

1. GENERAL INFORMATION

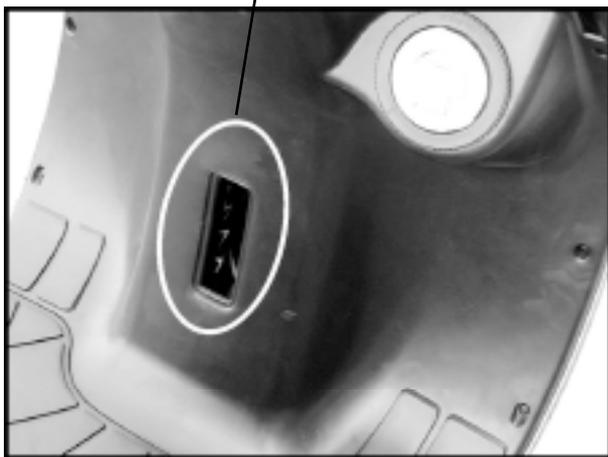
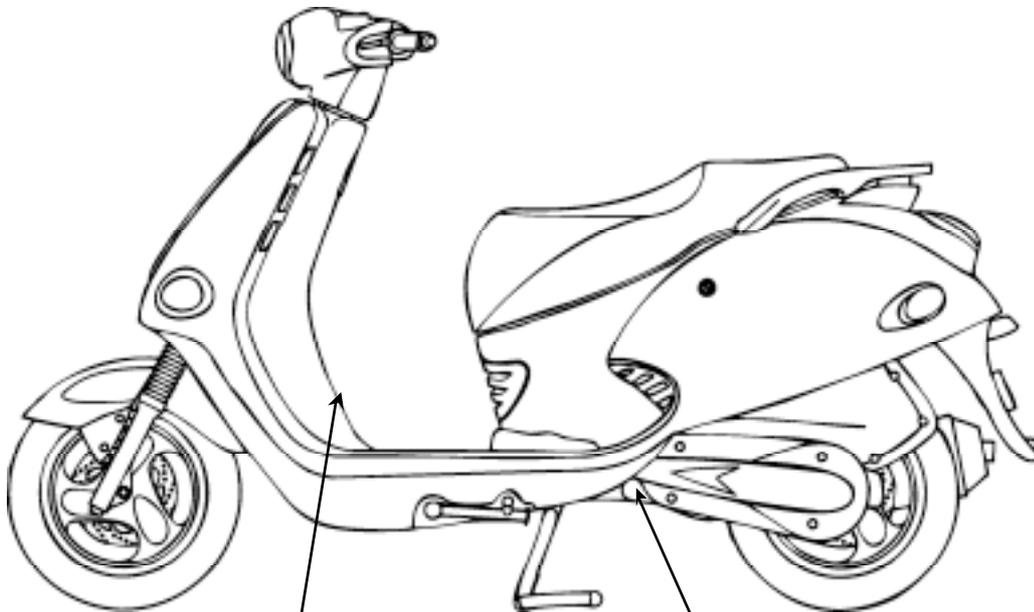
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GENERAL INFORMATION

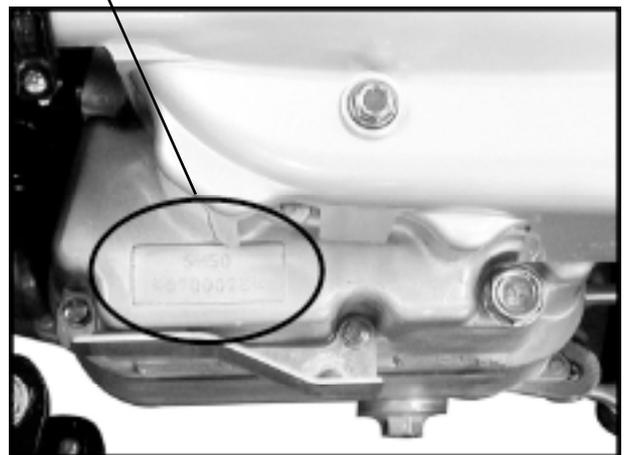
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SERIAL NUMBER



Location of Frame Serial Number



Location of Engine Serial Number

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SPECIFICATIONS

Cooling Type

Water cooling

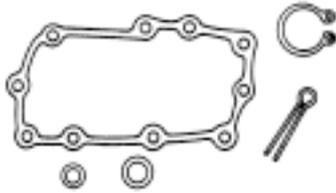
| | | | | |
|------------------------|--|-----------------------------------|--------------------|----------------------------|
| Name & Model No. | | SH50AA | | |
| Motorcycle Name & Type | | YUP 250 | | |
| Overall length | | 2060mm | | |
| Overall width | | 740mm | | |
| Overall height | | 1165mm | | |
| Wheel base | | 1435mm | | |
| Engine type | | Water cooled 4-stroke, OHC engine | | |
| Displacement | | 249.1/251cc | | |
| Fuel Used | | 92# nonleaded gasoline | | |
| Net weight (kg) | Front wheel | 65 | | |
| | Rear wheel | 93 | | |
| | Total | 158 | | |
| 1 Person 55kg | Front wheel | 86 | | |
| | Rear wheel | 127 | | |
| Gross weight(kg) | | Total 213 | | |
| Tires | Front wheel | 120/70-12 58P | | |
| | Rear wheel | 140/70-12 65P | | |
| Ground clearance | | 135mm | | |
| Perform- ance | Braking distance (m) | 4m/30km/hr | | |
| | Min. turning radius | 2350mm | | |
| Engine | Starting system | | Starting motor | |
| | Type | | Gasoline, 4-stroke | |
| | Cylinder arrangement | | Single cylinder | |
| | Combustion chamber type | | Semi-sphere | |
| | Valve arrangement | | O.H.C. | |
| | Bore x stroke (mm) | | 72.7 x 60/60.4 | |
| | Compression ratio | | 10.3:1 | |
| | Compression pressure (kg/cm ² -rpm) | | 16.5±2 | |
| | Max. output (kw/rpm) | | 13.34/7000 | |
| | Max. torque (kg.m/rpm) | | 2.0/5500 | |
| | Port timing | Intake | BDC | 42° |
| | | | TDC | -8° |
| | | Exhaust | BDC | 33° |
| | | | TDC | 1° |
| | Valve clearance (cold) | Intake | 0.1 | |
| | | Exhaust | 0.1 | |
| | Idle speed (rpm) | | 1450±50rpm | |
| | Lubrication System | Lubrication type | | Forced pressure & wet sump |
| | | Oil pump type | | Inner/outer rotor type |
| | | Oil filter type | | Full-flow filtration |
| Oil capacity | | 1.1 liters | | |

| | | | | | |
|--------------------|--------------------------------------|-----------------|--------------------|----------------------------|---------------------|
| Fuel System | Air cleaner type & No | | Paper element, wet | | |
| | Fuel capacity | | 10.5 liters | | |
| | Carburetor | Type | | CVK | |
| | | Piston dia. | | 30 | |
| | | Venturi dia. | | 30 equivalent | |
| Throttle type | | Butterfly type | | | |
| Electrical | Ignition System | Type | | Full transistor igniter | |
| | | Ignition timing | | repeatedly | |
| | | Contact breaker | | Non-contact point type | |
| | | Spark plug | | NGK DPR7EA-9 | |
| | | Spark plug gap | | 0.7mm | |
| | Battery | Capacity | | 12V10AH | |
| Power Drive System | Clutch | Type | | Dry multi-disc clutch | |
| | | Type | | Non-stage transmission | |
| | Transmission Gear | Operation | | Automatic centrifugal Type | |
| | | Reduction Gear | Type | | Two-stage reduction |
| Reduction ratio | 1st | | 0.83~2.2 | | |
| | 2nd | 6.98 | | | |
| Moving Device | Front Axle | Caster angle | | | |
| | | Connecting rod | | | |
| | Tire pressure (kgf/cm ²) | Front | 1.75 | | |
| | | Rear | 2.25 | | |
| Turning angle | Left | 45° | | | |
| | Right | 45° | | | |
| Brake system type | Front | Disk brake | | | |
| | Rear | Disk brake | | | |
| Damping Device | Suspension type | Front | Telescope | | |
| | | Rear | Double swing | | |
| | Shock absorber type | Front | Telescope | | |
| | | Rear | Double swing | | |
| Frame type | | Under bone | | | |

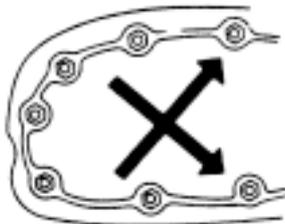
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SERVICE PRECAUTIONS

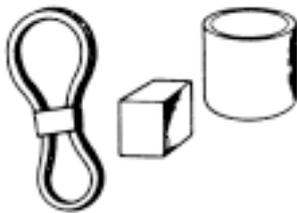
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



- 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.



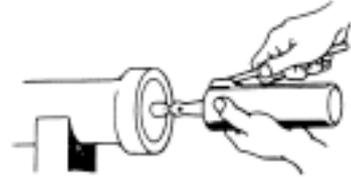
- When servicing the motorcycle, be sure to use special tools for removal and installation.



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



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



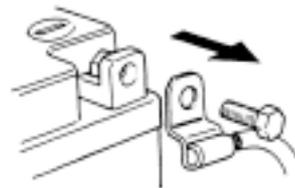
- After reassembly, check all parts for proper tightening and operation.



- 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.

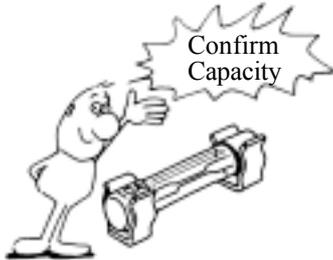


- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.



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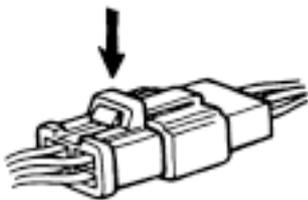
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.



- After operation, terminal caps shall be installed securely.



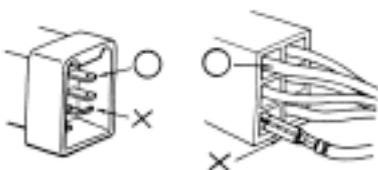
- When taking out the connector, the lock on the connector shall be released before operation.



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



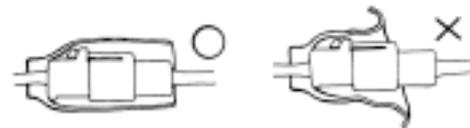
- Check if any connector terminal is bending, protruding or loose.



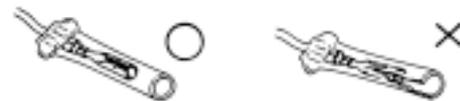
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



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



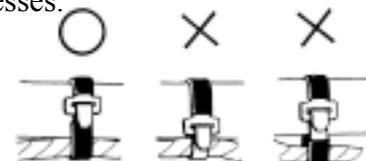
- Check the double connector cover for proper coverage and installation.



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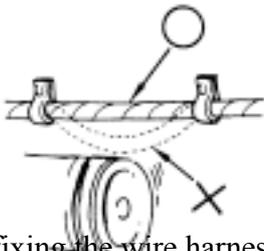
- After clamping, check each wire to make sure it is secure.



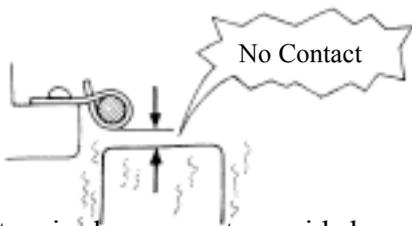
- Do not squeeze wires against the weld or its clamp.



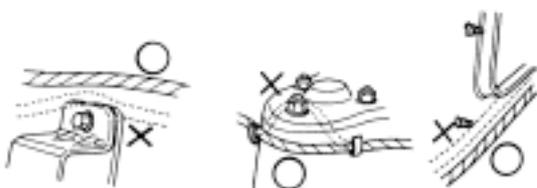
- After clamping, check each harness to make sure that it is not interfering with any moving or sliding parts.



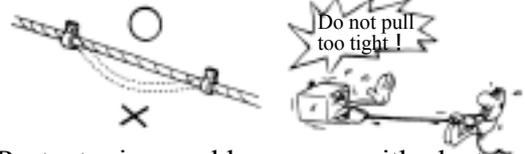
- When fixing the wire harnesses, do not make it contact the parts which will generate high heat.



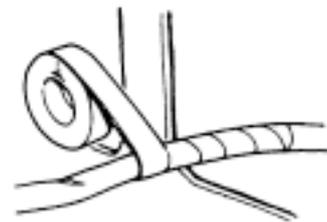
- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.



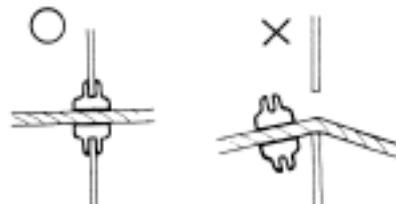
- Route harnesses so they are neither pulled tight nor have excessive slack.



- 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.

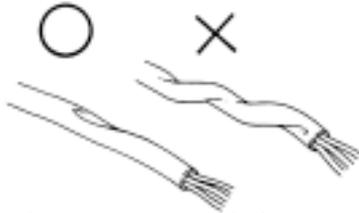


- When installing other parts, do not press or squeeze the wires.



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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.



- 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#)



Special

: Use special tool.



: Caution



: Warning

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TORQUE VALUES

STANDARD TORQUE VALUES

| Item | Torque (N-m) | Item | Torque (N-m) |
|----------------|--------------|-----------------------|--------------|
| 5mm bolt, nut | 4.5_ 6 | 5mm screw | 3.5_ 5 |
| 6mm bolt, nut | 8_ 12 | 6mm screw, SH bolt | 8.8 |
| 8mm bolt, nut | 18_ 25 | 6mm flange bolt, nut | 10_ 14 |
| 10mm bolt, nut | 30_ 40 | 8mm flange bolt, nut | 24_ 30 |
| 12mm bolt, nut | 50_ 60 | 10mm flange bolt, nut | 35_ 45 |

Torque specifications listed below are for important fasteners.

ENGINE

| Item | Q'ty | Thread dia.(mm) | Torque (N-m) | Remarks |
|----------------------------------|------|-----------------|--------------|----------------------|
| Cylinder head bolt A | 2 | 8 | 8.9 | Double end bolt |
| Cylinder head bolt B | 2 | 8 | 8.9 | Double end bolt |
| Oil filter screen cap | 1 | 30 | 12.7 | Apply oil to threads |
| Cylinder head cap nut | 4 | 8 | 24.5 | |
| Valve adjusting lock nut | 2 | 5 | 8.8 | |
| Cam chain tensioner slipper bolt | 1 | 6 | 8.8 | |
| Oil bolt | 1 | 12 | 14.7 | |
| Clutch outer nut | 1 | 12 | 53.9 | |
| Clutch drive plate nut | 1 | 12 | 53.9 | |
| Flywheel nut | 1 | 14 | 58.8 | |
| Oil pump bolt | 2 | 5 | 3.9 | |
| Cylinder head cover bolt | 4 | 6 | 11.8 | |
| Spark plug | 1 | 10 | 17.2 | |
| Cam chain tensioner bolt | 1 | 6 | 11.8 | |
| Water pump impeller | 1 | 8 | 11.8 | |
| Drive face nut | 1 | 12 | 93 | |
| Transmission case cover bolt | 9 | 8 | 20 | |
| Gear oil check bolt | 1 | 8 | 10 | |

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FRAME

| Item | Q'ty | Thread dia.(mm) | Torque (N-m) | Remarks |
|---------------------------------|------|-----------------|--------------|---------|
| Steering stem lock nut | 1 | 10 | 40_ 50 | |
| Front axle nut | 1 | 12 | 50_ 70 | |
| Rear axle nut | 1 | 16 | 110_ 130 | |
| Rear shock absorber upper bolt | 2 | 10 | 35_ 45 | |
| Rear shock absorber lower bolt | 2 | 10 | 35_ 45 | |
| Front shock absorber lock bolt | 4 | 8 | 29_ 35 | |
| Engine hanger bolt (frame side) | 2 | 12 | 45_ 55 | |
| Engine hanger bolt (ENG. side) | 1 | 10 | 45_ 55 | |
| Front caliper holder bolt | 2 | 8 | 29_ 35 | |
| Rear caliper holder bolt | 2 | 8 | 29_ 35 | |
| Brake oil bolt | 4 | 10 | 30_ 40 | |
| Master cylinder holder bolt | 4 | 6 | 10_ 14 | |
| Exhaust muffler pipe nut | 2 | 8 | 18_ 22 | |
| Exhaust muffler bolt | 3 | 8 | 32_ 38 | |
| Rear fork bolt | 2 | 8 | 29_ 35 | |

SPECIAL TOOLS

| Tool Name | Tool No. | Remarks | Ref. Page |
|------------------------------|----------|----------------------------------|-----------|
| Clutch spring compressor | E034 | Clutch disassembly | |
| Bearing puller 10,12,15,18mm | E037 | Bearing removal | |
| Valve spring compressor | E040 | Valve removal | |
| Oil seal & bearing installer | E014 | Oil seal & bearing install | |
| Tappet adjuster | E036 | Tappet adjustment | |
| Flywheel puller | E003 | A.C. generator flywheel removal | |
| Universal holder | E017 | Holding clutch for removal | |
| Flywheel holder | E021 | A.C. generator flywheel holding | |
| Lock nut socket wrench | F002 | Steering stem removal or install | |
| Float level gauge | | Carburetor fuel level check | |

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LUBRICATION POINTS

ENGINE

| Lubrication Points | Lubricant |
|---|---|
| Valve guide/valve stem movable part Camshaft protruding surface Valve rocker arm friction surface Camshaft drive 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 Crankshaft one-way clutch movable part Oil pump drive chain 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 SJ Engine Oil |
| Starter idle gear Friction spring movable part/shaft movable part Shaft movable grooved part Starter spindle movable part | High-temperature resistant grease |
| Starter one-way clutch threads | Thread locking agent |
| A.C. generator connector Transmission case breather tube | Adhesive |

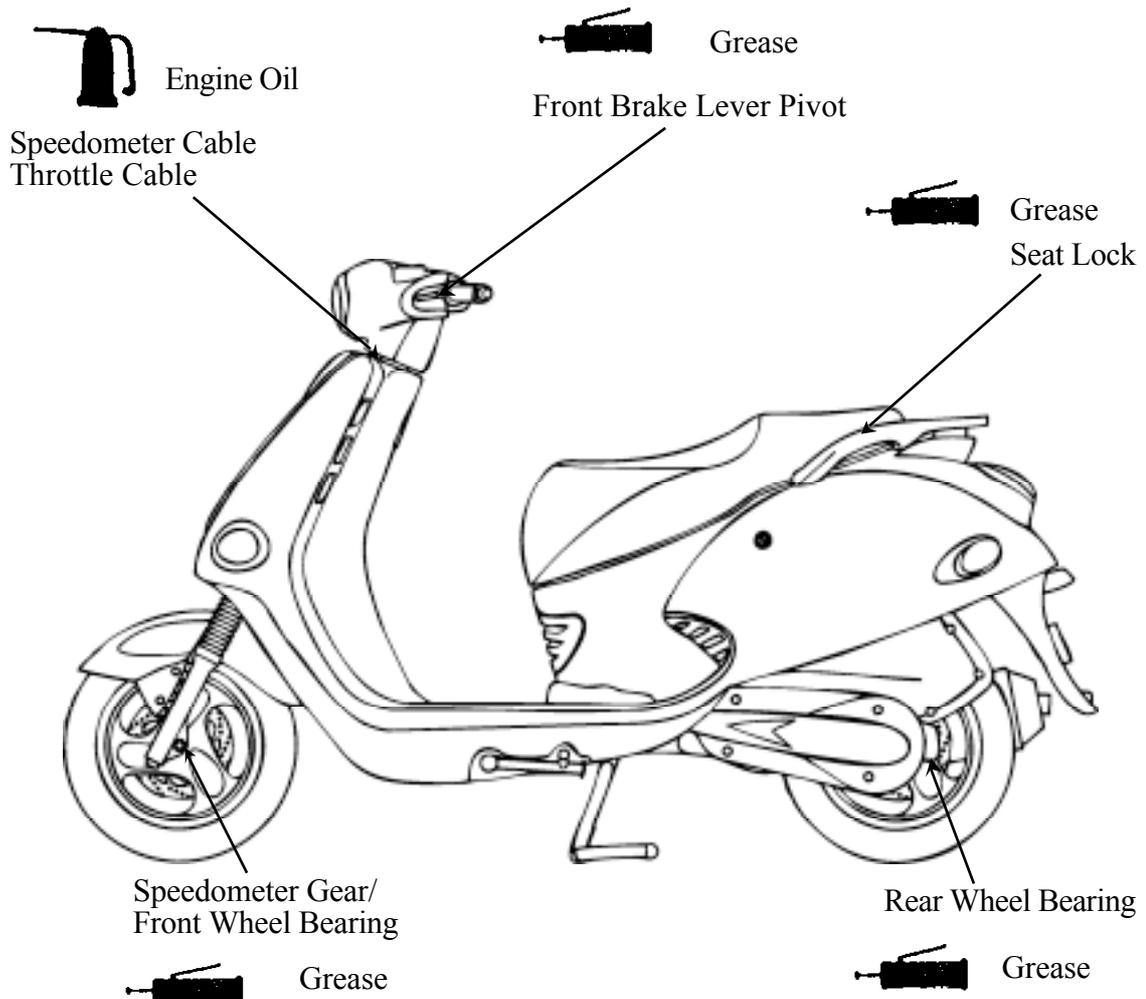
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FRAME

The following is the lubrication points for the frame.

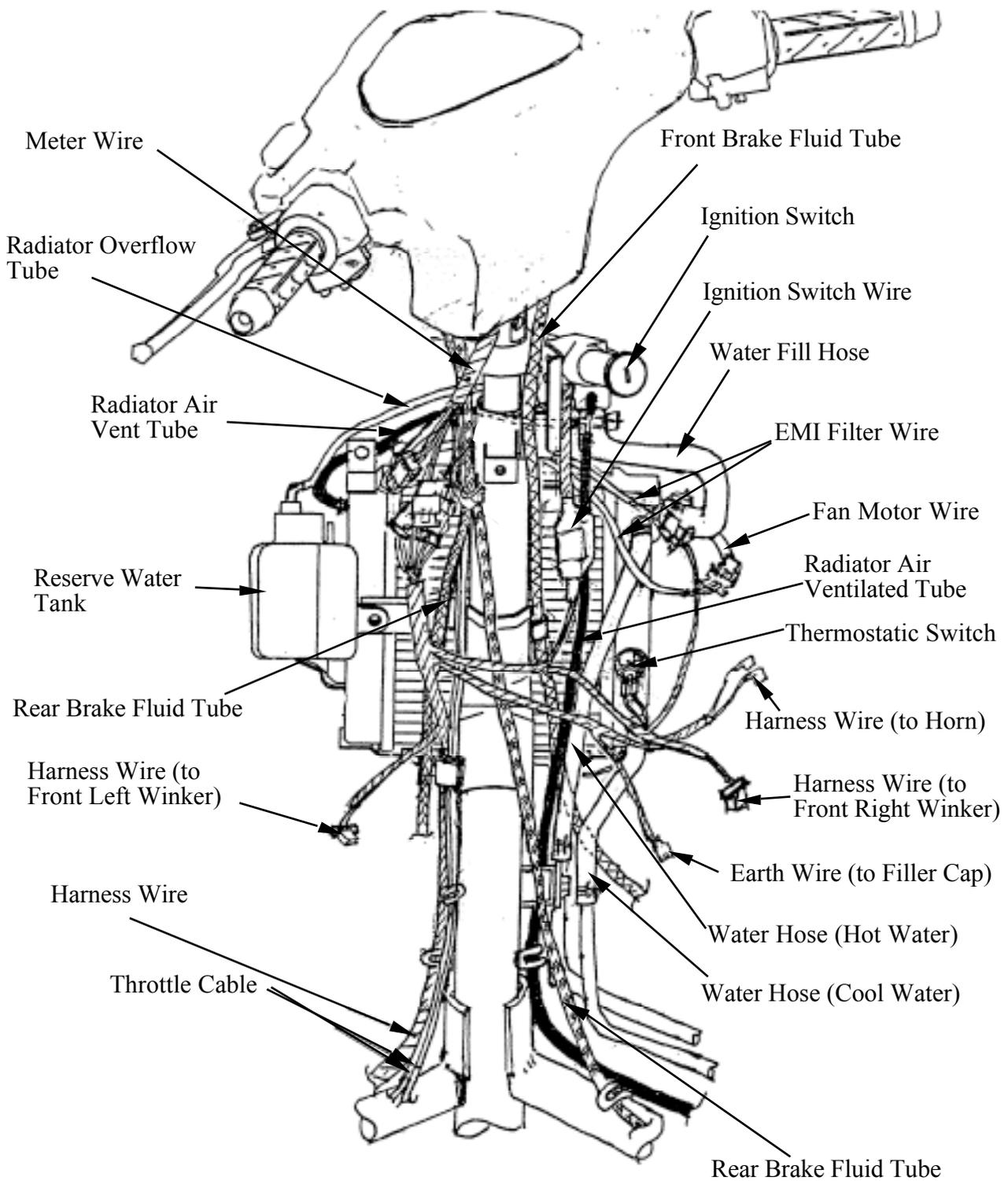
Use general purpose grease for parts not listed.

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.

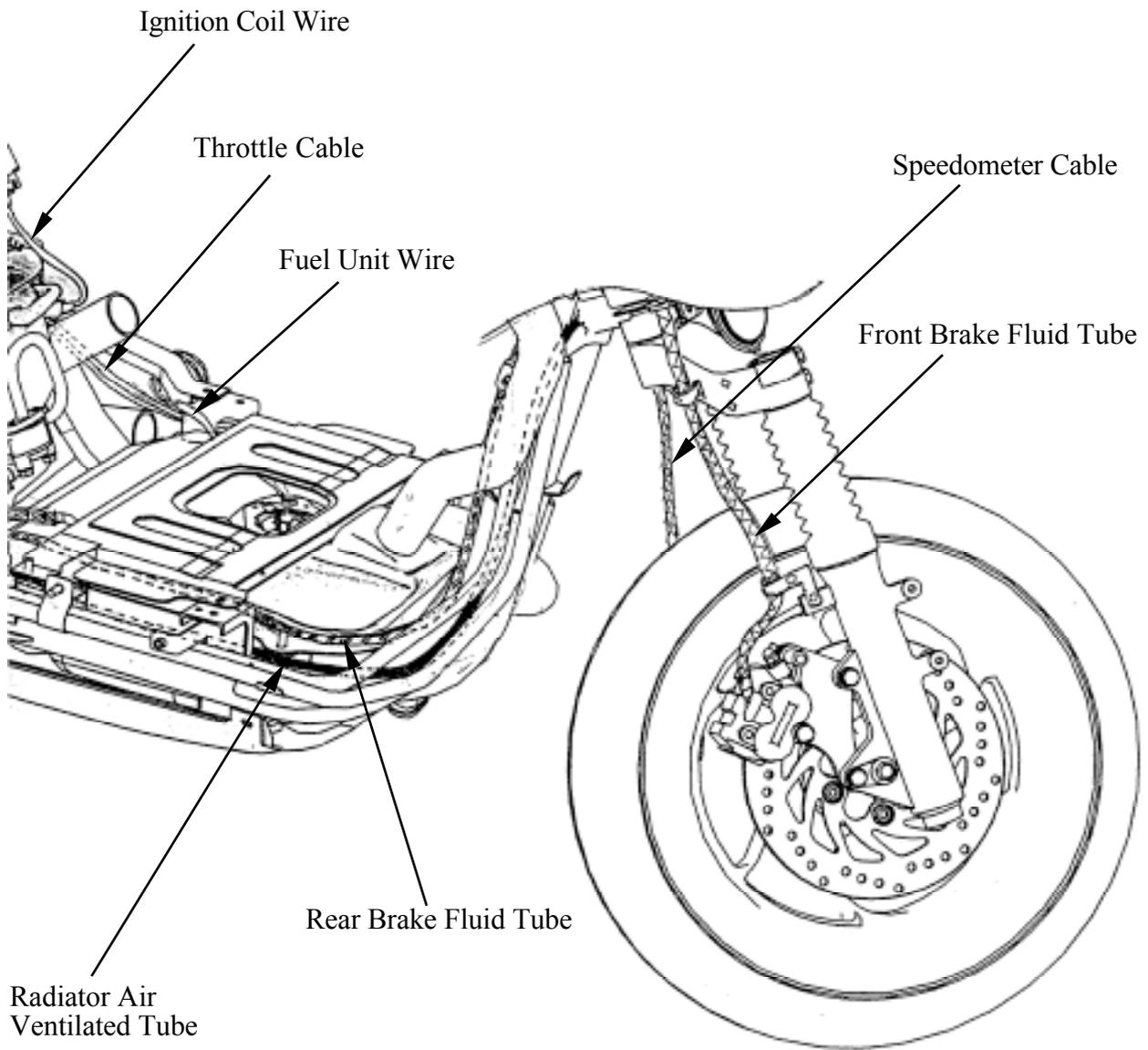


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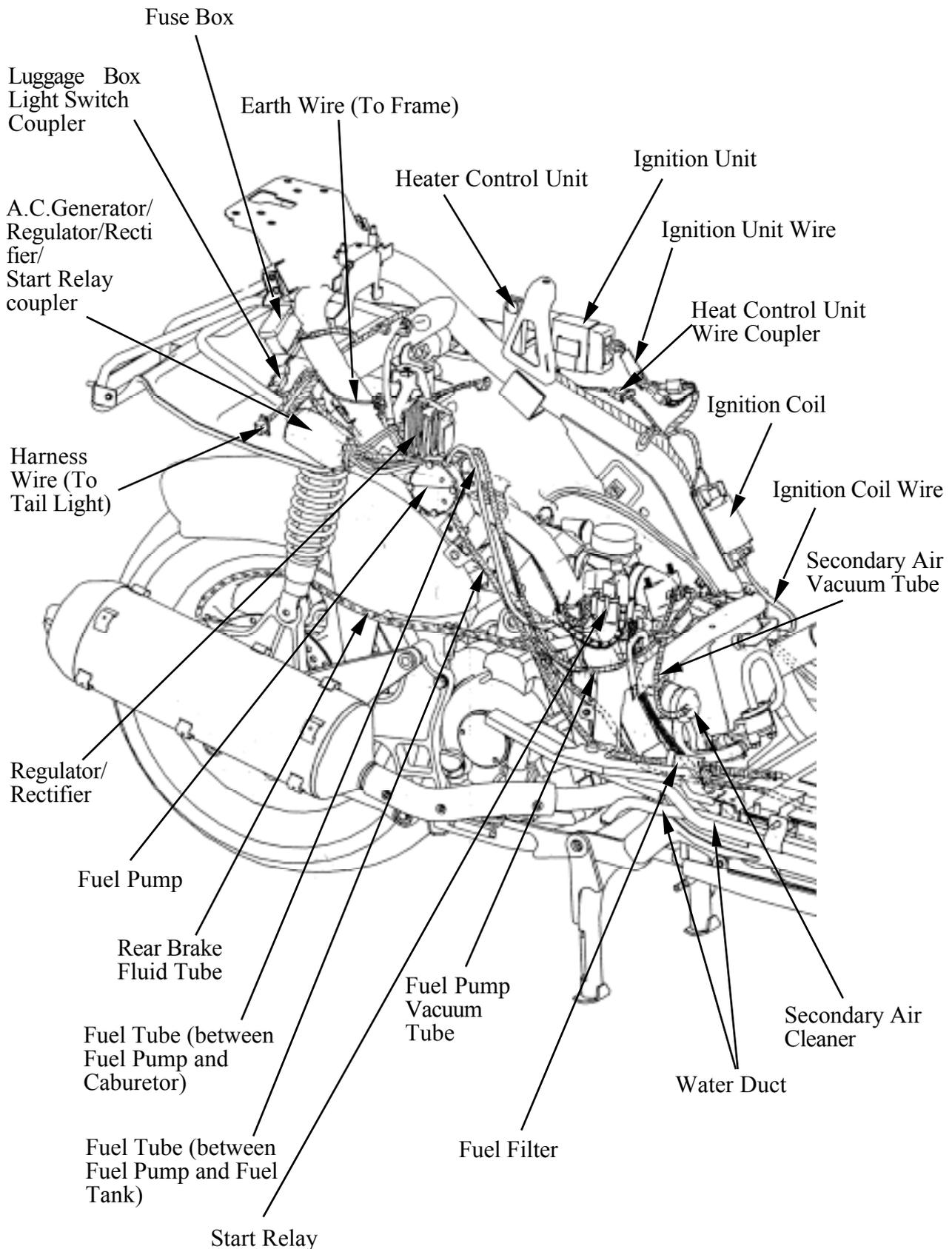
CABLE & HARNESS ROUTING



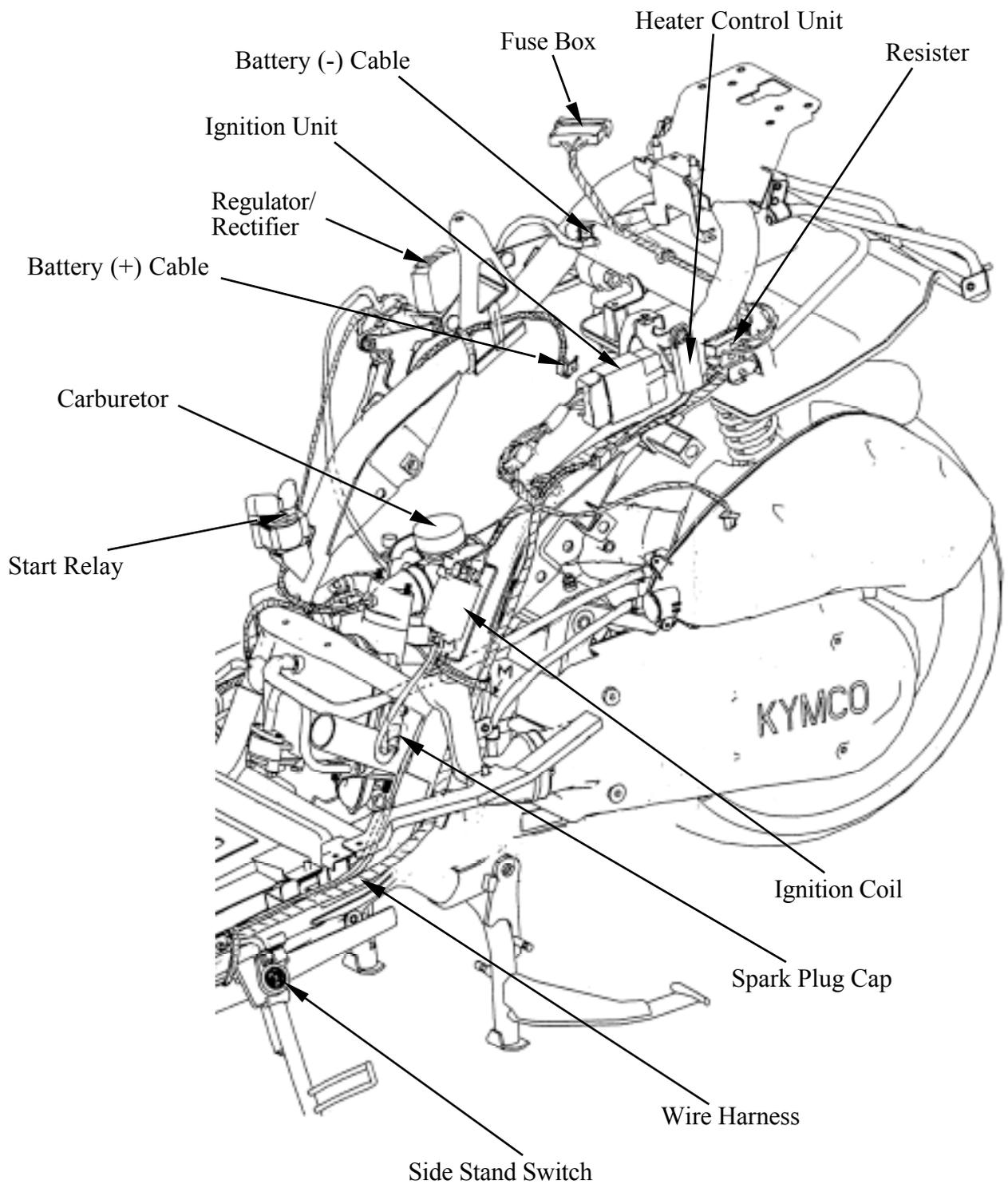
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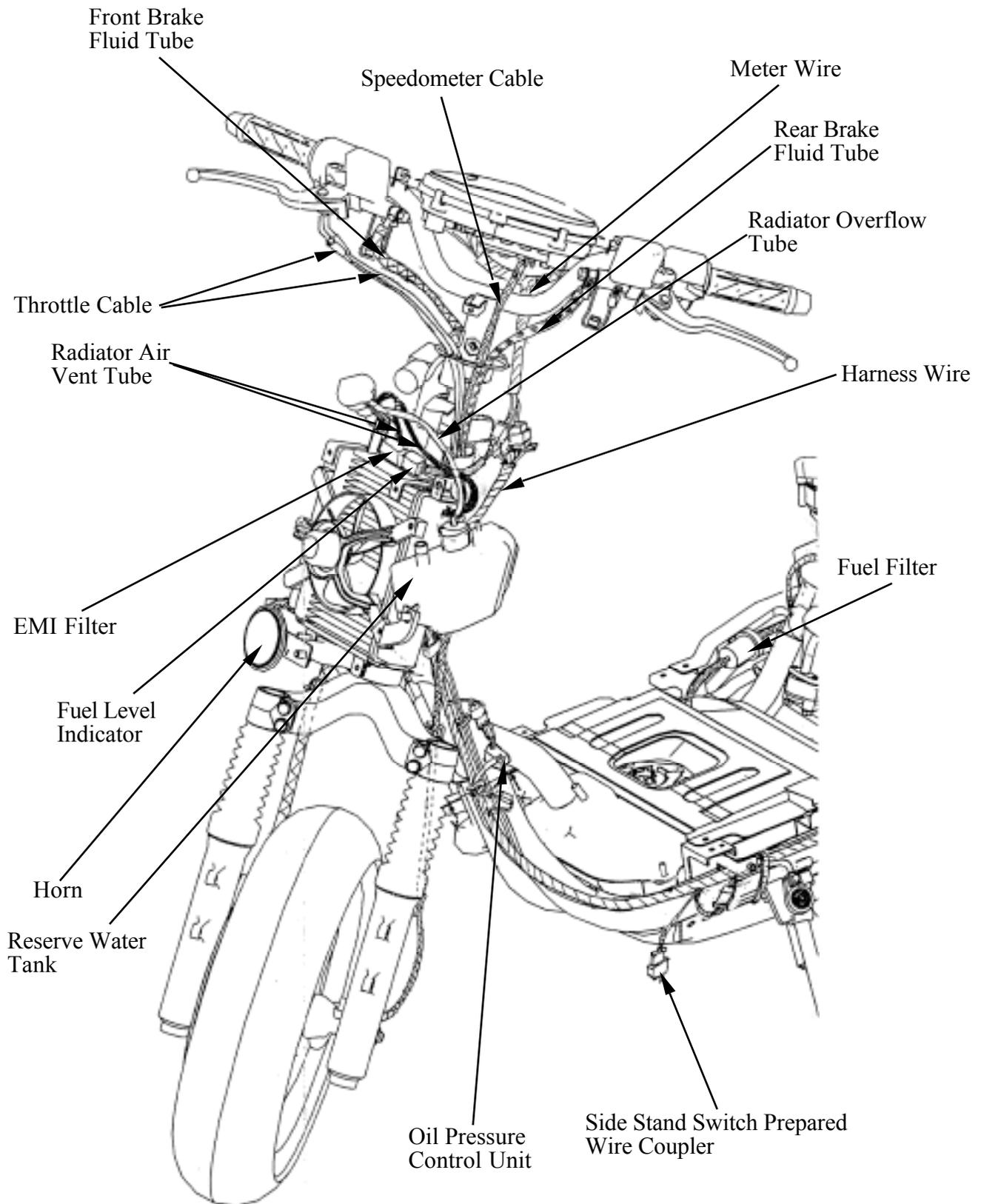
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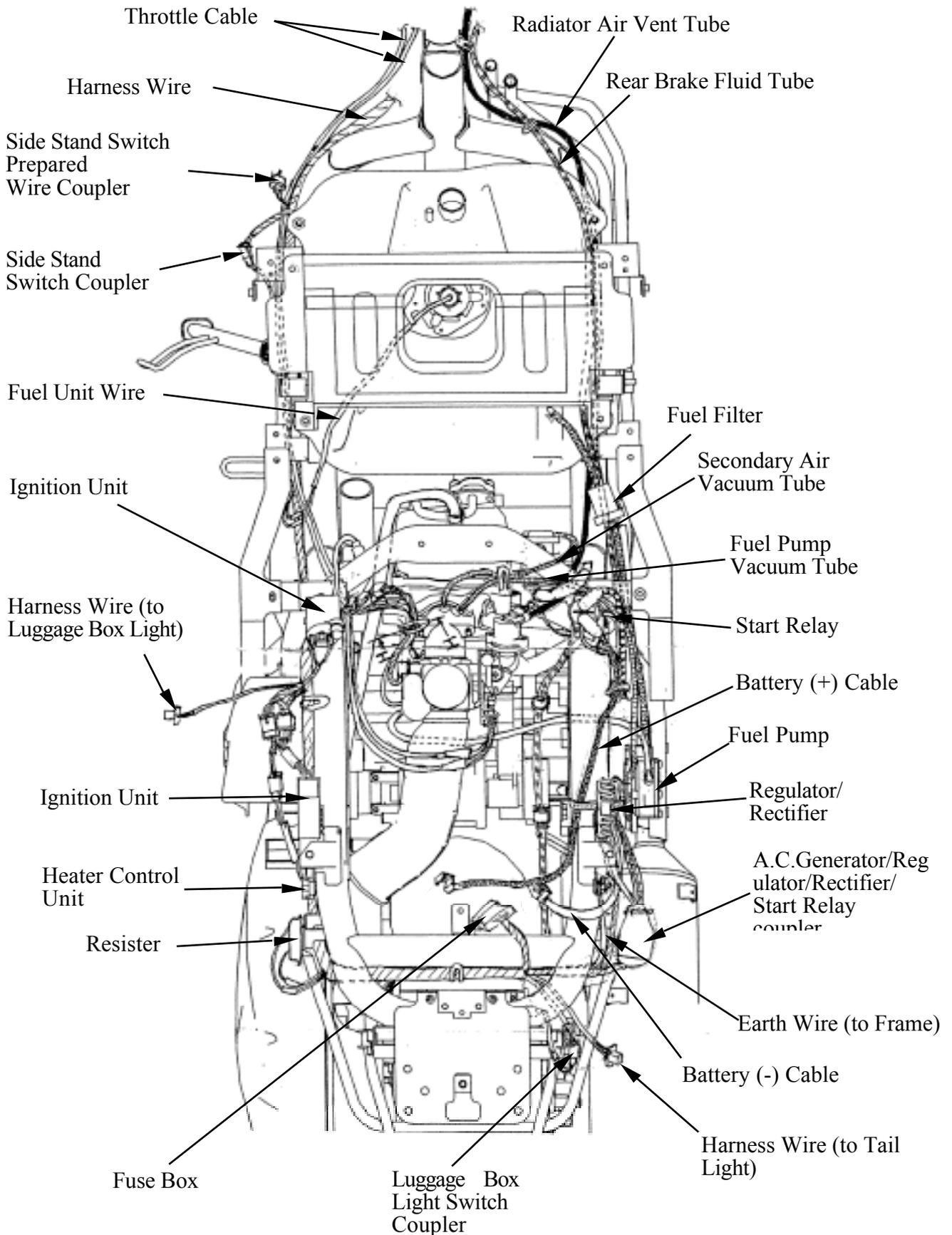
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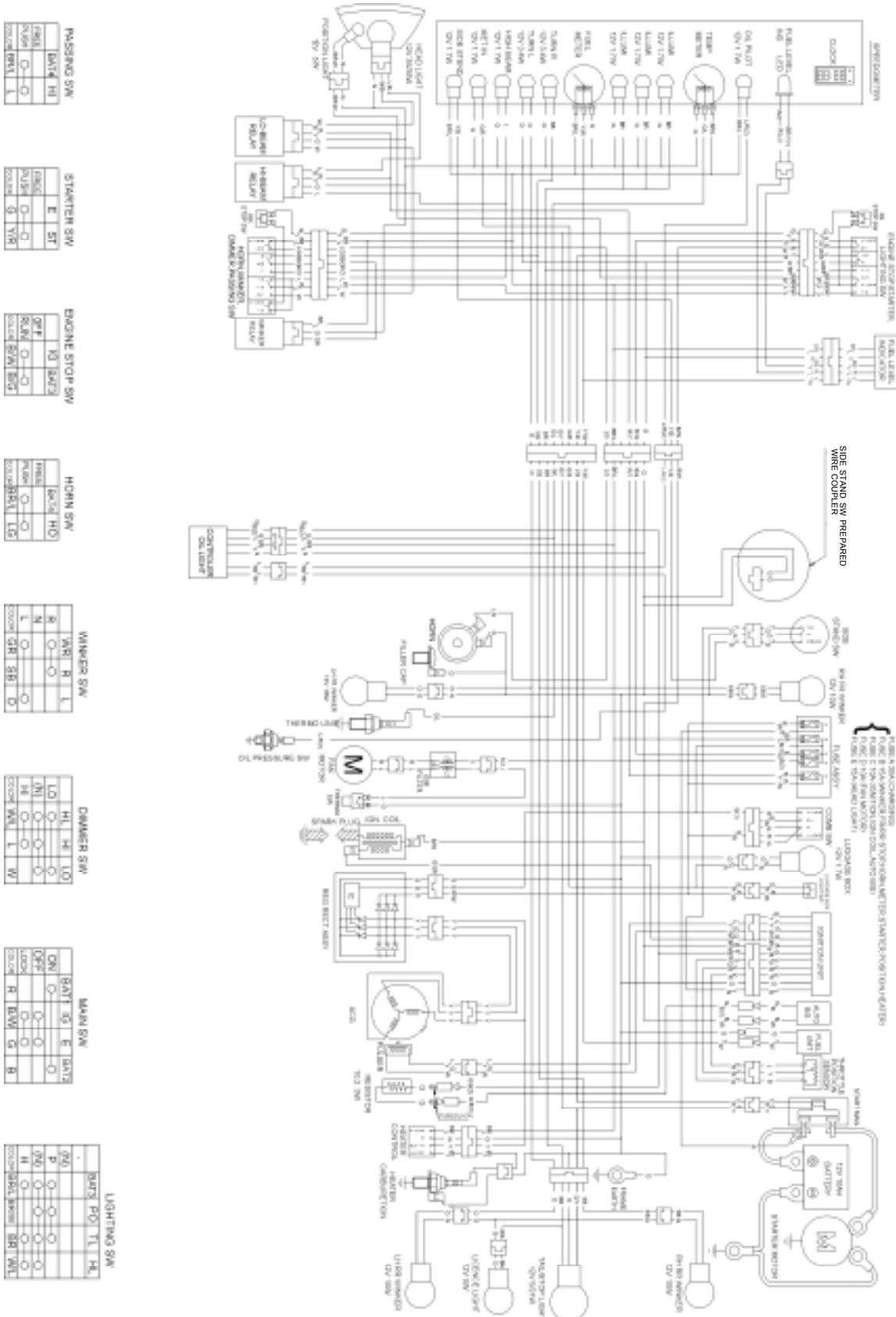


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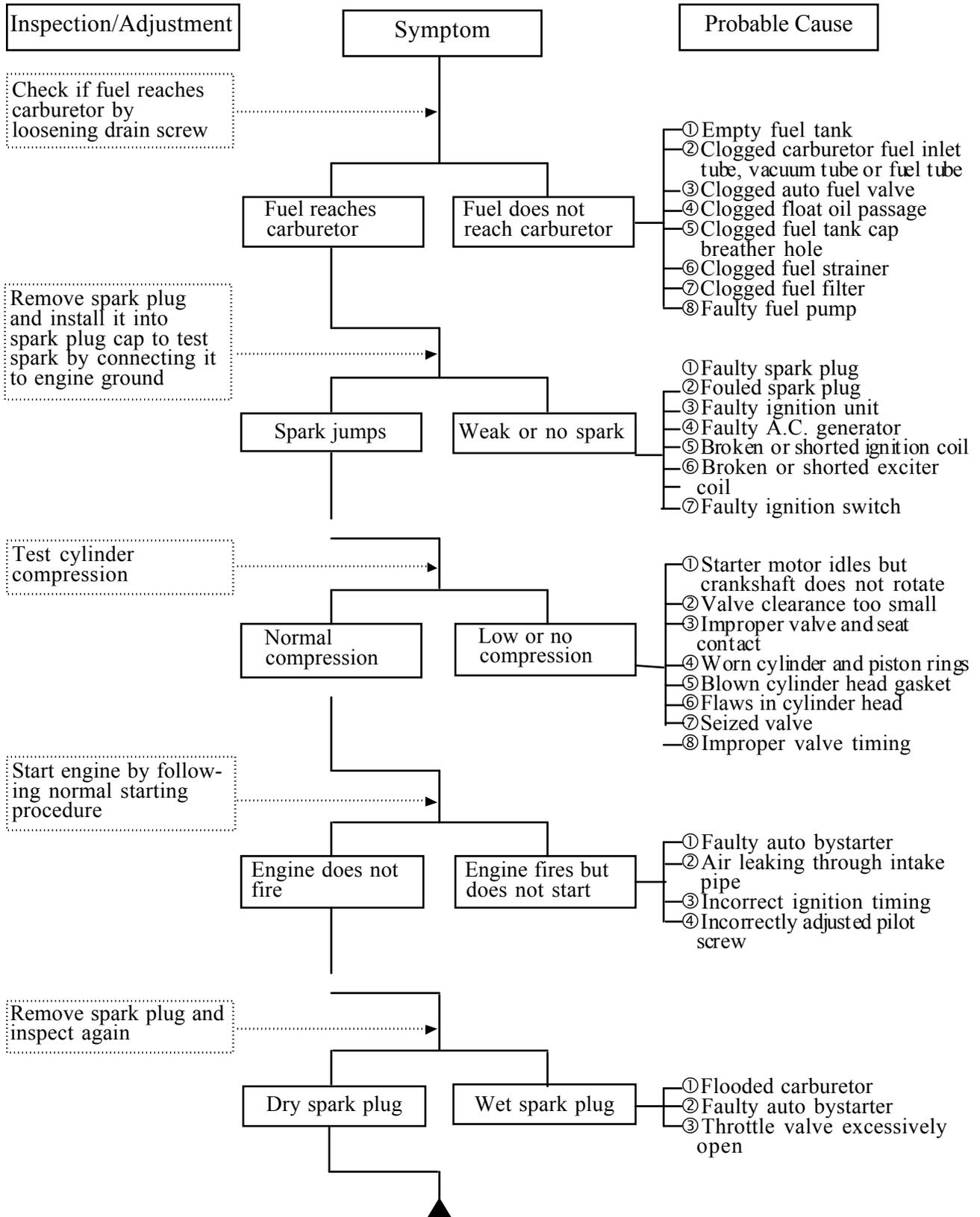
WIRING DIAGRAM



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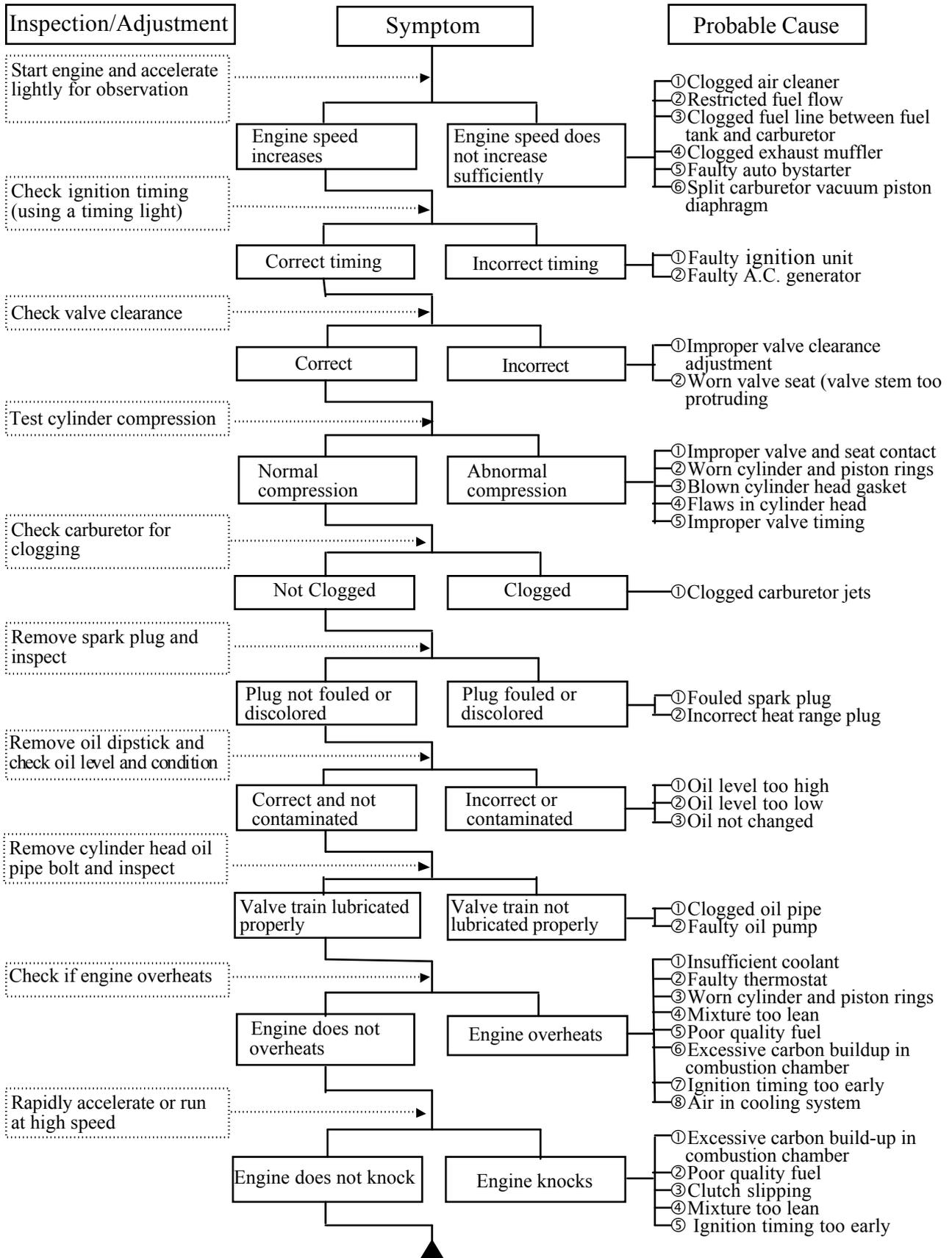
TROUBLESHOOTING

ENGINE WILL NOT START OR IS HARD TO START



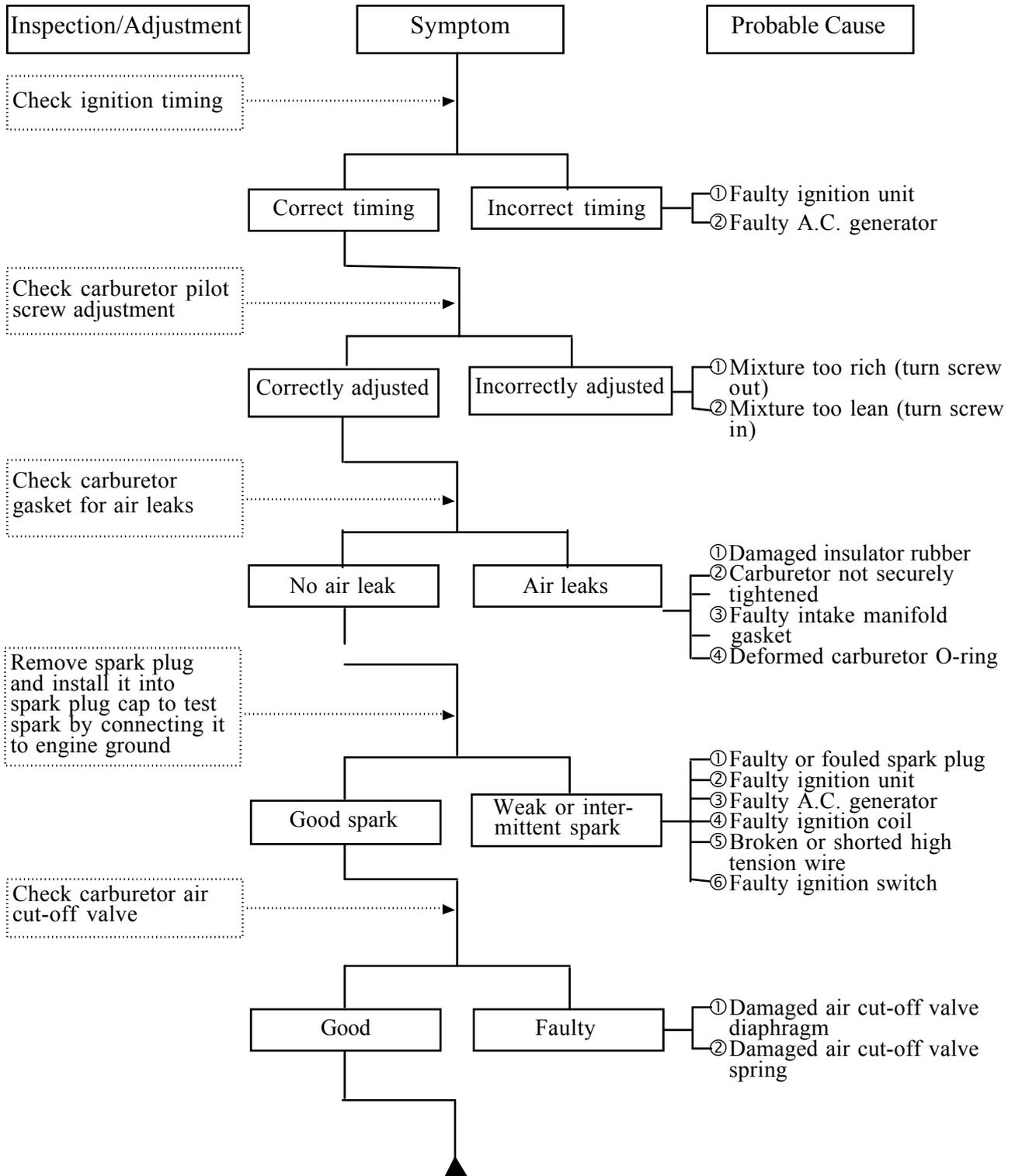
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ENGINE LACKS POWER



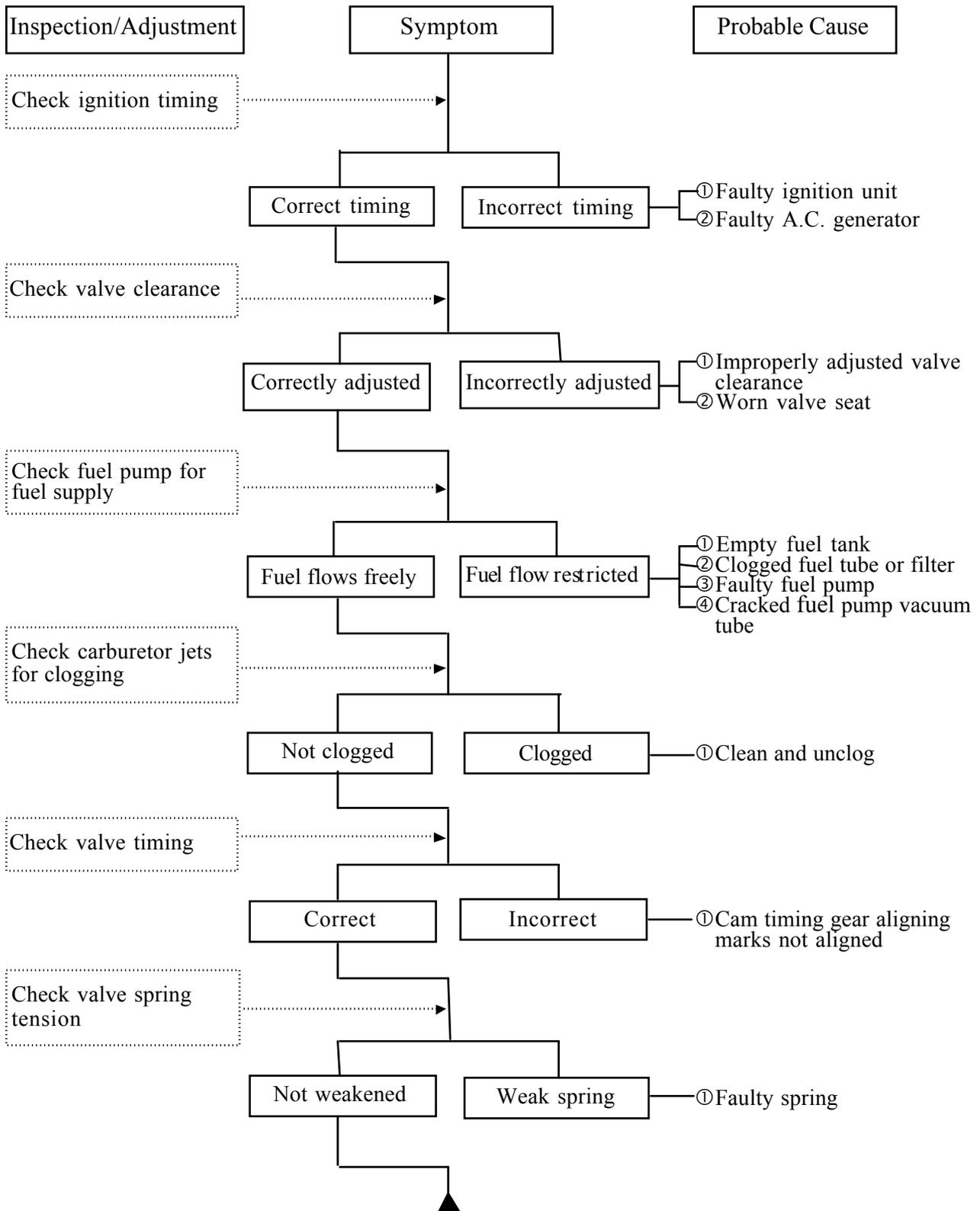
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POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)



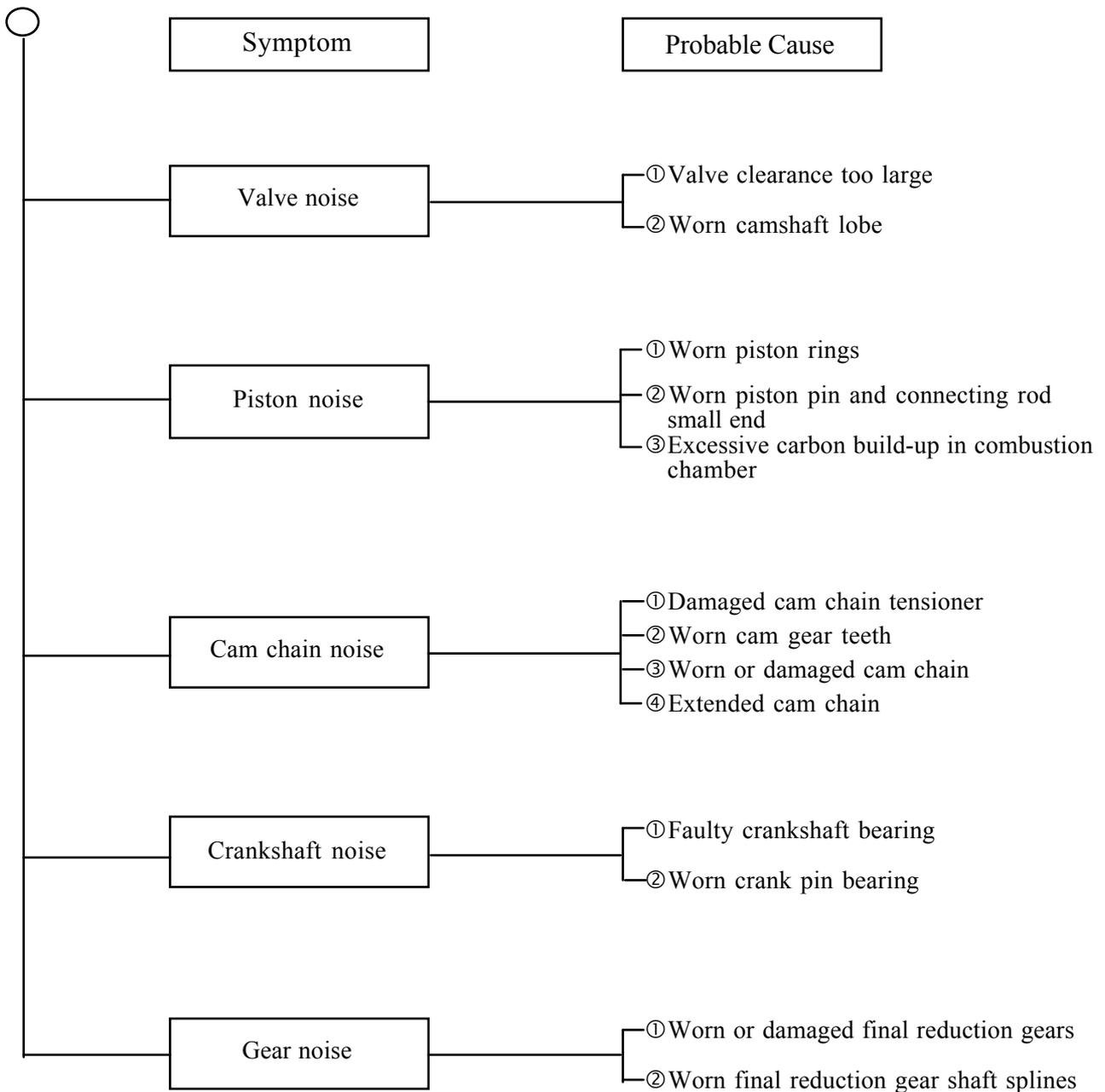
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POOR PERFORMANCE (AT HIGH SPEED)



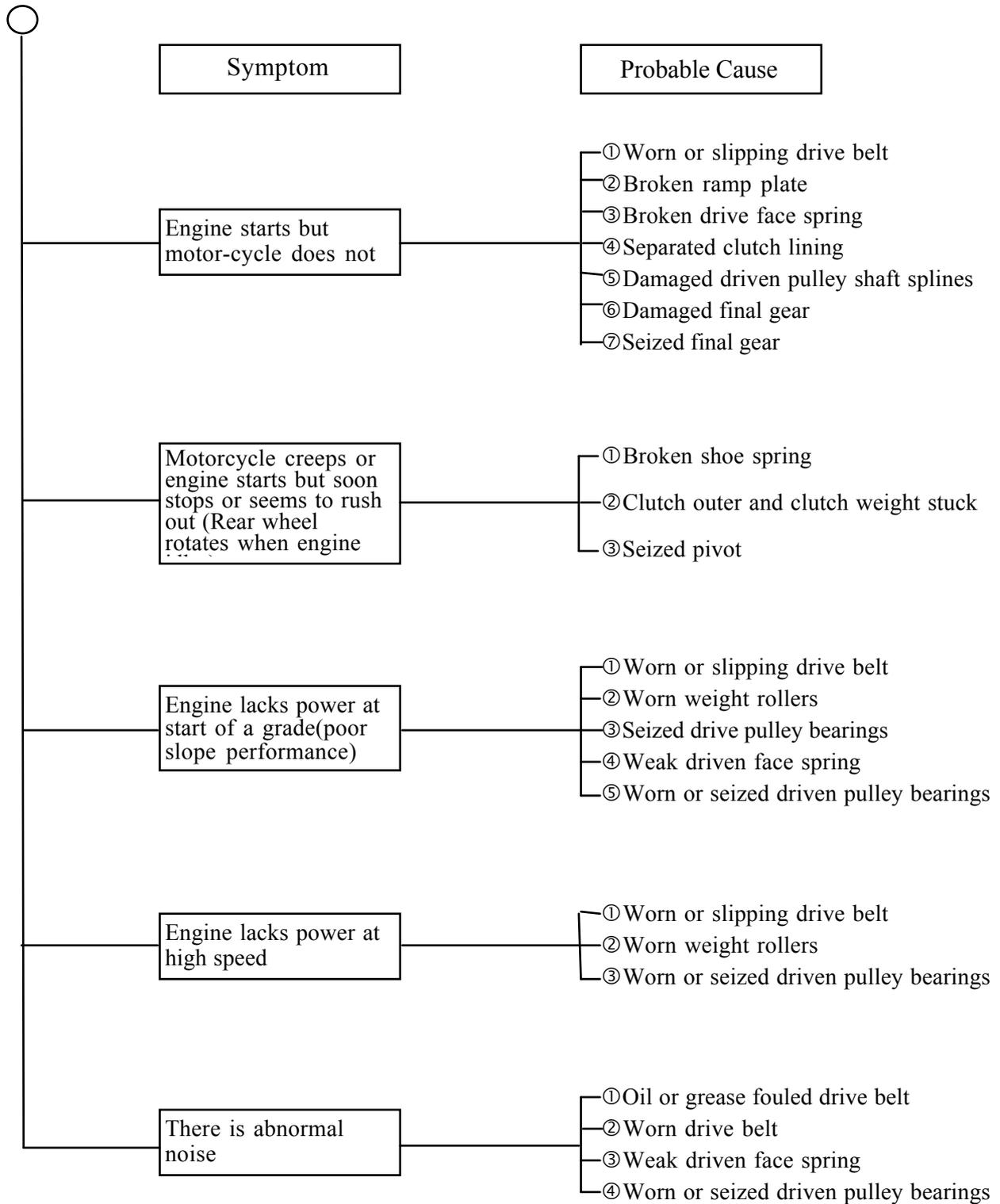
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ENGINE NOISE



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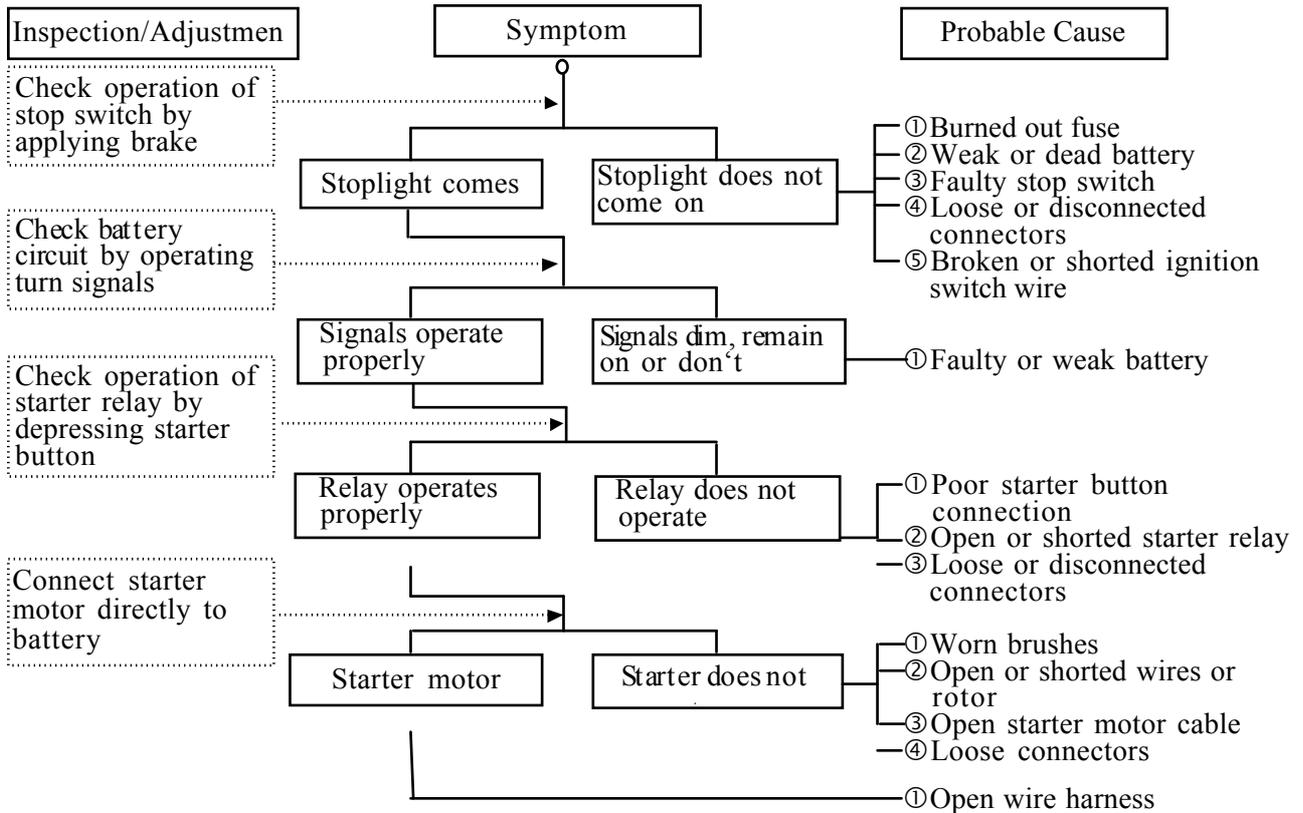
CLUTCH, DRIVE AND DRIVEN PULLEYS



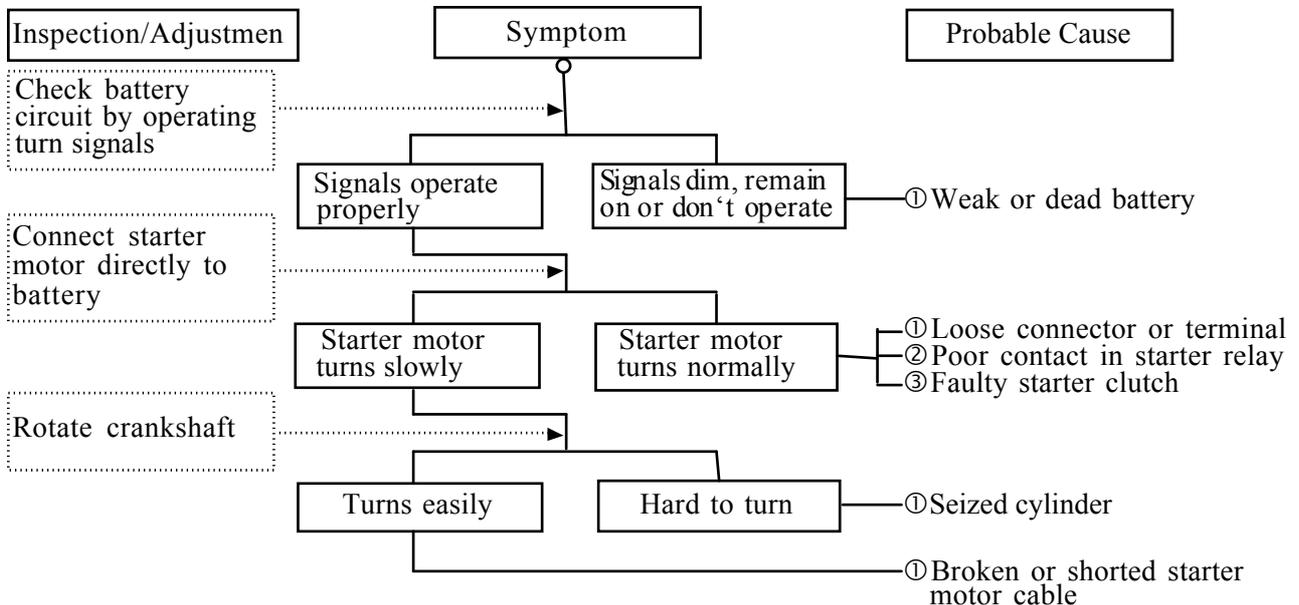
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STARTER MOTOR

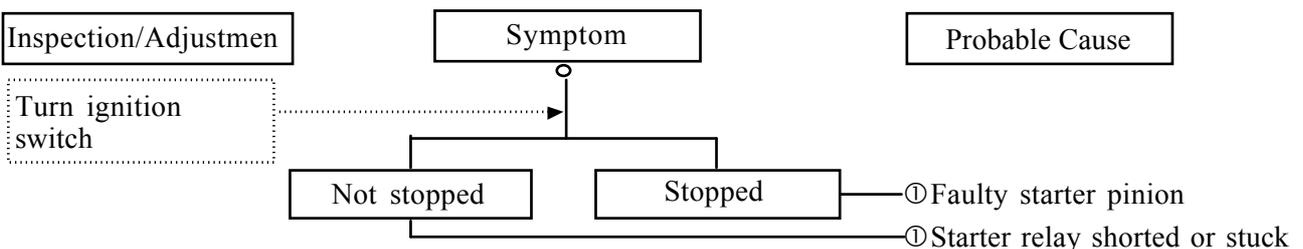
1. Starter motor won't turn



2. Starter motor turns slowly or idles



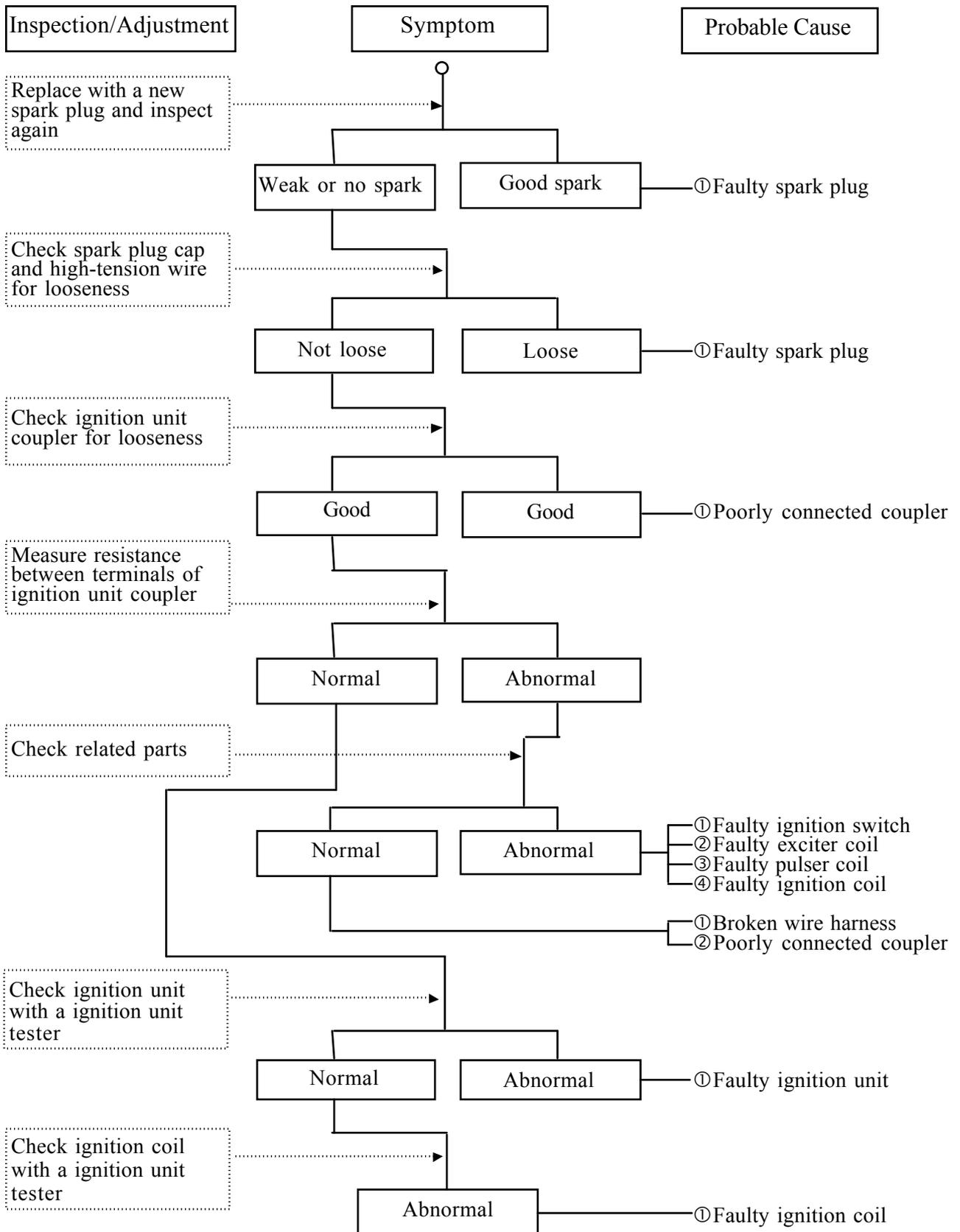
3. Starter motor does not stop turning



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closed

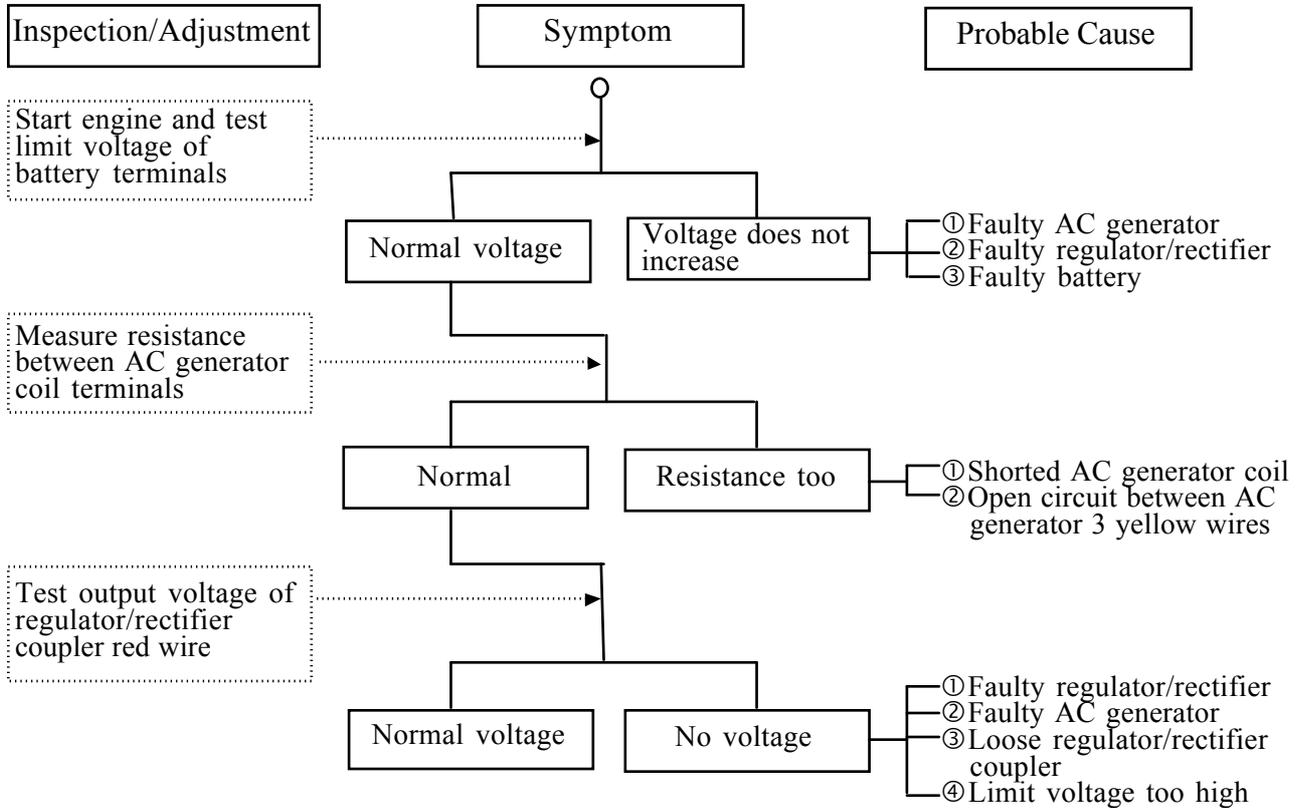
NO SPARK AT SPARK PLUG



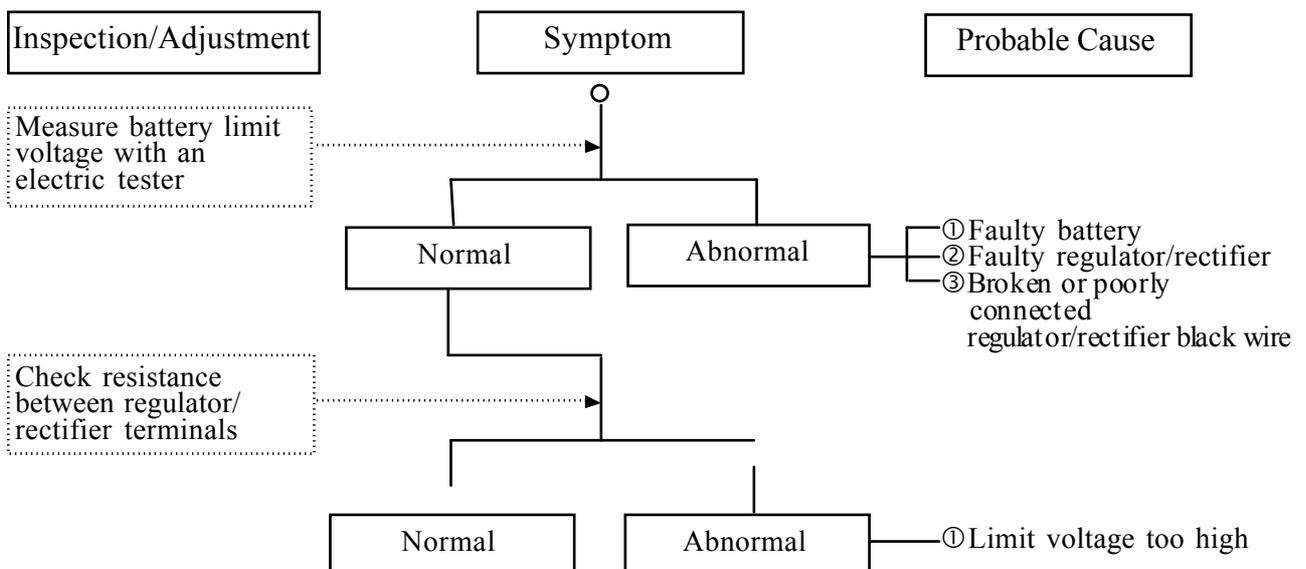
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POOR CHARGING (BATTERY OVER DISCHARGING OR OVERCHARGING)

Undercharging



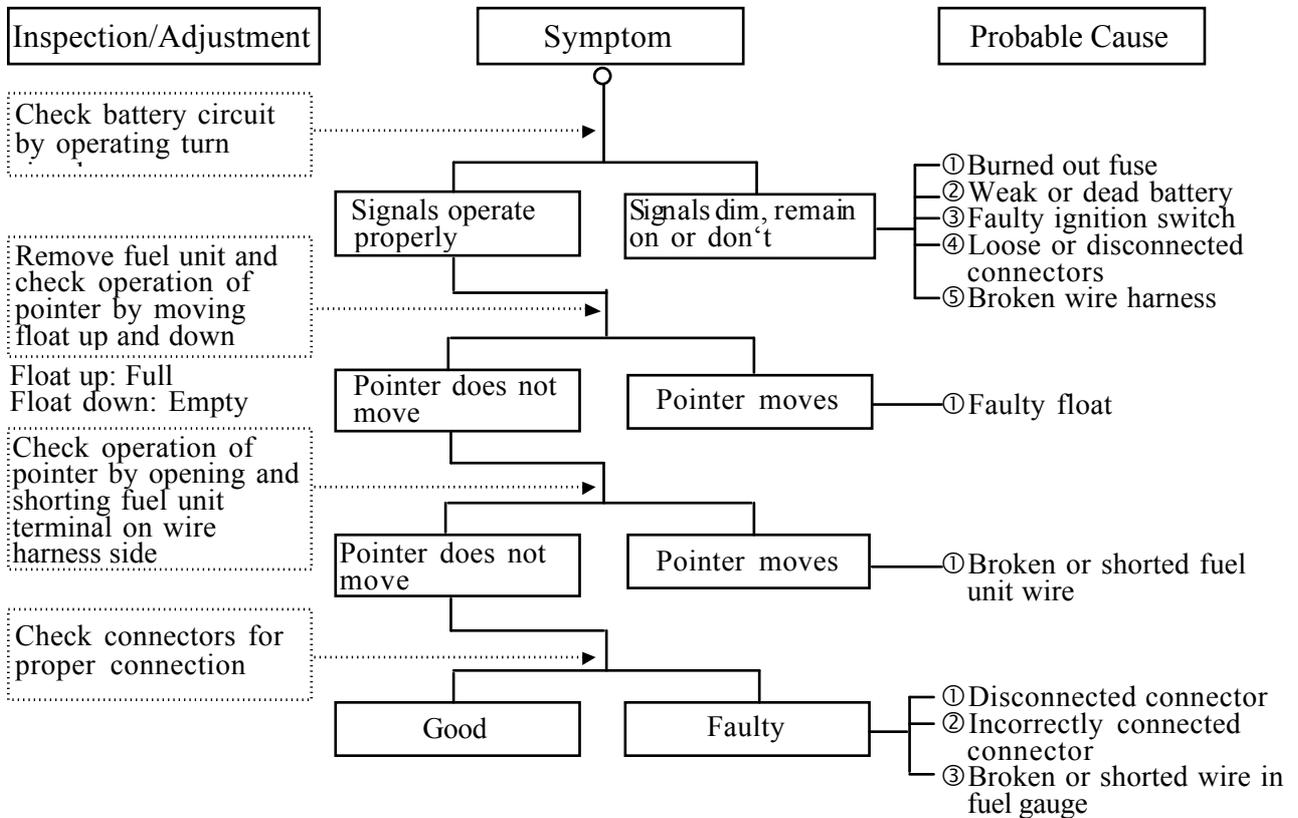
Overcharging



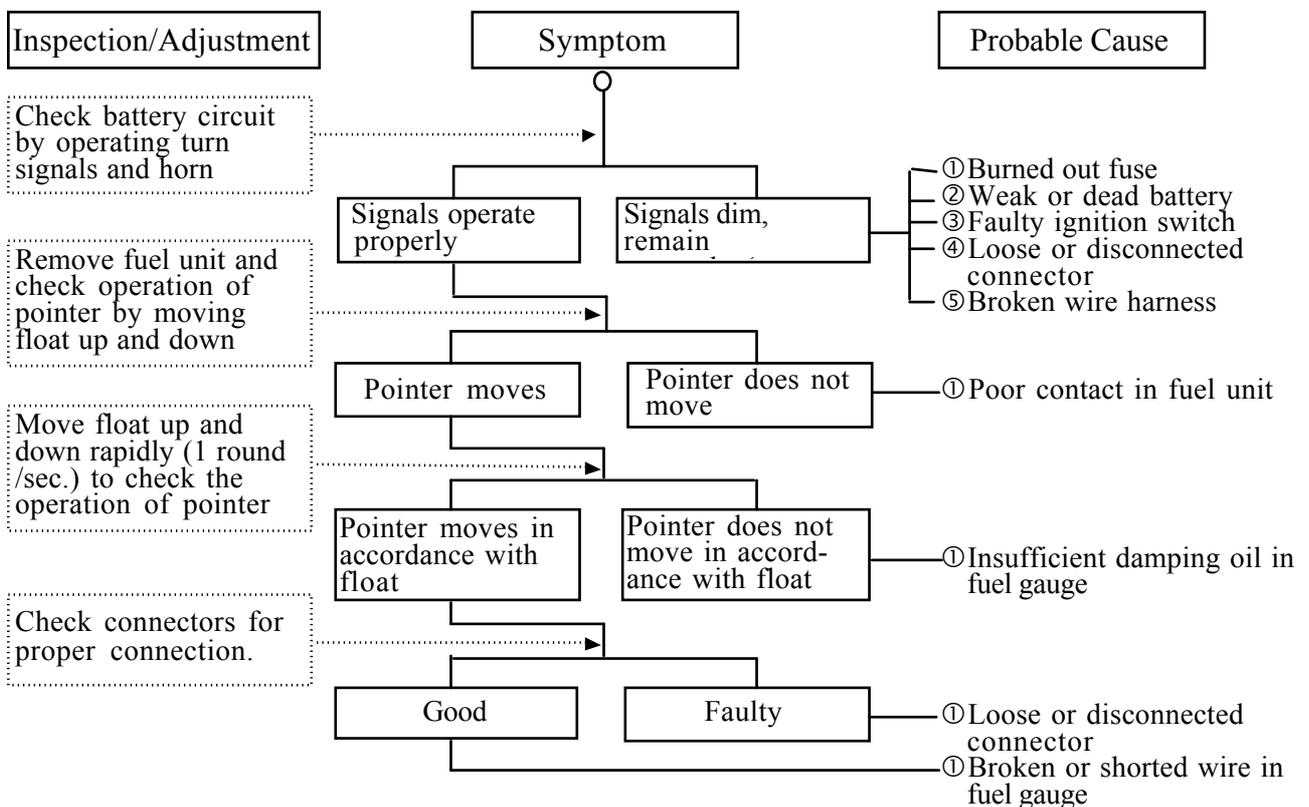
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FUEL GAUGE

1. Pointer does not register correctly (Ignition switch ON)

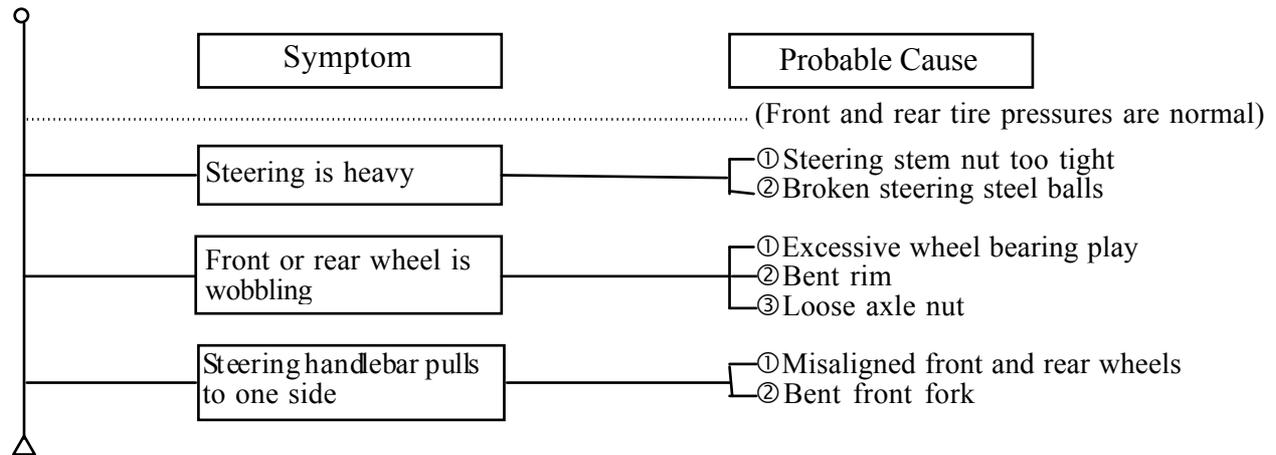


2. Pointer fluctuates or swings (Ignition switch ON)

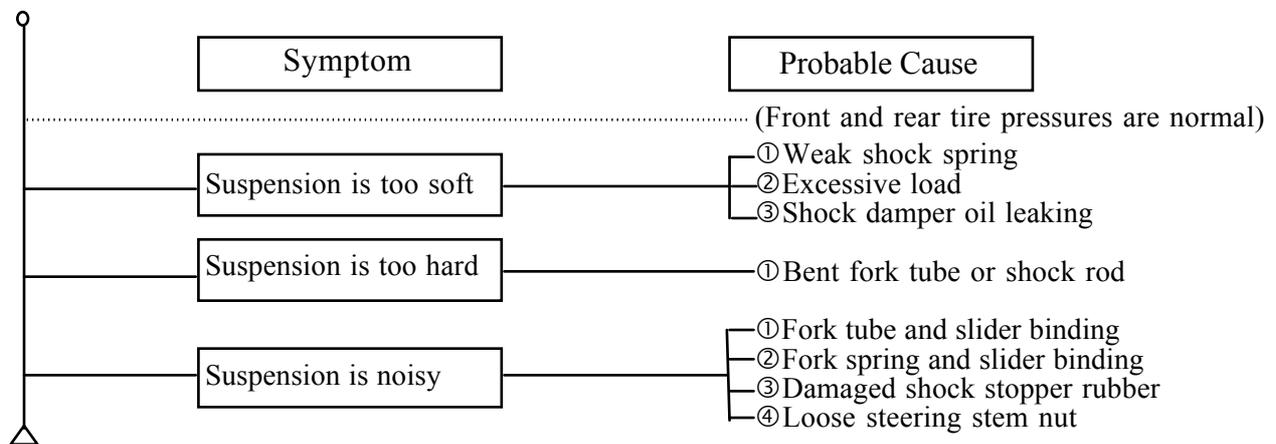


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STEERING HANDLEBAR DOES NOT TRACK STRAIGHT



POOR SUSPENSION PERFORMANCE



POOR BRAKE PERFORMANCE

