Honda Motorcycle Troubleshooting Guide

NOTE

**This is not an exhaustive list,giving every possible cause for each problem listed. It is meant simply as a rough guide to assist the troubleshooting for some of the more common difficulties.*

Engine Doesn't Start, Starting Difficulty:

Starter motor not rotating:

- Starter lockout or neutral switch trouble
- Starter motor trouble
- Battery voltage low
- Relays not contacting or operating
- Starter button not contacting
- Wiring open or shorted
- Ignition switch trouble
- Engine stop switch trouble
- Fuse blown

Starter motor rotating but engine doesn't turn over:

- Starter clutch trouble

Engine won't turn over:

- Valve seizure
- Cylinder, piston seizure
- Crankshaft seizure
- Connecting rod small end seizure
- Connecting rod big end seizure
- Transmission gear or bearing seizure
- Camshaft seizure
- Balancer bearing seizure

No fuel flow:

- Fuel tap vacuum hose clogged
- Fuel tank air vent obstructed
- Fuel tap clogged
- Fuel line clogged
- Float valve clogged

Engine flooded:

- Fuel level in carburetor float bowl too high
- Float valve worn or stuck open
- Starting technique faulty
- (When flooded, crank the engine with the throttle fully open to allow more air to reach the engine.)

No spark; spark weak:

- Battery voltage low
- Spark plug dirty, broken, or maladjusted
- Spark plug cap or high tension wiring trouble
- Spark plug cap not in good contact
- Spark plug incorrect
- IC ignitor trouble
- Neutral, starter lockout, or side stand switch trouble
- Pickup coil trouble
- Ignition coil trouble
- Ignition or engine stop switch shorted
- Wiring shorted or open
- Fuse blown

Compression low:

- Spark plug loose
- Cylinder head not sufficiently tightened down
- Cylinder, piston worn
- Piston ring bad (worn, weak broken, or sticking)
- Piston ring/land clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)
- Hydraulic lash adjuster damaged (worn, seizure, or spring broken)
- Hydraulic lash adjuster oil passage clogged

Poor Running at Low Speed:

Spark weak:

- Battery voltage low
- Spark plug dirty, broken, or maladjusted
- Spark plug cap or high tension wiring trouble
- Spark plug cap shorted or not in good contact
- Spark plug incorrect
- IC ignitor trouble
- Pickup coil trouble
- Ignition coil trouble

Fuel/air mixture incorrect:

- Pilot screw maladjusted
- Pilot jet, or air passage clogged
- Air bleed pipe, bleed holes clogged
- Pilot passage clogged
- Air cleaner clogged, poorly sealed, or missing
- Starter plunger stuck open
- Fuel level in carburetor float chamber too high or too low
- Fuel tank air vent obstructed
- Carburetor holder loose
- Surge tank duct loose

Compression low:

- Spark plug loose
- Cylinder head not sufficiently tightened down
- Cylinder, piston worn
- Piston ring bad (worn, weak, broken, or sticking)
- Piston ring/land clearance excessive
- Cylinder head warped
- Cylinder head gasket damaged
- Engine not sufficiently warmed up after lash adjuster installation
- Hydraulic lash adjuster damaged (worn, seizure, or spring broken)
- Hydraulic lash adjuster oil passage clogged
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface)

Backfiring when deceleration:
- Vacuum switch valve broken
- Air suction valve trouble
- Coasting enricher trouble

Other:
- IC ignitor trouble
- Carburetors not synchronizing
- Carburetor vacuum piston doesn't slide smoothly
- Engine oil viscosity too high
- Drive train trouble
- Final gear case oil viscosity too high
- Brake dragging
- Air suction valve trouble
- Vacuum switch valve trouble

Poor Running or No Power at High Speed:

Firing incorrect:
- Spark plug dirty, broken, or maladjusted
- Spark plug cap shorted or not in good contact
- Spark plug incorrect
- IC ignitor trouble
- Pickup coil trouble
- Ignition coil trouble

Fuel/air mixture incorrect:
- Starter plunger stuck open
- Main jet clogged or wrong size
- Jet needle or needle jet worn
- Air jet clogged
- Fuel level in carburetor float chamber too high or too low
- Bleed holes of air bleed pipe or needle jet clogged
- Air cleaner clogged, poorly sealed, or missing
- Surge tank duct poorly sealed
- Water or foreign matter in fuel
- Carburetor holder loose
- Fuel tank air vent obstructed
- Fuel tap clogged
- Fuel line clogged

Compression low:
- Spark plug loose
- Cylinder head not sufficiently tightened down
- Cylinder, piston worn
- Piston ring bad (worn, weak, broken, or sticking)
- Piston ring/land clearance excessive
- Cylinder head gasket damaged
- Cylinder head warped
- Hydraulic lash adjuster damaged (worn, seizure, or spring broken)
- Hydraulic lash adjuster oil passage clogged
- Valve spring broken or weak
- Valve not seating properly (valve bent, worn, or carbon accumulation on the seating surface.)

Knocking:
- Carbon built up in combustion chamber
- Fuel poor quality or incorrect
- Spark plug incorrect
- IC ignitor trouble

Backfiring when deceleration:
- Vacuum switch valve broken
- Air suction valve trouble
- Coasting enricher trouble

Miscellaneous:
- Throttle valve won't fully open
- Carburetor vacuum piston doesn't slide smoothly
- Brake dragging
- Clutch slipping
- Overheating
- Engine oil level too high
- Engine oil viscosity too high
- Drive train trouble
- Final gear case oil viscosity too high
- Air suction valve trouble
- Vacuum switch valve trouble
- Balancer mechanism malfunctioning

Overheating:

Firing incorrect:
- Spark plug dirty, broken, or maladjusted
- Spark plug incorrect
- IC ignitor trouble

Fuel/air mixture incorrect:
- Main jet clogged or wrong size
- Fuel level in carburetor float chamber too low
- Carburetor holder loose
- Air cleaner poorly sealed, or missing
- Air cleaner duct poorly sealed
- Air cleaner ciogged
- Surge tank duct poorly sealed

Compression high:
- Carbon built up in combustion chamber

Engine load faulty:
- Clutch slipping
- Engine oil level too high
- Engine oil viscosity too high
- Drive train trouble
- Final gear case oil viscosity too high
- Brake dragging

Lubrication inadequate:
- Engine oil level too low
- Engine oil poor quality or incorrect

Gauge incorrect:
- Water temperature gauge broken
- Water temperature sensor broken

Coolant incorrect:
- Coolant level too low
- Coolant deteriorated

Cooling system component incorrect:
- Radiator clogged
- Thermostat trouble
- Radiator cap trouble
- Thermostatic fan switch trouble
- Fan relay in junction box trouble
- Fan motor broken
- Fan blade damaged
- Water pump not turning
- Water pump impeller damaged

Over Cooling:

Gauge incorrect:
- Water temperature gauge broken
- Water temperature sensor broken

Cooling system component incorrect:
- Thermostatic fan switch trouble
- Thermostat trouble

Clutch Operation Faulty:

Clutch slipping:
- No clutch lever play
- Friction plate worn or warped
- Steel plate worn or warped
- Clutch spring broken or weak
- Clutch release mechanism trouble
- Clutch hub or housing unevenly worn
- Clutch inner cable catching

Clutch not disengaging properly:
- Clutch lever play excessive
- Clutch plate warped or too rough
- Clutch spring compression uneven
- Engine oil deteriorated
- Engine oil viscosity too high
- Engine oil level too high
- Clutch housing frozen on drive shaft
- Clutch release mechanism trouble
- Clutch hub locknut loose

Gear Shifting Faulty:

Doesn't go into gear; shift pedal doesn't return:
- Clutch not disengaging
- Shift fork bent or seized
- Gear stuck on the shaft
- Gear position lever binding
- Shift return spring weak or broken
- Shift return spring pin loose
- Shift mechanism arm spring broken
- Shift mechanism arm broken
- Shift pawl broken

Jumps out of gear:
- Shift fork worn
- Gear groove worn
- Gear dogs and/or dog holes worn
- Shift drum groove worn
- Gear positioning lever spring weak or broken
- Shift fork pin worn
- Drive shaft, output shaft, and/or gear splines worn

Overshifts:
- Gear positioning lever spring weak or broken
- Shift mechanism arm spring broken

Abnormal Engine Noise:

Knocking:
- IC ignitor trouble
- Carbon built up in combustion chamber
- Fuel poor quality or incorrect
- Spark plug incorrect
- Overheating

Piston slap:
- Cylinder/piston clearance excessive
- Cylinder, piston worn
- Connecting rod bent
- Piston pin, piston holes worn

Valve noise:
- Engine not sufficiently warmed up after lash adjuster installation
- Hydraulic lash adjuster damaged (worn, seizure, or spring broken)
- Air in hydraulic lash adjuster
- Metal chips or dust jammed in hydraulic lash adjuster
- Engine operated in red zone
- Valve spring broken or weak
- Camshaft bearing worn

Other noise:
- Connecting rod small end clearance excessive
- Connecting rod big end clearance excessive
- Piston ring worn, broken or stuck
- Piston seizure, damage
- Cylinder head gasket leaking
- Exhaust pipe leaking at cylinder head connection
- Crankshaft runout excessive
- Engine mounts loose
- Crankshaft bearing worn
- Primary gear worn or chipped
- Camshaft chain tensioner trouble
- Upper or lower tension spring trouble
- Camshaft chain, sprocket, guide worn
- Air suction valve damaged
- Balancer gear worn or chipped
- Balancer shaft position maladjusted
- Balancer bearing worn
- Balancer coupling rubber damper damaged
- Oil pump chain, sprocket worn

Abnormal Drive Train Noise:

Clutch noise:
- Weak or damaged rubber damper
- Clutch housing/friction plate clearance excessive
- Clutch housing gear worn

Transmission noise:
- Bearings worn
- Transmission gears worn or chipped
- Metal chips jammed in gear teeth
- Engine oil insufficient

Drive line noise:
- Bevel gear bearings worn
- Bevel gears worn or chipped
- Bevel gears maladjusted
- Rear wheel coupling damaged
- Insufficient lubricant

Abnormal Frame Noise:

Front fork noise:
- Oil insufficient or too thin
- Spring weak or broken

Rear shock absorber noise:
Shock absorber damaged
Disc brake noise:
Pad installed incorrectly
Pad surface glazed
Disc warped
Caliper trouble
Drum brake noise:
Brake linings overworn or worn unevenly
Drum worn unevenly or scored
Brake springs weak or broken
Foreign matter in hub
Brake not properly adjusted
Other noise:
Bracket, nut, bolt, etc. not properly mounted or tightened

Oil Pressure Warning Light Goes On:

Engine oil pump damaged
Engine oil screen clogged
Engine oil filter clogged
Engine oil level too low
Engine oil viscosity too low
Camshaft bearings worn
Crankshaft bearings worn
Oil pressure switch damaged
Wiring damaged
Relief valve stuck open
O-ring at the oil pipe in the crankcase damaged

Exhaust Smokes Excessively:

White smoke:
Piston oil ring worn
Cylinder worn
Valve oil seal damaged
Valve guide worn
Engine oil level too high
Black smoke:
Air cleaner clogged
Main jet too large or fallen off
Starter plunger stuck open
Fuel level in carburetor float chamber too high
Brown smoke:
Main jet too small
Fuel level in carburetor float chamber too low
Surge tank duct loose
Air cleaner poorly sealed or missing

Handling and/or Stability Unsatisfactory:

Handlebar hard to turn:
Steering stem locknut too tight
Bearing damaged
Steering bearing lubrication inadequate
Steering stem bent
Tire air pressure too low
Handlebar shakes or excessively vibrates:
Tire worn
Swing arm pivot bearing worn
Rim warped, or not balanced
Wheel bearing worn
Handlebar clamp loose
Steering stem head bolt loose
Handlebar pulls to one side:
Frame bent
Wheel misalignment
Swing arm bent or twisted
Steering maladjusted
Front fork bent
Right/left fork oil level uneven
Right/left rear shock absorbers unbalanced
Shock absorption unsatisfactory:
(Too hard)
Front fork oil excessive
Front fork oil viscosity too high
Front fork air pressure too high
Rear shock absorber air pressure too high
Tire air pressure too high
Front fork bent
(Too soft)
Front fork oil insufficient and/or leaking
Front fork oil viscosity too low
Front fork, rear shock absorber spring weak
Rear shock absorber oil leaking

Brake *Doesn't* Hold:

Disc brake:
Air in the brake line
Pad or disc worn
Brake fluid leak
Disc warped
Contaminated pad
Brake fluid deteriorated
Primary or secondary cup damaged
Master cylinder scratched inside
Drum brake:
Brake maladjusted
Brake linings or drum worn
Overheated
Water in brake drum
Brake cam, camshaft worn
Oil on brake linings

Battery Discharged:

Battery faulty (e.g., plates sulphated, shorted through sedimentation, electrolyte level too low)
Batterly leads making poor contact
Load excessive (e.g., bulb of excessive wattage)
Ignition switch trouble
Regulator/Rectifier trouble
Stator coil open or short
Wiring faulty

Battery Overcharged:

Alternator trouble
Regulator/Rectifier trouble
Battery trouble
Wiring faulty

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