

1. GENERAL INFORMATION

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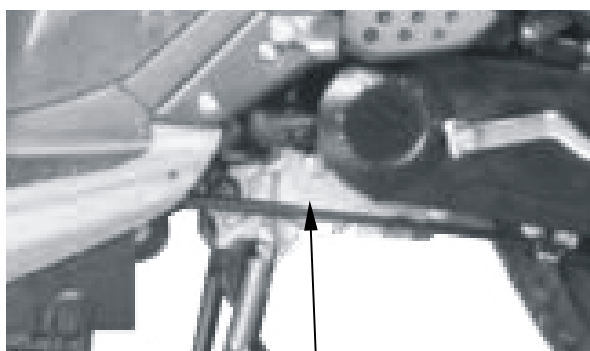
1

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ENGINE SERIAL NUMBER



Frame Serial Number



Location of Engine Serial Number

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SPECIFICATIONS

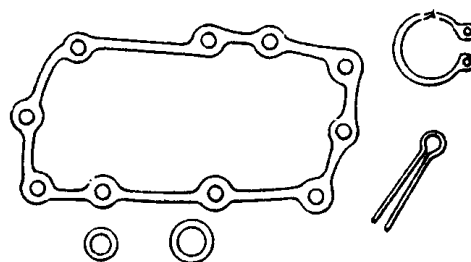
Motorcycle Name & Type			SUPER8 50			
Name & Model No.			LEJ2			
Overall length (mm)			1940			
Overall width (mm)			745			
Overall height (mm)			1220			
Wheel base (mm)			1365			
Engine type			O.H.C.			
Displacement			50cc			
Fuel Used			92# nonleaded gasoline			
Net weight (kg)	Front wheel		43			
	Rear wheel		55			
	Total		108			
Gross weight(kg)	Front wheel		45			
	Rear wheel		67			
	Total		144			
Tires	Front wheel		100/80 -14 56J			
	Rear wheel		120/80 -14 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		2.4/7500kw/(r/min)			
	Max. torque		3.2/7000kg 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)			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		0.8 liter		
	Cooling Type			Forced air cooling		

Fuel System	Air cleaner type & No		Paper element, wet	
	Fuel capacity		6.0 liter	
	Carburetor	Type	CVK	
		Piston dia. (mm)	18	
Venturi dia.(mm)		φ18.5equivalent		
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	12V7AH		
Power Drive System	Clutch	Type	Dry multi-disc clutch	
	Transmis- sion 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	

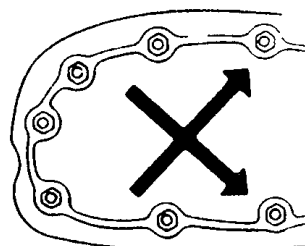
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SERVICE PRECAUTIONS

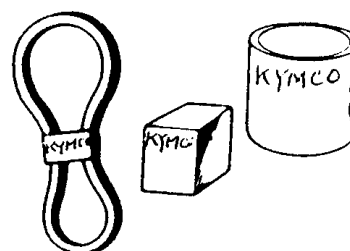
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



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



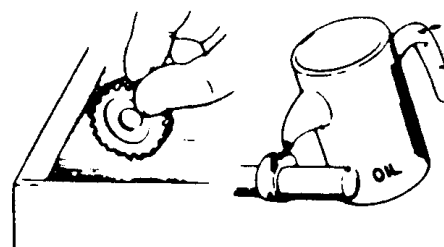
- Use genuine parts and lubricants



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



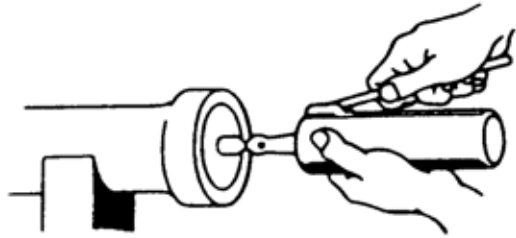
- After disassembly, clean removed parts. Lubricate sliding surfaces with engine oil before reassembly.



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



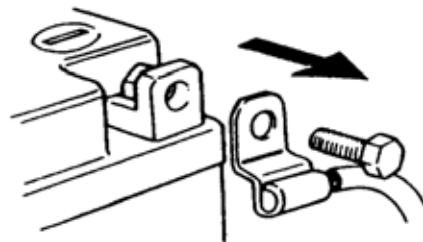
- After reassembly, check all parts for proper tightening and operation.



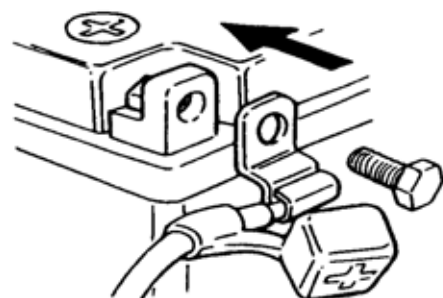
- When two persons work together, pay attention to the mutual working safety.



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



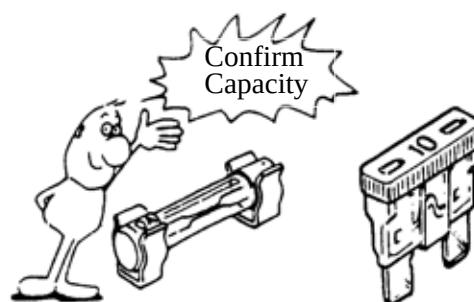
- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.



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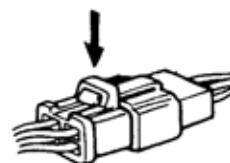
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.



- After operation, terminal caps shall be installed securely.



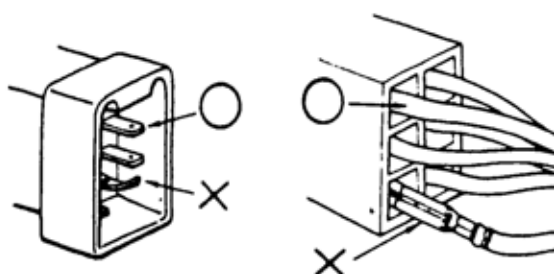
- When taking out the connector, the lock on the connector shall be released before operation.



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

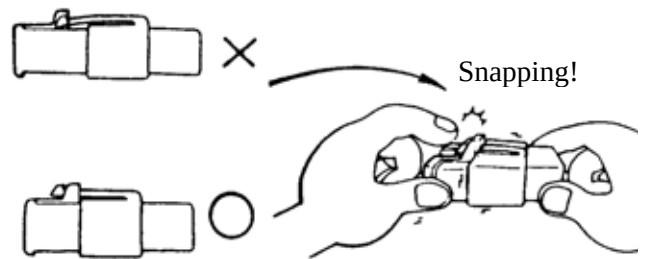


- Check if any connector terminal is bending, protruding or loose.

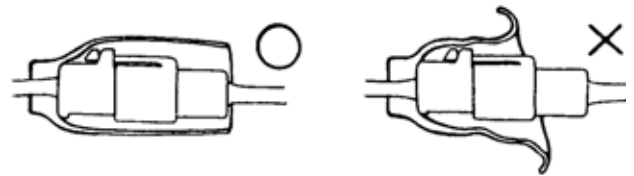


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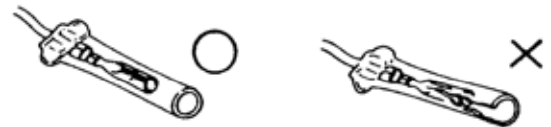
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



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



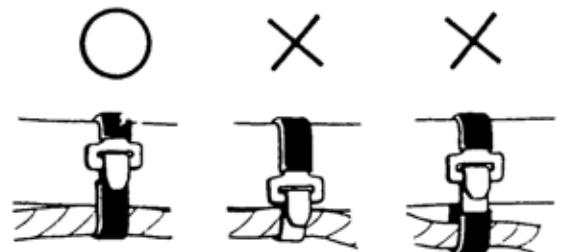
- Check the double connector cover for proper coverage and installation.



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

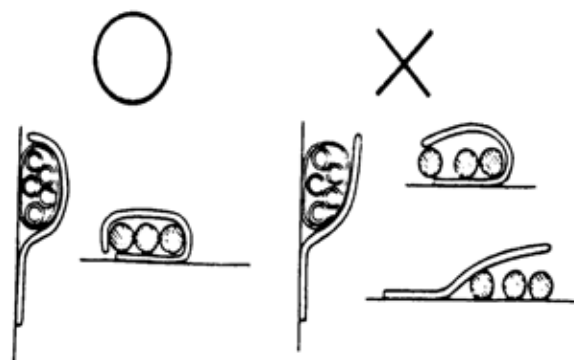


- Secure wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wire harnesses.



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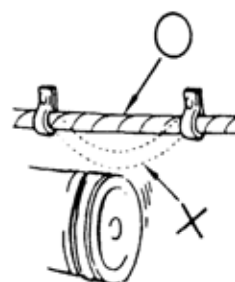
- After clamping, check each wire to make sure it is secure.



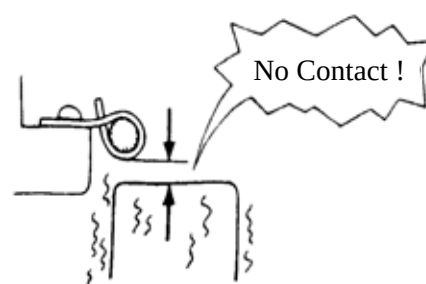
- Do not squeeze wires against the weld or its clamp



- 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.

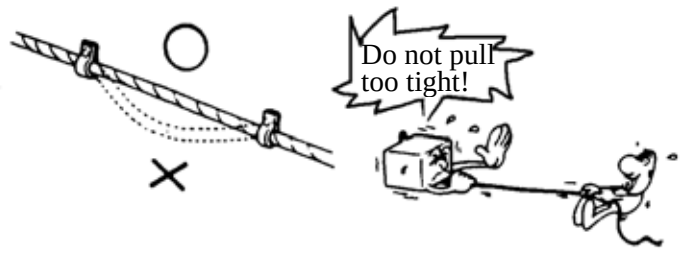


- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.

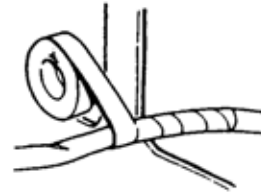


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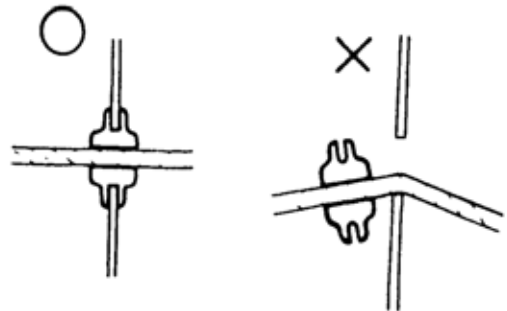
- Route harnesses so they are neither pulled tight nor have excessive slack.



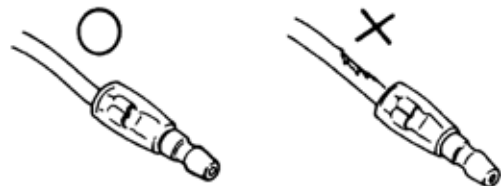
- Protect wires and harnesses with electrical tape or tube if they contact a sharp edge or corner



- 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.



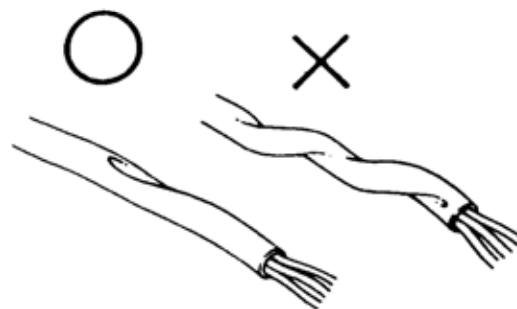
- When installing other parts, do not press or squeeze the wires.



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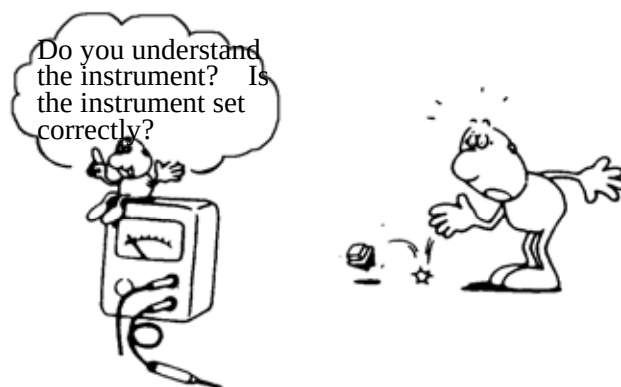
- After routing, check that the wire harnesses are not twisted or kinked.



- 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.



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■ 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.

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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	
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

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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

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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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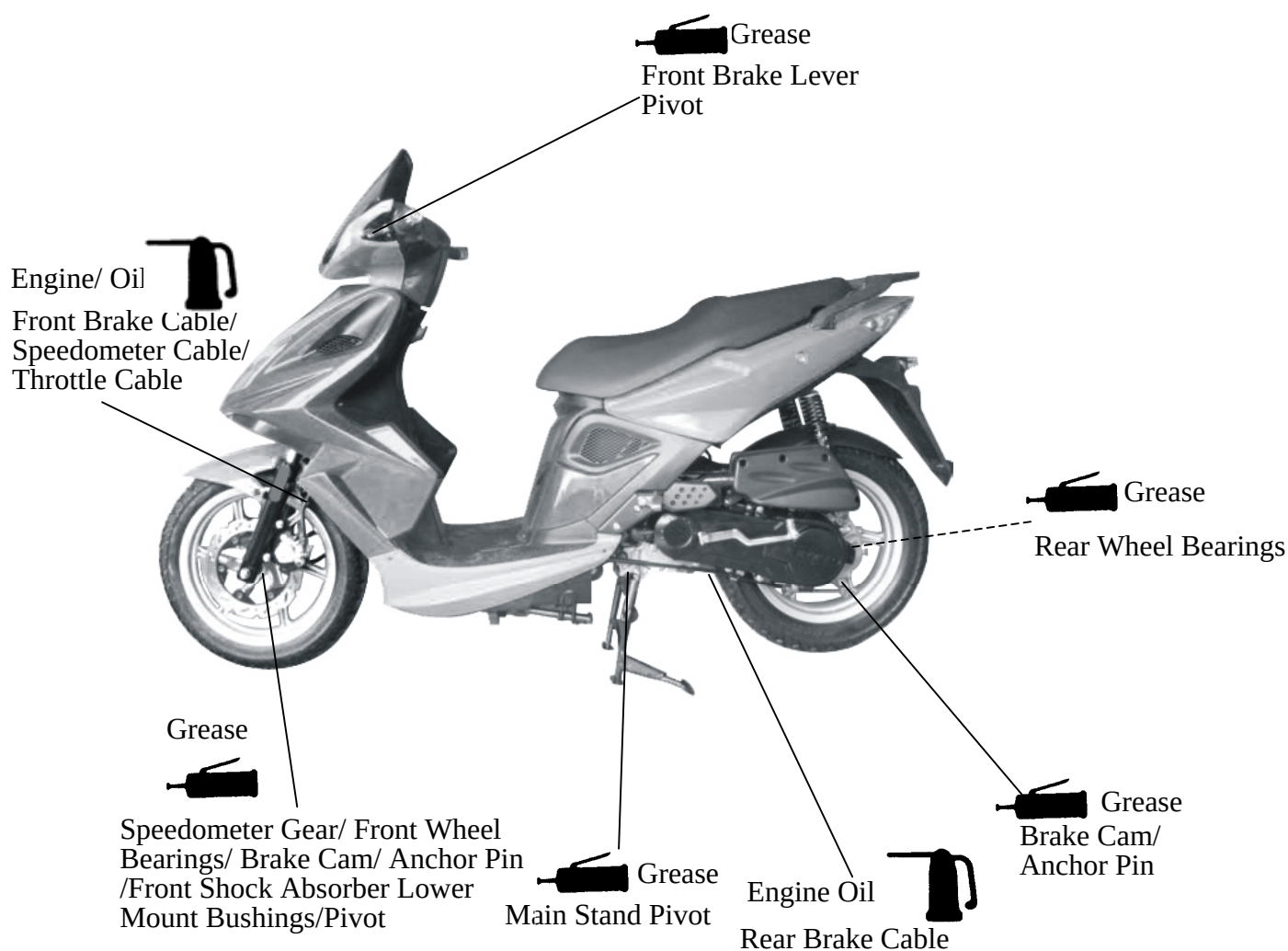
FRAME

The following is the lubrication points for the frame.

Use general purpose grease for parts not listed.

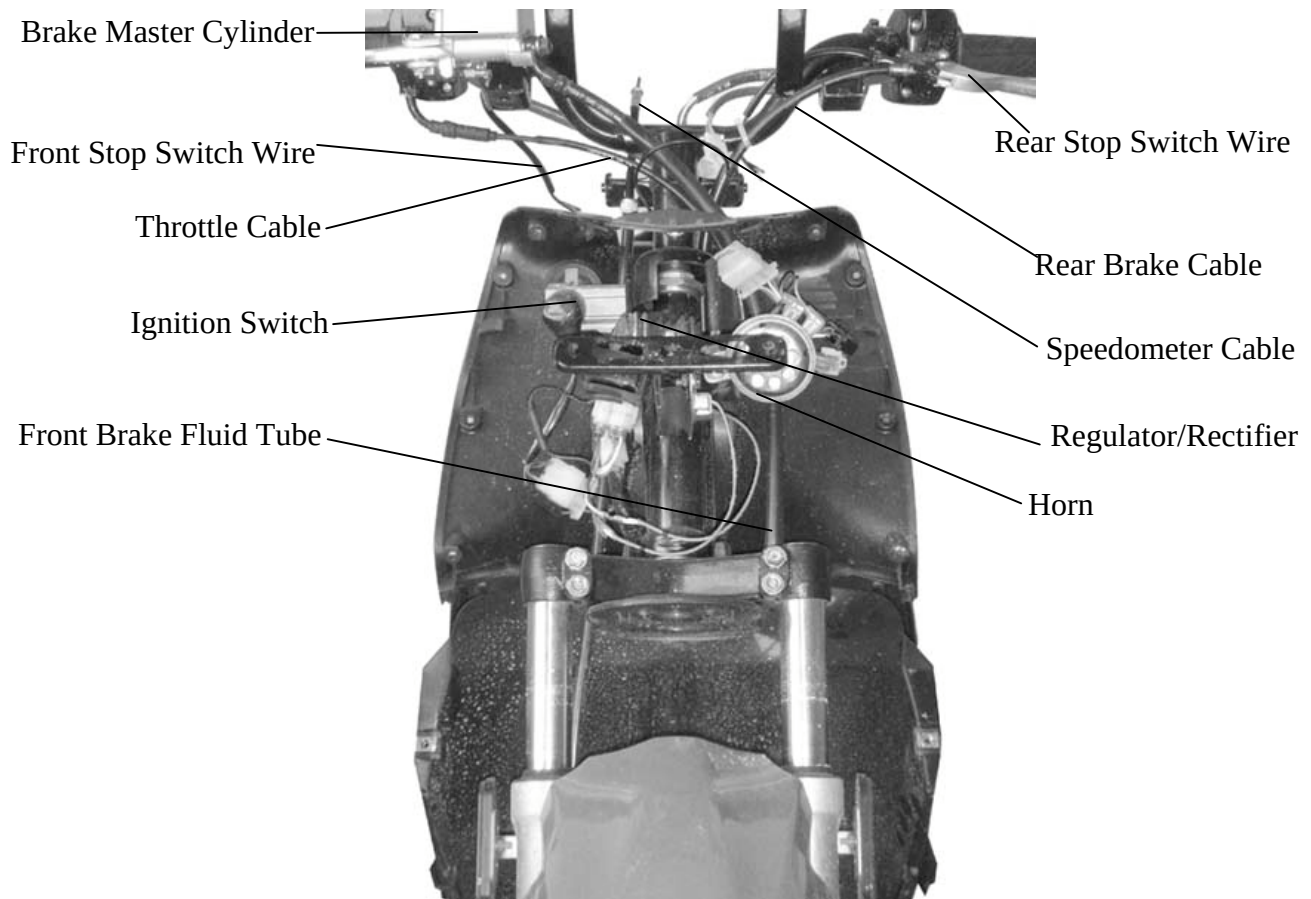
Apply clean engine oil or grease to cables and movable parts not specified.

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

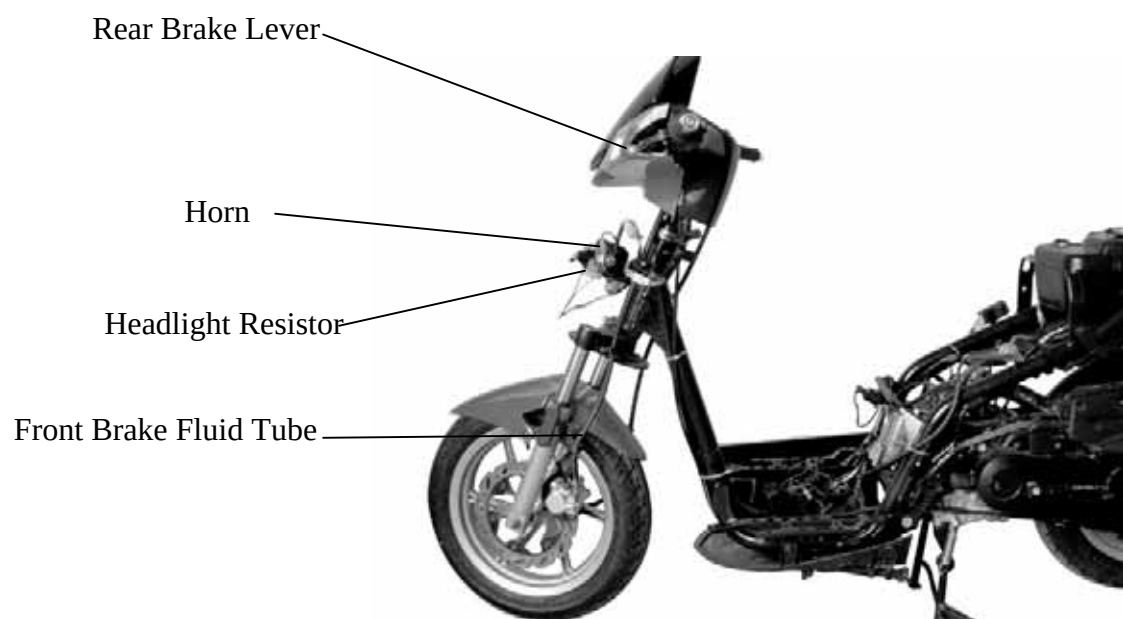
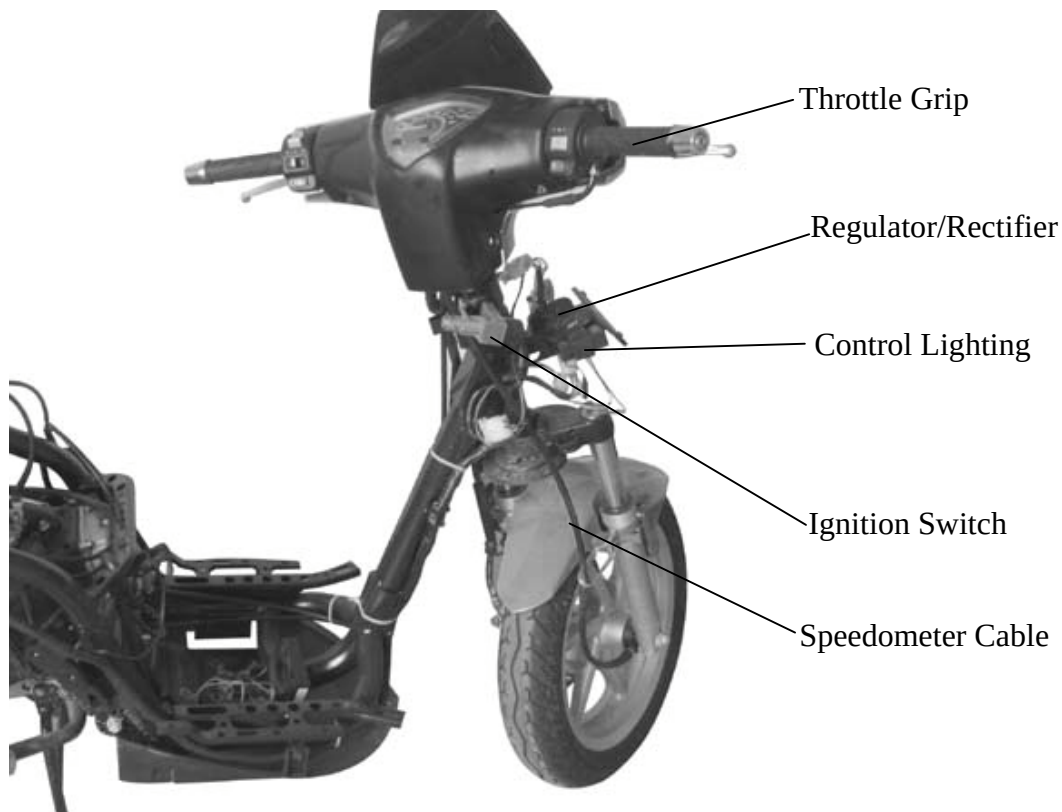


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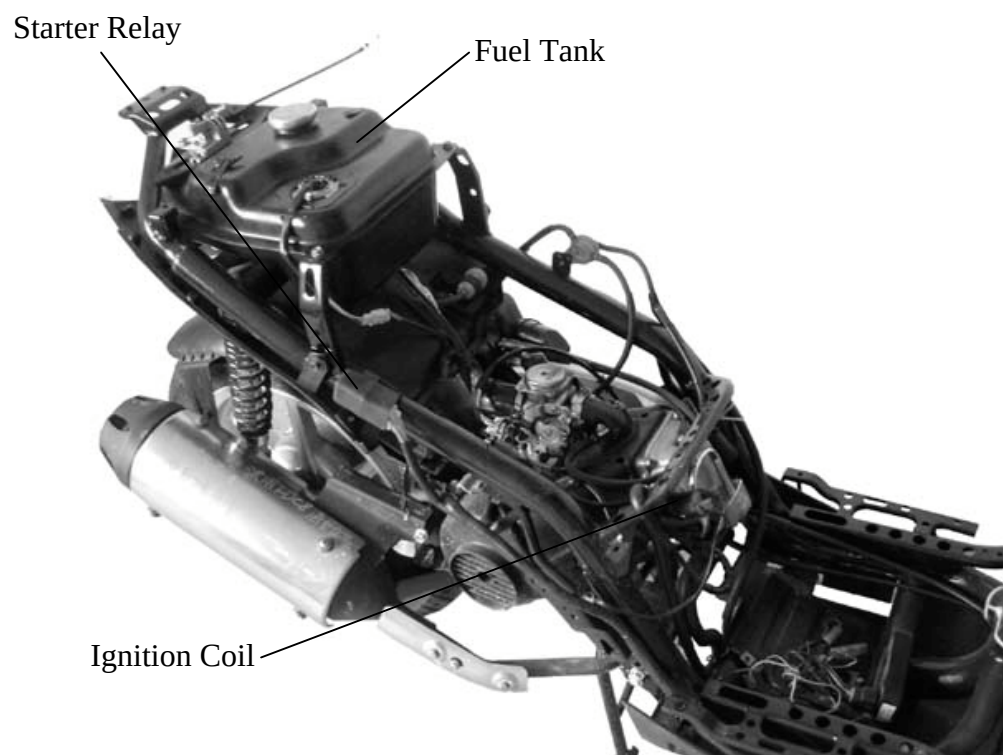
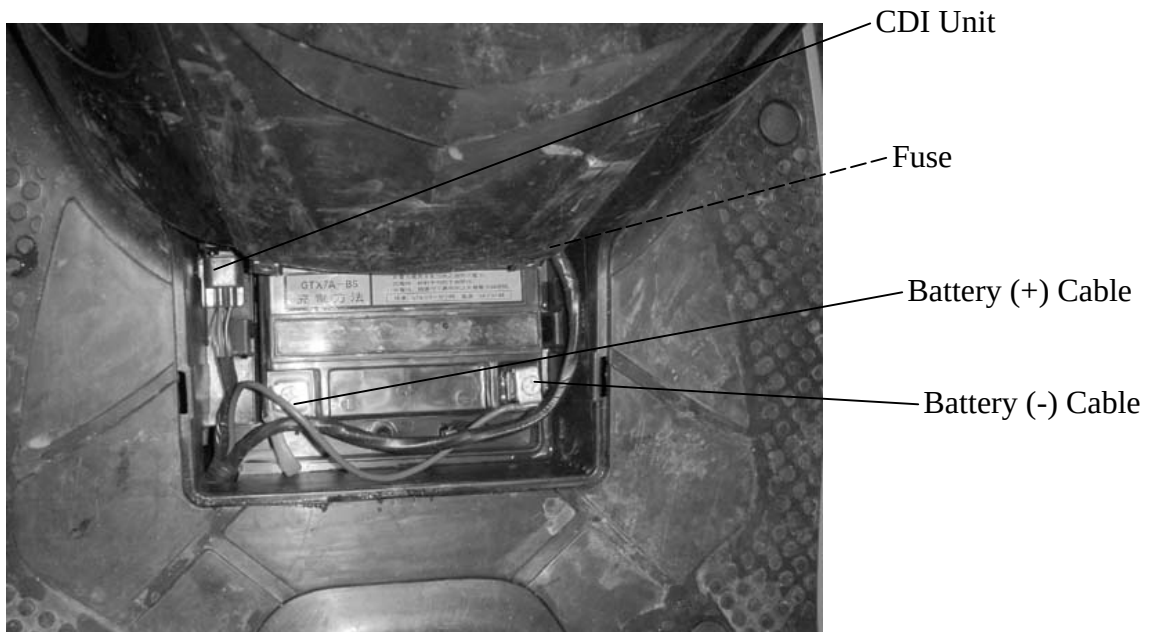
CABLE & HARNESS ROUTING



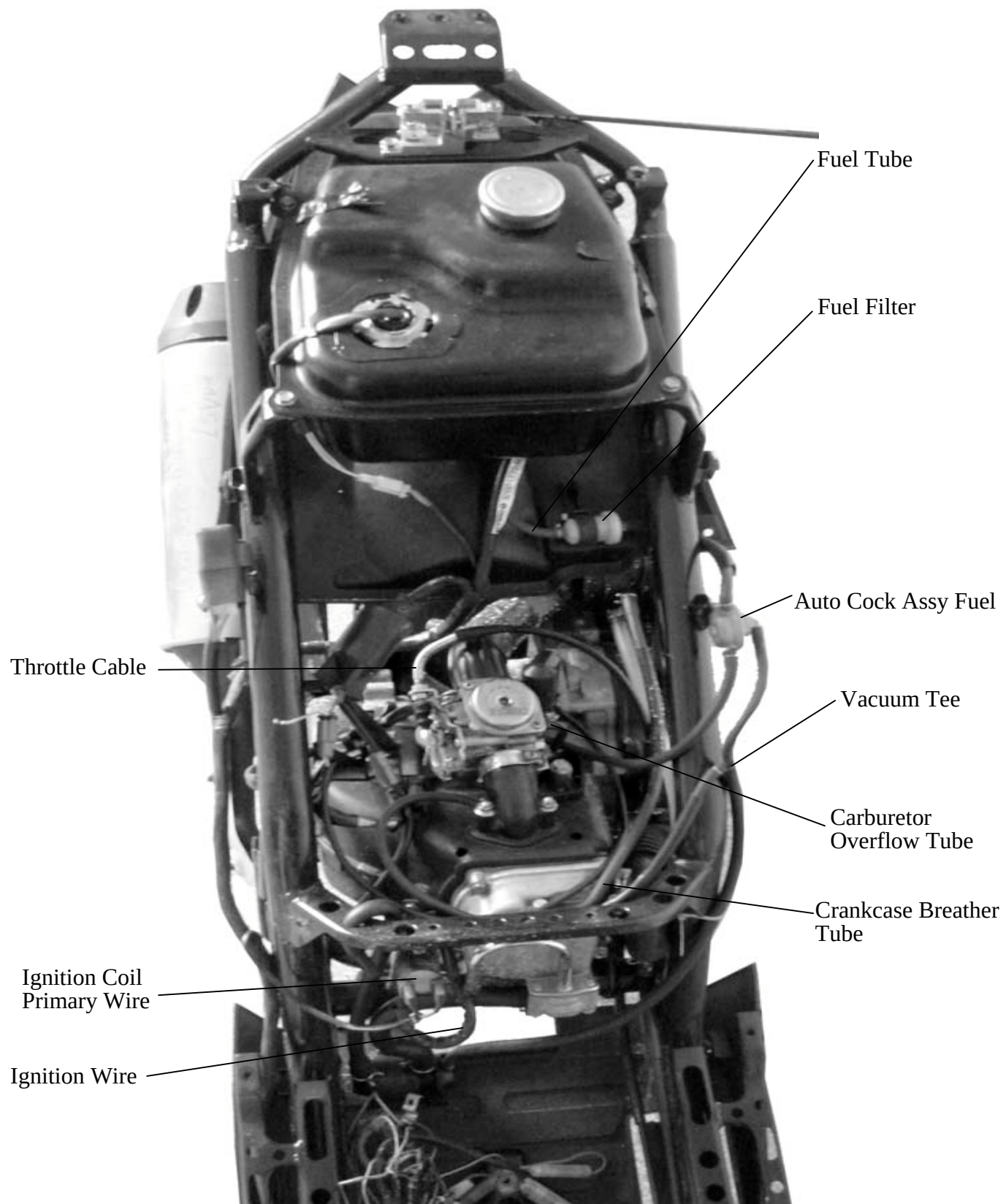
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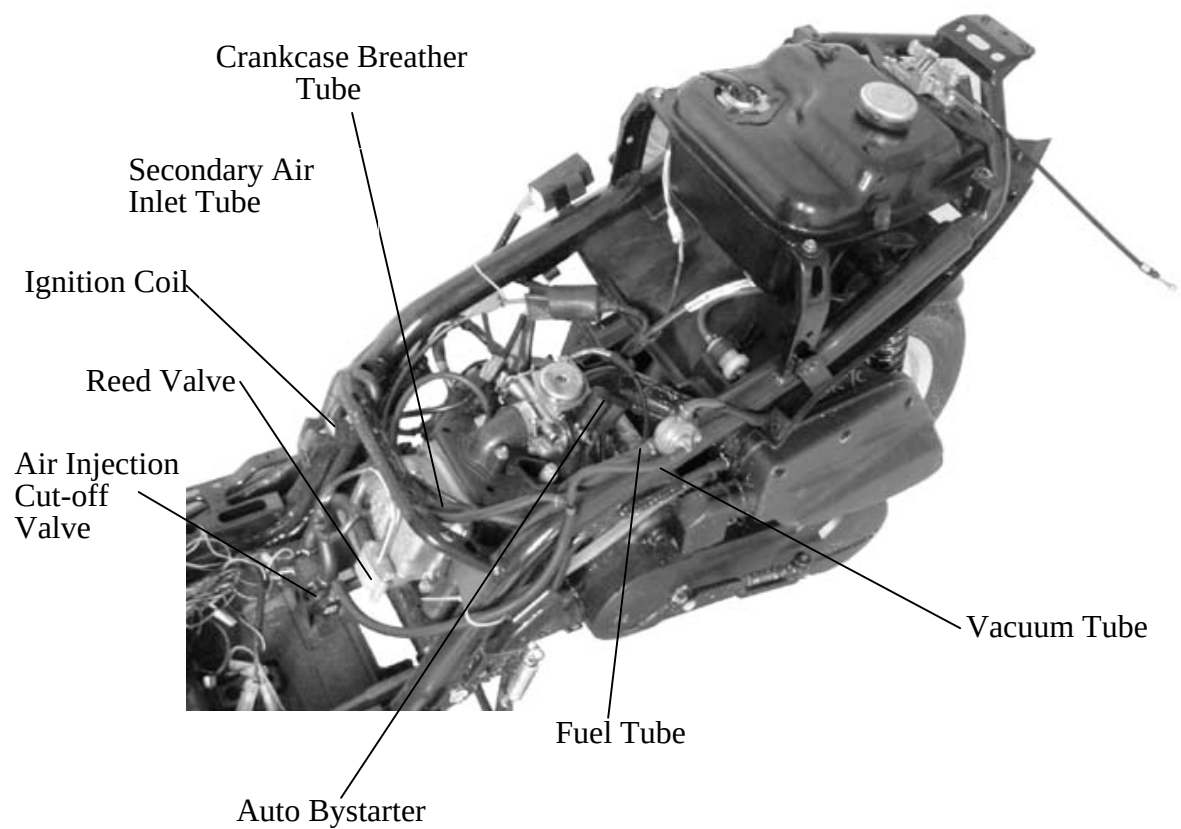
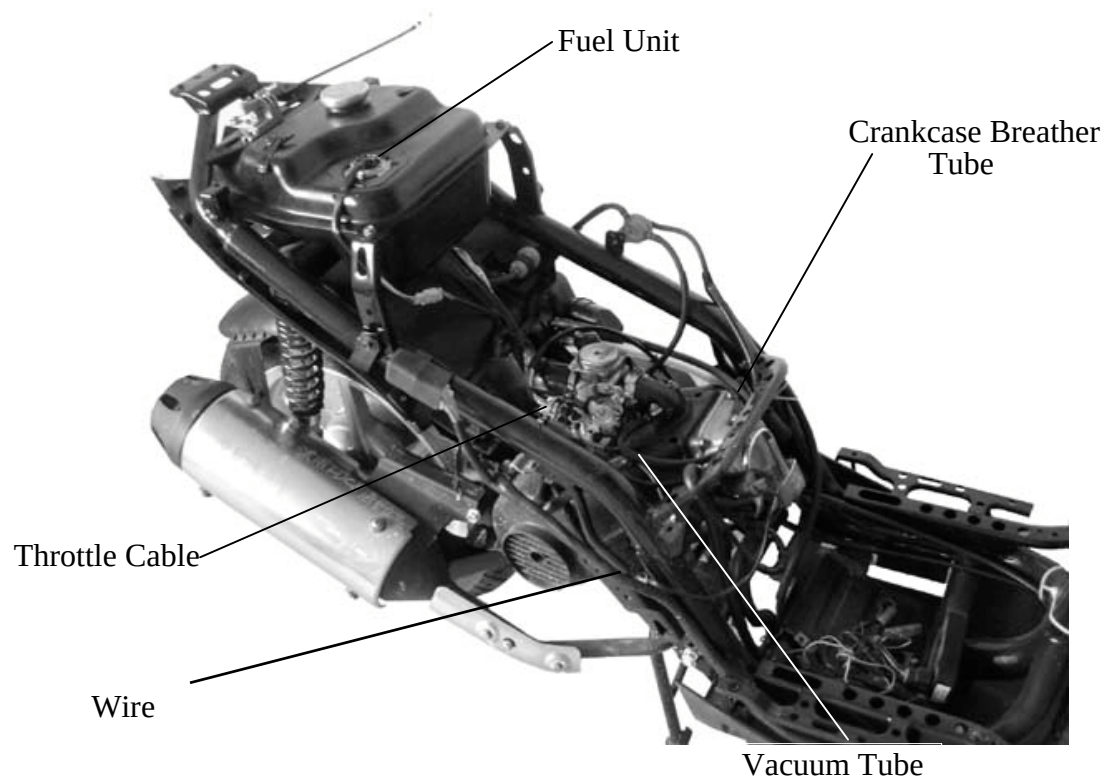
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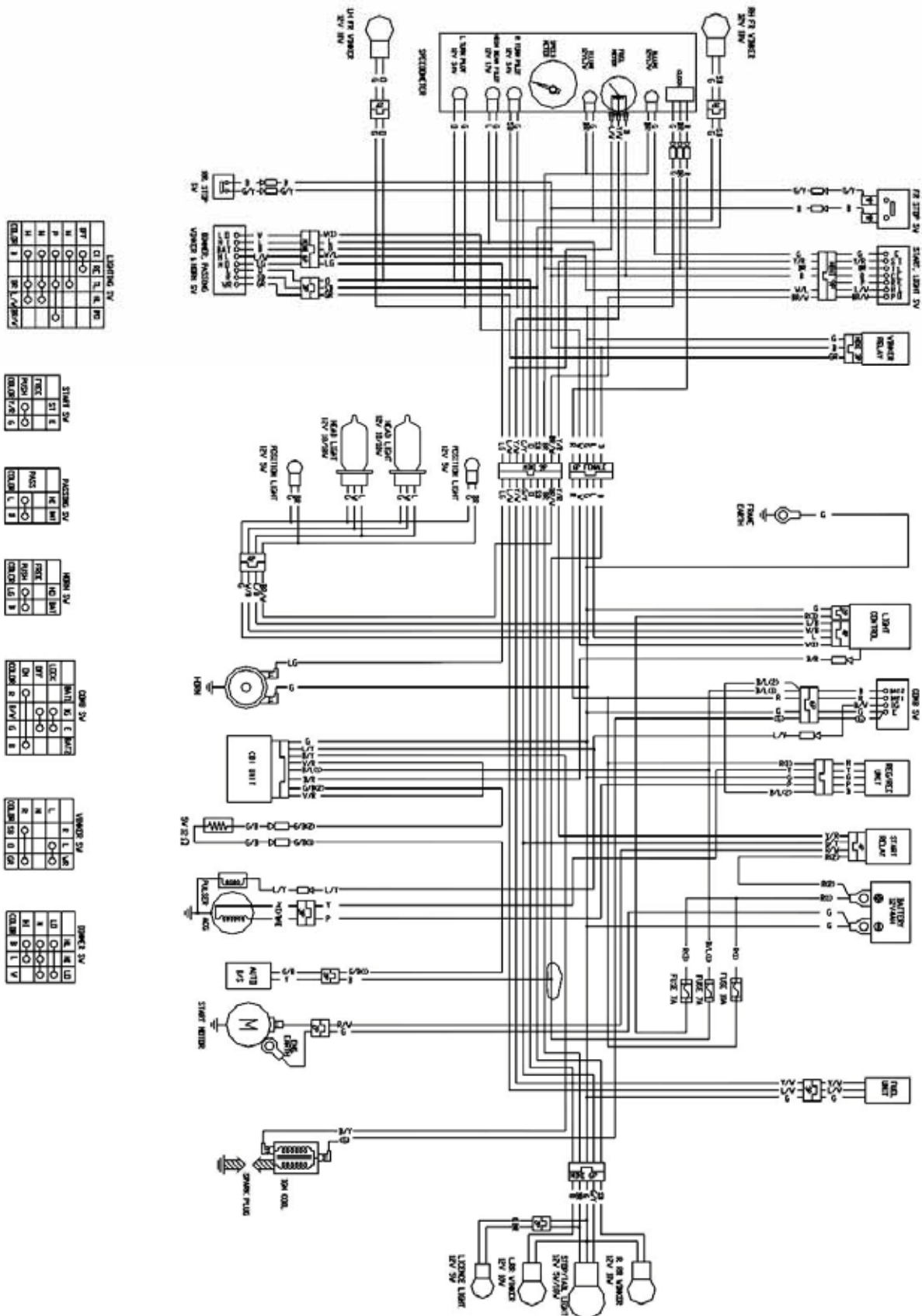
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WIRING DIAGRAM

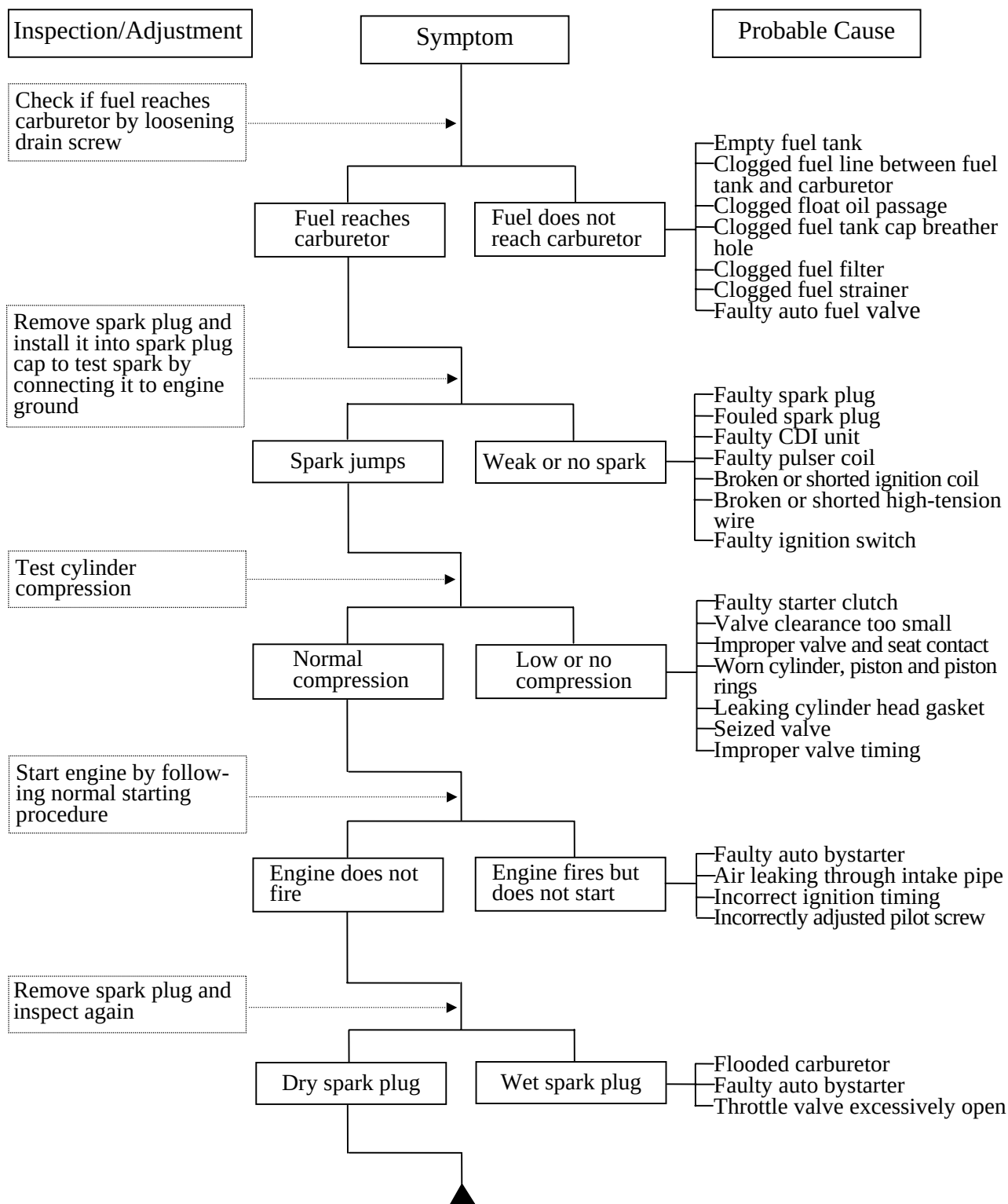


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TROUBLESHOOTING

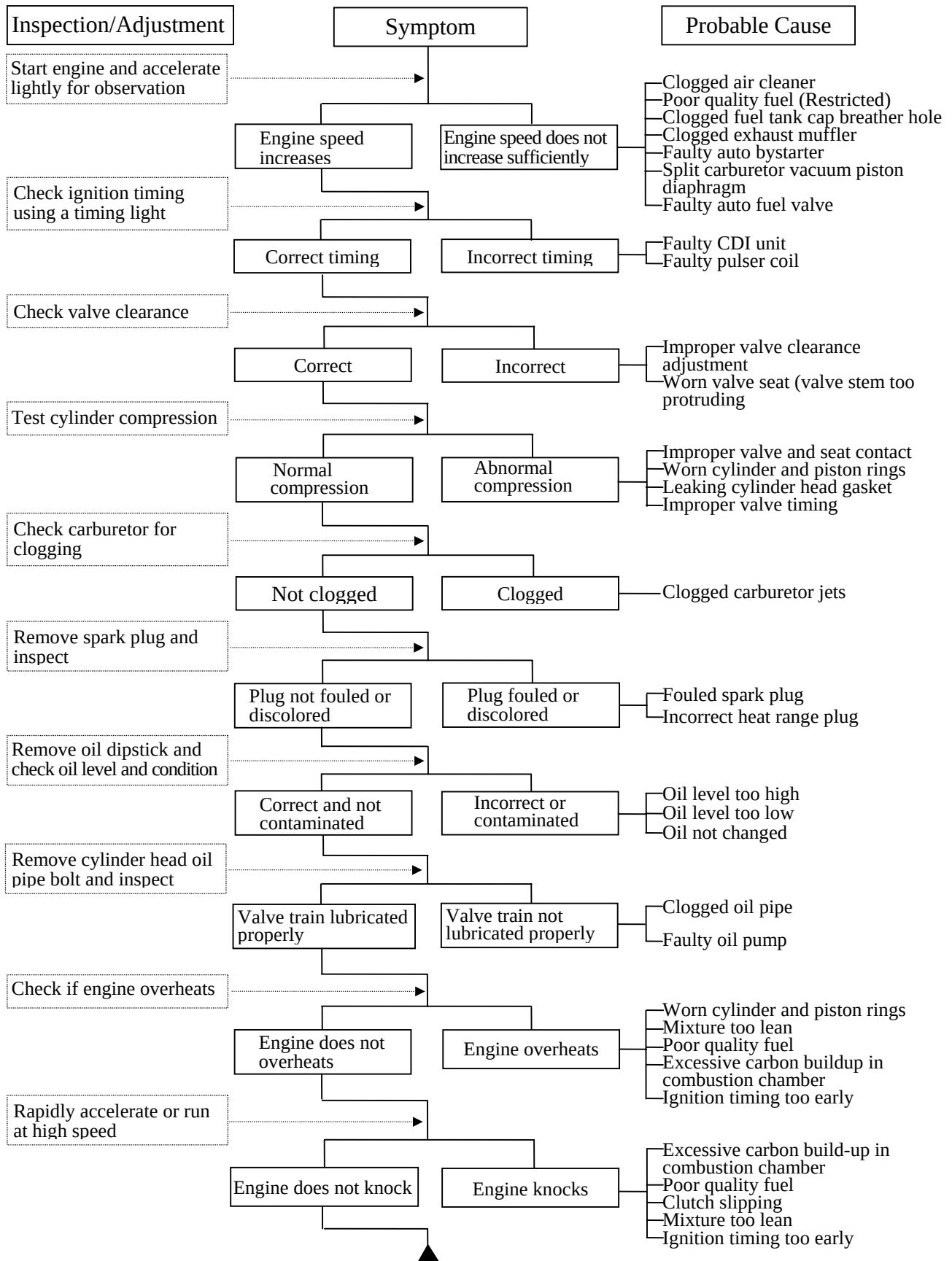
ENGINE WILL NOT START OR IS HARD TO START



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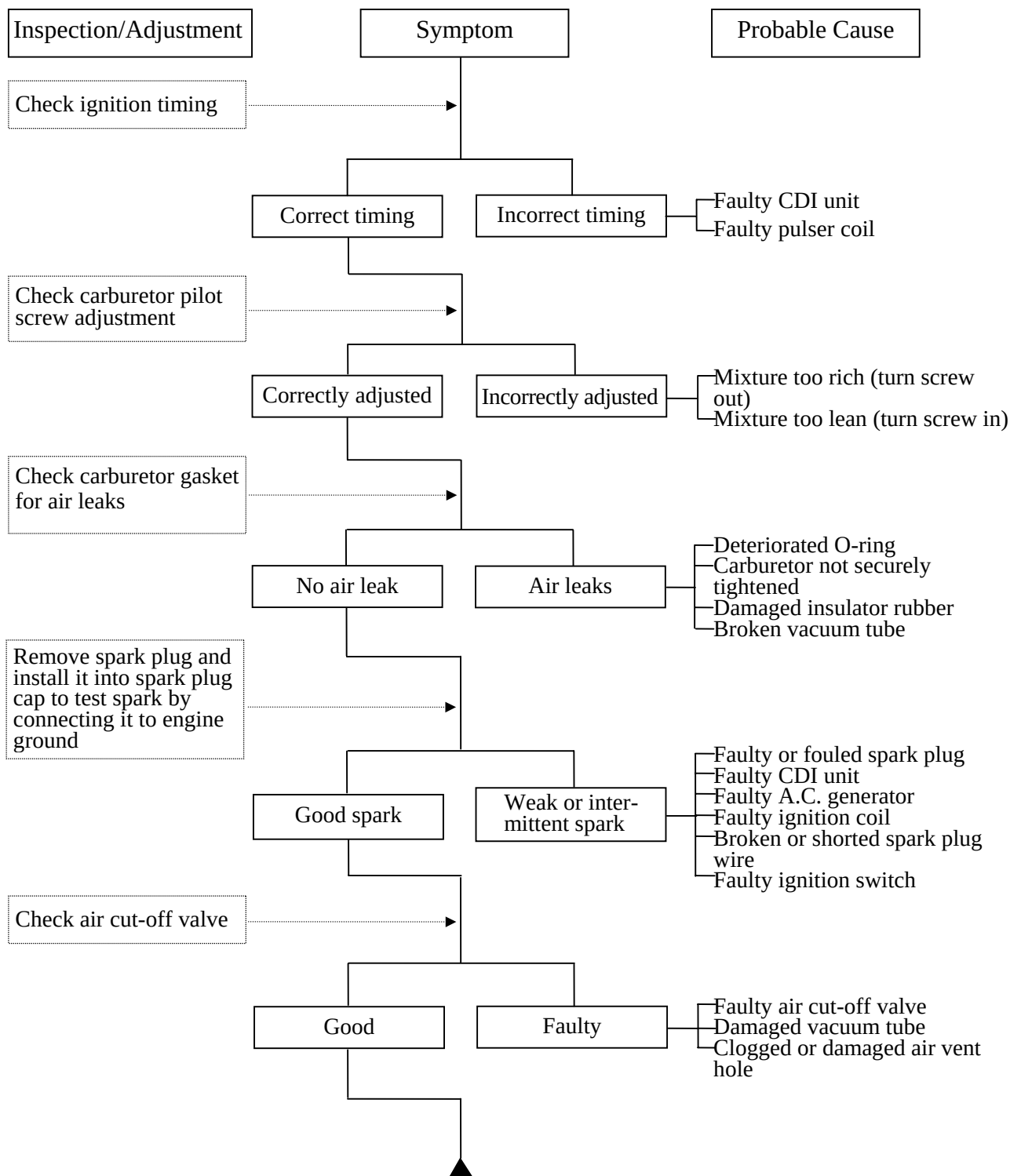
ENGINE LACKS POWER



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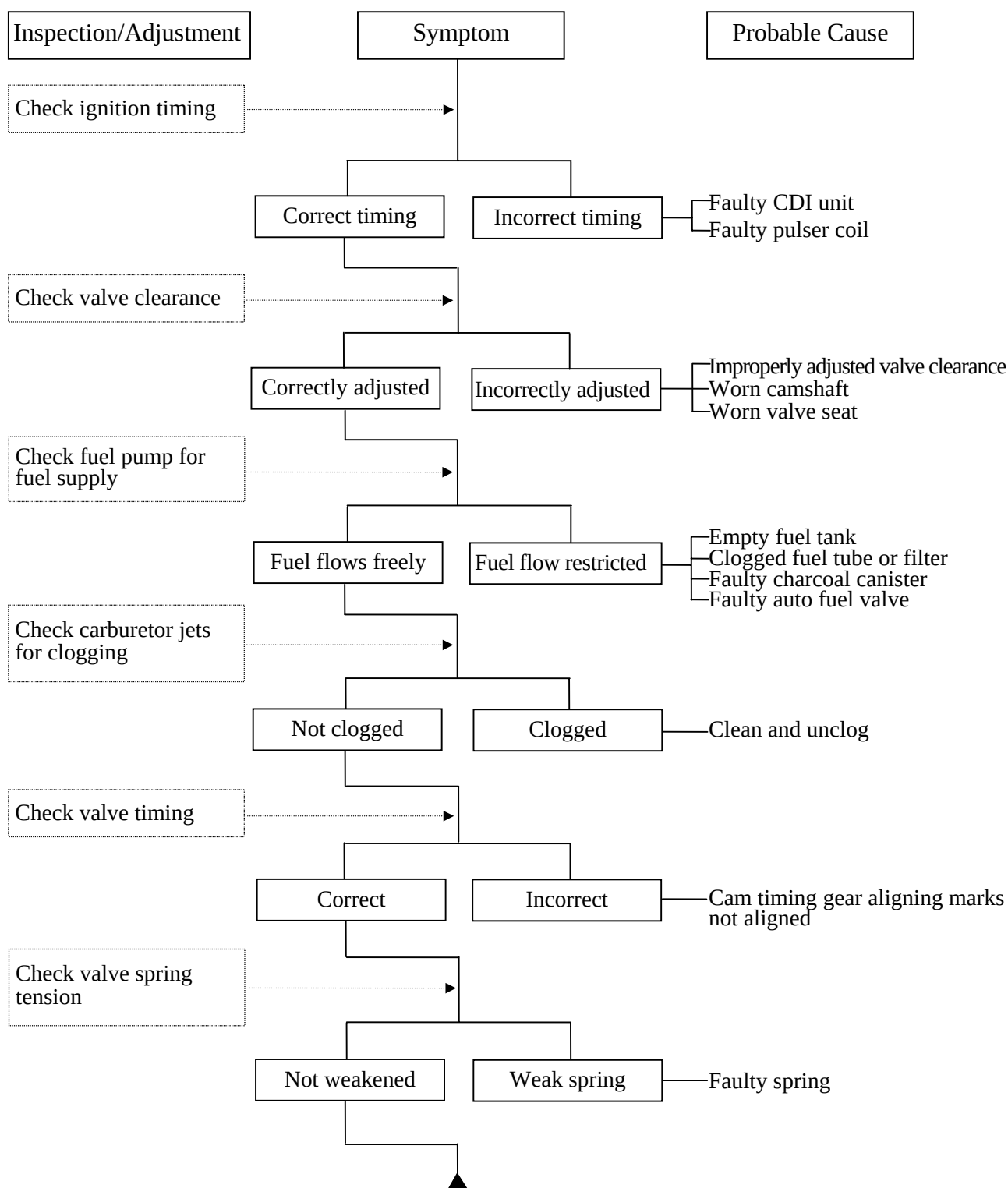
POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)



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POOR PERFORMANCE (AT HIGH SPEED)

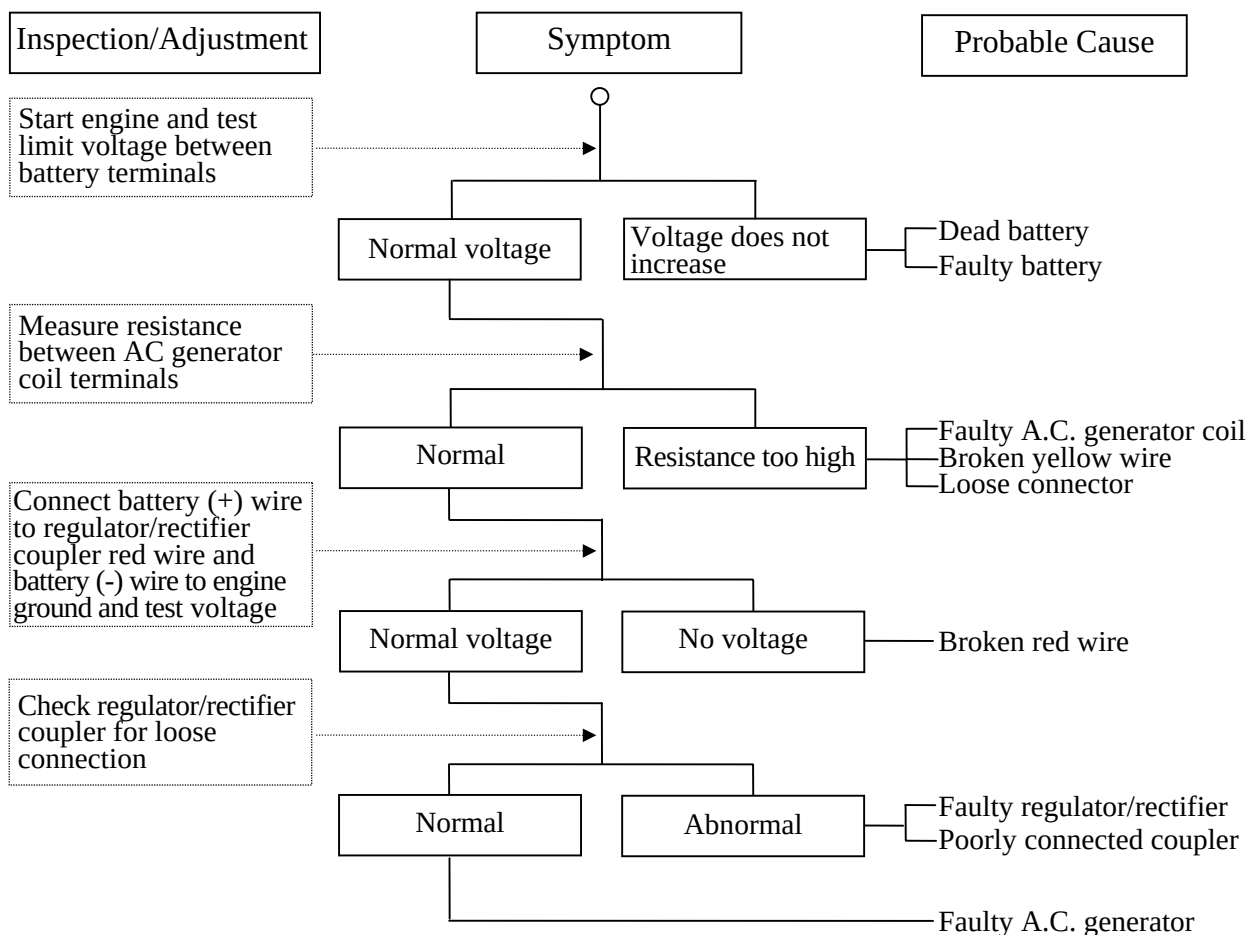


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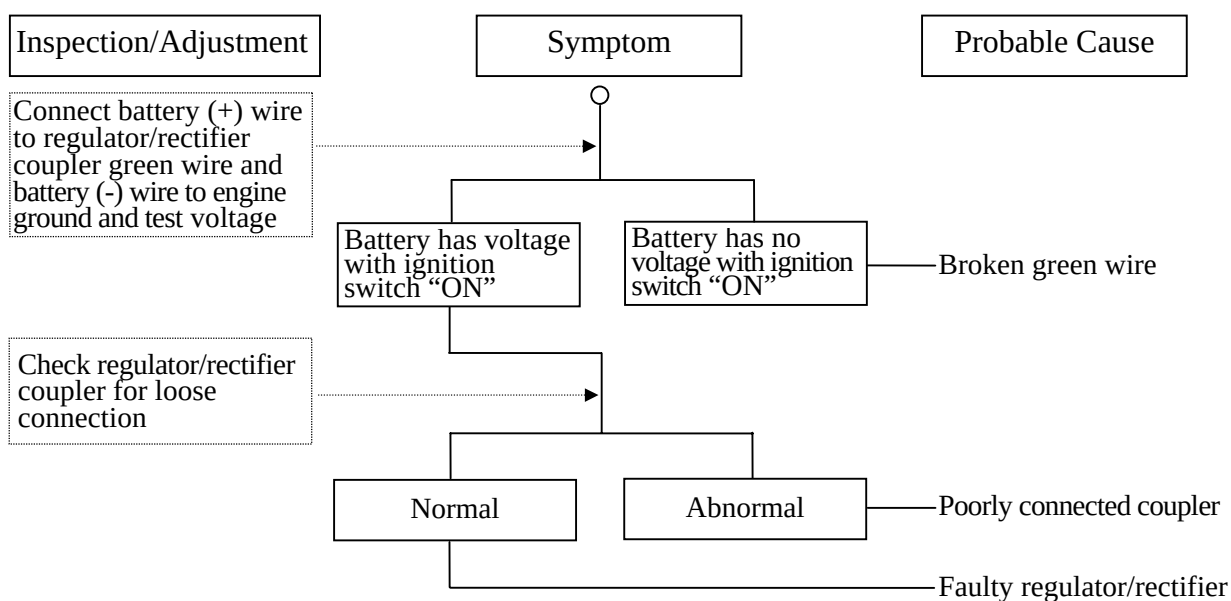
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POOR CHARGING (BATTERY OVER DISCHARGING OR OVERCHARGING)

Undercharging



Overcharging



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NO SPARK AT SPARK PLUG

