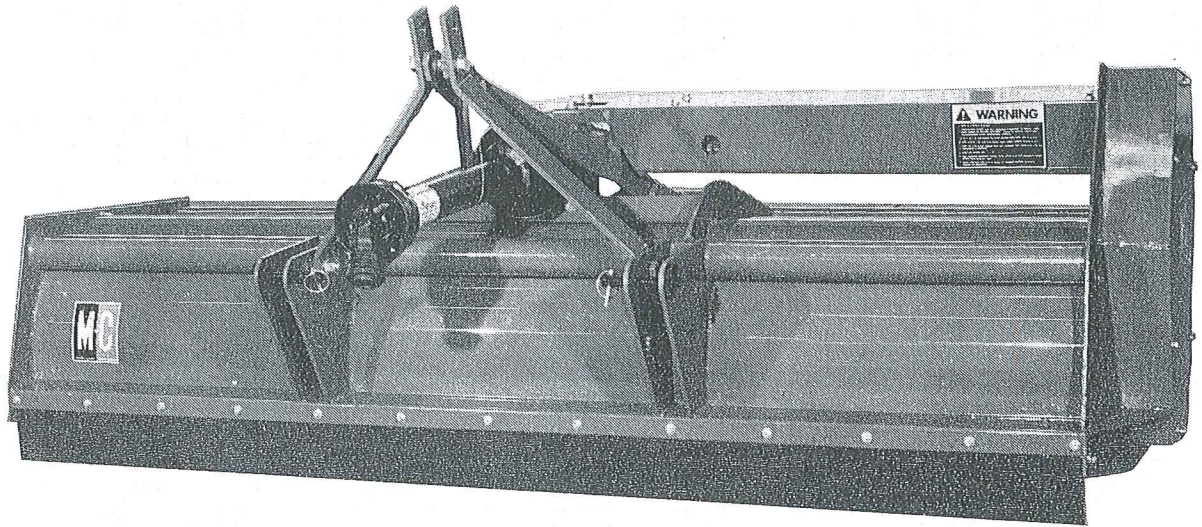


\$5.00



Flail Mower

(Starting with S/N 54709)



OPERATOR'S and PARTS MANUAL

MODEL 72 CL, 88 CL, & 88 OL

Form No.: FM 315 - APRIL 1995

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INTRODUCTION

TO THE OWNER

Before operating your Flail Mower, read the Operating, Adjustment and Maintenance instructions in this manual. Check each item referred to and become familiar with the adjustments and/or settings required to obtain efficient operation and maximum trouble-free service.

WORK SAFELY



This symbol is used to call your attention to instructions concerning your personal safety. Be sure to observe and follow these instructions.

WARRANTY REGISTRATION

It is important to send in your warranty registration card as soon as your new Flail Mower is delivered. Not only does the card validate your warranty, but it is also our way of knowing who has purchased M-C equipment so that we can keep in touch with you.

MODEL AND SERIAL NUMBER LOCATION

The model and serial number of your Flail Mower are stamped on a plate located to the left of the gearbox on the gearbox angle (rear). (See Figure 1.) For future reference, record the model and serial number in the blank spaces in Figure 2.

PARTS ORDERING INSTRUCTIONS

Order parts from your local M-C dealer or distributor.

Always furnish the Flail Mower model and serial number. This information is stamped on the serial number plate.

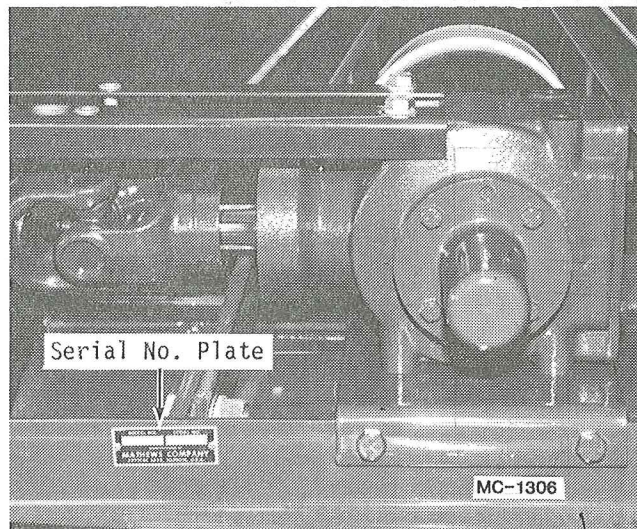


Figure 1



M-C 003





Figure 2

CAPSCREW GRADE IDENTIFICATION

There are four grades of hex-head capscrews. Grade 1 and 2 are common capscrews, grade 5 and grade 8 are used when greater strength is required. Each grade can be identified by the marking on the head of the capscrew, see chart below.

When servicing the Mower and/or replacing capscrews, be sure to use the correct size and grade. If in doubt, refer to the parts list. If a specific grade is not shown as part of the description, the capscrew is a grade 1 or 2.

CAPSCREW GRADE IDENTIFICATION CHART

S.A.E. Grade	Description	Capscrew Head Marking*
1	WILL HAVE A PLAIN HEAD - NO RADIAL LINES	
2	Low or Medium Carbon Steel Not Heat Treated	
5	WILL HAVE 3 RADIAL LINES Quenched and Tempered Medium Carbon Steel	
8	WILL HAVE 6 RADIAL LINES Quenched and Tempered Special Carbon or Alloy Steel	

*The center marking identifies the capscrew manufacturer.

Metric (SI) Measurements

(English Units & Metric (SI) Equivalents)

Area

1 square inch = 6.4516 square centimeters
 1 square foot = 0.0929 square meters
 1 square yard = 0.8361 square meters
 1 acre = 4047 square meters
 1 acre = 0.4047 hectare

Force

1 pound (force) = 4.45 newtons

Length

1 inch = 25.4 millimeters
 1 inch = 2.54 centimeters
 1 foot = 304.8 millimeters
 1 foot = 30.5 centimeters
 1 foot = 0.305 meters
 1 yard = 0.9144 meters
 1 mile = 1.6093 kilometers

Mass

1 ounce = 28.35 grams
 1 pound = 0.454 kilograms
 1 ton = 907.1848 kilograms

Power

1 horsepower = 0.7457 kilowatts

Pressure

1 psi = 6.89 kilopascals
 1 psi = 0.00689 megapascals
 1 inch of mercury = 3.377 kilopascals

Temperature

1 degree Fahrenheit ($^{\circ}\text{F} - 32$) \div 1.8 = $^{\circ}\text{Celsius}$

Torque

1 inch pound = 0.113 newton meters
 1 foot pound = 1.356 newton meters

Velocity

1 mile per hour = 1.61 kilometers per hour

Volume

1 bushel = 35.24 liters
 1 bushel = 0.0352 cubic meters
 1 pint = 0.4731 liters
 1 quart = 0.9464 liters
 1 gallon = 3.7854 liters
 1 cubic inch = 16.387 cubic centimeters
 1 cubic foot = 0.0283 cubic meters
 1 cubic yard = 0.7646 cubic meters

NOTE: The Mathews Company reserves the right to incorporate any changes in design without obligation to make these changes on units previously sold.

SET-UP INSTRUCTIONS

GENERAL

Before beginning to set up your Mower, read the set-up instructions carefully to become familiar with the machine.

Check to make sure that you have received all parts listed on your packing list and/or machine order. Make claims for any shortages immediately.

ROTOR ROTATION

1. The Mower is shipped from the factory with the rotor set for forward rotation. The rotor will turn in the same direction as ground travel. (See Figure 21-24, page 16.)

RIGHT or LEFT and FRONT or REAR of the Mower is determined by standing behind the Mower. (See Figure 3.)

Assemble the Mower on a solid flat level surface to insure safety and to aid in aligning parts during assembly.

IMPORTANT: Never lift or handle the Mower by the rotor. Also, when shipping, never use the rotor as an anchor point to tie the Mower down.



CAUTION: Do not work on or under the mower while the mower is in a raised position without supporting it with blocks or safety stands.

THREE-POINT HITCH (See Figure 3)

1. Bolt the mast support bars to the inside of the support brackets with 3/4-10X2" capscrews (grade 5), lockwashers and hex nuts. Do not tighten the nuts.
2. Install a 3/4-10X2" (grade 5) cap-screw through the inside of the front hitch plate and mast arm and secure with lockwasher and hex nut. Do not tighten.
3. Install the other mast arm same as paragraph 2 above.

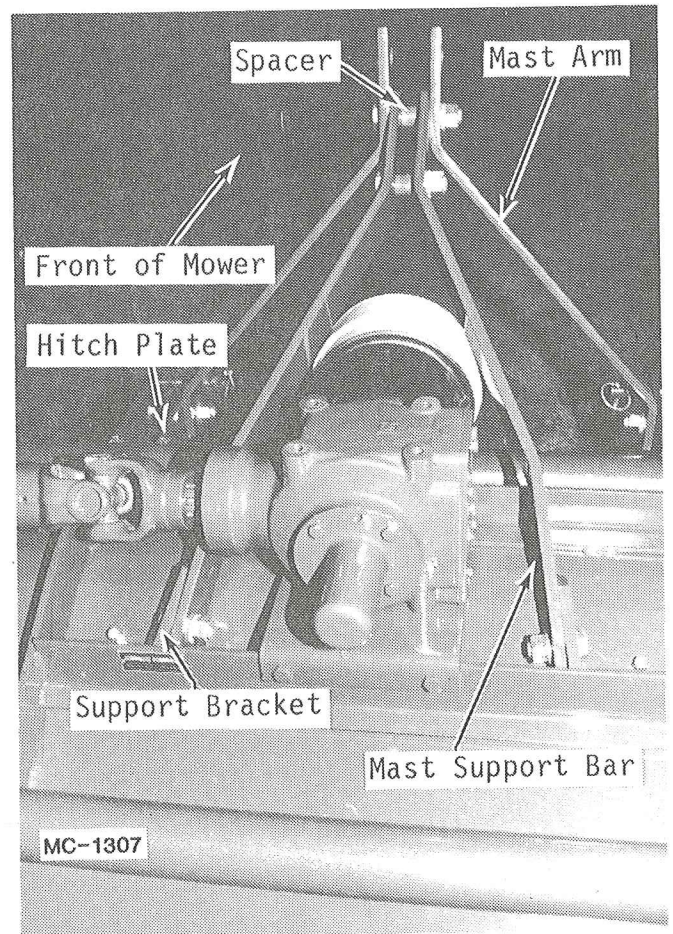


Figure 3

4. Insert the mast spacers between the mast support bars and mast arms. Secure masts with 3/4-10X4" and 3/4-10X3" capscrews (grade 5).
5. Tighten all nuts.

FRONT RUBBER FLAP

1. Install the rubber flap and retaining strip (already bolted together) on the inside of the front cover. (See Figure 4.)

The front rubber flap must be used with reverse rotor rotation. In forward rotation the front flap can be used in dry dusty conditions to help reduce dust and dry cut grass from blowing up in front of the mower.

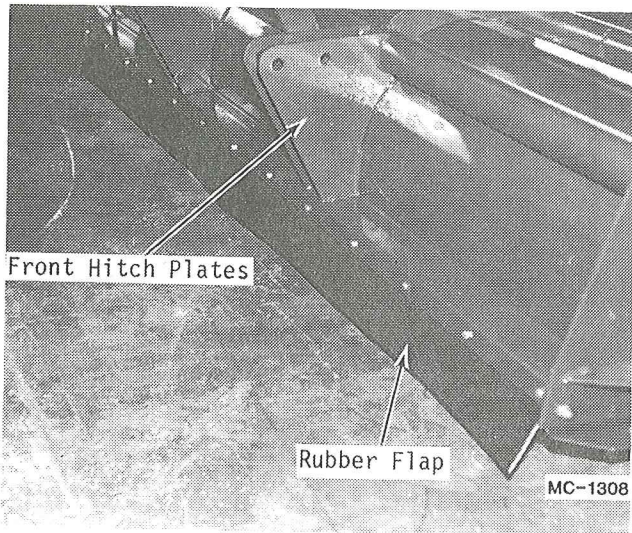


Figure 4

GAUGE ROLLER (See Figure 6)

1. Lift the back of the Mower just high enough to remove the gauge roller from its shipping position. Do not lift the Mower by the rotor.

CAUTION: Do not work on or under the mower while the mower is in a raised position without supporting it with blocks or safety stands.

Refer to page 8 for gauge roller cutting height adjustments.

2. Lift the Mower, remove the safety stands or blocking and lower the Mower to the ground.

PTO SHAFT AND GUARD

1. Remove all paint and foreign material from the gearbox splined input shaft and from both PTO shaft yokes. Be sure the quick disconnect spring-lok collar on the PTO shaft yokes are working smoothly to ensure positive locking.
2. Apply a small amount of grease to the splines of the gearbox input shaft. Install the PTO shaft onto the gearbox input shaft. Be sure the spring-lok collar is fully engaged.

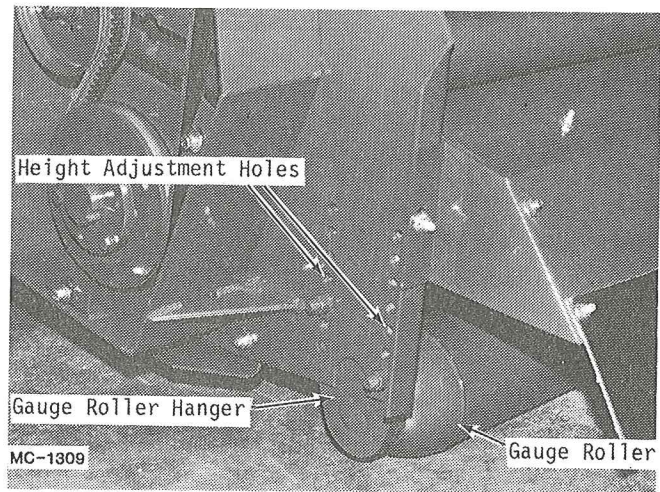


Figure 6

LUBRICATION

1. Remove the oil level plug on the right side of the gearbox and check the oil level, see Figure 5. The oil should be up to the level plug.

If the level is too low, remove the top filler plug on the gearbox and add Mobilfluid 423 multipurpose transmission lubricant or a good grade 10-20W engine oil until it runs out of the level plug hole.

Mobilfluid 423 is available from M-C in one pint containers. Order M-C part number 0008991. Install the level plug.

2. There are seven (7) grease fittings on the Mower. For grease fitting locations refer to "Lubrication" page 9. Lubricate with a hand grease gun. Do not over lubricate. Too much grease may damage the bearing seals.

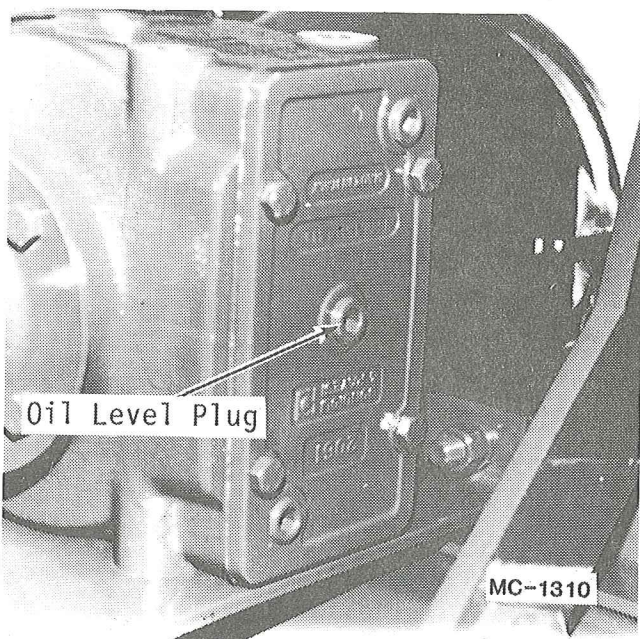


Figure 5

OPERATION

SAFETY PRECAUTIONS



A safe operator is the best insurance against accidents. The precautions listed below must be observed at all times.

- DO NOT OPERATE THE MOWER ABOVE 540 RPM POWER TAKE-OFF SPEED. TO DO SO WILL OVERSPEED THE ROTOR AND POSSIBLY CAUSE PERSONAL INJURY.
- DO NOT ALLOW CHILDREN OR BYSTANDERS ON OR AROUND THE MOWER WHILE IT IS OPERATING.
- DO NOT OPERATE THE MOWER WITH DAMAGED OR NO SAFETY SHIELDS IN PLACE AND SECURE.
- DO NOT OPERATE THE MOWER WITHOUT THE REAR STONE GUARD AND RUBBER FLAP. OPERATING WITHOUT THE STONE GUARD COULD CAUSE PERSONAL INJURY. WHEN OPERATING IN REVERSE ROTOR ROTATION (AGAINST GROUND) USE FRONT RUBBER FLAPS.
- DO NOT MAKE ANY INSPECTIONS OR ADJUSTMENTS WHILE THE MOWER IS OPERATING OR WHILE THE TRACTOR IS RUNNING.

GENERAL

1. Always start and stop the Mower slowly to prevent excessive shock loads to the belt drive assembly and rotor. Engage and disengage the tractor PTO at low engine RPM.
2. Never operate the Mower with missing or broken knives. If any knives are missing or broken, the rotor will be out of balance and the Mower will vibrate. Replace any missing or broken knives. See page 10 for procedures.



CAUTION: Before attempting to make any inspection, be sure to disengage the PTO and stop the tractor engine.

3. Before operating the Mower and after the first 2 hours of use check belt tension. Then check every other day (See page 11.)

4. A safety check should be made before operation and after 2 hours of use, then daily.
 - A. Tighten all capscrews and lock-nuts.
 - B. Inspect all knives to be sure they are not damaged and are secure.
 - C. Check to be sure that all guards and shields are in place and secure.
 - D. Inspect the gauge roller, rotor, gearbox, output drive shaft belt drive assembly and PTO shaft for signs of unusual wear or lubrication leaks that could lead to part failure.

CONNECTING THE MOWER TO THE TRACTOR

1. Back the tractor up to the Mower and attach the connection pins to the two lower links of the tractor hitch. Insert the klick pins through the connection pins. Be sure the klick pin ring is snapped down into the locking position.



WARNING: When mowing heavy or trashy material replace klick pins with bolts and locknuts.

2. Lift the Mower with the three point hitch just enough to connect the top (3rd) link to the Mower mast.
3. Connect the power take-off shaft to the tractor power take-off as follows:
 - A. Slide the collar on the yoke back to release the locking device.
 - B. Push the yoke onto the tractor PTO shaft until it bottoms.
 - C. Pull the yoke back slightly until the locking balls snap into the groove in the tractor PTO shaft.
 - D. To disconnect the PTO shaft, slide the collar back and pull the yoke off of the tractor PTO shaft.

4. Raise the Mower slowly (without the PTO running) and watch the PTO shaft to see that it does not pull apart when the mower is completely raised. Prior to operating watch that the PTO shaft does not pull apart or bottom out in uneven terrain.

IMPORTANT: If the PTO shaft bottoms out or pulls apart damage will occur to the Mower gearbox and/or PTO shaft.

5. Raising the mower higher than necessary will cause the PTO shaft universal joints to be at a greater angle. This could cause excessive wear and premature failure of the universal joints if the tractor PTO is engaged.

IMPORTANT: Never drop the Mower, always lower it slowly. Constant dropping may cause premature gauge roller bearing failure.

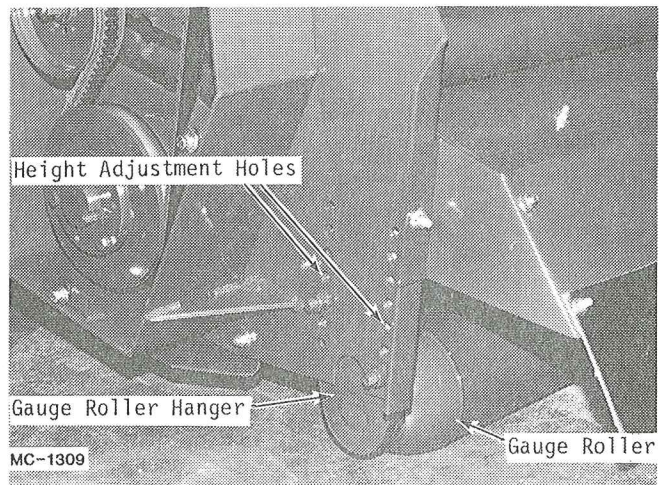


Figure 7 - Gauge Roller

IMPORTANT

RUN THE MOWER AT A LOW RPM CHECKING TO MAKE SURE THAT ALL DRIVE LINE PARTS ARE MOVING FREELY AND SMOOTHLY. ALSO CHECK OPERATION AT HIGHER RPM'S WITHIN THE OPERATING RANGE. (SEE PAGE 7.)

CUTTING HEIGHT

1. The cutting height can be adjusted by moving the gauge roller bearing brackets up or down in the adjustment holes in the Mower side plates. (See Figure 7.)
2. Lift the Mower with the tractor hydraulic system and place safety stands under the Mower body so that the gearbox is level.
3. For best operation, the Mower should be level or slightly up in the front. Level points on the Mower are the top of the hitch plates, gearbox and at the output shaft guard.

LEVELING THE MOWER

1. Level the Mower with the tractor top link adjusting screw. When adjusting top link, cutting height will change.

MOWING

1. Never operate the Mower with missing or broken knives. If any knives are missing or broken, the rotor will be out of balance and the Mower will vibrate. Replace missing or broken knives in sets. See "Knife Replacement" on page 10 for procedure.



CAUTION: Before attempting to do any maintenance or make any inspection, be sure to disengage the PTO and stop the tractor engine.

MAINTENANCE

GENERAL



CAUTION: Do not allow children or bystanders near the Mower while it is being adjusted and/or serviced.



CAUTION: Never do any maintenance on the Mower with the tractor running.

DAILY INSPECTION

1. Check all capscrews and locknuts for tightness.
2. Inspect all knives and knife hangers to be sure they are not damaged and are secure.
3. Check to be sure that all the guards and shields are in place and secure.
4. Inspect the gauge roller bearings, rotor bearings, gearbox, output shaft belt drive assembly and PTO shaft for signs of unusual wear or lubrication leaks that could lead to part failure. Also check for loose or missing stone guards or rubber flaps.

LUBRICATION

IMPORTANT: Use a hand grease gun. Grease sparingly to avoid damage to the bearing seals by forcing grease out. There are seven (7) grease fitting locations. (See page 10).

Every 8 Hours

1. Lubricate the power take-off shaft universal joints, one grease fitting in each yoke and one grease fitting in the telescoping PTO shaft. (See Figure 8).

NOTE: To locate the fitting in the telescoping PTO shaft, disconnect the PTO from the tractor PTO. Lengthen the PTO shaft until the guards pull apart and grease collar and fitting are accessible.

Every 20 Hours

1. Lubricate the rotor bearings on each end of the rotor. (See Figure 9 and 11.)

NOTE: The left rotor bearing grease fitting is behind the rotor pulley. It is necessary to remove the belt guard cover to reach this grease fitting.

2. Output shaft bearing. Remove belt guard cover to reach output shaft bearing. (See Figure 9.)
3. Output shaft universal joint. Reach through hole in output shaft guard. (See Figure 10.)

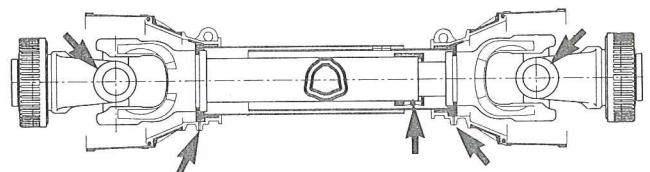
Every 100 Hours During Season

1. Remove the oil level plug on the right side of the gearbox and check the oil level. (See Figure 5.) The oil should be up to the level plug hole.
2. If the level is too low, remove the plug on top of the gearbox and add Mobilfluid 423 multipurpose transmission lubricant or a good grade 10-20W engine oil until it runs out of the side plug hole.

Mobilfluid 423 is available from M-C in one pint containers. Order M-C part number 0008991.

3. Install the side plug and top plug.

Grease points shown by arrows.



M-C 1460

Figure 8

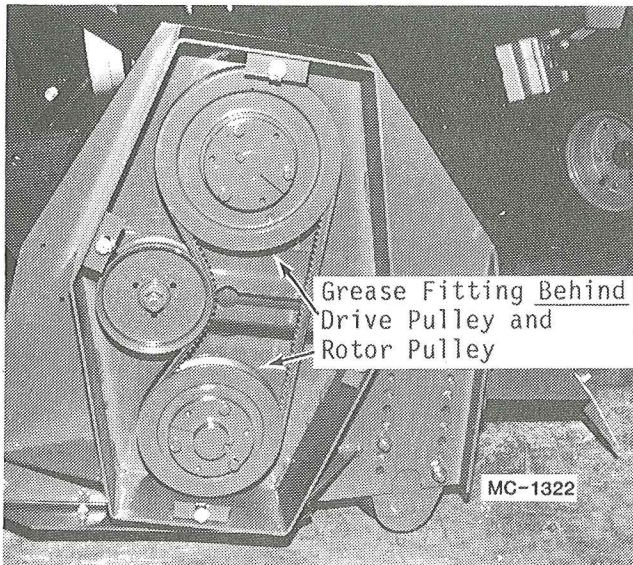


Figure 9

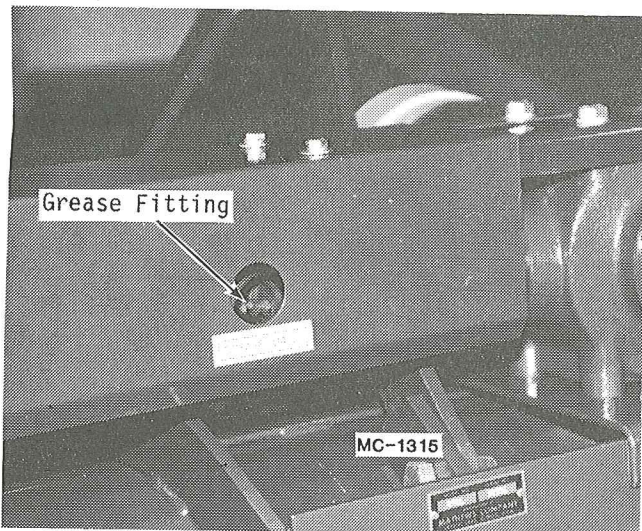


Figure 10

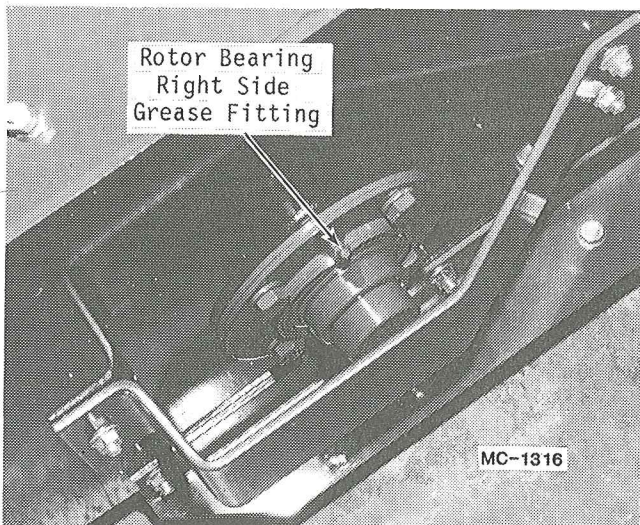


Figure 11

KNIFE AND THATCHING BLADE REPLACEMENT

1. The knives can be sharpened on an electric bench grinder if desired.



CAUTION: Always wear safety glasses when sharpening knives with a grinder.

IMPORTANT: To get the correct overlap of knives, the hangers must be installed as follows: (See Figure 12.)

- Row 1 - All hanger nuts to the left.
- Row 2 - All hanger nuts to the left.
- Row 3 - (Hidden) All hanger nuts to the right.
- Row 4 - All hanger nuts to the right.

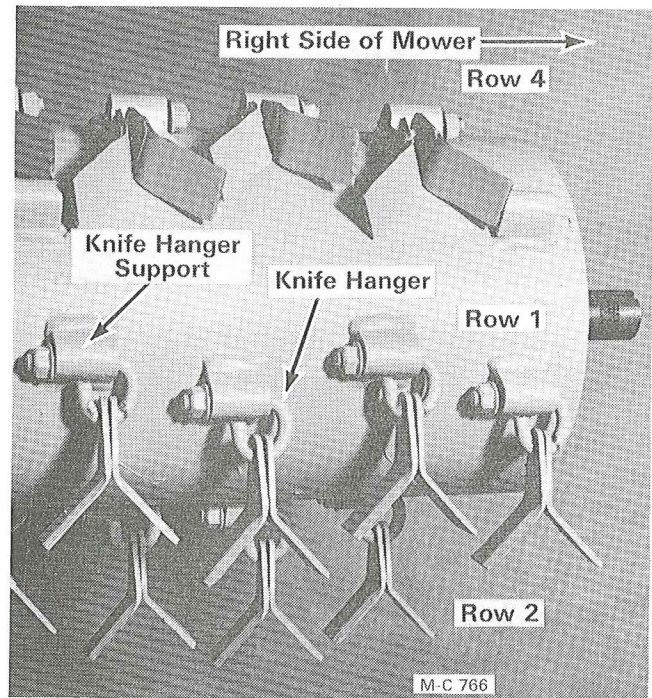


Figure 12

DRIVE BELT REPLACEMENT

1. Remove belt guard cover.
2. Remove the belt.
3. Clean dirt and debris from inside the guard and in the pulley grooves.
4. Install the new belt. Adjust belt tension (see below) and pulley alignment if necessary.

DRIVE BELT TENSION

1. Check tension on the drive belt.
2. 1/4" deflection at the midpoint with 16 lbs. of force on the straight side of the belt is desirable. (See Figure 13.)
3. Loosen the hex nut on the idler pulley and slide the pulley into the belt using a pry bar.

PULLEY ALIGNMENT



CAUTION: Before attempting to make any adjustments or inspection, be sure to disengage the PTO and stop the tractor engine.

1. Adjust the pulley 3/4" from the rotor body. (See Figure 14.) Place a straight edge across the faces of the rotor pulley and drive pulley. Adjust the rotor pulley in line with the drive pulley, as required.
2. Adjust the idler pulley by placing washers behind so it aligns with the rotor pulley. Be sure idler pulley does not rub against the idler bracket and that the belt is centered between idler pulley flanges.

DRIVE AND ROTOR PULLEY REPLACEMENT

NOTE: The drive and rotor pulleys are held on the shafts with tapered bushings. Use the jackscrew holes in the bushings to separate the bushings from the pulleys. Do not attempt to remove the pulleys with a gear puller as this could result in damage to the pulleys.

1. Remove the belt guard cover. Loosen the idler pulley and remove the drive belt.
2. Remove the three mounting capscrews in the bushing. (See Figure 15.) Thread the capscrews into the three jackscrew holes in the bushing. Tighten the three capscrews progressively and evenly until the bushing is loose on the shaft.
3. Remove the bushing and pulley from the shaft. If the bushing does not slip off of the shaft, wedge a screwdriver blade in the saw cut in the flange of the bushing (not the tapered surface) to spread the bushing.

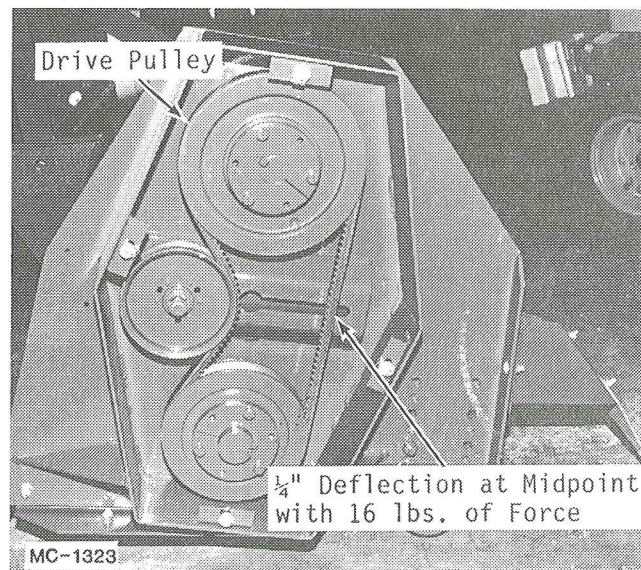


Figure 13

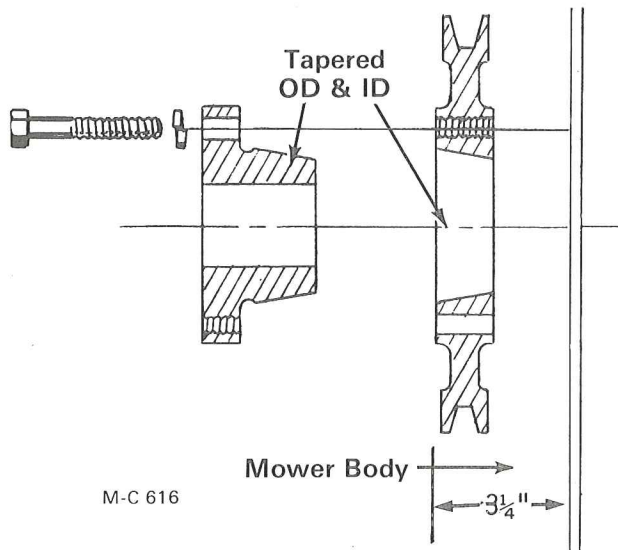


Figure 14

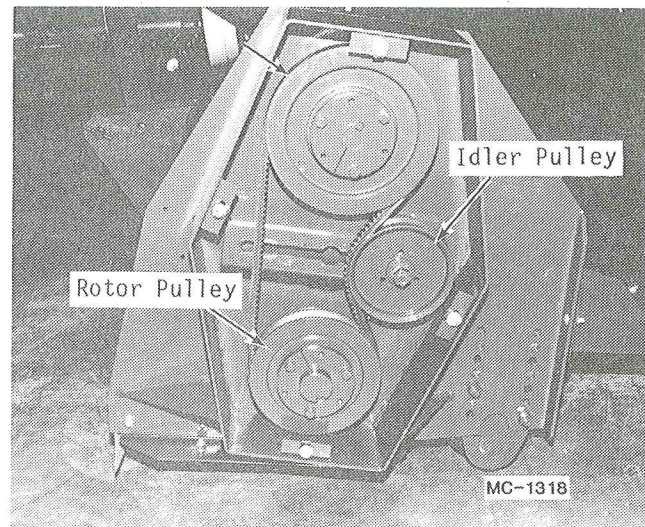


Figure 15

4. Before installing the pulley and bushing thoroughly inspect the tapered bore of the pulley and the tapered surface of the bushing. Any paint, dirt, oil or grease **must** be removed.
5. Place the bushing into the pulley from the front so that the bushing flange is to the outside. (See Figure 14.) The bushing and the bore of the pulley are tapered. Be sure to install the bushing into the large ID of the pulley tapered bore. If the bushing is installed into the small ID of the pulley, the pulley hub will crack when the mounting capscrews are tightened.
6. Place the three capscrews through the open holes in the bushing and thread them into the pulley by hand. Do not tighten the capscrews.

IMPORTANT: The capscrew and pulley threads must be clean and dry. Do not lubricate.

7. Install the key in the output drive and/or rotor shaft. Slide the pulley and bushing assembly onto the shaft. If the bushing is too tight on the shaft, wedge a screwdriver blade into the saw cut in the flange (not the tapered surface) to spread the bushing.

8. Install the drive belt and move the pulley and bushing in or out until the belt is in alignment on the pulleys. Tighten the three capscrews evenly and progressively. Torque the capscrews to 30 ft. lbs.

IMPORTANT: The tightening force on the three capscrews is multiplied many times by the wedging action of the bushing tapered surface. Do not exceed the specified torque or use a lubricant on the capscrew threads. To do so may create bursting pressures in the hub of the pulley.


NOTE: There should be a 1/8 to 1/4 inch gap between the pulley hub and the flange of the bushing. If the gap is closed, the shaft is undersize.

9. Adjust the idler pulley until the belt is tight with 1/4" deflection at the midpoint, with 16 lbs. of force. Tighten the nut. Install the belt guard cover.

ROTOR BEARING REPLACEMENT

Right Bearing

1. With the Mower on the floor, support the rotor so it stays in position when the bearing is removed. **Do not** lift the Mower by the rotor.

 **CAUTION:** Do not work on or under the Mower while the Mower is in a raised position without supporting it with blocks or safety stands.

2. Remove stub shaft guard. (See Figure 16.)
3. Clean the end of the rotor shaft with emery cloth. Remove the two set screws in the bearing lock collar.
4. Remove the four capscrews and lock-washers from the flangettes and remove both flangettes and bearing from the rotor shaft.
5. Lightly polish the rotor shaft with emery cloth. Lubricate the rotor shaft with motor oil. Install both flangettes with new rotor bearing on the rotor shaft. Flangette with grease fitting goes to the outside. Install the four capscrews and lock-washers loosely into the anti-wrap, see illustration on page 18.

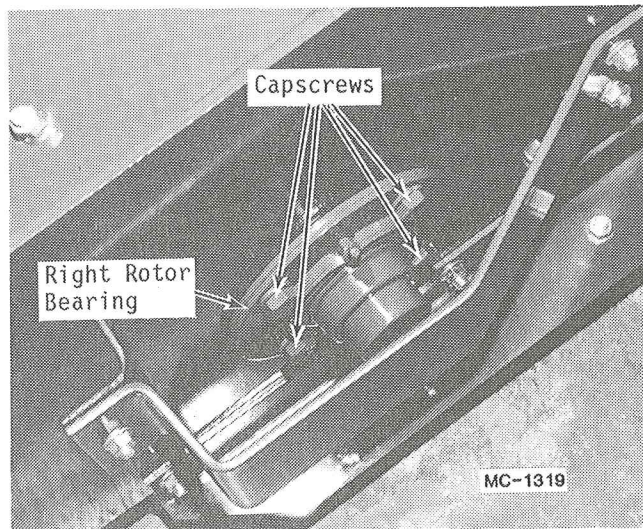



Figure 16

6. Remove the blocking from under the rotor and turn the rotor by hand to align the bearing on the rotor shaft. Tighten the flangette cap-screws and the two set screws in the bearing lock collar.
7. Install the stub shaft guard.

8. Lubricate the rotor bearing with a hand grease gun. Do not over lubricate. Too much grease may damage the bearing seal.

Left Bearing

1. Remove the belt guard cover. Remove the drive belt.
2. Remove rotor pulleys. Refer to "Drive and Rotor Pulley Replacement" page 11 for procedure. Remove the rotor pulley key.
3. With the Mower on the floor, support the rotor so it stays in position when the bearing is removed. **Do not** lift the Mower by the rotor.

 **CAUTION:** Do not work on or under the Mower while the Mower is in a raised position without supporting it with blocks or safety stands.

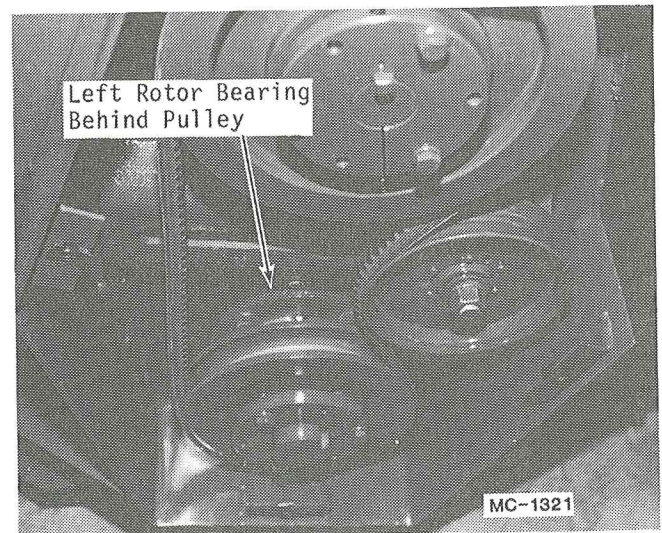


Figure 17

4. Clean the end of the rotor shaft with emery cloth. Remove the two set screws in the bearing lock collar.
5. Remove the four capscrews and lock-washers from the flangettes and remove both flangettes and bearing from the rotor shaft. (See Figure 17.)

6. Lightly polish the rotor shaft with emery cloth. Lubricate the rotor shaft with motor oil. Install both flangettes with new rotor bearing on the rotor shaft. Flangette with grease fitting goes to the outside with the grease fitting facing the rear. Install the four capscrews and lockwashers loosely into the antiwrap. (See illustration on page 18.)
7. Remove the blocking from under the rotor and turn the rotor by hand to align the bearing on the rotor shaft. Tighten the flangette cap-screws and the two set screws in the bearing lock collar securely.
8. Install the rotor pulley. Install belt and tighten idler pulley after applying tension.
9. Lubricate the rotor bearing with a hand grease gun. Do not over lubricate. Too much grease may damage the bearing seal.

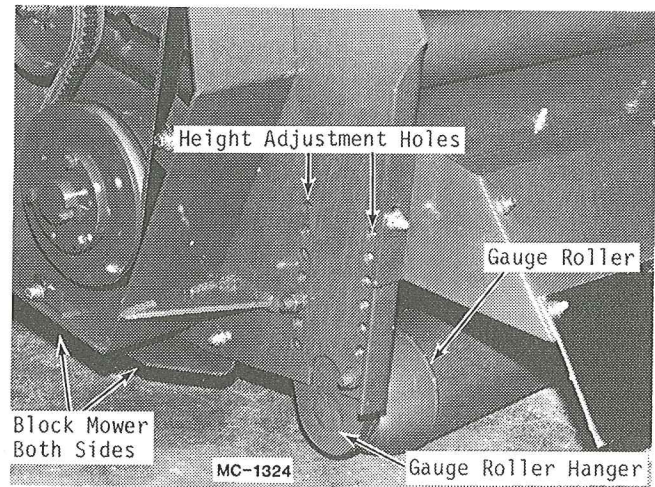



Figure 18

5. Install the gauge roller. Lift the Mower, remove the safety stands or blocking and lower the Mower to the ground.

GAUGE ROLLER BEARING REPLACEMENT

1. Lift the back of the Mower to take the weight off of the gauge roller. **Do not** lift the Mower by the rotor. (See blocking position, Figure 18.)

 **CAUTION:** Do not work on or under the Mower while the Mower is in a raised position without supporting it with blocks or safety stands.

2. Remove the two 1/2" capscrews on each side of the Mower that secure the gauge roller hangers to the Mower side plates. (See Figure 18.) Roll the gauge roller out from under the Mower.
3. Remove the bearing from the end of the gauge roller using an internal bearing puller, like those shown in Figure 19.
4. When installing the new bearing, drive or press on the outer race only. Pressing on the inner race will damage the bearing. Press the bearing until it seats on the shoulder in the gauge roller.

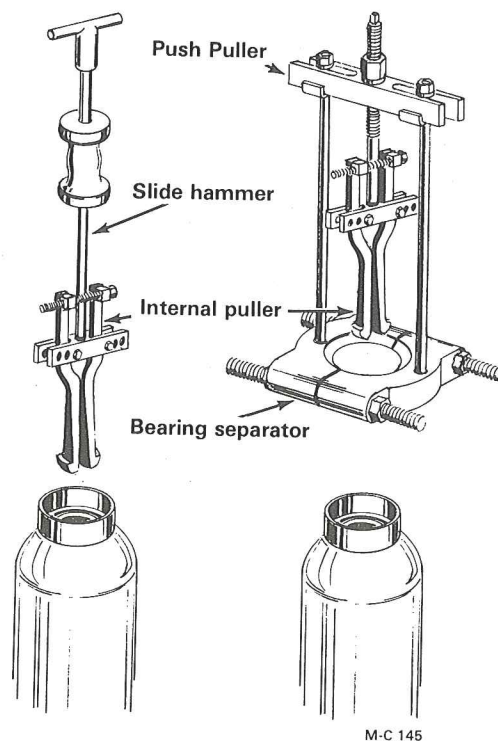


Figure 19

OUTPUT SHAFT BEARING REPLACEMENT

1. Remove the belt guard cover. Loosen the idler pulley. Remove the drive belt.
2. Remove the drive pulley. Refer to "Drive and Rotor Pulley Replacement" page 11 for procedure.
3. Remove the two set screws in the bearing collar and four capscrews securing the output shaft bearing.
4. Clean the output shaft with emery cloth and pull the output shaft bearing off of the output shaft.
5. Lightly polish the output shaft with emery cloth. Lubricate the output shaft with motor oil and slide the new bearing onto the shaft. Be sure that the grease fitting faces the bottom of the Mower.
6. Lift up on the output shaft and install the capscrews and flange whiz locknuts. (See page 20.)
7. Slide the output shaft with spacer and locking collar out against the bearing. Be sure the shaft from the gearbox extends 1/4" inside the yoke on the output shaft. Adjust locking collar if necessary. (See Figure 20.)

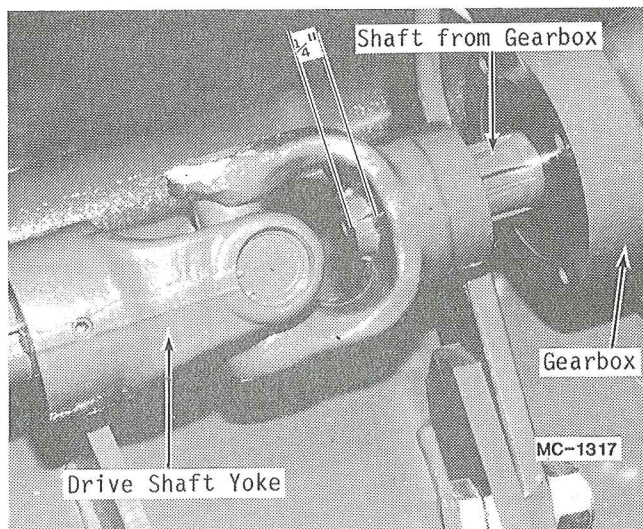


Figure 20

8. Install drive pulley. Replace belt and tighten idler pulley after applying tension.

9. Lubricate the output shaft bearing with hand grease gun. Do not over lubricate. Too much grease may damage the bearing seal.

STORING THE MOWER

1. When the Mower is to be stored for an extended period of time or at the end of the season, lubricate all bearings, filling any cavities where water condensation may occur and cause damage. Refer to "Lubrication" page 10 for location of all grease fittings.

IMPORTANT: Use a hand grease gun. Do not over lubricate. Too much grease may damage the bearing seals.

2. Remove the belt guard cover and clean dirt and debris from inside the guard and in the pulley grooves.

PRE-SEASON CHECK

1. Check the oil level in the gearbox and lubricate all bearings. Refer to "Lubrication" page 9 for location of all grease fittings.
2. Adjust the drive belt tension. Refer to "Drive Belt Tension," page 11.
3. Inspect for missing or broken knives. Replace as necessary. Refer to page 10.
4. Be sure all safety shields are in place and secure.
5. Run the Mower at a low RPM checking to make sure that all drive line parts are moving freely. Also, check operation at higher RPM's within the operating range. (See page 7.)

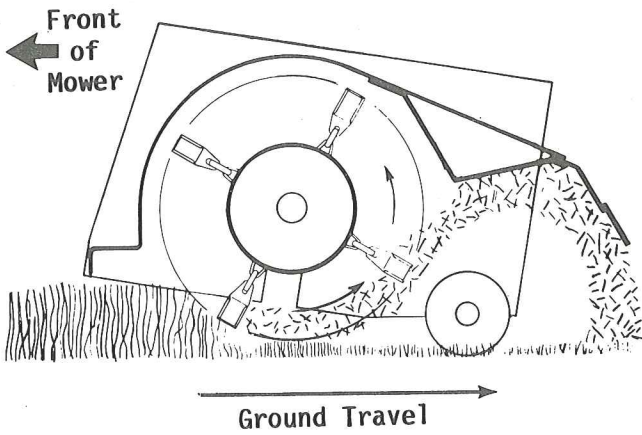
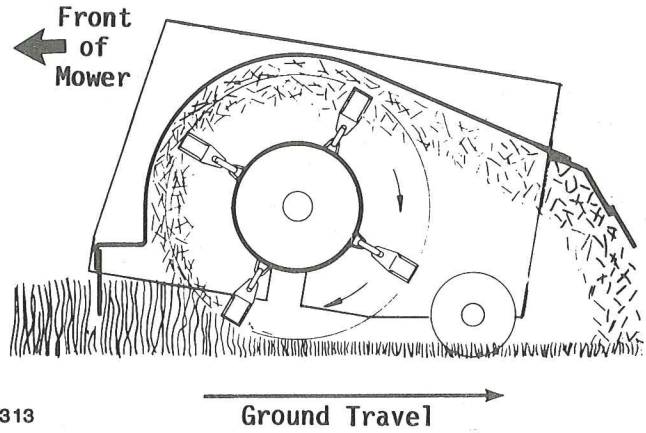


Figure 21

Forward rotor rotation works the same direction as ground travel. Knives cut down and back. The best choice for mowing tough growth in trashy conditions providing a smooth, uniform cut.



MC-1313

Figure 23

Reverse rotor rotation works the opposite direction of ground travel. Knives cut upward, directing cut material over the top of the rotor and discharging it safely to the ground. Recommended for fine turf areas where an attractive finish cut is desired.



WARNING: Front flap must be used with this rotation.

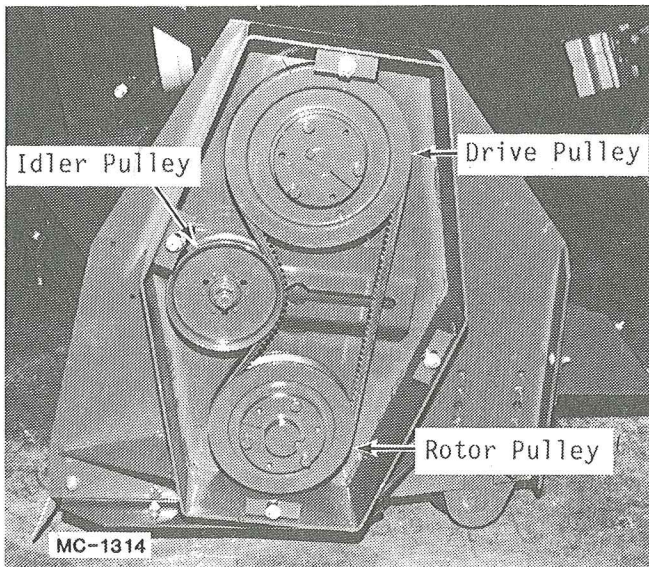


Figure 22

IDLER PULLEY POSITION WITH ROTOR IN FORWARD ROTATION

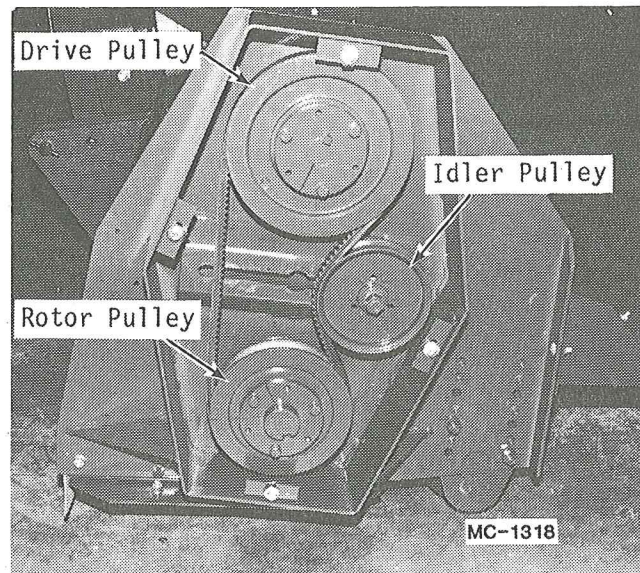


Figure 24

IDLER PULLEY POSITION WITH ROTOR IN REVERSE ROTATION

CHANGING ROTOR ROTATION (See Page 16)

1. Remove input shaft guard, rear shaft cover and output shaft guard and support angles.
2. Loosen belt.
3. Unbolt gearbox mount plate with gearbox attached. (See Figure 25.)
4. Unbolt gearbox from mount plate and rotate gearbox 180° front to rear.
5. Bolt mount plate and gearbox and re-install gearbox to the Mower with the output shaft connected to the drive shaft yoke.
6. Install idler pulley on slack side of belt, tighten belt, install input shaft guard, rear shaft cover and output shaft guard with support angles. (See page 16 for proper idler position.)
7. Be sure to install front rubber flap when rotor is in reverse rotor rotation. (See Figure 24.) Be sure rear stone guard is also in place.

INNER BODY PANEL

1. The inner body panel should be removed when operating in the reverse rotor rotation (See page 16) if the material being cut is heavy and is building up on the gauge roller, or the discharge is uneven.

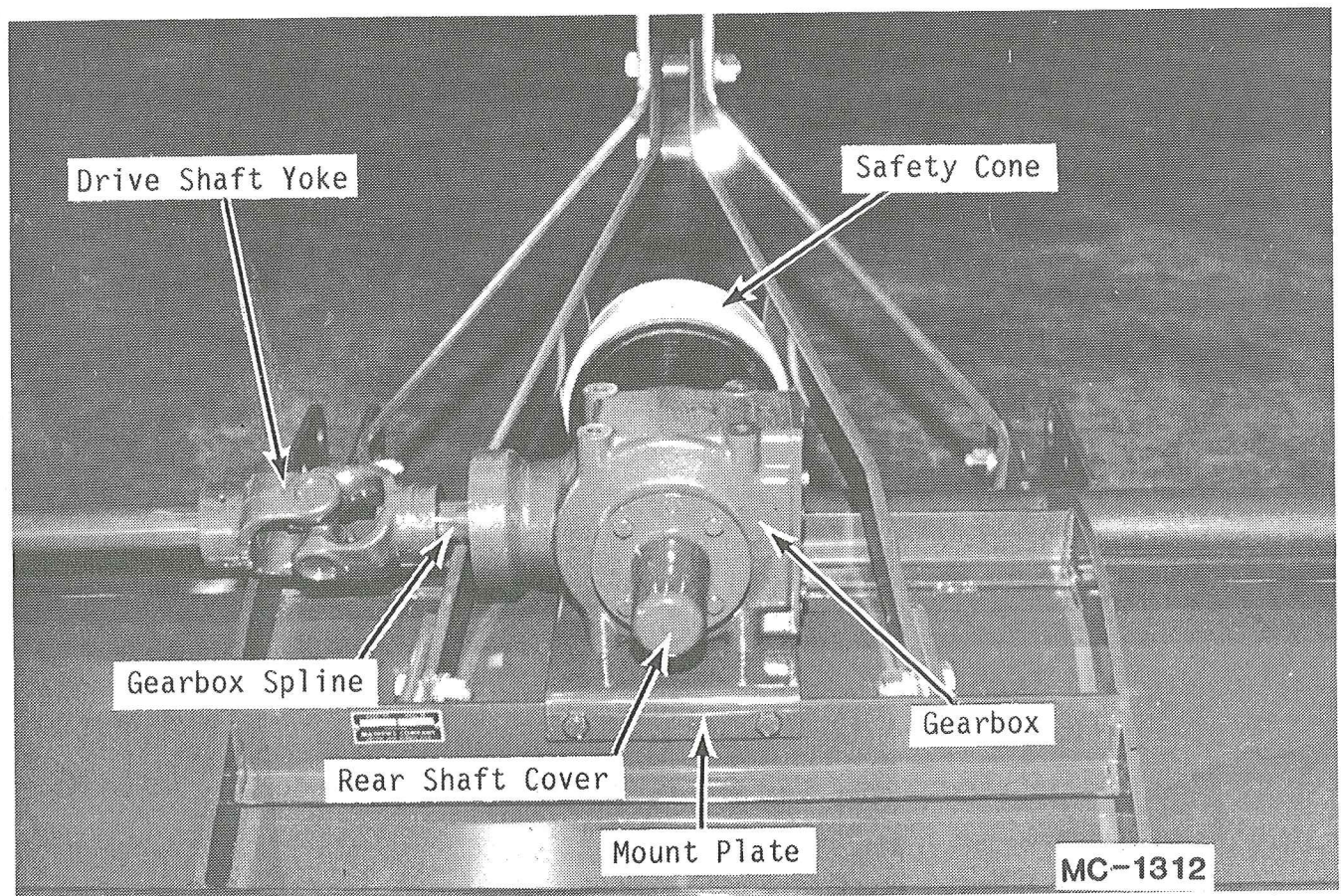
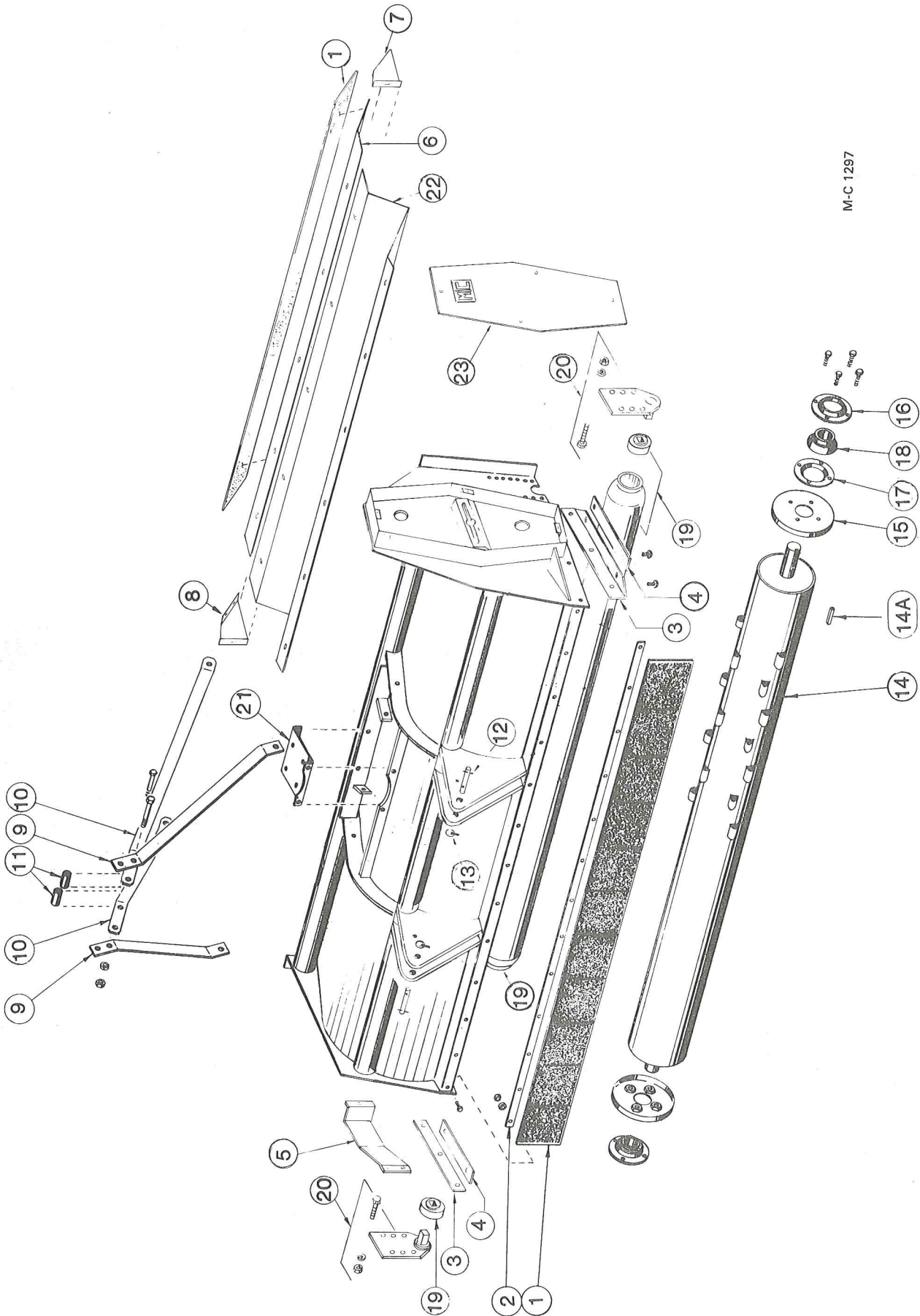


Figure 25

Body

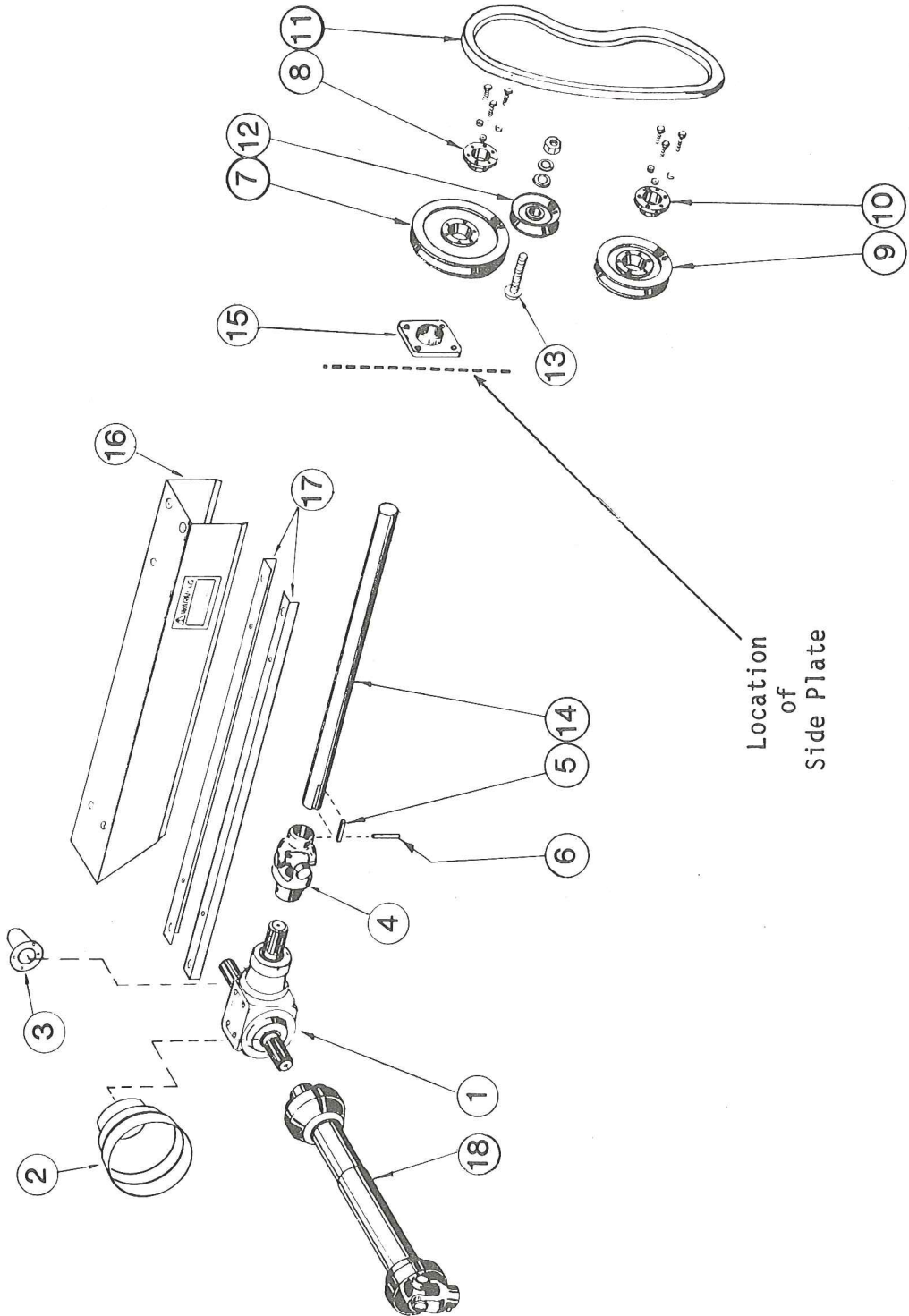
M-C 1297



Ref.	Part No.	Qty.	Description	Ref.	Part No.	Qty.	Description
1	101 5710	1	Rubber Flap		001 8315	1	Safety Warning Decal
	101 5709	1	72CL		121 8310	1	Made in USA Decal
2	101 2001	1	88CL & 880L	14	001 8310	1	Notice Machine Warning Decal
	101 2000	1	Retainer Strip		---	-	Balanced Rotor
3	000 8108	11-13	72CL	14A	001 5154	1	Key 1/2" x 2
4	000 8169	11-13	88CL & 880L	15	131 0137	2	Anti-Wrap Flange - 1-15/16"
	108 4201	2	5/16-18 x 1" Capscrew - Grd. 5	16	001 6023	2	1-15/16" 4-Bolt Flange w/Zerk
	108 4202	2	5/16-18 Flange Whiz Locknut	17	001 6022	2	1-15/16" 4-Bolt Flange w/o Zerk
	000 8120	4	Base Skid	18	131 6008	2	1-15/16" Bearing w/Collar
	000 8122	6	Wear Plate		131 8163	8	1/2-13 x 1 1/4" Capscrew w/NY Patch - Grd. 5
	000 8168	-	3/8 x 1" Truss Hd. Screw	19	000 8180	8	1/2" Lockwasher
5	108 3407	1	3/8-16 x 1" Carriage Bolt - Grd. 5		---	-	Gauge Roller w/Bearing
	000 8122	3	3/8-16 Flange Whiz Locknut		101 1064	1	72CL
	000 8168	3	Rotor End Guard		101 1063	1	88CL & 880L
6	108 4437	1	3/8-16 x 1" Carriage Bolt - Grd. 5	20	101 0089	2	FM Gauge Roller Hanger
	108 4434	1	3/8-16 Flange Whiz Locknut		000 8278	4	1/2-13 x 1-3/4" Capscrew - Grd. 5
7	108 4429	1	Deflector		000 8180	4	1/2" Lockwasher
8	108 4430	1	72CL	21	000 8163	4	1/2-13 Hex Nut
	000 8107	6-9	88CL & 880L		108 3409	1	Gearbox Mount Plate
	000 8173	6-9	Left End Cap Shield		131 8163	4	1/2-13 x 1 1/4" Capscrew w/NY Patch - Grd. 5
	000 8169	6-9	Right End Cap Shield		000 8180	4	1/2" Lockwasher
9	108 3571	2	5/16-18 x 1" Truss Hd. Screw		000 8175	4	1/2" Flatwasher
10	108 3572	2	5/16" Flatwasher		133 8161	4	1/2-13 x 1 1/2" Capscrew - Grd. 5
	128 8195	4	5/16-18 Flange Whiz Locknut		000 8180	4	1/2" Lockwasher
	001 8280	1	Mast Arm	22	000 8163	4	1/2-13 Hex Nut
	001 8200	1	Mast Support Arm		---	-	Inner Body Panel
	000 8182	6	3/4-10 x 2" Capscrew - Grd. 5		108 4436	1	72CL
	000 8165	6	3/4-10 x 3 Capscrew - Grd. 5		108 4428	1	88CL & 880L
11	101 5603	2	3/4-10 x 4" Capscrew - Grd. 5		000 8107	6	5/16-18 x 1" Truss Hd. Screw
12	151 5000	2	3/4" Lockwasher		000 8169	6	5/16-18 Flange Whiz Locknut
	001 8292	2	3/4-10 Hex Nut		000 8159	6	5/16-18 Hex Nut
	000 8995	2	Mast Spacer	23	108 4427	1	Belt Guard Cover
	101 6611	1	7/8" Connection Pin		000 8108	4	5/16-18 x 1" Capscrew - Grd. 5
	000 8300	1	1/4 x 2" Roll Pin		000 8173	4	5/16" Flatwasher
	128 8300	1	Klick Pin 5/16" Dia.		000 8222	4	5/16" Lockwasher
	131 8980	1	PTO w/Plastic Guard		001 8111	4	5/16-18 Clip Nut
			M-C 3-3/8 x 4" Decal				
			M-C 5 x 4-9/16" Decal				
			Serial Number Plate				

Body

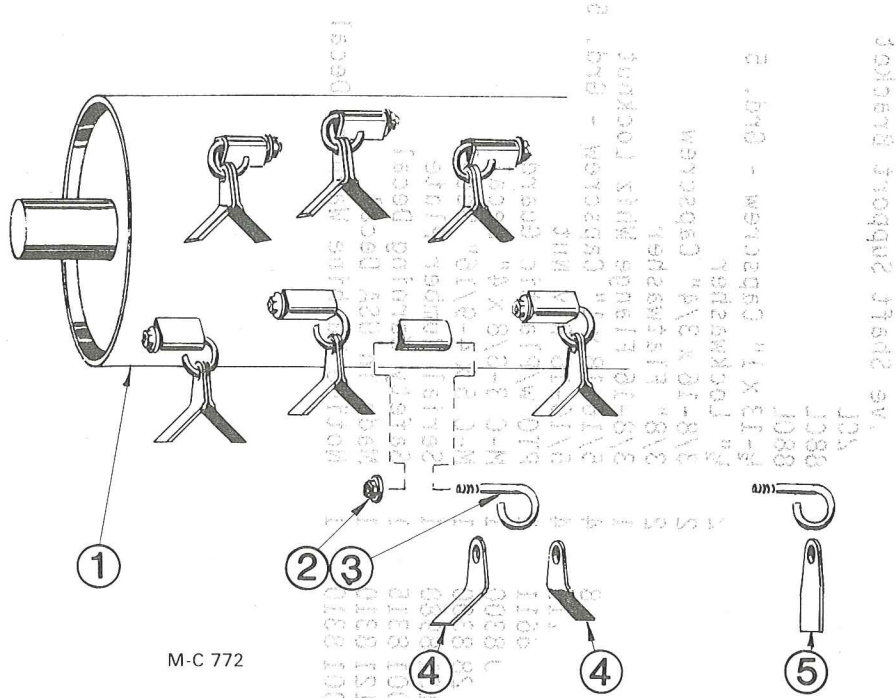
Drive Line and Guards



Drive Line and Guards

Ref.	Part No.	Qty.	Description	Ref.	Part No.	Qty.	Description
1	101 6612	1	1:3.10 3-Way Gearbox	16	---	---	Drive Shaft Guard
	000 8991	5	Gear Lub-Mobilfluid 423		108 4766	1	72CL
2	101 6614	1	Safety Cone (Gearbox)		108 4765	1	88CL
3	101 6615	1	Rear Safety Shaft Cover		108 4767	1	880L
	001 8148	8	3/8-16 x 3/4" Capscrew - Grd. 5	17	---	---	Drive Shaft Support Bracket
	000 8174	4	3/8" Flatwasher		108 4438	2	72CL
4	108 6600	1	Universal Joint		108 4432	2	88CL
5	001 5132	1	Key 3/8 x 3/8 x 2"		108 4440	2	880L
6	001 8281	1	3/8 x 3" Roll Pin		000 8135	2	½-13 x 1" Capscrew - Grd. 5
7	101 6200	1	1C9.0 Sheave		000 8180	2	½" Lockwasher
8	120 6211	1	1-7/16 S/F Bushing		000 8119	2	3/8-16 x 3/4" Capscrew
	131 5130	1	Key 3/8 x 2¼"		000 8174	2	3/8" Flatwasher
9	101 6201	1	1C7.5 Sheave		000 8168	1	3/8-16 Flange Whiz Locknut
10	141 6209	1	1-15/16 QD S/F Bushing		000 8108	4	5/16-18 x 1" Capscrew - Grd. 5
11	101 6100	1	CX55 Belt		128 8111	4	5/16-18 Riv Nut
12	041 6201	1	6¼ OD Flat Idler Pulley	18	101 6611	1	PTO w/Plastic Guard
13	001 8171	1	5/8-11 x 2½" Carriage Bolt		000 8300	1	M-C 3-3/8 x 4" Decal
	000 8176	1	5/8" Flatwasher		128 8300	1	M-C 5 x 4-9/16" Decal
	000 8299	6	5/8" Flatwasher		131 8980	1	Serial Number Plate
	000 8181	1	5/8" Lockwasher		001 8315	1	Safety Warning Decal
	000 8164	1	5/8-11 Hex Nut		121 8310	1	Made in USA Decal
14	---	---	Output Shaft		001 8310	1	Notice Machine Warning Decal
	108 5604	1	72CL				
	108 5603	1	88CL				
	108 5602	1	880L				
15	001 6015	1	1-7/16" Bore 4-Bolt Flange Bearing				
	000 8278	4	½-13 x 1-3/4" Capscrew - Grd. 5				
	000 8170	4	½" Flange Whiz Locknut				

Rotor, Knives and Thatching Blades

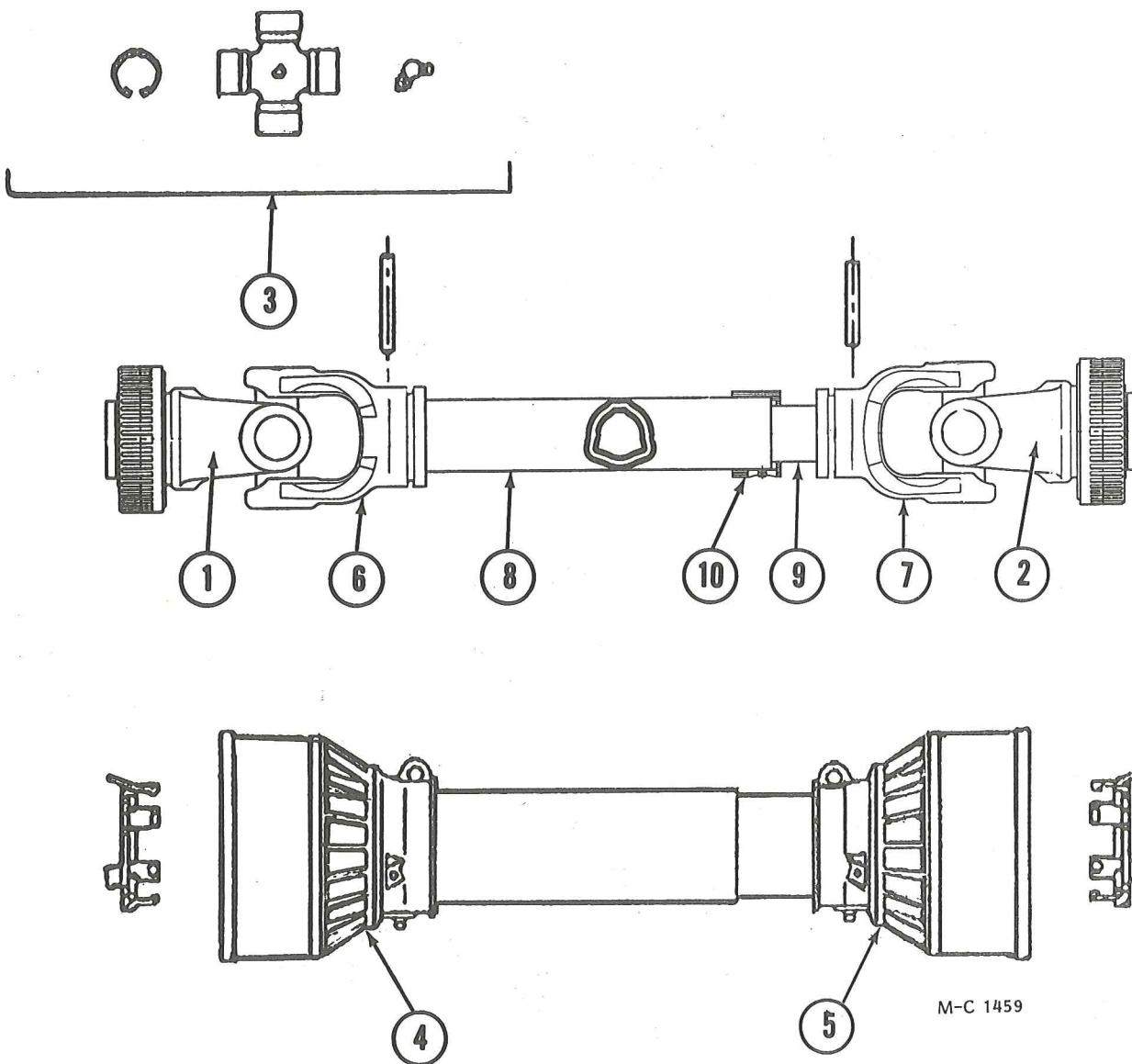


COMPLETE ROTOR ASSEMBLY	MODEL	ASSEMBLY NO.
	72CL	101 1049
	88CL & 880L	101 1047

Complete assemblies consist of ref. 1 thru 4 in quantities shown.

Ref.	Part No.	Qty. 72 CL	Qty. 88 CL	Qty. 88 OL	Description
1	131 0140	1	—	—	Balanced Rotor Weldment
	131 0141	—	1	1	Balanced Rotor Weldment
2	000 8205	86	106	106	3/8-16 Top Lock Flange Nut
3	101 8701	86	106	106	Knife Hanger
4	131 4465	172	212	212	Knife - Square End
5	133 4468	86	106	106	Thatching Blade - Optional

Power Take-Off Shaft 101 6616

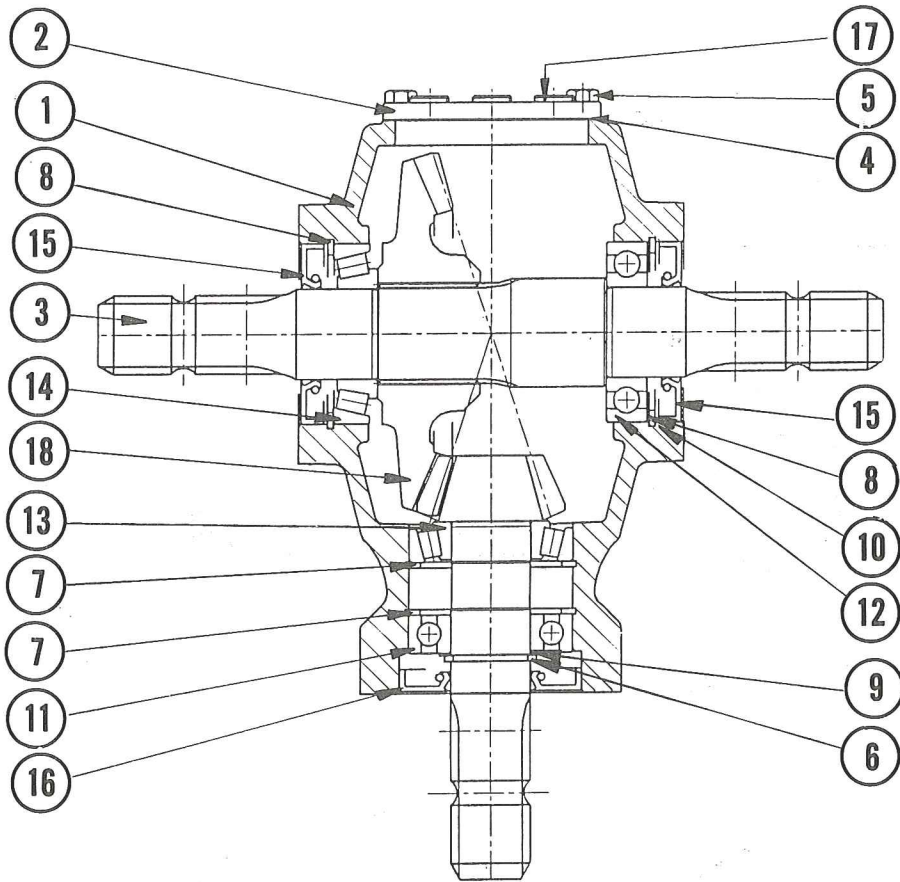


M-C 1459

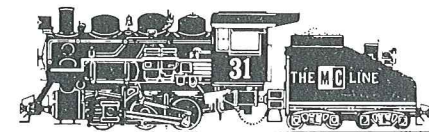
Ref.	Part No.	Qty.	Description
1	102 6657	1	1-3/8-6B Yoke (Tractor End)
2	102 6658	1	1-3/8-6B Yoke (Machine End)
3	132 6644	2	Cross Journal Assembly
4	102 6661	1	Safety Shield Tractor End
5	102 6662	1	Safety Shield Machine End
6	102 6660	1	Yoke with Pin Tractor End
7	102 6659	1	Yoke with Pin Machine End
8	102 6664	1	Tube Tractor Half
9	102 6665	1	Shaft Machine Half
10	102 6663	1	Greasing Collar

GEARBOX - FLAIL MOWER

1016612



Ref.	Part No.	Qty.	Description
1	102 6642	1	Gearbox Housing
2	102 6643	1	Gearbox Rear Cover
3	102 6644	1	Input Shaft 1-3/8" - 6B
4	102 6645	1	Rear Cover Gasket
5	----	4	Screw
6	102 6646	1	Input Shaft Snap Ring
7	102 6647	2	Input Shaft Snap Ring
8	102 6648	2	Output Shaft Snap Ring
9	102 9011	-	Shim Kit for #101 6612
10	102 9012	-	Shim Kit for #101 6612
11	102 6649	1	Input Shaft Ball Bearing
12	102 6650	1	Input Shaft Ball Bearing
13	102 6651	1	Input Shaft Tapered Bearing
14	102 6652	1	Output Shaft Tapered Bearing
15	102 6653	2	Oil Seal - Input
16	102 6654	1	Oil Seal - Output
17	102 6655	3	Oil Plug
18	102 6656	1	Bevel Gear



Iron Horse Quality