

Introduction

This manual is divided into seven sections, which cover specific Go-Ped® Models, gas and electric powered and detailed complete parts lists and illustrations for each. Also, most sections include troubleshooting information to assist your PMW dealership and technicians in providing customers with the best service.

For additional assistance, please feel free to contact Patmont Motor Werks Warranty Department by phone at 925-456-7052 or by email at warranty@goped.com.

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The information contained in this manual may change at any time without notice.

All information contained in this manual is based on the latest product information available at the time of printing.

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Revised – November 2005

Workshop Procedures

Detailed descriptions of standard workshop procedures, safety principles and service operations are not included in this manual. This manual does contain warnings and cautions against some specific service methods, which could cause personal injury, or could damage a machine or make it unsafe. Anyone using service procedures or tools whether or not recommended by Patmont Motor Werks Inc. must satisfy themselves thoroughly that neither personal safety or machine safety will be jeopardized.

WARNING

- This product should not be used by persons without excellent vision, balance, coordination, reflex, muscle & bone strength or good decision making capability.
- This product should not be used by minors without adult supervision.
- This product should not be used by persons unwilling or unable to take responsibility for their own actions.
- The user of this product assumes all risk associated with its use. To minimize these assumed risks, the user must wear safety helmet, goggles, gloves, elbow and knee pads and appropriate shoes with ankle support.

SAFETY WARNING

This vehicle does not conform to Federal Motor Vehicle Safety Standards and is not intended for operation on public streets, roads or highways. Serious injuries can result from the unsafe operation of this vehicle. The operator can minimize these assumed risks, by wearing Safety Equipment. SAFETY HELMET, GOGGLES, GLOVES, ELBOW AND KNEE PADS & APPROPRIATE SHOES MUST BE WORN. Do not operate this vehicle in TRAFFIC, WET, FROZEN, OILY or UNPAVED Surfaces. Avoid uneven surfaces, chuckholes, surface cracks and obstacles.

DO NOT REMOVE THIS LABEL

1	Strato charged Models GZ25N14 Engine
2	ESR 750 ESR750Ex
3	Super X-Ped Super Bigfoot G230RC Engine
4	Sport Bigfoot X-Ped Liquimatic G23LH Engine
5	GSR40
6	Super Go-Quad 30
7	Go-Ped® Trail Ripper GTR40

SECTION 1.STRATO-GSR 25 MODELS

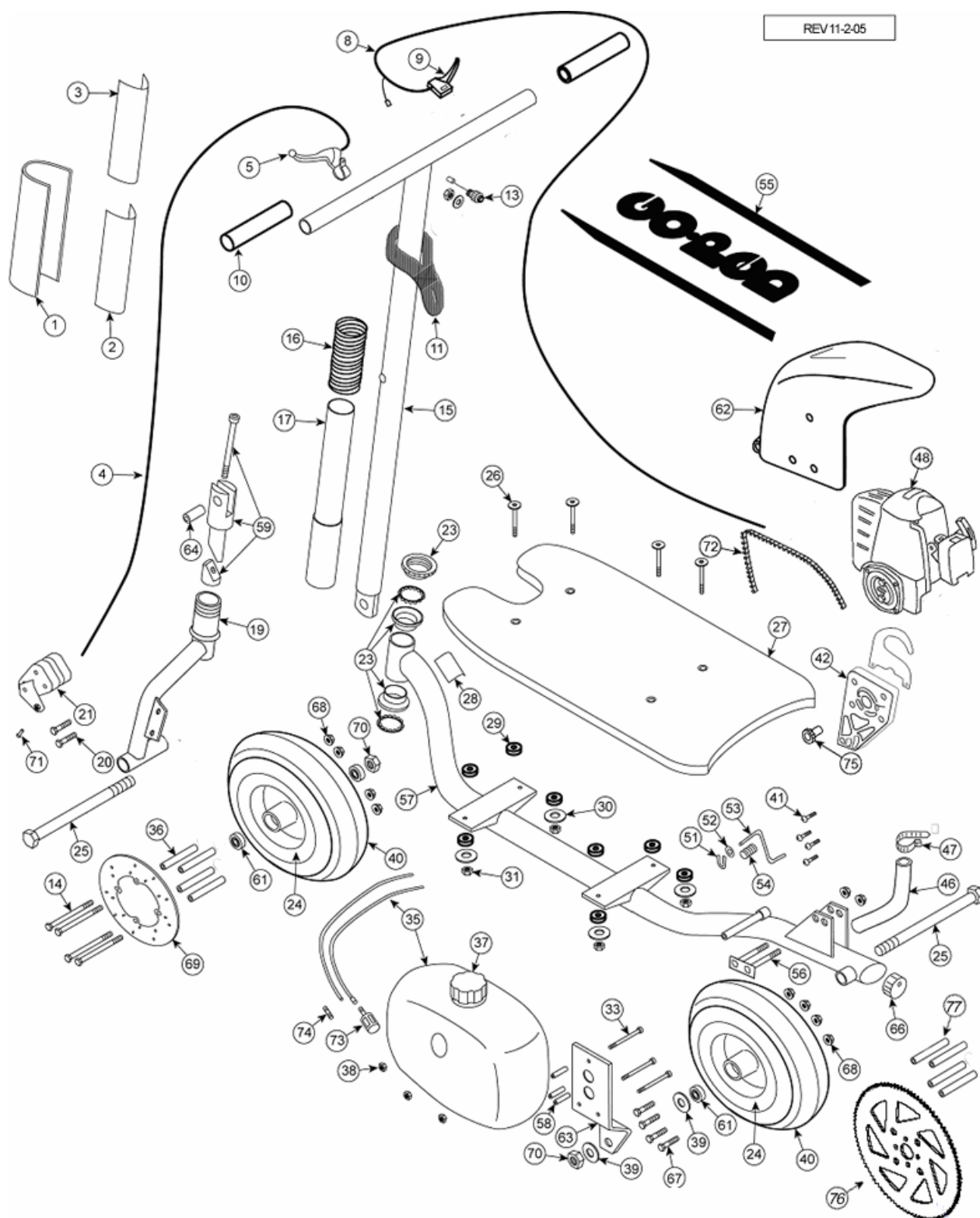
The following machines are powered by the GZ25N23 Strato-Charged engine.

There are four models in the 25 line, The GSR 25, the GSR-Sport, the X25 and the S25.

This section contains parts illustrations, parts lists, disassembly, assembly, frequently asked questions and troubleshooting information for each machine.

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1.1 GSR 25 Parts Illustration



1.2 Parts Listing – GSR 25

(Revised November 3, 2005)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1063	Yellow Warning Label	1
4.	1081	Brake Cable Assembly	1
5.	1048L	Brake Lever Assembly	1
6.			
7.			
8.	BF1050	Throttle Cable Assembly	1
9.	1051	Throttle Lever	1
10.	1049	Grips/set	1
11.	1412	Carry Loop, nylon (GSR25)	1
12.			
13.	3123	Kill Switch Assembly (includes kill switch, nut, washer)	1
14.	1088	Bolt 3/8-24 x 3.5" Low Hex Head; front wheel assembly	4
15.	GSR1041	T-bar, anodized – 24.75"	1
16.	1060	Safety Spring	1
17.	1022	Slide Tube	1
18.			
19.	MD1027A - color	Front Fork assembly w/axle Mad Dog - Lefty	1
20.	1090	Bolt, maddog caliper mount	1
21.	1083A	Caliper, Front Mad Dog Brake	1
22.			
23.	1028	Bearing kit; front fork	2
24.	2026M	Wheel; 10"PT; 2pcs. Mag.	2
25.	BF1033	Bolt, Axle 5/8-18 x 6 HHCS	2
26.	1008	Bolt, Deck 1/4-20 x 1-3/4 FHCS	4
27.	GBF1006	Deck w/Grit	1
28.	1068	Sticker, Made in U.S.A.	1
29.	1011	Grommet, Deck	8
30.	1009	Washer, Deck	4
31.	1010	Nut, Deck	4
32.			
33.	1025	Bolt, Gas Tank Mount	1
34.			
35.	2113	Gas Tank Assembly	1
36.	1087	Spacer, Disc Brake, maddog	4
37.	45171	Gas Cap	1
38.	1026	Nut, Gas Tank Mount	3
39.	BF1036	Washer, Axle	2
40.	BF1059O BF1058T	Tire, Rubber "TT" Power Play Tube, 10" Inner	2 2

41.	1401	Bolt, Engine Mount M6x35	4
42.	1454A	Motor Mount w/ Clutch drum	1
43.			
44.			
45.			
46.	GSR1026	Muffler Connect Tube	1
47.	GSR1027	Clamp, Exhaust tube	1
48.	4801B	Engine, GZ25N23, 25.4cc	1
49.			
50.			
51.	1072A	Retaining Ring, Kickstand	1
52.	1074A	Washer, Kickstand	1
53.	8634C	Kickstand Assembly, New Style	1
54.	1635	Spring, Kickstand, New Style	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	1407	U-bolt; motor mount	1
57.	251001 - color	Frame Assembly (unpainted) Options A,B,BK,G,SB,P,Y,R	1
58.	1024	Spacer, Gas Tank	3
59.	1043	Lower Hinge Fitting Assy, (Alum), inc bolt, wedge nut	1
60.	GSR1028	Grommet, Exhaust frame	1
61.	BF1038A	Wheel Bearing	4
62.	GSR1022A	Fender with silver decal	1
63.	GSR1019	Fender/Tank Rear Bracket	1
64.	1056	Handle Hinge Pin	1
65.			
66.	6007	Go Snuffer Silencer	1
67.	GSR1045	Bolt, Rear Wheel	4
68.	8008	Nut, Hub	8
69.	8003SS	Rotor, Front Stainless Steel Disc Brake	1
70.	BF1037	Nut, Axle 5/8-18 NTF	2
71.	1055	Cable, End Crimp	1
72.	GSR1003	Chain, # 25 Heavy 94 link	1
73.	3120	Fuel Filter	1
74.	3118	Fuel Line Return Fitting	1
75.	GSR1004.1	Sprocket, 6 tooth	1
76.	GSR1004.84	Sprocket; 84 tooth (GSR's)	1
77.	GSR1014	Spacer; rear wheel to sprocket	4
Available Assemblies			
	MD1058TT	Wheel Assy Front (Mag.)	
	1458TT	Wheel Assy Rear (Mag.)	1
	1446A	T-Bar complete – 24.75"	1

1.3 GSR-Sport Parts Illustration

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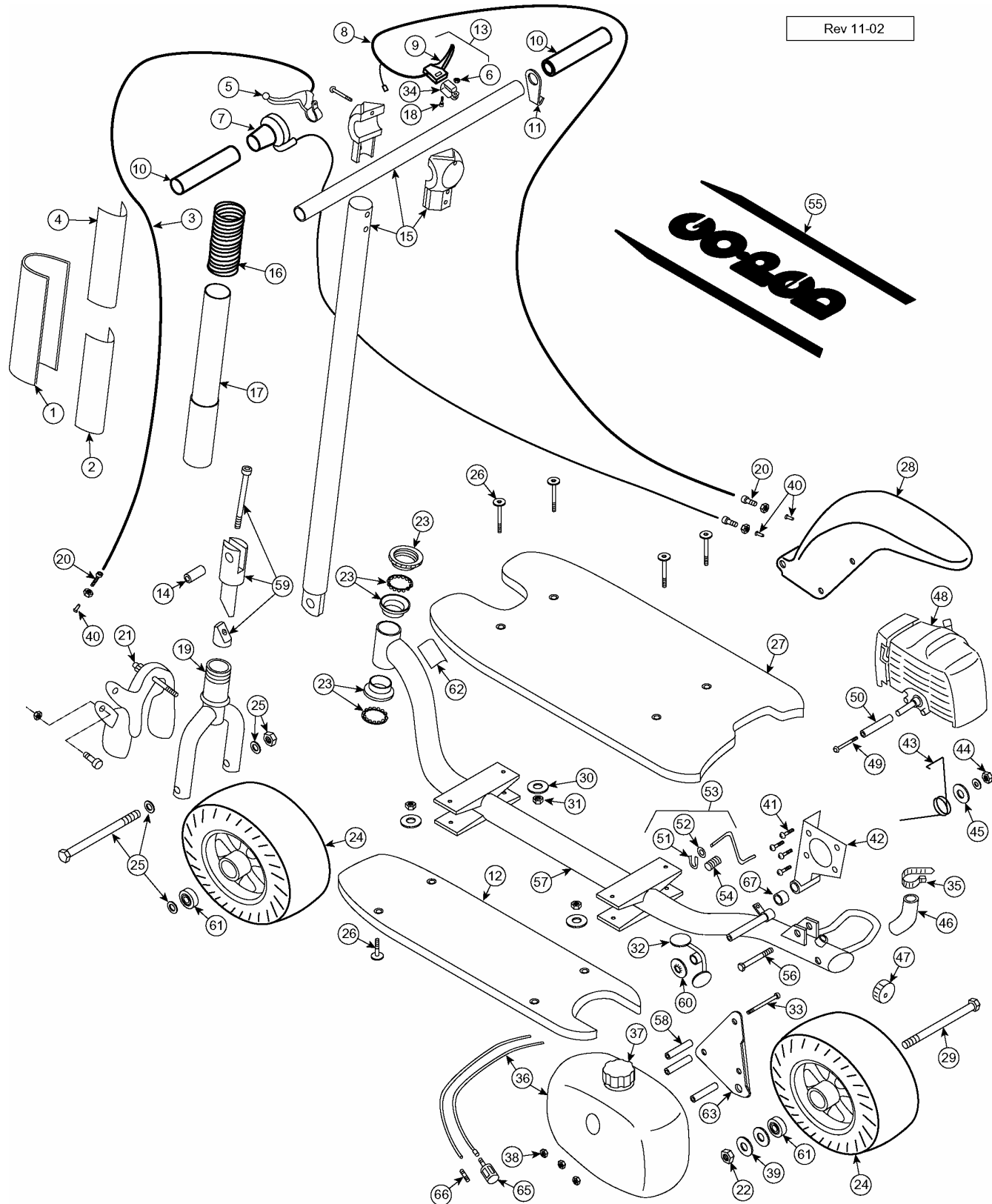
1.4 Parts Listing – GSR-Sport

(Rev 12-02)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1063	Yellow Warning Label	1
5.	1047	Brake Lever Assembly	1
6.	1069	Nut, Throttle Clamp 8-32 Nylok	1
7.			
8.	1050	Throttle Cable Assembly	1
9.	1051A	Throttle Lever	1
10.	1049	Grips/set	1
	1062	Safety Spring & Grip Kit	1
11.	KN1005	Latch, T-Bar	1
12.	1051B	Throttle Lever Assembly (includes items – 9, 18, 20, 6)	1
13.	3123	Kill Switch Assembly	1
14.	1056	Handle Hinge Pin	1
15.	1447A	T-Bar w/Upper Hinge-28.75"	1
16.	1060	Safety Spring	1
17.	1022	Slide Tube	1
18.	1067	Screw, Throttle Clamp 8-32 x ½ SHCS	1
19.	1027	Front Fork w/axle Designate color w/ Part #	1
20.	1066	Clamp, Throttle Lever	1
21.	1030	Caliper, Front Brake	1
22.	1037	Nut, Axle 3/8-24	1
23.	1028B	Front Fork Bearing Kit	1
24.	1158	Wheel Assembly, Mach 12 (replaces #1059)	1
25.	1033	Axle Bolt 3/8-24 x 3-1/2	2
26.	1008	Bolt, Deck	4
27.	GS1006	Deck w/grit	1
28.	1410	Fender, Rear	1
	1310B	Fender Mount Hardware Kit	1
	1310	Fender Kit, Rear	1
29.	1011	Grommet, Deck	8
30.	1009	Washer, Deck	4
31.	1010	Nut, Deck	4
32.	1311B	Rear Brake	1

33.	1025	Bolt, Gas Tank Mount	3
34.	2025	Cable Barrel w/nut	1
35.	1055	Cable, End Crimp	1
36.	BF3113	Gas Tank Assembly	1
37.	45171	Gas Cap	1
38.	1026	Nut, Gas Tank Mount	3
39.	1036	Washer, Axle	4
40.	1053	Plastic Cable Tie (8")	1
41.		Screw, Engine Mount	4
42.		Engine Mount Bracket	1
43.	1458	Wheel Assy, Rear w/ 56T sprocket	1
44.	8014	Nut, Engine Bracket	1
45.	8016	Washer, Swivel Damper	1
46.	GSR1026	Muffler Connect Tube Assembly	1
47.	6007	Go Snuffer Silencer	1
48.	4801A	Engine, GZ25N23, 25.4cc	1
	1018	Engine Hardware Kit	1
49.	1014	Bolt, Drive Spindle M6x55	1
50.	1013GS	Drive Spindle w/grit	1
51.	1072A	Retaining Ring, Kickstand	1
52.	1074A	Washer, Kickstand	1
53.	8634C	Kickstand Assembly, New Style	1
54.	1635	Spring, Kickstand, New Style	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	1312	Bolt, Motor Mount	1
57.		Frame Assembly	1
58.	1024	Spacer, Gas Tank	3
59.	1043A	Lower Hinge, FTG Assembly, Aluminum	1
60.	8020	Fender Retaining Washer	1
61.	1038A	Wheel Bearing	4
62.	1068	Sticker, Made in U.S.A.	1
63.	1303	Fender/Tank Rear Bracket	1
64.	3120	Fuel Filter	1
65.	3118	Fuel Line Return Fitting	1
66.	1306D	Spacer, Motor Pivot	1
67.	1413	Bolt, Rear Axle	1

1.5 X25 Ped Illustration



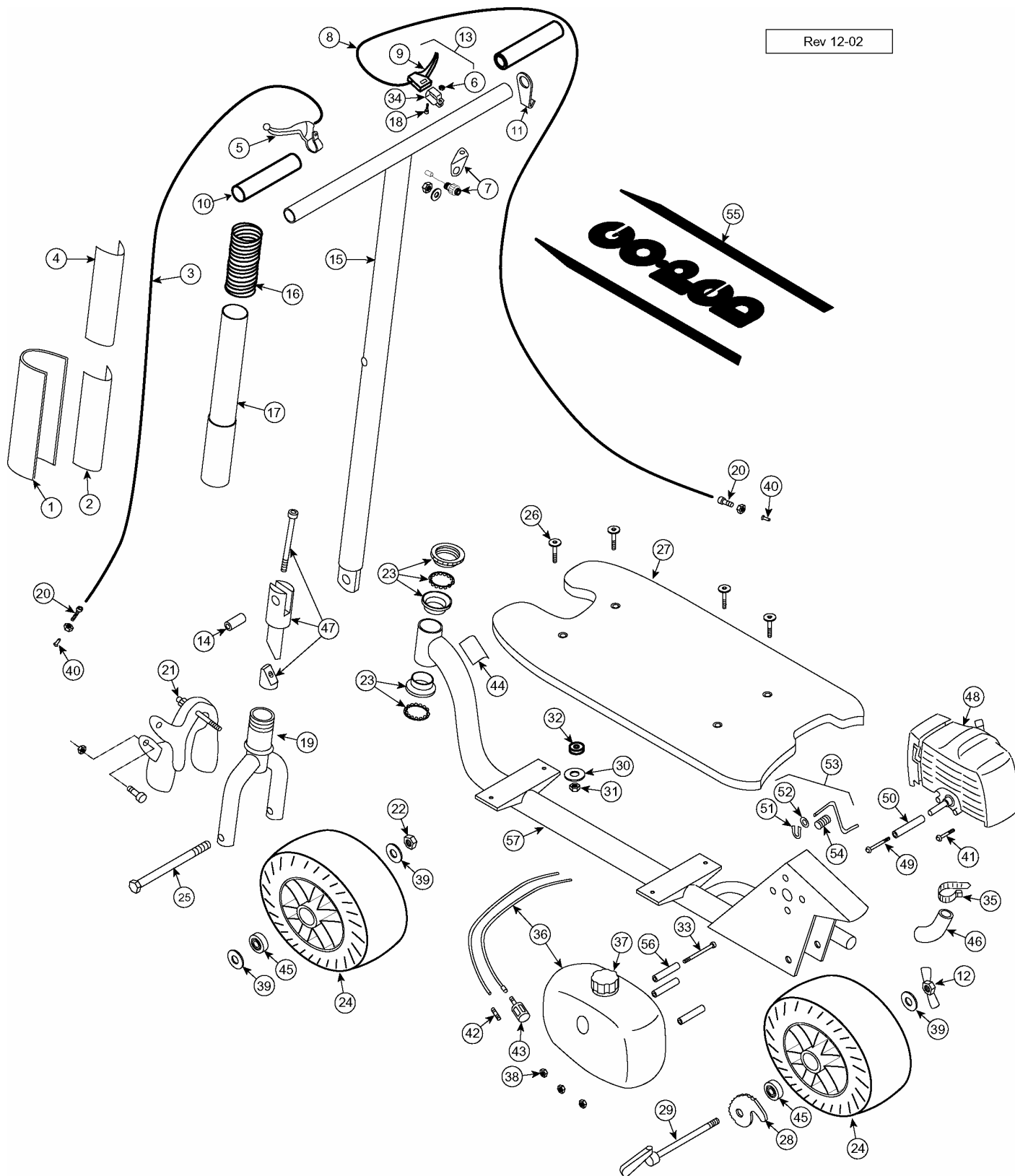
1.6 Parts Listing – X25 Ped

(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1063	Yellow Warning Label	1
5.	1047	Brake Lever Assembly	1
6.	1069	Nut, Throttle Clamp 8-32 Nylok	1
7.			
8.	1050	Throttle Cable Assembly	1
9.	1051A	Throttle Lever Assembly	1
10.	2049	Pro Grip set	1
11.	KN1005	Latch, T-Bar	1
12.	XS1006	Slide Deck	1
13.	1051B	Throttle Lever Assembly (includes items – 9, 18, 34, 6)	1
14.	1056	Handle Hinge Pin	1
15.	2043	Handlebar Assembly Complete 24.75"	1
16.	1060	Safety Spring	1
17.	1022	Slide Tube, Silver	1
18.	1067	Screw, Throttle Clamp 8-32 x ½ SHCS	1
19.	1127BK	Front Fork, Bothy Black	1
20.	2025	Cable Barrel w/nut	2
21.	1030	Brake Caliper, Front	1
22.	7008	Nut, Axle, Rear ½-20	1
23.	1028	Front Fork Bearing Kit	1
24.	X1058	Wheel Assembly, Aluminum	2
25.	1131	Axle Assembly, for Bothy Fork	1
26.	1008	Bolt, Deck	8
27.	1006XSA	Deck, Billet AL. w/Grit	1
28.			
29.	1317	Bolt, Rear Axle ½-20 x 5	1
30.	1009	Washer, Deck	8
31.	1010	Nut, Deck	8
32.			
33.	1025	Bolt, Gas Tank Mount M6x60	3

34.	1066	Clamp, Throttle Lever	1
35.	1053	Plastic Cable Tie (8")	3
36.	3113	Gas Tank w/ Fuel Lines	1
37.	3116	Gas Cap	1
38.	1026	Nut, Gas Tank Mount M6	3
39.	7009	Washer, Axle 1/2"	6
40.	1055	Cable, End Crimp	1
41.	1023	Screw, Engine Mount M5 x	4
42.			
43.			
44.			
45.			
46.	1019GS	Muffler Connect Tube Assembly	1
47.	6007	Plug, Go Snuffer Silencer	1
48.	4801	Engine, GZ25N14, 25.4cc	1
	1018	Engine Hardware Kit	1
49.	1016	Bolt, Drive Spindle M6 x 55	1
50.	1013B	Drive Spindle w/grit	1
51.	1072	E-Clip, Kickstand 5/16	1
52.	1074	Washer, Kickstand 5/16	1
53.	8633	Kickstand Assembly, New Style	1
54.	1635	Spring, Kickstand, New Style	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.			
57.	CX1001BK	Frame Assembly, Black	1
58.	1024	Spacer, Gas Tank	3
59.	X1043	Lower Hinge, Fitting Assembly, Steel	1
60.			
61.	Q1038A	Wheel Bearing	-
62.	1068	Sticker, Made in U.S.A.	1
63.	1303	Fender/Tank Rear Bracket	1
64.	1053S	Plastic Cable Tie (4") (not shown)	-
65.	3120	Fuel Filter	1
66.	3118	Fuel Line Return Fitting	1
67.			

1.7 Sport S25 Illustration



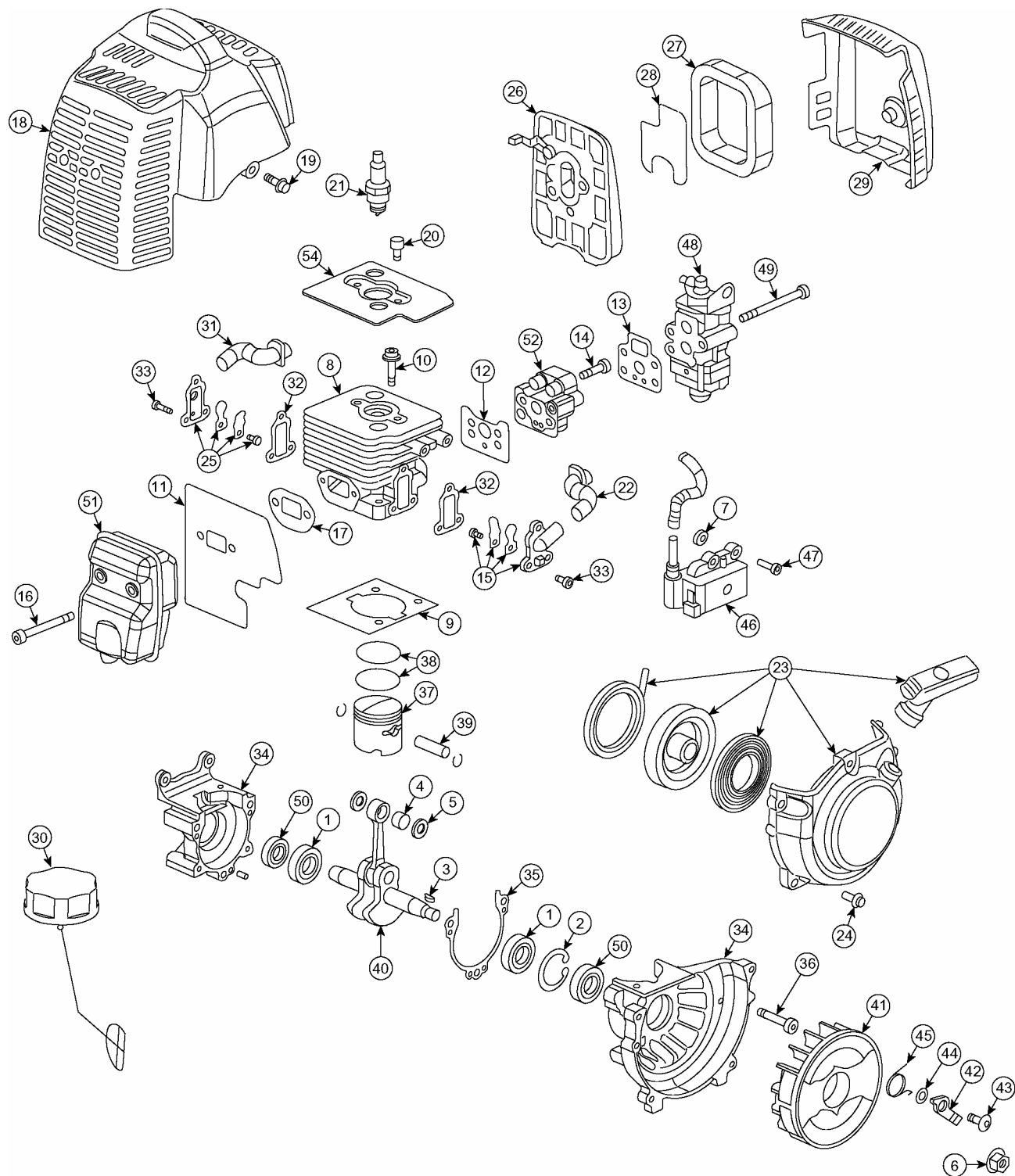
1.8 Parts Listing – Sport S25

(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1063	Yellow Warning Label	1
5.	1047	Brake Lever Assembly	1
6.	1069	Nut, Throttle Clamp 8-32 Nylok	1
7.	3123	Kill Switch Assembly	1
8.	1050	Throttle Cable Assembly	1
9.	1051A	Throttle Lever Assembly	1
10.	1049	Grip Set	1
11.	KN1005	Latch, T-Bar	1
12.	1017	Wing Nut, Quick Release	1
13.	1051B	Throttle Lever Assy Complete	
14.	1056	Handle Hinge Pin	1
15.	1046CL	Handlebar Assembly Complete 28.75"	1
16.	1060	Safety Spring	1
17.	1022	Slide Tube, Black	1
18.	1067	Screw, Throttle Clamp 8-32 x ½ SHCS	1
19.	1128 (R,B or BK)	Fork, Bothy Front P/N should be followed by R, B or BK for color	1
20.	2025	Cable Barrel w/nut	2
21.	1030	Brake Caliper, Front	1
22.	1037	Nut, Axle, Front 3/8-24	1
23.	1028B	Bearing, Front Fork	2
24.	1158	Wheel Assembly, Mach 12	2
25.	KN1012	Bolt, Axle Front 3/8-24 x 4- 1/2	1
26.	1008	Bolt, Deck	4
27.	S1006	Deck	1
28.	1015	Quick Release E.P W.	1
29.	1012	Quick Release Axle Bolt	1
30.	1009	Washer, Deck	4

31.	1010	Nut, Deck	4
32.	1011	Grommet, Deck	8
33.	1025	Bolt, Gas Tank Mount M6x60	3
34.	1066	Clamp, Throttle Lever	1
35.	1053	Plastic Cable Tie (8")	3
36.	3113	Gas Tank w/ Fuel Lines	1
37.	3116	Gas Cap	1
38.	1026	Nut, Gas Tank Mount M6	3
39.	1036	Washer, Axle 3/8	6
40.	1055	Cable, End Crimp	3
41.	1023	Screw, Engine Mount M5x	4
42.	3118	Fuel Line Return Fitting	1
43.	3120	Fuel Filter	1
44.	1068	Sticker, Made in U.S.A.	1
45.	1038A	Wheel Bearing	1
46.	1019A	Muffler Connect Tube Assembly	1
47.	1043	Lower Hinge, Fitting Assembly, Aluminum	1
48.	4801	Engine, GZ25N14, 25.4cc	1
49.	1016	Bolt, Drive Spindle M6x55	1
50.	1013GS	Drive Spindle w/grit	1
51.	1072	Retaining Ring, Kickstand 5/16	1
52.	1074	Washer, Kickstand 5/16	1
53.	8633	Kickstand Assembly, New Style	1
54.	1635	Spring, Kickstand, New Style	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	1024	Spacer, Gas Tank	3
57.	C1001 (R,B or BK)	Frame Assembly, R, B or BK	1
58.	1053S	Plastic Cable Tie (4") (not shown)	2

1.9 GZ25N23 Engine Parts Illustration



1.10 Parts Listing – GZ25N23 Engine

Item	Part No.	Description	Qty
1.	3020	Bearing Set, Crankcase	1
2.	3021	Ring, Crankcase	1
3.	3022	Key, Flywheel	1
4.	3039	Bearing, Piston	1
5.	3040	Pin Washer Set	1
6.	3044	Nut, Flywheel	1
7.	4057	Spacer, Ignition Coil	1
8.	4501	Cylinder	1
9.	4502	Gasket, Cylinder Base	1
10.	4503	Bolt, Torx, Cylinder	-
11.	4505	Insulator, Manifold	1
12.	4505	Gasket, Insulator	1
13.	4506	Gasket, Carburetor	1
14.	4507	Bolt, Torx, Insulator	-
15.	4508	Reed Valve Assembly (F)	1
16.	45101	Bolt, Torx, Muffler	-
17.	45012	Gasket, Muffler	1
18.	45110	Cover, Engine	1
19.	45111	Screw, Engine Cover	-
20.	45113	Bolt, Torx, Cylinder Plate	-
21.	45125	Spark Plug	1
22.	4513	Pipe, Air (F)	1
23.	45130	Recoil Starter Assembly	1
24.	45137	Bolt, Torx, Starter	-
25.	4514	Reed Valve Assembly (S)	1
26.	45140	Air Filter, Rear Housing	1
27.	45144	Air Filter Element	1
28.	45145	Air Filter Screen	1
29.	45146	Air Filter Cover Assembly	1

30.	45171	Gas Cap	1
31.	4519	Pipe, Air (S)	1
32.	4520	Gasket, Reedvalve	2
33.	4521	Bolt, Torx, Reedvalve	-
34.	4529	Crankcase Assembly with Bearings and Seals	1
35.	4532	Gasket, Crankcase	1
36.	4538A	Bolt, M5 x 30 SHCS Crankcase	-
37.	4540	Piston	1
38.	4541	Piston Ring Set	1
39.	4542	Pin, Piston	1
40.	4546	Crankshaft Complete	1
41.	4549	Flywheel	1
42.	4551	Pawl, Starter	-
43.	4552	Screw, Pawl Locator	-
44.	4553	Washer, Pawl Spacer	-
45.	4554	Spring, Pawl	-
46.	4555	Ignition Coil Assembly	1
47.	4559	Bolt, Torx, Coil Mount	-
48.	4570	Carburetor Assembly	1
49.	4585	Bolt, Torx, Carburetor	-
50.	4019	Oil Seal Set (separate from bearings)	1
51.	4012	Muffler	1
52.	4504	Manifold, Carburetor	1
53.	4801	Engine, GZ25N14, 25.4cc	1
54.		Cylinder Plate	1

1.11 Disassembly and Reassembly

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned, there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine **VOIDS** the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped® replacement parts, the Warranty is **VOID**.

1.11.1 Removing the T-Bar and Lower Hinge Fitting Assembly

1. Fold the handlebars to the carrying position.
2. Place the machine on its side with a solid object (such as a 2x6 piece of wood) under the fork.
3. Using a drift, drive the hinge pin out of the Lower Hinge Fitting assembly until the T-Bar can be removed.

CAUTION: The slide tube is spring loaded. Be sure it does not fly off and cause injury.

4. Remove the T-Bar from the Lower Hinge Fitting assembly.
5. Using a 1/4" Allen wrench, loosen the Lower Hinge Fitting bolt.
6. Using a drift or insert the 1/4" Allen wrench, hit the top of the Allen bolt to loosen the Wedge Nut.

NOTE: If the Wedge Nut is stuck in the Fork, spray a lubricant in the bottom of the fork to help loosen it. Thread the Lower Hinge Bolt into the Wedge to extract the Wedge from the Fork.

7. When the Wedge Nut becomes loose, the Lower Hinge Fitting may be removed from the Front Fork.

1.11.2 Removing and Reinstalling the Front Fork

1. Use a large ViseGrip® or ChannelLock® pliers to remove the Fork Nut.

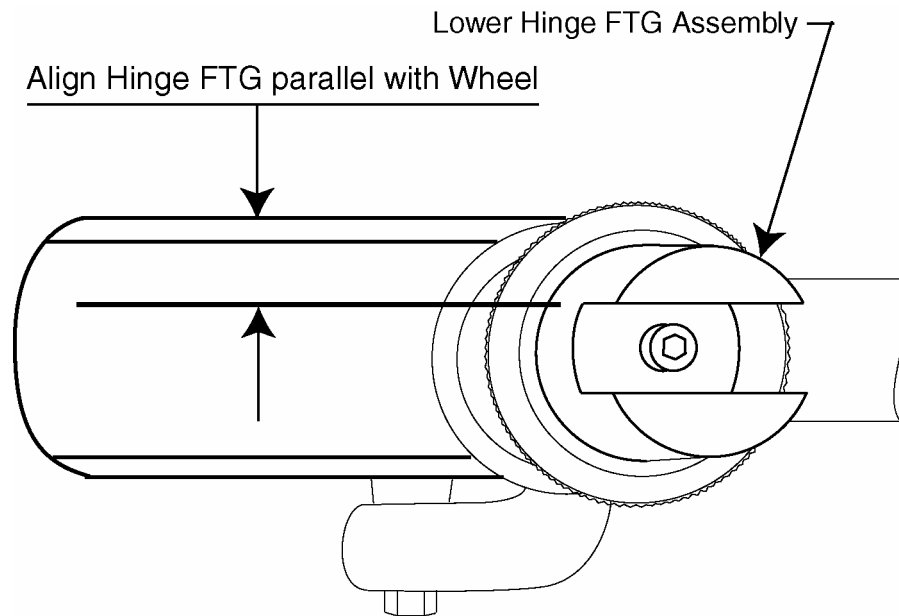
CAUTION: If the Fork Nut is Loctited in place it may be necessary to clamp and hold the front wheel in place in order to turn the Fork Nut.

2. Pull the Front Fork out of the frame.
3. Before removing the bearings from the races, notice how the bearings are seated in the races. They must be replaced in the same orientation to avoid bearing damage.
4. Clean and inspect the bearings and races.
5. If the bearings or races are damaged or show signs of wear, install a new Front Fork Bearing Kit.
6. Grease the bearings and bearing surfaces using a lithium based grease.
7. Reinstall the bearings and fork into the frame.
8. Clean and inspect the Fork Nut. If the Fork Nut is worn or damaged, replace it.

9. Install the Fork Nut.
10. Adjust the Fork Nut so there is no play in the bearings. Do not over-tighten.

1.11.3 Replacing the Lower Hinge Fitting Assembly

1. Assemble the pieces of the Lower Hinge Fitting Assembly. Do not completely tighten the Wedge Nut.
2. Push the Lower Hinge Fitting Assembly into the Front Fork, making sure the Fitting is seated properly. The Lower Hinge Fitting Assembly should be in contact with the Fork Nut.
3. Align the Lower Hinge Fitting Assembly with the Front Wheel as shown. (GSR Sport shown)



4. Securely tighten the Allen Bolt.

1.11.4 Reinstalling the T-Bar

1. Replace the spring and slide tube on the T-Bar.

NOTE: Replacing the T-Bar may require two persons, one to hold the slide tube in place and the other to drive the hinge pin in place.

2. Position the T-Bar in place on the fork and drive the hinge pin back in place.
3. Apply grease to the areas where the Slide Tube slides on the T-Bar and Lower Hinge Fitting assembly when the T-Bar is extended to the riding position.
4. Extend the T-Bar to the riding position and check that the slide tube properly engages the Fork Nut.
5. After reassembly, check that there is no play or binding in the bearings and that the T-Bar folds properly into the carrying position.
6. Check that the Lower Hinge Fitting Assembly is securely fastened to the Front Fork.
7. With the engine disengaged from the rear wheel, push the Go-Ped® around and check that the steering is working properly.

1.11.5 Removing the Engineplacing and Adjusting the Clutch Cable

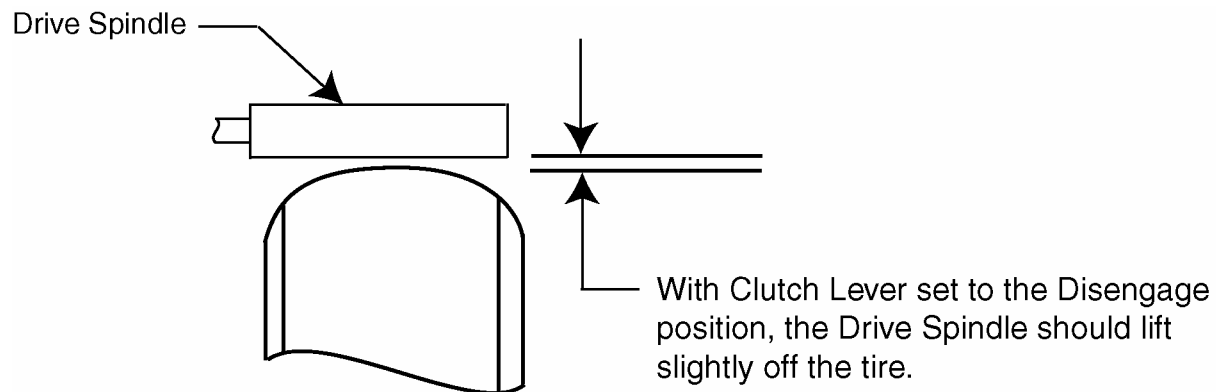
1. Using (2) 15/16" wrenches remove the rear axle nut.
2. Using a 9/16" wrench or socket loosen the (2) Engine mount nuts located under the Engine, push the Engine and mount reward enough to loosen the chain

3. Now pivot the Fender/Gas tank assy forward
4. Remove the Throttle cable from the Carburator. Save the nut that clamps the cable to the engine.
5. Remove the Fuel Lines and either plug them or fold the fuel lines over to pinch off and use a plastic tie to secure the fold and seal.
6. Using a 7/16 size Allen wrench remove the (4) 7/16 Socket head cap screws (Allen bolts) equally.
7. There are (2) aluminum spacers Pull the new cable out of its casing.
8. Feed the cable through the clutch lever and hook the end in the clutch handle.
9. Start feeding the cable through the casing and grease it as it is being fed through.
10. When the cable is completely fed through the casing, grease the cable that extends through the casing and pull it partially back through the casing.

NOTE: This part of the cable needs to be well greased because it takes the most wear.

11. Push the clutch handle to the fully engaged position.
12. Be sure the cable is completely pulled through the casing.
13. Feed the end of the cable through the adjusting barrel and around the clamping bolt on the engine bracket.
14. With the drive spindle resting on the tire, tighten the cable clamping bolt.
15. Position the clutch lever to the disengaged position.
16. Check that the drive spindle is lifted free of the tire.

IMPORTANT: When the clutch cable is properly adjusted the drive spindle is lifted slightly from the tire when the clutch lever is set to the disengaged position. If the clutch cable is not correctly adjusted, the drive spindle will not make proper contact with the tire and the tire will be ruined.



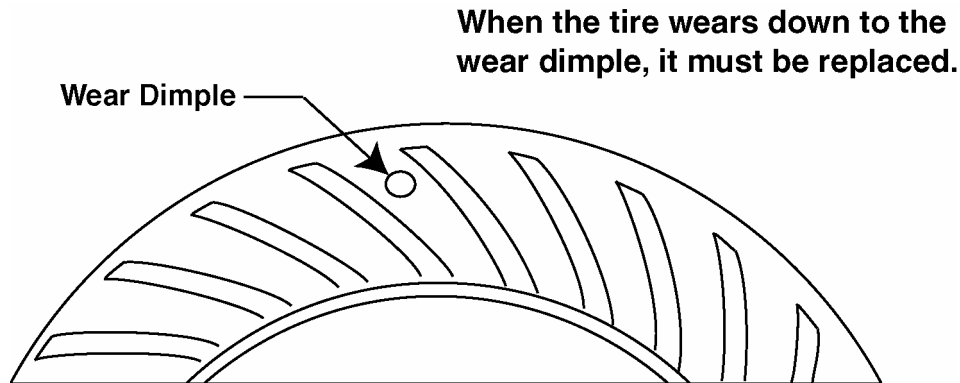
17. Test drive the machine and check that the drive spindle properly engages the tire.

NOTE: Spindles and tires wear as a result of normal operation and will eventually need to be replaced.

1.11.6 Replacing the Wheels because of Tire Wear

IMPORTANT: If the tires wear down to the wear dimple on the side of the tire they must be replaced. Driving the machine after the tires are worn beyond the wear dimple is dangerous and may damage the machine. Failure to replace the tires after they are worn down to the wear dimple will VOID the warranty.

1. Check tire wear.
2. If the tire is worn down to the wear dimple, it must be replaced.



3. Remove the axle. Note the position of any washers on the axle.
4. Remove the old wheel from the axle.
5. Install the new wheel, replacing any washers in the same position they were removed from.

1.11.7 Replacing the Throttle Cable

NOTE: If the engine will not start it may be because the throttle cable is grounding on the frame. To check for unintentional grounding, disconnect the electrical plug from the engine to the throttle cable. If the engine starts with the throttle cable disconnected, you will most likely need to replace the throttle cable.

1. Disconnect the plugs on the throttle cable at the kill switch and the engine.
2. Disconnect the throttle cable from the carburetor.
3. Remove the throttle cable (notice the cable routing).
4. Remove the new cable from the throttle casing.
5. Grease the cable and reinsert it into the casing.
6. Replace the throttle cable using the same routing as the original throttle cable.
7. Reconnect the throttle cable to the carburetor.
8. Reconnect the plugs at the kill switch and engine.
9. Check to be sure the throttle cable is properly adjusted.
10. Start the engine and check for proper throttle operation.
11. Drive the machine

1.11.8 Engine Mounting Bolt adjustment

IMPORTANT: Inspect and tighten the Engine Mounting Bolt prior to riding the Geo machines. Through normal operation this bolt may loosen and rub against the tire.

1. Inspect the clearance between the engine mounting bolt and rear tire (Older Geo Sport models).
2. Be sure the mounting bolt has no play.
3. If there is play or looseness in the engine mounting bolt, retighten securely.
4. Check to be sure the engine pivots freely to allow proper engagement on the tire.

1.12 Frequently Asked Questions

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine **VOIDS** the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped® replacement parts the Warranty is **VOID**.

Q. What is an FTG? What is a steel FTG?

A. FTG is short for Fitting. The FTG is the piece that the end of the T-Bar connects to. The Stock FTG is Aluminum. An optional Steel FTG is available. It is much stronger.

Q. What should I look for in an oil?

A. Use a fully Synthetic oil in your Go Ped®. Go-Mix II premixed oil packets are recommended and available through your Go-Ped® Dealer.

Q. What is a Rocket Key and what does it do?

A. A Rocket Key is an OFFSET key that replaces the stock timing key that is in your motor. The Rocket Key advances the engines timing 10 degrees to give it more power.

Q. What oil ratio should I use?

A. Use a fully synthetic oil for a stock motor with no modifications – 50:1 ratio. For a semi modded – 32:1 ratio. For a super modded motor – 25:1 ratio. For a crazy modded motor – 20:1 ratio.

Q. How many ounces of oil is 50:1, 32:1, 25:1?

A. Oil ratios – 50:1 = 3.2 oz/gal – 32:1 = 4.0 oz/gal – 25:1 = 5.3 oz/gal

Q. How to change the tire skin?

A. From www.pswsports.com

1. Remove the back tire from the Go-Ped®
2. Carefully take a hacksaw or sharp utility knife and cut the old tire off of the rim
3. Take the new tire and spray 2 (two) squirts of glass cleaner or water inside of the new tire. Rub around the inside of the tire with your finger to lubricate the inside of the tire.
4. Now take the rim and place it on a hard surface and press the new tire onto one side of the rim. (Just get it

started)

5. Finally, place the tire on the ground and jump on the tire to force it completely onto the rim.

6. Now install the wheel & tire back onto the Go-Ped®

1.13 Geo-Bigfoot and Geo-Sport Flat Rate Schedule

Remove and Replace	Time
Frame Change	1 ½ hr
T-Handle with cables	¾ hr
T-Handle without cables	1 hr
Engine Rebuild	1-½ hr
Engine Top End	½ hr
Engine	½ hr
Crankshaft	1 hr
Carburetor	¼ hr
Front or Rear Wheel complete	¼ hr
Clutch Cable	½ hr
Grip Shifter with Cable	¾ hr
Exhaust Tube	¼ hr
Deck	¼ hr
Hinge Assembly	½ hr
Brake Cable	¼ hr
Throttle Cable	¾ hr
Front Brake Caliper with Cable	½ hr
Front or Rear Tire change	½ hr
Motor Mount	1 hr
Motor Mount Spring/Clutch	½ hr

1.12.1 S25 Flat Rate Schedule

Remove and Replace	Time
Engine	½ hr
Engine Top End	½ hr
Engine Rebuild	1 ½ hr
Crankshaft	1 hr
Carburetor	¼ hr
Wheel complete	¼ hr
Tire change	½ hr
T-Handle with cables	½ hr
T-Handle without cables	¾ hr
Frame Change	1 hr
Exhaust Tube	¼ hr
Deck	¼ hr
Hinge Assembly	½ hr
Brake Cable	¼ hr
Brake Cable with Caliper	½ hr
Throttle Cable	¼ hr

SECTION 2: ESR 750 ELECTRIC MODEL

This section contains parts illustrations, parts lists, as well as troubleshooting information for the Electric Go-Ped® models, ESR750, ESR750Ex and their motor.

Paragraph	Page
2.1 ESR750 & ESR750Ex Motor Service.....	2-1
2.2 ESR750 & ESR750 Ex Parts Illustration	2-7
2.3 ESR750 and Batterty Upgrade Kit Parts Illustration.....	2-8
2.4 ESR seat attachment Parts Illustration	2-8
2.5 ESR accessories.....	2-9
2.6 ESR Parts lists	2-10
2.7 ESR troubleshooting guide.....	2-12

2.1. ESR750 & ESR750Ex Motor Service

The ESR750 motor is a brush DC motor. It consists of a Field (steel tube and magnets) an Armature (rotating portion) and Comm End (brush assembly and finned heat sink).

Figure #1 shows the major motor components disassembled.

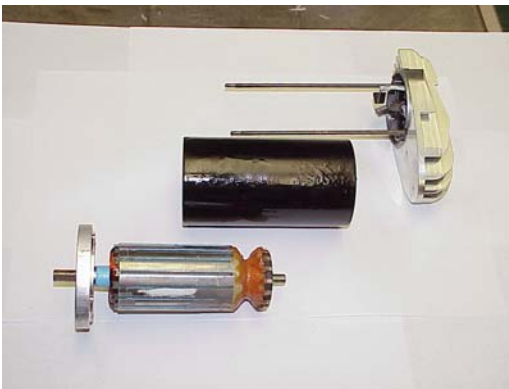


Figure 1

To remove the motor from the ESR frame first turn off the ON/OFF switch, then disconnect the motor wires from the Comm End shown in Figure #2.

You will need to pull back the rubber boots and remove the two outer 1/4-20 nuts. Do NOT remove the two inner nuts which are behind the two terminal rings.

Next, disconnect the small plastic two-wire connector which is for the motor thermostat. The connector has a locking tab which can easily be released with a small flat head screwdriver or even a small zip tie.



Figure 2

Next remove the fender and look at the Drive End as shown in Figure #3.

Remove the chain and drive sprocket. The sprocket is held on with a small set screw. Once the set screw is removed you might need a sprocket puller to easily slide it off the shaft.

Now remove the M6x35 bolt (shown black in this photo) which retains the motor into the frame.

Last, slide the motor out of the frame. A piece of adhesive-backed plastic may have been used between the motor and the inside of the tube to shim the motor in the frame. You will need to reuse or replace that shim. It is used to prevent the motor from vibrating or rattling in the frame.

You may need to twist the motor or tap GENTLY with a rubber mallet to remove the motor. Be careful with the motor. The brush card holder and the magnets can both be broken if abused.



Figure 3

Once the motor is removed, you should scribe lines on the motor field and the motor end caps for easy reassembly. On the bottom of the motor simply scribe small marks across the joint between each end cap and the motor Field. Those marks will help you re-align the rotation of the end caps during re-assembly. Proper alignment is important for good motor performance. If the end caps are improperly twisted the motor will run less efficiently.

Now you are ready to open the motor up. Looking again at Figure #3 you will see two small hex nuts which are part of the motor. Remove those nuts and the lock washers behind them. Now you can pull the motor apart into three parts as shown in Figure #1. You might need to tap GENTLY on the finned Comm End to separate it from the Motor Field.

When you separate the motor the brushes will be pushed out of the holder by the four brush springs. Be careful not to lose the springs.



Figure 4

Inspect the armature. The epoxy which is orange in this photo will probably be much darker in color. This is a normal effect caused by brush dust. Inspect the face of the commutator for any bad segments. The segments are the pie-shaped copper portions of the commutator. A bad segment will look much different than the rest of the commutator. It will be blackened or discolored. That is indicative of a broken connection in the winding. Also check the bearing which is in the billet aluminum Drive End plate.

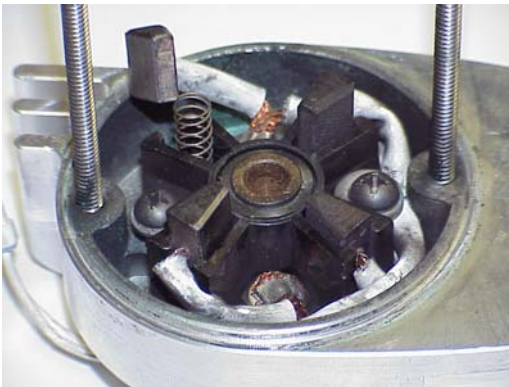


Figure 5

**Brush Spring****Brushes****Brush Holder**

Now inspect the Comm End (Figure 5). The four brushes should have been pushed up and possibly out of the brush holder by the four springs. Make sure the brushes are moving freely and are not stuck in the holder.

Inspect the brushes. When new they are ½" tall. If the brushes are less than .225" tall, they should be replaced. Brush life will probably be at least 750 hours of use.

Inspect the brush holder for cracks or signs of overheating or deformation.

If necessary, disassemble the Comm End.

First turn the Comm End over to the finned side and remove the two ¼-20 flanged nuts from the terminal studs. Remove and save the two black plastic flanged washers which are below the nuts.

Next turn the comm end back over and remove the two Philips Head screws from the brush holder. Be sure to save the washers, and remember their locations. The Comm End is now fully disassembled. Note the location and routing of the brushes and wires before removing them!

FYI - The small electrical component epoxied into the end cap is the thermostat. It should not be removed.

Comm End Reassembly:

- Place the brush holder into the end cap.
- Place the brushes in their holders the way you found them, and place the terminal studs through the holes in the end cap. If you install the brushes wrong the motor may run in reverse or not at all. *Don't install the brush springs yet.
- Hold the parts in place with your hand and flip the end cap over. Install the two black plastic flanged washers, and then install the two ¼-20 flanged nuts. That will hold the brushes and brush holder in place. Tighten the nuts to 20-25 in-lbs. Over tightening can break the brush holder.
- Flip the comm end back over. Reinstall the Philips head screws and washers the way you found them. Torque the screws to 20-25 in-lbs. It is very important that the wires be routed correctly. Where the two long brush wires cross, they are retained by the washer under one of the Philips head screws. Make sure that the white plastic insulating sleeves are correctly placed to prevent the copper wires from contacting the aluminum end cap. Make sure that the bushes can freely slide in the holder. If a brush cannot move freely, the motor will fail after a small amount of use!

- >>As the motor spins the commutator gradually wears down the brushes. The brush springs insure that the brushes stay in constant contact with the commutator. If a brush becomes stuck, it will gradually lose contact with the face and electricity will begin arcing to the commutator. This will gradually degrade the commutator. It will also cause overheating which could damage the brushes, the wires, or the brush holder. When a stuck brush occurs the rider will feel his power diminish to about 50% of normal as the motor begins to malfunction.
- When you are ready to reassemble the motor you can reinstall the brush springs. It can be difficult to hold the brushes in place while you assemble the motor. Using the drawing below you can make a simple tool to make this task easier. Simply cut the shape out of a rigid metal or plastic sheet perhaps 1/8" thick. Make sure you clean the tool off thoroughly so that no particles are left behind in the motor.

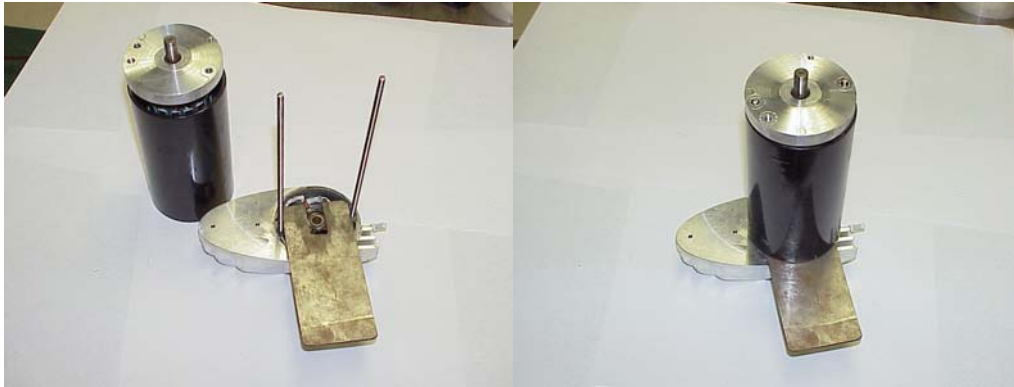
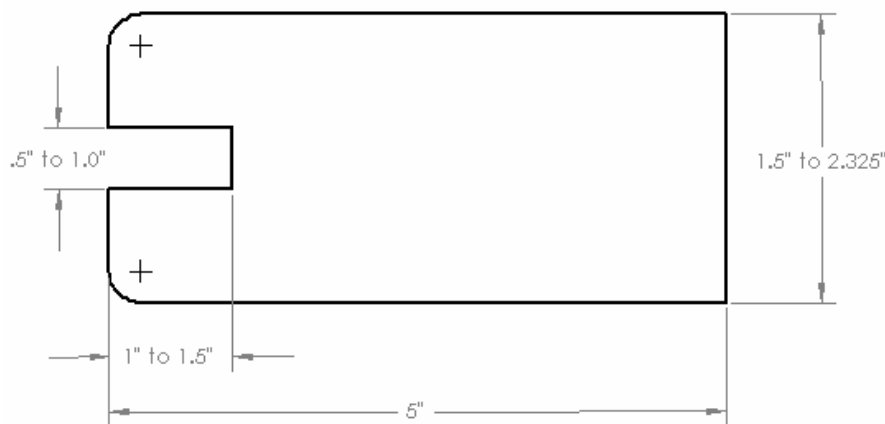


Figure 6 & 7



Motor Reassembly:

- With the Comm End reassembled, drop the four brush springs into the holder, and then push the brushes down on top of the springs. Use the tool described above (or something similar) to hold the brushes in place as shown in Figure #6.

- Put the Armature through the Field, and place them both down onto the Comm End as shown in Figure #7. Make sure that you have both end oriented correctly. Use the marks you scribed across the Field and End Caps to realign the ends with the Field.
- Pull the tool out, and allow the field to drop all the way down onto the Comm End.
- *You may need to help guide the two long threaded-rods through the holes on the Drive End. You may also need to help align the end of the armature into the bronze bushing in the Comm end.
- Once the three sections are assembled, recheck your rotation to make sure your scribed marks are aligned. Then install the lock washers and nuts. Torque to 25-39 in-lbs.

Turn the output shaft and make sure the motor spins. There will be drag from the magnets, but you should be able to turn the shaft by hand.

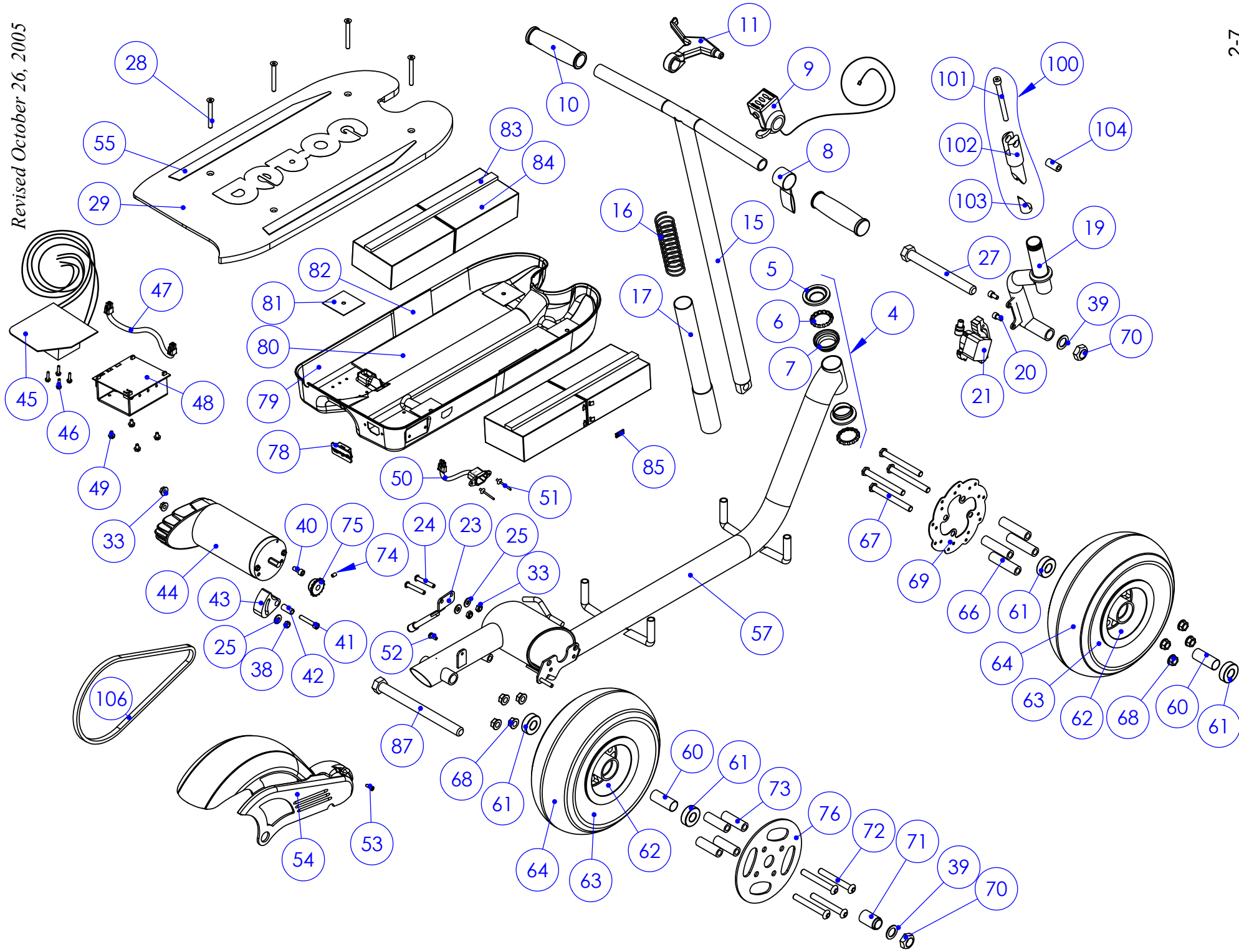
Motor Reinstallation:

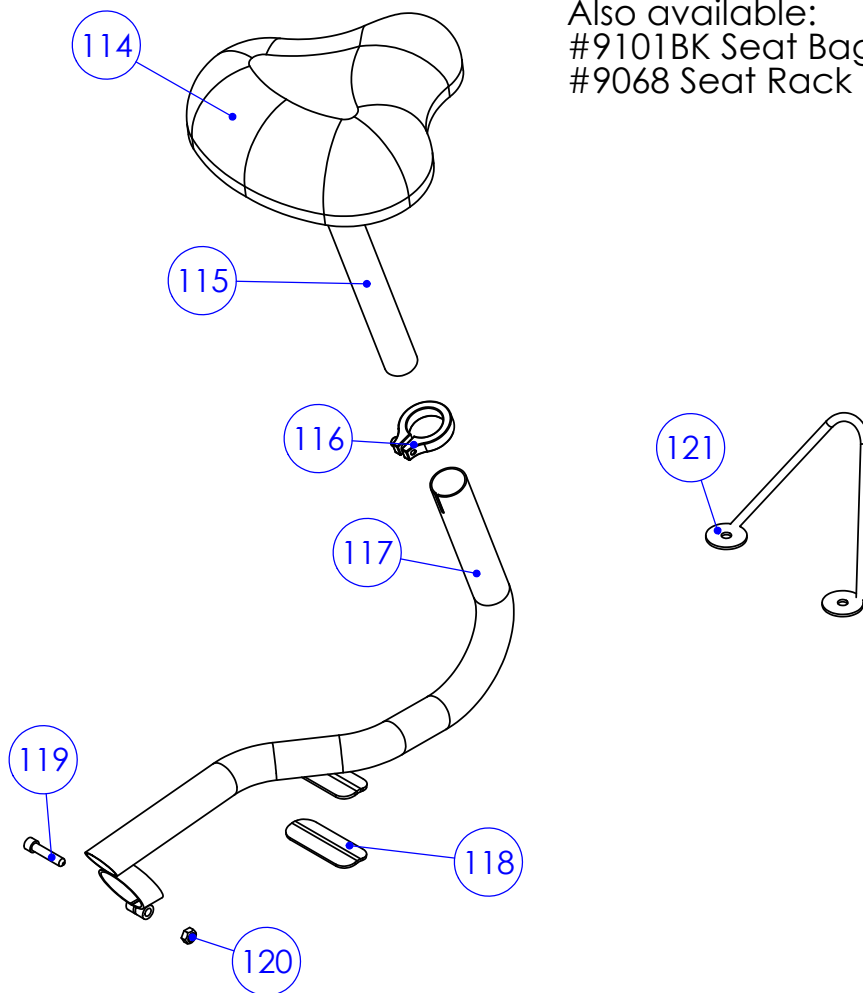
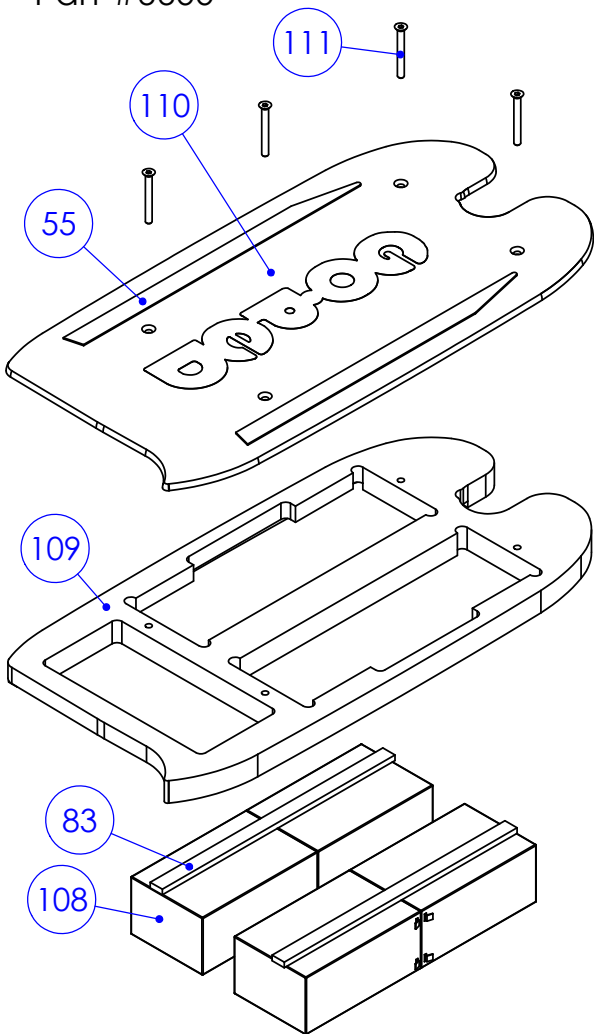
- Reinstall the motor in the scooter frame. Reinstall the plastic shim between the motor and the inside of the frame tube to keep the motor from vibrating in the frame.
- Install the M6x35 socket head bolt, which both mounts the chain tensioner AND retains the motor in the frame. Torque to 8 ft-lbs. The original bolt has a locking nylon patch, which is only good for one or two installations. If the patch is worn out, use a new bolt or Blue Loctite.
- Reinstall the sprocket and chain. You might need to clean up the end of the motor shaft to allow the sprocket to easily reinstall. Sandpaper or a file can quickly accomplish this.
- Hook the small plastic 2-wire thermostat connector back together.
- Hook the motor wires back up. Make sure the terminal rings are not left close to the aluminum end cap, or a short could occur. Torque the two outer ¼-20 nuts to 20-25 in-lbs. Overtightening could break the brush holder! Those nuts have a nylon locking insert which can only be reused a couple of times. If the nuts are not locking properly, replace them with new ones!
- With the rear wheel OFF THE GROUND turn on the scooter and apply the throttle. Make sure the rear wheel is spinning the correct direction. If it is spinning backwards, reverse the two motor wires.
- Reinstall the rubber boots over the terminals.
- Reinstall the fender.

Motor Testing:

You can test the motor in the following way:

- With the motor installed in a scooter remove the chain.
- Either hook up a Go-prammer to the scooter, or place a clamp type amperage probe over one of the two motor wires (but not both wires!) You may need to remove the deck to install the clamp probe.
- If using the Go-prammer, use the instruction manual to switch to the “CURRENT” parameter under the Debug Menu.
- Run the motor at full throttle with no load and measure the amperage draw. It should be **less than 4.2amps**. If you are using the Go-prammer to measure current, use the chart in the instruction manual to translate the reading on the screen into amperage.

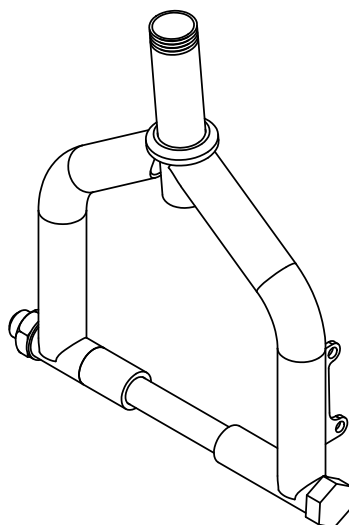




Other Available Accessories

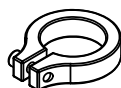
Part #BF1127B

- "Bothie" two sided fork.
- Available In Black. Not available in Candy Red to match ESRs.
- Includes new axle bolt and spacer.



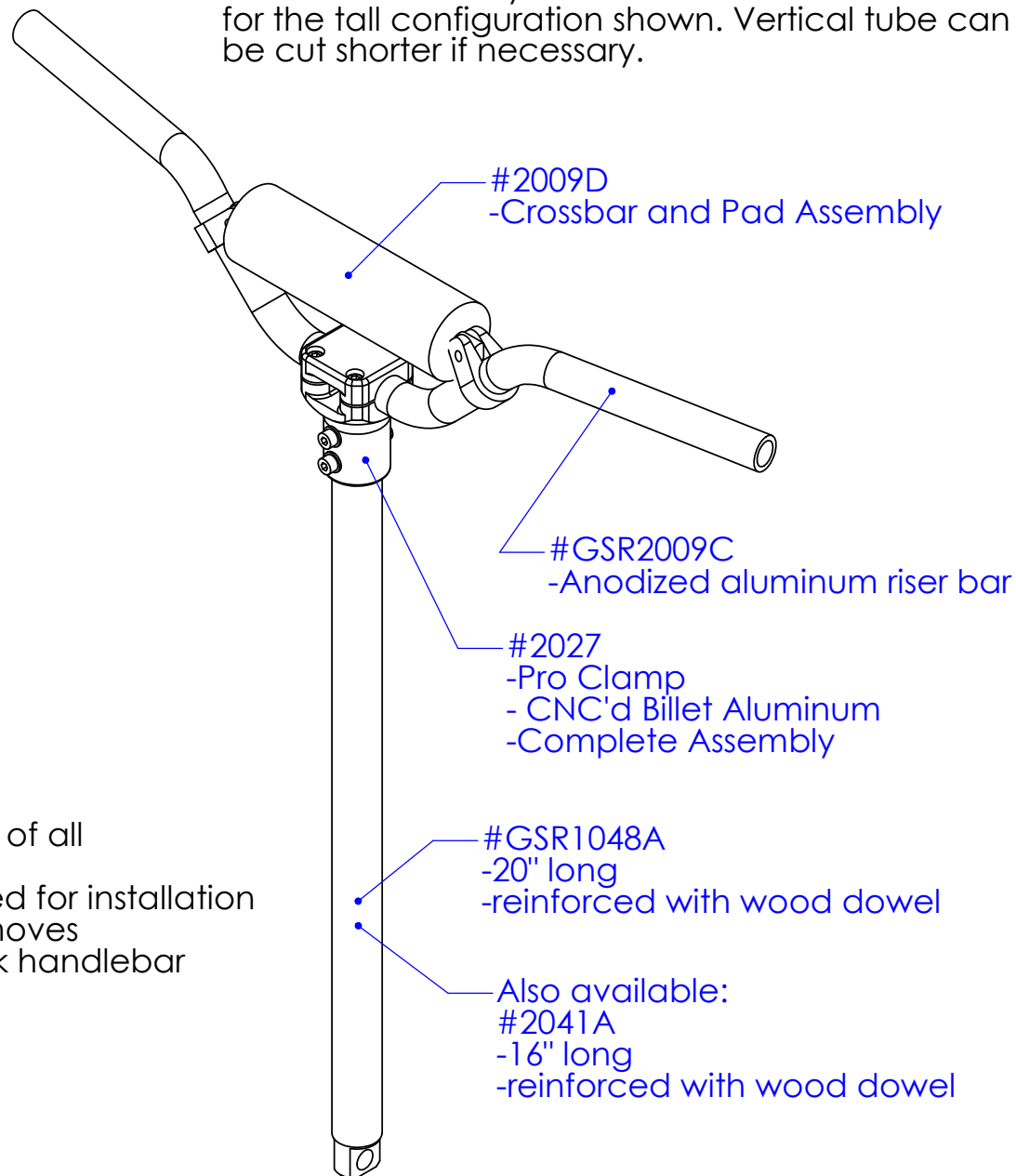
#1022C

- Slide Tube Clamp
- Installs on the bottom of all T-bar Slide tubes.
 - T-bar must be removed for installation
 - Tightening clamp removes some forward/back handlebar looseness.



Wider High Performance Handlebar

- Parts must be purchased Separately.
- Some older ESRs may have too short a throttle wire for the tall configuration shown. Vertical tube can be cut shorter if necessary.



Item	Part #	Description	Qty
-	-	-	-
4	1028	Front fork bearing kit, 2 bearings, 2 cups, 1 nut	0
5	1028N	Head set; Fork nut	1
6	1028B	Head set; bearing (single)	2
7	1028C	Head set; Bearing cup (single)	2
8	1411	Carry Loop, nylon	1
9	6109, 6110A, 6110B	ESR Throttle Lever, See identification chart to select correct model	1
10	1049	Grip Set	1
11	1048L	Brake Lever (Left)	1
-	-	-	-
15	GSR1041	T-bar anodized, 24.75"	1
16	1060	Safety Spring	1
17	1022	Slide Tube Assmby	1
-	-	-	-
19	MD1027CR MD1027BK	Front Fork, single sided, 10" wheel, Maddog brake, Candy Red or Black	1
20	1090	Bolt; Maddog Brake Mount; M6x12	2
21	1083A	Maddog Brake Caliper	1
-	-	-	-
23	6128	Kickstand; complete; black with spring and rubber foot	1
24	GSR1035	Bolt; 1/4-20 x 1.5" Button Head for kickstand mount	2
25	1076	Washer, 1/4" SAE flat	3
-	-	-	-
27	BF1033	Bolt; front axle; 5/8-18 x 6"	1
28	6114	Bolt; deck mount; 1/4-20 x 1-3/4 Torx Flat Head thread cutting (tool size T30)	4
29	E1006	Deck, with grip tape and foam, (ESR750 & ESR Sport, Not EX deck)	1
-	-	-	-
33	KN1009	Nut; 1/4-20 Nylock	4
-	-	-	-
38	1026	Nut, M6 low nylock	1
39	BF1036	Washer; axle; 1"OD x 5/8" ID x .060"	2
40	6133	Bolt; motor mount; M6x18 Socket head	1
41	1401	Bolt; motor mount; M6x35 SHCS	1
42	TB1028	Steel Tube, inserts into plastic chain guide, 3/8"x.78"	1
43	6102	Chain guide, plastic	1
44	6800	Electric Motor	1

45	6113A	Controller board (left side of pan, with attached wires) **This is the current version of controller which works with Throttle 6110B. Older controllers available. Ask Customer Service.	1
46	6115	Screw; controller mount; 6 x 5/8" Hex washer head	4
47	6148	Wire; DC interconnect; Controller to NEW charger	1
48	6118A	Charger (New style with aluminum "U" housing)	1
49	6013	Screw; Charger Mount; 10-32 x 5/16 hex wshr head	4
50	6108A	A/C Inlet; (for new charger)	1
51	6136	Pop rivet; for A/C Inlet	2
52	6016	Bolt; fender mount; 10-32 x 1/2" Philips Head (type F)	1
53	6015	Bolt; fender mount; M4x12 Socket Head	1
54	6008	Fender; rear; ESR750 & EX	1
55	2001	Deck Grip Tape Set	1
-	-	-	-
57	ESR1001CR ESR1001BK	Frame, ESR750 Candy Red or Black	1
-	-	-	-
60	BF1038B	Spacer, wheel bearing, Mag Rim (10" PT)	2
61	BF1038A	Bearing; Mag Wheel; 10" (PT)	4
62	2026M	Wheel; 10"PT, 2pcs. Magnesium	2
63	BF1058T	Inner Tube; 10"PT	2
64	BF1059O	Tire; no tube, Powerplay TT	2
-	-	-	-
66	1087	Spacer; front wheel to brake disk	4
67	1088	Bolt 3/8-24 x 3.5" Low hex head; front wheel assy	4
68	8008	Nut; 3/8-24 center lock	8
69	8003SS	Brake Disc, hardened stainless steel	2
70	BF1037	Nut; axle, 5/8-18 nylock	2
71	6127	Spacer; rear axle, stepped for fender	1
72	GSR1045	Bolt; Rear wheel assembly; 3/8"-24 x 3" Button Head	4
73	GSR1014	Spacer; Wheel to sprocket	4
74	6006	Set screw for sprocket; M5 x 8	1
75	6009.15	Sprocket, 15 tooth, #25	1
76	GSR1013.1	Sprocket; 76 tooth (alum)	1
-	-	-	-
78	6003	Rubber Plug; installs into rear of pan; holds data plug	1

79	6107R 6107	Battery Pan; ESR750 and EX, not Sport. Red or Black	1
80	6120C	Foam Pad; 1/8" thick installs under batteries	2
81	6131	Rubber pan dust shield. Square 2"x2" w/ center hole	4
82	6121	Plastic insulation tape; white; prevents short between pan & batteries	2
83	6119C	Foam Rubber Tape; 1/4"x 1/2"; sold per ft. Also used on deck.	88"
84	6005	Battery; HR6-12 T2 SLA (ESR750 & Sport, Not EX)	4
85	6126	Battery connector; Joins each pair of batteries. Old style was 4" long wire. Now a small metal tab is used.	2
-	-	-	-
87	1404	Bolt; rear axle 5/8-18 x 7.5"	1
-	-	-	-
100	1043	Lower hinge FTG. assy; Aluminum	1
101	1044	Bolt; lower hinge FTG. 5/16-24	1
102	1043A	Lower hinge FTG; clear anodized aluminum	1
103	1045	Wedge lug; lower hinge FTG.	1
104	1056	Handle hinge pin	1
-	-	-	-
106	6103	Chain; #25 Hard, 106 link (ESR750 & EX; not Sport)	1

THE FOLLOWING ITEMS ARE ON PAGE 2-15

108	6005B	Battery; HR9-12 T2 (larger battery; EX and upgrade)	4
109	1006ES	Deck Spacer; 1" thick wood	1
110	E1006F	Deck; no grip tape; 1/4" thick	1
111	6114B	Bolt; deck mount; 1/4-20 x 2-1/4 Torx Flat Head thread cutting (tool size T30)	4
-	-	-	-
114	9004	Seat with hardware	1
115	1094	Seat post; aluminum	1
116	1095	Seat post collar	1
117	ESR9002BK ESR9002CR	Seat frame, Black or Candy Red	1
118	6305	Neoprene rubber foot	1
119	1097	Bolt; 5/16-24 x 1.5 SHCS	1
120	7025	Nut; 5/16-24 nylock	1
121	6119	Toe Guard; black	1

ITEMS NOT SHOWN ON PARTS ILLUSTRATION

	1081	Brake Cable, 38"H / 48"C	1
	1063	Yellow Warning Sticker	1
	1064	Red Warning Sticker	1
	1061	Sticker; Reflective T-Bar pad	1
	1053	Large Zip Tie (black; 8")	1
	1053S	Small Zip Tie (black; 4")	2
	1065	Sticker; www.goped.com	1
	1068	Sticker; made in USA	1
	6002	A/C power cord, 72"	1
	6010	Sticker; Goped decal, metallic; for side of pan	2
	6011	Sticker; ESR750 (installs on tail of frame)	1
	6012	Sticker; Chrome Decal (ESR750) for slide tube	1
	6022	Heat Shrink tubing for throttle wire connection	1
	6033	Sticker; "CE" for europe	1
	6108	Old A/C inlet. Used on early ESRs with Old charger.	0
	6110	Old On/Off Switch. Used on early ESRs, placed on left side of T-bar.	0
	6116	Old Charger LED board. Used on early ESRs. Installed between Old charger and controller	0
	6118	Old Charger. Used on early ESRs. This charger does not have "U" shaped aluminum housing	0
	6129	Sticker; "HOT" for motor	1
	6160	White/Red warning sticker	1
	9031	User Manual (ESR)	1
	GSR1055	Sticker; Goped (Installs on fender)	1

Problem	Action		Solution
Acceleration and hill climbing greatly reduced from when scooter was new. Change was rapid and power loss may be %50.		Disconnect chain from motor. Use an amp meter to measure amp draw at full throttle, and no load, at a full charge. Draw should not exceed 4.2amps.	If draw exceeds 4.2amps, motor is malfunctioning.
Range is extremely low. May have reduced suddenly from one trip to the next.	1	A motor malfunction could cause abnormally high current draw. Use amp meter to measure draw as described above.	If draw exceeds 4.2amps, motor is malfunctioning.
	2	A battery wire could have become disconnected, causing the scooter to run on only 2 batteries instead of 4.	Open Pan and inspect for disconnected battery wires.
	3	Batteries could be old and need replacement. In this case the range degradation would be gradual, not immediate.	Replace batteries.
Motor is making noise, but scooter will not move or operates intermittently		Check drive sprocket set screw. If the screw has loosened up, it could be slipping on the motor shaft. This problem is sometimes be misdiagnosed as electrical.	Put drop of Blue Loctite on set screw and re-tighten.
Deck Removal:			
While working on an ESR you might find it necessary to remove the deck. The first several hundred ESRs which were produced have had the decks sealed to the aluminum pans with clear silicone. It is pretty easy to remove the deck, but the first time you do it can be a little tricky. First remove the four deck bolts. Now start by running a razor blade all the way around the scooter in the joint between the wood deck and the aluminum pan. This will begin to cut the silicone. Next take a long flat blade screw driver and start to pry the deck up at the FRONT of the scooter. (The electronics are all the rear of the scooter.) As you pry the deck up you will be able to see more of the silicone. Cut the silicone with the razor. The more you cut, the more you'll be able to raise the deck. Gradually work your way around the deck until enough of the silicone it cut for the deck to be removed.			

Problem	Action	Solution
Scooter will not operate		
A) Throttle LEDs DO turn on and clicking IS heard from pan when on/OFF switch IS operated. (The clicking noise is the relay on the controller board. It should click when the ON/OFF switch is operated.)	(1)Check to make sure wires are correctly attached to motor. (2)Measure voltage at motor wires while operating throttle. Make sure reading is about 24V at full throttle.	If 24V is found and wires are properly connected, motor must be malfunctioning. If 24V is NOT found at motor, then throttle or controller is malfunctioning.
B) Throttle LEDs do NOT turn on and/or clicking is NOT heard from pan when on/OFF switch IS operated.	(1)Check for throttle or ON/OFF switch malfunction. (2)Open pan and check if power is getting to controller. Controller should be receiving about 24V.	If problem wasn't found with step 1 or 2, controller may be malfunctioning.
Faulty throttle suspected.	Disconnect throttle at 8 pin connector, and install new throttle. If that does not solve the problem, the fault may be in the controller.	If the controller is suspected, install a known good controller to see if the problem is solved.
Faulty ON/OFF switch suspected.	Disconnect ON/OFF at 2 pin connector, and install new ON/OFF. If a known good ON/OFF switch isn't available you can short the two metal pins in the wire coming from the controller. When the circuit is completed, the controller should click and turn on. If that does not solve the problem, the fault may be in the controller.	If the controller is suspected, install a known good controller to see if the problem is solved.
Batteries bad or disconnected.	Remove deck. Inspect wires to be sure that all connections are still attached. With meter measure voltage across each battery. Voltage should be approximately 12V.	If connectors are off, reinstall and glue with silicone to insure that they do not come back off. If batteries are bad, replace the entire battery pack, not just one cell.

Problem	Action	Solution
Charger problems		
Background: Power flows from the inlet plug (110V or 220V AC) to the charger. Then 24V DC power flows from the charger to the small LED board. Then 24V DC power flows from the LED board to the Controller. The power passes through the controller to the batteries. The batteries are wired into two individual 24V battery packs which are in parallel. There are short connection wires between each set of batteries. If one of those wires is disconnected the scooter WILL run on half the batteries with 50% of normal range. Those connection wires should have silicone adhering them in place to prevent accidental disconnection.		
Testing the charging system: When testing the charging system for proper operation it is a good idea to first disconnect the batteries so that you do not get a false voltage reading from the batteries. After the batteries are disconnected, you can individually measure the voltage across both sets of battery wires. With the charger plugged in, the voltage to the batteries should be about 24V. If you do not read approximately 24V going to the batteries, then there is a breakdown somewhere in the system.		
A) LED on side of pan will not light when cord plugged in.	1 The outlet in the wall may be off. Plug in a lamp to make sure it is live.	
	2 The A/C cord may be bad. Try using a cord known to be good, or test the cord with a multimeter.	
	3 Charger may be malfunctioning. Remove deck, and with scooter plugged in carefully measure for 24V output from Charger. (2 wire connector, not 3 wire.)	If no 24V output, carefully check 110V A/C wires between charger and plug receptacle. If no problem found, replace charger. If 24V present go to next test.
	4 Charger LED board may be malfunctioning. Measure for 24V output from LED board to controller. It will be necessary to disconnect the LED board from the controller to perform this test.	Replace LED board if necessary.
B) LED goes to green <u>immediately</u> after plugging in scooter, even though batteries are known to be discharged.	There is probably a disconnection somewhere between the LED board and the batteries. The LED board may be disconnected from controller; the controller may be disconnected from batteries; or the short wires connecting the batteries may be off. Check all those connections.	

Error Codes		
The ESR controller is very advanced and has self-diagnostic features. If the ESR senses a problem it will alert the rider, similar to a "check engine" light in a car. The warning comes in the form of flashing codes on the Flux Capacitor LEDs. The codes are listed below for your reference. These codes can also be retrieved and reset using the Go-Prammer.		
Fault Code	Problem	Possible Cause
21	Motor Short	Bad motor, shorted connection to motor or controller
22	Motor Open	Bad motor, Loose/broken connection to motor or controller
32	Overtemperature	Excessive Use, Excessive ambient temperature, or controller
41	Charger Overvoltage	Battery Charger
42	Charge Mode Time Out	Probably a bad battery
51	Internal Controller Fault	Controller
53	Throttle Failband	Throttle control is malfunctioning, loose/broken cable, controller
62	Internal Controller Fault	Controller

SECTION 3.SUPER MODELS

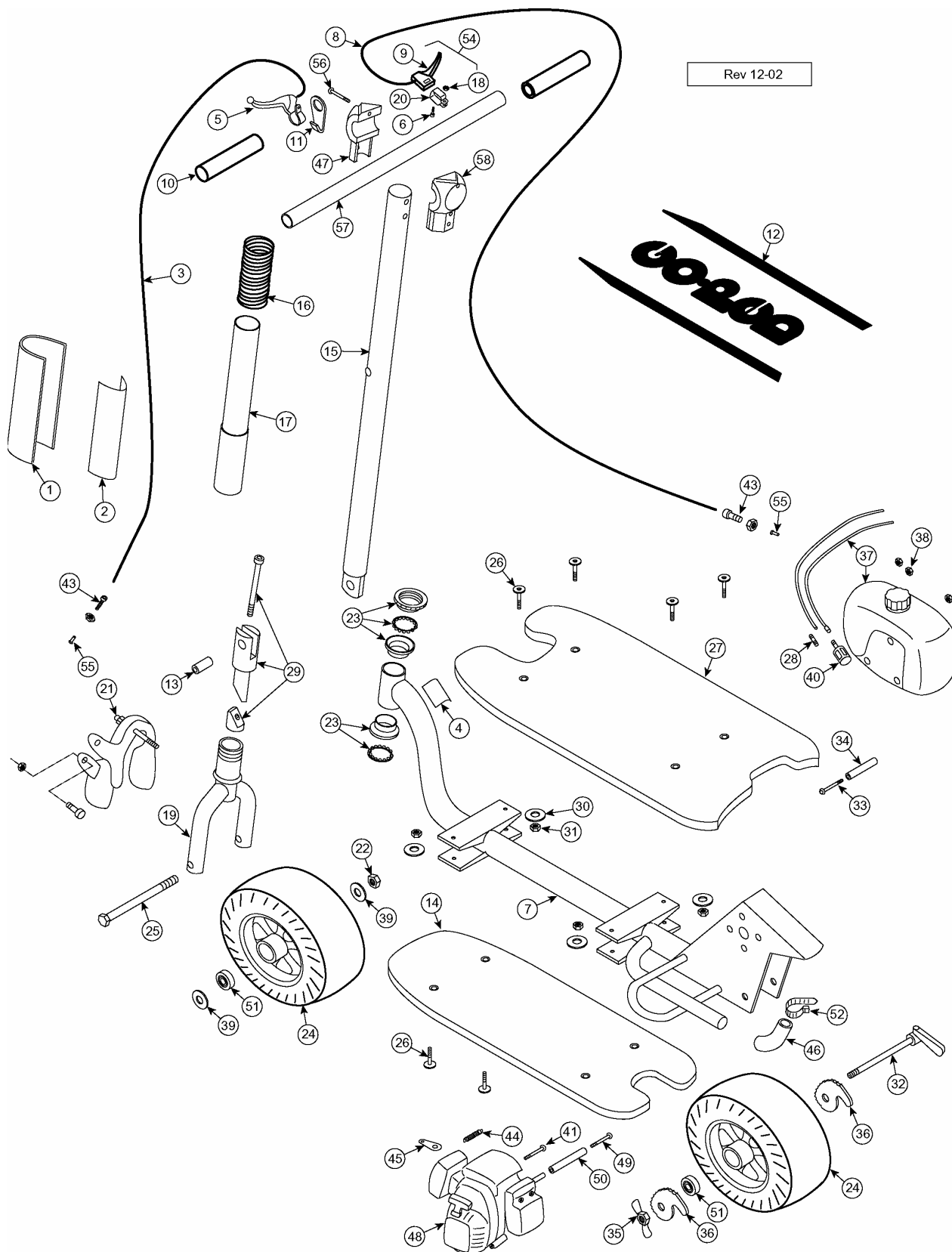
3.1 SUPER MODELS

There are two scooters in the Super line, The Super X-Ped and the Super Bigfoot.

This section contains parts illustrations, parts lists, disassembly, assembly, frequently asked questions and troubleshooting information for each machine.

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3.1.1 Super X-Ped Illustration



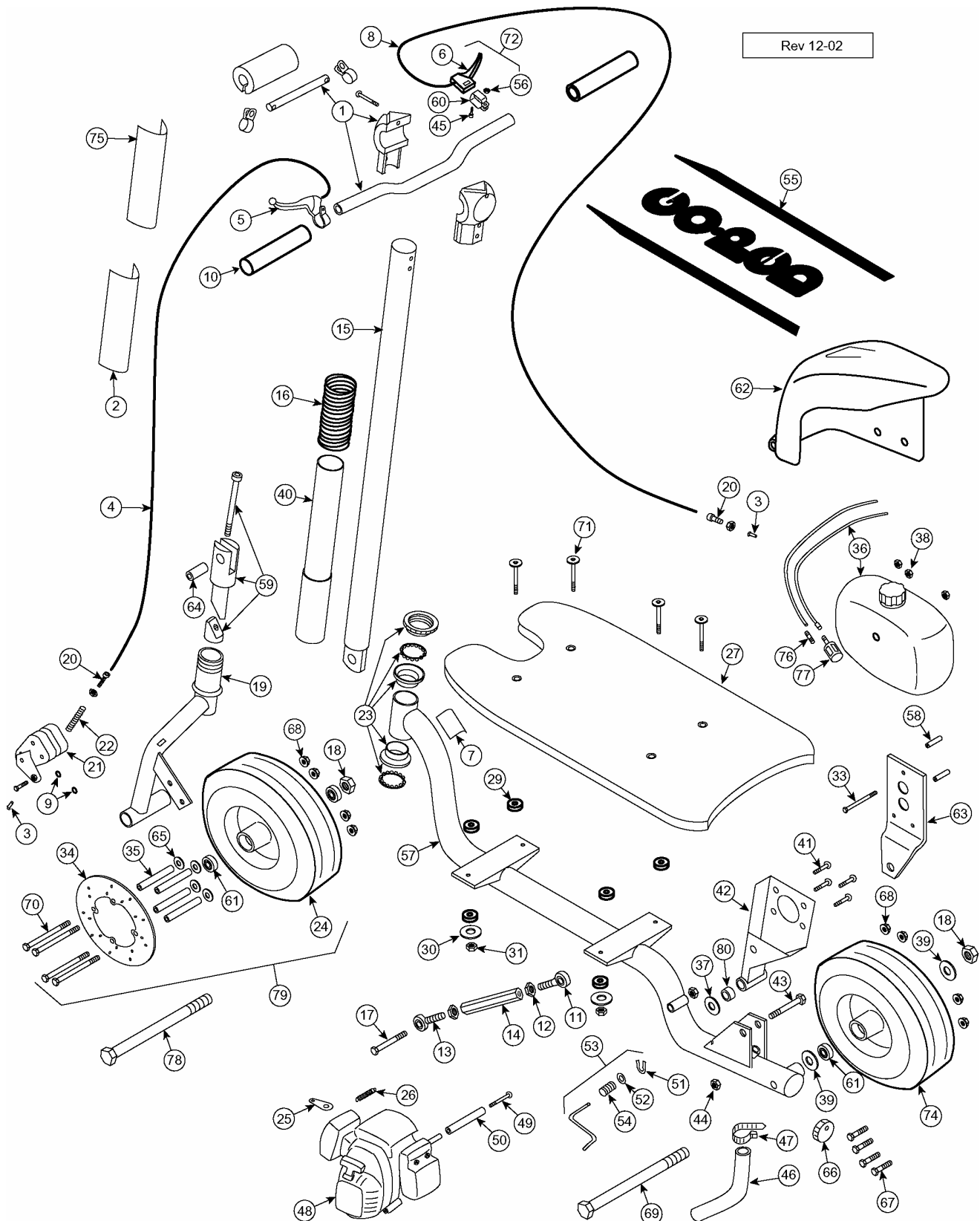
3.1.2 Parts Listing – Super X-Ped

(Rev 02-03)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1068	Sticker, Made in U.S.A.	1
5.	1048L	Brake Lever Assembly	1
6.	1067	Screw; Throttle Clamp 8-32 x ½ SHCS	1
7.	X1001S	Frame Assembly, Orange	1
8.	1050	Throttle Cable Assembly	1
9.	1051A	Throttle Lever	1
10.	2049	Grips/set	1
11.	KN1005	Latch, T-Bar	1
12.	2001	Grip Tape, Go-Ped Die Cut	1
13.	1056	Handle Hinge Pin	1
14.	XS1006	Slide Deck	1
15.	2043	T-Bar Complete 24.75"	1
16.	1060	Safety Spring	1
17.	X1022	Slide Tube	1
18.	1069	Nut, Throttle Clamp 8-32 Nylok	1
19.	1127S	Fork, Front Orange	1
20.	1066	Clamp, Throttle Lever	1
21.	1030	Brake Caliper, Front	1
22.	1037	Nut, Axle	1
23.	1028B	Bearing, Front Fork	2
24.	X1058	Wheel Assembly, Aluminum	2
	1058O	Tire, Go-Active Rubber	2
25.	KN1012	Axle Bolt - Front	2
	1131	Axle Assembly, Front	1
26.	KN1008	Bolt, Deck	8
27.	X1006	Deck w/Grit	1
	X1007	Hardware Kit, Deck Mount without Grommets	1
	1007	Hardware Kit, Deck Mount with Grommets	1
28.	3118	Fuel Line Return Fitting	1
29.	X1043	Lower Hinge, FTG	1

		Assembly, Steel	
30.	1009	Washer, Deck	4
31.	1010	Nut, Deck	4
32.	1012	Quick Release Axle Bolt	1
	1032	Axle Assembly, Quick Release	1
33.	1025	Bolt, Gas Tank Mount	3
34.	5018	Spacer, Gas Tank	3
35.	1017	Wing Nut	1
36.	1015A	Quick Release E.P.W.	2
37.	3113	Gas Tank w/Fuel Lines	1
	1021	Gas Tank Hardware Kit	1
38.	1026	Nut, Gas Tank Mount	3
39.	1036	Washer, Axle	6
40.	3120	Fuel Filter	1
41.	1023	Screw, Engine Mounting	4
42.	2020	Swivel, Throttle (not shown)	1
43.	2025	Barrel, Cable w/Nut	2
44.	2019	Spring, Throttle Return	1
45.	2018	Linkage Arm, Throttle	1
46.	1019	Muffler Connect Tube Assembly	1
47.	2027B	Clamp, Handlebar (Front)	1
48.	4802B	Engine, G260RC	1
49.	1016	Bolt, Drive Spindle	1
50.	1013X	Drive Spindle no Grit	1
51.	1038A	Wheel Bearing	4
	1038	Wheel Bearing Kit, Mach 12	2
52.	1053	Plastic Cable Tie (8")	6
53.	1055	Cable, End Crimp	1
54.	1051B	Throttle Lever Assy	1
55.	1063	Sticker, Yellow Warning Label	1
56.	2006	Bolt, Handlebar Mount	3
57.	2010	Drag Handlebar	1
58.	2027	Clamp, Handlebar (Rear)	1

3.1.3 Super Bigfoot Illustration

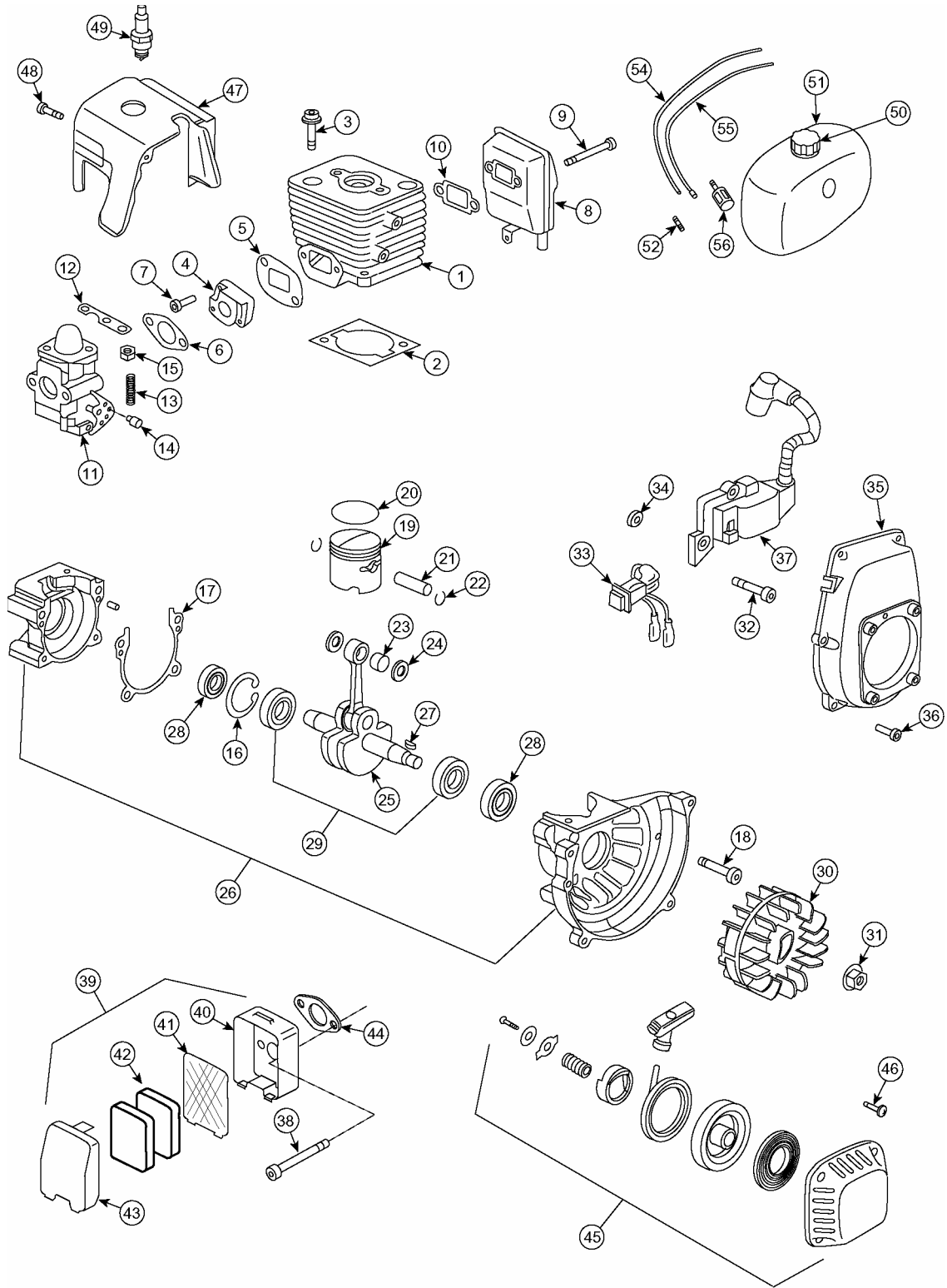


3.1.4 Parts Listing – Super Bigfoot

(Rev 02-04)

Item	Part No.	Description	Qty
1.	2046L	Handlebar Assy, Complete	1
2.	1064	Red Warning Label	1
3.	1055	Cable End Crimp	1
4.	1054	Brake Cable Assembly	1
5.	1047	Brake Lever Assembly	1
6.	1051A	Throttle Lever	1
7.	1068	Sticker, Made in U.S.A.	1
8.	BF1050	Throttle Cable Assembly	1
9.	8002A	O-Ring, Brake Motion	2
10.	2049	Grips/set	1
11.	2012	Rod End, 3/8-24 Rt. Thread	1
12.	2021N	Nut, Rod End Jam (Rt.)	1
13.	2013	Rod End, 3/8-24 Lft. Thread	1
14.	2014	Turn Down Lockout	1
15.	2040	T-Bar w/Upper Hinge	1
16.	1060	Safety Spring	1
17.	6017	Bolt, Motor Mt. Lockout	1
18.	1037	Nut, Axle 5/8-18	2
19.	BF1127SA	Front Fork w/cable barrel Orange (double sided)	1
20.	2025	Cable Barrel w/nut	1
21.	8018A	Brake Caliper, Front	1
22.	8005	Spring, Return	1
23.	1028B	Bearing, Front Fork	2
24.	SBF1058D	Wheel, Front Complete (Mag.)	1
	SBF1058	Wheel, Rear Complete (Mag.)	1
	BF1059O	Tire, Rubber Power Play TT	-
	BF1058O	Rubber Tire, All Terrain	2
	BF1058T	Tube/only	
25.	2018	Linkage Arm Throttle	1
26.	2019	Spring, Throttle Return	1
27.	BF1006	Deck	1
	1007	Hardware Kit; Deck Mount	1
	X1007	Hardware Kit; Deck Mount without Grommets	1
28.	2020	Swivel, Throttle (not shown)	1
29.	1011	Grommet, Deck	8
30.	1009	Washer, Deck	4
31.	KN1009	Nut, Deck Mount 1/4-20	4
32.	8013	Bushing, Motor Mount (not shown)	1
33.	1025	Bolt, Gas Tank Mount M6 x 60	3
34.	8003	Disc, Front Brake	1
35.	8004	Spacer, Front Brake	4
36.	2113	Gas Tank w/Fuel Lines	1
	1021	Gas Tank Hardware Kit	1
37.	8016	Washer, Swivel Damper	1
38.	1026	Nut, Gas Tank Mount M6 Nylon	3
39.	BF1036	Washer, Axle 1 x .641 x .060	2
40.	X1022	Slide Tube	1

41.	1023	Screw, Engine Mount	4
42.	8012B	Engine Mount Bracket	1
43.	8015	Bolt, Motor Bracket Mount 3/8- 24 x 2-1/2	1
44.	8014	Nut, Motor Bracket Mount 3/8- 24 Locknut	1
45.	1067	Screw; Throttle Clamp 8-32 x 1/2 SHCS	1
46.	BF1019A	Muffler Connect Tube Assy	1
47.	1053	Plastic Cable Tie (8")	1
48.	4802B	Engine, G260RC	1
49.	5012	Bolt, Drive Spindle M6-80 SHCS	1
50.	BF1013	Drive Spindle w/grit	1
51.	1072A	E-Clip, Kickstand, 5/16"	1
52.	1074A	Washer, Kickstand 5/16"	1
53.	8633	Kickstand Assembly ('02)	1
54.	1635	Spring, Kickstand ('02 New Style)	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	1069	Nut, Throttle Clamp 8-32 Nylok	1
57.	SBF1001	Frame Assembly, Orange	1
58.	1024	Spacer, Gas Tank	3
59.	X1043	Lower Hinge, FTG Assy, Steel	1
60.	1066	Clamp, Throttle Lever	1
61.	BF1038A	Wheel Bearing	3
62.	8010C	Fender, Rear w/ Chrome Decal	1
	8010B	Fender Mount Hardware Kit	1
63.	8019	Fender/Tank Rear Bracket	1
64.	1056	Handle Hinge Pin	1
65.	8021	Washer, Front Wheel	4
66.	6007	Plug, Go Snuffer Silencer	1
67.	8009	Bolt, Rear Wheel	4
68.	8008	Nut, Wheel 3/8-24	8
	8025	Wheel Hardware Kit (rear)	1
69.	BF1033	Bolt, Axle, Rear	1
	BF1031	Axle Assembly	1
70.	8024	Bolt, Disc Mount, Front 3/8-24 x 3-1/2	1
71.	1008	Bolt, Deck Mount 1/4-20	4
72.	1051B	Throttle Lever Assembly Complete	1
73.	1053S	Plastic Cable Tie (4")	2
74.	SBF1058	Wheel Assembly, Rear	1
75.	1063	Sticker, Yellow Warning Label	1
76.	3118	Fuel Line Return Fitting	1
77.	3120	Fuel Filter	1
78.	8050	Bolt, Axle, Front 5/8-18 x 9	1
79.			
80.	8013	Bushing, Motor Mount	1

3.1.5 G230RC Engine Illustration

3.1.6 G230RC Parts Listing

Item	Part No.	Description	Qty
1.	4301	Cylinder	1
2.	4302	Gasket, Cylinder Base	1
3.	4303	Bolt, Cylinder	2
4.	4304	Insulator Manifold	1
5.	4305	Gasket, Insulator	1
6.	4306	Gasket, Carburetor	1
7.	4008	Screw, Insulator	-
8.	3012	Muffler	1
9.	4002	Bolt, Muffler, M5 x 50 SHCS	2
10.	3011	Gasket, Muffler	1
11.	4359A	Carburetor Assembly	1
12.	2018	Linkage Arm, Throttle (Bracket)	1
13.	2019	Spring, Throttle Return	1
14.	2020	Swivel, Throttle	1
15.	2016	Cable Barrel Nut	1
16.	3021	Ring, Crankcase	1
17.	4018	Gasket, Crankcase	1
18.	4023	Bolt, Crankcase	-
19.	4320	Piston	1
20.	4321	Piston Ring	1
21.	3037	Piston Pin	1
22.	3038	Piston Pin Clip (Set)	1
23.	3039	Bearing, Piston Pin	1
24.	3040	Pin Washer (Set)	1
25.	4326	Crankshaft Complete	1
26.	4313	Crankcase Assembly	1
27.	3022	Key, Flywheel	1
28.	4019	Seal Set, Crankcase	1

29.	4315	Bearing Set, Crankcase	1
30.	4338	Flywheel	1
31.	3044	Nut, Flywheel	1
32.	4346	Bolt Coil Mount	2
33.	43113	Kill Switch Assembly	1
34.	4057	Spacer, Ignition Coil	2
35.	43107	Fan Cover	1
36.	43108	Bolt, Fan Cover	6
37.	4340	Ignition Coil Assembly	1
38.	2021	Bolt, Carburetor	2
39.	3107	Air Filter Assembly	1
40.	3111	Air Filter Rear Housing	1
41.	3108	Screen, Air Filter	1
42.	3109	Air Filter Element	2
43.	3110	Air Filter Cover	1
44.	4399	Spacer, Carburetor	1
45.	4347	Recoil Starter Assembly	1
46.	4358	Screw, Recoil Starter	4
47.	43109	Engine Cover	1
48.	4034	Screw, Engine Cover	1
49.	43112	Spark Plug	1
50.	3116	Gas Cap	1
51.	BF3114	Gas Tank Assembly	1
52.	3118	Fuel Line Return Fitting	1
53.	3113	Gas Tank with Fuel Lines	1
54.	3115B	Fuel Line (Blue)(1 ft)	1
55.	3115Y	Fuel Line (Yellow)(1 ft)	1
56.	3120	Fuel Filter	1

3.1.7 Disassembly and Reassembly

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine VOIDS the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped replacement parts the Warranty is VOID.

3.1.7.1 Removing the T-Bar and Lower Hinge FTG Assembly

Refer to Removing the T-Bar text in Section 1.

3.1.7.2 Removing and Reinstalling the Front Fork

Refer to Reinstalling the Front Fork text in Section 1.

3.1.7.3 Replacing the Lower Hinge FTG Assembly

Refer to Replacing the Lower Hinge FTG Assembly text in Section 1.

3.1.7.4 Reinstalling the T-Bar

Refer to Reinstalling the T-Bar text in Section 1.

3.1.7.5 Replacing the Wheels because of tire wear

IMPORTANT: If the tires wear down to the wear dimple on the side of the tire they must be replaced. Driving the machine after the tires are worn beyond the wear dimple is dangerous and may damage the machine. Failure to replace the tires after they are worn down to the wear dimple will VOID the warranty.

Refer to Replacing Wheels text in Section 1.

3.1.8 Super X-Ped and Super Bigfoot Frequently Asked Questions

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine VOIDS the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped replacement parts the Warranty is VOID.

Q. What is an FTG? What is a steel FTG?

A. FTG is short for Fitting. The FTG is the piece that the end of the T-Bar connects to. The Stock FTG is Aluminum. An optional Steel FTG is available. It is much stronger.

Q. How to change the tire skin?

A. From www.pswsports.com

1. Remove the back tire from the Go-Ped®
2. Carefully take a hacksaw or sharp utility knife and cut the old tire off of the rim
3. Take the new tire and spray 2 (two) squirts of glass cleaner or water inside of the new tire, rub around the inside of the tire with your finger to lubricate the inside of the tire.
4. Now take the rim and place it on a hard surface and press the new tire onto one side of the rim. (Just get it started)
5. Finally, place the tire on the ground and jump on the tire to force it completely onto the rim.
6. Now install the wheel & tire back onto the Go-Ped®

Q. How to remove and install a spindle?

A. From www.pswsports.com

1. Remove the back tire.
2. Remove the 3 nuts holding the gas tank on.
3. No need to remove the gas lines, just clear the tank of the studs and swing it back out of the way onto the deck.
4. Now that the tank is off and you can see the drive spindle, in the end of it you can see the allen bolt. Keep the spindle from spinning by using a pair of vise grips at the very top of the spindle. Remove the allen bolt.
5. The spindle is a wedge-mated fit on the crank and is on very tight. **DO NOT HIT IT WITH A HAMMER. Stick a Phillips Head screwdriver in the end where the Allen bolt came out and rotate screwdriver in a circular motion(like mixing in a mixing bowl) while applying pressure. This should loosen the spindle until it falls off.**

Now Install the New Spindle, Hold it with the vise grips while tightening the allen bolt.

***Note: This is how it is done by qualified PSWS Technicians everyday!**

3.1.9 G230RC Engine

The G230RC engine is used on the Super X-Ped, Super Bigfoot and Super Go-Quad models.

3.1.9.1 Specifications

Overall Size (LxWxH)	167 x 204 x 195mm
Weight	2.07kg
Engine Type	G230RC
Displacement	22.5cm ³
Clutch Engagement	6000rpm (STD Spring)
Carburetor Type	WT-603
Spark Plug	Champion RZ7C
Spark Plug Gap	0.65mm
Rotating Direction	Counter-Clockwise (View from PTO)

3.1.9.2 Fuel

Mix high-octane (over 95) gasoline and high grade 2 cycle oil (JASO FC Grade oil or ISO EGC grade) in the ratio of 25:1.

WARNING: Never use any alcohol fuel or alcohol added fuel, or the rubber parts in the carburetor and engine will be damaged.

Gasoline is very flammable. Avoid smoking, bringing ant fires near fuel.

3.1.9.3 Engine Starting

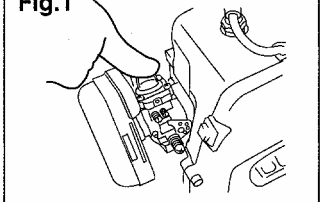
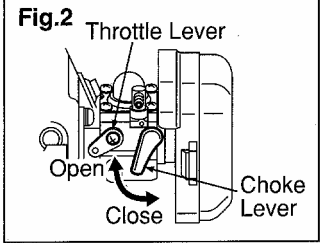
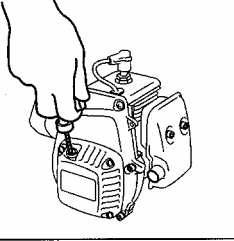
Fig.1 	Push the primer pump several times until overflow fuel flows out. Close the choke lever (Fig. 2) and move the throttle lever 1/4 ~ 1/3 open position. Pull the starter knob quickly until the first firing noise is heard.
Fig.2 	Open the choke (Fig. 2), throttle idle~ 1/4 open. Pull the starter quickly. Operate the engine for a few minutes to warm it up. IMPORTANT: If the engine is warm, chocking may not be necessary.

Fig.3

Over choking may cause starting difficulty due to a wet spark plug. In this case change the spark plug or dry it out and remove excess fuel in the cylinder by pulling the starter knob with the spark plug removed.

3.1.9.4 Operation

This engine is tuned at the factory to maximum power and speed and needs correct maintenance to keep it in top performance.

Follow the operating procedures described in the owner's manual.

Be sure to allow the engine to idle for at least 30 seconds after running for extended periods at full throttle. This will allow the engine to cool down before shutting it off.

3.1.9.5 Maintenance

1. Maintenance Chart

Items	Action	Before Use	Every 25 hours	Every 100 hours	Note
Leakage, Damage/Cracks	Check	✓			
Idling Speed	Check/Adjust	✓	✓	✓	
Air-Cleaner	Check/Clean	✓	✓		Replace if necessary
Spark Plug (gap)	Check/Adjust		✓	✓	Replace if necessary
Cylinder (barrel)	Check/Clean		✓	✓	Replace if necessary
Piston, Ring	Check/Clean		✓	✓	Replace if necessary
Muffler & Bolt	Check/Clean	✓	✓	✓	Replace if necessary
Bearings	Check/Clean		✓	✓	Replace if necessary
Crank Shaft	Check/Alignment			✓	Replace if necessary

2. Specifications and Technical Data

Items	Unit	Specifications	Remarks
Bore x Stroke	mm	32x28	
Displacement	cm ³	22.5	
Effective Compression Ratio		8.8	
Carburetor	Type	Walbro WT	
	Venture (mm)	12.7	
Starting		Recoil Starter	
Ignition	Type	TCI	
	Timing	BTC 30deg/8000 rpm	
Spark Plug	Standard	RZ7C	Champion
	Option (For Race)	CR6HVX with Terminal Nut	NGK
Clutch Engagement Speed	Rpm	6000	
No load max Speed	Rpm	19500	
Idling Speed	Rpm	4000	
Max. Power	kW/rpm	2.10/14,000	Without Air Cleaner and Muffler
Max. Torque	N.m/rpm	1.72/10,000	Without Air Cleaner and Muffler
Fuel Consumption	g/kW h	680 (500g/ps h)	Without Air Cleaner and Muffler
Carburetor Standard setting	H	1 3/8 ± ¼	
	L	1 ¼ ± 1/4	

3. Maintenance Specifications

Items		Standard	Limit	Measuring Device	Remarks
Cylinder	Compression (kg/cm ³)	8.8	7.3	Compression Gage	
	Bore (mm)	32	Plating damaged	Eye Checking	
Piston	Diameter (mm)	31.97	31.87	Micro Meter	At the skirt end and right angle to the piston pin
	Piston Ring Groove width (mm)	1.01	1.11	Thickness Gauge	
	Piston Pin Hole (mm)	8.01	8.05	Cylinder Gauge	
	Clearance between Piston and Cylinder (mm)	0.03~0.06	0.15	Micro Meter Cylinder Gauge	
	Clearance between Groove and Piston Ring (mm)	0.02~0.04	0.1	Thickness Gauge	
Piston Ring	End Gap (mm)	0.05~0.25	0.5	Thickness Gauge	When inserted in a new cylinder
	Width (mm)	0.98	0.93	Micro Meter	
Piston Pin Diameter (mm)		8	7.98	Micro Meter	
Connecting Rod Small end (mm)		11	11.05	Cylinder Gauge	
Crankshaft Dia. At Main Bearing (mm)		12	11.98	Micro Meter	
	Eccentricity (mm)	-	0.07	Dial Gauge	
	Axial Play (mm)	-	0.5	Thickness Gauge	
	Main Bearing	-	Gritty or Feels Flat Spot	-	

4. Carburetor

Items	Standard	Limit	Measuring Device	Remarks
Metering Lever set (mm)	1.65	±0.16	Vanier	
Inlet Valve Opening Pressure (kg/cm ³)	1.3~2.3		Leak Tester	
Inlet Valve Closing Pressure (kg/cm ³)	0.7~1.7		Leak Tester	

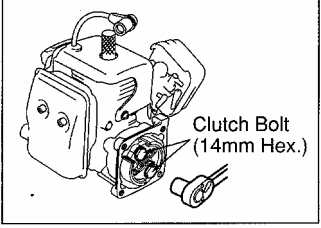
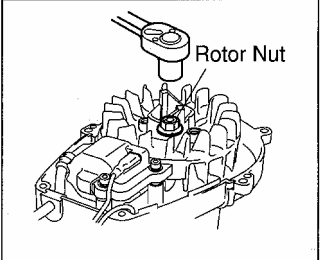
5. Ignition System

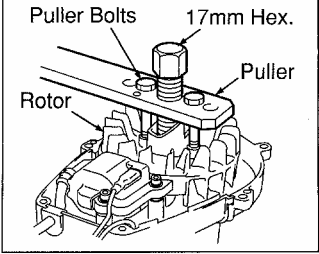
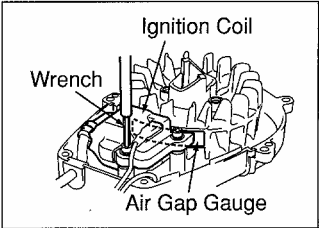
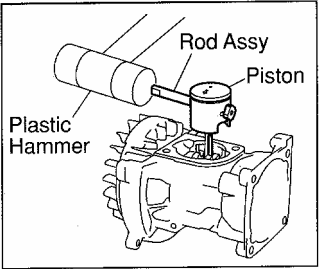
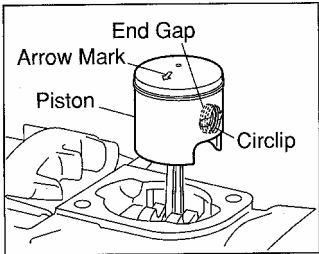
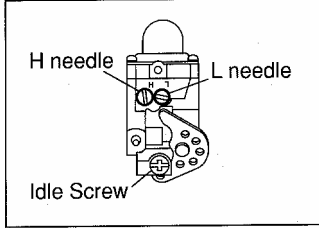
Items		Standard	Limit	Measuring Device	Remarks
Spark Plug Air Gap (mm)		0.6~0.7	0.7	Thickness Gauge	
Ignition Coil/Flywheel Air Gap (mm)		0.3	0.4	Thickness Gauge	
Coil Resistance (ohms)	Primary	0.7	-	Volt Meter	Reading between primary terminal and iron core
	Secondary	6100	-	Volt Meter	Reading between sparking cord end and iron core

6. Tightening Torque

Items	Screw Size	Standard (kg cm)	Limit (kg cm)	Remarks
Carburetor	M5 (P=0.8)	35	30~40	
Insulator	M5 (P=0.8)	35	30~40	With Locktight glue
Clutch	M6 (P=1.0)	65	50~80	
Rotor	M8 (P=1.0)	130	100~150	
Cylinder	M5 (P=0.8)	70	60~80	
Crankcase	M5 (P=0.8)	65	50~80	
Spark Plug	M10 (P=1.0)	110	100~120	
Muffler	M5 (P=0.8)	90	70~100	
Fan Cover	M5 (P=0.8)	35	30~40	
Ignition Coil	M4 (P=0.7)	33	25~40	
Starter Case	M4 (P=0.7)	13	10~15	
Tapping Screw	TP 4.3	25	20~30	

3.1.9.6 Service Guide

	Removing Clutch Shoe 1. Remove the housing and plug cap 2. Remove the spark plug and fit the stopper into the plug hole. 3. Remove clutch bolts.
	Removing Rotor Fan 4. Remove the rotor nut. 5. Remove the rotor using the puller assembly. Apply 8mm puller bolts.

	
	Assembling Rotor Insert the gauge between the rotor magnet metal and the coil. Tighten screws while pressing the coil against the rotor. GAP Specification 0.3 ~ 0.4mm
	Removing Piston Pin 1. Remove snap rings from both sides of the piston pin. 2. Engage the rod assembly to the piston pin and gently tap with a plastic hammer to push out the pin while holding the piston firmly. NOTE: Hard hammering may damage the big end of the connecting rod.
	Installing Piston 1. Make sure the arrow is pointed to the exhaust side. 2. Fit the circlip in the groove so as to face the end gap below. NOTE: A deformed circlip may come off during engine operation and damage the engine.
	Carburetor Adjustment The carburetor is optimally adjusted at the factory. It may be readjusted depending on current barometric and climatic conditions. Idle rpm: 4000 300 rpm (STD Spring) H needle: $1 \frac{3}{8} \pm \frac{1}{4}$ L needle $1 \frac{1}{4} \pm \frac{1}{4}$

3.1.9.7 Troubleshooting

1. Engine does not start

Description	Cause	Countermeasure
No spark in the Spark Plug		
Spark Plug	1. Wet spark plug electrodes	Dry the spark plug
	2. Carbon deposited on the electrodes	Clean the spark plug
	3. Insulation failure by insulator damage	Replace worn parts
	4. Improper spark gap	Adjust to 0.6~0.7mm
	5. Burn out of electrodes	Replace spark plug
Magnet	1. Ignition coil inside failure	Replace Ignition coil
	2. Damaged cable sheath or disconnected cable	Replace worn parts
Switch	3. Switch is OFF	Turn switch ON
	4. Switch failure	Replace the switch
	5. Primary wiring grounded	Repair ground
Sparks appear in the spark plug		
Compression and fueling is normal	1. Over sucking of fuel	Drain excess fuel
	2. Too rich fuel	Adjust carburetor
	3. Overflow	Carburetor adjust or exchange
	4. Clogging of air cleaner	Wash with mixed gasoline
	5. Faulty fuel	Change with proper fuel
Fueling normal but poor compression	1. Worn out cylinder, piston or piston ring	Replace worn parts
	2. Gas leakage from cylinder and crank case gasket	Apply liquid gasket and reassemble
No fuel supply	1. Choked breather air hole	Clean breather
	2. Clogged carburetor	Clean carburetor
	3. Clogged fuel filter	Clogged fuel filter

2. Lack of Power or poor performance

Description	Cause	Countermeasure
Compression is normal and no misfire	1. Air leaks in fuel line	Tighten connections
	2. Air penetration from intake tube joint or carburetor joint	Change gasket or tighten screws
	3. Water fuel	Replace with clean
	4. Piston seizure	Replace piston and cylinder
	5. Muffler choked with carbon	Clean muffler
Overheating	1. Fuel too lean	Adjust carburetor
	2. Clogged cylinder fins	Clean fins
	3. Poor fuel quality	Replace with good fuel
	4. Carbon deposits in combustion chamber	Clean carbon deposits
	5. Spark plug electrode red hot	Thoroughly clean, adjust gap 0.023~0.028 in
Others	1. Dirty air cleaner	Wash with mixed gasoline
	2. Overloading	Reduce load

3.1.9.8 Repair and Service items shipped with G230RC Engine

The items shown in the following figure are shipped with the engine. The Sparkplug/Screwdriver may be used to service the engine. The Muffler gasket may be used as a replacement if needed.

The Fuel line and Filter are intended for RC Car or Plane use and are not needed on the Super machines.



Sparkplug/
Screwdriver

Muffler
Gasket

Fuel
Filter

Fuel
Line

SECTION 4. G23LH MODELS

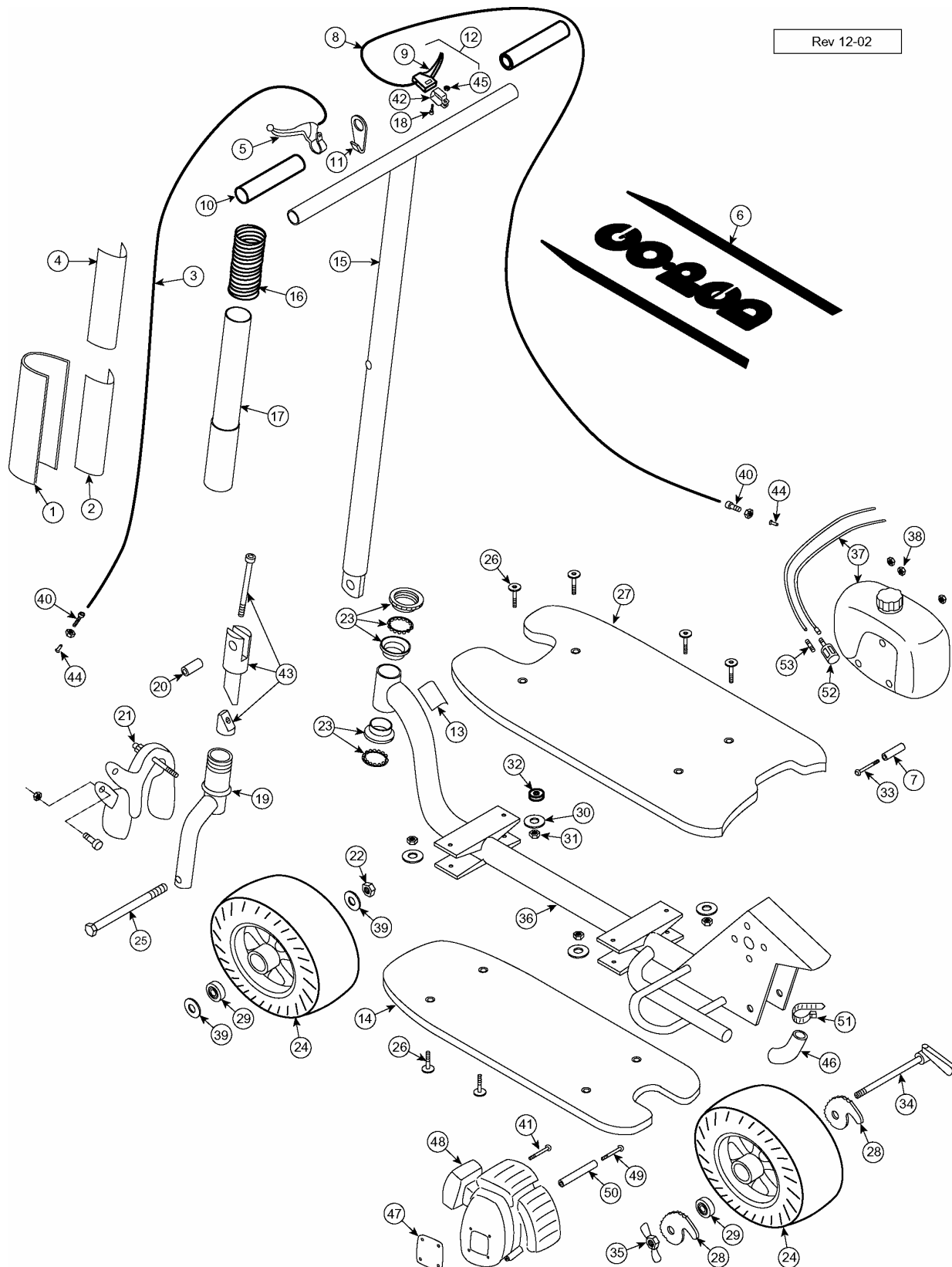
4.1 G23LH MODELS

There are four scooters in the G23LH line, The X-Ped, Bigfoot, Liquimatic and Sport.

This section contains parts illustrations, parts lists, disassembly, assembly, frequently asked questions and troubleshooting information for each machine.

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4.1.1 X-Ped Illustration



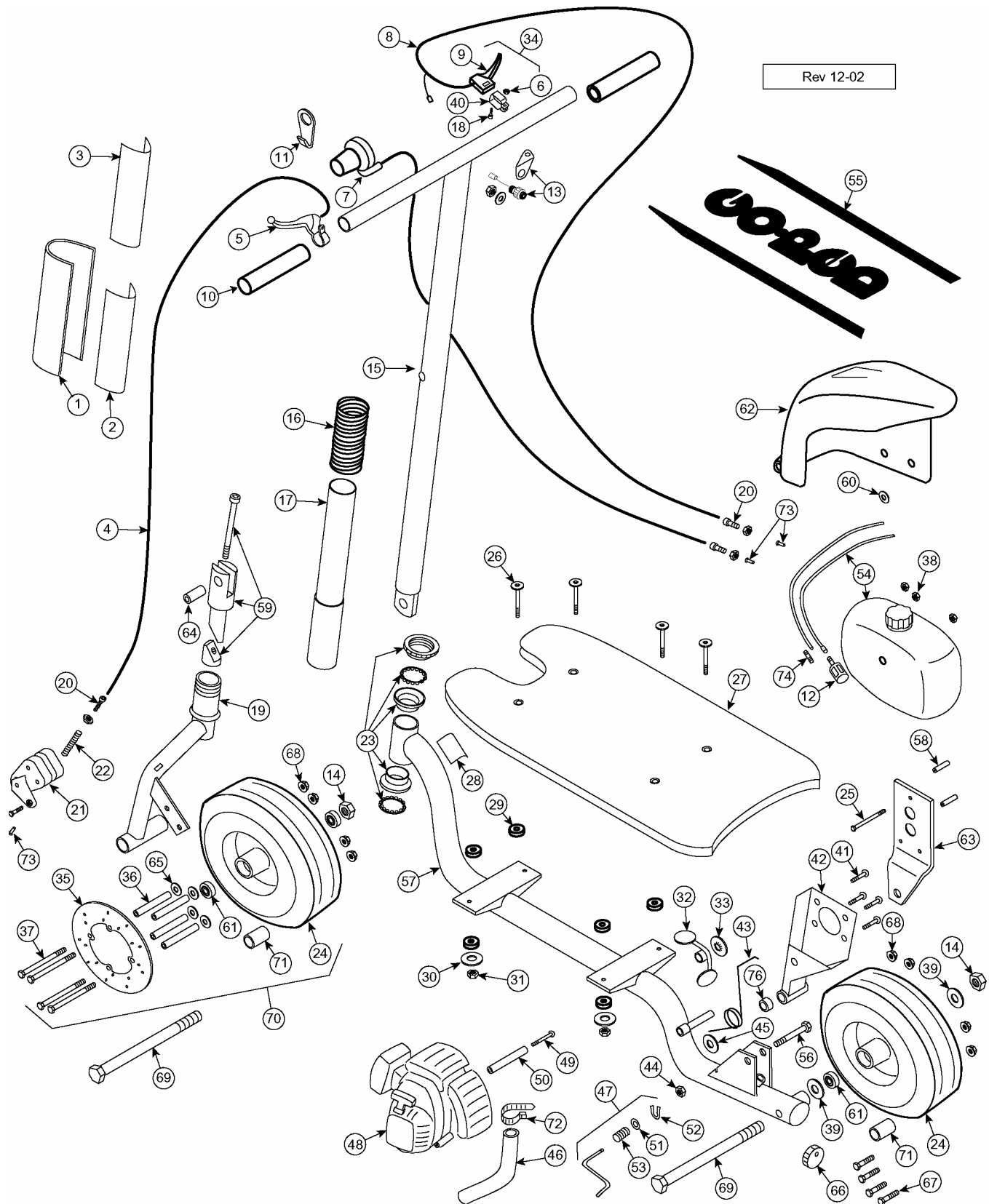
4.1.2 Parts Listing – X-Ped

(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1063	Warning Label, Yellow	1
5.	1047	Brake Lever Assembly	1
6.	2001	Grip Tape, Go-Ped Die Cut	1
7.	5018	Spacer, Gas Tank	3
8.	1050	Throttle Cable Assembly	1
9.	1051	Throttle Lever with Clamp	1
10.	2049	Grips/set	1
11.	KN1005	Latch, T-Bar	1
12.	1051B	Throttle Lever Assembly (includes items - 9, 18, 42, 45)	1
13.	1068	Sticker, Made in U.S.A.	1
14.	XS1006	Slide Deck	1
15.	2043	T-Bar Complete 24.75" (includes Brake, Throttle and cables)	1
16.	1060	Safety Spring	1
	1062	Safety Spring and Grip Set	1
17.	X1022	Slide Tube	1
18.	1067	Screw; Throttle Clamp 8-32 x ½ SHCS	1
19.	X1027	Front Fork w/axle, Sky Blue	1
	1027X	Front Fork, Sky Blue	1
20.	1056	Handle Hinge Pin	1
21.	1030	Brake Caliper, Front	1
22.	1037	Nut, Axle	1
23.	1028B	Bearing, Headset	2
24.	X1058	Wheel Assembly, Aluminum	2
	1058O	Go Active Rubber (tire only)	-
25.	1033	Axle Bolt - Front	2
	1031	Axle Assembly, Front	
26.	1008	Bolt, Deck Mount	4

27.	X1006	Deck w/Grit	1
	X1007	Hardware Kit, Deck Mount without Grommets	1
28.	1015A	Quick Release E.P.W.	2
29.	1038A	Wheel Bearing	1
	1038	Kit, Wheel Bearing	-
30.	1009	Washer, Deck	4
31.	1010	Nut, Deck	4
32.	1011	Grommet, Deck	4
33.	1025	Bolt, Gas Tank Mount	3
34.	1012	Bolt, Quick Release Axle	1
35.	1017	Wing Nut	1
36.	X1001	Frame Assembly, Sky Blue	1
37.	3113	Gas Tank w/Fuel Lines	1
38.	1026	Nut, Gas Tank Mount	3
39.	1036	Washer, Axle	4
40.	2025	Cable Barrel with Nut	2
41.	1023	Screw, Engine	4
42.	1066	Clamp, Throttle Lever	1
43.	X1043	Lower Hinge, FTG Assembly Steel	1
44.	1055	Cable, End Crimp	1
45.	1069	Nut, Throttle Clamp 8-32 Nylok	1
46.	1019A	Muffler Connect Tube Assy	1
47.	X4067	Block Off Plate	1
48.	4800	Engine, G23LH	1
49.	1016	Bolt, Drive Spindle	1
50.	1013X	Drive Spindle no Grit	1
51.	1053	Plastic Cable Tie (8")	3
52.	3120	Fuel Filter	1
53.	3118	Fuel Line Return Fitting	1
54.	1020X	Sticker, Chrome decal	1

4.1.3 Bigfoot Illustration



4.1.4 Parts Listing – Bigfoot

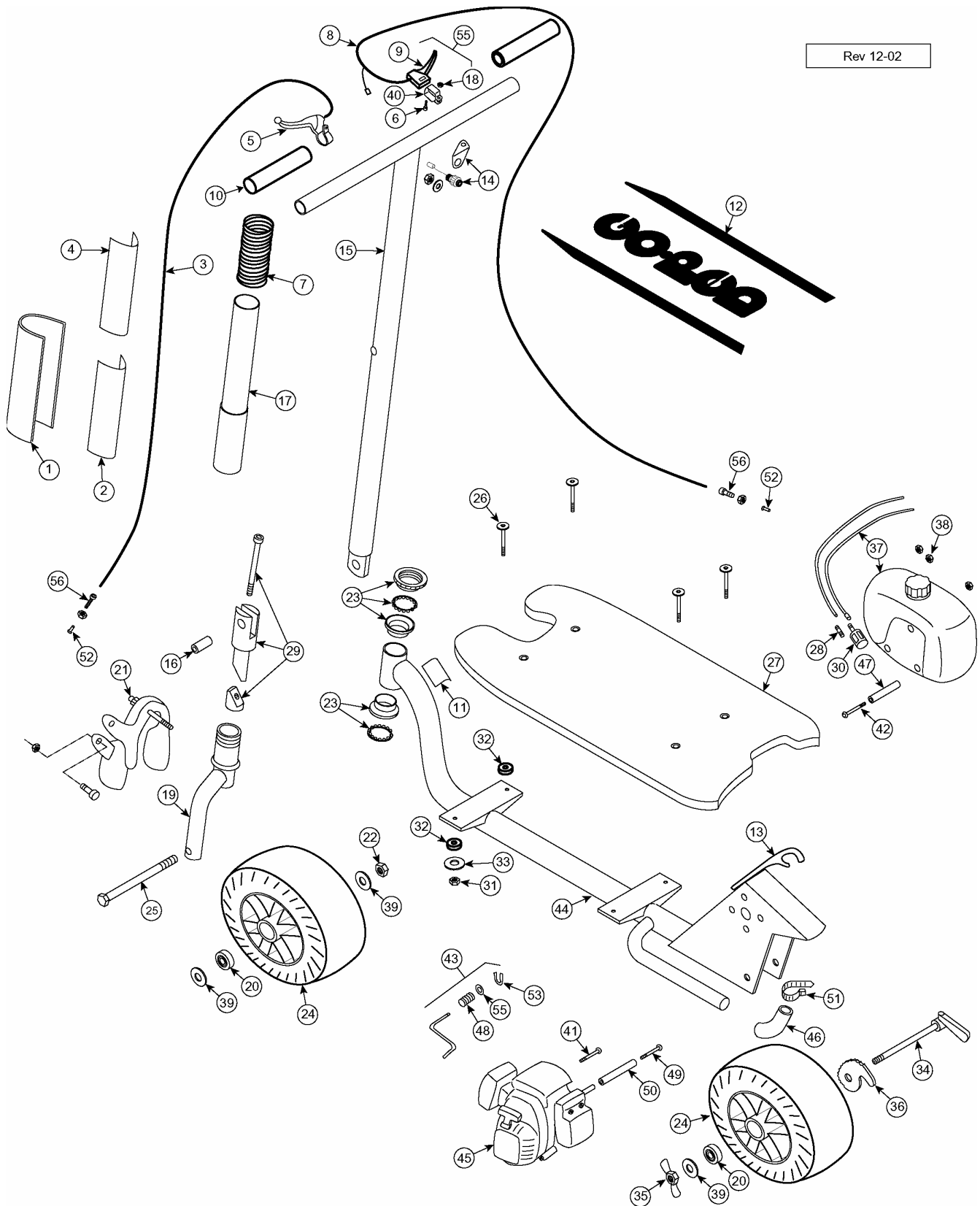
(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1063	Yellow Warning Label	1
4.	1054	Brake Cable Assembly	1
5.	1047	Brake Lever Assembly	1
6.	1069	Nut, Throttle Clamp 8-32 Nyllok	1
7.	8006C	Grip Shift (Post 2002 model)	1
8.	BF1050	Throttle Cable Assembly	1
9.	1051A	Throttle Lever	1
10.	1049	Grips/set	1
	1062	Safety Spring & Grip Kit	1
11.	KN1005	Latch, T-Bar	1
12.	3120	Fuel Filter	1
13.	3123	Kill Switch Assembly (includes bracket, washer, nut, kill switch)	1
14.	BF1037	Nut, Axle	2
15.	BF1046L	T-Bar Complete 24.75"	1
16.	1060	Safety Spring	1
17.	1022	Slide Tube	1
18.	1067	Screw; Throttle Clamp 8-32 x ½ SHCS	1
19.	BF1027Y	Front Fork w/axle, Yellow	1
20.	2025	Barrel Cable w/nut	1
21.	8018A	Caliper, Brake Front	1
22.	8005	Spring, Return, Brake	1
23.	1028	Front Fork Bearing Kit	1
24.	SBF1058	Wheel, Complete Rear (Mag.)	1
	SBF1058D	Wheel, Comp. Front (Mag.)	1
	BF1058O	Tire w/Tube, "AT" All Terrain	2
	BF1058T	Tube/only	2
25.	1025	Bolt, Gas Tank Mount	3
26.	1008	Bolt, Deck	4
27.	BF1006	Deck w/Grit	1
	1007	Hardware Kit, Deck Mount w/Grommets	1
28.	1068	Sticker, Made in U.S.A.	1
29.	1011	Grommet, Deck	8
30.	1009	Washer, Deck	4
31.	1010	Nut, Deck	4
32.	8011A	Rear Brake	1
33.	8002	Bushing, Brake Motion	1
34.	1051B	Throttle Lever Assembly (includes items - 9, 18, 42, 45)	1
35.	8003	Disc, Front Brake	1
36.	8004	Spacer, Front Brake	4
37.	8024	Bolt, Front Wheel, Disc	4

		Mount	
38.	1026	Nut, Gas Tank Mount	3
39.	1036	Washer	6
40.	1066	Clamp, Throttle Lever	1
41.	1023	Screw, Engine Mounting	4
42.	8012B	Engine Mount Bracket	1
43.	8017	Spring, Torsion "Motor Mount"	1
44.	8014	Nut, Motor Mount	1
45.	8016	Washer, Swivel Damper	1
46.	BF1019A	Muffler Connect Tube Assembly	1
47.	8633	Kickstand Assembly ('02)	1
48.	4800	Engine, G23LH	1
49.	5012	Bolt, Drive Spindle	1
50.	BF1013	Drive Spindle w/grit	1
51.	1074A	Washer, Kickstand 5/16	1
52.	1072A	E-Clip, Kickstand 5/16	1
53.	1635	Spring, Kickstand ('02 New Style)	1
54.	BF3113	Gas Tank Assembly	1
	1021	Gas Tank Hardware Kit	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	8015	Bolt, Motor Mount	1
57.	BF1001Y	Frame Assembly, Yellow	1
58.	1024	Spacer, Gas Tank	3
59.	1043	Lower Hinge, FTG Assembly, Aluminum	1
60.	8020	Fender Retaining Washer	1
61.	BF1038A	Wheel Bearing	4
62.	8010C	Fender, Rear w/ Chrome Decal (fits BF & SBF)	1
			1
	8010	Fender Kit, Rear	1
63.	8019	Fender/Tank Rear Bracket	1
64.	1056	Handle Hinge Pin	1
65.	8021	Washer, Front Wheel	4
66.	6007	Plug, Go Snuffer Silencer	2
67.	8009	Bolt, Rear Wheel	4
68.	8008	Nut, Wheel	4
69.	BF1033	Bolt, Axle	2
70.	BF1058D	Wheel Assembly w/Disk, Front	1
71.	BF1038B	Wheel Bearing Spacer	2
72.	1053	Plastic Cable Tie (8")	3
73.	1055	Cable, End Crimp	2
74.	3118	Fuel Line Return Fitting	1
75.	1053S	Plastic Cable Tie (4")	1
76.	8013	Bushing, Motor Mount	1

4.1.5 Sport Illustration

Rev 12-02



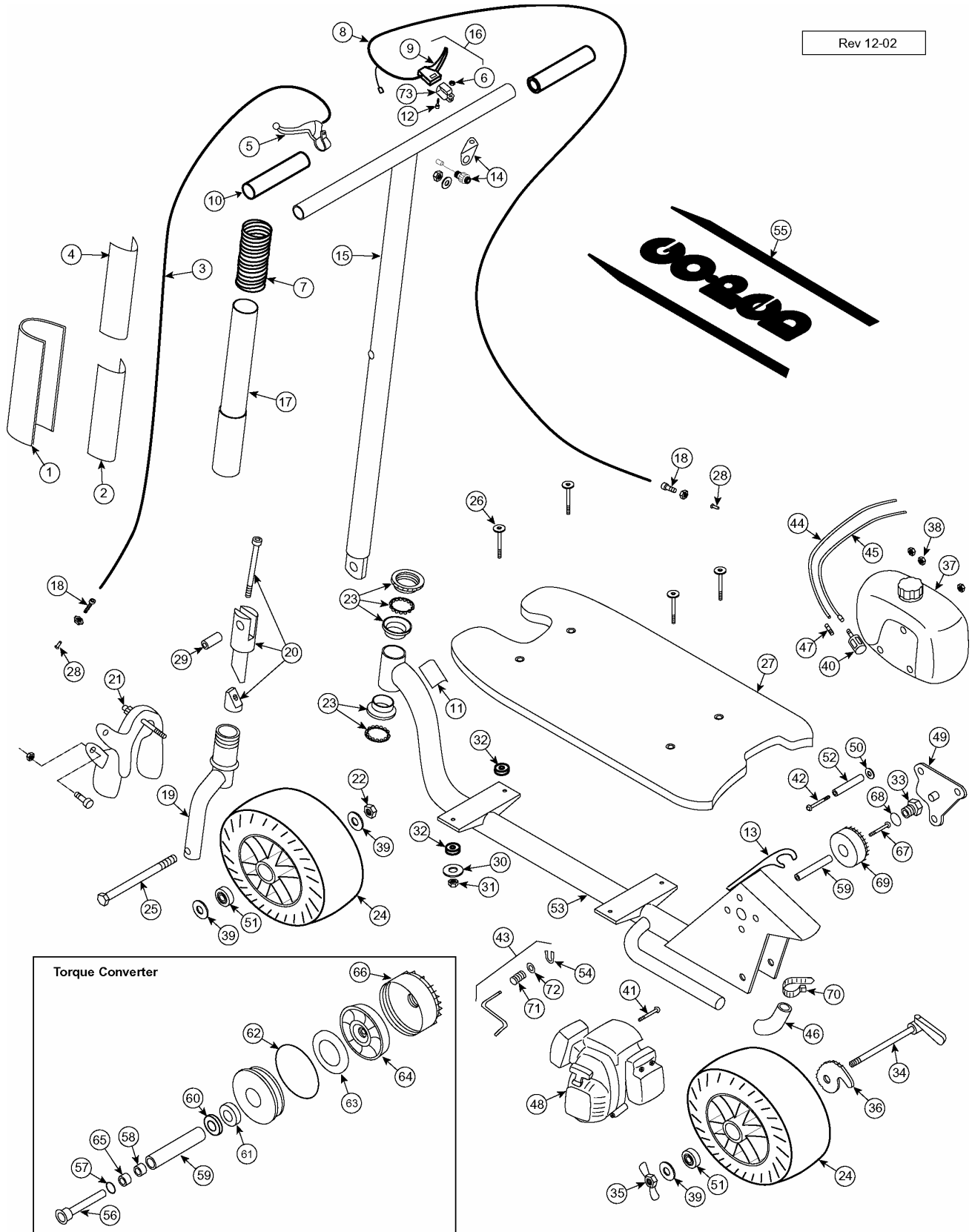
4.1.6 Parts Listing – Sport

(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1063	Warning Label, Yellow	1
5.	1047	Brake Lever Assembly	1
6.	1067	Screw, Throttle Clamp	1
7.	1060	Safety Spring	1
	1062	Safety Spring and Grip Set	-
8.	1050	Throttle Cable Assembly	1
9.	1051	Throttle Lever Assy (pre '03)	1
10.	1049	Grips/set	1
11.	1068	Sticker, Made in USA	1
12.	2001	Grip Tape, Go-Ped Die Cut	1
13.	1005	Latch, Plastic	1
14.	3123	Kill Switch Assembly	1
15.	1046L	T-Bar Complete 28.75"	1
16.	1056	Handle Hinge Pin	1
17.	1022	Slide Tube, Black Anodized	1
18.	1069	Nut, Throttle Clamp	1
19.	1027B	Front Fork w/axle, Blue	1
	1027R	Front Fork, w/axle Red	1
20.	1038A	Wheel Bearing	4
	1038	Kit, Wheel Bearing	-
21.	1030	Brake Caliper, Front	1
22.	1037	Nut, Front Axle 3/8-24	1
23.	1028B	Front Fork Bearing	2
24.	1158	Wheel Assembly, Mach 12	2
	1058O	Go Active Rubber (tire only)	-
	1058H	Hub, Mach 12 (not shown)	-
25.	1033	Axle Bolt, Frnt 3/8-24x3-1/2	2
	1031	Axle Assembly, Front	
26.	1008	Bolt, Deck Mount	4
27.	1006	Deck w/Grit	1
	1007	Hardware Kit, Deck Mount with Grommets	

28.	3118	Fuel Line Return Fitting	1
29.	1043	Lower Hinge, FTG Assembly, Aluminum	1
30.	3120	Filter, Fuel	1
31.	1010	Nut, Deck	4
32.	1011	Grommet, Deck	4
33.	1009	Washer, Deck	4
34.	1012	Bolt, Quick Release Axle	1
	1032	Axle Assembly, Quick Release	1
35.	1017	Wing Nut 3/8-24	1
36.	1015	Quick Release E.P.W.	1
37.	3113	Gas Tank w/Fuel Lines	1
	1021	Gas Tank Hardware Kit	-
38.	1026	Nut, Gas Tank Mount	3
39.	1036	Washer, Axle 3/8 x 11/16	5
40.	1066	Clamp, Throttle Lever	1
41.	1023	Screw, Engine Mount	4
42.	1025	Bolt, Gas Tank Mount	3
43.	8633	Kickstand Assembly ('02)	1
44.	1001B	Frame Assembly, Blue	1
	1001R	Frame Assembly, Red	1
45.	4800	Engine, G23LH	1
46.	1019	Muffler Connect Tube Assembly	1
47.	1024	Spacer, Gas Tank, Plastic	3
48.	1635	Spring, Kickstand	1
49.	1014	Bolt, Drive Spindle M6x45	1
50.	1013	Drive Spindle	1
51.	1053	Plastic Cable Tie (8")	1
52.	1055	Cable, End Crimp	1
53.	1072A	E-Clip, Kickstand	1
54.	1074A	Washer, Kickstand	1
55.	1051B	Throttle Lever Assembly	1
56.	2025	Barrel, Cable w/Nut	2

4.1.7 Liquimatic Illustration



4.1.8 Parts Listing – Liquimatic

(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Reflective T-Bar Pad	1
2.	1064	Red Warning Label	1
3.	1054	Brake Cable Assembly	1
4.	1063	Warning Label, Yellow	1
5.	1047	Brake Lever Assembly	1
6.	1069	Nut, Throttle Clamp 8-32 Nylok	1
7.	1060	Safety Spring	1
	1062	Safety Spring and Grip Set	-
8.	1050	Throttle Cable Assembly	1
9.	1051B	Throttle Lever Assy with Clamp	1
10.	1049	Grips/set	1
11.	1068	Sticker, Made in U.S.A.	1
12.	1067	Screw; Throttle Clamp 8-32 x ½ SHCS	1
13.	1005	Latch, Plastic	1
14.	3123	Kill Switch Assembly	1
15.	1046L	T-Bar Complete 28.75"	1
16.	1051B	Throttle Lever Assembly	1
17.	1022	Slide Tube, Black Anodized	1
18.	2025	Cable Barrel with Nut	2
19.	1027Y	Front Fork w/axle, Yellow	1
	1127Y	Front Fork, Yellow	1
20.	1043	Lower Hinge, FTG Assembly, Aluminum	1
21.	1030	Brake Caliper, Front	1
22.	1037	Nut, Axle	1
23.	1028B	Front Fork Bearing	2
24.	1158	Wheel Assembly, Mach 12 (Replaces 1059)	2
	1058O	Go Active Rubber (tire only)	-
25.	1033	Axle Bolt - Front	1
	1031	Axle Assembly, Front	
26.	1008	Bolt, Deck Mount	4
27.	1006	Deck w/Grit	1
	1007	Hardware Kit, Deck Mount with Grommets	
28.	1055	Cable, End Crimp	1
29.	1056	Handle Hinge Pin	1
30.	1009	Washer, Deck	4
31.	1010	Nut, Deck	4
32.	1011	Grommet, Deck	4
33.	5015	Support Plug Assembly	1
34.	1012	Bolt, Quick Release Axle	1
	1032	Axle Assembly, Quick Release	1

35.	1017	Wing Nut	1
36.	1015	Quick Release E.P.W.	1
37.	3113	Gas Tank w/Fuel Lines	1
	1021	Gas Tank Hardware Kit	-
38.	1026	Nut, Gas Tank Mount	3
39.	1036	Washer, Axle	6
40.	3120	Fuel Filter	1
41.	1023	Screw, Engine Mount	4
42.	1025	Bolt, Gas Tank Mount	3
43.	8633	Kickstand Assembly ('02)	1
44.	3115B	Fuel Line, Blue (1 ft.)	1
45.	3115Y	Fuel Line, Yellow (1 ft.)	1
46.	1019	Muffler Connect Tube Assembly	1
47.	3118	Fuel Line Return Fitting	1
48.	4800	Engine, G23LH	1
49.	5125	Outboard Support Plate Assembly	1
50.	5017	Spacer Washer	1
51.	1038A	Wheel Bearing	1
	1038	Kit, Wheel Bearing	-
52.	5018	Spacer, Gas Tank	3
53.	1001Y	Frame Assembly, Yellow	1
54.	1072A	E-Clip, Kickstand 5/16	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	5001	Shaft, Heat Treated	1
57.	5002	O-Ring, Shaft	1
58.	5003	Two-Way Roller Bearing	1
59.	5004	Turbine Roller, Gritted	1
60.	5005	Main Seal	1
61.	5006	Main Bearing	1
62.	5007	Turbine O-Ring	1
63.	5008	Pump, Core Ring	1
64.	5009	Pump, Machined	1
65.	5010	One-Way Roller Clutch Bearing	1
66.	5011	Cover	1
67.	5012	Bolt, M6 x 80 SHCS	4
68.	5013	O-Ring, Turbine Plug	1
69.	5123	Turbine Clutch Assembly Complete	1
	5227	Torque Converter Retro Kit	1
70.	1053	Plastic Cable Tie (8")	2
71.	1635	Spring, Kickstand ('02 New Style)	1
72.	1074A	Washer, Kickstand	1
73.	1066	Clamp, Throttle Lever	1

4.1.10 G23LH Parts Listing

Item	Part No.	Description	Qty
1.	4001	Cylinder	1
2.	4002	Muffler Bolt	2
3.	4003	Gasket, Cylinder Base	1
4.	4004	Bolt, Cylinder	2
5.	4005	Gasket, Insulator	1
6.	4006	Insulator, Manifold	1
7.	4007	Gasket, Carburetor	1
8.	4008	Screw, Insulator	1
9.	3009	Screw, Carburetor	1
10.			
11.	4011	Muffler Gasket	1
12.	4012	Muffler	1
13.			
14.			
15.			
16.	4016	Crankcase complete (no bearings or seals)	1
	4017	Crank with bearings and seals	1
17.			
18.	4018	Gasket, Crankcase	1
19.	4019	Seal Set, Crankcase	1
20.	3020	Bearing Set	1
21.	3021	Ring Crankcase	1
22.	3022	Key, Flywheel	1
23.	4023	Bolt, Crankcase	4
24.			
25.			
26.	4026	Fan, Cover	1
27.			
28.			
29.			
30.			
31.			
32.	4032	Fan, Cover Screw	4
33.	4033	Engine Cover	1
34.	4034	Screw, Engine Cover	1
35.	3035	Piston	1
36.	3036	Piston Ring Set	1
37.	3037	Piston Pin	1
38.	3038	Piston Pin Clip Set	1
39.	3039	Bearing, Piston Set	1
40.	3040	Pin Washer Set	1
41.	4041	Crankshaft Complete	1
42.			
43.			
44.	3044	Nut, Flywheel	1

45.	4045	Screw, Fan Cover	1
46.			
47.			
48.			
49.			
50.			
51.			
52.			
53.			
54.	4054	Flywheel	1
55.	4055	Ignition Coil	1
56.			
57.	4057	Spacer Ignition	1
58.	4058	Wire Grommet	1
59.	4059	Cord Complete	1
60.			
61.	4061	Bolt, coil mount	2
62.			
63.			
64.			
65.			
66.	4015	Spark Plug	1
67.	4067	Recoil Start Assy.	

78.			
79.	4079	Screw, Starter	1
80.			

87.			
88.	4088	Carburetor assembly	1
89.			

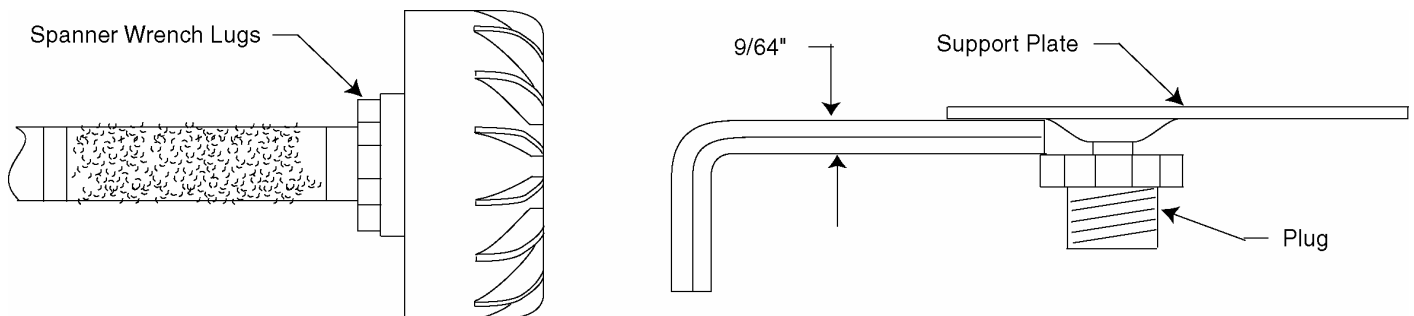
107.	3107	Air Filter Assembly	1
108.	3108	Air Filter Screen	1
109.	3109	Air Filter Element	1
110.	3110	Air Filter Cover	1
111.	3111	Air Filter Rear Housing	1

	3115B	Fuel Line - Blue	
	4300	Gasket Set	
	4800	Engine, G23LH	
	4988	Carburetor Rebuild Kit	
	X4067	Block Off Plate	

4.1.11 Liquimatic Hydraulic Torque Converter Installation Instructions

1. Lay the Go-Ped on its left side. Remove the gas tank, rear wheel and drive spindle.
2. Install the clutch assembly on the crankshaft.
3. Tighten the shaft bolt on the crank to approximately 8 to 12 ft. lbs.
4. Spin the clutch by hand to check the clearance. The clutch should spin freely in a counterclockwise direction.
5. Fill the clutch inner pump half way with automatic transmission fluid. High temperature automatic transmission fluid may be purchased at a local auto parts store. Remove the spark plug and pull the starter cord several times. The purpose of this is to bleed the air out of the small cavities in the clutch. Air in the pump will cause poor acceleration. Repeat the filling and pull starting process until the fluid level in the clutch is stable. The correct fluid level is the top of the shaft bolt.
6. Secure the clutch with a vice grips on the spanner wrench lugs as shown in the following figure.
7. Install the Plug.
8. Install the support plate. The plate should fit freely on the gas tank studs. If the studs bind on the plate, remove the plate and bend the studs accordingly. Refer to the following figure for proper support plate clearance. A 9/64 Allen wrench can be used as a gauge.
9. Thread the fuel lines through the plate and the frame. Install the gas tank on the studs. Before tightening the gas tank studs, the rear must be installed and tightened without adjusting it to the clutch in order to tension the frame. When the gas tank is installed and the gas tank nuts are tightened, attach the fuel lines to the carburetor and zip tie the fuel lines to the gas tank studs to prevent the fuel lines from rubbing on the clutch. Adjust the rear tire to the clutch.

WARNING: The support plate clearance should be 9/64 inch from the plate to the top of the Plug. If the clearance too deep or too shallow, the stud may be damaged. Proper adjustment is critical. Use washers on the gas tank studs to adjust this dimension to the proper depth.



4.1.12 Disassembly and Reassembly

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine VOIDS the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped replacement parts the Warranty is VOID.

4.1.12.1 Removing the T-Bar and Lower Hinge FTG Assembly

Refer to Removing the T-Bar text in Section 1.

4.1.12.2 Removing and Reinstalling the Front Fork

Refer to Reinstalling the Front Fork text in Section 1.

4.1.12.3 Replacing the Lower Hinge FTG Assembly

Refer to Replacing the Lower Hinge FTG Assembly text in Section 1.

4.1.12.4 Reinstalling the T-Bar

Refer to Reinstalling the T-Bar text in Section 1.

4.1.12.5 Replacing the Wheels because of tire wear

IMPORTANT: If the tires wear down to the wear dimple on the side of the tire they must be replaced. Driving the machine after the tires are worn beyond the wear dimple is dangerous and may damage the machine. Failure to replace the tires after they are worn down to the wear dimple will VOID the warranty.

Refer to Replacing Wheels text in Section 1.

4.1.13 Sport, X-Ped, Liquimatic and Bigfoot Frequently Asked Questions

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine VOIDS the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped replacement parts the Warranty is VOID.

Q. What is an FTG? What is a steel FTG?

A. FTG is short for Fitting. The FTG is the piece that the end of the T-Bar connects to. The Stock FTG is Aluminum. An optional Steel FTG is available. It is much stronger.

Q. How to change the tire skin?

A. From www.pswsports.com

1. Remove the back tire from the Go-Ped®
2. Carefully take a hacksaw or sharp knife and cut the old tire off of the rim
3. Take the new tire and spray 2 (two) squirts of WD-40 inside of the new tire, rub around the inside of the tire with your finger to lubricate the inside of the tire.
4. Now take the rim and place it on a hard surface and press the new tire onto one side of the rim. (Just get it started)
5. Finally, place the tire on a towel on the ground and jump on the tire to force it completely onto the rim.
6. Now install the wheel & tire back onto the Go-Ped®

Q. How to remove and install a spindle?

A. From www.pswsports.com

1. Remove the back tire.
2. Remove the 3 nuts holding the gas tank on.
3. No need to remove the gas lines, just clear the tank of the studs and swing it back out of the way onto the deck.
4. Now that the tank is off and you can see the drive spindle, in the end of it you can see the allen bolt. Keep the spindle from spinning by using a pair of vise grips at the very top of the spindle. Remove the allen bolt.
5. The spindle is a wedge-mated fit on the crank and is on very tight. **DO NOT HIT IT WITH A HAMMER. Stick a Phillips Head screwdriver in the end where the Allen bolt came out and rotate screwdriver in a circular motion(like mixing in a mixing bowl) while applying pressure. This should loosen the spindle until it falls off.**

Now Install the New Spindle, Hold it with the vise grips while tightening the allen bolt.

***Note: This is how it is done by qualified PSWS Technicians everyday!**

4.1.14 G23LH Engine

The G23LH engine is used on the X-Ped, Sport, Liquimatic Bigfoot models.

4.1.14.1 Specifications

Item	Unit	Specifications	Remarks
Engine		G23LH-48	
Engine Type		Air cooled 2-cycle single cylinder piston valve gasoline engine	Piston Port
Cylinder Layout		Upright	
Cylinder Bore x Stroke	mm (in)	32x28 (1.260 x 1.102)	
Displacement	cc (cu. in)	22.5 (1.37)	
Compression Ratio		7.7	
Fuel Mixing Ratio		2-cycle oil premixed gasoline 25:1	Use JASO FC or ISO EDG grade 2-cycle engine oil
Carburetor		Diaphragm Rotary valve WYJ-138A	
Starting Method		Recoil starter	
Ignition System		Transistor Control	
Spark Plug		NGK:BPMR7A	
Stopping Method		Primary coil short-circuiting	
Cooling Fan		Sirocco Fan	
Air Cleaner		Dry type	
Rotation Direction		Counter clockwise view from PTO	
Overall Size L x W x H	mm (in)	141 x 239 x 175 (5.66 x 9.40 x 6.88)	
Dry Weight	Kg (lbs)	1.9 (4.18 lbs)	
Operating Speed	rpm	5000~10000	
Idling Speed	rpm	2600~3000	
Max. Speed	rpm	11500	
Max. Output	Kw/rpm (hp/rpm)	0.87/8000 (1.2 HP/8000)	
Max. Torque	Nm/rpm (kg.m/rpm)	1.13/6500 (0.115/6500)	
Specific Fuel Consumption	g/kW.h (g/ps.h)	789 (580)	

4.1.14.2 Oil and Fuel mixing instructions

NOTE: For proper engine operation and maximum reliability, pay strict attention to the oil and fuel mixing instruction. Use a 40:1 fuel/oil ratio. Using improperly mixed fuel can severely damage the engine.

Use the following procedure to ensure proper mixing:

1. Put a small amount of fresh gasoline into a clean 1(U.S.) gallon (3.875-liter) fuel can.
2. Add 3.2 ounces of 2-cycle oil (Go-Mix II recommended).
3. Fill the remainder of the fuel can with gasoline (1 gallon).
4. Screw the fuel can cap on tight and SHAKE THE CAN VIGOROUSLY FOR 30 SECONDS.

4.1.15 Sport Flat Rate

Remove and Replace	Time
Engine	½ hr
Engine Top End	½ hr
Engine Rebuild	1 ½ hr
Crankshaft	1 hr
Carburetor	¼ hr
Wheel complete	¼ hr
Tire change	½ hr
T-Handle with cables	½ hr
T-Handle without cables	¾ hr
Frame Change	1 hr
Exhaust Tube	¼ hr
Deck	¼ hr
Hinge Assembly	½ hr
Brake Cable	¼ hr
Brake Cable with Caliper	½ hr
Throttle Cable	¼ hr

4.1.16 Bigfoot Flat Rate

Remove and Replace	Time
Frame Change	1 ½ hr
T-Handle with cables	³ / ₄ hr
T-Handle without cables	1 hr
Engine Rebuild	1-½ hr
Engine Top End	¹ / ₂ hr
Engine	¹ / ₂ hr
Crankshaft	1 hr
Carburetor	¹ / ₄ hr
Front or Rear Wheel complete	¹ / ₄ hr
Clutch Cable	¹ / ₂ hr
Grip Shifter with Cable	³ / ₄ hr
Exhaust Tube	¹ / ₄ hr
Deck	¹ / ₄ hr
Hinge Assembly	¹ / ₂ hr
Brake Cable	¹ / ₄ hr
Throttle Cable	³ / ₄ hr
Front Brake Caliper with Cable	¹ / ₂ hr
Front or Rear Tire change	¹ / ₂ hr
Motor Mount	1 hr
Motor Mount Spring/Clutch	¹ / ₂ hr

4.1.17 Liquimatic Flat Rate

Remove and Replace	Time
Engine Rebuild	1-½ hr
Engine Top End	½ hr
Engine	½ hr
Crankshaft	1 hr
Carburetor	¼ hr
Front or Rear Wheel complete	¼ hr
Tire change	½ hr
T-Handle with cables	½ hr
T-Handle without cables	¾ hr
Frame Change	1 hr
Exhaust Tube	¼ hr
Deck	¼ hr
Hinge Assembly	½ hr
Brake Cable	¼ hr
Brake Cable with Caliper	½ hr
Throttle Cable	¾ hr
Turbine R & R	1 hr
Turbine Rebuild	1 ½ hr
Outboard Support Bearing Assy & Plate	½ hr
Outboard Support Bearing Assy	¼ hr
Outboard Support Plate Assy	¼ hr
Turbine Oil Change	½ hr

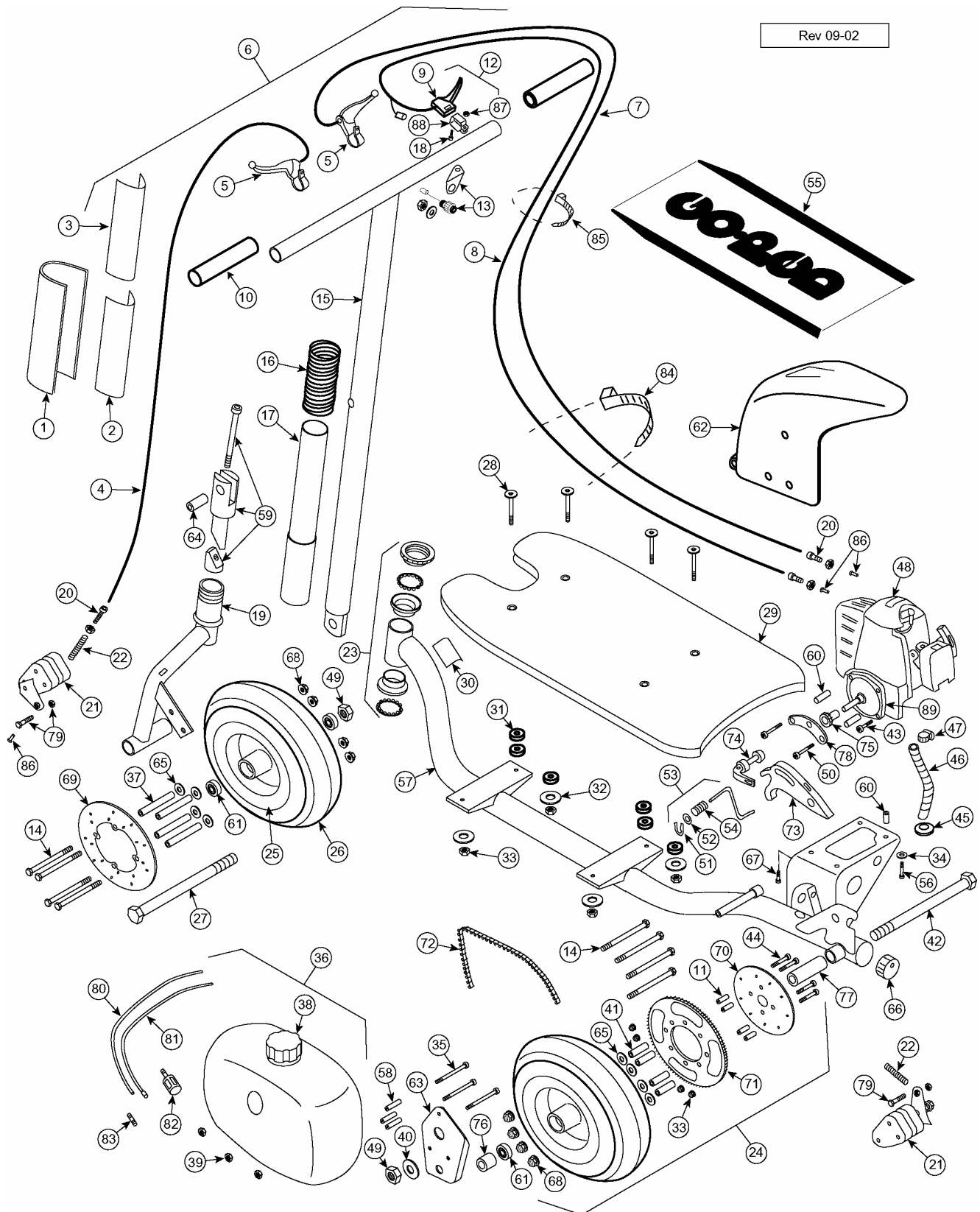
SECTION 5. GSR40 MODELS

5.1 GSR40 MODELS

This section contains parts illustrations, parts lists, disassembly, assembly, frequently asked questions and troubleshooting information for the GSR40 and the GSR40-TS Interceptor.

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5.1.1 GSR40 Illustration



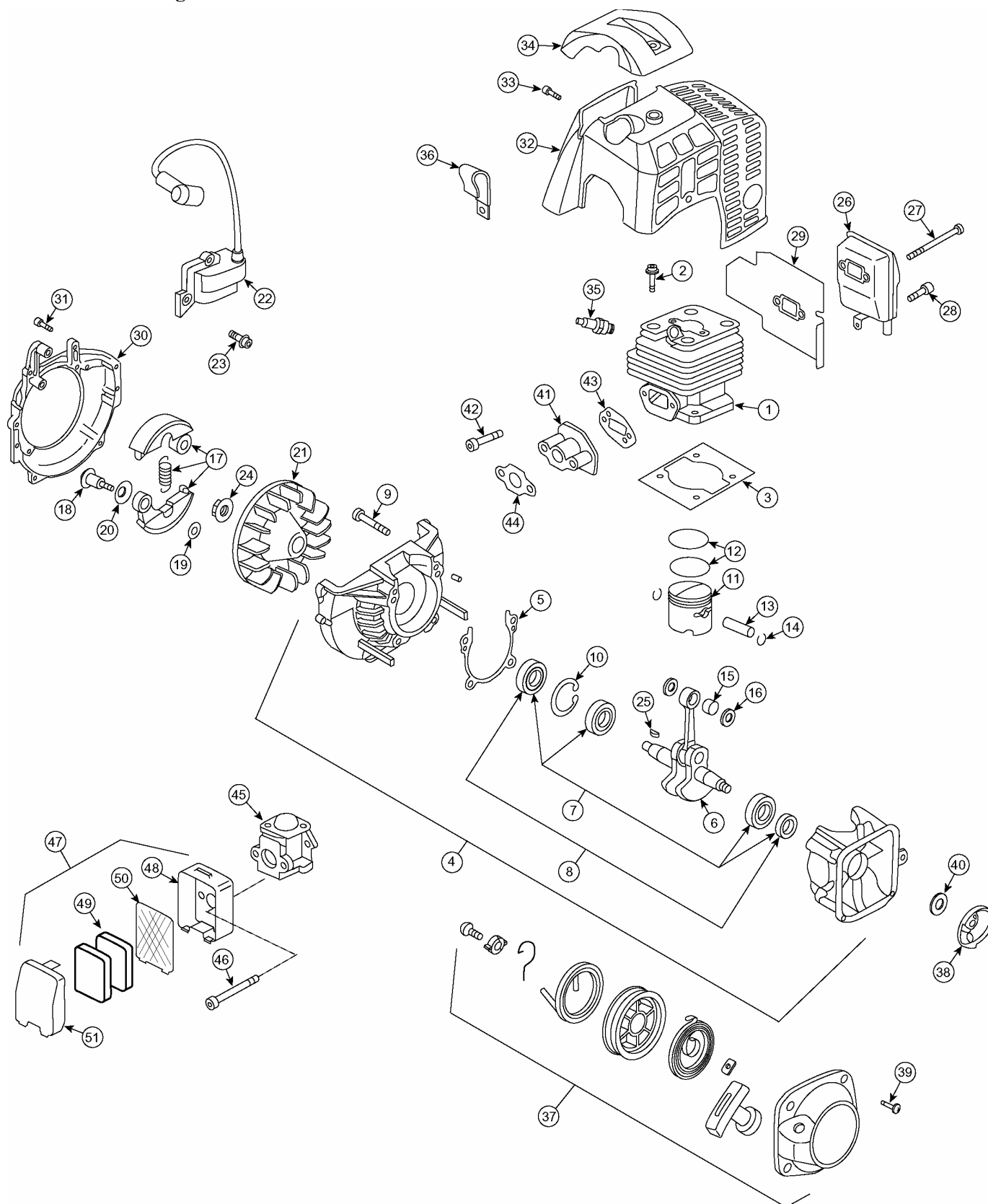
5.1.2 Parts Listing – GSR40

(Rev 02-04)

Item	Part No.	Description	Qty
1.	1061	Sticker; Reflective T-Bar Pad	1
2.	1064	Sticker; Red Warning Label	1
3.	1063	Sticker; Yellow Warning Label	1
4.	1054	Brake Cable; Front	1
5.	1048	Brake Lever Assembly	1
6.	GSR1046L	Handlebar Assy Complete - 24.75"	1
7.	GSR1030	Cable, Brake Rear	1
8.	BF1050	Throttle Cable Assembly	1
9.	1051A	Throttle Lever	1
10.	1049	Grip set	1
	1062	Safety Spring & Grip Kit	1
11.	GSR1016	Spacer; Sprocket to Disc	4
12.	1051B	Throttle Lever Assy	1
13.	3123	Kill Switch Assy (includes bracket, washer, nut, kill switch)	1
14.	8024	Bolt; Disc Mount 3/8-24 x 3-1/4 HHCS Grade 5	8
15.	GSR1041	T-Bar w/Upper Hinge	1
16.	1060	Safety Spring	1
17.	1022	Slide Tube; Black	1
18.	1067	Screw; throttle clamp 8-32 x 1/2 SHCS	
19.	BF1027RA	Fork Assembly; Lefty, Red	1
20.	2025	Cable Barrel w/nut	3
21.	8018A	Brake Assy; Disc Caliper	2
22.	8005	Spring; Return	2
23.	1028B	Bearing, Head Set	2
24.	GSR1059	Wheel Assy; Rear complete (includes items – 11,14, 25, 26, 33, 41, 44, 61, 65, 68, 70, 71)	1
25.	GSR1059	Wheel, Complete Rear (Mag.)	1
	GBF1058D	Wheel, Complete Front (Mag.)	1
26.	BF1059O	Tire Power Play TT (standard)	2
	BF1058O	Dirt Tire w/Tube (optional)	2
27.	BF1033	Bolt; Axle, 5/8-18 x 6 HHCS	1
28.	GSR1031	Bolt; Deck 1/4-20 x 2-1/4	4
29.	GSR1006	Deck w/ Grip Tape Logo	1
30.	1068	Sticker, Made in U.S.A.	1
31.	1011	Grommet; Deck	12
32.	1009	Washer; Deck Mount	4
33.	KN1009	Nut; Deck and Rear Disc 1/4-20	4
34.	GSR1025	Washer; Engine Mount	4
35.	1025	Bolt, Gas Tank Mount M6 x 60 HHCS	3
36.	2113	Gas Tank w/ 20.5" fuel lines, Extended Range	1
37.	8004	Spacer; Front Disc	4
38.	3116	Gas Cap	1
39.	1026	Nut, Gas Tank Mt. M6 Nylok	3
40.	BF1036	Washer; Axle 1 x .641 x .06	2
41.	GSR1014	Spacer; Wheel to Sprocket	4
42.	GSR1017	Bolt; Rear Axle 5/8-18 x 8.5 HHCS Grade 8	1
43.	GSR1012	Bolt; Clutch Mount, Lower M6-1 x	2

44.	GSR1035	Bolt; Disc Mount 1/4-20 x 1-1/2 BHCS Alloy	4
45.	GSR1028	Exhaust Frame Grommet	1
46.	GSR1026	Exhaust Tube	1
47.	GSR1027	Exhaust Clamp; 5/8"	1
48.	4803	Engine, G43, 41.5cc	1
49.	BF1037	Nut; Axle 5/8-18 Lock Nut	2
50.	GSR1011	Bolt; Clutch Mount, Upper M6-1 x 40 SHCS	2
51.	1072A	E-Clip, Kickstand 5/16	1
52.	1074A	Washer, Kickstand	1
53.	GSR1037	Kickstand Assembly, GSR40	1
54.	1636	Spring; Kickstand	1
55.	2001	Grip Tape, Go-Ped Die Cut	1
56.	4538A	Bolt; Outboard, Engine Mount M5-.8 x 30 SHCS	2
57.	GSR1001R	Frame Assembly, Red	1
58.	1024	Spacer, Gas Tank, Plastic	3
59.	1043	Lower Hinge FTG Assembly; Aluminum	1
60.	GSR1009	Spacer; 1/2 x .560 Aluminum	4
61.	BF1038A	Wheel Bearing	4
62.	GSR1022A	Fender; Rear w/ Chrome Decal	1
63.	GSR1019	Fender/Tank Rear Bracket	1
64.	1056	Handle Hinge Pin	1
65.	1036	Washer, Universal 3/8 x 11/16	8
66.	6007	Go Snuffer Silencer	1
67.	GSR1023	Bolt, Engine Mount Inboard M5-.8 x 16 SHCS	2
68.	8008	Nut; Wheel	8
69.	8003	Disc; Front	1
70.	GSR1044	Disc; Rear	1
71.	GSR1013	Sprocket; 76 tooth	1
72.	GSR1003	Chain; #25 Hard, 94 Link	1
73.	GSR1005	Chain Tensioner Guide	1
74.	GSR1007	Quick Release; Chain Tensioner	1
75.	GSR1004.1	Sprocket; Engine, 6 Tooth	1
	GSR1002.1	Sprocket; 7 Tooth (Optional)	1
76.	GSR1021	Spacer; Wheel to Fender	1
77.	GSR1018	Spacer; Wheel to Frame	2
78.	GSR1008.1	Chain Guide Mt. Bracket/Latch	1
79.	8022	Cable Fasten Bolt and Nut	2
80.	3115B	Fuel Line (Blue)(1ft)	1
81.	3115Y	Fuel Line (Yellow)(1ft)	1
82.	3120	Fuel Filter	1
83.	3118	Fuel Line Return Fitting	1
84.	1053	Plastic Cable Tie (8")	3
85.	1053S	Plastic Cable Tie (4")	1
86.	1055	Cable, End Crimp	2
87.	1069	Nut; throttle clamp 8-32 Nylok	1
88.	1066	Clamp; throttle lever	1
89.	GSR1124	Outer Clutch Housing Assembly	1
90.	8002A	O-Ring, Brake Motion	2
91.	GSR1045	Bolt, Rear Sprocket Mount	4

5.1.3 G43L-D Engine Illustration



5.1.4 G43L-D Engine Parts Listing

Item	Part No.	Description	Qty
1.	4701	Cylinder	1
2.	4004	Bolt, Cylinder	4
3.	4703	Gasket, Cylinder Base	1
4.	4705	Crankcase Assembly (includes bearings and seals)	1
	4704	Crankcase Assembly (cases only)	1
5.	4706	Gasket, Crankcase	1
6.	4718	Crankshaft Complete	1
7.	4754	Main Bearing and Seal Kit	1
8.	4755	Oil Seal set	1
9.	4023	Bolt, Crankcase	4
10.	4711	Snap Ring	1
11.	4712	Piston	1
12.	4713	Piston Ring (set of 2)	1
13.	4714	Piston Pin	1
14.	4715	Piston Pin Clip (set of 2)	1
15.	4716	Bearing, Piston Pin	1
16.	4717	Pin Washer (set of 2)	1
17.	4719	Clutch Shoes and Spring Kit	1
18.	4721	Bolt, Clutch (shoe mount)	2
19.	4722	Washer, Clutch	2
20.	4723	Washer, Clutch, Bevelled	2
21.	4724	Flywheel (Rotor)	1
22.	4725	Ignition Coil Assembly	1
23.	4346	Bolt, Coil	2
24.	3044	Nut, Flywheel	1
25.	3022	Key, Flywheel	1
26.	4735	Muffler (GSR40)	1
	4735HP	Muffler, Modified (GSR40-TS Interceptor)	1
27.	4737	Bolt, Muffler	2

28.	4738	Bolt, Muffler Stabilizer	1
29.	4739	Gasket, Muffler	1
30.	4742	Cover, Fan	1
31.	43108	Bolt, Fan Cover	4
32.	4745	Cover, Engine	1
33.	4746	Screw, Engine Cover	4
34.	4747	Guard, Plastic	1
35.	4748	Spark Plug	1
36.	4751	Clamp	1
37.	4752	Recoil Starter Assembly	1
38.	4761	Pulley, Starter	1
39.	4762	Screw, Starter Mount	4
40.	4764	Spacer, Pulley	1
41.	4765	Insulator Manifold (GSR40)	1
	4763	Insulator Manifold (GSR40-TS Interceptor)	1
42.	4766	Screw, Insulator	2
43.	4767	Gasket, Insulator	1
44.	4768	Gasket, Carburetor	1
45.	4769	Carburetor Assembly (GSR40)	1
	4771	Carburetor Assembly (GSR40-TS Interceptor)	1
46.	4798	Screw, Carburetor	2
47.	3107	Air Filter Assembly	1
48.	3111	Air Filter Rear Housing	1
49.	3109	Air Filter Element (set of 2)	1
50.	3108	Screen, Air Filter	1
51.	3110	Cover, Air Filter	1
	4799	Gasket Set (includes items 3, 5, 29, 43, 44)	1

5.1.5 Replacing Chain and Sprockets

IMPORTANT: It is recommended to replace the sprockets and chain at the same time. Otherwise the newly replaced sprocket/chain will wear rapidly when running on the old sprocket/chain.

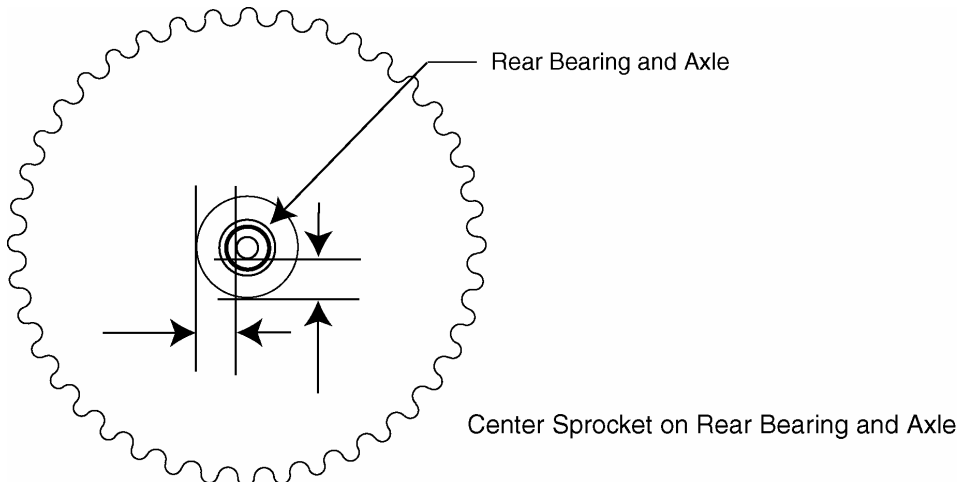
Remove the GoLube™ chain tensioner. Remove the chain by loosening the engine mounting screws. Remove the rear wheel. Remove the rear sprocket and disk from the rear wheel. Remove the drive sprocket from the engine shaft.

Install new sprockets and chain in reverse order of removal. Be sure to align the rear sprocket on the axle center and the drive sprocket as shown below.

Reinstall the GoLube™ chain tensioner and tension it as described below.

5.1.6 Checking Sprocket Alignment

If the rear sprocket has been replaced, it must be aligned to the center of the wheel bearings as shown.

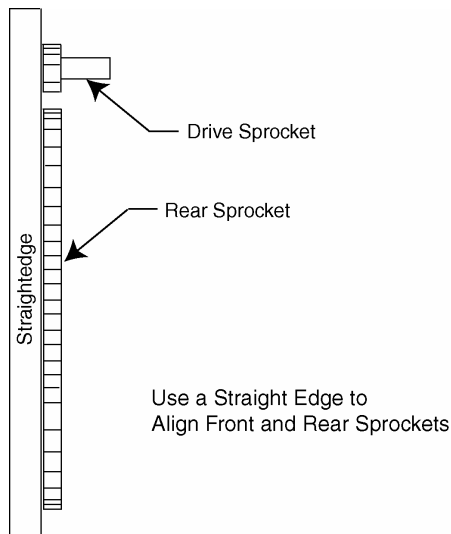


Use a caliper or the Go-Tool® alignment tool to center the sprocket and rear disk brake.

IMPORTANT: The sprocket must be properly aligned to the rear axle. Excessive chain wear, chain skipping, and excessive chain noise will result if the sprocket is not properly aligned to the axle.

Securely tighten the sprocket and rear disk hardware. Spin the rear wheel and visually inspect that the sprocket and rear disk are properly aligned.

With the chain removed, use a straight edge tool to visually check that the rear sprocket and drive sprocket are in alignment as shown.



If the sprockets are out of alignment, reposition the engine on the engine mounting bracket and securely tighten the engine mounting hardware.

5.1.7 Adjusting the Chain Tensioner

The GoLube™ chain tensioner is designed to help maintain proper chain tension and alignment.

During normal scooter use, the chain will wear and stretch. Also, the chain tensioner will wear to match the path of the chain.

To adjust the chain tensioner, release the quick release and press down on the tensioner to create a smooth straight chain path between the sprockets.

Tension the chain just enough to prevent chain slap and avoid skipping cogs while allowing the wheel to spin freely without excessive drag.

IMPORTANT: If the chain tensioner shows excessive wear , it should be replaced.

5.1.8 Chain Lubrication

The chain should be periodically cleaned and lubricated to avoid excessive wear.

Use a solvent that is safe for paint (citrus cleaner recommended) and a brush to clean the chain.

Use compressed air or spray cleaner such as WD40 to clean the chain.

NOTE: Spray cleaners such as WD40 do not provide sufficient lubrication for this type of drive system.

5.1.9 Disassembly and Reassembly

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine **VOIDS** the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped replacement parts the Warranty is **VOID**.

5.1.9.1 Removing the T-Bar and Lower Hinge FTG Assembly

Refer to Removing the T-Bar text in Section 1.

5.1.9.2 Removing and Reinstalling the Front Fork

Refer to Reinstalling the Front Fork text in Section 1.

5.1.9.3 Replacing the Lower Hinge FTG Assembly

Refer to Replacing the Lower Hinge FTG Assembly text in Section 1.

5.1.9.4 Reinstalling the T-Bar

Refer to Reinstalling the T-Bar text in Section 1.

5.1.10 Frequently Asked Questions

IMPORTANT: The Warranty card must be completely filled out and returned to Patmont Motor Werks. If the Warranty card is not returned there is **NO** Warranty on the machine.

IMPORTANT: Modification of the machine or the engine **VOIDS** the Warranty. If any parts are replaced on the machine that are not Genuine Go-Ped replacement parts the Warranty is **VOID**.

Q. What is an FTG? What is a steel FTG?

A. FTG is short for Fitting. The FTG is the piece that the end of the T-Bar connects to. The Stock FTG is Aluminum. An optional Steel FTG is available. It is much stronger.

5.1.11 G43L-D Engine

The G43L-D engine is used on the GSR40.

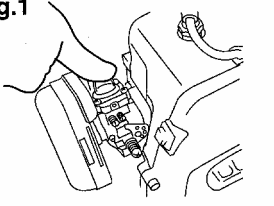
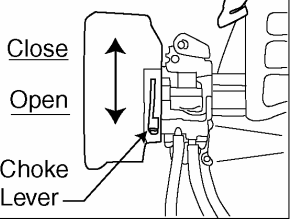
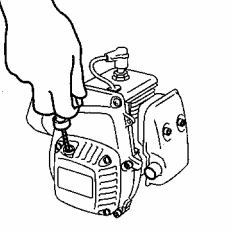
5.1.11.1 Fuel

Mix fuel (Leaded or Unleaded) 92 octane or higher gasoline and high grade 2 cycle oil (JASO FC Grade oil or ISO EGC grade) in the ratio of 50:1.

WARNING: Never use any alcohol fuel or alcohol added fuel, or the rubber parts in the carburetor and engine will be damaged.

Gasoline is very flammable. Avoid smoking, bringing any fires near fuel.

5.1.11.2 Engine Starting

Fig.1 	Push the primer bulb on the bottom of the carburetor several times until overflow fuel flows out.
Fig.2  Close Open Choke Lever	Close the choke lever (Fig. 2) and move the throttle lever $\frac{1}{4}$ ~ $\frac{1}{3}$ open position. Pull the starter knob quickly until the first firing noise is heard. Open the choke (Fig. 2), throttle idle ~ $\frac{1}{4}$ open. Pull the starter quickly. Operate the engine for a few minutes to warm it up. IMPORTANT: If the engine is warm, chocking may not be necessary.
Fig.3 	Over chocking may cause starting difficulty due to a wet spark plug. In this case change the spark plug or dry it out and remove excess fuel in the cylinder by pulling the starter knob with the spark plug removed.

5.1.11.3 Operation

This engine is tuned at the factory to maximum power and speed and needs correct maintenance to keep it in top performance.

Follow the operating procedures described in the owner's manual.

Be sure to allow the engine to idle for at least 30 seconds after running for extended periods at full throttle. This will allow the engine to cool down before shutting it off.

5.1.11.4 Maintenance**Maintenance Chart**

Items	Action	Before Use	Every 25 hours	Every 100 hours	Note
Leakage, Damage/Cracks	Check	✓			
Idling Speed	Check/Adjust	✓	✓	✓	
Air-Cleaner	Check/Clean	✓	✓		Replace if necessary
Spark Plug (gap)	Check/Adjust		✓	✓	Replace if necessary
Cylinder (barrel)	Check/Clean		✓	✓	Replace if necessary
Piston, Ring	Check/Clean		✓	✓	Replace if necessary
Muffler & Bolt	Check/Clean	✓	✓	✓	Replace if necessary
Bearings	Check/Clean		✓	✓	Replace if necessary
Crank Shaft	Check/Alignment			✓	Replace if necessary

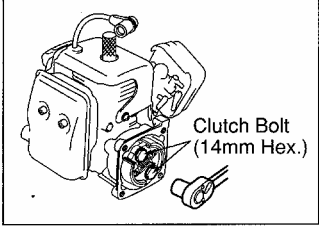
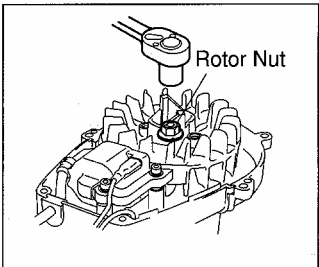
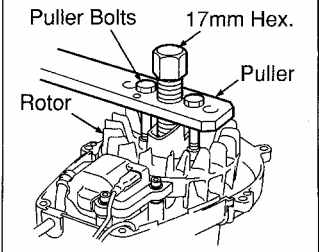
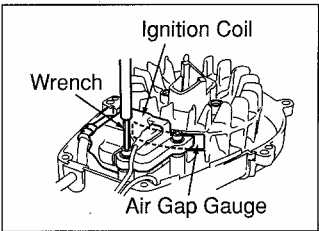
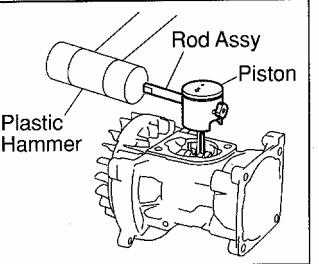
5.1.11.5 Specifications and Technical Data

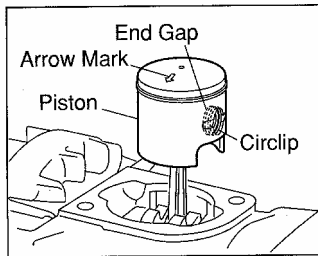
Items	Unit	Specifications	Remarks
Overall Size (LxWxH)	In (mm)	6.34 x 10.75 x 8.03 (161 x 273 x 204)	
Weight	Lbs (kg)	6.61 (3.0)	
Engine Type		Two Stroke Cycle	
Clutch Type		Centrifugal	
Bore x Stroke	In (mm)	1.57 x 1.30 (40 x 33)	
Displacement	In ³ (cm ³)	2.53 (41.5)	
Effective Compression Ratio		7.5	
Carburetor Type		Diaphragm	
Starting		Recoil Starter	
Ignition Type		CDI Control	
Spark Plug	Standard	BPMR7A	NGK
Spark Plug Gap	In (mm)	.023 ~ .027 (0.6 ~ 0.7)	
Rotor Gap	In (mm)	.013 (0.34)	
Rotating Direction		Counter Clockwise (PTO View)	
Clutch Engagement Speed	Rpm	3500	
No load max Speed	Rpm	12000	
Idling Speed	Rpm	2500	
Max. Power	Hp/rpm (kW/rpm)	1.97/7500 (1.47/7500)	After Full Break-in
Max. Torque	Lb ft/rpm (N.m/rpm)	1.66/5500 (2.25/5500)	
Fuel Consumption	g/kW h	612	
Mix Ratio		50:1	
Air Cleaner		Dry	

5.1.11.6 Tightening Torque

Items	Screw Size	Standard lb in (kg cm)	Limit lb in (kg cm)	Remarks
Carburetor	M5 (P=0.8)	30.4 (35)	26~34.7 (30~40)	
Insulator	M5 (P=0.8)	30.4 (35)	26~34.7 (30~40)	With Locktight glue
Clutch	M6 (P=1.0)	56.4 (65)	43.4~69.4 (50~80)	
Rotor	M8 (P=1.0)	113 (130)	86.8~130 (100~150)	
Cylinder	M5 (P=0.8)	60.8 (70)	52~69.4 (60~80)	
Crankcase	M5 (P=0.8)	56.4 (65)	43.4~69.4 (50~80)	
Spark Plug	M10 (P=1.0)	95.5 (110)	86.8~104 (100~120)	
Muffler	M5 (P=0.8)	78.1 (90)	60.8~86.8 (70~100)	
Fan Cover	M5 (P=0.8)	30.4 (35)	26~34.7 (30~40)	
Ignition Coil	M4 (P=0.7)	28.6 (33)	21.7~43.7 (25~40)	
Starter Case	M4 (P=0.7)	11.3 (13)	8.68~13 (10~15)	
Tapping Screw	TP 4.3	21.7 (25)	17.4~26 (20~30)	

5.1.11.7 Service Guide

	Removing Clutch Shoe 1. Remove the housing and plug cap 2. Remove the spark plug and fit the stopper into the plug hole. 3. Remove clutch bolts.
	Removing Rotor Fan 4. Remove the rotor nut. 5. Remove the rotor using the puller assembly. Apply 8mm puller bolts.
	
	Assembling Rotor Insert the gauge between the rotor magnet metal and the coil. Tighten screws while pressing the coil against the rotor. GAP Specification .013 in (0.34 mm)
	Removing Piston Pin 1. Remove snap rings from both sides of the piston pin. 2. Engage the rod assembly to the piston pin and gently tap with a plastic hammer to push out the pin while holding the piston firmly. NOTE: Hard hammering may damage the big end of the connecting rod.



Installing Piston

1. Make sure the arrow is pointed to the exhaust side.
2. Fit the circlip in the groove so as to face the end gap below.

NOTE: A deformed circlip may come off during engine operation and damage the engine.

5.1.11.8 Troubleshooting

1. Engine does not start

Description	Cause	Countermeasure
No spark in the Spark Plug		
Spark Plug	1. Wet spark plug electrodes	Dry the spark plug
	2. Carbon deposited on the electrodes	Clean the spark plug
	3. Insulation failure by insulator damage	Replace worn parts
	4. Improper spark gap	Adjust to .023~.027in
	5. Burn out of electrodes	Replace spark plug
Magnet	1. Ignition coil inside failure	Replace Ignition coil
	2. Damaged cable sheath or disconnected cable	Replace worn parts
Switch	3. Switch is OFF	Turn switch ON
	4. Switch failure	Replace the switch
	5. Primary wiring grounded	Repair ground
Sparks appear in the spark plug		
Compression and fueling is normal	1. Over sucking of fuel	Drain excess fuel
	2. Too rich fuel	Adjust carburetor
	3. Overflow	Carburetor adjust or exchange
	4. Clogging of air cleaner	Wash with mixed gasoline
	5. Faulty fuel	Change with proper fuel
Fueling normal but poor compression	1. Worn out cylinder, piston or piston ring	Replace worn parts
	2. Gas leakage from cylinder and crank case gasket	Apply liquid gasket and reassemble
No fuel supply	1. Choked breather air hole	Clean breather
	2. Clogged carburetor	Clean carburetor
	3. Clogged fuel filter	Clogged fuel filter

2. Lack of Power or poor performance

Description	Cause	Countermeasure
Compression is normal and no misfire	1. Air leaks in fuel line	Tighten connections
	2. Air penetration from intake tube joint or carburetor joint	Change gasket or tighten screws
	3. Water in fuel	Replace with clean
	4. Piston seizure	Replace piston and cylinder
	5. Muffler choked with carbon	Clean muffler
Overheating	1. Fuel too lean	Adjust carburetor
	2. Clogged cylinder fins	Clean fins
	3. Poor fuel quality	Replace with good fuel
	4. Carbon deposits in combustion chamber	Clean carbon deposits
	5. Spark plug electrode red hot	Thoroughly clean, adjust gap 0.023~0.027 in
Others	1. Dirty air cleaner	Wash with mixed gasoline
	2. Overloading	Reduce load

5.1.12 GSR40 & GSR40TSi Flat Rate Schedule

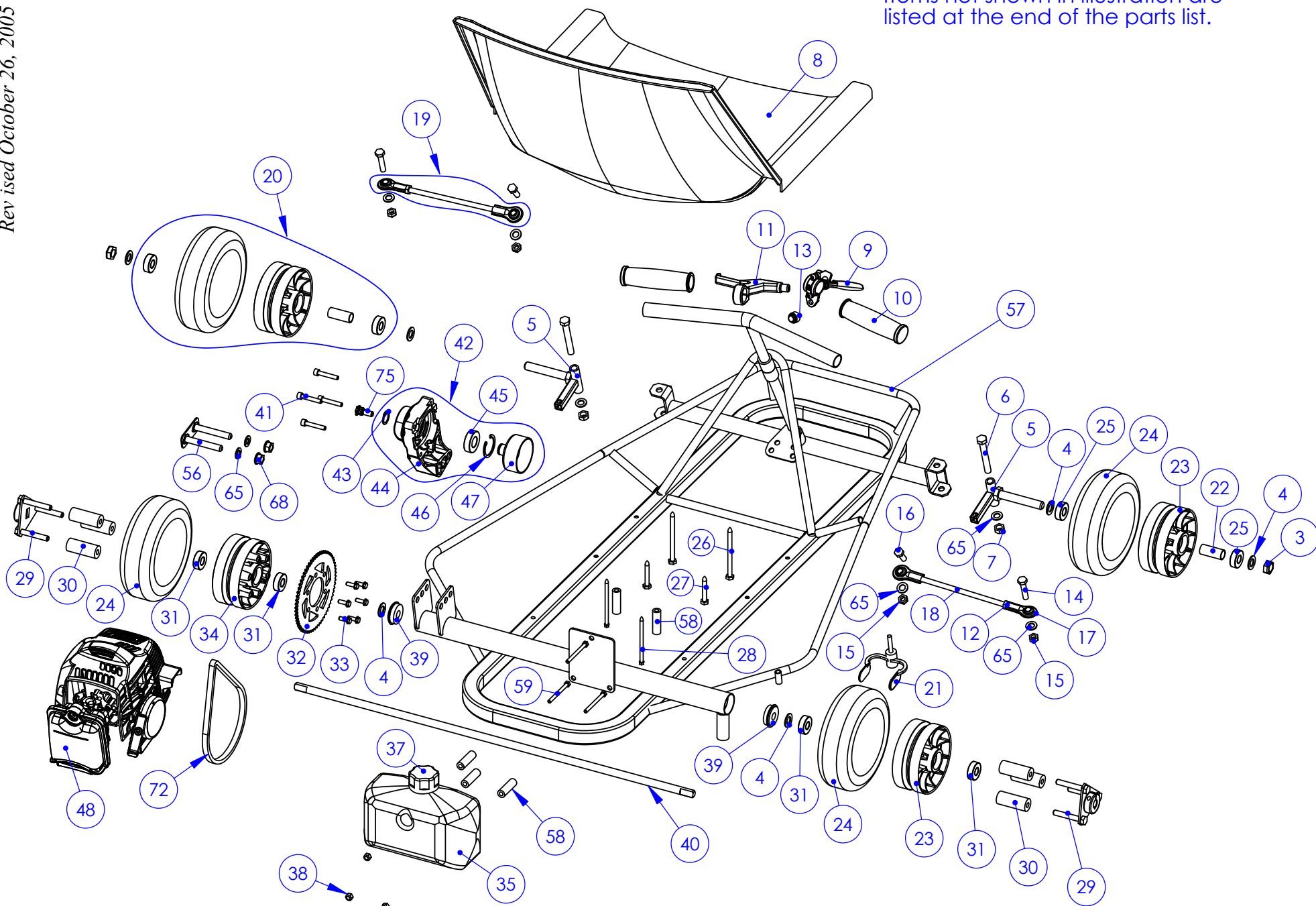
Remove and Replace	Time
Frame Change	1 ½ hr
T-Handle with cables	¾ hr
T-Handle without cables	1 hr
Engine Rebuild	1-½ hr
Engine Top End	½ hr
Engine R & R	½ hr
Crankshaft	1 hr
Carburetor	¼ hr
Front or Rear Wheel complete	¼ hr
Rear Tire change	¾ hr
Front Tire change	½ hr
Exhaust Tube	¼ hr
Deck	¼ hr
Hinge Assembly	½ hr
Front or Rear Brake Cable	½ hr
Throttle Cable	1 hr
Front Brake Caliper	½ hr
Rear Brake Caliper	¾ hr
Countershaft Sprocket	¾ hr
Rear Sprocket	½ hr
Chain	½ hr
Countershaft/Rear Sprocket & Chain	1 ½ hr
Clutch Assy	
Rear Fender	½ hr
Front Fork	¾ hr

SECTION 6 – SUPER GO-QUAD 30

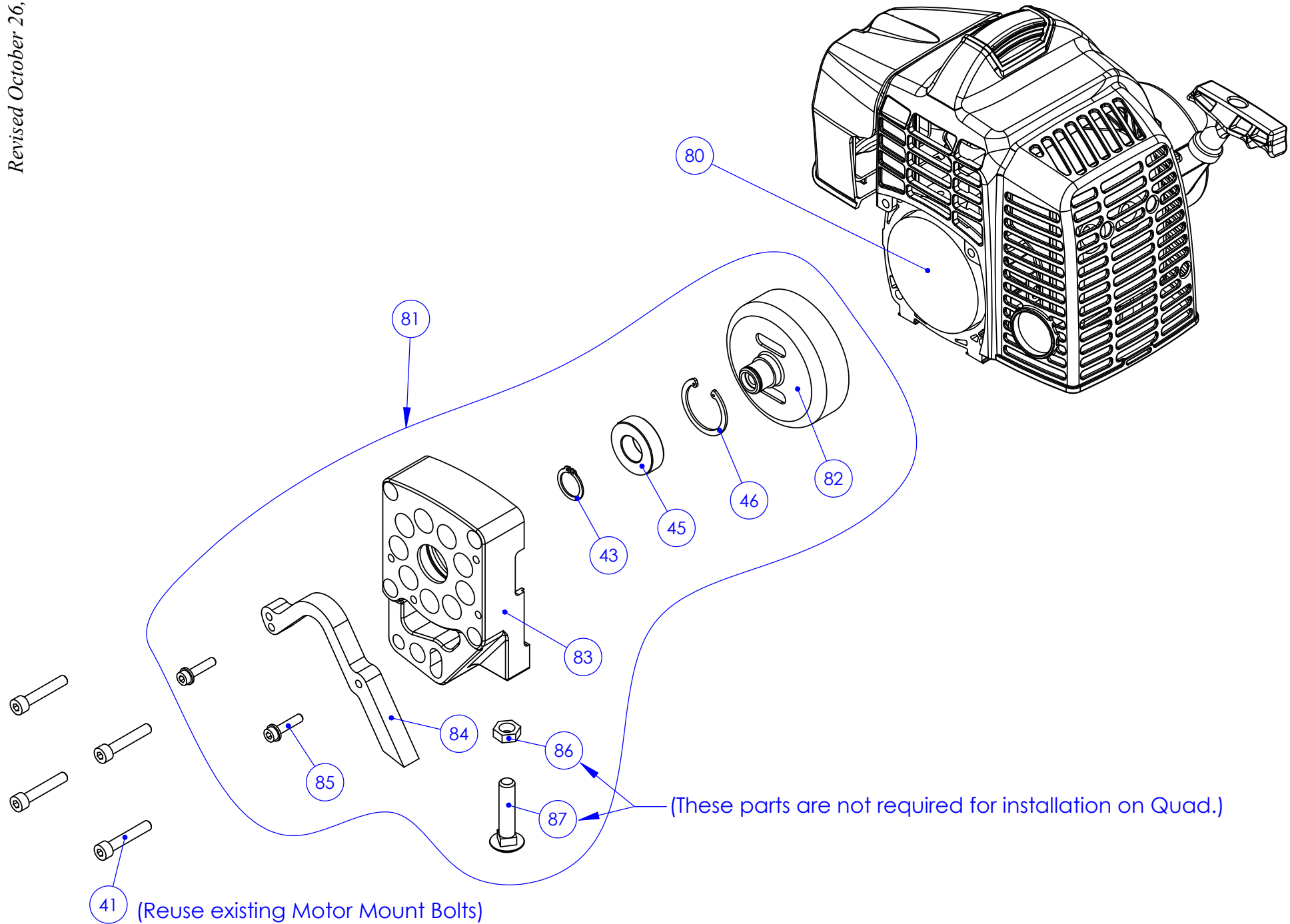
This section contains parts illustrations, parts lists, as well as a drawing highlighting the needed parts to upgrade a Super Go-Quad 30 with the new GP420RS, 41.5cc Go-Ped® Engine.

Paragraph	Page
Super Go-Quad 30 Illustration	6-2
Optional 41.5cc Motor Upgrade	6-3
Parts Listing – Super Go-Quad 30	6-4

Items not shown in illustration are listed at the end of the parts list.



Optional 41.5cc Motor Upgrade



Item	Part #	Description	Qty
3	7008	Nut, 1/2-20 Low Nylock	2
4	7009	Washer, Axle, 1/2"	6
5	7023	Steering control arm, black	2
6	7010	Bolt; 3/8-24 x 2-3/4" HHCS GR5	2
7	10370	Nut; axle, 6"SRT, 3/8-24 nylock	2
8	7018	Seat, Folding Type (7018A is old NON Folding seat)	1
9	1051	Throttle Lever	1
10	1049	Grip Set	1
11	1048L	Brake Lever (Left Side)	1
12	7065	Nut, 5/16-24 (GQs) Jam nut on tie rod	2
13	3123	Kill Switch with lockwasher and nut	1
14	7026	Bolt; 5/16-24 x 1-1/2 HHCS GR8	2
15	7025	Nylock Nut, 5/16-24	4
16	7064	Bolt; 5/16-24 x 1 HHCS GR5	2
17	7003	Tie Rod End (GQ's)	4
18	7024A	Tie Rod (threaded rod only)	2
19	7024	Tie Rod Assembly, complete	2
20	Q1158	Wheel COMP; 6"SRT, Mach12, 1/2" Bearings	2
21	1030	Brake Caliper, 6"SRT, front	1
22	7059	Spacer, wheel bearing [6"SRT]	4
23	1158H	Wheel; 6"SRT, Mach 12, No Rubber, No Bearings	3
24	1058O	Tire; Go-active rubber only	4
25	Q1038A	Bearing, wheel, 6"SRT, 1/2"ID	4
26	7072	Bolt; 1/4 x 2-1/4" HH Lag Bolt	2
27	7071	Bolt; 1/4 x 1-3/4" HH Lag Bolt	2
28	7073	Bolt; 1/4 x 3-1/2" HH Lag Bolt	2
29	7057	Drive Hub, painted black, no rubber	2
30	7060	Rubber Tubing; 5/16"ID for hubs	11"
31	7054	Spacer, 12mm ID x1.125"OD x.375" width; Aluminum	4
32	1013.64	Sprocket; 64 tooth (SGQ30)	1
33	1408	Screw, Go Active Sprocket Mnt	6
34	1458H	Wheel, 6"SRT, Mach 12 w/ standoffs	1
35	3113	Fuel Tank (1L) with fuel lines	1
37	45171	Gas Cap	1
38	1026	Nut; gas tank mount; M6 low nylock	3
39	7053	Bearing w/snap ring (SGQ30)	2
40	7035A	Axle Shaft; 12mm x 28.375"	1

41	1401	Bolt; engine mount; M6x35 SHCS	4
42	1454A	Motor mount assy w/drum, Cast MM, bearing, snap rings	1
43	1457	Snap Ring, Small, clutch housing	1
44	1454	Motor Mount, 54mm, Cast	1
45	1455	Bearing, clutch housing	1
46	1456	Snap Ring, Large, clutch housing	1
47	1125	Clutch drum; 54mm	1
48	4900	Engine; 29cc (GP290RS)	1
56	1407	U Bolt; motor mount	1
57	7070S	Frame, Silver SGQ30	1
58	1024	Spacer, gas tank, plastic	2
59	1025	Bolt, Gas Tank Mount, m6 x 60 HHCS	3
65	1036	Washer, universal, 3/8 x11/16	8
68	8008	Nut; 3/8-24 center lock	2
72	GSR1003.1	Chain; #25 Hard; 80 Link	1
75	GSR1004.1	Sprocket; 6 tooth (GSR's)	1

THE FOLLOWING ITEMS ARE ON PAGE 6-2

80	4901	Engine; 41.5cc (GP420RS)	1
81	216130001	78mm Motor mount assembly; BILLET w/drum, bearing, snap rings	1
	216130002	78mm Motor mount assembly; CAST w/drum, bearing, snap rings	0
82	121130002	Clutch Drum, 78mm	1
83	212130007	Motor Mount, 78mm, Billet	1
	212130012	Motor Mount, 78mm, Cast	0
84	212130001	Chain Guard; Upper	1
85	4503	screw; M5 x 22	2
86	131130007	Nut; 3/8-16, jam nut	0
87	131130006	Bolt; Carriage; 3/8-16 x 1.5"	0

ITEMS NOT SHOWN ON PARTS ILLUSTRATION

	1054	Brake Cable, 34"H / 40"C	1
	BF1050	Throttle Cable Assembly, P-301 (long)	1
	1063	Yellow Warning Sticker	1
	1064	Red Warning Sticker	1
	1053	Large Zip Tie (black; 8")	
	1053S	Small Zip Tie (black; 4")	
	1065	Sticker; www.goped.com	1
	1068	Sticker; made in USA	1

Item	Part #	Description	Qty
3	7008	Nut, 1/2-20 Low Nylock	2
4	7009	Washer, Axle, 1/2"	6
5	7023	Steering control arm, black	2
6	7010	Bolt; 3/8-24 x 2-3/4" HHCS GR5	2
7	10370	Nut; axle, 6"SRT, 3/8-24 nylock	2
8	7018	Seat, Folding Type (7018A is old NON Folding seat)	1
9	1051	Throttle Lever	1
10	1049	Grip Set	1
11	1048L	Brake Lever (Left Side)	1
12	7065	Nut, 5/16-24 (GQs) Jam nut on tie rod	2
13	3123	Kill Switch with lockwasher and nut	1
14	7026	Bolt; 5/16-24 x 1-1/2 HHCS GR8	2
15	7025	Nylock Nut, 5/16-24	4
16	7064	Bolt; 5/16-24 x 1 HHCS GR5	2
17	7003	Tie Rod End (GQ's)	4
18	7024A	Tie Rod (threaded rod only)	2
19	7024	Tie Rod Assembly, complete	2
20	Q1158	Wheel COMP; 6"SRT, Mach12, 1/2" Bearings	2
21	1030	Brake Caliper, 6"SRT, front	1
22	7059	Spacer, wheel bearing [6"SRT]	4
23	1158H	Wheel; 6"SRT, Mach 12, No Rubber, No Bearings	3
24	1058O	Tire; Go-active rubber only	4
25	Q1038A	Bearing, wheel, 6"SRT, 1/2"ID	4
26	7072	Bolt; 1/4 x 2-1/4" HH Lag Bolt	2
27	7071	Bolt; 1/4 x 1-3/4" HH Lag Bolt	2
28	7073	Bolt; 1/4 x 3-1/2" HH Lag Bolt	2
29	7057	Drive Hub, painted black, no rubber	2
30	7060	Rubber Tubing; 5/16"ID for hubs	11"
31	7054	Spacer, 12mm ID x1.125"OD x.375" width; Aluminum	4
32	1013.64	Sprocket; 64 tooth (SGQ30)	1
33	1408	Screw, Go Active Sprocket Mnt	6
34	1458H	Wheel, 6"SRT, Mach 12 w/ standoffs	1
35	3113	Fuel Tank (1L) with fuel lines	1
37	45171	Gas Cap	1
38	1026	Nut; gas tank mount; M6 low nylock	3
39	7053	Bearing w/snap ring (SGQ30)	2
40	7035A	Axle Shaft; 12mm x 28.375"	1

41	1401	Bolt; engine mount; M6x35 SHCS	4
42	1454A	Motor mount assy w/drum, Cast MM, bearing, snap rings	1
43	1457	Snap Ring, Small, clutch housing	1
44	1454	Motor Mount, 54mm, Cast	1
45	1455	Bearing, clutch housing	1
46	1456	Snap Ring, Large, clutch housing	1
47	1125	Clutch drum; 54mm	1
48	4900	Engine; 29cc (GP290RS)	1
56	1407	U Bolt; motor mount	1
57	7070S	Frame, Silver SGQ30	1
58	1024	Spacer, gas tank, plastic	2
59	1025	Bolt, Gas Tank Mount, m6 x 60 HHCS	3
65	1036	Washer, universal, 3/8 x11/16	8
68	8008	Nut; 3/8-24 center lock	2
72	GSR1003.1	Chain; #25 Hard; 80 Link	1
75	GSR1004.1	Sprocket; 6 tooth (GSR's)	1

THE FOLLOWING ITEMS ARE ON PAGE 6-2

80	4901	Engine; 41.5cc (GP420RS)	1
81	216130001	78mm Motor mount assembly; BILLET w/drum, bearing, snap rings	1
	216130002	78mm Motor mount assembly; CAST w/drum, bearing, snap rings	0
82	121130002	Clutch Drum, 78mm	1
83	212130007	Motor Mount, 78mm, Billet	1
	212130012	Motor Mount, 78mm, Cast	0
84	212130001	Chain Guard; Upper	1
85	4503	screw; M5 x 22	2
86	131130007	Nut; 3/8-16, jam nut	0
87	131130006	Bolt; Carriage; 3/8-16 x 1.5"	0

ITEMS NOT SHOWN ON PARTS ILLUSTRATION

	1054	Brake Cable, 34"H / 40"C	1
	BF1050	Throttle Cable Assembly, P-301 (long)	1
	1063	Yellow Warning Sticker	1
	1064	Red Warning Sticker	1
	1053	Large Zip Tie (black; 8")	
	1053S	Small Zip Tie (black; 4")	
	1065	Sticker; www.goped.com	1
	1068	Sticker; made in USA	1

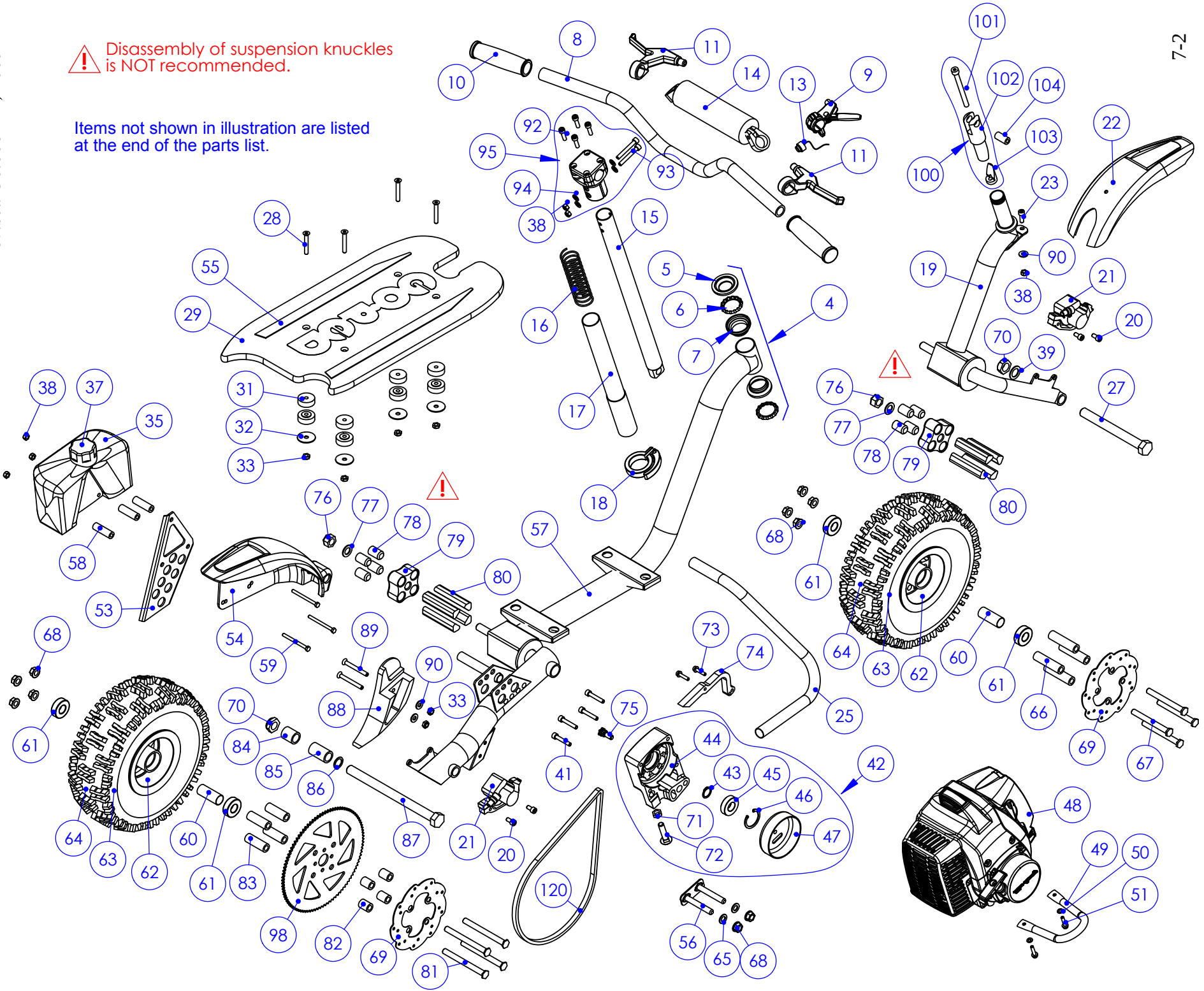
SECTION 7: Trail Ripper – GTR40

This section contains parts illustrations and parts list for the Go-Ped® Trail Ripper, GTR40.

Paragraph	Page
GTR40 Parts Illustration	7-2
GTR40 Parts List.....	7-3

⚠ Disassembly of suspension knuckles is NOT recommended.

Items not shown in illustration are listed at the end of the parts list.



Item	Part #	Description	Qty
4	1028	Front fork bearing kit, 2 bearings, 2 cups, 1 nut	0
5	1028N	Head set; Fork nut	1
6	1028B	Head set; bearing (single)	2
7	1028C	Head set; Bearing cup (single)	2
8	GSR2009C	Riser Handlebar	1
9	1051	Throttle Lever	1
10	1049	Grip Set	1
11	1048	Brake Lever Set (L & R)	1
12	-	-	-
13	3123	Kill Switch with lockwasher and nut	1
14	2009D	Crossbar / clamps / pad assembly	1
15	2041A	Handlebar stem w/W.D.16" (SBf)	1
16	1060	Safety Spring	1
17	1022	Slide Tube Assmbly	1
18	1022C	Slide Tube Clamp	1
19	216010002	Front Swing Arm Assembly, Upper & Lower Arms, rubber, aluminum comp block, 4 set screws, 1/2-20 Nylock & washer	1
20	1090	Bolt; Maddog Brake Mount; M6x12	4
21	1083A	Maddog Brake Caliper	2
22	212130005	Fender; front (TR)	1
23	6133	Bolt; M6x18 SHCS	1
24	-	-	-
25	215010005	Side stand; Red (TR)	1
26	-	-	-
27	BF1033	Bolt; front axle; 5/8-18 x 6"	1
28	1008	Bolt; deck mount; 1/4-20 x1.75" Flat Head	4
29	212130003	Deck, no grip tape, (TR)	1
30	-	-	-
31	1011	Deck Grommet; black rubber	8
32	1009	Washer; deck mount; 1/4ID x 1.25" OD	4
33	KN1009	Nut; 1/4-20 Nylock	6
34	-	-	-
35	2113	Gas tank, 1.5L, w/ 24" Fuel Lines	1
36	-	-	-
37	45171	Gas Cap	1
38	1026	Nut; gas tank mount; M6 low nylock	3
39	BF1036	Washer; axle; 1"OD x 5/8" ID x .060"	1
40	-	-	-

41	1401	Bolt; engine mount; M6x35 SHCS	4
42	216130001	78mm Motor mount assembly; BILLET w/drum, bearing, snap rings	1
	216130002	78mm Motor mount assembly; CAST w/drum, bearing, snap rings	0
43	1457	Snap Ring, Small, clutch housing	1
44	212130007	Motor Mount, 78mm, Billet	1
	212130012	Motor Mount, 78mm, Cast	0
45	1455	Bearing, clutch housing	1
46	1456	Snap Ring, Large, clutch housing	1
47	121130002	Clutch Drum, 78mm	1
48	4901	Engine; 41.5cc (GP420RS)	1
49	215010006	Engine Protection Bar; Red (TR)	1
50	GSR1025	5mm Washer	2
51	GSR1023	Screw; M5 x 16	2
52	-	-	-
53	215110001	Fender/Tank Bracket (TR)	1
54	GSR1022	Fender; Rear (GSR's,GBf)	1
55	2001	Deck Grip Tape Set	1
56	1407	U Bolt; motor mount	1
57	216010001	Frame & rear swingarm assy; rubber, aluminum comp block, 4 set screws, 1/2-20 Nylock & washer	1
58	1024	Spacer, gas tank, plastic	3
59	1025	Bolt, Gas Tank Mount, m6 x 60 HHCS	3
60	BF1038B	Spacer, wheel bearing, Mag Rim (10" PT)	2
61	BF1038A	Bearing; Mag Wheel; 10" (PT)	4
62	2026M	Wheel; 10"PT, 2pcs. Magn. Silv	2
63	BF1058T	Inner Tube; 10"PT	2
64	111130002	Tire; Badlands (TR)	2
65	1036	Washer, universal, 3/8 x 11/16	8
66	1087	Spacer; front wheel to brake disk	4
67	1088	Bolt 3/8-24 x 3.5" Low hex head; front wheel assy	4
68	8008	Nut; 3/8-24 center lock	2
69	8003SS	Brake Disc, hardened stainless steel	2
70	BF1037	Nut; axle, 5/8-18 nylock	2
71	131130007	Nut; 3/8-16, jam nut	1
72	131130006	Bolt; Carriage; 3/8-16 x 1.5"	1
73	4503	screw; M5 x 22	2
74	212130001	Chain Guard; Upper (TR)	1

75	GSR1004.1	Sprocket; 6 tooth (GSR's)	1
76	7008	1/2-20 Nylock Nut	2
77	7009	Washer, Axle, 1/2" AN FLT ZY	2
78	131130004	Set Screw; 5/8-11x1"	8
79	212130004	Compression Block; Billet Aluminum (TR)	2
80	212130008	.625 x 3.375" rubber rod (TR)	8
81	1089	Bolt 3/8-24 x 4" Low head hex; for rear wheel assy	4
82	GSR1016.2	Spacer, sprocket to brake disc	4
83	212130002	Spacer, wheel to sprocket (TR)	4
84	212130010	spacer; rear axle; tank side; 7/8"OD x 1" long	1
85	212130011	spacer; rear axle; sprocket side; 7/8"OD 1.5" long	1
86	1405	Washer; Rear axle shim (use 0 to 2 as needed)	1
87	GSR1017	Bolt; rear axle 5/8-18 x 8.5"	1
88	212130006	Chain/sprocket guard; Lower (TR)	1
89	GSR1031	Bolt; 1/4-20 x 2-1/4" Flat head screw	2
90	1076	Washer; 1/4" SAE flat	3
91	-	-	-
92	2004	Bolt; M6 x 22 SHCS w/patch	4
93	1014	Bolt; Pro Clamp mount, M6x45 SHCS	2
94	5017	Washer; 1/4" ss	4
95	2027	Pro Clamp complete	1
96	-	-	-
97	-	-	-
98	212130009	Sprocket; 98 tooth (TR)	1
99	-	-	-
100	X1043	Lower hinge FTG. assy; Steel	1
101	1044	Bolt; lower hinge FTG. 5/16-24	1
102	X1043A	Lower hinge FTG; plated, S	1
103	1045	Wedge lug; lower hinge FTG.	1
104	1056	Handle hinge pin	1
-	-	-	-
120	111130004	Chain; #25HG, 120 link (TR)	1

ITEMS NOT SHOWN ON PARTS ILLUSTRATION

	1081	Brake Cable, 38"H / 48"C	1
	1082	Brake Cable, 68"H / 82"C Rear, inc noodle	1
	1050N	Throttle Cable assy; P-201	1
	1063	Yellow Warning Sticker	1
	1064	Red Warning Sticker	1
	1061	Sticker; Reflective T-Bar pad	1
	1053	Large Zip Tie (black plastic; 8")	3
	1053S	Small Zip Tie (black plastic; 4")	3
	131130003	Tool; 5/16" hex key; for suspension set screws	1
	1077	CARB SORE sticker for engine	1
	2019	Spring; throttle return	1