

1. GENERAL INFORMATION

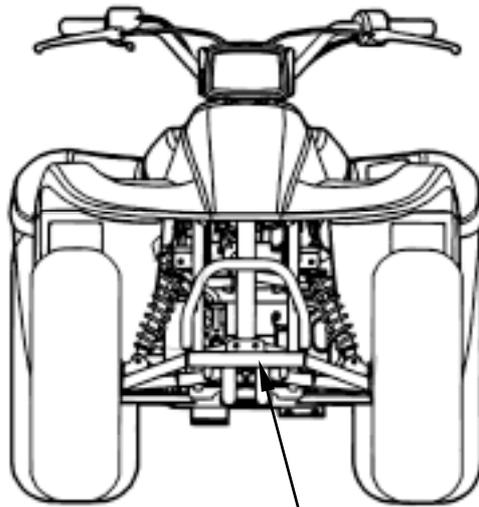
1

GENERAL INFORMATION

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1. GENERAL INFORMATION

SERIAL NUMBER



Location of Frame Serial Number



Location of Engine Serial Number

1. GENERAL INFORMATION

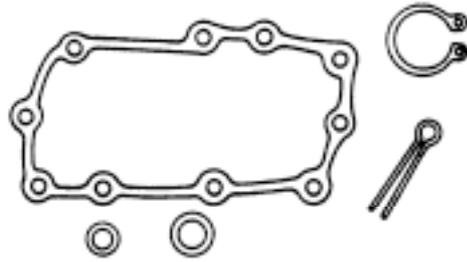
SPECIFICATIONS

Name & Model No.		LA10AD		
Motorcycle Name & Type		MX'er		
Overall length (mm)		1685		
Overall width (mm)		980		
Overall height (mm)		1030		
Wheel base (mm)		1120		
Engine type		Air cooled 2-stroke		
Displacement (cc)		49.4		
Fuel Used		92# nonleaded gasoline		
Net weight (kg)	Front wheel	67		
	Rear wheel	73		
	Total	140		
Gross weight(kg)	Front wheel	73		
	Rear wheel	77		
	Total	150		
Tires	Front wheel	20*7-8		
	Rear wheel	22*10-8		
Ground clearance (mm)		130		
Performance	Breaking distance (m)(ANSI)	20.6 below		
	Min. turning radius (m)	2.5		
Engine	Starting system		Starting motor & kick starter	
	Type		Air cooled 2-stroke	
	Cylinder arrangement		Single cylinder	
	Combustion chamber type		Semi-sphere	
	Valve arrangement		Reed valve & piston	
	Bore x stroke (mm)		39 x 41.4	
	Compression ratio		7.2:1	
	Compression pressure (kg/cm ²)		12.0	
	Max. output (ps/rpm)		4.3/6000	
	Max. torque (kg m/rpm)		0.55/5500	
	Port timing	Intake (1mm)	Open	Automatic controlled
			Close	Automatic controlled
		Exhaust (1mm)	Open	°-
			Close	°-
	Valve clearance (cold) (mm)	Intake	°-	
		Exhaust	°-	
	Idle speed (rpm)		2000rpm	
Lubrication type		Separate type		
Oil pump type		Plunger type		
Oil filter type		Full-flow filtration		

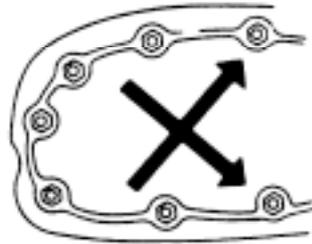
Fuel System	Air cleaner type & No		Sponge			
	Fuel capacity		8.1 liters			
	Carburetor	Type		PB		
		Main jet No.		80		
Venturi dia.(mm)		□14				
Throttle type		VALVE PISTON				
Electrical	Ignition System	Type		CDI		
		Ignition timing		22°/2000rpm		
		Spark plug		NGK BR8HAS		
		Spark plug gap		0.6_ 0.7mm		
Battery Capacity		12V4AH				
Power Drive System	Clutch Type		CVT			
	Operation		Automatic centrifugal Type			
	Gear Reduction	Type		Chain drive		
		Reduction ratio	1st	°-		
			2nd	°-		
Final gear ratio		23.678				
Moving Device	Front Axle	Caster angle		°-		
		Trail length		°-		
	Tire pressure (kg/cm ²)	Front	0.35			
		Rear	0.35			
Turning angle	Left	44°				
	Right	44°				
Brake system type	Rear	Disk brake				
	Front	Drum brake				
Damping Device	Suspension type	Front	Swing			
		Rear	Swing arm			
	Shock type	Front	Swing			
		Rear	Swing arm			
Frame type		SP pipe				

SERVICE PRECAUTIONS

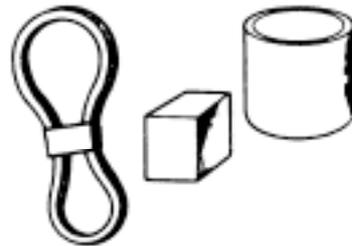
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



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



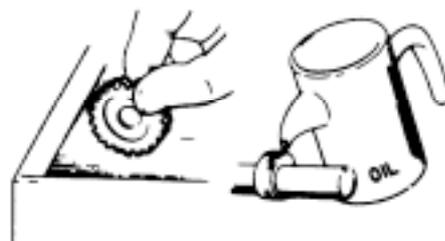
- Use genuine parts and lubricants.



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

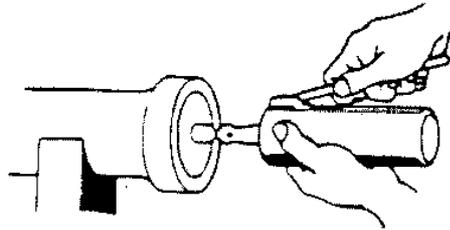


- After disassembly, clean removed parts. Lubricate sliding surfaces with engine oil before reassembly.

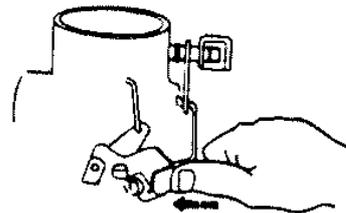


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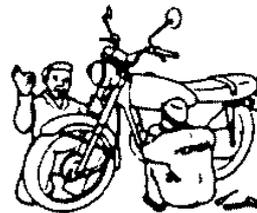
- Apply or add designated greases and lubricants to the specified lubrication points.



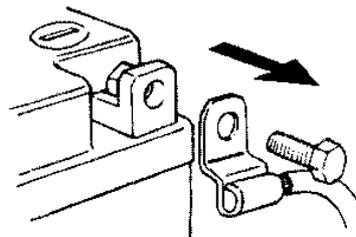
- After reassembly, check all parts for proper tightening and operation.



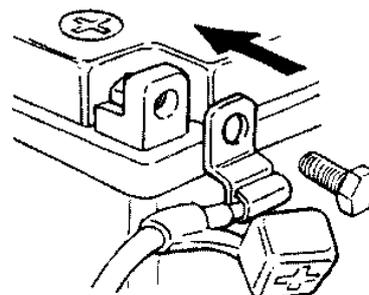
- When two persons work together, pay attention to the mutual working safety.



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

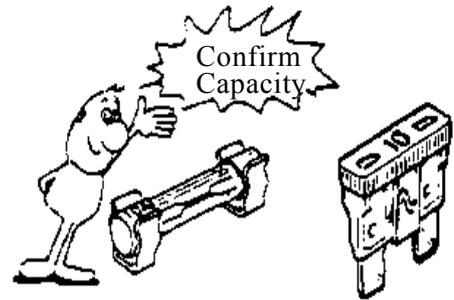


- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.



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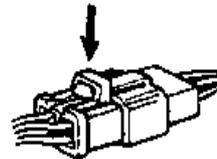
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.



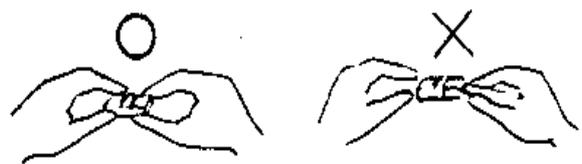
- After operation, terminal caps shall be installed securely.



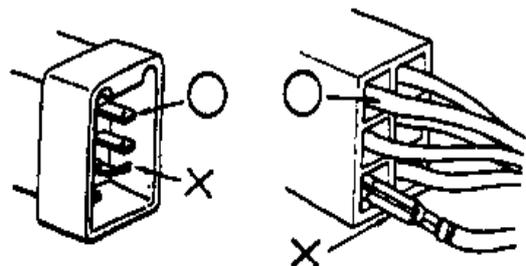
- When taking out the connector, the lock on the connector shall be released before operation.



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

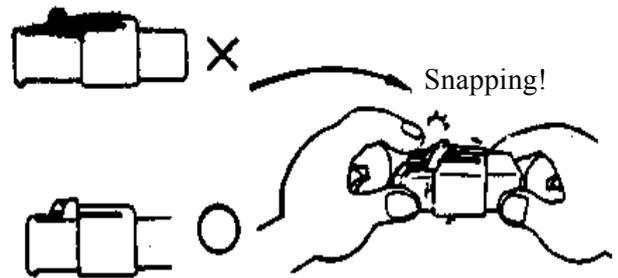


- Check if any connector terminal is bending, protruding or loose.

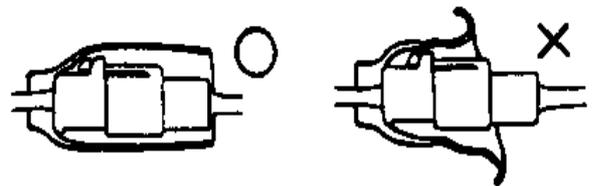


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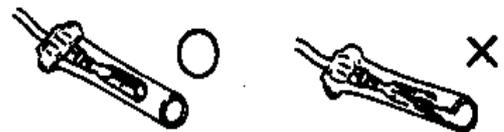
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



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



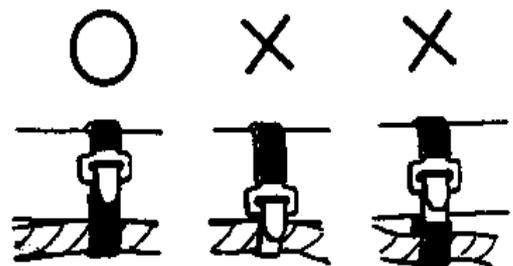
- Check the double connector cover for proper coverage and installation.



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

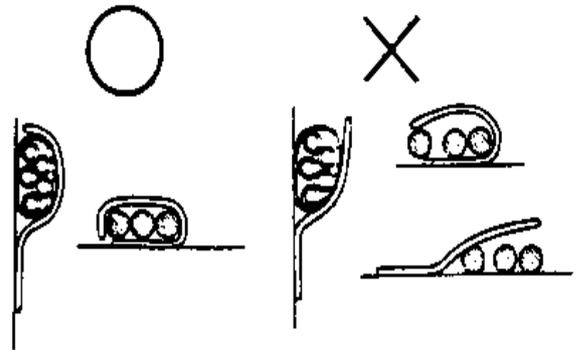


- Secure wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wire harnesses.

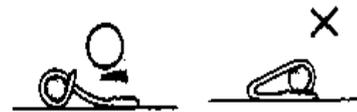


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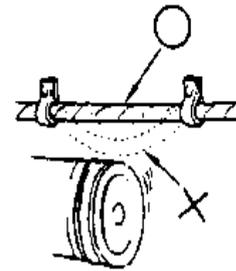
- After clamping, check each wire to make sure it is secure.



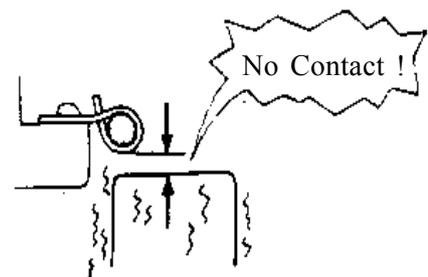
- Do not squeeze wires against the weld or its clamp.



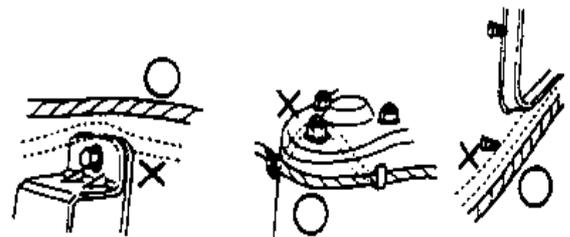
- After clamping, check each harness to make sure that it is not interfering with any moving or sliding parts.



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

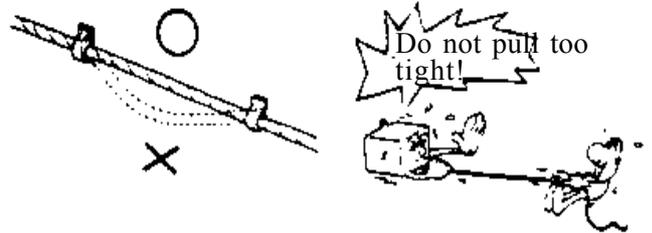


- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.

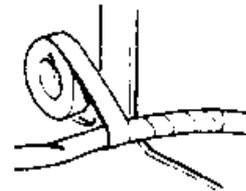


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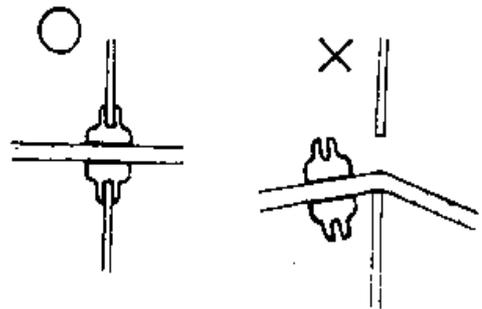
- Route harnesses so they are neither pulled tight nor have excessive slack.



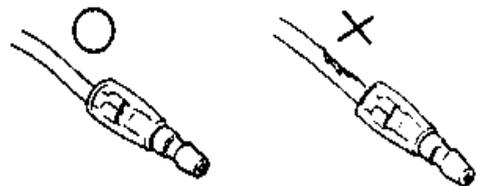
- Protect wires and harnesses with electrical tape or tube if they contact a sharp edge or corner.



- 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.

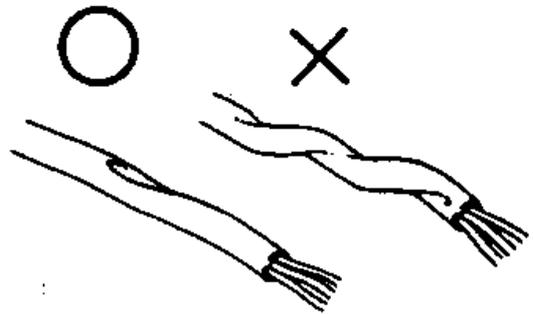


- When installing other parts, do not press or squeeze the wires.

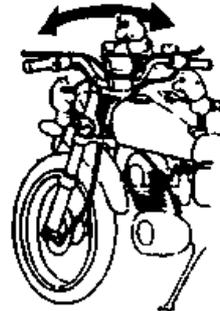


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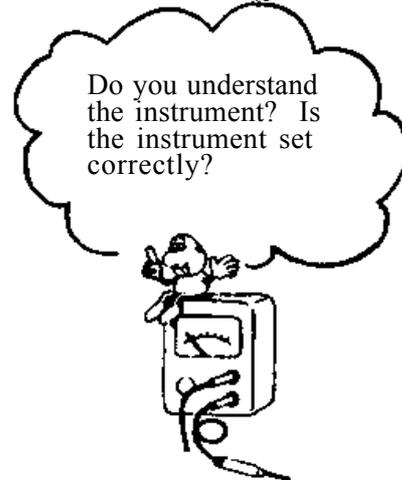
- After routing, check that the wire harnesses are not twisted or kinked.



- 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.



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■ Symbols:

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



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



: Apply grease for lubrication.



: Use special tool.



: Caution



: Warning

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TORQUE VALUES

STANDARD TORQUE VALUES

Item	Torque (kgf-m)	Item	Torque (kgf-m)
5mm bolt, nut	0.45_ 0.6	4mm screw	0.15_ 0.4
6mm bolt, nut	0.8_ 1.2	5mm screw	0.3_ 0.5
8mm bolt, nut	1.8_ 2.5	6mm screw, SH bolt	0.7_ 1.1
10mm bolt, nut	3.0_ 4.0	6mm flange bolt and nut	1.0_ 1.4
12mm bolt, nut	5.0_ 6.0	8mm flange bolt and nut	2.4_ 3.0
14mm bolt, nut	6.0_ 8.0	10mm flange bolt and nut	3.5_ 4.5

Torque specifications listed below are for important fasteners.

ENGINE

Item	Q'ty	Thread dia.(mm)	Torque (kgf-m)	Remarks
Cylinder head bolt	4	BF7X115	1.5_ 1.7	
Clutch drive plate nut	1	39	5.0_ 6.0	
Drive face nut	1	12	3.5_ 4.0	
Clutch outer nut	1	NH10	3.5_ 4.0	
A.C.G flywheel nut	1	10	3.5_ 4.0	
Oil check bolt	1	8	1.0_ 1.5	
Exhaust muffler joint lock nut	2	NC6mm	1.0_ 1.4	
Exhaust muffler lock bolt	2	BF8X35	3.0_ 3.6	
Spark plug			1.1_ 1.7	

FRAME

Item	Q'ty	Thread dia.(mm)	Torque (kgf-m)	Remarks
Steering stem nut	1	14	6.0_ 8.0	
Swing arm nut	4	10	4.0_ 5.0	
Rear wheel nut	4	14	6.0_ 8.0	
Front wheel nut	4	14	6.0_ 8.0	
Rear shock absorber upper mount bolt	1	10	3.5_ 4.5	
Front shock absorber upper mount bolt	2	10	3.5_ 4.5	
Front shock absorber lower mount bolt	2	10	3.5_ 4.5	
Rear fork axle	1	14	6.0_ 8.0	
Rear hub nut	4	12	6.0_ 8.0	
Rear wheel shaft nut	2	32	11.0_ 13.0	
Rear engine bracket up bolt	1	10	3.5_ 4.5	
Rear engine bracket bolt	2	10	3.5_ 4.5	
Engine hanger bracket bolt	1	10	4.0_ 5.0	

1. SPECIFICATIONS

SPECIAL TOOLS

Tool Name	Tool No.	Remarks Ref. Page
Flywheel puller	E001	
Oil seal and bearing install	E014	
Universal holder	E017	
Clutch spring compressor	E034	
Bearing puller	E037	
Crankshaft install	E016	
Crankshaft & crankcase install	E024	
Crankcase puller	E026	
Crankshaft Bearing puller	E030	
Nut wrench	F010	
Float level gauge		

LUBRICATION POINTS

ENGINE

Lubrication Points	Lubricant
Crankcase sliding & movable parts	JASO-FC or API-TC
Cylinder movable parts	JASO-FC or API-TC
Transmission gear (final gear)	Gear oil: SAE90#
Kick starter spindle bushing	Grease
Drive pulley movable parts	Grease
Starter pinion movable parts	Grease

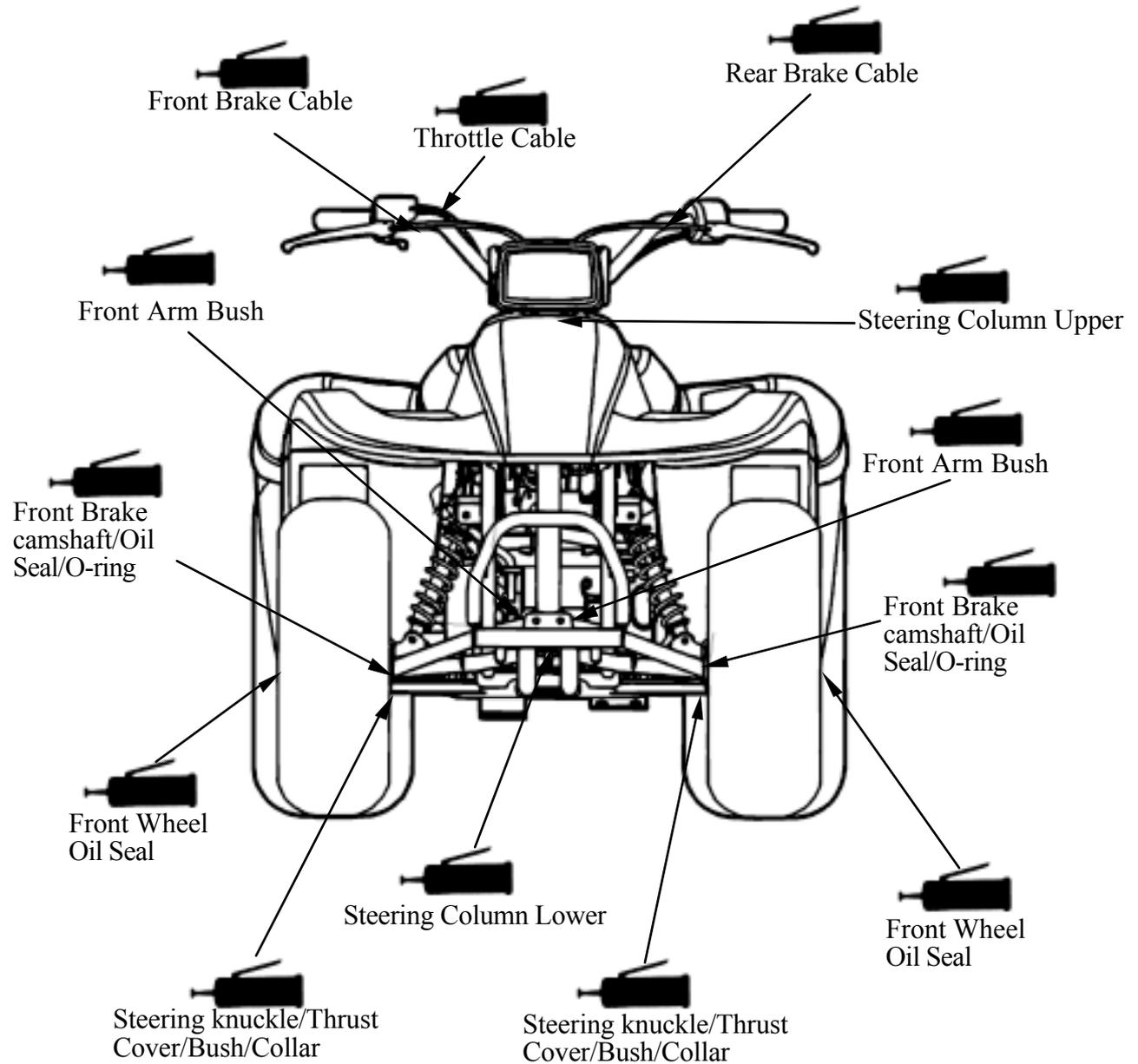
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FRAME

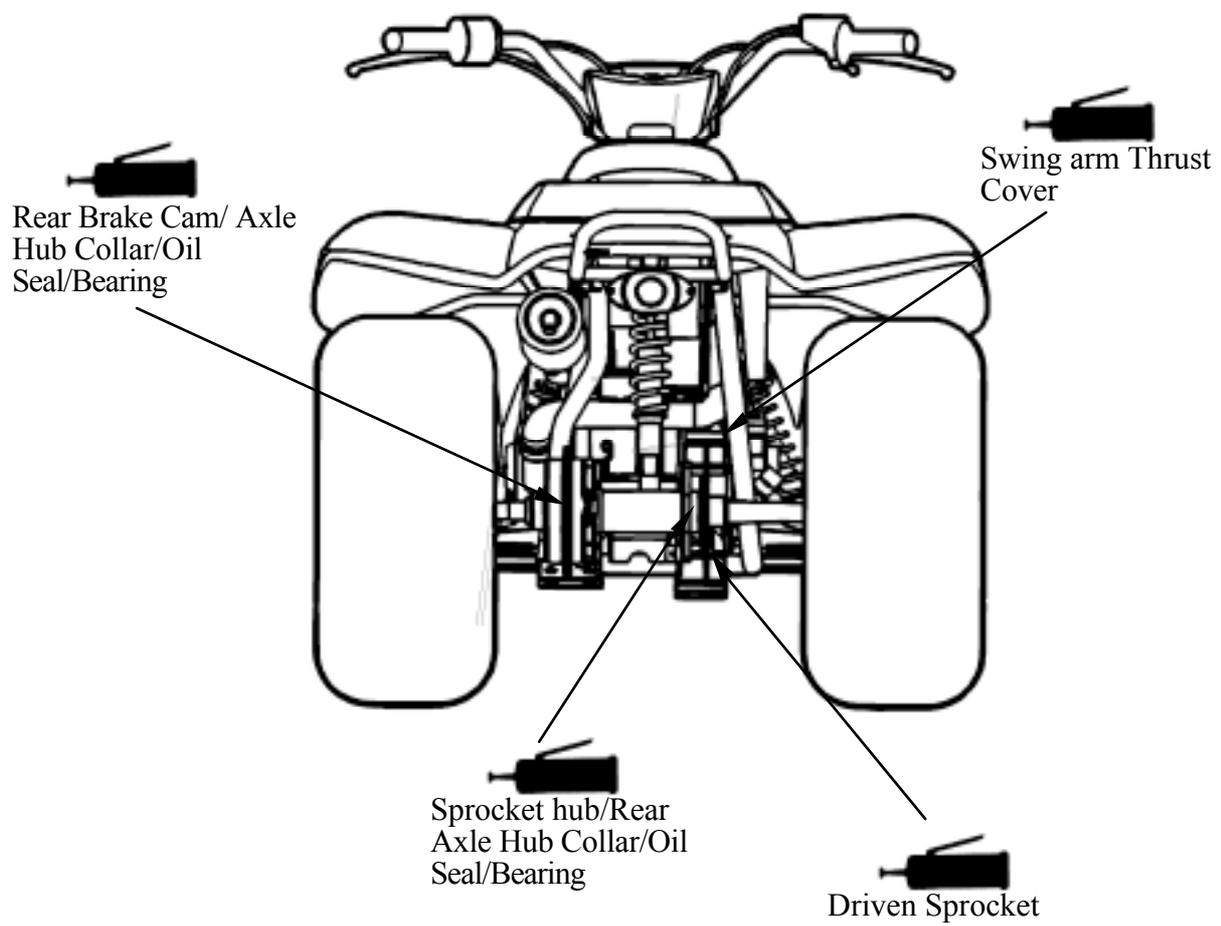
The following is the lubrication points for the frame.

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.



1. SPECIFICATIONS

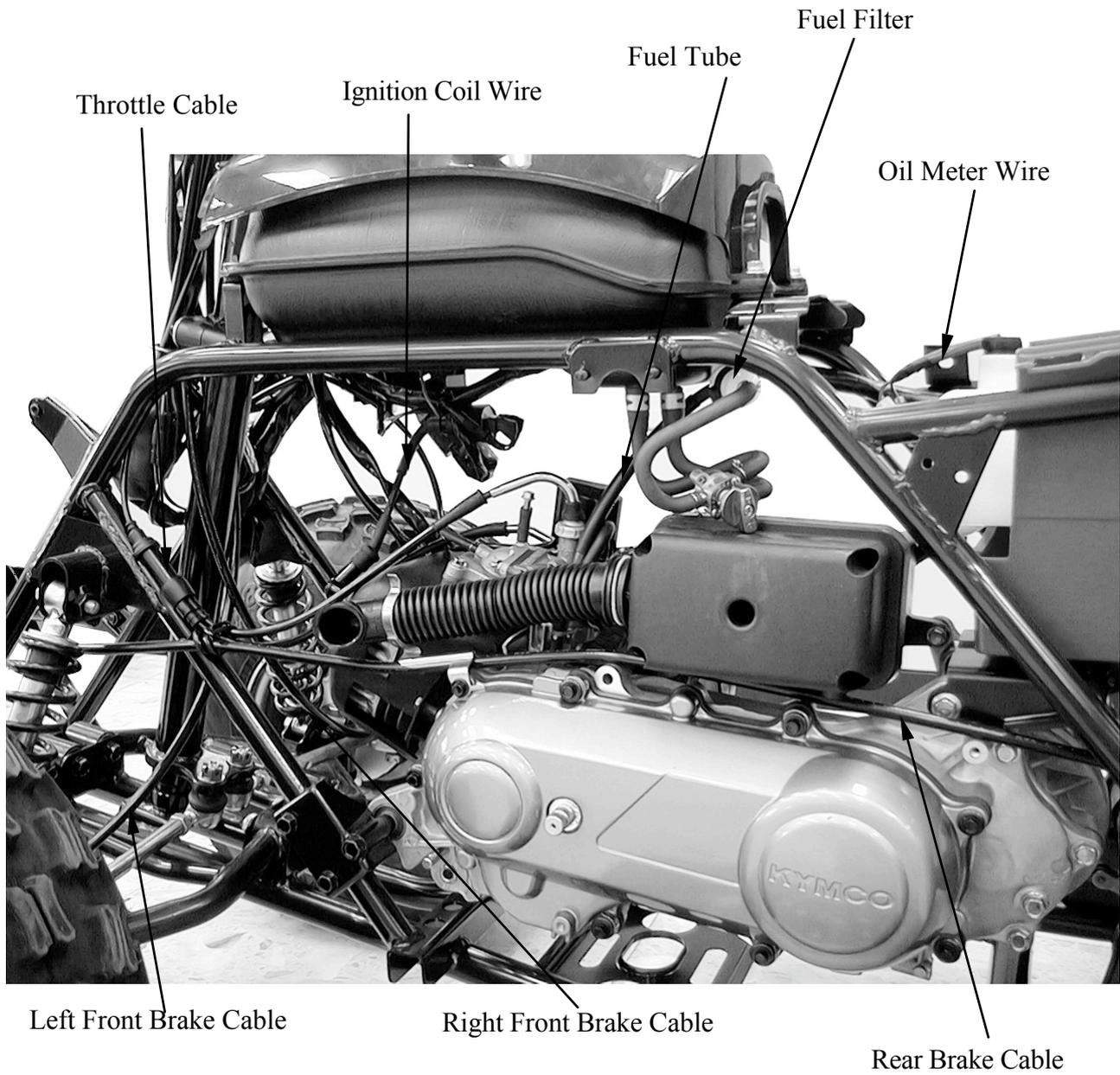


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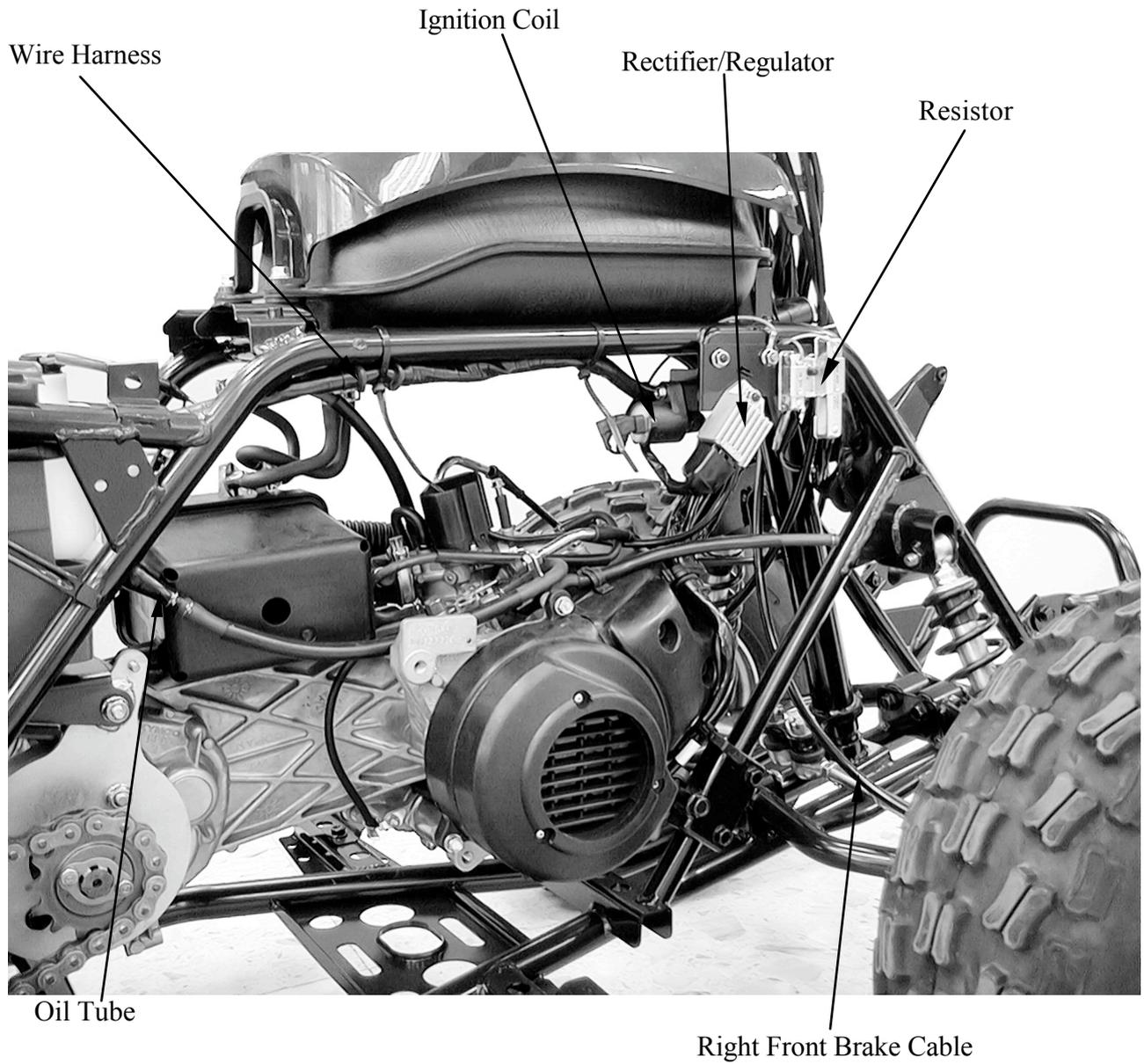
CABLE & HARNESS ROUTING



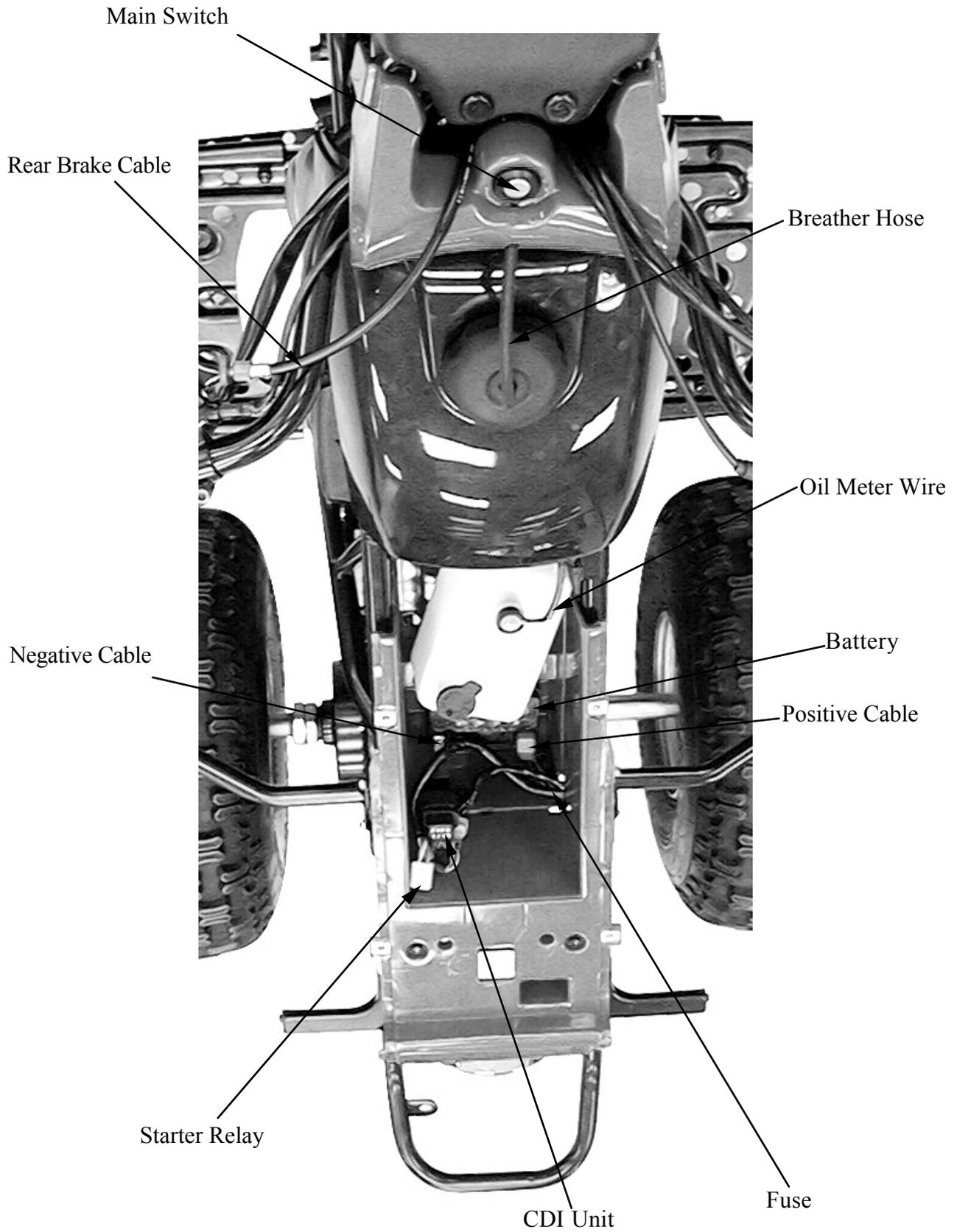
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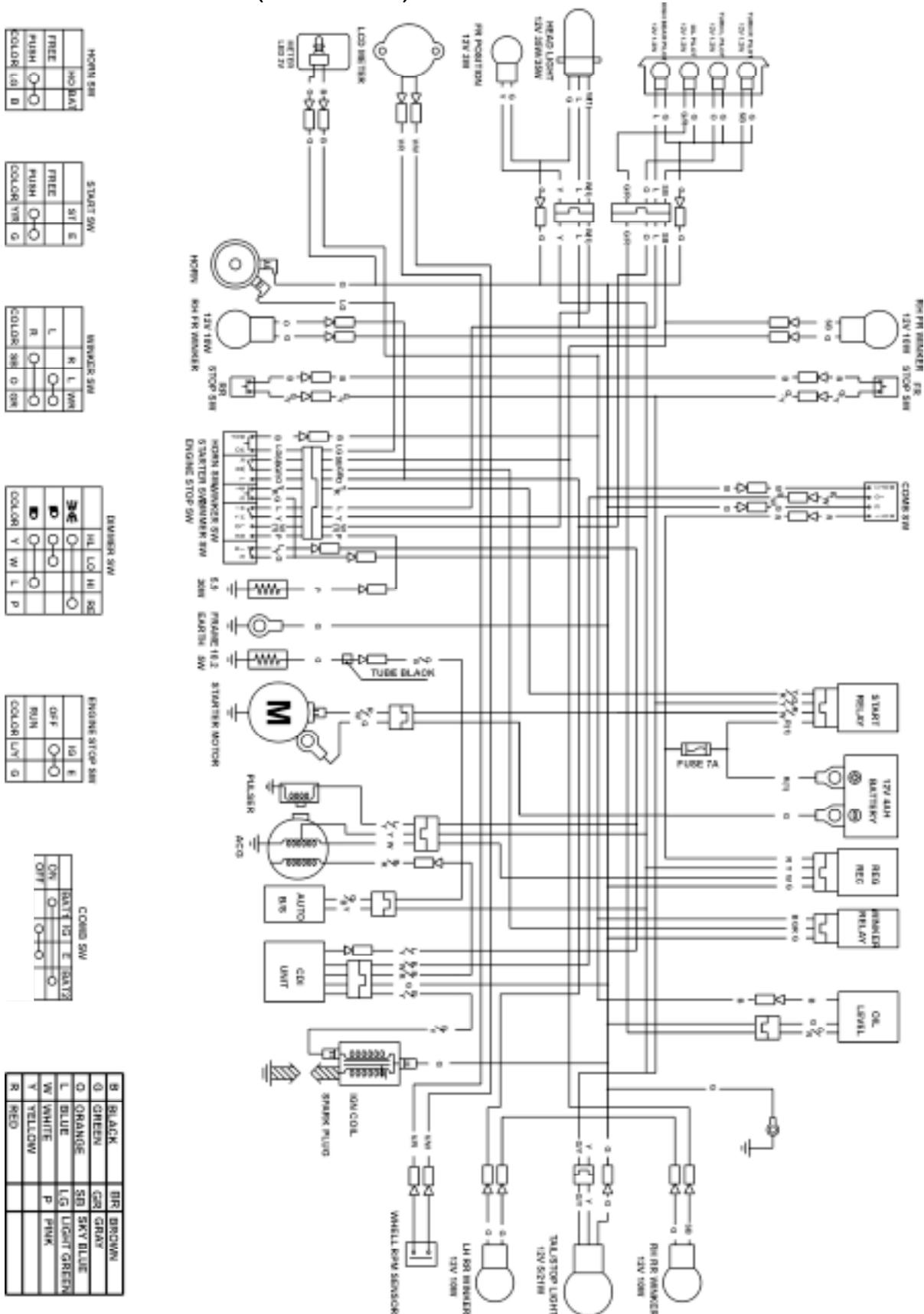


1. SPECIFICATIONS



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WIRING DIAGRAM (ON ROAD)



1. SPECIFICATIONS

WIRING DIAGRAM (OFF ROAD)

COLOR CODE GRADING MARKING

B	BLACK	BR	BROWN
Y	YELLOW	O	ORANGE
L	BLUE	SB	SKY BLUE
G	GREEN	LG	LIGHT GREEN
R	RED	P	PINK
W	WHITE	GR	GRAY

STARTER SW

FREE	E	ST
PUSH	O	O
COLOR	G	Y/R

ENGINE STOP SW

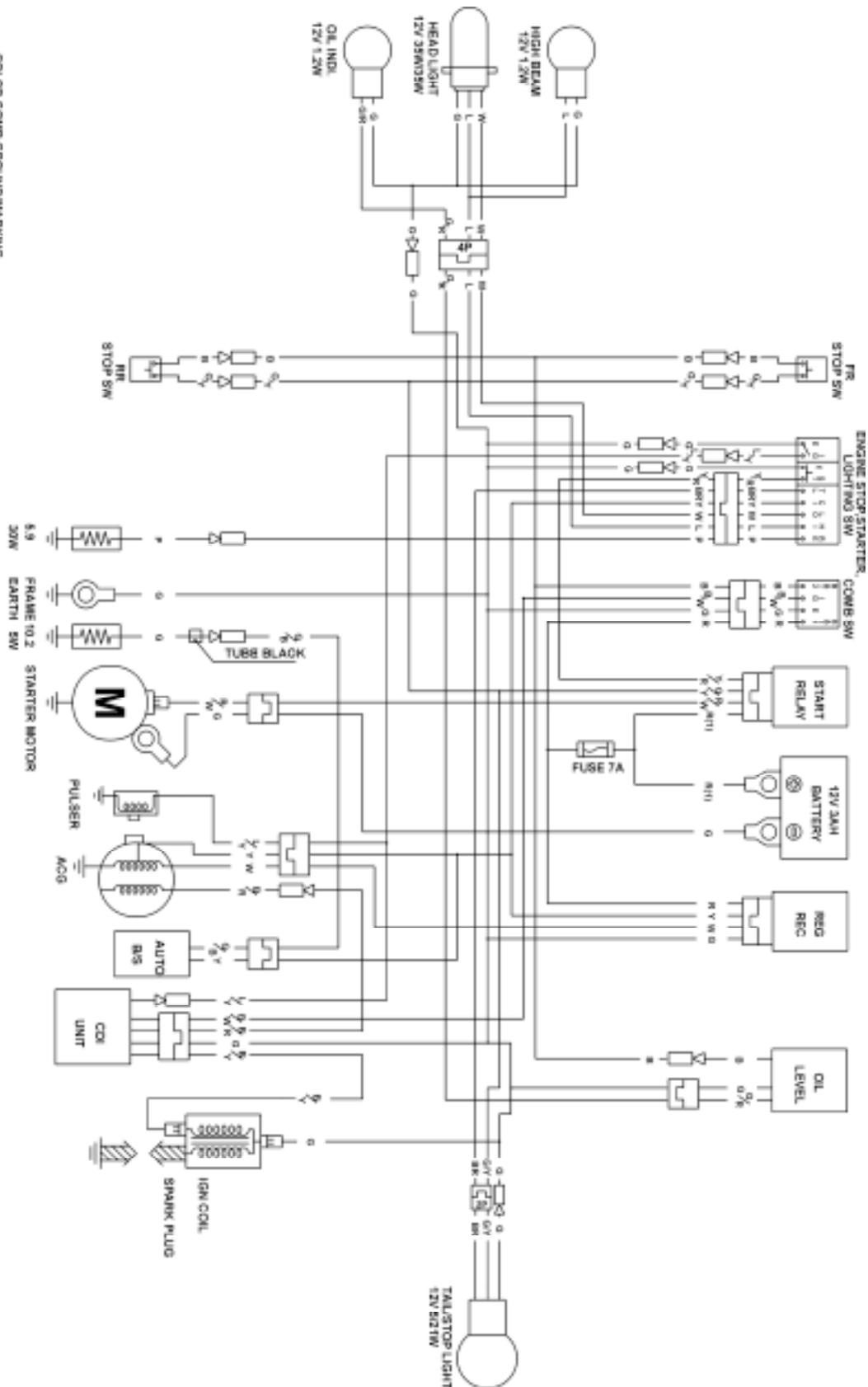
OFF	E	RS
RUN	O	O
COLOR	G	LY

COMB SW

BAT1	B	E	BAT2
OFF	O	O	O
ON	O	O	O

LIGHTING SW

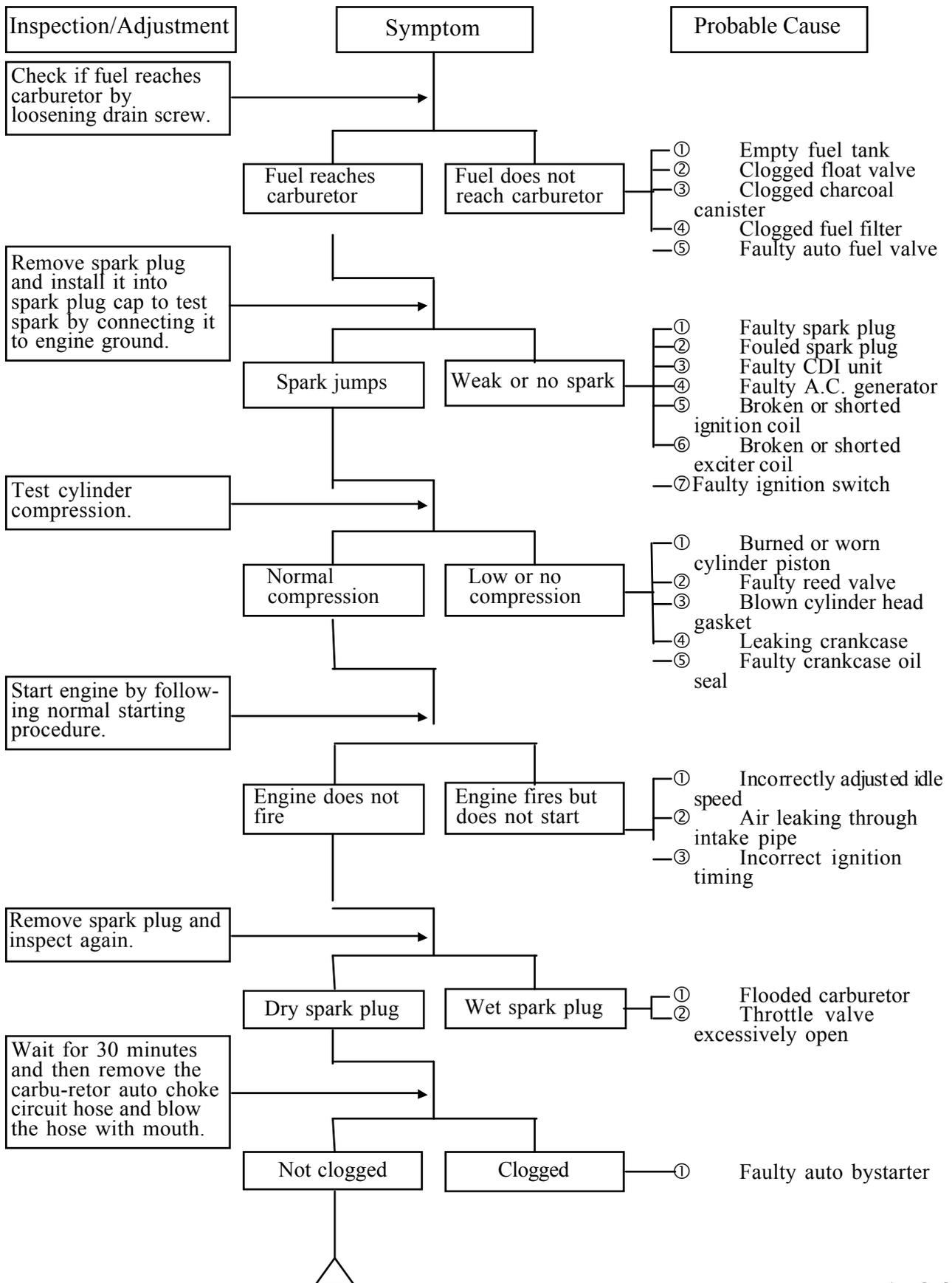
OT	BT	TL	LD	HL
ON	O	O	O	O
IN	O	O	O	O
L	O	O	O	O
IN	O	O	O	O
H	O	O	O	O
Y	P	BR	W	L



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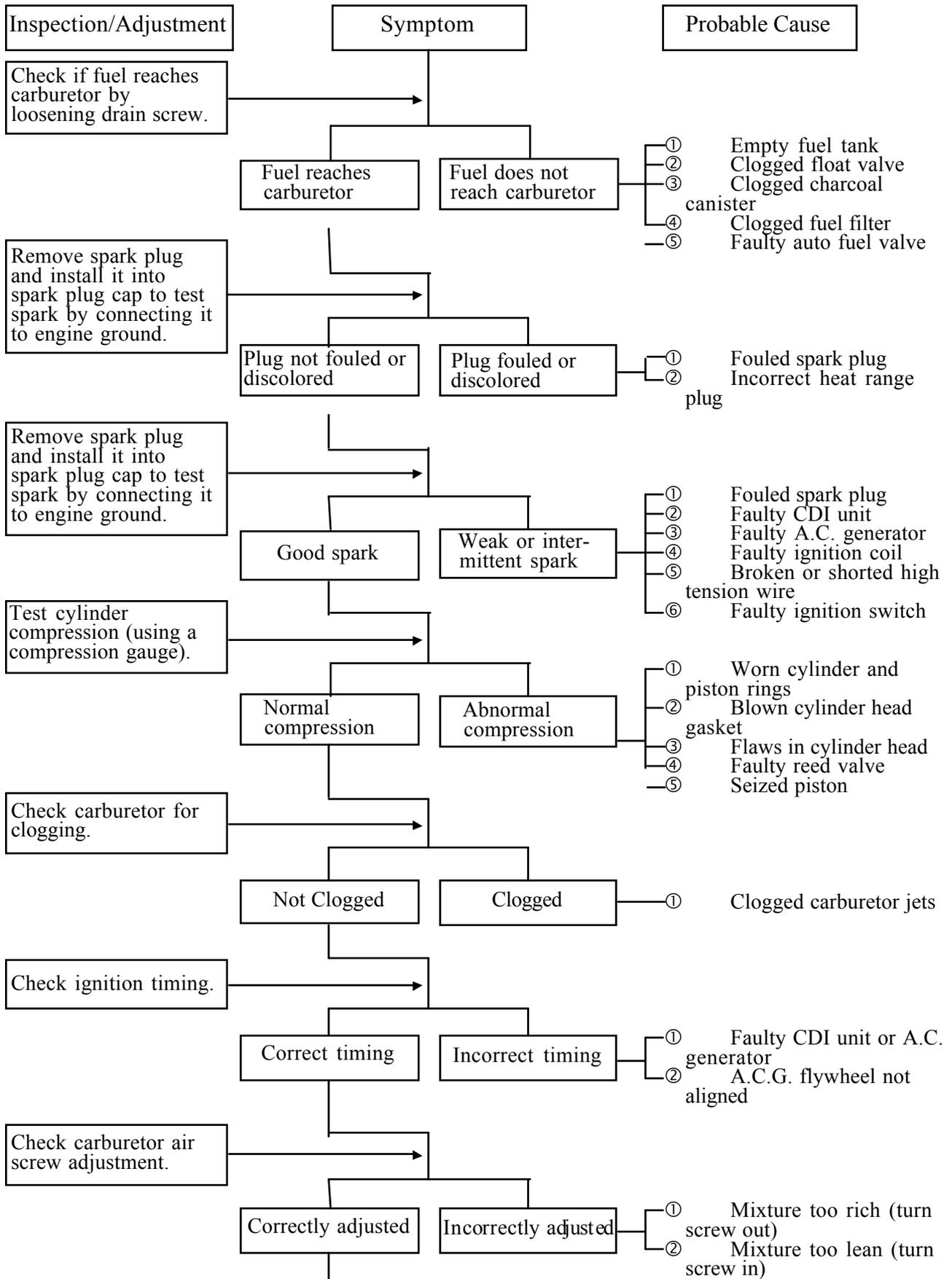
TROUBLESHOOTING

ENGINE WILL NOT START OR IS HARD TO START

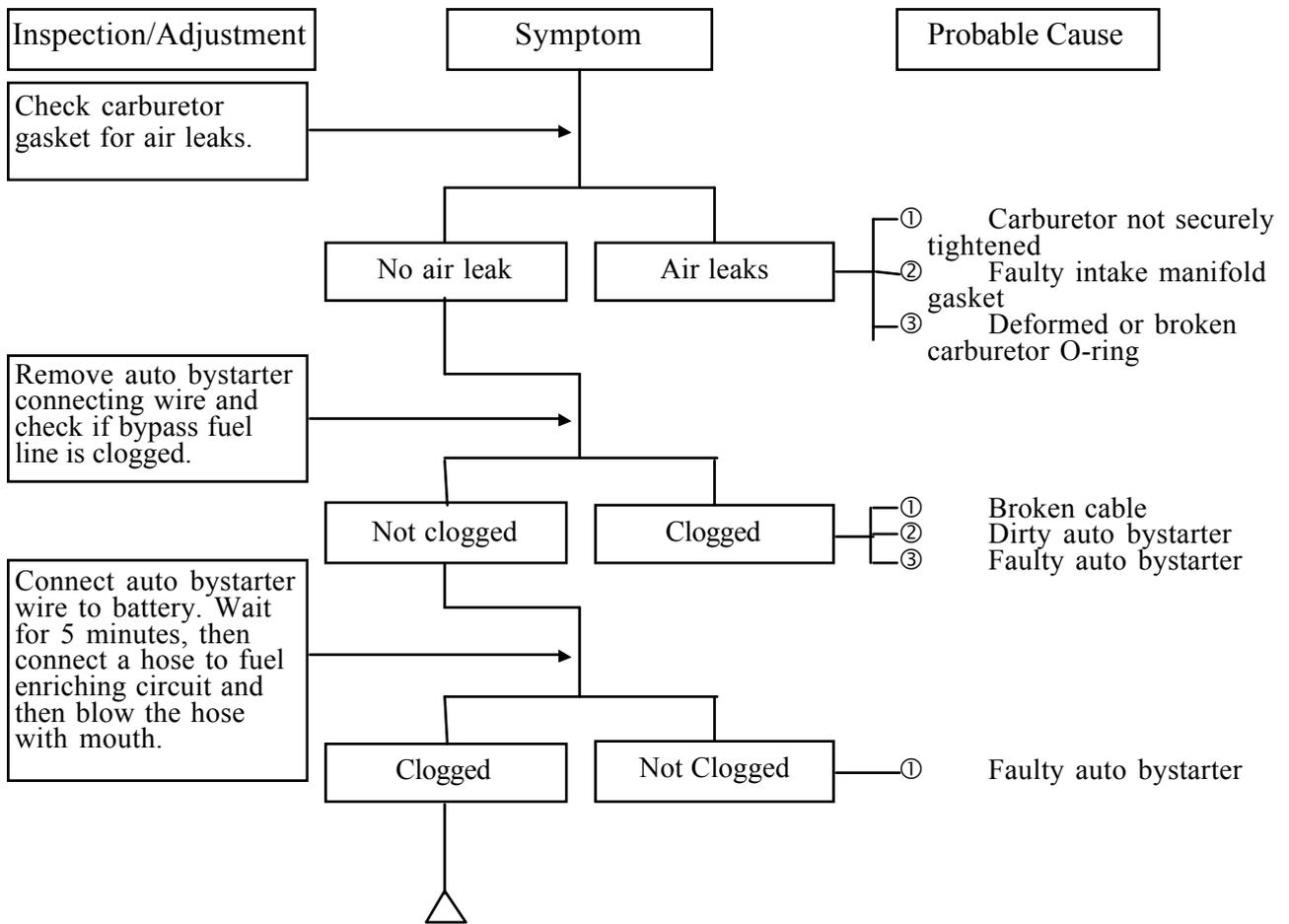


1. SPECIFICATIONS

ENGINE STOPS IMMEDIATELY AFTER IT STARTS

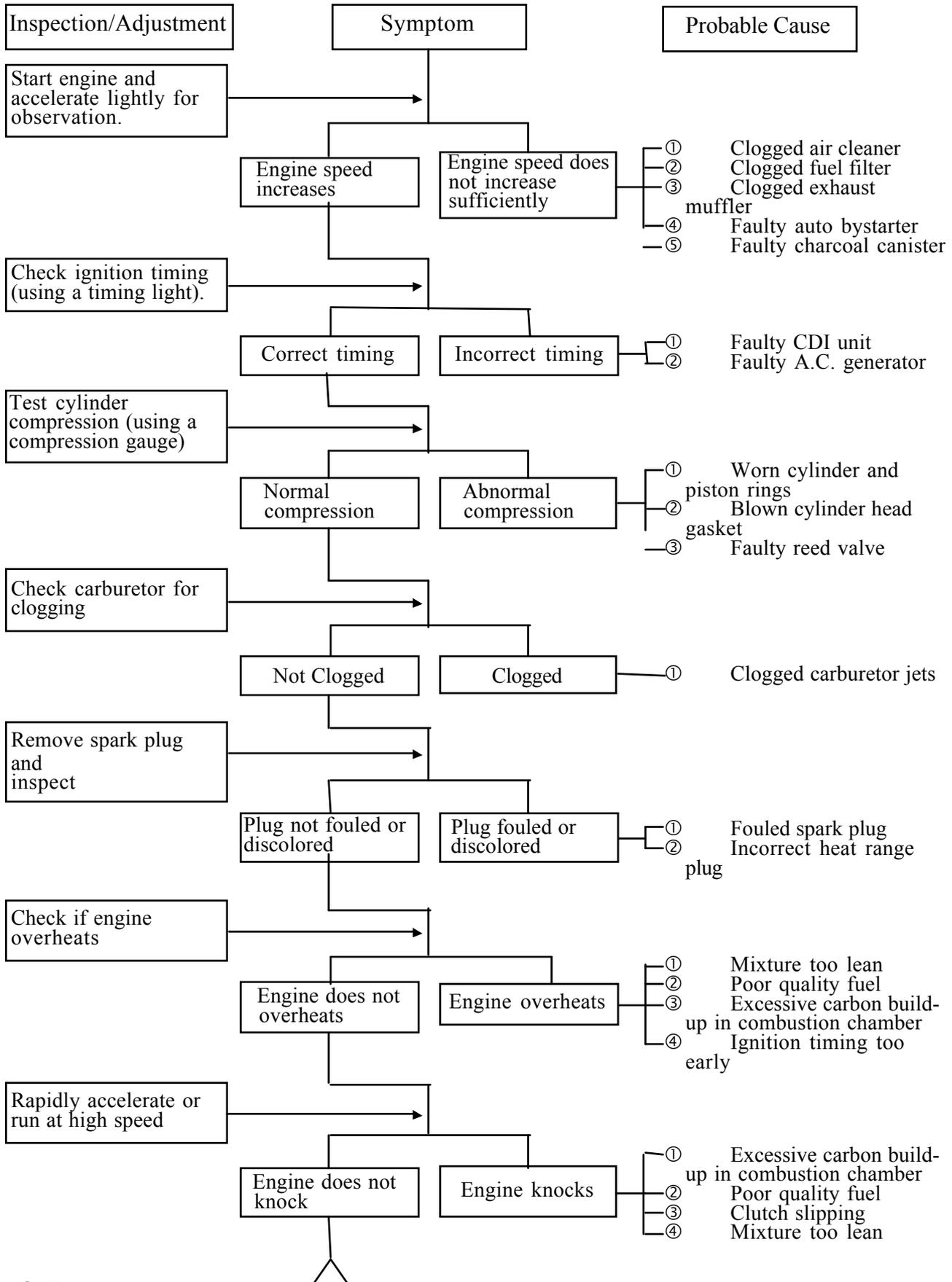


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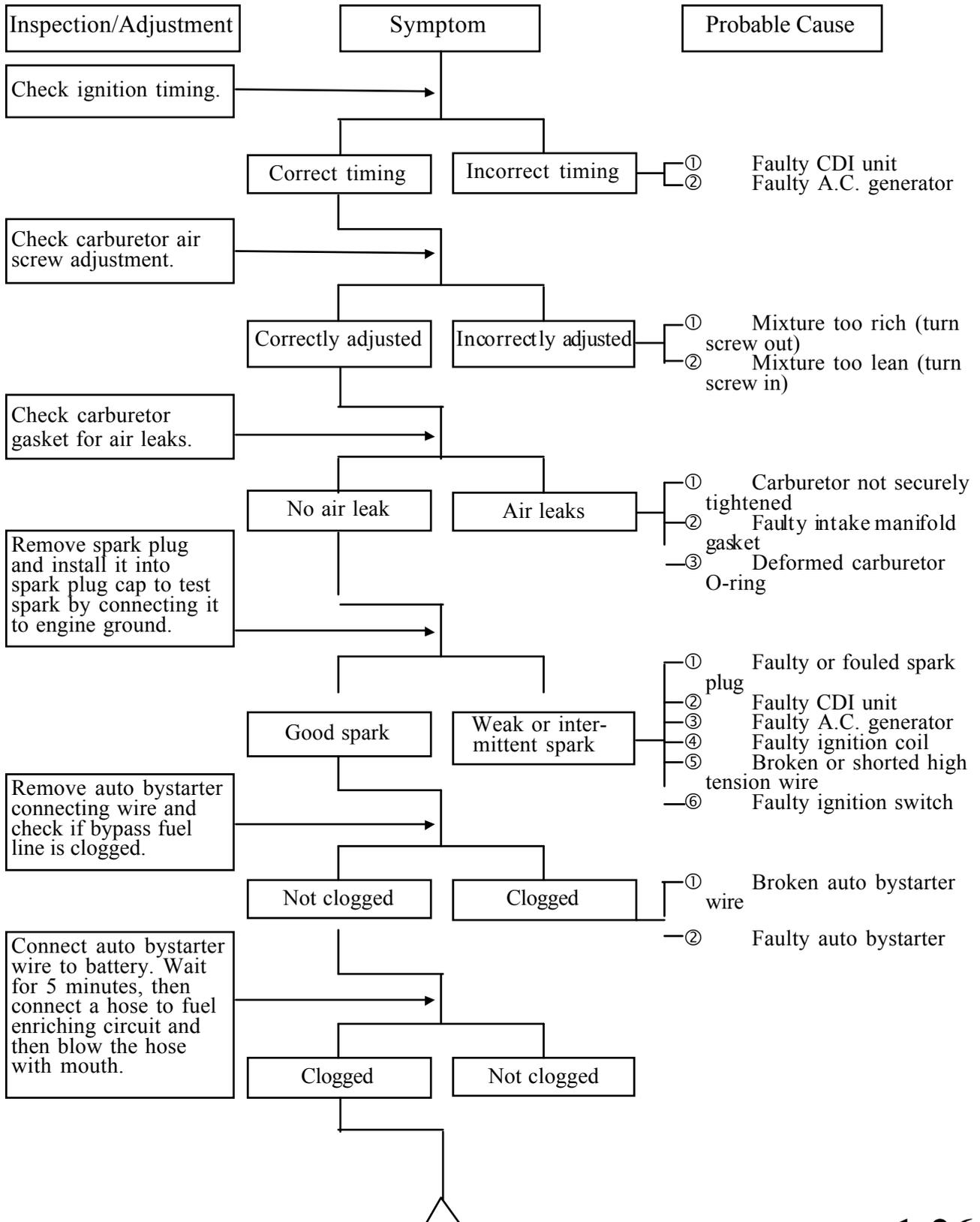
1. SPECIFICATIONS

ENGINE LACKS POWER



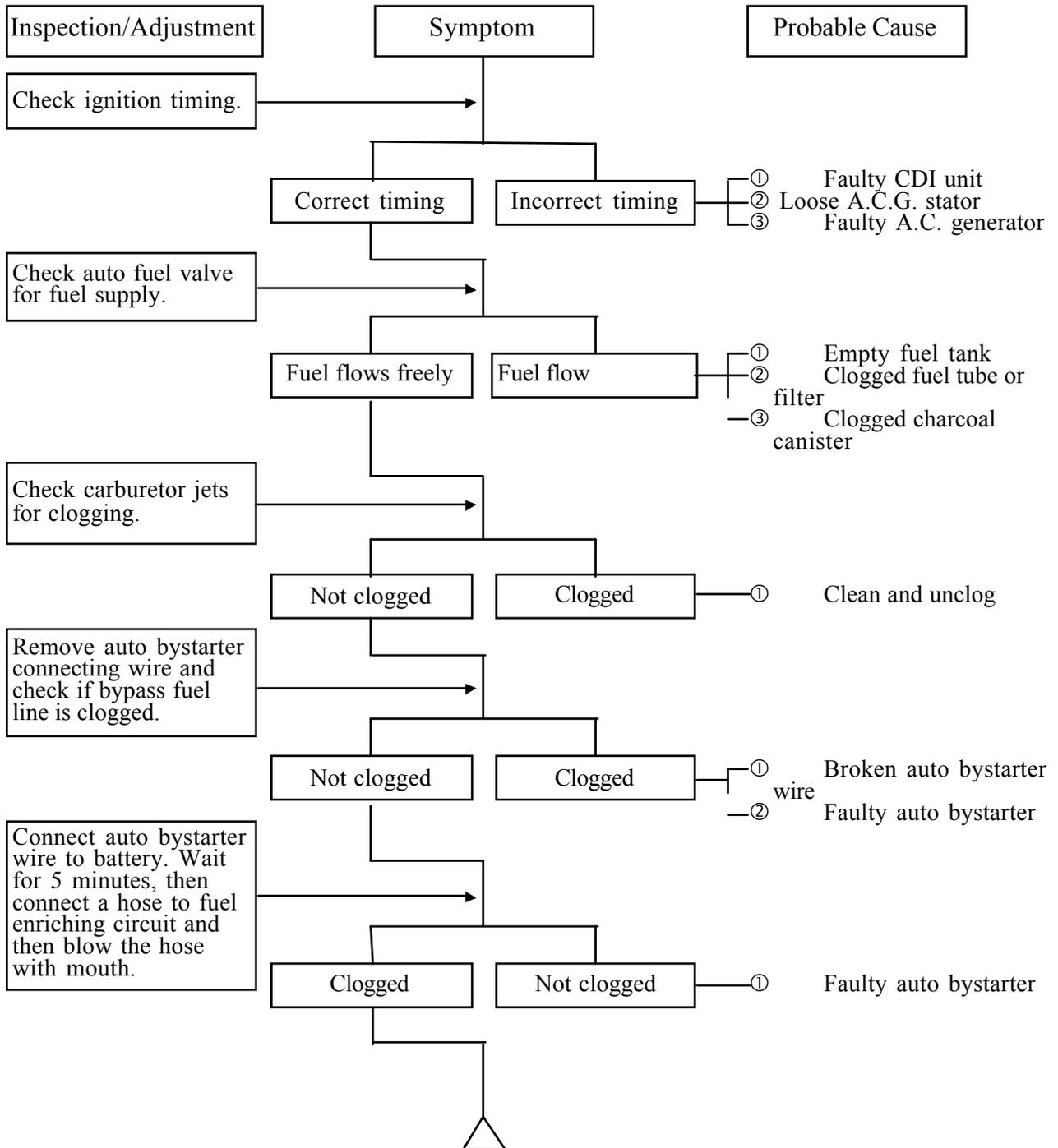
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POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)

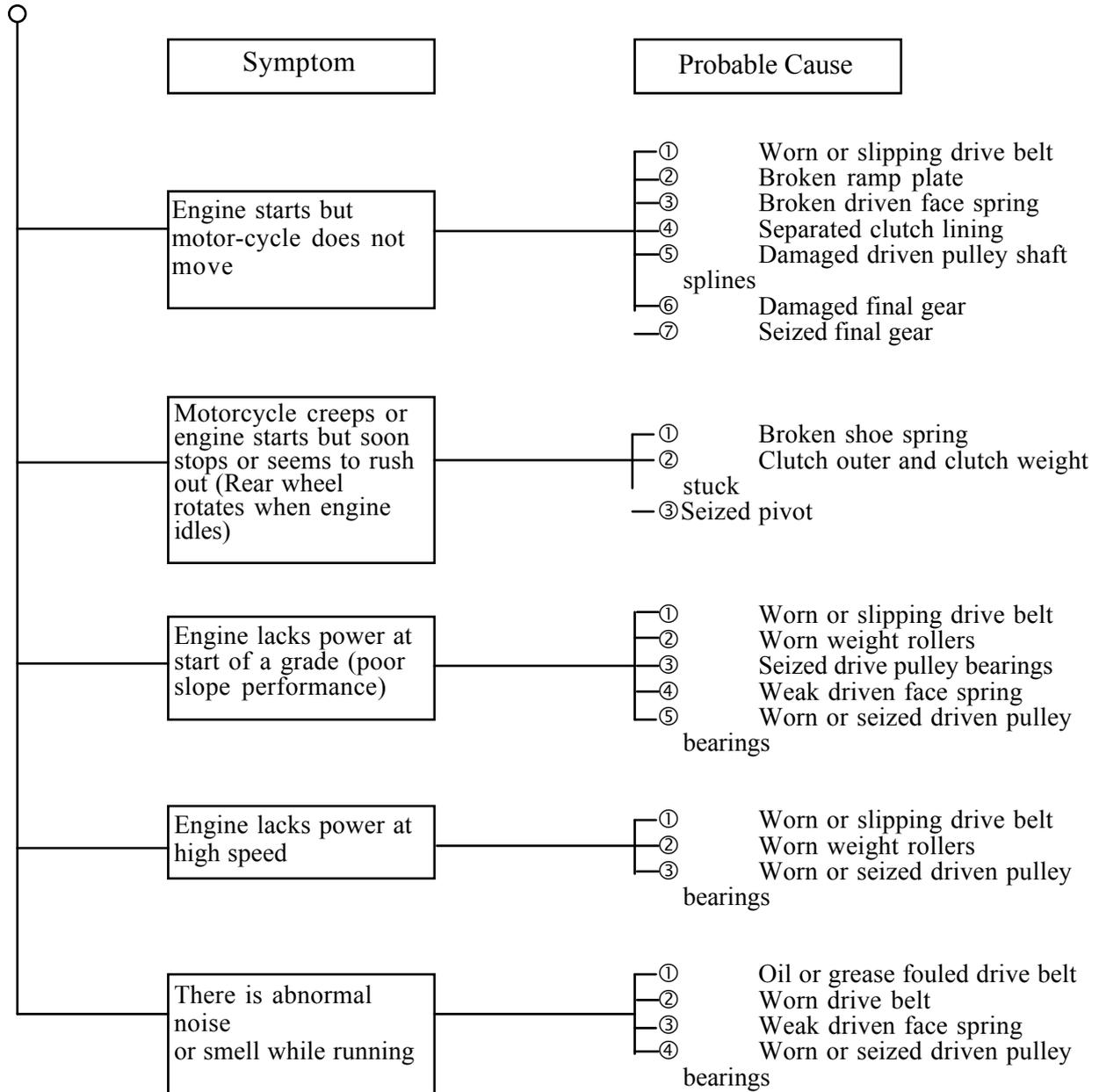


1. SPECIFICATIONS

POOR PERFORMANCE (AT HIGH SPEED)

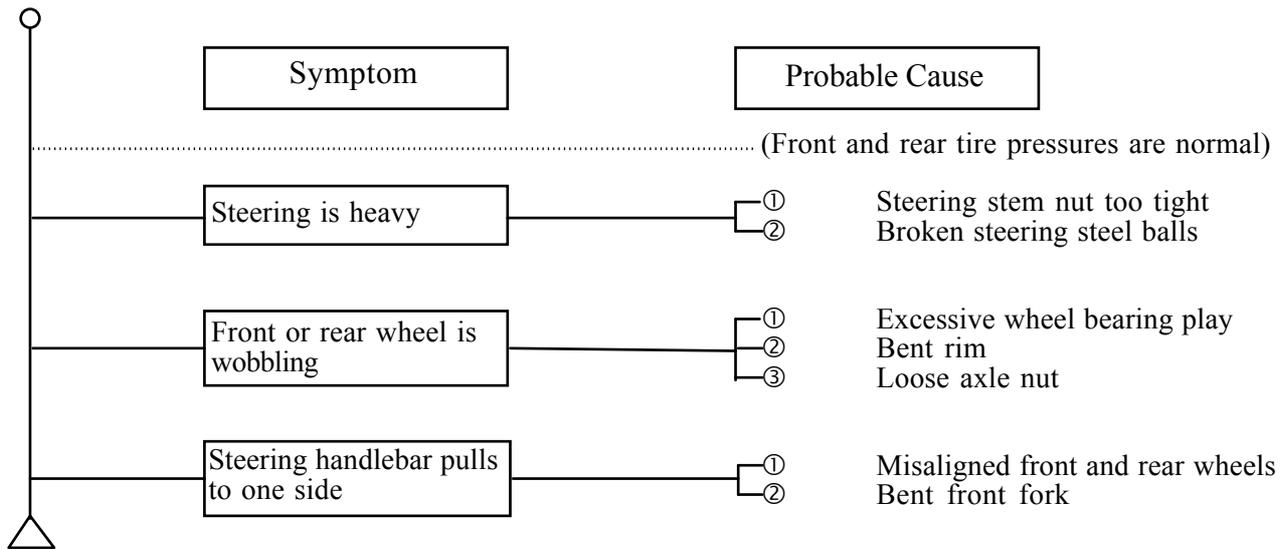


CLUTCH, DRIVE AND DRIVEN PULLEYS

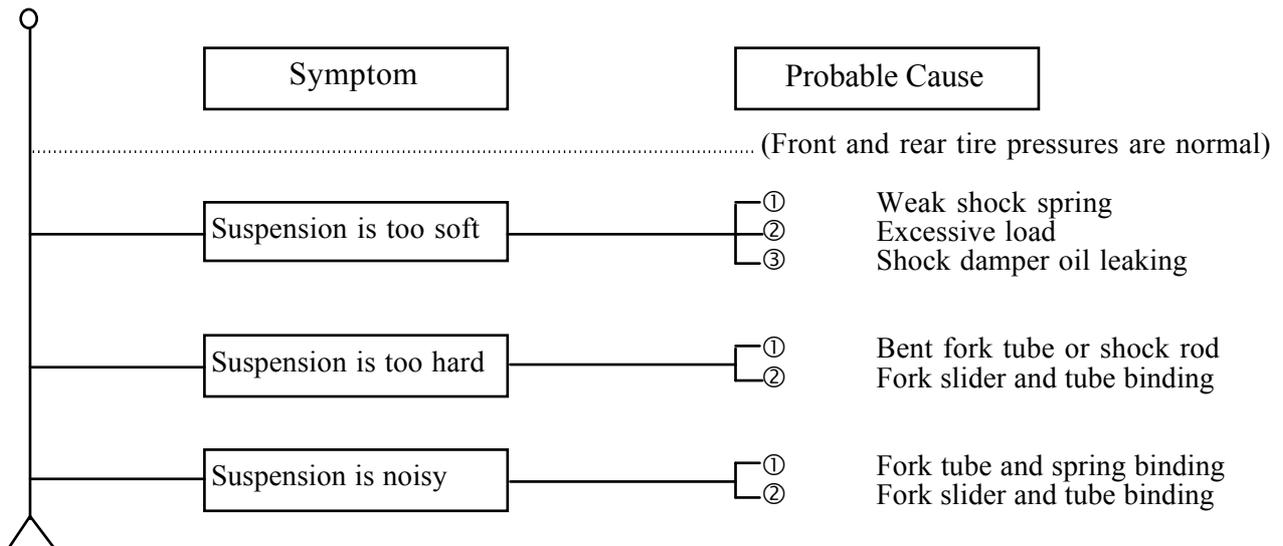


1. SPECIFICATIONS

STEERING HANDLEBAR DOES NOT TRACK STRAIGHT

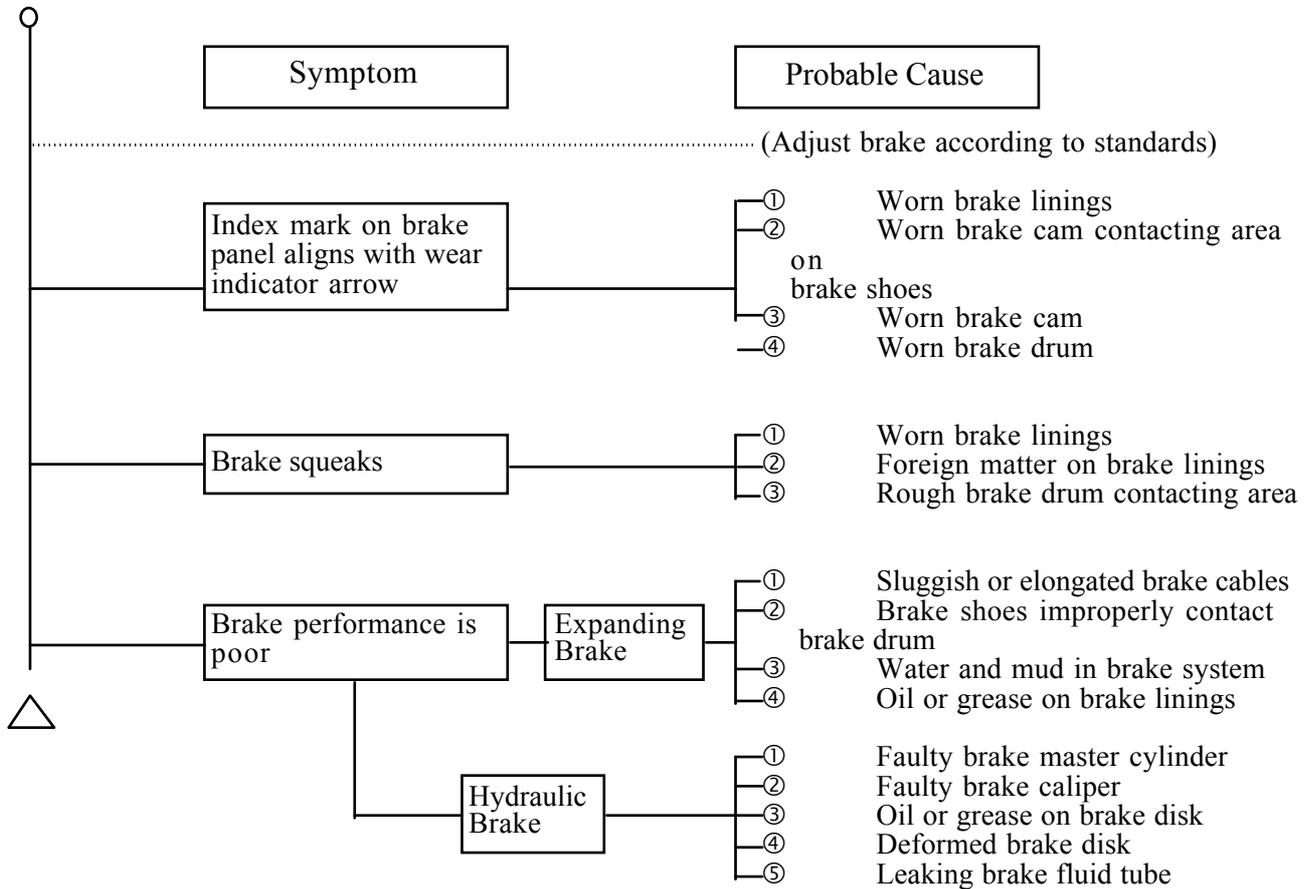


POOR SUSPENSION PERFORMANCE



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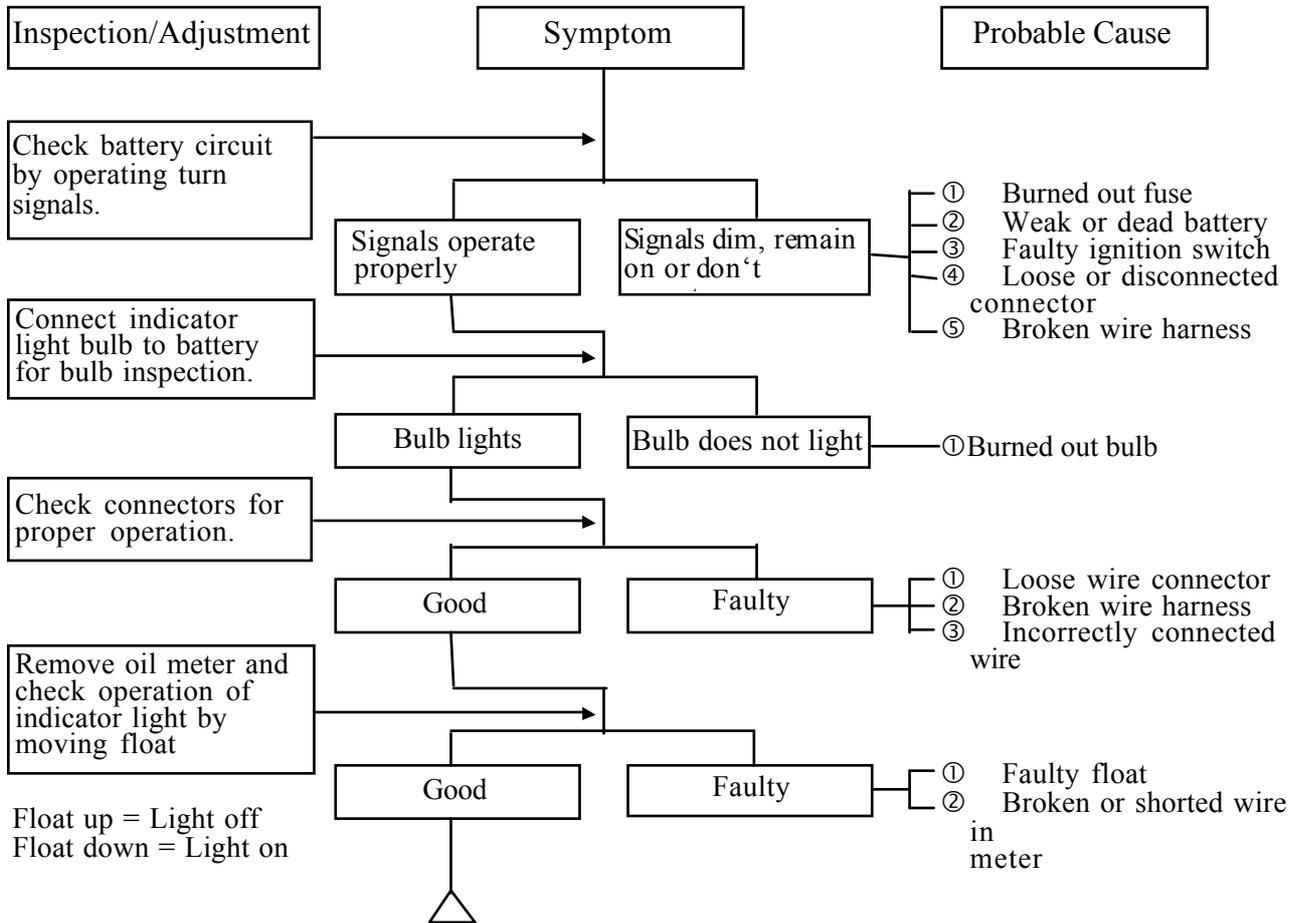
POOR BRAKE PERFORMANCE



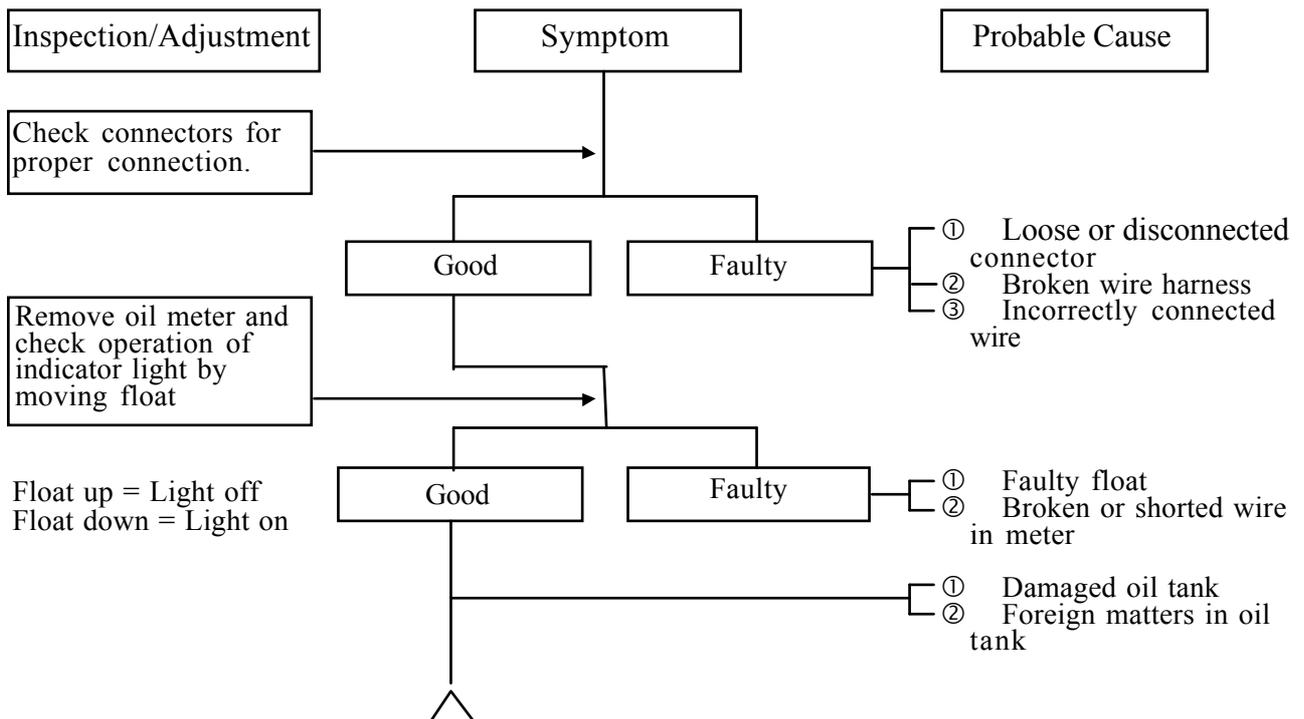
1. SPECIFICATIONS

OIL METER

1. Motor oil indicator light does not come on when there is no motor oil (Ignition switch ON)



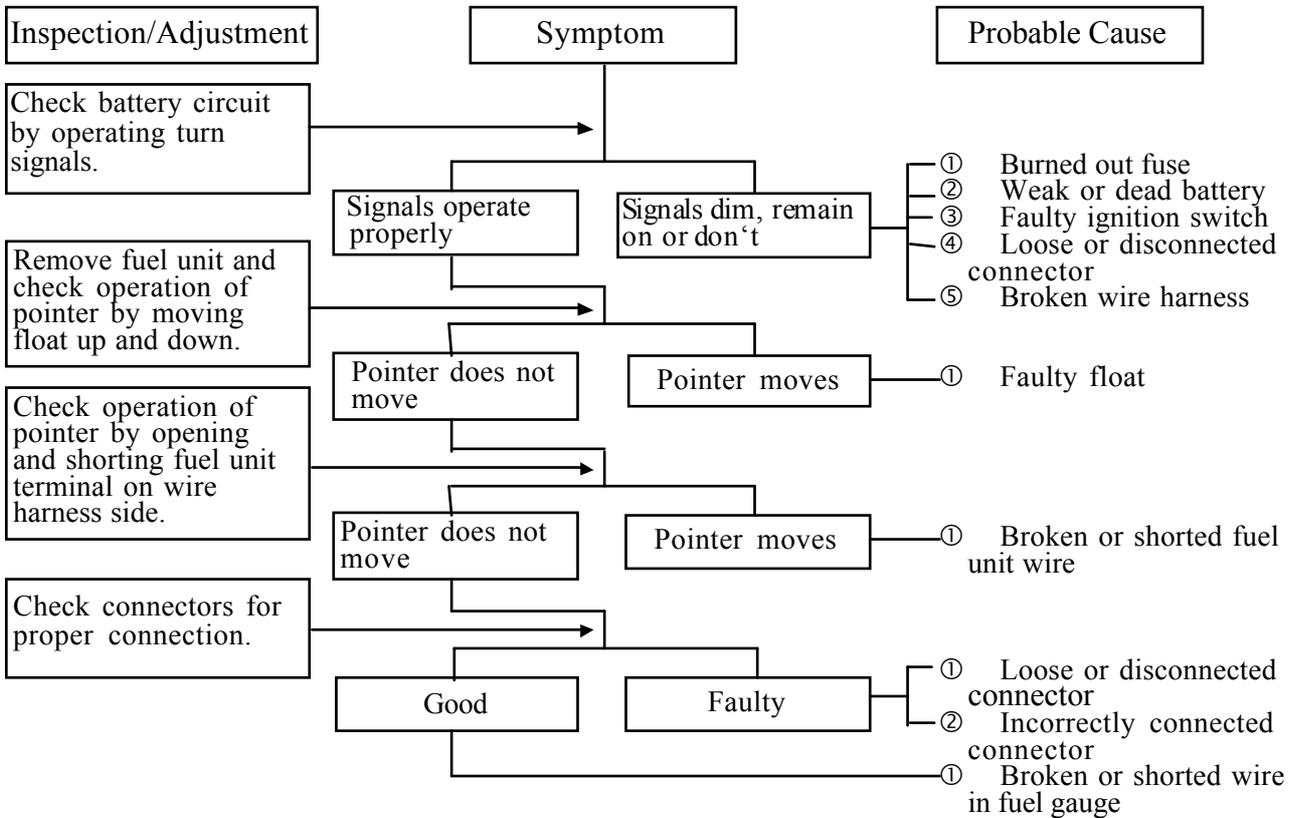
2. Motor oil is sufficient but the indicator light remains on (Ignition switch ON)



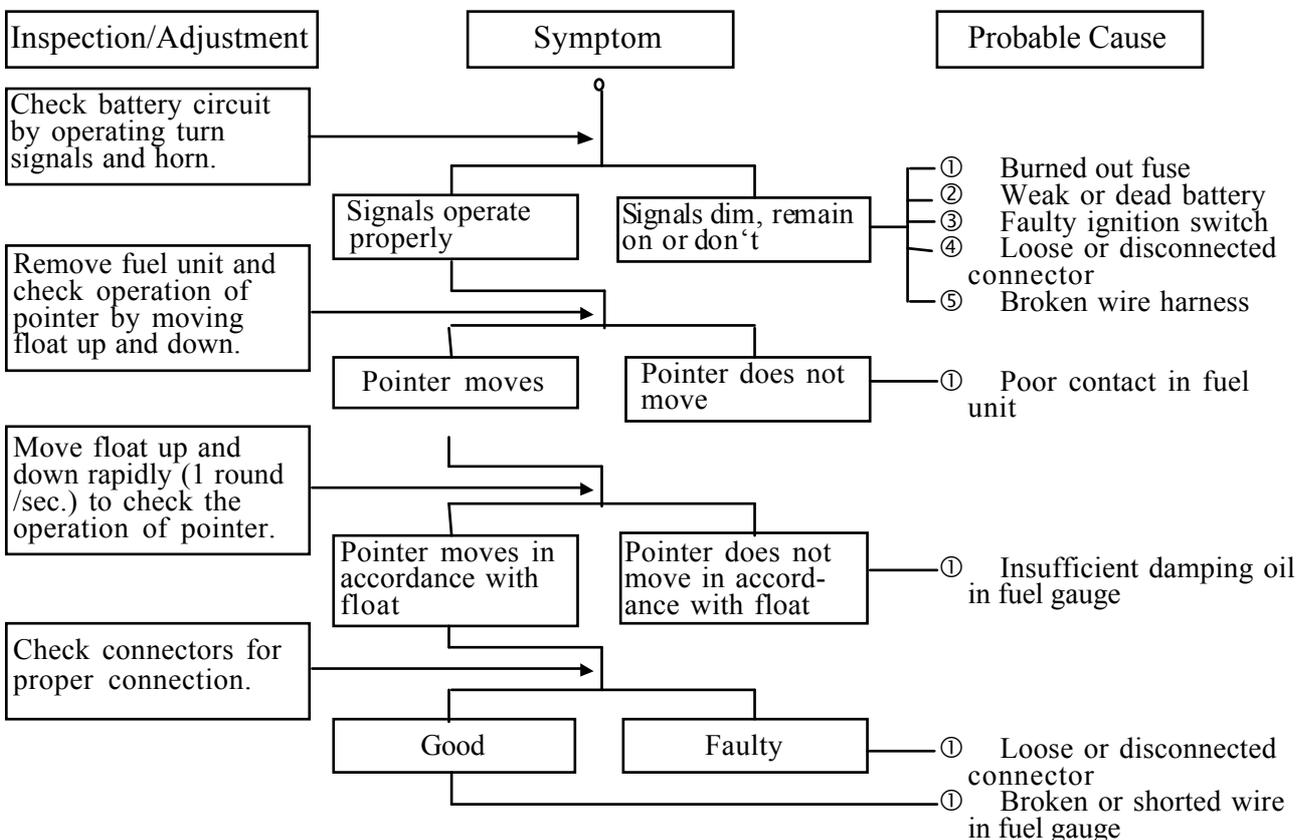
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FUEL GAUGE

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



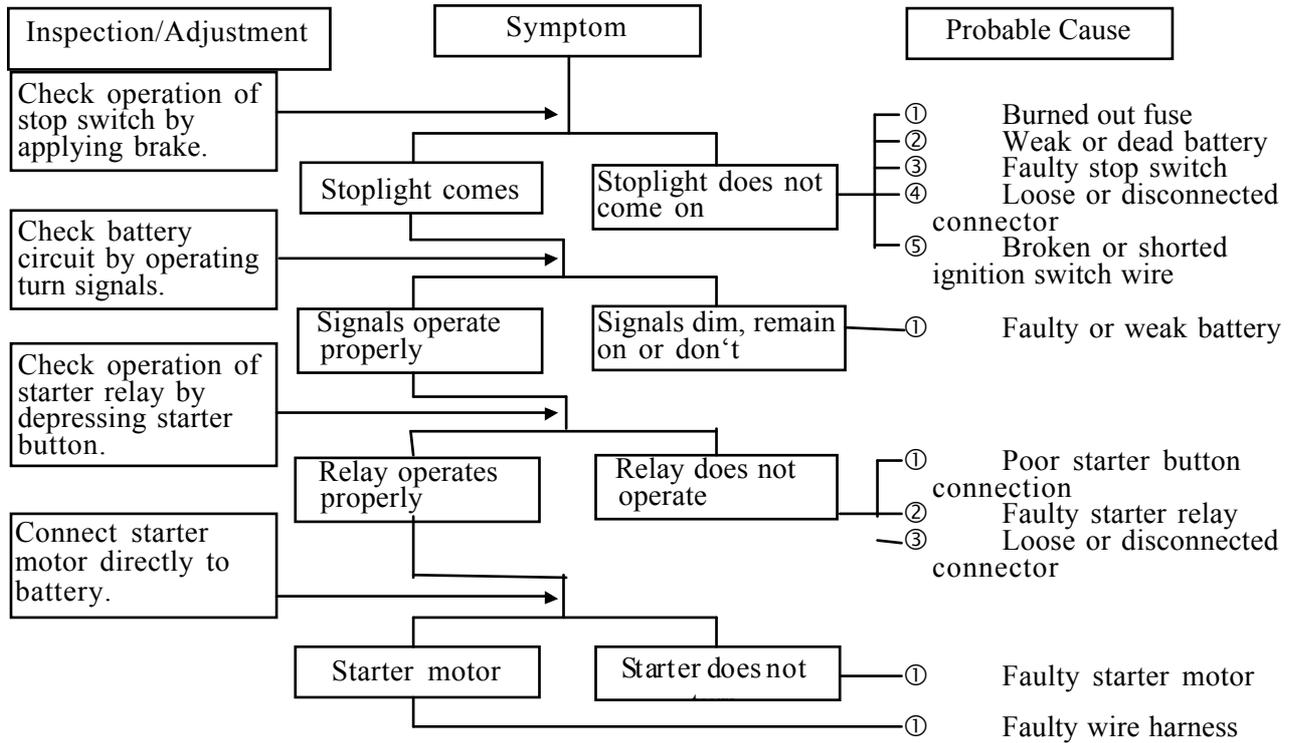
2. Pointer fluctuates or swings (Ignition switch ON)



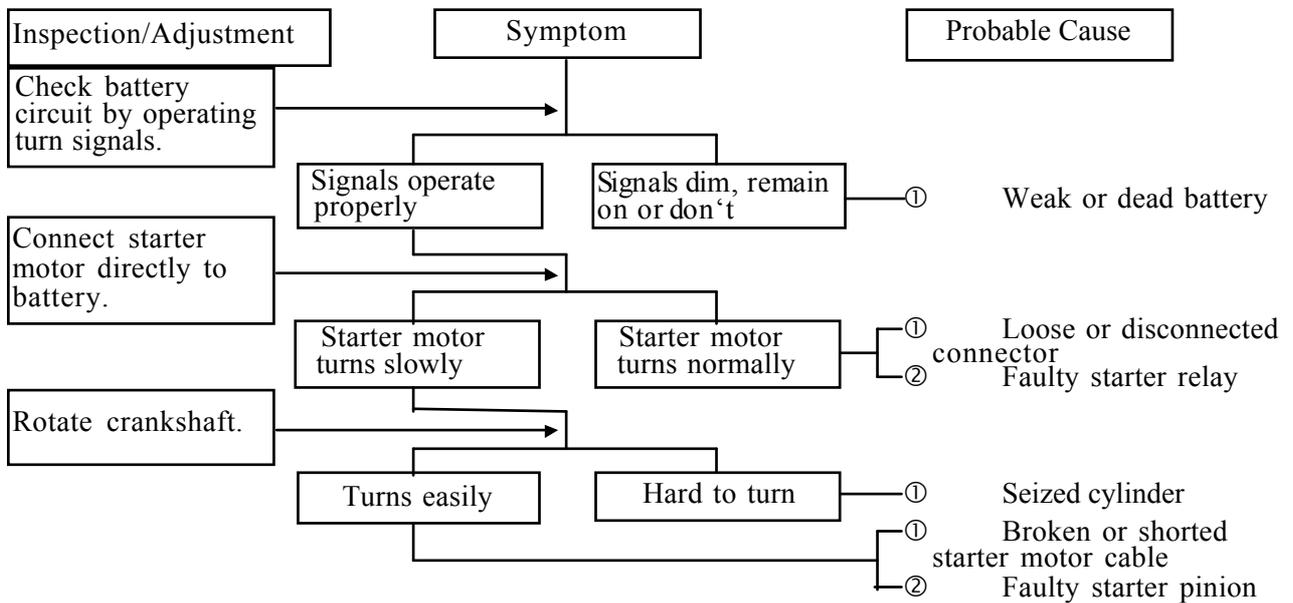
1. SPECIFICATIONS

STARTER MOTOR

1. Starter motor won't turn



2. Starter motor turns slowly or idles



3. Starter motor does not stop turning

