

1. GENERAL INFORMATION

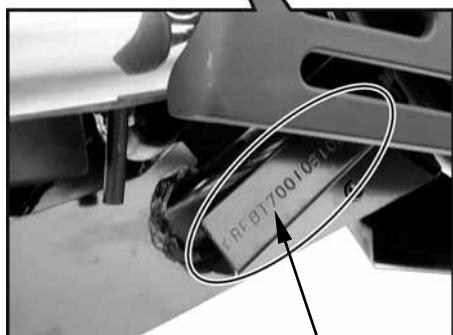
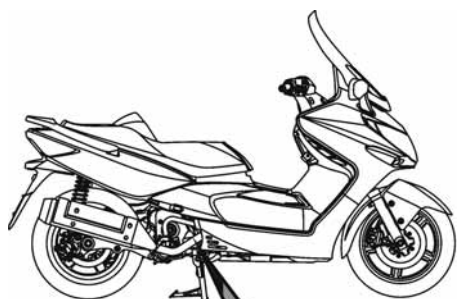
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GENERAL INFORMATION

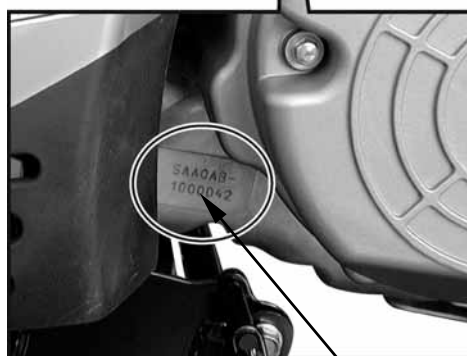
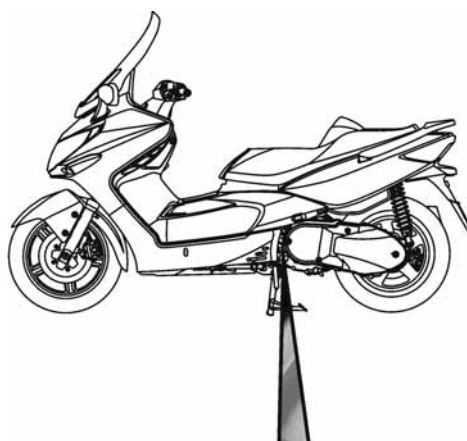
SERIAL NUMBER-----	1-1
SPECIFICATIONS-----	1-2
SERVICE PRECAUTIONS-----	1-3
TORQUE VALUES-----	1-7
SPECIAL TOOLS-----	1-9
LUBRICATION POINTS-----	1-10
CABLE & HARNESS ROUTING-----	1-12
TROUBLESHOOTING-----	1-22

1. GENERAL INFORMATION

SERIAL NUMBER



Location of Frame Serial Number



Location of Engine Serial Number

1. GENERAL INFORMATION

SPECIFICATIONS

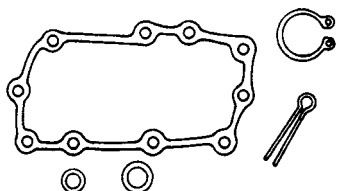
ITEM			SPECIFICATIONS	
Name			XCITING 500	
Overall length			2250 mm (90 in)	
Overall width (mm)			815 mm (33 in)	
Overall height (mm)			1450 mm (58 in)	
Wheel base (mm)			1570 mm (63 in)	
Engine type			O.H.C.	
Displacement			498.5 cm ³ (30.4 cu-in)	
Fuel Used			92# nonleaded gasoline	
Dry weight	Front wheel		83 kg (183 lbs)	
	Rear wheel		132 kg (290 lbs)	
	Total		215 kg (473 lbs)	
Curb weight	Front wheel		90 kg (198 lbs)	
	Rear wheel		141 kg (310 lbs)	
	Total		231 kg (508 lbs)	
Tires	Front wheel		120/70-15	
	Rear wheel		150/70-14	
Ground clearance			150 mm (6 in)	
Min. turning radius			2750 mm (110 in)	
Engine	Starting system		Electric starter motor	
	Type		Gasoline, 4-stroke	
	Cylinder arrangement		Single cylinder	
	Combustion chamber type		Semi-sphere	
	Valve arrangement		O.H.C., chain drive	
	Bore x stroke (mm)		92 x 75 mm (3.7 x 3 in)	
	Compression ratio		10.5:1	
	Compression pressure		13 kgf/cm ² (1300kPa, 185 psi)	
	Valve timing	Intake	Open	2° BTDC
			Close	45° ABDC
		Exhaust	Open	45° BBDC
			Close	5° ATDC
	Valve clearance (cold)	Intake		0.1 mm (0.004 in)
		Exhaust		0.1 mm (0.004 in)
	Idle speed (rpm)			1400rpm
	Lubrication System	Lubrication type		Forced pressure & Wet sump
		Oil pump type		Trochoid
Oil filter type		Full-flow filtration		
Oil capacity		2.5 L (2.2 Imp qt, 2.65 Us qt)		
Final reduction oil capacity		0.55 L (0.5 Imp qt, 0.58 Us qt)		
Cooling Type			Liquid cooled	

ITEM			SPECIFICATIONS
Fuel System	Air cleaner type & No		Wet paper type element
	Fuel capacity		12.8 L (3.38 Imp gal, 2.82 US gal)
	Carburetor	Type	CVK
		Main jet NO.	98
		Venturi dia.	φ36 mm (φ1.44 in)
		Throttle type	PISTON
Electrical Equipment	Ignition System	Type	Full transistor digital ignition
		Spark plug	CR8E
		Ignition timing	Throttle position sensor
		Spark plug gap	0.6~0.7mm (0.002~0.003 in)
	Battery	Capacity	12V12AH
Power Drive System	Clutch	Type	Dry, centrifugal automatic
	Transmission Gear	Type	Helical gear/spur gear
		Operation	Automatic centrifugal Type
	Reduction Ratio	Type	CVT
		Preliminary	2.68 – 1
		Final	5.4
Moving Device	FR/RR tire rolling circumference		1724/1778 mm (69/71 in)
	Tire pressure (rider only/60 kg)	Front	2 kg/cm ² (200 Kpa, 28 psi)
		Rear	2.5 kg/cm ² (250 Kpa, 36 psi)
	Turning angle	Left	40°
		Right	40°
	Brake system type		Rear
		Front	Disk brake
Damping Device	Suspension type	Front	Telescopic fork
		Rear	Unit swing
Frame type			Back born

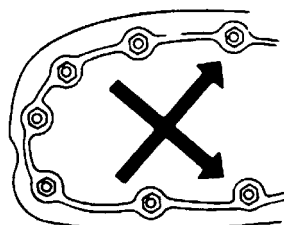
1. GENERAL INFORMATION

SERVICE PRECAUTIONS

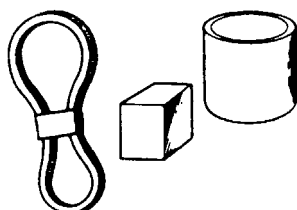
- Make sure to install new gaskets, O-rings, circlips, cotter pins, etc. when reassembling.



- 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.



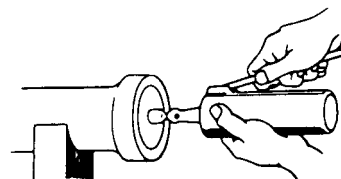
- When servicing the motorcycle, be sure to use special tools for removal and installation.



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



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



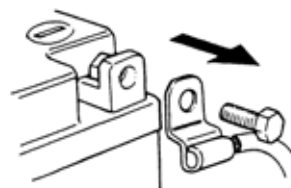
- After reassembly, check all parts for proper tightening and operation.



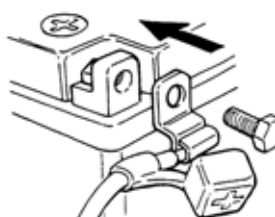
- When two persons work together, pay attention to the mutual working safety.



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

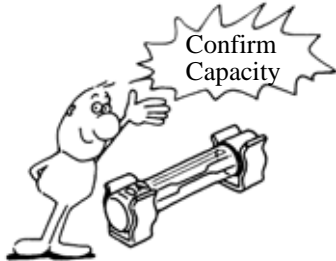


- After operation, check all connecting points, fasteners, and lines for proper connection and installation.
- When connecting the battery, the positive (+) terminal must be connected first.
- After connection, apply grease to the battery terminals.
- Terminal caps shall be installed securely.

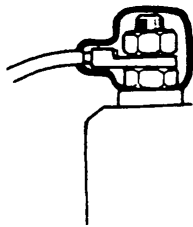


1. GENERAL INFORMATION

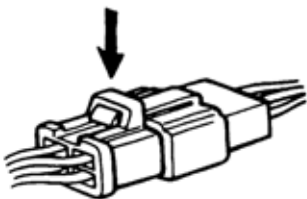
- If the fuse is burned out, find the cause and repair it. Replace it with a new one according to the specified capacity.



- After operation, terminal caps shall be installed securely.



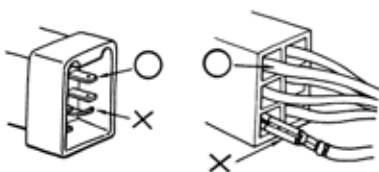
- When taking out the connector, the lock on the connector shall be released before operation.



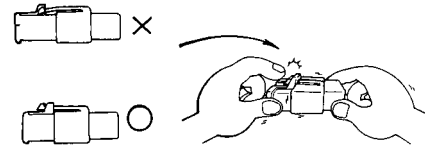
- Hold the connector body when connecting or disconnecting it.
- Do not pull the connector wire.



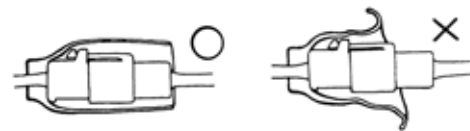
- Check if any connector terminal is bending, protruding or loose.



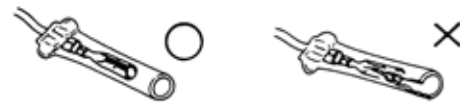
- The connector shall be inserted completely.
- If the double connector has a lock, lock it at the correct position.
- Check if there is any loose wire.



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



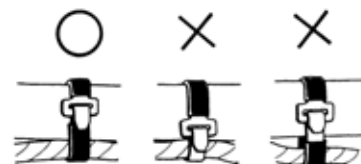
- Check the double connector cover for proper coverage and installation.



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

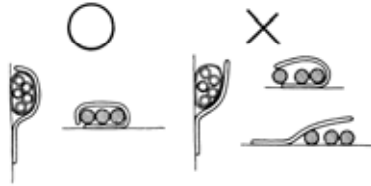


- Secure wire harnesses to the frame with their respective wire bands at the designated locations. Tighten the bands so that only the insulated surfaces contact the wire harnesses.

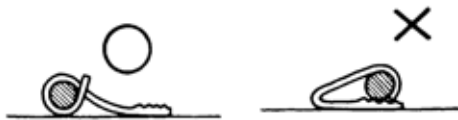


1. GENERAL INFORMATION

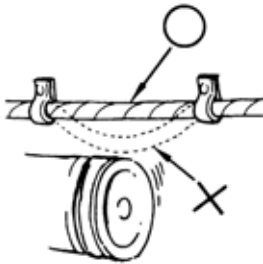
- After clamping, check each wire to make sure it is secure.



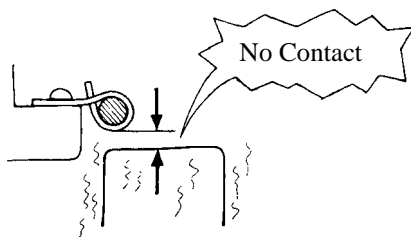
- Do not squeeze wires against the weld or its clamp.



- 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.

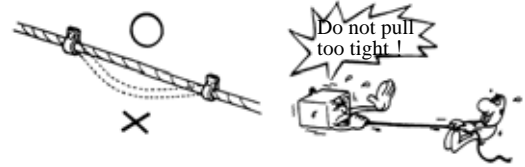


- Route wire harnesses to avoid sharp edges or corners. Avoid the projected ends of bolts and screws.

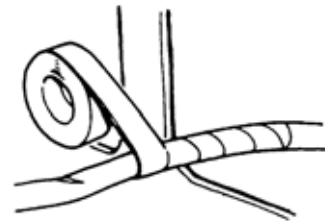
- Route wire harnesses passing through the side of bolts and screws. Avoid the projected ends of bolts and screws.



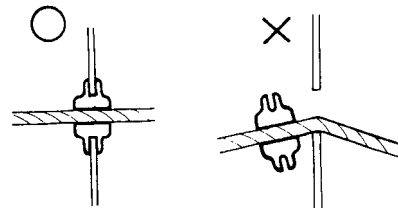
- Route harnesses so they are neither pulled tight nor have excessive slack.



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

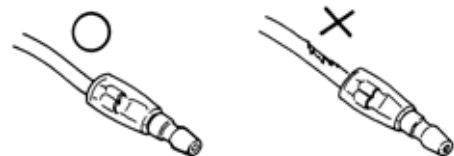


- When rubber protecting cover is used to protect the wire harnesses, it shall be installed securely.



- 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.

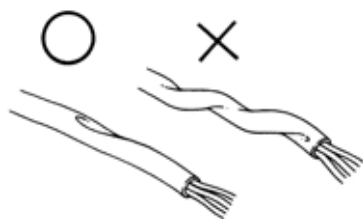


- When installing other parts, do not press or squeeze the wires.

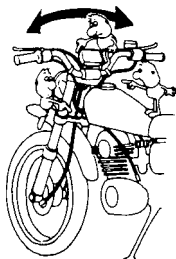


1. GENERAL INFORMATION

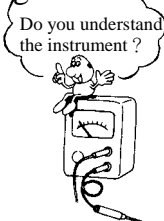
- After routing, check that the wire harnesses are not twisted or kinked.



- 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.



■ 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#)



: Note

1. GENERAL INFORMATION

TORQUE VALUES

STANDARD TORQUE VALUES

Item	Torque N•m (kgf•m, lbf•ft)	Item	Torque N•m (kgf•m, lbf•ft)
5mm bolt and nut	5(0.5, 4)	4mm screw	3 (0.3, 2)
6mm bolt and nut	10 (1, 7)	5mm screw	4 (0.4, 3)
8mm bolt and nut	22 (2.2, 16)	6mm screw, SH bolt	9 (0.9, 6.5)
10mm bolt and nut	35 (3.5, 25)	6mm flange bolt and nut	12 (1.2, 9)
12mm bolt and nut	55 (5.5, 40)	8mm flange bolt and nut	27 (2.7, 20)
14mm bolt and nut	70 (7, 50)	10mm flange bolt and nut	40 (4, 29)

Torque specifications listed below are for important fasteners.

ENGINE

Item	Q'ty	Thread dia. (mm)	Torque N•m (kgf•m, lbf•ft)	Remarks
MAINTENANCE:				
Engine oil drain plug	1	12	25 (2.5, 18)	
Oil strainer screen cap	1	30	15 (1.5, 11)	
Oil filter cartridge	1	20	10 (1, 7)	
Transmission oil drain bolt	1	8	24 (2.4, 18)	
Transmission oil filler bolt	1	8	24 (2.4, 18)	
Spark plug	1	10	12 (1.2, 9)	
Tappet adjust nut	4	5	9 (0.9, 6)	
LUBRICATION SYSTEM:				
Oil pump screw	1	4	3 (0.3, 2)	
Oil cooler bolt	2	16	35 (3.5, 25)	Apply oil
COOLING SYSTEM:				
Water pump cover bolt	2	6	13 (1.3, 9)	
CYLINDER HEAD:				
Breather separator bolt	3	6	13 (1.3, 9)	Apply oil
Cylinder head bolt (1 – 4)	4	10	48 (4.8, 35)	Apply oil
Cylinder head bolt (5 – 13)	9	8	23 (2.3, 17)	Apply oil
Cylinder head cover bolt	4	6	10 (1, 7)	
Cam chain tensioner bolt	2	6	12 (1.2, 9)	
Tensioner pivot bolt	1	8	10 (1, 7)	
Rocker arm shaft	2	18	45 (4.5, 32)	
DRIVE/DRIVEN PULLEY:				
Drive face nut	1	18	135 (13.5, 97)	Apply oil
Clutch out nut	1	14	80 (8, 58)	Apply oil

1. GENERAL INFORMATION

ENGINE (Cont'd)

Item	Q'ty	Thread dia. (mm)	Torque N•m (kgf•m, lbf•ft)	Remarks
Drive plate nut	1	28	78 (7.8, 56)	
ALTERNATOR				
ACG flywheel nut	1	14	55 (5.5, 40)	
FINAL REDUCTION:				
Transmission cover bolt	8	8	27 (2.7, 20)	
CRANKCASE:				
Crankcase bolt	13	6	12 (1.2, 9)	Apply oil
Oil pipe bolt	2	16	43 (4.3, 31)	Apply oil
Cam chain guide	2	8	20 (2, 15)	
SWITCH:				
Oil pressure switch	1	PT 1/8	22 (2.2, 16)	Apply seal

FRAME

Item	Q'ty	Thread dia.(mm)	Torque N•m (kgf•m, lbf•ft)	Remarks
STEERING:				
Handlebar bolt	4	8	23 (2.3, 17)	
Upper pinch bolt	2	8	23 (2.3, 17)	
Lower pinch bolt	4	8	23 (2.3, 17)	
Bridge stem nut	1	22	62 (6.2, 45)	
Steering stem lock nut	1	26	45 (4.5, 32)	
Top thread	1	26	17 (1.7, 12)	
WHEEL:				
Front axle bolt	1	18	55 (5.5, 40)	
Front fork bolt	2	8	23 (2.3, 17)	
Rear axle nut	1	20	180 (18, 130)	
SUSPENSION:				
Rear shock absorber bolt	4	10	40 (4, 29)	
Rear fork	2	8	32 (3.2, 23)	
BRAKE:				
Front caliper mounting bolt	4	8	32 (3.2, 23)	Replace a new one
Rear caliper mounting bolt	2	8	32 (3.2, 23)	Replace a new one
Brake fluid bolt	6	10	35 (3.5, 25)	
Master cylinder bolt	4	6	12 (1.2, 9)	

1. GENERAL INFORMATION

FRAME (Cont'd)

Item	Q'ty	Thread dia.(mm)	Torque N•m (kgf•m, lbf•ft)	Remarks
ENGINE HANGER:				
Engine hanger bolt	4	10	50 (5, 36)	
Engine mounting bolt	1	14	80 (8, 58)	
Engine mounting nut	1	14	80 (8, 58)	
Engine hanger rod nut	1	10	35 (3.5, 25)	
MUFFLER				
Exhaust pipe nut	2	8	20 (2, 14)	
Muffler mount bolt	3	10	35 (3.5, 25)	

SPECIAL TOOLS

Tool Name	Tool No.	Remarks
Clutch spring compressor	E053	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	E054	A.C. generator flywheel removal
Universal holder	E017	Holding clutch for removal
Oil filter cartridge wrench	E052	Cartridge removal or install
Flywheel holder	E021	A.C. generator flywheel holding
Lock nut socket wrench	F002	Steering stem removal or install

1. GENERAL INFORMATION

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 Balancer shaft Crankshaft one-way clutch movable part Oil pump drive chain Starter reduction gear engaging part O-ring face Oil seal lip	•Genuine KYMCO Engine Oil (SAE 5W-50) •API SJ Engine Oil
Drive gear shaft Countershaft Final gear Final gear shaft Transmission gearshaft bearing part	Transmission oil: SAE 90
A.C. generator connector	Adhesive

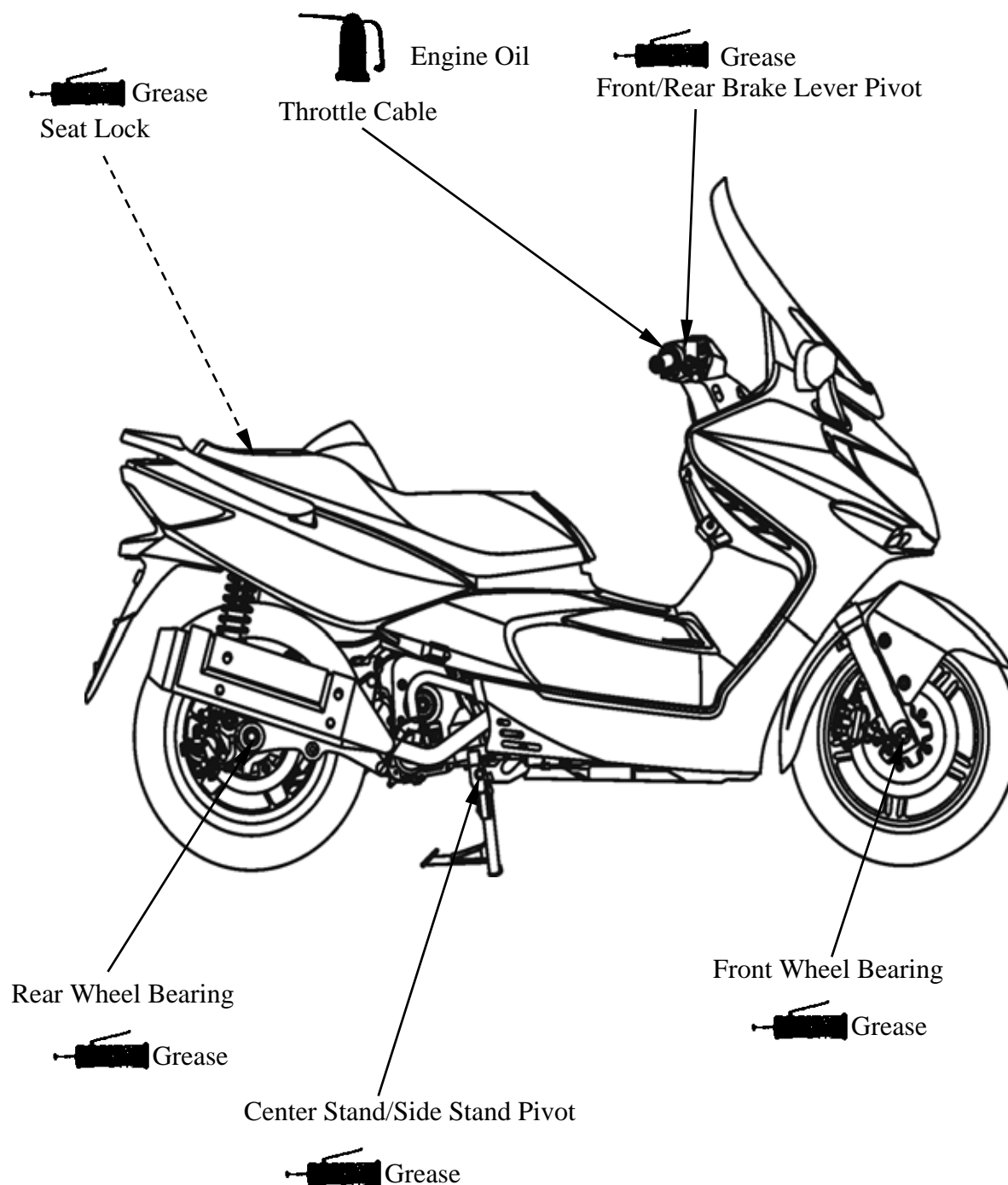
1. GENERAL INFORMATION

FRAME

The following is the lubrication points for the frame.

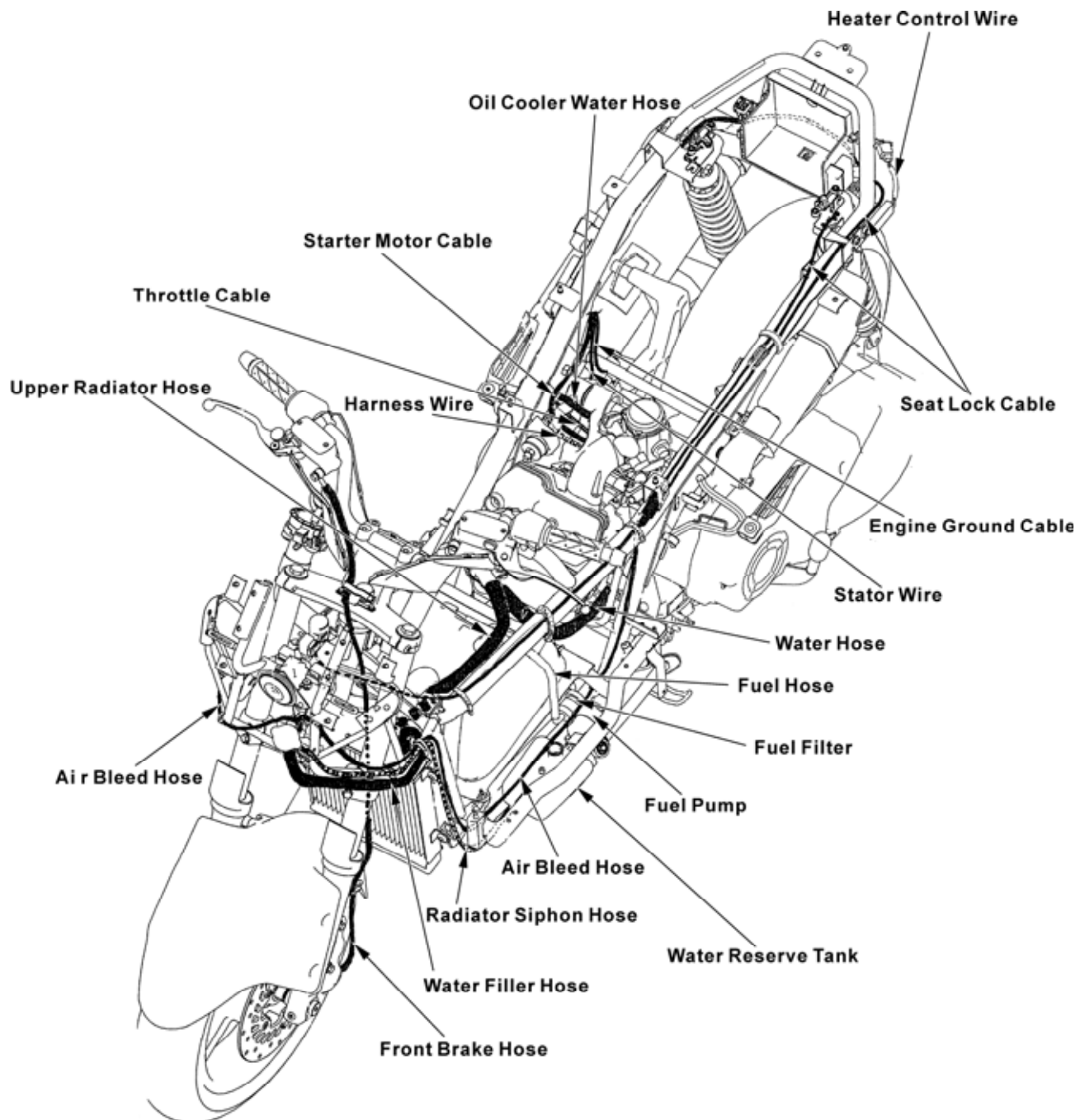
Use general purpose grease for parts not listed.

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.

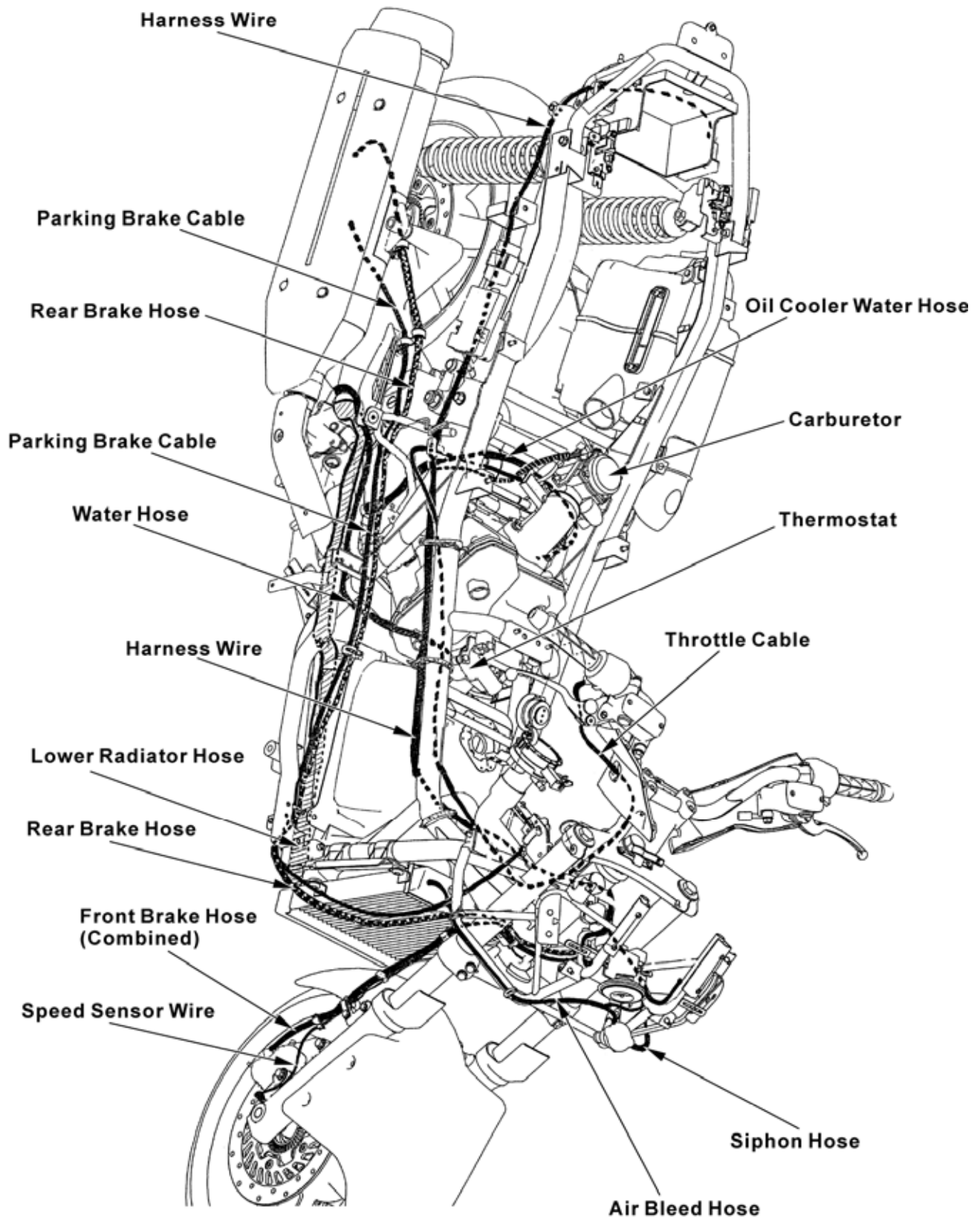


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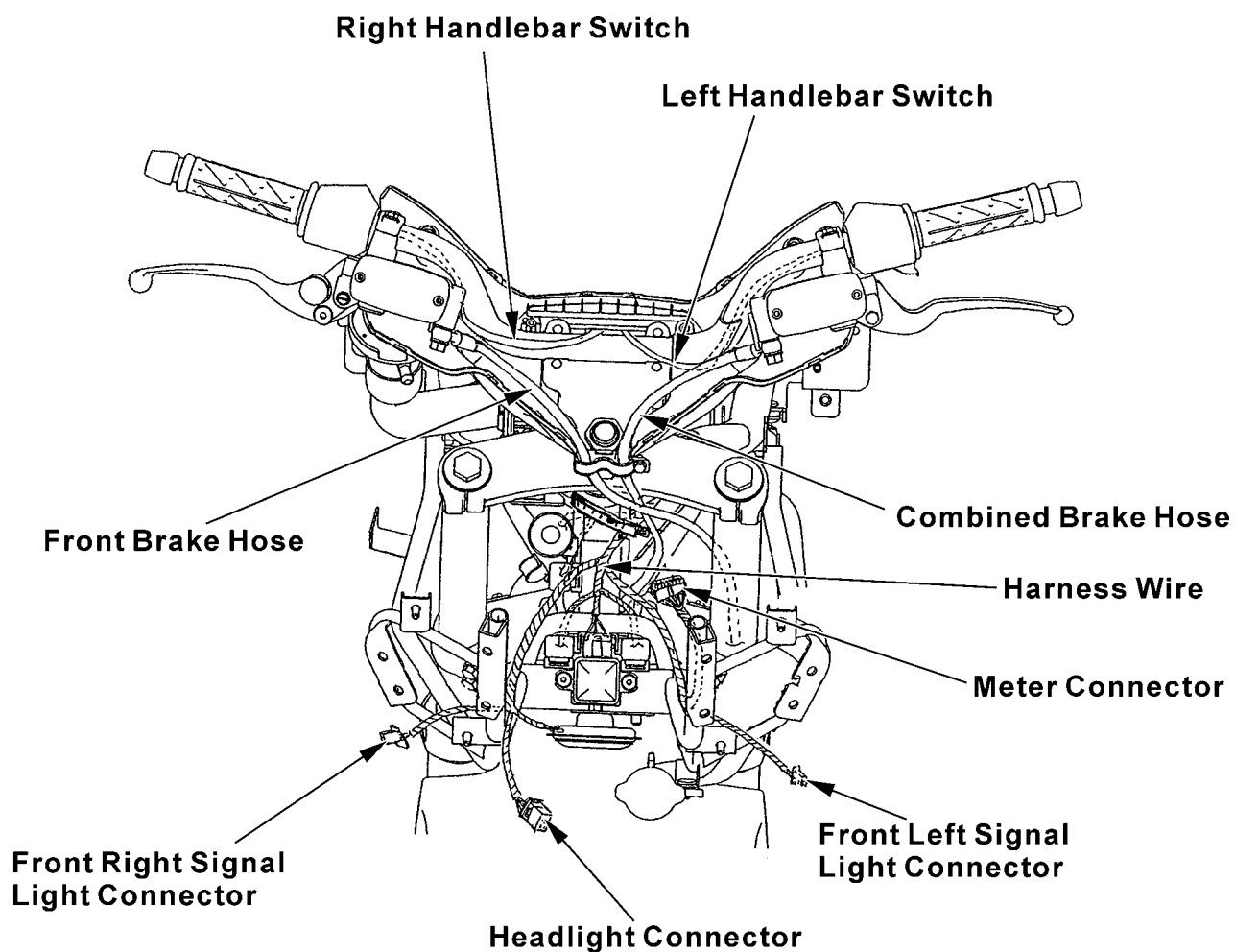
CABLE & HARNESS ROUTING



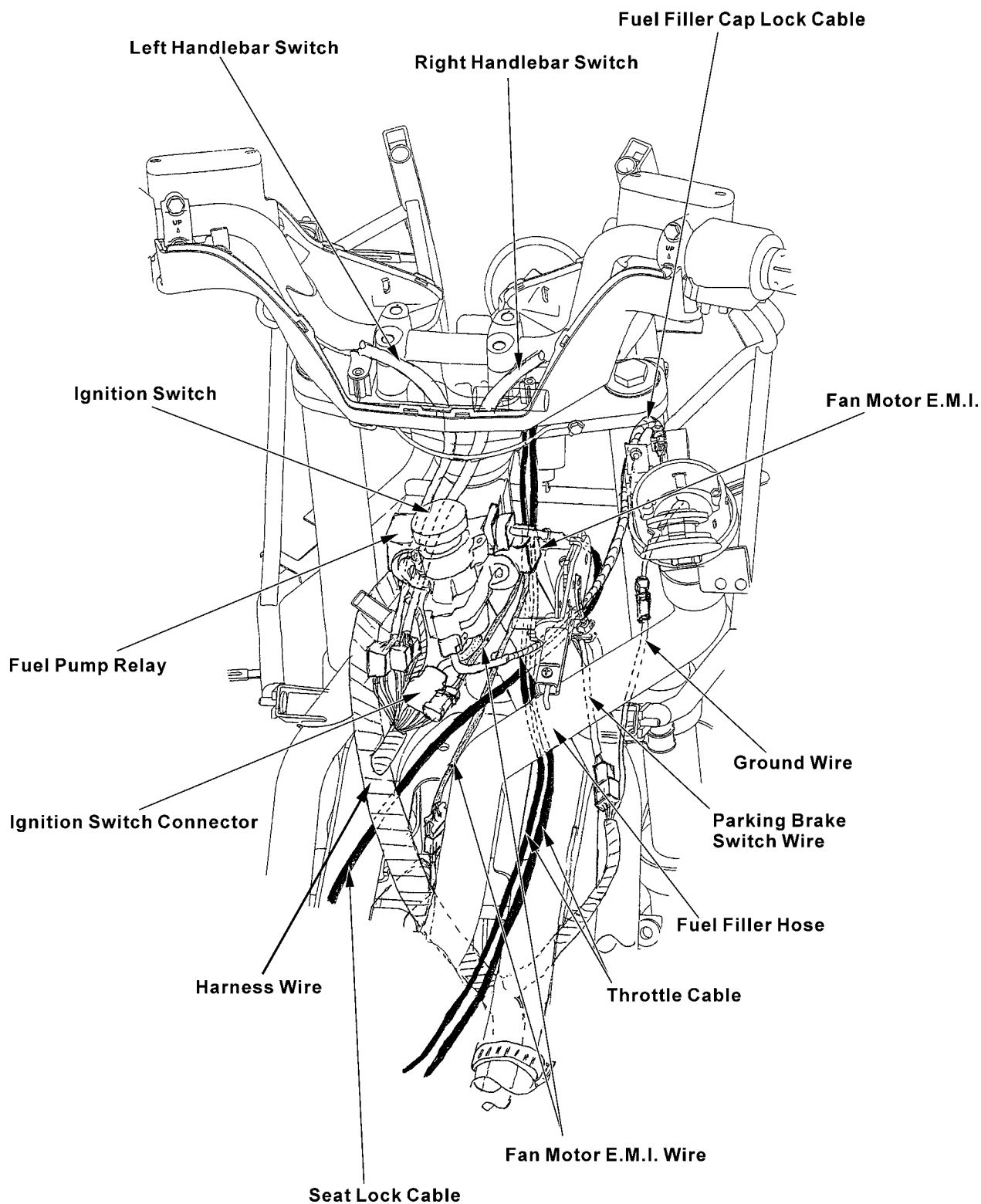
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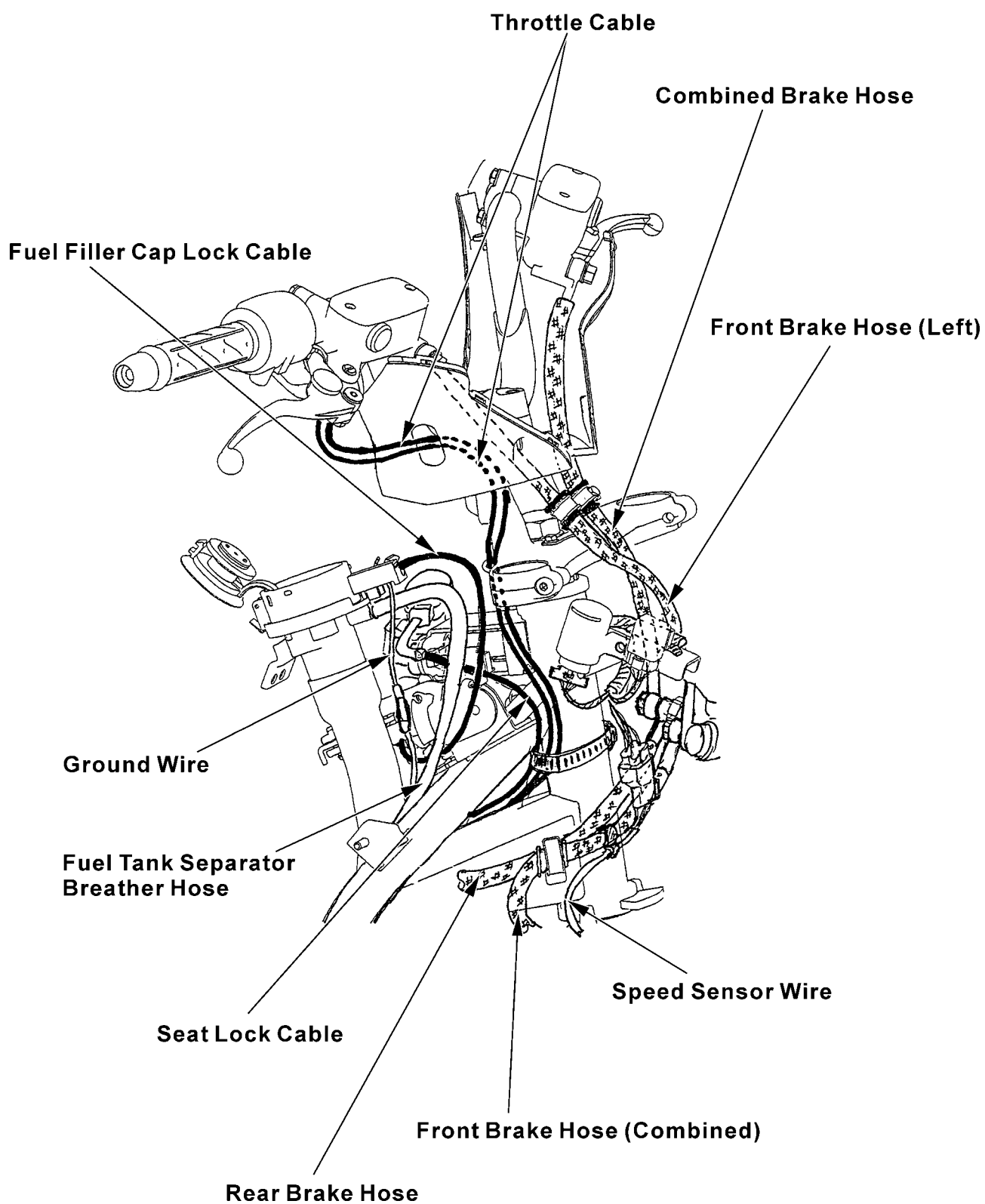
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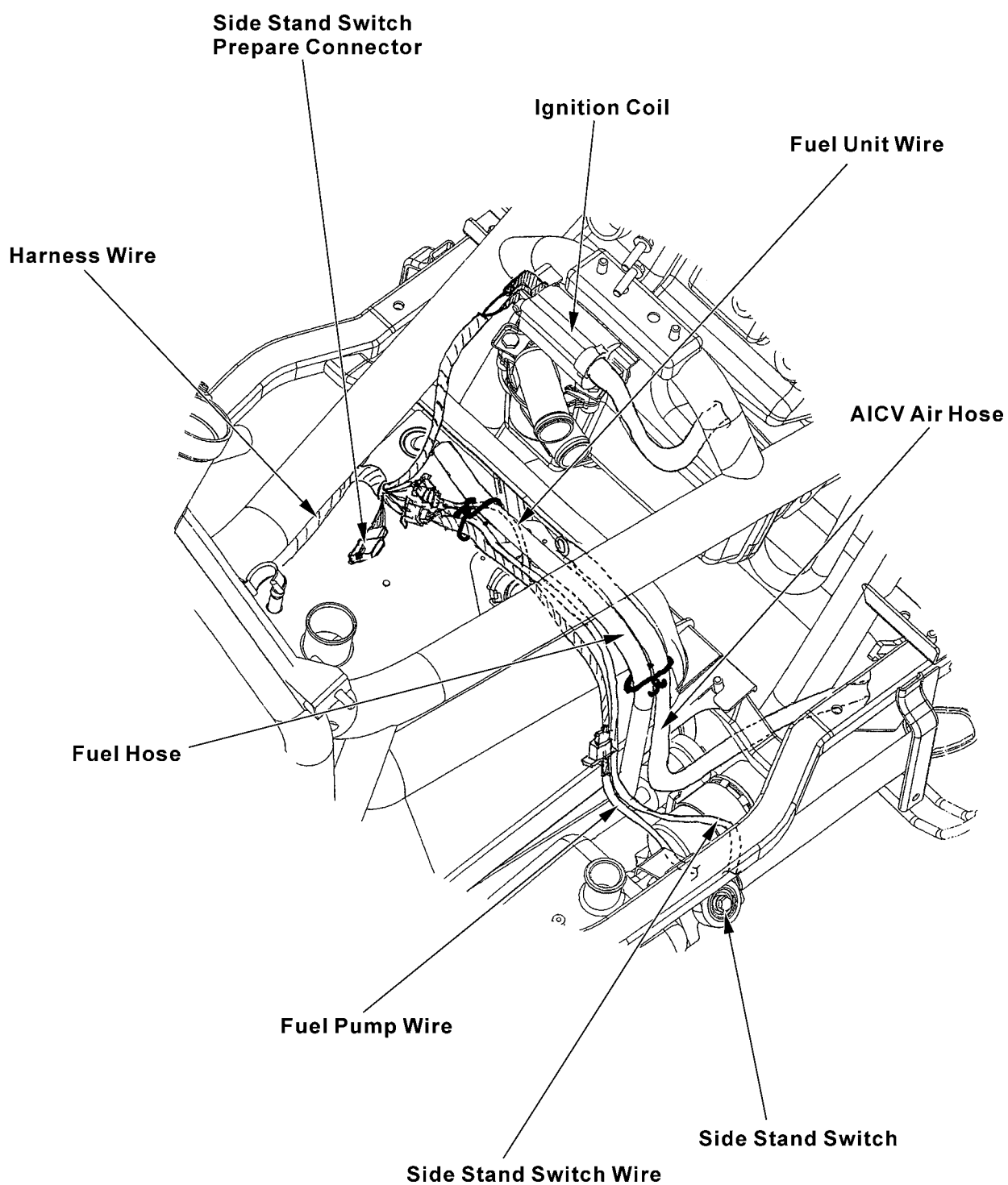
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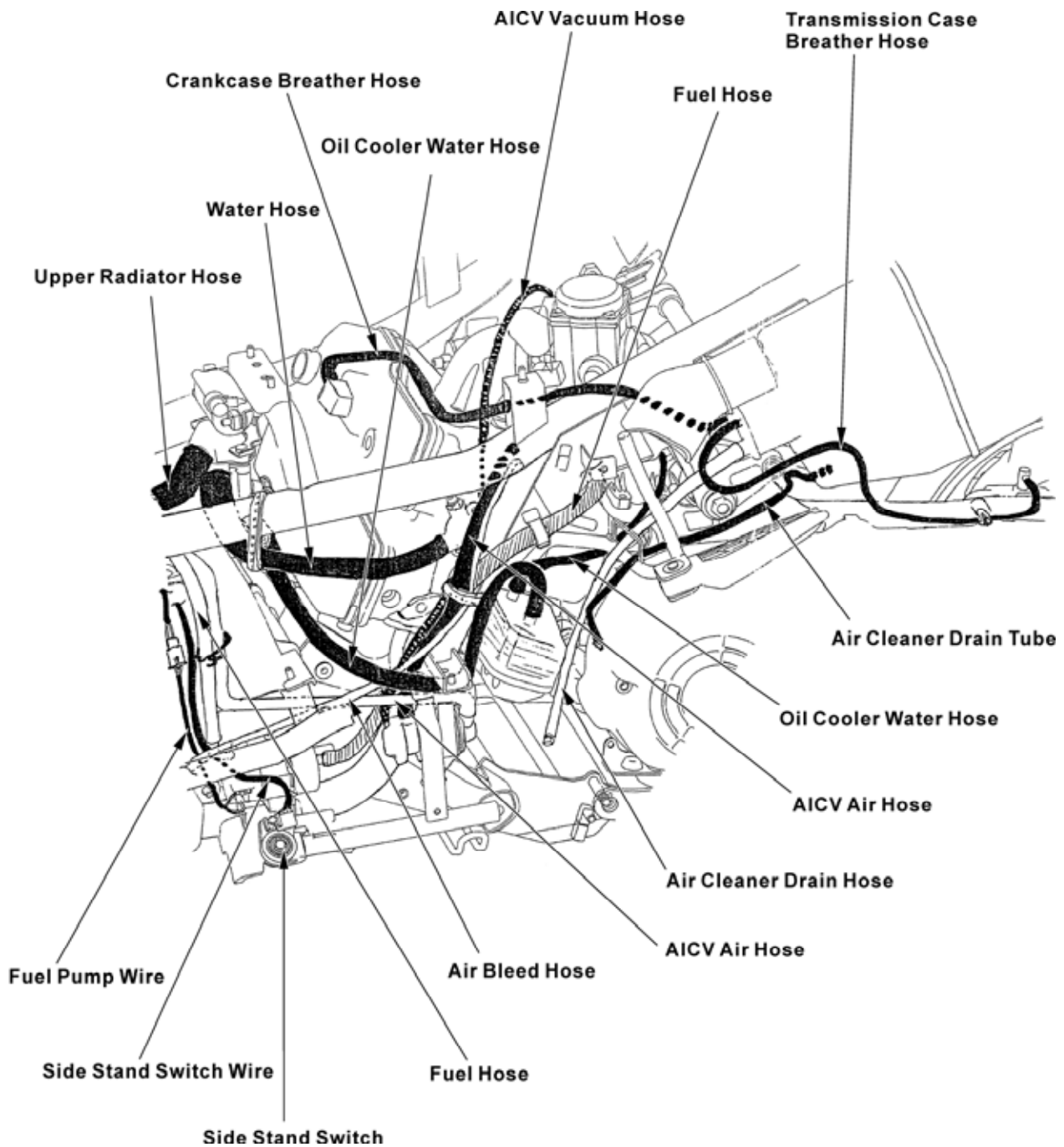
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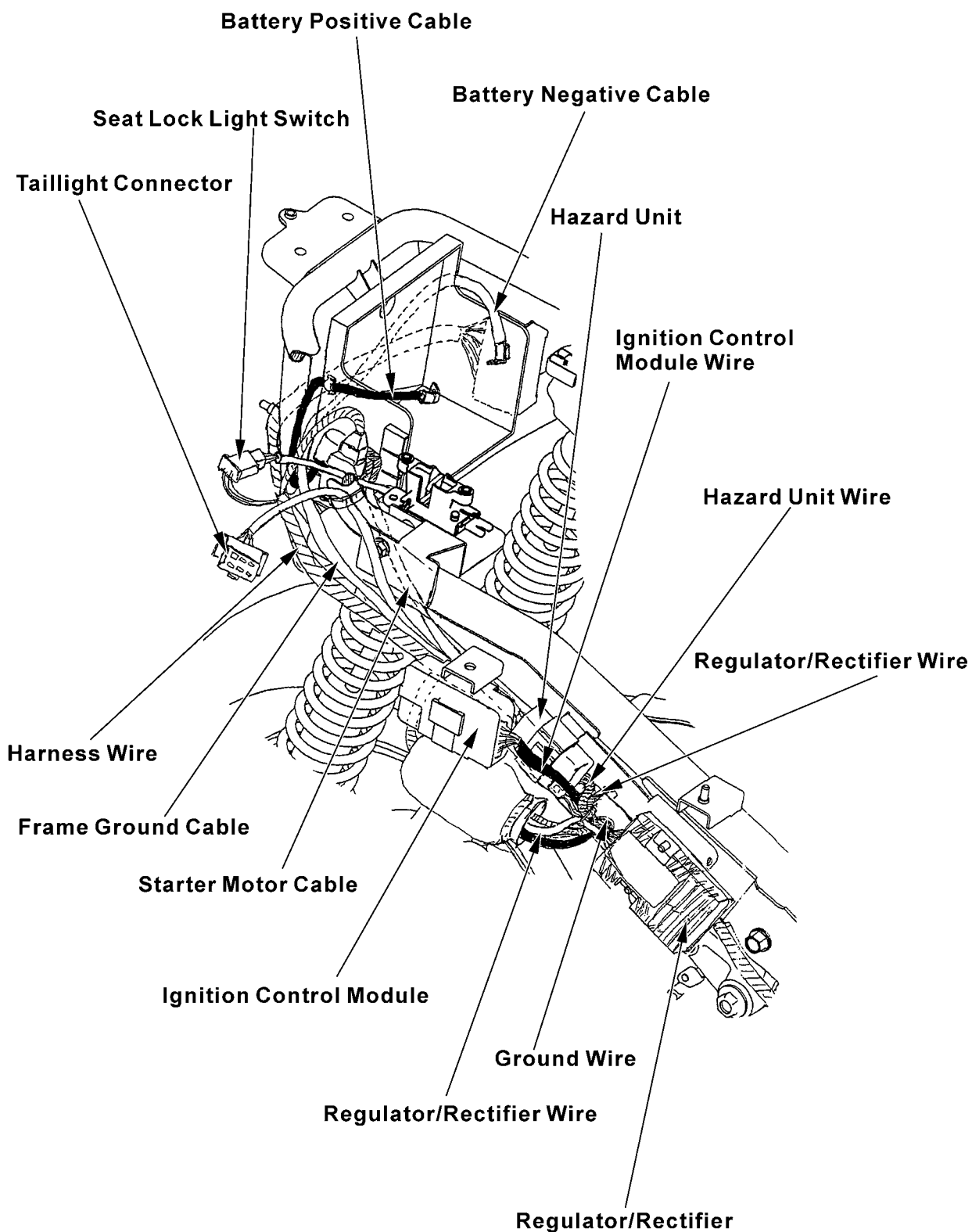
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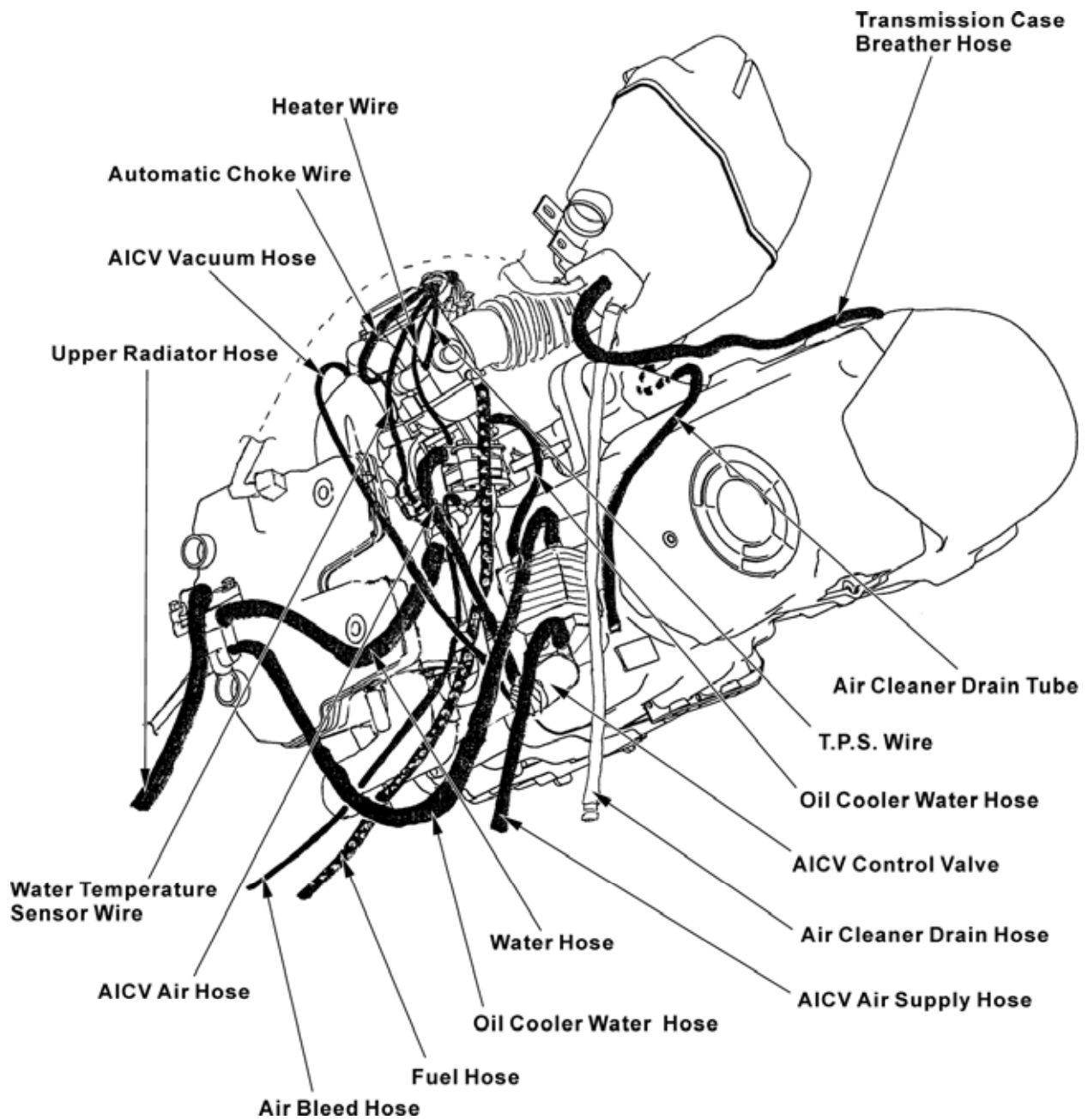
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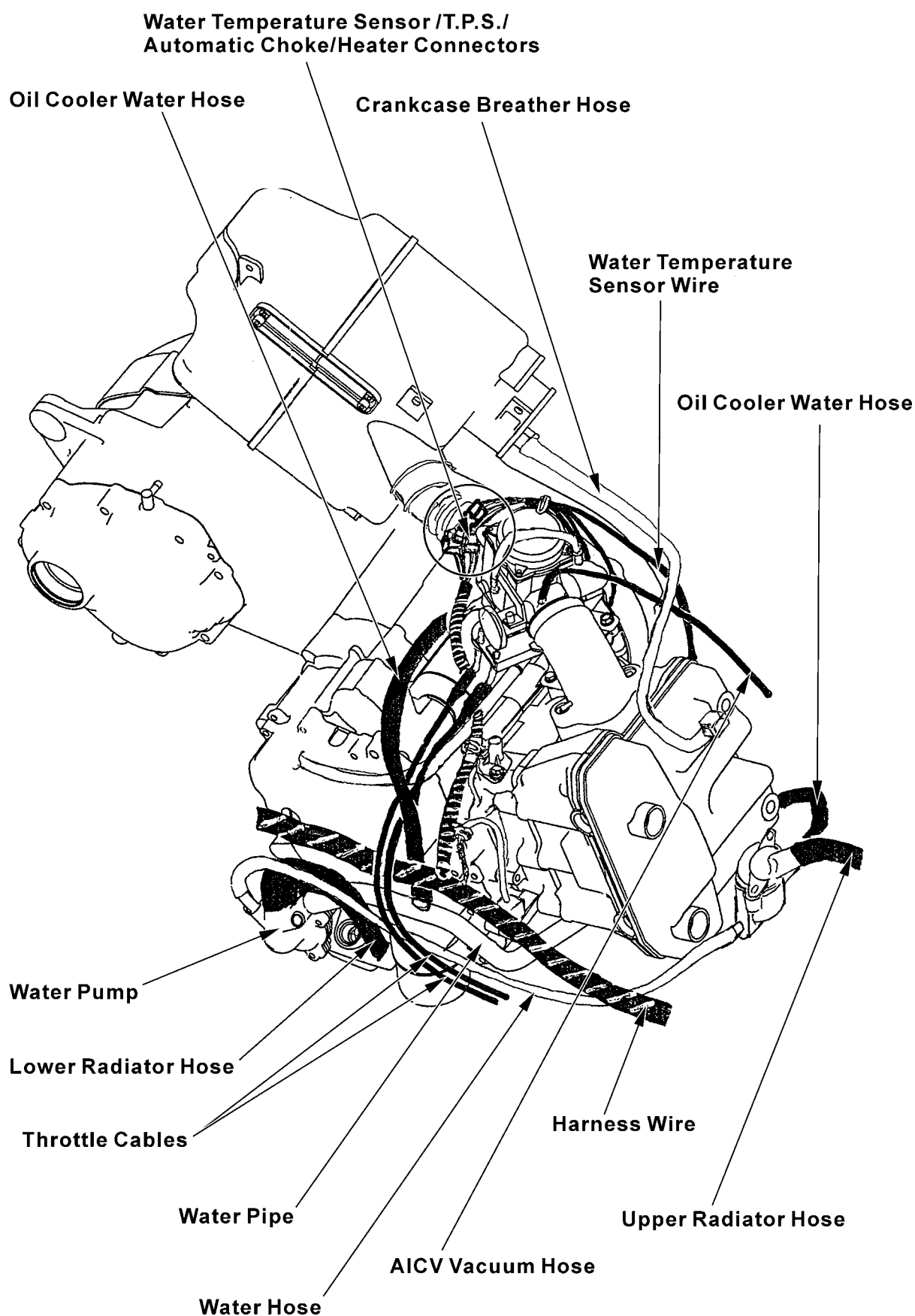
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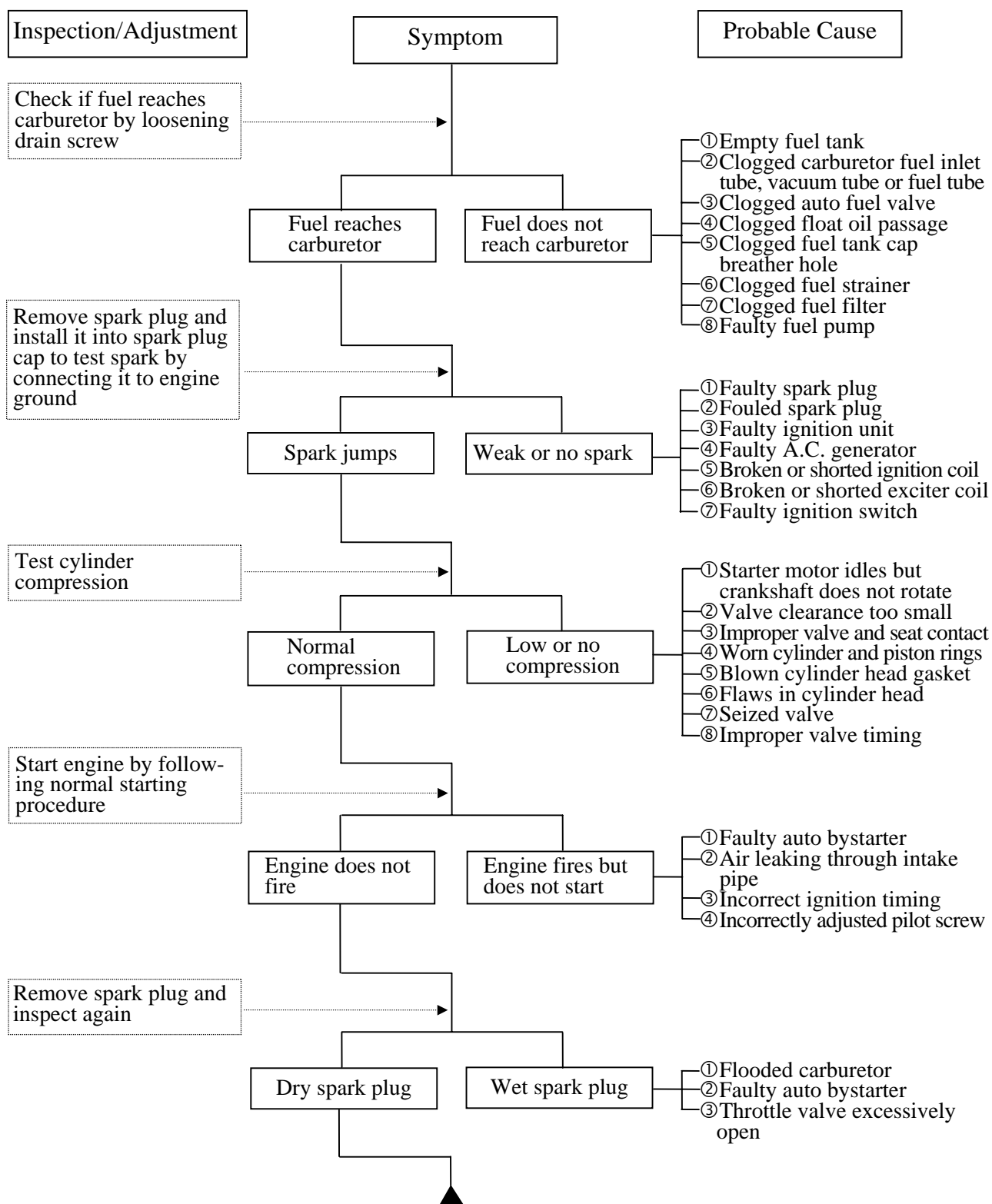
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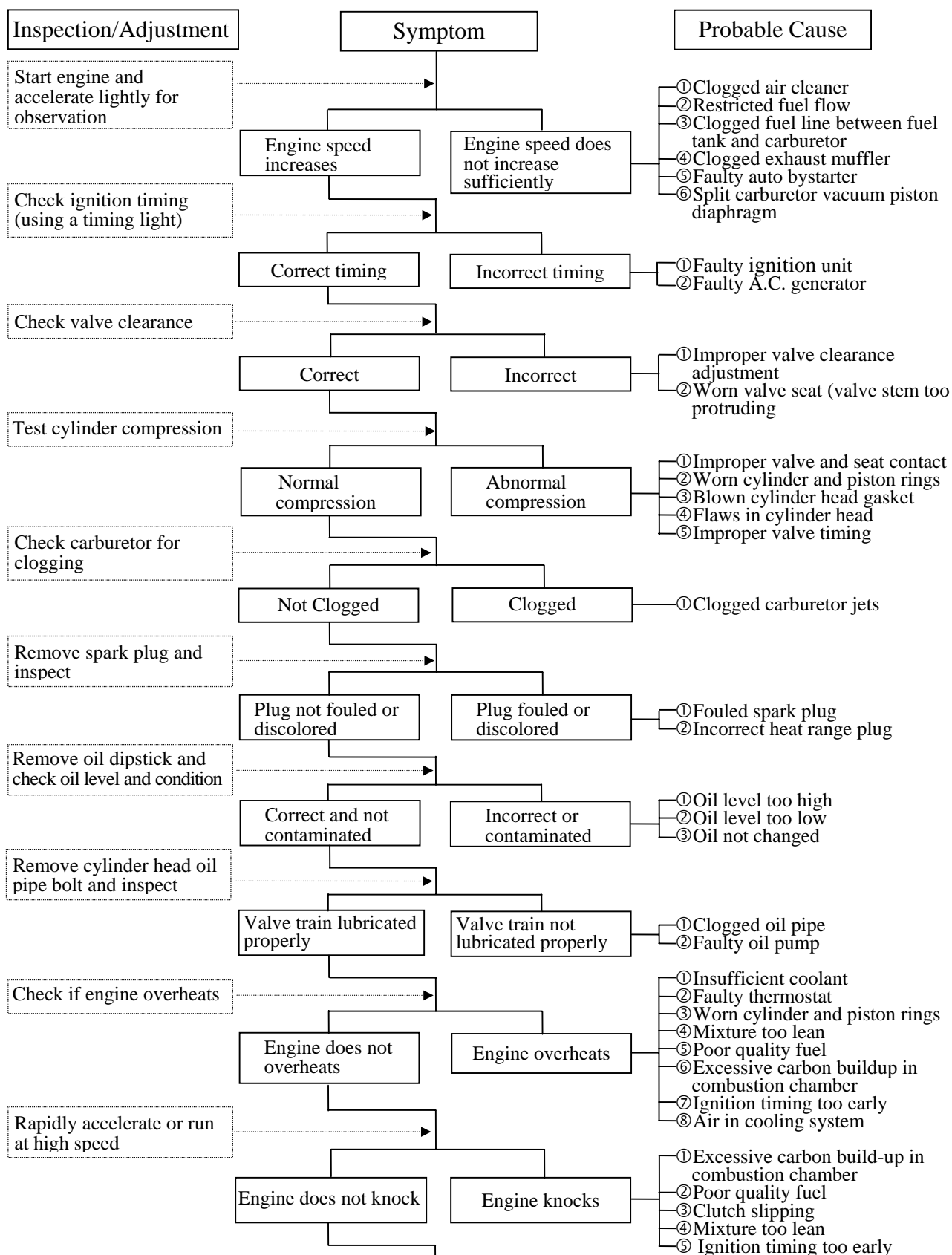
TROUBLESHOOTING

ENGINE WILL NOT START OR IS HARD TO START



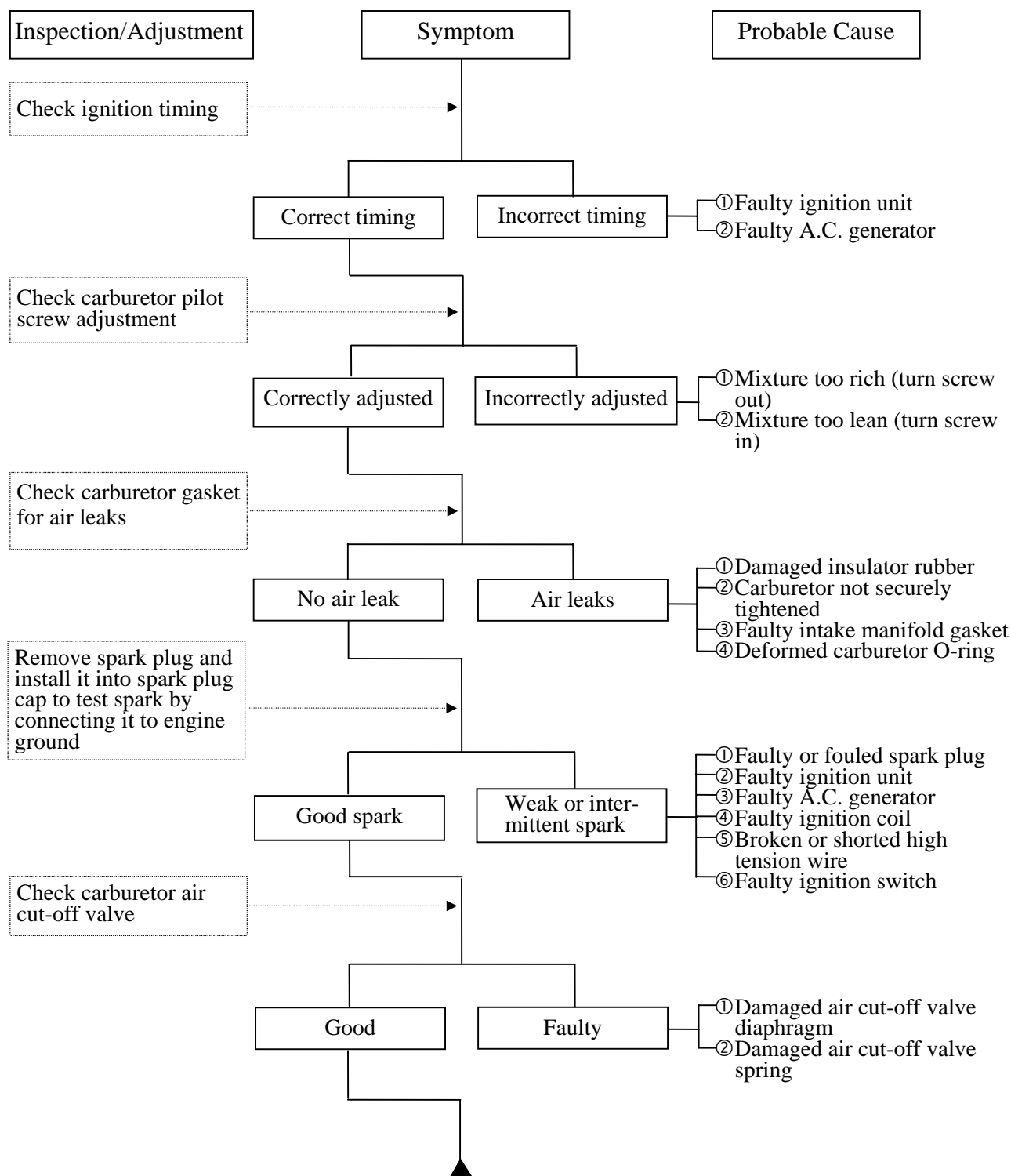
1. GENERAL INFORMATION

ENGINE LACKS POWER



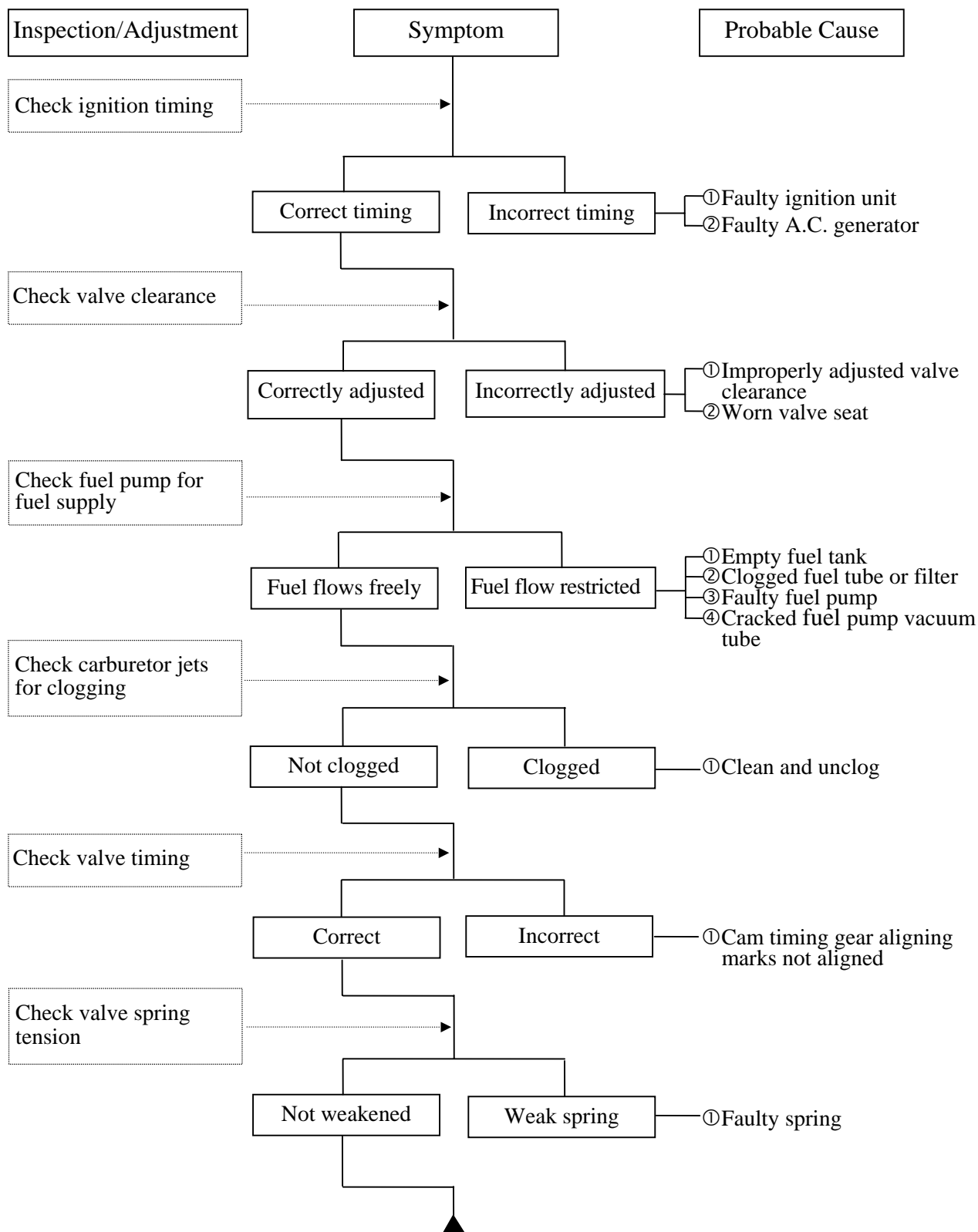
1. GENERAL INFORMATION

POOR PERFORMANCE (ESPECIALLY AT IDLE AND LOW SPEEDS)



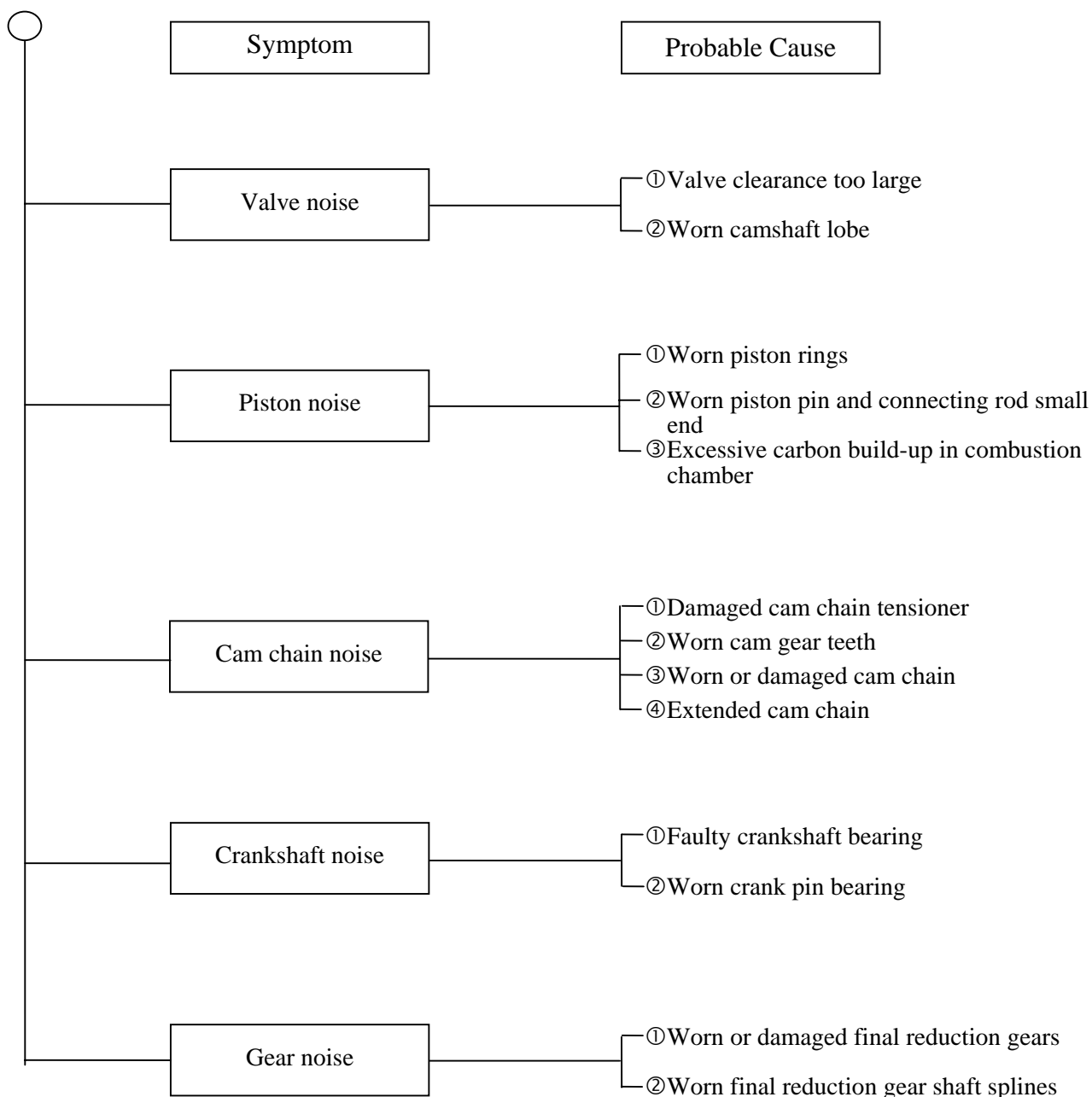
1. GENERAL INFORMATION

POOR PERFORMANCE (AT HIGH SPEED)



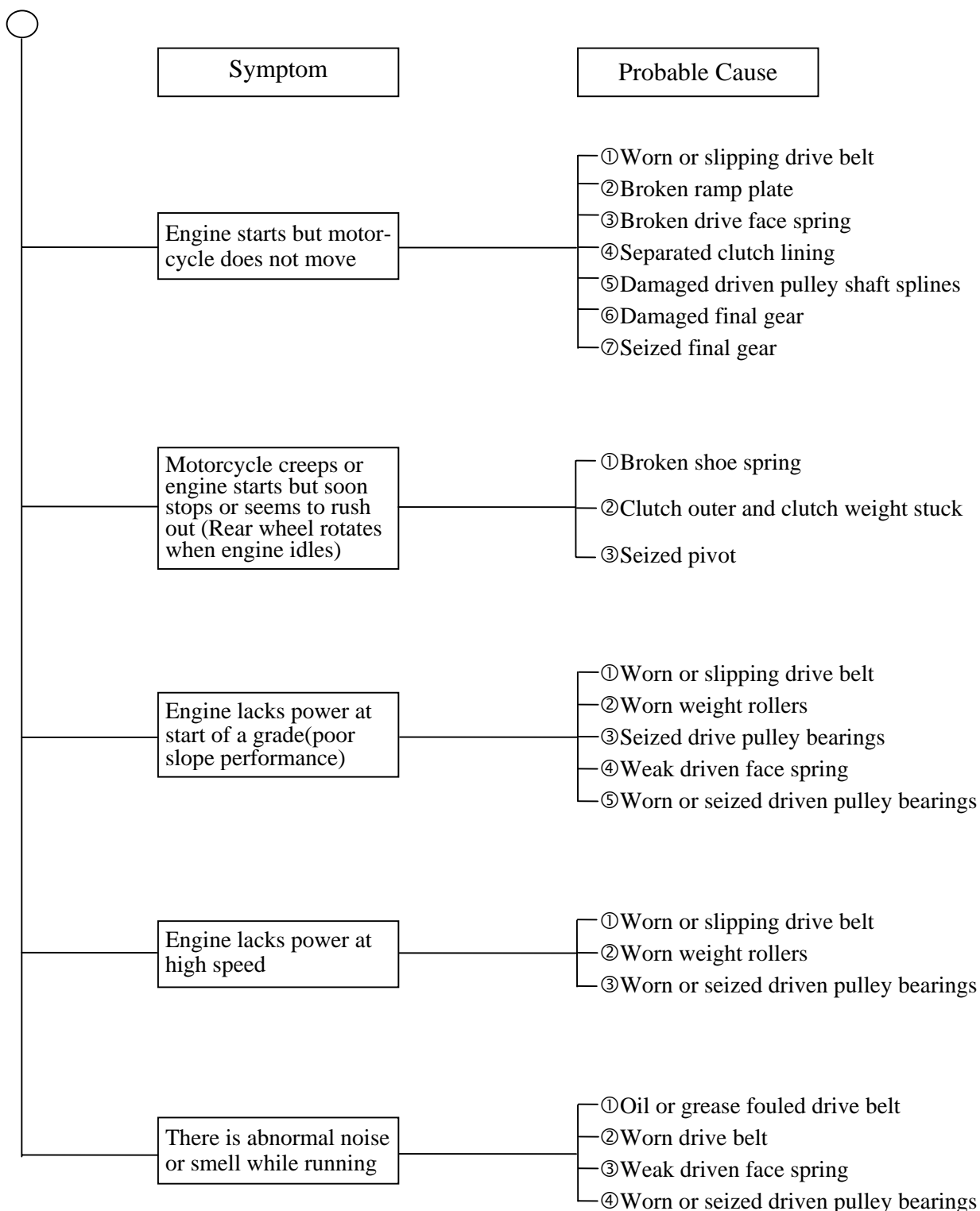
1. GENERAL INFORMATION

ENGINE NOISE



1. GENERAL INFORMATION

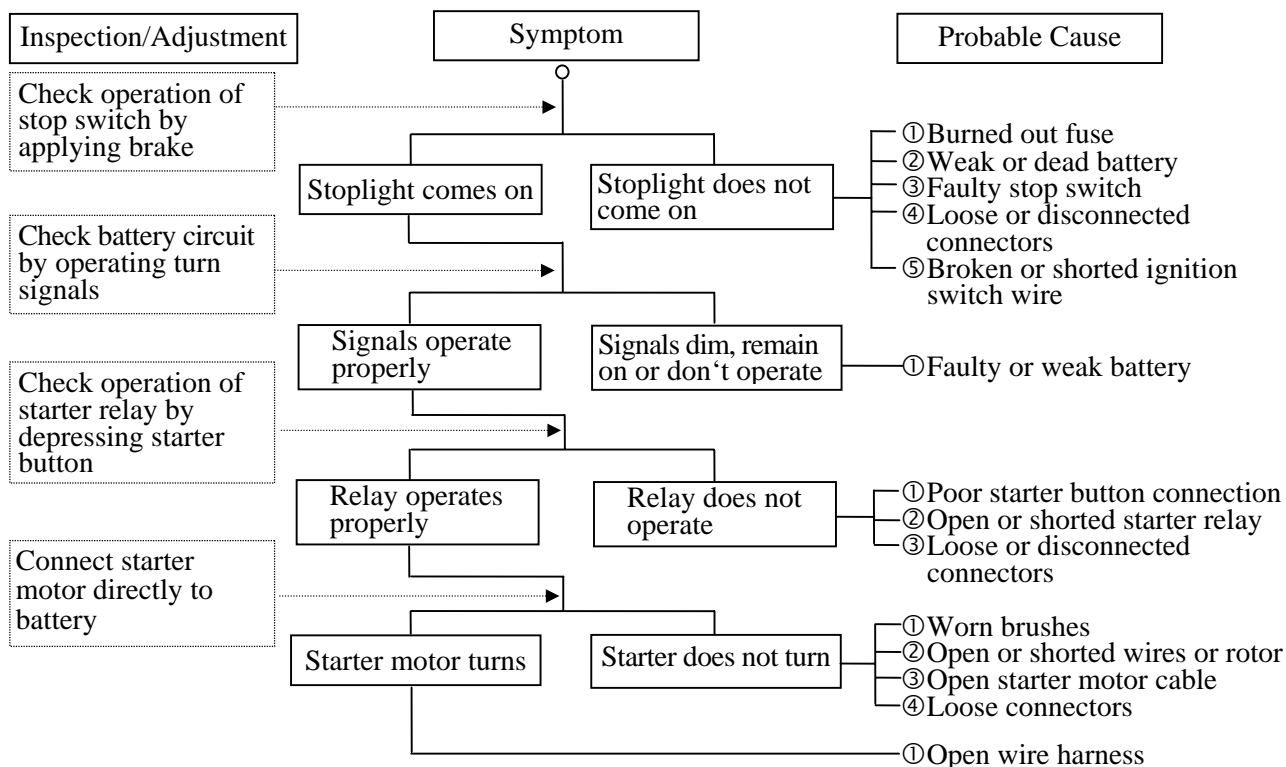
CLUTCH, DRIVE AND DRIVEN PULLEYS



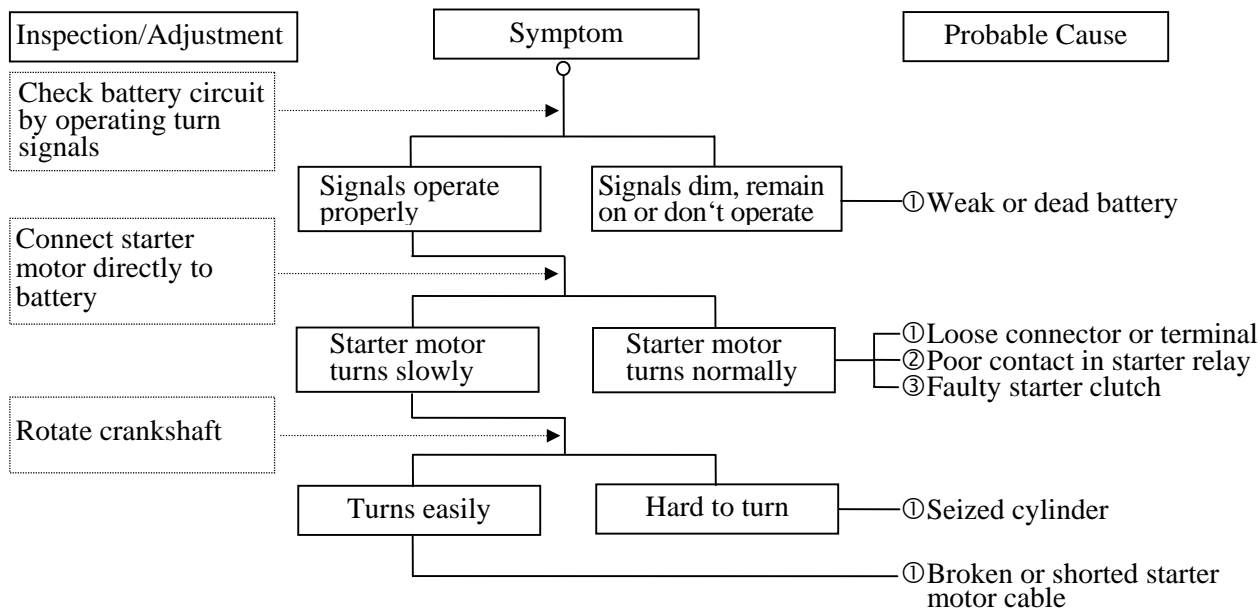
1. GENERAL INFORMATION

STARTER MOTOR

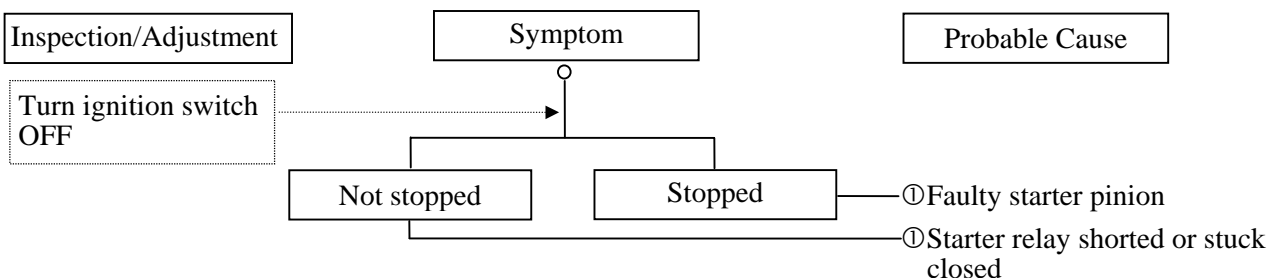
1. Starter motor won't turn



2. Starter motor turns slowly or idles

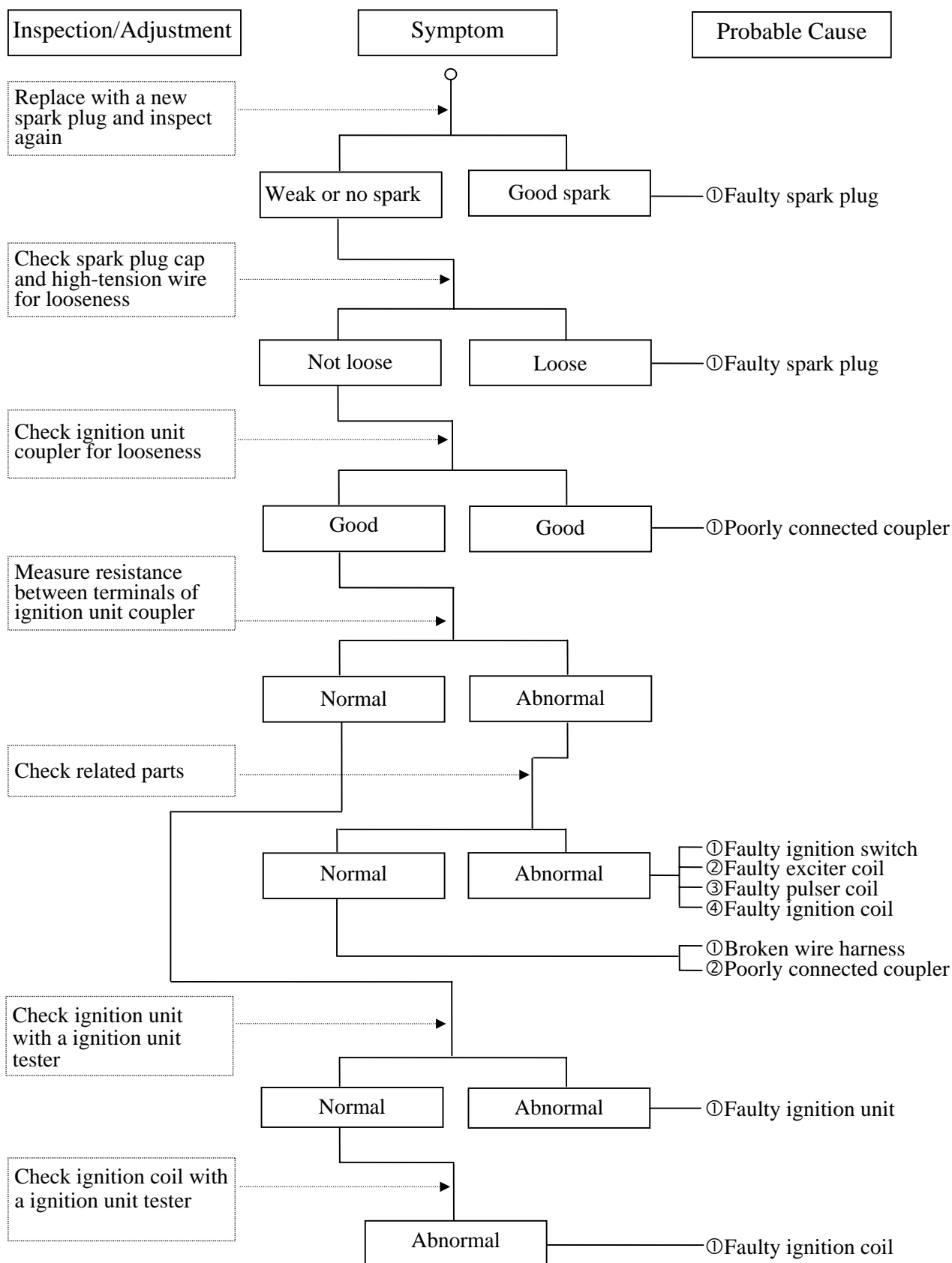


3. Starter motor does not stop turning



1. GENERAL INFORMATION

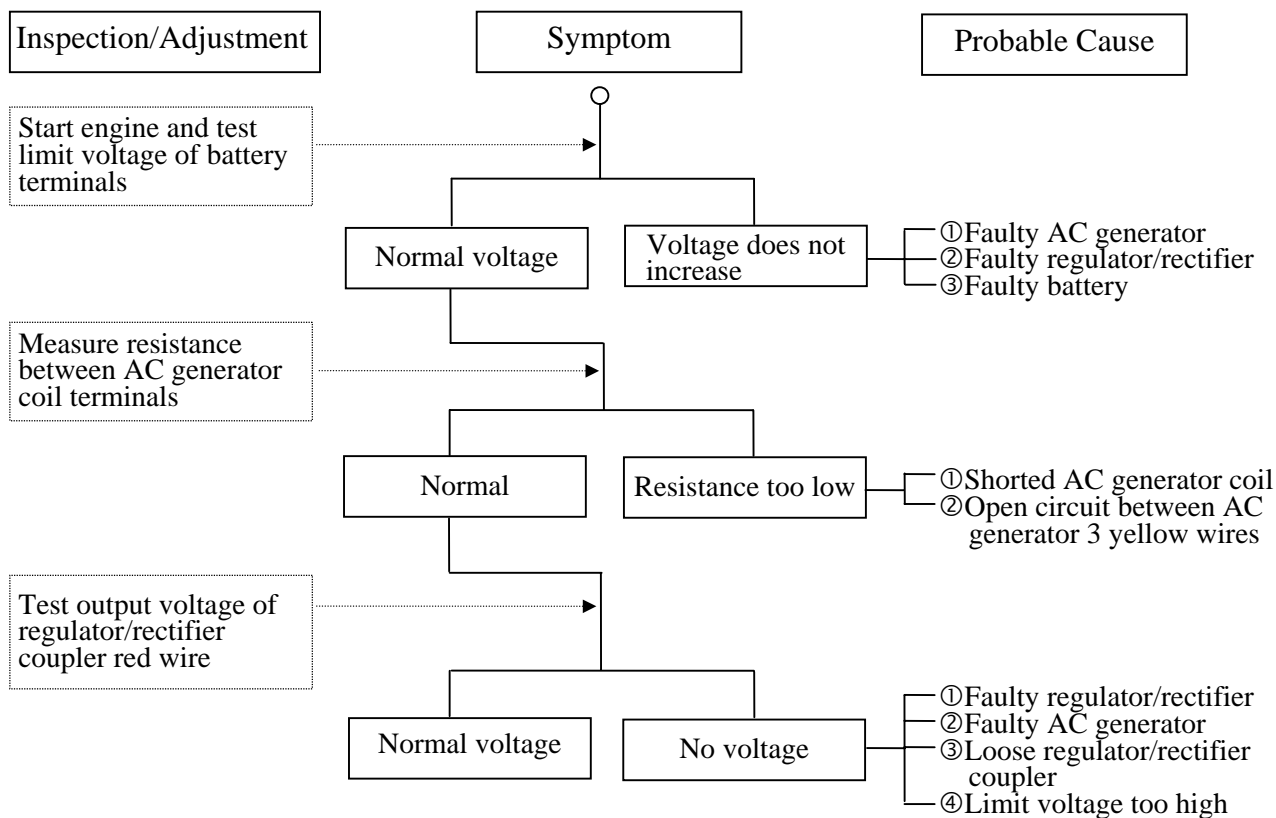
NO SPARK AT SPARK PLUG



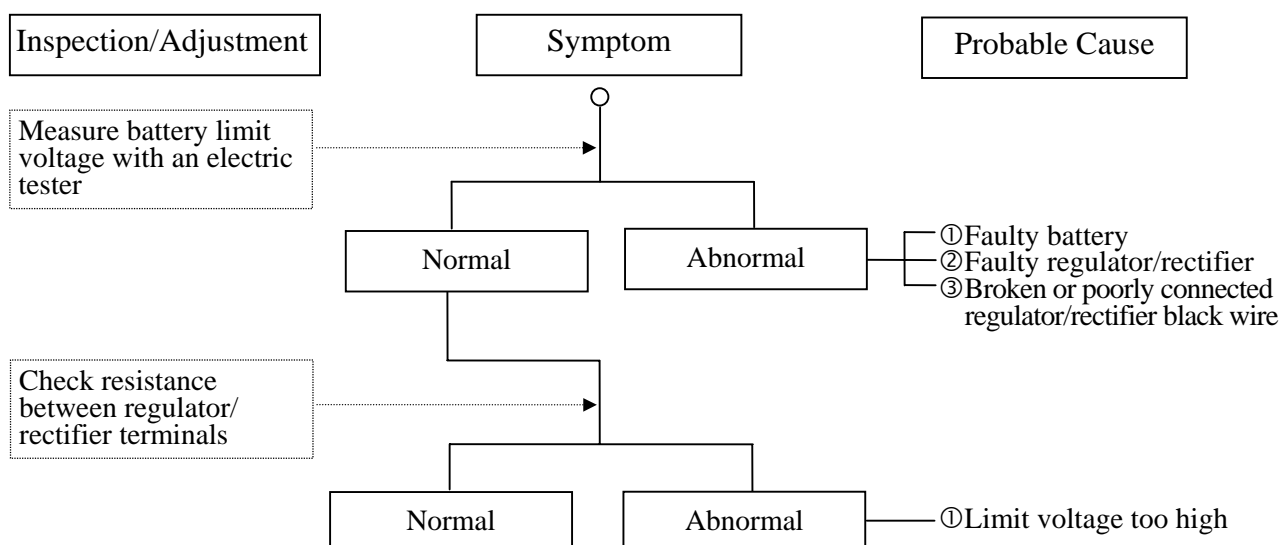
1. GENERAL INFORMATION

POOR CHARGING (BATTERY OVER DISCHARGING OR OVERCHARGING)

Undercharging



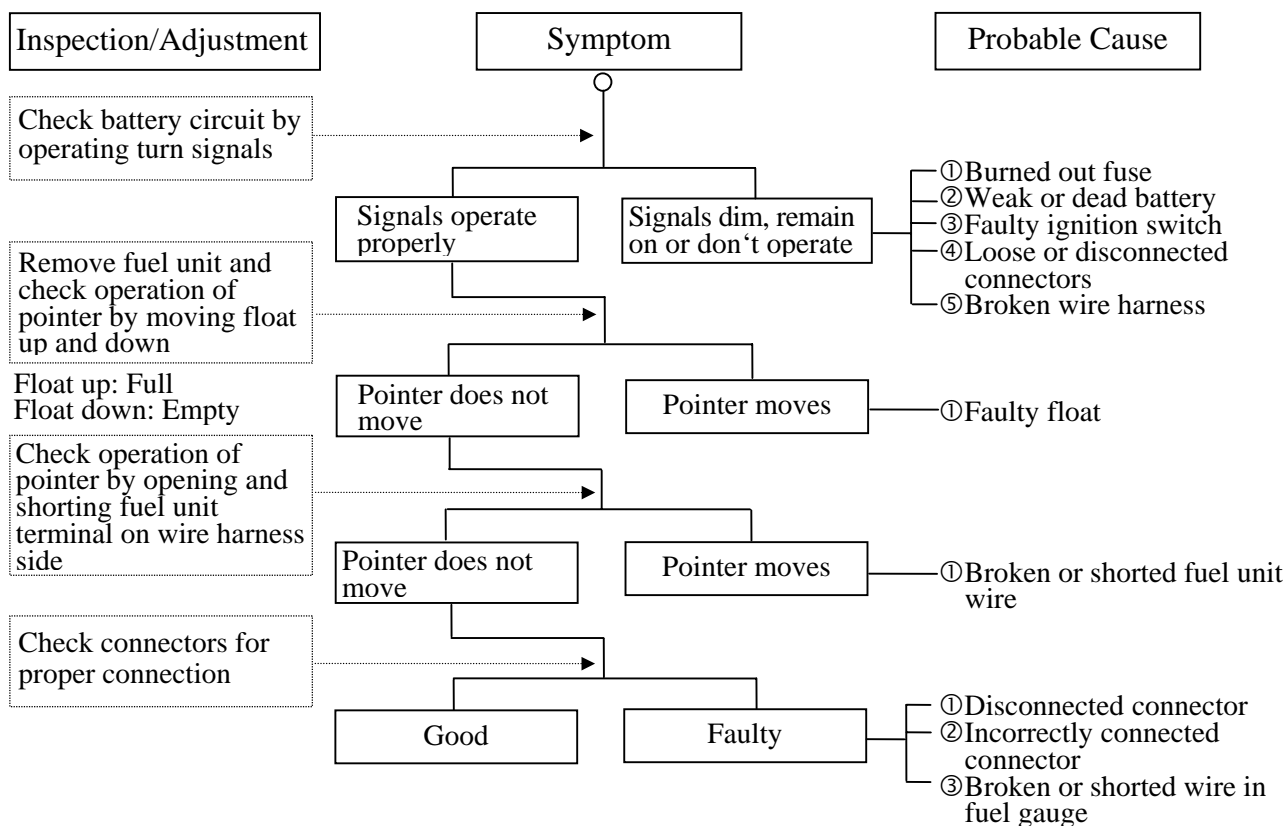
Overcharging



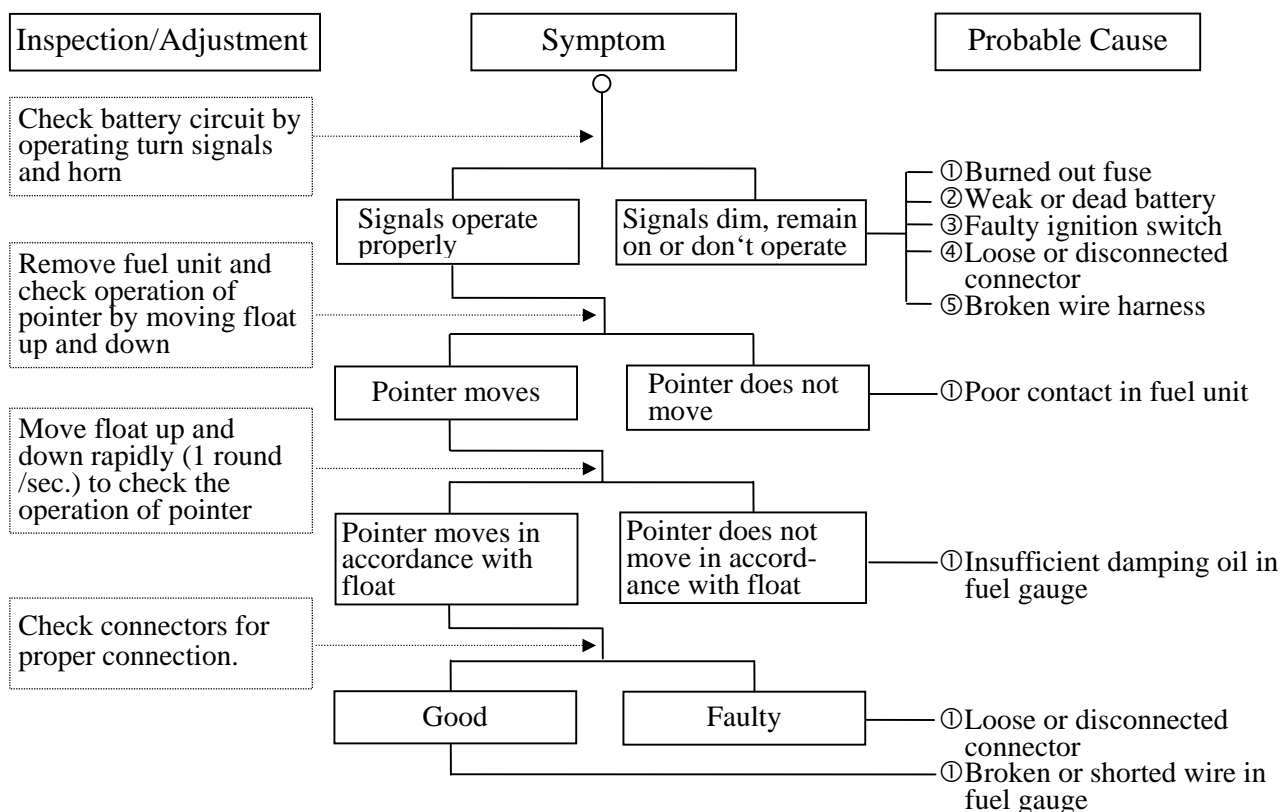
1. GENERAL INFORMATION

FUEL GAUGE

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



2. Pointer fluctuates or swings (Ignition switch ON)



1. GENERAL INFORMATION

STEERING HANDLEBAR DOES NOT TRACK STRAIGHT

Symptom	Probable Cause
	(Front and rear tire pressures are normal)
Steering is heavy	① Steering stem nut too tight ② Broken steering steel balls
Front or rear wheel is wobbling	① Excessive wheel bearing play ② Bent rim ③ Loose axle nut
Steering handlebar pulls to one side	① Misaligned front and rear wheels ② Bent front fork

POOR SUSPENSION PERFORMANCE

Symptom	Probable Cause
	(Front and rear tire pressures are normal)
Suspension is too soft	① Weak shock spring ② Excessive load ③ Shock damper oil leaking
Suspension is too hard	① Bent fork tube or shock rod
Suspension is noisy	① Fork tube and slider binding ② Fork spring and slider binding ③ Damaged shock stopper rubber ④ Loose steering stem nut

POOR BRAKE PERFORMANCE

Symptom	Probable Cause
Soft brake lever	① Worn brake linings ② Foreign matter on brake linings ③ Rough brake drum contacting area
Hard brake lever	① Worn brake linings ② Foreign matter on brake linings ③ Rough brake drum contacting area
Hard to brake	① Worn brake linings ② Worn brake cam contacting area on
Poor brake performance	① Worn brake linings ② Foreign matter on brake linings
Brake squeaks	① Sluggish or elongated brake cables ② Brake shoes improperly contact ③ Water and mud in brake system ④ Oil or grease on brake linings