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**Scrambler Mini-Bike  
Riders Manual  
and  
Illustrated Parts List**

# SCRAMBLER MINI-BIKE

## PACKING LIST

1	251-002	Seat
1		Parts Bag
2	204-832	Foot Peg Assembly
2	101-548	Screw, Hex Cap, 5/16-24 X 3/4" (Gr. 5)
2	135-004	Nut, Hex Lock, 5/16-24
2	203-627	Bolt, Dished Head, 5/16-24 X 1 1/2"
2	142-315	Lockwasher, 5/16" Internal
2	131-004	Nut, Hex, 5/16-24
1	101-509	Screw, Hex Cap, 1/4-20 X 1" (Gr. 5)
1	142-324	Lockwasher, 1/4" Internal
1	141-002	Washer, 1/4"
1		Engine Manual
1		Packing List
1		Rider's Handbook & Illustrated Parts List

## MINI-BIKE OPERATORS INSTRUCTIONS

Congratulations...you can be proud of your new Mini-Bike. It represents the finest bike ever designed. This bike was built by one of the world's largest producers of engine powered vehicles that has been providing fun, health, recreation and economical transportation to millions of people around the world.

You can increase the pleasure you get out of your new Mini-Bike by reading these instructions carefully. By following the operating instructions your bike will give you long years and thousands of miles of trouble free service,

### BREAK-IN

This Mini-Bike is manufactured to the most exacting standards, but it must be broken in properly for the first two (2) hours to insure long trouble free life.

### Engine System

Read the engine owner's manual carefully. Use the amount, and type of oil recommended for the initial fill. Also, follow the engine owner's manual recommendations for changing the oil.

### Do Not Race Engine

Do not race or run engine at high speed immediately after starting.

## CONTROLS

### Throttle Grip

The throttle grip controls the engine power, so the mini-bike speed is controlled by twisting the throttle grip. Turning the grip inward towards the rider increases the engine and mini-bike speed. Turning the throttle grip away from the rider decreases the speed.

### Drive System

Automatic Centrifugal Clutch

### Brakes

Caliper Disc Brake

## STARTING THE ENGINE

The Mini-Bike is equipped with a diaphragm type carburetor for easy starting.

### Cold Engine

Open fuel shut-off.

Move carburetor choke lever to choke position.

Apply brake.

Pull recoil starter rope smartly.  
After engine starts, slowly move choke to no-choke position.  
If choke lever is left on, too rich fuel is supplied to the engine, causing fouled spark plugs and defective engine operation.

### Warm Engine

Do Not use choke lever normally.

Open fuel shut-off.  
Apply brake.  
Pull recoil starter rope smartly.

In some instances, half-choking may be necessary, even on a warm engine.

## MAINTENANCE AND ADJUSTMENTS.

### Carburetor

The carburetor atomizes the fuel, mixes it with the proper amount of air and supplies a correct ratio to the engine.

The carburetor used on the Mini-Bike is of the diaphragm design and does not contain the usual float or float bowl arrangement.

There are many parts of the carburetor which may be adjusted, however, only the adjustments listed below should be performed outside of a qualified engine shop.

Carburetors are correctly adjusted for maximum performance when they leave the factory, but can be adjusted if necessary. Because mini-bikes use a centrifugal clutch all carburetor high speed settings must be made with engine at full throttle, the unit must either be on a kickstand or blocked up so that the back wheel is free off the ground. In either case, be sure that the bike is in a secure upright position with no chance of tipping over and then proceed as follows:

**NOTE:** A dirty or partially clogged air cleaner will cause engine to run rich and lose power. Clean or change the air cleaner as necessary - do not change carburetor settings until you have eliminated this possibility. New air cleaner elements can be purchased from your nearest Tecumseh service outlet. Consult your Yellow Pages for the address.

- A. Close "high speed adjusting needle" FINGER TIGHT ONLY by turning clockwise. Do not force as this will damage carburetor internal seat. (High speed adjusting needle located on L.H. side of carburetor directly below and ahead of idle adjusting needle.)
- B. Open (counterclockwise) one full turn.
- C. Close "idle adjusting needle" FINGER TIGHT ONLY by turning

clockwise. Do not force as this will damage carburetor internal seat. (Idle adjusting needle located on L.H. side of carburetor directly ahead of carburetor mounting bolt.)

- D. Open (counterclockwise) five-eighths (5/8) turn.
- E. Start engine.
- F. With engine running at full throttle, adjust "high speed adjusting needle" backward and/or forward 1/8 turn at a time until engine runs smooth. Allow engine to run at each new needle setting for at least 10 seconds to give engine time to react to each new setting. When engine is running smoothly, correct setting has been reached.
- G. Close throttle until engine is idling and adjust "idle adjusting needle" in same manner.
- H. The idle speed can then be adjusted by turning the idle screw in or out. (Located on top of carburetor facing L.H. side.)

#### Air Cleaner

The air cleaner is one of the most important items on your mini-bike and must be serviced frequently to avoid subsequent loss of power and engine damage. The air cleaner should be removed frequently and checked for dirt accumulation.

The air cleaner may be tapped lightly against a solid surface to dislodge loose dirt. The pores will eventually clog (engine will lose power) and at this point the air cleaner element should be replaced. Air cleaner elements may be purchased from the local authorized Tecumseh service outlet - see your Yellow Pages for the address.

NEVER wash the paper air cleaner or attempt to brush or blow the dirt from the element as this destroys its filtering ability.

NEVER run the engine without the filter in place or with a filter that has a hole in it.

NEVER substitute filters with polyurethane or other types of filters as their filtering ability is far less efficient. This would void engine warranty.

#### Brakes

The brakes are the most important part of your mini-bike for safe riding. Play in brakes increases gradually as they wear, so adjust them regularly.

Caliper Disc - Loosen cable adjustment nut and slide cable toward the rear of mini-bike. This will allow proper slack in the cable for adjustment. Slide the cable to the rear until the "V" in the brake arm is centered directly over the black brake pins located

behind the arm.

Remove the cotter pin from castle nut on brake arm shaft. Tighten castle nut until brake pads (pucks) just contact the brake disc (sprocket) and so a small amount of drag is felt when wheel is turned. Locate hole in brake arm shaft and reinstall cotter pin. Readjust cable so approximately a  $\frac{1}{2}$ " space is between the handlebar holder and the brake lever before a slight resistance is felt. Be sure and retighten the cable lock nuts.

### Tires

Tire inflation has a great effect on riding comfort, safety and the life of the mini-bike and tires. Proper standard inflation is 40 lbs., however, a slight adjustment (35 to 40) may be necessary under certain conditions.

Insufficient tire pressure gives a softer ride, but rapidly wears the sidewall of the tire. Tires slipping on the rim may also occur which will damage the innertube valve. Excessive tire pressure makes riding rough, uncomfortable and will wear the center of the tread. An over-in-flated tire will skid easily.

### Clutches

The clutches used on the Mini-Bikes are the finest in the industry and will occasionally need lubrication, especially when jerking or noise is noticed in the clutch area.

Remove chain guard and locate oil hole in clutch housing, lubricate with one or two drops of light oil. DO NOT OVER LUBRICATE.

### Drive Chains

All chains used on the Mini-Bikes must be properly lubricated and adjusted or rapid wearing of chain and sprockets will result. Use a recommended motorcycle or mini-bike chain lubricant. Inspect and lubricate all chains periodically.

The final drive chain is adjusted by loosening the two nuts on the swing arm mounting bolts. (Note: Loosen these mounting bolts by turning the nut and holding the bolt head stationary. The bolts used have serrated heads for additional grip and this will be damaged if this procedure is not followed.)

After loosening the nuts, slide the complete swing arm rearward until a deflection of approximately  $\frac{3}{8}$ " midway between the sprockets is achieved. Be sure that both sides of the swing arm are moved equal amounts. This will insure good chain alignment. Retighten the mounting bolts again holding the bolt and turning the nut.

NOTE: As normal wearing of chain and sprocket occur, it may be necessary to remove one full link and replace it with a half link.

The engine to jackshaft chain is adjusted by removing the chain guard and loosening the four engine mounting bolts. Slide engine ahead until approximately  $\frac{3}{8}$ " deflection of chain is possible midway between the clutch and jackshaft sprockets.

SRAMBLER MINI-BIKE

FRAME AND DRIVE COMPONENT

PARTS LISTS

AND

ILLUSTRATED PARTS DIAGRAMS

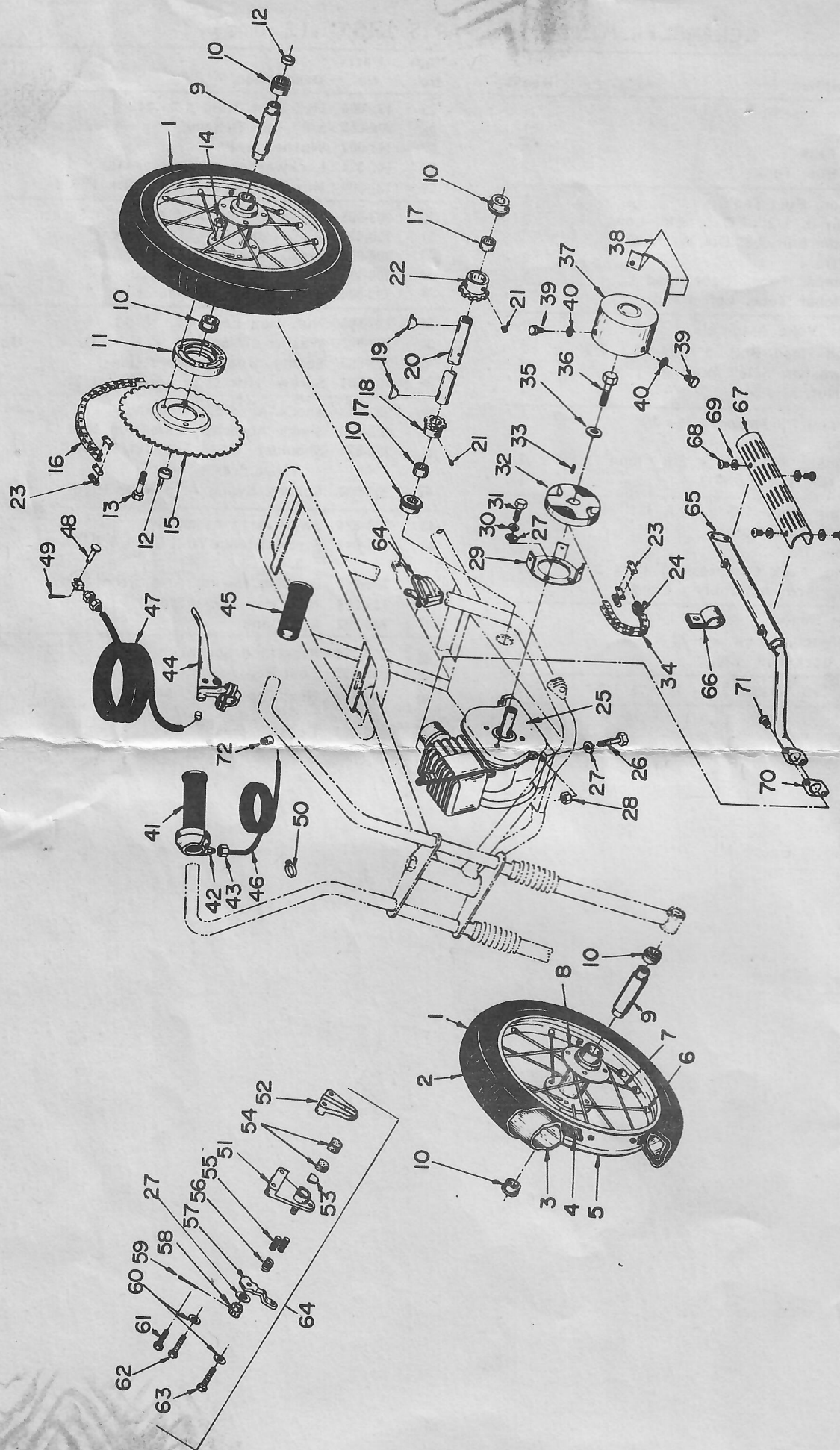
**SCRAMBLER PARTS LIST**

**(Drive Components)**

Item No.	Part No.	Description	Req'd
1	250-807	Tire & Tube Assembly Complete With Hub-Stud	2
2	250-790	Tire, 2.50 x 10" Stud	2
3	250-805	Tube, 2.50 x 10" W/Valve Stem Cap	2
4	203-604	Rubber Insert	2
5	203-605	Wheel Rim	2
6	203-607	Spoke Nipple	48
7	203-606	Spokes	48
8	203-608	Hub & Flange Assembly	2
9	203-611	Wheel Bearing Spacer	2
10	200-185	5/8" Sealed Ball Bearing	6
11	203-817	Sprocket Adapter	1
12	203-900	Rear Axle Spacer	2
13	101-512	Hex Cap Screw, 1/4-28 x 1 1/4"	4
14	135-002	Nut, Hex Lock, 1/4-28	4
15	203-819	Sprocket ASA 35-72 Tooth	1
16	204-029	Rear Drive Chain, ASA35-120 Pitches -	1
17	203-921	Spacer, Butted Seam, 5/8 I.D. x 3/8"	2
18	200-056	Sprocket, ASA35-12T, 5/8" B. -	1
19	203-914	Woodruff Key #61	2
20	203-913	Jackshaft	1
21	118-004	Nylok Set Screw, 1/4-20 x 1/4"	2
22	204-261	Sprocket, ASA35-20T.-5/8" Bore	1
23	200-059	Chain Master Link - ASA35	2
24	200-225	Chain Half Link - ASA35	1
25	250-865	Engine, 4 H.P. Lauson Without Alt.	1
26	101-556	Screw, Hex Cap, 5/16-24 x 1 1/2"	4
27	141-003	Washer, 5/16"	8
28	135-004	Nut, Hex Lock, 5/16-24	4
29	204-259	Chain Guard Mtg. Bracket	1
30	142-315	Lockwasher, 5/16" Internal	3
31	101-546	Screw, Hex Cap, 5/16-24 x 5/8"	3
32	204-077	Clutch, Extended Hub, ASA35-12T.	1
33	200-057	Key, 3/16" x 3/16" x 5/8"	1
34	204-260	Drive Chain, ASA35-50 Pitches	1
35	141-004	Washer, 3/8"	1

Item No.	Part No.	Description	Req'd
36	102-090	Screw, Hex Cap Nylok, 3/8-24 x 3/4"	1
37	203-894	Chain Guard Cover	1
38	204-176	Chain Guard Skirt	1
39	101-501	Screw, Hex Cap, 1/4-20 x 1/2"	3
40	142-324	Lockwasher, 1/4" Internal	3
41	201-249	Twist Grip, 7/8" I.D.	1
42	201-597	Union Body	1
43	201-598	Union Nut	1
44	201-250	Brake Lever, 7/8"	1
45	201-251	Handle Grip, 7/8" Dummy	1
46	203-941	Throttle Cable	1
47	203-942	Brake Cable	1
48	203-812	Clevis Pin	1
49	161-019	Cotter Pin	1
50	201-237	Cable Tube Clamp	2
51	203-588	Caliper Half With Stud	1
52	203-589	Caliper Half Without Stud	1
53	203-149	Disc, Brake Puck Spacer	1
54	203-591	Brake Pucks (Pair)	1
55	203-146	Pin, Brake Actuating	2
56	203-147	Spring, Brake Arm Return	1
57	204-659	Arm, Brake Actuating	1
58	131-104	Nut, Hex Slotted, 5/16-24	1
59	161-019	Cotter Pin, 3/32 x 3/4"	1
60	203-590	Spacer, 7/16 O.D. x 5/16" I.D. x 1/4" long	2
61	101-545	Screw, Hex Cap, 5/16-18 x 5/8"	1
62	101-555	Screw, Hex Cap, 5/16-18 x 1 1/2"	1
63	101-553	Screw, Hex Cap, 5/16-18 x 1 1/4"	1
64	203-931	Brake Assembly - H & H Disc. - Complete	1
65	204-231	Exhaust Pipe Assembly-Non-Spark Arrestor	1
66	203-964	Clamp, Exhaust Pipe	1
67	203-968	Exhaust Guard	1
68	111-042	Screw, Phil. Truss HD. Mach., #10-32 x 1/4"	4
69	142-321	Lockwasher, #10, Internal	4
70	204-229	Exhaust Pipe Gasket	1
71	111-044	Screw, Fillister HD. Sems, 1/4-20 x 1/2"	2
72	200-049	Wire Clamp	1





**Drive Components**

## SCRAMBLER MINI-BIKE PARTS LIST (Frame)

Item No.	Part No.	Description	Req'd
1	250-864	Frame Assembly	1
2	250-928	Seat	1
3	203-844	Fuel Tank	1
4	204-203	Cap, Fuel Tank	1
5	203-929	Cushion, Fuel Tank	1
6	203-886	Grommet, 1/2" I.D. x 3/8" Long	2
7	203-887	Shoulder Bolt, 3/8" Dia. W/1/4-20 THDS.	2
8	203-916	Handlebar Tube, Right Hand	1
	203-917	Handlebar Tube, Left Hand	1
9	203-853	Center Yoke Assembly	1
10	203-627	Dished Head Bolt, 5/16-24 x 1 1/2"	2
11	142-315	Lockwasher, 5/16" Internal	2
12	131-004	Hex Nut, 5/16-24	2
13	201-141	Retaining Pin Spring, 3/16 x 3/8" long	2
14	201-206	Retaining Pin, 3/16 x 3/8" long	2
15	135-014	Nut, Hex Lock, 5/8-18	1
16	201-297	Kingpin Bolt, 5/8-18 x 6 1/4" long	1
17	201-070	Rubber Boot Clamp	4
18	201-056	Rubber Boot	2
19	201-075	Spring, Fork Compression 1" x 3"	2
20	203-959	Lower Arm Assembly - Condor	2
21	203-952	Front Fender	1
22	111-039	Fill Mach. Screw, #10-32 x 3/8"	8
23	135-042	Hex Lock Nut, #10-32	8
24	203-880	Hex Cap Screw, 3/8 - 24 x 6 1/2"	2

Item No.	Part No.	Description	Req'd
25	135-006	Hex Lock Nut, 3/8 - 24	2
26	200-068	5/8" Ball Bearing	2
27	141-002	Washer, 1/4"	1
28	142-324	Lockwasher, 1/4" Internal	5
29	101-509	Hex Cap Screw, 1/4 - 20 x 1"	3
30	203-905	Valve, Single Shut Off With Screen	1
31	200-432	Fuel Line, 3/16" I.D. Clear	6"
32	204-007	Strap, Rear Fender Mounting	1
33	204-179	Rear Fender - Chopped	1
34	135-004	Hex Lock Nut, 5/16-24	3
35	135-505	Nut, Hex Lock Cap, 3/8-16	2
36	203-922	Washer, 17/64 I.D. x 1" O.D. x 14 Ga.	4
37	203-903	Spring, Rear Compression	2
38	101-501	Screw, Hex Cap, 1/4-20 x 1/2"	2
39	203-825	Shock Absorber Housing	2
40	203-823	Shock Absorber Extension Rod	2
41	203-831	Shoulder Bolt, 1/2" W/3/8-16 THDS.	2
42	203-830	Spacer, Swing Arm Rear Pivot	2
43	203-826	Swing Arm Assembly	1
44	111-041	Screw, Flange Whiz Lock, 3/8-16 x 3/4"	2
45	203-995	Bushing, Swing Arm Front Pivot	2
46	135-005	Nut, Hex Lock, 3/8-16	2
47	203-902	Kickstand	1
48	203-908	Kickstand Spring	1
49	204-832	Foot Peg Assembly	2
50	101-548	Hex Cap Screw, 5/16-24 x 3/4"	2
51	220-081	Decal - Gas Tank	2

