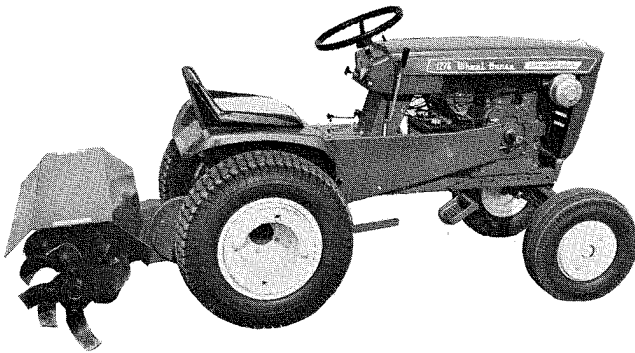


# TILLER

## 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,  $\frac{1}{4}$ " 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

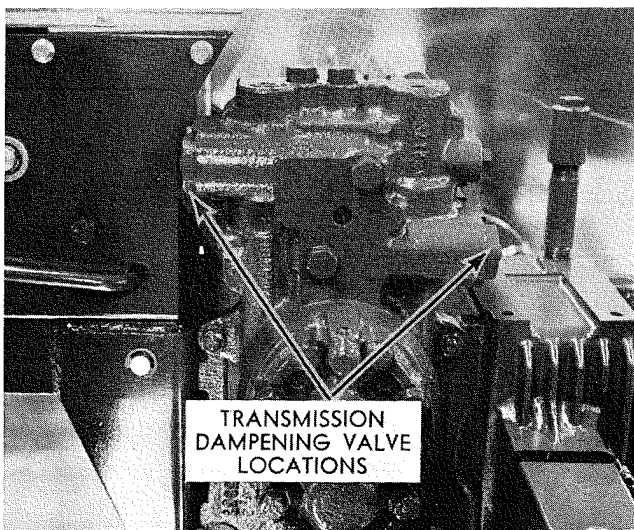
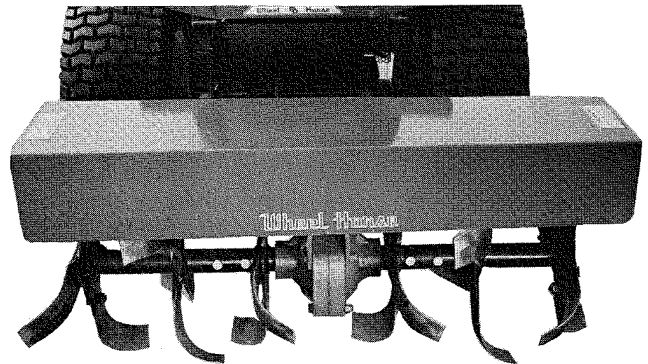


FIGURE A



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.

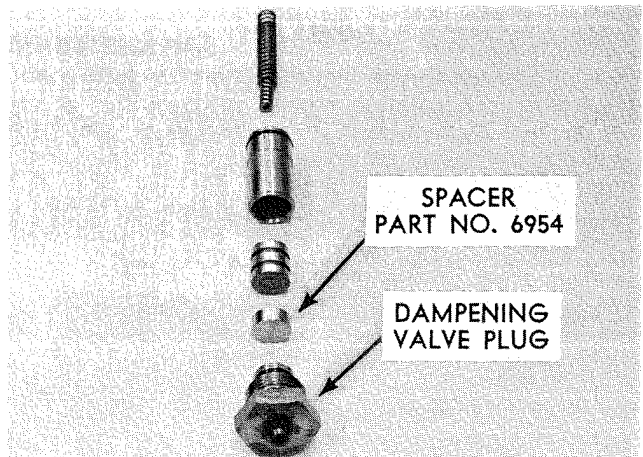


FIGURE B

### 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  $\frac{3}{8}$ -16 x  $3\frac{1}{4}$  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  $\frac{1}{2}$ -13 nut.

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

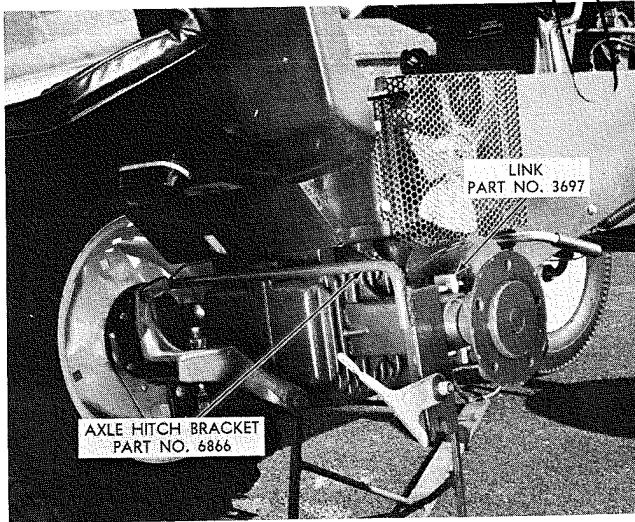


FIGURE I

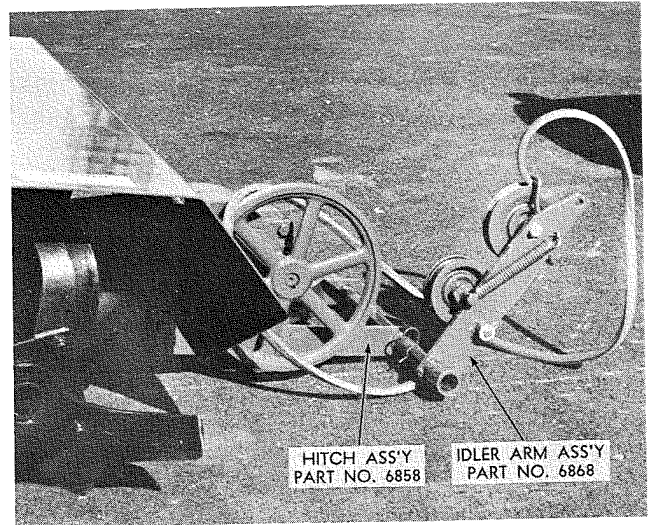


FIGURE IV

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

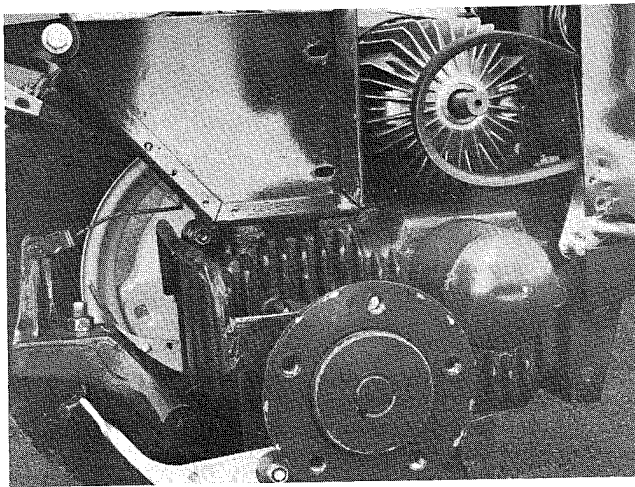


FIGURE II

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).

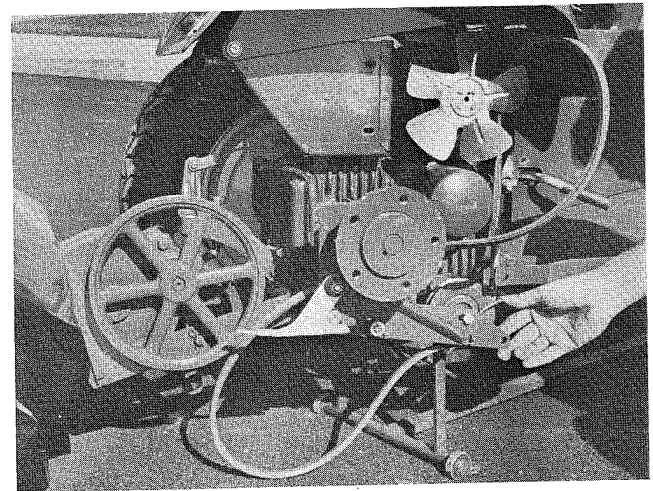


FIGURE V

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.

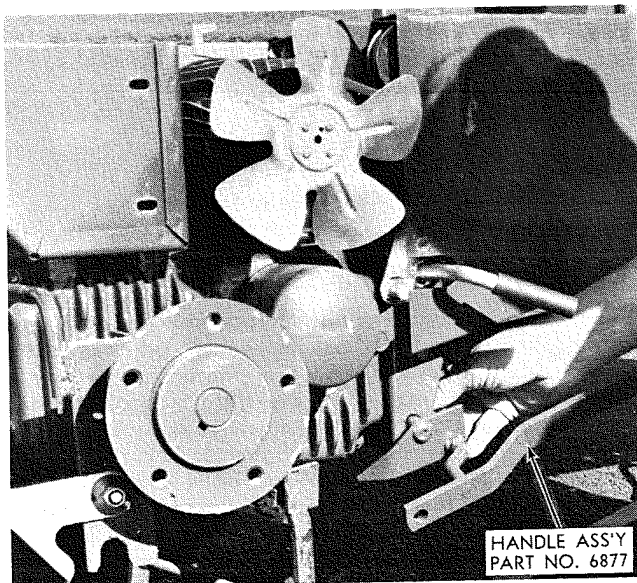


FIGURE III

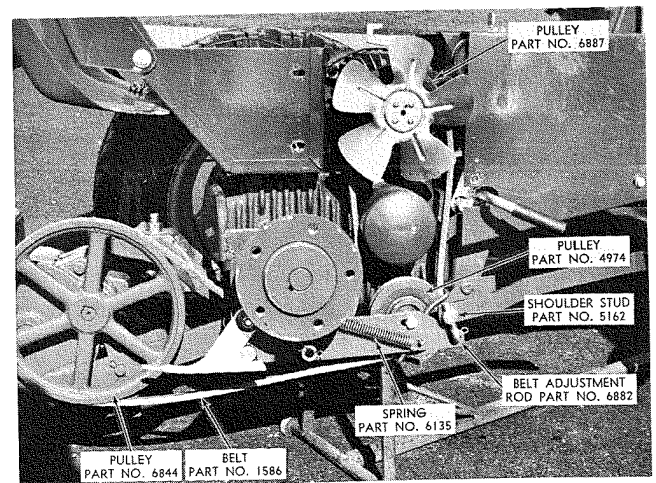
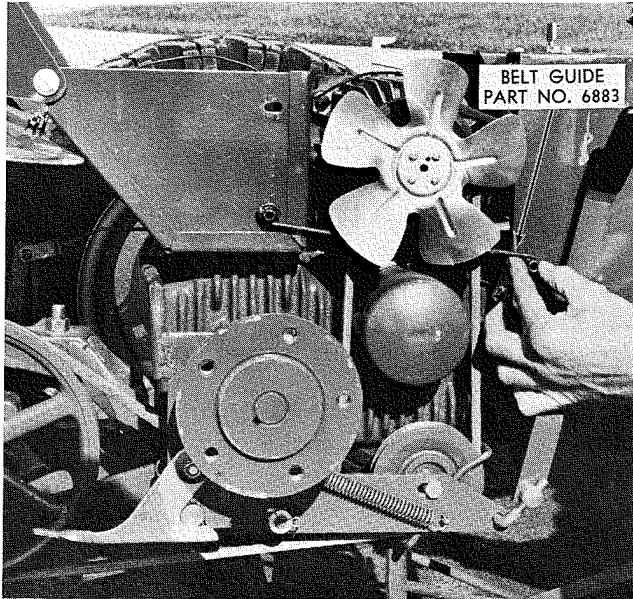


FIGURE VI

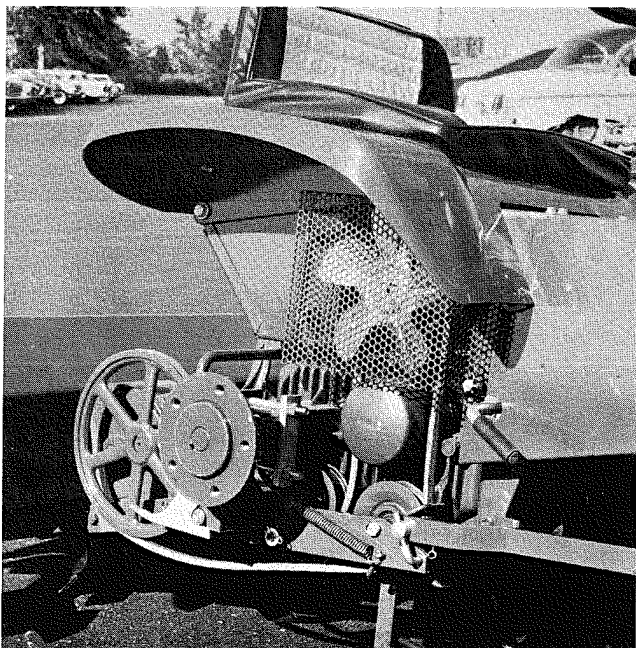
Secure with hairpin cotter, Part No. 933503-4. Belt adjustment is obtained by threading the adjustment rod in or out of the shoulder stud. Correct adjustment is reached when the handle is straight up (operating position) and the pulley tension spring, Part No. 6135 is being stretched  $\frac{3}{8}$  to  $\frac{1}{2}$  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  $\frac{1}{4}$ -20 x  $1\frac{1}{4}$  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



**FIGURE VIII**

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.

## 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:**  $13\frac{1}{2}$ "

**OUTPUT SHAFT:**  $1\frac{1}{4}$ " 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,  $1\frac{1}{2}$  pints.

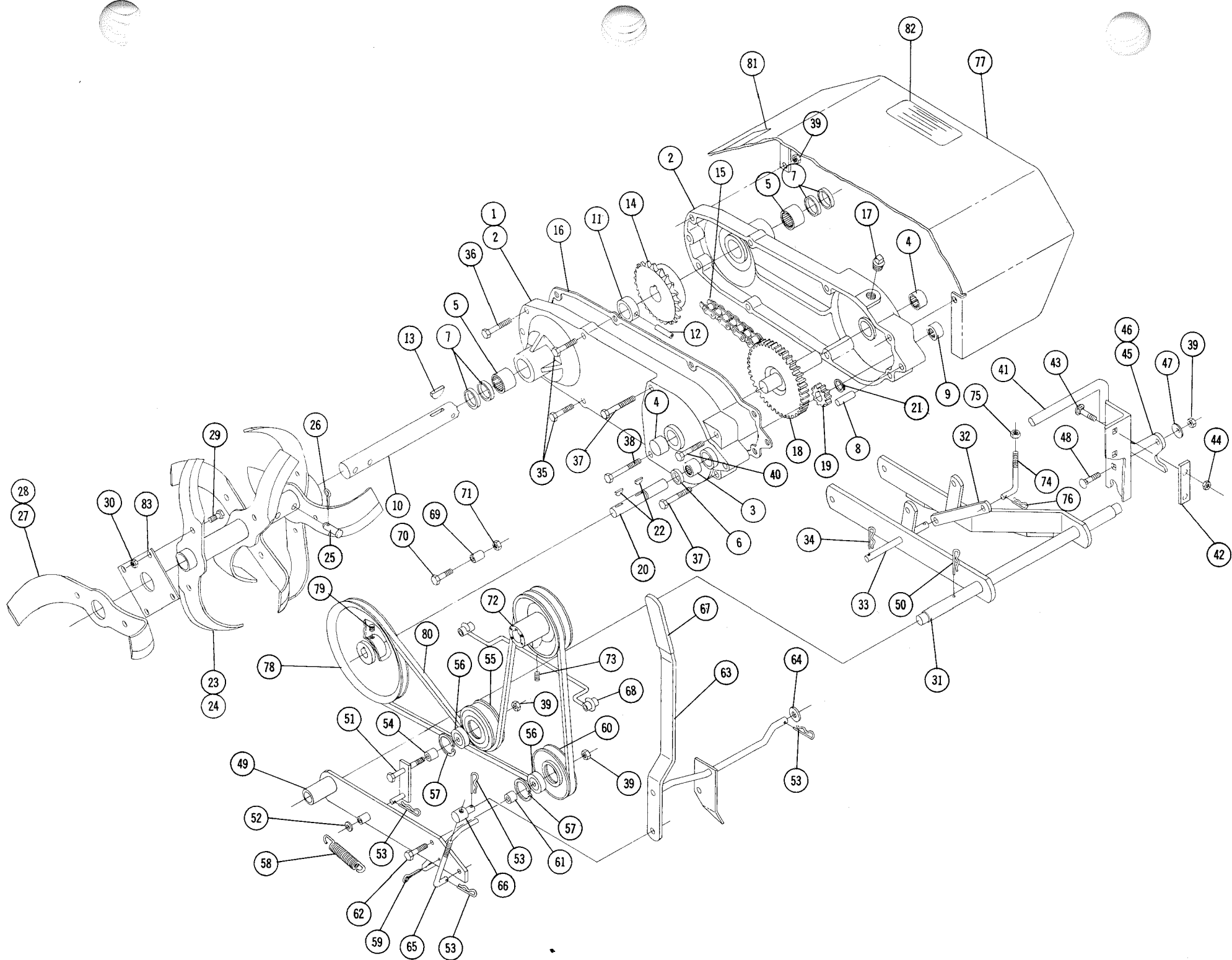
**TINE ASSEMBLY:** Right and left-hand assemblies, each with 6 one-piece, heat-treated tines. 12 cutting edges per side; 24 total cutting edges.

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

## PARTS LIST FOR RT-366

Item No.	Part No.	Description	No. Req'd.	Item No.	Part No.	Description	No. Req'd.
1	6835	Ass'y Gear Case — Complete	1	43	900072-4	Bolt Carriage $\frac{3}{8}$ - 16 x $3\frac{1}{4}$	4
2	6837	Case	2	44	915113-6	Nut Nylok $\frac{3}{8}$ - 16	4
3	1540	Bearing — Needle $\frac{3}{4}$ I.D. x $\frac{1}{2}$	1	45	5135	Plate — Latching R.H.	1
4	1532	Bearing — Needle I.D. x $\frac{3}{4}$ Closed End	2	46	5136	Plate — Latching L.H.	1
5	6833	Bearing — Needle $1\frac{1}{4}$ I.D. x 1	2	47	3775	Washer — Spring	2
6	1303	Seal $\frac{3}{4}$ I.D.	1	48	900063-4	Bolt Carriage $\frac{3}{8}$ - 16 x 1	2
7	1482	Seal $1\frac{1}{4}$ I.D.	4	49	6868	Ass'y Idler Arm	1
8	3915	Pin — Dowel	2	50	933505-4	Hairpin	1
9	1529	Bearing — Needle $\frac{3}{4}$ I.D. x $\frac{3}{4}$ Closed End	1	51	6873	Ass'y Idler Support	1
10	6842	Shaft — Tine	1	52	920009-4	Washer $\frac{3}{8}$ SAE	1
11	6843	Spacer	1	53	933503-4	Hairpin	3
12	933232	Roll Pin $\frac{5}{16}$ x 2	1	54	2233	Spacer	1
13	937058	Key #128 Woodruff	1	55	6740	Pulley	1
14	6845	Sprocket 2OT	1	56	4567	Ball Bearing	2
15	6848	Chain	1	57	936024	Snap Ring — Internal	1
16	6851	Gasket	1	58	6135	Spring	1
17	943421	Plug $\frac{1}{2}$ -14 Pipe	2	59	932034-4	Cotter Pin $\frac{3}{16}$ x 1	1
18	6894	Ass'y Gear — Reduction	1	60	4974	Pulley — Idler	1
19	3528	Gear — Pinion	1	61	6876	Spacer	1
20	6899	Shaft Input	1	62	908038-4	Bolt Hex $\frac{3}{8}$ - 16 x 2	1
21	936125	Snap — Ring $\frac{3}{4}$ Shaft	1	63	6877	Ass'y Handle — Clutch	1
22	937014	Key #9 Woodruff	2	64	920011-4	Washer $\frac{1}{2}$ SAE	1
23	6852	Ass'y Tine R.H.	1	65	6882	Rod — Belt Adjustment	1
24	6853	Ass'y Tine L.H.	1	66	5162	Stud — Shoulder	1
25	6854	Pin — Clevis — Tine Tube	4	67	MW-8067	Handle — Plastic	1
26	937017-4	Cotter Pin $\frac{1}{8}$ x 1	4	68	6883	Ass'y Belt Guide	1
27	6856	Tine — R.H.	1	69	6885	Spacer — Fan Shield	1
28	6857	Tine — L.H.	1	70	908006-4	Bolt Hex $\frac{1}{4}$ x $1\frac{1}{4}$	3
29	908046-4	Bolt Hex $\frac{7}{16}$ - 14 x 1	8	71	915111-6	Nut — Nylok $\frac{1}{4}$ - 20	2
30	915114-6	Nut Nylok $\frac{7}{16}$ - 14	8	72	6887	Pulley — Double Groove	1
31	6858	Ass'y Hitch	1	73	909867-5	Set Screw — Nylok $\frac{5}{16}$ -18 x $\frac{3}{4}$	1
32	6864	Link — Lift	1	74	6888	Rod — Lift	1
33	6865	Shaft	1	75	915115-6	Nut — Nylok $\frac{1}{2}$ - 13	1
34	932009-4	Cotter Pin $\frac{3}{32}$ x 1	2	76	933504-4	Hairpin	1
35	908040-4	Bolt Hex $\frac{3}{8}$ - 16 x $2\frac{1}{2}$	3	77	6874	Ass'y Tine Shield	1
36	908042-4	Bolt Hex $\frac{3}{8}$ - 16 x 3	1	78	6844	Pulley	1
37	908144-4	Bolt Hex $\frac{3}{8}$ - 16 x $4\frac{1}{2}$	2	79	909865-5	Set Screw $\frac{5}{16}$ - 18 x $\frac{1}{2}$ Nylok	1
38	908143-4	Bolt Hex $\frac{3}{8}$ - 16 x 5	1	80	1586	Belt 4L - 76	1
39	915663-4	Nut Elastic Stop $\frac{3}{8}$ - 16	12	81	5415	Decal — Wheel Horse	1
40	908145-4	Bolt Hex $\frac{3}{8}$ - 16 x $3\frac{3}{4}$	1	82	4570	Decal — Caution	2
41	6866	Ass'y Hitch — Axle Mounting	1	83	6855	Plate — Tine Mounting	2
42	3697	Link	2				





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## **Wheel-A-Matic Transmissions**

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A change is being made in the larger of the two relief valve springs, part #7053, located in the dampening valve cavity. The springs in both the forward and reverse assemblies are affected.

The new springs, part #7264 eliminate the need for the installation of the part #6954 spacers behind the part #6444 dampening valves, when using an RT-366 and RT-367 tiller. **IMPORTANT!!! Do not** install the #6954 spacers in combination with the new springs as the tractors response will be greatly affected and will be unsafe for the operator.

All hydrogears starting with serial number FB-02157 and above have the new springs installed. An easy method of checking without removing the fender and tool box assembly, is to remove the reverse dampening valve and piston, and measure the length of the spring. The new spring is approximately 2 1/4" long, the old spring measures 2".

The original spring, part #7053, and part #6954 spacers are being discontinued. To install an RT-366 and RT-367 tiller on earlier Wheel-a-Matic tractors, replace the original #7053 springs with the new #7264 springs.