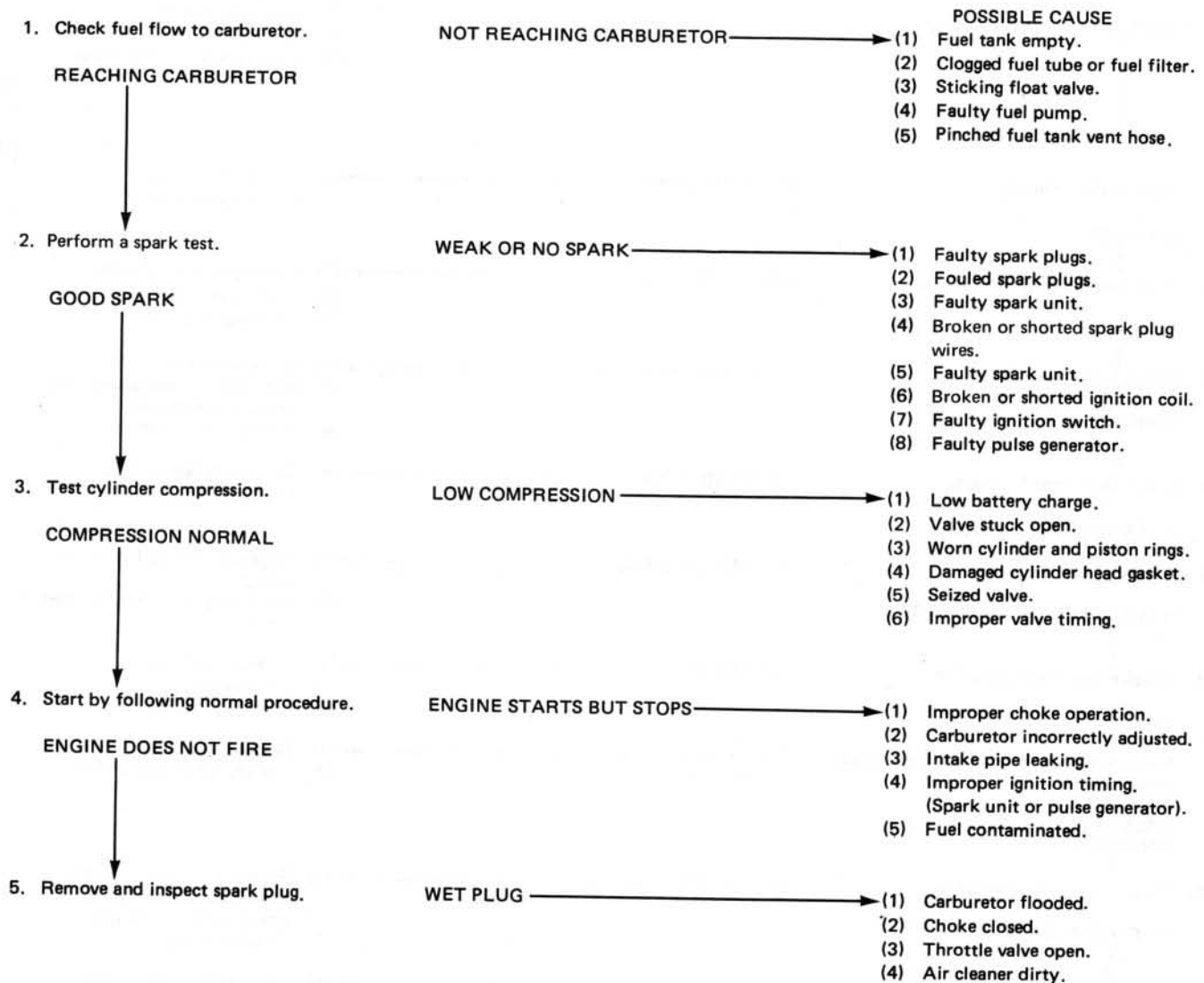


# 24. TROUBLESHOOTING

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## ENGINE DOES NOT START OR IS HARD TO START



# TROUBLESHOOTING

## ENGINE LACKS POWER

1. Raise wheels off ground and spin by hand.	WHEELS DO NOT SPIN FREELY	→	POSSIBLE CAUSE (1) Brake dragging. (2) Worn or damaged wheel bearings. (3) Wheel bearing needs lubrication. (4) Final gear bearing damaged.
↓ WHEEL SPINS FREELY			
2. Check tire pressure.	PRESSURE LOW	→	(1) Punctured tire. (2) Faulty tire valve.
↓ PRESSURE NORMAL			
3. Accelerate rapidly from low to second.	ENGINE SPEED CHANGED WHEN CLUTCH IS RELEASED	→	(1) Clutch slipping. (2) Worn clutch disc/plate. (3) Warped clutch disc/plate.
↓ ENGINE SPEED LOWERED WHEN CLUTCH IS RELEASED			
4. Accelerate lightly.	ENGINE SPEED DOES NOT INCREASE	→	(1) Carburetor choke closed. (2) Clogged air cleaner. (3) Restricted fuel flow. (4) Clogged muffler. (5) Pinched fuel tank vent hose.
↓ ENGINE SPEED INCREASES			
5. Check ignition timing.	INCORRECT	→	(1) Faulty spark unit. (2) Faulty pulse generator.
↓ CORRECT			
6. Check hydraulic tappet conditions.	INCORRECT	→	(1) Clogged tappet oil holes. (2) Worn valve seat. (3) Damaged tappet.
↓ CORRECT			
7. Test cylinder compression.	TOO LOW	→	(1) Valve stuck open. (2) Worn cylinder and piston rings. (3) Leaking head gasket. (4) Improper valve timing.
↓ NORMAL			
8. Check carburetor for clogging.	CLOGGED	→	● Carburetor not serviced frequently enough.
↓ NOT CLOGGED			
9. Remove spark plug.	FOULED OR DISCOLORED	→	(1) Plugs not serviced frequently enough. (2) Spark plug with incorrect heat range.
↓ NOT FOULED OR DISCOLORED			
10. Check oil level and condition.	INCORRECT	→	(1) Oil level too high. (2) Oil level too low. (3) Contaminated oil.
↓ CORRECT			
11. Remove cylinder head cover and inspect lubrication.	VALVE TRAIN NOT LUBRICATED PROPERLY	→	(1) Clogged oil passage. (2) Clogged oil control orifice.
↓ VALVE TRAIN LUBRICATED PROPERLY			
12. Check for engine overheating.	OVERHEATING	→	(1) Excessive carbon build-up in combustion chamber. (2) Use of poor quality fuel. (3) Clutch slipping.
↓ NOT OVERHEATING			
13. Accelerate or run at high speed.	ENGINE KNOCKS	→	(1) Worn piston and cylinder. (2) Wrong type of fuel. (3) Excessive carbon build-up in combustion chamber. (4) Ignition timing too advanced (Faulty spark unit).
↓ ENGINE DOES NOT KNOCK			

**POOR PERFORMANCE AT LOW AND IDLE SPEEDS**

1. Check ignition timing and hydraulic tappet condition.

INCORRECT

- POSSIBLE CAUSE**
- (1) Tappet holes clogged.
  - (2) Tappet damaged.
  - (3) Improper ignition timing. (Faulty spark unit).

CORRECT

2. Check carburetor pilot screw adjustment.

INCORRECT

See Fuel System Section.

CORRECT

3. Check for leaking intake pipe.

LEAKING

- (1) Deteriorated insulator O-ring.
- (2) Loose carburetor.

NO LEAK

4. Perform spark test.

WEAK OR INTERMITTENT SPARK

- (1) Faulty, carbon or wet fouled spark plug.
- (2) Faulty spark unit.
- (3) Faulty ignition coil.

GOOD SPARK

**POOR PERFORMANCE AT HIGH SPEED**

1. Check ignition timing.

INCORRECT

- (1) Faulty spark unit.
- (2) Faulty pulse generator.

CORRECT

2. Disconnect fuel tube at carburetor.

FUEL FLOW RESTRICTED

- (1) Clogged fuel line.
- (2) Clogged fuel tank breather hole.
- (3) Clogged fuel valve.
- (4) Faulty fuel pump.

FUEL FLOWS FREELY

3. Remove carburetor and check for clogged jets.

CLOGGED

Clean.

NO CLOGGED JETS

4. Check valve timing.

INCORRECT

Cam sprocket not installed properly.

CORRECT

5. Check valve spring tension.

WEAK

Faulty spring.

NOT WEAKENED

**POOR HANDLING** → Check tire pressure

1. If steering is heavy.

- (1) Steering stem adjustment nut too tight.
- (2) Damaged steering head bearings.

2. If either wheel is wobbling.

- (1) Excessive wheel bearing play.
- (2) Bent rim.
- (3) Improperly installed wheel hub.
- (4) Swingarm pivot bearing excessively worn.
- (5) Bent frame.
- (6) Swingarm pivot adjusting bolt too tight.

3. If the motorcycle pulls to one side.

- (1) Faulty shock absorber.
- (2) Front and rear wheels not aligned.
- (3) Bent front fork.
- (4) Bent swingarm.

# TROUBLESHOOTING

## HYDRAULIC TAPPET

### NOISEY TAPPET

1. Check for low oil level.  
Ride for five minutes with the engine speed over 3,000 rpm.  
Check oil level and condition.

CORRECT

2. Check oil pressure.

NOT CLOGGED

3. Remove cylinder head cover and oil hole caps and check lubrication.

CORRECT

4. Remove hydraulic tappet and check.

CORRECT

INCORRECT → (1) Contaminated oil.  
(2) Contaminated oil filter.

TOO LOW → (1) Clogged oil passage.  
(2) Clogged oil control orifice.  
(3) Oil level too low.

NOT LUBRICATED PROPERLY → (1) Clogged oil pipe.  
(2) Faulty O-ring.  
(3) Faulty oil hole cap.

INCORRECT → (1) Plunger sticking.  
(2) Faulty tappet.  
(3) Faulty one way valve.

### ENGINE LACKS POWER

1. Turn the engine for a few seconds with the starter.

ENGINE DOES NOT START

2. Check oil pressure.

CORRECT

3. Remove tappet and check

ENGINE STARTS → (1) Bubbly engine oil with over rev up.

TOO LOW → (1) Oil level too low.  
(2) Clogged oil passage.  
(3) Contaminated oil.  
(4) Contaminated oil filter.

INCORRECT → (1) Faulty tappet (Replace).