

TROUBLESHOOTING ENGINE OVERHEATING

Problem	Possible cause	Remedy	Page
Engine overheats	Cooling system faulty Incorrect ignition timing	Troubleshoot cooling system Reset timing	CO-5 IG-25, 29, 37

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: <ul style="list-style-type: none"> • No fuel in tank • Fuel pump not working • Fuel filter clogged • Fuel line clogged or leaking EFI system problems Ignition problems: <ul style="list-style-type: none"> • Ignition coil • Igniter • Distributor Spark plug faulty High-tension cords disconnected or broken Vacuum leaks: <ul style="list-style-type: none"> • PCV line • EGR line • Intake manifold • T-VIS valve (3S-GTE) • Throttle body • ISC valve (3S-GTE and 5S-FE) • Brake booster line Air suction between air flow meter and throttle body (3S-GTE) Low compression	Troubleshoot EFI system Repair as necessary Perform spark test Inspect plugs Inspect cords Repair as necessary Repair as necessary Check compression	FI-13 IG-6,10,15 IG-7, 11, 16 IG-7, 11, 16 EM-31

ROUGH IDLING

Problem	Possible cause	Remedy	Page
Rough idle, stalls or misses	Spark plug faulty High-tension cord faulty Ignition problems: <ul style="list-style-type: none"> • Ignition coil • Igniter • Distributor Incorrect ignition timing Vacuum leaks: <ul style="list-style-type: none"> • PCV line • EGR line • Intake manifold 	Inspect plugs Inspect cords Inspect coil Inspect igniter Inspect distributor Reset timing Repair as necessary	IG-7, 11, 16 IG-7,11,16 IG-8, 13, 17 IG-9, 14, 19 IG-9, 13, 18 IG-25, 29, 37

ROUGH IDLING (Cont'd)

Problem	Possible cause	Remedy	Page
Rough idle, stalls or misses (Cont'd)	Vacuum leaks (cont'd): <ul style="list-style-type: none"> • T-VIS valve (3S-GTE) • Throttle body • ISC valve (5S-FE and 3S-GTE) • Brake booster line Air suction between air flow meter and throttle body (3S-GTE) Incorrect idle speed Incorrect valve clearance EFI system problems Engine overheats Low compression	Check ISC system (3S-GTE and 5S-FE) Adjust idle speed (4A-FE) Adjust valve clearance Repair as necessary Check cooling system Check compression	FI-208, 211 MA-8 EM-13,17,22 CO-5 EM-31

ENGINE HESITATES/POOR ACCELERATION

Problem	Possible cause	Remedy	Page
Engine hesitates/poor acceleration	Spark plug faulty High-tension cord faulty Vacuum leaks: <ul style="list-style-type: none"> • PCV line • EGR line • Intake manifold • T-VIS valve (3S-GTE) • Throttle body • ISC valve (3S-GTE and 5S-FE) • Brake booster line Air suction between air flow meter and throttle body (3S-GTE) Incorrect ignition timing Incorrect valve clearance Fuel system clogged Air cleaner clogged EFI system problems Emission control system problems: (cold engine) <ul style="list-style-type: none"> • EGR system always on Engine overheats Low compression	Inspect plugs Inspect cords Repair as necessary Repair as necessary Reset timing Adjust valve clearance Check fuel system Check air cleaner Repair as necessary Check EGR system Check cooling system Check compression	IG-7, 11, 16 IG-7, 11, 16 IG-25, 29, 37 EM-13,17,22 MA-5 EC-9, 22, 38 CO-5 EM-31

ENGINE DIESELING

Problem	Possible cause	Remedy	Page
Engine diesels (runs after ignition switch is turned off)	EFI system problems Incorrect ignition timing EGR system faulty	Repair as necessary Reset timing Check EGR system	IG-25 , 29, 37 EC-9 , 22, 38

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	
Muffler explosion (after fire) all the time	Air cleaner clogged EFI system problems Incorrect ignition timing	Check air cleaner Repair as necessary Reset timing	MA-5 IG-25 , 29, 37
Engine backfires	EFI system problems Vacuum leaks: <ul style="list-style-type: none"> • PCV line • EGR line • Intake manifold • T-VIS valve (3S-GTE) • Throttle body • ISC valve (3S-GTE and 5S-FE) • Brake booster line Air suction between air flow meter and throttle body (3S-GTE) Insufficient fuel flow Incorrect ignition timing Incorrect valve clearance Carbon deposits in combustion chambers	Repair as necessary Check hoses and repair as necessary Repair as necessary Troubleshoot fuel system Reset timing Adjust valve clearance Inspect cylinder head	FI-13 IG-25 , 29, 37 EM-13 , 17, 22 EM-92 , 127, 161

EXCESSIVE OIL CONSUMPTION

Problem	Possible cause	Remedy	Page
Excessive oil consumption	Oil leak PCV line clogged Piston ring worn or damaged	Repair as necessary Check PCV system Check rings	EM-204 , 244, 289
	Valve stem and guide bushing worn	Check valves and guide bushing	EM-94 , 129, 163
	Valve stem oil seal worn	Check seals	

EXCESSIVE FUEL CONSUMPTION

Problem	Possible cause	Remedy	Page
Poor gasoline mileage	Fuel leak Air cleaner clogged Incorrect ignition timing ER system problems: <ul style="list-style-type: none"> • Injector faulty • Deceleration fuel cut system faulty Idle speed too high Spark plug faulty EG R system always on Low compression Tires improperly inflated Clutch slips Brakes drag	Repair as necessary Check air cleaner Reset timing Repair as necessary Check ISC system (3S-GTE and 5S-FE) Adjust idle speed (4A-FE) Inspect plugs Check EGR system Check compression Inflate tires to proper pressure Troubleshoot clutch Troubleshoot brakes	MA-5 IG-25, 29, 37 FI-208, 211 MA-8 IG-7, 11, 16 EC-9, 22, 38 EM-31

UNPLEASANT ODOR

Problem	Possible cause	Remedy	Page
Unpleasant odor	Incorrect idle speed Incorrect ignition timing Vacuum leaks: <ul style="list-style-type: none"> • PCV line • EGR line • Intake manifold • T-VIS valve (3S-GTE) • Throttle body • ISC valve (3S-GTE and 5S-FE) • Brake booster line EFI system problems	Check ISC system (3S-GTE and 5S-FE) Adjust idle Speed (4A-FE) Reset timing Repair as necessary Repair as necessary	FI-208, 211 MA-8 IG-25, 29, 37