WHEEL HORSE

AGRICULTURAL ATTACHMENTS

PARTS LIST AND INSTRUCTIONS

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- Tiller 7-1231
- Tiller 7-1231 Supplement
- Mid Mount Grader Blade 7-1111
- Formerly MB-405
- 32" Disc 7-1511
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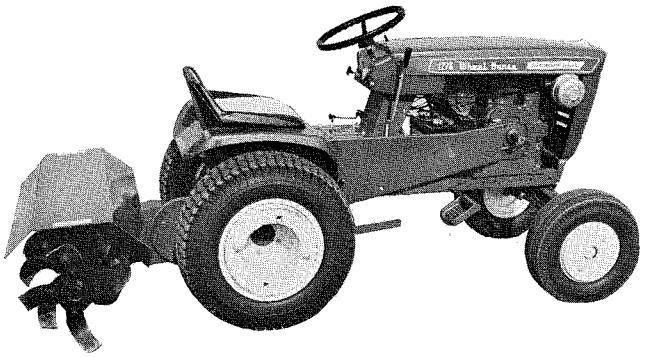
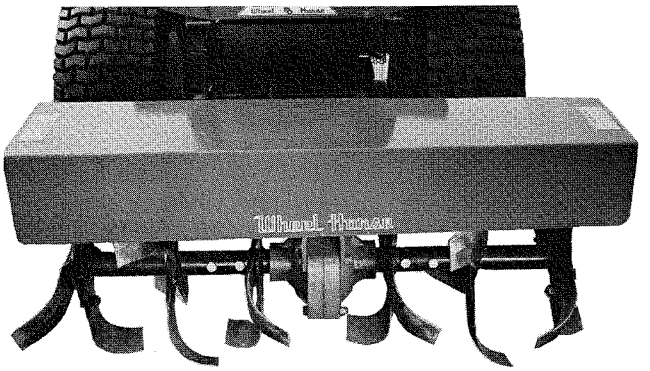
- Tandem Disc TDH-163
- Harrow PH-181

TILLER

RT-366





DESCRIPTION

The RT-366 is designed to fit the Wheel-A-Matic drive tractors. It has a 36" cut standard and a 30" cut optional by removing the outer tines. It is recommended that rear wheel weights No. WW-126 be used on all tractors. With models 875, 876, & 1075 front wheel weights No. WF-60 are also recommended.

SPACER INSTALLATION INSTRUCTIONS

Two spacers, ¼" wide, Part No. 6954 have been included with the tiller. These spacers increase the low pressure relief valve settings in the transmission, which results in a more uniform and positive ground speed control. They are provided for installation in the Wheel-A-Matic transmission on the following models only: 875, 1075, 876, 1076, and 1276. Extreme care should be taken to keep all parts clean when installing the spacers. If tractor has been used, clean all dust and dirt from around the two plug areas. The spacers are to be installed directly ahead of the dampening valve plugs which are located on the left side of the transmission (see figure A). Remove the front dampening plug and insert spacer, then replace the plug. Sometimes when removing a plug the piston and sleeve will remain attached. In this case, remove the sleeve from the plug. Reassemble all parts as shown in figure B. To install the spacer in the rear plug the tool box and fender will have to be removed.

The spacers do not have to be removed when tiller is removed from tractor. They can remain in the transmission. The spacers may make the tractor respond more actively to speed control handle. For safest operation the speed control handle should not be moved too rapidly, especially on grades.

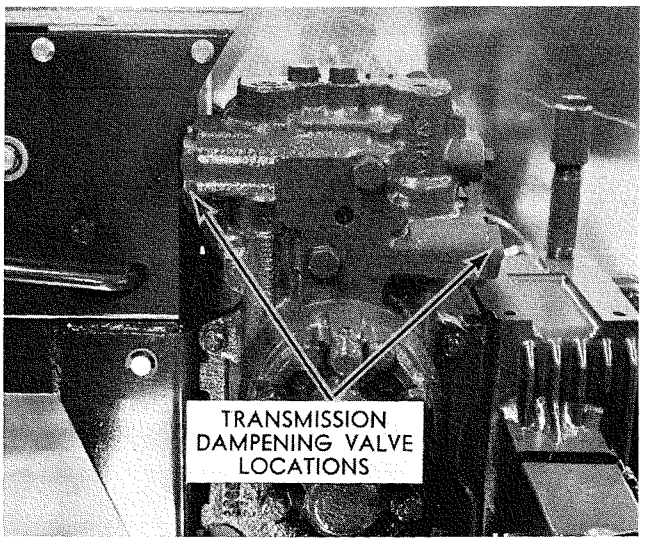


FIGURE A

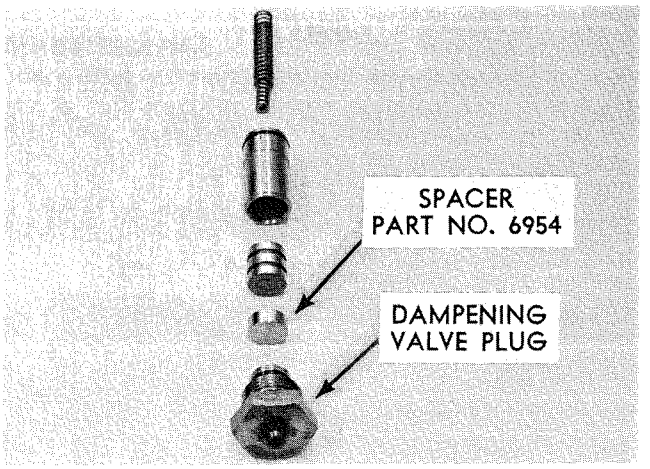


FIGURE B

ASSEMBLY

TILLER MOUNTING INSTRUCTIONS

1. Place tractor on a flat surface and engage parking brake. The wheels are to remain on the tractor. One is shown removed in the photographs, only to simplify instructions. Align the right side of the axle hitch bracket, Part No. 6866 flush with square end of the right axle as shown in figure I. Secure in place with four ⅜-16 x 3¼ carriage bolts and two links, Part No. 3697. Install the lift rod, Part No. 6889 in the tractor hitch and hold in place with a ½-13 nut.

2. Remove the fan screen, fan, and pump pulley as shown in figure II.

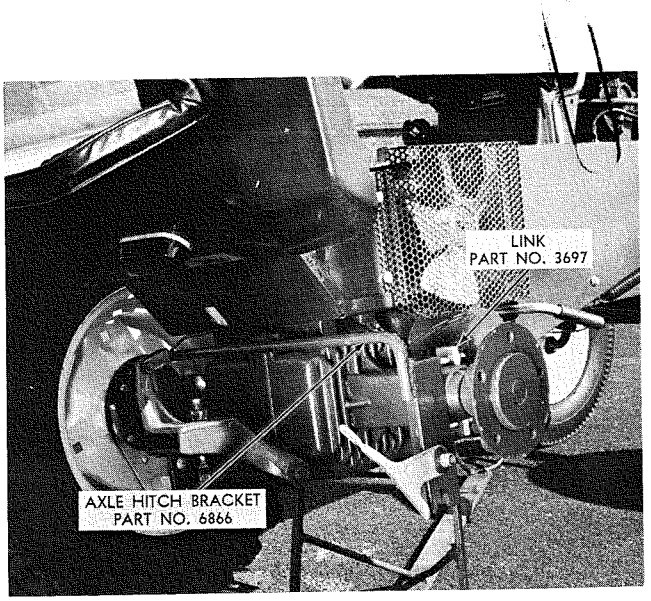


FIGURE I

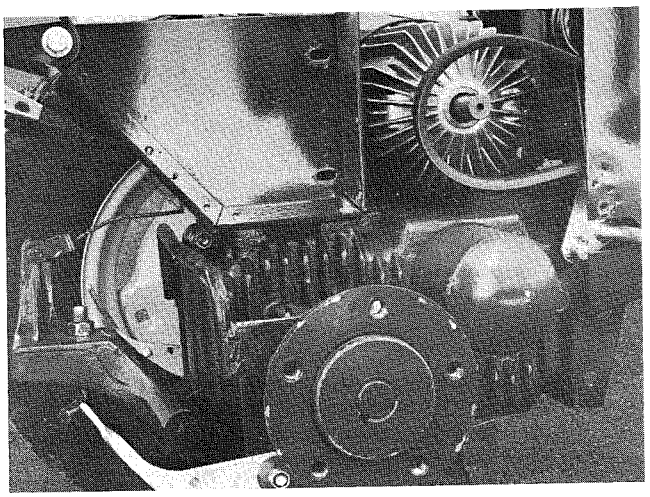


FIGURE II

3. Mount the fan on the double groove pulley, Part No. 6887 and install as shown in figure Iii. The pulley should be assembled so that there is $\frac{1}{8}$" clearance between the hub of the pulley and the Wheel-A-Matic unit. Install the handle assembly, Part No. 6877 thru the holes in transmission mounting plate as shown in figure III. Secure with $\frac{1}{2}$" washer and hairpin cotter, Part No. 933503-4. (see exploded drawing).

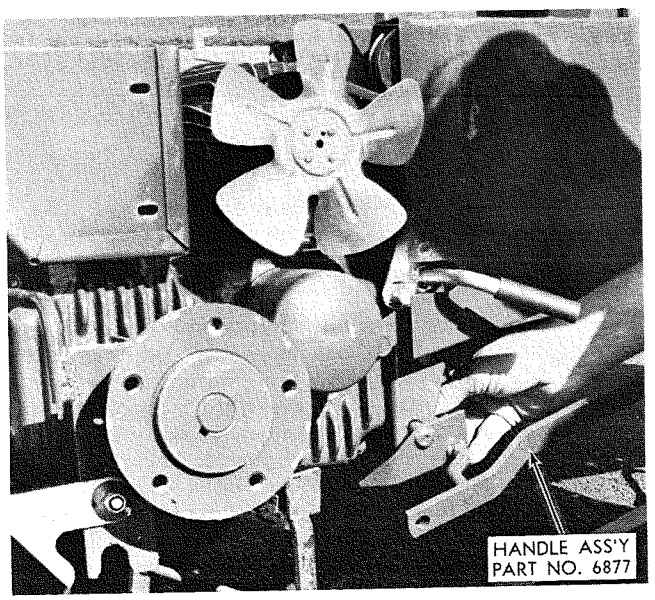


FIGURE III

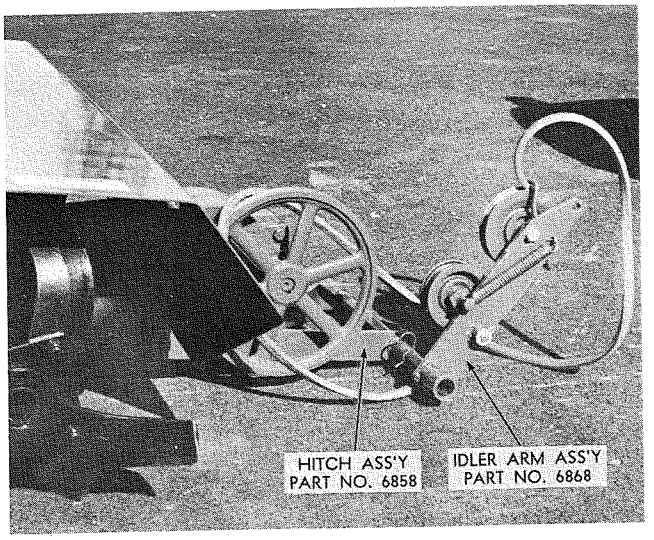


FIGURE IV

4. Slide the idler arm assembly on the shaft of the hitch assembly. (see figure IV).

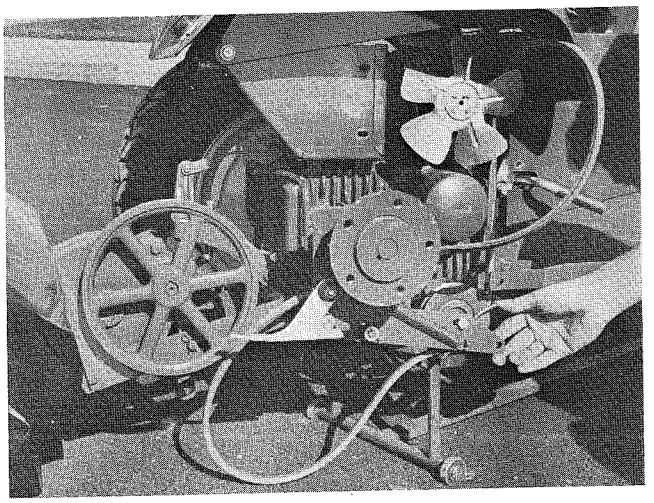


FIGURE V

5. Fit the shaft ends in the grooves of the hitch bracket and lock in place by pushing down on the handles. (see figure V).

6. Fit the belt on the double groove pulley, in front of the flat idler pulley and on the large tiller drive pulley as shown in figure VI and the exploded drawing. Install the belt adjustment rod, Part No. 6882 and shoulder stud, Part No. 5162 into the idler arm and handle assembly as shown in figure VI.

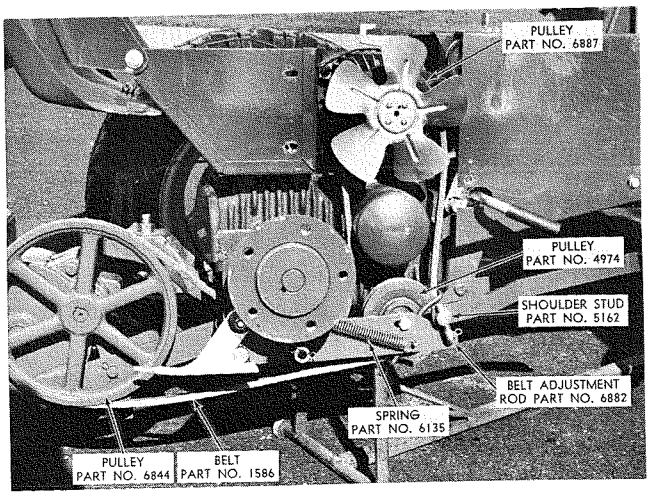


FIGURE VI

Secure with hairpin cotter, Part No. 933503-4. Belt adjustment is obtained by threading the adjustment rod in or out of the shoulder stud. Correct adjustment is reached when the handle is straight up (operating position) and the pulley tension spring, Part No. 6135 is being stretched ⅜ to ½ inch.

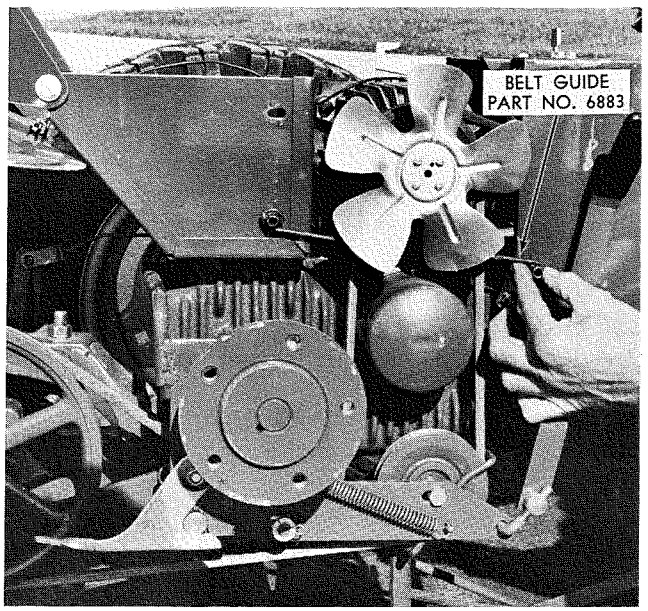


FIGURE VII

7. The belt guide, Part No. 6683 and a spacer, Part No. 6885 are used to guide the belt and to space the fan screen out away from the fan. (see figure VII). The belt guide and fan shield are secured with three ¼-20 x 1¼ hex bolts, one in the belt guard, and two with nuts in the side of the tool box. (see figure VIII). Attach the lift link, Part No. 6864 (item No. 32 on exploded drawing) to the lift rod. Secure with hairpin cotter, Part No. 933504-4. To adjust for correct lift height rest the tiller tines on the ground and tighten the nut on the lift rod till the tractor hitch touches the tiller gear case.

To remove the unit from the tractor proceed as follows. Pull the hairpin cotter from the clutch handle rod, pull the hairpin cotter from the belt adjustment rod and remove handle. Unloop the belt from the flat idler pulley, large "V" pulley and double groove pulley. The belt can be pulled between the fan and the fan shield without removing the fan shield. Pull the hairpin cotter from the lift rod, remove attached link and pull up on the axle bracket handle. The unit can now be pulled away from the tractor.

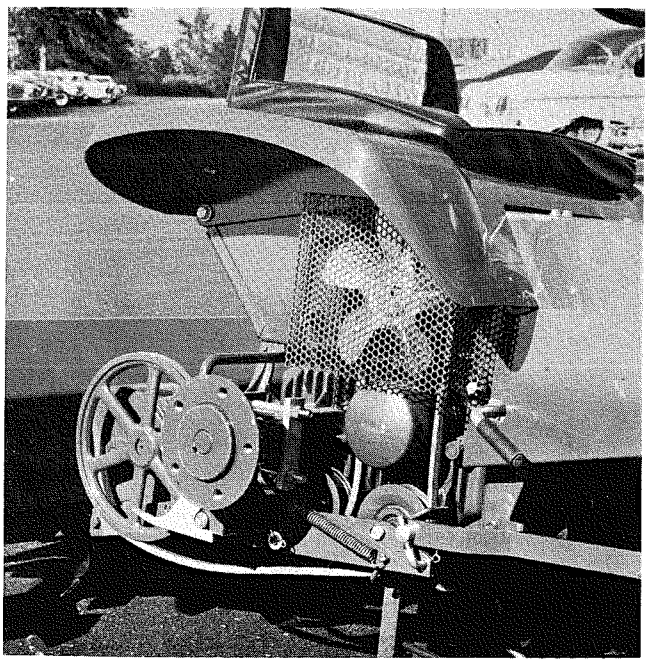


FIGURE VIII

OPERATING PROCEDURE

Never dismount from tractor without disengaging tiller clutch and setting tractor park brake. Always stop the engine to remove rocks or debris from the tines.

For best performance the tiller should be operated with the engine set at full throttle. The ground speed of the tractor can then be regulated with the speed control handle to match soil conditions.

In hard, compacted soils or clay it may be necessary to go slowly in order to obtain soil penetration. Better penetration can be obtained by removing the outer two tines which reduces the tilling width to 30 inches. It may be necessary to make two or more passes or to take overlapping cuts under these soil conditions.

When tilling in sod or gumbo soils the tiller will have a tendency to push the tractor. Wheel weights will help to counteract this. However, it may also be advisable to control the depth of soil penetration with the Height-A-Matic lift lever or with the HY-6 hydraulic control.

Do not over-till the soil or pulverize it. Soil tilled too finely will not absorb moisture. It will cause puddling and water run-off. In addition the soil will become compacted more readily.

MAINTENANCE

The gear case is filled with oil at the factory and should not require filling. However, the oil level should be checked before using tiller and periodically afterwards. To check oil level the tiller should be on the tractor with the tines touching the ground. Remove the pipe plug on the bottom of the gear case. If oil just runs from this hole then the oil is at its proper level. General purpose transmission type SAE 90 weight oil is used. When storing the unit for a long period of time, smear a light coat of grease on the tines to prevent rust.

SPECIFICATIONS

WIDTH OF CUT: 36" standard. 30" optional by removing outer tines.

ROTOR TINE DIAMETER: 13½"

OUTPUT SHAFT: 1¼" diameter heat-treated and ground shaft.

MAXIMUM DEPTH OF CUT: 6" to 8".

TOTAL REDUCTION FROM TRACTOR ENGINE TO OUTPUT SHAFT: 25 to 1. (Tine shaft RPM at full 3600 RPM engine speed: 145 RPM.)

WEIGHT: 135 lb.

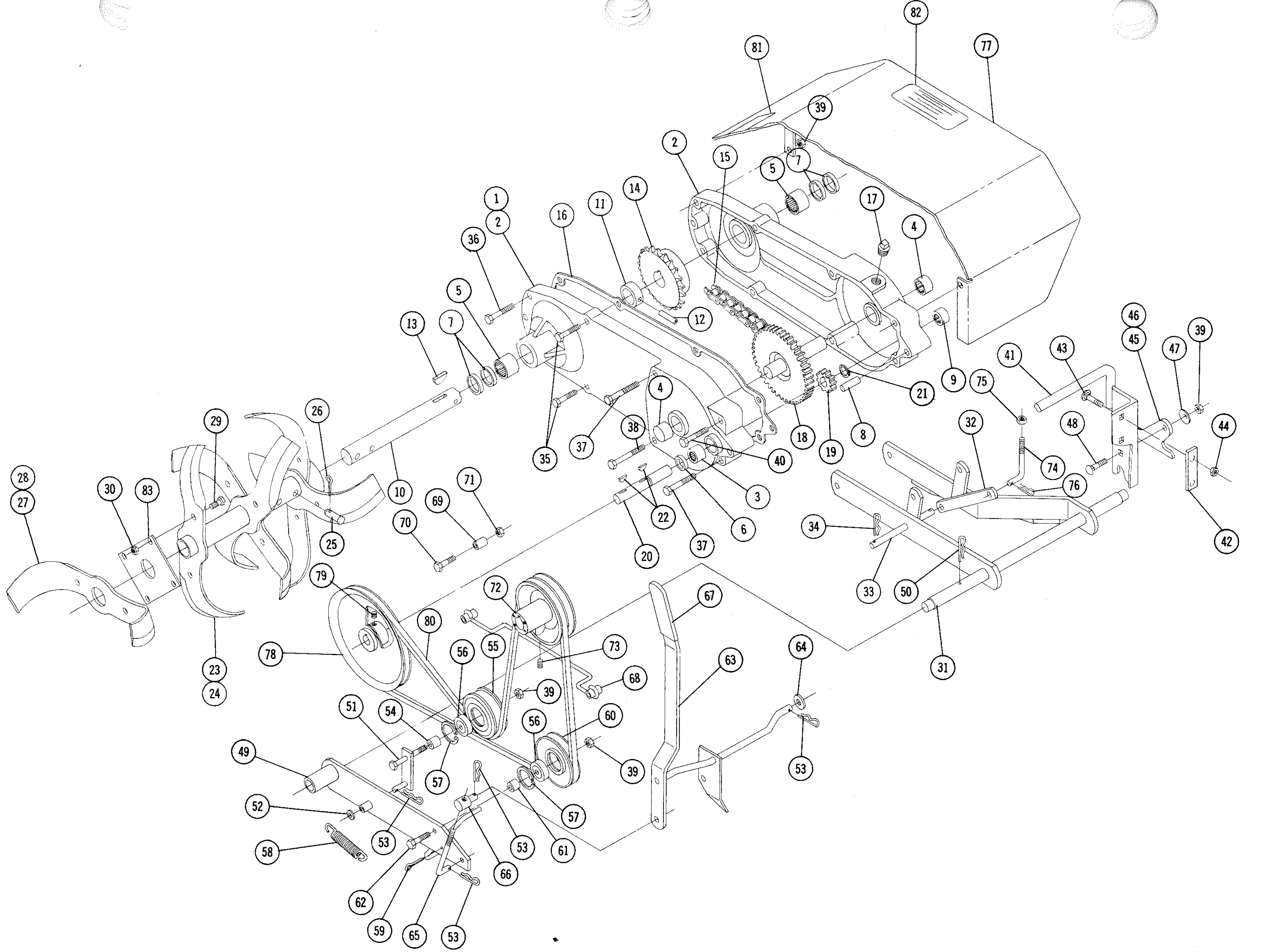
GEAR BOX LUBRICANT: SAE 90 gear lube, 1½ pints.

TINE ASSEMBLY: Right and left-hand assemblies, each with 6 one-piece, heat-treated tines. 12 cutting edges per side; 24 total cutting edges.

Model RT-366 Tiller fits all Wheel-A-Matic Tractors.

PARTS LIST FOR RT-366

Item No.	Part No.	Description	No. Req'd.
1	6835	Ass'y Gear Case — Complete	1
2	6837	Case	2
3	1540	Bearing — Needle ¾ I.D. x ½	1
4	1532	Bearing — Needle I.D. x ¾ Closed End	2
5	6833	Bearing — Needle 1¼ I.D x 1	2
6	1303	Seal ¾ I.D.	1
7	1482	Seal 1¼ I.D.	4
8	3915	Pin — Dowel	2
9	1529	Bearing — Needle ¾ I.D. x ¾ Closed End	1
10	6842	Shaft — Tine	1
11	6843	Spacer	1
12	933232	Roll Pin 5/16 x 2	1
13	937058	Key #128 Woodruff	1
14	6845	Sprocket 20T	1
15	6848	Chain	1
16	6851	Gasket	1
17	943421	Plug ½-14 Pipe	2
18	6894	Ass'y Gear — Reduction	1
19	3528	Gear — Pinion	1
20	6899	Shaft Input	1
21	936125	Snap — Ring ¾ Shaft	1
22	937014	Key #9 Woodruff	2
23	6852	Ass'y Tine R.H.	1
24	6853	Ass'y Tine L.H	1
25	6854	Pin — Clevis — Tine Tube	4
26	937017-4	Cotter Pin ⅛ x 1	4
27	6856	Tine — R.H.	1
28	6857	Tine — L.H.	1
29	908046-4	Bolt Hex 7/16 - 14 x 1	8
30	915114-6	Nut Nylok 7/16 - 14	8
31	6858	Ass'y Hitch	1
32	6864	Link — Lift	1
33	6865	Shaft	1
34	932009-4	Cotter Pin 3/32 x 1	2
35	908040-4	Bolt Hex ⅜ - 16 x 2½	3
36	908042-4	Bolt Hex ⅜ - 16 x 3	1
37	908144-4	Bolt Hex ⅜ - 16 x 4½	2
38	908143-4	Bolt Hex ⅜ - 16 x 5	1
39	915663-4	Nut Elastic Stop ⅜ - 16	12
40	908145-4	Bolt Hex ⅜ - 16 x 3¾	1
41	6866	Ass'y Hitch — Axle Mounting	1
42	3697	Link	2
43	900072-4	Bolt Carriage ⅜ - 16 x 3¼	4
44	915113-6	Nut Nylok ⅜ - 16	4
45	5135	Plate — Latching R.H.	1
46	5136	Plate — Latching L.H.	1
47	3775	Washer — Spring	2
48	900063-4	Bolt Carriage ⅜ - 16 x 1	2
49	6868	Ass'y Idler Arm	1
50	933505-4	Hairpin	1
51	6873	Ass'y Idler Support	1
52	920009-4	Washer ⅜ SAE	1
53	933503-4	Hairpin	3
54	2233	Spacer	1
55	6740	Pulley	1
56	4567	Ball Bearing	2
57	936024	Snap Ring — Internal	1
58	6135	Spring	1
59	932034-4	Cotter Pin 3/16 x 1	1
60	4974	Pulley — Idler	1
61	6876	Spacer	1
62	908038-4	Bolt Hex ⅜ - 16 x 2	1
63	6877	Ass'y Handle — Clutch	1
64	920011-4	Washer ½ SAE	1
65	6882	Rod — Belt Adjustment	1
66	5162	Stud — Shoulder	1
67	MW-8067	Handle — Plastic	1
68	6883	Ass'y Belt Guide	1
69	6885	Spacer — Fan Shield	1
70	908006-4	Bolt Hex ¼ x 1¼	3
71	915111-6	Nut — Nylok ¼ - 20	2
72	6887	Pulley — Double Groove	1
73	909867-5	Set Screw — Nylok 5/16-18 x ¾	1
74	6888	Rod — Lift	1
75	915115-6	Nut — Nylok ½ - 13	1
76	933504-4	Hairpin	1
77	6874	Ass'y Tine Shield	1
78	6844	Pulley	1
79	909865-5	Set Screw 5/16 - 18 x ½ Nylok	1
80	1586	Belt 4L - 76	1
81	5415	Decal — Wheel Horse	1
82	4570	Decal — Caution	2
83	6855	Plate — Tine Mounting	2



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TILLER
RT-367

DESCRIPTION

The RT-367 is designed to fit all Six Speed and Wheel-A-Matic tractors. It has 36" cut standard and a 30" cut optional by removing the outer tines.

TILLER MOUNTING INSTRUCTIONS

It is recommended that rear wheel weights No. WW-126 be used on all tractors. Tractors that have a 41¼" wheel base (tractor models marked "X" on accessory chart) front wheel weights No. WF-60 are also recommended.

The tiller is driven by an attachment clutch, if your tractor is not equipped with an attachment clutch, use the clutch shown on the accessory chart to fit your tractor model. Some tractors will need a new engine pulley and engine shaft key, see the chart for your tractor model. The front belt (Item No. 79 on the exploded view drawing) provided with the tiller, will fit most model tractors, all others take belt No. 1576. Check the chart for your model tractor.

ACCESSORY CHART

TRACTOR MODEL	X 875	X 1075	X 876	1076	1276	X 867	1067	1267	X 877	1077	1277
ATTACH. CLUTCH	PT-7	PT-7	PT-7	PT-6	PT-6	PT-7	PT-6	PT-6	PT-7	PT-6	PT-6
ENGINE PULLEY	7362	7362	7362	*	*	7363	*	*	7362	*	*
ENGINE SHAFT KEY	6507	6507	6507	**	**	6507	**	**	6507	**	**
FRONT BELT	1576	1576	1576	***	***	1576	***	***	1576	***	***

* Use Pulley Provided with Tractor
** Use Key Provided with Tractor
*** Use Front Belt Provided with Tiller
X Tractors with 41¼" Wheel Base

SPRING INSTALLATION INSTRUCTION

Two 2 5/16" (approx.) long springs, Part No. 7264 have been included with the tiller. This spring increases the low pressure relief valve setting in the transmission, which results in a more uniform and positive ground speed control. It is provided for installation in the Wheel-A-Matic transmission. It must replace the 2" springs on models 875 & 1075. On models 876, 1076 and 1276 a few tractors have the new longer springs, check the length if they are only 2" long replace with the longer springs. On models 877, 1077 and 1277 the springs will not need replacing. Extreme care should be taken to keep all parts clean when installing the springs. If tractor has been used, clean all dust and dirt from around the two plug areas. To replace a spring remove the dampening valve plugs which are

located on the left side of the transmission (**See Fig. A**). Remove the piston, occasionally the piston will not pop out far enough to grab with the fingers and a pencil type magnet has to be used to pull the piston out. Pull out the large spring, it will have a small spring inside and a spring seat pin will be inside the small spring. Put in the new spring and re-assemble all parts as shown in **Fig. B.** To install the spring in the rear plug the tool box and fender will have to be removed.

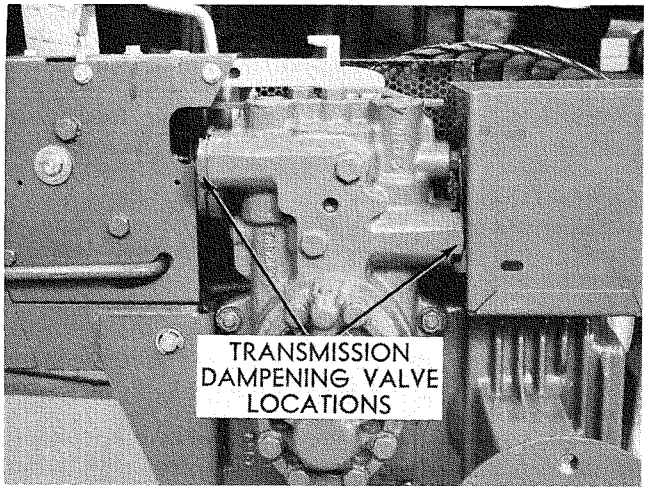


FIGURE A

The springs do not have to be removed when tiller is removed from tractor. They can remain in the transmission. The springs may make the tractor respond more actively to speed control handle. For safest operation the speed control handle should not be moved too rapidly, especially on grades.

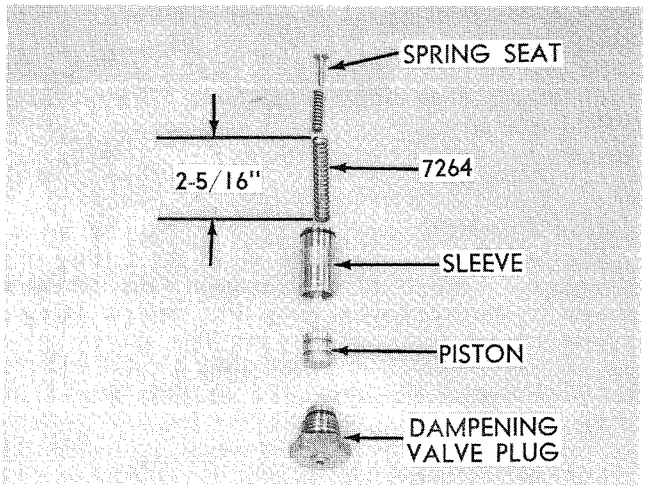


FIGURE B

ASSEMBLY

1. Attach the proper accessories to the tractor such as a clutch, pulley etc. Place the tractor on a flat surface and engage parking brake. The wheels are to remain on the tractor. One is shown removed in the photographs, only to simplify instructions. Remove the hairpin cotter from the tractor hitch cable. This allows you to mount the axle hitch bracket. Align the right side of the axle hitch bracket, Part No. 7345, ½" away from the end of the axle housing for six speed tractors, 1½" away for Wheel-A-Matic tractors. See **Fig. I.** Secure in place with four ⅜-16 x 3¼ carriage bolts and two links, Part No. 3697.

2. Install the idler arm assembly through the holes of the transmission mounting bracket. See **Fig. II.** Secure in place with the three ½" washers and one hairpin cotter, see the exploded view drawing. Attach the belt guard bracket to the frame as shown. Secure with a ⅜-16 x 1 bolt and nut. Hook the No. 6651 spring to the bracket.

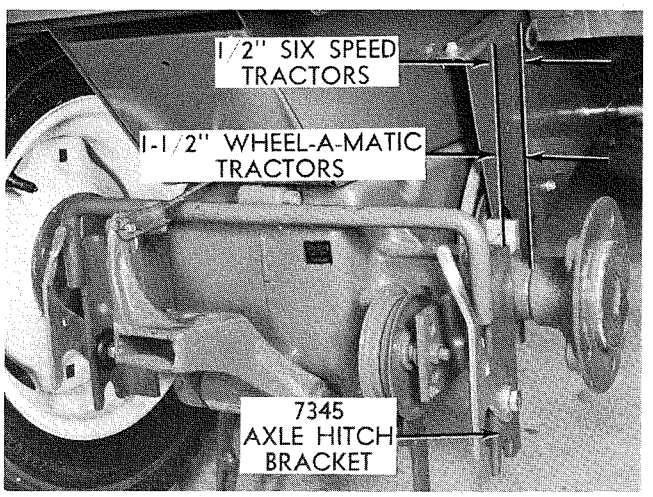


FIGURE I

3. Remove the bolt holding the belt guard to the tractor, in this same hole mount the belt guard bar, Part No. 7260. **Do not tighten down at this time.** There are three holes on the bottom of the bar, insert the bolt through the hole which corresponds to your tractor model. See **Fig. III.**

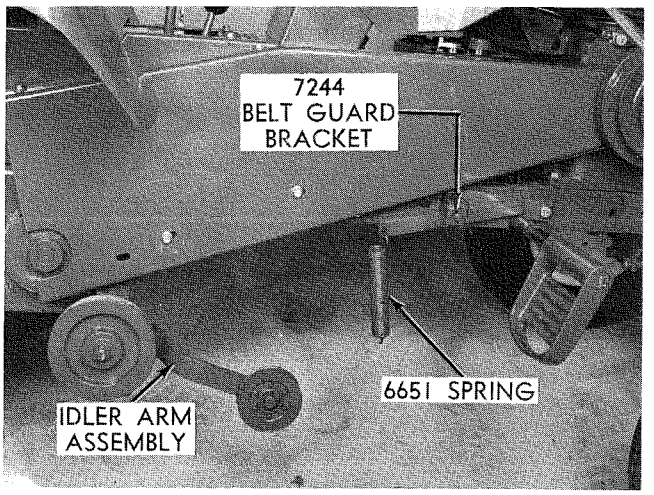


FIGURE II

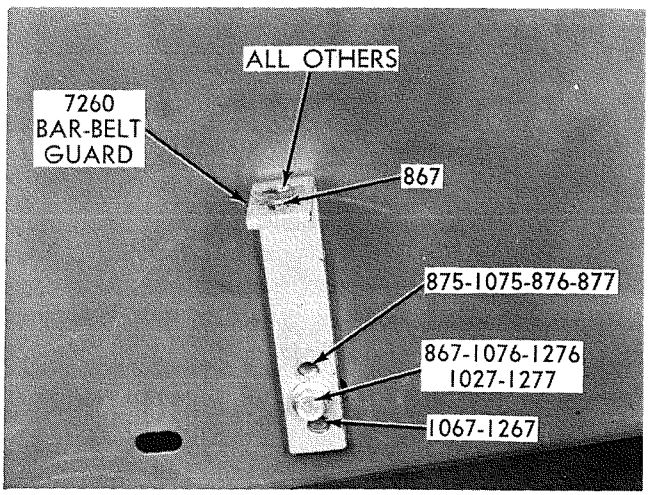


FIGURE III

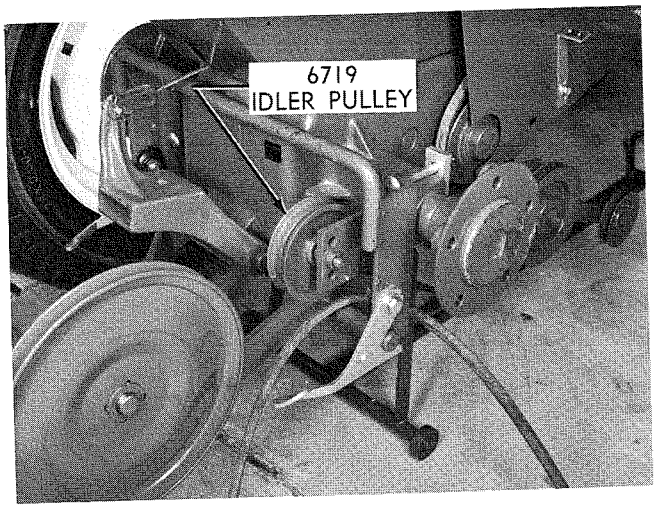


FIGURE IV

4. Loop the belt over the rod of the hitch assembly then fit the rod ends into the hitch bracket grooves. Fasten in place by pulling down on the handles. The handle bolts should then be tightened down to prevent slipping. See. **Fig. IV.**

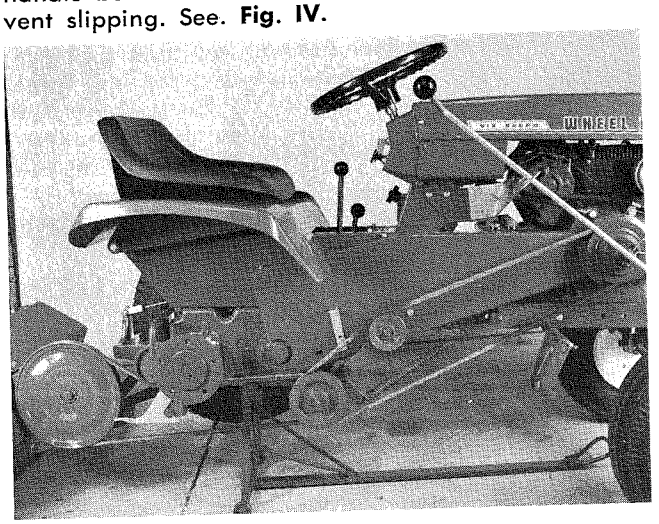


FIGURE V

5. Connect the spring to the idler arm assembly as shown in **Fig. V.** Install the rear belt, Part No. 7358 first, then install the front belt designated on the accessory chart. Check the belt alignment on the rear belt, sometimes one, two or all the washers have to be taken off of the flat idler pulley (Part No. 6719 See **Fig. IV**) to make it run on center.

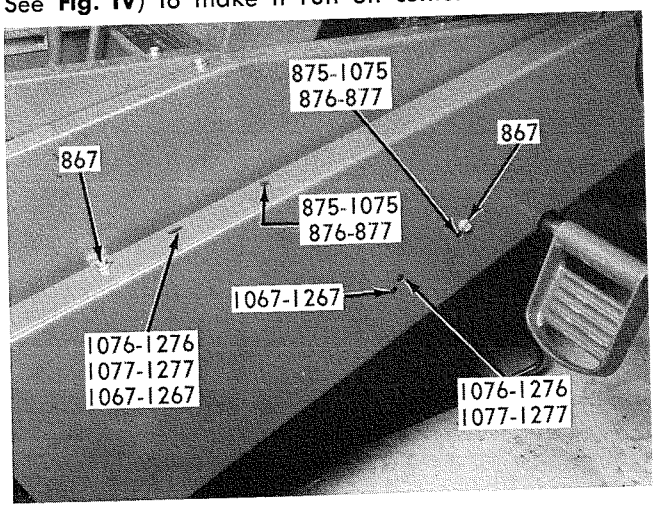


FIGURE VI

6. Install the lift rod, Part. No. 6888 through the tractor hitch, slip on the three ½" washers and fasten with ½-13 nut.

7. Place the belt guard in place and line up the a hole on the side with the belt bracket. Now line up a slot on top with the belt guard bar.' Remove the belt guard and tighten the bar bolt. Replace the belt guard, and fasten in place, using the holes which fit your tractor, see **Fig. VI.**

To remove the unit from the tractor remove the parts as follows: 1. belt guard 2. spring 3. belts 4. idler pulley assembly 5. belt guard bracket 6. belt guard bar 7. lift rod 8. pull up handle to remove hitch.

The axle hitch bracket can remain on the tractor.

OPERATING PROCEDURE

Never dismount from tractor without disengaging clutch and setting tractor park brake. Always stop the engine to remove rocks or debris from the tines.

For best performance the tiller should be operated with the engine set at full throttle. The ground speed of the tractor should then be regulated to match soil conditions.

In hard, compacted soils or clay it may be necessary to go slowly in order to obtain soil penetration. Better penetration can be obtained by removing the outer two tines which reduces the tilling width to 30 inches. It may be necessary to make two or more passes or to take overlapping cuts under these soil conditions.

When tilling in sod or gumbo soils the tiller will have a tendency to push the tractor. Wheel weights will help to counteract this. However, it may also be advisable to control the depth of soil penetration with the Height-A-Matic lift lever or with the HY-6 hydraulic control.

Do not over-till the soil or pulverize it. Soil tilled too finely will not absorb moisture. It will cause puddling and water run-off. In addition the soil will become compacted more readily.

MAINTENANCE

The gear case is filled with oil at the factory and should not require filling. However, the oil level should be checked before using tiller and periodically afterwards. To check oil level the tiller should be on the tractor with the tines touching the ground. Remove the pipe plug on the bottom of the gear case. If oil runs from this hole then the oil is at its proper level. General purpose transmission type SAE 90 weight oil is used. When storing the unit for a long period of time, smear a light coat of grease on the tines to prevent rust.

SPECIFICATIONS

WIDTH OF CUT: 36" standard. 30" optional by removing outer tines.

ROTOR TINE DIAMETER: 13½"

OUTPUT SHAFT: 1¼" diameter heat-treated and ground shaft.

MAXIMUM DEPTH OF CUT: 6" to 8".

TOTAL REDUCTION FROM TRACTOR ENGINE TO OUTPUT SHAFT: 28 to 1. (Tine shaft RPM at full 3600 RPM engine speed: 128 RPM).

WEIGHT: 150 lbs.

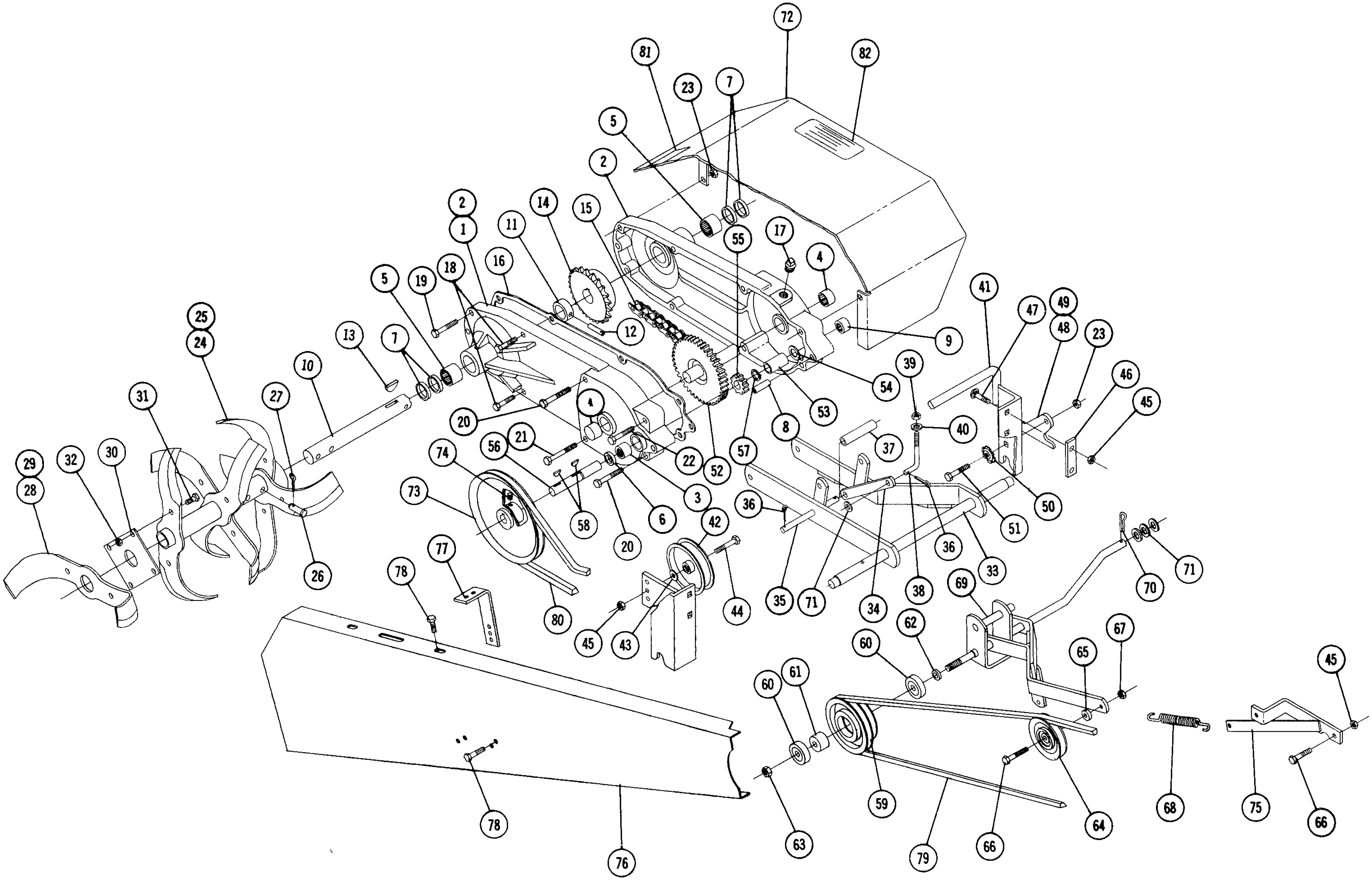
GEAR BOX LUBRICANT: SAE 90 gear lube, 1½ pints.

TINE ASSEMBLY: Right and left-hand assemblies, each with 6 one-piece, heat-treated tines. 12 cutting edges per side; 24 total cutting edges.

PARTS LIST FOR RT-367

When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	No. Req'd.
1	6835	Ass'y. Gear Case — Complete	1
2	6837	Case — Half	2
3	1540	Bearing — Needle 3/4 I.D.	1
4	1532	Bearing — Needle 1" I.D.	2
5	6838	Bearing — Needle 1 1/4 I.D.	2
6	1303	Seal 3/4 I.D.	1
7	1482	Seal 1 1/4 I.D.	4
8	933242	Roll Pin 3/8 x 1	2
9	1529	Bearing — Needle 3/4 I.D.	1
10	6842	Shaft — Tine	1
11	6843	Spacer	1
12	933232	Roll Pin 5/16 x 2	1
13	937058	Key #128 Woodruff	1
14	6845	Sprocket 20T	1
15	6848	Chain 3/4 Pitch 44 Pitches	1
16	6851	Gasket	1
17	943421	Plug 1/2 Pipe	2
18	908040-4	Bolt Hex 3/8-16 x 2 1/2	3
19	908042-4	Bolt Hex 3/8-16 x 3	1
20	908144-4	Bolt Hex 3/8-16 x 4 1/2	2
21	908143-4	Bolt Hex 3/8-16 x 5	1
22	908145-4	Bolt Hex 3/8-16 x 3 3/4	1
23	915663-4	Nut-Elastic Stop 3/8-16	10
24	6852	Ass'y. Tine R.H.	1
25	6853	Ass'y. Tine L.H.	1
26	6854	Pin-Clevis — Tine Tube	4
27	932017-4	Cotter Pin 1/8 x 1	4
28	6856	Tine — R.H.	1
29	6857	Tine — L.H.	1
30	6855	Plate — Tine Mounting	2
31	908046-4	Bolt — Hex 7/16-14 x 1	8
32	915114-6	Nut — Nylok 7/16-14	8
33	7340	Ass'y. Hitch	1
34	7344	Link — Lift	1
35	6865	Shaft	1
36	932009	Cotter Pin 3/32 x 1	3
37	7366	Spacer	1
38	6888	Rod — Lift	1
39	915115-6	Nut — Nylok 1/2-13	1
40	920011-4	Washer 1/2 SAE (Shim)	3
41	7345	Ass'y Hitch — Axle Mounting	1
42	6719	Pulley — Flat	1
43	920009-4	Washer 3/8 SAE (Shim)	3
44	908037-4	Bolt 3/8-16 x 1 3/4	1
45	915113-6	Nut — Nylok 3/8-16	6
46	3697	Link	2
47	900072-4	Bolt — Carriage 3/8-16 x 3 1/4	4
48	5135	Plate — Latching — R.H.	1
49	5136	Plate — Latching — L.H.	1
50	1336	Washer — Dome	2
51	908035-4	Bolt Hex 3/8-16 x 1 1/4	2
52	6894	Ass'y. Gear — Reduction	1
53	6963	Spacer	1
54	1535	Washer — Thrust	1
55	3528	Gear — Pinion	1
56	6899	Shaft — Input	1
57	936125	Snap Ring 3/4 Shaft — External	1
58	937014	Key #9 Woodruff	2
59	7354	Pulley	1
60	6593	Bearing	2
61	7361	Spacer	1
62	7360	Spacer	1
63	915003-6	Nut — Nylok 7/16-20	1
64	1623	Pulley — Idler	1
65	MW-2745	Spacer	1
66	908034-4	Bolt — Hex 3/8-16 x 1	2
67	915236-4	Nut — Jam 3/8-16	1
68	6651	Spring	1
69	7353	Ass'y. Idler Arm and Pivot	1
70	933512-4	Hairpin Cotter	1
71	920011-4	Washer 1/2 SAE	4
72	6874	Ass'y. Tine Shield	1
73	6844	Pulley	1
74	909865-5	Set Screw 5/16-18 x 1/2 Nylok	1
75	7244	Ass'y. Bracket — Belt Guard	1
76	7259	Guard — Belt	1
77	7260	Bar — Belt Guard	1
78	960151-4	Bolt — Whizlock 1/4-20 x 1/2	2
79	1586	"V" Belt (Front)	1
80	7358	"V" Belt (Rear)	1
81	5415	Decal — Wheel Horse	1
82	4498	Decal — Caution	2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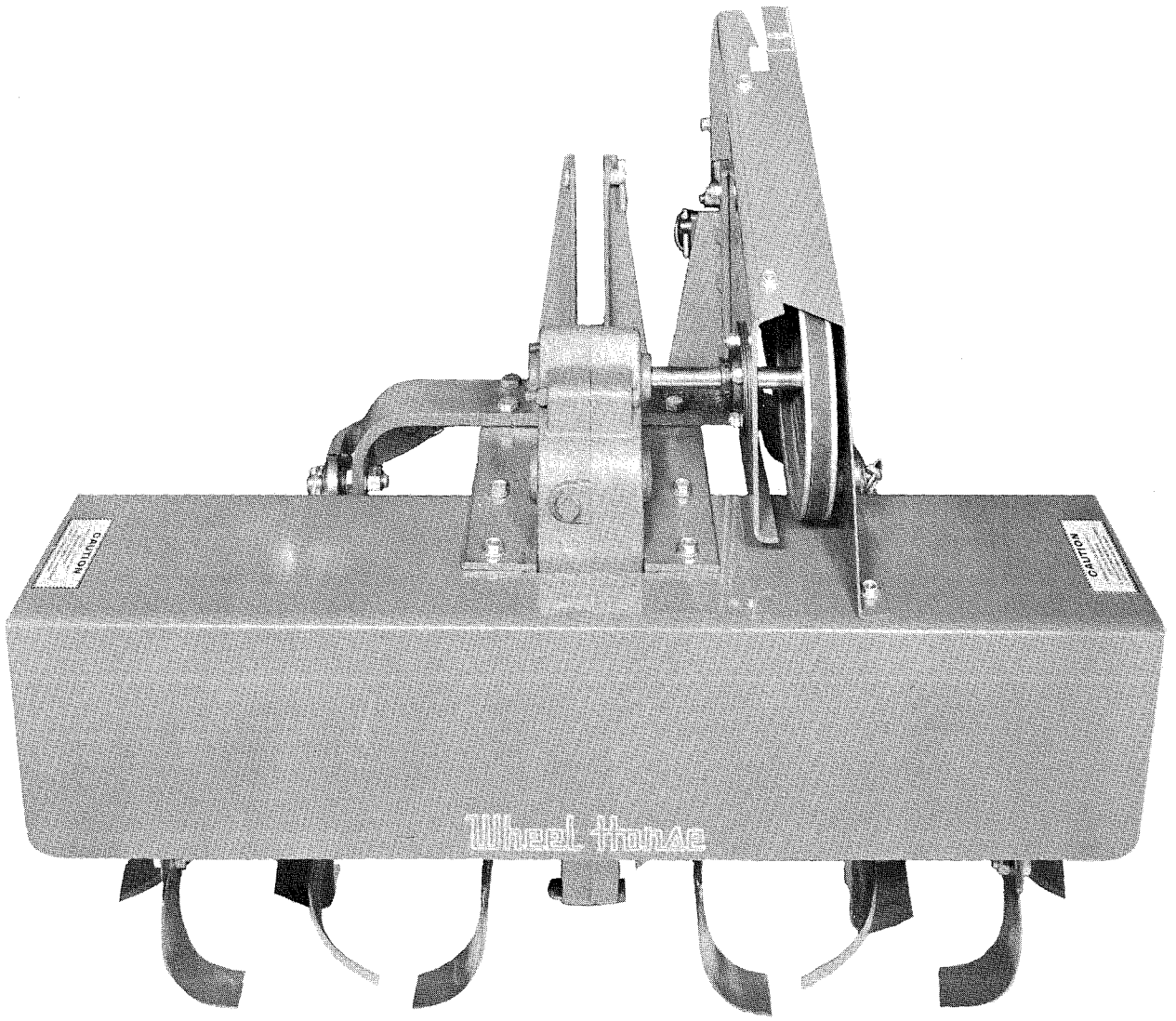
TILLER

MODEL 7-1231



DESCRIPTION

The model 7-1231 tiller is designed especially to work with the GT 14 tractor, model 1-7441. It has a 36" standard cut with a 30" cut optional by removing the outer tines. It is belt driven from a special tiller drive pulley on the tractor transmission input shaft.

The tiller attaches to the tractor by means of the 3 point implement hitch model 8-5411. Install the hitch according to the separate instructions furnished with it before proceeding with tiller installation.

It is also recommended that optional wheel weights, part numbers 8-1211 (front), and 8-1131 (rear), be installed on the tractor for better ground holding and traction when operating with a tiller.

TILLER INSTALLATION

1. Start two square head set screws in the hub of the tractor transmission input pulley. The set screws are contained in the loose parts package along with the tiller drive pulley, stub shaft, and Woodruff keys.

2. Install Woodruff keys in the stub shaft and insert the shaft into the long hub end of the tiller drive pulley. Leave the set screws loose.

3. Insert the other end of the stub shaft into the hub of the tractor transmission input pulley until the end of the stub shaft contacts the transmission shaft. Tighten the two set screws in the transmission pulley to secure the shaft in place.

4. Position the tiller drive pulley to provide a distance of 3⅛" center-to-center between the belt grooves of the two pulleys. See Figure 1. Tighten the tiller pulley set screws.

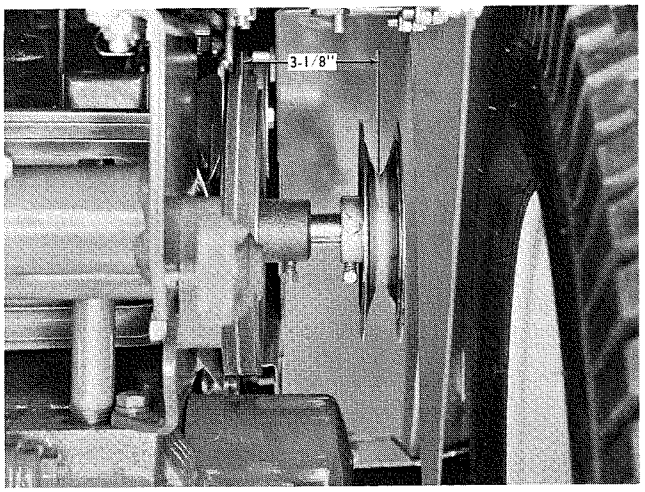


FIGURE 1

5. Adjust the length of the R.H. and L.H. hitch lift links to 8¼" from top of upper pivot block to bottom of lower pivot block. Turn the links by their roll pin handles to adjust their length. See Figure 2.

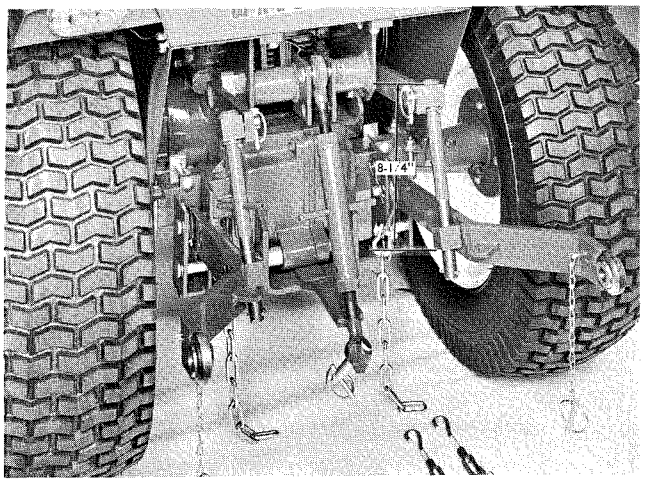


FIGURE 2

6. Set the hydraulic lift control lever in float position. Move the tiller into position behind the tractor. Slide the tiller bracket pins into the eyes of the lower hitch links and secure with Klik pins. Be sure the belt guide is to the right side of the R.H. lift link.

7. Attach the upper hitch link to the tiller mast with the clevis pin and secure with the Klik pin.

8. Adjust the length of the upper link to 14" between centers of the clevis pins. See Figure 3. The top of the tiller tine shield should be level if properly adjusted. Turn the link by its roll pin handle to adjust its length.

9. Center the tiller side to side, sighting along the upper link to check its position.

10. Cross the sway chains as shown in Figure 3, and tighten them by adjusting the length of the clevis and chain hooks. Secure the clevis pins with hairpin cotters. NOTE: The front chain brackets must be on the inner side of the lower links and on the same pins as the lower links. See Figure 2.

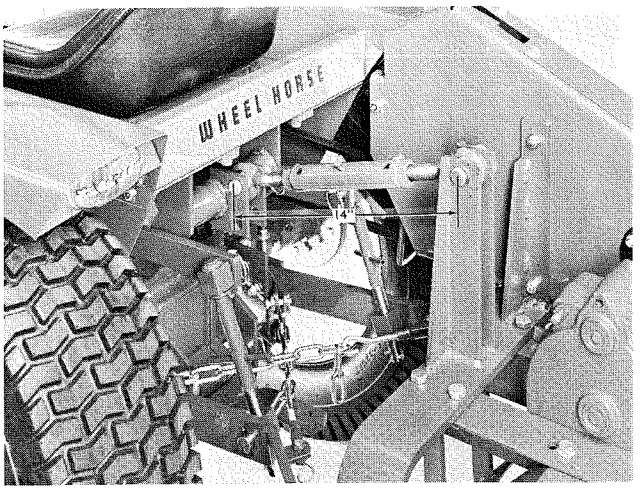


FIGURE 3

11. Disengage the tiller clutch and slip the drive belt over the tiller drive pulley. Be sure the lower belt strand is **above** the belt guide hook.

The tiller is ready for use. See operating instructions.

TILLER REMOVAL

1. Set the hydraulic lift control in float position and disengage the tiller clutch. Remove the drive belt from the tiller drive pulley on the tractor.

2. Remove hairpin cotters and clevis pins and release the sway chains from the lower hitch links.

3. Remove the Klik pin and clevis pin to release the upper hitch link from the tiller mast.

4. Remove the Klik pins and disengage the lower hitch links from the tiller bracket pins. Move the tiller away from the tractor.

OPERATING INSTRUCTIONS

Never dismount from the tractor without disengaging the tiller clutch and setting the tractor parking brake. Always stop the engine before doing any work on the tines such as removing rocks or other debris.

For best performance the tiller should be operated with the tractor engine set at full throttle, and with the hydraulic lift in float position. The ground speed of the tractor should then be regulated to match soil conditions.

In hard, compacted soils or clay it may be necessary to go slowly in order to obtain soil penetration. Better penetration can be obtained by removing the outer two tines which reduces the tilling width to 30 inches.

Under certain soil conditions it is advisable to till an area twice by overlapping cuts in the same direction or by making a second pass 90° to the first if the terrain permits.

When tilling sod or gumbo soils the tiller will have a tendency to push the tractor. Wheel weights will help counteract this, but it may also be advisable to reduce the depth of soil penetration with the hydraulic lift.

Do not over-till the soil or pulverize it. Soil tilled too finely will not readily absorb moisture. It will cause puddling and water run-off and the soil will become compacted too easily.

LUBRICATION

The gear case is filled with oil at the factory and should not require filling. However, the oil level should be checked before using the tiller and periodically thereafter.

Check the oil level by removing the pipe plug at the rear of the gear case with the tiller in operating position. The correct oil level is one inch below the bottom edge of the hole. SAE 90 MP GL4-GL5 oil may be added as necessary. When storing the unit for an extended period of time, apply a light coat of grease to the tines to prevent rust.

DRIVE BELT REPLACEMENT

When replacing belts be sure to purchase genuine Wheel Horse belts, as these belts are specifically designed for each application.

1. With the tiller mounted on the tractor, hitch links properly adjusted and tiller tines resting on the ground, remove the right half of the belt guard.

2. Disengage the tiller clutch, remove the old belt, and install the new one in its place.

3. Engage the tiller clutch and check the settings of the two idler pulley belt guide brackets. See items marked 59 and 80 on the exploded view drawing.

The guide bracket at the front (flat) pulley should be centered between the points where the belt contacts and leaves the pulley. To adjust, loosen the pulley center bolt and rotate the bracket as necessary to center it. Tighten the center bolt.

There should be approximately 3/32" clearance between the edge of the rear (Vee) pulley guide bracket and the belt strand leading to the tiller input pulley. To adjust, loosen the pulley center bolt and rotate the bracket rearward to decrease, forward to increase, the clearance. Tighten the center bolt.

4. Reinstall the right half of the belt guard.

SPECIFICATIONS

Width of cut: 36" standard. 30" optional by removing outer tines.

Rotor tine diameter: 13½".

Tine shaft: 1¼" diameter heat-treated and ground shaft.

Maximum depth of cut: 6" to 8".

Total reduction — tractor engine to tine shaft: 23:1.

Weight: 177 lbs.

Gear box lubricant: SAE 90 MP GL4-GL5 oil. Two quarts.

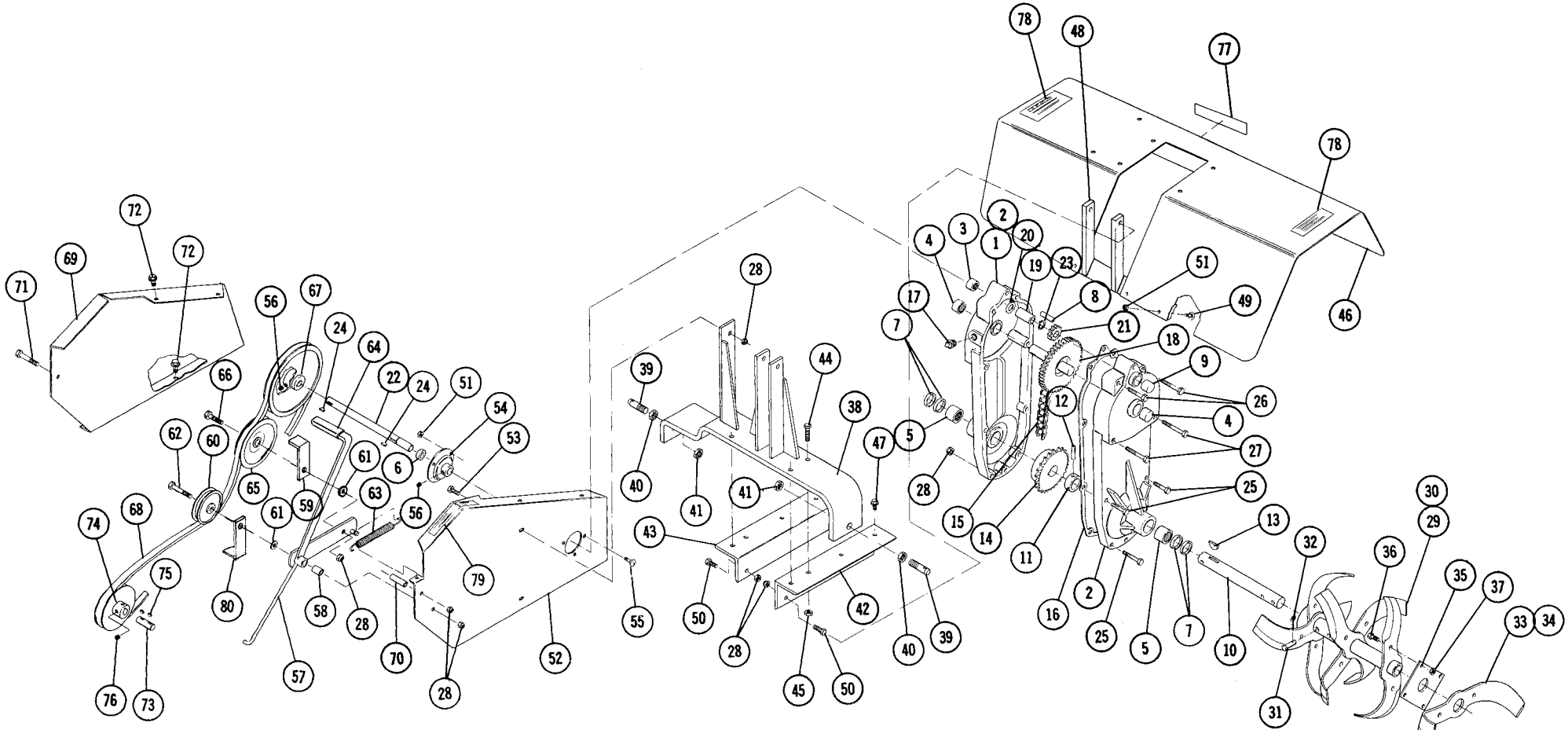
Tine assembly: Right and left-hand assemblies, each with 6 one-piece, heat-treated tines. 12 cutting edges per side; 24 total cutting edges.

PARTS LIST

When ordering parts always list Part No. and name of Part.

(Specifications subject to change without notice.)

Item No.	Part No.	Description	No. Req'd.
1	9192	Gear Case — Assembly Complete	1
2	6837	Case	2
3	1540	Bearing Needle 3/4 I.D. x 1/2	1
4	1532	Bearing Needle 1" I.D. x 3/4	2
5	6838	Bearing Needle 1¼ I.D. x 1	2
6	1303	Seal 3/4 I.D.	1
7	1482	Seal 1¼ I.D.	4
8	933242	Roll Pin 3/8 x 1	2
9	1529	Bearing 3/4 I.D. x 3/4	1
10	6842	Shaft — Tine	1
11	6843	Spacer	1
12	933232	Roll Pin 5/16 x 2	1
13	937058	Key #128 Woodruff	1
14	6845	Sprocket 20T	1
15	6848	Chain 3/4 Pitch 44 Pitches	1
16	6851	Gasket	1
17	943421	Plug 1/2-14 Pipe	2
18	6894	Gear — Reduction	1
19	6963	Spacer	1
20	1535	Washer — Thrust	1
21	3528	Gear Pinion	1
22	9034	Shaft Input	1
23	936125	Snap Ring 3/4 Shaft	1
24	937014	Key #9 Woodruff	2
25	908040-4	Bolt Hex 3/8-16 x 2½	4
26	908145-4	Bolt Hex 3/8-16 x 3¾	2
27	908143	Bolt Hex 3/8-16 x 5	2
28	915663-4	Nut Hex 3/8-16 Elastic Stop	15
29	9204	Tine R.H.	1
30	9205	Tine L.H.	1
31	9208	Pin — Clevis — Tine Tube	4
32	932017-4	Cotter Pin 1/8 x 1	4
33	9206	Tine R.H.	1
34	9207	Tine L.H.	1
35	9203	Plate — Tine Mounting	2
36	908046-4	Bolt Hex 7/16-14 x 1	8
37	915114-6	Nut Nylok 7/16-14	8
38	9026	Tiller Mast	1
39	9025	Pin — Lower Link	2
40	915240-4	Nut Hex 5/8-11 Jam	2
41	915934-4	Nut Hex 5/8-11 Crown Lock	2
42	9030	Bar — Tiller Support R.H.	1
43	9031	Bar — Tiller Support L.H.	1
44	908059-4	Bolt Hex 1/2-13 x 1½	4
45	915665-4	Nut Hex 1/2-13 Elastic Stop	4
46	9022	Tiller Shield	1
47	960200-4	Bolt Whizlock 3/8-16 x 5/8	4
48	9023	Tine Shield Mounting Bracket	1
49	900084-4	Bolt Carriage 5/16-18 x 1	4
50	908035-4	Bolt Hex 3/8-16 x 1¼	2
51	915662-4	Nut Hex 5/16-18 Elastic Stop	7
52	9148	Idler Support Plate	1
53	908034-4	Bolt Hex 3/8-16 x 1	2
54	5269	Bearing — Flanged Ball	1
55	900037-4	Bolt Carriage 5/16-18 x 3/4	3
56	909862-5	Set Screw 5/16-18 x 5/16	4
57	9032	Idler Arm	1
58	9035	Bushing — Spacer	1
59	9149	Bracket — Belt Guide	1
60	6719	Pulley — Flat Idler	1
61	920039-4	Washer 3/8 US	2
62	908042-4	Bolt Hex 3/8-16 x 3	1
63	6651	Spring Extension	1
64	7365	Grip — Clutch Arm	1
65	7451	Pulley — Idler	1
66	908037-4	Bolt Hex 3/8-16 x 1¾	1
67	9150	Pulley — Driven	1
68	9151	"V" Belt — Drive	1
69	9123	Guard — Belt	1
70	9138	Spacer — Belt Guard	1
71	908043-4	Bolt Hex 3/8-16 x 3½	1
72	960175-4	Bolt Whizlock 5/16-18 x 1/2	4
73	9037	Shaft Tiller Stub	1
74	9036	Pulley Drive Tiller	1
75	937010	Key #6 Woodruff	2
76	7977	Set Screw Square Head 5/16-18 x 1/2	4
77	5415	Decal — Wheel Horse	1
78	4498	Decal — Caution	2
79	9214	Decal — Clutch	1
80	9186	Bracket Belt Guide	1



EXPLODED VIEW

SUPPLEMENTAL SHEET

TILLER, MODEL 7-1231

DESCRIPTION

A pair of mower support hooks, a pair of dozer support hooks, and a 3 point hitch hanger assembly (Figure 1) are packed in a separate carton within the main carton. They permit installation and use of the tiller without disturbing whichever of the other attachments is already in place on the tractor. They also permit use of other front or mid mounted attachments without dismounting the tiller.

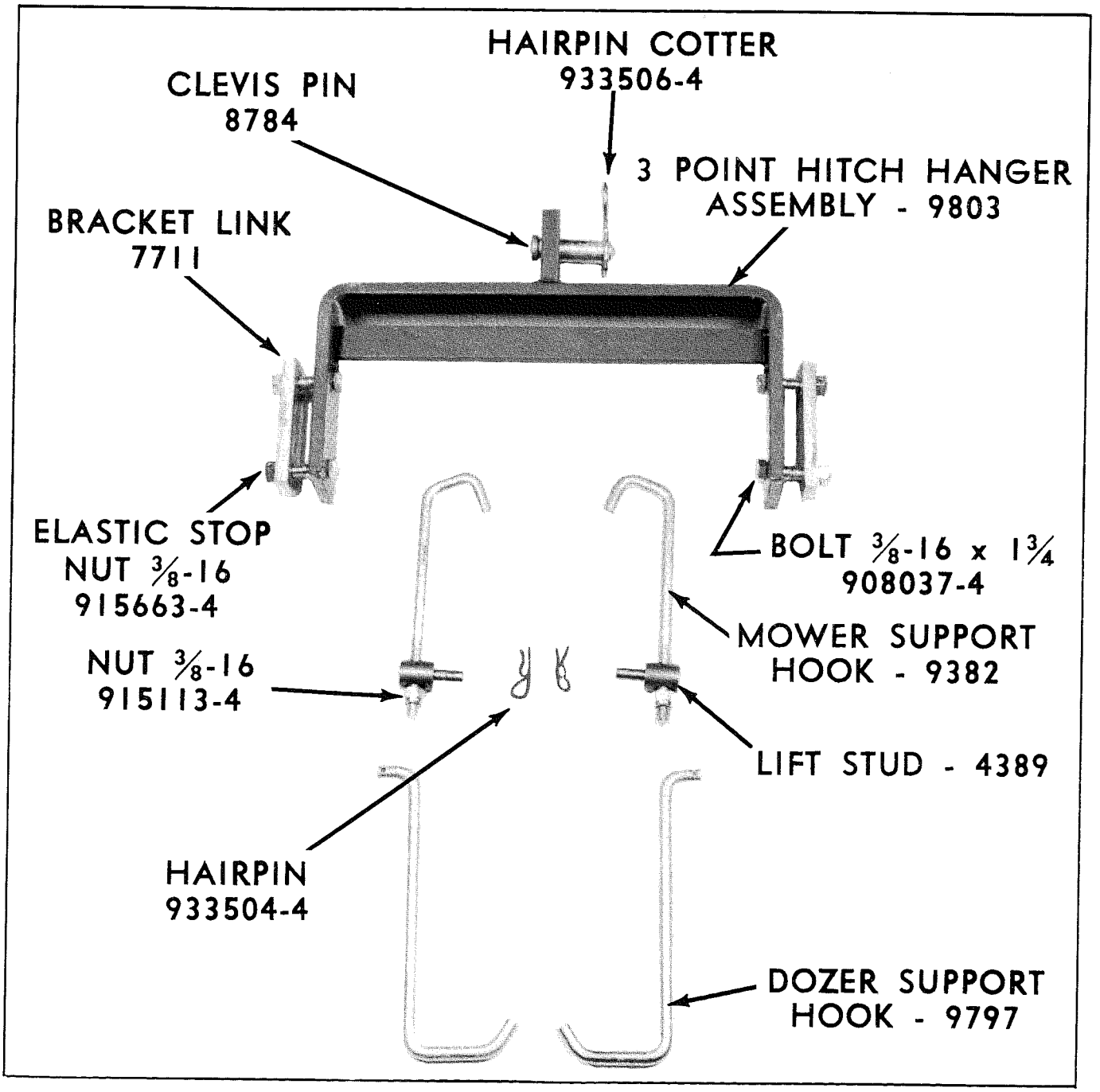


FIGURE 1

INSTRUCTIONS

Mower Support Hooks:

Pull the hairpin cotters and remove the mower lift rod (Figure 2). Set the mower height control lever at the highest cutting notch. Install the mower support hooks as shown in Figure 2 on both sides of the tractor. Run the nuts down against the trunnions to take the weight off the mower. Raise the gage wheels off the ground with the height control lever.

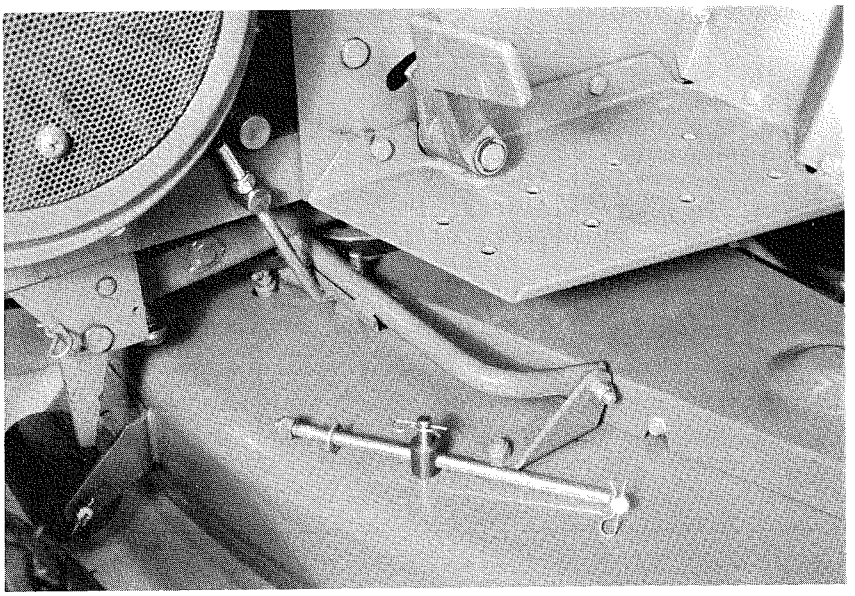


FIGURE 2

Dozer Support Hooks:

Raise the dozer blade with the hydraulic lift. Install the dozer support hooks as shown in Figure 3. Pull the hairpin cotters and disengage the lift bar from the dozer frame and the tractor lift arm.

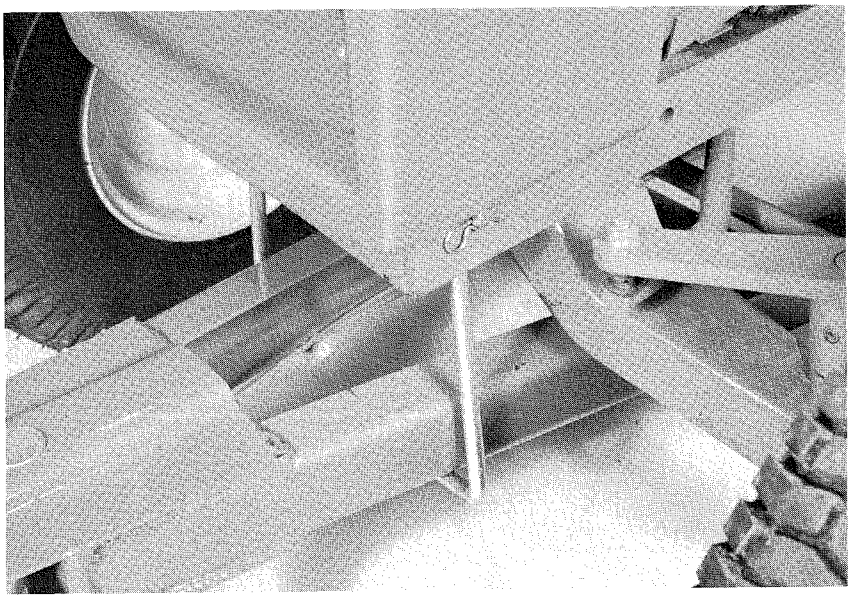


FIGURE 3

3 Point Hitch Hanger Assembly:

Install the hanger loosely on the lower hitch links with the 7711 bracket links and ⅜-16 bolts and nuts. Raise the hitch and insert the clevis pin through the lower hole in the tractor hitch bracket and the hole in the hanger tab (Figure 4). Secure the clevis pin with the hairpin cotter. Tighten the nuts to secure the hanger to the lower hitch links. Remove the Klik pins and roll pins from the top and bottom of the two lift rods and remove the lift rods. This permits the hitch lift assembly to be raised or lowered by the hydraulic lift while the tiller remains in transport position.

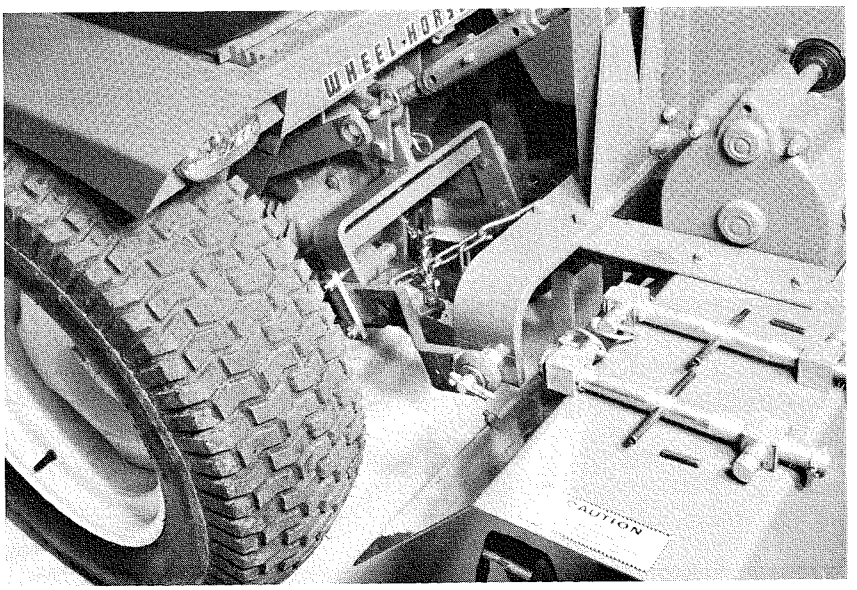
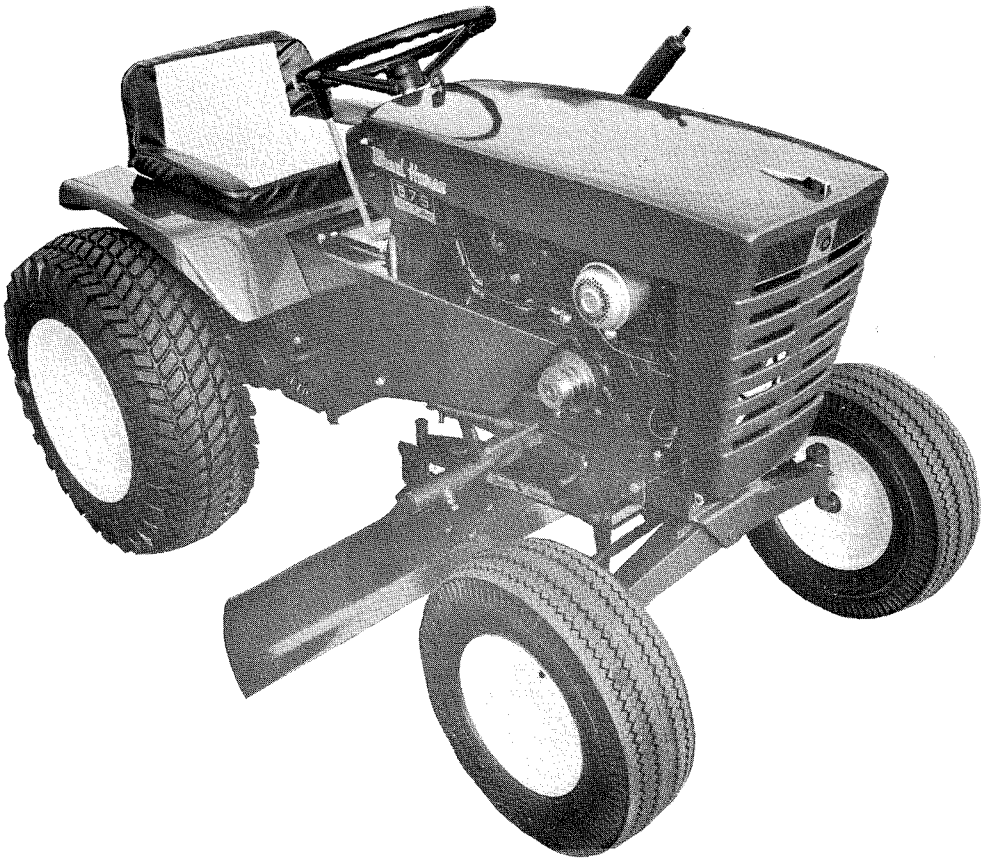


FIGURE 4

MID-MOUNTED GRADER BLADE
MODEL 7-1111
(Formerly MB-405)



ASSEMBLY:

1. The Blade is shipped complete in one carton. There are three (3) main parts in the carton: The Blade Assembly, Frame Assembly, and Hardware Package.

2. Remove contents from carton and place on clean flat surface.

3. Place Shaft of Blade Support Bracket, Part No. 5675 through tube in Frame Assembly, Part No. 5671 and secure with "E" Ring, Part No. 5700.

4. Put Lift Link, Part No. 5678 in the hole of the Lift Lug, located on top of the Frame Assembly, Part No. 5671 and secure with Hairpin Cotter, Part No. 933504.

MOUNTING:

The Grader Blade, is attached by use of the MA-1 Speed Hitch. **Note:** The MA-1 Speed Hitch **IS NOT** included with this attachment and it has an Instruction Sheet for mounting.

1. Slide the Grader Blade under tractor and place wide part of the Frame Assembly, Part No. 5671 into slots of Speed Hitch and close latch.

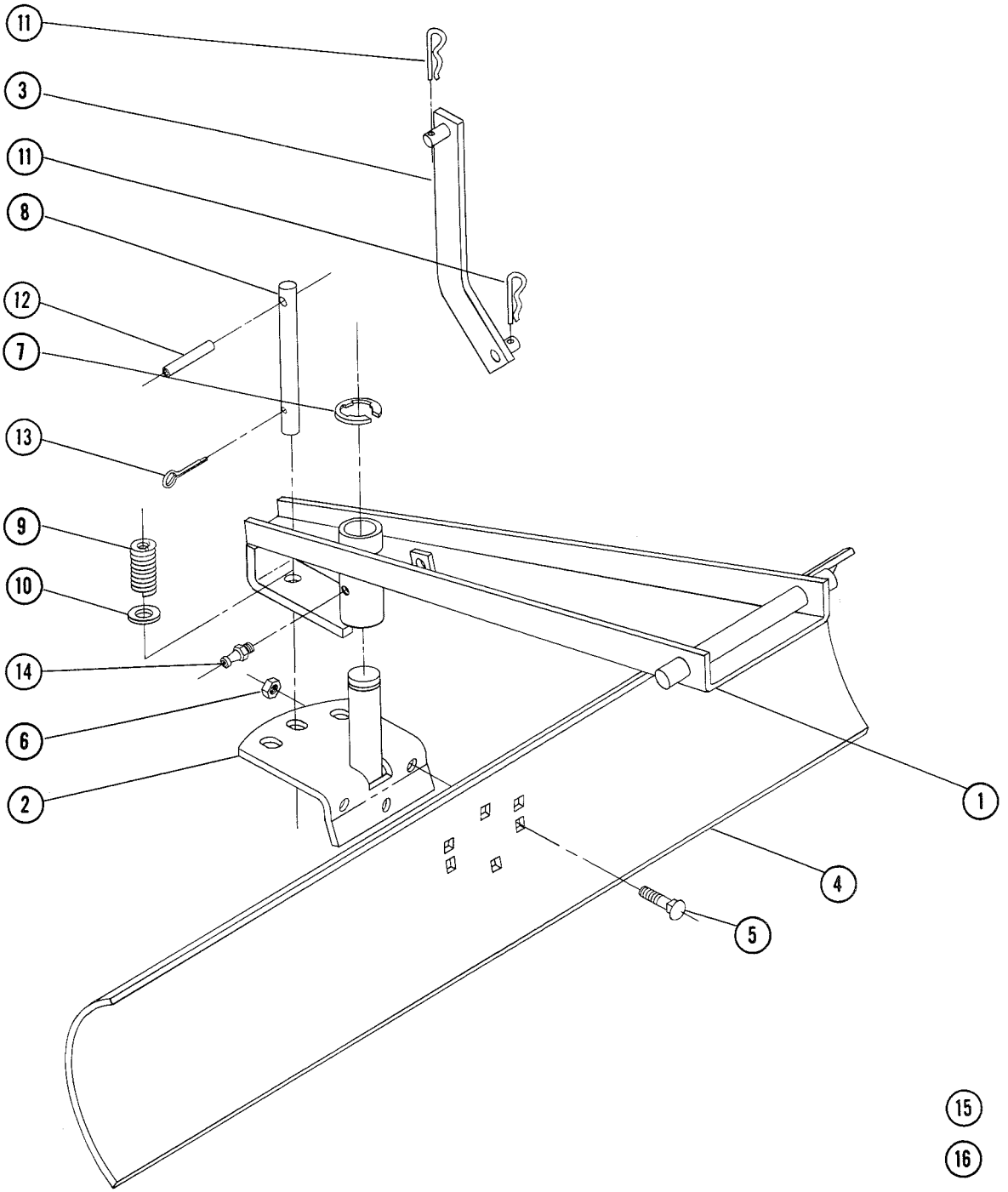
OPERATION:

Caution: Grease Blade Assembly Support Shaft before using.

The blade is adjustable and may be locked in three different positions: Straight, right angle, and left angle. These adjustments are made by pulling up on the "T" Pin (located at the rear of the Frame Assembly) and then turning the blade by hand right or left, now release "T" Pin which will lock blade into position. Down pressure should be applied by pushing down on tractor Lift Lever. **(Caution: Do Not Use Feet to Put Down Pressure on Blade.)**

Light weight oil should be applied to all moving parts before operation and after every 10 hours of use, also grease after every 10 hours of use.

Caution: Avoid hitting solid objects with corners of blade.



PARTS LIST

When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	No. Req'd.
1	5671	Ass'y. Frame	1
2	5675	Ass'y. Blade Support	1
3	5678	Ass'y. Lift Link	1
4	5680	Blade	1
5	900063-4	Bolt — Carriage $\frac{3}{8}$-16 x 1	3
6	915663-4	Nut — Elastic Stop $\frac{3}{8}$-16	3
7	5700	"E" Ring 1" Nom. Shaft	1
8	5682	Pin — Pawl	1

Ref. No.	Part No.	Description	No. Req'd.
9	5683	Spring — Compression	1
10	920013-4	Washer $\frac{5}{8}$ SAE	1
11	933504	Hairpin	2
12	933223	Roll-Pin $\frac{1}{4}$ x $2\frac{1}{2}$	1
13	932017-4	Cotter Pin $\frac{1}{8}$ x 1	1
14	1030	Fitting — Grease	1
15	5684	Decal — "Safety First"	1
16	5604	Decal — Attachment	1

32" DISC
MODEL 7-1511
(Formerly DP-861)

The Disc will come completely packed in one carton. The Channel Frame is made so that extra weight may be added if so desired. It will hold two standard cement blocks, one on each side.

When extra weight is used, it is not possible to lift the Disc with the hand-lever. By adjusting the blades, to the straight position, the Disc may be transported by towing with the use of the Pivot Bar. The Pivot Bar allows the user to turn while the Disc is down and stops the blades from hitting the rear wheels of the tractor. The Disc is mounted with the ½" x 1¾" bolt and locked with double nuts. The pin stop must be in the up position.

In cases where it is not necessary to use the added weights the hitch should be hooked directly to the tractor and may be lifted for transportation by the tractor lift-lever.

The trip lever allows the user to adjust the gangs from his seat. To do this, first, pull the Lock-Pin and then, by holding the handle and moving the tractor forward, the Discs will angle to the rear. To straighten the Disc simply pull pin and put tractor in reverse and lock.

You will note that the two pivot rods are threaded to allow adjustment to equalize the gangs.

ASSEMBLY

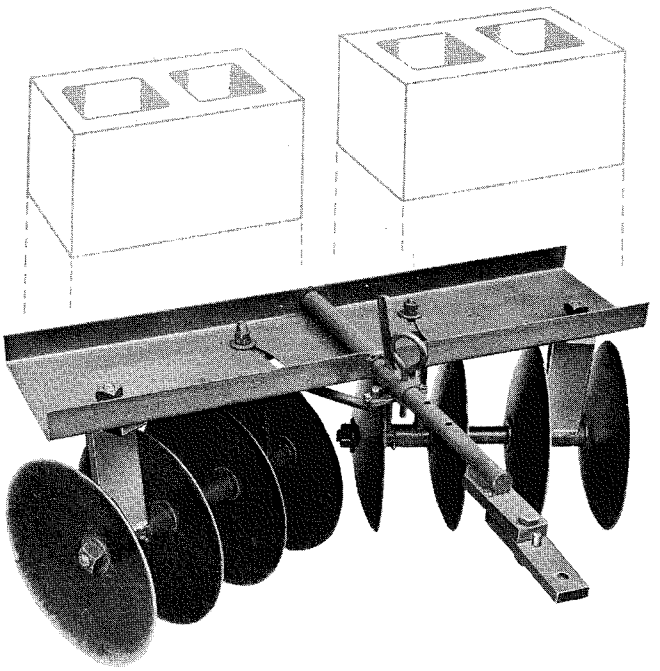
1. Place long ¾" x 15" bolt in vise, holding it by the head.

2. Place ¾" washer next and Disc with dish turned up, add another washer.

3. Using small diameter bushing, slide on next, placing cast iron post over the spacer with the longer hub towards the Disc. Add washer.

4. Now add another Disc and large spacer, then washer and Disc.

5. Finally add another bearing tube and casting, washer, disc, washer, lock washer and nut, draw up tightly, discs should turn easily.



6. After both sides are assembled, place under channel and bolt castings fast, using ⅝" Shoulder Bolts.

7. Slide Draw Bar through tube and lock each end with Roll Pins.

8. Now fasten Pivot Rods to inside, casting with locknut on each side and adjust so each side is even.

9. Hook Disc to tractor, either by using the straight hook-up or the pivot bar, if weight is to be used.

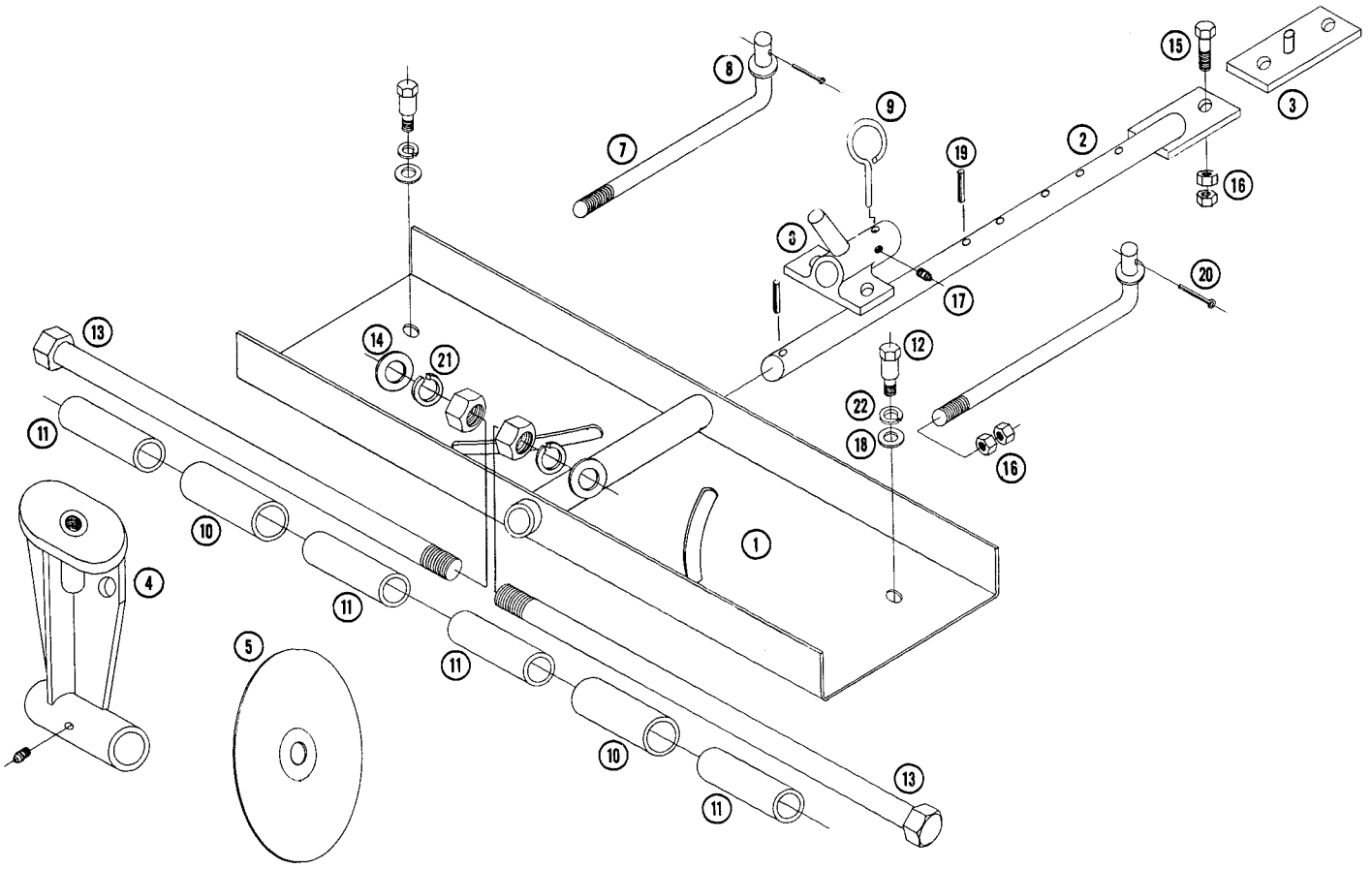
LUBRICATION

There are five Zerks on the Disc, one on each cast iron post and one on the trip lever. These should be greased every day when in use.

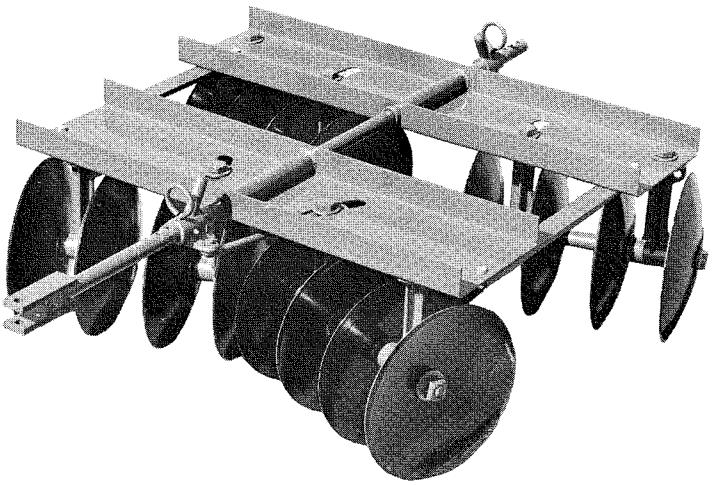
When Disc is to be stored, it is advisable to coat blades with grease to eliminate rusting.

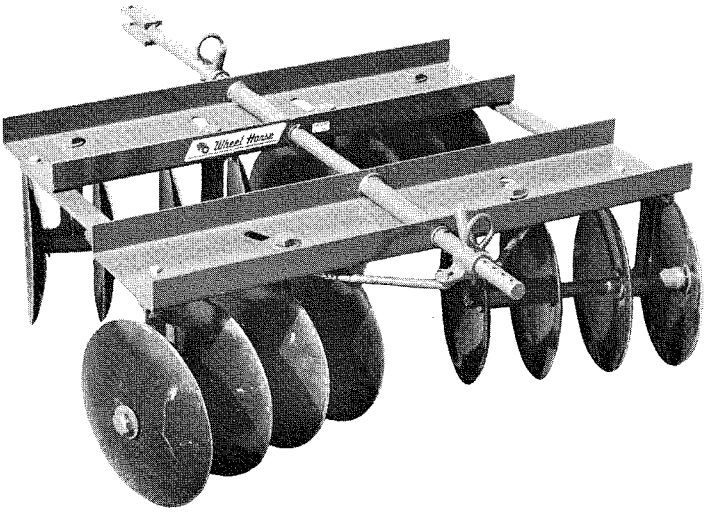
PARTS LIST

Ref. No.	Part No.	Description	No. Req'd.
1	2149	Channel Assembly	1
2	2153	Hitch Bar Assembly	1
3	2160	Pivot Bar Assembly	1
4	2104-C	Disc Gang	4
5	2108	Disc Blade	8
6	2151	Lever-Trip	1
7	2152	Pivot Rod	2
8	1017	Flat Washer	2
9	2156	Pin-Lock	1
10	2109	Pipe-Spacer	2
11	2110	Bearing Tube	4
12	2158	Shoulder Bolt $\frac{5}{8}$-11	4
13	1054	Machine Bolt w/nut $\frac{3}{4}$-10 x 15	2
14	1052	Flat Washer $\frac{3}{4}$	16
15	1073	Hex Head Cap Screw, $\frac{1}{2}$-13 x $1\frac{3}{4}$	1
16	1371	Hex Lock Nut $\frac{1}{2}$-13	6
17	1030	Grease Fitting $\frac{1}{4}$-28	5
18	1367	Flat Washer S.A.E. $\frac{7}{8}$	4
19	1340	Roll Pin $\frac{1}{4}$ x $1\frac{1}{4}$	2
20	1002	Cotter Pin $\frac{1}{8}$ x 1	2
21	1116	Lockwasher $\frac{3}{4}$	2
22	1366	Lockwasher $\frac{7}{8}$	4



TANDEM DISC
TDH-163





The TDH-163 disc is shipped complete in one carton. The channel frames are made so that extra weight may be added if so desired. It will hold 4 standard cement blocks, two in the front and two in the rear channel.

The trip lever allows the user to adjust the gangs. To do this, first pull the lock pin and pivot gangs to desired angle, replace lock pin. By adjusting the blades to the straight position, the disc may be transported. **DO NOT** attempt to lift the disc with the tractor hitch.

ASSEMBLY

1. To assemble gangs, place long ¾ x 15" bolt (Part No. 900993-4) in vise, grip it by the head.

2. Place ¾ washer next (920044-4) and disc with dish side turned up, add another washer.

3. Place the spacer tube (Part No. 2110) in the gang casting (Part No. 2104-C) and slide on bolt, longer hub first. Add washer.

4. Add another disc and washer, then add a spacer-pipe (Part No. 2109) then a washer, disc, and washer.

5. Finally, add another bearing-tube and casting, washer, disc, another washer and nut (Part No. 915668-4). Draw up tightly. Discs should turn easily.

6. Place assembled gangs under channels with dished side out and fasten with shoulder bolts (Part No. 2158) and washer (Part No. 920016-4).

7. Tie the two channel assemblies together (short channel in front) with tie bars and ⅜ bolts & nuts.

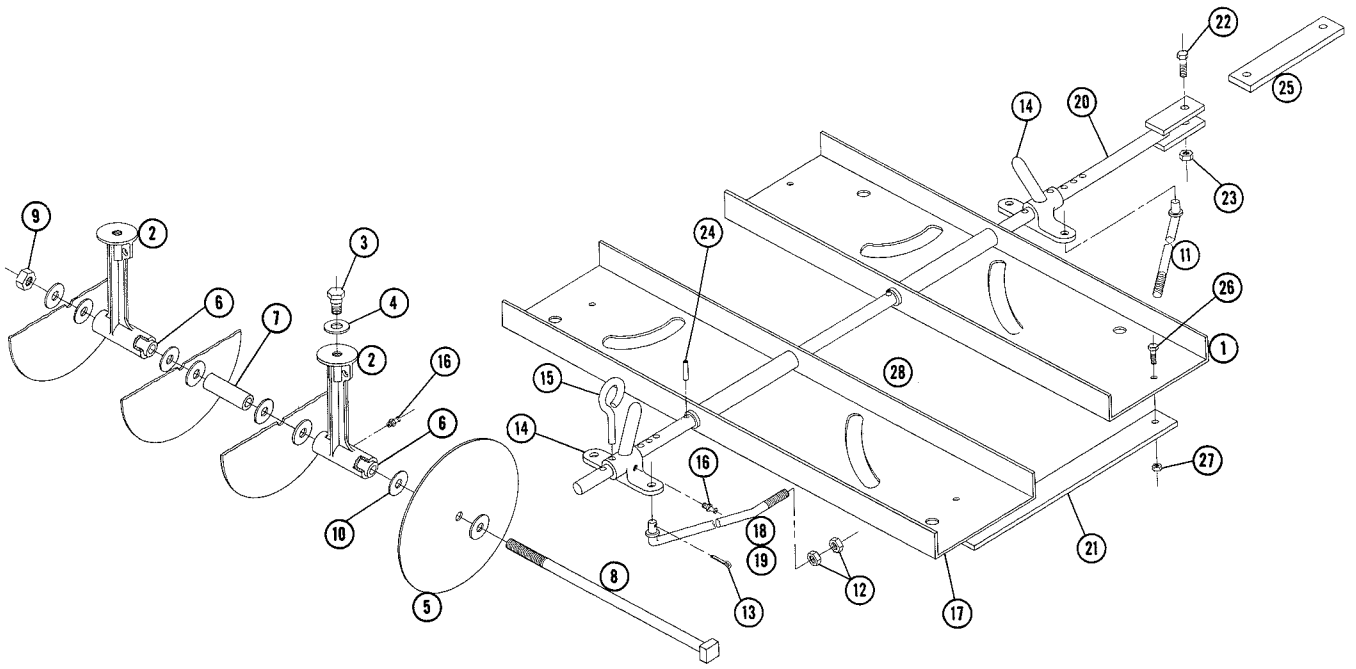
8. Slide trip lever casting with straight pivot rods (Part No. 2152) over hitch bar.

9. Slide hitch bar through channels, lock in place with roll pins, add trip lever casting with the bent pivot rods (Part Nos. 3058 and 3059).

10. Slide pivot rod ends through holes in gang casting, add ½" nuts, slide lock pin through hole in trip lever and hitch bar. Fasten hitch plate with the ½-13 x 2¼ bolt and nut.

LUBRICATION

There are ten zerks on the disc, one on each gang casting and one on each trip lever casting. These should be greased every day when in use. When disc is to be stored, it is advisable to coat blades with grease to eliminate rusting.



PARTS LIST

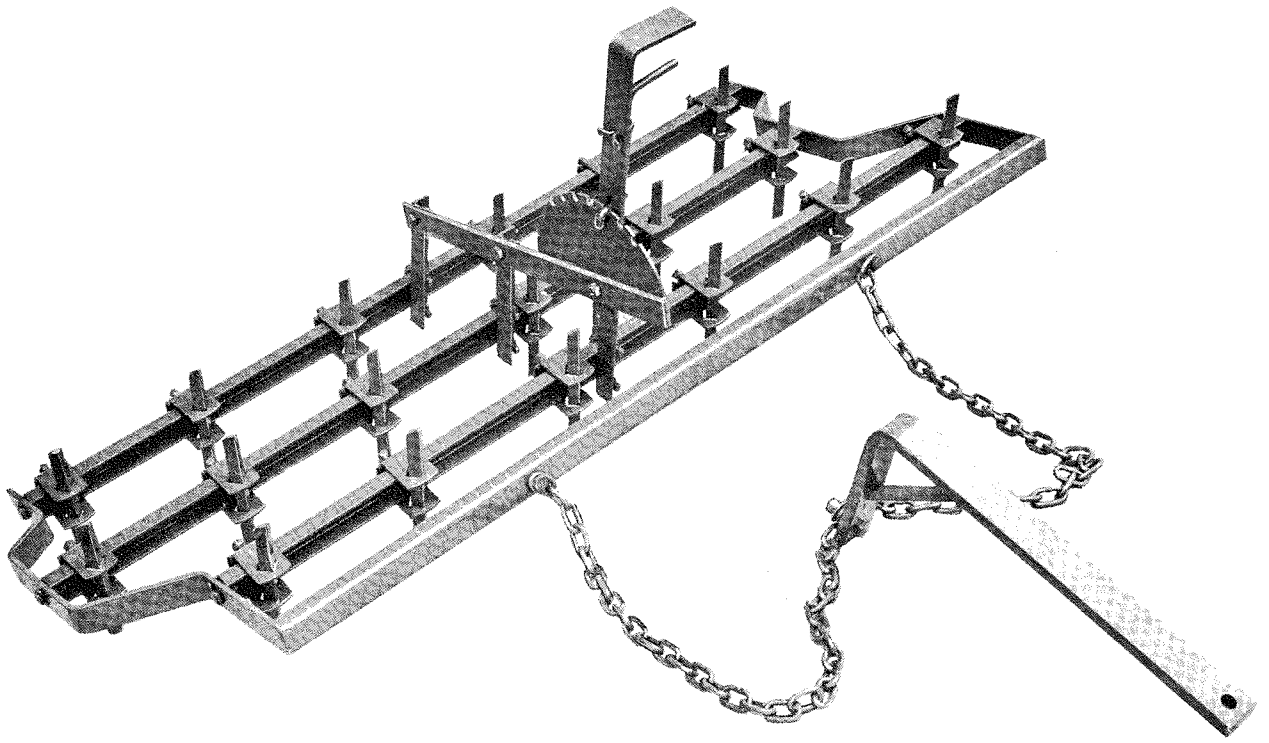
When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	No. Req'd.
1	2149	Ass'y. Channel - Front	1
2	2104-C	Gang	8
3	2158	Bolt - Shoulder $\frac{5}{8}$-11	8
4	920016-4	Washer - Plain $\frac{7}{8}$ Dia. x $1\frac{3}{4}$ OD	8
5	2108	Blade - Disc	16
6	2110	Spacer - Tube	8
7	2109	Spacer - Pipe	4
8	900993-4	Bolt - Hex. $\frac{3}{4}$-10 x 15	4
9	915668-4	Nut $\frac{3}{4}$-10 Elastic Stop	4
10	920044-4	Washer - Plain $\frac{3}{4}$ Dia. x 2	32
11	2152	Rod - Pivot	2
12	915115-6	Nut - Nylock $\frac{1}{2}$-13	8
13	932017-4	Cotter Pin $\frac{1}{8}$ x 1	4
14	2151	Lever - Trip	2

Ref. No.	Part No.	Description	No. Req'd.
15	2156	Pin - Lock	2
16	1030	Fitting - Grease $\frac{1}{4}$-28	10
17	3055	Ass'y. Channel - Rear	1
18	3058	Rod - Pivot - R.H. (Shown)	1
19	3059	Rod - Pivot - L.H. (Not Shown)	1
20	3060	Ass'y. Hitch Bar	1
21	3057	Bar - Tie	2
22	908062-4	Bolt - $\frac{1}{2}$-13 x $2\frac{1}{4}$	1
23	915115-6	Nut - Nylock $\frac{1}{2}$-13	1
24	933217	Roll - Pin $\frac{1}{4}$ x $1\frac{1}{2}$	4
25	2512	Plate - Hitch (Tractor)	1
26	908038-4	Bolt - Hex. $\frac{3}{8}$-16 x 1	4
27	915113-6	Nut - Nylock $\frac{3}{8}$-16	4
28	4411	Decal	1

HARROW
PH-181

PARTS LIST AND INSTRUCTIONS



MOUNTING

The Harrow is shipped in a carton almost completely assembled.

1. Remove from carton and lay Harrow out on the floor. There are 3 pieces plus a bag with bolts.

2. Bolt adjusting lever fast to the Harrow using U-Bolts. Place the lever towards the front as shown in photograph.

3. Fasten chain to channel using ⅜" x 1½" bolts and washers.

4. It will be necessary to readjust several spikes as they are moved in for shipping. At the same time, if desired, the spikes may be adjusted for height, this will depend upon the condition of the soil to be harrowed.

5. Place the hitch in the tractor-hitch with the chain ring down. The angle of the Harrow teeth may be adjusted with the lever according to operator.

6. Machine oil should be applied to any moving parts.

OPERATION

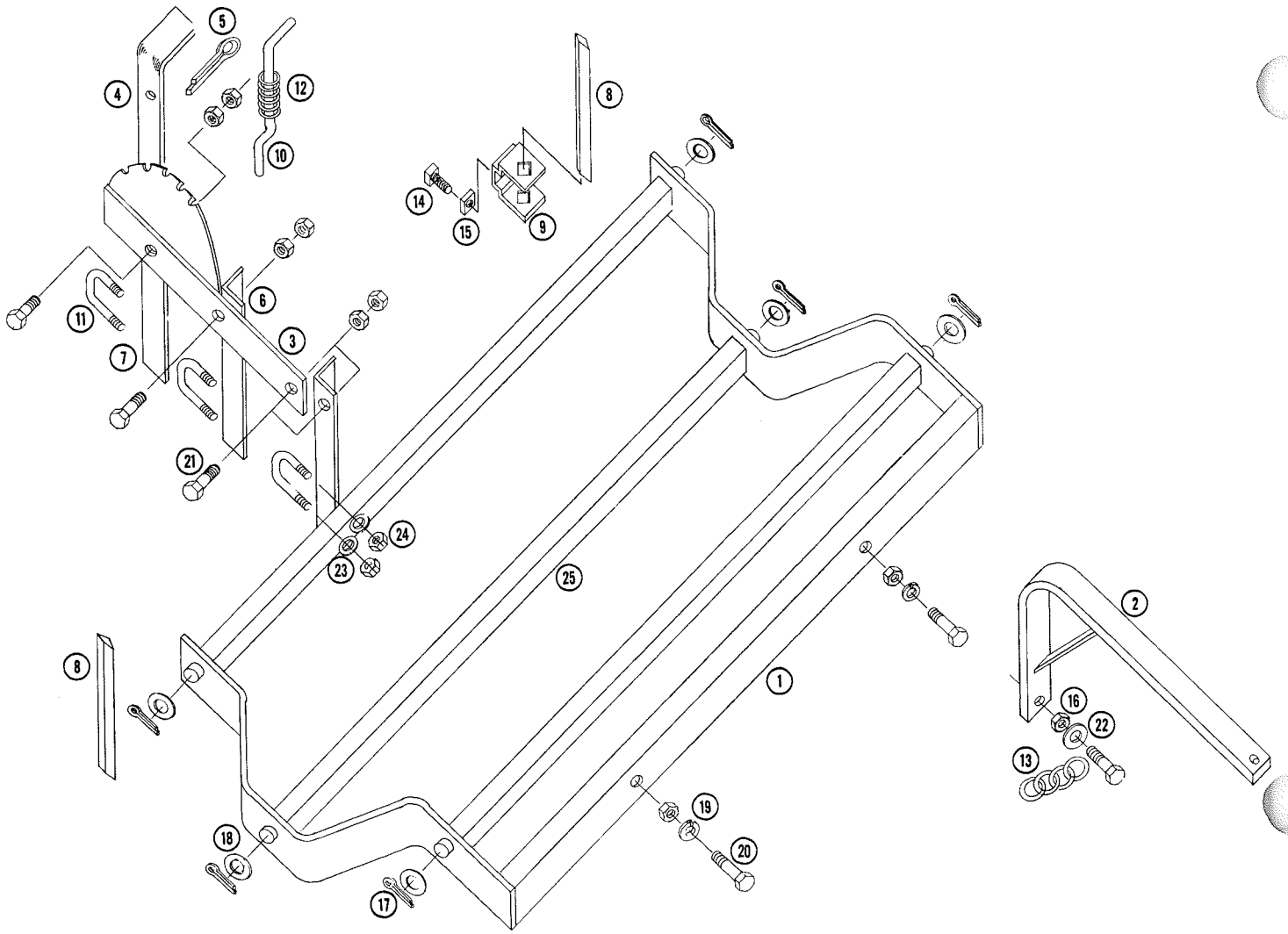
The Harrow may be used as a Drag to level with by moving lever all the way forward and pulling the spikes up.

When using Harrow in hard soil, added weight may be applied for better penetration.

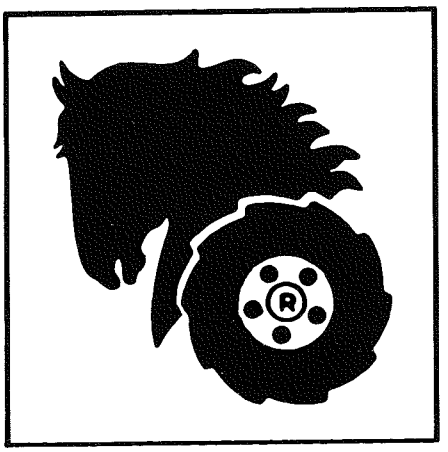
In grassy condition, it may be necessary to clean grass from spikes occasionally, as the spikes will build up with grass.

PARTS LIST

Ref. No.	Part No.	Description	No. Req'd.
1	2611	Frame Assembly	1
2	2607	Draw Bar Assembly	1
3	2626	Sector Assembly	1
4	2613	Handle	1
5	1375	Cotter Pin 5/16 x 3/4	1
6	2623	Adjusting Angle	2
7	2622	Adjusting Angle	1
8	2621 (366-16)	Spike	16
9	2624	Clamp—Spike	16
10	2617	Locking Pin—Spike Control Bar	1
11	2619	"U" Bolt	3
12	2625	Compression Spring	1
13	2610	Chain	2
14	1023	Square Head Set Screw, 3/8-16 x 1	16
15	1072	Square Nut 3/8-16	16
16	1016	Hex Nut, 3/8-16	9
17	1002	Cotter 1/8 x 1	6
18	1017	Flat Washer, S.A.E. 1/2	6
19	1039	Lockwasher	2
20	1064	Hex Head Cap Screw, 3/8-16 x 1 1/2	2
21	1028	Hex Head Cap Screw, 3/8-16 x 1 1/4	4
22	1041	Flat Washer 3/8	1
23	1045	Lockwasher	6
24	1007	Hex Nut 5/16-18	6
25	2614	Channel	3



AGRICULTURAL ATTACHMENTS



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Printed in U. S. A. 3-70

BULLETIN NO. A-5251