

Owner's Handbook

El Tigre Minibike

With Complete Illustrated Parts

Model No. 1012

To become an expert rider and to get the best performance from this machine, read the instructions in this handbook before you start the engine!



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Model and Serial Number

If you should need any technical assistance or parts for this vehicle, be sure to provide the JCPenney store with the model and serial numbers. Fill in the correct numbers NOW for future reference.

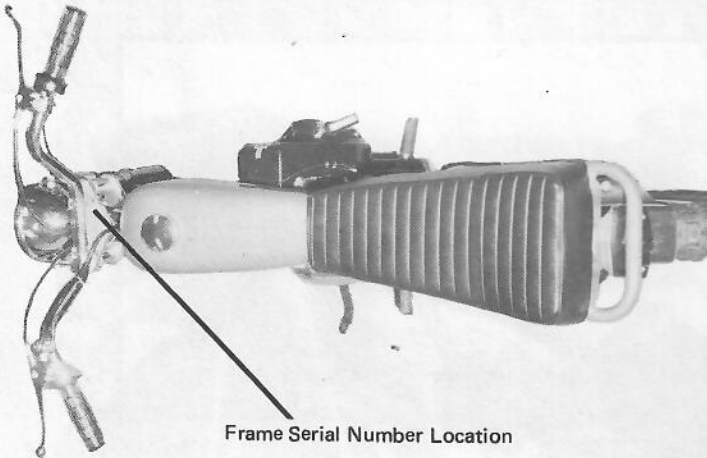
Purchase Date _____

Model Number _____

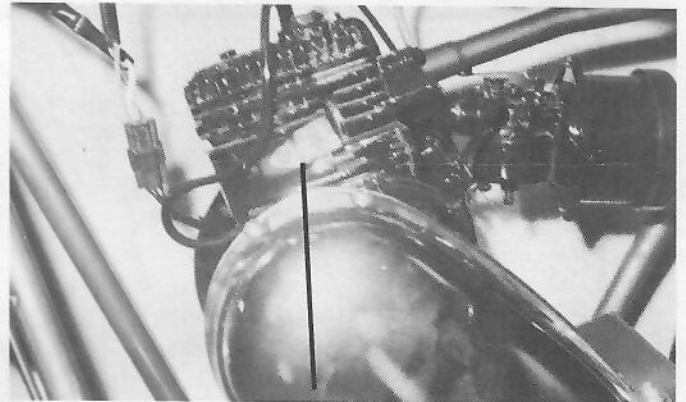
Frame Number _____

Engine Serial Number _____

Catalog Number _____



Frame Serial Number Location



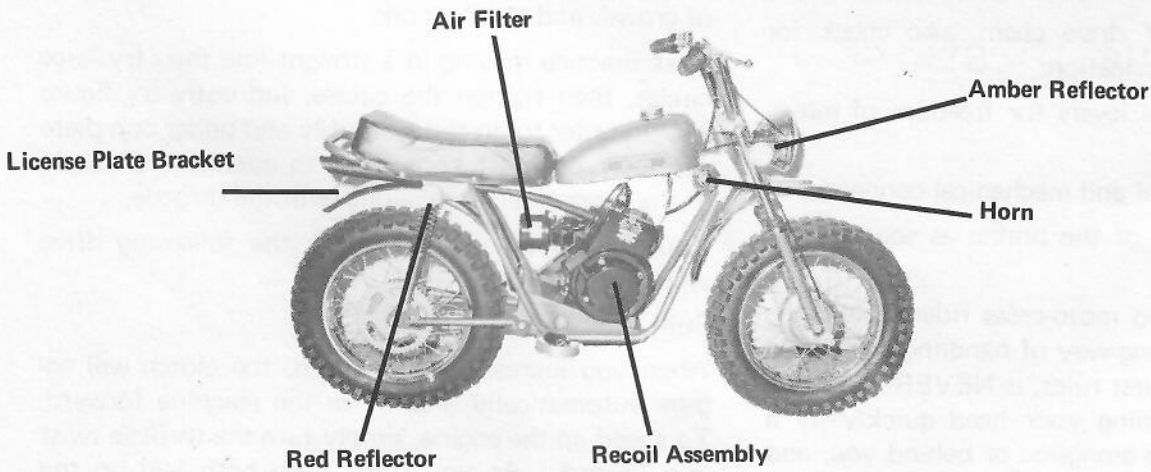
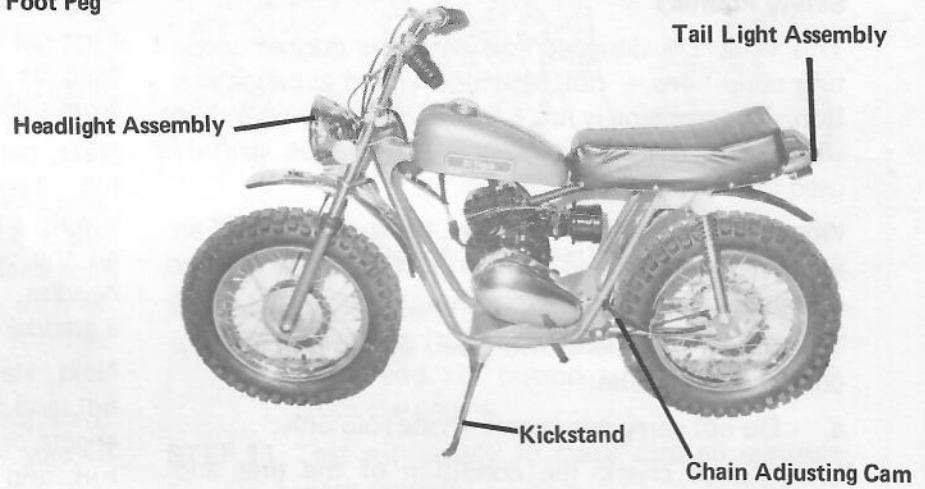
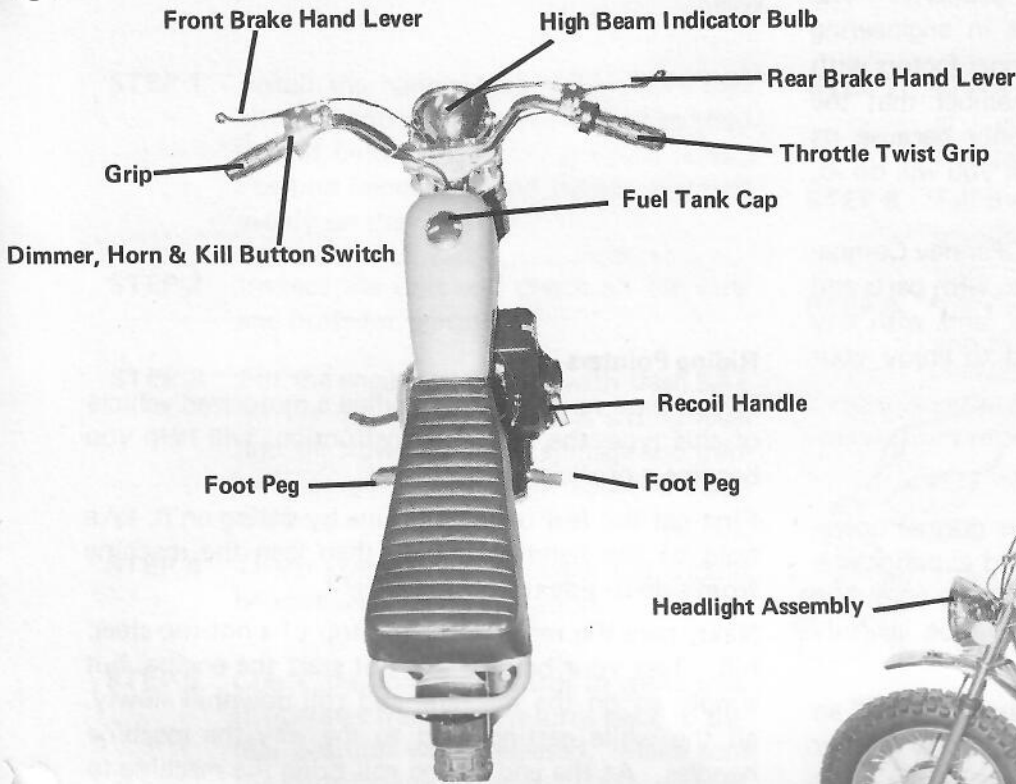
Engine Number Location

Technical Specifications

Engine Manufacturer - - - - -	Tecumseh	Frame Type- - - - -	Wishbone, Double Rail
Engine Model - - - - -	HS50	Wheel Base - - - - -	42.0"
Engine Type - - - - -	4 - Stroke	Overall Length - - - - -	63.75"
Number of Cylinders - - - - -	Single	Height to Handle Bar - - - - -	38"
Engine Displacement - - - - -	198cc	Height to Seat - - - - -	28"
Bore / Stroke - - - - -	2 13/16 / 1 15/16	Ground Clearance - - - - -	9"
Torque- - - - -	7.95 Ft. Lbs. Max.	Weight - - - - -	125 lb.
Starting System - - - - -	Recoil	Wheels - - - - -	14" Spoke, Chrome
Ignition System - - - - -	Flywheel Magneto	Tire Size - - - - -	3.50 X 14
Carburetor - - - - -	Tecumseh Floatbowl	Tread Pattern - - - - -	Moto Cross
Air Cleaner - - - - -	Replaceable Paper Filter	Front Suspension - - - - -	Telescopic Hydraulic
Engine Break-in Period- - - - -	2 Hours	Rear Suspension - - - - -	Dual HD Shocks
Spark Plug - - - - -	Champion CJ-8	Fuel Tank Capacity - - - - -	1.5 Gallons
Spark Plug Gap - - - - -	.020	Fuel - - - - -	Regular Grade
Breaker Point Gap - - - - -	-.015	Chain Size - - - - -	No. 420

Controls and Components

Model No. 1012



Welcome to the Riding Group

This handbook has been prepared especially for you. It is filled with information and practical instructions so that you may know everything about your machine and learn how to handle it properly. The machine itself represents the finest in engineering and workmanship, both being traditional factors with all JCPenney equipment. But remember that the finest machine remains the finest only because its owner takes good care of it. We trust you will do so, too.

Your satisfaction is our goal. The JCPenney Company therefore stands ready to help you with parts and accessories, with service and repairs, and with any other assistance that you may need to enjoy your riding.

Safety Pointers

This vehicle is designed for use under normal operating conditions — not for stunting and experimentation. The machine is not licenseable for use on public streets and roads, and therefore cannot be lawfully used in such areas.

When operating this machine, be sure to wear an approved helmet and eye protection, with proper clothing, including gloves and full shoes.

To become an experienced rider, simply follow a few common-sense rules:

- a. Do not carry passengers — ride solo only.
- b. Always check the condition of the tires and check air pressure before starting out.
- c. Check tank for sufficient fuel; check crankcase for oil.
- d. Check tension of drive chain; also check for cleanliness and lubrication.
- e. Check the control levers for freedom of movement.
- f. Check all electrical and mechanical connections.
- g. Check the action of the brakes as soon as you start rolling.

Experienced racing and moto-cross riders know the right way and the wrong way of handling motorized vehicles. One of the first rules, is NEVER to start a turn without first turning your head quickly for a look at what might be alongside or behind you, and NEVER ride fast in crowded areas. Keep a sharp look-out, all the time!

Wet, soft, sandy, and rough terrains create riding problems. Riding fast over such ground is dangerous!

Most accidents happen at dusk, when the body and

mind are tired. Be doubly careful when riding at these hours, and be on the alert for anything that might cross your path unexpectedly.

And lastly, NEVER use the brakes when the machine is in a curve, because braking in a curve is inviting a spill.

Riding Pointers

If you have never before handled a motorized vehicle of this type, the following instructions will help you become a proficient rider.

First get the feel of the machine by sitting on it, take hold of the handlebars, and then lean the machine from side-to-side to feel the weight.

Next, take the machine to the top of a not-too-steep hill. Test your brakes. Do not start the engine, but simply sit on the machine and roll downhill slowly, all the while getting used to the way the machine handles. At the end of the roll bring the machine to a gradual stop.

Next, start the engine while you're at the top of the hill, and then roll downhill but DO NOT speed up the engine or use the clutch and gears. Just let the engine run, and let the machine roll downhill. After this practice you will have the confidence to take the machine to an open area where you may start practicing actual riding under power. But be sure to keep clear of crowds and obstructions.

First practice moving in a straight line then try large circles, then tighten the circles, and lastly try figure 8's. In order to do this smoothly and under complete control, you must know how to operate the clutch, or the gears and clutch, along with the throttle.

Your model is equipped with the following drive system:

Fully Automatic Clutch

When you increase engine speed, the clutch will engage automatically and move the machine forward. To speed up the engine, simply turn the throttle twist grip inward. As you start, keep both feet on the ground to maintain your balance until you gather speed, then place your feet on the pegs. Be on the alert all the time. Look at the road ahead. To slow down, turn the throttle twist grip outward to idle the engine, and gently apply the brakes.

Assembly Instructions

- STEP 1** Install the handle bars making sure that all the control cables are routed so they do not bind or have any extreme bends. Position handlebars and tighten the nuts evenly on the U-bolts.
- STEP 2** Inspect the unit and check all the nuts and bolts for tightness.
- STEP 3** Fill the engine crank case with fresh SAE 30 oil; be sure the unit is sitting level and fill slowly to avoid spillage and trapping of air. Do not fill above the full mark.
- STEP 4** The brakes are pre-adjusted, but should be checked before operation.
- STEP 5** Check the throttle control to make sure it operates freely and returns back to the idle position when released. Make sure the throttle has at least 1/16th inch of slack or end play before the throttle starts to advance.
- STEP 6** The drive chain has been pre-adjusted, but should be checked to make sure it is properly adjusted.

- STEP 7** Check the fuel line to make sure that it is connected properly and that the clamps are in place.
- STEP 8** Fill the fuel tank with fresh regular grade gasoline. Fuel tank capacity is 1.5 gallons.
- STEP 9** Start engine according to steps one, two, and three in figure 1.

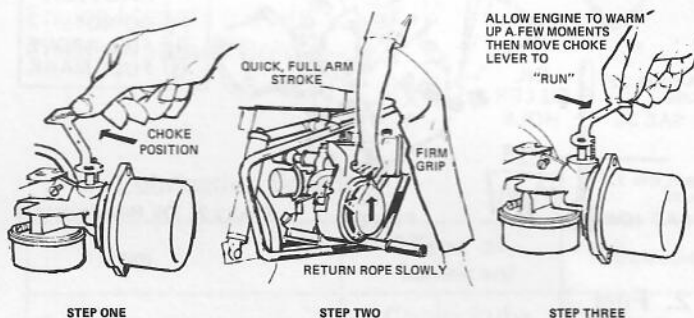


Figure 1. Engine Start Up

- STEP 10** While engine is idling check operation of headlight (high and low beam), taillight, horn, and kill button to make sure it stops the engine.
- STEP 11** Test run slowly to make sure all controls work properly.

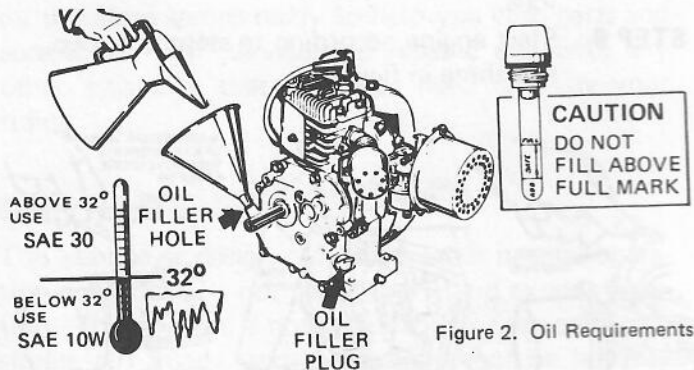
Engine Set-Up and Lubrication

1. Oil Level

Fill crankcase with 19 oz. of fresh clean (S.A.E. 30) oil. Be sure the vehicle is sitting level and fill slowly to avoid trapping air. The engine is equipped with a dip stick. Fill to full mark only. See figure 2.

Note

Engine seizure is caused by lack of oil or parts wearing out from dirty oil. These are two of the most frequent causes of premature engine failure.

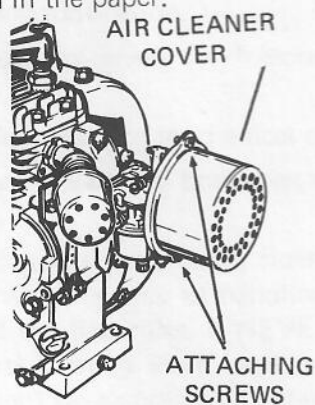


2. Fuel

Fill fuel tank with "Regular Grade" gasoline only. **Do Not Mix with Oil.** Be sure gasoline is fresh and container is clean. Be careful not to spill the gasoline, and wipe any that is spilled.

3. Air Filter

The air filter should be removed frequently (see figure 3) and tapped lightly against a solid surface which will dislodge loose dirt accumulation. **Never** wash the paper air filter or attempt to brush dirt from it as this destroys its filtering ability. **Never** run the engine without the filter in place, or with a filter that has a hole punctured in the paper.



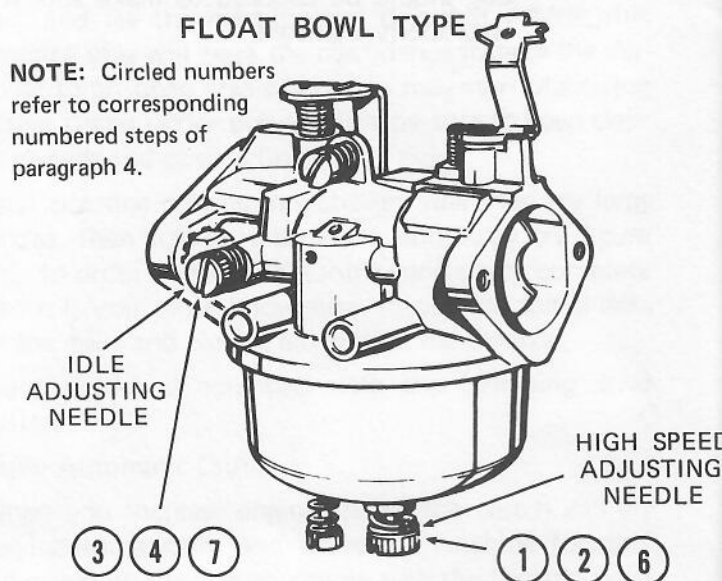
4. Carburetor

The carburetor has been pre-adjusted for maximum performance, but may be re-adjusted if necessary block the vehicle up so the rear wheel is free. Be sure that the vehicle is in a secure upright position with no chance of tipping over, and then proceed as follows (refer to figure 4):

Note

A dirty or partially clogged air filter will cause the engine to run rich and lose power.

- STEP 1** Close "High Speed Adjusting Needle" **finger tight only**, by turning clockwise. Do not force as this will damage carburetor internal seat.
- STEP 2** Open (counterclockwise) one full turn.
- STEP 3** Close "Idle Adjusting Needle" **finger tight only**, by turning clockwise, do not force as this will damage carburetor internal seat.
- STEP 4** Open (counterclockwise) five-eighths (5/8) turn.
- STEP 5** Start engine.
- STEP 6** 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 the engine time to react to each new setting. When engine is running smoothly correct setting has been reached.
- STEP 7** Adjust "Idle adjusting needle" until desired idling speed is obtained.



5. Spark plug

The spark plug should be removed, cleaned, and adjusted periodically. Check point gap with wire feeler gauge and adjust gap if required (see figure 5). See specifications for plug type and gap. Apply a little graphite grease to the threads to prevent sticking. Be sure cleaned plugs are free of all foreign material.

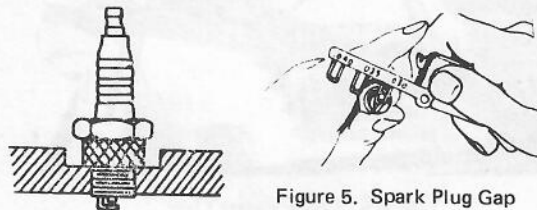


Figure 5. Spark Plug Gap

6. Throttle Twistgrip

The throttle is lubricated at the factory during assembly. If the throttle "sticks" (will not return to idle position) the throttle return spring may be broken or lubrication may be required. Lubricate as follows:

STEP 1 Remove the 2 screws in the adaptor ring, remove entire throttle control and apply oil to the end of the handlebar and all pivot points on the twist grip assembly, as shown in figure 6.

STEP 2 Reassemble.

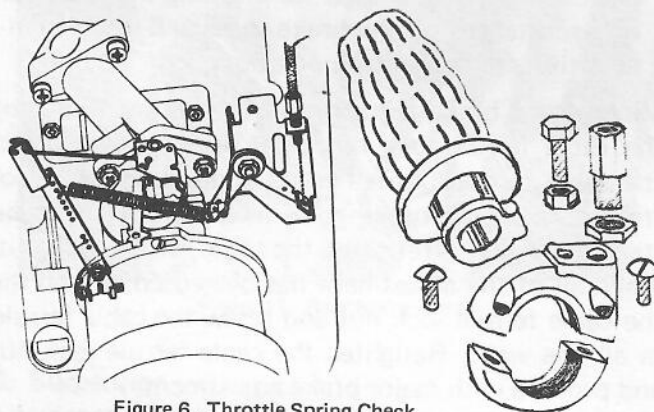


Figure 6. Throttle Spring Check

7. General Inspection

Item	Daily	Weekly	Monthly
Brake Operation	*	*	
Brake Adjustment	*		
Clutch Adjustment	*		
Lights	*		
Steering Operation	*		
Throttle Operation	*		
Air Cleaner	If Required	*	
Drive Chain Adjustment		*	
Tire Pressure		*	
Axle Bolts		*	
Wheel Spokes		*	
Brake Wear		*	
Electrical Wiring			*
Engine Mounting Bolts			*
Chassis Nuts and Bolts			*

8. Lubrication Schedule

Item	Type of Lubricant	Frequency
Drive Chain	Chain Lube or Oil	Daily
Control Cables	Light Machine Oil	Weekly
Rear Shocks	Light Machine Oil	Weekly
Brake Pivot Points	Light Machine Oil	Monthly
Pivot Rod	H.D. Bearing Grease	Monthly
Throttle Twist Grip	H.D. Bearing Grease	Monthly
Transmission Oil	#30 Motor Oil	Monthly
Front Fork Oil	#10 Oil or ATF	Bi-Annually

Maintenance Adjustments

1. Tires

The tread design is one of the most versatile available and gives maximum traction on any surface. To ensure riding comfort and maximum tire life, keep tires inflated to 20 P.S.I.

2. Wheel Alignment

The front and rear wheels are properly aligned and will stay aligned indefinitely with only a few minor preventive maintenance checks required.

Front Wheel —

1. Keep spokes tightened.
2. Make sure front axle bolt is kept tight.

Rear Wheel —

1. Keep spokes tightened.
2. Make sure rear axle bolt is kept tight.
3. Check swing arm bolts for tightness.
4. Keep chain adjusted properly (see figure 7).

3. Rims and Spokes

Periodically check the rims by spinning the wheel and checking to make sure it is not out of round from any sort of collision or fall. Make sure spokes are tight at all times.

4. Chain

The drive chain consists of many moving parts which are constantly under a tremendous strain. Annealed chain can be ruined in less than 100 miles due to dirt and rust. When lubricating the chain use any good grade of lube or oil. Use a clean rag to wipe off any accumulation of dirt and then apply a liberal amount of lubricant on the chain. Develop a habit of servicing the chain on a regular schedule.

Proper chain tension provides good performance and long chain and sprocket life. The chain should be adjusted for between $\frac{1}{2}$ " and $\frac{3}{4}$ " tension under finger pressure. See figure 7. A master link is provided for easy removal of the drive chain. The master link retaining clip should always be installed with the closed end in the direction of chain travel (see figure 8).

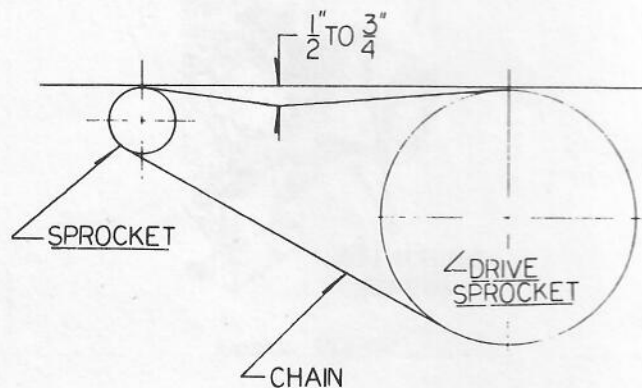


Figure 7. Chain Tension

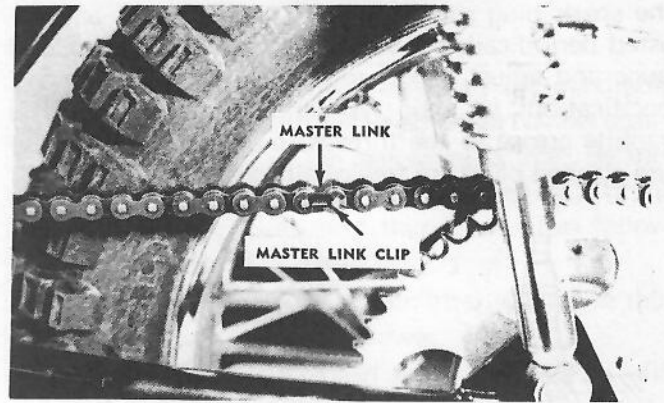


Figure 8. Chain Master Link

5. Brakes

The operation of the brakes should be checked each day before riding. The application of a few drops of light machine oil into the end of the cables and on the pivot points behind the brake actuating arms will help ensure smooth brake operation. Periodical cleaning of the brake drums and shoes with a clean dry cloth, will ensure quick, no fade stops.

Caution

Petroleum products used for cleaning the brake, or oily substances on the brake shoes will result in ineffective and dangerous operation.

Minor front brake adjustment is made by loosening the cable ferrule lock nut (Fig. 9) and backing out the cable ferrule until there is approximately $\frac{1}{2}$ " of free travel in the brake hand lever before the brake starts to engage. Retighten the cable ferrule lock nut. When all of the adjustment has been used, loosen the the cable ferrule lock nut and screw the cable ferrule in all the way. Retighten the cable ferrule lock nut and proceed with major brake adjustment.

Major front brake adjustment is accomplished by loosening the cable adjusting nuts (Fig. 10) and rotating them until there is $\frac{1}{2}$ " of free travel in the brake hand lever before the brake starts to engage. Retighten the cable adjusting nuts.

Rear brake adjustment is accomplished by removing the cleavis pin from the cleavis at rear end of the rear brake rod (Fig. 11). To tighten the brakes, screw the cleavis onto the rod (clockwise) checking the brake adjustment every two complete turns. The brake should be adjusted until there is about $\frac{1}{2}$ " of free travel in the foot pedal before the brakes start to engage. Reinstall the cotter pin using a new one if the old one is damaged. With the transmission in neutral lift the rear of the bike and spin the rear wheel to insure that the brake is not dragging.

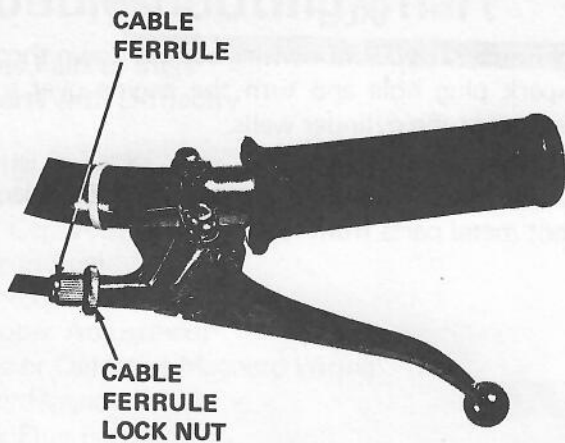


Figure 9. Minor Front Brake Check

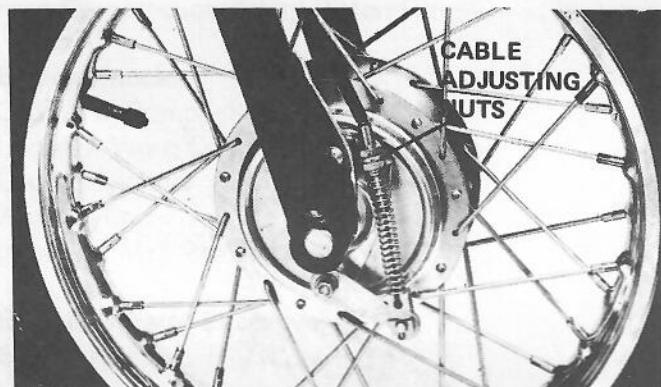


Figure 10. Major Front Brake Check

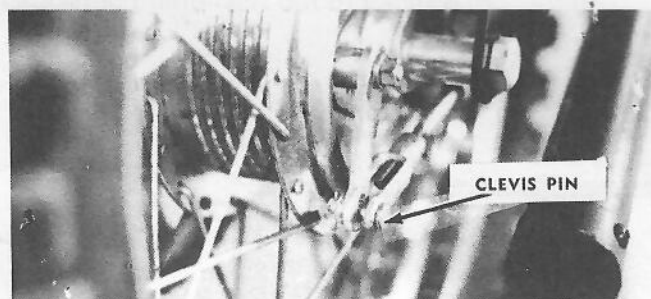


Figure 11. Rear Brake Check

6. Suspension

The front suspension is hydraulic. Every 100 hours the hydraulic oil should be changed as follows:

- STEP 1** Remove the front wheel and assembly.
- STEP 2** Unscrew the retaining nut and remove the lower shock tube (see figure 12).
- STEP 3** Remove shock spring and drain out old oil.
- STEP 4** Reassemble in reverse order tighten retain-nuts to 30 ft. lbs.

Note

Lock tight should be applied to the threads of the hydraulic resistor.

- STEP 5** Remove handle bar assembly for easy access to the 2 bolts acting as plugs in the upper yoke plate.
- STEP 6** Remove these 2 bolts and pour 3 oz. of hydraulic oil (S.A.E. 10) into each tube.

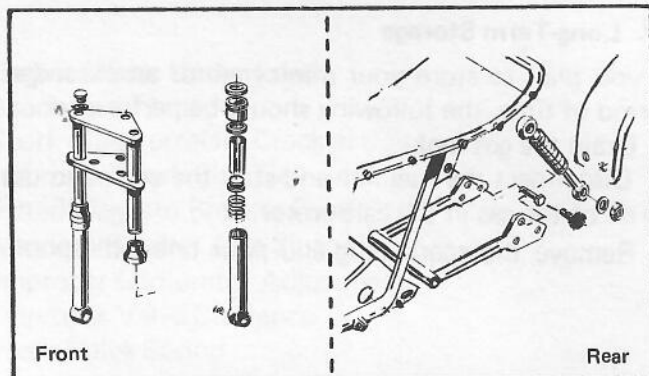


Figure 12. Checking Shocks

STEP 7 Replace bolts and handlebar assembly. Double check all bolts for tightness.

STEP 8 Bounce the front wheel up and down a few times to allow the oil to flow past the hydraulic resistors.

The rear suspension is equipped with a heavy duty automotive type shock absorber. See figure 12. Make sure that all dirt is washed out of the springs and off the main shaft (inside spring) with each cleaning. Periodically apply a few drops of oil to the main shaft.

7. Headlight

Make sure headlight mounting bolts are tight and electrical leads are properly secured.

8. Hubs

The front and rear wheel hubs contain double sealed bearings and require preventative maintenance only. Periodically clean dirt from wheel and hubs and wipe dry.

9. Exhaust Pipe

The muffler on the vehicle is positioned under the seat pan to protect the rider from the possibility of being burned. It is also equipped with a spark arrestor. See figure 13.

To remove your muffler remove the two Phillips head bolts out of the muffler adaptor on the engine, loosen the muffler clamp under the seat pan and pull out.

To clean out muffler, it is not necessary to remove screw plug from exhaust pipe. Operate engine to purge carbon through the screw hole.



Figure 13. Spark Arrestor

10. Long-Term Storage

If you plan to store your minicycle for an extended period of time, the following should be performed:

1. Drain the gas tank.
2. Disconnect the fuel line and start the engine to use up all of the gas in the carburetor.
3. Remove the spark plug and pour one tablespoon

OIL

of ~~the same oil you mix with your gas~~ down through the spark plug hole and turn the engine over a few times to coat the cylinder walls.

4. Replace the spark plug.
5. Cover your minibike and store it in a dry place to prevent metal parts from rusting.



Troubleshooting Chart

Engine Fails to Start or Starts with Difficulty

- No Fuel in Tank
- Obstructed Fuel Line
- Tank Cap Vent Obstructed
- Water in Fuel
- Engine Over Choked
- Improper Adjustment
- Loose or Defective Magneto Wiring
- Faulty Magneto
- Spark Plug Fouled
- Spark Plug Porcelain Cracked
- Poor Compression (Worn Piston Rings)

Engine Knocks

- Carbon in Combustion Chamber
- Loose or Worn Connecting Rod
- Loose Flywheel
- Worn Cylinder
- Improper Magneto Timing

Engine Vibrates Excessively

- Engine Not Securely Mounted
- Bent Crankshaft
- Associated Equipment out of Balance

Engine Misses Under Load

- Spark Plug Fouled
- Spark Plug Porcelain Cracked
- Improper Spark Plug Gap
- Pitted Magneto Breaker Points
- Magneto Breaker Arm Sluggish
- Improper Carburetor Adjustment
- Improper Valve Clearance
- Weak Valve Spring

Engine Lacks Power

- Choke Partially Closed
- Improper Carburetor Adjustment
- Magneto Improperly Timed
- Worn Piston Rings
- Lack of Lubrication
- Air Cleaner Fouled
- Valves Leaking

Engine Overheats

- Engine Improperly Timed
- Carburetor Improperly Adjusted
- Air Flow Obstructed
- Cooling Fins Clogged
- Excessive Load on Engine
- Carbon in Combustion Chamber
- Lack of Lubrication

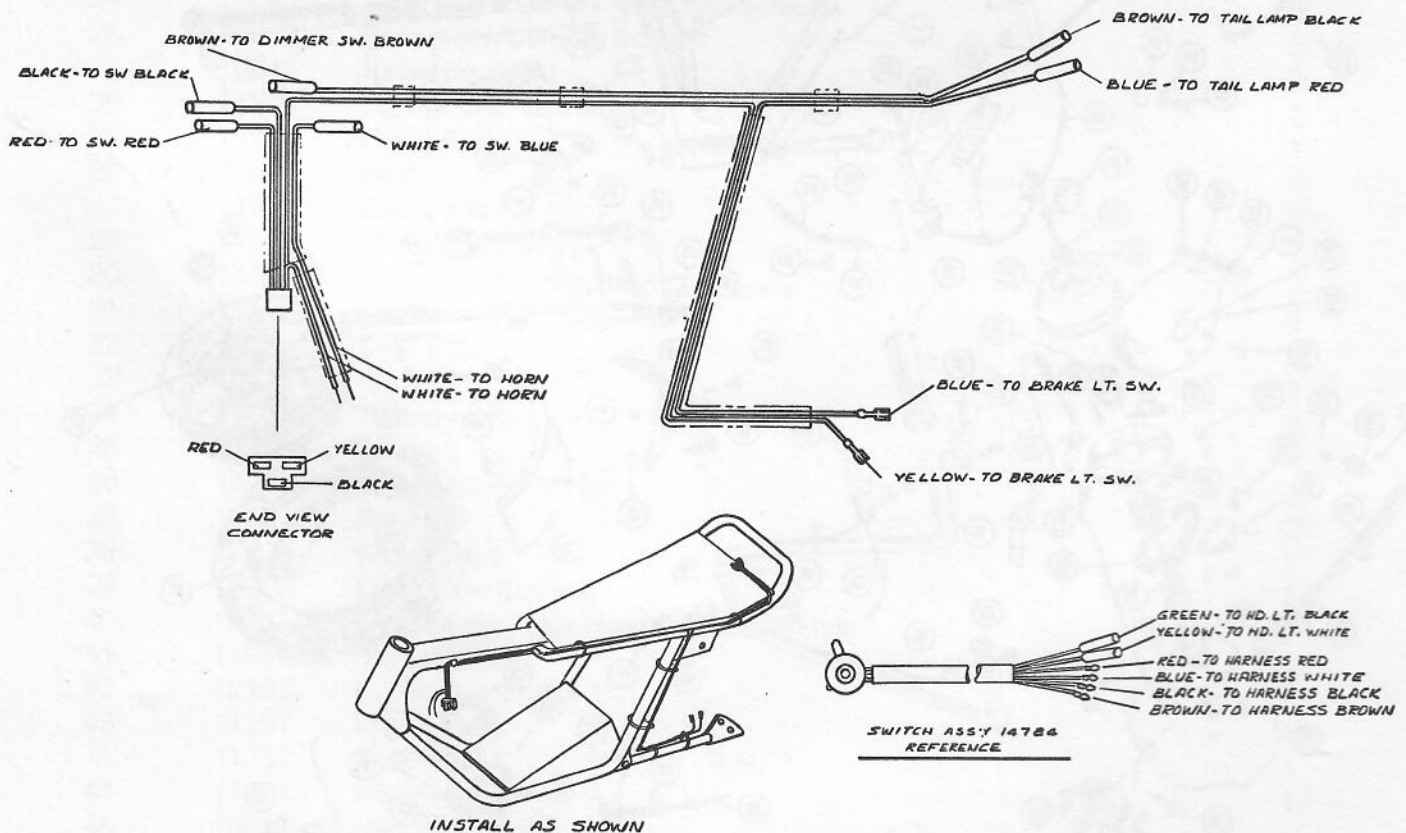


Figure 14. Wiring Diagram, Model 1012

Illustrated Parts List

All parts in this listing may be ordered through the J. C. Penney Co.

When ordering parts, always give the following information:

1. The part number
2. The part name
3. The model and/or Catalog No.

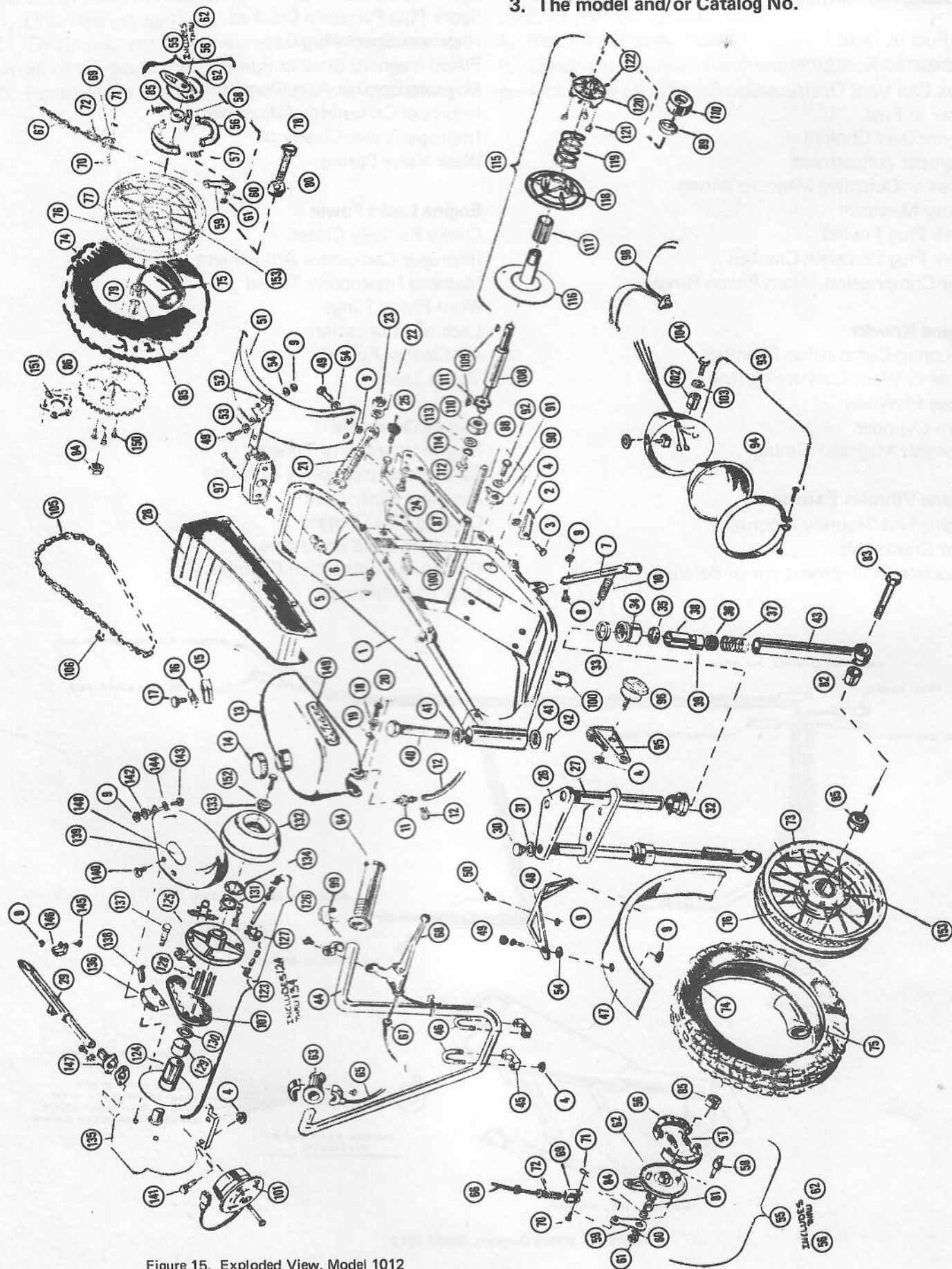


Figure 15. Exploded View, Model 1012

PARTS LIST MODEL 1012

Item No.	Part No.	Description	Qty.
1	11268	Main Frame	1
2	11181	Foot Peg	2
3	10549	5/16 - 18 x 1½" Hex Head Cap Screw	2
4	10524	5/16 - 18 Cone Lock Nut	28
5	10128	Seat Snap	8
6	10129	Rivet	8
7	11239	Kickstand	1
8	11355	¼ - 20 x 1 3/8" Hex Head Cap Screw	1
9	10522	¼ - 20 Cone Lock Nut	2
10	11246	Kickstand Spring	1
11	10511	Fuel Line Connector	1
12	10117	Fuel Line	1
	11014	Fuel Line Clamp	2
13	11394	Fuel Tank	1
14	11774	Fuel Tank Cap	-
15	11402	Fuel Tank Mount	1
16	11617	Mounting Plate	1
17	11755	¼ - 20 x 1½" Slotted, Pan Head Self Tapping Screw	1
18	10439	Rubber Grommet	2
19	11544	Speed Nut	2
20	10525	¼ - 20 x ¾" Phillips Head Machine Screw	2
21	10075	Rear Shock Absorber	2
22	10532	3/8 S.A.E. Flat Washer	4
23	10533	3/8 - 24 Cone Lock Nut	4
24	10537	3/8 - 24 x 1½" Hex Head Cap Screw	2
25	14263	Reflector Mounting Bracket	2
	12248	Refelctor (Red)	2
26	11248	Front Fork Assembly	1
27	11249	Front Fork	1
28	11496	Seat	1
	11265	Seat Cover	1
29	11509	Muffler	1
30	11094	3/8 - 24 x ½" Hex Head Cap Screw	2
31	11113	Spacer	2
32	11098	Dust Boot	2
33	10777	Oil Seal	2
34	11093	Retaining Nut	2
35	11100	Bushing	2
36	11095	Hydraulic Restrictor	2
37	11101	Spring	2
38	14809	Wear Sleeve	2
39	14808	Fork Tube Bushing	1
40	12152	½ - 20 x 6¾" Hex Head Cap Screw/Hole	1
41	11085	Bearing	2
42	12153	Cotter Pin, 3/32 x 1"	1
43	11251	Shock Tube L.H.	1
	11252	Shock Tube R.H.	1
44	11327	Handlebar	1
45	10005	Handlebar Clamp	2
46	10001	Handlebar U-Bolt	2
47	11234	Fender	1

PARTS LIST MODEL 1012

Item No.	Part No.	Description	Qty.
48	11228	Fender Bracket	1
49	11059	¼ - 20 x ¾" Hex Head Cap Screw	4
50	10525	¼ - 20 x ¾" Phillips, Pan Head Screw	2
51	11235	Fender	1
52	11359	Fender Bracket	1
53	10439	Grommet	4
54	10509	¼" S.A.E. Flat Washer	4
55	11633	Brake Assembly	2
56	11634	Brake Shoe, Pair	2
57	11635	Brake Spring	4
58	11636	Brake Actuating Cam	2
59	11637	Brake Actuating Arm	2
60	11639	Actuating Arm Washer	4
61	11640	Actuating Arm Nut	2
62	11641	Backing Plate	2
63	10055	Twist Grip Assembly w/Grip	1
64	10056	Dummy Grip	1
65	11284	Throttle Cable	1
66	11289	Brake Cable	1
67	11291	Brake Cable	1
68	10401	Control Lever	2
69	10246	Clevis	2
70	10190	Clevis Pin	2
71	10563	Cotter Pin, 1/16 x ½"	2
72	11352	Spring	2
73	11623	Wheel Assembly	1
74	11038	3.50 x 14" Knobby Tire	2
75	11039	3.50 x 14" Innertube	2
76	11040	Rim Strip	2
77	11624	Wheel Assembly	1
78	11374	½ - 20 x 7" Hex Head Cap Screw	1
79	11591	Spacer	1
80	11453	Spacer	1
81	11575	Spacer	1
82	11577	Spacer	1
83	11208	½ - 20 x 6½" Hex Head Cap Screw	1
84	10857	½ - 20 Cone Lock Nut	2
85	11085	Bearing	4
86	11457	Sprocket, 58 Tooth	1
87	11223	Swing Arm	1
88	10073	Pivot Rod	1
89	10232	Spacer	2
90	11257	Chain Adjusting Cam	2
91	10536	3/8" Split Lock Washer	2
92	10535	3/8 - 24 x 1" Hex Head Cap Screw	2
93	10710	Headlight Assembly	1
94	10815	Sealed Beam Unit	1
	10816	Headlight Bezel	1
	10852	Indicator Bulb	1
95	11186	Headlight Bracket	2
96	14264	Reflector Mount	2
	12249	Reflector (Amber)	2

PARTS LIST MODEL 1012

Item No.	Part No.	Description	Qty.
97	10711	Taillight Assembly	1
	10853	Taillight Lens	1
	10268	Taillight Bulb	1
98	11524	Wiring Harness	1
99	11468	Dimmer Switch & Horn Button	1
100	10077	Cable Tie	4
101	10140	Horn	1
102	10186	Spacer	2
103	10562	5/16" Split Lock Washer	2
104	10818	5/16 - 24 x 1" Hex Head Cap Screw	2
105	14480	Drive Chain 100 Pitch	1
106	11657	Master Link	1
107	14869	Drive Belt	1
108	14868	Jackshaft	1
109	11330	Woodruff Key, No. 9	2
110	10103	Bearing	2
111	11219	Sprocket, 9 Tooth	1
112	10523	5/16 - 18 x 1" Hex Head Cap Screw	1
113	10548	5/16" S.A.E. Flat Washer	1
114	10562	5/16" Split Lock Washer	1
115	14870	Driven Converter Assembly	1
116	14887	Fixed Face & Hub	1
117	14888	Bearing	1
118	14889	Moveable Face	1
119	14890	Spring	1
120	14891	Torque Bracket Assembly	1
121	14892	Cam Sliper	3
122	14893	Set Screw	3
123	14871	Drive Converter Assembly	1
124	14874	Fixed Face & Hub	1
125	14875	Moveable Face	1
126	14876	Spring Kit	3
127	14877	Roller Arm Kit	3
128	14878	Spline Liner	6
129	14879	Idler Bearing	1
130	14880	Idler Bearing Washer	1
131	14881	Retracter	1
132	14882	Ramp Plate	1
133	14883	Ramp Plate Washer	1
134	14885	Spline Washer	1
135	14936	Engine, 198 cc	1
136	14867	Guard Bracket	1
137	10540	5/16 - 24 x 1/2" Phillips Pan Head Machine Screw	2
138	10160	Speed Nut	2
139	10119	Torque Converter Guard	1
140	10962	1/4 - 20 x 1/2" Sems, Phillips, Pan Head Machine Screw	2
141	10548	5/16 - 18 x 1 1/2" Hex Head Cap Screw	4
142	10549	Rubber Grommet	1
143	11059	1/4 - 20 x 3/4" Hex Head Cap Screw	1
144	10509	1/4" S.A.E. Flat Washer	1

PARTS LIST MODEL 1012

Item No.	Part No.	Description	Qty.
145	10546	¼ - 20 x ½" Hex Head Cap Screw	1
146	11520	Muffler Clamp	1
147	11342	Exhaust Pipe Adapter	1
	10543	¼ - 20 x ½" Phillips Fillister Head Machine Screw	2
	10557	¼" Star Lock Washer	2
	10190	Exhaust Gasket	
148	10473	Decal, Warning	1
149	14872	Decal, El Tigre	2
150	11663	Sprocket Mounting Screw	4
151	11662	Sprocket Locking Collar	1
152	11255	3/8 - 24 x 1¼" Hex Head Cap Screw	1
153	11627	Spoke and Nipple	AR

PARTS LIST, MODEL HS50

Item No.	Part No.	Part Name	Item No.	Part No.	Part Name
1	33674	Cylinder Assy. (Incl. Nos. 2, 3 & 4) (2-13/16" Bore)	36	†6021	Screw
2	26727	Pin, Dowel	37	33636	Plug, Spark (Champion J-8 or equivalent)
3	27642	Plug, Sq. hd. pipe (Oil drain)	38	*31619	Gasket, Breather cover
3A	28582	Plug, Hex countersunk headless (Oil drain)	39	31337	Breather Assy. (Incl. Nos. 38 & 40)
4	32600	Seal, Oil	40	31410	Element, Breather
5	32644	Valve, Intake (Standard) (Incl. Nos. 7, 8 & 9)	41	†650128	Screw
5	32645	Valve, Intake (1/32" oversize) (Incl. Nos. 7, 8 & 9)	45	*33673	Gasket, Intake (1/32" thick)
6	29313B	Valve, Exhaust (Standard) (Incl. Nos. 7A, 8 & 9)	46	33669	Pipe, Intake
6	29315B	Valve, Exhaust (1/32" oversize) (Incl. Nos. 7A, 8 & 9)	48	†30646	Screw
7	31671	Cap, Upper valve spring (Intake)	59	31858	Link, Governor-to-throttle
7A	33678	Cap, Upper valve spring (Exhaust)	60	33302	Lever, Governor
8	31672	Spring, Valve	62	31752	Decal, Air cleaner
9	31673	Cap, Lower valve spring	63	31334	Rod, Governor (Incl. No. 67)
11	33676	Crankshaft	64	***33342	Baffle, Blower housing
14	33562	Piston & Pin Assy. (Standard) (Incl. 2 of No. 16) (2-13/16")	65	†650561	Screw
14	33563	Piston & Pin Assy. (.010 oversize) (Incl. 2 of No. 16)	66	33320	Decal, Name & Instruction
14	33564	Piston & Pin Assy. (.020 oversize) (Incl. 2 of No. 16)	67	28277	Washer, Flat
15	33567	Ring Set, Piston (Standard) (2-13/16")	68	†650168	Washer, Flat
15	33568	Ring Set, Piston (.010 oversize)	69	†29212	Screw
15	33569	Ring Set, Piston (.020 oversize)	70	**33663	Housing, Blower (Studs in 45%)
16	20381	Ring, Piston pin retaining	71	650763	Washer, Belleville
17	33661	Rod Assy., Connecting (Incl. Nos. 18, 19 & 20)	72	†650607	Nut, Hex
18	32610	Screw, Connecting rod	74	30747	Clip, Spark plug shorting
19	32609	Plate, Lock	75	†16645	Lockwasher
20	32654	Dipper, Oil	76	*27272	Gasket, Air cleaner
21	27241	Lifter, Valve	81	†650372	Screw
22	33158	Camshaft (Compression Release)	82	33341	Extension, Baffle
23	30756B	Cover, Cylinder (Incl. Nos. 24, 25, 27 & 106)	83	650701	Screw, Phil. hex hd. self-drilling No. 8-18 x 7/16
24	28540	Seal, Oil	85	†650372	Screw
25	32969	Dipstick, Oil (Incl. No. 27)	87	*26756	Gasket, Carburetor
28	*27677	Gasket, Cylinder cover	90	31715	Body, Air cleaner
29	†30564	Screw	91	30727	Element, Air cleaner
31	†650489	Screw	92	†650152	Screw
31A	650516	Screw, Hex hd. Sems w/flat washer, 1/4-20 x 1-1/8	93	31691	Bracket, Air cleaner
32	*33554	Gasket, Cylinder head	94	28820	Screw, Phil. fil. hd. mach. Sems 10-32 x 1/2
33	33016	Head, Cylinder	96A	33690	Decal, Name & H.P.
34	26073	Washer	97	30590A	Washer, Flat
35	650694	Screw, Hex hd. cap, 5/16-18 x 2	106	30574	Shaft, Mechanical governor
			107	30591	Gear Assy., Governor (Incl. No. 97)
			108	29193	Ring, Retaining
			109	30588A	Spool, Governor
			113	†30688	Screw
			121	29745	Extension, Blower housing
			122	†650128	Screw
			129	27247	Key, Flywheel
			137**	†29752	Nut
			139	29916	Clamp, Governor lever
			149***	†730136A	Speed Control Assy. (Incl. Nos. 150B, 153, 154 & 155)

PARTS LIST, MODEL HS50

Item No.	Part No.	Part Name	Item No.	Part No.	Part Name
150***	30091	Screw, Hex slotted washer hd. Sems 8-32 x 1/2	179	28539	Ring, Retaining
150A †	30322	Nut, Lock	180	28537	Washer, Flat
150B *	30200	Screw, Hex hd. Sems self-tapping 10-24 x 9/16 (Use as required)	181	33356	Terminal, Ground
151	27275	Clip, Wire retaining	182	28545	Grommet, Plastic
152	27276	Cover, Spark plug	183	†650643	Screw
153	650688	Screw, Hex hd., 10-32 x 1-5/16 (Drilled thru)	184	†30363	Nut, Hex, 10-32
154	33857	Spring, Compression	191	†29918	Washer, Lock
155	32923	Spring, Torsion	192	†30322	Nut & Lockwasher Assy.
		Spec. Nos. 67001, 4 thru 7, 9 thru 18, 20, 22 thru 30, 33 thru 36, 38 39, 41, 42, 45, 46, 49, 50, 51, 55	193	†29826	Screw
			194	†29216	Nut, Square
			195	29642	Ring, Retaining
			198	30547A	Contact Assy., Breaker
			199	30548A	Condenser
156	†28942	Screw	216	631021	Inlet Needle, Seat & Clip Assy.
177	30200	Screw, Hex hd. Sems, self-tapping, 10-24 x 9/16	217	631703	Carburetor
			218	610863	Magneto, Alternator (3 Amp)
			219**	590420	Starter, Rewind
178	28458	Bearing, Ball	221	88683	Gasket Set (Incl. items marked*)

TECUMSEH MODEL HS50

CODE EXPLANATION:

- * Indicates items included in gasket set.
- ** In original production some starters are riveted to the blower housing. If either the starter or blower housing requires replacement, both will have to be ordered. Also order 4 nuts illustrated to attach replacement starter to replacement blower housing.
- *** In original production the speed control assembly is riveted to the blower housing baffle. Replacement speed control assembly includes screws and nuts for mounting.
- New Parts, not used in previous production. Do not include dash (-) in part number when ordering parts.
- † Standard Hardware, can be purchased locally.

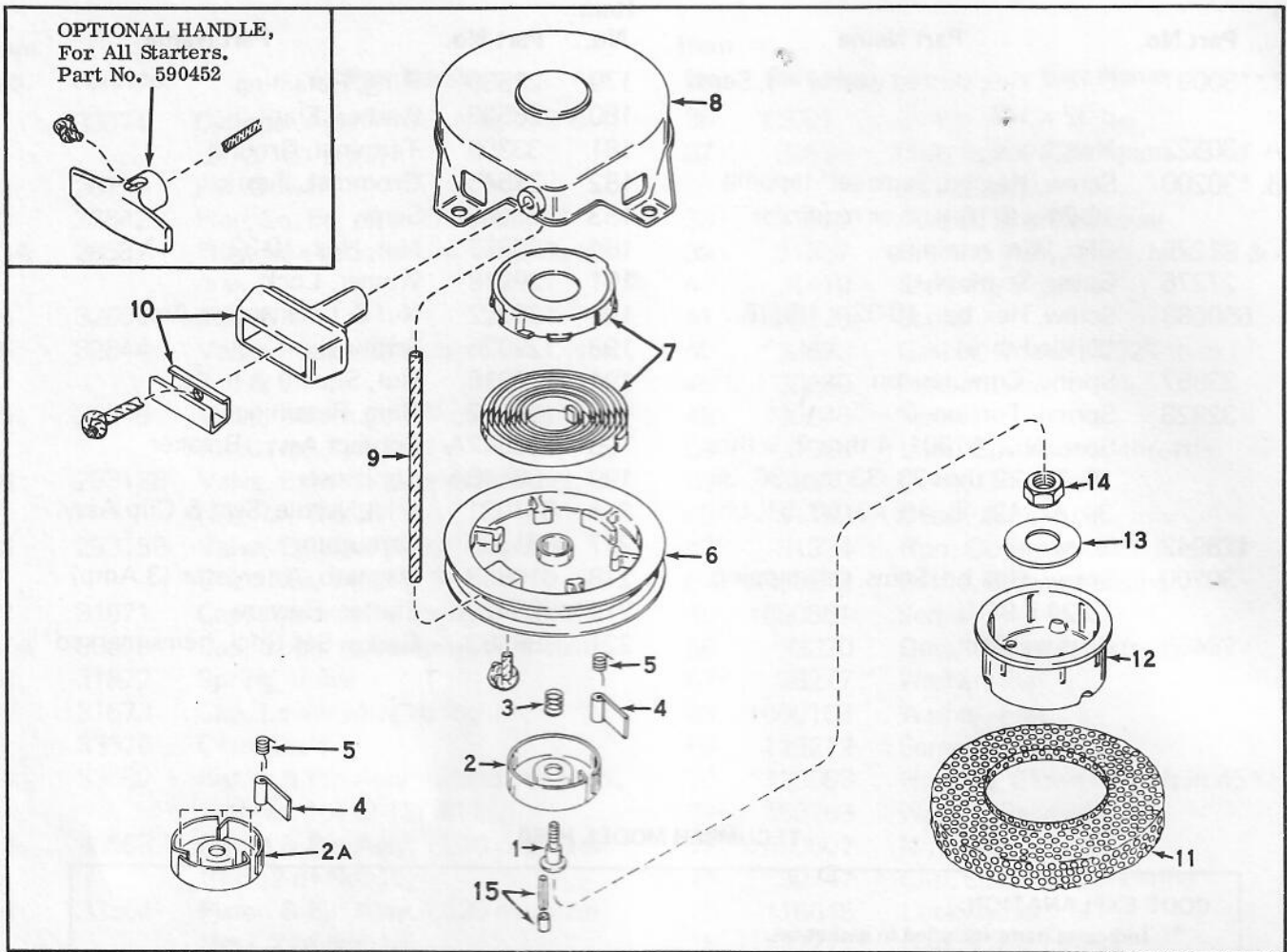


Figure 17. Exploded View, Starter, No. 590420

Item No.	Part No.	Part Name	Item No.	Part No.	Part Name
1	590509	Screw, Retainer	8	590415	Housing Assy., Starter
2	590410	Retainer, R. H.	9	590386	Rope, Starter (Length 54" & 11/64" Dia.)
3	590511	Spring, Brake	10	590387	Handle Assy., Starter
4	590148	Dog, Starter	11	590459	Pin, Centering (Not Used in Early Production)
5	590412	Spring, R. H. dog			
6	590413	Pulley			
7	590414	Spring & Keeper Assy. (Spring is 79" long, 5/16" wide & .020 thick)			

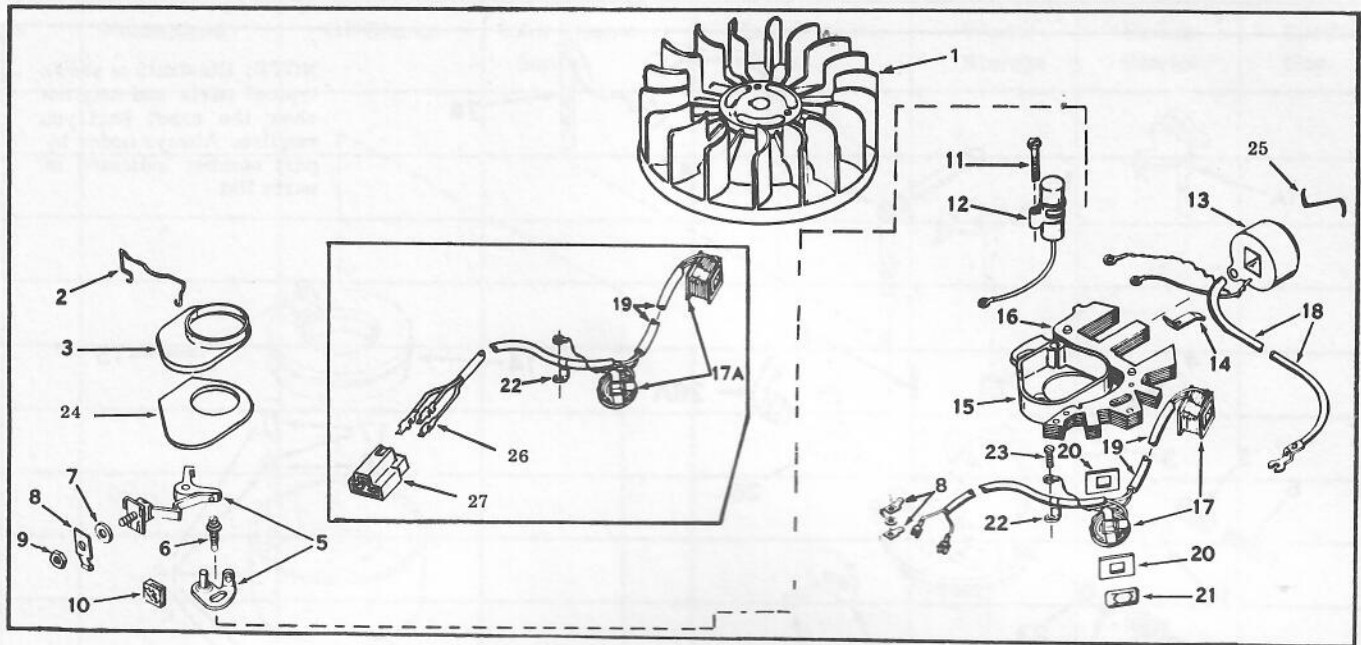


Figure 18. Exploded View, Magneto, No. 610863

Item No.	Part No.	Part Name	Item No.	Part No.	Part Name
1	610864	Flywheel	16	30834	Core & Plate Group
2	30836	Spring, Dust cover	17A	33030	Generating Coils & Leads (2 Circuit) (Incl. Nos. 36 & 37)
3	30550	Cover, Dust	18	30554	Wire, Lead
5	30547A	Contact Assy., Breaker	19	30840	Sleeve, Insulation
6	29181	Screw & Lockwasher	20	30838	Shield, Coil
7	610385	Washer, Terminal	21	610738	Clip, Coil fastening
8	30843	Tab, Terminal	22	30837	Clip, Ground
9	610408	Nut, Terminal	23	610384	Screw, Ground terminal
10	30549	Felt, Cam wiper	24	32052	Gasket, Dust cover
11	610593	Screw, Condenser fastening	25	31311	Clip, Coil locking
12	30548A	Condenser	26	610822	Terminals
13	30560A	Coil (Incl. No. 18)	27	610823	Connector, Pyramid
14	29629	Spring, Coil wedge			
15	610821	Stator Plate Assy. (Incl. Nos. 2, 3, 5 thru 23, 32, 33, 36, 37) (2 Circuit)			

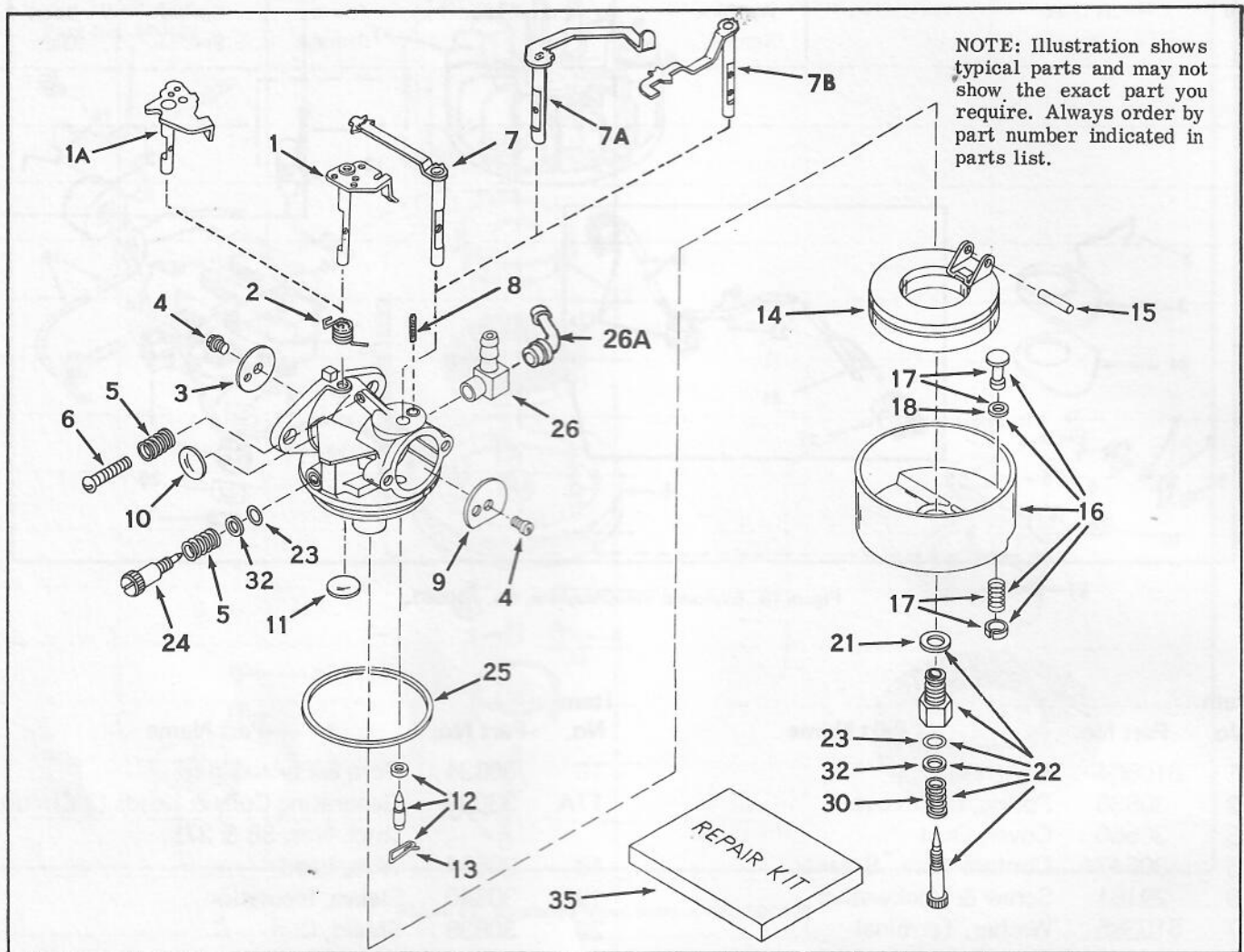



Figure 19. Exploded View, Carburetor, No. 631703

Item No.	Part No.	Part Name	Item No.	Part No.	Part Name
1	631615	Shaft & Lever Assy., Throttle	16	631025	Bowl & Drain Assy., Float (Incl. No. 17)
2	631279	Spring, Throttle return	17	27136A	Plunger Assy., Drain (Incl. No. 18)
3	631036	Shutter, Throttle	18	*27554	Gasket, Drain plunger
4	†650506	Screw, 4-40 x 3/16	21	27110	Gasket, Bowl-to-body
5	630766	Spring, Idle regulating screw	22	*631583	Adjustment Screw Assy., Main (Incl. Nos. 21, 23, 30 & 32)
6	†650417	Screw, Idle regulating	23	*630740	"O" Ring, Adjustment screw
7	631625	Shaft & Lever Assy., Choke	24	*631078	Screw, Idle adjustment
8	630735	Spring, Choke positioning	25	*631028	Gasket, Bowl-to-body
9	31837	Shutter, Choke	26	631445	Fitting, Fuel inlet
10	*630748	Plug, Welch	26A	631133	Fitting, Fuel inlet
11	*631027	Plug, Welch	30	630738	Spring, Main adjustment screw
12	*631021	Inlet Needle, Seat & Clip (Incl. No. 13)	32	630739	Washer
13	631022	Clip, Inlet needle	35	631584	Repair Kit (Incl. items marked*)
14	631023	Float, Carburetor			
15	*631024	Shaft, Float			



"Within thirty days of purchase we will provide service to repair or replace any part that is defective in material or workmanship (ninety days on the engine). Parts and labor are included.

Just return the vehicle to us for service.

Note: This guarantee does not cover mini-bikes, go-carts, or fun buggies used in competitive racing or on rental/commercial tracks. Nor does it cover them when the speed governor has been tampered with."