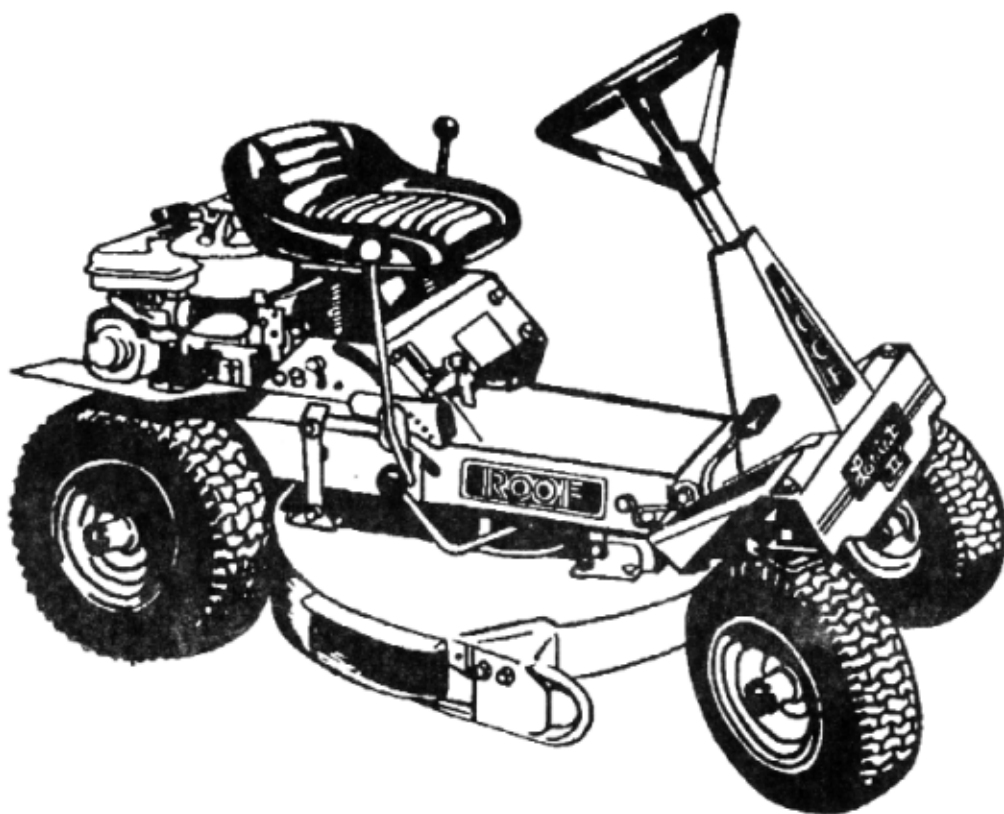


**SAFETY INSTRUCTIONS . . OPERATOR'S MANUAL . .**

**PARTS LIST . .**

# **ROOF** RIDING MOWER



## **WARNING**

IF INCORRECTLY USED THIS MACHINE CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE MACHINE SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ THE ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST, OR SERVICE THE MACHINE.

**MAXIM MANUFACTURING CORPORATION**

Sebastopol, MS 39359 Phone (601) 625-7471

# Safe Practices for Riding Mowers

1. READ OPERATOR'S MANUAL THOROUGHLY BEFORE ATTEMPTING TO USE MOWER.
2. Know controls and how to stop quickly.
3. NEVER allow children to operate mower or adults to operate it without proper instruction.
4. Do not carry passengers. Keep children and pets a safe distance away.
5. Disengage all clutches and shift into neutral before attempting to start engine.
6. Always stop the engine before leaving operator's position.
7. Stop the engine before making any repairs or adjustments.
8. Disengage power to blade when transporting.
9. WEAR GLOVES FOR CLEANING OR ANY MAINTENANCE ON BLADE.
10. WRAP THE BLADE WITH NEWSPAPER OR OTHER MATERIALS FOR MAINTENANCE.
11. Check the blade mounting bolts for proper tightness at frequent intervals.
12. Do not stop or start suddenly when going up or downhill.
13. Reduce speed on slopes and in sharp turns to prevent tipping or loss of control. Exercise extreme caution when changing direction on slopes.
14. Stay alert for holes in the terrain and other hidden hazards that could cause upsets.
15. Use care when pulling loads. Use approved hitch. Limit loads to those you can safely control.
16. Watch for traffic when crossing or near roadways.
17. NEVER direct discharge of material toward bystanders or allow anyone near the mower while in operation.
18. HANDLE GASOLINE WITH CARE. It is highly flammable. USE APPROVED GASOLINE CONTAINER. NEVER REMOVE THE CAP OF THE FUEL TANK OR ADD GASOLINE TO A RUNNING OR HOT ENGINE, OR FILL TANK INDOORS. WIPE UP SPILLED GASOLINE.
19. DO NOT RUN ENGINE INDOORS. Exhaust fumes are dangerous
20. Keep mower and attachments in good operating condition and safety devices in place.
21. Keep all nuts, bolts and screws tight to be sure equipment is in safe working condition.
22. NEVER store mower with gasoline in tank inside building where fumes may reach an open flame or spark. Allow engine to cool before storing it in any enclosure.
23. Keep engine free of grass, leaves or excessive grease.
24. After striking a foreign object STOP MOWER and inspect for damage. Repair damage before restarting and operating mower.
25. Do not change engine governor setting or overspeed engine.
26. Mow only in daylight or in good artificial light.
27. Never make a cutting height adjustment while mower is running if operator must dismount to do so.
28. Shut off engine while removing grasscatcher or unclogging chute.
29. KNOW WHAT IS BEHIND YOU BEFORE BACKING UP. MOVE BLADE ENGAGEMENT LEVER TO DISENGAGE. DO NOT MOW IN REVERSE UNLESS ABSOLUTELY NECESSARY AND THEN ONLY AFTER CAREFUL OBSERVATION OF THE ENTIRE AREA BEHIND THE MOWER.
30. Do not fill grasscatcher bags when mowing on slope. Empty bags when half full.
31. Do not operate near edge of water.
32. Do not use machine on public roads unless it is equipped with per ASAE S279 and SAE J127 lighting and marking standard.
33. It is recommended that your machine be thoroughly inspected once a year by a competent serviceman.
34. If it is necessary to adjust the carburetor with the engine running, take extra care not to allow rings, wristwatches, clothing, etc. to become entangled with moving parts.
35. Always remove the ignition key to prevent children from accidentally starting the machine.
36. Always store gasoline in locked storage safely away from children.
37. If machine is to be stored for a long time drain the gasoline tank. Disconnect battery cables or remove battery.
38. Always remove battery on electric start models when standing mower on end.
39. ALWAYS wear sturdy shoes or boots when operating mower--NOT SANDLES.
40. REFER TO INFORMATION ABOUT OPERATING UNIT ON SLOPE ELSEWHERE IN THIS MANUAL.

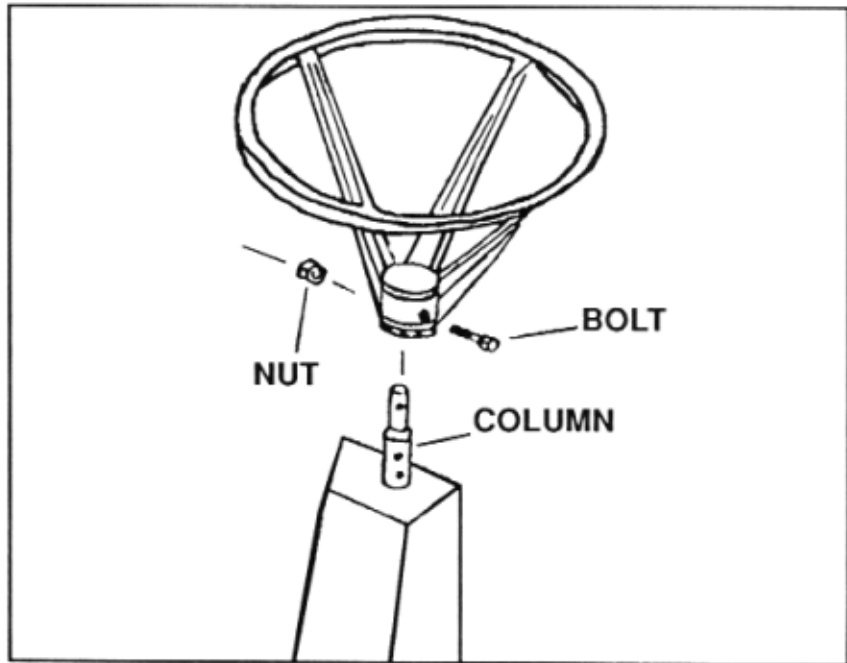
# SET UP INSTRUCTIONS

Roof Riders are Fully Assembled except for Steering Wheel and Seat.

**IMPORTANT: READ COMPLETE MANUAL BEFORE ATTEMPTING TO SET UP OR OPERATE MOWER.**

## TO INSTALL STEERING WHEEL

1. Drop steering wheel over steering column extension.
2. Remove 1/4" X 2-1/2" bolt and 1/4" nut from plastic package in box.
3. Install bolt through hole in steering wheel and insert nut at other end. Tighten.



**NOTE: SOME UNITS HAVE HANDLE BARS WHICH ARE ASSEMBLED USING TWO (2) ROLL PINS SUPPLIED.**

## TO INSTALL SEAT

1. Remove tape and plastic wrapping.
2. Locate four (4) bolts and lockwashers in hardware bag.
3. Assemble the wire harness to the switch on the bottom of the seat. (Starter will not operate if the switch is not connected.)
4. Locate seat on bracket and assemble bolts and washers.
5. Tighten bolts firmly. Check periodically. If seat should at any time seem loose while operating mower, STOP MOWER IMMEDIATELY AND CHECK BOLT.

## TO INSTALL BATTERY ACID

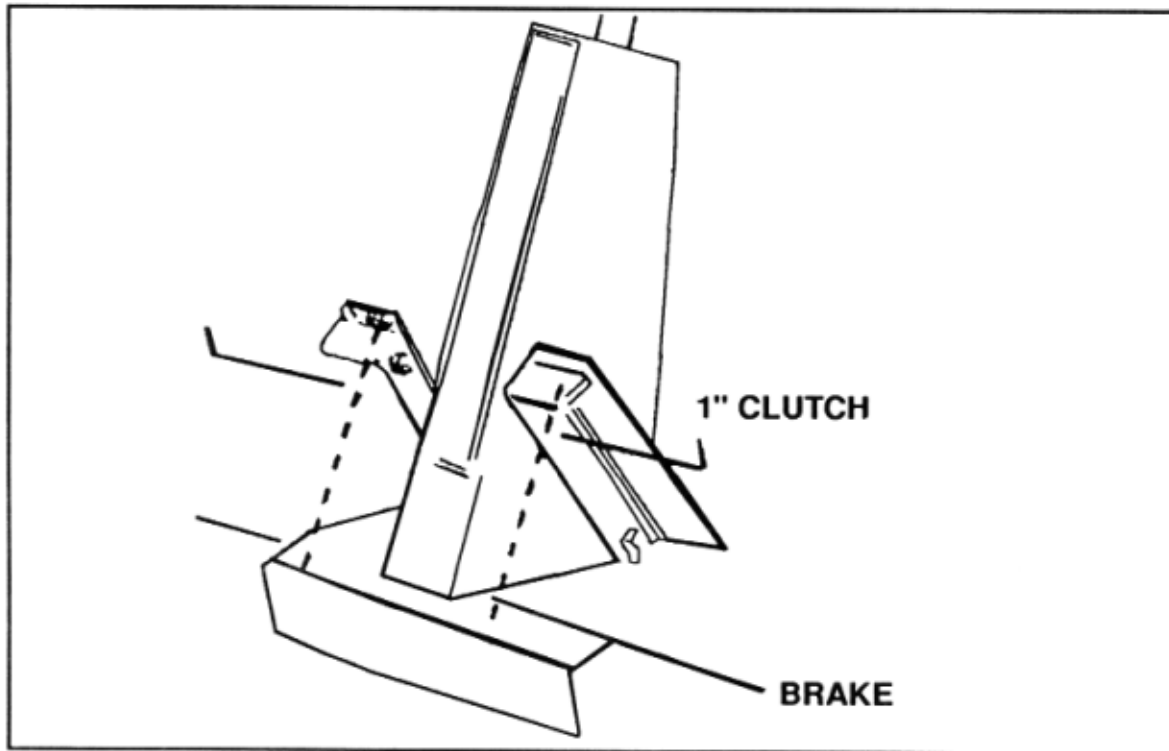
On electric start models, the battery must have battery acid installed. Read and follow warnings and instructions on the acid container.

**WARNING: BATTERY ACID IS CAUSTIC--FOR ANY REPAIR OR MAINTENANCE ON MOWER BATTERY SHOULD ALWAYS BE REMOVED SO THAT ANY TIPPING WILL NOT ALLOW ACID TO SPILL AND CAUSE DAMAGE TO THE UNIT OR POSSIBLE HARM TO THE OPERATOR. CARE MUST BE TAKEN TO RECONNECT THE BATTERY CABLES TO THE TERMINALS IN THE SAME ORDER IN WHICH THEY WERE REMOVED.**

# CONTROLS AND OPERATION

## Clutch-Brake Combination

To change gears, press clutch-brake 1". To stop or brake, depress pedal all the way down.



## Park Brake

To engage the park brake, press the clutch / brake pedal as far as it will go. Then rotate the park brake lever located next to the clutch / brake pedal to the forward position. To disengage the park brake, first press the clutch / brake pedal and then rotate the park brake lever to the rear.

## Shift Lever

To operate the shift lever, the clutch / brake pedal must be pressed. To shift gears, push out on the shift lever and move the lever to the desired position. Before releasing shift lever, be sure the pin on the shift lever enters the slot for the desired gear. When the unit is not in motion the clutch / brake pedal should be depressed before moving the shift lever. When the unit is moving forward the shift lever may be moved to a faster speed without depressing the clutch / brake pedal. When moving from a higher gear to a lower gear, apply a light pressure on the clutch / brake pedal. Always look behind unit before moving the shift lever to the "reverse position". When the unit is not in use, be sure that the shift lever is in the neutral position and the park brake is set.

# CONTROLS AND OPERATION CONT.

## Blade Engage Lever

Before engaging the blade, the engine throttle should be set to the desired operating speed. The blade engage lever is located on the right hand side of the unit just above the blade housing. To engage the blade, push down and forward on the lever to release it from its locked position. Holding a slight upward pressure, move the lever slowly forward until the blade starts to turn. Continue the forward movement until the lever locks in the forward position. To disengage the blade, push down and to the rear on the lever. Holding a slight upward pressure, move the lever back to the rear lock position. The lever must be locked in the rear position to operate the blade brake and for the engine to be restarted. **ALWAYS MOVE LEVER TO THE REAR LOCK POSITION WHEN DISENGAGING THE BLADE.**

## Operation

Begin mowing on a level area. As you get the "feel of the unit" you can adjust to a proper speed for your lawn.

Overlap each cut. For best results run wheel of mower along uncut grass.

Make first pass with left wheel close to the flower bed walls or foundations so that clippings will be blown in the opposite direction from these. Follow this practice when mowing around trees or other plantings.

## Operating on Slopes Safely

- Operate up and down - not across - slopes.
- Avoid sudden starts and stops on slopes.
- Be especially careful when you change direction on a slope.
- Avoid parking riding mower on a slope. Park on a level surface if possible.
- Do not operate mower on slopes exceeding 15 degrees (27% grade).

Cutting height will vary with different types of grass and individual preference. Generally, grass should be cut 1 - 1/2" (38 mm) in spring and not less than 2" (51 mm) in hot summer weather.

## Safety System

Your mower is equipped with the following safety system. The engine will not start unless the switch key is on, the shift lever is in the neutral position, and the blade is disengaged. Electric start units require an operator seated before the starter will operate. All mowers may be started manually without an operator on the seat. When the engine is running, if the operator leaves the seat with the transmission in gear, and / or the blade engaged, the engine will stop.

## **SAFETY SYSTEM CONTINUED**

**WARNING : BOTH MANUAL AND ELECTRIC START MODELS CAN BE STARTED WITH THE PULL ROPE, WITH THE TRANSMISSION IN GEAR, AND / OR THE BLADE ENGAGED IF A PERSON OR OBJECT IS ON THE SEAT.**

**NEVER ATTEMPT TO BYPASS SAFETY SYSTEM.**

**ALWAYS TURN THE KEY SWITCH TO "OFF" AND REMOVE THE KEY WHEN THE MOWER IS NOT IN USE.**

### **To Start Engine**

Check the engine oil level and fuel supply. Depress clutch / brake pedal and place shift lever in neutral position. Be sure blade engage lever is locked in the disengaged position. Move the throttle control to the "fast" position.

**Electric Start Models** : Sitting on the seat, insert key into the key switch and turn to the start position. When the engine starts, release the key and it will return to the run position. Do not hold key on start position more than 30 seconds. If the starter does not operate, see the section on Safety System above.

**Manual Start Models** : Be sure that the key switch is on, the shift lever in neutral, and the blade in disengaged position. Pull rope out slowly until starter engages. Then pull rope out rapidly. Repeat as required until engine starts.

If the engine is cold, it may be necessary to use the choke. See the engine manual for location and operation.

### **To Stop Engine**

Move the throttle control to the "slow" position. Turn the key switch to "off" position and remove the key to prevent unauthorized use.

### **Cutting Height Adjustment**

The lever just to the left of the seat raises and lowers the deck. Pull back to raise to the highest position. The cutting height adjustment is on the left side just below the seat. To adjust the cutting height, raise the deck to the highest position. Loosen the knob on the height control and allow it to move to the bottom of the slot. Lower the deck to the desired height. Holding the deck at the desired height with the lift lever, raise the depth control knob as high as it will go. Tighten the knob. Return left lever to highest position. When the left lever is lowered, the deck will return to the same position every time until the height adjustment is reset.

**Note: Always keep lift lever in highest position when transporting the mower.**

## **Blade**

**Important : Wear gloves for cleaning or any maintenance on the blade. Disconnect the spark plug wire and hold it away from the spark plug. Do not stand mower on end without removing the battery. Never leave mower standing on end for over one minute as oil will run into the cylinder of the engine.**

To remove the blade, remove the cotter pin from the end of the shaft. Remove the nut and blade. When sharpening the blade, remove the same amount from each end so as not to destroy the blade balance. When the blade is replaced, tighten the nut to approximately 80 foot pounds. Be sure to replace the cotter pin in the end of the shaft. Check the blade clearance from the deck. The bottom edge of the tips of the blade must be 1/8 to 1/4 inch above the edge of the deck. Blade should be replaced if it becomes bent or excessively worn.

## **Blade Belt Adjustment**

When the belt is properly adjusted, there should be 3/16 to 1/4 of an inch between the back side of the plate and the washer on the spring loaded shaft under the front of the mower when the blade is engaged. To adjust, loosen the nut on the back side of the plate and run it one inch toward the deck. Loosen the jam nuts in the front of the spring. Place the blade engage lever in the engaged (front) position and be sure it is locked in. Adjust the nut in front of the spring until the spacer inside the spring extends 3/16 to 1/4 inch through the plate. Be sure the spacer is pushed to the front. When the adjustment is correct, run the nut behind the plate forward until the washer is against the spacer. Snug the nut firmly. Holding the nut in front of the spring, tighten the jam nut against it.

## **Clutch / Brake Pedal Adjustment**

The clutch / brake pedal should be adjusted so the bottom of the pedal is approximately two inches from the foot rest. To adjust pedal, adjust the turnbuckle in the clutch / brake rod under the rear of the chassis. When the pedal adjustment is correct, adjust the brake by adjusting the nut below the spring at the rear of the chassis. The spring should be compressed slightly when the pedal bottoms against the foot rest.

## **General Maintenance**

Tire pressure should be 12 to 15 pounds in all four tires.

Keep the unit properly greased. One zerk on the steering shaft, one on each spindle, two in the front end pivot shaft, on the right rear hub. Use general purpose grease. Wipe off excess.

Always protect eyes, skin, and clothing when working near or on the battery. Remove the battery when standing unit on rear end.

To check the oil in the transmission, remove the plug near the power transfer wheel. Oil should flow out when the unit is sitting level. Oil may be added through this hole or through the plug hole on the opposite side by removing the left rear wheel. Use 90 weight gear oil.

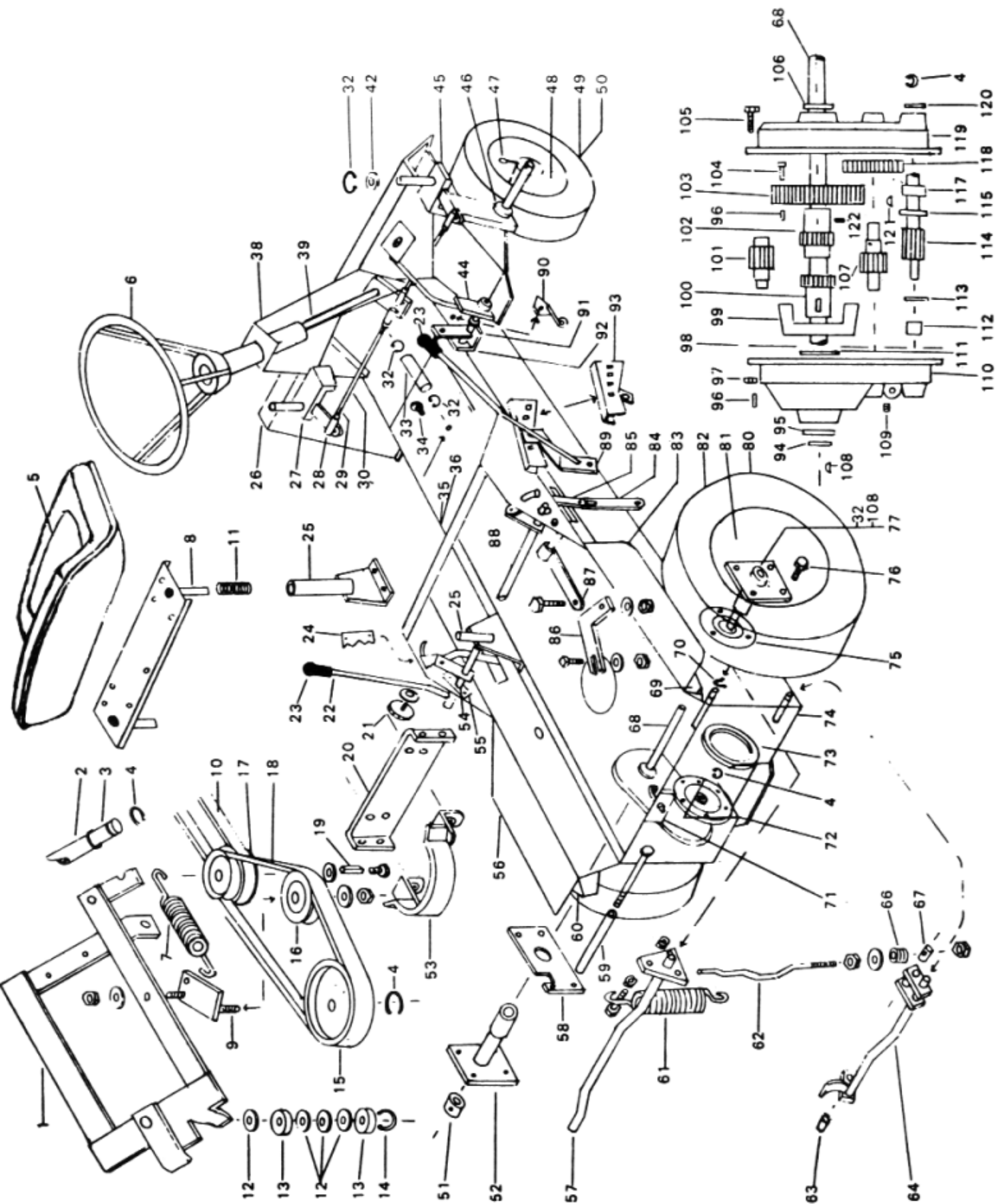
Refer to the engine manual for care and service of the engine.

To replace power transfer tire, remove five bolts which clamp the transfer tire on the wheel. Pry the old tire and clamping ring off the wheel. Replace with a new transfer tire. It is not necessary to remove the power transfer wheel from the transmission shaft.

## ROOF LARIAT II PARTS LIST

<u>Ref. No.</u>	<u>Maxim No.</u>	<u>Description</u>	<u>Ref. No.</u>	<u>Maxim No.</u>	<u>Description</u>
1	360178	Transfer Frame	64	360184	Brake
2	360180	Transfer Mounting Shaft	66	360123	Compression Spring
3	360086	Nylon Bushing, 5/8" I.D.	67	360183	Barrel Nut
4	446151	Retaining Ring, 5/8"	68	360174	Axle
5	130637	Moulded Seat	69	360077	Right Fender Stand
6	130645-A	Steering Wheel	70	446149	Retaining Ring, 1/2"
7	360186	Spring, Idler Arm	71	360195	Neutral Bar
8	360058	Seat Support	72	360188	Power Transfer Wheel
9	360181	Idler Arm	73	360194	Power Transfer Tire
10	272238	Belt (Blade)	74	360036	Back Frame
11	360059	Seat Spring	75	360029	Flange Bearing
12	455060	Thrust Washer, 5/8"	76	403145	Wheel Bolt
13	140114	Transfer Pulley Bearing	77	360222	Right Wheel Hub - Rear
14	446150	Retaining Ring	80	162047-A	Rear Wheel & Tire
15	360190	Power Transfer Pulley			Assembly, 16" X 6.50" X8"
16	336660	Idler Pulley	83	360076	Right Fender
17	271696	Engine Pulley	84	360025	Lift Link
18	272239	Belt (Traction Drive)	85	360079	Lift Link
19	463027	Key, 1/4" - 2	86	360208	Shift Crank
20	360179	Rear Cross Member	87	360206	Shift Crank
21	360106	Height Adjusting Knob	88	360197	Main Frame
22	360024	Lift Lever	89	360205	Shift Lever
23	313790	Grip	90	360097	Brake Latch
24	360103	Height Sector	91	360084	Clutch/Brake Shaft
25	360022	Seat Bracket	92	360085	Clutch/Brake Pedal
26	360081	Front End			Mounting
27	360094	Left Spindle	93	360204	Shift Sector
28	461463	Tie Rod End	94	360167	O Ring Seal
29	443109	Hex Jam Nut, 3/8"-24	95	360171	Oil Seal
30	360080	Tie Rod	96	360166	Case Guide Pin
32	446156	Retaining Ring, 3/4"	97	443101	Hex Nut, 1/4"-20
33	360026	Swivel Pin	98	360159	Case Gasket
34	360021	Bushing, 1/2" X 1/4"	99	360165	Differential Cage
35	360137	Front Plate (Fender)	100	360162	Outer Differential Gear
36	132211-C	Battery Mounting Plate	101	360163	Pinion
38	360083	Steering Pedestal	102	360161	Inner Differential Gear
39	360082	Steering Column	103	360164	Ring Gear
42	455059	Washer, 3/4" I.D.	104	402013	Hollow Head Capscrew
44	360087	Clutch/Brake Pedal	105	400112	Capscrew, 1/4"-20 X 7/8"
45	360095	Right Spindle	106	360172	Oil Seal, 3/4"
46	455056	Washer, 3/4"	107	360169	Gear and Shaft
47	446156	Retaining Ring	108	463010	Woodruff Key
48	162104	Front Wheel & Tire	109	600224	Pipe Plug, 1/4"
		Assembly	110	360157	Outer Case
51	360224	Axle Collar	111	455057	Thrust Washer, 1-1/4"
52	360223	Left Rear Hub	112	360158	Torrington Bearing, 1/2"
53	360217	Belt Guard	113	455058	Thrust Washer, 1/2" I.D.
54	360199	Left Cross Bar	114	360170	Input Gear
55	360110	Level Plate	115	360047	Washer
56	360104	Left Fender	117	360156	Torrington Bearing, 5/8"
57	360182	Clutch Actuating Bar	118	360175	Gear, 49 Tooth -- 16 Pitch
58	360177	Case Support	119	360155	Inner Case
59	360185	Spacer	120	360173	Oil Seal, 5/8"
60	360105	Left Fender Stand	121	463009	Woodruff Key, 1/8" X 3/8"
61	360189	Spring	122	415562	Set Screw, 5/16" X 5/16"
62	360198	Brake Link			
63	360048	Bushing, 1/2" X 3/16"			

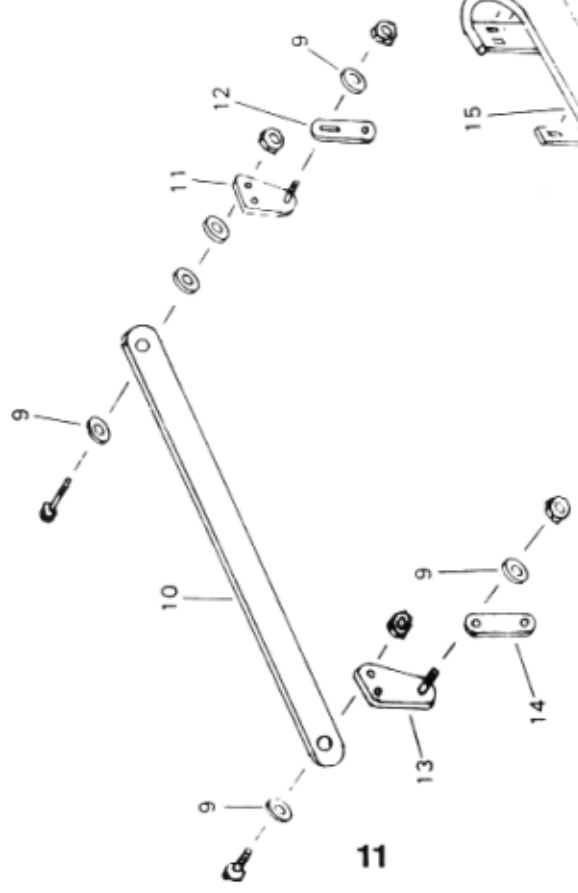
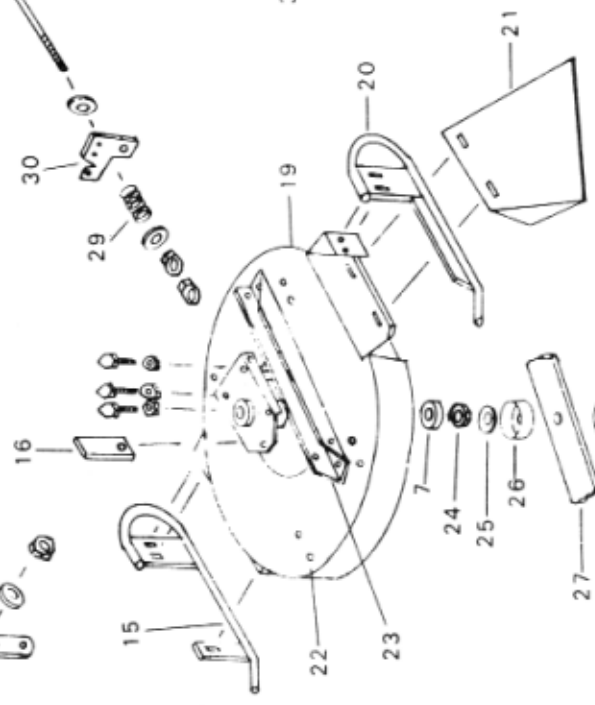
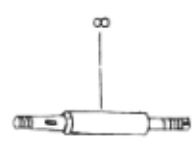
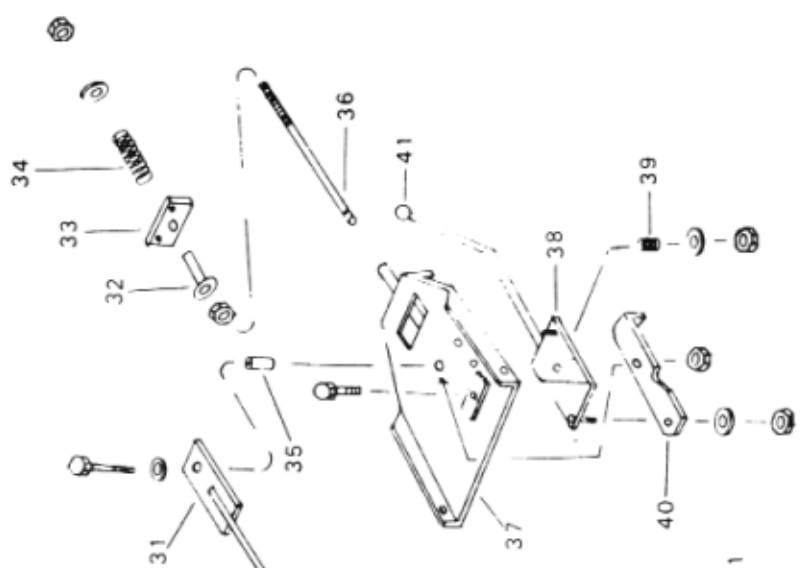




# ROOF LARIAT II PARTS LIST

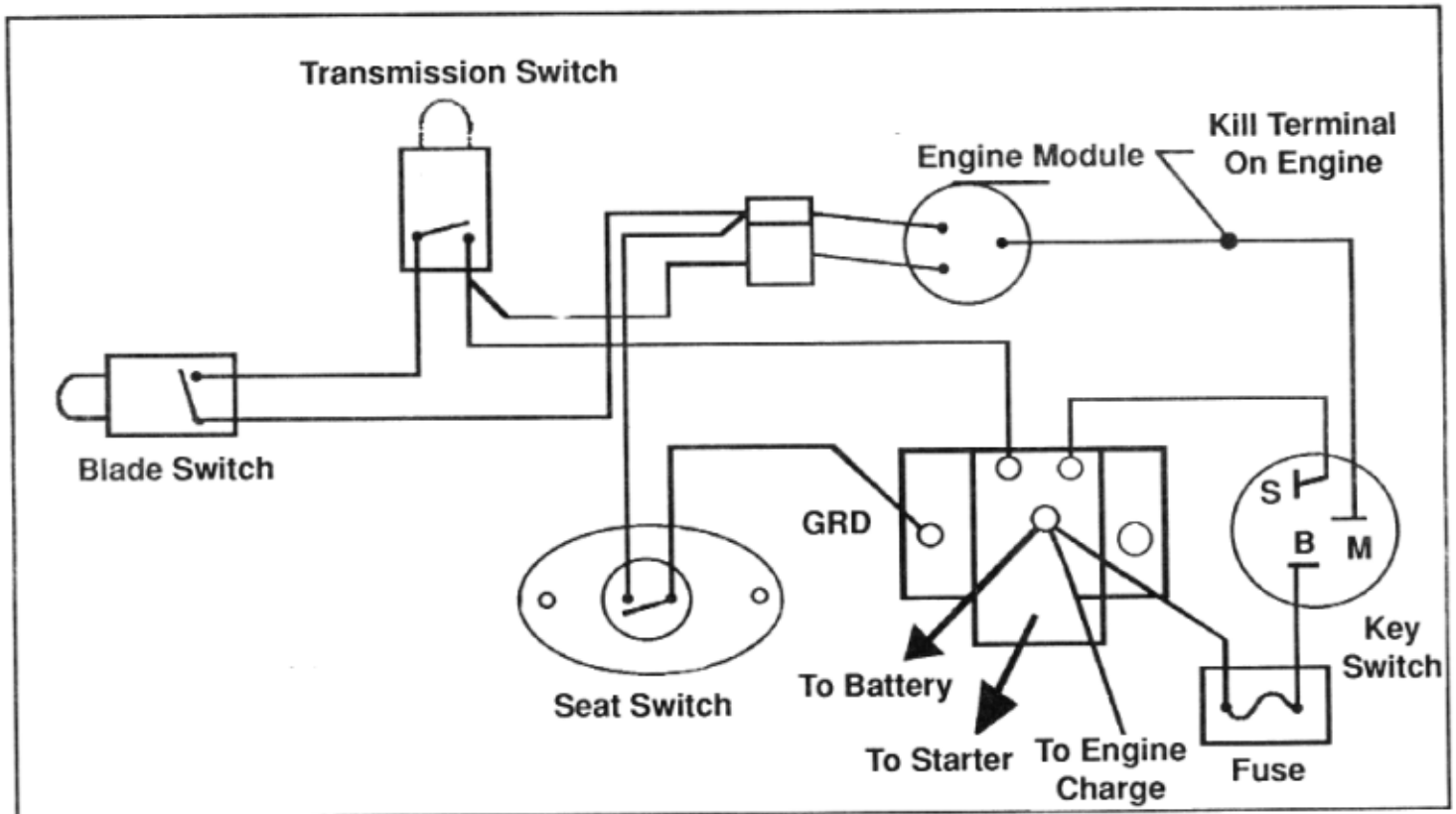
<u>REF. NO.</u>	<u>MAXIM NO.</u>	<u>DESCRIPTION</u>
1	443811	Jam Nut, 1/2"
2	446145	Star Lock Washer
3	463010	Woodruff Key
4	271695	Head Pulley
5	446152	Retaining Ring, Hvy. Duty 3/4" ext.
6	446158	Retaining Ring (Bearing Retainer)
7	140113	Bearing (Blade Shaft)
8	360111	Head Shaft
9	360048	Bushing, 1/2" - 3/16"
10	360098	Tie Bar
11	360102	Left Support Arm
12	360100	Front Link
13	360099	Right Support Arm
14	360101	Rear Link
15	360126	Left Runner
16	360127	Belt Guard
19	360128	Lawn Shield
20	360131	Right Runner
21	360060	Chute Guard
22	360129	Bracket Left
23	360130	Bracket Right
24	444724	Jam Nut, 3/4" NF
25	455056	Washer, 3/4"
26	360132	Blade Cup
27	145131	Blade, 30"
28	461473	Cotter Pin
29	360123	Spring
30	360133	Blade Brake
31	360220	Blade Brake Rod
32	360115	Tightener Sleeve
33	360116	Tightener Plate
34	360059	Spring
35	360118	Belt Tightener Bushing
36	360114	Belt Tightener Rod
37	360121	Clutch Frame
38	360122	Blade Clutch Lever
39	360123	Spring
40	360124	Belt Tightener Link
41	313790	Grip

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## PARTS LIST - ELECTRICAL ITEM

<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
132227	1	Wire Harness (Manual & Electric)
132230	1	Seat Switch
132231	1	Engine Module
360120	1	Blade Safety Switch
360120	1	Transmission Safety Switch
132232	1	Solenoid
360140	1	Key Switch - Electric Start
360150	1	Key Switch - Manual Start
132202	1	Battery Cable - Long 14"
132228	1	Battery Cable - Short 8"
132229	1	Starter Cable 16"
132237	1	Boot - Battery Terminal



### TROUBLE SHOOTING TIPS

If the starter will not operate, check to see if the shift lever is in the neutral position and that the blade engage lever is locked in the disengaged position. Also, you must be seated on the seat. If the starter still will not operate, check all wire connections at the switches and solenoid. Check the battery to be sure it is properly charged. The shift lever must be in neutral and blade lever locked in disengaged position before unit will crank (manual or electric).