TROUBLESHOOTING (1RZ AND 2RZ)

ENGINE OVERHEATING

Problem	Possible cause	Remedy	Page
Engine overheats	Cooling system faulty	Troubleshoot cooling system	CO-4
	Incorrect ignition timing	Reset timing	EM-24

HEAD STARTING

Problem	Possible cause	Remedy	Page
Engine will not crank or cranks slowly	Starting system faulty	Troubleshoot starting system	ST-2
Engine will not start/ Hard to start (cranks OK)	No fuel supply to carburetor	Troubleshoot fuel system	FU-4
	Carburetor problems	Repair as necessary	FU-10
	• Choke operating		
	• Flooding		
	• Needle valve sticking or clogged		
	• Vacuum hose disconnected or damaged		
	• Fuel cut solenoid valve not open		
	• Secondary throttle valve not close		
	• Outer vent control valve (OVCV) operating		
	Incorrect ignition timing	Reset timing	EM-24
	Ignition problems	Perform spark test	IG-6
	• Ignition coil	Inspect coil	IG-11, 12
	• Igniter (w/ Igniter)		
	• Distributor	Inspect distributor	IG-13, 14
	Spark plugs faulty	Inspect plugs	IG-9
	High-tension cords disconnected or broken	Inspect cords	IG-8
	Vacuum leaks	Repair as necessary	
	• PCV line		
	• Intake manifold		
	Low compression	Check compression	EM-37

ROUGH IDLING

Problem	Possible cause	Remedy	Page
Rough idle or stalls	Speak plugs faulty	Inspect plugs	IG-9
	High-tension cords faulty	Inspect cords	IG-8
	Vacuum leaks	Repair as necessary	
	• PCV line		
	• Intake manifold		
	• Air by-pass system		
	Incorrect ignition timing	Reset timing	EM-24
	Ignition problems	Perform spark test	IG-6
	• Ignition coil	Inspect coil	IG-11, 12
	• Igniter (w/ Igniter)		
	• Distributor	Inspect distributor	IG-13, 14

ROUGH IDLING (CONT'D)

Problem	Possible cause	Remedy	Page
Rough idle or stalls	Carburetor problems • Idle speed incorrect • Slow jet clogged • Idle mixture incorrect • Fuel cut solenoid valve not open • Fast idle speed setting incorrect (cold engine) • Choke system faulty • Secondary throttle valve not close	Repair as necessary	FU-10
	HAI system faulty (w/ HAI)	Check HAI system	
	Engine overhearts	Troubleshoot cooling system	CO-4
	Incorrect valve clearance	Adjust valve clearance	EM-12
	Low compression	Check compression	EM-37

ENGINE HESITATES/POOR ACCELERATION

Problem	Possible cause	Remedy	Page
Engine hesitates/ Poor acceleration Vacuum leaks	Spark plugs faulty	Inspect plugs	IG-9
	High-tension cords faulty	Inspect cords	IG-8
	Repair as necessary • PCV line • Intake manifold		
	Incorrect ignition timing	Reset timing	EM-24
	Air filter clogged	Check air filter	
	Fuel line clogged	Check fuel line	
	Carburetor problems • Float level too low • Accelerator pump faulty • Power valve faulty • Choke valve closed (hot engine) • Choke system • Secondary throttle stopper operation faulty (cold engine)	Repair as necessary	FU-10
	Emission control system problem • HAI system always on (hot engine) (w/ HAI) • AAP system faulty	Check HAI system Check AAP system	
	Manifold thermostat clogged	Check manifold thermostat	EM-54
	Engine overheats	Check cooling system	CO-9
	Low compression	Check compression	EM-37

ENGINE DIESELING

Problem	Possible cause	Remedy	Page
Engine dieseling (runs after ignition switch is turned off)	Carburetor problems • Linkage sticking • Idle speed or fast idle speed out of adjustment • Fuel cut solenoid faulty • Choke valve closed (hot engine) • Throttle valve not close	Repair as necessary	FU-10
	Incorrect ignition timing	Reset timing	EM-24

AFTER FIRE, BACKFIRE

Problem	Possible cause	Remedy	Page
Muffler explosion (after fire) on deceleration only	Air by-pass system	Check air by-pass system	
	Deceleration fuel cut system always off	Check fuel cut system	
Muffler explosion (after fire) all the time	Air filter clogged	Check air filter	
	Choke system faulty	Check choke system	
	Incorrect ignition timing	Reset timing	EM-24
	Incorrect valve clearance	Adjust valve clearance	EM-12
Engine backfires	Choke valve open (cold engine)	Check choke system	
	Carburetor vacuum leak	Check hoses and repair as necessary	
	Insufficient fuel flow	Troubleshoot fuel system	FU-4
	Incorrect ignition timing	Reset timing	EM-24
	Incorrect valve clearance	Adjust valve clearance	EM-12
	Carbon deposits in combustion chambers	Inspect cylinder head	EM-45
	HAI system faulty (w/ HAI)	Check HAI system	
	Manifold thermostat clogged	Check manifold thermostat	EM-54

EXCESSIVE OIL CONSUMPTION

Problem	Possible cause	Remedy	Page
Excessive oil consumption	Oil leak	Repair as necessary	
	PCV line clogged	Check PCV system	
	Piston ring worn or damaged	Check rings	EM-94
	Valve stem and guide worn	Check valves and guides	EM-46
	Valve stem oil seal worn or damaged	Check oil seal	

POOR FUEL MILEAGE

Problem	Possible cause	Remedy	Page
Poor fuel mileage	Fuel leak	Repair as necessary	
	Air filter clogged	Check air filter	
	Incorrect ignition timing	Reset timing	EM-24
	Vacuum leaks	Repair as necessary	
	• PCV line		
	• Intake manifold		
	Carburetor problems	Perform on-vehicle	FU-5
	• Choke system faulty	inspection of carburetor	
	• Idle speed too high		
	• Deceleration fuel cut system faulty		
	• Power valve always open		
	• AAP system always operate	Check AAP system	
	Speak plugs faulty	Inspect plugs	IG-9
	Low compression	Check compression	EM-37
	Tires improperly inflated	Inflate tires to proper pressure	
	Clutch slips	Troubleshoot clutch	
	Brake drag	Troubleshoot brakes	