

# *Wheel Horse*<sup>®</sup>

LAWN

## *Ranger*

models

**L-105, L-155**

**Riding Rotary Mower**



## **OPERATION AND SERVICE MANUAL WITH PARTS LIST**

**WHEEL-HORSE PRODUCTS, INC.**

**SOUTH BEND, IND.**



## BATTERY

The battery installed in the L-155 tractor is a dry charged battery. It is important that you properly prepare this battery to insure good service and long life.

1. Remove vent caps. Remove or destroy any sealing device which may have been used to close or restrict the vent openings.
2. Fill each cell of the battery to the proper level with the battery electrolyte.

**NOTE: Temperature of battery and electrolyte at time of filling should be above 60°F.** Never fill battery in the vehicle.

3. **BOOST CHARGE:** 15 amps. for 10 minutes or 7 amps. for 30 minutes. Adjust electrolyte level, if necessary, after charge.
4. **Install battery with battery posts toward the rear of mower.** After battery has been in service, add only approved water.  
**DO NOT ADD ACID.**

## TIRES

The front tires are 4.50 x 4" pneumatic and should be filled to 15 pounds of air pressure. **The rear tires are 9.50 x 8" and should have 6 to 8 pounds of air pressure.**

## STARTING ENGINE

1. Before starting the engine fill gas tank (located in the hood) with a good grade of regular gas, and open valve on gas tank. See Figure 1.
2. Place gear shift lever in neutral position.
3. Pull throttle lever  $\frac{1}{2}$  way out and turn to the right to lock it in position. **Note:** The throttle control has a locking device. Turn the throttle control to the left to unlock, adjust to the desired position and turn to the right to lock.
4. Pull choke lever all the way out to choke engine. If engine is warm and has been running, choking may not be necessary.
5. **A.** The Model L-155 has a key starter-switch. Turn key all the way to right to start engine.  
**B.** The Model L-105 has a recoil starter with an off and on switch. To start flip switch to on and pull recoil starter. (**Note: Keep feet clear of mower while pulling recoil starter**)
6. When engine starts push choke in to off position and regulate throttle control by turning to the left to unlock and push in or out to desired speed.
7. Depress clutch pedal on left side of tractor before selecting desired gear range.
8. When starting tractor in winter it is desirable to depress clutch so engine does not have to turn transmission.

## CLUTCHING

Don't force the gear shift lever if the gears do not immediately mesh. Depress clutch pedal all the way down and let up, then depress again and shift. To avoid sudden starts, release clutch pedal slowly. While in motion do not shift gears without depressing clutch pedal.

The clutch pedal also operates the brakes **WHEN DEPRESSED ALL THE WAY DOWN.** For this reason, you should depress the clutch pedal **ONLY  $\frac{2}{3}$  OF THE WAY DOWN WHEN SHIFTING** while in motion. This clutch-brake pedal combination makes clutching automatic as you apply the brakes to stop.

## PARKING BRAKE

The parking brake is located on the left side of the Lawn Ranger as shown in Figure 1. To set the parking brake depress the clutch-brake pedal as far as possible and push the parking brake down. To release the brake depress the clutch-brake pedal.

## ATTACHING TOOLS

Complete information on the assembly, attachment, operation and service of the many attaching tools will be provided with each attachment.

All drawn implements attach in seconds. Simply lift the tractor hitch pin, insert the tongue, and replace pin.

All power implements will use the attachment clutch pedal located on the right side of the tractor.

## CARE OF TRACTOR

1. Keep Lawn Ranger greased and oiled regularly. Refer to Figure 1 for the location of grease fittings. Check transmission and engine case oil levels.

2. Keep engine air cleaner clean. This will add to engine life.

3. Keep tires properly inflated. See previous instructions.

4. Keep Lawn Ranger covered and in a dry place when not in use.

5. Keep grass and dirt out of engine cowlings as these will stop the flow of air and decrease engine life.

6. **BRAKE ADJUSTMENT.** The brake band, located on the left side of the transmission, brakes the transmission and in turn stops the wheels.

To adjust, depress clutch brake pedal and move parking brake lever forward into the engaged position. Tighten nut on brake rod until both rear wheels skid when tractor is pushed — parking brake engaged. Tighten nut another  $\frac{1}{2}$  turn. The brake and parking brake are now properly adjusted.

7. **CLUTCH-BRAKE PEDAL ADJUSTMENT.** The clutch-brake pedal rod may be turned in or out to adjust the pedal to operator's desired position. Remove pin from rod and turn rod in or out for adjustment. There are also two holes in the pedal to adjust for travel. The upper hole is for a short movement of travel, the lower hole is for a long movement.

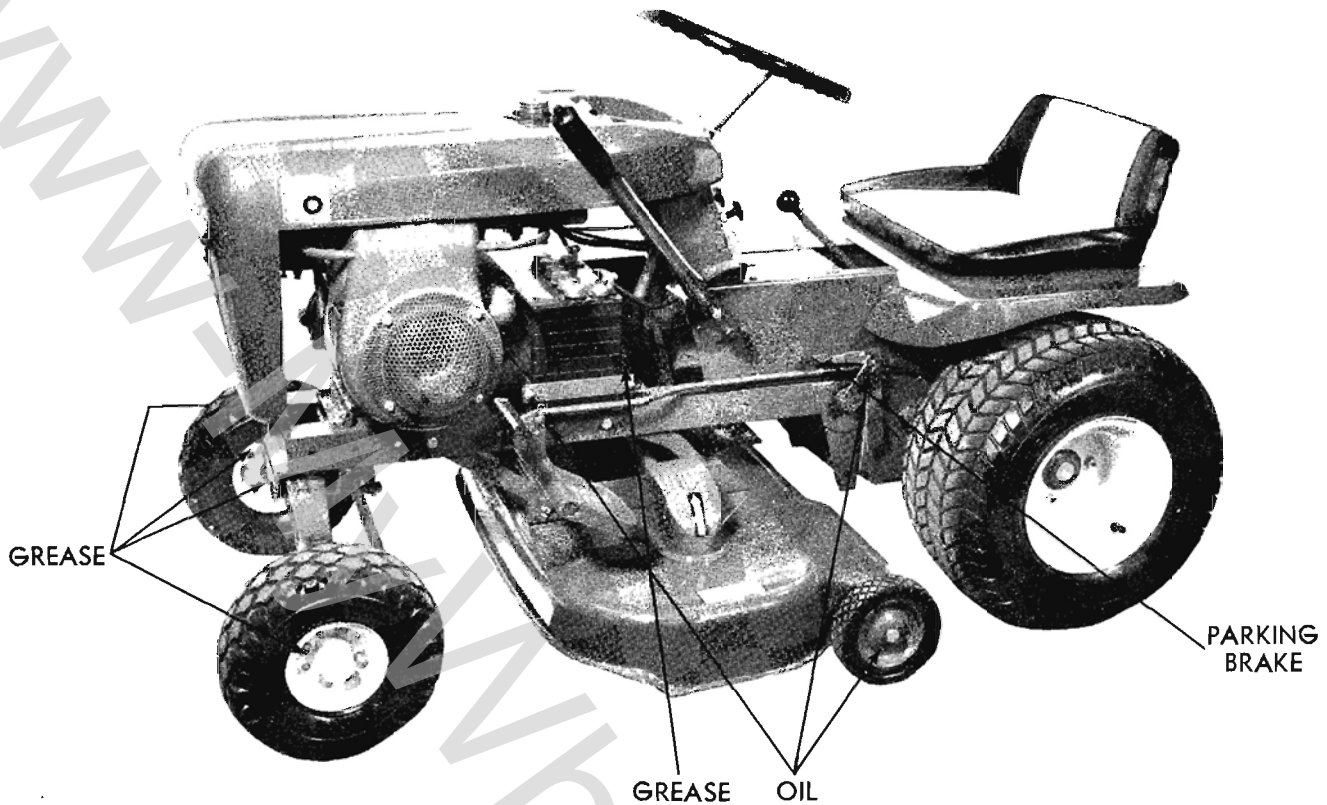
8. When replacing belts or mounting drive implements make sure all pulleys are in line.

9. **BATTERY.** Check liquid after every 40 hours of use. If tractor has been in storage it may be necessary to recharge.

10. Your Lawn Ranger is only as good as the service you give it. See your Wheel Horse Dealer for a thorough check-up after each season of use.

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

**(NOTE: Make sure all pulleys are in line.)**



### OPERATION

With proper care and adjustment, your new Wheel Horse Lawn Ranger has been designed to give many years of satisfactory performance.

Preparation for operation and operating hints listed below are recommended for all mowers and approved by the Outdoor Power Institute for safe operation of your mower.

1. Before mowing, clear the entire lawn area of all debris that could catch on or be thrown by the blades.
2. When you mow on rough terrain or in high grass or weeds, the blade should be set at the highest cutting point. In tall grass or weeds, a second cutting may be made to bring the grass down to the desired height.
3. Mowers do not operate as well in wet grass. Wet grass has a tendency to build up on mower housing and give non-uniform discharge.
4. Fill gas tank outdoors. Avoid spilling gasoline and **don't fill the tank** while engine is running or while you are smoking.
5. While mowing, give undivided attention to the job at hand, keep the cutting path in area of operation clear of all persons, particularly small children.
6. Never leave motor running unattended. Remove key when not in use — children could get hurt.
7. Don't overspeed the engine. Excessive cutting speed or tampering with the governor can be dangerous.
8. Exercise special care when mowing around objects to prevent the blades from striking them, and never deliberately mow over any object.
9. Stop mowing when another person approaches — prohibit others from riding with you on your riding mower.

10. Riding mowers can be tipped to either back or side. Exercise extreme caution when mowing on slopes or inclines. Engage clutch slowly and smoothly. Never abuse your mower by improper handling.

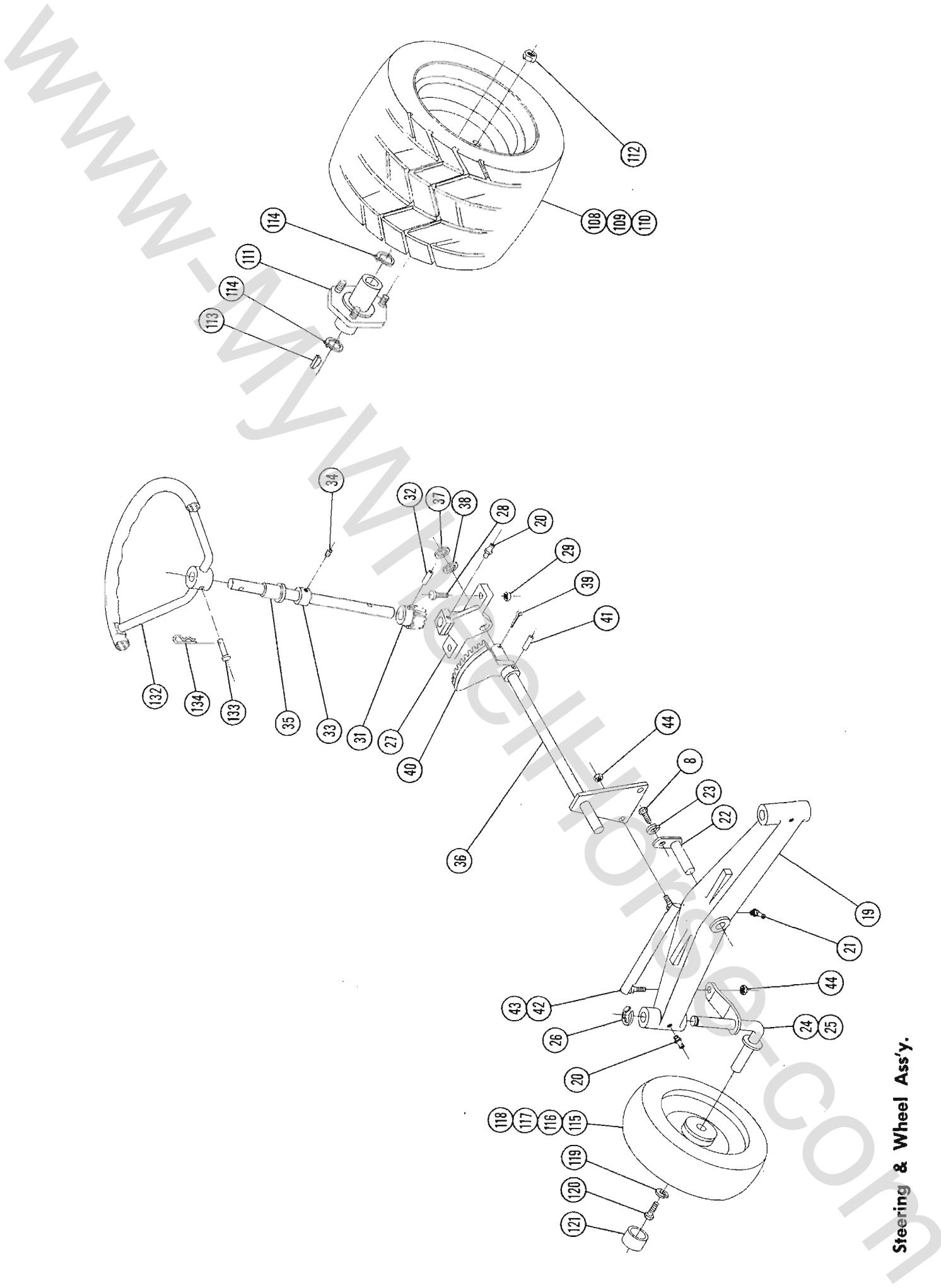
11. Never adjust mower or tractor until engine has been turned off.

12. If your Lawn Ranger is to be used for purposes other than mowing, latch mower clutch in disengaged position, stop engine and remove mower drive belt from engine pulley. The spring wire belt stop may be deflected to remove belt. Never allow children to operate unless you have removed this belt to prevent their accidentally engaging mower.

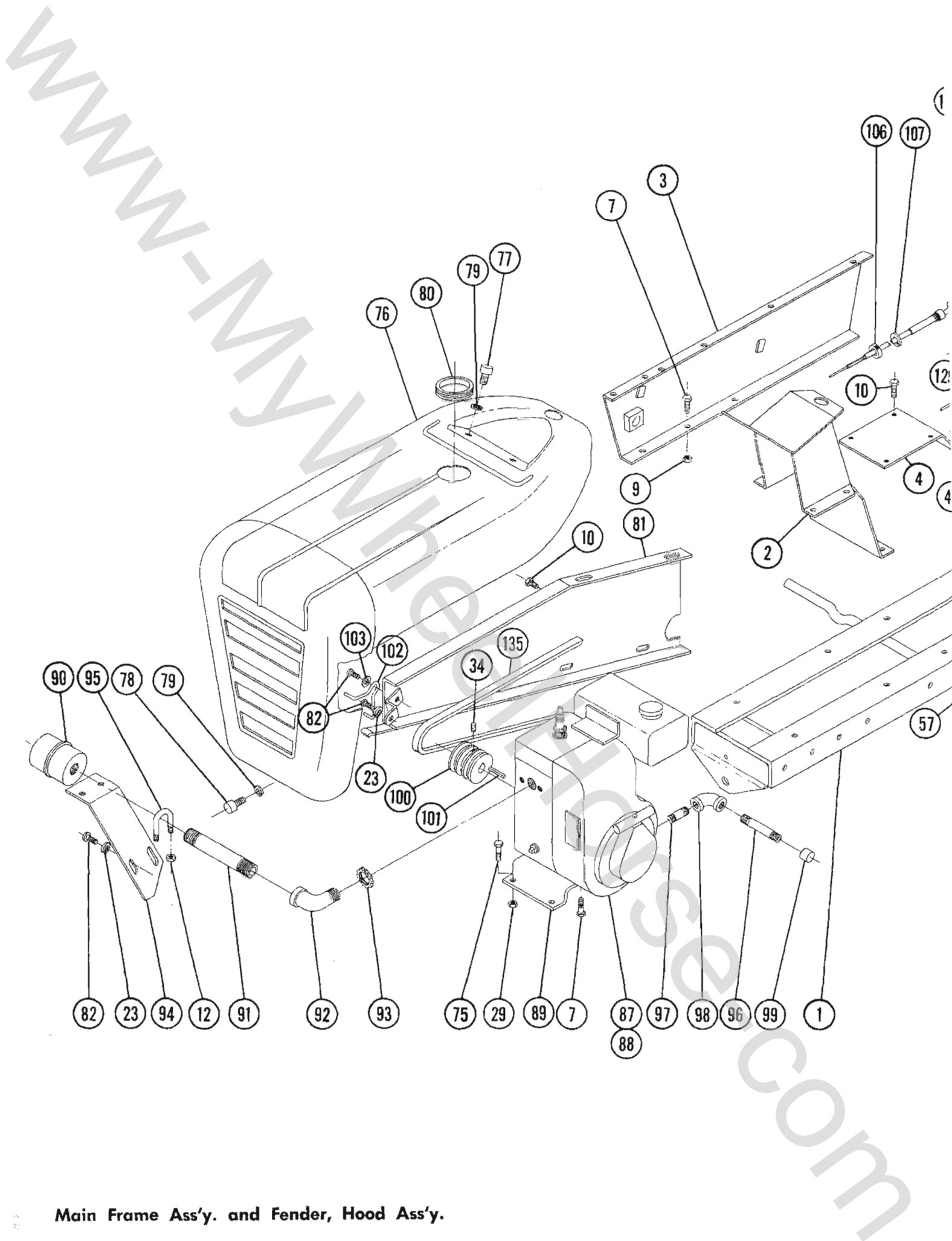
### WHEEL HORSE LAWN RANGER SPECIFICATIONS

(SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)

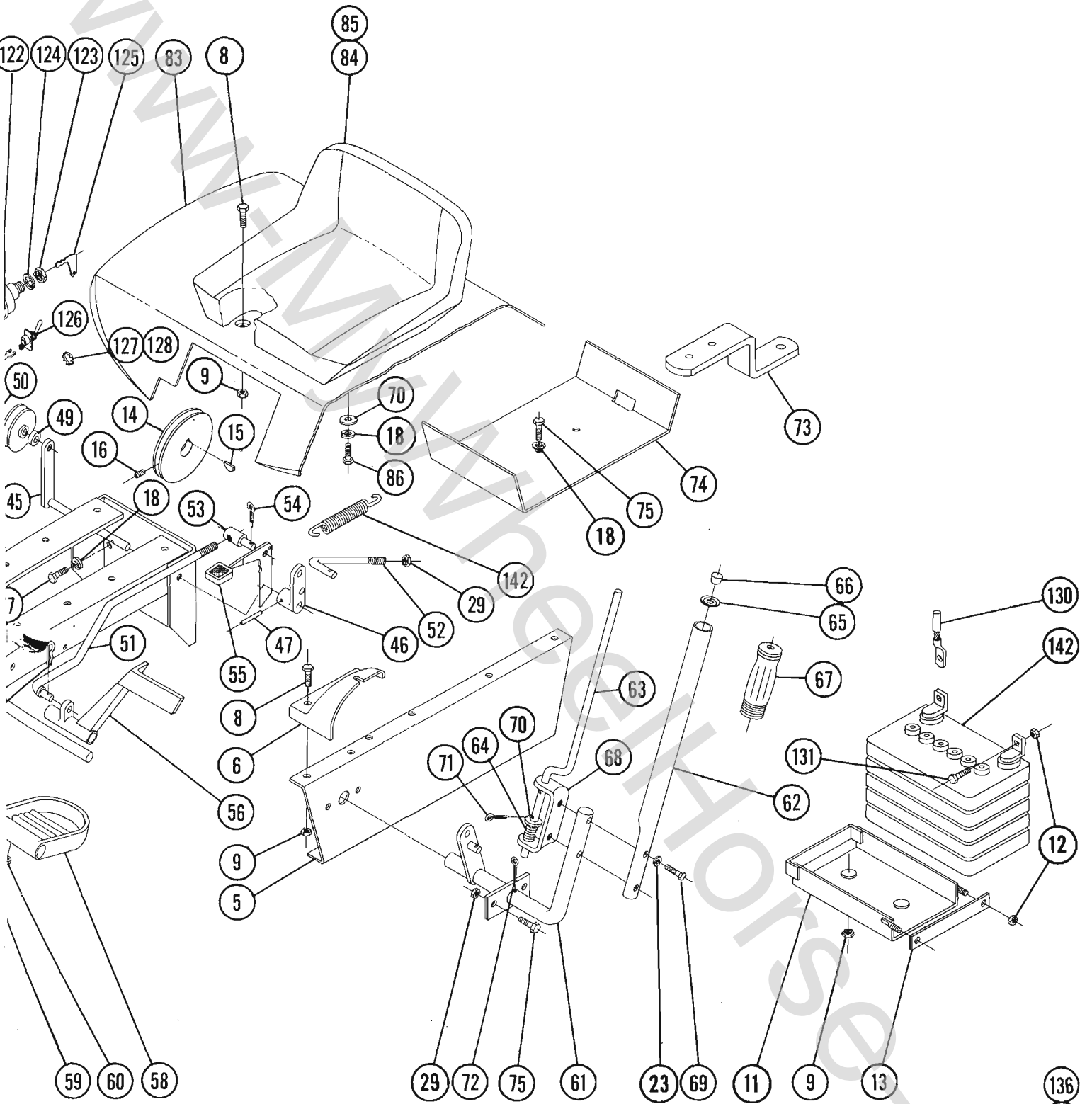
Speeds	3 forward to 5 MPH 1 reverse to 2¼ MPH
Turning Radius	(to outside of outside wheel 6')
Length Overall	55½ inches
Wheelbase	41¼ inches
Width Overall (with mower)	33½ inches
Width Overall (without mower)	31 inches
Width at Front Wheels	27¾ inches
Height	33½ inches
Height to Top of Hood	28¾ inches
Net Weight (L-155)	411 lbs.
Net Weight (L-105)	385 lbs.
Frame Clearance	10¾ inches
Engine (4 cycle, single cylinder, air cooled)	6 H.P.
Engine Crankcase Oil Capacity	21 oz.
Fuel Capacity	4 quarts
Tires (front)	4.50 x 4 Pneumatic (11" wheel dia.)
Tires (rear)	9.50 x 8 Pneumatic (17" wheel dia.)



Steering & Wheel Ass'y.



Main Frame Ass'y. and Fender, Hood Ass'y.



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## L-155 & L-105 TRACTOR PARTS LIST

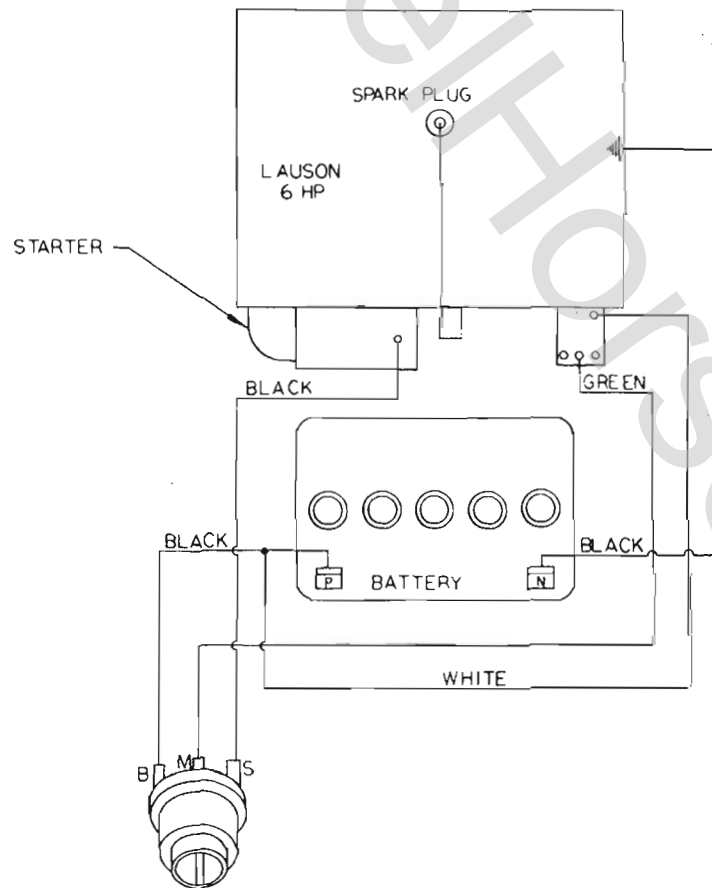
When ordering parts always list Part No. and name of part.

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	5519	Ass'y. Frame	1	73	4904	Hitch	1
2	5526	Ass'y. Hoodstand	1	74	5553	Tray Tool	1
3	5532	Ass'y. Panel R.H.	1	75	908034-4	Bolt Hex $\frac{3}{8}$ -16 x 1	8
4	5536	Ass'y. Plate — Cover	1	76	4975	Ass'y. Hood — Complete	1
5	5535	Panel L.H.	1	77	1345	Thumb Screw $\frac{1}{4}$ -20 x $\frac{3}{8}$	2
6	5538	Quadrant — Lift	1	78	1346	Thumb Screw $\frac{1}{4}$ -20 x $\frac{3}{4}$	1
7	908017-4	Bolt $\frac{3}{8}$ -18 x $\frac{3}{4}$	10	79	920081-4	Lockwasher $\frac{1}{4}$	3
8	908015-4	Bolt $\frac{3}{8}$ -18 x $\frac{1}{2}$	9	80	2767	Grommet 2 $\frac{1}{2}$ I.D.	1
9	915112-6	Nut $\frac{3}{8}$ -18 Nylok	16	81	4962	Ass'y. Belt Guard	1
10	960151-4	Screw $\frac{1}{4}$ -20 x $\frac{1}{2}$ Hex — Whizlock	14	82	1432	Screw Round Hd. $\frac{3}{8}$ -24 x $\frac{1}{2}$	4
11	4953	Ass'y. Battery Box	1	83	5555	Fender	1
12	915111-6	Nut — Nylok $\frac{1}{4}$ -20	6	84	5557	Base — Seat	1
13	4958	Clamp — Battery	1	85	5556	Cushion — Seat	1
14	1611	Pulley	1	86	908030-4	Bolt Hex $\frac{3}{8}$ -16 x $\frac{1}{2}$	2
15	937014	Key #9 Woodruff	1	87	5530	Ass'y. Engine 6 H.P. Lauson (Recoil)	1
16	909849-6	Set Screw $\frac{1}{4}$ -20 x $\frac{3}{16}$ Nylok	1	88	5531	Ass'y. Engine 6 H.P. Lauson (Electric)	1
17	908032-4	Bolt Hex $\frac{3}{8}$ -16 x $\frac{3}{4}$	4	89	4416	Base — Engine	1
18	920083-4	Lockwasher $\frac{3}{8}$ Plain	4	90	1739	Muffler	1
19	5540	Axle — Front	1	91	1754	Nipple $\frac{3}{4}$ Pipe x 5 $\frac{1}{2}$	1
20	1030	Fitting — Grease	3	92	1755	Elbow $\frac{3}{4}$ Pipe x 90 Street	1
21	1481	Fitting — Grease 45°	1	93	1756	Nut $\frac{3}{4}$ Pipe Lock	1
22	2294	Ass'y. — Pin & Plate	1	94	5646	Brace — Exhaust	1
23	920082-4	Lockwasher $\frac{3}{8}$ Plain	4	95	1240	Bolt "U" Clamp	1
24	5542	Ass'y. Spindle R.H.	1	96	943317	Nipple $\frac{1}{4}$ Pipe x 4	1
25	5543	Ass'y. Spindle L.H.	1	97	4218	Nipple $\frac{1}{4}$ Pipe x 1 $\frac{1}{4}$	1
26	5618	"E" Ring $\frac{3}{4}$ " Dia. Shaft	2	98	4216	Elbow $\frac{1}{4}$ Pipe x 90	1
27	4412	Support — Steering	1	99	4217	Cap $\frac{1}{4}$ Pipe	1
28	908035-4	Bolt Hex $\frac{3}{8}$ -16 x 1 $\frac{1}{4}$	2	100	1621	Pulley — Engine	1
29	915663-4	Nut $\frac{3}{8}$ -16 Elastic Stop	9	101	1349	Key $\frac{1}{4}$ x $\frac{1}{4}$ x 1 $\frac{1}{2}$	1
30	5529	Shaft — Upper Steering	1	102	4930	Stop Belt	1
31	3917	Gear Steering Pinion	1	103	920008-4	Washer $\frac{3}{4}$	1
32	933215	Roll Pin $\frac{1}{4}$ x 1 $\frac{1}{4}$	1	104	5560	Ass'y. Control — Choke	1
33	1085	Collar	1	105	5561	Ass'y. Control — Throttle	1
34	909848-6	Set Screw $\frac{1}{4}$ -20 x $\frac{1}{4}$ Nylok	2	106	1364	Nut $\frac{3}{8}$ -18 Round	2
35	5409	Bushing Nylon	1	107	920127-4	Lockwasher $\frac{3}{8}$ Ext. Tooth	2
36	5639	Ass'y. Shaft Lower Steering	1	108	5566	Ass'y. Wheel & Tire — Rear	2
37	5210	Washer — Shim (.015)	1	109	5567	Wheel — Rear	2
38	1278	Washer — Shim (.050)	1	110	5568	Tire 9.50 x 8	2
39	932035-4	Cotter Pin $\frac{3}{16}$ x 1 $\frac{1}{4}$	1	111	5569	Hub	2
40	5627	Sector — Steering	1	112	5559	Nut Wheel Hub $\frac{3}{8}$ -24 Special	6
41	933229	Roll Pin $\frac{3}{16}$ x 1 $\frac{1}{4}$	1	113	937022	Key 15 Woodruff	2
42	1772	Ass'y. Ball Joint R.H.	1	114	936131	Snap Ring 1" Ext.	4
43	1773	Ass'y. Ball Joint L.H.	1	115	5610	Ass'y. Wheel, Tire, & Tube Front	2
44	915002-6	Nut $\frac{3}{8}$ -24 Nylok	4	116	3081	Wheel	2
45	3950	Ass'y. Arm & Shaft Idler	1	117	5611	Tire 10.5 x 4.50-4	2
46	4899	Arm Clutch Rod Pivot	1	118	5612	Tube	2
47	933158	Roll Pin $\frac{1}{8}$ x 1 $\frac{1}{4}$	1	119	2844	Washer — Hub	2
48	1623	Pulley — Idler	1	120	908033-6	Bolt $\frac{3}{8}$ -16 x $\frac{1}{8}$ Nylok	2
49	1536	Bushing	1	121	2816	Hub Cap	4
50	1363	Bolt Hex $\frac{3}{8}$ -16 x $\frac{3}{8}$ — Special	1	122	4987	Ass'y. Switch — Ignition	1
51	2593	Rod — Clutch	1	123	4882	Nut Hex $\frac{5}{8}$ -32 Special	1
52	3935	Rod — Brake	1	124	4881	Lockwasher $\frac{3}{8}$ Dia. Special	1
53	1861	Stud — Clutch Rod	1	125	4989	Key — Ignition	1
54	932017-4	Cotter Pin $\frac{1}{8}$ x 1	2	126	3279	Ass'y. Switch — Ignition Cut Off	1
55	5544	Ass'y. Lock — Brake	1	127	4856	Button $\frac{1}{2}$ Dia. (L-155)	1
56	2267	Pedal — Clutch	1	128	3757	Button $\frac{3}{8}$ Dia. (L-105)	1
57	933504	Hairpin	1	129	4434	Wire Switch to Ground	1
58	4421	Footrest	2	130	4979	Wiring Harness	1
59	909554-4	Set-Screw $\frac{3}{8}$ -16 x 1 Sq. Hd.	2	131	908002-4	Bolt Hex $\frac{1}{4}$ -20 x $\frac{5}{8}$	2
60	915113-6	Nut $\frac{3}{8}$ -16 Nylok	2	132	5558	Wheel — Steering	1
61	5546	Ass'y. Shaft — Lift	1	133	5523	Pin — Clevis	1
62	5550	Lever — Lift	1	134	933503	Hairpin	1
63	5551	Plunger — Lift Lever	1	135	1576	"V" Belt	1
64	3624	Spring	1	136	937305	Wrench $\frac{1}{8}$ Allen	1
65	3578	Guide — Rod	1	137	1483	Decal — Lawn Ranger	1
66	3680	Cap	1	138	4410	Decal — Wheel Horse Emblem	2
67	1000	Grip — Handle	1	139	4984	Decal — Hood Panel	1
68	5552	Guide — Plunger	1	140	5578	Decal — Instrument Panel	1
69	908020-4	Bolt Hex $\frac{3}{8}$ -18 x 1 $\frac{1}{4}$	2	141	5604	Decal — Fender	1
70	920009-4	Washer $\frac{3}{8}$	3	142	1014	Spring — Clutch	1
71	932016-4	Cotter Pin $\frac{1}{8}$ x $\frac{3}{4}$	2	143	3653	Battery	1
72	932036-4	Cotter Pin $\frac{3}{16}$ x 1 $\frac{1}{2}$	1				

## RM-115 32" Mower (Lawn Ranger) Parts List

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

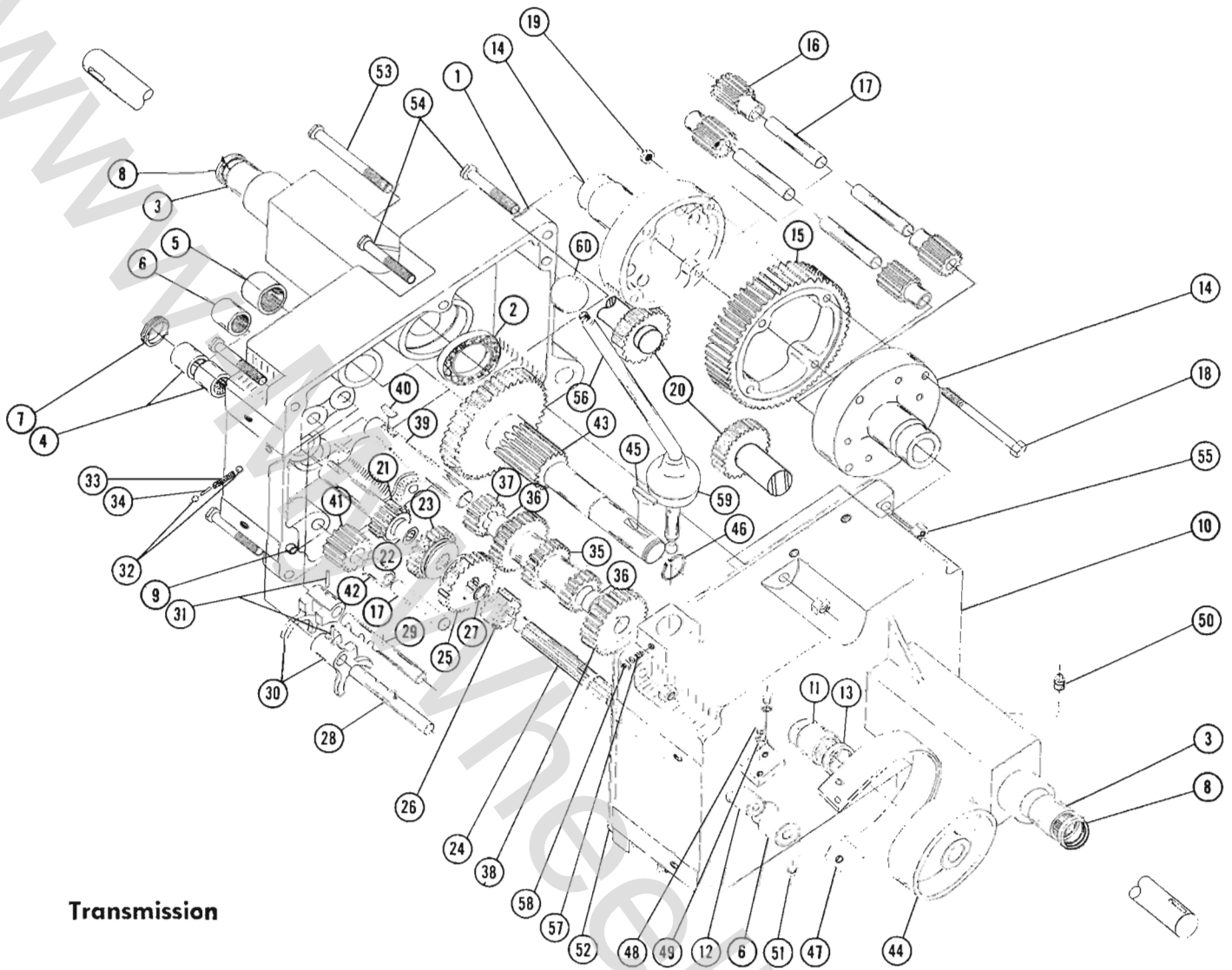
Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	5605	Ass'y. Deck	1	33	3757	Plug Button	2
2	5233	Housing	1	34	1304	Screw #8-32 Self Tap Hex	8
3	1508	Bearing	4	35	4924	Ass'y. Latch — Clutch Pedal	1
4	1303	Seal — Oil	2	36	4927	Ass'y. Clutch Pedal	1
5	908034-4	Bolt Hex 3/8-16 x 1	10	37	4931	Ass'y. Shield	1
6	908017-4	Bolt 5/16-18 x 3/4 Hex	4	38	1486	Spring — Clutch	2
7	915112-6	Nut 5/16-18 Nylok	4	39	1623	Pulley — Idler	1
8	915663-4	Nut 3/8-16 Elastic Stop	8	40	1536	Bush — Idler	1
9	3724	Shaft — Spindle	2	41	908033-4	Bolt Hex 3/8-16 x 7/8	1
10	1534	Bearing — Thrust	2	42	908005-4	Bolt Hex 1/4-20 x 1	1
11	1535	Washer — Thrust	4	43	915111-6	Nut 1/4-20 Nylok	1
12	3131	Gear — Spur	2	44	920007-4	Washer 1/4 S.A.E.	1
13	937084	Key #5 Woodruff	2	45	5242	Bracket Mtg. R.H.	1
14	936125	Snap Ring 3/4 Shaft	2	46	5243	Bracket Mtg. L.H.	1
15	1030	Fitting Grease	2	47	908032-4	Bolt Hex 3/8-16 x 3/4	4
16	3718	Blade R.H. 16"	1	48	4940	Link — Front	2
17	3719	Blade L.H. 16"	1	49	4939	Link — Rear	2
18	3716	Cup	2	50	4938	Rod — Front Link Pivot	1
19	933211	Roll Pin 1/4 x 3/4	4	51	920011-4	Washer 1/2 Dia. S.A.E.	5
20	1336	Washer Dome	2	52	932017-4	Cotter Pin 1/8 x 1	5
21	908033-6	Bolt — Nylok 3/8-16 x 7/8	2	53	4936	Rod — Rear Link Pivot	1
22	5234	Cross Shaft	1	54	4937	Spacer	4
23	3138	Housing	1	55	915663-4	Nut 3/8-16 Elastic Stop	4
24	1515	Bearing	1	56	5244	Bar Lift	1
25	920083-4	Lockwasher 3/8 Dia.	4	57	920009-4	Washer 3/8 S.A.E.	5
26	3130	Gear	2	58	933504	Hairpin	1
27	937009	Key #5 Woodruff	2	59	2877	Wheel	2
28	915639-4	Nut 5/8-18 Elastic Stop	2	60	5188	Bolt Shoulder	2
29	1613	Pulley	1	61	MW-4304	Washer 3/8 Dia.	2
30	937159	Key #9 Hi-Pro	1	62	1555	"V" Belt 44"	1
31	909862-6	Set Screw 5/16-18 x 5/16 Nylok	1	63	3710	Decal — Grease	2
32	3141	Cover — Gear	2	64	4570	Decal. — Caution	2



**Wiring for L-155**

**IGNITION-STARTER SWITCH**





**Transmission**

**TRANSMISSION PARTS LIST**

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

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	3900	Case R.H.	1	31	933156	Roll Pin $\frac{1}{8}$ x 1	2
2	1533	Bearing — Ball $1\frac{1}{2}$ I.D.	2	32	3517	Ball — Shift Stop	2
3	5571	Bearing — Bronze 1" I.D.	1	33	3518	Spring — Shift Stop	1
4	1508	Bearing — Needle $\frac{3}{4}$ I.D.	2	34	5614	Pin — Shift Stop	1
5	1532	Bearing — Needle 1" I.D.	1	35	3525	Gear — Cluster	1
6	1529	Bearing — Needle $\frac{3}{4}$ I.D.	1	36	1504	Bearing — Bronze $\frac{3}{4}$ I.D.	2
7	1303	Seal — Oil $\frac{3}{4}$ Shaft	1	37	3528	Gear — Reduction Pinion	1
8	1232	Seal — Oil 1" Shaft	1	38	5574	Gear — Reduction	1
9	3915	Pin — Dowel	2	39	3910	Shaft — Cluster Gear	1
10	3901	Case L.H.	1	40	937014	Key #9 Woodruff	2
11	1530	Bearing — Needle 1" I.D.	1	41	4204	Gear — Reverse Idler	1
12	1531	Bearing — Needle $\frac{5}{8}$ I.D.	1	42	1516	Bushing — Bronze $\frac{1}{2}$ I.D.	1
13	1232	Seal — Oil 1" Shaft	2	43	3903	Gear — Brake Shaft	1
14	3905	Case — Differential	2	44	3902	Drum — Brake	1
15	5575	Gear — Differential Bull	1	45	937022	Key #15 Woodruff	1
16	4235	Gear — Differential Pinion	4	46	936131	Snap Ring 1" Shaft	1
17	3909	Pin — Differential	5	47	4437	Ass'y. Brake Band & Lining	1
18	1329	Bolt — Hex $\frac{5}{16}$ -18 x $3\frac{1}{4}$ Special	4	48	908002-4	Bolt — Hex $\frac{1}{4}$ -20 x $\frac{5}{8}$	2
19	1316	Nut — Hug Lock $\frac{5}{16}$ -18	4	49	920081-4	Lockwasher $\frac{1}{4}$ Dia.	2
20	5577	Ass'y. Axle & Gear	2	50	943460-4	Plug $\frac{1}{4}$ Pipe	1
21	3522	Gear — Input	1	51	943420-4	Plug $\frac{3}{8}$ Pipe	1
22	1518	Bearing — Needle $\frac{5}{8}$ I.D.	1	52	3912	Gasket	1
23	3523	Gear — Hi & 2nd	1	53	908043-4	Bolt — Hex $\frac{3}{8}$ -16 x $3\frac{1}{2}$	1
24	3907	Shaft — Spline	1	54	908038-4	Bolt — Hex $\frac{3}{8}$ -16 x 2	5
25	3524	Gear — Low & Reverse	1	55	915113-6	Nut — Hex $\frac{3}{8}$ -16 Nylok	6
26	5572	Gear — Pinion — Splined	1	56	5279	Ass'y. Shift Stick	1
27	936125	Snap Ring $\frac{3}{4}$ Truarc	1	57	1239	Set Screw $\frac{1}{4}$ -20 x $\frac{3}{4}$ Dag Point	1
28	5615	Rail — Front Shift	1	58	915111-4	Nut — $\frac{1}{4}$ -20 Nylok	1
29	5616	Rail — Rear Shift	1	59	3577	Boot	1
30	3503	Fork — Shift	2	60	1001	Knob	1