

Wheel Horse®

YARD AND GARDEN TRACTORS

models

502, 552, 702

Suburban Tractors



OPERATION AND SERVICE MANUAL WITH PARTS LIST

WHEEL-HORSE PRODUCTS, INC.

SOUTH BEND, IND.



THINGS YOU SHOULD KNOW

The transmission is powered on needle bearings and roller bearings. The reduction is 108 to 1, and both final drives are steel forgings. All shafts are turned, ground, hardened, and polished for greater strength and best oil sealing.

Speeds are from 1 mph to 6 mph with 3 speeds forward and 1 reverse.

WARRANTY FOR WHEEL HORSE TRACTORS AND ATTACHMENTS

WE warrant WHEEL HORSE PRODUCTS for ONE YEAR from date of purchase against defective parts and workmanship. We will replace, free of charge, any defective part if returned to the factory PREPAID*. Wheel Horse Products, Inc., reserves the right to make changes or improvements upon its products without imposing any obligations upon itself to install the same upon its products that have been previously manufactured.

The engine and battery carry a separate warranty by the manufacturer. FOR ENGINE OR BATTERY SERVICE, CONTACT YOUR LOCAL ENGINE OR BATTERY SERVICE HEADQUARTERS.

**All warranty claims, work, shipments, must be handled through your authorized Wheel Horse dealer.*

NOTE: For commercial use warranted for 90 days.

BEFORE YOU START

There is **NO OIL** in the crankcase of the engine when shipped from the factory. Read Engine Manual and follow all instructions pertaining to type of lubrication specified. The engine is the heart of your tractor and it is very important that you keep it in good condition.

Lubricate all grease fittings with a regular pressure gun lubricant every eight to ten hours of operation. Refer to Figure 1 for the location of grease fittings.

A light machine oil should be used on all moving parts to keep joints from wearing and squeaking.

Remove oil filler plug, located at the left rear side of the transmission, and fill to level of hole with a good grade of S.A.E. 90 Gear Lube (will require about 3 pints).

The transmission should be checked after every 40 hours of use. The transmission should be drained once a year by removing plug on bottom to drain oil. Refill as above paragraph. This is a regular automotive type transmission with sliding gears and should have the same care as your car.

BATTERY

The battery installed in the 552 and 702 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. Place the filled dry charged battery on charge for a 10 minute period before installing. Adjust electrolyte level, if necessary, after charge.

IF FAST CHARGER IS NOT AVAILABLE, CHARGE AT 7 AMPERES FOR ONE HALF HOUR.

4. **Install battery with battery posts toward the rear of tractor.** Start motor. Check to see if generator is charging properly. After battery has been in service, add only approved water.
DO NOT ADD ACID.

TIRES

The front tires are 4:00x8 and should be inflated to 35 pounds of air pressure. **The rear tires are 6:00x12 and should have 6 to 8 pounds of air pressure.** The tires can also be filled with ballast if desired. Ordinarily this is not necessary as the weight of the operator will add sufficient weight for adequate traction.

STARTING ENGINE

1. Before starting the engine open valve on sediment bowl.
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 will not be necessary.
5. A. 502 tractor has a recoil starter with an OFF and ON switch. To start push switch on ON position and pull recoil starter.
B. 552 and 702 tractors have an ON and OFF key, also a starter button. Turn key to ON position and push starter button.
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 over transmission.

CLUTCHING

There is no need to 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 tractor as shown in Figure 1. To set the parking brake depress the clutch-brake pedal as far as possible and push the parking brake forward. To release the brake depress the clutch-brake pedal and pull the parking brake back.

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 THE TRACTOR

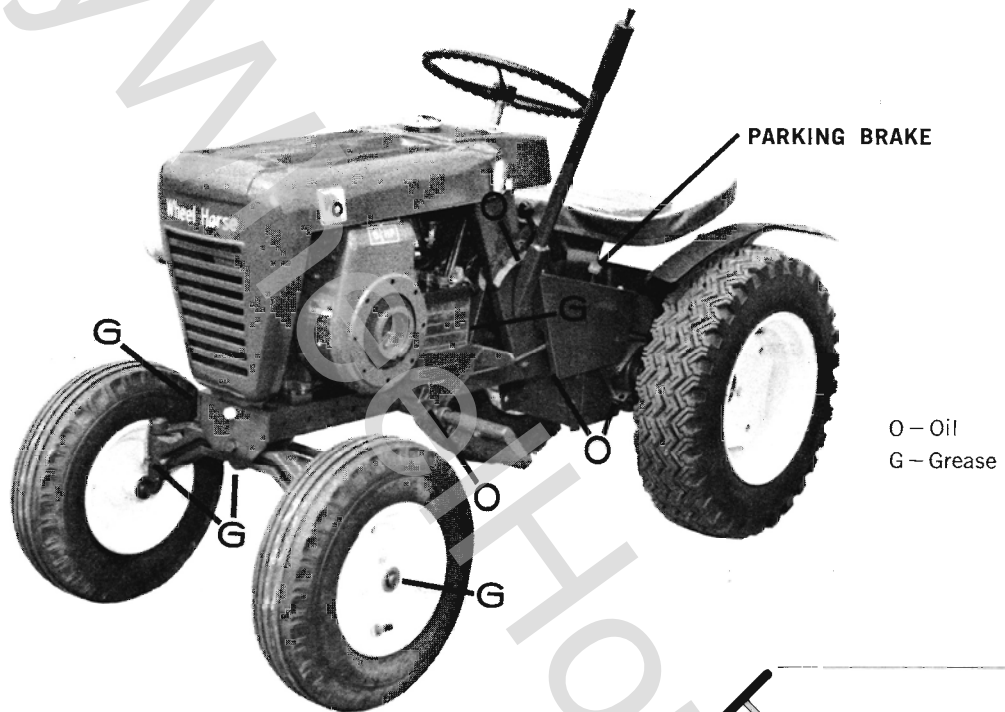
1. Keep tractor greased and oiled regularly. Refer to Figure 1 for the location of grease fittings. Check transmission and engine case oil levels.
2. Keep engine air cleaner clean. This will add to engine life.
3. Keep tires properly inflated. See previous instructions.
4. Keep tractor covered and in a dry place when not in use.
5. Keep grass and dirt out of engine cowling 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. Adjust the nut on the brake rod so that, when you depress the clutch pedal all the way down, the band tightens around the brake drum, just as the idler pulley releases the belt. Keep brake band and drum free from oil and dirt.
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.

8. When replacing belts or mounting drive implements make sure all pulleys are in line.
9. On the 552 and 702 tractors which have batteries, check liquid after every 40 hours of use. If tractor has been in storage it may be necessary to recharge.
10. Your tractor 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 it is advisable to purchase them from your Wheel Horse Dealer, as these belts are specifically designed for each tractor or attachment.

FOR YOUR SAFETY

- A. Keep all guards on at all times.
- B. Never abuse your tractor by improper handling.
- C. Keep hands and feet from moving parts.
- D. Remove key when not in use.
- E. Be careful on high uneven ground.

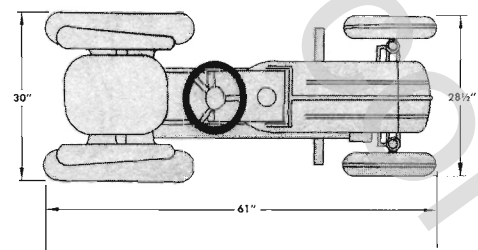
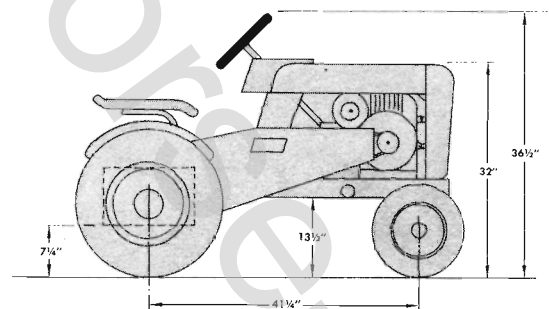
Figure 1



WHEEL HORSE TRACTOR SPECIFICATIONS

(Specifications subject to change without notice.)

Length overall	61 inches
Wheelbase	41 1/4 inches
Width overall	30 inches
Width at front wheels	28 1/2 inches
Height	36 1/2 inches
Height to top of hood	32 inches
Net weight	(702) 416 lbs.—(552) 359 lbs.—(502) 338 lbs.
Crop clearance	7 1/4 inches
Frame clearance	13 1/2 inches
Engine (4-cycle, single cylinder, air cooled)	5 1/2 or 7 hp.
Fuel capacity	4 quarts
Tires (front)	4:00x8" pneumatic (16" wheel dia.)
Tires (rear) Cleat-type or All Purpose tread	6:00x12" pneumatic (22" wheel dia.)



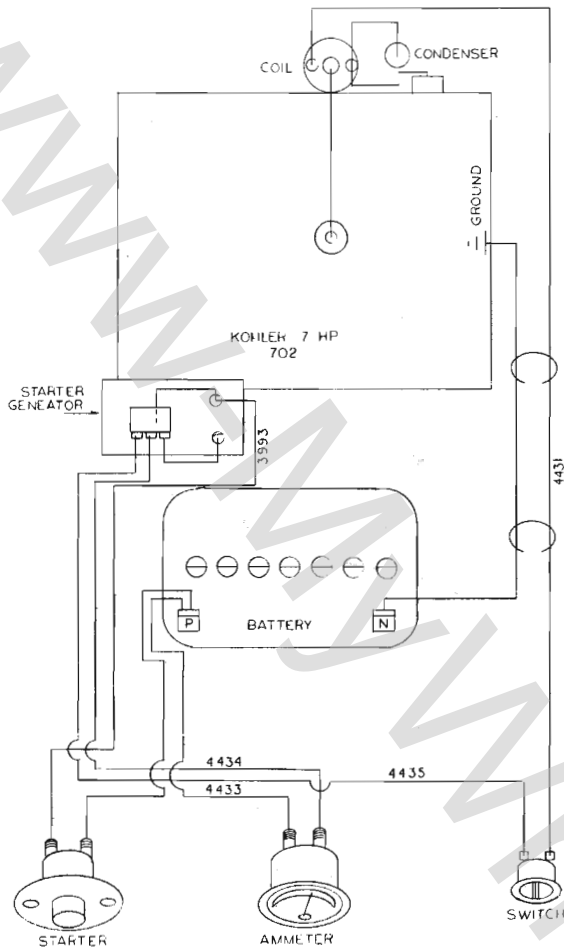


Figure 2—Wiring for 702

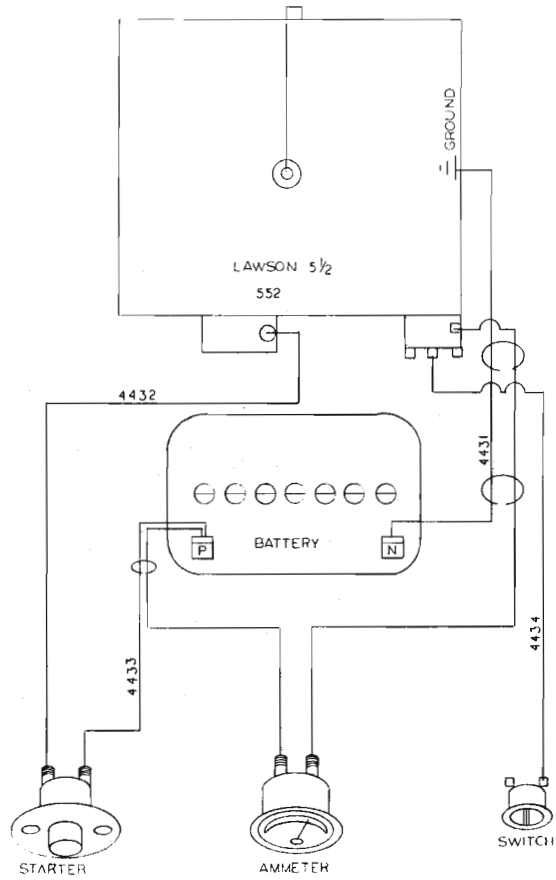
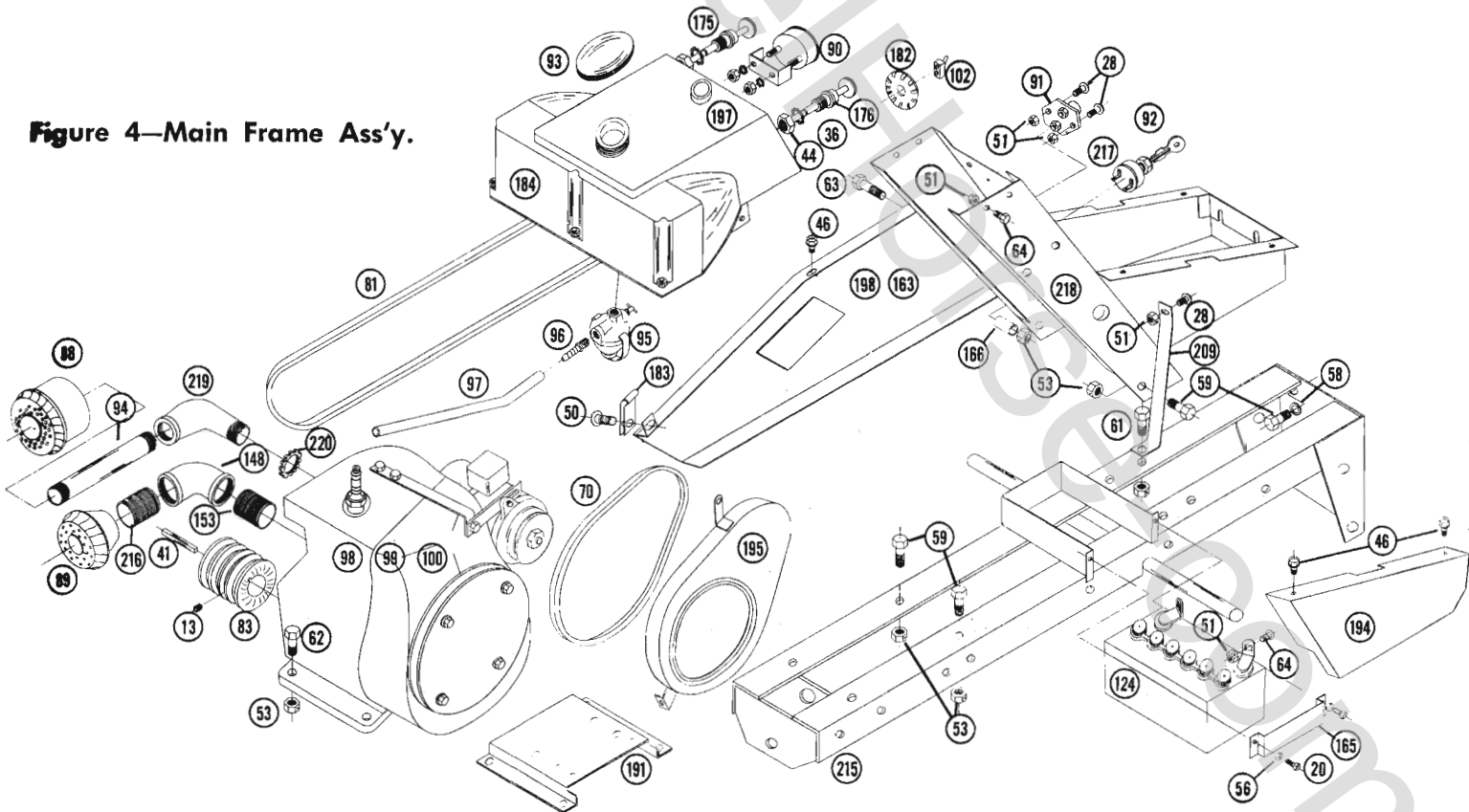


Figure 3—Wiring for 552

Figure 4—Main Frame Ass'y.



PARTS LIST for MODELS 502, 552 and 702 SUBURBAN TRACTORS

When ordering parts always list Part No., name of part, and Tractor Serial No. when available.

When more than one item is used on a tractor, only one Reference No. is used.

Ref. No.	Part No.	Description	No. Req.	Fig. No.	Ref. No.	Part No.	Description	No. Req.	Fig. No.
1	1000	Handle Grip	1	7	70	1583	"V" Belt Eng. to Gen.	1	4
2	1001	Knob	1	8	71	1516	Bushing	1	8
3	1002	1/8 x 1 Cotter Key	5	7	72	1518	Needle Bearing	1	8
4	1008	No. 15 Woodruff Key	3	8	73	1528	Needle Bearing	2	8
5	1012	3/16 x 1 Cotter Key	1	7	74	1529	Needle Bearing	2	8
7	1014	Tension Spring	2	7	75	1530	Needle Bearing	1	8
8	1023	Square Head Set Screw	2	8	76	1531	Needle Bearing	1	8
9	1030	Grease Fitting	6	5	77	1532	Needle Bearing	1	8
10	1032	3/8-16 x 2 Hex Hd. Cap Screw	5	8	78	1533	Ball Bearing	2	8
12	1042	3/16-18 x 5/16 Socket Hd. Set Screw	1	8	79	1536	Idler Bushing	1	7
13	1066	1/4-20 x 1/4 Socket Hd. Set Screw	1	4	80	1538	Needle Bearing	1	8
14	1081	1/4 x 1 1/2 Roll Pin	3	7	81	1576	"V" Belt 70" A Section	1	4
15	1085	3/4 I.D. Shaft Collar	2	7	82	1611	Pulley	1	8
16	1122	No. 9 Woodruff Key	3	8	83	1621	Engine Pulley	1	4
17	1127	3/4 I.D. Snap Ring	1	8	84	1623	Idler Pulley	1	7
18	1128	1 I.D. Snap Ring	1	8	85	1659	Rear Tire Ass'y.	2	5
19	1136	5/16 x 1 1/2 Roll Pin	1	7	86	1700	Rear Wheel Rim	2	5
20	1143	1/4-20 x 3/8 Button Hd. Mach. Screw	2	4	87	1709	Front Wheel Ass'y.	2	5
21	1146	Wire No. 16	1	3	88	1739	Lawson Muffler	1	4
22	1206	3/8-16 x 1 1/4 Sq. Hd. Cup Point Set Screw	2	7	89	1744	Kohler Muffler	1	4
23	1232	Oil Seal	3	8	90	1745	Ammeter	1	4
24	1235	Yoke Pin	2	7	91	1751	Starter Button	1	4
25	1239	1/4-20 x 3/4 Dog Point Set Screw	1	8	92	1752	Switch	1	4
26	1242	3/32 x 1 1/8 Roll Pin	1	8	93	1753	Gas Cap	1	4
27	1244	1/8 x 1 Roll Pin	2	8	94	1754	3/4" Std. Pipe Nipple 5 1/2" Lg.	1	4
28	1262	1/4-20 x 3/4 Rd. Hd. Mach. Screw	4	4	95	1786	Fuel Strainer	1	4
29	1271	1/4-20 x 3/8 Rd. Hd. Mach. Screw	1	8	96	1787	Straight Fitting	1	4
30	1273	10-32 x 3/8 Mach. Screw	2	4	97	1796	Fuel Line	1	4
31	1277	Wire Clip	2	100	98	1799	Kohler 7 hp. Engine	1	4
32	1285	1/16 x 5/8 Cotter Key	2	7	99	1800	Lawson 5 1/2 hp. Engine Electric	1	4
33	1287	1/2-13 x 2 3/4 Hex Hd. Cap Screw	1	5	100	1805	Lawson 5 1/2 hp. Engine	1	4
34	1303	Oil Seal	2	8	101	1861	Rod Control Stud	1	7
35	1329	3/16-18 x 3 1/4 Hex Hd. Cap Screw	4	8	102	3279	Off-On Switch (502)	1	5
36	1331	3/16 Shakeproof Washer	2	4	103	3503	Shift Fork	2	8
37	1339	3/8-16 x 3 1/2 Hex Hd. Cap Screw	1	8	104	3514	Shift Collar	1	8
38	1340	1/4 x 1 1/4 Roll Pin	5	5	105	3515	Front Shift Rail	1	8
39	1345	1/4-20 x 1 3/8 Thumb Screw	2	6	106	3516	Rear Shift Rail	1	8
40	1346	1/4-20 x 1 3/8 Thumb Screw	1	6	107	3517	Ball Stop	2	8
41	1349	1/4 x 1/4 x 1 1/2 Key	1	4	108	3518	Spring Stop	1	8
42	1350	1/8 x 1 1/4 Roll Pin	1	7	110	3522	Input Gear	1	8
43	1363	3/8-16 x 1/8 x Hex Hd. Cap Screw	1	7	111	3523	Hi and 2nd Gear	1	8
44	1364	3/16 Round Nut	2	4	112	3524	Low and Reverse Gear	1	8
45	1384	3/8 Std. Pipe Plug	2	8	113	3525	Cluster Gear	1	8
46	1385	1/4-20 x 1/2 Keps Screw	4	4	114	3526	Splined Pinion	1	8
47	1399	Decal 502	1	117	115	3527	Reduction Gear	1	8
48	1400	Decal 552	1	118	116	3528	Reduction Pinion	1	8
49	1401	Decal 702	1	119	117	3537	Seat Spring	1	6
50	1405	3/8-16 x 1/2 Rd. Hd. Mach. Screw	2	4	118	3573	Shift Pin Stop	1	8
51	1406	1/4-20 Hex Nylock Nut	4	5	119	3574	Wheel Hub	2	8
52	1407	3/16-18 Hex Nylock Nut	4	8	120	3577	Boot	1	8
53	1408	3/8-16 Hex Nylock Nut	10	4	121	3578	Plunger Guide	1	7
54	1410	1/2-13 Hex Nylock Nut	1	6	122	3605	Tie Rod	1	5
55	1413	3/8-24 Hex Nylock Nut	1	5	123	3624	Compression Spring	1	7
56	1416	1/4 Split Lock Washer	5	4	124	3653	Battery	1	4
57	1417	5/16 Split Lock Washer	2	5	125	3656	Switch (552)	1	4
58	1418	3/8 Split Lock Washer	11	8	126	3680	Plunger Cap	1	7
59	1423	3/8-16 x 3/4 Hex Hd. Cap Screw	8	4	127	3900	Transmission Case R.H.	1	8
60	1424	1/2-13 Hex Jam Nut	3	5	128	3901	Transmission Case L.H.	1	8
61	1425	3/8-16 x 1 Hex Hd. Cap Screw	4	4	129	3902	Brake Drum	1	8
62	1426	3/8-16 x 1 1/4 x Hex Hd. Cap Screw	4	5	130	3903	Brake Shaft Gear	1	8
63	1427	3/8-16 x 2 Hex Hd. Cap Screw	1	4	131	3904	Axle	2	8
64	1428	1/4-20 x 5/8 Hex Hd. Cap Screw	6	4	132	3905	Differential Case	2	8
65	1429	10-32 Lock Nut	2	4	133	3906	Bull Gear	1	8
66	1430	1/2-13 x 1 1/4 Carriage Hd. Bolt	1	6	134	3907	Spline Shaft	1	8
67	1432	5/8-24 x 1/2 Rd. Hd. Mach. Screw	2	4	135	3908	Axle Gear	2	8
68	1504	Bushing	2	8	136	3909	Differential Pin	5	8
69	1508	Needle Bearing	2	8	137	3910	Cluster Shaft	1	8
					138	3912	Gasket	1	8
					139	4437	Brake Band Ass'y.	1	8

Ref. No.	Part No.	Description	No. Req.	Fig. No.	Ref. No.	Part No.	Description	No. Req.	Fig. No.
140	3915	Locating Pin	2	8	181	4246	Trip Lever Ass'y.	1	7
141	3917	Bevel Pinion	1	5	182	4249	Hole Plug	1	4
142	3918	Steering Pivot	1	5	183	4256	Clip	1	4
143	3919	Steering Arm	2	5	184	4405	Fuel Tank	1	4
144	3926	Tractor Hitch	1	7	185	4408	Front Spindle	2	5
145	3931	Lift Cable	1	7	186	4410	Wheel Horse Decal	2	
146	3933	Lmk	1	7	187	4412	Bottom Steering Support	1	5
147	3935	Brake Rod	1	7	188	4413	Steering Sector	1	5
148	3939	1" Std. Pipe Elbow 45°	1	4	189	4414	Steering Wheel	1	5
149	3940	Drag Link	1	5	190	4415	Hood	1	6
150	4402	Tool Box	1	6	191	4416	Lawson Engine Base	1	4
151	3944	Lower Steering Shaft	1	5	192	4417	Brake Set Lever	1	7
152	3945	Upper Steering Shaft	1	5	193	4418	Shift Decal	1	
153	3948	1" Nipple 2" Long	1	4	194	4419	Shield	1	4
154	3949	Clevis Pin	2	5	195	4420	Belt Guard	1	4
155	3950	Idler Arm	1	7	196	4421	Foot Rest	2	7
156	3973	Seat	1	6	197	4422	Instrument Decal	1	4
157	3978	Seat Cushion	1	6	198	4423	Belt Guard	1	4
158	3979	Pivot Brake	1	7	199	4429	Clutch Rod	1	7
159	3983	Fender R. H.	1	6	200	4430	Clutch Pedal	1	7
160	3984	Fender L. H.	1	6	201	4431	Ground Switch to Coil Wire	1	2-3
161	3987	Upper Plunger Rod	1	7	202	4432	Starter Switch to Starter Wire	1	2-3
162	3988	Tractor Hitch Pin	1	7	203	4433	Battery to Starter Wire	1	2-3
163	4202	Belt Guard	1	4	204	4434	Generator to Ammeter Wire	1	2-3
164	4204	Reverse Idler Gear	1	8	205	4435	Switch to Regulator Wire	1	2-3
165	4206	Battery Clamp	1	4	206	3678	Seat Back (optional)		6
166	4211	Spacer	1	4	207	3678	Seat Back Spring (optional)		6
167	4213	1/2 x 3 Std. Pipe Nipple	1		208	1227	3/8 x 1 3/8 Roll Pin	1	5
168	4215	Shift Stick	1	8	209	3930	Hood Stand Channel Strut	2	5
169	4216	1/4 Std. Pipe Elbow 90°	1		210	1659	All Purpose Tire 6 x 12	2	5
170	4217	Pipe Cap 1/4 Std.	1		211	1650	Cleat Tire 6 x 12		5
171	4218	1/4 x 1 1/4 Std. Pipe Nipple	1		212	1711	Rear Wheel Weight (optional)		5
172	4220	Front Axle	1	5	213	1813	Tool Pin	1	7
173	4222	Quadrant	1	7	214	1004	Wheel Bolt	6	8
174	4231	Lift	1	7	215	4401	Frame Ass'y.	1	4
175	4232	Throttle	1	4	216	3947	Close Nipple 1" Std. Pipe	1	4
176	4233	Choke	1	4	217	1747	Switch (702)	1	4
177	4235	Differential Pinion Gear	4	8	218	4427	Hood Stand Channel Ass'y.	1	4
178	4238	Lift Lever	1	7	219	1755	Street El 90° 3/4" Std.	1	4
179	4239	Clutch Pedal	1	7	220	1756	1" Lock Nut (Kohler 702)	1	4
180	4243	Lower Plunger Ass'y.	1	7					



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