

# 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

## TROUBLESHOOTING

### 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



P

18



MADE FROM 50% RECYCLED PAPER  
MINIMUM 10% POST-CONSUMER CONTENT