



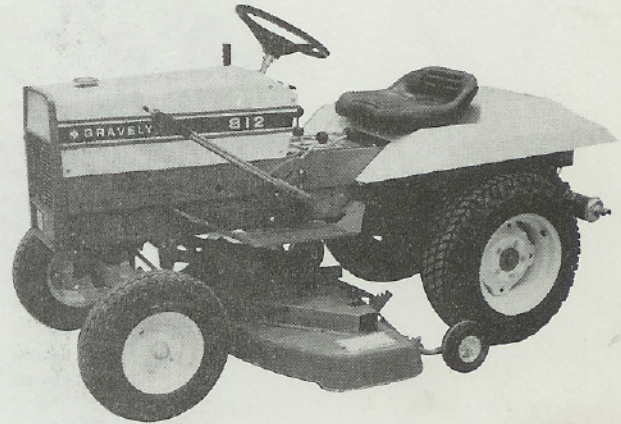
# GRAVELY®

CLARKE-GRAVELY CORPORATION  
A Studebaker-Worthington Company

# OPERATOR'S MANUAL

**NAME:** 40" & 50" ROTARY MOWER  
3-BLADES

**PART NUMBER(S):** 21296 - 40"  
21297 - 50"



## ROTARY MOWER WITH CONVERTIBLE TRACTOR

## ROTARY MOWER WITH RIDING TRACTOR

### GENERAL

### 4. SPECIFICATIONS

1. Read this manual carefully and understand how to operate and maintain the mower before attempting to use it. The 3-Blade Mower has been designed and built to the traditionally high standards for which Gravely is famous. With proper operation and maintenance the mower will perform for many years to come. Knowing how to use The Gravely Tractor and Mower is the largest part of getting the job done.

General purpose: lawn care, light weed mowing.

Maintenance intervals: every 8 hours of use.

Lubricants: All grease fittings and gear box: general purpose grease drive shaft. Locking collar: light oil.

Recommendations:

50" Rotary Mower will fit and operate on all Convertible and Riding Tractors.

Requires Quick Hitch Pin Kit and Front Mount Kit for Convertible Tractors.

Lift Assist Kit recommended for all Riding Tractors not equipped with hydraulic lift.

40" Rotary Mower, same as above, except will not fit on Riding Tractors with wheels in out-board position.

2. The mower is front mounted to Convertibles and center mounted on Riders. Power to the mower is controlled through the PTO (power take-off) of the Tractor. After initial installation no tools are required to disconnect or reconnect to the Tractors.

3. This manual includes parts lists, set up, safety, operator and maintenance instructions. All references to right, left, front, rear are made from the operator's position on the seat of Riders or at the handles of Convertibles. Contact The Gravely Dealer for further information.

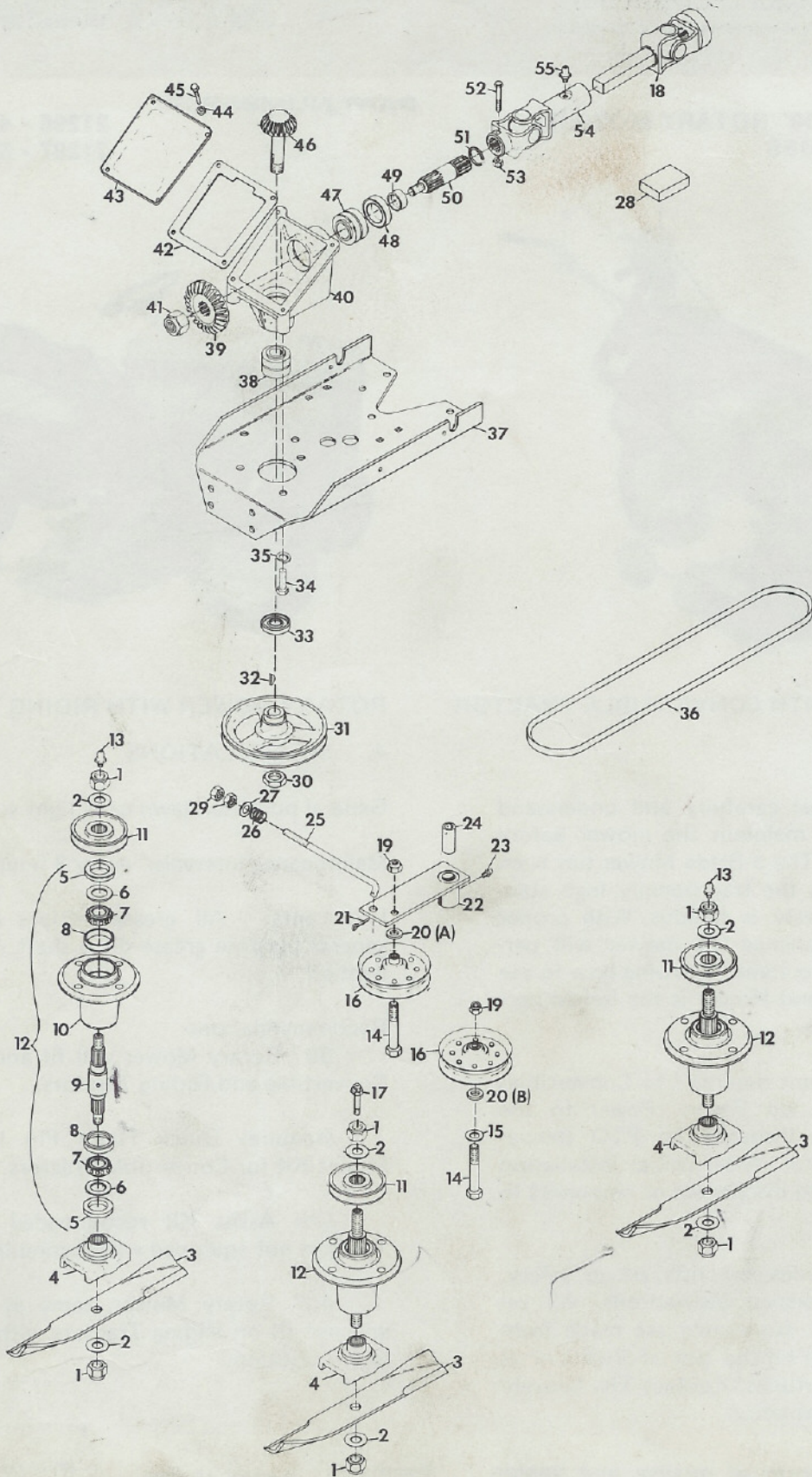
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Form No. 24677 (5-78)

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MOWER DRIVE 40" & 50"





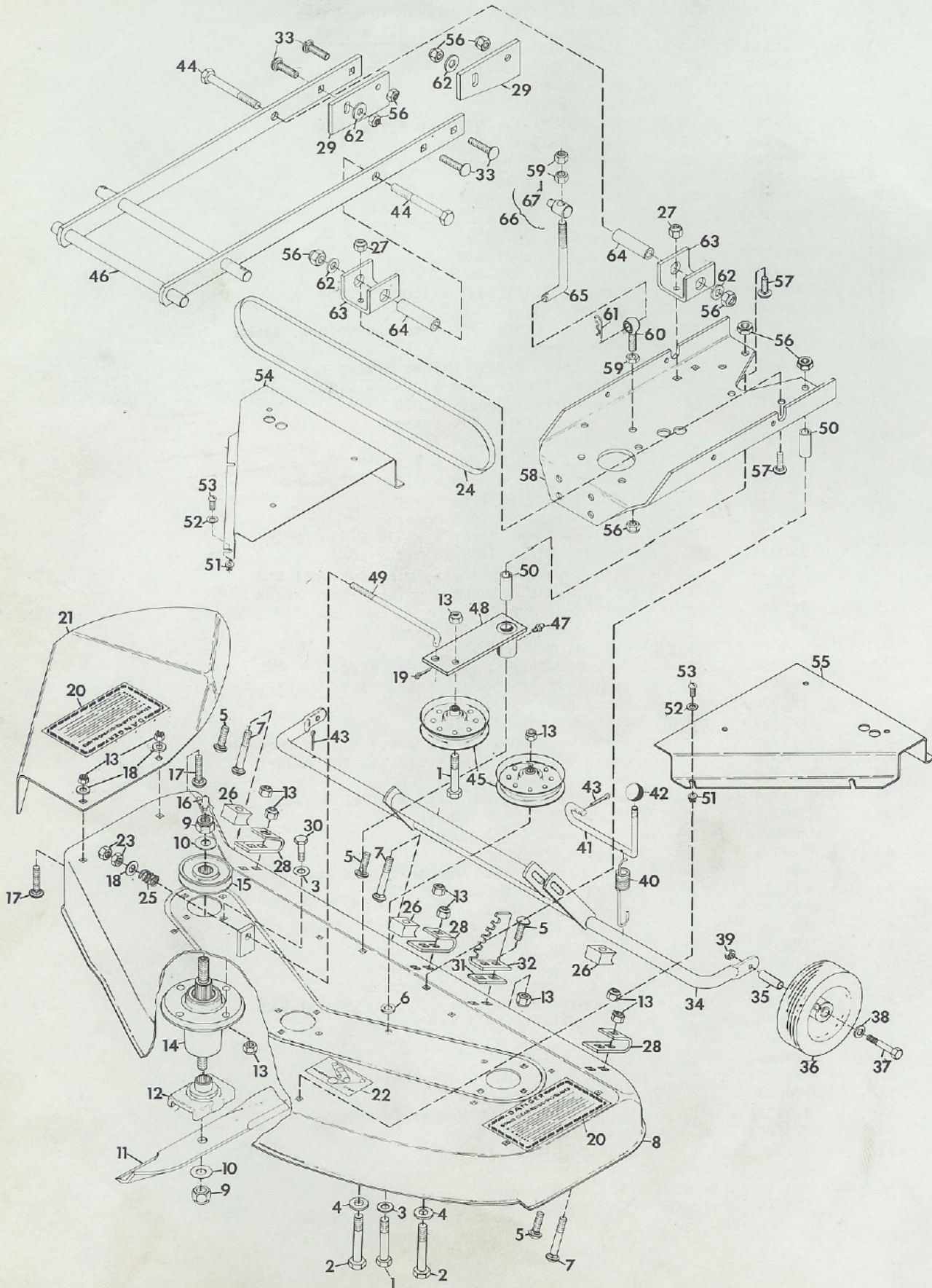
MOWER DRIVE 40" & 50"

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	418692	6	Nut, Lock; 5/8-11 Washer Insert Hex
2	131016	6	Washer, Flat; .656 x 1.312 x .095
3	11234	3	Blade, 50" Mower
	14668	3	Blade, 40" Mower
4	23026	3	Cradle, Blade
5	21211	2	Seal, Steel
6	20743	2	Washer, Flat; .975 x 1.970 x .030
7	9246	2	Cone, Roller Bearing
8	9245	2	Cup, Roller Bearing
9	21216	1	Shaft, Spindle
10	21215	1	Housing, Bearing
11	20065	3	Sheave, Spindle
12	21306	3	Assembly, Spindle
13	411010	2	Fitting, Lube; 1/8
14	180130	2	Bolt, Hex; 3/8-16 x 2
15	120388	1	Washer, Flat; .438 x 1.000 x .038
16	21060	2	Sheave, Idler
17	21214	1	Fitting, Lube; .125 Extended 90 Deg. Elbow
18	19074	1	Shaft, Prop Sq. Bar
19	456004	2	Nut, Lock; 3/8-16 Washer Insert Hex
20	14672	1	Spacer, Idler; .406 x .750 x .188
21	179252	1	Pin, Cotter; .062 x 1.000
22	21115	1	Weldment, Idler Pivot Arm
23	14406	1	Fitting, Lube; 1/4-28
24	19348	1	Spacer, .510 x .840 x 2.43 50" Mower
	19349	1	Spacer, .510 x .840 x 2.622 40" Mower
25	21111	1	Rod, Idler; 50 Inch Mower
	21112	1	Rod, Idler; 40 Inch Mower
26	11779	1	Spring, Comp. Type; 1 x .78 x 338 LB/in
27	120394	1	Washer, Flat; .406 x .812 x .065
28	12134	1	Kit, Repair Universal Joint Rockwell Std.
	20573	1	Kit, Repair Universal Joint Neapco 1605X
29	120369	2	Nut, Hex; 3/8-24
30	451539	1	Nut, Jam; 3/4-10 Hex Heavy
31	14660	1	Sheave, 1/2 x 6.50
32	431787	1	Key, Woodruff; .188 x .625 Hard
33	14645	1	Seal, Oil; 1.250 x 1.686 x .313
34	180173	3	Bolt, Hex; 1/2-13 x 1
35	120384	3	Washer, Lock; 1/2 SP
36	11216	1	Belt, V; .500 x .312 x 126.3 (50 In. Mower)
	14673	1	Belt, V; 1/2 x 5/16 x 117 (40 In. Mower)
37	22417	1	Support, Gear Housing
38	14644	1	Assembly, Bearing; .750 x 1.781 x 1.499
39	19607	1	Gear, Bevel; 50" Mower.
	20819	1	Gear, Bevel; 40" Mower
40	14636	1	Casting, Gear Box
41	456007	1	Nut, Lock; 3/4-10 Washer Insert Hex
42	11231	1	Gasket, Gear Housing
43	10982	1	Cover, Gear Housing
44	120380	4	Washer, Lock; 1/4 SP
45	180016	4	Bolt, Hex; 1/4-20 x .50
46	19608	1	Shaft, Gear Pinion; 50" Mower
	20820	1	Shaft, Gear Pinion; 40" Mower
47	14640	1	Assembly, Bearing; 1.000 x 1.980 x 1.243
48	14646	1	Seal, Oil; 1.250 x 1.987 x .250
49	14641	1	Spacer
50	20016	1	Shaft, Drive
51	14642	1	Ring, Retaining; 1.000 Shaft
52	180044	1	Bolt, Hex; 1/4-20 x 2
53	419454	1	Nut, Lock; 1/4-20 Washer Insert
54	13518	1	U-Joint, Female End
55	411027	1	Fitting, Lube; 1/4-28

NOTE: 20 (A) Pertains to 50 Inch Mower  
 20 (B) Pertains to 40 Inch Mower



40" MOWER DECK ASSEMBLY



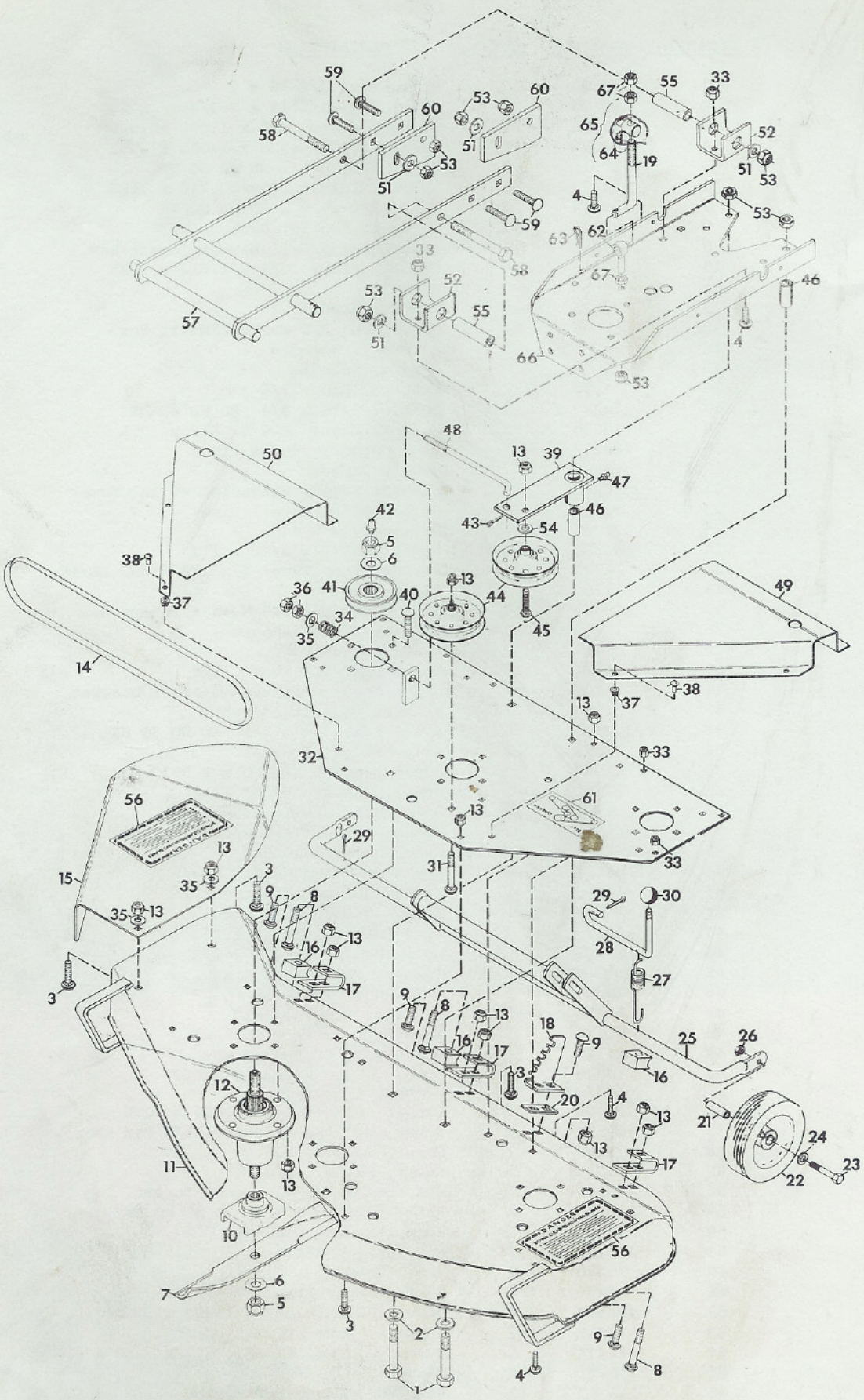


40" MOWER DECK ASSEMBLY

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	180130	2	Bolt, Hex; 3/8-16 x 2
2	180193	4	Bolt, Hex; 1/2-13 x 3-3/4
3	120388	13	Washer, Flat; .438 x 1.000 x .038
4	120396	4	Washer, Flat; .500 x 1.062 x .095
5	120915	5	Bolt; 3/8-16 x 1 RD HD SQ NK
6	14672	1	Spacer, Idler; .406 x .750 x .188
7	126419	3	Bolt; 3/8-16 x 2 RD HD SQ NK
8	21121	1	Weldment, 40 In. Deck
9	418692	6	Nut, Lock; 5/8-11 Washer Insert Hex
10	131016	6	Washer, Flat; .656 x 1.312 x .095
11	14668	3	Blade
12	23026	3	Cradle, Blade
13	456004	24	Nut, Lock; 3/8 Washer Insert Hex
14	21306	3	Assembly, Spindle
15	20065	3	Sheave, Spindle
16	411010	2	Fitting, Lube; 1/8
17	126227	2	Bolt; 3/8-16 x 3/4 RD HD SQ NK
18	120394	3	Washer, Flat; .406 x .812 x .065
19	179252	1	Pin, Cotter; .062 x 1.000
20	18549	2	Decal, Danger
21	19986	1	Shield, Safety Extension 40 In. Mower
22	11715	1	Decal, Belt Installation
23	120369	2	Nut, Hex; 3/8-24
24	14673	1	Belt, V; 1/2 x 5/16 x 117
25	11779	1	Spring, Comp Type; 1 x .78 x 338 LB/IN
26	11260	3	Stop, Nylon
27	419455	4	Nut, Lock; 5/16-18 Washer Insert Hex
28	11264	3	Bracket, Axle Support
29	21222	2	Plate, Adjustment
30	180124	12	Bolt, Hex; 3/8-16 x 1-1/4
31	21462	1	Shim, Mower height adjustment bracket
32	11265	1	Bracket, Height Adjust
33	120917	4	Bolt, 1/2-13 x 1-1/2 RD HD SQ NK
34	14661	1	Axle, Pivot Weldment
35	11937	2	Bushing, .385 x .750 x 2.593
36	11386	2	Wheel, Caster
37	189305	2	Bolt, Hex; 3/8-16 x 3-1/2
38	446477	2	Washer, Flat; .438 x 1.375 x .083
39	124829	2	Nut, Jam; 3/8-16 Hex
40	21471	1	Spring, 40 and 50 In. Mower
41	10993	1	Lever, Height Adjustment
42	11261	1	Knob, Adjustment Control
43	120123	3	Pin, Cotter; .125 x 1.250
44	180185	2	Bolt, Hex; 1/2-13 x 2-1/2
45	21060	2	Sheave, Idler
46	22418	1	Weldment, Pivot Arm
47	14406	1	Fitting, Lube; 1/4-28
48	21115	1	Weldment, Idler Pivot Arm
49	21112	1	Rod, Idler 40 Inch Mower
50	19349	4	Spacer, .510 x .840 x 2.622
51	11777	8	Grommet, Plastic
52	120392	8	Washer, Flat; .281 x .625 x .065
53	160536	8	Screw, Machine; 1/4-20 x 5/8 Pan HD
54	21258	1	Cover, Pulley; R.H.
55	21257	1	Cover, Pulley; L.H.
56	435507	11	Nut, Lock; 1/2-13 Washer Insert
57	126216	4	Bolt, 5/16-18 x 3/4 RD HD SQ NK
58	22417	1	Support, Gear Housing
59	120238	3	Nut, Jam; 1/2-13
60	19350	1	Bolt, Eye
61	15691	1	Cotter, Hair Pin
62	415543	4	Washer, Flat; .531 x 1.250 x .100
63	22415	2	Support, Mower Pivot
64	22414	2	Bushing, Mower Pivot; .510 x .750 x 2.020
65	19201	1	Rod, Lift
66	11317	1	Assembly, Mower Lift Pivot
67	142485	1	Pin, Groove; .125 x .625



50" MOWER DECK ASSEMBLY





## 50" MOWER DECK ASSEMBLY

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	180193	4	Bolt, Hex; 1/2-13 x 3-3/4
2	120396	4	Washer, Flat; .500 x 1.062 x .095
3	126227	6	Bolt, 3/8-16 x 3/4 RD HD SQ NK
4	126216	10	Bolt, 5/16-18 x 3/4 RD HD SQ NK
5	418692	6	Nut, Lock; 5/8-11 Washer Insert Hex
6	131016	6	Washer, Flat; .656 x 1.312 x .095
7	11234	3	Blade
8	126419	3	Bolt, 3/8-16 x 2 RD HD SQ NK
9	120915	5	Bolt, 3/8-16 x 1 RD HD SQ NK
10	23026	3	Cradle, Blade
11	20055	1	Weldment, 50 Inch Deck
12	21306	3	Assembly, Spindle
13	456004	28	Nut, Lock; 3/8-16 Washer Insert Hex
14	11216	1	Belt, V; .500 x .312 x 126.3
15	19985	1	Shield, Safety Extension 50 Inch Mower
16	11260	3	Stop, Nylon
17	11264	3	Bracket, Axle Support
18	11265	1	Bracket, Height Adjust
19	19201	1	Rod, Lift
20	21462	1	Shim, Mower Height Adjustment Bracket
21	11937	2	Bushing; .385 x .750 x 2.593
22	11386	2	Wheel, Caster
23	189305	2	Bolt, Hex; 3/8-16 x 3-1/2
24	446477	2	Washer, Flat; .436 x 1.375 x .083
25	11243	1	Weldment, Axle Pivot
26	124829	2	Nut, Jam; 3/8-16 Hex
27	21471	1	Spring, 40 and 50 Inch Mower
28	10993	1	Lever, Height Adjust
29	120123	3	Pin, Cotter; .125 x 1.250
30	11261	1	Knob, Adjustment Control
31	126416	1	Bolt, 3/8-16 x 1-3/4 RD HD SQ NK
32	21118	1	Weldment, Deck Support Plate
33	419455	10	Nut, Lock; 5/16-18 Washer Insert Hex
34	11779	1	Spring, Comp. Type; 1 x .78 x 338 LB/in
35	120394	3	Washer, Flat; .406 x .812 x .065
36	120369	2	Nut, Hex; 3/8-24
37	11777	8	Grommet, Plastic
38	160515	8	Screw, Mach; 1/4-20 x 1/2 Pan HD C-Recess
39	21115	1	Weldment, Idler Pivot Arm
40	126402	12	Bolt, 3/8-16 x 1-1/4 RD HD SQ NK
41	20065	3	Sheave, Spindle
42	411010	2	Fitting, Lube; 1/8
43	179252	1	Pin, Cotter; .062 x 1.000
44	21060	2	Sheave, Idler
45	180130	1	Bolt, Hex; 3/8-16 x 2
46	19348	4	Spacer, .510 x .840 x 2.43
47	14406	1	Fitting, Lube; 1/4-28
48	21111	1	Rod, Idler; 50 Inch Mower
49	21259	1	Cover, Pulley; L.H.
50	21260	1	Cover, Pulley; R.H.
51	415543	4	Washer, Flat; .531 x 1.250 x .100
52	22415	2	Support, Mower Pivot
53	435507	10	Nut, Lock; 1/2-13 Washer Insert
54	14672	1	Spacer, Idler; .406 x .750 x .188
55	22414	2	Bushing, Mower Pivot; .510 x .750 x 2.020
56	18549	2	Decal, Danger
57	22418	1	Weldment, Pivot Arm
58	180185	2	Bolt, Hex; 1/2-13 x 2-1/2
59	120917	4	Bolt, 1/2-13 x 1-1/2 RD HD SQ NK
60	21222	2	Plate, Adjustment
61	11715	1	Decal, Belt Installation
62	19350	1	Bolt, Eye
63	15691	1	Cotter, Hair Pin
64	142485	1	Pin, Groove; .125 x .625
65	11317	1	Assembly, Mower Lift Pivot
66	22417	1	Support, Gear Housing
67	120238	3	Nut, Jam; 1/2-13



## ASSEMBLY

1. Raise and support rear of mower about 4 inches.
2. Set axle pivot weldment in axle support brackets, Items 62 and 79.
3. Place a nylon stop in each bracket, curved side against axle. Fasten assembly with carriage bolts and nuts.

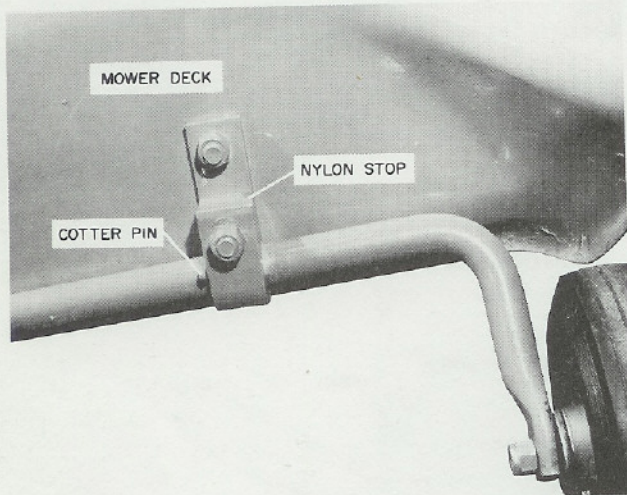


fig 3

4. Install a cotter pin in hole through axle just left of right side axle support. The cotter pin is not to interfere with the mower deck, fig 3.

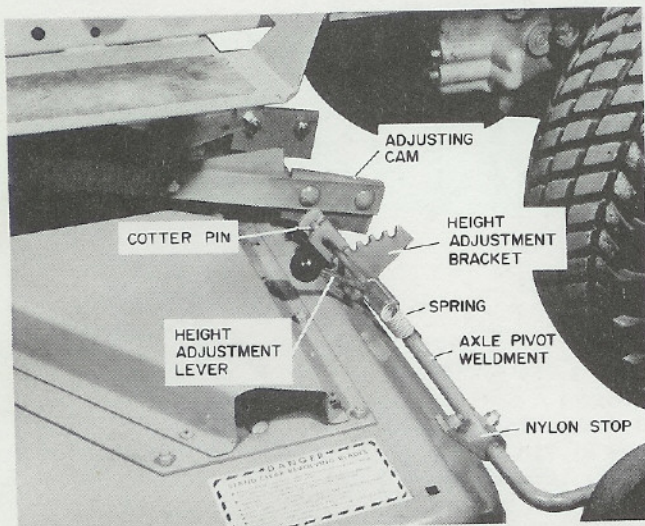


fig 4

5. Slide height adjustment lever in the 2 slots of the axle weldment. Fasten it with 2 cotter pins. Connect spring to height adjustment lever and axle. Screw knob on lever, fig 4.

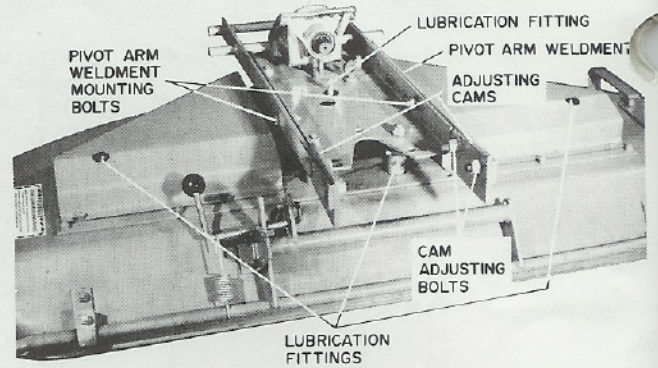


fig 5

6. Bolt pivot arm weldment to gearbox housing support; bolt heads outside, nuts and washers to the inside, fig 5.
7. Apply a light coat of general purpose grease to splined portion of gearbox drive shaft. Slide female end of the drive shaft universal joint onto the gearbox shaft. Be sure that bolt holes align. Fasten the "U" joint to gearbox shaft with bolt and locknut: Items 10, 12, 13 and 19, fig 5.
8. Apply heavy coat of general purpose grease to rectangular male shaft. Slide it into female shaft. Wipe off excess grease. The mower is now ready for initial lubrication.

## LUBRICATION

1. There are 7 grease fittings on the mower. After initial lubrication each point is to be relubricated every 8 HOURS of operation or more often when used in severe dust and/or grit conditions.

Spindle bearing housings . . . . .	3
Idler pivot arm . . . . .	1
Drive shaft . . . . .	1
Gauge wheels . . . . .	2

Note: Before relubricating, wipe fittings clean so as not to force dirt into grease fittings.

2. Blade spindle bearings are lubricated from the top of the deck through grease fittings, Items 52 and 53. When bearing housing is full, excess will come out the end of the housing.
3. The idler pivot arm is lubricated from the rear of the deck through the grease fitting on the bushing. Add grease until it comes out around the stud.



4. The drive shaft is lubricated from the top of the mower through the grease fitting on the female end "U" joint. Add grease until it comes out about the rectangular shaft, Items 9, 10 and 12, fig 5.

5. Gauge wheels are lubricated through grease fittings on the wheel hubs. Add grease until it comes out around the bushing. Items 86 and 87.

6. The gearbox is prelubricated and only needs visual inspection. If signs of leakage are present, refill box to its capacity with general purpose grease. Do not damage gasket, Items 17 and 18.

7. FRONT MOUNT KIT: There are 5 grease fittings on the assembly. After initial lubrication each point is to be relubricated every 8 HOURS of operation or more often when used in severe dust and/or grit conditions.

Caster wheels.....	2
Caster fork.....	2
Pivot pin weldment.....	1

## MOUNTING

### Riding Tractors, Center Mounting

1. Slide lift pivot on lift rod with groove pin extended towards bend in lift rod, Items 41, 43 and 69.

2. Run one jam nut 3/4 of the way on threaded portion of lift rod. Keeping it in position, jam other nut tightly against it, Items 42 and 43.

3. Lower equipment lift all the way down. Turn lift rod upside down (bent portion up) and put lift pivot in second hole from the end of the lift weldment. Put it in from the left side, fig 6.

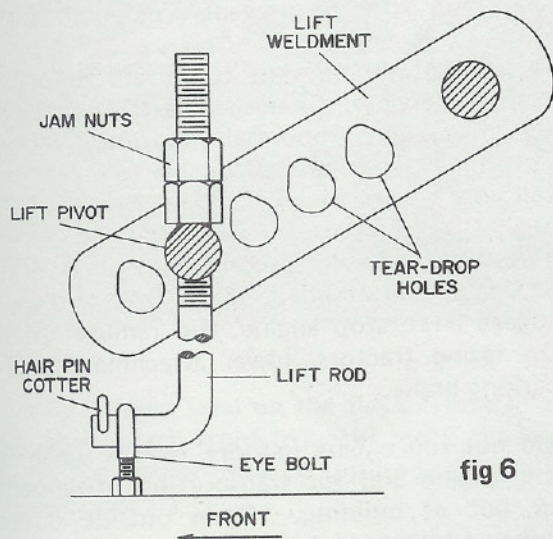


fig 6

4. Rotate lift rod to right-side-up position (bent part down) and raise equipment lift all the way up.

5. Set mower on a smooth surface. Set height adjustment lever in the lowest position (most forward notch). Slide mower under tractor.

6. Lower equipment lift all the way down. Connect bent portion of lift rod to eye bolt, Items 33 and 43. Secure together with hair pin cotter, Item 38.

7. Open equipment latches on frame. With equipment lift, raise mower and guide hanger assembly into the latches. Lock latches closed with hair pin cotters.

8. Lower mower all the way down. Apply a light coat of general purpose grease to splined PTO shaft. Connect drive shaft collar to PTO shaft (power take-off) of transmission. Be sure collar "clicks" into position on PTO shaft.

A. Twist Type Collar: Rotate collar ring in direction of arrow on ring and hold. Slide collar half way on shaft. Release ring and continue sliding on shaft until collar "clicks" and locks in position.

B. Slide Type Collar: Slide collar ring towards "U" joint and hold. Slide collar half way on shaft. Release ring and continue sliding on shaft until collar "clicks" and locks in position.

### Convertible Tractors, Front Mounting

9. Fasten quick hitch kit to Convertible Tractor.

10. Apply light coat of general purpose grease to PTO shaft and pivot pin of quick hitch kit.

11. Connect front mount kit to pivot arm of mower.

12. Slide the pivot pin of the quick hitch into the front mount kit and secure with washer and "klik" pin.

13. Connect the drive shaft to the PTO shaft as in paragraph 8.

14. Lubricate front mount kit as described in LUBRICATION, paragraph 7.



## SAFE OPERATION PRACTICES

### PREPARATION

1. Read the Tractor Owner's Manual carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Do not allow children to operate vehicle. Do not allow adults to operate it without proper instructions.
3. Thoroughly inspect the work area where the equipment is to be used and remove all stones, glass, metal, bones, sticks, wires and any other foreign objects. Stay alert for holes and other hidden hazards.
4. Disengage all clutches and shift into neutral before starting engine.
5. Do not put hands or feet near or under rotating parts.
6. Do not wear loose fitting clothing or accessories that might get caught in moving parts or on the controls. Keep hands, feet, hair, clothing, etc., away from moving parts.
7. Never operate the equipment in wet grass. When operating a walking tractor, always be sure of your footing; keep a firm hold on the handles and walk, never run.
8. Do not operate the equipment when barefoot or wearing open sandals. Always wear substantial footwear and eye protection.
9. Never attempt to make any adjustments while engine is running.
10. Never operate the equipment without good visibility and light.
11. Handle fuel with care, it is highly flammable.
  - (A) Do not smoke while handling fuel.
  - (B) Use approved fuel container.
  - (C) Never add fuel to a running engine or hot engine.
  - (D) Fill fuel tank out doors with extreme care. Never fill fuel tank indoors.
  - (E) Replace gasoline cap securely and wipe up spilled fuel.
  - (F) Always fill electric start tractors with tractor hood in the closed position.

### OPERATION

1. Exercise caution, especially when operating in reverse.
2. Do not operate equipment except from proper operator's position.
3. Keep safety devices and shields in place at all times.
4. Do not allow passengers to accompany the operator at any time.
5. Disengage PTO before crossing a gravel drive, walks or roads, and when transporting equipment. Stay alert for hidden hazards or traffic.
6. Use extreme caution when operating on slopes. Reduce speed on all slopes and sharp turns. Exercise extreme caution when changing direction on slopes.
7. Riding tractors mow up or down the face of slopes. Walking tractors mow across the face of slopes. DO NOT mow excessively steep slopes.
8. Never direct discharge of material toward bystanders nor allow anyone near the equipment while in operation.
9. After striking a foreign object, stop the engine and put the PTO in the OUT position before inspecting for damage. Any damage must be repaired before restarting the equipment.
10. Before cleaning, repairing, or inspecting, make certain the blade and all moving parts have stopped. Remove the key and disconnect the sparkplug wire to prevent accidental starting.
11. If the unit should start to vibrate abnormally, stop the engine, disengage the PTO, and check for the cause. Abnormal vibration is generally a warning of trouble. If unable to locate cause, call your service dealer.
12. Take all possible precautions when leaving equipment unattended. Shift into neutral, disengage PTO, stop engine, and remove the key. On riding tractors, lower attachment and set parking brake.
13. Do not run engine indoors, except when starting engine and for transporting equipment in or out of building. Open outside doors as exhaust fumes are dangerous.



14. To reduce fire hazard, keep the engine and mower free of grass, leaves, or excessive grease.
15. Do not change the engine governor settings or overspeed the engine.
16. Never operate machine at high transport speeds on slippery surfaces.
17. Check the blade mounting bolts for proper tightness at frequent intervals.

## ADJUSTMENTS

Cutting height is controlled with lever on left side of mower. Move the lever forward for a low cut and backward for a high cut.

### ADJUSTMENT PROCEDURE:

1. Park the tractor on level ground and set parking brake as described in the Tractor Owners Manual.
2. Lower mower lift to lowest position on manual lift tractors, to float position on hydraulic equipped tractors.
3. Select the most desirable cutting height using the height control lever.
4. Loosen the bolts securing the adjusting cams until they can be moved by hand. Items 96, 95 and 68.

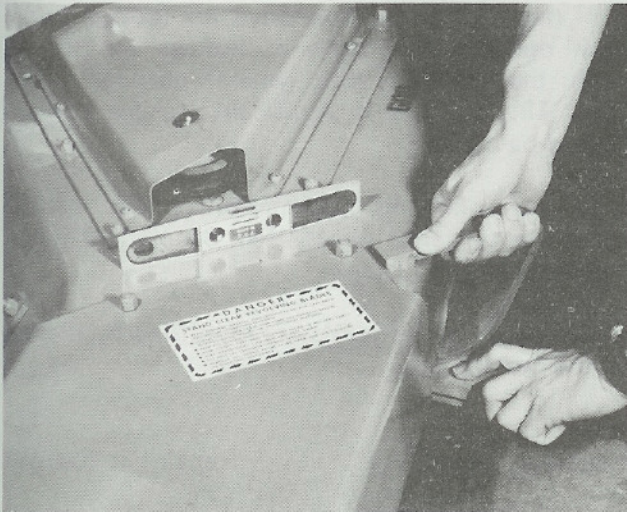


fig 7

5. Using a hand level on the flat portion of the mower deck, (from front to back) block the front (only) of the mower deck up until a level position is obtained. See fig 7.

NOTE: Mower deck should then be blocked on or about 1/8" above level.

Do this each side of mower deck, ie right and left side at the front.

6. By hand, push the front of the adjusting cam down as tight as possible against the pivot weldment axle, (Items 79 and 95, 50" mower) (Items 79 and 93, 40" mower) and tighten all bolts securely. See fig 8.

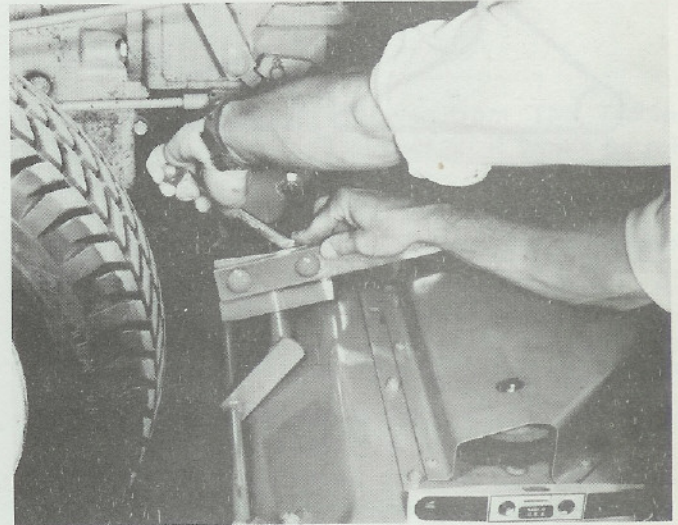


fig 8

7. When cutting height of mower is changed and a finer adjustment is desired, follow the ADJUSTMENT PROCEDURE as described above.

This adjustment is shown on the riding tractor. Use the same procedure for the walking tractor.

8. Blade Removal
  - A. Remove mower from The Tractor and turn mower upside down.
  - B. Remove nuts, washers, and blades, Item 55, 56 and 57. Wedge a piece of wood between blade and deck to keep the blade from turning. It is not necessary to remove blade cradles.
9. Blade Installation
  - A. Set blades in cradles, items 57 and 58. The lift portion of the blades points toward mower deck.
  - B. Put on washers and torque nuts to 50 ft. lbs. Wedge a piece of wood between blades and deck housing to keep blades from turning.
10. Belt Tension
  - A. Remove right side belt cover and loosen jam nut on the end of the rod, Items 73 and 76.



- B. Tighten the other jam nut against spring leaving an .010" to .015" air gap between coils of spring (approximate thickness of a match pack cover).
- C. Tighten end of jam nut against adjusting jam nut.
- D. Replace belt cover.

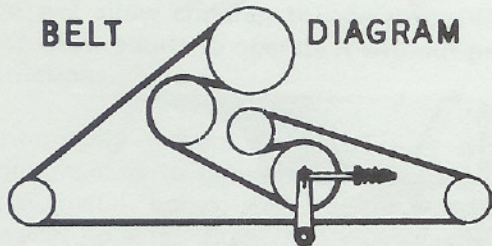


fig 9

- 11. Belt Replacement
  - A. Remove mower from The Tractor and take off left and right belt covers.
  - B. Unbolt gear housing support from deck and remove old belt.
  - C. Put on new belt as per diagram on mower deck and loosen belt tension, fig 9.
  - D. Bolt gear housing support and left side belt cover back on deck.
  - E. Adjust belt tension and replace right side belt cover.

### OPERATION

- 1. Read The Tractor Owners Manual. Follow safety and operating instructions to engage and disengage the PTO (power take-off).
- 2. After PTO is engaged, run engine at full throttle.
- 3. Select a ground speed fast enough to get the job done, yet slow enough to give a clean cut. Some trials may be necessary to find an optimum ground speed (for a particular stand of grass) to give a satisfactory cut.
- 4. In thick, lush growth reduce ground speed (not engine speed) to allow the mower enough (more) time to cut and discharge. Stop and shift to a lower gear to reduce ground speed.
- 5. **NORMAL MOWING:** Plan a mowing pattern so as to avoid discharging onto grass that has not been cut yet. Mowing grass with cuttings on top of it decreases the efficiency of the mower and is only necessary when mulching is desired. Keep the engine at full throttle.

- 6. **MULCHING:** Plan a mowing pattern so as to discharge cutting on grass that has yet to be mowed. The mower will then mow cut and uncut grass at the same time discharging a fine mulch. Slower ground speed is usually necessary for mulching than for normal mowing. Keep the engine at full throttle.

### ROUTINE MAINTENANCE

- 1. Perform all lubrications as described in LUBRICATION.
- 2. Check each spindle shaft nut before each operation to assure tightness; see ADJUSTMENT.
- 3. Check all nuts and bolts every 24 HOURS of operation to assure tightness.

Note: Some nuts and bolts can be visually inspected for tightness but nuts such as the spindle nuts should always be checked with a wrench.

- 4. Inspect each blade for sharpness before each operation. Resharpener and balance them when they become dull. When blades are removed for sharpening, inspect for surface cracks. Discard any blade that has evidence of metal fatigue and/or cracks. Pay particular attention to the metal around the center hole.
- 5. Clear the mower of cuttings and debris. Do not allow build-up of cuttings and debris.
- 6. Inspect the gearbox drive for leakage before each operation. If signs of leakage are present, refill the gearbox with general purpose grease, Item 18. If there is significant leakage a repair should be made.

- 7. The following information is for identification of universal joints, Item 34 of fig 1 and 2, Illustrated Parts Lists.

Brand of Universal joints are identified by the end of the bearing cap.

Neapco	=		=	Repair Kit 20573P1
Rockwell	=		=	Repair Kit 12134P1



## REMOVAL

### Disconnecting Locking Collars

**TWIST TYPE:** Rotate collar ring in direction of arrow and pull collar off PTO shaft.

**SLIDE TYPE:** Pull on collar ring until collar comes off PTO shaft.

### RIDING TRACTORS

1. As with mounting the mower on riding tractors removal is most easily accomplished on smooth pavement.

2. With mower in transport position (fully raised) adjust cutting height to lowest position and open equipment latches.

3. Lower mower and disconnect lift rod from mower. Disconnect drive shaft from transmission.

4. Carefully, slide mower from under chassis. Remove lift rod and reconnect to mower for storage.

### CONVERTIBLE TRACTORS

5. Disconnect drive shaft from quick hitch PTO.

6. Remove "klik" pin and washer from pivot pin of quick hitch.

7. Pull The Tractor from the mower.

8. Put washer and "klik" pin back on pivot pin for storage.

## STORAGE

1. After removing mower from The Tractor, reconnect lift rod to mower so it won't be misplaced.

2. Clear mower of all cuttings and debris.

3. Perform all lubrications.

4. Apply a light coat of oil to preserve finish and appearance.





## ATTACHMENT LIMITED WARRANTY

This Limited Warranty is issued by Clarke-Gravely Corporation, Gravely Division, and consists of the following terms:

1. Only the original purchaser of new Gravely manufactured attachments is covered by this Warranty.
2. This Warranty covers repair or replacement of parts manufactured by Gravely which are defective in material or workmanship. Gravely will pay for parts and labor only.
3. The Warranty starts the date of purchase and lasts for NINETY (90) DAYS for attachments used in Roofer applications, and TWELVE (12) MONTHS for products used in all other applications.
4. Some components of Gravely attachments are not covered by the Gravely Warranty. These components are covered by the original manufacturer's warranty. They are:
  - (a) Tires - Goodyear, Goodrich, Armstrong, General and Firestone
5. To obtain warranty service on Gravely attachments including components not manufactured by Gravely, use this procedure:
  - (a) Notify the Gravely dealer from whom you purchased the attachment.
  - (b) If you have moved and it is not convenient to notify the selling dealer, notify the nearest Gravely dealer. You should supply this dealer with a copy of the bill of sale as proof of the date of purchase.
  - (c) Make arrangements to have the attachment delivered to the dealer (refer to paragraph 6(a) below).
  - (d) If you have any questions concerning the Gravely Warranty, they should be referred to:

Gravely  
Clarke-Gravely Corporation  
A Studebaker-Worthington Company  
One Gravely Lane  
Clemmons, N. C. 27012  
Attn: Manager of Customer Services
  - (e) Warranty service on Gravely attachments must be performed by an authorized Gravely dealer or Gravely factory branch.
6. This Warranty does not cover the following:
  - (a) Transportation between owner's home or place of business and the dealership. If the dealer provides the transportation of the attachment, he will charge the owner his usual rate for such service.
  - (b) Normal maintenance services and normal replacement of items such as belts lubricants, mower, plow or cultivator blades.
7. GRAVELY MAKES NO OTHER EXPRESS WARRANTIES. ANY IMPLIED WARRANTIES, INCLUDING WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE PERIOD SET OUT IN PARAGRAPH 3 ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE STATEMENT MAY NOT APPLY TO YOU.
8. GRAVELY SHALL HAVE NO RESPONSIBILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE BREACH OF ANY WARRANTY, INCLUDING, BUT NOT LIMITED TO, INCONVENIENCE, RENTAL OR PURCHASE OF REPLACEMENT EQUIPMENT, LOSS OF PROFITS OR COMMERCIAL LOSS. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.
9. This Warranty gives you specific legal rights, and you may have other rights which vary from state to state.
10. A Gravely registration card is supplied with each Gravely attachment. Please complete the card and return it to Gravely at the address listed on the card. The registration card will be used by Gravely for:
  - (a) Recording date of purchase.
  - (b) Notification of owners in compliance with the Consumer Product Safety Act, should any notification be necessary.The return of registration card is not required in order to take advantage of this Warranty.
11. This Warranty is not subject to change or modification by anyone, including Gravely dealers and no Gravely dealer is authorized to make any representations or promises on Gravely's behalf.