

18. TROUBLESHOOTING

ENGINE DOES NOT START OR IS
HARD TO START 18-2

ENGINE LACKS POWER 18-3

POOR PERFORMANCE AT
LOW AND IDLE SPEED 18-5

POOR PERFORMANCE AT HIGH SPEED 18-6

POOR HANDLING..... 18-6

ENGINE DOES NOT START OR IS HARD TO START

1. Fuel Line Inspection

Check the fuel flow to the carburetor.

Does the fuel reach the carburetor?

YES – GO TO STEP 2.

NO – • Clogged fuel line or strainer
• Clogged fuel valve
• Clogged fuel fill cap breather hose

2. Spark Plug Inspection

Remove and inspect the spark plug.

Is the spark plug wet?

YES – • Flooded carburetor
• Throttle valve open
• Dirty air cleaner
• Improperly adjusted pilot screw
• Starting enrichment (SE) valve stuck open or damaged

NO – GO TO STEP 3.

3. Spark Test

Perform spark test.

Is there weak or no spark?

YES – • Faulty spark plug
• Fouled spark plug
• Loose or disconnected ignition system wires
• Broken or shorted spark plug wire
• Faulty ignition coil
• Faulty exciter coil
• Faulty ignition pulse generator
• Faulty engine stop switch
• Faulty ignition switch
• Faulty ignition control module (ICM)

NO – GO TO STEP 4.

4. Engine Starting Condition

Start the engine by the following normal procedure.

Does the engine start then stops?

Yes – • Improper choke operation
• Incorrectly adjusted carburetor
• Leaking carburetor insulator
• Improper ignition timing (Faulty ICM or ignition pulse generator)
• Contaminated fuel

NO – GO TO STEP 5.

5. Cylinder Compression

Test cylinder compression.

Is the compression low?

YES – • Valve clearance too small
• Valve stuck open
• Worn cylinder and piston rings
• Damaged cylinder head gasket
• Seized valve
• Improper valve timing

ENGINE LACKS POWER

1. Drive Train Inspection

Raise wheel off the ground and spin it by hand.

Does the wheel spin freely?

YES – GO TO STEP 2.

NO – • Brake dragging
• Worn or damaged wheel hub or axle bearing
• Drive chain too tight

2. Tire Pressure Inspection

Check tire pressure.

Are the tire pressures low?

YES – • Faulty tire valve
• Punctured tire

NO – GO TO STEP 3.

3. Clutch Inspection

Accelerate rapidly from low to second.

Does the engine speed change accordingly when clutch is engaged?

YES – GO TO STEP 4.

NO – • Clutch slipping
• Worn clutch discs
• Warped clutch plates
• Weak clutch springs
• Damaged clutch lifter arm
• Additive in engine oil

4. Engine Condition Inspection

Accelerate lightly.

Does the engine speed increase?

YES – GO TO STEP 5.

NO – • Starting enrichment (SE) valve stuck open
• Clogged air cleaner
• Restricted fuel flow
• Clogged muffler
• Restricted fuel fill cap breather hose

5. Engine Condition Inspection

Accelerate or run at high speed.

Is there knocking?

YES – • Worn piston and cylinder
• Use of poor quality fuel
• Excessive carbon build-up in combustion chamber
• Ignition timing too advance (Faulty ignition control module (ICM) or ignition pulse generator)
• Lean fuel mixture

NO – GO TO STEP 6.

6. Ignition Timing Inspection

Check the ignition timing.

Is the ignition timing correct?

YES – GO TO STEP 7.

NO – • Faulty ICM
• Faulty ignition pulse generator

TROUBLESHOOTING

7. Cylinder Compression Inspection

Test cylinder compression.

Is the compression low?

- YES** – • Valve clearance too small
• Valve stuck open
• Worn cylinder and piston rings
• Damaged cylinder head gasket
• Seized valve
• Improper valve timing

NO – GO TO STEP 8.

8. Carburetor Inspection

Check carburetor for clogging.

Is the carburetor clogged?

- YES** – Carburetor not serviced frequently enough

NO – GO TO STEP 9.

9. Spark Plug Inspection

Remove and inspect spark plug.

Is the spark plug fouled or discolored?

- YES** – • Plug not serviced frequently enough
• Incorrect spark plug used

NO – GO TO STEP 10.

10. Engine Oil Inspection

Check oil level and condition.

Is the oil level correct and in good condition?

YES – GO TO STEP 11.

- NO** – • Oil level too high
• Oil level too low
• Contaminated oil

11. Lubrication Inspection

Remove cylinder head cover and inspect lubrication.

Is the valve train lubricated properly?

- NO** – • Clogged oil passage
• Clogged oil orifice

POOR PERFORMANCE AT LOW AND IDLE SPEED**1. Pilot Screw Inspection**

Check the carburetor pilot screw adjustment.

Is the adjustment correct?

YES – GO TO STEP 2.

NO – See page 6-23.

2. Intake Air Leak Inspection

Check for leaking carburetor insulator.

Is there leaking?

YES – • Loose carburetor insulator bands
• Damaged insulator

NO – GO TO STEP 3.

3. Spark Test

Perform spark test.

Is there weak or intermittent spark?

YES – • Faulty spark plug
• Fouled spark plug
• Loose or disconnected ignition system wires
• Broken or shorted spark plug wire
• Faulty ignition coil
• Faulty exciter coil
• Faulty ignition pulse generator
• Faulty engine stop switch
• Faulty ignition switch
• Faulty ignition control module (ICM)

NO – GO TO STEP 4.

4. Ignition Timing Inspection

Check the ignition timing.

Is the ignition timing correct?

NO – • Faulty ICM
• Faulty ignition pulse generator

POOR PERFORMANCE AT HIGH SPEED

1. Fuel Line Inspection

Disconnect the fuel line at the carburetor.

Does fuel flow freely?

YES – GO TO STEP 2.

NO –

- Clogged fuel line
- Clogged fuel fill cap breather hose
- Faulty fuel valve
- Clogged fuel strainer

2. Carburetor Inspection

Check carburetor for clogging.

Is the carburetor clogged?

YES – Carburetor not serviced frequently enough

NO – GO TO STEP 3.

3. Valve Timing Inspection

Check valve timing.

Is the valve timing correct?

NO – Camshaft not installed properly

YES – GO TO STEP 4.

4. Ignition Timing Inspection

Check ignition timing.

Is the ignition timing correct?

NO –

- Faulty ignition control module (ICM)
- Faulty ignition pulse generator

YES – GO TO STEP 5.

5. Valve Spring Inspection

Check valve springs.

Are the valve springs weak?

YES – Faulty valve springs

POOR HANDLING

Steering is heavy

- Steering shaft holder bolts too tight
- Damaged steering shaft bushing
- Damaged steering shaft bearing

Any wheel is wobbling

- Excessive wheel bearing play
- Bent rim
- Improperly installed wheel hub
- Excessively worn swingarm pivot bearings
- Bent frame

Vehicle pulls to one side

- Tire air pressure incorrect
- Faulty shock absorber
- Bent tie-rod
- Incorrect tie-rod adjustment
- Bent swingarm
- Bent frame
- Improper wheel alignment



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