21. TROUBLESHOOTING

ENGINE DOES NOT START OR IS HARD TO START	**21-1**	**POOR PERFORMANCE AT LOW AND IDLE SPEEDS**	**21-3**
ENGINE LACKS POWER	**21-2**	**POOR PERFORMANCE AT HIGH SPEED**	**21-4**

ENGINE DOES NOT START OR IS HARD TO START

		Probable Cause
1. Check to see if fuel is getting to the carburetor. GETTING TO CARBURETOR ↓	NOT GETTING TO CARBURETOR →	*• Clogged fuel tube or fuel strainer • Clogged float valve • Clogged fuel tank cap breather tube
2. Try spark test. SPARKS JUMP ↓	WEAK OR NO SPARK →	•• Faulty spark plug • Fouled spark plug • Faulty CDI unit • Broken or shorted spark plug wire • Faulty alternator • Broken or shorted ignition coil • Faulty engine stop switch • Faulty pulse generator • Poorly connected, broken or shorted wires
3. Test cylinder compression COMPRESSION NORMAL ↓	LOW COMPRESSION →	•• Insufficient valve clearance • Valve stuck open • Worn cylinder and piston • Damaged cylinder head gasket • Improper valve timing • Improper valve and seat contact • Seized valve
4. Start by following normal starting procedure. ENGINE DOES NOT FIRE ↓	ENGINE FIRES BUT SOON STOPS →	*• Choke excessively open • Carburetor pilot screw excessively closed • Air leaking past intake pipe • Improper ignition timing (CDI unit or pulse generator faulty)
5. Remove spark plug. **DRY** ↓	WET PLUG →	•• Carburetor flooded • Carburetor choke excessively closed • Throttle valve excessively open • Clogged air cleaner element
6. Pour small amount of fuel into cylinder from the spark plug hole, install plug and try to start engine	**ENGINE STARTS BUT STOPS SOON** →	• Clogged carburetor • Faulty carburetor • Restricted fuel line
	ENGINE DOES NOT START →	• Incorrect ignition timing

ENGINE LACKS POWER

		Probable Cause
1. Raise wheels off ground and spin by hand. WHEEL SPINS FREELY	**WHEEL DOES NOT SPIN FREELY-**	Brake dragging Worn or damaged wheel bearing Wheel bearing needs lubrication Drive chain too tight Rear axle nut excessively tightened
2. Check tire pressure with tire gauge. **PRESSURE NORMAL**	PRESSURE TOO LOW •	•»•• Punctured tire • Faulty tire valve
3. Try rapid acceleration from low to second. **ENGINE SPEED LOWERED WHEN CLUTCH IS RELEASED**	**ENGINE SPEED DOES NOT-CHANGE WHEN CLUTCH IS RELEASED**	Clutch slipping Worn clutch disc/plate Warped clutch disc/plage
4. Lightly accelerate engine **ENGINE SPEED INCREASES**	**ENGINE SPEED DOES NOT-INCREASE SUFFICIENTLY**	Carburetor choke closed Clogged air cleaner Restricted fuel flow Clogged fuel tank breather tube Clogged muffler
5. Check ignition timing. CORRECT	INCORRECT.	Faulty CDI unit Faulty pulse generator
6. Check valve clearance. CORRECT	INCORRECT.	Improper valve adjustment Worn valve seat
7. Test cylinder compression using compression gauge. NORMAL	**TOO LOW**	Valve stuck open Worn cylinder and piston rings Leaking head gasket Improper valve timing Improper valve and seat contact
8. Check carburetor for clogging. NOT CLOGGED	**CLOGGED**	Carburetor dirty or air cleaner not serviced frequently enough
9. Remove spark plug. NOT FOULED OR DISCOLORED	**FOULED OR DISCOLORED -**	Plug not serviced frequently enough Use of plug with improper heat range