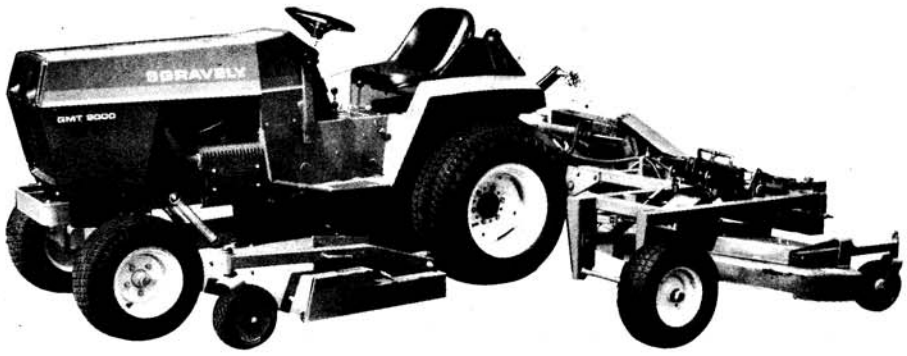
GRAVELY OPERATOR'S MANUAL

CLARKE-GRAVELY CORPORATION
A Studebaker-Worthington Company

NAME: 50 INCH WING MOWER **PART NUMBER(S):** 23554



The Gravely 50 inch wing mower is designed and built to be used on the Gravely 9000 Series Tractors in conjunction with the 72 inch center mount mower.

The rear power take off kit and the 72 inch center mount mower are required.

The Operator's Manual includes illustrated parts list, safety instructions, operation and maintenance instructions. All references to right, left, front and rear are given from the operator's position on the seat of the tractor.

To continue its program of quality and design improvement, the manufacturer reserves the right to change specifications, designs and prices without notice and without incurring obligation Form No. 24380 · 2/78 Printed in U.S.A.

Proper maintenance is important to the safe operation of all equipment. This mower is no exception. The operation and maintenance suggestions contained in this manual are effective methods for operating and servicing the tractor.

Improper use of the tractor and its attachments may result in damage to the machinery or severe personal injury. Persons operating and maintaining this equipment must read operators manuals completely and be required to practice these safety precautions and pay attention to the job being done.

It is important to understand that the warnings in this manual are not all inclusive. It is not possible for Gravely to know, evaluate and advise operators and servicing personnel of all possible hazardous consequences of operating and servicing this mower. Accordingly, anyone operating or servicing this mower in a manner not expressly recommended by Gravely must first satisfy himself that his safety, the safety of others and vehicle safety are not jeopardized by the method of operation or service elected by him.

TRAINING

It is the responsibility of the purchaser to provide these instructions and appropriate personal safety apparel to those operating and servicing this equipment.

1. Read the tractor and mower operator's manuals carefully before operating or servicing. Be thoroughly familiar with the equipment. Know how to stop the mower blades and how to operate the tractor controls quickly.

2. Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instructions.

3. Keep area of operation clear of all persons, especially small children and pets. Never direct the mower discharge toward bystanders or allow anyone in front of the equipment.

PREPARATION

1. 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 hidden hazards.

2. Disengage all clutches before starting the engine. This is done by placing the PTO levers in the OUT position and the forward-reverse lever in the mid or neutral position.

3. Never make any adjustments to the mower while engine is running or while the mower is in the transport position unless the stay rod is in place.

4. Do not put hands or feet near rotating parts.

5. 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. Personal protective equipment must be worn at all times, i.e., safety glasses, safety shoes, hard hats, and the like.

6. Before leaving the operator's position, STOP the engine and disengage the mower drive by placing the rear PTO lever in the OUT position, lower mower.

OPERATION

1. Always disengage the mower drive by placing the rear PTO lever in the OUT position before raising the mower from the cutting surface. Engage the mower drive only after the mower has been lowered to the cutting surface.

2. Always operate the equipment with good visibility and light.

3. Before making any repairs or adjustments, STOP the engine, disengage the attachment drive by placing the rear PTO lever in the OUT position, lower the mower and set the parking brake.

4. If a foreign object is struck, STOP the engine and put the rear PTO in the OUT position, lower mower and set parking brake before inspecting for damage. Any damage must be repaired before restarting the equipment.

5. Exercise caution, especially when operating the tractor in reverse.

6. Always operate equipment from the tractor's seat.

7. Keep all safety devices and shields in place at all times.

8. Never allow passengers to accompany the operator at any time.

9. Reduce speed on slopes and in sharp turns to prevent tipping over or loss of control. Exercise extreme caution when changing direction on slopes.

10. Always start or stop the tractor slowly when going up or down slopes. When operating on slopes, always go up and down, never across.

11. When hauling equipment on truck or trailer, tie down to tractor chassis and rear hitch.

12. Take all possible precautions when parking or leaving the tractor unattended: including STOP the engine, set parking brake and lower the mowers. Remove the ignition key.

13. Before cleaning, repairing, or inspecting equipment, make certain all moving parts have stopped. Set parking brake, lower mower and remove the key to prevent accidental starting.

14. If the mower should start to vibrate abnormally, immediately STOP the engine, disengage the rear PTO, set parking brake and lower mower. Abnormal vibration is generally a warning of trouble. Obtain qualified service assistance.

15. Do not run engine indoors, except when starting engine and transporting equipment in or out of a building. Open outside doors to insure proper ventilation.

16. Always operate the tractor in lower gears when on slippery surfaces.

17. Do not overload the mower capacity by traveling too fast in a higher gear.

18. WARNING: Gasoline must be handled with care. Refuel only outside with engine off.

19. Always observe traffic laws while transporting the equipment on or near the highway.

20. Always disengage the mower drive by placing the rear PTO lever in the OUT position when the attachment is not in use, when crossing pavement or barriers and before leaving operator's seat.

21. Be sure that the mower is resting on the ground before working on the equipment to prevent being struck or striking the exposed blade.

22. Exercise caution when raising and lowering the mower when the equipment is on slopes, when turning, when near people or obstacles.

23. Connect the stay rod when the mower is raised for transport or parking.

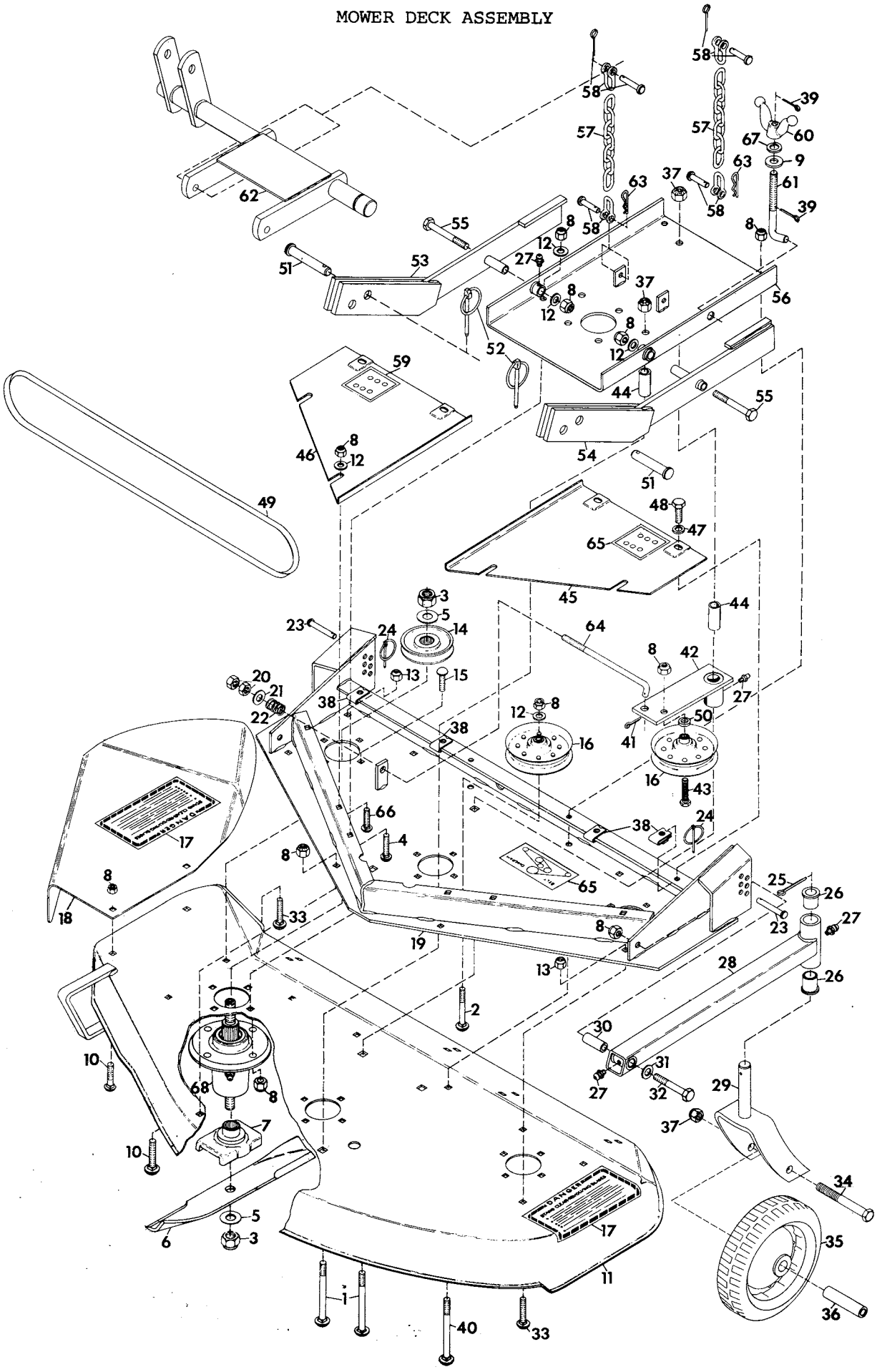
24. If the eqipment is to be parked in an area where pedestrian traffic is heavy, lower the mower to the surface level to prevent accidently contacting the mower blades.

MAINTENANCE AND STORAGE

1. Always maintain the equipment as specified in the product literature. Keep it in good repair and inspect regularly.

2. Inspect the drive system and hydraulic system for wear and damage regularly. A leaking hydraulic hose could cause the mower to drop rapidly.

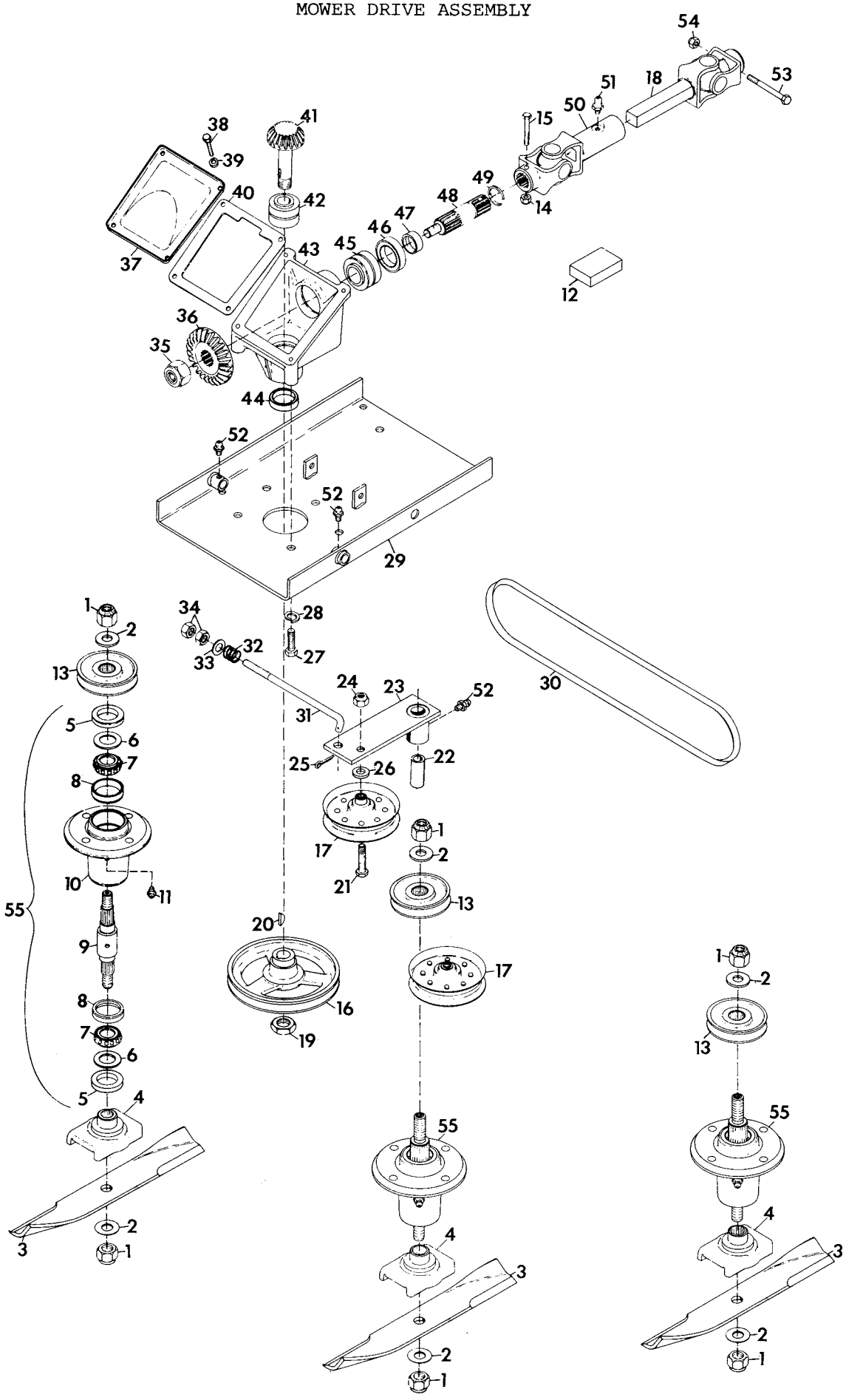
MOWER DECK ASSEMBLY



MOWER DECK ASSEMBLY

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	126808	3	Bolt, 1/2-13 x 3-3/4 RD HD SQ
2	126419	1	Bolt, 3/8-16 x 2 RD HD SQ NK
3	418692	6	Nut, Lock; 5/8-11 Washer Insert
4	120915	2	Bolt, 3/8-16 x 1 RD HD SQ NK
5	131016	6	Washer, Flat; .656 x 1.312 x .095
6	11234	3	Blade
7	23026	3	Cradle, Blade
8	456004	30	Nut, Lock; 3/8-16 Washer Insert
9	120396	1	Washer, Flat; .500 x 1.062 x .095
10	126227	4	Bolt, 3/8-16 x 3/4 RD HD SQ
11	23648	1	Deck, 50" Wing Weldment
12	120388	9	Washer, Flat; .438 x 1.000 x .038
13	419455	6	Nut, Lock; 5/16-18 Washer Insert
14	20065	3	Sheave, Spindle
15	126402	12	Bolt, 3/8-16 x 1-1/4 RD HD SQ
16	21060	2	Sheave, Idler
17	18549	2	Decal, Danger
18	19985	1	Shield, Safety Extension
19	23649	1	Weldment, Deck Support
20	120369	2	Nut, Hex; 3/8-24
21	120394		Washer, Flat; .406 x .812 x .065
22	11779	1	Spring, Comp Type; 1 x .78
23	22113	2	Pin, Clevis; 3/8 x 2.6
24	23468	2	Pin, Klik
25	120123	2	Pin, Cotter; .125 x 1.250
26	11947	4	Bushing; .752 x 1.065 x 1.193
27	14406	7	Fitting, Lube; 1/4 x 28
28	23668	2	Weldment, Caster Wheel-Support
29	11948	2	Weldment, Caster Fork
30	23671	2	Bushing, Pivot
31	120390	2	Washer, Flat; 9/16 x 1-3/8
32	180188	2	Bolt, Hex; 1/2-13 x 2-3/4
33	126216	6	Bolt, 5/16-18 x 3/4 RD HD SQ
34	433163	2	Bolt, Hex; 1/2-13 x 5
35	23696	2	Wheel, Gauge
36	11950	2	Bushing, Wheel; .520 x .750
37	435507	4	Nut, Lock; 1/2-13 Washer Insert
38	23665	4	Nut, Retainer
39	137185	2	Pin, Cotter; .125 x 1.00
40	126715	2	Bolt, 3/8-16 x 3-1/2
41	121224	1	Pin, Cotter; .094 x 1.00
42	21115	1	Arm, Idler Pivot Weldment
43	180130	1	Bolt, Hex; 3/8-16 x 2
44	19348	3	Spacer, .510 x .840 x 2.43
45	23666	1	Cover, L. H. Belt
46	23667	1	Cover, R. H. Belt
47	120214	4	Washer, Lock; 5/16 Sp.
48	180077	4	Bolt, Hex; 5/16-18 x 3/4
49	11216	1	Belt, V; .500 x .312 x 126.3
50	14672	1	Spacer
51	23682	2	Pin, Clevis; 1/2 x 1.330
52	23468	2	Pin, Klik
53	23672	1	Weldment, R. H. Hinge Link
54	23677	1	Weldment, L. H. Hinge Link
55	180134	2	Bolt, Hex; 3/8-16 x 2-1/2
56	23659	1	Weldment, Gearbox Support
57	23630	2	Chain, Lift
58	23629	4	Shakle, Chain
59	22401	1	Decal, Front, R. H.
60	22394	1	Nut, Wing; 1/2-13
61	23685	1	Rod, Mower Hitch
62	23622	1	Weldment, Lift Cross Shaft
63	11860	2	Cotter, Hair Pin
64	21111	1	Rod, Idler; 50 In. Mower
65	11715	1	Decal, Belt Installation
66	126390	4	Bolt, 3/8-16 x 7/8 RD HD SQ NK
67	120384	1	Washer, Lock; 1/2 Sp
68	23657	1	Assembly, Wing Spindle

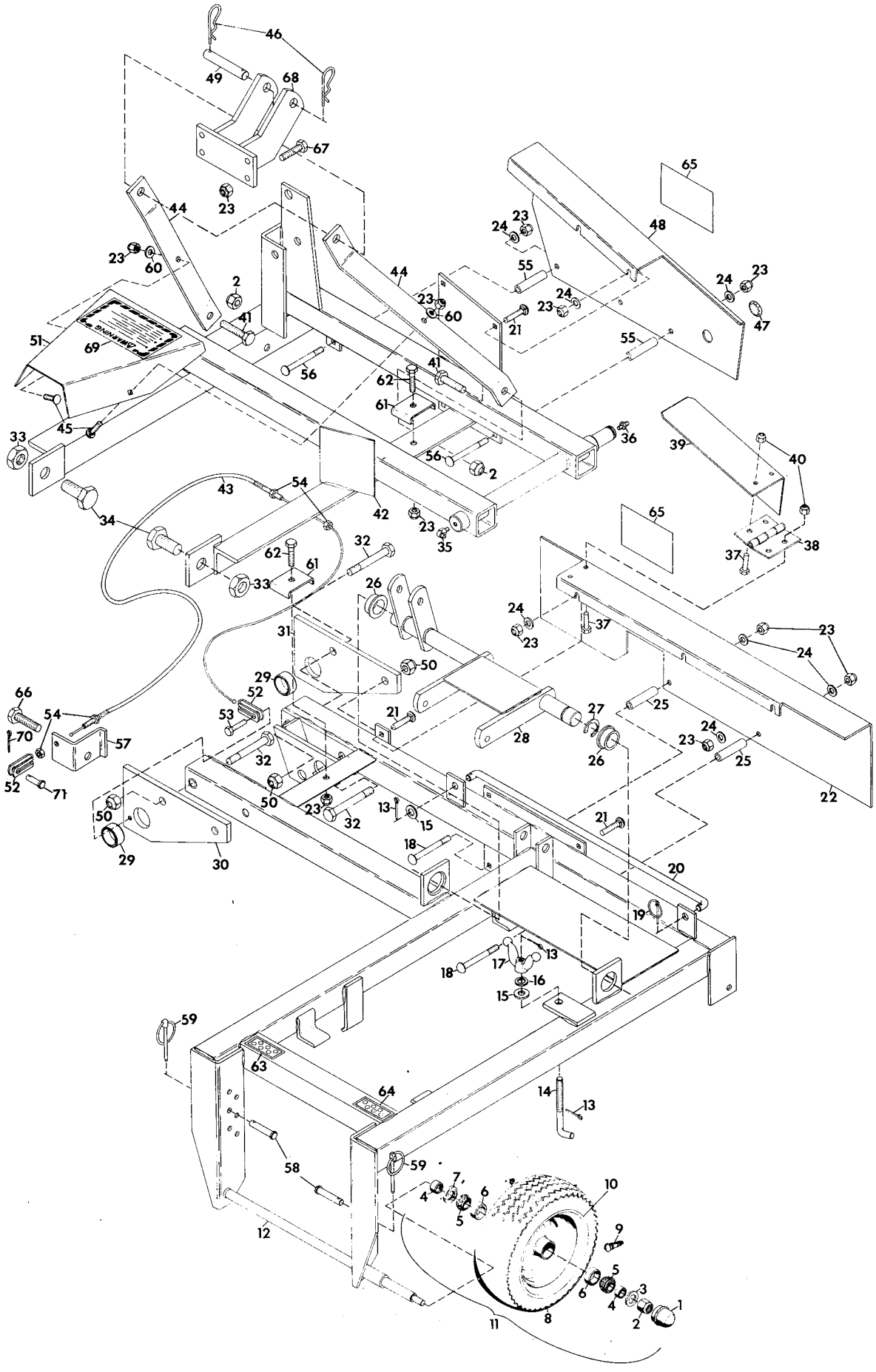
MOWER DRIVE ASSEMBLY



MOWER DRIVE ASSEMBLY

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	418692	6	Nut, Lock; 5/8-11 Washer Insert
2	131016	6	Washer, Flat; .656 x 1.312 x .095
3	11234	3	Blade
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	20058	1	Shaft, Spindle
10	21218	1	Housing, Bearing
11	411010	1	Fitting, Lube; 1/8
12	20573	1	Kit, Repair Universal Joint
13	20065	3	Sheave, Spindle
14	419454	1	Nut, Lock; 1/4-20 Washer Insert
15	180044	1	Bolt, Hex; 1/4-20 x 2
16	14660	1	Sheave, 1/2 x 6.50
17	21060	2	Sheave, Idler
18	24338	1	Shaft, Mower Drive, Male
19	451539	1	Nut, Jam; 3/4-10 Hex Heavy
20	431787	1	Key, Woodruff; 3/16 x 5/8
21	180130	1	Bolt, Hex; 3/8-16 x 2
22	19348	1	Spacer, .510 x .840 x 2.43
23	21114	1	Arm, Idler Pivot Weldment
24	456004	1	Nut, Lock; 3/8-16 Washer Insert
25	121224	1	Pin, Cotter; .094 x 1.000
26	14672	1	Spacer
27	180173	3	Bolt, Hex; 1/2-13 x 1
28	120384	3	Washer, Lock; 1/2 SP
29	23659	1	Weldment, Gearbox Support
30	11216	1	Belt, V; .500 x .312 x 126.3
31	21111	1	Rod, Idler; 50 In. Mower
32	11779	1	Spring, Comp. Type 1 x .78
33	120394	1	Washer, Flat; .406 x .812 x .065
34	120369	2	Nut, Hex; 3/8-24
35	456007	1	Nut, Lock; 3/4-10 Washer Insert
36	19607	1	Gear, Bevel
37	10982	1	Cover, Gear Housing
38	180016	4	Bolt, Hex; 1/4-20 x .50
39	120380	4	Washer, Lock; 1/4 SP
40	11231	1	Gasket, Gear Housing
41	19608	1	Shaft, Gear Pinion
42	14644	1	Assembly, Bearing; .75 x 1.781 x 1.499
43	14636	1	Casting, Gearbox
44	14645	1	Seal, Oil; 1.250 x 1.686 x .313
45	14640	1	Assembly, Bearing; 1.000 x 1.980 x 1.243
46	14646	1	Seal, Oil; 1.250 x 1.987 x .250
47	14641	1	Spacer, Ring
48	20016	1	Shaft, Drive
49	14642	1	Ring, Retaining; 1.000 Shaft
50	24339	1	Shaft, Mower Drive, Female
51	411027	1	Fitting, Lube; 1/4-28
52	14406	3	Fitting, Lube
53	180089	1	Bolt, Hex; 5/16-18 x 2-1/4
54	419455	1	Nut, Lock; 5/16-18 Washer Insert
55	23657	3	Assembly, Spindle

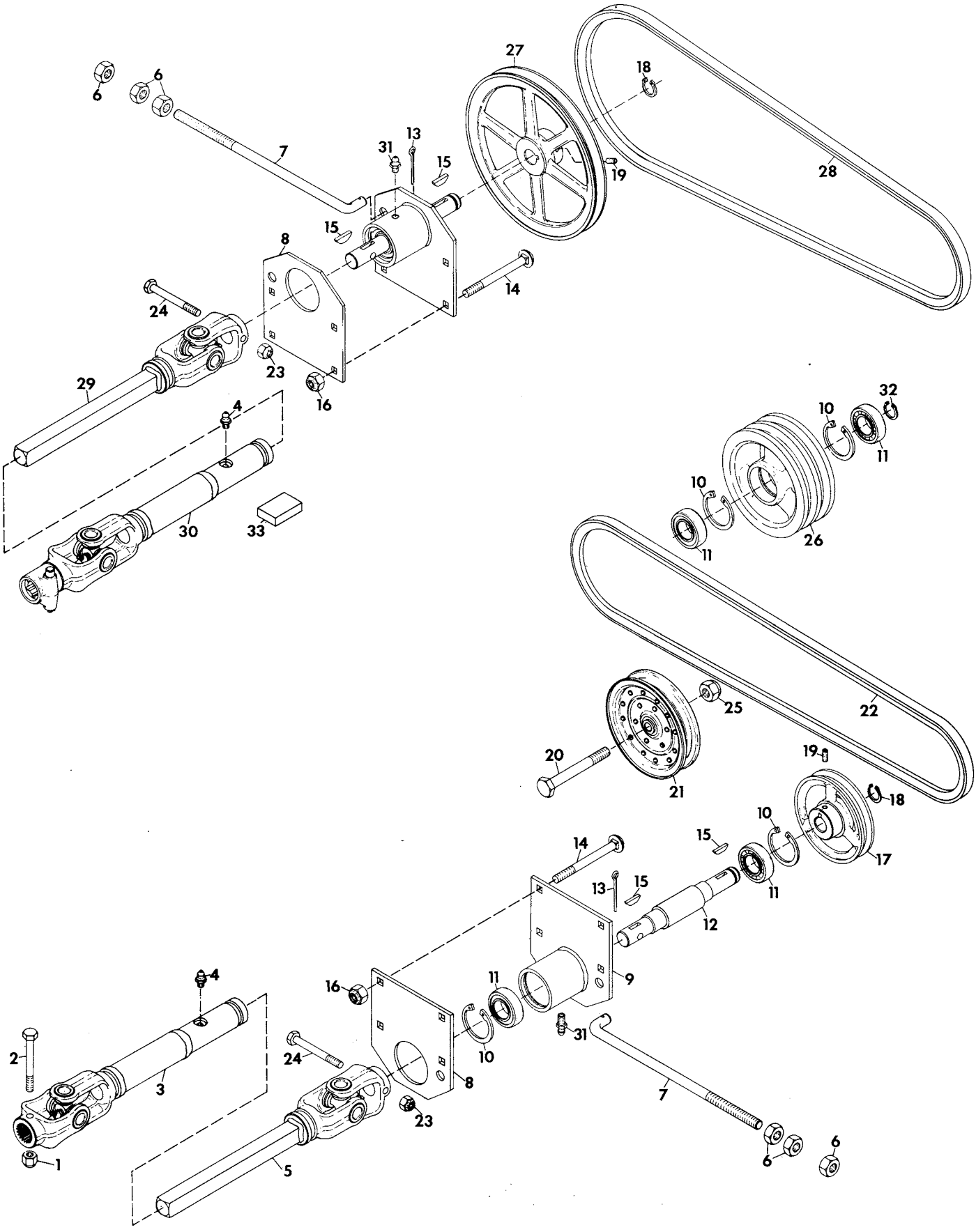
WING FRAME ASSEMBLY



WING FRAME ASSEMBLY

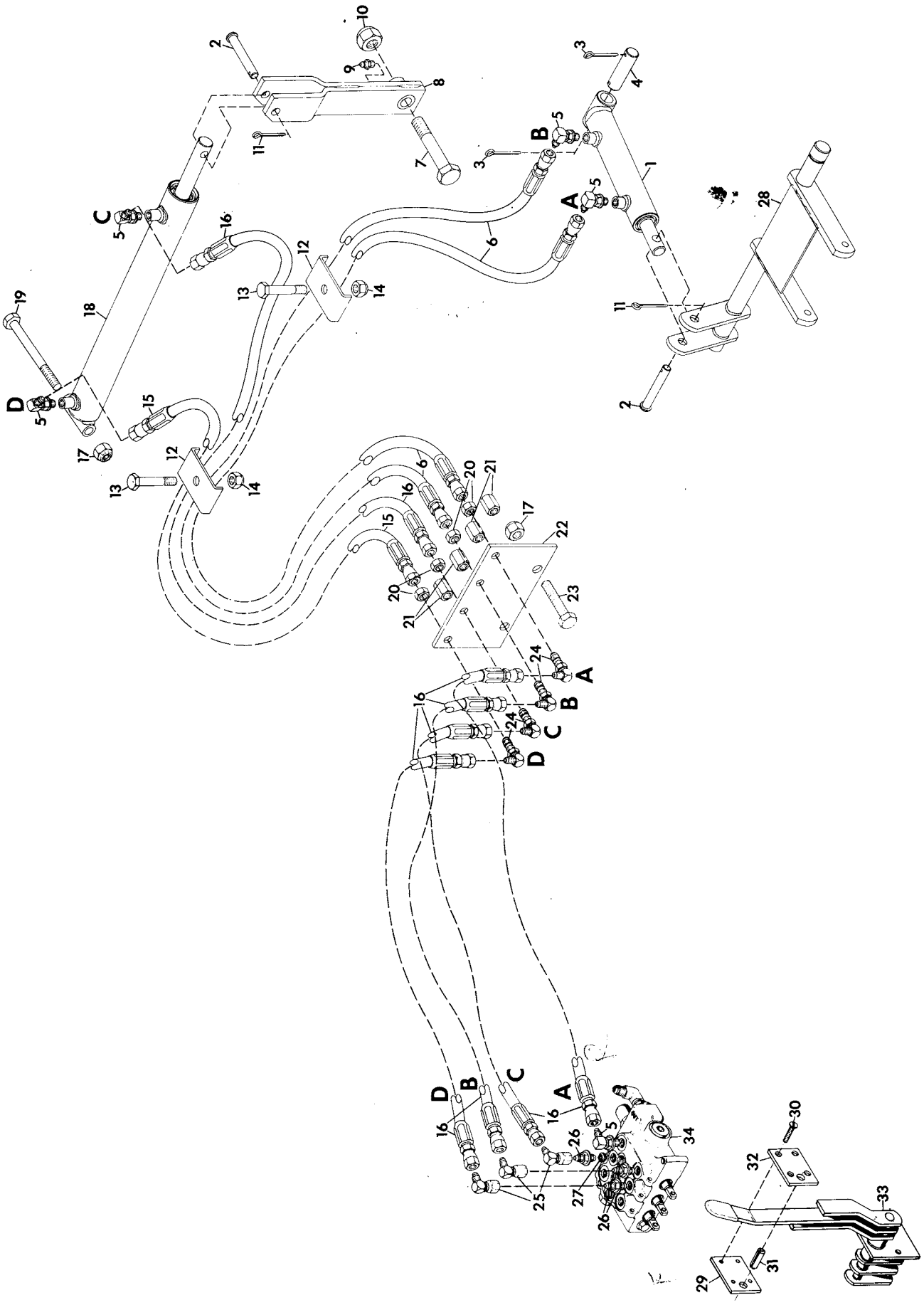
ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	18449	1	Cap
2	418692	1	Nut, Lock; 5/8-11 Washer Insert
3	131016	1	Washer, Flat; .656 x 1.312 x .095
4	18448	2	Spacer
5	18446	2	Bearing, Cone; LM 11949
6	18445	2	Bearing, Cup; LM 11910
7	18447	1	Seat (#E34)
8	11190	1	Tire, Front; 16 x 6.50-8
9	11191	1	Valve, Stem Assembly
10	18443	1	Rim, Front Wheel Assembly
11	18442	1	Wheel, Assembly Front
12	23574	1	Weldment, Wing Frame
13	137185	2	Pin, Cotter; .125 x 1.00
14	23685	1	Rod, Mower Hitch
15	120396	1	Washer, Flat; .500 x 1.062 x .095
16	120384	1	Washer, Lock; 1/2 SP
17	22394	1	Nut, Wing; 1/2-13
18	126729	2	Bolt, 3/8-16 x 4-1/2 RD HD SQ
19	23468	1	Pin, Klik
20	23686	1	Rod, Wing Lift
21	120915	5	Bolt, 3/8-16 x 1 RD HD SQ NK
22	23643	1	Cover, Wing Belt
23	456004	10	Nut, Lock; 3/8-16 Washer Insert
24	120394	10	Washer, Flat; .406 x .812 x .065
25	23642	2	Spacer
26	18355	2	Bushing, Pivot
27	11112	1	E-Ring; 1.000 Shaft
28	23622	1	Weldment, Lift Cross Shaft
29	12650	2	Bearing, Quill; 1.375 x 1.625 x .932
30	23605	1	Plate, Pivot L. H.
31	23604	1	Plate, Pivot R. H.
32	180192	4	Bolt, Hex; 1/2-13 x 3-1/2
33	273670	2	Nut, Lock; 7/8-9 Washer Insert
34	271816	2	Bolt, Hex; 7/8-9 x 2-1/4
35	411032	1	Fitting, Lube; 1/4-28 90 Deg.
36	14406	1	Fitting, Lube; 1/4 x 28
37	180077	4	Bolt, Hex; 5/16-18 x 3/4
38	23692	1	Hinge
39	23687	1	Guard, Idler Pulley
40	419455	4	Nut, Lock; 5/16-18 Washer Insert
41	271547	2	Bolt, Hex; 5/8-11 x 1-1/2
42	23559	1	Weldment, Main Frame
43	23572	1	Assembly, Cable; Wing Mower
44	23570	2	Brace, Rear R. H.
45	126402	2	Bolt; 3/8-16 x 1-1/4 RD HD SQ
46	15691	2	Cotter, Hair Pin
47	22091	1	Plug, Button
48	23644	1	Cover, Main Belt
49	21982	1	Pin; .750 x 3.3
50	435507	4	Nut, Lock; 1/2-13 Washer Insert
51	23688	1	Shield, Drive
52	21363	1	Clevis, Brake Conduit
53	180020	1	Bolt, Hex; 1/4-20 x 3/4
54	125339	4	Nut, Jam; 5/16-24 Hex
55	23641	3	Spacer
56	126734	3	Bolt, 3/8-16 X 5 RD HD SQ NK
57	23571	1	Bracket, Cable
58	23682	2	Pin, Clevis; 1/2 x 1.330
59	23468	2	Pin, Klik
60	120388	2	Washer, Flat; .438 x 1.000 x .038
61	23573	2	Bracket, Hose
62	180126	2	Bolt, Hex; 3/8-16 x 1.5
63	23646	1	Decal, Front, R. H.
64	23645	1	Decal, Front, L. H.
65	19479	1	Decal, Caution
66	180190	1	Bolt, Hex; 1/2-13 x 3
67	180123	4	Bolt, Hex; 3/8-16 x 1-1/8
68	21957	1	Weldment, Upper Link Plate
69	23693	1	Decal, Wing Mower Warning
70	121223	1	Pin, Cotter; 1/16 x .75
71	411373	1	Pin, Clevis; .25 x .75

DRIVE ASSEMBLY - FROM PTO TO MOWER DRIVE ASSEMBLY



DRIVE ASSEMBLY - FROM PTO TO MOWER DRIVE ASSEMBLY

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	419454	1	Nut, Lock; 1/4-20 Washer Insert
2	180044	1	Bolt, Hex; 1/4-20 x 2
3	24339	1	Shaft, Mower Drive, Female
4	411027	2	Fitting, Lube; 1/4-28
5	24338	1	Shaft, Mower Drive, Male
6	120238	6	Nut, Jam; 1/2-13 Hex
7	23614	2	Rod, Tension
8	23609	2	Plate, Bearing Housing
9	23607	2	Weldment, Drive Housing
10	23610	2	Ring, Retaining
11	13560	2	Bearing, Ball; 1.181 x 2.440 x .629
12	23611	1	Shaft, P.T.O.
13	137185	2	Pin, Cotter; .125 x 1.00
14	126705	8	Bolt, Hex; 3/8-16 x 3 RD HD SQ
15	124551	4	Key, Woodruff; 1/4 x 7/8
16	456004	8	Nut, Lock; 3/8-16 Washer Insert
17	23620	1	Pulley, Driven
18	17980	2	Ring, Retaining; 1.000 Shaft
19	102583	2	Screw, Set; 5/16-18 x 5/8
20	180181	1	Bolt, Hex; 1/2-13 x 2
21	23621	1	Pulley, Flat Idler
22	23640	1	Belt, V; Secondary Drive
23	419455	2	Nut, Lock; 5/16-18 Washer Insert
24	180089	2	Bolt, Hex; 5/16-18 x 2-1/4
25	435507	1	Nut, Lock; 1/2-13 Washer Insert
26	23616	1	Pulley, Idler
27	23619	1	Pulley, Drive
28	23639	1	Belt, V; Primary Drive
29	24341	1	Shaft, Primary Drive, Male
30	24340	1	Shaft, Primary Drive, Female
31	20741	2	Fitting, Lube; Safety Vent
32	23618	1	Ring, Retaining; 5160-118
33	20573	1	Kit, Repair Universal Joint


A
B
C
D

HYDRAULIC SYSTEM AND CONTROLS

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	19471	1	Cylinder, Hydraulic
2	14960	2	Pin, Clevis; .500 x 2.750
3	137228	2	Pin, Cotter; .156 x 1.500
4	23626	1	Pin, Cylinder
5	18826	5	Adapter; (P-H 2503-4-4)
6	23627	2	Hose, Hydraulic
7	271774	1	Bolt, Hex; 3/4-10 x 2-3/4
8	23631	1	Weldment, Lift Arm
9	14406	1	Fitting, Lube; 1/4-28
10	456007	1	Nut, Lock; 3/4-10 Washer Insert
11	137185	2	Pin, Cotter; .125 x 1.00
12	23573	2	Bracket, Hose
13	180126	2	Bolt, Hex; 3/8-16 x 1.5
14	456004	2	Nut, Lock; 3/8-16 Washer Insert
15	23638	1	Hose, Hydraulic
16	23555	1	Hose, Hydraulic
17	435507	1	Nut, Lock; 1/2-13 Washer Insert
18	23635	1	Cylinder, Hydraulic Lift
19	180194	1	Bolt, Hex; 1/2-13 x 4
20	272123	4	Nut, Jam; 7/16-20 Hex
21	23558	4	Nut, Cap
22	23556	1	Bracket, Quick Disconnect
23	180177	2	Bolt, Hex; 1/2-13 x 1-1/2
24	23557	4	Elbow, 90 Deg Buckhead Tube
25	21287	3	Adapter; (P-H 3903-4-4)
26	21286	3	Adapter; (P-H 0503-4-4)
27	23636	1	Plate, Flow Restriction
28	23622	1	Weldment, Lift Cross Shaft
29	23690	1	Plate, Lift Lever
30	120612	4	Screw, Mach; 10-32 x 5/8 Flat
31	141283	1	Pin, Dowel; 1/2 x 1
32	23691	1	Clamp, Lift Lever
33		1	Weldment, Hydraulic Lever Assembly
34		1	Valve, 3-Spool Hydraulic Control

NOTE Items 33 and 34 are shown for clarity and are not included in the 50 inch Wing Mower

CONTROLS

Read the tractor Operator's Manual and become familiar with its operation.

Become familiar with the hydraulic control levers and the function of each lever. See fig. 1. Know how to engage and disengage the PTO control levers. See figs. 2 & 3.

Before operating the hydraulic controls, check to make sure the wing frame assembly and the 50 inch mower deck are not in the secured transport position. See TRANSPORTING.

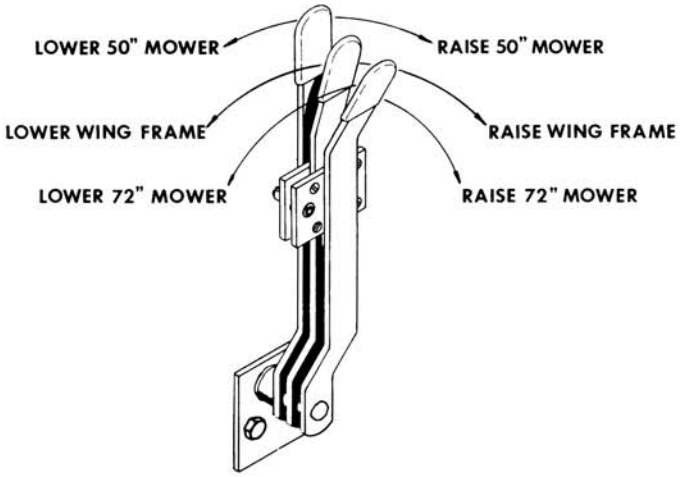


Fig. 1

OPERATING THE HYDRAULIC LEVERS

1. Start the tractor engine and allow a few minutes for the engine to warm up.

2. Pushing forward on the outside hydraulic lever on the tractor will lower the 72 inch center mount mower. Pulling the lever back will raise the mower. See fig. 1.

3. Pushing forward on the inside hydraulic lever on the tractor will lower the 50 inch wing mower. Pulling back on the lever will raise the mower. See fig. 1.

4. Pushing forward on the middle hydraulic lever on the tractor will lower the wing frame assembly. Pulling back on the lever will raise the wing frame assembly. See fig. 1.

NOTE: When raising the unit, always raise the 50 inch mower deck to the nested position before raising the wing frame assembly. When lowering the unit, always lower the wing frame assembly before lowering the 50 inch mower deck.

OPERATING THE PTO LEVERS

The PTO levers are used to engage and disengage the power to the mowers.

Pushing the center PTO control lever forward to "ENGAGE" will engage the center PTO that powers the 72 inch center mounted mower. Pulling the lever back will disengage the power. See fig. 2.

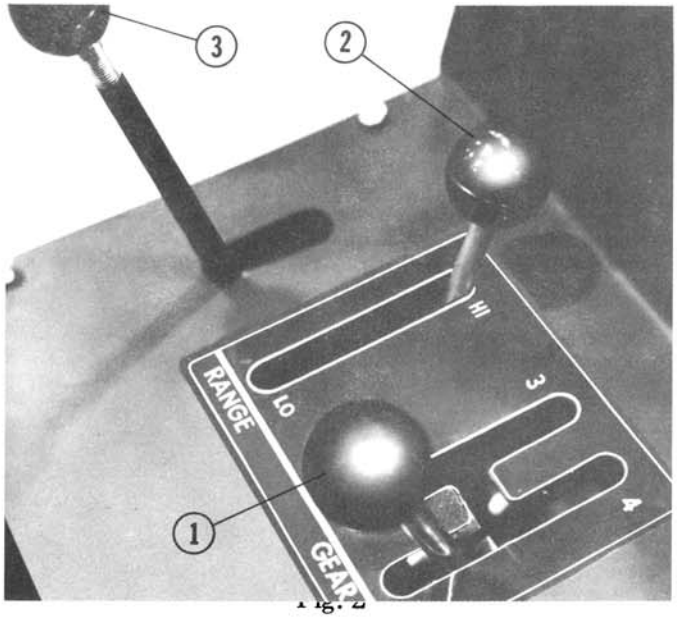


Fig. 2

1 — Gear Selector
2 — Range Selector
3 — Center PTO Control Lever

Pulling up on the rear PTO control lever will engage the rear PTO that powers the 50 inch wing mower. Pushing the lever down will disengage the power. See fig. 3.

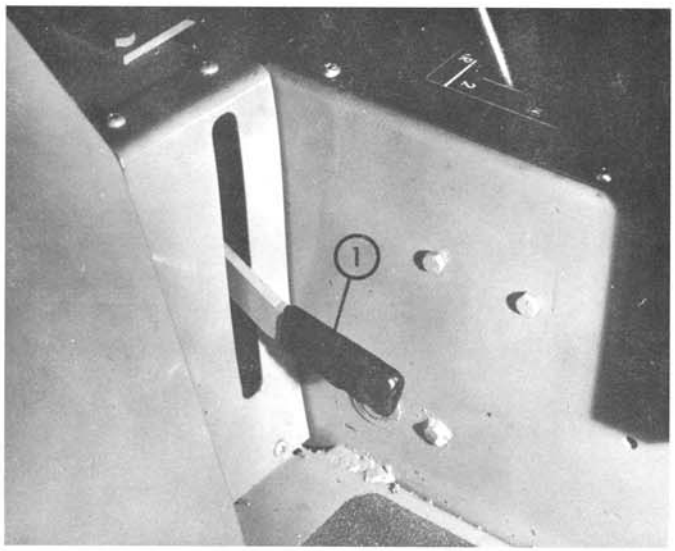


Fig. 3

1 — Rear PTO Control Lever

NOTE: With the rear PTO disengaging cable properly installed and adjusted, raising the wing frame assembly will automatically disengage the rear PTO stopping the mower blades of the 50 inch mower. The PTO will have to be re-engaged.

GROUND SPEED

The gear and range selectors control the ground speed of the tractor. See fig. 2.

Suggested gear and range selections are as follows:

A - 2 gear, Hi range for normal mowing.

B - 1 gear, Hi range for trimming.

The gear and range suggested are dependent upon conditions. Experiment by varying gear and range selections to find the optimum speed for the mowing job.

OPERATING

1. Start the tractor engine and allow a few minutes for the engine to warm up.

If the 72 inch mower and 50 inch wing mower are in the transport position, remove the stay rod from the wing frame assembly (see TRANSPORTING) and proceed as follows:

2. Push forward on the outside hydraulic lever on the tractor and lower the 72 inch mower.

3. Push forward on the middle hydraulic lever on the tractor and lower the wing frame assembly.

4. Push forward on the inside hydraulic lever on the tractor and lower the 50 inch mower deck.

5. With the 72 inch mower and the 50 inch wing mower down, in the operating position, select a slow ground speed.

6. Move the throttle lever to "FAST" (full throttle).

7. Engage the center PTO and allow the engine to reach full R.P.M.

8. Engage the rear PTO and allow the engine to reach full R.P.M.

9. Engage the direction control lever on the tractor and mow a short distance, about 20 ft. (609 cm). Stop the tractor, disengage the PTO controls, set the parking brake and stop the engine.

10. Check to see that the mowers are adjusted to give the desired cutting height. If not, adjust the cutting height. See HEIGHT ADJUSTMENT.

11. Practice mowing in the open without obstructions.

TRANSPORTING

To prepare the wing unit for transporting perform the following:

1. Start the tractor engine and allow a few minutes for the engine to warm up.

2. Pull back on the inside hydraulic lever on the tractor and raise the 50 inch mower deck so that it is nested to the wing frame assembly.

3. Stop the tractor engine.

4. Turn the wing nut on the securing rod until the rod can be inserted in the hole in the flange on the mower deck. See fig. 4.

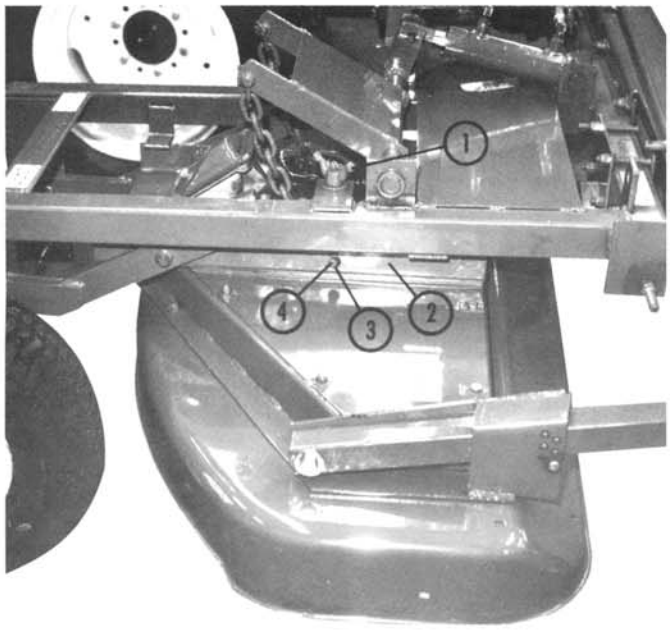


Fig. 4

1 — Wing Nut
2 — Flange
3 — Hole
4 — Securing Rod

5. Turn the wing nut clockwise until tight. The mower deck is now in a secure transport position.

6. Start the tractor engine.

7. Pull back on the middle hydraulic lever on the tractor and raise the wing frame assembly to the full up position. Stop the tractor engine.

8. Remove the Klik pin securing the stay rod and reconnect the stay rod and secure with the Klik pin as shown in fig. 5. The wing frame assembly is now in a secure transport position.

The 50 inch mower deck and wing frame assembly are now ready for transporting.

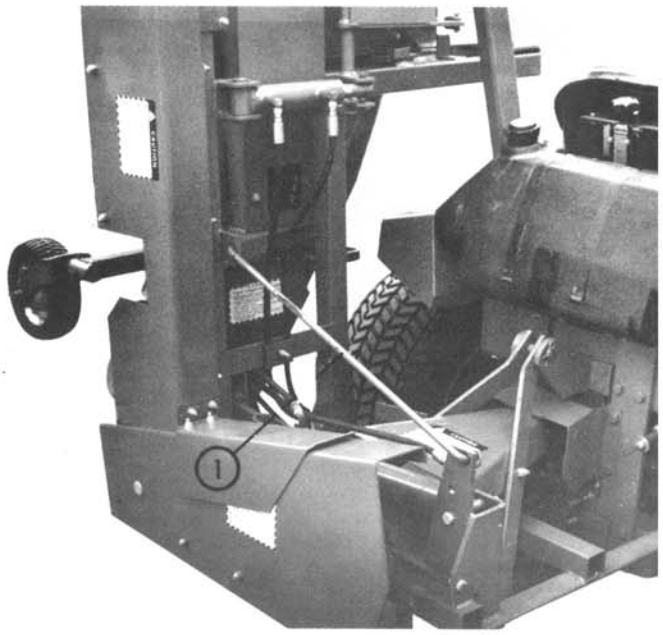


Fig. 5

1 — Stay Rod

TO LOWER THE WING AND 50 INCH MOWER

1. Remove the Klik pin from the stay rod and reconnect the stay rod to the upper position.

2. Start the tractor engine and push the middle hydraulic lever on the tractor forward and lower the wing frame assembly. Stop the tractor engine. See fig. 1.

3. Turn the wing nut-on the securing rod counterclockwise until the securing rod can be removed from the flange on the 50 inch mower deck.

4. Start the tractor engine and push the inside lever forward and lower the 50 inch mower deck. See fig. 1.

The 50 inch mower deck and wing frame assembly are now ready for operating.

CUTTING HEIGHT ADJUSTMENT

The 50 inch mower deck and the 72 inch center mount mower must have the same height adjustment as indicated by the numbered decals for an even cut. The height adjustment numbers on the 50 inch mower must correspond to the height adjustment numbers on the 72 inch mower.

The cutting height adjustment procedure for the 72 inch mower are as follows:

1. Raise the mower to the highest position with the hydraulic lift.

2. Set the caster wheel supports to the desired cutting height by locating the adjustment bolt in the desired hole of the adjusting flange on the mower deck. See fig. 6.

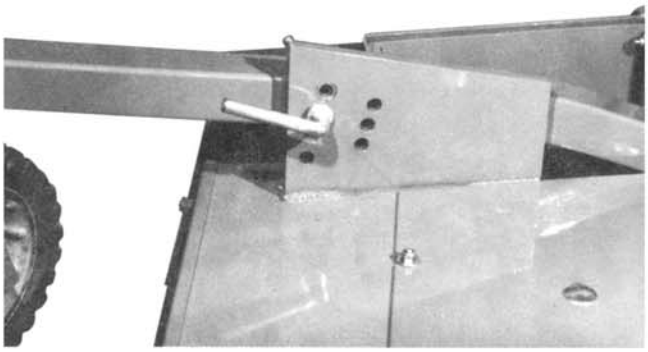


Fig. 6

3. Locate the corresponding hole in the hinge support and insert the clevis pin and secure with the hair pin cotter. See fig. 7.

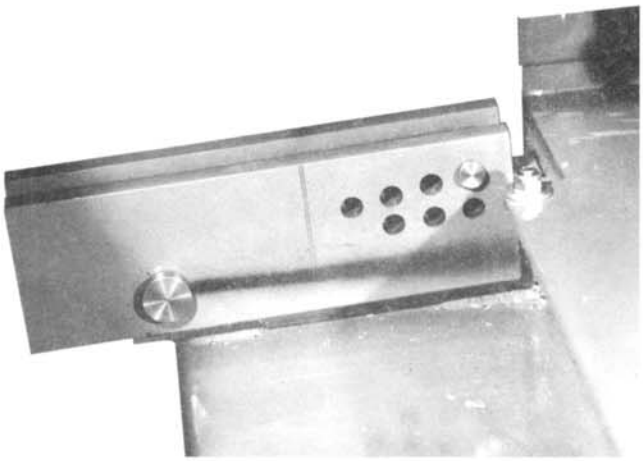


Fig. 7

For correct cutting height adjustment, holes in the caster wheel supports and hinge supports must correspond. Refer to decals attached to the mower deck.

LOWER THE NUMBER — LOWER THE CUTTING HEIGHT

The cutting height adjustment procedure for the 50 inch wing mower are as follows:

1. Start the tractor engine. Pull back on the inside hydraulic lever and partially raise the 50 inch mower deck. Do not raise to full height. Stop the tractor engine.

2. Put the clevis pins in the adjustment holes for the caster wheel arms that corresponds to the adjustment of the 72 inch mower as indicated by the numbered decals. See fig. 8.

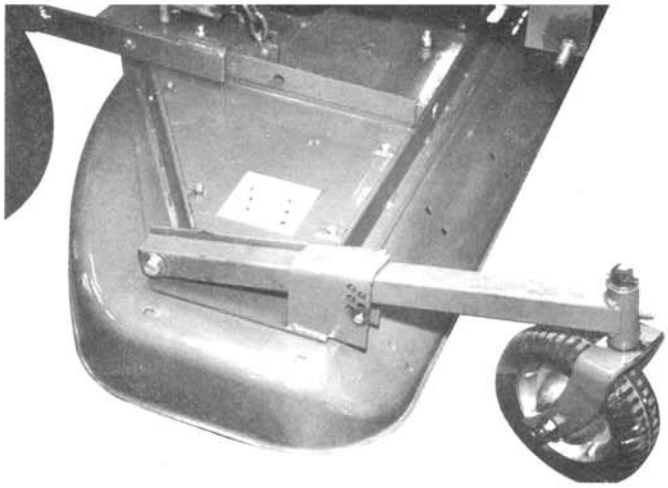


Fig. 8

3. Put the clevis pins in the adjustment holes for the lift arms that corresponds to the adjustment of the 72 inch mower as indicated by the numbered decals. See fig. 9.

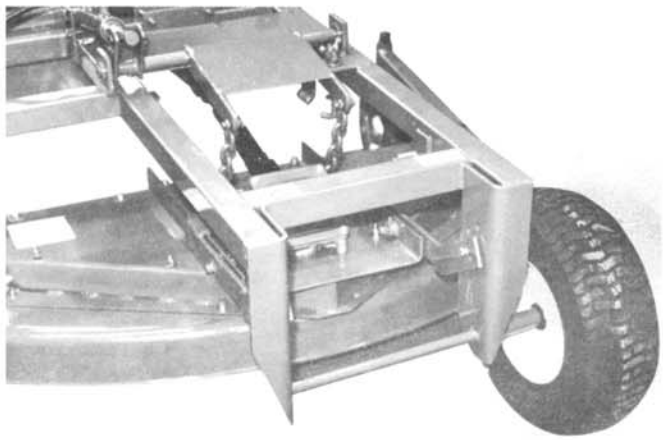


Fig. 9

1. Lubricate Daily with general purpose grease. Wipe fittings clean before lubricating so as not to force dirt into the grease fittings.

There are 21 grease fittings on the wing frame assembly and 50 inch mower deck. They are located as follows:

Mower "U" Joint	3
Wing "U" Joint	3
Lift Bracket	1
Idler	1
Pillow Blocks	2
Caster Wheels	2
Caster Wheel Bushings	2
Mower Support Plate Pivots	2
Caster Wheel Arm Pivots	2
Mower Spindles	3

2. Check belt tension after first days operation for initial stretch and adjust as necessary. See BELT TENSION ADJUSTMENT in 25 HOUR MAINTENANCE.

3. Check the blades for sharpness. Resharpen the blades when they become dull to prevent a ragged cut. When the blades are removed for sharpening, inspect the blades and replace any blade(s) that appears to be damaged. When installing the blades, place the blade cradle on the spindle, seat the blade in the cradle and secure with the washer and nut. Torque the nut to 50 ft. lbs. (67.8 Nm).

4. Check all nuts, bolts and screws to insure tightness. Make sure other fasteners, such as cotter pins etc., are in place. Tighten any loose fasteners and replace any missing fasteners.

5. Check the PTO disengaging cable and make sure it is properly adjusted. See PTO DISENGAGING CABLE ADJUSTMENT. Refer page 20.

Stop the tractor engine and set the parking brake before performing 25 hours maintenance.

1. BELT TENSION ADJUSTMENT
Belt Tension Adjustment - 50 Inch Mower

A. Remove the right side belt cover as viewed from the operator's position on the tractor seat.

B. Inspect the belt and replace if cracked, frayed or in any way damaged.

C. Loosen the jam nut on the end of the adjusting rod.

D. Tighten the other jam nut against the spring until there is an air gap of .010" to .015" (.254 to .381 mm) between the spring coils. A match book cover may be used as a gauge. Tighten the jam nuts.

E. Replace the belt cover.

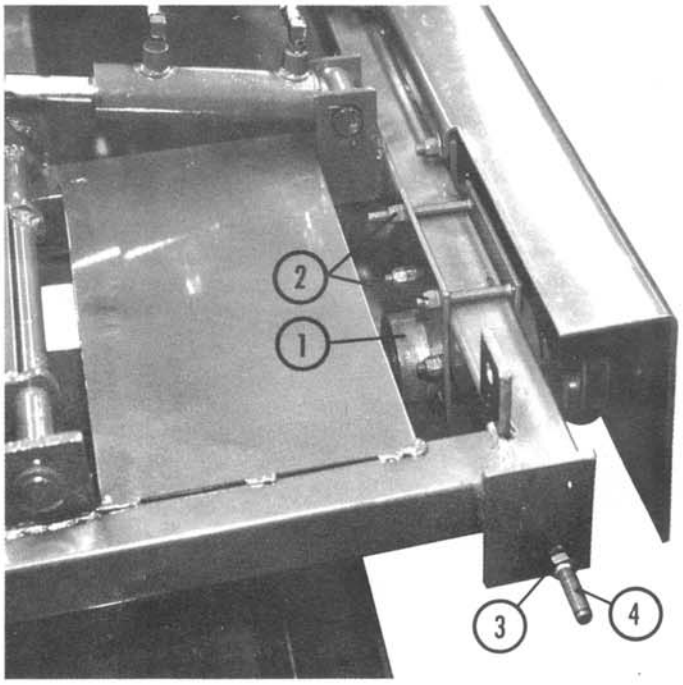


Fig. 10

1 — Pulley Drive
2 — Nut
3 — Nut
4 — Adjusting Rod

Belt Tension Adjustment- Wing Frame Assembly

Left Belt Adjustment (As viewed from the operators position).

A. Inspect the belt and replace if cracked, frayed or in any way damaged.

B. Loosen the four (4) nuts on the bolts securing the pulley drive to the frame. See fig. 10.

C. Loosen the nuts on the adjusting rod. See fig. 10.

D. Turn the adjusting nut until the belt has 1/2" (12.7 mm) deflection, at the midpoint between the two pulleys, using approximately 5 lbs. (2.25 kg) of pressure on the belt.

E. Tighten the other nut against the plate to secure the rod.

F. Tighten the four nuts loosened in step "B".

Right Belt Adjustment (As viewed from the operators position).

A. Inspect the belt and replace if cracked, frayed or in any way damaged.

B. Loosen the four (4) nuts on the bolts securing the pulley drive to the frame. See fig. 11.

C. Loosen the nuts on the adjusting rod. See fig. 11.

D. Turn the adjusting nut until the belt has 1/2" (12.7 mm) deflection, at the midpoint between the two pulleys, using approximately 10 lbs. (4.5 kg) of pressure on the belt.

E. Tighten the other nut against the plate to secure the rod.

F. Tighten the four nuts loosened in step "B".

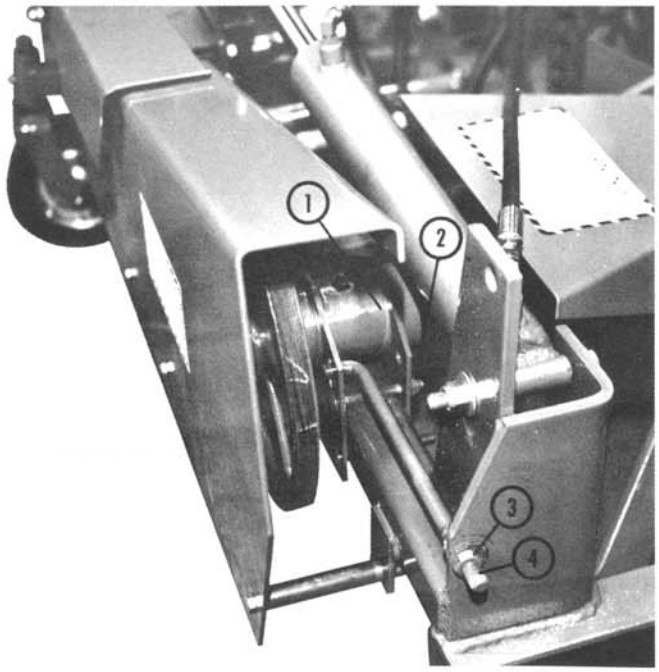


Fig. 11

1 — Pulley Drive
2 — Nut
3 — Nut
4 — Adjusting Rod

2. PTO DISENGAGING CABLE ADJUSTMENT

Stop the tractor engine before making any adjustments. To adjust the PTO disengaging cable perform the following:

A. Start the tractor engine and pull the inside hydraulic lever on the tractor back and raise the 50 inch mower deck to the nestled position. Stop the engine.

B. Put the rear PTO lever in the engaged position (lever up).

C. Adjust the PTO disengaging cable until there is a slight amount of play in the cable by turning the nuts on the threaded section of the cable.

D. Tie a weighted string to the wing frame support wheel axle. The string must measure 2 feet (60 cm) in length from the axle to the end of the weight.

E. Start the tractor engine. With the rear PTO lever in the engaged position, pull back on the middle hydraulic lever and slowly raise the wing frame assembly while observing the rear PTO control lever. The PTO control lever should disengage when the weighted string just clears the ground.

F. Stop the tractor engine.

G. If the PTO lever becomes disengaged before the weighted string is at full length, the cable is too tight.

H. If the PTO lever becomes disengaged after the weighted string is clear of the ground the cable is too loose.

I. Adjust the cable until proper adjustment is achieved as described in step "E".

3. Check the bushings for excessive movement. These are wear points and must be replaced if worn.

4. Make sure all guards and shields are in place and secure.

PERFORM DAILY MAINTENANCE

STORAGE

1. Clean mower of all cuttings and debris.

2. Perform Daily Maintenance and 25 Hour Maintenance.

AFTER STORAGE

1. Start Daily Maintenance and 25 Hour Maintenance.

GRAVELY

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.

GRAVELY
CLARKE-GRAVELY CORPORATION
A Studebaker-Worthington Company