

Wheel Horse®

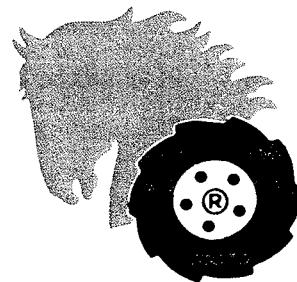
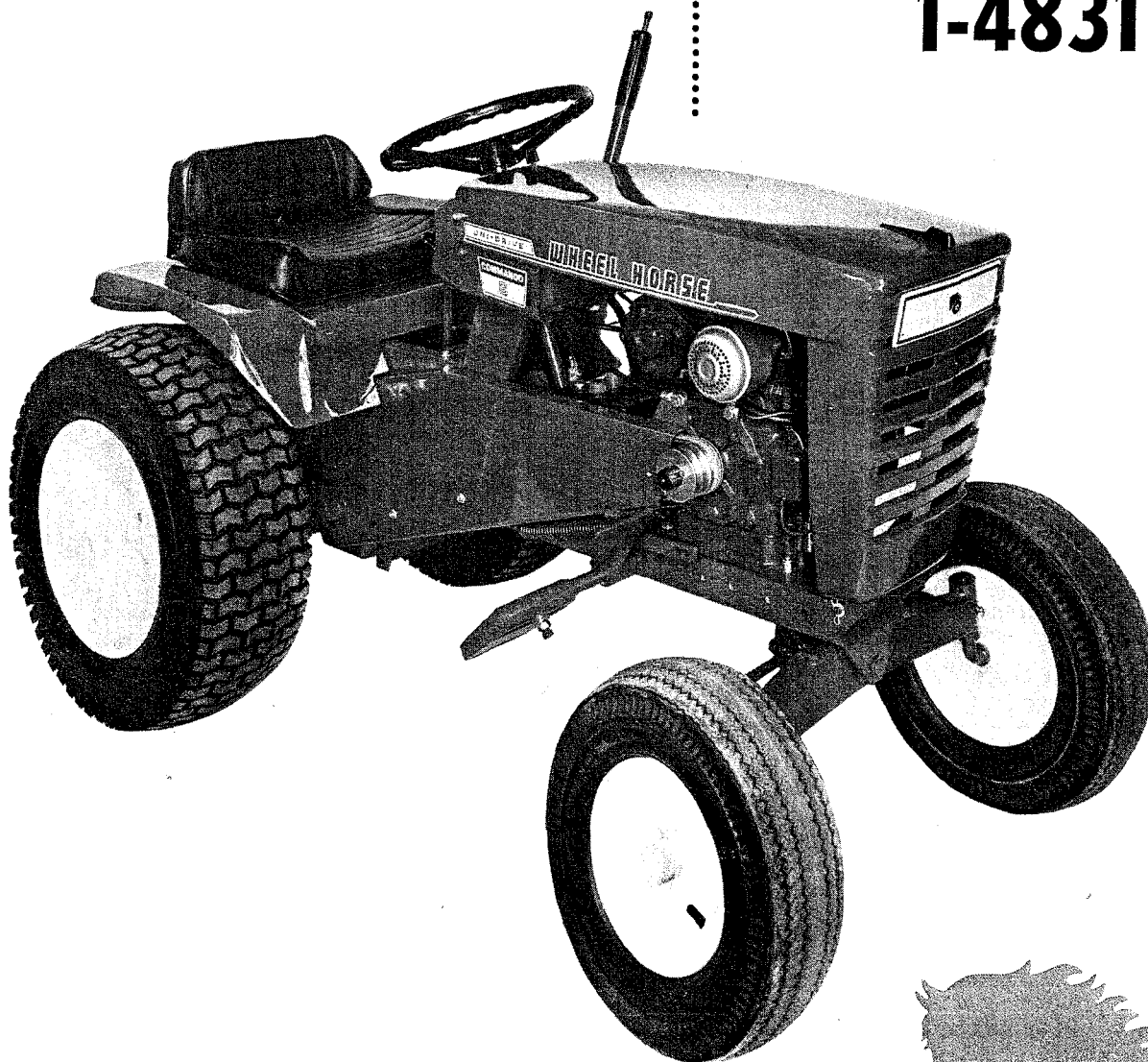
LAWN AND GARDEN TRACTORS

OWNERS MANUAL

**COMMANDO 8
TRACTOR**

MODEL

1-4831



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. 5432, 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.

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 in 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 16x5.50-8 and should be inflated to 12 pounds of air pressure. **The rear tires are 8.50 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 sediment bowl. See Fig. 1, 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 $\frac{2}{3}$ 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 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.

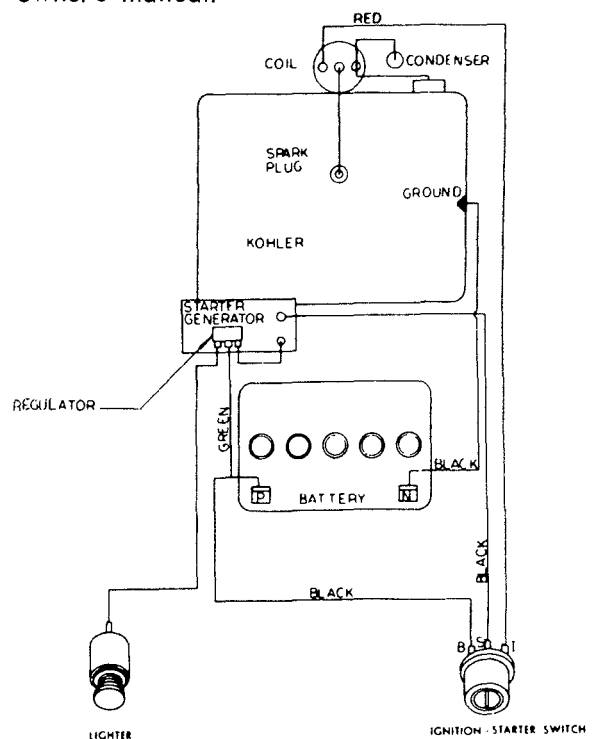
a. Use approved gasoline container.

b. Never add gasoline to a running motor — fill tank out of doors and 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.



WIRING DIAGRAM

SPECIFICATIONS

(Specifications subject to change without notice.)

Length Overall	61 inches
Wheelbase	41 1/4 inches
Width Overall	35 inches
Width at Front Wheels	33 1/2 inches
Height	37 1/2 inches
Height to Top of Hood	33 1/2 inches
Approx. Shipping Weight	430 lbs.
Crop Clearance	7 1/4 inches
Frame Clearance	13 1/2 inches
Engine (4-cycle, single cylinder, air cooled)	Electric Start
Horsepower (Manufacturer's Rating)	8 H.P.
Engine Oil Capacity	2 1/2 pints
Fuel Capacity	6 quarts
Transmission Oil Capacity	2 quarts
Tires (front) 5.50-8 Pneumatic (16" wheel dia.)	
Tires (rear) Terra-Type 8.50 x 12" Pneumatic (23" wheel dia.)	
Speeds — 3 Forward to 6 mph. 1 Reverse to 2 1/2 mph.	
Turning radius (to outside of outside wheel)	6'

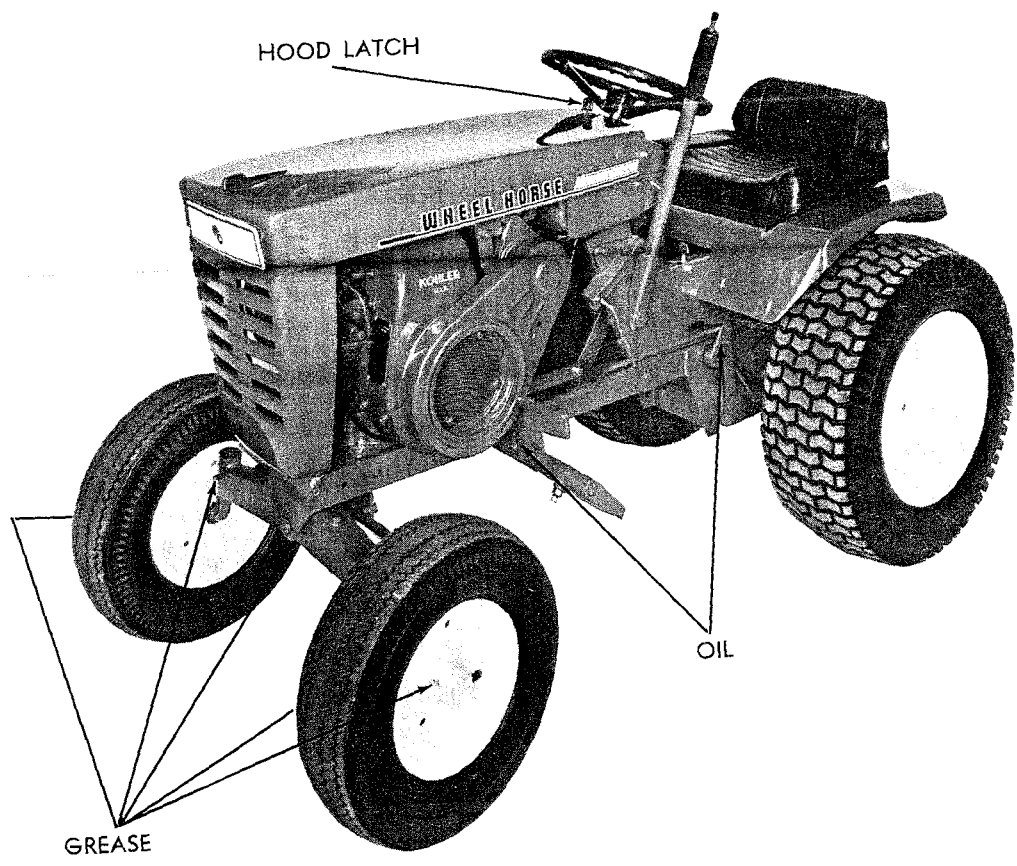
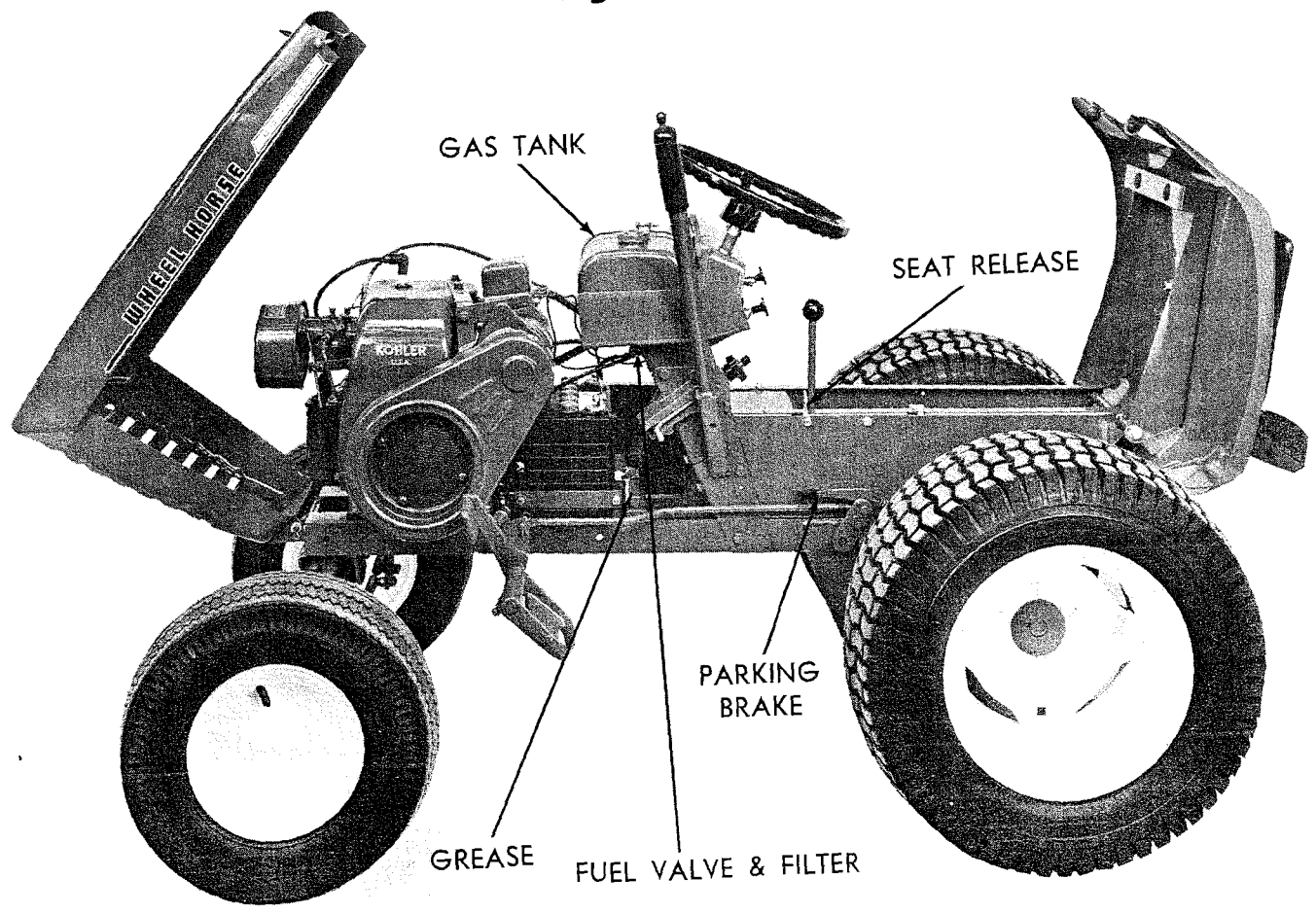
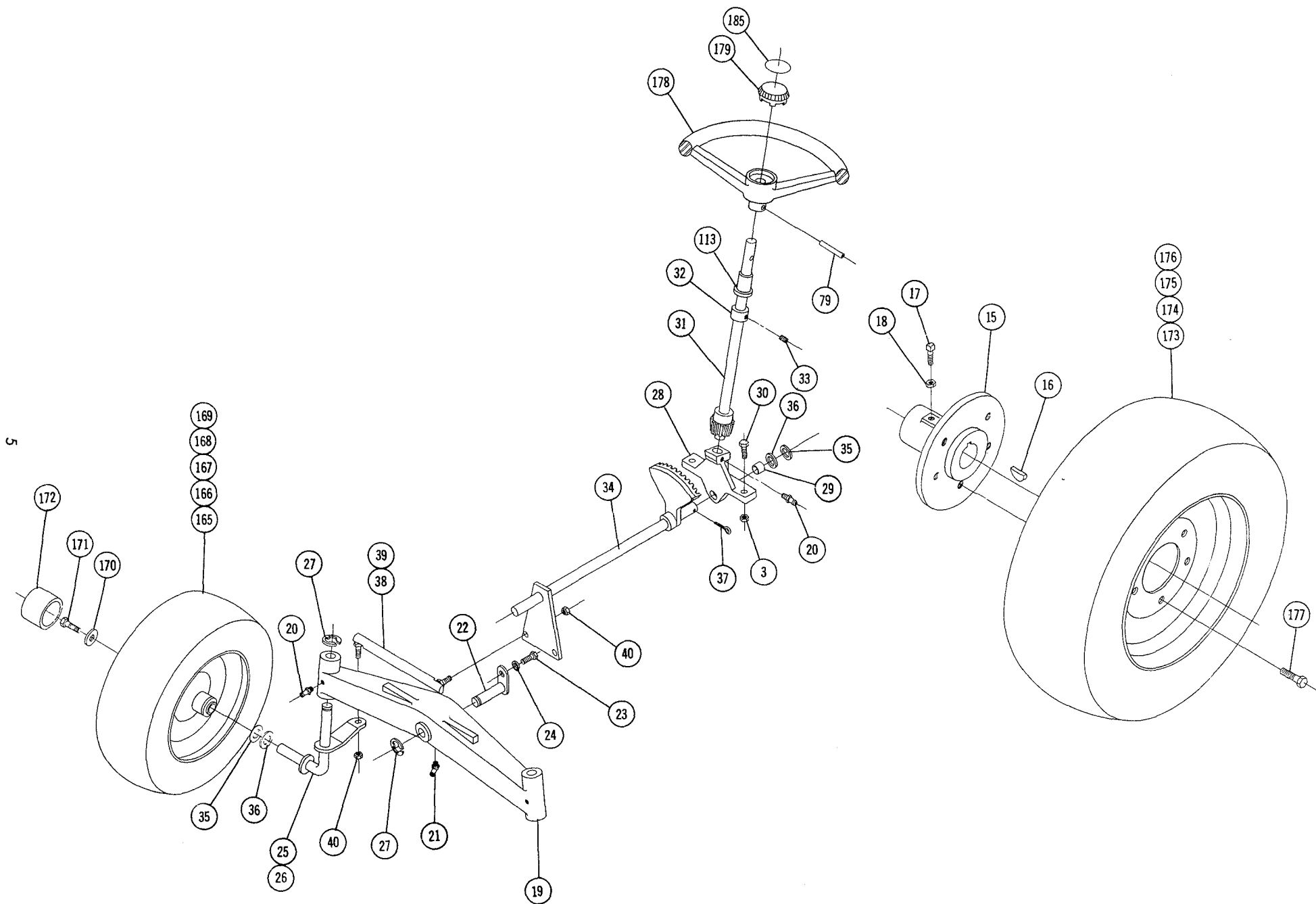
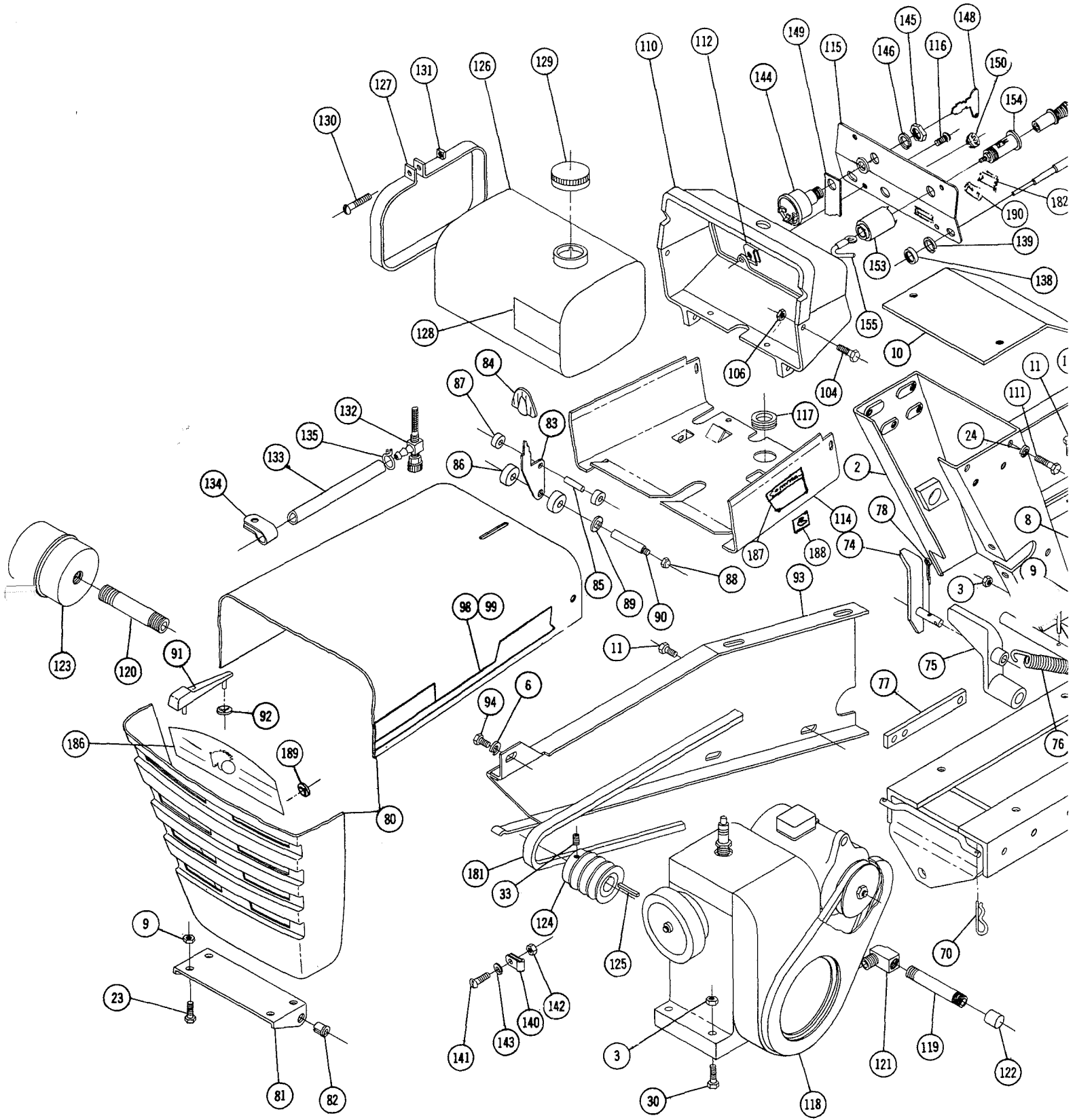


Figure 1

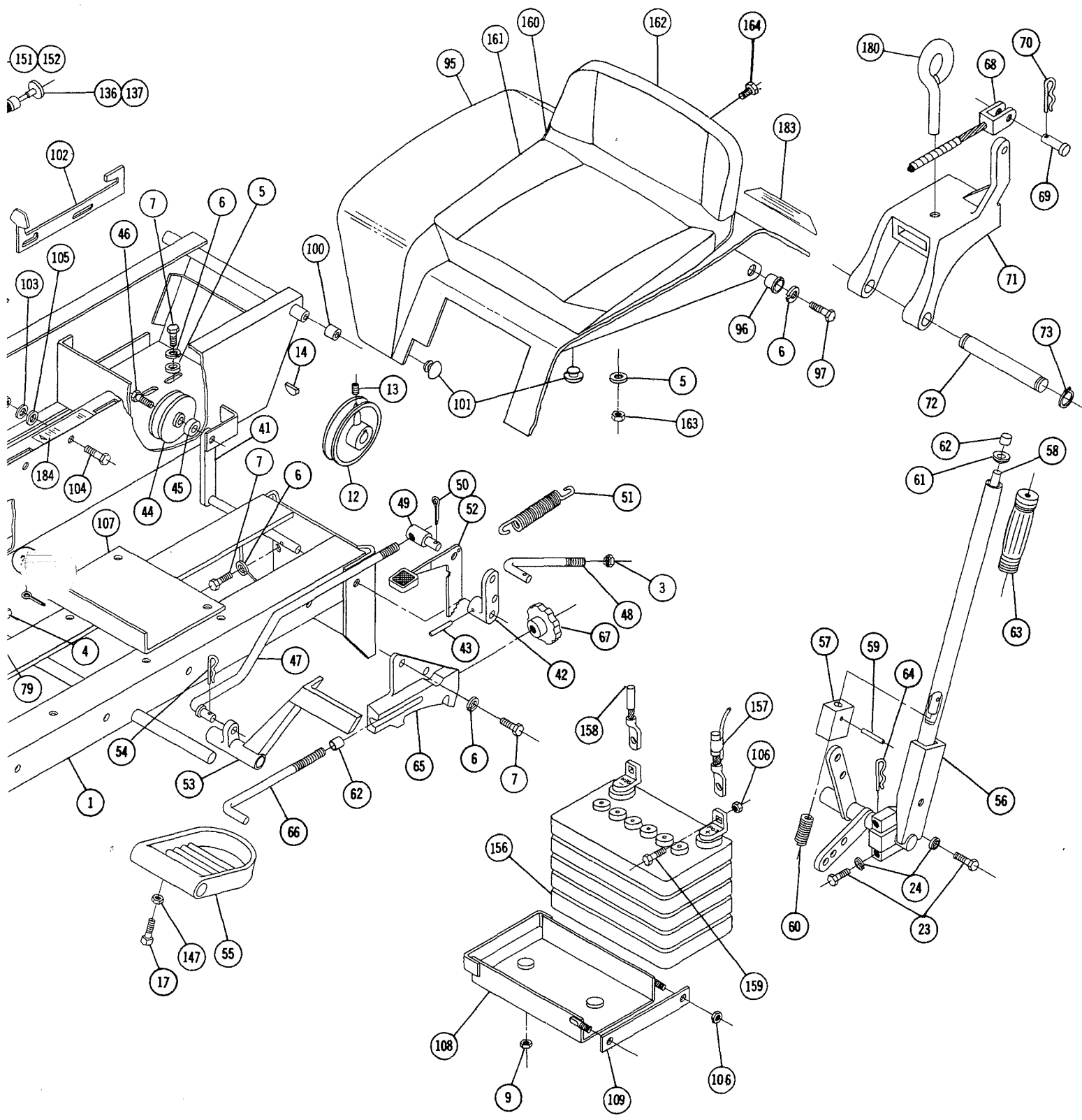




STEERING & WHEEL ASS'Y.



MAIN FRAME, FER



R & HOOD ASS'Y.

PARTS LIST COMMANDO 8 TRACTOR

(See pages 10 and 11 for Transmission break down and Parts List)

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

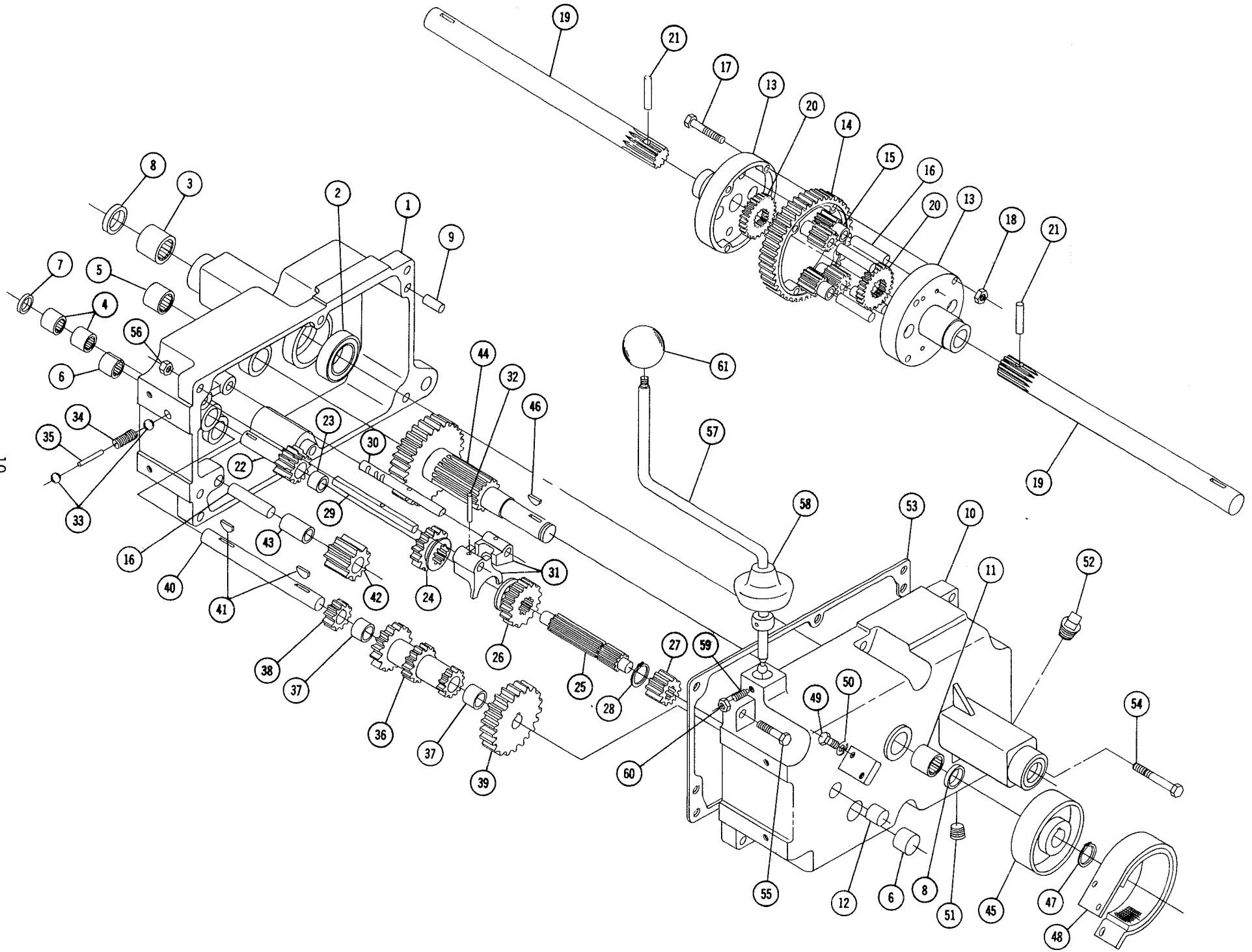
Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	5634	Ass'y. Frame	1	47	2593	Rod — Clutch	1
2	5645	Ass'y. Hood Stand	1	48	3935	Rod — Brake	1
3	915663-4	Nut $\frac{3}{8}$ -16 Elastic Stop	9	49	1861	Stud — Clutch Rod	1
4	908034-4	Bolt Hex $\frac{3}{8}$ -16 x 1	2	50	932017-4	Cotter Pin $\frac{1}{8}$ x 1	2
5	920009-4	Washer $\frac{3}{8}$ SAE	4	51	1014	Spring — Clutch	1
6	920083-4	Lockwasher $\frac{3}{8}$ Plain	11	52	5544	Ass'y. Lever & Knob — Brake	1
7	908032-4	Bolt Hex $\frac{3}{8}$ -16 x $\frac{3}{4}$	8	53	2267	Pedal — Clutch	1
8	908017-4	Bolt Hex $\frac{5}{16}$ -18 x $\frac{3}{4}$	2	54	933504-4	Hairpin Cotter	1
9	915112-6	Nut Nylok $\frac{5}{16}$ -18	8	55	4421	Foot Rest	2
10	5622	Ass'y. Cover Plate	1	56	2266	Ass'y. Lift Lever	1
11	960151-4	Bolt Whizlock $\frac{1}{4}$ -20 x $\frac{1}{2}$	6	57	4438	Plunger	1
12	1611	Pulley	1	58	4439	Rod	1
13	909849-5	Set Screw $\frac{1}{4}$ -20 x $\frac{5}{16}$ Nylok	1	59	933168	Roll Pin $\frac{5}{32}$ x $\frac{13}{16}$	1
14	937014	Key #9 Woodruff	1	60	3624	Spring	1
15	4996	Hub — Wheel 5 Bolt	2	61	3578	Guide — Plunger Rod	1
16	937022	Key #15 Woodruff	2	62	3680	Cap — Plunger Rod	2
17	909554	Set Screw — Square Head $\frac{3}{8}$ -16 x 1	4	63	1000	Grip — Handle	1
18	915236-4	Nut Hex $\frac{3}{8}$ -16	4	64	933506-4	Hair Pin	1
19	5638	Axle — Front	1	65	5640	Quadrant	1
20	1030	Fitting — Grease	3	66	2179	Rod — Height Control	1
21	1481	Fitting — Grease 45°	1	67	5280	Knob — Height Control	1
22	6216	Ass'y. Pin & Plate	1	68	3931	Ass'y. Cable — Lift	1
23	908015-4	Bolt Hex $\frac{5}{16}$ -18 x $\frac{1}{2}$	8	69	932120-4	Pin — Clevis $\frac{1}{4}$ Dia.	2
24	920082-4	Lockwasher $\frac{5}{16}$ Plain	4	70	933503-4	Hair Pin Cotter	4
25	5630	Ass'y. Spindle R.H.	1	71	3926	Hitch	1
26	5631	Ass'y. Spindle L.H.	1	72	3988	Pin — Hitch	1
27	5618	"E" Ring $\frac{3}{4}$ Dia.	3	73	936125	Snap Ring $\frac{3}{4}$ Shaft	2
28	6396	Support — Steering	1	74	6398	Ass'y. Trip Lever	1
29	6397	Bushing	1	75	4239	Pedal — Attachment Clutch	1
30	908035-4	Bolt Hex $\frac{3}{8}$ -16 x $1\frac{1}{4}$	6	76	5714	Spring	1
31	6567	Ass'y. Steering Shaft — Upper	1	77	5385	Link	1
32	1085	Collar	1	78	932025-4	Cotter Pin	2
33	909848-5	Set Screw $\frac{1}{4}$ -20 x $\frac{1}{4}$ Nylok	2	79	933215	Roll Pin $\frac{1}{4}$ x $1\frac{1}{4}$	2
34	6565	Ass'y. Steering Shaft — Lower	1	80	7231	Ass'y. Hood	1
35	5210	Washer — Shim (.015)	3	81	5455	Bracket — Hood Hinge	1
36	1278	Washer — Shim (.050)	3	82	5457	Bushing — Nylon	2
37	932035-4	Cotter Pin $\frac{3}{16}$ x $1\frac{1}{4}$	2	83	5467	Lever — Hood Latch	1
38	5628	Ass'y. Ball Joint R.H.	1	84	5469	Knob	1
39	5629	Ass'y. Ball Joint L.H.	1	85	933182	Roll Pin $\frac{3}{16}$ x $\frac{5}{8}$	1
40	915002-6	Nut Nylok $\frac{3}{8}$ -24	4	86	5505	Roller — Rubber	2
41	3950	Ass'y. Idler Arm & Shaft	1	87	5468	Roller — Steel	2
42	4899	Arm — Clutch Rod Pivot	1	88	915932-4	Nut — High Crown #10-24	2
43	933158	Roll Pin $\frac{1}{8}$ x $1\frac{1}{4}$	1	89	5466	Speed Nut $\frac{1}{4}$ Dia. Push-On	2
44	1623	Pulley — Idler	1	90	5522	Rod — Hood Latch	1
45	1536	Bushing	1	91	5438	Ornament — Hood	1
46	1363	Bolt Hex Special $\frac{3}{8}$ -16 x $\frac{3}{8}$	1	92	5437	Speed Nut $\frac{1}{8}$ Dia. Push-On	2

PARTS LIST COMMANDO 8 TRACTOR

(See pages 10 and 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
93	4993	Ass'y Belt Guard	1	142	915537-4	Nut Hex #8-32	1
94	908030-6	Bolt — Hex $\frac{3}{8}$ -16 x $\frac{1}{2}$ — Nylok	1	143	920078-4	Lockwasher #8	1
95	7444	Ass'y. Fender	1	144	7262	Ass'y. Switch — Ignition	1
96	5666	Bushing — Nylon	2	145	7261	Nut Hex $\frac{3}{8}$ -24 Special	1
97	908182-4	Bolt Hex $\frac{3}{8}$ -24 x $\frac{3}{8}$	2	146	920159-4	Lockwasher $\frac{3}{8}$ Internal Tooth	1
98	7422	Decal — Hood Trim R.H.	1	147	915113-4	Nut — Hex $\frac{3}{8}$ -16	2
99	7423	Decal — Hood Trim L.H.	1	148	7262	Key — Ignition	2
100	4937	Spacer	2	149	5451	Insulator — Switch	1
101	5667	Bumper — Rubber	4	150	5506	Plug Button	1
102	5695	Latch	1	151	5480	Ass'y. Cligar Lighter — Complete	1
103	MW-4404	Spring Washer	2	152	5481	Ass'y. Knob & Plug	1
104	960152-4	Bolt — Whizlock $\frac{1}{4}$ -20 x $\frac{3}{8}$	6	153	5483	Shell	1
105	920007-4	Washer $\frac{1}{4}$ SAE	2	154	5482	Ass'y. Socket	1
106	915111-6	Nut $\frac{1}{4}$ -20 Nylok	10	155	5484	Ass'y. Wire	1
107	6825	Cover — Dust	1	156	3653	Battery	1
108	4953	Ass'y. Battery Box	1	157	5445	Wiring Harness	1
109	4958	Clamp — Battery	1	158	3660	Wire Battery to Ground	1
110	5450	Housing — Control Panel	1	159	908002-4	Bolt Hex $\frac{1}{4}$ -20 x $\frac{5}{8}$	2
111	908016-4	Bolt Hex $\frac{3}{8}$ -18 x $\frac{3}{8}$	6	160	7018	Ass'y. Seat Base	1
112	5442	Speed Nut #10-16 Thread	4	161	7019	Cushion — Seat	1
113	5409	Bushing — Nylon	1	162	7020	Cushion — Back	1
114	5458	Support — Fuel Tank	1	163	915113-6	Nut $\frac{3}{8}$ -16 Nylok	2
115	7222	Panel — Control	1	164	7027	Bolt Hex $\frac{1}{4}$ -20 x $\frac{1}{2}$	4
116	926308-4	Screw — Self-Tap #10-16 x $\frac{3}{4}$	4	165	5637	Ass'y. Wheel, Tire & Tube — Front	2
117	5439	Grommet — Rubber	1	166	5635	Wheel	2
118	5151	Ass'y. Engine — Kohler	1	167	4999	Bearing — Ball	4
119	5223	Nipple $\frac{3}{8}$ Pipe x $3\frac{1}{2}$ Special	1	168	5636	Tire — 16 x 5.50-8	2
120	943367-4	Nipple 1" Pipe x $2\frac{1}{2}$	1	169	5512	Tube	2
121	5222	Elbow 90° Special	1	170	2844	Washer — Wheel Retainer	2
122	5224	Cap $\frac{3}{8}$ Pipe	1	171	908033-6	Bolt $\frac{3}{8}$ -16 x $\frac{7}{8}$ Nylok	2
123	5429	Muffler	1	172	2816	Hub Cap	2
124	1621	Pulley — Engine	1	173	5432	Ass'y. Wheel, Tire & Tube — Rear	2
125	1349	Key $\frac{1}{4}$ x $\frac{1}{4}$ x $1\frac{1}{2}$	1	174	5433	Wheel 12 x 7 JA	2
126	5417	Tank — Fuel	1	175	5434	Tire 8 x 12 Lawn & Garden	2
127	5459	Clamp — Tank	1	176	5435	Valve	2
128	5464	Tape — Insulator	1	177	1004	Lug Bolt — Wheel $\frac{7}{16}$ -20	10
129	5186	Cap — Fuel Tank	1	178	7623	Steering Wheel	1
130	909059-4	Bolt Round Head $\frac{1}{4}$ -20 x $1\frac{1}{4}$	1	179	2897	Insert	1
131	915515-4	Nut Square $\frac{1}{4}$ -20	1	180	1813	Tool Pin	1
132	4941	Ass'y. Filter & Valve	1	181	1576	"V" Belt — Drive	1
133	1796	Hose — Fuel	1	182	7415	Plug Button	1
134	4256	Clip — Hose	1	183	5604	Decal — Fender	1
135	950153-4	Clamp — Corbin	1	184	6165	Decal — Seat Latch	1
136	5170	Ass'y. Control — Choke	1	185	7421	Decal — Steering Wheel	1
137	5171	Ass'y. Control — Throttle	1	186	7416	Plate — Escutcheon	1
138	1364	Nut $\frac{3}{8}$ -18 Round	2	187	7560	Decal — "Commando"	2
139	920127-4	Lockwasher $\frac{3}{8}$ Shakeproof	2	188	7562	Decal — "8"	2
140	1277	Clip — Throttle Cable	1	189	7632	Speed Nut — Escutcheon	2
141	909000-4	Bolt Round Head #8-32 x $\frac{1}{2}$	1	190	7721	Clip — Push-On	1



OWNERS MAINTENANCE RECORD

OIL CHANGES

DATE _____ TYPE & KIND OF OIL _____

DATE _____ GREASE JOBS _____

TUNE UPS

DATE _____ PARTS REPLACED _____

BATTERY SERVICE

DATE _____ SERVICE REQUIRED _____

MISCELLANEOUS

DATE _____

5053 TRANSMISSION PARTS LIST

*(ORDER NO. 5053 FOR COMPLETE TRANSMISSION)

Ref. No.	Part No.	Description	No. Req'd.	Ref. No.	Part No.	Description	No. Req'd.
1	3900	Case R.H.	1	32	933156	Roll Pin 1/8 x 1	2
2	1533	Bearing — Ball 1 1/2 I.D.	2	33	3517	Ball — Shift Stop	2
3	1528	Bearing — Needle	2	34	3518	Spring — Shift Stop	1
4	1508	Bearing — Needle 3/4 I.D.	2	35	5614	Pin — Shift Stop	1
5	1532	Bearing — Needle 1" I.D.	1	36	3525	Gear — Cluster	1
6	1529	Bearing — Needle 3/4 I.D.	1	37	1504	Bearing — Bronze 3/4 I.D.	2
7	1303	Seal — Oil 3/4 Shaft	1	38	3528	Gear — Reduction Pinion	1
8	1232	Seal — Oil 1" Shaft	3	39	3527	Gear — Reduction	1
9	3915	Pin — Dowel	2	40	3910	Shaft — Cluster Gear	1
10	3901	Case L.H.	1	41	937014	Key #9 Woodruff	2
11	1530	Bearing — Needle 1" I.D.	1	42	4204	Gear — Reverse Idler	1
12	1531	Bearing — Needle 5/8 I.D.	1	43	1516	Bushing — Bronze 1/2 I.D.	1
13	3905	Case — Differential	2	44	3903	Gear — Brake Shaft	1
14	3906	Gear — Differential Bull	1	45	3902	Drum — Brake	1
15	4235	Gear — Differential Pinion	4	46	937022	Key #15 Woodruff	1
16	3909	Shaft	5	47	936131	Snap Ring 1" Shaft	1
17	908146	Bolt Hex 5/16-18 x 3 1/4	4	48	7376	Ass'y. Brake Band & Lining	1
18	1316	Nut Huglock 5/16-18	4	49	908002-4	Bolt Hex 1/4-20 x 3/8	2
19	3904	Axle — Rear	2	50	920081-4	Lockwasher 1/4 Dia.	2
20	3908	Gear — Axle	2	51	943460	Plug 1/4 Pipe	1
21	933217	Roll Pin 1/4 x 1 1/2	2	52	943420	Plug 3/8 Pipe	1
22	3522	Gear — Input	1	53	3912	Gasket	1
23	1518	Bearing — Needle 5/8 I.D.	1	54	908043-4	Bolt Hex 3/8-16 x 3 1/2	1
24	3523	Gear Hi & 2nd	1	55	908038-4	Bolt Hex 3/8-16 x 2	5
25	3907	Shaft Spline	1	56	915113-6	Nut Hex 3/8-16 Nylok	6
26	3524	Gear — Low & Reverse	1	*57	5632	Ass'y. Shift Stick	1
27	3526	Gear — Pinion — Splined	1	*58	3577	Boot — Shift Stick	1
28	936125	Snap Ring 3/4 Truarc	1	*59	1239	Set Screw Dog Point 1/4-20 x 3/4	1
29	5615	Rail — Front Shift	1	*60	915111-6	Nut Hex 1/4-20 Nylok	1
30	5616	Rail — Rear Shift	1	*61	1001	Knob	1
31	3503	Fork — Shift	2				

*Not included in No. 5053 Assembly.