TROUBLESHOOTING (2RZ-E)

ENGINE OVERHEATING

Problem	Possible cause	Remedy	Page
Engine overheats	Cooling system faulty	Troubleshoot cooling system	CO-4
	Incorrect ignition timing	Reset timing	EM-31

HARD 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 injector	Troubleshoot EFI system	FI-9
	• No fuel in tank		
	• Fuel pump not working		
	• Fuel filter clogged		
	• Fuel line clogged or leaking		
	EFI system problems	Repair as necessary	
	Ignition problems	*Perform spark test*	IG-6
	• Ignition coil	Inspect coil	IG-12
	• Igniter		
	• Distributor	Inspect distributor	IG-15
	Spark plugs faulty	Inspect plugs	IG-9
	High-tension cords disconnected or broken	Inspect cords	IG-8
	Vacuum leaks	Repair as necessary	
	• PCV hoses		
	• EGR valve		
	• Intake manifold		
	• Throttle body		
	Pulling in air between vacuum sensor and intake manifold	Repair as necessary	
	Low compression	Check compression	EM-37

ROUGH IDLING

Problem	*Possible cause*	*Remedy*	*Page*
Rough, idle, stalls or misses	Spark plugs faulty	Inspect plugs	IG-9
	High-tension cords faulty	Inspect cords	IG-8
	Ignition problems		
	• Ignition coil	Inspect coil	IG-12
	• Igniter		
	• Distributor	Inspect distributor	IG-15
	Incorrect ignition timing	Reset timing	EM-31
	Vacuum leaks	Repair as necessary	
	• PCV hoses		
	• EGR valve		
	• Intake manifold		
	• Throttle body		
	• Pulling in air between vaccum sensor and intake manifold	Repaire as necessary	
	Incorrect idle speed	Adjust idle	EM-33
	EFI system problems	Repair as necessary	

ROUGH IDLING (CONT'D)

Problem	Possible cause	Remedy	Page
Rough idle, stalls or misses (cont'd)	Engine overheats	Check cooling system	CO-9
	Low compression	Check compression	EM-37
	Incorrect valve clearance	Adjust valve clearance	EM-12

ENGINE HESITATES/POOR ACCELERATION

Problem	Possible cause	Remedy	Page
Engine hesitates/ Poor acceleration	Spark plugs faulty	Inspect plugs	IG-9
	High-tension cords faulty	Inspect cords	IG-8
	Vacuum leaks	Repair as necessary	
	• PCV hoses		
	• EGR valve		
	• Intake manifold		
	• Throttle body		
	Pulling in air between vaccum sensor and intake manifold	Repair as necessary	
	Incorrect ignition timing	Reset timing	EM-31
	Fuel system clogged	Check fuel system	
	Air cleaner clogged	Check air cleaner	
	EFI system problems	Repair as necessary	
	Emission control system problem (cold engine)		
	• EGR system always on	Check EGR system	
	Engine overheats	Check cooling system	CO-9
	Low compression	Check compression	EM-37

ENGINE DIESELING

Problem	Possible cause	Remedy	Page
Engine dieseling (run after ignition) switch is turned off)	EFI system problems	Repair as necessary	

AFTER FIRE, BACKFIRE

Problem	Possible cause	Remedy	Page
Muffler explosion (after fire) on deceleration only	Deceleration fuel cut system always off	Check EFI (fuel cut) system	FI-75
Muffler explosion (after fire) all the time	Air cleaner clogged	Check air cleaner	
	EFI system problem	Repair as necessary	
	Incorrect ignition timing	Reset timing	EM-31
	Incorrect valve clearance	Adjust valve clearance	

AFTER FIRE, BACKFIRE (CONT'D)

Problem	Possible cause	Remedy	Page
Engine backfires	EFI system problem	Repair as necessary	
	Vacuum leak ● PCV hoses ● EGR valve ● Intake manifold ● Throttle body	Check hoses and repair as necessary	
	Pulling in air between vaccum sensor and intake maniofold	Repair as necessary	
	Insufficient fuel flow	Troubleshoot fuel system	FI-9
	Incorrect ignition timing	Reset timing	EM-31
	Incorrect valve clearance	Adjust valve clearance	EM-12
	Carbon deposits in combustion chambers	Inspect cylinder head	EM-45

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	EM-46
	Valve stem seal worn	Check seals	

POOR GASOLINE MILEAGE

Problem	Possible cause	Remedy	Page
Poor gasoline mileage	Fuel leak	Repair as necessary	
	Air cleaner clogged	Check air cleaner	EM-11
	Incorrect ignition timing	Reset timing	EM-31
	EFI system problems ● Injector faulty	Repair as necessary	
	● Deceleration fuel cut system faulty	Check EFI (fuel cut) system	FI-75
	Spark plugs faulty	Inspect plugs	IG-9
	EGR system always on	Check EGR system	
	Low compression	Check compression	EM-37
	Tires improperly inflated	Inflate tires to proper pressure	
	Clutch slips	Troubleshoot clutch	
	Brakes drag	Troubleshoot brakes	
Unpleasant odor	Incorrect idle speed	Adjust idle	
	Incorrect ignition timing	Reset timing	EM-31
	Vacuum leaks ● PCV hoses ● EGR valve ● Intake manifold ● Throttle body	Repair as necessary	
	EFI system problems	Repair as necessary	