

CHAPTER 2

MAINTENANCE INFORMATION

2-1 Specification Sheet

ITEM NO.	BH1	BR1	BK1
Exhaust Volume	49.3 cc		
Stroke	2T		
Overall Length mm	1695	1830	1875
Overall Width mm	650	660	660
Overall Height mm	1075	1170	1170
Scooter Weight (Empty)	81	92	86
Tire (tubeless)	120/90-10 120/70-12	120/90-10 120/70-12 130/70-12 130/90-10	3.00-14
Cylinder Type	Horizontally Placed		
Max Horsepower	5.0ps/7500rpm		6.5ps/7000rpm
Gasoline	92 Unleaded Gasoline or Premium		
Lubrication Method	Oil Supplied Separately by Oil Pump		
Cooling Type for Engine	Air Cooled by Cooling Fan		
Ignition Method	C.D.I Ignition device w/o point.		
Rim comp Size	MT3.5x10 MT3.5x12	MT3.5x10 MT3.5x12	MT2.15x14
Turn Signal	Flashing 80-85 Times/Minute.10W		
Spark Plug	BPR6HS,BPR7HS,BP6HS,BP7HS (NGK) Clearance: 0.6- 0.7mm		
Battery	12V/4Ah		
Flywheel magneto	Alternating Output:12V-50W		
Rectifier	AC 13V,DC14.5V		
Transmission	V-belt Continuous Variable Transmission		
Brake	Type A: Disk for Front and Drum for Rear Type B: Drum for both front and Rear		
Frame	Made of Steel Pipe and Plate by Pressing and Welding, With a Helmet Trunk.		
Head Lamp	15Wx2 or 18/18Wx2		35/35W
Tail Lamp	5W		
Direction Lamps	10W		
Brake Lamp	18W OR 21W		21W
License Plate Lamp	5W		
Speedometer Lamp	1.7W x2		
Warning Light	1.7W X 1		
Oil warning Lamp	1.7W X 1		
Fuel Tank	5.1 L	6.8 L	5.1 L

2-1 Specification Sheet

ITEM		BH1-F(TAPO)
OVERALL LENGTH (mm)		1780
OVERALL HEIGHT (mm)		1075
EXHAUST VOLUME (C.C.)		49
BASIC WEIGHT (kg)		94
SPARK PLUG	TYPE	NGK BPR7HS
	CLEARANCE	0.6~0.7 mm
LUBRICATE OIL		—
LUBRICATE OIL QUANTITY		—
BATTERY V - AH		12V, 5AH
FUEL		UNLEADED GASOLINE
FUEL TANK CAPACITY		6.8 L
GEAR OIL		SAE 85W-90
GEAR OIL QUANTITY		0.09L
BRAKE SYSTEM		FRONT---DISC, REAR--- DRUM
LAMPS	HEAD LAMPS	12V 35W/35W
	REAR LAMPS	5W
	BRAKE LAMPS	21W
	TURN LAMPS	10WX4
RIM	TYPE	120/70-12 / 120/70-12
TIRE	INFLATION PRESSURE (FRONT/REAR)	1.75kgf/cm^2 / 2.10kgf/cm^2
	TYPE	FRONT: 120/70-12 REAR: 120/70-12

2.2 Maintenance Data

Cylinder + Piston + Crank Shaft CVT

ITEM	50		90	
	STANDARD	LIMIT	STANDARD	LIMIT
Cylinder Cover Flatness	00.02	0.1	0~0.02	0.1
Piston Outside Diameter	40.935~40.95	40.89	49.94~49.955	49.90
Clearance Between Cylinder and Piston.	0.065~0.075	0.12	0.065~0.075	0.12
Bore of Piston Pin	10.002~10.01	10.04	12.004~12.015	12.05
Outside Diameter of Piston Pin	9.995~10.00	9.98	11.995~12.00	11.98
Bore of Small End of Con-Rod	14.003~14.011	14.05	14.996~15.007	15.05
Inside Diameter of Cylinder	41.005~41.020	41.07	50.005~50.020	50.07
Clearance at terminal of piston ring when assembled in Cylinder.	0.10~0.25	0.75 (1st&2nd Rings)	0.15~0.35	0.85
Radial Clearance of Big-End at Con-Rod	0.1~0.55	1.0	0.1~0.55	1.0
Run-out of Crank Shaft	0~0.05	0.1	0~0.05	0.1

CVT

Free Length of Clutch Spring	98.1	96.9	110.0	111.8
Thickness of Clutch Lining	3.0	2.0	3.0	2.0
Bore of Clutch Housing	110~110.15	110.40	110~110.15	110.40

BRAKE

Bore of Brake Drum	110	110.7	110	110.7
Brake Lining O.D.	119.2	106	119.2	106
Thickness of Disc Brake Lining	4.5	2.0	4.5	2.0

WHEEL

Run-out of the Inner Side at Wheel Rim		3		3
Wear Limit of Tire		0.8		0.8
Straightness of Front Wheel Shaft	0~0.15	0.25	0~0.15	0.25

Engine Oil

Capacity	1.3L		0.8L	
Residual Capacity when Light on	0.3L		0.23L	
Oil Used	TGB Super Engine		TGB Super Engine	
Oil Capacity of Gear Box	90c.c		90c.c	

Ignition

Lead		153BTDC /4000rpm		153BTDC /4000rpm
Spark Distance	6-8mm	5mm	6-8mm	5mm
Inner Electric Resistance at Spark Plug Cap	5~7.6k	3k	5~7.6k	3k

Battery

Specific Gravity of Electrolyte		1.32		1.32
Voltage for Charging		13-15V		13~15V

Fuse	10A(GA5) 7A (THE OTHERS)		7A	
Brake				
Clearance of Front Brake Lever		20-30mm		20-30mm
Clearance of Rear Brake Lever		15-35mm		15-35mm
Tire Pressure				
	GA5/GF5 BK1 GI5/ GE5 BR1 BH1		GF9 BK5 GI9/ GE9 BR5 BH5	
Front (kpa)	171 175		171 175	
Rear (kpa)	215 210		215 210	

2-3 Special Tools

CVT-R Remover/ GA5000051F04



To remove Driven Pulley Assy and Flywheel magneto.

Bearing Remover/ GA5000051F12



1. Taking out Right Hand Bearing of Drive Shaft
2. Applicable Scope 12

Crank Case & Shaft Remover
GA5000051F05



To divide Crank Case and to draw out Crank Shaft.

Bearing Remover/ GA5000051F19



1. Taking out RH Crank Shaft Bearing of Crank case & Bearing of Rear Axle on left hand crank case.
2. Applicable Scope: 20

Crank Shaft & Right Hand Crank Case
GA5000051F08



To Draw the Crank Shaft into the Right Hand Crank Case

Bearing Remover/ GA5000051F20



1. Taking out LH Bearing of Drive Shaft on gear box cover.
2. Applicable Scope: 17

Bearing remover/GA5000051F21



1. Taking out LH Bearing of crank Shaft.
2. Applicable Scope: 25

Bearing Installer/GA5000051F17



1. Left Hand Crank Shaft (Left Hand Bearing of Drive Shaft.)
2. Applicable Scope: 17 x 47

Bearing Installer/GA5000051F15



1. For Left Hand Crank Case
2. For Left Hand Crank Shaft Bearing
3. Applicable Scope: 25 x 52

Bearing Installer/GA5000051F18



1. To press Right Hand Bearing of Drive Shaft
2. Applicable Scope: 12 x 32

Bearing Installer/GA5000051F16



1. For Left Hand Crank Case
2. For Right Hand Crank Shaft Bearing and Bearing of Rear Wheel
3. Applicable Scope: 20 x 47

Flywheel Magneto Remover
GA5000051F22



To remove Flywheel Magneto

Oil Seal Installer/GA5000051F30



1. Oil Seal for Right Hand Crank Case and Gear box cover
2. Applicable Scope: 17 x 27

Oil Seal Installer/ GA5000051F33



1. To install Oil Seal for Rear Axle and Crank Case
2. Applicable Scope: 27 x 40

GA5000051F31 / Oil Seal Installer



1. Left Hand Crank Case (Oil Seal for Engine oil pump gear)
2. Applicable Scope: 24 x 43

GA5000051F35 / CVT-F Remover



1. To remove The Driving Pulley of C.V.T
2. To remove Right Hand kick starter

Oil Seal Installer/ GA5000051F32



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1. Left Hand Crank Case (Oil Seal for left Hand Crank Shaft).
2. Applicable Scope: 24 x 43

Oil Seal Assembly Tools
GA504AL06D06

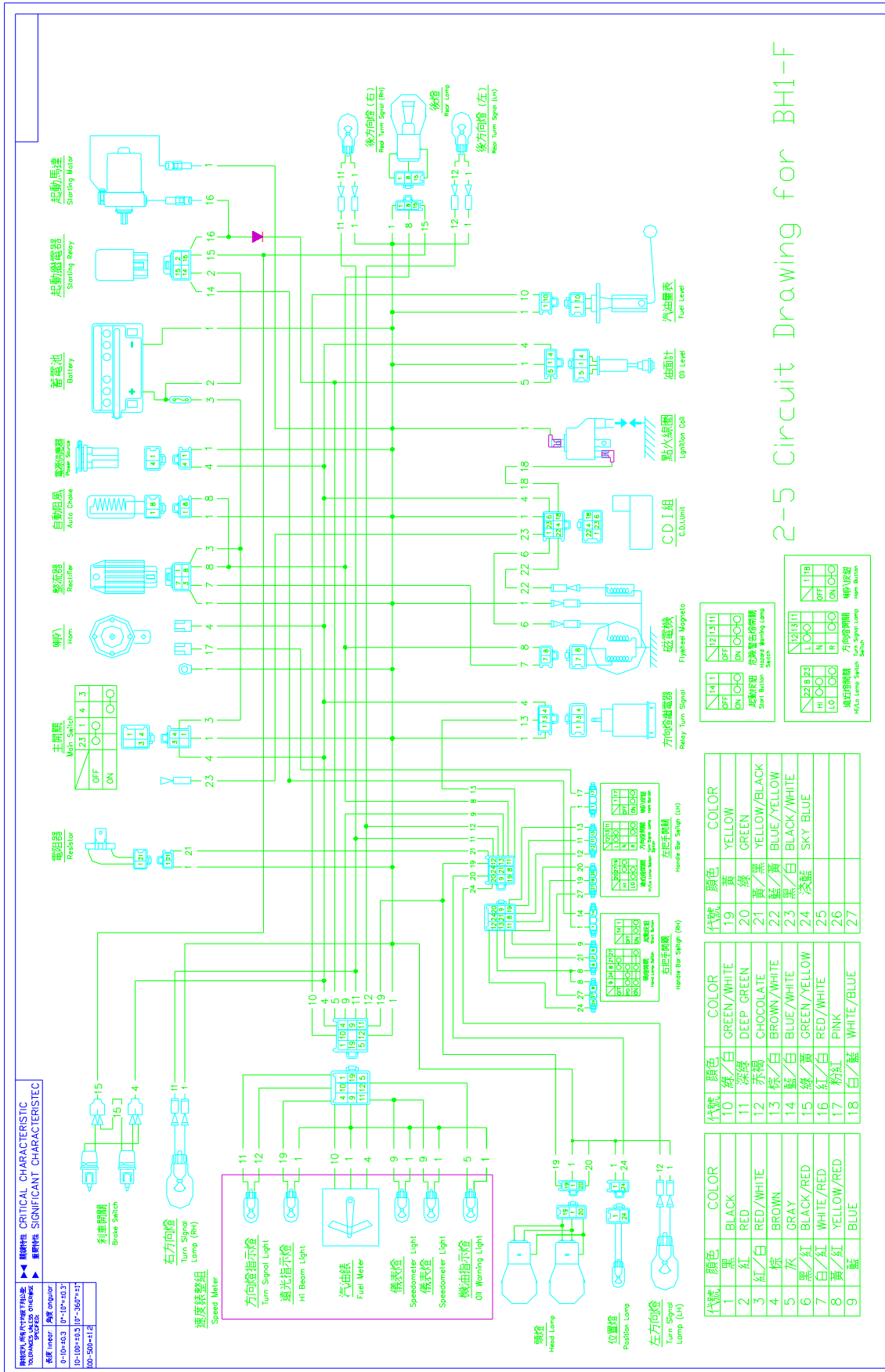


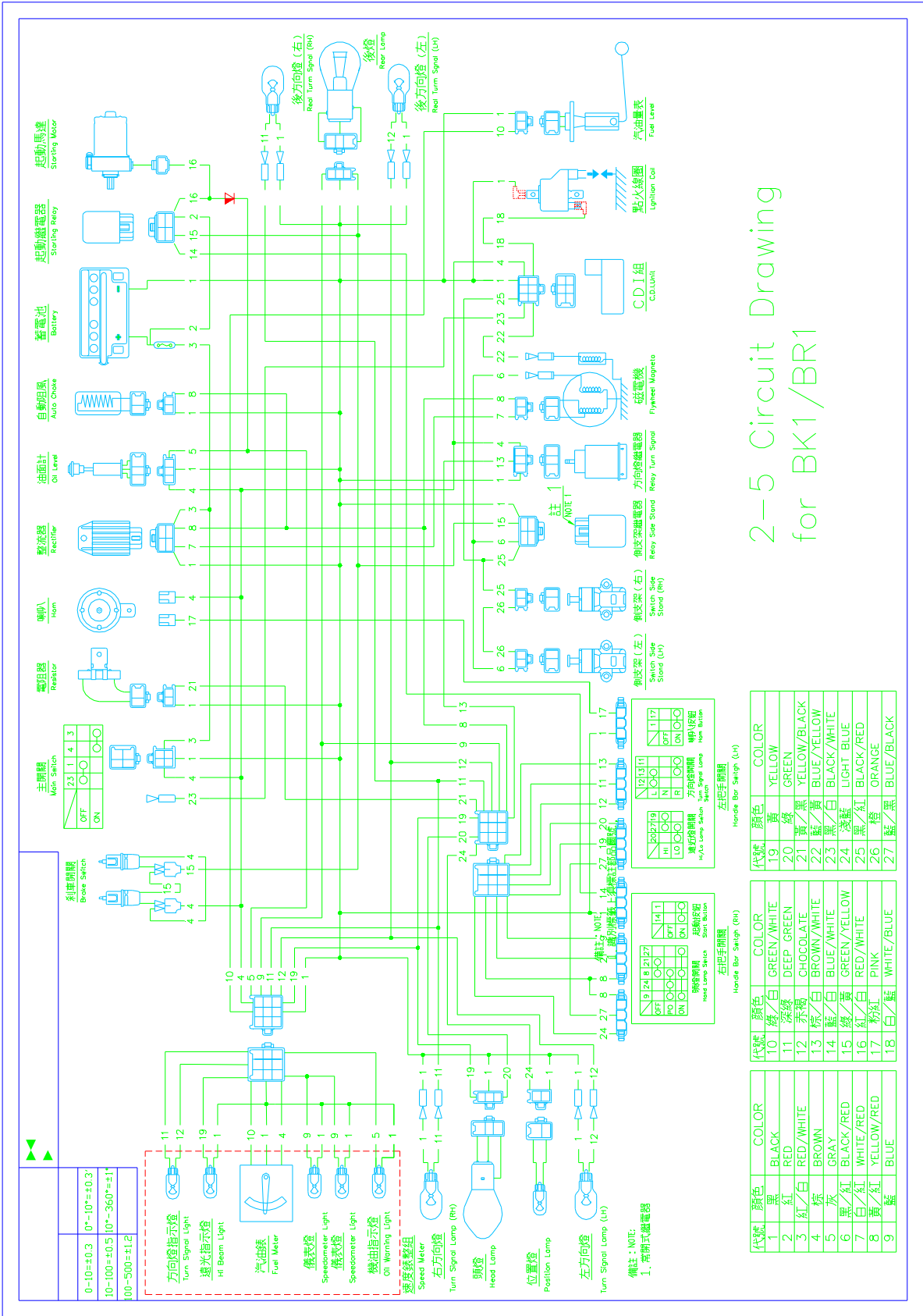
Assemble Oil Seal on Crank Shaft and Avoid Oil Seal Inner diameter Damaged by Crank Shaft Teeth.

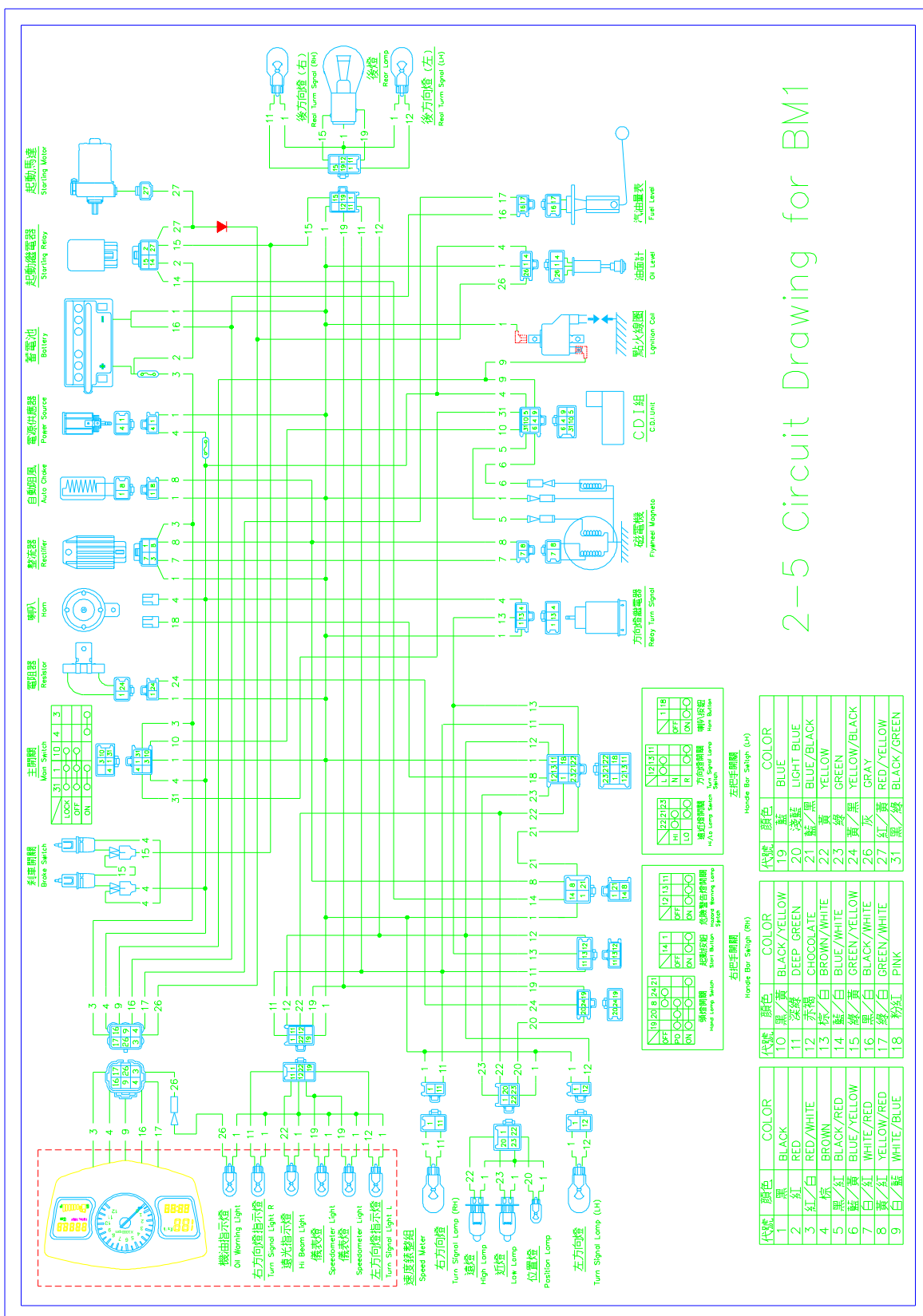
2-4 List of Grease & Oil Adopted:

GA55100001 TGB Supper Grease No.0 Apply in Oil Seal.	GA50400003 Supper Grease No.3 Apply in Axle Shaft, inside of Oil Seal.
GA50400001 1104 Sealing Three- Bond Apply on Right Hand Crank Surface.	GA50400004 TGB Gear Oil 85w/90 Transmission Gear Oil for Scooters.
GA50400002 TGB Supper Oil (JASO FC) Apply in Oil Tank	GA55100002 Three-Bond 1322 Under M10 Screw (For medium fixing) for Flywheel Magneto.
GA50400005 TGB Supper Grease No. I Apply in Oil Seal.	GA55100003 DOT-3 Brake Oil For Brake.
GA50400006 TGB Supper Grease No.2 Apply in Kick Starter.	GA50400008 TGB Supper Grease No.4 For Movable Drive Face Comp.
GA50400017 Cemedine 575 Apply in Handle Grip	

2-5 Circuit Drawings



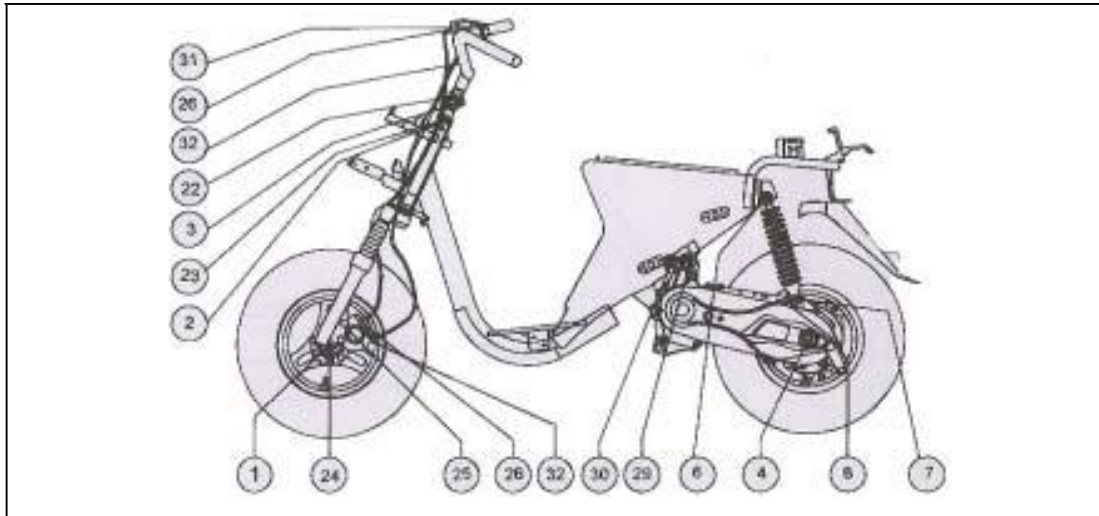




2.6 Troubleshooting

Complaint	Possible Reason	Remedy
No action for starter motor	1. Fuse breaks. 2. No power in battery. 3. Defective action of brake switch. 4 Short circuit of starter relay.	Replace Charging Replace Replace
No sparking or poor sparking	1. Defective spark plug. 2. Defective CDI & ignition coil unit. 3. Defective magneto stator coil. 4. Loose connection of lead wire.	Replace Replace Replace Connect
Unable or Difficult to start	Plug not sparking 1. Damaged spark plug or spark plug cap. 2. Dirty or wet spark plug. 3. Defective CDI &ignition coil unit or stator coil. 4. Open or short in high-tension cord. 5. Defective ignition switch. No fuel reaching the carburetor 1. No gasoline in fuel tank. 2. Clogged hole in the fuel tank cap. 3. Clogged or defective fuel cock. 4. Clogged fuel hose or defective vacuum hose. Compression too low 1. Excessively worn cylinder or piston rings. 2. Spark plug too loose. 3. Broken, cracked or otherwise failed piston.	Replace Clean & dry Replace Replace Replace Replace Clean Clean or replace Clean or replace Replace Tighten Replace
Noisy engine	1. Piston or cylinder worn down. 2. Combustion chamber fouled with carbon. 3. Piston pin, bearing or piston pin worn. 4. Worn or burnt crankshaft bearings.	Replace Clean Replace Replace
Engine idles poorly	1. Stiff piston ring in place. 2. Excessively worn cylinder or piston rings. 3. Gas leaks from crankshaft oil seal. 4. Defective CDI & ignition coil unit. 5. Clogged jets in carburetor.	Replace Replace Replace Replace Clean or adjust

2-7 Screw Torque



Screw Torque of Body for GI5/GI9//GE5/GE9/BH1/BH5/BH1-F

Item	Locking Location	Thread	pcs	Torque
1	Front Axle Nut	12	1	550-600kg.cm
2	Steering Stem Lock Nut	25.4	1	600-650kg.cm
3	Handle Bar Lock Screw	10	1	550-600kg.cm
4	Rear Axle Nut	16	1	600-900kg.cm
6	Rear Shock Absorber Upper Bolt	10	1	200-300kg.cm
7	Rear Shock Absorber Lower Bolt	10	1	200-300kg.cm
8	Rear Brake	6	1	60-90kg.cm
22	Handle- bar Screw	8	1	250kg.cm
23	Bearing Lock Nut	25.4	1	200kg.cm
24	Brake Disc Nut	10	3	180-280kg.cm
25	Caliper Bolt	8	2	210-250kg.cm
26	Brake Hose Bolt	10	2	250-320kg.cm
29	Engine Hanger Nut	12	1	550-600kg.cm
30	Frame Engine Nut	10	2	550-600kg.cm
31	Master Cylinder Bolt	6	2	200kg.cm
32	Speedometer Cable Nut		2	60kg.cm

General Torque

Thread	General Bolt kg.cm	Heavy Duty Bolt kg.cm
4	10-20	15-30
5	20-40	30-60
8	100-160	80-120
10	220-350	300-400
12	350-550	500-600