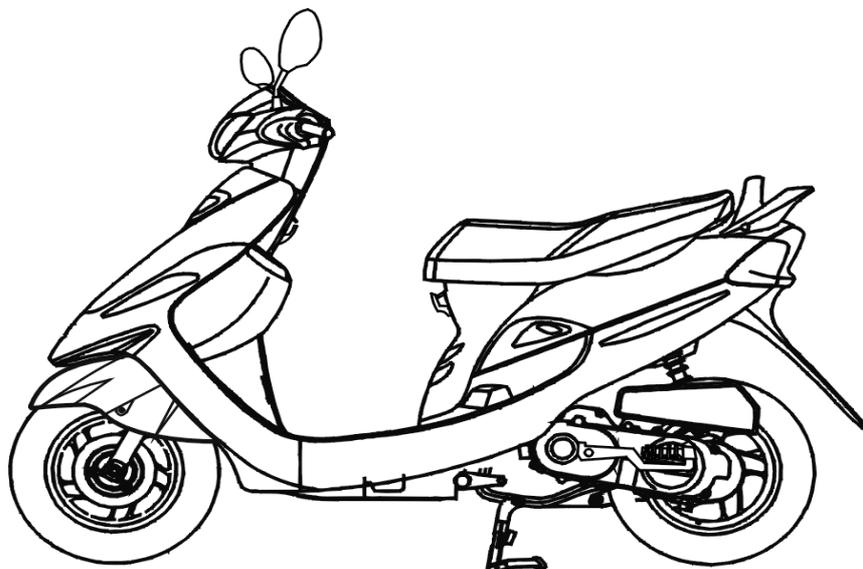
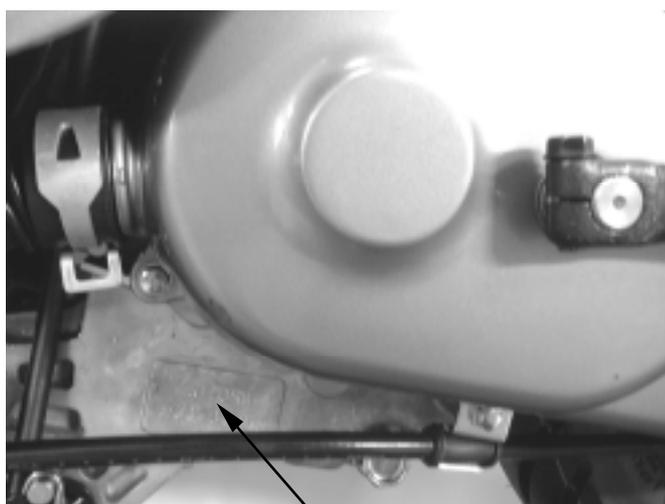


ENGINE SERIAL NUMBER.....	1- 1	LUBRICATION POINTS.....	1-13
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ENGINE SERIAL NUMBER



Filly LX 50



Location of Engine Serial Number

1. GENERAL INFORMATION

FILLY LX 50

SPECIFICATIONS

Motorcycle Name & Type		Filly LX 50		
Name & Model No.		SD10BB		
Overall length (mm)		1720		
Overall width (mm)		625		
Overall height (mm)		1035		
Wheel base (mm)		1200		
Engine type		O.H.C.		
Displacement		49.5cc		
Fuel Used		92# nonleaded gasoline		
Net weight (kg)	Front wheel	34		
	Rear wheel	48		
	Total	82		
Gross weight(kg)	Front wheel	35		
	Rear wheel	50		
	Total	85		
Tires	Front wheel	90/90-10 50J		
	Rear wheel	100/80-10 53J		
Ground clearance (mm)		110		
Performance	Braking distance (m)	7.9 (Initial speed 40km/h)		
	Min. turning radius (m)	1.8		
Engine	Starting system		Starting motor & kick starter	
	Type		Gasoline, 4-stroke	
	Cylinder arrangement		Single cylinder	
	Combustion chamber type		Semi-sphere	
	Valve arrangement		O.H.C.	
	Bore x stroke (mm)		□39.0 x 41.4	
	Compression ratio		10.5	
	Compression pressure (kg/cm ² -rpm)		14	
	Max. output		2.208/8000kw/(r/min)	
	Max. torque		0.3/6500kg m/rpm	
	Port timing	Intake	Open	3°
			Close	7°
		Exhaust	Open	9°
			Close	1°
	Valve clearance (cold) (mm)	Intake	0.04	
		Exhaust	0.04	
	Idle speed (rpm)		1900 ± 100rpm	
Lubrication System	Lubrication type		Forced pressure & wet sump	
	Oil pump type		Inner/outer rotor type	
	Oil filter type		Full-flow filtration	

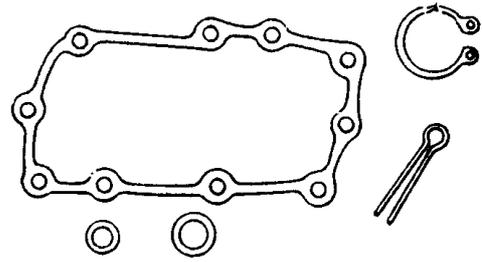
Oil capacity	0.85 liter
Cooling Type	Forced air cooling

Fuel System	Air cleaner type & No		Paper element, wet	
	Fuel capacity		6.1 liter	
	Carburetor	Type	CVK	
		Piston dia. (mm)		
Venturi dia.(mm)		□17equivalent		
	Throttle type		Butterfly type	
Electrical	Ignition System	Type	CDI	
		Ignition timing	BTDC28°/4000rpm	
		Contact breaker	Non-contact point type	
		Spark plug	NGK C7HSA	
	Spark plug gap	0.6_ 0.7mm		
Battery	Capacity		12V4AH	
Power Drive System	Clutch	Type	Dry multi-disc clutch	
		Transmission Gear	Type	Non-stage transmission
	Reduction Gear		Operation	Automatic centrifugal type
		Type	Two-stage reduction	
Moving Device	Front Axle	Caster angle	27°	
		Trail length	□	
Damping Device	Tire pressure (kg/cm ²)	Front	1.75	
		Rear	2.25	
	Turning angle	Left	45°	
Right		45°		
Brake system type	Front	DISK (160mm)		
	Rear	Drum (110mm) brake		
Damping Device	Suspension type	Front	TELESCOPE	
		Rear	Unit Swing	
	Shock absorber distance	Front	70	
Rear		66		
Frame type		Under Bone		

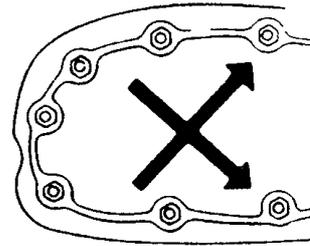
1. GENERAL INFORMATION

SERVICE PRECAUTIONS

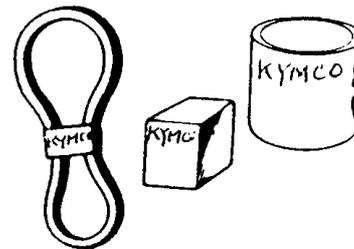
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



- When tightening bolts or nuts, begin with larger-diameter to smaller ones at several times, and tighten to the specified torque diagonally.



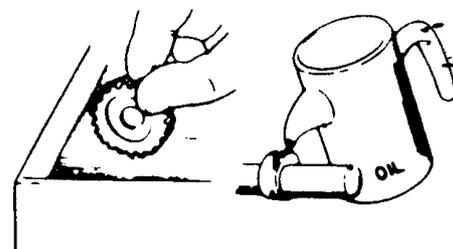
- Use genuine parts and lubricants



- When servicing the motorcycle, be sure to use special tools for removal and installation.

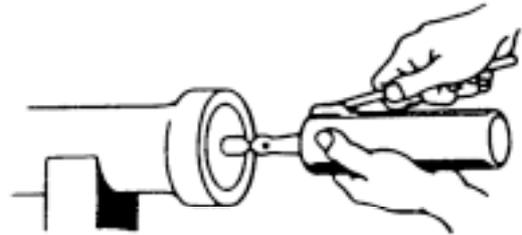


- After disassembly, clean removed parts. Lubricate sliding surfaces with engine oil before reassembly.



1. GENERAL INFORMATION

- Apply or add designated greases and lubricants to the specified lubrication points.



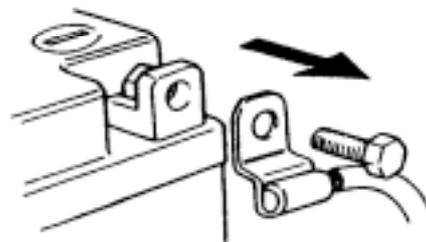
- After reassembly, check all parts for proper tightening and operation.



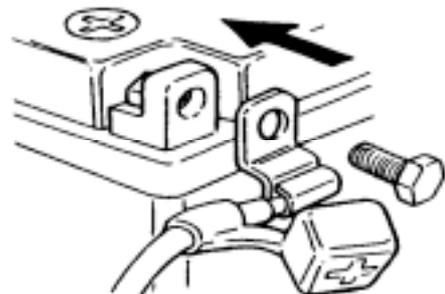
- When two persons work together, pay attention to the mutual working safety.



- Disconnect the battery negative (-) terminal before operation.
- When using a spanner or other tools, make sure not to damage the motorcycle surface.

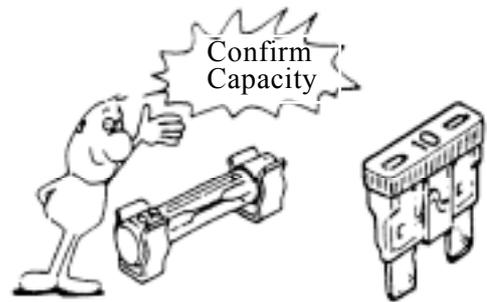


- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.



1. GENERAL INFORMATION

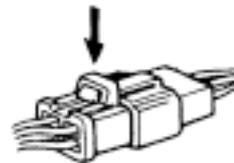
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.



- After operation, terminal caps shall be installed securely.



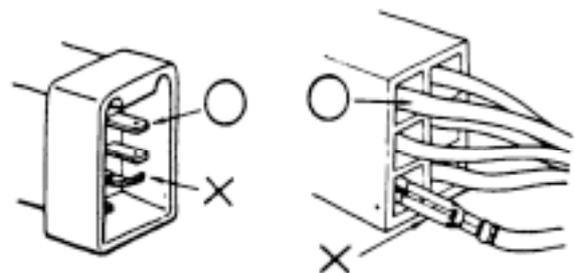
- When taking out the connector, the lock on the connector shall be released before operation.



- Hold the connector body when connecting or disconnecting it.
- Do not pull the connector wire.

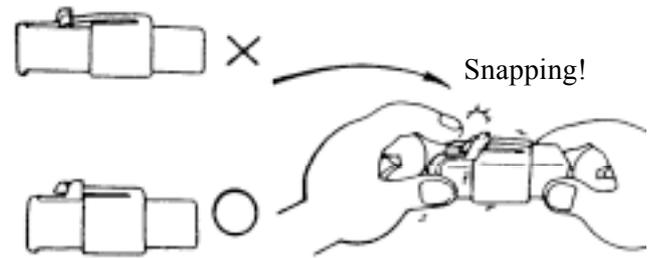


- Check if any connector terminal is bending, protruding or loose.

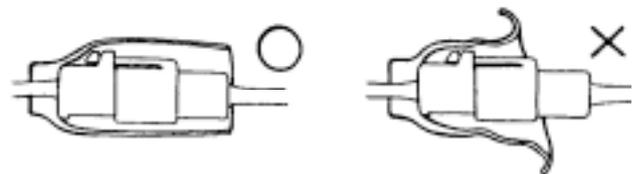


1. GENERAL INFORMATION

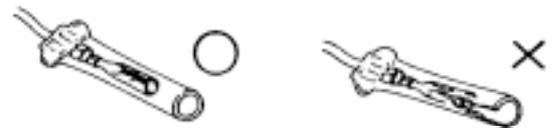
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



- Before connecting a terminal, check for damaged terminal cover or loose negative terminal.



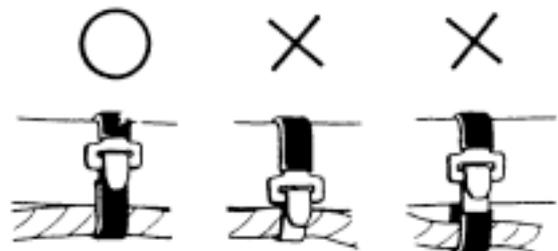
- Check the double connector cover for proper coverage and installation.



- Insert the terminal completely.
- Check the terminal cover for proper coverage.
- Do not make the terminal cover opening face up.

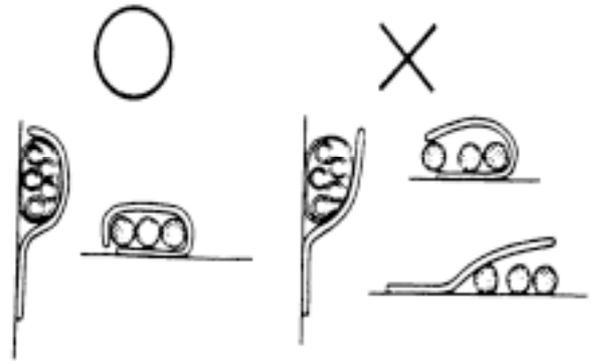


- Secure wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wire harnesses.

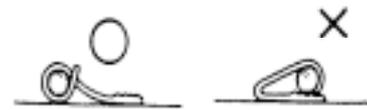


1. GENERAL INFORMATION

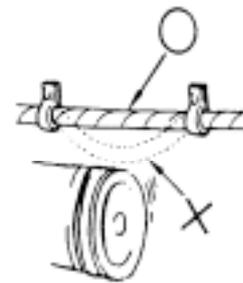
- After clamping, check each wire to make sure it is secure.



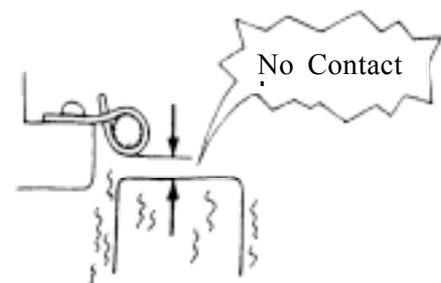
- Do not squeeze wires against the weld or its clamp



- After clamping, check each harness to make sure that it is not interfering with any moving or sliding parts.



- When fixing the wire harnesses, do not make it contact the parts which will generate high heat.

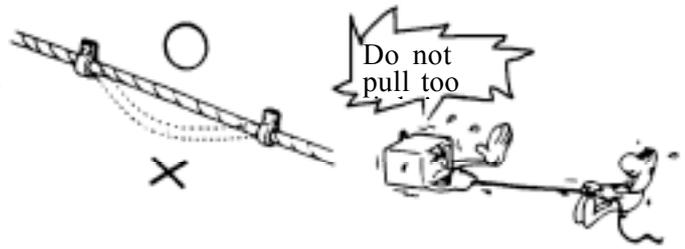


- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.

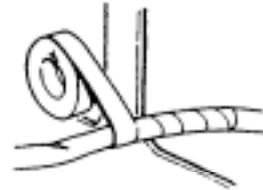


1. GENERAL INFORMATION

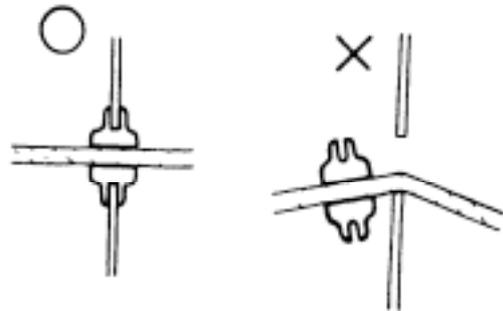
- Route harnesses so they are neither pulled tight nor have excessive slack.



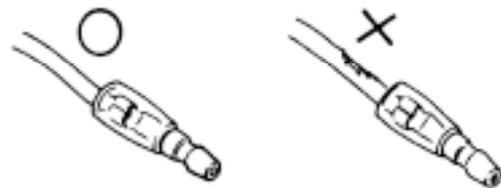
- Protect wires and harnesses with electrical tape or tube if they contact a sharp edge or corner



- When rubber protecting cover is used to protect the wire harnesses, it shall be installed securely.



- Do not break the sheath of wire.
- If a wire or harness is with a broken sheath, repair by wrapping it with protective tape or replace it.

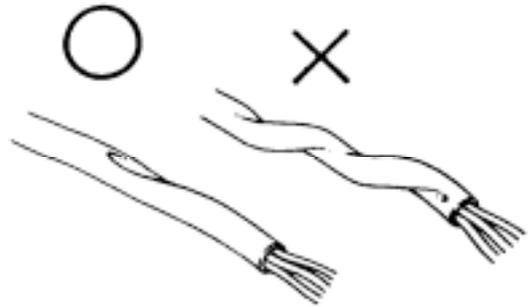


- When installing other parts, do not press or squeeze the wires.



1. GENERAL INFORMATION

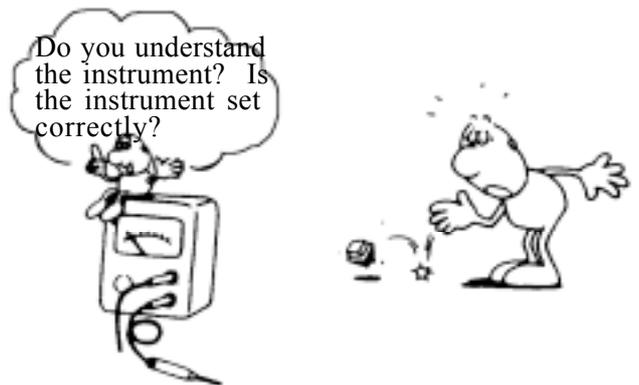
- After routing, check that the wire harnesses are not twisted or kinked.



- Wire harnesses routed along with handlebar should not be pulled tight, have excessive slack or interfere with adjacent or surrounding parts in all steering positions.



- When a testing device is used, make sure to understand the operating methods thoroughly and operate according to the operating instructions.



- Be careful not to drop any parts.

- When rust is found on a terminal, remove the rust with sand paper or equivalent before connecting.



- Do not bend or twist control cables. Damaged control cables will not operate smoothly and may stick or bind.



1. GENERAL INFORMATION

■ Symbols:

The following symbols represent the servicing methods and cautions included in this service manual.



Engine Oil

: Apply engine oil to the specified points. (Use designated engine oil for lubrication.)



Grease

: Apply grease for lubrication.



Gear Oil

: Transmission Gear Oil (90#)



: Use special tool.



: Caution



: Warning

(⇒12-3) : Refer to page 12-3.

1. GENERAL INFORMATION

FILLY LX 50

TORQUE VALUES

STANDARD TORQUE VALUES

Item	Torque (kg-m)	Item	Torque (kg-m)
5mm bolt, nut	0.45-0.6	5mm screw	0.35-0.5
6mm bolt, nut	0.6-1.2	6mm screw, SH bolt	0.7-1.1
8mm bolt, nut	1.8-2.5	6mm flange bolt, nut	1.0-1.4
10mm bolt, nut	3.0-4.0	8mm flange bolt, nut	2.4-3.0
12mm bolt, nut	5.0-6.0	10mm flange bolt, nut	3.5-4.5

Torque specifications listed below are for important fasteners.

ENGINE

Item	Q'ty	Thread dia.(mm)	Torque (kg-m)	Remarks
Cylinder head bolt A	2	6	0.7-1.1	Double end bolt
Cylinder head bolt B	4	6	0.7-1.1	
Oil filter screen cap	1	30	1.0-2.0	
Exhaust muffler lock bolt	2	6	0.7-1.1	Double end bolt
Cylinder head flange nut	4	7	1.2-1.6	Apply oil to threads
Valve adjusting lock nut	2	3	0.07-0.09	
Cam chain tensioner slipper bolt	1	8	0.4-0.7	
Oil bolt	1	8	1.1-1.5	
Clutch outer nut	1	10	3.5-4.5	
Clutch drive plate nut	1	28	5.0-6.0	
Starter motor mounting bolt	2	6	0.8-1.2	
Oil pump bolt	3	4	0.1-0.3	
Drive face nut	1	10	5.5-6.5	
Spark plug	1	10	1.0-1.4	
A.C. generator stator bolt	2	6	0.8-1.2	
Cam chain tensioner bolt	1	6	0.8-1.2	

FRAME

Item	Q'ty	Thread dia.(mm)	Torque (kg-m)	Remarks
Steering stem lock nut	1	25.4	8.0-12.0	U-nut
Front axle nut	1	10	5.0-7.0	U-nut
Rear axle nut	1	14	11.0-13.0	U-nut
Rear shock absorber upper bolt	1	10	4.0-5.0	
Rear shock absorber lower bolt	1	8	2.0-3.0	
Speedometer cable set screw	1	5	0.45-0.6	
Rear shock absorber lock nut	1	8	3.0-3.6	Apply locking agent

1. GENERAL INFORMATION

SPECIAL TOOLS

Tool Name	Tool No.	Remarks	Ref. Page
Bearing puller 10.12.15.1 8 mm	E037	10.12.15.1 8mm bearing	10-3 10-4 12-6
Bushing remover L	E032	11102 bush	
Bushing remover S	EO19	11203 bush rear	
Crankshaft bearing	E030	91005 radial	
Crankshaft protector	E029	13000 crankshaft	
Clutch spring compressor	E027	2301a driven pulley assy	9-9 9-12
Cushion assemble &	F004	52400 cushion	13-4
Flywheel holder	E017	31110 flywheel comp.231 0a pulley assy driven	9-5 9-9 9-13 14-7 14-9
Flywheel puller	E002	Left hand thread	14-7
Long socket	F002	50306 steering	12-21 12-22
Oil seal & bearing	E014	Oil seal & bearing	
Tool box	E033	Special tools	
Tappet adjuster	E036	90012 screw	3-5
Valve spring compressor	E038	Valve spring	7-7 7-8

1. GENERAL INFORMATION

LUBRICATION POINTS

ENGINE

Lubrication Points	Lubricant
Valve guide/valve stem movable part Cam lobes Valve rocker arm friction surface Cam chain Cylinder lock bolt and nut Piston surroundings and piston ring grooves Piston pin surroundings Cylinder inside wall Connecting rod/piston pin hole Connecting rod big end Crankshaft R/L side oil seal Starter reduction gear engaging part Countershaft gear engaging part Final gear engaging part Bearing movable part O-ring face Oil seal lip	<ul style="list-style-type: none"> •Genuine KYMCO Engine Oil (SAE15W-40) •API□SG Engine Oil
Starter idle gear Friction spring movable part/shaft movable part Shaft movable grooved part Kick starter spindle movable part	High-temperature resistant grease
A.C. generator connector Transmission case breather tube	Adhesive

1. GENERAL INFORMATION

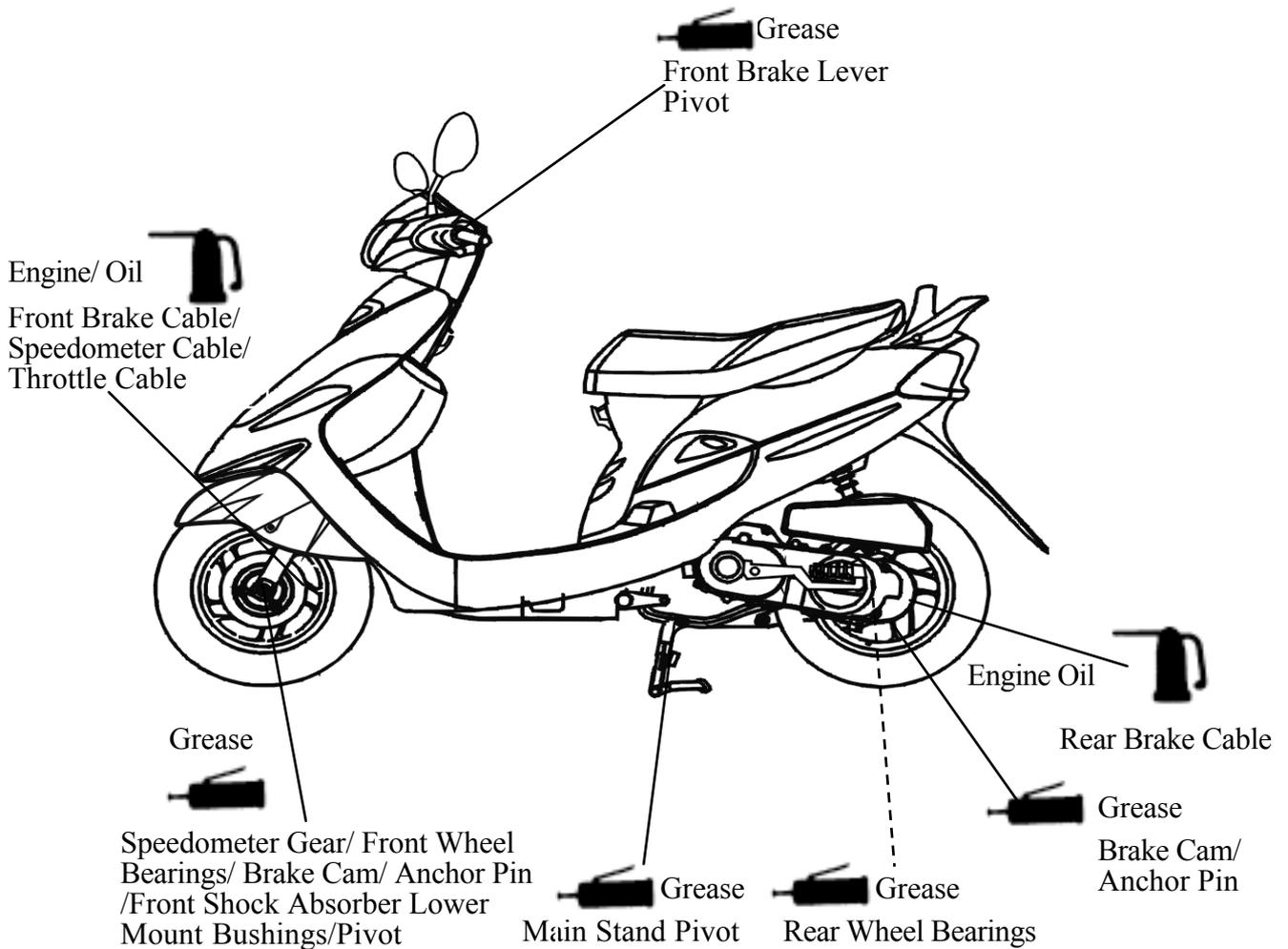
FRAME

The following is the lubrication points for the frame.

Use general purpose grease for parts not listed.

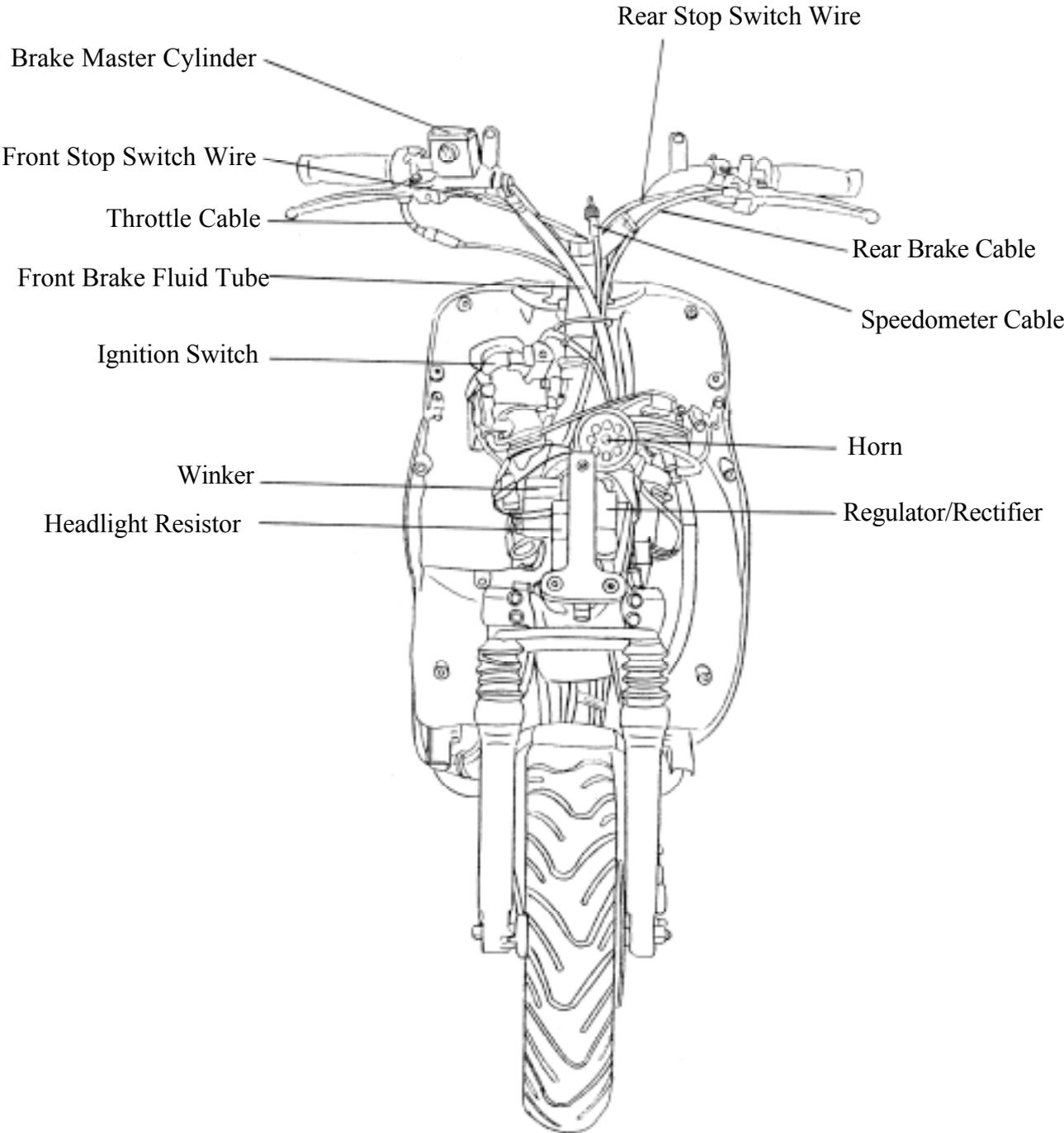
Apply clean engine oil or grease to cables and movable parts not specified.

This will avoid abnormal noise and rise the durability of the motorcycle.

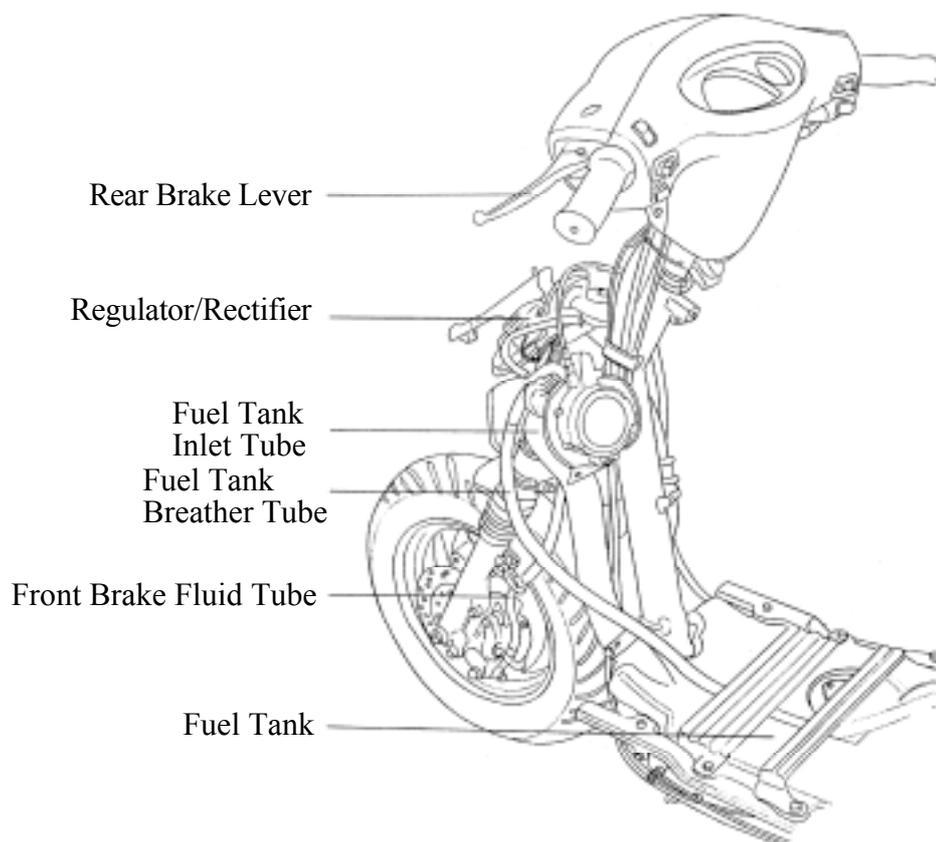
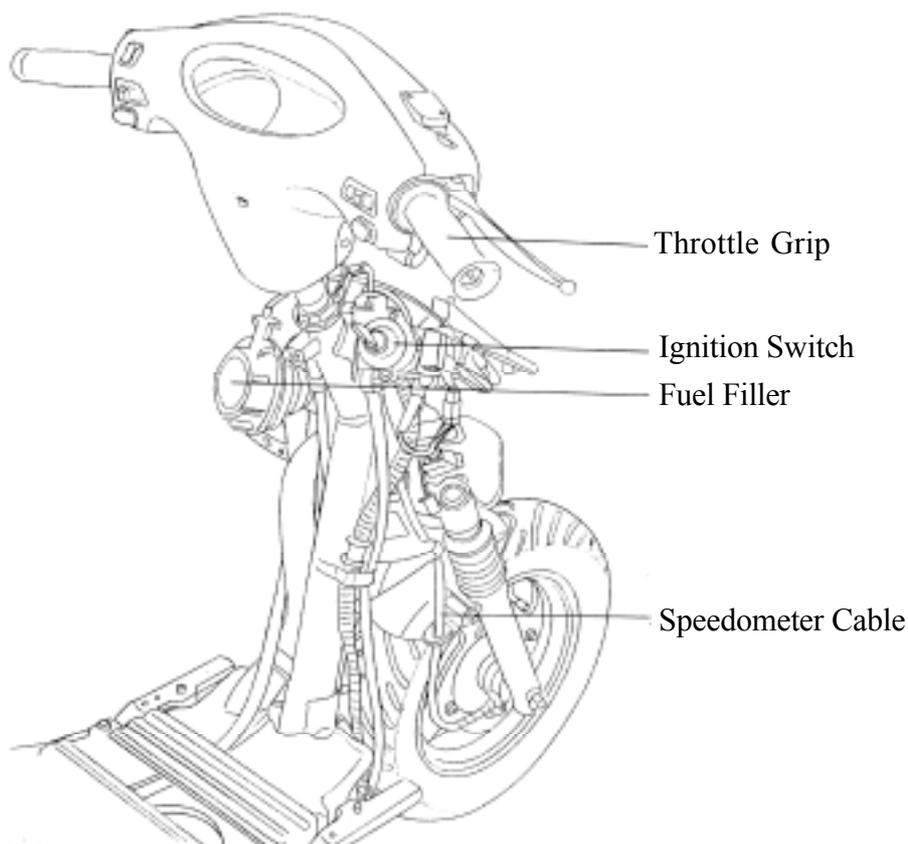


1. GENERAL INFORMATION

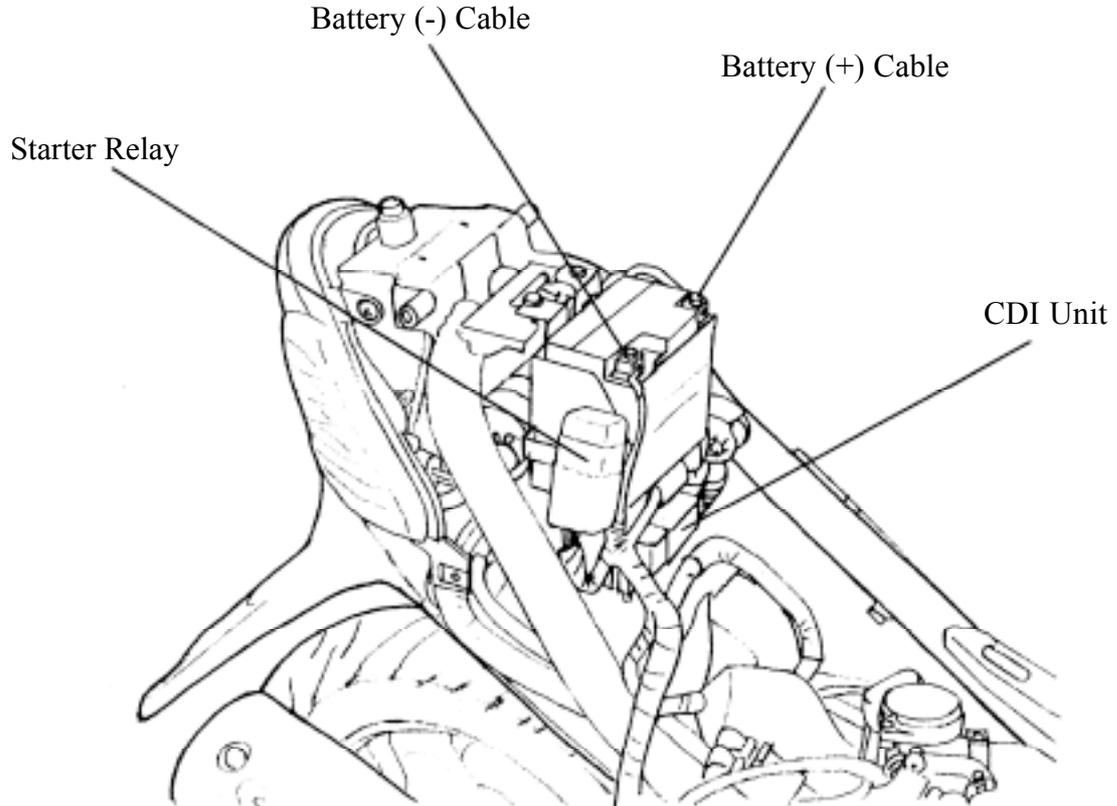
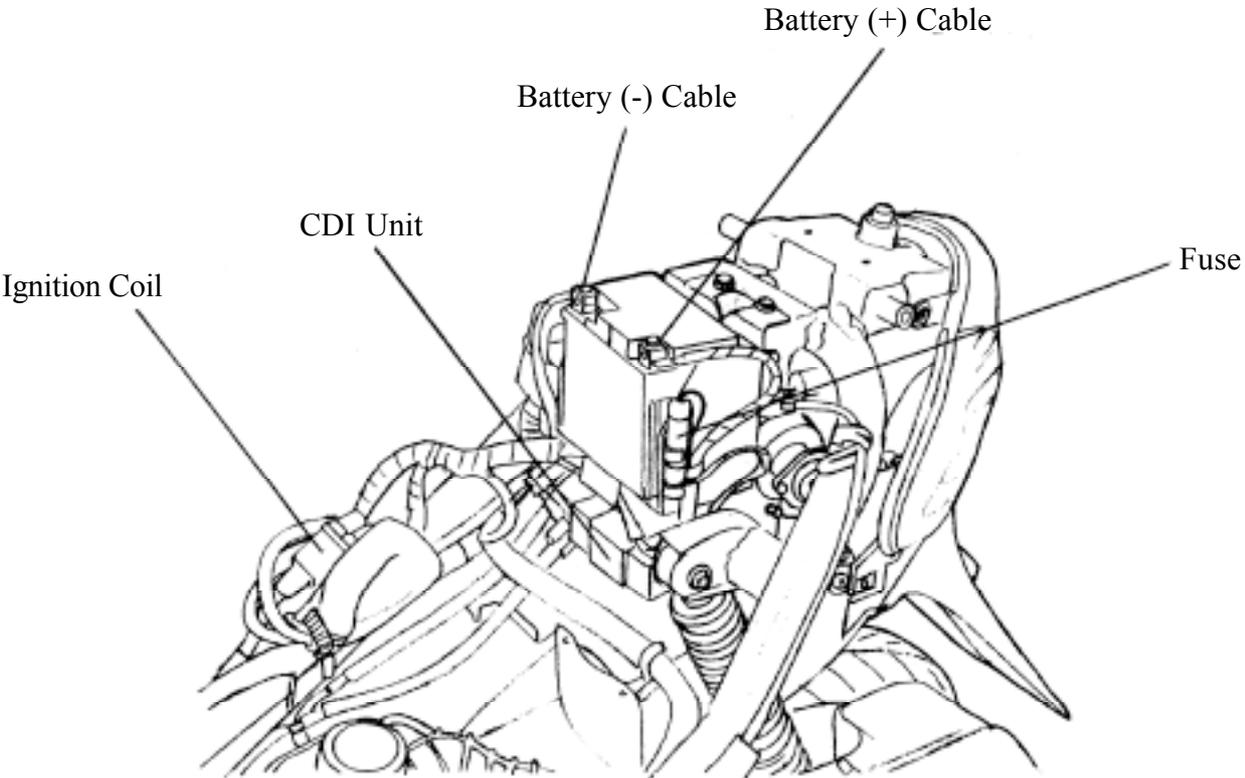
CABLE & HARNESS ROUTING



1. GENERAL INFORMATION

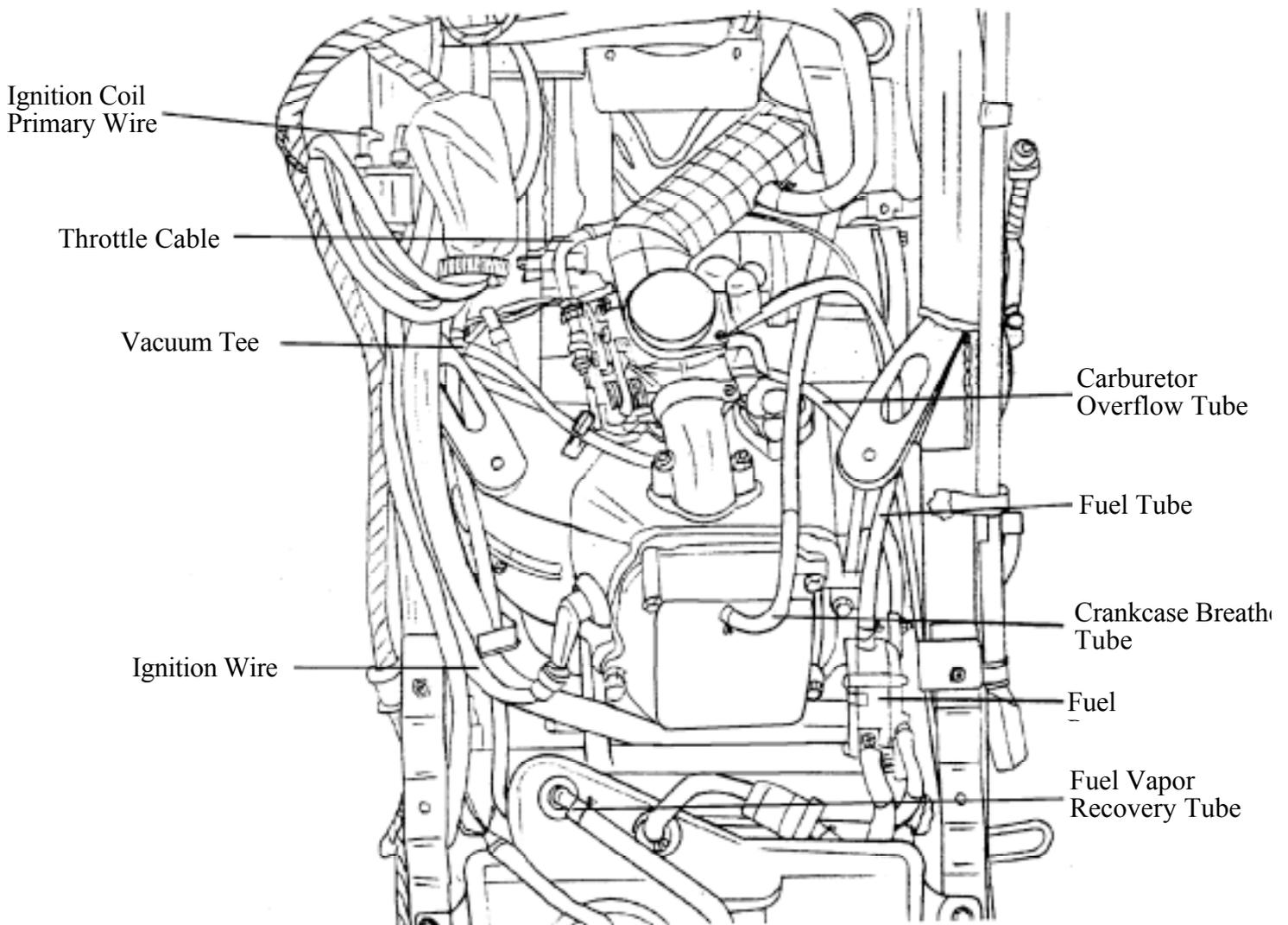


1. GENERAL INFORMATION



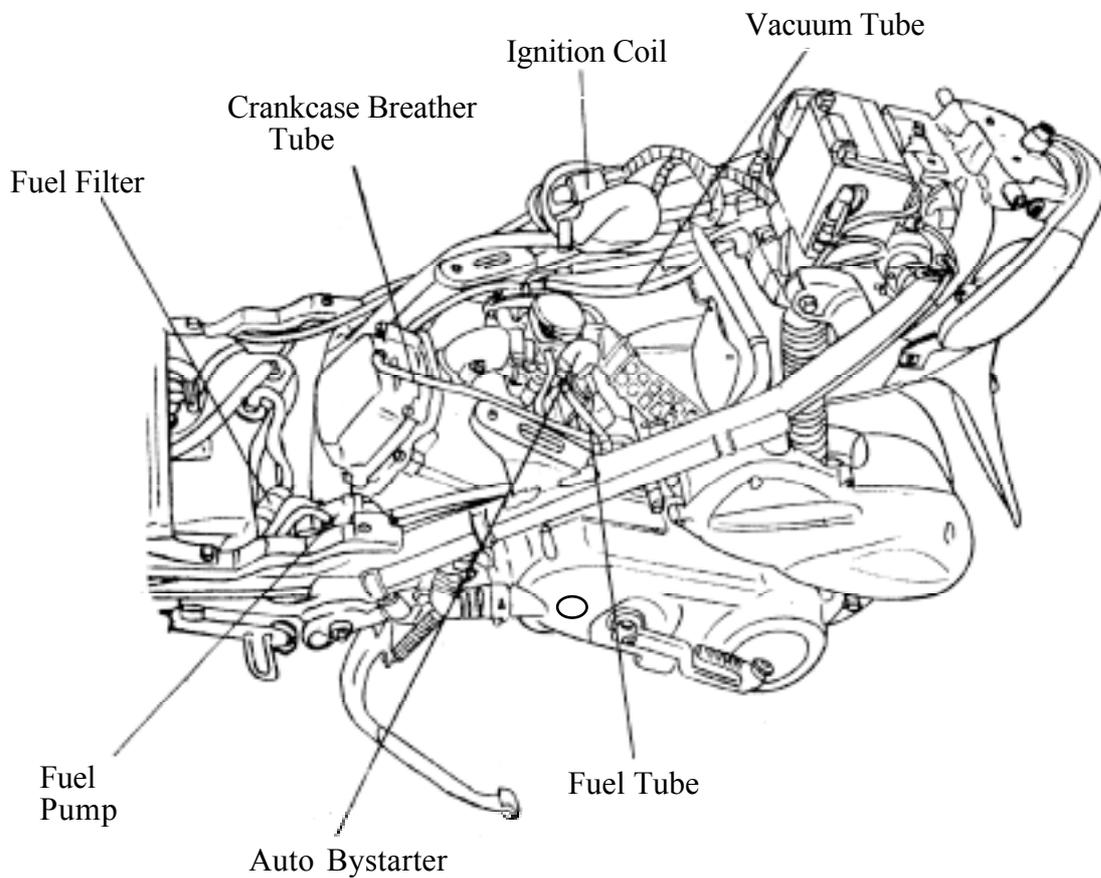
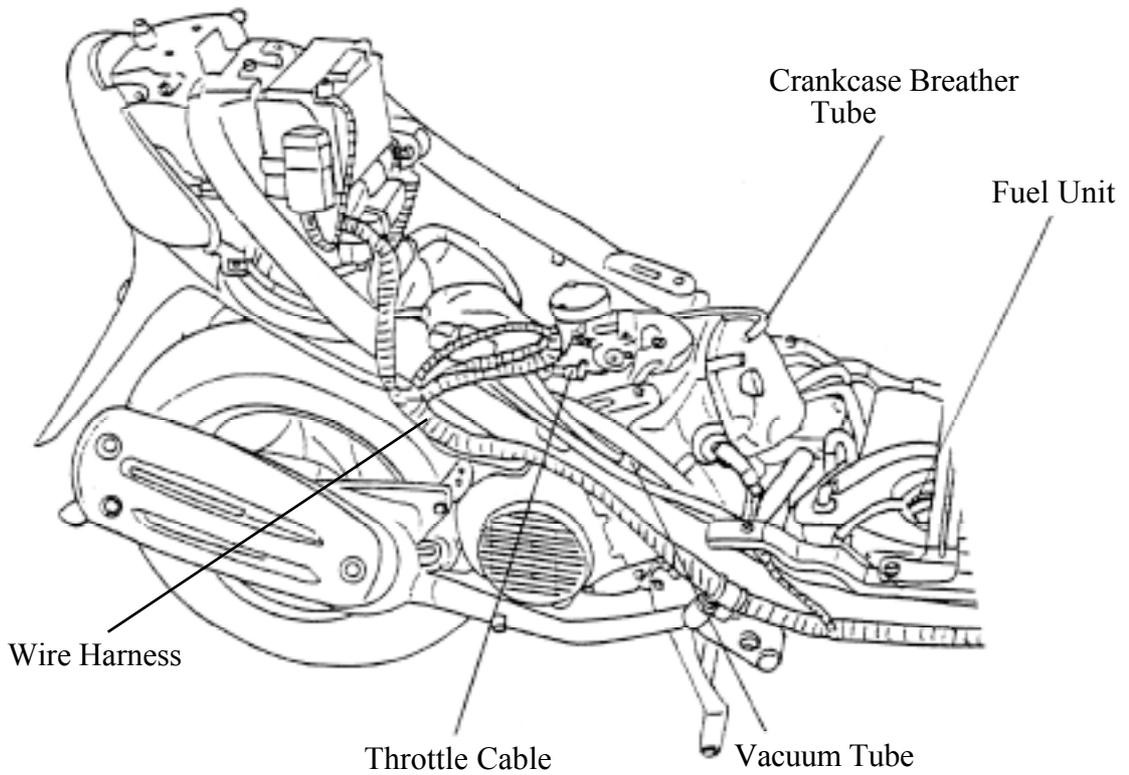
1. GENERAL INFORMATION

FILLY LX 50



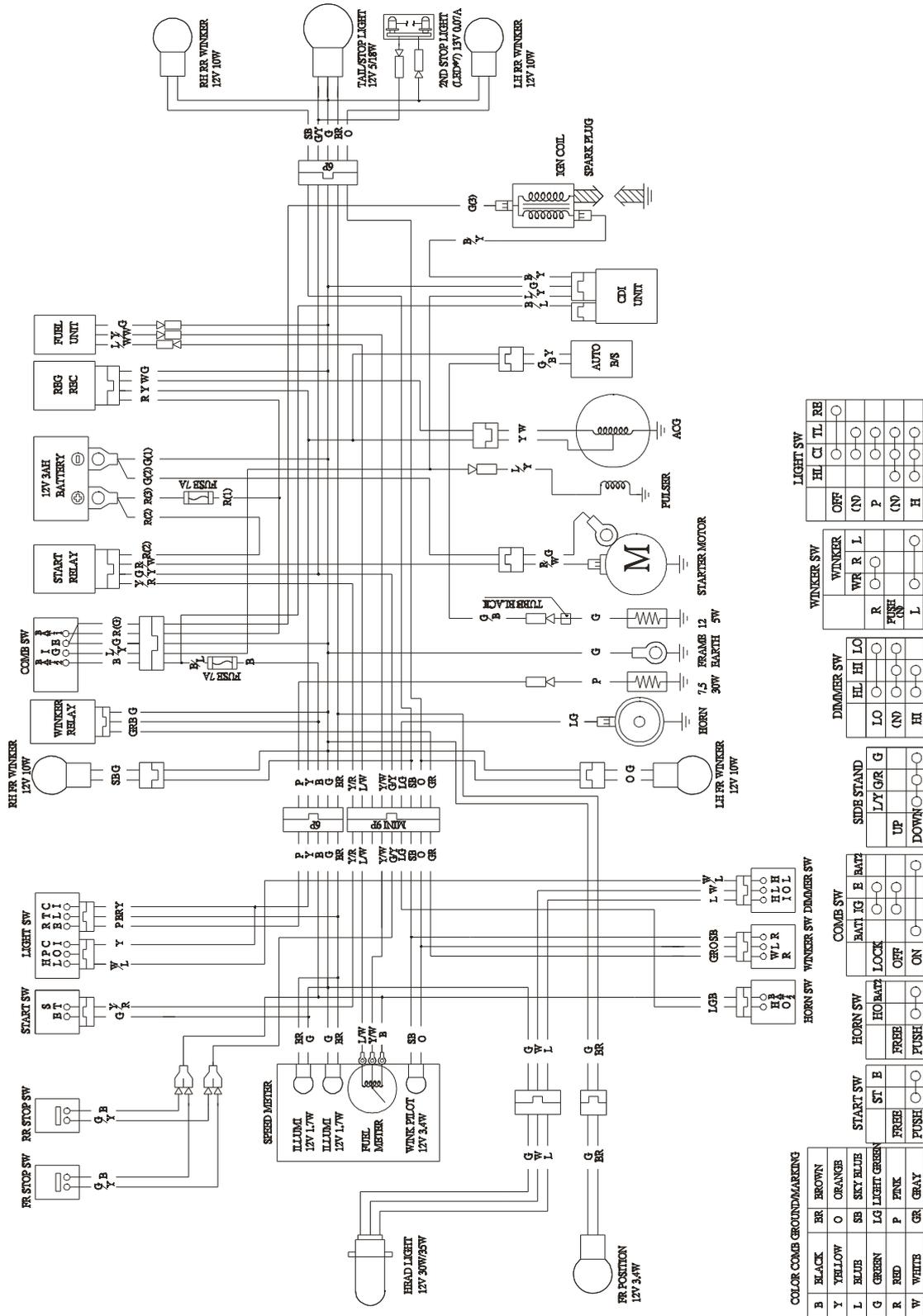
1. GENERAL INFORMATION

FILLY LX 50



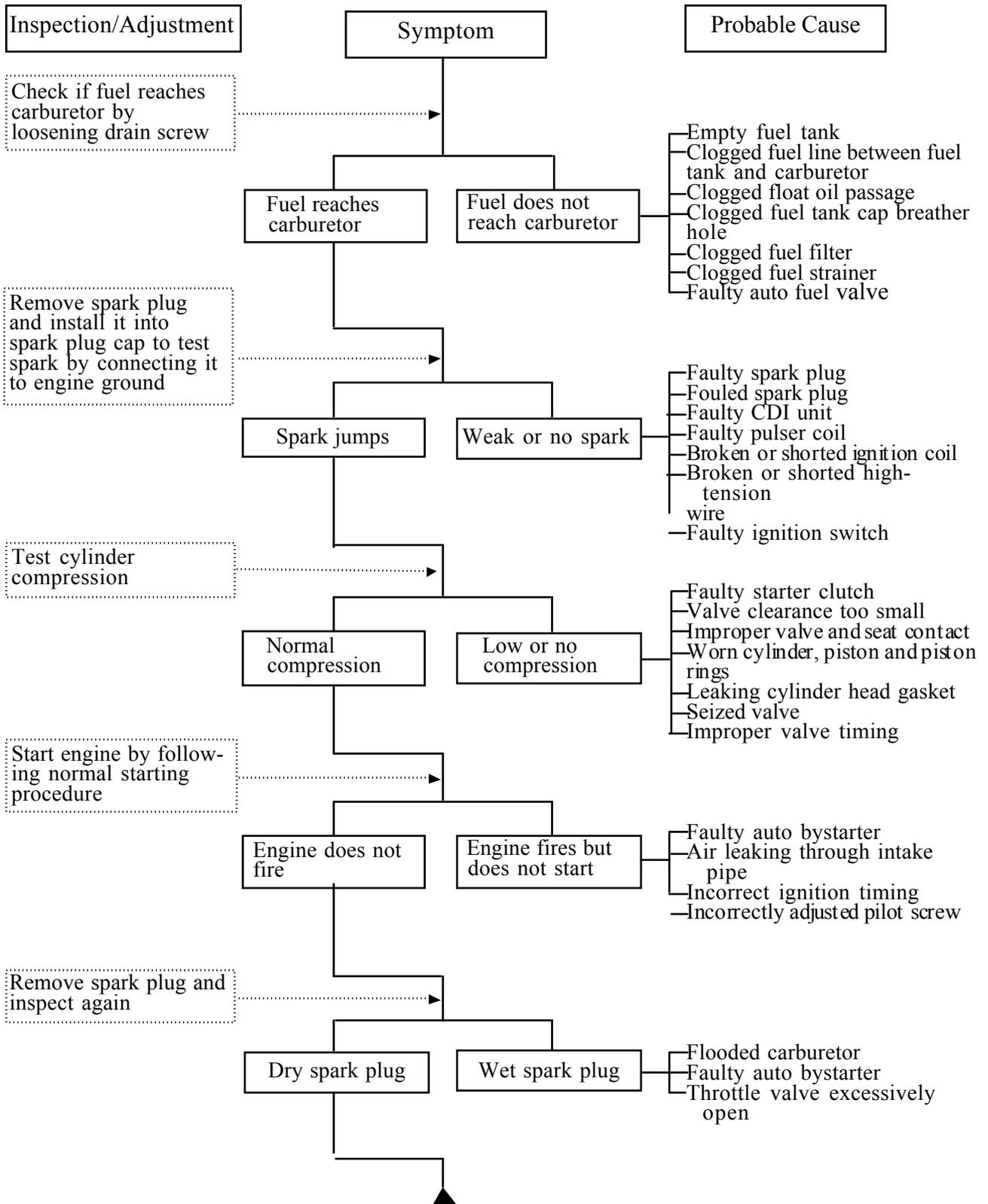
1. GENERAL INFORMATION

WIRING DIAGRAM



TROUBLESHOOTING

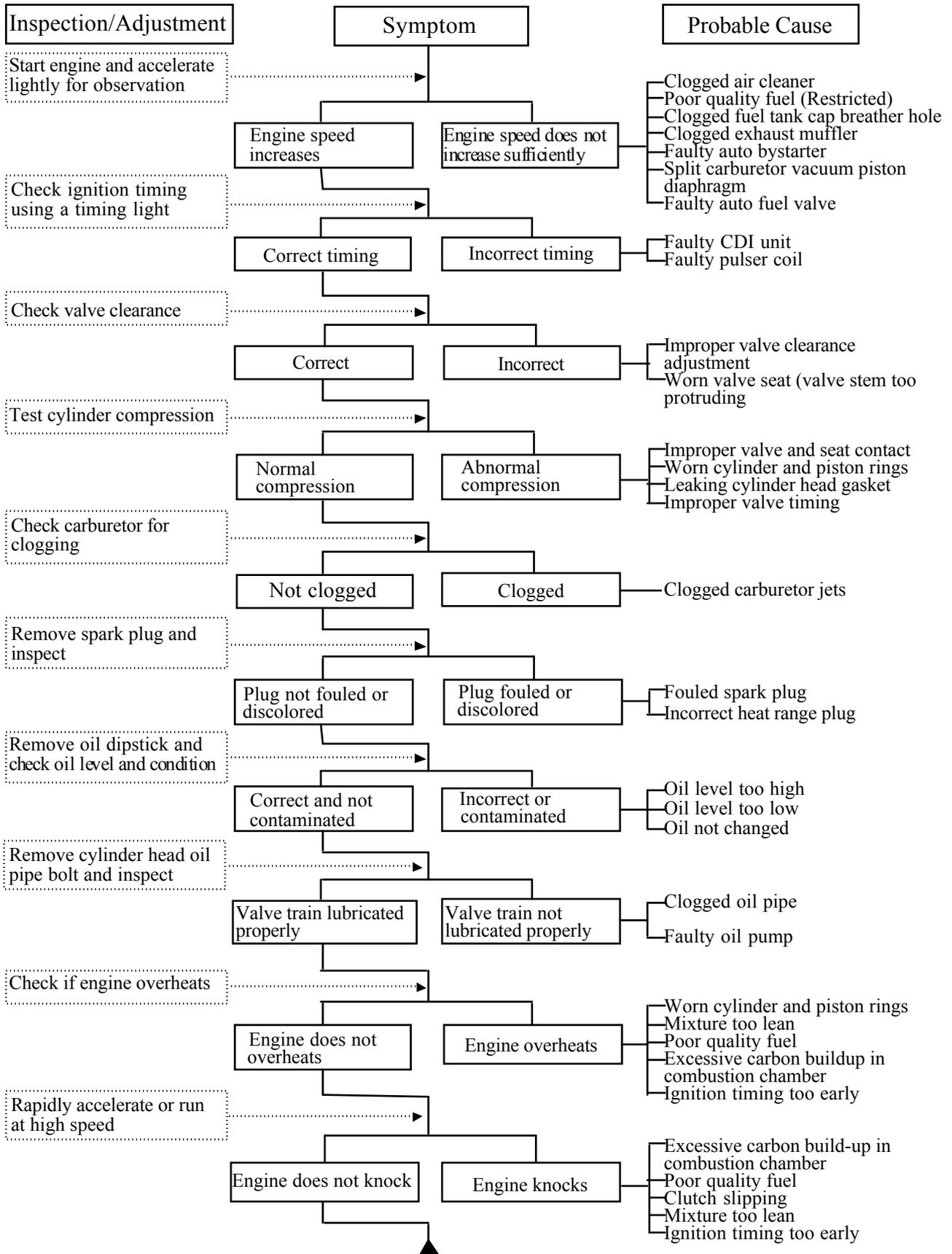
ENGINE WILL NOT START OR IS HARD TO START



1. GENERAL INFORMATION

FILLY LX 50

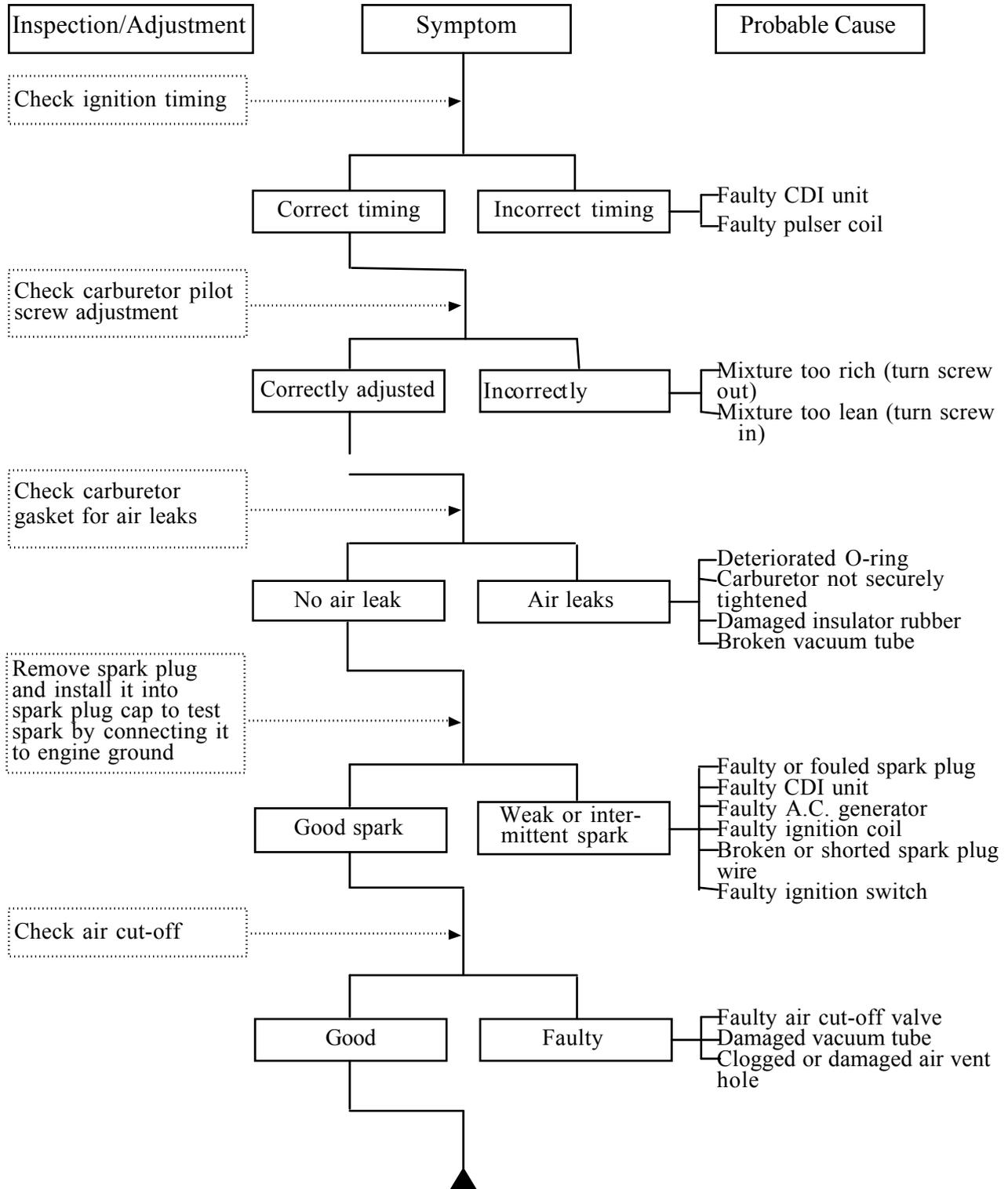
ENGINE LACKS POWER



1. GENERAL INFORMATION

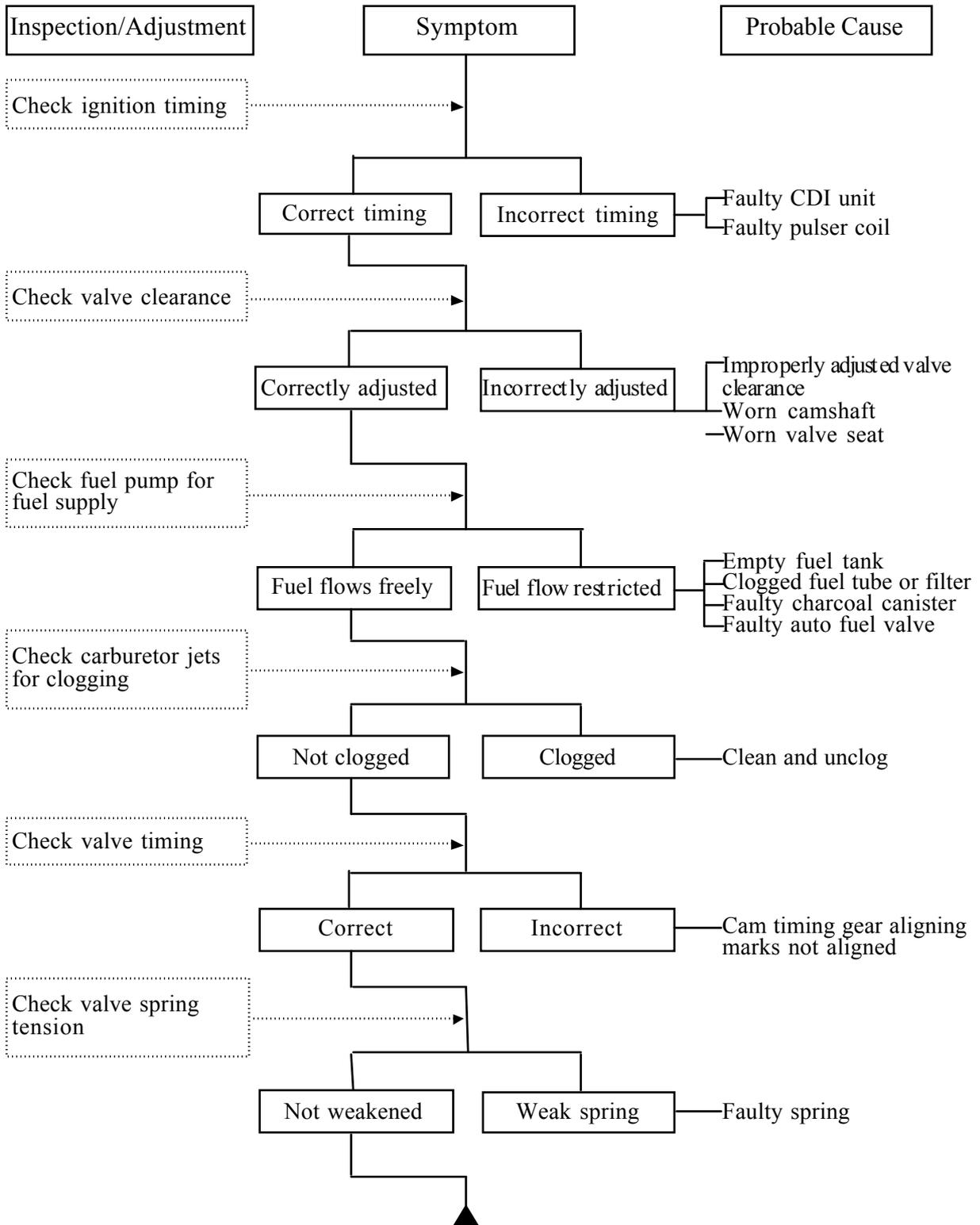
FILLY LX 50

POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)



1. GENERAL INFORMATION

POOR PERFORMANCE (AT HIGH SPEED)

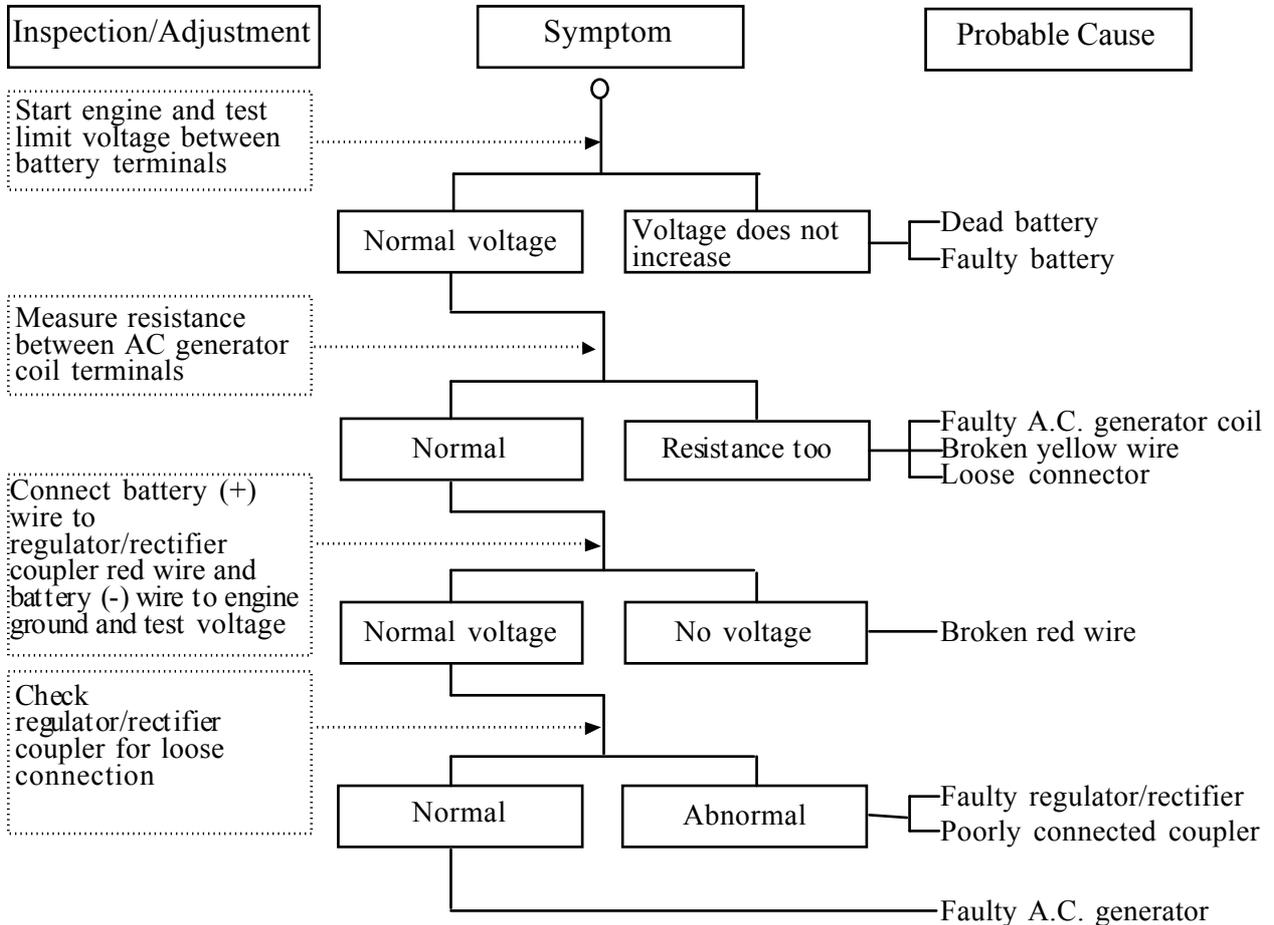


1. GENERAL INFORMATION

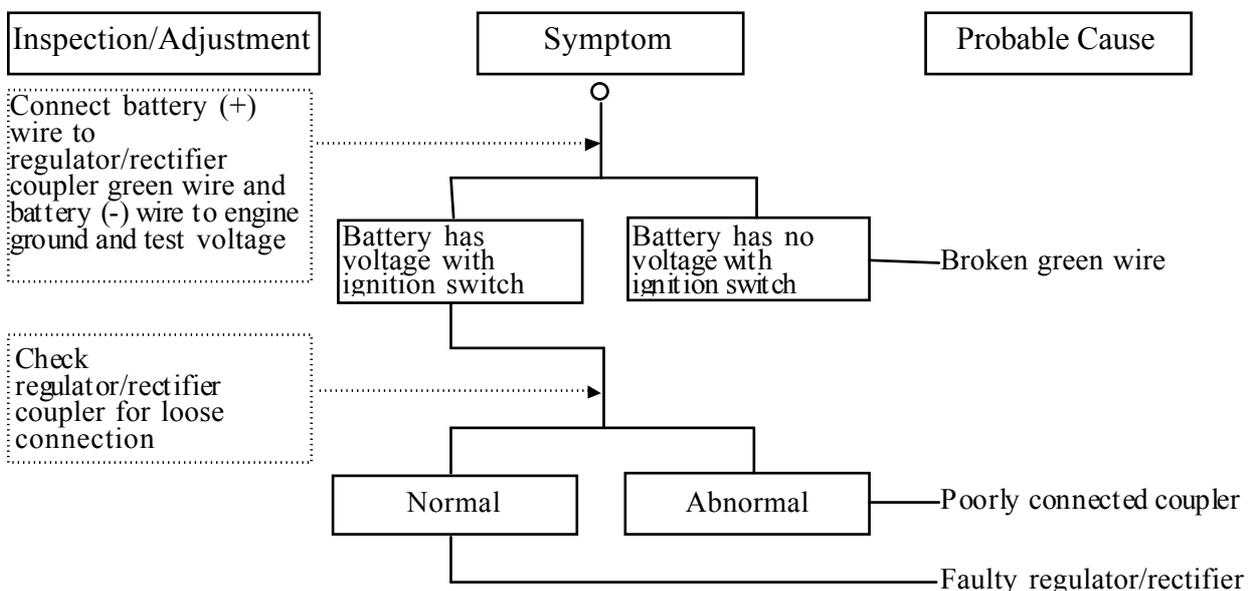
FILLY LX 50

POOR CHARGING (BATTERY OVER DISCHARGING OR OVERCHARGING)

Undercharging



Overcharging



1. GENERAL INFORMATION

FILLY LX 50

NO SPARK AT SPARK PLUG

