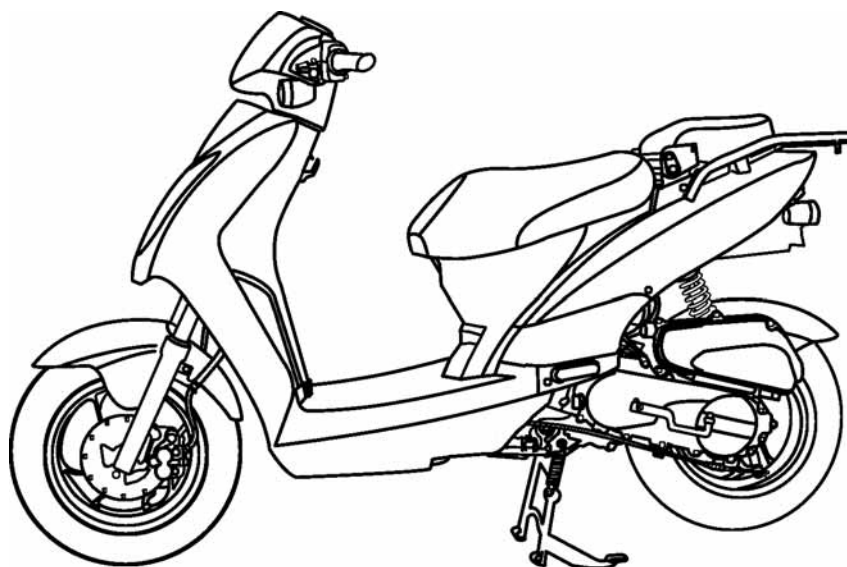


1. GENERAL INFORMATION

AGILITY 50
1

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



AGILITY 50



Location of Engine Serial Number

1. GENERAL INFORMATION

AGILITY 50

SPECIFICATIONS

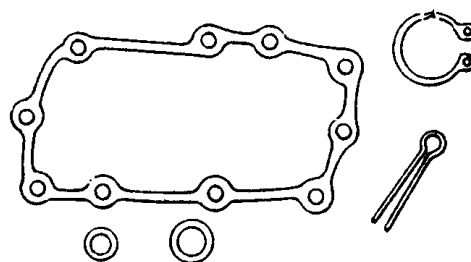
Motorcycle Name & Type			AGILITY 50		
Name & Model No.			KG10SA		
Overall length (mm)			1830		
Overall width (mm)			690		
Overall height (mm)			1130		
Wheel base (mm)			1325		
Engine type			O.H.C.		
Displacement			49.5cc		
Fuel Used			92# nonleaded gasoline		
Net weight (kg)		Front wheel	37.5		
		Rear wheel	55		
		Total	92.5		
Gross weight(kg)		Front wheel	38		
		Rear wheel	59		
		Total	97		
Tires		Front wheel	120/70 -12	56J	
		Rear wheel	130/70 -12	56J	
Ground clearance (mm)			112		
Perform- ance	Braking distance (m)		4 (Initial speed 20km/h)		
	Min. turning radius (m)		1.99		
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)		φ39.0 x 41.4		
	Compression ratio		11		
	Compression pressure (kg/cm ² -rpm)		18		
	Max. output		3.5/7500kw/(r/min)		
	Max. torque		0.35/7000kg 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)			1700±100rpm	
	Lubrication System	Lubrication type		Forced pressure & wet sump	
		Oil pump type		Inner/outer rotor type	
		Oil filter type		Full-flow filtration	
		Oil capacity		0.8 liter	
	Cooling Type			Forced air cooling	

Fuel System	Air cleaner type & No		Paper element, wet		
	Fuel capacity		5.0 liter		
	Carburetor	Type	CVK		
		Piston dia. (mm)			
		Venturi dia.(mm)	φ17equivalent		
Throttle type		Butterfly type			
Electrical Equipment	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		
		Operation	Automatic centrifugal type		
	Reduction Gear	Type	Two-stage reduction		
		Reduction ratio	1st	0.8-3.1	
			2nd	11.05	
Moving Device	Front Axle	Caster angle	27°		
		Trail length	—		
	Tire pressure (kg/cm ²)	Front	1.75		
		Rear	2.25		
	Turning angle	Left	45°		
		Right	45°		
Brake system type		Front	DISK (180mm) brake		
		Rear	Drum (110mm) brake		
Damping Device	Suspension type	Front	TELESCOPE		
		Rear	Unit Swing		
	Shock absorber distance	Front	80		
		Rear	82		
Frame type			Under Bone		

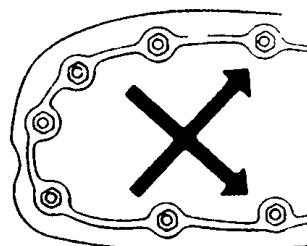
1. GENERAL INFORMATION

SERVICE PRECAUTIONS

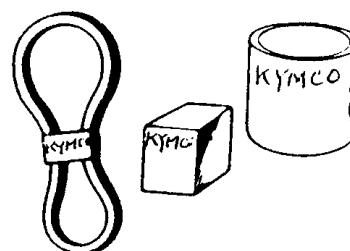
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



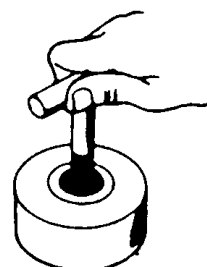
- When tightening bolts or nuts, begin with larger-diameter to smaller ones at several times, and tighten to the specified torque diagonally.



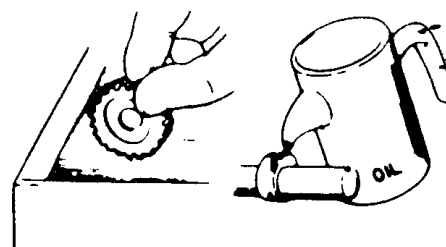
- Use genuine parts and lubricants



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

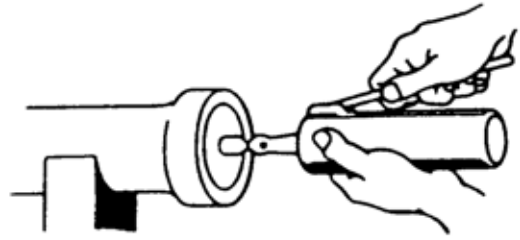


- After disassembly, clean removed parts. Lubricate sliding surfaces with engine oil before reassembly.



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



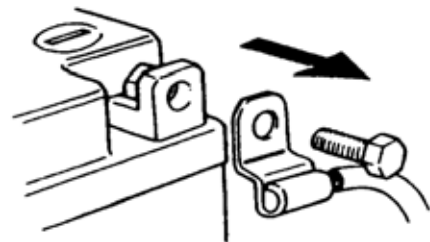
- After reassembly, check all parts for proper tightening and operation.



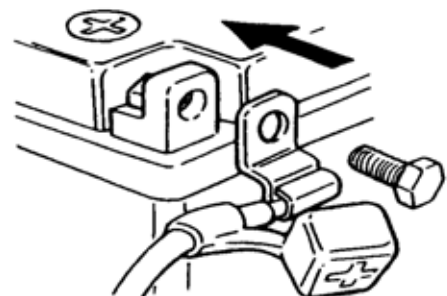
- When two persons work together, pay attention to the mutual working safety.



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

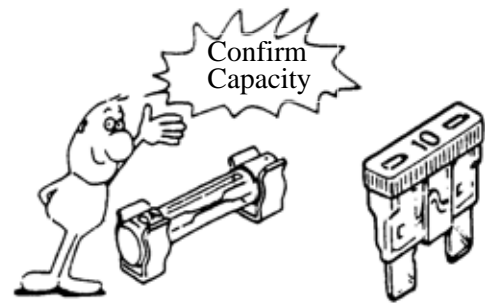


- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.



1. GENERAL INFORMATION

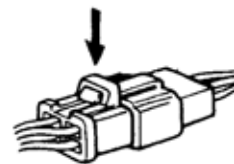
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.



- After operation, terminal caps shall be installed securely.



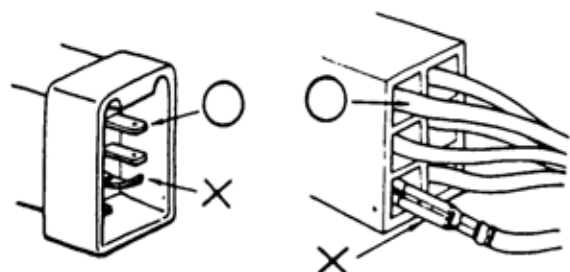
- When taking out the connector, the lock on the connector shall be released before operation.



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

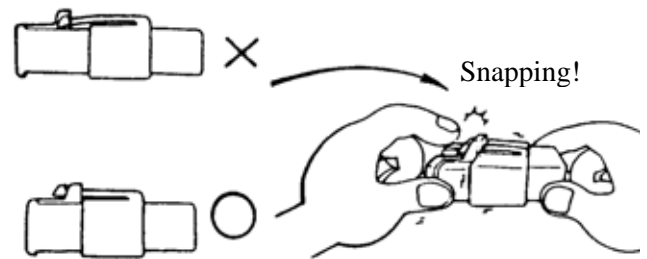


- Check if any connector terminal is bending, protruding or loose.

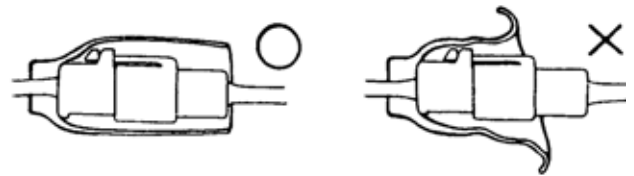


1. GENERAL INFORMATION

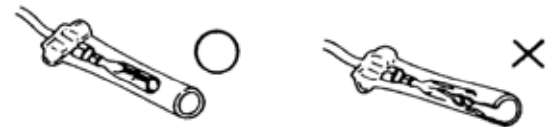
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



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



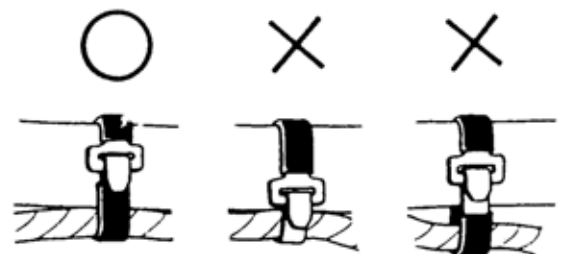
- Check the double connector cover for proper coverage and installation.



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

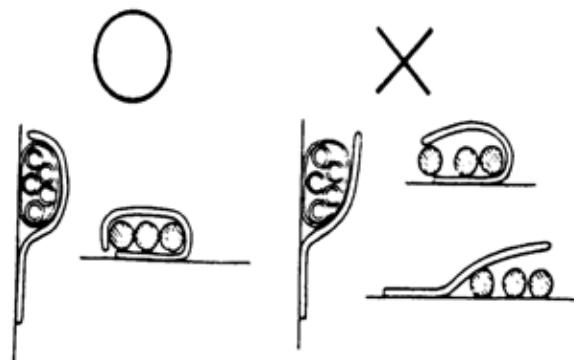


- Secure wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wire harnesses.



1. GENERAL INFORMATION

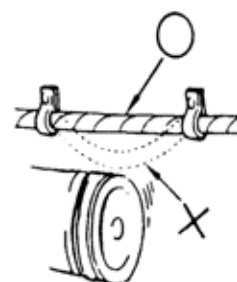
- After clamping, check each wire to make sure it is secure.



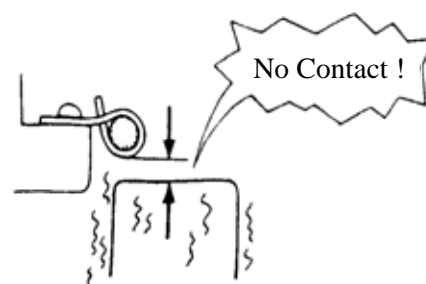
- Do not squeeze wires against the weld or its clamp



- 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.

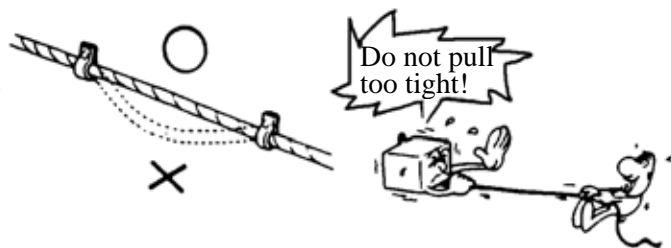


- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.

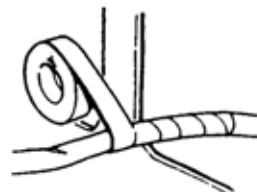


1. GENERAL INFORMATION

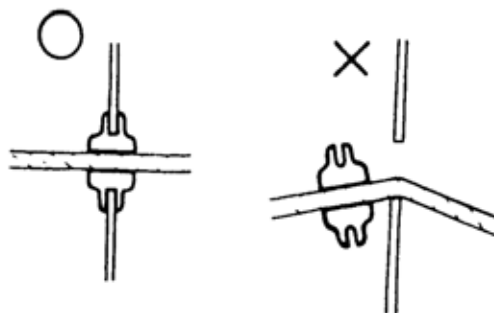
- Route harnesses so they are neither pulled tight nor have excessive slack.



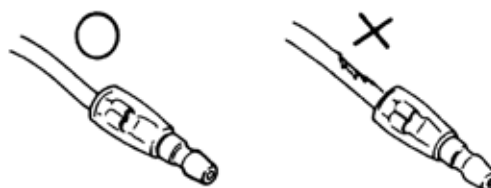
- Protect wires and harnesses with electrical tape or tube if they contact a sharp edge or corner



- 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.

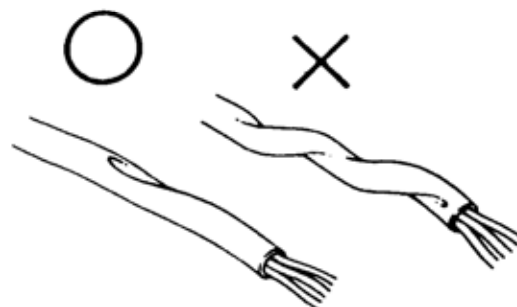


- When installing other parts, do not press or squeeze the wires.



1. GENERAL INFORMATION

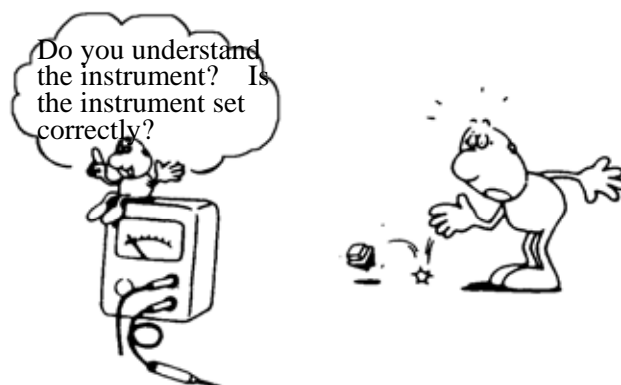
- After routing, check that the wire harnesses are not twisted or kinked.



- 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.

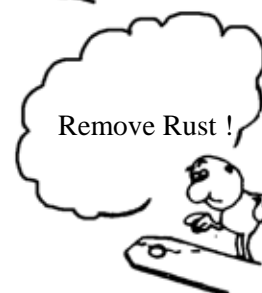


- When a testing device is used, make sure to understand the operating methods thoroughly and operate according to the operating instructions.



- 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

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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 Apply oil to threads
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	
Cylinder head flange nut	4	7	1.2-1.6	
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	Apply locking agent
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	

1. GENERAL INFORMATION

AGILITY 50

SPECIAL TOOLS

Tool Name	Tool No.	Remarks	Ref. Page
Bearing puller 10.12.15.18 mm	E037	10.12.15.18mm bearing	10-3 10-4 12-6
Bushing remover L	E032	11102 bush engine hanger rubber	
Bushing remover S	EO19	11203 bush rear cushion under rubber	
Crankshaft bearing puller	E030	91005 radial bearing	
Crankshaft protector	E029	13000 crankshaft comp 12mm.14mm	
Clutch spring compressor	E027	2301a driven pully assy	9-9 9-12
Cushion assemble & disassemble tool	F004	52400 cushion assy	13-4
Flywheel holder	E017	31110 flywheel comp.2310a pully assy driven	9-5 9-9 9-13 14-7 14-9
Flywheel puller	E002	Left hand thread 27mm	14-7
Long socket wrench 32mm 8angle	F002	50306 steering stem	12-21 12-22
Oil seal & bearing installer	E014	Oil seal & bearing install	
Tool boox	E033	Special tools storage	
Tappet adjuster	E036	90012 screw tappet	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	•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

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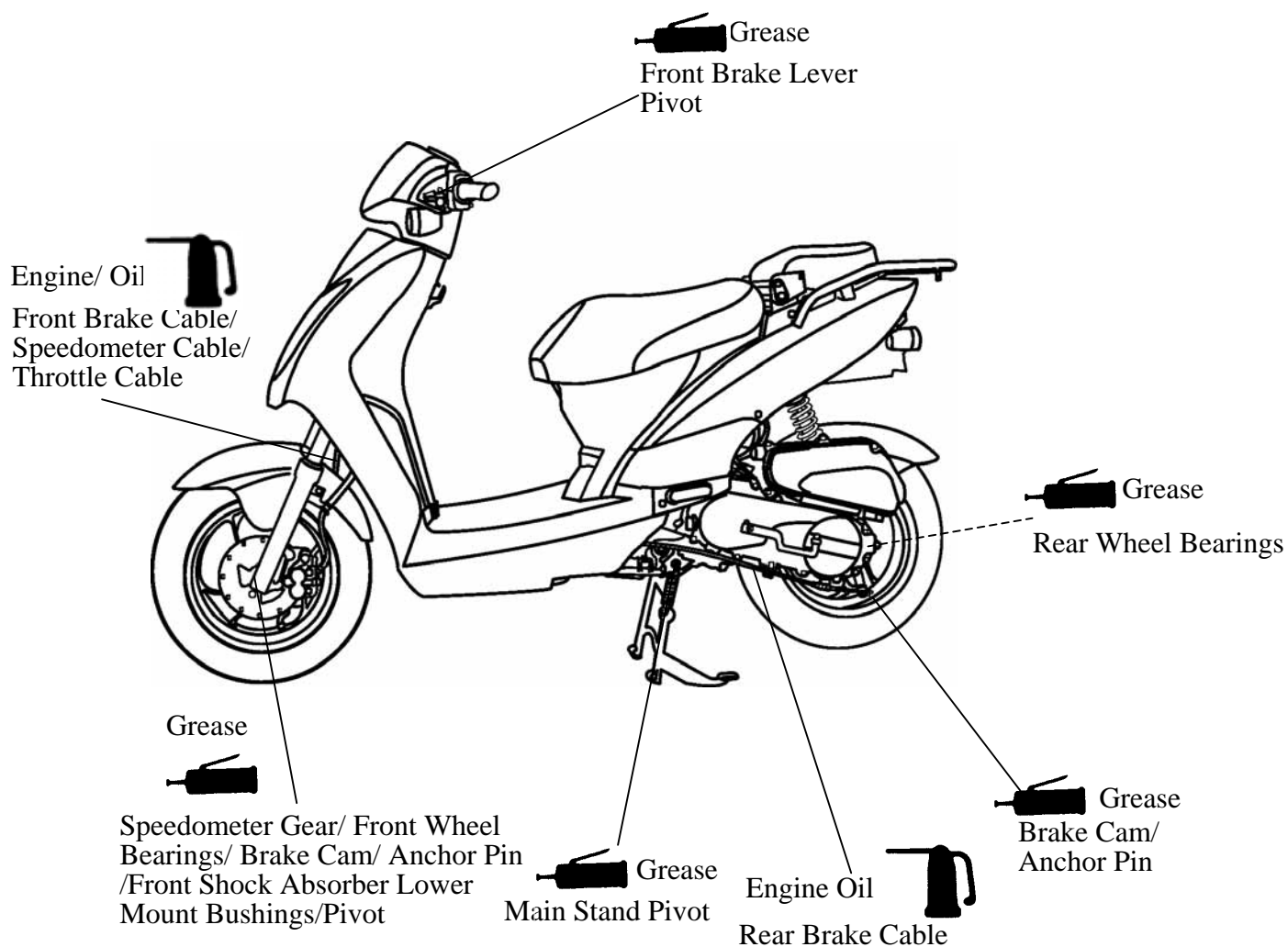
FRAME

The following is the lubrication points for the frame.

Use general purpose grease for parts not listed.

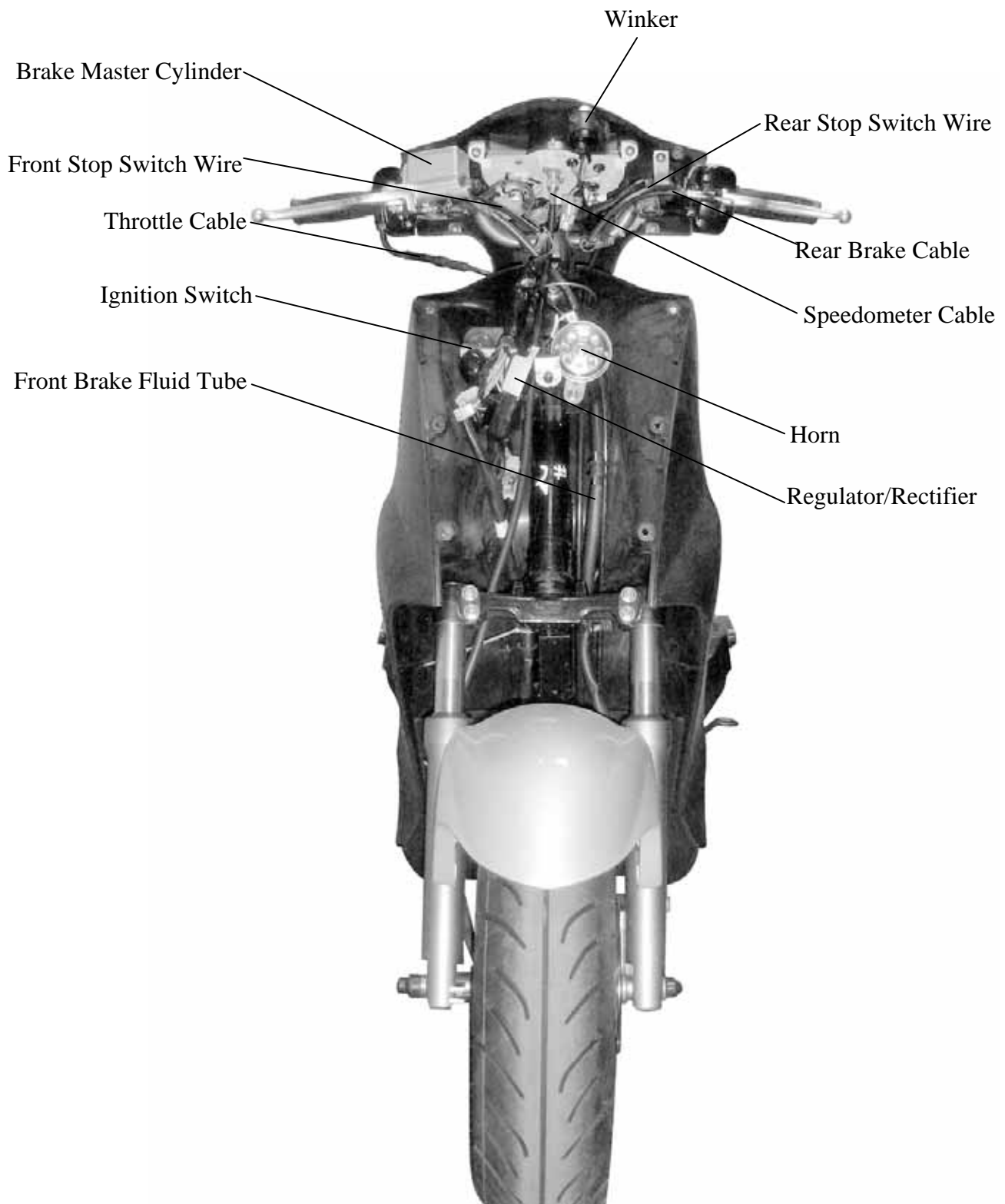
Apply clean engine oil or grease to cables and movable parts not specified.

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

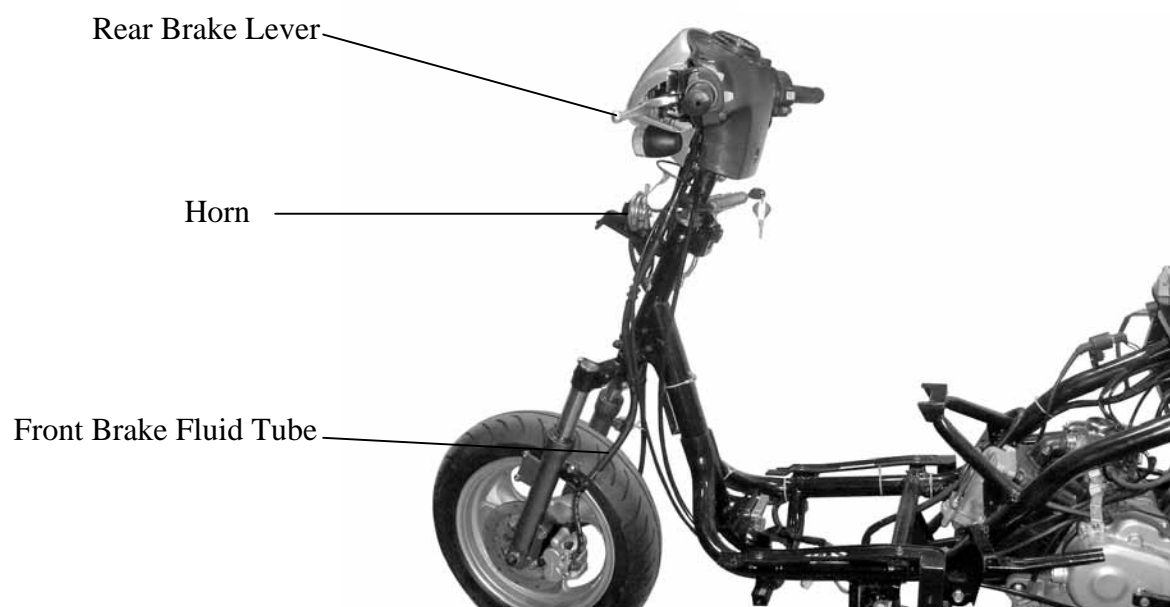
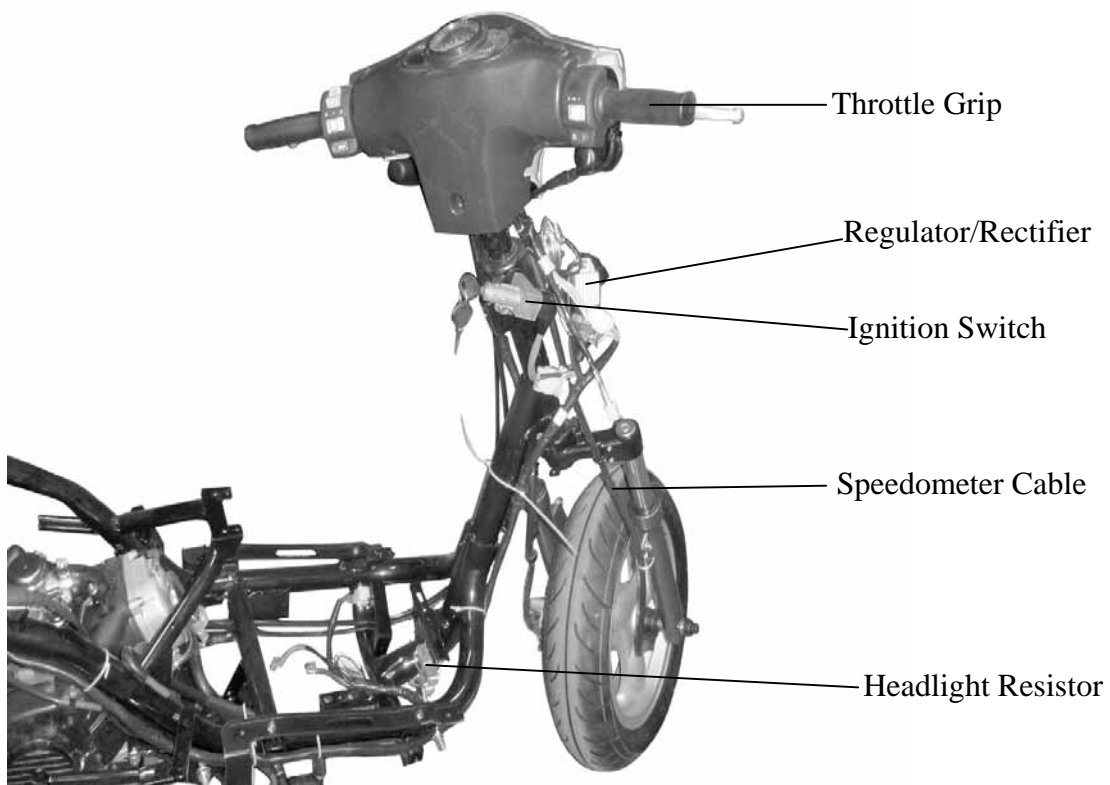


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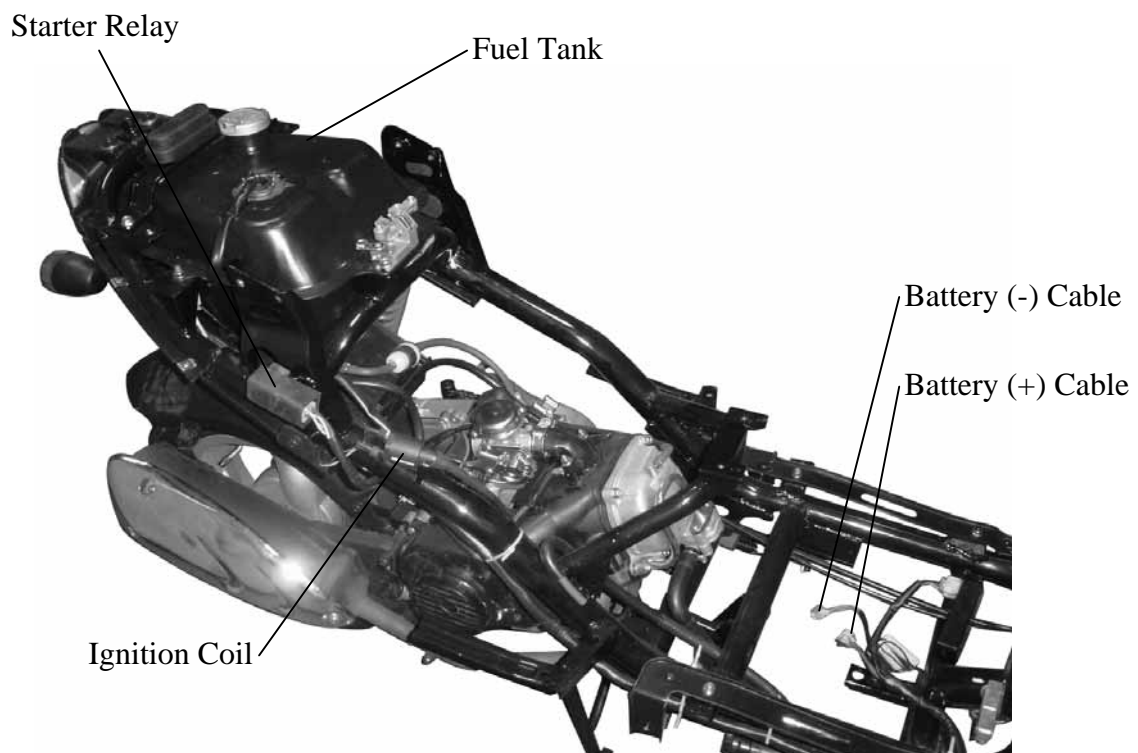
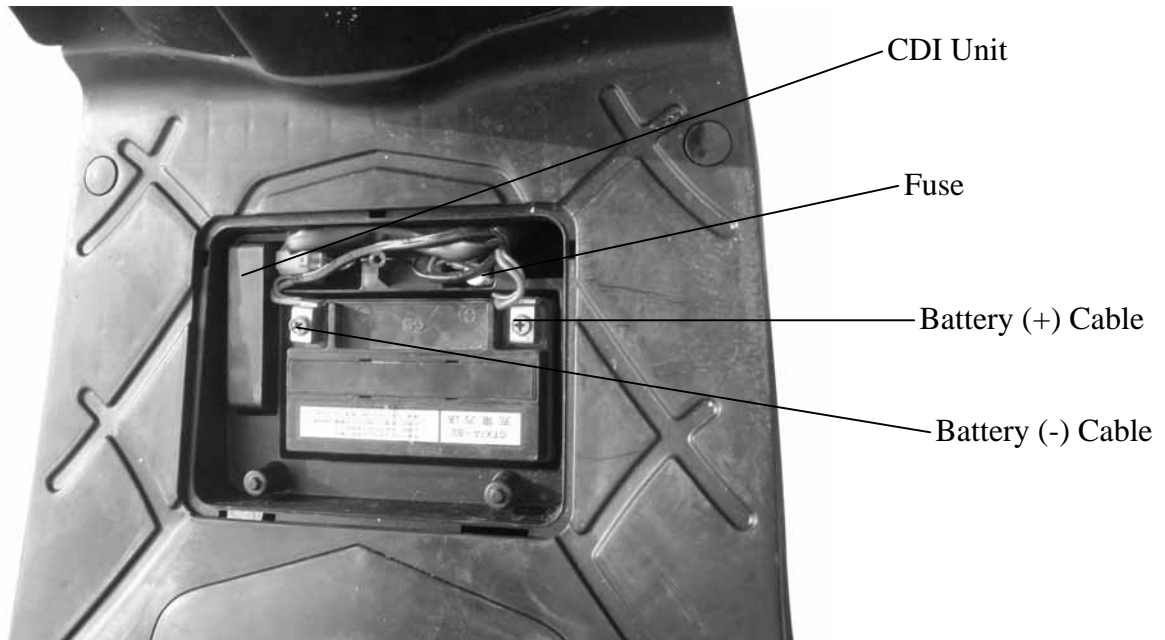
CABLE & HARNESS ROUTING



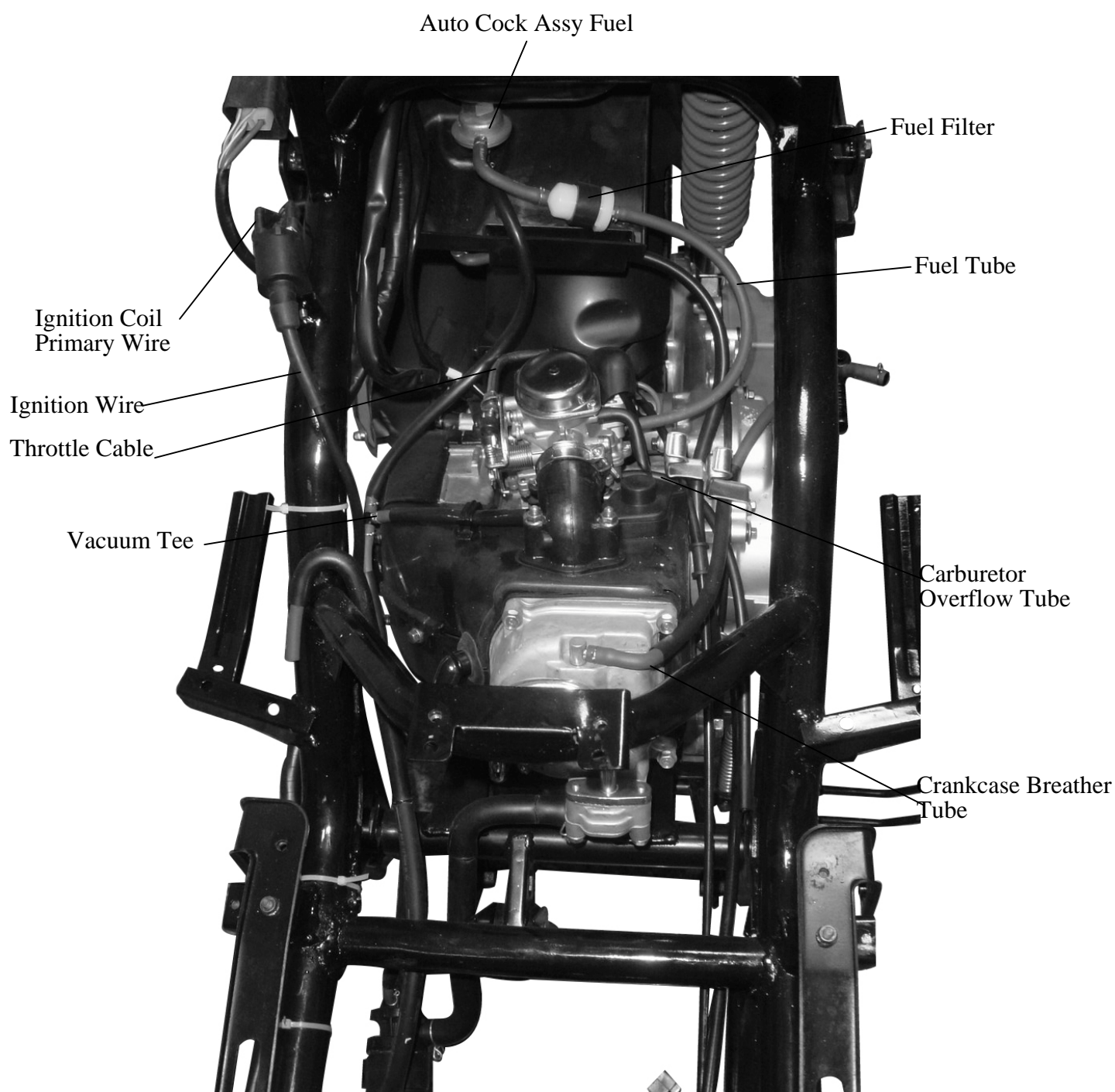
1. GENERAL INFORMATION



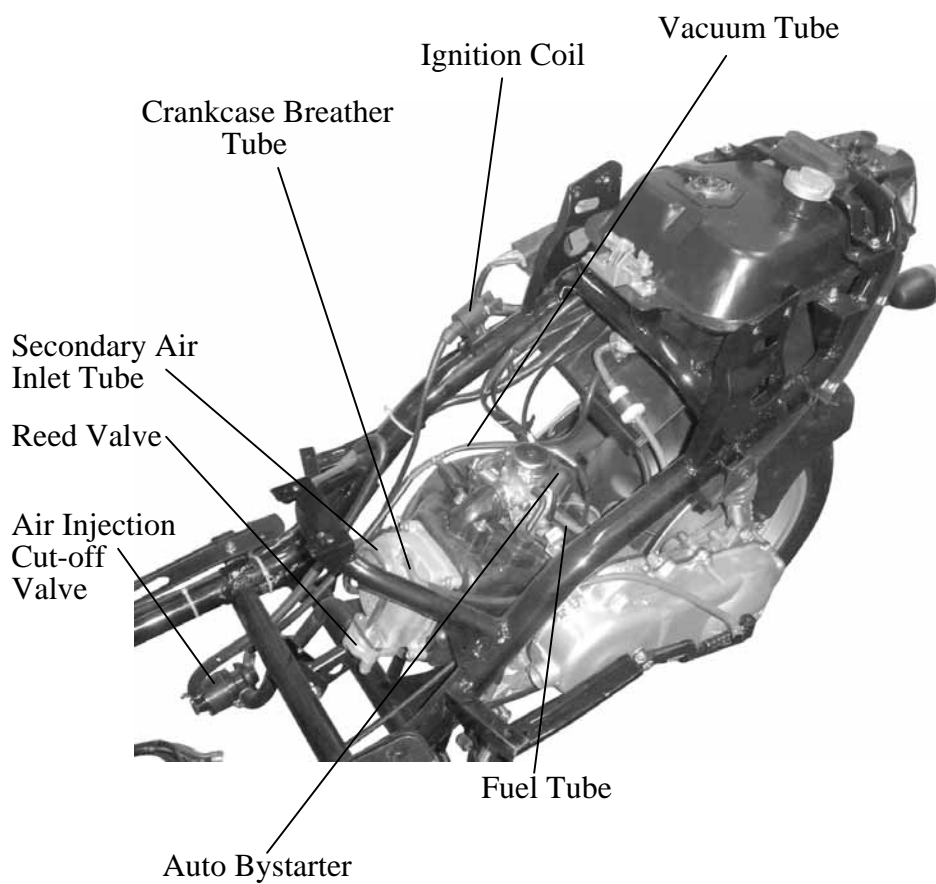
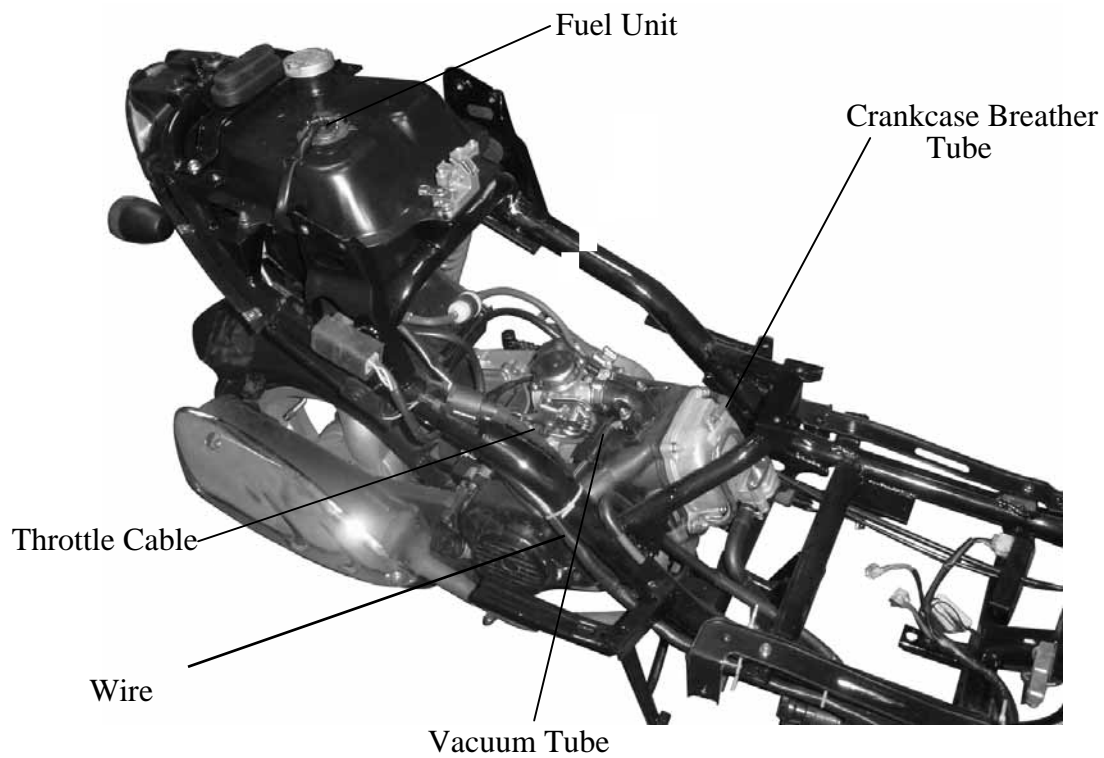
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1. GENERAL INFORMATION



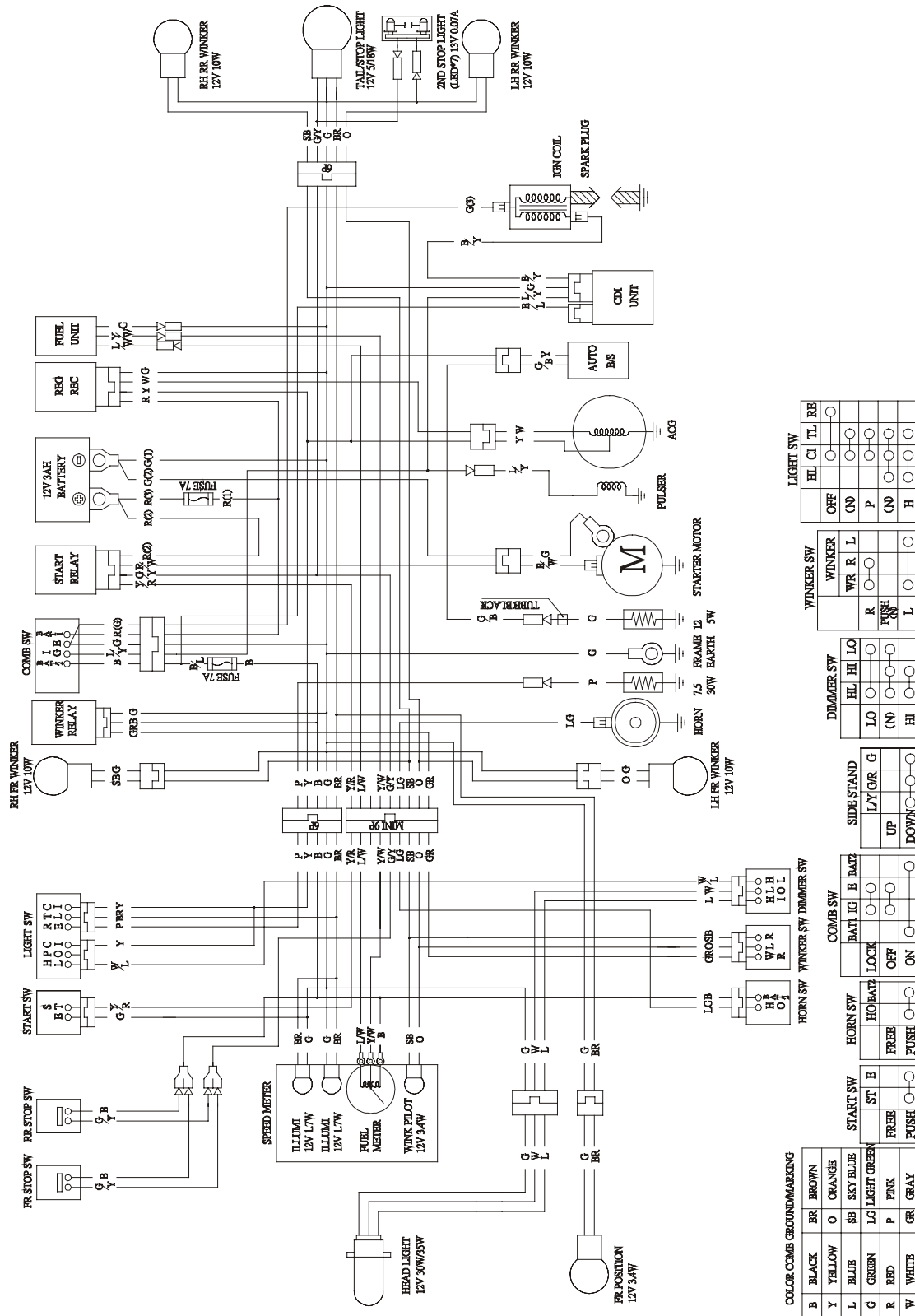
1. GENERAL INFORMATION



1. GENERAL INFORMATION

AGILITY 50

WIRING DIAGRAM

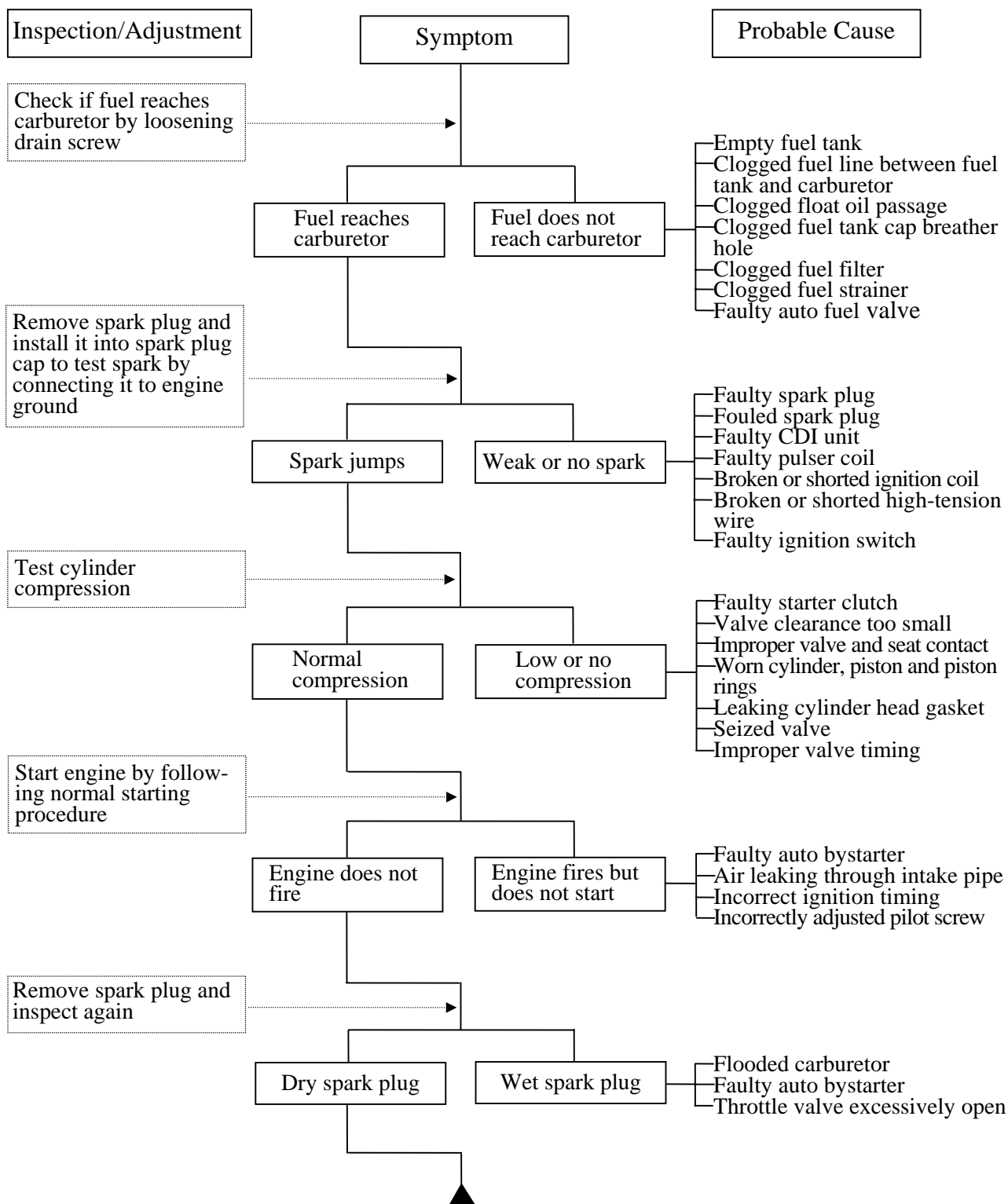


1. GENERAL INFORMATION

AGILITY 50

TROUBLESHOOTING

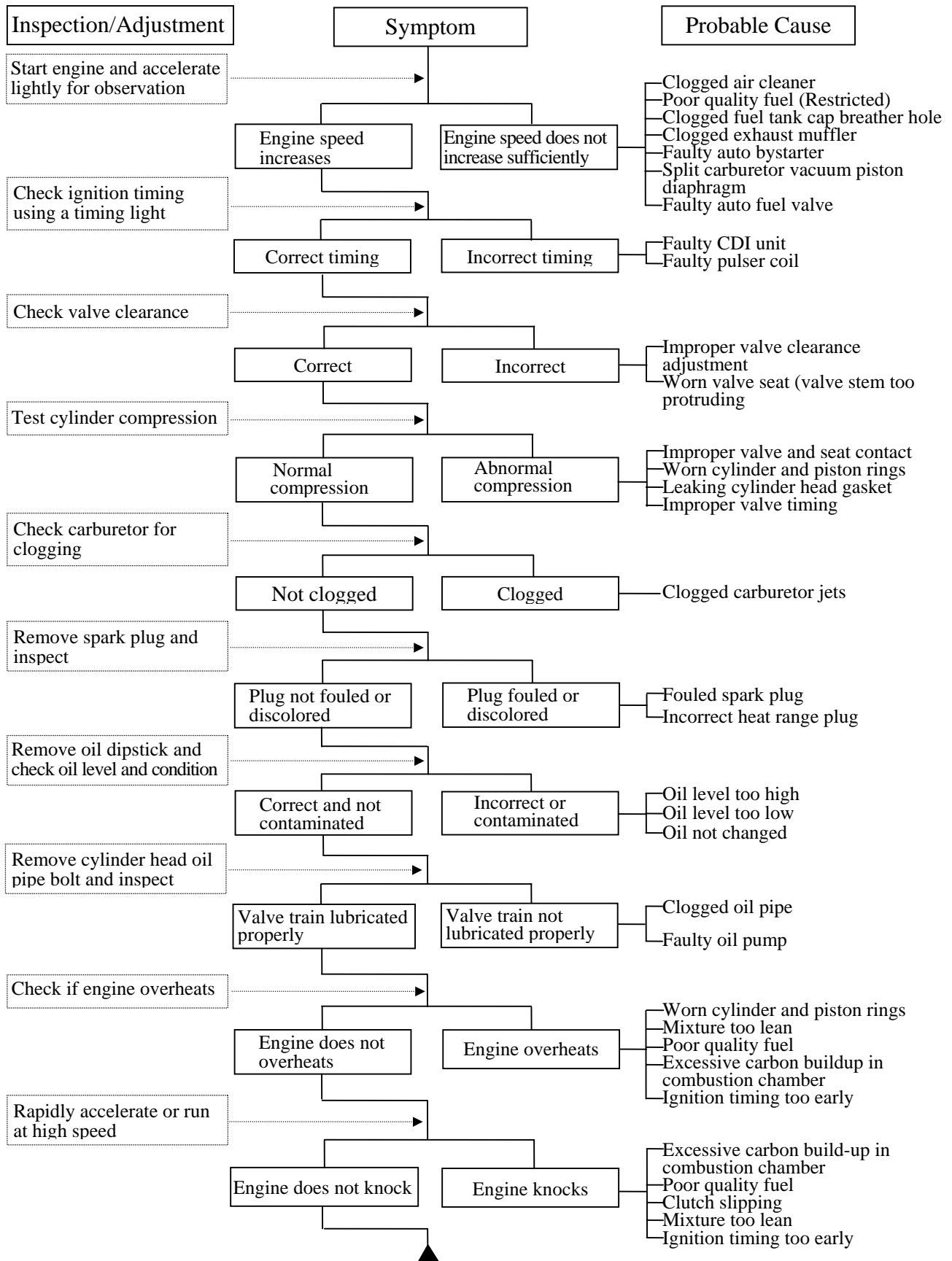
ENGINE WILL NOT START OR IS HARD TO START



1. GENERAL INFORMATION

AGILITY 50

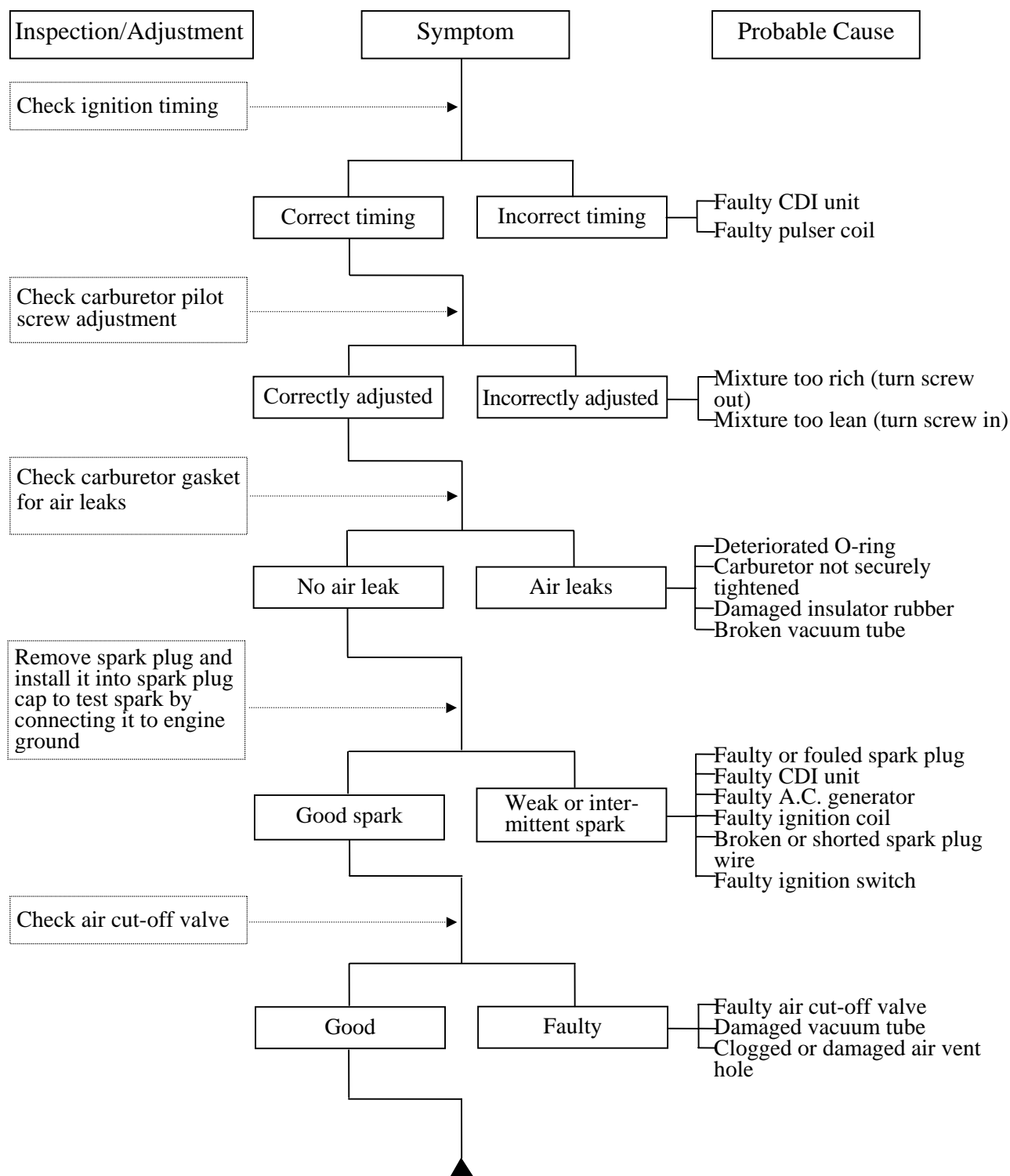
ENGINE LACKS POWER



1. GENERAL INFORMATION

AGILITY 50

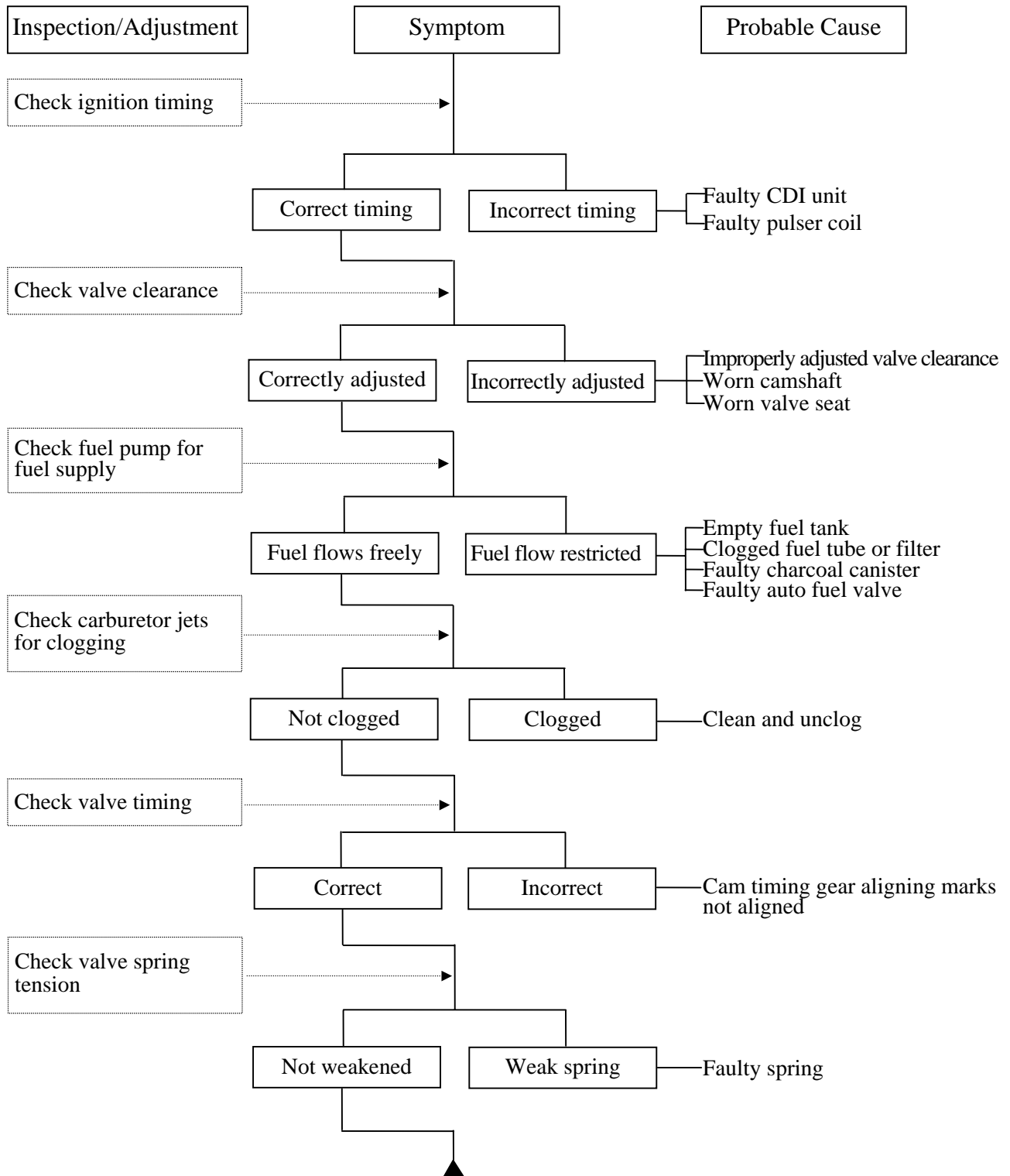
POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)



1. GENERAL INFORMATION

AGILITY 50

POOR PERFORMANCE (AT HIGH SPEED)

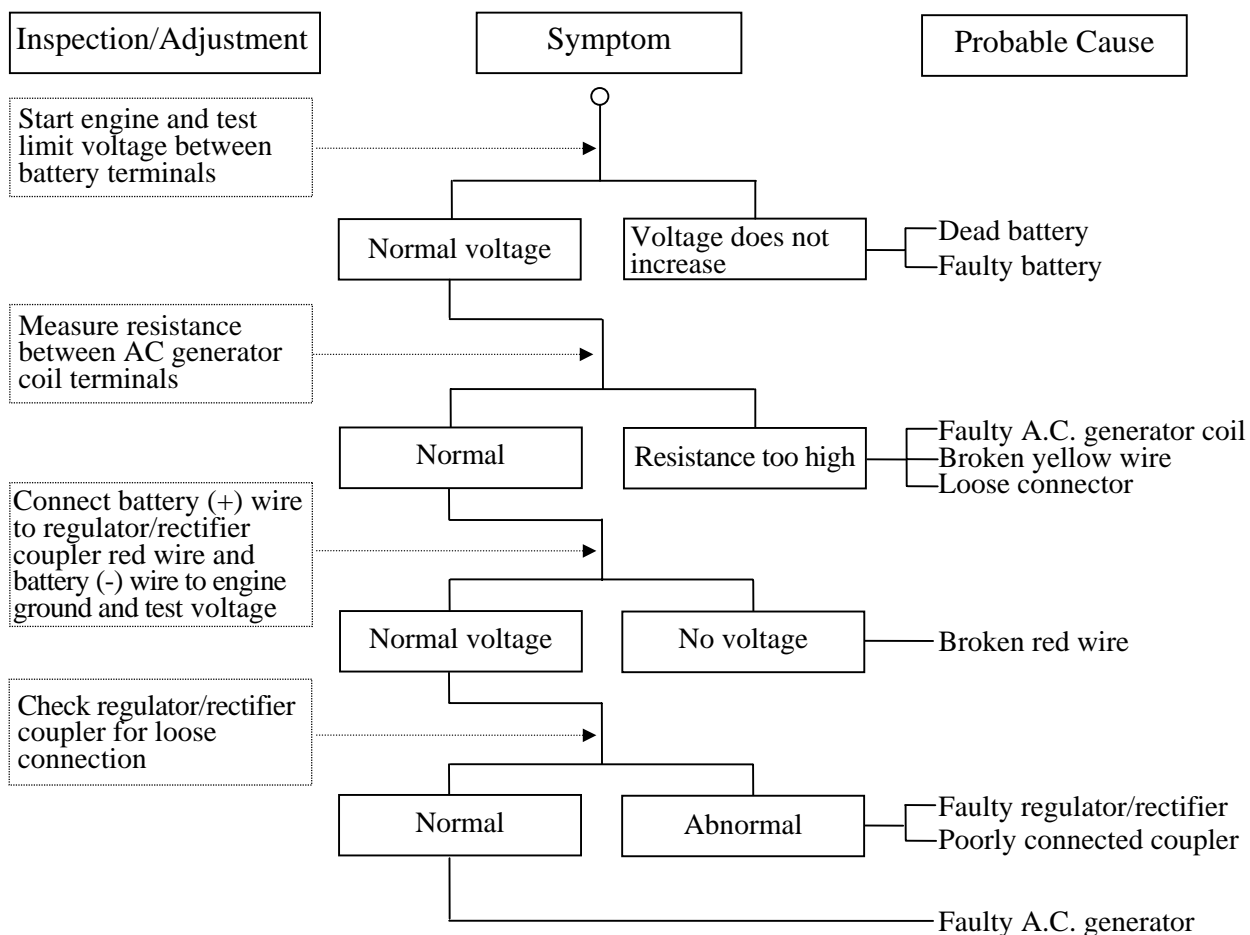


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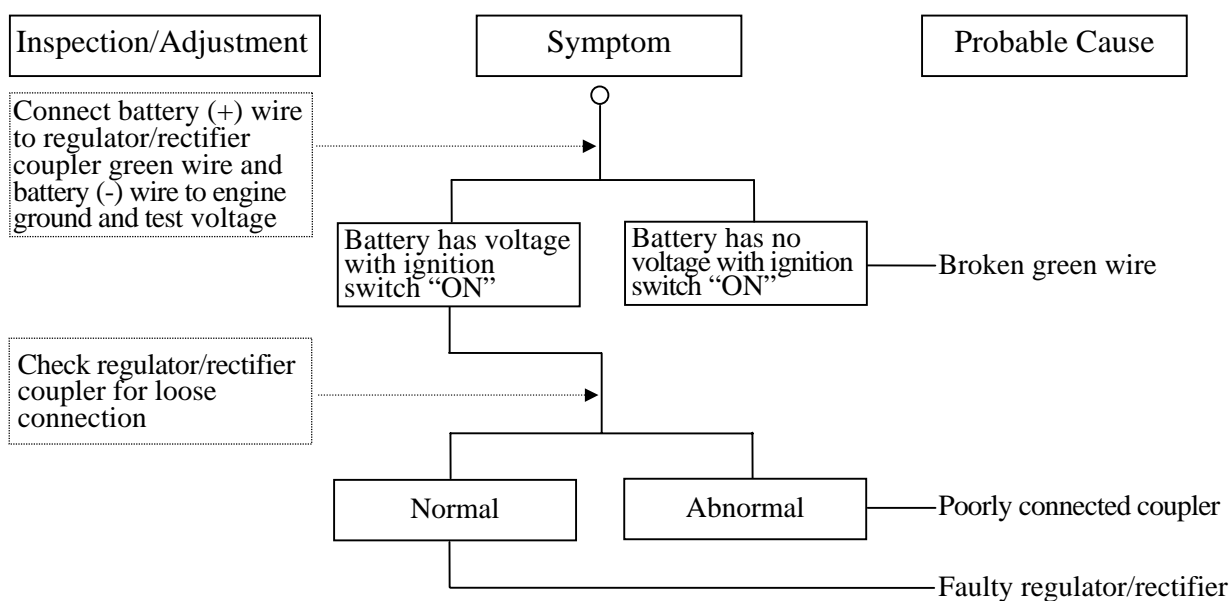
AGILITY 50

POOR CHARGING (BATTERY OVER DISCHARGING OR OVERCHARGING)

Undercharging



Overcharging



1. GENERAL INFORMATION

AGILITY 50

NO SPARK AT SPARK PLUG

