

Wheel Horse®

LAWN AND GARDEN TRACTORS

models

605, 655

MIDWAY Power Equipment
92 E. MAIN ST., WRTN
285-4271

WILBUR & SONS
121 Pogunticut Ave
W. Easton, MA
238-4203
238-2158



OPERATION AND SERVICE MANUAL WITH PARTS LIST



WHEEL-HORSE PRODUCTS, INC.

SOUTH BEND, IND.

ASSEMBLY

A. The Tractor is shipped in one carton with the rear wheel and tire assembly, Part No. 5432, in a separate carton.

B. **Open tractor unit first.** Remove all parts from carton, and place in a convenient arrangement on a clean level surface.

C. The front wheel spindles must be connected to the ball joints. Place the threaded end of the R.H. ball joint, Part No. 5628 through the hole of the R.H. spindle, Part No. 5630, and secure with $\frac{3}{8}$ " Nylok nut, Part No. 915002-6. Repeat this same operation with the left hand side.

THINGS YOU SHOULD KNOW

The transmission is powered on needle bearings and ball 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

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 obligation 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: 90 Day Warranty for Commercial Use.

BEFORE YOU START

There is **NO OIL** in the crankcase of the engine when shipped from the factory. **OIL . . .** Use a good grade of regular oil. The engine oil weights listed below are recommended by the engine manufacturer and must be followed for best performance and long life. Multiple weight oils, such as all-season 10W-30, are not recommended.

ABOVE 32° use S.A.E. 30W

BELOW 32° use S.A.E. 10W

Check oil level every 5 operating hours or each time equipment is used.

Change oil every 25 operating hours or sooner if equipment is operated in extremely dusty or dirty conditions. 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. 40 oil (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 655 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 tractor.** After battery has been in service, add only approved water.

DO NOT ADD ACID.

TIRES

The front tires are 16 x 5.50-8 and should be inflated to 12-15 pounds of air pressure. **The rear tires are 8 x 12 and should have 10 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 fill gas tank (located under the hood) with a good grade of regular gas, and open valve on gas tank. See Figure 1. To open hood push lever at back of hood forward and lift hood.

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 655 tractor has a key starter-switch. Turn key all the way to right to start engine.

B. The Model 605 tractor has a recoil starter with an off and on key. To start turn key to right and pull 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 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 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 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.

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 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.

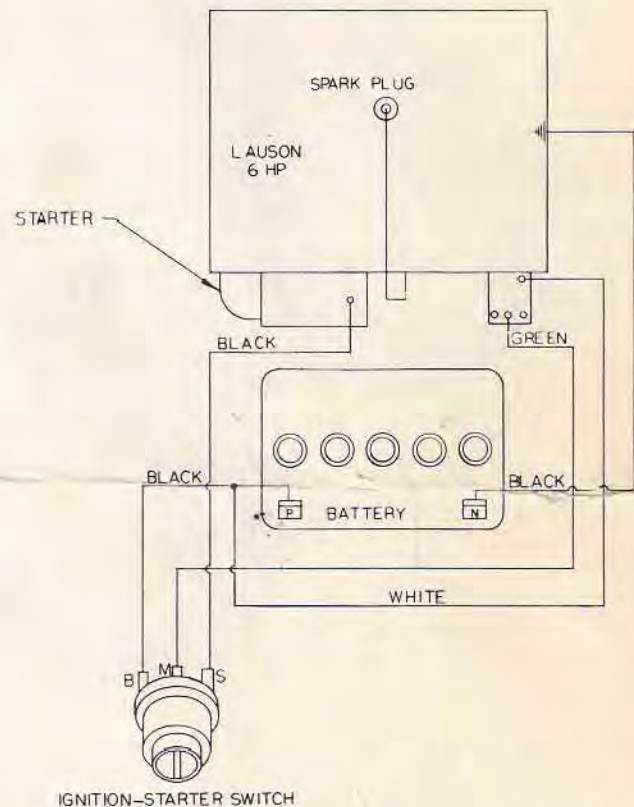
11. When replacing belts be sure to purchase genuine Wheel Horse belts, as these belts are specifically designed for each application.

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

12. To raise seat/fender unit pull knob back. See Fig. 1. Seat should be latched before operating tractor.

FOR YOUR SAFETY

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



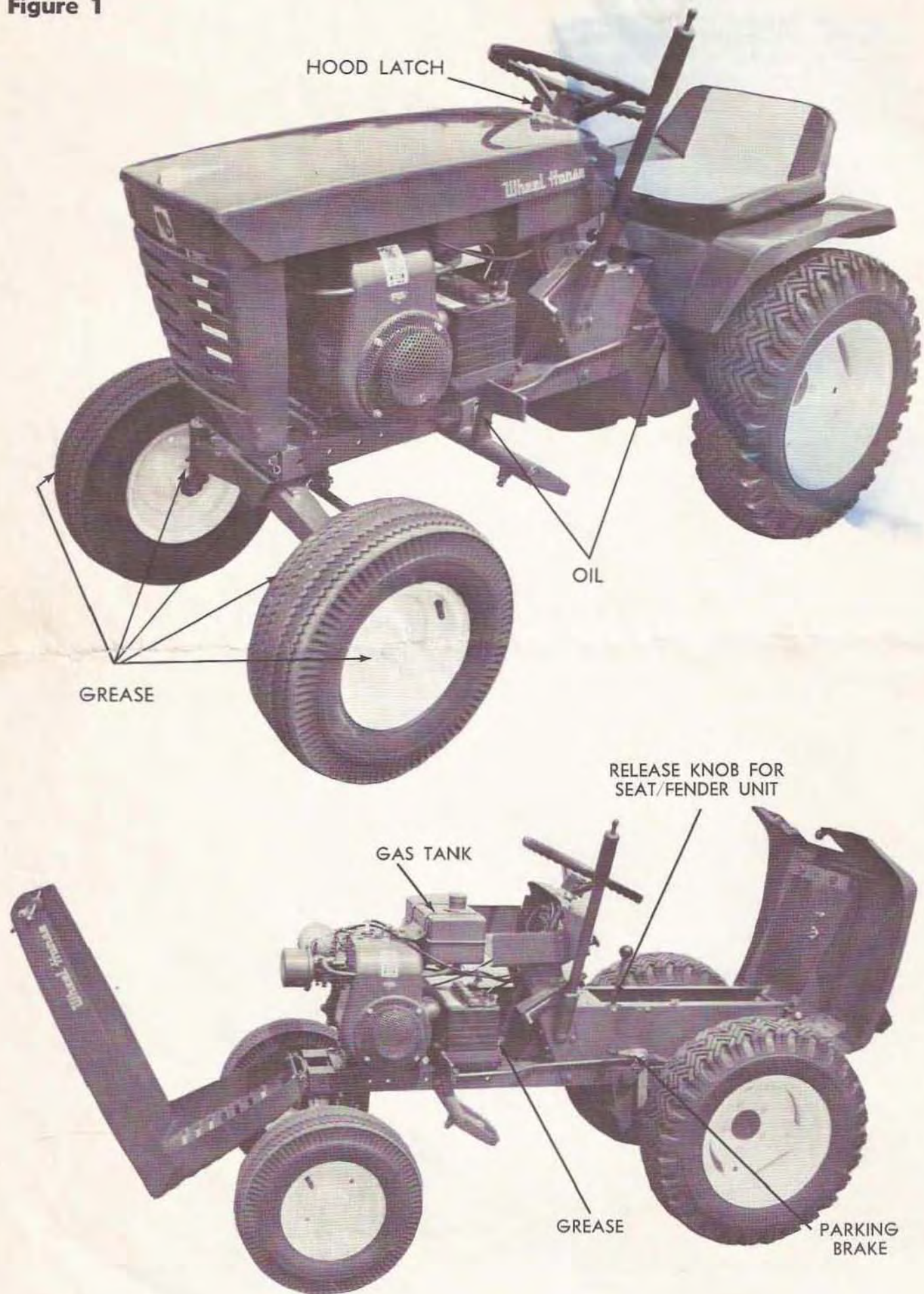
WIRING FOR 655

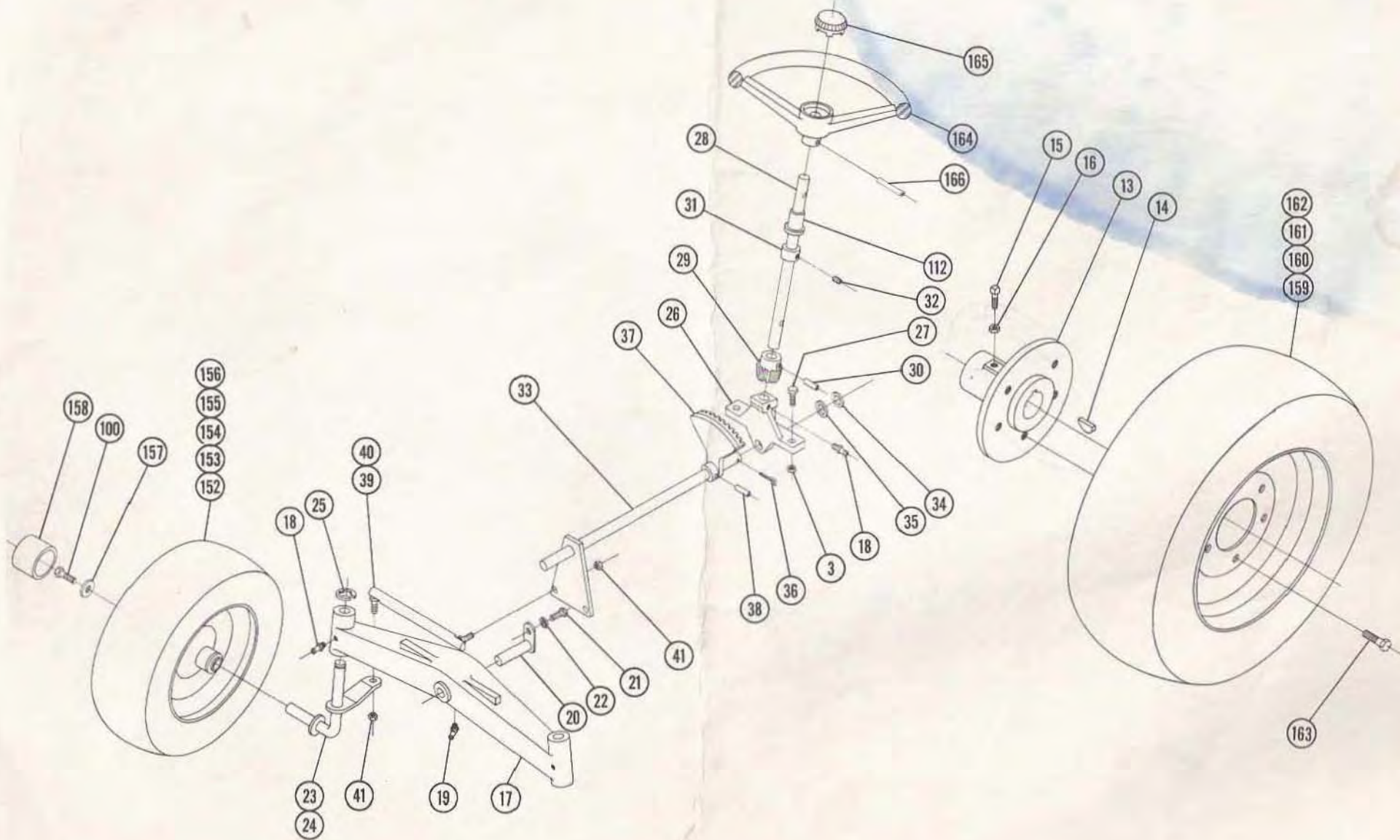
SPECIFICATIONS

(Specifications subject to change without notice.)

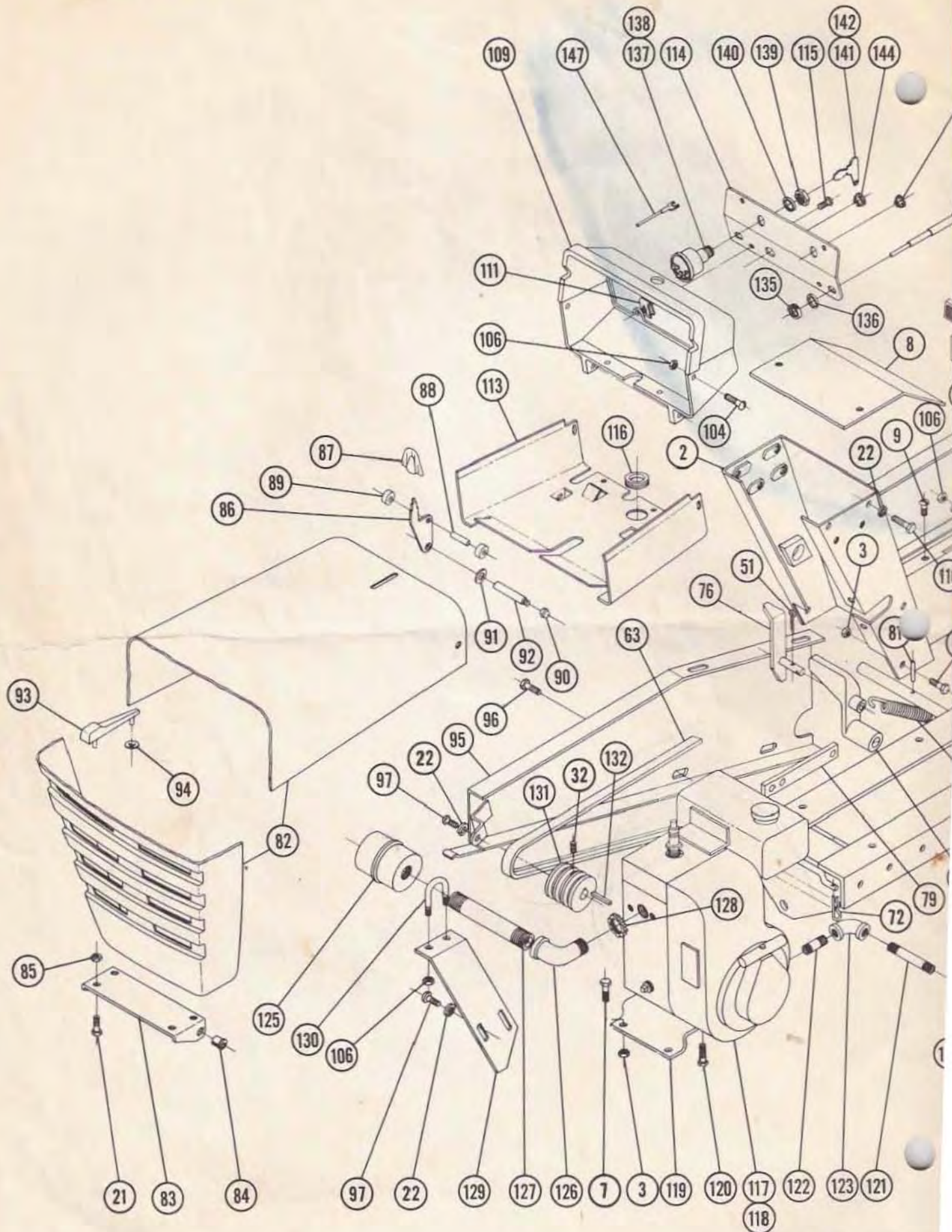
Length Overall	61 inches
Wheelbase	41 $\frac{1}{4}$ inches
Width Overall	34 inches
Width at Front Wheels	33 $\frac{1}{2}$ inches
Height	37 inches
Height to Top of Hood	33 $\frac{1}{2}$ inches
Approx. Shipping Weight	514 lbs.
Crop Clearance	7 $\frac{1}{4}$ inches
Frame Clearance	13 $\frac{1}{2}$ inches
Engine (4-cycle, single cylinder, air cooled)	6 H.P.
Engine Crankcase Oil Capacity	21 oz.
Fuel Capacity	4 quarts
Tires (front) 5.50-8 Pneumatic (16" wheel dia.)	
Tires (rear) 6.00 x 12" Pneumatic (22 $\frac{1}{2}$ " wheel dia.)	
Speeds — 3 Forward to 6 mph. 1 Reverse to 2 $\frac{1}{2}$ mph.	
Turning radius (to outside of outside wheel)	6'

Figure 1

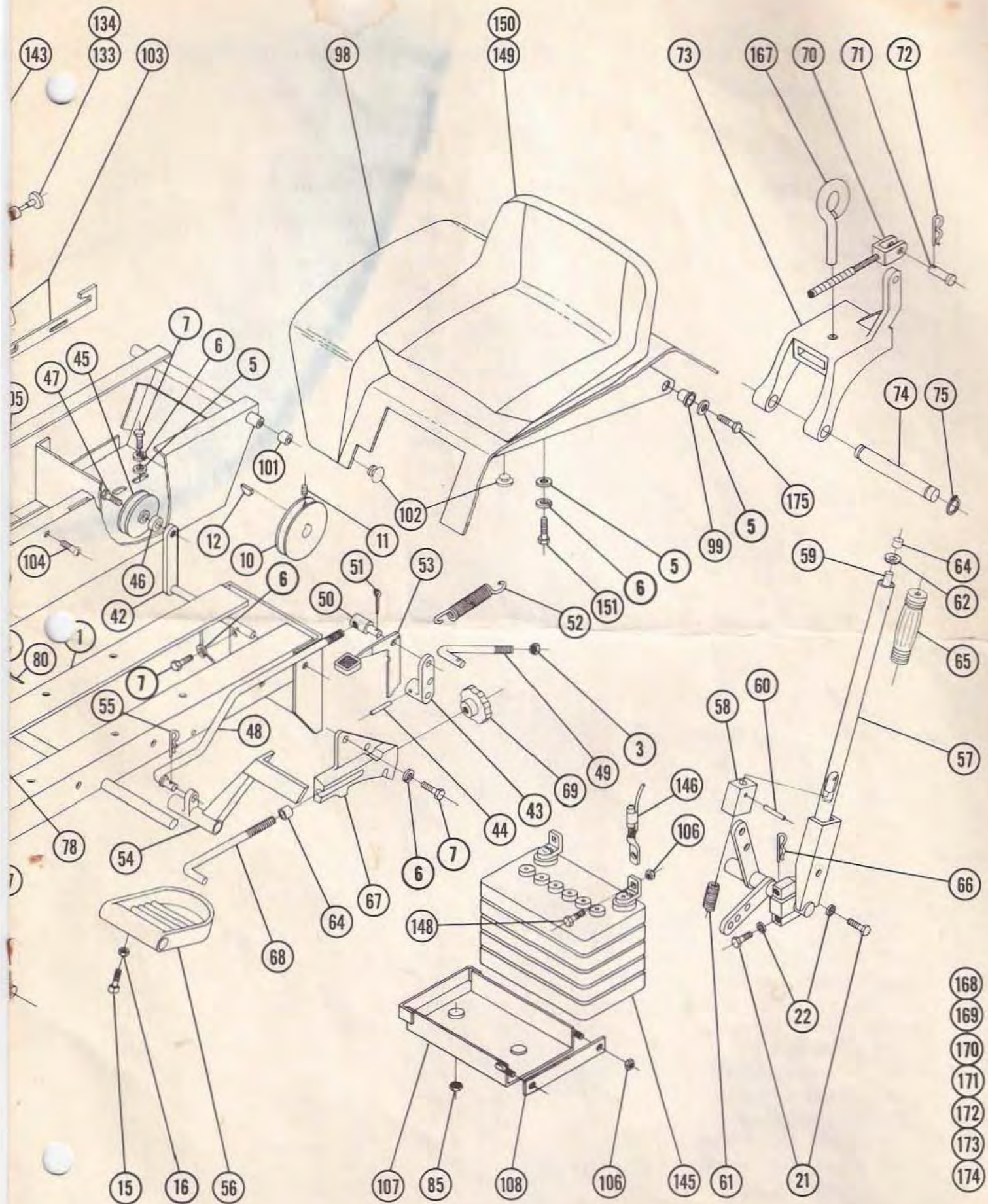




STEERING & WHEEL ASS'Y.



MAIN FRAME, F



DER & HOOD ASS'Y.

PARTS LIST for MODELS 605 & 655 LAWN and GARDEN TRACTOR

(Except Transmission — see page 10 for Transmission break down and Parts List)

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

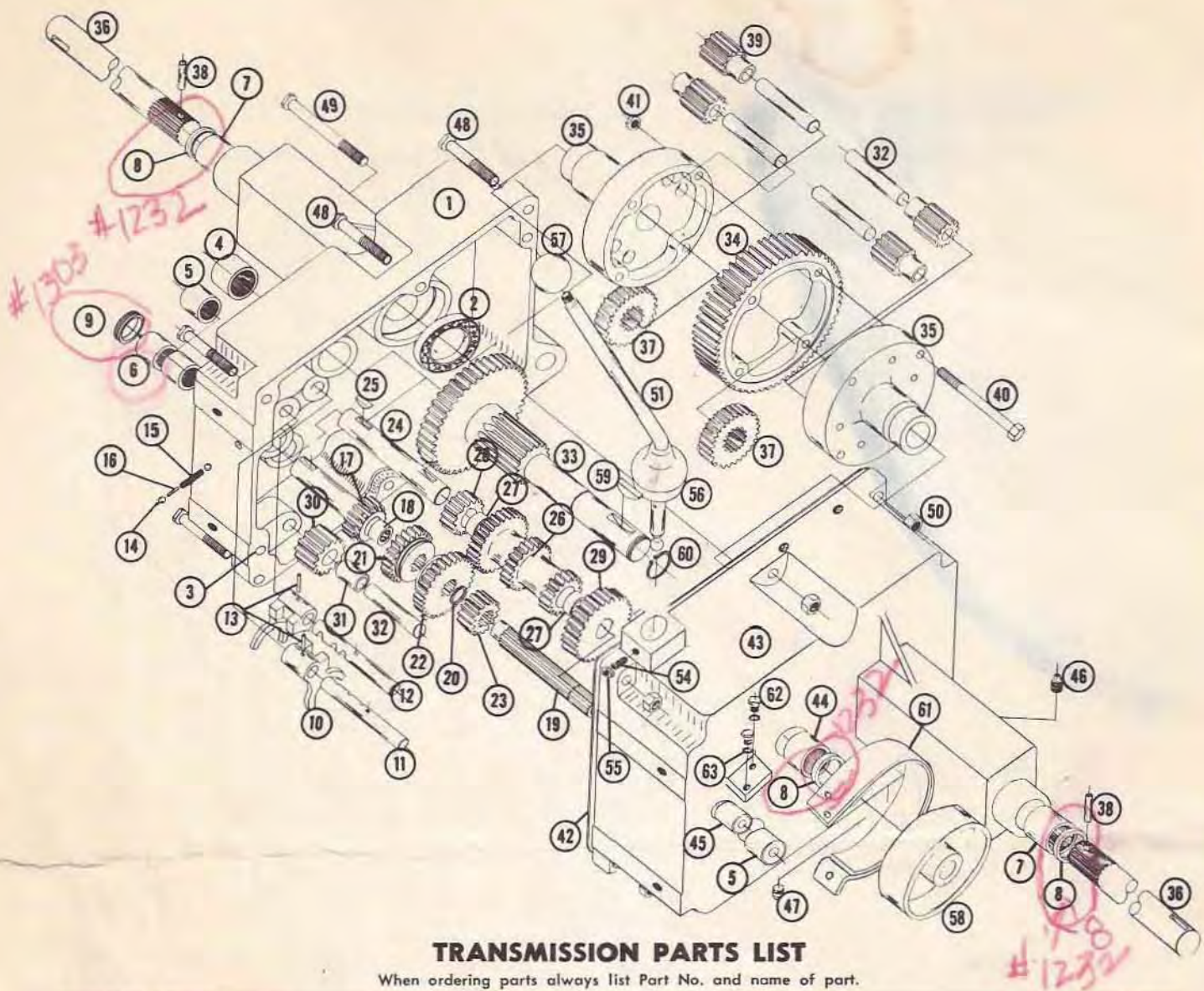
Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	5634	Ass'y. Frame	1	45	1623	Pulley - Idler	1
2	5645	Ass'y. Hoodstand	1	46	1536	Bushing	1
3	915663-4	Nut $\frac{3}{8}$ -16 Elastic Stop	9	47	1363	Bolt Hex. Special $\frac{3}{8}$ -16 x $\frac{7}{8}$	1
4	908034-4	Bolt - Hex. $\frac{3}{8}$ -16 x 1	2	48	2593	Rod - Clutch	1
5	920009-4	Washer $\frac{3}{8}$	6	49	3935	Rod - Brake	1
6	920083-4	Lockwasher $\frac{3}{8}$ Plain	10	50	1861	Stud - Clutch Rod	1
7	908032-4	Bolt - Hex. $\frac{3}{8}$ -16 x $\frac{3}{4}$	12	51	932017-4	Cotter Pin $\frac{1}{8}$ x 1	4
8	5622	Ass'y. Cover Plate	1	52	1014	Spring - Clutch	1
9	909052-4	Bolt Rd. Hd. $\frac{1}{4}$ -20 x $\frac{1}{2}$	2	53	5544	Ass'y. Lever & Knob-Brake	1
10	1611	Pulley	1	54	2267	Pedal - Clutch	1
11	909849-6	Set Screw $\frac{1}{4}$ -20 x $\frac{5}{16}$ Nylok	1	55	933504	Hair Pin	1
12	937014	Key #9 Woodruff	1	56	4421	Footrest	2
13	4996	Hub - Wheel 5 Bolt	2	57	2266	Ass'y. Lift Lever	1
14	937022	Key #15 Woodruff	2	58	4438	Plunger	1
15	909554-4	Set Screw Square Hd. $\frac{3}{8}$ -16 x 1	4	59	4439	Rod	1
16	915113-6	Nut Nylok $\frac{3}{8}$ -16	4	60	933168	Roll Pin $\frac{5}{32}$ x $1\frac{1}{16}$	1
17	5638	Axle Front	1	61	3624	Spring	1
18	1030	Fitting Grease	3	62	3578	Guide - Plunger Rod	1
19	1481	Fitting - Grease 45°	1	63	3578 9691	"V" Belt	1
20	2294	Ass'y. Pin & Plate	1	64	3680	Cap - Plunger Rod	2
21	908015-4	Bolt Hex. $\frac{5}{16}$ -18 x $\frac{1}{2}$	8	65	1000	Grip - Handle	1
22	920082-4	Lockwasher $\frac{5}{16}$ Plain	11	66	933506	Hair Pin	1
23	5630	Ass'y. Spindle R.H.	1	67	5640	Quadrant	1
24	5631	Ass'y. Spindle L.H.	1	68	2179	Rod - Height Control	1
25	5618	E-Ring $\frac{3}{4}$ Dia.	2	69	5280	Knob - Height Control	1
26	4412	Support - Steering	1	70	3931	Ass'y. Cable - Lift	1
27	908035-4	Bolt - Hex. $\frac{3}{8}$ -16 x $1\frac{1}{4}$	2	71	932120-4	Pin - Clevis $\frac{1}{4}$ Dia.	2
28	5335	Shaft - Steering - Upper	1	72	933503	Hairpin	4
29	3917	Gear - Steering Pinion	1	73	3926	Hitch	1
30	933215	Roll Pin $\frac{1}{4}$ x $1\frac{1}{4}$	1	74	3988	Pin - Hitch	1
31	1085	Collar	1	75	936125	Snap Ring $\frac{3}{4}$ Shaft	2
32	909848-6	Set Screw $\frac{1}{4}$ -20 x $\frac{1}{4}$ Nylok	2	76	4246	Ass'y. Trip Lever	1
33	5639	Ass'y. Steering Shaft - Lower	1	77	4239	Pedal - Attachment Clutch	1
34	5210	Washer - Shim (.015)	1	78	5714	Spring	1
35	1278	Washer - Shim (.050)	1	79	5385	Link	1
36	932035-4	Cotter Pin $\frac{3}{16}$ x $1\frac{1}{4}$	1	80	932034-4	Cotter Pin $\frac{3}{16}$ x $1\frac{1}{4}$	1
37	5627	Sector - Steering	1	81	933188	Roll Pin $\frac{3}{16}$ x 1	1
38	933229	Roll Pin $\frac{3}{16}$ x $1\frac{1}{4}$	1	82	5465	Ass'y. Hood	1
39	5628	Ass'y. Ball Joint R.H.	1	83	5455	Bracket - Hood Hinge	1
40	5629	Ass'y. Ball Joint L.H.	1	84	5457	Bushing - Nylon	2
41	915002-4	Nut Nylok $\frac{3}{8}$ -24	4	85	915112-6	Nut - Nylok $\frac{3}{16}$ -18	6
42	3950	Ass'y. Idler Arm & Shaft	1	86	5467	Lever - Hood Latch	1
43	4899	Arm - Clutch Rod Pivot	1	87	5469	Knob	1
44	933158	Roll Pin $\frac{1}{8}$ x $1\frac{1}{4}$	1	88	933182	Roll Pin $\frac{3}{16}$ x $\frac{5}{8}$	1

PARTS LIST for MODELS 605 & 655 LAWN and GARDEN TRACTOR

(Except Transmission — see page 10 for Transmission break down and 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.
89	5468	Roller - Steel	2	133	5440	Ass'y. Control - Choke	1
90	915902-4	Nut - Low Crown #10-24	2	134	5171	Ass'y. Control - Throttle	1
91	5466	Speednut 1/4 Dia. Push On	2	135	1364	Nut 3/16-18 Round	2
92	5522	Rod - Hood Latch	1	136	920127-4	Lockwasher 3/8 Shakeproof	2
93	5438	Ornament - Hood Latch	1	137	3656	Ass'y. Switch - Ignition (605)	1
94	5437	Speednut 1/8 Dia. Push On	2	138	4987	Ass'y. Switch - Ignition (655)	1
95	5308	Ass'y. Belt Guard	1	139	4882	Nut - Hex. 5/8-32 Special	1
96	960151-4	Bolt - Hex. Whizlock 1/4-20 x 1/2 ✓	4	140	4881	Lockwasher 3/8 Special	1
97	1432	Screw Rd. Hd. 3/16-24 x 1/2	3	141	4989	Key Ignition (655)	2
98	5661	Ass'y. Fender	1	142	3668	Key Ignition (605)	2
99	5666	Bushing - Nylon .500 I.D.	2	143	935113	Plugbutton 29/32 Hole (Lighter)	1
100	908033-6	Bolt - Hex. Nylok 3/8-16 x 7/8	4	144	5506	Plugbutton 25/32 Hole (Generator)	1
101	4937	Spacer	2	145	3653	Battery	1
102	5667	Bumper - Rubber	4	146	5647	Wiring Harness	1
103	5696	Ass'y. Latch & Knob	1	147	4434	Wire Switch to Ground (605)	1
104	909054-4	Bolt Rd. Hd. 1/4-20 x 5/8	6	148	908002-4	Bolt - Hex. 1/4-20 x 5/8	2
105	920007-4	Washer 1/4 SAE	2	149	5557	Base - Seat	1
106	915111-6	Nut - Nylok 1/4-20	12	150	5556	Cushion - Seat	1
107	4953	Ass'y. Battery Box	1	151	908030-4	Bolt Hex. 3/8-16 x 1/2	2
108	4958	Clamp - Battery	1	152	5637	Ass'y. Wheel, Tire, & Tube - Front	2
109	5450	Housing - Control Panel	1	153	5635	Wheel	2
110	908016-4	Bolt - Hex. 5/16-18 x 3/8	4	154	4999	Bearing	4
111	5442	Speed Nut #10-16 THD.	4	155	5636	Tire - 16 x 5.50-8	2
112	5409	Bushing - Nylon	1	156	5512	Tube	2
113	5458	Support - Fuel Tank	1	157	2844	Washer	2
114	5453	Panel - Complete	1	158	2816	Hubcap	2
115	926308-4	Screw - Self Tap #10-16 x 3/4 Type "B"	4	159	1667	Ass'y. Wheel, Tire, & Tube - Rear	2
116	5439	Grommet - Rubber	1	160	1700	Wheel	2
117	5531	Ass'y. Engine 6 H.P. Lauson (Electric)	1	161	1662	Tire	2
118	5530	Ass'y. Engine 6 H.P. Lauson (Recoil)	1	162	1654	Tube	2
119	4416	Base - Engine	1	163	1004	Lug Bolt - Wheel 7/16-20	10
120	908017-4	Bolt - Hex. 5/16-18 x 3/4	4	164	4983	Steering Wheel	1
121	943317	Nipple 1/4 Pipe x 4	1	165	2897	Insert	1
122	4218	Nipple 1/4 Pipe x 1 1/4	1	166	933213	Roll Pin 1/4 x 1	1
123	4216	Elbow 1/4 Pipe x 90°	1	167	1813	Tool Pin	1
124	4217	Cap 1/4 Pipe	1	168	937305	Wrench 1/8 Hex. Allen	1
125	1739	Muffler	1	169	5604	Decal - (Fender)	1
126	1755	Elbow 3/4 Pipe x 90°	1	170	5415	Decal - Wheel Horse	2
127	943358	Nipple 3/4 Pipe x 3 1/2	1	171	5649	Decal - Belt Guard (655)	1
128	1756	Lock Nut - 3/4 Pipe	1	172	5648	Decal - Belt Guard (605)	1
129	5646	Brace - Exhaust	1	173	5462	Decal - Decor (Hood)	1
130	1240	U-Bolt	1	174	4581	Decal - Steering Wheel	1
131	1621	Pulley - Eng.	1	175	908182-6	Bolt - Hex. 3/8-24 x 7/8 Nylok	2
132	1349	Key 1/4 x 1/4 x 1 1/2	1				



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 - Transmission	1	33	3903	Gear - Brake Shaft	1
2	1533	Bearing - Ball	2	34	3906	Gear - Bull	1
3	3915	Pin - Locating	2	35	3905	Case - Differential	2
4	1532	Bearing - Needle	1	36	3904	Axle - Rear	2
5	1529	Bearing - Needle	2	37	3908	Gear - Axle	2
6	1508	Bearing - Needle	2	38	933217	Pin - Roll $\frac{1}{4} \times 1\frac{1}{2}$	2
7	1528	Bearing - Needle	2	39	4235	Gear - Differential Pinion	4
8	1232	Seal - Oil	3	40	1329	Cap Screw - Hex. $\frac{5}{16}$ -18 x $3\frac{1}{4}$	4
9	1303	Seal - Oil	1	41	1316	Nut - Hex. Lock $\frac{3}{16}$ -18	4
10	3503	Fork - Shift	2	42	3912	Gasket	1
11	5615	Rail - Front Shift	1	43	3901	Case Transmission	1
12	5616	Rail - Rear Shift	1	44	1530	Bearing - Needle	1
13	933156	Pin - Roll $\frac{1}{8} \times 1$	2	45	1531	Bearing - Needle	1
14	3517	Ball - Stop	2	46	943460-4	$\frac{1}{4}$ Std. Pipe Plug	1
15	3518	Spring - Stop	1	47	943420-4	$\frac{3}{8}$ Std. Pipe Plug	1
16	5614	Shift Pin - Stop	1	48	908038-4	Bolt Hex. - $\frac{3}{8}$ -16 x 2	5
17	3522	Gear - Input Drive	1	49	908043-4	Bolt - Hex. $\frac{3}{8}$ -16 x $3\frac{1}{2}$	1
18	1518	Bearing - Needle	1	50	915113-6	Nut - Nylock $\frac{3}{8}$ -16	6
19	3907	Shaft - Spline	1	51	5632	Stick - Shift Ass'y.	1
20	936125	Snap Ring Truarc $\frac{3}{4}$ Shaft	1				
21	3523	Gear (Hi & Intr.)	1	54	1239	Screw - Soc. Hd. - Set $\frac{1}{4}$ -20 x $\frac{3}{4}$	1
22	3524	Gear (Low & Reverse)	1	55	915111-4	Nut - Hex. Lock $\frac{1}{4}$ -20	1
23	3526	Gear - Spline Shaft	1	56	3577	Boot - Shift Lever	1
24	3910	Cluster - Shaft	1	57	1001	Knob - Shift	1
25	937014	Key - #9 Woodruff	2	58	3902	Drum - Brake	1
26	3525	Gear - Cluster	2	59	937022	Key #15 Woodruff	1
27	1504	Bushing - Bronze	1	60	936131	Snap Ring 1" Shaft	1
28	3528	Pinion - Cluster Shaft Reduction	1	61	4437	Band - Brake	1
29	3527	Gear - Cluster Shaft Reduction	1	62	908002-4	Bolt - Hex. $\frac{1}{4}$ -20 x $\frac{3}{8}$	2
30	4204	Gear - Reverse Idler	1	63	920081-4	Washer - Lock $\frac{1}{4}$	2
31	1516	Bushing - Bronze	1				
32	3909	Pin - Reverse Idler	5				

