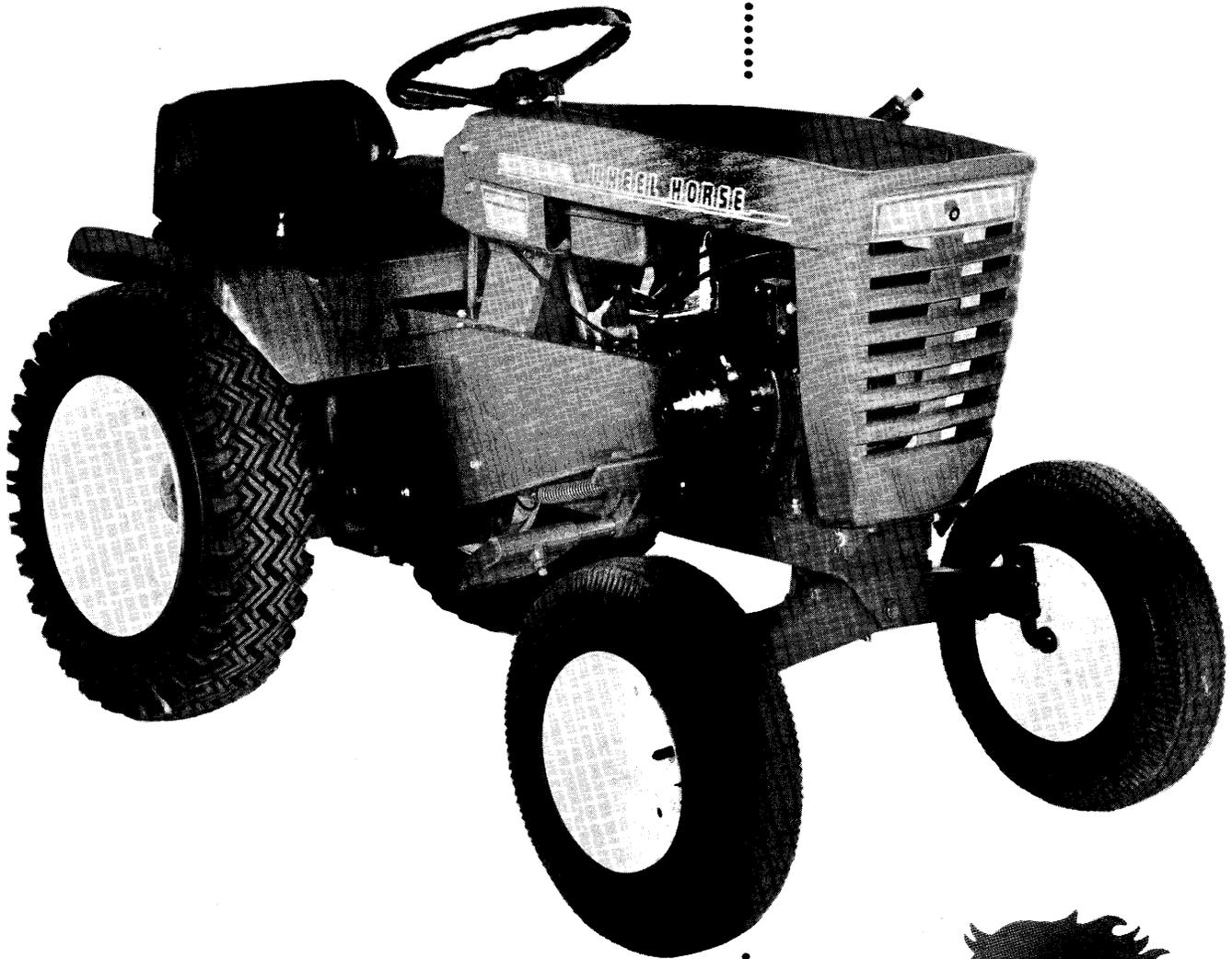


Wheel Horse[®]

LAWN AND GARDEN TRACTORS

OWNERS MANUAL

**COMMANDO 6
TRACTOR
MODEL
1-4631**



WHEEL-HORSE PRODUCTS, INC.

SOUTH BEND, IND.

"Quality is Standard Equipment in Every Wheelhorse Product"

ASSEMBLY

A. The tractor is shipped in one carton with the rear wheel and tire assemblies, Part No. 1667, in a separate carton.

B. Mount rear wheels to hubs using the ten lug bolts, Part No. 1004.

C. Mount front wheels to spindles using the $\frac{3}{8}$ -16 x $\frac{7}{8}$ Nylok bolts, Part No. 908033-6 and washers, Part No. 2844. There are two shim washers, one .015 thick and one .050 thick, in the loose part package for each wheel. Use one or both as shown on the exploded view drawing to provide a close fit. Press on hub caps.

D. Mount the steering wheel to steering shaft with the $\frac{1}{4}$ x $1\frac{1}{4}$ Roll Pin, Part No. 933215. Press on steering wheel insert.

BEFORE YOU START

There is **NO OIL** in the crankcase of the engine when shipped from the factory. **OIL** . . . See Engine Manual.

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. 90 oil (will require about 3 pints).

The transmission oil level 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 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. Start engine. After battery has been in service, add only approved water.**

DO NOT ADD ACID.

TIRES

The front tires are 4.00-8 and should be inflated to 12 pounds of air pressure. **The rear tires are 6 x 12 and should have 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 fill gas tank (located under the hood) with a good grade of regular gas, and open valve on fuel filter. See Page 4.

2. Place gear shift lever in neutral position and apply the parking brake.

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

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 $\frac{3}{4}$ 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 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 electrolyte level periodically. 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.

SAFETY SUGGESTIONS

Recommended by Outdoor Power Equipment Institute

1. Know the controls and how to stop quickly — read the owners manual.

2. Do not allow children to operate machine; nor adults to operate it without proper instruction.

3. Clear work area of objects which might be picked up and thrown.

4. Disengage all clutches and shift into neutral before starting motor. Keep hands, feet, and clothing away from power driven parts.

5. Do not carry passengers. Keep children and pets a safe distance away.

6. Never direct discharge of any material toward bystanders, nor allow anyone near machine while in operation.

7. Disengage power to attachment (s) and stop motor before leaving operator position.

8. Take precautions when leaving machine unattended (to avoid accidental starting, rolling away, accidental dropping of any attachment, etc.)

9. Disengage power to any attachment whenever it is not in use, or when traveling from one work area to another.

10. Stay alert for holes and other hidden hazards. Know what is behind you, before backing up.

11. Beware of steep slopes; reduce speed on all side slopes and sharp turns, to prevent tipping or losing control.

12. Don't stop or start suddenly when going uphill or downhill.

13. Use care when pulling loads or using heavy equipment.

14. Watch out for traffic when near roadways.

15. Handle gasoline with care — it is highly flammable.

a. Use approved gasoline container.

b. Never add gasoline to a running motor — fill tank out of doors wipe up spilled gasoline.

c. Replace gasoline cap securely.

d. Open doors if motor is run in garage — exhaust gases are dangerous.

16. Keep machine in good operating condition and keep safety devices in place. Use guards as instructed in owner's manual.

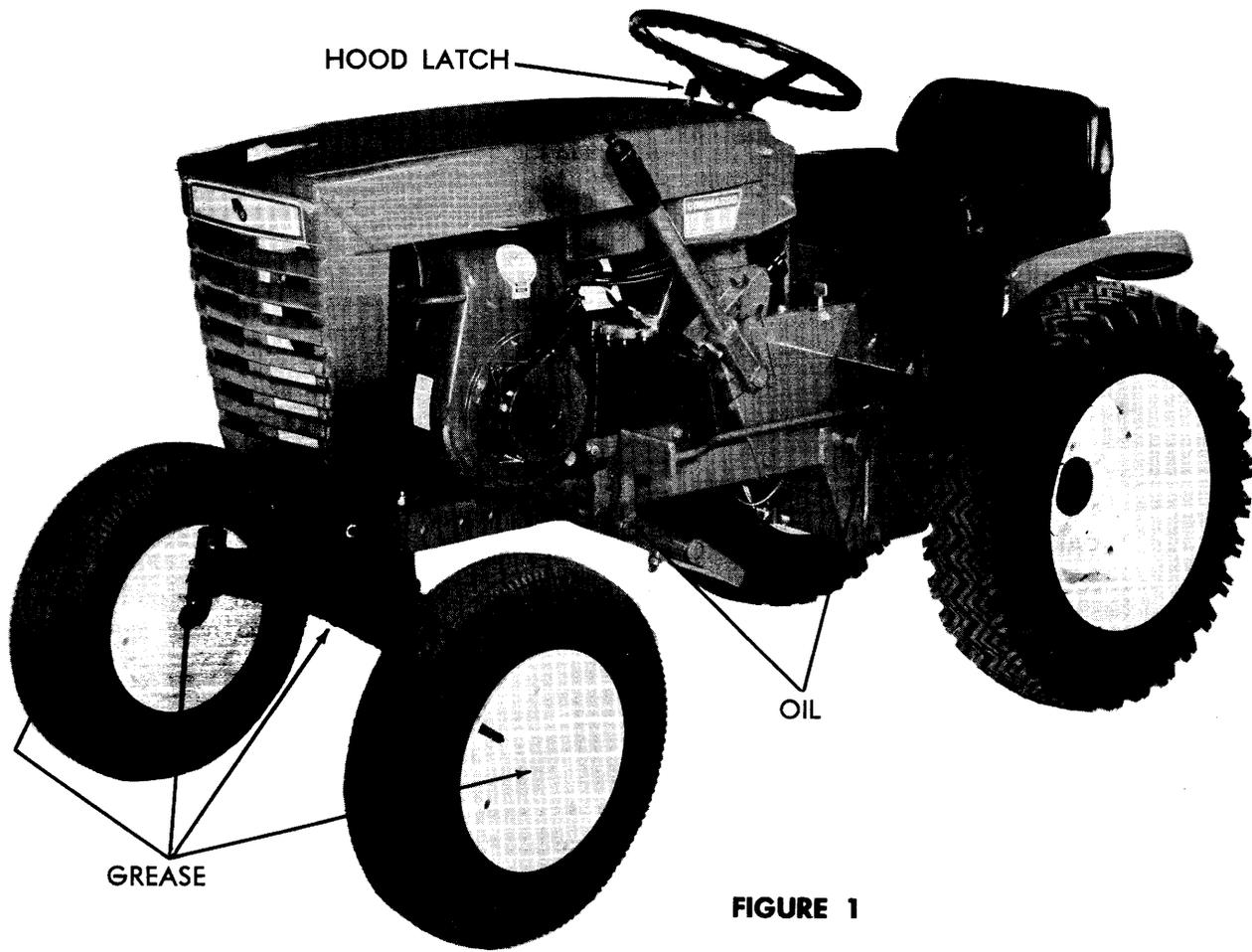
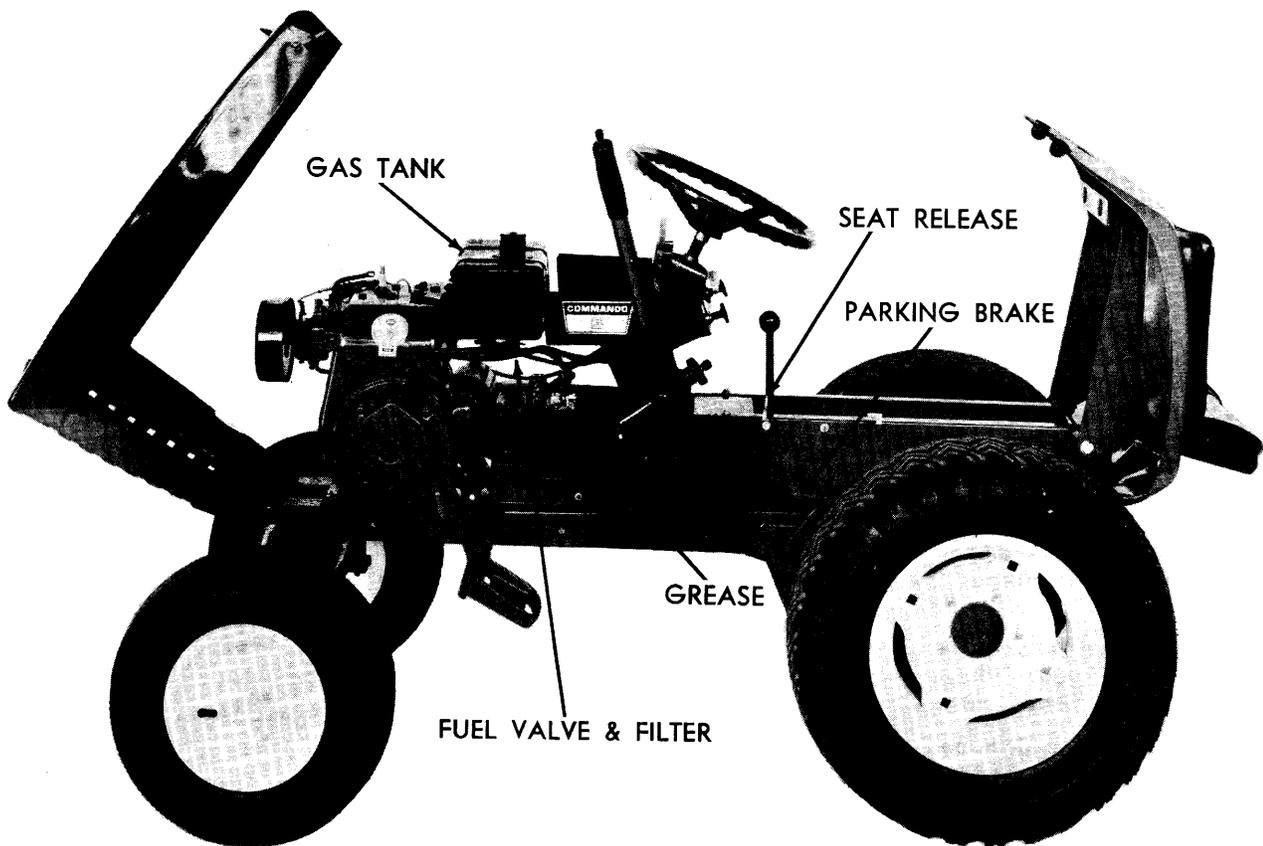
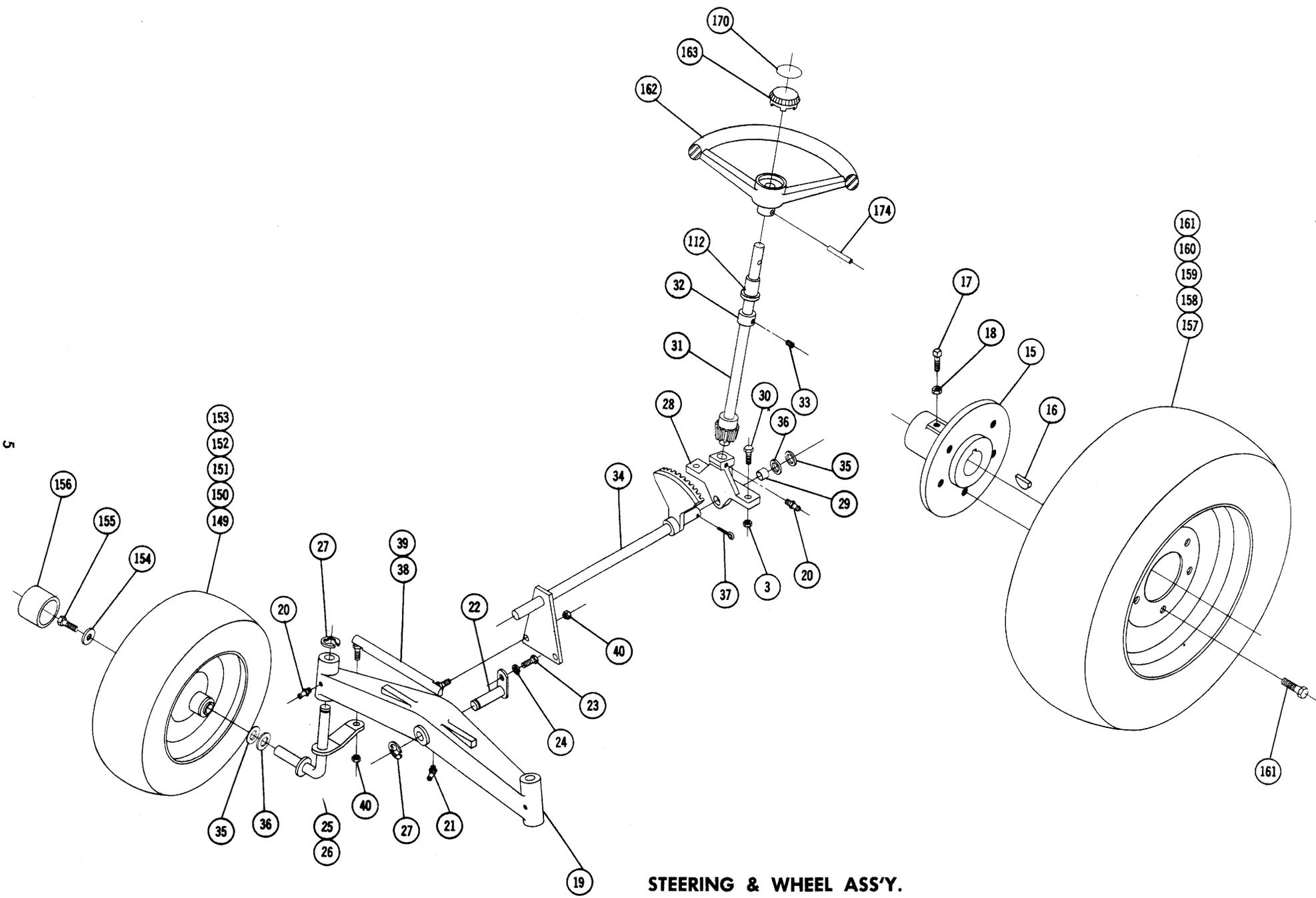
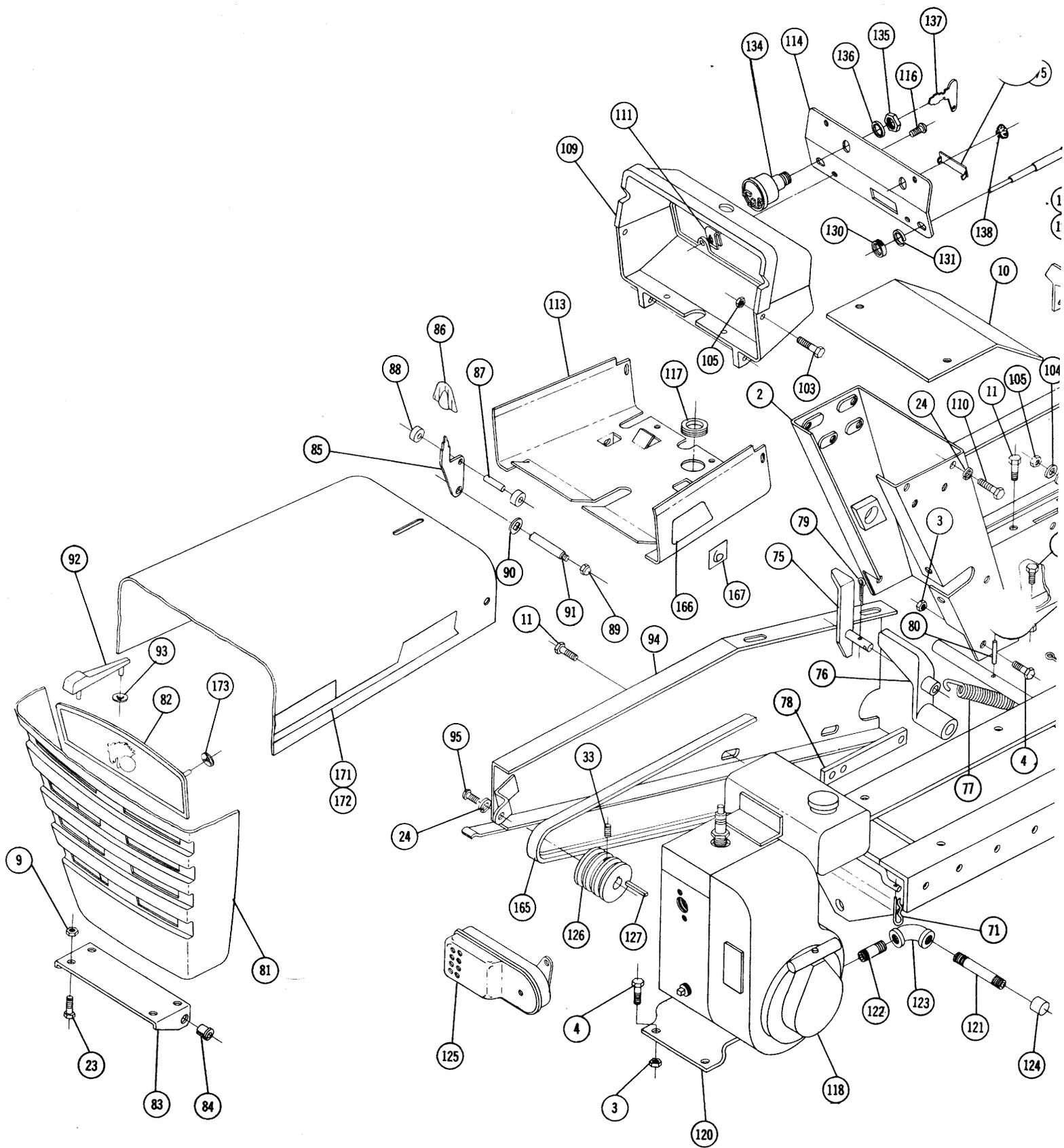


FIGURE 1

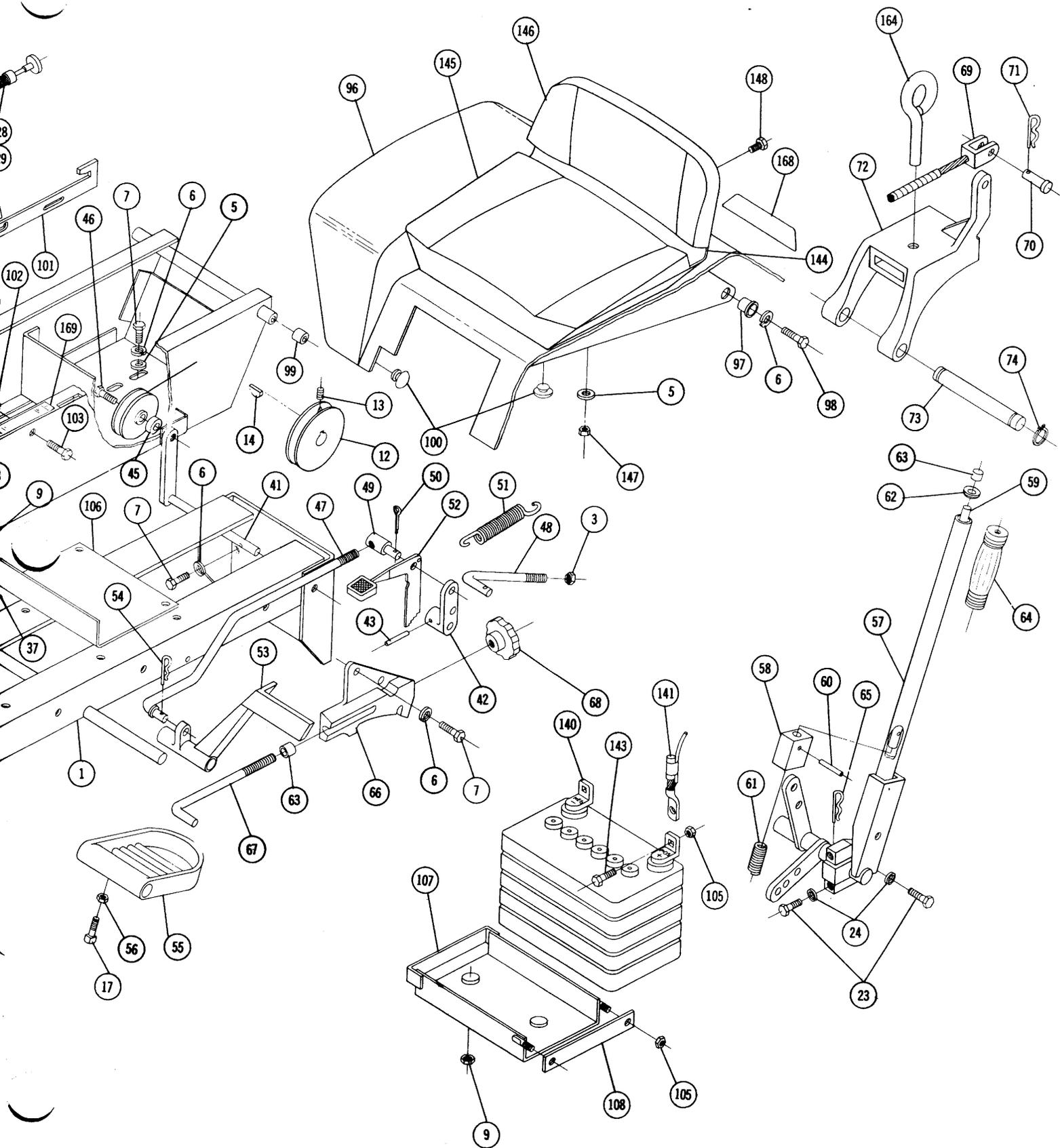




STEERING & WHEEL ASS'Y.



MAIN FRAME, FEND



R & HOOD ASS'Y.

PARTS LIST COMMANDO 6 TRACTOR

(Except Transmission — see page 11 for Transmission break down and Parts List)

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

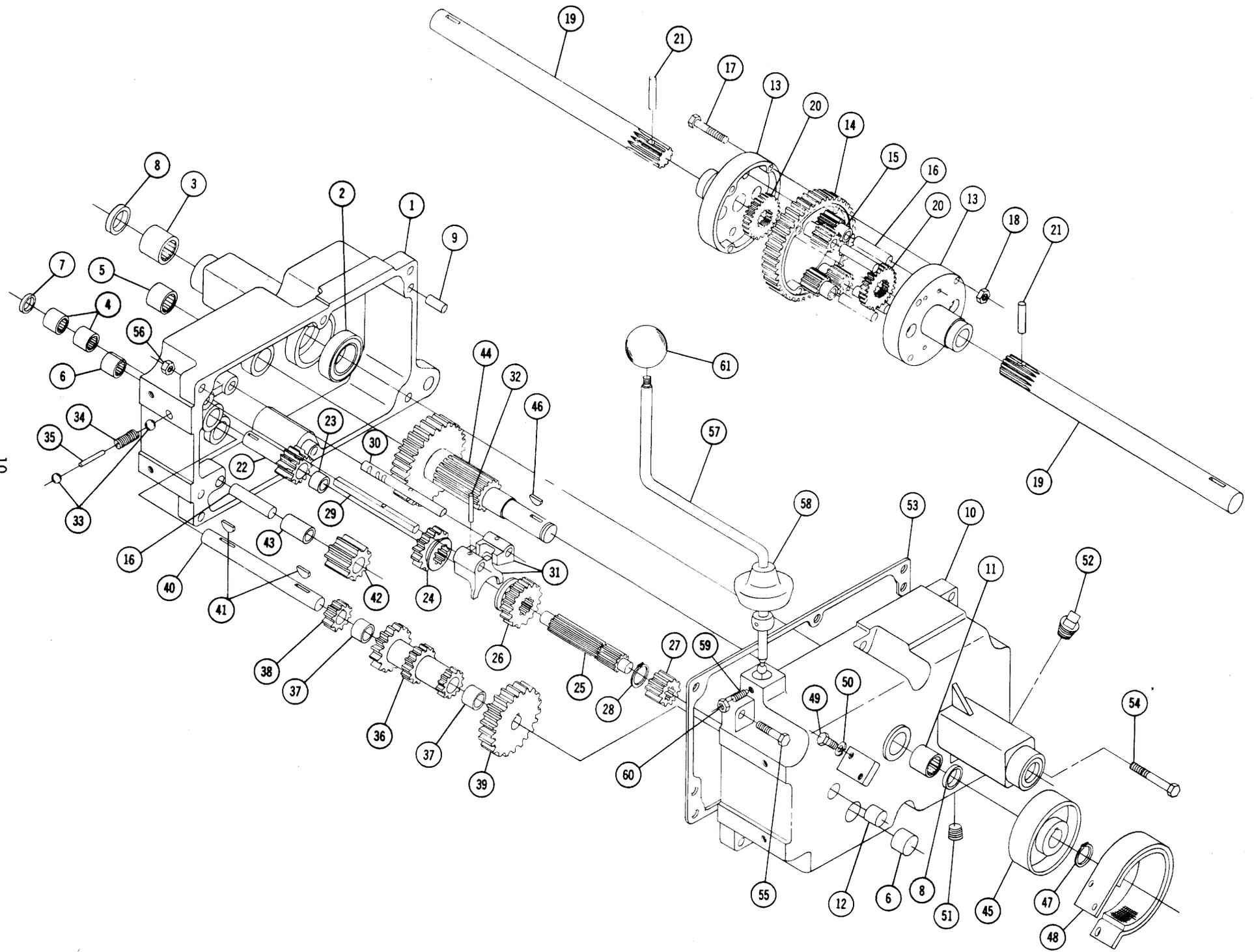
Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	5634	Ass'y. Frame	1	46	1363	Bolt Hex Special $\frac{3}{8}$ -16 x $\frac{7}{8}$	1
2	5645	Ass'y. Hoodstand	1	47	2593	Rod — Clutch	1
3	915663-4	Nut $\frac{3}{8}$ -16 Elastic Stop	9	48	3935	Rod — Brake	1
4	908034-4	Bolt Hex $\frac{3}{8}$ -16 x 1	6	49	1861	Stud — Clutch Rod	1
5	920009-4	Washer $\frac{3}{8}$ SAE	4	50	932017-4	Cotter Pin $\frac{1}{8}$ x 1	2
6	920083-4	Lockwasher $\frac{3}{8}$ Plain	10	51	1014	Spring — Clutch	1
7	908032-4	Bolt Hex $\frac{3}{8}$ -16 x $\frac{3}{4}$	8	52	5544	Ass'y. Lever & Knob — Brake	1
8	908017-4	Bolt Hex $\frac{5}{16}$ -18 x $\frac{3}{4}$	2	53	2267	Pedal — Clutch	1
9	915112-6	Nut Nylok $\frac{5}{16}$ -18	8	54	933504-4	Hairpin — Cotter	1
10	5622	Ass'y. Cover Plate	1	55	4421	Foot Rest	2
11	960151-4	Bolt Whizlock $\frac{1}{4}$ -20 x $\frac{1}{2}$	6	56	915113-4	Nut Hex $\frac{3}{8}$ -16	2
12	1611	Pulley	1	57	2266	Ass'y. Lift Lever	1
13	909849-5	Set Screw Nylok $\frac{1}{4}$ -20 x $\frac{5}{16}$	1	58	4438	Plunger	1
14	937014	Key #9 Woodruff	1	59	4439	Rod	1
15	4996	Hub — Wheel 5 Bolt	2	60	933168	Roll Pin $\frac{5}{32}$ x $1\frac{1}{16}$	1
16	937022	Key #15 Woodruff	2	61	3624	Spring	1
17	909554	Set Screw Square Head $\frac{3}{8}$ -16 x	2	62	3578	Guide — Plunger Rod	1
18	915236-4	Nut Hex $\frac{3}{8}$ -16 Jam	4	63	3680	Cap — Plunger Rod	2
19	5638	Axle Front	1	64	1000	Grip — Handle	1
20	1030	Fitting — Grease	3	65	933506-4	Hairpin Cotter	1
21	1481	Fitting — Grease 45°	1	66	5640	Quadrant	1
22	6216	Ass'y. Pin & Plate	1	67	2179	Rod Height Control	1
23	908015-4	Bolt Hex $\frac{5}{16}$ -18 x $\frac{1}{2}$	8	68	5280	Knob — Height Control	1
24	920082-4	Lockwasher $\frac{5}{16}$ Plain	9	69	3931	Ass'y. Cable — Lift	1
25	5630	Ass'y. Spindle R.H.	1	70	932120-4	Pin — Clevis $\frac{1}{4}$ Dia.	2
26	5631	Ass'y. Spindle L.H.	1	71	933503-4	Hairpin Cotter	4
27	5618	"E" Ring $\frac{3}{4}$ Dia.	3	72	3926	Hitch	1
28	6396	Support — Steering	1	73	3988	Pin	1
29	6397	Bushing	1	74	936125	Snap Ring $\frac{3}{4}$ Shaft	2
30	908035-4	Bolt Hex $\frac{3}{8}$ -16 x $1\frac{1}{4}$	2	75	6398	Ass'y. Trip Lever	1
31	6567	Ass'y. Steering Shaft — Upper	1	76	4239	Pedal — Attachment Clutch	1
32	1085	Collar	1	77	5714	Spring	1
33	909848-5	Set Screw $\frac{1}{4}$ -20 x $\frac{1}{4}$ Nylok	2	78	5385	Link	1
34	6565	Ass'y. Steering Shaft — Lower	1	79	932025-4	Cotter Pin $\frac{5}{32}$ x 1	2
35	5210	Washer — Shim (.015)	3	80	933213	Roll Pin $\frac{1}{4}$ x 1	2
36	1278	Washer — Shim (.050)	3	81	7231	Ass'y. Hood	1
37	932035-4	Cotter Pin $\frac{3}{16}$ x $1\frac{1}{4}$	2	82	7146	Plate Escutcheon	1
38	5628	Ass'y. Ball Joint R.H.	1	83	5455	Bracket — Hood Hinge	1
39	5629	Ass'y. Ball Joint L.H.	1	84	5457	Bushing — Nylon	2
40	915002-6	Nut Nylok $\frac{3}{8}$ -24	4	85	5467	Lever — Hood Latch	1
41	3950	Ass'y. Idler Arm & Shaft	1	86	5469	Knob	1
42	4899	Arm — Clutch Rod Pivot	1	87	933182	Roll Pin $\frac{3}{16}$ x $\frac{5}{8}$	1
43	933158	Roll Pin $\frac{1}{8}$ x $1\frac{1}{4}$	1	88	5468	Roller — Steel	2
44	1623	Pulley — Idler	1	89	915932-4	Nut High Crown #10-24	2
45	1536	Bushing	1	90	5466	Speed Nut $\frac{1}{4}$ Dia. Push On	2

PARTS LIST COMMANDO 6 TRACTOR

(Except Transmission — see page 11 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.
91	5522	Rod — Hood Latch	1	135	7261	Nut Hex $\frac{3}{16}$ -24 Special	1
92	5438	Ornament — Hood Latch	1	136	920159-4	Lockwasher $\frac{3}{16}$ Internal Tooth	1
93	5437	Speed Nut $\frac{1}{8}$ Dia. Push-On	2	137	7262	Key — Ignition	2
94	5308	Ass'y. Belt Guard	1	138	935113-4	Plug Button $\frac{29}{32}$ Hole	1
95	1432	Screw Round Head $\frac{5}{16}$ -24 x $\frac{1}{2}$	3				
96	7417	Ass'y. Fender	1	140	3653	Battery	1
97	5666	Bushing — Nylon	2	141	5647	Wiring Harness	1
98	908182-4	Bolt Hex $\frac{3}{8}$ -24 x $\frac{3}{8}$	2	143	908002-4	Bolt Hex $\frac{1}{4}$ -20 x $\frac{5}{8}$	2
99	4937	Spacer	2	144	7018	Ass'y. Seat Base	1
100	5667	Bumper — Rubber	4	145	7019	Cushion — Seat	1
101	5695	Latch	1	146	7020	Cushion — Back	1
102	MW-4404	Spring Washer	2	147	915113-6	Nut — Nyllok $\frac{3}{8}$ -16	2
103	960152-4	Bolt Whizlock $\frac{1}{4}$ -20 x $\frac{5}{8}$	6	148	7027	Bolt Hex $\frac{1}{4}$ -20 x $\frac{1}{2}$	4
104	920007-4	Washer $\frac{1}{4}$ SAE	2	149	6389	Ass'y. Wheel, Tire & Tube	2
105	915111-6	Nut — Nyllok $\frac{1}{4}$ -20	12	150	5635	Wheel	2
106	6825	Cover — Dust	1	151	4999	Bearing — Ball	4
107	4953	Ass'y. Battery Box	1	152	1656	Tire 4.80/4.00 - 8	2
108	4958	Clamp — Battery	1	153	1657	Tube	2
109	5450	Housing — Control Panel	1	154	2844	Washer — Wheel Retainer	2
110	908016-4	Bolt Hex $\frac{5}{16}$ -18 x $\frac{5}{8}$	4	155	908033-6	Bolt $\frac{3}{8}$ -16 x $\frac{7}{8}$ Nyllok	2
111	5442	Speed Nut #10-16 Thread	4	156	2816	Hub Cap	2
112	5409	Bushing — Nylon	1	157	1667	Ass'y. Wheel, Tire & Tube	2
113	5458	Support — Fuel Tank	1	158	1700	Wheel	2
114	7379	Panel — Control	1	159	1662	Tire 6 x 12 Lawn & Garden	2
115	7415	Plug Button	1	160	1654	Tube	2
116	926308-4	Screw Self Tap #10-16 x $\frac{3}{4}$	4	161	1004	Lug Bolt — Wheel $\frac{7}{16}$ -20	10
117	5439	Grommet — Rubber	1	162	7623	Steering Wheel	1
118	6751	Ass'y. Engine Lauson — Electric	1	163	2897	Insert	1
120	4416	Base — Engine	1	164	1813	Tool Pin	1
121	943317-4	Nipple $\frac{1}{4}$ Pipe x 4	1	165	1576	"V" Belt — Drive	1
122	4218	Nipple $\frac{1}{4}$ Pipe x $1\frac{1}{4}$	1	166	7560	Decal — Commando	2
123	4216	Elbow $\frac{1}{4}$ Pipe x 90°	1	167	7561	Decal — "6"	2
124	4217	Cap $\frac{1}{4}$ Pipe	1	168	5604	Decal — Fender	1
125	7628	Muffler	1	169	6165	Decal — Seat Latch	1
126	1621	Pulley — Engine	1	170	7421	Decal — Steering Wheel	1
127	1349	Key $\frac{1}{4}$ x $\frac{1}{4}$ x $1\frac{1}{2}$	1	171	7422	Decal — Hood Trim R.H.	1
128	5440	Ass'y. Control — Choke	1	172	7423	Decal — Hood Trim L.H.	1
129	5171	Ass'y. Control — Throttle	1	173	7632	Speed Nut — Push-On	1
130	1364	Nut $\frac{3}{16}$ -18 Round	2	174	933215	Roll Pin $\frac{1}{4}$ x $1\frac{1}{4}$	1
131	920127-4	Lockwasher $\frac{3}{16}$ Shake Proof	2	175	7721	Clip Push-On	1
134	7572	Ass'y. Switch — Ignition	1				



5053 TRANSMISSION PARTS LIST

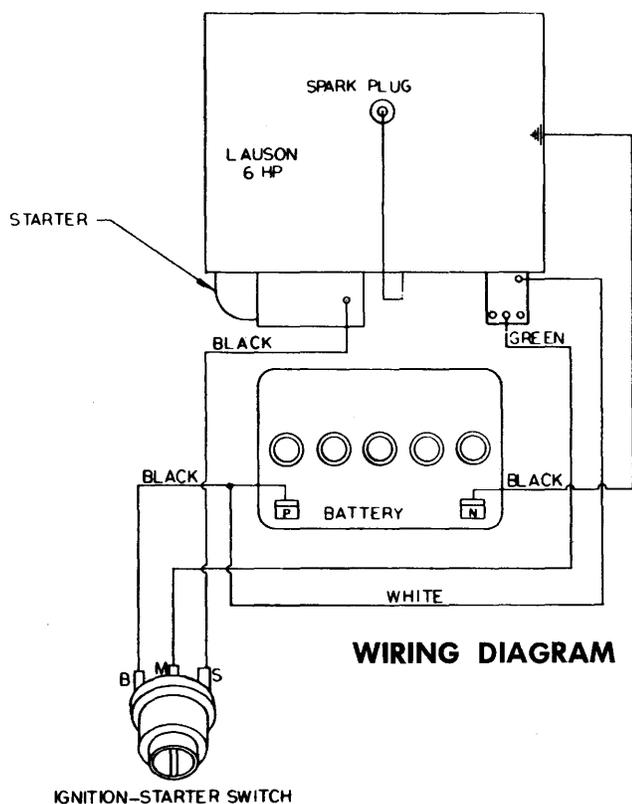
*(ORDER NO. 5053 FOR COMPLETE TRANSMISSION)

When ordering parts always list Part No. and Name of Part.

Ref. No.	Part No.	Description	No. Req'd.
1	3900	Case R.H.	1
2	1533	Bearing — Ball 1½ I.D.	2
3	1528	Bearing — Needle	2
4	1508	Bearing — Needle ¾ I.D.	2
5	1532	Bearing — Needle 1" I.D.	1
6	1529	Bearing — Needle ¾ I.D.	1
7	1303	Seal — Oil ¾ Shaft	1
8	1232	Seal — Oil 1" Shaft	3
9	3915	Pin — Dowel	2
10	3901	Case L.H.	1
11	1530	Bearing — Needle 1" I.D.	1
12	1531	Bearing — Needle ⅝ I.D.	1
13	3905	Case — Differential	2
14	3906	Gear — Differential Bull	1
15	4235	Gear — Differential Pinion	4
16	3909	Shaft	5
17	908146	Bolt Hex ⅝-18 x ¾	4
18	1316	Nut Huglock ⅝-18	4
19	3904	Axle — Rear	2
20	3908	Gear — Axle	2
21	933217	Roll Pin ¼ x 1½	2
22	3522	Gear — Input	1
23	1518	Bearing — Needle ⅝ I.D.	1
24	3523	Gear Hi & 2nd	1
25	3907	Shaft Spline	1
26	3524	Gear — Low & Reverse	1
27	3526	Gear — Pinion — Splined	1
28	936125	Snap Ring ¾ Truarc	1
29	5615	Rail — Front Shift	1
30	5616	Rail — Rear Shift	1
31	3503	Fork — Shift	2

Ref. No.	Part No.	Description	No. Req'd.
32	933156	Roll Pin ⅛ x 1	2
33	3517	Ball — Shift Stop	2
34	3518	Spring — Shift Stop	1
35	5614	Pin — Shift Stop	1
36	3525	Gear — Cluster	1
37	1504	Bearing — Bronze ¾ I.D.	2
38	3528	Gear — Reduction Pinion	1
39	3527	Gear — Reduction	1
40	3910	Shaft — Cluster Gear	1
41	937014	Key #9 Woodruff	2
42	4204	Gear — Reverse Idler	1
43	1516	Bushing — Bronze ½ I.D.	1
44	3903	Gear — Brake Shaft	1
45	3902	Drum — Brake	1
46	937022	Key #15 Woodruff	1
47	936131	Snap Ring 1" Shaft	1
48	7376	Ass'y. Brake Band & Lining	1
49	908002-4	Bolt Hex ¼-20 x ⅝	2
50	920081-4	Lockwasher ¼ Dia.	2
51	943460	Plug ¼ Pipe	1
52	943420	Plug ⅜ Pipe	1
53	3912	Gasket	1
54	908043-4	Bolt Hex ⅜-16 x 3½	1
55	908038-4	Bolt Hex ⅜-16 x 2	5
56	915113-6	Nut Hex ⅜-16 Nylok	6
57	5632	Ass'y. Shift Stick	1
58	3577	Boot — Shift Stick	1
59	1239	Set Screw Dog Point ¼-20 x ¾	1
60	915111-6	Nut Hex ¼-20 Nylok	1
61	1001	Knob	1

*Not included in No. 5053 Assembly.



SPECIFICATIONS

(Specifications subject to change without notice.)

Length Overall	61 inches
Wheelbase	41¼ inches
Width Overall	34 inches
Width at Front Wheels	33½ inches
Height	37½ inches
Height to Top of Hood	33½ inches
Approx. Shipping Weight	398 lbs.
Crop Clearance	7¼ inches
Frame Clearance	13½ inches
Engine Horsepower (Engine Mfg'r's Rating)	6 H.P.
Engine Crankcase Oil Capacity	21 oz.
Fuel Capacity	4 quarts
Tires (front) 4.00-8 Pneumatic (16" wheel dia.)	
Tires (rear) 6.00 x 12" Pneumatic (22½" wheel dia.)	
Speeds — 3 Forward to 6 mph. 1 Reverse to 2½ mph.	
Turning radius (to outside wheel)	6'

ATTACHMENTS AVAILABLE COMMANDO 6 TRACTOR

36" ROTARY MOWER (5-2361)
32" ROTARY MOWER (5-2321)
32" SNOW THROWER (6-2211)
42" SICKLE BAR MOWER (7-1321)
42" SNOW-DOZER (6-4111)
32" DISC (7-1511)
8" PLOW (7-1421)
TRAILING CULTIVATOR (7-1711)
TWO SECTION CULTIVATOR (7-1721)
SPIKE TOOTH HARROW (7-1611)
2-WHEEL DUMP TRAILER (7-2211)
4-WHEEL UTILITY WAGON (7-2111)
SPIKED DISC AERATOR (7-2411)
GRADER BLADE (7-1111)
LAWN ROLLER (7-2311)



OPTIONAL ACCESSORIES

TIRE CHAINS (8-2311)
FRONT AND REAR WHEEL DISCS (8-0511)
WHEEL WEIGHTS — FRONT (8-1211)
WHEEL WEIGHTS — REAR (8-1111)
AUXILIARY HITCH (8-5111)
DUAL WHEELS (8-0711)
LIGHT PANEL (8-0811)

