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.	NOT GETTING TO CARBURETOR*• • •	Clogged fuel tube or fuel strainer Clogged float valve Clogged fuel tank cap breather tube
	GETTING TO CARBURETOR		
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 short- ed wires
3.	Test cylinder compression	LOW COMPRESSION	Insufficient valve clearance
	COMPRESSION NORMAL		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 FIRES BUT SOON STOPS	Choke excessively open Carburetor pilot screw excessively closed
	ENGINE DOES NOT FIRE	•	Air leaking past intake pipe Improper ignition timing (CDI unit or pulse generator faulty)
5.	Remove spark plug.	WET PLUG	Carburetor flooded Carburetor choke excessively closed
	DRY		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	Clogged carburetor Faulty carburetor Restricted fuel line
		ENGINE DOES NOT START	Incorrect ignition timing

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TROUBLESHOOTING

ENGINE LACKS POWER

		Probable Cause
 Raise wheels off ground and spin by hand. 	WHEEL DOES NOT SPIN FREELY	 Brake dragging Worn or damaged wheel bearing Wheel bearing needs lubrication
WHEEL SPINS FREELY		 Drive chain too tight Rear axle nut excessively tightened
2. Check tire pressure with tire gauge.	PRESSURE TOO LOW •	Punctured tireFaulty tire valve
PRESSURE NORMAL		
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 DOES NOT-	Carburetor choke closed
ENGINE SPEED INCREASES	INCREASE SUFFICIENTLY	 Clogged air cleaner Restricted fuel flow Clogged fuel tank breather tube Clogged muffler
5. Check ignition timing.	INCORRECT.	 Faulty CDI unit Faulty pulse generator
6. Check valve clearance.	INCORRECT.	Improper valve adjustmentWorn valve seat
CORRECT		
 Test cylinder compression using compression gauge. 	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.	CLOGGED	 Carburetor dirty or air cleaner not serviced frequently enough
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9. Remove spark plug.	FOULED OR DISCOLORED	 Plug not serviced frequently enough
NOT FOULED OR DISCOLORED		 Use of plug with improper heat range

TROUBLESHOOTING

10. Remove oil level gauge and check oil level.	OIL LEVEL INCORRECT	Oil level too highOil level too low					
11. Remove and inspect lubrication.	VALVE TRAIN NOT LUBRICATED PROPERLY	 Clogged oil passage Clogged oil control orifice Contaminated oil 					
VALVE TRAIN LUBRICATED PROPERLY							
12. Check if engine overheats.	OVERHEATED	Excessive carbon build-up in com- bustion chamber					
NORMAL		 Improper quality fuel Clutch slips Fuel air mixture too lean 					
13. Accelerate or run at high speed.	ENGINE KNOCKS						
ENGINE DOES NOT KNOCK		 Fuel/air mixture too lean Use of improper grade of fuel Excessive carbon build-up in combustion chamber 					
		 Ignition timing too advanced (Faulty CDI unit) 					
POOR PERFORMANCE AT LOW AND IDLE SPEEDS							
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POOR PERFORMANCE AT I	LOW AND IDLE SPEEDS	Probable Cause					
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TROUBLESHOOTING

POOR PERFORMANCE AT HIGH SPEED

				Probable Cause
1.	Check ignition timing and valve clearance.	INCORRECT	:	Improper valve clearance Faulty CDI unit Faulty pulse generator
2.	Disconnect fuel line at carburetor. FUEL FLOWS FREELY	FUEL FLOW RESTRICTED		Clogged fuel tube Clogged fuel tank breather tube Clogged fuel valve
			•	Clogged fuel strainer
3.	Remove carburetor and check for clogged jet(s).	CLOGGED — (Clean them)	:	Loose air cleaner connecting tube Faulty air cleaner
4.	Check valve timing. CORRECT	INCORRECT	 •'	Camshaft not installed properly
5.	Check valve spring tension.	WEAK		Faulty spring
6				
υ.	Check spark arrester for clogging.			