



***INSTRUCTION  
and  
PARTS MANUAL***

**FLAIL  
MOWER**

**MODEL 72AL·72AP  
MODEL 84AL·84AP**

18756-18855

**MM 70**

**MATHEWS COMPANY • CRYSTAL LAKE, ILLINOIS, 60014 • U. S. A.**

## LUBRICATION

### P.T.O.:

Lubricate universal joints daily when in use. A light coat of grease should be applied to the telescoping section inside the shield.

### GEAR BOX:

Fill gear box with No. 140 gear lube until it runs out level plug hole.

### DRIVE BEARINGS:

Lubricate rotor and output shaft bearings after every 50 hours of operation. DO NOT OVER GREASE.

### CHAIN:

Oil chain with light engine oil. Under extreme conditions it may be advisable not to oil the chain.

## MAINTENANCE

### CHAIN ADJUSTMENT:

The chain should have about 1/4" of play in it at all times.

#### CAUTION:

CHAIN SHOULD NOT BE UNDER TENSION AT ANY TIME

### SAFETY SHEAR PIN:

This pin is designed to protect the Gear Box and Drive Components against severe shock loads.

#### CAUTION:

DO NOT REPLACE SHEAR BOLTS WITH HARDENED BOLTS

### KNIVES:

Inspect Rotor regularly for bent or broken knives.

#### CAUTION:

DO NOT RUN MACHINE WITH MISSING OR BROKEN KNIVES

To sharpen knives, grind at original angle of edge. Do not sharpen front edge of knife.

### WINTER STORAGE:

Before storing your Mower, grease all of the Bearings to eliminate any cavities where condensation may occur. It is also advisable to paint the exposed surfaces of the inside of the machine with oil to prevent rusting and pitting during storage.

## OPERATING INSTRUCTIONS

### POWER TAKE-OFF SPEED:

Do not exceed 540 RPM's on tractor power take-off.

### CUTTING HEIGHT:

#### LIFT MOWERS

The cutting height is adjusted by moving the tractor 3 point hitch and/or gauge roller.

#### PULL MOWERS

The cutting height is adjusted by moving the Ram Jack in or out until proper height is achieved.

### GAUGE ROLLER:

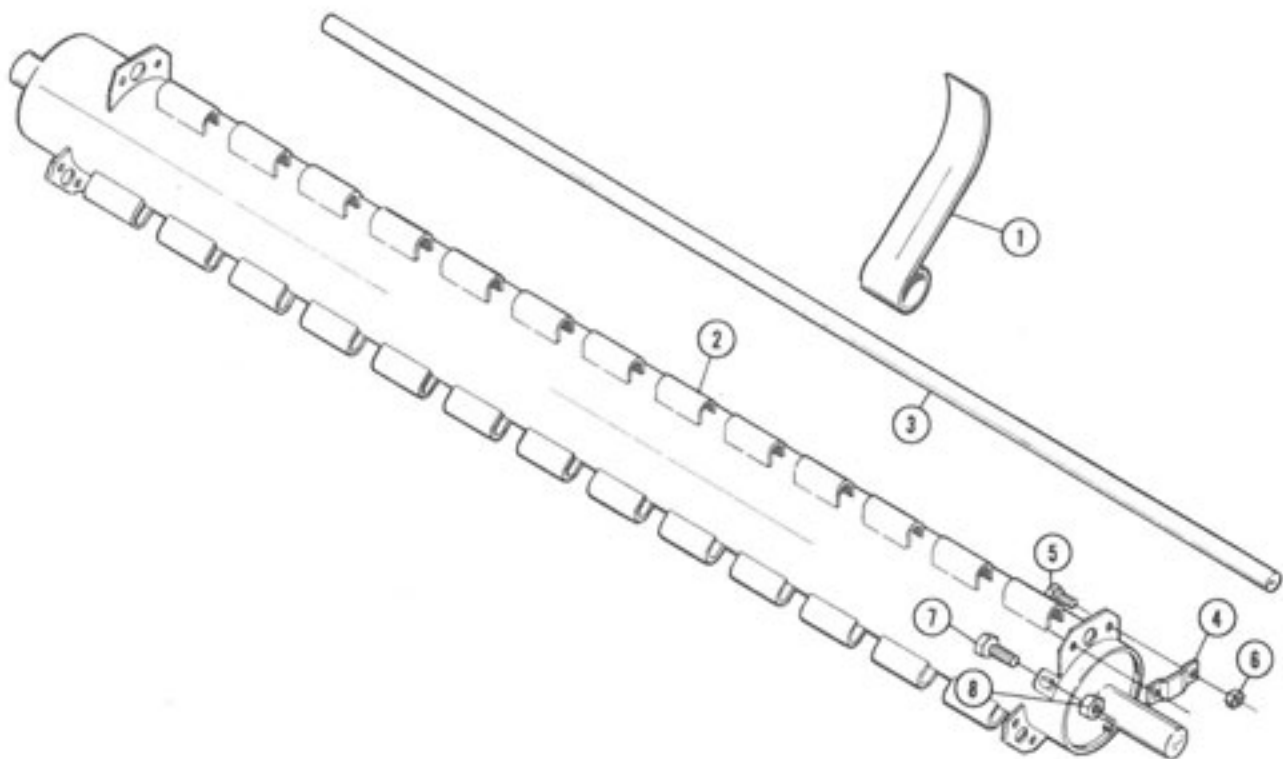
The gauge roller is designed to prevent scalping.

Adjust gauge roller to desired cutting height by moving brackets up or down.

### LEVEL ADJUSTMENT:

To adjust level on a **Lift Type Mower**, adjust upper link on the tractor until skids run parallel to ground.

To adjust level of **Pull Type Mower**, set tractor draw bar to mower pole height. It may be necessary to move the pole to a different position on the pole plate. Skid should run parallel with ground. For finer adjustment move ram in or out.

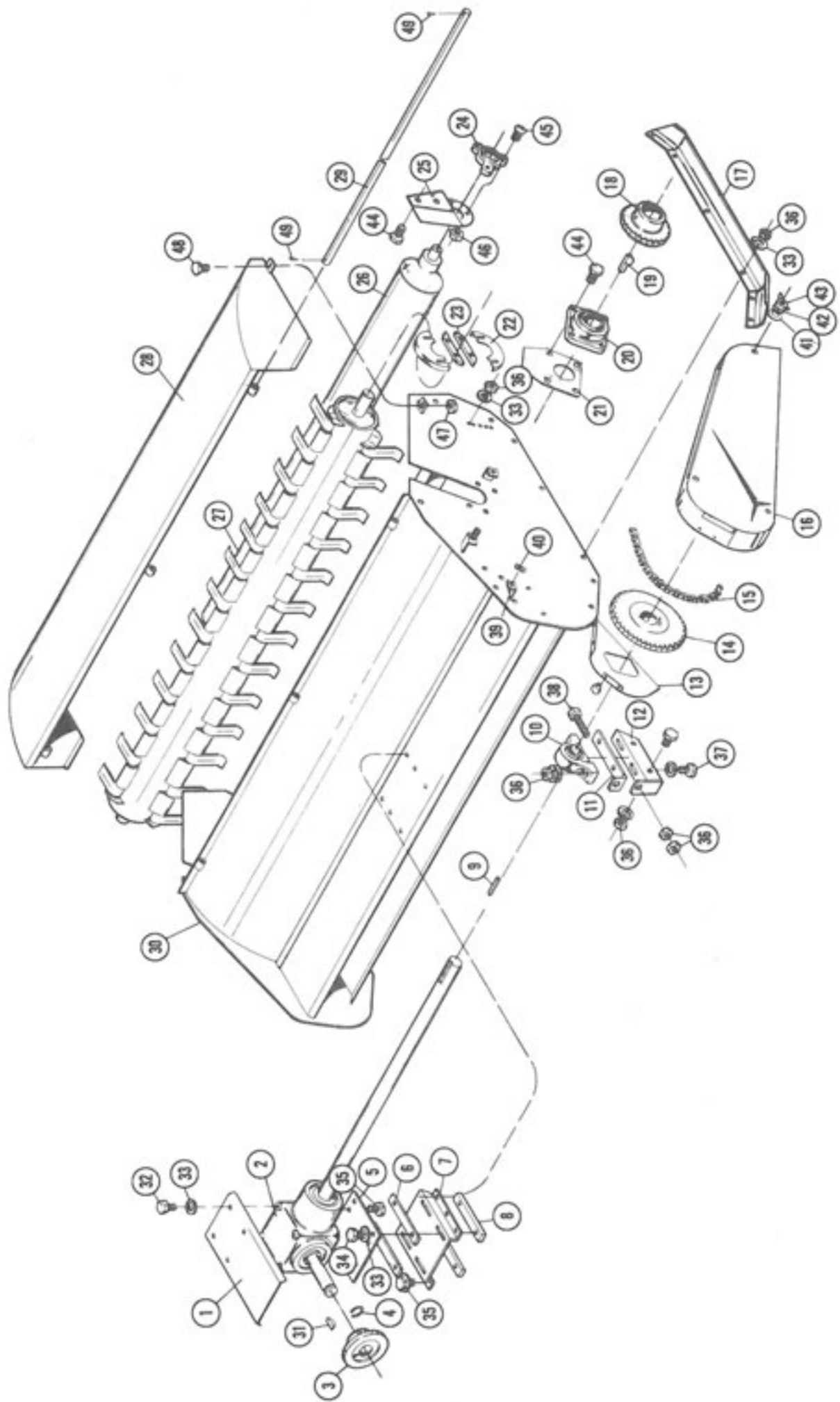


ROTOR ASSEMBLY

6 - 1011017

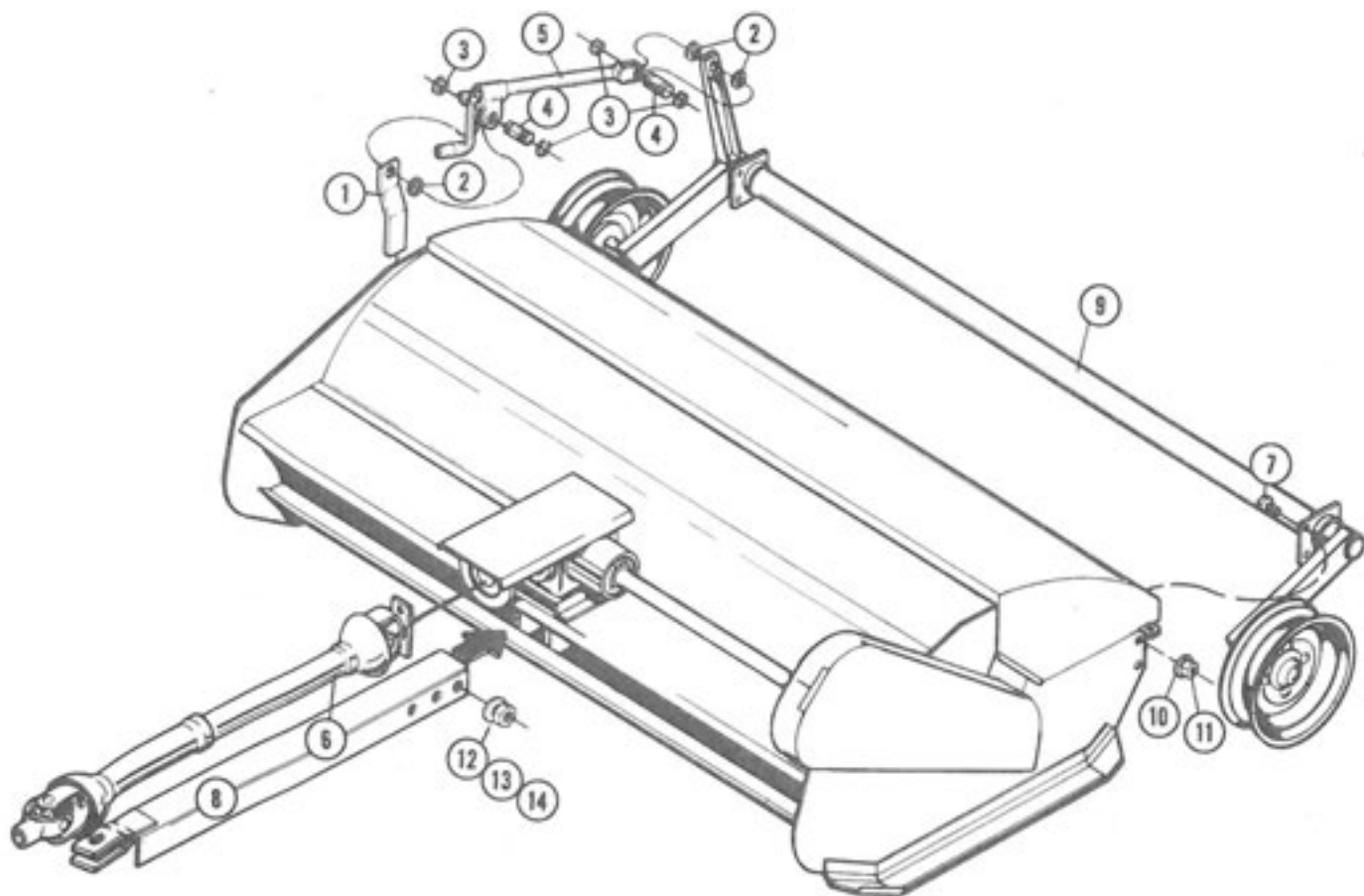
7 - 1011018

REF. NO.	PART NO.	DESCRIPTION
1.	0018999	Knife "G" Type
2.	1010041	6' Rotor Weldment
	1010049	7' Rotor Weldment
3.	1018998	6' Knife Hanger Rod
	1018997	7' Knife Hanger Rod
4.	0012000	End Locator Bracket
5.		3/8-16 x 1" HHCS
6.		3/8-16" Hex Nut
7.		3/8-16 x 1-1/2" HHCS
8.		3/8-16" Hex Nut



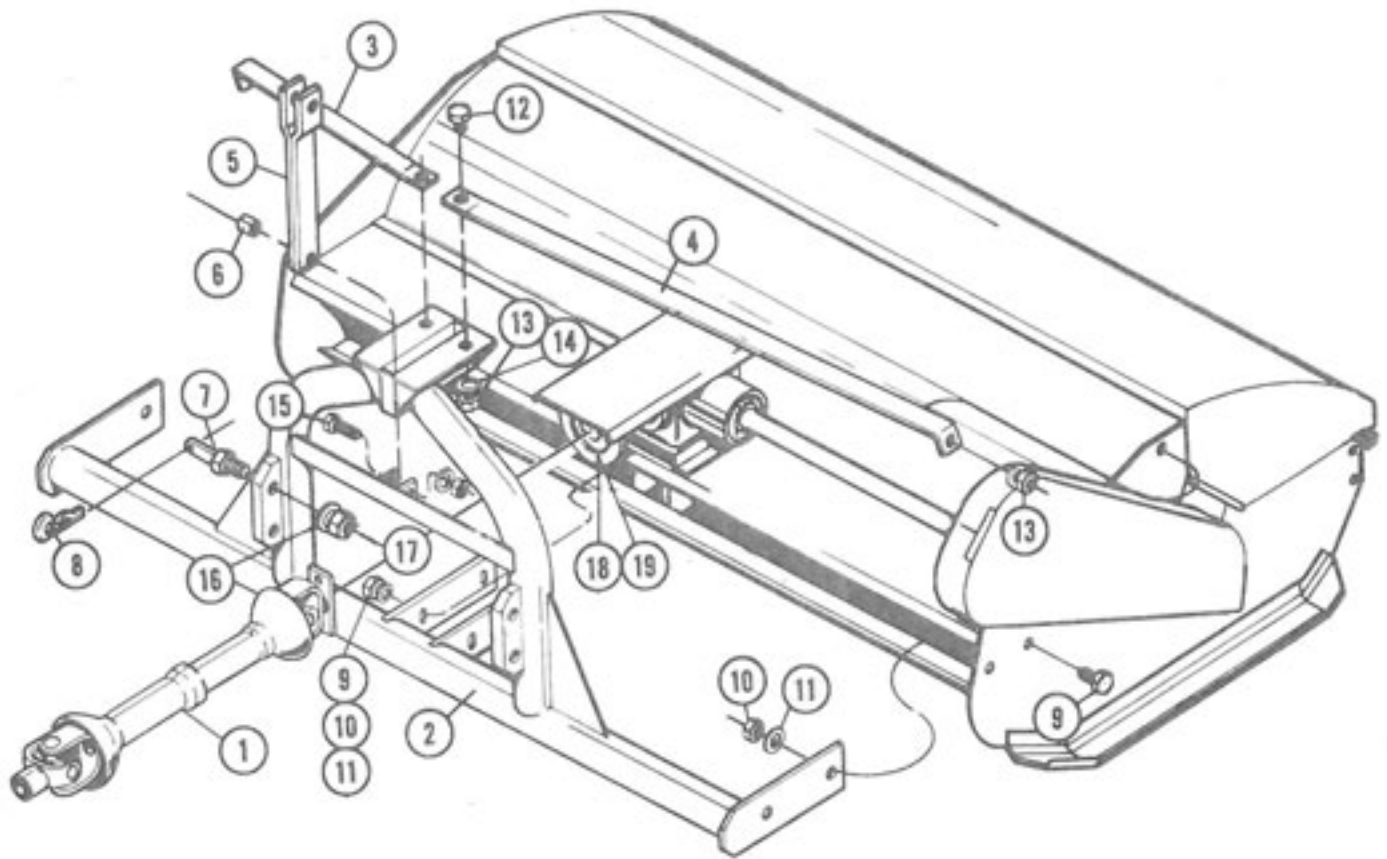
## MAIN ASSEMBLY

REF.	PART NO.	DESCRIPTION	REF.	PART NO.	DESCRIPTION
1.	1014770	Universal Joint Shield	27.	1011017	6' Rotor Assembly
2.	1016606	Gear Box	28.	1011018	7' Rotor Assembly
3.	0017650	1-1/4" Shear Flange	29.	1010064	6' Rear Cover Weld.
4.	0018250	P.T.O. Snap Ring 1-1/4"	30.	1010065	7' Rear Cover Weld.
5.	1013423	Gear Box Mount Plate	31.	1015178	Mower Cover Rod 6'
6.	1015176	Spacer Bar	32.	1015179	Mower Cover Rod 7'
7.	1014223	Gear Box Mount - Low	33.	1010060	Body Weldment 6'
8.	1034201	Gear Box Mount - High	34.	1010061	Body Weldment 7'
9.	1015175	Nut Bar	35.	0018998	3/8 x 1-1/4" Woodruff Key
10.	0016011	3/8 x 3/8 x 1-1/4" Key	36.		1/2-13 x 3/4" HHCS
11.	1013534	1-7/16" Pillow Block Bearing	37.		1/2" Lock Washer
12.	1010068	Bearing Adj. Bar	38.		1/2-13 x 1-3/4" HHCS
13.	1014655	Outboard Bearing Brkt. Weld.	39.		1/2-13 x 1" HHCS
14.	1016402	Sprocket Cover	40.		1/2-13" Hex Nut
15.	1016302	31T Drive Sprocket	41.		1/2-13 x 2-1/2" HHCS
16.	1010066	Chain AG-60	42.		1/2-13 x 3-1/2" HHCS Full Thd.
17.	1010063	Chain Guard Weldment	43.		5/16-18 x 1" HHCS
18.	0016402	Left Skid Weldment	44.		Tinnerman Nut
19.	0018987	Right Skid Weldment	45.		5/16" Flat Washer
20.	0016010	17T Rotor Drive Sprocket	46.		5/16" Lock Washer
21.	1014772	1/2 x 1/2 x 15/16" Gib Key	47.		5/16-18" Wing Nut
22.	0014652	1-15/16" Flange Bearing	48.		1/2-13 x 1-1/2" HHCS
23.	0015175	Side Plate Slot Shield	49.		3/8-16 x 3/4" Carriage Bolt
24.	0006001	Anti-Wrap Device			3/8" Lock Washer
25.	1010058	1/2-13 Stud Anchor			3/8-16" Hex Nut
26.	1010042	3-Bolt Flange Bearing 1-1/4"			3/8-16 x 1" HHCS
	1010044	Gauge Roller Bearing Brkt.			1/8 x 1" Cotter Pin
		6' Gauge Roller			
		7' Gauge Roller			



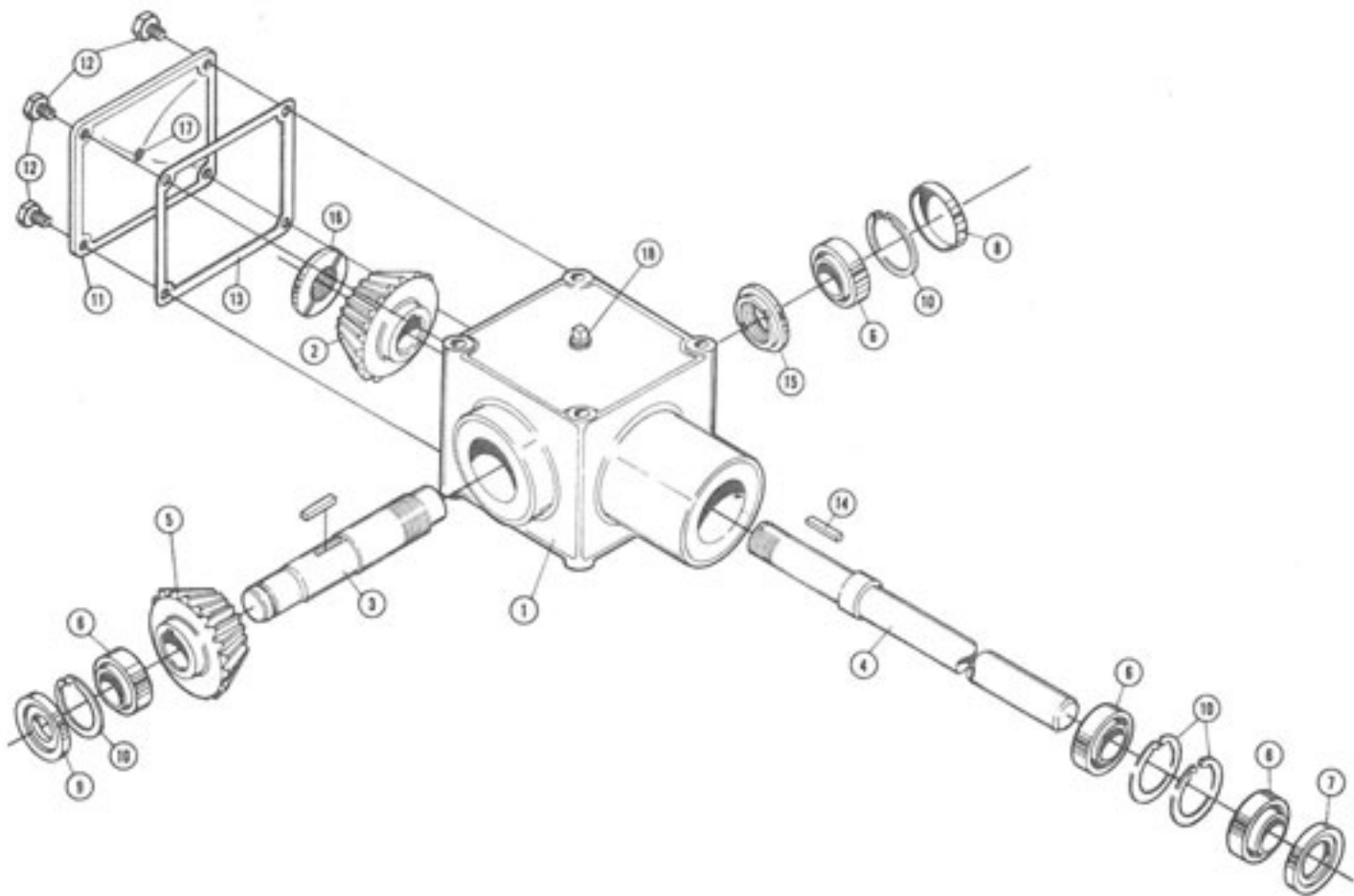
POLE & AXLE ASSEMBLY

REF. NO.	PART NO.	DESCRIPTION
1.	1013672	Ram Arm Bracket
2.		1" Flat Washer
3.	0008250	Ram Pin Snap Ring 1"
4.	0008230	Ram Pin
5.	0001001	Ram Assembly
6.	1016608	P.T.O. - Pull Type
7.		1/2-13 x 1-1/2" HHCS
8.	1010008	Mower Pole Weldment
9.	1011015	6' Axle Assembly
	1011016	7' Axle Assembly
10.		1/2" Lock Washer
11.		1/2-13" Hex Nut
12.		5/8-11 x 1-3/4" HHCS
13.		5/8-11" Hex Nut
14.		5/8" Lock Washer



THREE POINT HITCH ASSEMBLY

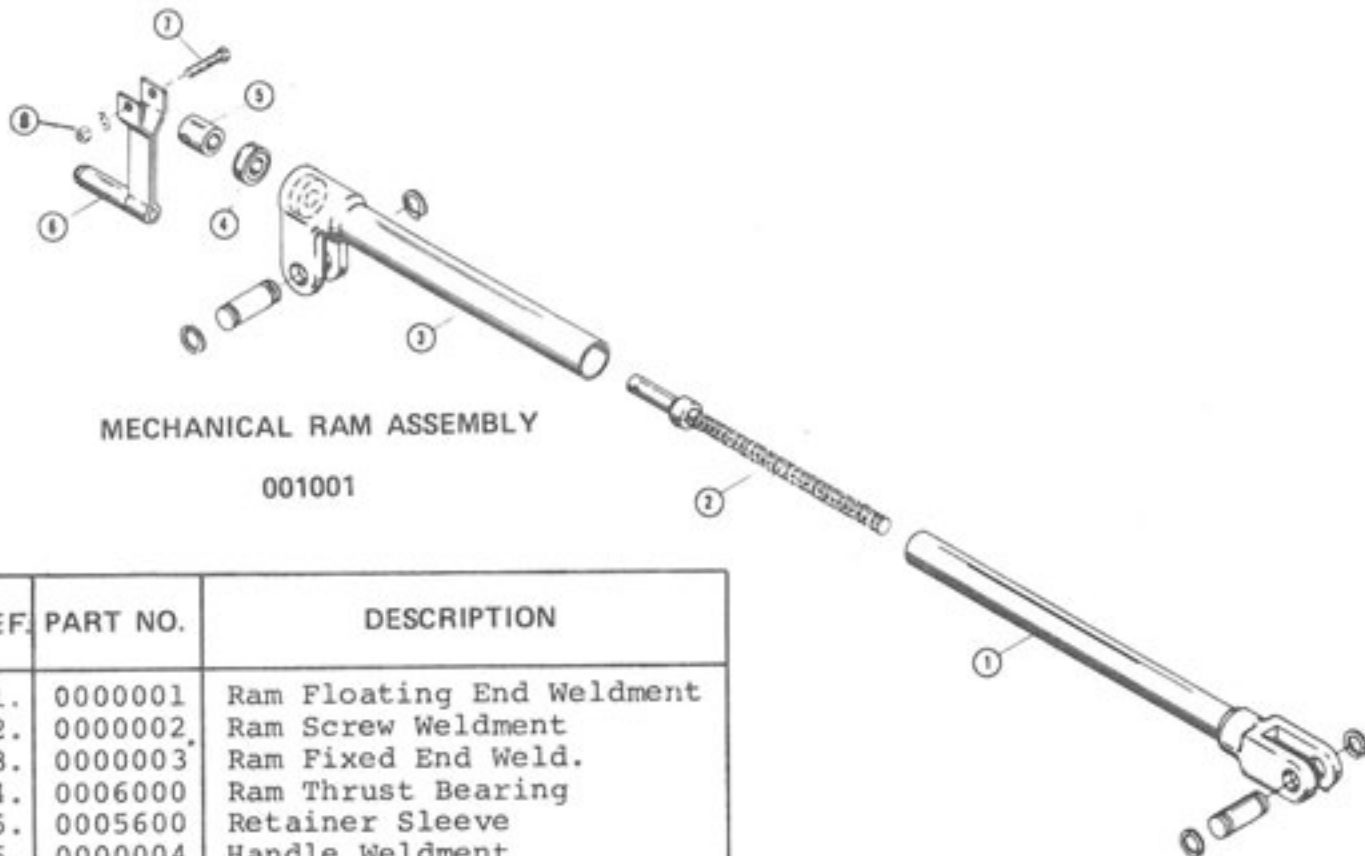
REF. NO.	PART NO.	DESCRIPTION
1.	1016607	P.T.O. - Lift Type
2.	1010038	6' Three Point Hitch Frame
	1010048	7' Three Point Hitch Frame
3.	1013537	6' Right Tie Brace
	1013538	7' Right Tie Brace
4.	1013536	6' Left Tie Brace
5.	1010020	Floating Arm Weldment
6.	1015590	3 Point Pivot Bushing
7.	1018255	7/8" Implement Pin
8.	1018254	Guest-Safety Linch Pin
9.		5/8-11 x 1-3/4" HHCS
10.		5/8-11" Hex Nut
11.		5/8" Lock Washer
12.		1/2-13 x 1-1/2" HHCS
13.		1/2-13" Hex Nut
14.		1/2" Lock Washer
15.		1/2-13 x 2-1/2" HHCS
16.		7/8" Lock Washer
17.		7/8-14" Hex Nut
18.	0018130	3/8-16 x 1-3/4" Shear Pin
19.		3/8-16" Lock Nut



MOWER GEAR BOX  
1016606

REF. NO.	PART NO.	DESCRIPTION
1.	1027653	Mower Gear Box Housing
2.	1026501	16T Output Bevel Gear
3.	1026624	Input Shaft
4.	1026625	Output Shaft
5.	1026502	24T Bevel Gear
6.	0026012	Inner Bearing
	0026013	Bearing Cup
7.	0026667	Grease Seal
8.	0028601	Gear Box Cap Seal
9.	0028602	Seal
10.	0028258	Snap Ring
11.	1026626	Gear Box Cover
12.		5/16-18 x 5/8" HHCS
13.	0026600	Gasket - Gear Box
14.	0015130	3/8 x 3/8 x 1" Key
15.	1028259	Input Stake Nut
16.	0028260	Output Stake Nut
17.	0027500	Level Plug
18.	0026607	Plug - Vent - Gear Box

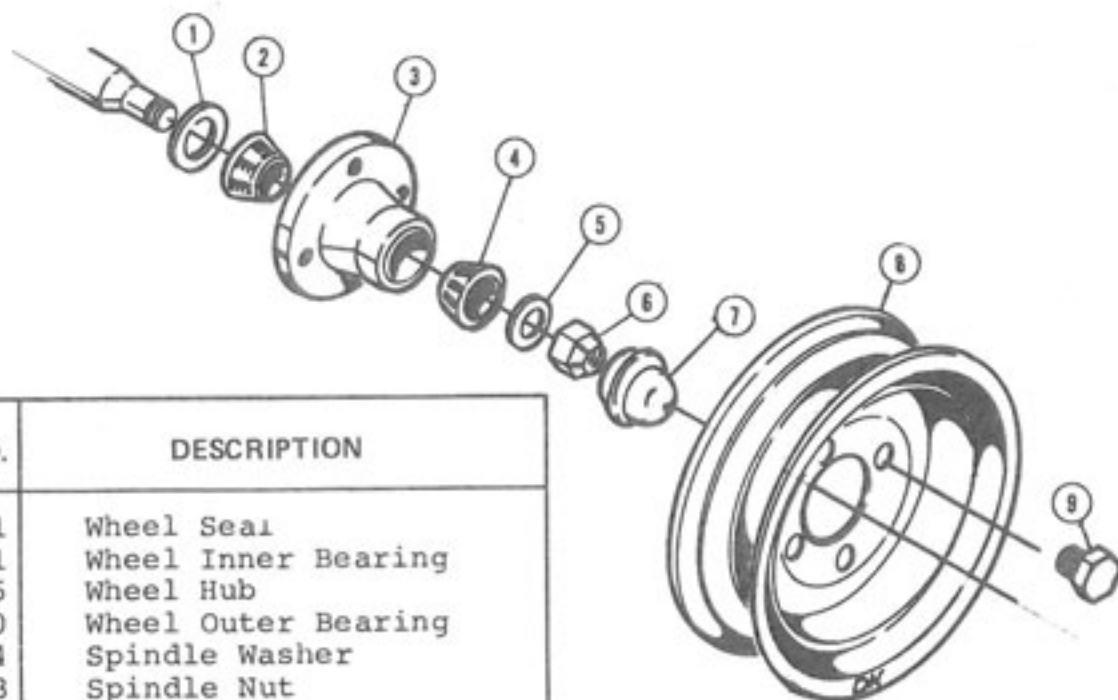




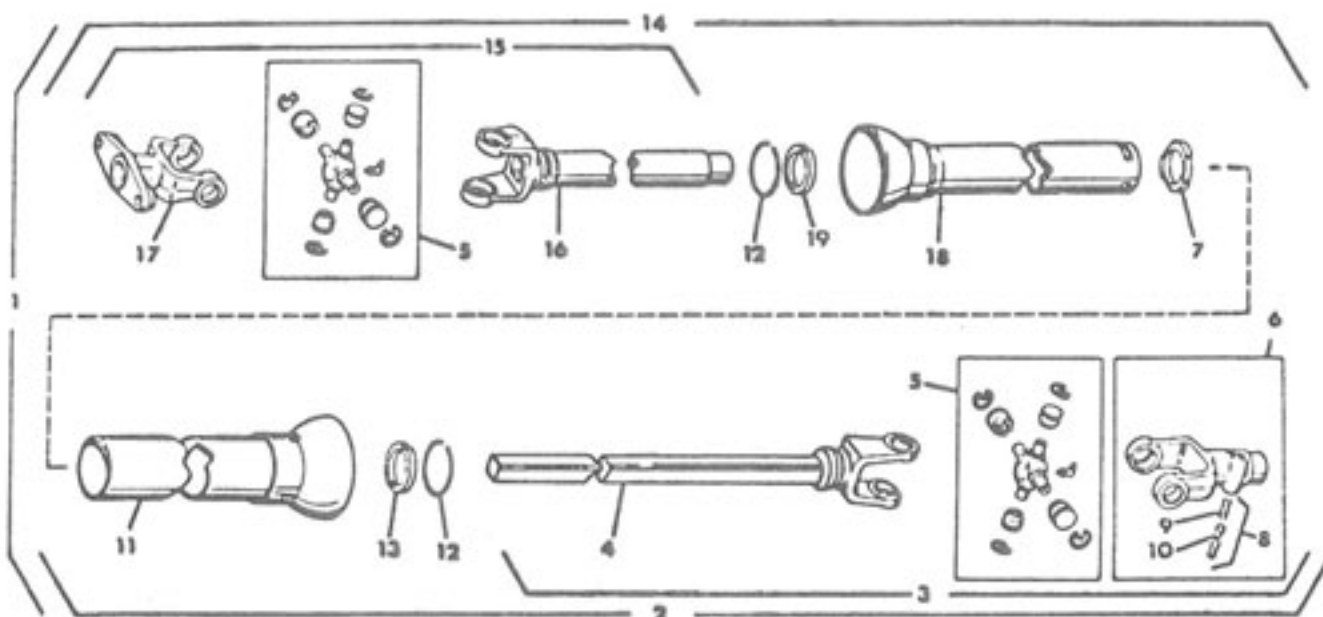
MECHANICAL RAM ASSEMBLY

001001

REF.	PART NO.	DESCRIPTION
1.	0000001	Ram Floating End Weldment
2.	0000002	Ram Screw Weldment
3.	0000003	Ram Fixed End Weld.
4.	0006000	Ram Thrust Bearing
5.	0005600	Retainer Sleeve
6.	0000004	Handle Weldment
7.		3/8-16 x 2" HHCS
8.	0018149	3/8-16" Lock Nut



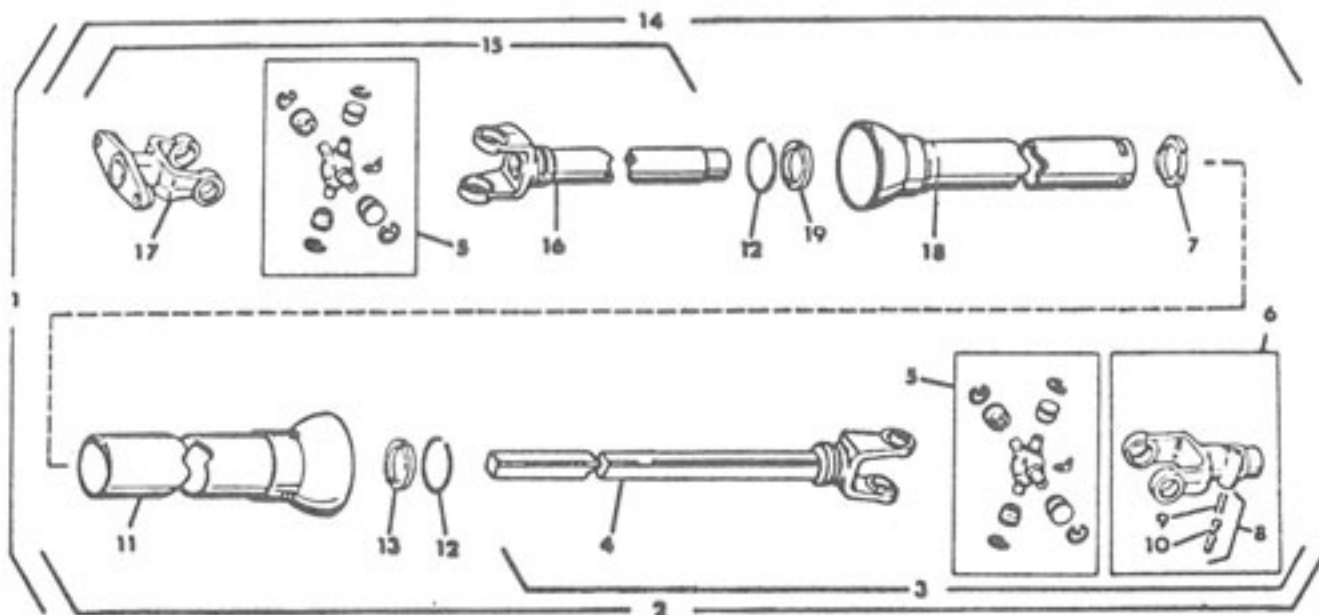
REF.	PART NO.	DESCRIPTION
1.	0018991	Wheel Seal
2.	0016001	Wheel Inner Bearing
3.	0018995	Wheel Hub
4.	0016000	Wheel Outer Bearing
5.	0018254	Spindle Washer
6.	0018253	Spindle Nut
7.	0018996	Wheel Hub Cap
8.	0018997	Wheel Rim Only
9.	0018251	Wheel Lug Bolt



LIFT TYPE P.T.O.

1016607

REF. NO.	PART NO.	DESCRIPTION
1.	1016607	"DN35W" Universal Joint and Telescoping Shaft Assembly with Nylon QDFWG
2.	1026616	Joint and Shaft with QDFWG
3.	1026617	Joint and Shaft Assembly
4.	1026618	Yoke and Shaft Assembly
5.	0026628	Repair Kit
6.	1026610	Q.D. Yoke Assembly (1-3/8 - 6B)
7.	0026613	Nylon Centralizer
8.	0026629	Safe*T*Pin and Spring Kit
9.	0026602	Lock Pin Spring
10.	0026601	Safe*T*Pin
11.	1026619	Female Guard Assembly
12.	0028250	Bearing Retainer
13.	0026004	Nylon Bearing
14.	1026620	Joint and Tube w/QDFWG
15.	1026621	Joint and Tube Assembly
16.	1026622	Yoke and Tube Assembly
17.	0026666	Yoke, Shear (1.255/1.252" Dia.)
18.	1026623	Male Guard Assembly
19.	0026634	Nylon Bearing



PULL TYPE P.T.O.

1016608

REF. NO.	PART NO.	DESCRIPTION
1.	1016608	"DN35W" Universal Joint and Telescoping Shaft Assembly with Nylon QDFWG
2.	1026607	Joint and Shaft with QDFWG
3.	1026608	Joint and Shaft Assembly
4.	1026609	Yoke and Shaft Assembly
5.	0026628	Repair Kit
6.	1026610	Q.D. Yoke Assembly(1-3/8 - 6B)
7.	0026613	Nylon Centralizer
8.	0026629	Safe*T*Pin and Spring Kit
9.	0026602	Lock Pin Spring
10.	0026601	Safe*T*Pin
11.	1026611	Female Guard Assembly
12.	0028250	Bearing Retainer
13.	0026004	Nylon Bearing
14.	1026612	Joint and Tube w/QDFWG
15.	1026613	Joint and Tube Assembly
16.	1026614	Yoke and Tube Assembly
17.	0026666	Yoke, Shear (1.255/1.252" Dia.)
18.	1026615	Male Guard Assembly

## INSTRUCTIONS FOR ORDERING PARTS

To eliminate error and speed delivery:

1. Order your parts from your LOCAL M-C DEALER or DISTRIBUTOR.
2. Write your NAME and ADDRESS on your order PLAINLY.
3. Explain WHERE and HOW to make shipment.
4. GIVE MODEL NAME, NUMBER, and SERIAL NUMBER that is stamped on the NAME PLATE of your product.
5. Order from your PARTS LIST as this is the ONLY means we have of identifying the parts you need. Order by QUANTITY DESIRED, the PART NUMBER, and the description OF PART.
6. INSPECT ALL SHIPMENTS ON RECEIPT. If any parts are damaged or missing, file a claim with the carrier before accepting.
7. Do not return material to MATHEWS COMPANY without a letter of explanation. Make a list of all returned parts, show your name and address and include it with the shipment. TRANSPORTATION CHARGES MUST BE PREPAID.

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