

OWNER'S MANUAL

8H.P. ROPER RALLY LAWN TRACTOR MODEL NO. L86356R

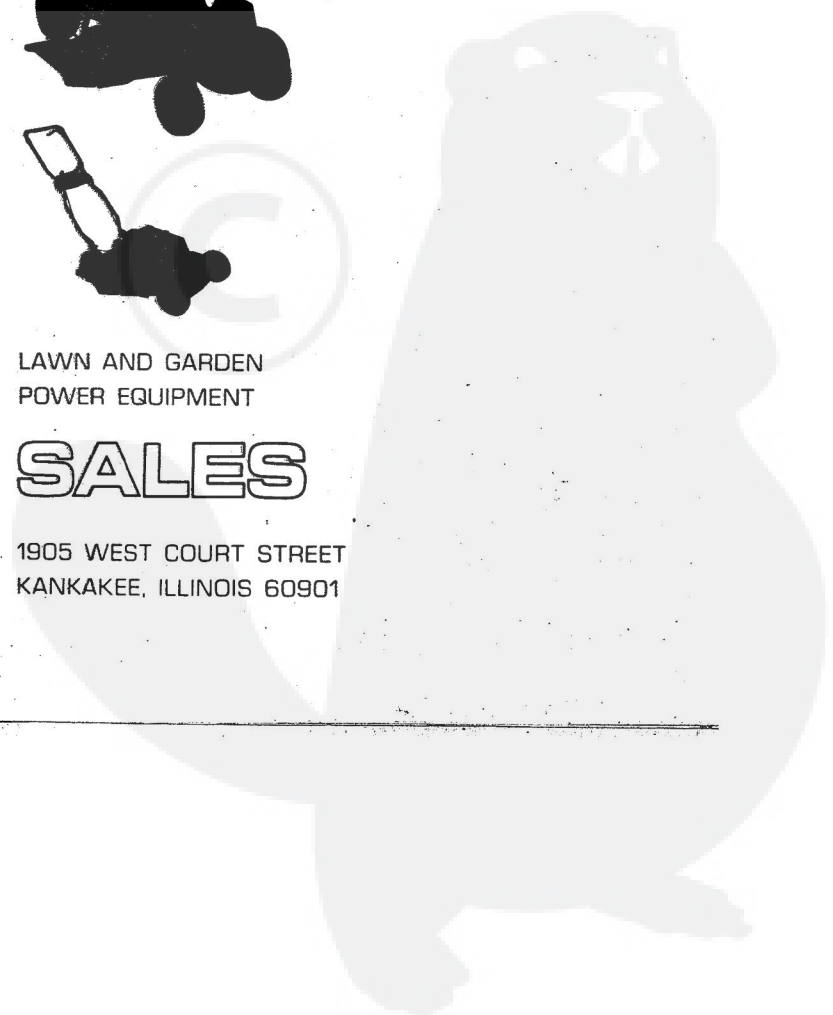


LAWN AND GARDEN
POWER EQUIPMENT

ROPER

SALES

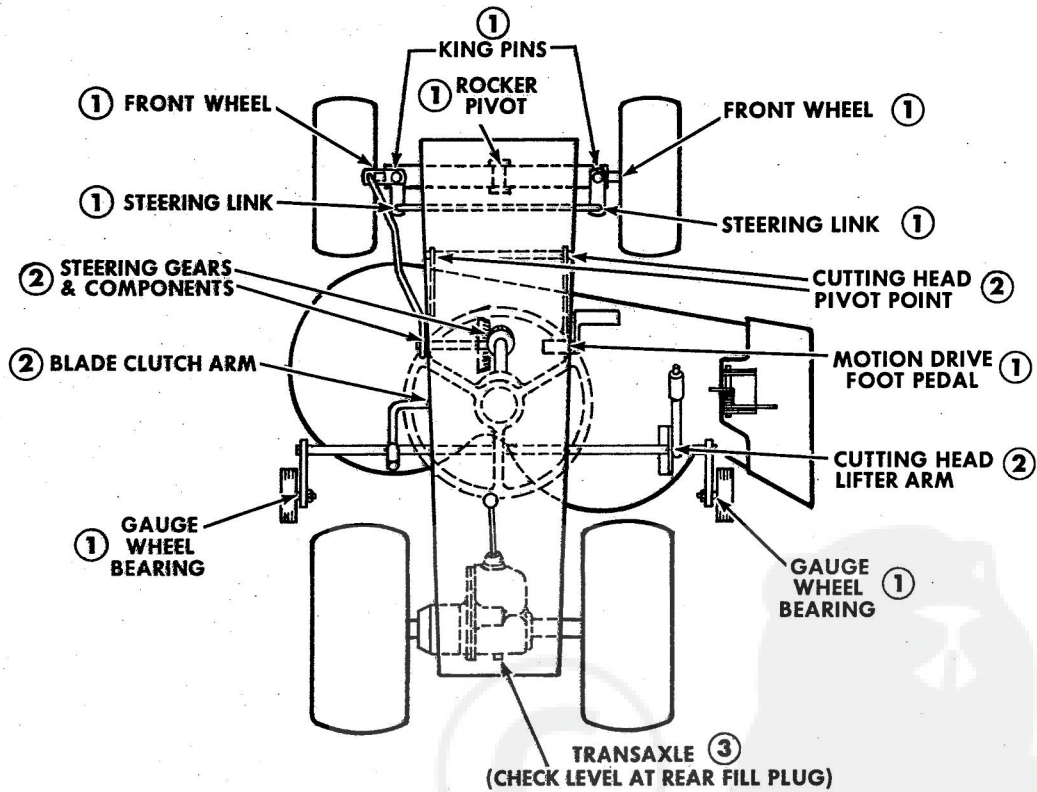
1905 WEST COURT STREET
KANKAKEE, ILLINOIS 60901



TROUBLE SHOOTING POINTS

PROBLEM	CAUSE	CORRECTION
Does not start	<ol style="list-style-type: none"> 1. Blade clutch lever engaged. 2. Parking brake not engaged. 3. Problem in Interlock system. 4. Out of gasoline. 5. "Stale Gasoline". 6. Battery needs charged (If so equipped). 7. Ignition switch in "off" position (Recoil start only). 8. Dirty or burnt - out spark plug. 9. Spark plug wire is disconnected from the spark plug. 10. Water in gasoline from condensation in fuel tank. 	<ol style="list-style-type: none"> 1. Move blade clutch lever to disengaged position. 2. Engage parking brake. 3. See "Trouble Shooting Interlock System" below. 4. Fill fuel tank with fresh, clean gasoline. 5. Drain gas tank and refill with fresh, clean gasoline. 6. Recharge battery, see "Battery Care" under Maintenance. 7. Turn ignition switch to "On" position. 8. Clean or replace spark plug. 9. Connect wire to spark plug. 10. Drain tank and refill fuel tank with fresh, clean gasoline.
<p>(TROUBLE SHOOTING INTERLOCK SYSTEM)</p> <p>This mower is equipped with an interlock system to prevent the engine from being started unless the transmission is in neutral, and the parking brake engaged and the blade clutch is disengaged.</p> <p>If the mower will not start when the parking brake is engaged and the blade is disengaged, the trouble may be with either the interlock switch located on the foot pedal, interlock switch located on blade clutch, or the relay module. To check for a faulty component follow the procedure outlined below.</p> <ol style="list-style-type: none"> 1. Check the engine spark by removing spark plug and placing the end of the spark plug against the metal ground (engine mounting bolt). Turn over engine. If you are obtaining a spark, refer to engine "trouble shooting" procedure. If you are not obtaining a spark, continue with Steps 2 and 3. 2. Place an electrical wire between the two 1/4 inch terminals on the relay module. Turn over engine. If engine starts, the problem is in one or both interlock switches. A faulty interlock switch can be established with a D.C. test light. The test light should light when placed across the switch terminals, if the foot pedal is depress and blade clutch is disengaged. 3. If engine still does not start following Step 2, remove double terminal from 3/16 terminal on the relay module, if engine starts, the problem is the relay module and should be replaced. 		
Loss of power	<ol style="list-style-type: none"> 1. "Stale Gasoline". 2. Cutting too close to the ground. 3. Dirty air cleaner. 4. Build up of dried grass under cutting head. 	<ol style="list-style-type: none"> 1. Drain tank and refill fuel tank with fresh, clean gasoline. 2. Set in "high cut" position for heavy, tall and/or wet grass. 3. Clean or replace air cleaner. 4. Disconnect spark plug wire and clean underneath cutting head.
Poor cut	<ol style="list-style-type: none"> 1. Dull or bent blade(s). 2. Slow blade RPM. 	<ol style="list-style-type: none"> 1. Replace blade(s). 2. Run engine at "Full Run" position on control lever.
Excessive vibrations	<ol style="list-style-type: none"> 1. Loose blade(s). 2. Bent blade(s). 3. Bent Jackshaft assembly. 	<ol style="list-style-type: none"> 1. Tighten blade(s) bolt (27-35 ft. lbs. torque). 2. Replace blade(s). 3. Replace jackshaft assembly.
Excessive belt wear	<ol style="list-style-type: none"> 1. Using foot pedal for a "Foot rest". 	<ol style="list-style-type: none"> 1. Rest your feet on floor boards.

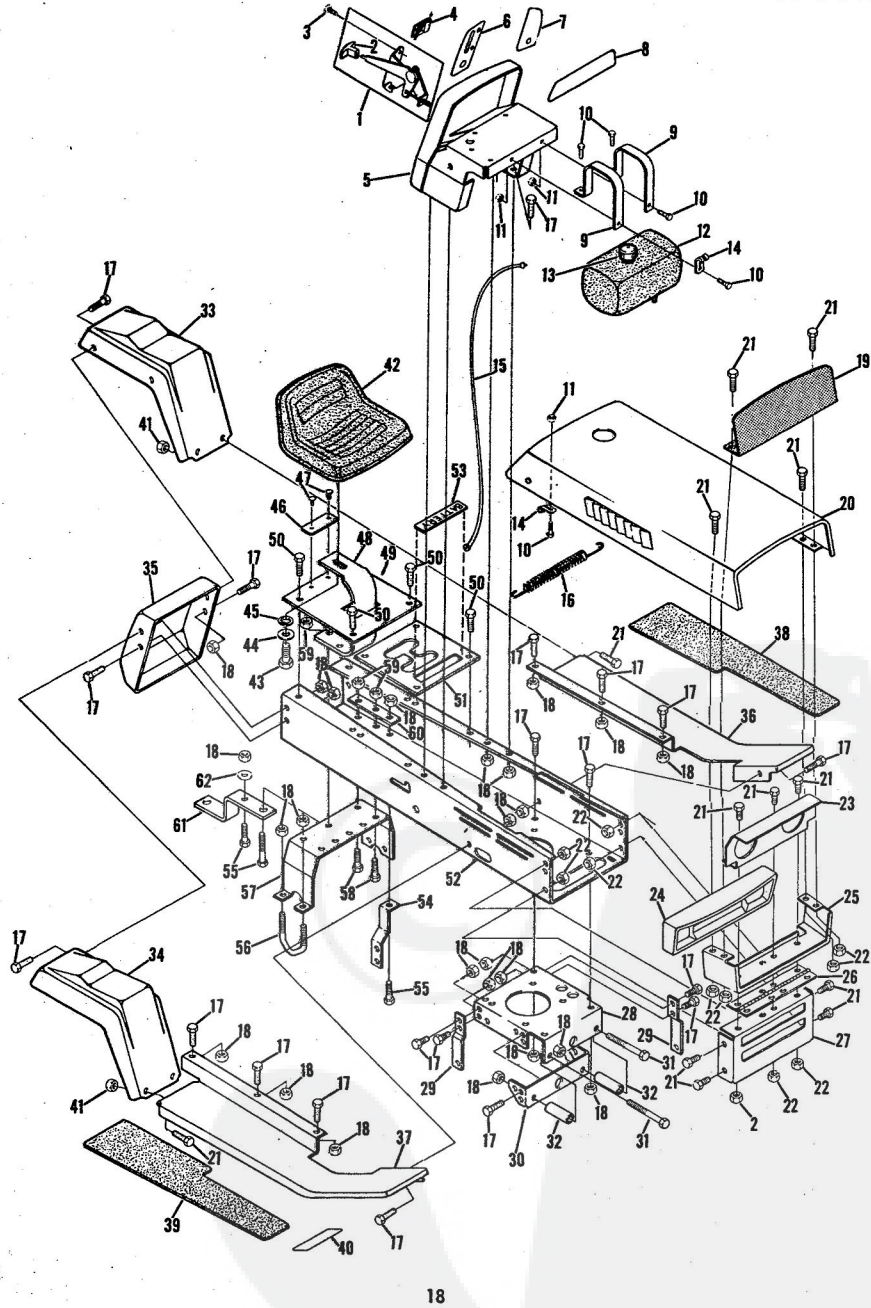
LUBRICATION CHART



- ① SAE 30 MOTOR OIL - EVERY 5 TO 10 HOURS
- ② CHASSIS GREASE - EVERY 10 HOURS
- ③ SAE 90 GEAR LUBRICANT - EVERY 25 HOURS

8H.P. ROPER RALLY LAWN TRACTOR MODEL NUMBER L86356R

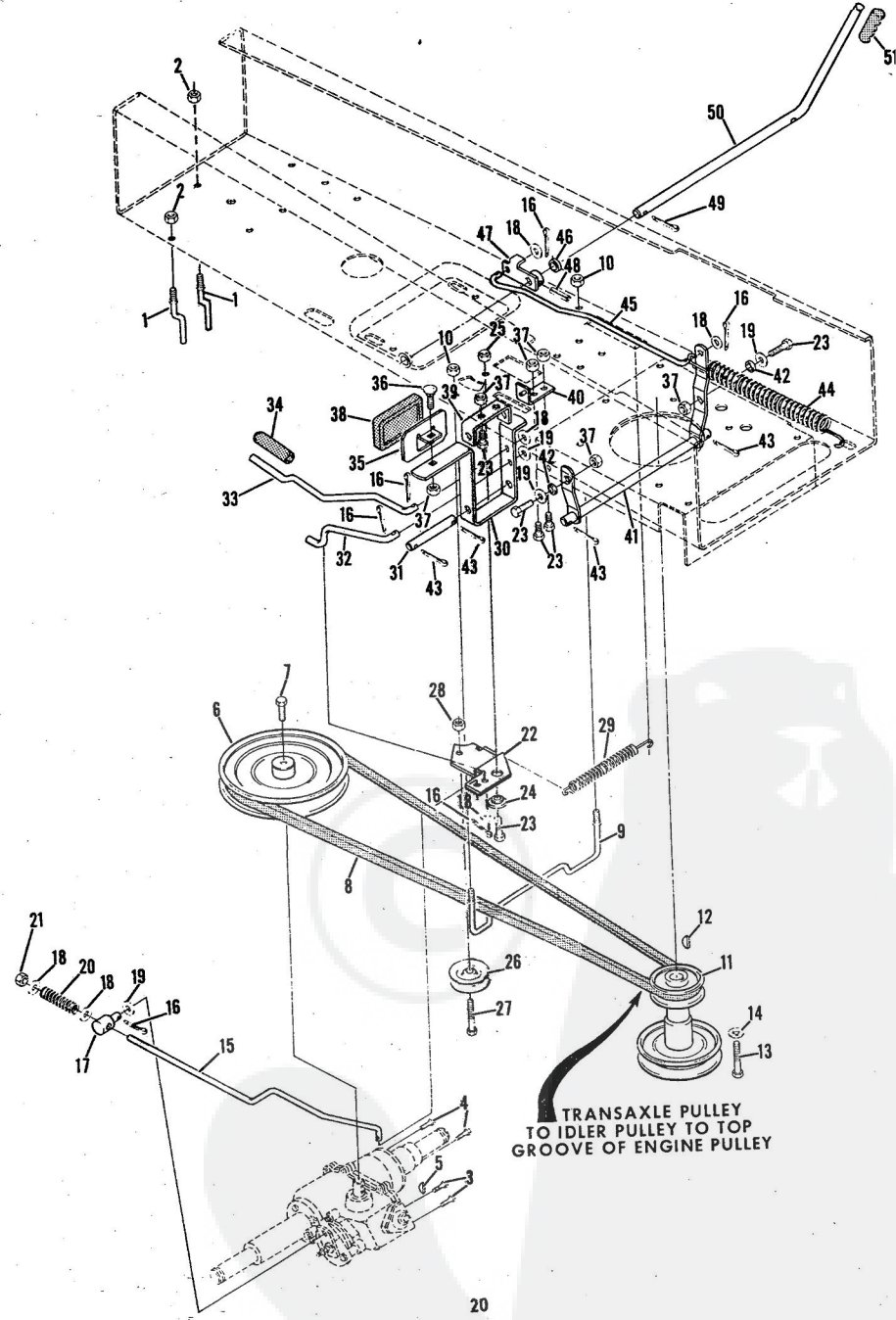
REPAIR PART



8H.P. ROPER RALLY LAWN TRACTOR MODEL NUMBER L86356R

Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	371676	Remote Control Assembly (Incl. Ref. #2)	33	371214	Fender - L.H.
2	361159	Knob - Remote Control	34	371215	Fender - R.H.
3	341945	Screw, Machine Phil. #10-24 x 1/2	35	372109	Rear Cover Assembly
4	360891	Speed Nut #10-24	36	371212	Foot Rest - L.H.
5	371249	Dash Assembly	37	371213	Foot Rest - R.H.
6	371695	Decal, Dash - R.H.	38	373302	Foot Rest Pad - L.H.
7	372098	Decal, Dash - L.H.	39	373303	Foot Rest Pad - R.H.
8	371697	Decal, Dash - Instructions	40	368306	Decal - Clutch and Brake
9	371255	Tank Clamp	41	365221	Nut, Keps 5/16-18
10	357968	Bolt, Hex Head 1/4-20 x 3/4	42	370360	Seat Assembly
11	363601	Nut, Lock 1/4-20	43	359095	Bolt, Hex Head 1/2-13 x 1
12	371254	Fuel Tank	44	353084	Washer, Flat Steel .531-1.187 x .127
13	371256	Fuel Cap	45	318810	Washer, Lock 1/2
14	372012	Clevis Lanyard	46	372629	Number Plate
15	372011	Hood Cable	47	354562	Screw, Self-Tapping #10-24 x 3/8
16	372004	Spring	48	371196	Seat Spring
17	351630	Bolt, Hex Head 5/16-18 x 3/4	49	371261	Cover Plate
18	368478	Nut, Lock 5/16-18	50	371263	Screw, Hex Head Thread Cutting 5/16-18 x 1/2
19	371913	Hood Insert	51	373351	Chassis Cover
20	371941	Hood Assembly	52	372343	Chassis
21	354262	Screw, Hex Head 5/16-18 x 5/8	53	371266	Battery Cap
22	354922	Nut, Keps 5/16-18	54	371198	Axle Strap
23	371915	Headlight Support	55	353068	Bolt, Hex Head 5/16-18 x 1
24	371914	Headlight Panel	56	371606	Clamp
25	371911	Panel Frame	57	371197	Transaxle Support
26	373191	Hinge	58	364605	Bolt, Hex Head 3/8-16 x 1
27	372630	Grill Frame - Lower	59	365543	Nut, Lock 3/8-16
28	371177	Engine Base	60	371507	Support
29	371190	Brake Rod Bracket	61	371205	Tow Hitch
30	371178	Rocker Bar Support	62	362735	Washer, Flat Steel .375-1.250 x .201
31	353984	Bolt, Hex Head 5/16-18 x 2 3/4			
32	371431	Spacer			

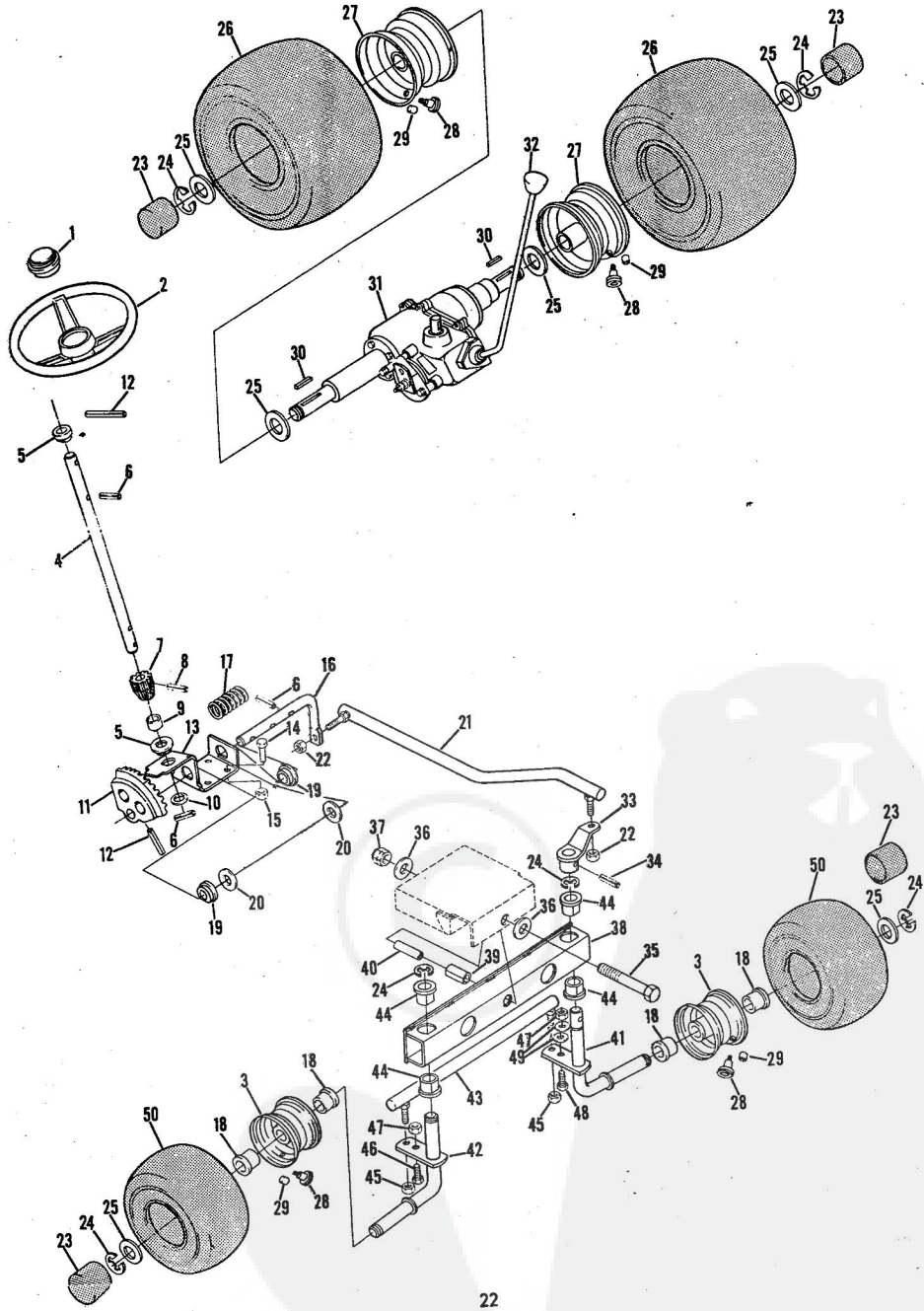
8H.P. ROPER RALLY LAWN TRACTOR MODEL NUMBER L86356R



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Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	371200	Belt Guide	23	351630	Bolt, Hex Head 5/16-18 x 3/4
2	354922	Nut, Keps 5/16-18	24	371202	Bushing
3	368205	Screw, Hex Head w/Washer 5/16-18 x 7/8	25	363124	Nut, Hex 5/16-24
4	368206	Screw, Hex Head w/Washer 5/16-18 x 1 1/8	26	367400	Idler Pulley
5	352859	Key, Woodruff #61	27	365542	Bolt, Hex Head 3/8-16 x 1 1/2
6	371234	Pulley - Transaxle	28	365543	Nut, Lock 3/8-16
7	357917	Screw, Hex Head 1/4-20 x 3/4	29	373275	Idler Spring
8	371240	Belt	30	371221	Foot Pedal
9	371241	Mid Belt Guide	31	371223	Pedal Shaft
10	355615	Nut, Keps 3/8-16	32	371224	Clutch Rod
11	371923	Pulley, Engine	33	371225	Park Brake Rod
12	365053	Key, Woodruff #6	34	371226	Grip
13	368874	Screw, Machine w/Washer Nylak 3/8-24 x 1 3/8	35	371222	Pedal Plate
14	362735	Washer, Flat Steel .375-1.250 x .201	36	359476	Bolt, Carriage 5/16-18 x 3/4
15	371237	Brake Rod	37	368478	Nut, Lock 5/16-18
16	32947	Cotter Pin 3/4	38	367365	Foot Pad
17	371238	Trunnion	39	371199	Pedal Bracket
18	353998	Washer, Flat Steel .406-.750 x .063	40	371204	Switch Bracket
19	350806	Washer, Flat Steel .328-.750 x .063	41	371191	Clutch Arm Assembly
20	371239	Brake Spring	42	371195	Spacer
21	362336	Nut, Lock 3/8-16	43	32655	Cotter Pin 1"
22	371201	Idler Bracket	44	371248	Spring
			45	373231	Blade Clutch Rod
			46	353632	Washer, Flat Steel .531-1 x .063
			47	373229	Clutch Arm Assembly
			48	352379	Spring Pin 3/16 x 1
			49	32654	Cotter Pin 3/4
			50	371242	Clutch Handle
			51	371246	Grip

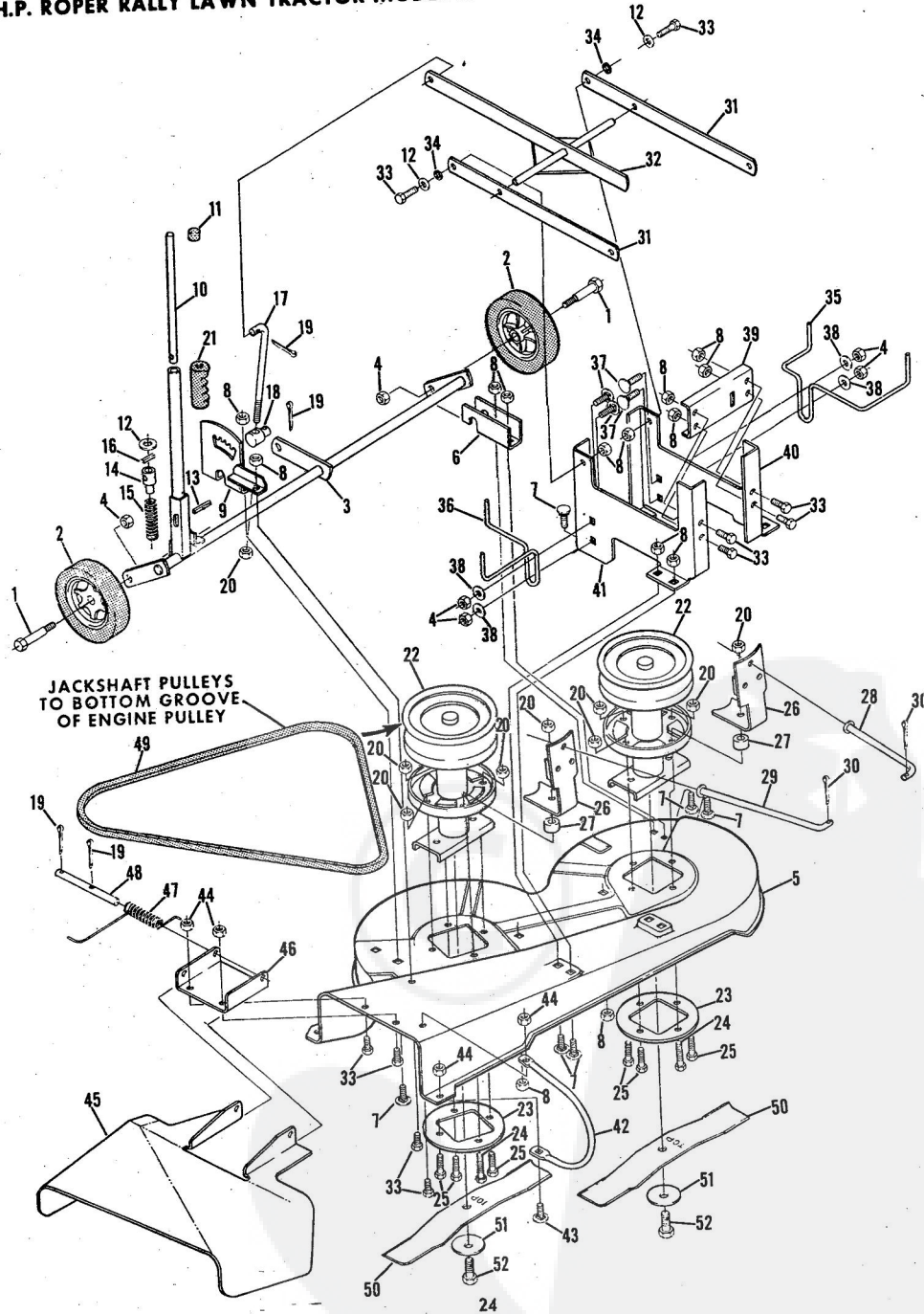
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8H.P. ROPER RALLY LAWN TRACTOR MODEL NUMBER 186356R

Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	371939	Insert Cap	27	371652	Rim (R.R.-L.R.)
2	371935	Steering Wheel	28	365139	Valve Stem (R.R.-L.R. - R.F.-L.F.)
3	371650	Rim (R.F.-L.F.) (Incl. Ref. #52)	29	359192	Valve Cap (R.R.-L.R. - R.F.-L.F.)
4	371209	Steering Shaft	30	366414	Square Key 3/16 x 2
5	371210	Bushing	31	794126	Transaxle Assembly (See Page 28 and 29)
6	352379	Spring Pin Slotted 3/16 -1			Tecumseh Products Company (Model 143.649)
7	371171	Pinion Gear			Knob
8	354960	Spring Pin Slotted 1/4 x 1 1/2	32	371267	Steering Arm Assembly
9	371211	Shaft Spacer	33	371185	Spring Pin 1/4 x 1 1/4
10	352912	Washer, Flat Steel .765-1.125 x .127	34	362079	Bolt, Hex Head 1/2-13 x 3
11	371172	Gear	35	364606	Washer, Flat Steel .515-.875 x .063
12	367362	Drive Lok Pin .250 x 1.50	36	359164	Nut, Lock 1/2-13
13	371206	Steering Bracket	37	360249	Rocker Bar Assembly
14	351630	Bolt, Hex Head 5/16-18 x 3/4	38	371179	Rocker Bar Pivot
15	368478	Nut, Lock 5/16-18	39	367151	Pivot Spacer
16	373306	Steering Rod	40	371188	Kingpin Assembly - L.H.
17	372589	Spring	41	373236	Kingpin Assembly R.H.
18	366506	Bearing (R.F.-L.F.)	42	373237	Tie Rod
19	371208	Bushing	43	373240	Bearing - Kingpin (R.F.-L.F.)
20	353462	Washer, Flat Steel .656-1.250 x .093	44	371182	Nut, Lock 5/16-24 (R.F.-L.F.)
21	371219	Drag Link	45	367892	Bolt, Hex Head 3/8-16 x 3/4 (R.F.)
22	361342	Nut, Hex 3/8-24	46	355912	Nut, Lock 3/8-16 (R.F.-L.F.)
23	371259	Hub Cap (R.F.-L.F. - R.R. L.R.)	47	365543	Bolt, Hex Head 3/8-16 x 1 (L.F.)
24	352913	E-Ring 3/4 Shaft (R.R.-L.R. - R.F.-L.F.)	48	364605	Washer, Flat Steel .405-.860 x .172 (L.F.)
25	352966	Washer, Flat Steel .765-1.250 x .060 (R.F.-L.F. - R.R.-L.R.)	49	355611	Tire (15 x 6.00 x 6) (R.F.-L.F.)
26	371653	Tire (18 x 9.50 x 8) (R.R.-L.R.)	50	371651	

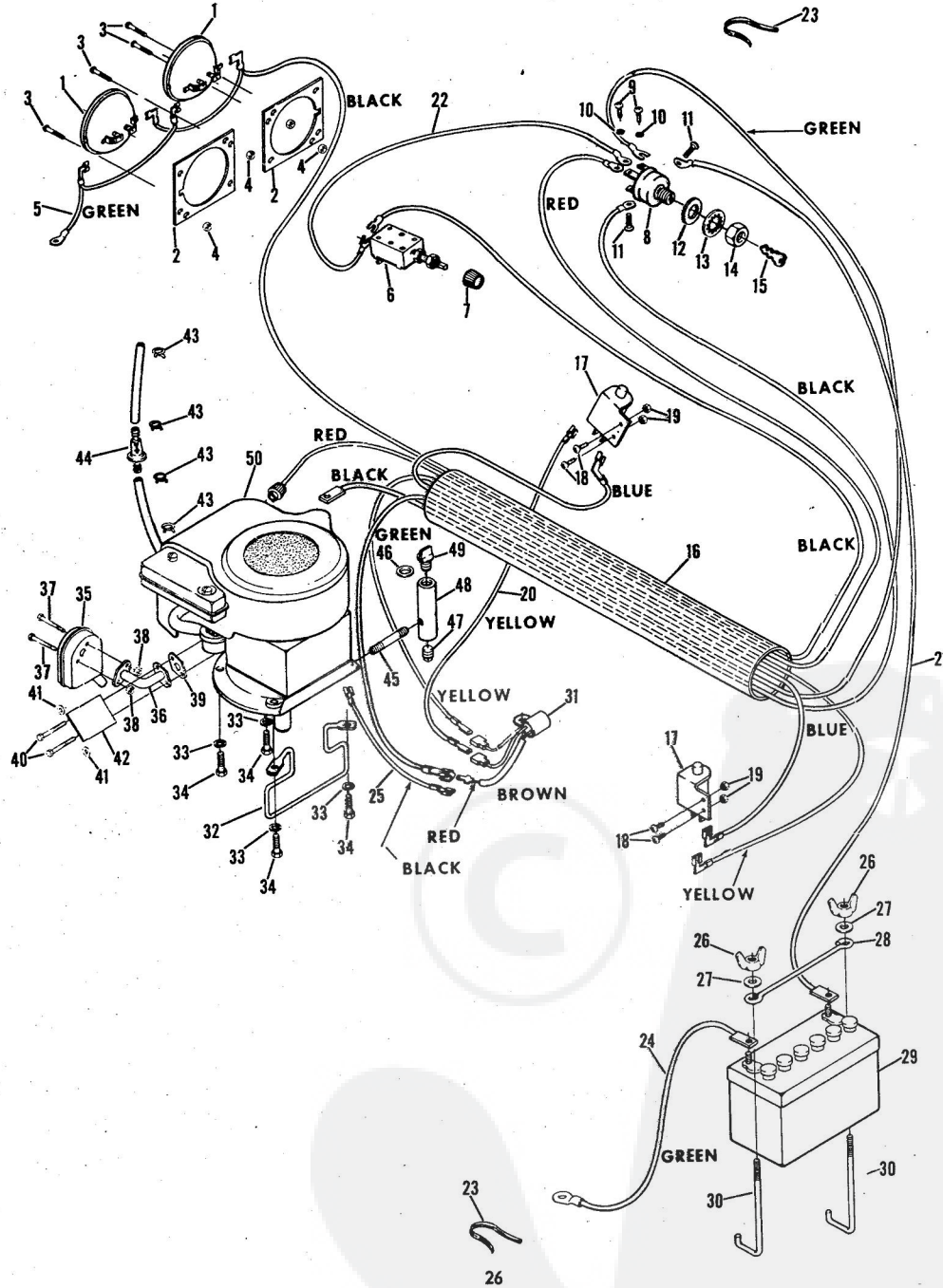
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Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	360838	Axle Bolt (Special)	28	371525	Brake Rod - L.H.
2	363655	Gauge Wheel	29	371524	Brake Rod - R.H.
3	371671	Pivot Rod Assembly	30	32655	Cotter Pin 1/8 x 1
4	365543	Nut, Nyllok 3/8-16	31	371297	Parallel Link
5	371730	Housing w/Silk Screening	32	372915	Parallel Rod Assembly
6	367337	Pivot Rod Support	33	351630	Bolt, Hex Head 5/16-18 x 3/4
7	366238	Bolt, Carriage 5/16-18 x 5/8	34	371616	Spacer
8	368478	Nut, Lock 5/16-18	35	371298	Belt Keeper - L.H.
9	372937	Quadrant	36	371299	Belt Keeper - R.H.
10	371661	Rod	37	361306	Bolt, Carriage 3/8-16 x 3/4
11	371673	Plunger Cap	38	354005	Washer, Flat Steel .405-.860 x .095
12	350806	Washer, Flat Steel .328-.750 x .063	39	371278	Channel
13	354960	Spring Pin - Slotted 1/4 x 1 1/2	40	371276	Housing Bracket - L.H.
14	371658	Plunger	41	371277	Housing Bracket - R.H.
15	371669	Spring	42	371647	Skid
16	352870	Spring Pin 1/8 x 5/8	43	359476	Bolt, Carriage 5/16-18 x 3/4
17	371300	Adjustment Rod	44	363124	Nut, Lock 5/16-18
18	371301	Trunnion	45	371529	Discharge Guard
19	32947	Cotter Pin 3/4	46	371528	Bracket - Discharge Guard
20	362336	Nut, Lock 3/8-16	47	371526	Spring - Discharge Guard
21	371672	Grip	48	371555	Hinge Rod
22	371275	Jackshaft Assembly	49	362828	Belt
23	371575	Plate	50	371285	Blade
24	365542	Screw, Hex Head 1/4-20 x 1 1/2	51	367354	Washer, Flat Steel .390-2.38 x .156
25	364605	Bolt, Hex Head 3/8-16 x 1	52	367676	Screw, Machine w/Lock Washer Nylon 3/8-24 x 7/8
26	371523	Brake Spring Assembly			
27	371522	Spacer			

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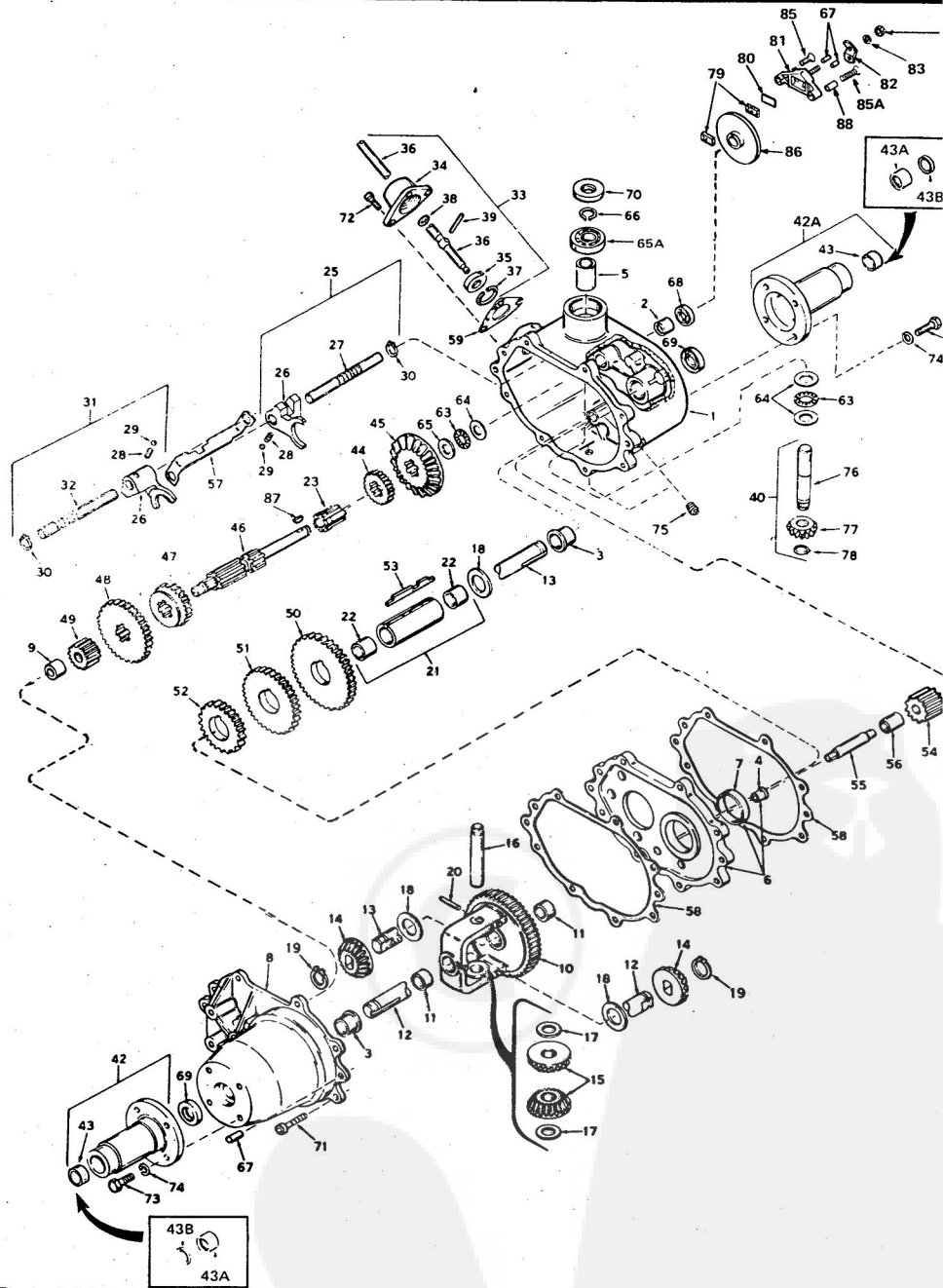


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Ref. No.	Part No.	Part Name	Ref. No.	Part No.	Part Name
1	360941	Bulb - Headlight Sealed Beam #4406	28	367187	Battery Rod
2	373025	Headlamp Support	29	370372	Battery Pack
3	365421	Screw, Machine #10-24 x 1	30	370456	Battery Bolt
4	354509	Nut, Lock #10-24	31	371984	Relay Module
5	371706	Wire Assembly	32	371231	Belt Keeper
6	365061	Light Switch (Incl. Ref. #7)	33	350902	Washer, Lock 3/8
7	368058	Knob, Switch	34	371232	Screw, Hex Head Thread Form 3/8-16 x 1 1/4
8	371670	Ignition Switch (Incl. Ref. #9, 10, 11, 13, 14, 15)	35	370458	Muffler Assembly
9	360949	Screw, Machine #8-32 x 1/4	36	372110	Muffler Extension Assembly
10	367757	Washer, Lock Internal Tooth #10	37	353984	Bolt, Hex Head 5/16-18 x 2 3/4
11	367756	Screw #10-32 x .31	38	354922	Nut, Keps 5/16-18
12	353848	Washer, Flat Steel .640-1 x .063	39	372144	Exhaust Gasket
13	367758	Washer, Lock Internal Tooth 5/8	40	370541	Screw, Machine Hex Head 1/4-20 x 5/8
14	367759	Nut, Hex 5/8 x 32	41	35081	Lock Washer 3/8
15	367760	Key Set (Pair)	42	372112	Heat Shield
16	371927	Wire Harness	43	373381	Hose Clamp
17	371220	Switch - Interlock	44	371979	Fuel Filter
18	361307	Screw, Hex Head Tapping #10-24 x 1/2	45	371382	Pipe Nipple 3/8 x 3
19	354509	Nut, Keps #10-24	46	371679	Washer, Oil Fill
20	371521	Wire Assembly	47		Plug Drain (See Engine Parts List)
21	371719	Wire Assembly	48	371381	Oil Fitting
22	364903	Wire Assembly	49		Plug, Oil Filter (See Engine Parts List)
23	343174	Wire Tie	50		Engine - Model 191707
24	371717	Wire Assembly		372631	Briggs and Stratton (8.0 H.P.)
25	368401	Wire Assembly			Parts List - Owner's Manual
26	352231	Wing Nut 1/4-20			
27	353847	Washer, Flat Steel .265-.750 x .063			

TRANSAXLE NO. 794126

MODEL NUMBER: 143.64



Revised 8-24-73

TRANSAXLE NO. 794126

Ref. No.	Part No.	Part Name
1	794126 770063	Complete Transaxle Case Assy., Transaxle (Incl. Nos. 2, 3 & 5)
2	780086	Bearing, Needle
3	780059	Bearing, Bronze
4	780060	Bearing, Bronze
5	780061	Bearing, Bronze
6	786033	Plate Assy., Center (Incl. Nos. 4 & 7)
7	780062	Bearing, Bronze
8	772042	Cover Assy., Transaxle (Incl. Nos. 3 & 9)
9	780063	Bearing, Needle
10	778053	Gear Assy., Differential (Incl. No. 11)
11	780064	Bearing, Bronze
12	774221	Axle, Left hand
13	774220	Axle, Right hand
14	778067	Gear, Bevel
15	778068	Pinion, Bevel
16	786034	Pin, Drive
17	780065	Washer, Thrust
18	780001	Washer, Thrust
19	788038	Ring, Snap
20	792040	Pin, Roll
21	786035	Sleeve Assy., Countershaft (Incl. No. 22)
22	780066	Bearing, Bronze
23	776090	Shaft, Idler
25	784079	Rod Assy., Shift (1st & Rev.) (Incl. Nos. 26 thru 30)
26	784004	Fork, Shift
27	784083	Rod, Shift
28	792003	Spring
29	792004	Ball, Steel
30	792017	Ring, Snap
31	784084	Rod Assy., Shift (2nd & 3rd) (Incl. Nos. 26, 28, 29, 30 & 32)
32	784085	Rod, Shift
33	784264	Lever & Housing Assy., Shift (Incl. Nos. 34 thru 39)
34	784088	Housing, Shift lever
35	784094	Keeper, Shift lever
36	784265	Lever, Shift
37	792016	Ring, Snap
38	792001	Ring, Quad
39	792049	Pin, Drive
40	776102	Shaft & Gear Assy., Input (Incl. Nos. 76, 77 & 78)
42	782036A	Housing Assy., Axle (Incl. No. 43)
42A	782043	Housing Assy., Axle (Incl. No. 43)
43	780091	Bearing & Seal Assy., Needle (See Note 1)
43A	530105	Bearing, Needle
43B	788042	Seal, Oil

MODEL NUMBER: 143.649

Ref. No.	Part No.	Part Name
44	778024	Gear (16 teeth)
45	778057	Gear, Bevel (33 teeth)
46	776138	Shaft, Shifter & Brake
47	778058	Gear, Shifting (2nd & 3rd)
48	778059	Gear, Shifting (1st & Rev.)
49	778060	Gear, Spur (12 teeth)
50	778061	Gear, Countershaft drive (39 teeth)
51	778062	Gear, Countershaft (34 teeth)
52	778063	Gear, Countershaft (25 teeth)
53	792034A	Key, Countershaft
54	778064	Gear, Reverse Idler
55	776057	Shaft, Reverse Idler
56	786036	Spacer, Reverse Idler
57	784087	Stop, Shifter
58	788033	Gasket, Case & Cover
59	788003	Gasket, Shift lever housing
63	780071	Bearing, Thrust
64	780072	Washer, Thrust
65	780073	Washer, Thrust
65A	780093	Bearing, Ball
66	792035	Ring, Snap
67	786026	Pin, Dowel
68	788043	Seal, Oil
69	788009	Seal, Oil
70	788035	Seal, Oil
71	792036	Screw, Flanged hex hd., 1/4-20 x 1-1/4
72	792007	Screw, Socket hd. cap, 1/4-20 x 3/4
73	792037	Screw, Hex hd., 5/16-18 x 1
74	2029	Lockwasher, 5/16"
75	792039	Plug, Pipe, 1/8"
76	776103	Shaft, Input
77	778077	Pinion, Input
78	788040	Ring, Retaining
79	790006	Pad, Brake
80	790007	Plate, Brake pad
81	790005	Holder, Brake pad
82	790004	Lever, Brake
83	792076	Washer, Flat
84	792075	Nut, Lock
85	792073	Screw, Hex hd. cap, 1/4-20 x 1-1/4 thr'd forming
85A	792085	Screw, Hex hd. cap, 1/4-20 x 2-1/4 thr'd forming
86	790009	Disk, Brake
87	792045	Key, Woodruff No. 61
88	786066	Spacer

NOTE 1: The No. 780091 bearing and seal assy. can be used interchangeably with the separate No. 530105 bearing and the separate No. 788042 seal.

WIRING DIAGRAM

8H.P. ROPER RALLY LAWN TRACTOR MODEL NUMBER L86356R

