back into position on the shaft of the gearbox, making sure that the splines in the shaft match up to the grooves on the shaft. Be careful in performing this step as it is possible that the blade holder can fall and cause bodily damage.
4. Screw the castle nut back onto the shaft and place the cotter pin back into the hole on the shaft. Remember to bend at least one of the prongs on the cotter pin.

## **HYDRAULIC HOSE REMOVAL**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 5*
2. Mark or otherwise document the proper location of each hose. The hoses can be identified by either having a male or a female quick-disconnect coupling.
3. Using a crescent wrench, loosen the hose connectors at the motor.

## **HYDRAULIC HOSE INSTALLATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 5*
2. Identify the proper location for each hose on the hydraulic motor.
3. Hand-tighten each hose connector. Perform final tightening with a crescent wrench.

***Note: DO NOT use Teflon tape or any other thread bonding material when installing the hoses into the hydraulic motor.***

## **QUICK-DISCONNECT COUPLING REMOVAL**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 5*
2. Using masking tape, label each hose with a mark indicating which coupling was on it.
3. Use two crescent wrenches to remove the quick-disconnect couplings. One will be used on the hose end and the other will be used on the coupling.

# REPAIR AND MAINTENANCE INSTRUCTIONS

## **QUICK-DISCONNECT COUPLING INSTALLATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 9*
2. Refer to the masking tape used in the previous step for reference of the location of each quick-disconnect coupling.
3. Apply either Teflon tape or another thread bonding material to the threads of the hose end.
4. Hand-tighten each quick-disconnect coupling onto each hose. Use two crescent wrenches to tighten each coupling. One will be used on the hose end and the other will be used on the coupling.

## **HYDRAULIC MOTOR REMOVAL**

1. Follow all steps in the "Pre-Maintenance & Repair Steps" at the top of Page 8.
2. Remove the hydraulic hoses (if required) according to the directions above.
3. Loosen the bolts that attach the hydraulic motor to the gearbox and remove the motor.

## **HYDRAULIC MOTOR INSTALLATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps" at the top of Page 8.
2. Place the hydraulic motor atop the gearbox in the original position, making sure to line the bolt holes up.
3. Secure the motor to the gearbox with the bolts removed in the previous step.

## **GEARBOX REMOVAL**

1. Follow all steps in the "Pre-Maintenance & Repair Steps". *see page 5*
2. Remove the blade holder according to the directions above.
3. Remove the hydraulic motor and hoses according to the directions above.
4. Unbolt the nuts that hold the gearbox to the deck of the rotary cutter.

## **GEARBOX INSTALLATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps" at the top of Page 8.
2. Secure the gearbox to the deck using the nuts removed in the previous step.
3. Mount the hydraulic motor to the gearbox according to the directions above.
4. Mount the blade holder to the underside of the gearbox according to the directions above.

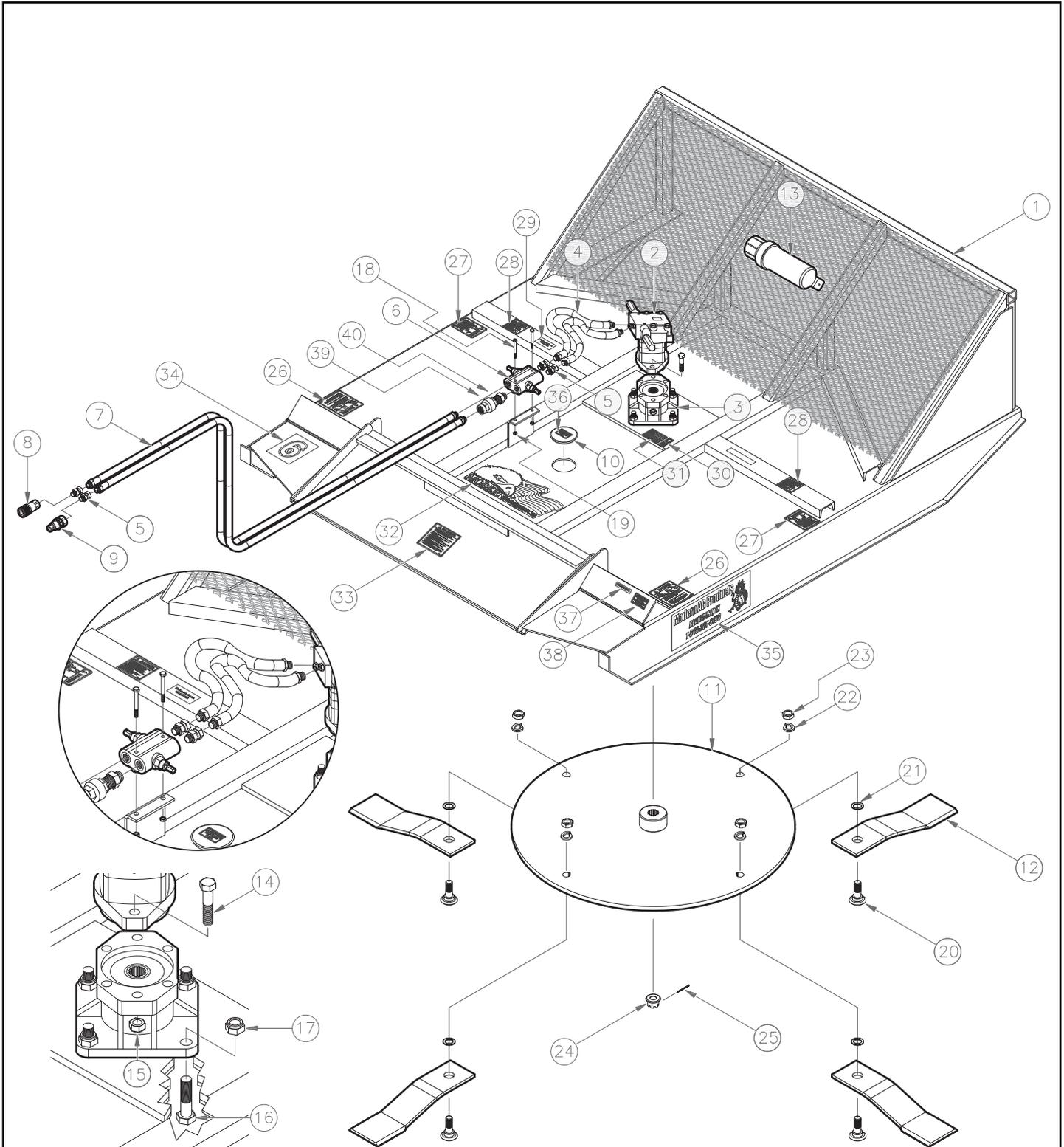
## **GEARBOX LUBRICATION**

1. Follow all steps in the "Pre-Maintenance & Repair Steps" at the top of Page 8.
2. Unscrew one of the two plugs that are located at the base of the gearbox near the deck.
3. Fill the housing with gear oil EP85W-140. It is ok, but not necessary to use an EP oil. Fill enough oil to lube both bearings, which means the housing is almost full.
4. Screw the grease plug back into the threaded hole.

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# **ASSEMBLY/PARTS SECTION**

# ASSEMBLY/PARTS SECTION



HARDWARE CLOSE-UP  
OF CHAR-LYNN MOTOR TO  
GEAR BOX.

\*Effective February 27, 2020 Skid Steer cutters will be built using 262-1163 & 227-5055. This change will follow all cutter going forward beginning with serial number "110064".

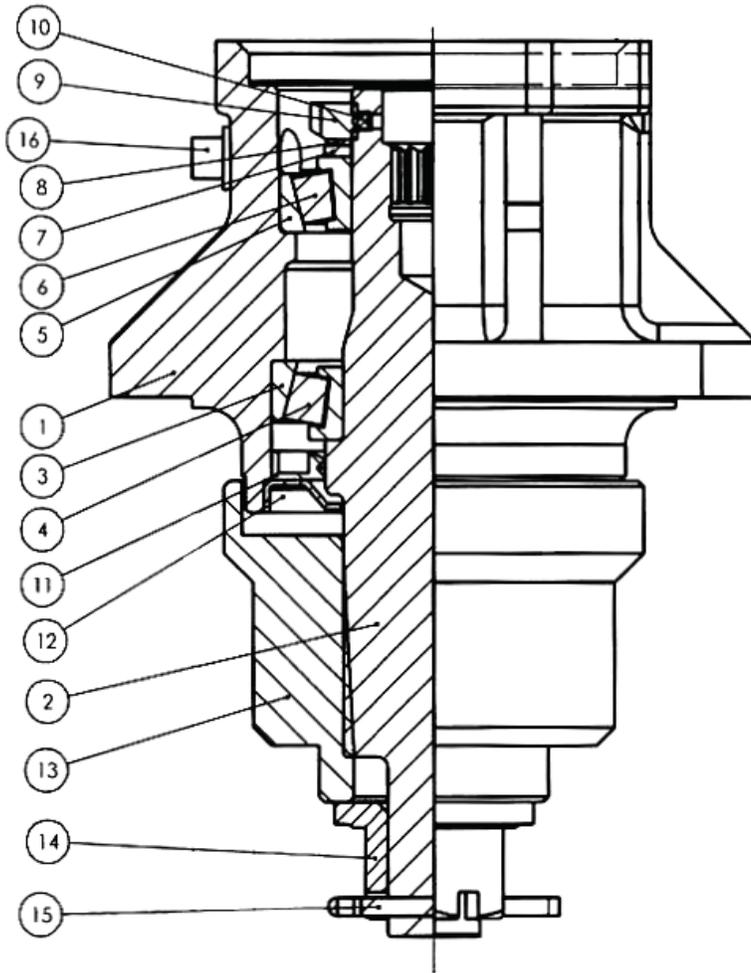
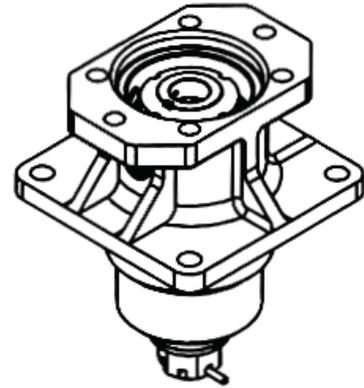
## ASSEMBLY/PARTS SECTION

### 6' Skid Steer Mower (Chopper) Parts List

Item	Part Number	Description	Qty
1.....	401-6SKIDSTEER .....	6' SKID STEER BODY .....	1
2.....	104-3654-006 .....	CHAR-LYNN MOTOR .....	1
3.....	401-0179 .....	GEAR BOX, MDH-40 .....	1
4.....	415-0160 .....	16" HOSE, 3/4" MPT X 7/8" ORB 14.....	2
5.....	50-118 .....	ST SWIVEL ADAPTER, 3/4MPT : 3/4FPT .....	4
6.....	262-1161 .....	CUSHION VALVE DRV-2HH.....	1
7.....	415-0096 .....	96" HOSE, 3/4MPT X 3/4MPT.....	2
8.....	227-5053 .....	COUPLER, 1/2 FM PIPE 1/2-14NPSF .....	1
9.....	227-5054 .....	NIPPLE, 1/2 FM PIPE 1/2-14NPSF .....	1
10.....	116-1656 .....	MOWER DECK PLUG .....	1
11.....	115-8019 .....	STUMP JUMPER, SKID STEER 41" .....	1
12.....	401-0156 .....	BLADE.....	4
13.....	412-9099 .....	MANUAL HOLDER.....	1
14.....	412-2007 .....	BOLT, 9/16"-12 X 2-1/2" GR8.....	2
15.....	412-2006 .....	TOP LOCK NUT, 9/16"-12 .....	2
16.....	412-0023-02 .....	TAP BOLT, 5/8" X 2" GR5.....	4
17.....	412-5284 .....	HEX NUT, 5/8-11 NC NYLOCK.....	4
18.....	400-0018 .....	BOLT, 5/16" X 3" UNC GR8.....	2
19.....	620-5 .....	HEX NUT, 5/16" .....	2
20.....	125-907 .....	BLADE BOLT, 1-1/8" BB70.....	4
21.....	830-1018NH .....	WASHER W/ KEYWAY .....	4
22.....	900-8771 .....	LOCK WASHER, 1-1/8" .....	4
23.....	125-925 .....	JAM NUT, 1-1/8" GR8.....	4
24.....	MDH40-120050.....	NUT, HEX SLOTTED, 1-14UNS .....	1
25.....	501-0940 .....	COTTER PIN .....	1
*26.....	M400 .....	DECAL, DANGER ROTATING BLADES .....	2
*27.....	M600 .....	DECAL, DANGER THROWN OBJECTS .....	2
28.....	490-5010 .....	DECAL, DANGER DO NOT OPERATE .....	1
29.....	490-2003 .....	DECAL, MODERN ATTACHMENTS .....	1
30.....	490-FEMA.....	DECAL, FEMA MEMBER.....	1
31.....	490-1023 .....	DECAL, US FLAG.....	1
32.....	490-EAGLE .....	DECAL, EAGLE MADE IN AMERICA .....	1
*33.....	M100 .....	DECAL, TO PREVENT SERIOUS INJURY .....	1
34.....	490-1105 .....	DECAL, "6" .....	1
*35.....	490-1031 .....	DECAL, MODERN AG PRODUCTS .....	2
36.....	490-1024 .....	DECAL, CAUTION KEEP HANDS CLEAR .....	1
*37.....	.....	DECAL, MODERN MFG .....	1
38.....	490-GALVCOAT.....	DECAL, CAUTION GALVANIZED COATING .....	2
39.....	262-1163.....	Check Valve CV075 .....	1
40.....	227-5055.....	Hex Nipple .....	1
(*).....	<b>490-9000.....</b>	<b>DECAL SHEET (CONTAINS ITEMS #26,#27,#33,#35 &amp; #37)</b>	

**ITEMS IN THIS SHEET ARE SOLD AS A SET ONLY. SEE PAGE 5.**

# ASSEMBLY/PARTS SECTION

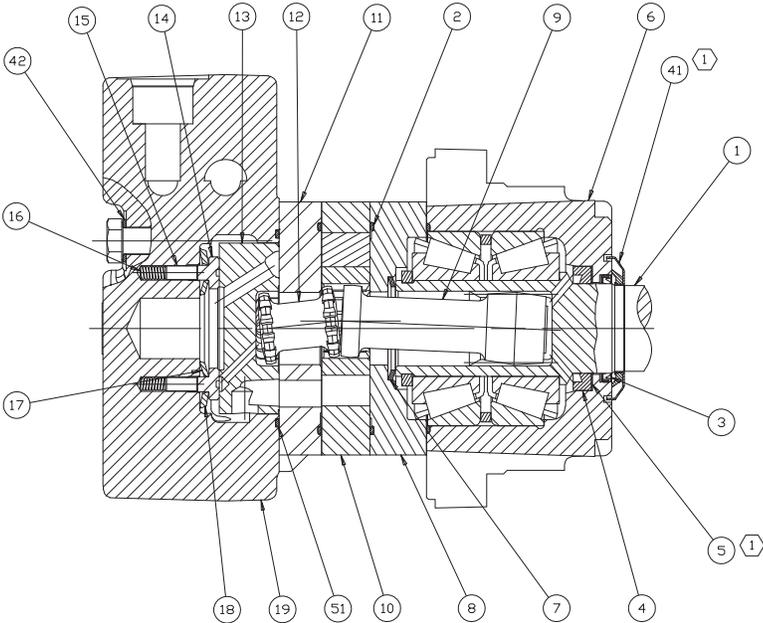
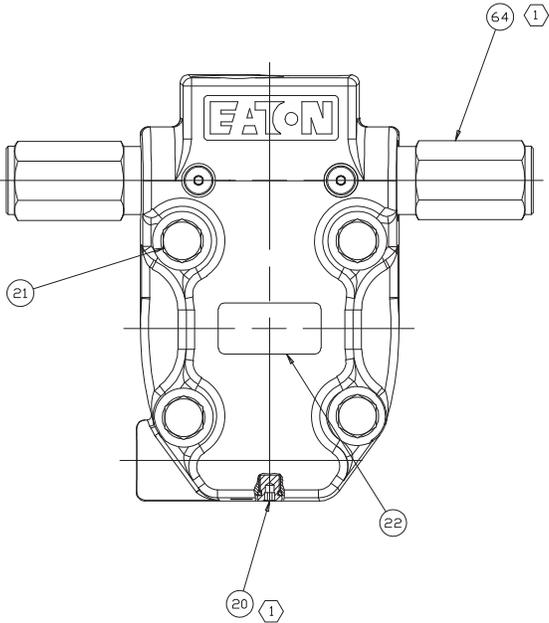
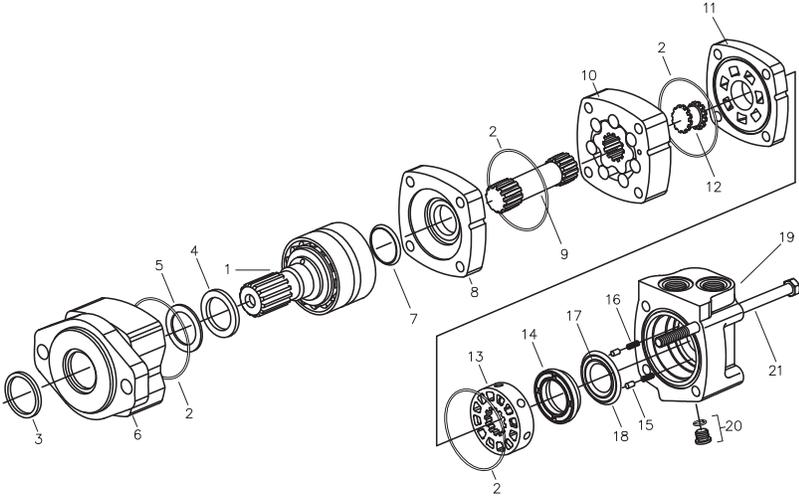


## ASSEMBLY/PARTS SECTION

### 401-0179 Gearbox MDH-40 Parts List

Item	Part Number	Description	Qty
1.....		HOUSING, MDH-40 .....	1
2.....	MDH40-040778.....	SHAFT-13Z INPUT SPLINE-11 .....	1
3.....	MDH40-050200.....	BEARING, CUP 30210Y .....	1
4.....	MDH40-050201.....	BEARING, CONE 30210X.....	1
5.....	MDH40-050239.....	BEARING, CUP 30209Y .....	1
6.....	MDH40-050240.....	BEARING, CONE 30209X.....	1
7.....	MDH40-090464.....	WASHER WITH TANG .....	1
8.....	MDH40-130099.....	LOCK WASHER, M45 .....	1
9.....	MDH40-120136.....	LOCKNUT, M45 X 1.5 BEARING .....	1
10.....	MDH40-110304.....	SET SCREW, M5 .....	2
11.....	MDH40-060183.....	LIP SEAL-OUTPUT .....	1
12.....	MDH40-240567.....	SEAL PROTECTOR .....	1
13.....	MDH40-210034.....	BLADE HUB 15T ....(Reference only not included W/GB).....	1
14.....	MDH40-120050.....	NUT, HEX SLOTTED, 1-14UNS .....	1
15.....	MDH40-100001.....	COTTER PIN 5MM X 50MM.....	1
16.....	MDH40-140023.....	PLUG, PIPE SQUARE HEAD, 3/8" -18NPT.....	2

# ASSEMBLY/PARTS SECTION



## ASSEMBLY/PARTS SECTION

### 104-3654-006 Char-Lynn Motor Parts List

Item	Part Number	Description	Qty
1.....	21618-007 .....	SHAFT SUB-ASSEMBLY .....	1
2 .....	4999136-001 .....	SEAL .....	4
3.....	9121-001 .....	SEAL, SHAFT EXCLUSION .....	1
4.....	9057-009 .....	SEAL, SHAFT.....	1
5.....	7382-000 .....	BACK-UP RING.....	1
6.....	21578-001 .....	HOUSING, BEARING .....	1
7.....	9050-000 .....	SEAL, SHAFT FACE .....	1
8.....	22102-000 .....	PLATE, WEAR.....	1
9 .....	21371-010 .....	DRIVE.....	1
10.....	21625-002 .....	GEROLER SUB-ASSEMBLY .....	1
11.....	22134-000 .....	PLATE, VALVE.....	1
12.....	8433-000 .....	DRIVE, VALVE .....	1
13 .....	21466-000 .....	VALVE.....	1
14.....	8915-000 .....	PLATE, BALANCING.....	1
15.....	14351-000 .....	PIN .....	2
16.....	7383-000 .....	SPRING .....	2
17.....	9049-001 .....	SEAL, INNER FACE .....	1
18.....	9135-002 .....	SEAL, OUTER FACE .....	1
19.....	4994646-007 .....	HOUSING, VALVE S/A .....	1
20.....	9072-003 .....	PLUG SUB-ASSEMBLY.....	1
21.....	14384-006 .....	SCREW, CAP .....	4
22.....	9029-007 .....	PLATE, NAME .....	1
42.....	16048-184 .....	WASHER .....	4
51.....	250002-039 .....	SEAL.....	1
64.....	02-199293 .....	RELIEF VALVE S/A .....	2
	16096-610 .....	PLUG, SHIPPING (NOT SHOWN) .....	1

**LIMITED WARRANTY  
POLICY & REGISTRATION**

# LIMITED WARRANTY POLICY & REGISTRATION

Modern, Inc. warrants its products for a period of one year after date of sale by authorized dealer to be free from defects in material and workmanship, and will replace at its factory, any parts that will be returned, with shipping charges prepaid, and when examined by us, will disclose it to be defective. This warranty will not apply to implements or parts that have been subjected to misuse, negligence, accident, or that have been altered or repaired.

1. Parts may not be returned without authorization by ModernAg Products.
2. All products returned under warranty inspection claim must be returned PREPAID to our factory.
3. Our obligation under the above warranty is limited to repair or replacement at our factory of any part or parts which Modern, Inc. decides to be defective.
4. Products or parts that have been examined by Modern, Inc. and determined to be improperly operated, damaged by accident or negligence, field repaired or altered, are not covered by this warranty.
5. Modern, Inc. reserves the right to change our specification and designs at any time.
6. This warranty will not obligate Modern, Inc. to bear any cost of labor for field replacement, testing, or adjustment.

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**DEALER: I hereby certify that:**

1. The machine has been correctly assembled in accordance with manufacturers instructions.
2. All bolts have been checked and tightened.
3. All other pre-delivery checks have been completed as per operators manual.
4. Purchaser was given operators manual and instructed in safe and correct usage of machine and on limitation of warranty.
5. Machine was tested and operates correctly.

**PURCHASER: I hereby certify that:**

1. The machine is correctly assembled.
2. Receipt of the operators manual which I have read and clearly understood.
3. I have a clear understanding of the warranty limitations.
4. I have a clear understanding on the correct and safe operation of the machine
5. That the machine needs regular maintenance as per instructions in operators manual.
6. I have a clear understanding on the capacity of this machine and am aware of its limitations.

MODEL \_\_\_\_\_ SERIAL # \_\_\_\_\_

DEALER \_\_\_\_\_ DATE DELIVERED \_\_\_\_\_

DEALER'S STAMP

MAIL TO:

PURCHASERS ADDRESS: