

**CHAPTER 9.
TROUBLESHOOTING**

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TROUBLESHOOTING**NOTE:**

The following guide for troubleshooting does not cover all the possible causes of trouble. It should be helpful, however, as a guide to basic troubleshooting. Refer to the relative procedure in this manual for checks, adjustments, and replacement of parts.

STARTING PROBLEMS**ENGINE****Cylinders and cylinder head(-s)**

- Loose spark plug
- Loose cylinder head
- Damaged cylinder head gasket
- Worn or damaged cylinder
- Incorrect valve clearance
- Incorrectly sealed valve
- Incorrect valve-to-valve-seat contact
- Incorrect valve timing
- Faulty valve spring
- Seized valve

Pistons and piston rings

- Incorrectly installed piston ring
- Damaged, worn or fatigued piston ring
- Seized piston ring
- Seized or damaged piston

Air filter

- Incorrectly installed air filter
- Clogged air filter element

Crankcase and crankshaft

- Incorrectly assembled crankcase
- Seized crankshaft

ELECTRICAL SYSTEMS**Battery**

- Faulty battery
- Discharged battery

Fuses

- Blown, damaged or incorrect fuse
- Incorrectly installed fuse

Spark plugs

- Incorrect spark plug gap
- Incorrect spark plug heat range
- Fouled spark plug
- Worn or damaged electrode
- Worn or damaged insulator
- Faulty spark plug cap

Ignition coils

- Damaged ignition coil
- Broken or shorted primary or secondary coils

FUEL SYSTEM**Fuel tank**

- Empty fuel tank
- Clogged fuel filter
- Clogged fuel tank breather hose
- Deteriorated or contaminated fuel

Fuel pump

- Faulty fuel pump
- Faulty fuel pump relay

Fuel cock

- Clogged or damaged fuel hose

Carburetors

- Deteriorated or contaminated fuel
- Clogged pilot jet
- Clogged pilot air passage
- Sucked-in air
- Damaged float
- Worn needle valve
- Incorrectly installed needle valve seat
- Incorrect fuel level
- Incorrectly installed pilot jet
- Clogged starter jet
- Faulty starter plunger
- Incorrectly adjusted starter cable

Ignition system

- Faulty CDI unit
- Faulty pickup coil

Switches and wiring

- Faulty main switch
- Faulty engine stop switch
- Broken or shorted wiring
- Faulty neutral switch
- Faulty start switch
- Faulty sidestand switch
- Faulty clutch switch
- Incorrectly grounded circuit
- Loose connections

Starting system

- Faulty starter motor
- Faulty starter relay
- Faulty starting circuit cutoff relay
- Faulty starter clutch

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INCORRECT ENGINE IDLING SPEED

ENGINE

Cylinders and cylinder head

- Incorrect valve clearance
- Damaged valve train components

Air filter

- Clogged air filter element

FUEL SYSTEM

Carburetors

- Faulty starter plunger
- Loose or clogged pilot jet
- Loose or clogged pilot air jet
- Damaged or loose carburetor joint
- Incorrectly synchronized carburetors
- Incorrectly adjusted engine idling speed (throttle stop screw)
- Incorrect throttle cable free play
- Flooded carburetor

ELECTRICAL SYSTEMS

Battery

- Faulty battery
- Discharged battery

Spark plugs

- Incorrect spark plug gap
- Incorrect spark plug heat range
- Fouled spark plug
- Worn or damaged electrode
- Worn or damaged insulator
- Faulty spark plug cap

Ignition coils

- Broken or shorted primary or secondary coils
- Faulty spark plug lead
- Damaged ignition coil

Ignition system

- Faulty ignition unit
- Faulty pickup coil

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POOR MEDIUM-AND-HIGH-SPEED PERFORMANCE

Refer to "STARTING PROBLEMS".

ENGINE

Air filter

- Clogged air filter element

Air intake system

- Clogged air ducts

FUEL SYSTEM

Carburetors

- Faulty diaphragm
- Incorrect fuel level
- Loose or clogged main jet

Fuel pump

- Faulty fuel pump

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FAULTY GEAR SHIFTING

SHIFTING IS DIFFICULT

Refer to "CLUTCH DRAGS".

SHIFT PEDAL DOES NOT MOVE

Shift shaft

- Incorrectly adjusted shift rod
- Bent shift shaft

Shift drum and shift forks

- Foreign object in a shift drum groove
- Seized shift fork
- Bent shift fork guide bar

Transmission

- Seized transmission gear
- Foreign object between transmission gears
- Incorrectly assembled transmission

JUMPS OUT OF GEAR

Shift shaft

- Incorrect shift pedal position
- Incorrectly returned stopper lever

Shift forks

- Worn shift fork

Shift drum

- Incorrect axial play
- Worn shift drum groove

Transmission

- Worn gear dog

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FAULTY CLUTCH**CLUTCH SLIPS****Clutch**

- Incorrectly assembled clutch
- Incorrectly adjusted clutch cable
- Loose or fatigued clutch spring
- Worn friction plate
- Worn clutch plate

Engine oil

- Incorrect oil level
- Incorrect oil viscosity (low)
- Deteriorated oil

CLUTCH DRAGS**Clutch**

- Unevenly tensioned clutch spring plate
- Warped pressure plate
- Bent clutch plate
- Swollen friction plate
- Bent clutch pull rod
- Damaged clutch boss
- Burnt primary driven gear bushing
- Match marks not aligned

Engine oil

- Incorrect oil level
- Incorrect oil viscosity (high)
- Deteriorated oil

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OVERHEATING**ENGINE****Clogged coolant passages****Cylinder head(-s) and piston(-s)**

- Heavy carbon buildup

Engine oil

- Incorrect oil level
- Incorrect oil viscosity
- Inferior oil quality

COOLING SYSTEM**Coolant**

- Low coolant level

Radiator

- Damaged or leaking radiator
- Faulty radiator cap
- Bent or damaged radiator fin

Water pump

- Damaged or faulty water pump

Thermostat

- Thermostat stays closed

Oil cooler

- Clogged or damaged oil cooler

Hoses and pipes

- Damaged hose
- Incorrectly connected hose
- Damaged pipe
- Incorrectly connected pipe

FUEL SYSTEM**Carburetors**

- Incorrect main jet setting
- Incorrect fuel level
- Damaged or loose carburetor joint

Air filter

- Clogged air filter element

CHASSIS**Brakes**

- Dragging brake

ELECTRICAL SYSTEMS**Spark plugs**

- Incorrect spark plug gap
- Incorrect spark plug heat range

Ignition system

- Faulty CDI unit

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OVERCOOLING**COOLING SYSTEM****Thermostat**

- Thermostat stays open

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POOR BRAKING PERFORMANCE

- Worn brake pad
- Worn brake disc
- Air in hydraulic brake system
- Leaking brake fluid
- Faulty brake caliper piston seal
- Loose union bolt
- Damaged brake hose
- Oil or grease on the brake disc
- Oil or grease on the brake pad
- Incorrect brake fluid level

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FAULTY FRONT FORK LEGS

LEAKING OIL

- Bent, damaged or rusty inner tube
- Damaged outer tube
- Incorrectly installed oil seal
- Damaged oil seal lip
- Incorrect oil level (high)
- Loose damper rod assembly bolt
- Damaged damper rod assembly bolt copper washer
- Damaged cap bolt O-ring

MALFUNCTION

- Bent or damaged inner tube
- Bent or damaged outer tube
- Damaged fork spring
- Worn or damaged outer tube busing
- Bent or damaged damper rod
- Incorrect oil viscosity
- Incorrect oil level

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UNSTABLE HANDLING

Handlebars

- Bent or incorrectly installed right handlebar
- Bent or incorrectly installed left handlebar

Steering head components

- Incorrectly installed upper bracket
- Incorrectly installed lower bracket (incorrectly tightened ring nut)
- Bent steering stem
- Damaged ball bearing or bearing race

Front fork legs

- Uneven oil levels (both front fork legs)
- Unevenly tensioned fork spring (both front fork legs)
- Damaged fork spring
- Bent or damaged inner tube
- Bent or damaged outer tube

Swingarm

- Worn bearing or bushing
- Bent or damaged swingarm

Rear shock absorber assembly

- Faulty rear shock absorber spring
- Leaking oil or gas

Tires

- Uneven tire pressures (front and rear)
- Incorrect tire pressure
- Uneven tire wear

Wheels

- Incorrect wheel balance
- Deformed cast wheel
- Damaged wheel bearing
- Bent or loose wheel axle
- Excessive wheel runout

Frame

- Bent frame
- Damaged steering head pipe
- Incorrectly installed bearing race

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FAULTY LIGHTING AND SIGNALING SYSTEMS

HEADLIGHT DOES NOT LIGHT

- Wrong headlight bulb
- Too many electrical accessories
- Hard charging
- Incorrect connection
- Incorrectly grounded circuit
- Poor contacts (main or light switch)
- Burnt-out headlight bulb

HEADLIGHT BULB BURNT OUT

- Wrong headlight bulb
- Faulty battery
- Faulty rectifier/regulator
- Incorrectly grounded circuit
- Faulty main switch
- Faulty light switch
- Headlight bulb life expired

TAIL/BRAKE LIGHT DOES NOT LIGHT

- Wrong tail/brake light bulb
- Too many electrical accessories
- Incorrect connection
- Burnt-out tail/brake light bulb

TAIL/BRAKE LIGHT BULB BURNT OUT

- Wrong tail/brake light bulb
- Faulty battery
- Incorrectly adjusted rear brake light switch
- Tail/brake light bulb life expired

TURN SIGNAL DOES NOT LIGHT

- Faulty turn signal switch
- Faulty turn signal relay
- Burnt-out turn signal bulb
- Incorrect connection
- Damaged or faulty wire harness
- Incorrectly grounded circuit
- Faulty battery
- Blown, damaged or incorrect fuse

TURN SIGNAL BLINKS SLOWLY

- Faulty flasher relay
- Faulty main switch
- Faulty turn signal switch
- Wrong turn signal bulb

TURN SIGNAL REMAINS LIT

- Faulty flasher relay
- Burnt-out-turn signal bulb

TURN SIGNAL BLINKS QUICKLY

- Incorrect turn signal bulb
- Faulty flasher relay
- Burnt-out turn signal bulb

HORN DOES NOT SOUND

- Incorrectly adjusted horn
- Damaged or faulty horn
- Faulty main switch
- Faulty horn switch
- Faulty battery
- Blown, damaged or incorrect fuse
- Faulty wire harness